

Accessories for Concrete Structures



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Formtie Accessories

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Accessories for Precast Industry

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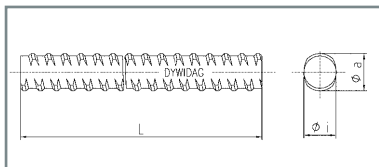
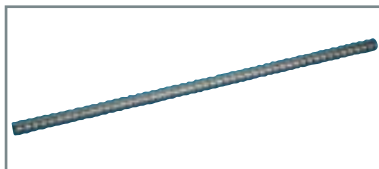




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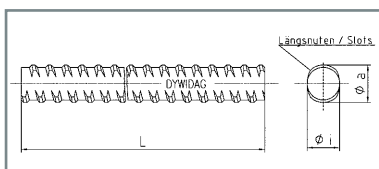
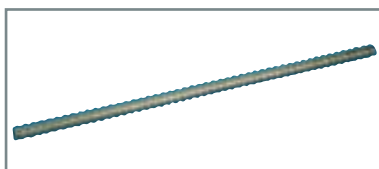
DYWIDAG Threadbar, not weldable



| Article No. | Ø | Steel Grade | Max. Load | Working Load | Weight |
|-------------|---------|-------------|-----------|--------------|--------|
| | [mm] | | [kN] | [kN] | [kg/m] |
| 100003 | 15/17 | St 900/1100 | 195 | 90 | 1.44 |
| 100010 | 20/23 | St 900/1100 | 345 | 160 | 2.56 |
| 100017 | 26.5/30 | St 950/1050 | 580 | 300 | 4.50 |

Hot rolled. Compliance with French Norm NF P 93-350 standard.
All Threadbars also available galvanized.

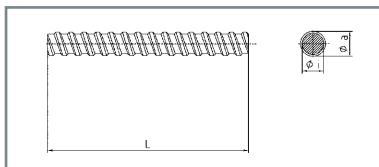
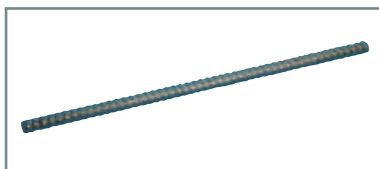
DYWIDAG Threadbar, weldable



| Article No. | Ø | Steel Grade | Max. Load | Working Load | Weight |
|-------------|-------|-------------|-----------|--------------|--------|
| | [mm] | | [kN] | [kN] | [kg/m] |
| 100002 | 15/17 | St 900/1100 | 190 | 90 | 1.44 |
| 100009 | 20/23 | St 900/1100 | 345 | 160 | 2.56 |

Hot rolled. Compliance with French Norm NF P 93-350 standard.
Charpy value of 28J at -20°C. The bar can be bent at 180° with a bending diameter of 4d.
All Threadbars also available galvanized.

MUKUSOL Threadbar, weldable



| Article No. | Ø | Max. Load | Working Load | Weight |
|-------------|---------|-----------|--------------|--------|
| | [mm] | [kN] | [kN] | [kg/m] |
| 12 FS 0000 | 12.0/14 | 60 | 30 | 1.00 |
| 15 FS 0000 | 15/17 | 170 | 80 | 1.50 |
| 15 VA 0000* | 15/17 | 150 | 70 | 1.58 |
| 20 FS 0000 | 20/23 | 275 | 140 | 2.60 |
| 26 ES 0000 | 26.5/30 | 500 | 240 | 4.56 |

Cold rolled, * Stainless Steel, grade 316 (V4A)
Weldable: for weldability and methods, please contact DSI

All Threadbars also available galvanized

Diameters and loads

| Nominal diameter | Minor diameter | Cross section area | Weight | Pitch | Failure load | Yield load | Working load |
|------------------|----------------|--------------------|--------|-------|--------------|------------|--------------|
| [mm] | [mm] | [mm²] | [kg/m] | [mm] | [kN] | [kN] | [kN] |
| 17 | 15 | 177 | 1.44 | 10 | 195 | 159 | 95 |
| 23 | 20 | 314 | 2.56 | 10 | 345 | 283 | 172 |
| 30 | 26.5 | 551 | 4.48 | 13 | 580 | 525 | 290 |

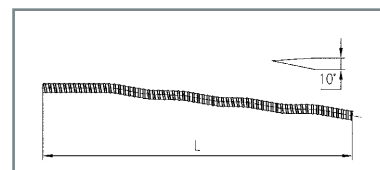
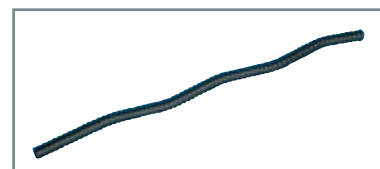
The working loads of all products on this page depend on concrete strength, installation depth, distances between anchors and other factors. Please ask DSI for details.

Wobble Anchor

| Article No. | Bar Ø [mm] | Length L [mm] | Weight [kg/pc] |
|-------------|---------------|------------------|-------------------|
| 100269 | 15 | 550 | 0.82 |
| 20 FS 2080 | 20 | 700 | 1.82 |
| 26 ES 2080 | 26.5 | 800 | 3.70 |

Made of MUKUSOL Threadbars

On request: made of DYWIDAG Threadbars

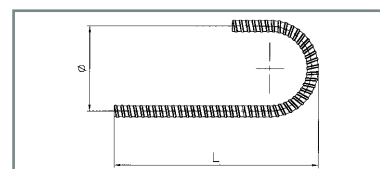
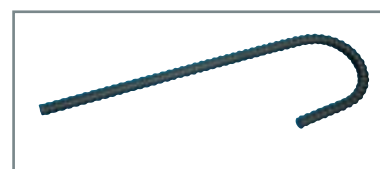


Hook Anchor

| Article No. | Bar Ø [mm] | Length L [mm] | Hook Ø [mm] | Weight [kg/pc] |
|----------------|---------------|------------------|----------------|-------------------|
| 15 FS 3047/250 | 15 | 250 | 100 | 0.68 |
| 15 FS 3047/450 | 15 | 450 | 100 | 1.00 |
| 20 FS 3047/600 | 20 | 600 | 150 | 2.20 |
| 26 ES 3047/800 | 26.5 | 800 | 200 | 5.50 |

Made of MUKUSOL Threadbars

On request: made of DYWIDAG Threadbars



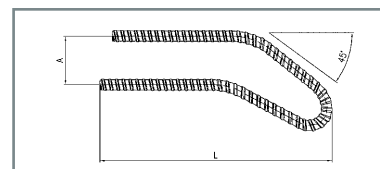
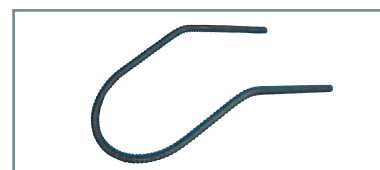
Loop Anchor

| Article No. | Bar Ø [mm] | Length L [mm] | Width A [mm] | Weight [kg/pc] |
|-------------|---------------|------------------|-----------------|-------------------|
| 15 FS 3076 | 15 | 550 | 230 | 1.96 |
| 20 FS 3076 | 20 | 600 | 300 | 4.00 |
| 26 ES 3076 | 26.5 | 800 | 400 | 9.20 |

Made of MUKUSOL Threadbars

For the anchorage of brace frames with a 45° angle

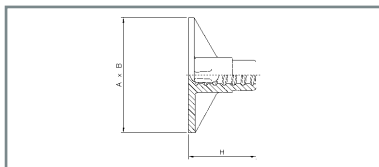
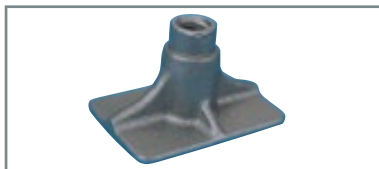
On request: made of DYWIDAG Threadbars



Anchorage in Concrete

The working loads of all products on this page depend on concrete strength, installation depth, distances between anchors and other factors. Please ask DSI for details.

Fix Anchor



| Article No. | Bar Ø [mm] | Plate Size [mm] | Height [mm] | Weight [kg/pc] |
|--|---------------|--------------------|----------------|-------------------|
| 101904 | 15 | 100 x 70 | 60 | 0.48 |
| 101909 | 15 | 80 x 55 | 60 | 0.45 |
| 101941 | 20 | Ø 90 | 80 | 0.85 |
| 26 E 3074 | 26.5 | Ø 120 | 70 | 1.84 |
| Fix Anchor with Concrete Spacer Sleeve ¹⁾ | | | | |
| 15 F 3074/S | 15.0 | 100 x 70 | 60 | 0.65 |

Cast

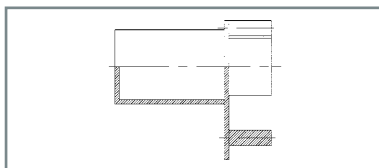
¹⁾ Including Nail Plug and Closing Plug, installation depth = 125 mm

101904 and 101909 are installed using a PE Foot

101941 and 26 E 3074 are installed using cones

For details, please ask DSI.

PE Foot

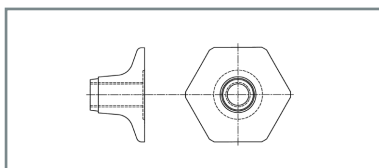


| Article No. | Bar Ø [mm] | Nom. Installation Depth [mm] | Weight [kg/pc] |
|-------------|---------------|---------------------------------|-------------------|
| 15 F 3174/K | 15 | 85 | 0.03 |

For assembling Fix Anchors 15 F 3074 and 15 F 3174

Delivery includes Nails and PE Plug

Anchor Foot



| Article No. | Bar Ø [mm] | Plate Size A [mm] | Height [mm] | Bunch [mm] | Weight [kg/pc] |
|-------------|---------------|----------------------|----------------|---------------|-------------------|
| 100239 | 15 | Hex 60 | 52 | Ø 22 | 0.23 |
| 100283 | 20 | Hex 78 | 62 | Ø 32 | 0.50 |
| 100313 | 26.5 | Hex 115 | 67 | Ø 40 | 1.46 |

Forged, weldable

Bunch fits PVC Tubes 22 x 26mm (100239),

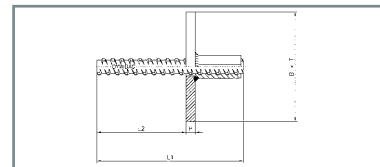
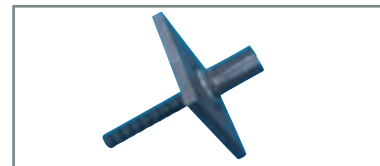
32 x 38mm (100283) and 40 x 46mm (100313)

The working loads of all products on this page, except the Weldable Neck Flange, depend on concrete strength, installation depth, distances between anchors and other factors. Please ask DSI for details.

Plate Anchor

| Article No. | Bar Ø [mm] | Plate Size [mm] | L1/L2 [mm] | Weight [kg/pc] |
|---------------|---------------|--------------------|---------------|-------------------|
| 15 F 3058 | 15 | 120 x 100 x 10 | 160/100 | 1.30 |
| 15 F 3058/400 | 15 | 120 x 100 x 10 | 400/340 | 1.65 |
| 15 FS 3058 | 15 | 120 x 100 x 10 | 160/140 | 1.20 |
| 20 FS 3058 | 20 | 120 x 100 x 10 | 480/400 | 2.60 |

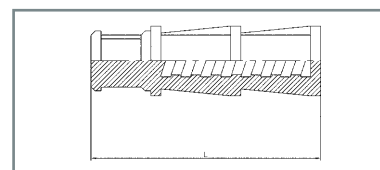
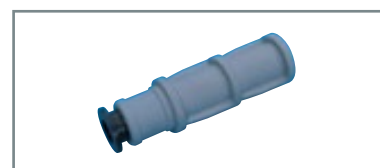
Installation with Cones



Shuttering Sleeve

| Article No. | Bar Ø [mm] | Length [mm] | Weight [kg] |
|-------------|---------------|----------------|----------------|
| 15 F 3116 | 15 | 100 | 0.04 |

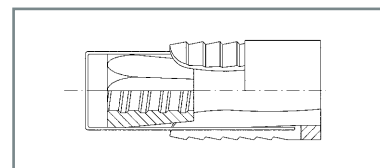
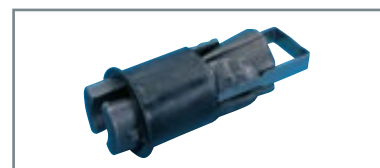
Delivery includes 18mm Ø Nail Plug



Expansion Shell

| Article No. | Bar Ø [mm] | Bore Hole Ø [mm] | Weight [kg/pc] |
|-------------|---------------|---------------------|-------------------|
| 100241 | 15 | 32 - 35 | 0.22 |
| 100240 | 15 | 35 - 38 | 0.30 |
| 15 F 2184 | 15 | 35 - 37 | 0.39 |
| 100284 | 20 | 42 - 45 | 0.40 |
| 20 F 2137 | 20 | 51 - 53 | 0.65 |
| 26 E 2221 | 26.5 | 61 - 63 | 0.75 |
| 26 E 2137 | 26.5 | 51 - 53 | 0.60 |

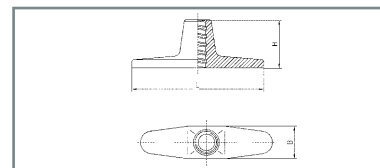
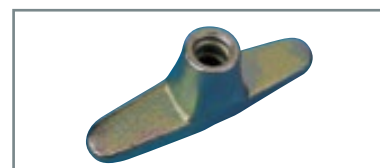
Please ask for installation instruction



Weldable Neck Flange

| Article No. | Bar Ø [mm] | L x B x H [mm] | Weight [kg/pc] |
|-------------|---------------|-------------------|-------------------|
| 101901 | 15 | 130 x 30 x 50 | 0.40 |

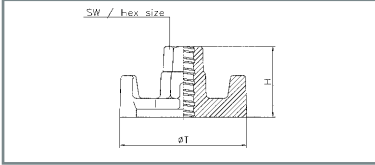
Weldable, application with steel structures, max. working load 90kN
Application is shown on page 25.



Nuts and Couplers

Unless noted, working loads of Nuts and Couplers are as follows:
 Ø12...: 30kN; Ø15...: 90kN; Ø20...: 150kN; Ø26...: 250kN

Wing Nut Bracket - Cast



| Article No. | Bar Ø [mm] | Plate Ø [mm] | Height/Hex [mm] | Chord ¹⁾ [mm] | Weight [kg/pc] |
|---------------|---------------|-----------------|--------------------|-----------------------------|-------------------|
| 12 F 2072 | 12 | 70 | 50/24 | -- | 0.45 |
| 101899 | 15 | 70 | 53/27 | ≤ 35 | 0.50 |
| 101906 | 15 | 90 | 53/27 | ≤ 35 | 0.57 |
| 102740 | 15 | 100 | 53/27 | ≤ 35 | 0.69 |
| 101907 | 15 | 110 | 53/27 | ≤ 35 | 0.68 |
| 101908 | 15 | 130 | 53/27 | ≤ 35 | 0.90 |
| 20 F 2072/130 | 20 | 130 | 65/36 | ≤ 40 | 1.30 |

¹⁾ chord distance
 Cast, galvanized

Wing Nut Bracket - Forged



| Article No. | Bar Ø [mm] | Plate Ø [mm] | Height/Hex [mm] | Weight [kg/pc] |
|-------------|---------------|-----------------|--------------------|-------------------|
| 100230 | 15 | 65 | 50/27 | 0.68 |
| 100278 | 20 | 80 | 60/36 | 1.05 |

Forged, galvanized, not weldable

Slope Plate



| Article No. | Bar Ø [mm] | Plate [mm] | Height/Hex [mm] | Inclination [°] | Weight [kg/pc] |
|-------------|---------------|---------------|--------------------|--------------------|-------------------|
| 101913 | 15 | 120 x 120 | 65/27 | max 15 | 1.14 |
| 101897 | 15 | Ø 120 | 65/27 | max 5 | 0.92 |
| 20 F 1030 | 20 | Ø 130 | 85/36 | max 10 | 1.52 |

Galvanized, for inclined formwork
 101913 / 101897: Cast
 20 F 1030: Forged
 101913 / 101897 for use with steel chords.

Unless noted, working loads of Nuts and Couplers are as follows:
 Ø12....: 30kN; Ø15....: 90kN; Ø20....: 150kN; Ø26....: 250kN

Combination Plate

| Article No. | Bar Ø [mm] | Plate [mm] | Hex [mm] | Weight [kg/pc] |
|-------------|---------------|----------------|-------------|-------------------|
| 101913 | 15 | 120 x 120 x 10 | 27 | 1.42 |
| 15 F 1021 | 15 | 140 x 100 x 10 | 27 | 1.42 |
| 15 F 1023 | 15 | 200 x 150 x 10 | 27 | 2.70 |

Galvanized, nut: forged, plate: steel S235,
 max. inclination of nut: 5°

101913: Working load 20kN if supported on timber.

15 F 1021: For use with steel chords.

15 F 1023: Working load 50kN if supported on timber.

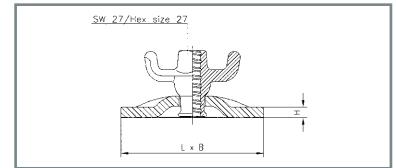


Plate Washer

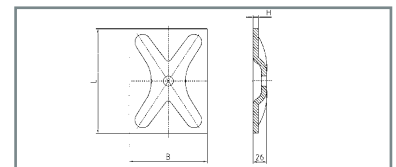
| Article No. | Bar Ø [mm] | Plate [mm] | Hole Ø [mm] | Weight [kg/pc] |
|-------------|---------------|----------------|----------------|-------------------|
| 15 F 2062 | 15 | 140 x 100 x 10 | 20 | 1.15 |
| 15 F 2066 | 15 | 120 x 120 x 10 | 20 | 1.10 |
| 15 F 2097 | 15 | 200 x 150 x 10 | 20 | 2.30 |

Galvanized, steel grade S235 or similar,

15 F 2062: For use with steel chords.

15 F 2066: Working load 20kN if supported on timber.

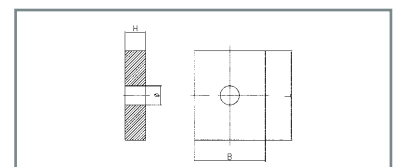
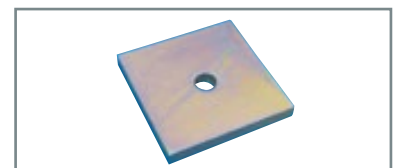
15 F 2097: Working load 50kN if supported on timber.



Flat Bearing Plate

| Article No. | Bar Ø [mm] | Dimensions* [mm] | Hole Ø [mm] | Weight [kg/pc] |
|-------------|---------------|---------------------|----------------|-------------------|
| 100235 | 15 | 120 x 120 x 12 | 18 | 1.31 |
| 100236 | 15 | 130 x 70 x 10 | 18 | 0.70 |
| 100281 | 20 | 120 x 120 x 12 | 25 | 1.30 |
| 100280 | 20 | 120 x 120 x 15 | 25 | 1.60 |
| 100311 | 26.5 | 120 x 120 x 20 | 32 | 2.30 |

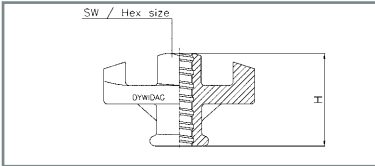
* Further dimensions available on request



Nuts and Couplers

Unless noted, working loads of Nuts and Couplers are as follows:
 Ø12....: 30kN; Ø15....: 90kN; Ø20....: 150kN; Ø26....: 250kN

Wing Nut - Cast



| Article No. | Bar Ø [mm] | Height [mm] | Hex [mm] | Weight [kg/pc] |
|-------------|---------------|----------------|-------------|-------------------|
| 12 F 2071 | 12 | 50 | 24 | 0.19 |
| 101911 | 15 | 55 | 27 | 0.31 |
| 101939 | 20 | 60 | 36 | 0.48 |
| 26 E 2177 | 26.5 | 65 | 46 | 0.90 |

Cast, galvanized

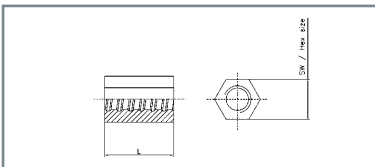
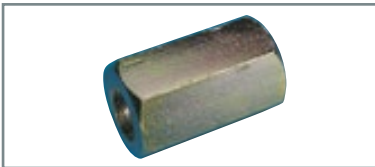
Wing Nut - Forged



| Article No. | Bar Ø [mm] | Height [mm] | Hex [mm] | Weight [kg/pc] |
|-------------|---------------|----------------|-------------|-------------------|
| 100228 | 15 | 50 | 27 | 0.36 |

Forged, galvanized

Hex Nut/Lock Nut



| Article No. | Bar Ø [mm] | Length [mm] | Hex [mm] | Weldable | Weight [kg/pc] |
|---|---------------|----------------|-------------|------------------|-------------------|
| Hex Nuts – designed to take the full bar load ¹⁾ | | | | | |
| 101917 | 15 | 50 | 30 | Yes | 0.22 |
| 15 F 2002/70 | 15 | 70 | 30 | Yes | 0.30 |
| 15 VA 2002/50 | 15 | 50 | 30 | -- ²⁾ | 0.22 |
| 101956 | 20 | 60 | 36 | Yes | 0.40 |
| 101987 | 25 | 80 | 41 | -- | 0.60 |
| 100309 | 26.5 | 60 | 46 | -- | 0.60 |
| 26 E 2002/80 | 26.5 | 80 | 46 | -- | 0.80 |
| Lock Nuts – designed for securing, not for taking bar loads | | | | | |
| 101923 | 15 | 25 | 30 | Yes | 0.13 |
| 101960 | 20 | 30 | 36 | Yes | 0.16 |
| 101945 | 26.5 | 30 | 46 | -- | 0.30 |

¹⁾ Working load of 100309: 200kN

²⁾ Stainless steel, grade 316 (V4A)

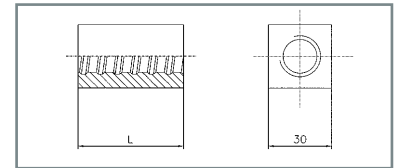
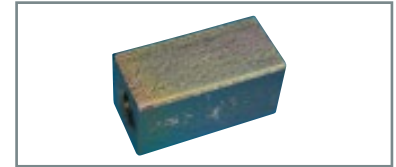
All Hex Nuts also available galvanized.

Unless noted, working loads of Nuts and Couplers are as follows:
 Ø12....: 30kN; Ø15....: 90kN; Ø20....: 150kN; Ø26....: 250kN

Square Nut

| Article No. | Bar Ø [mm] | Length [mm] | Hex [mm] | Weight [kg/pc] |
|----------------------------|---------------|----------------|-------------|-------------------|
| 15 F 2028/35 ¹⁾ | 15 | 35 | 30 | 0.18 |
| 15 F 2028/60 | 15 | 60 | 30 | 0.32 |

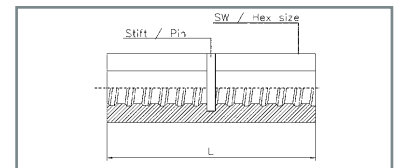
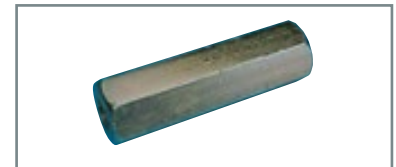
¹⁾ Lock Nut, not designed to take the full load of the Threadbar
 All Square Nuts also available galvanized → Article No. .../V
 (example: 15 F 2028/35/V)



Hex Couplers

| Article No. | Bar Ø [mm] | Length [mm] | Hex [mm] | Weight [kg/pc] |
|-----------------------------|---------------|----------------|-------------|-------------------|
| 15 F 2002/90 ¹⁾ | 15 | 90 | 30 | 0.39 |
| 100219 | 15 | 105 | 30 | 0.46 |
| 100271 | 20 | 120 | 36 | 0.77 |
| 26 E 3005/120 ²⁾ | 26.5 | 120 | 46 | 1.10 |
| 26 E 3005/150 | 26.5 | 150 | 46 | 1.38 |

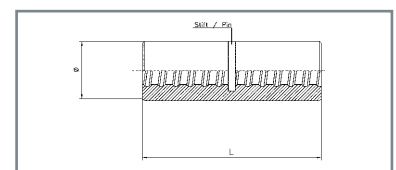
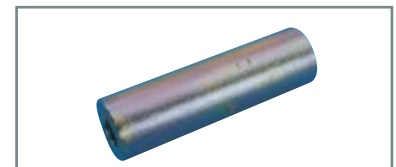
¹⁾ Working load 15 F 2002/90: 80kN, ²⁾ Working load 26 E 3005/120: 200kN
 Screwing-in length is guaranteed by stop-pin.
 All couplers also available galvanized.



Round Couplers

| Article No. | Bar Ø [mm] | Length [mm] | Diameter [mm] | Weight [kg/pc] |
|-------------|---------------|----------------|------------------|-------------------|
| 15 F 3003 | 15 | 105 | 30 | 0.40 |
| 20 F 3003 | 20 | 130 | 40 | 0.89 |
| 102000 | 26.5 | 150 | 50 | 1.50 |

Screwing-in length is guaranteed by stop-pin.
 All couplers also available galvanized.

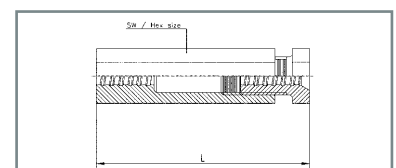
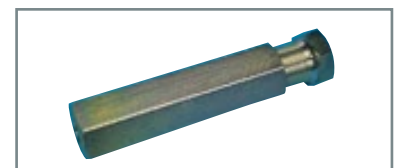


Turnbuckle Splice

| Article No. | Bar Ø [mm] | Length [mm] | Hex [mm] | Weight [kg/pc] |
|----------------------------|---------------|----------------|-------------|-------------------|
| 15 F 3013/14 ¹⁾ | 15 | 185 | 41 | 1.40 |
| 20 F 3013/14 ²⁾ | 20 | 190 | 46 | 1.60 |
| 26 E 3013/14 ³⁾ | 26.5 | 250 | 60 | 3.86 |

For screwing and tensioning with two fixed bar ends.

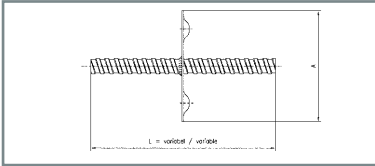
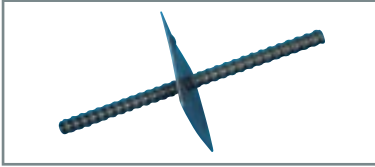
- ¹⁾ Tensile force 40kN if a torque of 0.5kNm is applied
²⁾ Tensile force 70kN if a torque of 0.75kNm is applied
³⁾ Tensile force 100kN if a torque of 1.0kNm is applied



Water Stops

Water Stops prevent water from seeping alongside the Threadbar. Data sheets, installation instructions and test results are available on request.

Water Stop Type N



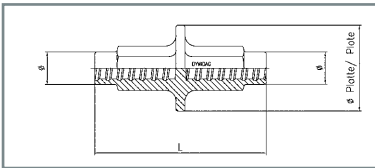
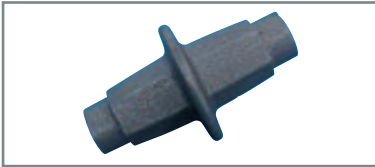
| Article No. | Bar Ø [mm] | Plate Size [mm] | Weight [kg/pc] |
|-------------|---------------|--------------------|-------------------|
| 100238 | 15 | 120 x 120 x 2 | 0.20 |
| 100282 | 20 | 120 x 120 x 2 | 0.20 |
| 26 ES 3043 | 26.5 | 120 x 120 x 2 | 0.20 |

Only plate without Threadbar, which has to be ordered separately.

→ Calculation of bar length:

Bar length = wall thickness minus double concrete cover of cone

Water Stop Type G



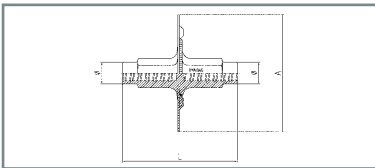
| Article No. | Bar Ø [mm] | Length [mm] | Plate Ø [mm] | Bunch Ø [mm] | Weight [kg/pc] |
|-------------|---------------|----------------|-----------------|------------------|-------------------|
| 101914 | 15 | 110 | 65 | 26 ¹⁾ | 0.55 |
| 15 F 3093/B | 15 | 130 | 110 | 26 ²⁾ | 0.98 |
| 101953 | 20 | 160 | 80 | 31 | 1.35 |

Cast

¹⁾ For tubes with 26mm inner diameter

²⁾ For tubes with 26mm outer diameter

Water Stop Type S



| Article No. | Bar Ø [mm] | Length [mm] | Plate Ø [mm] | Bunch Ø [mm] | Weight [kg/pc] |
|-------------|---------------|----------------|-----------------|------------------|-------------------|
| 15 F 3044 | 15 | 110 | 120 x 120 | 26 ¹⁾ | 0.76 |
| 20 F 3044 | 20 | 160 | 120 x 120 | 31 | 1.55 |

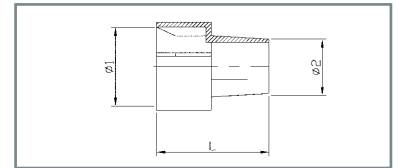
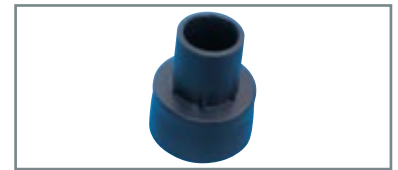
Cast

¹⁾ For tubes with 26mm inner diameter

PE – Reduction Piece

| Article No. | Bar Ø [mm] | Length [mm] | Diameter [mm] | Weight [kg/pc] |
|-------------|---------------|----------------|------------------|-------------------|
| 15 F 3093/K | 15 | 33 | 26/22 | 0.01 |

For connecting Type 15 F 3093 and 15 F 3044 Water Stops to 22mm internal diameter tubes.



Water Stop Plus – Bentonite Layer

| Article No. | Bar Ø [mm] | Plate Size [mm] | Weight [kg/pc] |
|--------------|---------------|--------------------|-------------------|
| 15 FS 3043/A | 15 | 120 x 120 x 2 | 0.04 |
| 20 FS 3043/A | 20 | 120 x 120 x 2 | 0.04 |
| 26 ES 3043/A | 26.5 | 120 x 120 x 2 | 0.04 |



Bentonite coating which swells when in contact with water and seals up the concrete actively and permanently.

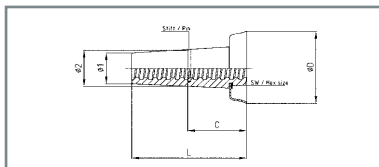
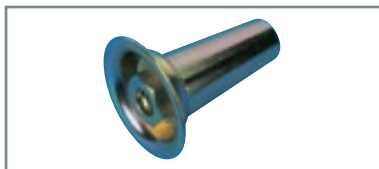
On stock for Water Stop Type N

On request for Water Stop Type G, Water Stop Type S

Cones for Lost Formties

Unless noted, working loads of cones for Lost Formties are as follows:
 Ø12...: 30kN; Ø15...: 90kN; Ø20...: 150kN; Ø26...: 250kN

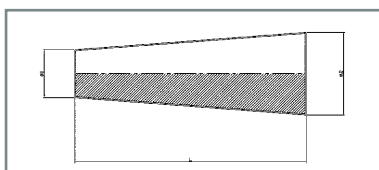
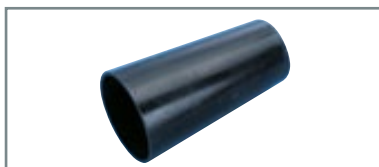
Steel Cone



| Article No. | Bar Ø [mm] | Ø1/Ø2/ØD [mm] | L [mm] | Hex [mm] | C ¹⁾ [mm] | Weight [kg/pc] |
|-------------|---------------|------------------|-----------|-------------|-------------------------|-------------------|
| 15 F 3034 | 15 | 30/43/62 | 100 | 30 | 50 | 0.60 |
| 15 F 3034/B | 15 | 30/43/76 | 100 | 30 | 50 | 0.67 |
| 20 F 3034 | 20 | 33/46/62 | 130 | 36 | 65 | 0.95 |
| 26 E 3034 | 26.5 | 40/54/95 | 150 | 41 | 75 | 1.24 |

¹⁾ C = concrete cover, all cones galvanized
 For de-installation, please use the hexagon wrench .. F 7044

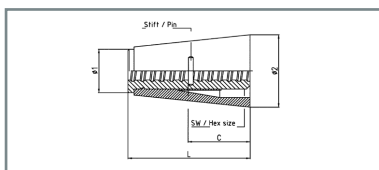
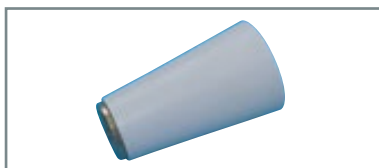
PE Sleeve for Steel Cone



| Article No. | For Cone | L [mm] | Ø1/Ø2 [mm] | Weight [kg/pc] |
|-------------|--------------------------|-----------|---------------|-------------------|
| 15 F 3034/K | 15 F 3034 15 F 3034/B | 80 | 31/41 | 0.01 |
| 20 F 3034/K | 20 F 3034 | 110 | 34/44 | 0.01 |
| 26 E 3034/K | 26 E 3034 | 125 | 41/54 | 0.02 |

To ensure easy unscrewing of Steel Cones, the PE Sleeve is put on the cone before assembly.

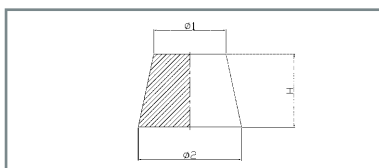
Steel-Plastic Cone



| Article No. | Bar Ø [mm] | Ø1/Ø2 [mm] | L [mm] | Hex [mm] | C ¹⁾ [mm] | Weight [kg/pc] |
|-------------|---------------|---------------|-----------|-------------|-------------------------|-------------------|
| 15 F 3037 | 15 | 40/60 | 100 | 27 | 50 | 0.45 |
| 20 F 3037 | 20 | 43/71 | 125 | 32 | 65 | 0.80 |
| 26 E 3037 | 26.5 | 60/102 | 135 | 46 | 65 | 1.65 |

¹⁾ C = concrete cover
 Consists of galvanized steel coupler with plastic cover
 For de-installation, please use the hexagon wrench .. F 7044

Concrete Plug



| Article No. | For Cone | Ø1/Ø2 [mm] | Height [mm] | Weight [kg/pc] |
|-------------|-----------|---------------|----------------|-------------------|
| 15 F 3037/S | 15 F 3037 | 52/68 | 30 | 0.15 |
| 20 F 3037/S | 20 F 3037 | 59/69 | 40 | 0.27 |

For re-locking the cone holes of the Steel-Plastic Cone.

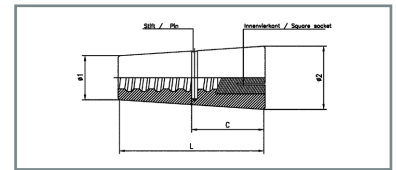
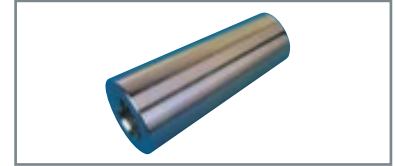
Different systems can be used for anchoring climbing formwork. Two standard systems are presented on the following pages: a) DYWIDAG System b) Artéon System. Upon request, we also develop and manufacture special solutions and individually designed products.

A) DYWIDAG System for Climbing Formwork:

Positioning Cone

| Article No. | Thread [mm] | Ø1/Ø2 [mm] | L [mm] | • [mm] | C ¹⁾ [mm] | Weight [kg/pc] |
|-------------|----------------|---------------|-----------|-----------|-------------------------|-------------------|
| 15 F 3073 | 15F/M24 | 30/43 | 100 | 18 | 50 | 0.57 |
| 20 F 3073 | 20F/M27 | 33/46 | 130 | 20 | 65 | 0.78 |
| 26 E 3073 | 26E/M33 | 40/54 | 150 | 24 | 75 | 1.24 |

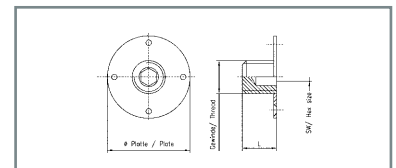
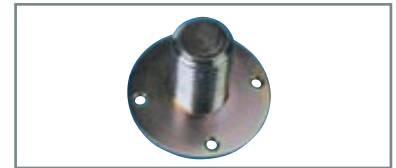
¹⁾ C = concrete cover, all cones galvanized
Positioning Cones are put in place before concreting.
For de-installation, use square wrench .. F 7045.



Nail Plate

| Article No. | Material | Thread [mm] | Ø [mm] | L [mm] | Hex [mm] | Weight [kg/pc] |
|--------------|----------|----------------|-----------|-----------|-------------|-------------------|
| 15 F 3073/N | Steel | M 24 | 60 | 40 | 12 | 0.11 |
| 15 F 3073/PE | PE | M 24 | 48 | 25 | 14 | 0.01 |
| 20 F 3073/N | Steel | M 27 | 65 | 25 | 12 | 0.20 |
| 20 F 3073/PE | PE | M 27 | 58 | 25 | 14 | 0.02 |
| 26 E 3073/N | Steel | M 33 | 75 | 25 | 12 | 0.30 |

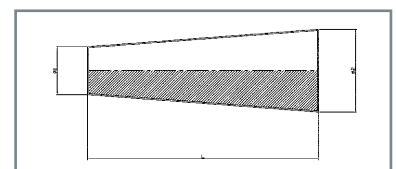
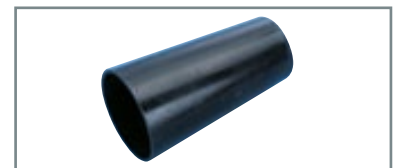
Galvanized, for fixing positioning cones to formwork.
For de-installation, use square wrench 15 F 7043.



PE Sleeve

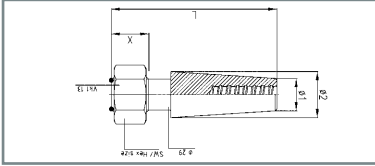
| Article No. | For Cone | L [mm] | Ø1/Ø2 [mm] | Weight [kg/pc] |
|-------------|-----------|-----------|---------------|-------------------|
| 15 F 3073/K | 15 F 3073 | 97 | 31/43 | 0.01 |
| 20 F 3073/K | 20 F 3073 | 110 | 34/44 | 0.01 |
| 26 E 3073/K | 26 E 3073 | 125 | 41/54 | 0.02 |

To ensure easy unscrewing of Positioning Cones, the PE-Sleeve is put on the cone before assembly.



Cones for Climbing Formwork

Climbing Cone



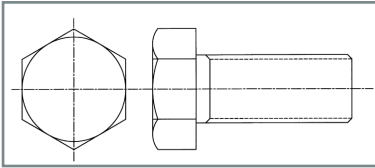
| Article No. | Ø1/Ø2 [mm] | L [mm] | Hex [mm] | X [mm] | Shear Load ¹⁾ [kN] | Weight [kg/pc] |
|-------------|---------------|-----------|-------------|-----------|----------------------------------|-------------------|
| 15 F 3038 | 30/43 | 155 | 55 | 35 | 30 | 1.28 |
| 20 F 3038 | 33/46 | 185 | 55 | 35 | 40 | 1.56 |
| 26 E 3038 | 40/54 | 210 | 55 | 35 | 50 | 2.50 |

Galvanized,

¹⁾ at a minimum concrete strength of 10N/mm².

Cone for shear load, Positioning Cone has to be removed.

Hex Screw



| Article No. | Thread | L [mm] | Hex [mm] | Material [mm] | Weight [kg/pc] |
|-------------|--------|---------------|-------------|------------------|-------------------|
| 15 F 3073/S | M 24 | ¹⁾ | 36 | 10.9 | ¹⁾ |
| 20 F 3073/S | M 27 | ¹⁾ | 41 | 10.9 | ¹⁾ |
| 26 E 3073/S | M 33 | ¹⁾ | 50 | 10.9 | ¹⁾ |

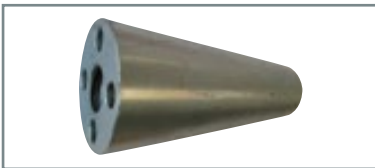
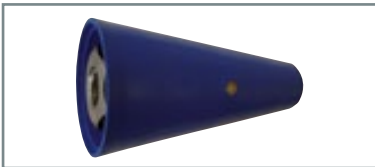
¹⁾ Length according to customer requirements, standard lengths:

M 24 = 60 / 80mm, M 27 = 60 / 80mm, M 33 = 100mm.

Hex Screw is screwed into Positioning Cone, which remains in the concrete and accommodates the shear load (alternative solution to Climbing Cones).

B) Artéon System for Climbing Formwork:

Positioning Cone



| Article No. | Bar Ø [mm] | Type | D [mm] | L [mm] | Hex [mm] | L1 (C) [mm] | Weight [kg/pc] |
|-------------|---------------|------------------------|-----------|-----------|---------------|----------------|-------------------|
| 100246 | 15 | Steel/Plastic | 55 | 110 | 30 | 58 | 0.44 |
| 100247 | 15 | Steel | 55 | 110 | 27 | 58 | 0.90 |
| 100248 | 15 | Magnetic ¹⁾ | 55 | 110 | 12 | 58 | 0.46 |
| 100289 | 20 | Steel/Plastic | 64 | 125 | 36 | 65 | 0.65 |
| 100290 | 20 | Steel | 64 | 125 | ²⁾ | 65 | 1.42 |
| 101963 | 20 | Magnetic ¹⁾ | 64 | 125 | 12 | 65 | 0.72 |

¹⁾ Magnetic cone for steel formwork

²⁾ Screw out with a special tool

Shear Cone

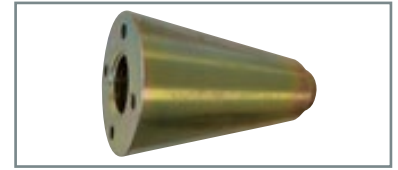


| Article No. | Bar Ø [mm] | Thread F | D [mm] | L/L1 [mm] | Hex [mm] | Lf [mm] | Weight [kg/pc] |
|-------------|---------------|------------|-----------|--------------|-------------|------------|-------------------|
| 100249 | 15 | M 24 x 3.0 | 55 | 105/60 | 17 | 46 | 0.88 |
| 100252 | 15 | M 30 x 3.5 | 55 | 105/60 | 17 | 46 | 0.80 |
| 100291 | 20 | M 30 x 3.5 | 64 | 120/65 | 19 | 43 | 1.31 |

Steel Cone for shear load. To be used with Hex Screws or adapters.

Shear Cone M 39

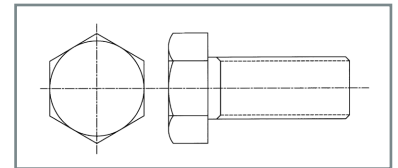
| Article No. | Bar Ø [mm] | Thread F | D [mm] | L/L1 [mm] | Lf [mm] | Weight [kg/pc] |
|-------------|---------------|------------|-----------|--------------|------------|-------------------|
| 100294 | 20 | M 39 x 4.0 | 88 | 150/85 | 73 | 3.50 |
| 100317 | 26.5 | M 39 x 4.0 | 88 | 155/85 | 72 | 3.45 |



Steel Cone for positioning and shear load. To be used with a Hex Screw or an adapter. Screw out using a special tool.

Hex Screw

| Article No. | Thread | For Cone | L [mm] | Hex [mm] | Material [mm] | Weight [kg/pc] |
|-------------------|--------|------------------|-----------|-------------|------------------|-------------------|
| Length on request | M 24 | 100249 | * | 36 | 10.9 | * |
| Length on request | M 30 | 100252 100291 | * | 46 | 10.9 | * |
| Length on request | M 39 | 100294 100317 | * | 60 | 10.9 | * |



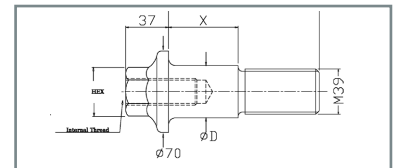
To be used with a Shear Cone

* Length according to customer requirements, standard lengths:

M 24 = 50/70/90mm, M 30 = 50/70/90/100mm, M 39 = 90/100mm

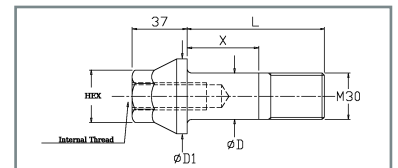
Adapter M 39

| Article No. | Internal Thread | For Cone | L [mm] | Hex [mm] | Ø D/X [mm] | Weight [kg/pc] |
|-------------|-----------------|-----------|-----------|-------------|---------------|-------------------|
| 100319 | 20 F | A 2324069 | 130 | 36 | 45/60 | 1.70 |
| 100320 | 26 E | A 3024069 | 130 | 36 | 45/60 | 1.52 |



Adapter M 30

| Article No. | Internal Thread | For Cone | L [mm] | Hex [mm] | Ø D/X [mm] | Weight [kg/pc] |
|-------------|-----------------|-----------|-----------|-------------|---------------|-------------------|
| 100257 | 15 F | A 1722131 | 73 | 30 | 31/29 | 0.68 |
| 100258 | 15 F | A 1722131 | 92 | 30 | 31/50 | 0.73 |
| 100300 | 20 F | A 2322056 | 93 | 36 | 40/51 | 1.10 |



Concrete Plug

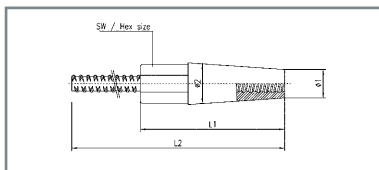
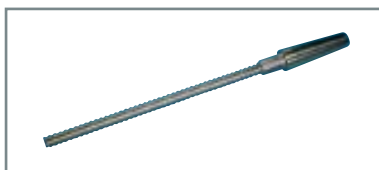
| Article No. | For Cone Ø [mm] | L [mm] | Ø D [mm] | Weight [kg/pc] |
|-------------|--------------------|-----------|-------------|-------------------|
| 100256 | 55 | 46 | 54 | 0.19 |
| 100296 | 64 | 60 | 63 | 0.29 |
| 100318 | 88 | 50 | 86 | 0.57 |



To replace Shear Cones after use.

Special Accessories

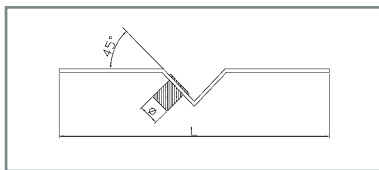
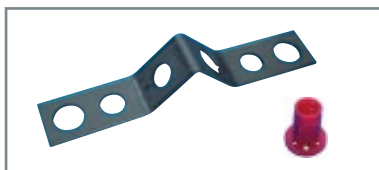
Shebolt (Anchor Head)



| Article No. | Bar Ø [mm] | Ø1/Ø2/Hex [mm] | L1/L2 [mm] | Weight [kg/pc] |
|--------------|---------------|-------------------|---------------|-------------------|
| 15 F 3045/28 | 15 | 28/32/24 | 200/750 | 1.60 |
| 20 F 3045 | 20 | 33/46/36 | 200/650 | 2.50 |
| 26 ES 3045 | 26.5 | 40/54/46 | 210/650 | 4.74 |

Galvanized.
Application is shown on page 24.

V-Fix

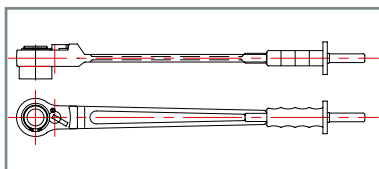


| Article No. | Bar Ø [mm] | Length [mm] | Bunch Diameter Ø [mm] | Inclination | Weight [kg/pc] |
|-------------|---------------|----------------|--------------------------|-------------|-------------------|
| 15 F 5120 | 15 | 300 | 22 | 45 ° | 0.44 |
| 20 F 5120 | 20 | 300 | 28 | 45 ° | 0.44 |
| 26 E 5120 | 26.5 | 300 | 36 | 45 ° | 0.44 |

Ensures the accurate keeping of a 45° angle for anchoring walls worked fair on one side.

Tools

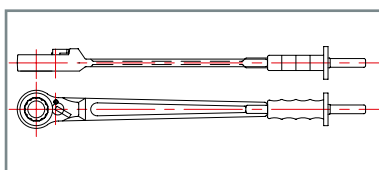
Formwork Wrench



| Hexagonal socket | | 36mm | 38mm | 46mm |
|------------------|------|--------|----------|--------|
| Reference | | 100031 | 100032 | 100045 |
| Use / Formwork | | | OUTINORD | |
| Length | [mm] | 640 | 640 | 640 |
| Weight | [g] | 2,800 | 2,800 | 3,000 |

Available with a claw in 36 / 38mm : ref. 102003 / 102004

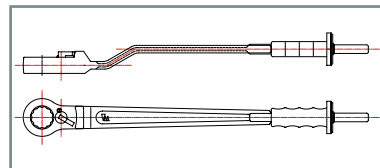
Wrench with Inversor Cam and Short Socket



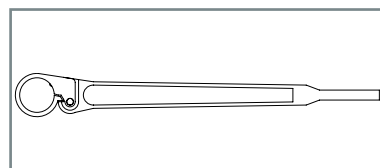
| Hexagonal socket | | 36mm | 38mm |
|------------------|------|-----------------|----------|
| Reference | | 100043 | 100044 |
| Use / Formwork | | SATECO / HUSSOR | OUTINORD |
| Length | [mm] | 640 | 640 |
| Weight | [g] | 2,300 | 2,300 |

Bent Wrench with Inversor Cam and Short Socket

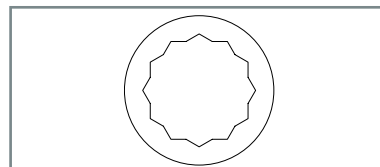
| Hexagonal Socket | | 36mm | 38mm |
|------------------|------|--------|------|
| Reference | | 102014 | |
| Use / Formwork | | SATECO | |
| Length | [mm] | 630 | |
| Weight | [g] | 2,300 | |

**Friction Wrench**

| Hexagonal Socket | | 36mm | 38mm |
|------------------|------|-----------------|-----------------|
| Designation | | B20 + 36 socket | B20 + 38 socket |
| Reference | | 102010 | 102012 |
| Use / Formwork | | HUSSOR | |
| Length | [mm] | 556 | 556 |
| Weight | [kg] | 1.90 | 1.90 |

**Socket for Friction Wrench B20**

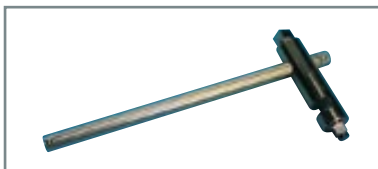
| Hexagonal Socket | | 27mm | 30mm | 36mm | 38mm |
|------------------|------|--|----------------------------|--|--------|
| Reference | | 100036 | 100037 | 100034 | 100035 |
| Height | [mm] | 24 | 24 | 24 | 24 |
| Use : Wing Nuts | | Wing Nut 100228 Wing Nut 100231 | Nuts : 100224 101917 | Nuts 100275 101956 101978 101974 | 101983 |
| Use : Couplers | | | 17.30.105 | 23.36.120 | |
| Weight | [kg] | 0.23 | 0.23 | 0.23 | 0.23 |



For screwing Vm3.65 and Vm2.40, use a 27mm double socket ref. 100038.

Additional Tools are available on request.

Universal Wrench

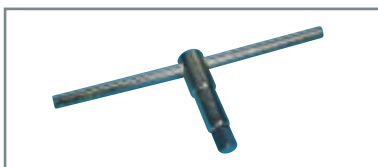


| Article No. | Weight [kg/pc] |
|-------------|-------------------|
| 15 F 7043 | 1.56 |

Universal tool with the following features:

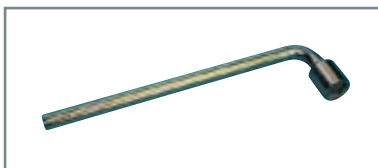
- ✓ Square 18mm, for Positioning Cone 15 F 3073
- ✓ Hex size 12mm, for all Nail Plates ...3073/N
- ✓ Square 13mm, for all Climbing Cones ...3038
- ✓ Wrench for 15mm DYWIDAG Threadbars

Square Wrench



| Article No. | ■ [mm] | Description | Weight [kg/pc] |
|--------------|-----------|--------------------------------|-------------------|
| 15 F 7045 | 13 | For all Climbing Cones | 1.84 |
| 15 F 7045/18 | 18 | For Positioning Cone 15 F 3073 | 1.84 |
| 20 F 7045/20 | 20 | For Positioning Cone 20 F 3073 | 0.85 |
| 26 E 7045/24 | 24 | For Positioning Cone 26 E 3073 | 1.10 |

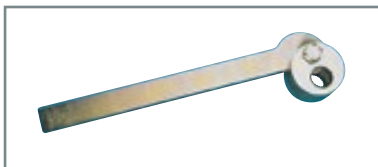
Hexagon Wrench



| Article No. | Hex size [mm] | Fits ... (examples) | Weight [kg/pc] |
|--------------|------------------|--------------------------------|-------------------|
| 12 F 7044/24 | 24 | 12 F 2071, 12 F 2072 | 0.96 |
| 15 F 7044/27 | 27 | 15 F 3037 – Steel Plastic Cone | 1.16 |
| 15 F 7044/30 | 30 | 15 F 3034 – Steel Cone | 1.58 |
| 20 F 7044/32 | 32 | 20 F 3037 – Steel Plastic Cone | 1.90 |
| 20 F 7044/36 | 36 | 20 F 3034 – Steel Cone | 2.36 |
| 26 E 7044/41 | 41 | 26 E 3034 – Steel Cone | 3.00 |
| 26 E 7044/46 | 46 | 26 E 2002 – Hex Nut | 3.58 |

Tool for the installation of Hex Nuts and Cones.

Wrench for Threadbar



| Article No. | Weight [kg/pc] |
|-------------|-------------------|
| 15 F 5121 | 0.25 |

Tool for all 15mm Threadbars

Wrench for DYWIDAG Threadbars



| Article No. | | Weight [kg/pc] |
|-------------|--------------------------------------|-------------------|
| 15 F 5122 | For DYWIDAG Threadbars 15 and 20mm | 2.00 |
| 26 E 5122 | For DYWIDAG Threadbars 20 and 26.5mm | 2.00 |

Tool for all Ø 15, 20 and 26.5mm DYWIDAG Threadbars.

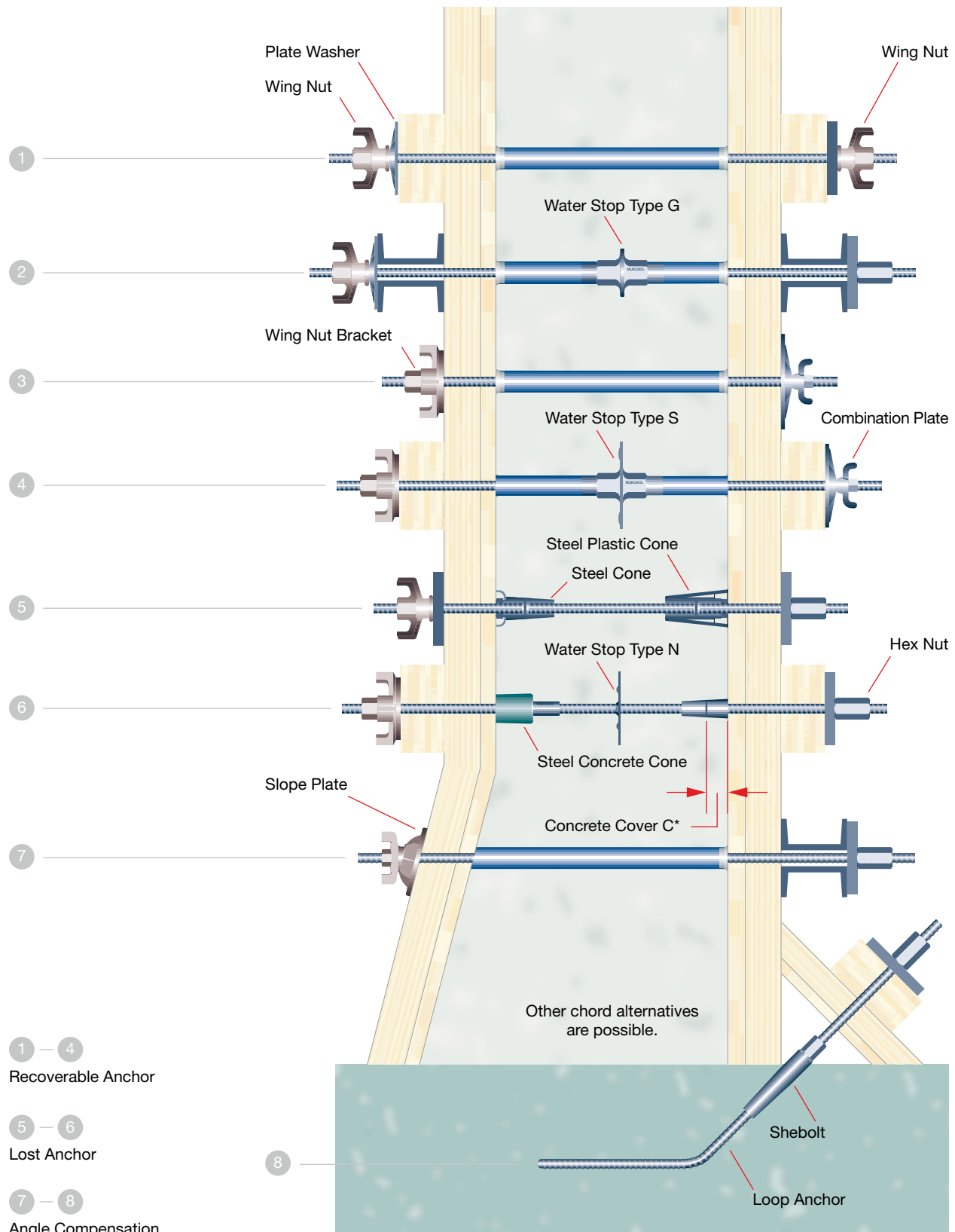
Proper use of Formties and Accessories is essential to prevent accidents and failures. All products are intended for use by qualified and experienced workmen. It is the user's responsibility to continually inspect working hardware for wear and to discard worn parts.

Improper use of the Formtie System can expose workers to extreme danger that may result in severe injury or death.



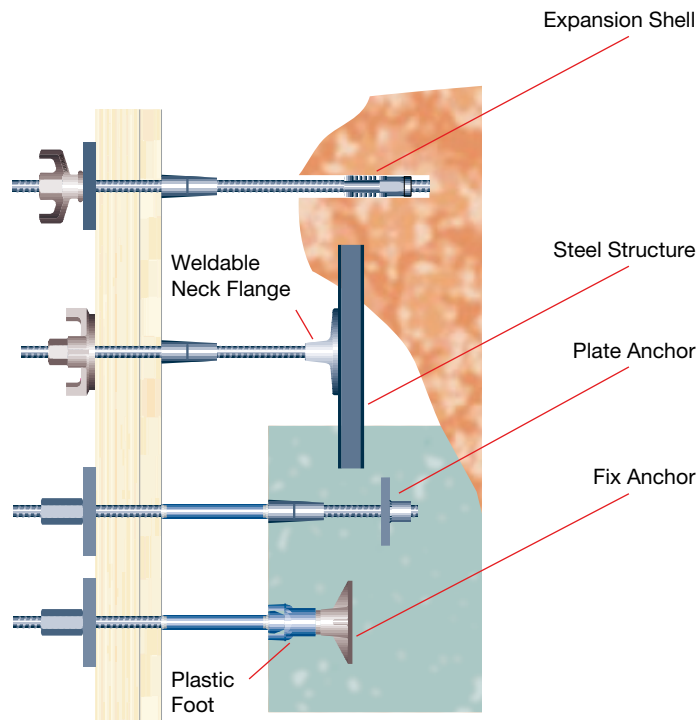
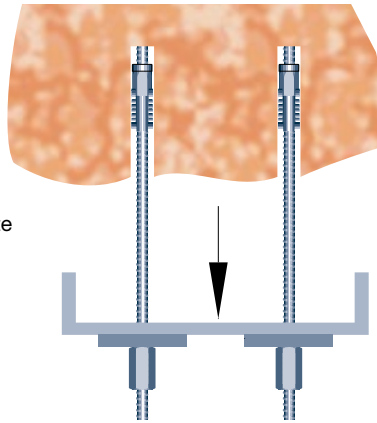
Application Examples

We are the DYWIDAG Formtie System specialist. We manufacture, assemble and supply anchor bars and the complete range of accessories for bar diameters 12.5, 15, 20 and 26.5 mm. All products are designed according to international standards and building codes. Our own in-house testing laboratory and permanent external monitoring guarantee the continuous high quality of our products.

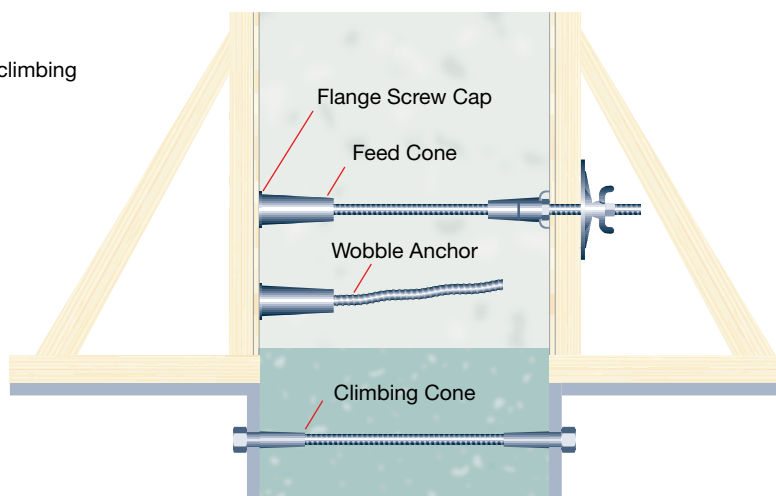


* Length of Lost Anchor = Wall Thickness - 2 x Concrete Cover C

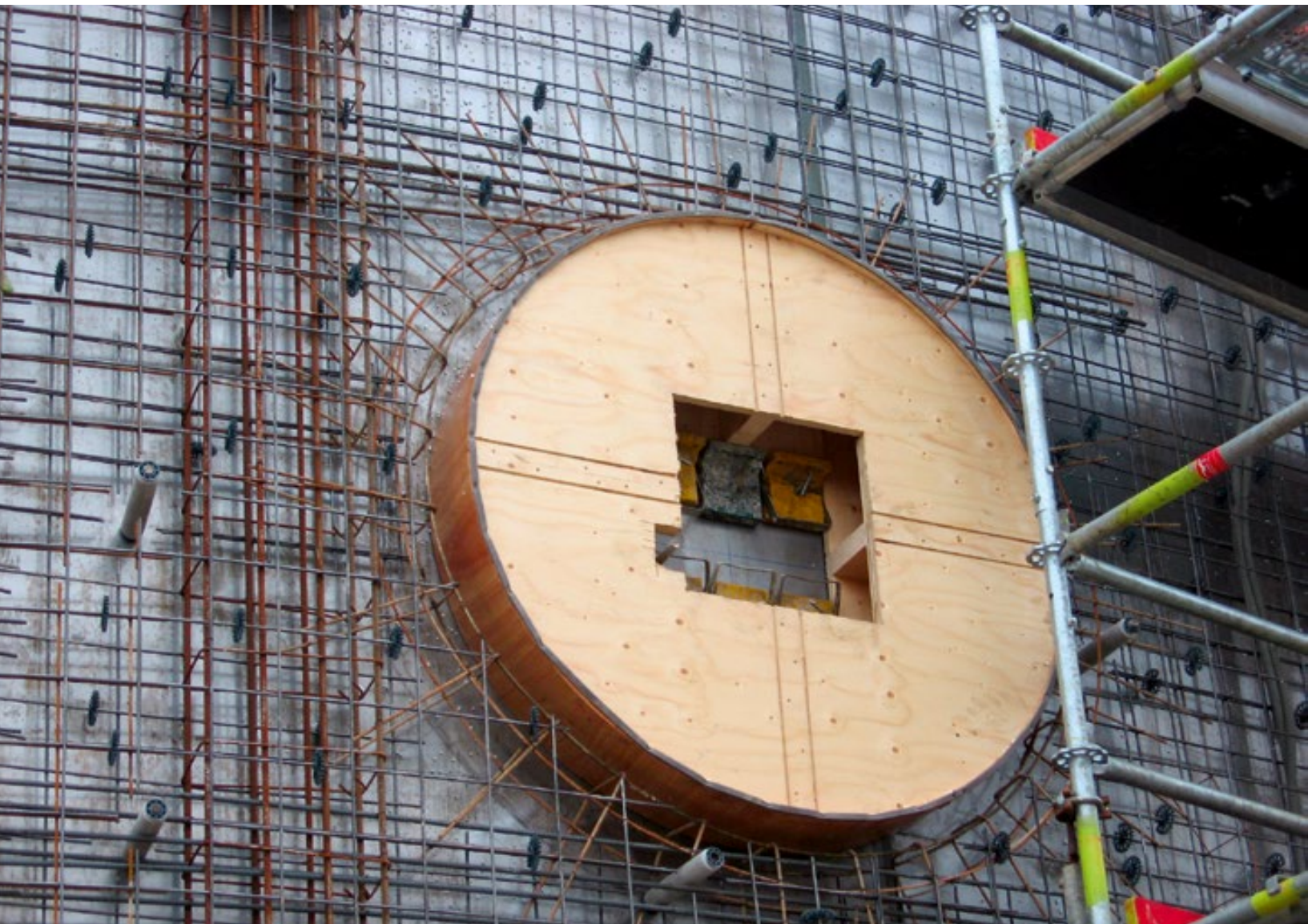
Suspensions in rock or concrete with expansion shells



Cones for climbing formworks



Subject to technical alterations.



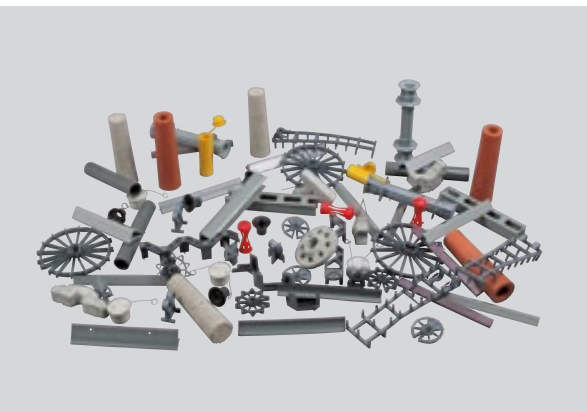
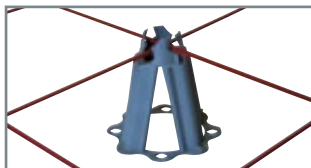


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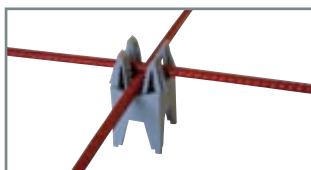
| Code | Name | Steel Ø [mm] | Concrete Cover [mm] | Sale Sizes | Weight [kg/100p.] | Characteristics |
|------|------|-----------------|------------------------|------------|----------------------|-----------------|
|------|------|-----------------|------------------------|------------|----------------------|-----------------|

CALEPLOT



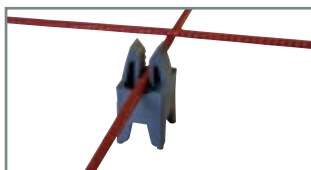
| | | | | | | |
|--------|-----------------|---|------------|--------|------|--|
| 011997 | CALEPLOT 15/20 | - | 15 and 20 | 500 p. | 1.03 | <ul style="list-style-type: none"> - Highly resistant and very stable plastic spacer. - Wide base to ensure ideal fixing of reinforcing steels on insulators, ground floor formwork, ... |
| 011998 | CALEPLOT 25/30 | - | 25 and 30 | 400 p. | 1.23 | |
| 011999 | CALEPLOT 40/50 | - | 40 and 50 | 200 p. | 2.10 | |
| 012000 | CALEPLOT 50/60 | - | 50 and 60 | 200 p. | 2.40 | |
| 012001 | CALEPLOT 70/80 | - | 70 and 80 | 200 p. | 2.70 | |
| 012002 | CALEPLOT 90/100 | - | 90 and 100 | 100 p. | 3.27 | |

CALFIX



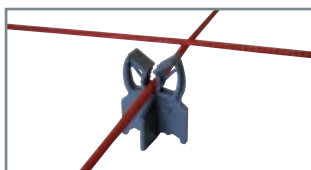
| | | | | | | |
|--------|-----------|---------|----|----------|------|--|
| 004704 | CALFIX 20 | 2 to 18 | 20 | 2,500 p. | 0.49 | <ul style="list-style-type: none"> - Ultra resistant spacer, building site special. Workers can walk on reinforcing steels without any special pre-cautions, Calfix remains in place. - Can be clipped on reinforcing steel or at steel intersections in case of welded fabric with small Ø wires. - With its well cut legs and stops at the end of these legs, Calfix is invisible after form removal. |
| 004705 | CALFIX 25 | 2 to 18 | 25 | 2,000 p. | 0.59 | |
| 004706 | CALFIX 30 | 2 to 18 | 30 | 2,000 p. | 0.63 | |
| 004707 | CALFIX 35 | 2 to 18 | 35 | 1,250 p. | 0.74 | |
| 004708 | CALFIX 40 | 2 to 18 | 40 | 1,250 p. | 0.81 | |
| | | | | | | |

CALTOUT



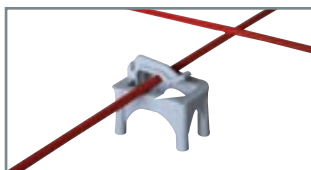
| | | | | | | |
|--------|------------|---------|----|----------|------|--|
| 001950 | CALTOUT 20 | 4 to 18 | 20 | 2,500 p. | 0.41 | <ul style="list-style-type: none"> - Spacer with widely cut legs with stops at ends. - Invisible after form removal. |
| 001951 | CALTOUT 25 | 4 to 18 | 25 | 2,500 p. | 0.51 | |
| 001952 | CALTOUT 30 | 4 to 18 | 30 | 2,000 p. | 0.61 | |

D.M. "B"



| | | | | | | |
|--------|------------|---------|----|----------|------|--|
| 002001 | D.M."B" 15 | 4 to 14 | 15 | 3,000 p. | 0.36 | <ul style="list-style-type: none"> - Highly resistant and very stable plastic spacer. - The stretchable clip of the D.M."B" allows positioning of steel from Ø 4 to 14mm or 4 to 18mm as per the models. |
| 002002 | D.M."B" 20 | 4 to 14 | 20 | 2,500 p. | 0.43 | |
| 002003 | D.M."B" 25 | 4 to 14 | 25 | 2,000 p. | 0.50 | |
| 002004 | D.M."B" 30 | 4 to 14 | 30 | 2,000 p. | 0.63 | |
| 002006 | D.M."B" 40 | 4 to 14 | 40 | 1,500 p. | 0.67 | |
| 002008 | D.M."B" 50 | 4 to 18 | 50 | 1,000 p. | 0.86 | |
| 002009 | D.M."B" 60 | 4 to 18 | 60 | 1,000 p. | 0.81 | |
| 002010 | D.M."B" 65 | 4 to 18 | 65 | 1,000 p. | 0.85 | |
| | | | | | | |
| | | | | | | |

MANDFIX

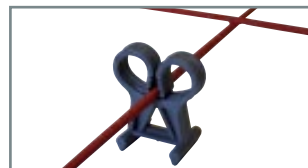


| | | | | | | |
|--------|-----------------------|---------|----|----------|------|--|
| 000092 | MANDFIX 20 | 4 to 18 | 20 | 2,000 p. | 0.65 | <ul style="list-style-type: none"> - Perfect for prefabricated parts of washed, pumiced or sanded concrete or for unsurfaced exposed concrete. - Can also be used for horizontal and vertical fixing. - For steel rods of small Ø fix Mandfix at steel intersections. |
| 000093 | MANDFIX 25 | 4 to 18 | 25 | 1,250 p. | 0.68 | |
| 000096 | MANDFIX 30 Reinforced | 4 to 18 | 30 | 1,000 p. | 0.86 | |
| 000097 | MANDFIX 35 Reinforced | 4 to 18 | 35 | 1,000 p. | 0.88 | |
| 000098 | MANDFIX 40 Reinforced | 4 to 18 | 40 | 1,000 p. | 0.94 | |
| | | | | | | |

| Code | Name | Steel Ø [mm] | Concrete Cover [mm] | Sale Sizes | Weight [kg/100p.] | Characteristics |
|------|------|-----------------|---------------------------|---------------|----------------------|-----------------|
|------|------|-----------------|---------------------------|---------------|----------------------|-----------------|

NAPFIX

| | | | | | | |
|--------|-----------|---------|----|----------|------|---|
| 002015 | NAPFIX 25 | 4 to 24 | 25 | 1,000 p. | 0.92 | - Very solid, stable spacer with a good base. |
| 002016 | NAPFIX 30 | 4 to 24 | 30 | 1,000 p. | 0.93 | |
| 002017 | NAPFIX 40 | 4 to 24 | 40 | 1,000 p. | 1.18 | |
| 002018 | NAPFIX 50 | 4 to 24 | 50 | 500 p. | 1.33 | |
| 002019 | NAPFIX 60 | 4 to 24 | 60 | 250 p. | 1.72 | |
| 002020 | NAPFIX 70 | 4 to 24 | 70 | 250 p. | 1.88 | |
| 002021 | NAPFIX 80 | 4 to 24 | 80 | 250 p. | 2.00 | |



| Code | Name | Steel Ø [mm] | For Piles of | Sale Sizes | Weight [kg/100p.] | Characteristics |
|------|------|-----------------|-----------------|---------------|----------------------|-----------------|
|------|------|-----------------|-----------------|---------------|----------------------|-----------------|

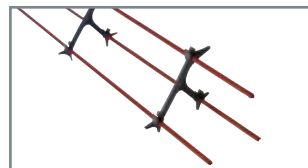
DSM "5"

| | | | | | | |
|--------|--------------|--------|-----------|----------|------|---|
| 001575 | D.S.M"5" 75 | 3 to 5 | 75 x 75 | 1,250 p. | 0.45 | - Struts for fence rods. - Can immediately set up the 4 reinforcing steels of fencing rods in reinforced concrete. |
| 001577 | D.S.M"5" 90 | 3 to 5 | 90 x 90 | 2,000 p. | 0.52 | |
| 001510 | D.S.M"5" 100 | 3 to 5 | 100 x 100 | 1,500 p. | 0.55 | |
| 001512 | D.S.M"5" 120 | 3 to 5 | 120 x 120 | 1,250 p. | 0.71 | |



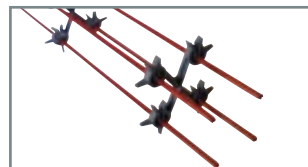
DSM "5" 3 BRANCHES

| | | | | | | |
|--------|------------------------|--------|---------|----------|------|--|
| 001550 | D.S.M"5" 3 branches 75 | 3 to 5 | 75 x 75 | 2,000 p. | 0.31 | - Struts for fence rods (angled parts). - Can immediately set up the 3 reinforcing steels of fencing rods in reinforced concrete. |
| 001551 | D.S.M"5" 3 branches 80 | 3 to 5 | 80 x 80 | 2,000 p. | 0.31 | |



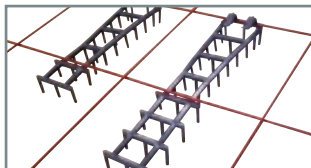
DSM "8"

| | | | | | | |
|--------|-------------------|--------|--------------------|----------|------|---|
| 001511 | D.S.M"8" 75 | 4 to 8 | 75 x 75 to 80 x 80 | 1,250 p. | 0.54 | - Struts for fence rods. - Can immediately set up the 4 reinforcing steels of fencing rods in reinforced concrete. |
| 001585 | D.S.M"8" 90 | 4 to 8 | 90 x 90 | 1,250 p. | 0.67 | |
| 001515 | D.S.M"8" 100 | 4 to 8 | 100 x 100 | 1,250 p. | 0.78 | |
| 001587 | D.S.M"8" 120 x 90 | 4 to 8 | 120 x 90 | 1,000 p. | 0.73 | |
| 001580 | D.S.M"8" 120 | 4 to 8 | 120 x 120 | 1,000 p. | 0.91 | |



| Code | Name | Length [cm] | Concrete Cover [mm] | Sale Sizes | Weight [kg/100p.] | Characteristics |
|------|------|----------------|---------------------------|---------------|----------------------|-----------------|
|------|------|----------------|---------------------------|---------------|----------------------|-----------------|

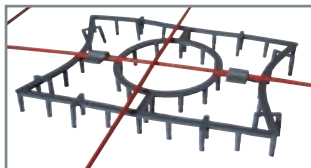
ACROFIX



| | | | | | | |
|--------|----------------------|----|----|--------|------|---|
| 001860 | ACROFIX 250/15 | 25 | 15 | 250 p. | 3.21 | <ul style="list-style-type: none"> - Highly resistant spacer. - For all kinds of reinforcing steels with Ø ranging from 4 to 16mm. - Length 250 or 330mm for a width of 65mm. - It has 2 hooks that ensure good positioning and attachment on the steel. |
| 001861 | ACROFIX 250/20 | 25 | 20 | 250 p. | 3.50 | |
| 001862 | ACROFIX 250/25 | 25 | 25 | 250 p. | 3.64 | |
| 001863 | ACROFIX 250/30 | 25 | 30 | 250 p. | 3.85 | |
| 001865 | ACROFIX 250/40 | 25 | 40 | 200 p. | 4.28 | |
| 001871 | ACROFIX 330/20 | 33 | 20 | 200 p. | 4.60 | <ul style="list-style-type: none"> - Its length of 25 or 33cm always guarantees welded fabric support even with wide meshing. - Acrofix 250 or 330 for approximately every 0.70m² to 0.75m². - Acrofix 330 is specially designed for reinforcing steels with wide grids. |
| 001872 | ACROFIX 330/25 | 33 | 25 | 200 p. | 4.79 | |
| 001873 | ACROFIX 330/30 | 33 | 30 | 200 p. | 5.04 | |
| 017736 | ACROFIX 330/40 white | 33 | 40 | 150 p. | 5.70 | |
| | | | | | | |

The ACROFIX spacer is used for horizontal as well as vertical fixing.

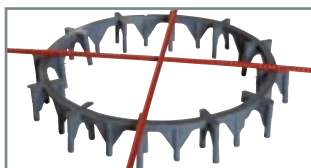
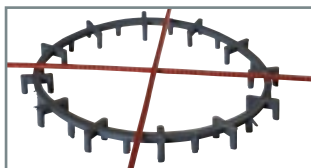
AGRIPFIX



| | | | | | | |
|--------|-------------|---|----|--------|------|--|
| 001560 | AGRIPFIX 15 | - | 15 | 125 p. | 4.56 | <ul style="list-style-type: none"> - Reinforcing steel spacer with a very large fixing surface, 26cm x 20cm. - Attaches easily to reinforcing steels. - Its 2 clips ensure a secure hold without a risk of unhooking. |
| 001561 | AGRIPFIX 20 | - | 20 | 125 p. | 5.12 | |
| 001562 | AGRIPFIX 25 | - | 25 | 125 p. | 5.45 | |
| 001563 | AGRIPFIX 30 | - | 30 | 125 p. | 5.70 | |

The AGRIPFIX spacer is used for horizontal as well as vertical fixing.

CAL'RING AND REINFORCED CAL'RING

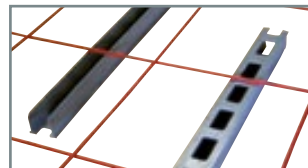


| | | | | | | |
|--------|------------------------|---|----|--------|------|--|
| 001725 | CAL'RING 15 | - | 15 | 500 p. | 3.05 | <ul style="list-style-type: none"> - Horizontal spacer for welded fabric and for common steel Ø. - Made of 4 pre-detailed rings with Ø ranging from 18 to 32cm. - Can be easily fitted on the formwork before installing welded fabric. Even if a ring moves during pouring, its area ensures effective fixing of steel rods under all circumstances. |
| 001726 | CAL'RING 20 | - | 20 | 400 p. | 3.37 | |
| 001727 | CAL'RING 25 | - | 25 | 360 p. | 3.81 | |
| 001728 | CAL'RING 30 | - | 30 | 320 p. | 4.04 | |
| 001730 | CAL'RING 25 Reinforced | - | 25 | 360 p. | 4.20 | <ul style="list-style-type: none"> - Double legs for CAL'RING. For Reinforced CAL'RING, same design as Cal'ring but with double reinforced legs, highly stable and resistant. |
| 001731 | CAL'RING 30 Reinforced | - | 30 | 320 p. | 4.57 | |
| 001732 | CAL'RING 35 Reinforced | - | 35 | 240 p. | 5.15 | |
| 001733 | CAL'RING 40 Reinforced | - | 40 | 240 p. | 5.50 | |

| Code | Name | Concrete Cover [mm] | Sale Sizes | Standard Packaging | Weight [kg/100m] | Characteristics |
|------|------|---------------------|------------|--------------------|------------------|-----------------|
|------|------|---------------------|------------|--------------------|------------------|-----------------|

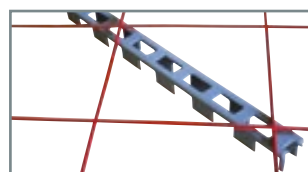
| | | | | | | |
|--------|-----------------------|----|--------|--------|-------|--|
| 001688 | UNICALE-I 25 - 2.00ML | 25 | 100m | 4,200m | 22.00 | <ul style="list-style-type: none"> - U shaped spacer for fixing reinforcing steels on insulators, ground floor formwork, etc... - Can be placed upside down, the 2 wings of the U shape facing upward. |
| 001689 | UNICALE-I 30 - 2.00ML | 30 | 100m | 3,600m | 28.00 | |
| 001691 | UNICALE-I 40 - 2.00ML | 40 | 50m | 2,000m | 31.00 | |
| 016634 | UNICALE-I 50 - 2.00ML | 50 | 50m | 1,200m | 46.00 | |
| 017003 | UNICALE-I 60 - 2.00ML | 60 | 1,600m | 1,600m | 68.50 | |

UNICALE I



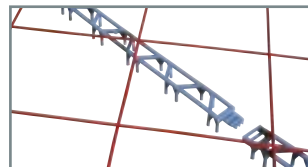
| | | | | | | |
|--------|------------------------|----|------|--------|-------|---|
| 001677 | UNICALE-II 25 - 2.00ML | 25 | 100m | 4,200m | 18.00 | <ul style="list-style-type: none"> - Plastic U, highly resistant, with very wide cutouts for concrete passage. - Used for vertical, horizontal or inclined fixing. - Can be cut into pieces of 33 or 50 cm for fixing by blocks. |
| 001678 | UNICALE-II 30 - 2.00ML | 30 | 100m | 3,600m | 20.00 | |
| 001687 | UNICALE-II 40 - 2.00ML | 40 | 60m | 2,400m | 25.00 | |
| 001694 | UNICALE-II 50 - 2.00ML | 50 | 60m | 1,440m | 39.00 | |
| 017505 | UNICALE-II 60 - 2.00ML | 60 | 40m | 1,600m | 49.00 | |

UNICALE II



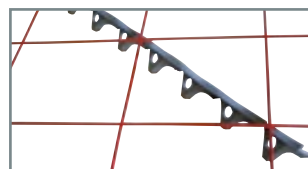
| | | | | | | |
|--------|-------------------------|----|------|--------|-------|--|
| 001658 | UNICALE-III 25 - 2.00ML | 25 | 100m | 5,000m | 10.20 | <ul style="list-style-type: none"> - Each 2.00m length consists of two 1.00m long parts. Delivered assembled, these parts can be disassembled at the last minute at the building site. - With a largely cut out form, Unicale III can be perfectly embedded in concrete. |
| 001659 | UNICALE-III 30 - 2.00ML | 30 | 100m | 3,000m | 10.60 | |
| 001660 | UNICALE-III 35 - 2.00ML | 35 | 100m | 3,000m | 11.00 | |

UNICALE III



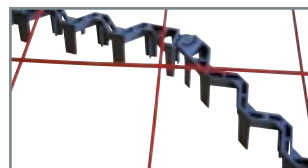
| | | | | | | |
|--------|------------------------|----|------|--------|-------|--|
| 016657 | UNICALE-IV 25 - 0.80ML | 25 | 40m | 2,800m | 12.00 | <ul style="list-style-type: none"> - Very resistant and stable plastic spacer. - Original design to ensure excellent penetration of concrete. - Patented model. |
| 016658 | UNICALE-IV 25 - 2.00ML | 25 | 100m | 5,000m | 12.00 | |
| 016659 | UNICALE-IV 30 - 0.80ML | 30 | 40m | 2,800m | 12.50 | |
| 016660 | UNICALE-IV 30 - 2.00ML | 30 | 100m | 5,000m | 12.50 | |
| 016661 | UNICALE-IV 35 - 2.00ML | 35 | 80m | 3,200m | 14.20 | |
| 016662 | UNICALE-IV 40 - 0.80ML | 40 | 32m | 1,344m | 16.70 | |
| 016663 | UNICALE-IV 40 - 2.00ML | 40 | 80m | 3,200m | 16.70 | |
| 016664 | UNICALE-IV 50 - 2.00ML | 50 | 80m | 3,200m | 21.70 | |

UNICALE IV



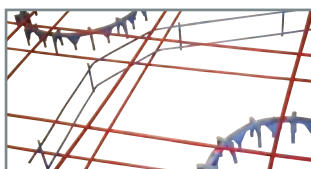
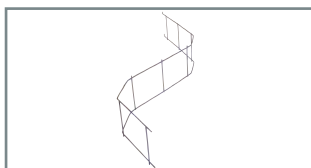
| | | | | | | |
|--------|---------------------------|----|------|--------|-------|--|
| 001684 | UNICALE R.FIX 25 - 2.00ML | 25 | 100m | 3,600m | 8.30 | <ul style="list-style-type: none"> - Widely cut plastic spacer to ensure excellent concrete penetration. - Each 2.00m unit consists of three 0.67m parts fitted with a rotating attachment, which allows sine curve positioning. |
| 001679 | UNICALE R.FIX 30 - 2.00ML | 30 | 100m | 3,000m | 10.00 | |
| 001686 | UNICALE R.FIX 35 - 2.00ML | 35 | 80m | 2,400m | 11.40 | |
| 001685 | UNICALE R.FIX 40 - 2.00ML | 40 | 80m | 2,400m | 12.80 | |

UNICALE R-FIX



| Code | Name | Height [mm] | Sale Sizes | Standard Packaging | Weight [kg/100m] | Characteristics |
|------|------|----------------|---------------|-----------------------|---------------------|-----------------|
|------|------|----------------|---------------|-----------------------|---------------------|-----------------|

ZISTA GIRDER



| | | | | | | |
|--------|---------------------|-----|-----|--------|-------|--|
| 007955 | ZISTA GIRDER 40 MM | 40 | 50m | 2,000m | 22.50 | <ul style="list-style-type: none"> - Serpentine shaped in welded fabric, which provides a support area 30 to 40 times greater than a normal straight girder, therefore definitely less expensive to use. - Good stability – does not teeter. - No contact with formwork. - Other sizes on request. |
| 007956 | ZISTA GIRDER 50 MM | 50 | 50m | 2,000m | 23.50 | |
| 007957 | ZISTA GIRDER 60 MM | 60 | 50m | 2,000m | 24.00 | |
| 007959 | ZISTA GIRDER 70 MM | 70 | 50m | 2,000m | 28.50 | |
| 007961 | ZISTA GIRDER 80 MM | 80 | 50m | 2,000m | 29.00 | |
| 007963 | ZISTA GIRDER 90 MM | 90 | 50m | 2,000m | 30.00 | |
| 007965 | ZISTA GIRDER 100 MM | 100 | 50m | 2,000m | 31.00 | |
| 007967 | ZISTA GIRDER 110 MM | 110 | 50m | 2,000m | 31.50 | |
| 007970 | ZISTA GIRDER 120 MM | 120 | 50m | 2,000m | 33.50 | |
| 007972 | ZISTA GIRDER 130 MM | 130 | 50m | 2,000m | 34.50 | |
| 007975 | ZISTA GIRDER 140 MM | 140 | 50m | 2,000m | 35.50 | |
| 007977 | ZISTA GIRDER 150 MM | 150 | 50m | 2,000m | 36.00 | |
| 007980 | ZISTA GIRDER 160 MM | 160 | 50m | 2,000m | 43.00 | |
| 007993 | ZISTA GIRDER 180 MM | 180 | 50m | 2,000m | 45.00 | |
| 007995 | ZISTA GIRDER 200 MM | 200 | 50m | 800m | 60.50 | |
| 007996 | ZISTA GIRDER 220 MM | 220 | 50m | 800m | 62.50 | |
| 007997 | ZISTA GIRDER 240 MM | 240 | 50m | 800m | 64.00 | |
| 007998 | ZISTA GIRDER 260 MM | 260 | 50m | 800m | 66.00 | |
| 007999 | ZISTA GIRDER 280 MM | 280 | 50m | 800m | 68.00 | |
| 008000 | ZISTA GIRDER 300 MM | 300 | 50m | 800m | 69.50 | |

| Code | Name | Concrete Cover [mm] | Sale Sizes | Standard Packaging | Weight [kg/100m] | Characteristics |
|------|------|---------------------------|---------------|-----------------------|---------------------|-----------------|
|------|------|---------------------------|---------------|-----------------------|---------------------|-----------------|

TRIANGULAR CHAIR



| | | | | | | |
|--------|-------------------------|-----|-------|---------|------|--|
| 007960 | Triangular Chair 70 MM | 70 | 400ml | 2,000ml | 1.12 | <ul style="list-style-type: none"> - Linear steel space length 2m composed of 14 vertical steels Ø 3.88mm and 3 longitudinal steels Ø 3.00mm. - The triangular chair is unalterable thanks to the vertical steels disposed every 15cm, and is adapted to heavy loads. - Its geometry allows an excellent stability and ensures a perfect concrete penetration. - Other dimensions available up to 250mm. |
| 007962 | Triangular Chair 90 MM | 90 | 400ml | 2,000ml | 1.22 | |
| 007969 | Triangular Chair 100 MM | 100 | 400ml | 2,000ml | 1.28 | |
| 007964 | Triangular Chair 110 MM | 110 | 400ml | 2,000ml | 1.32 | |
| 007966 | Triangular Chair 130 MM | 130 | 400ml | 1,600ml | 1.42 | |
| 007968 | Triangular Chair 150 MM | 150 | 400ml | 1,200ml | 1.54 | |
| 007973 | Triangular Chair 170 MM | 170 | 400ml | 1,200ml | 1.60 | |
| 007971 | Triangular Chair 190 MM | 190 | 400ml | 800ml | 1.98 | |

| Code | Name | Concrete Cover [mm] | Sale Sizes | Standard Packaging | Weight [kg/100p.] | Characteristics |
|------|------|---------------------|------------|--------------------|-------------------|-----------------|
|------|------|---------------------|------------|--------------------|-------------------|-----------------|

BETON-FIX

| | | | | | | |
|--------|--------------|----|--------|-----------|-------|---|
| 002744 | BETON-FIX 20 | 20 | 300 p. | 12,000 p. | 6.83 | <ul style="list-style-type: none"> - Concrete waterproof spacer, highly resistant. - Large support area lending good stability. - No fibers in the concrete. - For all steel diameters. - Easy attachment because of connected galvanized loops. - Support area Ø 35mm. |
| 018471 | BETON-FIX 25 | 25 | 285 p. | 11,400 p. | 7.30 | |
| 002747 | BETON-FIX 30 | 30 | 240 p. | 9,600 p. | 8.45 | |
| 002750 | BETON-FIX 40 | 40 | 130 p. | 7,600 p. | 10.59 | |
| 002751 | BETON-FIX 50 | 50 | 130 p. | 5,200 p. | 15.47 | |
| 018472 | BETON-FIX 60 | 60 | 95 p. | 3,800 p. | 21.00 | |
| 014328 | BETON-FIX 70 | 70 | 75 p. | 3,000 p. | 27.17 | |



BLOCKFIX

| | | | | | | |
|--------|-------------|----|--------|-----------|-------|--|
| 002782 | BLOCKFIX 25 | 25 | 425 p. | 17,500 p. | 4.85 | <ul style="list-style-type: none"> - Same as Beton-fix but with a cradle for resting the reinforcing steel. |
| 002785 | BLOCKFIX 30 | 30 | 340 p. | 14,000 p. | 6.20 | |
| 002787 | BLOCKFIX 40 | 40 | 250 p. | 10,500 p. | 8.07 | |
| 002790 | BLOCKFIX 50 | 50 | 175 p. | 7,500 p. | 11.84 | |
| 002791 | BLOCKFIX 60 | 60 | 135 p. | 6,000 p. | 14.92 | |



CROIXFIX

| | | | | | | |
|--------|-------------|----|--------|-----------|-------|--|
| 002719 | CROIXFIX 20 | 20 | 600 p. | 24,000 p. | 3.20 | <ul style="list-style-type: none"> - In waterproof concrete, spacer is almost invisible after form removal. - Easy attachment on steel rods because of connected galvanized loops. - To be positioned at steel intersections. - The spacers do not contain any fibers. |
| 002720 | CROIXFIX 25 | 25 | 500 p. | 20,000 p. | 4.13 | |
| 002721 | CROIXFIX 30 | 30 | 400 p. | 16,000 p. | 5.06 | |
| 002715 | CROIXFIX 40 | 40 | 250 p. | 10,000 p. | 8.09 | |
| 002725 | CROIXFIX 50 | 50 | 190 p. | 7,600 p. | 10.76 | |



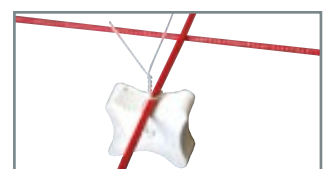
BETON-CLIP

| | | | | | | |
|--------|---------------|----|--------|-----------|-------|---|
| 018532 | BETON-CLIP 25 | 25 | 325 p. | 13,000 p. | 3.20 | <ul style="list-style-type: none"> - In waterproof concrete, spacer is almost invisible after formwork removal. - Easy attachment from Ø4 to Ø14 thanks to clips. - Perfect stability thanks to large support area - Also available in heights of 20, 35 and 45. - Can be provided in white - Vertical and horizontal use |
| 018533 | BETON-CLIP 30 | 30 | 300 p. | 12,000 p. | 5.50 | |
| 018540 | BETON-CLIP 40 | 40 | 250 p. | 10,000 p. | 8.80 | |
| 018541 | BETON-CLIP 50 | 50 | 200 p. | 8,000 p. | 11.00 | |
| 018542 | BETON-CLIP 60 | 60 | 115 p. | 4,600 p. | 16.00 | |
| 018543 | BETON-CLIP 70 | 70 | 92 p. | 6,440 p. | 21.00 | |



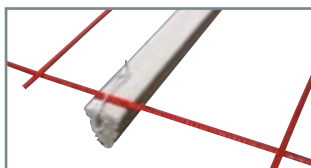
TRIVALEUR

| | | | | | | |
|--------|-----------------------|----------|--------|-----------|-------|--|
| 002725 | TRIVALEUR 20-25 or 30 | 20-25-30 | 600 p. | 24,000 p. | 3.27 | <ul style="list-style-type: none"> - Highly resistant spacer in waterproof concrete. - Each Trivaleur offers 3 height options for fixing. - Test report provided on request. - The spacers do not contain any fibers. - Can be supplied without threads on request, delivery time is determined individually. |
| 002728 | TRIVALEUR 35-40 or 50 | 35-40-50 | 185 p. | 7,400 p. | 10.77 | |



| Code | Name | Concrete Cover [mm] | Sale Sizes | Standard Packaging | Weight [kg/100 p.] | Characteristics |
|------|------|---------------------|------------|--------------------|--------------------|-----------------|
|------|------|---------------------|------------|--------------------|--------------------|-----------------|

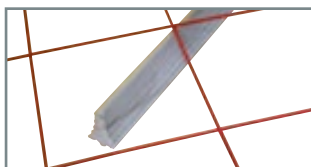
FIBER CONCRETE SEPARATOR



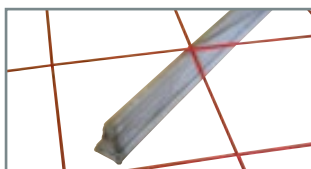
| | | | | | |
|--------|--|----|-------|----------|-------|
| 002668 | FIBER CONCRETE SEPARATOR WITH HOOK 33/30 | 30 | 75 p. | 3,000 p. | 25.20 |
| 002670 | FIBER CONCRETE SEPARATOR WITH HOOK 33/40 | 40 | 50 p. | 2,000 p. | 40.50 |

- Vertical spacer.
- Length: 33cm.
- Attaches easily on reinforcing steels.
- Recommended for heavy reinforcing steels.
- Other concrete covers on request: quantities and delivery time are determined individually.
- Other sizes on request

FIBER CONCRETE SLIDE AND RULER



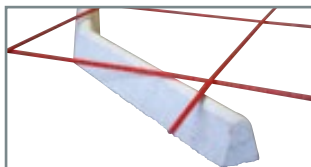
| | | | | | |
|--------|----------------------------|----|--------|----------|-------|
| 002652 | FIBER CONCRETE SLIDE 33/25 | 25 | 100 p. | 4,000 p. | 23.60 |
| 002653 | FIBER CONCRETE SLIDE 33/30 | 30 | 75 p. | 3,000 p. | 29.34 |
| 002655 | FIBER CONCRETE SLIDE 33/40 | 40 | 50 p. | 1,800 p. | 47.00 |
| 002656 | FIBER CONCRETE SLIDE 33/50 | 50 | 40 p. | 1,280 p. | 67.00 |



| | | | | | |
|--------|-----------------------------|----|--------|----------|--------|
| 002681 | FIBER CONCRETE RULER 100/25 | 25 | 100 p. | 1,500 p. | 58.00 |
| 002682 | FIBER CONCRETE RULER 100/30 | 30 | 100 p. | 1,000 p. | 83.00 |
| 002684 | FIBER CONCRETE RULER 100/40 | 40 | 100 p. | 600 p. | 132.00 |
| 002686 | FIBER CONCRETE RULER 100/50 | 50 | 100 p. | 400 p. | 218.00 |
| 002649 | FIBER CONCRETE RULER 100/60 | 60 | 50 p. | 250 p. | 300.00 |

- Horizontal spacer.
- Length: 33 cm for FIBER CONCRETE SLIDE and 100 cm for FIBER CONCRETE RULER.
- Because of its well-researched length, the FIBER CONCRETE SLIDE of 33cm allows economical bracing in staggered rows.
- Conventional continuous 1m slides often arrive broken at the jobsite. This is not the case with the FIBER CONCRETE SLIDE: it prevents losses caused by damages during transportation.
- Concave section.
- Other shapes, sections, sizes supplied on demand.

ZZ CONCRETE RULER



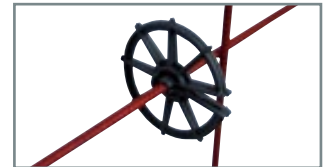
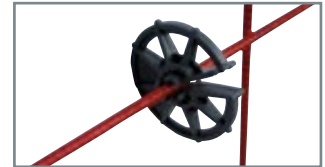
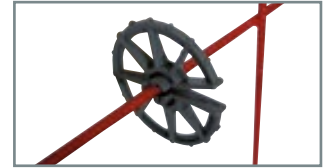
| | | | | | |
|--------|----------------------|----|----------|----------|--------|
| 002688 | ZZ CONCRETE RULER 25 | 25 | 1,200 p. | 1,200 p. | 83.08 |
| 002685 | ZZ CONCRETE RULER 30 | 30 | 750 p. | 750 p. | 123.33 |
| 002687 | ZZ CONCRETE RULER 40 | 40 | 500 p. | 500 p. | 167.80 |
| 002689 | ZZ CONCRETE RULER 50 | 50 | 400 p. | 400 p. | 221.50 |
| 002690 | ZZ CONCRETE RULER 60 | 60 | 320 p. | 320 p. | 310.94 |

- Highly resistant spacer in waterproof concrete.
- Length: 80cm.
- The spacers do not contain any fibers.
- Its sine curve shape ensures greater stability.

| Code | Name | Steel Ø [mm] | Concrete Cover [mm] | Sale Sizes | Weight [kg/100p.] | Characteristics |
|------|------|-----------------|---------------------------|---------------|----------------------|-----------------|
|------|------|-----------------|---------------------------|---------------|----------------------|-----------------|

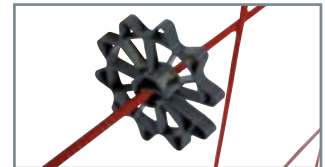
CAL'ROUE

| | | | | | | |
|--------|----------------|---------|----|----------|------|--|
| 002618 | CAL'ROUE 6/20 | 3 to 6 | 20 | 3,000 p. | 0.43 | <ul style="list-style-type: none"> - Highly resistant spacer designed to maintain steel rods of small Ø in precast units of concrete with small widths. - Very good hold for steel. - Can be made in different colors on request. |
| 002619 | CAL'ROUE 6/25 | 3 to 6 | 25 | 2,500 p. | 0.43 | |
| 002620 | CAL'ROUE 6/30 | 3 to 6 | 30 | 2,000 p. | 0.50 | |
| 002612 | CAL'ROUE 10/20 | 4 to 10 | 20 | 2,500 p. | 0.33 | |
| 002613 | CAL'ROUE 10/25 | 4 to 10 | 25 | 2,000 p. | 0.47 | |
| 002614 | CAL'ROUE 10/30 | 4 to 10 | 30 | 2,000 p. | 0.49 | |
| 002616 | CAL'ROUE 10/40 | 4 to 10 | 40 | 1,000 p. | 0.92 | |



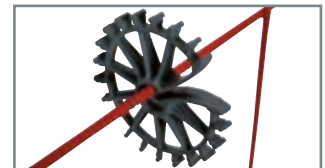
COROLFIX

| | | | | | | |
|--------|------------------|---------|----|----------|------|---|
| 006170 | COROLFIX 5-12/15 | 5 to 12 | 15 | 5,000 p. | 0.30 | <ul style="list-style-type: none"> - Spacer ensuring good steel support. - Ideal for general purposes on construction sites. - Can be made in different colors on request. |
| 006171 | COROLFIX 5-12/20 | 5 to 12 | 20 | 4,000 p. | 0.34 | |
| 006172 | COROLFIX 5-12/25 | 5 to 12 | 25 | 1,250 p. | 0.63 | |
| 012748 | COROLFIX 5-12/30 | 5 to 12 | 30 | 1,250 p. | 0.76 | |
| 006174 | COROLFIX 5-12/35 | 5 to 12 | 35 | 1,000 p. | 1.26 | |
| 006175 | COROLFIX 5-14/40 | 5 to 14 | 40 | 750 p. | 1.60 | |
| 006176 | COROLFIX 5-14/50 | 5 to 14 | 50 | 500 p. | 2.60 | |



MIN'FIX

| | | | | | | |
|--------|------------|---------|----|----------|------|--|
| 006007 | MIN'FIX 20 | 5 to 10 | 20 | 2,000 p. | 0.62 | <ul style="list-style-type: none"> - Resistant spacer with a special clamping core for effective attachment to steel. - Almost impossible to break away. - Unobtrusive. - Ideal for general purposes on construction sites and in the precast industry. - Can be made in different colors on request. |
| 006008 | MIN'FIX 25 | 5 to 12 | 25 | 1,500 p. | 0.73 | |
| 006009 | MIN'FIX 30 | 5 to 12 | 30 | 1,250 p. | 0.89 | |
| 006017 | MIN'FIX 40 | 6 to 14 | 40 | 500 p. | 1.78 | |
| 006018 | MIN'FIX 50 | 6 to 14 | 50 | 300 p. | 2.24 | |
| | | | | | | |



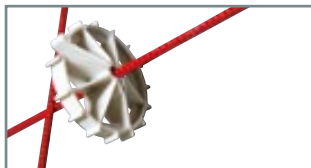
SUPERFIX

| | | | | | | |
|--------|-------------------|----------|----|----------|------|--|
| 006164 | SUPERFIX 5-14/25 | 5 to 14 | 25 | 1,000 p. | 0.98 | <ul style="list-style-type: none"> - Ultra resistant spacer with a special wide and thick core for effective attachment to steel. - Almost impossible to break away. - Does not get crushed by the pressure of steel against formwork. - Can be made in different colors on request. |
| 006165 | SUPERFIX 5-14/30 | 5 to 14 | 30 | 800 p. | 1.17 | |
| 006166 | SUPERFIX 6-16/35 | 6 to 16 | 35 | 500 p. | 1.42 | |
| 006167 | SUPERFIX 6-16/40 | 6 to 16 | 40 | 375 p. | 1.63 | |
| 006158 | SUPERFIX 12-18/40 | 12 to 18 | 40 | 700 p. | 2.48 | |
| 006159 | SUPERFIX 12-18/50 | 12 to 18 | 50 | 500 p. | 2.93 | |
| 006160 | SUPERFIX 12-18/60 | 12 to 18 | 60 | 300 p. | 3.72 | |
| 006162 | SUPERFIX 12-18/70 | 12 to 18 | 70 | 250 p. | 4.48 | |



| Code | Name | Steel Ø [mm] | Concrete Cover [mm] | Sale Sizes | Standard Packaging | Weight [kg/100p.] | Characteristics |
|------|------|-----------------|---------------------------|---------------|-----------------------|----------------------|-----------------|
|------|------|-----------------|---------------------------|---------------|-----------------------|----------------------|-----------------|

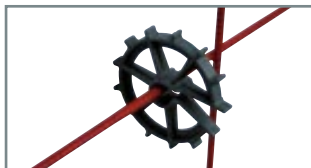
DUX EX



| | | | | | | |
|--------|----------------|----------|----|----------|-----------|------|
| 017822 | DUX EX 6/10 NM | 4 to 6 | 10 | 1,000 p. | 10,000 p. | 0.19 |
| 004410 | DUX EX 8/10 | 6 to 8 | 10 | 1,000 p. | 10,000 p. | 0.22 |
| 004215 | DUX EX 6/15 | 4 to 6 | 15 | 500 p. | 7,500 p. | 0.31 |
| 004415 | DUX EX 8/15 | 6 to 8 | 15 | 500 p. | 5,000 p. | 0.35 |
| 004220 | DUX EX 6/20 | 4 to 6 | 20 | 500 p. | 5,000 p. | 0.51 |
| 004420 | DUX EX 8/20 | 6 to 8 | 20 | 500 p. | 4,000 p. | 0.52 |
| 004620 | DUX EX 12/20 | 10 to 12 | 20 | 500 p. | 3,500 p. | 0.60 |
| 004920 | DUX EX 18/20 | 14 to 18 | 20 | 500 p. | 2,500 p. | 0.67 |
| 004225 | DUX EX 6/25 | 4 to 6 | 25 | 500 p. | 3,000 p. | 0.68 |
| 004425 | DUX EX 8/25 | 6 to 8 | 25 | 500 p. | 3,000 p. | 0.69 |
| 004625 | DUX EX 12/25 | 10 to 12 | 25 | 500 p. | 2,500 p. | 0.70 |
| 004430 | DUX EX 8/30 | 6 to 8 | 30 | 250 p. | 1,500 p. | 1.16 |
| 013574 | DUX EX 8/40 | 6 to 8 | 40 | 100 p. | 800 p. | 1.56 |

- On request and with individually determined delivery times, concrete covers of 35, 40 and 50mm can be delivered for some steel Ø.

DUX OPEN



| | | | | | | |
|--------|----------------|----------|----|----------|----------|------|
| 003064 | DUX OPEN 6/20 | 4 to 6 | 20 | 3,500 p. | 3,500 p. | 0.36 |
| 003084 | DUX OPEN 8/20 | 6 to 8 | 20 | 3,500 p. | 3,500 p. | 0.35 |
| 003124 | DUX OPEN 12/20 | 10 to 13 | 20 | 250 p. | 2,500 p. | 0.60 |
| 003264 | DUX OPEN 26/20 | 20 to 26 | 20 | 250 p. | 1,000 p. | 0.93 |
| 003065 | DUX OPEN 6/25 | 4 to 6 | 25 | 2,500 p. | 2,500 p. | 0.54 |
| 003085 | DUX OPEN 8/25 | 6 to 8 | 25 | 2,000 p. | 2,000 p. | 0.58 |
| 003125 | DUX OPEN 12/25 | 10 to 13 | 25 | 250 p. | 2,500 p. | 0.78 |
| 003185 | DUX OPEN 18/25 | 14 to 18 | 25 | 250 p. | 1,000 p. | 1.20 |
| 003265 | DUX OPEN 26/25 | 20 to 26 | 25 | 250 p. | 1,000 p. | 1.39 |
| 003086 | DUX OPEN 8/30 | 6 to 8 | 30 | 1,250 p. | 1,250 p. | 0.69 |
| 003266 | DUX OPEN 26/30 | 20 to 26 | 30 | 125 p. | 1,000 p. | 1.73 |
| 013597 | DUX OPEN 8/40 | 6 to 8 | 40 | 125 p. | 1,000 p. | 1.85 |

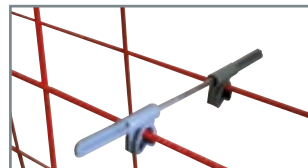
- Very rigid and resistant spacer for use in public works.
- On request and with individually determined delivery times, concrete covers of 50-60-70 and 95mm can be delivered for some steel Ø.
- The "DUX OPEN" 6/20 - 8/20 - 6/25 and 8/30 ultra reinforced, that have been specifically designed for producing of centrifugal pipes are manufactured on demand.

| Code | Name | Length A [cm] | Concrete Cover B [mm] | Sale Sizes | Weight [kg/100p.] | Characteristics |
|------|------|------------------|-----------------------------|---------------|----------------------|-----------------|
|------|------|------------------|-----------------------------|---------------|----------------------|-----------------|

DOUBLE LAYER

| | | | | | |
|--------|---------------------|-----|----|--------|------|
| 001611 | DOUBLE LAYER 150/20 | 150 | 20 | 100 p. | 2.10 |
| 001612 | DOUBLE LAYER 160/20 | 160 | 20 | 100 p. | 2.15 |
| 001614 | DOUBLE LAYER 180/20 | 180 | 20 | 100 p. | 2.30 |
| 001616 | DOUBLE LAYER 200/20 | 200 | 20 | 100 p. | 2.40 |
| 001622 | DOUBLE LAYER 250/20 | 250 | 20 | 100 p. | 2.65 |
| 001630 | DOUBLE LAYER 150/25 | 150 | 25 | 100 p. | 2.20 |
| 001631 | DOUBLE LAYER 160/25 | 160 | 25 | 100 p. | 2.25 |
| 001632 | DOUBLE LAYER 180/25 | 180 | 25 | 100 p. | 2.40 |
| 001633 | DOUBLE LAYER 200/25 | 200 | 25 | 100 p. | 2.60 |
| 001635 | DOUBLE LAYER 250/25 | 250 | 25 | 100 p. | 3.00 |
| 001636 | DOUBLE LAYER 300/25 | 300 | 25 | 100 p. | 3.40 |
| 001638 | DOUBLE LAYER 140/30 | 140 | 30 | 100 p. | 2.10 |
| 001639 | DOUBLE LAYER 150/30 | 150 | 30 | 100 p. | 2.25 |
| 001640 | DOUBLE LAYER 160/30 | 160 | 30 | 100 p. | 2.30 |
| 001641 | DOUBLE LAYER 180/30 | 180 | 30 | 100 p. | 2.50 |
| 001642 | DOUBLE LAYER 200/30 | 200 | 30 | 100 p. | 2.60 |
| 001643 | DOUBLE LAYER 240/30 | 240 | 30 | 100 p. | 3.40 |
| 001644 | DOUBLE LAYER 250/30 | 250 | 30 | 100 p. | 3.50 |
| 001645 | DOUBLE LAYER 300/30 | 300 | 30 | 100 p. | 3.60 |
| 001651 | DOUBLE LAYER 160/40 | 160 | 40 | 100 p. | 2.60 |
| 001647 | DOUBLE LAYER 180/40 | 180 | 40 | 100 p. | 2.75 |
| 001648 | DOUBLE LAYER 200/40 | 200 | 40 | 100 p. | 2.95 |
| 001649 | DOUBLE LAYER 240/40 | 240 | 40 | 100 p. | 3.20 |
| 001650 | DOUBLE LAYER 250/40 | 250 | 40 | 100 p. | 3.70 |
| 013489 | DOUBLE LAYER 200/50 | 200 | 50 | 100 p. | 3.10 |
| 013503 | DOUBLE LAYER 250/50 | 250 | 50 | 100 p. | 3.90 |

- Made of a Ø 5mm steel stem, equipped with 2 plastic spacers.
- Supports 2 layers of reinforcing steels from 15, 20, 25, 30, 40 or 50mm of formwork.
- Can be adjusted for steel rods with Ø from 4 to 12mm.
- Can be manufactured for the sides required and with steel-formwork distances of 15, 20, 25, 30, 40, 50mm.
- Other non-standard dimensions manufactured on demand.
- Standard packaging: 500 parts.



| Code | Name | Wall Thickness [cm] | With or without Nail | Sale Sizes | Weight [kg/100p.] | Characteristics |
|------|------|------------------------|----------------------|------------|----------------------|-----------------|
|------|------|------------------------|----------------------|------------|----------------------|-----------------|

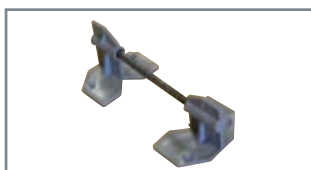
NAIL-ON CASTOR



| | | | | | |
|--------|-------------------------------------|---|--------------|--------|------|
| 002910 | NAIL-ON CASTOR Ø 41 mm | - | without nail | 100 p. | 2.80 |
| 002911 | NAIL-ON CASTOR Ø 48 mm | - | without nail | 100 p. | 1.50 |
| 016150 | NAIL-ON CASTOR Ø 48 mm with nail | - | with nail | 100 p. | 1.75 |

- In very rigid plastic.
- To position the feet of the formwork and especially the feet of piles formwork.
- Nailed with "toc" nails along the sides of the formwork or at the corners of piles.
- The 016150 type with assembled nail can be nailed with various pneumatic guns.

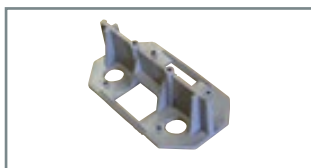
FORMWORK FOOT SPACER REINFORCED



| | | | | | |
|--------|---------------------------|----|---|--------|-------|
| 002962 | FORMWORK FOOT R - 15CM | 15 | - | 100 p. | 9.00 |
| 002963 | FORMWORK FOOT R - 16CM | 16 | - | 100 p. | 9.50 |
| 002965 | FORMWORK FOOT R - 18CM | 18 | - | 100 p. | 10.00 |
| 002967 | FORMWORK FOOT R - 20CM | 20 | - | 100 p. | 11.00 |
| 002972 | FORMWORK FOOT R - 25CM | 25 | - | 100 p. | 13.00 |

- Same as FORMWORK FOOT A, but with a height of 6cm, which allows you to securely support the lower part of vertical formwork in spite of level differences in the exposed floorings.
- The 2 plastic end pieces are pierced to allow nails to be driven and are equipped with dampers to prevent the plastic from splitting during nailing.
- Only end pieces can be delivered on request.

FORMWORK FOOT SPACER P



| | | | | | |
|--------|-------------------------------------|----|--------------|--------|------|
| 002915 | FORMWORK FOOT P - 15CM | 15 | without nail | 100 p. | 5.81 |
| 002995 | FORMWORK FOOT P - 15CM with nail | 15 | with nail | 100 p. | 7.50 |

- To position the feet of vertical formwork. Nailed to the floor.
- Manufactured entirely with plastic. Very rigid and solid.
- Other sizes available on request.
- On request from certain companies, the FORMWORK FOOT P can be delivered with pre-assembled nails.

FORMWORK FOOT SPACER MAX



| | | | | | |
|--------|----------------------------|----|--------------|--------|------|
| 016282 | FOOT MAX 16CM | 16 | without nail | 100 p. | 4.40 |
| 016283 | FOOT MAX 18CM | 18 | without nail | 100 p. | 4.80 |
| 016284 | FOOT MAX 20CM | 20 | without nail | 100 p. | 5.20 |
| 016285 | FOOT MAX 16CM with nail | 16 | with nail | 100 p. | 5.40 |
| 016286 | FOOT MAX 18CM with nail | 18 | with nail | 100 p. | 5.80 |
| 016287 | FOOT MAX 20CM with nail | 20 | with nail | 100 p. | 6.20 |

- This formwork foot spacer was designed to replace the FORMWORK FOOT P. Its main characteristics are similar to those of FORMWORK FOOT P, with more possibilities for passing joints through than in FORMWORK FOOT A and FORMWORK FOOT R.

STEEL NAILS

- Hardened steel nails with Ø 3.5 x 70mm conical tips for FORMWORK FOOT A and MAX (code 002988).
- Sold by boxes of 1 kg (± 200 pieces per box).



| Code | Name | Length [cm] | Color | Sale Sizes | Unit Weight [kg] | Characteristics |
|------|------|----------------|-------|---------------|------------------------|-----------------|
|------|------|----------------|-------|---------------|------------------------|-----------------|

MAGNETISED CONE

| | | | | | |
|--------|-----------------------|----|--------|------|------|
| 002852 | MAGNETISED CONE 14 CM | 14 | Orange | 1 p. | 0.33 |
| 002853 | MAGNETISED CONE 15 CM | 15 | Blue | 1 p. | 0.35 |
| 002854 | MAGNETISED CONE 16 CM | 16 | Ivory | 1 p. | 0.37 |
| 002855 | MAGNETISED CONE 17 CM | 17 | Beige | 1 p. | 0.38 |
| 002856 | MAGNETISED CONE 18 CM | 18 | Brown | 1 p. | 0.40 |
| 002857 | MAGNETISED CONE 20 CM | 20 | Grey | 1 p. | 0.41 |
| 002858 | MAGNETISED CONE 22 CM | 22 | Red | 1 p. | 0.43 |
| 002859 | MAGNETISED CONE 25 CM | 25 | Green | 1 p. | 0.45 |

- Massive spacers with permanent magnets inside.
- Use: footbridge reservation, formwork panel support, passage of tie-rods, etc...
- Avoids drilling metal formwork panels.
- Other sizes possible on request.



MASSIVE SPACER

| | | | | | |
|--------|----------------------|----|--------|-------|------|
| 002814 | MASSIVE SPACER 14 CM | 14 | Orange | 10 p. | 0.16 |
| 002815 | MASSIVE SPACER 15 CM | 15 | Blue | 10 p. | 0.19 |
| 002816 | MASSIVE SPACER 16 CM | 16 | Ivory | 10 p. | 0.20 |
| 002817 | MASSIVE SPACER 17 CM | 17 | Beige | 10 p. | 0.21 |
| 002818 | MASSIVE SPACER 18 CM | 18 | Brown | 10 p. | 0.22 |
| 013791 | MASSIVE SPACER 20 CM | 20 | Grey | 10 p. | 0.23 |
| 002822 | MASSIVE SPACER 22 CM | 22 | Red | 10 p. | 0.24 |
| 002825 | MASSIVE SPACER 25 CM | 25 | Green | 10 p. | 0.26 |

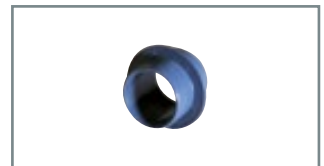
- Conical formwork spacer, recoverable, with massive and thick walls.
- Internal Ø 26mm.
- External Ø of the big base: 52mm.
- The MASSIVE SPACERS EL can be juxtaposed with a JUNCTION SPACER to form walls thicker than 25cm.
- Recovery of spacers:
 - Spacers up to 25cm: with a CONE PUNCH.
 - Juxtaposed spacers: with a CONE EXTRACTOR and the day after pouring at the latest.
- Do not hit the spacer directly with a hammer.



JUNCTION SPACER

| | | | | | |
|--------|-----------------|---|---|--------|-------|
| 005466 | JUNCTION SPACER | - | - | 125 p. | 0.004 |
|--------|-----------------|---|---|--------|-------|

- To juxtapose the MASSIVE SPACERS EL.



STANDARD SPACER

| | | | | | |
|--------|-----------------------|----|--------|-------|------|
| 002804 | STANDARD SPACER 14 CM | 14 | Orange | 10 p. | 0.09 |
| 002805 | STANDARD SPACER 15 CM | 15 | Blue | 10 p. | 0.10 |
| 002806 | STANDARD SPACER 16 CM | 16 | Ivory | 10 p. | 0.10 |
| 002807 | STANDARD SPACER 17 CM | 17 | Beige | 10 p. | 0.11 |
| 002808 | STANDARD SPACER 18 CM | 18 | Brown | 10 p. | 0.11 |
| 002809 | STANDARD SPACER 20 CM | 20 | Grey | 10 p. | 0.13 |
| 002810 | STANDARD SPACER 22 CM | 22 | Red | 10 p. | 0.14 |
| 002811 | STANDARD SPACER 25 CM | 25 | Green | 10 p. | 0.16 |

- Same sizes and uses as the massive spacer.
- Reinforced wall with internal fins.
- External Ø of the big base: 52mm.
- Limited re-use.
- Used in small vertical formwork.
- Must be recovered only with a CONE PUNCH.
- Risk of breakage if hammered directly.



| Code | Name | Wall Thickness [cm] | Sale Sizes | Standard Packaging | Weight [kg/100p.] | Characteristics |
|------|------|------------------------|------------|--------------------|----------------------|-----------------|
|------|------|------------------------|------------|--------------------|----------------------|-----------------|

CONCRETE CONE



| | | | | | |
|--------|-----------------------|----------|-------|----------|--------|
| 018537 | CONCRETE CONE 13.5 CM | 14 to 15 | 64 p. | 2,560 p. | 48.40 |
| 018517 | CONCRETE CONE 14.5 CM | 16 to 17 | 60 p. | 2,400 p. | 50.80 |
| 018431 | CONCRETE CONE 16.5 CM | 18 to 20 | 52 p. | 2,080 p. | 52.30 |
| 018538 | CONCRETE CONE 17.5 CM | 19 to 21 | 48 p. | 1,920 p. | 60.40 |
| 018449 | CONCRETE CONE 18.5 CM | 20 to 22 | 48 p. | 1,920 p. | 65.80 |
| 018554 | CONCRETE CONE 19.5 CM | 21 to 23 | 48 p. | 1,920 p. | 63.50 |
| 018539 | CONCRETE CONE 24.5 CM | 25 | 32 p. | 1,280 p. | 108.40 |

- To block holes left behind by the spacers. Suppresses sound and heat bridges.
- Adequately wet the plugs.
- Lightly grease the plugs and the holes with an anchoring mortar. Execute the finishing and resurfacing work on each side of the wall with mortar.
- For waterproof casing, you need to use a waterproof anchoring mortar that can be made more substantial by adding a small amount of silica sand.

PVC Tubes

| Code | Name | For Form Tie Ø [mm] | Ø int. x Ø ext. | Sale Sizes | Standard Packaging | Weight [kg/100m] | Characteristics |
|------|------|------------------------|-----------------|------------|--------------------|---------------------|-----------------|
|------|------|------------------------|-----------------|------------|--------------------|---------------------|-----------------|

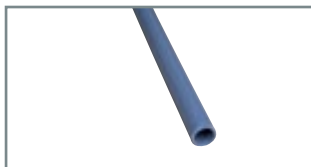
PVC TUBE



| | | | | | | |
|--------|-------------------------|----|---------|-----|--------|-------|
| 002226 | PVC TUBE SMOOTH 22 x 26 | 20 | 22 x 26 | 50m | 3,200m | 18.00 |
| 002330 | PVC TUBE SMOOTH 26 x 30 | 24 | 26 x 30 | 50m | 2,100m | 22.00 |
| 002631 | PVC TUBE ROUGH 26 x 31 | 24 | 26 x 31 | 50m | 2,100m | 26.00 |
| 003236 | PVC TUBE SMOOTH 32 x 36 | 30 | 32 x 36 | 30m | 1,470m | 29.90 |

- Super economic formwork PVC tube.
- Standard length: 2m (4m on request and with individually determined delivery times).
- Type 22 x 26, 26 x 30 and 26 x 31 available also in rough finish.

PVC TUBE T.R.



| | | | | | | |
|--------|-----------------------|----|---------|-----|--------|-------|
| 002222 | PVC TUBE SMOOTH TR 22 | 20 | 22 x 28 | 50m | 2,400m | 34.00 |
| 002262 | PVC TUBE SMOOTH TR 26 | 24 | 26 x 32 | 50m | 2,100m | 34.50 |
| 002302 | PVC TUBE SMOOTH TR 30 | 28 | 30 x 36 | 30m | 1,500m | 40.00 |
| 002322 | PVC TUBE SMOOTH TR 32 | 30 | 32 x 38 | 30m | 1,470m | 42.00 |
| 002342 | PVC TUBE SMOOTH TR 34 | 32 | 34 x 40 | 30m | 1,500m | 44.00 |
| 002402 | PVC TUBE SMOOTH TR 40 | 38 | 40 x 46 | 30m | 600m | 53.34 |

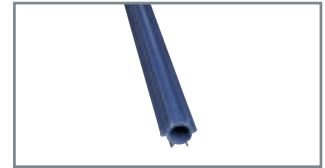
- Formwork PVC tube with thick and smooth external walls, very high resistance to pressure.
- Can be cut to desired lengths, adding value to the cuts.
- Standard length: 2m (4m on request and with individually determined delivery times).

| Code | Name | For Form Tie Ø [mm] | Ø int. x Ø ext. | Sale Sizes | Standard Packaging | Weight per 100 m [kg] | Characteristics |
|------|------|---------------------|-----------------|------------|--------------------|-----------------------|-----------------|
|------|------|---------------------|-----------------|------------|--------------------|-----------------------|-----------------|

DURCHGANG

| | | | | | | |
|--------|-----------------|----|---------------|-----|--------|-------|
| 001203 | DURCHGANG 20 TP | 18 | about 20 x 35 | 50m | 2,500m | 31.80 |
| 001264 | DURCHGANG 26 TP | 24 | about 26 x 42 | 30m | 1,500m | 36.00 |
| 001324 | DURCHGANG 32 TP | 30 | about 30 x 58 | 30m | 900m | 55.00 |

- PVC tube with very high resistance to pressure.
- Its large fins make it highly rigid and give it a very large support area for formworks as well as perfect anchoring in concrete.
- Standard length: 2m.
- Can be cut to desired lengths, adding value to the cuts.

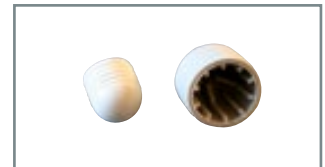


| Code | Name | For Orifice Ø [mm] | A [mm] | Sale Sizes | Standard Packaging | Weight [kg/100p.] | Characteristics |
|------|------|--------------------|--------|------------|--------------------|-------------------|-----------------|
|------|------|--------------------|--------|------------|--------------------|-------------------|-----------------|

WATERPROOF PLUG

| | | | | | | |
|--------|--------------------|----|----|--------|----------|------|
| 000301 | WATERPROOF PLUG 22 | 22 | 26 | 500 p. | 2,500 p. | 0.80 |
| 000302 | WATERPROOF PLUG 26 | 26 | 29 | 250 p. | 1,000 p. | 1.02 |
| 000303 | WATERPROOF PLUG 32 | 32 | 36 | 125 p. | 500 p. | 1.70 |

- Elastic stop cap to be used with a waterproof system, with PVC tubes of inner Ø 20, 22, 26 and 32mm.
- Does not ensure waterproofing by itself.



SEAL CONE

| | | | | | | |
|--------|--------------|----|----|--------|----------|------|
| 005420 | SEAL CONE 20 | 20 | 38 | 500 p. | 4,000 p. | 0.51 |
| 005422 | SEAL CONE 22 | 22 | 42 | 500 p. | 4,000 p. | 0.53 |
| 005426 | SEAL CONE 26 | 26 | 46 | 500 p. | 3,000 p. | 0.62 |
| 005432 | SEAL CONE 32 | 32 | 50 | 500 p. | 2,500 p. | 0.83 |
| 005438 | SEAL CONE 40 | 40 | 55 | 125 p. | 1,000 p. | 1.60 |

- End piece made of plastic that can be fitted inside PVC tubes and DURCHGANG.
- Can be reused 3 to 4 times.
- The SEAL CONES 22 and 26 (code 005422 and 005426) also fits in FIBRE CONCRETE TUBES Ø 22 and 26mm.



- To determine the length of the PVC tubes and the DURCHGANG, take the total thickness of the vertical formwork and subtract 20mm (2 x 10mm) for the cones, except for type 005403 (2 x 30mm) and type 005438 (2 x 20mm).

SEAL CONE "50"

| | | | | | | |
|--------|------------------------|----|----|--------|--------|------|
| 005457 | SEAL CONE SMOOTH 50/22 | 22 | 46 | 125 p. | 500 p. | 2.70 |
| 005456 | SEAL CONE SMOOTH 50/26 | 26 | 46 | 125 p. | 500 p. | 2.30 |

- Allows deep filling.
- Used with rough PVC tubes to create a waterproof system.



| Code | Name | Length [mm] | Sale Sizes | Standard Packaging | Weight [kg/100p.] | Characteristics |
|------|------|-------------|------------|--------------------|-------------------|-----------------|
|------|------|-------------|------------|--------------------|-------------------|-----------------|

CONCRETE PLUG 40/5

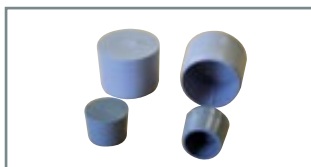
| | | | | | |
|--------|--------------------|----|--------|----------|------|
| 000334 | CONCRETE PLUG 40/5 | 40 | 200 p. | 8,000 p. | 9.53 |
|--------|--------------------|----|--------|----------|------|

- Perfectly suited for filling the SEAL CONE SMOOTH 50/22 or 50/26 reservations.
- To obtain a waterproof filling of 5 bars, use the BI-COMPONENT ADHESIVE. Test reports no. 21-1392 894-01 dated 11/29/94 (MPA-NRW) provided on request.



| Code | Name | For Orifice [mm] | Sale Sizes | Standard Packaging | Weight [kg/100p.] | Characteristics |
|------|------|---------------------|------------|--------------------|----------------------|-----------------|
|------|------|---------------------|------------|--------------------|----------------------|-----------------|

DECKI



| | | | | | | |
|--------|----------|----|----------|-----------|------|--|
| 003222 | DECKI 22 | 22 | 1,000 p. | 10,000 p. | 0.26 | <ul style="list-style-type: none"> - Plastic finishing cap to block visible holes of DURCHGANG, PVC TUBE and PVC TUBE TR after form removal. - DECKI do not ensure watertightness, but help avoid expensive finishing for shoring walls, artwork, industrial buildings, etc. |
| 003226 | DECKI 26 | 26 | 1,000 p. | 5,000 p. | 0.48 | |
| 003230 | DECKI 30 | 30 | 500 p. | 5,000 p. | 0.43 | |
| 003232 | DECKI 32 | 32 | 500 p. | 5,000 p. | 0.57 | |

| Code | Name | For PVC Tube | Sale Sizes | Weight [kg/100p.] | Characteristics |
|------|------|--------------|------------|----------------------|-----------------|
|------|------|--------------|------------|----------------------|-----------------|

WATERPROOF CAP WITH DECKI



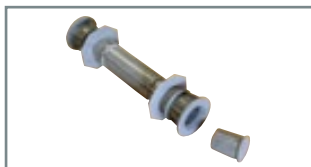
| | | | | | |
|--------|------------------------------|---------|--------|------|--|
| 013677 | FLANGE CAP FOR 22 x 26 | 22 x 26 | 200 p. | 1.50 | <ul style="list-style-type: none"> - Waterproof cap + special DECKI, ensures streaming watertightness. - Resists water pressure up to 7 bars. - Test reports provided on request. - Waterproof cap and corresponding waterproof DECKI delivered separately. - In case of ordering cuts, please provide the following information: <ul style="list-style-type: none"> • Will SEAL CONES be used? • The thickness of the finished wall that is to be made. • Always take into account size e (see on the left). |
| 013354 | FLANGE DECKI FOR 22 x 26 | 22 x 26 | 200 p. | 0.60 | |
| 013676 | WATERPROOF CAP FOR 26 x 30 | 26 x 30 | 500 p. | 1.40 | |
| 013353 | WATERPROOF DECKI FOR 26 x 30 | 26 x 30 | 500 p. | 0.56 | |

Length of spacer cuts = thickness of shell - 2 x e

- 22 x 26: e = 4.0cm
- 26 x 30: e = 2.5cm

| Code | Name | Wall Thickness [cm] | Sale Sizes | Weight [kg/100p.] | Characteristics |
|------|------|------------------------|------------|----------------------|-----------------|
|------|------|------------------------|------------|----------------------|-----------------|

COMBI FLANGE WITH DECKI



| | | | | | |
|--------|---|----|--------|------|--|
| 016833 | COMBI FLANGE 22 x 26 - 15 CM WITH DECKI | 15 | 100 p. | 6.00 | <ul style="list-style-type: none"> - PVC tubes with flanges serve as water dams. - 22mm interior Ø to allow formtie DYWIDAG 15/17 to pass through. - Filling of each orifice with the help of a special waterproof DECKI provided for this reason. - Resists water pressure up to 7 bars. - Test reports provided on request. |
| 016850 | COMBI FLANGE 22 x 26 - 16 CM WITH DECKI | 16 | 100 p. | 6.30 | |
| 017506 | COMBI FLANGE 22 x 26 - 18 CM WITH DECKI | 18 | 100 p. | 6.60 | |
| 012665 | COMBI FLANGE 22 x 26 - 20 CM WITH DECKI | 20 | 100 p. | 7.00 | |
| 016851 | COMBI FLANGE 22 x 26 - 22 CM WITH DECKI | 22 | 100 p. | 7.50 | |
| 012666 | COMBI FLANGE 22 x 26 - 25 CM WITH DECKI | 25 | 100 p. | 7.90 | |
| 016906 | COMBI FLANGE 22 x 26 - 30 CM WITH DECKI | 30 | 100 p. | 8.80 | |
| 017507 | COMBI FLANGE 22 x 26 - 35 CM WITH DECKI | 35 | 100 p. | 9.70 | |

| Code | Name | For PVC Tube Ø [mm] | Sale Quantity | Standard Packaging | Weight per 100 [kg] | Characteristics |
|------|------|---------------------|---------------|--------------------|---------------------|-----------------|
|------|------|---------------------|---------------|--------------------|---------------------|-----------------|

HYDRO-EXPANSIVE PLUG

| | | | | | | |
|--------|--------------------------|-------------|--------|----------|------|--|
| 018555 | Hydro-expansive Plug D26 | 25.50-26.20 | 100 p. | 9,000 p. | 3.40 | |
|--------|--------------------------|-------------|--------|----------|------|--|

- Hydro-expansive plug comprise a water-swellable rubber cap and solid plug
- The cap prevents water from infiltrating the bar and the core provides a mechanical anchor under water pressures up to 6 bar.
- Guarantees a perfect seal, combating moisture infiltration with a single hammer blow.
- No re-profiling or treatment is required after installation



HYDRO-EXPANSIVE RING

| | | | | | | |
|--------|--------------------------|-------|--------|-----------|------|--|
| 018556 | Hydro-expansive Ring D26 | 24-30 | 100 p. | 12,600 p. | 3.40 | |
| 018589 | Hydro-expansive Ring D31 | 31-38 | 50 p. | 9,000 p. | 3.30 | |

- Water swellable product that expands on contact with water
- Prevents water from permeating through cracks in the concrete around formwork spacers.
- Quick and easy to use
- Can be used in dead formwork system with the connector.
- Test report and certificate available



| Code | Name | For Tie Bar Ø [mm] | For Ring | Sale Quantity | Standard Packaging | Weight per 100 [kg] | Characteristics |
|------|------|--------------------|----------|---------------|--------------------|---------------------|-----------------|
|------|------|--------------------|----------|---------------|--------------------|---------------------|-----------------|

HYDRO-EXPANSIVE SEALING CONNECTOR

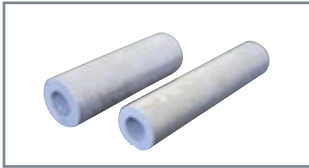
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|--------|---------------|--------|-----|-------|----------|------|--|
| 018590 | CONNECTOR D15 | Ø15-17 | D26 | 50 p. | 9,000 p. | 1.24 | |
| 018591 | CONNECTOR D20 | Ø20-23 | D31 | 50 p. | 9,000 p. | 1.80 | |

- Connector for heavy-duty concrete structures where formwork tie bars remain in situ
- Made from synthetic, water-swellable rubber that fully prevents moisture infiltration.
- The Sealing Connector is slid over the tie rod and anchored with the Hydro-expansive Ring - For use with DYWIDAG Tie Rods
- Quick and easy to use
- Test report and certificate available



| Code | Name | Length [cm] | Sale Sizes | Standard Packaging | Weight [kg/100p.] | Characteristics |
|------|------|----------------|---------------|-----------------------|----------------------|-----------------|
|------|------|----------------|---------------|-----------------------|----------------------|-----------------|

FIBRE CONCRETE TUBE



| | | | | | | |
|--------|-----------------------------------|-----|--------|----------|------------|--|
| 002675 | FIBRE CONCRETE TUBE Ø 22 - 15 CM | 15 | 80 p. | 2,560 p. | 28.09 | <ul style="list-style-type: none"> - Tube for formwork in fiber concrete without asbestos. - Recommended for waterproof walls. - Resists water pressure of 7 bars. - Test report no. 21.0791.5.86 carried out by the MPA NRW on the Ø 22mm Fiber Concrete Tube. - Complete test report provided on request. - Other lengths possible on request. - Ø int. x Ø ext. = 22/40 or 26/50. - Ø 32 mm interior on request and with time for delivery. |
| 002676 | FIBRE CONCRETE TUBE Ø 22 - 16 CM | 16 | 80 p. | 2,560 p. | 29.97 | |
| 002678 | FIBRE CONCRETE TUBE Ø 22 - 18 CM | 18 | 80 p. | 2,560 p. | 33.72 | |
| 002679 | FIBRE CONCRETE TUBE Ø 22 - 20 CM | 20 | 60 p. | 1,920 p. | 37.50 | |
| 002683 | FIBRE CONCRETE TUBE Ø 22 - 25 CM | 25 | 50 p. | 2,000 p. | 46.84 | |
| 018286 | FIBRE CONCRETE TUBE Ø 26 - 15 CM | 15 | 20 p. | - | 40.80 | |
| 018287 | FIBRE CONCRETE TUBE Ø 26 - 16 CM | 16 | 20 p. | - | 43.60 | |
| 018288 | FIBRE CONCRETE TUBE Ø 26 - 18 CM | 18 | 20 p. | - | 49.04 | |
| 018289 | FIBRE CONCRETE TUBE Ø 26 - 20 CM | 20 | 20 p. | - | 54.48 | |
| 018292 | FIBRE CONCRETE TUBE Ø 26 - 25 CM | 25 | 20 p. | - | 68.08 | |
| 002636 | FIBRE CONCRETE TUBE Ø 22 - 125 CM | 125 | 1.25 m | 500 m | 1.94 per m | <p>IMPLEMENTATION:</p> <ul style="list-style-type: none"> - The FIBRE CONCRETE TUBES are dampened before they are fixed in the vertical formworks. - During the concreting phase, spacer contact with the vibrating needle should be avoided. |
| 018294 | FIBRE CONCRETE TUBE Ø 26 - 125 CM | 125 | 1.25 m | 250 m | 2.10 per m | |

| Code | Name | For F. C. Tube [Ø in mm] | Sale Sizes | Standard Packaging | Weight [kg/100p.] | Characteristics |
|------|------|-----------------------------|---------------|-----------------------|----------------------|-----------------|
|------|------|-----------------------------|---------------|-----------------------|----------------------|-----------------|

SEAL FLANGE



| | | | | | | |
|--------|------------------|----|--------|---|------|--|
| 005424 | SEAL FLANGE F-22 | 22 | 250 p. | - | 0.22 | <ul style="list-style-type: none"> - Can be fitted at the extremities of the FIBRE CONCRETE TUBES to avoid crushing of formwork and passing of laitance. - For the same use, you can also use a SEAL CONE. |
| 014126 | SEAL FLANGE F-27 | 27 | 250 p. | - | 0.28 | |

PVC SLEEVE



| | | | | | | |
|--------|--------------------------|----|--------|----------|------|--|
| 005468 | CONNECTION PVC SLEEVE 22 | 22 | 250 p. | 2,500 p. | 1.00 | <ul style="list-style-type: none"> - Allows you to connect 2 FIBRE CONCRETE TUBES or 1 FIBRE CONCRETE TUBE with a PVC TUBE of the same interior Ø. - Avoids passing of laitance. |
|--------|--------------------------|----|--------|----------|------|--|

FIBRE CONCRETE PLUG



| | | | | | | |
|--------|---------------------------------|----|----------|---|------|---|
| 000312 | FIBRE CONCRETE PLUG Ø 22 - 2 CM | 22 | 1,000 p. | - | 1.50 | <ul style="list-style-type: none"> - Capping cannot be done on 2 sides of the spacer at the same time. You must start with the exposed side. The operation on the opposite side can be done only after 2 to 3 hours. - Based on the objective, cap each face with one or more caps of different lengths. - To obtain a waterproof filling, use the BI-COMPONENT ADHESIVE. - Ø 32mm caps on request. |
| 000315 | FIBRE CONCRETE PLUG Ø 22 - 5 CM | 22 | 500 p. | - | 3.80 | |
| 000317 | FIBRE CONCRETE PLUG Ø 22 - 7 CM | 22 | 250 p. | - | 5.40 | |
| 011992 | FIBRE CONCRETE PLUG Ø 26 - 2 CM | 26 | 1,000 p. | - | 2.40 | |
| 011993 | FIBRE CONCRETE PLUG Ø 26 - 5 CM | 26 | 1,000 p. | - | 6.00 | |

CAPPING

Generally speaking, the following rules should be adhered to:

- The capping operation can be done only about 5 days after concreting: in winter, this time could be greater.
- The FIBRE CONCRETE TUBES should be previously dusted with a bottlebrush.
- The FIBRE CONCRETE TUBES should be as dry as possible.

This operation can be carried out in many ways:

1. Normal capping: only one FIBRE CONCRETE PLUG on each side.
2. Waterproofing: 2 FIBRE CONCRETE PLUGS on each side with BI-COMPONENT ADHESIVE.
3. Soundproof: the gap between the FIBRE CONCRETE PLUGS would be less than or equal to 2/10 of the length of the FIBRE CONCRETE TUBE.
4. Complete capping: firewall.

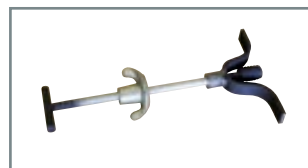
| Code | Name | Sale Sizes | Unit Weight [kg] | Characteristics |
|------|------|------------|------------------|-----------------|
|------|------|------------|------------------|-----------------|

CONE PUNCH

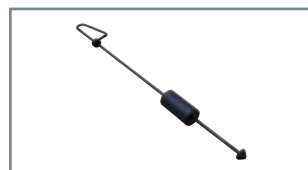
| | | | | |
|--------|----------------------------------|------|------|--|
| 006000 | CONE PUNCH 30 CM STAINLESS STEEL | 1 p. | 1.00 | <ul style="list-style-type: none"> - Made of solid stainless steel or black steel. - Indispensable for removing spacers without damaging them. |
| 012528 | CONE PUNCH 30 CM BLACK STEEL | 1 p. | 1.00 | |

**CONE EXTRACTOR**

| | | | | |
|--------|----------------|------|------|--|
| 002845 | CONE EXTRACTOR | 1 p. | 1.70 | <ul style="list-style-type: none"> - Designed solely for recovering end-to-end spacers. |
|--------|----------------|------|------|--|

**CONE PULLER**

| | | | | |
|--------|-------------|------|------|--|
| 002842 | CONE PULLER | 1 p. | 1.70 | <ul style="list-style-type: none"> - Allows you to recover the inner spacers from the side of the larger Ø. - By striking the "head metal" (which slides on the stem) on the handle, the vibration frees the spacer, which is recovered by the stem equipped with a cap. |
|--------|-------------|------|------|--|

**WRENCH FOR SEAL CONE "50"**

| | | | | |
|--------|---|------|------|---|
| 012615 | WRENCH FOR SEAL CONE SMOOTH 22/50 AND 26/50 | 1 p. | 0.50 | <ul style="list-style-type: none"> - Special wrench to recover the SEAL CONE SMOOTH 50/22 and 50/26. |
|--------|---|------|------|---|

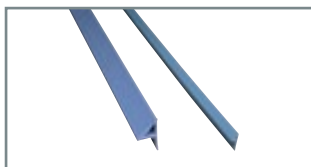
**CONCRETE CONE MOULD**

| | | | | |
|--------|------------------------|------|-------|--|
| 008050 | CONCRETE CONE MOULD 25 | 1 p. | 19.50 | <ul style="list-style-type: none"> - Very strong steel reinforced with inner spacers. - Allows manufacture of 10 CONCRETE CONES at a time: <ul style="list-style-type: none"> • length = 25cm • small Ø = 37mm • big Ø = 54mm - For concrete walls with thickness of less than 25cm, install the 25cm CONCRETE CONE and cut the end of the CONCRETE CONE that protrudes from the wall with a big chisel before finishing. - Before molding the CONCRETE CONE, coat the interior impressions of the mould using a form removal product. |
|--------|------------------------|------|-------|--|



| Code | Name | Measures A x B x C [mm] | Sale Sizes | Weight [kg/100m] | Characteristics |
|------|------|-------------------------------|---------------|---------------------|-----------------|
|------|------|-------------------------------|---------------|---------------------|-----------------|

CHAMFER



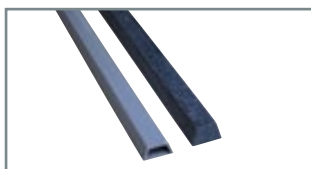
| | | | | | |
|--------|---------------------|--------------|------|-------|--|
| 003711 | CHAMFER 15 – 2.50 M | 15 x 10 x 25 | 100m | 6.20 | <ul style="list-style-type: none"> - In very solid plastic with thick walls. - Can be reused 2 to 3 times. - The tongue firmly maintains chamfer in place within the angle of the formwork without any risk of it moving. - It can be nailed to the edge of the wood formworks, or locked between the metal vertical formworks. - Standard length: 2.50m. |
| 003715 | CHAMFER 22 – 2.50 M | 22 x 15 x 32 | 100m | 13.90 | |
| 003720 | CHAMFER 28 – 2.50 M | 28 x 20 x 38 | 100m | 23.20 | |
| 003721 | CHAMFER 36 – 2.50 M | 36 x 26 x 47 | 50m | 29.00 | |
| 003724 | CHAMFER 42 – 2.50 M | 40 x 27 x 50 | 50m | 40.00 | |

ROUND PROFILE



| | | | | | |
|--------|---------------------------|--------------|------|-------|---|
| 003799 | ROUND PROFILE 30 - 2.50 M | 30 x 20 x 39 | 100m | 22.60 | <ul style="list-style-type: none"> - To round out the corners of reinforced concrete piles in public areas, schools...to prevent accidents. - Standard length: 2.50m. |
|--------|---------------------------|--------------|------|-------|---|

TRAPEZIUM



| | | | | | |
|--------|-------------------------------|--------------|-------|-------|--|
| 003650 | HOLLOW TRAPEZIUM 20 x 10 x 10 | 20 x 10 x 10 | 100m | 9.00 | <ul style="list-style-type: none"> - Profile in rigid plastic, solid or hollow. - Can be attached to formworks with brads or by collage or with a double-sided adhesive. - Used for negatives in the façades or walls in poured concrete. - Standard length: 2.50m. - Type "solid": other sections on request, minimum order 500 m with individually determined delivery times. |
| 003651 | HOLLOW TRAPEZIUM 20 x 15 x 10 | 20 x 15 x 10 | 100m | 9.50 | |
| 003653 | HOLLOW TRAPEZIUM 30 x 20 x 15 | 30 x 20 x 15 | 100m | 17.00 | |
| 003654 | HOLLOW TRAPEZIUM 35 x 20 x 35 | 35 x 20 x 35 | 50m | 22.00 | |
| 003703 | SOLID TRAPEZIUM 30 x 20 x 20 | 30 x 20 x 20 | 2.50m | 50.00 | |
| 003704 | SOLID TRAPEZIUM 40 x 30 x 20 | 40 x 30 x 20 | 2.50m | 70.00 | |

| Code | Name | Measures A x B [mm] | Sale Sizes | Weight [kg/100m] | Characteristics |
|------|------|---------------------------|---------------|---------------------|-----------------|
|------|------|---------------------------|---------------|---------------------|-----------------|

TRIANGLE



| | | | | | |
|--------|----------------------|---------|------|-------|--|
| 003705 | TRIANGLE 9 – 2.50 M | 9 x 6 | 100m | 2.50 | <ul style="list-style-type: none"> - In very solid plastic with thick walls. - Can be reused 2 to 3 times. - Type 20 and 27 with 90° angle, lightly rounded. - Standard length: 2.50m. |
| 003710 | TRIANGLE 15 – 2.50 M | 15 x 10 | 100m | 4.95 | |
| 003714 | TRIANGLE 20 – 2.50 M | 20 x 15 | 100m | 6.30 | |
| 003719 | TRIANGLE 27 – 2.50 M | 27 x 20 | 100m | 11.60 | |
| 003716 | TRIANGLE 34 – 2.50 M | 34 x 25 | 100m | 21.80 | |
| 003717 | TRIANGLE 41 – 2.50 M | 41 x 28 | 50m | 24.60 | |
| 003718 | TRIANGLE 55 – 2.50 M | 56 x 40 | 50m | 28.50 | |

| Code | Name | Measures A x B x C x D [mm] | Sale Sizes | Weight [kg/100 m] | Characteristics |
|------|------|-----------------------------------|---------------|----------------------|-----------------|
|------|------|-----------------------------------|---------------|----------------------|-----------------|

WATER DROP 1

| | | | | | |
|--------|------------------|-------------------|------|-------|--|
| 003751 | WATER DROP 1 A12 | 20 x 12 x 12 x 9 | 100m | 6.50 | <ul style="list-style-type: none"> - Simple water drop in plastic, remains mixed with the concrete. - Can be attached to formworks with headless nails. - 1 nail every 20 to 30cm. - Standard length: 2.50m. |
| 003753 | WATER DROP 1 A15 | 22 x 7 x 15 x 10 | 100m | 7.50 | |
| 003752 | WATER DROP 1 A20 | 27 x 13 x 20 x 10 | 100m | 8.80 | |
| 003754 | WATER DROP 1 A30 | 30 x 22 x 27 x 14 | 100m | 15.60 | |



| Code | Name | Sale Sizes | Standard Packaging | Weight [kg/m] | Characteristics |
|------|------|---------------|-----------------------|------------------|-----------------|
|------|------|---------------|-----------------------|------------------|-----------------|

JOINT "P"

| | | | | | |
|--------|---------------------------------|----|-----|------|--|
| 003677 | JOINT "P" 40 MM IN 3.00 M. GREY | 3m | 30m | 0.30 | <ul style="list-style-type: none"> - Anti-crack joints for slabs, terraces, sidewalks, tennis courts, ... - The joint ruler must be placed on concrete blocks approximately every 75cm and leveled carefully. - The alignment must be checked with a line. - At the juncture of 2 joint rulers, place a reinforcing steel iron in the upper part of each joint ruler, which should be placed end to end. - To ensure a good finish, make an oblique cut on the joint rulers to be positioned perpendicularly. |
| 003679 | JOINT "P" 80 MM IN 5.00 M. GREY | 5m | 50m | 0.40 | |



| Code | Name | Measures A x B x C [mm] | Slip Resistant | Sale Sizes | Weight [kg/m] | Characteristics |
|------|------|-------------------------------|-------------------|---------------|------------------|-----------------|
|------|------|-------------------------------|-------------------|---------------|------------------|-----------------|

MAGNETIC STRAIGHT EDGE



Light series

| | | | | | |
|--------|--|--------------|--------|-------|------|
| 002891 | MAGNETIC STRAIGHT EDGE 25 x 18 x 25 | 25 x 18 x 25 | 40kg/m | 1.25m | 1.00 |
| 002892 | MAGNETIC STRAIGHT EDGE 40 x 33 x 25 | 40 x 33 x 25 | 4 kg/m | 1.25m | 2.00 |
| 002894 | MAGNETIC STRAIGHT EDGE 50 x 43 x 25 | 50 x 43 x 25 | 40kg/m | 1.25m | 2.30 |

Heavy series

| | | | | | |
|--------|--|--------------|--------|-------|------|
| 003625 | MAGNETIC STRAIGHT EDGE 50 x 42 x 30 | 50 x 42 x 30 | 75kg/m | 1.25m | 2.70 |
| 003626 | MAGNETIC STRAIGHT EDGE 60 x 52 x 30 | 60 x 52 x 30 | 75kg/m | 1.25m | 3.70 |

- Made of composite resin with permanent magnets embedded all along its length, the MAGNETIC STRAIGHT EDGE allows you to acquire the required reservations before laying the precast slabs.
- Its beveled face allows easy form removal.
- Other sizes can be manufactured on request. Minimum quantity for these special series \geq than 25m.

MAGNETIC TRAPEZIUM



| | | | | | |
|--------|--------------------------------------|----------------|--------|-------|------|
| 002904 | MAGNETIC TRAPEZIUM 20 x 13.6 x 12 | 20 x 13.6 x 12 | 30kg/m | 1.25m | 0.63 |
| 002901 | MAGNETIC TRAPEZIUM 30 x 22 x 15 | 30 x 22 x 15 | 30kg/m | 1.25m | 0.80 |
| 002905 | MAGNETIC TRAPEZIUM 40 x 32 x 15 | 40 x 32 x 15 | 30kg/m | 1.25m | 1.04 |
| 002903 | MAGNETIC TRAPEZIUM 40 x 29 x 20 | 40 x 29 x 20 | 30kg/m | 1.25m | 1.30 |
| 002900 | MAGNETIC TRAPEZIUM 50 x 39 x 20 | 50 x 39 x 20 | 30kg/m | 1.25m | 2.00 |

- Made in the same way as the magnetic triangle profile.
- Other sizes can be manufactured on request. Minimum quantity for this special series \geq than 25 m.
- This profile can be used to create either recesses or water drops.
- Delivered with a mortise and tenon joint system on each end.
- Other sizes on request

| Code | Name | Measures A x B [mm] | Slip Resistant | Sale Sizes | Weight [kg/m] | Characteristics |
|------|------|---------------------------|-------------------|---------------|------------------|-----------------|
|------|------|---------------------------|-------------------|---------------|------------------|-----------------|

MAGNETIC TRIANGLE



| | | | | | |
|--------|------------------------------|---------|-------|-------|------|
| 002877 | MAGNETIC TRIANGLE 21 x 15 | 21 x 15 | 3kg/m | 1.25m | 0.16 |
| 002878 | MAGNETIC TRIANGLE 28 x 20 | 28 x 20 | 8kg/m | 1.25m | 0.60 |
| 002879 | MAGNETIC TRIANGLE 35 x 25 | 35 x 25 | 8kg/m | 1.25m | 0.76 |
| 002885 | MAGNETIC TRIANGLE 42 x 30 | 42 x 30 | 8kg/m | 1.25m | 0.90 |

- Delivery with beveled right angle to make it easy to use.
- Made of composite resin with permanent magnets embedded all along its length, the MAGNETIC TRIANGLE PROFILE is easy to position in the corners of the metal formwork.
- It is a better substitute for metal rulers that you have to solder on the precast industry tables.
- Other sizes can be manufactured on request. Minimum quantity for these special series \geq than 25m.

| Code | Name | For Thickness Floor/Wall [mm] | Sale Sizes | Standard Packaging | Weight [kg/m] | Characteristics |
|------|------|-------------------------------------|---------------|-----------------------|------------------|-----------------|
|------|------|-------------------------------------|---------------|-----------------------|------------------|-----------------|

| | | | | | |
|--------|----------------------------|------------|-------|-----------|------|
| 000130 | THREADED SOCKET 130 MM | 130 to 150 | 10 p. | 300 p. | 5.60 |
| 000145 | THREADED SOCKET 145 MM | 145 to 165 | 10 p. | 230 p. | 6.10 |
| 000155 | THREADED SOCKET 155 MM | 155 to 175 | 10 p. | 200 p. | 6.30 |
| 000175 | THREADED SOCKET 175 MM | 175 to 200 | 10 p. | 150 p. | 7.00 |
| 000168 | CAP FOR THREADED SOCKET | - | 10 p. | 10,000 p. | 0.16 |

Wrenching resistance of sockets equipped with coach screws.

THREADED SOCKET 130 MM embedded in concrete mixed at 350kg/m³:

- After 2 days: wrenching by 2.450kg load.

- After 7 days: wrenching by 2.650kg load.

The steel must be passed through the orifice fitted at the base of the threaded part in order to link the socket to the floor reinforcing steels.

Each socket can support only one push rod or shackle.

THREADED SOCKET

- Plastic socket for embedding in concrete during pouring so that formworks or precast components can be quickly positioned and firmly held.
- The indicated size in the name corresponds to the height of the THREADED SOCKET.
- The inner threading is planned for coach screws 20/105. Even after long term storage, it is always easy to bolt the shores.
- Important:
 1. The THREADED SOCKETS should never be used as lifting sockets.
 2. It is formally prohibited to use Form Ties or similar to fix the shores on the sockets.



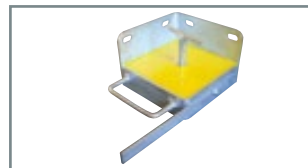
Magnetic Block

| Code | Name | Dimensions L x l x H [cm] | Sale Sizes | Unit Weight [kg] | Characteristics |
|------|------|---------------------------------|---------------|------------------------|-----------------|
|------|------|---------------------------------|---------------|------------------------|-----------------|

MAGNETIC BLOCK METAL FRAME

| | | | | |
|--------|--|--------------|------|------|
| 018369 | MAGNETIC BLOCK RESIN 400 KG METAL FRAME | 15 x 15 x 10 | 1 p. | 3.40 |
|--------|--|--------------|------|------|

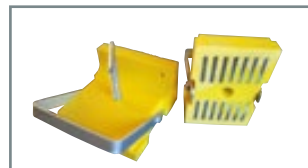
- Magnetic block with a metal frame.
- For fixing frames in vertical formwork.
- Force 400kg.



MAGNETIC BLOCK RESIN

| | | | | |
|--------|--------------------------------|---------------|------|------|
| 018451 | MAGNETIC BLOCK RESIN 240 KG | 15 x 11 x 8.5 | 1 p. | 2.04 |
| 018367 | MAGNETIC BLOCK RESIN 400 KG | 15 x 15 x 8 | 1 p. | 2.41 |

- Magnetic block made of resin.
- For fixing frames in vertical formwork.
- Force 240kg and 400kg.
- Also available in 750kg



| Code | Name | Length [cm] | Ø int. [mm] | Sale Sizes | Weight [kg/100p.] | Characteristics |
|------|------|----------------|----------------|---------------|----------------------|-----------------|
|------|------|----------------|----------------|---------------|----------------------|-----------------|

ANCHOR FOOT

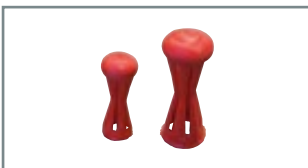
| | | | | | | |
|--------|-----------------------------------|----|----|--------|------|--|
| 000990 | ANCHOR FOOT PLASTIC Ø 26 MM | 10 | 26 | 100 p. | 2.85 | <ul style="list-style-type: none"> - Delivered completely molded in 26 and 42mm. - Mounted with caps and plugs in 37 and 40mm. - Embedded in concrete at pouring time. - The yellow or red plugs help quick identification. - Put a stirrup at the top of the ANCHOR FOOT for good anchorage in concrete. |
| 000986 | ANCHOR FOOT PLASTIC Ø 37 MM | 10 | 37 | 50 p. | 4.90 | |
| 000988 | ANCHOR FOOT PLASTIC Ø 42 MM | 10 | 42 | 50 p. | 6.50 | |

| Code | Name | Length | Sale Sizes | Unit Weight [kg] | Characteristics |
|------|------|--------|---------------|------------------------|-----------------|
|------|------|--------|---------------|------------------------|-----------------|

PROTECT BAND REBAR SAFETY STRIP

| | | | | | |
|--------|------------------------------------|----|----|-----|--|
| 018432 | PROTECT BAND without Steel Core | 1m | 1m | 0.7 | <ul style="list-style-type: none"> - For protecting jobsite staff from starter reinforcing steels and welded fabrics. - Consists of PVC to ensure long life - High security with steel core safety test: 100kg from a height of 3m - Reuseable <ul style="list-style-type: none"> • Highly visible color. • Easy and quick to use. • Weather-resistant plastic. • Secure and stable on all reinforcement diameters. • Can be applied in horizontal and vertical positions. |
| 018460 | PROTECT BAND with Steel Core | 1m | 1m | 1.7 | |

| Code | Name | For Steel Ø [mm] | Sale Sizes | Standard Packaging | Weight [kg/100p.] | Characteristics |
|------|------|------------------------|---------------|-----------------------|----------------------|-----------------|
|------|------|------------------------|---------------|-----------------------|----------------------|-----------------|

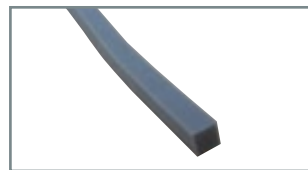
SIGNAL' STEEL

| | | | | | | |
|--------|------------------------------|----------|--------|----------|------|--|
| 005491 | SIGNAL' STEEL 6 TO 16 MM | 6 to 16 | 250 p. | 2,500 p. | 0.93 | <ul style="list-style-type: none"> - Plastic cap that nests the ends of vertical or horizontal starter reinforcing steels. - Its single objective is to indicate the presence of starter reinforcing steels and to attract the attention of jobsite staff with its bright color. |
| 005496 | SIGNAL' STEEL 16 TO 32 MM | 16 to 30 | 150 p. | 150 p. | 3.42 | |

| Code | Name | Width x Thickness [mm] | Sale Sizes | Weight [kg/100m] | Characteristics |
|------|------|---------------------------|------------|---------------------|-----------------|
|------|------|---------------------------|------------|---------------------|-----------------|

SQUARE JOINT

| | | | | | |
|--------|-------------------------|---------|------|------|---|
| 009874 | SQUARE JOINT 25 x 25 MM | 25 x 25 | 540m | 0.69 | <ul style="list-style-type: none"> - Grey polyurethane foam, length 2 m. - Density $\pm 19 \text{ kg/m}^3$. - Other sections available on request and allowing time for delivery. |
|--------|-------------------------|---------|------|------|---|

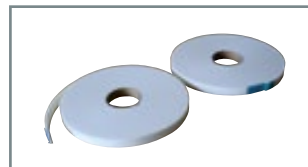
**FORMWORK JOINT**

| | | | | | |
|--------|------------------------------|---------|------|------|--|
| 014268 | FORMWORK JOINT PO-PU 10 x 10 | 10 x 10 | 570m | 0.63 | Formwork joint PO-PU with open cells <ul style="list-style-type: none"> - Polyester/Polyurethane foam, very flexible with open cells. - Can be crushed easily between formworks. - Other sections on request and allowing time for manufacture. |
| 014270 | FORMWORK JOINT PO-PU 15 x 10 | 15 x 10 | 390m | 0.95 | |
| 017321 | FORMWORK JOINT PO-PU 20 x 10 | 20 x 10 | 285m | 1.27 | |
| 014272 | FORMWORK JOINT PO-PU 15 x 15 | 15 x 15 | 260m | 1.35 | |
| 014275 | FORMWORK JOINT PO-PU 20 x 15 | 20 x 15 | 190m | 1.74 | <ul style="list-style-type: none"> - Other sections on request and allowing time for manufacture. - Grey in color. - Adhesive on the joint width. |
| 017369 | FORMWORK JOINT PO-PU 20 x 20 | 20 x 20 | 152m | 2.18 | |
| 017370 | FORMWORK JOINT PO-PU 30 x 20 | 30 x 20 | 104m | 3.06 | |
| 014278 | FORMWORK JOINT PO-PU 25 x 25 | 25 x 25 | 90m | 3.13 | |
| 017371 | FORMWORK JOINT PO-PU 30 x 25 | 30 x 25 | 78m | 3.75 | Formwork joint PE with closed cells <ul style="list-style-type: none"> - Polyethylene foam with closed cells, guaranteed to ensure good watertightness during laitance under formwork pressure. - Other sections on request and allowing time for manufacture. - White color. - Self-adhesive foam for easy installation. |
| 017372 | FORMWORK JOINT PO-PU 50 x 30 | 50 x 30 | 42m | 7.22 | |



| | | | | | |
|--------|--------------------------|--------|------|------|--|
| 014271 | FORMWORK JOINT PE 10 x 3 | 10 x 3 | 625m | 0.22 | Formwork joint PE with closed cells <ul style="list-style-type: none"> - Polyethylene foam with closed cells, guaranteed to ensure good watertightness during laitance under formwork pressure. - Other sections on request and allowing time for manufacture. - White color. - Self-adhesive foam for easy installation. |
| 014273 | FORMWORK JOINT PE 15 x 3 | 15 x 3 | 500m | 0.33 | |
| 014274 | FORMWORK JOINT PE 20 x 3 | 20 x 3 | 375m | 0.48 | |
| 014276 | FORMWORK JOINT PE 15 x 4 | 15 x 4 | 500m | 0.40 | |
| 014277 | FORMWORK JOINT PE 20 x 4 | 20 x 4 | 375m | 0.53 | |
| 014279 | FORMWORK JOINT PE 20 x 5 | 20 x 5 | 150m | 0.66 | |
| 014280 | FORMWORK JOINT PE 30 x 5 | 30 x 5 | 100m | 1.00 | |
| 014282 | FORMWORK JOINT PE 25 x 6 | 25 x 6 | 120m | 0.94 | |
| 014294 | FORMWORK JOINT PE 30 x 6 | 30 x 6 | 100m | 1.13 | |

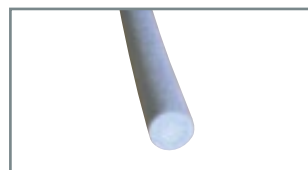
| Equivalence for joint thickness | |
|---------------------------------|-------|
| PE | PO-PU |
| 3mm | 10mm |
| 4mm | 15mm |
| 5mm | 20mm |
| 6mm | 25mm |
| 8mm | 30mm |



| Code | Name | Ø [mm] | Sale Sizes | Weight [kg/100m] | Characteristics |
|------|------|-----------|------------|---------------------|-----------------|
|------|------|-----------|------------|---------------------|-----------------|

POLYETHYLENE JOINT

| | | | | | |
|--------|--------------------------|----|--------|-------|--|
| 009301 | POLYETHYLENE JOINT 6 MM | 6 | 2,500m | 0.16 | <ul style="list-style-type: none"> - Foam with closed cells and smooth sides. |
| 009303 | POLYETHYLENE JOINT 10 MM | 10 | 1,150m | 0.40 | |
| 009307 | POLYETHYLENE JOINT 15 MM | 15 | 550m | 0.89 | |
| 009309 | POLYETHYLENE JOINT 20 MM | 20 | 350m | 1.51 | |
| 009311 | POLYETHYLENE JOINT 25 MM | 25 | 200m | 2.45 | |
| 009313 | POLYETHYLENE JOINT 30 MM | 30 | 160m | 3.44 | |
| 009315 | POLYETHYLENE JOINT 40 MM | 40 | 270m | 6.74 | |
| 009317 | POLYETHYLENE JOINT 50 MM | 50 | 180m | 10.56 | |



| Code | Name | Use Range [mm] | Sale Sizes | Weight [kg/100m] | Characteristics |
|------|------|-------------------|------------|---------------------|-----------------|
|------|------|-------------------|------------|---------------------|-----------------|

ILLMOD 600



| | | | | | |
|--------|-----------------------------|----------|-------|-------|--|
| 009602 | JOINT ILLMOD 600 10/2 | 2 | 375m | 1.60 | <ul style="list-style-type: none"> - Description: ILLMOD 600 is a precompressed Watertight joint made of filled polyurethane foam intended for weather stripping and waterproofing joints from driving rain (up to 600Pa decompressed to its maximal referential). ILLMOD 600 is pre-compressed to 15 % (1/7) of its thickness and roller conditioned. - SOCOTEC requirements specification. - Advantages: <ul style="list-style-type: none"> • Self extinguishing and fire resistant. • Chemically neutral, therefore non-toxic. • Good sound insulator because of its thick density (Test report and graphs available on request). • Classified among insulating products (thermal conductivity: ~ 0.045 W m.K). • Compatible with various construction materials (wood, aluminum, steel). Non staining on PVC and aluminium. - Instructions for use: <ul style="list-style-type: none"> • Do not expose ILLMOD 600 permanently to temperatures higher than 90° C. • Do not supercompress ILLMOD 600 beyond its thickness on the roller. • Avoid contact with certain neutral silicones. Use ILLMOD only with approval from the manufacturer for natural stone or certain materials that are highly solvent. - Storage time: ≤ 2 years to T ≤ 20° C. (Date of manufacture on the inner wall of the boxed core: week and year). - Standard color: anthracite. - Other sizes: on request. |
| 009603 | JOINT ILLMOD 600 15/2 | 2 | 250m | 2.40 | |
| 009610 | JOINT ILLMOD 600 15/3 | 3 | 200m | 3.00 | |
| 009611 | JOINT ILLMOD 600 20/3 | 3 | 150m | 4.00 | |
| 009617 | JOINT ILLMOD 600 15/3 - 7 | 3 to 7 | 160m | 3.75 | |
| 009618 | JOINT ILLMOD 600 20/3 - 7 | 3 to 7 | 120m | 5.00 | |
| 009631 | JOINT ILLMOD 600 15/5 - 10 | 5 to 10 | 112m | 5.36 | |
| 009632 | JOINT ILLMOD 600 20/5 - 10 | 5 to 10 | 84m | 7.14 | |
| 009637 | JOINT ILLMOD 600 20/7 - 12 | 7 to 12 | 64.5m | 9.30 | |
| 009638 | JOINT ILLMOD 600 25/7 - 12 | 7 to 12 | 51.6m | 11.63 | |
| 009643 | JOINT ILLMOD 600 20/8 - 18 | 8 to 18 | 49.5m | 12.12 | |
| 009644 | JOINT ILLMOD 600 30/8 - 15 | 8 to 15 | 33m | 18.18 | |
| 009651 | JOINT ILLMOD 600 25/10 - 22 | 10 to 22 | 36m | 26.60 | |
| 009652 | JOINT ILLMOD 600 30/10 - 22 | 10 to 22 | 36m | 29.50 | |
| 009655 | JOINT ILLMOD 600 40/13 - 29 | 13 to 29 | 36.4m | 43.93 | |
| 009658 | JOINT ILLMOD 600 40/17 - 32 | 17 to 32 | 28m | 57.14 | |
| 009665 | JOINT ILLMOD 600 40/24 - 40 | 24 to 40 | 18.9m | 84.66 | |

Application examples:

- Between precast concrete parts.
- Traditional masonry and wall concrete (within the construction tolerance limits DTU 36.1/37.1).
- Coat wall, external insulation systems within a TECHNICAL NOTICE CSTB.
- Window installations: aluminum, wood, PVC and eased frames roller shutter.
- Light façades and cladding.
- Construction of timber framed houses.
- Joint renovation of existing façades.

| Code | Name | Section [mm] | Sale Sizes | Weight [kg/m] | Characteristics |
|------|------|-----------------|---------------|------------------|-----------------|
|------|------|-----------------|---------------|------------------|-----------------|

BENTOSTOP

| | | | | |
|--------|----------------------|---------|-----|------|
| 015911 | BENTOSTOP 20 x 10 MM | 20 x 10 | 35m | 0.55 |
| 015912 | BENTOSTOP 20 x 15 MM | 20 x 15 | 30m | 0.83 |

TECHNICAL NOTICE CSTB N° 3/07-542*01 Ext

- BENTOSTOP is a gasket for the sealing of construction joints. It is made of natural sodium bentonite and hydrophile butyl rubber.
- BENTOSTOP is used to prevent water infiltration in construction joints.
- BENTOSTOP must be glued and nailed. Use NEOPRENE ADHESIVE for dry supports. Use KORA POP 225 mounting adhesive for wet supports.



NEOSTOP

| | | | | |
|--------|--------------------|---------|-----|------|
| 015021 | NEOSTOP 20 X 5 MM | 20 x 5 | 30m | 0.24 |
| 015909 | NEOSTOP 20 X 10 MM | 20 x 10 | 30m | 0.10 |

TECHNICAL NOTICE CSTB 3/09-596*01 Ext

- PURSTOP is a gasket for the sealing of construction joints made of hydrophilic polyurethane.
- PURSTOP is used to prevent water infiltration in construction joints.
- PURSTOP must be glued and nailed. Use NEOPRENE ADHESIVE for dry supports. Use KORA POP 225 mounting adhesive for wet supports.



| Code | Name | Sale Sizes | Standard Packaging | Weight [kg] | Characteristics |
|------|------|---------------|-----------------------|----------------|-----------------|
|------|------|---------------|-----------------------|----------------|-----------------|

BENTOMASTIC

| | | | | |
|--------|-----------------|------|-------|--------|
| 011000 | BENTOMASTIC 307 | 1 p. | 12 p. | 0.50/p |
|--------|-----------------|------|-------|--------|

- BENTOMASTIC is a waterproof putty made from natural sodium bentonite.
- BENTOMASTIC is an easy and quick replacement product for BENTOSTOP.



PROTECTION GRATING

| | | | | |
|--------|---------------------------|---|----|--------|
| 013546 | PROTECTIO GRID 25 X 20 MM | - | 1m | 0.10/m |
|--------|---------------------------|---|----|--------|

- Protection grating made of expanded metal to be used with BENTOSTOP and PURSTOP joints in case of large stresses during concrete pouring.
- Ensures perfect installation of hydrophilic gaskets by piling against their support.
- Installation by mechanical fixing with supports every 20cm.



| Code | Name | Joint Width | Sale Sizes | Weight [kg/m] | Characteristics |
|------|------|-------------|------------|------------------|-----------------|
|------|------|-------------|------------|------------------|-----------------|

COMPRESSION SEAL



| | | | | | |
|--------|--------------------------------|------------|-----|------|---|
| 018593 | COMPRESSION SEAL PSO-030 GREY | 20 to 25mm | 25m | 0.60 | <ul style="list-style-type: none"> - Closing shapes for joints, weathering and UV resistant. - MK shapes are grey and MKN shapes are black. - Other possible sizes on request. |
| 018612 | COMPRESSION SEAL PSO-020 BLACK | 13 to 20mm | 40m | 0.50 | |
| 018612 | COMPRESSION SEAL PSO-030 BLACK | 20 to 25mm | 40m | 0.60 | |

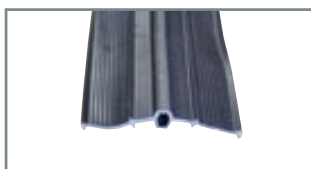
| Code | Name | Width [mm] | Sale Sizes | Weight [kg/m] | Characteristics |
|------|------|---------------|------------|------------------|-----------------|
|------|------|---------------|------------|------------------|-----------------|

WATERSTOP WTJDE



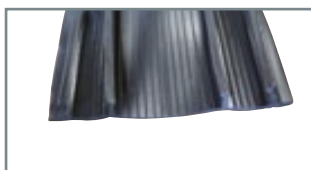
| | | | | | |
|--------|--------------------------|-----|-----|------|--|
| 016731 | WATERSTOP WTJDE 190 MM R | 190 | 25m | 1.50 | <ul style="list-style-type: none"> - External waterstop made of PVC-P. - Used for waterproofing concrete for expansion joints. - Other possible sizes on request. |
| 016734 | WATERSTOP WTJDE 240 MM R | 240 | 25m | 1.60 | |
| 016735 | WATERSTOP WTJDE 320 MM R | 320 | 25m | 2.20 | |

WATERSTOP WTJDI



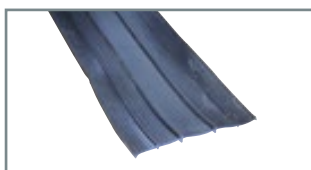
| | | | | | |
|--------|--------------------------|-----|-----|------|--|
| 016737 | WATERSTOP WTJDI 150 MM R | 150 | 25m | 1.05 | <ul style="list-style-type: none"> - Internal waterstop made of PVC-P. - Used for waterproofing concrete for expansion joints. - Other possible sizes on request. |
| 016738 | WATERSTOP WTJDI 190 MM R | 190 | 25m | 1.10 | |
| 016741 | WATERSTOP WTJDI 240 MM R | 240 | 25m | 1.60 | |
| 016746 | WATERSTOP WTJDI 320 MM R | 320 | 25m | 2.20 | |

WATERSTOP WTRBE



| | | | | | |
|--------|--------------------------|-----|-----|------|--|
| 016753 | WATERSTOP WTRBE 190 MM R | 190 | 25m | 1.20 | <ul style="list-style-type: none"> - External waterstop made of PVC-P. - Used for waterproofing concrete for expansion joints. - Other possible sizes on request. |
| 016756 | WATERSTOP WTRBE 240 MM R | 240 | 25m | 1.55 | |
| 016757 | WATERSTOP WTRBE 320 MM R | 320 | 25m | 2.10 | |

WATERSTOP WTRBI



| | | | | | |
|--------|--------------------------|-----|-----|------|--|
| 016759 | WATERSTOP WTRBI 150 MM R | 150 | 25m | 0.65 | <ul style="list-style-type: none"> - Internal waterstop made of PVC-P. - Used for waterproofing concrete for expansion joints. - Other possible sizes on request. |
| 016762 | WATERSTOP WTRBI 190 MM R | 190 | 25m | 0.83 | |
| 016765 | WATERSTOP WTRBI 240 MM R | 240 | 25m | 1.03 | |
| 016768 | WATERSTOP WTRBI 320 MM R | 320 | 25m | 1.60 | |

| Code | Name | Width [mm] | Sale Sizes | Weight [kg] | Characteristics |
|------|------|---------------|---------------|----------------|-----------------|
|------|------|---------------|---------------|----------------|-----------------|

WATERSTOP SI

| | | | | | |
|--------|-----------------------|-----|-----|--------|---|
| 016770 | WATERSTOP SI 80 MM R | 80 | 50m | 0.65/m | <ul style="list-style-type: none"> - Waterstop in PVC-P recommended for construction joints in silos. - The SI shape is installed in fresh concrete. - It is recommended to vibrate the concrete after installing the shape while maintaining the installation height in concrete. |
| 016771 | WATERSTOP SI 120 MM R | 120 | 50m | 1.23/m | |



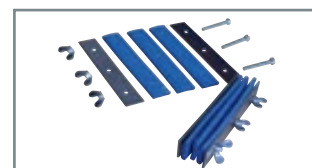
WATERSTOP KAB

| | | | | | |
|--------|-------------|-----|-----|--------|---|
| 017380 | KAB 125 SET | 125 | 25m | 1.20/m | <ul style="list-style-type: none"> - PVC waterstop combined with a hydrophilic strip. - The KAB set includes 25 ml of KAB and 50 mounting stirrups. - It is used for waterproofing concrete walls for construction joints. - Test report available on request. - Easy to install and dependable. |
| 017517 | KAB 150 SET | 150 | 25m | 1.40/m | |



JUNCTURE KS

| | | | | | |
|--------|----------------|-----|------|---------|---|
| 017400 | JUNCTURE KS 12 | 120 | 1 p. | 0.16/p. | <ul style="list-style-type: none"> - Connection system designed for juncture without thermal soldering of the KAB shape. - The KS juncture is made of 2 assembly rails, 3 hydrophilic strips and 3 M5 screws with wing nuts. - Functioning is guaranteed by hydrophilic strips with large expansion. |
| 017516 | JUNCTURE KS 15 | 150 | 1 p. | 0.23/p. | |



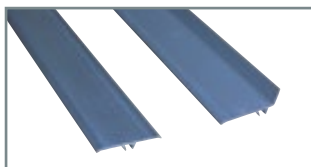
WELDING TOOL

| | | | | | |
|--------|-----------------------|---|------|---------|--|
| 016729 | WELDING TOOL WTLC 300 | - | 1 p. | 1.10/p. | <ul style="list-style-type: none"> - Heating blade 300W - 220V. - For connection to 2 PVC waterstops by thermal welding. |
|--------|-----------------------|---|------|---------|--|



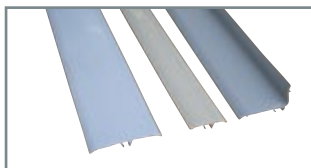
| Code | Name | Moving Joint Width [mm] | Sale Sizes | Weight [kg/m] | Characteristics |
|------|------|-------------------------|------------|---------------|-----------------|
|------|------|-------------------------|------------|---------------|-----------------|

JOINT COVER TREBO ALU



| | | | | | |
|--------|-------------------------|----------|----|------|---|
| 012568 | CVJ TREBO ALU ANGLE 050 | 10 to 35 | 3m | 0.35 | <ul style="list-style-type: none"> - Joint covers in natural anodized aluminum. - Allows you to protect and cover façade joints, floors, walls and ceilings. - Standard length: 3m. - Standard packaging: 30m. - The dovetail under the surface allows you to insert attaching clips: <ul style="list-style-type: none"> • 4 clips per 3m of joint covers on the wall and ceiling. • 10 clips per 3m of joint covers for floors with light pedestrian traffic. - Lacquering possible with time and extra cost. |
| 012572 | CVJ TREBO ALU ANGLE 070 | 30 to 45 | 3m | 0.46 | |
| 012573 | CVJ TREBO ALU ANGLE 090 | 35 to 60 | 3m | 0.61 | |
| 012575 | CVJ TREBO ALU FLAT 050 | 10 to 35 | 3m | 0.28 | |
| 012580 | CVJ TREBO ALU FLAT 060 | 20 to 40 | 3m | 0.35 | |
| 012582 | CVJ TREBO ALU FLAT 070 | 30 to 45 | 3m | 0.41 | |
| 012583 | CVJ TREBO ALU FLAT 090 | 35 to 60 | 3m | 0.55 | |
| 012584 | CVJ TREBO ALU FLAT 120 | 35 to 80 | 3m | 0.75 | |
| 012585 | CVJ TREBO ALU FLAT 140 | 35 to 80 | 3m | 0.85 | |

JOINT COVER TREBO PVC



| | | | | | |
|--------|-------------------------------|----------|----|------|---|
| 012590 | CVJ TREBO PVC ANGLE 050 WHITE | 10 to 35 | 3m | 0.20 | <ul style="list-style-type: none"> - Joint cover in white, beige or grey PVC. - Allows you to protect and cover façade joints, floors, walls and ceilings. - Standard length: 3m - Standard packaging: 30m. - The dovetail under the surface allows you to insert attaching clips: <ul style="list-style-type: none"> • 5 clips per 3m of joint covers on the wall and ceiling. • 10 clips per 3m of joint covers for floors with light pedestrian traffic. |
| 012591 | CVJ TREBO PVC ANGLE 050 BEIGE | 10 to 35 | 3m | 0.20 | |
| 012592 | CVJ TREBO PVC ANGLE 050 GREY | 10 to 35 | 3m | 0.20 | |
| 012593 | CVJ TREBO PVC ANGLE 070 WHITE | 30 to 45 | 3m | 0.27 | |
| 012594 | CVJ TREBO PVC ANGLE 070 BEIGE | 30 to 45 | 3m | 0.27 | |
| 016890 | CVJ TREBO PVC ANGLE 070 GREY | 30 to 45 | 3m | 0.27 | |
| 017518 | CVJ TREBO PVC ANGLE 090 WHITE | 35 to 60 | 3m | 0.35 | |
| 012595 | CVJ TREBO PVC ANGLE 090 BEIGE | 35 to 60 | 3m | 0.35 | |
| 012596 | CVJ TREBO PVC FLAT 050 WHITE | 10 to 35 | 3m | 0.19 | |
| 012597 | CVJ TREBO PVC FLAT 050 BEIGE | 10 to 35 | 3m | 0.19 | |
| 012599 | CVJ TREBO PVC FLAT 070 WHITE | 30 to 45 | 3m | 0.25 | |
| 012600 | CVJ TREBO PVC FLAT 070 BEIGE | 30 to 45 | 3m | 0.25 | |
| 012601 | CVJ TREBO PVC FLAT 070 GREY | 30 to 45 | 3m | 0.25 | |
| 012602 | CVJ TREBO PVC FLAT 090 WHITE | 35 to 60 | 3m | 0.35 | |
| 017519 | CVJ TREBO PVC FLAT 090 BEIGE | 35 to 60 | 3m | 0.35 | |

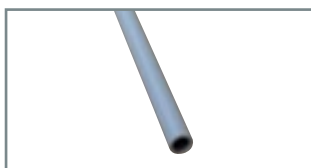
| Code | Name | Sale Sizes | Standard Packaging | Unit Weight [kg] | Characteristics |
|------|------|------------|--------------------|------------------|-----------------|
|------|------|------------|--------------------|------------------|-----------------|

CLIP FOR JOINT COVER TREBO ALU



| | | | | | |
|--------|---------------------------|-------|------|------|---|
| 012588 | CVJ TREBO CLIP L 35-80 MM | 50 p. | 1 p. | 0.02 | <ul style="list-style-type: none"> - Clip in stainless steel. - Allows especially stable fixing of the TREBO joint cover. |
| 012589 | CVJ TREBO CLIP S 10-35 MM | 50 p. | 1 p. | 0.01 | |

CONNECTING PART



| | | | | | |
|--------|-----------------|--------|------|------|---|
| 017019 | CONNECTING PART | 100 p. | 1 p. | 0.05 | <ul style="list-style-type: none"> - Facilitates the connection of TREBO shapes. |
|--------|-----------------|--------|------|------|---|

| Code | Name | Ø [mm] | Sale Sizes | Weight [kg/m] | Characteristics |
|------|------|-----------|---------------|------------------|-----------------|
|------|------|-----------|---------------|------------------|-----------------|

FIRESTOP JOINT LRV

| | | | | | |
|--------|----------------------------|----|-----|------|--|
| 014264 | FIRESTOP JOINT LRV Ø 12 MM | 12 | 50m | 0.07 | <ul style="list-style-type: none"> - Fiber rolls of mineral rock wrapped in silicon threads. - The LRV rolls weather strip the construction joints and ensure effective protection against flames and gas without additional putty. - Based on the assembly configurations, the degree of resistance to fire is determined: <ul style="list-style-type: none"> • As compared to the tests conducted by the Fire Safety services of CSTB. • By extrapolation as compared to these tests. - Technical data and test reports available on request. - Ø 80, 100, 120 and 140mm on request. |
| 014265 | FIRESTOP JOINT LRV Ø 20 MM | 20 | 30m | 0.15 | |
| 014266 | FIRESTOP JOINT LRV Ø 30 MM | 30 | 30m | 0.19 | |
| 014267 | FIRESTOP JOINT LRV Ø 40 MM | 40 | 30m | 0.37 | |
| 014297 | FIRESTOP JOINT LRV Ø 50 MM | 50 | 25m | 0.42 | |
| 014298 | FIRESTOP JOINT LRV Ø 60 MM | 60 | 25m | 0.60 | |





GLT TG-1A

| Code | Name | Width a x Thickness h [mm] | Maximum Compression | Sale Sizes | Weight [kg/m] |
|--------|----------------------|----------------------------|---------------------|------------|---------------|
| 010009 | TG 1A IN 200 MM | 200 x 1 | 3 N/mm ² | 1.5 m | 0.16 |
| 010021 | TG 1A + B1 IN 200 MM | 200 x 3 | 1N/mm ² | 1.5m | 0.20 |
| 010038 | TG 1A + B4 IN 200 MM | 200 x 3 | 2N/mm ² | 1.0m | 0.72 |
| 010046 | TG 1A + C1 IN 200 MM | 200 x 5 | 1N/mm ² | 1.5m | 0.24 |
| 010061 | TG 1A + C4 IN 200 MM | 200 x 5 | 2N/mm ² | 1.0m | 1.24 |

- Sliding sheet ensures free expansion of two superimposed parts by absorbing horizontal movements.
- Made of a double sheet of polyethylene with lubricant:
 - Bare: TG-1A.
 - With 1 filled face: TG-1A+B.
 - With 2 filled faces: TG-1A+C.
- Type of filling: polystyrene (TG-1A + B1 and C1) or synthetic material (TG-1A + B3 and C3) or elastomer (TG-1A + B4 and C4).
- Fields of use:
 - TG-1A: metal support.
 - TG-1A + B: concrete support and cast born part.
 - TG-1A + C: concrete support and precast born part.
- Other sizes available on demand.

Linear Deformation Bearings



GLT TD-21S

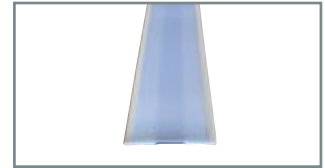
| Code | Name | h x a x b* [mm] | Maximum Vertical Load | Sale Sizes | Weight [kg/m] |
|--------|---------------------|-----------------|-----------------------|------------|---------------|
| 010065 | TD-21S 5 x 25 x 125 | 5 x 25 x 125 | 7.5t/m | 1.0 m | 0.17 |
| 010066 | TD-21S 5 x 25 x 150 | 5 x 25 x 150 | 7.5t/m | 1.0 m | 0.19 |
| 010067 | TD-21S 5 x 25 x 175 | 5 x 25 x 175 | 7.5t/m | 1.0 m | 0.19 |
| 010068 | TD-21S 5 x 25 x 200 | 5 x 25 x 200 | 7.5t/m | 1.0 m | 0.20 |
| 010070 | TD-21S 5 x 25 x 250 | 5 x 25 x 250 | 7.5t/m | 1.0 m | 0.22 |
| 010073 | TD-21S 5 x 33 x 125 | 5 x 33 x 125 | 13.0t/m | 1.0 m | 0.23 |
| 010074 | TD-21S 5 x 33 x 150 | 5 x 33 x 150 | 13.0t/m | 1.0 m | 0.24 |
| 010076 | TD-21S 5 x 33 x 175 | 5 x 33 x 175 | 13.0t/m | 1.0 m | 0.24 |
| 010077 | TD-21S 5 x 33 x 200 | 5 x 33 x 200 | 13.0t/m | 1.0 m | 0.25 |
| 010078 | TD-21S 5 x 33 x 250 | 5 x 33 x 250 | 13.0t/m | 1.0 m | 0.27 |
| 010082 | TD-21S 5 x 50 x 125 | 5 x 50 x 125 | 25.0t/m | 1.0 m | 0.42 |
| 010083 | TD-21S 5 x 50 x 150 | 5 x 50 x 150 | 25.0t/m | 1.0 m | 0.44 |
| 010084 | TD-21S 5 x 50 x 175 | 5 x 50 x 175 | 25.0t/m | 1.0 m | 0.44 |
| 010085 | TD-21S 5 x 50 x 200 | 5 x 50 x 200 | 25.0t/m | 1.0 m | 0.45 |
| 010086 | TD-21S 5 x 50 x 250 | 5 x 50 x 250 | 25.0t/m | 1.0 m | 0.47 |

- Deformation bearing permits carrying out of "elastic mounting". By its deformation, it absorbs the twisting of the beared part as well as the horizontal displacement. The vertical load and considerable horizontal stress are transmitted to the support part through the intermediary of the elastomer core.
- Composition: GLT TD-21S bearings are made of a neoprene core fitted between 2 strips of synthetic foam and protected from laitance by adhesive bands.
- Other sizes available on demand (strip width, width and thickness of core).
- For all calculations, it is imperative to consult our technical documents or contact our engineering department.
- * Table headings:
 - h: thickness of the bearing.
 - a: width of the elastomer core.
 - b: total width of the bearing.

| Code | Name | h x a x b* | Maximum Vertical Load | Sale Sizes | Weight | Characteristics |
|------|------|------------|-----------------------|------------|--------|-----------------|
| | | [mm] | | | [kg/m] | |

GLT TDG-27SF

| | | | | | | |
|--------|------------------------|---------------|---------|------|------|--|
| 010145 | TDG-27SF 5 x 25 x 125 | 5 x 25 x 125 | 7.5t/m | 1.0m | 0.27 | <ul style="list-style-type: none"> - Sliding and deformation bearing permits carrying out "elastic mounting". By its deformation, it absorbs the twisting of the born part and ensures reduction of the horizontal stress brought on by the displacement of the work. The vertical load is transmitted to the support part by the intermediary of the elastomer core. - Composition: GLT TDG-27SF bearings are made of a neoprene core fitted between 2 strips of synthetic foam and protected from lantance by adhesive bands. Everything is covered by 2 polyethylene sheets with lubricant. - Standard length: strips of 1.00m. - Other sizes available on demand (strip width, width and thickness of core). - Total thickness of support: <ul style="list-style-type: none"> • 6mm for cores with a thickness of 5mm. • 11mm for cores with a thickness of 10mm. - For all calculations, it is imperative to consult our technical documents or contact our engineering department. - * Table headings: <ul style="list-style-type: none"> • h: thickness of the elastomer core. • a: width of the elastomer core. • b: total width of the bearing. |
| 010146 | TDG-27SF 5 x 25 x 150 | 5 x 25 x 150 | 7.5t/m | 1.0m | 0.30 | |
| 010148 | TDG-27SF 5 x 25 x 175 | 5 x 25 x 175 | 7.5t/m | 1.0m | 0.33 | |
| 010150 | TDG-27SF 5 x 25 x 200 | 5 x 25 x 200 | 7.5t/m | 1.0m | 0.35 | |
| 010153 | TDG-27SF 5 x 25 x 250 | 5 x 25 x 250 | 7.5t/m | 1.0m | 0.42 | |
| 010161 | TDG-27SF 5 x 33 x 125 | 5 x 33 x 125 | 10.0t/m | 1.0m | 0.32 | |
| 010162 | TDG-27SF 5 x 33 x 150 | 5 x 33 x 150 | 10.0t/m | 1.0m | 0.35 | |
| 010163 | TDG-27SF 5 x 33 x 175 | 5 x 33 x 175 | 10.0t/m | 1.0m | 0.38 | |
| 010164 | TDG-27SF 5 x 33 x 200 | 5 x 33 x 200 | 10.0t/m | 1.0m | 0.40 | |
| 010167 | TDG-27SF 5 x 33 x 250 | 5 x 33 x 250 | 10.0t/m | 1.0m | 0.47 | |
| 010172 | TDG-27SF 5 x 50 x 125 | 5 x 50 x 125 | 15.0t/m | 1.0m | 0.42 | |
| 010173 | TDG-27SF 5 x 50 x 150 | 5 x 50 x 150 | 15.0t/m | 1.0m | 0.45 | |
| 010174 | TDG-27SF 5 x 50 x 175 | 5 x 50 x 175 | 15.0t/m | 1.0m | 0.46 | |
| 010175 | TDG-27SF 5 x 50 x 200 | 5 x 50 x 200 | 15.0t/m | 1.0m | 0.50 | |
| 010177 | TDG-27SF 5 x 50 x 250 | 5 x 50 x 250 | 15.0t/m | 1.0m | 0.57 | |
| 010222 | TDG-27SF 10 x 50 x 175 | 10 x 50 x 175 | 15.0t/m | 1.0m | 0.82 | |



Pinpoint Deformation Bearings

Rules for use:

- a, the small side of the bearing must be 5 times the height h.
- The mean compression is the smaller of the 2 following values:

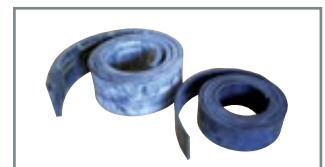
| | |
|----|---|
| N | $\sigma m = \min. (1.2 \times \beta ; 5\text{MPa})$ |
| N3 | $\sigma m = \min. (0.6 \times \beta ; 6\text{MPa})$ |

with $\beta = a \times b / 2 \times h (a + b)$

- The twisting of the bearing can be translated into horizontal stress on the loadbearing part.
- The calculation formula for the horizontal stress as well as the admissible displacement and twisting values are shown in our technical documentation.

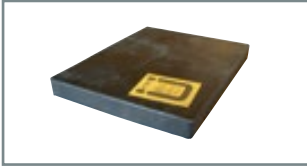
GLT N and N3

- Non reinforced neoprene bearings allow transmission of a vertical load between 2 parts while ensuring twisting as well as a displacement in relation to its deformation.
- The neoprene can be delivered in 2 different qualities: N and N3.
- Can be manufactured in the desired sizes with or without holes. Can be delivered in a roll.
- Possible thickness: 5, 10, 15, 20, 25 and 30mm.
- For all calculations, it is imperative to consult our technical documentation or contact our engineering department.



| Name | a x b x h* [mm] | Maximum Vertical Load | Sale Sizes | Weight [kg/m] | Characteristics |
|------|--------------------|-----------------------------|---------------|------------------|-----------------|
|------|--------------------|-----------------------------|---------------|------------------|-----------------|

GLT BLOCK B



| | | | | | |
|-------------------------|----------------|--------|------|-------|---|
| BLOCK B1 100 x 100 x 21 | 100 x 100 x 21 | 15.0t | 1 p. | 0.66 | <ul style="list-style-type: none"> - Reinforced neoprene bearing placed between a structure and its support and intended to transmit the loads perpendicular to its plane. It allows absorption by twisting and distortion of the deformations and translations of the structure when they are limited. - Other sizes available on request. - Delivery with holes possible. - Composition: synthetic neoprene bound by vulcanization to steel bands E36. - Anti-slip mechanism available on request. - For all calculations, it is imperative to consult our technical documents or contact our engineering department. - * Table headings: <ul style="list-style-type: none"> • a: width of the bearing. • b: length of the bearing. • h: thickness of the bearing. |
| BLOCK B1 100 x 100 x 28 | 100 x 100 x 28 | 15.0t | 1 p. | 0.88 | |
| BLOCK B1 100 x 150 x 21 | 100 x 150 x 21 | 22.5t | 1 p. | 0.99 | |
| BLOCK B1 100 x 150 x 28 | 100 x 150 x 28 | 22.5t | 1 p. | 1.32 | |
| BLOCK B1 150 x 200 x 21 | 150 x 200 x 21 | 45.0t | 1 p. | 1.98 | |
| BLOCK B1 150 x 200 x 28 | 150 x 200 x 28 | 45.0t | 1 p. | 2.65 | |
| BLOCK B1 200 x 250 x 19 | 200 x 250 x 19 | 75.0t | 1 p. | 2.99 | |
| BLOCK B1 200 x 250 x 30 | 200 x 250 x 30 | 75.0t | 1 p. | 4.73 | |
| BLOCK B1 200 x 250 x 41 | 200 x 250 x 41 | 75.0t | 1 p. | 6.46 | |
| BLOCK B1 200 x 300 x 19 | 200 x 300 x 19 | 90.0t | 1 p. | 3.59 | |
| BLOCK B1 200 x 300 x 30 | 200 x 300 x 30 | 90.0t | 1 p. | 5.67 | |
| BLOCK B1 200 x 300 x 41 | 200 x 300 x 41 | 90.0t | 1 p. | 7.75 | |
| BLOCK B1 200 x 400 x 19 | 200 x 400 x 19 | 120.0t | 1 p. | 4.79 | |
| BLOCK B1 200 x 400 x 30 | 200 x 400 x 30 | 120.0t | 1 p. | 7.56 | |
| BLOCK B1 200 x 400 x 41 | 200 x 400 x 41 | 120.0t | 1 p. | 10.33 | |

| Code | Name | a1 x b1 x h1* a x b x h* [mm] | Permissible Vertical Load | Sale Sizes | Unit Weight [kg] | Characteristics |
|------|------|-------------------------------------|---------------------------------|---------------|------------------------|-----------------|
|------|------|-------------------------------------|---------------------------------|---------------|------------------------|-----------------|

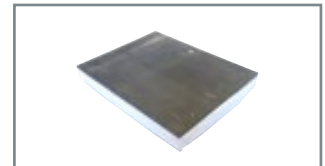
GLT NEG

| | | | | | | |
|--------|--|----------------------------------|-------|------|------|---|
| 015157 | NEG 140 x 140 x 9 (100 x 100 x 5) | 140 x 140 x 9 100 x 100 x 5 | 5.0t | 1 p. | 0.19 | <ul style="list-style-type: none"> - Pinpoint sliding and deformation bearing allowing transmission of a vertical load between 2 parts by ensuring twisting as well as displacement of 20mm on each side (larger displacement available on request). - Other sizes available on request. - Delivery with holes possible. - Composition: GLT NEG bearings are made of the following parts: <ol style="list-style-type: none"> 1. Neoprene block. 2. Vulcanized teflon on the block. 3. Sliding plate with elastomer filling. 4. Lateral filling of synthetic foam. - For all calculations, it is imperative to consult our technical documents or contact our engineering department. - * Table headings: <ul style="list-style-type: none"> • a1: width of the sliding plate. • b1: length of the sliding plate. • h1: total thickness of the bearing. • a x b x h: width x length x thickness of the neoprene block. |
| 015159 | NEG 140 x 140 x 14 (100 x 100 x 10) | 140 x 140 x 14 100 x 100 x 10 | 3.0t | 1 p. | 0.26 | |
| 015162 | NEG 140 x 190 x 9 (100 x 150 x 5) | 140 x 190 x 9 100 x 150 x 5 | 7.5t | 1 p. | 0.27 | |
| 015164 | NEG 140 x 190 x 14 (100 x 150 x 10) | 140 x 190 x 14 100 x 150 x 10 | 5.4t | 1 p. | 0.37 | |
| 015268 | NEG 190 x 240 x 9 (150 x 200 x 5) | 190 x 240 x 9 150 x 200 x 5 | 15.0t | 1 p. | 0.49 | |
| 015271 | NEG 190 x 240 x 14 (150 x 200 x 10) | 190 x 240 x 14 150 x 200 x 10 | 15.0t | 1 p. | 0.70 | |
| 015350 | NEG 240 x 240 x 9 (200 x 200 x 5) | 240 x 240 x 9 200 x 200 x 5 | 20.0t | 1 p. | 0.62 | |
| 015353 | NEG 240 x 240 x 14 (200 x 200 x 10) | 240 x 240 x 14 200 x 200 x 10 | 20.0t | 1 p. | 0.90 | |
| 015359 | NEG 240 x 290 x 9 (200 x 250 x 5) | 240 x 290 x 9 200 x 250 x 5 | 25.0t | 1 p. | 0.77 | |
| 015361 | NEG 240 x 290 x 14 (200 x 250 x 10) | 240 x 290 x 14 200 x 250 x 10 | 25.0t | 1 p. | 1.12 | |
| 015368 | NEG 240 x 340 x 9 (200 x 300 x 5) | 240 x 340 x 9 200 x 300 x 5 | 30.0t | 1 p. | 0.92 | |
| 015370 | NEG 240 x 340 x 14 (200 x 300 x 10) | 240 x 340 x 14 200 x 300 x 10 | 30.0t | 1 p. | 1.34 | |



GLT BEG

| | | | | | | |
|--------|---|----------------------------------|-------|------|------|---|
| 011034 | B1EG 140 x 140 x 25 (100 x 100 x 21) | 140 x 140 x 25 100 x 100 x 21 | 15.0t | 1 p. | 1.03 | <ul style="list-style-type: none"> - Pinpoint sliding and deformation bearing allowing transmission of a vertical load between 2 parts by ensuring twisting as well as displacement of 20mm on each side (larger displacement available on request). - Other sizes available on request. - Delivery with holes possible. - Composition: the GLT BEG bearings are made of the following parts: <ol style="list-style-type: none"> 1. Reinforced neoprene block. 2. Vulcanized teflon on the block. 3. Sliding plate made of stainless steel with elastomer filling. 4. Lateral filling of synthetic foam. - Anti-slip feature available on request. - For all calculations, it is imperative to consult our technical documents or contact our engineering department. - * Table headings: <ul style="list-style-type: none"> • a1: width of the sliding plate. • b1: length of the sliding plate. • h1: total thickness of the bearing. • a x b x h: width x length x thickness of the neoprene block. |
| 011036 | B1EG 140 x 140 x 32 (100 x 100 x 28) | 140 x 140 x 32 100 x 100 x 28 | 15.0t | 1 p. | 1.13 | |
| 011039 | B1EG 140 x 190 x 25 (100 x 150 x 21) | 140 x 190 x 25 100 x 150 x 21 | 22.5t | 1 p. | 1.50 | |
| 011042 | B1EG 140 x 190 x 32 (100 x 150 x 28) | 140 x 190 x 32 100 x 150 x 28 | 22.5t | 1 p. | 1.83 | |
| 011085 | B1EG 190 x 240 x 25 (150 x 200 x 21) | 190 x 240 x 25 150 x 200 x 21 | 45.0t | 1 p. | 2.85 | |
| 011088 | B1EG 190 x 240 x 32 (150 x 200 x 28) | 190 x 240 x 32 150 x 200 x 28 | 45.0t | 1 p. | 3.52 | |
| 011165 | B1EG 240 x 240 x 23 (200 x 200 x 19) | 240 x 240 x 23 200 x 200 x 19 | 60.0t | 1 p. | 3.71 | |
| 011166 | B1EG 240 x 240 x 34 (200 x 200 x 30) | 240 x 240 x 34 200 x 200 x 30 | 60.0t | 1 p. | 5.40 | |
| 011167 | B1EG 240 x 240 x 45 (200 x 200 x 41) | 240 x 240 x 45 200 x 200 x 41 | 60.0t | 1 p. | 6.30 | |
| 011170 | B1EG 240 x 290 x 23 (200 x 250 x 19) | 240 x 290 x 23 200 x 250 x 19 | 75.0t | 1 p. | 4.31 | |
| 011171 | B1EG 240 x 290 x 34 (200 x 250 x 30) | 240 x 290 x 34 200 x 250 x 30 | 75.0t | 1 p. | 6.05 | |
| 011172 | B1EG 240 x 290 x 45 (200 x 250 x 41) | 240 x 290 x 45 200 x 250 x 41 | 75.0t | 1 p. | 7.78 | |
| 011177 | B1EG 240 x 340 x 23 (200 x 300 x 19) | 240 x 340 x 23 200 x 300 x 19 | 90.0t | 1 p. | 5.17 | |
| 011178 | B1EG 240 x 340 x 34 (200 x 300 x 30) | 240 x 340 x 34 200 x 300 x 30 | 90.0t | 1 p. | 7.26 | |
| 011179 | B1EG 240 x 340 x 45 (200 x 300 x 41) | 240 x 340 x 45 200 x 300 x 41 | 90.0t | 1 p. | 9.34 | |



| Code | Name | Ø [mm] | Sale Sizes | Weight [kg/m] | Characteristics |
|------|------|-----------|---------------|------------------|-----------------|
|------|------|-----------|---------------|------------------|-----------------|

MATISOL



| | | | | |
|--------|---|----------|-----|------|
| 014387 | MATISOL THICKNESS 5 MM WIDTH 200 MM | 200 x 5 | 10m | 0.82 |
| 014397 | MATISOL THICKNESS 10 MM WIDTH 200 MM | 200 x 10 | 10m | 1.64 |

- Neoprene bearing for noise insulation from impact noises on jobsites.
- Standard length: 10m roll.
- More widths available on request.
- Can also be manufactured in desired sized blocks.
- Possible thickness: 5 and 10mm.

Maximum sound reduction of 29 dB obtained for applied compression of 0.5 N/mm².

SD



| | | | | |
|--------|-------------|----------|-----|------|
| 016170 | SD 200 x 10 | 200 x 10 | 10m | 1.50 |
|--------|-------------|----------|-----|------|

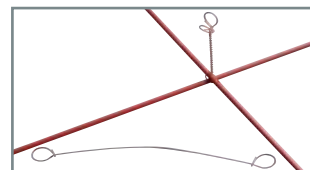
- Neoprene bearing with sine curve section allowing effective insulation from vibrations and solid sounds. Large capacity for dynamic damping.
- Standard length: 10m roll and width of 20cm with 4 pre-cut strips of 50mm.

Average sound reduction evaluated at 22dB for applied compression of 0.16N/mm².

| Code | Name | Sale Sizes | Weight [kg/1,000p.] | Characteristics |
|------|------|------------|------------------------|-----------------|
|------|------|------------|------------------------|-----------------|

LOOP TIE

| | | | | |
|--------|-----------------------|----------|------|---|
| 005940 | COOPER LOOP TIE 10 CM | 1,000 p. | 1.20 | <ul style="list-style-type: none"> - Tie made of copper. - The lengths are given overall. - Other sizes available on request. - Length of link to be used = sum of the 2 Ø of reinforcing steels x 4. |
| 005941 | COOPER LOOP TIE 12 CM | 1,000 p. | 1.25 | |
| 005943 | COOPER LOOP TIE 14 CM | 1,000 p. | 1.30 | |
| 005944 | COOPER LOOP TIE 16 CM | 1,000 p. | 1.45 | |
| 005945 | COOPER LOOP TIE 18 CM | 1,000 p. | 1.65 | |
| 005946 | COOPER LOOP TIE 20 CM | 1,000 p. | 1.90 | |



| Code | Name | Sale Sizes | Unit Weight [kg] | Characteristics |
|------|------|------------|---------------------|-----------------|
|------|------|------------|---------------------|-----------------|

BINDING TOOL

| | | | | |
|--------|---------------------|------|------|---|
| 005950 | BINDING TOOL 320 MM | 1 p. | 0.40 | <ul style="list-style-type: none"> - For binding steels using LOOP TIES. |
|--------|---------------------|------|------|---|



| Code | Name | To Assemble the Steel of | Sale Sizes | Weight [kg/1,000 p.] | Characteristics |
|------|------|--------------------------|------------|-------------------------|-----------------|
|------|------|--------------------------|------------|-------------------------|-----------------|

BINDING "BS"

| | | | | | |
|--------|--------------------|-----------------------------|-----------|------|--|
| 005905 | BINDING "BS" 5-5 | 4 x 4 - 4 x 5 - 5 x 5 | 14,000 p. | 2.00 | <ul style="list-style-type: none"> - Made of "piano cord" steel. - For binding steels. - Extremely quick and simple installation. - Labor reduced by 3/4. - On request and with individually determined delivery times, BINDING "BS" can be made of galvanized steel. |
| 005906 | BINDING "BS" 6-6 | 4 x 6 - 5 x 6 - 6 x 6 | 18,000 p. | 3.13 | |
| 005908 | BINDING "BS" 6-8 | 4 x 8 - 5 x 8 - 6 x 8 | 15,000 p. | 2.63 | |
| 005909 | BINDING "BS" 8-8 | 7 x 8 - 8 x 8 | 10,000 p. | 1.86 | |
| 005904 | BINDING "BS" 5-10 | 3 x 10 - 5 x 10 - 6 x 10 | 10,000 p. | 1.97 | |
| 005910 | BINDING "BS" 8-10 | 5 x 10 - 6 x 10 - 8 x 10 | 13,000 p. | 2.21 | |
| 005912 | BINDING "BS" 8-12 | 5 x 12 - 6 x 12 - 8 x 12 | 10,000 p. | 2.79 | |
| 005929 | BINDING "BS" 12-12 | 10 x 10 - 10 x 12 - 12 x 12 | 7,200 p. | 2.15 | |
| 005914 | BINDING "BS" 8-14 | 5 x 14 - 6 x 14 - 8 x 14 | 10,000 p. | 2.98 | |
| 005916 | BINDING "BS" 8-16 | 6 x 16 - 8 x 16 - 10 x 16 | 8,000 p. | 3.85 | |
| 005917 | BINDING "BS" 16-16 | 12 x 16 - 14 x 16 - 16 x 16 | 6,000 p. | 5.11 | |
| 005919 | BINDING "BS" 5-20 | 3 x 20 - 4 x 20 - 5 x 20 | 4,000 p. | 4.80 | |
| 005920 | BINDING "BS" 8-20 | 6 x 20 - 8 x 20 - 10 x 20 | 5,600 p. | 4.73 | |
| 005922 | BINDING "BS" 8-22 | 6 x 22 - 7 x 22 - 8 x 22 | 4,000 p. | 4.80 | |
| 005923 | BINDING "BS" 12-22 | 10 x 22 - 12 x 22 | 4,000 p. | 5.00 | |
| 005924 | BINDING "BS" 8-24 | 6 x 24 - 7 x 24 - 8 x 24 | 5,600 p. | 4.87 | |



| Code | Name | Thickness [mm] | Sale Sizes | Weight [kg/100p.] | Characteristics |
|------|------|-------------------|---------------|----------------------|-----------------|
|------|------|-------------------|---------------|----------------------|-----------------|

THICKNESS WEDGE



| | | | | | |
|--------|-----------------------|----|--------|-------|---|
| 006222 | THICKNESS WEDGE 2 MM | 2 | 250 p. | 1.13 | <ul style="list-style-type: none"> - In solid PVC. - Crush resistance: 200 kg/cm². - Dimension: 70mm x 70mm. |
| 006223 | THICKNESS WEDGE 3 MM | 3 | 250 p. | 1.27 | |
| 006225 | THICKNESS WEDGE 5 MM | 5 | 125 p. | 2.48 | |
| 006227 | THICKNESS WEDGE 7 MM | 7 | 125 p. | 3.41 | |
| 006229 | THICKNESS WEDGE 9 MM | 9 | 125 p. | 4.21 | |
| 006233 | THICKNESS WEDGE 15 MM | 15 | 50 p. | 7.00 | |
| 006235 | THICKNESS WEDGE 20 MM | 20 | 50 p. | 10.00 | |
| 006237 | THICKNESS WEDGE 25 MM | 25 | 100 p. | 12.50 | |
| 006239 | THICKNESS WEDGE 30 MM | 30 | 100 p. | 15.00 | |

ADJUSTMENT WEDGE



| | | | | | |
|--------|-----------------------|---|--------|------|---|
| 006212 | ADJUSTMENT WEDGE 2 MM | 2 | 250 p. | 0.68 | <ul style="list-style-type: none"> - In solid PVC. - Crush resistance: 200 kg/cm². - Dimension: 70 mm x 70 mm with hole 22 mm x 45 mm. |
| 006213 | ADJUSTMENT WEDGE 3 MM | 3 | 250 p. | 1.02 | |
| 006215 | ADJUSTMENT WEDGE 5 MM | 5 | 125 p. | 1.93 | |
| 006217 | ADJUSTMENT WEDGE 7 MM | 7 | 125 p. | 2.74 | |
| 006219 | ADJUSTMENT WEDGE 9 MM | 9 | 125 p. | 3.42 | |

STORAGE WEDGE



| | | | | | |
|--------|----------------------------|---|--------|------|---|
| 002280 | STORAGE WEDGE WITHOUT STEM | - | 200 p. | 5.67 | <ul style="list-style-type: none"> - Double storage wedge in solid PVC. - Placed between precast parts. - Prevents bursting of edges. - Does not stain parts. - Used for storage or transport. - Model with 2 stems for hanging on the top of panels. - Model without stems for horizontal installation. |
| 002281 | STORAGE WEDGE WITH STEM | - | 150 p. | 5.86 | |

- Dimension: 63mm x 173mm.
 - Thickness: 12mm.
 - Length of the stem: 30mm.
 - Crush resistance:
 By 20° Celsius and for a time of 72 hours, each excrescence supports 140kg without deformation of its upper curvature, except for a light flattening of approximately 3mm.

| Code | Name | Steel Ø [mm] | Sale Sizes | Weight [kg/100p.] | Characteristics |
|------|------|-----------------|---------------|----------------------|-----------------|
|------|------|-----------------|---------------|----------------------|-----------------|

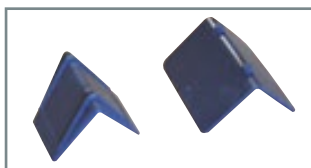
DRAUF CAP



| | | | | | |
|--------|-------------------|---|----------|------|---|
| 005541 | DRAUF CAP 4 LONG | 4 | 1,000 p. | 0.02 | <ul style="list-style-type: none"> - Protection cap in plastic to be fitted on the extremities of the steels to avoid rust stains. - Drauf 4 for "J2000". |
| 005550 | DRAUF CAP 5 ROUND | 5 | 1,000 p. | 0.05 | |
| 005560 | DRAUF CAP 6 ROUND | 6 | 1,000 p. | 0.06 | |
| 005580 | DRAUF CAP 8 ROUND | 8 | 1,000 p. | 0.08 | |

| Code | Name | Measures A x B x C [mm] | Sale Sizes | Weight [kg/100 p.] | Characteristics |
|------|------|-------------------------------|---------------|-----------------------|-----------------|
|------|------|-------------------------------|---------------|-----------------------|-----------------|

PROTECT ANGLE



| | | | | | |
|--------|------------------|--------------|----------|------|--|
| 000350 | PROTECT ANGLE I | 34 x 40 x 28 | 3,500 p. | 0.33 | <ul style="list-style-type: none"> - For protection of precast parts during bundling and transportation. - Terminals or lateral edges prevent the strip from slipping. |
| 000351 | PROTECT ANGLE II | 30 x 50 x 50 | 2,000 p. | 0.49 | |

General Characteristics of Laroche Concrete Products

The production site:



Products made in the European Union

New and modern factory designed specially for manufacturing Laroche products in the best quality conditions:

- Total area: 10,000m².
- Covered surface: 3,000m².

Product design:

- Most of the products have been designed in partnership with users: This guarantees having reliable products that are perfectly suited to the needs of our customers.
 - After defining the product's functional characteristics with the user, Laroche ensures the control of the wholes: creation, design, equipment production, manufacture, logistics.
- Concrete spacers: generally designed to be invisible after striking: any support surface, non-geometric, perfected according to the use required.
- Laroche spacers can be used to make architectonic concrete: consult us.
- Comments: all products can be made of a particular concrete on request:
 - In white or colored concrete.
 - With a particular cement.

Concrete manufacture:

- Components:
 - Siliceous sand from GSM quarries in the Bordeaux area.
 - Cements CPA CEM I 52.5 from the Calcia factory in Bussac (17).
- Tools:
 - Aggregates stored in covered bins for better humidity control.
 - Computer run concrete power unit.
- Characteristics:
 - Concrete resistance of standard products: results available on request.
 - With particular aggregates.
- Products of special concrete are not kept in stock. However, Laroche can sometimes help out with the remainder from a previous manufacture. It is advisable to consult Laroche for the time needed: supplies, manufacture, hardening, delivery.

Concrete implementation:

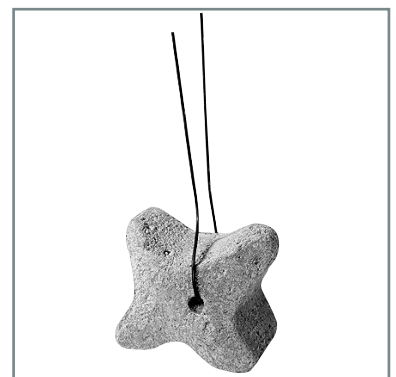
- Vibration on special vibrating table.
- Use of special Laroche moulding procedures.

Treatment of moulded products:

- Concrete spacers and heel-pieces:
 - Curing of concrete products in damp environment for a minimum of 120 hours (damp chamber, immersion), no oven drying.
- Concrete cones and plugs, products in deferred demoulding:
 - Concrete undergoes low temperature oven drying at 40°.

Packaging:

- Bags or crates of black polypropylene, depending on the products.
- Labelling showing code N°, description, quantity, weight, date of manufacture and packaging: the traceability of our products is assured.
- Standard palletizing:
 - 60 bags per pallet of 100 x 120 x h 100cm.
 - 40 or 50 crates depending on the products, on a pallet of 100 x 120 or 80 x 120 (height approx. 100cm).
 - Pallets covered with film or banderoled for dispatch.



Spacers for Regular Reinforcements

Fields of application:

- Building sites = housing, offices.
- Precast.
- Small-scale civil engineering work.

Implementation:

- Number of spacers determined according to the rigidity of the reinforcements = ratio of 3 per m² on average.
- Up to 50mm of cover = the weight of the reinforcements and the cradle shape of the spacer make attachment optional.

Design:

- See "Characteristic Generals" form.
- All SU and SUFA spacers can be moulded in white or colored concrete.

| Code | Description | Cover (E) | L | I | h | Max. Dia. |
|------|-------------|-----------|------|------|------|-----------|
| | | [mm] | [mm] | [mm] | [mm] | [mm] |

SU SPACERS

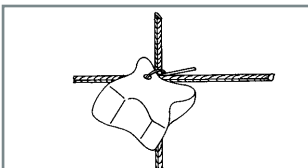
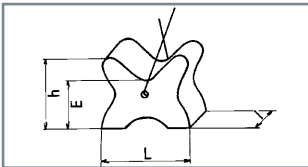


| | | | | | | |
|--------|----------|-------|-------|----|----|----|
| 904563 | SU 20 | 20 | 42 | 22 | 28 | 16 |
| 904564 | SU 25 | 25 | 48 | 28 | 34 | 20 |
| 904565 | SU 30 | 30 | 48 | 28 | 37 | 20 |
| 904566 | SU 35 | 35 | 48 | 28 | 40 | 25 |
| 904567 | SU 40/50 | 40/50 | 50/57 | 35 | 50 | 32 |

Dimensions from 60 to 200mm on request.

| Wire N°7 | Wire N°10 | Description | Cover (E) | L | I | h | Max. Dia. |
|----------|-----------|-------------|-----------|------|------|------|-----------|
| | | | [mm] | [mm] | [mm] | [mm] | [mm] |

SUFA SPACERS



| | | | | | | | |
|--------|--------|------------|-------|-------|----|----|----|
| 904675 | - | SUFA 20 | 20 | 42 | 22 | 28 | 16 |
| 904676 | - | SUFA 25 | 25 | 48 | 28 | 34 | 20 |
| 904678 | 904680 | SUFA 30 | 30 | 48 | 28 | 37 | 20 |
| 904681 | 904683 | SUFA 35 | 35 | 48 | 28 | 40 | 25 |
| 904684 | 904686 | SUFA 40/50 | 40/50 | 50/57 | 35 | 50 | 32 |
| 904687 | 904689 | SUFA 60 | 60 | 50 | 35 | 67 | 20 |

- Wire N°7 length 190mm.
- Wire N°10 length 280mm.

Spacers for Heavy Reinforcements

Fields of application:

- Civil engineering work.
- Setting of heavy reinforcements.
- Setting of large section reinforcements.
- SUS PP = setting of scraped reinforcements (pushed bridges) ...

Design:

- See "General Characteristics" form.
- High stability.
- Holes for possibly passing an attachment wire on site or at the factory (spacers SUS FA or SUS FA PP).
- SUS PP = sliding shape which allows the scraping of reinforcements.

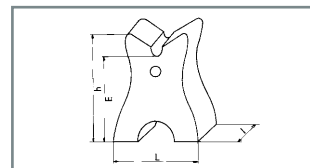
Implementation:

- Spacers type SUS = placed under bars that are sufficiently heavy to hold them in place. (Horizontal spacing).
- Spacers type SUS PP = used like spacers type SUS, can also be tied to the intersection of two bars.

| Code | Description | Cover (E) | L | I | h | Max. Dia. |
|------|-------------|-----------|------|------|------|-----------|
| | | [mm] | [mm] | [mm] | [mm] | [mm] |

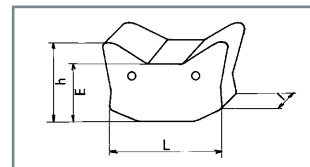
SUS SPACERS

| | | | | | | |
|--------|--------|----|----|----|----|----|
| 904600 | SUS 25 | 25 | 52 | 26 | 35 | 25 |
| 904601 | SUS 30 | 30 | 52 | 30 | 40 | 25 |
| 904602 | SUS 40 | 40 | 45 | 35 | 45 | 25 |
| 904603 | SUS 45 | 45 | 60 | 32 | 52 | 32 |
| 904604 | SUS 50 | 50 | 70 | 40 | 58 | 40 |
| 904606 | SUS 60 | 60 | 75 | 42 | 72 | 40 |
| 904607 | SUS 70 | 70 | 77 | 40 | 80 | 40 |
| 904608 | SUS 80 | 80 | 77 | 40 | 90 | 40 |



SUS PP SPACERS

| | | | | | | |
|--------|-----------|----|----|----|----|----|
| 904624 | SUS PP 30 | 30 | 64 | 30 | 44 | 32 |
| 904626 | SUS PP 35 | 35 | 65 | 35 | 48 | 32 |
| 904628 | SUS PP 40 | 40 | 65 | 35 | 52 | 32 |
| 904629 | SUS PP 50 | 50 | 65 | 38 | 62 | 32 |
| 911317 | SUS PP 55 | 55 | 65 | 40 | 70 | 32 |



NB: For SUS and SUS PP spacers, the attachment wire can be supplied separately.

| Wire N°7 | Wire N°10 | Description |
|----------|-----------|-------------|
|----------|-----------|-------------|

SUS FA AND SUS FA PP SPACERS (SUS and the SUS PP spacers, the attachment wire)

| | | |
|--------|--------|--------------|
| 904734 | - | SUS FA 25 |
| 904736 | 904738 | SUS FA 30 |
| 904739 | 904741 | SUS FA 40 |
| 904745 | 904747 | SUS FA 50 |
| 904748 | 904750 | SUS FA 60 |
| 904769 | 904771 | SUS FA PP 30 |
| 904776 | 904777 | SUS FA PP 40 |
| - | 904779 | SUS FA PP 50 |



- Wire N°7 length 190mm.
- Wire N°10 length 280mm.

Spacers for Heavy Reinforcements

Fields of application:

- Civil engineering work.
- Setting for heavy reinforcements.
- Setting of scraped reinforcements:
 - Pushed bridges, cercle bricks ...
 - Reinforcements of tubular piles.
 - Centring of reinforcements lowered between the forms.

Design:

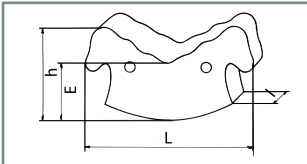
- See "General Characteristics" form.
- Sliding shape allowing the scraping of reinforcements.
- Cannot slip away from its fixation point.
- GPM: concrete roller.

Implementation:

- Attachment indispensable.
- PIROGUE and PP are obligatorily placed at the intersection of two bars:
 - The longitudinal bar is used to buttress the spacer.
 - The cover is constant whatever the position of the transverse spacer.
- GPM: fits onto a rod of Ø 12 maximum or on supplementary bars (steel fallers) fixed to reinforcing bars.

| Code | Description | Cover (E) [mm] | L [mm] | I [mm] | h [mm] | Diameter [mm] |
|------|-------------|-------------------|-----------|-----------|-----------|------------------|
|------|-------------|-------------------|-----------|-----------|-----------|------------------|

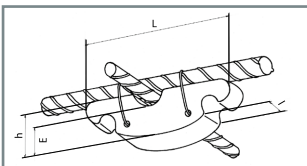
PIROGUE SPACERS



| | | | | | | |
|--------|------------|----|----|----|----|-------|
| 904794 | Pirogue 25 | 25 | 95 | 30 | 43 | 20/32 |
| 904795 | Pirogue 30 | 30 | 95 | 33 | 48 | 20/32 |
| 904796 | Pirogue 40 | 40 | 95 | 33 | 58 | 20/32 |

- Pirogue FA spacers.
 - PIROGUE FA spacers + wire fitted in the factory.
 - Able to fit one or two wires on request.
- Attaching wire may be supplied separately.
- Wire factory fitted on request.

TYPE PP SPACERS



| | | | | | | |
|------------|------------|----|-----|----|----|----|
| 904801 | PP 27 N°70 | 27 | 126 | 30 | 43 | 20 |
| 904802 | PP 33 N°71 | 33 | 122 | 38 | 45 | 20 |
| 904803 | PP 50 N°72 | 50 | 125 | 47 | 65 | 20 |
| on request | PP 65 N°73 | 65 | 115 | 35 | 80 | 16 |

| Code | Description | Cover (E) [mm] | L [mm] | I [mm] | Diameter [mm] |
|------|-------------|-------------------|-----------|-----------|------------------|
|------|-------------|-------------------|-----------|-----------|------------------|

GPM SPACERS



| | | | | | |
|--------|--------|----|-----|----|----|
| 904790 | GPM 50 | 45 | 150 | 38 | 12 |
|--------|--------|----|-----|----|----|

REINFORCED BARRETTES

- Parallelepipeds of reinforced concrete.
- Used in foundation or hidden faces.



Fields of application:

- Centering reinforcements for posts, piles, girders, thin shear walls, tubes etc.
- Used especially in cases:
 - Of complex prefabricated moldings.
 - Where the placement of reinforcements must be very precise.

Design:

- See "General Characteristics" form.
- Perfectly homogenous with the cast concrete.
- Invisible after striking.
- Type G spacers form a perfectly reliable and secure reinforcement.

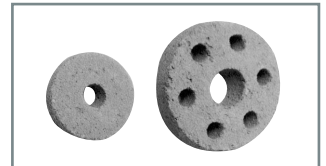
Implementation:

- Used chiefly when the reinforcing framework is being erected.
- Must be slipped onto the metal rods.
- May be slipped onto supplementary rods (metal fallers) which are meshed, attached or welded to the main reinforcement.

| Code | Description | Cover (E) [mm] | Dia. Smooth Rebar [mm] | Dia. Ribbed Rebar [mm] | Dia. Total [mm] | Dia. Central Hole [mm] |
|------|-------------|-------------------|------------------------------|------------------------------|--------------------|------------------------------|
|------|-------------|-------------------|------------------------------|------------------------------|--------------------|------------------------------|

TYPE G SPACERS

| | | | | | | |
|--------|------------|----|----|----|-----|----|
| 904896 | G20 - 103 | 30 | 18 | 16 | 80 | 20 |
| 904897 | G20 - 104 | 38 | 18 | 16 | 96 | 22 |
| 904887 | G11 - 204 | 30 | 10 | 6 | 71 | 12 |
| 904888 | G11 - 205 | 37 | 10 | 6 | 85 | 12 |
| 904891 | G15 - 302 | 30 | 14 | 10 | 75 | 15 |
| 904893 | G15 - 303 | 40 | 14 | 10 | 95 | 16 |
| 904898 | G25 - 901 | 40 | 22 | 20 | 104 | 25 |
| 904900 | G30 - 1001 | 40 | 28 | 25 | 110 | 30 |
| 904899 | G25 - 902 | 35 | 22 | 20 | 95 | 25 |



STAR SPACER

Fields of application:

- Manufacture of architectonic concrete, can be moulded in white or colored concrete.



Spacers for Regular Reinforcements

Fields of application:

- Classical and architectonic prefabrication: setting in all positions.
- Buildings: vertical setting of shaped or welded wire mesh.
- Civil engineering: vertical setting of heavy reinforcements.

Design:

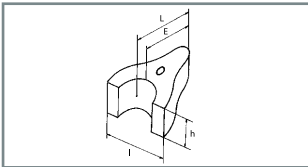
- See "General Characteristics" form.
- Contact surface with the form minimum but sufficient: effectiveness and invisibility.
- All SIDE spacers can be moulded in white or colored concrete.

Implementation:

- Select SIDE spacer according to the desired cover and the diameter of the bar that will be placed in its recess.
- Attach it to a reinforcement intersection: will not slide, will not turn around.

| Code | Description | Cover (E) [mm] | Bar dia. allowed [mm] | L [mm] | I [mm] | h [mm] |
|------|-------------|-------------------|-----------------------------|-----------|-----------|-----------|
|------|-------------|-------------------|-----------------------------|-----------|-----------|-----------|

SIDE SPACER

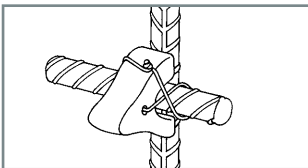


| | | | | | | |
|--------|-------------------|----|----------|-----|-----|----|
| 904971 | SIDE 25 – D 4/7 | 25 | 4 to 7 | 32 | 40 | 22 |
| 904974 | SIDE 30 – D 7/10 | 30 | 7 to 10 | 40 | 35 | 25 |
| 904979 | SIDE 30 – D 12/16 | 30 | 12 to 16 | 45 | 45 | 28 |
| 904988 | SIDE 40 – D 14/20 | 40 | 14 to 20 | 55 | 50 | 28 |
| 904995 | SIDE 40 – D 20/25 | 40 | 20 to 25 | 70 | 55 | 30 |
| 904972 | SIDE 50 – D 4/7 | 50 | 4 to 7 | 55 | 40 | 22 |
| 904980 | SIDE 50 – D 12/16 | 50 | 12 to 16 | 62 | 48 | 28 |
| 904996 | SIDE 50 – D 20/25 | 50 | 20 to 25 | 70 | 57 | 28 |
| 904997 | SIDE 60 – D 20/25 | 60 | 20 to 25 | 80 | 65 | 30 |
| 904989 | SIDE 70 – D 16/20 | 70 | 16 to 20 | 87 | 62 | 28 |
| 905003 | SIDE 70 – D 25/32 | 70 | 25 to 32 | 90 | 65 | 30 |
| 905006 | SIDE 70 – D 40 | 70 | 40 | 115 | 115 | 35 |

- SIDE 60 D 16/20, SIDE 60 D 35/32 and other diameters, lengths or types of wire available on request.

| Wire N°7 | Wire N°10 | Description |
|----------|-----------|-------------|
|----------|-----------|-------------|

SIDEFA SPACER



| | | |
|--------|--------|---------------------|
| 905011 | - | SIDEFA 30 – D 7/10 |
| 905015 | - | SIDEFA 30 – D 12/16 |
| 905023 | 905025 | SIDEFA 40 – D 14/20 |
| - | 905032 | SIDEFA 40 – D 20/25 |
| - | 905034 | SIDEFA 60 – D 20/25 |

- SIDE spacer with attachment wire.
- Wire N°7 length 190mm.
- Wire N°10 length 280mm.
- SIDEFA 70 mm D 25/32 and other diameters, lengths or types of wire available on request.

Fields of application:

- Building:
 - Stopping off PVC pipe.
- Civil engineering:
 - Filling up the holes of anchoring cones (setting cones or steel cones).
 - Filling up the grab-holes provided for reinforced polyurethane forms for bridges.

Design:

- See "General Characteristics" form.

Implementation:

- Plugs for anchoring cones:
- Using the plugs:
 - Fix the Concrete Plugs paying attention to the current rules for correct fixing.
 - Use fixatives with granules no greater than 0.7mm.
 - Follow the recommendations provided by the fixative suppliers.
- Fixing advice: the hole must be clean and must not contain any trace of oil.

| With hydraulic mortars: | With multi-constituent resins: |
|---|---|
| <ul style="list-style-type: none"> - Wet the hole and the Concrete Plug as for any fixing operation, especially in hot and dry weather. - Make some plastic mortar: too much water in the mixture reduces the quality of the fixative mortar: Follow the supplier's instructions. | <ul style="list-style-type: none"> - Pay attention to the wetness of the Concrete Plug or the support, and also the temperature at which it is used: Follow the supplier's instructions. |
| <ul style="list-style-type: none"> - Coat the Concrete Plug and the hole with fixative mortar or resin. - Push the coated Concrete Plug into the hole with a rotating movement. - Fix it in place with a light tap on the broad end of the Concrete Plug. - Touch up the surface with the fixative mortar or resin. | |

| Code | Description | Dimensions d [mm] | Dimensions D [mm] | Dimensions h [mm] | For anchoring cone |
|------|-------------|-------------------------|-------------------------|-------------------------|--------------------|
|------|-------------|-------------------------|-------------------------|-------------------------|--------------------|

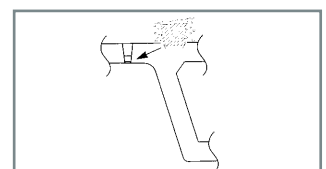
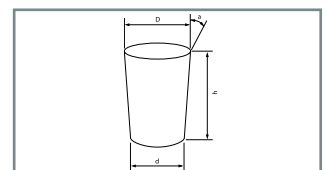
CONCRETE PLUG

| | | | | | |
|--------|-----------------------------|----|----|----|-----------------|
| 905251 | Concrete plug 55/45PM | 45 | 52 | 46 | Artéon 28/55 |
| 905255 | Concrete plug 47 x 62 x h60 | 47 | 62 | 60 | Artéon 33/64 |
| 905257 | Concrete plug 88/55GM | 72 | 85 | 53 | Artéon 40/88/39 |

- Concrete plugs for filling conical grab-points for reinforced polyurethane forms for bridges:
 - Let the plug drop down dry into the hole. The plug will come to a halt $\approx 10\text{mm}$ below the under-surface of the cladding section.
 - Fill the rest of the hole with concrete.

| Code | Description | Dimensions d [mm] | Dimensions D [mm] | Dimensions h [mm] | tan a |
|------|-------------|-------------------------|-------------------------|-------------------------|-------|
|------|-------------|-------------------------|-------------------------|-------------------------|-------|

| | | | | | |
|--------|------------------------------|----|----|-----|-------|
| 905205 | Concrete plug 49 x 56 x h100 | 49 | 56 | 100 | 0.035 |
| 905215 | Concrete plug 68 x 76 x h120 | 68 | 76 | 120 | 0.035 |
| 905225 | Concrete plug 79 x 87 x h120 | 79 | 87 | 120 | 0.035 |

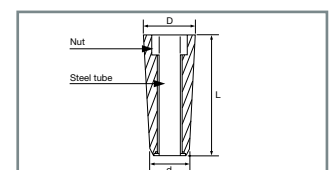


SEAL CONE CPU

Fields of application:

- Reinforced polyurethane forms for bridges.

Dimensions available on request.



| Code | Name | Sale Sizes | Weight [kg] | Characteristics |
|------|------|------------|----------------|-----------------|
|------|------|------------|----------------|-----------------|

ACRO ADHESIVE



| | | | | |
|--------|---------------|--------------|------------|--|
| 002835 | ACRO ADHESIVE | Pot of 750ml | 0.75 / pot | <ul style="list-style-type: none"> - Contact polychloroprene, mono-component adhesive. - The ACRO adhesive is perfectly suited for fixing plastic profiles or neoprene bearings on concrete. |
|--------|---------------|--------------|------------|--|

BI-COMPONENT ADHESIVE



| | | | | |
|--------|---------------------------|---------------|----------|---|
| 012634 | BI-COMPONENT ADHESIVE "A" | Pot of 0.80kg | 0.80/pot | <ul style="list-style-type: none"> - Reactive adhesive with 2 components: <ul style="list-style-type: none"> • Component A: epoxy resin. • Component B: hardener. - The BI-COMPONENT ADHESIVE must be used when you need waterproofing. It is perfectly suited for gluing CONCRETE PLUG 40/5 and FIBRE CONCRETE PLUG. - Standard packaging: <ul style="list-style-type: none"> • Component A: 6.4kg • Component B: 3.2kg |
| 012635 | BI-COMPONENT ADHESIVE "B" | Pot of 0.40kg | 0.40/pot | |

MONO-COMPONENT ADHESIVE



| | | | | |
|--------|-------------------------|-----------------|------------|---|
| 002838 | MONO-COMPONENT ADHESIVE | Pail of 15.00kg | 15.00/pail | <ul style="list-style-type: none"> - The MONO-COMPONENT ADHESIVE is perfectly suited for gluing CONCRETE PLUG 40/5 and FIBRE CONCRETE PLUG when you are not looking for waterproofing. |
|--------|-------------------------|-----------------|------------|---|

NEOPRENE ADHESIVE PUTTY



| | | | | |
|--------|-------------------------|--------------------|----------------|--|
| 012641 | NEOPRENE ADHESIVE PUTTY | Cartridge of 310ml | 0.41/cartridge | <ul style="list-style-type: none"> - Mono-component adhesive putty made from neoprene rubber. - The NEOPRENE ADHESIVE PUTTY is perfectly suited for gluing hydrophilic gaskets BENTOSTOP and PURSTOP on dry supports. - One cartridge approximately glues 5m. of hydrophilic gasket. - Standard packaging: box of 12 cartridges. |
|--------|-------------------------|--------------------|----------------|--|

| Code | Name | Sale Sizes | Weight [kg] | Characteristics |
|------|------|------------|----------------|-----------------|
|------|------|------------|----------------|-----------------|

POLYURETHANE ADHESIVE FOR SHOULDER

| | | | | |
|--------|------------------------------------|--------------------|----------------|--|
| 012643 | POLYURETHANE ADHESIVE FOR SHOULDER | Cartridge of 310ml | 0.50/cartridge | <ul style="list-style-type: none"> - Mono-component putty for waterproof gluing. - The POLYURETHANE ADHESIVE, SNJF label, is to be used for gluing CONCRETE SHOULDERS. - One cartridge approximately glues 2m of shoulder. - Standard packaging: box of 20 cartridges. |
|--------|------------------------------------|--------------------|----------------|--|



SILICONE PUTTY 1st CATEGORY

| | | | | |
|--------|-----------------------------------|--------------------|----------------|--|
| 014384 | SILICONE PUTTY 1st CATEGORY WHITE | Cartridge of 310ml | 0.40/cartridge | <ul style="list-style-type: none"> - Neutral silicone mono-component putty intended for gluing and waterproofing. |
| 014385 | SILICONE PUTTY 1st CATEGORY GREY | Cartridge of 310ml | 0.40/cartridge | <ul style="list-style-type: none"> - The SILICONE PUTTY 1st CATEGORY is perfectly suited for waterproofing expansion joints. - Standard packaging: box of 25 cartridges. |





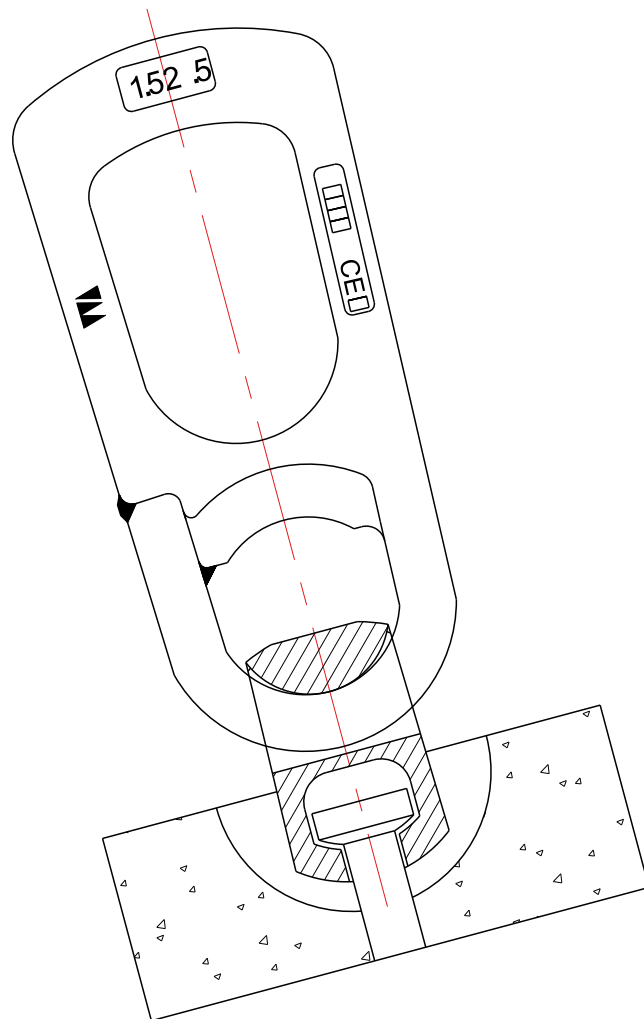


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Lifting System with Spherical Head Anchors

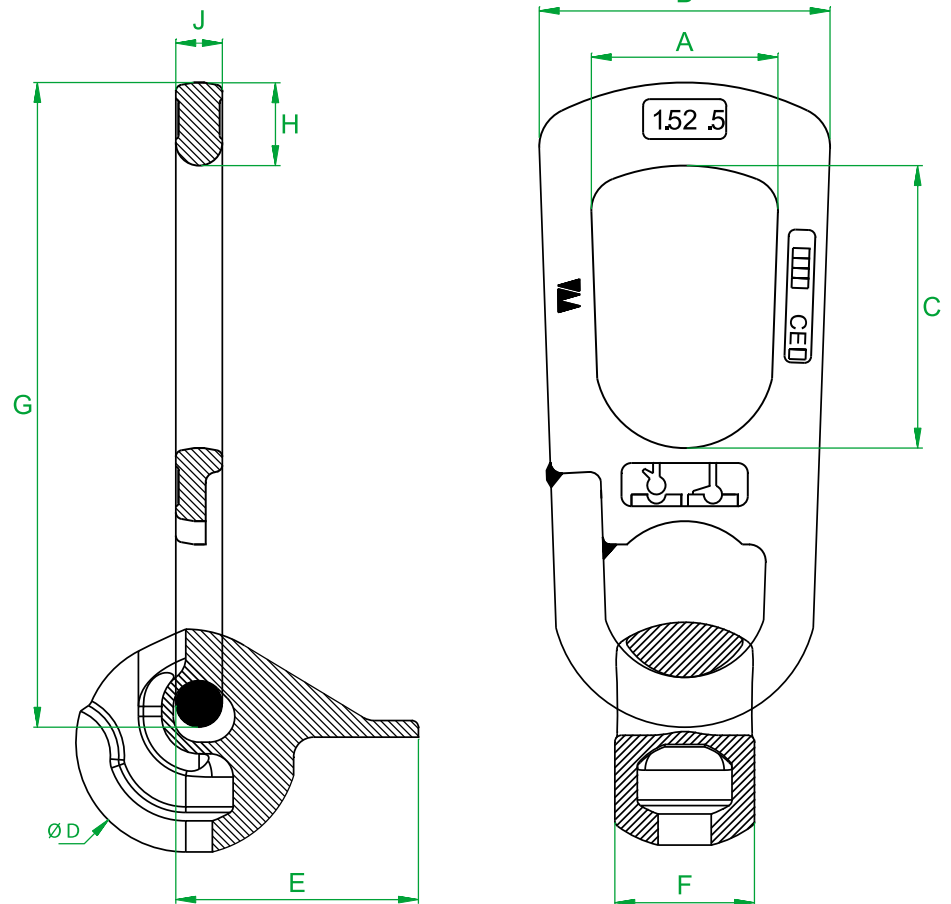
- Lifting System for precast elements
- Working Load from 1.3 to 32 Tons
- Full range of Anchors, Formers, and Lifting Hooks
- Lifting hooks and Formers reusable
- Lifting hooks with CE certification



Lifting Eye

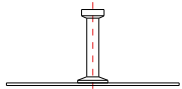
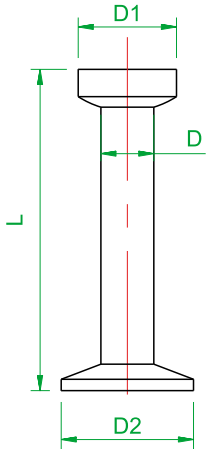
| Range | | 1.3 T | 2.5 T | 5 T | 7.5 T - 10 T | 15 T - 20 T | 32 T |
|-------|------|--------|--------|--------|--------------|-------------|--------|
| Ref. | | 100327 | 100328 | 100329 | 100330 | 100331 | 100332 |
| A | [mm] | 44 | 56 | 68 | 82 | 113 | 175 |
| B | [mm] | 74 | 88 | 118 | 160 | 191 | 269 |
| C | [mm] | 70 | 85 | 88 | 112 | 135 | 189 |
| ØD | [mm] | 56 | 68 | 88 | 112 | 152 | 195 |
| E | [mm] | 54 | 66 | 83 | 113 | 151 | 214 |
| F | [mm] | 32 | 42 | 57 | 73 | 110 | 153 |
| G | [mm] | 162 | 196 | 237 | 339 | 447 | 584 |
| H | [mm] | 20 | 25 | 37 | 50 | 75 | 100 |
| J | [mm] | 12 | 14 | 16 | 26 | 30 | 45 |

Lifting eyes are provided with CE certificates and usage and safety instructions.



Spherical Head Anchor

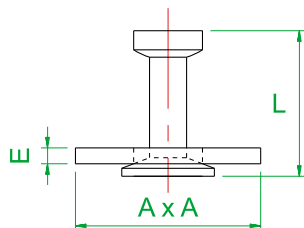
Spherical Head Anchor



| Ref. | Strength | Lg. [mm] | Weight [kg] | Qty /bag | Ref. | Strength | Lg. [mm] | Weight [kg] | Qty /bag |
|--------|----------|-------------|----------------|-------------|--------|----------|-------------|----------------|-------------|
| 100626 | 1T3 | 35 | 0.042 | 300 | 100664 | 7T5 | 165 | 0.900 | 25 |
| 100627 | | 40 | 0.045 | 300 | 100665 | | 200 | 1.020 | 25 |
| 100628 | | 50 | 0.051 | 300 | 100666 | | 240 | 1.170 | 10 |
| 100629 | | 55 | 0.054 | 300 | 100667 | | 300 | 1.380 | 10 |
| 100630 | | 65 | 0.060 | 300 | 100670 | 10T | 115 | 0.890 | 25 |
| 100631 | | 85 | 0.073 | 300 | 100672 | | 135 | 0.990 | 25 |
| 100632 | | 120 | 0.100 | 200 | 100673 | | 150 | 1.060 | 10 |
| 100633 | | 170 | 0.130 | 100 | 100674 | | 170 | 1.160 | 10 |
| 100634 | 2T5 | 240 | 0.170 | 100 | 100675 | | 200 | 1.310 | 10 |
| 100635 | | 45 | 0.110 | 200 | 100677 | | 250 | 1.550 | 10 |
| 100636 | | 55 | 0.120 | 200 | 100678 | | 340 | 1.980 | 10 |
| 100637 | | 65 | 0.130 | 100 | 100679 | | 680 | 3.620 | 1 |
| 100638 | | 75 | 0.140 | 100 | 100680 | 15T | 140 | 1.870 | 10 |
| 100639 | | 85 | 0.150 | 100 | 100681 | | 165 | 2.050 | 10 |
| 100640 | | 120 | 0.200 | 100 | 100682 | | 200 | 2.300 | 1 |
| 100642 | | 170 | 0.260 | 100 | 100683 | | 300 | 3.000 | 1 |
| 100643 | | 210 | 0.310 | 100 | 100684 | | 400 | 3.730 | 1 |
| 100644 | | 240 | 0.345 | 50 | 100685 | 20T | 200 | 2.850 | 1 |
| 100645 | | 280 | 0.390 | 50 | 100686 | | 240 | 3.210 | 1 |
| 100647 | 5T | 75 | 0.350 | 50 | 100688 | | 340 | 4.100 | 1 |
| 100649 | | 85 | 0.370 | 50 | 100689 | | 500 | 5.552 | 1 |
| 100650 | | 95 | 0.440 | 50 | 100690 | | 1,000 | 9.970 | 1 |
| 100651 | | 120 | 0.580 | 50 | 100691 | 32T | 200 | 5.550 | 1 |
| 100654 | | 180 | 0.730 | 25 | 100692 | | 250 | 6.320 | 1 |
| 100656 | | 240 | 0.980 | 25 | 100693 | | 280 | 6.780 | 1 |
| 100657 | | 340 | 1.330 | 25 | 100694 | | 320 | 7.400 | 1 |
| 100660 | | 100 | 0.670 | 25 | 100695 | | 500 | 10.010 | 1 |
| 100661 | | 120 | 0.740 | 25 | 100696 | | 700 | 13.260 | 1 |
| 100662 | | 140 | 0.810 | 25 | 100697 | | 1,200 | 20.960 | 1 |

Spherical head anchors are provided with CE certificate. Other lengths can be provided on request. Foot anchors are in black carbon steel. They are also available with zinc plated and hot dip galvanised steel. They can be provided also in stainless steel (on request). To get the full compression cone, the distance from the concrete edge must be higher than 3L and the distance between anchors must be higher than 6L. However, even in that case, the load capacity of the anchorage (concrete failure) has to be checked by qualified people. On request, DSI-ARTÉON can provide anchors welded on a steel plate 20 x 3mm. This system is an easy, quick and safe solution for placing anchors in concrete elements by spot welding the steel plate to the reinforcing steels of the precast element (pipe, ...). Dimensions are defined on a case by case basis with the customer.

Plate Anchor



| Range | 2.5 T | 5 T | 10 T |
|--------|--------|--------|------------|
| Ref. | 100711 | 100713 | On request |
| A [mm] | 70 | 90 | 90 |
| E [mm] | 6 | 8 | 10 |
| L [mm] | 55 | 65 | 115 |

On request. Please send us an inquiry if you wish to know which reinforcing steel you should use and which working load the system accommodates.

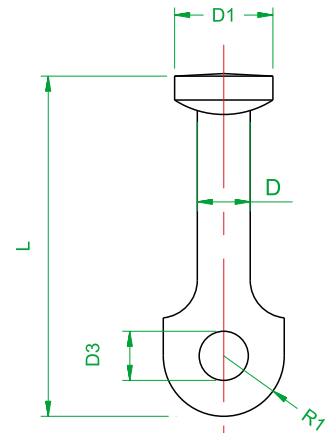
Eye Anchor

| Range | | 1.3 T | 2.5 T | 5 T | 10 T | 20 T | 32 T |
|---------------------|------|--------|--------|------------------|------------------|--------|--------|
| Ref. | | 100698 | 100699 | 100700 100701 | 100702 100703 | 100704 | 100705 |
| D | [mm] | 10 | 14 | 20 | 28 | 38 | 50 |
| D1 | [mm] | 18 | 25 | 36 | 46 | 69 | 88 |
| D3 | [mm] | 10 | 13 | 20 | 25 | 38 | 47 |
| R1 | [mm] | 11 | 16 | 21.5 | 27.5 | 41.5 | 50 |
| L _{normal} | [mm] | 65 | 90 | 90 | 115 | 250 | 300 |
| L _{short} | [mm] | | | 120 | 180 | | |

Eye anchors are provided with CE certificate.

Eye anchors must always be used with ribbed reinforcing steel, grade FeE500.

Eye anchors are available in black carbon steel or hot dip galvanized steel.



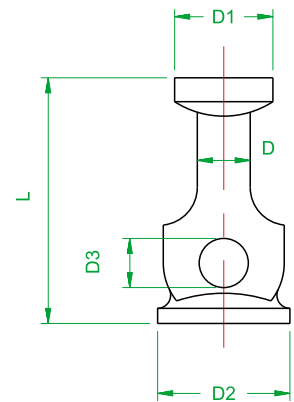
Foot & Eye Anchor

| Range | | 1.3 T | 2.5 T | 5 T |
|-------|------|--------|--------|--------|
| Ref. | | 100706 | 100707 | 100708 |
| D | [mm] | 10 | 14 | 20 |
| D1 | [mm] | 18 | 25 | 36 |
| D2 | [mm] | 22 | 35 | 47 |
| D3 | [mm] | 10 | 13 | 20 |
| L | [mm] | 53 | 65 | 80 |

Foot & eye anchors are provided with CE certificate.

Foot & eye anchors must always be used with ribbed reinforcing steel, grade FeE500.

Foot & eye anchors are available in black carbon steel or hot dip galvanized steel.



Ribbed Reinforcing Steel FeE500

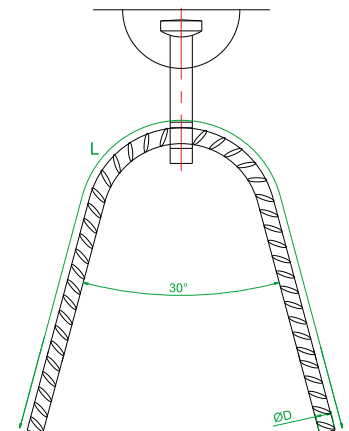
To use with eye anchors and with foot & eye anchors.

Total length L (mm) of ribbed reinforcing steel is to be placed in the eye of the anchor, depending on the concrete strength.

| Range | | 1.3 T | 2.5 T | 5 T | 10 T | 20 T | 32 T |
|----------------|------|-------|-------|-----|------|------|------|
| Rebar diameter | | | | | | | |
| D | [mm] | 8 | 10 | 16 | 20 | 32 | 40 |

Length for Concrete

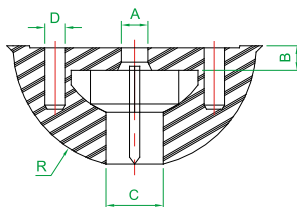
| | | | | | | | |
|-------|------|-----|-------|-------|-------|-------|-------|
| 10MPa | [mm] | 700 | 1,100 | 1,600 | 2,000 | 3,000 | 3,800 |
| 20MPa | [mm] | 600 | 700 | 1,100 | 1,400 | 2,000 | 2,700 |
| 10MPa | [mm] | 450 | 600 | 900 | 1,100 | 1,700 | 2,100 |



Rubber Recess Former and Accessories

Round Rubber Recess Former

Round Rubber Recess Former + Fixing Set

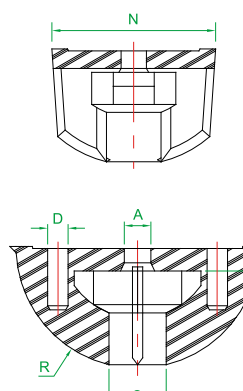


| Range | 1.3 T | 2.5 T | 5 T | 7.5 T | 10 T | 15 T | 20 T | 32 T |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Ref. | 100357 | 100358 | 100359 | 100360 | 100361 | 100362 | 100363 | 100364 |
| R [mm] | 30 | 37 | 47 | 59 | 59 | 80 | 80 | 102 |
| A [mm] | 9 | 11 | 11 | 13 | 13 | 13 | 13 | 15 |
| B [mm] | 6 | 10 | 11.5 | 14 | 14 | 16 | 16 | 16 |
| C [mm] | 10 | 14 | 20 | 24 | 28 | 34 | 38 | 50 |
| D [mm] | 6.5 | 6.5 | 8.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 |

Rubber recess formers can be used 30 to 40 times.

Narrow Rubber Recess Former

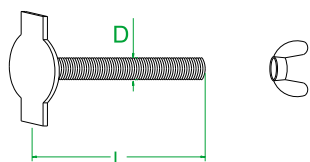
Narrow Rubber Recess Former + Fixing Set



| Range | 1.3 T | 2.5 T | 5 T | 7.5 T | 10 T | 15 T | 20 T |
|--------|--------|--------|--------|--------|--------|--------|--------|
| Ref. | 100343 | 100344 | 100345 | 100346 | 100347 | 100348 | 100349 |
| R [mm] | 30 | 37 | 47 | 59 | 59 | 80 | 80 |
| A [mm] | 9 | 11 | 11 | 13 | 13 | 13 | 13 |
| B [mm] | 6 | 10 | 11.5 | 14 | 14 | 16 | 16 |
| C [mm] | 10 | 14 | 20 | 24 | 28 | 34 | 38 |
| D [mm] | 6.5 | 6.5 | 8.5 | 10.5 | 10.5 | 10.5 | 10.5 |
| N [mm] | 43 | 53 | 69 | 85 | 85 | 124 | 124 |

Rubber recess formers can be used 30 to 40 times.

Fixing Set for Rubber Recess Former



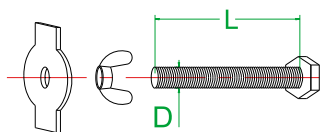
| Range | 1.3 T | 2.5 T | 5 T | 10 T | 20 T | 32 T |
|--------|--------|--------|--------|--------|--------|--------|
| Ref. | 100373 | 100374 | 100375 | 100376 | 100377 | 100378 |
| D [mm] | M8 | M10 | M10 | M12 | M12 | M12 |
| L [mm] | 80 | 80 | 100 | 100 | 100 | 100 |

Fixing sets are composed of a plate with welded threadbar and the wing nut.

Threaded Plate

Wing Nut

Screw

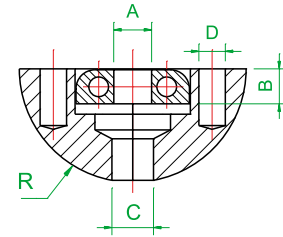


| Range | 1.3 T | 2.5 T | 5 T | 10 T | 20 T |
|----------|--------|--------|--------|--------|--------|
| Plate | 100379 | 100380 | 100381 | 100382 | 100383 |
| Wing nut | 100384 | 100385 | 100385 | 100386 | 100386 |
| Screw | 100387 | 100388 | 100388 | 100389 | 100389 |
| D [mm] | M8 | M10 | M10 | M12 | M12 |
| L [mm] | 60 | 80 | 80 | 80 | 80 |

Articulated Steel Recess Former

Articulated Steel Former (Round)

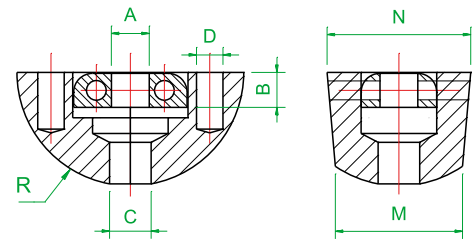
| Range | | 1.3 T | 2.5 T | 5 T | 10 T |
|-------|------|--------|--------|--------|--------|
| Ref. | | 100336 | 100337 | 100338 | 100340 |
| R | [mm] | 30 | 37 | 14 | 59 |
| A | [mm] | M10 | M10 | M10 | M12 |
| B | [mm] | 10 | 10 | 10 | 10 |
| C | [mm] | 11 | 15 | 21 | 29 |
| D | [mm] | 7 | 7 | 10 | 9 |



Formers can also be supplied in 7.5 T on request

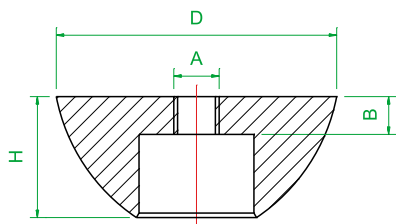
Narrow Articulated Steel Former

| Range | | 1.3 T | 2.5 T |
|-------|------|------------------------|------------------------|
| Ref. | | 102224 (on request) | 100333 (on request) |
| R | [mm] | 30 | 37 |
| N | [mm] | 42 | 48 |
| M | [mm] | 37 | 43 |
| A | [mm] | M12 | M10 |
| B | [mm] | 12 | 10 |
| C | [mm] | 11 | 15 |
| D | [mm] | No hole | 7 |



Recess Former with Rubber Ring

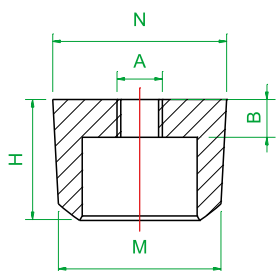
Steel Recess Former (hemispherical)



| Range | 1.3 T | 2.5 T | 5 T |
|--------|--------|--------|--------|
| Ref. | 100390 | 100391 | 100392 |
| D [mm] | 58 | 74 | 94 |
| A [mm] | M8 | M12 | M12 |
| B [mm] | 10 | 10 | 10 |
| H [mm] | 25 | 32 | 39 |

Steel recess formers must be used with rubber ring.

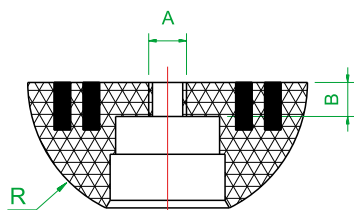
Narrow Steel Recess Former



| Range | 1.3 T | 2.5 T | 5 T |
|--------|------------------------|------------------------|------------------------|
| Ref. | 100398 (on request) | 100399 (on request) | 100400 (on request) |
| D [mm] | 58 | 74 | 94 |
| A [mm] | M8 | M12 | M12 |
| B [mm] | 10 | 10 | 10 |
| H [mm] | 25 | 32 | 39 |
| N [mm] | 42 | 46 | 69 |
| M [mm] | 34 | 43 | 58 |

Steel recess formers must be used with rubber ring.

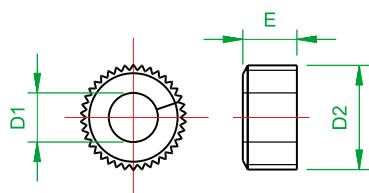
Magnetic Recess Former



| Range | 1.3 T | 2.5 T | 5 T | 10 T |
|-------------------------|--------|--------|--------|--------|
| Ref. | 102242 | 102245 | 102248 | 102250 |
| R [mm] | 30 | 37 | 47 | 59 |
| A [mm] | M10 | M10 | M10 | M10 |
| B [mm] | 6 | 9 | 12 | 12 |
| Magnetic load installed | 60 kg | 75 kg | 100 kg | 150 kg |

Magnetic recess formers must be used with rubber ring.

Rubber Ring



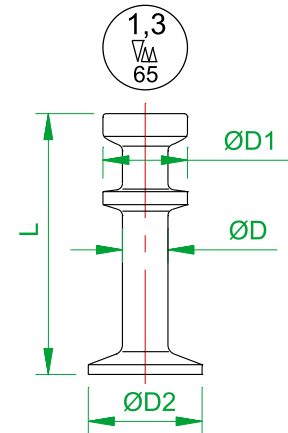
| Range | 1.3 T | 2.5 T | 5 T | 10 T |
|---------|--------|--------|--------|--------|
| Ref. | 102232 | 102234 | 102236 | 102237 |
| D2 [mm] | 22 | 32 | 38.7 | 49.4 |
| D1 [mm] | 10 | 14 | 21 | 28.5 |
| E [mm] | 11 | 12 | 14 | 20 |

Double Head Anchor and Recess Formers

Double Head Anchor

| Range | 1.3 T | 2.5 T | 5 T |
|-------------|-----------------------|------------------------|------------------------|
| Ref. | | | |
| D [mm] | 10 | 14 | 20 |
| D1 [mm] | 18 | 25 | 36 |
| D2 [mm] | 25 | 35 | 50 |
| L [mm] | 55 Ref. 102181 | 55 Ref. 102189 | 120 Ref. 102200 |
| | 65 Ref. 102183 | 65 Ref. 102190 | 180 Ref. 102201 |
| | 85 Ref. 102186 | 85 Ref. 102191 | |
| | | 120 Ref. 102192 | |

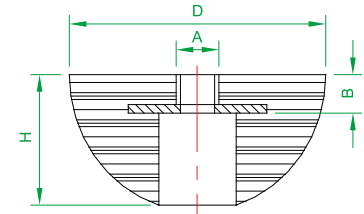
Double head anchors are provided with CE certificate.
Other length can be provided on request.
Double head anchors are zinc plated.



Tightening Former

| Range | 1.3 T | 2.5 T |
|-------------|---------------|---------------|
| Ref. | 100411 | 100412 |
| D [mm] | 60 | 74 |
| A [mm] | M8 | M10 |
| B [mm] | 9 | 11 |
| H [mm] | 32.7 | 42.6 |

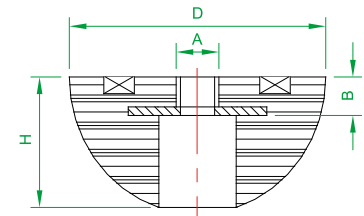
Double head anchors are attached to the former by tightening.



Magnetic Tightening Former

| Range | 1.3 T | 2.5 T |
|-------------------------|---------------|---------------|
| Ref. | 102258 | 102259 |
| D [mm] | 60 | 74 |
| A [mm] | M8 | M10 |
| B [mm] | 9 | 11 |
| H [mm] | 32.7 | 42.6 |
| Magnetic load installed | 60kg | 60kg |

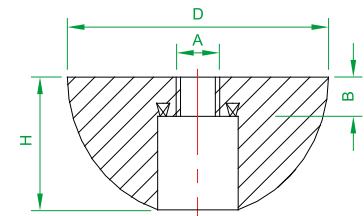
Double head anchors are attached to the former by tightening.



Magnetgrip Former

| Range | 1.3 T | 2.5 T |
|-------------|---------------|---------------|
| Ref. | 102251 | 102254 |
| D [mm] | 60 | 74 |
| A [mm] | M8 | M10 |
| B [mm] | 9 | 11 |
| H [mm] | 32.7 | 42.6 |

Double head anchors are attached to the former by internal magnets.



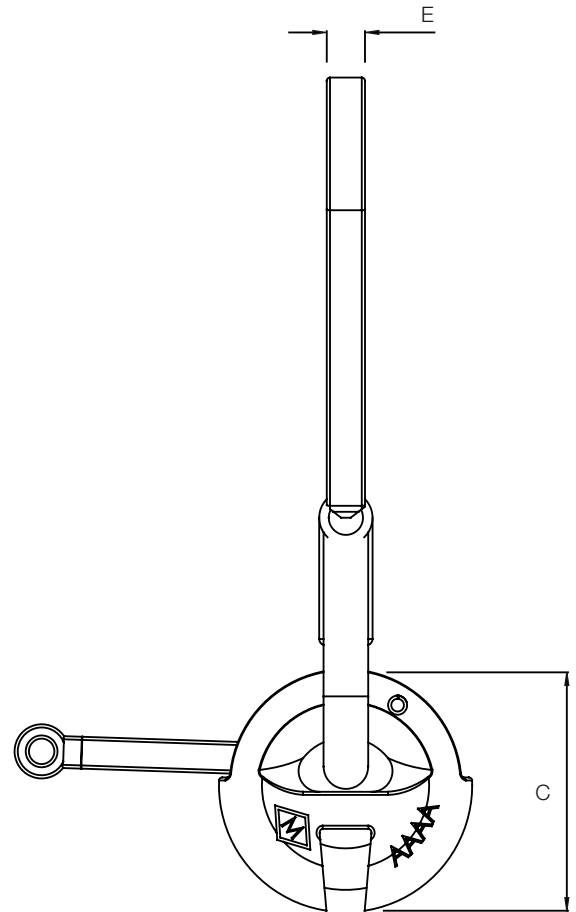
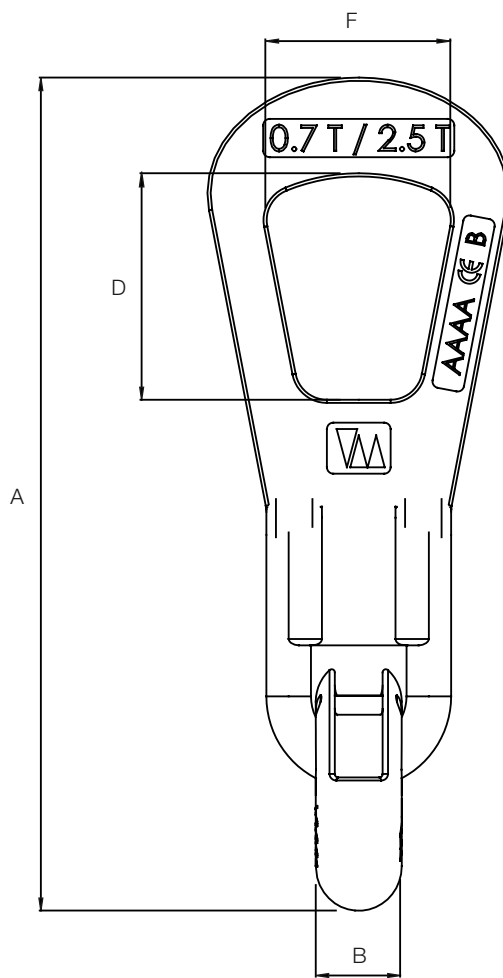
Lifting System with Flat Anchors



Lifting Hook

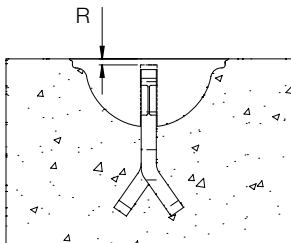
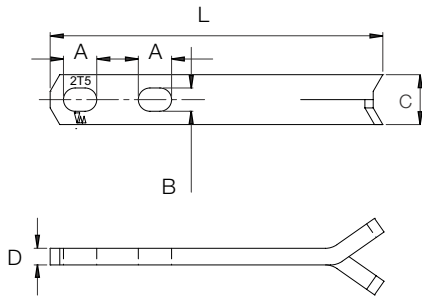
| Class | Reference | A | B | C | D | E | F |
|-------|-----------|-----|----|-----|-----|-----|----|
| 2T5 | 100523 | 261 | 27 | 80 | 70 | 50 | 48 |
| 5T | 100524 | 330 | 36 | 100 | 86 | 71 | |
| 10T | 100525 | 425 | 50 | 140 | 112 | 90 | |
| 26T | 100526 | 605 | 72 | 209 | 160 | 120 | |

Lifting hooks are provided with a CE certificate and usage and safety instruction. They must be checked once a year by a qualified person.



Lifting System with Flat Anchors

Spread Anchor



| Class | R [mm] |
|-------|--------|
| 2T5 | 10 |
| 5T | 10 |
| 10T | 15 |
| 26T | 15 |

| Class | Reference | Working Load | A | B | C | D | L |
|-------|-----------|--------------|----|----|----|----|-----|
| 2T5 | 100751 | 0T7 | 20 | 14 | 30 | 5 | 110 |
| | 100752 | 1T4 | 20 | 14 | 30 | 6 | 110 |
| | 100753 | 1T4 | 20 | 14 | 30 | 6 | 160 |
| | 100754 | 2T | 20 | 14 | 30 | 8 | 130 |
| | 100755 | 2T | 20 | 14 | 30 | 8 | 160 |
| | 100756 | 2T | 20 | 14 | 30 | 8 | 210 |
| | 100757 | 2T5 | 20 | 14 | 30 | 10 | 150 |
| | 100758 | 2T5 | 20 | 14 | 30 | 10 | 200 |
| | 100759 | 2T5 | 20 | 14 | 30 | 10 | 250 |
| 5T | 100760 | 3T | 22 | 18 | 40 | 10 | 160 |
| | 100761 | 3T | 22 | 18 | 40 | 10 | 200 |
| | 100762 | 3T | 22 | 18 | 40 | 10 | 280 |
| | 100763 | 4T | 22 | 18 | 40 | 12 | 180 |
| | 100764 | 4T | 22 | 18 | 40 | 12 | 240 |
| | 100765 | 4T | 22 | 18 | 40 | 12 | 320 |
| | 100766 | 5T | 22 | 18 | 40 | 15 | 180 |
| | 100767 | 5T | 22 | 18 | 40 | 15 | 240 |
| | 100768 | 5T | 22 | 18 | 40 | 15 | 400 |
| 10T | 100769 | 5T3 | 31 | 26 | 60 | 12 | 220 |
| | 100770 | 5T3 | 31 | 26 | 60 | 12 | 260 |
| | 100771 | 5T3 | 31 | 26 | 60 | 12 | 340 |
| | 100772 | 7T5 | 31 | 26 | 60 | 16 | 260 |
| | 100773 | 7T5 | 31 | 26 | 60 | 16 | 300 |
| | 100774 | 7T5 | 31 | 26 | 60 | 16 | 420 |
| | 100775 | 10T | 31 | 26 | 60 | 20 | 300 |
| | 100776 | 10T | 31 | 26 | 60 | 20 | 370 |
| | 100777 | 10T | 31 | 26 | 60 | 20 | 520 |
| 26T | 100778 | 14T | 45 | 35 | 80 | 20 | 370 |
| | 100779 | 14T | 45 | 35 | 80 | 20 | 460 |
| | 100780 | 22T | 45 | 35 | 90 | 26 | 500 |
| | 100781 | 22T | 45 | 35 | 90 | 26 | 620 |

Anchors are in black carbon steel. They are also available with hot dip galvanized steel.

Spread anchors can be used for tilt up.

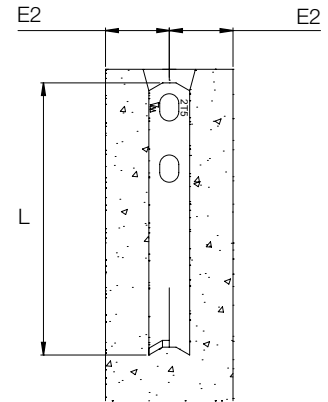
The following conditions must be met:

- add recommended reinforcement for the tilt up anchor,
- use the longer anchor of each classes,
- divide the working load by 2,
- respect minimal edge distances for the tilt up anchor.

Lifting System with Flat Anchors

Minimum Center Distance, Edge Distance for Spread Anchor

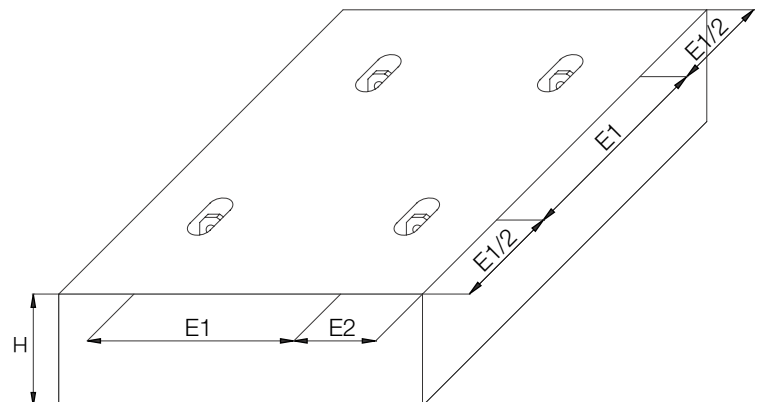
| Class | Working Load | Length [mm] | Minimum Center Distance E1 [mm] | Minimum Thickness 2 x E2 [mm] | | |
|-------|--------------|----------------|---------------------------------------|-------------------------------------|-------|-------|
| | | | | 15MPa | 25MPa | 35MPa |
| 2T5 | 0T7 | 110 | 385 | 70 | 60 | 50 |
| | 1T4 | 110 | 385 | 90 | 70 | 70 |
| | 1T4 | 160 | 560 | 80 | 60 | 60 |
| | 2T | 130 | 455 | 110 | 90 | 90 |
| | 2T | 160 | 660 | 100 | 80 | 80 |
| | 2T | 210 | 735 | 90 | 70 | 70 |
| | 2T5 | 150 | 525 | 120 | 80 | 80 |
| | 2T5 | 200 | 730 | 110 | 80 | 70 |
| | 2T5 | 250 | 875 | 100 | 80 | 70 |
| 5T | 3T | 160 | 560 | 120 | 100 | 100 |
| | 3T | 200 | 700 | 110 | 90 | 90 |
| | 3T | 280 | 980 | 100 | 80 | 80 |
| | 4T | 180 | 630 | 140 | 120 | 100 |
| | 4T | 240 | 840 | 130 | 110 | 100 |
| | 4T | 320 | 1120 | 120 | 100 | 100 |
| | 5T | 180 | 630 | 180 | 140 | 140 |
| | 5T | 240 | 840 | 160 | 120 | 120 |
| | 5T | 400 | 1,400 | 140 | 100 | 100 |
| 10T | 5T3 | 220 | 770 | 180 | 140 | 100 |
| | 5T3 | 260 | 910 | 160 | 130 | 100 |
| | 5T3 | 340 | 1,190 | 140 | 100 | 100 |
| | 7T5 | 260 | 910 | 240 | 160 | 120 |
| | 7T5 | 300 | 1,050 | 200 | 160 | 120 |
| | 7T5 | 420 | 1,470 | 160 | 120 | 120 |
| | 10T | 300 | 1,050 | 280 | 200 | 160 |
| | 10T | 370 | 1,295 | 240 | 160 | 160 |
| | 10T | 520 | 1,820 | 200 | 140 | 120 |
| 26T | 14T | 370 | 1,295 | 300 | 250 | 200 |
| | 14T | 460 | 1,610 | 240 | 200 | 160 |
| | 22T | 500 | 1,750 | 400 | 300 | 250 |
| | 22T | 620 | 2,170 | 300 | 250 | 250 |



Minimum thickness of unit H

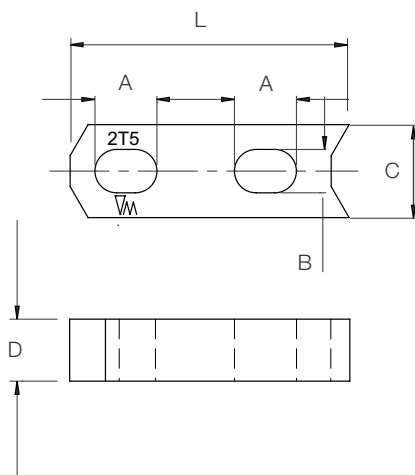
$$H = L + R + e$$

L : length of the anchor
R : cover of anchor head
e : concrete cover



Lifting System with Flat Anchors

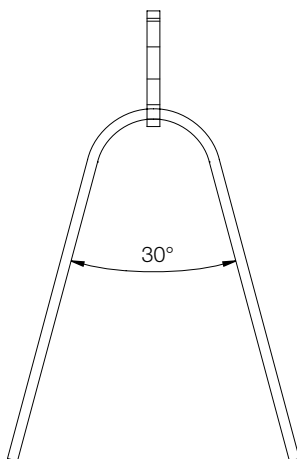
Two Hole Anchor



| Class | Reference | Working Load | A | B | C | D | L |
|-------|-----------|--------------|----|----|----|----|-----|
| 2T5 | 100782 | 0T7 | 20 | 14 | 30 | 5 | 90 |
| | 100783 | 1T4 | 20 | 14 | 30 | 6 | 90 |
| | 100784 | 2T | 20 | 14 | 30 | 8 | 90 |
| | 100785 | 2T5 | 20 | 14 | 30 | 10 | 90 |
| 5T | 100786 | 3T | 22 | 18 | 40 | 10 | 120 |
| | 100787 | 4T | 22 | 18 | 40 | 12 | 120 |
| | 100788 | 5T | 22 | 18 | 40 | 15 | 120 |
| 10T | 100789 | 5T3 | 31 | 26 | 60 | 12 | 160 |
| | 100790 | 7T5 | 31 | 26 | 60 | 16 | 160 |
| | 100791 | 10T | 31 | 26 | 60 | 20 | 160 |
| 26T | 100792 | 14T | 45 | 35 | 80 | 20 | 240 |

Anchors are in black carbon steel.
They are also available with hot dip galvanised steel.

The anchor must always be used with a ribbed reinforcing steel, grade FeE500.
The table below indicates the diameter (mm) and the total length (mm) of the ribbed reinforcing steel that has to be used according to the concrete strength f_c .



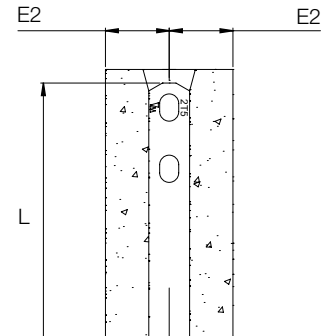
| Concrete Strength f_c | Class 2T5 | | | | Class 5T | | | Class 10T | | | Class 26T |
|-------------------------|-----------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 0T7 | 1T4 | 2T | 2T5 | 3T | 4T | 5T | 5T3 | 7T5 | 10T | 14T |
| 15MPa | Ø8 400 | Ø10 650 | Ø12 800 | Ø12 1000 | Ø14 1000 | Ø16 1200 | Ø16 1500 | Ø20 1250 | Ø20 1750 | Ø25 1850 | Ø32 2350 |
| 25MPa | Ø8 320 | Ø10 520 | Ø12 640 | Ø12 800 | Ø14 800 | Ø16 960 | Ø16 1200 | Ø20 1000 | Ø20 1400 | Ø25 1480 | Ø32 1880 |
| 35MPa | Ø8 260 | Ø10 425 | Ø12 520 | Ø12 650 | Ø14 650 | Ø16 780 | Ø16 975 | Ø20 815 | Ø20 1140 | Ø25 1200 | Ø32 1530 |

Lifting System with Flat Anchors

Minimum Center Distance, Edge Distance for Two Hole Anchor

Concrete strength > 15 MPa

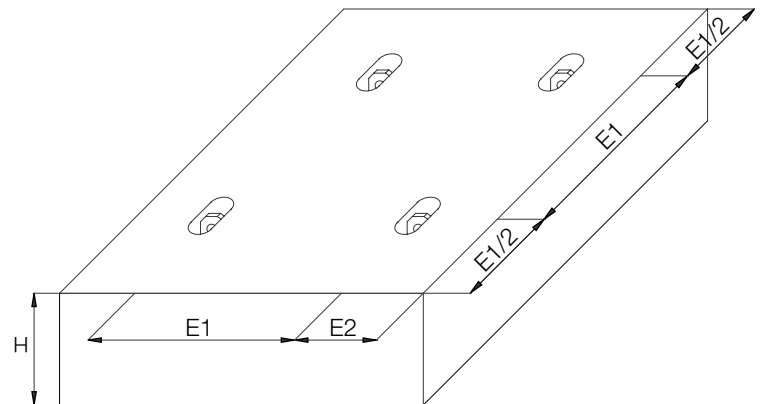
| Class | Working Load | Length [mm] | Min. Center Distance E1 [mm] | Minimum Thickness 2 x E2 [mm] |
|-------|--------------|----------------|---------------------------------------|--|
| 2T5 | 0T7 | 90 | 500 | 70 |
| | 1T4 | 90 | 500 | 80 |
| | 2T | 90 | 600 | 90 |
| | 2T5 | 90 | 600 | 100 |
| 5T | 3T | 120 | 650 | 100 |
| | 4T | 120 | 700 | 110 |
| | 5T | 120 | 750 | 120 |
| 10T | 5T3 | 160 | 800 | 120 |
| | 7T5 | 160 | 1,200 | 130 |
| | 10T | 170 | 1,200 | 140 |
| 26T | 14T | 240 | 1,500 | 160 |



Minimum thickness H

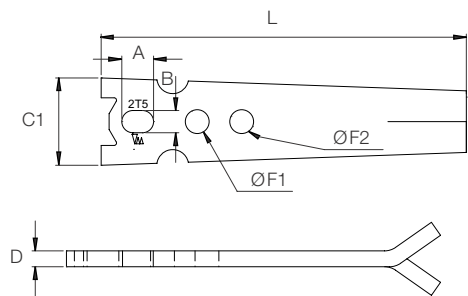
$$H = L + R + e$$

L : length of the anchor
R : cover of anchor head
e : concrete cover



Lifting System with Flat Anchors

Tilt up Anchor

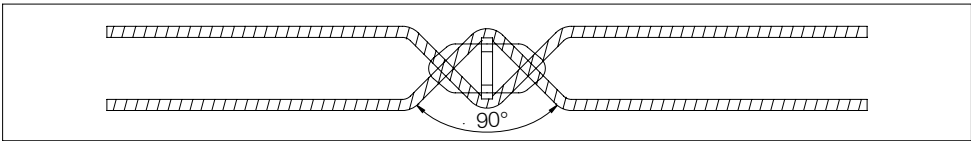


| Class | Reference | Working Load | A | B | C1 | D | ØF1 | ØF2 | L |
|-------|-----------|--------------|----|----|----|----|-----|-----|-----|
| 2T5 | 100797 | 1T4 | 20 | 14 | 55 | 6 | 15 | 15 | 200 |
| | 100798 | 2T5 | 20 | 14 | 55 | 10 | 15 | 15 | 230 |
| 5T | 100799 | 4T | 22 | 18 | 70 | 12 | 18 | 20 | 270 |
| | 100800 | 5T | 22 | 18 | 70 | 15 | 18 | 20 | 290 |
| 10T | 100801 | 7T5 | 31 | 26 | 95 | 15 | 25 | 25 | 320 |
| | 100802 | 10T | 31 | 26 | 95 | 20 | 25 | 25 | 390 |

Ribbed reinforcing steel Fe500 must be put into the notch of the tilt up anchor to avoid concrete splitting at the time of tilt up.
The table below indicates the diameter (mm) and the total length (mm) of the ribbed reinforcing steel that has to be used according to the concrete strength f_c .

| Concrete Strength f_c | Class 2T5 | | Class 5T | | Class 10T | |
|-------------------------|------------|------------|------------|--------------|--------------|--------------|
| | 1T4 | 2T5 | 4T | 5T | 7T5 | 10T |
| 15MPa | Ø10 700 | Ø12 800 | Ø14 950 | Ø16 1,000 | Ø20 1,200 | Ø20 1,500 |
| 25MPa | Ø10 560 | Ø12 640 | Ø16 760 | Ø16 800 | Ø20 960 | Ø25 1200 |
| 35MPa | Ø10 455 | Ø12 520 | Ø16 620 | Ø16 650 | Ø20 780 | Ø25 975 |

Installation sketch of the reinforcement :



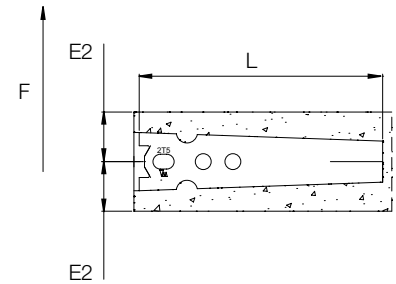
The bending radius of the reinforcement must respect the rules of BAEL 91.

Lifting System with Flat Anchors

Minimum Center Distance, Edge Distance for Tilt Up Anchor

Concrete strength > 15 MPa

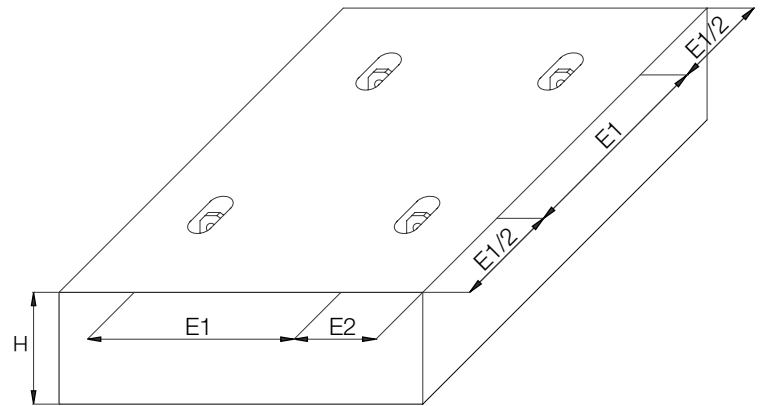
| Class | Working Load | Length [mm] | Min. Center Distance E1 [mm] | Minimum Thickness 2 x E2 [mm] |
|-------|--------------|----------------|---------------------------------------|--|
| 2T5 | 1T4 | 200 | 700 | 100 |
| | 2T5 | 300 | 800 | 120 |
| 5T | 4T | 270 | 950 | 140 |
| | 5T | 290 | 1,000 | 140 |
| 10T | 7T5 | 320 | 1,200 | 160 |
| | 10T | 390 | 1,200 | 200 |



Minimum thickness H

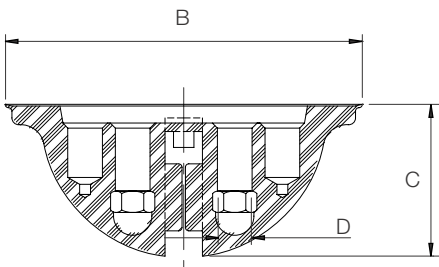
$$H = L + R + e$$

L : length of the anchor
R : cover of anchor head
e : concrete cover



Lifting System with Flat Anchors

Flat Anchor Former

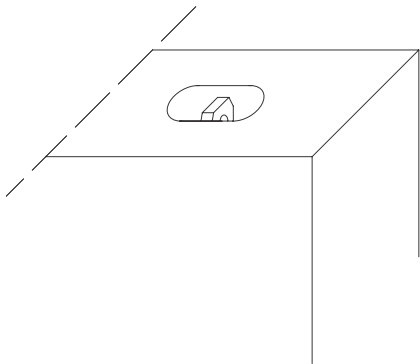


| Class | Reference | A | B | C | D |
|-------|-----------|-----|-----|-----|-----|
| 2T5 | 100527 | 44 | 105 | 45 | M8 |
| 5T | 100528 | 49 | 126 | 59 | M8 |
| 10T | 100529 | 67 | 188 | 85 | M12 |
| 26T | 100530 | 112 | 234 | 118 | M16 |

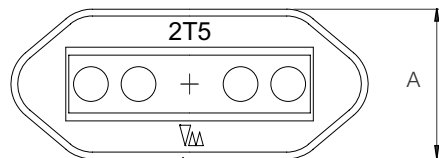
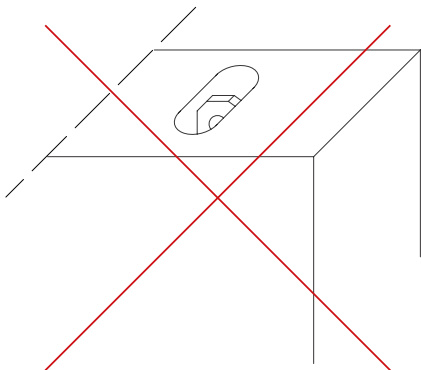
Plastic former.
Fixing by nails or screw.



Right



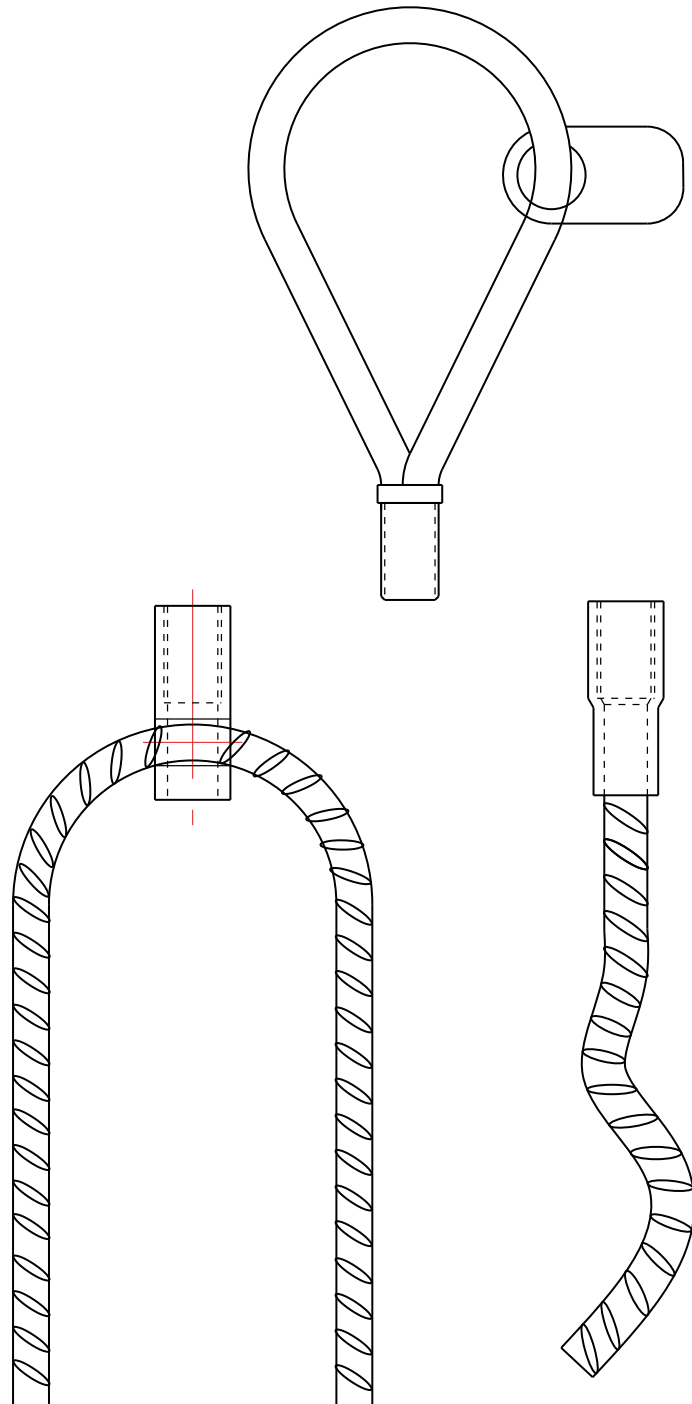
Wrong



To ensure the correct setting of the anchor in a thin unit, the former must be placed as shown in the drawing (the wide part of the former must be placed in the thick part of the unit).



Lifting System with Sockets



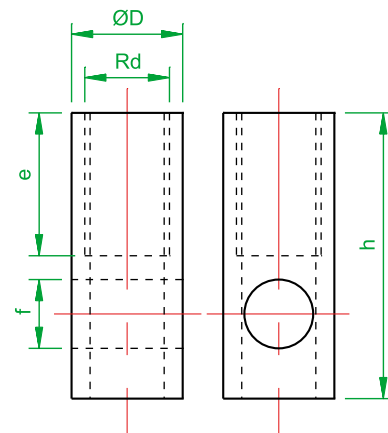
Lifting Socket with Cross Hole

Lifting sockets with cross hole comply with the safety rules for transport anchors used for precast concrete units. Lifting sockets may only be used in combination with a lifting loop or Special Lifting Device.

The insert shows an internal thread and cross hole. The reinforcement steel stirrup inserted through this cross hole takes over transmission of power into the unit.

Load Bearing Capacities and Dimensions

| Reference | Thread Rd | Load Bearing Capacities [kg] | | Dimensions [mm] | | | | Weight [kg/100p] |
|-----------|-----------|------------------------------|-----------------|-----------------|-----|-----|------|------------------|
| | | 0° - 45° | Lateral tension | D | h | e | f | |
| 100451 | 12 | 500 | 250 | 15.0 | 40 | 22 | 8.0 | 3.3 |
| 100452 | 14 | 800 | 400 | 18.0 | 47 | 25 | 10.5 | 5.0 |
| 100453 | 16 | 1,200 | 600 | 21.0 | 54 | 27 | 13.0 | 8.0 |
| 100454 | 18 | 1,600 | 800 | 24.0 | 65 | 34 | 13.0 | 15.5 |
| 100455 | 20 | 2,000 | 1,000 | 27.0 | 69 | 35 | 15.5 | 18.0 |
| 100456 | 24 | 2,500 | 1,250 | 31.0 | 78 | 43 | 18.0 | 22.0 |
| 100457 | 30 | 4,000 | 2,000 | 39.5 | 103 | 56 | 22.5 | 70.0 |
| 100458 | 36 | 6,300 | 3,150 | 47.0 | 125 | 68 | 27.5 | 80.0 |
| 100459 | 42 | 8,000 | 4,000 | 54.0 | 145 | 80 | 32.0 | 105.0 |
| 100460 | 52 | 12,500 | 6,250 | 70.0 | 195 | 100 | 40.0 | 300.0 |



On lateral tension, lifting sockets with cross hole have only half the load-bearing capacity as on axial tension.

Lifting sockets are manufactured of precision steel in special quality.

They are also available in stainless steel.

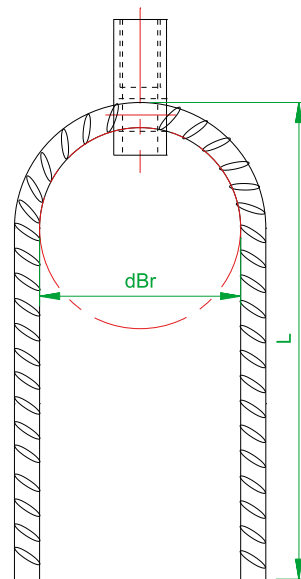
Sockets are zinc plated and manufactured with Rd thread.

Lifting sockets with cross hole must always be used with a steel rebar as follows:

Diameter and Dimensions of Reinforcement Stirrups

| Reference | Rebar Ø FeE500 | Bending diameter d _{Br} | Parallel | |
|-----------|----------------|----------------------------------|--------------------------|---------------------|
| | [mm] | | Length of stirrup L [mm] | Cutting length [mm] |
| 100451 | 6 | 24 | 240 | 490 |
| 100452 | 8 | 32 | 280 | 570 |
| 100453 | 10 | 40 | 330 | 670 |
| 100454 | 10 | 40 | 420 | 850 |
| 100455 | 12 | 48 | 440 | 890 |
| 100456 | 14 | 56 | 480 | 970 |
| 100457 | 16 | 64 | 650 | 1,320 |
| 100458 | 20 | 140 | 820 | 1,670 |
| 100459 | 25 | 175 | 860 | 1,750 |
| 100460 | 28 | 196 | 1,200 | 2,440 |

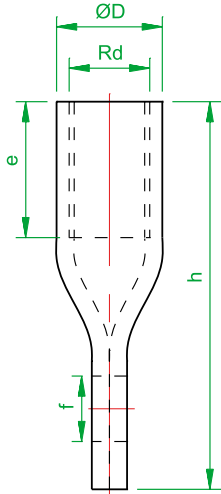
Lengths of the stirrups are defined for a minimum concrete strength of 15MPa.



Lifting Socket with Flat End

Lifting sockets with flat end complies with safety rules for transport anchors used for precast concrete units. The lifting socket may only be used in combination with a lifting loop or Special Lifting Device.
The insert shows an internal thread, a flat end and cross hole. The reinforcement steel stirrup inserted through this cross hole takes over transmission of power into the unit.

Load Bearing Capacities and Dimensions



| Reference | Thread Rd | Load bearing capacities [kg] | | Dimensions [mm] | | | | Weight [kg/100 p] |
|-----------|-----------|------------------------------|-----------------|-----------------|-----|----|------|-------------------|
| | | 0° - 45° | Lateral tension | D | h | e | f | |
| 100469 | 12 | 500 | 250 | 15.0 | 60 | 22 | 8.0 | 5.0 |
| 100470 | 14 | 800 | 400 | 18.0 | 70 | 25 | 10.5 | 6.0 |
| 100471 | 16 | 1,200 | 600 | 21.0 | 77 | 27 | 13.0 | 10.0 |
| 100472 | 18 | 1,600 | 800 | 24.0 | 85 | 34 | 13.0 | 18.0 |
| 100473 | 20 | 2,000 | 1,000 | 27.0 | 92 | 35 | 15.5 | 21.0 |
| 100475 | 24 | 2,500 | 1,250 | 31.0 | 100 | 43 | 18.0 | 29.0 |

On lateral tension, lifting sockets with flat end have only half the load-bearing capacity as on axial tension.

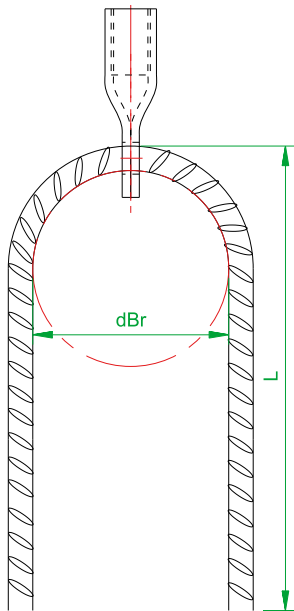
Lifting sockets are manufactured of precision steel in special quality.

They are also available in stainless steel.

Sockets are zinc plated and manufactured with Rd thread.

Lifting sockets with flat end must always be used with a steel rebar as follows:

Diameter and Dimensions of Reinforcement Stirrups



| Reference | Rebar Ø FeE500 [mm] | Bending Diameter d _{Br} [mm] | Parallel | |
|-----------|---------------------|---------------------------------------|--------------------------|---------------------|
| | | | Length of Stirrup L [mm] | Cutting Length [mm] |
| 100469 | 6 | 24 | 240 | 490 |
| 100470 | 8 | 32 | 280 | 570 |
| 100471 | 10 | 40 | 330 | 670 |
| 100472 | 10 | 40 | 420 | 850 |
| 100473 | 12 | 48 | 440 | 890 |
| 100475 | 14 | 56 | 480 | 970 |

Lengths of the stirrups are defined for a concrete strength of minimum 15MPa.

Lifting Socket with Long Wavy Rebar

Lifting sockets with long wavy rebar comply with the safety rules for transport anchors used for precast concrete units. Lifting sockets may only be used in combination with a lifting loop or Special Lifting Device.

Load bearing capacities and dimensions

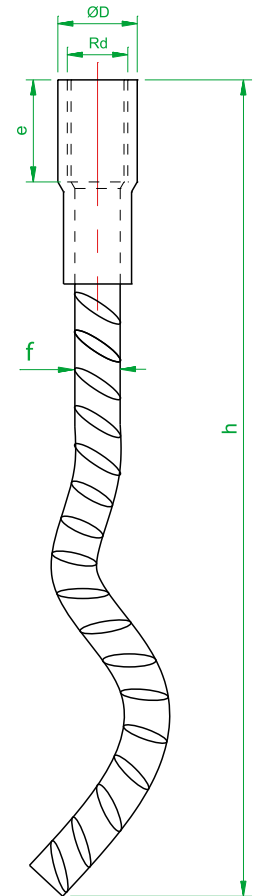
| Reference | Thread Rd | Load Bearing Capacities [kg] | | Dimensions [mm] | | | | Weight [kg/100p] |
|-----------|-----------|------------------------------|-----------------|-----------------|-----|-----|----|------------------|
| | | 0° - 45° | Lateral Tension | ØD | h | e | f | |
| 100497 | 12 | 500 | 250 | 15.0 | 137 | 22 | 8 | 7.4 |
| 100498 | 14 | 800 | 400 | 18.0 | 170 | 25 | 10 | 14.2 |
| 100499 | 16 | 1,200 | 600 | 21.0 | 216 | 27 | 12 | 24.6 |
| 100500 | 18 | 1,600 | 800 | 24.0 | 235 | 34 | 14 | 39.0 |
| 100501 | 20 | 2,000 | 1,000 | 27.0 | 257 | 35 | 16 | 53.1 |
| 100502 | 24 | 2,500 | 1,250 | 31.0 | 350 | 43 | 16 | 73.0 |
| 100503 | 30 | 4,000 | 2,000 | 39.5 | 450 | 56 | 20 | 145.0 |
| 100504 | 36 | 6,300 | 3,150 | 47.0 | 570 | 68 | 25 | 281.0 |
| 100505 | 42 | 8,000 | 4,000 | 54.0 | 620 | 80 | 28 | 389.0 |
| 100506 | 52 | 12,500 | 6,250 | 70.0 | 880 | 100 | 32 | 765.0 |

On lateral tension, lifting sockets with long wavy rebar have only half the load-bearing capacity as on axial tension.

Lifting sockets with short wavy rebar or straight rebar can also be provided.

Lifting sockets are manufactured of precision steel in special quality.

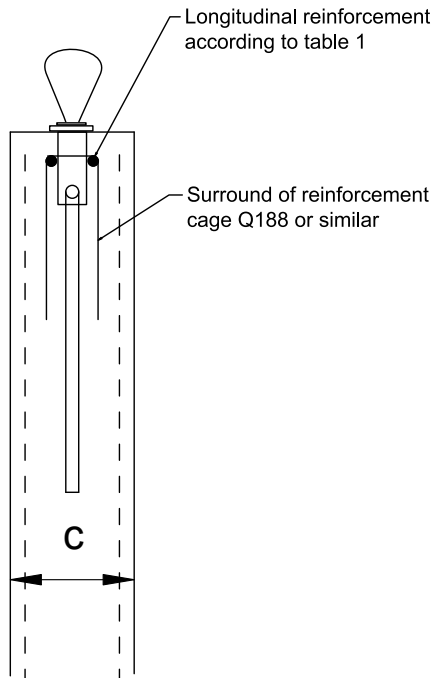
Sockets are zinc plated and manufactured with Rd thread.



Reinforcement and Minimum Thickness for Sockets...

When using lifting inserts, precast units must be reinforced with a minimum surface reinforcement (according to table 1), and concrete must have a strength of minimum 15MPa at the first time of lifting. An already existing static-structural reinforcement may be taken into account. The user is personally responsible for further transmission of load into the unit.

Table 1: Minimum Reinforcement



| Reference | Longitudinal Reinforcement FeE500 | | Surface Reinforcement FeE500 |
|-----------|-----------------------------------|-------|------------------------------|
| | [mm] | [mm] | [cm ² /m] |
| 100451 | Ø 10 | 850 | 1.31 |
| 100452 | Ø 10 | 850 | 1.31 |
| 100453 | Ø 10 | 850 | 1.31 |
| 100454 | Ø 12 | 850 | 1.88 |
| 100455 | Ø 12 | 850 | 1.88 |
| 100456 | Ø 12 | 850 | 1.88 |
| 100457 | Ø 16 | 1,000 | 1.88 |
| 100458 | Ø 16 | 1,000 | 1.88 |
| 100459 | Ø 16 | 1,000 | 1.88 |
| 100460 | Ø 20 | 1,200 | 1.88 |

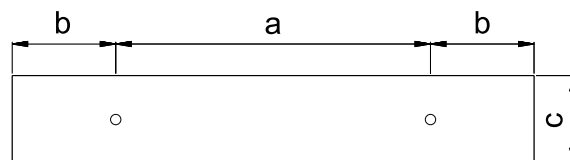
This minimum reinforcement can be replaced by comparable stirrups with longitudinal reinforcement. Diagonal tension requests additional reinforcement (table 3).

For transmission of load into the concrete, a reinforcement stirrup of FeE500 is inserted through the cross hole of the lifting socket. Contact of reinforcement and insert has to be ensured in a suitable manner (binding wire, but no welding).

Lifting sockets must be used in units with minimum dimensions according to table 2.

Table 2: Minimum Axis Distance, Edge Distance, Minimum Thickness of Unit

| Reference | Minimum Axis Distance (a) [mm] | Minimum Edge Distance (b) [mm] | Minimum Thickness of Unit (c) [mm] |
|-----------|-----------------------------------|-----------------------------------|---------------------------------------|
| 100451 | 300 | 150 | 60 |
| 100452 | 400 | 200 | 60 |
| 100453 | 400 | 300 | 80 |
| 100454 | 500 | 350 | 100 |
| 100455 | 550 | 400 | 100 |
| 100456 | 600 | 450 | 120 |
| 100457 | 650 | 550 | 140 |
| 100458 | 800 | 700 | 200 |
| 100459 | 1,000 | 800 | 240 |
| 100460 | 1,200 | 900 | 275 |



...with Cross Hole, Flat End and Long Wavy Rebar

In cases of lateral and diagonal tension, reinforcement as shown in Tables 3 and 4 must be installed in addition to the minimum reinforcement provided in table 1. The additional reinforcement must have pressure contact with the insert. Diagonal tension reinforcement is arranged opposite to the direction of tensile force.

Table 3: Additional Reinforcement on Diagonal Tension (Necessary if $\beta \geq 12.5^\circ$)

| Reference | rebar \varnothing FeE500 [mm] | L [mm] | Bending diameter d_{Br} [mm] |
|-----------|---------------------------------------|-----------|--------------------------------------|
| 100451 | 6 | 150 | 24 |
| 100452 | 6 | 200 | 24 |
| 100453 | 8 | 200 | 32 |
| 100454 | 8 | 250 | 32 |
| 100455 | 8 | 300 | 32 |
| 100456 | 10 | 300 | 40 |
| 100457 | 12 | 400 | 48 |
| 100458 | 14 | 550 | 56 |
| 100459 | 16 | 600 | 64 |
| 100460 | 20 | 750 | 140 |

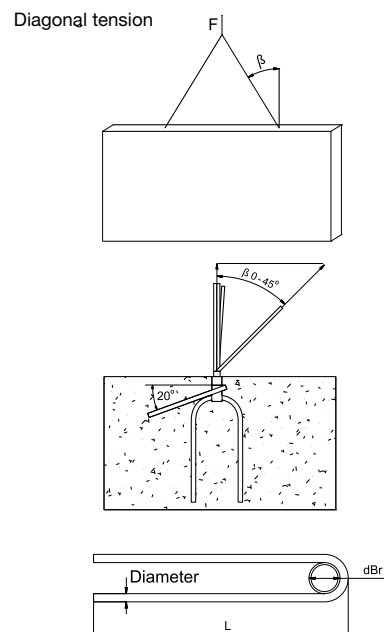
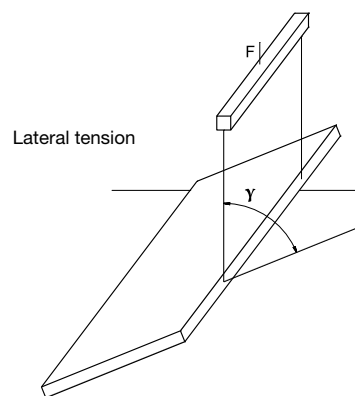


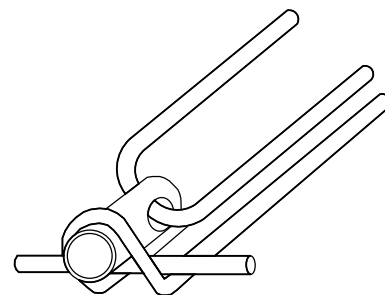
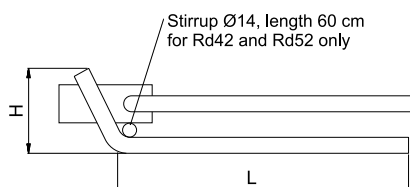
Table 4: Additional Reinforcement on Lateral Rension (Necessary if $\gamma \geq 7^\circ$)

| Reference | rebar \varnothing FeE500 [mm] | L [mm] | H [mm] | Bending diameter d_{Br} [mm] |
|-----------|---------------------------------------|-----------|-----------|--------------------------------------|
| 100451 | 6 | 270 | 35 | 24 |
| 100452 | 8 | 350 | 42 | 32 |
| 100453 | 8 | 420 | 49 | 32 |
| 100454 | 12 | 460 | 55 | 48 |
| 100455 | 12 | 490 | 64 | 48 |
| 100456 | 12 | 520 | 75 | 48 |
| 100457 | 16 | 570 | 92 | 64 |
| 100458 | 16 | 690 | 118 | 64 |
| 100459 | 16 | 830 | 143 | 64 |
| 100460 | 20 | 930 | 174 | 140 |



The tilt-up of slabs can lead to simultaneous diagonal and lateral tension. Those cases request only lateral reinforcement and cover cases of diagonal tension as well.

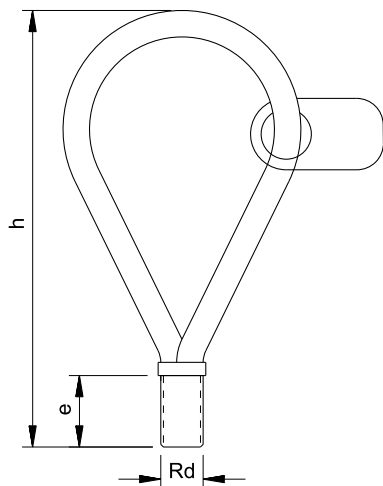
If the unit is repeatedly tilted up or down during installation, lateral reinforcement must be considered.



Lifting Loops

Lifting loops can be used with lifting sockets. When using lifting loops, the present instruction for use must be taken into account in addition to instructions for the installation and use of lifting sockets.
Lifting loops are available with Rd thread.

Load Bearing Capacity and Dimensions



| Reference | Rd Thread | Load Bearing Capacity [kg] 0 - 45° | h [mm] | e [mm] |
|-----------|-----------|---------------------------------------|-----------|-----------|
| 100432 | Rd 12 | 500 | 155 | 22 |
| 100433 | Rd 14 | 800 | 155 | 25 |
| 100434 | Rd 16 | 1,200 | 165 | 27 |
| 100435 | Rd 18 | 1,600 | 190 | 34 |
| 100436 | Rd 20 | 2,000 | 215 | 35 |
| 100437 | Rd 24 | 2,500 | 255 | 44 |
| 100438 | Rd 30 | 4,000 | 300 | 55 |
| 100439 | Rd 36 | 6,300 | 360 | 68 |
| 100440 | Rd 42 | 8,000 | 425 | 75 |
| 100441 | Rd 52 | 12,500 | 530 | 95 |

Lifting loops consist of a special steel wire rope in galvanized quality. Threaded components are made of bright precision steel.

When in use, the following things must be taken into account:

- Lateral tension of lifting loop is inadmissible. Only axial tension or diagonal tension up to 45° is permissible.
- Threads must be totally driven in.
- Clean dirty threads of transport anchors and lifting loops.

In case of lateral tension, which is inadmissible for lifting loops, we recommend using Special Lifting Devices.

As any other lifting equipment, lifting loops must be inspected once a year by an expert.

To prevent a premature state of wear, the vertical curve radius of the load hooks must be at least the same as the wire diameter of the lifting loop.

Special Lifting Devices can be used with lifting sockets. When using this Special Lifting Device, the present instruction for use must be taken into account in addition to instructions for the installation and use of lifting sockets.

Special Lifting Devices are available with Rd thread.

Load Bearing Capacity and Dimensions

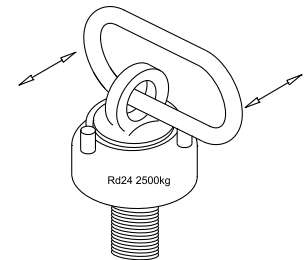
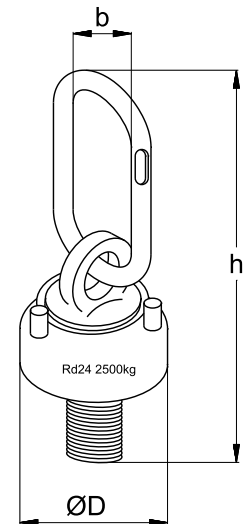
| Reference | Rd Thread | Load Bearing Capacity [kg] 0 - 90° | ØD [mm] | h [mm] | b [mm] |
|-----------|-----------|---------------------------------------|------------|-----------|-----------|
| 100476 | 12 | 500 | 47 | 125 | 35 |
| 100477 | 14 | 800 | 52 | 126 | 35 |
| 100478 | 16 | 1,200 | 56 | 151 | 35 |
| 100479 | 18 | 1,600 | 59 | 152 | 60 |
| 100480 | 20 | 2,000 | 70 | 158 | 60 |
| 100481 | 24 | 2,500 | 74 | 187 | 75 |
| 100482 | 30 | 4,000 | 90 | 219 | 90 |
| 100483 | 36 | 6,300 | 101 | 255 | 100 |
| 100484 | 42 | 8,000 | 110 | 256 | 100 |
| 100485 | 52 | 12,500 | 130 | 344 | 140 |

Special Lifting Devices are especially suitable for lateral and diagonal tension and are therefore particularly convenient for tilting up flat manufactured panels.

Special Lifting Devices must be driven in a way which ensures that the bottom plate has throughout contact with the concrete surface. This is particularly important because, on lifting the Special Lifting Device, a deviation is initiated and spalling is largely prevented. This way, bending and damage to the thread can be avoided.

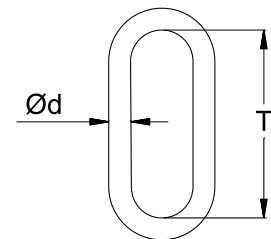
The Special Lifting Device can be used like a conventional screw and can be driven in or out of the threaded insert. The chainlink can be used to tighten or loosen the Special Lifting Device. It must be pulled through the chainlink and its recesses fit the three pins located at the circumference of the Special Lifting Device.

This efficient lever arm enables convenient tightening and removing without any tool.



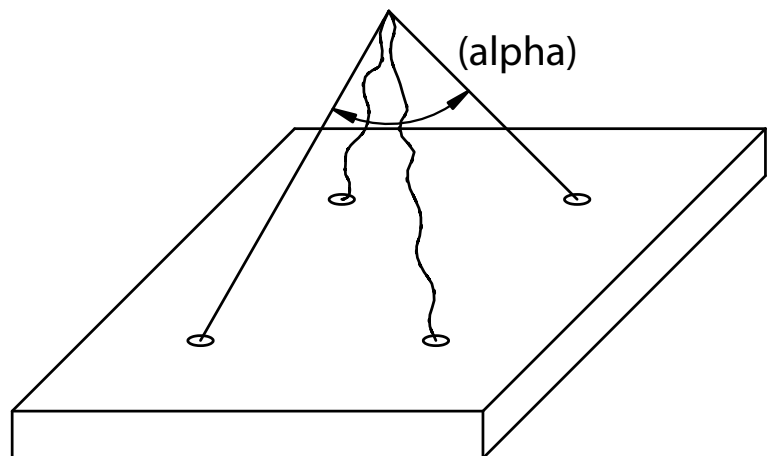
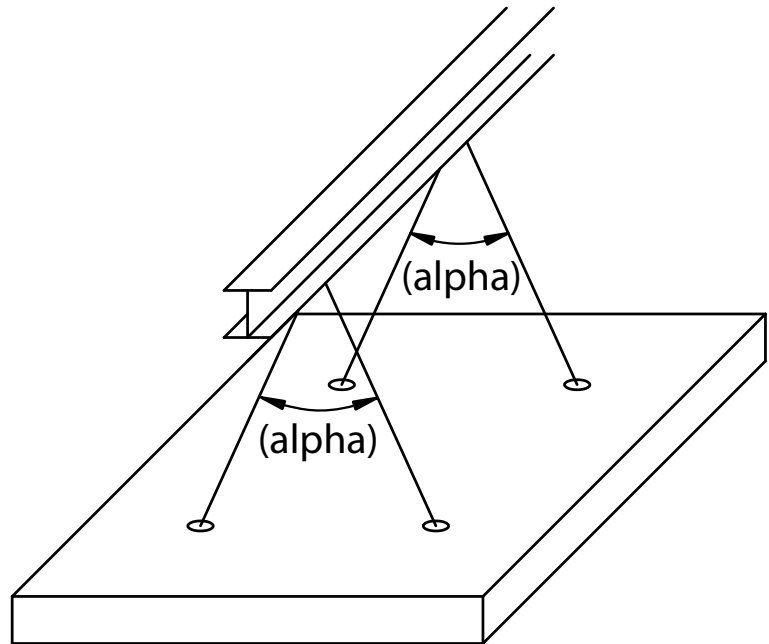
Ring Dimensions

| Reference | Load bearing capacity [kg] 0 - 90° | Ød [mm] | T [mm] | $T_{max} = 1.05 \times T$ [mm] |
|-----------|---------------------------------------|------------|-----------|-----------------------------------|
| 100476 | 500 | 10 | 85 | 89 |
| 100477 | 800 | 10 | 85 | 89 |
| 100478 | 1,200 | 10 | 110 | 116 |
| 100479 | 1,600 | 16 | 95 | 100 |
| 100480 | 2,000 | 16 | 102 | 107 |
| 100481 | 2,500 | 18 | 125 | 131 |
| 100482 | 4,000 | 22 | 148 | 155 |
| 100483 | 6,300 | 26 | 160 | 168 |
| 100484 | 8,000 | 26 | 160 | 168 |
| 100485 | 12,500 | 36 | 220 | 231 |



As any other lifting equipment, lifting loops must be inspected once a year by an expert.

Calculation of Actions on Lifting Inserts



The forces acting on a lifting insert should be calculated taking into account:

- The precast unit weight.
- The adhesion to the mould.
- The lifting machinery (dynamic coefficient).
- The sling angle.
- The number and position of inserts (number of efficient points).

Precast unit weight

The weight to lift has to be calculated taking into consideration the weight of the precast element, but also all the other parts lifted with the precast unit (formworks, preassembled parts).

Actions from adhesion to the mould

Adhesion and form friction will occur when the precast element is removed from the formwork. For practical reasons, the two effects are combined in one value designated q_{adh} . The values for q_{adh} given in the table below may be considered.

| Formwork and Condition | q_{adh} |
|---|---------------------|
| Oiled steel mould, oiled plastic coated plywood | 1 kN/m ² |
| Varnished wooden mould | 2 kN/m ² |
| Rough wooden mould | 3 kN/m ² |

The area to be used in calculations is the total contact area between the concrete and the form. For some types of uneven form surfaces (structured matrixes, reliefs, structured timber etc.), forces may be much larger than given in the table, and should be considered separately. Force may be zero if the concrete does not come in contact with the form at all, for example if the concrete is poured on a layer of bricks that has been laid out on the form bottom. Large vertical form surfaces may create extensive friction forces due to undulations in the form. Prestressed components will usually have a camber caused by the prestressing force, and will therefore have lower friction against the vertical sides of the form.

Dynamic Actions

During lifting and handling, lifting devices are subjected to dynamic actions. The magnitude of the dynamic actions depends on the type of lifting machinery. Dynamic effects should be taken into account by the dynamic coefficient ψ_{dyn} provided in the table below.

| Lifting Machinery | Dynamic Coefficient (ψ_{dyn}) |
|---|--------------------------------------|
| Stationary crane, rail-mounted crane, speed < 1 m/s | 1.15 |
| Stationary crane, rail-mounted crane, speed > 1 m/s | 1.30 |
| Bridge crane, speed < 1 m/s | 1.15 |
| Bridge crane, speed > 1 m/s | 1.60 |
| Lifting and moving on flat terrain | 2 |
| Lifting and moving on rough terrain | 4 |

Dynamic influences that are not covered in this table should be subject to special provisions or the judgment of engineers.

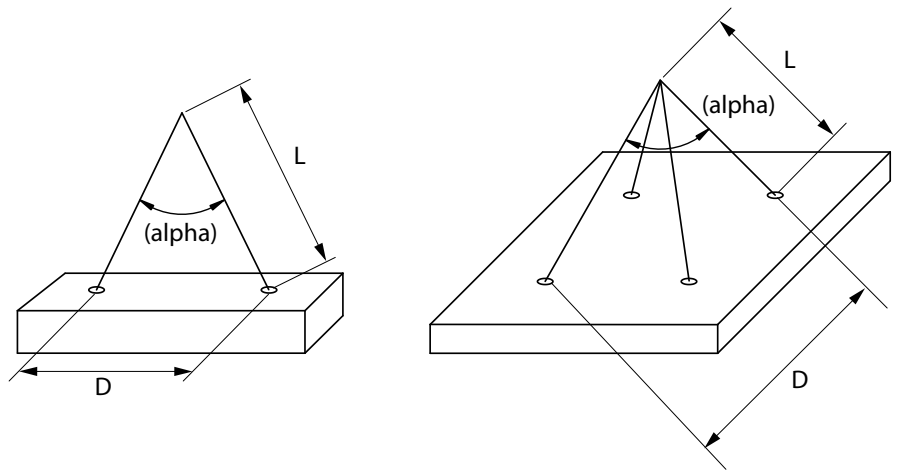
Calculation of Actions on Lifting Inserts

Sling Angle

If the ropes, chains or slings are not perfectly vertical when lifting, this will create a sling coefficient provided in the table below, depending on the angle α which is the angle at the top of the slings.

| Angle α | Sling Length L | Sling Coefficient (i_{sling}) |
|----------------|----------------|--|
| 0° | - | 1 |
| 30° | 2 D | 1.04 |
| 45° | 1.3 D | 1.08 |
| 60° | D | 1.16 |
| 90° | 0.7 D | 1.42 |
| 120° | 0.6 D | 2 |

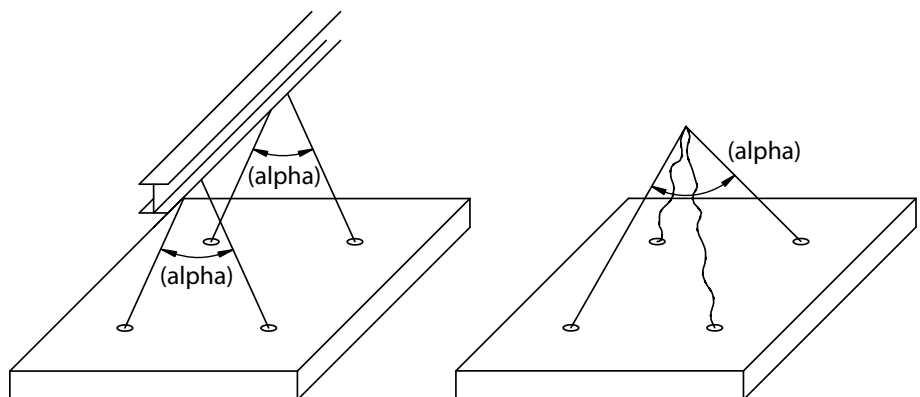
With D = distance between 2 opposite lifting inserts



Number of Efficient Lifting Points

In most cases, in a statically indeterminate system, the load distribution on inserts depends on the unknown stiffness of the ropes and the inserts itself. Therefore in most cases, a maximum of 2 efficient lifting points should be used in the calculation of the actions on inserts.

The number of efficient points should only be equal to the total number of lifting points if suitable means such as beams ensure that the load is equally distributed on all lifting inserts.



4 efficient points

2 efficient points

Calculation of actions on lifting inserts

The actions, E_d , should be determined from Equation

$$E_d = \frac{(G + q_{adh} \cdot A_f) \times \psi_{dyn} \times \psi_{sling}}{N_{eff}}$$

with:

- G = weight of the precast concrete element (kN)
- q_{adh} = mould adhesion (kN/m²)
- A_f = form area in contact with concrete (m²)
- ψ_{dyn} = dynamic coefficient
- ψ_{sling} = sling coefficient
- N_{eff} = number of efficient lifting points

Conclusion and other considerations

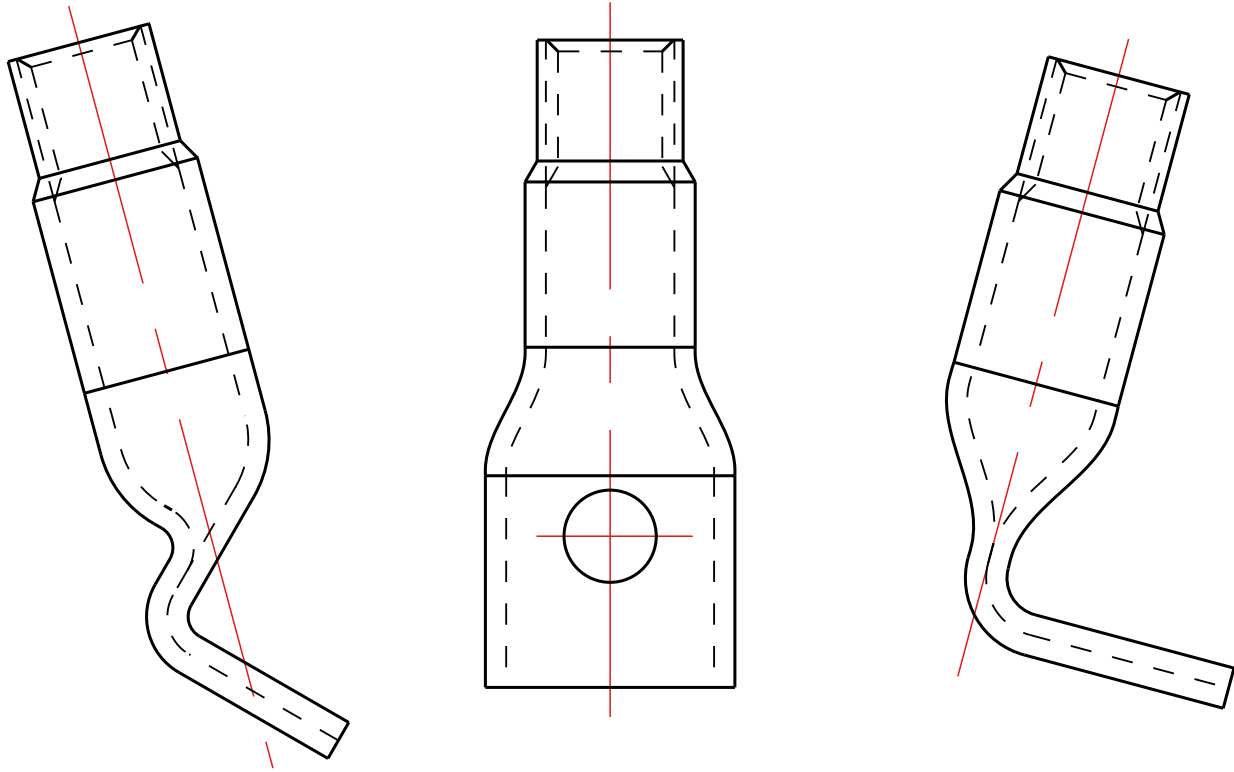
The Safe Working Load of the lifting insert must be higher than E_d .

In some cases, it can be necessary to calculate the action on inserts at different stages of the life of a precast unit (at the precast factory and on site for example).

The concrete strength needs to be clearly defined when lifting at the precast factory and on site to select and design the type and the size of the inserts.

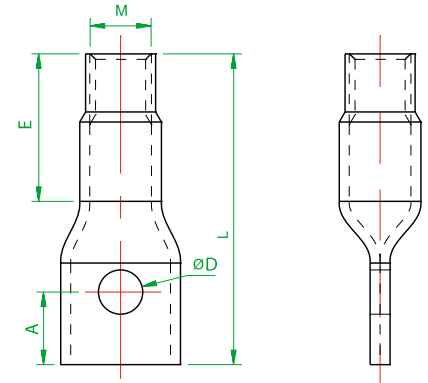
The load capacity of the anchorage (concrete failure and steel failure) has to be checked by qualified people.

Fixing System with Sockets

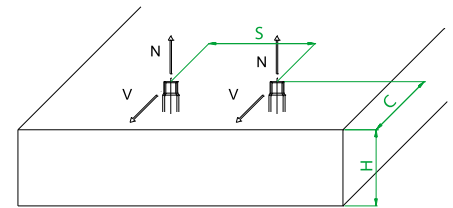


Fixing Socket with Cross Hole

| Reference | Thread x L | A [mm] | ØD [mm] | E [mm] | F [daN] |
|-----------|------------|-----------|------------|-----------|------------|
| 102302 | M6 x 35 | 8.5 | 6.2 | 15 | 120 |
| 102306 | M8 x 40 | 8.5 | 8.2 | 15 | 200 |
| 102310 | M10 x 50 | 11 | 8.2 | 20 | 350 |
| 102313 | M12 x 60 | 15 | 10.2 | 25 | 500 |
| 102319 | M16 x 70 | 20 | 12.2 | 25 | 700 |
| 102317 | M16 x 100 | 20 | 12.2 | 45 | 1,000 |
| 102322 | M20 x 100 | 27 | 14.2 | 40 | 1,250 |
| 102326 | M24 x 120 | 30 | 14.2 | 50 | 1,800 |
| 102328 | M30 x 150 | 38 | 17.2 | 65 | 2,750 |



| Reference | Thread x L | C _N [mm] | C _V [mm] | S [mm] | H [mm] |
|-----------|------------|------------------------|------------------------|-----------|-----------|
| 102302 | M6 x 35 | 55 | 70 | 105 | 80 |
| 102306 | M8 x 40 | 60 | 80 | 120 | 95 |
| 102310 | M10 x 50 | 75 | 100 | 150 | 85 |
| 102313 | M12 x 60 | 90 | 120 | 180 | 125 |
| 102319 | M16 x 70 | 105 | 140 | 210 | 95 |
| 102317 | M16 x 100 | 150 | 200 | 300 | 130 |
| 102322 | M20 x 100 | 150 | 200 | 300 | 125 |
| 102326 | M24 x 120 | 180 | 240 | 360 | 155 |
| 102328 | M30 x 150 | 225 | 300 | 450 | 175 |



Fixing sockets with cross hole are not self-anchoring sockets.

The largest bar diameter must be chosen that passes through the cross hole ØD.

The bar must be a ribbed reinforcement bar grade FeE500 with a length of 9 times the diameter.

Fixing sockets must not be used for lifting but exclusively for fixing.

Fixing sockets are electro-galvanised and bichromated.

Permissible loads F are defined for a concrete compressive strength of 25MPa.

To avoid premature failure of the socket by blow-out of the concrete, the socket has to be placed with minimum distances from the edge and between sockets.

For straight pulling N, the minimum edge distance is C_N and the minimum distance between 2 sockets is S.

For shear force V, the minimum edge distance is C_V and the minimum distance between 2 sockets is S.

The minimum thickness of the panel should be H (minimum concrete cover of 25mm).

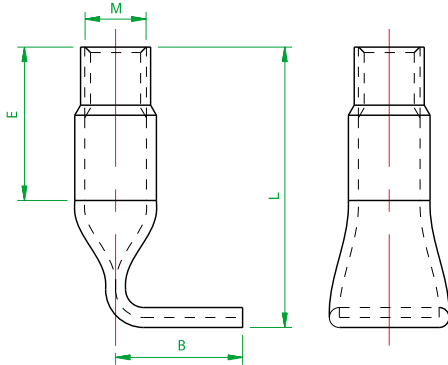
When the force is a combination of shear force V and straight pull N, the permissible load F should respect the following formula:

$$\sqrt{V^2 + N^2} \leq \text{perm.F}$$

Fixing sockets must be used with metric thread screw. They must be screwed on at least one time the diameter and no more than E.

Fixing Socket with Bent End

Fixing Socket with Bent End



| Reference | Thread x L | E [mm] | B [mm] | F [daN] |
|-----------|------------|-----------|-----------|------------|
| 102269 | M8 x 35 | 15 | 25 | 180 |
| 102270 | M8 x 45 | 15 | 25 | 230 |
| 102272 | M10 x 40 | 15 | 25 | 240 |
| 102273 | M10 x 60 | 30 | 25 | 400 |
| 102274 | M12 x 45 | 25 | 25 | 350 |
| 102276 | M12 x 70 | 40 | 25 | 600 |
| 102278 | M16 x 60 | 25 | 35 | 600 |
| 102280 | M16 x 100 | 45 | 35 | 1,000 |
| 102282 | M20 x 70 | 30 | 35 | 1,000 |
| 102283 | M20 x 100 | 45 | 35 | 1,250 |

| Reference | Thread x L | C _N [mm] | C _V [mm] | S [mm] | H [mm] |
|-----------|------------|------------------------|------------------------|-----------|-----------|
| 102269 | M8 x 35 | 55 | 70 | 105 | 60 |
| 102270 | M8 x 45 | 70 | 90 | 135 | 70 |
| 102272 | M10 x 40 | 60 | 80 | 120 | 65 |
| 102273 | M10 x 60 | 90 | 120 | 180 | 85 |
| 102274 | M12 x 45 | 70 | 90 | 135 | 70 |
| 102276 | M12 x 70 | 105 | 140 | 210 | 95 |
| 102278 | M16 x 60 | 90 | 120 | 180 | 85 |
| 102280 | M16 x 100 | 150 | 200 | 300 | 125 |
| 102282 | M20 x 70 | 105 | 140 | 210 | 95 |
| 102283 | M20 x 100 | 150 | 200 | 300 | 125 |

Fixing sockets with bent end are self-anchoring sockets.

Fixing sockets must not be used for lifting but exclusively for fixing.
Fixing sockets consist of dichromate zinc plated steel.

Permissible loads F are defined for a concrete compressive strength of 25MPa.

To avoid premature failure of the socket by blow-out of the concrete, the socket has to be placed with minimum distances from the edge and between sockets.

For straight pulling N, the minimum edge distance is C_N and the minimum distance between 2 sockets is S.

For shear force V, the minimum edge distance is C_V and the minimum distance between 2 sockets is S.

The minimum thickness of the panel should be H (minimum concrete cover of 25 mm).

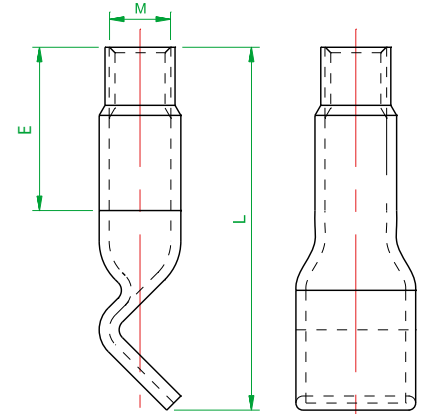
When the force is a combination of shear force V and straight pull N, the permissible load F should respect the following formula:

$$\sqrt{V^2 + N^2} \leq \text{perm.F}$$

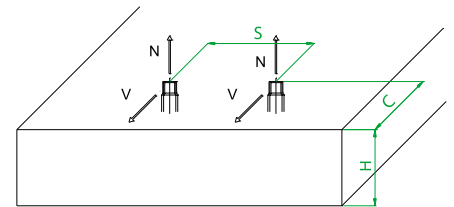
Fixing sockets must be used with metric thread screw. They must be screwed on at least one time the diameter and no more than E.

Fixing Socket with Waved End

| Reference | Thread x L | E [mm] | F [daN] |
|------------|------------|-----------|------------|
| 102329 | M6 x 30 | 10 | 80 |
| On request | M6 x 50 | 30 | 150 |
| 102330 | M8 x 40 | 15 | 200 |
| 102331 | M8 x 50 | 20 | 250 |
| On request | M10 x 40 | 15 | 300 |
| 102332 | M10 x 50 | 20 | 350 |
| 102334 | M12 x 60 | 25 | 500 |
| 102338 | M16 x 100 | 45 | 1,000 |
| On request | M20 x 100 | 65 | 1,250 |



| Reference | Thread x L | C _N [mm] | C _V [mm] | S [mm] | H [mm] |
|------------|------------|------------------------|------------------------|-----------|-----------|
| 102329 | M6 x 30 | 45 | 60 | 90 | 55 |
| On request | M6 x 50 | 75 | 100 | 150 | 75 |
| 102330 | M8 x 40 | 60 | 80 | 120 | 65 |
| 102331 | M8 x 50 | 75 | 100 | 150 | 75 |
| On request | M10 x 40 | 60 | 80 | 120 | 65 |
| 102332 | M10 x 50 | 75 | 100 | 150 | 75 |
| 102334 | M12 x 60 | 90 | 120 | 180 | 85 |
| 102338 | M16 x 100 | 150 | 200 | 300 | 125 |
| On request | M20 x 100 | 150 | 200 | 300 | 125 |



Fixing sockets with waved end are self-anchoring sockets.

Fixing sockets must not be used for lifting but exclusively for fixing.
Fixing sockets consist of dichromate zinc plated steel.

Permissible loads F are defined for a concrete compressive strength of 25MPa.

To avoid premature failure of the socket by blow-out of the concrete, the socket has to be placed with minimum distances from the edge and between sockets.
For straight pulling N, the minimum edge distance is C_N and the minimum distance between 2 sockets is S.
For shear force V, the minimum edge distance is C_V and the minimum distance between 2 sockets is S.
The minimum thickness of the panel should be H (minimum concrete cover of 25mm).

When the force is a combination of shear force V and straight pull N, the permissible load F should respect the following formula:

$$\sqrt{V^2 + N^2} \leq \text{perm.F}$$

Fixing sockets must be used with metric thread screw. They must be screwed on at least one time the diameter and no more than E.



| | |
|--|--|
| <p>In accordance with the decree No. 95-354 coordinates of the certification body</p> <p>AFNOR CERTIFICATION 11 avenue Francis de Pressensé 93571 Saint-Denis La Plaine Cedex, France</p> | <p>Repository certification mark "Special products for hydraulic concrete structures" Identification No. NF 030 www.marque-nf.com</p> <p>Certification standard for the brand "Admixtures for concrete, mortars and grouts – curing compounds" Identification No. NF 085 www.cerib.com An updated list of products TECHNIQUE BETON holders marked "Admixtures for concrete, mortars and grouts – curing compounds", is available from our sales team.</p> <p>NF</p> <p>The CE marking is a regulatory requirement for the free movement of goods within the European space. TECHNIQUE BETON products ranges repair, surface protection, anchoring and flooring are CE marked.</p> <p>CE</p> <p>NF</p> |
|--|--|



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Products made in the European Union

The range of products presented in this brochure may be changed without prior notice. Please do not hesitate to contact our sales department.
The information contained herein is based on our current knowledge and is provided for information purposes only. We cannot be held liable in any circumstances if our products are used for non-compliant or inappropriate uses.

Mould Release Agents

Mould release agents are products intended to be applied on the surfaces of moulds and formworks to facilitate form stripping of concrete elements by reducing the adhesion between the various elements.

Consumption

The consumption of oils is very variable and depends on numerous factors:

- The composition of the product.
- The type of formwork, its porosity and absorbent nature.
- The surface condition of the mould: a rough surface requires more product than a smooth surface.
- Demoulding time.
- The shape of the formwork.

Application

The product must be applied in very thin coats. If applied by spray, it is very important to use suitable application devices, equipped with nozzles and filters to eliminate any impurities. In all cases, the film applied should not be too thick. The principal consequences are:

- Retarded setting.
- Concrete stains and shade differences.
- Bug holes.
- Poor adhesion of any coatings applied later.

Advice: Remove excess release agent. Excess affects efficiency.

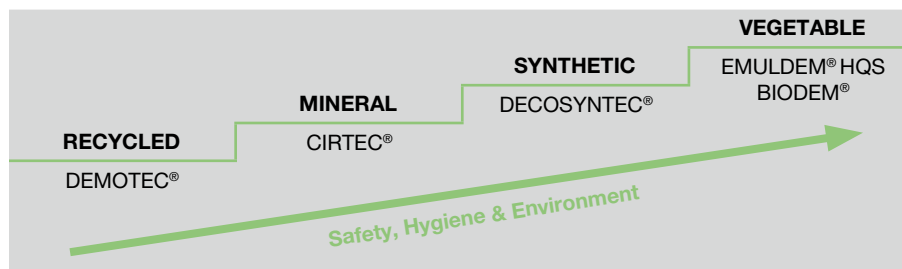
Choosing the type of mould release agent

| | Recycled | Mineral | Synthetic | Vegetable |
|-----------------------------|----------|---------|-----------|-----------|
| Concrete drop height | | | | |
| Standard | 4 | 4 | 4 | 4 |
| High | 3 | 3 | 5 | 4 |
| Temperature | | | | |
| < 5°C | 3 | 3 | 5 | 2 |
| From 5 to 30°C | 3 | 3 | 5 | 5 |
| > 30°C | 3 | 3 | 5 | 2 |
| Type of formwork | | | | |
| Wood | 5 | 5 | 3 | 3 |
| Metal | 4 | 4 | 5 | 5 |
| PU matrix | 0 | 0 | 2 | 3 |
| Type of shuttering | | | | |
| Used | 3 | 3 | 5 | 5 |
| New | 3 | 3 | 5 | 5 |

Between 0 and 2: Avoid or not very suited

Between 3 and 5: To be used, increasingly high performance

TECHNIQUE BETON classifies its products according to their nature to assist customers in their hygiene, safety and environment approach.



Formwork accessories and anchors must be oiled to facilitate stripping.



Mould Release Agents

| Code | Name | Color | Consumption | Properties |
|------|------|-------|-------------|------------|
|------|------|-------|-------------|------------|

Delayed mould release – Vegetable



| | | | | |
|--|---|---------------------|---|--|
| 912297 912147 912146 912386 912387 912388 | EMULDEM® HQS CONCENTRE 1,000l containers (H) 215l drums (H) 30l jerrycans (H) 1,000l containers (E) 215l drums (E) 30l jerrycans (E) | Pale yellow liquid | - 80 m ² per liter of diluted product. - By spray, with a minimum pressure of 2bars | Vegetable oil emulsion in water. VOCs free. - Excellent concrete surface quality. - Biodegradable. - Odorless. - For temperatures: • > -5°C: EMULDEM® HQS CONCENTRE (H). • > 5°C: EMULDEM® HQS CONCENTRE (E). Product to be diluted with water. Refer to TDS. |
| 910976 910977 910978 909425 909426 909427 | BIODER® PV 1,000l containers (H) 215l drums (H) 30l jerrycans (H) 1,000l containers (E) 215l drums (E) 30l jerrycans (E) | Straw yellow liquid | - 30 to 35m ² per liter. - By spray, with a minimum pressure of 5bars, or with a cloth. | Pure vegetable. - Results in very high quality facings. - Does not stain. - Biodegradable. • Temperature < 8°C: BIODER® PV (H). • Temperature > 8°C: BIODER® PV (E). |
| 909408 909410 909412 | BIODER® SI 1 1,000l containers 215l drums 30l jerrycans | Dark yellow liquid | - 40 to 50m ² per liter. - By spray or with a cloth. | Vegetable based. - Results in very high quality facings. - Does not stain. - Biodegradable. • Use BIODER® SI2 for temperature < 5°C. |
| 912112 912148 912149 | NEOBIO 1,000l containers 215l drums 30l jerrycans | Dark yellow liquid | - 40 to 50m ² per liter. - By spray or with a cloth. | Vegetable based. - Good quality facings. - Does not stain. |

Delayed Mould Release – Synthetic

| | | | | |
|----------------------------|---|------------------------------|--|---|
| 912212 912211 912213 | EMULDEM® CS 1,000l containers 215l drums 30l jerrycans | White liquid | - 70 to 100m ² per liter. - By spray or with a cloth. | Synthetic oil to be diluted with water. VOCs free. - Excellent concrete surface quality: uniform shade and glazed finish. - Odorless. |
| 910900 910890 910916 | DECOSYNTEC® 2005 1,000l containers 215l drums 30l jerrycans | Light yellow to amber liquid | - 35m ² per liter. - By spray, with a minimum pressure of 4 bars, or with a cloth. | Pure synthetic. VOCs free. For difficult form removals. - Very good water resistance. - High flash point. - Corrosion protection. - Does not stain – Abrasion resistant. |
| 909351 909352 909356 | DECOSYNTEC® 2003 1,000l containers 215l drums 30l jerrycans | Light yellow to amber liquid | - 40m ² per liter. - By spray or with a cloth. | For neat or difficult form removals and new shuttering. - Good water resistance. - Improves the appearance of facings. - Corrosion protection. - Does not stain – Abrasion resistance. |
| 909309 909310 909315 | DECOSYNTEC® 2000 1,000l containers 215l drums 30l jerrycans | Light yellow to amber liquid | - 35 to 40m ² per liter. - By spray or with a cloth. | Ensures formworks are kept clean. - Improves the appearance of facings. - Does not stain. - Corrosion protection. |

| | Shuttered Concrete | Prestressed Concrete | Shuttering Floor Slabs | Civil Engineering (Tunnels) | Architectonic Concrete | White Concrete | Very High Cast Walls | Self Compacting Concrete | Elastomeric Moulds Plaster Industry |
|-------------------|--------------------|----------------------|------------------------|-----------------------------|------------------------|----------------|----------------------|--------------------------|-------------------------------------|
| Application Areas | | | | | | | | | |
| | • | | • | • | • | • | | | • |
| | • | • | | • | • | • | | | |
| | • | • | | • | • | • | | • | |
| | • | • | | • | • | | | | • |
| | • | • | | • | • | • | | | |
| | • | | | • | • | • | • | • | |
| | • | • | • | • | • | • | | | |



| |
|--------------------------|
| Self Compacting Concrete |
| Fluted Concrete |
| Colored Concrete |
| White Concrete |
| Civil Engineering |
| Architectonic Concrete |
| Prestressed Concrete |
| Shuttered Concrete |

| Code | Name | Consumption | Nature | Application Areas | | | | | | | |
|------|------|-------------|--------|-------------------|--|--|--|--|--|--|--|
|------|------|-------------|--------|-------------------|--|--|--|--|--|--|--|

Delayed Mould Release



| | | | | | | | | | | | |
|----------------------------|---|-------------------------|---------------------|---|---|---|---|---|---|---|---|
| 909437 | CIRTEC® 30l kegs | 30 to 40m² per liter | Wax New mineral | | | • | • | • | • | • | • |
| 909111 909113 909118 | DEMOTEC® 200 1,000l containers 215l drums 30l jerrycans | 35 to 40m² per liter | Recycled mineral | • | • | • | | | | | |

Immediate Mould Release



| | | | | | | | | | | | |
|----------------------------|--|-------------------------|--------------------|---|--|--|--|--|--|--|--|
| 909365 909366 909367 | DECOSYNTEC® V2004 1,000l containers 215l drums 30l jerrycans | 40 to 50m² per liter | Vegetable based | <ul style="list-style-type: none"> - Enclosure elements (posts, plates). - Light prefabrication (edges, agglomerates, etc.). - In general, any immediate mould release concrete. | | | | | | | |
|----------------------------|--|-------------------------|--------------------|---|--|--|--|--|--|--|--|

Equipment



| | |
|--------|---|
| 911859 | METAL SPRAY APPLICATOR: 6LT WITH FLAT FAN NOZZLE |
| 912323 | METAL SPRAY APPLICATOR: 6LT WITH ROTATING NOZZLE |
| 906347 | METAL SPRAY APPLICATOR: 10LT |

Our Mortars

- Are carefully controlled, thus guaranteeing security.
- Are predosed and of constant composition, thus guaranteeing regularity and quality.
- No on-site supply and storage of components necessary.
- Enable time savings in the case of work that needs to be carried out quickly.

Adapted to Different Configurations

- With different shades: from dark grey, grey, light grey, to white.
- With different application thicknesses ranging from 1mm to 60mm.
- With different setting times: rapid or normal.
- Single component product: mix with water or two component product: mix with the resin supplied.

4 Major Product Families

- Finishing coat pastes and mortars.
- Anchoring and grouting mortars.
- Repair mortars.
- Tanking mortars.

Recognition and Substrate Preparation

Before applying a hydraulic mortar, ensure that the carrier is:

- Compatible with the mortar to be applied.
- Dusted and cleaned of all loose material.
- Sound and sufficient cohesion (depends on the application and mortar).
- Clean, free from traces of grease and unfrozen.
- Rough or roughened if necessary.
- Moistened with refusal but without puddles.
- Covered by a suitable primer if necessary (see page 122, Concrete bonding agents).



TECHNIQUE BETON's product range corresponds to market trends in terms of health and environment through:

- Developing FDES* for repair, floor, anchoring and grouting mortars.
- Continuous improvement of existing products.
- Labeling health (VOC**).

* FDES: Fact environmental and health declaration

** VOC: Volatile Organic Compounds

Levelling Pastes and Mortars

| Code | Name | Consumption | Application |
|------|------|-------------|-------------|
|------|------|-------------|-------------|

Finishing Coat Pastes



| | | | |
|--------|---|---|--|
| 908569 | REJET CRYL® GROS 25kg buckets | <ul style="list-style-type: none"> - 0.8kg of pure paste per mm thickness and per m². - 1.6kg of paste mixed with cement per mm thickness and per m². | <ul style="list-style-type: none"> - Exterior and interior: Add 1/2 to 1 vol. cement for 1 vol. of Revet Cryl®. - Interior only: Add 1/2 to 1 vol. plaster for 1 vol. of Revet Cryl®. - Do not add water. - Mix until a smooth homogeneous paste is obtained. - Coat the substrate with a stainless steel spatula, trowel or plasterer's knife. |
| 908564 | REJET CRYL® FIN 25kg buckets | | |
| 908562 | 150kg drums | | |

Finishing Coat Mortars



| | | | |
|--------|---|---|--|
| 912141 | FINENDUIT® 20kg bags with handle | 1.9kg of mixed product per mm thickness and per m². | <ul style="list-style-type: none"> - Mix to the desired consistency with clear water (6 to 7.5l of water per 20kg of powder). - Leave the mixture to stand for 2min. - Do not apply to frozen substrates or if there is a risk of frost within 24h. |
| 908590 | FINIMUR® GROS 25kg bags | 1.7kg of mixed product per mm thickness and per m². | <ul style="list-style-type: none"> - Mix to the desired consistency with clear water (3.5 to 4l of water per 25 kg of powder). - Leave the mixture to stand for 2 min. - Do not apply to frozen substrates or if there is a risk of frost within 24h. |
| 908595 | Available in white. | | |
| 908582 | FINIMUR® FIN 25kg bags | | |
| 910763 | Available in dark grey, light grey and white. | 1.7kg of mixed product per mm thickness and per m². | <ul style="list-style-type: none"> - Mix to the desired consistency with clear water (3.8 to 4.4l of water per 25kg of powder). - Leave the mixture to stand for 2min. - Do not apply to frozen substrates or if there is a risk of frost within 24h. |
| 908584 | | | |
| 908588 | | | |



Ground levelling mortars



| | | | |
|-----------|---|---|--|
| CE 909553 | FINISOL® 25kg bags | 1.9kg of mixed product per m² and per mm thickness. | <ul style="list-style-type: none"> - Order of incorporation: water then powder. - Mix with clear water (3.9 to 4.2l of water per 25 kg of powder). - Apply Techna Acryl primer before applying FINISOL®. |
| CE 911655 | Available in rapid setting, FINISOL® R. | | |
| CE 909555 | FINISOL® FIN 25kg bags | 1.9kg of mixed product per m² and per mm thickness. | <ul style="list-style-type: none"> - Order of incorporation: water then powder. - Mix with clear water (4 to 4.3l of water per 25kg of powder). - Apply Techna Acryl primer before applying FINISOL® FIN. |

Floor Screeds



| | | | |
|-----------|--|---|--|
| CE 909560 | FINICHAPE® 25kg bags | 2kg of mixed product per m² and per mm thickness. | <ul style="list-style-type: none"> - Mix to the desired consistency with clear water (3 to 4l of water per 25kg of powder). - Apply onto rough concrete substrate after a thin layer of patching mortar. - Refer to the TDS for the preparation of the substrate. |
| CE 911444 | Available in self levelling mortar, FINICHAPE® AN. | | |

Primer for FINISOL Mortars



| Code | Name | Recommended Dose | Density at 20°C |
|------------------|--|---|-----------------|
| 908484 908487 | TECHNA ACRYL 215kg drums 30kg jerrycans | 160g/m² on average, depending on the substrate. | 1.05 |

Levelling Pastes and Mortars

| Pot Life of the Mixture at 20°C | Properties | Application Thickness | Application Areas |
|---------------------------------|------------|-----------------------|-------------------|
|---------------------------------|------------|-----------------------|-------------------|

| | | | |
|--|---|---------------|--|
| <ul style="list-style-type: none"> - With cement: 1h - With plaster: 20min | <ul style="list-style-type: none"> - Good adhesion, even on smooth substrate. - Eliminates air bubbles. - Very good workability. - No chalking. | From 4 to 8mm | <ul style="list-style-type: none"> - All general interior and exterior levelling jobs with additions of cement or plaster (interiors only). - Finishing. |
| | | From 0 to 4mm | |

| | | | |
|-----------|--|------------------------------|---|
| Around 2h | <ul style="list-style-type: none"> - Powder levelling; yields paste when mixed with water. | From 0 to 10mm in spot areas | <ul style="list-style-type: none"> - All general interior and exterior levelling jobs. - Finishing. |
| Around 2h | <ul style="list-style-type: none"> - Very quick and easy to apply. - Good adhesion to different substrates. | From 5 to 20mm in spot areas | <ul style="list-style-type: none"> - All interior and exterior levelling jobs. |
| Around 2h | <ul style="list-style-type: none"> - Very easy and quick to apply. - Very smooth finish. - Very good impact resistance. - Good adhesion to different substrates. | From 0 to 10mm in spot areas | <ul style="list-style-type: none"> - All general interior and exterior levelling jobs. - Finishing. |

| | | | |
|-------|---|----------------|--|
| 30min | <ul style="list-style-type: none"> - Self levelling mortar for new and existing interior and exterior floors. - Perfect finish: fine, regular appearance. - Very high self levelling power, thus avoiding the need for sanding. - Rapid drying, applied at 20°C: <ul style="list-style-type: none"> • Pedestrian traffic: 24 h. • Light vehicular traffic: 72 h. - Moderate to heavy traffic. | From 5 to 30mm | <ul style="list-style-type: none"> - Floor levelling jobs. - Suitable for the following floor coverings: parquets, plastic floor coverings, carpets, tiles, epoxy, PU or acrylic paints. |
| 30min | | From 2 to 20mm | <ul style="list-style-type: none"> - Floor levelling jobs. - Suitable for the following floor coverings: parquets, plastic floor coverings, carpets, tiles, epoxy, PU or acrylic paints. |

| | | | |
|-------|--|----------------|---|
| 30min | <ul style="list-style-type: none"> - New or existing interior and exterior floors. - Moderate to heavy traffic. - FINICHAPE®: Forms suitable for slopes. - FINICHAPE® AN: self levelling mortar. | From 5 to 50mm | <ul style="list-style-type: none"> - Ramps, slopes - FINICHAPE®. - Floor levelling - FINICHAPE® AN. - Balconies, terraces. - Toilets and bathrooms. - Manufacturing halls, sales rooms, distribution halls, workshops, garages, etc. - Running and circulation paths. |
|-------|--|----------------|---|

| Application | Properties |
|---|---|
| <ul style="list-style-type: none"> - The substrate should be clean, sound, free of dust and grease, not frozen and should be reasonably dry. - Apply a thin coat by spray, roller or brush. | <ul style="list-style-type: none"> - Acrylic primer for regulating the porosity of concrete substrates, thus creating a strong bonding interface before applying floor hydraulic mortar. - Primer for Finisol mortars. - Green liquid. |



Application of primer

Anchoring and Grouting Mortars

| Code | Name | Consumption | Pot Life of the Mixture at 20°C | Start => End of Setting at 20°C | Properties |
|------|------|-------------|---------------------------------|---------------------------------|------------|
|------|------|-------------|---------------------------------|---------------------------------|------------|

Hydraulic Anchoring and Grouting Mortar



| | | | | | |
|--------|------------------------------|--|-------|--|--|
| 909822 | CALSTAR® 25kg bags | 1 x 25kg bag + 3.5l of water yield 13.25l of slurry. | 1h 30 | <ul style="list-style-type: none"> - Fluid consistency: 8 h 15 => 11 h 35 - Setting time at 5°C: Fluid consistency: 18 h 00 => 22 h 10 | <ul style="list-style-type: none"> - Does not oxidise. Very high adhesion to concrete and steel. Very high fluidity. - Exceptional initial and final strength. - Resistance to seawater and to the high-sulphate water. - Grouting height: 1 to 10cm. For larger thickness contact us. - Compressive strength after 28 days at 20°C: 79MPa - plastic consistency. |
|--------|------------------------------|--|-------|--|--|

Hydraulic Anchoring Mortar



| | | | | | |
|--------|-----------------------------|--|----|---|---|
| 909774 | MASTAR® 25kg bags | 1 x 25kg bag + 5.6l of water yield 14.5l of slurry. 2 bags of 25kg maximum for each item. Possibility of adding aggregates in the case of larger volumes - refer to TDS. | 1h | <ul style="list-style-type: none"> - Very fluid consistency: 4 h 15 => 6 h 50 - Plastic consistency: 1 h 10 => 2 h 45 | <ul style="list-style-type: none"> - Does not oxidise. Very high adhesion to steel. Very high fluidity. - Exceptional initial and final strength. - Resistance to high-sulphate water. - Compressive strength after 28 days at 20°C: 75MPa - plastic consistency. |
|--------|-----------------------------|--|----|---|---|

Repair Mortars

| Code | Name | Consumption | Pot Life of the Mixture at 20°C | Application thickness | Properties |
|------|------|-------------|---------------------------------|-----------------------|------------|
|------|------|-------------|---------------------------------|-----------------------|------------|

Passivating Mortar

| | | | | | |
|--------|--|--|-------|------------------------|--|
| 909670 | RAVALCHOC® PROTECTOR AC 7kg kits | 1.5 to 1.8kg of mixed product per mm thickness and per m². | 30min | One layer. Around 1mm. | <ul style="list-style-type: none"> - With migrant corrosion inhibitors (MCI). - Very high adhesion to steel. - Passivating effect. - Waterproof and impermeable to corrosive agents. |
|--------|--|--|-------|------------------------|--|

Single Component Synthetic Fibre Reinforced Repair Mortar



| | | | | | |
|--------|--|---|-------|---|--|
| 909596 | FIBRALCHOC® 25kg bags Particle size: 0 to 1.6mm | 2kg of mixed product per mm thickness and per m². | 1h 30 | 5mm minimum up to 60mm in a single application. | <ul style="list-style-type: none"> - Class R4. - High adhesion. - Good impact and abrasion resistance. - High mechanical strength. - Thixotropic. |
| 909600 | Available in light grey. | | | | |
| 909598 | FIBRALCHOC® FIN 25kg bags Particle size: 0 to 0.5mm | 2kg of mixed product per mm thickness and per m². | 1h 30 | 2mm minimum up to 60mm in a single application. | |
| 909602 | Available in light grey. | | | | |

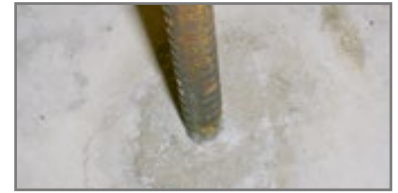
Two Component Synthetic Resin Repair Mortar



| | | | | | |
|----------------------------|--|--|----|---|--|
| 909467 | RAVALCHOC® 30kg kits Particle size: 0 to 1.6mm | 1.8 to 2kg of mixed product per mm thickness and per m². | 1h | 5mm minimum up to 30mm maximum in a single application. | <ul style="list-style-type: none"> - Excellent impact and abrasion resistance. Waterproof, good workability and handling characteristics. |
| 909483 909563 | Available in light grey and white. | | | | |
| 909502 | RAVALCHOC® 0/5 30kg kits Particle size: 0 to 0.5mm | 1.8 to 2kg of mixed product per mm thickness and per m². | 1h | 2mm minimum up to 30mm maximum in a single application. | |
| 909513 909576 912107 | Available in light grey, white and PMES (for sea water and high sulfate water exposure). | | | | |

Anchoring and Grouting Mortars

| Application between 5 and 35°C | Application Areas |
|--|--|
| <ul style="list-style-type: none"> - Grouting with fluid consistency: 3.85l of water for 25kg bag. - Horizontal anchoring with plastic consistency: 3.25l of water for 25kg bag. - Once the anchorings or the grouting have been completed, protect them from drying out too quickly by spraying them with PROTECSOL® GE08 curing compound. | <ul style="list-style-type: none"> - Grouting for precision machines, concrete or metal bearing plates, machine bases, bridge bearings, generators, compressors, ... - Anchoring of reinforcements in concrete, threaded rods (anchor bolts), columns. - Connection of prefabricated parts. |
| <ul style="list-style-type: none"> - Mix with clear water in a concrete mixer or with a drill equipped with a mixing blade: 3.6 to 5.6l depending on the desired consistency. - Once the anchorings have been completed, protect them from drying out too quickly by spraying them with PROTECSOL® GE08 curing compound. | <ul style="list-style-type: none"> - Anchoring of reinforcements in concrete, threaded rods (anchor bolts), columns. - Connection of prefabricated parts. |



Repair Mortars

| Application between 5 and 35°C | Application Areas |
|--|--|
| - | Render for the corrosion protection of reinforcement bars. |
| <ul style="list-style-type: none"> - Mix with clear water to the desired consistency (3.8 to 5l of water per 25kg of powder). Manual or mechanical application. - On rough or roughened substrates, dampen until no more water can be absorbed and eliminate any residual water. Store at ambient temperature in order to obtain a mixture at 20-25°C. | <p>All general repair work: beams, columns, lintels, nosing, civil engineering works.</p> |
| <ul style="list-style-type: none"> - Carefully mix the powder with the resin to the desired consistency (3.2 to 4.5l of resin per 25kg of powder). - Manual or mechanical application. - Dampen the substrate beforehand without leaving traces of water on the surface. | <ul style="list-style-type: none"> - All repair jobs subject to weathering, civil engineering works, motorways, concrete runways, staircase steps, unloading berths. - Suitable for industrial floors, floors resistant to oils and hydrocarbons, tank linings, cement slurries and filling of joints. |



| Code | Name | Properties | Application Areas | Pot Life of the Mixture at 20°C | Consumption of Mixed Product per mm Thickness and per m² |
|------|------|------------|-------------------|---------------------------------|--|
|------|------|------------|-------------------|---------------------------------|--|

Rapid Setting Repair of Concrete



| | | | | | |
|------------------|---|---|--|------------------------------------|---------------------------|
| CE 909519 | RAVALCHOC® PR 30kg kits Particle size: 0 to 1.6mm | <ul style="list-style-type: none"> - Waterproof, rapid setting. - Repair mortar. - Good adherence to most substrates. - Impact and abrasion resistant. - High mechanical strength even after a short time. - Thixotropic. - Two components. | <ul style="list-style-type: none"> - Repairs requiring short downtimes. - Reprofilling. - Nosing, beams, columns. - Unloading berths. - Fixing. - All repair work requiring short downtimes. | 12min | 2kg |
| CE 909610 | FIBRALCHOC® R 25kg bags Particle size: 0 to 1.6mm | <ul style="list-style-type: none"> - Fibre reinforced, rapid setting. - Repair mortar. - Good adherence to most substrates. - Impact and abrasion resistant. - Thixotropic. - Single component. | <ul style="list-style-type: none"> - Exterior or interior floors, walls and ceilings. - Repair and filling of spalling, nosing, holes, chases, corings, columns, banisters, cast walls, roof parapets, edge beams, repair of joint lips, beam angles. - Everyday fixing jobs: cleats, gudgeons. - All repair work requiring short downtimes. | 20 to 25min | 2kg |
| CE 911595 | FIBRALCHOC® FCR 25kg bags Particle size: 0 to 0.5mm Fine and light grey. | <ul style="list-style-type: none"> - Good resistance to aggressive types of water. - Rapid development of initial and final resistance (or strength) characteristics. - Subsequent compressive strength: 26MPa - Good adhesion on most substrates. - Single component. | <ul style="list-style-type: none"> - Repair of prefabricated parts, columns, beams. - Fixing and anchoring of street furniture. - All repair work requiring short downtimes. | 10 to 15min | 2.2kg |
| CE 909791 | STARFIX® 25kg bags Particle size: 0 to 1.6mm | <ul style="list-style-type: none"> - Ultra rapid version of STARFIX®. | <ul style="list-style-type: none"> - Shutter waterways. - Minor repairs and seals fast. | 3 to 5min | 2.2kg |
| 909799 | STARFIX® T3 25kg bags Particle size: 0 to 1.6mm | <ul style="list-style-type: none"> - Instantaneous setting accelerator. - Incorporated in the cement, enables virtually instantaneous setting. - Liquid. | <ul style="list-style-type: none"> - Shutter waterways. - Water proofing in general. - Fixing in water. - Accelerated mortars and renders. | Virtually instantaneous hardening. | Depending on type of use. |
| 908700 908702 | GUNIFLASH RAPIDEX 30kg jerrycans 6kg jerrycans | | | | |

Concrete Bonding Agent



| Code | Name | Properties | Application areas | Consumption |
|--------------------------------------|--|---|---|--|
| 909849 909850 909851 909848 | COPOX COLLE REPRISE 1kg kits 2kg kits 5kg kits 25kg kits | <ul style="list-style-type: none"> - Epoxy adhesive for concrete bonding. - Concrete bonding of fresh concrete on hardened concrete. - Bonding in humid environments. - Solvent free. - Two components. | <ul style="list-style-type: none"> - Concrete bonding. - Adhesion of floor screeds. - Concrete/concrete and concrete/steel bonding in humid environments. - Waterproof film coatings. - Non slip coating. - Protection of concrete and steel against chemical attacks - contact us. | <ul style="list-style-type: none"> - Concrete bonding: 0.5 to 0.8kg/m². - Bonding: 0.2kg/m². |
| 908492 908493 908500 908505 | TECHNALATEX® 1,000l containers 215l drums 30l jerrycans 5l jerrycans | <ul style="list-style-type: none"> - Adhesion promoting resin. - Incorporation into renders: Improves adhesion. - Improves mechanical strength. - Improves abrasion resistance. - Improves workability. - Improves waterproofing. - White liquid. - Aqueous phase - Protect from frost. | <ul style="list-style-type: none"> - Adhesion promoting slurries for cement, plaster and bonding mortars. - Screed mortars. - Repairs, reprofiling. - Concrete bonding. - Waterproofing renders. - Floor screeds. - Fixing mortars: masonry, tiling. - Adhesion primer. | <ul style="list-style-type: none"> - Floor screeds: 0.35 to 0.8kg per mm thickness and per m². - Primer: 0.15 to 0.2l per m². |
| 908542 908543 908548 908551 | TECHNALATEX® M High performance, concentrated version: 1,000l containers 215l drums 30l jerrycans 5l jerrycans | | | <ul style="list-style-type: none"> - Floor screeds: 0.32 to 0.4kg per mm thickness and per m². - Primer: 0.15 to 0.2l per m² (dilution 1/1). |

| Code | Name | Properties | Application Areas | Pot Life of the Mixture at 20°C | Consumption of Mixed Product per mm Thickness and per m ² |
|------|------|------------|-------------------|---------------------------------|--|
|------|------|------------|-------------------|---------------------------------|--|

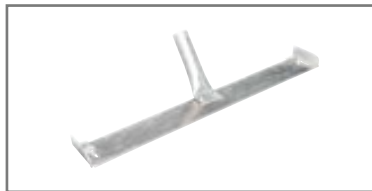
Waterproofing - Tanking

| | | | | | |
|-----------|---|---|--|---|---|
| CE 909970 | CORAL 25kg bags | <ul style="list-style-type: none"> - Good adherence to most substrates. - Effective waterproofing. - Gas exchanges to be maintained. - Single component. | <ul style="list-style-type: none"> - Impermeable bonding of concrete cones. - Basements and top of foundation. - Treatment of capillary percolation and rises. | 1h | 2kg At least 3mm thick in 2 crossed layers. |
| CE 909659 | RAVALCHOC® FLEXIBLE ETANCHE 23kg kits | <ul style="list-style-type: none"> - Tanking and protection mortar. - Two components. | <ul style="list-style-type: none"> - Tanking in general, horizontal and vertical: cellars, parking garages, galleries, tunnels, lift pits, etc. French SOCOTEC investigation. - Impermeable bonding of concrete cones. French CEBTP test. - Wall bases. | 45min to 1h | 2 to 3kg in 2 crossed layers. 1 to 2mm/coat. |
| CE 910008 | MINERALCHOC® 25kg bags | <ul style="list-style-type: none"> - Mineralization mortar. - Forms crystals in concrete pores. - Single component. | <ul style="list-style-type: none"> - Tanking in general, horizontal and vertical: cellars, parking garages, galleries, tunnels, lift pits, etc. French SOCOTEC investigation. | 30min | 2 to 3kg 2 layers |
| CE 909543 | RAVALCHOC AL® 30kg kits | <ul style="list-style-type: none"> - Tanking and repair floor mortar. - Self levelling. - Fluid self levelling product. - Exceptional adhesion to concrete. - High mechanical strength. - Water proof. - Moderate to heavy traffic. - Two components. | <ul style="list-style-type: none"> - Horizontal tanking in general: cellars, parking garages, galleries, tunnels, lift pits, etc. French SOCOTEC investigation. | Pedestrian traffic: 24h Light traffic: 48h Heavy traffic: 72h | 2kg |
| CE 909613 | Available in fine version: RAVALCHOC AL® 0/5 | | <ul style="list-style-type: none"> - Horizontal floor repairs: industrial floors, parking areas, balconies, paving, pits. | | |



Equipment

| | |
|--------|---|
| 907974 | SQUEEGEE |
| 911907 | BUBBLE REMOVING ROLLER WITH HANDLE |



Jointing Mortars

| Code | Name | Properties | Application Areas | Pot Life of the Mixture at 20°C | Consumption of Mixed Product per mm Thickness and per m ² |
|--------|----------------------------------|---|--|--|--|
| 912314 | FINIJOINT 20kg buckets | <ul style="list-style-type: none"> - Very good adhesion to substrates. - Good moisture resistance. - No dusting. <p>Paste ready for mixing with cement.</p> | <ul style="list-style-type: none"> - Precast double wall joints - Refilling of shuttering floor slab joints. - INTERIOR and EXTERIOR applications. | 1h | 1 bucket + cement = 230 linear meters of 1 cm by 1 cm joint. Joint width from 5 to 20mm |
| 909455 | DALFLEX 25kg bags | <ul style="list-style-type: none"> - Good adhesion to the substrate. - Good water retention to avoid desiccation phenomena. - No creep. - Single component. | <ul style="list-style-type: none"> - Refilling of shuttering floor slab joints. - Only suitable for interior applications. | 2 to 3h Depends on site conditions. | 1 bag + 12 liters of water = 250 linear meters of 1 cm by 1cm joint. |



For Modifying the Properties of Fresh and Hardened Concrete

| | Workability | Setting Time | Short Term Mechanical Strength (1 day) | Long Term Mechanical Strength (> 28 days) | Entrapped Air | Capillary Absorption | Frost Resistance of Hardened Concrete | Compactness |
|--|-------------|--------------|--|---|---------------|----------------------|---------------------------------------|-------------|
| For Modifying the Properties of Fresh Concrete | | | | | | | | |
| Water reducing agents | | | ↑ | ↑ | | ↓ | | ↑ |
| Plasticizer | ↑ | | | | | ↓ | | ↑ |
| Superplasticizer | ↑ | | ↑ | ↑ | | ↓ | | ↑ |
| For Modifying Setting and Hardening Times | | | | | | | | |
| Setting accelerators | | ↓ | ↑ | | | | | |
| Setting retarders | | ↑ | ↓ | ↑ | | | | |
| For Modifying the Properties of Hardened Concrete | | | | | | | | |
| Air entrainers | ↑ | | ↓ | ↓ | ↑ | | | ↑ |
| Waterproofing agents | | | | | | ↓↓ | | |

Entrapped air: quantity of air contained in concrete and/or mortar.

Capillary absorption: water absorption phenomenon due to the porosity of the concrete and/or mortar.

TECHNIQUE BETON Services:

In partnership with your jobsite, TECHNIQUE BETON develops concrete admixture formula according to your needs and customized for your components: cement, sand, gravel, ...

Working from the following elements – theoretical part:

- Description of the concrete parameters.
- Sending raw materials TDS.

And in a second time – practical part/tests on concrete thanks to:

- Sending samples of raw materials (cements, aggregates, ...).

TECHNIQUE BETON's Range of Admixtures

- Benefit from CE marking as per the EN 934-2 Standard.
- Our products are inter-compatible

It is possible to combine several admixtures to obtain the final desired characteristics.



| Code | Name | Application Areas | Recommended Dose |
|------|------|-------------------|------------------|
|------|------|-------------------|------------------|

Setting Accelerators



| | | | | |
|-------|----------------------------|--|--|---|
| CE NF | 908384 908386 908389 | TECHNIPRISE® 25 1,000l containers 316kg drums 30kg jerrycans | Chloride free. - Concreting in cold weather. - Ready mixed concrete. - Prestressed concrete. - Mortar. | 0.5 to 5% of the weight of cement. Normal dose: 2%. |
| | 908397 908398 908400 | TECHNADUR 1,000l containers 286kg drums 30kg jerrycans | Chloride free. - All types of concrete except for aluminous concrete. - Concreting in cold weather. - Ready mixed concrete. - Prestressed concrete. - Mortar. | 0.5 to 5% of the weight of cement. Normal dose: 2.5%. |
| | 908338 908342 908344 | CRD® 19 1,000l containers 215l drums 20l jerrycans | Contains chloride. - Accelerates mould turnaround and cuts steam curing times. - Form removal in cold weather. | 0.5 to 4% of the weight of cement. Normal dose: 2%. |

Setting Retarder

| | | | | |
|-------|----------------------------|--|---|---|
| CE NF | 908413 908418 908420 | ADDIFOR RETARD® 1,000l containers 270kg drums 30kg jerrycans | - Mass concrete. - Concreting in hot weather. - Concrete pumped over long distances. - Suitable for long transport distances. - Concrete bonding. - Piles and diaphragm walls. - Renders. | 0.2 to 2.2% of the weight of cement. Normal dose: 0.3%. |
|-------|----------------------------|--|---|---|

Super Plasticizers / High Water Reducing Agents

| | | | | |
|-------|----------------------------|--|---|--|
| CE NF | 908086 908087 908088 | ADDIFOR® 2005 1,000l containers 226kg drums 30kg jerrycans | - All types of concrete except for aluminous concrete. - Fibre reinforced, prestressed, ready mixed, high reinforcement density, pumped concrete. - Paving. - High performance concrete. | 0.6 to 1.2% of the weight of cement. Normal dose: 0.5%. Self Compacting Concrete: 0.8-0.9%. |
| CE NF | 908058 908060 908061 | ADDIFOR® 2001 1,000l containers 250kg drums 30kg jerrycans | - All types of concrete except for aluminous concrete. - Paving. - Fibre reinforced, ready mixed, sprayed, pumped, rapid application concrete. - High performance concrete. | 0.6 to 2.5% of the weight of cement. Normal dose: 0.8%. |

Plasticizers / Water Reducing Agents

| | | | | |
|----|----------------------------|--|---|---|
| CE | 912365 912366 912367 | ADDIFOR® 2015 1,000l containers 221kg drums 30.9kg jerrycans | - Increases concrete fluidity. - Improves mechanical strength. - Decreases capillary absorption. | 0.3 to 3% of the weight of cement. Normal dose: 1%. |
| CE | 908091 908092 908093 | ADDIFOR® 2005 LMO 1,000l containers 226kg drums 30kg jerrycans | - Concrete requiring long workability times. - All types of concrete except for aluminous concrete. - Prestressed, ready mixed, pumped, highly reinforced concrete. - Concreting in hot weather. - Pavings. - High performance concrete – SCC. | 0.4 to 1.4% of the weight of cement. Normal dose: 0.5%. Self Compacting Concrete: 0.8-0.9%. Maintenance of workability from 0.8%. |

Waterproofing Agent

| | | | | |
|-------|----------------------------|--|--|-------------------------------------|
| CE NF | 908833 908834 908838 | IMPER BETON 1,000l containers 219kg drums 30kg jerrycans | - Foundation concrete. - Foundation rafts. - Tank lining mortars. - Tanks, swimming pools, retention ponds. - Renders. - Concrete in aggressive environments. | 1 to 2% of the weight of cement. |
|-------|----------------------------|--|--|-------------------------------------|

| Incorporation | Density | Effects | | | | |
|---|---------|--------------------------|--------------|--|---|----------------------|
| | | Workability - Plasticity | Setting Time | Short Term Mechanical Strength (1 day) | Long Term Mechanical Strength (> 28 days) | Capillary Absorption |
| Incorporate into the mixing water at the start of mixing. | 1.47 | | +++ | ++ | Equivalent to concrete without admixture. | |
| Incorporate into the mixing water at the start of mixing. | 1.33 | | + | + | Equivalent to concrete without admixture. | |
| Incorporate into the mixing water at the start of mixing. | 1.38 | | +++ | ++ | ++ | |
| Incorporate into the mixing water. | 1.25 | + | -- | - | +++ | |
| Incorporate into the mixing water or add later. | 1.05 | ++ | | +++ | +++ | |
| Incorporate into the mixing water or add later. | 1.17 | ++ | | ++ | ++ | |
| Incorporate into the mixing water at the start of mixing. | 1.03 | ++ | | + | + | |
| Incorporate into the mixing water or add later. | 1.05 | +++ | | +++ | +++ | |
| Incorporate into the mixing water. | 1.02 | + | | | | +++ |

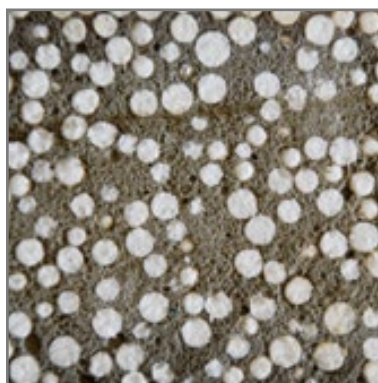


| Code | Name | Application Areas | Recommended Dose |
|------|------|-------------------|------------------|
|------|------|-------------------|------------------|

Others



| | | | |
|------------------|--|--|---------------------------------------|
| 908308 908310 | AIR BETON 217kg drums 30kg jerrycans | Bubbling agent, chloride free, entraps 2 to 5 % air in the concrete: - Frost resistant concrete, concrete used at high altitude. - Paving concrete – Airport runways. - Mortars and renders – Pumped concrete, easily pumped concrete. - Reduction of friction, easier application. - Ready mixed concrete. | 0.2 to 1% of the weight of cement. |
| 908682 908687 | ISOFOR 40kg kegs 4kg buckets | Additive for lightweight concrete and mortars - Production of lightweight concrete in Ready Mix Concrete plants or on site. - Renders – Renovation (screeds, filling). - Heat proofing and sound proofing repairs. | Concrete and mortars: 1 to 2kg/m³. |
| 910358 908682 | BETON PSE Beads, 500l bags ISOFOR 40kg kegs | Lightweight concrete - Flooring renovation and insulation. - Floating or bonded screeds. - Roofs – Frame walls. - Filling mortars – Sound proofing. - Lining of pipes – Light roadworks. | |
| 908437 908439 | MOSAR 226kg drums 30kg jerrycans | Additive for stabilised, lightweight and retarded mortars. - Mortars for laying bricks and breezeblocks. - Fresh mortars retarded from several hours to 48 hours. - Machine sprayed mortars, manually applied mortars, scraped renders. | 0.3 to 3% of the weight of cement. |



Curing Compounds

Cure: Essential for ensuring quality and durable concrete.

The spraying of curing creates an impermeable film on the surface of concrete.

This film can protect the concrete against water loss due to adverse weather conditions: wind, sun, humidity variation, etc.; exothermic reaction and hydration of the concrete.

Without spraying the curing compound, the drying affects the skin as well as the strength of the concrete surface. The result is the appearance of cracks.

The durability of the concrete surface is reduced.



without curing compound




with curing compound

Application

- Follow the recommended dosages.
- Spray on any surface of fresh concrete as soon as bleed water has disappeared, i.e. as soon as the concrete turns matt.
- Avoid puddles.

Subsequent Coatings

- Eliminate the curing compound only using mechanical means (sanding, blasting) before applying the subsequent coatings.

| Code | Name | Nature | Consumption | Density |
|--|---|----------------------------|-------------------------------------|---------|
| 908295 908296 908298 | PROTECDAL 1,000l containers 215l drums 30l jerrycans | Solvent phase | 3 to 5m ² per liter. | 0.83 |
|  911718 911588 911587 | PROTECSOL® GE 08 1,000l containers 215l drums 30l jerrycans | Aqueous phase VOCs free | 4 to 10m ² per liter. | 0.98 |

Equipment

| | |
|--------|---|
| 911859 | METAL SPRAY APPLICATOR: 6LT WITH FLAT FAN NOZZLE |
| 912323 | METAL SPRAY APPLICATOR: 6LT WITH ROTATING NOZZLE |
| 906347 | METAL SPRAY APPLICATOR: 10LT |



Surface Treatment Products

| Code | Name | Method of Application | Properties |
|------|------|-----------------------|------------|
|------|------|-----------------------|------------|

Surface Damp Proofing Agent



| | | | |
|------------------|---|-------------|---|
| 908775 908780 | TIPTEC® 215l drums 30l jerrycans | On surface. | <ul style="list-style-type: none"> - Very good damp proofing. - Self washability. - Maintains gaseous exchanges. - Stops carbonation phenomena. - Solvent based product. - Colorless. |
|------------------|---|-------------|---|

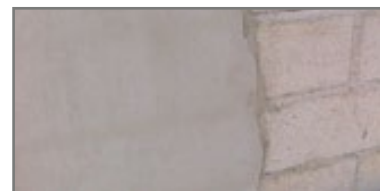


| | | | |
|------------------|---|---|---|
| 908804 908806 | TIPTEC® E 215l drums 30l jerrycans | By injection. Possible application on furniture surface (deactivated concrete, white concrete). | <ul style="list-style-type: none"> - Very good damp proofing. - Resistance to aggressive atmospheric agents. - Maintains gaseous exchanges. - Stops capillary absorption phenomena. - Water based product. - Yellow. - Protect from frost. |
|------------------|---|---|---|

Waterproofing of Foundations

| | | | | |
|----|------------------|--|--|---|
| CE | 912053 | FONDAFUGE 25kg bags | On concrete, breeze blocks, stones, bricks substrates. | <ul style="list-style-type: none"> - Protects and waterproofs basements and foundations. - Treats infiltration and capillary rise of underground parts. - Ready mix mortar with water. - Solvent free - no bitumen. |
| | 911818 911790 | EMULBLACK 220l drums 30l kegs | On concrete, metal and wood substrates. | <ul style="list-style-type: none"> - Protects and waterproofs basements and foundations. - Closes the capillary network support. - No creep. - Insensitive to temperature and weather resistant. - Black bituminous emulsion semi-fluid in water. - Protect from frost. |
| | 908766 | COLBLACK 30kg kegs | On agglomerates, breeze blocks substrates. | <ul style="list-style-type: none"> - Filling of the capillary network of support. - No creep. - Insensitive to temperature changes. - Resistance to atmospheric agents and chemical (dilute acids). - Resistance to waste water in A3 environment. - Black bituminous emulsion paste in water. - Protect from frost. |
| | 908749 908755 | BLACKSOL 220l drums 30l kegs | On concrete, metal and wood substrates. | <ul style="list-style-type: none"> - Filling of the capillary network of support. - Insensitive to temperature changes. - Weather resistant to temperature variations and weather resistant. - Black bituminous solution in solvent. |

| Application Areas | Consumption | Application |
|--|---|---|
| <ul style="list-style-type: none"> - Traditional exterior renders. - Architectonic concrete. - Monuments. - Free stone. - Street furniture. - Facing bricks. | 3 to 6m ² per liter | 2 coats by brush or spray applicator at 1 hour interval, on dry surfaces. |
| <ul style="list-style-type: none"> - Renders. - Concrete. - Injection into walls. - Protects against humidity. | <ul style="list-style-type: none"> - Depending on the substrate: 4 to 6m²/l. - By injection: around 0.1 liter per hole. | Injection hole into wall bases at angles of 45° every 15cm. Over 2/3 of the wall thickness. |
| <ul style="list-style-type: none"> - Foundations. - Basements (concrete, breeze blocks, stones, bricks). | <ul style="list-style-type: none"> - 2kg of mixed product per mm thickness and per m². - 3mm thick in 2 crossed layers. | 2 crossed layers by brush or roller at intervals of 24h. |
| <ul style="list-style-type: none"> - Foundations. - Concrete basements. - Retaining walls. - Buried wood and metal tanks. | 3 to 5m ² per layer and per liter. | 2 or 3 coats by brush, wiper or roller at intervals of a few hours. Depending on the porosity of the substrate. |
| <ul style="list-style-type: none"> - Foundations. - Basements (agglomerates, breeze blocks). - Buried wood and metal tanks. | <ul style="list-style-type: none"> - Impregnation for waterproofing and protection: 0.5 to 1kg/m². - Renders for waterproofing and interior protection of tanks and ponds: 1 coat of neat product followed by a semi-thick coat of the mixture: 1 volume of CEM I (Portland Cement), 2 volumes of water, 10 volumes of COLBLACK, i.e. in total 1 to 2kg/m². | With a stainless steel flooring trowel. |
| <ul style="list-style-type: none"> - Foundations. - Concrete basements. - Retaining walls. - Buried wood and metal tanks. | <ul style="list-style-type: none"> - On mortar and concrete: 5 to 6m²/l/coat. - On metal: 8 to 10m²/l/coat. - On wood: 4 to 5m²/l/coat. | 2 or 3 coats by brush, wiper or roller spaced several hours. Depending on the porosity of the substrate. |



Surface Treatment Products

| Code | Name | Consumption |
|------|------|-------------|
|------|------|-------------|

Concrete Bonding Adhesion Promoting Agents



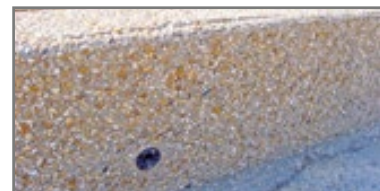
| | | |
|--------------------------------------|--|--|
| 909849 909850 909851 909848 | COPOX COLLE REPRISE 1kg kits 2kg kits 5kg kits 25kg kits | - Concrete bonding: 0.5 to 0.8kg/m². - Bonding: 0.2kg/m². |
| 908492 908493 908500 908505 | TECHNALATEX® 1,000l containers 215l drums 30l jerrycans 5l jerrycans | - Floor screeds: 0.35 to 0.8kg per mm thickness and per m². - Primer: 0.15 to 0.2l per m². |
| 908542 908543 908548 908551 | TECHNALATEX® M High performance, concentrated version: 1,000l containers 215l drums 30l jerrycans 5l jerrycans | - Floor screeds: 0.32 to 0.4kg per mm thickness and per m². - Primer: 0.15 to 0.2l per m² (dilution 1/1). |

Deactivating Agents



| | | |
|------------------|---|---------------------------|
| 912278 | TECHNA RETARD SURFACE N°1 Translucent blue 20l jerrycans | - 4 to 5m² per liter. |
| 912276 912275 | TECHNA RETARD SURFACE N°2 Translucent blue 20l jerrycans Opaque yellow 20l jerrycans | |
| 912274 | TECHNA RETARD SURFACE N°3 Translucent blue 20l jerrycans | |
| 908247 | TECHNA PROTECT 7kg buckets | - 0.2kg to 0.35kg per m². |

| Properties | Application Areas |
|--|---|
| <ul style="list-style-type: none"> - Epoxy adhesive for concrete bonding. - Concrete bonding of fresh concrete on hardened concrete. - Bonding in humid environments. - Solvent free. - Two components. | <ul style="list-style-type: none"> - Concrete bonding. - Adhesion of floor screeds. - Concrete/concrete and concrete/steel bonding in humid environments. - Waterproof film coatings. - Non slip coating. - Protection of concrete and steel against chemical attacks - contact us. |
| <ul style="list-style-type: none"> - Adhesion promoting resin. <p>Incorporation into renders:</p> <ul style="list-style-type: none"> - Improves adhesion. - Improves mechanical strength. - Improves abrasion resistance. - Improves workability. - Improves waterproofing. - White liquid. - Aqueous phase - protect from frost. | <ul style="list-style-type: none"> - Adhesion promoting slurries for cement, plaster and bonding mortars. - Screed mortars. - Repairs, reprofiling. - Concrete bonding. - Waterproofing renders. - Floor screeds. - Fixing mortars: masonry, tiling. - Adhesion primer. |
| <ul style="list-style-type: none"> - Surface deactivating and curing agent. - Stops surface setting of cement but has no effect on the concrete mass. - Acts as a curing compound by protecting concrete from desiccation during the hardening phase. <p>Deactivation depends on the maximum diameter of the aggregates and the desired effect.</p> <ul style="list-style-type: none"> - N°1: Low deactivation between 8 & 10mm. - N°2: Moderate deactivation up to 14mm. - N°3: Pronounced deactivation up to 20mm. - Totally solvent free. - Protect from frost. | <ul style="list-style-type: none"> - Concreting with visible aggregates (white or grey cement). - Highway concrete. - Pedestrian areas. - Architectonic concrete. - Horizontal concrete bonding. |
| <ul style="list-style-type: none"> - Protection agent. - Protection of pouring surroundings against various projections (concrete deactivating agents, cure compounds) when carrying out roadworks. - Use in combination with TECHNIA RETARD SURFACE to protect surroundings from deactivating and cleaning agents. - Water based - Thick colorless liquid. - Protect from frost. | <p>May be used on all types of building materials: concrete, mortar, paving-stones, facing bricks, wood, plastic materials, glass, renders, non-ferrous metals, paints.</p> |



| Code | Name | Sale Sizes | Weight | Characteristics |
|------|------|------------|--------|-----------------|
|------|------|------------|--------|-----------------|

ACRO ADHESIVE



| | | | | |
|--------|----------------------|--------------|----------|--|
| 002835 | ACRO ADHESIVE | Pot of 750ml | 0.75/pot | <ul style="list-style-type: none"> - Contact polychloroprene, mono-component adhesive. - ACRO adhesive is perfectly suited for fixing plastic profiles or neoprene bearings on concrete. |
|--------|----------------------|--------------|----------|--|

BI-COMPONENT ADHESIVE



| | | | | |
|--------|----------------------------------|---------------|----------|---|
| 012634 | BI-COMPONENT ADHESIVE "A" | Pot of 0.80kg | 0.80/pot | <ul style="list-style-type: none"> - Reactive adhesive with 2 components: <ul style="list-style-type: none"> • Component A: epoxy resin, 6.4kg. • Component B: hardener, 3.2kg. |
| 012635 | BI-COMPONENT ADHESIVE "B" | Pot of 0.40kg | 0.40/pot | |

- BI-COMPONENT ADHESIVE must be used when you need waterproofing. It is perfectly suited for gluing CONCRETE PLUG 40/5 and FIBRE CONCRETE PLUG.








| | | |
|--|---|---|
| <p>In accordance with the decree No. 95-354 coordinates of the certification body</p> <p>AFNOR CERTIFICATION 11 avenue Francis de Pressensé 93571 Saint-Denis La Plaine Cedex, France</p> | <p>Repository certification mark "Special products for hydraulic concrete structures" Identification No. NF 030 www.marque-nf.com</p> <p>Certification standard for the brand "Admixtures for concrete, mortars and grouts – curing compounds" Identification No. NF 085 www.cerib.com An updated list of products TECHNIQUE BETON holders marked "Admixtures for concrete, mortars and grouts – curing compounds", is available from our sales team.</p> | <p> The CE marking is a regulatory requirement for the free movement of goods within the European space. TECHNIQUE BETON products ranges repair, surface protection, anchoring and flooring are CE marked.</p> <p></p> <p></p> |
|--|---|---|



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Laroche Spacers and Profiles

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Technique Béton Chemicals

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General Characteristics of Laroche Concrete Products



The production site:



Products made in the European Union

New and modern factory designed specially for manufacturing Laroche products in the best quality conditions:

- Total area: 10,000m².
- Covered surface: 3,000m².

Product design:

- Most of the products have been designed in partnership with users: This guarantees having reliable products that are perfectly suited to the needs of our customers.
 - After defining the product's functional characteristics with the user, Laroche ensures the control of the wholes: creation, design, equipment production, manufacture, logistics.
- Concrete spacers: generally designed to be invisible after striking: any support surface, non-geometric, perfected according to the use required.
- Laroche spacers can be used to make architectonic concrete: consult us.
- Comments: all products can be made of a particular concrete on request:
 - In white or colored concrete.
 - With a particular cement.



Concrete manufacture:

- Components:
 - Siliceous sand from GSM quarries in the Bordeaux area.
 - Cements CPA CEM I 52.5 from the Calcia factory in Bussac (17).
- Tools:
 - Aggregates stored in covered bins for better humidity control.
 - Computer run concrete power unit.
- Characteristics:
 - Concrete resistance of standard products: results available on request.
 - With particular aggregates.
- Products of special concrete are not kept in stock. However, Laroche can sometimes help out with the remainder from a previous manufacture. It is advisable to consult Laroche for the time needed: supplies, manufacture, hardening, delivery.



Concrete implementation:

- Vibration on special vibrating table.
- Use of special Laroche moulding procedures.

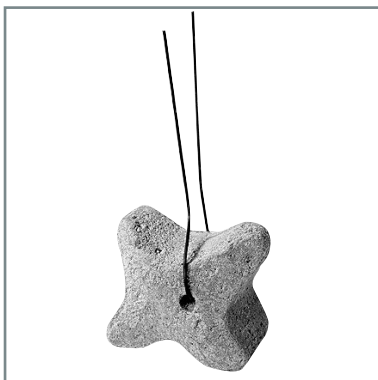
Treatment of moulded products:

- Concrete spacers and heel-pieces:
 - Curing of concrete products in damp environment for a minimum of 120 hours (damp chamber, immersion), no oven drying.
- Concrete cones and plugs, products in deferred demoulding:
 - Concrete undergoes low temperature oven drying at 40°.



Packaging:

- Bags or crates of black polypropylene, depending on the products.
- Labelling showing code N°, description, quantity, weight, date of manufacture and packaging: the traceability of our products is assured.
- Standard palletizing:
 - 60 bags per pallet of 100 x 120 x h 100cm.
 - 40 or 50 crates depending on the products, on a pallet of 100 x 120 or 80 x 120 (height approx. 100cm).
 - Pallets covered with film or banderoled for dispatch.



Fields of application:

- Light precast. Pre-cast slabs. Panels.
- On-site precasting.
- Reinforcements of low diameter flooring.

Conception:

- See "General Characteristics" form.
- All these spacers can be moulded in white or colored concrete.

Implementation:

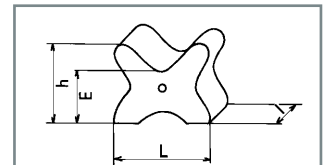
- 3 spacers/m² on average.

| Code | Description | Cover (E) | L | I | h | Max. Dia. |
|------|-------------|-----------|------|------|------|-----------|
| | | [mm] | [mm] | [mm] | [mm] | [mm] |

SUL SPACERS

| | | | | | | |
|--------|--------|----|----|----|----|----|
| 904537 | SUL 25 | 25 | 35 | 25 | 35 | 12 |
| 904538 | SUL 30 | 30 | 38 | 25 | 37 | 12 |
| 904539 | SUL 40 | 40 | 42 | 30 | 50 | 12 |

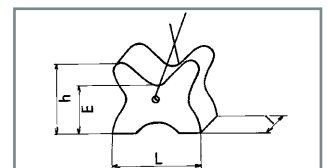
Possibility of tying.



SULFA SPACERS

| | | | | | | |
|--------|----------|----|----|----|----|----|
| 904713 | SULFA 25 | 25 | 35 | 25 | 35 | 12 |
| 904715 | SULFA 30 | 30 | 38 | 25 | 37 | 12 |
| 904717 | SULFA 40 | 40 | 42 | 30 | 50 | 12 |

Attachment wire N°7, length 190mm.



Spacers for Regular Reinforcements

Fields of application:

- Building sites = housing, offices.
- Precasting.
- Small-scale civil engineering work.

Implementation:

- Number of spacers determined according to the rigidity of the reinforcements = ratio of 3 per m² on average.
- Up to 50mm of cover = the weight of the reinforcements and the cradle shape of the spacer make attachment optional.

Design:

- See "Characteristic Generals" form.
- All SU and SUFA spacers can be moulded in white or colored concrete.

| Code | Description | Cover (E) | L | I | h | Max. Dia. |
|------|-------------|-----------|------|------|------|-----------|
| | | [mm] | [mm] | [mm] | [mm] | [mm] |

SU SPACERS

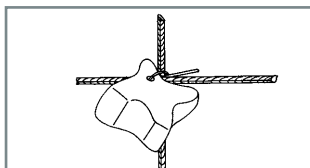
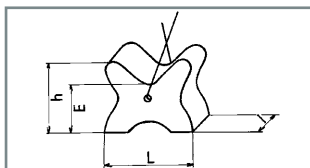


| | | | | | | |
|--------|----------|-------|-------|----|----|----|
| 904563 | SU 20 | 20 | 42 | 22 | 28 | 16 |
| 904564 | SU 25 | 25 | 48 | 28 | 34 | 20 |
| 904565 | SU 30 | 30 | 48 | 28 | 37 | 20 |
| 904566 | SU 35 | 35 | 48 | 28 | 40 | 25 |
| 904567 | SU 40/50 | 40/50 | 50/57 | 35 | 50 | 32 |

Dimensions from 60 to 200mm on request.

| Wire N°7 | Wire N°10 | Description | Cover (E) | L | I | h | Max. Dia. |
|----------|-----------|-------------|-----------|------|------|------|-----------|
| | | | [mm] | [mm] | [mm] | [mm] | [mm] |

SUFA SPACERS



| | | | | | | | |
|--------|--------|------------|-------|-------|----|----|----|
| 904675 | - | SUFA 20 | 20 | 42 | 22 | 28 | 16 |
| 904676 | - | SUFA 25 | 25 | 48 | 28 | 34 | 20 |
| 904678 | 904680 | SUFA 30 | 30 | 48 | 28 | 37 | 20 |
| 904681 | 904683 | SUFA 35 | 35 | 48 | 28 | 40 | 25 |
| 904684 | 904686 | SUFA 40/50 | 40/50 | 50/57 | 35 | 50 | 32 |
| 904687 | 904689 | SUFA 60 | 60 | 50 | 35 | 67 | 20 |

- Wire N°7 length 190mm.
- Wire N°10 length 280mm.

Fields of application:

- Building: spacers for beam reinforcement.
- Prefabricated booths and factories: spacers for pile reinforcement, beams, joists etc.
- Precasting of electricity poles.

Design:

- See "Characteristic Generals" form.
- Enables construction of chamfers.

Implementation:

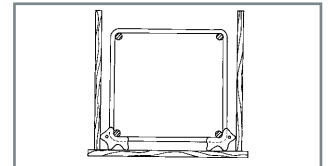
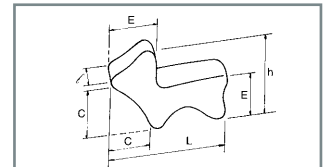
- One spacer every 1 m or 1.5m according to the reinforcements.
- Placed without fastening below the loose rods of the reinforcing cages.

Attention: coating in situ = coating of the spacer minus \varnothing of reinforcing rod

| Code | Description | Cover (E) [mm] | L [mm] | I [mm] | h [mm] | Chamfer C x C. [mm] |
|------|-------------|-------------------|-----------|-----------|-----------|---------------------------|
|------|-------------|-------------------|-----------|-----------|-----------|---------------------------|

DOG

| | | | | | | |
|--------|--------|----|----|----|----|---------|
| 904950 | DOG 25 | 25 | 68 | 24 | 49 | 20 x 20 |
| 904951 | DOG 32 | 32 | 75 | 45 | 48 | 30 x 30 |
| 904953 | DOG 36 | 36 | 70 | 33 | 65 | 15 x 15 |



Other products available

Dividers:

- Enable correct spacing between the reinforcements or bundles of reinforcements in the case of very dense frameworks: Figure 1-2-3.
- Spacing for the reinforcements of prefabricated concrete electricity poles, beams etc.
- Placed between the loose rods of reinforcing cages.

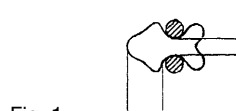


Fig. 1

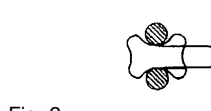


Fig. 2

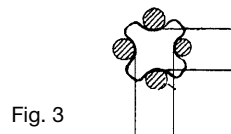


Fig. 3

Fixed or Magnetic Strips

Fig. 1

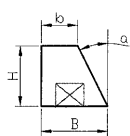


Fig. 2

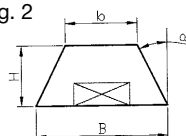


Fig. 3

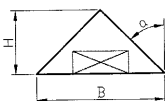
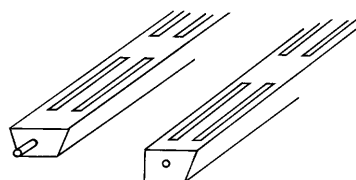
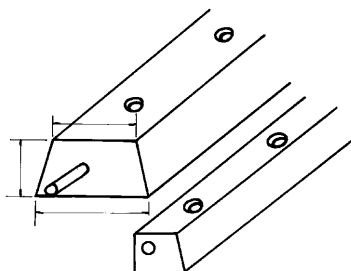


Fig. 4



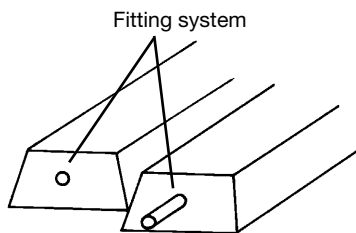
Magnet profile

Fig. 5



Magnet profile for screwing

Fig. 6



Magnet profile for sticking or poking

Fields of application:

- Building, civil engineering:
 - Magnetic footing edging, fillets, etc.
- Precasting:
 - Water drops gutter, fillets.

Design:

- Polyurethane profile (PU).
- Male/female interlocks at each end, to ensure perfect alignment of profiles.
- Section:
 - Isosceles trapezium: shown as ISO (figure 1).
 - Right-angled trapezium: shown as RECT (figure 2).
 - Right-angled isosceles triangle: shown as TRI (figure 3).
 - Other shapes on request.
- Type of fixing:
 - Magnets spaced along the profile (figure 4), or magnetic track.
 - Ø 4mm holes, countersunk every 100 mm, for screw-fixing to wood or chipboard (figure 5).
 - Without hole for fixing by fine-point nails or sticking (figure 6).
- Longitudinal stiffening:
 - With local magnets: rigid on edges, slightly flexible on the flat.
 - With magnetic track rail: rigid in all senses, only for flat shuttering.
 - Other stiffening on request: curved shuttering, etc.

Implementation:

Place the profiles one by one, linking them together: use a ruler.

- Nailing or screwing: carefully clean the surfaces.
 - Place a joint by injecting between the profile and the shuttering.
 - Nail or screw it, monitoring the pressure of the head of the nail or screw on the profile so as not to deform it.
- Sticking: carefully clean the surfaces. Use a polyurethane mastic, applied by injection, following the manufacturer's instructions.
- Magnetic fixing:
 - Ensure that the application surfaces are clean: shuttering and magnets.
 - Take care over vibration and concreting (mixer with handle): although it is very strong, a magnet may slip if care is not taken.

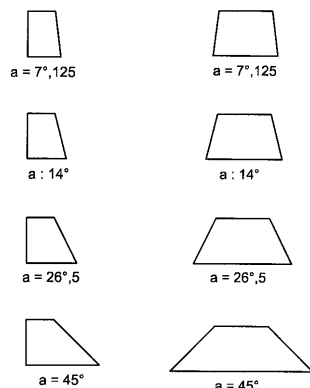
Help for choosing the correct magnet profile:

- Choose angle (a) in relation to the architectural requirements: see scaled illustrations (figure 7).
- Fix the long side (B) and the height (H).
- Height (H) of magnet profil currently available as a function of angle (a):

| Height (H) | a = 7.125° tan a = 0.125 | a = 14° tan a = 0,250 | a = 26.5° tan a = 0.500 | a = 45° tan a = 1.0 |
|------------|-----------------------------|--------------------------|----------------------------|------------------------|
| [mm] | | | | |

MAGNET PROFIL – FILLETS

Fig. 7



| | | | | |
|----|---|---|---|---|
| 15 | • | • | • | • |
| 20 | • | • | • | • |
| 25 | | • | • | |
| 30 | • | • | • | • |
| 40 | • | • | | |

- Note: the following relations link the long side (B), the height (H), the short side (b) and angle (a):
 - Isosceles trapezium: $B = b + (2H \times \tan a)$
 - Right-angled trapezium: $B = b + (H \times \tan a)$
 - Triangle: $B = 2H$
- Three standard lengths: 100cm, 120cm, 125cm.
- Other lengths on request, provided that they are manufacturable.

| Code | Description | | | | | | | | Specific Uses |
|------|-------------|------|-----------|-----------|-----------|-----------|---|-------|---------------|
| | | Type | B [mm] | b [mm] | H [mm] | L [mm] | a | Tan a | |

Isosceles Magnet Profile ISO (Figures 1 and 3)

| | | | | | | | | | |
|--------|----------------|-------------|----|----|----|-------|------|-------|--------------------|
| 906700 | Magnet profile | Local. Fix. | 20 | 16 | 15 | 1,250 | 7.5° | 0.133 | Water drops gutter |
| 906779 | Magnet profile | Local. Fix. | 25 | 15 | 20 | 1,250 | 14° | 0.25 | – |
| 906788 | Magnet profile | Local. Fix. | 30 | 20 | 20 | 1,250 | 14° | 0.25 | – |
| 906796 | Magnet profile | Rail | 30 | 20 | 20 | 1,250 | 14° | 0.25 | – |
| 906804 | Magnet profile | Local. Fix. | 40 | 30 | 20 | 1,250 | 14° | 0.25 | – |
| 906803 | Magnet profile | Rail | 40 | 30 | 20 | 1,250 | 14° | 0.25 | – |
| 906809 | Magnet profile | Local. Fix. | 50 | 40 | 20 | 1,250 | 14° | 0.25 | – |

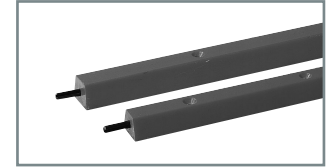
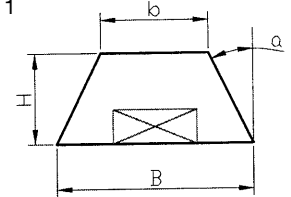


Fig. 1



Rectangular Magnet Profile RECT (Figures 2 and 3)

| | | | | | | | | | |
|--------|----------------|------|----|------|----|-------|-----|------|-------------------------|
| 906856 | Magnet profile | Rail | 30 | 22.5 | 30 | 1,250 | 14° | 0.25 | Magnetic footing edging |
| 906861 | Magnet profile | Rail | 40 | 32.5 | 30 | 1,250 | 14° | 0.25 | Magnetic footing edging |
| 906865 | Magnet profile | Rail | 50 | 42.5 | 30 | 1,250 | 14° | 0.25 | Magnetic footing edging |

Fig. 2

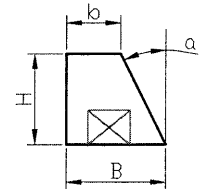
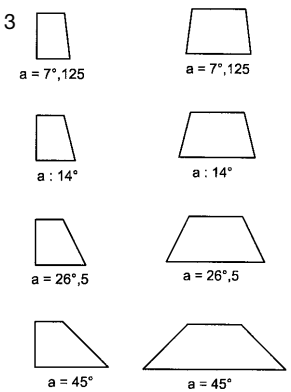


Fig. 3

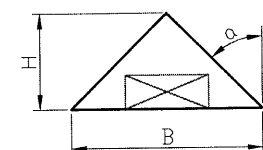


| Code | Description | | | | | Specific Uses |
|------|-------------|--------|--------|--------|--|---------------|
| | Type | B [mm] | H [mm] | L [mm] | | |

Triangular Magnet Profile TRI (Figure 4)

| | | | | | | |
|--------|----------------|-----|----|----|-------|--------------------|
| 906995 | Magnet profile | Tri | 20 | 10 | 1,250 | Water drops gutter |
| 906998 | Magnet profile | Tri | 30 | 15 | 1,250 | – |
| 907003 | Magnet profile | Tri | 40 | 20 | 1,250 | – |

Fig. 4



Magnetic Chamfers

Fields of application:

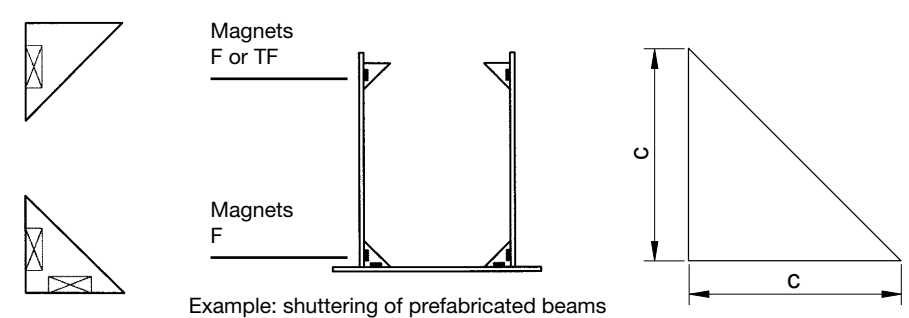
- Breaking the angles of beams, posts, walls etc.
- Building, civil engineering.
 - Precasting.

Design:

- Polyurethane profile (PU).
- Male/female interlocks at each end, to ensure perfect alignment of profiles for types F and TF.
- Type of fixing:
 - Type F: strong magnetization, the magnets are spread over 1 or 2 sides.
 - Type TF: very strong magnetization, made on request.

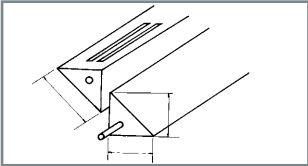
Implementation:

- Ensure cleanliness of surfaces where they will be applied: both shuttering and magnets.
- Place the type F and TF magnetic chamfers by interlocking them end to end, in the angles of the metallic molds or shuttering.
- In the upper part of the molds, align the type F and TF using a ruler. The concrete must be poured carefully to avoid slipping of the magnets.



| Code | Description | C [mm] | Lg [mm] |
|------|-------------|-----------|------------|
|------|-------------|-----------|------------|

TYPE F-TF



Magnetic Chamfers

| | | | |
|--------|------------------------------------|----|-------|
| 907001 | Magnetic chamfer F 20 X 20 lg 1250 | 20 | 1,250 |
| 907027 | Magnetic chamfer F 30 X 30 lg 1250 | 30 | 1,250 |

Mould release agents are products intended to be applied on the surfaces of moulds and formworks to facilitate form stripping of concrete elements by reducing the adhesion between the various elements.



Products made in the European Union

Consumption

The consumption of oils is very variable and depends on numerous factors:

- The composition of the product.
- The type of formwork, its porosity and absorbent nature.
- The surface condition of the mould: a rough surface requires more product than a smooth surface.
- The form stripping time.
- The shape of the formwork.

Application

The product must be applied in very thin coats.

If applied by spray, it is very important to use suitable application devices, equipped with nozzles and filters to eliminate any impurities.

In all cases, the film applied should not be too thick. The principal consequences are:

- Retarded setting.
- Concrete stains and shade differences.
- Bug holes.
- Poor adhesion of any coatings applied later.

Advice: Remove excess release agent. Excess affects efficiency.

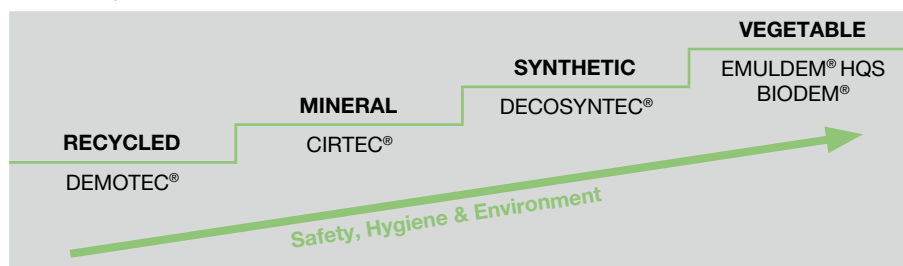
Choosing the type of mould release agent

| | Recycled | Mineral | Synthetic | Vegetable |
|-----------------------------|----------|---------|-----------|-----------|
| Concrete drop height | | | | |
| Standard | 4 | 4 | 4 | 4 |
| High | 3 | 3 | 5 | 4 |
| Temperature | | | | |
| < 5°C | 3 | 3 | 5 | 2 |
| From 5 to 30°C | 3 | 3 | 5 | 5 |
| > 30°C | 3 | 3 | 5 | 2 |
| Type of Formwork | | | | |
| Wood | 5 | 5 | 3 | 3 |
| Metal | 4 | 4 | 5 | 5 |
| PU matrix | 0 | 0 | 2 | 3 |
| Type of Shuttering | | | | |
| Used | 3 | 3 | 5 | 5 |
| New | 3 | 3 | 5 | 5 |

Between 0 and 2: avoid or not very suited.

Between 3 and 5: to be used, increasingly high performance.

TECHNIQUE BETON classifies its products according to their nature to assist customers in their hygiene, safety and environment approach.



Formwork accessories and anchors must be oiled to facilitate stripping.

Mould Release Agents

| Code | Name | Properties |
|------|------|------------|
|------|------|------------|

Immediate Mould Release



| | | |
|----------------------------|--|--|
| 909365 909366 909367 | DECOSYNTec® V2004 1,000l containers 215l drums 30l jerrycans | Vegetable based. - Closing elements (columns, plates). - Light prefabrication (borders, blocks, ...). - Generally suitable for any element that is immediately stripped from formwork. - Facilitates stripping of vibrated dry concrete. |
|----------------------------|--|--|

Delayed Mould Release - Refer to Chemicals for Concrete Structures p 6-7



| | | |
|--|---|--|
| 912297 912147 912146 912386 912387 912388 | EMULDEM® HQS CONCENTRE 1,000l containers (H) 215l drums (H) 30l jerrycans (H) 1,000l containers (E) 215l drums (E) 30l jerrycans (E) | Vegetable oil emulsion in water. VOCs free. - Improves the appearance of facings. - Excellent concrete surface quality. - Biodegradable. - Odorless. - For temperature: • > -5°C: EMULDEM® HQS CONCENTRE (H). • > 5°C: EMULDEM® HQS CONCENTRE (E). Product to be diluted with water. Refer to TDS. |
| 912212 912211 912213 | EMULDEM® CS 1,000l containers 215l drums 30l jerrycans | Synthetic oil to be diluted with water. VOCs free. - Improves the appearance of facings: uniform shade and glazed finish. - Excellent concrete surface quality. - Odorless. |
| 909309 909310 909315 | DECOSYNTec® 2000 1,000l containers 215l drums 30l jerrycans | Synthetic based. - Ensures formworks are kept clean. - Improves the appearance of facings. - Does not stain. - Corrosion protection. |
| 909437 | CIRTEC® 30l kegs | Wax in solvent - New mineral. For white, colored and stamped concrete. - Excellent facing quality. - Very good resistance to water. - Protection against corrosion. - Does not stain concrete. |

Equipment



| | |
|--------|--|
| 911859 | METAL SPRAY APPLICATOR 6LT WITH FLAT FAN NOZZLE |
| 912323 | METAL SPRAY APPLICATOR 6LT WITH ROTATING NOZZLE |
| 906347 | METAL SPRAY APPLICATOR 10LT |

| Steam curing | Consumption | Color |
|--------------|---|------------------------------|
| Up to 60°C | 40 to 50m ² per liter. | Light yellow liquid |
| Up to 60°C | 80m ² per liter of diluted product. By spray, with a minimum pressure of 2bars. | Pale yellow emulsion |
| Up to 40°C | 70 to 100m ² per liter. By spray or with a cloth. | White liquid |
| Up to 50°C | 35 to 40m ² per liter. By spray or with a cloth. | Light yellow to amber liquid |
| – | 30 to 40m ² per liter. With a cloth. | Flexible white paste |





Products made in the European Union

| Code | Name | Properties |
|------|------|------------|
|------|------|------------|

Finishing Coat Mortars



912141 **FINENDUIT®**
20kg bags with handle

Powder levelling; yields paste when mixed with water.



908590 **FINIMUR® GROS**
25kg bags
908595 Available in white

- Very quick and easy to apply.
- Good adhesion to different substrates.

908582 **FINIMUR® FIN**
25kg bags
910763 Available in dark grey,
908584 light grey
908588 and white

- Very easy and quick to apply.
- Very smooth finish.
- Very good impact resistance.
- Good adhesion to different substrates.

Repair Mortars



909596 **FIBRALCHOC®**
25kg bags
Particle size: 0 to 1.6mm
Available in light grey, fine
particle size

Fibre reinforced mortar.
- Good adhesion.
- Impact and abrasion resistant.
- Thixotropic.
Single component.



909610 **FIBRALCHOC® R**
25kg bags
Particle size: 0 to 1.6mm

Fibre reinforced mortar. Rapid setting time.
- Good adhesion.
- Impact and abrasion resistant.
- Thixotropic.
Single component.



909791 **STARFIX®**
25kg bags
Particle size: 0 to 1.6mm

Good resistance to aggressive types of water.
Rapid development of initial and final resistance
(or strength) characteristics.
- Compressive strength after 24h: 26MPa.
- Good adhesion on most substrates.
Single component.

| Application Areas | Pot Life of the Mixture at 20°C | Consumption | Application Thickness |
|-------------------|---------------------------------|-------------|-----------------------|
|-------------------|---------------------------------|-------------|-----------------------|

| | | | |
|---|-----------|---|-------------------------------|
| <ul style="list-style-type: none"> - All general interior and exterior levelling jobs. - Finishing. | Around 2h | 1.9kg of mixed product per mm thickness and per m². | From 0 to 10mm in spot areas. |
| <ul style="list-style-type: none"> - All interior and exterior levelling jobs. | Around 2h | 1.7kg of mixed product per mm thickness and per m². | From 5 to 20mm in spot areas. |
| <ul style="list-style-type: none"> - All general interior and exterior levelling jobs. - Finishing. | Around 2h | 1.7kg of mixed product per mm thickness and per m². | From 0 to 10mm in spot areas. |



| | | | |
|--|-------------|---|--|
| <ul style="list-style-type: none"> - Repair and filling of spalling, nosing, holes, chases, corings, columns, banisters, cast walls, roof parapets, edge beams, repair of joint lips, beam angles. - Everyday fixing jobs: cleats, gudgeons. | 1h 30 | 2kg of mixed product per mm thickness and per m². | 4-5mm minimum, up to 60mm in a single application. |
| <ul style="list-style-type: none"> - Repair and filling of spalling, nosing, holes, chases, corings, columns, banisters, cast walls, roof parapets, edge beams, repair of joint lips, beam angles. - Everyday fixing jobs: cleats, gudgeons. | 20 to 25min | 2kg of mixed product per mm thickness and per m². | 4-5mm minimum, up to 60mm in a single application. |
| <ul style="list-style-type: none"> - Repair of prefabricated elements, columns, beams. - Fixing and anchoring of street furniture. - All repairs requiring short downtimes. | 10 to 15min | 2.2kg of mixed product per mm thickness and per m². | 5 to 30mm in spot areas. |



Liquid Admixtures and Curing Compounds



Products made in the European Union

| Code | Name | Properties | Recommended Dose |
|------|------|------------|------------------|
|------|------|------------|------------------|

Setting Accelerators



| | | | | |
|-------|----------------------------|--|---|---|
| CE NF | 908384 908386 908389 | TECHNIPRISE® 25 1,000l containers 316kg drums 30kg jerrycans | Chloride free. - Accelerates mould turnaround and cuts steam curing times. - With or without steam curing. | 0.5 to 5% of the weight of cement. Normal dose: 2.5%. |
| | 908338 908342 908344 | CRD® 19 1,000l containers 215l drums 20l jerrycans | Contains chloride. - Accelerates mould turnaround and cuts steam curing times. - Form removal in cold weather. | 0.5 to 4% of the weight of cement. Normal dose: 2%. |

Super Plasticizers / High Water Reducing Agents

| | | | | |
|-------|----------------------------|--|--|--|
| CE NF | 908086 908087 908088 | ADDIFOR® 2005 1,000l containers 226kg drums 30kg jerrycans | - Significantly increases concrete fluidity. - Cement dispersant. - Decreases capillary absorption. - Self compacting concrete. | 0.6 to 1.2% of the weight of cement. Normal dose: 0.5%. SCC*: 0.8-0.9%. |
| | 908058 908060 908061 | ADDIFOR® 2001 1,000l containers 250kg drums 30kg jerrycans | - Increases plasticity and workability while improving mechanical strength. - Decreases capillary absorption. | 0.6 to 2.5% of the weight of cement. Normal dose: 0.8%. |

Plasticizers / Water Reducing Agents

| | | | | |
|----|----------------------------|--|--|---|
| CE | 912365 912366 912367 | ADDIFOR® 2015 1,000l containers 221kg drums 30.9kg jerrycans | - Increases concrete fluidity. - Improves mechanical strength. - Decreases capillary absorption. | 0.3 to 3% of the weight of cement. Normal dose: 1% |
| | 908091 908092 908093 | ADDIFOR® 2005 LMO 1,000l containers 226kg drums 30kg jerrycans | - Permits long workability times: 2h of workability. - Decreases capillary absorption. - Self compacting concrete. | 0.4 to 1.4% of the weight of cement. Normal dose: 0.5%. SCC*: 0.8-0.9%. Workability maintain from 0.8%. |

*SCC: Self Compacting Concrete

TECHNIQUE BETON's Range of Admixtures

- Benefit from CE marking as per the EN 934-2 Standard.
 - Our products are inter-compatible
- It is possible to combine several admixtures to obtain the final desired characteristics.

Curing Compounds

Refer to Chemicals for Concrete Structures, chapter "Surface Treatment Products".



Liquid Admixtures and Curing Compounds

| Density | Application | Effects | | | |
|---------|---|--------------------------|--------------|--|--|
| | | Workability - Plasticity | Setting Time | Short Term Mechanical Strength (1 day) | Long Term Mechanical Strength (>28 days) |
| 1.47 | Incorporate into the mixing water at the start of mixing. | | + | + | + |
| 1.38 | Incorporate into the mixing water at the start of mixing. | | + | + | + |
| 1.05 | Incorporate into the mixing water or add later. | + | | + | + |
| 1.16 | Incorporate into the mixing water or add later. | + | | + | + |
| 1.03 | Incorporate into the mixing water at the start of mixing. | + | | + | + |
| 1.05 | Incorporate into the mixing water or add later. | + | | + | + |



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