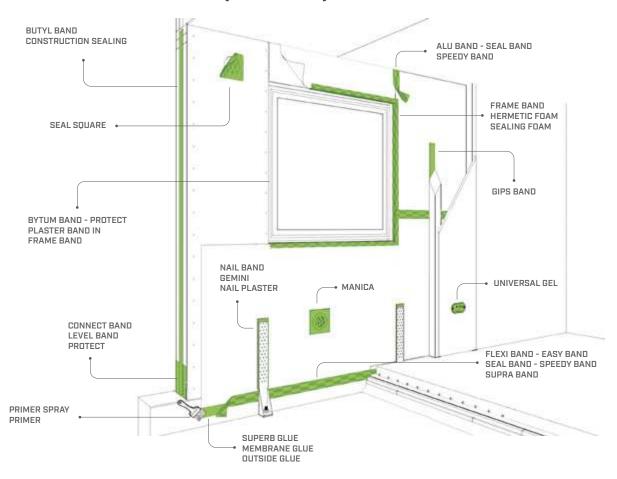
# TIMBER FRAME

Solutions to design and build with frame systems

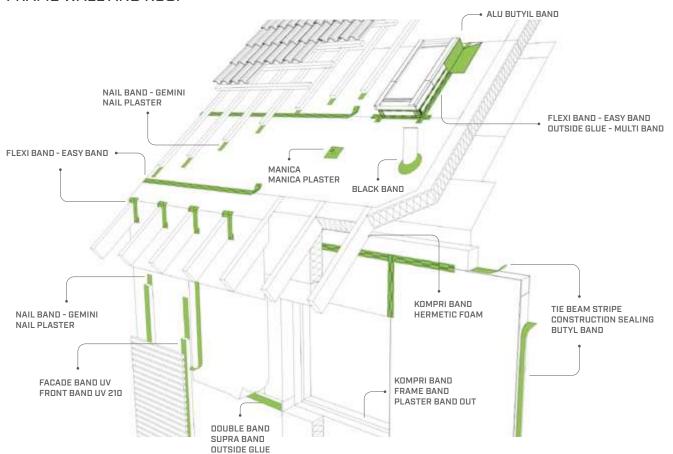


## **APPLICATION SETTINGS**

#### FRAME WALL WITH WINDOW (internal view)



#### FRAME WALL AND ROOF

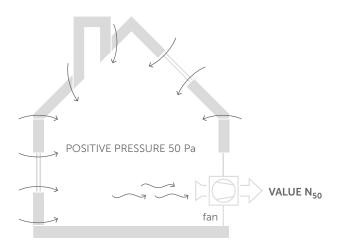


### **QUALITY BUILDING**

Modern building requires attention to be paid to issues that just a few years ago were considered secondary: energy savings, noise reduction, resistance to earthquakes or other exceptional natural events all of these are areas closely connected to the application of advanced technology and quality products.

#### INSPECTION TOOLS

With the **BLOWER DOOR TEST** a building is subjected to positive pressure of 50 Pa, while the quantity of air that filters from the surfaces which enclose the casing is measured. The value  $n_{50}$  [1/h] expresses the ratio between the volume of air dispersed in an hour and the total volume of the building.



#### VALUES N<sub>50</sub> [1/h]

- Passive house ≤ 0,6/h
- Building with low energy consumption  $\leq 2.0/h$
- Building with forced ventilation system  $\leq 1,5/h$
- Conventional building ≤ 3,0/h

# REDUCING ENERGY CONSUMPTION

Numerous studies show that energy use in buildings causes over 40% of global  ${\rm CO_2}$  emissions.

Greater attention paid to reducing energy consumption during design is essential for both the environment and for economic savings.

#### **MATERIALS**

Wood, a sustainable material.

#### INDOOR AIR QUALITY

Improved air quality, improved quality of life.

#### **RENEWABLE SOURCES**

Environmental sustainability and primary energy sources.

#### **VENTILATION**

Controlled air exchange for excellent comfort.

#### WATER

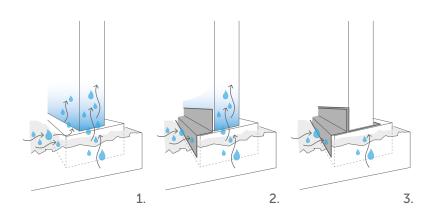
Reducing water consumption.

#### **LOCATION**

Importance of positioning and solar contributions.

### ATTENTION TO DETAILS

The durability of wood is closely connected to protection from water: proper installation is necessary to impede external infiltration, humidity coming from the subsoil and unsatisfactory sealing.



- CRITICALITY
   Humidity due to capillary action.
- SIDE PROTECTION
   Bituminous membranes, bituminous bands.
- 3. VERTICAL PROTECTION

  Continuous waterproof sheaths, bituminous and butyl bands.

## **I** ALU START

### ALUMINIUM SYSTEM FOR THE CONNECTION OF BUILDINGS TO THE GROUND









FOCUS	raising and levelling of TIMBER FRAME panels	
WIDTH	from 100 to 160 mm	
STRENGTH	in all stress directions	
FASTENERS	LBA, LBS, SKR-E, AB1, VIN-FIX PRO, EPO-FIX PLUS	

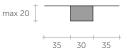


# **I CONNECT BAND**

### SEALING WALL BARRIER FOR IRREGULAR **FOUNDATIONS**







_						
+	37	15	60	15	90	20 13

FOCUS	waterproofing of ground connection with irregular surfaces
MATERIAL	EPDM with self-expanding tapes made of impregnated polyurethane foam
DIMENSIONS	100 mm x 25 m   250 mm x 25 m

# **C E** N 13984



### **I LEVEL BAND**

### **SEALING WALL BARRIER FOR FOUNDATIONS**





-	0		0		
+	25	75	-	250	

FOCUS	waterproofing of ground connection with regular surfaces	
MATERIAL	polyethylene (PE) and closed-cell EPDM profiles	
DIMENSIONS	125 mm x 25 m   350 mm x 25 m	





# **■** PROTECT

### SELF-ADHESIVE BUTYL BAND, CAN BE PLASTERED





FOCUS	waterproofing and sealing of ground connection and window/door frames
MATERIAL	adhesive butyl compound with polypropylene (PP) fabric support, and separation layer
DIMENSIONS	330 mm x 10 m   500 mm x 10 m
THICKNESS	1 mm



## I GROUND BAND

### SELF-ADHESIVE BITUMINOUS MEMBRANE





FOCUS	self-sealing and self-adhesive
MATERIAL	bituminous compound spread on high density polyethylene film (PE) and separation layer
DIMENSIONS	200 mm x 20 m   500 mm x 20 m   1000 mm x 20 m
THICKNESS	1,5 mm



### SKR-E

### SCREW ANCHOR FOR CONCRETE CE1



FOCUS	screw for concrete
HEAD	hexagonal head with mock washer
DIAMETER	from 8 to 16 mm
LENGTH	from 80 to 290 mm









## WHT

### ANGLE BRACKET FOR TENSILE LOADS





FOCUS	tensile joints
HEIGHT	from 340 to 740 mm
THICKNESS	3,0 mm
FASTENERS	LBA, LBS, VIN-FIX PRO, EPO-FIX PLUS



# **CE** ETA-11/0496

### I TITAN F

### ANGLE BRACKET FOR SHEAR FORCES





FOCUS	shear joints
HEIGHT	71 mm
THICKNESS	3,0 mm
FASTENERS	LBA, LBS, VIN-FIX PRO, EPO-FIX PLUS, SKR, AB1



# CE ETA

### WZU

### ANGLE BRACKET FOR TENSILE LOADS



FOCUS	timber frame struts fastening
HEIGHT	from 90 to 480 mm
THICKNESS	from 2,0 to 4,0 mm
FASTENERS	LBA, LBS, VIN-FIX PRO

Discover the complete range of **PLATES AND CONNECTORS FOR TIMBER** www.rothoblaas.com

# WHT PLATE C CONCRETE

### PLATES FOR TENSILE LOADS





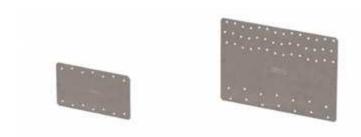
FOCUS	tensile joints on concrete
HEIGHT	440   540 mm
THICKNESS	3,0 mm
FASTENERS	LBA, LBS, SKR, VIN-FIX PRO, EPO-FIX PLUS



# **C**E EN 14545

## I TITAN PLATE T TIMBER

### PLATES FOR SHEAR LOADS



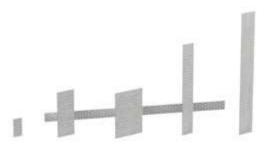
FOCUS	timber-to-timber shear joint
HEIGHT	200   300 mm
THICKNESS	3,0 mm
FASTENERS	LBA, LBS



# **CE**EN 14545

### LBV

#### PERFORATED PLATES



FOCUS	tension fastening
HEIGHT	from 120 to 1200 mm
THICKNESS	from 1,5 to 2,5 mm
FASTENERS	LBA, LBS



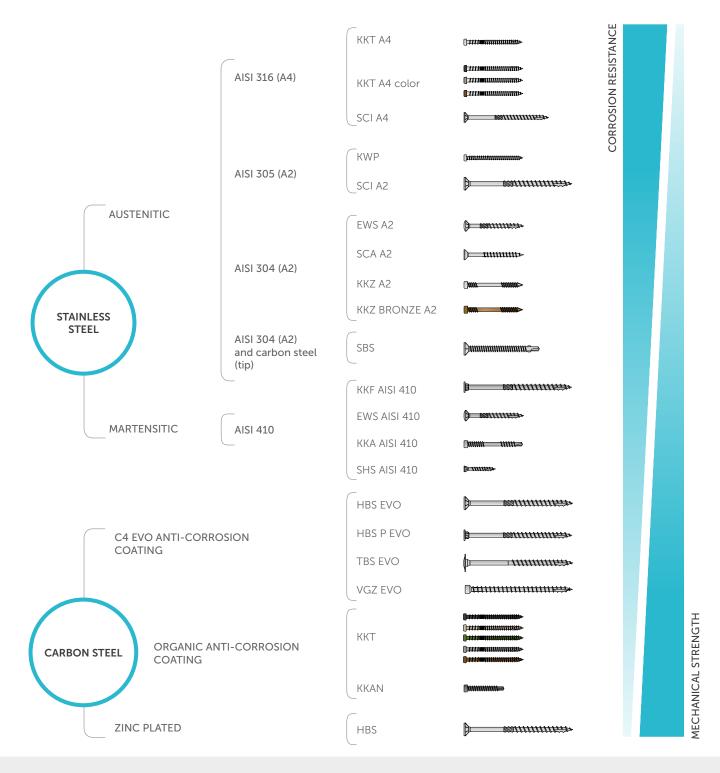






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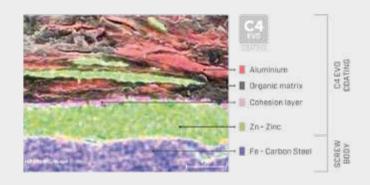
### MATERIALS AND COATINGS



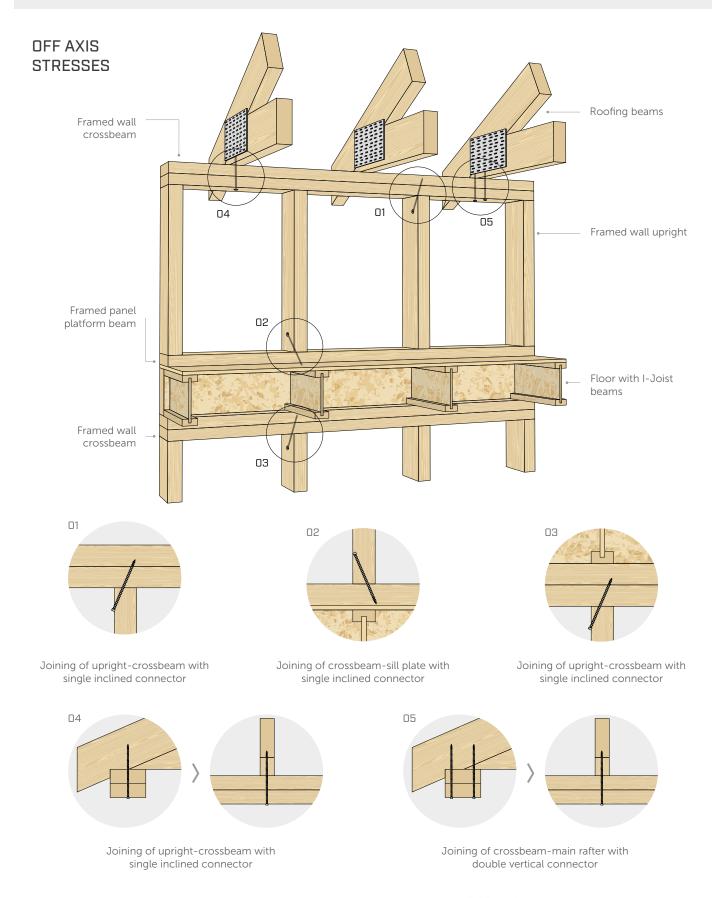
### C4 EVO COATING

Is a multilayer coating composed of:

- An external functional layer of epoxy matrix with aluminium flakes of around 15-20  $\mu$ m, which gives the coating optimum resistance to mechanical and thermal stresses. The aluminium flakes also serve, when required, as sacrificial cathodes for the metal base of the screw.
- A central binding layer for the external functional layer.
- An internal layer of around 4  $\mu m$  zinc microns which acts as an additional layer of corrosion resistance.



### **CEILING-TO-WALL JOINTS**



Discover the complete range of **SCREWS AND CONNECTORS FOR TIMBER** on our website or request the catalogue from your trusted agent. **www.rothoblaas.com** 





## **I** HBS

### COUNTERSUNK SCREW









FOCUS	extremely complete range
HEAD	countersunk with under-head ribs
DIAMETER	from 3,5 to 12,0 mm
LENGTH	from 30 to 600 mm



# **CE** EN 14592

# I HBS SOFTWOOD BULK

COUNTERSUNK SCREW





HEAD countersunk with under-head ribs  DIAMETER 5.0.1.6.0 mm	FOCUS	maxi package
DIAMETER 5.0   6.0 mm	HEAD	countersunk with under-head ribs
5,0   5,0   1111	DIAMETER	5,0   6,0 mm
LENGTH from 60 to 160 mm	LENGTH	from 60 to 160 mm









### I HBS COIL

**HBS BOUND SCREWS** 



FOCUS	HBS bound screw
HEAD	countersunk with under-head ribs
DIAMETER	from 4,0 to 6,0 mm
LENGTH	from 30 to 80 mm



## **LBA**

#### HIGH BOND NAIL





FOCUS	threaded, annular ring nail
HEAD	flat
DIAMETER	4,0   6,0 mm
LENGTH	from 40 to 100 mm











FLANGE HEAD SCREW



FOCUS	screw with built-in washer
HEAD	flange
DIAMETER	from 6,0 to 10,0 mm
LENGTH	from 40 to 520 mm











### VGZ EVO FRAME

MINI FULL THREAD SCREW WITH CYLINDRICAL HEAD



FOCUS	connector for narrow sections, ideal for outdoor use in service class 3
HEAD	cylindrical, countersunk
DIAMETER	5,3   5,6 mm
LENGTH	from 80 to 160 mm



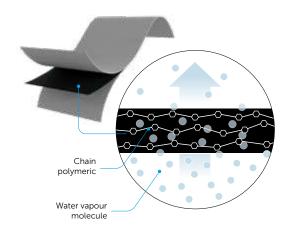
### **MEMBRANES**

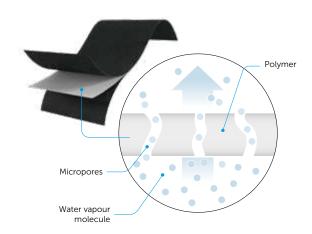
#### MONOLITHIC

Membranes with a homogeneous and continuous functional layer. The permeance of monolithic membranes is provided by the ability of the polymer of which they are composed to make a **CHEMICAL INTERACTION** with water molecules. Some polymers, in fact, are able to activate a chemical interaction with water molecules and therefore to be crossed through, thus becoming breathable.

#### **MICROPOROUS**

Membrane with functional microporous layer, obtained through mechanical processing during the production. Permeability to water vapour is entrusted to the **CAPILLARY PRINCIPLE:** the water molecule passes through the micropores in the vapour check film, enclosed in one or two protective layers.

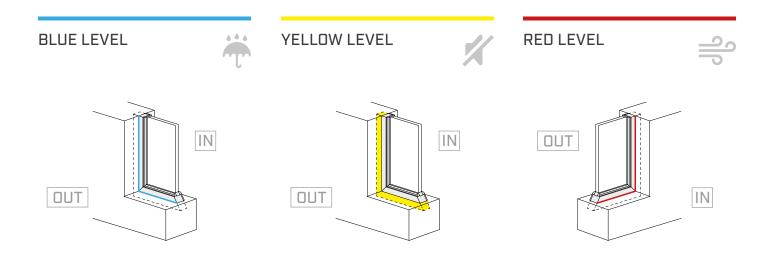




### DOORS, WINDOWS AND STRUCTURE

#### THREE LEVELS OF PROTECTION

The three level method, which is used often in most European countries, identifies thermal and acoustic insulation levels for proper placement of doors and windows. To obtain maximum performance, it is important to take care in all design stages. Rothoblaas offers specific solutions for each of the three levels.



This is the most external level, that guarantees protection against weather. If not properly treated, it can create infiltration problems that lead to the formation of condensation and mould.

Intermediate level, which must guarantee thermal/acoustic performance and mechanical fixing. Problems can arise from the fact that frequently the materials that insulate well against noise are not equally effective against cold.

Most internal level, generally the most neglected. Must guarantee airtightness to avoid formation of condensation in installation joints, which could damage the insulating solutions used in the primary node.

## **I EASY BAND**

#### **UNIVERSAL SINGLE-SIDED TAPE**



FOCUS	sealing of membranes and construction elements both indoor and outdoor
MATERIAL	polyethylene (PE) support with acrylic glue, reinforcing grid and separation layer
DIMENSIONS	50 mm x 25 m   60 mm x 25 m
ADVANTAGES	versatile and stable even at high temperatures



# P

### **I SEAL BAND**

#### SINGLE-SIDED TAPE FOR INDOOR USE



FOCUS	sealing of membranes and construction elements in indoor environment
MATERIAL	hydrorepellant impregnated paper support, acrylic glue and separation layer
DIMENSIONS	60 mm x 40 m
ADVANTAGES	available in version with pre-cut liner to facilitate placement in corners



# **C E** N 13984

### **I FRAME BAND**

# SELF-EXPANDING SEALING TAPE FOR WINDOW/DOOR FRAMES



FOCUS	sealing of windows/doors with great soundproofing power
MATERIAL	precompressed polyurethane foam impregnated with fire- proof substances and polyethylene (PE) film
DIMENSIONS	54 mm x 30 m   74 mm x 30 m
ADVANTAGES	suitable to replace the three levels of protection (see intro) without additional products



AIR-TIGHTNESS AND WATERPROOFING are synonyms of building quality, durability and housing comfort. Discover our solutions on our website or request the catalogue from your trusted agent. www.rothoblaas.com



## **BARRIER ALU**

### REFLECTIVE AIR VAPOUR BARRIER







FOCUS	waterproof, it completely blocks the passage of vapour and reflects heat internally
MASS PER UNIT AREA	from 100 to 200 g/m <sup>2</sup>
WATER VAPOUR TRANSMISSION	versions from Sd > 150 to Sd > 1500 m
SPECIAL	3,0 m versions with reaction to fire class B-s1, d0



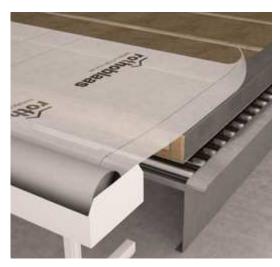
### VAPOR

### VAPOUR STOP CONTROL LAYER





FOCUS	waterproof, it blocks vapour
MASS PER UNIT AREA	from 100 to 225 g/m <sup>2</sup>
WATER VAPOUR TRANSMISSION	versions from Sd = 4 m to Sd = 40 m
SPECIAL	3,0 m versions



## I CLIMA CONTROL

### MEMBRANE WITH VARIABLE DIFFUSION



FOCUS	waterproof, it regulates the passage of vapour thanks to the variable Sd
MASS PER UNIT AREA	from 80 to 160 g/m <sup>2</sup>
WATER VAPOUR TRANSMISSION	variable diffusion, between Sd = 0,2 and Sd = 5 m
SPECIAL	membrane with variable diffusion





## **I TRASPIR**

### HIGH PERFORMANCE BREATHABLE











FOCUS	waterproof, it allows the passage of vapour
MASS PER UNIT AREA	from 75 to 270 g/m <sup>2</sup>
WATER VAPOUR TRANSMISSION	Sd < 0,05 m
SPECIAL	versions with SINTEF, CSTB, BBA certification



### **B**-s1, d0



### I TRASPIR EVO

#### HIGHLY BREATHABLE MONOLITHIC MEMBRANE



FOCUS	highly waterproof, it allows the passage of vapour
MASS PER UNIT AREA	from 90 to 360 g/m <sup>2</sup>
WATER VAPOUR TRANSMISSION	Sd < 0,2 m
SPECIAL	functional monolithic layer (EVO) for excellent durability



## I NET ROLL

### FLEXIBLE VENTILATED UNDER-RIDGE



FOCUS	protection of the roof ventilation section
ADVANTAGES	ventilation strap stitched and glued to pleated wings, durable
MATERIAL	polypropylene (PP) ventilation grid and aluminium strips with adhesive butyl rope
DIMENSIONS	310 mm x 5 m   390 mm x 5 m   390 mm x 20 m



## **WASP**

# ANCHOR FOR TRANSPORTING PREFABRICATED ELEMENTS AND CLT PANELS



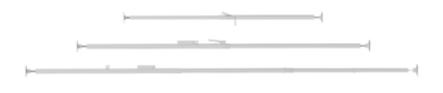


FOCUS	can be used for axial and transversal loads
MATERIAL	very high strength bright zinc plated carbon steel
DIMENSIONS	185 mm
ADVANTAGES	maximum capacity 1300 kg



### **GIRAFFE**

### **ASSEMBLY SUPPORT**



FOCUS	precise length adjustment by means of the side handle
MATERIAL	GIR3000 and GIR4000 in zinc plated steel GIR2200 and GIR6000 in extruded aluminium 6060
DIMENSIONS	2200-3000-4000-6000 mm
ADVANTAGES	GIR3000 equipped with quick adjustment with automatic fastener



### MANTIS

# LIFTING BELT FOR TRANSPORT WALLS AND PRECAST ELEMENTS



FOCUS	7:1 safety factor
MATERIAL	polyester
DIMENSIONS	50 or 100 cm
ADVANTAGES	maximum capacity 800 kg

EN 1492-1

TDDLS AND MACHINES, everything you need to work in best conditions on site. Discover them on our website or ask your trusted agent for the catalogue. www.rothoblaas.com





XEPOX **(**E

#### TWO COMPONENTS EPOXY ADHESIVE



FOCUS	structural gluing
TYPES	joints with rods, joints with perforated or sandblasted plates
RANGE	5 products to adapt to all installation requirements
APPLICATION	applicable by spray, brush, percolation or spatula depending on viscosity











### VIN-FIX

### VINYL ESTER CHEMICAL ANCHOR WITHOUT **STYRENE**



FOCUS	cracked, non-cracked concrete and seismic category C2
MATERIAL	vinyl ester without styrene based
FORMAT	300 ml   420 ml
ADVANTAGES	suitable for dry, wet concrete or submerged holes



## **I HERMETIC FOAM**

### HIGH PERFORMING SOUNDPROOFING **SEALING FOAM**



FOCUS	elastic sealing for regular and irregular joints on the most common materials
MATERIAL	closed-cell polyurethane compound with high elasticity
FORMAT	750 ml
ADVANTAGES	tested for noise reduction up to 60 dB

Get the most out of our solutions, thanks to the support of our highly qualified **TECHNICAL CONSULTANTS**, always available to designers, technicians and installers.

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## **VGZ**

### FULL THREAD SCREW WITH CYLINDRICAL HEAD









FOCUS	45° connections, reinforcements and couplings
HEAD	cylindrical, countersunk
DIAMETER	5,3   5,6   7,0   9,0   11,0 mm
LENGTH	from 80 to 600 mm









### **ALU MIDI**

### CONCEALED BRACKET WITH AND WITHOUT HOLES



FOCUS	concealed joints
TIMBER SECTIONS	from 80 x 100 mm to 200 x 520 mm
STRENGTH	R <sub>V,K</sub> up to 150 kN
FASTENERS	LBA, LBS, SBD, STA, SKR



## **BSA**

### METAL HANGERS WITH EXTERNAL WINGS



FOCUS	visible joint
DIMENSIONS	from 40 x 110 mm to 200 x 240 mm
THICKNESS	2,0   2,5 mm
FASTENERS	LBA, LBS, SKR, VIN-FIX PRO





## LOCK T TIMBER

### CONCEALED HOOK TIMBER-TO-TIMBER CONNECTOR







FOCUS	joints that can be disassembled
TIMBER SECTIONS	from 35 x 80 mm to 200 x 440 mm
STRENGTH	R <sub>v,k</sub> up to 65 kN
FASTENERS	LBS



### I SPEEDY BAND

UNIVERSAL SINGLE-SIDED TAPE WITHOUT SEPARATION LAYER



FOCUS	sealing of membranes and construction elements both indoor and outdoor
MATERIAL	polyethylene (PE) support with acrylic glue and reinforcing grid
DIMENSIONS	60 mm x 25 m   300 mm x 25 m
ADVANTAGES	no separation liner to reduce waste and time



### **CONSTRUCTION SEALING**

COMPRESSIBLE SEAL FOR REGULAR JUNCTIONS



FOCUS	sealing of windows/doors and structural elements with regular surfaces
MATERIAL	Expanded EPDM
DIMENSIONS	46 mm x 25 m
ADVANTAGES	high chemical stability and durability



## **I ALADIN STRIPE**

#### RESILIENT SOUNDPROOFING PROFILE







MATERIAL	Extruded and expanded EPDM
THICKNESS	5,0 and 7,0 mm
DIMENSIONS	dividable pre-cut strips from 95 to 115 mm
APPLICABLE LINEAR LOAD	from 2,0 to 30 kN/m

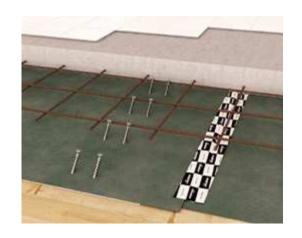


### **I SILENT FLOOR**

### RESILIENT UNDERSCREED FOIL



FIELDS OF USE	underscreed
MATERIAL	elastoplastomeric bitumen coupled with polyester felt
ROLL DIMENSIONS	5,0 mm x 1,05 m x 10 m
DYNAMIC STIFFNESS S'	27 MN/m³
ΔLW *	28 dB



### **I SILENT STEP**

# SUBSTRATE MADE OF POLYETHYLENE SERVING AS A VAPOUR BARRIER



FIELDS OF USE	underfloor
MATERIAL	NPE polyethylene with PE film
ROLL DIMENSIONS	2,0 mm x 1,0 m x 15 m
MASS PER UNIT AREA	100 g/m <sup>2</sup>
PROTECTION FROM RISING DAMP (Sd)	> 75 m



Our SOUNDPROOFING SOLUTIONS guarantee the highest standards in terms of soundproofing and housing comfort. Discover them on our website or ask your trusted agent for the catalogue.

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## R10 - R20 - R30

### ADJUSTABLE POST BASE









FOCUS	adjustable height after assembly
COLUMNS	from 80 x 80 mm to 240 x 240 mm
HEIGHT	adjustable from 140 to 250 mm
FASTENERS	HBS PLATE EVO, SKR, VIN-FIX PRO



### FLAT - FLIP

### CONNECTORS FOR DECKING



FOCUS	extremely precise joints
CLADDING	black anti-rust coating   zinc plated
BOARDS	symmetrical grooving
JOINTS	7,0 mm
FASTENERS	KKTN540, KKAN440



### ♠ B-s1, d0



### I TRASPIR EVO UV

### HIGHLY BREATHABLE MONOLITHIC MEMBRANE **RESISTANT TO UV RAYS**



FOCUS	permanent UV stability
MASS PER UNIT AREA	210 g/m <sup>2</sup>
WATER VAPOUR TRANSMISSION	Sd < 0,15 m
SPECIAL	3.0 m versions with reaction to fire class B-s1, d0





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• • • •

• • • •

EN 517:2006 B

EN UNI 795:2012 A 11578:2015 A



FOCUS	ideal for timber beams with reduced cross-section, from a minimum of 38 x 68 mm
MATERIAL	1.4016 stainless steel grade AISI430
FIELD OF USE	min. timber structure 114 mm (38 + 38 + 38) x 68 mm



EN UNI 795:2012 A 11578:2015 A

### I HOOK EVO 2.0

#### **ANCHOR POINT**



FOCUS	versatile fastening according to the type of tiles on the roof
MATERIAL	1.4301 stainless steel grade AISI304
FIELD OF USE	min. timber structure 80 x 100 mm min. concrete structure 120 mm



EN UNI 795:2012 A 11578:2015 A

## LOOP - LOOP XL

### **ANCHOR POINT**



FOCUS	low visual impact, ideal for installation on roofs in historic centres
MATERIAL	1.4404 stainless steel grade AISI316   EN AW-6060 aluminium
FIELD OF USE	min. timber structure: 100 x 100 mm concrete structure in combination with KRAKEN sup- port: min. 40 mm

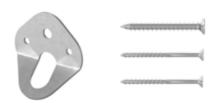


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EN UNI 795:2012 A 11578:2015 A



FOCUS	ideal as an anchor point in multiple environments, it allows the operator to safely access
MATERIAL	1.4016 stainless steel grade AISI430
FIELD OF USE	min. timber structure 100 x 100 mm min. concrete structure 140 mm min. steel structure 5 mm





EN 795:2012 A+C

CEN/TS UNI 16415:2013 11578:2015 A+C



#### SUPPORT FOR AOSO1







• • • •

FOCUS	support suitable for installation on flat, inclined and overhead surfaces for PATROL lifeline or as single point in combination with AOS01
MATERIAL	galvanized steel S235JR or stainless steel 1.4301 / AISI304
FIELD OF USE	min. timber structure 160 x 160 mm min. concrete structure 140 mm min. steel structure 6 mm



EN CEN/TS UNI 795:2012 C 16415:2013 11578:2015 C

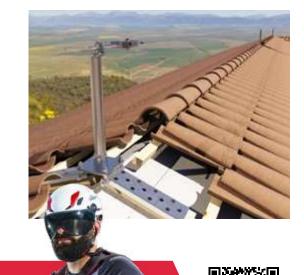
## I PATROL KIT

LIFELINE KIT





FOCUS	convenient kit including terminals, dissipators, intermediate and rope for the construction of a of 10-15 or 25 m. lifeline
MATERIAL	1.4301 stainless steel grade AISI304 - EN-AW 6082 aluminium
FIELD OF USE	usable on TOWER, TOWER XL, SHIELD, SHIELD 2.0, COPPO supports



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#### **FASTENING**

Screws for timber | Plates and connectors | Anchors for concrete

#### AIRTIGHTNESS AND WATERPROOFING

Stops and barriers | Breathable | Sheaths | Tapes and profiles Sealants | Accessories

#### SOUNDPROOFING

Resilient profiles | Soundproofing layers | Sealants

#### **■ FALL PROTECTION**

Lifeline | Lifeline components | Single points | Collective protection and accesses | PPE | Fastening systems and accessories

#### I TOOLS AND MACHINES

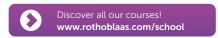
Transport and lifting | Carpentry tools | Templates

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Training programmes that deal with the most current topics in the field of designing and constructing timber buildings, but not limited to. Qualified speakers and stimulating teaching programmes: the perfect combination to keep up to date with the main topics related to the world of timber constructions.





#### Rotho Blaas Srl

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