

edition 2019

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# CONCRETE ACCESSORIES

products and information

REINFORCEMENT CONTINUITY SYSTEMS |

CORNER FILLETS |

ACCESSORIES |

SPACERS |

**exte**

partner of the  
construction industry

## Welcome to EXTE - concrete accessories

### Our philosophy

We are partner and server of problems for the construction industry. With operating experience, since 1959, we are on a par with our costumers and passionately take care of their requirements. Result: products and systems of high quality at attractive prices.

### Our qualities:

- operating experience
- modern tool manufacturing
- efficient production
- powerful logistics
- dynamic sales
- lean management

### Product development






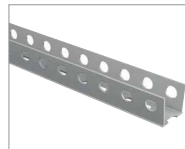
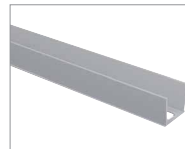




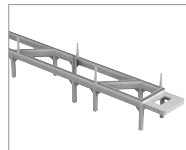
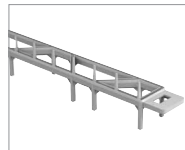


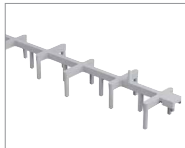


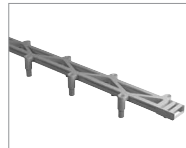
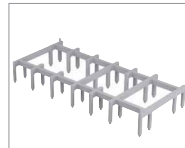
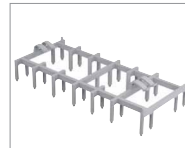
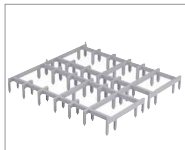
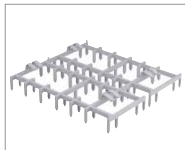



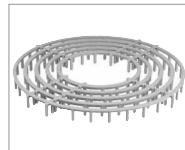




























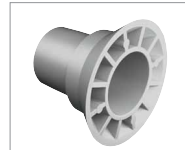
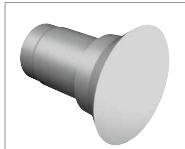








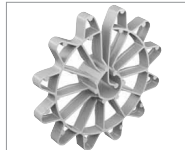



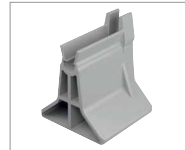
Our focus is on close contact to our customers. Their wishes and needs, caused by the requirements of the market, build the foundation of our acting.

### Continuity

Sustainability is one of our highest values. Aspiring long-term relationships and continious development, we do not chase rapid efforts.

### Assurance through independence

As family-owned enterprise we emphasize independence. That means long-term mutual trust for our partners.

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BD p.26



BDK p.26



BTP p.26



BV p.27



BVH p.27



BRS p.27



BDH p.28



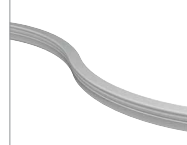
BDD p.28



BB p.29



BBN p.29



BS p.30



BSN p.30



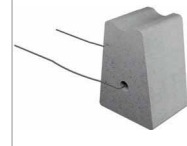
BSRN p.30



BTPS p.30



BA p.31



BAD p.31



BAO p.31



BK p.32



BKD p.32



BAR p.32



BR p.33



BST p.33



BFA p.33



BFB p.33



KU p.33



KA p.33



BTA B p.34



BDDNV p.34



BTA D p.34



TKS p.34



BAH p.35



BD2 LK p.35



BD2 QK p.35



GBADK p.36



GBADK p.36



GBADK p.36



GBAFK p.36



GBAFK p.36



GBARO p.37



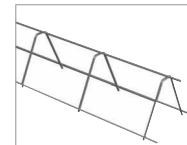
GBAVO p.37



GBA SK p.37



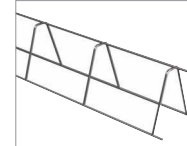
SBK p.37



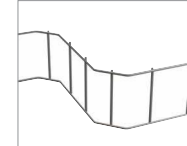
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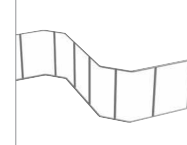
SBA - DBV p.40



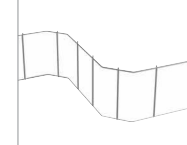
SBA o.UE. p.41



S DBV p.42



S.o.UE. p.43



S p.43



VB p.44



VB QT p.44



GF p.44



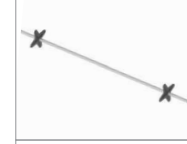
BF p.44



SB p.45



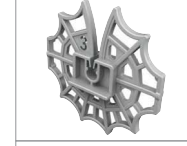
SB QT p.45



SAS p.46



SAS - A p.47



ROB 6 p.47



ROB 6-8 p.47



ROB 6-10 p.47



DWA S p.48



DWA K p.48



TC p.49



DWA S TC p.49



ELH mF p.52



ELV mF p.52



ELRH mF p.52



ELH oF p.53



ELPEH oF p.53



ELPEV mF p.53



RL1 p.54



RL12 p.54



RL16 p.54



TPP p.55



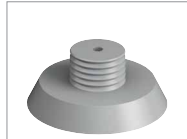
T p.55



AP p.55



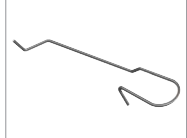
DWD p.58



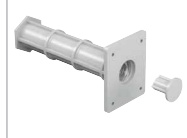
HPG p.58



KB p.58



FSB p.58



DGH p.59



PN p.59



DSD p.59



IPD p.59



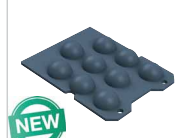
SP p.60



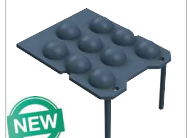
SPT p.60



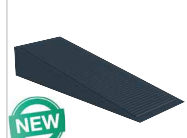
SPS p.60



SPK p.60



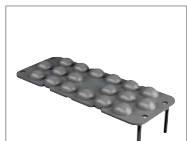
SPKH p.60



KK p.60



SPN p.61



SPH p.61



TW p.61



MP p.62



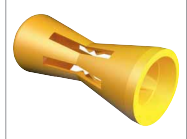
MPO p.62



MPS p.62



MPW p.62



SKV p.63



SKA p.63



SKA D p.63



SKA S p.63



PROTEX SL p.64



PROTEX p.64



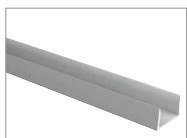
SA p.65



SAN p.65



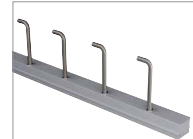
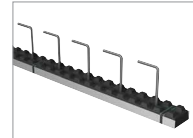
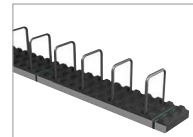
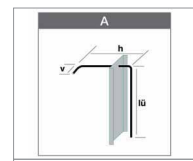
SAL p.65

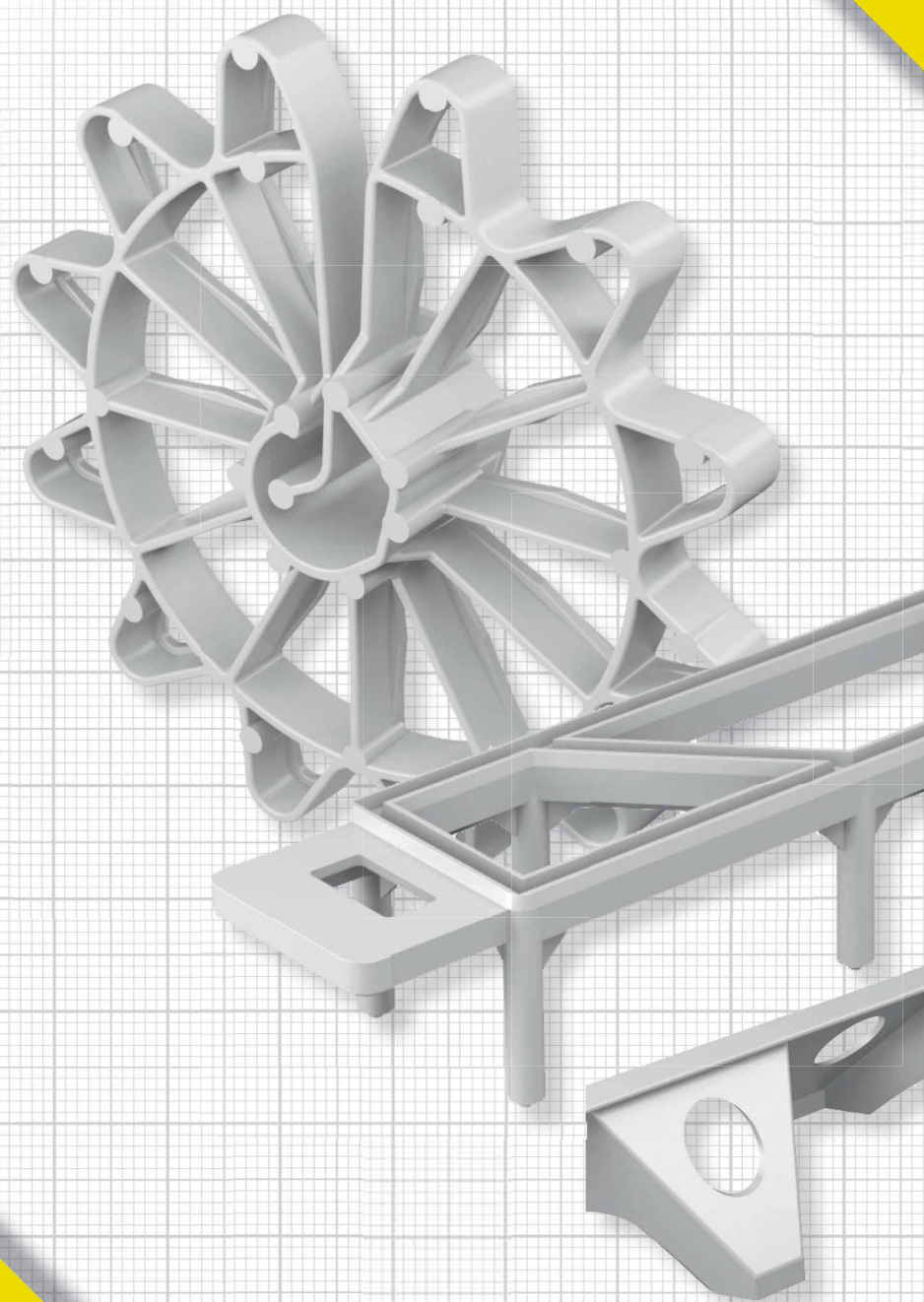


SL p.65



SST p.65

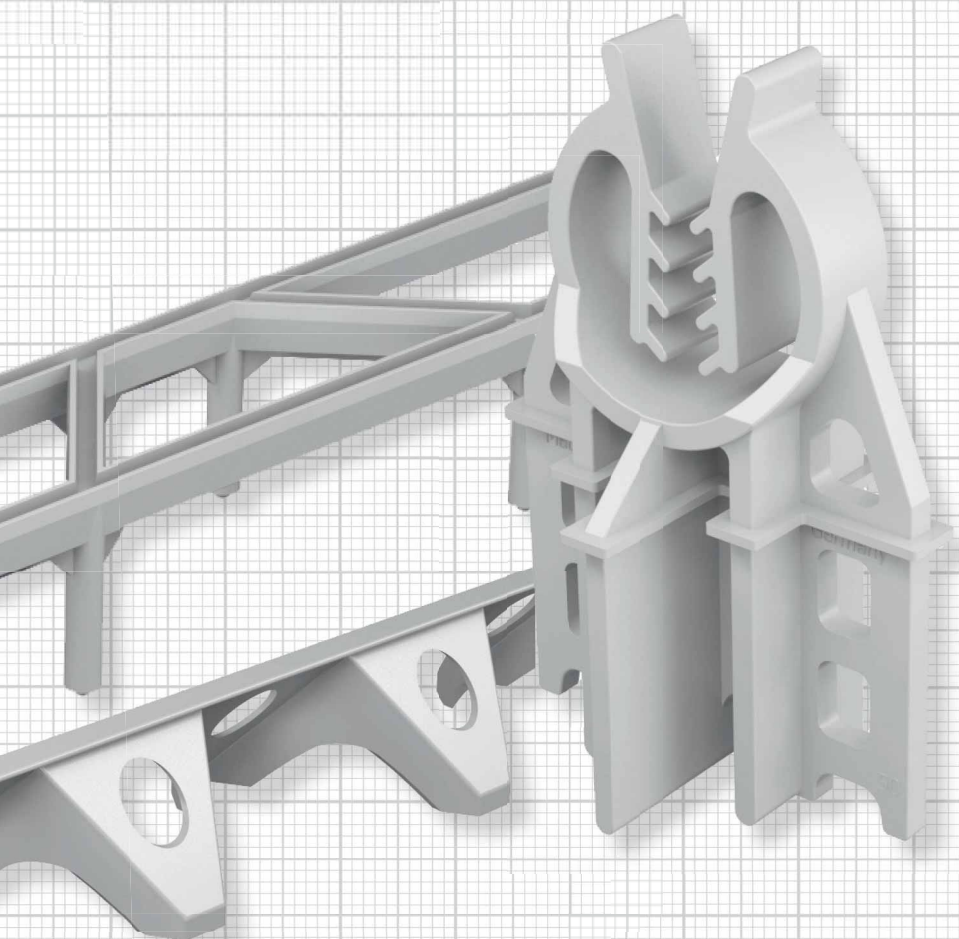
BWA  
single row p.68BWA  
double row p.69BWA QLV  
single row p.71BWA QLV  
double row p.72BWA  
overview p.74



# SPACERS

*PLASTIC*

SPACERS  
PLASTIC





## ZZ Zig-Zag-spacer

- Stable spacer for the bottom layer of the reinforcement.
- Slip-proof and safe against overturning, highly loadable.
- Optimal concrete flow to support the prevention of voids or linear cracking in the concrete.
- Best handling for transportation, warehousing or installation through packaging in the EXTE Optipack.

article no.	designation	concrete cover (mm)	length (cm)	metres / pack	metres / pallet
1515	ZZ 15	15	200	100	5.000
1520A	ZZ 20	20	200	100	5.000
1525A	ZZ 25	25	200	100	5.000
1530A	ZZ 30	30	200	100	5.000
1535A	ZZ 35	35	200	80	3.200
1540A	ZZ 40	40	200	80	3.200
1545A	ZZ 45	45	200	80	3.200
1550A	ZZ 50	50	200	80	3.840
1555A	ZZ 55	55	205	82	3.280
1560A	ZZ 60	60	205	82	3.280
1565A	ZZ 65	65	205	82	3.280

Other lengths upon request.

Tested according to DBV-specification "Abstandhalter" DBV -c- L2/F/T/A.



## ZZ S Zig-Zag-spacer – shock-proof

- Stable spacer for the bottom layer of the reinforcement.
- Slip-proof and safe against overturning, highly loadable.
- Extremely impact resistant, also at low temperatures.
- Optimal concrete flow to support the prevention of voids or linear cracking in the concrete.
- Best handling for transportation, warehousing or installation through packaging in the EXTE Optipack.

article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
1515S	ZZS 15	15	200	100	5.000
1520S	ZZS 20	20	200	100	5.000
1525S	ZZS 25	25	200	100	5.000
1530S	ZZS 30	30	200	100	5.000
1535S	ZZS 35	35	200	80	3.200
1540S	ZZS 40	40	200	80	3.200
1545S	ZZS 45	45	200	80	3.200
1550S	ZZS 50	50	200	80	3.840
1555S	ZZS 55	55	205	82	3.280
1560S	ZZS 60	60	205	82	3.280
1565S	ZZS 65	65	205	82	3.280

Other lengths upon request.

The product is available upon request, only.



## ZZOA Zig-Zag-spacer – without lateral cut-outs

- Stable spacer for the bottom layer of the reinforcement.
- Slip-proof and safe against overturning, highly loadable.
- Without lateral cut-outs.
- Optimal concrete flow to support the prevention of voids or linear cracking in the concrete.
- Best handling for transportation, warehousing or installation through packaging in the EXTE Optipack.



article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
1315	ZZOA 15	15	200	100	5.000
1320	ZZOA 20	20	200	100	5.000
1325	ZZOA 25	25	200	100	5.000
1330	ZZOA 30	30	200	100	5.000
1335	ZZOA 35	35	200	80	3.200
1340	ZZOA 40	40	200	80	3.200
1345	ZZOA 45	45	200	80	3.200
1350	ZZOA 50	50	200	80	3.840
1355	ZZOA 55	55	205	82	3.280
1360	ZZOA 60	60	205	82	3.280
1365	ZZOA 65	65	205	82	3.280

Other lengths upon request.

## ZZSN Zig-Zag-spacer – with pointed legs and knobs

- Spacer for lightweight reinforcement.
- Suitable for fair-faced concrete, specifically for precast elements.
- With pointed feet for little contact with the formwork and with knobs to fix the reinforcement.



article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
1620	ZZ 20 SN	20	244	109,80	6.148,80
1625	ZZ 25 SN	25	244	109,80	6.148,80
1630	ZZ 30 SN	30	240	108,00	6.048,00

Other lengths upon request.

The product is available upon request, only.

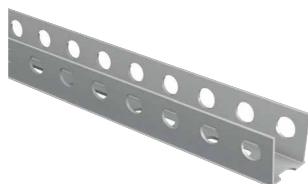


### AL/2 Linear spacer – with lateral cut-outs

- Large lateral cut-outs for smooth concrete flow.

article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
1901	AL 15/2	15	200	100	7.000
1903	AL 20/2	20	200	100	6.300
1905	AL 25/2	25	200	100	4.900
1907	AL 30/2	30	200	100	4.200
19091	AL 35/2	35	200	60	3.780
19112	AL 40/2	40	200	60	2.400
1944	AL 45/2	45	200	60	2.100
19131	AL 50/2	50	200	60	1.680
1919	AL 60/2	60	200	40	1.280
1957	AL 70/2	70	200	40	1.120
1959	AL 75/2	75	200	40	1.120
1961	AL 80/2	80	200	40	1.120

Other lengths upon request.



### AL/1 Linear spacer – without lateral cut-outs

- Spacer strip for use on soft subsoil.
- Reversible.

article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
1900	AL 15/1	15	200	100	7.000
1902	AL 20/1	20	200	100	6.300
1904	AL 25/1	25	200	100	4.900
1906	AL 30/1	30	200	100	4.200
1908	AL 35/1	35	200	60	3.780
19102	AL 40/1	40	200	60	2.400
1914	AL 45/1	45	200	60	2.100
1912	AL 50/1	50	200	60	1.680
1920	AL 60/1	60	200	40	1.280
1958	AL 70/1	70	200	40	1.120

Other lengths upon request.



### AL/0 Linear spacer – without lateral cut-outs and without holes

- Spacer strip for the bottom layer of the reinforcement.
- Without lateral cut-outs and holes for higher load.

article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
19000L	AL 15/1 OL	15	200	100	7.000
19020L	AL 20/1 OL	20	200	100	6.300
19040L	AL 25/1 OL	25	200	100	4.900
19060L	AL 30/1 OL	30	200	100	4.200
19080L	AL 35/1 OL	35	200	60	3.780
191020L	AL 40/1 OL	40	200	60	2.400
19140L	AL 45/1 OL	45	200	60	2.100
19120L	AL 50/1 OL	50	200	60	1.680
19200L	AL 60/1 OL	60	200	40	1.280
19580L	AL 70/1 OL	70	200	40	1.120
19600L	AL 75/1 OL	75	200	40	1.120
19620L	AL 80/1 OL	80	200	40	1.120

Other lengths upon request.

## TWX Twistex

- Stable design, also appropriate for heavy reinforcement.
- Flexible and efficient laying through a length of 80 cm.
- Can also be used on soft subsoil, when turned upside down.

article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
1421580	TWX Twistex 15	15	80	70	3.430
1422080	TWX Twistex 20	20	80	60	2.940
1422580	TWX Twistex 25	25	80	50	2.450
1423080	TWX Twistex 30	30	80	40	1.960
1423580	TWX Twistex 35	35	80	30	1.680
1424080	TWX Twistex 40	40	80	30	1.470
1425080	TWX Twistex 50	50	80	20	1.120

Test certificate upon request.



## WAVE Wave – 33 cm

- Extremely loadable spacer for the bottom layer of the reinforcement.
- Lateral cut-outs for smooth concrete flow.
- Protruding knobs prevent shifting of the reinforcement.
- Can also be used on soft subsoil, when turned upside down.

article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
14703325	WELLE 25-33	25	33	80	7.200
14703330	WELLE 30-33	30	33	80	7.200



## WST Wave bar

- Spacer for lightweight reinforcement.
- Excellent concrete flow.

article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
1481100	WST 15	15	100	80	4.160
1482100	WST 20	20	100	80	3.840
1483100	WST 25	25	100	80	3.520
1484100	WST 30	30	100	80	3.200
1485100	WST 35	35	100	80	2.880
1486100	WST 40	40	100	80	2.560
1488100	WST 50	50	100	80	1.920

Other lengths upon request.



## TFL Topflex

- Linear spacer made from plastic, with pointed feet.
- Specifically appropriate for fair-faced concrete.
- Suitable for sequential use (pushfit coupling).

article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
1471100	TFL 15	15	100	50	3.200
1472100	TFL 20	20	100	50	3.200
1473100	TFL 25	25	100	50	2.800
1474100	TFL 30	30	100	50	2.800
1475100	TFL 35	35	100	50	2.400
1476100	TFL 40	40	100	50	2.400
1477100	TFL 45	45	100	50	2.000
1478100	TFL 50	50	100	50	2.000

Other lengths upon request.





with knob distance 5,0 cm



with knob distance 2,5 cm



without knobs



also available with sharp feet

## DST Double rod

- Linear spacer made from plastic, with pointed feet.
- Available with a knob spacing of 5 cm or 2,5 cm, or without knobs.
- Suitable for architectural concrete.

article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
<b>with knob distance 5,0 cm</b>					
1441250E	DST 15 - 250 E	15	250	250	4.500
1442250E	DST 20 - 250 E	20	250	250	4.500
1443250E	DST 25 - 250 E	25	250	250	3.750
1444250E	DST 30 - 250 E	30	250	250	3.000
1445250E	DST 35 - 250 E	35	250	250	3.000
1446250E	DST 40 - 250 E	40	250	125	2.250
1447250E	DST 45 - 250 E	45	250	125	2.250
1448250E	DST 50 - 250 E	50	250	125	1.875
<b>with knob distance 2,5 cm</b>					
1461250E	DST 15 - 250 / 25 E	15	250	250	4.500
1462250E	DST 20 - 250 / 25 E	20	250	250	4.500
1463250E	DST 25 - 250 / 25 E	25	250	250	3.750
1464250E	DST 30 - 250 / 25 E	30	250	250	3.000
1465250E	DST 35 - 250 / 25 E	35	250	250	3.000
1466250E	DST 40 - 250 / 25 E	40	250	125	2.250
1467250E	DST 45 - 250 / 25 E	45	250	125	2.250
1468250E	DST 50 - 250 / 25 E	50	250	125	1.875
<b>without knobs</b>					
1451250E	DST 15 - 250 o.N.	15	250	250	5.250
1452250E	DST 20 - 250 o.N.	20	250	250	5.250
1453250E	DST 25 - 250 o.N.	25	250	250	4.500
1454250E	DST 30 - 250 o.N.	30	250	250	3.750
1456250E	DST 40 - 250 o.N.	40	250	125	3.000
1457250E	DST 45 - 250 o.N.	45	250	125	3.000
1458250E	DST 50 - 250 o.N.	50	250	125	2.500

Standard length: 5 X 0,50 m = ca. 2,50 m, other lengths upon request.

Approved according to DBV-specification "Abstandhalter" DBV -c- F/T/A.



## DST ES Double rod – extra stable

- Linear spacer made from plastic, with pointed feet.
- Available with a knob spacing of 5 cm.
- Suitable for architectural concrete.

article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
<b>with knob distance 5,0 cm</b>					
1441250ES	DST 15 - 250 ES	15	250	250	4.500
1442250ES	DST 20 - 250 ES	20	250	250	4.500
1443250ES	DST 25 - 250 ES	25	250	250	3.750
1444250ES	DST 30 - 250 ES	30	250	250	3.000
1445250ES	DST 35 - 250 ES	35	250	250	3.000
1446250ES	DST 40 - 250 ES	40	250	125	2.250
1447250ES	DST 45 - 250 ES	45	250	125	2.250
1448250ES	DST 50 - 250 ES	50	250	125	1.875

Standard length: 5 X 0,50 m = ca. 2,50 m, other lengths upon request.

Approved according to DBV-specification "Abstandhalter" DBV -c- F/T/A.

## TF Centipede

- Track spacer made from plastic, with pointed feet.
- For architectural concrete, suitable for sequential use (pushfit coupling).

article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
1431	TF 15	15	100	100	5.200
1432	TF 20	20	100	100	5.200
1433	TF 25	25	100	100	4.000
1434	TF 30	30	100	100	3.200
1435	TF 35	35	100	100	2.000
1436	TF 40	40	100	100	2.000
1437	TF 45	45	100	50	1.600
1438	TF 50	50	100	50	1.600

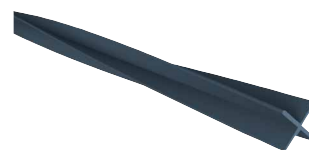
Approved according to DBV-specification "Abstandhalter" DBV -c- F/T/A.



## KPG X-Spacer – twisted

- Oblong spacer with X-profile, twisted.

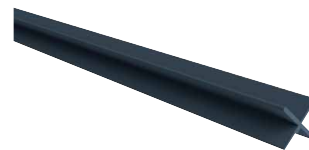
article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
1674	KPG 20	20	2,5	100	7.000
1675	KPG 25	25	2,5	100	4.000
1676	KPG 30	30	2,5	100	3.500



## KP X-Spacer

- Oblong spacer with X-profile.

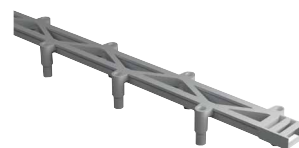
article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
1664	KP 20	20	2,5	100	7.000
1665	KP 25	25	2,5	100	4.000
1666	KP 30	30	2,5	100	3.500



## Linex Linear spacer

- Stable spacer with pointed legs.
- Optimal concrete flow to support the prevention of voids or linear cracking in the concrete.
- Suitable for fair-faced concrete.
- Suitable for sequential use (pushfit coupling).

article no.	designation	concrete cover (mm)	length (cm)	metres / bundle	metres / pallet
1480020200	LIN 20	20	200	100	4.800
1480025200	LIN 25	25	200	100	4.800
1480030200	LIN 30	30	200	100	4.800
1480035200	LIN 35	35	200	100	3.600
1480040200	LIN 40	40	200	100	3.600
1480050200	LIN 50	50	200	100	3.600
1480060200	LIN 60	60	200	100	3.000
1480075200	LIN 75	75	200	100	1.800
1480100200	LIN 100	100	200	100	1.200





### RES Square spacer

article no.	designation	concrete cover (mm)	size (cm)	units / bundle	units / pallet
39815	RES 15	15	20 x 9	100	4.800
39820	RES 20	20	20 x 9	100	4.800
39825	RES 25	25	20 x 9	100	4.800
39830	RES 30	30	20 x 9	100	4.800
39835	RES 35	35	20 x 9	100	4.800
39840	RES 40	40	20 x 9	100	4.800
39850	RES 50	50	20 x 9	100	4.800

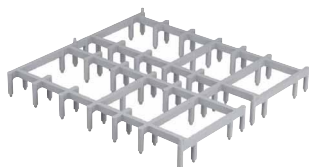
Approved according to DBV-specification "Abstandhalter" DBV -c- F/T/A.



### RES H Square spacer – with hooks

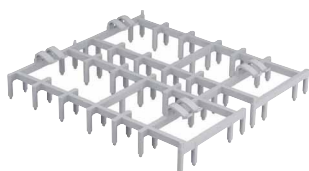
article no.	designation	concrete cover (mm)	size (cm)	units / bundle	units / pallet
398151	RES 15 H	15 H	20 x 9	100	4.800
398201	RES 20 H	20 H	20 x 9	100	4.800
398251	RES 25 H	25 H	20 x 9	100	4.800
398301	RES 30 H	30 H	20 x 9	100	4.800
398351	RES 35 H	35 H	20 x 9	100	4.800
398401	RES 40 H	40 H	20 x 9	100	4.800
398501	RES 50 H	50 H	20 x 9	100	4.800

Approved according to DBV-specification "Abstandhalter" DBV -c- F/T/A.



### RES D Square spacer – double

article no.	designation	concrete cover (mm)	size (cm)	units / pallet
39915	RES 15 D	15 D	20 x 19	2.400
39920	RES 20 D	20 D	20 x 19	2.400
39925	RES 25 D	25 D	20 x 19	2.400
39930	RES 30 D	30 D	20 x 19	2.400
39935	RES 35 D	35 D	20 x 19	2.400
39940	RES 40 D	40 D	20 x 19	2.400
39950	RES 50 D	50 D	20 x 19	2.400



### RES DH Square spacer – double and with hooks

article no.	designation	concrete cover (mm)	size (cm)	units / pallet
399151	RES 15 DH	15	20 x 19	2.400
399201	RES 20 DH	20	20 x 19	2.400
399251	RES 25 DH	25	20 x 19	2.400
399301	RES 30 DH	30	20 x 19	2.400
399351	RES 35 DH	35	20 x 19	2.400
399401	RES 40 DH	40	20 x 19	2.400
399501	RES 50 DH	50	20 x 19	2.400

## RES R Square spacer – with round feet

article no.	designation	concrete cover (mm)	size (cm)	units / bundle	units / pallet
39815R	RES 15 R	15	20 x 9	100	4.800
39820R	RES 20 R	20	20 x 9	100	4.800
39825R	RES 25 R	25	20 x 9	100	4.800
39830R	RES 30 R	30	20 x 9	100	4.800
39835R	RES 35 R	35	20 x 9	100	4.800
39840R	RES 40 R	40	20 x 9	100	4.800
39850R	RES 50 R	50	20 x 9	100	4.800



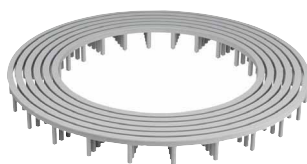
Approved according to DBV-specification "Abstandhalter" DBV -c- F/T/A.

## RES HR Square spacer – with hooks and round feet

article no.	designation	concrete cover (mm)	size (cm)	units / bundle	units / pallet
398151R	RES 15 HR	15	20 x 9	100	4.800
398201R	RES 20 HR	20	20 x 9	100	4.800
398251R	RES 25 HR	25	20 x 9	100	4.800
398301R	RES 30 HR	30	20 x 9	100	4.800
398351R	RES 35 HR	35	20 x 9	100	4.800
398401R	RES 40 HR	40	20 x 9	100	4.800
398501R	RES 50 HR	50	20 x 9	100	4.800



Approved according to DBV-specification "Abstandhalter" DBV -c- F/T/A.

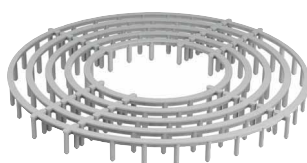


### RAS Ring-shaped spacer

- Large-area spacer for the bottom layer of the reinforcement, consisting of six nested rings of a diameter from 19 cm to 31 cm.

article no.	designation	concrete cover (mm)	units / sac	units / pallet
3915	RAS 15	15	300	12.000
3920	RAS 20	20	300	12.000
3925	RAS 25	25	300	12.000
3930	RAS 30	30	300	9.600
3935	RAS 35	35	300	9.000

Approved according to DBV-specification "Abstandhalter" DBV -c- F/T/A.

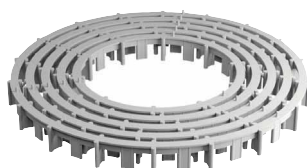


### RAS V Ring-shaped spacer – reinforced

- Reinforced large-area spacer for the bottom layer of the reinforcement, consisting of five nested rings of a diameter from 19 cm to 38 cm.

article no.	designation	concrete cover (mm)	units / sac	units / pallet
3921	RAS 20 V	20	150	5.400
3926	RAS 25 V	25	150	5.400
3931	RAS 30 V	30	150	4.650
3936	RAS 35 V	35	100	3.600
3941	RAS 40 V	40	100	3.000
3951	RAS 50 V	50	100	2.700

Approved according to DBV-specification "Abstandhalter" DBV -c- F/T/A.



### RAS EV Ring-shaped spacer – extra reinforced

- Stable large-area spacer for the bottom layer of the reinforcement, consisting of five nested rings of a diameter of 19 cm to 33 cm.

article no.	designation	concrete cover (mm)	units / sac	units / pallet
3914	RAS 20 EV	20	125	4.500
3918	RAS 25 EV	25	125	4.500
3922	RAS 30 EV	30	125	4.500
3924	RAS 35 EV	35	100	4.500
3928	RAS 40 EV	40	100	4.500
3932	RAS 50 EV	50	100	4.500





## AS Spacer

- Stable spacer made from plastic.

article no.	designation	concrete cover (mm)	pcs. / bag	pcs. / sac	pcs. / pallet
3310	AS 10	10	1.000	12.000	168.000
3315	AS 15	15	1.000	8.000	112.000
3320	AS 20	20	1.000	5.000	70.000
3325	AS 25	25	500	3.000	42.000
3330	AS 30	30	500	3.000	42.000
3340	AS 40	40	250	1.250	17.500
3350	AS 50	50	125	1.000	14.000
3360	AS 60	60	125	1.000	14.000
3370	AS 70	70	100	500	7.000



## ASK Spacer – with clamp

- Stable spacer made from plastic, with elastic clamping device.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	pcs. / bag	pcs. / sac	pcs. / pallet
3010	ASK 10	10	4 - 16	1.000	8.000	144.000
3015	ASK 15	15	4 - 16	1.000	6.000	108.000
3020	ASK 20	20	4 - 16	500	4.000	72.000
3025	ASK 25	25	4 - 16	500	3.500	63.000
3030	ASK 30	30	4 - 16	250	2.500	45.000
3035	ASK 35	35	4 - 16	250	1.500	36.000
3040	ASK 40	40	4 - 16	250	1.250	45.000
3045	ASK 45	45	4 - 16	125	1.000	20.000
3050	ASK 50	50	4 - 16	125	1.000	20.000



## ASKS Spacer – with clamp "Standard"

- Stable spacer made from plastic, with elastic clamping device.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	pcs. / bag	pcs. / sac	pcs. / pallet
38815	ASKS 15	15	4 - 20	500	3.000	60.000
38820	ASKS 20	20	4 - 20	500	4.000	72.000
38825	ASKS 25	25	4 - 20	500	3.500	63.000
38830	ASKS 30	30	4 - 20	250	2.500	45.000
38835	ASKS 35	35	4 - 20	250	1.500	36.000
38840	ASKS 40	40	4 - 20	250	1.250	30.000
38850	ASKS 50	50	4 - 20	125	1.000	20.000



## ASKG Spacer – with clamp "Gigant"

- Extra stable spacer with a large clamping range.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	pcs. / bag
388820	ASKG 20	20	8 - 24	500
388825	ASKG 25	25	8 - 24	500
388830	ASKG 30	30	8 - 24	500
388835	ASKG 35	35	8 - 24	250
388840	ASKG 40	40	8 - 24	250
388850	ASKG 50	50	8 - 24	250





### ASKM Spacer – with clamp "Maxi"

- Stable spacer designed for medium to heavy reinforcement.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	pcs. / bag
388915	ASKM 15	15	8 - 25	1.000
388920	ASKM 20	20	8 - 25	1.000
388925	ASKM 25	25	8 - 25	750
388930	ASKM 30	30	8 - 25	500
388935	ASKM 35	35	8 - 25	500
388940	ASKM 40	40	8 - 25	500
388950	ASKM 50	50	8 - 25	500
388975	ASKM 75	75	8 - 25	250



### ASKP Spacer – with clamp "Plate"

- Large base for use on soft subsoil.
- Elastic clamping device.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	pcs./ bag	pcs./ sac	pcs. / pallet
3815	ASKP 15	15	4 - 16	1.000	3.000	42.000
3820	ASKP 20	20	4 - 16	1.000	3.000	42.000
3825	ASKP 25	25	4 - 16	500	2.500	35.000
3830	ASKP 30	30	4 - 16	500	2.500	35.000
3835	ASKP 35	35	4 - 16	250	2.000	28.000
3840	ASKP 40	40	4 - 16	125	1.000	14.000

### T (f) Tower – with flat legs

- Extremely stable and sturdy clip spacer.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	units / bag	units / pallet
30201	TF 20/6-20	20	6-20	500	39.000
30251	TF 25/6-20	25	6-20	500	36.000
30301	TF 30/6-20	30	6-20	500	36.000
30351	TF 35/6-20	35	6-20	500	34.000
30401	TF 40/6-20	40	6-20	400	25.600
30501	TF 50/6-20	50	6-20	375	24.000



### T (s) Tower – with pointed legs

- Extremely stable and sturdy clip spacer.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	units / bag	units / pallet
30203	TS 20/6-20	20	6-20	500	39.000
30253	TS 25/6-20	25	6-20	500	36.000
30303	TS 30/6-20	30	6-20	500	36.000
30353	TS 35/6-20	35	6-20	500	34.000
30403	TS 40/6-20	40	6-20	400	25.600
30503	TS 50/6-20	50	6-20	375	24.000



### TMP Tower – with plate

- With a large base for use on soft subsoil.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	units / bag	units / pallet
381520H	TMP 15-20 H *	15 + 20	8-16	500	16.000
382530H	TMP 25-30 H *	25 + 30	8-16	400	12.800
384050H	TMP 40-50 H	40 + 50	8-16	200	16.000
385060H	TMP 50-60 H	50 + 60	8-16	200	13.600
387080	TMP 70-80	70 + 80	8-16	200	7.200
389000	TMP 90-100	90 + 100	8-16	100	6.400

\* 381520H and 382530H not stacked !



## BENEFIT

Optimised handling through the EXTE "Optipack".

Example:  
288.000 units TMP 40/50 H  
fit into a 40-foot container.

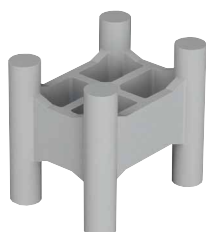




### Turm Turm spacer – with 4 legs

- Stable spacer with a large clamping range for medium or heavy reinforcement.
- Available with pointed or flat feet.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	pcs. / sac	pcs. / pallet
309201	Turm 4F 20/6-20	20	6 - 20	2.000	12.000
309251	Turm 4F 25/6-20	25	6 - 20	1.500	12.000
309301	Turm 4F 30/6-20	30	6 - 20	1.500	12.000
309351	Turm 4F 35/6-20	35	6 - 20	1.000	10.000
309401	Turm 4F 40/6-20	40	6 - 20	1.000	10.000
309451	Turm 4F 45/6-20	45	6 - 20	1.000	8.000
309501	Turm 4F 50/6-20	50	6 - 20	500	7.500
309551	Turm 4F 55/6-20	55	6 - 20	500	7.500
309203	Turm 4S 20/6-20	20	6 - 20	2.000	12.000
309253	Turm 4S 25/6-20	25	6 - 20	1.500	12.000
309303	Turm 4S 30/6-20	30	6 - 20	1.500	12.000
309353	Turm 4S 35/6-20	35	6 - 20	1.000	10.000
309403	Turm 4S 40/6-20	40	6 - 20	1.000	10.000
309453	Turm 4S 45/6-20	45	6 - 20	1.000	8.000
309503	Turm 4S 50/6-20	50	6 - 20	500	7.500
309553	Turm 4S 55/6-20	55	6 - 20	500	7.500



### DUP Duplex spacer

- Extremely stable plastic spacer.
- With 2 concrete covers.
- Smooth, gentle formwork surface.
- With nailing holes for fixing to the formwork.

article no.	designation	concrete cover (mm)	pcs. / sac	pcs. / pallet
388992530	DUP 25 - 30	25 / 30	500	20.000
388993035	DUP 30 - 35	30 / 35	500	20.000
388994050	DUP 40 - 50	40 / 50	250	10.000
388994070	DUP 40 - 70	40 / 70	250	8.000
388995060	DUP 50 - 60	50 / 60	250	8.000



### DUO Wall spacer

- To maintain clearances to the formwork, in between the rebars and the wall thickness.
- For rebar diameters up to 10 mm.
- 100 pieces per bag.

wall thickness	concrete cover					
	15 mm	20 mm	25 mm	30 mm	35 mm	40 mm
150 mm	15015	15020	15025	15030	15035	15040
200 mm	20015	20020	20025	20030	20035	20040
240 mm	24015	24020	24025	24030	24035	24040
250 mm	25015	25020	25025	25030	25035	25040
300 mm	30015	30020	30025	30030	30035	30040
350 mm	35015	35020	35025	35030	35035	35040
365 mm	36515	36520	36525	36530	36535	36540
400 mm	40015	40020	40025	40030	40035	40040

**Example for ordering:**  
For a wall thickness of 240 mm and a concrete cover of 20 mm on either side, the item you require is called: **DUO 240 / 20**, and the article no. is 24020.



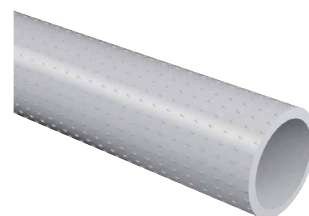
## RSR Tube spacer – with a roughened surface

- Tubing for the self-manufacturing of formwork spacers.

article no.	designation	length (cm)	for steel Ø (mm)	metres / bundle	metres / pallet
2424	RSR 20 / 24	200	18	50	2.450
2626	RSR 22 / 26	200	20	100	3.000
2522	RSR 22 / 28	200	20	50	2.450
25261	RSR 22 / 26 PE*	200	20	100	2.500
2528	RSR 26 / 32	200	24	50	1.500
2628	RSR 28 / 32	200	24	50	1.500
2532	RSR 32 / 38	200	30	50	1.500

\* from PE/polyethylene

26, 28, 32 only available upon request.



## RS Tube spacer – with a smooth surface

- Tubing for the self-manufacturing of formwork spacers.

article no.	designation	length (cm)	for steel Ø (mm)	metres / bundle	metres / pallet
2204	RS 20 / 24	200	18	50	2.450
2226	RS 22 / 26	200	20	100	2.500
2222	RS 22 / 28	200	20	50	2.450

Other diameters available upon request.



## ST Plug

- Plug for sealing tie points.

article no.	designation	for tube inside Ø (mm)	units / bag	units / sac
3107	ST 7	7	1.000	
3109	ST 9	9	1.000	
3110	ST 10	10	1.000	
3111	ST 11	11	1.000	
3113	ST 13	13	1.000	
3114	ST 14	14	1.000	
3116	ST 16	16	1.000	10.000
3118	ST 18	18	1.000	10.000
3120	ST 20	20	1.000	10.000
3122	ST 22	22	1.000	10.000
3126	ST 26	26	500	5.000
3130	ST 30	30	500	5.000
3132	ST 32	32	500	
3134	ST 34	34	500	



## EST Vent plug

- Plug with holes for releasing air when the tie point is being grouted.

article no.	designation	for tube inside Ø (mm)	units / bag
31221	EST 22	22	1.000

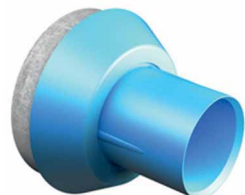




### SKF Complete pipe spacer

- Completely assembled formwork spacer made of a roughened tube spacer 22/26 with supporting cones SK 22 (blue) on either side.
- The openings are sealed with plugs DS and ST, plastering over the produced cavity. This will provide best protection against water and sound.
- Special lengths from 15 cm to 45 cm available.
- Also available with 2 supporting cones SK 22/10 DR with adhesive sealing rings.

article no.	designation	for wall thickness (mm)	units / sac	units / pallet
3520	SKF 22 / 20	200	150	6.000
3524	SKF 22 / 24	240	150	6.000
3525	SKF 22 / 25	250	100	4.000
3530	SKF 22 / 30	300	100	4.000
3537	SKF 22 / 36,5	365	100	4.000
3520DR	SKF 22 / 20 DR	200	150	6.000
3524DR	SKF 22 / 24 DR	240	150	6.000
3525DR	SKF 22 / 25 DR	250	100	4.000
3530DR	SKF 22 / 30 DR	300	100	4.000
3537DR	SKF 22 / 36,5 DR	365	100	4.000



### SK Supporting cone

- Supporting cone for the self assembly of tie points.
- Also available with adhesive sealing rings.

article no.	designation	height (mm)	suitable for tube	units / bag	units / sac	units / pallet
3214	SK 14	10	RS 14	1.000	5.000	
3220	SK 20	10	RS 20	500	4.000	64.000
32222	SK 22/10 N	10	RS 22	500	3.000	54.000
322215	SK 22/15	15	RS 22	500	2.500	45.000
322230	SK 22/30	30	RS 22	250	1.000	14.000
322250	SK 22/50	50	RS 22	250		10.000
3226	SK 26	10	RS 26	250	1.500	
3232	SK 32	10	RS 32	250	2.500	
3225DR	SK 22/10 DR	10	RS 22	500	3.000	54.000
3216	SKS		cone wrench for SK supporting cone			



### GBA SK Fair-faced concrete plug – concrete

- Plug made from poured concrete in high-quality fair-faced concrete grade for the sealing of tie points.
- Suitable for SK 22/10 and SK 22/10 DR.
- A small shadow gap will form after installation.

article no.	designation	suitable for	units / sac	units / pallet
986982210	GBA SK 22/10	SK 22/10	100	4.000



### KSB Fair-faced concrete plug – plastic

- Plug made from plastic, for sealing tie points.
- Suitable for SK 22/10 and SK 22/10 DR.
- A small shadow gap will form after installation.

article no.	designation	suitable for	units / sac	units / pallet
3222KSB	KSB 22/10	SK 22/10	250	5.000

### GK Supporting cone – threaded

article no.	designation	height (mm)	suitable for tube	units / bag	units / sac	units / pallet
3201	GK 22	30	RS 22 / 26	250	1.500	21.000
32012250	GK 22 / 50	50	RS 22 / 26	125	500	7.000
3202	GKS	cone wrench for GK 22 threaded supporting cone.				



### FSK Complete tube spacer "Compact"

- One piece injection moulded formwork spacer, completed with 2 plugs STF.

article no.	designation	for wall thickness (mm)	units / sac	units / pallet
352150L	FSK 150 L	150	100	3.000
352180L	FSK 180 L	180	100	3.000
352200L	FSK 200 L	200	100	3.000
352240L	FSK 240 L	240	100	3.000
352250L	FSK 250 L	250	100	3.000
352300L	FSK 300 L	300	100	3.000
352350L	FSK 350 L	350	50	2.000
352365L	FSK 365 L	365	50	2.000
352400L	FSK 400 L	400	50	2.000



Test certificate upon request.

### BM Swellable collar

- Will automatically swell upon contact with water, thus perfectly embedding the spacer.
- Collar for easy installation through merely wrapping.

article no.	designation	suitable for	units / sac	units / pallet
2130	BM 22	RSR 22/26, FSK	500	9.000





### FSG Complete "compact" pipe spacer – assembled

- Completely assembled formwork spacer, made from a roughened tube spacer 22/26.
- Mounted groove caps RKW with water stop, completed with 2 plugs STF.
- The groove caps will remain in the concrete and will be sealed with the plugs STF.

article no.	designation	for wall thickness (mm)	units / sac	units / pallet
3521751	FSG 175	175	100	2.500
3524501	FSG 450	450	50	2.000
3525001	FSG 500	500	50	2.000

Other lengths upon request.

Test certificate upon request.



### RKW Grooved cap – with water barrier for FSG

- Grooved cap to produce watertight tie points.
- The pipe spacer has to be cut 82 mm shorter than the required thickness of the wall.

article no.	designation	for pipe spacer Ø (mm)	units / sac	units / pallet
3292226	RKW	22 / 26	200	14.400

Test certificate upon request.



### STF Plug for RKW

- Plug for watertight sealing of RKW.

article no.	designation	for	units / bag	units / pallet
352022	STF 22	RKW	2.000	72.000



### FSX Tube spacer – for fair-faced concrete

- As FSK/FSG, but with SKX supporting cone installed on either side.
- Completed with 2 plugs STX.

article no.	designation	for wall thickness (mm)	units / sac	units / pallet
354240	FSX 240	240	100	3.000
354250	FSX 250	250	100	3.000
354300	FSX 300	300	100	3.000
354350	FSX 350	350	50	2.000
354365	FSX 365	365	50	2.000
354400	FSX 400	400	50	2.000

**Attention:**

Self-manufacturing: The pipe spacer has to be cut 112 mm shorter than the required thickness of the wall.



### SKX Supporting cone – for fair-faced concrete

- Supporting cone for FSX.

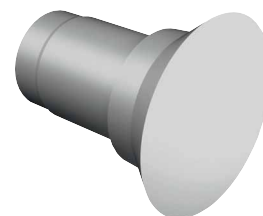
article no.	designation	for	units / sac	units / pallet
3230	SKX	RKW	500	2.500



### STX Plug – for fair-faced concrete

- Plug for watertight sealing of tube spacer FSX.
- Standard colour: grey
- RAL-colours upon request.

article no.	designation	for	units / sac	units / pallet
354022	STX	RKX	500	2.500





### RKF Complete tube spacer

- Completely assembled formwork spacer, consisting of a roughened tube spacer 22/26 with groove caps RK 26 installed on either side.
- The groove caps remain in the concrete and are sealed with plugs RST.
- Special lengths from 14 cm to 45 cm available.

article no.	designation	for wall thickness (mm)	units / sac	units / pallet
3570	RKF 22 / 20	200	150	6.000
3574	RKF 22 / 24	240	150	6.000
3575	RKF 22 / 25	250	100	4.000
3580	RKF 22 / 30	300	100	4.000
3587	RKF 22 / 36,5	365	100	4.000

**Attention:**

Self-manufacturing: The pipe spacer has to be cut 30 mm shorter than the required thickness of the wall.



### RK Groove cap

- To plug onto the tube spacer.

article no.	designation	height (mm)	suitable for spacer	units / bag	units / sac	units / pallet
3203	RK 26	30	RS / RSR 20 & 22 / 26	250	40.000	40.000



### RST Groove sealing plug

- Sealing plug for groove cap RK 26.

article no.	designation	fits in	units / bag	units / sac	units / pallet
3204	RST	RK 26	500	5.000	70.000

## RKF D Complete pipe spacer

- Completely assembled formwork spacer, consisting of a roughened tube spacer 22/26 with groove caps RK 26 D installed on either side.
- The groove caps remain in the concrete and are sealed with plugs RST D.
- Special lengths from 14 cm to 45 cm available.

article no.	designation	for wall thickness (mm)	units / sac	units / pallet
3570	RKF 22 / 20	200	150	6.000
3574	RKF 22 / 24	240	150	6.000
3575	RKF 22 / 25	250	100	4.000
3580	RKF 22 / 30	300	100	4.000
3587	RKF 22 / 36,5	365	100	4.000

Test certificate upon request.



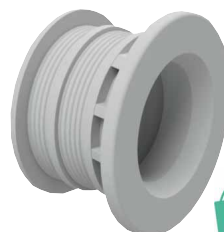
## RK D Groove cap – watertight

- Grooved cap to produce watertight tie points.
- Good concrete bond through ribs.
- Formwork support diameter 40 mm.
- Same colour: concrete gray as the groove plug.

article no.	designation	height (mm)	suitable for	units / sac	units / pallet
3203D	RK D 26	20	RST D 26, RSR 22/26, RS 22/26	500	20.000

Attention:

Self-manufacturing: The pipe spacer has to be cut 19mm shorter than the required thickness of the wall.



## RST D Groove sealing plug – watertight

- For positive sealing of the groove cap after installation.
- Flush closure with the groove cap after installation.
- Same colour: concrete gray as the groove cap.

article no.	designation	height mm	suitable for	units / sac	units / pallet
3204D	RST D 26	20	RK D 26	500	48.000

Test certificate upon request.



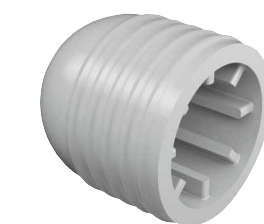
## DS Sealing plug

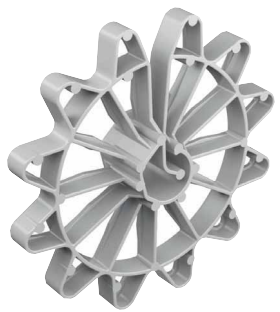
- Plug made from elastic PVC for best sealing.

article no.	designation	for tube inside Ø (mm)	units / bag	units / sac
3161	DS 20	20	500	2.500
3162	DS 22	22	500	2.500
3163	DS 26	26	250	1.000
3164	DS 32	32	125	500

3200 **EDS** application tool for all DS types

**Important:** The application tool will be needed to place the DS into the relevant tube!

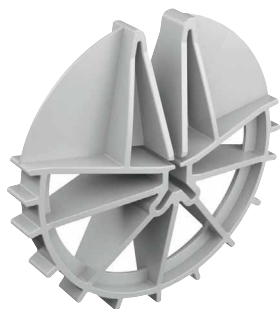
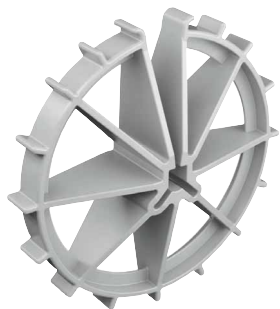




## UNI Universal wheel spacer

- Spacer with a large clamping range for different steel diameters.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	units / bag	units / sac	units / pallet
4015	UNI 4-10 / 15	15	4 - 10	1.000	5.000	100.000
4020	UNI 4-12 / 20	20	4 - 12	500	4.000	72.000
4025	UNI 4-12 / 25	25	4 - 12	500	2.500	45.000
4025S*	UNI 4-12 / 25 S	25	4 - 12	500	2.500	45.000
4030	UNI 4-12 / 30	30	4 - 12	250	1.500	30.000
4030S*	UNI 4-12 / 30 S	30	4 - 12	250	1.500	30.000
4035	UNI 4-12 / 35	35	4 - 12	200	1.000	18.000
4035S*	UNI 4-12 / 35 S	35	4 - 12	200	1.000	18.000
4040	UNI 5-14 / 40	40	5 - 14	125	750	13.500
4040S*	UNI 5-14 / 40 S	40	5 - 14	125	750	13.500
4050	UNI 8-14 / 50	50	8 - 14	100	500	9.000
4050S*	UNI 8-14 / 50 S	50	8 - 14	100	500	9.000
*reinforced for heavy loading						
4120	UNI 6-20 / 20	20	6 - 20	250	2.000	40.000
4125	UNI 6-20 / 25	25	6 - 20	250	1.000	36.000
4130	UNI 6-20 / 30	30	6 - 20	125	1.000	20.000
4135	UNI 6-20 / 35	35	6 - 20	125	1.000	16.000
4140	UNI 6-20 / 40	40	6 - 20	125	500	14.000
4150	UNI 6-20 / 50	50	6 - 20	50	500	8.000
4160	UNI 12-20 / 60	60	12 - 20		250	6.500
4175	UNI 12-20 / 75	75	12 - 20		250	4.500



## KAS Clamp wheel spacer

- Spacer with a defined clamping range for different steel diameters.
- Extra stable spacer with firm hold on the steel bar.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	units / bag	units / sac	units / pallet
4210	KAS 6/10	10	4 - 6	1.000	10.000	140.000
4215	KAS 6/15	15	4 - 6	500	7.500	105.000
4220	KAS 6/20	20	4 - 6	500	5.000	70.000
4225	KAS 6/25	25	4 - 6	500	3.000	42.000
4410	KAS 8/10	10	6 - 8	1.000	10.000	140.000
4415	KAS 8/15	15	6 - 8	500	5.000	70.000
4420	KAS 8/20	20	6 - 8	500	4.000	56.000
4425	KAS 8/25	25	6 - 8	500	3.000	42.000
4430	KAS 8/30	30	6 - 8	250	1.500	21.000
4435	KAS 8/35	35	6 - 8	200	1.000	14.000
4440	KAS 8/40	40	6 - 8	200	800	11.200
4615	KAS 12/15	15	10 - 12	500	4.000	56.000
4620	KAS 12/20	20	10 - 12	500	3.500	49.000
4625	KAS 12/25	25	10 - 12	500	2.500	35.000
4635	KAS 12/35	35	10 - 12	200	1.000	14.000
4640	KAS 12/40	40	10 - 12	100	800	11.200
4904512	KAS 12/45	45	10 - 12		500	8.000
4650	KAS 12/50	50	10 - 12	100	300	4.200
4915	KAS 18/15	15	14 - 18	500	3.000	42.000
4920	KAS 18/20	20	14 - 18	500	2.500	35.000
4925	KAS 18/25	25	14 - 18	500	2.000	28.000
4930	KAS 18/30	30	14 - 18	200	1.000	14.000
4940	KAS 18/40	40	14 - 18	100	600	8.400
4950	KAS 18/50	50	14 - 18	100	300	4.200

## PGR Pile foundation wheel – plastic

- Extremely stable spacer for pile foundation.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	units / sac	pcs. / pallet
42950	PGR 50 / 6-20	50	6-20	45	4.500
42975	PGR 75 / 6-20	75	6-20	45	2.205



## BAR Pile foundation wheel – concrete

- Spacer for guiding reinforcement cages along the formwork.
- Made from fibre reinforced concrete.

article no.	designation	concrete cover (mm)	width (mm)	outside Ø mm	pcs. / sac	pcs. / pallet
9869935	BAR 35 / 25	35	25	83	75	3.000
9869945	BAR 45 / 25	45	25	103	50	2.000
9869950	BAR 50 / 30	50	30	113	40	1.600
9869955	BAR 55 / 30	55	30	123	30	1.200

Other sizes available upon request.



## TKS Tunnel rebar chair – plastic

- Best concrete flow through open shape.
- Strongly chamfered to protect the tunnel sealing.
- Rebar easy to insert through conical design of the seat.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	units / pallet
3269500810	TKS 50 / 8 - 10	50	8 - 10	2.400
3269600810	TKS 60 / 8 - 10	60	8 - 10	2.400

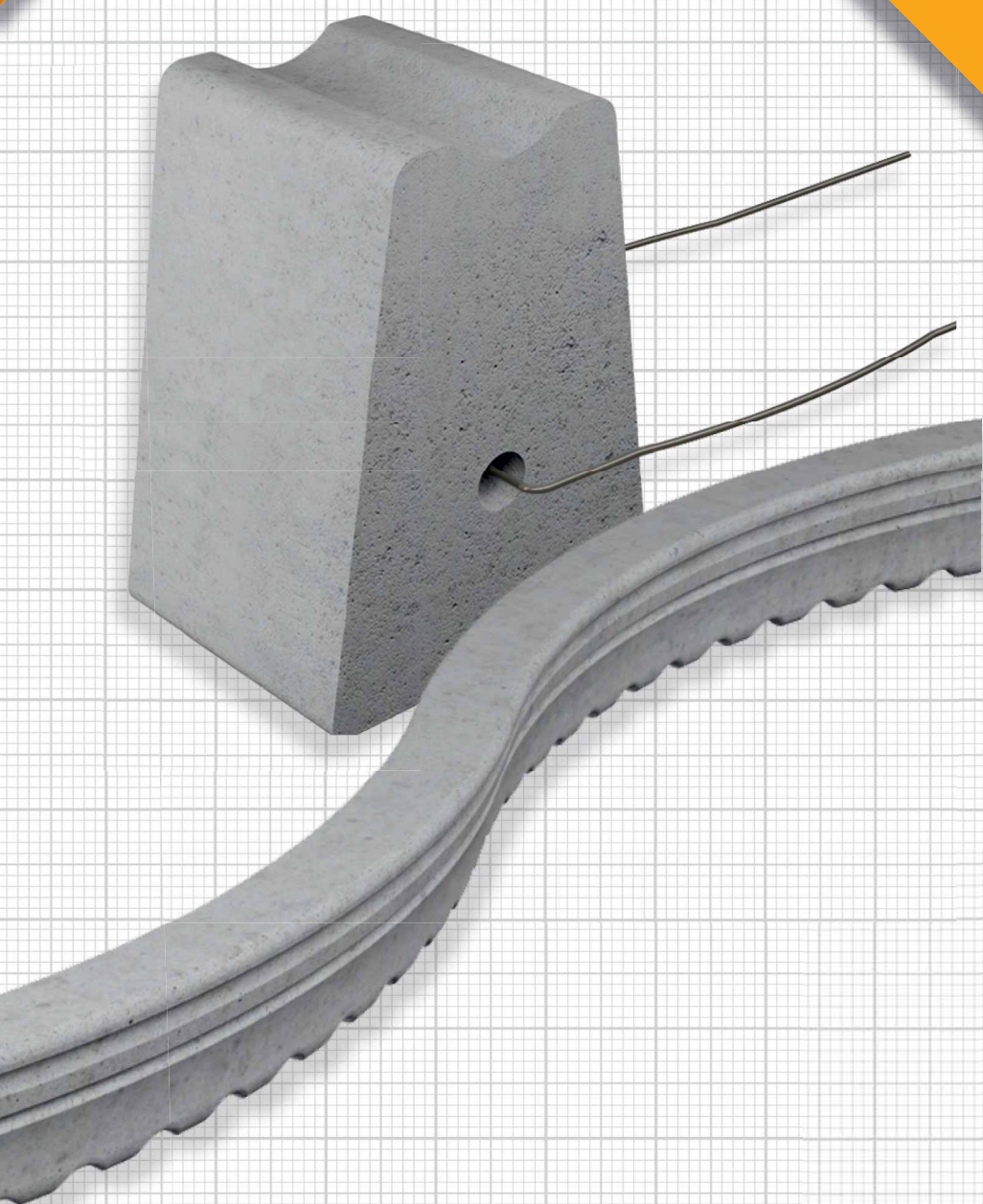




# SPACERS

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## BD Concrete triangular bar

- Triangular solid section made from fibre reinforced concrete.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / pallet
98120	BD 20	20	100	1.500
98125	BD 25	25	100	1.000
98130	BD 30	30	100	750
98135	BD 35	35	100	600
98140	BD 40	40	100	400
98145	BD 45	45	100	300
98150	BD 50	50	100	250
98155	BD 55	55	100	250
98160	BD 60	60	100	250
98170	BD 70	70	100	175

Other lengths and concrete covers available upon request.

Approved according to DBV-specification "Abstandhalter" DBV -c- L2/F/T/A.



## BDK Concrete triangular bar – concave

- Triangular section of concave shape, made from fibre reinforced concrete.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / pallet
981030	BDK 30	30	100	1.000
981035	BDK 35	35	100	750
981040	BDK 40	40	100	600
981045	BDK 45	45	100	500
981050	BDK 50	50	100	400
981055	BDK 55	55	100	300
981060	BDK 60	60	100	250

Other lengths and concrete covers available upon request.



## BTP Concrete T-Section

- T-section made from fibre reinforced concrete.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / pallet
988325	BTP 25	25	100	1.500
988330	BTP 30	30	100	1.000
988335	BTP 35	35	100	750
988340	BTP 40	40	100	600
988345	BTP 45	45	100	500
988350	BTP 50	50	100	400
988355	BTP 55	55	100	300
988360	BTP 60	60	100	250
988370	BTP 70	70	100	250
988380	BTP 80	80	100	200

Other lengths and concrete covers available upon request.

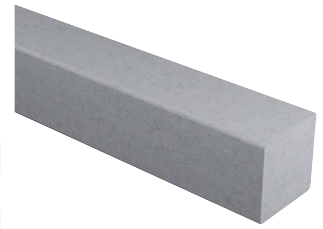


## BV Concrete square

- Square section made from fibre reinforced concrete.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / pallet
98820	BV 20 x 20	20	100	1.000
98825	BV 25 x 25	25	100	750
98830	BV 30 x 30	30	100	500
98835	BV 35 x 35	35	100	400
98840	BV 40 x 40	40	100	250
98845	BV 45 x 45	45	100	250
98850	BV 50 x 50	50	100	200
98855	BV 55 x 55	55	100	150
98860	BV 60 x 60	60	100	125
98870	BV 70 x 70	70	100	100
98875	BV 75 x 75	75	100	100
9883040	BV 30 x 40	30 + 40	100	400
9884050	BV 40 x 50	40 + 50	100	250

Other lengths and concrete covers available upon request.



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## BVH Concrete square H-section

- H-section made from fibre reinforced concrete.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / pallet
98822510	BVH 25	25	100	1.000
98823010	BVH 30	30	100	800
98823510	BVH 35	35	100	600
98824010	BVH 40	40	100	400
98824510	BVH 45	45	100	350
98825010	BVH 50	50	100	250
98825510	BVH 55	55	100	200
98826010	BVH 60	60	100	150
98827010	BVH 70	70	100	125

Other lengths and concrete covers available upon request.



## BRS Concrete round bar

- Round bar made from fibre reinforced concrete.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / pallet
98520	BRS 20	20	100	1.500
98525	BRS 25	25	100	1.000
98530	BRS 30	30	100	750
98535	BRS 35	35	100	500
98540	BRS 40	40	100	400

Other lengths and concrete covers available upon request.





### BDH Concrete triangular section with hook – length 18 cm

- Triangular section with hook.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / box	pcs. / pallet
9822018	BDH 20 -18	20	18	250	10.000
9822518	BDH 25 -18	25	18	125	5.000
9823018	BDH 30 -18	30	18	125	5.000
9823518	BDH 35 -18	35	18	100	4.000
9824018	BDH 40 -18	40	18	100	4.000
9824518	BDH 45 -18	45	18	80	3.200
9825018	BDH 50 -18	50	18	50	2.000
9825518	BDH 55 -18	55	18	45	1.800
9826018	BDH 60 -18	60	18	40	1.600

Other lengths and concrete covers available upon request.

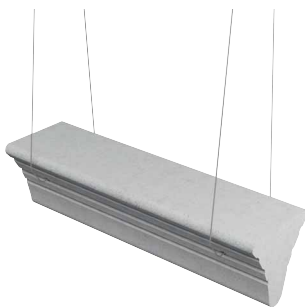


### BDH Concrete triangular section with hook – length 33 cm

- Triangular section with hook.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / box	pcs. / pallet
98212033	BDH 20 - 33	20	33	100	4.000
98212533	BDH 25 - 33	25	33	75	3.000
98213033	BDH 30 - 33	30	33	75	3.000
98213533	BDH 35 - 33	35	33	60	2.400
98214033	BDH 40 - 33	40	33	50	2.000
98214533	BDH 45 - 33	45	33	40	1.600
98215033	BDH 50 - 33	50	33	32	1.344
98215533	BDH 55 - 33	55	33	25	960
98216033	BDH 60 - 33	60	33	25	960
98218033	BDH 80 - 33	80	33	15	600

Other lengths and concrete covers available upon request.



### BDD Concrete triangular section – with two tying wires

- Triangular section with two galvanized wires for fastening to vertical reinforcement.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / box	pcs. / pallet
98283330	BDD 30 - 33	30	33	75	2.700
98283335	BDD 35 - 33	35	33	55	2.200
98283340	BDD 40 - 33	40	33	45	1.800
98283350	BDD 50 - 33	50	33	35	1.400

Other lengths and concrete covers available upon request.

## BB Concrete arch – length 25 cm

- Triangular section of arch shape made from fibre reinforced concrete.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / box	pcs. / pallet
98302025	BB 20 - 25	20	25	125	5.000
98302525	BB 25 - 25	25	25	125	5.000
98303025	BB 30 - 25	30	25	80	3.200
98303525	BB 35 - 25	35	25	75	3.000
98304025	BB 40 - 25	40	25	65	2.600
98304525	BB 45 - 25	45	25	60	2.400
98305025	BB 50 - 25	50	25	40	1.600



## BB Concrete arch – length 33 cm

- Triangular section of arch shape made from fibre reinforced concrete.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / box	pcs. / pallet
98302533	BB 25 - 33	25	33	80	3.200
98303033	BB 30 - 33	30	33	65	2.600
98303533	BB 35 - 33	35	33	60	2.400
98304033	BB 40 - 33	40	33	40	1.600
98304533	BB 45 - 33	45	33	40	1.600
98305033	BB 50 - 33	50	33	25	1.000
98306033	BB 60 - 33	60	33	25	750



## BBN Concrete arch including knobs – length 25 cm

- Triangular section of arch shape made from fibre reinforced concrete, including knobs.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / box	pcs. / pallet
98402025	BBN 20 - 25	20	25	125	5.000
98402525	BBN 25 - 25	25	25	100	4.000
98403025	BBN 30 - 25	30	25	80	3.200
98403525	BBN 35 - 25	35	25	75	2.600
98404025	BBN 40 - 25	40	25	65	2.400
98404525	BBN 45 - 25	45	25	60	1.600
98405025	BBN 50 - 25	50	25	40	1.400
98405525	BBN 55 - 25	55	25	35	1.200
98406025	BBN 60 - 25	60	25	30	1.200

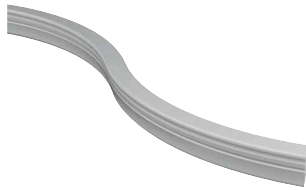


## BBN Concrete arch including knobs – length 33 cm

- Triangular section of arch shape made from fibre reinforced concrete, including knobs.

article no.	designation	concrete cover (mm)	length (cm)	pcs. / box	pcs. / pallet
98402533	BBN 25 - 33	25	33	80	3.200
98403033	BBN 30 - 33	30	33	65	2.600
98403533	BBN 35 - 33	35	33	60	2.400
98404033	BBN 40 - 33	40	33	40	1.600
98404533	BBN 45 - 33	45	33	40	1.600
98405033	BBN 50 - 33	50	33	25	1.000
98406033	BBN 60 - 33	60	33	25	750





### BS Concrete snake

- Triangular section made from fibre reinforced concrete, snake-shaped.
- The snake shape is designed to prevent the spacer from tilting.

article no.	designation	concrete cover (mm)	length (cm)	units / pallet
9832080	BS 20 - 80	20	80	2.000
9832580	BS 25 - 80	25	80	1.750
9833080	BS 30 - 80	30	80	1.500
9833580	BS 35 - 80	35	80	1.250
9834080	BS 40 - 80	40	80	1.000
9834580	BS 45 - 80	45	80	750
9835080	BS 50 - 80	50	80	600
9835580	BS 55 - 80	55	80	500
9836080	BS 60 - 80	60	80	500

Other lengths and concrete covers available upon request.

Approved according to DBV-specification "Abstandhalter" DBV -c- L2.



### BSN Concrete snake – with knobs

- Triangular section made from fibre reinforced concrete, snake-shaped.
- The snake shape is designed to prevent the spacer from tilting.

article no.	designation	concrete cover (mm)	length (cm)	units / pallet
9842080	BSN 20 - 80	20	80	2.000
9842580	BSN 25 - 80	25	80	1.750
9843080	BSN 30 - 80	30	80	1.500
9843580	BSN 35 - 80	35	80	1.250
9844080	BSN 40 - 80	40	80	1.000
9844580	BSN 45 - 80	45	80	750
9845080	BSN 50 - 80	50	80	600
9845580	BSN 55 - 80	55	80	500
9846080	BSN 60 - 80	60	80	500

Other lengths and concrete covers available upon request.

Approved according to DBV-specification "Abstandhalter" DBV -c- L2.



### BSRN Concrete snake – with grooves and knobs

- Triangular section made from fibre reinforced concrete, snake-shaped.
- Lateral grooves allow for better bond in the concrete.
- With formed knobs for defined formwork support.

article no.	designation	concrete cover (mm)	length (cm)	units / pallet
9802580	BSRN 25 - 80	25	80	1.750
9803080	BSRN 30 - 80	30	80	1.500
9803580	BSRN 35 - 80	35	80	1.250
9804080	BSRN 40 - 80	40	80	1.000
9804580	BSRN 45 - 80	45	80	750
9805080	BSRN 50 - 80	50	80	600

Other lengths and concrete covers available upon request.



### BTPS T-section snake

- T-section snake shaped.

article no.	designation	concrete cover (mm)	length (cm)	units / pallet
988925	BTPS 25	25	100	1.500
988930	BTPS 30	30	100	1.000
988935	BTPS 35	35	100	750
988940	BTPS 40	40	100	600
988945	BTPS 45	45	100	500
988950	BTPS 50	50	100	400
988955	BTPS 55	55	100	300
988960	BTPS 60	60	100	250

Other lengths and concrete covers available upon request.

## BA Concrete spacer

- Stable block spacer made from fibre reinforced concrete, including perforation for threading in a fixing wire.

article no.	designation	concrete cover (mm)	width (mm)	units / sac	units / pallet
98620	BA 20	20	20	1.000	50.000
98625	BA 25	25	20	1.000	40.000
98630	BA 30	30	22	500	20.000
98635	BA 35	35	22	500	20.000
98640	BA 40	40	25	500	20.000
98645	BA 45	45	25	250	10.000
98650	BA 50	50	28	250	10.000
98655	BA 55	55	28	200	8.000
98660	BA 60	60	28	200	8.000
98670	BA 70	70	32	150	6.000
98675	BA 75	75	32	125	5.000
98690	BA 90	90	32	75	3.000

Test certificate upon request.

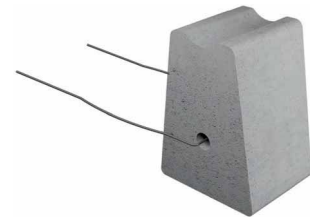


## BAD Concrete spacer – including wire

- Stable block spacer made from fibre reinforced concrete, includes galvanized fixing wire.

article no.	designation	concrete cover (mm)	width (mm)	units / sac	units / pallet
986120	BAD 20	20	20	1.000	50.000
986125	BAD 25	25	20	1.000	40.000
986130	BAD 30	30	22	500	20.000
986135	BAD 35	35	22	500	20.000
986140	BAD 40	40	25	500	20.000
986145	BAD 45	45	25	250	10.000
986150	BAD 50	50	28	250	10.000
986155	BAD 55	55	28	200	8.000
986160	BAD 60	60	28	200	8.000
986170	BAD 70	70	32	150	6.000
986175	BAD 75	75	32	125	5.000
986190	BAD 90	90	32	75	3.000

Test certificate upon request.



## BAO Concrete spacer – with eye wires

- Stable block spacer including galvanized eyelet suspension wires.

article no.	designation	concrete cover (mm)	width (mm)	units / sac	units / pallet
986020	BAO 20	20	35	500	20.000
986025	BAO 25	25	35	400	16.000
986030	BAO 30	30	35	250	12.500
986035	BAO 35	35	35	250	10.000
986040	BAO 40	40	40	200	8.000
986045	BAO 45	45	40	150	6.000
986050	BAO 50	50	45	150	6.000





### BK Concrete bone spacer

- Block spacer made from fibre reinforced concrete, for different concrete covers, perforation for threading in a fixing wire.

article no.	designation	concrete cover (mm)	width (mm)	pcs. / sac	pcs. / pallet
98720	BK 20 - 30	20 + 25 + 30	20	500	25.000
98735	BK 35 - 50	35 + 40 + 50	24	250	10.000
98745	BK 45 - 60	45 + 55 + 60	24	125	5.000
987451	BK 45 + 55	45 + 55	24	150	6.000

Approved according to DBV-specification "Abstandhalter" DBV -c- L2.



### BKD Concrete bone spacer – including wire

- As BK, including fully mounted fixing wire.

article no.	designation	concrete cover (mm)	width (mm)	pcs. / sac	pcs. / pallet
987120	BKD 20 - 30	20 + 25 + 30	20	500	25.000
987135	BKD 35 - 50	35 + 40 + 50	24	250	10.000
987145	BKD 45 - 60	45 + 55 + 60	24	125	5.000
9871451	BKD 45 + 55	45 + 55	24	150	6.000

Approved according to DBV-specification "Abstandhalter" DBV -c- L2.



### BAR Pile foundation wheel – concrete

- Spacer for guiding reinforcement cages along the formwork.
- Made from fibre reinforced concrete.

article no.	designation	concrete cover (mm)	width (mm)	outside Ø mm	pcs. / sac	pcs. / pallet
9869935	BAR 35 / 25	35	25	83	75	3.000
9869945	BAR 45 / 25	45	25	103	50	2.000
9869950	BAR 50 / 30	50	30	113	40	1.600
9869955	BAR 55 / 30	55	30	123	30	1.200

Other sizes available upon request.

## BR Concrete tube

- Tube spacer made from fibre reinforced concrete.

article no.	designation	inside Ø (mm)	length (cm)	metres / pallet
98922	BR 22 - 125	22	125	500

Other lengths available upon request.



## BST Concrete plug

- Plug made from fibre reinforced concrete, for sealing concrete tubes.

article no.	designation	diameter (mm)	length (mm)	units / sac	units / pallet
989996	BR ST 22 - 20	22	20	1.000	60.000

Other lengths available upon request.



## BF Concrete fixation

- Concrete adhesive with two components based on epoxy resin.
- Mix 1 : 1
- Please, be sure to observe and follow the instructions provided in the safety data sheet!

article no.	designation		kg / tin	tin / box
9899972	BFA - Glue	component A	0,60	10 total
9899982	BFB - Hardener	component B	0,60	10 total



## KU Coupling

- For connecting plastic tubes or fibre concrete tubes.

article no.	designation	suitbale for spacer (mm)	units / bag	units / sac	units / pallet
3251	KU	22	250	2.500	35.000

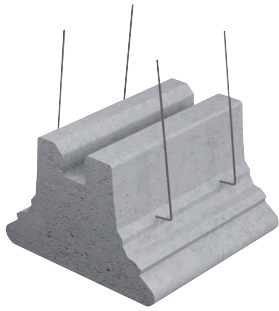


## KA Cap

- For sealing plastic tubes or fibre concrete tubes.

article no.	designation	suitbale for spacer (mm)	units / bag	units / sac	units / pallet
3250	KA	22	250	5.000	70.000

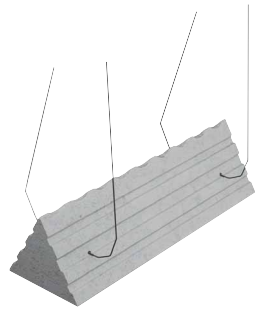




### BTA B Concrete tunnel spacer – including two wires

- Stable spacer made from fibre reinforced concrete, for the bottom layer.
- Centrally arranged groove for insertion of rebars, two pieces 1,4 mm black wires.

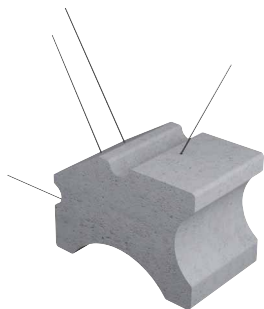
article no.	designation	concrete cover (mm)	length (cm)	units / pallet
98799501	BTA 50 B 2D	50	100	1.000
98799601	BTA 60 B 2D	60	100	1.000
<b>with glued tissow flow as a protection for the tunnel foil:</b>				
98799502	BTA 50 B 2D F	50	100	1.000
98799602	BTA 60 B 2D F	60	100	1.000



### BDDNV Concrete tunnel spacer – with two wires

- Stable spacer made from fibre reinforced concrete.
- Includes two pieces 1,2 mm black wires.

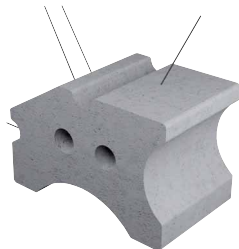
article no.	designation	concrete cover (mm)	length (cm)	units / pallet
9828996025	BDDNV 60-25 / 1,2	60	250	8.000



### BTA D Concrete tunnel spacer – including two wires

- Stable spacer made from fibre reinforced concrete, usage: sealings.
- Includes two pieces 1,2 mm black wires.

article no.	designation	concrete cover (mm)	units / pallet
98790609	BTA 60 / 90 A 2D	60 / 90	1400
98790812	BTA 80 / 120 B 2D	80 / 120	600
98791116	BTA 110 / 160 C 2D	110 / 160	300



### TKS Tunnel rebar chair – plastic

- Best concrete flow through open shape.
- Strongly chamfered to protect the tunnel sealing.
- Rebar easy to insert through conical design of the seat.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	units / pallet
3269500810	TKS 50 / 8 - 10	50	8 - 10	2.400
3269600810	TKS 60 / 8 - 10	60	8 - 10	2.400



## BAH H-shaped spacer

- Made from fibre reinforced concrete.
- Usage: fireproof reinforcement.

article no.	designation	concrete cover (mm)	width (mm)	units / sac	units / pallet
98699145	BAH 45	45	25	250	10.000
98699150	BAH 50	50	25	200	8.000



## BD2 LK Spacer – longitudinal clamps

- Made from fibre reinforced concrete.
- Including fillet and two longitudinal clamps.

article no.	designation	concrete cover (mm)	width (mm)	hollow throat (mm)	units / sac	units / pallet
98699220	BD2LK 20	20	30	10	250	8.000
98699225	BD2LK 25	25	30	10	200	8.000
98699230	BD2LK 30	30	30	10	200	8.000
98699235	BD2LK 35	35	30	10	200	8.000
98699240	BD2LK 40	40	30	10	200	8.000
98699245	BD2LK 45	45	30	10	150	6.000
98699250	BD2LK 50	50	30	10	125	5.000



SPACERS  
CONCRETE

## BD2 QK Spacer – transverse clamps

- Made from fibre reinforced concrete.
- Including fillet and two transverse clamps.

article no.	designation	concrete cover (mm)	width (mm)	hollow throat (mm)	units / sac	units / pallet
98699320	BD2QK 20	20	40	10	200	6.000
98699325	BD2QK 25	25	40	10	150	6.000
98699330	BD2QK 30	30	40	10	150	6.000
98699335	BD2QK 35	35	40	10	150	6.000
98699340	BD2QK 40	40	40	10	150	6.000
98699345	BD2QK 45	45	40	10	150	6.000
98699350	BD2QK 50	50	40	10	125	5.000



## GBADK Poured concrete spacer – with double clamp



- Stable concrete spacer for fair-faced concrete, with plastic double clamp.
- Usage: vertical reinforcement.
- Half round, three, or four feet for little contact with the formwork.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	units / sac	units / pallet
98688201	GBADK 20 / 1	20	4 - 14	250	12.500
98688251	GBADK 25 / 1	25	4 - 14	250	12.500
98688301	GBADK 30 / 1	30	4 - 14	250	10.000
98688351	GBADK 35 / 1	35	4 - 14	250	8.750
98688401	GBADK 40 / 1	40	4 - 14	250	8.000
986203	GBADK 20 / 3	25	4 - 14	300	18.000
986253	GBADK 25 / 3	25	4 - 14	300	18.000
986303	GBADK 30 / 3	30	4 - 14	250	13.750
986353	GBADK 35 / 3	35	4 - 14	250	11.250
986403	GBADK 40 / 3	40	4 - 14	250	10.000
986453	GBADK 45 / 3	45	4 - 14	250	10.000
986503	GBADK 50 / 3	50	4 - 14	200	8.000
986553	GBADK 55 / 3	55	4 - 14	200	8.000
98682154	GBADK 15 / 4	15	4 - 14	300	18.000
98682204	GBADK 20 / 4	20	4 - 14	300	18.000
98682254	GBADK 25 / 4	25	4 - 14	300	18.000
98682304	GBADK 30 / 4	30	4 - 14	250	13.750
98682354	GBADK 35 / 4	35	4 - 14	250	11.250
98682404	GBADK 40 / 4	40	4 - 14	250	10.000
98682504	GBADK 50 / 4	50	4 - 14	200	8.000

Test certificate upon request.

## GBAFK Poured concrete spacer – with clamp "Badminton"



- Stable concrete spacer for fair-faced concrete, with clamp "Badminton".
- Usage: vertical reinforcement.
- Three, or four feet for little contact with the formwork.

article no.	designation	concrete cover (mm)	units / sac	units / pallet
98679203	GBAFK 20 / 3	20	350	14.000
98679253	GBAFK 25 / 3	25	325	13.000
98679303	GBAFK 30 / 3	30	300	12.000
98679353	GBAFK 35 / 3	35	250	10.000
98679403	GBAFK 40 / 3	40	250	10.000
98679453	GBAFK 45 / 3	45	200	8.000
98679503	GBAFK 50 / 3	50	200	8.000
98679603	GBAFK 60 / 3	60	115	4.600
98679703	GBAFK 70 / 3	70	92	3.680
986882204	GBAFK 20 / 4	20	300	18.000
986882254	GBAFK 25 / 4	25	300	18.000
986882304	GBAFK 30 / 4	30	250	13.750
986882350	GBAFK 35 / 4	35	250	11.250
986882404	GBAFK 40 / 4	40	250	10.000
986882504	GBAFK 50 / 4	50	200	8.000

Test certificate upon request.

## GBARO Poured concrete spacer – with eyelet suspension wires

- Stable poured concrete spacer with eyelet suspension wires.
- Usage: vertical reinforcement.
- Conical shape with flat contact face for enhanced stability.

article no.	designation	concrete cover (mm)	units / sac	units / pallet
9869120	GBARO 20	20	300	12.000
9869125	GBARO 25	25	285	11.400
9868130	GBARO 30	30	240	9.600
9869135	GBARO 35	35	215	8.600
9868140	GBARO 40	40	190	7.600
9869150	GBARO 50	50	130	5.200
9869160	GBARO 60	60	95	3.800



## GBAVO Poured concrete spacer – with eyelet suspension wires

- Stable poured concrete spacer with eyelet suspension wires.
- Usage: vertical reinforcement.
- Square shape with flat contact face for enhanced stability.

article no.	designation	concrete cover (mm)	units / sac	units / pallet
98692120	GBAVO 20	20	440	17.600
98692125	GBAVO 25	25	325	13.000
98692130	GBAVO 30	30	295	11.800
98692140	GBAVO 40	40	185	7.400
98692150	GBAVO 50	50	150	6.000
98692155	GBAVO 55	55	100	4.000
98692160	GBAVO 60	60	90	3.600
98692170	GBAVO 70	70	70	2.800



## GBA SK Fair-faced concrete plug – concrete

- Plug made from poured concrete in high-quality fair-faced concrete grade for the sealing of tie points.
- Suitable for SK 22/10 and SK 22/10 DR.
- A small shadow gap will form after installation.

article no.	designation	suitable for	units / sac	units / pallet
986982210	GBA SK 22/10	SK 22/10	100	4.000



## SBK Fair-faced concrete taper

- Cone made of poured concrete in high-quality fair-faced concrete grade for the sealing of tie points.
- A small shadow gap will form after installation.

article no.	designation	material	Ø D1 mm	Ø D2 mm	length mm	units / box	units / pallet
989997	SBK	concrete	38	19	27	100	4.000

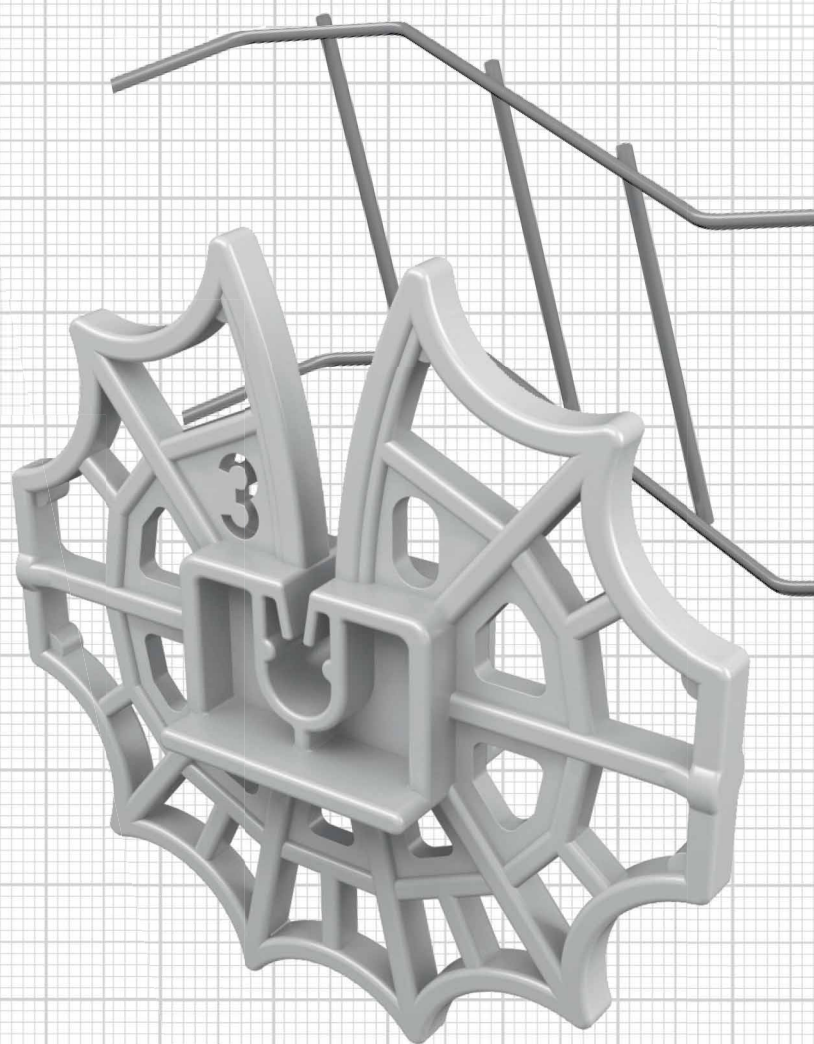


## KSB Fair-faced concrete plug – plastic

- Plug made from plastic, for sealing tie points.
- Suitable for SK 22/10 and SK 22/10 DR.
- A small shadow gap will form after installation.

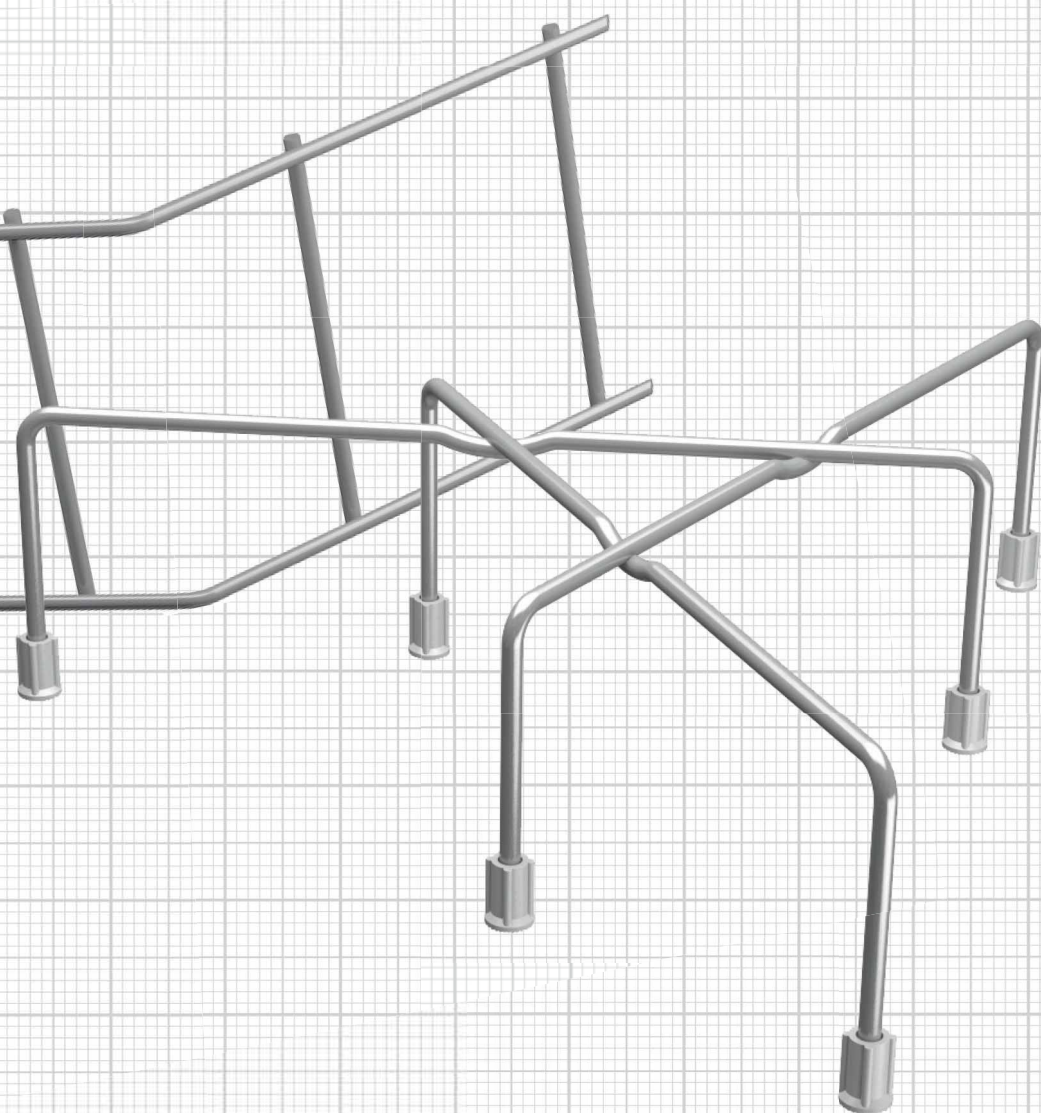
article no.	designation	suitable for	units / sac	units / pallet
3222KSB	KSB 22/10	SK 22/10	250	5.000



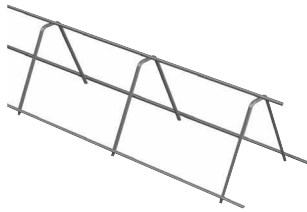


# SPACERS

STEEL



SPACERS  
STEEL



**SBA Highchair**

**SBA - DBV Highchair DBV**

- SBA A-Chair: lightweight design, specifically economical.
- SBA DBV A-Chair DBV: according to the requirements of DIN 1045-1, tested according to DBV-Code of practice "Unterstützungen".
- SBA is lightweight and available up to a height of 20 cm.
- SBA DBV is only available as from 21 cm.



article no.	designation	height (cm)	units / bundle	units / pallet
94x05	SBA 5	5	200	1.200
94x06	SBA 6	6	200	1.200
94x07	SBA 7	7	200	1.200
94x08	SBA 8	8	200	1.200
94x09	SBA 9	9	200	1.200
94x10	SBA 10	10	200	1.200
94x11	SBA 11	11	200	1.200
94x12	SBA 12	12	200	800
94x13	SBA 13	13	200	800
94x14	SBA 14	14	200	600
94x15	SBA 15	15	200	600
94x16	SBA 16	16	200	600
94x17	SBA 17	17	200	600
94x18	SBA 18	18	200	400
94x19	SBA 19	19	200	400
94x20	SBA 20	20	200	400
94521	SBA 21 DBV	21	200	400
94522	SBA 22 DBV	22	200	400
94523	SBA 23 DBV	23	200	400
94524	SBA 24 DBV	24	200	400
94525	SBA 25 DBV	25	200	200

Length approx. 200 cm, 10 pieces per pack, supply only in large-size packs on pallet.

X = 2 : SBA / A - highchair

X = 5 : SBA - DBV / A - highchair DBV

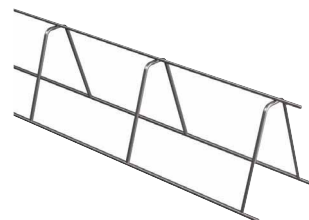
## SBA o. UE. Highchair – without protruding ends

- Highchair without protruding ends.
- Lightweight construction, particularly economical.
- Can be used on vapour barrier.
- Easier adjustment on the reinforcement mesh.
- Reduced risk of injuries.

article no.	designation	height (cm)	units / bundle	units / pallet
94605	SBA 5 o. UE.	5	200	1.200
94606	SBA 6 o. UE.	6	200	1.200
94607	SBA 7 o. UE.	7	200	1.200
94608	SBA 8 o. UE.	8	200	1.200
94609	SBA 9 o. UE.	9	200	1.200
94610	SBA 10 o. UE.	10	200	1.200
94611	SBA 11 o. UE.	11	200	1.200
94612	SBA 12 o. UE.	12	200	800
94613	SBA 13 o. UE.	13	200	800
94614	SBA 14 o. UE.	14	200	600
94615	SBA 15 o. UE.	15	200	600
94616	SBA 16 o. UE.	16	200	600
94617	SBA 17 o. UE.	17	200	600
94618	SBA 18 o. UE.	18	200	400
94619	SBA 19 o. UE.	19	200	400
94620	SBA 20 o. UE.	20	200	400

Length approx. 200 cm, 10 pieces per pack, supply only in large-size packs on pallet.

This item is available upon request only.





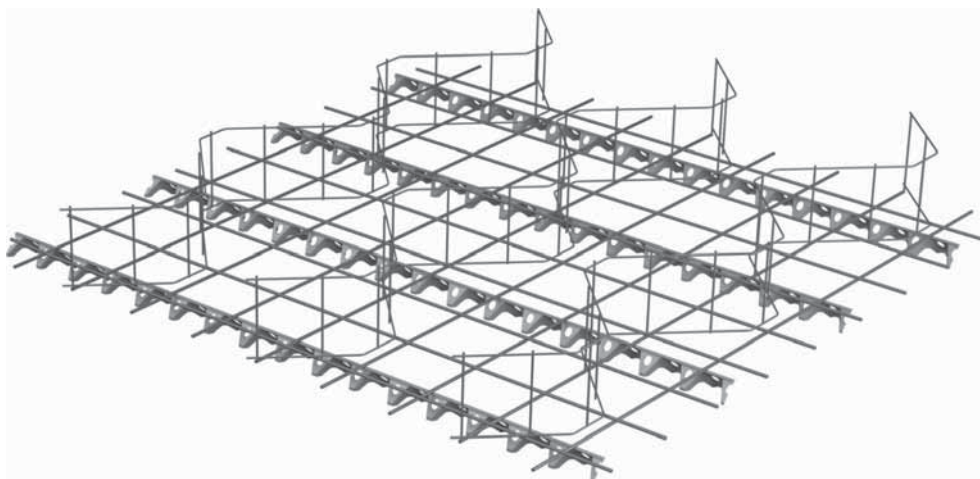
## S-DBV Highchair snake DBV

- S-highchair: lightweight design, specifically economical.
- S-DBV highchair: according to the requirements of DIN 1045-1, tested according to DBV-Code of practice "Unterstützungen".
- Optimized packaging: Up to 52 pal / truck.

article no.	designation	height (cm)	units / bundle	units / pallet
94303	S 3 DBV	3	25	2.400
94304	S 4 DBV	4	25	1.800
94305	S 5 DBV	5	25	1.600
94306	S 6 DBV	6	25	1.400
94307	S 7 DBV	7	25	1.200
94308	S 8 DBV	8	25	1.000
94309	S 9 DBV	9	25	1.000
94310	S 10 DBV	10	25	800
94311	S 11 DBV	11	25	800
94312	S 12 DBV	12	25	600
94313	S 13 DBV	13	25	600
94314	S 14 DBV	14	25	600
94315	S 15 DBV	15	25	600
94316	S 16 DBV	16	25	600
94317	S 17 DBV	17	25	400
94318	S 18 DBV	18	25	400
94319	S 19 DBV	19	25	400
94320	S 20 DBV	20	25	400
94321	S 21 DBV	21	25	400
94322	S 22 DBV	22	25	400
94323	S 23 DBV	23	25	400
94324	S 24 DBV	24	25	400
94325	S 25 DBV	25	25	400
94326	S 26 DBV	26	25	200
94328	S 28 DBV	28	25	200
94330	S 30 DBV	30	25	200
94332	S 32 DBV	32	25	200
94334	S 34 DBV	34	25	200
94336	S 36 DBV	36	25	200
94338	S 38 DBV	38	25	200
94340	S 40 DBV	40	25	200

Length approx. 200 cm, width approx. 20 cm.

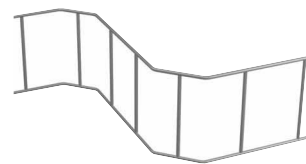
Heights 3 cm and 4 cm available upon request, only.





## S.o.UE. Highchair snake – without protruding ends

- Lightweight design, specifically economical.
- Can be used on vapour barrier.
- Easier adjustment on the reinforcement mesh.
- Reduced risk of injuries.
- S.o.UE. is lightweight and available up to a height of 10 cm.
- S.o.UE. DBV is only available from 11 cm to 40 cm.



article no.	designation	height (cm)	units / bundle	units / pallet
94403	S 3 o.UE.	3	25	2.400
94404	S 4 o.UE.	4	25	1.800
94405	S 5 o.UE.	5	25	1.600
94406	S 6 o.UE.	6	25	1.400
94407	S 7 o.UE.	7	25	1.200
94408	S 8 o.UE.	8	25	1.000
94409	S 9 o.UE.	9	25	1.000
94410	S 10 o.UE.	10	25	800

Length approx. 200 cm, width approx. 20 cm.

## S Highchair snake

- S-highchair: lightweight design, specifically economical.
- Optimized packaging: Up to 52 pal / truck.



article no.	designation	height (cm)	units / bundle	units / pallet
94003	S 3	3	25	2.400
94004	S 4	4	25	1.800
94005	S 5	5	25	1.600
94006	S 6	6	25	1.400
94007	S 7	7	25	1.200
94008	S 8	8	25	1.000
94009	S 9	9	25	1.000
94010	S 10	10	25	800
94011	S 11	11	25	800
94012	S 12	12	25	600
94013	S 13	13	25	600
94014	S 14	14	25	600
94015	S 15	15	25	600
94016	S 16	16	25	600
94017	S 17	17	25	400
94018	S 18	18	25	400
94019	S 19	19	25	400
94020	S 20	20	25	400
94021	S 21	21	25	400
94022	S 22	22	25	400
94023	S 23	23	25	400
94024	S 24	24	25	400
94025	S 25	25	25	400
94026	S 26	26	25	200

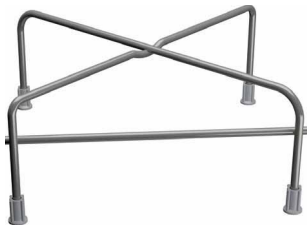
Length approx. 200 cm, width approx. 20 cm.

Heights 3 cm and 4 cm available upon request, only.



## VB Quadropod – with plastic feet

- Stable support for the top layer of the reinforcement.
- Ideally suited for ceilings / floorings with integrated heating or cooling systems.
- Includes push-on feet.
- Rust protection through plug-on plastic caps with a contact face of 14 mm, 45 mm, or poured concrete feet.
- Large plastic feet for soft subsoil. Poured concrete feet for fair-faced concrete.



plastic foot F 14 mm  
VB standard: X = without  
with crossbar QT: X = 5



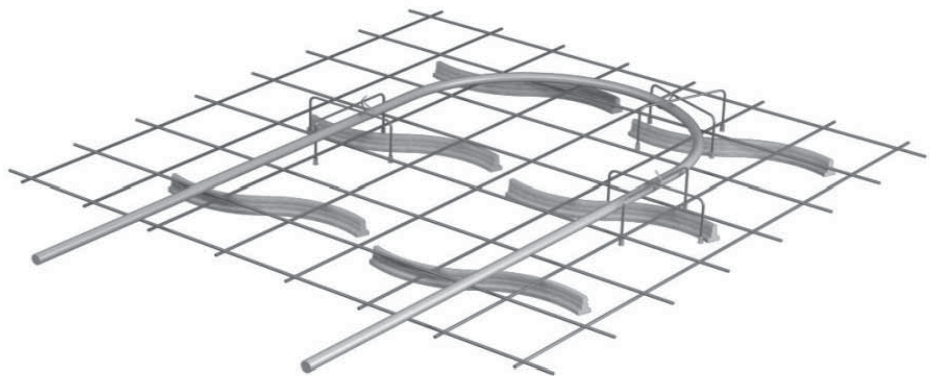
plastic foot GF 45 mm  
VB with GF: X = 6  
with crossbar QT: X = 7



poured concrete foot  
VB with BF: X = 8  
with crossbar QT: X = 9

article no.	designation	range Ø (cm)	height (cm)	steel Ø (mm)	pcs. / pack
946X056	VB 05 / 6	30	5	6	50
946X066	VB 06 / 6	30	6	6	50
946X076	VB 07 / 6	30	7	6	50
946X086	VB 08 / 6	30	8	6	50
946X096	VB 09 / 6	30	9	6	50
946X106	VB 10 / 6	30	10	6	50
946X116	VB 11 / 6	30	11	6	50
946X126	VB 12 / 6	30	12	6	50
946X136	VB 13 / 6	30	13	6	50
946X146	VB 14 / 6	30	14	6	50
946X156	VB 15 / 6	30	15	6	50
946X166	VB 16 / 6	30	16	6	50
946X176	VB 17 / 6	30	17	6	50
946X186	VB 18 / 6	30	18	6	50
946X196	VB 19 / 6	30	19	6	50
946X206	VB 20 / 6	30	20	6	50
946X216	VB 21 / 6	30	21	6	50
946X226	VB 22 / 6	30	22	6	50
946X236	VB 23 / 6	30	23	6	50
946X246	VB 24 / 6	30	24	6	50
946X256	VB 25 / 6	30	25	6	50
946X266	VB 26 / 6	30	26	6	50
946X276	VB 27 / 6	30	27	6	50
946X286	VB 28 / 6	30	28	6	50
946X296	VB 29 / 6	30	29	6	50
946X306	VB 30 / 6	30	30	6	50

Approved according to DBV-specification "Unterstützungen nach Eurocode 2".



## SB Hexapod – with plastic feet

- Extremely stable support for the top layer of the reinforcement.
- Very high stability through multiple overlapping and welded reinforcing brackets.
- Ideally suited for ceilings / floorings with integrated heating or cooling systems.
- Includes push-on feet.
- Rust protection through plug-on plastic caps with a contact face of 14 mm, 45 mm, or poured concrete feet.
- Large plastic feet for soft subsoil. Poured concrete feet for fair-faced concrete.

article no.	designation	range Ø (cm)	height (cm)	steel Ø (mm)	pcs. / pack
947X056	SB 05 / 6	41	5	6	50
947X066	SB 06 / 6	41	6	6	50
947X076	SB 07 / 6	41	7	6	50
947X086	SB 08 / 6	41	8	6	50
947X096	SB 09 / 6	41	9	6	50
947X106	SB 10 / 6	41	10	6	50
947X116	SB 11 / 6	41	11	6	50
947X126	SB 12 / 6	41	12	6	50
947X136	SB 13 / 6	41	13	6	50
947X146	SB 14 / 6	41	14	6	50
947X156	SB 15 / 6	41	15	6	50
947X166	SB 16 / 6	41	16	6	50
947X176	SB 17 / 6	41	17	6	50
947X186	SB 18 / 6	41	18	6	50
947X196	SB 19 / 6	41	19	6	50
947X206	SB 20 / 6	41	20	6	50
947X216	SB 21 / 6	41	21	6	50
947X226	SB 22 / 6	41	22	6	50
947X236	SB 23 / 6	41	23	6	50
947X246	SB 24 / 6	41	24	6	50
947X256	SB 25 / 6	41	25	6	50
947X266	SB 26 / 6	41	26	6	50
947X276	SB 27 / 6	41	27	6	50
947X286	SB 28 / 6	41	28	6	50
947X296	SB 29 / 6	41	29	6	50
947X306	SB 30 / 6	41	30	6	50

Approved according to DBV-specification "Unterstützungen nach Eurocode 2".



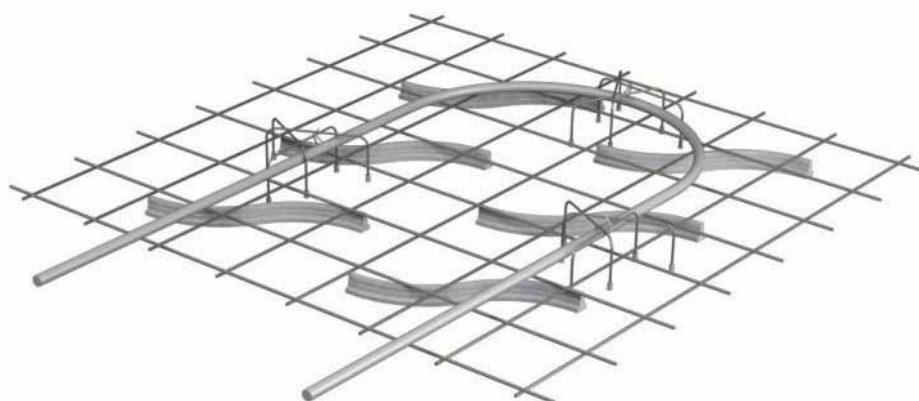
plastic foot F 14 mm  
VB standard: X = without  
with crossbar QT: X = 5



plastic foot GF 45 mm  
VB with GF: X = 6  
with crossbar QT: X = 7



poured concrete foot  
VB with BF: X = 8  
with crossbar QT: X = 9





## SAS Rod spacer

- With firmly applied plastic spacers for use in precast industry.
- Available with 5 mm or 6 mm diameter steel bar.
- Standard lengths: 2.16 m; 2.36 m; 2.45 m; and 2.96 m.
- Foot distance: 15 cm or 30 cm.

designation	concrete cover (mm)	steel Ø (mm)	support height (mm)	pcs. / bundle	pcs. / pallet
<b>foot distance: 15 cm</b>					
SAS 15-20/5/XXX/15	15	5	20	50	50
SAS 20-25/5/XXX/15	20	5	25	50	50
SAS 25-30/5/XXX/15	25	5	30	50	50
SAS 30-35/5/XXX/15	30	5	35	50	50
<b>foot distance: 30 cm</b>					
SAS 15-21/6/XXX/15	15	6	21	50	50
SAS 20-26/6/XXX/15	20	6	26	50	50
SAS 25-31/6/XXX/15	25	6	31	50	50
SAS 30-36/6/XXX/15	30	6	36	50	50
<b>foot distance: 30 cm</b>					
SAS 15-20/5/XXX/30	15	5	20	50	50
SAS 20-25/5/XXX/30	20	5	25	50	50
SAS 25-30/5/XXX/30	25	5	30	50	50
SAS 30-35/5/XXX/30	30	5	35	50	50
<b>foot distance: 30 cm</b>					
SAS 15-21/6/XXX/30	15	6	21	50	50
SAS 20-26/6/XXX/30	20	6	26	50	50
SAS 25-31/6/XXX/30	25	6	31	50	50
SAS 30-36/6/XXX/30	30	6	36	50	50

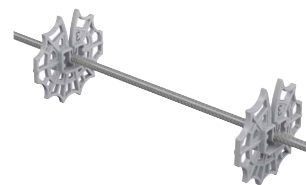
XXX = Length in cm

Lengths made to specifications: available upon request, up to 3 m long.

Test certificate upon request.

## SAS - A Rod spacer – slip on

- Includes pushed-on plastic spacers.
- Available with 6 mm diameter steel bar.



designation	concrete cover (mm)	steel Ø (mm)	support height (mm)	units / bundle	bundle / pallet
<b>foot distance: 30 cm</b>					
SAS 10-16/6/XXX/A	10	6	16	50	36
SAS 15-21/6/XXX/A	15	6	21	50	36
SAS 20-26/6/XXX/A	20	6	26	25	36
SAS 25-31/6/XXX/A	25	6	31	25	36
SAS 30-36/6/XXX/A	30	6	36	25	30
SAS 35-41/6/XXX/A	35	6	41	20	30
SAS 40-46/6/XXX/A	40	6	46	20	30
SAS 45-51/6/XXX/A	45	6	51	20	30
SAS 50-56/6/XXX/A	50	6	56	20	20

XXX = Length in cm

Test certificate upon request.

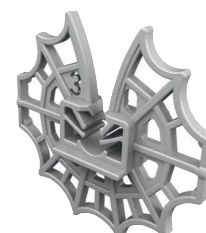
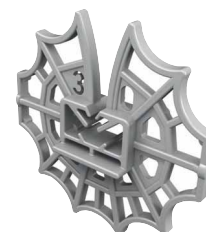
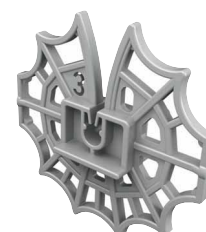
## ROB Robotex

- Spacers for the production of rod spacers.
- Sortable spacer for semi automatic or fully automatic installation on reinforcement steelbars.
- Little contact face with the formwork.
- Delivery in grid boxes possible.

article no.	designation	for steel Ø (mm)	for SAS	units / box	units / pallet
42156	Robotex 6 / 15	6	SAS 15-21/6/XXX/A	1.800	86.400
42206	Robotex 6 / 20	6	SAS 20-26/6/XXX/A	1.200	57.600
42256	Robotex 6 / 25	6	SAS 25-31/6/XXX/A	800	38.400
42306	Robotex 6 / 30	6	SAS 30-36/6/XXX/A	600	28.800
42356	Robotex 6 / 35	6	SAS 35-41/6/XXX/A	400	19.200
42158	Robotex 6-8 / 15	6-8	SAS 15-23/Y/XXX/A	1.800	86.400
42208	Robotex 6-8 / 20	6-8	SAS 20-28/Y/XXX/A	1.200	57.600
42258	Robotex 6-8 / 25	6-8	SAS 25-33/Y/XXX/A	800	38.400
42308	Robotex 6-8 / 30	6-8	SAS 30-38/Y/XXX/A	600	28.800
422010	Robotex 6-10 / 20	6-10	SAS 20-30/Y/XXX/A	1.200	57.600
423010	Robotex 6-10 / 30	6-10	SAS 30-40/Y/XXX/A	600	28.800

Y = Steel Ø in mm ; XXX = Length in cm

Test certificate upon request.





article no.:

X = 08: steel Ø 8 mm

X = 10: steel Ø 10 mm

example:

3208200 = DWA S 200-08

wall thickness 200mm,  
steel Ø 08mm

## DWA S Double-wall spacer "Shoe"

- For the production of precast double walls.
- Concrete cover from 15 mm to 35 mm.

article no.	designation	wall thickness (mm)	steel Ø (mm)	units / sac	units / pallet
32X120	DWA S 120 - X	120	X	100	3.000
32X140	DWA S 140 - X	140	X	100	3.000
32X150	DWA S 150 - X	150	X	100	3.000
32X160	DWA S 160 - X	160	X	100	3.000
32X180	DWA S 180 - X	180	X	100	3.000
32X200	DWA S 200 - X	200	X	100	3.000
32X240	DWA S 240 - X	240	X	100	3.000
32X250	DWA S 250 - X	250	X	100	3.000
32X300	DWA S 300 - X	300	X	50	3.000
32X350	DWA S 350 - X	350	X	50	2.000
32X360	DWA S 360 - X	360	X	50	2.000
32X365	DWA S 365 - X	365	X	50	2.000
32X400	DWA S 400 - X	400	X	50	2.000
32X500	DWA S 500 - X	500	X	50	2.000

Approved according to DBV-specification "Abstandhalter" DBV -c- L1/T/A.



steel Ø 8 mm



foot for steel Ø 10 mm

## DWA K Double-wall spacer "Four-way foot"

- For the production of precast double walls.
- Concrete cover from 20 mm to 35 mm.
- DWA K with 10 mm Steel has a lowered foot and is non-penetrable.
- In case of steel diameter 10 mm: material ABS.
- Same wall thicknesses available as for DWA S.

article no.	designation	wall thickness (mm)	steel Ø (mm)	units / sac	units / pallet
32908200	DWA K 200 - 08	200	8	100	3.000
32908240	DWA K 240 - 08	240	8	100	3.000
32908250	DWA K 250 - 08	250	8	100	3.000
32908300	DWA K 300 - 08	300	8	50	2.000
32908360	DWA K 360 - 08	360	8	50	2.000
32908400	DWA K 400 - 08	400	8	50	2.000
32910200	DWA K 200 - 10	200	10	100	3.000
32910240	DWA K 240 - 10	240	10	100	3.000
32910250	DWA K 250 - 10	250	10	100	3.000
32910300	DWA K 300 - 10	300	10	50	2.000
32910360	DWA K 360 - 10	360	10	50	2.000
32910400	DWA K 400 - 10	400	10	50	2.000

Other lengths and wall thicknesses upon request.

Approved according to DBV-specification "Abstandhalter" DBV -c- L1/T/A.

## TC Thermoconnect

- Anchor connector made from glass-fibre reinforced plastic (GFRP). For sandwich and core-insulated double walls, to avoid thermal bridges.
- The concrete shells will be connected permanently and securely.
- Very low thermal conductivity and high chemical resistance.
- Easy and fast to install; rods are inset into the fresh concrete of the first shell through the insulation. Generally, no collars will be required to fix the core insulation in place.
- The glass fibres are endless throughout the rod's shape.



article no.	designation	Ø mm	length mm	units / sac	units / pallet
325010300	TC 10 / 300	10	300	upon request	upon request
325010365	TC 10 / 365	10	365	upon request	upon request
325010400	TC 10 / 400	10	400	upon request	upon request
325010500	TC 10 / 500	10	500	upon request	upon request

Test certificate upon request.

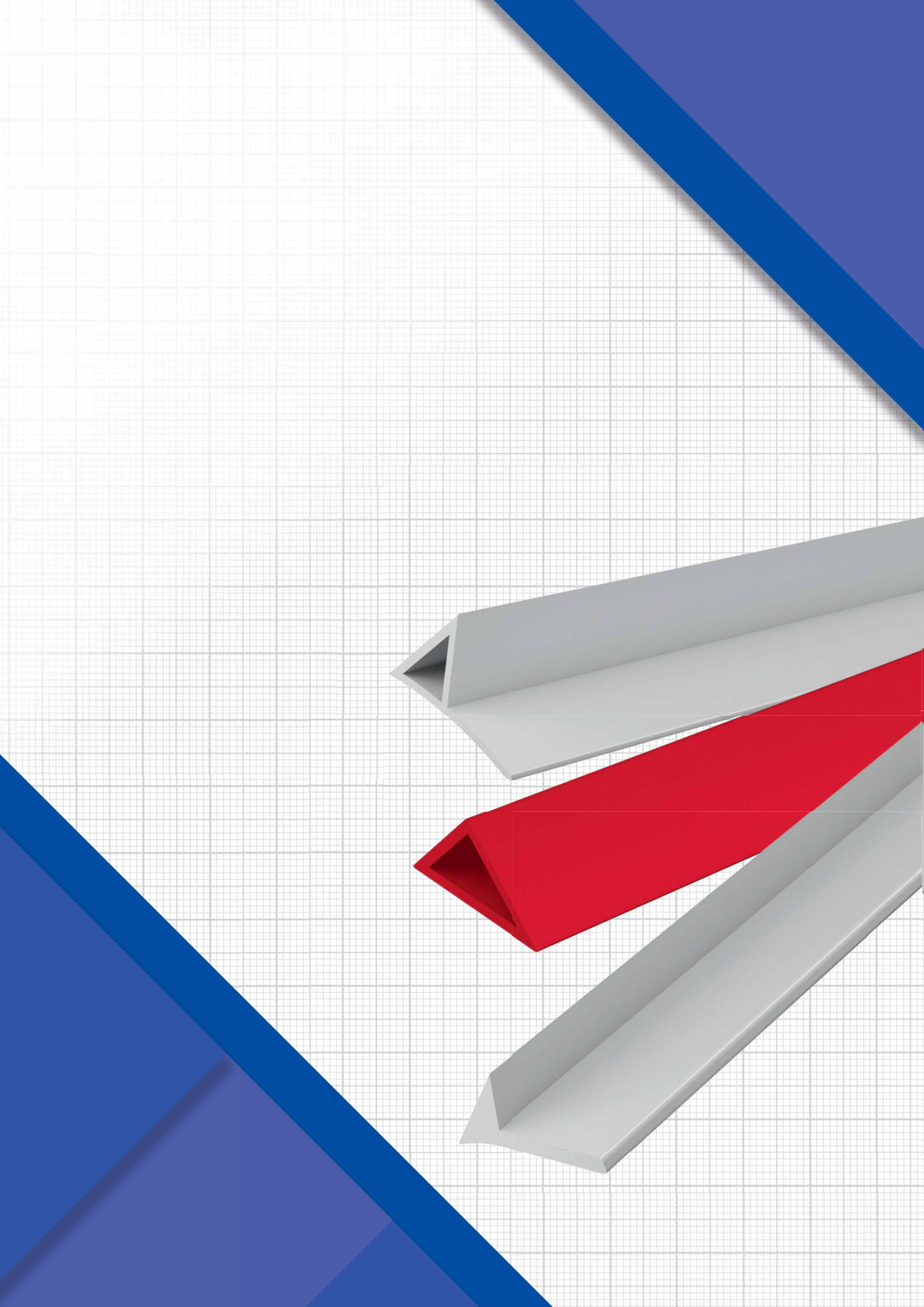
## DWA S TC Double-wall spacer "Shoe Thermoconnect"

- For the production of precast double-walls.
- Rod: Thermoconnect.
- Concrete cover from 15 mm to 35 mm.

article no.	designation	wall thickness (mm)	TC	units / sac	units / pallet
32TC120	DWA S 120 - TC	120	10	100	3.000
32TC140	DWA S 140 - TC	140	10	100	3.000
32TC150	DWA S 150 - TC	150	10	100	3.000
32TC160	DWA S 160 - TC	160	10	100	3.000
32TC180	DWA S 180 - TC	180	10	100	3.000
32TC200	DWA S 200 - TC	200	10	100	3.000
32TC240	DWA S 240 - TC	240	10	100	3.000
32TC250	DWA S 250 - TC	250	10	100	3.000
32TC300	DWA S 300 - TC	300	10	50	3.000
32TC350	DWA S 350 - TC	350	10	50	2.000
32TC360	DWA S 360 - TC	360	10	50	2.000
32TC365	DWA S 365 - TC	365	10	50	2.000
32TC400	DWA S 400 - TC	400	10	50	2.000
32TC500	DWA S 500 - TC	500	10	50	2.000

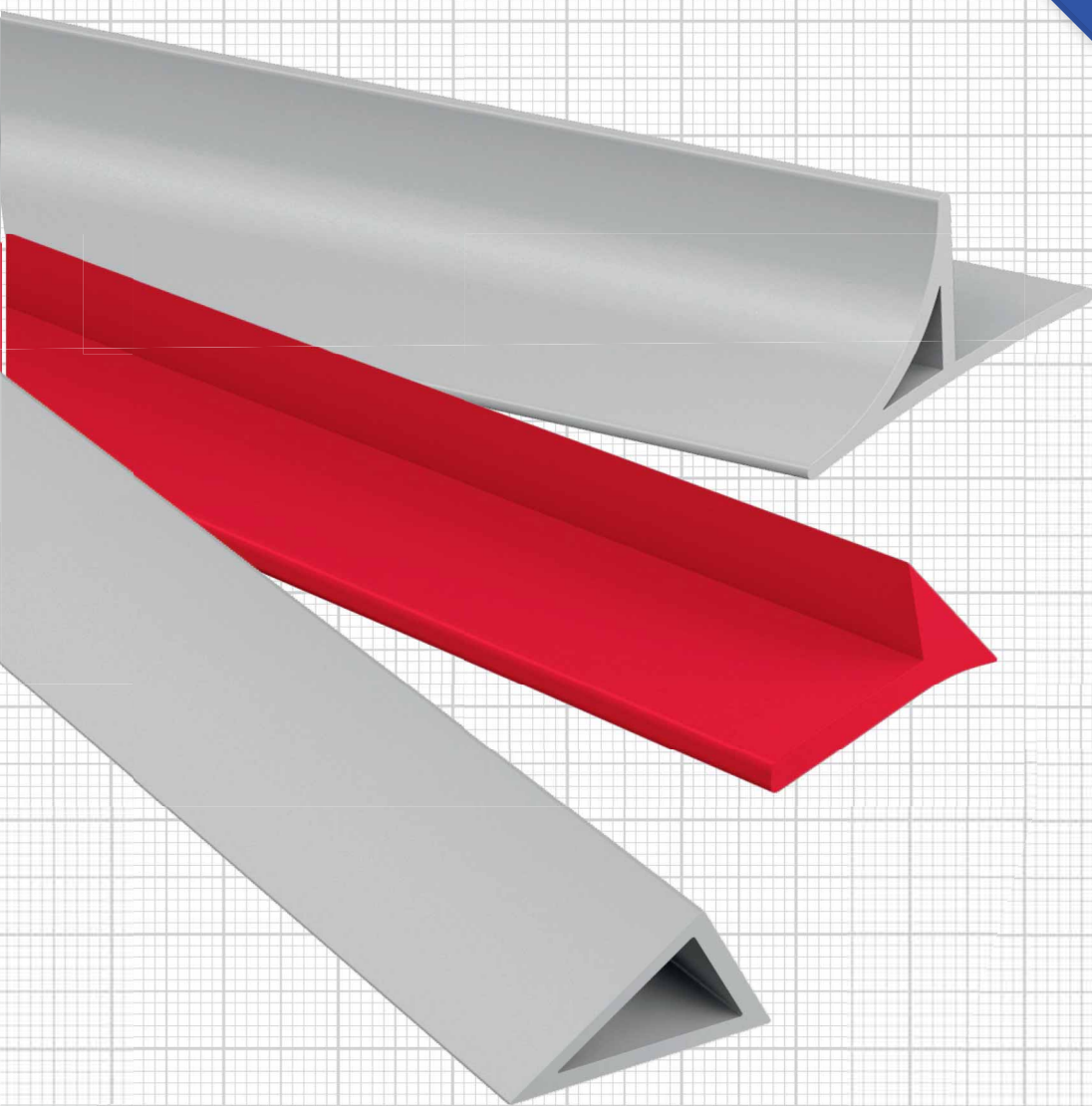
DWA S TC available upon request, only.



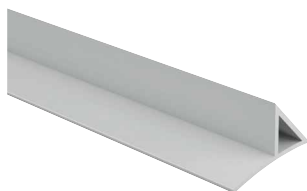




# CORNER FILLETS



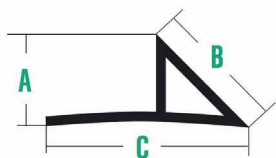
CORNER  
FILLETS



**EL Chamfer**

- Made of high-impact resistant material with or without nailing flange for chamfering, especially for square columns and girders, but also for decoration of large-size architectural concrete components.
- For fixing, provided with nailing holes, distance of 10-15 cm.
- Concrete surface = B. A, B and C: tolerance range +/- 1.5 mm.

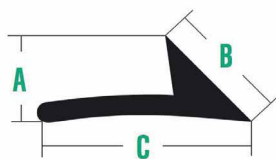
**Chamfer with nailing flange (hollow section)**



article no.	designation	length (cm)	size (mm)			metres / bundle	metres / pallet
			A	B	C		
1711	EL 110	250	11,0	15,5	26,0	100	5.400
1715	EL 115	250	15,0	21,2	32,0	100	5.500
1720	EL 120	250	20,0	28,3	37,0	100	4.500
1725	EL 125	250	25,0	36,1	46,0	50	2.450
1730	EL 130	250	30,0	42,4	53,0	50	1.800



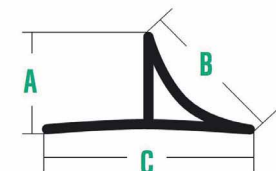
**Chamfer with nailing flange (solid section)**



article no.	designation	length (cm)	size (mm)			metres / bundle	metres / pallet
			A	B	C		
1706	EL 106 - S	250	6,5	9,0	20,5	100	6.000
1791 A	EL 110 - S	250	10,0	14,2	27,0	100	5.600
1795	EL 115 - S	250	15,0	21,2	31,0	50	2.750



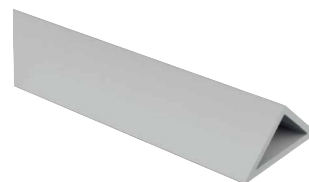
**Chamfer with nailing flange (hollow section) – rounded**



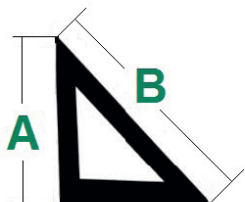
article no.	designation	length (cm)	size (mm)			metres / bundle	metres / pallet
			A	B	C		
1799	RUL 120	250	20,0	30,0	41,0	100	4.000

**EL** chamfer made from PE (polyethylene)

- Flexible and bendable.
- High impact resistant, also at low temperatures.
- Specially suitable for use with pneumatic nailing gun.
- Chamfers are free of heavy metals and halogens. Can be easily disposed off and develop no noxious substances in thermal recycling. (observe local regulations)



Chamfer without nailing flange (hollow section)

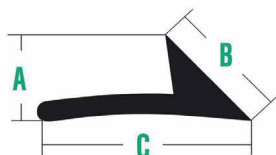
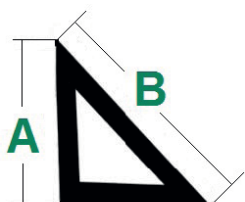


article no.	designation	length (cm)	size (mm)		metres / bundle	metres / pallet
			A	B		
1705 *	EL 6-S	250	6,5	9,2	100	5.000
1710	EL 11	250	11,0	15,5	100	9.000
1713	EL 15	250	15,0	21,2	100	5.600
1718	EL 20	250	20,0	28,3	100	5.500
1724	EL 25	250	25,0	35,4	100	2.700
1729	EL 30	250	30,0	42,4	50	2.450

\*EL 6-S = solid section from PVC (polyvinyl chloride)

Chamfer made from PE – red

- Red colour to recognize the material.



CORNER  
FILLETS

article no.	designation	length (cm)	size (mm)			metres / bundle	metres / pallet
			A	B	C		
17101	EL 11 PE/red	250	11,0	15,5		100	9.000
17131	EL 15 PE/red	250	15,0	21,2		100	5.600
17901	EL 110-S PE/red	250	10,0	14,2	27,0	100	5.000
17951	EL 115-S PE/red	250	15,0	21,2	32,0	50	2.750



### RL1 Rain fillet 1

- Made from impact resistant material, nailable.

article no.	designation	h mm	bi mm	ba mm	length m	metres / bundle	metres/ pallet
1801	RL1	11	15	23	2,5	100	5.000



### RL12 Rain fillet 12

- Made from impact resistant material, nailable.

article no.	designation	h mm	bi mm	ba mm	length m	metres / bundle	metres/ pallet
1812	RL12	12	20	29	2,5	100	5.000



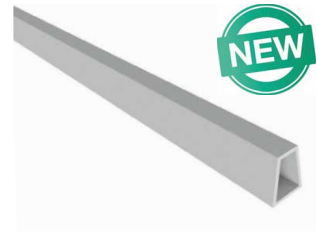
### RL16 Rain fillet 16

- Made from impact resistant material, nailable.

article no.	designation	h mm	bi mm	ba mm	length m	metres / bundle	metres/ pallet
1816	RL16	16	30	35	2,5	100	2.000

**TPP** Trapezoidal void former – hollow section

article no.	designation	b1 mm	b2 mm	h mm	length m	metres / bundle	metres / pallet
18916	TPP 16	16	10	20	2,5	100	2000
18920	TPP 20	20	10	10	2,5	100	2000
18930	TPP 30	30	20	15	2,5	100	2000
18940	TPP 40	40	20	10	2,5	100	2000
18950	TE 20	20	15	10	2,5	100	2000

**T** T-section

- Made from impact resistant material, nailable.
- For closure of gaps in between formwork.

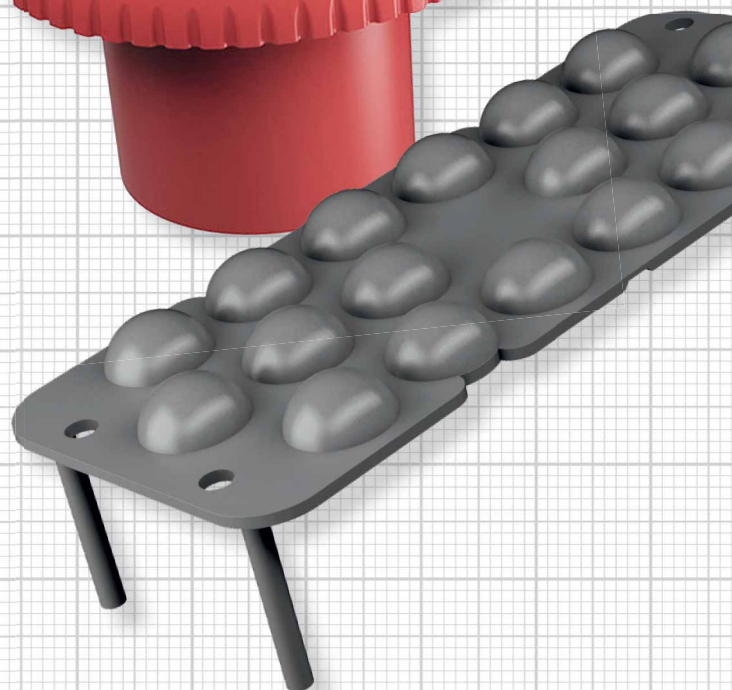
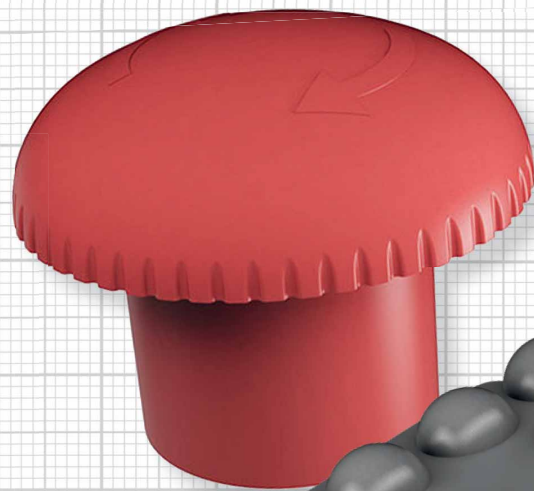
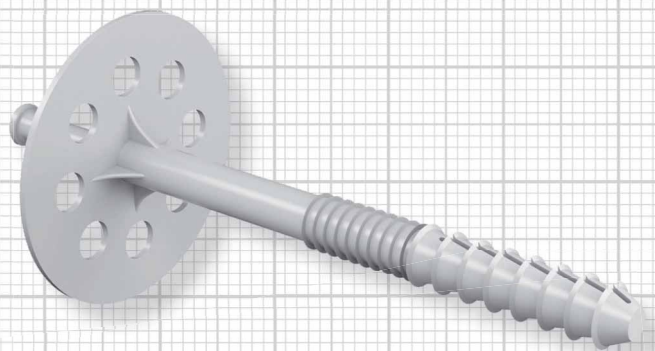
article no.	designation	b mm	h mm	length m	metres / bundle	metres / pallet
1840	TP 40 / 20	42	21	2,5	100	5.000

**AP** Draining section

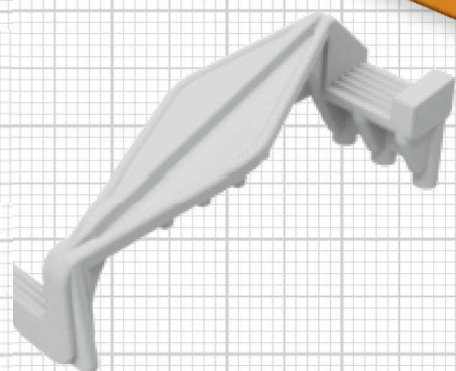
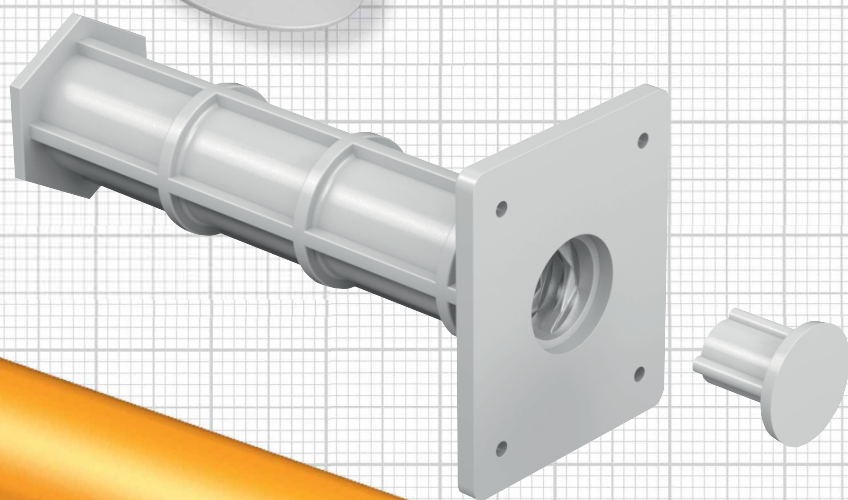
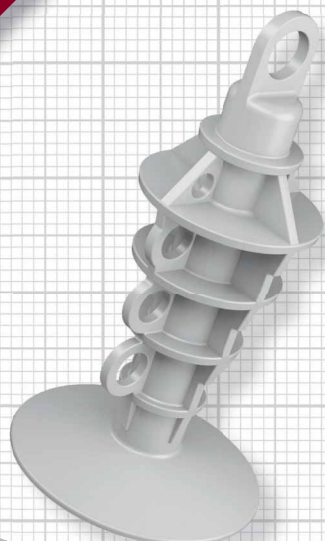
- For simultaneously forming voids and chamfering.

article no.	designation	b1 mm	b2 mm	h mm	length m	metres / bundle	metres / pallet
1830	AP 55 / 16	12	55	16	2	40	upon request
1832	AP 45 / 10	10	45	10	2	40	upon request
1834	AP 31 / 12	10	31	12	2	40	upon request





# ACCESSORIES





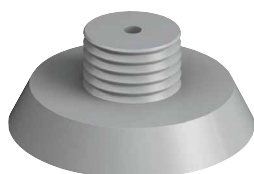
with protective paper or adhesive plate

### DWD Double-wall dowels

- Plastic dowel for fastening cross-arm braces.
- Particularly suitable for double walls.
- Also available with protective paper or adhesive plate.

article no.	designation	for screw	units / sac
31012	DWD 12	DIN 571 12x70	250
310121	DWD 12 S	DIN 571 12x70	250
with protective paper			
310122	DWD 12 K	DIN 571 12x70	250
with adhesive plate			

Test certificate upon request.



### HPG Threaded retaining plate

- Retaining element of plastic for fixing threaded sleeves.
- Plates can be nailed or glued to the formwork.
- After casting, the panels are screwed out.

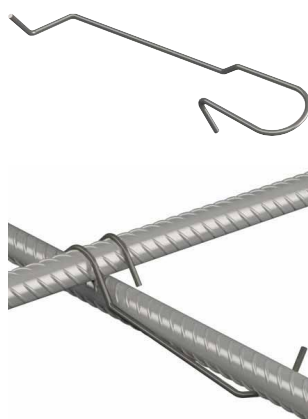
article no.	designation	thread M	height (mm)	units / sac	units / pallet
34512	HPG M 12	12	10	1.000	63.000
34514	HPG M 14	14	10	1.000	63.000
34516	HPG M 16	16	10	1.000	54.000
34518	HPG M 18	18	10	1.000	54.000
34520	HPG M 20	20	10	1.000	54.000
34524	HPG M 24	24	10	500	36.000



### KB Plastic binder

- Spacer for use in the precast industry.
- To connect the intersections of reinforcement steel mesh and to interconnect rebars.

article no.	designation	concrete cover (mm)	for steel Ø (mm)	units / bag	units / sac	units / pallet
32151	KB 15	15	8 - 12	500	3.000	108.000



### FSB Spring steel binder

- Made from spring steel, designed to interconnect rebars.
- Supplied on cardboard strips.

article no.	designation	clip steel Ø (mm)	for steel "distributor" Ø (mm)	for steel "carrier" Ø (mm)	units / box	units / pallet
9480816	FSB 8-08 / 1,6	1,6	6-8	6-8	14.400	230.400
9481016	FSB 8-10 / 1,6	1,6	6-8	8-10	12.600	201.600
9481216	FSB 8-12 / 1,6	1,6	6-10	10-12	10.800	172.800
9481218	FSB 8-12 / 1,8	1,8	6-10	10-12	9.900	158.400
9481418	FSB 8-14 / 1,8	1,8	6-8	12-14	9.450	151.200
9481618	FSB 8-16 / 1,8	1,8	6-10	14-16	8.100	129.600
9482018	FSB 8-20 / 1,8	1,8	6-10	18-20	7.200	115.200

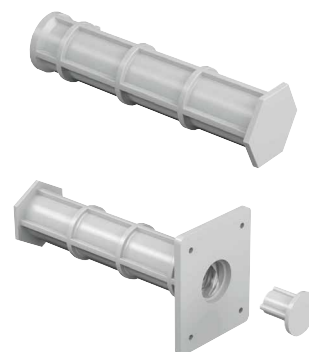


## DGH DYG socket

- Sleeve with an internal screw thread and including / excluding a nailing flange.
- For the installation of anchor rods (size DG 15).
- Plug as a thread protection.

article no.	designation	for tie rod	length (cm)	units / bag	units / sac
311501	DGH 15 excluding flange	15	12	50	200
311500	DGH 15 including flange	15	12	50	200
311502	DGS 15 plug	15		50	1.000

Test certificate upon request.



## PN Plastic nail

- For securing insulation boards.

article no.	designation	length (mm)	for board thickness (mm)	pcs. / sac	pcs. / pallet
3741	PN 60	60	to 20	8.000	112.000
3742	PN 75	75	to 25	6.000	84.000
3743	PN 100	100	off 25	3.500	49.000
3744	PN 125	125	off 50	2.500	68.000
3745	PN 150	150	off 75	500	52.000
3759	PN 200	200	off 125	300	20.400
3767	PN 235	235	off 160	250	7.500
3769	PN 250	250	off 175	250	7.500
3770	PN 275	275	off 200	250	7.500
3771	PN 300	300	off 225	250	5.000



## DSD Insulation nail

- Excluding nail pin, made of high impact resistant plastic, for hard insulating materials.
- 8 mm bore, plate diameter 90 mm.
- Suitable for concrete, solid brick, and gypsum.

article no.	designation	dowel Ø (mm)	length (mm)	for insulation thickness (mm)	pcs. / box
3761	DSD 8 x 80	8	80	30 - 50	250
3747	DSD 8 x 100	8	100	60 - 70	250
3748	DSD 8 x 120	8	120	80 - 90	250
3749	DSD 8 x 140	8	140	100 - 110	250
3750	DSD 8 x 160	8	160	120 - 130	250



## IPD Insulating board dowel

- Including pin, also suited for use on subsoil of low bearing capacity.
- 10 mm bore, 60 mm plate diameter.
- Suitable for concrete, natural stone, solid brick, and many other construction materials of medium to high strength.

article no.	designation	dowel Ø (mm)	length (mm)	for insulation thickness (mm)	pcs. / box
3751	IPD 10 x 90	10	90	40 - 50	250
3752	IPD 10 x 110	10	110	60 - 70	250
3753	IPD 10 x 130	10	130	80 - 90	250
3754	IPD 10 x 150	10	150	100 - 110	250
3762	IPD 10 x 160	10	160	110 - 120	250
3746	IPD 10 x 210	10	210	120 - 130	100





### SP Panel pad

- Extremely stable stacking plate with knobs.

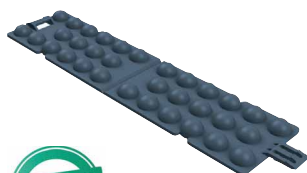
article no.	designation	size (mm)	thickness (mm)	units / box	units / pallet
3446	SP	200 x 62	10	150	6.000



### SPT Panel pad – divisible

- Extremely stable stacking plate with knobs.

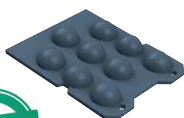
article no.	designation	size (mm)	thickness (mm)	units / box	units / pallet
3447	SPT	200 x 62	10	150	6.000



### SPS Panel pad – including pushfit coupling

- Extremely stable stacking plate with knobs.
- Suitable for sequential use (pushfit coupling).

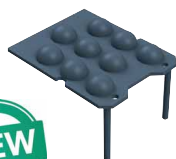
article no.	designation	size (mm)	thickness (mm)	units / box	units / pallet
3447 S	SPS	250 x 62	10	150	4.800



### SPK Panel pad – small

- Extremely stable stacking plate with knobs.

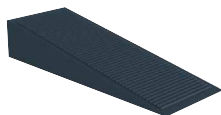
article no.	designation	size (mm)	thickness (mm)	units / bag	units / pallet
3443	SPK	79 x 62	10	500	18.000



### SPKH Panel pad – small with hooks

- Extremely stable stacking plate with knobs and hooks.
- Can thus also be fastened to structural elements in an angled condition.

article no.	designation	size (mm)	thickness (mm)	units / bag	units / pallet
3444	SPKH	79 x 62	10	500	8.000



### KK Plastic wedge

- Assembly wedge made from plastic.
- Ribbed to make it slip-proof.
- Suitable for larger loads.

article no.	designation	length (mm)	width (mm)	height (mm)	units / bag	units / pallet
37901	KK 1	70	30	10	500	25.000
37902	KK 2	110	40	20	250	14.000

**SPN** Panel pad – with knobs

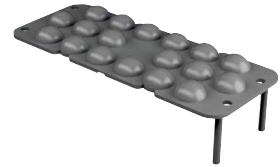
- Extremely stable stacking plate with knobs, also suitable for larger loads.
- Colour: Grey or white. Nature upon request.

article no.	designation	size (mm)	units / bag
3440	SPN	150 x 60	200

**SPH** Panel pad – with hooks

- Extremely stable stacking plate with knobs and hooks 44 mm long.
- Can thus also be fastened to structural elements in an angled condition.
- Colour: Grey or white. Nature upon request.

article no.	designation	size (mm)	units / bag
3441	SPH	150 x 60	200

**TW** Corner guards

- Sturdy bracket for edge protection for the handling or transportation of precast components.
- Including slot for belts, slings or straps up to 10 cm wide. Stackable, economically packed.

article no.	designation	size (mm)	units / bag
3445	TW	135 x 135 x 85	150



## MP Shim pad



- MP is designed as installation aid; load on full surface; no everlasting load.

article no.	designation	size (mm)	thickness (mm)	units / bag	units / pallet
3402	MP 2	70 x 70	2	250	45.000
3403	MP 3	70 x 70	3	250	45.000
3405	MP 5	70 x 70	5	125	20.000
3407	MP 7	70 x 70	7	125	10.000
3408	MP 8	70 x 70	8	125	10.000
3409	MP 9	70 x 70	9	125	10.000
3410	MP 10	70 x 70	10	125	20.000
3415	MP 15	70 x 70	15	50	10.000
3420	MP 20	70 x 70	20	50	10.000



## MPO Shim Pad "Optimal"

- MPO is designed as installation aid; load on full surface; no everlasting load.
- Any height combinable from merely two sizes at any time.
- Fast installation through straightforward connection of the plates.
- No motion after placing. Economical stocking.

article no.	designation	colour	size (mm)	thickness (mm)	units / bag
34024	MPO 2	white	70 x 70	2	250
34034	MPO 3	black	70 x 70	3	250

article no.	designation	colour	size (mm)	thickness (mm)	kit / bag
34004	MPO BS		70 x 70	2 + 3	5

Assembly kit, plugged, of 50 units MPO 2 and MPO 3, each.

## MPS Shim pad – with slot



- As MP, with a slot 22 mm wide for adjustment.

article no.	designation	size (mm)	thickness (mm)	units / bag	units / pallet
34021	MPS 2	70 x 70	2	250	45.000
34031	MPS 3	70 x 70	3	250	45.000
34051	MPS 5	70 x 70	5	125	20.000
34071	MPS 7	70 x 70	7	125	20.000
34091	MPS 9	70 x 70	9	125	20.000
34101	MPS 10	70 x 70	10	125	20.000



## MPW Mounting plate "waffle pattern"

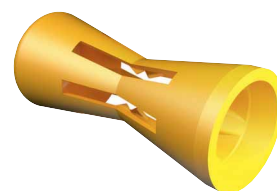
- MPW is designed as installation aid; load on full surface; no everlasting load.

article no.	designation	size (mm)	thickness (mm)	units / bag	units / pallet
34105	MPW 10	70 x 70	10	125	20.000
34205	MPW 20	70 x 70	20	50	10.000

### SKV Protection cap "Variable"

- Protection cap in signal colour orange.
- Will prevent injuries from protruding rebars.

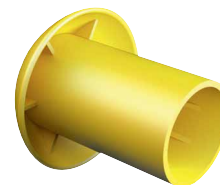
article no.	designation	for steel Ø (mm)	units / bag	units / sac	units / pallet
3276	SKV 8 - 16	8 - 16	250	2.500	30.000
3277	SKV 16 - 30	16 - 30	100		10.000



### SKA Protection cap

- Protection cap including mushroom-shaped head in signal colour.
- Will prevent injuries from protruding rebars.

article no.	designation	for steel Ø (mm)	units / bag	units / sac	units / pallet
3270	SKA 8 - 16	8 - 16	125	750	12.000
3275	SKA 16 - 32	16 - 32	125	500	8.000



### SKA D Protection cap

- Plastic safety cap for protruding rebars.
- Firm grip on the rebars.
- Reduced risk of injuries.
- Rotatable, therefore quick and easy to assemble.
- Made from weather and impact-resistant plastics.
- Re-usable.

article no.	designation	for steel Ø (mm)	units / bag	units / pallet
3278	SKA D 8 - 16	8 - 16	250	18.000
3279	SKA D 16 - 30	16 - 30	250	10.000
3280	SKA D 20 - 40	20 - 40	125	4.000



### SKA S Protection cap – with steel insert

- Plastic safety cap for protruding rebars.
- With steel insert for reduced risk of injuries.
- Easy and quick to assemble.
- Firm grip on the rebars.

article no.	designation	baffle plate Ø (mm)	for steel Ø (mm)	units / bag	units / pallet
3281	SKA S 6 - 20	113	6 - 20	25	2.000
3282	SKA S 20 - 36	113	20 - 36	25	2.000
3283	SKA S 32 - 50	113	32 - 50	25	2.000



Test certificate upon request.



## PROTEX - Softline Protection strip "Softline"

- Plastic safety strip.
- Quick and easy attachment to the rebars.
- Firm fit on the rebars.
- No sharp corners or edges.
- No grooves in which dirt, dust or rain collects.
- Optimized packaging for freight saving.
- Non-penetrable due to steel insert.
- Available in different signal colours, standard colour is orange.
- Available with advertising imprint on the lateral surface.

article no.	designation	dimensions	for steel Ø (mm)	length (cm)	metres / pallet
18654575	Protex SL	45 x 75 mm	8 - 40	100	360
18654575SE	Protex Plus SL	45 x 75 mm	8 - 40	100	360
with steel insert					

Test certificate upon request.



## PROTEX Protection strip

- Plastic safety strip.
- Quick and easy attachment to the rebars.
- Firm fit on the rebars.
- No sharp corners or edges.
- Optimized packaging for freight saving.
- Non-penetrable due to steel insert.
- Available in different signal colours, standard colour is orange.
- Available with advertising imprint on the lateral surface.

article no.	designation	dimensions	for steel Ø (mm)	length (cm)	metres / pallet
186550110	Protex Safety strip	50 x 110 mm	8 - 40	100	300
186550110SE	Protex Safety strip	50 x 110 mm	8 - 40	100	300
with steel insert					

Test certificate upon request.

**SA** Formwork stop

- For formwork alignment.

article no.	designation	height (mm)	Ø mm	pcs./ bag	pcs. / box	pcs. / pallet
3710	SA	30	48	100	500	6.000

**SAN** Formwork stop – including nail

- For formwork alignment.
- With an inserted nail for fastest installation.
- Also usable with nailing tools.

article no.	designation	height (mm)	Ø mm	pcs. / box	pcs. / pallet
37101	SAN	30	48	100	7.000

**SAL** Formwork stop – massive with holes

- For formwork alignment.
- With several holes for variable fixing.

article no.	designation	height (mm)	Ø mm	pcs./ bag	pcs. / sac	pcs. / pallet
37102	SAL	30	40	100	500	10.000

**SL** Linear formwork stop

- For formwork alignment.
- Made from stable plastic.
- Includes nailing holes in a spacing of approximately 10 cm.

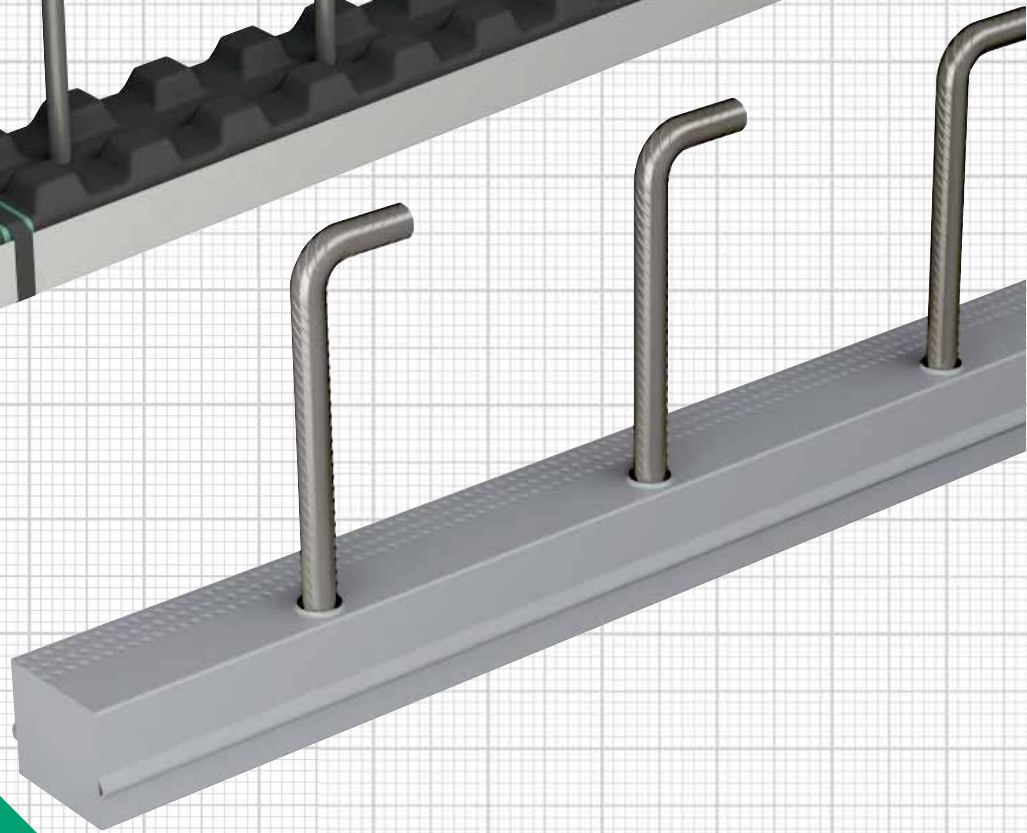
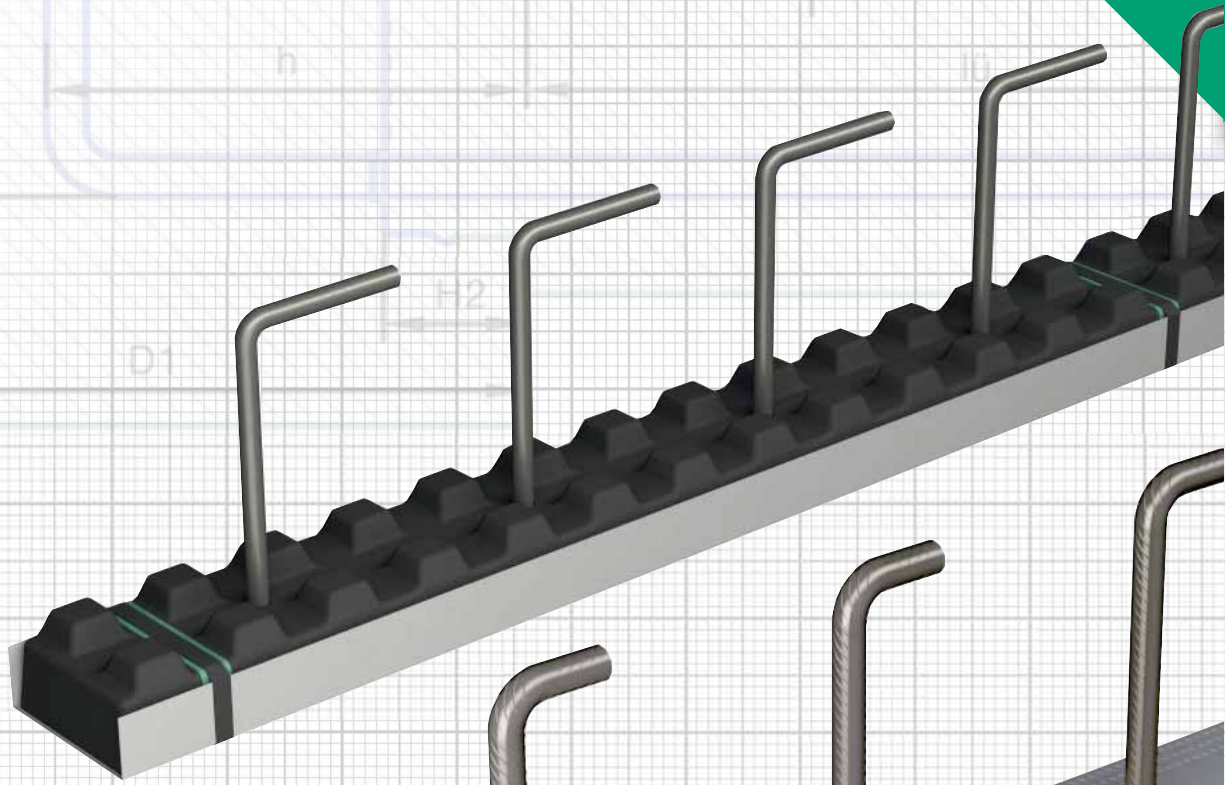
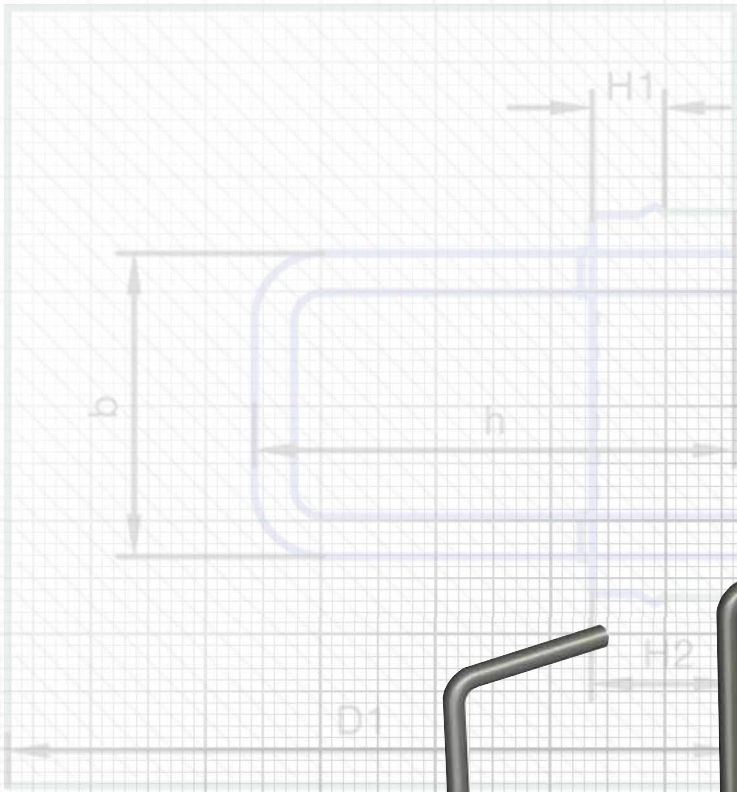
article no.	designation	length (mm)	width x height (mm)	metres / bundle	metres / pallet
1985	SL 50/30	200	50 x 30	20	2.000

**SST** Formwork plug

- For closure of holes in the formwork.

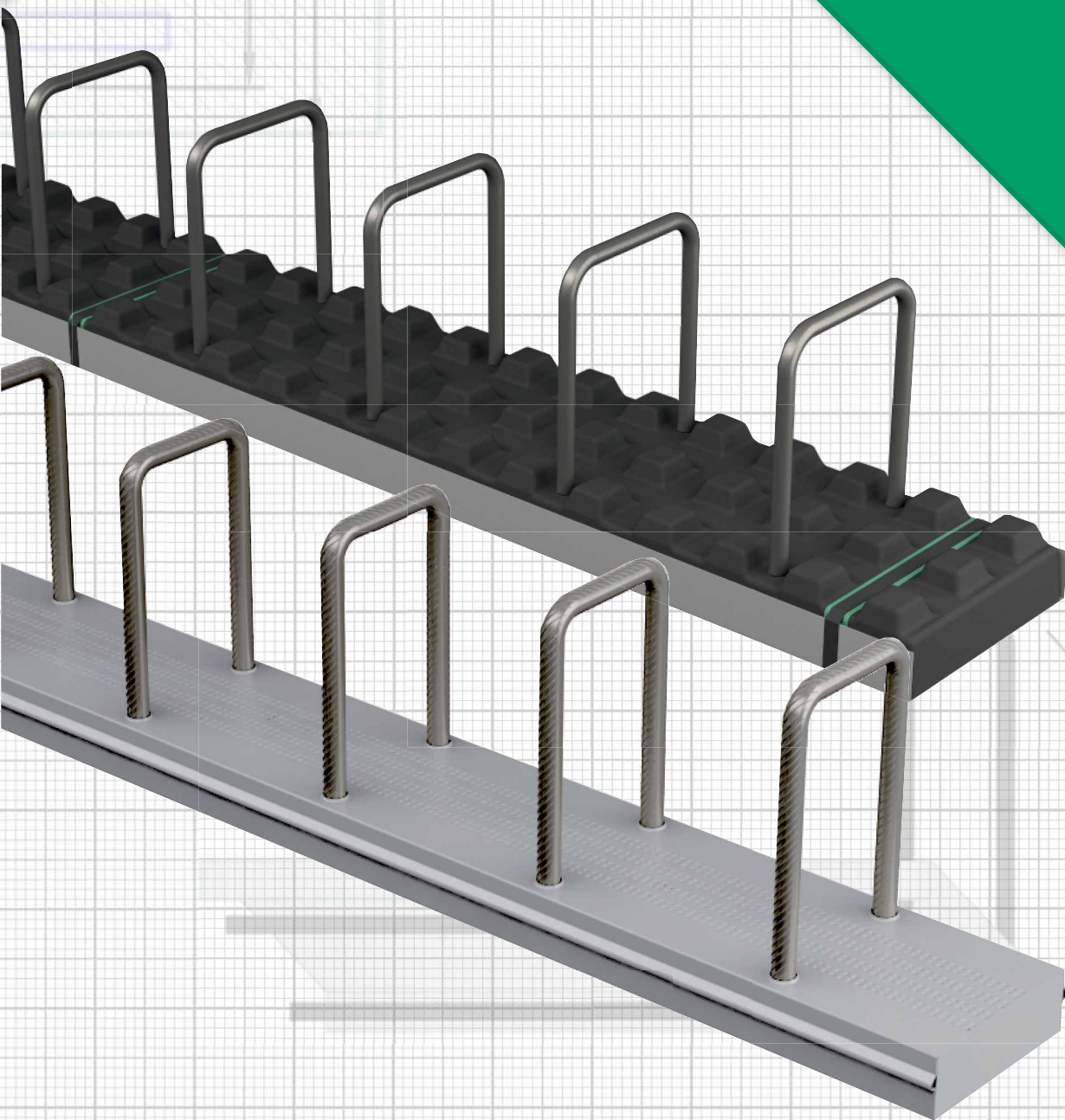
article no.	designation	suitable for hole Ø (mm)	length (mm)	pcs. / bag	pcs. / sac	pcs. / pallet
312225	SST 22 - 25	22 - 25	30	500	4.000	40.000







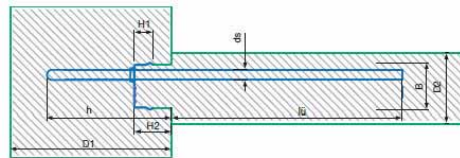
# REINFORCEMENT CONTINUITY SYSTEMS



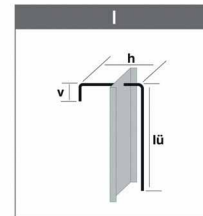


## BWA Reinforcement continuity system

- Single row / standard type stirrup form = type "I" / length of element 125 cm
- Use of constructional reinforcing steel, capable of being bent into position, according to DIN 488.
- Bending roll diameter according to norm 6 ds.
- Anchoring lengths and bending diameters according to the DBV-instruction sheet "Rückbiegen".
- Tested according to DBV-instruction sheet "Rückbiegen".
- Type approved according to Eurocode 2.



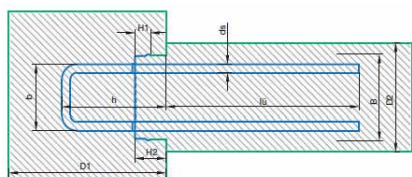
Reinforcement continuity system  
single row



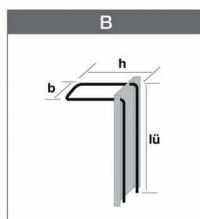
article no.	designation	steel "ds" Ø mm	stirrup			"lü" mm	box			pallet m
			distance "s" in mm	height "h" in mm	dimensions "v" in mm		width "B" in mm	height "H1" in mm	height "H2" with cover mm	
550815	BWA 55-08/15	8	150	170	75	320	58	12	24	250
550820	BWA 55-08/20	8	200	170	75	320	58	12	24	250
550825	BWA 55-08/25	8	250	170	75	320	58	12	24	250
551015	BWA 55-10/15	10	150	170	95	390	58	12	30	250
551020	BWA 55-10/20	10	200	170	95	390	58	12	30	250
551025	BWA 55-10/25	10	250	170	95	390	58	12	30	250
851010	BWA 85-10/10	10	100	170	95	390	86	12	30	200
851015	BWA 85-10/15	10	150	170	95	390	86	12	30	200
851020	BWA 85-10/20	10	200	170	95	390	86	12	30	200
851025	BWA 85-10/25	10	250	170	95	390	86	12	30	200
851210	BWA 85-12/10	12	100	170	110	430	86	12	36	150
851215	BWA 85-12/15	12	150	170	110	460	86	12	36	200
851220	BWA 85-12/20	12	200	170	110	460	86	12	36	200
851225	BWA 85-12/25	12	250	170	110	460	86	12	36	200

## BWA Reinforcement continuity system

- Double row / standard type stirrup form = type "B" / length of element 125 cm



Reinforcement continuity system double row



article no.	designation	steel "ds" Ø mm	stirrup			"lü" mm	box			pallet m
			distance "s" in mm	height "h" in mm	dimensions "v" in mm		width "B" in mm	height "H1" in mm	height "H2" with cover mm	
<b>BWA 120</b>										
1200815	BWA 120-08/15	8	150	170	88	320	122	12	24	150
1200820	BWA 120-08/20	8	200	170	88	320	122	12	24	150
1200825	BWA 120-08/25	8	250	170	88	320	122	12	24	150
<b>BWA 150</b>										
1500815	BWA 150-08/15	8	150	170	116	320	150	12	24	150
1500820	BWA 150-08/20	8	200	170	116	320	150	12	24	150
1500825	BWA 150-08/25	8	250	170	116	320	150	12	24	150
1501010	BWA 150-10/10	10	100	170	118	360	150	12	30	150
1501015	BWA 150-10/15	10	150	170	118	390	150	12	30	150
1501020	BWA 150-10/20	10	200	170	118	390	150	12	30	150
1501025	BWA 150-10/25	10	250	170	118	390	150	12	30	150
1501210	BWA 150-12/10	12	100	170	120	310	150	12	36	125
1501215	BWA 150-12/15	12	150	170	120	460	150	12	36	125
1501220	BWA 150-12/20	12	200	170	120	460	150	12	36	125
1501225	BWA 150-12/25	12	250	170	120	460	150	12	36	125
<b>BWA 170</b>										
1700815	BWA 170/08-15	8	150	170	134	320	168	12	24	125
1700820	BWA 170/08-20	8	200	170	134	320	168	12	24	125
1700825	BWA 170/08-25	8	250	170	134	320	168	12	24	125
1701010	BWA 170/10-10	10	100	170	136	390	168	12	30	125
1701015	BWA 170/10-15	10	150	170	136	390	168	12	30	125
1701020	BWA 170/10-20	10	200	170	136	390	168	12	30	125
1701025	BWA 170/10-25	10	250	170	136	390	168	12	30	125
1701210	BWA 170/12-10	12	100	170	138	370	168	12	36	125
1701215	BWA 170/12-15	12	150	170	138	460	168	12	36	125
1701220	BWA 170/12-20	12	200	170	138	460	168	12	36	125
1701225	BWA 170/12-25	12	250	170	138	460	168	12	36	125



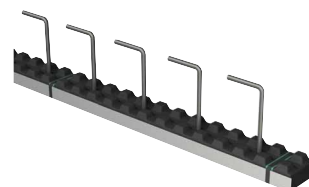
## BWA Reinforcement continuity system

- Double row / standard type stirrup form = type "B" / length of element 125 cm

article no.	designation	steel "ds" Ø mm	stirrup			"lü" mm	box			pallet m
			distance "s" in mm	height "h" in mm	dimensions "v" in mm		width "B" in mm	height "H1" in mm	height "H2" with cover mm	
<b>BWA 190</b>										
1900815	BWA 190-08/15	8	150	170	152	320	186	12	24	125
1900820	BWA 190-08/20	8	200	170	152	320	186	12	24	125
1900825	BWA 190-08/25	8	250	170	152	320	186	12	24	125
1901010	BWA 190-10/10	10	100	170	154	390	186	12	30	125
1901015	BWA 190-10/15	10	150	170	154	390	186	12	30	125
1901020	BWA 190-10/20	10	200	170	154	390	186	12	30	125
1901025	BWA 190-10/25	10	250	170	154	390	186	12	30	125
1901210	BWA 190-12/10	12	100	170	156	430	186	12	36	125
1901215	BWA 190-12/15	12	150	170	156	460	186	12	36	125
1901220	BWA 190-12/20	12	200	170	156	460	186	12	36	125
1901225	BWA 190-12/25	12	250	170	156	460	186	12	36	125
<b>BWA 220</b>										
2200815	BWA 220-08/15	8	150	170	188	320	222	12	24	80
2200820	BWA 220-08/20	8	200	170	188	320	222	12	24	80
2200825	BWA 220-08/25	8	250	170	188	320	222	12	24	80
2201010	BWA 220-10/10	10	100	170	190	390	222	12	30	80
2201015	BWA 220-10/15	10	150	170	190	390	222	12	30	80
2201020	BWA 220-10/20	10	200	170	190	390	222	12	30	80
2201025	BWA 220-10/25	10	250	170	190	390	222	12	30	80
2201210	BWA 220-12/10	12	100	170	192	460	222	12	36	80
2201215	BWA 220-12/15	12	150	170	192	460	222	12	36	80
2201220	BWA 220-12/20	12	200	170	192	460	222	12	36	80
2201225	BWA 220-12/25	12	250	170	192	460	222	12	36	80
<b>BWA 240</b>										
2400815	BWA 240/08-15	8	150	170	208	320	242	12	24	80
2400820	BWA 240/08-20	8	200	170	208	320	242	12	24	80
2400825	BWA 240/08-25	8	250	170	208	320	242	12	24	80
2401010	BWA 240/10-10	10	100	170	210	390	242	12	30	80
2401015	BWA 240/10-15	10	150	170	210	390	242	12	30	80
2401020	BWA 240/10-20	10	200	170	210	390	242	12	30	80
2401025	BWA 240/10-25	10	250	170	210	390	242	12	30	80
2401210	BWA 240/12-10	12	100	170	212	460	242	12	36	80
2401215	BWA 240/12-15	12	150	170	212	460	242	12	36	80
2401220	BWA 240/12-20	12	200	170	212	460	242	12	36	80
2401225	BWA 240/12-25	12	250	170	212	460	242	12	36	80

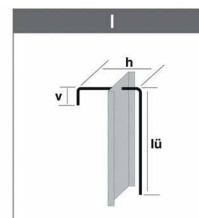
## BWA QLV Reinforcement continuity system with longitudinal and transverse denticulation

- Single row / standard type stirrup form = type "I" / length of element 125 cm



### Advantages of BWA longitudinal and lateral interlocked:

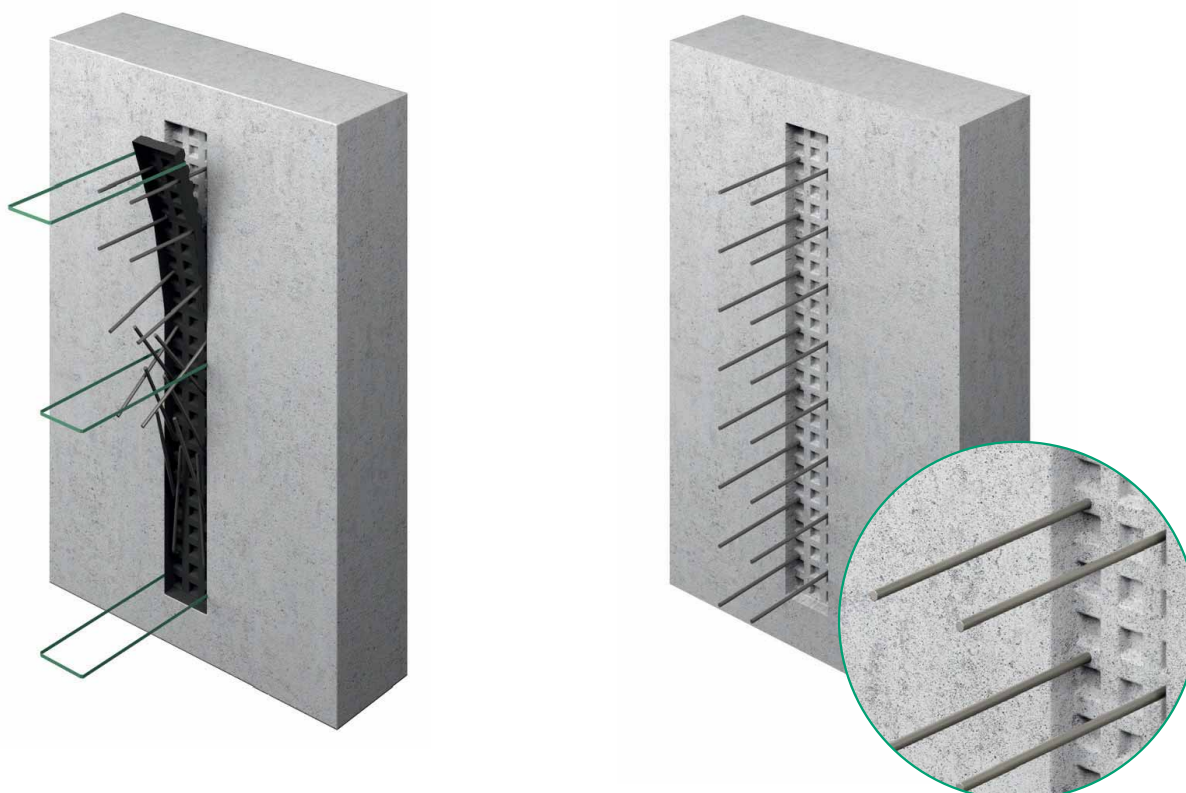
- For an optimal direction-independent shear transfer in longitudinal and lateral direction.
- Does not require certification regarding to the surface conditions in the construction joint.
- Lower weight compared to reinforcement continuity systems made of steel plates.
- Bars of high ductile reinforcement steel B500B according to DIN 488.
- Classified as "interlocked" according to the DBV-code of practice.
- The plastic storage box must be removed, resulting in a monolithic concrete joint, which is not a foreign object compared to the steel sheet storage box.

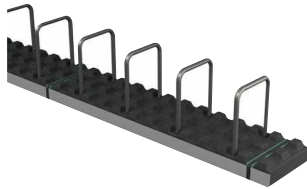


article no.	designation	steel "ds" Ø mm	stirrup			"lü" mm	box			pallet m
			distance "s" in mm	height "h" in mm	dimensions "v" in mm		width "B" in mm	height "H1" in mm	height "H2" with cover mm	
<b>BWA 85</b>										
851010V	BWA 85-10/10V	10	100	170	95	390	83	12	45	200
851015V	BWA 85-10/15V	10	150	170	95	390	83	12	45	200
851020V	BWA 85-10/20V	10	200	170	95	390	83	12	45	200
851025V	BWA 85-10/25V	10	250	170	95	390	83	12	45	200
851210V	BWA 85-12/10V	12	100	170	110	430	83	12	45	150
851215V	BWA 85-12/15V	12	150	170	110	460	83	12	45	200
851220V	BWA 85-12/20V	12	200	170	110	460	83	12	45	200
851225V	BWA 85-12/25V	12	250	170	110	460	83	12	45	200

### Application:

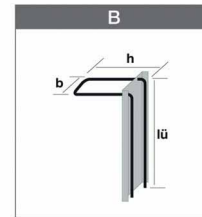
- After striking the formwork, take off the casing lid and bend the bars outwards.
- Remove the indented plastic casing using the straps attached.





## BWA QLV Reinforcement continuity system with longitudinal and transverse denticulation

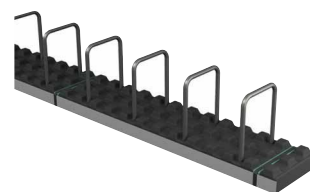
- Double row / standard type stirrup form = type "B" / length of element 125 cm



article no.	designation	steel "ds" Ø mm	stirrup			"l <sub>ü</sub> " mm	box			pallet m
			distance "s" in mm	height "h" in mm	dimensions "v" in mm		width "B" in mm	height "H1" in mm	height "H2" with cover mm	
<b>BWA 120</b>										
1200815V	BWA 120-08/15V	8	150	170	88	320	118	12	45	150
1200820V	BWA 120-08/20V	8	200	170	88	320	118	12	45	150
1200825V	BWA 120-08/25V	8	250	170	88	320	118	12	45	150
<b>BWA 150</b>										
1500815V	BWA 150-08/15V	8	150	170	116	320	148	12	45	150
1500820V	BWA 150-08/20V	8	200	170	116	320	148	12	45	150
1500825V	BWA 150-08/25V	8	250	170	116	320	148	12	45	150
1501010V	BWA 150-10/10V	10	100	170	118	360	148	12	45	150
1501015V	BWA 150-10/15V	10	150	170	118	390	148	12	45	150
1501020V	BWA 150-10/20V	10	200	170	118	390	148	12	45	150
1501025V	BWA 150-10/25V	10	250	170	118	390	148	12	45	150
1501210V	BWA 150-12/10V	12	100	170	120	310	148	12	45	125
1501215V	BWA 150-12/15V	12	150	170	120	460	148	12	45	125
1501220V	BWA 150-12/20V	12	200	170	120	460	148	12	45	125
1501225V	BWA 150-12/25V	12	250	170	120	460	148	12	45	125
<b>BWA 190</b>										
1900815V	BWA 190-08/15V	8	150	170	152	320	188	12	45	125
1900820V	BWA 190-08/20V	8	200	170	152	320	188	12	45	125
1900825V	BWA 190-08/25V	8	250	170	152	320	188	12	45	125
1901015V	BWA 190-10/15V	10	150	170	154	390	188	12	45	125
1901020V	BWA 190-10/20V	10	200	170	154	390	188	12	45	125
1901025V	BWA 190-10/25V	10	250	170	154	390	188	12	45	125
1901210V	BWA 190-12/10V	12	100	170	156	430	188	12	45	125
1901215V	BWA 190-12/15V	12	150	170	156	460	188	12	45	125
1901220V	BWA 190-12/20V	12	200	170	156	460	188	12	45	125
1901225V	BWA 190-12/25V	12	250	170	156	460	188	12	45	125

## BWA QLV Reinforcement continuity system with longitudinal and transverse denticulation

- Double row / standard type stirrup form = type "B" / length of element 125 cm



article no.	designation	steel "ds" Ø mm	stirrup			"lü" mm	box			pallet m
			distance "s" in mm	height "h" in mm	dimensions "v" in mm		width "B" in mm	height "H1" in mm	height "H2" with cover mm	
<b>BWA 220</b>										
2200815V	BWA 220-08/15V	8	150	170	188	320	218	12	45	80
2200820V	BWA 220-08/20V	8	200	170	188	320	218	12	45	80
2200825V	BWA 220-08/25V	8	250	170	188	320	218	12	45	80
2201010V	BWA 220-10/10V	10	100	170	190	390	218	12	45	80
2201015V	BWA 220-10/15V	10	150	170	190	390	218	12	45	80
2201020V	BWA 220-10/20V	10	200	170	190	390	218	12	45	80
2201025V	BWA 220-10/25V	10	250	170	190	390	218	12	45	80
2201210V	BWA 220-12/10V	12	100	170	192	460	218	12	45	80
2201215V	BWA 220-12/15V	12	150	170	192	460	218	12	45	80
2201220V	BWA 220-12/20V	12	200	170	192	460	218	12	45	80
2201225V	BWA 220-12/25V	12	250	170	192	460	218	12	45	80

## Overview of stirrup form types



BWA standard type, single row = "I"  
 BWA standard type, double row = "B"

**Important:** For types E, H, F, G, K, L and O may vary by +-2 cm due to production and installation dimensions "h" and "l<sub>ü</sub>".

This can be prevented by using a "location security strip", which must be requested and ordered always separately.

To inquire for custom designs, please use the "BWA - Sonderanfertigungen" (custom designs) blank form available at [www.exte.de](http://www.exte.de), or call us at +49 (0) 34721 401 - 0.



Fax: +49 /34721/ 401 - 99

E-Mail: info@exte.de

Phone: +49 (0) 34721 401 0

Company / Customer.-Nr.:

Address / Stamp:

article no.	designation	size / concrete cover / dimensions	quantity

## 1. General provisions

These terms and conditions of sale will apply to contractors, legal entities or corporate bodies of public law or special funds under public law respectively. The Contractor will make deliveries and provide services exclusively subject to the below terms and conditions. Any deviating terms and conditions of the Purchaser that have not been expressly accepted or approved in writing will not be binding and will not apply even though they may not have been expressly objected to. Any and all agreements, proposals or quotations will be subject to the Contractor's terms and conditions only. They will be deemed accepted and approved when the purchase order is placed or delivery is accepted respectively.

## 2. Price

The proposals or quotations submitted by the Contractor will be without obligation and subject to confirmation. Proposals or quotations will only be valid if submitted in writing. The prices quoted will be subject to the proviso that the job data on which the proposal or quotation is based will remain unchanged. The prices quoted are to be understood as net prices in Euros, excluding value-added tax (VAT), packing, freight, postage and insurance. They will be deemed ex works unless agreed otherwise.

## 3. Drawings and descriptions

The right of exclusive manufacturing is reclaimed for any designs, drawings or tools submitted, more specifically for any profiles or sections. Execution or reproduction by third parties will be subject to permission under copyright law by the Contractor. The Contractor hereby warrants that the manufacture, the supply and delivery of any items made to its specifications will not violate any property rights of any third parties. Any and all molds, templates or similar fixtures as well as drawings or technical documentation regarding the goods to be supplied and delivered or their manufacture respectively will remain the sole property of the Contractor, even though the Purchaser may be charged with the costs for said items.

## 4. Acceptance of orders - purchase orders - placing of orders

The contract will be deemed completed upon written confirmation of the purchase order by the Contractor. Any subsequent changes of the order that are caused by the Purchaser will entitle the Contractor to change any terms or conditions of the contract that are thereby affected accordingly. Any such changes must also be confirmed in writing. Should the Contractor become aware of any subsequent circumstances that seem to cast doubt on the solvency of the Purchaser, the Contractor may make further processing of the order conditional, such as delivery of prepayment, or require reasonable security.

## 5. Execution and performance

### 5.1. Acceptance of technical data or specifications by the Purchaser

Detailed design documents submitted by the Contractor to the Purchaser must be reviewed and approved by the Purchaser in relation to any material or required properties. The Purchaser shall return the duly signed documents to indicate its approval. Should any corrections be required, these must be clearly marked accordingly. The Contractor will not accept liability for any noticeable defect or deficiency that the Purchaser may have ignored or may not have objected to or rejected at the time of such review unless the Contractor should have fraudulently concealed the same.

### 5.2. Tolerances

**5.2.1.** Figures, dimensions or drawings as well as any indications as to composition or quality that are shown in any price lists, catalogs or similar documents shall merely be considered as customary approximate values only. Samples or patterns shall merely be deemed to be approximate test samples of no commercial value in terms of dimensions, quality or other such properties. Information provided by us in relation to properties, dimensions, purpose or intended use or similar are to be understood as mere descriptions and do not pertain or include any assurance of properties.

**5.2.2.** In the event of technical necessity, we reserve the right to supply and deliver the goods ordered with deviations in terms of nature or quality, dimensions or other such properties. Any such deviations will not qualify for complaint unless said changes should result in significant impairment in terms of the usefulness of the items supplied and delivered.

**5.2.3.** The content of the package is determined through weighing (number of units). The weights thus determined are noncommittal approximate values used to determine the shipping costs. As a general rule, the Contractor will be entitled to make deliveries of excess quantities or shortages in quantity respectively as a function of the product of up to ten percent (10%). The Purchaser shall always pay for the actual quantity or volume supplied and delivered to them.

### 6. Supply and delivery

Any goods notified ready for dispatch and shipment must be accepted by the Purchaser without any undue delay. Failing this, the Contractor will be entitled, at their own discretion, to either ship the goods or to warehouse them, both at the cost and risk of the Purchaser. Upon delivery to the railroad company, the forwarding agent or the shipping company, or upon commencement of warehousing or, at the latest, when the goods are taken out of the warehouse or are released from the production facility, the risk will pass over to the Purchaser, this also applies if the Contractor is in charge of shipment and delivery. Partial deliveries will be allowed on principle. They will be invoiced separately. Each partial delivery made will be deemed to be a separate commercial transaction. Fulfillment or non-fulfillment of any one partial delivery will not have any effect or impact on any other partial delivery. If the Contractor foresees that they will not be able to make delivery within the respective delivery period, they will inform the Purchaser of this immediately in writing, quoting the reasons for the delay and the estimated delivery date, where possible. Business disruptions both at their own production facility or at external facilities which are essential for the manufacture or the handling or transportation of the goods will relieve the Contractor from its obligation to comply with the period of delivery without giving rise to any claims for compensation, if and to the extent that such a delay cannot be prevented at reasonable cost or in due time respectively. Business disruptions to this effect shall be any severe or material obstacles for which the Contractor is not responsible and which the Contractor could not reasonably foresee, in particular general scarcity of raw materials or energy shortage, unavailability of transportation, government interventions, labor disputes, war or civil commotion or major fires. The above paragraph shall apply *mutatis mutandis* in instances where the Contractor would not receive deliveries in due time or deliveries of the correct materials from the upstream supplier or vendor in spite of congruent covering purchase. In instances of Force Majeure, labor disputes, civil commotion, government interventions, failure of our suppliers or vendors to deliver to us or similar unforeseeable, unavoidable and serious events, the contracting parties will be obliged, within the scope of what is reasonable, to exchange any required information and to adjust their respective obligations to the changed conditions in good faith. If delivery is delayed due to the above circumstances or due to any acts or omissions on the part of the Purchaser, the period allowed for delivery will be extended by a reasonable period of time. If the Purchaser, after confirmation of the purchase order, requests changes to be made to the purchase order that would affect the production time, a new period of delivery shall commence upon acceptance and confirmation of such changes. The Purchaser will only be entitled to rescind from the contract in instances whereby the Contractor is responsible for the noncompliance of the delivery date and the Purchaser has granted a reasonable extension of time that has expired to no avail. Compensation for indirect damage such as for loss of profit or covering purchase will be precluded. Acceptance of the goods shall occur according to contractual agreements. If acceptance is delayed, the Contractor will be entitled to charge any costs incurred by such a delay. If acceptance is delayed by the Purchaser, costs incurred by storing the goods at the Contractor's warehouse will be charged to the Purchaser, by no less than half a percent (0.5%) of the invoiced amount per month. However, the Contractor, after unsuccessful expiration of a reasonable period of time, will be entitled to otherwise dispose of the delivery item and to make the delivery to the Purchaser within a reasonably extended period of time.

### 7. Reservation of title

The Contractor reserves title of ownership of the goods supplied and delivered until all claims from the transaction with the Contractor have been settled and until all related payments as per the contract for supply and delivery will have been received in full according to Section 449 of the German Civil Code (BGB). The Purchaser will assign any and all claims for the payment of purchase prices by its customers from the conditional sale of any goods supplied and delivered to it under reservation of title to the Contractor upon conclusion of the contract between the Contractor and the Purchaser, which is in the amount of the purchase price of the goods subject to retention of title agreed between the Contractor and the Purchaser (plus value-added tax) by way of security. The Contractor hereby accepts said assignment. The Purchaser will be entitled to collect said amounts receivable for as long as it is not in arrears with any payments to be made to the Contractor. The right of the Contractor to collect said amounts receivable to them shall remain unprejudiced. The Purchaser undertakes to disclose to the Contractor the claims assigned and their respective trade debtors upon the Contractor's reasonable request, and to provide any information required for collection, and to advise the respective trade debtors of such assignment in writing. The Purchaser will not be entitled to pledge any of the goods supplied and delivered to it under conditional sale or to transfer the same to any third parties by way of security respectively. Pledging or other such interventions by third parties shall be communicated by the Purchaser to the Contractor in writing without any undue delay. In the event of a breach of contract on the part of the Purchaser, and more specifically delay in payment, the Contractor, upon unsuccessful expiration of a reasonable grace period for delivery by the Purchaser, shall be entitled to rescind from the contract and redeem the respective goods; legal requirements regarding dispensability of setting

deadlines will remain unprejudiced. The Purchaser will be obliged to surrender the respective goods. The Contractor will be entitled to rescind from the contract if a petition in bankruptcy is filed for the assets of the Purchaser. If these goods are sold together with other goods that are not the property of the Contractor, the claim of the Purchaser towards its customers in the amount of the purchase price agreed between the Contractor and the Purchaser upon conclusion of the respective delivery contract shall be deemed to have been assigned to the Contractor as a principal security, it will be the amount of their claims for payment for the goods they supplied and delivered. Retention of title will also apply until any other claims of the Contractor will have been settled (overall reservation of title). The Contractor will release any securities as and if the receivables to be collateralized should be excessively collateralized by more than twenty percent (20%). If the goods of the Contractor are combined with other movable property to form a unitary item or if they are inseparably mixed with other property or if the other property is the principal object, the Purchaser will transfer proportional joint ownership to the Contractor, to the extent that the principal object is their property. The Purchaser will hold in safe custody the property or joint property on behalf of the Contractor. As with goods that are subject to retention of title, provisions shall apply to any objects formed by way of processing, combination or mixing respectively. The Purchaser shall immediately advise the Contractor of any compulsory enforcement measures regarding the goods subject to retention of title, the claims assigned to the Contractor or other such collateralized submitting any documents required for the latter's own interventions. The same shall also apply to any impairment or interference of any other kind. The assertion of reservation of title or the redemption of the delivery item by the Contractor shall not be deemed rescission from the contract.

### 8. Terms of payment

Invoices will not be issued any earlier than upon shipment of the goods from our premises or when the Purchaser has accepted the delivery by default. Unless otherwise agreed, invoices shall be payable without deduction within fourteen (14) days of the invoice date. If the Contractor has indisputably supplied and delivered defective goods, the Purchaser shall still be obliged to make payment for the part of the goods that is free from defects unless such partial shipment alone is of no interest or use to them. In addition, the Contractor will be exclusively entitled to offset against validly ascertained or undisputed counterclaims. If the period allowed for payment is exceeded, the Contractor may charge default interest at the rate charged to the Contractor by the bank for overdrafts, but no less than eight (8) percentage points above the respective base interest rate of the European Central Bank. Bills of exchange and cheques will only be accepted where agreed, and only on account of performance and on condition that they may be discounted. Discount charges will be charged as of the maturity of the invoiced amount. No warranty will be extended for the submission of the bill of exchange or check in due time and for the raising of bill protest. In the event of default in payment, the Contractor may, after written communication to the Purchaser, suspend the performance of its obligations until the respective payments have been received. If, after conclusion of the contract, it becomes evident that the payment claim of the Contractor will be jeopardized through inadequate performance on part of the Purchaser, the Contractor may refuse performance and the Contractor may set a reasonable period of time for the Purchaser to make payment or provide collateral matching the physical delivery. If the Purchaser refuses to meet said request or if the period of time set expires unsuccessfully, the Contractor may rescind from the contract or claim damages. If there seems to be a significant deterioration in the pecuniary circumstances of the Purchaser or if the Purchaser is in arrears with payment, the Contractor may request immediate payment even for the goods not as yet supplied and delivered, for any invoices as yet not payable, and for any bills of exchange or checks not as yet mature and if the respective amounts are covered by the Contractor's spending on the respective order.

### 9. Liability for defects in delivery

The nature and quality of the goods are exclusively determined by the agreed technical shipping instructions. If the Contractor has to deliver based on drawings, specifications or samples submitted by the Purchaser, the latter shall assume the risk of suitability for the intended purpose. The date of the transfer of risk shall prevail in relation to the contractual condition of the goods. Complaints shall be lodged with immediate effect within the remit of Section 377 of the German Commercial Code (HGB). Hidden defects must be reported immediately upon detection, without any undue delay. The Contractor will not accept responsibility for improper or inappropriate use, faulty assembly or installation or similar caused by the Purchaser or by any third parties. The same will apply to natural wear, faulty or negligent handling, consequences of inappropriate modifications or modifications made without the prior consent of the Contractor, or repair work undertaken by the Purchaser or any third parties respectively. The same will also apply to any defects that would deteriorate the value or suitability for use of the goods to an insignificant extent. The Contractor shall be given an opportunity to ascertain the defect that is the subject of the complaint. Faulty goods shall be returned to the Contractor without any undue delay, upon request. If the Purchaser does not comply with this obligation, or makes any modifications to any goods already found faulty without the consent of the Contractor, any warranty claims for material defects will be deemed forfeited forthwith. In instances of justified notice of defects submitted in due time, the Contractor will proceed to supplementary performance through supply and delivery of replacement goods that are free from defect. If said supplementary performance fails, the Purchaser may decide to reduce the price or rescind from the contract respectively. In any case, the right of the Purchaser to ascertain claims from defects will lapse after twelve (12) months. However, this will not apply if or where longer statutes of limitation are made mandatory by law.

### 10. Other claims, liability

Unless otherwise stipulated below, any other or further claims of the Purchaser against the Contractor shall be excluded. This will specifically apply to claims for damages for breach of contract from contractual obligation or from tortious act. Thus, the Contractor does not assume liability for any damage not caused to the goods supplied and delivered per se. More specifically, the Contractor will not assume liability for any loss of profit or other such financial losses on the part of the Purchaser. The above limitations of liability will not apply in instances of intention, gross negligence on the part of legal representatives or executive staff or in instances of culpable violation of fundamental contractual obligations, respectively. In the event of culpable violation of fundamental contractual obligations, the Contractor will exclusively assume liability for contractually anticipated foreseeable damage, however, with the exception of instances of intention or gross negligence on the part of the legal representatives or executive staff of the Contractor. In addition, limitation of liability will not be effective or apply in instances where liability must be assumed for personal injuries or damage to privately used objects if goods are defective according to the German law on product liability (ProdHaftG). Furthermore, it will not be effective in instances of injury to life, limb or health or if guaranteed qualities or warranted characteristics are missing, if such warranty was made with the intention of collateralizing the partner against undamaged goods supplied and delivered per se. As and if liability of the Contractor is excluded or limited, this shall also be true for the personal liability of its staff, employees, legal representatives or agents, respectively. Statutory regulations regarding the burden of proof shall remain unprejudiced.

### 11. Place of performance, legal venue and applicable law

Depending on the respective placement of the order, the place of performance shall be the Contractor's business location in Nienburg (Germany) respectively. The exclusive legal venue for services, deliveries or payments, including actions on checks or bills of exchange or similar legal disputes between the contracting parties for purchase orders placed with the Nienburg or Köthen based units will be the relevant courts in either the Bemburg local court district or the Dessau regional court district. The Contractor may also institute proceedings against the contracting partner in another legal venue with jurisdiction over them, pursuant to Sections 12 ff. of the German Code of Civil Procedure (ZPO). The contractual relationship shall be governed exclusively by the law of the Federal Republic of Germany.

### 12. Miscellaneous provisions

Failing specific agreements made herein, relevant legal regulations shall apply. Should any one provision hereof be or become ineffective or void, the remaining provisions hereof shall remain unprejudiced. This shall not entail the invalidity or voidance of the whole contract. Any such ineffective or void provision shall be given a new interpretation such that the intended economic objective will be achieved through it. If such reinterpretation is not possible, the contracting parties shall be obliged to replace the ineffective or void provision by a new provision that most closely resembles the ineffective or void provision in terms of its economic objective.



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