HOLZ TECHNIC

Make it easy.

Le icone riportate in questa pagina identificano i prodotti che possono essere utilizzati anche in classe di servizio 3.
The icons appearing on this page identify the products which may also be used in Service Class 3.

CLASSI DI SERVIZIO
SERVICE CLASS

1. Tutti gli elementi all'interno
   All interior elements
2. Elementi protetti dall'azione diretta delle intemperie
   Elements protected from direct exposure to weather
3. Elementi "bagnati" esposti alle intemperie
   "Wet" elements exposed to weather

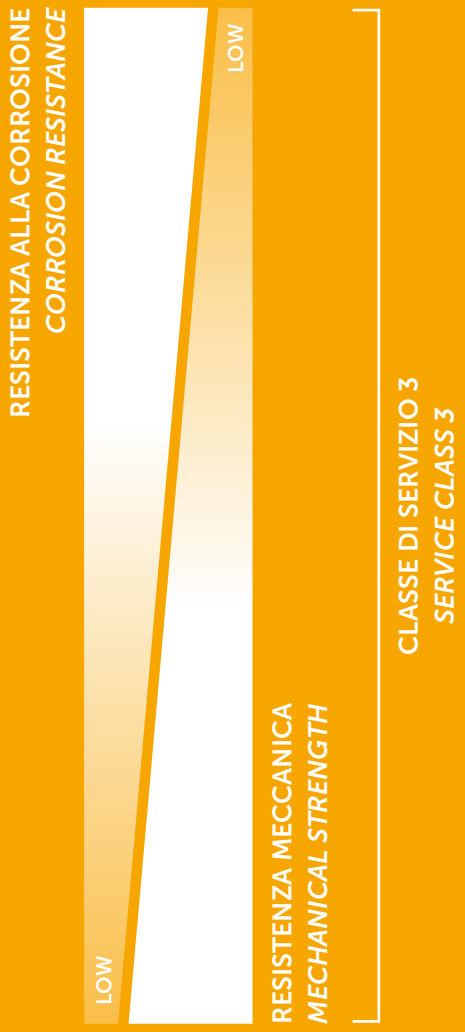
MATERIALI E RIVESTIMENTI PER ESTERNO
EXTERIOR MATERIALS AND COATINGS

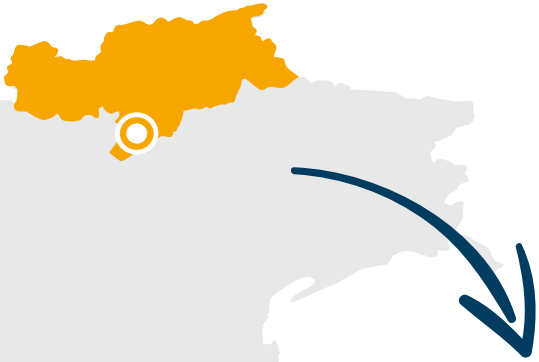
ACCIAIO INOSSIDABILE *STAINLESS STEEL*

- **A4** AISI 316 — Acciaio inossidabile austenitico A4 *A4 Austenitic stainless steel*
- **A2** AISI 305 — Acciaio inossidabile austenitico A2 *A2 Austenitic stainless steel*
- **A2** AISI 304 — Acciaio inossidabile austenitico A2 *A2 Austenitic stainless steel*
- AISI 410 — Acciaio inossidabile martensitico *Martensitic stainless steel*

ACCIAIO AL CARBONIO *CARBON STEEL*

- **C4** EVO — Rivestimento anticorrosivo multistrato *Multilayer anti-corrosion coating*
- **ANTI CORR.** — Rivestimento anticorrosivo organico *Organic anti-corrosion coating*
- **HOT DIP** — Rivestimento con zincatura a caldo *Galvanizing coating*





HOLZ TECHNIC

Make it easy.

DAL CUORE DELLE ALPI VERSO IL MONDO

HOLZ TECHNIC nasce nel cuore delle Alpi italiane, una terra in cui le costruzioni in legno sono una realtà da secoli.

Oggi è presente in oltre 70 paesi del mondo, con una rete internazionale di agenti che porta il know-how tecnico maturato negli anni direttamente nella tua rivendita.

Visita il sito, contatta l'agente più vicino a te e ottieni il meglio per i tuoi clienti!

FROM THE HEART OF THE ALPS TO THE WORLD

***HOLZ TECHNIC** was founded in the heart of the Italian Alps, a region where timber buildings have been designed for centuries.*

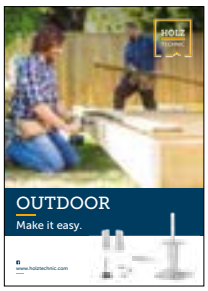
Today it operates in more than 70 countries worldwide, with an international network of agents that bring the technical know-how gained over the years directly into your store.

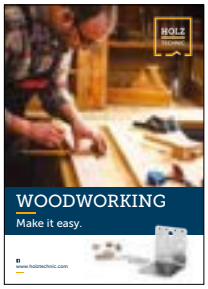
Visit the website, contact the agent nearest to you and get the best for your customers!

www.holztechnic.com

VISUAL MERCHANDISING

SCOPRI LE NOVITÀ PER FAR CRESCERE IL TUO BUSINESS!
DISCOVER WHAT'S NEW TO GROW YOUR BUSINESS!





MOOD ESPOSITIVI

Un nuovo concetto espositivo che rende più semplice l'individuazione dei prodotti suddividendoli in 4 grandi categorie:

STRUCTURE | OUTDOOR | WOODWORKING | INSULATION

Noi di Holz Technic mettiamo a disposizione della vostra rivendita una serie di supporti per personalizzare e comunicare al meglio i nostri prodotti come poster, totem, display, adesivi e molto altro!

DISPLAY MOODS

A new display concept that makes it simpler to identify products, dividing them into 4 large categories:

STRUCTURE | OUTDOOR | WOODWORKING | INSULATION

We at Holz Technic make a series of supporting media available to your store, such as posters, totems, displays, stickers and more, to help customise and communicate our products as well as possible!

TESTATE ESPOSITORI

Oltre alla classica immagine istituzionale Holz Technic adesso è possibile personalizzare le testate dei nostri espositori con i nuovi soggetti espositivi, permettendovi di guidare il cliente verso una vera e propria selezione di prodotti adatti ad ogni specifica esigenza.

DISPLAY UNIT TOPS

As well as the classic Holz Technic institutional image, it is now possible to customise the tops of our display units with the new display subjects, enabling you to guide customers towards a real and proper selection of products suitable for all their specific needs.

TOTEM

Il modo più incisivo ed impattante per comunicare con il cliente e creare un richiamo forte e distintivo all'interno della vostra rivendita.

TOTEMS

The most incisive and impacting way to communicate with customers and create a strong and distinctive appeal in your store.

PRODUCT DISPLAY

Una soluzione efficace per mettere in evidenza i prodotti, sostenuta da una grande e chiara immagine del relativo campo di applicazione.
ALU HT | TYP R | GWZ | CLC

PRODUCT DISPLAY

An effective solution to highlight the products, supported by a large and clear image of the related field of application.
ALU HT | TYP R | GWZ | CLC

ADESIVI DA PAVIMENTO

Realizzati in materiale estremamente resistente, sono l'ideale per creare percorsi guidati tra le corsie oppure evidenziare le scaffalature e i prodotti Holz Technic.

FLOOR STICKERS

Made of extremely resistant material, they are ideal for creating guided routes among the aisles or for highlighting the shelving and Holz Technic products.

SEGNALETICA PER ESTERNI

Con i nuovi mood espositivi è più semplice comunicare con i clienti a partire dagli spazi esterni. Sfoglia la brochure POP TOOLS e scegli i supporti più adatti al tuo punto vendita!

SIGNAGE FOR OUTSIDE

With the new display moods, it is simpler to communicate with customers starting from outdoor spaces. Browse the POP TOOLS brochure and choose the support media most suitable for your sales point!

POP TOOLS

Scopri tutte le soluzioni espositive e di personalizzazione per la tua rivendita nella brochure POP TOOLS. Richiedila al tuo agente!

POP TOOLS

Discover all the display and customisation solutions for your dealership in the POP TOOLS brochure. Ask your agent for it!

FISSAGGIO PER COSTRUZIONI IN LEGNO
FASTENING FOR TIMBER CONSTRUCTIONS

VITI PER STRUTTURE
SCREWS FOR STRUCTURES

HTS-HT	VITE FILETTO TOTALE PER FALEGNAMERIA *TOTAL THREAD SCREW FOR WOODWORK*		CE	38
TPP	VITE TESTA PICCOLA *SMALL HEAD SCREW*			40
TPP AISI410	VITE TESTA PICCOLA *SMALL HEAD SCREW*			41
SNK	VITE BIANCA PER LEGNO TESTA SVASATA *WHITE COUNTERSUNK HEAD SCREW FOR WOOD*		CE	42
SCH-H	VITE GIALLA PER LEGNO TESTA SVASATA *YELLOW COUNTERSUNK HEAD SCREW FOR WOOD*		CE	48
TLL	VITE BIANCA PER LEGNO TESTA LARGA *WHITE FLANGE-HEAD SCREW FOR WOOD*		CE	54
HBS EVO	VITE TESTA SVASATA *SCREW WITH COUNTERSUNK HEAD*		CE	58
TBS EVO	VITE TESTA LARGA *FLANGE HEAD SCREW*		CE	59
KOP	TIRAFONDO *COACH SCREW*		CE	60
MBS	VITE AUTOFILETTANTE PER MURATURA *SELF-TAPPING SCREW FOR MASONRY*			62
THERMO WASHER	ROSETTA PER FISSAGGIO DI ISOLANTE SU LEGNO *WASHER TO FASTEN INSULATION TO WOOD*		CE	63
ISULFIX	TASSELLO PER FISSAGGIO DI ISOLANTE SU MURATURA *ANCHOR FOR FASTENING INSULATION TO BRICKWORK*		CE	63
GWZ	VITE TUTTO FILETTO A TESTA CILINDRICA *TOTAL THREAD SCREW WITH CYLINDRICAL HEAD*		CE	64
DWZ	VITE DOPPIO FILETTO PER ISOLANTE *DOUBLE THREAD SCREW FOR INSULATOR*		CE	70
CLC	CONNETTORE LEGNO-CALCESTRUZZO *TIMBER-TO-CONCRETE FASTENER*		CE	74

VITI PER STRUTTURE
SCREWS FOR STRUCTURES

SBD-HT	SPINOTTO AUTOFORANTE *SELF-DRILLING DOWEL*		CE	84
STA	SPINOTTO LISCIO *SMOOTH DOWEL*		CE	88

VITI E CONNETTORI PER ESTERNO
SCREWS AND CONNECTORS FOR OUTDOOR

MINI	VITE DOPPIO FILETTO TESTA A SCOMPARSA *DOUBLE THREAD SCREW WITH CONCEALED HEAD*		CE	92
KKZ-HT	VITE A TESTA CILINDRICA A SCOMPARSA *COUNTERSUNK CYLINDRICAL HEAD SCREW*		CE	93
BFO	VITE TESTA TONDA E GAMBO RINFORZATO *ROUND-HEAD SCREW AND REINFORCED SHANK*		CE	94
SCA-HT	VITE TESTA SVASATA *SCREW WITH COUNTERSUNK HEAD*			95
BFO	VITI IN BUCKET 1000 *SCREWS IN BUCKET 1000*		CE	96
SCA-HT	VITI IN BUCKET 1000 *SCREWS IN BUCKET 1000*			96
KGA	VITE TESTA CONICA UNIVERSALE *UNIVERSAL CONICAL HEAD SCREW*		CE	97
KGL EVO	VITE TESTA CONICA *CONICAL HEAD SCREW*		CE	98
KWP	VITE PER TAVOLE WPC *SCREW FOR WPC PLANKS*			100
KKA	VITE AUTOFORANTE LEGNO-ALLUMINIO *SELF-DRILLING SCREW TIMBER-TO-ALUMINIUM*			101

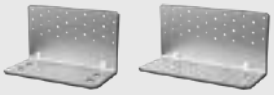
VITI E CONNETTORI PER ESTERNO
SCREWS AND CONNECTORS FOR OUTDOOR

FLAT	FISSAGGIO A SCOMPARSA PER TERRAZZE *CONCEALED FASTENING FOR TERRACES*		102
FLIP	FISSAGGIO A SCOMPARSA PER TERRAZZE *CONCEALED FASTENING FOR TERRACES*		103
TVM	CLIP A SCOMPARSA PER TAVOLE IN LEGNO *CONCEALED CLIP FOR WOOD BOARDS*		104
GAP 3	CONNETTORE PER TERRAZZE E FACCIATE *FASTENER FOR TERRACES AND FACADES*		106
GAP 4	CONNETTORE PER TERRAZZE E FACCIATE *FASTENER FOR TERRACES AND FACADES*		107
GROUND COVER	TELO ANTIRADICE *ROOT-RESISTANT SHEET*		108
NAG	PAD LIVELLANTE *LEVELING PAD*		109
GRANULO	SOTTOFONDO IN GOMMA GRANULARE *GRANULAR RUBBER SUBSTRATE*		110
PROFID	PROFILO A SEZIONE QUADRATA *SQUARE SECTION PROFILE*		111
TERRA BAND UV	NASTRO ADESIVO BUTILICO RESISTENTE AI RAGGI UV *BUTYL ADHESIVE TAPE, RESISTANT TO UV RAYS*		112
STAR	STELLA PER DISTANZE *STAR FOR DISTANCES*		113
SHIM	CUNEI LIVELLANTI *LEVELLING WEDGES*		113
JFA	SUPPORTO REGOLABILE PER TERRAZZE *ADJUSTABLE SUPPORT FOR TERRACES*		113
SUPPORT	SUPPORTO REGOLABILE PER TERRAZZE *ADJUSTABLE SUPPORT FOR TERRACES*		116
ALU TERRACE	PROFILO IN ALLUMINIO PER TERRAZZE *ALUMINIUM PROFILE FOR PATIOS*		118

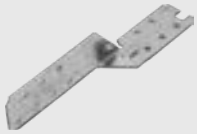
VITI PER LAMIERA
SCREWS FOR METAL SHEET

SBS-HT	VITE AUTOFORANTE LEGNO-METALLO *SELF-DRILLING TIMBER-METAL SCREW*			122
SBS A2	VITE AUTOFORANTE LEGNO-METALLO *SELF-DRILLING TIMBER-METAL SCREW*			124
MCS	VITE CON RONDELLA PER LAMIERE *SCREW WITH WASHER FOR METAL SHEET*			125
WBAZ	RONDELLA CON GUARNIZIONE PER LAMIERA *WASHER WITH GASKET FOR METAL SHEET*			126
TBS EVO	VITE TESTA LARGA *FLANGE HEAD SCREW*		CE	128
MTS	VITE PER LAMIERA *SCREWS FOR METAL SHEET*			129

PIASTRE E ANGOLARI
PLATES AND ANGLE BRACKETS

LBA	CHIODI ANKER *ANKER NAILS*		CE	132
LBS	VITE TESTA TONDA E SOTTOTESTA PIATTO *ROUND-HEAD SCREW AND FLAT UNDERHEAD*		CE	133
HT 20	ANGOLARE PER FALEGNAMERIA *ANGLE BRACKET FOR WOODWORK*			134
HT 40	ANGOLARE STANDARD *STANDARD ANGLE BRACKET*		CE	135
HT 70	ANGOLARE 70 *ANGLE BRACKET 70*		CE	136
HT 90	ANGOLARE 90 *ANGLE BRACKET 90*		CE	137
HT 100	ANGOLARE 100 PER FORZE DI TAGLIO *ANGLE BRACKET 100 FOR SHEAR FORCES*		CE	138
HT 170	ANGOLARE 170 PER FORZE DI TAGLIO E TRAZIONE *ANGLE BRACKET 170 FOR SHEAR AND TENSILE FORCES*		CE	139
HTKR	ANGOLARE PER FORZE DI TRAZIONE *ANGLE BRACKET FOR TENSILE FORCES*		CE	140
HTW	ANGOLARE PER FORZE DI TAGLIO *ANGLE BRACKET FOR SHEAR FORCES*		CE	142
TITAN F	ANGOLARE PER ELEVATE FORZE DI TAGLIO *ANGLE BRACKET FOR HIGH SHEAR FORCES*		CE	144
TITAN N	ANGOLARE PER FORZE DI TAGLIO E TRAZIONE *ANGLE BRACKET FOR SHEAR AND TENSILE FORCES*		CE	148

PIASTRE E ANGOLARI
PLATES AND ANGLE BRACKETS

HTZ	HOLD DOWN PER ELEVATE FORZE DI TRAZIONE *HOLD DOWN FOR HIGH TENSILE FORCES*		CE	152
HT PLATE	PIASTRE PER FORZE DI TAGLIO E TRAZIONE *PLATES FOR SHEAR AND TENSILE FORCES*		CE	156
LBV	PIASTRA FORATA PER LEGNO *PERFORATED PLATE FOR WOOD*		CE	160
LBB	NASTRO FORATO *PERFORATED BAND*		CE	161
WZU	ANGOLARE PER STRUTTURE A TELAIO *ANGLE BRACKET FOR FRAME STRUCTURES*		CE	162
WHO	ANGOLARE LISCIO *SMOOTH ANGLE BRACKET*		CE	164
WVS	ANGOLARE RINFORZATO *REINFORCED ANGLE BRACKET*		CE	164
WKF	ANGOLARE PER FACCIATE *ANGLE BRACKET FOR FACADES*		CE	165
WBO 135°	ANGOLARE 135° *135° ANGLE BRACKET*		CE	166
WVB A2	ANGOLARE STANDARD INOX A2 *A2 STANDARD STAINLESS STEEL ANGLE BRACKET*		CE	166
LBN	PIASTRA STANDARD *STANDARD PLATE*		CE	167
SPN	ANCORAGGIO UNIVERSALE *UNIVERSAL ANCHOR SYSTEM*		CE	167

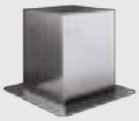
PIASTRE E ANGOLARI
PLATES AND ANGLE BRACKETS

ALUMINI HT	STAFFA A SCOMPARSA IN LEGA DI ALLUMINIO *CONCEALED ALUMINIUM ALLOY BRACKET*		CE	168
ALUMIDI HT	STAFFA A SCOMPARSA IN LEGA DI ALLUMINIO *CONCEALED ALUMINIUM ALLOY BRACKET*		CE	170
UV-T	CONNETTORE A SCOMPARSA AD AGGANCIO LEGNO-LEGNO *CONCEALED TIMBER-TO-TIMBER CONNECTOR*		CE	176
UV-C	CONNETTORE A SCOMPARSA AD AGGANCIO LEGNO-CALCESTRUZZO *CONCEALED TIMBER-TO-CONCRETE CONNECTOR*		CE	178
XEPOX	ADESIVO EPOSSIDICO BICOMPONENTE *TWO COMPONENTS EPOXY ADHESIVE*		CE	180
BSI	SCARPA LISCIA ALI INTERNE *SMOOTH SHOE INTERNAL WINGS*		CE	182
BSA	SCARPA LISCIA ALI ESTERNE *SMOOTH SHOE EXTERNAL WINGS*		CE	184

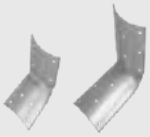
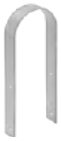
PORTAPILASTRI
POST BASES

HUT S-R	CAPPELLO PER PILASTRO QUADRATO E TONDO *CAP FOR SQUARE AND ROUND PILLAR*			190
M70 S	PORTAPILASTRO A SFONDARE QUADRATO *SQUARE SPIKED PILLAR-HOLDER*		ETA	190
M70 R	PORTAPILASTRO A SFONDARE ROTONDO *ROUND SPIKED PILLAR-HOLDER*		ETA	190
F20	PORTAPILASTRO A BICCHIERE ROTONDO *ROUND SLEEVE PILLAR-HOLDER*		ETA	191
FR20	PORTAPILASTRO A BICCHIERE ROTONDO MARRONE *BROWN ROUND SLEEVE PILLAR-HOLDER*		ETA	191
M53	PORTAPILASTRO CHIUSO CON BARRA *CLOSED POST BASE WITH BAR*			191
F11	PORTAPILASTRO A BICCHIERE CON BASE A SCOMPARSA *SLEEVE PILLAR-HOLDER WITH CONCEALED BASE*			192
F12	PORTAPILASTRO APERTO CON BASE A SCOMPARSA *OPEN PILLAR-HOLDER WITH CONCEALED BASE*			192
F51	PORTAPILASTRO APERTO QUADRATO *SQUARE OPEN PILLAR-HOLDER*			192
FD60	PORTAPILASTRO DOPPIO AD ALI ESTERNE *DOUBLE PILLAR-HOLDER WITH EXTERNAL WINGS*		CE	193
F69	PORTAPILASTRO APERTO *OPEN PILLAR-HOLDER*			193
FD70	PORTAPILASTRO UNIVERSALE *UNIVERSAL PILLAR-HOLDER*			193

PORTAPILASTRI
POST BASES

FD10	PORTAPILASTRO DOPPIO A BICCHIERE *DOUBLE SLEEVE PILLAR-HOLDER*		ETA	194
FD20	PORTAPILASTRO DOPPIO A BICCHIERE SPESSORE 4 mm *DOUBLE SLEEVE PILLAR-HOLDER WITH 4mm THICKNESS*		ETA	194
FDI20	PORTAPILASTRO DOPPIO A BICCHIERE INOX *STAINLESS STEEL DOUBLE SLEEVE PILLAR-HOLDER*			194
FD30	PORTAPILASTRO DOPPIO A "L" *DOUBLE "L" PILLAR-HOLDER*		CE	195
FD40	PORTAPILASTRO DOPPIO RIALZATO *DOUBLE ELEVATED PILLAR-HOLDER*		CE	195
FD50	PORTAPILASTRO DOPPIO AD ALI INTERNE *DOUBLE PILLAR-HOLDER WITH INTERNAL WINGS*		CE	195
F10	PORTAPILASTRO A BICCHIERE QUADRATO *SQUARE SLEEVE PILLAR-HOLDER*		ETA	196
FI10	PORTAPILASTRO A BICCHIERE QUADRATO INOX *STAINLESS STEEL SQUARE SLEEVE PILLAR-HOLDER*		ETA	196
F50	PORTAPILASTRO A BICCHIERE GRANDE MISURA *LARGE SIZE SLEEVE PILLAR-HOLDER*		ETA	196
FI50	PORTAPILASTRO A BICCHIERE QUADRATO INOX GRANDE MISURA *LARGE SIZE STAINLESS STEEL SQUARE SLEEVE PILLAR-HOLDER*		CE	197
FR50	PORTAPILASTRO A BICCHIERE QUADRATO MARRONE *BROWN SQUARE SLEEVE PILLAR-HOLDER*		ETA	197
FM50	PORTAPILASTRO A BICCHIERE QUADRATO GRIGIO *GREY SQUARE SLEEVE PILLAR-HOLDER*		ETA	197

PORTAPILASTRI
POST BASES

M10	PORTAPILASTRO A MURO *WALL-MOUNT PILLAR-HOLDER*		ETA	198
M20	PORTAPILASTRO A "U" *"U" PILLAR-HOLDER*		CE	198
M50	PORTAPILASTRO A "U" PER CALCESTRUZZO *"U" PILLAR-HOLDER FOR CONCRETE*		CE	198
M30	PORTAPILASTRO A STAFFA *BRACKET PILLAR-HOLDER*		CE	199
S40	PORTAPILASTRO INCLINABILE *INCLINABLE PILLAR-HOLDER*			199
BRACE F	PIASTRA A CERNIERA *HINGED PLATE*			199
ROUND	GIUNTI PER PALI TONDI *JOINTS FOR ROUND POLES*			200
ROUND "L"	GIUNTI A "L" PER PALI TONDI *"L" JOINTS FOR ROUND POLES*			200
ROUND "U"	GIUNTI A "U"PER PALI TONDI *"U" JOINTS FOR ROUND POLES*			200
GATE LATCH	CATENACCIO *SLIDING LOCK*			201
GATE HOOK	GANCIO PER CANCELLI *GATE PINTLE HINGE*			201
GATE HINGES	CERNIERA PER CASSE *HINGE*			201
GATE FLOOR	CHIUSURA A PAVIMENTO *CANE BOLT*			201

PORTAPILASTRI
POST BASES

GATE BAND	BANDELLA *STRAP*			201
TYP P10-P20	PORTAPILASTRO A TUBO DA ANNEGARE *EMBEDDED TUBULAR POST BASE*		CE	202
M51	PORTAPILASTRO A "U" PER CALCESTRUZZO *"U" PILLAR-HOLDER FOR CONCRETE*			205
M52	PORTAPILASTRO APERTO PER CALCESTRUZZO *OPEN PILLAR-HOLDER FOR CONCRETE*			205
M60	PORTAPILASTRO CON LAMA INTERNA PER CALCESTRUZZO *PILLAR-HOLDER WITH INTERNAL CORE FOR CONCRETE*		ETA	205
F70	PORTAPILASTRO A "T" CON LAMA INTERNA *"T" PILLAR-HOLDER WITH INTERNAL CORE*		CE	206
TYP R	PORTAPILASTRO REGOLABILE *ADJUSTABLE PILLAR-HOLDER*		CE	208
R40 L	PORTAPILASTRO REGOLABILE A BASE RETTANGOLARE *ADJUSTABLE PILLAR-HOLDER WITH RECTANGULAR BASE*		CE	211
R40 S	PORTAPILASTRO REGOLABILE A BASE QUADRATA *ADJUSTABLE PILLAR-HOLDER WITH SQUARE BASE*		CE	211
R70	PORTAPILASTRO REGOLABILE PER CALCESTRUZZO *ADJUSTABLE PILLAR-HOLDER FOR CONCRETE*		CE	211
TYP S50	PORTAPILASTRO AD ALTE RESISTENZE *HIGHLY-RESISTANT POST BASE*		CE	212
TYP X	PORTAPILASTRO A CROCE *CROSS-SHAPED PILLAR-HOLDER*		CE	214

ANCORANTI PER CALCESTRUZZO
ANCHORS FOR CONCRETE

VIN-FIX PRO	ANCORANTE CHIMICO VINILESTERE CE1 CATEGORIA SISMICA C1 (M12-M24) *VINYL ESTER CHEMICAL ANCHOR CE1 SEISMIC CATEGORY C1 (M12-M24)*		CE	220
EPO-FIX PLUS	ANCORANTE CHIMICO EPOSSIDICO CE1 CATEGORIA SISMICA C2 (M12-M16-M20) *EPOXY CHEMICAL ANCHOR CE1 SEISMIC CATEGORY C2 (M12-M16-M20)*		CE	220
SKR | SKS	ANCORANTI AVVITABILI *SCREW ANCHORS*		CE	221
ABS	ANCORANTE PESANTE CON FASCETTA CE1 - CATEGORIA SISMICA C2 *HEAVY ANCHOR WITH CE1 LOOP FASTENER - SEISMIC CATEGORY C2*		CE	224
AB1	ANCORANTE PESANTE CE1 - CATEGORIA SISMICA C2 (M12-M16) *CE1 HEAVY ANCHOR - SEISMIC CATEGORY C2 (M12-M16)*		CE	224
AB1-A4	ANCORANTE PESANTE CE1 - CATEGORIA SISMICA C1 *CE1 HEAVY ANCHOR - SEISMIC CATEGORY C1*		CE	224
AB7	ANCORANTE PESANTE CE7 *CE7 HEAVY ANCHOR*		CE	224
ABU	ANCORANTE PESANTE *HEAVY ANCHOR*			225
AHZ	ANCORANTE MEDIO PESANTE *MEDIUM HEAVY ANCHOR*			225
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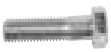
EKS	BULLONE TESTA ESAGONALE *HEXAGONAL HEAD BOLT*		DIN	231
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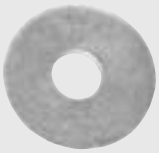
ULS 1052	RONDELLA XL RINFORZATA *REINFORCED XL WASHER*		DIN	233
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METRICO
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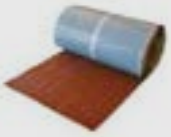
ALU RAPID	CONVERSA IN ALLUMINIO E BUTILE ADESIVO *ALUMINIUM VALLEY AND ADHESIVE BUTYL*		243
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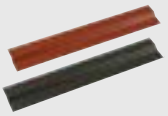
GUTTER	SCOSSALINA IN LAMIERA *SHEET METAL FLASHING*		244
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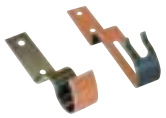
PEAK HOOK	GANCIO FERMACOLMO *PEAK HOOK*		247
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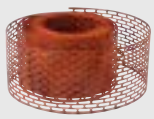
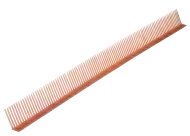
VENT GRILLE	GRIGLIA PARAPASSERI IN PVC *PVC BIRD SCREEN*		250
BIRD COMB EVO	PETTINE PARAPASSERI *EAVES BIRD COMB*		251
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MEMBRANES

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MEMBRANE
MEMBRANES

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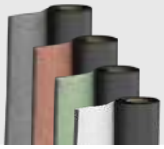
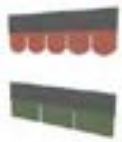
BYTUM SLATE 3500	MEMBRANA BITUMINOSA AUTOADESIVA ARDESIATA *SELF-ADHESIVE SLATED BITUMINOUS MEMBRANE*		CE	297
SHINGLE	TEGOLA BITUMINOSA *BITUMINOUS TILE*		CE	298
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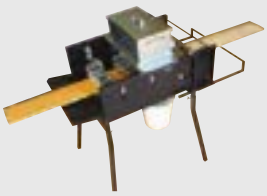
JELLY	IMPREGNATRICE PER ELEMENTI DI SEZIONE MAX. 300 x 90 mm *PAINTING MACHINE FOR ELEMENTS WITH SECTION MAX. 300 x 90 mm*		332
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CARPENTRY

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CARPENTERIA
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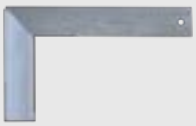
EMU	SQUADRA DA FALEGNAME IN ALLUMINIO *ALUMINIUM CARPENTER'S SQUARE*		357

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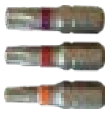
PORTAINSERTO *DRIVER BIT HOLDER*	CON FINE CORSA *WITH END STOP*		373
LAME *BLADES*			374
BIT	INSERTI TORX *TORX BITS*		375

REACH

REGISTRATION, EVALUATION, AUTHORISATION OF CHEMICALS

(CE n.1907/2006)

COS'È?

È il regolamento europeo per la gestione delle sostanze chimiche in quanto tali o in quanto componenti di **preparati** (miscele) e **articoli** (*rif. art.3 punti 2,3*). Questo regolamento attribuisce precise responsabilità ad ogni anello della catena di approvvigionamento riguardo la comunicazione e l'uso sicuro delle sostanze pericolose.

WHAT IS IT?

It's the European regulation for the management of chemical substances as such or as components of preparations (mixtures) and items (ref. Art. 3 points 2 and 3). This regulation attributes precise responsibilities to each link of the supply chain regarding the communication and safe use of hazardous substances.

A COSA SERVE?

Il REACH punta ad assicurare un elevato livello di protezione della salute umana e dell'ambiente. La nascita del REACH impone la raccolta e la diffusione di informazioni complete sui pericoli di alcune sostanze e l'uso sicuro di queste all'interno della catena di approvigionamento. Il regolamento prevede l'aggiornamento continuo delle informazioni ed il controllo da parte dell'agenzia europea delle sostanze chimiche ECHA (European Chemical Agency).

In particolare per l'utilizzatore questi concetti si traducono in:

- **SVHC - Substances Of Very High Concern**
  Lista di sostanze pericolose eventualmente contenute in **articoli**
- **SDS - Safety Data Sheet**
  Documento che porta le informazioni per la corretta gestione di ogni miscela **pericolosa**

WHAT'S IT FOR?

REACH aims to ensure a high level of human health and environmental protection. The introduction of REACH requires the collection and communication of complete information on the dangers of certain substances and their safe use within the supply chain. The regulation provides for continual updating of the information and control by ECHA (the European Chemicals Agency).

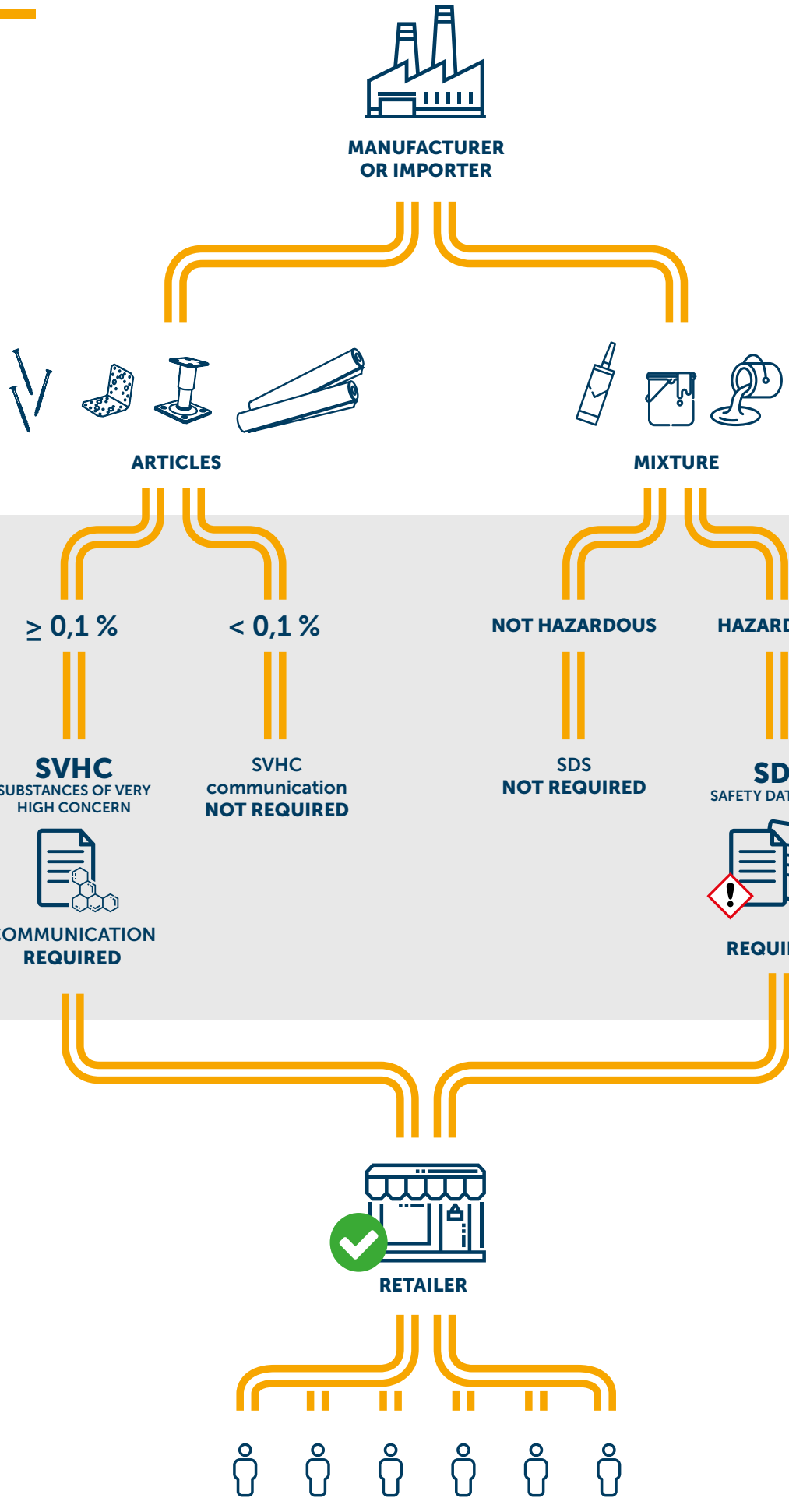
In particular, for users, these concepts translate into:

- ***SVHC - Substances Of Very High Concern***
  List of any hazardous substances contained in ***items***
- ***SDS - Safety Data Sheet***
  Document that contains the information for correct management of every ***hazardous*** mixture

Abbiamo inserito la **conformità REACH** tra i parametri di **selezione dei nostri prodotti** e **processi produttivi.** In questo modo possiamo garantire elevati standard qualitativi in termini di tutela della salute e dell'ambiente.

*We have added **REACH** compliance among **the selection parameters for our products** and **production processes.** In this way, we can guarantee high quality standards in terms of health and environmental protection.*

REACH


MANUFACTURER
OR IMPORTER
ARTICLES
MIXTURE
PRODUCTS
≥ 0,1 %
< 0,1 %
NOT HAZARDOUS
HAZARDOUS
SVHC
SUBSTANCES OF VERY
HIGH CONCERN
SVHC
communication
NOT REQUIRED
SDS
NOT REQUIRED
SDS
SAFETY DATA SHEET
COMMUNICATION
REQUIRED
REQUIRED
REACH REGULATION
RETAILER
MARKET

Make it easy.

FISSAGGIO PER COSTRUZIONI IN LEGNO

FASTENING FOR TIMBER CONSTRUCTIONS

VITI PER STRUTTURE
SCREWS FOR STRUCTURES

38 HTS-HT

40 TPP

41 TPP AISI410

42 SNK

48 SCH-H

54 TLL

58 HBS EVO

59 TBS EVO

60 KOP

62 MBS

63

THERMOWASHER

63

ISULFIX

64

GWZ

70

DWZ

74

CLC

84

SBD-HT

88

STA

HTS-HT

INCLUDED

CE
EN 14592

VITE FILETTO TOTALE PER FALEGNAMERIA
TOTAL THREAD SCREW FOR WOODWORK

20% di parte liscia per accoppiamento pannelli
20% smooth part for panel coupling

Senza RIBS sottotesta
Without under-head RIBS

Impronta TX
TX impression

Accoppiamento ideale MDF - legno
Ideal MDF-wood coupling

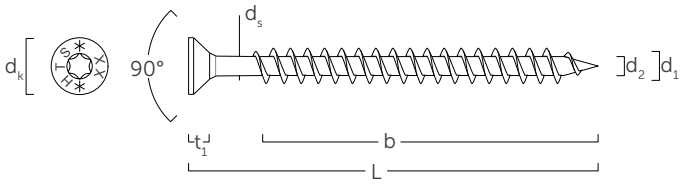
CODICI E DIMENSIONI
CODES AND DIMENSIONS

HTS-HT ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
HTS-HT BRIGHT ZINC PLATED CARBON STEEL

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
3 TX 10	**HTS312H**	12	6	500
	HTS316H	16	10	500
	HTS320H	20	14	500
	HTS325H	25	19	500
	HTS330H	30	24	500
3,5 TX 15	**HTS3516H**	16	10	500
	HTS3520H	20	14	500
	HTS3525H	25	19	500
	HTS3530H	30	24	500
	HTS3535H	35	27	200
	HTS3540H	40	32	200
	HTS3550H	50	42	200
4 TX 20	**HTS420H**	20	14	500
	HTS425H	25	19	500
	HTS430H	30	24	500
	HTS440H	40	32	200
	HTS450H	50	42	200

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
4,5 TX 20	**HTS4530H**	30	24	200
	HTS4540H	40	32	200
	HTS4545H	45	37	200
	HTS4550H	50	42	200
5 TX 25	**HTS530H**	30	24	200
	HTS540H	40	32	200
	HTS550H	50	42	200
	HTS560H	60	50	100
	HTS570H	70	60	100
	HTS580H	80	70	100

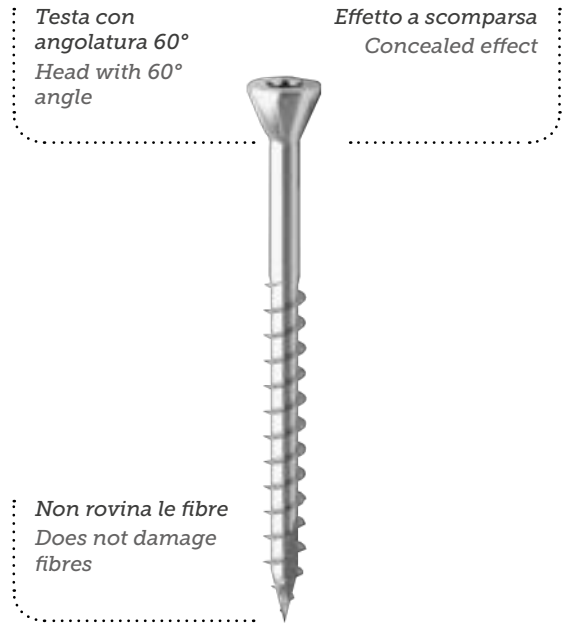
GEOMETRIA
GEOMETRY



diametro nominale ***nominal diameter***	d_1	[mm]	3	3,5	4	4,5	5
diametro testa *head diameter*	d_k	[mm]	6,00	7,00	8,00	8,80	9,70
diametro nocciolo *tip diameter*	d_2	[mm]	2,00	2,20	2,50	2,80	3,20
diametro gambo *shank diameter*	d_s	[mm]	2,20	2,45	2,75	3,20	3,65
spessore testa *head thickness*	t_1	[mm]	2,20	2,40	2,70	2,80	2,80
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	2,0	2,0	2,5	2,5	3,0
momento caratteristico di snervamento *characteristic yield moment*	$M_{y,k}$	[Nmm]	2168	2676	3752	5813	8801
parametro caratteristico di resistenza ad estrazione *characteristic withdrawal-resistance parameter*	$f_{ax,k}$	[N/mm²]	18,5	17,9	17,1	17,0	15,5
densità associata *associated density*	ρ_a	[kg/m³]	350	350	350	350	350
parametro caratteristico di penetrazione della testa *characteristic head-pull-through parameter*	$f_{head,k}$	[N/mm²]	26,0	25,1	24,1	23,1	22,5
densità associata *associated density*	ρ_a	[kg/m³]	350	350	350	350	350
resistenza caratteristica a trazione *characteristic tensile strength*	$f_{tens,k}$	[kN]	4,2	4,5	5,5	7,8	11,0

TPP

VITE TESTA PICCOLA
SMALL HEAD SCREW

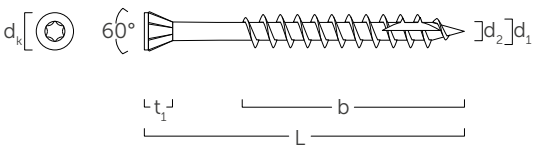


CODICI E DIMENSIONI
CODES AND DIMENSIONS

TPP ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
TPP BRIGHT ZINC PLATED CARBON STEEL

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
3,5 TX 10	**TPP3530**	30	20	10	500
	TPP3540	40	26	14	500
	TPP3550	50	34	16	500

GEOMETRIA
GEOMETRY

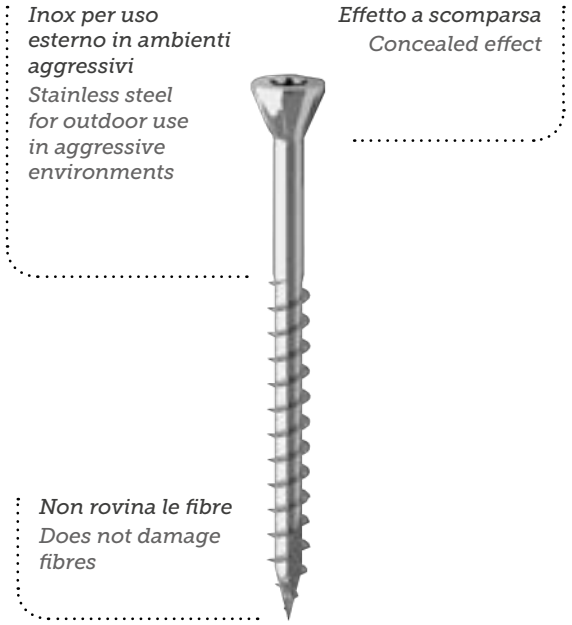


diametro nominale ***nominal diameter***	**d_1**	**[mm]**	**3,5**
diametro testa *head diameter*	d_k	[mm]	5,75
diametro nocciolo *tip diameter*	d_2	[mm]	2,3
spessore testa *head thickness*	t_1	[mm]	4,00
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	2,0

AISI 410 INCLUDED

TPP AISI410

VITE TESTA PICCOLA
SMALL HEAD SCREW

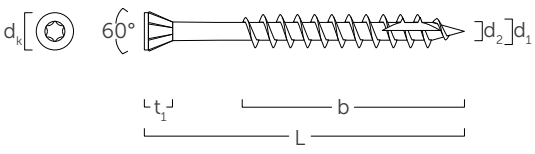


CODICI E DIMENSIONI
CODES AND DIMENSIONS

TPP ACCIAIO INOSSIDABILE AISI 410
TPP STAINLESS STEEL AISI 410

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
3,5 TX 10	**TPP3540AS**	40	26	14	500
	TPP3550AS	50	34	16	500

GEOMETRIA
GEOMETRY



diametro nominale *nominal diameter*	**d_1**	**[mm]**	**3,5**
diametro testa *head diameter*	d_k	[mm]	5,75
diametro nocciolo *tip diameter*	d_2	[mm]	2,3
spessore testa *head thickness*	t_1	[mm]	4,00
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	2,0

SNK

INCLUDED

CE
ETA 11/0030

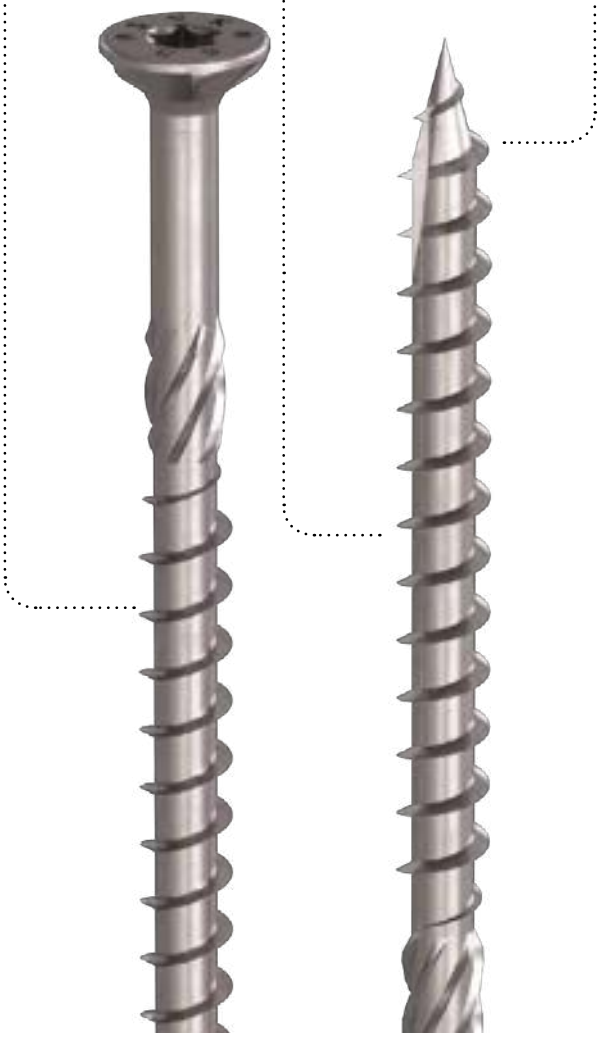
VITE BIANCA PER LEGNO TESTA SVASATA
WHITE COUNTERSUNK HEAD SCREW FOR WOOD

Certificata anche per avvitamento parallelo alla fibra (0°-90°)
Certified also for screwing parallel to the fibre (0°-90°)

Informazioni complete sulla testa
Complete information on the head

Filetto a ombrello
Umbrella thread

Eccellente resistenza a rottura e snervamento
Excellent resistance to failure and yielding



CODICI E DIMENSIONI
CODES AND DIMENSIONS

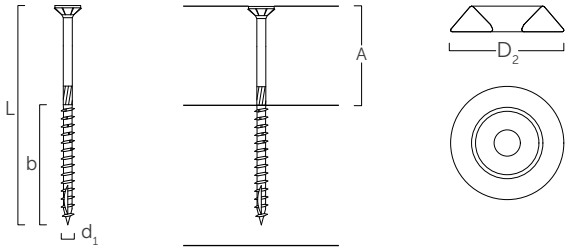
SNK ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
SNK BRIGHT ZINC PLATED CARBON STEEL

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
3,5 TX15	**SNK3540**	40	18	22	400
	SNK3550	50	24	26	400
4 TX20	**SNK440**	40	24	16	400
	SNK445	45	30	15	400
	SNK450	50	30	20	400
	SNK460	60	35	25	200
	SNK470	70	40	30	400
4,5 TX20	**SNK4540**	40	24	16	400
	SNK4545	45	30	15	400
	SNK4550	50	30	20	200
	SNK4560	60	35	25	200
	SNK4570	70	40	30	200
	SNK4580	80	40	40	200
5 TX25	**SNK550**	50	24	26	200
	SNK560	60	30	30	200
	SNK570	70	35	35	100
	SNK580	80	40	40	100
	SNK590	90	45	45	100
	SNK5100	100	50	50	100
	SNK5120	120	60	60	100
6 TX30	**SNK660**	60	30	30	100
	SNK670	70	40	30	100
	SNK680	80	40	40	100
	SNK690	90	50	40	100
	SNK6100	100	50	50	100
	SNK6120	120	60	60	100
	SNK6140	140	75	65	100
	SNK6160	160	75	85	100
	SNK6180	180	75	105	100
	SNK6200	200	75	125	100
	SNK6220	220	75	145	100
	SNK6240	240	75	165	100
	SNK6260	260	75	185	100
	SNK6280	280	75	205	100
	SNK6300	300	75	225	100

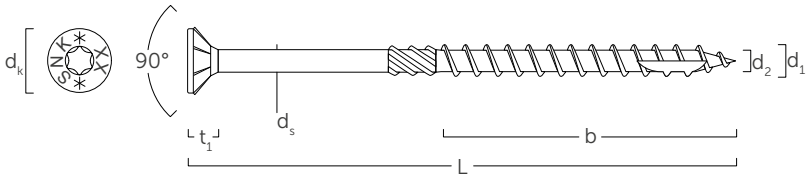
d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
8 TX40	**SNK880**	80	52	28	100
	SNK8100	100	52	48	100
	SNK8120	120	60	60	100
	SNK8140	140	60	80	100
	SNK8160	160	80	80	100
	SNK8180	180	80	100	100
	SNK8200	200	80	120	100
	SNK8220	220	80	140	100
	SNK8240	240	80	160	100
	SNK8260	260	80	180	100
	SNK8280	280	80	200	100
	SNK8300	300	100	200	100
	SNK8320	320	100	220	100
	SNK8340	340	100	240	100
	SNK8360	360	100	260	100
	SNK8380	380	100	280	100
	SNK8400	400	100	300	100
10 TX40	**SNK10100**	100	52	48	50
	SNK10120	120	60	60	50
	SNK10140	140	60	80	50
	SNK10160	160	80	80	50
	SNK10180	180	80	100	50
	SNK10200	200	80	120	50
	SNK10220	220	80	140	50
	SNK10240	240	80	160	50
	SNK10260	260	80	180	50
	SNK10280	280	80	200	50
	SNK10300	300	100	200	50
	SNK10320	320	100	220	50
	SNK10340	340	100	240	50
	SNK10360	360	100	260	50
	SNK10380	380	100	280	50
	SNK10400	400	100	300	50

RONDELLA TORNITA
TURNED WASHER

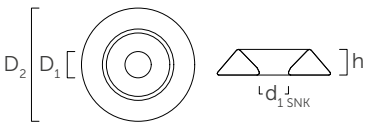
CODICE *CODE*	$d_{1\ SNK}$ [mm]	D_2 [mm]	
HUS6	6	20	100
SHT8	8	25	50
SHT10	10	32	50



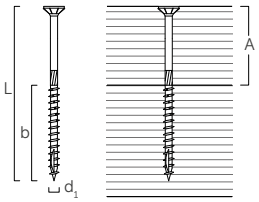
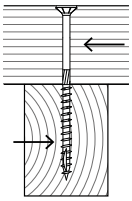
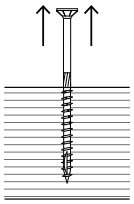
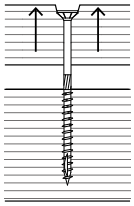
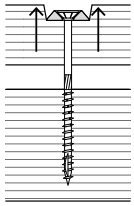
GEOMETRIA E CARATTERISTICHE MECCANICHE
GEOMETRY AND MECHANICAL CHARACTERISTICS



diametro nominale ***nominal diameter***	**d_1**	**[mm]**	**3,5**	**4**	**4,5**	**5**	**6**	**8**	**10**
diametro testa *head diameter*	d_k	[mm]	7,00	8,00	9,00	10,00	12,00	14,50	18,25
diametro nocciolo *tip diameter*	d_2	[mm]	2,25	2,55	2,80	3,40	3,95	5,40	6,40
diametro gambo *shank diameter*	d_s	[mm]	2,45	2,75	3,15	3,65	4,30	5,80	7,00
spessore testa *head thickness*	t_1	[mm]	2,20	2,80	2,80	3,10	4,50	4,50	5,80
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	2,0	2,5	3,0	3,0	4,0	5,0	6,0
momento caratteristico di snervamento *characteristic yield moment*	$M_{y,k}$	[Nmm]	2143	3033	4119	5417	9494	20057	35830
parametro caratteristico di resistenza ad estrazione *characteristic withdrawal-resistance parameter*	$f_{ax,k}$	[N/mm²]	11,7	11,7	11,7	11,7	11,7	11,7	11,7
parametro caratteristico di penetrazione della testa *characteristic head-pull-through parameter*	$f_{head,k}$	[N/mm²]	10,5	10,5	10,5	10,5	10,5	10,5	10,5
resistenza caratteristica a trazione *characteristic tensile strength*	$f_{tens,k}$	[kN]	3,8	5,0	6,4	7,9	11,3	20,1	31,4

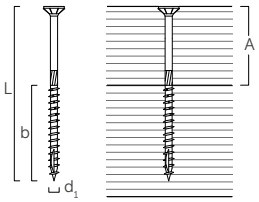
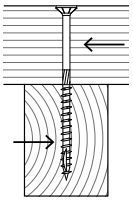
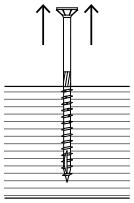
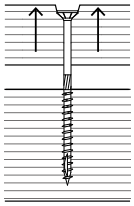
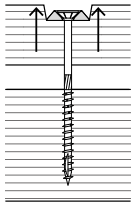


diametro nominale vite ***nominal screw diameter***	**$d_{1\ SNK}$**	**[mm]**	**6**	**8**	**10**
diametro interno *internal diameter*	D_1	[mm]	7,5	8,5	11,0
diametro esterno *external diameter*	D_2	[mm]	20,0	25,0	32,0
altezza *height*	h	[mm]	4,0	5,0	6,0

				TAGLIO *SHEAR*	TRAZIONE *TENSION*		
geometria *geometry*				legno-legno *timber-to-timber*	estrazione filetto[1] *thread withdrawal* [1]	penetrazione testa *head pull-through*	penetrazione testa con rondella *head pull-through with washer*
							
d_1 [mm]	L [mm]	b [mm]	A [mm]	$R_{V,k}$ [kN]	$R_{ax,k}$ [kN]	$R_{head,k}$ [kN]	$R_{head,k}$ [kN]
3,5	40	18	22	0,73	0,80	0,56	
	50	24	26	0,79	1,06	0,56	
4	40	24	16	0,83	1,21	0,73	-
	45	30	15	0,81	1,52	0,73	-
	50	30	20	0,91	1,52	0,73	-
	60	35	25	1,00	1,77	0,73	-
	70	40	30	1,00	2,02	0,73	-
4,5	40	24	16	0,98	1,36	0,92	-
	45	30	15	0,96	1,70	0,92	-
	50	30	20	1,06	1,70	0,92	-
	60	35	25	1,19	1,99	0,92	-
	70	40	30	1,22	2,27	0,92	-
	80	40	40	1,22	2,27	0,92	-
5	50	24	26	1,29	1,52	1,13	-
	60	30	30	1,46	1,89	1,13	-
	70	35	35	1,46	2,21	1,13	-
	80	40	40	1,46	2,53	1,13	-
	90	45	45	1,46	2,84	1,13	-
	100	50	50	1,46	3,16	1,13	-
	120	60	60	1,46	3,79	1,13	-
6	60	30	30	1,78	2,27	1,63	4,53
	70	40	30	1,88	3,03	1,63	4,53
	80	40	40	2,07	3,03	1,63	4,53
	90	50	40	2,07	3,79	1,63	4,53
	100	50	50	2,07	3,79	1,63	4,53
	120	60	60	2,07	4,55	1,63	4,53
	140	75	65	2,07	5,68	1,63	4,53
	160	75	85	2,07	5,68	1,63	4,53
	180	75	105	2,07	5,68	1,63	4,53
	200	75	125	2,07	5,68	1,63	4,53
	220	75	145	2,07	5,68	1,63	4,53
	240	75	165	2,07	5,68	1,63	4,53
	260	75	185	2,07	5,68	1,63	4,53
	280	75	205	2,07	5,68	1,63	4,53
	300	75	225	2,07	5,68	1,63	4,53

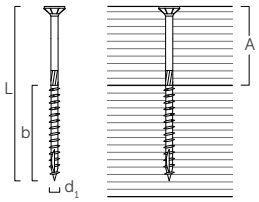
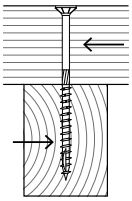
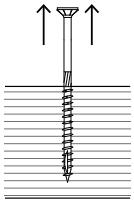
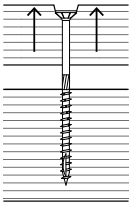
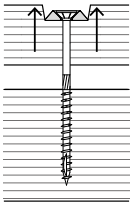
NOTE
NOTES

[1] La resistenza assiale ad estrazione del filetto è stata valutata considerando un angolo di 90° fra le fibre ed il connettore e per una lunghezza di infissione pari a b.
The axial thread withdrawal resistance was calculated considering a 90° angle between the grain and the connector and for a fixing length of b.

				TAGLIO *SHEAR*	TRAZIONE *TENSION*		
geometria *geometry*				legno-legno *timber-to-timber*	estrazione filetto[1] *thread withdrawal* [1]	penetrazione testa *head pull-through*	penetrazione testa con rondella *head pull-through with washer*
							
d_1 [mm]	L [mm]	b [mm]	A [mm]	$R_{V,k}$ [kN]	$R_{ax,k}$ [kN]	$R_{head,k}$ [kN]	$R_{head,k}$ [kN]
8	80	52	28	2,59	5,25	2,38	7,08
	100	52	48	3,28	5,25	2,38	7,08
	120	60	60	3,28	6,06	2,38	7,08
	140	60	80	3,28	6,06	2,38	7,08
	160	80	80	3,28	8,08	2,38	7,08
	180	80	100	3,28	8,08	2,38	7,08
	200	80	120	3,28	8,08	2,38	7,08
	220	80	140	3,28	8,08	2,38	7,08
	240	80	160	3,28	8,08	2,38	7,08
	260	80	180	3,28	8,08	2,38	7,08
	280	80	200	3,28	8,08	2,38	7,08
	300	100	200	3,28	10,10	2,38	7,08
	320	100	220	3,28	10,10	2,38	7,08
	340	100	240	3,28	10,10	2,38	7,08
	360	100	260	3,28	10,10	2,38	7,08
	380	100	280	3,28	10,10	2,38	7,08
	400	100	300	3,28	10,10	2,38	7,08

NOTE
NOTES

[1] La resistenza assiale ad estrazione del filetto è stata valutata considerando un angolo di 90° fra le fibre ed il connettore e per una lunghezza di infissione pari a b.
The axial thread withdrawal resistance was calculated considering a 90° angle between the grain and the connector and for a fixing length of b.

				TAGLIO *SHEAR*	TRAZIONE *TENSION*		
geometria *geometry*				legno-legno *timber-to-timber*	estrazione filetto[1] *thread withdrawal* [1]	penetrazione testa *head pull-through*	penetrazione testa con rondella *head pull-through with washer*
							
d_1 [mm]	L [mm]	b [mm]	A [mm]	$R_{V,k}$ [kN]	$R_{ax,k}$ [kN]	$R_{head,k}$ [kN]	$R_{head,k}$ [kN]
10	100	52	48	4,22	6,57	3,77	11,60
	120	60	60	4,82	7,58	3,77	11,60
	140	60	80	4,82	7,58	3,77	11,60
	160	80	80	4,82	10,10	3,77	11,60
	180	80	100	4,82	10,10	3,77	11,60
	200	80	120	4,82	10,10	3,77	11,60
	220	80	140	4,82	10,10	3,77	11,60
	240	80	160	4,82	10,10	3,77	11,60
	260	80	180	4,82	10,10	3,77	11,60
	280	80	200	4,82	10,10	3,77	11,60
	300	100	200	4,82	12,63	3,77	11,60
	320	100	220	4,82	12,63	3,77	11,60
	340	100	240	4,82	12,63	3,77	11,60
	360	100	260	4,82	12,63	3,77	11,60
	380	100	280	4,82	12,63	3,77	11,60
	400	100	300	4,82	12,63	3,77	11,60

NOTE
NOTES

[1] La resistenza assiale ad estrazione del filetto è stata valutata considerando un angolo di 90° fra le fibre ed il connettore e per una lunghezza di infissione pari a b.
The axial thread withdrawal resistance was calculated considering a 90° angle between the grain and the connector and for a fixing length of b.

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono in accordo a ETA-11/0030.
  Characteristic values according to ETA-11/0030.
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_k \cdot k_{mod}}{\gamma_m}$$

  I coefficienti γ_m e k_{mod} sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  The coefficients γ_m and k_{mod} should be taken according to the current regulations used for the calculation.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 385 kg/m³.
  The calculation process used a timber characteristic density of ρ_k = 385 kg/m³.
- I valori sono stati calcolati considerando la parte filettata completamente inserita nell'elemento ligneo.
  Values were calculated considering the threaded part as being completely inserted into the wood.
- Il dimensionamento e la verifica degli elementi in legno devono essere svolti a parte.
  Dimensioning and verification of the timber elements must be carried out separately.

SCH-H

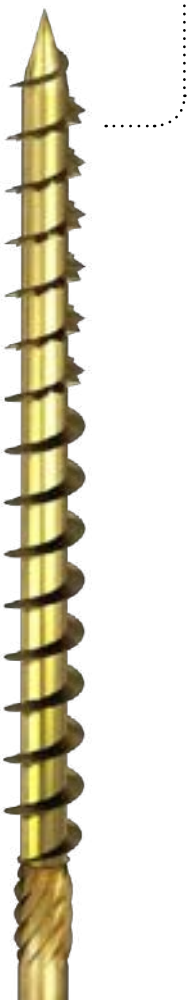
CE
EN 14592

VITE GIALLA PER LEGNO TESTA SVASATA
YELLOW COUNTERSUNK HEAD SCREW FOR WOOD

Zincatura gialla
Yellow galvanising

Lunghezza filetto maggiorata per una miglior chiusura del giunto
Thread length increased for better closure of the joint

Speciale punta autoforante SAW
Special self-perforating SAW tip



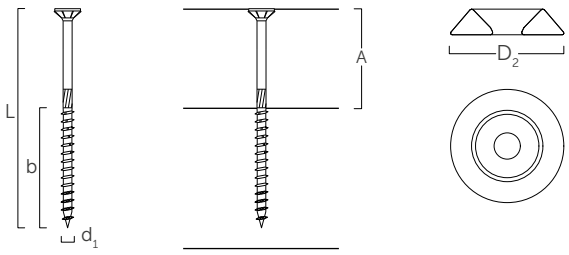
SCH-H ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA GIALLA
SCH-H YELLOW ZINC PLATED CARBON STEEL

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
4 TX20	**SCHH440**	40	24	16	500
	SCHH450	50	30	20	400
	SCHH460	60	35	25	200
	SCHH470	70	40	30	200
	SCHH480	80	40	40	200
4,5 TX20	**SCHH4540**	40	24	16	400
	SCHH4550	50	30	20	200
	SCHH4560	60	35	25	200
	SCHH4570	70	40	30	200
	SCHH4580	80	40	40	200
5 TX25	**SCHH540**	40	24	16	200
	SCHH550	50	30	20	200
	SCHH560	60	35	25	200
	SCHH570	70	40	30	200
	SCHH580	80	50	30	100
	SCHH590	90	55	35	100
	SCHH5100	100	60	40	100
	SCHH5120	120	60	60	100
6 TX30	**SCHH660**	60	35	25	100
	SCHH680	80	50	30	100
	SCHH6100	100	60	40	100
	SCHH6120	120	75	45	100
	SCHH6140	140	80	60	100
	SCHH6160	160	90	70	100
	SCHH6180	180	100	80	100
	SCHH6200	200	100	100	100
	SCHH6220	220	100	120	100
	SCHH6240	240	100	140	100
	SCHH6260	260	100	160	100
	SCHH6280	280	100	180	100
	SCHH6300	300	100	200	100

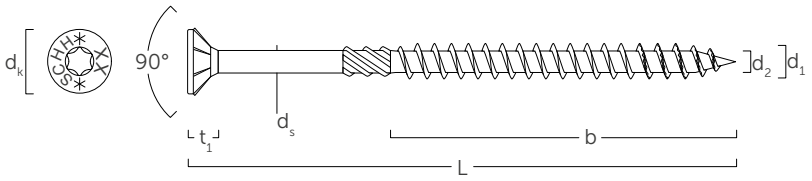
d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
8 TX40	**SCHH8100**	100	60	40	100
	SCHH8120	120	80	40	100
	SCHH8140	140	80	60	100
	SCHH8160	160	90	70	100
	SCHH8180	180	90	90	100
	SCHH8200	200	100	100	100
	SCHH8220	220	100	120	100
	SCHH8240	240	100	140	100
	SCHH8260	260	100	160	100
	SCHH8280	280	100	180	100
	SCHH8300	300	100	200	100
	SCHH8320	320	100	220	100
	SCHH8340	340	100	240	100
	SCHH8360	360	100	260	100

RONDELLA TORNITA GIALLA
YELLOW TURNED WASHER

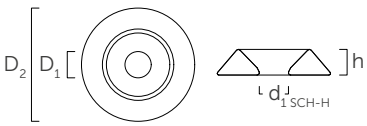
CODICE *CODE*	$d_{1\ SCH-H}$ [mm]	D_2 [mm]	
SUS6H	6	20	100
SUS8H	8	25	50



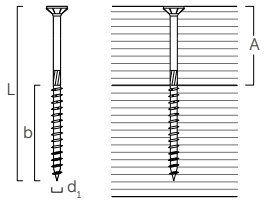
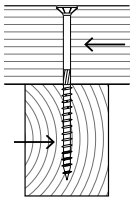
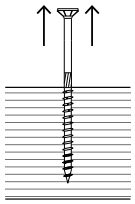
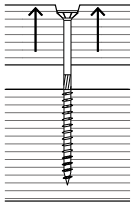
GEOMETRIA E CARATTERISTICHE MECCANICHE
GEOMETRY AND MECHANICAL CHARACTERISTICS



diametro nominale ***nominal diameter***	**d_1**	**[mm]**	**4**	**4,5**	**5**	**6**	**8**
diametro testa *head diameter*	d_k	[mm]	8,00	9,00	10,00	12,00	14,50
diametro nocciolo *tip diameter*	d_2	[mm]	2,55	2,80	3,40	3,95	5,40
diametro gambo *shank diameter*	d_s	[mm]	2,75	3,15	3,65	4,30	5,80
spessore testa *head thickness*	t_1	[mm]	2,80	2,80	3,10	4,50	4,50
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	2,5	3,0	3,0	4,0	5,0
momento caratteristico di snervamento *characteristic yield moment*	$M_{y,k}$	[Nmm]	-	-	6912	10673	22219
parametro caratteristico di resistenza ad estrazione *characteristic withdrawal-resistance parameter*	$f_{ax,k}$	[N/mm^2]	-	-	13,9	14,7	14,7
densità associata *associated density*	ρ_a	[kg/m^3]	-	-	350	350	350
parametro caratteristico di penetrazione della testa *characteristic head-pull-through parameter*	$f_{head,k}$	[N/mm^2]	-	-	18,9	15,0	15,3
densità associata *associated density*	ρ_a	[kg/m^3]	-	-	350	350	350
resistenza caratteristica a trazione *characteristic tensile strength*	$f_{tens,k}$	[kN]	-	-	10,5	13,5	19,6



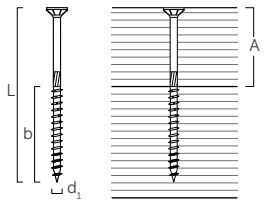
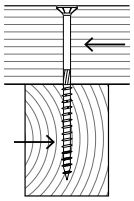
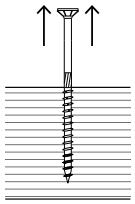
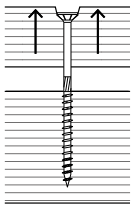
diametro nominale vite ***nominal screw diameter***	**$d_{1\,SCH-H}$**	**[mm]**	**6**	**8**
diametro interno *internal diameter*	D_1	[mm]	7,5	8,5
diametro esterno *external diameter*	D_2	[mm]	20,0	25,0
altezza *height*	h	[mm]	4,0	5,0

				TAGLIO *SHEAR*	TRAZIONE *TENSION*	
geometria *geometry*				legno-legno *timber-to-timber*	estrazione filetto[1] *thread withdrawal* [1]	penetrazione testa *head pull-through*
						
d_1 [mm]	L [mm]	b [mm]	A [mm]	$R_{V,k}$ [kN]	$R_{ax,k}$ [kN]	$R_{head,k}$ [kN]
5	40	24	16	1,12	1,80	2,04
	50	30	20	1,35	2,25	2,04
	60	35	25	1,46	2,63	2,04
	70	40	30	1,56	3,00	2,04
	80	50	30	1,56	3,75	2,04
	90	55	35	1,66	4,13	2,04
	100	60	40	1,71	4,50	2,04
	120	60	60	1,71	4,50	2,04
6	60	35	25	1,70	3,33	2,33
	80	50	30	1,84	4,76	2,33
	100	60	40	2,08	5,71	2,33
	120	75	45	2,16	7,14	2,33
	140	80	60	2,16	7,62	2,33
	160	90	70	2,16	8,57	2,33
	180	100	80	2,16	9,52	2,33
	200	100	100	2,16	9,52	2,33
	220	100	120	2,16	9,52	2,33
	240	100	140	2,16	9,52	2,33
	260	100	160	2,16	9,52	2,33
	280	100	180	2,16	9,52	2,33
	300	100	200	2,16	9,52	2,33

NOTE
NOTES

[1] La resistenza assiale ad estrazione del filetto è stata valutata considerando un angolo di 90° fra le fibre ed il connettore e per una lunghezza di infissione pari a b.
The axial thread withdrawal resistance was calculated considering a 90° angle between the grain and the connector and for a fixing length of b.

VALORI STATICI
STATIC VALUES

				TAGLIO *SHEAR*	TRAZIONE *TENSION*	
geometria *geometry*				legno-legno *timber-to-timber*	estrazione filetto[1] *thread withdrawal* [1]	penetrazione testa *head pull-through*
						
d_1 [mm]	L [mm]	b [mm]	A [mm]	$R_{V,k}$ [kN]	$R_{ax,k}$ [kN]	$R_{head,k}$ [kN]
8	100	60	40	2,92	7,62	3,47
	120	80	40	2,92	10,15	3,47
	140	80	60	3,39	10,15	3,47
	160	90	70	3,39	11,42	3,47
	180	90	90	3,39	11,42	3,47
	200	100	100	3,39	12,69	3,47
	220	100	120	3,39	12,69	3,47
	240	100	140	3,39	12,69	3,47
	260	100	160	3,39	12,69	3,47
	280	100	180	3,39	12,69	3,47
	300	100	200	3,39	12,69	3,47
	320	100	220	3,39	12,69	3,47
	340	100	240	3,39	12,69	3,47
	360	100	260	3,39	12,69	3,47

NOTE
NOTES

[1] La resistenza assiale ad estrazione del filetto è stata valutata considerando un angolo di 90° fra le fibre ed il connettore e per una lunghezza di infissione pari a b.
The axial thread withdrawal resistance was calculated considering a 90° angle between the grain and the connector and for a fixing length of b.

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono secondo normativa EN 1995:2014.
  Characteristic values according to EN 1995:2014.
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_k \cdot k_{mod}}{\gamma_m}$$

  I coefficienti γ_m e k_{mod} sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  The coefficients γ_m and k_{mod} should be taken according to the current regulations used for the calculation.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 385 kg/m^3.
  The calculation process used a timber characteristic density of ρ_k = 385 kg/m^3.
- Il dimensionamento e la verifica degli elementi in legno devono essere svolti a parte.
  Dimensioning and verification of the timber elements must be carried out separately.
- Le resistenze caratteristiche a taglio sono valutate per viti inserite senza preforo; nel caso di viti inserite con preforo è possibile ottenere valori di resistenza maggiori.
  The shear characteristic resistances are calculated for screws inserted without pre-drilling holes. In the case of screws inserted with pre-drilling holes, greater resistance values can be obtained.

TLL

INCLUDED

CE
ETA 11/0030

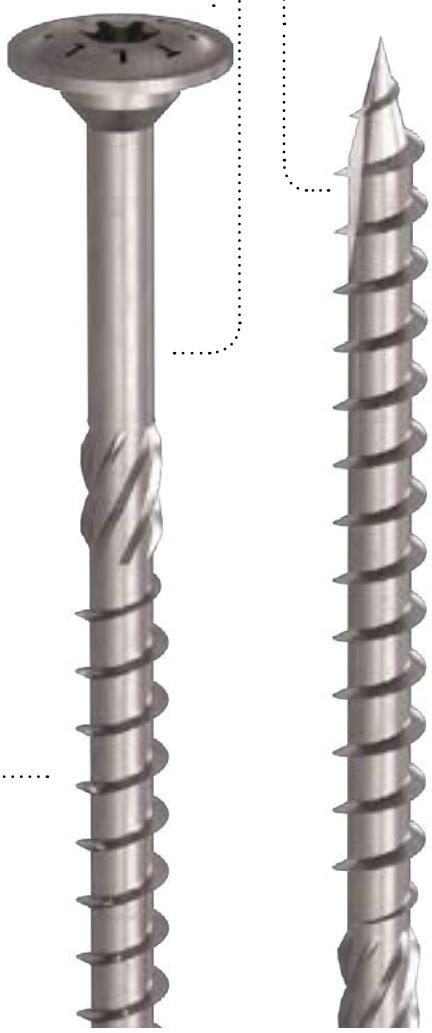
VITE BIANCA PER LEGNO TESTA LARGA
WHITE FLANGE-HEAD SCREW FOR WOOD

Filetto ad ombrello per elevata resistenza ad estrazione
Umbrella thread for high resistance to withdrawal

Stringe bene gli elementi
Suitably tightens elements

Avvitamento facile e veloce
Quick and easy to screw

Rondella integrata
Built-in washer



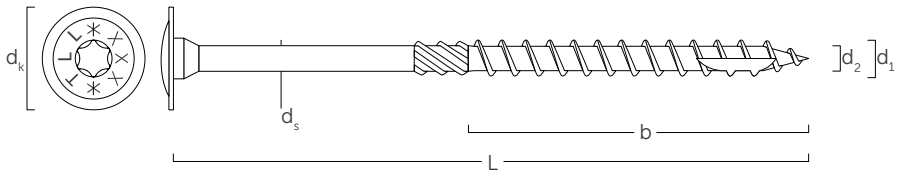
CODICI E DIMENSIONI
CODES AND DIMENSIONS

TLL ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
TLL BRIGHT ZINC PLATED CARBON STEEL

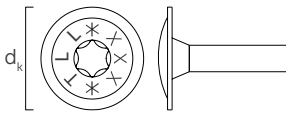
d_1 [mm]	d_k [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
6 TX30	15,5	**TLL680**	80	50	30	100
		TLL6100	100	60	40	100
		TLL6120	120	75	45	100
		TLL6140	140	75	65	100
		TLL6160	160	75	85	100
		TLL6180	180	75	105	100
		TLL6200	200	75	125	100
8 TX40	19	**TLL860**	60	52	10	100
		TLL880	80	52	28	50
		TLL8100	100	52	20	50
		TLL8120	120	80	40	50
		TLL8140	140	80	60	50
		TLL8160	160	100	60	50
		TLL8180	180	100	80	50
		TLL8200	200	100	100	50
		TLL8220	220	100	120	50

d_1 [mm]	d_k [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
8 TX40	19	**TLL8240**	240	100	140	50
		TLL8260	260	100	160	50
		TLL8280	280	100	180	50
		TLL8300	300	100	200	50
		TLL8320	320	100	220	50
		TLL8340	340	100	240	50
		TLL8360	360	100	260	50
		TLL8380	380	100	280	50
		TLL8400	400	100	300	50
10 TX50	25	**TLL10160**	160	80	80	50
		TLL10200	200	100	100	50
		TLL10240	240	100	140	50
		TLL10280	280	100	180	50
		TLL10320	320	120	220	50
		TLL10360	360	120	260	50
		TLL10400	400	120	300	50

GEOMETRIA E CARATTERISTICHE MECCANICHE
GEOMETRY AND MECHANICAL CHARACTERISTICS

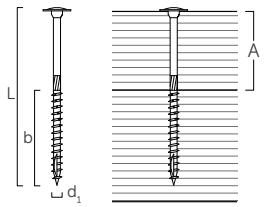
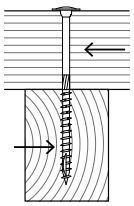
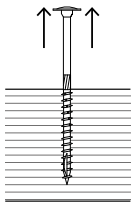
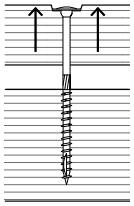


TLL Ø6-Ø8



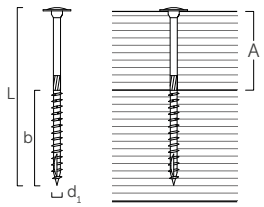
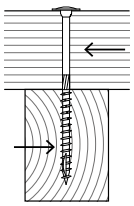
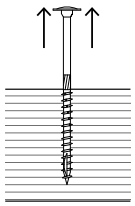
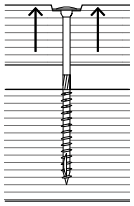
TLL Ø10

diametro nominale ***nominal diameter***	d_1	[mm]	6	8	10
diametro testa *head diameter*	d_k	[mm]	15,50	19,00	25,00
diametro nocciolo *tip diameter*	d_2	[mm]	3,95	5,40	6,40
diametro gambo *shank diameter*	d_s	[mm]	4,30	5,80	7,00
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	4,0	5,0	6,0
momento caratteristico di snervamento *characteristic yield moment*	$M_{y,k}$	[Nmm]	9494	20057	35830
parametro caratteristico di resistenza ad estrazione *characteristic withdrawal-resistance parameter*	$f_{ax,k}$	[N/mm²]	11,7	11,7	11,7
parametro caratteristico di penetrazione della testa *characteristic head-pull-through parameter*	$f_{head,k}$	[N/mm²]	10,5	10,5	10,5
resistenza caratteristica a trazione *characteristic tensile strength*	$f_{tens,k}$	[kN]	11,3	20,1	31,4

				TAGLIO *SHEAR*	TRAZIONE *TENSION*	
geometria *geometry*				legno-legno *timber-to-timber*	estrazione filetto[1] *thread withdrawal* [1]	penetrazione testa *head pull-through*
						
d_1 [mm]	L [mm]	b [mm]	A [mm]	$R_{V,k}$ [kN]	$R_{ax,k}$ [kN]	$R_{head,k}$ [kN]
6	80	50	30	2,15	3,79	2,72
	100	60	40	2,35	4,55	2,72
	120	75	45	2,35	5,68	2,72
	140	75	65	2,35	5,68	2,72
	160	75	85	2,35	5,68	2,72
	180	75	105	2,35	5,68	2,72
	200	75	125	2,35	5,68	2,72
8	60	52	8	1,08	5,25	4,09
	80	52	28	3,02	5,25	4,09
	100	80	20	2,71	8,08	4,09
	120	80	40	3,41	8,08	4,09
	140	80	60	3,70	8,08	4,09
	160	100	60	3,70	10,10	4,09
	180	100	80	3,70	10,10	4,09
	200	100	100	3,70	10,10	4,09
	220	100	120	3,70	10,10	4,09
	240	100	140	3,70	10,10	4,09
	260	100	160	3,70	10,10	4,09
	280	100	180	3,70	10,10	4,09
	300	100	200	3,70	10,10	4,09
	320	100	220	3,70	10,10	4,09
	340	100	240	3,70	10,10	4,09
	360	100	260	3,70	10,10	4,09
	380	100	280	3,70	10,10	4,09
	400	100	300	3,70	10,10	4,09

NOTE
NOTES

[1] La resistenza assiale ad estrazione del filetto è stata valutata considerando un angolo di 90° fra le fibre ed il connettore e per una lunghezza di infissione pari a b.
The axial thread withdrawal resistance was calculated considering a 90° angle between the grain and the connector and for a fixing length of b.

				TAGLIO *SHEAR*	TRAZIONE *TENSION*	
geometria *geometry*				legno-legno *timber-to-timber*	estrazione filetto[1] *thread withdrawal* [1]	penetrazione testa *head pull-through*
						
d_1 [mm]	L [mm]	b [mm]	A [mm]	$R_{V,k}$ [kN]	$R_{ax,k}$ [kN]	$R_{head,k}$ [kN]
10	160	80	80	5,64	10,10	7,08
	200	100	100	5,64	12,63	7,08
	240	100	140	5,64	12,63	7,08
	280	100	180	5,64	12,63	7,08
	320	120	200	5,64	15,15	7,08
	360	120	240	5,64	15,15	7,08
	400	120	280	5,64	15,15	7,08

NOTE
NOTES

(1) La resistenza assiale ad estrazione del filetto è stata valutata considerando un angolo di 90° fra le fibre ed il connettore e per una lunghezza di infissione pari a b.
The axial thread withdrawal resistance was calculated considering a 90° angle between the grain and the connector and for a fixing length of b.

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono in accordo a ETA-11/0030.
  Characteristic values according to ETA-11/0030.
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_k \cdot k_{mod}}{\gamma_m}$$

  I coefficienti γ_m e k_{mod} sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  The coefficients γ_m and k_{mod} should be taken according to the current regulations used for the calculation.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 385 kg/m³.
  The calculation process used a timber characteristic density of ρ_k = 385 kg/m³.
- I valori sono stati calcolati considerando la parte filettata completamente inserita nell'elemento ligneo.
  Values were calculated considering the threaded part as being completely inserted into the wood.
- Il dimensionamento e la verifica degli elementi in legno devono essere svolti a parte.
  Dimensioning and verification of the timber elements must be carried out separately.

HBS EVO

INCLUDED

C4 EVO

CE ETA 11/0030

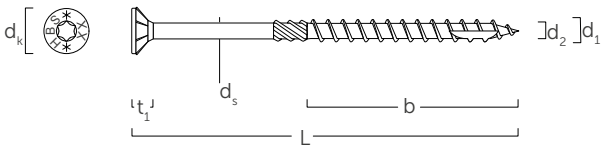
VITE TESTA SVASATA
SCREW WITH COUNTERSUNK HEAD

CODICI E DIMENSIONI
CODES AND DIMENSIONS

HBS EVO RIVESTIMENTO ANTICORROSIONE
HBS EVO ANTI-RUST COATING

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
5 TX25	**HBSEVO580**	80	40	40	100
	HBSEVO590	90	45	45	100
	HBSEVO5100	100	50	50	100
6 TX30	**HBSEVO680**	80	40	40	100
	HBSEVO6100	100	50	50	100
	HBSEVO6120	120	60	60	100
	HBSEVO6140	140	75	65	100
	HBSEVO6160	160	75	85	100
	HBSEVO6180	180	75	105	100
	HBSEVO6200	200	75	125	100
8 TX40	**HBSEVO8120**	120	60	60	100
	HBSEVO8140	140	60	80	100
	HBSEVO8160	160	80	80	100
	HBSEVO8180	180	80	100	100
	HBSEVO8200	200	80	120	100

GEOMETRIA
GEOMETRY



diametro nominale ***nominal diameter***	d_1	[mm]	5	6	8
diametro testa *head diameter*	d_k	[mm]	10,00	12,00	14,50
diametro nocciolo *tip diameter*	d_2	[mm]	3,40	3,95	5,40
diametro gambo *shank diameter*	d_s	[mm]	3,65	4,30	5,80
spessore testa *head thickness*	t_1	[mm]	3,10	4,50	4,50
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	3,0	4,0	5,0

TBS EVO

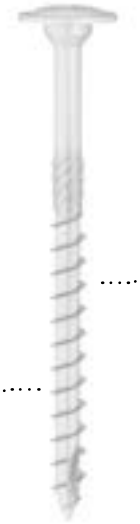
INCLUDED

C4 EVO

CE ETA 11/0030

VITE TESTA LARGA
FLANGE HEAD SCREW

Filetto asimmetrico "ad ombrello"
Asymmetric "umbrella" thread



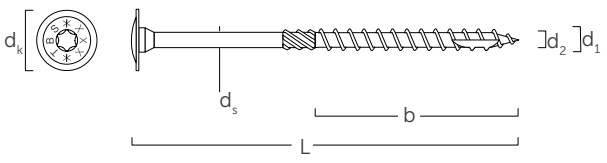
Elevata resistenza alla corrosione
High corrosion resistance

CODICI E DIMENSIONI
CODES AND DIMENSIONS

TBS EVO RIVESTIMENTO ANTICORROSIONE
TBS EVO ANTI-RUST COATING

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
6 TX 30	**TBSEVO660**	60	40	20	100
	TBSEVO680	80	50	30	100
	TBSEVO6100	100	60	40	100
	TBSEVO6120	120	75	45	100
	TBSEVO6140	140	75	65	100
	TBSEVO6160	160	75	85	100
	TBSEVO6180	180	75	105	100
	TBSEVO6200	200	75	125	100
8 TX 40	**TBSEVO8100**	100	80	20	50
	TBSEVO8120	120	80	40	50
	TBSEVO8140	140	80	60	50
	TBSEVO8160	160	100	60	50
	TBSEVO8180	180	100	80	50
	TBSEVO8200	200	100	100	50
	TBSEVO8220	220	100	120	50
	TBSEVO8240	240	100	140	50

GEOMETRIA
GEOMETRY

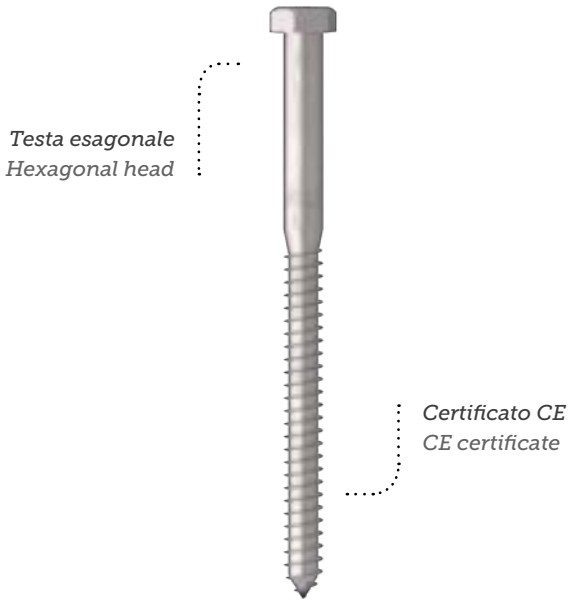


diametro nominale *nominal diameter*	d_1	[mm]	6	8
diametro testa *head diameter*	d_k	[mm]	15,50	19,00
diametro nocciolo *tip diameter*	d_2	[mm]	3,95	5,40
diametro gambo *shank diameter*	d_s	[mm]	4,30	5,80
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	4,0	5,0

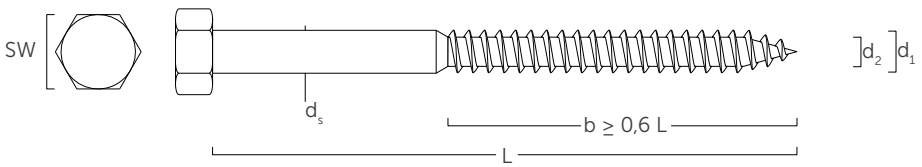
KOP

CE
EN 14592

TIRAFONDO
COACH SCREW



GEOMETRIA
GEOMETRY



diametro nominale *nominal diameter*	**d_1**	**[mm]**	**8**	**10**	**12**	**16**
misura chiave *wrench size*	SW	[mm]	13	17	19	24
diametro nocciolo *tip diameter*	d_2	[mm]	5,60	7,00	9,00	12,00
diametro gambo *shank diameter*	d_s	[mm]	8,00	10,00	12,00	16,00
momento caratteristico di snervamento *characteristic yield moment*	$M_{y,k}$	[Nmm]	16900	32200	65700	138000
parametro caratteristico di resistenza ad estrazione *characteristic withdrawal-resistance parameter*	$f_{ax,k}$	[N/mm^2]	12,9	10,6	10,2	10,0
densità associata *associated density*	ρ_a	[kg/m^3]	400	400	440	360
resistenza caratteristica a trazione *characteristic tensile strength*	$f_{tens,k}$	[kN]	15,7	23,6	37,3	75,3

CODICI E DIMENSIONI
CODES AND DIMENSIONS

KOP ACCIAIO AL CARBONIO
CARBON STEEL KOP

d_1 [mm]	CODICE *CODE*	L [mm]	
8 SW13	**KOP850**	50	100
	KOP860	60	100
	KOP870	70	100
	KOP880	80	100
	KOP8100	100	50
	KOP8120	120	50
	KOP8140	140	50
	KOP8160	160	50
	KOP8180	180	50
	KOP8200	200	50
10 SW17	**KOP1050**	50	50
	KOP1060	60	50
	KOP1080	80	50
	KOP10100	100	50
	KOP10120	120	50
	KOP10140	140	50
	KOP10150	150	50
	KOP10160	160	50
	KOP10180	180	50
	KOP10200	200	50
	KOP10220	220	50
	KOP10240	240	50
	KOP10260	260	50
	KOP10280	280	50
	KOP10300	300	50
12 SW19	**KOP1250**	50	50
	KOP1260	60	50
	KOP1270	70	50
	KOP1280	80	50
	KOP1290	90	25
	KOP12100	100	25
	KOP12120	120	25
	KOP12140	140	25
	KOP12150	150	25
	KOP12160	160	25
	KOP12180	180	25
	KOP12200	200	25
	KOP12220	220	25
	KOP12240	240	25
	KOP12260	260	25
	KOP12280	280	25
	KOP12300	300	25
	KOP12320	320	25
	KOP12340	340	25
	KOP12360	360	25
	KOP12380	380	25
	KOP12400	400	25

KOP ACCIAIO AL CARBONIO
CARBON STEEL KOP

d_1 [mm]	CODICE *CODE*	L [mm]	
16 SW24	**KOP1680**	80	25
	KOP16100	100	25
	KOP16120	120	25
	KOP16140	140	25
	KOP16150	150	25
	KOP16160	160	25
	KOP16180	180	25
	KOP16200	200	25
	KOP16220	220	25
	KOP16240	240	25
	KOP16260	260	25
	KOP16280	280	25
	KOP16300	300	25
	KOP16320	320	25
	KOP16340	340	25
	KOP16360	360	25
	KOP16380	380	25
	KOP16400	400	25

KOP ACCIAIO INOSSIDABILE A2*
*KOP STAINLESS STEEL A2**

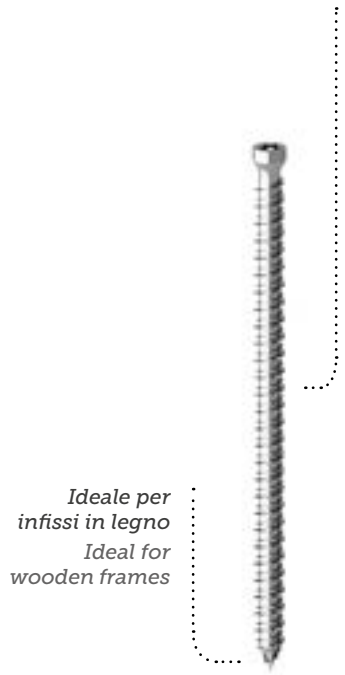
A2 AISI 304

d_1 [mm]	CODICE *CODE*	L [mm]	
8 SW13	**AI571850**	50	100
	AI571860	60	100
	AI571870	70	100
	AI571880	80	100
	AI5718100	100	50
	AI5718120	120	50
10 SW17	**AI5711050**	50	50
	AI5711060	60	50
	AI5711080	80	50
	AI57110100	100	50
	AI57110120	120	50
	AI57110140	140	50
	AI57110150	150	50
	AI57110160	160	50
	AI57110180	180	50
	AI57110200	200	50
12 SW19	**AI57112100**	100	25
	AI57112120	120	25
	AI57112140	140	25
	AI57112160	160	25
	AI57112180	180	25

* No CE
No CE

MBS

VITE AUTOFILETTANTE PER MURATURA
SELF-TAPPING SCREW FOR MASONRY

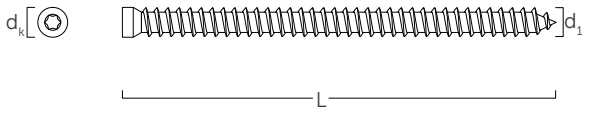


CODICI E DIMENSIONI
CODES AND DIMENSIONS

MBS ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
MBS BRIGHT ZINC PLATED CARBON STEEL

d_1 [mm]	CODICE *CODE*	L [mm]	
7,5 TX 30	**MBS7572**	72	100
	MBS7592	92	100
	MBS75112	112	100
	MBS75132	132	100
	MBS75152	152	100
	MBS75182	182	100

GEOMETRIA
GEOMETRY



diametro nominale ***nominal diameter***	**d_1**	**[mm]**	**7,5**
diametro testa *head diameter*	d_k	[mm]	8
diametro preforo calcestruzzo/muratura *diameter of pre-drilling hole concrete/brickwork*	d_0	[mm]	6,0
diametro foro nell'elemento da fissare *hole diameter in the element to be fastened*	d_f	[mm]	6,2

THERMO WASHER

CE ETA 11/0030

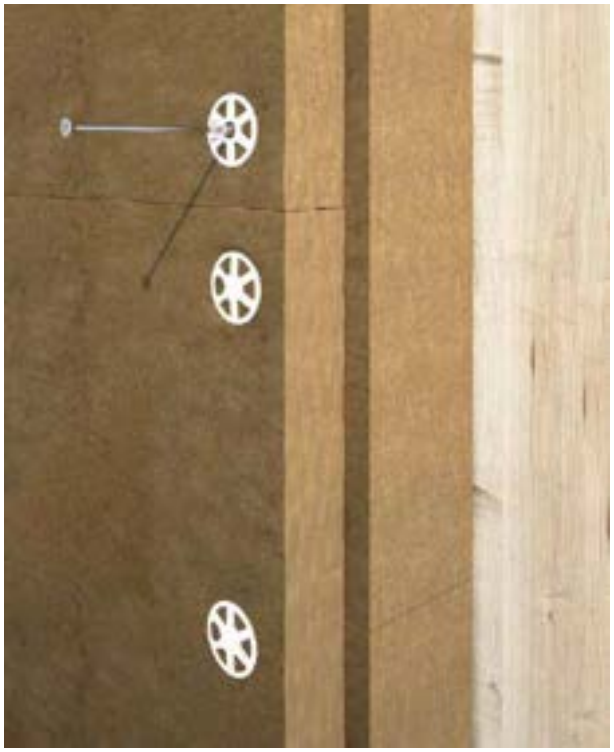
ROSETTA PER FISSAGGIO DI ISOLANTE SU LEGNO

WASHER TO FASTEN INSULATION TO WOOD

Anti ponte termico
Anti-thermal bridge

Cavità per una miglior adesione dell'intonaco
Cavity for better adhesion of the plaster

CODICE *CODE*	d_{VITE} / d_{SCREW} [mm]	a x b x c [mm]	
THERMO65	6-8	65 x 4 x 20	700



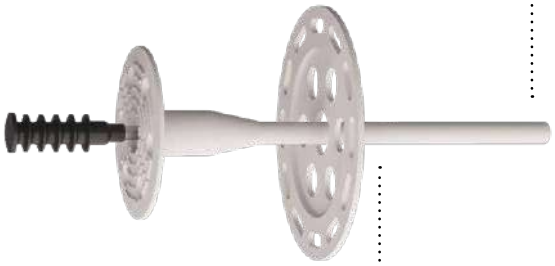
ISULFIX

CE ETA

TASSELLO PER FISSAGGIO DI ISOLANTE SU MURATURA

ANCHOR FOR FASTENING INSULATION TO BRICKWORK

Ideale per muratura
Ideal for brickwork



Doppia espansione
Double expansion

CODICE *CODE*	L [mm]	d_{FORO} d_{HOLE} [mm]	d_{TESTA} d_{HEAD} [mm]	A [mm]	
ISULFIX8110	110	8	60	80	250
ISULFIX8150	150			120	150
ISULFIX8190	190			160	100

CODICE *CODE*	d_{TESTA} d_{HEAD} [mm]	descrizione *description*	
ISULFIX90	90	rosetta addizionale *additional washer*	250

GWZ

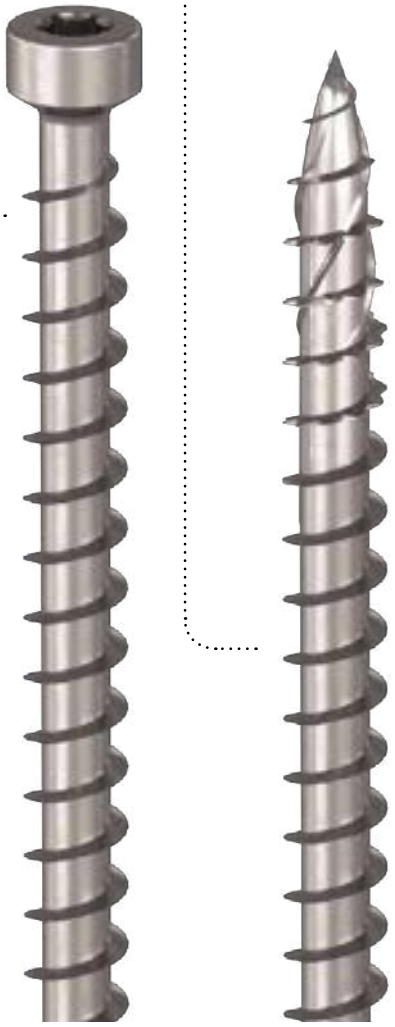
VIDEO INCLUDED CE ETA

VITE TUTTO FILETTO A TESTA CILINDRICA
TOTAL THREAD SCREW WITH CYLINDRICAL HEAD

Ideale per accoppiamento travi
Ideal to couple beams

Connessione trave principale-secondaria
Main/secondary beam connection

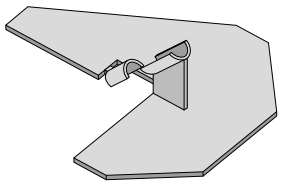
Cucitura giunti solai X-LAM e parete X-LAM
Stapling of CLT floor and CLT wall joints



CODICI E DIMENSIONI
CODES AND DIMENSIONS

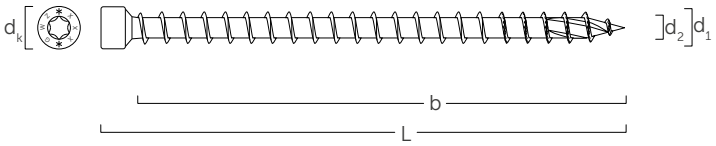
GWZ ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
GWZ BRIGHT ZINC PLATED CARBON STEEL

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
6 TX30	**GWZ6100**	100	90	25
	GWZ6120	120	110	25
	GWZ6140	140	130	25
	GWZ6160	160	150	25
8 TX40	**GWZ8120**	120	110	25
	GWZ8140	140	130	25
	GWZ8160	160	150	25
	GWZ8180	180	170	25
	GWZ8200	200	190	25
	GWZ8220	220	210	25
	GWZ8240	240	230	25
	GWZ8260	260	250	25
	GWZ8280	280	270	25
	GWZ8300	300	290	25
	GWZ8320	320	310	25



CODICE *CODE*	descrizione *description*	
JIGVGZ45	dima in acciaio per viti GWZ a 45° *steel template for GWZ screws at 45°*	1

GEOMETRIA E CARATTERISTICHE MECCANICHE
GEOMETRY AND MECHANICAL CHARACTERISTICS



diametro nominale *nominal diameter*	d_1	[mm]	6	8
diametro testa *head diameter*	d_k	[mm]	8,00	11,00
diametro nocciolo *tip diameter*	d_2	[mm]	4,00	5,20
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	4,0	5,0
momento caratteristico di snervamento *characteristic yield moment*	$M_{y,k}$	[Nmm]	10000	20000
parametro caratteristico di resistenza ad estrazione *characteristic withdrawal-resistance parameter*	$f_{ax,k}$	[N/mm²]	11,0	11,0
resistenza caratteristica a trazione *characteristic tensile strength*	$f_{tens,k}$	[kN]	12	21
resistenza caratteristica a snervamento *characteristic yield strength*	$f_{y,k}$	[N/mm²]	1000	1000

COLLEGAMENTO A TAGLIO CON CONNETTORI INCROCIATI
SHEAR CONNECTION WITH CROSSED CONNECTORS

GIUNZIONE AD ANGOLO RETTO - TRAVE PRINCIPALE /TRAVE SECONDARIA
90-DEGREE JOINT - MAIN BEAM / SECONDARY BEAM

d_1 [mm]	L [mm]	$S_{g\,HT}$ [mm]	$S_{g\,NT}$ [mm]	$B_{HT\,min}$ [mm]	$H_{HT\,min} = h_{NT\,min}$ [mm]	$b_{NT\,min}$ [mm]	N° coppie *No. pairs*	VALORI CARATTERISTICI[1] *CHARACTERISTIC VALUES*[1] $R_{V,k}$ [kN]	VALORI AMMISSIBILI *ADMISSIBLE VALUES* V_{adm} [kg]	m[2] [mm]
6	140	40	70	65	120	57	1	8,1	170	63
						87	2	15,0	339	
						117	3	21,7	509	
6	160	60	70	75	135	57	1	12,1	255	63
						87	2	22,6	509	
						117	3	32,5	764	
8	200	65	105	90	165	76	1	8,7	368	89
						116	2	16,3	735	
						156	3	23,5	1103	
8	220	85	105	95	175	76	1	11,4	481	89
						116	2	21,3	962	
						156	3	30,7	1442	
8	240	105	105	100	190	76	1	12,8	594	89
						116	2	23,9	1188	
						156	3	34,5	1782	
8	260	115	115	110	205	76	1	14,0	651	96
						116	2	26,2	1301	
						156	3	37,7	1952	
8	280	125	125	115	220	76	1	15,3	707	103
						116	2	28,5	1414	
						156	3	41,0	2121	
8	300	135	135	125	235	76	1	16,5	764	110
						116	2	30,8	1527	
						156	3	44,3	2291	
8	320	145	145	130	250	76	1	17,7	820	117
						116	2	33,0	1640	
						156	3	47,6	2461	

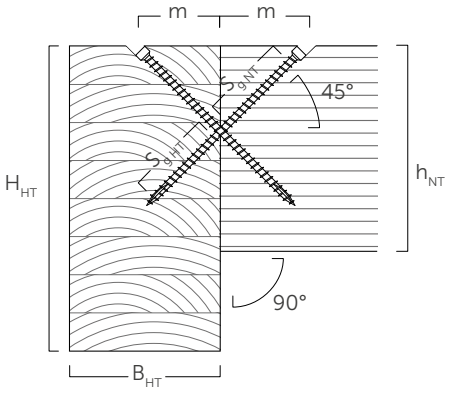
PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono secondo normativa EN 1995:2014 in accordo a ETA 12/0471.
  The characteristic values comply with EN 1995:2014 as per ETA-12/0471.
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

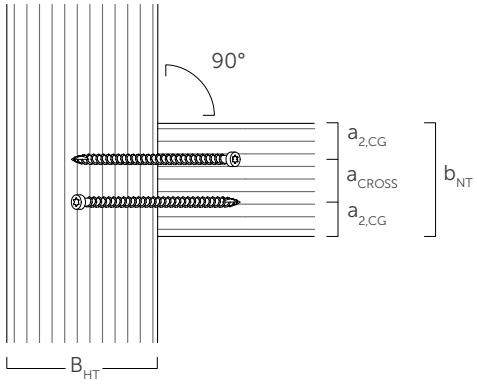
$$R_d = \frac{R_k \cdot k_{mod}}{\gamma_m}$$

  I coefficienti γ_m e k_{mod} sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  The coefficients γ_m and k_{mod} should be taken according to the current regulations used for the calculation.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 385 kg/m³.
  The calculation process used a timber characteristic density of ρ_k = 385 kg/m³.
- In fase di calcolo si considera una lunghezza di filetto efficace pari a S_g = (L - 10 mm - 10 mm - Tol.) /2 dove Tol.= tolleranza di posa 10 mm.
  During calculation, an effective thread length equal to S_g = (L - 10 mm - 10 mm - Tol.) /2 with Tol. = installation tolerance 10 mm is considered.
- La resistenza assiale ad estrazione del filetto è stata valutata considerando una lunghezza di filetto efficace pari a S_g . I connettori devono essere inseriti a 45° rispetto al piano di taglio.
  The thread axial resistance to withdrawal has been evaluated considering an effective thread length equal to S_g. The connectors must be inserted at 45° with respect to the shear plane.
- Il dimensionamento e la verifica degli elementi in legno devono essere svolti a parte.
  Dimensioning and verification of the timber elements must be carried out separately.

COLLEGAMENTO A TAGLIO CON CONNETTORI INCROCIATI - 1 COPPIA
SHEAR CONNECTION WITH CROSSED CONNECTORS - 1 PAIR

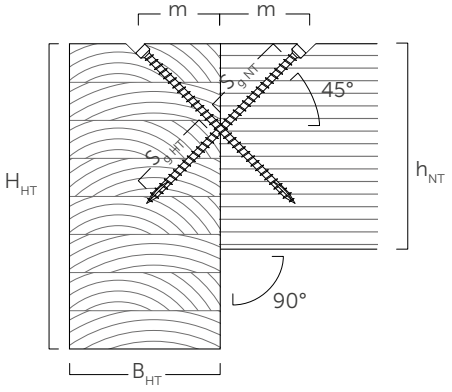


sezione
section

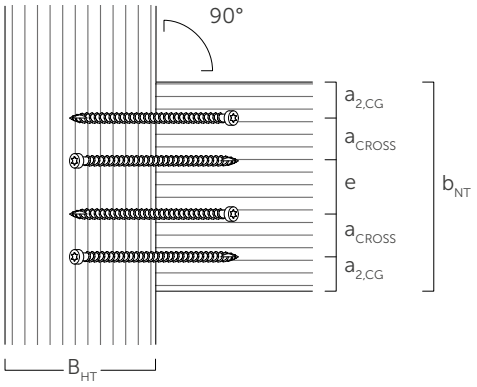


pianta
plan

COLLEGAMENTO A TAGLIO CON CONNETTORI INCROCIATI - 2 O PIÙ COPPIE
SHEAR CONNECTION WITH CROSSED CONNECTORS - 2 OR MORE PAIRS



sezione
section



pianta
plan

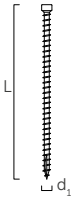
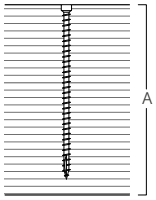
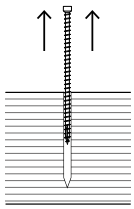
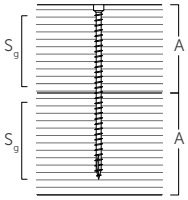
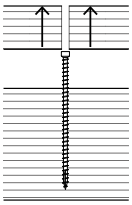
DISTANZE MINIME CONSIGLIATE [mm]
MINIMUM RECOMMENDED DISTANCES [mm]

d_1 [mm]	$a_{2,CG}$ [mm]	a_{CROSS} [mm]	e [mm]
6	24	9	21
8	32	12	28

NOTE
NOTES

(1) I valori forniti sono calcolati considerando una distanza $a_{1,CG} \geq 5d$. In alcuni casi è prevista la posa asimmetrica dei connettori ($S_{g\,HT} \neq S_{g\,NT}$).
The values given are calculated considering a distance $a_{1,CG} \geq 5d$. In some cases the asymmetrical laying of connectors is needed $S_{g\,HT} \neq S_{g\,NT}$).

(2) La quota di montaggio (m) è valida nel caso di posa simmetrica dei connettori ($S_{g\,HT} = S_{g\,NT}$) a filo superiore degli elementi.
The assembly height (m) applies in the event of symmetrical installation of the flush connectors ($S_{g\,HT} = S_{g\,NT}$) above the elements.
Nel caso di posa asimmetrica è necessario prevedere l'installazione dei connettori lato trave principale con un affondamento della testa tale da garantire le lunghezze efficaci ($S_{g\,HT}$, $S_{g\,NT}$) indicate in tabella.
In the case of asymmetric installation, it is necessary to provide for installation of the connectors on the main beam side with the head buried so as to guarantee the effective lengths ($S_{g\,HT}$, $S_{g\,NT}$) indicated in the table.

		TRAZIONE[1] *TENSION [1]*						
geometria *geometry*		**estrazione filetto totale[2]** *total thread withdrawal [2]*			**estrazione filetto parziale[2]** *partial thread withdrawal [2]*			**trazione acciaio** *steel tension*
								
d_1 [mm]	L [mm]	b [mm]	A_{MIN} [mm]	legno / *timber* $R_{ax,k}$ [kN]	S_g [mm]	A_{MIN} [mm]	legno / *timber* $R_{ax,k}$ [kN]	acciaio / *steel* $R_{tens,k}$ [kN]
6	100	90	110	6,41	35	55	2,49	12,00
	120	110	130	7,84	45	65	3,21	
	140	130	150	9,26	55	75	3,92	
	160	150	170	10,68	65	85	4,63	
8	120	110	130	10,45	45	65	4,27	21,00
	140	130	150	12,35	55	75	5,22	
	160	150	170	14,25	65	85	6,17	
	180	170	190	16,15	75	95	7,12	
	200	190	210	18,04	85	105	8,07	
	220	210	230	19,94	95	115	9,02	
	240	230	250	21,84	105	125	9,97	
	260	250	270	23,74	115	135	10,92	
	280	270	290	25,64	125	145	11,87	
	300	290	310	27,54	135	155	12,82	
	320	310	330	29,44	145	165	13,77	

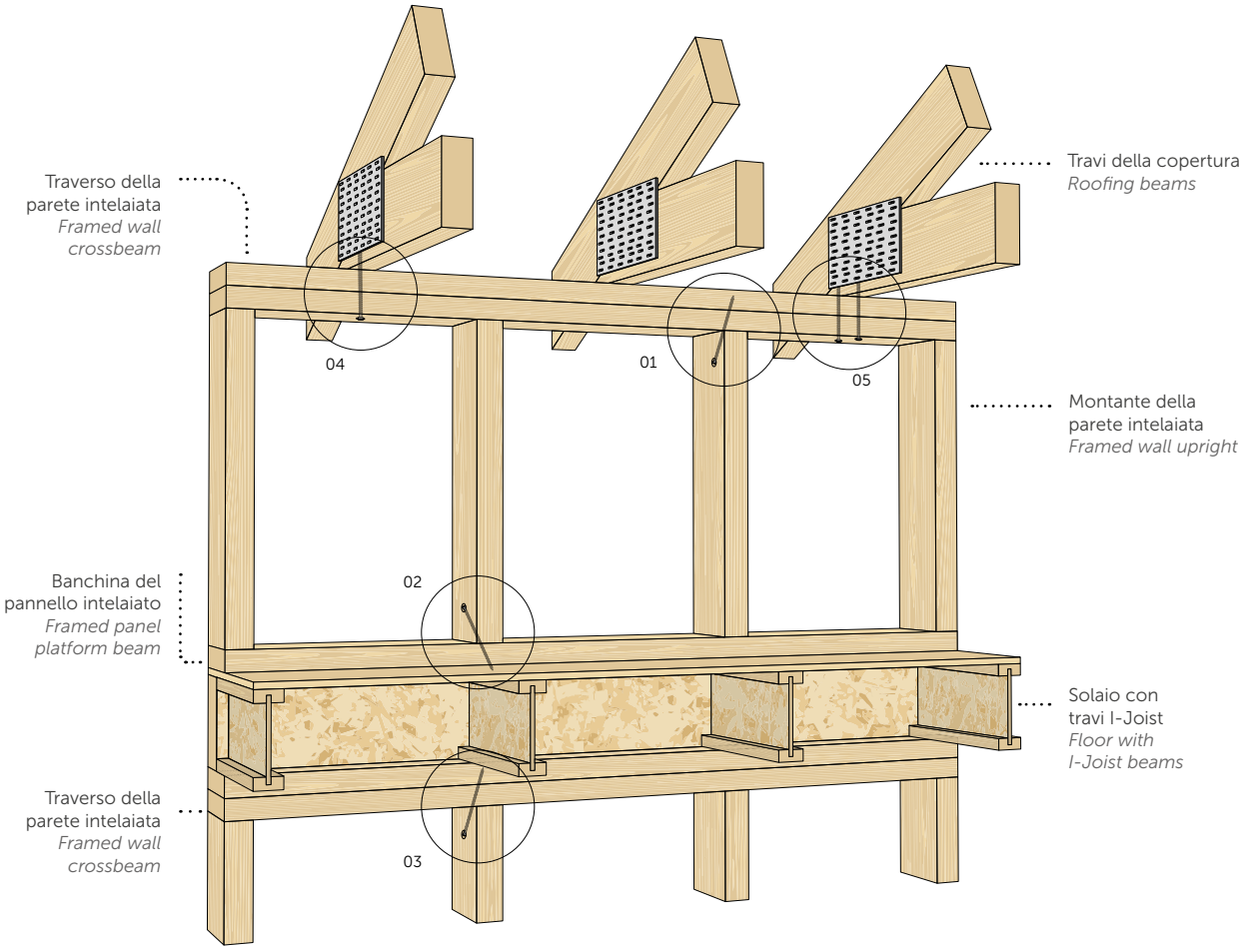
NOTE
NOTES

[1] La resistenza di progetto del connettore è la minima fra la resistenza di progetto lato legno ($R_{ax,d}$) e la resistenza di progetto lato acciaio ($R_{tens,d}$).
The connector design resistance is the lowest between the wood side design resistance ($R_{ax,d}$) and the steel side resistance ($R_{tens,d}$).

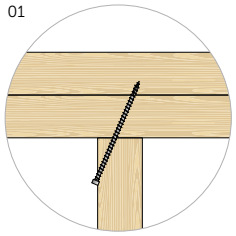
$$R_{ax,d} = min \begin{cases} \frac{R_{ax,d} \cdot k_{mod}}{\gamma_m} \\ \frac{R_{tens,k}}{\gamma_{m2}} \end{cases}$$

[2] La resistenza assiale ad estrazione del filetto è stata valutata considerando un angolo di 90° fra le fibre ed il connettore e per una lunghezza di filetto efficace pari a b o S_g.
Per valori intermedi di S_g è possibile interpolare linearmente.
The axial resistance of the thread to withdrawal was calculated considering a 90° angle between the fibres and the connector and for a effective thread length of b or S_g.
For intermediate values of S_g it is possible to linearly interpolate.

ESEMPIO APPLICATIVO CON STRUTTURA I-JOIST E VITE GWZ Ø6
EXAMPLE OF APPLICATION WITH I-JOIST STRUCTURE AND GWZ Ø6 SCREW

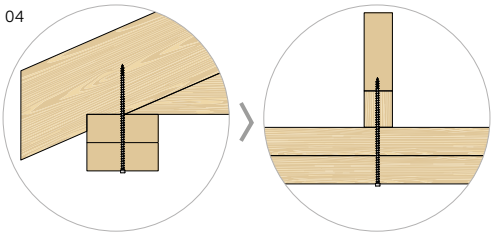


01



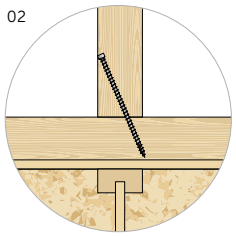
Giunzione montante-traverso con singolo connettore inclinato
Joining of upright-crossbeam with single inclined connector

04



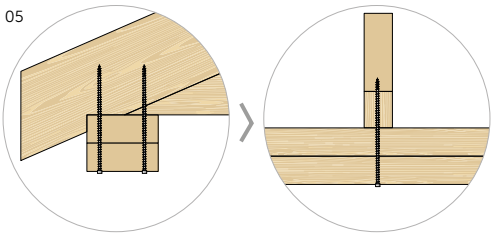
Giunzione montante-traverso con singolo connettore inclinato
Joining of upright-crossbeam with single inclined connector

02



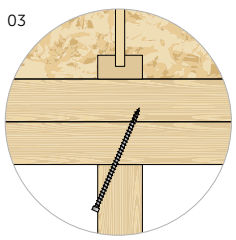
Giunzione traverso-banchina con singolo connettore inclinato
Joining of crossbeam-sill plate with single inclined connector

05



Giunzione traverso-puntone con doppio connettore verticale
Joining of crossbeam-main rafter with double vertical connector

03



Giunzione montante-traverso con singolo connettore inclinato
Joining of upright-crossbeam with single inclined connector

DWZ

INCLUDED

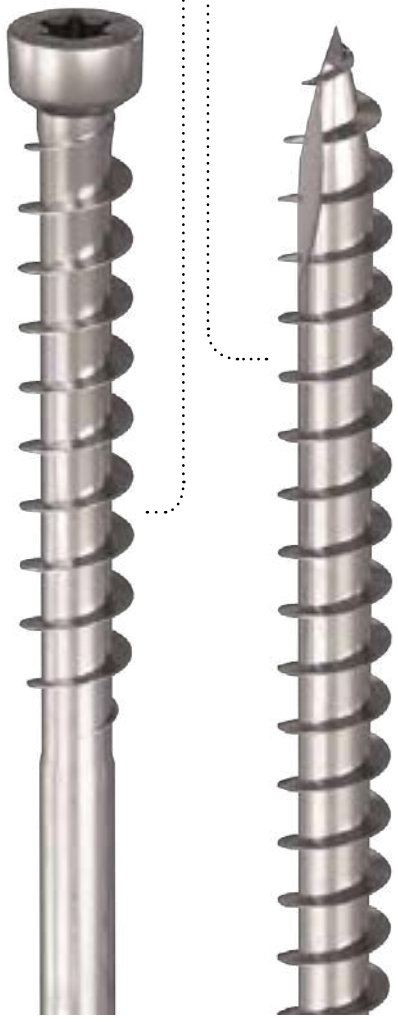
CE
ETA 11/0030

VITE DOPPIO FILETTO PER ISOLANTE
DOUBLE THREAD SCREW FOR INSULATOR

Per isolante duro/ morbido e facciata
For hard/soft insulation layer and façade

Testa a scomparsa cilindrica
Cylindrical concealed head

Ideale per isolazione continua
Ideal to continuous insulation



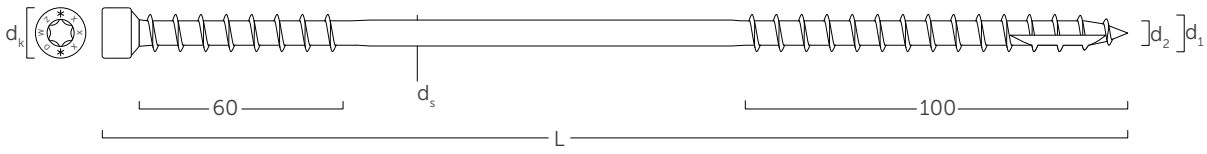
CODICI E DIMENSIONI
CODES AND DIMENSIONS

DWZ ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
DWZ BRIGHT ZINC PLATED CARBON STEEL

d_1 [mm]	CODICE *CODE*	L [mm]	
7 TX30	**DWZ7220**	220	50
	DWZ7260	260	50
	DWZ7300	300	50
	DWZ7340	340	50

d_1 [mm]	CODICE *CODE*	L [mm]	
9 TX40	**DWZ9320**	320	50
	DWZ9360	360	50
	DWZ9400	400	50
	DWZ9440	440	50

GEOMETRIA E CARATTERISTICHE MECCANICHE
GEOMETRY AND MECHANICAL CHARACTERISTICS



diametro nominale ***nominal diameter***	**d_1**	**[mm]**	**7**	**9**
diametro testa *head diameter*	d_k	[mm]	9,50	11,50
diametro nocciolo *tip diameter*	d_2	[mm]	4,60	5,90
diametro gambo *shank diameter*	d_s	[mm]	5,00	6,50
momento caratteristico di snervamento *characteristic yield moment*	$M_{y,k}$	[Nmm]	14174	27244
parametro caratteristico di resistenza ad estrazione *characteristic withdrawal-resistance parameter*	$f_{ax,k}$	[N/mm^2]	11,7	11,7
resistenza caratteristica a trazione *characteristic tensile strength*	$f_{tens,k}$	[kN]	15,4	25,4

LUNGHEZZA MINIMA VITE DWZ Ø7
MINIMUM SCREW LENGTH DWZ Ø7

spessore isolazione + tavolato *insulation + wooden planking thickness* [mm]	spessore listello* *batten thickness** [mm]									
	s = 30		s = 40		s = 50		s = 60		s = 80	
	A DWZ 60°	B DWZ 90°	A DWZ 60°	B DWZ 90°	A DWZ 60°	B DWZ 90°	A DWZ 60°	B DWZ 90°	A DWZ 60°	B DWZ 90°
	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]
60	220	220	220	220	220	220	220	220	260	220
80	220	220	220	220	220	220	260	220	260	220
100	220	220	260	220	260	220	260	220	300	260
120	260	220	260	220	260	260	300	260	300	260
140	260	260	300	260	300	260	300	260	340	300
160	300	260	300	260	340	300	340	300	340	300
180	340	300	340	300	340	300	340	300	-	340
200	340	300	340	300	-	340	-	340	-	340
220	-	340	-	340	-	340	-	340	-	-

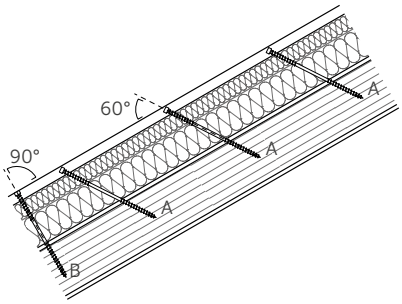
* Dimensioni minime listello: DWZ Ø7 mm: base/altezza = 50/30 mm
Minimum batten thicknesses: DWZ Ø7 mm: base/height = 50/30 mm

LUNGHEZZA MINIMA VITE DWZ Ø9
MINIMUM SCREW LENGTH DWZ Ø9

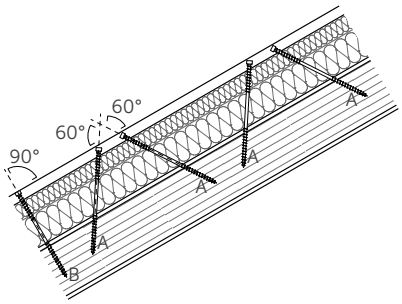
spessore isolazione + tavolato *insulation + wooden planking thickness* [mm]	spessore listello* *batten thickness** [mm]									
	s = 30		s = 40		s = 50		s = 60		s = 80	
	A DWZ 60°	B DWZ 90°	A DWZ 60°	B DWZ 90°	A DWZ 60°	B DWZ 90°	A DWZ 60°	B DWZ 90°	A DWZ 60°	B DWZ 90°
	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]	L_{min} [mm]
140	-	-	320	320	320	320	320	320	320	320
160	-	-	320	320	320	320	320	320	360	320
180	-	-	320	320	360	320	360	320	400	320
200	-	-	360	320	360	320	400	320	400	360
220	-	-	400	320	400	360	400	360	440	360
240	-	-	400	360	400	360	440	360	440	400
260	-	-	440	360	440	400	440	400	-	400
280	-	-	440	400	-	400	-	400	-	440
300	-	-	-	400	-	440	-	440	-	440

* Dimensioni minime listello: DWZ Ø9 mm: base/altezza = 60/40 mm
Minimum batten thicknesses: DWZ Ø9 mm: base/height = 60/40 mm

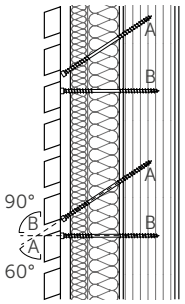
POSSIBILI CONFIGURAZIONI
POSSIBLE CONFIGURATIONS



ISOLANTE RIGIDO COPERTURA
RIGID ROOF INSULATION
$\sigma_{(10\%)} \geq 50$ kPa (EN826)



ISOLANTE MORBIDO COPERTURA
SOFT ROOF INSULATION
$\sigma_{(10\%)} < 50$ kPa (EN826)



ISOLANTE FACCIATA
FACADE INSULATION

NOTE
NOTES

Il numero e la disposizione dei fissaggi dipendono dalla geometria della superficie, dalla tipologia di isolante e dai carichi agenti.
Verificare che la punta delle vite non fuoriesca dal travetto.
The number and placement of the fastenings depends on the geometry of the surfaces, the type of insulation and the loads acting on them.
Check that the screw tip does not stick out from the rafter.

CLC

INCLUDED

CE
ETA 19/0244

CONNETTORE LEGNO-CALCESTRUZZO
TIMBER-TO-CONCRETE FASTENER

Sistema non invasivo ideale per recupero di solai
Non-invasive system ideal for recovery of floors

Indicatore di posa
Installation indicator

Sistema rapido a secco
Rapid dry system

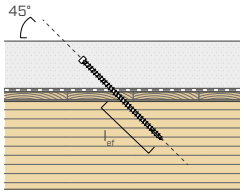
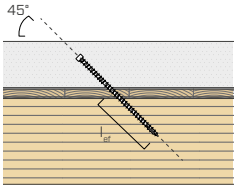
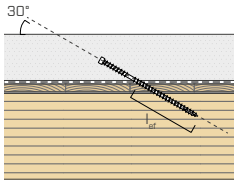
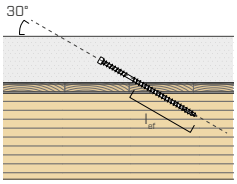
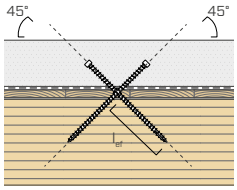
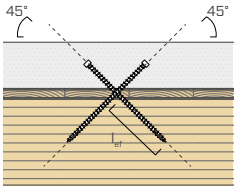
Certificazione CE con posa a 30°, 45° e connettori incrociati a 45°
CE certification with installation at 30°,45° and crossed connectors at 45°

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CLC ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
CLC BRIGHT ZINC PLATED CARBON STEEL

d_1 [mm]	CODICE *CODE*	L [mm]	b_1 [mm]	b_2 [mm]	
8 TX40	**CLC8160**	160	50	110	100
	CLC8240	240	50	190	100

MODULO DI SCORRIMENTO K_{ser}
SLIP MODULUS K_{ser}

disposizione connettori *connector arrangement*	K_{ser} [N/mm]	
	con lamina fonoisolante (1) *with soundproofing layer* (1)	**senza lamina fonoisolante** (1) *without soundproofing layer* (1)
45° connettori paralleli *parallel connectors*		
	19 l_{ef}	56 l_{ef}
30° connettori paralleli *parallel connectors*		
	48 l_{ef}	80 l_{ef}
45° connettori incrociati *crossed connectors*		
	85 l_{ef}	85 l_{ef}

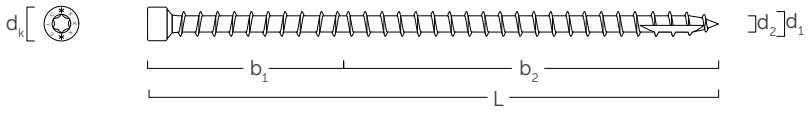
NOTE
NOTES

(1) Lamina sottomassetto resiliente in bitume e feltro di poliestere tipo SILENT FLOOR.
Resilient underscreed foil, in bitumen and polyester felt, like SILENT FLOOR.

Il modulo di scorrimento K_{ser} è da considerarsi relativo ad un singolo connettore inclinato o ad una coppia di connettori incrociati soggetti ad una forza parallela al piano di scorrimento.
The K_{ser} slip modulus is to be considered as relating to a single inclined connector or a pair of crossed connectors subject to a parallel force at the slip surface.

l_{ef} = profondità di penetrazione del connettore CLC nell'elemento in legno in millimetri.
l_{ef} = depth of CLC connector penetration into timber element, in millimetres.

GEOMETRIA E CARATTERISTICHE MECCANICHE
GEOMETRY AND MECHANICAL CHARACTERISTICS



diametro nominale *nominal diameter*		**d_1**	**[mm]**	**8,0**
diametro testa *head diameter*		d_k	[mm]	10,50
diametro nocciolo *tip diameter*		d_2	[mm]	5,20
diametro preforo *pre-drilling hole diameter*		d_v	[mm]	5,0
momento caratteristico di snervamento *characteristic yield moment*		$M_{y,k}$	[Nmm]	28000
parametro caratteristico di resistenza ad estrazione *characteristic withdrawal-resistance parameter*		$f_{ax,k}$	[N/mm^2]	11,3
densità associata *associated density*		ρ_a	[kg/m^3]	350
resistenza caratteristica a trazione *characteristic tensile strength*		$f_{tens,k}$	[kN]	25,0
resistenza caratteristica ad estrazione - calcestruzzo *withdrawal-resistance characteristic - concrete*	connettori incrociati 45° con lamina fonoisolante[1] *crossed connectors at a 45° angle, with soundproofing layer[1]*	$F_{ax,concrete,Rk}$	[kN]	10,0
	connettori paralleli 45° con lamina fonoisolante[1] *parallel connectors at a 45° angle, with soundproofing layer[1]*			
	connettori paralleli 30° con lamina fonoisolante[1] *parallel connectors at a 30° angle, with soundproofing layer[1]*			
	connettori paralleli 45° senza lamina fonoisolante *parallel connectors at a 45° angle, without soundproofing layer*	$F_{ax,concrete,Rk}$	[kN]	15,0
coefficiente d'attrito *coefficient of friction*		μ	[-]	0,25

NOTE
NOTES

[1] Lamina sottomassetto resiliente in bitume e feltro di poliestere tipo SILENT FLOOR.
Resilient underscreed foil, in bitumen and polyester felt, like SILENT FLOOR.

PRINCIPI GENERALI
GENERAL PRINCIPLES

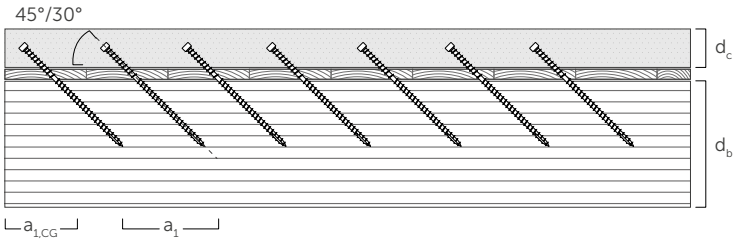
- Per i valori di resistenza meccanica e per la geometria dei connettori si è fatto riferimento a quanto riportato in ETA-19/0244.
For the mechanical strength values and the geometry of the screws, reference was made to ETA-19/0244.
- La resistenza a taglio di progetto del singolo connettore inclinato è la minima fra la resistenza di progetto lato legno ($R_{ax,d}$), la resistenza di progetto lato calcestruzzo ($R_{ax,concrete,d}$) e la resistenza di progetto lato acciaio ($R_{tens,d}$):
The design shear strength of each crossed connector is the minimum between the timber design shear strength ($R_{ax,d}$), the concrete design shear strength ($R_{ax,concrete,d}$) and the steel design shear strength ($R_{tens,d}$):

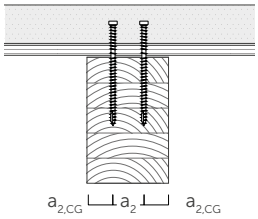
$$R_{v,Rd} = (\cos\alpha + \mu \cdot \sin\alpha) \cdot \min \begin{cases} F_{ax,\alpha,Rd} \\ f_{tens,d} \\ F_{ax,concrete,Rd} \end{cases}$$

La componente di attrito μ può essere considerata solamente nelle disposizioni con viti inclinate (30° e 45°) e in assenza della lamina fonoisolante.
The friction component μ can be considered only in arrangement with inclined screws (30° e 45°) and without the soundproofing layer.

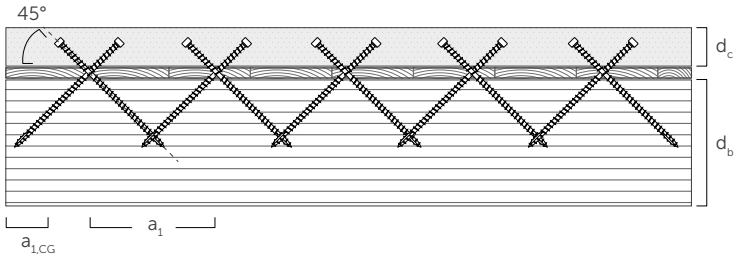
DISTANZE MINIME PER CONNETTORI CARICATI ASSIALMENTE [1]
MINIMUM DISTANCES FOR CONNECTORS STRESSED AXIALLY [1]

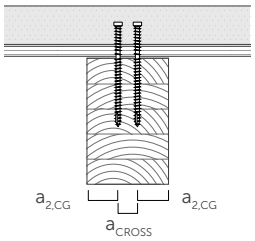
DISPOSIZIONE PARALLELA
PARALLEL ARRANGEMENT





DISPOSIZIONE INCROCIATA
CROSSED ARRANGEMENT





d_1	[mm]	**8**
a_1	[mm]	130·sin(α)
a_2	[mm]	40
$a_{1,CG}$	[mm]	85
$a_{2,CG}$	[mm]	35
a_{CROSS}	[mm]	12

NOTE
NOTES

[1] Le distanze minime per connettori caricati assialmente sono in accordo a ETA-19/0244.
The minimum distances for connectors stressed axially are compliant with ETA-19/0244.

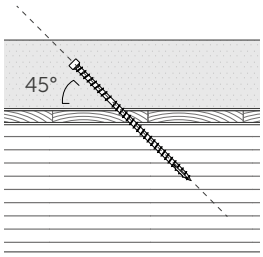
d_c spessore soletta in calcestruzzo (50 mm ≤ d_c ≤ 0,7 d_b)
thickness of concrete slab (50 mm ≤ d_c ≤ 0,7 d_b)

d_b altezza trave in legno (d_b ≥ 100 mm)
height of wooden beam (d_b ≥ 100 mm)

VALORI STATICI
STATIC VALUES

interasse travi *distance between joists*	660 mm	peso proprio (g_{k1}) *own weight (g_{k1})*	trave in legno + tavolato + soletta in calcestruzzo *timber beam + wooden planking + concrete slab*
spessore soletta cls C20/25 *concrete slab thickness C20/25*	50 mm		
limite di freccia *arrow limit*	w_{ist} = l/400 $w_{net,fin}$ = l/250	carico permanente non strutturale (g_{k2}) *permanent non-structural load (g_{k2})*	2 kN/m²
norma di calcolo *calculation standard*	NTC 2018 + UNI EN 1995:2014	sovraccarico variabile (q_k) *variable load (q_k)*	2 kN/m²

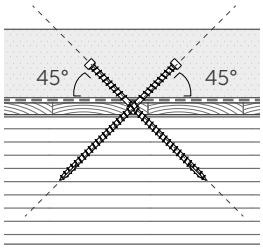
CONNETTORE CLC Ø8x160 - Legno lamellare GL 24h (EN 14080:2013)
CONNECTOR CLC Ø8x160 - Glulam GL 24h (EN 14080:2013)
Spessore tavolato t_s = 21 mm
Plank thickness t_s = 21 mm



Posa a 45° senza lamina fonoisolante.
Installation at a 45° angle, without soundproofing layer.

sezione trave BxH *beam section BxH* [mm]		luce / *span* [m] 3	3,5	4	4,5	5	5,5	6
120 x 160	n. connettori per trave *no. connectors per beam*	8	12	30	54	-	-	-
	passo [mm] *pitch [mm]*	400/400	200/400	100/200	120/240 (1)			
	n. connettori/m² *no. connectors/m²*	4,0	5,2	11,4	18,2			
120 x 200	n. connettori per trave *no. connectors per beam*	-	8	18	24	44	-	-
	passo [mm] *pitch [mm]*		400/400	200/400	130/260	170/340 (1)		
	n. connettori/m² *no. connectors/m²*		3,5	6,8	8,1	13,3		
140 x 200	n. connettori per trave *no. connectors per beam*	-	-	16	22	36	60	-
	passo [mm] *pitch [mm]*			240/240	150/300	100/200	130/260 (1)	
	n. connettori/m² *no. connectors/m²*			6,1	7,4	10,9	16,5	
140 x 240	n. connettori per trave *no. connectors per beam*	-	-	-	16	22	42	56
	passo [mm] *pitch [mm]*				300/400	180/360	100/200	160/320
	n. connettori/m² *no. connectors/m²*				5,4	6,7	11,6	14,1

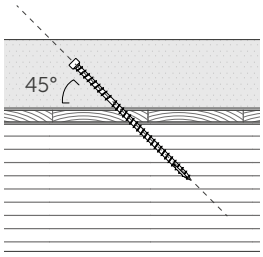
CONNETTORE CLC Ø8x160 - Legno lamellare GL 24h (EN 14080:2013)
CONNECTOR CLC Ø8x160 - Glulam GL 24h (EN 14080:2013)
Spessore tavolato t_s = 21 mm
Plank thickness t_s = 21 mm



Posa incrociata a 45° con o senza lamina fonoisolante.
Crossed installation at a 45° angle, with or without sound-proofing layer.

sezione trave BxH *beam section BxH* [mm]		luce / *span* [m] 3	3,5	4	4,5	5	5,5	6
120 x 160	n. connettori per trave *no. connectors per beam*	16	20	40	48	-	-	-
	passo [mm] *pitch [mm]*	400/400	300/400	170/340	130/260			
	n. connettori/m² *no. connectors/m²*	8,1	8,7	15,2	16,2			
120 x 200	n. connettori per trave *no. connectors per beam*	-	16	28	40	60	96	-
	passo [mm] *pitch [mm]*		400/400	300/400	200/400	140/280	160/320 (1)	
	n. connettori/m² *no. connectors/m²*		6,9	10,6	13,5	18,2	26,4	
140 x 200	n. connettori per trave *no. connectors per beam*	-	-	28	36	48	92	-
	passo [mm] *pitch [mm]*			400/400	250/400	160/320	180/360 (1)	
	n. connettori/m² *no. connectors/m²*			10,6	12,1	14,5	25,3	
140 x 240	n. connettori per trave *no. connectors per beam*	-	-	-	28	36	48	68
	passo [mm] *pitch [mm]*				400/400	250/400	160/320	130/230
	n. connettori/m² *no. connectors/m²*				9,4	10,9	13,2	17,2

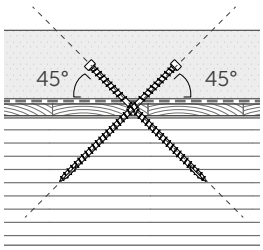
CONNETTORE CLC Ø8x240 - Legno lamellare GL 24h (EN 14080:2013)
CONNECTOR CLC Ø8x240 - Glulam GL 24h (EN 14080:2013)
Spessore tavolato t_s = 21 mm
Plank thickness t_s = 21 mm



Posa a 45° senza lamina fonoisolante.
Installation at a 45° angle, without soundproofing layer.

sezione trave BxH *beam section BxH* [mm]		luce / *span* [m] 3	3,5	4	4,5	5	5,5	6
120 x 160	n. connettori per trave *no. connectors per beam*	8	10	18	24	-	-	-
	passo [mm] *pitch [mm]*	500/500	300/400	200/400	120/240			
	n. connettori/m² *no. connectors/m²*	4,0	4,3	6,8	8,1			
120 x 200	n. connettori per trave *no. connectors per beam*	-	8	14	18	24	34	-
	passo [mm] *pitch [mm]*		500/500	300/400	200/400	150/300	110/220	
	n. connettori/m² *no. connectors/m²*		3,5	5,3	6,1	7,3	9,4	
140 x 200	n. connettori per trave *no. connectors per beam*	-	-	14	18	22	34	60
	passo [mm] *pitch [mm]*			400/400	200/400	180/360	120/240	140/280 [1]
	n. connettori/m² *no. connectors/m²*			5,3	6,1	6,7	9,4	15,2
140 x 240	n. connettori per trave *no. connectors per beam*	-	-	-	14	20	24	34
	passo [mm] *pitch [mm]*				350/350	200/400	160/320	130/240
	n. connettori/m² *no. connectors/m²*				4,7	6,1	6,6	8,6

CONNETTORE CLC Ø8x240 - Legno lamellare GL 24h (EN 14080:2013)
CONNECTOR CLC Ø8x240 - Glulam GL 24h (EN 14080:2013)
Spessore tavolato t_s = 21 mm
Plank thickness t_s = 21 mm



Posa incrociata a 45° con o senza lamina fonoisolante.
Crossed installation at a 45° angle, with or without soundproofing layer.

sezione trave BxH *beam section BxH* [mm]		luce / *span* [m] 3	3,5	4	4,5	5	5,5	6
120 x 160	n. connettori per trave *no. connectors per beam*	16	24	40	48	-	-	-
	passo [mm] *pitch [mm]*	400/400	200/400	160/320	130/260			
	n. connettori/m² *no. connectors/m²*	8,1	10,4	15,2	16,2			
120 x 200	n. connettori per trave *no. connectors per beam*	-	16	32	36	48	-	-
	passo [mm] *pitch [mm]*		400/400	250/400	200/400	150/300		
	n. connettori/m² *no. connectors/m²*		6,9	12,1	12,1	14,5		
140 x 200	n. connettori per trave *no. connectors per beam*	-	-	28	36	48	64	-
	passo [mm] *pitch [mm]*			300/400	200/400	150/300	120/240	
	n. connettori/m² *no. connectors/m²*			10,6	12,1	14,5	17,6	
140 x 240	n. connettori per trave *no. connectors per beam*	-	-	-	24	40	60	64
	passo [mm] *pitch [mm]*				300/500	200/400	150/300	140/280
	n. connettori/m² *no. connectors/m²*				8,1	12,1	16,5	16,2

NOTE
NOTES

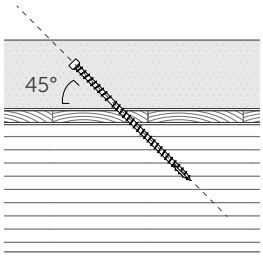
[1] Connettori disposti su due file.
Connectors placed in two rows.

Per configurazioni di calcolo differenti è disponibile gratuitamente il software di calcolo (www.holztechnic.com).
For different calculation methods, the calculation software is available free of charge (www.holztechnic.com).

VALORI STATICI
STATIC VALUES

interasse travi *distance between joists*	660 mm	peso proprio (g_{k1}) *own weight (g_{k1})*	trave in legno + tavolato + soletta in calcestruzzo *timber beam + wooden planking + concrete slab*
spessore soletta cls C20/25 *concrete slab thickness C20/25*	50 mm		
limite di freccia *arrow limit*	w_{ist} = l/400 $w_{net,fin}$ = l/250	carico permanente non strutturale (g_{k2}) *permanent non-structural load (g_{k2})*	2 kN/m²
norma di calcolo *calculation standard*	EN 1995:2014	sovraccarico variabile (q_k) *variable load (q_k)*	2 kN/m²

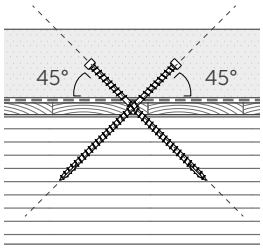
CONNETTORE CLC Ø8x160 - Legno lamellare GL 24h (EN 14080:2013)
CONNECTOR CLC Ø8x160 - Glulam GL 24h (EN 14080:2013)
Spessore tavolato t_s = 21 mm
Plank thickness t_s = 21 mm



Posa a 45° senza lamina fonoisolante.
Installation at a 45° angle, without soundproofing layer.

sezione trave BxH *beam section BxH* [mm]		luce / *span* [m] 3	3,5	4	4,5	5	5,5	6
120 x 160	n. connettori per trave *no. connectors per beam*	8	10	30	54	-	-	-
	passo [mm] *pitch [mm]*	400/400	300/400	100/200	120/240 (1)			
	n. connettori/m² *no. connectors/m²*	4,0	4,3	11,4	18,2			
120 x 200	n. connettori per trave *no. connectors per beam*	-	8	14	20	36	-	-
	passo [mm] *pitch [mm]*		400/400	300/400	180/330	190/380		
	n. connettori/m² *no. connectors/m²*		3,5	5,3	6,7	10,9		
140 x 200	n. connettori per trave *no. connectors per beam*	-	-	14	20	34	60	-
	passo [mm] *pitch [mm]*			300/300	200/300	110/220	130/260 (1)	
	n. connettori/m² *no. connectors/m²*			5,3	6,7	10,3	16,5	
140 x 240	n. connettori per trave *no. connectors per beam*	-	-	-	14	20	30	44
	passo [mm] *pitch [mm]*				400/400	200/400	150/300	100/200
	n. connettori/m² *no. connectors/m²*				4,7	6,1	8,3	11,1

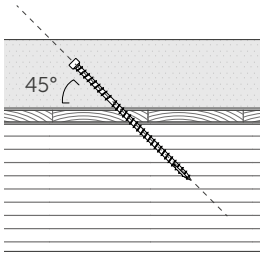
CONNETTORE CLC Ø8x160 - Legno lamellare GL 24h (EN 14080:2013)
CONNECTOR CLC Ø8x160 - Glulam GL 24h (EN 14080:2013)
Spessore tavolato t_s = 21 mm
Plank thickness t_s = 21 mm



Posa incrociata a 45° con o senza lamina fonoisolante.
Crossed installation at a 45° angle, with or without sound-proofing layer.

sezione trave BxH *beam section BxH* [mm]		luce / *span* [m] 3	3,5	4	4,5	5	5,5	6
120 x 160	n. connettori per trave *no. connectors per beam*	16	16	40	-	-	-	-
	passo [mm] *pitch [mm]*	400/400	400/400	170/340				
	n. connettori/m² *no. connectors/m²*	8,1	6,9	15,2				
120 x 200	n. connettori per trave *no. connectors per beam*	-	16	28	36	60	96	-
	passo [mm] *pitch [mm]*		400/400	300/400	250/500	140/280	160/320 (1)	
	n. connettori/m² *no. connectors/m²*		6,9	10,6	12,1	18,2	26,4	
140 x 200	n. connettori per trave *no. connectors per beam*	-	-	16	28	44	92	-
	passo [mm] *pitch [mm]*			500/500	350/500	170/340	180/360	
	n. connettori/m² *no. connectors/m²*			6,1	9,4	13,3	25,3	
140 x 240	n. connettori per trave *no. connectors per beam*	-	-	-	28	32	44	64
	passo [mm] *pitch [mm]*				400/400	300/500	200/500	150/300
	n. connettori/m² *no. connectors/m²*				9,4	9,7	12,1	16,2

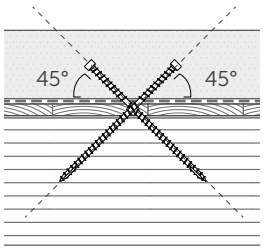
CONNETTORE CLC Ø8x240 - Legno lamellare GL 24h (EN 14080:2013)
CONNECTOR CLC Ø8x240 - Glulam GL 24h (EN 14080:2013)
Spessore tavolato t_s = 21 mm
Plank thickness t_s = 21 mm



Posa a 45° senza lamina fonoisolante.
Installation at a 45° angle, without soundproofing layer.

sezione trave BxH *beam section BxH* [mm]		luce / *span* [m] 3	3,5	4	4,5	5	5,5	6
120 x 160	n. connettori per trave *no. connectors per beam*	8	8	16	24	-	-	-
	passo [mm] *pitch [mm]*	500/500	400/500	250/400	120/240			
	n. connettori/m² *no. connectors/m²*	4,0	3,5	6,1	8,1			
120 x 200	n. connettori per trave *no. connectors per beam*	-	8	14	12	20	34	-
	passo [mm] *pitch [mm]*		500/500	300/400	250/500	190/380	110/220	
	n. connettori/m² *no. connectors/m²*		3,5	5,3	4,0	6,1	9,4	
140 x 200	n. connettori per trave *no. connectors per beam*	-	-	8	16	20	320	60
	passo [mm] *pitch [mm]*			500/500	300/400	200/400	130/260	140/280 [1]
	n. connettori/m² *no. connectors/m²*			3,0	5,4	6,1	88,2	15,2
140 x 240	n. connettori per trave *no. connectors per beam*	-	-	-	8	16	18	22
	passo [mm] *pitch [mm]*				500/500	300/400	250/400	200/400
	n. connettori/m² *no. connectors/m²*				2,7	4,8	5,0	5,6

CONNETTORE CLC Ø8x240 - Legno lamellare GL 24h (EN 14080:2013)
CONNECTOR CLC Ø8x240 - Glulam GL 24h (EN 14080:2013)
Spessore tavolato t_s = 21 mm
Plank thickness t_s = 21 mm



Posa incrociata a 45° con o senza lamina fonoisolante.
Crossed installation at a 45° angle, with or without sound-proofing layer.

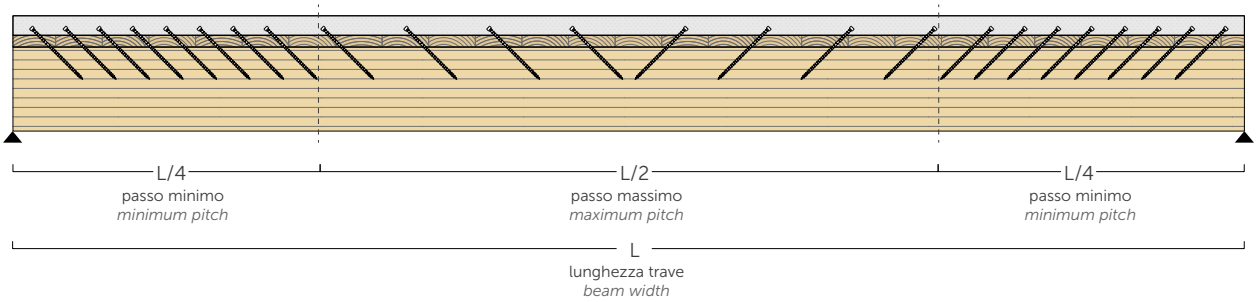
sezione trave BxH *beam section BxH* [mm]		luce / *span* [m] 3	3,5	4	4,5	5	5,5	6
120 x 160	n. connettori per trave *no. connectors per beam*	16	20	32	40	-	-	-
	passo [mm] *pitch [mm]*	500/500	320/500	220/400	200/400			
	n. connettori/m² *no. connectors/m²*	8,1	8,7	12,1	13,5			
120 x 200	n. connettori per trave *no. connectors per beam*	-	16	20	24	44	-	-
	passo [mm] *pitch [mm]*		500/500	350/500	250/500	180/360		
	n. connettori/m² *no. connectors/m²*		6,9	7,6	8,1	13,3		
140 x 200	n. connettori per trave *no. connectors per beam*	-	-	20	32	40	48	-
	passo [mm] *pitch [mm]*			400/500	260/400	200/400	160/320	
	n. connettori/m² *no. connectors/m²*			7,6	10,8	12,1	13,2	
140 x 240	n. connettori per trave *no. connectors per beam*	-	-	-	20	36	44	60
	passo [mm] *pitch [mm]*				400/500	250/400	200/400	160/320
	n. connettori/m² *no. connectors/m²*				6,7	10,9	12,1	15,2

NOTE
NOTES

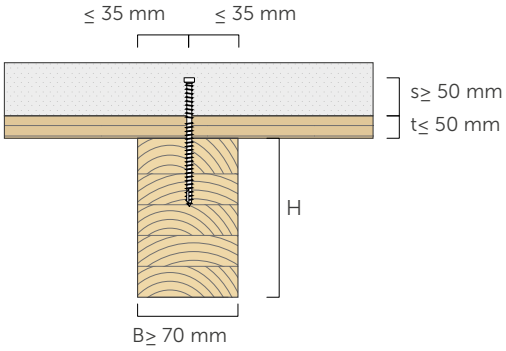
[1] Connettori disposti su due file.
Connectors placed in two rows.

Per configurazioni di calcolo differenti è disponibile gratuitamente il software di calcolo (www.holztechnic.com).
For different calculation methods, the calculation software is available free of charge (www.holztechnic.com).

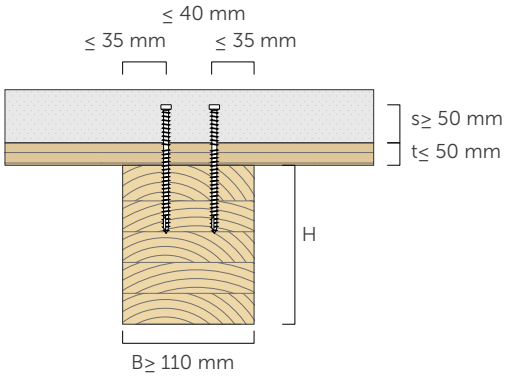
SCHEMA DI INSTALLAZIONE - CONNETTORI INSTALLATI PARALLELI 45°
INSTALLATION DIAGRAM - CONNECTORS INSTALLED PARALLEL 45°



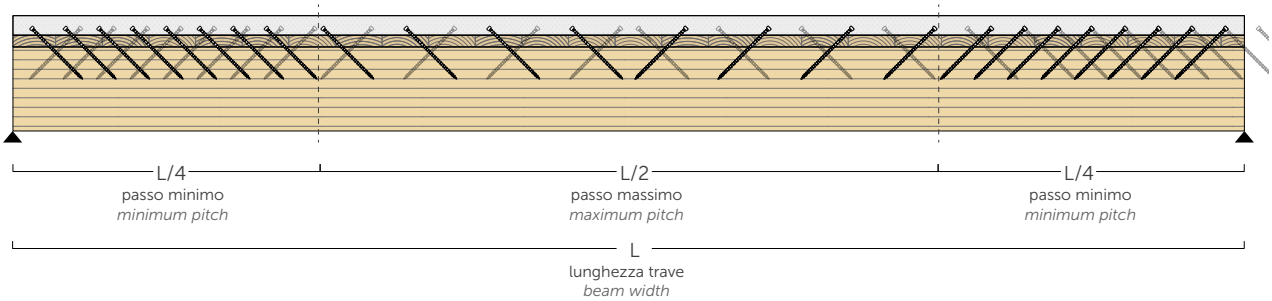
DISPOSIZIONE CONNETTORI IN 1 FILA
SINGLE-ROW CONNECTOR ARRANGEMENT



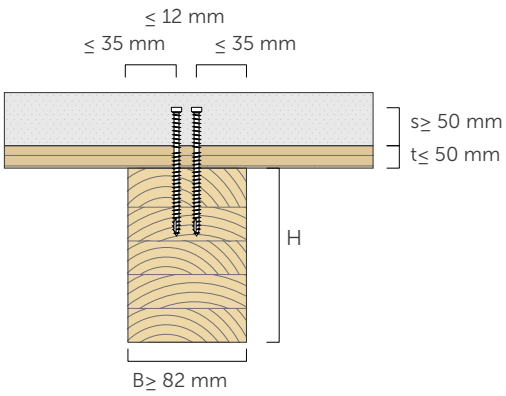
DISPOSIZIONE CONNETTORI IN 2 FILE
DOUBLE-ROW CONNECTOR ARRANGEMENT



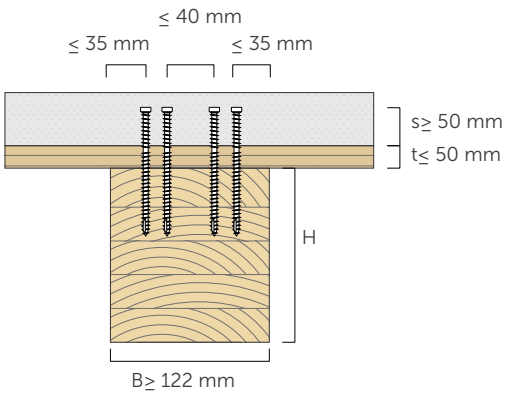
SCHEMA DI INSTALLAZIONE - CONNETTORI INSTALLATI INCROCIATI 45°
INSTALLATION DIAGRAM - CONNECTORS INSTALLED CROSSED 45°



DISPOSIZIONE CONNETTORI INCROCIATI (1 FILA)
CROSSED CONNECTOR ARRANGEMENT (1 ROW)



DISPOSIZIONE CONNETTORI INCROCIATI (2 FILE)
CROSSED CONNECTOR ARRANGEMENT (2 ROWS)



SBD-HT

INCLUDED

CE
EN 14592

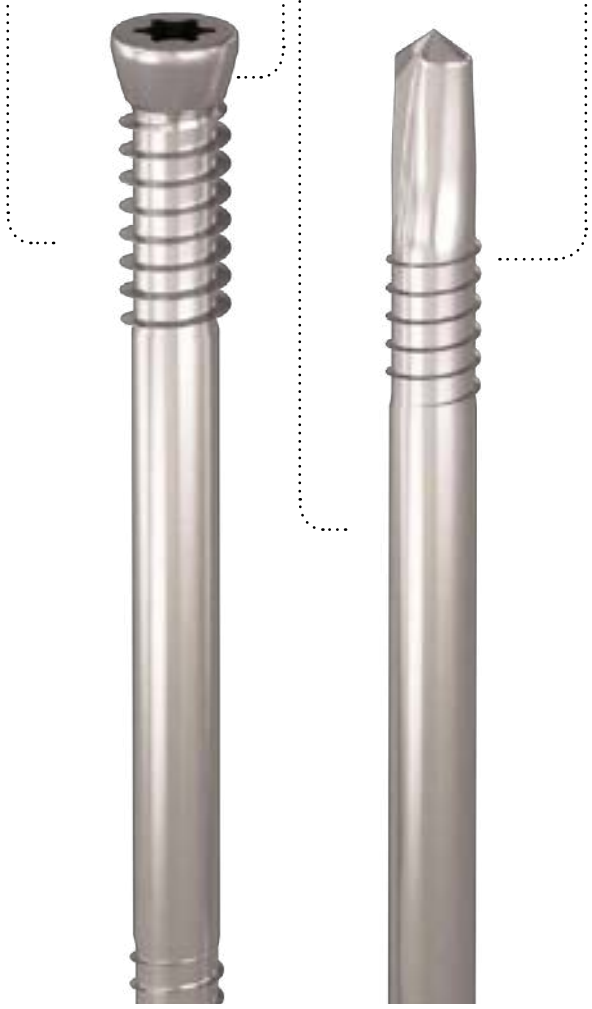
SPINOTTO AUTOFORANTE
SELF-DRILLING DOWEL

Filetto per chiusura del giunto e semplificazione eventuale svitamento
Thread for closing the joint and simplified unscrewing

Ideale per acciaio e alluminio
Ideal for steel and aluminium

Testa ridotta per giunzioni a scomparsa
Smaller head for concealed joints

Diametro maggiorato per più resistenza
Increased diameter for more resistance



CODICI E DIMENSIONI
CODES AND DIMENSIONS

SBD-HT ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
SBD-HT BRIGHT ZINC PLATED CARBON STEEL

d_1 [mm]	CODICE *CODE*	L [mm]	b_2 [mm]	b_1 [mm]	
7,5 TX 40	**SBD7595H**	95	20	15	50
	SBD75115H	115	20	15	50
	SBD75135H	135	20	15	50
	SBD75155H	155	20	15	50
	SBD75175H	175	40	15	50

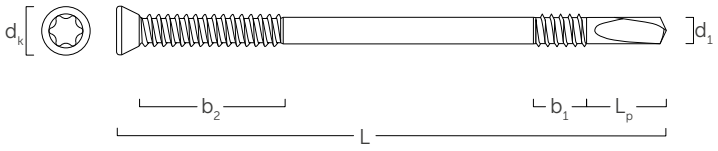
Disponibile anche in altre lunghezze.
Also available in other lengths.

SPESSORI PIASTRE
PLATES THICKNESS

piastra *plate* [mm]	**spessore max. piastra singola** *max. thickness single plate* [mm]	**spessore max. piastra doppia** *max. thickness double plate* [mm]
ACCIAIO S235 *S235 STEEL*	10,0	8,0
ACCIAIO S275 *S275 STEEL*	8,0	6,0
ACCIAIO S355 *S355 STEEL*	6,0	5,0
ALUMINI	6,0	-
ALUMIDI	6,0	-
ALUMAXI	10,0	-

Giunzione a taglio legno-piastra metallica-legno *Timber - metal plate - timber shear joint*	
Pressione consigliata *Recommended pressure*	≈ 40 kg
Avvitatura consigliata *Recommended screwing*	≈ 1000 - 1500 rpm (piastra in acciaio) *(steel plate)* ≈ 600 - 1000 rpm (piastra in alluminio) *(aluminium plate)*

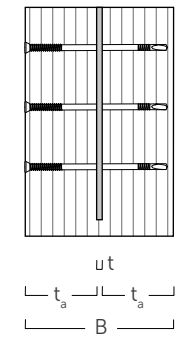
GEOMETRIA E CARATTERISTICHE MECCANICHE
GEOMETRY AND MECHANICAL CHARACTERISTICS



diametro nominale *nominal diameter*	**d_1**	**[mm]**	**7,5**
diametro testa *head diameter*	d_k	[mm]	11,0
lunghezza punta *tip length*	L_p	[mm]	24,0
lunghezza efficace *effective length*	L_{eff}	[mm]	L - 0,8
momento caratteristico di snervamento *characteristic yield moment*	$M_{y,k}$	[Nmm]	42000

TAGLIO LEGNO-ACCIAIO-LEGNO $R_{V,k}$
SHEAR TIMBER-STEEL-TIMBER $R_{V,k}$

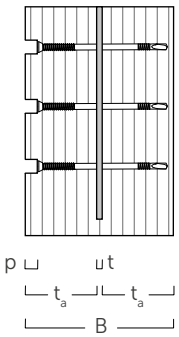
1 PIASTRA INTERNA (2 piani di taglio) - PROFONDITÀ INSERIMENTO TESTA SPINOTTO 0 mm
1 INTERNAL PLATE (2 shear planes) - DOWEL HEAD INSTALLATION DEPTH 0 mm



fissaggio *fastening*	**SBD**	[mm]	7,5x95	7,5x115	7,5x135	7,5x155	7,5x175
larghezza trave *beam width*	**B**	[mm]	100	120	140	160	180
profondità inserimento testa *head insertion depth*	**p**	[mm]	0	0	0	0	0
legno esterno *exterior wood*	**t_a**	[mm]	47	57	67	77	87

$R_{V,k}$ [kN]	**angolo forza-fibre** *load-to-grain angle*	**0°**	9,50	10,62	11,91	12,83	13,30
		30°	8,79	9,75	10,87	11,93	12,55
		45°	8,21	9,04	10,02	11,10	11,74
		60°	7,72	8,45	9,32	10,29	11,05
		90°	7,31	7,95	8,73	9,60	10,45

1 PIASTRA INTERNA (2 piani di taglio) - PROFONDITÀ INSERIMENTO TESTA SPINOTTO 15 mm
1 INTERNAL PLATE (2 shear planes) - DOWEL HEAD INSTALLATION DEPTH 15 mm



fissaggio *fastening*	**SBD**	[mm]	7,5x95	7,5x115	7,5x135	7,5x155	7,5x175
larghezza trave *beam width*	**B**	[mm]	120	140	160	180	200
profondità inserimento testa *head insertion depth*	**p**	[mm]	15	15	15	15	15
legno esterno *exterior wood*	**t_a**	[mm]	42	52	62	72	82

$R_{V,k}$ [kN]	**angolo forza-fibre** *load-to-grain angle*	**0°**	9,45	10,59	11,89	13,18	13,30
		30°	8,74	9,72	10,85	12,07	12,59
		45°	8,16	9,01	10,00	11,09	11,99
		60°	7,68	8,42	9,30	10,27	11,30
		90°	7,27	7,92	8,71	9,59	10,52

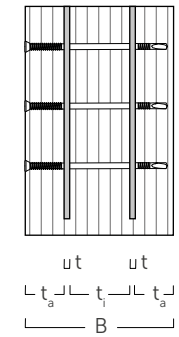
classe di resistenza *strength class*	**C24**	**GL22h**	**C30**	**C40 / GL32c**	**GL28h**	**D24**	**D30**
ρ_k [kg/m^3]	350	370	380	400	425	485	530
k_F	1,00	1,03	1,05	1,08	1,11	1,20	1,27

Per differenti masse volumiche ρk la resistenza di progetto lato legno si calcola come: $R'_{V,d} = R_{V,d} \cdot k_F$.
For different densities ρk the wood-side design resistance is calculated as: $R'_{V,d} = R_{V,d} \cdot k_F$.

		a_1 [mm]								
	n. SBD	**40**	**50**	**60**	**70**	**80**	**90**	**100**	**120**	**140**
nef	2	1,49	1,58	1,65	1,72	1,78	1,83	1,88	1,97	2,00
	3	2,15	2,27	2,38	2,47	2,56	2,63	2,70	2,83	2,94
	4	2,79	2,95	3,08	3,21	3,31	3,41	3,50	3,67	3,81
	5	3,41	3,60	3,77	3,92	4,05	4,17	4,28	4,48	4,66
	6	4,01	4,24	4,44	4,62	4,77	4,92	5,05	5,28	5,49
	7	4,61	4,88	5,10	5,30	5,48	5,65	5,80	6,07	6,31

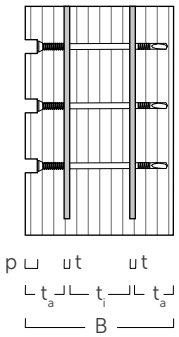
Nel caso di più spinotti disposti parallelamente alle fibre, si deve tener conto del numero efficace: $R'_{V,d} = R_{V,d} \cdot k_F$.
In the case of multiple dowels placed parallel to the fibres, the effective number must be taken into account: $R'_{V,d} = R_{V,d} \cdot k_F$.

2 PIASTRE INTERNE (4 piani di taglio) - PROFONDITÀ INSERIMENTO TESTA SPINOTTO 0 mm
2 INTERNAL PLATES (4 shear planes) - DOWEL HEAD INSTALLATION DEPTH 0 mm



fissaggio *fastening*		**SBD**	[mm]	7,5x95	7,5x115	7,5x135	7,5x155	7,5x175
larghezza trave *beam width*		**B**	[mm]	-	-	140	160	180
profondità inserimento testa *head insertion depth*		**p**	[mm]	-	-	0	0	0
legno esterno *exterior wood*		**t_a**	[mm]	-	-	37	42	48
legno interno *interior wood*		**t_i**	[mm]	-	-	**54**	**64**	**72**
$R_{v,k}$ [kN]	**angolo forza-fibre** *load-to-grain angle*		**0°**	-	-	19,42	21,40	22,90
			30°	-	-	17,74	19,67	21,13
			45°	-	-	16,38	18,23	19,54
			60°	-	-	15,24	16,91	18,21
			90°	-	-	14,16	15,79	17,09

2 PIASTRE INTERNE (4 piani di taglio) - PROFONDITÀ INSERIMENTO TESTA SPINOTTO 10 mm
2 INTERNAL PLATES (4 shear planes) - DOWEL HEAD INSTALLATION DEPTH 10 mm



fissaggio *fastening*		**SBD**	[mm]	7,5x95	7,5x115	7,5x135	7,5x155	7,5x175
larghezza trave *beam width*		**B**	[mm]	-	140	160	180	200
profondità inserimento testa *head insertion depth*		**p**	[mm]	-	10	10	10	10
legno esterno *exterior wood*		**t_a**	[mm]	-	27	32	38	46
legno interno *interior wood*		**t_i**	[mm]	-	**54**	**64**	**72**	**76**
$R_{v,k}$ [kN]	**angolo forza-fibre** *load-to-grain angle*		**0°**	-	17,72	20,49	22,03	22,70
			30°	-	16,06	18,71	20,41	21,30
			45°	-	14,71	17,23	18,94	19,85
			60°	-	13,59	15,88	17,71	18,50
			90°	-	12,65	14,74	16,67	17,36

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono secondo normativa EN 1995:2014.
  Characteristic values according to EN 1995:2014.
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_k \cdot k_{mod}}{\gamma_m}$$

I coefficienti γ_m e k_{mod} sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
The coefficients γ_m and k_{mod} should be taken according to the current regulations used for the calculation.
- I valori forniti sono calcolati con piastre di spessore 5 mm ed una fresata nel legno di spessore 6 mm e relativi ad un singolo spinotto SBD.
  The values provided are calculated using 5 mm thick plates, a 6 mm thick milled cut in the timber and a single SBD dowel.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 350 kg/m³.
  The calculation process used a timber characteristic density of ρ_k = 350 kg/m³.
- Il dimensionamento e la verifica degli elementi in legno e delle piastre metalliche devono essere svolti a parte.
  Sizing and verification of the wooden elements and metal plates must be done separately.

STA

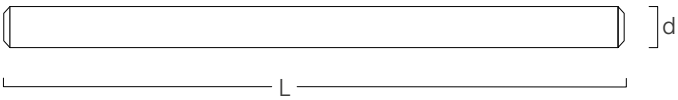
CE
EN 14592

SPINOTTO LISCIO
SMOOTH DOWEL

Marcatura CE
CE marking

Acciaio S355 per garantire maggiore resistenza a taglio (Ø16 e Ø20)
S355 steel grade to provide higher shear strength (Ø16 and Ø20)

GEOMETRIA
GEOMETRY



diametro nominale *nominal diameter*	**d**	**[mm]**	**8**	**12**	**16**	**20**
lunghezza *length*	L	[mm]	60 ÷ 140	60 ÷ 400	80 ÷ 500	120 ÷ 500
materiale *material*	acciaio *steel*	[mm]	S235	S235	S355	S355
	$f_{u,k,MIN}$	[N/mm²]	360	360	460	460
	$f_{y,k,MIN}$	[N/mm²]	235	235	355	355
momento caratteristico di snervamento *characteristic yield moment*	$M_{y,k}$	[Nmm]	24100	69100	191000	340000

Parametri meccanici in accordo alla marcatura CE secondo EN 14592.
Mechanical parameters according to CE marking, in accordance with EN 14592.

d [mm]	CODICE *CODE*	L [mm]	acciaio *steel*	
8	**STA860B**	60	S235	200
	STA870B	70	S235	200
	STA880B	80	S235	200
	STA890B	90	S235	200
	STA8100B	100	S235	200
	STA8110B	110	S235	200
	STA8120B	120	S235	200
	STA8140B	140	S235	200
12	**STA1260B**	60	S235	100
	STA1270B	70	S235	100
	STA1280B	80	S235	100
	STA1290B	90	S235	100
	STA12100B	100	S235	100
	STA12110B	110	S235	100
	STA12120B	120	S235	100
	STA12130B	130	S235	100
	STA12140B	140	S235	100
	STA12150B	150	S235	100
	STA12160B	160	S235	100
	STA12170B	170	S235	100
	STA12180B	180	S235	100
	STA12200B	200	S235	100
	STA12220B	220	S235	100
	STA12240B	240	S235	100
	STA12260B	260	S235	100
	STA12280B	280	S235	100
	STA12320B	320	S235	100
	STA12340B	340	S235	100
	STA12360B	360	S235	100
	STA12400B	400	S235	100
12	**STA121000B**	1000	S235	1
16	**STA1680B**	80	S355	50
	STA16100B	100	S355	50
	STA16110B	110	S355	50
	STA16120B	120	S355	50
	STA16130B	130	S355	50
	STA16140B	140	S355	50
	STA16150B	150	S355	50
	STA16160B	160	S355	50
	STA16170B	170	S355	50
	STA16180B	180	S355	50
	STA16190B	190	S355	50
	STA16200B	200	S355	50
	STA16220B	220	S355	50

d [mm]	CODICE *CODE*	L [mm]	acciaio *steel*	
16	**STA16240B**	240	S355	50
	STA16260B	260	S355	50
	STA16280B	280	S355	50
	STA16300B	300	S355	50
	STA16320B	320	S355	50
	STA16340B	340	S355	50
	STA16360B	360	S355	50
	STA16380B	380	S355	50
	STA16400B	400	S355	50
	STA16420B	420	S355	50
	STA16440B	440	S355	50
	STA16460B	460	S355	50
	STA16480B	480	S355	50
	STA16500B	500	S355	50
16	**STA161000B**	1000	S355	1
20	**STA20120B**	120	S355	25
	STA20140B	140	S355	25
	STA20150B	150	S355	25
	STA20160B	160	S355	25
	STA20180B	180	S355	25
	STA20190B	190	S355	25
	STA20200B	200	S355	25
	STA20220B	220	S355	25
	STA20240B	240	S355	25
	STA20260B	260	S355	25
	STA20280B	280	S355	25
	STA20300B	300	S355	25
	STA20320B	320	S355	25
	STA20340B	340	S355	25
	STA20360B	360	S355	25
	STA20380B	380	S355	25
	STA20400B	400	S355	25
	STA20420B	420	S355	25
	STA20440B	440	S355	25
	STA20460B	460	S355	25
	STA20480B	480	S355	25
	STA20500B	500	S355	25
20	**STA201000B**	1000	S355	1

MATERIALE / ***MATERIAL***

STA Ø8 - Ø12
Acciaio al carbonio S235 con zincatura galvanica.
S235 bright zinc plated carbon steel.

STA Ø16 - Ø20
Acciaio al carbonio S355 con zincatura galvanica.
S355 bright zinc plated carbon steel.

VITI E CONNETTORI PER ESTERNO
SCREWS AND CONNECTORS FOR OUTDOOR

92 MINI

93 KKZ-HT

94 BFO

95 SCA-HT

96 BFO

96 SCA-HT

97 KGA

98 KGL EVO

100 KWP

101 KKA

102 FLAT

103 FLIP

104 TVM

106 GAP 3

107 GAP 4

108 GROUND COVER

109 NAG

110 GRANULO

111 PROFID

112 TERRA BAND UV

113 STAR

113 SHIM

114 JFA

116 SUPPORT

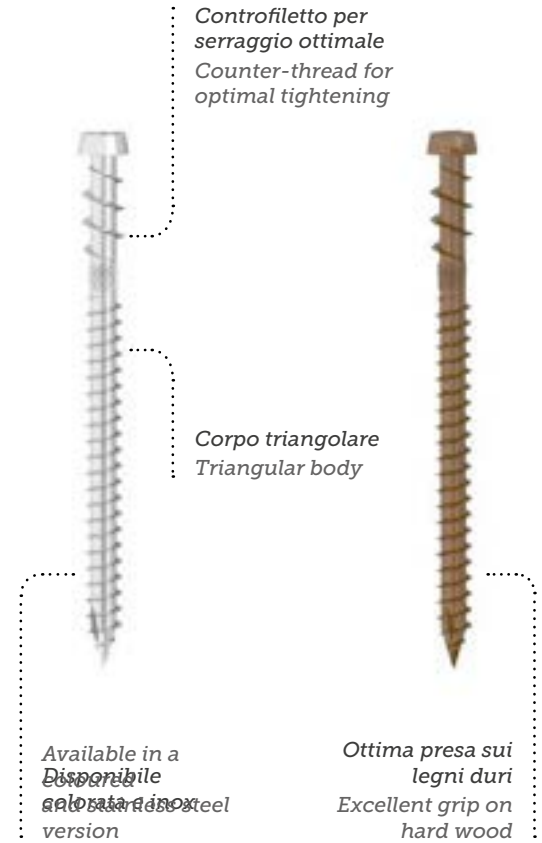
118 ALU TERRACE

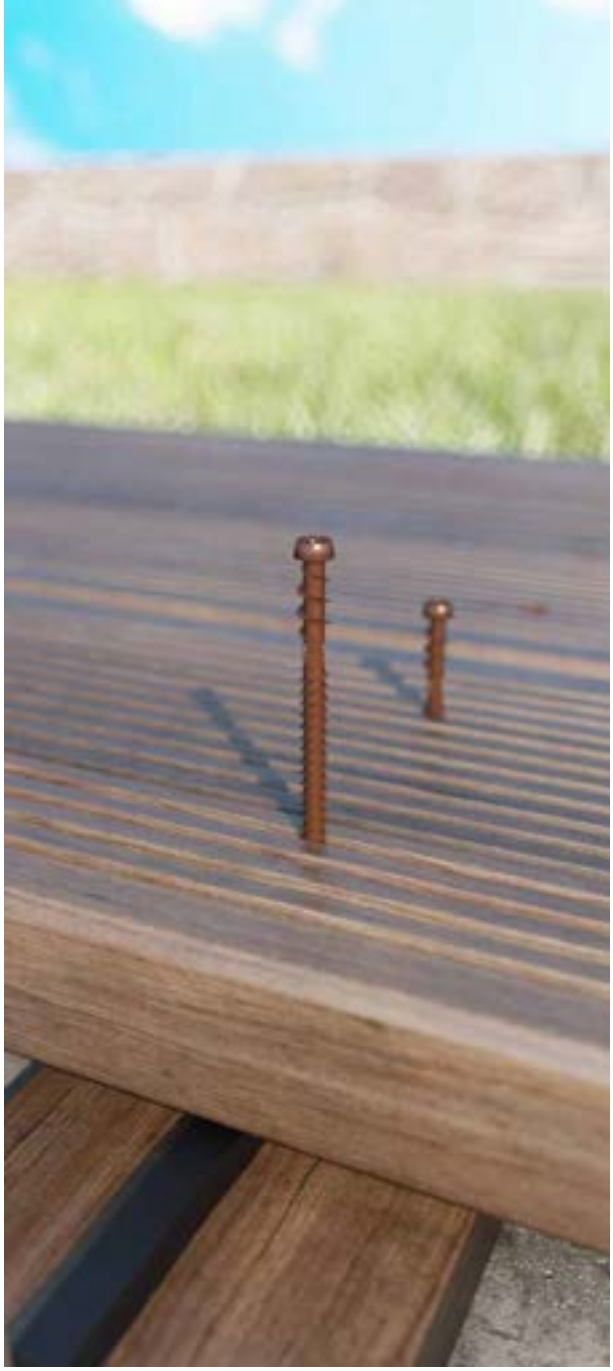
MINI

INCLUDED

A4 AISI 316 | ANTI CORR. | CE EN 14592

VITE DOPPIO FILETTO TESTA A SCOMPARSA
DOUBLE THREAD SCREW WITH CONCEALED HEAD





CODICI E DIMENSIONI
CODES AND DIMENSIONS

MINI ACCIAIO CON TRATTAMENTO ANTICORROSIVO
MINI STEEL WITH ANTI-CORROSION TREATMENT

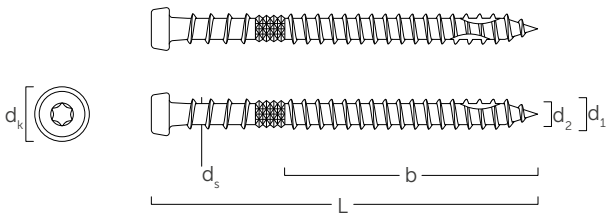
d_1 [mm]	CODICE *CODE*		L [mm]	b [mm]	A [mm]	
5 TX20	MNB550	●	53	35	18	200
	MNB560	●	60	40	22	200
	MNB570	●	70	50	27	100

Disponibile anche in altri colori.
Also available in other colours.

MINI ACCIAIO INOSSIDABILE A4
A4 STAINLESS STEEL MINI

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
5 TX20	MNA550	53	35	18	200
	MNA560	60	40	22	200
	MNA570	70	50	27	100

GEOMETRIA
GEOMETRY



diametro nominale ***nominal diameter***	d_1	[mm]	5,25	5,25
diametro testa *head diameter*	d_k	[mm]	6,75	6,75
diametro nocciolo *tip diameter*	d_2	[mm]	3,40	3,40
diametro gambo *shank diameter*	d_s	[mm]	4,05	4,05
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	3,0 - 4,0	3,0 - 4,0
intaglio punta *notched tip*			singolo *single*	doppio *double*

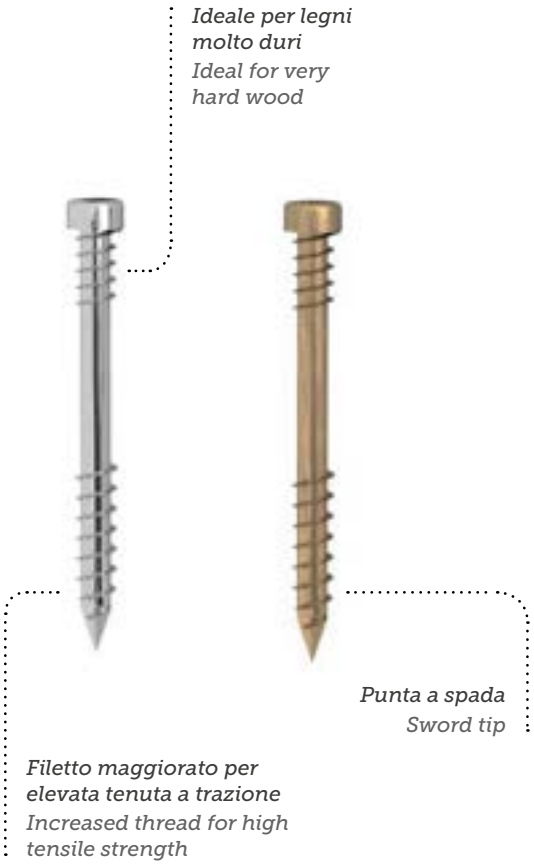
KKZ-HT

INCLUDED

A2 AISI 304

CE EN 14592

VITE A TESTA CILINDRICA A SCOMPARSA
COUNTERSUNK CYLINDRICAL HEAD SCREW



CODICI E DIMENSIONI
CODES AND DIMENSIONS

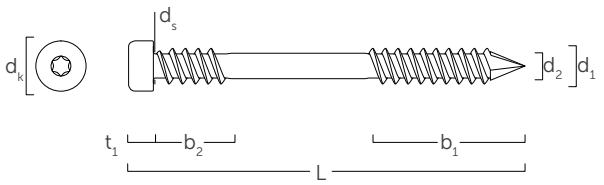
KKZ-HT ACCIAIO INOSSIDABILE A2
KKZ-HT A2 STAINLESS STEEL

d_1 [mm]	CODICE *CODE*		L [mm]	b_1 [mm]	b_2 [mm]	A [mm]	
5 TX 25	**KKZ550H**		50	22	11	28	200
	KKZ560H		60	27	11	33	200
	KKZ570H		70	32	11	38	100

KKZ-HT BRONZE ACCIAIO INOSSIDABILE A2
KKZ-HT BRONZE A2 STAINLESS STEEL

d_1 [mm]	CODICE *CODE*		L [mm]	b_1 [mm]	b_2 [mm]	A [mm]	
5 TX 25	**KKZB550H**		50	22	11	28	200
	KKZB560H		60	27	11	33	200

GEOMETRIA
GEOMETRY



diametro nominale ***nominal diameter***	d_1	[mm]	5
diametro testa *head diameter*	d_k	[mm]	6,80
diametro nocciolo *tip diameter*	d_2	[mm]	3,50
diametro gambo *shank diameter*	d_s	[mm]	4,35
spessore testa *head thickness*	t_1	[mm]	3,10
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	3,50

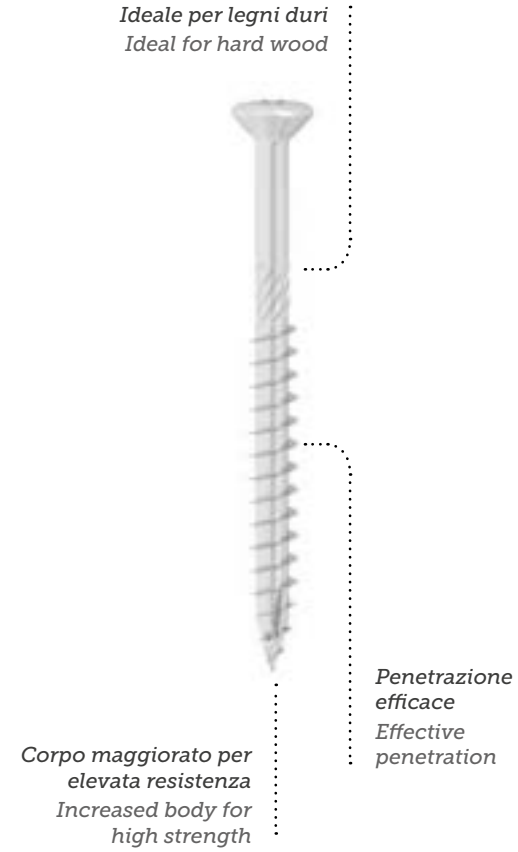
BFO

INCLUDED

A2 AISI 305

CE EN 14592

VITE TESTA TONDA E GAMBO RINFORZATO
ROUND-HEAD SCREW AND REINFORCED SHANK

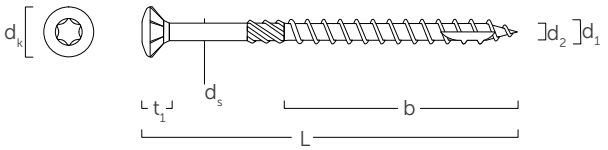


CODICI E DIMENSIONI
CODES AND DIMENSIONS

BFO ACCIAIO INOSSIDABILE A2
BFO STAINLESS STEEL A2

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
5 TX25	**BFO550**	50	30	20	200
	BFO560	60	36	24	200
	BFO570	70	42	28	100

GEOMETRIA
GEOMETRY

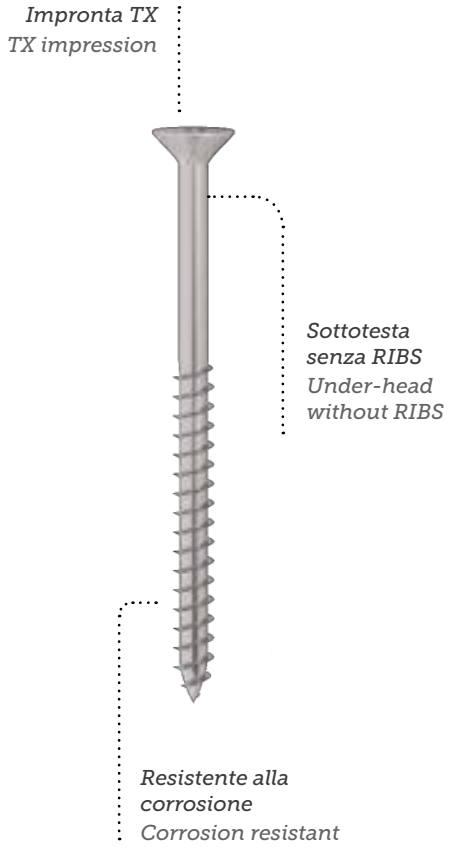


diametro nominale *nominal diameter*	**d_1**	**[mm]**	**5,3**
diametro testa *head diameter*	d_k	[mm]	8,00
diametro nocciolo *tip diameter*	d_2	[mm]	3,90
diametro gambo *shank diameter*	d_s	[mm]	4,10
spessore testa *head thickness*	t_1	[mm]	3,65
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	3,50

SCA-HT

A2
AISI 304

VITE TESTA SVASATA
SCREW WITH COUNTERSUNK HEAD

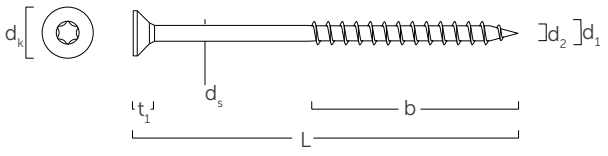


CODICI E DIMENSIONI
CODES AND DIMENSIONS

SCA-HT ACCIAIO INOSSIDABILE A2
SCA-HT STAINLESS STEEL A2

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
4 TX 20	SCA440H	40	24	16	200
	SCA450H	50	30	20	200
4,5 TX 20	SCA4550H	50	30	20	200
	SCA4560H	60	36	24	200
5 TX 25	SCA550H	50	30	20	200
	SCA560H	60	36	24	200
	SCA570H	70	42	28	200

GEOMETRIA
GEOMETRY



diametro nominale ***nominal diameter***	d_1	[mm]	4	4,5	5
diametro testa *head diameter*	d_k	[mm]	8,00	9,00	10,00
diametro nocciolo *tip diameter*	d_2	[mm]	2,55	2,80	3,40
diametro gambo *shank diameter*	d_s	[mm]	2,75	3,15	3,65
spessore testa *head thickness*	t_1	[mm]	3,80	4,25	4,65
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	2,5	3,0	3,0

BFO

INCLUDED

A2 AISI 305

CE EN 14592

VITI IN BUCKET 1000
SCREWS IN BUCKET 1000

BFO ACCIAIO INOSSIDABILE A2
BFO STAINLESS STEEL A2

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
5 TX25	**BFOBUC550**	50	30	20	1000
	BFOBUC560	60	36	24	1000

SCA-HT

A2 AISI 304

VITI IN BUCKET 1000
SCREWS IN BUCKET 1000

SCA-HT ACCIAIO INOSSIDABILE A2
SCA-HT STAINLESS STEEL A2

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
5 TX 25	**SCABUC560H**	60	36	24	1000
	SCABUC570H	70	42	28	1000

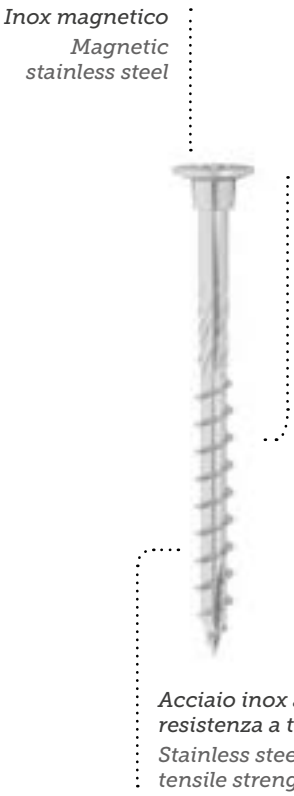
KGA

INCLUDED

AISI 410

CE ETA 11/0030

VITE TESTA CONICA UNIVERSALE
UNIVERSAL CONICAL HEAD SCREW

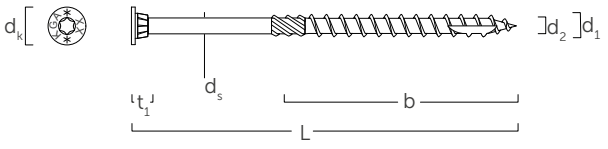


CODICI E DIMENSIONI
CODES AND DIMENSIONS

KGA ACCIAIO INOSSIDABILE AISI 410
KGA STAINLESS STEEL AISI 410

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
4,5 TX 20	**KGA4550**	50	30	20	200
	KGA4560	60	35	25	200
5 TX 25	**KGA550**	50	30	20	200
	KGA560	60	35	25	200
	KGA570	70	40	30	100

GEOMETRIA
GEOMETRY



diametro nominale *nominal diameter*	d_1	[mm]	4,5	5
diametro testa *head diameter*	d_k	[mm]	8,80	9,65
diametro nocciolo *tip diameter*	d_2	[mm]	3,05	3,25
diametro gambo *shank diameter*	d_s	[mm]	3,35	3,60
spessore testa *head thickness*	t_1	[mm]	5,00	6,00
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	3,0	3,0

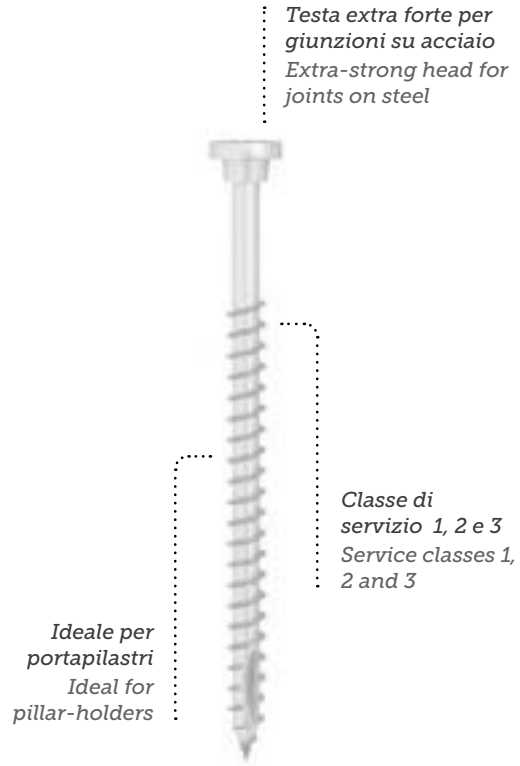
KGL EVO

INCLUDED

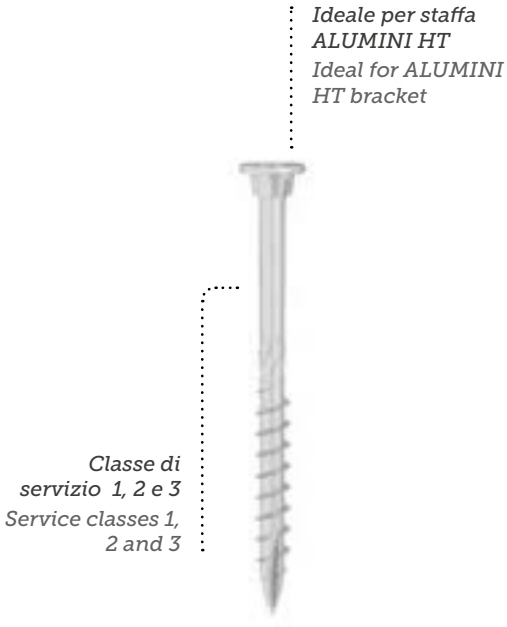
C4 EVO

CE ETA 11/0030

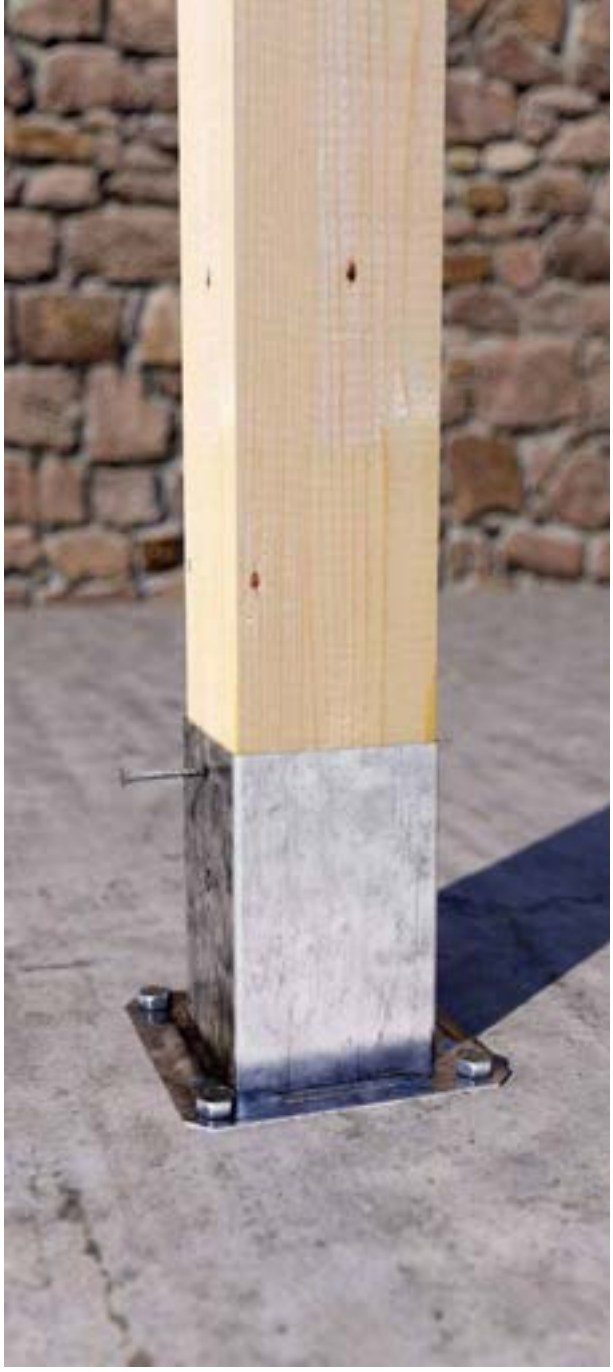
VITE TESTA CONICA
CONICAL HEAD SCREW



KGL EVO Ø 8



KGL EVO Ø 5



CODICI E DIMENSIONI
CODES AND DIMENSIONS

KGL EVO RIVESTIMENTO ANTICORROSIONE
KGL EVO ANTI-RUST COATING

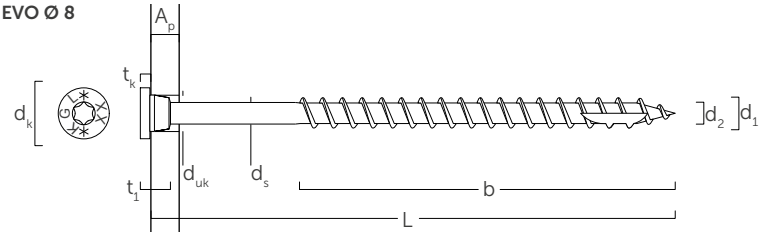
d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A_t [mm]	A_p [mm]	
5 TX 25	KGL560C	60	35	25	1.0 ÷ 10.0	200

KGL EVO RIVESTIMENTO ANTICORROSIONE
KGL EVO ANTI-RUST COATING

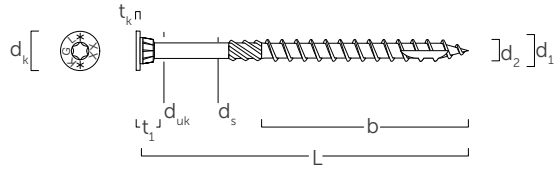
d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A_p [mm]	
8 TX 40	KGL860C	60	52	1.0 ÷ 15.0	100

GEOMETRIA
GEOMETRY

KGL EVO Ø 8



KGL EVO Ø 5



diametro nominale ***nominal diameter***	**d_1**	**[mm]**	**5**	**8**
diametro testa *head diameter*	d_k	[mm]	9,65	14,50
diametro nocciolo *tip diameter*	d_2	[mm]	3,40	5,40
diametro gambo *shank diameter*	d_s	[mm]	3,65	5,80
spessore testa *head thickness*	t_1	[mm]	4,50	4,60
spessore rondella *washer thickness*	t_k	[mm]	1,00	3,40
diametro sottotesta *underhead diameter*	d_{uk}	[mm]	6,0	10,0
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	3,0	5,0
momento caratteristico di snervamento *characteristic yield moment*	$M_{y,k}$	[Nmm]	5417,2	20057,5
parametro caratteristico di resistenza ad estrazione *characteristic withdrawal-resistance parameter*	$f_{ax,k}$	[N/mm²]	11,7	11,7
parametro caratteristico di penetrazione della testa *characteristic head-pull-through parameter*	$f_{head,k}$	[N/mm²]	10,5	10,5
resistenza caratteristica a trazione *characteristic tensile strength*	$f_{tens,k}$	[kN]	7,9	20,1

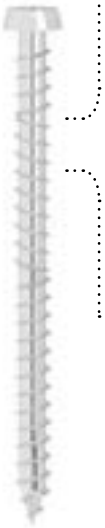
KWP

INCLUDED

A2
AISI 305

VITE PER TAVOLE WPC
SCREW FOR WPC PLANKS

Non richiede preforo su WPC sia pieno che vuoto
No pre-drilling required on WPC both full and empty



Triplo filetto
Triple thread

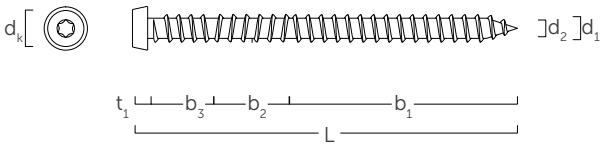
Eccellente aspirazione dei trucioli
Excellent aspiration of shavings

CODICI E DIMENSIONI
CODES AND DIMENSIONS

KWP ACCIAIO INOSSIDABILE A2
KWP STAINLESS STEEL A2

d_1 [mm]	CODICE *CODE*	L [mm]	b_1 [mm]	b_2 [mm]	b_3 [mm]	A [mm]	
5 TX 20	**KWP560**	60	36	15	6,5	25	200
	KWP570	70	46	15	6,5	35	100

GEOMETRIA
GEOMETRY



diametro nominale *nominal diameter*	**d_1**	**[mm]**	**5**
diametro testa *head diameter*	d_k	[mm]	6,75
diametro nocciolo *tip diameter*	d_2	[mm]	3,30
spessore testa *head thickness*	t_1	[mm]	2,30
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	3,00

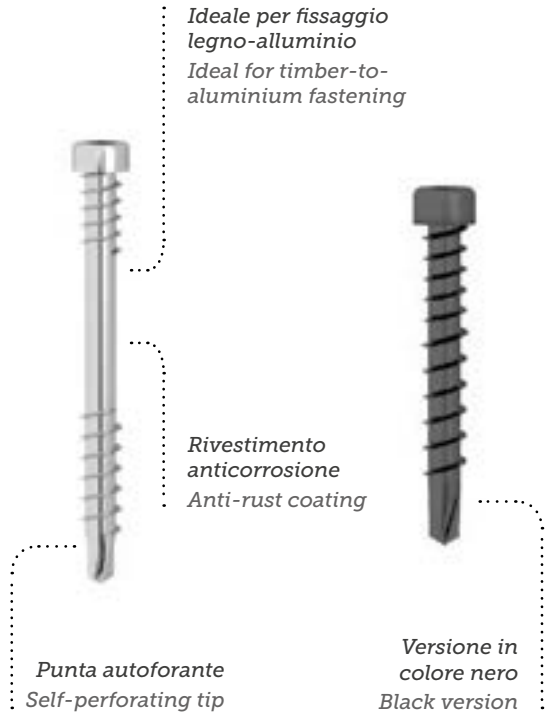
KKA

INCLUDED

ANTI CORR.

AISI 410

VITE AUTOFORANTE LEGNO-ALLUMINIO
SELF-DRILLING SCREW TIMBER-TO-ALUMINIUM



CODICI E DIMENSIONI
CODES AND DIMENSIONS

KKA ACCIAIO INOSSIDABILE AISI 410
KKA STAINLESS STEEL AISI 410

d_1 [mm]	CODICE *CODE*	L [mm]	b_1 [mm]	b_2 [mm]	A [mm]	$s_1=s_2$ [mm]	
4 TX 20	**KKA420**	20	11,4	-	-	1÷2.5	200
5 TX 25	**KKA540**	40	15,5	11	29	2÷3	100
	KKA550	50	20,5	11	39	2÷3	100

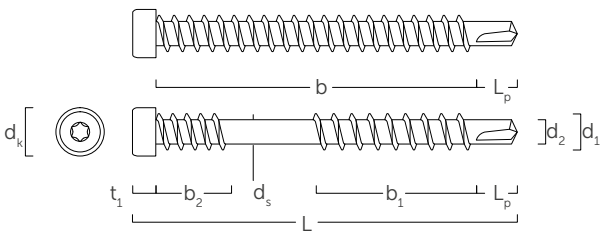
KKA COLOR
KKA COLOR

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	$s_1=s_2$ [mm]	
4 TX 20	**KKAN420**	20	10	-	2÷3	200
	KKAN430	30	20	22	2÷3	200
	KKAN440	40	30	32	2÷3	200
5 TX 25	**KKAN540**	40	30	29	2÷3	100

s_1 spessore piastra acciaio S235/St37
thickness, steel plate S235/St37

s_2 spessore piastra alluminio
thickness, aluminium plate

GEOMETRIA
GEOMETRY



diametro nominale *nominal diameter*	d_1	[mm]	4	5
diametro testa *head diameter*	d_k	[mm]	6,30	6,80
diametro nocciolo *tip diameter*	d_2	[mm]	2,80	3,50
diametro gambo *shank diameter*	d_s	[mm]	3,50	3,80
spessore testa *head thickness*	t_1	[mm]	3,10	3,35
diametro preforo *pre-drilling hole diameter*	L_p	[mm]	5,50	6,50

FLAT

FISSAGGIO A SCOMPARSA PER TERRAZZE
CONCEALED FASTENING FOR TERRACES

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	**materiale** *material*	**P x B x s** [mm]	
FLAT	alluminio nero *black alluminum*	64 x 27 x 4	200

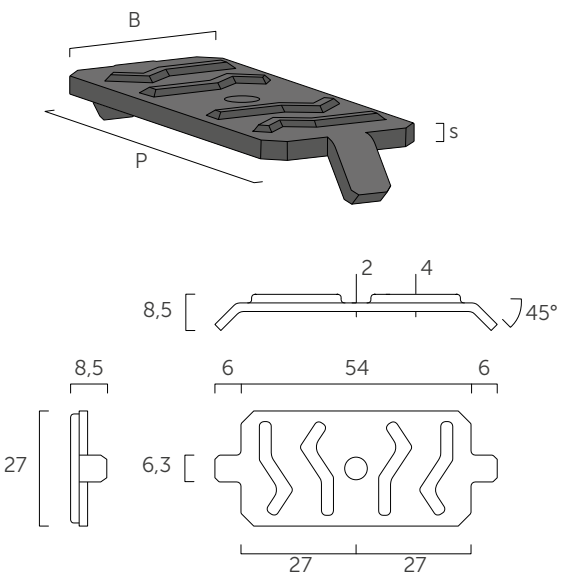
KKT COLOR
fissaggio su legno e WPC
fastening on wood and WPC

d_1 [mm]	**CODICE** *CODE*	**L** [mm]	
5 TX 20	**KKTN540**	40	200

KKA COLOR
fissaggio su alluminio
fastening on aluminium

d_1 [mm]	**CODICE** *CODE*	**L** [mm]	
5 TX 25	**KKAN540**	40	200

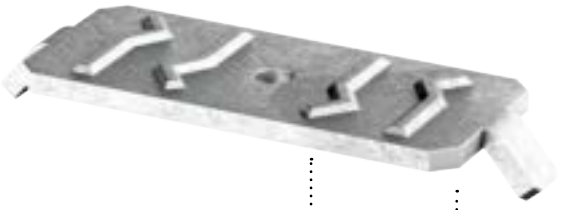
GEOMETRIA
GEOMETRY



FLIP

FISSAGGIO A SCOMPARSA PER TERRAZZE
CONCEALED FASTENING FOR TERRACES

Fissaggio rapido
Fast dry fastening



Scomparsa totale
Fully concealed

Ideale per tavole di legno
Ideal for timber boards

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	materiale *material*	P x B x s [mm]	
FLIP	acciaio al carbonio con zincatura Z275 *Z275 bright zinc plated carbon steel*	64 x 27 x 4	200

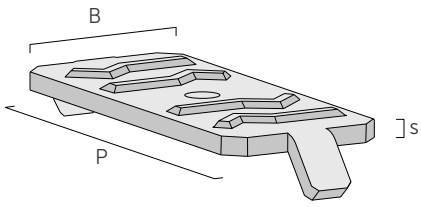
KKT COLOR
fissaggio su legno e WPC
fastening on wood and WPC

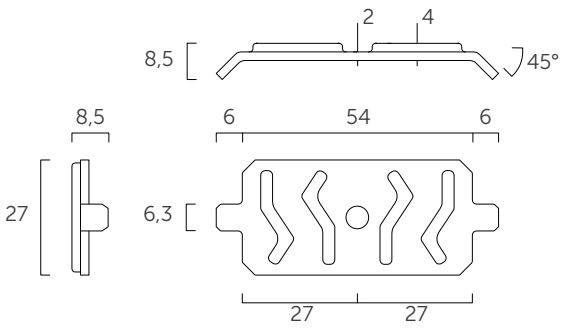
d_1 [mm]	CODICE *CODE*	L [mm]	
5 TX 20	**KKTN540**	40	200

KKA COLOR
fissaggio su alluminio
fastening on aluminium

d_1 [mm]	CODICE *CODE*	L [mm]	
5 TX 25	**KKAN540**	40	200

GEOMETRIA
GEOMETRY





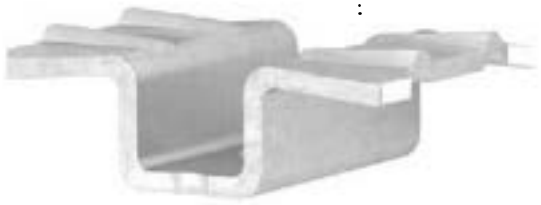
TVM

A2
AISI 304

CLIP A SCOMPARSA PER TAVOLE IN LEGNO
CONCEALED CLIP FOR WOOD BOARDS

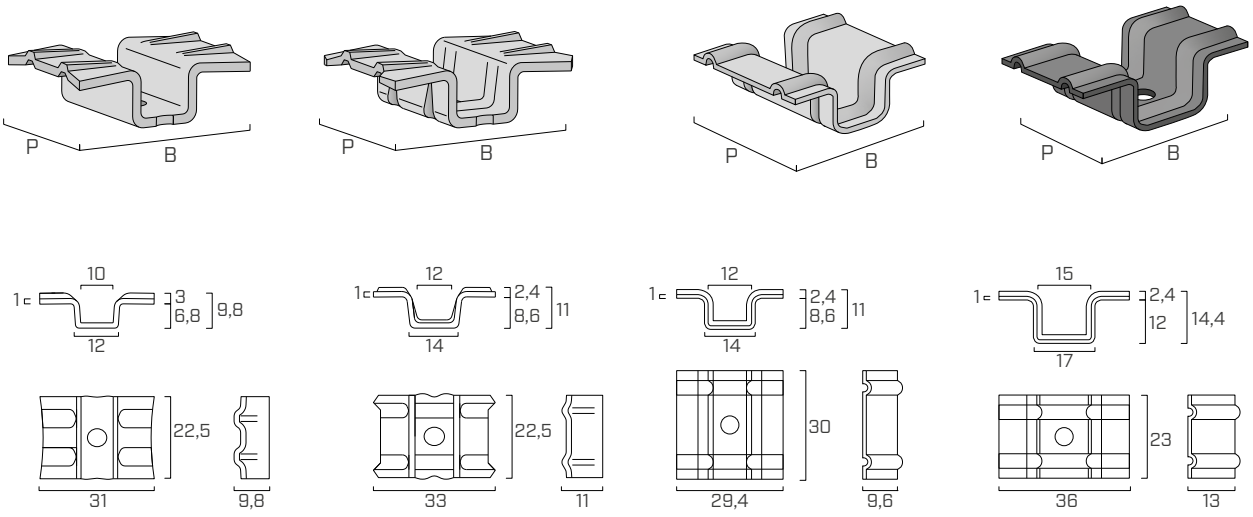
Acciaio inossidabile A2
A2 stainless steel

Velocità di posa
Installation speed



Ideale per tavole con scanalatura asimmetrica
Ideal for boards with asymmetrical grooving

GEOMETRIA
GEOMETRY



CODICI E DIMENSIONI
CODES AND DIMENSIONS

TVM ACCIAIO INOSSIDABILE A2
TVM STAINLESS STEEL A2

CODICE *CODE*	materiale *material*	P x B x s [mm]	
TVM1	A2 | AISI304	22.5 x 31 x 3.0	250
TVM2	A2 | AISI304	22.5 x 33 x 2.4	250
TVM3	A2 | AISI304	30 x 29.4 x 2.4	200

TVM COLOR
TVM COLOR

CODICE *CODE*	materiale *material*	P x B x s [mm]	
TVMN4	alluminio nero *black alluminum*	23 x 36 x 2.4	200

PRODOTTI CORRELATI
RELATED PRODUCTS

KKT X
fissaggio su legno e WPC per TVM A2 | AISI304
fastening on wood and WPC for TVM A2 | AISI304

d_1 [mm]	CODICE *CODE*	L [mm]	
5 TX 20	**KKTX520A4**	20	200
	KKTX525A4	25	200
	KKTX530A4	30	200
	KKTX540A4	40	200

KKA AISI410
fissaggio su alluminio per TVM A2 | AISI304
fastening on aluminium for TVM A2 | AISI304

d_1 [mm]	CODICE *CODE*	L [mm]	
4 TX 20	**KKA420**	20	200

KKT COLOR
fissaggio su legno e WPC per TVM COLOR
fastening on wood and WPC for TVM COLOR

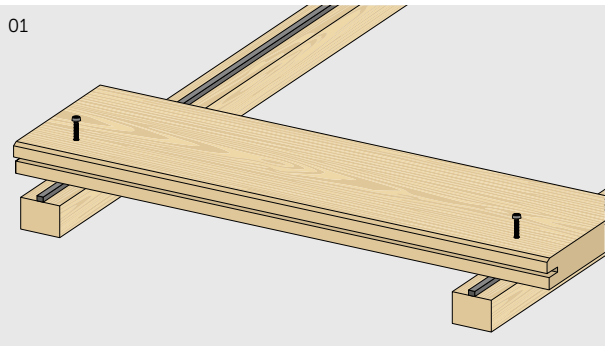
d_1 [mm]	CODICE *CODE*	L [mm]	
5 TX 20	**KKTN540**	40	200

KKA COLOR
fissaggio su alluminio per TVM COLOR
fastening on aluminium for TVM COLOR

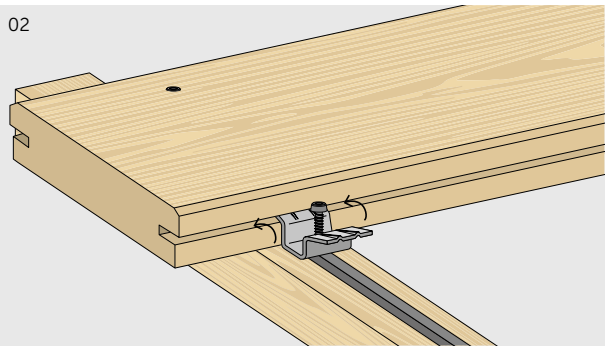
d_1 [mm]	CODICE *CODE*	L [mm]	
4 TX 20	**KKAN420**	20	200

INSTALLAZIONE
INSTALLATION

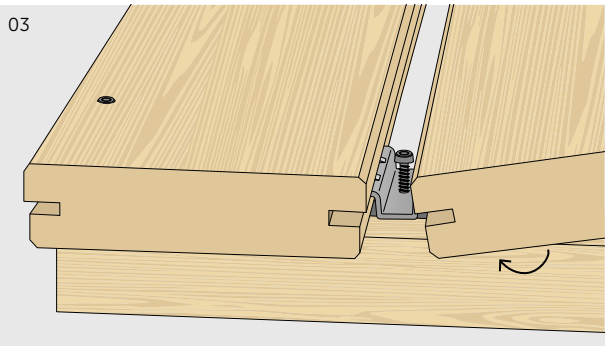
01



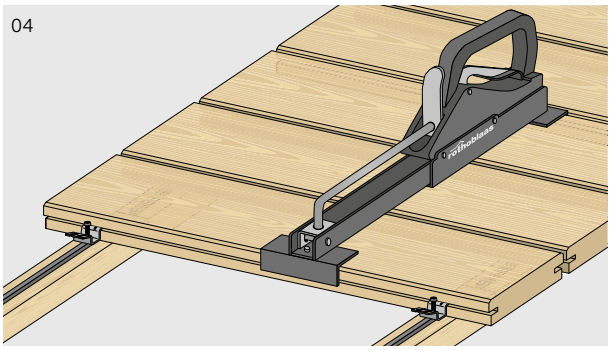
02



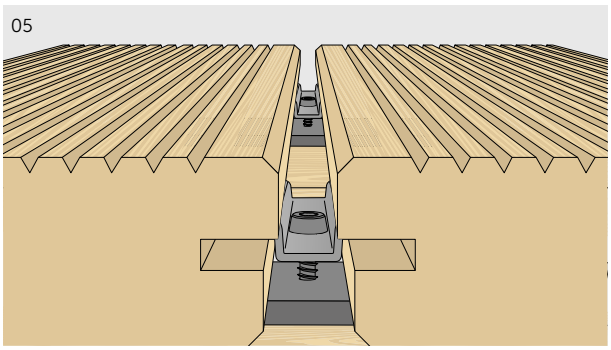
03



04



05



GAP 3

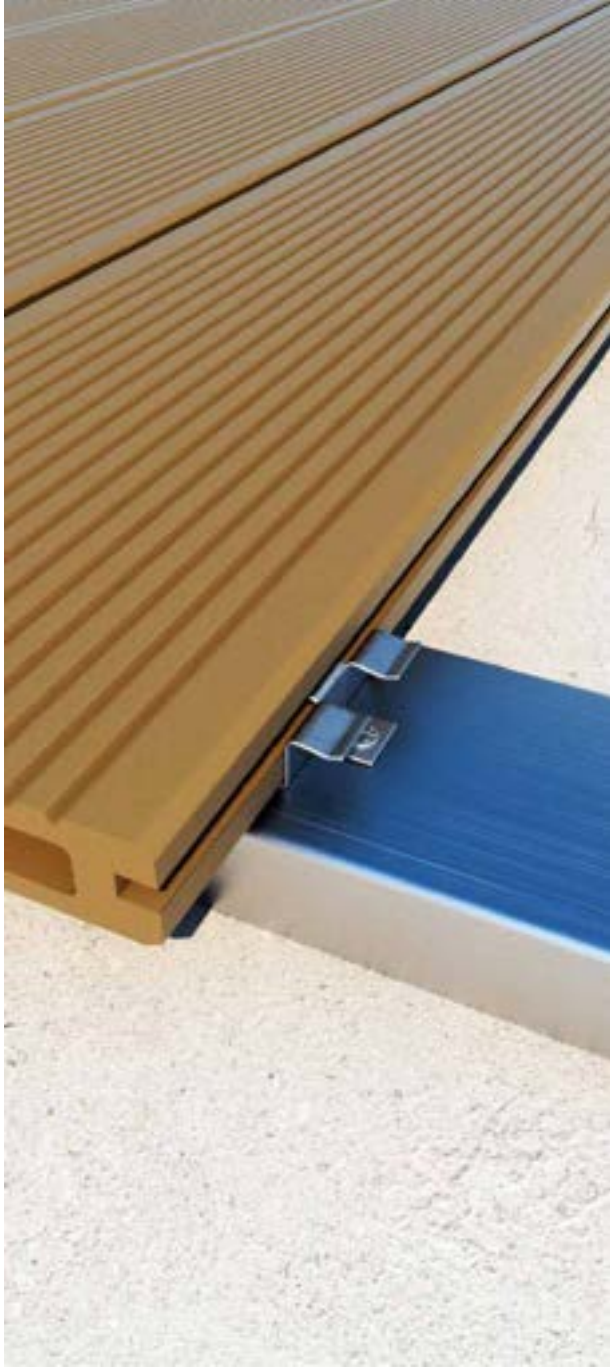
A2
AISI 305

CONNETTORE PER TERRAZZE E FACCIATE
FASTENER FOR TERRACES AND FACADES

Versione in acciaio inossidabile
Stainless steel version

Adatto per fughe da 3 a 5 mm
Gaps from 3 to 5 mm

Ideale per WPC e legni duri
Ideal for WPC and hard wood



CODICI E DIMENSIONI
CODES AND DIMENSIONS

GAP3 ACCIAIO INOSSIDABILE A2
GAP3 STAINLESS STEEL A2

CODICE *CODE*	**materiale** *material*	**P x B x s** [mm]	
GAP3	A2 | AISI304	40 x 32 x 11	200

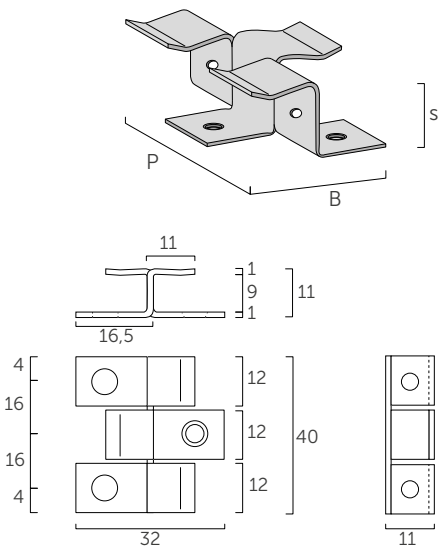
SCA A2 | AISI304
fissaggio su legno e WPC
fastening on wood and WPC

d_1 [mm]	**CODICE** *CODE*	**L** [mm]	
3,5 TX 15	**SCA3525**	25	500
	SCA3535	35	500

SBN A2 | AISI304
fissaggio su alluminio
fastening on aluminium

d_1 [mm]	**CODICE** *CODE*	**L** [mm]	
3,5 TX 15	SBNA23525	25	1000

GEOMETRIA
GEOMETRY



GAP 4

CONNETTORE PER TERRAZZE E FACCIATE
FASTENER FOR TERRACES AND FACADES

Versione in acciaio zincato
Zinc-plated steel version

Adatto per fughe da 3 a 5 mm
Gaps from 3 to 5 mm

Resistenza meccanica
Mechanical strength

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	materiale *material*	P x B x s [mm]	
GAP4	acciaio al carbonio con zincatura Z275 *Z275 bright zinc plated carbon steel*	42 x 42 x 11	100

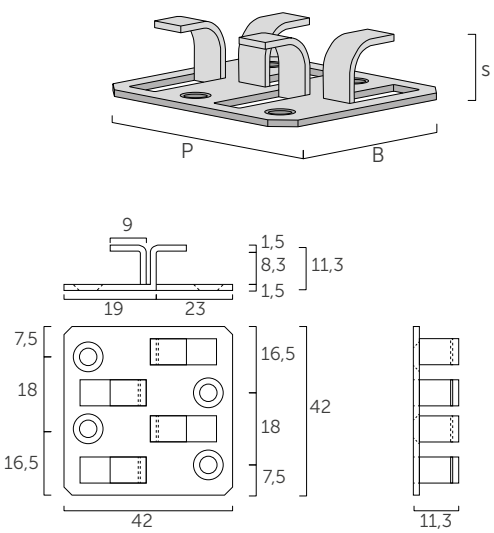
HTS
fissaggio su legno e WPC
fastening on wood and WPC

d_1 [mm]	CODICE *CODE*	L [mm]	
3,5 TX 15	**HTS3525H**	25	1000
	HTS3535H	35	500

SBN
fissaggio su alluminio
fastening on aluminium

d_1 [mm]	CODICE *CODE*	L [mm]	
3,5 TX 15	**SBN3525**	25	500

GEOMETRIA
GEOMETRY



GROUND COVER

TELO ANTIRADICE
ROOT-RESISTANT SHEET

Arresta la crescita vegetale
Stops vegetation growth

Ideale per sottostrutture di terrazze
Ideal for terrace substructures

Permeabile all'acqua
Water permeable

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	**H x L** [mm]	**A** [m²]	
COVER50	1,6 x 10	10	1

MATERIALE / ***MATERIAL***

Tessuto non tessuto (TNT) in polipropilene (PP).
Non-woven fabric (NWF) in polypropylene (PP).

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	50 g/m²
resistenza a trazione *tensile strength*	MD: 95 N / 55 mm CD: 370 N / 50 mm
allungamento *elongation*	MD: 35% CD: 80%

MD: longitudinale *longitudinal*

CD: trasversale *transversal*

NAG

PAD LIVELLANTE
LEVELING PAD

Per il livellamento di sottostrutture
For levelling substructures

Disponibile in 3 spessori
Available in 3 thicknesses

Resistente ai raggi UV e a cedimenti meccanici
Resistant to UV rays and mechanical failures

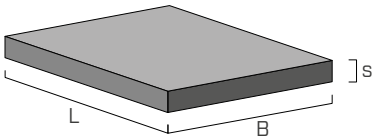
CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	B x L x s [mm]	densità *density*	shore	
NAG60602	60 x 60 x 2	1220	65	50
NAG60603	60 x 60 x 3	1220	65	30
NAG60605	60 x 60 x 5	1220	65	20

MATERIALE / ***MATERIAL***

EPDM nero.
EPDM, black.

GEOMETRIA
GEOMETRY



GRANULO

SOTTOFONDO IN GOMMA GRANULARE
GRANULAR RUBBER SUBSTRATE

Disponibile in lastra, rotolo e pad
Available in sheets, rolls and pads

Antivibrante e isolante dal rumore da calpestio
Anti-vibration and impact sound noise insulation

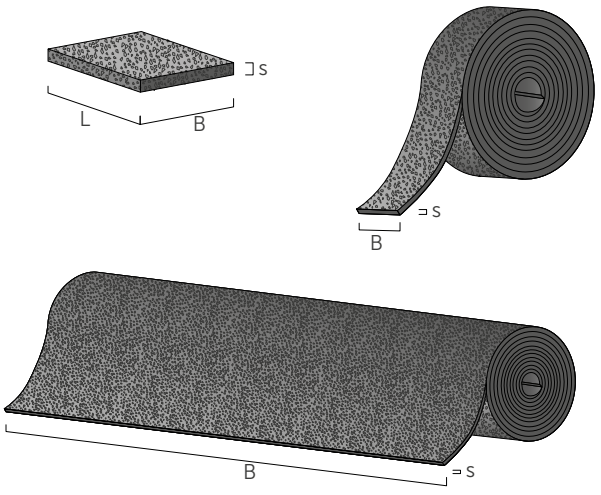
CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	B x L x s [mm]	[kg/m³]	shore A	
GRANULOROLL	8 x 80 x6	750	50	1
GRANULOMAT	6 x 1250 x 10	750	50	1
GRANULOPAD	10 x 80 x 0.08	750	50	20

MATERIALE / ***MATERIAL***

Granuli di gomma termolegata con PU.
Rubber granules thermo-bound with PU.

GEOMETRIA
GEOMETRY



PROFID

PROFILO A SEZIONE QUADRATA
SQUARE SECTION PROFILE

Eccellente microventilazione
Excellent micro-ventilation

Elevata resistenza allo schiacciamento
High resistance to crushing

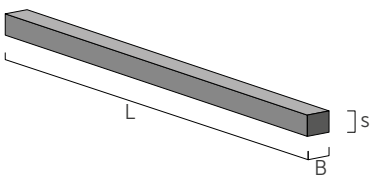
CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	**s** [mm]	**B** [mm]	**L** [mm]	**densità** *density* [kg/m³]	**shore**	
PROFID	8	8	40	1220	65	8

MATERIALE / *MATERIAL*

EPDM nero.
EPDM, black.

GEOMETRIA
GEOMETRY



s spessore
thickness
B base
base
L lunghezza
length

TERRA BAND UV

NASTRO ADESIVO BUTILICO RESISTENTE AI RAGGI UV
BUTYL ADHESIVE TAPE, RESISTANT TO UV RAYS

Resistenza permanente ai raggi UV
Permanent resistance to UV rays

Protegge la sottostruttura dall'acqua
Protects the substructure against water

Per terrazze e facciate
For terraces and facades

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	s [mm]	H [mm]	L [mm]	
TERRAUV75	0,8	75	10	8
TERRAUV100	0,8	100	10	6
TERRAUV200	0,8	200	10	4

MATERIALE / ***MATERIAL***

Compound butilico rivestito da un film in alluminio color nero con pellicola di separazione.
Butyl-based compound coated with a black aluminium separating film.

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
resistenza allo strappo *tear strength*	MD: 185 N / 50 mm CD: 200 N / 50 mm
allungamento *elongation*	MD: 10% CD: 20%
probe tack	8 N
adesività al distacco a 180° *detachment adhesion at 180°*	20 N/cm
scivolamento verticale *vertical sliding*	0 mm
resistenza termica *temperature resistance*	-30 / + 90°C
temperatura di applicazione *application temperature*	0 / + 40 °c
resistenza raggi UV *UV resistance*	6 mesi *6 months*
impermeabilità all'acqua *watertightness*	conforme *conforming*
temperatura di stoccaggio *storage temperature*	+15 / +30 °C
presenza solventi *solvents*	NO *NO*

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

NOTA: stoccare il prodotto in luogo asciutto e al coperto per massimo 12 mesi.
NOTE: *store the product in a cool, dry place for no more than 12 months.*

STAR

STELLA PER DISTANZE
STAR FOR DISTANCES

Per fughe precise
For precise spacing

CODICE *CODE*	spessori *thickness* [mm]	
STAR	da 4 a 8 *from 4 to 8*	4

SHIM

CUNEI LIVELLANTI
LEVELLING WEDGES

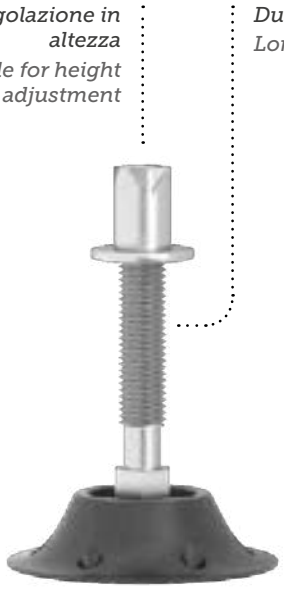
Disponibile anche in versione LARGE
Also available in the LARGE version

CODICE *CODE*	colore *colour*	L x P x s [mm]	
SHBLUE	blu / *blue*	100 x 22 x 1	500
SHBLACK	nero / *black*	100 x 22 x 2	500
SHRED	rosso / *red*	100 x 22 x 3	500
SHWHITE	bianco / *white*	100 x 22 x 4	500
SHYELLOW	giallo / *yellow*	100 x 22 x 5	500

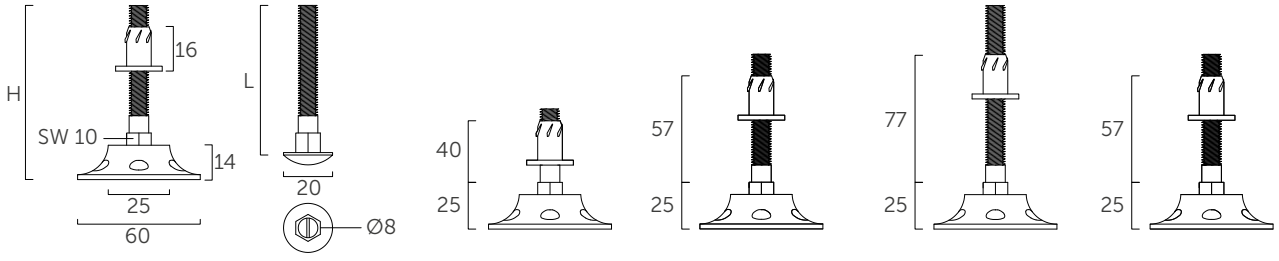
JFA

A2
AISI 305

SUPPORTO REGOLABILE PER TERRAZZE
ADJUSTABLE SUPPORT FOR TERRACES



GEOMETRIA
GEOMETRY



CODICI E DIMENSIONI
CODES AND DIMENSIONS

JFA ACCIAIO AL CARBONIO
JFA CARBON STEEL

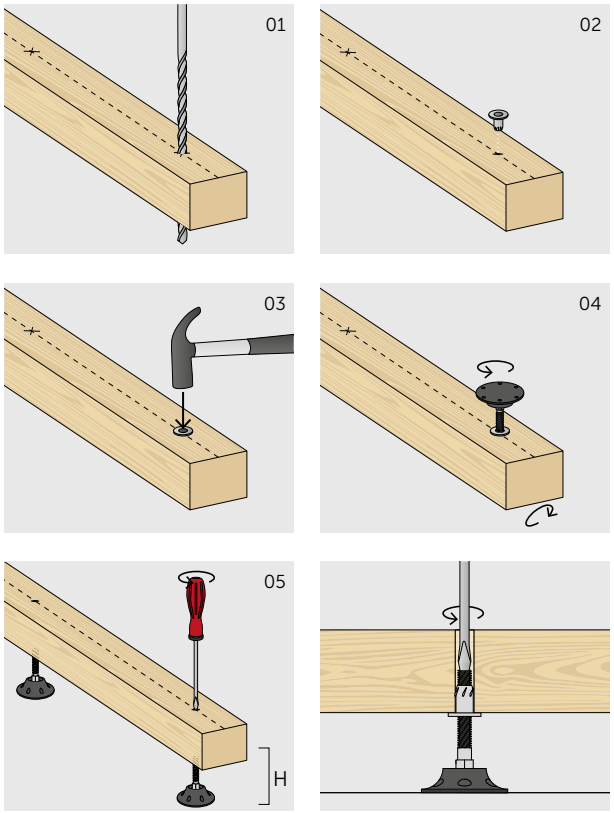
CODICE *CODE*	**materiale** *material*	**vite Ø x L** *screw Ø x L* [mm]	
JFA840	acciaio al carbonio *carbon steel*	8 x 40	100
JFA860	acciaio al carbonio *carbon steel*	8 x 60	100
JFA880	acciaio al carbonio *carbon steel*	8 x 80	100

JFA ACCIAIO INOSSIDABILE A2
JFA STAINLESS STEEL A2

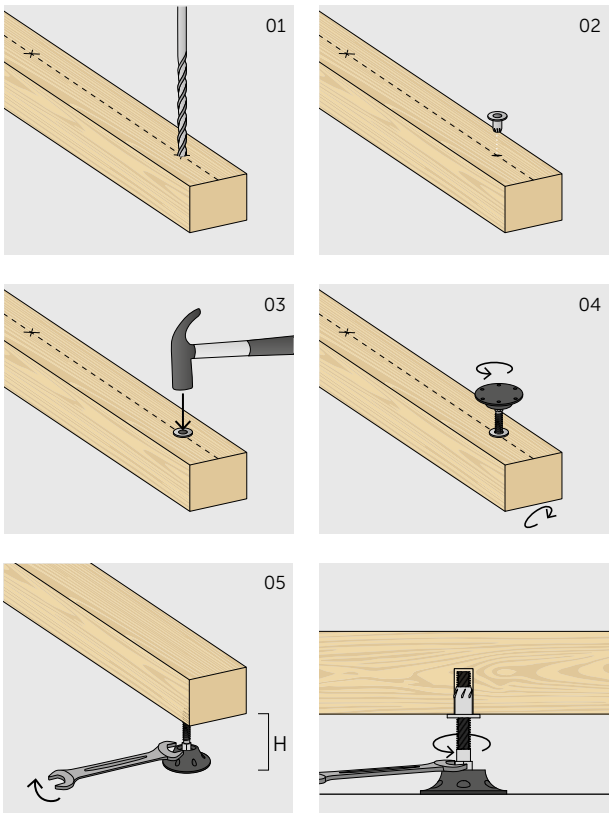
CODICE *CODE*	**materiale** *material*	**vite Ø x L** *screw Ø x L* [mm]	
JFA860A2	acciaio inossidabile *stainless steel*	8 x 60	100

INSTALLAZIONE JFA
JFA INSTALLATION

FISSAGGIO CON REGOLAZIONE DALL'ALTO
JFA INSTALLATION WITH ADJUSTMENT FROM ABOVE



FISSAGGIO CON REGOLAZIONE DAL BASSO
FASTENING WITH ADJUSTMENT FROM BELOW



SUPPORT

SUPPORTO REGOLABILE PER TERRAZZE
ADJUSTABLE SUPPORT FOR TERRACES

Varie altezze
Different heights

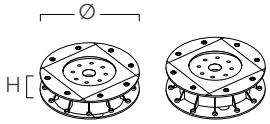
Componibili
Modular

Per carichi elevati
For heavy loads

CODICI E DIMENSIONI
CODES AND DIMENSIONS

SUPPORT SUP-S

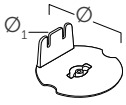
SUPPORTO IN PP, PORTATA 400 KG
SUPPORT IN PP, CAPACITY 400 KG



CODICE *CODE*	Ø [mm]	H [mm]	
SUPS2230	150	22 - 30	20
SUPS2840	150	28 - 40	20

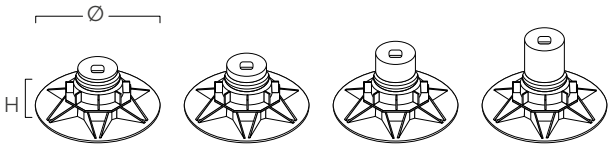
TESTINA PER SUP-S
HEAD FOR SUP-S

CODICE *CODE*	Ø [mm]	Ø$_1$ [mm]	
SUPSLHEAD1	70	3 x 14	20



SUPPORT SUP-M

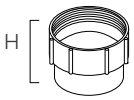
SUPPORTO IN PP, PORTATA 400 KG
SUPPORT IN PP, CAPACITY 400 KG



CODICE *CODE*	Ø [mm]	H [mm]	
SUPM3550	200	35 -50	25
SUPM5070	200	50 - 70	25
SUPM65100	200	65 - 100	25
SUPM95130	200	95 - 130	25
SUPM125160	200	125 - 160	25
SUPM155190	200	155 - 190	25
SUPM185220	200	185 - 220	25

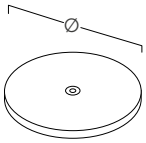
PROLUNGA PER SUP-M
EXTENSION FOR SUP-M

CODICE *CODE*	H [mm]	
SUPMEXT30	30	25



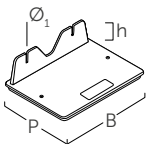
TESTINA PER SUP-M
HEAD FOR SUP-M

CODICE *CODE*	Ø [mm]	
SUPMHEAD1	120	25



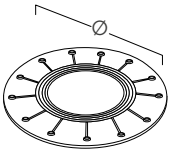
TESTINA PER SUP-M
HEAD FOR SUP-M

CODICE *CODE*	B x P [mm]	H [mm]	Ø$_1$ [mm]	
SUPMHEAD2	120 x 90	30	3 x 14	25



CORRETTORE DI PENDENZA PER SUP-M E SUP-L
SLOPE ADAPTER FOR SUP-M AND SUP-L

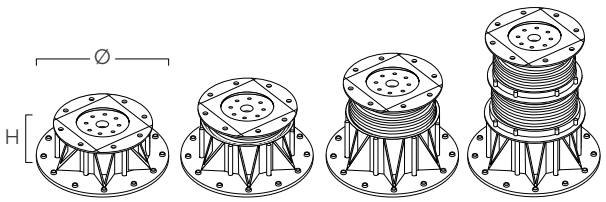
CODICE *CODE*	Ø [mm]		
SUPCORRECT1	200	1%	20
SUPCORRECT2	200	2%	20
SUPCORRECT3	200	3%	20



MATERIALE / ***MATERIAL***
Polipropilene (PP).
Polypropylene (PP).

SUPPORT SUP-L

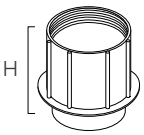
SUPPORTO IN PP, PORTATA 800 KG
SUPPORT IN PP, CAPACITY 800 KG



CODICE *CODE*	Ø [mm]	H [mm]	
SUPL3550	200	35 - 50	20
SUPL5075	200	50 - 75	20
SUPL75120	200	75 - 120	20
SUPL115220	200	115 - 220	20
SUPL215320	200	215 - 320	20
SUPL315420	200	315 - 420	20
SUPL415520	200	415 - 520	20
SUPL515620	200	515 - 620	20
SUPL615720	200	615 - 720	20
SUPL715820	200	715 - 820	20
SUPL815920	200	815 - 920	20
SUPL9151020	200	915 - 1020	20

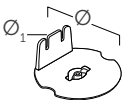
PROLUNGA PER SUP-L
EXTENSION FOR SUP-L

CODICE *CODE*	H [mm]	
SUPLEXT100	100	20



TESTINA PER SUP-L
HEAD FOR SUP-L

CODICE *CODE*	Ø [mm]	Ø$_1$ [mm]	
SUPSLHEAD1	70	3 x 14	20



ALU TERRACE

PROFILO IN ALLUMINIO PER TERRAZZE
ALUMINIUM PROFILE FOR PATIOS

Versione per carichi standard e carichi elevati
Version for standard and heavy loads

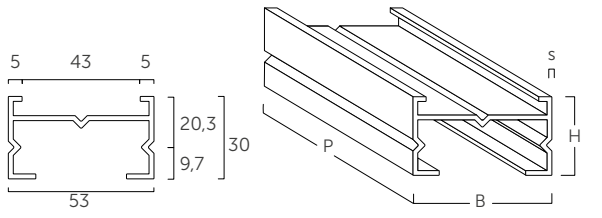
CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	s [mm]	B [mm]	P [mm]	H [mm]	
ALUTERRA30	1,8	53	2200	30	1
ALUTERRA50	2,5	60	2200	50	1

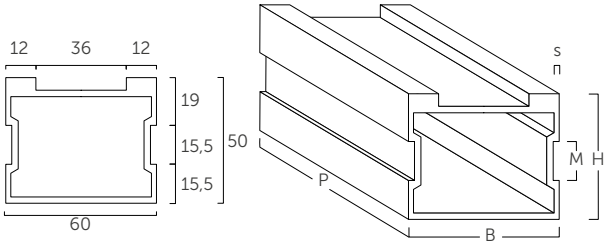
MATERIALE / ***MATERIAL***

Versione in alluminio e in alluminio con anodizzazione classe 15 con colorazione nero grafite.
Versions in aluminium and in anodized aluminium (class 15) in graphite black.

GEOMETRIA
GEOMETRY

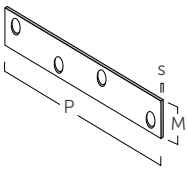


ALU TERRACE 30

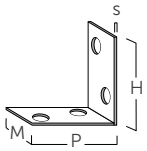


ALU TERRACE 50

PRODOTTI CORRELATI
RELATED PRODUCTS



LBVI15100



WHOI1540

CODICE *CODE*	s [mm]	M [mm]	P [mm]	H [mm]	
LBVI15100	1,75	15	100	--	200
WHOI1540	1,75	15	40	40	200

KKA ACCIAIO INOSSIDABILE AISI 410
KKA STAINLESS STEEL AISI 410

d_1 [mm]	CODICE *CODE*	L [mm]	A [mm]	
4 TX 20	**KKA420**	20	-	200
5 TX 25	**KKA540**	40	29	100
	KKA550	50	39	100

KKA COLOR
KKA COLOR

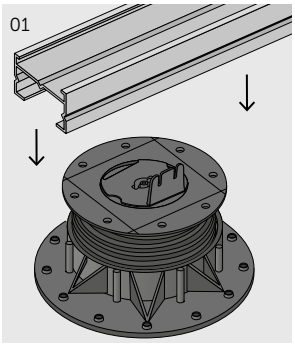
d_1 [mm]	CODICE *CODE*	L [mm]	A [mm]	
4 TX 20	**KKAN420**	20	-	200
	KKAN430	30	22	200
	KKAN440	40	32	200
5 TX 25	**KKAN540**	40	29	100

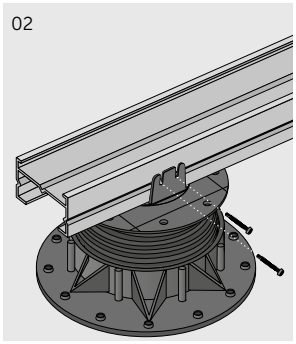
FISSAGGI A SCOMPARSA PER TERRAZZE
CONCEALED FASTENING FOR TERRACES

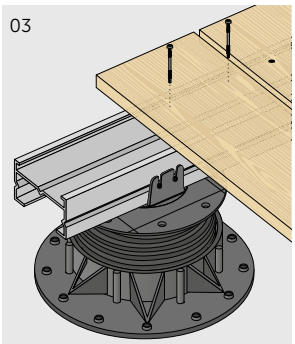
CODICE *CODE*	materiale *material*	P x B x s [mm]	
FLAT	alluminio nero *black alluminum*	64 x 27 x 4	200
FLIP	acciaio zincato *zinc-plated steel*	64 x 27 x 4	200

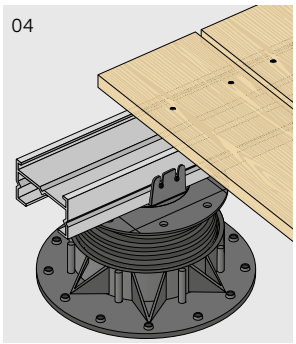
ESEMPI DI FISSAGGIO
APPLICATION OF FASTENING

FISSAGGIO CON VITI E ALUTERRA30
FASTENING WITH SCREWS AND ALUTERRA30

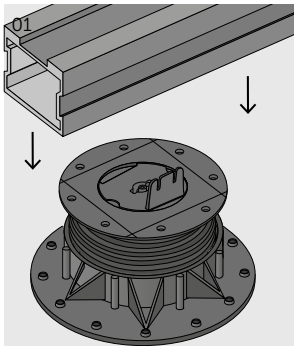


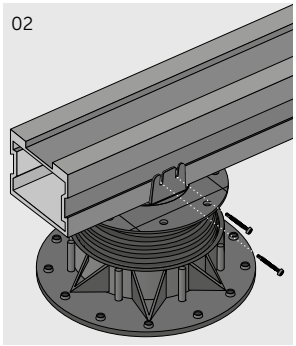


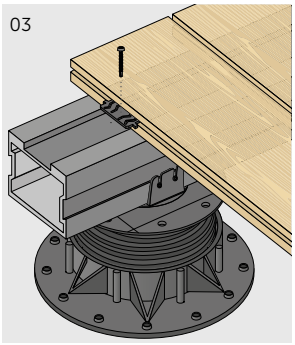


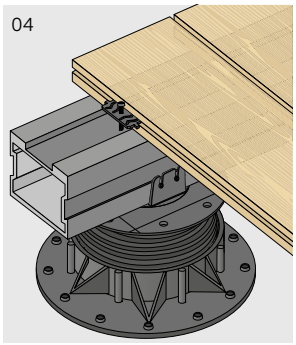


FISSAGGIO CON CLIP E ALUTERRA50
FASTENING WITH CLIP AND ALUTERRA50









VITI PER LAMIERA
SCREWS FOR METAL SHEET

122 SBS-HT

125 MCS

124 SBS A2

126 WBAZ

128

TBS EVO

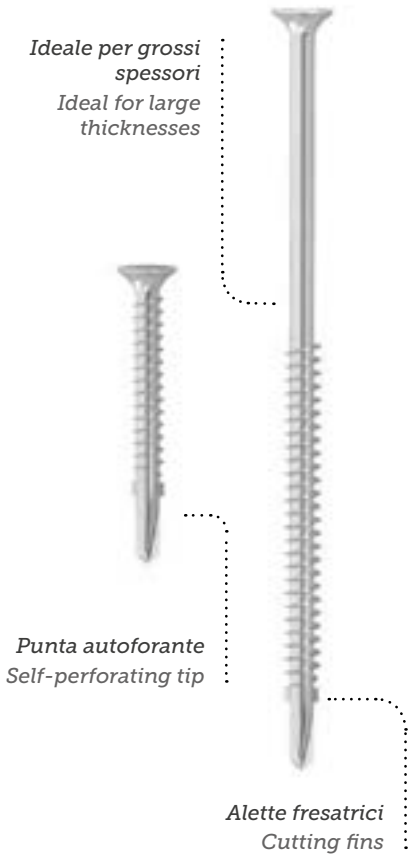
129

MTS

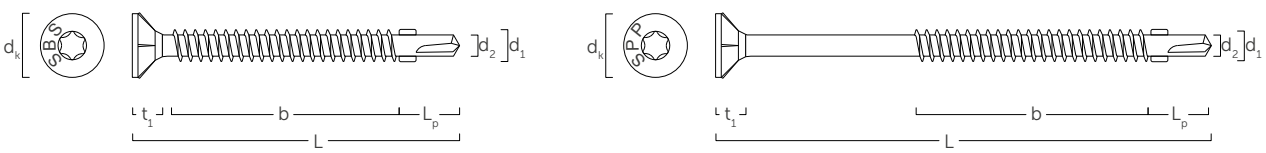
SBS-HT

INCLUDED

VITE AUTOFORANTE LEGNO-METALLO
SELF-DRILLING TIMBER-METAL SCREW



GEOMETRIA
GEOMETRY



			SBS-HT				SPP
diametro nominale ***nominal diameter***	**d_1**	**[mm]**	**4,2**	**4,8**	**5,5**	**6,3**	**6,3**
diametro testa *head diameter*	d_k	[mm]	8,00	9,25	10,50	12,00	12,50
diametro nocciolo *tip diameter*	d_2	[mm]	3,30	3,50	4,15	4,85	4,85
spessore testa *head thickness*	t_1	[mm]	3,50	4,20	4,80	5,30	5,30
lunghezza punta *tip length*	L_p	[mm]	10,0	10,5	11,5	15,0	20,0

CODICI E DIMENSIONI
CODES AND DIMENSIONS

SBS-HT ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
SBS-HT BRIGHT ZINC PLATED CARBON STEEL

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	s_1 [mm]	s_2 [mm]	
4,2 TX 20	**SBS4238H**	38	25	23	1÷3	2÷4	500
4,8 TX 25	**SBS4845H**	45	30	28	2÷4	3÷5	200
5,5 TX 25	**SBS5550H**	50	34	31	3÷5	4÷6	200
6,3 TX 30	**SBS6360H**	60	40	36	4÷6	6÷8	100
	SBS6370H	70	50	46	4÷6	6÷8	100
	SBS6385H	85	65	61	4÷6	6÷8	100

Disponibile anche in altre lunghezze.
Also available in other lengths.

s_1 spessore piastra acciaio S235/St37
thickness, steel plate S235/St37

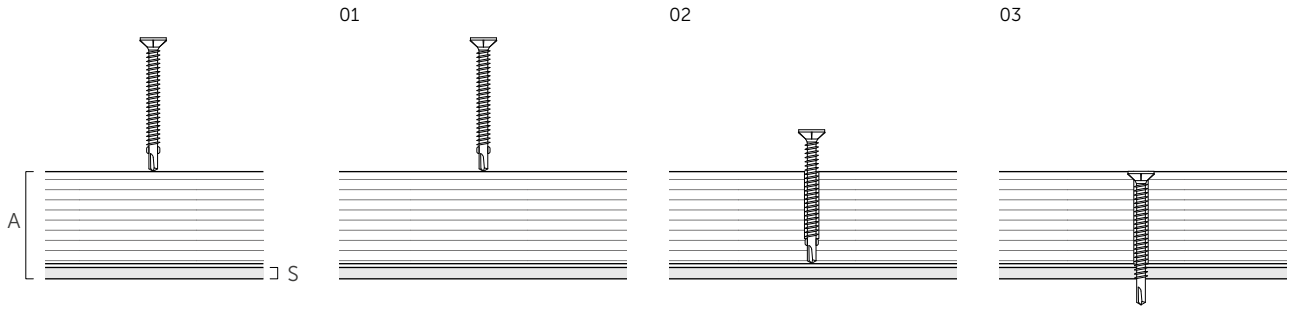
s_2 spessore piastra alluminio
thickness, aluminium plate

SPP ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
SPP BRIGHT ZINC PLATED CARBON STEEL

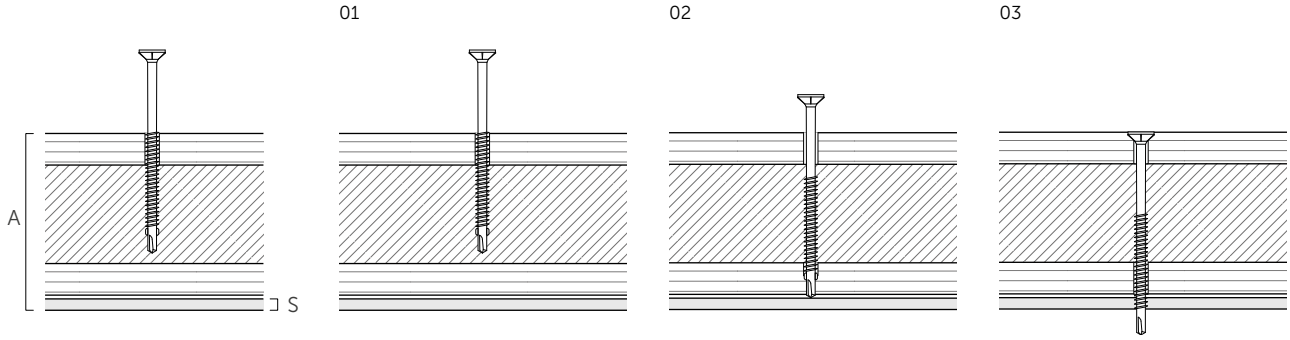
d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	s_1 [mm]	s_2 [mm]	
6,3 TX 30	**SPP63125**	125	60	96	6÷8	8÷10	100
	SPP63145	145	60	116	6÷8	8÷10	100
	SPP63165	165	60	136	6÷8	8÷10	100
	SPP63180	180	60	151	6÷8	8÷10	100
	SPP63200	200	60	171	6÷8	8÷10	100
	SPP63220	220	60	191	6÷8	8÷10	100
	SPP63240	240	60	211	6÷8	8÷10	100

INSTALLAZIONE
INSTALLATION

INSTALLAZIONE SBS-HT / *SBS-HT INSTALLATION*



INSTALLAZIONE SPP / *SPP INSTALLATION*



SBS A2

A2
AISI 304

VITE AUTOFORANTE LEGNO-METALLO
SELF-DRILLING TIMBER-METAL SCREW

Corpo in acciaio inossidabile
Stainless steel body

Punta in acciaio al carbonio
Carbon steel tip

CODICI E DIMENSIONI
CODES AND DIMENSIONS

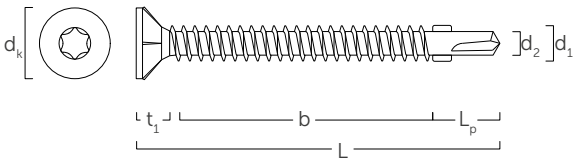
SBS ACCIAIO INOSSIDABILE A2
SBS STAINLESS STEEL A2

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	s_1 [mm]	s_2 [mm]	
4,8 TX 25	SBSA24845	45	31	30	1÷3	2÷3	200
5,5 TX 25	SBSA25555	55	39	37	2÷5	3÷5	200
6,3 TX 30	SBSA26370	70	53	49	3 ÷6	4 ÷8	100
	SBSA263120	120	103	99	3 ÷6	4 ÷8	100

s_1 spessore piastra acciaio S235/St37
thickness, steel plate S235/St37

s_2 spessore piastra alluminio
thickness, aluminium plate

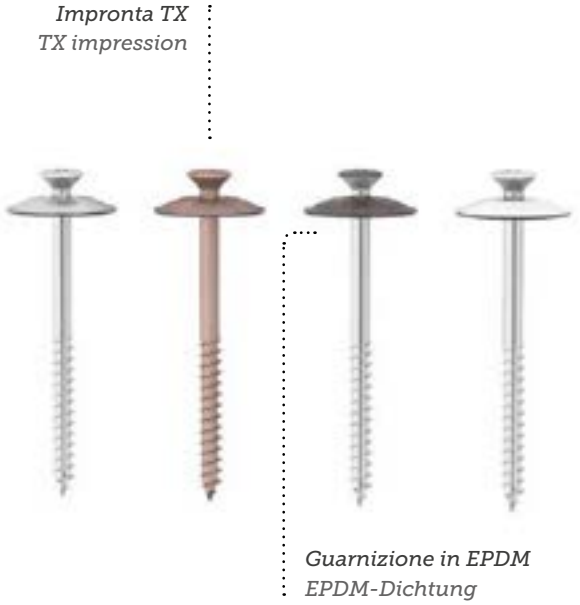
GEOMETRIA
GEOMETRY

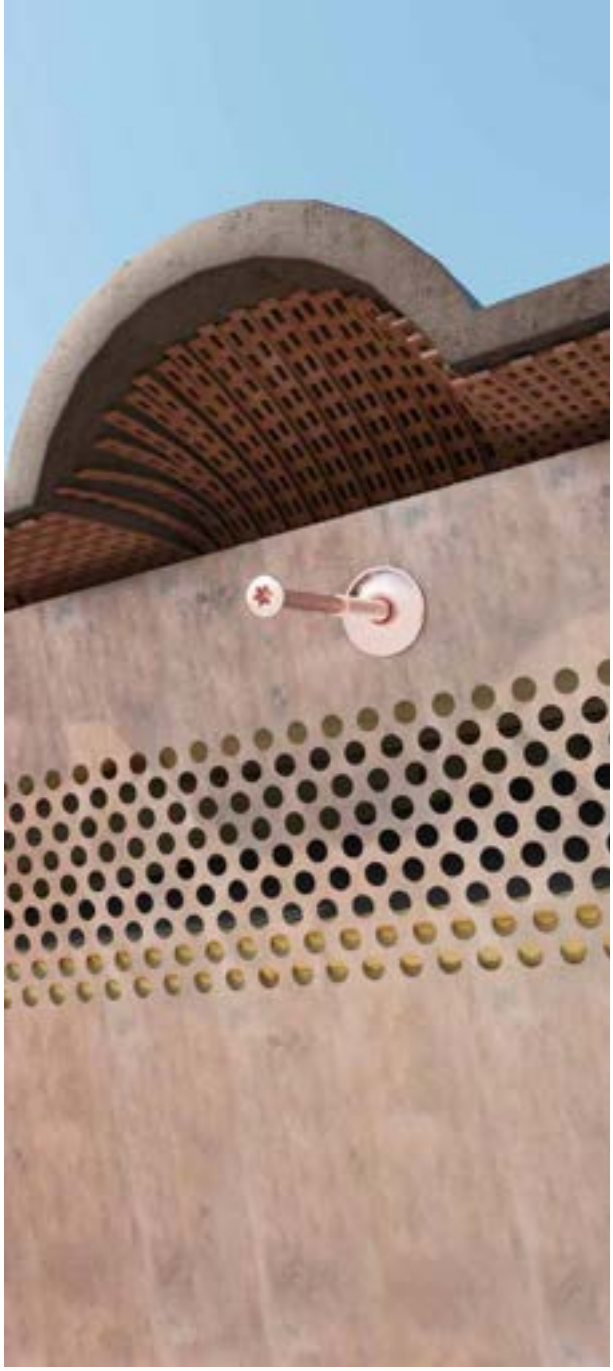


diametro nominale *nominal diameter*	d_1	[mm]	4,8	5,5	6,3
diametro testa *head diameter*	d_k	[mm]	9,25	10,50	12,00
diametro nocciolo *tip diameter*	d_2	[mm]	3,50	4,15	4,85
spessore testa *head thickness*	t_1	[mm]	4,00	4,85	4,50
lunghezza punta *tip length*	L_p	[mm]	10,25	10,00	12,00

MCS

VITE CON RONDELLA PER LAMIERE
SCREW WITH WASHER FOR METAL SHEET

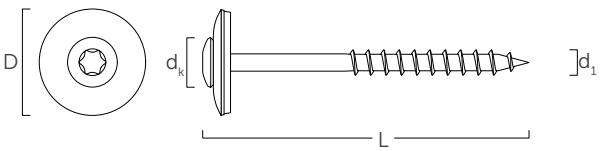




CODICI E DIMENSIONI
CODES AND DIMENSIONS

d_1 [mm]	CODICE *CODE*	colori *colours*	L [mm]	
4,5 TX 20	MCS4525A2	●	25	200
	MCS4535A2	●	35	200
	MCS4545A2	●	45	200
	MCS4560A2	●	60	200
	MCS4580A2	●	80	200
	MCS45100A2	●	100	200
	MCS45120A2	●	120	200
4,5 TX 20	MCS4525A2M	●	25	200
	MCS4535A2M	●	35	200
	MCS4545A2M	●	45	200
4,5 TX 20	MCS4525CU	●	25	200
	MCS4535CU	●	35	200
	MCS4545CU	●	45	200
	MCS4560CU	●	60	200
	MCS4580CU	●	80	200
	MCS45100CU	●	100	200
	MCS45120CU	●	120	200
4,5 TX 20	MCS4525A2B	○	25	200
	MCS4535A2B	○	35	200
	MCS4545A2B	○	45	200

GEOMETRIA
GEOMETRY



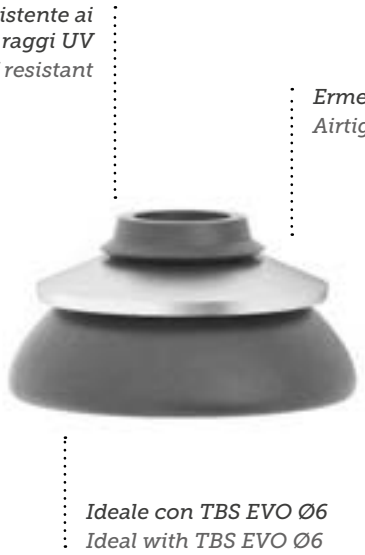
diametro nominale ***nominal diameter***	d_1	[mm]	4,5
diametro testa *head diameter*	d_k	[mm]	8,3
diametro rondella *diameter of washer*	D	[mm]	20,0

● acciaio inossidabile A2 *A2 stainless steel*
● RAL 8017
● finitura ramata *copper finishing*
○ RAL 9002

WBAZ

A2 AISI 304

RONDELLA CON GUARNIZIONE PER LAMIERA
WASHER WITH GASKET FOR METAL SHEET



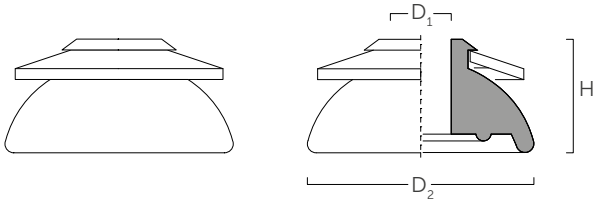
CODICI E DIMENSIONI
CODES AND DIMENSIONS

WBAZ RONDELLA CON GUARNIZIONE PER LAMIERA
WBAZ WASHER WITH GASKET FOR METAL SHEET

vite / *screw* [mm]	CODICE *CODE*	D_2 [mm]	H [mm]	D_1 [mm]	
6,3 - 6,5	**WBAZ25A2**	25	15	6,5	100

WBAZ disponibile in altri colori su richiesta
WBAZ available in other colours upon request

GEOMETRIA
GEOMETRY

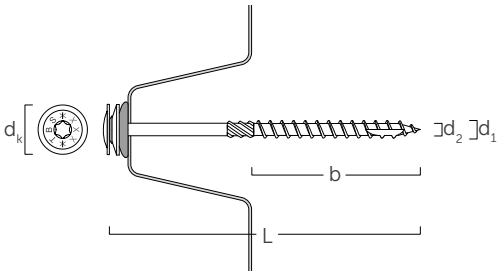


diametro nominale vite ***nominal screw diameter***	**d_1**	**[mm]**	**6,0 - 6,5**
diametro interno *internal diameter*	D_1	[mm]	6,5
diametro esterno *external diameter*	D_2	[mm]	25
spessore *thickness*	H	[mm]	15

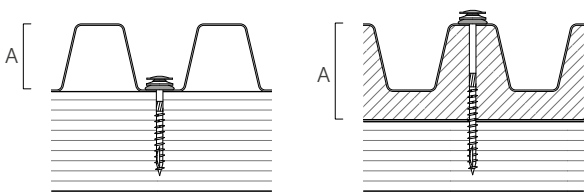
PRODOTTI CORRELATI
RELATED PRODUCTS

TBS EVO - VITE TESTA LARGA
TBS EVO - FLANGE HEAD SCREW

C4 EVO



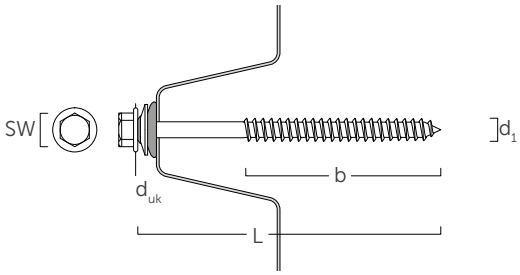
diametro nominale *nominal diameter*	d_1	[mm]	6
diametro testa *head diameter*	d_k	[mm]	15,50
diametro nocciolo *tip diameter*	d_2	[mm]	3,95



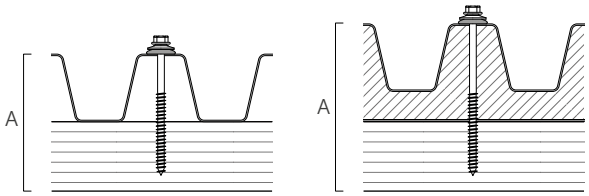
d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
6 TX 30	**TBSEVO660**	60	40	20	100
	TBSEVO680	80	50	30	100
	TBSEVO6100	100	60	40	100
	TBSEVO6120	120	75	45	100
	TBSEVO6140	140	75	65	100
	TBSEVO6160	160	75	85	100
	TBSEVO6180	180	75	105	100
	TBSEVO6200	200	75	125	100

MTS - VITE PER LAMIERA
MTS - SCREW FOR METAL SHEET

A2 AISI 304

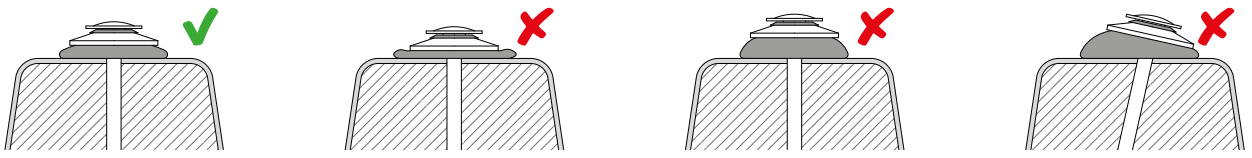


diametro nominale *nominal diameter*	d_1	[mm]	6
misura chiave *wrench size*	SW	[mm]	8
diametro rondella *diameter of washer*	d_{uk}	[mm]	12,5



d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
6 SW 8	**MTS680**	80	58	20÷40	100
	MTS6100	100	58	40÷60	100
	MTS6120	120	58	60÷80	100

INSTALLAZIONE
INSTALLATION



Avvitatura corretta
Correct tightening

Avvitatura eccessiva
Excessive tightening

Avvitatura insufficiente
Insufficient tightening

Avvitatura errata fuori asse
Tightening off axis

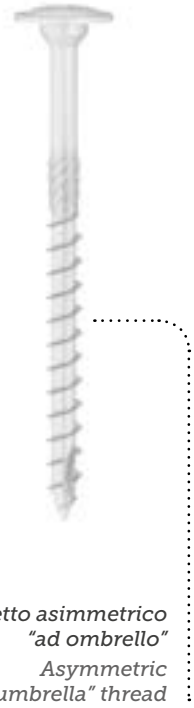
TBS EVO

INCLUDED

C4 EVO

CE ETA 11/0030

VITE TESTA LARGA
FLANGE HEAD SCREW



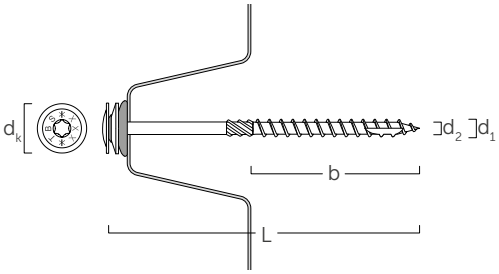
Filetto asimmetrico "ad ombrello"
Asymmetric "umbrella" thread

CODICI E DIMENSIONI
CODES AND DIMENSIONS

TBS EVO RIVESTIMENTO ANTICORROSIONE
TBS EVO ANTI-RUST COATING

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
6 TX 30	**TBSEVO660**	60	40	20	100
	TBSEVO680	80	50	30	100
	TBSEVO6100	100	60	40	100
	TBSEVO6120	120	75	45	100
	TBSEVO6140	140	75	65	100
	TBSEVO6160	160	75	85	100
	TBSEVO6180	180	75	105	100
	TBSEVO6200	200	75	125	100

GEOMETRIA
GEOMETRY

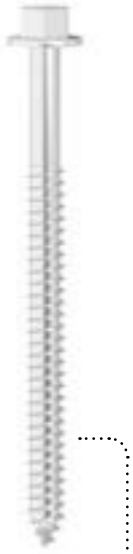


diametro nominale *nominal diameter*	d_1	[mm]	6
diametro testa *head diameter*	d_k	[mm]	15,50
diametro nocciolo *tip diameter*	d_2	[mm]	3,95
diametro gambo *shank diameter*	d_s	[mm]	4,30
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	4,0

MTS

A2
AISI 304

VITE PER LAMIERA
SCREWS FOR METAL SHEET



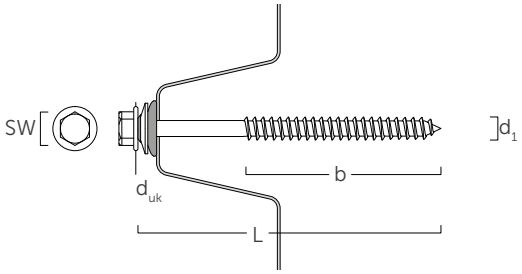
Ideale con rondella WBAZ
Ideal with WBAZ washer

CODICI E DIMENSIONI
CODES AND DIMENSIONS

MTS ACCIAIO INOSSIDABILE A2
MTS STAINLESS STEEL A2

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A [mm]	
6 SW 8	**MTS680**	80	58	20÷40	100
	MTS6100	100	58	40÷60	100
	MTS6120	120	58	60÷80	100

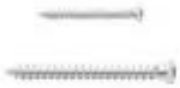
GEOMETRIA
GEOMETRY



diametro nominale ***nominal diameter***	**d_1**	**[mm]**	**6**
misura chiave *wrench size*	SW	[mm]	8
diametro rondella *diameter of washer*	d_{uk}	[mm]	12,5

PIASTRE E ANGOLARI
PLATES AND ANGLE BRACKETS

132 LBA



133 LBS

134 HT 20

135 HT 40

136 HT 70

137 HT 90

138 HT 100

139 HT 170

140 HTKR

142 HTW

144 TITAN F

148 TITAN N

152 HTZ

156 HT PLATE

160 LBV

161 LBB

162 WZU

164 WHO

165 WVS

165 WKF

166 WBO 135°

166 WVB A2

167 LBN

167 SPN

168 ALU MINI HT

170 ALU MIDI HT

176 UV-T

178 UV-C

180 XEPOX

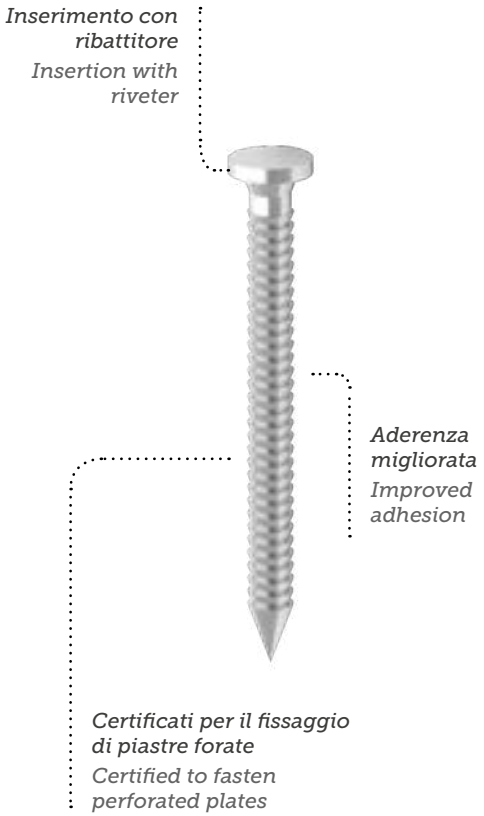
182 BSI

184 BSA

LBA

CE

CHIODI ANKER
ANKER NAILS



CODICI E DIMENSIONI
CODES AND DIMENSIONS

LBA ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
LBA BRIGHT ZINC PLATED CARBON STEEL

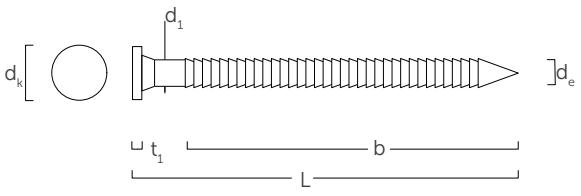
d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
4	**HT4040**	40	30	250
	HT4050	50	40	250
	HT4060	60	50	250
	HT4075	75	60	250
	HT40100	100	80	250
6	**LBA660**	60	50	250
	LBA680	80	70	250
	LBA6100	100	80	250

LBA ACCIAIO INOSSIDABILE A4
LBA STAINLESS STEEL A4

A4 AISI 316

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
4	**LBAI450**	50	40	250

GEOMETRIA
GEOMETRY



diametro nominale *nominal diameter*	d_1	[mm]	4	6
diametro testa *head diameter*	d_k	[mm]	8,00	12,00
diametro esterno *external diameter*	d_e	[mm]	4,40	6,65
spessore testa *head thickness*	t_1	[mm]	1,40	2,00
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	3,0	4,5

LBS

INCLUDED

CE
ETA 11/0030

VITE TESTA TONDA E SOTTOTESTA PIATTO
ROUND-HEAD SCREW AND FLAT UNDERHEAD

Sottotesta conico di precisione per piastre forate
Conical precision underhead for perforated plates

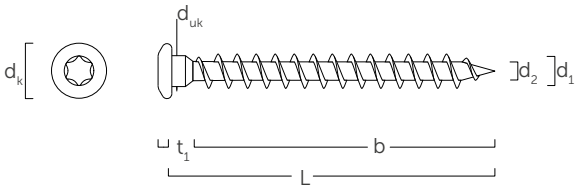
Elevata resistenza ad estrazione
High withdrawal resistance

CODICI E DIMENSIONI
CODES AND DIMENSIONS

LBS ACCIAIO AL CARBONIO CON ZINCATURA GALVANICA
LBS BRIGHT ZINC PLATED CARBON STEEL

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
5 TX 20	**LBS525**	25	21	500
	LBS540	40	36	500
	LBS550	50	46	200
	LBS560	60	56	200
	LBS570	70	66	200
7 TX 30	**LBS760**	60	55	100
	LBS780	80	75	100
	LBS7100	100	95	100

GEOMETRIA
GEOMETRY



diametro nominale *nominal diameter*	d_1	[mm]	5
diametro testa *head diameter*	d_k	[mm]	7,80
diametro nocciolo *tip diameter*	d_2	[mm]	3,00
diametro sottotesta *underhead diameter*	d_{uk}	[mm]	4,90
spessore testa *head thickness*	t_1	[mm]	2,40
diametro preforo *pre-drilling hole diameter*	d_v	[mm]	3,0

HT 20

ANGOLARE PER FALEGNAMERIA
ANGLE BRACKET FOR WOODWORK

Per piccole lavorazioni
For small processing jobs

CODICI E DIMENSIONI
CODES AND DIMENSIONS

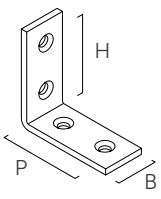
CODICE *CODE*		B x P x H [mm]	s [mm]	n Ø 5	
HT404020R	1	20 x 40 x 40	3,0	4	200
HT606020R	2	20 x 60 x 60	3,0	4	200

MATERIALE / ***MATERIAL***

Acciaio al carbonio S250 GD con zincatura Z275.
Z275 bright zinc plated S250 GD carbon steel.

GEOMETRIA
GEOMETRY

1



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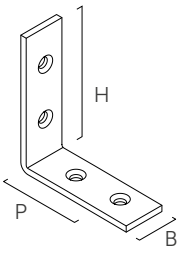


HT 40

CE

ANGOLARE STANDARD
STANDARD ANGLE BRACKET

Versatilità dei fori
Versatility of the holes

CODICI E DIMENSIONI
CODES AND DIMENSIONS

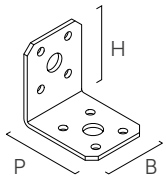
CODICE *CODE*		B x P x H [mm]	s [mm]	n Ø 5	n Ø 11	
HT505040	1	40 x 50 x 50	2,5	8	2	150
HT606045	2	45 x 60 x 60	2,5	12	2	50
HT909040	3	40 x 90 x 90	3,0	16	4	100

MATERIALE / ***MATERIAL***

Acciaio al carbonio S250 GD con zincatura Z275.
Z275 bright zinc plated S250 GD carbon steel.

GEOMETRIA
GEOMETRY

1



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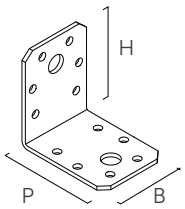

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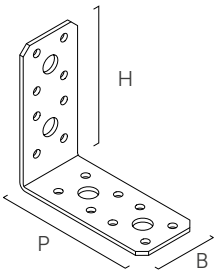


HT 70

CE

ANGOLARE 70
ANGLE BRACKET 70

Perfetto per strutture semplici
Perfect for simple structures

CODICI E DIMENSIONI
CODES AND DIMENSIONS

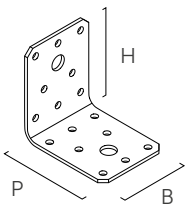
CODICE *CODE*		B x P x H [mm]	s [mm]	n Ø 5	n Ø 11	
HT7070SR	①	55 x 70 x 70	2,0	16	2	100
HT7070S	②	55 x 70 x 70	2,0	14	2	100

MATERIALE / ***MATERIAL***

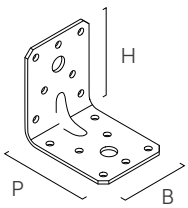
Acciaio al carbonio S250 GD con zincatura Z275.
Z275 bright zinc plated S250 GD carbon steel.

GEOMETRIA
GEOMETRY

①



②



HT 90

CE

ANGOLARE 90
ANGLE BRACKET 90

Ideale per case a telaio
Ideal for frame houses

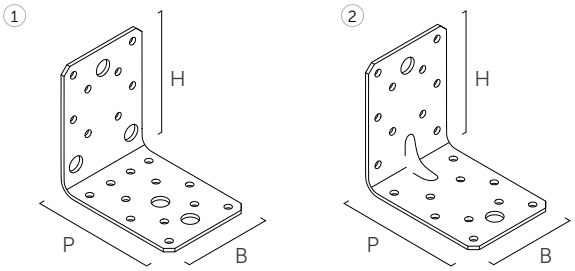
CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*		B x P x H [mm]	s [mm]	n Ø 5	n Ø 11	
HT9090SR	①	65 x 90 x 90	2,5	20	2	100
HT9090S	②	65 x 90 x 90	2,5	20	5	100

MATERIALE / *MATERIAL*

Acciaio al carbonio S350 GD con zincatura Z275.
Z275 bright zinc plated S350 GD carbon steel.

GEOMETRIA
GEOMETRY



HT 100

CE

ANGOLARE 100 PER FORZE DI TAGLIO
ANGLE BRACKET 100 FOR SHEAR FORCES

Fissaggio versatile
Versatile fastening

Ideale per case in X-LAM
Ideal for CLT houses

CODICI E DIMENSIONI
CODES AND DIMENSIONS

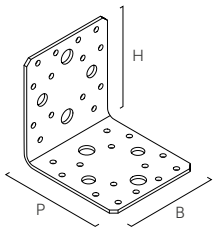
CODICE *CODE*		B x P x H [mm]	s [mm]	n Ø 5	n Ø 11	n Ø 13	
HT100100SR	1	90 x 100 x 100	3,0	28	6	2	50
HT100100S	2	90 x 100 x 100	3,0	28	4	2	50

MATERIALE / ***MATERIAL***

Acciaio al carbonio S250 GD con zincatura Z275.
Z275 bright zinc plated S250 GD carbon steel.

GEOMETRIA
GEOMETRY

1



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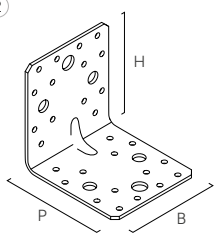
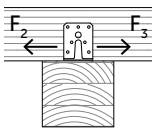




CODICE *CODE*	giunzione *connection*	NUMERO FISSAGGI *FASTENING NUMBER* fissaggio fori Ø5 *holes fastening Ø5* tipo *type*	Ø x L [mm]	n_v [pz/*pcs*]	fissaggio fori Ø11 *holes fastening Ø13* n_v [pz/*pcs*]	VALORI CARATTERISTICI *CHARACTERISTIC VALUES* (EN 1995:2008) TAGLIO *SHEAR* $R_{2/3,k}$ [kN]
HT100100SR HT100100S	legno/legno *timber-to-timber*	chiodi Anker *Anker nails*	Ø4,0 x 60	26	-	**13,0**
	legno/calcestruzzo *timber-to-concrete*		Ø4,0 x 60	12	2	**13,0**

- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_k \cdot k_{mod}}{\gamma_m}$$

I coefficienti γ_m e k_{mod} sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
The coefficients γ_m and k_{mod} should be taken according to the current regulations used for the calculation.

HT 170

CE

ANGOLARE 170 PER FORZE DI TAGLIO E TRAZIONE
ANGLE BRACKET 170 FOR SHEAR AND TENSILE FORCES

Resistente in più direzioni
Resistant in more directions

Ideale in presenza di cordoli
Ideal for use with ribs

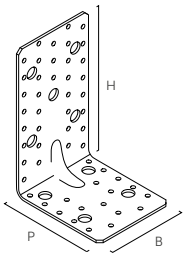
CODICI E DIMENSIONI
CODES AND DIMENSIONS

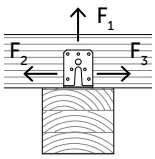
CODICE *CODE*	B x P x H [mm]	s [mm]	n Ø 5	n Ø 13	
HT110170R	95 x 110 x 170	3,0	53	9	25

MATERIALE / ***MATERIAL***

Acciaio al carbonio S250 GD con zincatura Z275.
Z275 bright zinc plated S250 GD carbon steel.

GEOMETRIA
GEOMETRY





CODICE *CODE*	giunzione *connection*	NUMERO FISSAGGI *FASTENING NUMBER* fissaggio fori Ø5 *holes fastening Ø5* tipo *type*	Ø x L [mm]	n_v [pz/*pcs*]	fissaggio fori Ø13 *holes fastening Ø13* n_v [pz/*pcs*]	VALORI CARATTERISTICI *CHARACTERISTIC VALUES* (EN 1995:2008) TAGLIO *SHEAR* $R_{2/3,k}$ [kN]	TRAZIONE *TENSION* $R_{1,k}$ [kN]
HT110170R	legno/legno *timber-to-timber*	chiodi Anker *Anker nails*	Ø4,0 x 60	39	-	**13,0**	**6,5**
	legno/calcestruzzo *timber-to-concrete*		Ø4,0 x 60	21	4	**13,0**	**-**

- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_k \cdot k_{mod}}{\gamma_m}$$

I coefficienti γ_m e k_{mod} sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
The coefficients γ_m and k_{mod} should be taken according to the current regulations used for the calculation.

HTKR

CE

ANGOLARE PER FORZE DI TRAZIONE
ANGLE BRACKET FOR TENSILE FORCES

CODICI E DIMENSIONI
CODES AND DIMENSIONS

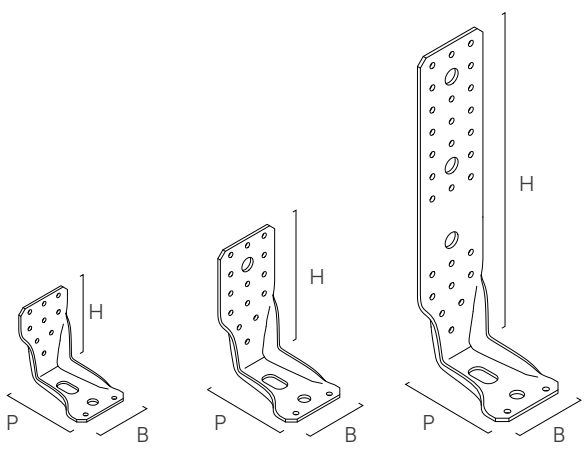
CODICE *CODE*	B x P x H [mm]	s [mm]	n Ø 5	n Ø 11	n Ø 13,5	
HT9590E	65 x 88 x 95	4,0	11	1	-	25
HT13590E	65 x 88 x 135	4,0	16	1	1	25
HT28590E	65 x 88 x 285	4,0	30	1	3	25
WKR09530	65 x 88 x 95	3,0	11	1	-	25
WKR13530	65 x 88 x 135	3,0	16	1	1	25
WKR28530	65 x 88 x 285	3,0	30	1	3	25

Foro asolato Ø 13,5 x 24,5 mm
Cored hole Ø13,5 x 24,5 mm

MATERIALE / ***MATERIAL***

Acciaio al carbonio S250 GD con zincatura Z275.
Z275 bright zinc plated S250 GD carbon steel.

GEOMETRIA
GEOMETRY



H = 95 **H = 135** **H = 285**

HTW

CE

ANGOLARE PER FORZE DI TAGLIO
ANGLE BRACKET FOR SHEAR FORCES

Ideale per edifici a telaio o in X-LAM
Ideal for frame or CLT buildings

Doppio rinforzo
Double reinforcement

Ideale fissaggio legno-legno e legno-calcestruzzo
Ideal for timber-to-timber and timber-to-concrete fastening

CODICI E DIMENSIONI
CODES AND DIMENSIONS

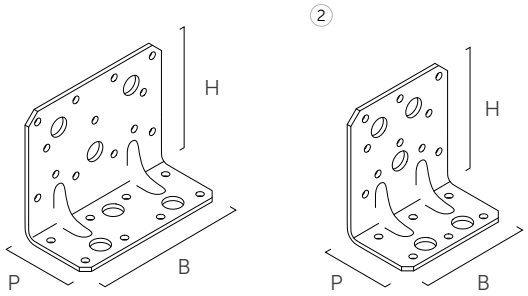
CODICE *CODE*		B x P x H [mm]	s [mm]	n Ø 5	n Ø 13	
HT5090110	①	110 x 50 x 90	3,0	21	6	50
HT509080	②	80 x 50 x 90	3,0	16	5	100

MATERIALE / ***MATERIAL***

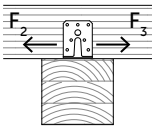
Acciaio al carbonio S250 GD con zincatura Z275.
Z275 bright zinc plated S250 GD carbon steel.

GEOMETRIA
GEOMETRY

① ②



VALORI STATICI
STATIC VALUES



		NUMERO FISSAGGI *FASTENING NUMBER*				VALORI CARATTERISTICI *CHARACTERISTIC VALUES* (EN 1995:2008)
						TAGLIO *SHEAR*
CODICE *CODE*	giunzione *connection*	fissaggio fori Ø5 *holes fastening Ø 5*			fissaggio fori Ø13 *holes fastening Ø 13*	$R_{2/3,k}$
		tipo *type*	Ø x L [mm]	n_v [pz/pcs]	n_v [pz/pcs]	[kN]
HT5090110	legno/legno *timber-to-timber*	chiodi Anker *Anker nails*	Ø4,0 x 60	19	-	**13,7**
	legno/calcestruzzo *timber-to-concrete*	chiodi Anker *Anker nails*	Ø4,0 x 60	11	2	**18,6**
HT509080	legno/legno *timber-to-timber*	chiodi Anker *Anker nails*	Ø4,0 x 60	14	-	**8,5**
	legno/calcestruzzo *timber-to-concrete*	chiodi Anker *Anker nails*	Ø4,0 x 60	8	2	**8,4**

- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_k \cdot k_{mod}}{\gamma_m}$$

I coefficienti γ_m e k_{mod} sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
The coefficients γ_m and k_{mod} should be taken according to the current regulations used for the calculation.

TITAN F

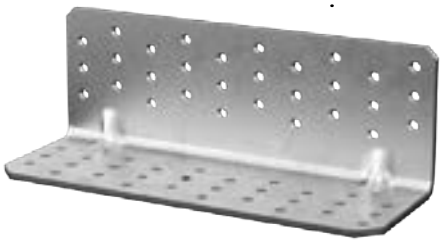
CE
ETA 11/0496

ANGOLARE PER ELEVATE FORZE DI TAGLIO
ANGLE BRACKET FOR HIGH SHEAR FORCES

Giunzioni legno-legno e legno-calcestruzzo
Timber-to-timber and timber-to-concrete joints

TCF200

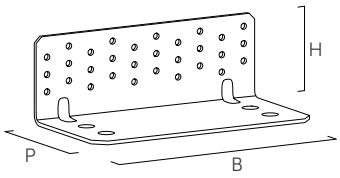
Resistenze a taglio eccezionali
Exceptional shear resistance



TTF200

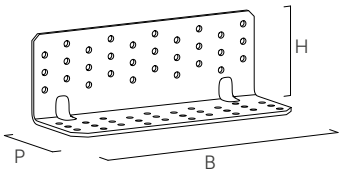
CODICI E DIMENSIONI
CODES AND DIMENSIONS

LEGNO-CALCESTRUZZO
TIMBER-TO-CONCRETE



CODICE *CODE*	B x P x H [mm]	s [mm]	n_H Ø 13	n_V Ø 5	
TCF200	200 x 103 x 71	3	4	30	10

LEGNO-LEGNO
TIMBER-TO-TIMBER



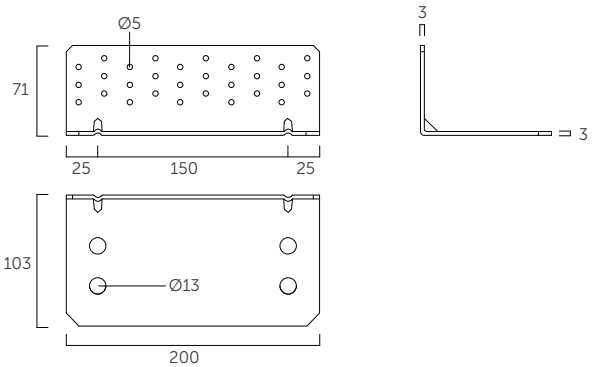
CODICE *CODE*	B x P x H [mm]	s [mm]	n_H Ø 5	n_V Ø 5	
TTF200	200 x 71 x 71	3	30	30	10

MATERIALE / ***MATERIAL***

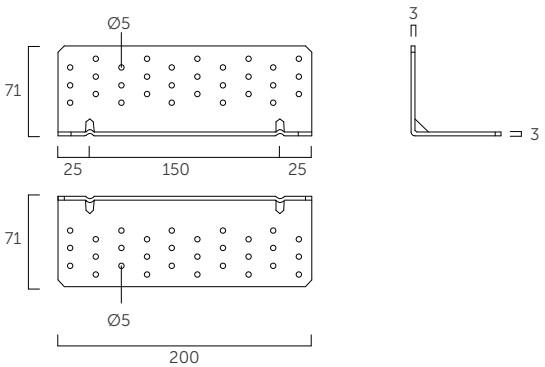
Acciaio al carbonio DX51D con zincatura Z275.
Z275 bright zinc plated DX51D carbon steel.

GEOMETRIA
GEOMETRY

TCF200

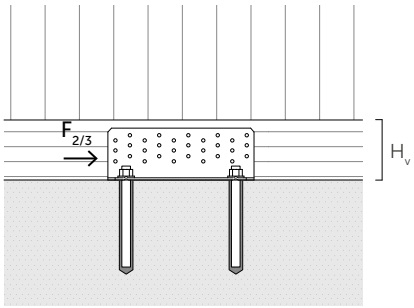


TTF200



TCF200

GIUNZIONE A TAGLIO - LEGNO/CALCESTRUZZO
SHEAR JOINT - TIMBER-TO-CONCRETE



$R_{2/3,k}$ LEGNO
$R_{2/3,k}$ TIMBER

configurazione trave di banchina *sill beam configuration*	fissaggio fori Ø5 *holes fastening Ø 5*			$R_{2/3,k\ timber}$
	tipo *type*	Ø x L [mm]	n_v [pz/*pcs*]	[kN]
$H_v \geq 90$ mm	chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	30	**35,5**
	viti LBS *screws LBS*	Ø5,0 x 50		**42,5**
$H_v = 80$ mm	chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	25	**31,0**
	viti LBS *screws LBS*	Ø5,0 x 50		**37,2**
$H_v = 70$ mm	chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	15	**20,9**
	viti LBS *screws LBS*	Ø5,0 x 50		**25,1**
$H_v = 60$ mm	chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	10	**15,1**
	viti LBS *screws LBS*	Ø5,0 x 50		**18,1**

$R_{2/3,d}$ CALCESTRUZZO NON FESSURATO
$R_{2/3,d}$ UNCRACKED CONCRETE

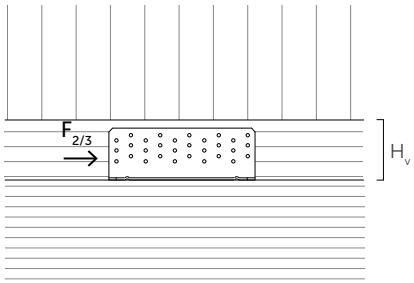
fissaggio fori Ø13 *holes fastening Ø 13*			$R_{2/3,d\ concrete}$	
tipo *type*	Ø x L [mm]	n_H [pz/*pcs*]	IN (1) [kN]	OUT (2) [kN]
VIN-FIX PRO	M12 x 130 cl. 5.8	2	**29,7**	**24,4**
SKR CE	M12 x min. 100	2	**38,3**	**31,4**

NOTE
NOTES

(1) Installazione degli ancoranti nei due fori interni (IN).
Installation of the anchors in internal holes (IN).
(2) Installazione degli ancoranti nei due fori esterni (OUT).
Installation of the anchors in external holes (OUT).

TTF200

GIUNZIONE A TAGLIO - LEGNO/LEGNO
SHEAR JOINT - TIMBER-TO-TIMBER



$R_{2/3,k}$ **LEGNO**
$R_{2/3,k}$ ***TIMBER***

configurazione trave di banchina *sill beam configuration*	**fissaggio fori Ø5** *holes fastening Ø 5*				$R_{2/3,k\ timber}$
	tipo *type*	**Ø x L** [mm]	n_v [pz/*pcs*]	n_H [pz/*pcs*]	[kN]
$H_v \geq 90$ mm	chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	30	30	**35,5**
	viti LBS *screws LBS*	Ø5,0 x 50			**42,5**
$H_v = 80$ mm	chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	25	25	**31,0**
	viti LBS *screws LBS*	Ø5,0 x 50			**37,2**
$H_v = 70$ mm	chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	15	15	**20,9**
	viti LBS *screws LBS*	Ø5,0 x 50			**25,1**
$H_v = 60$ mm	chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	10	10	**15,1**
	viti LBS *screws LBS*	Ø5,0 x 50			**18,1**

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici degli angolari TITAN sono secondo normativa EN 1995-1-1 in accordo a ETA-11/0496. I valori di progetto degli ancoranti per calcestruzzo sono calcolati in accordo alle rispettive Valutazioni Tecniche Europee.
  The characteristic values of the TITAN angle brackets comply with the EN 1995-1-1 standard in accordance with ETA-11/0496. The design values of the anchors for concrete are calculated in accordance with the respective European Technical Assessments.
- I valori di resistenza di progetto si ricavano dai valori tabellati come segue:
  Design resistance values can be obtained from the tabled values as follows:

$$R_d = min \begin{cases} \dfrac{R_{k,timber} \cdot k_{mod}}{\gamma_M} \\ R_{d,concrete} \end{cases}$$

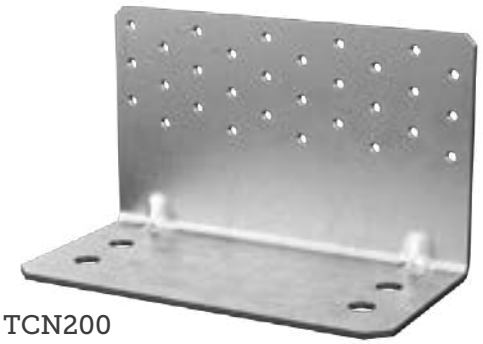
  I coefficienti k_{mod} e γ_M sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  Coefficients k_{mod} and γ_M must be taken according to the current Standard adopted for the design.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a $\rho_k = 350$ kg/m³ e calcestruzzo C20/25 con armatura rada, spessore minimo pari a 200 mm in assenza di distanze dal bordo.
  The calculation process used a timber characteristic density of $\rho_k = 350$ kg/m³ and C20/25 concrete with a thin reinforcing layer, minimum thickness of 200 mm, where edge-distance is not a limiting factor.
- Il dimensionamento e la verifica degli elementi in legno e calcestruzzo devono essere svolti a parte.
  Dimensioning and verification of timber and concrete elements must be carried out separately.

TITAN N

CE
ETA 11/0496

ANGOLARE PER FORZE DI TAGLIO E DI TRAZIONE
ANGLE BRACKET FOR SHEAR AND TENSILE FORCES

Resistenze a taglio eccezionali
Exceptional shear resistance

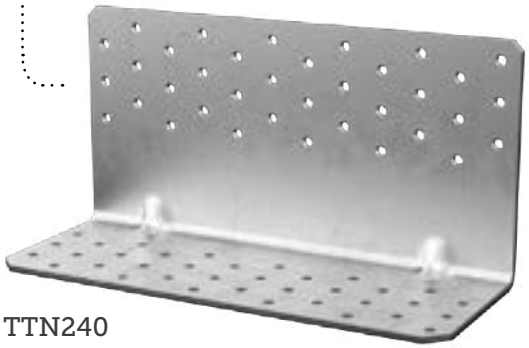


TCN200

Ottime resistenze a trazione
Excellent tensile strength

TCW200

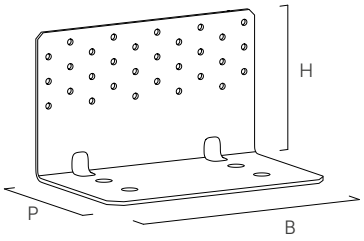
Ottime resistenze sia a taglio che a trazione
Excellent shear and tensile strength



TTN240

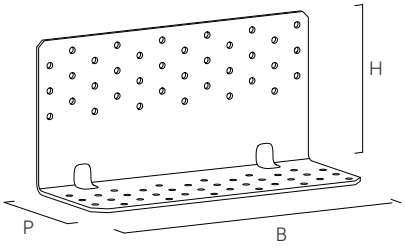
CODICI E DIMENSIONI
CODES AND DIMENSIONS

LEGNO-CALCESTRUZZO
TIMBER-TO-CONCRETE



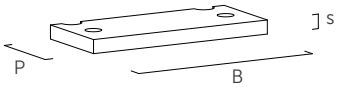
CODICE *CODE*	B x P x H [mm]	s [mm]	n_H Ø 13	n_V Ø 5	
TCN200	200 x 103 x 120	3	4	30	10

LEGNO-LEGNO
TIMBER-TO-TIMBER



CODICE *CODE*	B x P x H [mm]	s [mm]	n_H Ø 5	n_V Ø 5	
TTN240	240 x 93 x 120	3	36	36	10

TITAN WASHER - RONDELLA PER ANGOLARE TCN200
TITAN WASHER - WASHER FOR TCN200 ANGLE BRACKET



CODICE *CODE*	B x P [mm]	s [mm]	n Ø 14	
TCW200	190 x 72	12	2	1

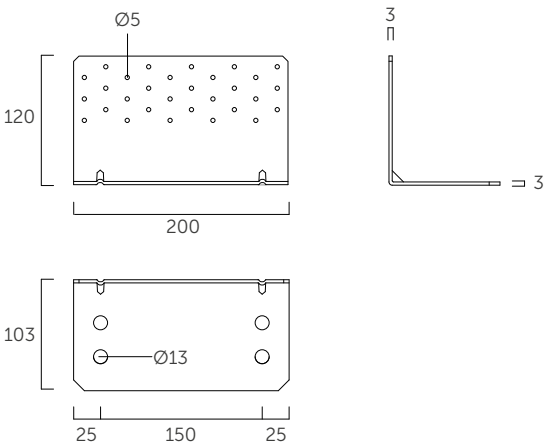
MATERIALE / ***MATERIAL***

TITAN N
Acciaio al carbonio DX51D con zincatura Z275.
Z275 bright zinc plated DX51D carbon steel.

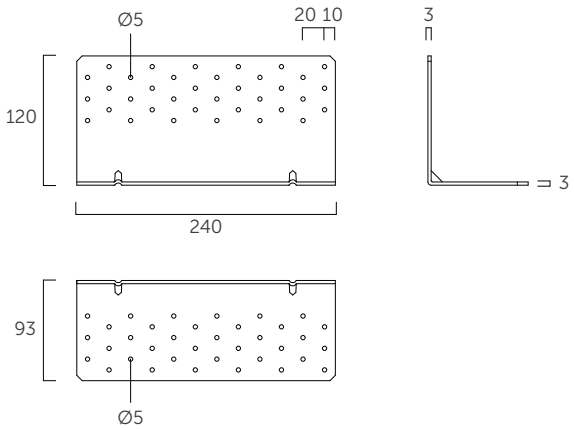
TITAN WASHER
Acciaio al carbonio S235 con zincatura galvanica.
S235 bright zinc plated carbon steel.

GEOMETRIA
GEOMETRY

TCN200

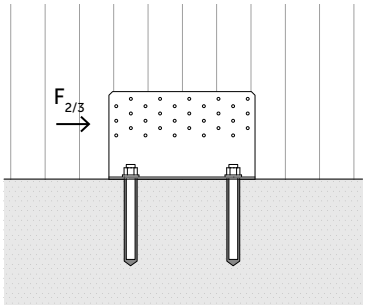


TTN240



TCN200

GIUNZIONE A TAGLIO - LEGNO/CALCESTRUZZO
SHEAR JOINT - TIMBER-TO-CONCRETE



$R_{2/3,k}$ LEGNO
$R_{2/3,k}$ TIMBER

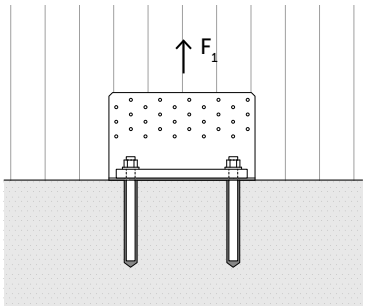
fissaggio fori Ø5 *holes fastening Ø 5*			$R_{2/3,k\ timber}$
tipo *type*	**Ø x L** [mm]	**n_v** [pz/*pcs*]	[kN]
chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	30	**22,1**
viti LBS *screws LBS*	Ø5,0 x 50		**26,5**

$R_{2/3,d}$ CALCESTRUZZO NON FESSURATO
$R_{2/3,d}$ UNCRACKED CONCRETE

fissaggio fori Ø13 *holes fastening Ø 13*			$R_{2/3,d\ concrete}$	
tipo *type*	**Ø x L** [mm]	**n_H** [pz/*pcs*]	**IN** (1) [kN]	**OUT** (2) [kN]
VIN-FIX PRO	M12 x 130 cl. 5.8	2	**29,7**	**24,4**
SKR CE	M12 x min. 100	2	**38,3**	**31,4**

TCN200 + TCW200

GIUNZIONE A TRAZIONE - LEGNO/CALCESTRUZZO
TENSILE JOINT - TIMBER-TO-CONCRETE



$R_{1,k}$ LEGNO
$R_{1,k}$ TIMBER

$R_{1,k}$ ACCIAIO
$R_{1,k}$ STEEL

$R_{1,d}$ CALCESTRUZZO NON FESSURATO
$R_{1,d}$ UNCRACKED CONCRETE

fissaggio fori Ø5 *holes fastening Ø 5*			$R_{1,k\ timber}$	$R_{1,k\ timber}$		VIN-FIX PRO (3)	$R_{1,d\ concrete}$
tipo *type*	**Ø x L** [mm]	**n_v** [pz/*pcs*]	[kN]	[kN]	γ_{steel}	**Ø x L** [mm]	**IN** (1) [kN]
chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	30	**57,9**	**45,7**	γ_{M0}	M12 x 180 cl.5.8	**21,65**
viti LBS *screws LBS*	Ø5,0 x 50	30	**68,1**				

NOTE
NOTES

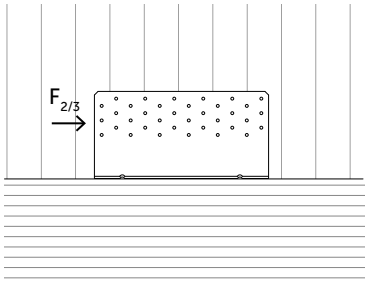
(1) Installazione degli ancoranti nei due fori interni (IN) in assenza di distanze dal bordo in calcestruzzo.
Installation of the anchors in the two internal holes (IN) in concrete, where edge-distance is not a limiting factor.

(2) Installazione degli ancoranti nei due fori esterni (OUT) in assenza di distanze dal bordo in calcestruzzo.
Installation of the anchors in the two external holes (OUT) in concrete, where edge-distance is not a limiting factor.

(3) In caso di ancoranti alternativi, il gruppo deve essere verificato per $R_{1,d} \geq 2k_{t//} \times F_{1,d} = 2 \times 1{,}09 \times F_{1,d}$.
For alternative anchors, the group must be verified for $R_{1,d} \geq 2k_{t//} \times F_{1,d} = 2 \times 1{,}09 \times F_{1,d}$.

TTN240

GIUNZIONE A TAGLIO - LEGNO/LEGNO
SHEAR JOINT - TIMBER-TO-TIMBER

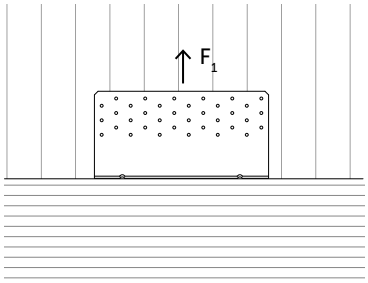


$R_{2/3,k}$ LEGNO
$R_{2/3,k}$ TIMBER

fissaggio fori Ø5 *holes fastening Ø 5*				$R_{2/3,k\ timber}$
tipo *type*	**Ø x L** [mm]	n_v [pz/*pcs*]	n_H [pz/*pcs*]	[kN]
chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	36	36	**37,9**
viti LBS *screws LBS*	Ø5,0 x 50			**46,7**

TTN240

GIUNZIONE A TRAZIONE - LEGNO/LEGNO
TENSILE JOINT - TIMBER-TO-TIMBER



$R_{1,k}$ LEGNO
$R_{1,k}$ TIMBER

fissaggio fori Ø5 *holes fastening Ø 5*				$R_{1,k\ timber}$
tipo *type*	**Ø x L** [mm]	n_v [pz/*pcs*]	n_H [pz/*pcs*]	[kN]
chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	36	36	**7,37**
viti LBS *screws LBS*	Ø5,0 x 50			**16,2**

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici degli angolari TITAN sono secondo normativa EN 1995-1-1 in accordo a ETA-11/0496. I valori di progetto degli ancoranti per calcestruzzo sono calcolati in accordo alle rispettive Valutazioni Tecniche Europee.
  The characteristic values of the TITAN angle brackets comply with the EN 1995-1-1 standard in accordance with ETA-11/0496. The design values of the anchors for concrete are calculated in accordance with the respective European Technical Assessments.
- I valori di resistenza di progetto si ricavano dai valori tabellati come segue:
  Design resistance values can be obtained from the tabled values as follows:

$$R_d = min \begin{cases} \dfrac{R_{k,timber} \cdot k_{mod}}{\gamma_M} \\ R_{d,concrete} \end{cases}$$

  I coefficienti k_{mod} e γ_M sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  Coefficients k_{mod} and γ_M must be taken according to the current Standard adopted for the design.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 350 kg/m³ e calcestruzzo C20/25 con armatura rada e spessore minimo pari a 200 mm.
  The calculation process used a timber characteristic density of ρ_k = 350 kg/m³ and C20/25 concrete with a thin reinforcing layer and minimum thickness of 200 mm.
- Il dimensionamento e la verifica degli elementi in legno e calcestruzzo devono essere svolti a parte.
  Dimensioning and verification of timber and concrete elements must be carried out separately.

HTZ

CE
ETA 11/0086

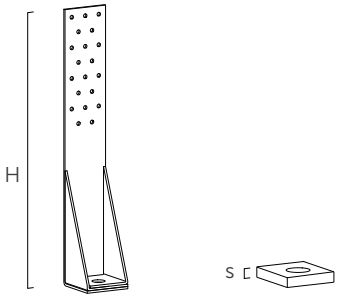
HOLD DOWN PER ELEVATE FORZE DI TRAZIONE
HOLD DOWN FOR HIGH TENSILE FORCES

Resistenza caratteristica a trazione di oltre 80 kN
Characteristic tensile strength of more than 80 kN

Acciaio S355 ad elevata resistenza
High-resistance S355 stainless steel

Rondella per una maggiore resistenza
Washer for greater resistance

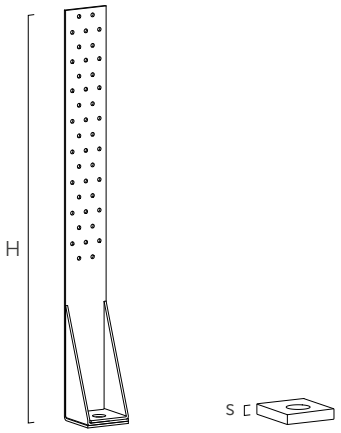
CODICI E DIMENSIONI
CODES AND DIMENSIONS



CODICE *CODE*	H [mm]	Ø [mm]	s [mm]	n_v Ø 5	
HTZ340	340	17	3	20	10
HTZ440	440	17	3	30	10

RONDELLA PER ANGOLARE HTZ440
WASHER FOR HTZ440 ANGLE BRACKET

CODICE *CODE*	Ø [mm]	s [mm]	HTZ340	HTZ440	
HTZULS10	18	10	-	●	10



CODICE *CODE*	H [mm]	Ø [mm]	s [mm]	n_v Ø 5	
WHT540	540	22	3	45	10
WHT620	620	26	3	55	10

RONDELLA PER ANGOLARE WHT540 E WHT620
WASHER FOR WHT540 AND WHT620 ANGLE BRACKET

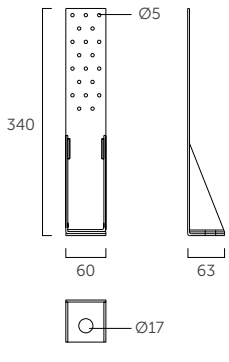
CODICE *CODE*		Ø [mm]	s [mm]	WHT540	WHT620	
WHTW50L	ULS505610L	22	10	●	-	1
WHTW70L	ULS707720L	26	20	-	●	1

MATERIALE / ***MATERIAL***

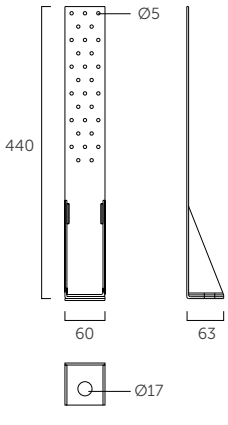
HTZ
Acciaio al carbonio S355 con zincatura galvanica Fe/Zn 12c.
S355 bright zinc plated Fe/Zn 12c carbon steel.

RONDELLA / ***WASHER***
Acciaio al carbonio S235 con zincatura galvanica Fe/Zn 12c.
S235 bright zinc plated Fe/Zn 12c carbon steel.

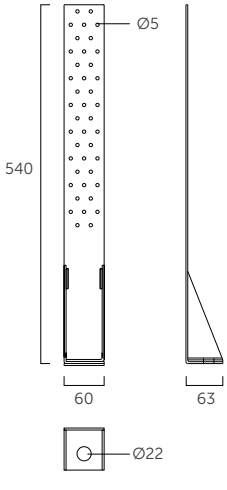
GEOMETRIA
GEOMETRY



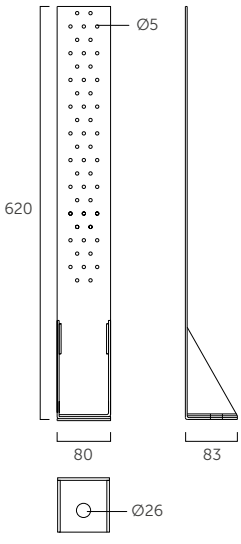
HTZ340



HTZ440

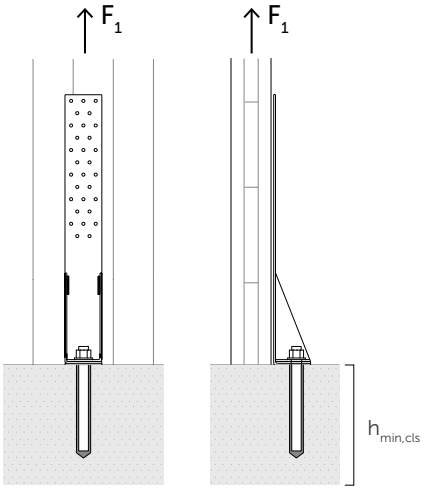


WHT540



WHT620

GIUNZIONE A TRAZIONE - LEGNO/CALCESTRUZZO
TENSILE JOINT - TIMBER-TO-CONCRETE



	$R_{1,k}$ LEGNO *$R_{1,k}$ TIMBER*			$R_{1,k}$ ACCIAIO *$R_{1,k}$ STEEL*		$R_{1,d}$ CALCESTRUZZO NON FESSURATO *$R_{1,d}$ UNCRACKED CONCRETE*		
CODICE *CODE*	**fissaggio fori Ø5** *holes fastening Ø 5*		$R_{1,k\ timber}$	$R_{1,k\ steel}$		**VIN-FIX PRO**	$R_{1,d\ concrete}$	$h_{min,concrete}$
	Ø x L [mm]	n_v [pz/*pcs*]	[kN]	[kN]	γ_{steel}	**Ø x L** [mm]	[kN]	[mm]
HTZ340	chiodi Anker LBA Ø4,0 x 60 viti LBS Ø5 x 50 *Anker nail LBA Ø4,0 x 60* *screws LBS Ø5 x 50*	20	**38,6**	**42,0**	γ_{M0}	M16 x 160 - cl. 5.8	**32,0**	200
HTZ440 + HTZULS10		30	**57,9**	**63,4**	γ_{M2}	M16 x 190 - cl. 5.8	**37,5**	200
WHT540 + ULS505610L		45	**86,9**	**63,4**	γ_{M2}	M20 x 240 - cl. 5.8	**57,5**	240
WHT620 + ULS707720L		55	**106,2**	**85,2**	γ_{M2}	M24 x 270 - cl. 5.8	**69,3**	260

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici degli angolari sono secondo normativa EN 1995-1-1 in accordo a ETA-11/0086. I valori di progetto degli ancoranti per calcestruzzo sono calcolati in accordo alle rispettive Valutazioni Tecniche Europee.
  The characteristic values of the angle brackets comply with the EN 1995-1-1 standard in accordance with ETA-11/0086. The design values of the anchors for concrete are calculated in accordance with the respective European Technical Assessments.
- I valori di resistenza di progetto si ricavano dai valori tabellati come segue:
  Design resistance values can be obtained from the tabled values as follows:

$$R_d = min \begin{cases} \frac{R_{k,timber} \cdot k_{mod}}{\gamma_M} \\ \frac{R_{k,steel}}{\gamma_{steel}} \\ R_{d,concrete} \end{cases}$$

I coefficienti k_{mod}, γ_M e γ_{steel} sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
The coefficients k_{mod}, γ_M and γ_{steel} should be taken according to the current regulations used for the calculation.
In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 350 kg/m³ e calcestruzzo C20/25 con armatura rada, in assenza di distanze dal bordo.
The calculation process used a timber characteristic density of ρ_k = 350 kg/m³ and C20/25 concrete with a thin reinforcing layer, where edge-distance is not a limiting factor.

- Il dimensionamento e la verifica degli elementi in legno e calcestruzzo devono essere svolti a parte.
  Dimensioning and verification of timber and concrete elements must be carried out separately.

HT PLATE

CE
EN 14545

PIASTRE PER FORZE DI TAGLIO E TRAZIONE
PLATES FOR SHEAR AND TENSILE FORCES

Per forze di trazione
For tensile forces

Per forze di taglio
For shear forces

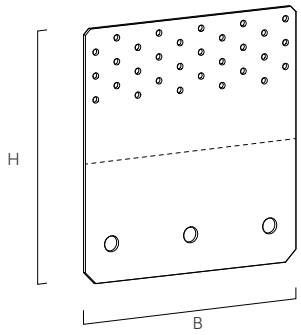
Indicatore di posa
Installation indicator

HTPLATE200

HTPLATE440

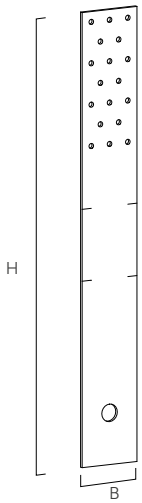
CODICI E DIMENSIONI
CODES AND DIMENSIONS

PIASTRA A TAGLIO
SHEAR PLATE



CODICE *CODE*	B x H [mm]	s [mm]	n_v Ø 5	n_v Ø 13	
HTPLATE200	200 x 214	3	30	3	10

PIASTRA A TRAZIONE
TENSILE PLATE



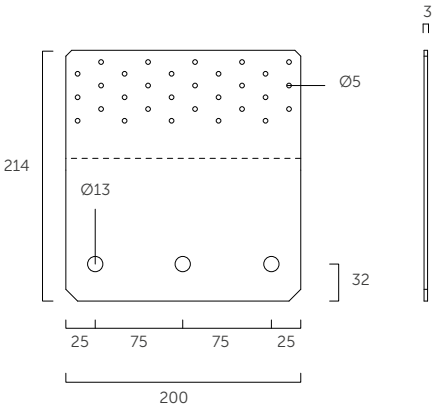
CODICE *CODE*	B x H [mm]	s [mm]	n_v Ø 5	n_v Ø 17	
HTPLATE440	60 x 440	3	18	1	10

MATERIALE / ***MATERIAL***

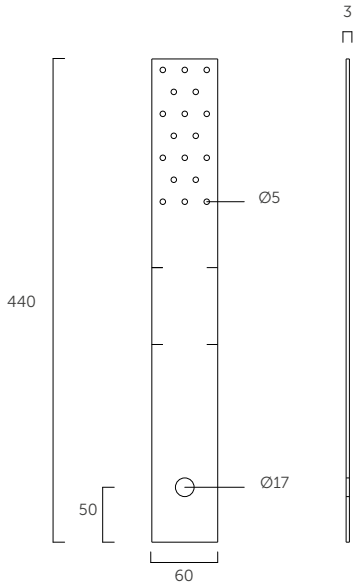
Acciaio al carbonio DX51D con zincatura Z275.
Z275 bright zinc plated DX51D carbon steel.

GEOMETRIA
GEOMETRY

HTPLATE200

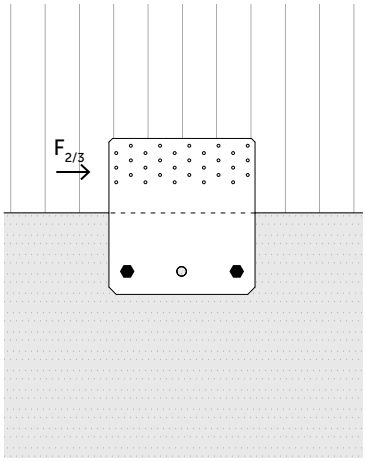


HTPLATE440



HTPLATE200

GIUNZIONE A TAGLIO - LEGNO/CALCESTRUZZO
SHEAR JOINT - TIMBER-TO-CONCRETE



$R_{2/3,k}$ LEGNO *$R_{2/3,k}$ TIMBER*				$R_{2/3,d}$ CALCESTRUZZO NON FESSURATO *$R_{2/3,d}$ UNCRACKED CONCRETE*			
fissaggio fori Ø5 ***holes fastening Ø5***			$R_{2/3,k\ timber}$	**fissaggio fori Ø13** ***holes fastening Ø13***			$R_{2/3,d\ concrete}$
tipo ***type***	**Ø x L** [mm]	n_v [pz/*pcs*]	[kN]	**tipo** ***type***	**Ø x L** [mm]	n_H [pz/*pcs*]	[kN]
chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	30	**24,9**	**VIN-FIX PRO**	M12 x 130 - cl. 5.8	2	**12,8**
viti LBS *screws LBS*	Ø5,0 x 50			**SKR CE**	M12 x min. 100	2	**11,4**

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici degli angolari sono secondo normativa EN 1995-1-1. I valori di progetto degli ancoranti per calcestruzzo sono calcolati in accordo alle rispettive Valutazioni Tecniche Europee.
  The characteristic values of the angle brackets are according to the standard EN 1995-1-1. The design values of the anchors for concrete are calculated in accordance with the respective European Technical Assessments.
- I valori di resistenza di progetto si ricavano dai valori tabellati come segue:
  Design resistance values can be obtained from the tabled values as follows:

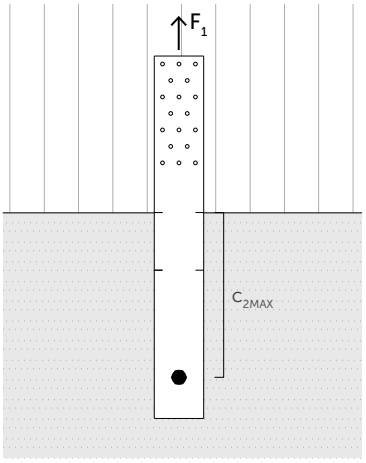
$$R_d = min \begin{cases} \frac{R_{k,timber} \cdot k_{mod}}{\gamma_M} \\ \frac{R_{k,steel}}{\gamma_{steel}} \\ R_{d,concrete} \end{cases}$$

I coefficienti k_{mod}, γ_M e γ_{steel} sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
The coefficients k_{mod}, γ_M and γ_{steel} should be taken according to the current regulations used for the calculation.
In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 350 kg/m³ e calcestruzzo C20/25 con armatura rada e spessore minimo pari a 200 mm.
The calculation process used a timber characteristic density of ρ_k = 350 kg/m³ and C20/25 concrete with a thin reinforcing layer and minimum thickness of 200 mm.

- Il dimensionamento e la verifica degli elementi in legno e calcestruzzo devono essere svolti a parte.
  Dimensioning and verification of timber and concrete elements must be carried out separately.

HTPLATE440

GIUNZIONE A TRAZIONE - LEGNO/CALCESTRUZZO
TENSILE JOINT - TIMBER-TO-CONCRETE



$R_{1,k}$ LEGNO *$R_{1,k}$ TIMBER*				$R_{1,k}$ ACCIAIO *$R_{1,k}$ STEEL*		$R_{1,d}$ CALCESTRUZZO NON FESSURATO *$R_{1,d}$ UNCRACKED CONCRETE*	
fissaggio fori Ø5 ***holes fastening Ø5***			$R_{1,k\ timber}$	$R_{1,k\ timber}$		**VIN-FIX PRO**	$R_{1,d\ concrete}$ (1)
tipo ***type***	**Ø x L** [mm]	n_v [pz/*pcs*]	[kN]	[kN]	γ_{steel}	**Ø x L** [mm]	[kN]
chiodi Anker LBA *Anker nail LBA*	Ø4,0 x 60	18	**34,7**	**34,8**	γ_{M2}	M16 x 190 cl.5.8	**31,1**
viti LBS *screws LBS*	Ø5,0 x 50		**41,8**				

NOTE
NOTES

(1) Valori calcolati per $c_2 = c_{2MAX} = 200$ mm. Per valori 130 mm $\leq c_2 < 200$ mm: $R_{1,d\ concrete} = 22{,}6$ kN.
Values calculated for $c_2 = c_{2MAX} = 200$ mm. For values 130 mm $\leq c_2 < 200$ mm: $R_{1,d\ concrete} = 22{,}6$ kN.

LBV

CE
EN 14545

PIASTRA FORATA PER LEGNO
PERFORATED PLATE FOR WOOD

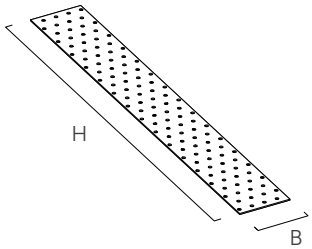
Due spessori 1,5 mm e 2 mm
Two thicknesses 1,5 mm and 2 mm

Ampia gamma pronta per l'uso
Wide range ready for use

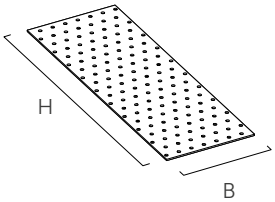
CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*		B x H [mm]	s [mm]	n Ø 5	
LBV60600	PF703100	60 x 600	1,5	75	10
LBV60800	PF703105	60 x 800	1,5	100	10
LBV80600	PF703110	80 x 600	1,5	105	10
LBV80800	PF703115	80 x 800	1,5	140	10
LBV10080	PF703120	100 x 800	1,5	180	10
LBV40120	PF703000	40 x 120	2	9	200
LBV40160	PF703005	40 x 160	2	12	50
LBV60140	PF703010	60 x 140	2	18	50
LBV60200	PF703015	60 x 200	2	25	100
LBV60240	PF703020	60 x 240	2	30	100
LBV80200	PF703025	80 x 200	2	35	50
LBV80240	PF703030	80 x 240	2	42	50
LBV80300	PF703035	80 x 300	2	53	50
LBV100140	PF703040	100 x 140	2	32	50
LBV100200	PF703045	100 x 200	2	45	50
LBV100240	PF703050	100 x 240	2	54	50
LBV100300	PF703055	100 x 300	2	68	50
LBV100400	PF703060	100 x 400	2	90	20
LBV100500	PF703065	100 x 500	2	112	20
LBV120200	PF703070	120 x 200	2	55	50
LBV120240	PF703075	120 x 240	2	66	50
LBV120300	PF703080	120 x 300	2	83	50
LBV140400	PF703085	140 x 400	2	130	15
LBV160400	PF703090	160 x 400	2	150	15
LBV200300	PF703095	200 x 300	2	142	15

GEOMETRIA
GEOMETRY



LBV s = 1,5 mm



LBV s = 2,0 mm

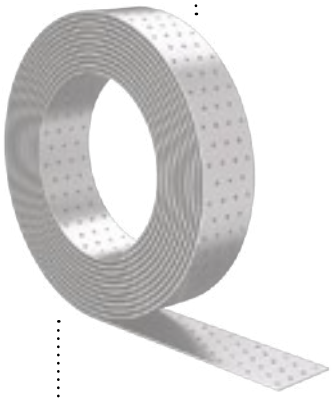
LBB

EN 14545

NASTRO FORATO
PERFORATED BAND

Due spessori 1,5 mm e 3 mm
Two thicknesses 1,5 mm and 3 mm

Marcatura metrica
Metric marking



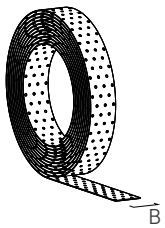
Acciaio ad elevata resistenza
High-resistance steel

CODICI E DIMENSIONI
CODES AND DIMENSIONS

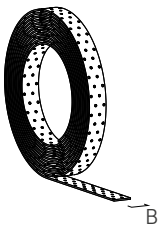
CODICE *CODE*		B [mm]	L [m]	s [mm]	n Ø 5	
LBB40	PF900040	40	50	1,5	75 / m	1
LBB60	PF900060	60	50	1,5	125 / m	1
LBB80	PF400080	80	25	1,5	175 / m	1
LBB4030	PF400043	40	50	3	75 / m	1

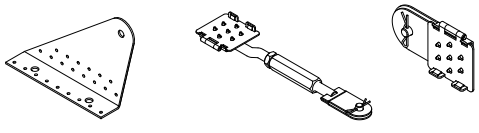
CODICE *CODE*	tipo *type*	
CLIPSET60	per LBB6015 *for LBB6015*	1

GEOMETRIA
GEOMETRY



LBB





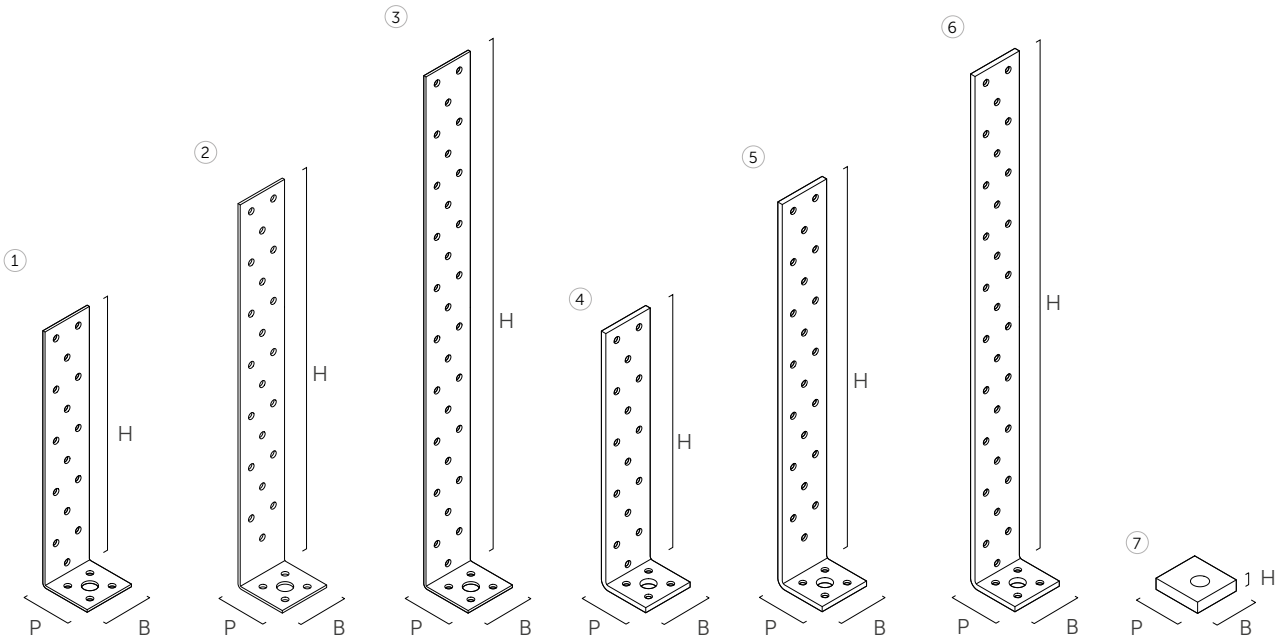
CLIPSET

WZU

CE

ANGOLARE PER STRUTTURE A TELAIO
ANGLE BRACKET FOR FRAME STRUCTURES

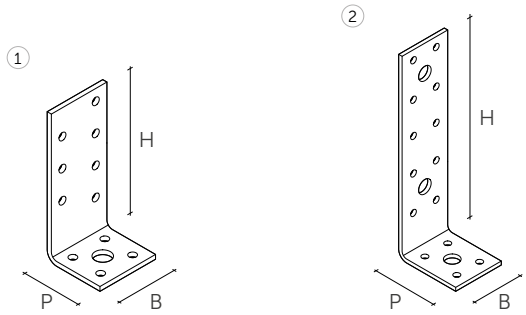
WZU 200/300/400



CODICE *CODE*			B [mm]	P [mm]	H [mm]	s [mm]	n Ø 5	n Ø 14	
WZU2002	1	PF101100	40	40	200	2,0	19	1	100
WZU3002	2	PF101105	40	40	300	2,0	25	1	50
WZU4002	3	PF101110	40	40	400	2,0	34	1	50
WZU2004	4	PF101115	40	40	200	4,0	19	1	50
WZU3004	5	PF101120	40	40	300	4,0	25	1	50
WZU4004	6	PF101125	40	40	400	4,0	34	1	25
WZUW	7	PF700005	40	43	10	-	-	1	50

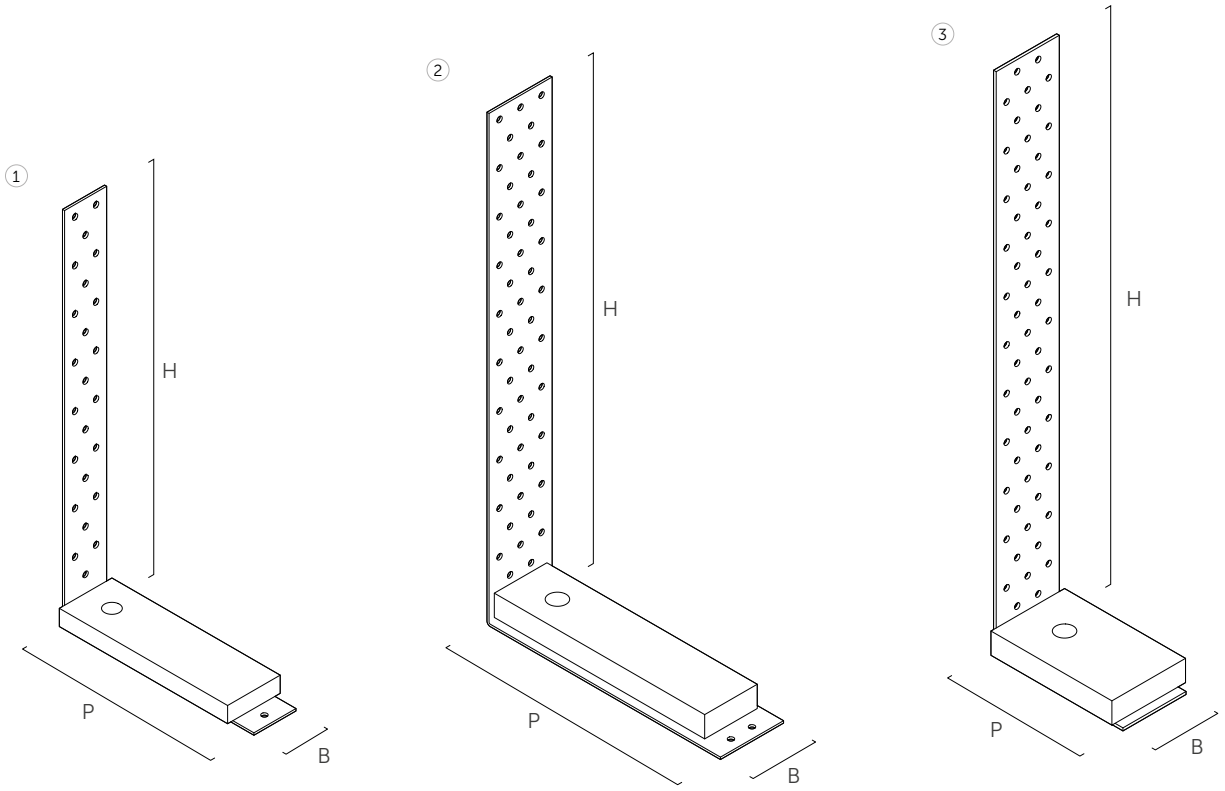
HOLZ TECHNIC

WZU 90/155



CODICE *CODE*			B [mm]	P [mm]	H [mm]	s [mm]	n Ø 5	n Ø 11	
WZU090	1	PF101080	40	35	90	3,0	11	1	100
WZU155	2	PF101090	40	50	155	3,0	14	3	100

WZU STRONG



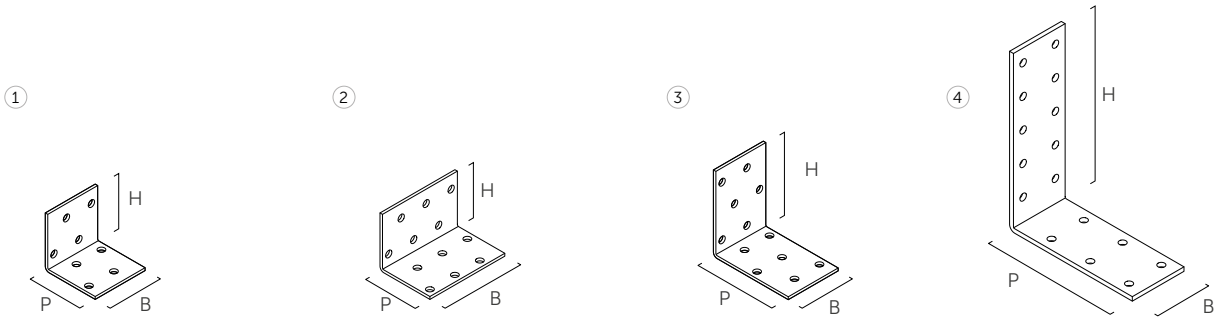
CODICE *CODE*			B [mm]	P [mm]	H [mm]	s [mm]	n Ø 5	n Ø 13	n Ø 18	n Ø 22	rondella* *washer**	
WZU342	1	PF103010	40	182	340	2,0	39	1	-	-	160 x 50 x 15 Ø12,5	10
WZU422	2	PF103015	60	222	420	2,0	79	-	1	-	200 x 60 x 20 Ø16,5	10
WZU482	3	PF103020	60	123	480	2,0	72	-	-	1	115 x 70 x 20 Ø20,5	10

* Rondella inclusa nella confezione.
* *Washer included in the package.*

WHO

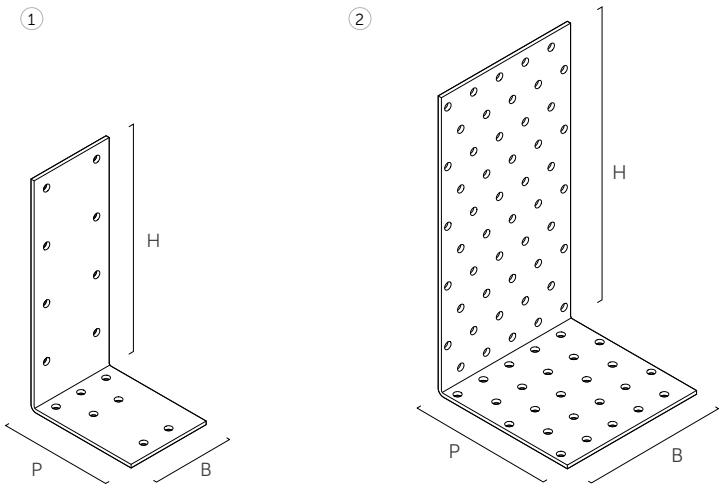
ANGOLARE LISCIO
SMOOTH ANGLE BRACKET

WHO 40/60/120



CODICE *CODE*			B [mm]	P [mm]	H [mm]	s [mm]	n Ø 5	
WHO4040	1	PF101160	40	40	40	2,0	8	200
WHO4060	2	PF101165	60	40	40	2,0	12	150
WHO6040	3	PF101170	40	60	60	2,0	12	150
WHO12040	4	PF101070	40	95	120	3,0	16	100

WHO 160/200

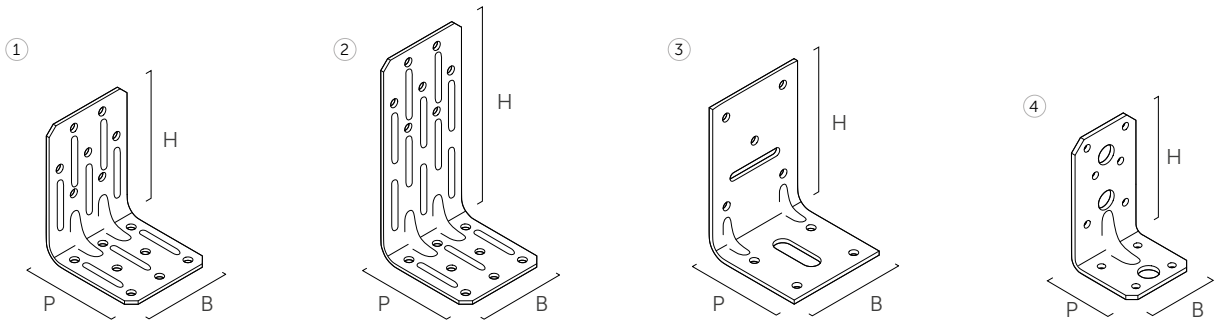


CODICE *CODE*			B [mm]	P [mm]	H [mm]	s [mm]	n Ø 5	
WHO16060	1	PF101130	60	80	160	4,0	15	50
WHO200100	2	PF101175	100	100	200	2,5	75	25

WVS

ANGOLARE RINFORZATO
REINFORCED ANGLE BRACKET

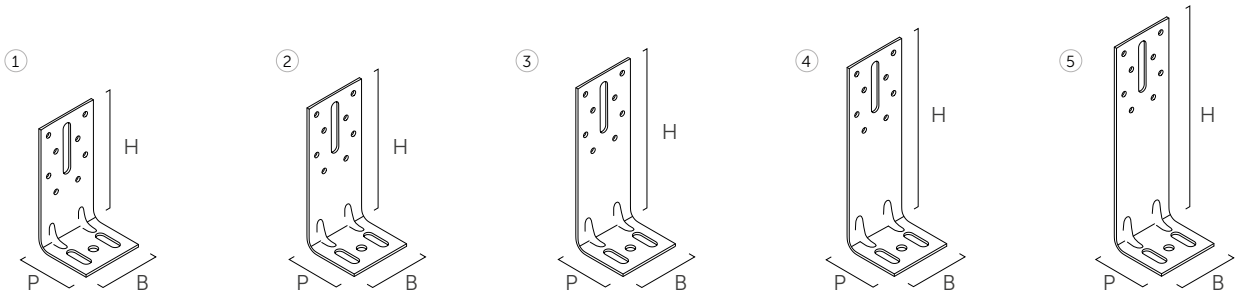
WHO 40/60/120



CODICE *CODE*			B [mm]	P [mm]	H [mm]	s [mm]	n Ø 5	n Ø 13	n $Ø_V$	n $Ø_H$	
WVS8060	1	PF100081	55	60	80	2,0	15	-	-	-	100
WVS12060	2	PF100121	55	60	120	2,0	15	-	-	-	100
WVS9060	3	PF101025	60	60	90	2,5	9	-	1 -Ø5 x 30	1 - Ø10 x 30	100
WVS9050	4	PF101050	50	50	90	3,0	10	3	-	-	100

WKF

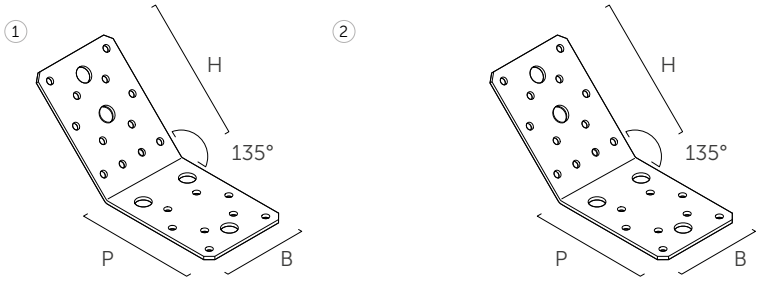
ANGOLARE PER FACCIATE
ANGLE BRACKET FOR FACADES



CODICE *CODE*		B [mm]	P [mm]	H [mm]	s [mm]	n Ø 5	n Ø 8,5	n $Ø_V$	n $Ø_H$	
WKF120	1	60	54	120	2,5	8	1	1 -Ø8,5 x 41,5	2 -Ø8,5 x 16,5	100
WKF140	2	60	54	140	2,5	8	1	1 -Ø8,5 x 41,5	2 -Ø8,5 x 16,5	100
WKF160	3	60	54	160	2,5	8	1	1 -Ø8,5 x 41,5	2 -Ø8,5 x 16,5	100
WKF180	4	60	54	180	2,5	8	1	1 -Ø8,5 x 41,5	2 -Ø8,5 x 16,5	100
WKF200	5	60	54	200	2,5	8	1	1 -Ø8,5 x 41,5	2 -Ø8,5 x 16,5	100

WBO 135°

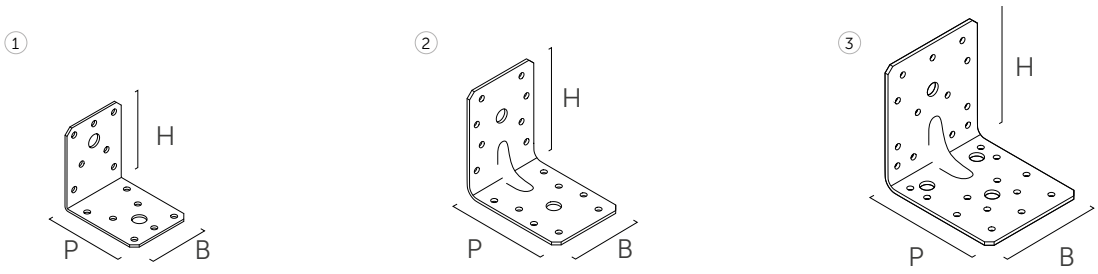
ANGOLARE 135°
135° ANGLE BRACKET



CODICE *CODE*			B [mm]	P [mm]	H [mm]	s [mm]	n Ø 5	n Ø 11	n Ø 13	
WBO13509	1	PF101005	65	90	90	2,5	20	5	-	100
WBO13510	2	PF101010	90	100	100	3,0	28	6	2	40

WVB A2

ANGOLARE STANDARD INOX A2
A2 STANDARD STAINLESS STEEL ANGLE BRACKET

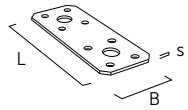


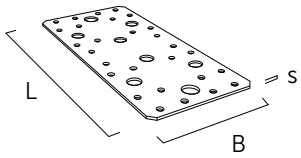
CODICE *CODE*		B [mm]	P [mm]	H [mm]	s [mm]	n Ø 5	n Ø 11	
AI7055	1	55	70	70	2,0	14	2	100
AI9065	2	65	90	90	2,5	16	2	100
AI10090	3	90	105	105	2,5	26	4	50

LBN

PIASTRA STANDARD
STANDARD PLATE

① ②





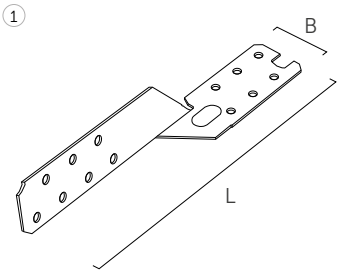
CODICE *CODE*		L [mm]	B [mm]	s [mm]	n Ø 5	n Ø 11	
HT9540	①	95	40	2,5	8	2	150
HT17540	①	175	40	3,0	16	4	100
HT13555	①	135	55	2,0	16	2	100

CODICE *CODE*		L [mm]	B [mm]	s [mm]	n Ø 5	n Ø 7	n Ø 11	n Ø13	
HT17065	②	170	65	2,5	20	8	2	-	50
HT19090	②	190	90	3,0	28	-	6	2	50

SPN

ANCORAGGIO UNIVERSALE
UNIVERSAL ANCHOR SYSTEM

①



CODICE *CODE*			L [mm]	B [mm]	s [mm]	n Ø 5	
SPU170	①	PF702010	170	36	2,0	9	100
SPU210	①	PF702015	210	36	2,0	13	100
SPU250	①	PF702020	250	36	2,0	17	100

ALUMINI HT

VIDEO

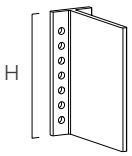
CE
ETA 09/0361

STAFFA A SCOMPARSA IN LEGA DI ALLUMINIO
CONCEALED ALUMINIUM ALLOY BRACKET

Fissaggio semplice e veloce con viti KGL EVO e spinotti autoforanti SBD
Simple and quick fastening with KGL EVO screws and SBD self-drilling dowels

Giunzione invisibile
Invisible joint

CODICI E DIMENSIONI
CODES AND DIMENSIONS

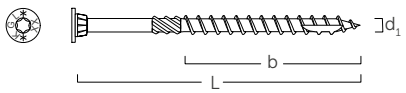


CODICE *CODE*	H [mm]	
ALUMINIHT65	65	25
ALUMINIHT95	95	25
ALUMINIHT125	125	25
ALUMINIHT155	155	15
ALUMINIHT2165	2165	1

MATERIALE / ***MATERIAL***
Lega di alluminio EN AW-6060.
EN AW-6060 aluminum alloy.

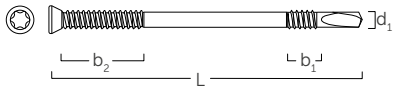
PRODOTTI CORRELATI
RELATED PRODUCTS

KGL EVO



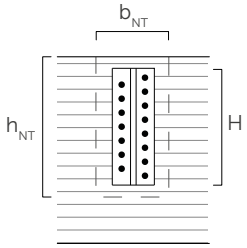
d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	A_t [mm]	A_p [mm]	
5 TX 25	**KGL560C**	60	35	25	1.0 ÷ 10.0	200

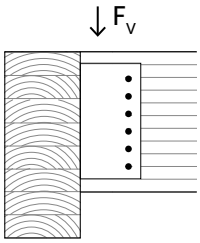
SBD-HT



d_1 [mm]	CODICE *CODE*	L [mm]	b_2 [mm]	b_1 [mm]	
7,5 TX 40	**SBD7555**	55	10	15	50
	SBD7575	75	10	15	50
	SBD7595H	95	20	15	50

VALORI STATICI GIUNZIONE LEGNO-LEGNO
STATIC VALUES TIMBER-TO-TIMBER JOINT





ALUMINI HT	trave secondaria *secondary beam*			trave principale *main beam*	VALORI CARATTERISTICI *CHARACTERISTIC VALUES*	VALORI AMMISSIBILI *ADMISSIBLE VALUES*
			spinotti SBD *dowels SBD*	viti KGL EVO *screw KGL EVO*		
H [mm]	b_{NT} [mm]	h_{NT} [mm]	Ø7,5 [pz/*pcs* - Ø x L]	Ø5 x 60 [pz/*pcs*]	$R_{V,k}$ [kN]	V_{adm} [kg]
65	60	90	2 - Ø7,5 x 55	7	**2,9**	*100*
95	60	120	3 - Ø7,5 x 55	11	**7,1**	*380*
125	60	150	4 - Ø7,5 x 55	15	**12,9**	*620*
155	60	180	5 - Ø7,5 x 55	19	**19,9**	*850*
185 *	60	210	6 - Ø7,5 x 55	23	**27,9**	*1090*

NOTE
NOTES

* Misura ottenibile dalla barra ALUMINIHT2165.
Dimension obtainable from ALUMINIHT2165.

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono secondo normativa EN 1995-1-1 in accordo a ETA-09/0361.
  Characteristic values comply with the EN 1995-1-1 standard in accordance with ETA-09/0361.
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_{V,k} \cdot k_{mod}}{\gamma_M}$$

- I coefficienti k_{mod} e γ_M sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  Coefficients k_{mod} and γ_M must be taken according to the current Standard adopted for the design.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 385 kg/m³.
  The calculation process used a timber characteristic density of ρ_k = 385 kg/m³.
- Il dimensionamento e la verifica degli elementi in legno devono essere svolti a parte.
  Dimensioning and verification of the timber elements must be carried out separately.
- I valori di resistenza del sistema di fissaggio sono validi per le ipotesi di calcolo definite in tabella.
  Resistance values for the fastening system are valid for the calculation examples shown in the table.

ALUMIDI HT

VIDEO

CE
ETA 09/0361

STAFFA A SCOMPARSA IN LEGA DI ALLUMINIO
CONCEALED ALUMINIUM ALLOY BRACKET

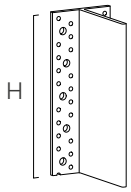
Legno-legno e legno-calcestruzzo
Timber-to-timber and timber-to-concrete

Grandi capacità di carico in tutti i formati
Large load capacities in all formats

Disponibile con e senza fori
Available with and without holes

CODICI E DIMENSIONI
CODES AND DIMENSIONS

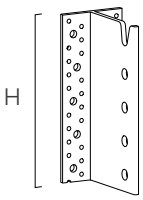
ALUMIDI HT SENZA FORI
ALUMIDI HT WITHOUT HOLES



CODICE *CODE*	H [mm]	
ALUMIDIHT80	80	25
ALUMIDIHT120	120	25
ALUMIDIHT160	160	25
ALUMIDIHT200	200	15
ALUMIDIHT240	240	15
ALUMIDIHT2200	2200	1

Fissaggio con chiodi Anker HT4060 o LBS550.
Fastening with Anker HT4060 or LBS550 nails.

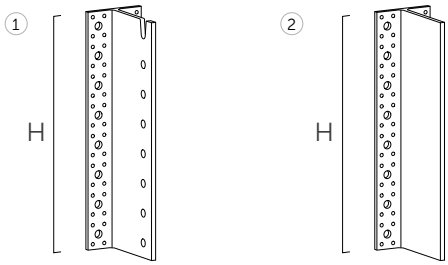
ALUMIDI CON FORI
ALUMIDI WITH HOLES



CODICE *CODE*	H [mm]	
ALUMIDI120L	120	25
ALUMIDI160L	160	25
ALUMIDI200L	200	15
ALUMIDI240L	240	15
ALUMIDI280L	280	15

Fissaggio con chiodi Anker HT4060 o LBS550.
Fastening with Anker HT4060 or LBS550 nails.

ALUMAXI CON E SENZA FORI
ALUMAXI WITH AND WITHOUT HOLES



CODICE *CODE*		H [mm]	
ALUMAXI2176	2	2176	1
ALUMAXI2176L	1	2176	1

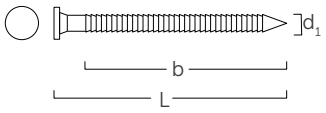
Fissaggio con chiodi Anker LBA6100 o LBS780.
Fastening with Anker LBA6100 or LBS780 nails.

PRODOTTI CORRELATI
RELATED PRODUCTS

SBD-HT SPINOTTO AUTOFORANTE
SBD-HT SELF-DRILLING DOWEL

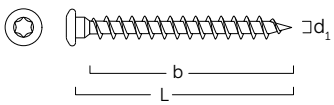
d_1 [mm]	CODICE *CODE*	L [mm]	b_2 [mm]	b_1 [mm]	
7,5 TX 40	**SBD75115H**	115	20	15	50
	SBD75135H	135	20	15	50
	SBD75155H	155	20	15	50

LBA CHIODI ANKER
LBA ANKER NAILS



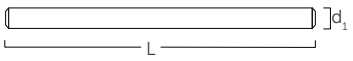
d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
4	**HT4060**	60	50	250
6	**LBA6100**	100	80	250

LBS VITE TESTA TONDA E SOTTOTESTA PIATTO
LBS ROUND-HEAD SCREW AND FLAT UNDERHEAD



d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
5 TX 20	**LBS550**	50	46	200
7 TX 30	**LBS780**	80	75	100

STA SPINOTTO LISCIO
STA SMOOTH DOWEL

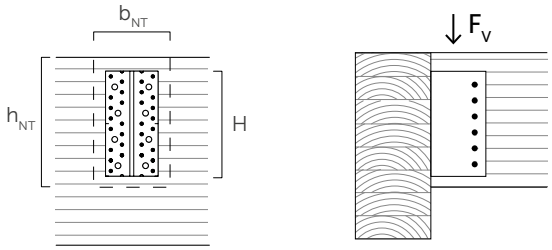


d_1 [mm]	CODICE *CODE*	L [mm]	acciaio *steel*	
12	**STA12120B**	120	S235	100
	STA12140B	140	S235	100
	STA12160B	160	S235	100
16	**STA16160B**	160	S355	50
	STA16180B	180	S355	50
	STA16200B	200	S355	50

MATERIALE / ***MATERIAL***

Lega di alluminio EN AW-6005A.
EN AW-6005A aluminium alloy.

VALORI STATICI GIUNZIONE LEGNO-LEGNO
STATIC VALUES TIMBER-TO-TIMBER JOINT



ALUMIDI HT SENZA FORI
ALUMIDI HT WITHOUT HOLES

ALUMIDI HT	trave secondaria *secondary beam*			trave principale *main beam*	VALORI CARATTERISTICI *CHARACTERISTIC VALUES*	VALORI AMMISSIBILI *ADMISSIBLE VALUES*
			spinotti SBD *dowels SBD*	chiodi Anker LBA *Anker nail LBA*		
H [mm]	b_{NT} [mm]	h_{NT} [mm]	Ø7,5 [pz/*pcs* - Ø X L]	Ø4 x 60 [pz/*pcs*]	$R_{V,k\ timber}$ [kN]	V_{adm} [kg]
80	120	120	3 - Ø7,5 x 115	14	**10,9**	*540*
120	120	160	4 - Ø7,5 x 115	22	**19,7**	*1070*
160	120	200	5 - Ø7,5 x 115	30	**29,6**	*1530*
200	120	240	7 - Ø7,5 x 115	38	**42,5**	*2030*
240	120	280	9 - Ø7,5 x 115	46	**54,6**	*2720*
280 *	140	320	10 - Ø7,5 x 135	54	**71,8**	*2890*
320 *	140	360	11 - Ø7,5 x 135	62	**84,9**	*3180*
360 *	160	400	12 - Ø7,5 x 155	70	**103,6**	*3470*
400 *	160	440	13 - Ø7,5 x 155	78	**116,3**	*3867*

ALUMIDI CON FORI
ALUMIDI WITH HOLES

ALUMIDI	trave secondaria *secondary beam*			trave principale *main beam*	VALORI CARATTERISTICI *CHARACTERISTIC VALUES*	VALORI AMMISSIBILI *ADMISSIBLE VALUES*
			spinotti STA *dowels STA*	chiodi Anker LBA *Anker nail LBA*		
H [mm]	b_{NT} [mm]	h_{NT} [mm]	Ø12 [pz/*pcs* - Ø X L]	Ø4 x 60 [pz/*pcs*]	$R_{V,k\ timber}$ [kN]	V_{adm} [kg]
120	120	160	3 - Ø12 x 120	22	**23,0**	*1070*
160	120	200	4 - Ø12 x 120	30	**34,5**	*1820*
200	120	240	5 - Ø12 x 120	38	**46,5**	*2320*
240	120	280	6 - Ø12 x 120	46	**60,9**	*3010*
280	140	320	7 - Ø12 x 140	54	**77,2**	*3390*
320	140	360	8 - Ø12 x 140	62	**93,2**	*3580*
360	160	400	9 - Ø12 x 160	70	**114,3**	*3760*
400 *	160	440	10 - Ø12 x 160	78	**127,3**	*4190*

NOTE
NOTES

* Misura ottenibile dalla barra ALUMIDIHT2200.
Dimension obtainable from the ALUMIDIHT2200 bar.

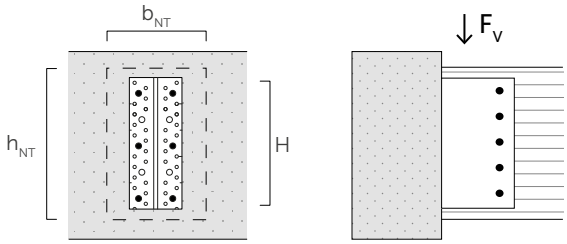
PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono secondo normativa EN 1995-1-1 in accordo a ETA-09/0361 e valutati secondo metodo sperimentale Rothoblaas.
  Characteristic values are consistent with EN 1995-1-1, in accordance with ETA-09/0361 and evaluated with Rothoblaas experimental method.
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_{V,k} \cdot k_{mod}}{\gamma_M}$$

- I coefficienti k_{mod} e γ_M sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  Coefficients k_{mod} and γ_M must be taken according to the current Standard adopted for the design.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 385 kg/m^3.
  The calculation process used a timber characteristic density of ρ_k = 385 kg/m^3.
- Il dimensionamento e la verifica degli elementi in legno devono essere svolti a parte.
  Dimensioning and verification of the timber elements must be carried out separately.
- I valori di resistenza del sistema di fissaggio sono validi per le ipotesi di calcolo definite in tabella.
  Resistance values for the fastening system are valid for the calculation examples shown in the table.

VALORI STATICI GIUNZIONE LEGNO-CALCESTRUZZO CON SPINOTTI AUTOFORANTI SBD
STATIC VALUES OF TIMBER-TO-CONCRETE JOINT WITH SBD SELF-DRILLING DOWELS



ALUMIDI HT SENZA FORI - ANCORANTE AVVITABILE [1]
ALUMIDI HT WITHOUT HOLES - SCREW ANCHOR [1]

ALUMIDI HT	trave secondaria - legno *secondary beam - timber*				trave principale - cls non fessurato *main beam - uncracked concrete*		VALORI AMMISSIBILI *ADMISSIBLE VALUES*
			spinotti SBD *dowels SBD*		ancorante SKR CE *SKR CE anchor*		
H [mm]	b_{NT} [mm]	h_{NT} [mm]	Ø7,5 [pz/*pcs* - Ø X L]	$R_{V,k\ timber}$ [kN]	Ø10 x 80 [pz/*pcs*]	$R_{V,d\ concrete}$ [kN]	V_{adm} [kg]
80	120	120	2 - Ø7,5 x 115	**16,62**	2	**6,10**	*340*
120	120	160	3 - Ø7,5 x 115	**24,93**	4	**10,20**	*570*
160	120	200	4 - Ø7,5 x 115	**33,25**	4	**12,90**	*800*
200	120	240	5 - Ø7,5 x 115	**41,56**	6	**17,40**	*1030*
240	120	280	6 - Ø7,5 x 115	**49,87**	6	**19,80**	*1260*
280 *	140	320	6 - Ø7,5 x 135	**55,13**	8	**24,30**	*1490*
320 *	140	360	7 - Ø7,5 x 135	**64,31**	8	**26,50**	*1720*
360 *	160	400	7 - Ø7,5 x 155	**71,09**	10	**31,10**	*1950*
400 *	160	440	8 - Ø7,5 x 155	**81,24**	10	**33,10**	*2167*

ALUMIDI HT SENZA FORI - ANCORANTE CHIMICO [1]
ALUMIDI HT WITHOUT HOLES - CHEMICAL ANCHOR [1]

ALUMIDI HT	trave secondaria - legno *secondary beam - timber*				trave principale - cls non fessurato *main beam - uncracked concrete*		VALORI AMMISSIBILI *ADMISSIBLE VALUES*
			spinotti SBD *dowels SBD*		ancorante VIN-FIX PRO *VIN-FIX PRO anchor*		
H [mm]	b_{NT} [mm]	h_{NT} [mm]	Ø7,5 [pz/*pcs* - Ø X L]	$R_{V,k\ timber}$ [kN]	Ø8x 110 [2] [pz/*pcs*]	$R_{V,d\ concrete}$ [kN]	V_{adm} [kg]
80	120	120	3 - Ø7,5 x 115	**24,93**	2	**8,80**	*606*
120	120	160	4 - Ø7,5 x 115	**33,25**	4	**15,40**	*948*
160	120	200	5 - Ø7,5 x 115	**41,56**	4	**22,10**	*1516*
200	120	240	7 - Ø7,5 x 115	**58,18**	6	**30,70**	*1894*
240	120	280	8 - Ø7,5 x 115	**66,49**	6	**37,00**	*2343*
280 *	140	320	10 - Ø7,5 x 135	**91,88**	8	**48,70**	*2724*
320 *	140	360	11 - Ø7,5 x 135	**101,07**	8	**55,60**	*2926*
360 *	160	400	12 - Ø7,5 x 155	**121,86**	10	**64,40**	*3405*
400 *	160	440	13 - Ø7,5 x 155	**132,02**	10	**66,40**	*3906*

NOTE
NOTES

* Misura ottenibile dalla barra ALUMIDIHT2200.
Dimension obtainable from the ALUMIDIHT2200 bar.

[1] Installare gli ancoranti a due a due partendo dall'alto, tassellando a file alternate.
Install the anchors two at a time, starting from the top, dowelling alternate rows.

[2] Ancorante chimico VIN-FIX PRO con barre filettate (tipo INA) di classe di acciaio minima 5.8. con h_{ef} = 93 mm.
Chemical anchor VIN-FIX PRO with threaded rods (type INA) of minimum strength grade equal to 5.8. with h_{ef} = 93 mm.

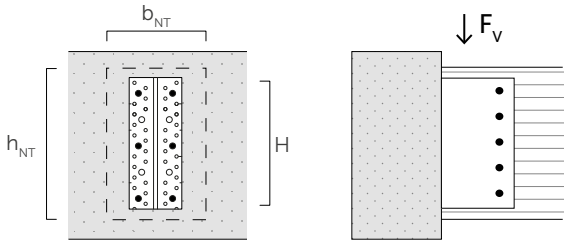
PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono secondo normativa EN 1995-1-1 in accordo a ETA-09/0361. I valori di progetto degli ancoranti per calcestruzzo sono calcolati in accordo alle rispettive Valutazioni Tecniche Europee.
  Characteristic values comply with the EN 1995-1-1 standard in accordance with ETA-09/0361. The design values of the anchors for concrete are calculated in accordance with the respective European Technical Assessments.
- I valori di resistenza di progetto si ricavano dai valori tabellati come segue:
  Design resistance values can be obtained from the tabled values as follows:

$$R_d = min \begin{cases} \dfrac{R_{V,k\ timber} \cdot k_{mod}}{\gamma_M} \\ R_{V,d\ concrete} \end{cases}$$

  I coefficienti k_{mod} e γ_M sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  Coefficients k_{mod} and γ_M must be taken according to the current Standard adopted for the design.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 385 kg/m³ e calcestruzzo C25/30 con armatura rada in assenza di distanze dal bordo.
  The calculation process used a timber characteristic density of ρ_k = 385 kg/m³ and C25/30 concrete with a thin reinforcing layer, where edge-distance is not a limiting factor.
- Il dimensionamento e la verifica degli elementi in legno e in calcestruzzo devono essere svolti a parte.
  Dimensioning and verification of timber and concrete elements must be carried out separately.

VALORI STATICI GIUNZIONE LEGNO-CALCESTRUZZO CON SPINOTTI LISCI STA
STATIC VALUES OF TIMBER-TO-CONCRETE JOINT WITH STA SMOOTH DOWELS



ALUMIDI CON FORI - ANCORANTE AVVITABILE [1]
ALUMIDI WITH HOLES - SCREW ANCHOR [1]

ALUMIDI	trave secondaria - legno *secondary beam - timber*				trave principale - cls non fessurato *main beam - uncracked concrete*		VALORI AMMISSIBILI *ADMISSIBLE VALUES*
			spinotti STA *dowels STA*		ancorante SKR CE *SKR CE anchor*		
H [mm]	b_{NT} [mm]	h_{NT} [mm]	Ø12 [pz/*pcs* - Ø X L]	$R_{V,k\ timber}$ [kN]	Ø10 x 80 [pz/*pcs*]	$R_{V,d\ concrete}$ [kN]	V_{adm} [kg]
120	120	160	3 - Ø12 x 120	**35,46**	4	**10,20**	*630*
160	120	200	4 - Ø12 x 120	**47,28**	4	**12,90**	*880*
200	120	240	5 - Ø12 x 120	**59,10**	6	**17,40**	*1140*
240	120	280	6 - Ø12 x 120	**70,92**	6	**19,80**	*1390*
280	140	320	7 - Ø12 x 140	**90,97**	8	**24,30**	*1640*
320	140	360	8 - Ø12 x 140	**103,96**	8	**26,50**	*1900*
360	160	400	9 - Ø12 x 160	**128,43**	10	**31,10**	*2150*
400 *	160	440	10 - Ø12 x 160	**142,70**	10	**33,10**	*2389*

ALUMIDI CON FORI - ANCORANTE CHIMICO [1]
ALUMIDI WITH HOLES - CHEMICAL ANCHOR [1]

ALUMIDI	trave secondaria - legno *secondary beam - timber*				trave principale - cls non fessurato *main beam - uncracked concrete*		VALORI AMMISSIBILI *ADMISSIBLE VALUES*
			spinotti STA *dowels STA*		ancorante VIN-FIX PRO *VIN-FIX PRO anchor*		
H [mm]	b_{NT} [mm]	h_{NT} [mm]	Ø12 [pz/*pcs* - Ø X L]	$R_{V,k\ timber}$ [kN]	Ø8x 110 [2] [pz/*pcs*]	$R_{V,d\ concrete}$ [kN]	V_{adm} [kg]
120	120	160	3 - Ø12 x 120	**35,46**	4	**15,40**	*948*
160	120	200	4 - Ø12 x 120	**47,28**	4	**22,10**	*1516*
200	120	240	5 - Ø12 x 120	**59,10**	6	**30,70**	*1894*
240	120	280	6 - Ø12 x 120	**70,92**	6	**37,00**	*2343*
280	140	320	7 - Ø12 x 140	**90,97**	8	**48,70**	*2724*
320	140	360	8 - Ø12 x 140	**103,96**	8	**55,60**	*2926*
360	160	400	9 - Ø12 x 160	**128,43**	10	**64,40**	*3405*
400 *	160	440	10 - Ø12 x 160	**142,70**	10	**66,40**	*3906*

NOTE
NOTES

* Misura ottenibile dalla barra ALUMIDIHT2200.
Dimension obtainable from the ALUMIDIHT2200 bar.

[1] Installare gli ancoranti a due a due partendo dall'alto, tassellando a file alternate.
Install the anchors two at a time, starting from the top, dowelling alternate rows.

[2] Ancorante chimico VIN-FIX PRO con barre filettate (tipo INA) di classe di acciaio minima 5.8. con h_{ef} = 93 mm.
Chemical anchor VIN-FIX PRO with threaded rods (type INA) of minimum strength grade equal to 5.8. with h_{ef} = 93 mm.

PRINCIPI GENERALI
GENERAL PRINCIPLES

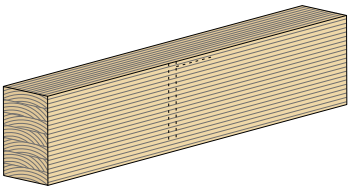
- I valori caratteristici sono secondo normativa EN 1995-1-1 in accordo a ETA-09/0361. I valori di progetto degli ancoranti per calcestruzzo sono calcolati in accordo alle rispettive Valutazioni Tecniche Europee.
Characteristic values comply with the EN 1995-1-1 standard in accordance with ETA-09/0361. The design values of the anchors for concrete are calculated in accordance with the respective European Technical Assessments.
- I valori di resistenza di progetto si ricavano dai valori tabellati come segue:
Design resistance values can be obtained from the tabled values as follows:

$$R_d = min \begin{cases} \dfrac{R_{V,k\ timber} \cdot k_{mod}}{\gamma_M} \\ R_{V,d\ concrete} \end{cases}$$

- I coefficienti k_{mod} e γ_M sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
Coefficients k_{mod} and γ_M must be taken according to the current Standard adopted for the design.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 385 kg/m^3 e calcestruzzo C25/30 con armatura rada in assenza di distanze dal bordo.
The calculation process used a timber characteristic density of ρ_k = 385 kg/m^3 and C25/30 concrete with a thin reinforcing layer, where edge-distance is not a limiting factor.
- Il dimensionamento e la verifica degli elementi in legno e in calcestruzzo devono essere svolti a parte.
Dimensioning and verification of timber and concrete elements must be carried out separately.

INSTALLAZIONE
INSTALLATION

ALUMIDI HT SENZA FORI
ALUMIDI HT WITHOUT HOLES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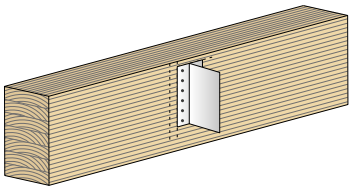
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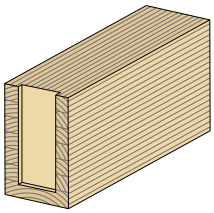
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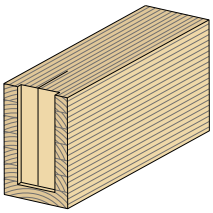
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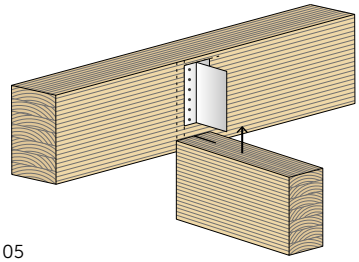
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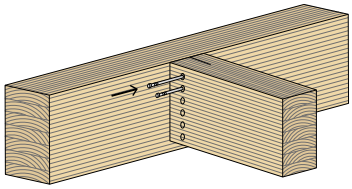
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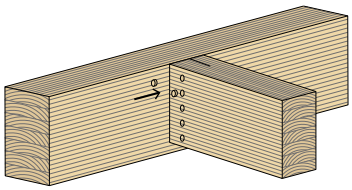
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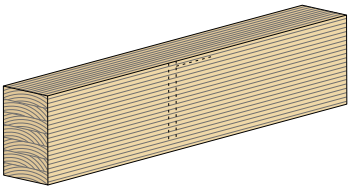
ALUMIDI CON FORI
ALUMIDI WITH HOLES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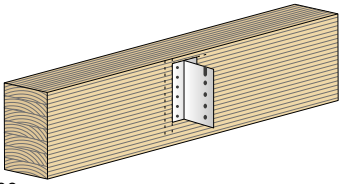
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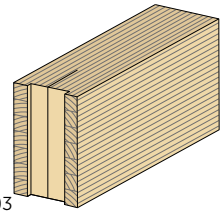
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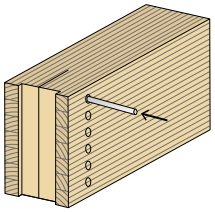
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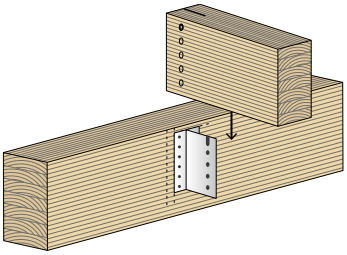
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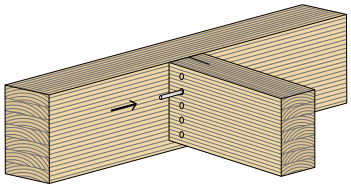
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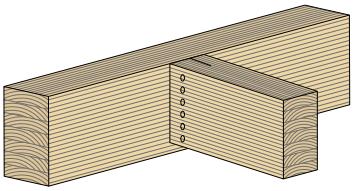

07

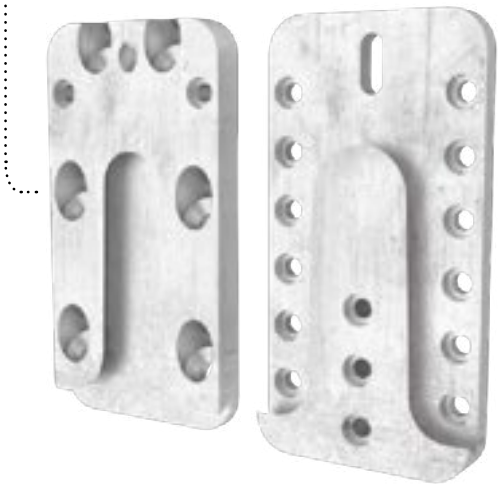
UV-T

VIDEO

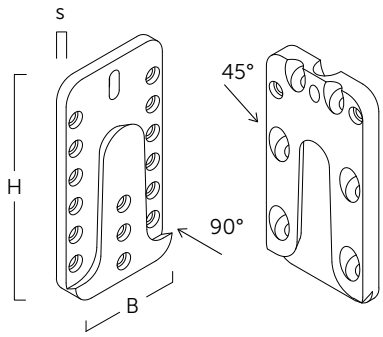
CE ETA

CONNETTORE A SCOMPARSA AD AGGANCIO LEGNO-LEGNO
CONCEALED TIMBER-TO-TIMBER CONNECTOR

Smontabile e rapido da installare
Quick installation and easily removal



CODICI E DIMENSIONI
CODES AND DIMENSIONS



CODICE *CODE*	B x H x s [mm]	$Ø_{90°}$ [mm]	$Ø_{45°}$ [mm]	
UVT3070	30 x 70 x 16	5	4	25
UVT4085	40 x 85 x 16	5	6	25
UVT60115	60 x 115 x 16	5	6	25
UVT60160	60 x 160 x16	5	6	10
UVT60215	60 x 215 x 16	5	6	10

$Ø_{90°}$: diametro foro per viti inserite a 90°.
hole diameter for screws inserted at 90°.

$Ø_{45°}$: diametro foro per viti inserite a 45°.
hole diameter for screws inserted at 45°.

MATERIALE / ***MATERIAL***

Lega di alluminio.
Aluminium alloy.

PRODOTTI CORRELATI
RELATED PRODUCTS

LBS
VITE PER FISSAGGIO A 90°
SCREW FOR 90° FASTENING

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
5 TX 20	**LBS550**	50	46	200
	LBS560	60	56	200
	LBS570	70	66	200

SNK
VITE PER FISSAGGIO A 45° PER UVT3070
SCREW FOR 45° FASTENING FOR UVT3070

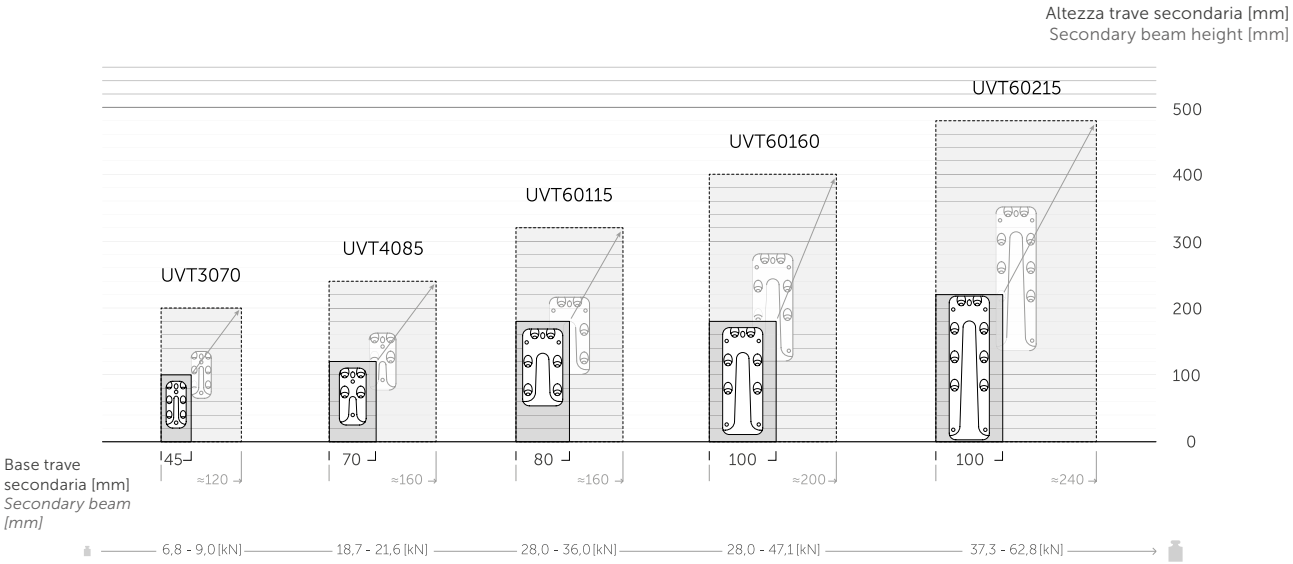
d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
4 TX 20	**SNK450**	50	30	200
	SNK470	70	40	200

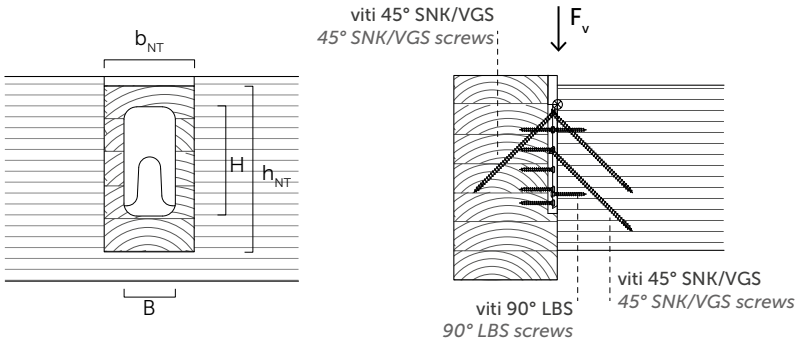
VGS
VITE PER FISSAGGIO A 45°
SCREW FOR 45° FASTENING

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
6 TX 30	**VGS6100**	100	90	100
	VGS6160	160	150	100

Viti non incluse nella confezione.
Screws not included in the box.

GAMMA
RANGE





VALORI STATICI
STATIC VALUES

UV-T B x H [mm]	trave secondaria *secondary beam* b_{NT} [mm]	h_{NT} [mm]	viti 45° *45° screws*	viti 90° *90° screws*	VALORI CARATTERISTICI *CHARACTERISTIC VALUES* (EN 1995:2008) $R_{V,k}$ [kN]
30 x 70	45	100	7 - SNK 4x50	8 - LBS 5x50	6,8
	45	115	7 - SNK 4x70	8 - LBS 5x50	9,0
40 x 85	70	120	5 - VGS 6x100	11 - LBS 5x50	18,7
	70	160	5 - VGS 6x160	11 - LBS 5x70	21,6
60 x 115	80	180	7 - VGS 6x100	17 - LBS 5x50	28,0
	80	220	7 - VGS 6x160	17 - LBS 5x70	36,0
60 x 160	100	180	7 - VGS 6x100	25 - LBS 5x50	28,0
	100	220	7 - VGS 6x160	25 - LBS 5x70	47,1
60 x 215	100	220	9 - VGS 6x100	34 - LBS 5x50	37,3
	100	260	9 - VGS 6x160	34 - LBS 5x70	62,8

UV-C

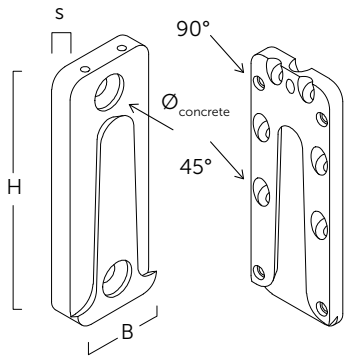
VIDEO

CE ETA

CONNETTORE A SCOMPARSA AD AGGANCIO LEGNO-CALCESTRUZZO
CONCEALED TIMBER-TO-CONCRETE CONNECTOR

Montaggio veloce anche su calcestruzzo
Fast assembly even on concrete

CODICI E DIMENSIONI
CODES AND DIMENSIONS



CODICE *CODE*	B x H x s [mm]	Ø concrete [mm]	Ø 90° [mm]	Ø 45° [mm]	
UVC60115	60 x 115 x 24	12	5	6	10
UVC60160	60 x 160 x 24	12	5	6	10
UVC60215	60 x 215 x 24	12	5	6	10

$Ø_{concrete}$: diametro foro per fissaggi su calcestruzzo
hole diameter for fastening on concrete

$Ø_{90°}$: diametro foro per viti inserite a 90°
hole diameter for screws inserted at 90°

$Ø_{45°}$: diametro foro per viti inserite a 45°
hole diameter for screws inserted at 45°

MATERIALE / ***MATERIAL***

Lega di alluminio.
Aluminium alloy.

PRODOTTI CORRELATI
RELATED PRODUCTS

LBS
VITE PER FISSAGGIO A 90°
SCREW FOR 90° FASTENING

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
5 TX 20	**LBS550**	50	46	200
	LBS560	60	56	200
	LBS570	70	66	200

VGS
VITE PER FISSAGGIO A 45°
SCREW FOR 45° FASTENING

d_1 [mm]	CODICE *CODE*	L [mm]	b [mm]	
6 TX 30	**VGS6100**	100	90	100
	VGS6160	160	150	100

SKS CE
ANCORANTE AVVITABILE TESTA SVASATA
SCREW ANCHORS COUNTERSUNK

d_1 [mm]	CODICE *CODE*	L [mm]	$d_{0\ concrete}$ [mm]	T_{inst} [Nm]	
10 TX 40	**SKS10100CE**	100	8	50	50

$d_{0\ concrete}$: diametro foro nel supporto in calcestruzzo
hole diameter in the concrete support

T_{inst}: coppia di serraggio
tightening torque

Fissaggi non inclusi nella confezione.
Fasteners not included in the package.

XEPOX

CE
EN 1504-4

ADESIVO EPOSSIDICO BICOMPONENTE
TWO COMPONENTS EPOXY ADHESIVE

XEPOX F

XEPOX D

XEPOX P

XEPOX L

XEPOX F

XEPOX G

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CARTUCCE
CARTRIDGES

CODICE *CODE*	**descrizione** *description*	**contenuto** *content* [ml]	
XEPOXF400	fluido *fluid*	400	1
XEPOXD400	denso *dense*	400	1

FUSTINI
DRUMS

CODICE *CODE*	**descrizione** *description*	**contenuto** *content* [ml]	
XEPOXP3000	primer *primer*	A + B = 3000	1
XEPOXL3000	liquido *liquid*	A + B = 3000	1
XEPOXL5000		A + B = 5000	1
XEPOXF3000	fluido *fluid*	A + B = 3000	1
XEPOXF5000		A + B = 5000	1
XEPOXG3000	gel *gel*	A + B = 3000	1

PRODOTTI CORRELATI
RELATED PRODUCTS

CODICE *CODE*	**descrizione** *description*	
MAMDB	pistola per cartucce doppie *double cartridge gun*	1
AT0202	beccuccio miscelatore *mixing nozzle*	12

XEPOX P
Adesivo epossidico bicomponente a bassissima viscosità ed elevato potere bagnante per rinforzi strutturali con nastri/tessuti di carbonio o vetro. Utile anche per la protezione di lamiere sabbiate SA2,5/SA3 (ISO 8501) e per la costruzione di inserti FRP (Fiber Reinforced Polymers).
Two-component epoxy adhesive with extremely low viscosity and high wetting properties for structural reinforcments through carbon or glass fiber textures. Useful to protect sanded metal sheets SA2,5/SA3 (ISO 8501) and to realize FRP (Fiber Reinforced Polymers) inserts.

XEPOX L
Adesivo epossidico bicomponente per impieghi strutturali, molto fluido, applicabile per colatura in fori verticali molto profondi e per grandi giunti con inserti a scomparsa in fresate molto estese, oppure con interspazi molto esigui (1 mm o superiori), sempre previa accuratissima sigillatura delle fughe.
Two-component epoxy adhesive for structural usage, very fluid, applicable via pouring into very deep vertical holes and suitable for large joints with hidden inserts placed in quite extended grooves, also good in case of reduced spacing (1mm or more), provided that the slots are accurately sealed.

XEPOX F
Adesivo epossidico bicomponente fluido per impieghi strutturali, applicabile per iniezioni in fori ed in fresate previa sigillatura delle fughe. Preferibile per la solidarizzazione al legno dei connettori piegati (sistema Turrini-Piazza) nei solai collaboranti in legno-calcestruzzo, sia con travi nuove che esistenti; interspazio tra il metallo ed il legno di circa 2 mm o superiore. Percolazione nei fori verticali nelle fresate dopo l'inserimento di inserti metallici a piastra o a barra.
Two-component epoxy adhesive for structural usage, applicable via injections into holes and grooves, provided that the slots are accurately sealed. Preferable for binding timber fasteners bent (Turrini-Piazza method) into timber-concrete composite floors, both with new and existing joists; gaps between timber and metal of approximately 2 mm or more. Percolation into the vertical holes in the groves after inserting the metal plate or rod inserts.

XEPOX D
Adesivo epossidico bicomponente tixotropico (denso) per impieghi strutturali, applicabile per iniezioni soprattutto in fori orizzontali o verticali nelle travi in legno lamellare, legno massiccio, nelle murature e nel calcestruzzo armato.
Two-component epoxy thixotropic (dense) adhesive for structural usage, applicable via injections especially into horizontal or vertical holes in Glulam and solid timber beams, masonry or reinforced concrete walls.

XEPOX G
Adesivo epossidico bicomponente gel per impieghi strutturali, applicabile a spatola anche su superfici verticali e nella formazione di spessori consistenti o irregolari. Idoneo per sovrapposizioni lignee molto estese e all'incollaggio di rinforzi strutturali con l'utilizzo di tessuti in fibre di vetro o carbonio e per placcaggi (riporti) in legno o metallo.
Two-component epoxy gel adhesive for structural usage, applicable via trowel also on vertical surfaces, permits the realization of thick or uneven layers. Suitable for large timber overlaps, for gluing structural reinforcing elements by using glass or carbon fiber textures and for metal or timber coatings.

BSI

CE

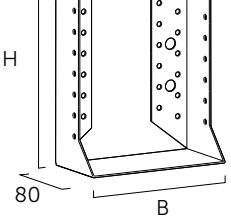
SCARPA LISCIA ALI INTERNE
SMOOTH SHOE INTERNAL WINGS

Effetto a scomparsa
Concealed effect

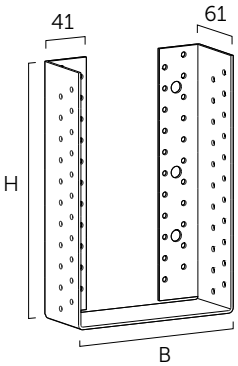
Omologata anche per OSB
Also approved for OSB

Resistenze e geometrie certificate
Certified resistances and designs

GEOMETRIA
GEOMETRY



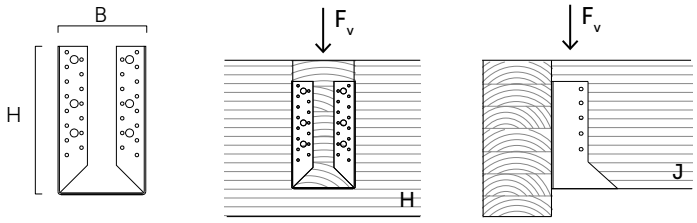
BSIS: liscia
smooth



BSIG: grande misura
large size

MATERIALE / ***MATERIAL***

Acciaio al carbonio S250 GD con zincatura Z275.
Z275 bright zinc plated S250 GD carbon steel.



BSIS

GIUNZIONE LEGNO-LEGNO
TIMBER-TO-TIMBER JOINT

					chiodi Anker LBA *Anker nail LBA*	numero chiodi *nail number*		VALORI CARATTERISTICI *CHARACTERISTIC VALUES*	
CODICE *CODE*		**B** [mm]	**H** [mm]	**s** [mm]	**Ø x L** [mm]	n_H (1) [pz/*pcs*]	n_J (2) [pz/*pcs*]	$R_{V,k}$ [kN]	
BSIS40110	PF202000	40	110	2,0	Ø4 x 40	8	4	8,7	50
HT60100I	-	60	100	2,0	Ø4 x 40	8	4	7,6	50
BSIS60160	PF202010	60	160	2,0	Ø4 x 40	12	6	15,0	50
BSIS70125	PF901400	70	125	2,0	Ø4 x 40	10	6	10,5	50
HT80120I	-	80	120	2,0	Ø4 x 40	18	10	18,3	50
BSIS80150	PF202025	80	150	2,0	Ø4 x 40	22	12	26,3	50
BSIS80180	PF202030	80	180	2,0	Ø4 x 40	26	14	30,0	25
BSIS90145	PF901405	90	145	2,0	Ø4 x 40	22	12	25,7	50
HT10090I	-	100	90	2,0	Ø4 x 60	12	6	16,8	50
BSIS100120	PF202029	100	120	2,0	Ø4 x 60	16	10	18,2	50
HT100140I	-	100	140	2,0	Ø4 x 60	22	12	33,1	50
BSIS100170	PF202035	100	170	2,0	Ø4 x 60	26	14	37,8	50
BSIS100200	PF202040	100	200	2,0	Ø4 x 60	30	16	42,5	25
BSIS120120	PF202045	120	120	2,0	Ø4 x 60	18	10	27,5	25
HT120160I	-	120	160	2,0	Ø4 x 60	26	14	37,8	25
BSIS120190	PF202055	120	190	2,0	Ø4 x 60	30	16	42,5	25
BSIS140140	PF202060	140	140	2,0	Ø4 x 60	22	12	33,1	25
BSIS140180	PF902065	140	180	2,0	Ø4 x 60	30	16	42,5	25

BSIG

GIUNZIONE LEGNO-LEGNO
TIMBER-TO-TIMBER JOINT

					chiodi Anker LBA *Anker nail LBA*	numero chiodi *nail number*		VALORI CARATTERISTICI *CHARACTERISTIC VALUES*	
CODICE *CODE*		**B** [mm]	**H** [mm]	**s** [mm]	**Ø x L** [mm]	n_H (1) [pz/*pcs*]	n_J (2) [pz/*pcs*]	$R_{V,k}$ [kN]	
BSIG120240	PF202410	120	240	2,5	Ø4 x 60	46	30	75,6	20
BSIG140240	PF202420	140	240	2,5	Ø4 x 60	46	30	75,6	20
BSIG160160	PF202430	160	160	2,5	Ø4 x 60	30	18	41,6	15
BSIG160200	PF202435	160	200	2,5	Ø4 x 60	38	22	56,7	15
BSIG180220	PF202455	180	220	2,5	Ø4 x 60	42	26	66,2	10
BSIG200200	PF202465	200	200	2,5	Ø4 x 60	38	22	56,7	10
BSIG200240	PF202470	200	240	2,5	Ø4 x 60	46	30	75,6	10

NOTE
NOTES

(1) n_H numero di fissaggi sulla trave principale
number of fasteners on the main beam

(2) n_J numero di fissaggi sulla trave secondaria
number of fasteners on the secondary joist

- I valori caratteristici sono in accordo a ETA.
  Characteristic values according to ETA.
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_{V,k} \cdot k_{mod}}{\gamma_m}$$

- I coefficienti γ_m e k_{mod} sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  The coefficients γ_m and k_{mod} should be taken according to the current regulations used for the calculation.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 350 kg/m³.
  The calculation process used a timber characteristic density of ρ_k = 350 kg/m³.

BSA

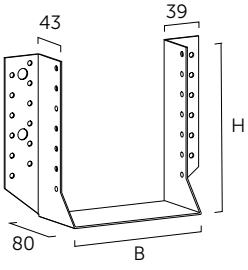
SCARPA LISCIA ALI ESTERNE
SMOOTH SHOE EXTERNAL WINGS

Ideale anche per calcestruzzo
Also ideal for concrete

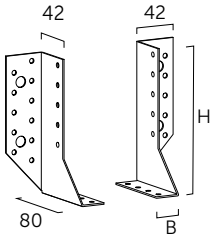
Omologata anche per I-Joist e OSB
Also approved for I-Joist and OSB

Utilizzabile anche in flessione deviata
Also usable with deviated bends

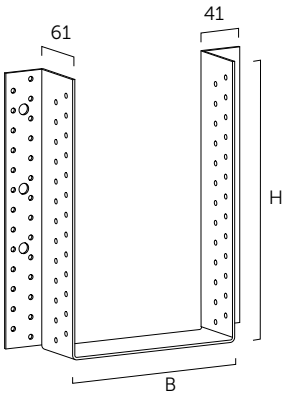
GEOMETRIA
GEOMETRY



BSAS: liscia
smooth



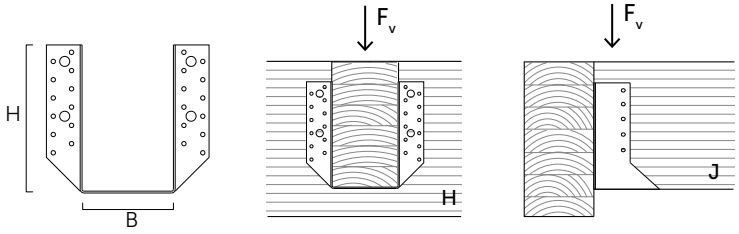
BSAD: 2 pezzi*
*2 pieces**



BSAG: grande misura
large size

MATERIALE / ***MATERIAL***

Acciaio al carbonio S250 GD con zincatura Z275.
Z275 bright zinc plated S250 GD carbon steel.



BSAS

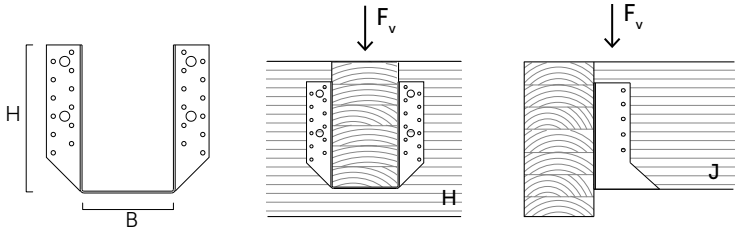
GIUNZIONE LEGNO-LEGNO
TIMBER-TO-TIMBER JOINT

					chiodi Anker LBA *Anker nail LBA*	numero chiodi *nail number*		VALORI CARATTERISTICI *CHARACTERISTIC VALUES*	
CODICE *CODE*		**B** [mm]	**H** [mm]	**s** [mm]	**Ø x L** [mm]	n_H (1) [pz/*pcs*]	n_J (2) [pz/*pcs*]	$R_{V,k}$ [kN]	
BSAS40110	PF201250	40	110	2,0	Ø4 x 40	8	4	8,7	50
BSAS46117	PF201254	46	117	2,0	Ø4 x 40	8	4	9,0	50
BSAS46137	PF201255	46	137	2,0	Ø4 x 40	10	6	11,8	50
BSAS46207	PF201256	46	207	2,0	Ø4 x 40	14	8	16,9	25
BSAS5070	PF201253	50	70	2,0	Ø4 x 40	4	2	3,6	50
BSAS51105	PF201257	51	105	2,0	Ø4 x 40	8	4	8,1	50
BSAS51135	PF201260	51	135	2,0	Ø4 x 40	10	6	11,5	50
HT60100KE	-	60	100	2,0	Ø4 x 40	14	8	13	50
BSAS64128	PF201273	64	128	2,0	Ø4 x 40	18	10	19,2	50
BSAS64158	PF201263	64	158	2,0	Ø4 x 40	22	12	26,3	50
BSAS70125	PF901390	70	125	2,0	Ø4 x 40	18	10	18,6	50
BSAS70155	PF201285	70	155	2,0	Ø4 x 40	22	12	26,3	50
BSAS7690	PF201280	76	90	2,0	Ø4 x 40	12	6	10,4	25
BSAS76152	PF201287	76	152	2,0	Ø4 x 40	22	12	26,3	50
HT80120KE	-	80	120	2,0	Ø4 x 40	18	10	17,5	50
BSAS80140	PF201310	80	140	2,0	Ø4 x 40	20	10	22,5	50
BSAS80150	PF202024	80	150	2,0	Ø4 x 40	22	12	26,3	50
BSAS80180	PF202028	80	180	2,0	Ø4 x 40	26	14	30	25
BSAS80210	PF201315	80	210	2,0	Ø4 x 40	30	16	33,8	25
BSAS90145	PF901395	90	145	2,0	Ø4 x 40	22	12	25,7	50
BSAS92184	PF201320	92	184	2,0	Ø4 x 40	26	14	30	25
HT10090KE	-	100	90	2,0	Ø4 x 60	12	6	15,2	50
BSAS100120	-	100	120	2,0	Ø4 x 60	18	10	27,1	50
HT100140KE	-	100	140	2,0	Ø4 x 60	22	12	33,1	50
BSAS100160	PF201325	100	160	2,0	Ø4 x 60	24	12	33,1	50
BSAS100170	PF201326	100	170	2,0	Ø4 x 60	26	14	37,8	25
BSAS100200	PF201330	100	200	2,0	Ø4 x 60	30	16	42,5	25
BSAS120120	PF201335	120	120	2,0	Ø4 x 60	18	10	27,1	25
HT120160KE	-	120	160	2,0	Ø4 x 60	26	14	37,8	25
BSAS120190	PF201345	120	190	2,0	Ø4 x 60	30	16	42,5	25
BSAS140140	PF201350	140	140	2,0	Ø4 x 60	22	12	33,1	25
BSAS140160	PF201355	140	160	2,0	Ø4 x 60	26	14	37,8	25
BSAS140180	PF901360	140	180	2,0	Ø4 x 60	30	16	42,5	25

BSAD*

CODICE *CODE*		**B** [mm]	**H** [mm]	**s** [mm]	
BSAD25100	PF203005	25	100	2,0	25
BSAD25140	PF203010	25	140	2,0	25
BSAD25180	PF203015	25	180	2,0	25

*NO CE
**NO CE*



BSAG

GIUNZIONE LEGNO-LEGNO
TIMBER-TO-TIMBER JOINT

					chiodi Anker LBA *Anker nail LBA*	numero chiodi *nail number*		VALORI CARATTERISTICI *CHARACTERISTIC VALUES*	
CODICE *CODE*		**B** [mm]	**H** [mm]	**s** [mm]	**Ø x L** [mm]	n_H (1) [pz/*pcs*]	n_J (2) [pz/*pcs*]	$R_{V,k}$ [kN]	
BSAG100240	PF201400	100	240	2,5	Ø4 x 60	46	30	75,6	20
BSAG100280	PF201405	100	280	2,5	Ø4 x 60	54	34	85,1	20
BSAG120240	PF201410	120	240	2,5	Ø4 x 60	46	30	75,6	20
BSAG120280	PF201415	120	280	2,5	Ø4 x 60	54	34	85,1	20
BSAG140240	PF201420	140	240	2,5	Ø4 x 60	46	30	75,6	20
BSAG140280	PF201425	140	280	2,5	Ø4 x 60	54	34	85,1	20
BSAG160160	PF201430	160	160	2,5	Ø4 x 60	30	18	41,6	15
BSAG160200	PF201435	160	200	2,5	Ø4 x 60	38	22	56,7	15
BSAG160240	PF201440	160	240	2,5	Ø4 x 60	46	30	75,6	15
BSAG160280	PF201445	160	280	2,5	Ø4 x 60	54	34	85,1	15
BSAG160320	PF201450	160	320	2,5	Ø4 x 60	62	38	94,6	15
BSAG180220	PF201455	180	220	2,5	Ø4 x 60	42	26	66,2	10
BSAG180280	PF201460	180	280	2,5	Ø4 x 60	54	34	85,1	10
BSAG200200	PF201465	200	200	2,5	Ø4 x 60	38	22	56,7	10
BSAG200240	PF201470	200	240	2,5	Ø4 x 60	46	30	75,6	10

NOTE
NOTES

(1) n_H numero di fissaggi sulla trave principale
number of fasteners on the main beam

(2) n_J numero di fissaggi sulla trave secondaria
number of fasteners on the secondary joist

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono in accordo a ETA.
  Characteristic values according to ETA.
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_{V,k} \cdot k_{mod}}{\gamma_m}$$

- I coefficienti γ_m e k_{mod} sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  The coefficients γ_m and k_{mod} should be taken according to the current regulations used for the calculation.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 350 kg/m³.
  The calculation process used a timber characteristic density of ρ_k = 350 kg/m³.

PORTAPILASTRI
POST BASES

190 HUT S-R

190 M70 S

190 M70 R

191 F20

191 FR20

191 M53

192 F11

192 F12

192 F51

193 FD60

193 F69

193 FD70

194 FD10

194 FD20

194 FDI20

195 FD30

195 FD40

195 FD50

196 F10

196 FI10

196 F50

197 FI50

197 FR50

197 FM50

198 M10

198 M20

198 M50

199 M30

199 S40

199 BRACE F

200 ROUND

201 GATE

202 TYP P10-P20

205 M51

205 M52

205 M60

206 F70

208 TYP R

211 R40 L

211 R40 S

211 R70

212 TYP S50

214 TYP X

HUT S-R

S235 HOT DIP

CAPPELLO PER PILASTRO QUADRATO E TONDO
CAP FOR SQUARE AND ROUND PILLAR

① ②

CODICE *CODE*		misura *size* [mm]	H [mm]	
HUTS70	① FE010000	70 x 70	20	10
HUTS90	① FE010005	90 x 90	20	10
HUTS100	① FE010010	100 x 100	20	10
HUTS120	① FE010015	120 x 120	20	10

CODICE *CODE*		Ø [mm]	H [mm]	
HUTR80	② FE010020	Ø 80	20	10
HUTR100	② FE010025	Ø 100	20	10
HUTR120	② FE010030	Ø 120	20	10

M70 S

ETA 10/0422 S235 HOT DIP

PORTAPILASTRO A SFONDARE QUADRATO
SQUARE SPIKED PILLAR-HOLDERS

CODICE *CODE*		misura *size* [mm]	H bicchiere *H sleeve* [mm]	s [mm]	n_V x Ø [mm]	L punta *L tip* [mm]	
M70S70	FE500000	71 x 71	150	2,0	4 x Ø11	600	1
M70S90	FE500005	91 x 91	150	2,0	4 x Ø11	600	1
MS70S100*	FE500006*	101 x 101	150	2,0	4 x Ø11	750	1
MS70S120*	FE500007*	121 x 121	150	2,0	4 x Ø11	750	1

* non presente nel documento ETA.
* *not included in the ETA document.*

M70 R

ETA 10/0422 S235 HOT DIP

PORTAPILASTRO A SFONDARE ROTONDO
ROUND SPIKED PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H bicchiere *H sleeve* [mm]	s [mm]	n_V x Ø [mm]	L punta *L tip* [mm]	
M70R80	FE500010	Ø81	150	2,0	4 x Ø11	450	1
M70R100	FE500015	Ø101	150	2,0	4 x Ø11	450	1
M70R120*	FE500016	Ø121	150	2,0	4 x Ø11	600	1

* non presente nel documento ETA.
* *not included in the ETA document.*

F20

ETA 10/0422 S235 HOT DIP

PORTAPILASTRO A BICCHIERE ROTONDO
ROUND SLEEVE PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
F2080	FE500030	Ø81	150	2,0	160 x 160	4 x Ø11,5	4 x Ø11	1
F20100	FE500035	Ø101	150	2,0	160 x 160	4 x Ø11,5	4 x Ø11	1
F20120	FE500040	Ø121	150	2,0	180 x 180	4 x Ø11,5	4 x Ø11	1
F20140	FE500045	Ø141	150	2,0	200 x 200	4 x Ø11,5	4 x Ø11	1

Fissaggi per legno e per calcestruzzo inclusi.
Fastenings for wood and concrete included.

FR20

ETA 10/0422 S235 HOT DIP THERMO DUST

PORTAPILASTRO A BICCHIERE ROTONDO MARRONE
BROWN ROUND SLEEVE PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
FR20100	TYPFR200100	Ø101	150	2,0	160 x 160	4 x Ø11,5	4 x Ø11	1
FR20120	TYPFR200120	Ø121	150	2,0	180 x 180	4 x Ø11,5	4 x Ø11	1

Fissaggi per legno e per calcestruzzo inclusi.
Fastenings for wood and concrete included.

M53

PORTAPILASTRO CHIUSO CON BARRA
CLOSED POST BASE WITH BAR

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	n_V x Ø [mm]	Ø x L [mm]	
M5380	TYPM53080	Ø81	150	3	4 x Ø12,5	20 x 200	1
M53100	TYPM53100	Ø101	150	3	4 x Ø12,5	20 x 200	1
M53120	TYPM53120	Ø121	150	3	4 x Ø12,5	20 x 200	1

F11

S235 HOT DIP

PORTAPILASTRO A BICCHIERE CON BASE A SCOMPARSA
SLEEVE PILLAR-HOLDER WITH CONCEALED BASE

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	
F1190	TYPF110909	91 x 91	150	2,5	4 x Ø8	4 x Ø11	1
F11100	TYPF111010	101 x 101	150	2,5	4 x Ø8	4 x Ø11	1
F11120	TYPF111212	121 x 121	150	2,5	4 x Ø8	4 x Ø11	1
F11140	TYPF111414	141 x 141	200	3	4 x Ø13	4 x Ø11	1
F11160	TYPF111616	161 x 161	200	3	4 x Ø13	4 x Ø11	1
LIFT20	TYPF080606	rialzo *standoff*	20	3	60 x 60	-	1

F12

S235 HOT DIP

PORTAPILASTRO APERTO CON BASE A SCOMPARSA
OPEN PILLAR-HOLDER WITH CONCEALED BASE

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
F1270	TYPF120607	72 x 60	100	2,5	72 x 60	4 x Ø8	4 x Ø11	1
F1280	TYPF120608	82 x 60	100	2,5	82 x 60	4 x Ø8	4 x Ø11	1
F1290	TYPF120709	92 x 70	120	2,5	92 x 70	4 x Ø8	4 x Ø11	1
F12100	TYPF120810	102 x 80	120	2,5	102 x 80	4 x Ø8	4 x Ø11	1
F12120	TYPF121012	122 x 100	140	2,5	122 x 100	4 x Ø8	4 x Ø11	1
F12140	TYPF121214	142 x 120	160	3	142 x 120	4 x Ø13	4 x Ø11	1
F12160	TYPF121416	162 x 140	180	3	162 x 140	4 x Ø13	4 x Ø11	1
LIFT20	TYPF080606	rialzo *standoff*	20	3	60 x 60	-	-	1

F51

S235 HOT DIP

PORTAPILASTRO APERTO QUADRATO
SQUARE OPEN PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
F51120	TYPF511212	121 x 121	150	3,0	187 x 187	4 x Ø11,5	8 x Ø11	1
F51140	TYPF511414	141 x 141	200	3,0	207 x 207	4 x Ø11,5	8 x Ø11	1
F51160	TYPF511616	161 x 161	200	4,0	227 x 227	4 x Ø13,0	8 x Ø11	1
F51180	TYPF511818	181 x 181	225	4,0	247 x 247	4 x Ø13,0	8 x Ø11	1
F51200	TYPF512020	201 x 201	225	4,0	267 x 267	4 x Ø13,0	8 x Ø11	1

FD60

S235 HOT DIP CE ETA 10/0422

PORTAPILASTRO DOPPIO AD ALI ESTERNE
DOUBLE PILLAR-HOLDER WITH EXTERNAL WINGS

CODICE *CODE*		H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	ali *wings* [mm]	
FD6050	FE500430	185	4	46 x 46	2 x Ø11,5	2 x Ø11	40 x 43	1
FD6080	FE500435	220	4	76 x 76	2 x Ø11,5	2 x Ø11	50 x 73	1

F69

S235 HOT DIP

PORTAPILASTRO APERTO
OPEN PILLAR-HOLDER

CODICE *CODE*	misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
F69100	101 x 101	150	2,5	150 x 150	4 x Ø11,5	8 x Ø11	1
F69120	121 x 121	150	2,5	200 x 200	4 x Ø11,5	8 x Ø11	1
F69160	161 x 161	200	3	240 x 240	4 x Ø11,5	8 x Ø11	1
F69200	201 x 201	220	3	300 x 300	4 x Ø11,5	8 x Ø11	1

FD70

S235 HOT DIP

PORTAPILASTRO UNIVERSALE
UNIVERSAL PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
FD7080	FE500426	81 x 81	180	3,0	120 x 65	2 x Ø11,5	4 x Ø11	1
FD70100	FE500427	101 x 101	220	3,0	150 x 80	2 x Ø11,5	4 x Ø11	1

FD10

ETA 10/0422 S235 HOT DIP

PORTAPILASTRO DOPPIO A BICCHIERE
DOUBLE SLEEVE PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
FD10120	FE500095	121 x 56	200	2,5	200 x 95	2 x Ø11,5	2 x Ø11	1
FD10140	FE500100	141 x 66	200	2,5	220 x 105	2 x Ø11,5	2 x Ø11	1
FD10160	FE500105	161 x 76	200	2,5	240 x 115	2 x Ø11,5	2 x Ø11	1
FD10180	FE500110	181 x 86	200	2,5	260 x 125	2 x Ø11,5	2 x Ø11	1
FD10200	FE500115	201 x 96	200	2,5	280 x 135	2 x Ø11,5	2 x Ø11	1

FD20

ETA 10/0422 S235 HOT DIP

PORTAPILASTRO DOPPIO A BICCHIERE SPESSORE 4 mm
DOUBLE SLEEVE PILLAR-HOLDER WITH 4mm THICKNESS

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
FD20120	FE500120	121 x 38	200	4,0	200 x 78	2 x Ø11,5	2 x Ø11	1
FD20140	FE500125	141 x 46	200	4,0	200 x 85	2 x Ø11,5	2 x Ø11	1
FD20160	FE500130	161 x 54	200	4,0	240 x 92	2 x Ø11,5	2 x Ø11	1
FD20200	FE500135	201 x 66	200	4,0	280 x 105	2 x Ø11,5	2 x Ø11	1

FDI20

A2 AISI 304

PORTAPILASTRO DOPPIO A BICCHIERE INOX
STAINLESS STEEL DOUBLE SLEEVE PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
FDI20100	TYPFDI2010	100 x 30	230	3	180 x 85	2 x Ø12,5	2 x Ø12,5	1
FDI20120	TYPFDI2012	120 x 40	250	3	190 x 85	2 x Ø12,5	2 x Ø12,5	1
FDI20140	TYPFDI2014	140 x 40	250	3	210 x 85	2 x Ø12,5	2 x Ø12,5	1
FDI20160	TYPFDI2016	160 x 40	280	3	230 x 85	2 x Ø12,5	2 x Ø12,5	1
FDI20200	TYPFDI2020	200 x 50	300	3	270 x 95	2 x Ø12,5	2 x Ø12,5	1

FD30

S235 HOT DIP CE ETA 10/0422

PORTAPILASTRO DOPPIO A "L"
DOUBLE "L" PILLAR-HOLDER

CODICE *CODE*		H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
FD3060	FE500465	180	4	60 x 50	1 x Ø11,5	2 x Ø11	1
FD3080	FE500470	240	4	80 x 50	1 x Ø11,5	2 x Ø11	1

FD40

S235 HOT DIP CE ETA 10/0422

PORTAPILASTRO DOPPIO RIALZATO
DOUBLE ELEVATED PILLAR-HOLDER

CODICE *CODE*	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	H rialzo *H standoff* [mm]	
FE500475	180	4	60 x 50	1 x Ø11,5	2 x Ø11	20	1
FE500480	240	4	80 x 60	1 x Ø11,5	2 x Ø11	20	1

FD50

S235 HOT DIP CE ETA 10/0422

PORTAPILASTRO DOPPIO AD ALI INTERNE
DOUBLE PILLAR-HOLDER WITH INTERNAL WINGS

CODICE *CODE*		H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
FD5050	FE500420	185	4	46 x 46	1 x Ø11,5	2 x Ø11	1
FD5080	FE500425	220	4	76 x 76	1 x Ø11,5	2 x Ø11	1

F10

ETA 10/0422 — S235 HOT DIP

PORTAPILASTRO A BICCHIERE QUADRATO
SQUARE SLEEVE PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
F1070	FE500020	71 x 71	150	2,0	150 x 150	4 x Ø11,5	4 x Ø11	1
F1080*	FE500022*	81 x 81	150	2,0	150 x 150	4 x Ø11,5	4 x Ø11	1
F1090	FE500025	91 x 91	150	2,0	150 x 150	4 x Ø11,5	4 x Ø11	1

* non presente nel documento ETA.
* *not included in the ETA document.*

FI10

ETA 10/0422 — A2 AISI 304

PORTAPILASTRO A BICCHIERE QUADRATO INOX
STAINLESS STEEL SQUARE SLEEVE PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
FI1070	AI500020	71 x 71	150	2,0	150 x 150	4 x Ø11,5	4 x Ø11	1
FI1090	AI500021	91 x 91	150	2,0	150 x 150	4 x Ø11,5	4 x Ø11	1

F50

ETA 10/0422 — S235 HOT DIP

PORTAPILASTRO A BICCHIERE GRANDE MISURA
LARGE SIZE SLEEVE PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
F50100	FE500050	101 x 101	150	2,5	150 x 150	4 x Ø11,5	4 x Ø11	1
F50120	FE500055	121 x 121	150	2,5	200 x 200	4 x Ø11,5	4 x Ø11	1
F50140	FE500060	141 x 141	150	2,5	200 x 200	4 x Ø11,5	4 x Ø11	1
F50160	FE500065	161 x 161	200	2,5	240 x 240	4 x Ø11,5	4 x Ø11	1
F50180	FE500066	181 x 181	200	2,5	280 x 280	4 x Ø11,5	4 x Ø11	1
F50200	FE500070	201 x 201	200	2,5	300 x 300	4 x Ø11,5	4 x Ø11	1

FI50

A2 AISI 304 CE ETA 10/0422

PORTAPILASTRO A BICCHIERE QUADRATO INOX GRANDE MISURA
LARGE SIZE STAINLESS STEEL SQUARE SLEEVE PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
FI50100	AI500050	101 x 101	150	2,5	150 x 150	4 x Ø11,5	4 x Ø11	1
FI50120	AI500055	121 x 121	150	2,5	200 x 200	4 x Ø11,5	4 x Ø11	1
FI50140	AI500060	141 x 141	150	2,5	200 x 200	4 x Ø11,5	4 x Ø11	1
FI50160	AI500065	161 x 161	200	2,5	240 x 240	4 x Ø11,5	4 x Ø11	1
FI50200	AI500070	201 x 201	200	2,5	300 x 300	4 x Ø11,5	4 x Ø11	1

FR50

ETA 10/0422 S235 HOT DIP THERMO DUST

PORTAPILASTRO A BICCHIERE QUADRATO MARRONE
BROWN SQUARE SLEEVE PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
FR50100	TYPFR501010	101 x 101	150	2,5	150 x 150	4 x Ø11,5	4 x Ø11	1
FR50120	TYPFR501212	121 x 121	150	2,5	200 x 200	4 x Ø11,5	4 x Ø11	1

Fissaggi per legno e per calcestruzzo inclusi.
Fastenings for wood and concrete included.

FM50

ETA 10/0422 S235 HOT DIP THERMO DUST

PORTAPILASTRO A BICCHIERE QUADRATO GRIGIO
GREY SQUARE SLEEVE PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
FM50100	TYPFM501010	101 x 101	150	2,5	150 x 150	4 x Ø11,5	4 x Ø11	1
FM50120	TYPFM501212	121 x 121	150	2,5	200 x 200	4 x Ø11,5	4 x Ø11	1
FM50160	TYPFM501616	161 x 161	200	2,5	240 x 240	4 x Ø11,5	4 x Ø11	1
FM50200	TYPFM502020	201 x 201	200	2,5	300 x 300	4 x Ø11,5	4 x Ø11	1

Fissaggi per legno e per calcestruzzo inclusi.
Fastenings for wood and concrete included.

M10

ETA 10/0422 S235 HOT DIP

PORTAPILASTRO A MURO
WALL-MOUNT PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	Ø x L [mm]	
M1070	FE500140	71 x 71	150	2	151	6 x Ø11	4 x Ø11	10 x Ø11	1
M1090	FE500145	91 x 91	150	2	175	6 x Ø11	4 x Ø11	10 x Ø11	1

M20

S235 HOT DIP CE ETA 10/0422

PORTAPILASTRO A "U"
"U" PILLAR-HOLDER

CODICE *CODE*		H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
M2070	FE500180	150	5	71 x 60	1 x Ø13 + 2 x Ø11,5	6 x Ø11	1
M2090	FE500185	150	5	91 x 60	1 x Ø13 + 2 x Ø11,5	6 x Ø11	1
M20100	FE500190	150	5	101 x 60	1 x Ø13 + 2 x Ø11,5	6 x Ø11	1
M20120	FE500195	150	5	121 x 60	1 x Ø13 + 2 x Ø11,5	6 x Ø11	1

M50

S235 HOT DIP CE ETA 10/0422

PORTAPILASTRO A "U" PER CALCESTRUZZO
"U" PILLAR-HOLDER FOR CONCRETE

CODICE *CODE*		H [mm]	s [mm]	B x P [mm]	n_V x Ø [mm]	Ø x L [mm]	
M5070	FE500200	150	5	71 x 60	6 x Ø11	20 x 200	1
M5090	FE500205	150	5	91 x 60	6 x Ø11	20 x 200	1
M50100	FE500210	150	5	101 x 60	6 x Ø11	20 x 200	1
M50120	FE500215	150	5	121 x 60	6 x Ø11	20 x 200	1

M30

S235 HOT DIP

CE ETA 10/0422

PORTAPILASTRO A STAFFA
BRACKET PILLAR-HOLDER

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
M3070	FE500220	71 x 50	200	5	160 x 60	2 x Ø11,5	4 x Ø11	1
M3080	FE500225	81 x 50	200	5	170 x 60	2 x Ø11,5	4 x Ø11	1
M3090	FE500230	91 x 50	200	5	180 x 60	2 x Ø11,5	4 x Ø11	1
M30100	FE500235	101 x 50	200	5	190 x 60	2 x Ø11,5	4 x Ø11	1
M30120*	FE500240	121 x 50	200	5	210 x 60	2 x Ø11,5	4 x Ø11	1

* non in possesso di marcatura CE.
not holding CE marking.

S40

HOT DIP

PORTAPILASTRO INCLINABILE
INCLINABLE PILLAR-HOLDER

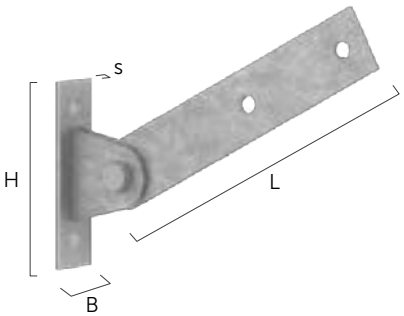
CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	B x P [mm]	n_H x Ø [mm]	n_V x Ø [mm]	
S4070	FE500360	71 x 60	100	5	100 x 100	4 x Ø12	6 x Ø11	1
S4090	FE500365	91 x 60	100	5	100 x 100	4 x Ø12	6 x Ø11	1

BRACE F

A2 AISI 304

S235 HOT DIP

PIASTRA A CERNIERA
HINGED PLATE



CODICE *CODE*	B [mm]	H [mm]	L [mm]	s [mm]	Ø [mm]	
BRF140	40	140	235	5	13	1
BRFI140*	40	140	235	4	13	1

* Versione in acciaio A2 | AISI304.
Stainless steel A2 | AISI304 version.

ROUND

S235 HOT DIP

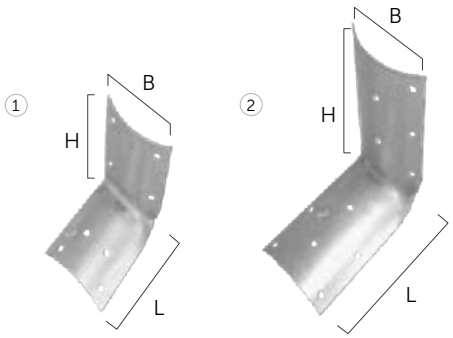
GIUNTI PER PALI TONDI
JOINTS FOR ROUND POLES

CODICE *CODE*			misura *size* [mm]	Ø palo *Ø pole* [mm]	Ø foro *Ø hole* [mm]	
ROUND100	1	FE010265	70 x 200 x 2.5	Ø100	11	10
ROUNDE100	2	FE010270	70 x 117.5 x 2.5	Ø100	11	10
ROUNDH100	3	FE010295	70 x 107.5 x 2.5	Ø100	11	10

ROUND "L"

S235 HOT DIP

GIUNTI A "L" PER PALI TONDI
"L" JOINTS FOR ROUND POLES

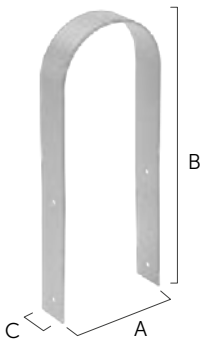


CODICE *CODE*			H [mm]	L [mm]	B [mm]	s [mm]	Ø palo *Ø pole* [mm]	
ROUNDL80	1	FE010296	80	80	57	1,5	Ø120	100
ROUNDL120	2	FE010297	123	120	74	1,5	Ø120	100

ROUND "U"

S235 HOT DIP

GIUNTI A "U"PER PALI TONDI
"U" JOINTS FOR ROUND POLES



CODICE *CODE*			A [mm]	B [mm]	C [mm]	s [mm]	
ROUNDU80	1	FE010250	80	345	40	3,0	1
ROUNDU100	2	FE010255	100	345	40	3,0	1
ROUNDU120	3	FE010260	120	345	40	3,0	1

GATE LATCH

CATENACCIO
SLIDING LOCK

CODICE *CODE*		misura *size* [mm]	
GATEL100	FE010238	44 x 100 x 16	10
GATEL120	FE010239	44 x 120 x 16	10
GATEL140	FE010241	52 x 140 x 20	10

GATE FLOOR

S235 HOT DIP

CHIUSURA A PAVIMENTO
CANE BOLT

CODICE *CODE*		H [mm]	
GATEF400	FE010055	400	5
GATEF500	FE010060	500	5

GATE HOOK

S235 HOT DIP

GANCIO PER CANCELLI
GATE PINTLE HINGE

CODICE *CODE*		misura *size* [mm]	Ø [mm]	
GATEH13	FE010065	100 x 35 x 4	13	10
GATEH16	FE010070	115 x 40 x 4.5	16	10
GATEH20	FE010075	167 x 60 x 6	20	4

GATE HINGES

S235 HOT DIP

CERNIERA PER CASSE
HINGE

CODICE *CODE*		misura *size* [mm]	s [mm]	
HINGE140	FE010165	140 x 35	2	20
HINGE160	FE010170	160 x 35	2	20
HINGE200	FE010175	200 x 35	2	20

GATE BAND

S235 HOT DIP

BANDELLA
STRAP

CODICE *CODE*		misura *size* [mm]	Ø [mm]	Ø PERNO Ø *DOWEL* [mm]	
GATEB13300	FE010105	300 x 40 x 5	7	13	10
GATEB13500	FE010110	500 x 40 x 5	7	13	10
GATEB16400	FE010115	400 x 45 x 5	9	16	10
GATEB16700	FE010120	700 x 45 x 5	9	16	10
GATEB201200	FE010125	1200 x 60 x 8	9	20	1

TYP P10-P20

S235 HOT DIP | ANTI CORR. | CE ETA 10/0422

PORTAPILASTRO A TUBO DA ANNEGARE
EMBEDDED TUBULAR POST BASE

Zincato a caldo
Hot dip galvanising

TYP P10

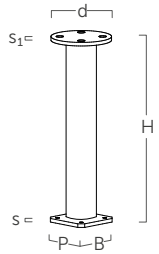
DAC COAT
DAC COAT

TYP P20

CODICI E DIMENSIONI
CODES AND DIMENSIONS

TYP P10

S235
HOT DIP

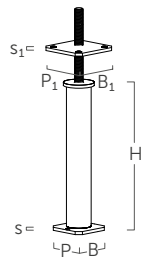


CODICE *CODE*		B x P x s [mm]	n_{H1} x Ø [mm]	d x s_1 [mm]	H [mm]	$Ø_2$ [mm]	
P10300	TYPP10300	80 x 80 x 6	4 x 11.0	100 x 6	300	48,3	1
P10500	TYPP10500	80 x 80 x 6	4 x 11.0	100 x 6	500	48,3	1

Viti consigliate per il fissaggio: 4 x Ø8x80.
Screws recommended for fastening: 4 x Ø8x80.

TYP P20

ANTI CORR.



CODICE *CODE*		B x P x s [mm]	n_{H1} x Ø [mm]	B_1 x P_1 x s_1 [mm]	H [mm]	$Ø_2$ [mm]	Ø x L [mm]	
P20300	TYPP20300	80 x 80 x 6	4 x 11.0	100 x 100 x 8	300	48,3	M24 x 170	1
P20500	TYPP20500	80 x 80 x 6	4 x 11.0	100 x 100 x 8	500	48,3	M24 x 170	1

Viti consigliate per il fissaggio: 4 x Ø8x80.
Screws recommended for fastening: 4 x Ø8x80.

H altezza
height

d x s_1 diametro e spessore del disco
disc diameter and thickness

n_{H1} x Ø numero e diametro fori sulla piastra superiore
number and diameter of holes in the top plate

Ø x L diametro e lunghezza della barra
bar diameter and length

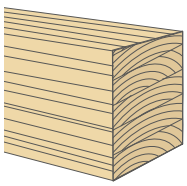
$Ø_2$ diametro palo
pole diameter

B x P x s dimensione piastra base
base plate dimensions

B_1 x P_1 x s_1 dimensione piastra superiore
top plate dimensions

INSTALLAZIONE
INSTALLATION

TYP P10 INSTALLAZIONE
TYP P10 INSTALLATION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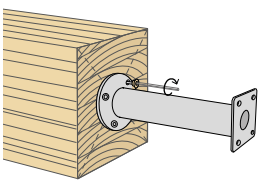
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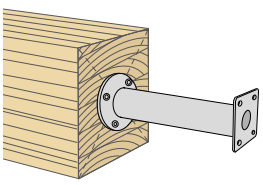
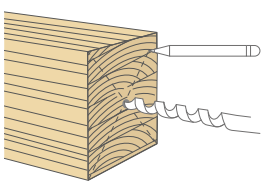

03

TYP P20 INSTALLAZIONE
TYP P20 INSTALLATION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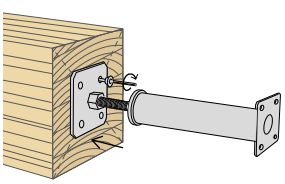
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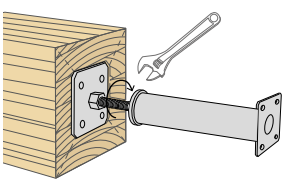
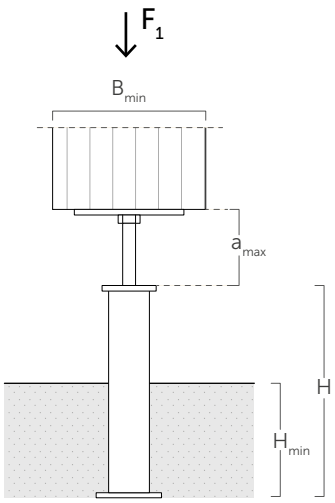

03



TYP P10

CODICE *CODE*	B_{min} [mm]	H [mm]	H_{min} [mm]	$R_{1,k\ timber}$ [kN]	γ_{timber}	$R_{1,k\ timber}$ [kN]	γ_{steel}	$R_{1,k\ timber}$ [kN]	γ_{steel}
P10300	☐ 100 x 100 ◯ Ø100	312	156	**98,6**	γ_{MT} (1)	**78,7**	γ_{M0}	**107,0**	γ_{M1}
P10500		512	256					**99,3**	

TYP P20

CODICE *CODE*	B_{min} [mm]	H [mm]	H_{min} [mm]	a_{max} [mm]	$R_{1,k\ timber}$ [kN]	γ_{timber}	$R_{1,k\ timber}$ [kN]	γ_{steel}	$R_{1,k\ timber}$ [kN]	γ_{steel}
P20300	☐ 100 x 100	312	156	70	**93,7**	γ_{MT} (1)	**59,5**	γ_{M0}	**106,0**	γ_{M1}
P20500		512	256	70					**106,0**	

NOTE
NOTES

(1) Coefficiente parziale del materiale legno.
Partial coefficient of the timber

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono in accordo a ETA-10/0422.
  Characteristic values according to ETA-10/0422.
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = min \begin{cases} \frac{R_{i,k\ timber} \cdot k_{mod}}{\gamma_{timber}} \\ \frac{R_{i,k\ steel}}{\gamma_{steel}} \end{cases}$$

  I coefficienti k_{mod} e γ sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  Coefficients k_{mod} and γ must be taken according to the current Standard adopted for the design.
  La verifica del fissaggio lato calcestruzzo deve essere svolta a parte.
  The verification of the fastener-to-concrete connection must be carried out separately.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 350 kg/m³.
  The calculation process used a timber characteristic density of ρ_k = 350 kg/m³.
- Il dimensionamento e la verifica degli elementi in legno ed in calcestruzzo devono essere svolti a parte.
  Wood and concrete elements must be sized and checked separately.

M51

S235 HOT DIP

PORTAPILASTRO A "U" PER CALCESTRUZZO
"U" PILLAR-HOLDER FOR CONCRETE

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	n_H x Ø [mm]	n_V x Ø [mm]	Ø x L [mm]	
M51100	TYPM510100	Ø101	150	3	2 x Ø8	4 x Ø11	20 x 200	1
M51120	TYPM510120	Ø121	150	3	2 x Ø8	4 x Ø11	20 x 200	1

M52

S235 HOT DIP

PORTAPILASTRO APERTO PER CALCESTRUZZO
OPEN PILLAR-HOLDER FOR CONCRETE

CODICE *CODE*		misura *size* [mm]	H [mm]	s [mm]	n_H x Ø [mm]	n_V x Ø [mm]	Ø x L [mm]	
M5290	TYPM520709	91 x 70	120	2,5	4 x Ø8	4 x Ø11	20 x 200	1
M52100	TYPM520810	101 x 80	120	2,5	4 x Ø8	4 x Ø11	20 x 200	1
M52120	TYPM521012	121 x 100	140	2,5	4 x Ø8	4 x Ø11	20 x 200	1

M60

ETA 10/0422

S235 HOT DIP

PORTAPILASTRO CON LAMA INTERNA PER CALCESTRUZZO
PILLAR-HOLDER WITH INTERNAL CORE FOR CONCRETE

CODICE *CODE*		H [mm]	s [mm]	B x P [mm]	n_V x Ø [mm]	Ø x L [mm]	
M6080	FE500217	130	8	80 x 80	4 x Ø11	20 x 250	1

F70

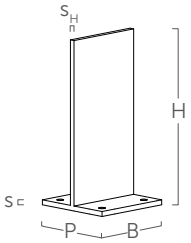
S235 HOT DIP CE ETA 10/0422

PORTAPILASTRO A "T" CON LAMA INTERNA
"T" PILLAR-HOLDER WITH INTERNAL CORE

Giunzione a scomparsa
Hidden joint

Fissaggio con spinotti o bulloni
Fastening with pins or bolts

CODICI E DIMENSIONI
CODES AND DIMENSIONS



CODICE *CODE*		B x P x s [mm]	n_H x Ø [mm]	s_H [mm]	H [mm]	
F7080	TYPF700808	80 x 80 x 6	4 x Ø8	4	150	1
F70100	TYPF701010	100 x 100 x 6	4 x Ø8	6	200	1
F70140	TYPF701414	140 x 140 x 8	4 x Ø11,5	8	300	1

H altezza
height

B x P x s dimensione piastra base
base plate dimensions

n_H x Ø numero e diametro fori sulla piastra base
number and diameter of holes in the base plate

CONFIGURAZIONI DI CALCOLO CON SPINOTTI SBD
CALCULATION CONFIGURATIONS WITH SBD DOWELS

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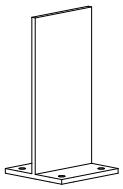
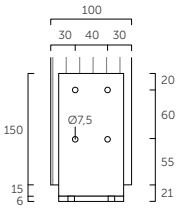
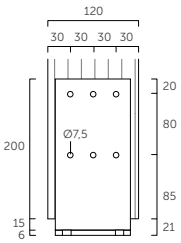
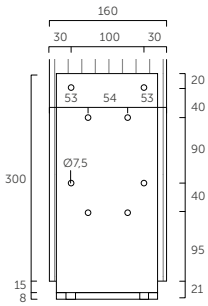
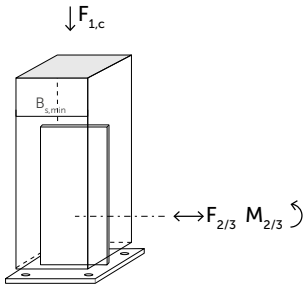
			

VALORI STATICI CARATTERISTICI
STATIC CHARACTERISTIC VALUES



				COMPRESSIONE *COMPRESSION*			TAGLIO *SHEAR*		MOMENTO *MOMENT*		
CODICE *CODE*	fissaggio legno *timber fastening* tipo *type*	pz/*pcs* - Ø x L [mm]	pilastro *post* $B_{s,min}$ [mm]	$R_{1,c\,k\,timber}$ [kN]	$R_{1,c\,k\,steel}$ [kN]	γ_{steel}	$R_{2/3,t\,k\,steel}$ [kN]	γ_{steel}	$M_{2/3,k\,timber}$ [kNm]	$M_{2/3,k\,steel}$ [kNm]	γ_{steel}
F7080	spinotti autoforanti **SBD** *self-drilling dowel **SBD***	4 - Ø7,5 x 75	100 x 100	**29,6**	32,7	γ_{M1}	**3,4**	γ_{M0}	**0,36**	**0,46**	γ_{M0}
F70100		6 - Ø7,5 x 95	120 x 120	**52,6**	67,8		**3,8**		**1,98**	**0,55**	
F70140		8 - Ø7,5 x 115	160 x 160	**87,7**	103,0		**6,5**		**4,22**	**1,28**	

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono secondo normativa EN 1995-1-1 in accordo a ETA-10/0422.
  Characteristic values comply with the EN 1995-1-1 standard in accordance with ETA-10/0422.
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = min \begin{cases} \frac{R_{i,k\,timber} \cdot k_{mod}}{\gamma_{timber}} \\ \frac{R_{i,k\,steel}}{\gamma_{steel}} \end{cases}$$

  I coefficienti k_{mod} e γ sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  Coefficients k_{mod} and γ must be taken according to the current Standard adopted for the design.
  La verifica del fissaggio lato calcestruzzo deve essere svolta a parte.
  The verification of the fastener-to-concrete connection must be carried out separately.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 350 kg/m³.
  The calculation process used a timber characteristic density of ρ_k = 350 kg/m³.
- Il dimensionamento e la verifica degli elementi in legno ed in calcestruzzo devono essere svolti a parte.
  Wood and concrete elements must be sized and checked separately.
- I valori di resistenza riportati sono calcolati singolarmente; nel caso di interazione di più sollecitazioni contemporaneamente, la verifica deve essere svolta a parte.
  The provided strength values are evaluated singularly; in case of combined loading the verification must be carried out separately.
- Possibile fissaggio alternativo tramite spinotti lisci o bulloni M12. Per valori statici e configurazioni di posa fare riferimento al documento ETA-10/0422.
  Possible alternative fastening using smooth dowels or M12 bolts. For static values and installation configurations, please refer to the document ETA-10/0422.

TYP R

VIDEO

S235 HOT DIP | ANTI CORR. | CE ETA 10/0422

PORTAPILASTRO REGOLABILE
ADJUSTABLE PILLAR-HOLDER

TYP R10

Fissaggi inclusi
Fastening systems included

Durabilità grazie al rialzo
Durability thanks to the elevation

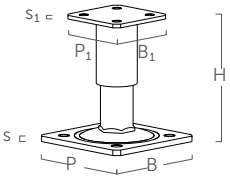
Regolabile dopo l'installazione
Adjustable after installation

TYP R20

Rivestimento speciale anticorrosione
Special anti-rust coating

TYP R30

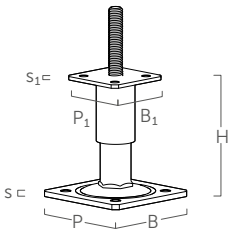
TYP R10



CODICE *CODE*		B_1 x P_1 x s_1 [mm]	n_{H1} x Ø [mm]	B x P x s [mm]	n_H x Ø [mm]	H [mm]	vite* *screw**	
R1080	FE500450	80 x 80 x6	4 x Ø9	120 x 120 x 6	4 x Ø11,5	140-165	Ø6 x 90	4
R10100	FE500455	100 x 100 x 6	4 x Ø11	160 x 160 x 6	4 x Ø11,5	170-205	Ø8 x 100	4
R10140	FE500460	140 x 140 x 8	4 x Ø11	200 x 200 x 8	4 x Ø11,5	200-250	Ø8 x 100	4

* Viti e bit inclusi.
Screws and bits included.

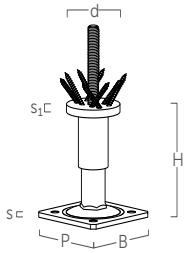
TYP R20



CODICE *CODE*		B_1 x P_1 x s_1 [mm]	n_{H1} x Ø [mm]	B x P x s [mm]	n_H x Ø [mm]	H [mm]	Ø x L [mm]	vite* *screw**	
R2080	FE500485	80 x 80 x 6	4 x Ø9	120 x 120 x 6	4 x Ø11,5	140-165	16 x 80	Ø6 x 90	4
R20100	FE500490	100 x 100 x 6	4 x Ø11	160 x 160 x 6	4 x Ø11,5	170-205	20 x 120	Ø8 x 100	4
R20140	FE500495	140 x 140 x 8	4 x Ø11	200 x 200 x 8	4 x Ø11,5	200-250	24 x 150	Ø8 x 100	4

* Viti e bit inclusi.
Screws and bits included.

TYP R30



CODICE *CODE*		d x s_1 [mm]	B x P x s [mm]	n_H x Ø [mm]	H [mm]	Ø [mm]	vite* *screw**	
R3080	FE501700	Ø80 x 10	120 x 120 x 6	4 x Ø11,5	145-170	16	Ø6 x 60	4
R30120	FE501705	Ø120 x 10	160 x 160 x 6	4 x Ø11,5	175-210	20	Ø6 x 90	4

* Viti e bit inclusi.
Screws and bits included.

H altezza
height

Ø x L diametro e lunghezza della barra
bar diameter and length

B x P x s dimensione piastra base
base plate dimensions

n_H x Ø numero e diametro fori sulla piastra base
number and diameter of holes in the base plate

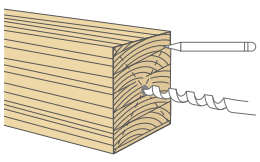
B_1 x P_1 x s_1 dimensione piastra superiore
top plate dimensions

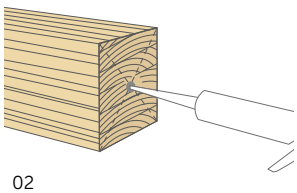
d x s_1 diametro e spessore del disco
disc diameter and thickness

n_{H1} x Ø numero e diametro fori sulla piastra superiore
number and diameter of holes in the top plate

Ø diametro barra
bar diameter

INSTALLAZIONE
INSTALLATION


01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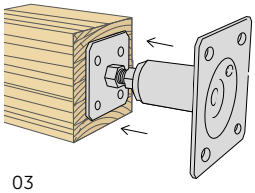
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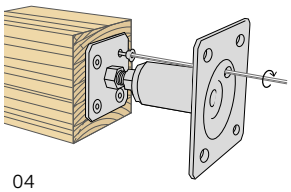
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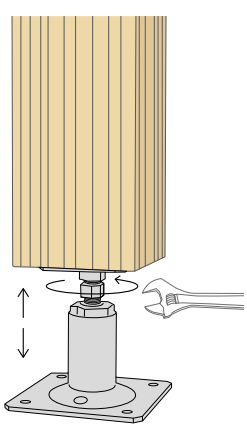
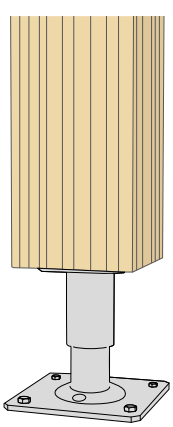
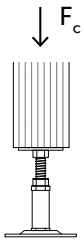

05

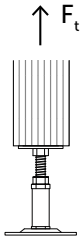

06

VALORI STATICI CARATTERISTICI
STATIC CHARACTERISTIC VALUES

RESISTENZA A COMPRESSIONE
STRENGTH COMPRESSION

sollecitazione *stress*	TYP R		fissaggio *fastening*	pilastro *post* $B_{s,min}$ [mm]	$R_{1,c\ k\ timber}$ [kN]	$R_{1,c\ k\ steel}$ [kN]	γ_{steel}
	R10	**R1080**		80	**71,20**	**48,30**	γ_{M1}
		R10100		100	**111,80**	**75,40**	
		R10140		140	**222,80**	**108,60**	
	R20	**R2080**		80	**55,80**	**48,30**	
		R20100		100	**90,40**	**75,40**	
		R20140		140	**189,00**	**108,60**	
	R30	**R3080**		120	**-**	**48,30**	
		R30120		160	**-**	**75,40**	

RESISTENZA A TRAZIONE
TENSILE STRENGTH

sollecitazione *stress*	TYP R		fissaggio *fastening*	pilastro *post* $B_{s,min}$ [mm]	$R_{1,t\ k\ timber}$ [kN]	$R_{1,t\ k\ steel}$ [kN]	γ_{steel}
	R10	**R1080**		80	**-**	**-**	-
		R10100		100	**-**	**-**	-
		R10140		140	**-**	**-**	-
	R20	**R2080**		80	**16,08** [(1)]	**-**	-
		R20100		100	**30,16** [(1)]	**-**	-
		R20140		140	**45,24** [(1)]	**-**	-
	R30	**R3080**		120	**18,70**	**24,30**	γ_{M0}
		R30120		160	**62,40**	**36,40**	

NOTE
NOTES

(1) I valori ad estrazione sono stati calcolati considerando solo la resistenza offerta dalla barra filettata fissata con resina epossidica (si consiglia l'utilizzo di adesivo XEPOXD400).
I valori ad estrazione caratteristici sono stati calcolati secondo DIN 1052:2004.
I valori ad estrazione ammissibili sono stati calcolati considerando la resistenza ammissibile a taglio del legno sulla superficie del foro.
The pull out strength has been obtained by considering only the strength of the glued-in threaded rod (it is recommended to use the adhesive XEPOXD400).
The characteristic withdrawal values were calculated according to DIN 1052:2004.
The admissable pull out strength values have been calculated by considering the admissable shear strength value of timber on the surface of the hole.

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono secondo normativa EN 1995-1-1 in accordo a ETA-10/0422.
- *The characteristic values comply with standard EN 1995-1-1 in accordance with ETA-10/0422.*
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = min \begin{cases} \frac{R_{i,k\ timber} \cdot k_{mod}}{\gamma_M} \\ \frac{R_{i,k\ steel}}{\gamma_{steel}} \end{cases}$$

  I coefficienti k_{mod} e γ sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  Coefficients k_{mod} and γ must be taken according to the current Standard adopted for the design.
  La verifica del fissaggio lato calcestruzzo deve essere svolta a parte.
  The verification of the fastener-to-concrete connection must be carried out separately.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 350 kg/m^3.
  The calculation process used a timber characteristic density of ρ_k = 350 kg/m^3.
- Il dimensionamento e la verifica degli elementi in legno ed in calcestruzzo devono essere svolti a parte.
  Wood and concrete elements must be sized and checked separately.

R40 L

S235 HOT DIP | ANTI CORR. | A2 AISI 304 | CE ETA 10/0422

PORTAPILASTRO REGOLABILE A BASE RETTANGOLARE
ADJUSTABLE PILLAR-HOLDER WITH RECTANGULAR BASE

		PIASTRA SUPERIORE *TOP PLATE*		PIASTRA INFERIORE *BOTTOM PLATE*			
CODICE *CODE*		$B_1 \times P_1 \times s_1$ [mm]	$n_{H1} \times Ø$ [mm]	B x P x s [mm]	$n_H \times Ø$ [mm]	Ø x L [mm]	
R40L150	FE500280	100 x 100 x 6	4 x Ø11	160 x 100 x 6	4 x Ø11,5	20 x 150	1
R40L250	FE500285	100 x 100 x 6	4 x Ø11	160 x 100 x 6	4 x Ø11,5	24 x 250	1
RI40L150*	AI500280*	100 x 100 x 6	4 x Ø11	160 x 100 x 6	4 x Ø11,5	20 x 150	1
RI40L250*	AI500285*	100 x 100 x 6	4 x Ø11	160 x 100 x 6	4 x Ø11,5	24 x 250	1

* Versione in acciaio A2 | AISI304.
Stainless steel A2 | AISI304 version.

R40 S

S235 HOT DIP | ANTI CORR. | CE ETA 10/0422

PORTAPILASTRO REGOLABILE A BASE QUADRATA
ADJUSTABLE PILLAR-HOLDER WITH SQUARE BASE

		PIASTRA SUPERIORE *TOP PLATE*		PIASTRA INFERIORE *BOTTOM PLATE*			
CODICE *CODE*		$B_1 \times P_1 \times s_1$ [mm]	$n_{H1} \times Ø$ [mm]	B x P x s [mm]	$n_H \times Ø$ [mm]	Ø x L [mm]	
R40S70	FE500265	70 x 70 x 6	2 x Ø6	100 x 100 x 6	4 x Ø11,5	16 x 99	1
R40S80	FE500270	80 x 80 x 6	4 x Ø11	100 x 100 x 6	4 x Ø11,5	20 x 99	1

R70

S235 HOT DIP | ANTI CORR. | CE ETA 10/0422

PORTAPILASTRO REGOLABILE PER CALCESTRUZZO
ADJUSTABLE PILLAR-HOLDER FOR CONCRETE

CODICE *CODE*		B x P x s [mm]	$n_H \times Ø$ [mm]	Ø x L [mm]	
R70100	FE500440	100 x 100 x 8	4 x Ø11	20 x 350	1
R70140	FE500445	140 x 140 x 8	4 x Ø11	24 x 450	1

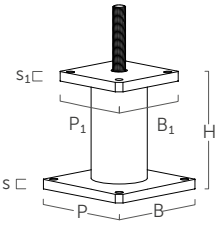
TYP S50

S235 HOT DIP CE ETA 10/0422

PORTAPILASTRO AD ALTE RESISTENZE
HIGHLY-RESISTANT POST BASE

Resistenza caratteristica a compressione superiore a 300 kN
Characteristic compression strength of more than 300 kN

CODICI E DIMENSIONI
CODES AND DIMENSIONS

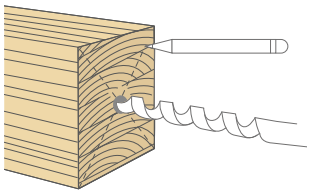


CODICE *CODE*		B x P x s [mm]	n_H x Ø [mm]	B_1 x P_1 x s_1 [mm]	n_{H1} x Ø [mm]	H [mm]	Ø x L [mm]	
S50120120	TYPS501212	160 x 160 x 12	4 x Ø11	120 x 120 x 12	4 x Ø13	120	M20 x 120	1
S50120180	TYPS501218	160 x 160 x 12	4 x Ø11	120 x 120 x 12	4 x Ø13	180	M20 x 120	1
S50160180	TYPS501618	200 x 200 x 16	4 x Ø11	160 x 160 x 16	4 x Ø13	180	M24 x 150	1
S50160240	TYPS501624	200 x 200 x 16	4 x Ø11	160 x 160 x 16	4 x Ø13	240	M24 x 150	1

Viti consigliate per il fissaggio: 4 x Ø8x80.
Screws recommended for fastening: 4 x Ø8x80.

H altezza *height*
Ø x L diametro e lunghezza della barra *bar diameter and length*
B x P x s dimensione piastra base *base plate dimensions*
n_H x Ø numero e diametro fori sulla piastra base *number and diameter of holes in the base plate*
B_1 x P_1 x s_1 dimensione piastra superiore *top plate dimensions*
n_{H1} x Ø numero e diametro fori sulla piastra superiore *number and diameter of holes in the top plate*

INSTALLAZIONE
INSTALLATION



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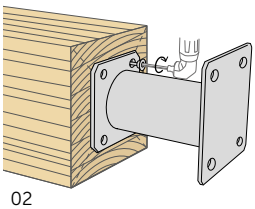
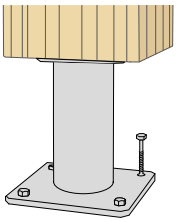
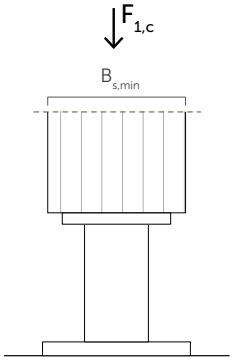


02



03

VALORI STATICI
STATIC VALUES



RESISTENZA A COMPRESSIONE
STRENGTH COMPRESSION

CODICE *CODE*	$B_{s,min}$ [mm]	$R_{1,c\ k\ timber}$ [kN]	γ_{timber}	$R_{1,c\ k\ steel}$ [kN]	γ_{steel}	[kN]	γ_{steel}
S50120120	120 x 120	**193,0**	γ_{MT} (1)	**127,0**	γ_{M0}	**277,0**	γ_{M1}
S50120180		**193,0**		**127,0**		**277,0**	
S50160180	160 x 160	**324,0**		**247,0**		**351,0**	
S50160240		**324,0**		**247,0**		**351,0**	

NOTE
NOTES

(1) Coefficiente parziale del materiale legno.
Partial coefficient of the timber.

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono in accordo a ETA-10/0422.
  Characteristic values according to ETA-10/0422.
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

$$R_d = min \begin{cases} \frac{R_{i,k\ timber} \cdot k_{mod}}{\gamma_{timber}} \\ \frac{R_{i,k\ steel}}{\gamma_{steel}} \end{cases}$$

  I coefficienti k_{mod} e γ sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  Coefficients k_{mod} and γ must be taken according to the current Standard adopted for the design.
  La verifica del fissaggio lato calcestruzzo deve essere svolta a parte.
  The verification of the fastener-to-concrete connection must be carried out separately.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 350 kg/m³.
  The calculation process used a timber characteristic density of ρ_k = 350 kg/m³.
- Il dimensionamento e la verifica degli elementi in legno ed in calcestruzzo devono essere svolti a parte.
  Wood and concrete elements must be sized and checked separately.

TYP X

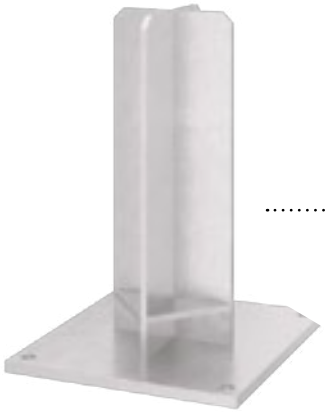
VIDEO

S235 HOT DIP

CE ETA 10/0422

PORTAPILASTRO A CROCE
CROSS-SHAPED PILLAR-HOLDER

Fissaggio con spinotti o bulloni
Fastening with pins or bolts



TYP XS10

Resistente a momento
Moment resistant

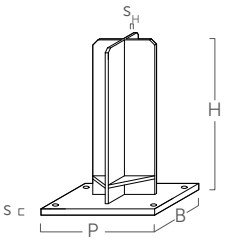
TYP XR10

Fissaggio con resina per legno
Fastening with resin for wood

TYP XS10

FISSAGGIO CON SPINOTTI O BULLONI
FASTENING WITH PINS OR BOLTS

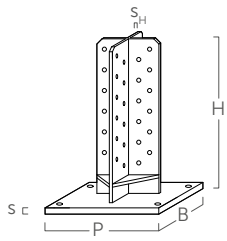
CE
ETA 10/0422



CODICE *CODE*		B x P x s [mm]	n_H x Ø [mm]	H [mm]	s_H [mm]	lame *blades*	
XS10120	TYPXS101212	220 x 220 x 10	4 x Ø13	300	6	lisce *smooth*	1
XS10160	TYPXS101616	260 x 260 x 12	4 x Ø17	300	8	lisce *smooth*	1

TYP XR10

FISSAGGIO CON RESINA PER LEGNO
FASTENING WITH RESIN FOR WOOD

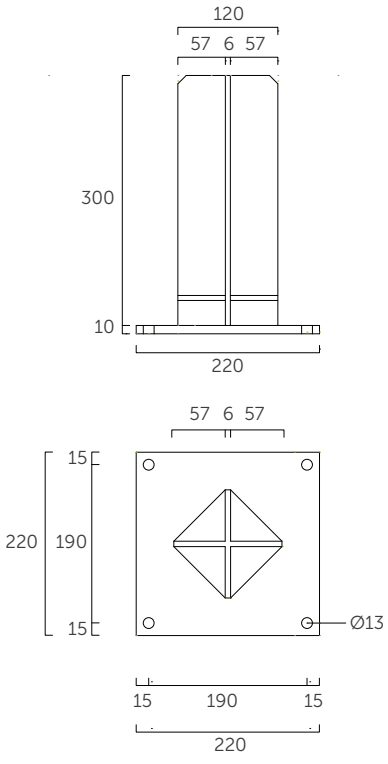


CODICE *CODE*		B x P x s [mm]	n_H x Ø [mm]	H [mm]	s_H [mm]	lame *blades*	
XR10120*	TYPXR101212	220 x 220 x 10	4 x Ø13	300	6	fori Ø8 *holes Ø8*	1

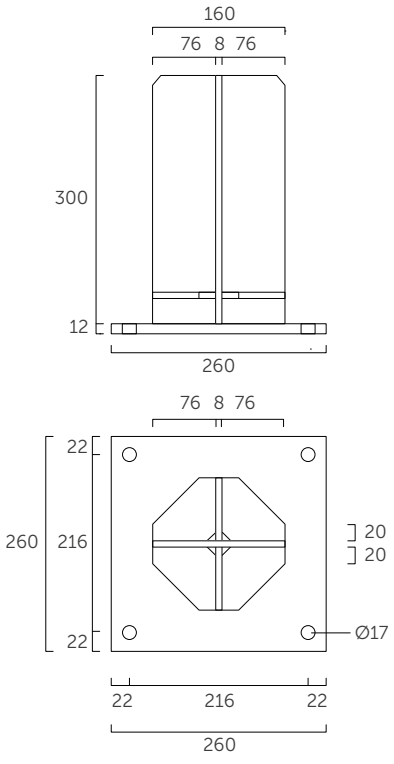
* non in possesso di marcatura CE.
not holding CE marking.

GEOMETRIA
GEOMETRY

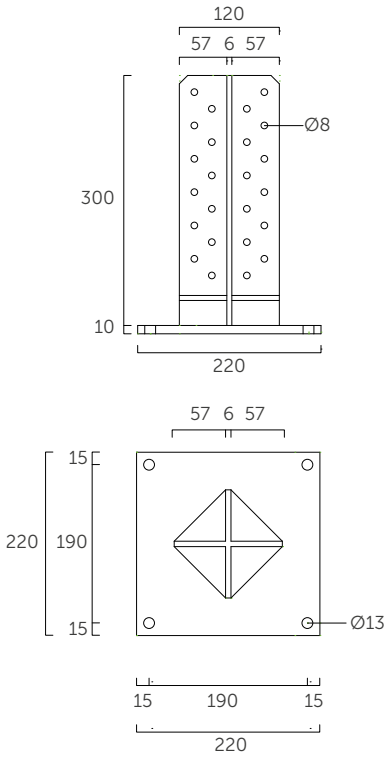
XS10120



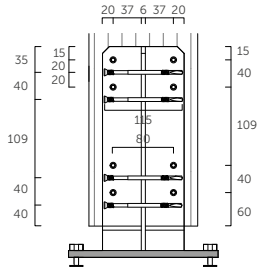
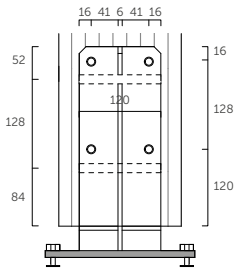
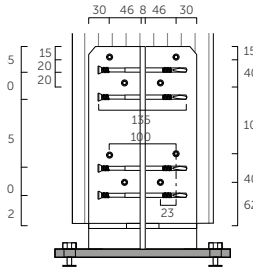
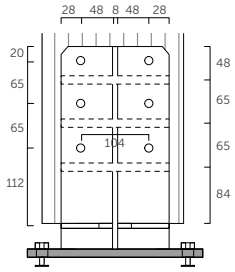
XS10160



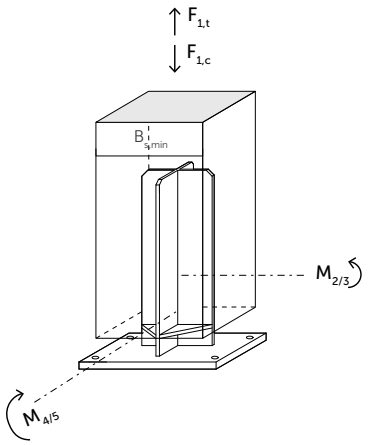
XR10120



CONFIGURAZIONI DI CALCOLO TYP XS10
TYP XS10 CONFIGURATIONS SCHEMES

XS10120		XS10160	
C1	**C2**	**C1**	**C2**
spinotti autoforanti SBD *self-drilling dowel SBD*	spinotti lisci STA *smooth dowel STA*	spinotti autoforanti SBD *self-drilling dowel SBD*	spinotti lisci STA *smooth dowel STA*
			

VALORI STATICI CARATTERISTICI
STATIC CHARACTERISTIC VALUES

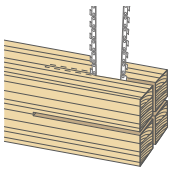


					COMPRESSIONE *COMPRESSION*	TRAZIONE *TENSION*		MOMENTO [1] $M_{2/3} = M_{4/5}$ *MOMENT* [1] $M_{2/3} = M_{4/5}$	
CODICE *CODE*	**conf.** *pckg*	**fissaggio legno** *timber fastening* **tipo** *type*	pz/*pcs* - **Ø x L** [mm]	**pilastro** *post* $B_{s,min}$ [mm]	$R_{1,c\ k\ timber}$ [kN]	$R_{1,t\ k\ steel}$ [kN]	γ_{steel}	$M_{k\ steel}$ [kNm]	γ_{steel}
XS10120	**C1**	spinotti autoforanti **SBD** *self-drilling dowel **SBD***	16 - Ø7,5 x 115	140 x 140	**133,0**	**32,6**	γ_{M0}	**0,9**	γ_{M0}
	C2	spinotti lisci **STA** *smooth dowel **STA***	8 - Ø12 x 120	160 x 160	**125,0**	**32,6**		**0,9**	
XS10160	**C1**	spinotti autoforanti **SBD** *self-drilling dowel **SBD***	16 - Ø7,5 x 135	160 x 160	**197,0**	**59,0**	γ_{M0}	**1,8**	γ_{M0}
	C2	spinotti lisci **STA** *smooth dowel **STA***	12 - Ø12 x 160	200 x 200	**182,0**	**59,0**		**1,8**	

			COMPRESSIONE *COMPRESSION*	TRAZIONE *TENSION*		MOMENTO [1] $M_{2/3} = M_{4/5}$ *MOMENT* [1] $M_{2/3} = M_{4/5}$	
CODICE *CODE*	**fissaggio** *fastening* **tipo** *type*	**pilastro** *post* $B_{s,min}$ [mm]	$R_{1,c\ k\ timber}$ [kN]	$R_{1,t\ k\ steel}$ [kN]	γ_{steel}	$M_{k\ steel}$ [kNm]	γ_{steel}
XR10120	adesivo **XEPOX** [2] ***XEPOX** adhesive* [2]	160 x 160	**105,0**	**32,6**	γ_{M0}	**0,9**	γ_{M0}

INSTALLAZIONE
INSTALLATION

TYP XS10 INSTALLAZIONE
TYP XS10 INSTALLATION



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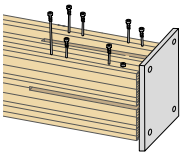

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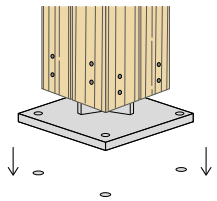
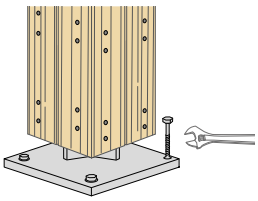
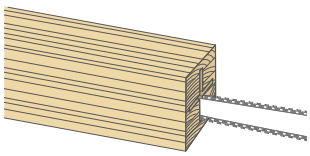


03



04

TYP XR10 INSTALLAZIONE
TYP XR10 INSTALLATION



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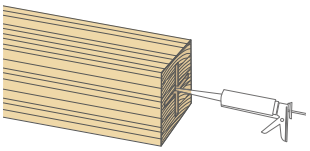

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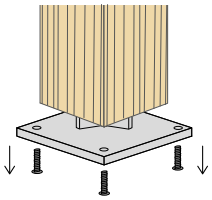
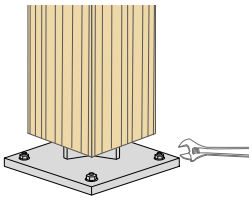


03



04

NOTE
NOTES

(1) Prevedere rinforzo ortogonale alla fibra installando 4 viti VGZ Ø7 x $B_{s,min}$ (2 viti per direzione) al di sopra delle flage verticali.
Provide for perpendicular reinforcement at the fibre installing 4 screws VGZ Ø7 x $B_{s,min}$ (2 screws per direction) above the vertical flanges.

(2) Si consiglia l'impiego di XEPOX F o XEPOX D.
We recommend using XEPOX F or XEPOX D.

PRINCIPI GENERALI
GENERAL PRINCIPLES

- I valori caratteristici sono secondo normativa EN 1995-1-1 in accordo a ETA-10/0422 (TYP XS10).
  The characteristic values comply with standard EN 1995-1-1 in accordance with ETA-10/0422 (TYP XS10).
- I valori di progetto si ricavano dai valori caratteristici come segue:
  Design values can be obtained from characteristic values as follows:

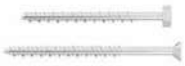
$$R_d = min \begin{cases} \dfrac{R_{i,k\ timber} \cdot k_{mod}}{\gamma_{timber}} \\ \dfrac{R_{i,k\ steel}}{\gamma_{steel}} \end{cases}$$

  I coefficienti k_{mod} e γ sono da assumersi in funzione della normativa vigente utilizzata per il calcolo.
  Coefficients k_{mod} and γ must be taken according to the current Standard adopted for the design.
  La verifica del fissaggio lato calcestruzzo deve essere svolta a parte.
  The verification of the fastener-to-concrete connection must be carried out separately.
- In fase di calcolo si è considerata una massa volumica degli elementi lignei pari a ρ_k = 350 kg/m³.
  The calculation process used a timber characteristic density of ρ_k = 350 kg/m³.
- Il dimensionamento e la verifica degli elementi in legno ed in calcestruzzo devono essere svolti a parte.
  Wood and concrete elements must be sized and checked separately.
- I valori di resistenza riportati sono calcolati singolarmente; nel caso di interazione di più sollecitazioni contemporaneamente, la verifica deve essere svolta a parte.
  The provided strength values are evaluated singularly; in case of combined loading the verification must be carried out separately.

ANCORANTI PER CALCESTRUZZO
ANCHORS FOR CONCRETE

220 VIN-FIX PRO

220 EPO-FIX PLUS



221 SKR | SKS

224 ABS

224 AB1

224 AB1-A4

224 AB7

225 ABU

225 AHZ

225 AHS

225

MBS

226

NDC

226

NDS

226

NDB

227

NDK

227

NDL

227

INA

227

IHP-IHM

VIN-FIX PRO CE

ANCORANTE CHIMICO VINILESTERE CE1
CATEGORIA SISMICA C1 (M12-M24)
VINYL ESTER CHEMICAL ANCHOR CE1
SEISMIC CATEGORY C1 (M12-M24)

CODICE *CODE*	contenuto *content* [ml]	
VIN410	410	12
VIN300	300	12

F120 SEISMIC C1 A+ LEED According to LEED IEQ 4.1

EPO-FIX PLUS CE

ANCORANTE CHIMICO EPOSSIDICO CE1
CATEGORIA SISMICA C2 (M12-M16-M20)
EPOXY CHEMICAL ANCHOR CE1
SEISMIC CATEGORY C2 (M12-M16-M20)

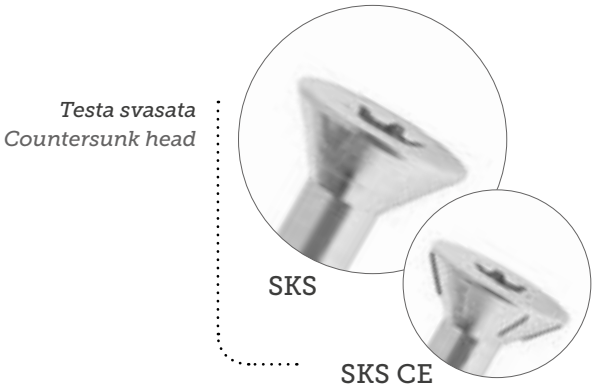
CODICE *CODE*	contenuto *content* [ml]	
EPO385	385	12

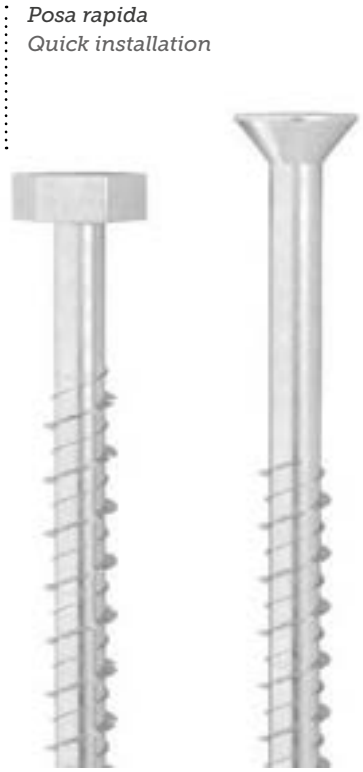
F120 SEISMIC C2 A+

SKR | SKS

CE ETA

ANCORANTI AVVITABILI
SCREW ANCHORS





CODICI E DIMENSIONI
CODES AND DIMENSIONS

SKR TESTA ESAGONALE
SKR HEXAGONAL HEAD

d_1 [mm]	CODICE *CODE*	L [mm]	t_{fix} [mm]	$h_{1,min}$ [mm]	h_{nom} [mm]	d_0 [mm]	$d_{f\ timber}$ [mm]	$d_{f\ steel}$ [mm]	SW [mm]	T_{inst} [Nm]	
7,5	**SKR7560**	60	10	60	50	6	8	8-10	13	15	50
	SKR7580	80	30	60	50	6	8	8-10	13	15	50
	SKR75100	100	20	90	80	6	8	8-10	13	15	50
10	**SKR1080**	80	30	65	50	8	10	10-12	16	25	50
	SKR10100	100	20	95	80	8	10	10-12	16	25	25
	SKR10120	120	40	95	80	8	10	10-12	16	25	25
	SKR10140	140	60	95	80	8	10	10-12	16	25	25
	SKR10160	160	80	95	80	8	10	10-12	16	25	25
12	**SKR12100**	100	20	100	80	10	12	12-14	18	50	25
	SKR12120	120	40	100	80	10	12	12-14	18	50	25
	SKR12140	140	60	100	80	10	12	12-14	18	50	25
	SKR12160	160	80	100	80	10	12	12-14	18	50	25
	SKR12200	200	120	100	80	10	12	12-14	18	50	25
	SKR12240	240	160	100	80	10	12	12-14	18	50	25
	SKR12280	280	200	100	80	10	12	12-14	18	50	25
	SKR12320	320	240	100	80	10	12	12-14	18	50	25
	SKR12400	400	320	100	80	10	12	12-14	18	50	25

SKS TESTA SVASATA
SKS COUNTERSUNK HEAD

d_1 [mm]	CODICE *CODE*	L [mm]	t_{fix} [mm]	$h_{1,min}$ [mm]	h_{nom} [mm]	d_0 [mm]	$d_{f\ timber}$ [mm]	$d_{f\ steel}$ [mm]	TX	T_{inst} [Nm]	
7,5	**SKS7560**	60	10	60	50	6	8	-	40	-	50
	SKS7580	80	30	60	50	6	8	-	40	-	50
	SKS75100	100	20	90	80	6	8	-	40	-	50
	SKS75120	120	40	90	80	6	8	-	40	-	50
	SKS75140	140	60	90	80	6	8	-	40	-	50
	SKS75160	160	80	90	80	6	8	-	40	-	50

SKR EVO TESTA ESAGONALE RIVESTIMENTO ANTICORROSIONE
SKR EVO HEXAGONAL HEAD ANTI-RUST COATING

C4 EVO

d_1 [mm]	CODICE *CODE*	L [mm]	t_{fix} [mm]	$h_{1,min}$ [mm]	h_{nom} [mm]	d_0 [mm]	$d_{f\ timber}$ [mm]	$d_{f\ steel}$ [mm]	SW [mm]	T_{inst} [Nm]	
7,5	**SKREVO7560**	60	10	60	50	6	8	8-10	13	15	50
10	**SKREVO1080**	80	30	65	50	8	10	10-12	16	25	50
12	**SKREVO12100**	100	20	100	80	10	12	12-14	18	50	25

SKS EVO TESTA ESAGONALE RIVESTIMENTO ANTICORROSIONE
SKS EVO HEXAGONAL HEAD ANTI-RUST COATING

C4 EVO

d_1 [mm]	CODICE *CODE*	L [mm]	t_{fix} [mm]	$h_{1,min}$ [mm]	h_{nom} [mm]	d_0 [mm]	$d_{f\ timber}$ [mm]	$d_{f\ steel}$ [mm]	TX	T_{inst} [Nm]	
7,5	**SKSEVO7580**	80	30	60	50	6	8	-	40	-	50
	SKSEVO75100	100	20	90	80	6	8	-	40	-	50
	SKSEVO75120	120	40	90	80	6	8	-	40	-	50

CODICI E DIMENSIONI
CODES AND DIMENSIONS

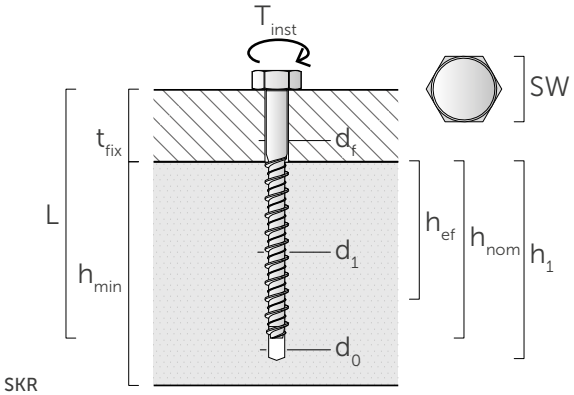
SKR CE TESTA ESAGONALE CON FALSA RONDELLA
SKR CE HEXAGONAL HEAD WITH MOCK WASHER

d_1 [mm]	CODICE *CODE*	L [mm]	t_{fix} [mm]	$h_{1,min}$ [mm]	h_{nom} [mm]	h_{ef} [mm]	d_0 [mm]	d_f [mm]	SW [mm]	T_{inst} [Nm]	
8	**SKR8100CE**	100	40	75	60	48	6	9	10	20	50
10	**SKR1080CE**	80	10	85	70	56	8	12	13	50	50
	SKR10100CE	100	30	85	70	56	8	12	13	50	25
	SKR10120CE	120	50	85	70	56	8	12	13	50	25
12	**SKR12110CE**	110	30	100	80	64	10	14	15	80	25
	SKR12150CE	150	70	100	80	64	10	14	15	80	25
	SKR12210CE	210	130	100	80	64	10	14	15	80	20
	SKR12250CE	250	170	100	80	64	10	14	15	80	15
	SKR12290CE	290	210	100	80	64	10	14	15	80	15
16	**SKR16130CE**	130	20	140	110	85	14	18	21	160	10

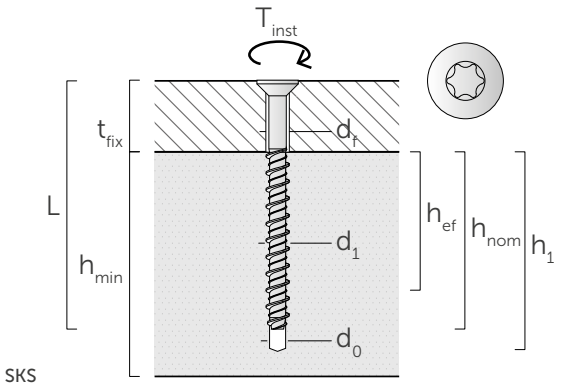
SKS CE TESTA SVASATA PIANA
SKS CE COUNTERSUNK FLAT HEAD

d_1 [mm]	CODICE *CODE*	L [mm]	t_{fix} [mm]	$h_{1,min}$ [mm]	h_{nom} [mm]	h_{ef} [mm]	d_0 [mm]	d_f [mm]	TX	T_{inst} [Nm]	
8	**SKS75100CE**	100	40	75	60	48	6	9	30	20	50
10	**SKS10100CE**	100	30	85	70	56	8	12	40	50	50

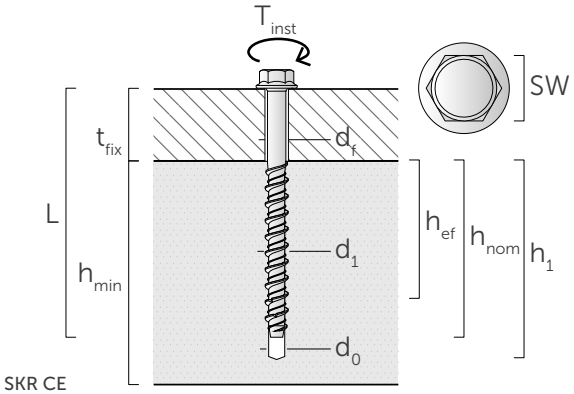
GEOMETRIA
GEOMETRY



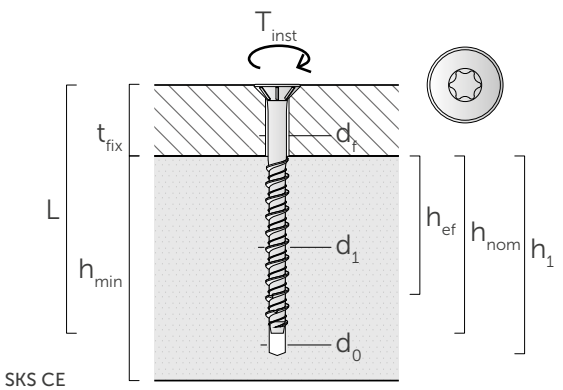
SKR



SKS



SKR CE



SKS CE

d_1 diametro esterno dell'ancorante
external diameter of anchor

t_{fix} spessore massimo fissabile
maximum attachable thickness

h_1 profondità minima foro
minimum hole depth

h_{nom} profondità di inserimento
nominal anchoring depth

h_{ef} profondità effettiva di ancoraggio
effective anchor depth

d_0 diametro foro nel supporto in calcestruzzo
hole diameter in the concrete support

d_f diametro massimo foro nell'elemento da fissare
maximum hole diameter in the element to be fastened

SW misura chiave
wrench size

T_{inst} coppia di serraggio
tightening torque

L lunghezza ancorante
anchor length

ABS

SEISMIC C2 · R120 · CE

ANCORANTE PESANTE CON FASCETTA CE1
CATEGORIA SISMICA C2
HEAVY ANCHOR WITH CE1 LOOP FASTENER
SEISMIC CATEGORY C2

CODICE *CODE*		$d=d_0$ [mm]	L [mm]	t_{fix} [mm]	SW [mm]	T_{inst} [Nm]	
ABS1070	FE210356	10	70	5	10	15	50
ABS10100	FE210361		100	35	10	15	50
ABS12100	FE210366	12	100	30	13	30	50
ABS12120	FE210371		120	50	13	30	25
ABS16120	FE210376	16	120	40	17	50	25
ABS16140	FE210381		140	60	17	50	20
ABS18120	FE210386	18	120	20	19	100	10
ABS18150	FE210391		150	50	19	100	10
ABS24140	FE210392	24	140	20	24	160	5
ABS24170	FE210393		170	50	24	160	5

AB1

SEISMIC C2 · R120 · CE

ANCORANTE PESANTE CE1
CATEGORIA SISMICA C2 (M12-M16)
CE1 HEAVY ANCHOR
SEISMIC CATEGORY C2 (M12-M16)

CODICE *CODE*	$d=d_0$ [mm]	L [mm]	t_{fix} [mm]	SW [mm]	T_{inst} [Nm]	
AB1875	8	75	9	13	15	100
AB1895		95	29	13	15	50
AB18115		115	49	13	15	50
AB110115	10	115	35	17	40	25
AB110135		135	55	17	40	25
AB112100	12	100	4	19	60	25
AB112120		120	24	19	60	25
AB112150		150	54	19	60	25
AB112180		180	84	19	60	25
AB116145	16	145	28	24	100	10

AB1-A4

SEISMIC C1 · R120 · CE · A4 AISI 316

ANCORANTE PESANTE CE1
CATEGORIA SISMICA C1
CE1 HEAVY ANCHOR
SEISMIC CATEGORY C1

CODICE *CODE*		$d=d_0$ [mm]	L [mm]	t_{fix} [mm]	SW [mm]	T_{inst} [Nm]	
AB1892A4	AI8095A4	8	92	30	13	20	50
AB18112A4	AI80112A4		112	50	13	20	50
AB11092A4	AI1095A4	10	92	10	17	35	50
AB110132A4	AI10132A4		132	50	17	35	25
AB112118A4	AI12110A4	12	118	20	19	70	20
AB112163A4	AI12163A4		163	65	19	70	20
AB116123A4	AI16123A4	16	123	5	24	120	10

AB7

CE

ANCORANTE PESANTE CE7
CE7 HEAVY ANCHOR

AB7 STANDARD RONDELLA ISO 7089
AB7 STANDARD WASHER ISO 7089

CODICE *CODE*	$d=d_0$ [mm]	L [mm]	t_{fix} [mm]	SW [mm]	T_{inst} [Nm]	
AB71075	10	75	3	17	35	50
AB712100	12	100	23	19	60	50
AB712120		120	28	19	60	20
AB716145	16	145	23	24	120	15
AB716220		220	98	24	120	10
AB720170	20	170	23	30	240	5

AB7 EXTRALUNGO RONDELLA MAGGIORATA ISO 7093
AB7 EXTRALONG LARGE SIZE WASHER ISO 7093

CODICE *CODE*	$d=d_0$ [mm]	L [mm]	t_{fix} [mm]	SW [mm]	T_{inst} [Nm]	
AB716300	16	300	185	24	100	5
AB716400		400	245	24	100	5

ABU

ANCORANTE PESANTE
HEAVY ANCHOR

CODICE *CODE*		d=d_0 [mm]	L [mm]	t_{fix} [mm]	SW [mm]	T_{inst} [Nm]	
ABU895	FE210505	8	95	40	13	20	50
ABU8115	FE210510		115	60	13	20	50
ABU1090	FE210515	10	90	30	17	30	50
ABU10100	FE210520		100	40	17	30	50
ABU10120	FE210525		120	60	17	30	25
ABU1295	FE210530	12	95	5	19	80	25
ABU12110	FE210535		110	30	19	80	25
ABU12160	FE210540		160	80	19	80	25
ABU14130	FE210541	14	130	30	22	100	15
ABU16125	FE210545	16	125	20	24	140	15
ABU16145	FE210550		145	40	24	140	15

AHZ

ANCORANTE MEDIO PESANTE
MEDIUM HEAVY ANCHOR

CODICE *CODE*		d=d_0 [mm]	L [mm]	t_{fix} [mm]	SW [mm]	T_{inst} [Nm]	
AHZ870	FE210170	8	70	30	10	15	100
AHZ1080	FE210180	10	80	30	13	20	50
AHZ10100	FE210175		100	50	13	20	50
AHZ10120	FE210178		120	70	13	20	50
AHZ12100	FE210150	12	100	40	17	35	25

AHS

ANCORANTE PER FISSAGGIO NON PASSANTE
ANCHOR FOR NON-PASS-THROUGH FASTENING

CODICE *CODE*		d=d_0 [mm]	L [mm]	d_{VITE} d_{SCREW} [mm]	t_{fix} [mm]	SW [mm]	T_{inst} [Nm]	
AHS1242	FE210185	12	42	M6	5	10	13	50
AHS1450	FE210190	14	50	M8	8	13	25	50
AHS1660	FE210195	16	60	M10	20	17	50	25

MBS

VITE AUTOFILETTANTE PER MURATURA
SELF-TAPPING SCREW FOR MASONRY

CODICE *CODE*	d [mm]	L [mm]	d_0 [mm]	d_f [mm]	
MBS7572	7,5 TX30	72	6	6,2	100
MBS7592		92	6	6,2	100
MBS75112		112	6	6,2	100
MBS75132		132	6	6,2	100
MBS75152		152	6	6,2	100
MBS75182		182	6	6,2	100

d_0 diametro foro nel supporto
hole diameter in the support
d_f diametro foro nell'elemento da fissare
hole diameter in the element to be fastened

NDC

R90
d10

TASSELLO NYLON CE CON VITE
CE NYLON PLUG WITH SCREW

CODICE *CODE*		d_0 [mm]	L_t [mm]	d_V x L_V [mm]	t_{fix} [mm]	$h_{1,min}$ [mm]	h_{ef} [mm]	d_f [mm]	inserto *bit*	
NDC880	FE210600	8	80	5,5 x 85	10	80	70	8,5	TX30	50
NDC8100	FE210570		100	5,5 x 105	30	80	70	8,5	TX30	50
NDC8120	FE210575		120	5,5 x 125	50	80	70	8,5	TX30	50
NDC8140	FE210580		140	5,5 x 145	70	80	70	8,5	TX30	50
NDC10100	FE210705	10	100	7 x 105	30	80	70	10,5	TX40	50
NDC10120	FE210710		120	7 x 125	50	80	70	10,5	TX40	50
NDC10140	FE210715		140	7 x 145	70	80	70	10,5	TX40	25
NDC10160	FE210720		160	7 x 165	90	80	70	10,5	TX40	25
NDC10200	FE210725		200	7 x 205	130	80	70	10,5	TX40	25
NDC10240	FE240010		240	7 x 245	170	80	70	10,5	TX40	20

NDS

TASSELLO NYLON CON VITE
NYLON PLUG WITH SCREW

CODICE *CODE*		d_0 [mm]	L_t [mm]	d_V x L_V [mm]	t_{fix} [mm]	inserto *bit*	
NDS10100	FE210605	10	100	7 x 105	25	TX40	25
NDS10120	FE210585		120	7 x 125	45	TX40	25
NDS10140	FE210590		140	7 x 145	65	TX40	25
NDS10160	FE210595		160	7 x 165	85	TX40	25
NDS10200	FE210610		200	7 x 205	125	TX40	25

NDB

TASSELLO NYLON A BATTERE CON VITE
NYLON HAMMER PLUG WITH SCREW

CODICE *CODE*		d_0 [mm]	L_t [mm]	d_V x L_V [mm]	t_{fix} [mm]	inserto *bit*	
NDB640	FE210300	6	40	3,8 x 45	10	PCS 2	200
NDB655	FE210305		55	3,8 x 60	25	PCS 2	100
NDB667	FE210310		67	3,8 x 72	37	PCS 2	100
NDB860	FE210315	8	60	4,8 x 65	25	PCS 3	100
NDB875	FE210320		75	4,8 x 80	40	PCS 3	100
NDB8100	FE210325		100	4,8 x 105	65	PCS 3	50
NDB8120	FE210330		120	4,8 x 125	85	PCS 3	50
NDB8135	FE210335		135	4,8 x 140	100	PCS 3	50

NDK

TASSELLO UNIVERSALE IN NYLON
UNIVERSAL NYLON PLUG

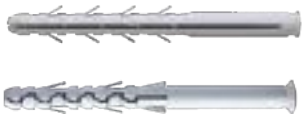
① CON COLLARE
WITH COLLAR

② 4 SETTORI
4 SECTORS

CODICE *CODE*			d_0 [mm]	L_t [mm]	d_{VITE} d_{SCREW} [mm]	
NDKU635	①	FE210200	6	35	4 - 5	100
NDKU850	①	FE210210	8	50	4,5 - 6	100
NDKU1060	①	FE210215	10	60	6 - 8	50
NDKG840	②	FE210219	8	40	4,5 - 6	100
NDKG1260	②	FE210220	12	60	8 - 10	50
NDKG1470	②	FE210225	14	70	10 - 12	25

NDL

TASSELLO UNIVERSALE LUNGO IN NYLON
LONG UNIVERSAL NYLON PLUG

① ② 

CODICE *CODE*			d_0 [mm]	L_t [mm]	$d_{TIRAFONDO}$ $d_{COACH\ SCREW}$ [mm]	
NDL12160	①	FE210615	12	160	10	25
NDL12200	①	FE210616		200	10	25
NDL12240	①	FE210617		240	10	25
NDL14100	①	FE210618	14	100	12	50
NDL14130	①	FE210619		130	12	50
NDL14160	①	FE210620		160	12	25
NDL16140	②	FE210621	16	140	12	25
NDL16160	②	FE210622		160	12	20
NDL16200	②	FE210623		200	12	20
NDL16240	②	FE210624		240	12	20

INA

BARRA FILETTATA cl. 5.8 CON DADO E RONDELLA
THREADED BAR cl. 5.8 WITH NUT AND WASHER

CODICE *CODE*		d [mm]	L [mm]	d_0 [mm]	d_f [mm]	
INA8110	FE210100	M8	110	10	≤ 9	10
INA10110	FE210105	M10	110	12	≤ 12	10
INA10130	FE210110		130	12	≤ 13	10
INA12130	FE210115	M12	130	14	≤ 14	10
INA12180	FE210119		180	14	≤ 15	10
INA16160	FE210116	M16	160	18	≤ 18	10
INA16190	FE210118		190	18	≤ 18	10
INA16230	FE210121		230	18	≤ 18	10
INA20240	FE210117	M20	240	24	≤ 22	10
INA24270	FE210122	M24	270	28	≤ 26	10
INA27400	FE210123	M27	400	32	≤ 30	10

IHP-IHM

BUSSOLE PER MATERIALI FORATI
BUSHINGS FOR PERFORATED MATERIALS

① IHP - RETE PLASTICA
IHP - PLASTIC MESH

② IHM - RETE METALLICA
IHM - METAL NET

CODICE *CODE*			d_0 [mm]	L [mm]	barra *rod* [mm]	d_0 [mm]	
IHP1685	①	FE210120	16	85	M10 (M8)	16	10
IHP16130	①	FE210125	16	130	M10 (M8)	16	10
IHP2085	①	FE210130	20	85	M12 / M16	20	10
IHM121000	②	FE210230	12	1000	M8	12	50
IHM161000	②	FE210235	16	1000	M8 / M10	16	50
IHM221000	②	FE210240	22	1000	M12 / M16	22	25

METRICO
METRIC

230

KOS

231

KOT

231

EKS

232

MGS 1000 4.8

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MGS 1000 8.8

232

MGS 2200 4.8

232

MGS AI

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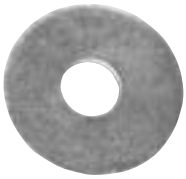
ULS 9021

233

ULS 440



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ULS 1052

233

ULS 125

235

MUT 6334

234

MUT 934

235

AI MUT 985

234

AI 934

235

AI 9021

234

MUT 1587

234

AI 1587

KOS

EN 14592

BULLONE TESTA ESAGONALE CON DADO
HEXAGONAL HEAD BOLT WITH NUT

Classe acciaio **8.8** / *Steel class **8.8***
Zincato galvanico / *Bright zinc plated*
DIN 601 (ISO 4016*)

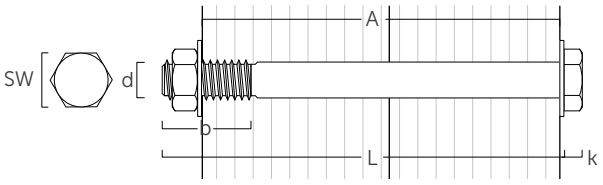
d [mm]	CODICE *CODE*	L [mm]	b [mm]	A_{max} [mm]	
M12	**KOS12100B**	100	30	75	25
	KOS12120B	120	30	95	25
	KOS12140B	140	36	115	25
	KOS12160B	160	36	135	25
	KOS12180B	180	36	155	25
	KOS12200B	200	36	175	25
	KOS12220B	220	49	195	25
	KOS12240B	240	49	215	25
	KOS12260B	260	49	235	25
	KOS12280B	280	49	255	25
	KOS12300B	300	49	275	25
	KOS12320B	320	49	295	25
	KOS12340B	340	49	315	25
	KOS12360B	360	49	335	25
	KOS12380B	380	49	355	25
	KOS12400B	400	49	375	25
M16	**KOS16120B**	120	38	85	15
	KOS16140B	140	44	105	15
	KOS16150B	150	44	115	15
	KOS16160B	160	44	125	15
	KOS16180B	180	44	145	15
	KOS16200B	200	44	165	15
	KOS16220B	220	57	185	15
	KOS16240B	240	57	205	15
	KOS16260B	260	57	225	15
	KOS16280B	280	57	245	15
	KOS16300B	300	57	265	15
	KOS16320B	320	57	285	15
	KOS16340B	340	57	305	15
	KOS16360B	360	57	325	15
	KOS16380B	380	57	345	15
	KOS16400B	400	57	365	15
	KOS16420B	420	57	385	15
	KOS16440B	440	57	405	15
	KOS16460B	460	57	425	15
	KOS16480B	480	57	445	15
	KOS16500B	500	57	465	15
	KOS16520B	520	57	485	15
	KOS16540B	540	57	505	15
	KOS16560B	560	57	525	15
	KOS16580B	580	57	545	15
	KOS16600B	600	57	565	15

d [mm]	CODICE *CODE*	L [mm]	b [mm]	A_{max} [mm]	
M20	**KOS20120B**	120	46	75	10
	KOS20140B	140	52	95	10
	KOS20160B	160	52	115	10
	KOS20180B	180	52	135	10
	KOS20200B	200	52	155	10
	KOS20220B	220	65	175	10
	KOS20240B	240	65	195	10
	KOS20260B	260	65	215	10
	KOS20280B	280	65	235	10
	KOS20300B	300	65	255	10
	KOS20320B	320	65	275	10
	KOS20340B	340	65	295	10
	KOS20360B	360	65	315	10
	KOS20380B	380	65	335	10
	KOS20400B	400	65	355	10
	KOS20420B	420	65	375	10
	KOS20440B	440	65	395	10
	KOS20460B	460	65	415	10
	KOS20480B	480	65	435	10
	KOS20500B	500	65	455	10
	KOS20520B	520	65	475	10
	KOS20540B	540	65	495	10
	KOS20560B	560	65	515	10
	KOS20580B	580	65	535	10
	KOS20600B	600	65	555	10

Lo spessore massimo fissabile A è calcolato considerando l'utilizzo di DADO MUT934 e 2 rondelle ULS DIN 440.
The maximum attachable thickness A is calculated considering the use of NUT MUT934 and 2 washers ULS DIN 440.

* La norma ISO 4016 differisce dalla norma DIN 601 per i parametri k e SW nel diametro M12
Standard ISO 4016 differs from standard DIN 601 in the M12 diameter for parameters k and SW

GEOMETRIA
GEOMETRY



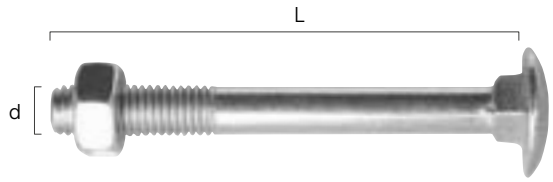
diametro nominale *nominal diameter*	d	[mm]	M12	M16	M20
misura chiave *wrench size*	SW	[mm]	19	24	30
spessore testa *head thickness*	k	[mm]	7,5	10,0	12,5

Geometria secondo la norma DIN 601 (ISO 4016).
Design according to standard DIN 601 (ISO 4016).

KOT

BULLONE TESTA TONDA CON DADO
ROUND HEAD BOLT WITH NUT

Classe acciaio **4.8** / *Steel class **4.8***
Zincato galvanico / *Bright zinc plated*
DIN 603 (ISO 8677*)



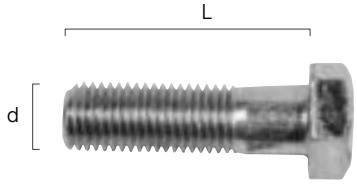
d [mm]	CODICE *CODE*	L [mm]	
M8	**KOT850**	50	200
	KOT860	60	200
	KOT870	70	200
	KOT880	80	200
	KOT890	90	100
	KOT8100	100	100
	KOT8120	120	100
	KOT8140	140	100
M10	**KOT10100**	100	100
	KOT10120	120	50
	KOT10130	130	50
	KOT10140	140	50
	KOT10150	150	50
	KOT10160	160	50
	KOT10180	180	50
	KOT10200	200	50
	KOT10220	220	50
M12	**KOT12200**	200	25
	KOT12220	220	25
	KOT12240	240	25
	KOT12260	260	25
	KOT12280	280	25
	KOT12300	300	25

* La norma ISO 8677 differisce dalla norma DIN 603 per i parametri k e SW nel diametro M10 e M12.
ISO 8677 differs from DIN 603 in diameters M10 and M12 for parameters k and SW.

EKS

BULLONE TESTA ESAGONALE
HEXAGONAL HEAD BOLT

Classe acciaio **8.8** / *Steel class **8.8***
Zincato galvanico / *Bright zinc plated*
DIN 933 (ISO 4017) - (●)
DIN 931 (ISO 4014) - (●●)



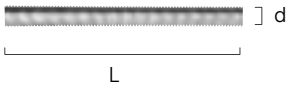
d [mm]	CODICE *CODE*	filetto *thread*	L [mm]	
M20 SW30	**EKS2040**	●	40	25
	EKS2050	●	50	25
	EKS2060	●	60	25
	EKS2070	●●	70	25
	EKS2080	●●	80	25
	EKS20100	●●	100	25
M24 SW36	**EKS2440**	●	40	25
	EKS2450	●	50	25
	EKS2460	●	60	25
	EKS2465	●	65	25
	EKS2470	●	70	25
	EKS2480	●●	80	25
	EKS2485	●●	85	25

(●) filetto totale
total thread
(●●) filetto parziale
partial thread

MGS 1000 4.8

BARRA FILETTATA
THREADED BAR

Classe acciaio **4.8** / *Steel class **4.8***
Zincato galvanico / *Bright zinc plated*
DIN 975

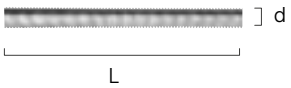


CODICE *CODE*	barra *rod*	L [mm]	
MGS10008	M8	1000	10
MGS100010	M10	1000	10
MGS100012	M12	1000	10
MGS100014	M14	1000	10
MGS100016	M16	1000	10
MGS100018	M18	1000	10
MGS100020	M20	1000	10
MGS100022	M22	1000	10
MGS100024	M24	1000	10
MGS100027	M27	1000	10
MGS100030	M30	1000	10

MGS 1000 8.8

BARRA FILETTATA
THREADED BAR

Classe acciaio **8.8** / *Steel class **8.8***
Zincato galvanico / *Bright zinc plated*
DIN 975

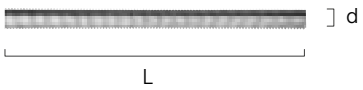


CODICE *CODE*	barra *rod*	L [mm]	
MGS10888	M8	1000	1
MGS11088	M10	1000	1
MGS11288	M12	1000	1
MGS11488	M14	1000	1
MGS11688	M16	1000	1
MGS11888	M18	1000	1
MGS12088	M20	1000	1
MGS12488	M24	1000	1
MGS12788	M27	1000	1

MGS 2200 4.8

BARRA FILETTATA
THREADED BAR

Classe acciaio **4.8** / *Steel class **4.8***
Zincato galvanico / *Bright zinc plated*
DIN 975



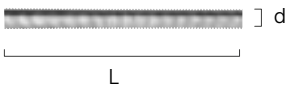
CODICE *CODE*	barra *rod*	L [mm]	
MGS220012	M12	2200	1
MGS220016	M16	2200	1
MGS220020	M20	2200	1

MGS AI

A2 AISI 304

BARRA FILETTATA
THREADED BAR

Acciaio inossidabile **A2** / *A2 stainless steel*
DIN 975



CODICE *CODE*	barra *rod*	L [mm]	
AI9758	M8	1000	5
AI97510	M10	1000	5
AI97512	M12	1000	5
AI97516	M16	1000	5
AI97520	M20	1000	5

ULS 9021

RONDELLA GRANDE
LARGE WASHER

Acciaio S235 / *S235 steel*
Zincato galvanico / *Bright zinc plated*
DIN 9021 (ISO 7093*)

CODICE *CODE*	barra *rod*	d_{INT} [mm]	d_{EXT} [mm]	s [mm]	
ULS8242	M8	8,4	24	2	200
ULS10302	M10	10,5	30	2,5	200
ULS13373	M12	13	37	3	100
ULS15443	M14	15	44	3	100
ULS17503	M16	17	50	3	100
ULS20564	M18	20	56	4	50
ULS22604	M20	22	60	4	50

* La norma ISO 7093 differisce dalla norma DIN 9021 per la durezza superficiale.
ISO 7093 differs from DIN 9021 in the surface hardness.

ULS 440

RONDELLA GRANDE RINFORZATA
REINFORCED LARGE WASHER

Acciaio S235 / *S235 steel*
Zincato galvanico / *Bright zinc plated*
DIN 440 R (ISO 7094*)

CODICE *CODE*	barra *rod*	d_{INT} [mm]	d_{EXT} [mm]	s [mm]	
ULS11343	M10	11	34	3	200
ULS13444	M12	13,5	44	4	200
ULS17565	M16	17,5	56	5	50
ULS22726	M20	22	72	6	50
ULS26856	M24	26	80	6	25

* La norma ISO 7094 differisce dalla norma DIN 440 R per la durezza superficiale.
ISO 7094 differs from DIN 440 R in the surface hardness.

ULS 1052

RONDELLA XL RINFORZATA
REINFORCED XL WASHER

Acciaio S235 / *S235 steel*
Zincato galvanico / *Bright zinc plated*
DIN 1052

CODICE *CODE*	barra *rod*	d_{INT} [mm]	d_{EXT} [mm]	s [mm]	
ULS14586	M12	14	58	6	50
ULS18686	M16	18	68	6	50
ULS22808	M20	22	80	8	25
ULS25928	M24	25	92	8	20
ULS271058	M27	28	105	8	20

ULS 125

RONDELLA
WASHER

Acciaio S235 / *S235 steel*
Zincato galvanico / *Bright zinc plated*
DIN 125 A (ISO 7089*)

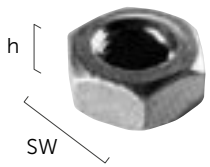
CODICE *CODE*	barra *rod*	d_{INT} [mm]	d_{EXT} [mm]	s [mm]	
ULS81616	M8	8,4	16	1,6	1000
ULS10202	M10	10,5	20	2	500
ULS13242	M12	13	24	2,5	500
ULS17303	M16	17	30	3	250
ULS21373	M20	21	37	3	250
ULS25444	M24	25	44	4	200
ULS28504	M27	28	50	4	20
ULS31564	M30	31	56	4	20

* La norma ISO 7089 differisce dalla norma DIN 125 A per la durezza superficiale.
ISO 7089 differs from DIN 125 A in the surface hardness.

MUT 934

DADO ESAGONALE
HEXAGONAL NUT

Classe acciaio **8** / *Steel class **8***
Zincato galvanico / *Bright zinc plated*
DIN 934 (ISO 4032*)



CODICE *CODE*	barra *rod*	h [mm]	SW [mm]	
MUT9348	M8	6,5	13	400
MUT93410	M10	8	17	500
MUT93412	M12	10	19	500
MUT93414	M14	11	22	200
MUT93416	M16	13	24	200
MUT93418	M18	15	27	100
MUT93420	M20	16	30	100
MUT93422	M22	18	32	50
MUT93424	M24	19	36	50
MUT93427	M27	22	41	25
MUT93430	M30	24	46	25

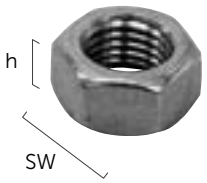
* La norma ISO 4032 differisce dalla norma DIN 934 per i parametri h e SW nei diametri M10, M12, M14 e M22.
ISO 4032 differs from DIN 934 in diameters M10 and M12 for parameters h and SW and diameters M10, M12, M14 and M22.

AI 934

A2 AISI 304

DADO ESAGONALE
HEXAGONAL NUT

Acciaio inossidabile **A2** / *A2 stainless steel*
DIN 934 (ISO 4032*)



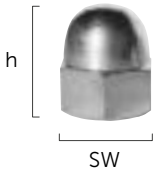
CODICE *CODE*	barra *rod*	h [mm]	SW [mm]	
AI9348	M8	6,5	13	500
AI93410	M10	8	16	200
AI93412	M12	10	18	200
AI93416	M16	13	24	100
AI93420	M20	16	30	50

* La norma ISO 4032 differisce dalla norma DIN 934 per i parametri h e SW nei diametri M10 e M12.
ISO 4032 differs from DIN 934 in diameters M10 and M12 for parameters h and SW.

MUT 1587

DADO CIECO
BLIND NUT

Classe acciaio **8** / *Steel class **8***
Zincato galvanico / *Bright zinc plated*
DIN 1587



CODICE *CODE*	barra *rod*	h [mm]	SW [mm]	
MUT15878S	M8	15	13	200
MUT158710S	M10	18	17	50
MUT158712S	M12	22	19	50
MUT158714S	M14	25	22	50
MUT158716S	M16	28	24	100
MUT158718S	M18	32	27	50
MUT158720S	M20	34	30	25
MUT158722S	M22	39	32	25
MUT158724S	M24	42	36	25

Dado tornito in un unico pezzo.
Single-piece turned nut.

AI 1587

A2 AISI 304

DADO CIECO
BLIND NUT

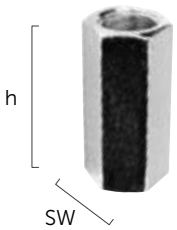
Acciaio inossidabile **A2** / *A2 stainless steel*
DIN 1587

CODICE *CODE*	barra *rod*	h [mm]	SW [mm]	
AI158710	M10	18	17	100
AI158712	M12	22	19	100
AI158716	M16	28	24	50
AI158720	M20	34	30	25

MUT 6334

DADO DA GIUNZIONE
CONNECTING NUT

Classe acciaio **8** / *Steel class **8***
Zincato galvanico / *Bright zinc plated*
DIN 6334



CODICE *CODE*	barra *rod*	h [mm]	SW [mm]	
MUT933410	M10	30	17	10
MUT933412	M12	36	19	10
MUT933416	M16	48	24	10
MUT933420	M20	60	30	10

AI MUT 985

A2 AISI 304

DADO AUTOBLOCCANTE
SELF-LOCKING NUT

Acciaio inossidabile **A2** / *A2 stainless steel*
DIN 985 (ISO 10511*)

CODICE *CODE*	barra *rod*	h [mm]	SW [mm]	
MUT9858	M8	8	13	1
MUT98510	M10	10	17	1
MUT98512	M12	12	19	1
MUT98516	M16	16	24	1

* ISO 10511 differs from DIN 985 in diameters M10 and M12 for parameters h and SW
La norma ISO 10511 differisce dalla norma DIN 985 per i parametri h e SW nei diametri M10 e M12

AI 9021

A2 AISI 304

RONDELLA
WASHER

Acciaio inossidabile **A2** / *A2 stainless steel*
DIN 9021 (ISO 7093*)

CODICE *CODE*	barra *rod*	d_{INT} [mm]	d_{EXT} [mm]	s [mm]	
AI90218	M8	8,4	24	2	500
AI902110	M10	10,5	30	2,5	500
AI902112	M12	13	37	3	200
AI902116	M16	17	50	3	100
AI902120	M20	22	60	4	50

* La norma ISO 7093 differisce dalla norma DIN 9021 per la durezza superficiale.
ISO 7093 differs from DIN 9021 in the surface hardness.

Make it easy.

HOLZ TECHNIC

ISOLAMENTO ALL'ARIA, ALL'ACQUA E AL RUMORE

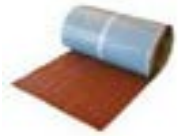
AIRTIGHTNESS, WATERPROOFING AND SOUNDPROOFING

SOTTOCOLMI E ACCESSORI
ROLL-OUT DRY RIDGE SYSTEMS AND ACCESSORIES

240 AERIUS

241 PEAK VENT

242 STANDARD ROLL



243 ALU RAPID

244 ALTUM

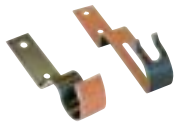
244 GUTTER

245 VALLEY ALU

245 GASKET

246 SUPPORT UNI

246 SUPPORT NAIL



247 PEAK HOOK

247 SNOW STOP

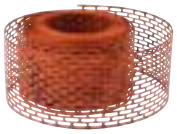
248 MANICA ROLL

248 MANICA POST

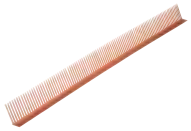
249 MANICA PLASTER

249 MANICA

250 VENT MESH



250 VENT GRILLE

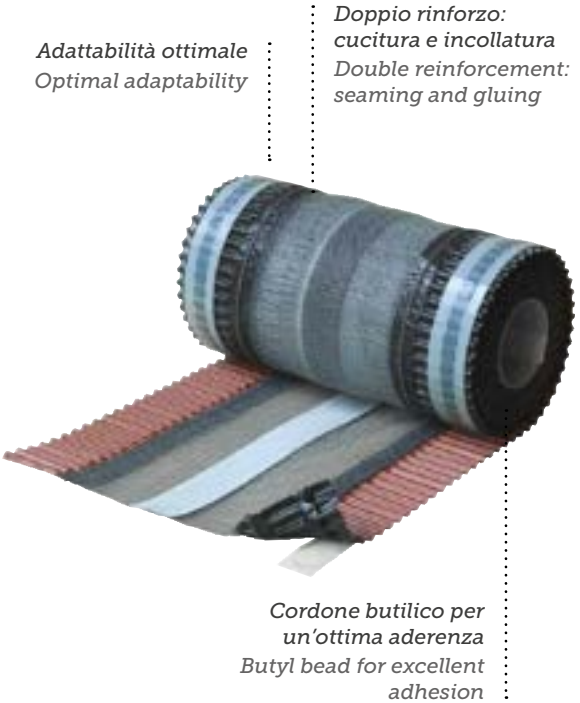


251 BIRD COMB EVO

251 BIRD SPIKE

AERIUS

SOTTOCOLMO VENTILATO CON RETE IN PP
VENTILATED RIDGE ROLL WITH PP NET



CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	colori *colours*	H [mm]	L [m]	
AERIUS390R	●	390	5	4
AERIUS390M	●	390	5	4
AERIUS390N	●	390	5	4
NETRED39020	●	390	20	1
NETBRO39020	●	390	20	1

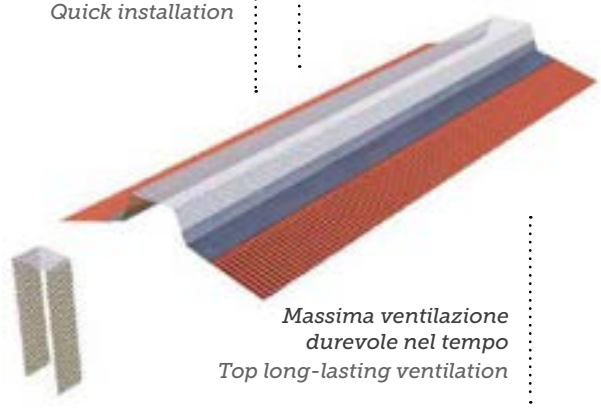
GEOMETRIA
GEOMETRY

PEAK VENT

KIT SOTTOCOLMO RIGIDO
RIGID RIDGE ROLL KIT

Kit completo di fissaggi
Full kit of fastening systems

Posa rapida
Quick installation



Massima ventilazione durevole nel tempo
Top long-lasting ventilation

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [mm]	L [m]	
PEAKVENT380	380	1	10

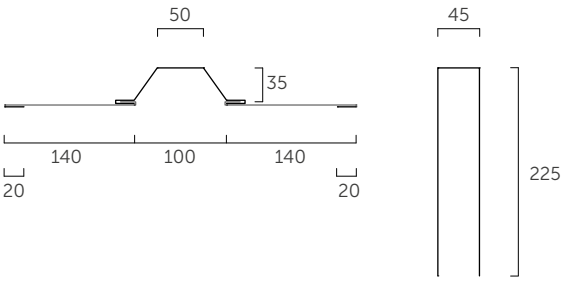
CONTENUTO CONFEZIONE:
PACKAGE CONTENTS:

10 elementi di ventilazione da 1 m
one-metre ventilation elements

12 staffe di supporto
supporting brackets

40 viti autofilettanti
self-tapping screws

GEOMETRIA
GEOMETRY



STANDARD ROLL

SOTTOCOLMO VENTILATO
VENTILATED RIDGE ROLL

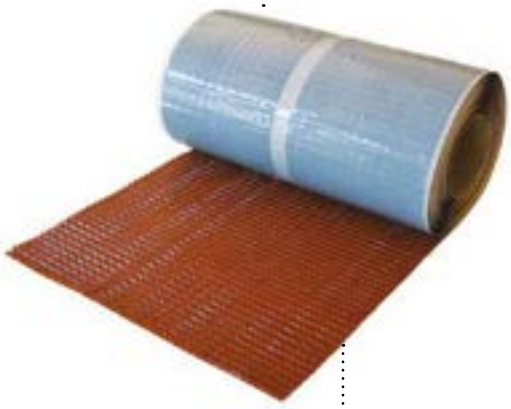
CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	colori *colours*	H [mm]	L [m]	
STANDRED390	●	390	5	4
STANDBRO390	●	390	5	4

ALU RAPID

CONVERSA IN ALLUMINIO E BUTILE ADESIVO
ALUMINIUM VALLEY AND ADHESIVE BUTYL

Modellabile in fase di posa
Mouldable during installation



Butilico, per un'adesione perfetta
Butyl-based, for perfect adhesion

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	colori *colours*	H [mm]	L [m]	
ALURRED150	●	150	5	1
ALURRED300	●	300	5	1
ALURBRO300	●	300	5	1

ALTUM

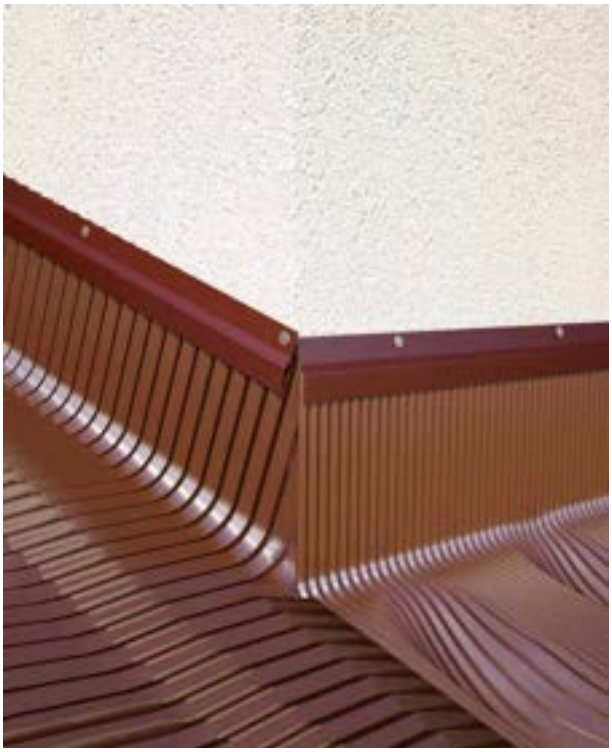
SOTTOCOLMO VENTILATO RIGIDO
VENTILATED RIGID RIDGE ROLL

CODICE *CODE*	H [mm]	L [m]	
ALTUM400R	400	1	20

GUTTER

SCOSSALINA IN LAMIERA
SHEET METAL FLASHING

CODICE *CODE*	colori *colours*	H [mm]	L [m]	
GUTTER		74	1,5	10



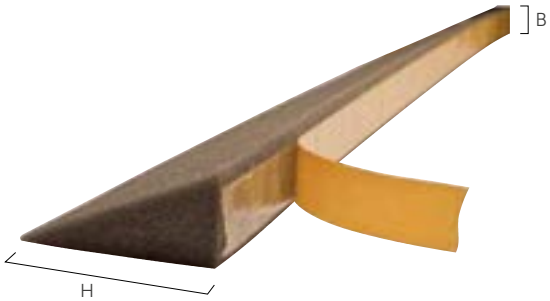
VALLEY ALU

COMPLUVIO IN LAMIERA
SHEET METAL EAVES GUTTER

CODICE *CODE*	colori *colours*	H [mm]	L [m]	
VALLEY600		600	10	2

GASKET

PROTEZIONE PER COMPLUVIO
EAVES GUTTER PROTECTION

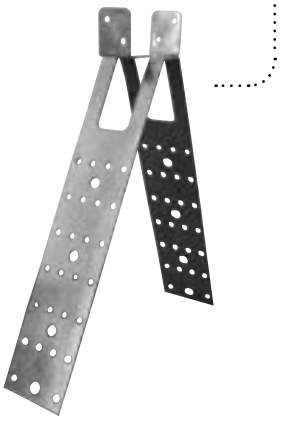


CODICE *CODE*	H [mm]	B [mm]	L [m]	
GASKET	75	35	1	140

SUPPORT UNI

PORTALISTELLO UNIVERSALE
UNIVERSAL BATTEN-HOLDER

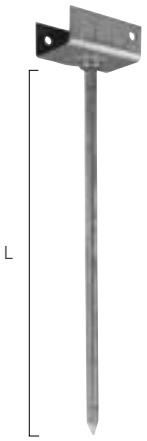
Regolazione precisa
Accurate adjustment



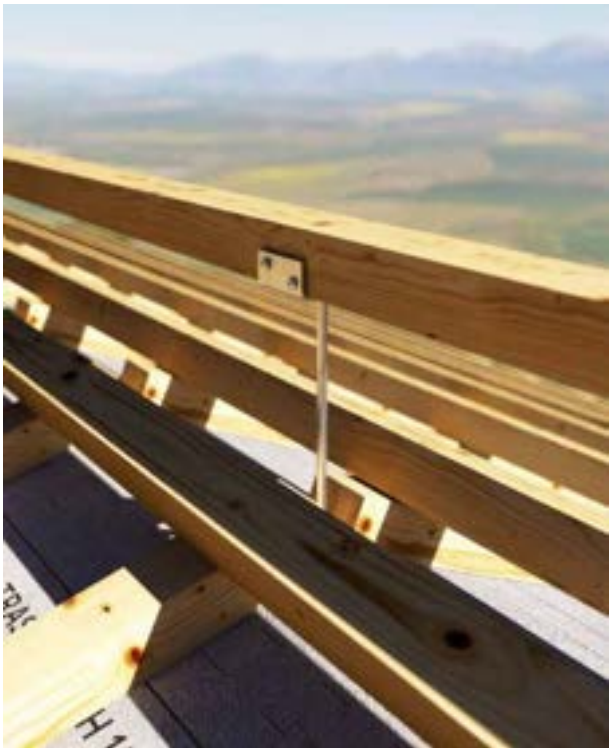
CODICE *CODE*	largh. max listello *max batten width* [mm]	L [mm]	
SUPPORTUNI	50	210	50

SUPPORT NAIL

PORTALISTELLO A CHIODO
NAIL BATTEN-HOLDER

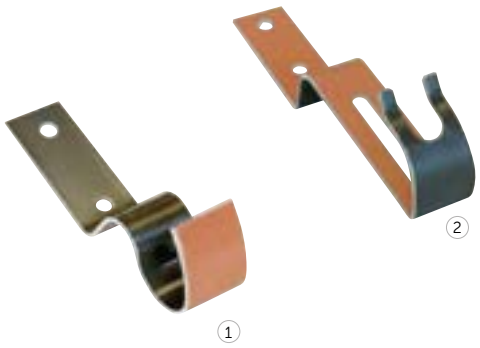


CODICE *CODE*	largh. max listello *max batten width* [mm]	L [mm]	
SUPPORTNAIL	50	210	50



PEAK HOOK

GANCIO FERMACOLMO
PEAK HOOK



CODICE *CODE*		colori *colours*	L [mm]	
PEAKHOOKRED	1	●	20	250
PEAKHOOKBRO	2	●	20	250

SNOW STOP

GANCIO FERMANEVE IN METALLO
METAL SNOW STOP HOOK

CODICE *CODE*		colori *colours*	L [mm]	
SNOWRED1	1	●	280	40
SNOWBRO1	1	●	280	40
SNOWRED2	2	●	280	40
SNOWBRO2	2	●	280	40

MANICA ROLL

MANICOTTO IN PIOMBO E BUTILE
LEAD AND BUTYL SLEEVE

Può essere sagomato con taglierino o forbice
It can be shaped with a cutter or scissors

Strato di piombo da 0,5 mm per maggiore resistenza
0,5 mm lead layer for greater resistance

CODICE *CODE*	colori *colours*	H [mm]	L [m]	s [mm]	
MANROLL1		300	5	0,5	1
MANROLL2		300	5	0,5	1
MANROLL3		300	5	0,5	1
MANROLL4		300	5	0,5	1
MANROLL5		300	5	0,5	1

MANICA POST

MANICOTTO SIGILLANTE ALU-BUTYL
SEALING SLEEVE ALU-BUTYL

Resistente agli UV
UV-resistant

CODICE *CODE*	colori *colours*	Ø [mm]	sup. collante *glue support* [mm]	
MANPOST1		25-32	300 x 200	5
MANPOST2		42-55	300 x 200	5
MANPOST3		42-55	230 x 230	4

MANICA PLASTER

MANICOTTO SIGILLANTE INTONACABILE
SEALING SLEEVE THAT CAN BE PLASTERED

Efficace su legno e superfici porose
Effective on wood and porous surfaces

CODICE *CODE*	Ø [mm]	sup. collante *glue support* [mm]	
MANPLASTER1	100-125	350 x 350	4

MANICA

MANICOTTO SIGILLANTE PER TUBI E CAVI PASSANTI
SEALING SLEEVE FOR CONDUIT AND CABLE PASSAGE

Ermetico
Airtight

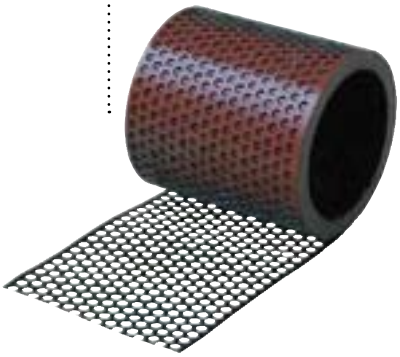
1 2

CODICE *CODE*		Ø [mm]	sup. collante *glue support* [mm]	
MANSINGLE1	1	4 - 8	150 x 150	10
MANSINGLE2	1	8 - 12	150 x 150	10
MANSINGLE3	1	15 - 22	150 x 150	10
MANSINGLE4	1	25 - 32	150 x 150	10
MANSINGLE5	1	42 - 55	230 x 230	4
MANSINGLE6	1	75 - 90	230 x 230	4
MANMULTI1	2	6 x 16 - 25	320 x 320	4

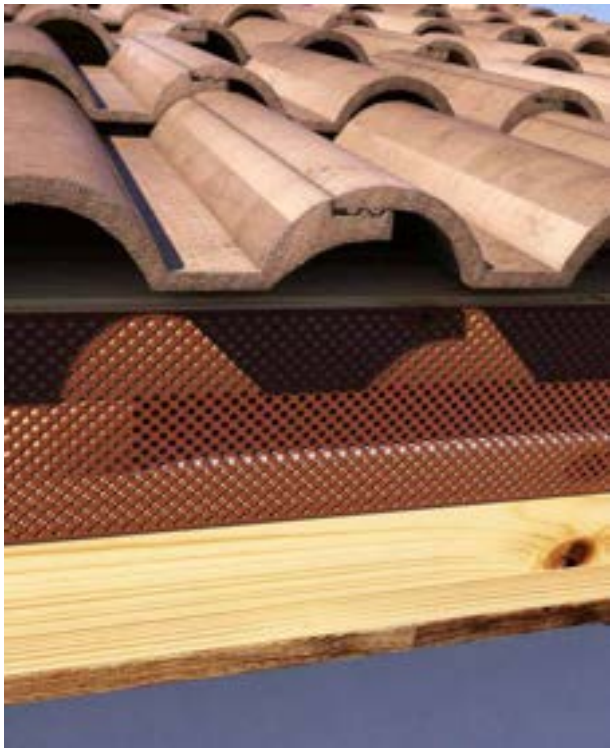
VENT MESH

GRIGLIA DI VENTILAZIONE FLESSIBILE
FLEXIBLE VENTILATION GRID

Bicolore, disponibile in diverse altezze
Bicolour, available in various heights

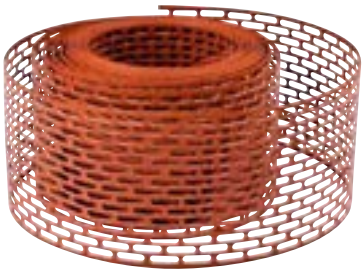


CODICE *CODE*	colori *colours*	H [mm]	L [m]	
VENT80		80	5	1
VENT100		100	25	1
VENT120		120	5	1
VENT160		160	25	1



VENT GRILLE

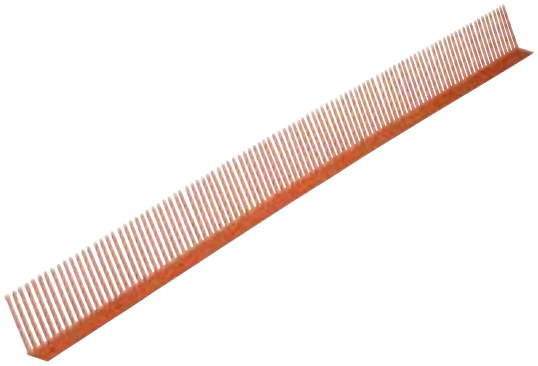
GRIGLIA PARAPASSERI IN PVC
PVC BIRD SCREEN



CODICE *CODE*	H [mm]	L [m]	
VENTG80R	80	5	24
VENTG100R	100	5	24

BIRD COMB EVO

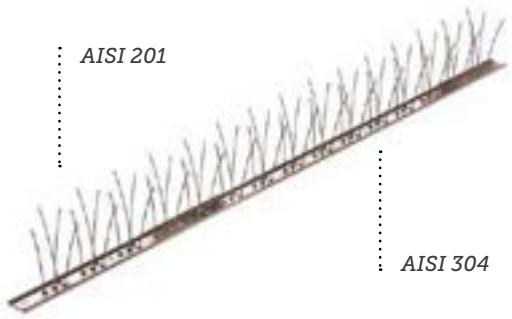
PETTINE PARAPASSERI
EAVES BIRD COMB



CODICE *CODE*	colori *colours*	H [mm]	L [m]	
BIRDRED60		60	1	200
BIRDBRO60		60	1	200
BIRDRED100		100	1	300
BIRDBRO100		100	1	300

BIRD SPIKE

DISSUASORE PER VOLATILI
BIRD SPIKES



CODICE *CODE*	H [mm]	L [m]	
BIRDSPIKE	100	1	25

NASTRI E PROFILI
TAPES AND EDGES

254 SIGNO

263 ALU BUTYL BAND

256 INTERNA

264 BLACK BAND

258 SIMPLA

264 NAIL PLASTER

260 FRONT BAND UV 210

265 GEMINI

261 MULTI BAND

265 NAIL BAND

262 TERRA BAND UV

266 PROTECT

263 ALU BAND

266 BYTUM BAND

267 GROUND BAND

267 LEVEL BAND

268 CONNECT BAND

268 CONSTRUCTION SEALING

269 TIE BEAM STRIPE

269 BUTYL BAND

270 FRAME BAND

270 KOMPRI BAND

271 PLASTER BAND IN

271 PLASTER BAND OUT

272 OUTSIDE GLUE

273 SUPERB GLUE

274 SUPRA BAND

274 PRIMER

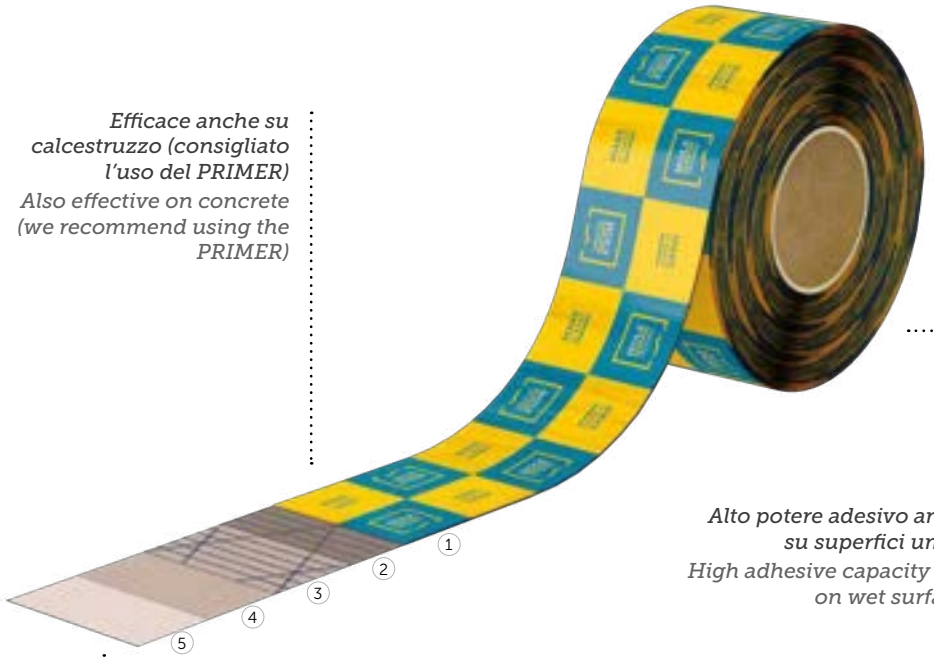
275 PRIMER SPRAY

SIGNO

NASTRO ADESIVO UNIVERSALE AD ALTA ADESIVITÀ
UNIVERSAL HIGH-ADHESIVE TAPE

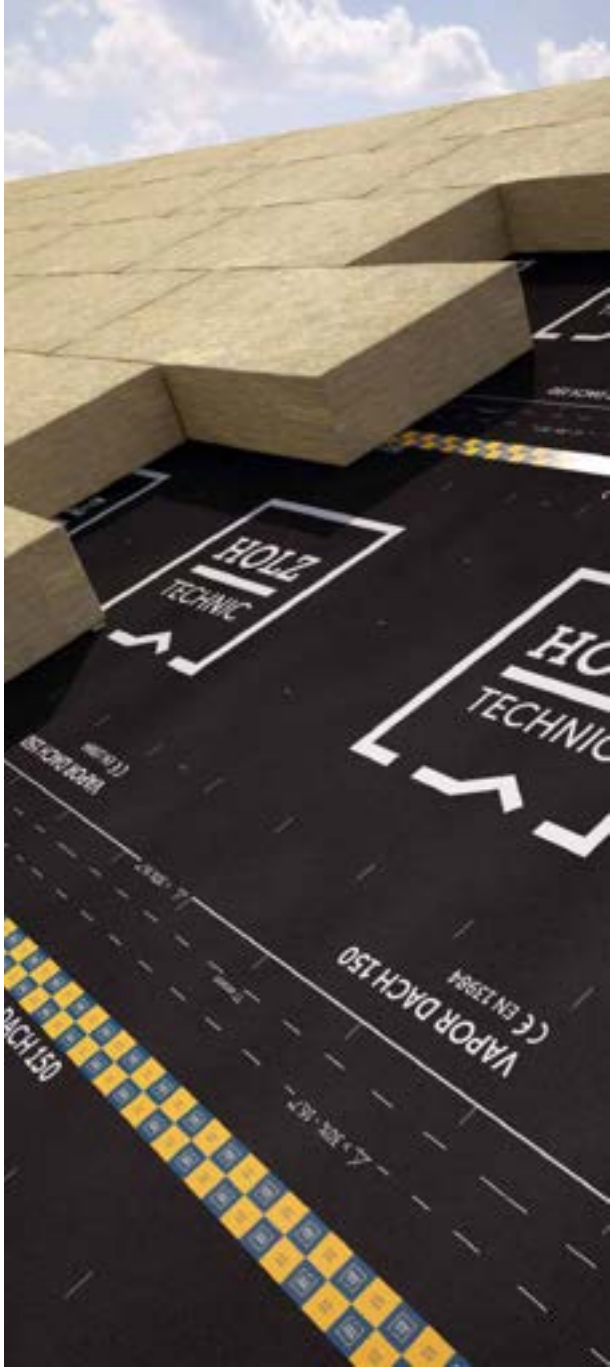
Uso interno ed esterno
For indoor and outdoor use

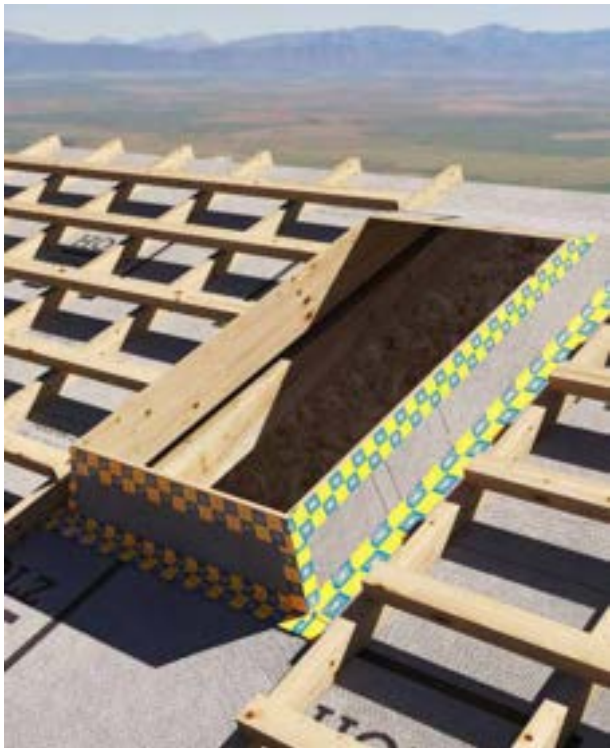
Efficace anche su calcestruzzo (consigliato l'uso del PRIMER)
Also effective on concrete (we recommend using the PRIMER)



Alto potere adesivo anche su superfici umide
High adhesive capacity also on wet surfaces

1. *Pellicola in polietilene /Polyethylene film*
2. *Collante in poliacrilato / Polyacrylate glue*
3. *Rete in polietilene / Polyethylene mesh*
4. *Collante in poliacrilato / Polyacrylate glue*
5. *Carta siliconata / Silicone-impregnated paper*





CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [mm]	L [m]	s [mm]	
EGOSIGNO	60	25	0,34	10

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà ***property***	**valore** ***value***
resistenza allo strappo *tear strength*	> 50 N / 25 mm
capacità di espansione *expansion capacity*	20 %
adesività *adhesiveness*	> 30 N / 25 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	40 m
resistenza termica *temperature resistance*	-40 / +80°C
temperatura di applicazione *application temperature*	- 10 / + 40°C
resistenza raggi UV *UV resistance*	6 mesi *6 months*
impermeabilità all'acqua *watertightness*	conforme *conforming*
temperatura di stoccaggio *storage temperature*	+5 / +25 °C
presenza solventi *solvents*	NO *NO*

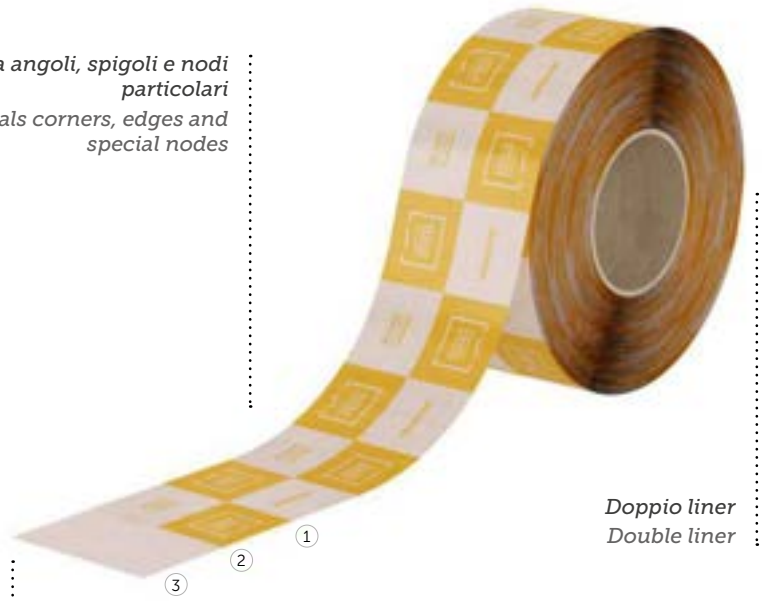
NOTA: stoccare il prodotto in luogo asciutto e al coperto.
NOTE: *store the product in a cool, dry place.*

INTERNA

NASTRO MONOADESIVO PER INTERNO
SINGLE-SIDED TAPE FOR INDOOR USE

Tenuta all'aria nel tempo
Airtightness over time

Sigilla angoli, spigoli e nodi particolari
Seals corners, edges and special nodes



Doppio liner
Double liner

1. *Carta impregnata idrorepellente* / *Water-repellent impregnated paper*
2. *Collante in poliacrilato* / *Polyacrylate glue*
3. *Carta siliconata* / *Silicone-impregnated paper*

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	liner [mm]	**H** [mm]	**L** [m]	**s** [mm]	
INTERNA60	-	60	25	0,30	10
INTERNA3030	30 / 30	60	25	0,30	10

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
resistenza allo strappo *tear strength*	> 70 N/cm
capacità di espansione *expansion capacity*	> 5%
adesività *adhesiveness*	> 15 N/cm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	6 m
resistenza termica *temperature resistance*	-40 / +100°C
temperatura di applicazione *application temperature*	> -10 °C
temperatura di stoccaggio *storage temperature*	+15 / +30 °C
presenza solventi *solvents*	NO *NO*

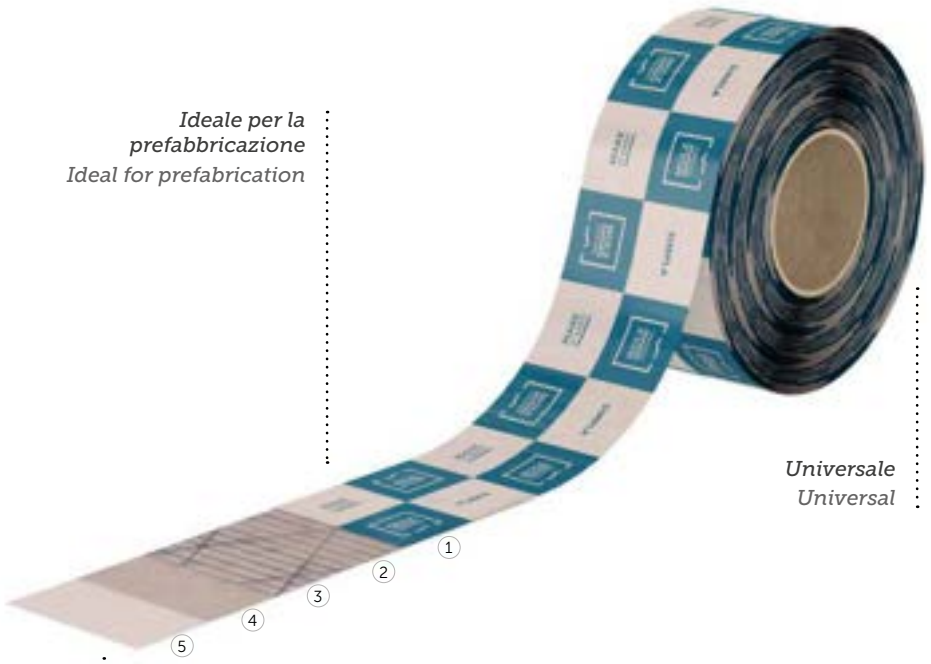
NOTA: stoccare il prodotto in luogo asciutto e al coperto.
NOTE: *store the product in a cool, dry place.*

SIMPLA

NASTRO MONOADESIVO UNIVERSALE
UNIVERSAL SINGLE-SIDED TAPE

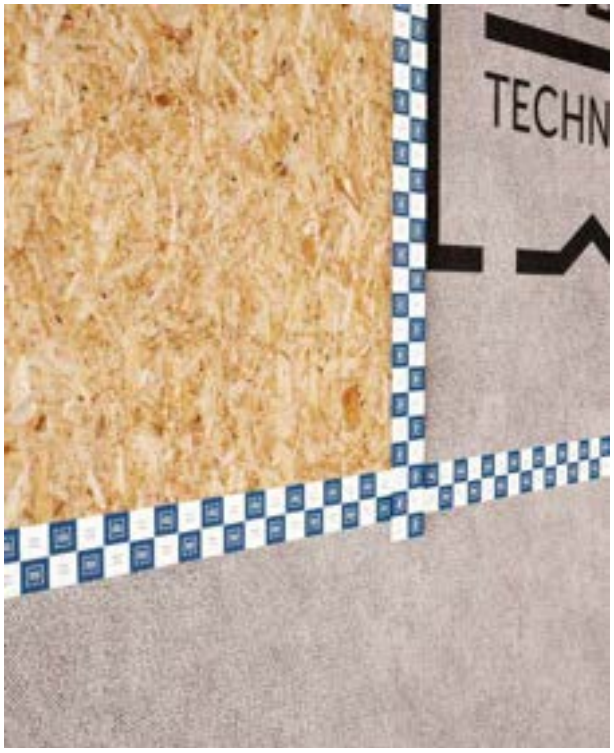
Adesione stabile nel tempo
Stable adhesion over time

Ideale per la prefabbricazione
Ideal for prefabrication



Universale
Universal

1. *Pellicola in polietilene /Polyethylene film*
2. *Collante in poliacrilato / Polyacrylate glue*
3. *Rete in polietilene / Polyethylene mesh*
4. *Collante in poliacrilato / Polyacrylate glue*
5. *Carta siliconata / Silicone-impregnated paper*



CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [mm]	L [m]	s [mm]	
SIMPLA60	60	25	0,28	10

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà ***property***	**valore** ***value***
adesività *adhesiveness*	> 35 N/25 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	30 m
resistenza termica *temperature resistance*	-40 / +100°C
temperatura di applicazione *application temperature*	> +5°C
impermeabilità all'acqua *watertightness*	conforme *conforming*
resistenza raggi UV *UV resistance*	4 mesi *4 months*
temperatura di stoccaggio *storage temperature*	+5 / +25 °C
presenza solventi *solvents*	NO *NO*

NOTA: stoccare il prodotto in luogo asciutto e al coperto.
NOTE: *store the product in a cool, dry place.*

FRONT BAND UV 210

NASTRO ACRILICO RESISTENTE
AI RAGGI UV
ADHESIVE ACRYLIC TAPE RESISTANT TO UV RAYS

Ideale con TRASPIR EVO UV 210
Ideal with TRASPIR EVO UV 210

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [mm]	L [m]	s [mm]	
FRONTUV75	75	20	0,60	8

MATERIALE / ***MATERIAL***

Membrana monolitica con collante acrilico e pellicola di separazione.
Monolithic membrane with acrylic glue and separating film.

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà ***property***	**valore** ***value***
resistenza allo strappo *tear strength*	> 100 N / 25 mm
capacità di espansione *expansion capacity*	20 %
adesività *adhesiveness*	> 30 N / 25 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	0,04 m
resistenza termica *temperature resistance*	- 30 / +100°C
temperatura di applicazione *application temperature*	> +5°C
resistenza raggi UV * *UV resistance **	permanente *permanent*
impermeabilità all'acqua *watertightness*	conforme *conforming*
temperatura di stoccaggio *storage temperature*	+5 / +25 °C
presenza solventi *solvents*	NO *NO*

* con giunti fino a 50 mm di larghezza e che scoprono massimo il 40 % della superficie
* *with joints up to 50 mm wide exposing up to 40% of the surface*

NOTA: stoccare il prodotto in luogo asciutto e al coperto.
NOTE: *store the product in a cool, dry place.*

MULTI BAND

NASTRO MONOADESIVO UNIVERSALE INTONACABILE
UNIVERSAL SINGLE-SIDED TAPE THAT CAN BE PLASTERED

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
resistenza allo strappo *tear strength*	> 25 N / 25 mm
capacità di espansione *expansion capacity*	> 50 %
adesività *adhesiveness*	> 16 N / 25 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	< 0,1 m
resistenza termica *temperature resistance*	-40 / + 90°C
temperatura di applicazione *application temperature*	> -10°C
resistenza raggi UV *UV resistance*	6 mesi *6 months*
impermeabilità all'acqua *watertightness*	conforme *conforming*
temperatura di stoccaggio *storage temperature*	+15 / +30 °C
presenza solventi *solvents*	NO *NO*

NOTA: stoccare il prodotto in luogo asciutto e al coperto.
NOTE: *store the product in a cool, dry place.*

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	**H** [mm]	**L** [m]	**s** [mm]	
MULTI75	75	20	0,40	12

MATERIALE / ***MATERIAL***

Supporto in tessuto di poliestere (PL) con collante acrilico e pellicola di separazione.
Support in polyester (PL) fabric with acrylic glue and separating film.

TERRA BAND UV

NASTRO ADESIVO BUTILICO RESISTENTE AI RAGGI UV
BUTYL ADHESIVE TAPE, RESISTANT TO UV RAYS

Protezione da acqua e raggi UV
Protection against water and UV rays

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
resistenza allo strappo *tear strength*	MD: 185 N / 50 mm CD: 200 N / 50 mm
allungamento *elongation*	MD: 10% CD: 20%
probe tack	8 N
adesività al distacco a 180° *detachment adhesion at 180°*	20 N/cm
scivolamento verticale *vertical sliding*	0 mm
resistenza termica *temperature resistance*	-30 / + 90°C
temperatura di applicazione *application temperature*	0 / + 40 °c
resistenza raggi UV *UV resistance*	permanente *permanent*
impermeabilità all'acqua *watertightness*	conforme *conforming*
presenza solventi *solvents*	NO *NO*
MD: longitudinale *longitudinal*	**CD:** trasversale *transversal*

NOTA: stoccare il prodotto in luogo asciutto e al coperto per massimo 12 mesi.
NOTE: *store the product in a cool, dry place for no more than 12 months.*

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	**H** [mm]	**L** [m]	**s** [mm]	
TERRAUV75	75	10	0,8	8
TERRAUV100	100	10	0,8	6
TERRAUV200	200	10	0,8	4

MATERIALE / ***MATERIAL***

Compound butilico rivestito da un film in alluminio color nero con pellicola di separazione.
Butyl-based compound coated with a black aluminium separating film.

ALU BAND

NASTRO ACRILICO RIFLETTENTE CON SUPPORTO IN ALLUMINIO
REFLECTIVE ACRYLIC TAPE WITH ALUMINIUM SUPPORT

Anche per impianti
Can be used also for systems

CODICE *CODE*	H [mm]	L [m]	s [mm]	
ALUBAND75	75	50	0,06	18

ALU BUTYL BAND

NASTRO BUTILICO RIFLETTENTE CON SUPPORTO IN ALLUMINIO
REFLECTIVE BUTYL TAPE WITH ALUMINIUM SUPPORT

Stabile ai raggi UV
Resistant to UV rays

CODICE *CODE*	H [mm]	L [m]	s [mm]	
ALUBUTYL75	75	10	**1**	8
ALUBUTYL150	150	10	**1**	4

BLACK BAND

NASTRO ADESIVO BUTILICO
BUTYL ADHESIVE TAPE

Altamente modellabile
Highly mouldable

CODICE *CODE*	liner	H [mm]	L [m]	s [mm]	
BLACK50	-	50	10	2	6
BLACK4040	40 / 40	80	10	2	4

NAIL PLASTER

PUNTO CHIODO ADESIVO IN SCHIUMA DI POLIETILENE A CELLE CHIUSE
ADHESIVE CLOSED-CELL POLYETHYLENE FOAM NAIL POINT

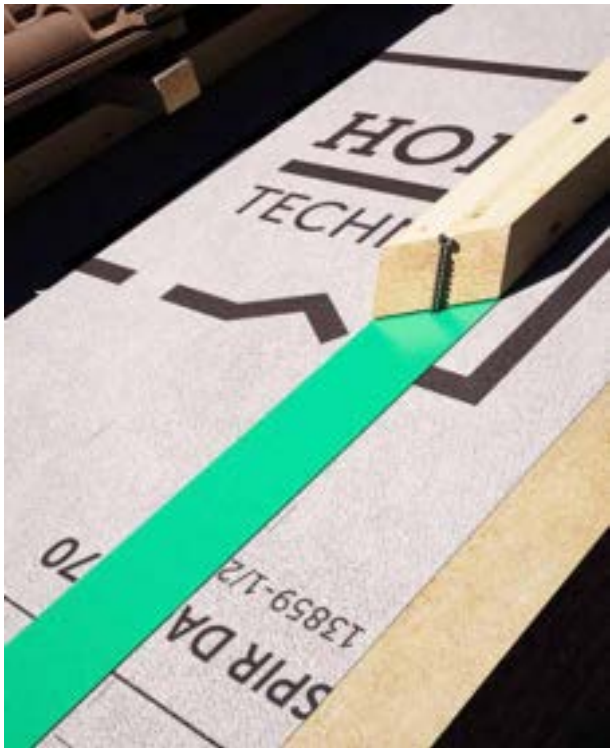
CODICE *CODE*	H [mm]	pezzi *pieces*	L [m]	s [mm]	
NAILPLA350	50	-	30	3	10
NAILPLA35050	50 x 50	400	-	3	6
NAILPLA550	50	-	10	5	6

GEMINI

PUNTO CHIODO BIADESIVO IN SCHIUMA DI POLIETILENE A CELLE CHIUSE
BI-ADHESIVE CLOSED-CELL POLYETHYLENE FOAM NAIL POINT

Doppia adesività
Double adhesiveness

CODICE *CODE*	H [mm]	L [m]	s [mm]	
GEMINI60	60	30	3	8
GEMINI80	80	30	3	10



NAIL BAND

PUNTO CHIODO ADESIVO BUTILICO
BUTYL ADHESIVE NAIL POINT

Impiego versatile
Versatile use

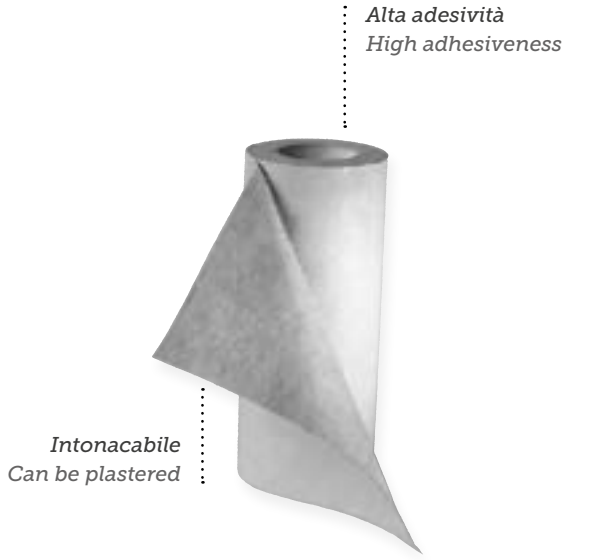
Sigillatura perfetta
Perfect sealing

CODICE *CODE*	H [mm]	L [m]	s [mm]	
NAILBAND50	50	15	1	12

PROTECT

CE
EN 13956
EN 13967

TAGLIAMURO BUTILICO PER SOTTOFONDI
BUTYL WALL BARRIER FOR FOUNDATIONS



CODICE *CODE*	H [mm]	L [m]	s [mm]	
PROTECT330	330	10	1	2
PROTECT500	500	10	1	1

BYTUM BAND

TAGLIAMURO BITUMINOSO PER SOTTOFONDI
BITUMINOUS WALL BARRIER FOR FOUNDATIONS

CODICE *CODE*	H [mm]	L [m]	s [mm]	
BYTBAND240	240	15	1	2
BYTBAND370	370	15	1	1

GROUND BAND

CE
EN 13969
EN 14967

MEMBRANA BITUMINOSA
BITUMINOUS MEMBRANE

Autoadesiva
Self-adhesive

Posa a freddo
Cold installation

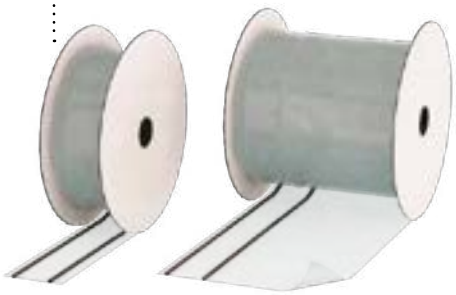
CODICE *CODE*	liner [mm]	H [mm]	L [m]	s [mm]	
GROUND200	30 / 170	200	20	1,5	2
GROUND500	30 / 470	500	20	1,5	1
GROUND1000	500 / 500	1000	20	1,5	1

LEVEL BAND

CE
EN 13984

TAGLIAMURO IN POLIETILENE CON PROFILI IN EPDM
POLYETHYLENE WALL BARRIER WITH PROFILES IN EPDM

Protegge dall'umidità di risalita capillare
Protects against rising damp



CODICE *CODE*	H [mm]	L [m]	
LEVEL125	125	25	2
LEVEL350	350	25	2

CONNECT BAND

CE EN 13984

TAGLIAMURO IN EPDM CON NASTRI AUTOESPANDENTI
EDPM WALL BARRIER WITH SELF-EXPANDING TAPES

Banda butilica per applicazione semplice
Butyl band for simple application

CODICE *CODE*	H [mm]	L [m]	
CONNECT100	100	25	3
CONNECT250	250	25	1

CONSTRUCTION SEALING

GUARNIZIONE EPDM
EPDM GASKET

Ideale per la sigillatura di giunzioni legno-legno
Ideal for sealing timber-to-timber joints

CODICE *CODE*	H [mm]	L [m]	s [mm]	
CONSTRU4625	46	25	3	4

TIE BEAM STRIPE

PROFILO EPDM SOTTOBANCHINA
DORMANT EPDM BEAM PROFILE

Isolamento acustico
Soundproofing

CODICE *CODE*	H [mm]	L [m]	s [mm]	
TIEBEAM71	71	50	9	1

BUTYL BAND

CE
EN 13956
EN 13967

NASTRO BIADESIVO BUTILICO
BI-ADHESIVE BUTYL TAPE

Ermetico e resistente
Airtight and resistant

CODICE *CODE*	H [mm]	L [m]	s [mm]	
BUTYLBAND1501	15	15	1	20
BUTYLBAND1502	15	10	2	13

FRAME BAND

CE EN 13984

NASTRO AUTOESPANDENTE PER FINESTRE
SELF-EXPANDING TAPE FOR WINDOWS

Isolamento termico e acustico
Thermal and sound insulation

CODICE *CODE*	H [mm]	L [m]	s_{max} [mm]	f [mm]	
FRAME2054	54	30	20	2-10	7
FRAME2074	74	30	20	2-10	5

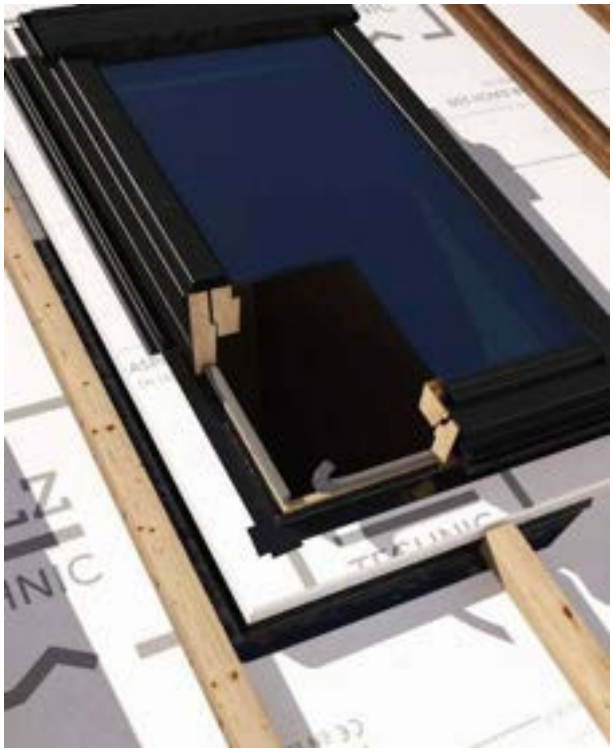
KOMPRI BAND

CE ETA 07/0072

NASTRO AUTOESPANDENTE
SELF-EXPANDING TAPE

Tenuta all'aria e isolamento acustico
Airtightness and soundproofing

CODICE *CODE*	H [mm]	L [m]	s_{max} [mm]	f [mm]	
KOMPRI1010	10	13	10	1-4	30
KOMPRI1015	15	13	10	1-4	20
KOMPRI2015	15	8	20	4-10	20
KOMPRI3015	15	4,3	30	6-15	20
KOMPRI4520	20	3,3	45	9-20	15



PLASTER BAND IN

NASTRO MONOADESIVO INTONACABILE PER USO INTERNO
SINGLE-SIDED TAPE FOR INDOOR USE, CAN BE PLASTERED

Schermo freno al vapore
Vapour retardant

CODICE *CODE*	liner [mm]	H [mm]	L [m]	
PLASTIN1263	12 / 63	75	25	5
PLASTIN1288	12 / 88	100	25	4
PLASTIN12138	12 / 138	150	25	2
PLASTIN12188	12 / 188	200	25	2

PLASTER BAND OUT

NASTRO MONOADESIVO INTONACABILE PER USO ESTERNO
SINGLE-SIDED TAPE FOR EXTERNAL USE, CAN BE PLASTERED

Supporto traspirante
Breathable support

CODICE *CODE*	liner [mm]	H [mm]	L [m]	
PLASTOUT1263	12 / 63	75	25	5
PLASTOUT1288	12 / 88	100	25	4
PLASTOUT12138	12 / 138	150	25	2
PLASTOUT12188	12 / 188	200	25	2

OUTSIDE GLUE

COLLA ADESIVA BUTILICA PER USO ESTERNO
BUTYL ADHESIVE GLUE FOR OUTDOOR USE

Sigilla i più comuni materiali, anche se umidi o bagnati
Seals the most common materials, even if damp or wet

Elevata elasticità nel tempo
High elasticity over time

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	contenuto *content* [ml]	cartuccia *cartridge* [ml]	
OUTGLUE310	310	plastica *plastic*	24
OUTGLUE600	600	morbida *soft*	12

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
colore *colour*	grigio *grey*
densità *density*	1.3 g/m³
temperatura di applicazione *application temperature*	0 / +40 °C
tempo di essicazione a 25 °C *hardening time at 25 °C*	24 / 48 h
impermeabilità all'acqua dopo l'essicazione *water tightness after hardening*	conforme *conforming*
temperatura di stoccaggio *storage temperature*	+5 / +25 °C
presenza solventi *solvents*	SI *YES*

NOTA: stoccare il prodotto in luogo asciutto e al coperto per massimo 12 mesi.
NOTE: *store the product in a cool, dry place for no more than 12 months.*

SUPERB GLUE

COLLA ADESIVA PER USO INTERNO
ADHESIVE GLUE FOR INDOOR USE

Essiccazione rapida, stabile nel tempo
Rapid drying, stable over time

Ideale per la sigillatura di membrane
Ideal for sealing membranes

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	contenuto *content* [ml]	cartuccia *cartridge* [ml]	
SUPGLUE310	310	plastica *plastic*	12
SUPGLUE600	600	morbida *soft*	12

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
colore *colour*	azzurro *light blue*
densità *density*	1,3 g/cm^3
temperatura di applicazione (supporto) *application temperature (support)*	-10 / +40 °C
temperatura di applicazione (cartuccia) *application temperature (cartridge)*	+5 / +35 °C
tempo di essicazione a 25 °C *hardening time at 25 °C*	ca. 2 mm / 24 h *ca. 2 mm / 24 h*
impermeabilità all'acqua dopo l'essicazione *water tightness after hardening*	conforme *conforming*
temperatura di stoccaggio *storage temperature*	-20 /+25 °C
presenza solventi *solvents*	NO *NO*

NOTA: stoccare il prodotto in luogo asciutto e al coperto per massimo 12 mesi.
NOTE: *store the product in a cool, dry place for no more than 12 months.*

SUPRA BAND

PROFILO BIADESIVO BUTILICO
BI-ADHESIVE BUTYL PROFILE

Elevata aderenza in ogni condizione
High adhesion under any condition

CODICE *CODE*	H [mm]	L [m]	s [mm]	
SUPRA6	6	6	4	16
SUPRA10	10	6	4	22

PRIMER

SOTTOFONDO PER NASTRI ACRILICI
SUBSTRATE FOR ACRYLIC TAPES

CODICE *CODE*	contenuto *content* [kg]	colore *colour*	
PRIMER	1,0	trasparente *clear*	1

PRIMER SPRAY

SOTTOFONDO SPRAY PER NASTRI ACRILICI
SPRAY SUBSTRATE FOR ACRYLIC TAPES

Istantaneo
Instantaneous

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	contenuto *content* [ml]	
PRIMERSPRAY	750	12

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
colore in forma liquida *liquid colour*	bianco *white*
colore in forma indurita *hardened colour*	trasparente *clear*
temperatura di applicazione *application temperature*	+5 / +35 °C
tempo di essicazione *hardening time*	ca. 30 / 40 minuti *ca. 30 / 40 minutes*
resa *yield*	80 g/m^2
temperatura di stoccaggio *storage temperature*	+5 / +20 °C
presenza solventi *solvents*	NO *NO*

NOTA: stoccare il prodotto in luogo asciutto e al coperto per massimo 12 mesi.
NOTE: *store the product in a cool, dry place for no more than 12 months.*

MEMBRANE
MEMBRANES

278 BARRIER 150

279 BARRIER ALU HT 150

280 VAPOR INNEN 100

281 VAPOR INNEN 120

282 VAPOR DACH 150

283 VAPOR DACH 225

285 TRASPIR DACH MONO 160

286 TRASPIR WAND 110

287 TRASPIR DACH 135

288 TRASPIR DACH 150

289 TRASPIR DACH 170

290 TRASPIR DACH 190

291

TRASPIR DACH 270

292

TRASPIR FASSADE

294

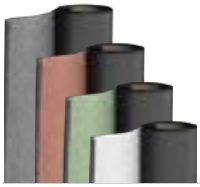
BYTUM 400

295

BYTUM 750

296

BYTUM 1100



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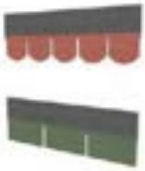
BYTUM SLATE 3500



298

SHINGLE

302

TRASPIR METAL

304

RADON

BARRIER 150

CE
EN 13984

SCHERMO BARRIERA AL VAPORE Sd 145 m
AIR VAPOUR BARRIER Sd 145 m

IT	FR	CH	DE
UNI 11470 **B/R2**	DTU 31.2 **pare-vapeur**	SIA 232 **V.v.u.**	ZVDH **dh.**

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	roll [m]	H [m]	L [m]	A [m²]	
BAR150	1,5 x 25	1,5	25	37,5	1
BAR15032	3,2 x 25	3,2	25	80	1

COMPOSIZIONE / ***COMPOSITION***

1. film funzionale in polietilene (PE) estruso / *extruded vapour check polythene (PE) film*

BAR150 rotoli/bancale / *rolls/pallet* = **52**
peso rotolo / *roll weight* = **7,0 kg**

BAR15032 rotoli/bancale / *rolls/pallet* = **52**
peso rotolo / *roll weight* = **15,0 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	188 g/m²
spessore *thickness*	0,2 mm
trasmissione del vapore d'acqua (Sd)* *water vapour transmission (Sd)**	145 m
resistenza a trazione *tensile strength*	MD: 206 N / 50 mm CD: 180 N / 50 mm
allungamento* *elongation**	MD: 480% CD: 665%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 147 N CD: 165 N
impermeabilità all'acqua *watertightness*	conforme *conforming*
resistenza termica *temperature resistance*	-40 / +80°C
resistenza al vapore d'acqua dopo invecchiamento artificiale *durability of water vapour resistance against ageing*	conforme *conforming*
reazione al fuoco *reaction to fire*	classe E *class E*
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 725000 *ca. 725000*

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

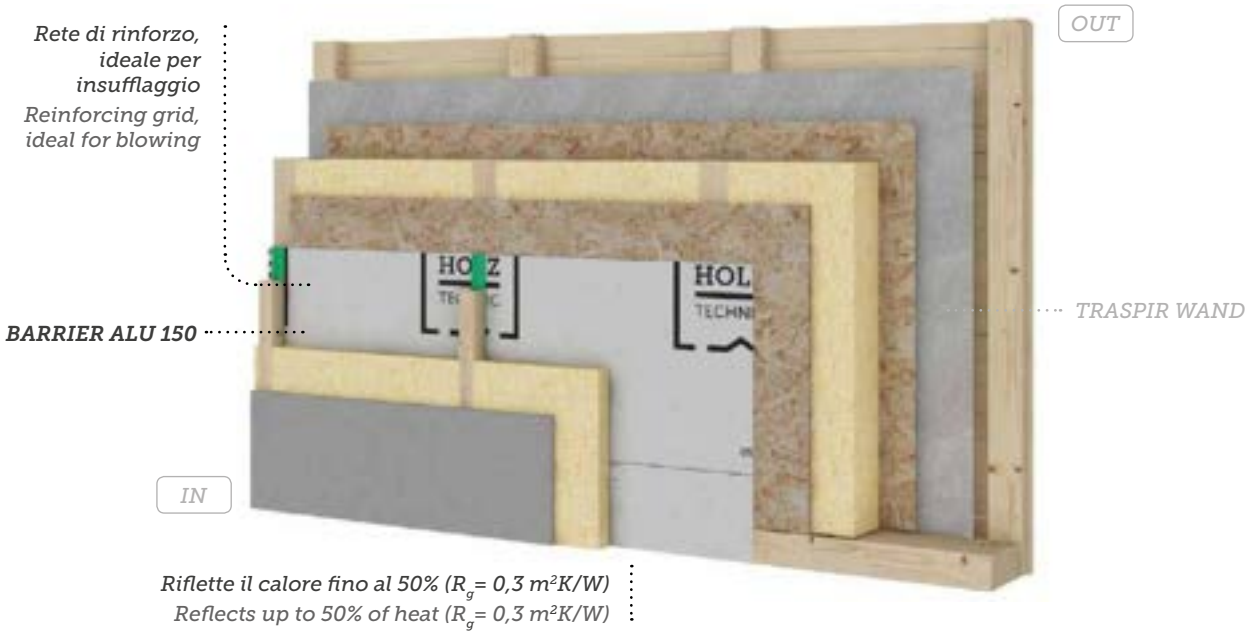
* Valori medi ottenuti da test. Per conoscere i valori minimi consultare la DoP.
Average values obtained from tests. Consult the Declaration of Performance (DoP) for the minimum values.

BARRIER ALU HT 150

CE
EN 13984

SCHERMO BARRIERA AL VAPORE RIFLETTENTE Sd 150 m
REFLECTIVE AIR VAPOUR BARRIER Sd 150 m

IT	FR	CH	DE
UNI 11470 **D/R1**	DTU 31.2 **pare-vapeur**	SIA 232 **V.v.u.**	ZVDH **dh.**



CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [m]	L [m]	A [m²]	
BARALUHT150	1,5	50	75	1

COMPOSIZIONE / *COMPOSITION*

1. film in PE alluminizzato / *aluminised PE film*
2. griglia di rinforzo in PE / *PE reinforcement grid*
3. film in PE / *PE film*

BARALUHT150 rotoli/bancale / *rolls/pallet* = **80**
peso rotolo / *roll weight* = **8,0 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	100 g/m²
spessore *thickness*	0,2 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	150 m
resistenza a trazione *tensile strength*	MD: 230 N / 50 mm CD: 230 N / 50 mm
allungamento *elongation*	MD: 15% CD: 10%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 110 N CD: 110 N
impermeabilità all'acqua *watertightness*	conforme *conforming*
resistenza termica *temperature resistance*	-40 / +80°C
resistenza al vapore d'acqua dopo invecchiamento artificiale *durability of water vapour resistance against ageing*	conforme *conforming*
reazione al fuoco *reaction to fire*	classe E *class E*
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 750000 *ca. 750000*

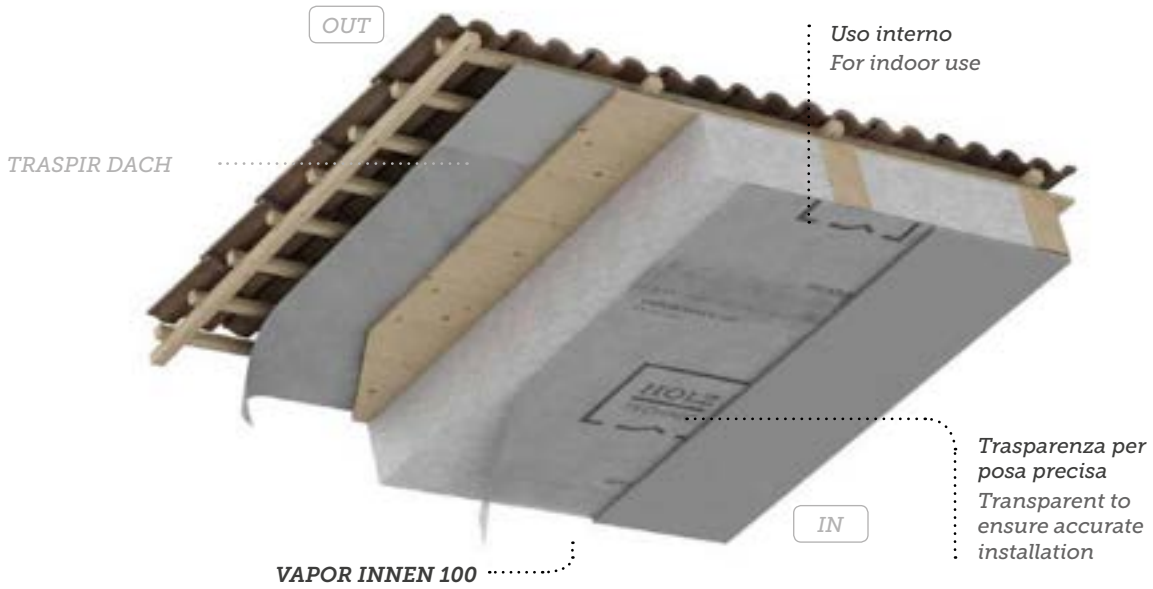
MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

VAPOR INNEN 100

CE
EN 13984

FRENO VAPORE PER INTERNO
INDOOR VAPOUR RETARDANT

IT	FR	CH	DE
UNI 11470 D/R1	DTU 31.2 pare-vapeur	SIA 232 V.v.u.	ZVDH dh.



CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
VINNEN100	-	1,5	100	150	1

COMPOSIZIONE / *COMPOSITION*

1. film freno vapore in PP / *PP vapour retardant film*
2. tessuto non tessuto in PP / *non-woven PP fabric*

VINNEN100 rotoli/bancale / *rolls/pallet* = **36**
peso rotolo / *roll weight* = **15,3 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	100 g/m²
spessore *thickness*	0,3 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	26 m
resistenza a trazione *tensile strength*	MD: 150 N / 50 mm CD: 130 N / 50 mm
allungamento *elongation*	MD: 50% CD: 50%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 80 N CD: 80 N
impermeabilità all'acqua *watertightness*	conforme *conforming*
resistenza termica *temperature resistance*	-40 / +80°C
resistenza al vapore d'acqua dopo invecchiamento artificiale *durability of water vapour resistance against ageing*	conforme *conforming*
reazione al fuoco *reaction to fire*	classe E *class E*
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 86700 *ca. 86700*

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

VAPOR INNEN 120

CE
EN 13984

FRENO VAPORE PER INTERNO
INDOOR VAPOUR RETARDANT

IT	FR	CH	DE
UNI 11470 **D/R1**	DTU 31.2 **pare-vapeur**	SIA 232 **V.v.u.**	ZVDH **dh.**

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
VINNEN120	-	1,5	50	75	1

COMPOSIZIONE / *COMPOSITION*

1. film freno vapore in PP / *PP vapour retardant film*
2. tessuto non tessuto in PP / *non-woven PP fabric*

VINNEN120 rotoli/bancale / *rolls/pallet* = **36**
peso rotolo / *roll weight* = **9,0 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	121 g/m²
spessore *thickness*	0,4 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	30 m
resistenza a trazione *tensile strength*	MD: 180 N / 50 mm CD: 140 N / 50 mm
allungamento *elongation*	MD: 30% CD: 40%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 130 N CD: 160 N
impermeabilità all'acqua *watertightness*	conforme *conforming*
resistenza termica *temperature resistance*	-40 / +80°C
resistenza al vapore d'acqua dopo invecchiamento artificiale *durability of water vapour resistance against ageing*	conforme *conforming*
reazione al fuoco *reaction to fire*	classe E *class E*
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 75000 *ca. 75000*

MD: longitudinale *longitudinal*
CD: trasversale *transversal*

VAPOR DACH 150

CE
EN 13984

FRENO VAPORE PER TETTO
ROOF VAPOUR RETARDANT

IT	FR	CH	DE
UNI 11470 **B/R2**	DTU 31.2 **frein-vapeur**	SIA 232 **V.v.u. V.v.o.**	ZVDH **dh.**

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
VDACH150	-	1,5	50	75	1
VDACHTT150	TT	1,5	50	75	1

COMPOSIZIONE / ***COMPOSITION***

1. tessuto non tessuto in PP / *non-woven PP fabric*
2. film freno vapore in PP / *PP vapour retardant film*
3. tessuto non tessuto in PP / *non-woven PP fabric*

VDACH150 rotoli/bancale / *rolls/pallet* = **25**
peso rotolo / *roll weigh* = **11,5 kg**

VDACHTT150 rotoli/bancale / *rolls/pallet* = **25**
peso rotolo / *roll weight* = **11,5 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	150 g/m²
spessore *thickness*	0,4 mm
trasmissione del vapore d'acqua (Sd)* *water vapour transmission (Sd)**	13 m
resistenza a trazione* *tensile strength**	MD: 260 N / 50 mm CD: 180 N / 50 mm
allungamento* *elongation**	MD: 55% CD: 65%
resistenza a lacerazione chiodo* *resistance to nail tearing**	MD: 200 N CD: 260 N
impermeabilità all'acqua *watertightness*	conforme *conforming*
resistenza termica *temperature resistance*	-20 / +80°C
resistenza al vapore d'acqua dopo invecchiamento artificiale *durability of water vapour resistance against ageing*	conforme *conforming*
reazione al fuoco *reaction to fire*	classe F *class F*
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 32500 *ca. 32500*

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

* Valori medi ottenuti da test. Per conoscere i valori minimi consultare la DoP.
Average values obtained from tests. Consult the Declaration of Performance (DoP) for the minimum values.

HOLZ TECHNIC

VAPOR DACH 225

CE
EN 13984

FRENO VAPORE PER TETTO
ROOF VAPOUR RETARDANT

IT	FR	CH	DE
UNI 11470 **A/R3**	DTU 31.2 **frein-vapeur**	SIA 232 **V.v.u. V.v.o.**	ZVDH **dh.**

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
VDACH225	-	1,5	50	75	1

COMPOSIZIONE / *COMPOSITION*

1. tessuto non tessuto in PP / *non-woven PP fabric*
2. film freno vapore in PP / *PP vapour retardant film*
3. tessuto non tessuto in PP / *non-woven PP fabric*

VDACH225 rotoli/bancale / *rolls/pallet* = **20**
peso rotolo / *roll weight* = **16,9 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	225 g/m²
spessore *thickness*	0,8 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	4 m
resistenza a trazione *tensile strength*	MD: 380 N / 50 mm CD: 300 N / 50 mm
allungamento *elongation*	MD: 60% CD: 80%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 225 N CD: 300 N
impermeabilità all'acqua *watertightness*	conforme *conforming*
resistenza termica *temperature resistance*	-20 / +80°C
resistenza al vapore d'acqua dopo invecchiamento artificiale *durability of water vapour resistance against ageing*	conforme *conforming*
reazione al fuoco *reaction to fire*	classe E *class E*
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 5000 *ca. 5000*

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

MONOLITICO E MICROPOROSO
MONOLITHIC AND MICROPOROUS

PRODOTTI MONOLITICI
MONOLITHIC PRODUCTS

Membrane dotate di strato funzionale omogeneo e continuo. La permeabilità al vapore acqueo è affidata ad una reazione chimica fondata sulla permeanza del polimero: alcuni polimeri infatti sono in grado di attivare una reazione chimica con le molecole del vapore e quindi farsi attraversare, diventando così traspiranti.

Membranes with a homogeneous and continuous functional layer. Water vapour permeability is entrusted to a chemical reaction based on the permeance of the polymer. In fact, some polymers are able to activate a chemical reaction with vapour molecules that allows them to pass through, rendering them breathable.

FIG.1: immagine al microscopio di una membrana monolitica sezionata.
Parte superiore: film monolitico.
Parte inferiore: filamenti del tessuto di supporto e protezione.

FIG 1: microscope image of a monolithic membrane section.
Upper part: monolithic film.
Lower part: support and protection fibre filaments.

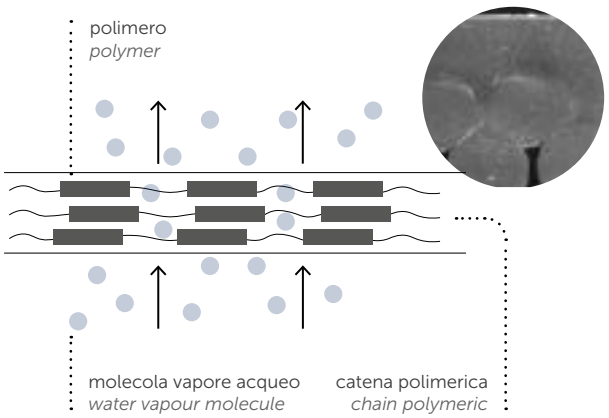
PRODOTTI MICROPOROSI
MICROPOROUS PRODUCTS

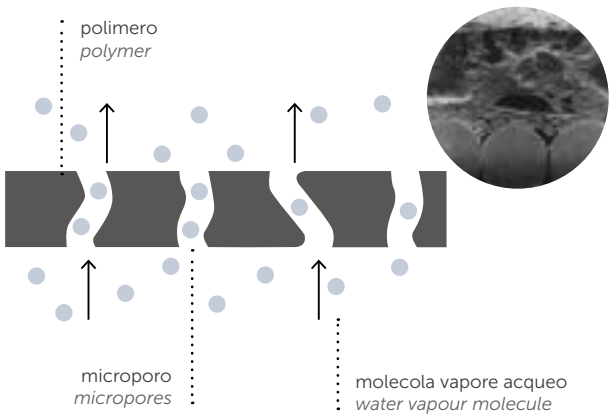
Membrana con strato funzionale dotato di microporosità, ottenuta mediante lavorazione meccanica. La permeabilità al vapore acqueo è affidata al principio della capillarità: la molecola di vapore passa attraverso i micropori del film funzionale racchiuso in uno o due strati protettivi.

Membrane with functional microporous layer, obtained through mechanical processing. Permeability to water vapour is entrusted to the capillary principle: the vapour molecule passes through the micropores in the vapour check film, enclosed in one or two protective layers.

FIG. 2: immagine al microscopio di una membrana microporosa sezionata.
Parte superiore: film microporoso.
Parte inferiore: filamenti del tessuto di supporto e protezione.

FIG. 2: microscope image of a microporous membrane section.
Upper part: microporous film.
Lower part: support and protection fibre filaments.





MONOLITICO E MICROPOROSO A CONFRONTO
COMPARISON OF MONOLITHIC AND MICROPOROUS

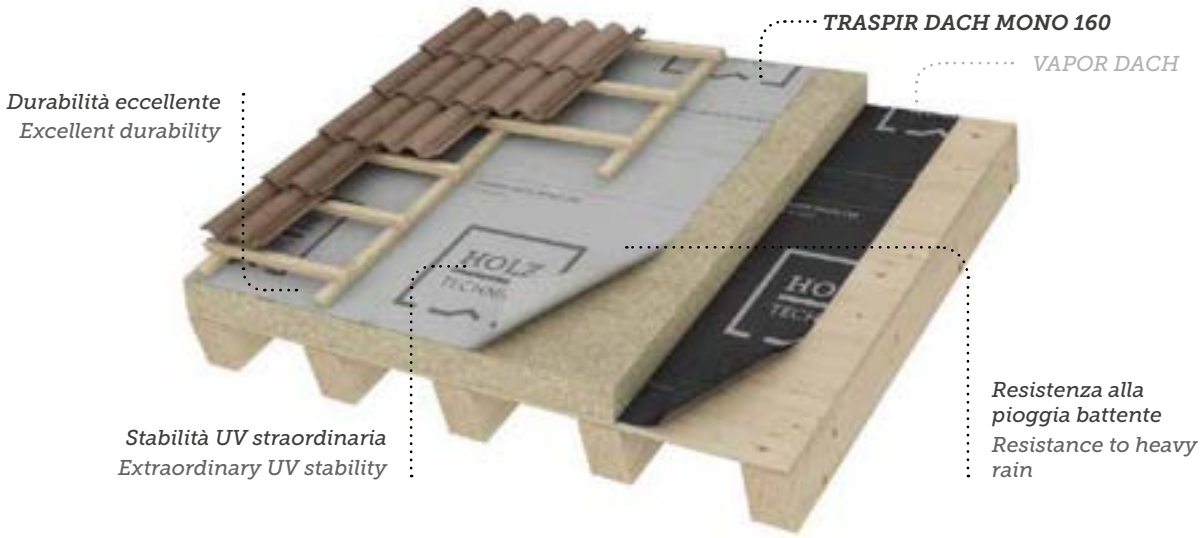
caratteristica *characteristics*	**monolitico** *monolithic*	**microporoso** *microporous*
stabilità termica *thermal stability*	● ● ●	● ○ ○
durabilità e stabilità nell'invecchiamento *durability and stability with ageing*	● ● ●	● ● ○
stabilità UV *UV resistance*	● ● ●	● ● ○
stabilità chimica *chemical stability*	● ● ●	● ○ ○
bassa reazione al fuoco *low reaction to fire*	● ● ○	● ○ ○
traspirabilità (vapore acqueo) *breathability (water vapour)*	● ● ●	● ● ●
impermeabilità all'acqua *watertightness*	● ● ●	● ● ○
impermeabilità all'aria *airtightness*	● ● ●	● ● ○
resistenza alla pioggia battente *resistance to heavy rain*	● ● ●	● ● ○
resistenze meccaniche *mechanical resistance*	● ● ●	● ● ●
resistenza allo scivolamento *slipping resistance*	● ● ○	● ● ●

TRASPIR DACH MONO 160

CE
EN 13859-1

IT UNI 11470 B/R2 | FR CPT 3651_2 HPV E1-Sd1-TR2 | CH SIA 232 UD EB | DE ZVDH UDB-A USB-A | AT Önorm B4119 UD-k RU

MEMBRANA ALTAMENTE TRASPIRANTE MONOLITICA PER TETTO
HIGH PERFORMANCE SINGLE-BLOCK BREATHER MEMBRANE FOR ROOFS



CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
TDACHMTT160	TT	1,5	50	75	1

COMPOSIZIONE / ***COMPOSITION***

1. tessuto non tessuto in PP / *non-woven PP fabric*
2. film monolitico traspirante in PE / *monolithic PE breathable film*
3. tessuto non tessuto in PP / *non-woven PP fabric*

TDACHMTT160 rotoli/bancale / *rolls/pallet* = **30**
peso rotolo / *roll weight* = **12,0 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	160 g/m²
spessore *thickness*	0,5 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	0,1 m
resistenza a trazione *tensile strength*	MD: 280 N / 50 mm CD: 220 N / 50 mm
allungamento *elongation*	MD: 50% CD: 60%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 180 N CD: 200 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	4 mesi *4 months*
resistenza termica *temperature resistance*	-40 / +100°C
dopo invecchiamento artificiale *after ageing*	
resistenza a trazione *tensile strength*	MD: 260 N / 50 mm CD: 200 N / 50 mm
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
allungamento *elongation*	MD: 40% CD: 50%
reazione al fuoco *reaction to fire*	classe E *class E*

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

TRASPIR WAND 110

EN 13859 - 1/2

MEMBRANA ALTAMENTE TRASPIRANTE
HIGH PERFORMANCE BREATHABLE MEMBRANE

IT UNI 11470 **D/R1**

FR CPT 3651_2 **HPV** **pare-pluie**

Uso interno ed esterno
For indoor and outdoor use

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
TWAND110	-	1,5	50	75	1

COMPOSIZIONE / *COMPOSITION*

1. tessuto non tessuto in PP / *non-woven PP fabric*
2. film traspirante in PP / *PP breathable film*
3. tessuto non tessuto in PP / *non-woven PP fabric*

TWAND110 rotoli/bancale / *rolls/pallet* = **36**
peso rotolo / *roll weight* = **8,3 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	112 g/m²
spessore *thickness*	0,4 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	0,02 m
resistenza a trazione *tensile strength*	MD: 250 N / 50 mm CD: 165 N / 50 mm
allungamento *elongation*	MD: 50% CD: 70%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 115 N CD: 135 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	2 mesi *2 months*
resistenza termica *temperature resistance*	-40 / +80°C
dopo invecchiamento artificiale *after ageing*	
resistenza a trazione *tensile strength*	MD: 220 N / 50 mm CD: 145 N / 50 mm
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
allungamento *elongation*	MD: 40% CD: 60%
reazione al fuoco *reaction to fire*	classe E *class E*

MD: longitudinale *longitudinal*

CD: trasversale *transversal*

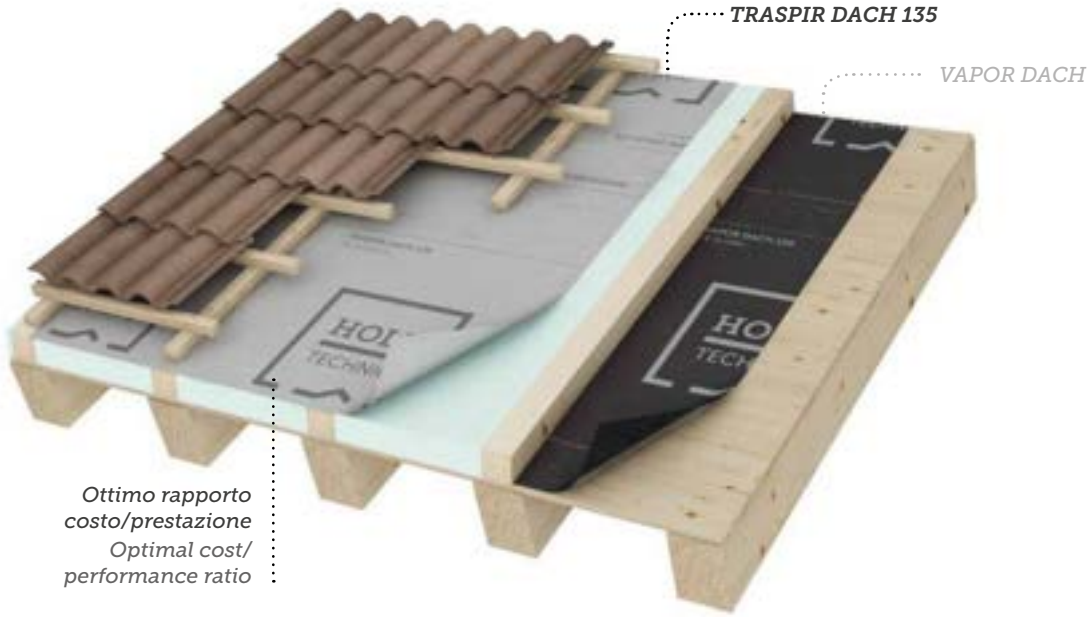
HOLZ TECHNIC

TRASPIR DACH 135

CE
EN 13859-1/2

MEMBRANA ALTAMENTE TRASPIRANTE
HIGH PERFORMANCE BREATHABLE MEMBRANE

IT UNI 11470 **C/R1** | **FR** CPT 3651_2 **HPV E1-Sd1-TR2** | **DE** ZVDH **UDB-B USB-B**



CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
TDACH135	-	1,5	50	75	1

COMPOSIZIONE / *COMPOSITION*

1. tessuto non tessuto in PP / *non-woven PP fabric*
2. film traspirante in PP / *PP breathable film*
3. tessuto non tessuto in PP / *non-woven PP fabric*

TDACH135 rotoli/bancale / *rolls/pallet* = **28**
peso rotolo / *roll weight* = **10,1 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	135 g/m²
spessore *thickness*	0,6 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	0,02 m
resistenza a trazione *tensile strength*	MD: 280 N / 50 mm CD: 190 N / 50 mm
allungamento *elongation*	MD: 70% CD: 110%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 135 N CD: 170 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	2 mesi *2 months*
resistenza termica *temperature resistance*	-40 / +80°C
dopo invecchiamento artificiale *after ageing*	
resistenza a trazione *tensile strength*	MD: 250 N / 50 mm CD: 160 N / 50 mm
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
allungamento *elongation*	MD: 50% CD: 50%
reazione al fuoco *reaction to fire*	classe E *class E*

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

TRASPIR DACH 150

EN 13859-1/2

MEMBRANA ALTAMENTE TRASPIRANTE
HIGH PERFORMANCE BREATHABLE MEMBRANE

IT	FR	CH	DE	AT
UNI 11470 **B/R2**	CPT 3651_2 **HPV E1-Sd1-TR2**	SIA 232 **UD EB**	ZVDH **UDB-A USB-A**	Önorm B4119 **UD-k RU**

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
TDACH150	-	1,5	50	75	1
TDACHTT150	TT	1,5	50	75	1

COMPOSIZIONE / ***COMPOSITION***

1. tessuto non tessuto in PP / *non-woven PP fabric*
2. film traspirante in PP / *PP breathable film*
3. tessuto non tessuto in PP / *non-woven PP fabric*

TDACH150 rotoli/bancale / *rolls/pallet* = **25**
peso rotolo / *roll weight* = **11,1 kg**

TDACHTT150 rotoli/bancale / *rolls/pallet* = **25**
peso rotolo / *roll weight* = **10,0 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	150 g/m²
spessore *thickness*	0,5 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	0,05 m
resistenza a trazione *tensile strength*	MD: 350 N / 50 mm CD: 210 N / 50 mm
allungamento *elongation*	MD: 100% CD: 125%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 190 N CD: 225 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	2 mesi *2 months*
resistenza termica *temperature resistance*	-40 / +80°C
dopo invecchiamento artificiale *after ageing*	
resistenza a trazione *tensile strength*	MD: 310 N / 50 mm CD: 180 N / 50 mm
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
allungamento *elongation*	MD: 45% CD: 60%
reazione al fuoco *reaction to fire*	classe E *class E*

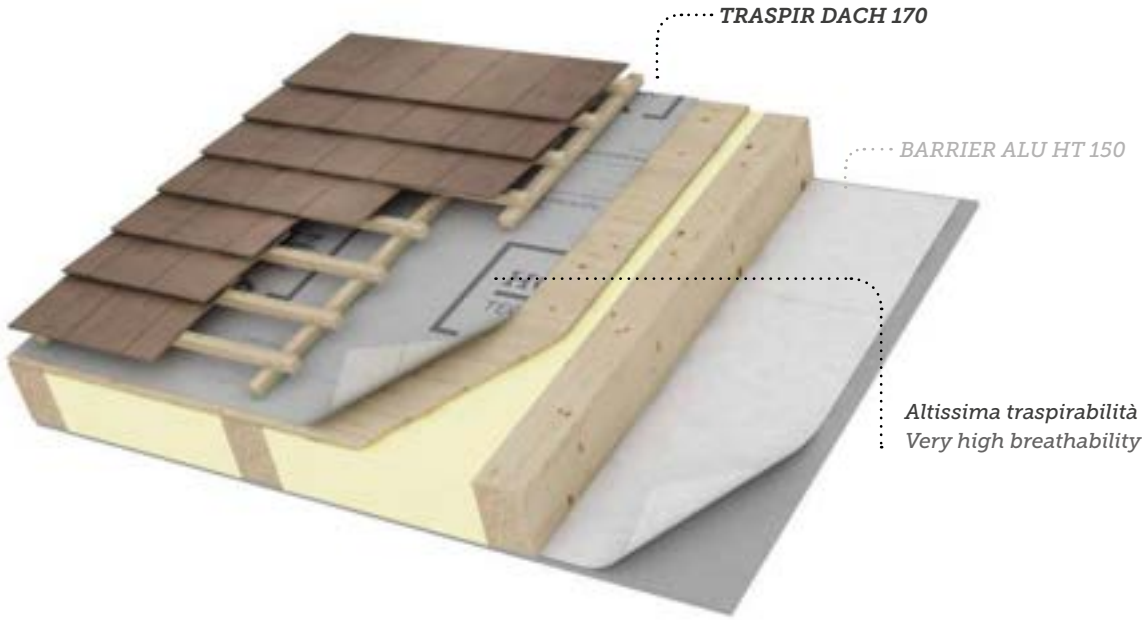
MD: longitudinale *longitudinal*
CD: trasversale *transversal*

TRASPIR DACH 170

CE
EN 13859-1

MEMBRANA ALTAMENTE TRASPIRANTE
HIGH PERFORMANCE BREATHABLE MEMBRANE

IT UNI 11470 **B/R2** | **FR** CPT 3651_2 **HPV E1-Sd1-TR2** | **CH** SIA 232 **UD EB** | **DE** ZVDH **UDB-A USB-A** | **AT** Önorm B4119 **UD-k RU**



CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
TDACH170	-	1,5	50	75	1

COMPOSIZIONE / ***COMPOSITION***

1. tessuto non tessuto in PP / *non-woven PP fabric*
2. film traspirante in PP / *PP breathable film*
3. tessuto non tessuto in PP / *non-woven PP fabric*

TDACH170 rotoli/bancale / *rolls/pallet* = **25**
peso rotolo / *roll weight* = **10,0 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	170 g/m²
spessore *thickness*	0,6 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	0,02 m
resistenza a trazione *tensile strength*	MD: 330 N / 50 mm CD: 230 N / 50 mm
allungamento *elongation*	MD: 55% CD: 80%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 190 N CD: 230 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	3 mesi *3 months*
resistenza termica *temperature resistance*	-40 / +80°C
dopo invecchiamento artificiale *after ageing*	
resistenza a trazione *tensile strength*	MD: 290 N / 50 mm CD: 200 N / 50 mm
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
allungamento *elongation*	MD: 45% CD: 65%
reazione al fuoco *reaction to fire*	classe E *class E*

MD: longitudinale *longitudinal*
CD: trasversale *transversal*

TRASPIR DACH 190

EN 13859-1/2

MEMBRANA ALTAMENTE TRASPIRANTE
HIGH PERFORMANCE BREATHABLE MEMBRANE

IT	FR	CH	DE	AT
UNI 11470 B/R3	CPT 3651_2 HPV E1-Sd1-TR3	SIA 232 UD EB	ZVDH UDB-A USB-A	Önorm B4119 UD-k RU

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
TDACHTT190	TT	1,5	50	75	1

COMPOSIZIONE / ***COMPOSITION***

1. tessuto non tessuto in PP / *non-woven PP fabric*
2. film traspirante in PP / *PP breathable film*
3. tessuto non tessuto in PP / *non-woven PP fabric*

TDACHTT190 rotoli/bancale / *rolls/pallet* = **23**
peso rotolo / *roll weight* = **14,0 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	190 g/m²
spessore *thickness*	0,6 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	0,05 m
resistenza a trazione *tensile strength*	MD: 410 N / 50 mm CD: 275 N / 50 mm
allungamento *elongation*	MD: 75% CD: 110%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 210 N CD: 260 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	3 mesi *3 months*
resistenza termica *temperature resistance*	-40 / +80°C
dopo invecchiamento artificiale *after ageing*	
resistenza a trazione *tensile strength*	MD: 370 N / 50 mm CD: 210 N / 50 mm
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
allungamento *elongation*	MD: 50% CD: 60%
reazione al fuoco *reaction to fire*	classe E *class E*

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

TRASPIR DACH 270

CE
EN 13859-1

MEMBRANA ALTAMENTE TRASPIRANTE
HIGH PERFORMANCE BREATHABLE MEMBRANE

IT	FR	CH	DE	AT
UNI 11470 A/R3	CPT 3651_2 HPV E1-Sd1-TR3	SIA 232 UD EB	ZVDH UDB-B USB-B	Önorm B4119 UD-k RU

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
TDACH270	-	1,5	50	75	1

COMPOSIZIONE / *COMPOSITION*

1. tessuto non tessuto in PP / *non-woven PP fabric*
2. griglia di rinforzo in PP / *reinforcing PP grid*
3. film traspirante in PP / *PP breathable film*
4. griglia di rinforzo in PP / *reinforcing PP grid*
5. tessuto non tessuto in PP / *non-woven PP fabric*

TDACH270 rotoli/bancale / *rolls/pallet* = **16**
peso rotolo / *roll weight* = **20,3 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

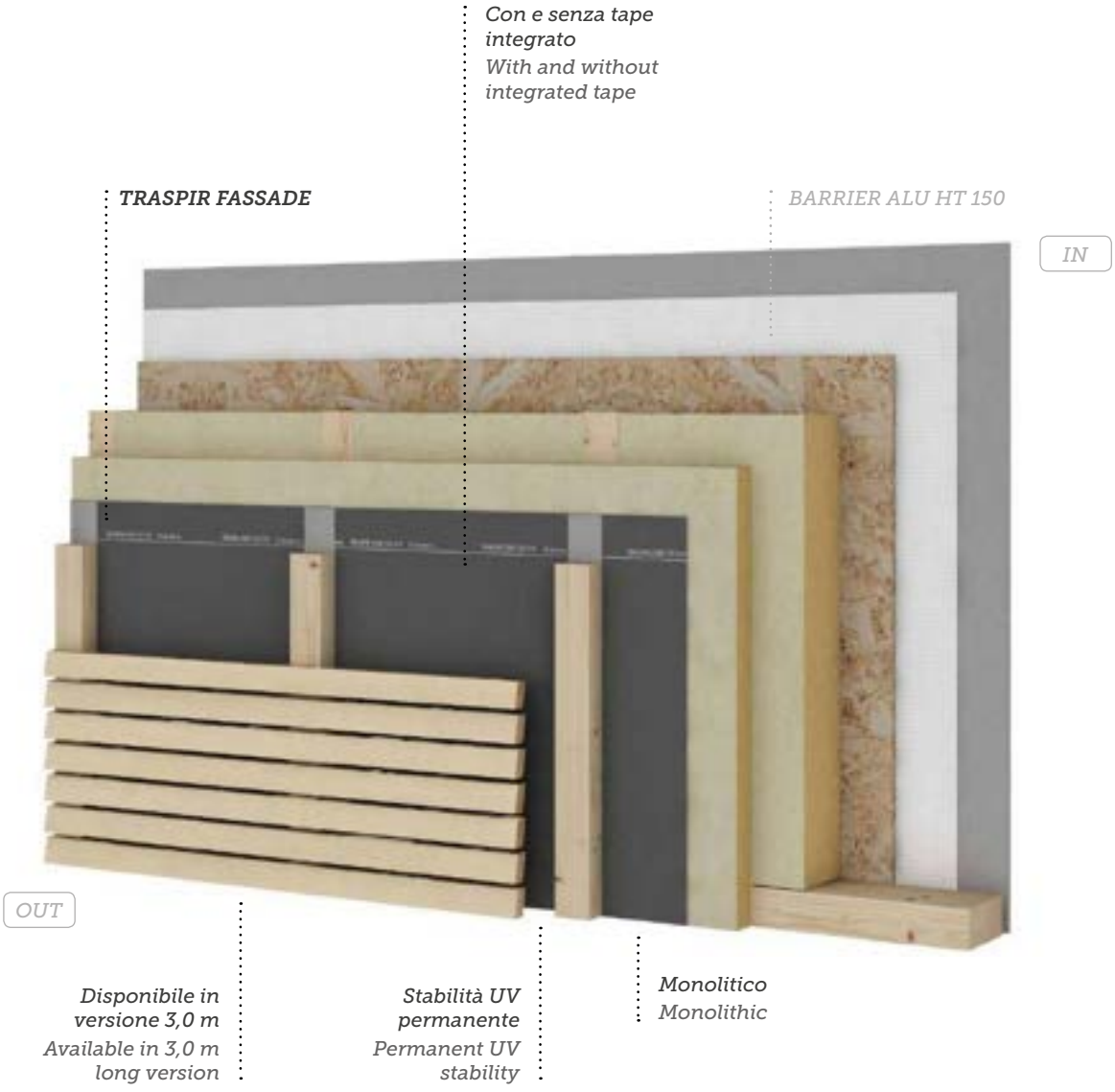
proprietà *property*	**valore** *value*
grammatura *mass per unit area*	270 g/m²
spessore *thickness*	1,0 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	0,035 m
resistenza a trazione *tensile strength*	MD: 650 N / 50 mm CD: 800 N / 50 mm
allungamento *elongation*	MD: 40% CD: 60%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 750 N CD: 550 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	3 mesi *3 months*
resistenza termica *temperature resistance*	-40 / +80°C
dopo invecchiamento artificiale *after ageing*	
resistenza a trazione *tensile strength*	MD: 620 N / 50 mm CD: 770 N / 50 mm
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
allungamento *elongation*	MD: 35% CD: 55%
reazione al fuoco *reaction to fire*	classe E *class E*

MD: longitudinale *longitudinal*
CD: trasversale *transversal*

TRASPIR FASSADE

CE

MEMBRANA TRASPIRANTE MONOLITICA RESISTENTE AI RAGGI UV
BREATHABLE MONOLITHIC MEMBRANE RESISTANT TO UV RAYS



TRASPIR EVO UV 210

COMPOSIZIONE / *COMPOSITION*

1. film monolitico traspirante / *single-block breather film*
2. tessuto in PL / *PL fabric*

TRASPIR ZENIT UV 210

COMPOSIZIONE / *COMPOSITION*

1. film monolitico traspirante in PU / *monolithic PU breathable film*
2. tessuto in PL / *PL fabric*

CODICI E DIMENSIONI
CODES AND DIMENSIONS

TTTUV210 rotoli/bancale / *rolls/pallet* = **24**
peso rotolo / *roll weight* = **15,8 kg**

TRASPIR EVO UV 210

CE EN 13859-2

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
TTTUV210	TT	1,5	50	75	1

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	210 g/m²
spessore *thickness*	0,3 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	0,04 m
resistenza a trazione *tensile strength*	MD: 300 N / 50 mm CD: 200 N / 50 mm
allungamento *elongation*	MD: 25% CD: 25%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 120 N CD: 120 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	permanente* *permanent**
resistenza termica *temperature resistance*	-40 / +100°C
dopo invecchiamento artificiale *after ageing*	
resistenza a trazione *tensile strength*	MD: 290 N / 50 mm CD: 190 N / 50 mm
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
allungamento *elongation*	MD: 20% CD: 20%
reazione al fuoco *reaction to fire*	classe B-s1,d0 *class B-s1,d0*

FR CPT 3651_2 HPV pare-pluie

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

* con giunti fino a 50 mm di larghezza e che scoprono massimo il 40% della facciata
* *with joints up to 50 mm wide exposing up to 40% of the facade*

CODICI E DIMENSIONI
CODES AND DIMENSIONS

TUV210 rotoli/bancale / *rolls/pallet* = **16**
peso rotolo / *roll weight* = **12 kg**

TUV21030 rotoli/bancale / *rolls/pallet* = **16**
peso rotolo / *roll weight* = **24 kg**

TRASPIR ZENIT UV 210

CE EN 13859-1/2

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
TUV210	-	1,5	50	75	1
TUV21030	-	3,0	50	150	1

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	210 g/m²
spessore *thickness*	1,0 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	0,15 m
resistenza a trazione *tensile strength*	MD: 380 N / 50 mm CD: 420 N / 50 mm
allungamento *elongation*	MD: 40% CD: 45%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 220 N CD: 210 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	permanente** *permanent**
resistenza termica *temperature resistance*	-40 / +80°C
dopo invecchiamento artificiale *after ageing*	
resistenza a trazione *tensile strength*	MD: 340 N / 50 mm CD: 380 N / 50 mm
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
allungamento *elongation*	MD: 35% CD: 50%
reazione al fuoco *reaction to fire*	classe E *class E*

IT UNI 11470 A/R3 | FR CPT 3651_2 pare-pluie E1-Sd2-TR3 | CH SIA 232 UD EB | DE ZVDH UDB-B USB-B | AT Önorm B4119 UD-k RU

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

** con giunti fino a 30 mm di larghezza e che scoprono massimo il 30% della facciata
** *with joints up to 30 mm wide exposing up to 30% of the facade*

BYTUM 400

CE
EN 13859-1

SCHERMO BITUMINOSO SOTTOTEGOLA
BITUMINOUS UNDERLAY CONTROL LAYER

IT UNI 11564 **P / SR3 / A** | **DE** ZVDH **E1 DO PYE PV** | **AT** Önorm B3661 **KV Bitumenbahnen**

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
BYT400	-	1,0	50	50	1

COMPOSIZIONE / *COMPOSITION*

1. tessuto non tessuto in PP / *non-woven PP fabric*
2. mescola bituminosa / *bituminous mixture*
3. tessuto in PL / *PL fabric*
4. mescola bituminosa / *bituminous mixture*
5. tessuto non tessuto in PP / *non-woven PP fabric*

BYT400 rotoli/bancale / *rolls/pallet* = **20**
peso rotolo / *roll weigh* = **21,0 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	400 g/m²
spessore *thickness*	0,6 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	22 m
resistenza a trazione *tensile strength*	MD: 460 N / 50 mm CD: 370 N / 50 mm
allungamento *elongation*	MD: 45% CD: 50%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 200 N CD: 200 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	4 mesi *4 months*
resistenza a basse temperature *resistance at low temperatures*	-45 °C
resistenza termica *temperature resistance*	-40 / +100°C
reazione al fuoco *reaction to fire*	classe E *class E*
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 36000 *ca. 36000*

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

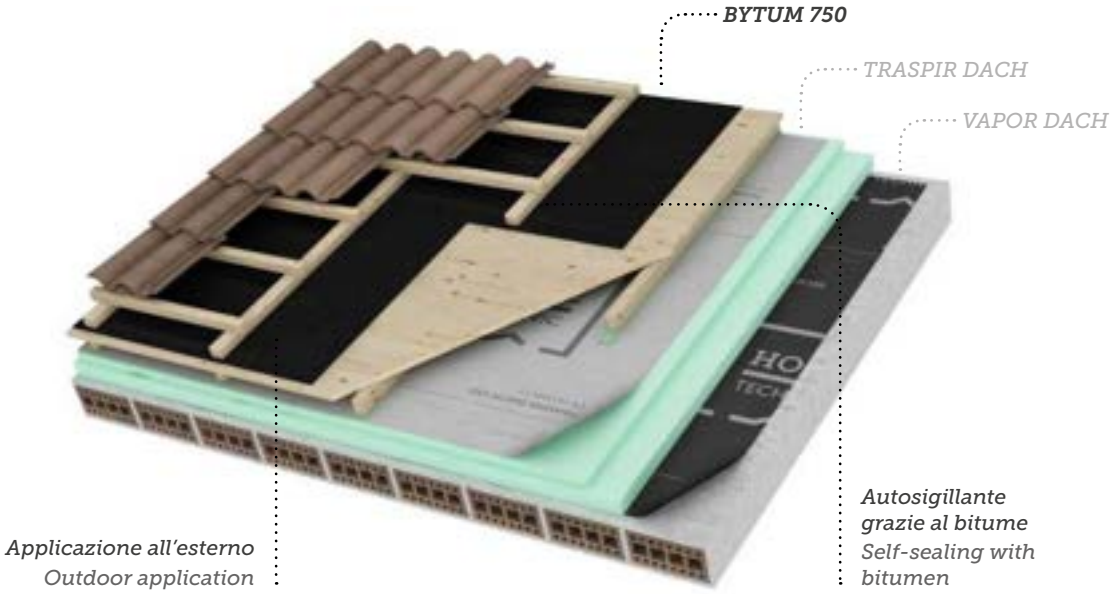
HOLZ TECHNIC

BYTUM 750

CE
EN 13859-1

SCHERMO BITUMINOSO SOTTOTEGOLA
BITUMINOUS UNDERLAY CONTROL LAYER

IT UNI 11564 **P / SR2 / A** | **DE** ZVDH **E1 DO PYP PV** | **AT** Önorm B3661 **KV Bitumenbahnen**



CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
BYTT750	T	1,0	40	40	1

COMPOSIZIONE / *COMPOSITION*

1. tessuto non tessuto in PP e pellicola di separazione siliconata / *non-woven PP fabric and silicone separating film*
2. mescola bituminosa / *bituminous mixture*
3. tessuto in PL / *PL fabric*
4. mescola bituminosa / *bituminous mixture*
5. tessuto non tessuto in PP e pellicola di separazione siliconata / *non-woven PP fabric and silicone separating film*

BYT750 rotoli/bancale / *rolls/pallet* = **20**
peso rotolo / *roll weight* = **30,4 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	750 g/m²
spessore *thickness*	0,8 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	38 m
resistenza a trazione *tensile strength*	MD: 460 N / 50 mm CD: 370 N / 50 mm
allungamento *elongation*	MD: 45% CD: 50%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 200 N CD: 200 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	4 mesi *4 months*
resistenza a basse temperature *resistance at low temperatures*	-45 °C
resistenza termica *temperature resistance*	-40 / +100°C
reazione al fuoco *reaction to fire*	classe E *class E*
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 47500 *ca. 47500*

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

BYTUM 1100

CE
EN 13859-1

SCHERMO BITUMINOSO SOTTOTEGOLA
BITUMINOUS UNDERLAY CONTROL LAYER

IT UNI 11564 **P / SR2 / A** | **DE** ZVDH **E1 DO PYE PV** | **AT** Önorm B3661 **KV Bitumenbahnen**

Lavorabile anche a basse temperature
Workable even at low temperatures

Alta elasticità e resistenza
High elasticity and strength

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tape	H [m]	L [m]	A [m²]	
BYT1100	-	1,0	25	25	1

COMPOSIZIONE / *COMPOSITION*

1. tessuto non tessuto in PP / *non-woven PP fabric*
2. mescola bituminosa / *bituminous mixture*
3. tessuto in PL / *PL fabric*
4. mescola bituminosa / *bituminous mixture*
5. tessuto non tessuto in PP / *non-woven PP fabric*

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	1100 g/m²
spessore *thickness*	1.1 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	55 m
resistenza a trazione *tensile strength*	MD: 650 N / 50 mm CD: 500 N / 50 mm
allungamento *elongation*	MD: 45% CD: 50%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 230 N CD: 230 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	4 mesi *4 months*
resistenza a basse temperature *resistance at low temperatures*	-45 °C
resistenza termica *temperature resistance*	-40 / +100°C
reazione al fuoco *reaction to fire*	classe E *class E*
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 50000 *ca. 50000*

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

BYT1100 rotoli/bancale / *rolls/pallet* = **24**
peso rotolo / *roll weight* = **27,3 kg**

HOLZ TECHNIC

BYTUM SLATE 3500

CE
EN 13859-1
EN 13707

MEMBRANA BITUMINOSA AUTOADESIVA ARDESIATA
SELF-ADHESIVE SLATED BITUMINOUS MEMBRANE

IT UNI 11564 V / SR1 / A

DE ZVDH E1 DO PYE G

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	colori *colours*	H [m]	L [m]	A [m²]	
BYTSGRA3500	●	1	10	10	1
BYTSRED3500	●	1	10	10	1
BYTSGRE3500	●	1	10	10	1
BYTSWHI3500	○	1	10	10	1

COMPOSIZIONE / ***COMPOSITION***

1. scaglie di ardesia / *slate flakes*
2. bitume distillato polimero elastoplastico / *distilled bitumen elasto-plastic polymer*
3. PL stabilizzato con fibra di vetro / *PL stabilised with fibreglass*
4. bitume distillato polimero elastoplastico / *distilled bitumen elasto-plastic polymer*
5. bitume distillato autoadesivo modificato con polimeri / *self-adhesive distilled bitumen modified with polymers*
6. film plastico asportabile / *removable plastic film*

rotoli/bancale / *rolls/pallet* = **20**
peso rotolo / *roll weight* = **35,0 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	ca. 3,5 kg/m² *ca. 3,5 kg/m²*
spessore *thickness*	ca. 2,8 mm *ca. 2,8 mm*
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	ca. 280 m *ca. 280 m*
resistenza a trazione *tensile strength*	MD: 400 N / 50 mm CD: 300 N / 50 mm
allungamento *elongation*	MD: 35% CD: 35%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 120 N CD: 120 N
impermeabilità all'acqua *watertightness*	60 kPa *60 kPa*
stabilità UV *UV resistance*	permanente *permanent*
flessibilità a basse temperature *flexibility at low temperatures*	-15 °C
temperatura di applicazione *application temperature*	+ 5 / + 40°C
pendenza d'installazione consigliata *recommended installation pitch*	> 2°
reazione al fuoco *reaction to fire*	classe E *class E*
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 100000 *ca. 100000*

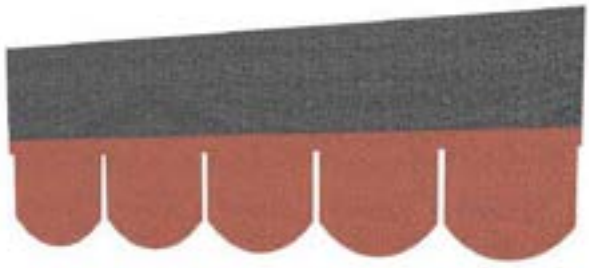
MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

SHINGLE

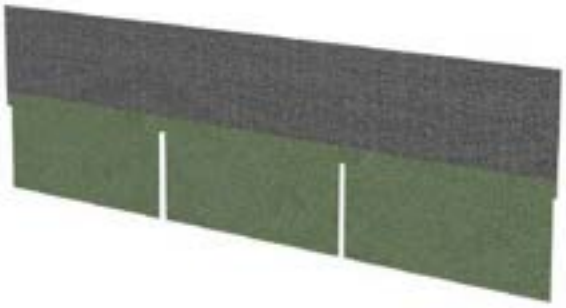
CE
ETA

TEGOLA BITUMINOSA (CANADESE)
BITUMINOUS TILE

Autosigillante grazie ai punti termo-adesivi
Self-sealing with thermo-adhesive points



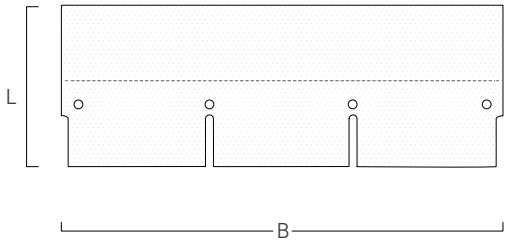
Stabilità UV permanente
Permanent UV stability



Marcatura CE
CE marking

CODICI E DIMENSIONI
CODES AND DIMENSIONS

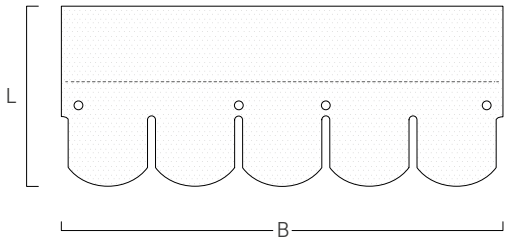
SHINGLE RECTANGULAR



peso / *weight* = **9,6 kg/m²**
dimensione B x L / *dimension B x L* = **777 x 336 mm**

CODICE *CODE*	colori *colours*	A/co [m²]	A/b [m²]	co	co/b
SHIREDR	●	2	66	1	33
SHIBROR	●	2	66	1	33
SHIGRER	●	2	66	1	33
SHIBLAR	●	2	66	1	33

SHINGLE BIBER

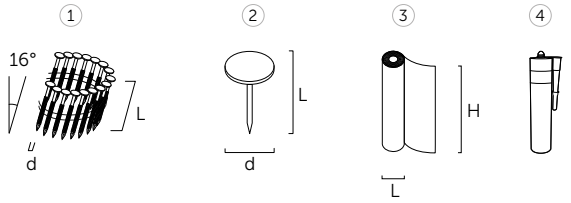


peso / *weight* = **9,0 kg/m²**
dimensione B x L / *dimension B x L* = **808 x 336 mm**

CODICE *CODE*	colori *colours*	A/co [m²]	A/b [m²]	co	co/b
SHIREDB	●	2	66	1	33
SHIBROB	●	2	66	1	33
SHIGREB	●	2	66	1	33
SHIBLAB	●	2	66	1	33

A/co: area tegole a confezione
area of tiles per package
A/b: area tegole a bancale
area of tiles per pallet
co: confezioni
packages
co/b: confezioni a bancale
packages per pallet

PRODOTTI CORRELATI
RELATED PRODUCTS



CHIODI ROOFING RING A ROTOLO - D16°
ROOFING RING NAIL ROLL - D16°

CODICE *CODE*		materiale *material*	d x L [mm]	
HH10501873	1	galvanizzati *galvanized*	3 x 19	7200
HH10501874	1	galvanizzati *galvanized*	3 x 22	7200
HH10501875	1	galvanizzati *galvanized*	3 x 25	7200

CHIODI A TESTA LARGA - SFUSI
LARGE-HEAD NAILS - LOOSE

CODICE *CODE*		d x L [mm]	kg
FE610135	2	3.1 x 19	5
FE610131	2	3.1 x 25	5
FE610132	2	3.1 x 32	5

BYTUM 400 MEMBRANA BITUMINOSA AUTOADESIVA
BYTUM 400 SELF-ADHESIVE BITUMINOUS MEMBRANE

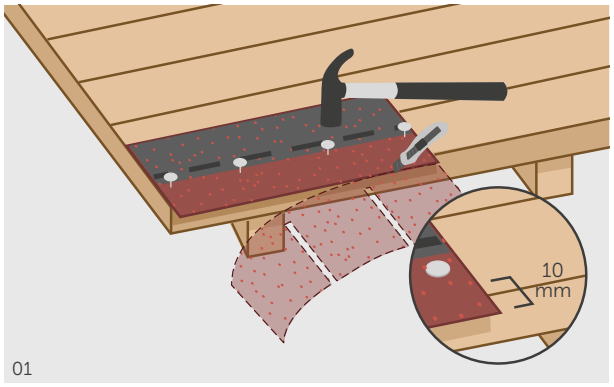
CODICE *CODE*		tape	H [m]	L [mm]	A [m²]	
BYT400	3	-	1,0	50	50	1

SHINGLE STICK

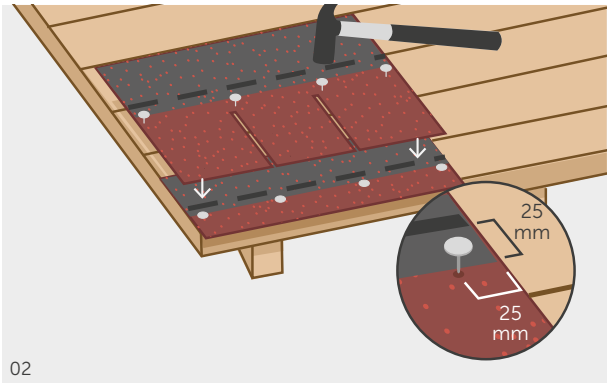
CODICE *CODE*		CE	[ml]	
00057008	4	●	310	12

ISTRUZIONI DI POSA
APPLICATION INSTRUCTIONS

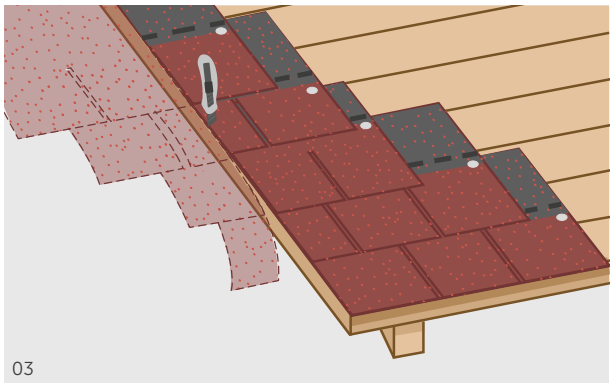
POSA SHINGLE RECTANGULAR PENDENZA 15° - 60°
SHINGLE RECTANGULAR INSTALLATION SLOPE 15° - 60°

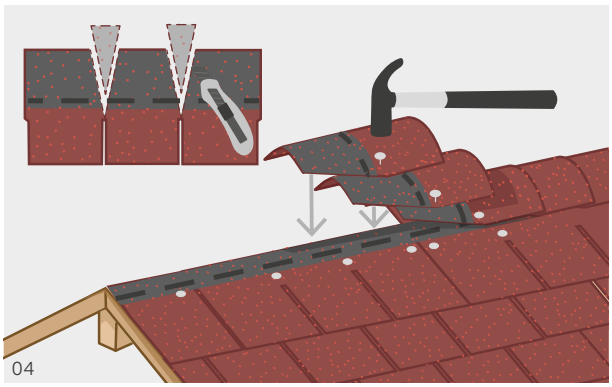


01

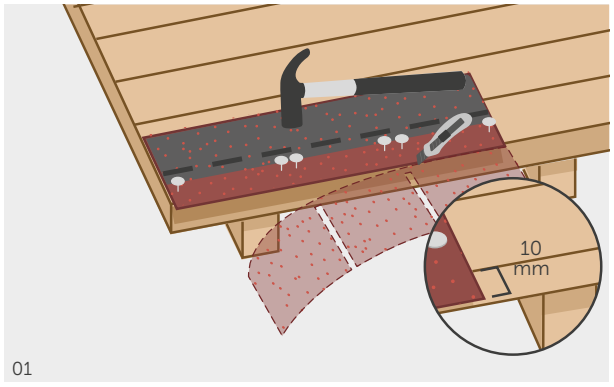


02

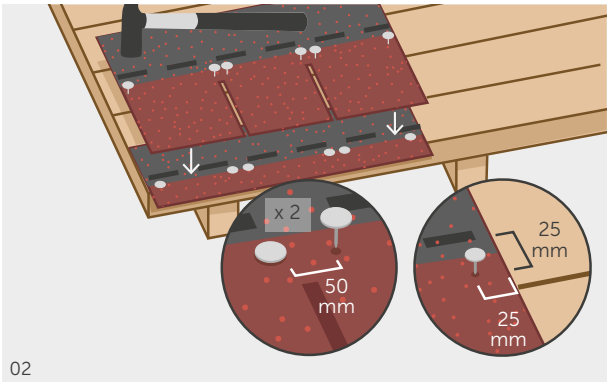

03


04

POSA SHINGLE RECTANGULAR PENDENZA 60° - 85°
SHINGLE RECTANGULAR INSTALLATION SLOPE 60° - 85°



01



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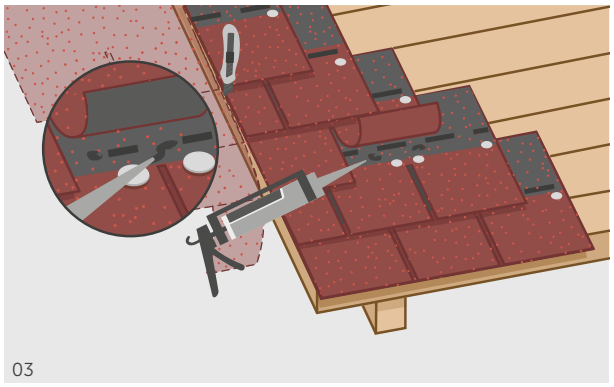
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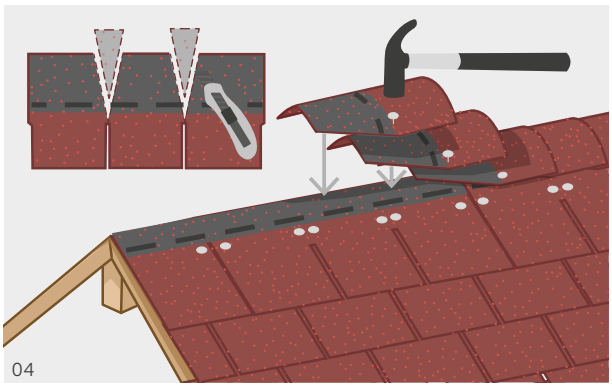
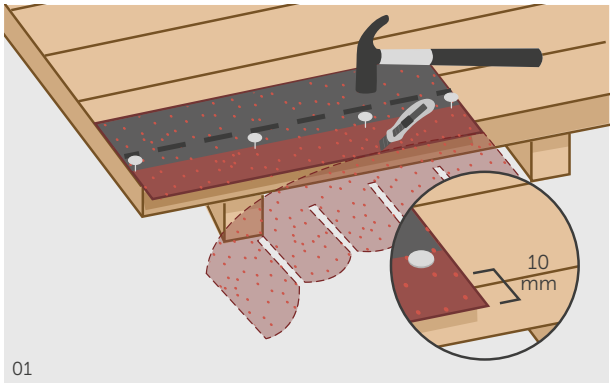

04

ISTRUZIONI DI POSA
APPLICATION INSTRUCTIONS

POSA SHINGLE BIBER PENDENZA 15° - 60°
SHINGLE BIBER INSTALLATION SLOPE 15° - 60°



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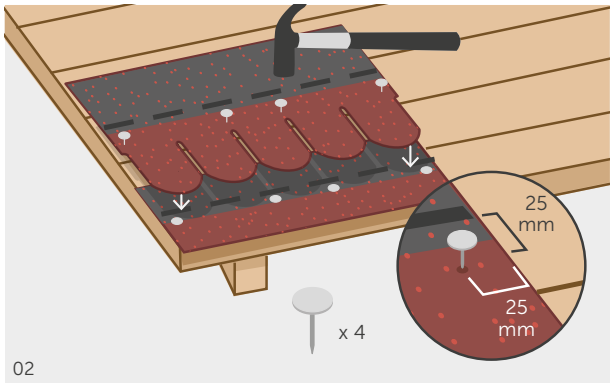

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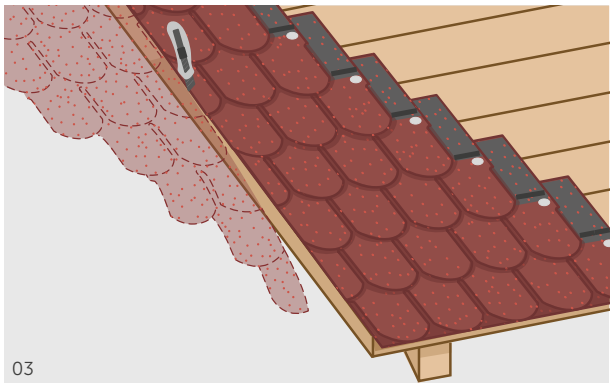
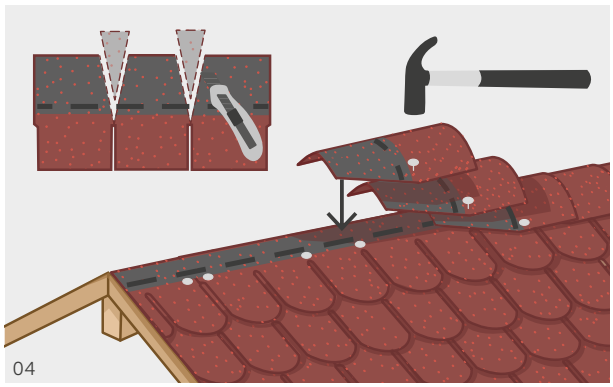
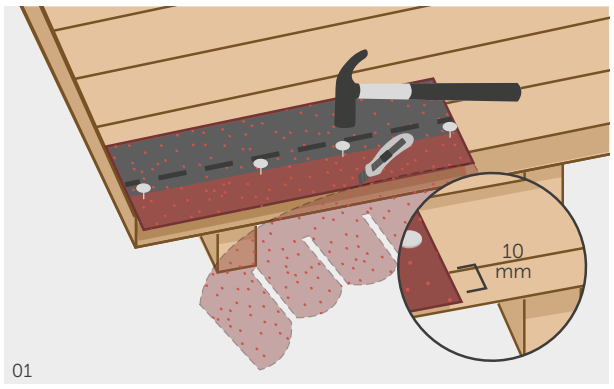

03


04

POSA SHINGLE BIBER PENDENZA 60° - 85°
SHINGLE BIBER INSTALLATION SLOPE 60° - 85°



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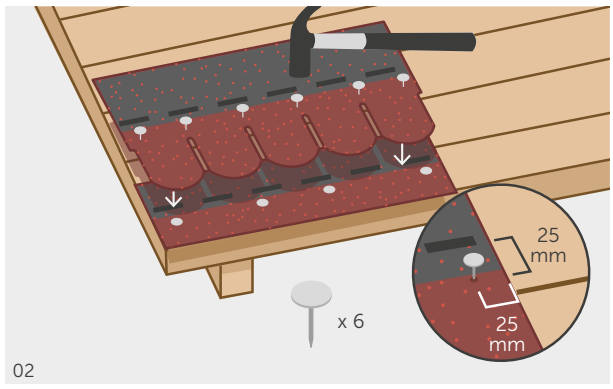

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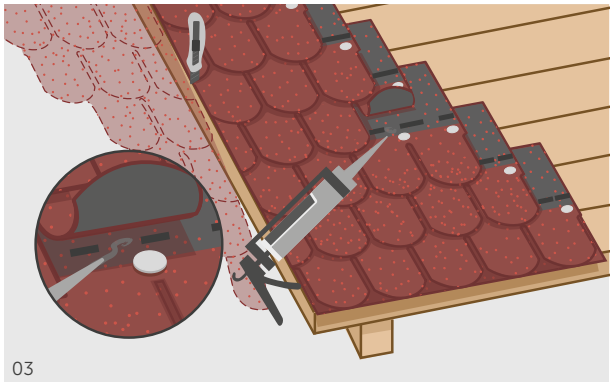
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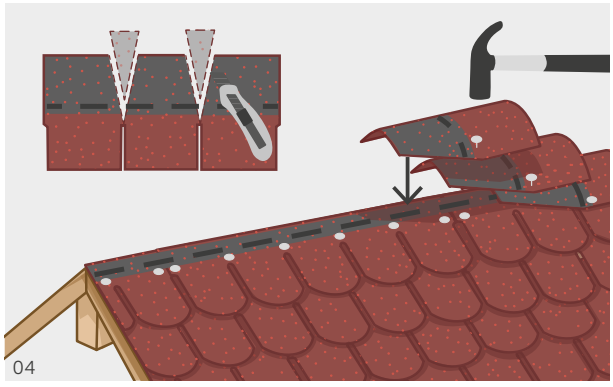
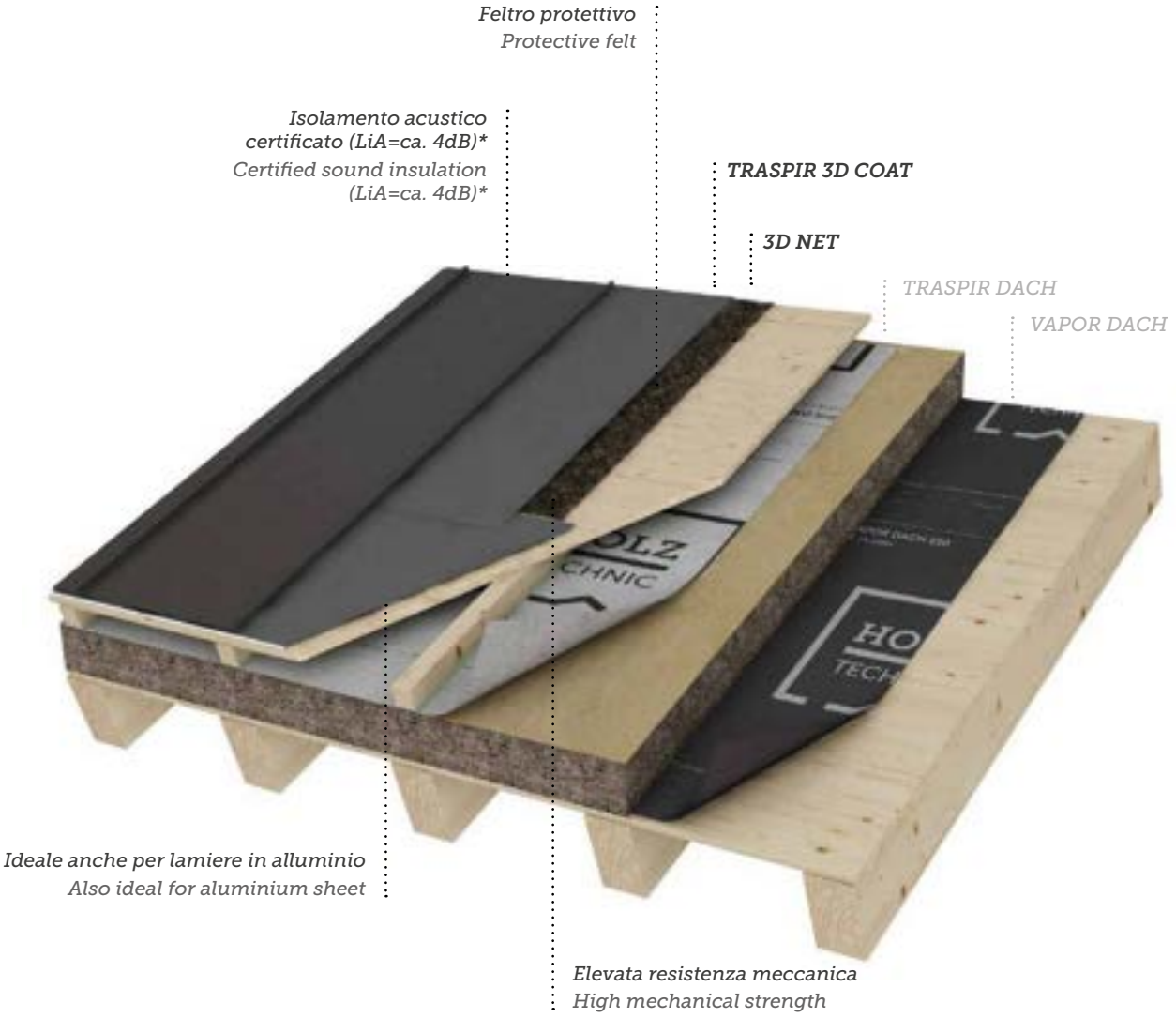

04

TRASPIR METAL

STUOIE TRIDIMENSIONALI PER COPERTURE METALLICHE
3D MATS FOR METAL ROOFS

IT	FR	CH	DE	AT
UNI 11470 A/R2	CPT 3651_2 HPV E1-Sd1-TR2	SIA 232 UD EB	ZVDH UDB-A USB-A	Önorm B4119 UD-k RU



* Il report completo dei test è disponibile presso il nostro ufficio tecnico.
The full test report is available from our technical department.

CODICI E DIMENSIONI
CODES AND DIMENSIONS

TRASPIR 3D COAT

CODICE *CODE*	tape	H [m]	L [mm]	A [m²]	
TTMET580	T	1,5	25	37,5	1

COMPOSIZIONE / ***COMPOSITION***

1. tessuto non tessuto in PP / *non-woven PP fabric*
2. stuoia tridimensionale in PP / *3-dimensional PP mat*
3. tessuto non tessuto in PP / *non-woven PP fabric*
4. film traspirante in PP / *PP breathable film*
5. tessuto non tessuto in PP / *non-woven PP fabric*

TTMET580 rotoli/bancale / *rolls/pallet* = **4**
peso rotolo / *roll weight* = **12,3 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	585 (300) g/m²
spessore *thickness*	8,5 mm (2 kPa) 7,75 mm (10 kPa)
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	0,02 m
resistenza a trazione *tensile strength*	MD: 325 N / 50 mm CD: 225 N / 50 mm
allungamento *elongation*	MD: 45% CD: 70%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 185 N CD: 195 N
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
stabilità UV *UV resistance*	3 mesi *3 months*
resistenza termica *temperature resistance*	-40 / +80°C
dopo invecchiamento artificiale *after ageing*	
resistenza a trazione *tensile strength*	MD: 285 N / 50 mm CD: 195 N / 50 mm
impermeabilità all'acqua *watertightness*	classe W1 *class W1*
allungamento *elongation*	MD: 35% CD: 30%
reazione al fuoco *reaction to fire*	classe E *class E*
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 33 *ca. 33*

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

CODICI E DIMENSIONI
CODES AND DIMENSIONS

3D NET

CODICE *CODE*	tape	H [m]	L [mm]	A [m²]	
3DNET	-	1,4	25	35,0	1

COMPOSIZIONE / ***COMPOSITION***

1. stuoia tridimensionale in PP / *3-dimensional PP mat*

3DNET rotoli/bancale / *rolls/pallet* = **6**
peso rotolo / *roll weight* = **12,3 kg**

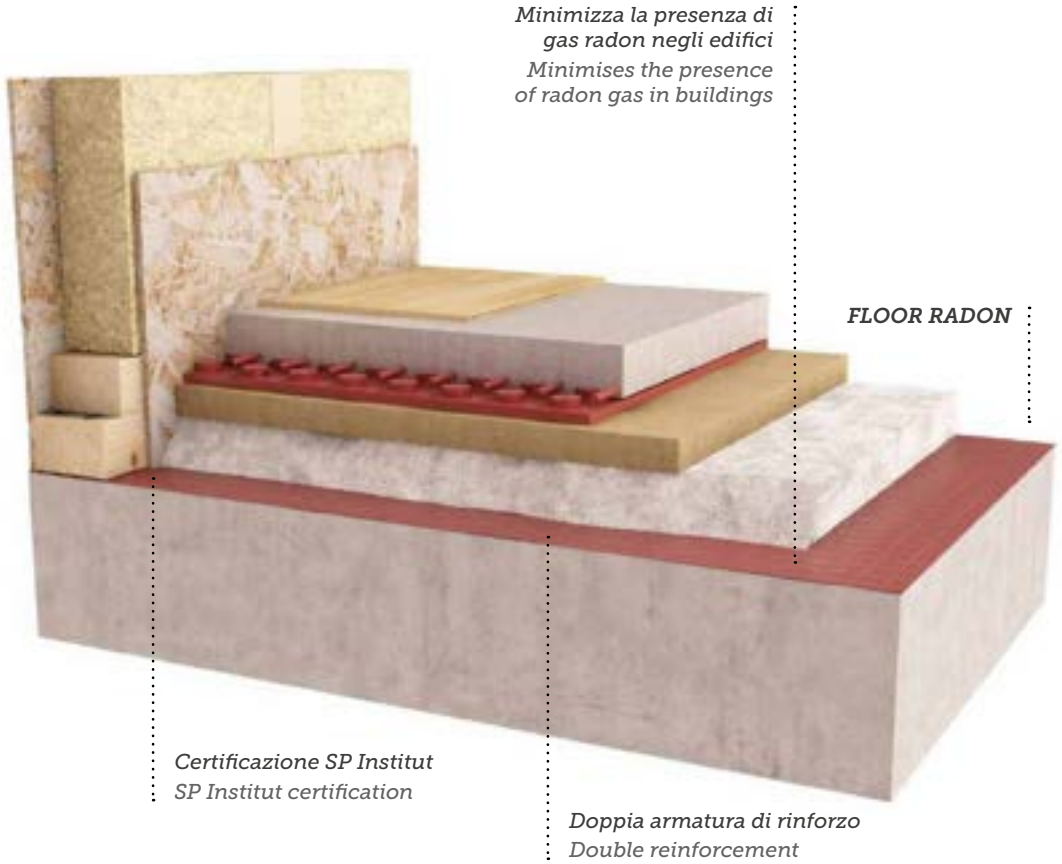
DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	350 g/m²
spessore *thickness*	7,5 mm (2 kPa) 6,75 mm (10 kPa)
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	-
resistenza a trazione NET *maximum tensile strength NET*	MD: 1,3 N / 50 mm CD: 0,5 N / 50 mm
allungamento NET *elongation NET*	MD: 95% CD: 65%
resistenza a lacerazione chiodo *resistance to nail tearing*	-
impermeabilità all'acqua *watertightness*	-
stabilità UV *UV resistance*	3 mesi *3 months*
resistenza termica *temperature resistance*	-40 / +80°C
dopo invecchiamento artificiale *after ageing*	
resistenza a trazione *tensile strength*	-
impermeabilità all'acqua *watertightness*	-
allungamento *elongation*	-
reazione al fuoco *reaction to fire*	classe E *class E*
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	-

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

RADON

BARRIERA AL GAS RADON IMPERMEABILIZZANTE PER FONDAZIONI
WATERPROOFING RADON GAS BARRIER FOR FOUNDATIONS



CODICI E DIMENSIONI
CODES AND DIMENSIONS

FLOOR RADON

CE EN 13967

CODICE *CODE*	tape	H [m]	L [mm]	A [m²]	
RADON350	-	2,0	25	50	1

COMPOSIZIONE / *COMPOSITION*

1. strato in LDPE rosso / *red LDPE layer*
2. griglia di rinforzo in PL / *reinforcing PL grid*
3. strato in HDPE / *HDPE layer*
4. strato in LDPE nero / *black LDPE layer*

RADON350 rotoli/bancale / *rolls/pallet* = **5**
peso rotolo / *roll weight* = **19,0 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	350 g/m²
spessore *thickness*	0,4 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	232 m
resistenza a trazione *tensile strength*	MD: 450 N / 50 mm CD: 420 N / 50 mm
allungamento *elongation*	MD: 12% CD: 12%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 300 N CD: 300 N
impermeabilità all'acqua *watertightness*	conforme *conforming*
resistenza termica *temperature resistance*	-40 / +80°C
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 580000 *ca. 580000*
permeabilità al gas radon *radon permeability*	< 10 x 10^{-12} m²/s
trasmissione radon *radon transmittance*	< 20 x 10^{-9} m/s

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

CODICI E DIMENSIONI
CODES AND DIMENSIONS

Autoadesivo e riflettente
Self-adhesive and reflective

FLOOR RADON EVO

CE EN 13969

CODICE *CODE*	tape	H [m]	L [mm]	A [m²]	
RADONEVO1200	-	1,0	25	25	1

COMPOSIZIONE / *COMPOSITION*

1. film in PL / *PL film*
2. film in alluminio rinforzato / *reinforced aluminium film*
3. coumpound gommobituminoso autoadesivo / *self-adhesive rubber-bituminous compound*
4. strato di separazione in carta siliconata / *silicone paper separation layer*

RADONEVO1200 rotoli/bancale / *rolls/pallet* = **15**
peso rotolo / *roll weight* = **31,0 kg**

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
grammatura *mass per unit area*	1,2 kg/m²
spessore *thickness*	1,2 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	> 1500 m
resistenza a trazione *tensile strength*	MD: 150 N / 50 mm CD: 150 N / 50 mm
allungamento *elongation*	MD: 20% CD: 20%
resistenza a lacerazione chiodo *resistance to nail tearing*	MD: 70 N CD: 70 N
impermeabilità all'acqua *watertightness*	conforme *conforming*
resistenza termica *temperature resistance*	-40 / +80°C
fattore di resistenza al vapore (μ) *water vapour resistance factor (μ)*	ca. 1250000 *ca. 1250000*
permeabilità al gas radon *radon permeability*	0,56 x 10^{-12} m²/s
trasmissione radon *radon transmittance*	0,47 x 10^{-9} m/s

MD: longitudinale *longitudinal* **CD:** trasversale *transversal*

ISOLAMENTO ACUSTICO
SOUNDPROOFING

308 GRANULO

309 TRACK

310 ALADIN STRIPE

312 SILENT UNDERFLOOR

313 SILENT GIPS

314 GIPS BAND

315 SILENT EDGE

316 SILENT FLOOR SOFT

317

SILENT FLOOR

318

SILENT
WALL MASS

319

SILENT WALL

320

SILENT STEP SOFT

321

SILENT STEP

322

SILENT STEP ALU

323

SILENT STEP UNI

GRANULO

PROFILO IN GOMMA GRANULARE
GRANULAR RUBBER PROFILE

Tagliamuro
Wall barrier

Antivibrante
Vibration damper

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	B [mm]	L [m]	s [mm]	
GRANULO100	100	15	4	1

MATERIALE / ***MATERIAL***

Granuli di gomma termo-legata con PU.
Rubber granules thermo-bound with PU.

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà ***property***	**valore** ***value***
densità *density*	750 kg/m^3
rigidità termica apparente s't *apparent thermal stiffness s't*	66 MN/m^3
stima teorica del livello di attenuazione del calpestio ΔL_w [(1)] come sottomassetto *theoretical estimate of the degree of footstep attenuation ΔL_w [(1)] as underscreed*	22,6 dB
sforzo deformazione in compressione *compression deformation stress*	
10% deformazione *10% deformation*	21 kPa
25% deformazione *25% deformation*	145 kPa

(1) Si considera una condizione di carico con m'= 125 kg/m^2.
(1) *The load considered is m'=125 kg/m^2.*

TRACK

PROFILO ACUSTICO IN EPDM
EPDM ACOUSTIC PROFILE

Divisibile in due parti
Can be divided into two parts

Versatile ed efficace
Versatile and effective

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [mm]	L [m]	s [mm]	
TRACK85	85	50	4,5	1

MATERIALE / ***MATERIAL***

Gomma sintetica: EPDM compatto estruso.
Synthetic rubber: Extruded compact EPDM.

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
densità *density*	1,2 ± 0,02 g/cm³
allungamento alla rottura *elongation at break point*	≥ 250 %
deformazione alla compressione 22 h *compression deformation 22 h*	
+23 °C	-
+40 °C	-
+70 °C	≤ 40 %
temperatura di lavorazione *working temperature*	- 35 / +70 °C

ALADIN STRIPE

FLANKSOUND
EN ISO 10848

PROFILO ACUSTICO IN EPDM
EPDM ACOUSTIC PROFILE

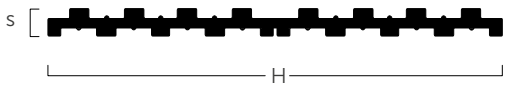
Testato e certificato
Tested and certified

4 dB

Altamente performante
High performance

CODICI E DIMENSIONI
CODES AND DIMENSIONS

ALADIN95 - SOFT



ALADIN115 - EXTRA SOFT

CODICE *CODE*	H [mm]	L [m]	s [mm]	
ALADIN95	95	50	5	1
ALADIN115	115	50	7	1

MATERIALE / ***MATERIAL***

ALADIN STRIPE SOFT: EPDM compatto estruso.
ALADIN STRIPE EXTRA SOFT: EPDM espanso.
ALADIN STRIPE SOFT: Extruded compact EPDM.
ALADIN STRIPE EXTRA SOFT: Expanded EPDM.

DATI TECNICI
TECHNICAL SPECIFICATIONS

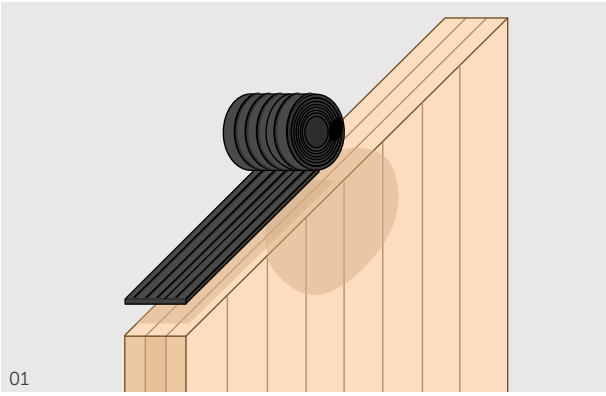
proprietà *property*	**ALADIN95**	**ALADIN115**
densità *density*	1,1 ± 0,02 g/cm³	0,50 ± 0,06 g/cm³
rigidità dinamica s' (condizione ermetica) [1] *dynamic stiffness s' (non-hermetic condition)* [1]	221 MN/m³	76 MN/m³
rigidità dinamica s' (condizione non ermetica)[1] *dynamic stiffness s' (non-hermetic condition)* [1]	115 MN/m³	23 MN/m³
deformazione alla compressione 22 h *compression deformation 22 h*		
+23 °C	-	≤ 25 %
+40 °C	-	≤ 35 %
+70 °C	-	-
+100 °C	≥ 50 %	-

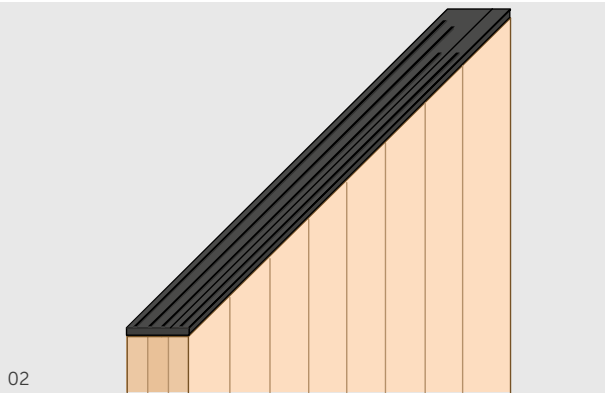
TABELLA D'IMPIEGO
TABLE OF USE

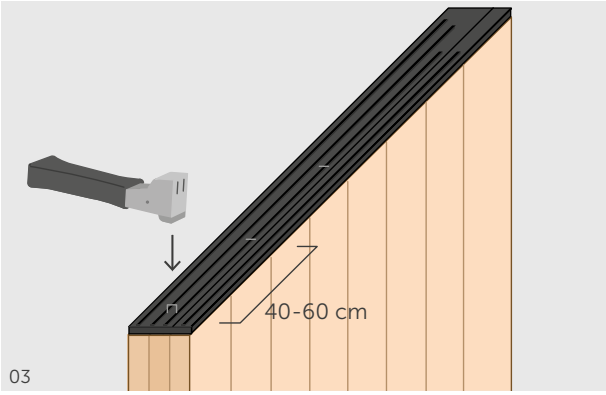
CODICE *CODE*	L [mm]	tipo *type*	compressione applicabile *applicable compression* [N/mm²]		abbassamento *reduction* [mm]		carico lineare applicabile *applicable linear load* [kN/m]		abbattimento acustico $L'_{nt,w}$ *acoustic abatement* $L'_{nt,w}$ [dB] (2)
			da *from*	a *to*	min *min*	max *max*	da *from*	a *to*	
ALADIN95	47,5	soft - diviso *soft - divided*	0,189	0,316	0,5	1,5	9	15	≤ 3
ALADIN95	95,0	soft *soft*	0,189	0,316	0,5	1,5	18	30	≤ 3
ALADIN115	57,5	extra soft - diviso *extra soft - divided*	0,035	0,157	0,7	2,0	2	9	≤ 4
ALADIN115	115,0	extra soft *extra soft*	0,035	0,157	0,7	2,0	4	18	≤ 4

Grafici completi per il calcolo della prestazione acustica disponibili presso il nostro ufficio tecnico.
Complete charts for calculating acoustic performance available at our technical office.

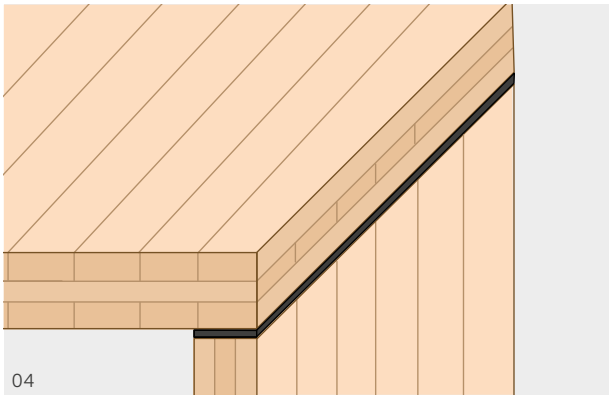
ISTRUZIONI DI POSA
APPLICATION INSTRUCTIONS


01


02



03


04

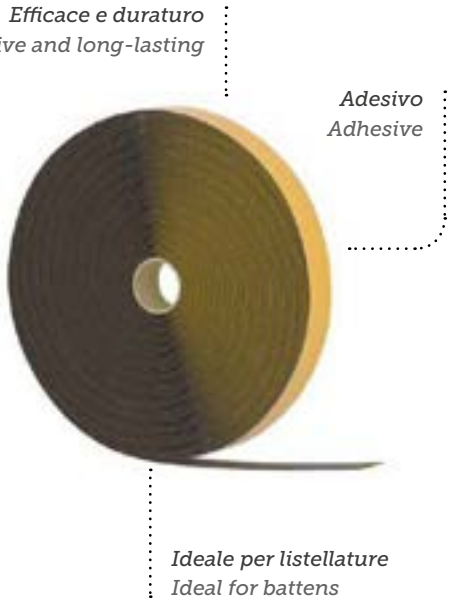
NOTE
NOTES

(1) s' = s' (t) non viene calcolato il contributo dell'aria perché il prodotto è infinitamente impermeabile all'aria (valori estremamente alti di resistività al flusso).
s' = s' (t) the contribution of air is not calculated because the product is extremely impermeable to air (extremely high flow resistance figures).

(2) Risultati garantiti senza impiego di staffe e/o sistemi di fissaggio tra parete e solaio.
Results guaranteed without the use of brackets and/or fastening systems between wall and floor.

SILENT UNDERFLOOR

STRISCIA FONOISOLANTE PER SOTTOLISTELLI
SOUNDPROOFING STRIP FOR FLOORS



CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [mm]	L [m]	s [mm]	
SILENTUNDER50	50	30	4	5

MATERIALE / ***MATERIAL***

EPDM espanso con collante acrilico e liner in carta siliconata.
Expanded EPDM with acrylic glue and silicone paper liner.

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà ***property***	**valore** ***value***
densità *density*	140 kg/m^3
invecchiamento con calore e deformazione permanente *ageing with heat and permanent deformation*	passato *passed*
resistenza a compressione *compression resistance*	
25 % di compressione *25 % compression*	40 kP
50 % di compressione *50 % compression*	105 kPa
50 % 22 h: +20 °C	35 %

SILENT GIPS

STRISCIA PREINCISA E AUTOADESIVA PER STRUTTURE IN CARTONGESSO
PRE-SCORED AND SELF-ADHESIVE STRIP FOR PLASTERBOARD STRUCTURES

Struttura a celle chiuse
Closed cell structure

Evita la trasmissione delle vibrazioni sonore
Prevents the transmission of sound vibrations

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	liner [mm]	H [mm]	L [m]	s [mm]	
SILENTGIPS	12 / 76 / 12	100	30	3,3	1

MATERIALE / ***MATERIAL***

Polietilene a celle chiuse con collante acrilico e liner in pellicola siliconata.
Closed-cell polyethylene with acrylic glue and silicone film liner.

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
densità (interno-esterno) *density (internal-external)*	100 - 150 kg/m^3
rigidità dinamica s' *dynamic stiffness s'*	60 MN/m^3
stima potere fonoisolante del singolo profilo *soundproofing power estimate for a single profile*	10 - 13 dB
schiacciamento (carico 6,5 kPa) *crushing (load 6,5 kPa)*	0,3 mm

GIPS BAND

PUNTO CHIODO AUTOADESIVO PER PROFILI
SELF-ADHESIVE NAIL POINT FOR PROFILES

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [mm]	L [m]	s [mm]	
GIPSBAND50	50	30	3	10

MATERIALE / ***MATERIAL***

Film di supporto e profilo in schiuma di polietilene (PE) a celle chiuse con collante acrilico.
Support film and closed-cell polyethylene (PE) foam profile with acrylic glue.

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
densità *density*	ca. 25 kg/m^3 *ca. 25 kg/m^3*
resistenza a compressione *compression resistance*	
10 %	2 kPa
25 %	3 kPa
50 %	5 kPa

SILENT EDGE

FASCIA PERIMETRALE AUTOADESIVA
SELF-ADHESIVE PERIMETER BAND

Con supporto adesivo e pretaglio
With adhesive and pre-cut support

Ideale per solai collaboranti
Ideal for composite floors

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [mm]	L [m]	s [mm]	
SILENTEDGE150	150	50	4	5

MATERIALE / ***MATERIAL***

Polietilene a celle chiuse con collante acrilico e liner in pellicola siliconata.
Closed-cell polyethylene with acrylic glue and silicone film liner.

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
densità *density*	22 - 25 kg/m^3
isolamento al calpestio ΔL_w calcolato in laboratorio *insulation against footsteps ΔL_w calculated in the laboratory*	20 - 25 dB
isolamento al calpestio ΔL_w calcolato in cantiere *insulation against footsteps ΔL_w calculated on site*	58 - 59 dB
sollecitazione a compressione al 10% di deformazione *compression stress at 10% deformation*	13,002 kPa

SILENT FLOOR SOFT

LAMINA SOTTOMASSETTO
UNDERSCREED FOIL

Eccellente rapporto costo-performance
Excellent value for money

Stabile nel tempo
Stable over time

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [m]	L [m]	s [mm]	A [m²]	
SILENTFLOORS	1,55	50	5	77,5	1

MATERIALE / ***MATERIAL***

Lamina in polietilene espanso a celle chiuse.
Closed cell expanded polyethylene foil.

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
massa areica *mass per unit area*	0,15 kg/m²
rigidità dinamica s' *dynamic stiffness s'*	> 45 MN/m³
stima teorica del livello di attenuazione del calpestio ΔL_w [(1)] *theoretical estimate of the degree of footstep attenuation ΔL_w [(1)]*	24,9 dB
sforzo deformazione 10% in compressione *10% deformation force under compression*	13 kPa
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	ca. 10 m *ca. 10 m*

(1) Si considera una condizione di carico con m'=125 kg/m².
(1) *The load considered is m'=125 kg/m².*

SILENT FLOOR

LAMINA SOTTOMASSETTO IN BITUME
UNDERSCREED FOIL MADE OF BITUMEN

Riduce le vibrazioni prodotte dal calpestio
Reduces vibrations generated by foot traffic

Ermetico e impermeabile
Airtight and waterproof

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [m]	L [m]	s [mm]	A [m²]	
SILENTFLOOR	1,05	10	5	10,5	1

MATERIALE / ***MATERIAL***

Bitume elastoplastomerico accoppiato ad un feltro resiliente in poliestere.
Elastoplastomeric bitumen coupled with polyester felt.

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
spessore (lamina + feltro) *thickness (foil + felt)*	5 (2+3) mm
massa areica *mass per unit area*	1,5 kg/m²
rigidità dinamica s' *dynamic stiffness s'*	27 MN/m³
rigidità dinamica apparente s't *apparent dynamic stiffness s't*	7 MN/m³
stima teorica del livello di attenuazione del calpestio ΔL_w [(1)] *theoretical estimate of the degree of footstep attenuation* ΔL_w [(1)]	28 dB
Creep (2kPa)	≤ 1 mm
proprietà di trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	> 100 m

[(1)] Si considera una condizione di carico con m'=125 kg/m².
[(1)] *The load considered is m'=125 kg/m².*

SILENT WALL MASS

MEMBRANA BITUMINOSA FONOIMPEDENTE
BITUMINOUS SOUNDPROOFING MEMBRANE

Eccellente rapporto costo-performance
Excellent value for money

Densità elevata 6 kg/m²
High density 6 kg/m²

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [m]	L [m]	s [mm]	A [m²]	
SILENTWALLM	1,2	5	4	6,0	1

MATERIALE / ***MATERIAL***

Monostrato in bitume elatoplastomerico rivestito su entrambi i lati da un tessuto non tessuto in polipropilene.
Single-layer elastoplastomeric bitumen, covered on both sides with a polypropylene non-woven fabric.

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
massa areica *mass per unit area*	6 kg/m²
stima teorica del potere fonoisolante della singola guaina *theoretical estimate of the soundproofing power of a single sheet*	24 dB
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	80 m

SILENT WALL

MEMBRANA BITUMINOSA FONOIMPEDENTE AUTOADESIVA
SELF-ADHESIVE BITUMINOUS SOUNDPROOFING MEMBRANE

Ideale per pareti e cavedi
Ideal for walls and skylight wells

Autoadesiva
Self-adhesive

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [m]	L [m]	s [mm]	A [m²]	
SILENTWALL	1,0	8,5	4	8,5	1

MATERIALE / ***MATERIAL***

Monostrato in bitume elastoplastomerico autoadesivo rivestito su un lato con tessuto non tessuto in polipropilene e film siliconato.
Single layer of self-adhesive elastoplastomeric bitumen, lined on one side with polypropylene non-woven fabric and silicone film.

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà *property*	**valore** *value*
massa areica *mass per unit area*	5 kg/m²
stima teorica del potere fonoisolante della singola guaina *theoretical estimate of the soundproofing power of a single sheet*	27 dB
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	80 m

SILENT STEP SOFT

LAMINA SOTTOPAVIMENTO
UNDERFLOOR FOIL

Impermeabile all'acqua
Waterproof

Struttura a celle chiuse
Closed cell structure

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [m]	L [m]	s [mm]	A [m²]	
SILENTSTEPS	1,3	25	2	32,5	1

MATERIALE / ***MATERIAL***

Sottostrato in PE a celle chiuse.
Substrate made of closed cell PE.

CAMPI DI APPLICAZIONE
FIELDS OF APPLICATION

posa pavimento ***floor installation***	flottante *floating*
tipo di pavimento ***floor type***	parquet / LVT (qualità medio alta) *parquet / LVT (medium high quality)*
riscaldamento a pavimento ***in-floor heating***	idoneo *suitable*

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà ***property***	**valore** ***value***
massa areica *mass per unit area*	0,15 kg/m²
stima teorica del livello di attenuazione del calpestio ΔL_w *theoretical estimate of the degree of footstep attenuation ΔL_w*	18 dB
schiacciamento (massa massetto 165 kg/m²) *crushing* *(screed mass 165 kg/m²)*	0,03 mm
trasmissione del vapore d'acqua (Sd) *water vapour transmission (Sd)*	ca. 6 m *ca. 6 m*

SILENT STEP

LAMINA SOTTOPAVIMENTO
UNDERFLOOR FOIL

Barriera all'umidità
SD > 75 m
Barrier to damp
SD > 75 m

Nastro adesivo integrato
Integrated adhesive tape

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [m]	L [m]	s [mm]	A [m²]	
SILENTSTEP	1,0	15	2	15	1

MATERIALE / ***MATERIAL***

Sottostrato in polietilene di tipo NPE ad alta densità rivestito con film PE con funzione di barriera vapore.
Substrate made of high density npe polyethylene with pe film serving as a vapour barrier.

CAMPI DI APPLICAZIONE
FIELDS OF APPLICATION

posa pavimento ***floor installation***	flottante *floating*
tipo di pavimento ***floor type***	parquet / LVT (qualità medio alta) / laminato *parquet / LVT (medium high quality) / laminate*
riscaldamento a pavimento ***in-floor heating***	idoneo *suitable*

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà ***property***	**valore** ***value***
protezione dalla risalita di umidità (SD) *protection from rising damp (SD)*	> 75 m
sollecitazione dinamica da calpestio (DL) *dynamic stress from impact sounds (DL)*	> 10000 cicli (a 25 kPa) > 10000 cycles (at 25 kPa)
sollecitazione duratura da carichi statici (CC) *lasting stress from static loads (CC)*	2 kPa (max carico con def. < 0,5 mm in 10 anni) *(max load with def. < 0,5 mm for 10 years)*
sollecitazione temporanea da carichi (CS) *temporary stress from loads (CS)*	30 kPa (0,5 mm di deformazione) *(0,5 mm deformation)*
isolamento dal rumore da calpestio (IS) *impact sound noise insulation (IS)*	ΔL_w = 18 dB (sotto 7 mm di laminato DPL) *(below 7 mm of DPL laminate)*

SILENT STEP ALU

LAMINA SOTTOPAVIMENTO ALUMINIZZATA
ALUMINISED UNDERFLOOR FOIL

Ideale per sistemi con riscaldamento a pavimento
Ideal for in-floor heating system

Rivestimento alluminizzato riflettente
Reflective aluminised coating

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [m]	L [m]	s [mm]	A [m²]	
SILENTSTEPA	1,0	8,5	2	8,5	1

MATERIALE / ***MATERIAL***

Sottostrato in mescola polimerica ad alta densità rivestito in alluminio con funzione di barriera vapore.
Substrate of a high density polymer mix covered in aluminium serving as a vapour barrier.

CAMPI DI APPLICAZIONE
FIELDS OF APPLICATION

posa pavimento ***floor installation***	flottante *floating*
tipo di pavimento ***floor type***	parquet / LVT (qualità medio alta) / laminato *parquet / LVT (medium high quality) / laminate*
riscaldamento a pavimento ***in-floor heating***	idoneo *suitable*

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà ***property***	**valore** ***value***
protezione dalla risalita di umidità (SD) *protection from rising damp (SD)*	> 150 m
sollecitazione dinamica da calpestio (DL) *dynamic stress from impact sounds (DL)*	> 100000 cicli (a 25 kPa) > 100000 cycles (at 25 kPa)
sollecitazione duratura da carichi statici (CC) *lasting stress from static loads (CC)*	> 50 kPa (max carico con def. < 0,5 mm in 10 anni) *(max load with def. < 0,5 mm for 10 years)*
sollecitazione temporanea da carichi (CS) *temporary stress from loads (CS)*	300 kPa (0,5 mm di deformazione) *(0,5 mm deformation)*
isolamento dal rumore da calpestio (IS) *impact sound noise insulation (IS)*	ΔL_w = 18 dB (sotto 7 mm di laminato DPL) *(below 7 mm of DPL laminate)*
reazione al fuoco *reaction to fire*	Bfl - s1

SILENT STEP UNI

LAMINA SOTTOPAVIMENTO
UNDERFLOOR FOIL

Elevate performance termiche e acustiche
High thermal and sound insulation performance

Posa a colla o flottante
Glued or floating installation

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	H [m]	L [m]	s [mm]	A [m²]	
SILENTSTEPU	1,0	10	2	10	1

MATERIALE / ***MATERIAL***

Sottostrato in poliuretano ad alta densità con elevata resistenza a compressione.
High density polyurethane substrate with excellent compression resistance.

CAMPI DI APPLICAZIONE
FIELDS OF APPLICATION

posa pavimento ***floor installation***	flottante / incollato *floating / glued*
tipo di pavimento ***floor type***	parquet / LVT (qualità medio alta) / laminato *parquet / LVT (medium high quality) / laminate*
riscaldamento a pavimento ***in-floor heating***	idoneo *suitable*

DATI TECNICI
TECHNICAL SPECIFICATIONS

proprietà ***property***	**valore** ***value***
protezione dalla risalita di umidità (SD) *protection from rising damp (SD)*	< 75 m
sollecitazione dinamica da calpestio (DL) *dynamic stress from impact sounds (DL)*	> 10000 cicli (a 25 kPa) > 10000 cycles (at 25 kPa)
sollecitazione duratura da carichi statici (CC) *lasting stress from static loads (CC)*	> 20 kPa (max carico con def. < 0,5 mm in 10 anni) *(max load with def. < 0,5 mm for 10 years)*
sollecitazione temporanea da carichi (CS) *temporary stress from loads (CS)*	> 200 kPa (0,5 mm di deformazione) *(0,5 mm deformation)*
isolamento dal rumore da calpestio (IS) *impact sound noise insulation (IS)*	ΔL_w = 18 dB (sotto laminato) *(under laminate)* ΔL_w = 20 dB (sotto LVT) *(under LVT)*

Make it easy.

HOLZ TECHNIC

ATTREZZATURA

TOOLS

CARPENTERIA
CARPENTRY

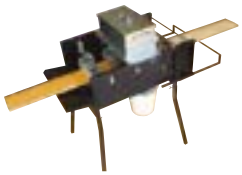
328 SKORPIO

328 GEKO

329 PINCER TIP

329 PINCER LEVER

330 GIRAFFE



332 JELLY

333 CRICKET

334 PICARD 790

334 PECKER

335 CUTTER

335 BLADE

336 KOI

336 FUGU

337 POUCH

338 SHIM

338 SHIM LARGE

339 WEDGES

339 GRAFFATRICE *TACKER*

340 CHIODI NASTRATI *COLLATED NAILS*

341 TEMPLATE

341 MANTIS

342 WASP

344 CAP TOP

345 CAP PLUS

345 CAP ECO

SKORPIO

TIRATRAVE
BEAM PULLER

Doppia dentatura per una presa migliore
Double toothing for a better grip

Sostituzione rapida degli uncini
Quick hook replacement

CODICE *CODE*	descrizione *description*	
SKORPIO	tiratrave *beam puller*	1
SKORPIOS	gancio zincato *galvanized hook*	1

GEKO

TIRAPANNELLI
PANEL PULLER

Piastre girevoli a 360°
360° rotary plates

CODICE *CODE*	descrizione *description*	
GEKO	piastre 60 x 160 mm - 6 fori da 8,5 mm e 3 fori da 13 mm *plates 60 x 160 mm - 6 holes from 8,5 mm and 3 holes from 13 mm*	1
GEKOP	piastra zincata di ricambio 60 x 160 mm *spare galvanised plate 60 x 160 mm*	1

PINCER TIP

TIRATRAVE
BEAM PULLER

Tenuta eccezionale
Exceptional resistance

CODICE *CODE*	apertura *opening* [mm]	scartamento *scrapping* [mm]	profilo *profile* [mm]	
PINTIP60	600	120	27 x 13	1
PINTIP80	800	140	30 x 15	1

PINCER LEVER

STRETTOIO A LEVA
LEVER CLAMP

Forza di serraggio fino a 7,5 kN
Tightening torque of up to 7,5 kN

CODICE *CODE*	apertura *opening* [mm]	scartamento *scrapping* [mm]	profilo *profile* [mm]	
PINLEV1430	300	140	25 x 12	1
PINLEV1260	600	120	25 x 12	1

GIRAFFE

SUPPORTO DI MONTAGGIO
PROPS FOR ASSEMBLY SUPPORT

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*		lunghezza *length* [mm]	peso *weight* [mm]	
GIR2200	1	1180 - 2200	3,35	1
GIR3000	2	1750 - 3000*	9,80	1
GIR4000	3	1750 - 4000	13	1

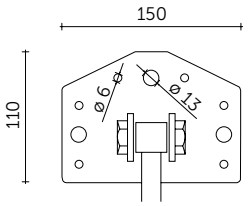
* con fermo di bloccaggio rapido
with rapid locking stop

RICAMBI
SPARE PARTS

CODICE *CODE*	descrizione *description*	
METSP	spina con catena *pin with chain*	1
METPIN2	piastra base *bottom plate*	1

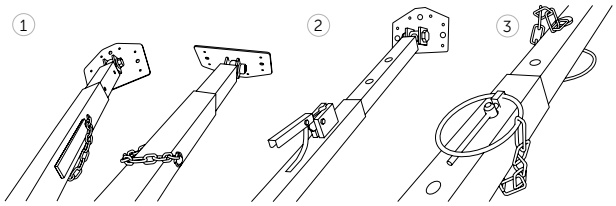
GEOMETRIA
GEOMETRY

PIASTRA DI ANCORAGGIO
ANCHOR PLATE



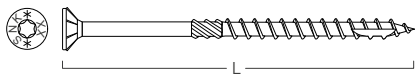
spessore piastra *plate thickness* [mm]	n° fori *no. holes* [Ø13]	n° fori *no. holes* [Ø6]
4	3	6

BLOCCO LUNGHEZZA
LENGTH LOCK



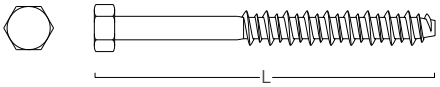
CODICE *CODE*	blocco *lock*	regolazione *adjustment*
GIR2200 (1)	mediante apposito perno *with the special pin*	tramite maniglia laterale *with the lateral handle*
GIR3000 (2)	mediante fermo di bloccaggio rapido *with the locking stop*	
GIR4000 (3)	mediante apposito perno *with the special pin*	

CONNETTORI
CONNECTORS



CE ETA 11/0030

giunzione su legno fori Ø13 / fori Ø6 *joint on timber holes Ø13 / holes Ø6*	dimensioni *dimensions*
SNK Ø10	L = 120 - 200 mm*
SNK Ø5	L = 45 - 120 mm*

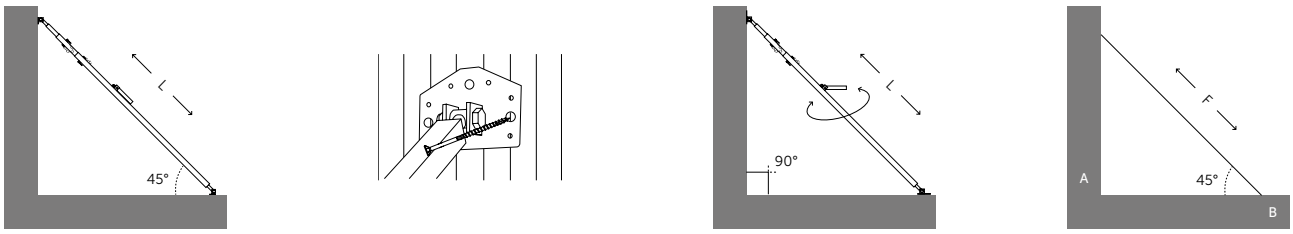


CE ETA

giunzione su calcestruzzo fori Ø13 / fori Ø6 *joint on concrete holes Ø13 / holes Ø6*	dimensioni *dimensions*
SKR Ø12	ancorante avvitabile per calcestruzzo *screw anchor for concrete* L = 100 - 400 mm*

* La scelta della lunghezza del connettore è da valutarsi caso per caso in funzione delle dimensioni dell'elemento da sostenere, della tipologia di supporto su cui si utilizza GIRAFFE e dell'entità del carico da sostenere.
* *The choice of length of the connection is assessed each time in function of the element to be supported, the type of support on which GIRAFFE is used and the load to be sustained.*

INSTALLAZIONE
INSTALLATION



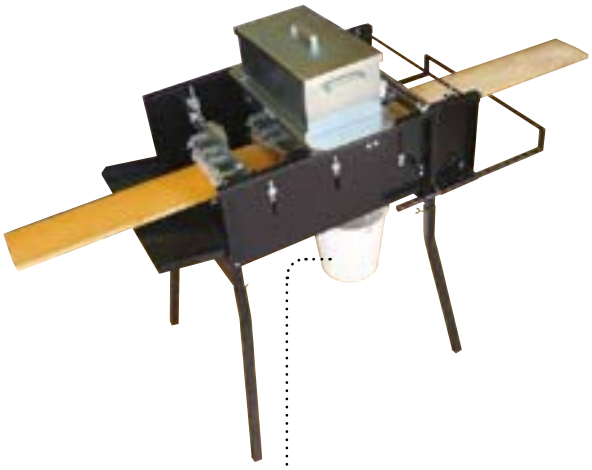
1. Posizionamento della parete e di GIRAFFE, opportunamente regolato in lunghezza (sopra la metà della parete)
1. Placement of the wall of the GIRAFFE, suitably adjusted in length (above the middle of the wall)
2. Inserimento dei connettori di fissaggio nelle piastre di estremità
2. Insertion of the fasteners into the end plates
3. Aggiustamento della lunghezza di GIRAFFE, agendo sulla maniglia di regolazione, per la perfetta verticalità della parete
3. Giraffe length adjustment via the adjustment handle, for perfect wall verticality
4. ESEMPIO STATICO: A - 2 x SNK Ø10 x 120 / B : 2 x SNK Ø10 x 120 / L = 3,0 m / $F_{adm,max}$ = 5,80 kN**
*4. STATIC EXAMPLE: A - 2 x SNK Ø10 x 120 / B : 2 x SNK Ø10 x 120 / L = 3,0 m / $F_{adm,max}$ = 5,80 kN***

** Documentazione tecnica completa e relazione di calcolo del sistema (GIRAFFE + connettori) disponibile su: www.rothoblaas.com
*** Complete technical datasheet and system calculation report (GIRAFFE + fasteners) available at: www.rothoblaas.com*

JELLY

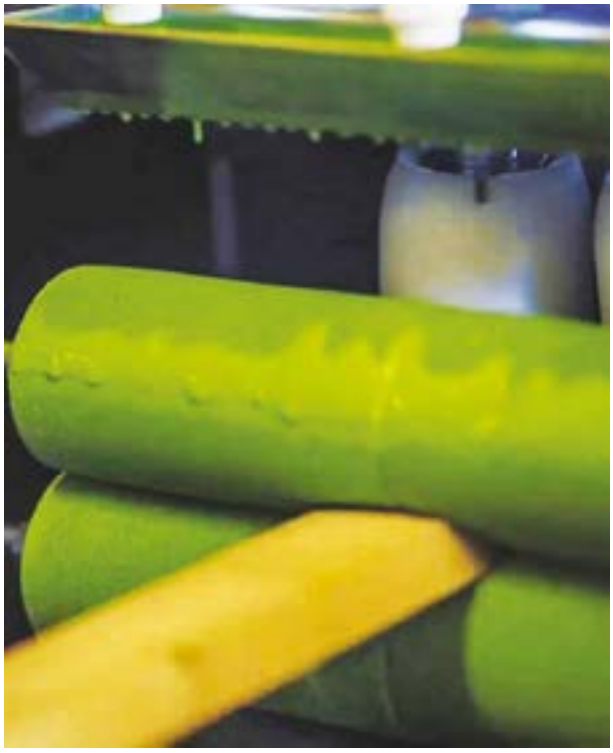
IMPREGNATRICE PER ELEMENTI DI SEZIONE MAX. 300 x 90 mm
PAINTING MACHINE FOR ELEMENTS WITH SECTION MAX. 300 x 90 mm

Lavorazione: 2 persone ca. 200 m²/ora
Processing: 2 people approx. 200 m²/h



Recupero dell'impregnante in eccesso
Recovery of the excess impregnating primer

Impregna elementi su 1, 2, 3 o 4 lati
Impregnate elements on 1, 2, 3 or 4 sides



CODICI E DIMENSIONI
CODES AND DIMENSIONS

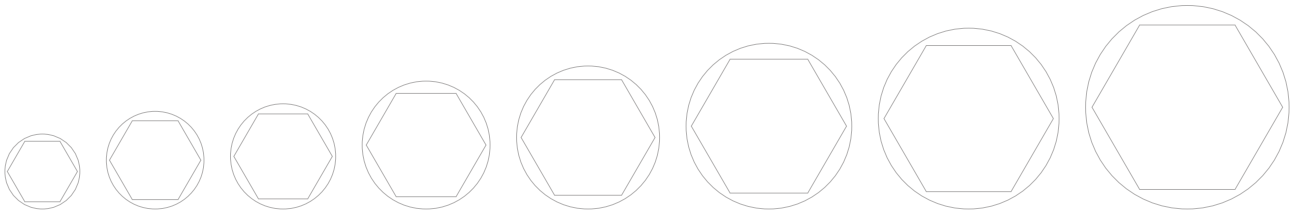
CODICE *CODE*	scatto *trigger* [mm]	
JELLY	impregnatrice automatica completa *complete automatic sealer machine*	1
JLL2015	rulli *rolls*	6
JLL2020	spazzole *brushes*	12
JLL2025	ugelli *nozzles*	3

CRICKET

CHIAVE A CRICCHETTO A 8 MISURE
8 SIZE RATCHETING WRENCH

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	misure [bussola / filetto M] *sizes [bush / thread M]*		L [mm]	
CRICKET	10/M6 - 13/M8 - 14/M8 - 17/M10	1	340	1
	19/M12 - 22/M14 - 24/M16 - 27/M18	2		



lato 1 *side 1*

10/M6 - 13/M8 - 14/M8 - 17/M10

lato 2 *side 2*

19/M12 - 22/M14 - 24/M16 - 27/M18

PICARD 790

MARTELLO PROFESSIONALE
PROFESSIONAL HAMMER

Manico bilanciato in pelle
Balanced leather handle

CODICE *CODE*	peso della testa *weight head* [g]	
PIC790	600	1

PECKER

MARTELLO FORGIATO DA UN PEZZO UNICO
HAMMER FORGED FROM A SINGLE PIECE OF METAL

Manico in caucciù cellulare
Cellular rubber handle

CODICE *CODE*	peso della testa *weight head* [g]	
PECKER	600	1

CUTTER

CUTTER PROFESSIONALE
PROFESSIONAL CUTTER

Stabile, leggero e resistente
Stable, light and resistant

CODICE *CODE*	**descrizione** *description*	
HTCUTTER	taglierino *cutter*	24

LAMA

COLTELLO PER ISOLANTI UTILIZZABILE SU ENTRAMBI I LATI
INSULATION KNIFE THAT CAN BE USED ON BOTH SIDES

CODICE *CODE*	**lunghezza** *length* [mm]	
LAMA	280	1

KOI

SEGA A MANO GIAPPONESE
JAPANESE HAND SAW

CODICE *CODE*	**descrizione** *description*	
KOI30	sega giapponese 300 mm *japanese saw 300 mm*	1
KOI302	lama di ricambio *spare blade*	1

FUGU

SEGA GIAPPONESE A TAGLIO PRECISO
PRECISION CUTTING JAPANESE SAW

CODICE *CODE*	**descrizione** *description*	
FUGU265	sega di precisione 265 mm *precision saw 265 mm*	1
FUGU265R	lama di ricambio *spare blade*	1

POUCH

BORSA PORTA ATTREZZI
TOOLS BAG

Poliestere e pelle
Polyester and leather

1

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*		descrizione *description*	
POUCH1	1	borsa porta attrezzi doppia con cintura / *double tool bag with belt*	1
POUCH2	2	borsa porta attrezzi singola con cintura / *single tool bag with belt*	1
POUCH3	3	portamartello / *hammer holder*	1

2

Poliestere
Polyester

3

SHIM

CUNEI LIVELLANTI
LEVELLING WEDGES

CODICE *CODE*	colore *colour*	L x P x s [mm]	
SHBLUE	blu / *blue*	100 x 22 x 1	500
SHBLACK	nero / *black*	100 x 22 x 2	500
SHRED	rosso / *red*	100 x 22 x 3	500
SHWHITE	bianco / *white*	100 x 22 x 4	500
SHYELLOW	giallo / *yellow*	100 x 22 x 5	500

SHIM LARGE

CUNEI LIVELLANTI
LEVELLING WEDGES

CODICE *CODE*	colore *colour*	L x P x s [mm]	
LSHRED	rosso / *red*	160 x 50 x 2	250
LSHGREEN	verde / *green*	160 x 50 x 3	250
LSHBLUE	blu / *blue*	160 x 50 x 5	250
LSHWHITE	bianco / *white*	160 x 50 x 10	100
LSHYELLOW	giallo / *yellow*	160 x 50 x 15	100
LSHMIX	multicolore *multicolour*	160 x 50	80

WEDGES

CUNEI LIVELLANTI
LEVELLING WEDGES

Posa semplice e veloce
Fast and easy installation

CODICE *CODE*	descrizione *description*	L x B x H [mm]	
WDGREEN	verde *green*	80 x 30 x 10	1000
WDGORAN	arancione *orange*	80 x 40 x 8	1000
WDGBROW	marrone *brown*	90 x 45 x 15	500
WDGYELL	giallo *yellow*	150 x 45 x 25	324
WDGSET	TransPack 245 (70 verdi, 60 arancioni, 75 marroni, 40 gialli) *(70 green, 60 orange, 75 brown, 40 yellow)*		245

GRAFFATRICE
TACKER

GRAFFATRICE A MARTELLO
HAMMER TACKER

Maneggevole
Handy

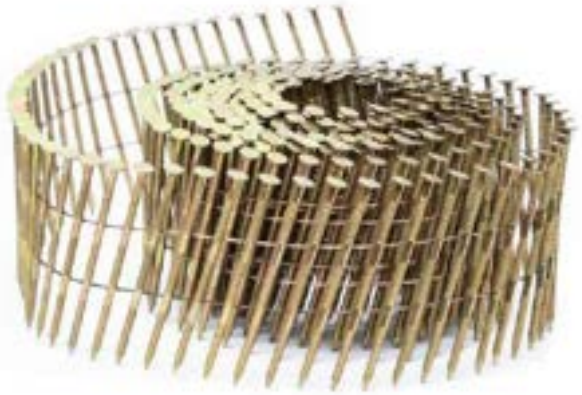
CODICE *CODE*	tipo graffa - lunghezza *tack type - length* [mm]	larghezza spalla *shoulder width* [mm]	spessore filo *wire thickness* [mm]	
HH735347 (1)	L 6 - 10	10,6	0.5 x 1.25	1
HH735322 (2)	L 8 - 14	10,6	0.5 x 1.25	1

GRAFFE L -galvanizzate
L TACKS - galvanised

CODICE *CODE*	L [mm]	HH735347	HH735322	
HH10005121	6	●		5000
HH10005122	8	●	●	5000
HH10005123	10	●	●	5000
HH10005124	12		●	5000
HH10005125	14		●	5000

CHIODI NASTRATI
COLLATED NAILS

CHIODI LISCI NASTRATI A FILO, ROTOLO - D16°
SMOOTH NAIL COILS, ROLL - D16°



CODICE *CODE*	d x L [mm]	materiale *material*	peso *weight* [mm]	
HH40001160	2,5 x 60	acciaio grezzo *unfinished steel*	14,6	7200
HH40001170	2,5 x 70		20,3	7200
HH40001190	2,8 x 90		20,2	4500

CODICE *CODE*	Ø chiodo *Ø nail* [mm]	lunghezza chiodo *nail length* [mm]	nastratura *taping* [mm]	scatto *trigger* [mm]	peso *weight* [mm]
HH3515 ①	2,3 - 3.1	38 - 70	filo / *wire*	contatto / *contact*	2,9
HH3539 ②	2,5 - 3.4	45 - 90	filo / *wire*	singolo - contatto *single - contact*	3,8

TEMPLATE

DIMA DI FRESATURA PER TASCHE
POCKET MILLING TEMPLATE

Per tasche da 100 x 120 mm a 265 x 275 mm
For pockets from 100 x 120 mm to 265 x 275 mm

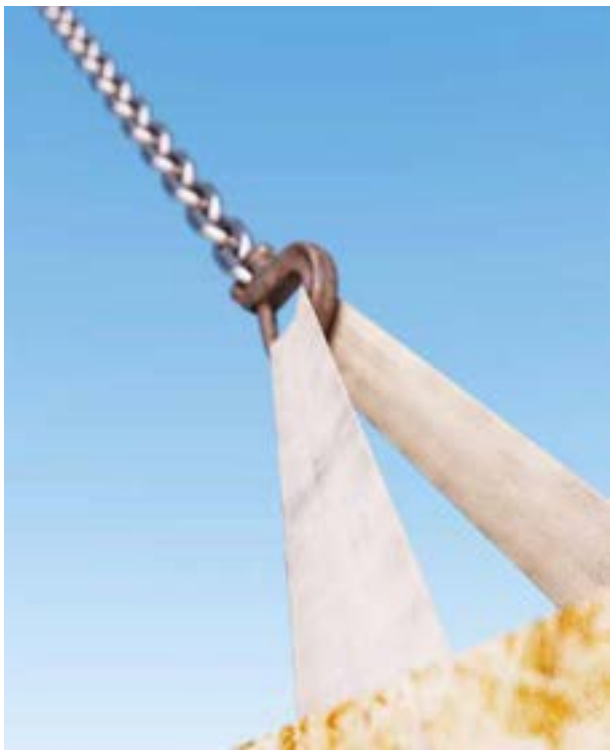
CODICE *CODE*	descrizione *description*	
AT2180	dima per tasche *template for packets*	1

MANTIS

CINGHIA MONOUSO PER TRASPORTO PARETI ED ELEMENTI PREFABBRICATI
LIFTING BELT FOR TRANSPORT WALLS AND PRECAST ELEMENTS

Portata max. 800 kg
Max. capacity 800 kg

CODICE *CODE*	lunghezza *length* [cm]	larghezza *width* [cm]	
MNT05	50	50	50
MNT10	100	50	50
MNT0535	50	35	250
MNT1035	100	35	150



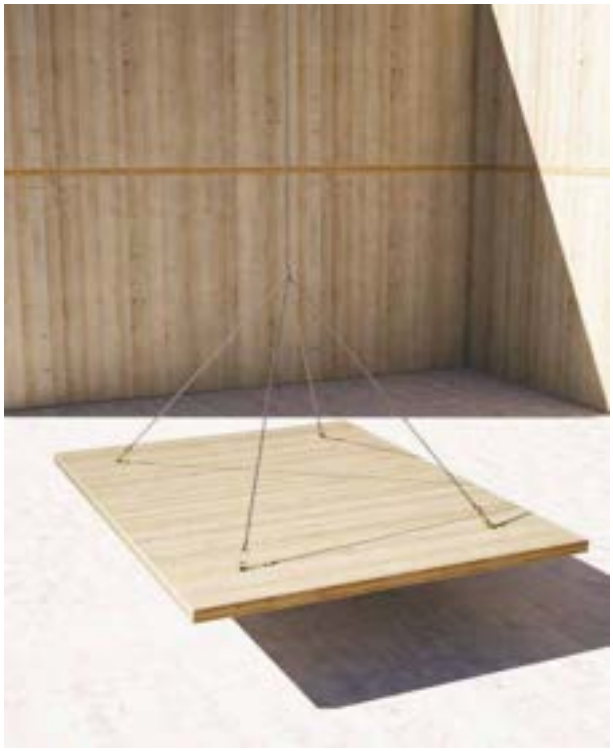
WASP

CE

GANCIO PER IL TRASPORTO DI ELEMENTI PREFABBRICATI E PANNELLI LAMELLARI
ANCHOR FOR LIFTING PREFABRICATED ELEMENTS AND CLT PANELS

Per carichi sia assiali che trasversali
Can be used for axial and transversal loads

Portata max. 1300 kg
Max. capacity 1300 kg

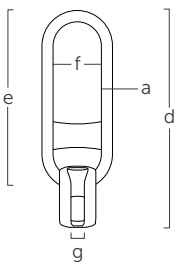


CODICI E DIMENSIONI
CODES AND DIMENSIONS

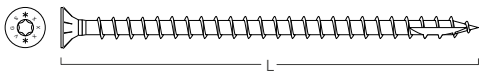
CODICE *CODE*	**descrizione** *description*	**portata max.** *max. capacity* [kg]	
WASP	gancio / *hook*	1300	2

GEOMETRIA E INSTALLAZIONE
GEOMETRY AND INSTALLATION

	a	**d**	**e**	**f**	**g**
[mm]	12	185	157	40	12

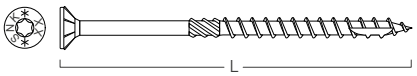


CONNETTORI
CONNECTORS



CE ETA 11/0030

VGS Ø11**	connettore tutto filetto a testa svasata *total thread connector with countersunk head* L = 100 - 600 mm*



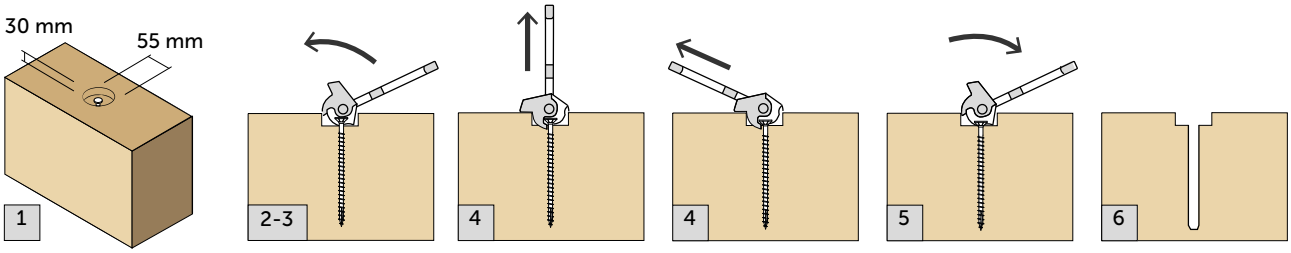
CE ETA 11/0030

SNK Ø10	vite a testa svasata a filetto parziale *partially threaded countersunk screw* L = 80 - 400 mm*

* La scelta della lunghezza del connettore è da valutarsi caso per caso in funzione delle dimensioni dell'elemento ligneo, della modalità di posizionamento del connettore, dell'angolo di sollevamento, dell'entità del carico da sollevare e della disposizione dei ganci.
* *The choice of connector length is to be based each time on the dimensions of the wooden element, on the connector's placement, on the lift angle, on the weight of the load to be lifted and on the arrangement of the hooks.*

** VGS11100, VGS11150, VGS11200, VGS11250, VGS11300

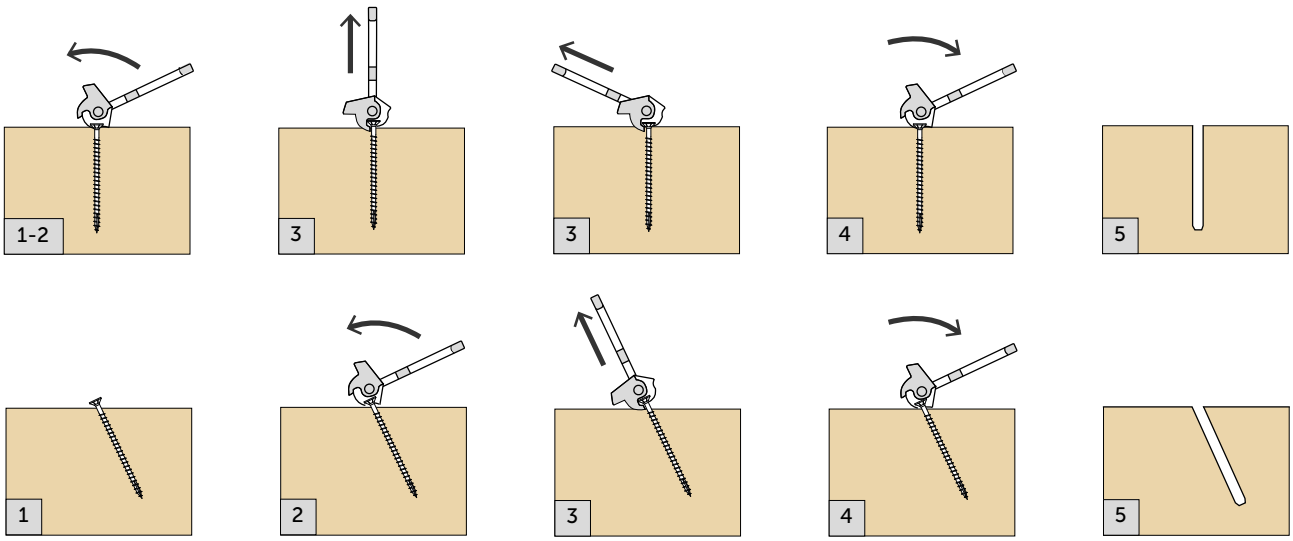
INSTALLAZIONE WASP CON FRESATA
WASP INSTALLATION WITH SLOT



1. Realizzazione della fresata per l'alloggio del WASP
2. Inserimento della vite nell'elemento in legno da sollevare
3. Posizionamento del WASP
4. Sollevamento della struttura (forza perpendicolare o inclinata)
5. Rimozione del WASP (sganciamento)
6. Rimozione della vite (opzionale)

1. Drilling of slot for the WASP
2. Insertion of the screw into the timber element to be lifted
3. WASP positioning
4. Lifting of the structure (perpendicular or inclined force)
5. WASP removal (unhooking)
6. Removing the screw (optional)

INSTALLAZIONE PERPENDICOLARE / INCLINATA
PERPENDICULAR / INCLINED INSTALLATION



1. Inserimento della vite nell'elemento in legno da sollevare
2. Posizionamento del WASP
3. Sollevamento della struttura (forza perpendicolare o inclinata)
4. Rimozione del WASP (sganciamento)
5. Rimozione della vite (opzionale)

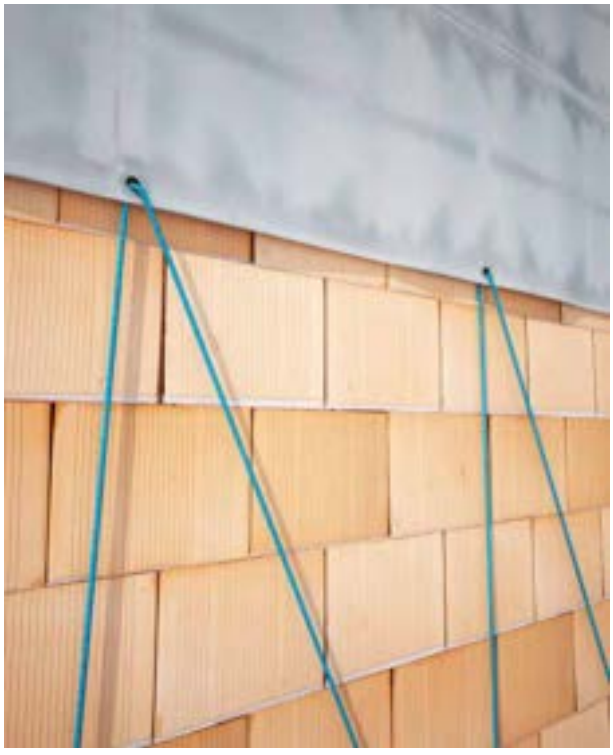
1. Insertion of the screw into the timber element to be lifted
2. WASP positioning
3. Lifting of the structure (perpendicular or inclined force)
4. WASP removal (unhooking)
5. Removing the screw (optional)

CAP TOP

TELONE DI COPERTURA
TARPAULIN FOR ROOFS

Gancio di sollevamento integrato
Integrated lifting hook

Occhielli metallici per applicazione sicura
Metal eyelets for safe application



CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	misure *size* [m]	grammatura *mass per unit area* [g/m²]	peso *weight* [kg]	
CAPTOP1012*	10 x 12	600	72	1
CAPTOP1214*	12 x 14		100,8	1
CAPTOP1416*	14 x 16		134,4	1

* Su richiesta è possibile fornire anche altre misure e/o teli personalizzati
* *Other sizes and/or personalised sheets can be supplied on request*

CAP PLUS

TELONE DI COPERTURA
TARPAULIN FOR ROOFS

CODICE *CODE*	misure *size* [m]	grammatura *mass per unit area* [g/m²]	peso *weight* [kg]	
CAPPLUS0810	8 x 10	300	24	1
CAPPLUS1012	10 x 12		36	1
CAPPLUS1214	12 x 14		50,4	1
CAPPLUS1416	14 x 16		67,2	1
CAPPLUS1618	16 x 18		86,4	1

CAP ECO

TELONE DI COPERTURA
TARPAULIN FOR ROOFS

CODICE *CODE*	misure *size* [m]	grammatura *mass per unit area* [g/m²]	peso *weight* [kg]	
CAPECO0410	4 x 10	210	8,4	1
CAPECO0810	8 x 10		16,8	1

ANTICADUTA
FALL PROTECTION

347 BASE

348 PROTECTOR

350 KITE

351 LOOP

352 HOOK EVO

353 HORIZONTAL NET

353 VERTICAL NET

BASE

KIT BASE PER IL CANTIERE
BASE WORKSITE KIT

Due punti di attacco: sternale e dorsale
Two attachment points: sternal and dorsal

①

Meccanismo anticaduta di tipo guidato e scorrimento installato fisso sulla corda
Guided and sliding-type fall protection device, with fixed installation on the rope

②

Completo di gancio per il sollevamento
Complete with hook for lifting

③

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	tipo *type*		descrizione *description*	
BASE	IRIS	①	imbracatura per l'anticaduta (misura unica) *harness for fall protection (single size)*	1
	LINO10	②	dispositivo anticaduta di tipo guidato su linea di ancoraggio (10 m) *guided type fall protection device on anchor line (10 m)*	
	RBBAG	③	zainetto *backpack*	

PROTECTOR

CE

CASCHI PER LA SICUREZZA SUL LAVORO, PER INDUSTRIA ED EDILIZIA
HELMETS FOR WORKPLACE SAFETY, FOR INDUSTRY AND CONSTRUCTION

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	**descrizione** *description*	**taglia** *size*	**materiale** *material*	
PRO*	PROTECTOR	UNI 52 - 64 cm	ABS	1
PRONEC*	PROTECTOR con coprinuca *PROTECTOR with nape cover*			1
PRODIE*	PROTECTOR dielettrico *PROTECTOR dielectric*			1

* Su richiesta disponibile anche in vari colori (giallo, giallo ad alta visibilità, nero, nero gommato, arancione e rosso).
* *On request, also available in different colours (yellow, high-visibility yellow, black, rubberised black, orange and red).*

PRODOTTI CORRELATI
RELATED PRODUCTS

VISIERA
VISOR

CODICE *CODE*		materiale *material*	
VISTRA	1	policarbonato *polycarbonate*	1
VISDAR	2	policarbonato *polycarbonate*	1
VISTRALON	3	policarbonato *polycarbonate*	1
VISTRE	4	metallo *metal*	1

CUFFIE
EARMUFFS

CODICE *CODE*		SNR [dB]	
EAR26	1	26	1
EAR30	2	30	1
EAR32	3	32	1

EARADA	adattatore per cuffie *ear defenders adapter*	1

GIROTESTA
HEADBAND

CODICE *CODE*	descrizione *description*	
GEARPRO	girotesta di ricambio *spare head wrap*	1

IMBOTTITURA
PADDING

CODICE *CODE*	descrizione *description*	
PADPRO	imbottitura di ricambio *spare padding*	1

KITE

PUNTO DI ANCORAGGIO
ANCHOR POINT

Pratico e sicuro
Practical and safe

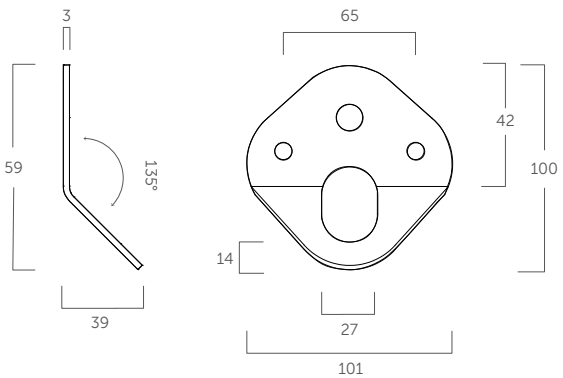
Universale
Universal

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	**materiale** *material*	**B** [mm]	**L** [mm]	
KITE	acciaio inox / *stainless steel* 1.4016 - AISI430	101	100	1

campi d'impiego *field of use*	**inclinazione** *inclination*
legno min: 100 x 100 mm *min. timber: 100 x 100 mm*	
calcestruzzo min: 140 mm *min. concrete: 140 mm*	
acciaio min: 5 mm *min. steel: 5 mm*	

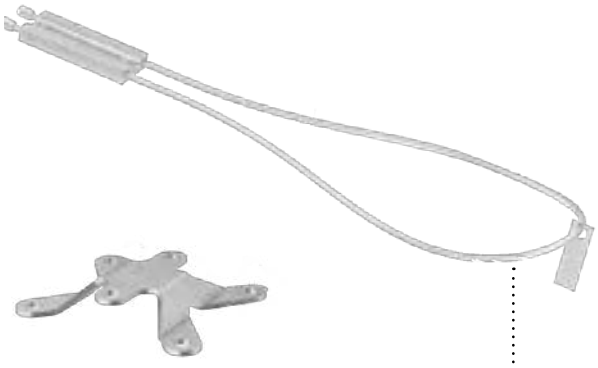
GEOMETRIA
GEOMETRY



LOOP

PUNTO DI ANCORAGGIO
ANCHOR POINT

Installazione rapida
Fast installation



KRAKEN

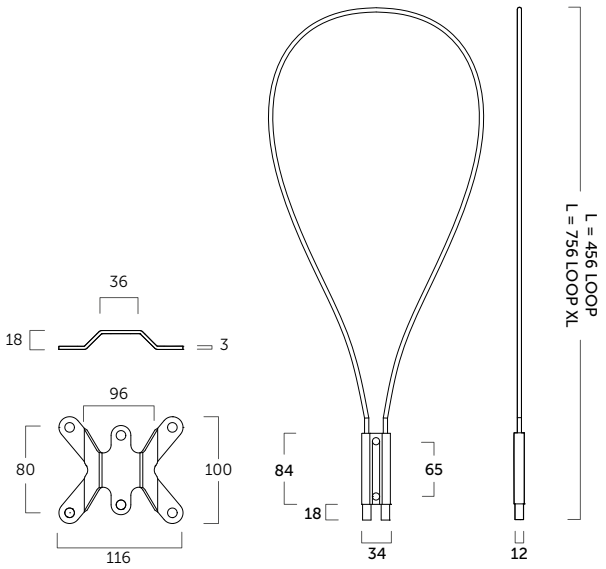
Discreto
Unobtrusive

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	**materiale** *material*	**B** [mm]	**L** [mm]	
LOOP	acciaio inox / *stainless steel* 1.4404 - AISI316	-	456	1
LOOPXL	acciaio inox / *stainless steel* 1.4404 - AISI316	-	756	1
KRAKEN	acciaio inox / *stainless steel* 1.4016 IIA - AISI430	116	100	1

campi d'impiego *field of use*	**inclinazione** *inclination*
legno min: 100 x 100 mm *min. timber: 100 x 100 mm*	
calcestruzzo min: 100 mm *min. concrete: 100 mm*	
laterocemento con soletta in calcestruzzo min: 40 mm *masonry with concrete slab min: 40 mm*	

GEOMETRIA
GEOMETRY



HOOK EVO

PUNTO DI ANCORAGGIO
ANCHOR POINT

Sezione minima
Minimum section

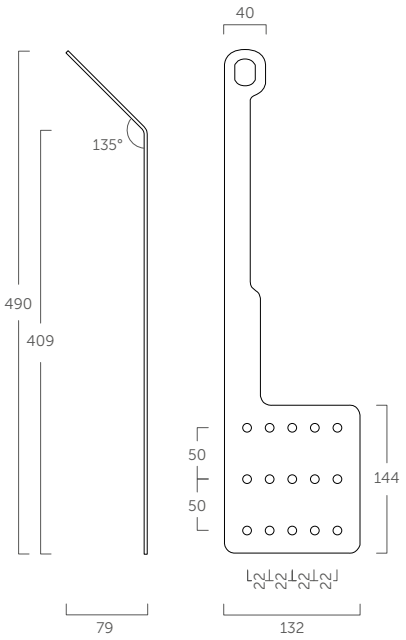
Discreto e flessibile
Unobtrusive and flexible

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	**materiale** *material*	**L** [mm]	
HOOKEVO	acciaio inox / *stainless steel* 1.4016 - AISI430	490	1

campi d'impiego *field of use*	**inclinazione** *inclination*
legno min: 100 x 100 mm *min. timber: 100 x 100 mm*	

GEOMETRIA
GEOMETRY



HORIZONTAL NET

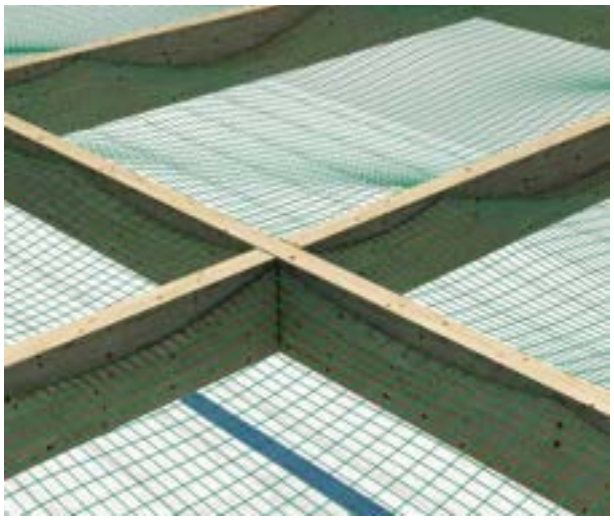
RETE PROTETTIVA ORIZZONTALE IN POLIPROPILENE
HORIZONTAL POLYPROPYLENE FALL PROTECTION SAFETY NET

Disponibile in colori e formati personalizzati
Available in personalised colours and formats

CODICE *CODE*	B [m]	L [m]	apertura *opening* [m]	corda *rope* [mm]	peso *weight* [kg]	
HOR510	5	10	100	Ø5	11,4	1
HOR610	6				13,7	1
HOR1010	10				22,9	1
HOR7515	7,5				25,7	1

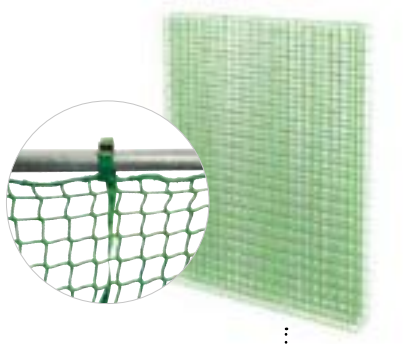
PRODOTTI COMPLEMENTARI - FISSAGGIO
COMPLEMENTARY PRODUCTS - FASTENING

CODICE *CODE*	descrizione *description*	corda *rope* [mm]
HORFIX	corda di fissaggio *fastening rope*	Ø14
HORCONNECT	corda di cucitura *sewing rope*	Ø6



VERTICAL NET

RETE PROTETTIVA LATERALE IN POLIPROPILENE
LATERAL POLYPROPYLENE FALL PROTECTION SAFETY NET



Disponibile anche blu, bianco e rosso
Available also blue, white and red

CODICE *CODE*	B [m]	L [m]	apertura *opening* [m]	corda *rope* [mm]	peso *weight* [kg]	
VER210	2	10	100	Ø5	4,5	1

PRODOTTI COMPLEMENTARI - FISSAGGIO
COMPLEMENTARY PRODUCTS - FASTENING

CODICE *CODE*	descrizione *description*	L [m]	p_{min} [mm]
VERBENT	cinghia di fissaggio *fastening strap*	Ø14	700

MISURAZIONE
MEASUREMENT

355

HT-MET

356

BEEKIT

355

HT-MAT

356

PEACOCK DUO

356

BEAVER

357

FLAMINGO

356

PEACOCK

357

EMU

HT-MET

METRO A STECCA
FOLDING RULER

Legno di faggio rosso di alta qualità
High quality red beechwood

CODICE *CODE*	descrizione *description*	
HTMET	metro a stecca *folding ruler*	10

HT-MAT

MATITE DA FALEGNAME E DA CARPENTIERE
CARPENTERS' PENCILS

Due versioni: per legno e per muratura
Two versions: for timber and for masonry

CODICE *CODE*		descrizione *description*	
HTMATG	1	matita per falegnameria *carpentry pencil*	60
HTMATB	2	matita per muratura *masonry pencil*	60

BEAVER

SQUADRA DA CARPENTIERE
CARPENTER'S SQUARE

CODICE *CODE*	misure *size* [mm]	
BEAVER	800 x 320	1

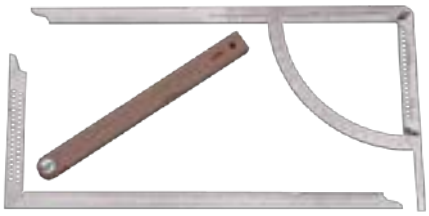
PEACOCK

SQUADRA ALFA
ALFA SQUARE

CODICE *CODE*	misure *size* [mm]	
PCK8043	800 x 430	1
PCK9048	900 x 480	1

BEEKIT

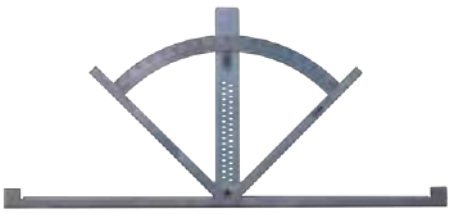
SQUADRA DA CARPENTIERE, SQUADRA ALFA E FALSA SQUADRA
CARPENTER'S SQUARE, ALFA SQUARE AND SLIDING T BEVEL



CODICE *CODE*	descrizione *description*	
BEEKIT	squadra da carpentiere, squadra alfa e falsa squadra *carpenter's square, alfa square and sliding T bevel*	1

PEACOCK DUO

SQUADRA ALFA DOPPIA
ALFA DOUBLE SQUARE



CODICE *CODE*	misure *size* [mm]	
PCKD8043	800 x 430	1

FLAMINGO

FALSA SQUADRA IN ALLUMINIO
ALUMINUM SLIDING T BEVEL

CODICE *CODE*	misure *size* [mm]	
FLAMINGO	300	1

EMU

SQUADRA DA FALEGNAME IN ALLUMINIO
ALUMINIUM CARPENTER'S SQUARE

CODICE *CODE*	misure *size* [mm]	
EMU2515	250 x 150	1
EMU4020	400 x 200	1

RIPARAZIONE
REPAIR

359

RESTO KITT

359

PLASTUK

360

WOOD REPAIR

362

TAPPI, SPINE E RATTOPPI
CAPS, PINS AND PATCHES

364

RATTOPPI, CHIODI, TAPPI E BISCOTTI
PATCHES, NAILS, CAPS AND PLUGS

RESTO KITT

STUCCO PER RIPARAZIONI IN INTERNI (DA LACCARE PER USO IN ESTERNO)
INDOOR REPAIR PLASTER (TO BE PAINTED OVER IF USED OUTDOORS)

Ecologico, ad asciugatura rapida
Ecological, quick drying

CODICE *CODE*	colore *colour*	peso netto *net weight* [g]	
FE710835	bianco *white*	200	1
FE710825	abete *fir*	200	1
FE710815	pino *pine*	200	1
FE710855	faggio chiaro *light beech*	200	1
FE710800	ciliegio americano *American cherry*	200	1
FE710810	frassino antico chiaro *antique light ash*	200	1
FE710820	rovere chiaro *light oak*	200	1
FE710790	noce chiaro *light walnut*	200	1
FE710850	rovere medio *medium oak*	200	1
FE710860	faggio medio *medium beech*	200	1
FE710780	faggio trattato al vapore *steam treated beech*	200	1
FE710795	ciliegio *cherry*	200	1
FE710785	noce *walnut*	200	1
FE710775	mogano chiaro *light mahogany*	200	1
FE710770	mogano *mahogany*	200	1
FE710826	abete *fir*	450	1

PLASTUK

STUCCO BICOMPONENTE PER RIPARAZIONI IN INTERNI ED ESTERNI
BICOMPONENT PUTTY FOR INDOOR AND OUTDOOR REPAIRS

Per legno, plastica, metallo e pietra
For wood, plastic, metal and stone

CODICE *CODE*	colore *colour*	peso netto *net weight* [g]	peso netto indurente *net weight hardener* [g]	
FE710005	abete *fir*	1000	30	1
FE710010	rovere *oak*	1000	30	1
FE710015	noce walnut	1000	30	1

VIDEO

WOOD REPAIR

SISTEMA AD INIEZIONE PER LA RIPARAZIONE DEL LEGNO
INJECTION SYSTEM FOR WOOD REPAIRS

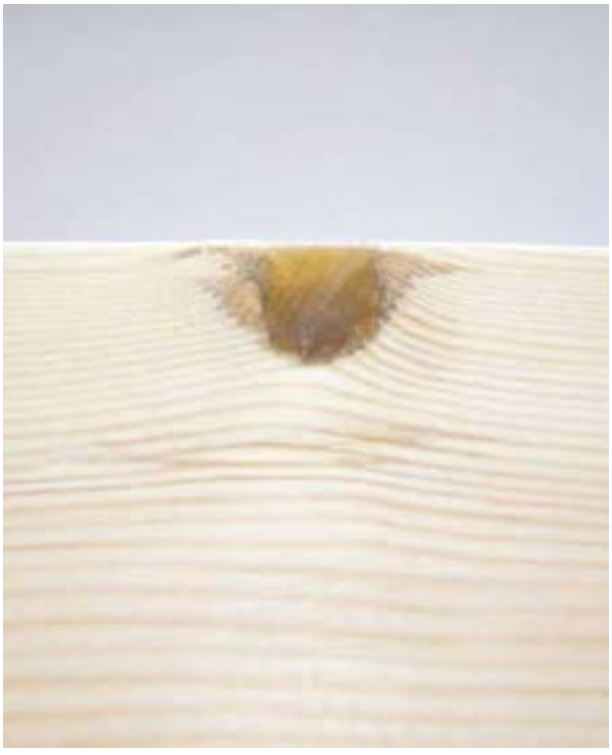
Stick ecologici e atossici
Ecological and non-toxic sticks

Ideale per nodi, fessure lunghe e riparazioni difficili
Ideal for knots, long crevices and difficult repairs

1

2

Facile e veloce nell'utilizzo
Easy and quick to use



CODICI E CARATTERISTICHE
CODES AND CHARACTERISTICS

CODICE *CODE*		descrizione *description*	tensione in esercizio *voltage in operation*	temperatura *temperature*	adesivo *adhesive*	capacità di fusione *moulding capacity*	
WOODREPAIR01	(1)	set base *base set*	220-240 V, 50 Hz	170°C	riempitivo 12 mm *12 mm filler*	0,3-0,6 kg/ora *0,3-0,6 kg/hr*	1
WR06	(2)	pistola professionale *professional gun*		120 - 230°C		1-1,5 kg/ora *1-1,5 kg/hr*	1

STICK

CODICE *CODE*		descrizione *description*	stick /
WRCMIX1		abete - pino - quercia - mogano / *fir - pine - oak - mahogany*	8
WRCMIX2		frassino - faggio - noce - nero / *ash - beech - walnut - black*	8
WRC10	○	bianco / *white*	8
WRC11		frassino / *ash*	8
WRC12		pino / *pine*	8
WRC13		pino chiaro / *light pine*	8
WRC14		quercia / *oak*	8
WRC15		mogano / *mahogany*	8
WRC16		noce / *walnut*	8
WRC17		faggio / *beech*	8
WRC18		ciliegio / *cherry*	8
WRC19		abete / *fir*	8
WRC20		nero / *black*	8
WRC21		stick per pulizia / *cleaning stick*	8
WRC22		grigio / *grey*	8
WRC23		giallo / *yellow*	8

ACCESSORI / *ACCESSORIES*

CODICE *CODE*		descrizione *description*
WR01	(1)	blocco di alluminio con manico / *aluminium lock with handle*
WR02	(2)	blocco di alluminio / *aluminium lock*
WR03	(3)	pialletto a mano / *hand-held spokeshave*
WR04	(4)	cambio colore / *colour change*

TAPPI, SPINE E RATTOPPI
CAPS, PINS AND PATCHES

1

TAPPO IN LEGNO - ABETE - LUNGO VENA
CAP IN WOOD - FIR - ALONG GRAIN

CODICE *CODE*	Ø [mm]	altezza *height* [mm]	ca. / *ca.*
FE710045	10	10	2000
FE710050	12	10	1000
FE710060	15	10	1100
FE710065	20	10	650
FE710075	25	10	400
FE710085	30	10	300
FE710095	35	10	200
FE710105	40	10	160
FE710115	45	10	130
FE710120	50	10	110
FE710070	20	10	6500
FE710080	25	10	4000
FE710090	30	10	3000
FE710100	35	10	2000
FE710110	40	10	1600

2

TAPPO IN LEGNO - LARICE - LUNGO VENA
CAP IN WOOD - LARCH - ALONG GRAIN

CODICE *CODE*	Ø [mm]	altezza *height* [mm]	ca. / *ca.*
FE710315	15	10	785
FE710320	20	10	425
FE710325	25	10	290
FE710330	30	10	190
FE710335	35	10	145
FE710340	40	10	105

3

TAPPO IN LEGNO - ABETE - NODO
CAP IN WOOD - FIR - KNOT

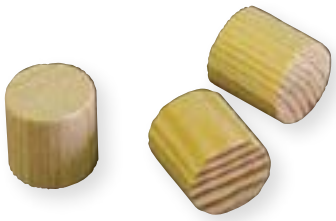
CODICE *CODE*	Ø [mm]	altezza *height* [mm]	
FE710420	10	9	250
FE710425	15	9	250
FE710430	20	9	250
FE710435	25	9	250
FE710440	30	9	250
FE710445	35	9	250
FE710450	40	9	100

4

TAPPO IN LEGNO - ABETE - CLASSE DI RESISTENZA AL FUOCO F-30 SECONDO DIN4102
CAP IN WOOD - FIR- FIRE RESISTANCE CLASS F-30 AS PER DIN4102

CODICE *CODE*	Ø [mm]	altezza *height* [mm]	
FE710465	20	20	100
FE710475	25	20	100
FE710480	30	20	100
FE710485	40	20	100
FE710490	50	20	50
FE710500	60	20	40
FE710520	70	20	25
FE710525	80	20	25
FE710200	12	40	450
FE710205	16	40	250
FE710210	20	40	160
FE710215	50	40	26

5



TAPPO IN LEGNO - ABETE - TESTA
CAP IN WOOD - FIR - HEAD

CODICE *CODE*	Ø [mm]	altezza *height* [mm]	ca. / *ca.*
FE710540	10	20	500
FE710545	12	20	500
FE710550	14	20	500
FE710560	16	20	500
FE710565	18	20	250
FE710466	20	20	250
FE710570	22	20	250
FE710575	24	20	250

SPINE IN LEGNO - FAGGIO
WOODEN PINS - BEECH

CODICE *CODE*	Ø [mm]	altezza *height* [mm]	ca. / *ca.*
FE710130	6	40	1400
FE710140	8	30	1000
FE710150	8	40	750
FE710160	10	40	500
FE710225	10	60	320
FE710185	12	60	230
FE710195	14	140	70
FE710275	16	60	105

SPINE IN LEGNO - FAGGIO - 1 m
WOODEN PINS - BEECH - 1 m

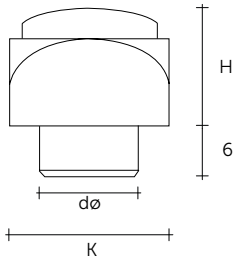
CODICE *CODE*	Ø [mm]	altezza *height* [mm]	
FE710240	8	1000	100
FE710245	10	1000	100
FE710250	12	1000	100
FE710255	14	1000	50
FE710260	16	1000	50
FE710265	18	1000	50
FE710270	20	1000	50

RATTOPPI IN ABETE PER RIPARAZIONI DI TRAVI LAMELLARI
FIR PATCHES FOR REPAIR OF GLULAM BEAMS

CODICE *CODE*	tipo/larghezza *type / width* [mm]	lunghezza *length* [mm]	
FE700005	F20	70	200
FE700070	F20	150	50
FE700075	F20	300	50
FE700080	F20	500	50
FE700083	F24	70	180
FE700085	F24	150	50
FE700090	F24	300	50
FE700095	F24	500	50
FE700240	F35	70	110
FE700100	F35	150	25
FE700105	F35	300	25
FE700110	F35	500	25
FE700250	F42	70	90
FE700115	F42	150	25
FE700120	F42	300	25
FE700125	F42	500	25

RATTOPPI, CHIODI, TAPPI E BISCOTTI
PATCHES, NAILS, CAPS AND PLUGS

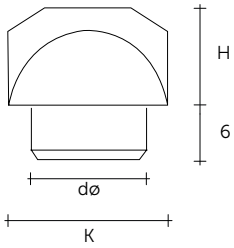
1



FALSO CHIODO - ABETE
FAKE WOOD NAIL - FIR

CODICE *CODE*	K x H x d	
FE710875	22 x 15 x 15	50

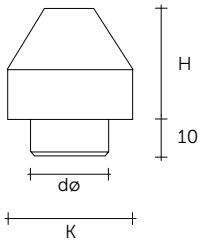
2



FALSO CHIODO - ABETE
FAKE WOOD NAIL - FIR

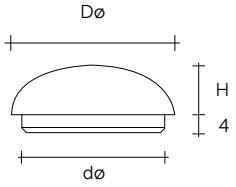
CODICE *CODE*	K x H x d	
FE710885	18 x 8 x 10	50
FE710890	22 x 13 x 15	50

3



FALSO CHIODO - ABETE
FAKE WOOD NAIL - FIR

CODICE *CODE*	K x H x d	
FE710990	25 x 22 x 15	50
FE710995	30 x 25 x 15	50



TAPPO - ABETE
CAP - FIR

CODICE *CODE*	K x H x d	
FE710595	19 x 6 x 15	50
FE710605	24 x 8 x 20	50
FE710615	34 x 11 x 30	25

1

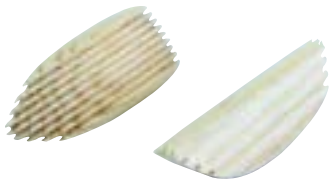
CHIODO IN LEGNO CILINDRICO - ROVERE
CYLINDRICAL WOODEN NAIL - OAK

CODICE *CODE*	Ø [mm]	lunghezza *length* [mm]	
FE710020	20	200	25

2

CHIODO IN LEGNO OTTAGONALE - ROVERE
OCTAGONAL WOODEN NAIL - OAK

CODICE *CODE*	Ø [mm]	lunghezza *length* [mm]	
FE710025	16	150	50
FE710030	20	200	25



RATTOPPO AD ANGOLO - ABETE
ANGULAR PATCH - FIR

CODICE *CODE*	tipo / larghezza *type / width* [mm]	lunghezza *length* [mm]	ca. / *ca.*
FE710110	35	95	100

BISCOTTI IN LEGNO
WOODEN PLUGS

CODICE *CODE*	numero *number*	misura *size* [mm]	
FE710385	0	47 x 15 x 4	1000
FE710390	10	53 x 19 x 4	1000
FE710395	20	56 x 23 x 4	1000

PUNTE E FRESE
DRILL BITS AND CUTTERS

367

FRESA PER LEGNO
CUTTER FOR WOOD

368

PUNTE LEWIS
LEWIS BITS

370

FRESA PER PUNTE
DRILL BIT CUTTER

370

PUNTA PER LEGNO HSS
HSS DRILL BIT FOR WOOD

371

BORMAX

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BORMAX 3 HM

372

FRESA PER TAPPI
CAP CUTTER

373

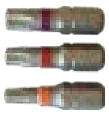
SET

373

PORTAINSERTO
DRIVER BIT HOLDER

374

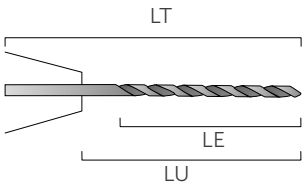
LAME
BLADES



375

BIT

LEGENDA
LEGEND



LT lunghezza totale
overall lenght

LU lunghezza utile
effective lenght

LE lunghezza spirale
spiral lenght

FRESA PER LEGNO
CUTTER FOR WOOD

PER ESEGUIRE UNA FRESATA GUIDATA
FOR GUIDED MILLING

1

2

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	Ø fresa *Ø cutter* [mm]	Ø foro interno per centraggio *Ø inside hole for centring* [mm]	Ø gambo *Ø shank* [mm]	LT [mm]	LU [mm]	
F1614020	20	8	13	140	90	1
F1614025	25	8	13	140	90	1
F1614030	30	8	13	140	90	1
F1614035	35	8	13	145	95	1
F1614040	40	8	13	145	95	1
F1614045	45	10	13	150	100	1
F1614050	50	10	13	150	100	1
F1614055	55	10	13	150	100	1
F1614060	60	10	13	150	100	1
F1614065	65	10	13	155	105	1
F1614070	70	10	13	155	105	1
F1614075	75	10	13	155	105	1
F1614080	80	10	13	155	105	1
F1614100	100	10	16	160	110	1

PUNTA PER PREFORO
TIP FOR PRE-DRILLING

CODICE *CODE*		Ø [mm]	per frese da Ø *cutter Ø* [mm]	LU [mm]	
F1614208	1	8	20 - 40	50	1
F1614210	1	10	44.45 - 120	50	1

PUNTA DI CENTRAGGIO
CENTERING TIP

CODICE *CODE*		Ø [mm]	per frese da Ø *cutter Ø* [mm]	
FE1619208	2	3,8	20 - 40	1
FE1619210	2	4	44.45 - 120	1

TESTINE
HEADS

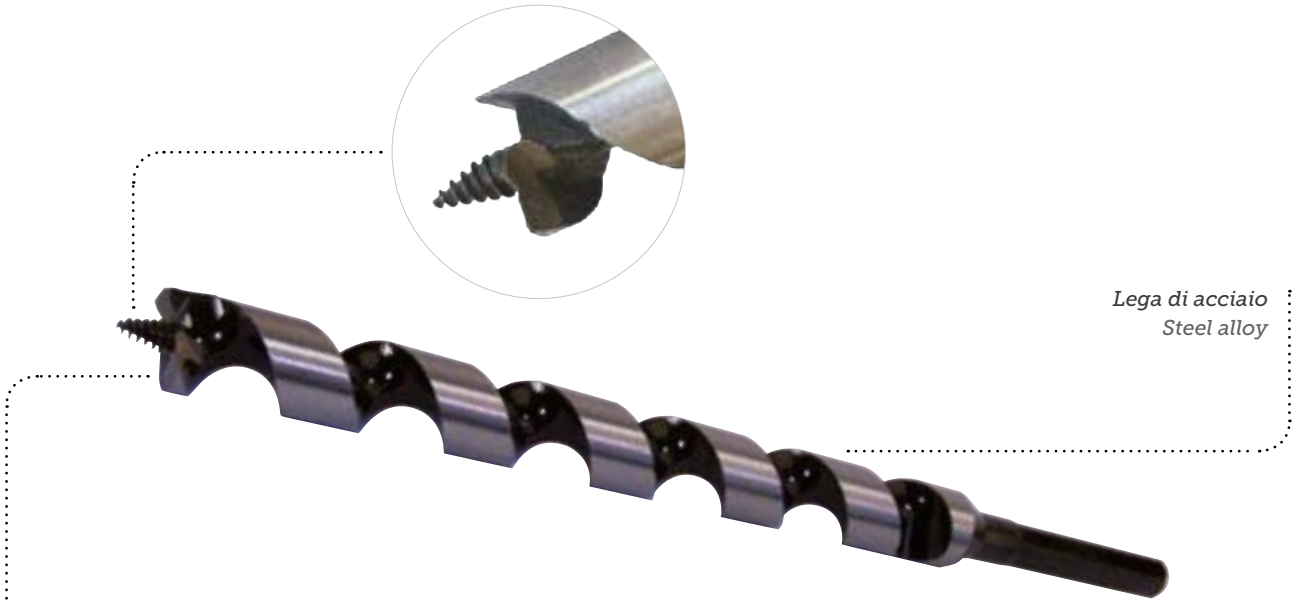
CODICE *CODE*	Ø mm	per frese da Ø *cutter Ø* [mm]	LT [mm]	LU [mm]	
F1619110	10	20 - 40	75	50	1
F1619112	12	20 - 40	75	50	1
F1619116	16	20 - 40	75	50	1
F1619014	14	45 - 100	75	50	1
F1619016	16	45 - 100	75	50	1
F1619018	18	45 - 100	75	50	1

BATTUTA DI PROFONDITÀ
DEPTH STOP

CODICE *CODE*	per frese da Ø *cutter Ø* [mm]	Ø interno *Ø internal* [mm]	
F1619100	40 - 90	95	1

PUNTE LEWIS
LEWIS BITS

PER FORI PROFONDI IN LEGNI DOLCI E LEGNI DURI EUROPEI
FOR DEEP DRILLING IN SOFT AND EUROPEAN HARDWOODS



Lega di acciaio
Steel alloy

Scanalatura a spirale tonda, punta filettata e sgrossatore di alta qualità
Round-section twist flute, threaded tip, high-quality roughing tooth

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	Ø punta *Ø tip* [mm]	Ø gambo *Ø shank* [mm]	LT [mm]	LE [mm]	
F1410205	5	4,5	235	160	1
F1410206	6	5,5	235	160	1
F1410207	7	6,5	235	160	1
F1410208	8	7,8	235	160	1
F1410210	10	9,8	235	160	1
F1410212	12	11,8	235	160	1
F1410214	14	13	235	160	1
F1410216	16	13	235	160	1
F1410218	18	13	235	160	1
F1410220	20	13	235	160	1
F1410222	22	13	235	160	1
F1410224	24	13	235	160	1

CODICE *CODE*	Ø punta *Ø tip* [mm]	Ø gambo *Ø shank* [mm]	LT [mm]	LE [mm]	
F1410228	28	13	235	160	1
F1410230	30	13	235	160	1
F1410232	32	13	235	160	1
F1410305	5	4,5	320	255	1
F1410306	6	5,5	320	255	1
F1410307	7	6,5	320	255	1
F1410308	8	7,8	320	255	1
F1410309	9	8	320	255	1
F1410310	10	9,8	320	255	1
F1410312	12	11,8	320	255	1
F1410314	14	13	320	255	1
F1410316	16	13	320	255	1

CODICE *CODE*	Ø punta *Ø tip* [mm]	Ø gambo *Ø shank* [mm]	LT [mm]	LE [mm]	
F1410318	18	13	320	255	1
F1410320	20	13	320	255	1
F1410322	22	13	320	255	1
F1410324	24	13	320	255	1
F1410326	26	13	320	255	1
F1410328	28	13	320	255	1
F1410330	30	13	320	255	1
F1410332	32	13	320	255	1
F1410407	7	6,5	460	380	1
F1410408	8	7,8	460	380	1
F1410410	10	9,8	460	380	1
F1410412	12	11,8	460	380	1
F1410414	14	13	460	380	1
F1410416	16	13	460	380	1
F1410418	18	13	460	380	1
F1410420	20	13	460	380	1
F1410422	22	13	460	380	1
F1410424	24	13	460	380	1
F1410426	26	13	460	380	1
F1410428	28	13	460	380	1
F1410430	30	13	460	380	1
F1410432	32	13	460	380	1
F1410440	40	13	460	380	1
F1410450	50	13	460	380	1
F1410612	12	11,8	650	535	1
F1410614	14	13	650	535	1
F1410616	16	13	650	535	1
F1410618	18	13	650	535	1
F1410620	20	13	650	535	1
F1410622	22	13	650	535	1
F1410624	24	13	650	535	1
F1410626	26	13	650	535	1
F1410628	28	13	650	535	1
F1410630	30	13	650	535	1
F1410632	32	13	650	535	1
F1410014	14	13	1.080	1.010	1
F1410016	16	13	1.080	1.010	1
F1410018	18	13	1.080	1.010	1
F1410020	20	13	1.080	1.010	1
F1410022	22	13	1.080	1.010	1
F1410024	24	13	1.080	1.010	1
F1410026	26	13	1.080	1.010	1
F1410028	28	13	1.080	1.010	1
F1410030	30	13	1.080	1.010	1

CODICE *CODE*	Ø punta *Ø tip* [mm]	Ø gambo *Ø shank* [mm]	LT [mm]	LE [mm]	
F1410032	32	13	1.080	1.010	1
F1410134	34	13	1.000	380	1
F1410136	36	13	1.000	380	1
F1410138	38	13	1.000	380	1
F1410140	40	13	1.000	380	1
F1410145	45	13	1.000	380	1
F1410150	50	13	1.000	380	1

CODICE *CODE*	Ø set [mm]	LT [mm]	LE [mm]	
F1410200	6, 8, 10, 12, 14, 16, 18, 20	235	160	1
F1410303	10, 12, 14, 16, 18, 20, 22, 24	320	255	1
F1410403	10, 12, 14, 16, 18, 20, 22, 24	460	380	1

FRESA PER PUNTE
DRILL BIT CUTTER

PER PUNTA ELICOIDALE LEWIS
FOR LEWIS TWIST DRILL BIT

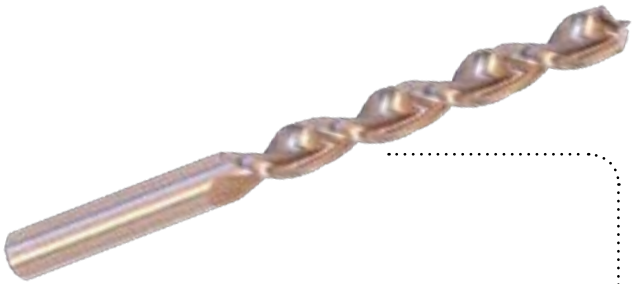
Con doppi taglienti e incisori
With double cutting edges and engravers

CODICE *CODE*	Ø punta *Ø tip* [mm]	Ø gambo *Ø shank* [mm]	LT [mm]	
F1411040	40	13	30	1
F1411050	50	13	30	1
F1411060	60	13	30	1
F1411070	70	13	30	1

CODICE *CODE*	Ø fresa *Ø cutter* [mm]	Ø punta *Ø tip* [mm]	LT punta *LT bit* [mm]	
F1411200	40 - 50 - 60	14 - 16 - 18	235	1
F1411300	40 - 50 - 60	14 - 16 - 18	320	1
F1411400	40 - 50 - 60	14 - 16 - 18	460	1

PUNTA PER LEGNO HSS
HSS DRILL BIT FOR WOOD

PUNTE ELICOIDALI PER LEGNI DURI
HELICAL BITS FOR HARD WOODS



Speciale spirale con interno levigato, per un migliore scarico dei trucioli
Special twist with smoothed flute for improved chip evacuation

CODICE *CODE*	Ø punta *Ø tip* [mm]	Ø gambo *Ø shank* [mm]	LT [mm]	LE [mm]	
F1594020	2	2	49	22	1
F1594030	3	3	60	33	1
F1594040	4	4	75	43	1
F1594050	5	5	85	52	1
F1594060	6	6	92	57	1
F1594080	8	8	115	75	1
F1594090	9	9	125	81	1
F1594100	10	10	130	87	1
F1594110	11	11	140	94	1
F1594120	12	12	150	101	1
F1599205	5	5	250	200	1
F1599206	6	6	250	200	1
F1599207	7	7	250	200	1
F1599208	8	8	250	180	1
F1599209	9	9	250	180	1
F1599210	10	10	250	180	1
F1599212	12	12	250	180	1
F1599214	14	13	250	180	1
F1599216	16	13	250	180	1
F1599405	5	5	400	300	1
F1599406	6	6	400	300	1
F1599407	7	7	400	300	1
F1599408	8	8	400	300	1
F1599409	9	9	400	300	1
F1599410	10	10	400	300	1
F1599412	12	12	400	300	1
F1599414	14	13	400	300	1
F1599416	16	13	400	300	1

CODICE *CODE*	Ø set [mm]	
F1594835	3, 4, 5, 6, 8	1
F1594510	3, 4, 5, 6, 8, 10, 12, 13, 14, 16	1

BORMAX

PER LEGNI DOLCI, LEGNI DURI EUROPEI, PANNELLI TRUCIOLARI E IN MDF
FOR SOFT WOOD, EUROPEAN HARD WOOD, FIBRE BOARDS AND MDF

Uso stazionario e a mano libera
Stationary and free hand use

Per fori precisi
For precise holes

CODICI E DIMENSIONI
CODES AND DIMENSIONS

CODICE *CODE*	Ø punta *Ø tip* [mm]	Ø gambo *Ø shank* [mm]	LT [mm]	LE [mm]	
F1622015	15	8	90	57	1
F1622020	20	8	90	57	1
F1622025	25	10	90	57	1
F1622030	30	10	90	57	1
F1622035	35	10	90	57	1
F1622040	40	10	90	57	1
F1622045	45	10	90	57	1
F1622050	50	10	90	57	1
F1622055	55	13	90	57	1
F1622060	60	13	90	57	1
F1623025	25	13	135	85	1
F1623030	30	13	140	90	1
F1623035	35	13	145	95	1
F1623040	40	13	145	95	1
F1623050	50	13	155	105	1
F1623055	55	13	155	105	1
F1623060	60	13	155	105	1
F1623070	70	13	160	110	1
F1623080	80	13	160	110	1
F1623100	100	16	160	110	1

CODICE *CODE*	Ø set [mm]	LT [mm]	LE [mm]	
F1622505	15, 20, 25, 30, 35	90	57	1
F1622508	15, 20, 25, 30, 35, 40, 45, 50	90	57	1

BORMAX 3 HM

UNIVERSALE, ANCHE PER LEGNI ESOTICI DURI, PANNELLI LAMINATI E ALTRI MATERIALI

ALSO FOR HARD EXOTIC WOOD, MELAMINE-LINED PANELS AND OTHER MATERIALS

Punta Forstner universale per materiali duri
Universal Forstner bit for hard materials

CODICE *CODE*	Ø esterno *Ø external* [mm]	Ø gambo *Ø shank* [mm]	LT [mm]	LU [mm]	
F1663015	15	8	90	57	1
F1663020	20	8	90	57	1
F1663025	25	10	90	57	1
F1663030	30	10	90	57	1
F1663035	35	10	90	57	1
F1663040	40	10	90	57	1
F1663045	45	10	90	57	1
F1663050	50	10	90	57	1

CODICE *CODE*	Ø set [mm]	Ø [mm]	LU [mm]	
F1663505	15, 20, 25, 30, 35	90	57	1
F1663504	35, 40, 45, 50	90	57	1

FRESA PER TAPPI
CAP CUTTER

PER LA PRODUZIONE DI TAPPI IN LEGNO

TO MAKE WOODEN CAPS

Progettata per uso con punte BORMAX
Designed to be used with BORMAX bits

CODICE *CODE*	Ø interno *Ø internal* [mm]	Ø gambo *Ø shank* [mm]	LT [mm]	LU [mm]	
F1616015	15	13	140	70	1
F1616020	20	13	140	70	1
F1616025	25	13	140	70	1
F1616030	30	13	140	70	1
F1616035	35	13	140	70	1
F1616040	40	16	140	70	1
F1616045	45	16	140	70	1
F1616050	50	16	140	70	1

CODICE *CODE*	**descrizione** *description* [mm]	Ø [mm]	LU [mm]	
F1628306	set fresa per tappi + Bormax *disc cutter + Bormax set*	15, 20, 25	70 - 57	1

SET

BATTUTA DI PROFONDITÀ, SVASATORE, PUNTA
DEPTH STOP, COUNTERSINKER, BIT

Perfetto per uso su legni duri
Perfect for use on hard woods

CODICE *CODE*	Ø punta *Ø tip* [mm]	Ø svasatore *Ø counterbore cutter* [mm]	
F3577040	4	12	1
F3577050	5	12	1
F3577060	6	12	1
F3577504	set 4, 5, 6	12	1

PORTAINSERTO
DRIVER BIT HOLDER

CON FINE CORSA
WITH END STOP

Arresto automatico al raggiungimento della profondità impostata
Automatic stop on reaching the depth set

CODICE *CODE*	Ø punta *Ø tip* [mm]	Ø svasatore *Ø counterbore cutter* [mm]	
AT4030	profondità regolabile *adjustable depth*	5	1

LAME
BLADES

LAMA PER SEGHE A NASTRO - MD DARIO
BLADE FOR BAND SAWS - MD DARIO

CODICE *CODE*	misure *size* [mm]	tipo macchina *machine type* [mm]	
ATMD06	2,450 x 6	SV3	10
ATMD10	2,450 x 10	SV3	10
ATMD3310	2,530 x 10	SN33	10
ATMD3306	2,530 x 6	SN33	10

LAMA PER SEGHE A NASTRO MANUALI - HEMA / PROTOOL
BLADE FOR MANUAL BAND SAWS - HEMA / PROTOOL

CODICE *CODE*	misure *size* [mm]	
LAMEHH6	1,710 x 6	10
LAMEHH10	1,710 x 10	10

LAMA PER SEGHE A NASTRO - MAFELL Z3 / Z5, CON DENTATURA POSTERIORE
BLADE FOR BAND SAWS - MAFELL Z3 / Z5, WITH POSTERIOR TOOTHING

CODICE *CODE*	misure *size* [mm]	
LAMEZ58DD	1,752 x 8	10

COLTELLO PER PIALLA PER TRAVI - HEMA / PROTOOL
KNIFE FOR BEAM PLANERS - HEMA / PROTOOL

CODICE *CODE*	misure *size* [mm]	
WMHH205ST	205	12
WMHH245ST	245	12
WMHH300ST	300	12
WMHH350ST	350	12

LAMA PER PANNELLI SANDWICH COMPOSITI IN METALLO
FOR COMPOSITE SANDWICH PANELS IN METAL

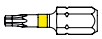
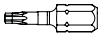
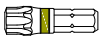
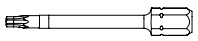
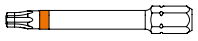
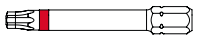
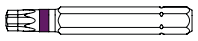
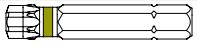
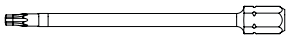
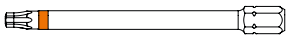
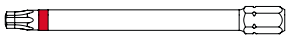
CODICE *CODE*	misure *size* [mm]	tipo macchina *machine type* [mm]	
MA092579	Z54, WZ / FA 330 x 2,2 / 2,6 x 30 mm	Mafell MKS130	1
MA092534	Z86, FZFA / FZFA 450 x 3,4 / 3,0 x 30 mm	Mafell MKS185	1

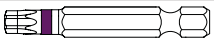
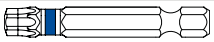
LAMA PER SEGHETTO CON AFFILATURA ONDULATA PER PANNELLI IN FIBRA DI LEGNO
BLADE FOR HACKSAW WITH SERRATED EDGE FOR PLYWOOD PANELS

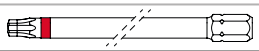
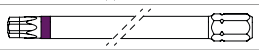
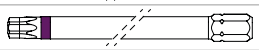
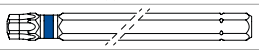
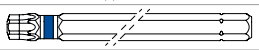
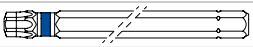
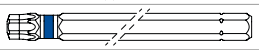
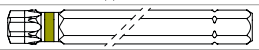
CODICE *CODE*	misure *size* [mm]	
LAM155	155	5

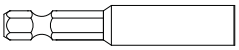
BIT

INSERTI TORX
TORX BITS

L [mm]	CODICE *CODE*	inserto *bit*	colore *colour*		geometria *geometry*
25	**TX1025**	TX 10	giallo / *yellow*	10	
	TX1525	TX 15	bianco / *white*	10	
	TX2025	TX 20	arancione / *orange*	10	
	TX2525	TX 25	rosso / *red*	10	
	TX3025	TX 30	viola / *purple*	10	
	TX4025	TX 40	blu / *blue*	10	
	TX5025	TX 50	verde / *green*	10	
50	**TX1550**	TX 15	bianco / *white*	5	
	TX2050	TX 20	arancione / *orange*	5	
	TX2550	TX 25	rosso / *red*	5	
	TX3050	TX 30	viola / *purple*	5	
	TX4050	TX 40	blu / *blue*	5	
	TX5050	TX 50	verde / *green*	5	
75	**TX1575**	TX 15	bianco / *white*	5	
	TX2075	TX 20	arancione / *orange*	5	
	TX2575	TX 25	rosso / *red*	5	

L [mm]	CODICE *CODE*	inserto *bit*	colore *colour*		geometria *geometry*
50	**TXE3050**	TX 30	viola / *purple*	5	
	TXE4050	TX 40	blu / *blue*	5	

L [mm]	CODICE *CODE*	inserto *bit*	colore *colour*		geometria *geometry*
150	**TX25150**	TX 25	rosso / *red*	1	
200	**TX30200**	TX 30	viola / *purple*	1	
350	**TX30350**	TX 30	viola / *purple*	1	
150	**TX40150**	TX 40	blu / *blue*	1	
200	**TX40200**	TX 40	blu / *blue*	1	
350	**TX40350**	TX 40	blu / *blue*	1	
520	**TX40520**	TX 40	blu / *blue*	1	
150	**TX50150**	TX 50	verde / *green*	1	

CODICE *CODE*	descrizione *description*		geometria *geometry*
TXHOLD	60 mm - magnetico *60 mm - magnetic*	5	

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