

## Accessories for Concrete Structures





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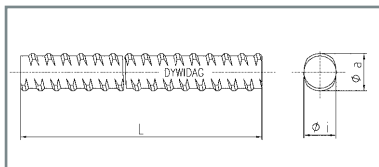
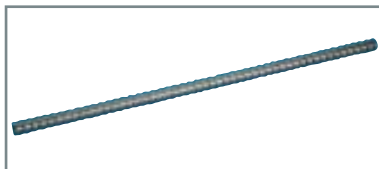




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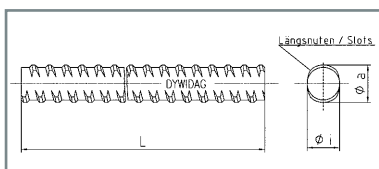
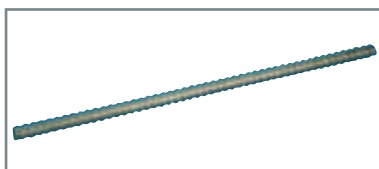
## DYWIDAG Threadbar, not weldable



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.

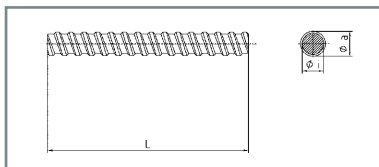
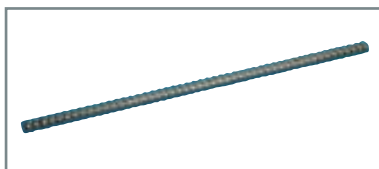
## DYWIDAG Threadbar, weldable



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

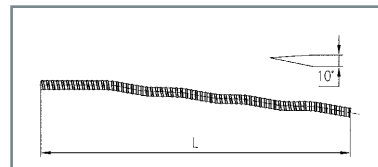
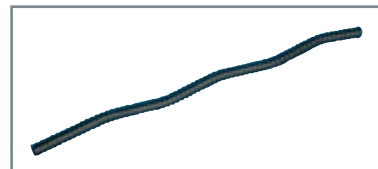
The working loads of all products on this page depend on concrete strength, installation depth, distances between anchors and other factors. Please ask DSI for details.

## 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

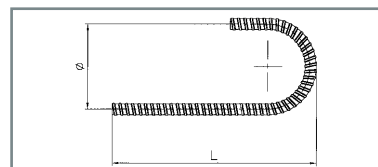
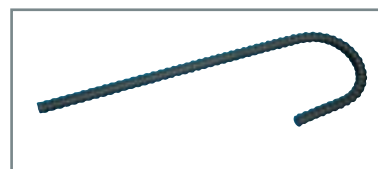


## Hook Anchor

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



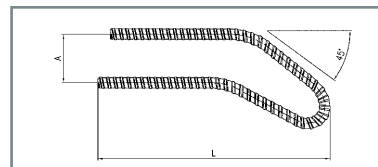
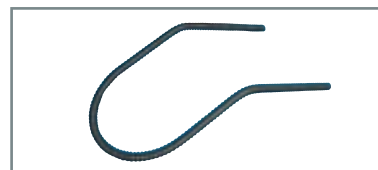
## Loop Anchor

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

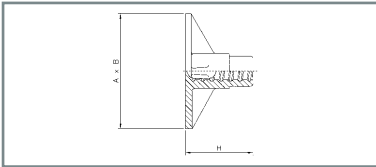
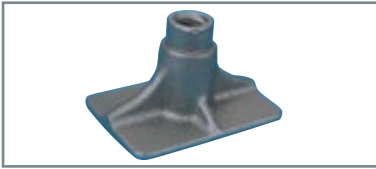




# Anchorage in Concrete

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 <sup>1)</sup>				
15 F 3074/S	15.0	100 x 70	60	0.65

Cast

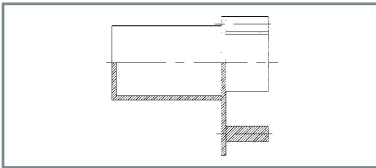
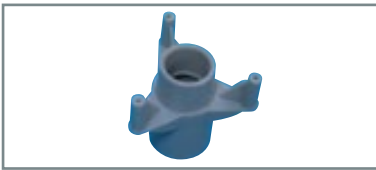
<sup>1)</sup> Including Nail Plug and Closing Plug, installation depth = 125 mm

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

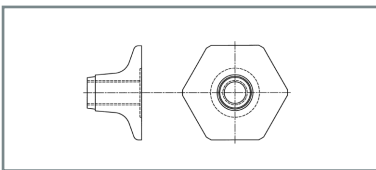


Article No.	Bar Ø [mm]	Nom. Installation Depth [mm]	Weight [kg/pc]
15 F 3174/K	15	85	0.03

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),

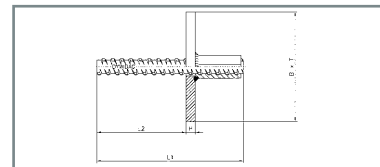
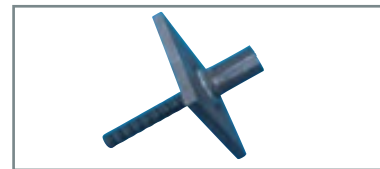
32 x 38mm (100283) and 40 x 46mm (100313)

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

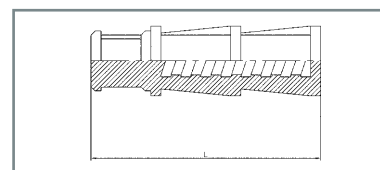
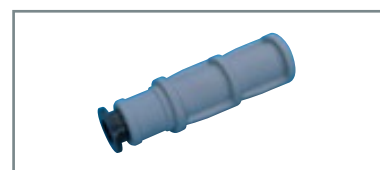
Installation with Cones



## Shuttering Sleeve

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

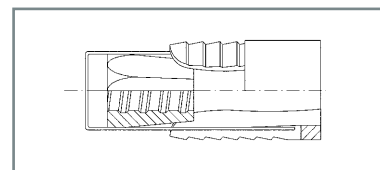
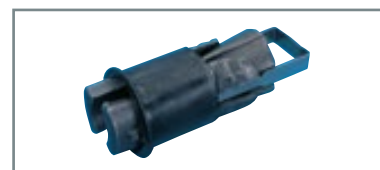
Delivery includes 18mm Ø Nail Plug



## 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

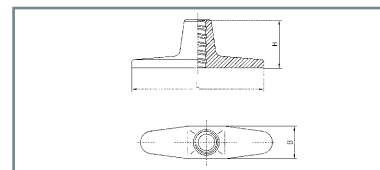
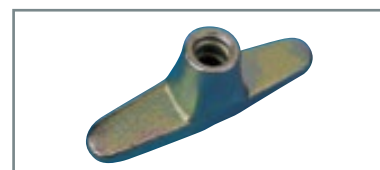
Please ask for installation instruction



## 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

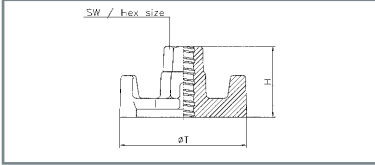
Weldable, application with steel structures, max. working load 90kN  
Application is shown on page 25.



# 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 <sup>1)</sup> [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

<sup>1)</sup> 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

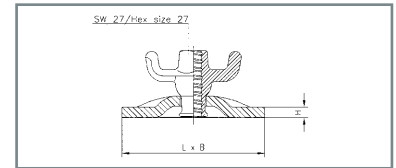
Article No.	Bar Ø [mm]	Plate [mm]	Hex [mm]	Weight [kg/pc]
101913	15	120 x 120 x 10	27	1.42
15 F 1021	15	140 x 100 x 10	27	1.42
15 F 1023	15	200 x 150 x 10	27	2.70

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

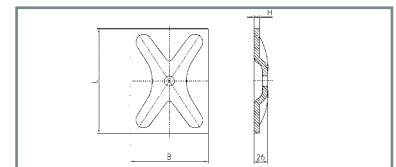
Article No.	Bar Ø [mm]	Plate [mm]	Hole Ø [mm]	Weight [kg/pc]
15 F 2062	15	140 x 100 x 10	20	1.15
15 F 2066	15	120 x 120 x 10	20	1.10
15 F 2097	15	200 x 150 x 10	20	2.30

Galvanized, steel grade S235 or similar,

15 F 2062: For use with steel chords.

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

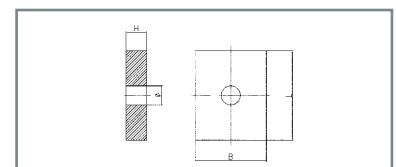
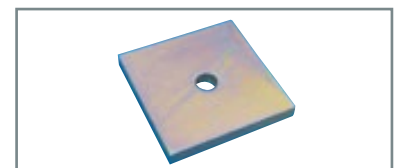
15 F 2097: Working load 50kN if supported on timber.



## 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

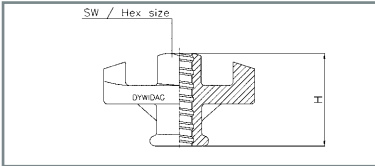
\* Further dimensions available on request



# 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

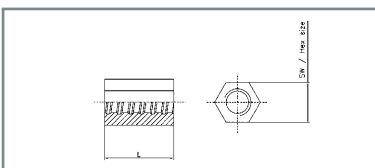
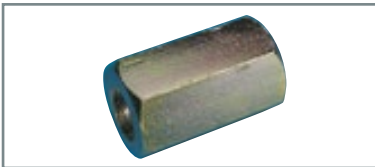
## Wing Nut - Forged



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 <sup>1)</sup>					
101917	15	50	30	Yes	0.22
15 F 2002/70	15	70	30	Yes	0.30
15 VA 2002/50	15	50	30	-- <sup>2)</sup>	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

<sup>1)</sup> Working load of 100309: 200kN

<sup>2)</sup> Stainless steel, grade 316 (V4A)

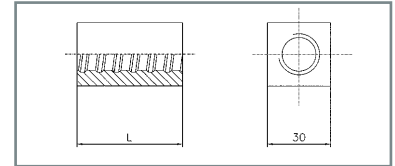
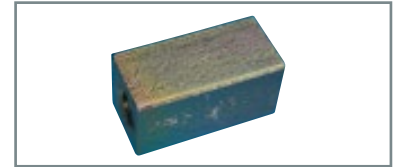
All Hex Nuts also available galvanized.

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 <sup>1)</sup>	15	35	30	0.18
15 F 2028/60	15	60	30	0.32

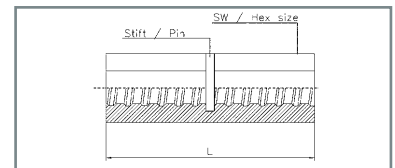
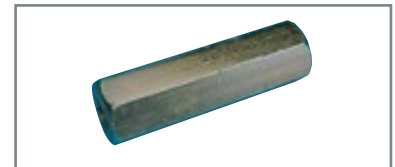
<sup>1)</sup> Lock Nut, not designed to take the full load of the Threadbar  
 All Square Nuts also available galvanized → Article No. .../V  
 (example: 15 F 2028/35/V)



## Hex Couplers

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

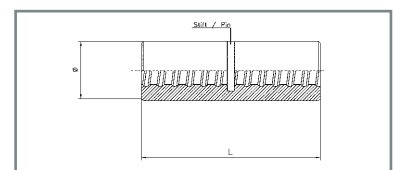
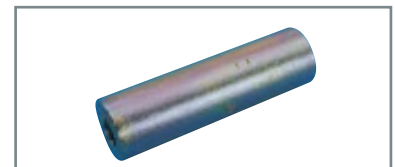
<sup>1)</sup> Working load 15 F 2002/90: 80kN, <sup>2)</sup> Working load 26 E 3005/120: 200kN  
 Screwing-in length is guaranteed by stop-pin.  
 All couplers also available galvanized.



## 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.

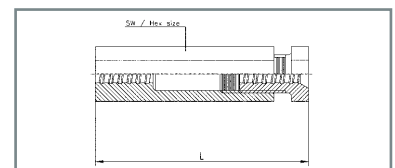
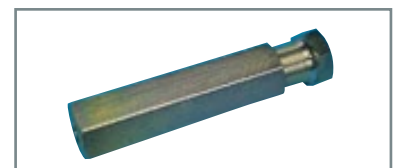


## Turnbuckle Splice

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

For screwing and tensioning with two fixed bar ends.

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

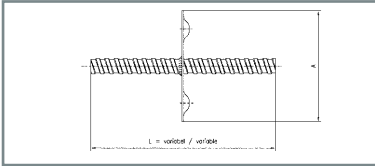
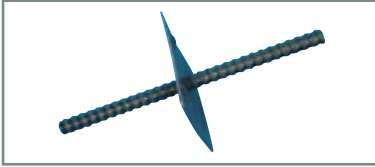




# Water Stops

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

## Water Stop Type N



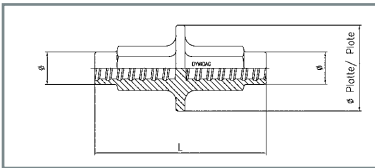
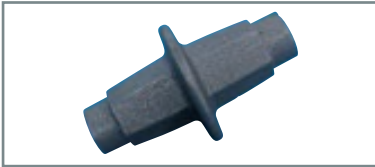
Article No.	Bar Ø [mm]	Plate Size [mm]	Weight [kg/pc]
100238	15	120 x 120 x 2	0.20
100282	20	120 x 120 x 2	0.20
26 ES 3043	26.5	120 x 120 x 2	0.20

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



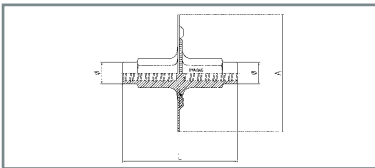
Article No.	Bar Ø [mm]	Length [mm]	Plate Ø [mm]	Bunch Ø [mm]	Weight [kg/pc]
101914	15	110	65	26 <sup>1)</sup>	0.55
15 F 3093/B	15	130	110	26 <sup>2)</sup>	0.98
101953	20	160	80	31	1.35

Cast

<sup>1)</sup> For tubes with 26mm inner diameter

<sup>2)</sup> 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 <sup>1)</sup>	0.76
20 F 3044	20	160	120 x 120	31	1.55

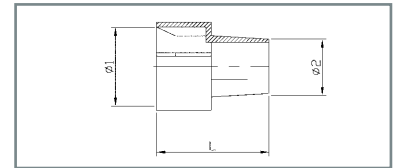
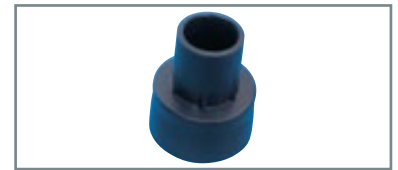
Cast

<sup>1)</sup> 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.

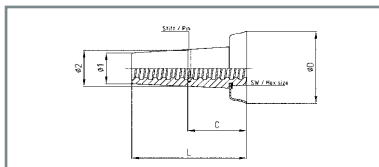
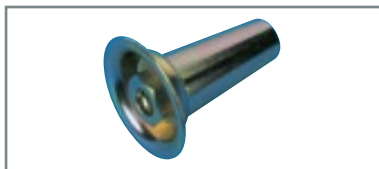
On stock for Water Stop Type N

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

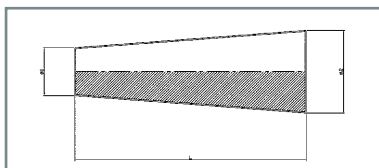
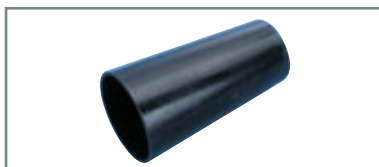
## Steel Cone



Article No.	Bar Ø [mm]	Ø1/Ø2/ØD [mm]	L [mm]	Hex [mm]	C <sup>1)</sup> [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

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

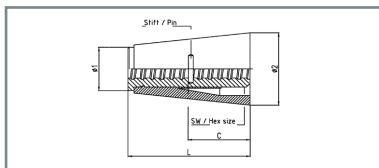
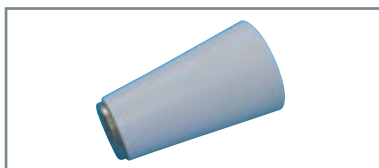
## PE Sleeve for Steel Cone



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.

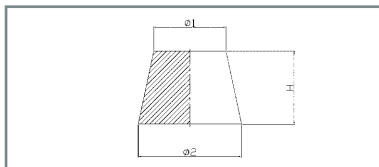
## Steel-Plastic Cone



Article No.	Bar Ø [mm]	Ø1/Ø2 [mm]	L [mm]	Hex [mm]	C <sup>1)</sup> [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

<sup>1)</sup> 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.



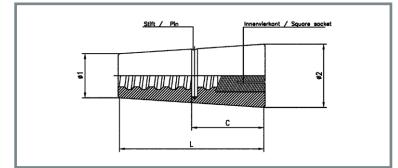
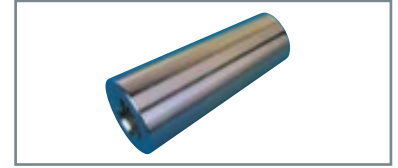
Different systems can be used for anchoring climbing formwork. Two standard systems are presented on the following pages: a) DYWIDAG System b) Artéon System. Upon request, we also develop and manufacture special solutions and individually designed products.

## A) DYWIDAG System for Climbing Formwork:

### Positioning Cone

Article No.	Thread [mm]	Ø1/Ø2 [mm]	L [mm]	• [mm]	C <sup>1)</sup> [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

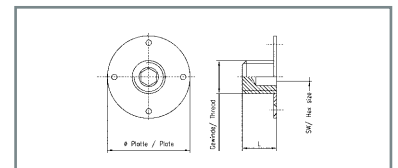
<sup>1)</sup> C = concrete cover, all cones galvanized  
Positioning Cones are put in place before concreting.  
For de-installation, use square wrench .. F 7045.



### 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

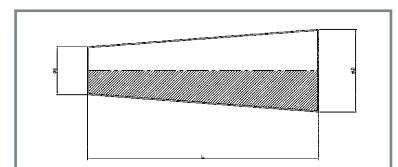
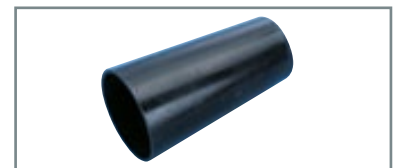
Galvanized, for fixing positioning cones to formwork.  
For de-installation, use square wrench 15 F 7043.



### PE Sleeve

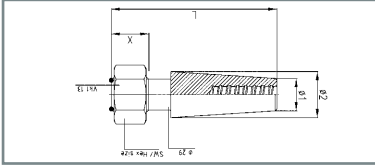
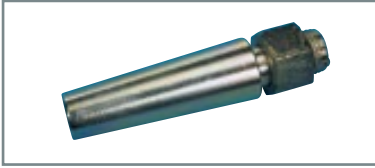
Article No.	For Cone	L [mm]	Ø1/Ø2 [mm]	Weight [kg/pc]
15 F 3073/K	15 F 3073	97	31/43	0.01
20 F 3073/K	20 F 3073	110	34/44	0.01
26 E 3073/K	26 E 3073	125	41/54	0.02

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



# Cones for Climbing Formwork

## Climbing Cone



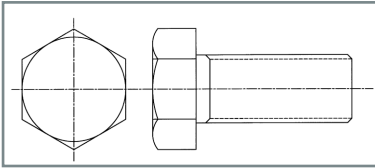
Article No.	Ø1/Ø2 [mm]	L [mm]	Hex [mm]	X [mm]	Shear Load <sup>1)</sup> [kN]	Weight [kg/pc]
15 F 3038	30/43	155	55	35	30	1.28
20 F 3038	33/46	185	55	35	40	1.56
26 E 3038	40/54	210	55	35	50	2.50

Galvanized,

<sup>1)</sup> at a minimum concrete strength of 10N/mm<sup>2</sup>.

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	<sup>1)</sup>	36	10.9	<sup>1)</sup>
20 F 3073/S	M 27	<sup>1)</sup>	41	10.9	<sup>1)</sup>
26 E 3073/S	M 33	<sup>1)</sup>	50	10.9	<sup>1)</sup>

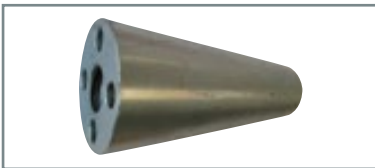
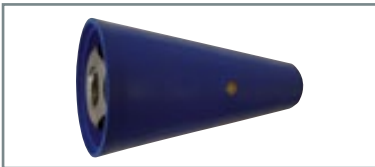
<sup>1)</sup> Length according to customer requirements, standard lengths:

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 <sup>1)</sup>	55	110	12	58	0.46
100289	20	Steel/Plastic	64	125	36	65	0.65
100290	20	Steel	64	125	<sup>2)</sup>	65	1.42
101963	20	Magnetic <sup>1)</sup>	64	125	12	65	0.72

<sup>1)</sup> Magnetic cone for steel formwork

<sup>2)</sup> Screw out with a special tool

### Shear Cone

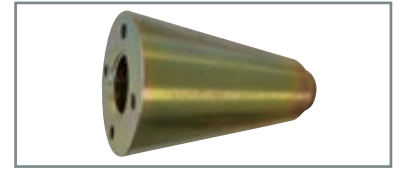


Article No.	Bar Ø [mm]	Thread F	D [mm]	L/L1 [mm]	Hex [mm]	Lf [mm]	Weight [kg/pc]
100249	15	M 24 x 3.0	55	105/60	17	46	0.88
100252	15	M 30 x 3.5	55	105/60	17	46	0.80
100291	20	M 30 x 3.5	64	120/65	19	43	1.31

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

## Shear Cone M 39

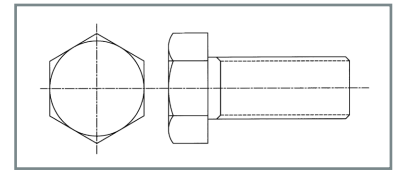
Article No.	Bar Ø [mm]	Thread F	D [mm]	L/L1 [mm]	Lf [mm]	Weight [kg/pc]
100294	20	M 39 x 4.0	88	150/85	73	3.50
100317	26.5	M 39 x 4.0	88	155/85	72	3.45



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	*



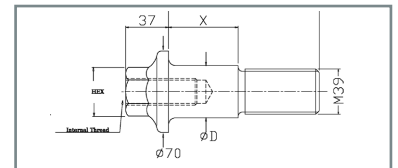
To be used with a Shear Cone

\* Length according to customer requirements, standard lengths:

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

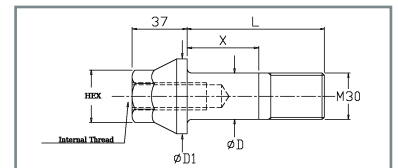
## Adapter M 39

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

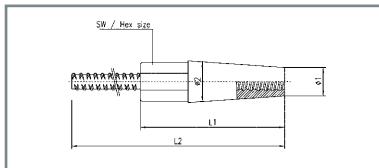
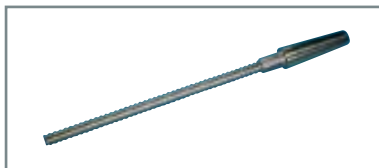
Article No.	For Cone Ø [mm]	L [mm]	Ø D [mm]	Weight [kg/pc]
100256	55	46	54	0.19
100296	64	60	63	0.29
100318	88	50	86	0.57



To replace Shear Cones after use.

# Special Accessories

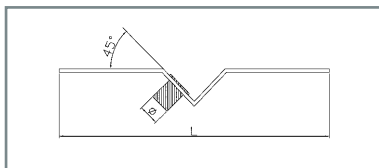
## Shebolt (Anchor Head)



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

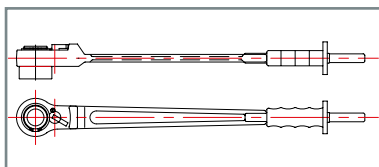


Article No.	Bar Ø [mm]	Length [mm]	Bunch Diameter Ø [mm]	Inclination	Weight [kg/pc]
15 F 5120	15	300	22	45 °	0.44
20 F 5120	20	300	28	45 °	0.44
26 E 5120	26.5	300	36	45 °	0.44

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

# Tools

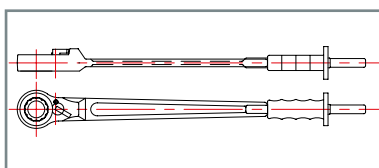
## Formwork Wrench



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

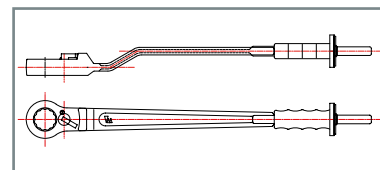
## Wrench with Inversor Cam and Short Socket



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

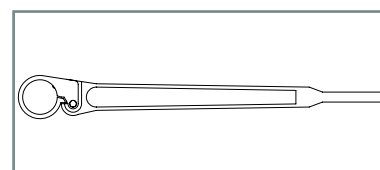
## Bent Wrench with Inversor Cam and Short Socket

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



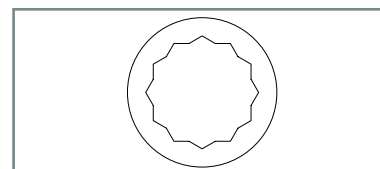
## Friction Wrench

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

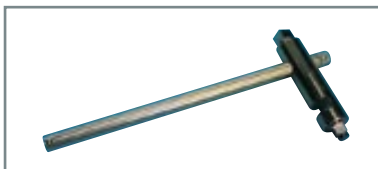
Hexagonal Socket		27mm	30mm	36mm	38mm
Reference		100036	100037	100034	100035
Height	[mm]	24	24	24	24
Use : Wing Nuts		Wing Nut 100228 Wing Nut 100231	Nuts : 100224 101917	Nuts 100275 101956 101978 101974	101983
Use : Couplers			17.30.105	23.36.120	
Weight	[kg]	0.23	0.23	0.23	0.23



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

Additional Tools are available on request.

## Universal Wrench

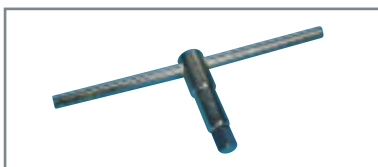


Article No.	Weight [kg/pc]
15 F 7043	1.56

Universal tool with the following features:

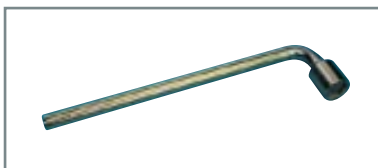
- ✓ Square 18mm, for Positioning Cone 15 F 3073
- ✓ Hex size 12mm, for all Nail Plates ...3073/N
- ✓ Square 13mm, for all Climbing Cones ...3038
- ✓ Wrench for 15mm DYWIDAG Threadbars

## 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

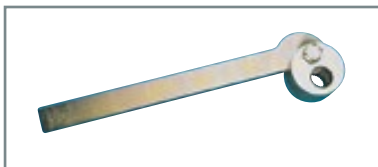
## Hexagon Wrench



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



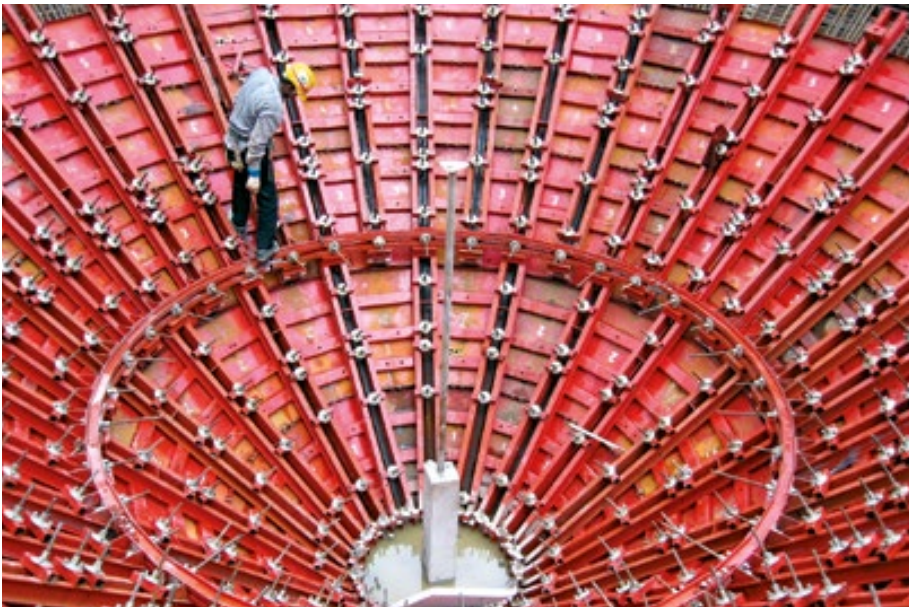
Article No.		Weight [kg/pc]
15 F 5122	For DYWIDAG Threadbars 15 and 20mm	2.00
26 E 5122	For DYWIDAG Threadbars 20 and 26.5mm	2.00

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



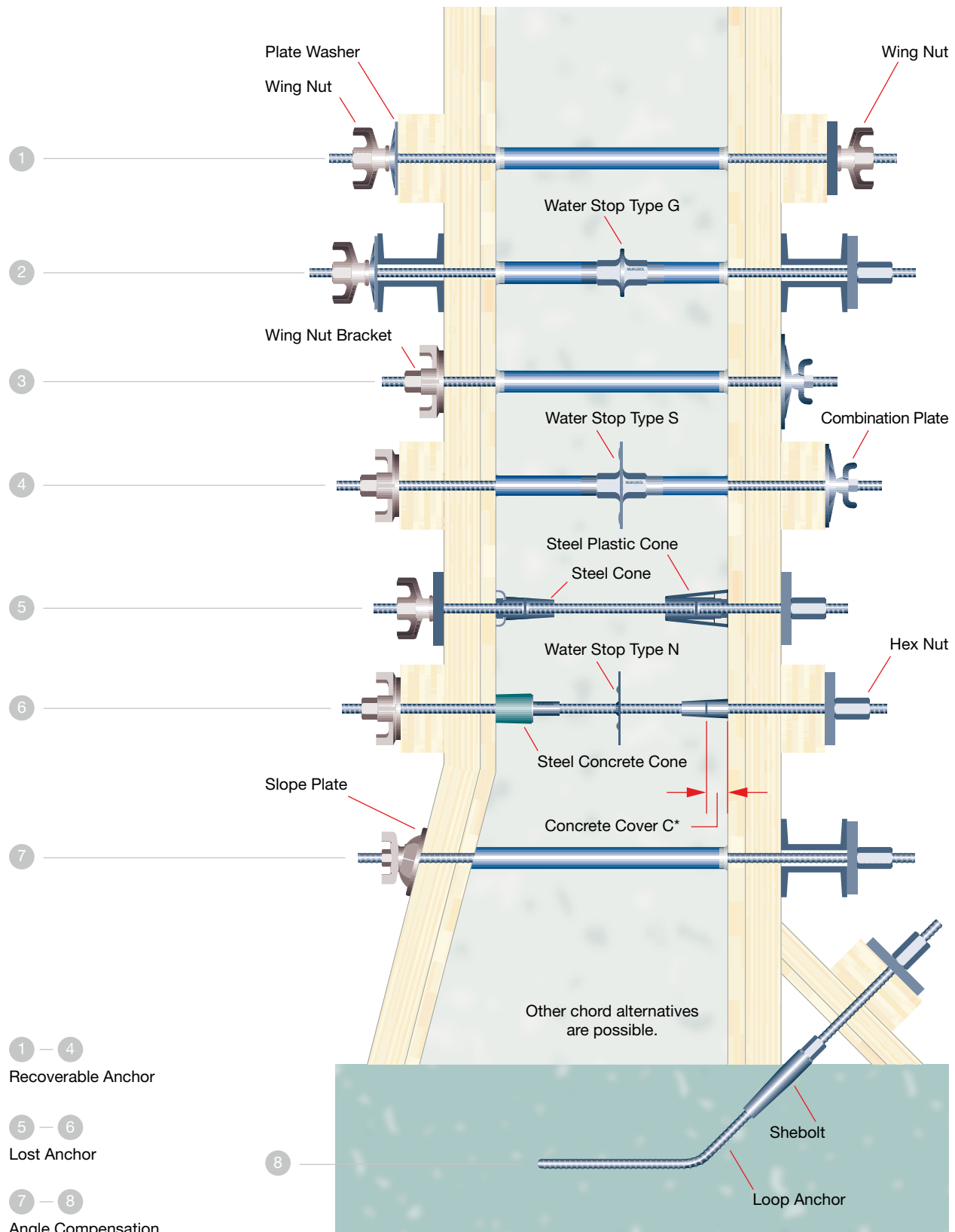
Proper use of Formties and Accessories is essential to prevent accidents and failures. All products are intended for use by qualified and experienced workmen. It is the user's responsibility to continually inspect working hardware for wear and to discard worn parts.

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



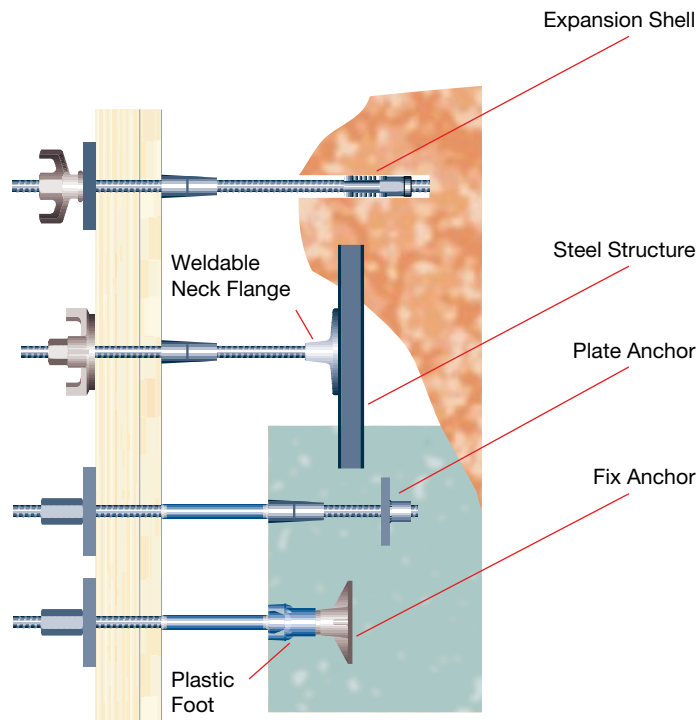
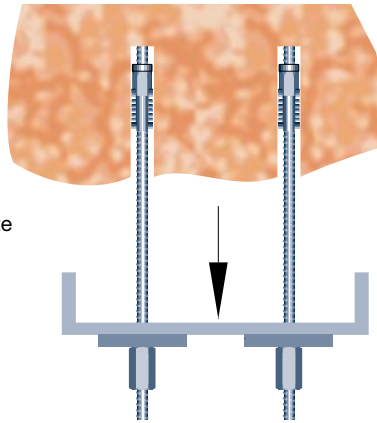
# Application Examples

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.

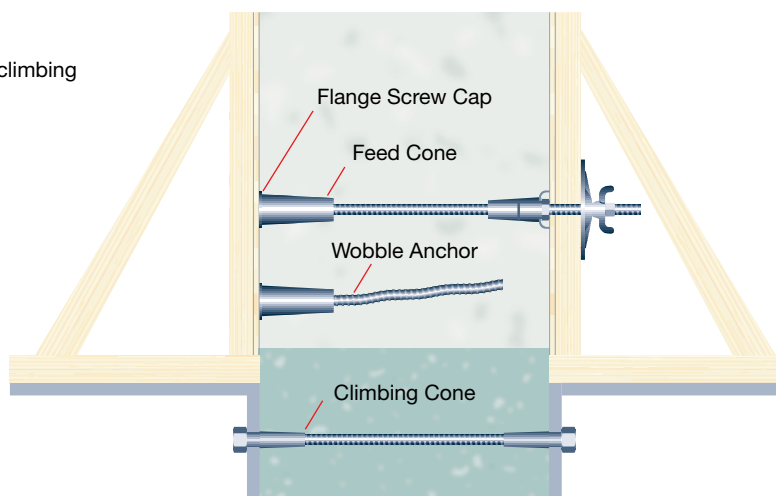


\* Length of Lost Anchor = Wall Thickness - 2 x Concrete Cover C

Suspensions in rock or concrete with expansion shells

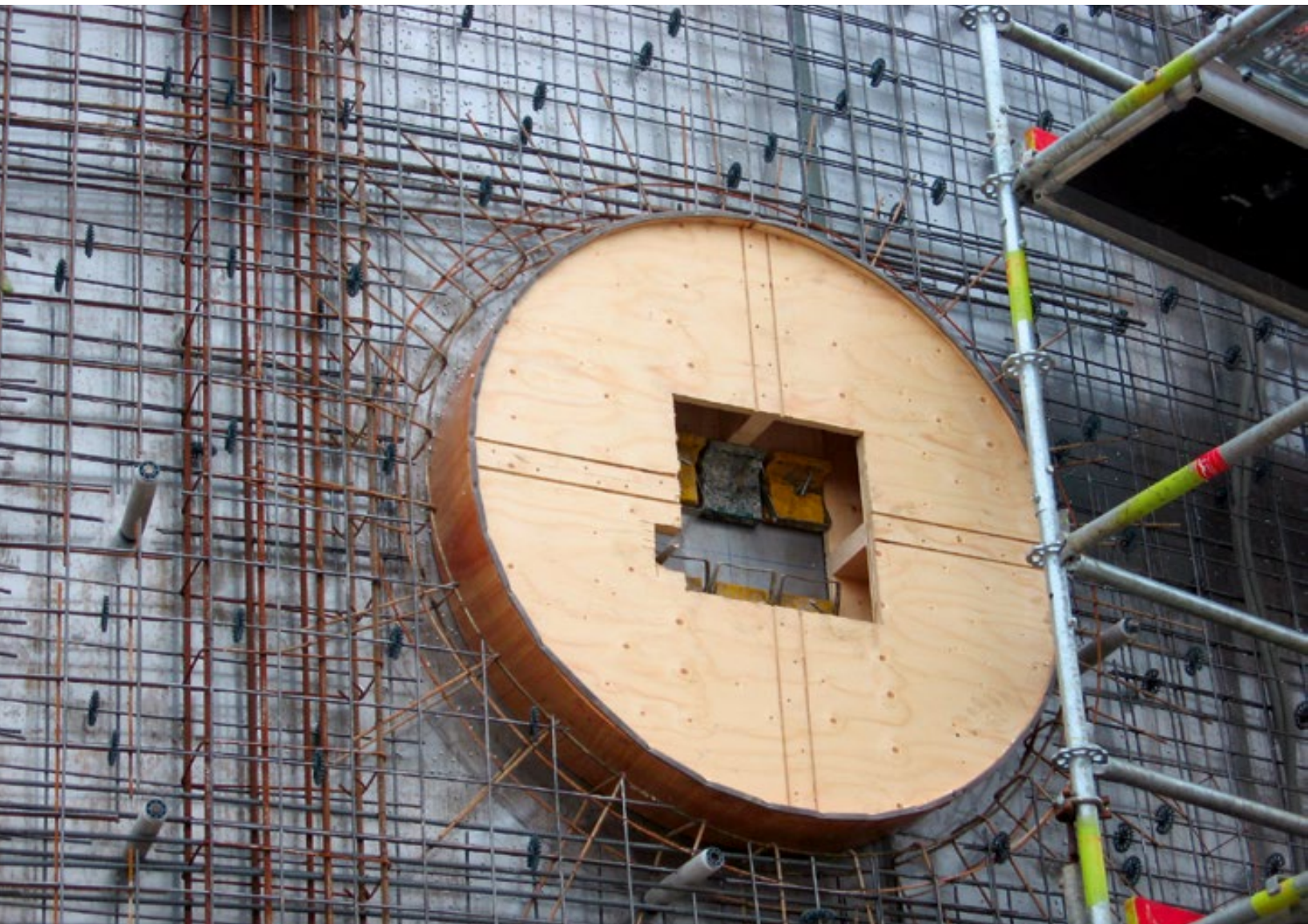


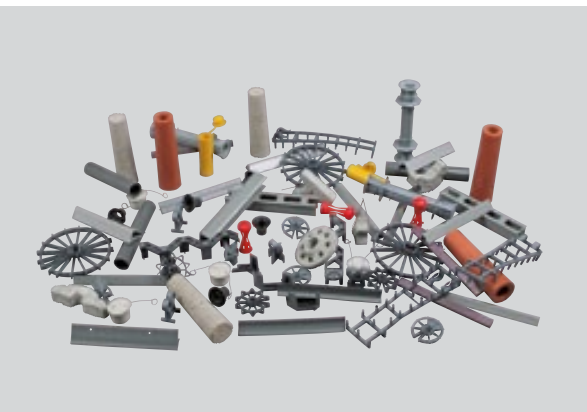
Cones for climbing formworks



Subject to technical alterations.





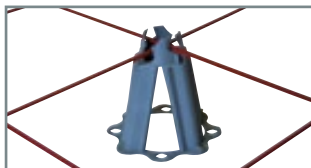


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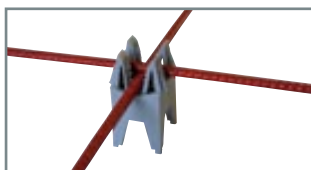
Code	Name	Steel Ø [mm]	Concrete Cover [mm]	Sale Sizes	Weight [kg/100p.]	Characteristics
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## CALEPLOT



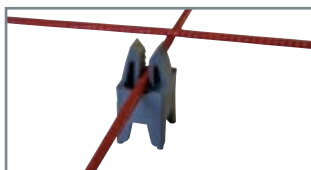
011997	CALEPLOT 15/20	-	15 and 20	500 p.	1.03	<ul style="list-style-type: none"> <li>- Highly resistant and very stable plastic spacer.</li> <li>- Wide base to ensure ideal fixing of reinforcing steels on insulators, ground floor formwork, ...</li> </ul>
011998	CALEPLOT 25/30	-	25 and 30	400 p.	1.23	
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



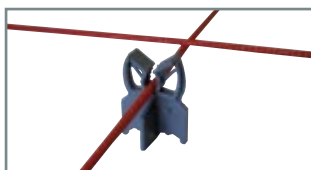
004704	CALFIX 20	2 to 18	20	2,500 p.	0.49	<ul style="list-style-type: none"> <li>- Ultra resistant spacer, building site special. Workers can walk on reinforcing steels without any special pre-cautions, Calfix remains in place.</li> <li>- Can be clipped on reinforcing steel or at steel intersections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



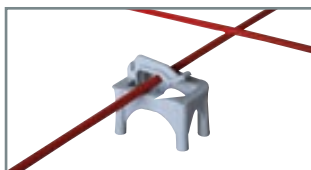
001950	CALTOUT 20	4 to 18	20	2,500 p.	0.41	<ul style="list-style-type: none"> <li>- Spacer with widely cut legs with stops at ends.</li> <li>- Invisible after form removal.</li> </ul>
001951	CALTOUT 25	4 to 18	25	2,500 p.	0.51	
001952	CALTOUT 30	4 to 18	30	2,000 p.	0.61	

## D.M. "B"



002001	D.M."B" 15	4 to 14	15	3,000 p.	0.36	<ul style="list-style-type: none"> <li>- Highly resistant and very stable plastic spacer.</li> <li>- 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.</li> </ul>
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

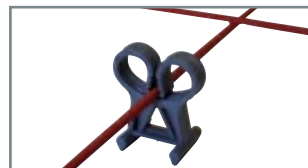


000092	MANDFIX 20	4 to 18	20	2,000 p.	0.65	<ul style="list-style-type: none"> <li>- Perfect for prefabricated parts of washed, pumiced or sanded concrete or for unsurfaced exposed concrete.</li> <li>- Can also be used for horizontal and vertical fixing.</li> <li>- For steel rods of small Ø fix Mandfix at steel intersections.</li> </ul>
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
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## 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
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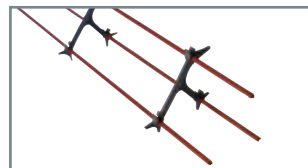
## DSM "5"

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	



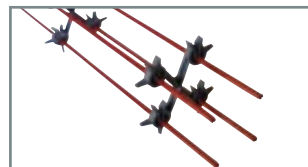
## DSM "5" 3 BRANCHES

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"

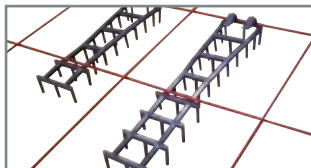
001511	D.S.M"8" 75	4 to 8	75 x 75 to 80 x 80	1,250 p.	0.54	- Struts for fence rods. - Can immediately set up the 4 reinforcing steels of fencing rods in reinforced concrete.
001585	D.S.M"8" 90	4 to 8	90 x 90	1,250 p.	0.67	
001515	D.S.M"8" 100	4 to 8	100 x 100	1,250 p.	0.78	
001587	D.S.M"8" 120 x 90	4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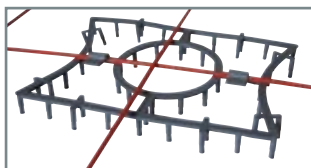
## ACROFIX



001860	ACROFIX 250/15	25	15	250 p.	3.21	<ul style="list-style-type: none"> <li>- Highly resistant spacer.</li> <li>- For all kinds of reinforcing steels with Ø ranging from 4 to 16mm.</li> <li>- Length 250 or 330mm for a width of 65mm.</li> <li>- It has 2 hooks that ensure good positioning and attachment on the steel.</li> </ul>
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"> <li>- Its length of 25 or 33cm always guarantees welded fabric support even with wide meshing.</li> <li>- Acrofix 250 or 330 for approximately every 0.70m<sup>2</sup> to 0.75m<sup>2</sup>.</li> <li>- Acrofix 330 is specially designed for reinforcing steels with wide grids.</li> </ul>
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.

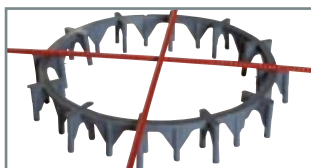
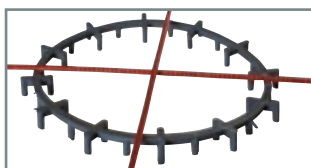
## AGRIPFIX



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

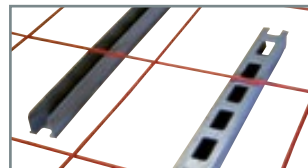


001725	CAL'RING 15	-	15	500 p.	3.05	<ul style="list-style-type: none"> <li>- Horizontal spacer for welded fabric and for common steel Ø.</li> <li>- Made of 4 pre-detailed rings with Ø ranging from 18 to 32cm.</li> <li>- Can be easily fitted on the formwork before installing welded fabric. Even if a ring moves during pouring, its area ensures effective fixing of steel rods under all circumstances.</li> </ul>
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"> <li>- Double legs for CAL'RING. For Reinforced CAL'RING, same design as Cal'ring but with double reinforced legs, highly stable and resistant.</li> </ul>
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	

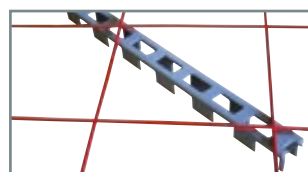


Code	Name	Concrete Cover [mm]	Sale Sizes	Standard Packaging	Weight [kg/100m]	Characteristics
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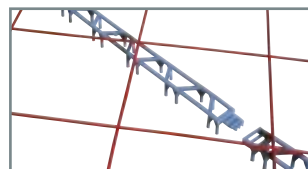
UNICALE I						
001688	UNICALE-I 25 - 2.00ML	25	100m	4,200m	22.00	<ul style="list-style-type: none"> <li>- U shaped spacer for fixing reinforcing steels on insulators, ground floor formwork, etc...</li> <li>- Can be placed upside down, the 2 wings of the U shape facing upward.</li> </ul>
001689	UNICALE-I 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	



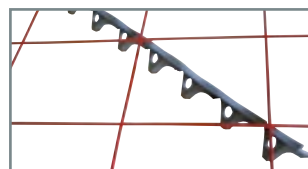
UNICALE II						
001677	UNICALE-II 25 - 2.00ML	25	100m	4,200m	18.00	<ul style="list-style-type: none"> <li>- Plastic U, highly resistant, with very wide cutouts for concrete passage.</li> <li>- Used for vertical, horizontal or inclined fixing.</li> <li>- Can be cut into pieces of 33 or 50 cm for fixing by blocks.</li> </ul>
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	



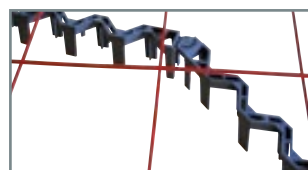
UNICALE III						
001658	UNICALE-III 25 - 2.00ML	25	100m	5,000m	10.20	<ul style="list-style-type: none"> <li>- Each 2.00m length consists of two 1.00m long parts. Delivered assembled, these parts can be disassembled at the last minute at the building site.</li> <li>- With a largely cut out form, Unicale III can be perfectly embedded in concrete.</li> </ul>
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 IV						
016657	UNICALE-IV 25 - 0.80ML	25	40m	2,800m	12.00	<ul style="list-style-type: none"> <li>- Very resistant and stable plastic spacer.</li> <li>- Original design to ensure excellent penetration of concrete.</li> <li>- Patented model.</li> </ul>
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	

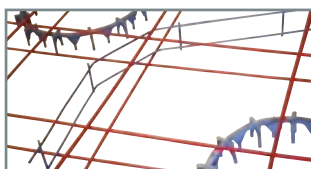
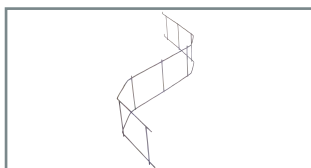


UNICALE R-FIX						
001684	UNICALE R.FIX 25 - 2.00ML	25	100m	3,600m	8.30	<ul style="list-style-type: none"> <li>- Widely cut plastic spacer to ensure excellent concrete penetration.</li> <li>- Each 2.00m unit consists of three 0.67m parts fitted with a rotating attachment, which allows sine curve positioning.</li> </ul>
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	



Code	Name	Height [mm]	Sale Sizes	Standard Packaging	Weight [kg/100m]	Characteristics
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## ZISTA GIRDER



007955	ZISTA GIRDER 40 MM	40	50m	2,000m	22.50	<ul style="list-style-type: none"> <li>- 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.</li> <li>- Good stability – does not teeter.</li> <li>- No contact with formwork.</li> <li>- Other sizes on request.</li> </ul>
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
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## TRIANGULAR CHAIR



007960	Triangular Chair 70 MM	70	400ml	2,000ml	1.12	<ul style="list-style-type: none"> <li>- Linear steel space length 2m composed of 14 vertical steels Ø 3.88mm and 3 longitudinal steels Ø 3.00mm.</li> <li>- The triangular chair is unalterable thanks to the vertical steels disposed every 15cm, and is adapted to heavy loads.</li> <li>- Its geometry allows an excellent stability and ensures a perfect concrete penetration.</li> <li>- Other dimensions available up to 250mm.</li> </ul>
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
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## BETON-FIX

002744	BETON-FIX 20	20	300 p.	12,000 p.	6.83	<ul style="list-style-type: none"> <li>- Concrete waterproof spacer, highly resistant.</li> <li>- Large support area lending good stability.</li> <li>- No fibers in the concrete.</li> <li>- For all steel diameters.</li> <li>- Easy attachment because of connected galvanized loops.</li> <li>- Support area Ø 35mm.</li> </ul>
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"> <li>- Same as Beton-fix but with a cradle for resting the reinforcing steel.</li> </ul>
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"> <li>- In waterproof concrete, spacer is almost invisible after form removal.</li> <li>- Easy attachment on steel rods because of connected galvanized loops.</li> <li>- To be positioned at steel intersections.</li> <li>- The spacers do not contain any fibers.</li> </ul>
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	



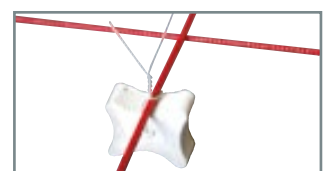
## BETON-CLIP

018532	BETON-CLIP 25	25	325 p.	13,000 p.	3.20	<ul style="list-style-type: none"> <li>- In waterproof concrete, spacer is almost invisible after formwork removal.</li> <li>- Easy attachment from Ø4 to Ø14 thanks to clips.</li> <li>- Perfect stability thanks to large support area</li> <li>- Also available in heights of 20, 35 and 45.</li> <li>- Can be provided in white</li> <li>- Vertical and horizontal use</li> </ul>
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	



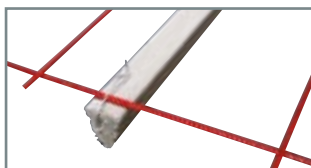
## TRIVALEUR

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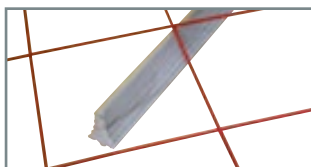
## FIBER CONCRETE SEPARATOR



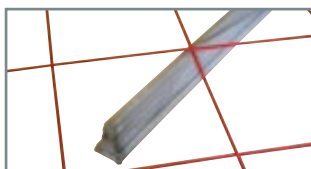
002668	FIBER CONCRETE SEPARATOR WITH HOOK 33/30	30	75 p.	3,000 p.	25.20
002670	FIBER CONCRETE SEPARATOR WITH HOOK 33/40	40	50 p.	2,000 p.	40.50

- 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



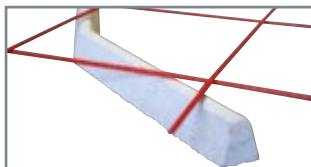
002652	FIBER CONCRETE SLIDE 33/25	25	100 p.	4,000 p.	23.60
002653	FIBER CONCRETE SLIDE 33/30	30	75 p.	3,000 p.	29.34
002655	FIBER CONCRETE SLIDE 33/40	40	50 p.	1,800 p.	47.00
002656	FIBER CONCRETE SLIDE 33/50	50	40 p.	1,280 p.	67.00



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



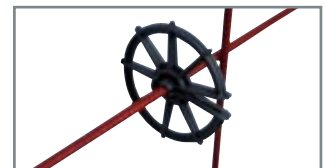
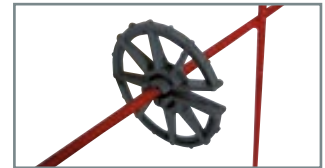
002688	ZZ CONCRETE RULER 25	25	1,200 p.	1,200 p.	83.08
002685	ZZ CONCRETE RULER 30	30	750 p.	750 p.	123.33
002687	ZZ CONCRETE RULER 40	40	500 p.	500 p.	167.80
002689	ZZ CONCRETE RULER 50	50	400 p.	400 p.	221.50
002690	ZZ CONCRETE RULER 60	60	320 p.	320 p.	310.94

- 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
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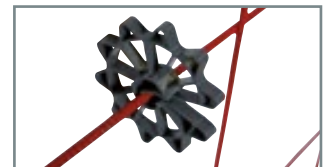
## CAL'ROUE

002618	CAL'ROUE 6/20	3 to 6	20	3,000 p.	0.43	<ul style="list-style-type: none"> <li>- Highly resistant spacer designed to maintain steel rods of small Ø in precast units of concrete with small widths.</li> <li>- Very good hold for steel.</li> <li>- Can be made in different colors on request.</li> </ul>
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	



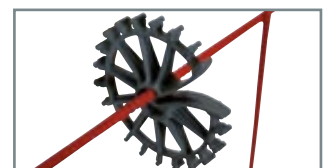
## COROLFIX

006170	COROLFIX 5-12/15	5 to 12	15	5,000 p.	0.30	<ul style="list-style-type: none"> <li>- Spacer ensuring good steel support.</li> <li>- Ideal for general purposes on construction sites.</li> <li>- Can be made in different colors on request.</li> </ul>
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"> <li>- Resistant spacer with a special clamping core for effective attachment to steel.</li> <li>- Almost impossible to break away.</li> <li>- Unobtrusive.</li> <li>- Ideal for general purposes on construction sites and in the precast industry.</li> <li>- Can be made in different colors on request.</li> </ul>
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	



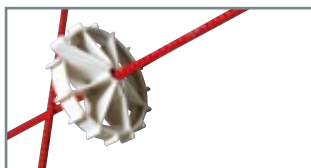
## SUPERFIX

006164	SUPERFIX 5-14/25	5 to 14	25	1,000 p.	0.98	<ul style="list-style-type: none"> <li>- Ultra resistant spacer with a special wide and thick core for effective attachment to steel.</li> <li>- Almost impossible to break away.</li> <li>- Does not get crushed by the pressure of steel against formwork.</li> <li>- Can be made in different colors on request.</li> </ul>
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	



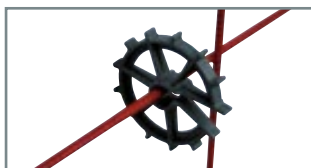
Code	Name	Steel Ø [mm]	Concrete Cover [mm]	Sale Sizes	Standard Packaging	Weight [kg/100p.]	Characteristics
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## DUX EX



017822	DUX EX 6/10 NM	4 to 6	10	1,000 p.	10,000 p.	0.19	<ul style="list-style-type: none"> <li>- On request and with individually determined delivery times, concrete covers of 35, 40 and 50mm can be delivered for some steel Ø.</li> </ul>
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	

## DUX OPEN



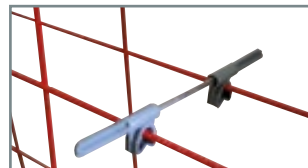
003064	DUX OPEN 6/20	4 to 6	20	3,500 p.	3,500 p.	0.36	<ul style="list-style-type: none"> <li>- Very rigid and resistant spacer for use in public works.</li> <li>- On request and with individually determined delivery times, concrete covers of 50-60-70 and 95mm can be delivered for some steel Ø.</li> <li>- 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.</li> </ul>
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	

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

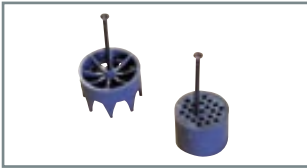
001611	DOUBLE LAYER 150/20	150	20	100 p.	2.10
001612	DOUBLE LAYER 160/20	160	20	100 p.	2.15
001614	DOUBLE LAYER 180/20	180	20	100 p.	2.30
001616	DOUBLE LAYER 200/20	200	20	100 p.	2.40
001622	DOUBLE LAYER 250/20	250	20	100 p.	2.65
001630	DOUBLE LAYER 150/25	150	25	100 p.	2.20
001631	DOUBLE LAYER 160/25	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
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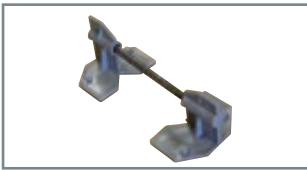
## NAIL-ON CASTOR



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.

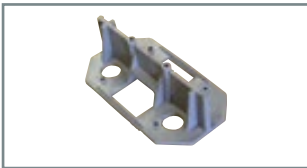
## FORMWORK FOOT SPACER REINFORCED



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



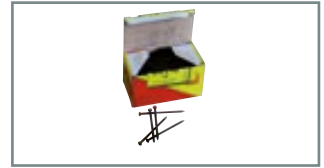
016282	FOOT MAX 16CM	16	without nail	100 p.	4.40
016283	FOOT MAX 18CM	18	without nail	100 p.	4.80
016284	FOOT MAX 20CM	20	without nail	100 p.	5.20
016285	FOOT MAX 16CM with nail	16	with nail	100 p.	5.40
016286	FOOT MAX 18CM with nail	18	with nail	100 p.	5.80
016287	FOOT MAX 20CM with nail	20	with nail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

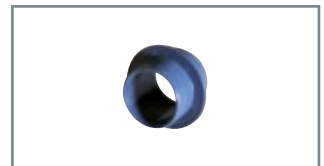
- Conical formwork spacer, recoverable, with massive and thick walls.
- Internal Ø 26mm.
- External Ø of the big base: 52mm.
- The MASSIVE SPACERS EL can be juxtaposed with a JUNCTION SPACER to form walls thicker than 25cm.
- Recovery of spacers:
  - Spacers up to 25cm: with a CONE PUNCH.
  - Juxtaposed 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
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- 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
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## 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
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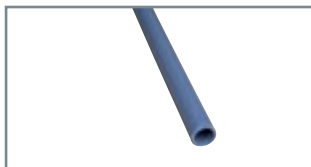
## PVC TUBE



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

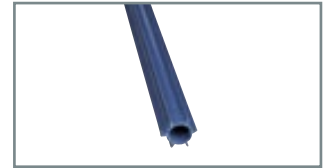
- Formwork PVC tube with thick and smooth external walls, very high resistance to pressure.
- Can be cut to desired lengths, adding value to the cuts.
- Standard length: 2m (4m on request and with individually determined delivery times).

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

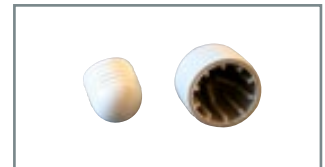


Code	Name	For Orifice Ø [mm]	A [mm]	Sale Sizes	Standard Packaging	Weight [kg/100p.]	Characteristics
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## WATERPROOF PLUG

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
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## CONCRETE PLUG 40/5

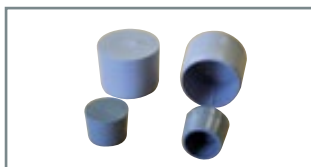
000334	CONCRETE PLUG 40/5	40	200 p.	8,000 p.	9.53
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- Perfectly suited for filling the SEAL CONE SMOOTH 50/22 or 50/26 reservations.
- To obtain a waterproof filling of 5 bars, use the BI-COMPONENT ADHESIVE. Test reports no. 21-1392 894-01 dated 11/29/94 (MPA-NRW) provided on request.



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



003222	DECKI 22	22	1,000 p.	10,000 p.	0.26	<ul style="list-style-type: none"> <li>- Plastic finishing cap to block visible holes of DURCHGANG, PVC TUBE and PVC TUBE TR after form removal.</li> <li>- DECKI do not ensure watertightness, but help avoid expensive finishing for shoring walls, artwork, industrial buildings, etc.</li> </ul>
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
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## WATERPROOF CAP WITH DECKI



013677	FLANGE CAP FOR 22 x 26	22 x 26	200 p.	1.50	<ul style="list-style-type: none"> <li>- Waterproof cap + special DECKI, ensures streaming watertightness.</li> <li>- Resists water pressure up to 7 bars.</li> <li>- Test reports provided on request.</li> <li>- Waterproof cap and corresponding waterproof DECKI delivered separately.</li> <li>- In case of ordering cuts, please provide the following information: <ul style="list-style-type: none"> <li>• Will SEAL CONES be used?</li> <li>• The thickness of the finished wall that is to be made.</li> <li>• Always take into account size e (see on the left).</li> </ul> </li> </ul>
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
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## 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"> <li>- PVC tubes with flanges serve as water dams.</li> <li>- 22mm interior Ø to allow formtie DYWIDAG 15/17 to pass through.</li> <li>- Filling of each orifice with the help of a special waterproof DECKI provided for this reason.</li> <li>- Resists water pressure up to 7 bars.</li> <li>- Test reports provided on request.</li> </ul>
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
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## HYDRO-EXPANSIVE PLUG

018555	Hydro-expansive Plug D26	25.50-26.20	100 p.	9,000 p.	3.40	<ul style="list-style-type: none"> <li>- Hydro-expansive plug comprise a water-swellable rubber cap and solid plug</li> <li>- The cap prevents water from infiltrating the bar and the core provides a mechanical anchor under water pressures up to 6 bar.</li> <li>- Guarantees a perfect seal, combating moisture infiltration with a single hammer blow.</li> <li>- No re-profiling or treatment is required after installation</li> </ul>
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## HYDRO-EXPANSIVE RING

018556	Hydro-expansive Ring D26	24-30	100 p.	12,600 p.	3.40	<ul style="list-style-type: none"> <li>- Water swellable product that expands on contact with water</li> <li>- Prevents water from permeating through cracks in the concrete around formwork spacers.</li> <li>- Quick and easy to use</li> <li>- Can be used in dead formwork system with the connector.</li> <li>- Test report and certificate available</li> </ul>
018589	Hydro-expansive Ring D31	31-38	50 p.	9,000 p.	3.30	



Code	Name	For Tie Bar Ø [mm]	For Ring	Sale Quantity	Standard Packaging	Weight per 100 [kg]	Characteristics
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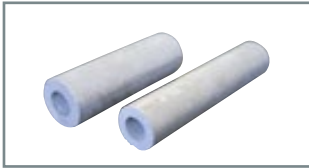
## HYDRO-EXPANSIVE SEALING CONNECTOR

018590	CONNECTOR D15	Ø15-17	D26	50 p.	9,000 p.	1.24	<ul style="list-style-type: none"> <li>- Connector for heavy-duty concrete structures where formwork tie bars remain in situ</li> <li>- Made from synthetic, water-swellable rubber that fully prevents moisture infiltration.</li> <li>- The Sealing Connector is slid over the tie rod and anchored with the Hydro-expansive Ring - For use with DYWIDAG Tie Rods</li> <li>- Quick and easy to use</li> <li>- Test report and certificate available</li> </ul>
018591	CONNECTOR D20	Ø20-23	D31	50 p.	9,000 p.	1.80	



Code	Name	Length [cm]	Sale Sizes	Standard Packaging	Weight [kg/100p.]	Characteristics
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## 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"> <li>- Tube for formwork in fiber concrete without asbestos.</li> <li>- Recommended for waterproof walls.</li> <li>- Resists water pressure of 7 bars.</li> <li>- Test report no. 21.0791.5.86 carried out by the MPA NRW on the Ø 22mm Fiber Concrete Tube.</li> <li>- Complete test report provided on request.</li> <li>- Other lengths possible on request.</li> <li>- Ø int. x Ø ext. = 22/40 or 26/50.</li> <li>- Ø 32 mm interior on request and with time for delivery.</li> </ul>
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"> <li>- The FIBRE CONCRETE TUBES are dampened before they are fixed in the vertical formworks.</li> <li>- During the concreting phase, spacer contact with the vibrating needle should be avoided.</li> </ul>
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
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## SEAL FLANGE



005424	SEAL FLANGE F-22	22	250 p.	-	0.22	<ul style="list-style-type: none"> <li>- Can be fitted at the extremities of the FIBRE CONCRETE TUBES to avoid crushing of formwork and passing of laitance.</li> <li>- For the same use, you can also use a SEAL CONE.</li> </ul>
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"> <li>- Allows you to connect 2 FIBRE CONCRETE TUBES or 1 FIBRE CONCRETE TUBE with a PVC TUBE of the same interior Ø.</li> <li>- Avoids passing of laitance.</li> </ul>
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## FIBRE CONCRETE PLUG



000312	FIBRE CONCRETE PLUG Ø 22 - 2 CM	22	1,000 p.	-	1.50	<ul style="list-style-type: none"> <li>- 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.</li> <li>- Based on the objective, cap each face with one or more caps of different lengths.</li> <li>- To obtain a waterproof filling, use the BI-COMPONENT ADHESIVE.</li> <li>- Ø 32mm caps on request.</li> </ul>
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.

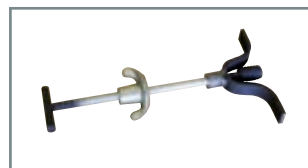
Code	Name	Sale Sizes	Unit Weight [kg]	Characteristics
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**CONE PUNCH**

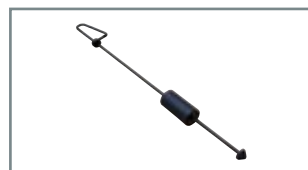
006000	CONE PUNCH 30 CM STAINLESS STEEL	1 p.	1.00	<ul style="list-style-type: none"> <li>- Made of solid stainless steel or black steel.</li> <li>- Indispensable for removing spacers without damaging them.</li> </ul>
012528	CONE PUNCH 30 CM BLACK STEEL	1 p.	1.00	

**CONE EXTRACTOR**

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

002842	CONE PULLER	1 p.	1.70	<ul style="list-style-type: none"> <li>- Allows you to recover the inner spacers from the side of the larger Ø.</li> <li>- 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.</li> </ul>
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**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"> <li>- Special wrench to recover the SEAL CONE SMOOTH 50/22 and 50/26.</li> </ul>
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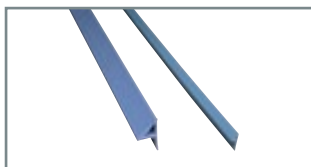
**CONCRETE CONE MOULD**

008050	CONCRETE CONE MOULD 25	1 p.	19.50	<ul style="list-style-type: none"> <li>- Very strong steel reinforced with inner spacers.</li> <li>- Allows manufacture of 10 CONCRETE CONES at a time: <ul style="list-style-type: none"> <li>• length = 25cm</li> <li>• small Ø = 37mm</li> <li>• big Ø = 54mm</li> </ul> </li> <li>- 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.</li> <li>- Before molding the CONCRETE CONE, coat the interior impressions of the mould using a form removal product.</li> </ul>
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Code	Name	Measures A x B x C [mm]	Sale Sizes	Weight [kg/100m]	Characteristics
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## CHAMFER



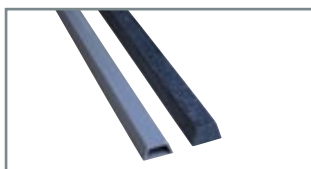
003711	CHAMFER 15 – 2.50 M	15 x 10 x 25	100m	6.20	<ul style="list-style-type: none"> <li>- In very solid plastic with thick walls.</li> <li>- Can be reused 2 to 3 times.</li> <li>- The tongue firmly maintains chamfer in place within the angle of the formwork without any risk of it moving.</li> <li>- It can be nailed to the edge of the wood formworks, or locked between the metal vertical formworks.</li> <li>- Standard length: 2.50m.</li> </ul>
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"> <li>- To round out the corners of reinforced concrete piles in public areas, schools...to prevent accidents.</li> <li>- Standard length: 2.50m.</li> </ul>
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## TRAPEZIUM



003650	HOLLOW TRAPEZIUM 20 x 10 x 10	20 x 10 x 10	100m	9.00	<ul style="list-style-type: none"> <li>- Profile in rigid plastic, solid or hollow.</li> <li>- Can be attached to formworks with brads or by collage or with a double-sided adhesive.</li> <li>- Used for negatives in the façades or walls in poured concrete.</li> <li>- Standard length: 2.50m.</li> <li>- Type "solid": other sections on request, minimum order 500 m with individually determined delivery times.</li> </ul>
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
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## TRIANGLE



003705	TRIANGLE 9 – 2.50 M	9 x 6	100m	2.50	<ul style="list-style-type: none"> <li>- In very solid plastic with thick walls.</li> <li>- Can be reused 2 to 3 times.</li> <li>- Type 20 and 27 with 90° angle, lightly rounded.</li> <li>- Standard length: 2.50m.</li> </ul>
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
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**WATER DROP 1**

003751	WATER DROP 1 A12	20 x 12 x 12 x 9	100m	6.50	<ul style="list-style-type: none"> <li>- Simple water drop in plastic, remains mixed with the concrete.</li> <li>- Can be attached to formworks with headless nails.</li> <li>- 1 nail every 20 to 30cm.</li> <li>- Standard length: 2.50m.</li> </ul>
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
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**JOINT "P"**

003677	JOINT "P" 40 MM IN 3.00 M. GREY	3m	30m	0.30	<ul style="list-style-type: none"> <li>- Anti-crack joints for slabs, terraces, sidewalks, tennis courts, ...</li> <li>- The joint ruler must be placed on concrete blocks approximately every 75cm and leveled carefully.</li> <li>- The alignment must be checked with a line.</li> <li>- 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.</li> <li>- To ensure a good finish, make an oblique cut on the joint rulers to be positioned perpendicularly.</li> </ul>
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
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## MAGNETIC STRAIGHT EDGE



### Light series

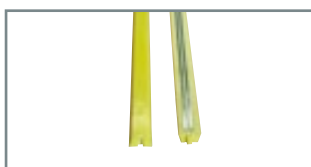
002891	MAGNETIC STRAIGHT EDGE 25 x 18 x 25	25 x 18 x 25	40kg/m	1.25m	1.00
002892	MAGNETIC STRAIGHT EDGE 40 x 33 x 25	40 x 33 x 25	4 kg/m	1.25m	2.00
002894	MAGNETIC STRAIGHT EDGE 50 x 43 x 25	50 x 43 x 25	40kg/m	1.25m	2.30

### 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

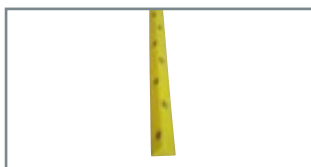


002904	MAGNETIC TRAPEZIUM 20 x 13.6 x 12	20 x 13.6 x 12	30kg/m	1.25m	0.63
002901	MAGNETIC TRAPEZIUM 30 x 22 x 15	30 x 22 x 15	30kg/m	1.25m	0.80
002905	MAGNETIC TRAPEZIUM 40 x 32 x 15	40 x 32 x 15	30kg/m	1.25m	1.04
002903	MAGNETIC TRAPEZIUM 40 x 29 x 20	40 x 29 x 20	30kg/m	1.25m	1.30
002900	MAGNETIC TRAPEZIUM 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
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## 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
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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/m<sup>3</sup>:

- 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.



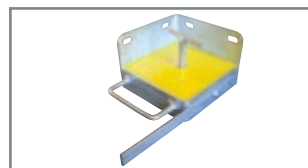
# Magnetic Block

Code	Name	Dimensions L x l x H [cm]	Sale Sizes	Unit Weight [kg]	Characteristics
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## MAGNETIC BLOCK METAL FRAME

018369	MAGNETIC BLOCK RESIN 400 KG METAL FRAME	15 x 15 x 10	1 p.	3.40
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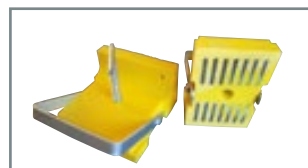
- Magnetic block with a metal frame.
- For fixing frames in vertical formwork.
- Force 400kg.



## 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
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**ANCHOR FOOT**

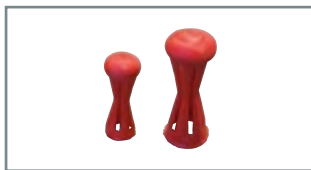
000990	ANCHOR FOOT PLASTIC Ø 26 MM	10	26	100 p.	2.85	<ul style="list-style-type: none"> <li>- Delivered completely molded in 26 and 42mm.</li> <li>- Mounted with caps and plugs in 37 and 40mm.</li> <li>- Embedded in concrete at pouring time.</li> <li>- The yellow or red plugs help quick identification.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

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

Code	Name	For Steel Ø [mm]	Sale Sizes	Standard Packaging	Weight [kg/100p.]	Characteristics
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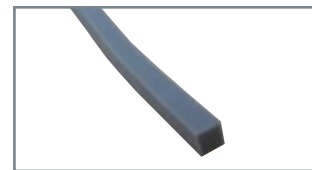
**SIGNAL' STEEL**

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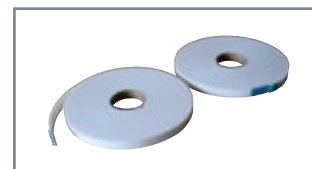
### SQUARE JOINT

009874	SQUARE JOINT 25 x 25 MM	25 x 25	540m	0.69	<ul style="list-style-type: none"> <li>- Grey polyurethane foam, length 2 m.</li> <li>- Density <math>\pm 19 \text{ kg/m}^3</math>.</li> <li>- Other sections available on request and allowing time for delivery.</li> </ul>
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### 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"> <li>- Polyester/Polyurethane foam, very flexible with open cells.</li> <li>- Can be crushed easily between formworks.</li> <li>- Other sections on request and allowing time for manufacture.</li> </ul>
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	Formwork joint PE with closed cells <ul style="list-style-type: none"> <li>- Polyethylene foam with closed cells, guaranteed to ensure good watertightness during laitance under formwork pressure.</li> <li>- Other sections on request and allowing time for manufacture.</li> <li>- White color.</li> <li>- Self-adhesive foam for easy installation.</li> </ul>
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"> <li>- Polyethylene foam with closed cells, guaranteed to ensure good watertightness during laitance under formwork pressure.</li> <li>- Other sections on request and allowing time for manufacture.</li> <li>- White color.</li> <li>- Self-adhesive foam for easy installation.</li> </ul>
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	
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	Formwork joint PE with closed cells <ul style="list-style-type: none"> <li>- Polyethylene foam with closed cells, guaranteed to ensure good watertightness during laitance under formwork pressure.</li> <li>- Other sections on request and allowing time for manufacture.</li> <li>- White color.</li> <li>- Self-adhesive foam for easy installation.</li> </ul>
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	Formwork joint PE with closed cells <ul style="list-style-type: none"> <li>- Polyethylene foam with closed cells, guaranteed to ensure good watertightness during laitance under formwork pressure.</li> <li>- Other sections on request and allowing time for manufacture.</li> <li>- White color.</li> <li>- Self-adhesive foam for easy installation.</li> </ul>
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	

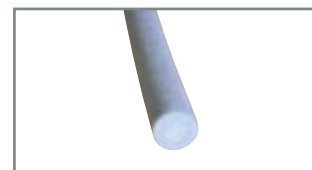


Equivalence for joint thickness	
PE	PO-PU
3mm	10mm
4mm	15mm
5mm	20mm
6mm	25mm
8mm	30mm

Code	Name	Ø [mm]	Sale Sizes	Weight [kg/100m]	Characteristics
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### POLYETHYLENE JOINT

009301	POLYETHYLENE JOINT 6 MM	6	2,500m	0.16	<ul style="list-style-type: none"> <li>- Foam with closed cells and smooth sides.</li> </ul>
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
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## ILLMOD 600



009602	JOINT ILLMOD 600 10/2	2	375m	1.60	<ul style="list-style-type: none"> <li>- 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.</li> <li>- SOCOTEC requirements specification.</li> <li>- Advantages: <ul style="list-style-type: none"> <li>• Self extinguishing and fire resistant.</li> <li>• Chemically neutral, therefore non-toxic.</li> <li>• Good sound insulator because of its thick density (Test report and graphs available on request).</li> <li>• Classified among insulating products (thermal conductivity: ~ 0.045 W m.K).</li> <li>• Compatible with various construction materials (wood, aluminum, steel). Non staining on PVC and aluminium.</li> </ul> </li> <li>- Instructions for use: <ul style="list-style-type: none"> <li>• Do not expose ILLMOD 600 permanently to temperatures higher than 90° C.</li> <li>• Do not supercompress ILLMOD 600 beyond its thickness on the roller.</li> <li>• Avoid contact with certain neutral silicones. Use ILLMOD only with approval from the manufacturer for natural stone or certain materials that are highly solvent.</li> </ul> </li> <li>- Storage time: ≤ 2 years to T ≤ 20° C. (Date of manufacture on the inner wall of the boxed core: week and year).</li> <li>- Standard color: anthracite.</li> <li>- Other sizes: on request.</li> </ul>
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
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## 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
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## BENTOMASTIC

011000	BENTOMASTIC 307	1 p.	12 p.	0.50/p
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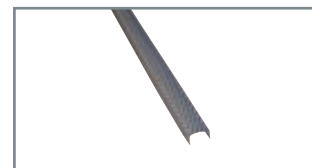
- BENTOMASTIC is a waterproof putty made from natural sodium bentonite.
- BENTOMASTIC is an easy and quick replacement product for BENTOSTOP.



## PROTECTION GRATING

013546	PROTECTIO GRID 25 X 20 MM	-	1m	0.10/m
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- 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
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## **COMPRESSION SEAL**



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

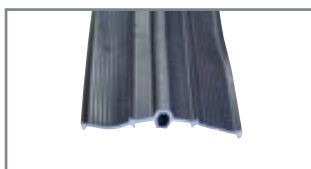
Code	Name	Width [mm]	Sale Sizes	Weight [kg/m]	Characteristics
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## **WATERSTOP WTJDE**



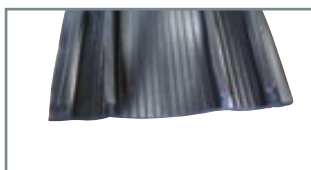
016731	WATERSTOP WTJDE 190 MM R	190	25m	1.50	<ul style="list-style-type: none"> <li>- External waterstop made of PVC-P.</li> <li>- Used for waterproofing concrete for expansion joints.</li> <li>- Other possible sizes on request.</li> </ul>
016734	WATERSTOP WTJDE 240 MM R	240	25m	1.60	
016735	WATERSTOP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

## **WATERSTOP WTJDI**



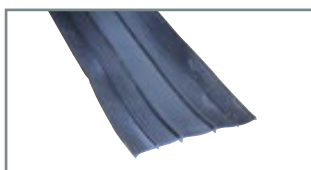
016737	WATERSTOP WTJDI 150 MM R	150	25m	1.05	<ul style="list-style-type: none"> <li>- Internal waterstop made of PVC-P.</li> <li>- Used for waterproofing concrete for expansion joints.</li> <li>- Other possible sizes on request.</li> </ul>
016738	WATERSTOP WTJDI 190 MM R	190	25m	1.10	
016741	WATERSTOP 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"> <li>- External waterstop made of PVC-P.</li> <li>- Used for waterproofing concrete for expansion joints.</li> <li>- Other possible sizes on request.</li> </ul>
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"> <li>- Internal waterstop made of PVC-P.</li> <li>- Used for waterproofing concrete for expansion joints.</li> <li>- Other possible sizes on request.</li> </ul>
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
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## WATERSTOP SI

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



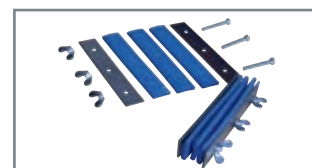
## WATERSTOP KAB

017380	KAB 125 SET	125	25m	1.20/m	<ul style="list-style-type: none"> <li>- PVC waterstop combined with a hydrophilic strip.</li> <li>- The KAB set includes 25 ml of KAB and 50 mounting stirrups.</li> <li>- It is used for waterproofing concrete walls for construction joints.</li> <li>- Test report available on request.</li> <li>- Easy to install and dependable.</li> </ul>
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"> <li>- Connection system designed for juncture without thermal soldering of the KAB shape.</li> <li>- The KS juncture is made of 2 assembly rails, 3 hydrophilic strips and 3 M5 screws with wing nuts.</li> <li>- Functioning is guaranteed by hydrophilic strips with large expansion.</li> </ul>
017516	JUNCTURE KS 15	150	1 p.	0.23/p.	



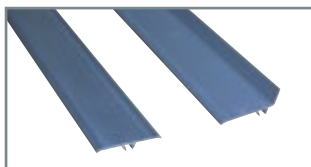
## WELDING TOOL

016729	WELDING TOOL WTLC 300	-	1 p.	1.10/p.	<ul style="list-style-type: none"> <li>- Heating blade 300W - 220V.</li> <li>- For connection to 2 PVC waterstops by thermal welding.</li> </ul>
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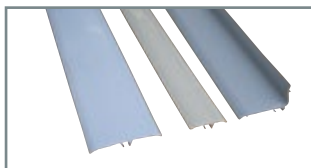
Code	Name	Moving Joint Width [mm]	Sale Sizes	Weight [kg/m]	Characteristics
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## JOINT COVER TREBO ALU



012568	CVJ TREBO ALU ANGLE 050	10 to 35	3m	0.35	<ul style="list-style-type: none"> <li>- Joint covers in natural anodized aluminum.</li> <li>- Allows you to protect and cover façade joints, floors, walls and ceilings.</li> <li>- Standard length: 3m.</li> <li>- Standard packaging: 30m.</li> <li>- The dovetail under the surface allows you to insert attaching clips: <ul style="list-style-type: none"> <li>• 4 clips per 3m of joint covers on the wall and ceiling.</li> <li>• 10 clips per 3m of joint covers for floors with light pedestrian traffic.</li> </ul> </li> <li>- Lacquering possible with time and extra cost.</li> </ul>
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"> <li>- Joint cover in white, beige or grey PVC.</li> <li>- Allows you to protect and cover façade joints, floors, walls and ceilings.</li> <li>- Standard length: 3m</li> <li>- Standard packaging: 30m.</li> <li>- The dovetail under the surface allows you to insert attaching clips: <ul style="list-style-type: none"> <li>• 5 clips per 3m of joint covers on the wall and ceiling.</li> <li>• 10 clips per 3m of joint covers for floors with light pedestrian traffic.</li> </ul> </li> </ul>
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	

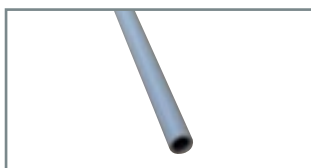
Code	Name	Sale Sizes	Standard Packaging	Unit Weight [kg]	Characteristics
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## CLIP FOR JOINT COVER TREBO ALU



012588	CVJ TREBO CLIP L 35-80 MM	50 p.	1 p.	0.02	<ul style="list-style-type: none"> <li>- Clip in stainless steel.</li> <li>- Allows especially stable fixing of the TREBO joint cover.</li> </ul>
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"> <li>- Facilitates the connection of TREBO shapes.</li> </ul>
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Code	Name	Ø [mm]	Sale Sizes	Weight [kg/m]	Characteristics
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## FIRESTOP JOINT LRV

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



Code	Name	Width a x Thickness h [mm]	Maximum Compression	Sale Sizes	Weight [kg/m]	Characteristics
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## GLT TG-1A



010009	TG 1A IN 200 MM	200 x 1	3 N/mm <sup>2</sup>	1.5 m	0.16	<ul style="list-style-type: none"> <li>- Sliding sheet ensures free expansion of two superimposed parts by absorbing horizontal movements.</li> <li>- Made of a double sheet of polyethylene with lubricant: <ul style="list-style-type: none"> <li>• Bare: TG-1A.</li> <li>• With 1 filled face: TG-1A+B.</li> <li>• With 2 filled faces: TG-1A+C.</li> </ul> </li> <li>- Type of filling: polystyrene (TG-1A + B1 and C1) or synthetic material (TG-1A + B3 and C3) or elastomer (TG-1A + B4 and C4).</li> <li>- Fields of use: <ul style="list-style-type: none"> <li>• TG-1A: metal support.</li> <li>• TG-1A + B: concrete support and cast born part.</li> <li>• TG-1A + C: concrete support and precast born part.</li> </ul> </li> <li>- Other sizes available on demand.</li> </ul>
010021	TG 1A + B1 IN 200 MM	200 x 3	1N/mm <sup>2</sup>	1.5m	0.20	
010038	TG 1A + B4 IN 200 MM	200 x 3	2N/mm <sup>2</sup>	1.0m	0.72	
010046	TG 1A + C1 IN 200 MM	200 x 5	1N/mm <sup>2</sup>	1.5m	0.24	
010061	TG 1A + C4 IN 200 MM	200 x 5	2N/mm <sup>2</sup>	1.0m	1.24	

# Linear Deformation Bearings

Code	Name	h x a x b* [mm]	Maximum Vertical Load	Sale Sizes	Weight [kg/m]	Characteristics
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## GLT TD-21S

010065	TD-21S 5 x 25 x 125	5 x 25 x 125	7.5t/m	1.0 m	0.17	<ul style="list-style-type: none"> <li>- 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.</li> <li>- 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.</li> <li>- Other sizes available on demand (strip width, width and thickness of core).</li> <li>- For all calculations, it is imperative to consult our technical documents or contact our engineering department.</li> <li>- * Table headings: <ul style="list-style-type: none"> <li>• h: thickness of the bearing.</li> <li>• a: width of the elastomer core.</li> <li>• b: total width of the bearing.</li> </ul> </li> </ul>
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	

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"> <li>- 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.</li> <li>- 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.</li> <li>- Standard length: strips of 1.00m.</li> <li>- Other sizes available on demand (strip width, width and thickness of core).</li> <li>- Total thickness of support: <ul style="list-style-type: none"> <li>• 6mm for cores with a thickness of 5mm.</li> <li>• 11mm for cores with a thickness of 10mm.</li> </ul> </li> <li>- For all calculations, it is imperative to consult our technical documents or contact our engineering department.</li> <li>- * Table headings: <ul style="list-style-type: none"> <li>• h: thickness of the elastomer core.</li> <li>• a: width of the elastomer core.</li> <li>• b: total width of the bearing.</li> </ul> </li> </ul>
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.

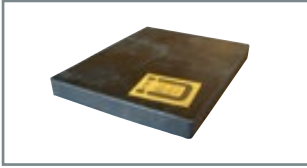
## GLT N and N3

- 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
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## 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"> <li>- 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.</li> <li>- Other sizes available on request.</li> <li>- Delivery with holes possible.</li> <li>- Composition: synthetic neoprene bound by vulcanization to steel bands E36.</li> <li>- Anti-slip mechanism available on request.</li> <li>- For all calculations, it is imperative to consult our technical documents or contact our engineering department.</li> <li>- * Table headings: <ul style="list-style-type: none"> <li>• a: width of the bearing.</li> <li>• b: length of the bearing.</li> <li>• h: thickness of the bearing.</li> </ul> </li> </ul>
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
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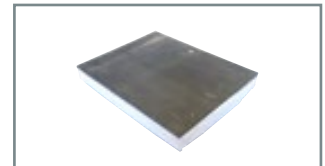
## GLT NEG

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"> <li>- 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).</li> <li>- Other sizes available on request.</li> <li>- Delivery with holes possible.</li> <li>- Composition: GLT NEG bearings are made of the following parts:               <ol style="list-style-type: none"> <li>1. Neoprene block.</li> <li>2. Vulcanized teflon on the block.</li> <li>3. Sliding plate with elastomer filling.</li> <li>4. Lateral filling of synthetic foam.</li> </ol> </li> <li>- For all calculations, it is imperative to consult our technical documents or contact our engineering department.</li> <li>- * Table headings:               <ul style="list-style-type: none"> <li>• a1: width of the sliding plate.</li> <li>• b1: length of the sliding plate.</li> <li>• h1: total thickness of the bearing.</li> <li>• a x b x h: width x length x thickness of the neoprene block.</li> </ul> </li> </ul>
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

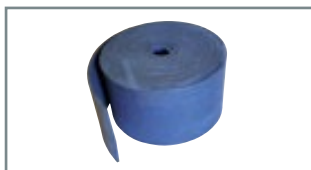
011034	B1EG 140 x 140 x 25 (100 x 100 x 21)	140 x 140 x 25 100 x 100 x 21	15.0t	1 p.	1.03	<ul style="list-style-type: none"> <li>- Pinpoint sliding and deformation bearing allowing transmission of a vertical load between 2 parts by ensuring twisting as well as displacement of 20mm on each side (larger displacement available on request).</li> <li>- Other sizes available on request.</li> <li>- Delivery with holes possible.</li> <li>- Composition: the GLT BEG bearings are made of the following parts:               <ol style="list-style-type: none"> <li>1. Reinforced neoprene block.</li> <li>2. Vulcanized teflon on the block.</li> <li>3. Sliding plate made of stainless steel with elastomer filling.</li> <li>4. Lateral filling of synthetic foam.</li> </ol> </li> <li>- Anti-slip feature available on request.</li> <li>- For all calculations, it is imperative to consult our technical documents or contact our engineering department.</li> <li>- * Table headings:               <ul style="list-style-type: none"> <li>• a1: width of the sliding plate.</li> <li>• b1: length of the sliding plate.</li> <li>• h1: total thickness of the bearing.</li> <li>• a x b x h: width x length x thickness of the neoprene block.</li> </ul> </li> </ul>
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
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## 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/mm<sup>2</sup>.

## SD



016170	SD 200 x 10	200 x 10	10m	1.50
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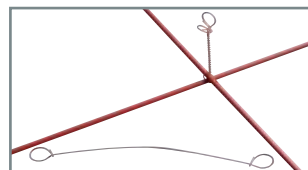
- Neoprene bearing with sine curve section allowing effective insulation from vibrations and solid sounds. Large capacity for dynamic damping.
- Standard length: 10m roll and width of 20cm with 4 pre-cut strips of 50mm.

Average sound reduction evaluated at 22dB for applied compression of 0.16N/mm<sup>2</sup>.

Code	Name	Sale Sizes	Weight [kg/1,000p.]	Characteristics
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## LOOP TIE

005940	COOPER LOOP TIE 10 CM	1,000 p.	1.20	<ul style="list-style-type: none"> <li>- Tie made of copper.</li> <li>- The lengths are given overall.</li> <li>- Other sizes available on request.</li> <li>- Length of link to be used = sum of the 2 Ø of reinforcing steels x 4.</li> </ul>
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
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## BINDING TOOL

005950	BINDING TOOL 320 MM	1 p.	0.40	<ul style="list-style-type: none"> <li>- For binding steels using LOOP TIES.</li> </ul>
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Code	Name	To Assemble the Steel of	Sale Sizes	Weight [kg/1,000 p.]	Characteristics
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## 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"> <li>- Made of "piano cord" steel.</li> <li>- For binding steels.</li> <li>- Extremely quick and simple installation.</li> <li>- Labor reduced by 3/4.</li> <li>- On request and with individually determined delivery times, BINDING "BS" can be made of galvanized steel.</li> </ul>
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
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## THICKNESS WEDGE



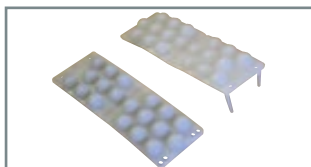
006222	THICKNESS WEDGE 2 MM	2	250 p.	1.13	<ul style="list-style-type: none"> <li>- In solid PVC.</li> <li>- Crush resistance: 200 kg/cm².</li> <li>- Dimension: 70mm x 70mm.</li> </ul>
006223	THICKNESS WEDGE 3 MM	3	250 p.	1.27	
006225	THICKNESS WEDGE 5 MM	5	125 p.	2.48	
006227	THICKNESS WEDGE 7 MM	7	125 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"> <li>- In solid PVC.</li> <li>- Crush resistance: 200 kg/cm².</li> <li>- Dimension: 70 mm x 70 mm with hole 22 mm x 45 mm.</li> </ul>
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"> <li>- Double storage wedge in solid PVC.</li> <li>- Placed between precast parts.</li> <li>- Prevents bursting of edges.</li> <li>- Does not stain parts.</li> <li>- Used for storage or transport.</li> <li>- Model with 2 stems for hanging on the top of panels.</li> <li>- Model without stems for horizontal installation.</li> </ul>
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
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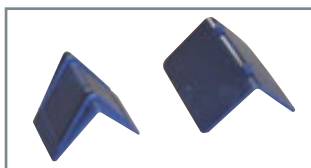
## DRAUF CAP



005541	DRAUF CAP 4 LONG	4	1,000 p.	0.02	<ul style="list-style-type: none"> <li>- Protection cap in plastic to be fitted on the extremities of the steels to avoid rust stains.</li> <li>- Drauf 4 for "J2000".</li> </ul>
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
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## PROTECT ANGLE



000350	PROTECT ANGLE I	34 x 40 x 28	3,500 p.	0.33	<ul style="list-style-type: none"> <li>- For protection of precast parts during bundling and transportation.</li> <li>- Terminals or lateral edges prevent the strip from slipping.</li> </ul>
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: 10,000m<sup>2</sup>.
- Covered surface: 3,000m<sup>2</sup>.

## 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:

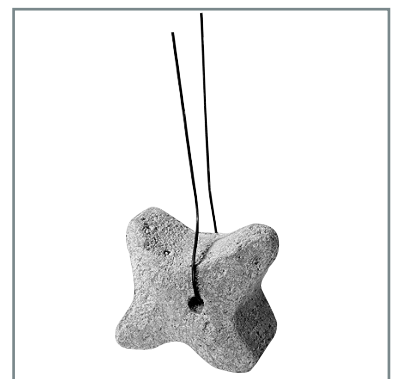
- Vibration on special vibrating table.
- Use of special Laroche moulding procedures.

## 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 m<sup>2</sup> 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

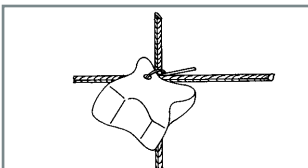
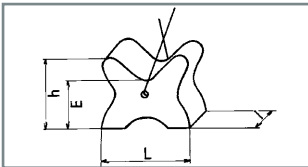


904563	SU 20	20	42	22	28	16
904564	SU 25	25	48	28	34	20
904565	SU 30	30	48	28	37	20
904566	SU 35	35	48	28	40	25
904567	SU 40/50	40/50	50/57	35	50	32

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.

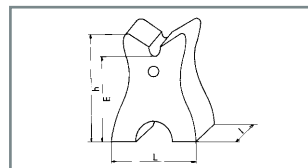
## Implementation:

- 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]

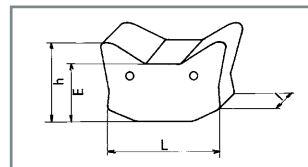
## SUS SPACERS

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
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## 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:

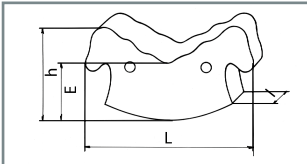
- See "General Characteristics" form.
- Sliding shape allowing the scraping of reinforcements.
- Cannot slip away from its fixation point.
- GPM: concrete roller.

## 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]
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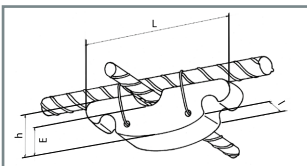
## PIROGUE SPACERS



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]
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## GPM SPACERS



904790	GPM 50	45	150	38	12
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## 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.

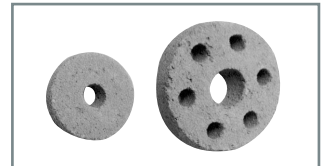
## Implementation:

- 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]
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## 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:

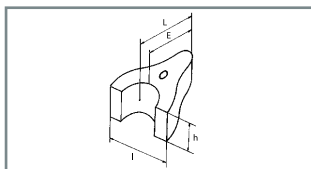
- See "General Characteristics" form.
- Contact surface with the form minimum but sufficient: effectiveness and invisibility.
- All SIDE spacers can be moulded in white or colored concrete.

## 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]
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## SIDE SPACER

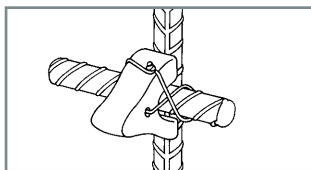


904971	SIDE 25 – D 4/7	25	4 to 7	32	40	22
904974	SIDE 30 – D 7/10	30	7 to 10	40	35	25
904979	SIDE 30 – D 12/16	30	12 to 16	45	45	28
904988	SIDE 40 – D 14/20	40	14 to 20	55	50	28
904995	SIDE 40 – D 20/25	40	20 to 25	70	55	30
904972	SIDE 50 – D 4/7	50	4 to 7	55	40	22
904980	SIDE 50 – D 12/16	50	12 to 16	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
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## 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"> <li>- Wet the hole and the Concrete Plug as for any fixing operation, especially in hot and dry weather.</li> <li>- Make some plastic mortar: too much water in the mixture reduces the quality of the fixative mortar: Follow the supplier's instructions.</li> </ul>	<ul style="list-style-type: none"> <li>- 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.</li> </ul>
<ul style="list-style-type: none"> <li>- Coat the Concrete Plug and the hole with fixative mortar or resin.</li> <li>- Push the coated Concrete Plug into the hole with a rotating movement.</li> <li>- Fix it in place with a light tap on the broad end of the Concrete Plug.</li> <li>- Touch up the surface with the fixative mortar or resin.</li> </ul>	

Code	Description	Dimensions d [mm]	Dimensions D [mm]	Dimensions h [mm]	For anchoring cone
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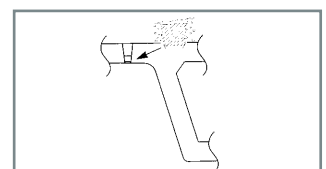
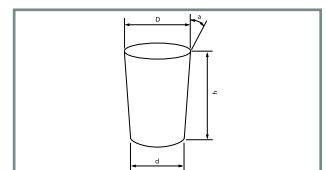
## CONCRETE PLUG

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
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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

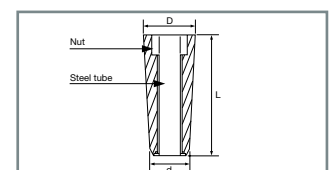


## SEAL CONE CPU

### Fields of application:

- Reinforced polyurethane forms for bridges.

Dimensions available on request.



Code	Name	Sale Sizes	Weight [kg]	Characteristics
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## ACRO ADHESIVE



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



012634	BI-COMPONENT ADHESIVE "A"	Pot of 0.80kg	0.80/pot	<ul style="list-style-type: none"> <li>- Reactive adhesive with 2 components: <ul style="list-style-type: none"> <li>• Component A: epoxy resin.</li> <li>• Component B: hardener.</li> </ul> </li> <li>- 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.</li> <li>- Standard packaging: <ul style="list-style-type: none"> <li>• Component A: 6.4kg</li> <li>• Component B: 3.2kg</li> </ul> </li> </ul>
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"> <li>- The MONO-COMPONENT ADHESIVE is perfectly suited for gluing CONCRETE PLUG 40/5 and FIBRE CONCRETE PLUG when you are not looking for waterproofing.</li> </ul>
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## NEOPRENE ADHESIVE PUTTY



012641	NEOPRENE ADHESIVE PUTTY	Cartridge of 310ml	0.41/cartridge	<ul style="list-style-type: none"> <li>- Mono-component adhesive putty made from neoprene rubber.</li> <li>- The NEOPRENE ADHESIVE PUTTY is perfectly suited for gluing hydrophilic gaskets BENTOSTOP and PURSTOP on dry supports.</li> <li>- One cartridge approximately glues 5m. of hydrophilic gasket.</li> <li>- Standard packaging: box of 12 cartridges.</li> </ul>
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Code	Name	Sale Sizes	Weight [kg]	Characteristics
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## POLYURETHANE ADHESIVE FOR SHOULDER

012643	POLYURETHANE ADHESIVE FOR SHOULDER	Cartridge of 310ml	0.50/cartridge	<ul style="list-style-type: none"> <li>- Mono-component putty for waterproof gluing.</li> <li>- The POLYURETHANE ADHESIVE, SNJF label, is to be used for gluing CONCRETE SHOULDERS.</li> <li>- One cartridge approximately glues 2m of shoulder.</li> <li>- Standard packaging: box of 20 cartridges.</li> </ul>
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## SILICONE PUTTY 1st CATEGORY

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







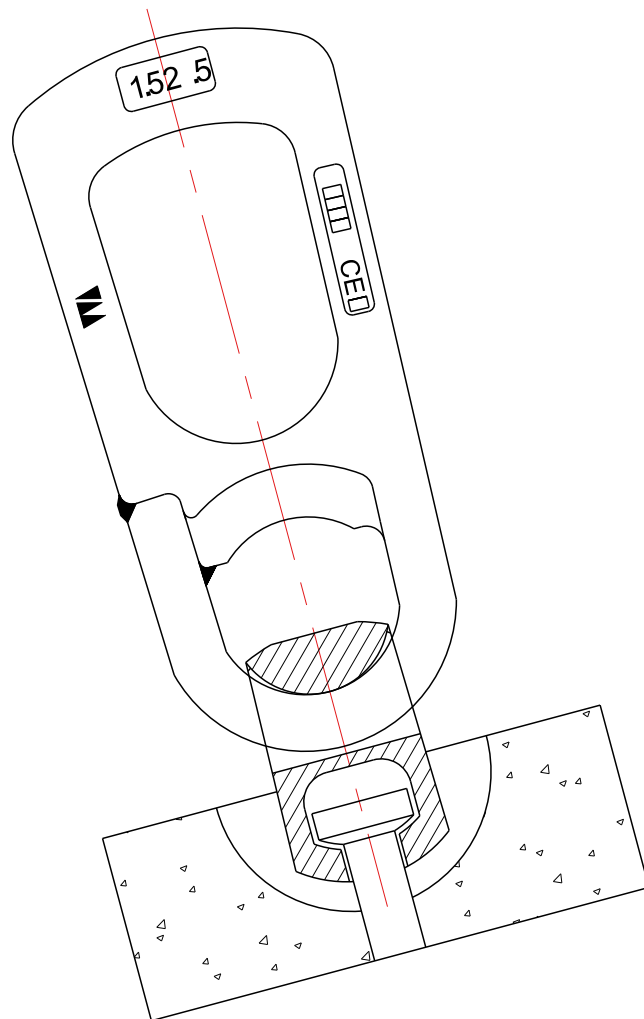
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03. <a href="#">Lifting System with Sockets</a>	<b>94</b>
04. <a href="#">Calculation of Actions on Lifting Inserts</a>	<b>102</b>
05. <a href="#">Fixing System with Sockets</a>	<b>106</b>



# Lifting System with Spherical Head Anchors

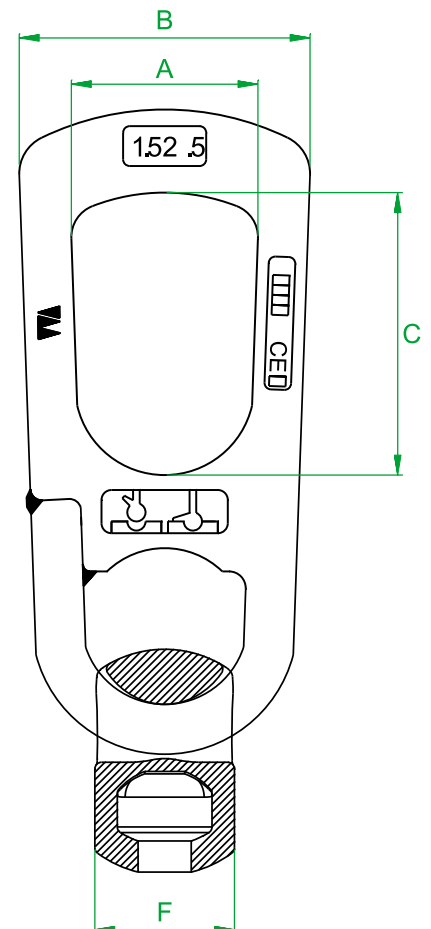
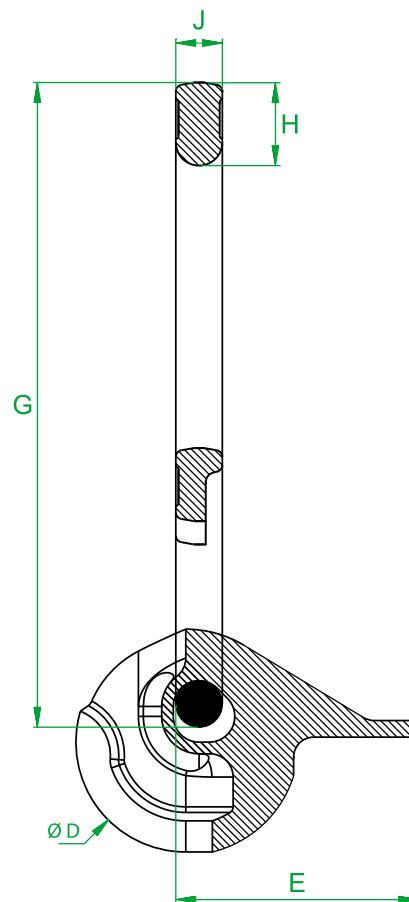
- Lifting System for precast elements
- Working Load from 1.3 to 32 Tons
- Full range of Anchors, Formers, and Lifting Hooks
- Lifting hooks and Formers reusable
- Lifting hooks with CE certification



## Lifting Eye

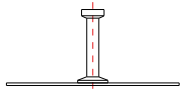
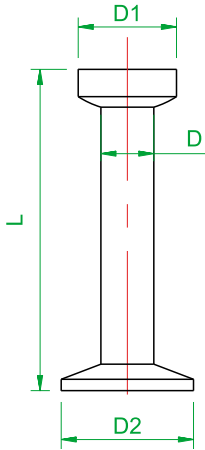
Range		1.3 T	2.5 T	5 T	7.5 T - 10 T	15 T - 20 T	32 T
Ref.		100327	100328	100329	100330	100331	100332
A	[mm]	44	56	68	82	113	175
B	[mm]	74	88	118	160	191	269
C	[mm]	70	85	88	112	135	189
ØD	[mm]	56	68	88	112	152	195
E	[mm]	54	66	83	113	151	214
F	[mm]	32	42	57	73	110	153
G	[mm]	162	196	237	339	447	584
H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

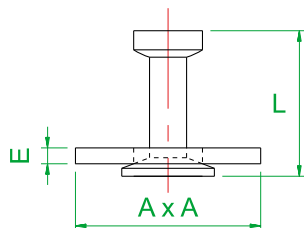
## Spherical Head Anchor



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	5T	210	0.310	100	100684	20T	400	3.730	1
100644		240	0.345	50	100685		200	2.850	1
100645		280	0.390	50	100686		240	3.210	1
100647		75	0.350	50	100688		340	4.100	1
100649		85	0.370	50	100689	32T	500	5.552	1
100650		95	0.440	50	100690		1,000	9.970	1
100651		120	0.580	50	100691		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.

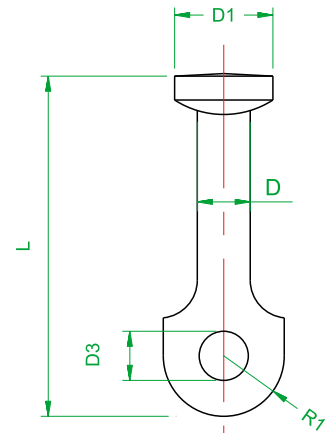
## Eye Anchor

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 <sub>normal</sub>	[mm]	65	90	90	115	250	300
L <sub>short</sub>	[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.



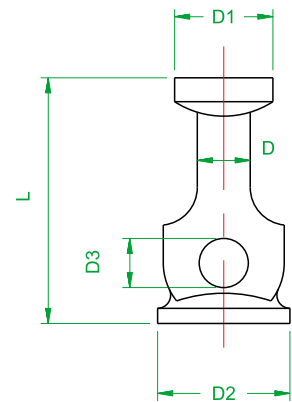
## Foot & Eye Anchor

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

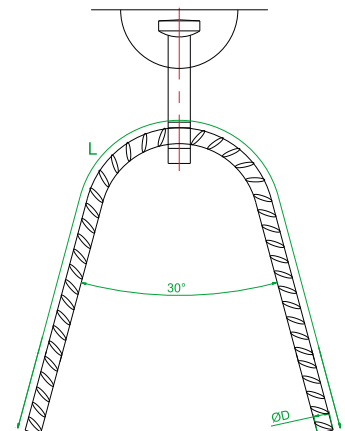
To use with eye anchors and with foot & eye anchors.

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

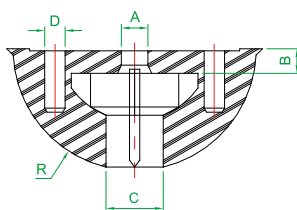
10MPa	[mm]	700	1,100	1,600	2,000	3,000	3,800
20MPa	[mm]	600	700	1,100	1,400	2,000	2,700
10MPa	[mm]	450	600	900	1,100	1,700	2,100



# Rubber Recess Former and Accessories

## Round Rubber Recess Former

### Round Rubber Recess Former + Fixing Set

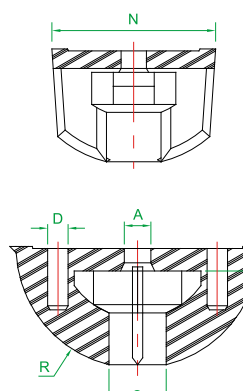


Range	1.3 T	2.5 T	5 T	7.5 T	10 T	15 T	20 T	32 T
Ref.	100357	100358	100359	100360	100361	100362	100363	100364
R [mm]	30	37	47	59	59	80	80	102
A [mm]	9	11	11	13	13	13	13	15
B [mm]	6	10	11.5	14	14	16	16	16
C [mm]	10	14	20	24	28	34	38	50
D [mm]	6.5	6.5	8.5	10.5	10.5	10.5	10.5	10.5

Rubber recess formers can be used 30 to 40 times.

## Narrow Rubber Recess Former

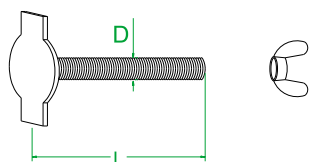
### Narrow Rubber Recess Former + Fixing Set



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



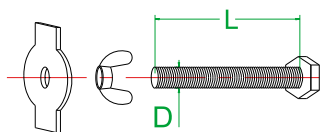
Range	1.3 T	2.5 T	5 T	10 T	20 T	32 T
Ref.	100373	100374	100375	100376	100377	100378
D [mm]	M8	M10	M10	M12	M12	M12
L [mm]	80	80	100	100	100	100

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

## Threaded Plate

### Wing Nut

### Screw

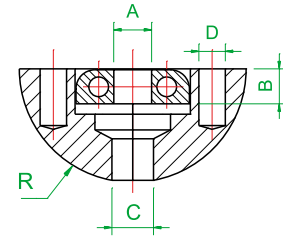


Range	1.3 T	2.5 T	5 T	10 T	20 T
Plate	100379	100380	100381	100382	100383
Wing nut	100384	100385	100385	100386	100386
Screw	100387	100388	100388	100389	100389
D [mm]	M8	M10	M10	M12	M12
L [mm]	60	80	80	80	80

# Articulated Steel Recess Former

## Articulated Steel Former (Round)

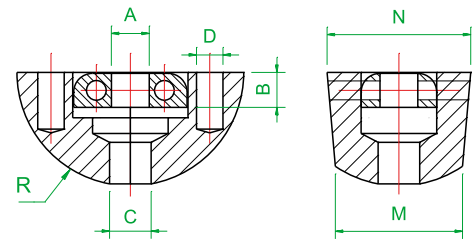
Range	1.3 T	2.5 T	5 T	10 T
Ref.	100336	100337	100338	100340
R [mm]	30	37	14	59
A [mm]	M10	M10	M10	M12
B [mm]	10	10	10	10
C [mm]	11	15	21	29
D [mm]	7	7	10	9



Formers can also be supplied in 7.5 T on request

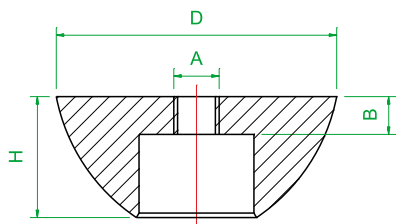
## Narrow Articulated Steel Former

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

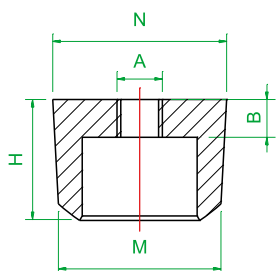
## Steel Recess Former (hemispherical)



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.

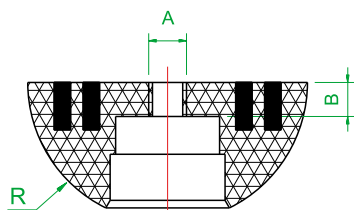
## Narrow Steel Recess Former



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.

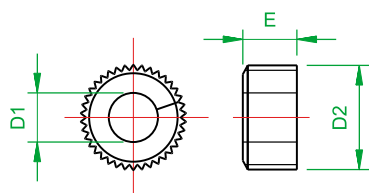
## Magnetic Recess Former



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

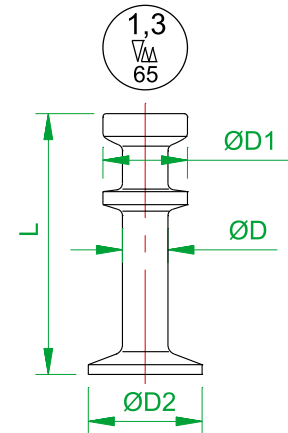


# Double Head Anchor and Recess Formers

## Double Head Anchor

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

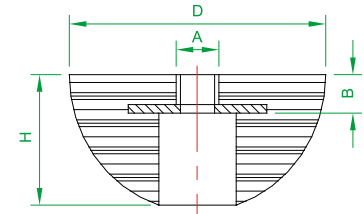
Double head anchors are provided with CE certificate.  
Other length can be provided on request.  
Double head anchors are zinc plated.



## Tightening Former

Range	1.3 T	2.5 T
<b>Ref.</b>	<b>100411</b>	<b>100412</b>
D [mm]	60	74
A [mm]	M8	M10
B [mm]	9	11
H [mm]	32.7	42.6

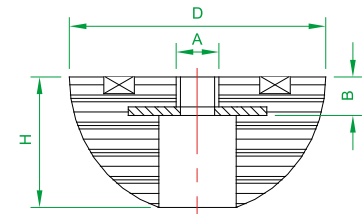
Double head anchors are attached to the former by tightening.



## Magnetic Tightening Former

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

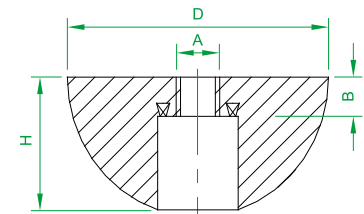
Double head anchors are attached to the former by tightening.



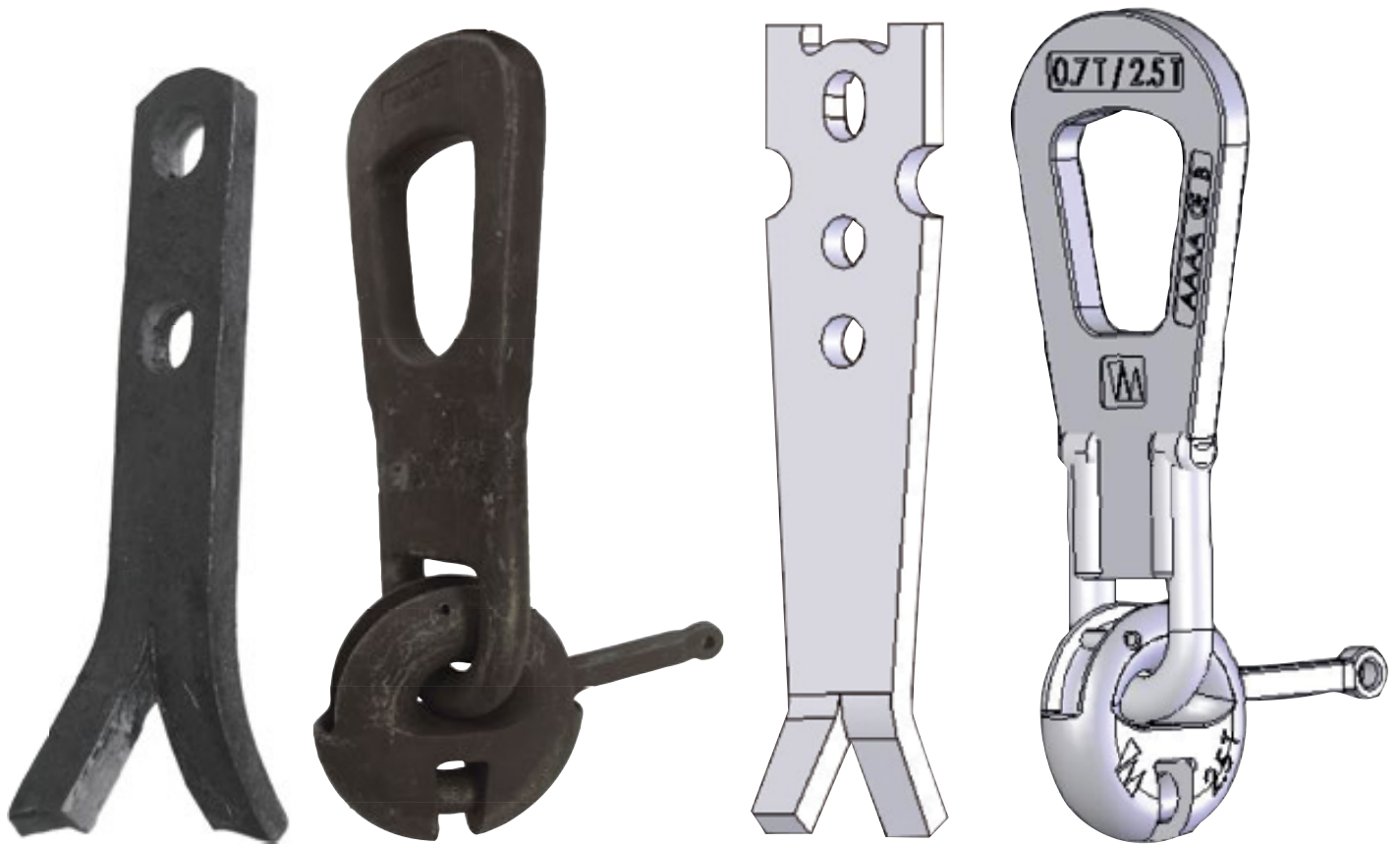
## Magnetgrip Former

Range	1.3 T	2.5 T
<b>Ref.</b>	<b>102251</b>	<b>102254</b>
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.



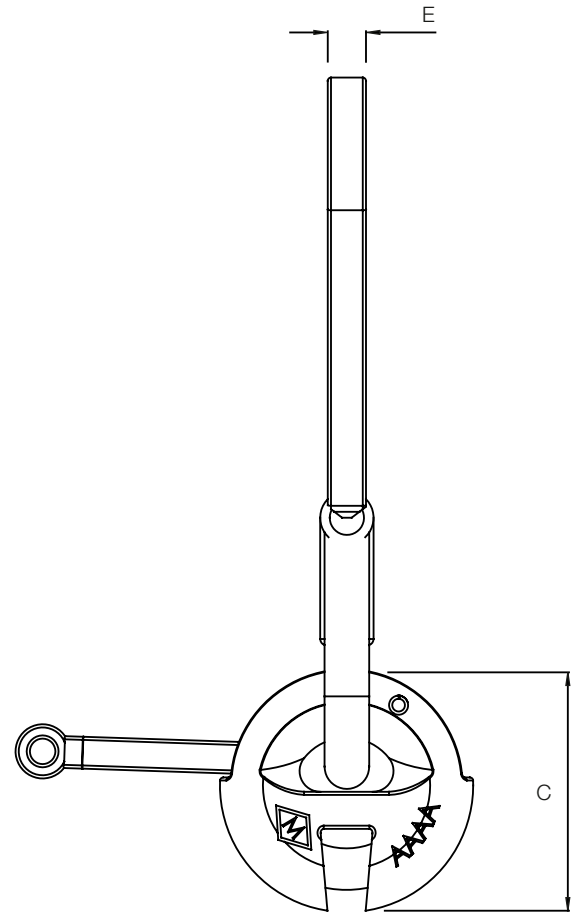
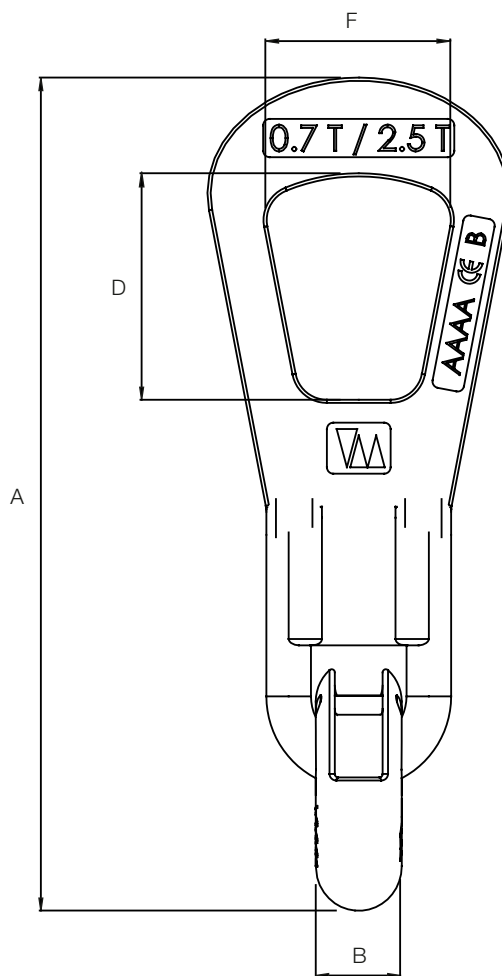
## Lifting System with Flat Anchors



## Lifting Hook

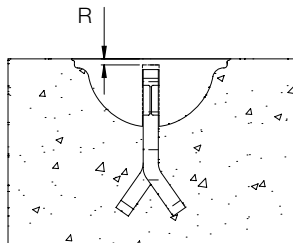
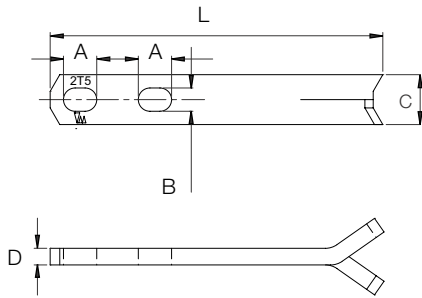
Class	Reference	A	B	C	D	E	F
2T5	100523	261	27	80	70	50	48
5T	100524	330	36	100	86	71	
10T	100525	425	50	140	112	90	
26T	100526	605	72	209	160	120	

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.

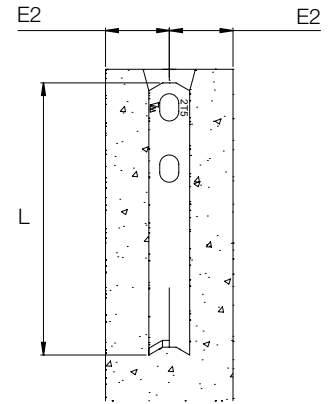
The following conditions must be met:

- 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

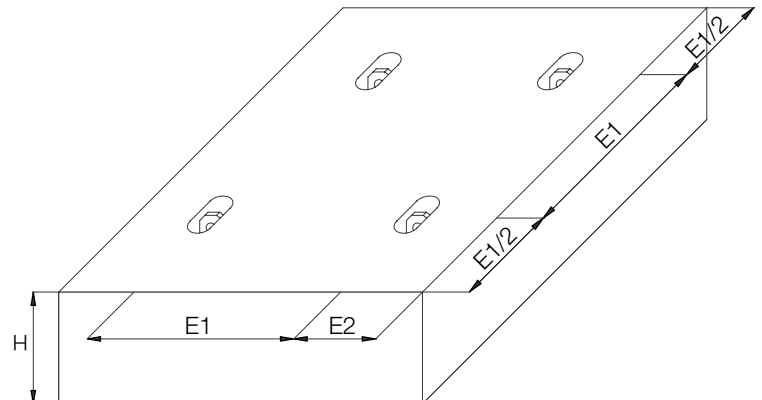
Class	Working Load	Length [mm]	Minimum Center Distance E1 [mm]	Minimum Thickness 2 x E2 [mm]		
				15MPa	25MPa	35MPa
2T5	0T7	110	385	70	60	50
	1T4	110	385	90	70	70
	1T4	160	560	80	60	60
	2T	130	455	110	90	90
	2T	160	660	100	80	80
	2T	210	735	90	70	70
	2T5	150	525	120	80	80
	2T5	200	730	110	80	70
	2T5	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

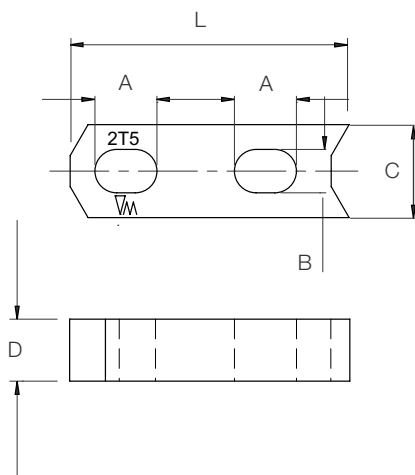
$$H = L + R + e$$

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



# Lifting System with Flat Anchors

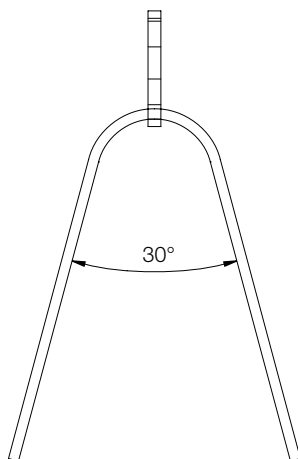
## Two Hole Anchor



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  $f_c$ .



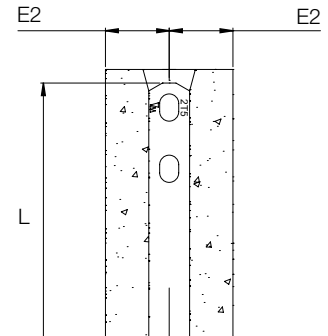
Concrete Strength $f_c$	Class 2T5				Class 5T			Class 10T			Class 26T
	0T7	1T4	2T	2T5	3T	4T	5T	5T3	7T5	10T	14T
15MPa	Ø8 400	Ø10 650	Ø12 800	Ø12 1000	Ø14 1000	Ø16 1200	Ø16 1500	Ø20 1250	Ø20 1750	Ø25 1850	Ø32 2350
25MPa	Ø8 320	Ø10 520	Ø12 640	Ø12 800	Ø14 800	Ø16 960	Ø16 1200	Ø20 1000	Ø20 1400	Ø25 1480	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

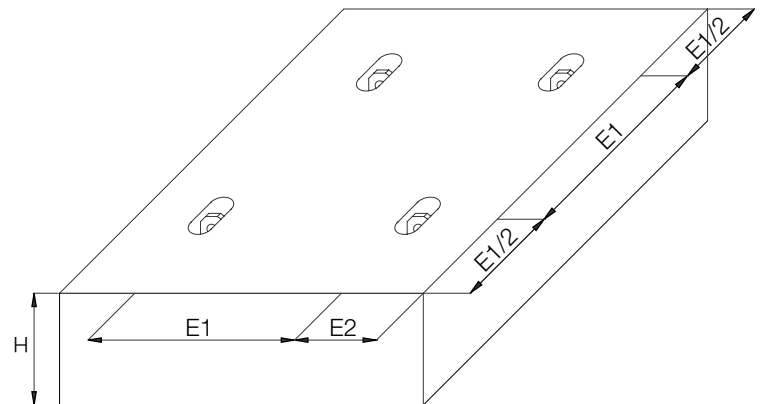
Class	Working Load	Length [mm]	Min. Center Distance E1 [mm]	Minimum Thickness 2 x E2 [mm]
2T5	0T7	90	500	70
	1T4	90	500	80
	2T	90	600	90
	2T5	90	600	100
5T	3T	120	650	100
	4T	120	700	110
	5T	120	750	120
10T	5T3	160	800	120
	7T5	160	1,200	130
	10T	170	1,200	140
26T	14T	240	1,500	160



Minimum thickness H

$$H = L + R + e$$

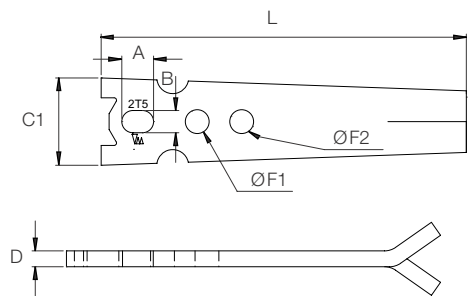
L : length of the anchor  
R : cover of anchor head  
e : concrete cover





# Lifting System with Flat Anchors

## Tilt up Anchor

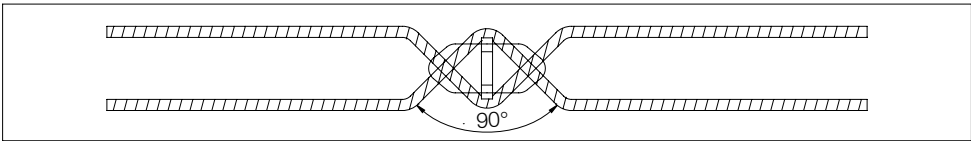


Class	Reference	Working Load	A	B	C1	D	ØF1	ØF2	L
2T5	100797	1T4	20	14	55	6	15	15	200
	100798	2T5	20	14	55	10	15	15	230
5T	100799	4T	22	18	70	12	18	20	270
	100800	5T	22	18	70	15	18	20	290
10T	100801	7T5	31	26	95	15	25	25	320
	100802	10T	31	26	95	20	25	25	390

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 :



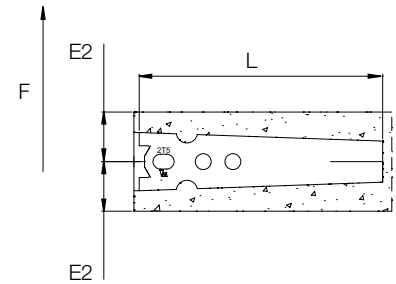
The bending radius of the reinforcement must respect the rules of BAEL 91.

# Lifting System with Flat Anchors

## Minimum Center Distance, Edge Distance for Tilt Up Anchor

Concrete strength > 15 MPa

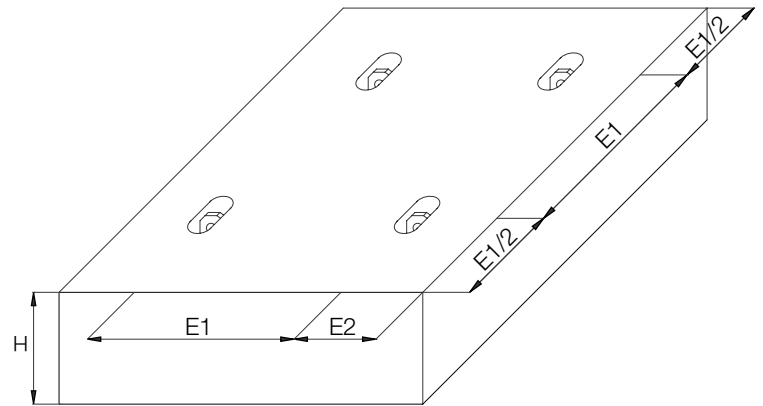
Class	Working Load	Length [mm]	Min. Center Distance E1 [mm]	Minimum Thickness 2 x E2 [mm]
2T5	1T4	200	700	100
	2T5	300	800	120
5T	4T	270	950	140
	5T	290	1,000	140
10T	7T5	320	1,200	160
	10T	390	1,200	200



Minimum thickness H

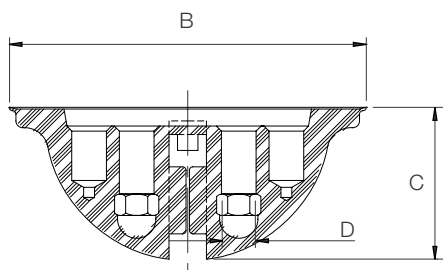
$$H = L + R + e$$

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



# Lifting System with Flat Anchors

Flat Anchor Former

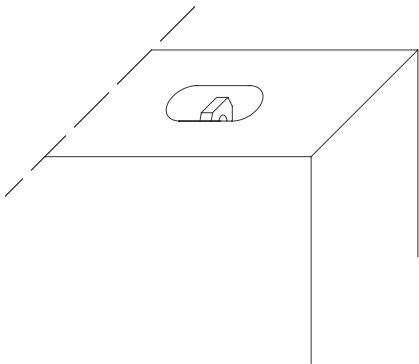


Class	Reference	A	B	C	D
2T5	100527	44	105	45	M8
5T	100528	49	126	59	M8
10T	100529	67	188	85	M12
26T	100530	112	234	118	M16

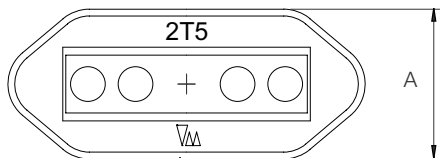
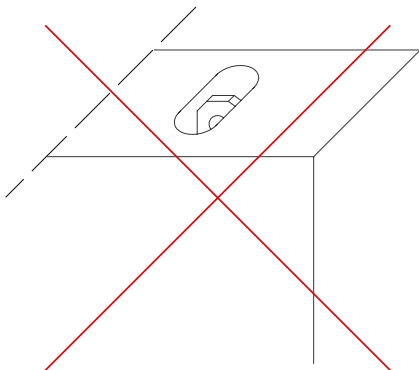
Plastic former.  
Fixing by nails or screw.



Right



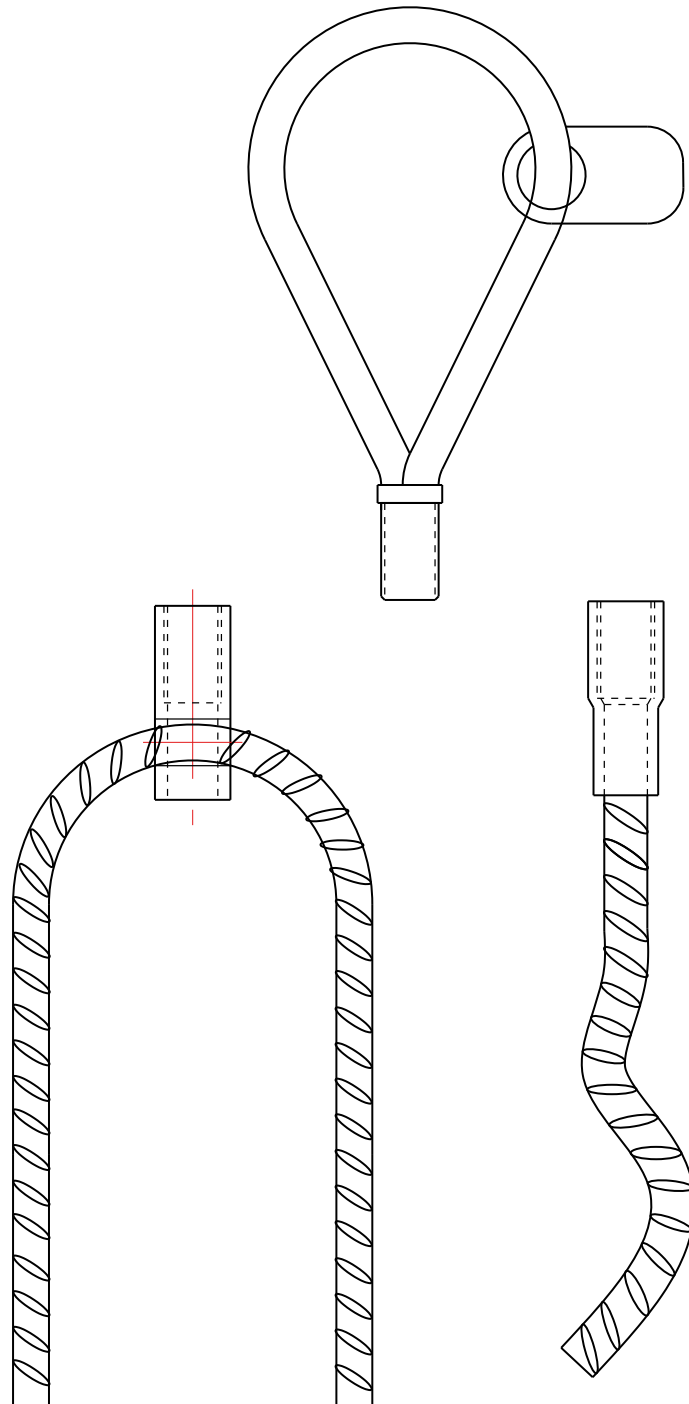
Wrong



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



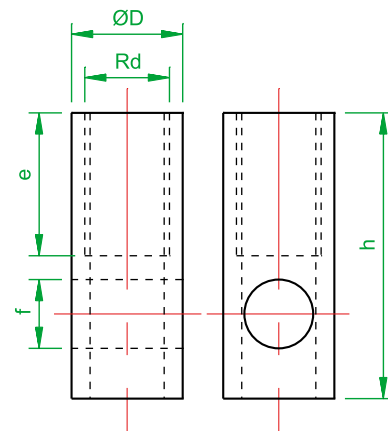
# Lifting Socket with Cross Hole

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.

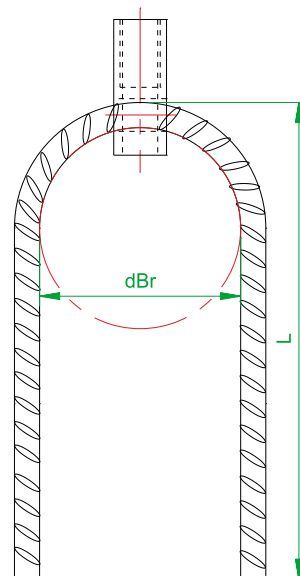
Sockets are zinc plated and manufactured with Rd thread.

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 <sub>Br</sub>	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

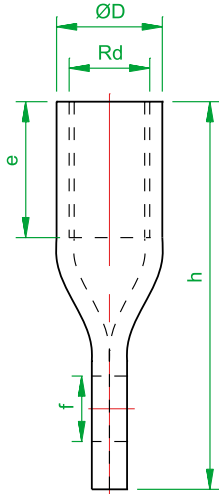
Lengths of the stirrups are defined for a minimum concrete strength of 15MPa.



# 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.

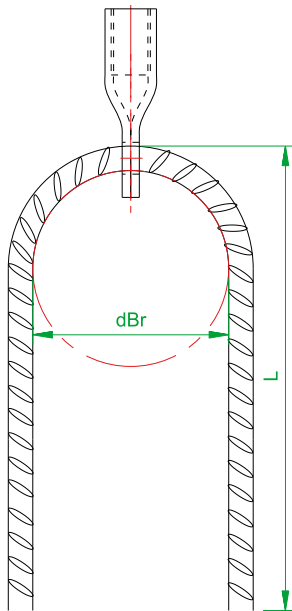
Lifting sockets are manufactured of precision steel in special quality.

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 <sub>Br</sub> [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**

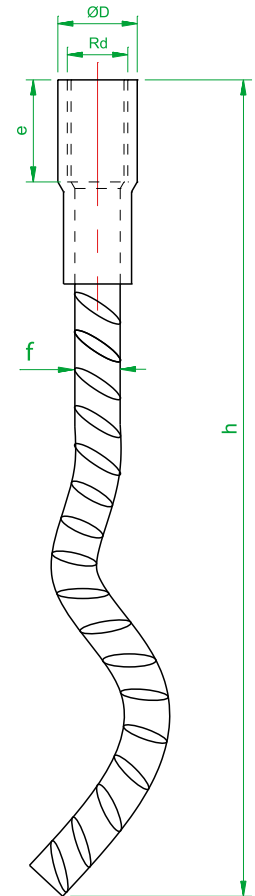
Reference	Thread Rd	Load Bearing Capacities [kg]		Dimensions [mm]				Weight [kg/100p]
		0° - 45°	Lateral Tension	ØD	h	e	f	
100497	12	500	250	15.0	137	22	8	7.4
100498	14	800	400	18.0	170	25	10	14.2
100499	16	1,200	600	21.0	216	27	12	24.6
100500	18	1,600	800	24.0	235	34	14	39.0
100501	20	2,000	1,000	27.0	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.

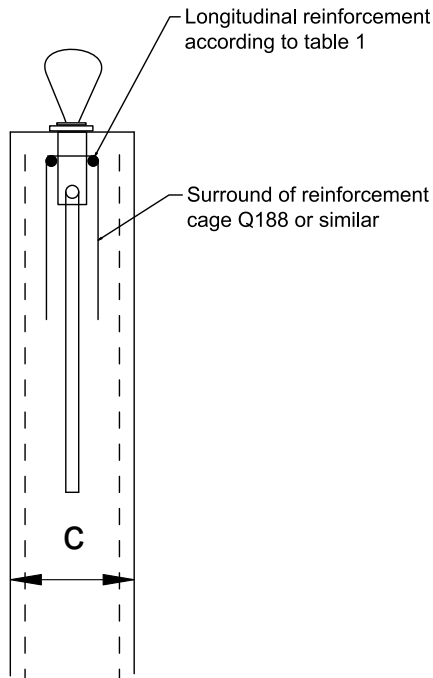




# Reinforcement and Minimum Thickness for Sockets...

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**



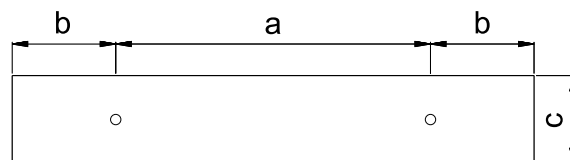
Reference	Longitudinal Reinforcement FeE500		Surface Reinforcement FeE500
	[mm]	[mm]	[cm <sup>2</sup> /m]
100451	Ø 10	850	1.31
100452	Ø 10	850	1.31
100453	Ø 10	850	1.31
100454	Ø 12	850	1.88
100455	Ø 12	850	1.88
100456	Ø 12	850	1.88
100457	Ø 16	1,000	1.88
100458	Ø 16	1,000	1.88
100459	Ø 16	1,000	1.88
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

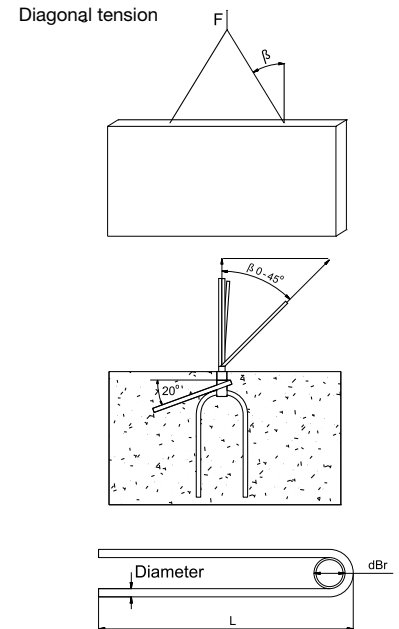


# ...with Cross Hole, Flat End and Long Wavy Rebar

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.

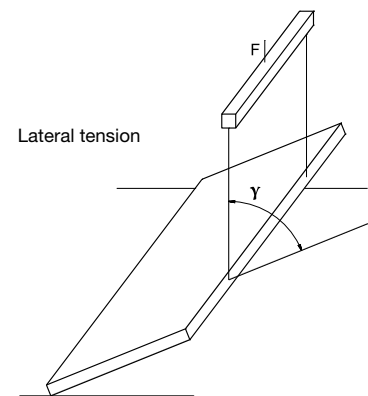
**Table 3: Additional Reinforcement on Diagonal Tension (Necessary if  $\beta \geq 12.5^\circ$ )**

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

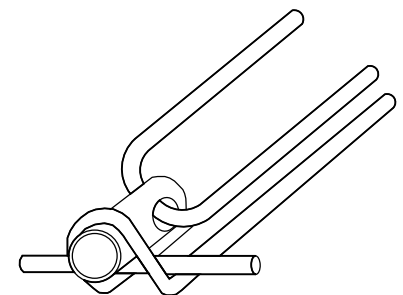
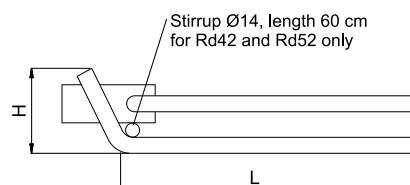


**Table 4: Additional Reinforcement on Lateral Rension (Necessary if  $\gamma \geq 7^\circ$ )**

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.

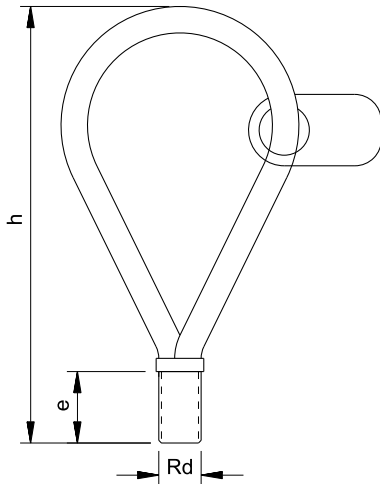


# Lifting Loops

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

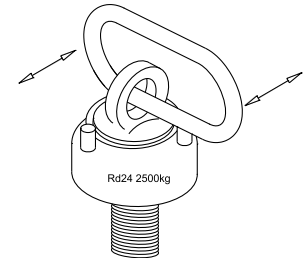
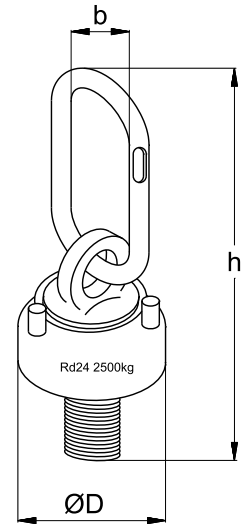
Reference	Rd Thread	Load Bearing Capacity [kg] 0 - 90°	ØD [mm]	h [mm]	b [mm]
100476	12	500	47	125	35
100477	14	800	52	126	35
100478	16	1,200	56	151	35
100479	18	1,600	59	152	60
100480	20	2,000	70	158	60
100481	24	2,500	74	187	75
100482	30	4,000	90	219	90
100483	36	6,300	101	255	100
100484	42	8,000	110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

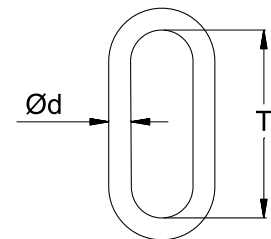
The Special Lifting Device can be used like a conventional screw and can be driven in or out of the threaded insert. The chainlink can be used to tighten or loosen the Special Lifting Device. It must be pulled through the chainlink and its recesses fit the three pins located at the circumference of the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

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



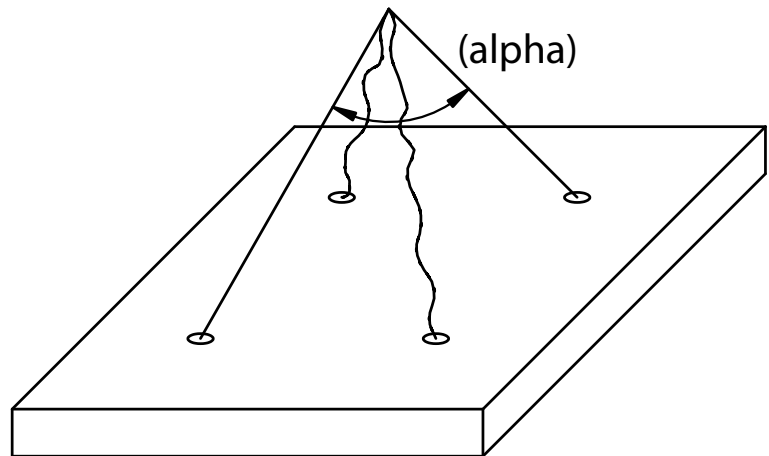
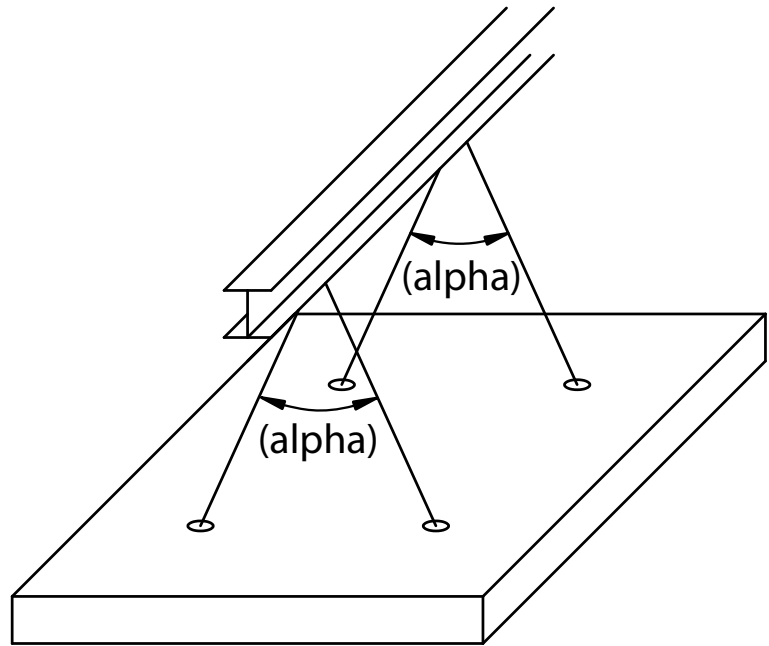
## Ring Dimensions

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 <sup>2</sup>
Varnished wooden mould	2 kN/m <sup>2</sup>
Rough wooden mould	3 kN/m <sup>2</sup>

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  $\psi_{dyn}$  provided in the table below.

Lifting Machinery	Dynamic Coefficient ( $\psi_{dyn}$ )
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.

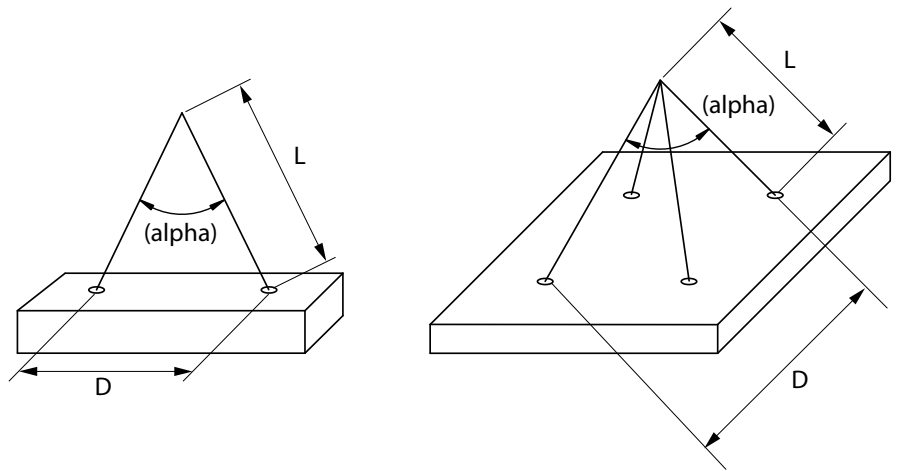
# Calculation of Actions on Lifting Inserts

## 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  $\alpha$  which is the angle at the top of the slings.

Angle $\alpha$	Sling Length L	Sling Coefficient ( $i_{\text{sling}}$ )
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

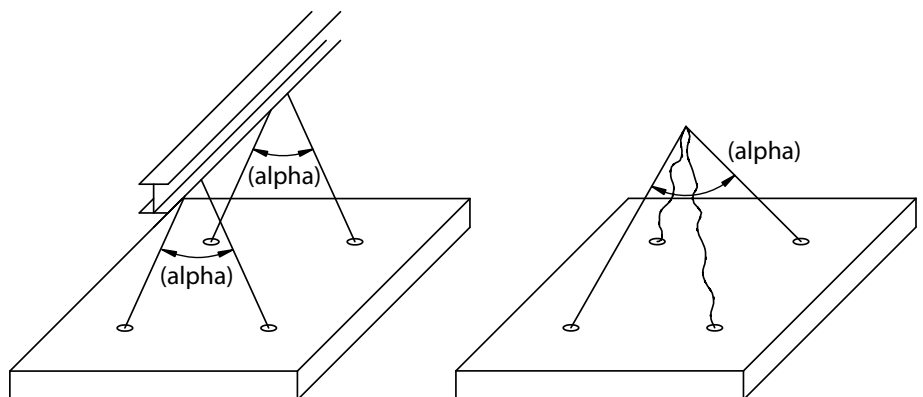
With D = distance between 2 opposite lifting inserts



## 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/m<sup>2</sup>)
- $A_f$  = form area in contact with concrete (m<sup>2</sup>)
- $\psi_{dyn}$  = dynamic coefficient
- $\psi_{sling}$  = 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  $E_d$ .

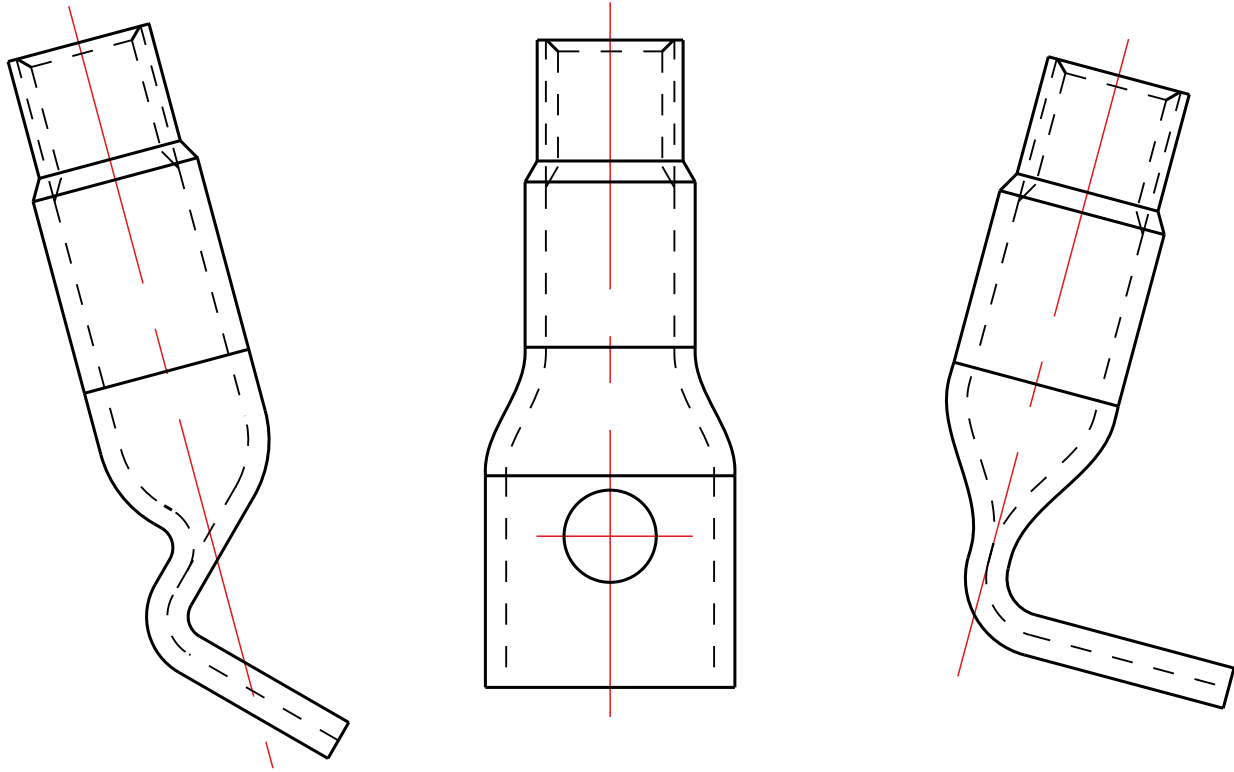
In some cases, it can be necessary to calculate the action on inserts at different stages of the life of a precast unit (at the precast factory and on site for example).

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.

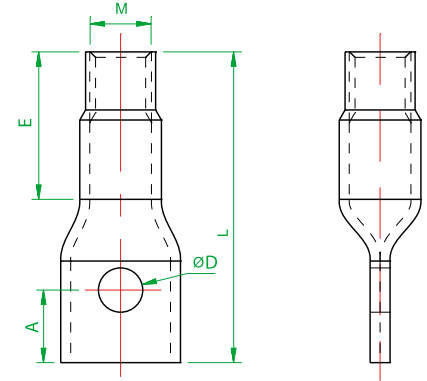


## Fixing System with Sockets

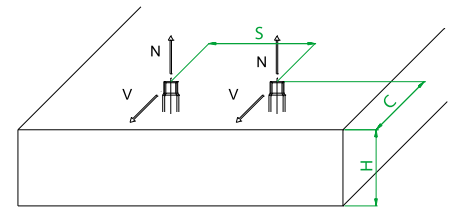


## Fixing Socket with Cross Hole

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 <sub>N</sub> [mm]	C <sub>V</sub> [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<sub>N</sub> and the minimum distance between 2 sockets is S.

For shear force V, the minimum edge distance is C<sub>V</sub> and the minimum distance between 2 sockets is S.

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

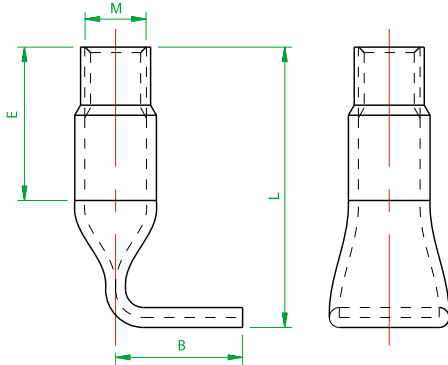
When the force is a combination of shear force V and straight pull N, the permissible load F should respect the following formula:

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

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 <sub>N</sub> [mm]	C <sub>V</sub> [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<sub>N</sub> and the minimum distance between 2 sockets is S.

For shear force V, the minimum edge distance is C<sub>V</sub> and the minimum distance between 2 sockets is S.

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

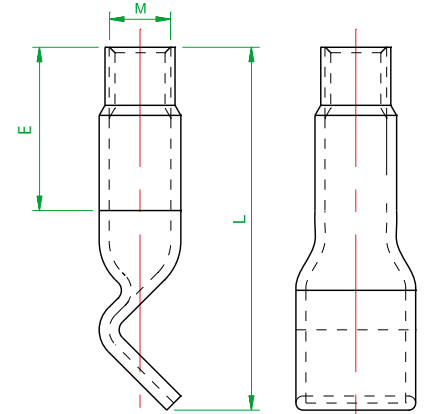
When the force is a combination of shear force V and straight pull N, the permissible load F should respect the following formula:

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

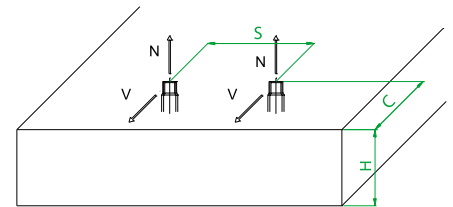
Fixing sockets must be used with metric thread screw. They must be screwed on at least one time the diameter and no more than E.

## 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 <sub>N</sub> [mm]	C <sub>V</sub> [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<sub>N</sub> and the minimum distance between 2 sockets is S.  
For shear force V, the minimum edge distance is C<sub>V</sub> 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><b>AFNOR CERTIFICATION</b> 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 <a href="http://www.marque-nf.com">www.marque-nf.com</a></p> <p>Certification standard for the brand "Admixtures for concrete, mortars and grouts – curing compounds" Identification No. NF 085 <a href="http://www.cerib.com">www.cerib.com</a> An updated list of products TECHNIQUE BETON holders marked "Admixtures for concrete, mortars and grouts – curing compounds", is available from our sales team.</p> <div>    </div>
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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.

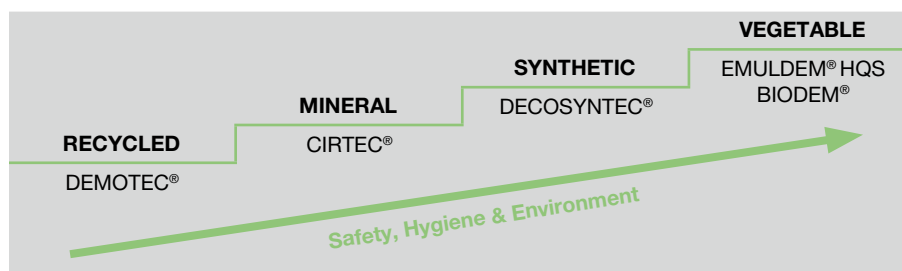
## Choosing the type of mould release agent

	Recycled	Mineral	Synthetic	Vegetable
<b>Concrete drop height</b>				
Standard	4	4	4	4
High	3	3	5	4
<b>Temperature</b>				
< 5°C	3	3	5	2
From 5 to 30°C	3	3	5	5
> 30°C	3	3	5	2
<b>Type of formwork</b>				
Wood	5	5	3	3
Metal	4	4	5	5
PU matrix	0	0	2	3
<b>Type of shuttering</b>				
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
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## Delayed mould release – Vegetable



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

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

Code	Name	Consumption	Nature	Application Areas							
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## Delayed Mould Release



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

## Immediate Mould Release



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



911859	<b>METAL SPRAY APPLICATOR: 6LT WITH FLAT FAN NOZZLE</b>
912323	<b>METAL SPRAY APPLICATOR: 6LT WITH ROTATING NOZZLE</b>
906347	<b>METAL SPRAY APPLICATOR: 10LT</b>

## 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
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## Finishing Coat Pastes



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

## Finishing Coat Mortars



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



## Ground levelling mortars



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

## Floor Screeds



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

## Primer for FINISOL Mortars



Code	Name	Recommended Dose	Density at 20°C
908484 908487	<b>TECHNA ACRYL</b> 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
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<ul style="list-style-type: none"> <li>- With cement: 1h</li> <li>- With plaster: 20min</li> </ul>	<ul style="list-style-type: none"> <li>- Good adhesion, even on smooth substrate.</li> <li>- Eliminates air bubbles.</li> <li>- Very good workability.</li> <li>- No chalking.</li> </ul>	From 4 to 8mm	<ul style="list-style-type: none"> <li>- All general interior and exterior levelling jobs with additions of cement or plaster (interiors only).</li> <li>- Finishing.</li> </ul>
		From 0 to 4mm	

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

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

30min	<ul style="list-style-type: none"> <li>- New or existing interior and exterior floors.</li> <li>- Moderate to heavy traffic.</li> <li>- FINICHAPE®: Forms suitable for slopes.</li> <li>- FINICHAPE® AN: self levelling mortar.</li> </ul>	From 5 to 50mm	<ul style="list-style-type: none"> <li>- Ramps, slopes - FINICHAPE®.</li> <li>- Floor levelling - FINICHAPE® AN.</li> <li>- Balconies, terraces.</li> <li>- Toilets and bathrooms.</li> <li>- Manufacturing halls, sales rooms, distribution halls, workshops, garages, etc.</li> <li>- Running and circulation paths.</li> </ul>
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Application	Properties
<ul style="list-style-type: none"> <li>- The substrate should be clean, sound, free of dust and grease, not frozen and should be reasonably dry.</li> <li>- Apply a thin coat by spray, roller or brush.</li> </ul>	<ul style="list-style-type: none"> <li>- Acrylic primer for regulating the porosity of concrete substrates, thus creating a strong bonding interface before applying floor hydraulic mortar.</li> <li>- Primer for Finisol mortars.</li> <li>- Green liquid.</li> </ul>



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
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## Hydraulic Anchoring and Grouting Mortar



CE NF

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



CE NF

909774	<b>MASTAR®</b> 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"> <li>- Very fluid consistency: 4 h 15 =&gt; 6 h 50</li> <li>- Plastic consistency: 1 h 10 =&gt; 2 h 45</li> </ul>	<ul style="list-style-type: none"> <li>- Does not oxidise. Very high adhesion to steel. Very high fluidity.</li> <li>- Exceptional initial and final strength.</li> <li>- Resistance to high-sulphate water.</li> <li>- Compressive strength after 28 days at 20°C: 75MPa - plastic consistency.</li> </ul>
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# Repair Mortars

Code	Name	Consumption	Pot Life of the Mixture at 20°C	Application thickness	Properties
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## Passivating Mortar

909670	<b>RAVALCHOC® PROTECTOR AC</b> 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"> <li>- With migrant corrosion inhibitors (MCI).</li> <li>- Very high adhesion to steel.</li> <li>- Passivating effect.</li> <li>- Waterproof and impermeable to corrosive agents.</li> </ul>
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## Single Component Synthetic Fibre Reinforced Repair Mortar



CE NF

CE

CE

CE

909596	<b>FIBRALCHOC®</b> 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"> <li>- Class R4.</li> <li>- High adhesion.</li> <li>- Good impact and abrasion resistance.</li> <li>- High mechanical strength.</li> <li>- Thixotropic.</li> </ul>
909600	Available in light grey.				
909598	<b>FIBRALCHOC® FIN</b> 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.				

FIBRALCHOC® NF:  

- Fire rating: A1 - Incombustible.
- Compressive strength after 28 days: 66MPa.
- Adhesion on rough surfaces: ≥ 2MPa.

## Two Component Synthetic Resin Repair Mortar



CE NF

CE

CE

CE

909467	<b>RAVALCHOC®</b> 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"> <li>- Excellent impact and abrasion resistance. Waterproof, good workability and handling characteristics.</li> </ul>
909483 909563	Available in light grey and white.				
909502	<b>RAVALCHOC® 0/5</b> 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.	<p>RAVALCHOC® NF:</p> <ul style="list-style-type: none"> <li>- Class R4.</li> <li>- Contact with water intended for human consumption is allowed.</li> <li>- Compressive strength after 28 days: 50MPa.</li> <li>- Adhesion on sandblasted concrete surfaces: ≥ 2MPa.</li> </ul> <p>RAVALCHOC® 0/5:</p> <ul style="list-style-type: none"> <li>- Class R3.</li> </ul>
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"> <li>- Grouting with fluid consistency: 3.85l of water for 25kg bag.</li> <li>- Horizontal anchoring with plastic consistency: 3.25l of water for 25kg bag.</li> <li>- Once the anchorings or the grouting have been completed, protect them from drying out too quickly by spraying them with PROTECSOL® GE08 curing compound.</li> </ul>	<ul style="list-style-type: none"> <li>- Grouting for precision machines, concrete or metal bearing plates, machine bases, bridge bearings, generators, compressors, ...</li> <li>- Anchoring of reinforcements in concrete, threaded rods (anchor bolts), columns.</li> <li>- Connection of prefabricated parts.</li> </ul>
<ul style="list-style-type: none"> <li>- 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.</li> <li>- Once the anchorings have been completed, protect them from drying out too quickly by spraying them with PROTECSOL® GE08 curing compound.</li> </ul>	<ul style="list-style-type: none"> <li>- Anchoring of reinforcements in concrete, threaded rods (anchor bolts), columns.</li> <li>- Connection of prefabricated parts.</li> </ul>



## Repair Mortars

Application between 5 and 35°C	Application Areas
-	Render for the corrosion protection of reinforcement bars.
<ul style="list-style-type: none"> <li>- Mix with clear water to the desired consistency (3.8 to 5l of water per 25kg of powder). Manual or mechanical application.</li> <li>- 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.</li> </ul>	<p>All general repair work: beams, columns, lintels, nosing, civil engineering works.</p>
<ul style="list-style-type: none"> <li>- Carefully mix the powder with the resin to the desired consistency (3.2 to 4.5l of resin per 25kg of powder).</li> <li>- Manual or mechanical application.</li> <li>- Dampen the substrate beforehand without leaving traces of water on the surface.</li> </ul>	<ul style="list-style-type: none"> <li>- All repair jobs subject to weathering, civil engineering works, motorways, concrete runways, staircase steps, unloading berths.</li> <li>- Suitable for industrial floors, floors resistant to oils and hydrocarbons, tank linings, cement slurries and filling of joints.</li> </ul>





Code	Name	Properties	Application Areas	Pot Life of the Mixture at 20°C	Consumption of Mixed Product per mm Thickness and per m²
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## Rapid Setting Repair of Concrete



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

## Concrete Bonding Agent



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

Code	Name	Properties	Application Areas	Pot Life of the Mixture at 20°C	Consumption of Mixed Product per mm Thickness and per m <sup>2</sup>
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## Waterproofing - Tanking

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



## Equipment

907974	<b>SQUEEGEE</b>
911907	<b>BUBBLE REMOVING ROLLER WITH HANDLE</b>



## 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 <sup>2</sup>
912314	<b>FINIJOINT</b> 20kg buckets	<ul style="list-style-type: none"> <li>- Very good adhesion to substrates.</li> <li>- Good moisture resistance.</li> <li>- No dusting.</li> </ul> <p>Paste ready for mixing with cement.</p>	<ul style="list-style-type: none"> <li>- Precast double wall joints</li> <li>- Refilling of shuttering floor slab joints.</li> <li>- <b>INTERIOR and EXTERIOR</b> applications.</li> </ul>	1h	1 bucket + cement = 230 linear meters of 1 cm by 1 cm joint.  Joint width from 5 to 20mm
909455	<b>DALFLEX</b> 25kg bags	<ul style="list-style-type: none"> <li>- Good adhesion to the substrate.</li> <li>- Good water retention to avoid desiccation phenomena.</li> <li>- No creep.</li> <li>- Single component.</li> </ul>	<ul style="list-style-type: none"> <li>- Refilling of shuttering floor slab joints.</li> <li>- Only suitable for interior applications.</li> </ul>	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
<b>For Modifying the Properties of Fresh Concrete</b>								
Water reducing agents			↑	↑		↓		↑
Plasticizer	↑					↓		↑
Superplasticizer	↑		↑	↑		↓		↑
<b>For Modifying Setting and Hardening Times</b>								
Setting accelerators		↓	↑					
Setting retarders		↑	↓	↑				
<b>For Modifying the Properties of Hardened Concrete</b>								
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
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## Setting Accelerators



CE NF	908384 908386 908389	<b>TECHNIPRISE® 25</b> 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	<b>TECHNADUR</b> 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	<b>CRD® 19</b> 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	<b>ADDIFOR RETARD®</b> 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%.
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## Super Plasticizers / High Water Reducing Agents

CE NF	908086 908087 908088	<b>ADDIFOR® 2005</b> 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	<b>ADDIFOR® 2001</b> 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	<b>ADDIFOR® 2015</b> 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	<b>ADDIFOR® 2005 LMO</b> 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	<b>IMPER BETON</b> 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.
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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	+				+++

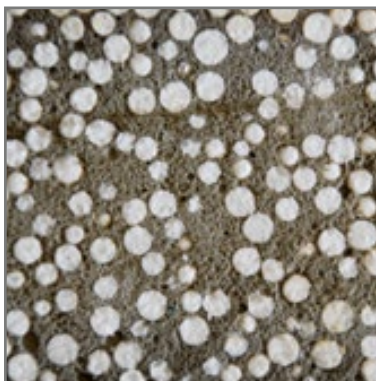


Code	Name	Application Areas	Recommended Dose
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## Others



908308 908310	<b>AIR BETON</b> 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	<b>ISOFOR</b> 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	<b>BETON PSE</b> 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	<b>MOSAR</b> 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	<b>PROTECDAL</b> 1,000l containers 215l drums 30l jerrycans	Solvent phase	3 to 5m <sup>2</sup> per liter.	0.83
 911718 911588 911587	<b>PROTECSOL® GE 08</b> 1,000l containers 215l drums 30l jerrycans	Aqueous phase VOCs free	4 to 10m <sup>2</sup> per liter.	0.98

## Equipment

911859	<b>METAL SPRAY APPLICATOR: 6LT WITH FLAT FAN NOZZLE</b>
912323	<b>METAL SPRAY APPLICATOR: 6LT WITH ROTATING NOZZLE</b>
906347	<b>METAL SPRAY APPLICATOR: 10LT</b>





# Surface Treatment Products

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

## Surface Damp Proofing Agent



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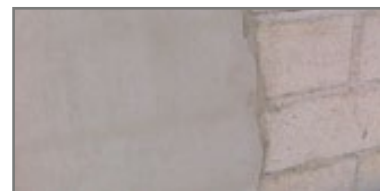


908804 908806	<b>TIPTEC® E</b> 215l drums 30l jerrycans	By injection. Possible application on furniture surface (deactivated concrete, white concrete).	<ul style="list-style-type: none"> <li>- Very good damp proofing.</li> <li>- Resistance to aggressive atmospheric agents.</li> <li>- Maintains gaseous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

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

Application Areas	Consumption	Application
<ul style="list-style-type: none"> <li>- Traditional exterior renders.</li> <li>- Architectonic concrete.</li> <li>- Monuments.</li> <li>- Free stone.</li> <li>- Street furniture.</li> <li>- Facing bricks.</li> </ul>	3 to 6m <sup>2</sup> per liter	2 coats by brush or spray applicator at 1 hour interval, on dry surfaces.
<ul style="list-style-type: none"> <li>- Renders.</li> <li>- Concrete.</li> <li>- Injection into walls.</li> <li>- Protects against humidity.</li> </ul>	<ul style="list-style-type: none"> <li>- Depending on the substrate: 4 to 6m<sup>2</sup>/l.</li> <li>- By injection: around 0.1 liter per hole.</li> </ul>	Injection hole into wall bases at angles of 45° every 15cm. Over 2/3 of the wall thickness.
<ul style="list-style-type: none"> <li>- Foundations.</li> <li>- Basements (concrete, breeze blocks, stones, bricks).</li> </ul>	<ul style="list-style-type: none"> <li>- 2kg of mixed product per mm thickness and per m<sup>2</sup>.</li> <li>- 3mm thick in 2 crossed layers.</li> </ul>	2 crossed layers by brush or roller at intervals of 24h.
<ul style="list-style-type: none"> <li>- Foundations.</li> <li>- Concrete basements.</li> <li>- Retaining walls.</li> <li>- Buried wood and metal tanks.</li> </ul>	3 to 5m <sup>2</sup> 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"> <li>- Foundations.</li> <li>- Basements (agglomerates, breeze blocks).</li> <li>- Buried wood and metal tanks.</li> </ul>	<ul style="list-style-type: none"> <li>- Impregnation for waterproofing and protection: 0.5 to 1kg/m<sup>2</sup>.</li> <li>- 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/m<sup>2</sup>.</li> </ul>	With a stainless steel flooring trowel.
<ul style="list-style-type: none"> <li>- Foundations.</li> <li>- Concrete basements.</li> <li>- Retaining walls.</li> <li>- Buried wood and metal tanks.</li> </ul>	<ul style="list-style-type: none"> <li>- On mortar and concrete: 5 to 6m<sup>2</sup>/l/coat.</li> <li>- On metal: 8 to 10m<sup>2</sup>/l/coat.</li> <li>- On wood: 4 to 5m<sup>2</sup>/l/coat.</li> </ul>	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
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## Concrete Bonding Adhesion Promoting Agents



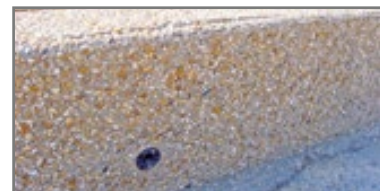
909849 909850 909851 909848	<b>COPOX COLLE REPRISE</b> 1kg kits 2kg kits 5kg kits 25kg kits	- Concrete bonding: 0.5 to 0.8kg/m². - Bonding: 0.2kg/m².
908492 908493 908500 908505	<b>TECHNALATEX®</b> 1,000l containers 215l drums 30l jerrycans 5l jerrycans	- Floor screeds: 0.35 to 0.8kg per mm thickness and per m². - Primer: 0.15 to 0.2l per m².
908542 908543 908548 908551	<b>TECHNALATEX® M</b> 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	<b>TECHNA RETARD SURFACE N°1</b> Translucent blue 20l jerrycans	- 4 to 5m² per liter.
912276	<b>TECHNA RETARD SURFACE N°2</b> Translucent blue 20l jerrycans	
912275	Opaque yellow 20l jerrycans	
912274	<b>TECHNA RETARD SURFACE N°3</b> Translucent blue 20l jerrycans	- 0.2kg to 0.35kg per m².
908247	<b>TECHNA PROTECT</b> 7kg buckets	

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



002835	<b>ACRO ADHESIVE</b>	Pot of 750ml	0.75/pot
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- Contact polychloroprene, mono-component adhesive.
- ACRO adhesive is perfectly suited for fixing plastic profiles or neoprene bearings on concrete.

## BI-COMPONENT ADHESIVE





012634	<b>BI-COMPONENT ADHESIVE "A"</b>	Pot of 0.80kg	0.80/pot
012635	<b>BI-COMPONENT ADHESIVE "B"</b>	Pot of 0.40kg	0.40/pot

- Reactive adhesive with 2 components:
  - Component A: epoxy resin, 6.4kg.
  - Component B: hardener, 3.2kg.
- 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><b>AFNOR CERTIFICATION</b> 11 avenue Francis de Pressensé 93571 Saint-Denis La Plaine Cedex, France</p>	<div> <div> Repository certification mark  "Special products for hydraulic concrete structures"  Identification No. NF 030  <a href="http://www.marque-nf.com">www.marque-nf.com</a> </div> <div>  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. </div> </div> <div> <div> Certification standard for the brand "Admixtures for concrete, mortars and grouts – curing compounds"  Identification No. NF 085  <a href="http://www.cerib.com">www.cerib.com</a>  An updated list of products TECHNIQUE BETON holders marked "Admixtures for concrete, mortars and grouts – curing compounds", is available from our sales team. </div> <div>  </div> </div>
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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: 10,000m<sup>2</sup>.
- Covered surface: 3,000m<sup>2</sup>.

## 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.

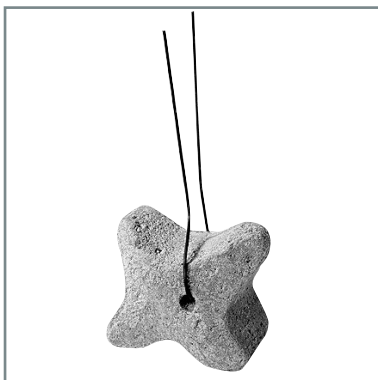
## Treatment of moulded products:

- 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:

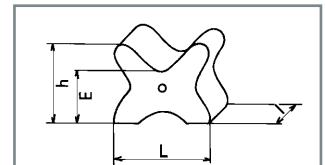
- 3 spacers/m<sup>2</sup> on average.

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

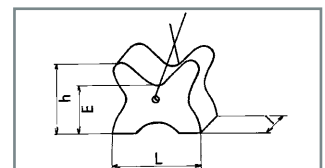
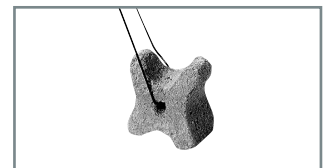
Possibility of tying.



## 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 m<sup>2</sup> 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

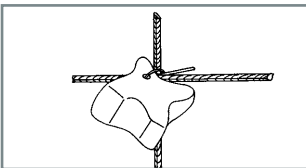
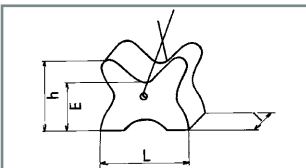


904563	SU 20	20	42	22	28	16
904564	SU 25	25	48	28	34	20
904565	SU 30	30	48	28	37	20
904566	SU 35	35	48	28	40	25
904567	SU 40/50	40/50	50/57	35	50	32

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:

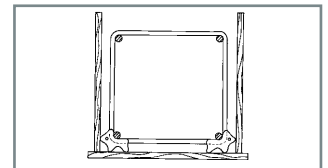
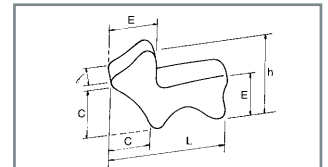
- One spacer every 1 m or 1.5m according to the reinforcements.
- Placed without fastening below the loose rods of the reinforcing cages.

**Attention: coating in situ = coating of the spacer minus Ø 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.

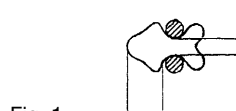


Fig. 1

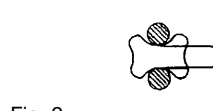


Fig. 2

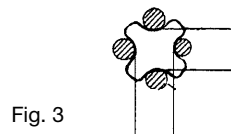


Fig. 3

# Fixed or Magnetic Strips

Fig. 1

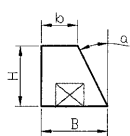


Fig. 2

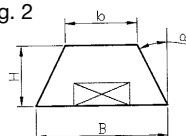


Fig. 3

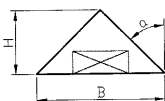
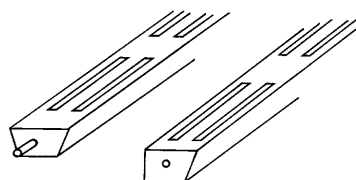
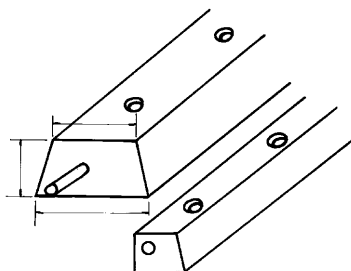


Fig. 4



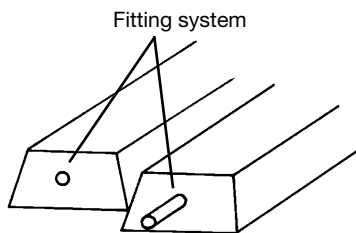
Magnet profile

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.

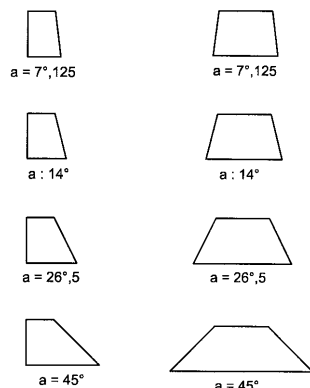
## Help for choosing the correct magnet profile:

- 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	–

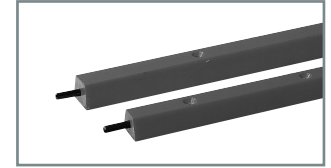
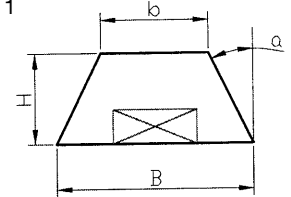


Fig. 1



## 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

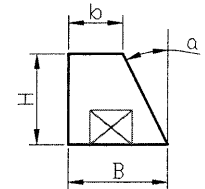
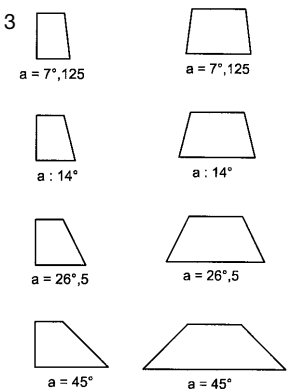


Fig. 3

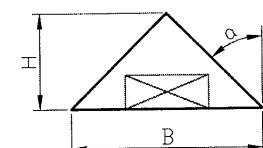


Code	Description					Specific Uses
		Type	B [mm]	H [mm]	L [mm]	

## 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:**

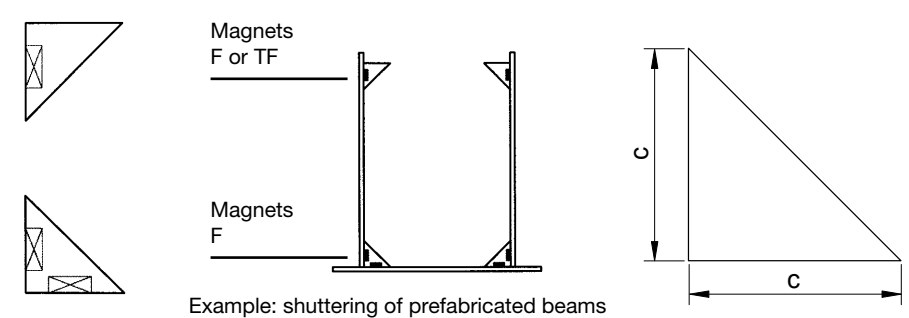
- Breaking the angles of beams, posts, walls etc.
- Building, civil engineering.
  - Precasting.

**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.

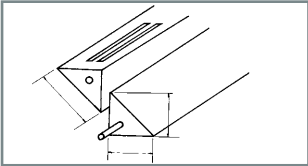
**Implementation:**

- 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]
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**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.



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## 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.

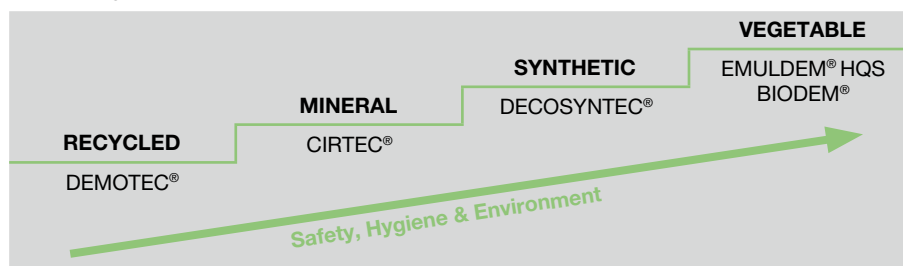
## Choosing the type of mould release agent

	Recycled	Mineral	Synthetic	Vegetable
<b>Concrete drop height</b>				
Standard	4	4	4	4
High	3	3	5	4
<b>Temperature</b>				
< 5°C	3	3	5	2
From 5 to 30°C	3	3	5	5
> 30°C	3	3	5	2
<b>Type of Formwork</b>				
Wood	5	5	3	3
Metal	4	4	5	5
PU matrix	0	0	2	3
<b>Type of Shuttering</b>				
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
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## Immediate Mould Release



909365 909366 909367	<b>DECOSYNTec® V2004</b> 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.
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## Delayed Mould Release - Refer to Chemicals for Concrete Structures p 6-7



912297 912147 912146 912386 912387 912388	<b>EMULDEM® HQS CONCENTRE</b> 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). <b>Product to be diluted with water. Refer to TDS.</b>
912212 912211 912213	<b>EMULDEM® CS</b> 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	<b>DECOSYNTec® 2000</b> 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	<b>CIRTEC®</b> 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	<b>METAL SPRAY APPLICATOR 6LT WITH FLAT FAN NOZZLE</b>
912323	<b>METAL SPRAY APPLICATOR 6LT WITH ROTATING NOZZLE</b>
906347	<b>METAL SPRAY APPLICATOR 10LT</b>

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





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Code	Name	Properties
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## Finishing Coat Mortars



912141	<b>FINENDUIT®</b> <b>20kg bags</b> with handle	Powder levelling; yields paste when mixed with water.
908590 908595	<b>FINIMUR® GROS</b> <b>25kg bags</b> Available in white	<ul style="list-style-type: none"> <li>- Very quick and easy to apply.</li> <li>- Good adhesion to different substrates.</li> </ul>
908582 910763 908584 908588	<b>FINIMUR® FIN</b> <b>25kg bags</b> Available in dark grey, light grey and white	<ul style="list-style-type: none"> <li>- Very easy and quick to apply.</li> <li>- Very smooth finish.</li> <li>- Very good impact resistance.</li> <li>- Good adhesion to different substrates.</li> </ul>



## Repair Mortars



<b>CE</b> <b>NF</b>	909596	<b>FIBRALCHOC®</b> <b>25kg bags</b> Particle size: 0 to 1.6mm Available in light grey, fine particle size	<b>Fibre reinforced mortar.</b> <ul style="list-style-type: none"> <li>- Good adhesion.</li> <li>- Impact and abrasion resistant.</li> <li>- Thixotropic.</li> </ul> <b>Single component.</b>
<b>CE</b>	909610	<b>FIBRALCHOC® R</b> <b>25kg bags</b> Particle size: 0 to 1.6mm	<b>Fibre reinforced mortar. Rapid setting time.</b> <ul style="list-style-type: none"> <li>- Good adhesion.</li> <li>- Impact and abrasion resistant.</li> <li>- Thixotropic.</li> </ul> <b>Single component.</b>
<b>CE</b>	909791	<b>STARFIX®</b> <b>25kg bags</b> Particle size: 0 to 1.6mm	<b>Good resistance to aggressive types of water. Rapid development of initial and final resistance (or strength) characteristics.</b> <ul style="list-style-type: none"> <li>- Compressive strength after 24h: 26MPa.</li> <li>- Good adhesion on most substrates.</li> </ul> <b>Single component.</b>

Application Areas	Pot Life of the Mixture at 20°C	Consumption	Application Thickness
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<ul style="list-style-type: none"> <li>- All general interior and exterior levelling jobs.</li> <li>- Finishing.</li> </ul>	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"> <li>- All interior and exterior levelling jobs.</li> </ul>	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"> <li>- All general interior and exterior levelling jobs.</li> <li>- Finishing.</li> </ul>	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"> <li>- Repair and filling of spalling, nosing, holes, chases, corings, columns, banisters, cast walls, roof parapets, edge beams, repair of joint lips, beam angles.</li> <li>- Everyday fixing jobs: cleats, gudgeons.</li> </ul>	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"> <li>- Repair and filling of spalling, nosing, holes, chases, corings, columns, banisters, cast walls, roof parapets, edge beams, repair of joint lips, beam angles.</li> <li>- Everyday fixing jobs: cleats, gudgeons.</li> </ul>	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"> <li>- Repair of prefabricated elements, columns, beams.</li> <li>- Fixing and anchoring of street furniture.</li> <li>- All repairs requiring short downtimes.</li> </ul>	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
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## Setting Accelerators



CE NF	908384 908386 908389	<b>TECHNIPRISE® 25</b> 1,000l containers 316kg drums 30kg jerrycans	<b>Chloride free.</b> - 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	<b>CRD® 19</b> 1,000l containers 215l drums 20l jerrycans	<b>Contains chloride.</b> - 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	<b>ADDIFOR® 2005</b> 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	<b>ADDIFOR® 2001</b> 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	<b>ADDIFOR® 2015</b> 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	<b>ADDIFOR® 2005 LMO</b> 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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