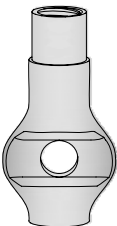
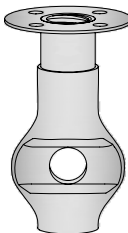
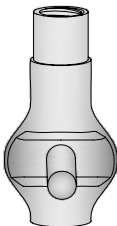
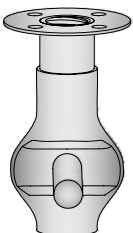
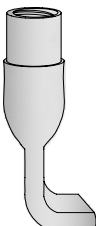

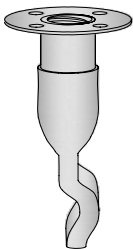


Threaded Fixing Anchors

SALON
TUKITUOTE

Instructions of use

		
<p>Fixing Socket PVA (pages 2-7)</p>	<p>Fixing Socket PVA-N (pages 8-11)</p>	<p>Fixing Socket PVA-H (pages 12-16)</p>
		
<p>Fixing Socket PVA-NH (pages 17-19)</p>	<p>Fixing Socket PVA-T (pages 20-24)</p>	<p>Fixing Socket PVA-W (pages 25-28)</p>
		
<p>Fixing Socket PVA-WN (pages 29-31)</p>		

Fixing Socket PVA

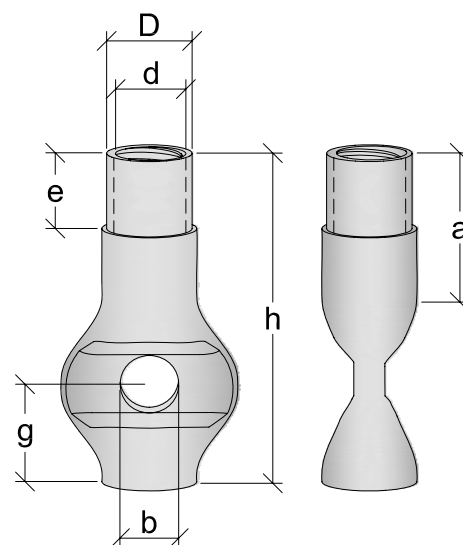
The fixing sockets are by mean of their low height and the individual fixing possibilities suitable for fastening of pillars and props and for receiving axial forces. The fixing sockets are recommended only for fixings, they are not suitable for lifting. They are mainly used for temporary fixings and applications without structural significance.

They are a single point fixing without tolerance and are not recommended where accuracy of fixing position is required or where tolerances cannot be accommodated by other components.

A reinforcement bar has to be inserted through the cross hole thus a safe transmission of the static forces into the concrete is guaranteed. Sockets can be used in concrete with a compressive strength $\geq 25 \text{ N/mm}^2$.

There is a metric thread in the socket, which should be greased before the installation into the precast concrete unit.

For fastening to a steel formwork, Magnetic Holders models HM4 are recommended. Nailing Plates are used to fasten anchors to a wooden formwork. To prevent dirt and concrete from penetrating into the thread of the socket, Protective Caps are used.



Materials:

- zinc-plated or
- stainless steel

Table 1: Fixing Socket PVA (zinc-plated)

Article	Maximum working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]	b [mm]	g [mm]
0700	0,10	M6×35	6	35	8.5	6	20	6	7
0702	0,20	M8×40	8	40	10.5	6	25	6	8
0703	0,20	M8×50	8	50	10.5	6	25	6	8
0704	0,35	M10×45	10	45	13.5	10	20	6	12
0705	0,35	M10×50	10	50	13.5	10	24	6	12
0706	0,35	M10×60	10	60	13.5	10	25	6	12
0708	0,50	M12×55	12	55	17.0	12	25	10	15
0710	0,50	M12×65	12	65	17.0	12	25	10	15
0710-1	0,50	M12×80	12	80	17.0	12	25	10	15
0870	0,50	M16×50	16	50	21.3	16	30	without	-
0713	1,00	M16×70	16	70	21.3	16	30	10	17
0712	1,00	M16×80	16	80	21.3	16	30	12	22
0714	1,00	M16×100	16	100	21.3	16	32	12	22
0715	1,00	M16×120	16	120	21.3	16	32	12	22
0716	1,25	M20×100	20	100	26.9	20	40	13	22
0718	1,25	M20×120	20	120	26.9	20	40	13	22
0794	1,25	M20×150	20	150	26.9	20	40	13	22
0725	1,25	M20×240	20	240	26.9	20	40	13	22
0720	1,68	M24×120	24	120	33.7	24	50	17	25
0721	1,68	M24×150	24	150	33.7	24	50	17	25
0723	2,20	M30×150	30	150	42.0	30	70	22	25

Threaded Fixing Anchors / Fixing Socket PVA

Table 2: Fixing Socket PVA (stainless steel)

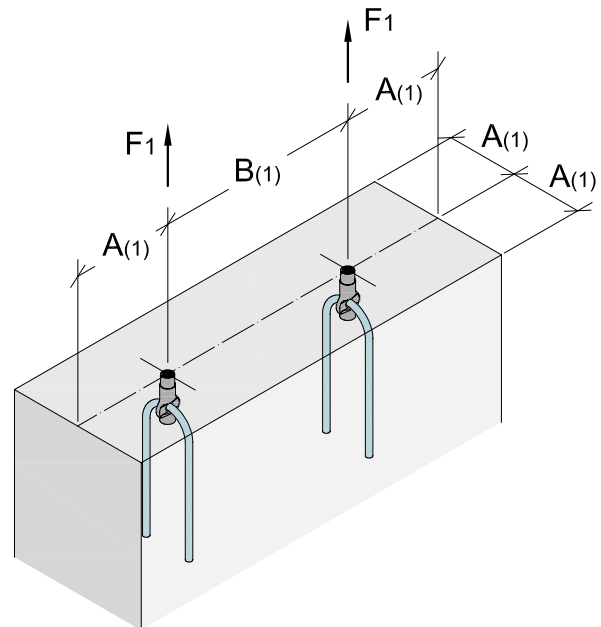
Article	Max. working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]	b [mm]	g [mm]
0700E	0,10	M6×35	6	35	8.5	6	20	6	7
0700E-40	0,10	M6×40	6	40	8.5	6	20	6	7
0726	0,20	M8×40	8	40	10.5	6	25	6	8
0703E	0,20	M8×50	8	50	10.5	6	25	6	8
0728	0,35	M10×45	10	45	13.5	10	20	6	12
0707	0,35	M10×60	10	60	13.5	10	25	6	12
0729	0,50	M12×40	12	40	13.5	12	25	10	15
0730	0,50	M12×55	12	55	17.0	12	25	10	15
0731	0,50	M12×60	12	60	17.0	12	25	10	15
0732	0,50	M12×70	12	70	21.3	16	30	10	17
0734	1,00	M16×80	80	21.3	21.3	16	30	12	22
0736	1,00	M16×100	100	21.3	21.3	16	32	12	22
0737	1,00	M16×120	120	21.3	21.3	16	32	12	22
0738	1,25	M20×100	100	26.9	26.9	20	40	13	22
0740	1,68	M24×120	24	120	26.9	20	40	13	22

Installation Instructions for Fixing Socket PVA

1. Straight pull load

Table 3: Minimal dimensions and permissible loads

Type	F ₁ [kN]	A(1) _{min} [mm]	B(1) _{min} [mm]
M6×35	1	55	110
M6×40	2	60	120
M8×40	2	60	120
M8×50	2	75	150
M10×45	3,5	75	150
M10×50	3,5	75	150
M10×60	3,5	90	180
M12×40	5	60	120
M12×55	5	90	180
M12×60	5	90	180
M12×65	5	105	210
M12×70	5	105	210
M12×80	5	120	240
M16×70	7	105	210
M16×80	8	120	240
M16×100	10	150	300
M16×120	10	180	360
M20×100	12,5	150	300
M20×120	12,5	180	360

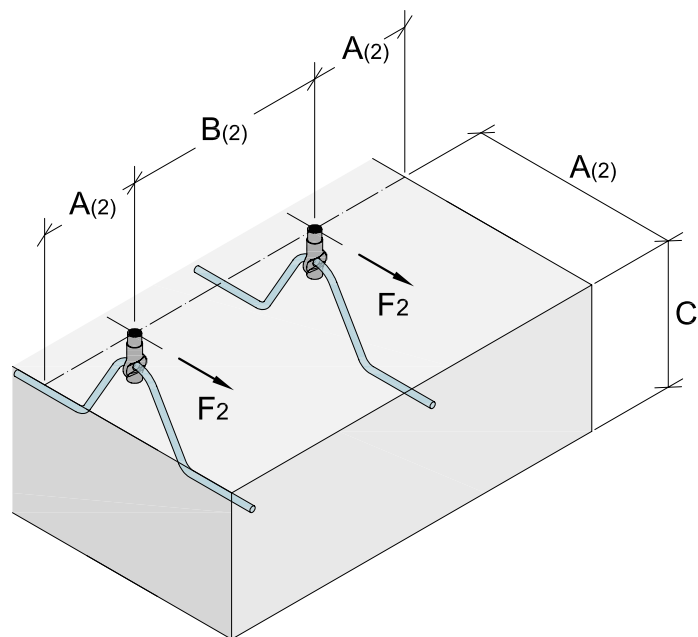


M20×150	12,5	225	450
M20×240	12,5	360	720
M24×120	16,8	180	360
M24×150	16,8	225	450
M30×150	22	225	450

2. Transversal pull load

Table 4: Minimal dimensions and permissible loads

Type	F ₂ [kN]	A(2) _{min} [mm]	B(2) _{min} [mm]	C _{min} * [mm]
M6×35	1	70	140	60
M6×40	2	80	160	65
M8×40	2	80	160	65
M8×50	2	100	200	75
M10×45	3,5	90	180	70
M10×50	3,5	100	200	75
M10×60	3,5	120	240	85
M12×40	5	80	160	65
M12×55	5	110	220	80
M12×60	5	120	240	85
M12×65	5	130	260	90
M12×70	5	140	280	95
M12×80	5	160	320	105
M16×70	10	140	280	95
M16×80	10	160	320	105
M16×100	10	200	400	125
M16×120	10	240	480	145
M20×100	12,5	200	400	125
M20×120	12,5	240	480	145
M20×150	12,5	300	600	175
M20×240	12,5	480	960	265
M24×120	16,8	240	480	145
M24×150	16,8	300	600	175
M30×150	22	300	600	175

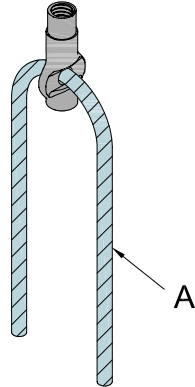


* - for concrete cover 25mm

3. Parallel shear pull load (interaction)

The force components should be calculated according to the following formula: $F_1^2 + F_2^2 = F_{adm}^2$
 Its means that the same admissible force applies for an angle of inclination from 0° to 90°

4. Reinforcement



A reinforcement bar (BSt500S):

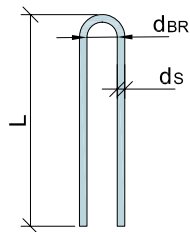
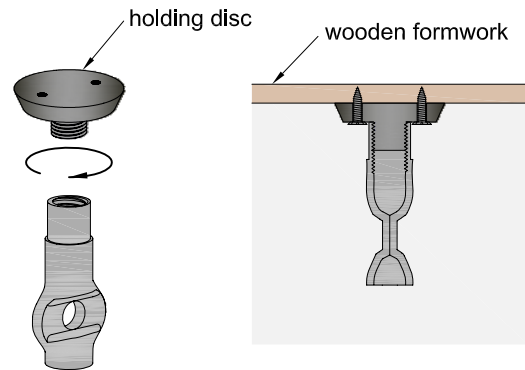


Table 5: Reinforcement bar A (according to DIN 1045-1)

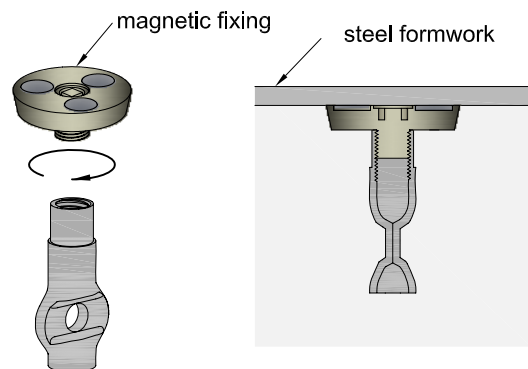
Type	d_s [mm]	L [mm]	d_{BR} [mm]
M6×35	5	150	20
M6×40	5	150	20
M8×40	5	150	20
M8×50	5	150	20
M10×45	6	250	25
M10×50	6	250	25
M10×60	6	250	25
M12×40	8	250	25
M12×55	8	250	25
M12×60	8	250	25
M12×65	8	250	25
M12×70	8	250	25
M12×80	8	250	25
M16×70	8	300	33
M16×80	10	300	33
M16×100	10	300	40
M16×120	10	300	40
M20×100	12	350	45
M20×120	12	350	45
M20×150	12	350	45
M20×240	12	350	45
M24×120	12	400	45
M24×150	12	400	45
M30×150	16	500	65

5. Accessories of Installation

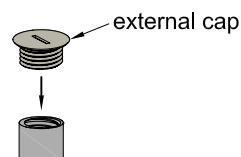
Nailing Plate (for more information, look at brochure “Threaded Lifting System”, page 5) are used when is necessary to fasten sockets to a wooden formwork. They eliminate the possibility of getting concrete or pollution into the sockets.



Magnetic Holder Type HM4 (for more information, look at brochure “Threaded Lifting System”, pages 2-4) are used when is necessary to fasten sockets to a steel formwork.

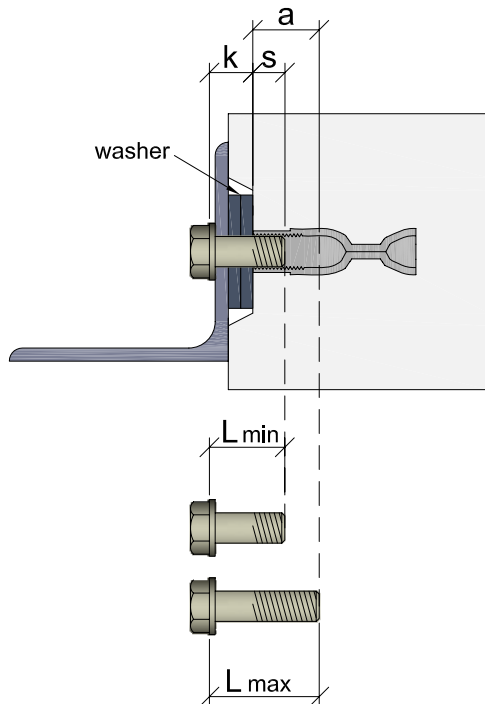


Protective Caps (for more information, look at brochure “Threaded Lifting System”, page 6) are used to seal socket and prevent various substances such as residual concrete, dust, snow etc. from penetrating into the socket, protecting the anchor thread from clogging up.



6. Fixing component

An element is attached to the anchor with a standard metric thread fastening bolt and washer.



For all fixing anchors there is a minimum and a maximum screw-in length. Determining the required bolt length:

$$L_{\min} = s + k$$

$$L_{\max} = a + k$$

k – clamp thickness

s – minimum screw-in length (table 6)

a – maximum screw-in length (table 1)

Table 6: Minimum screw-in length

Thread size	s [mm]	
	with recess* =1.5×d	without recess* =1.2×d
M8	12,0	9,6
M10	15,0	12,0
M12	18,0	14,5
M16	24,0	19,5
M20	30,0	24,0
M24	36,0	29,0

* - fixing anchors in recessed position - secured to the formwork with Nailing Plate or Magnetic Holders

Fixing Socket PVA-N

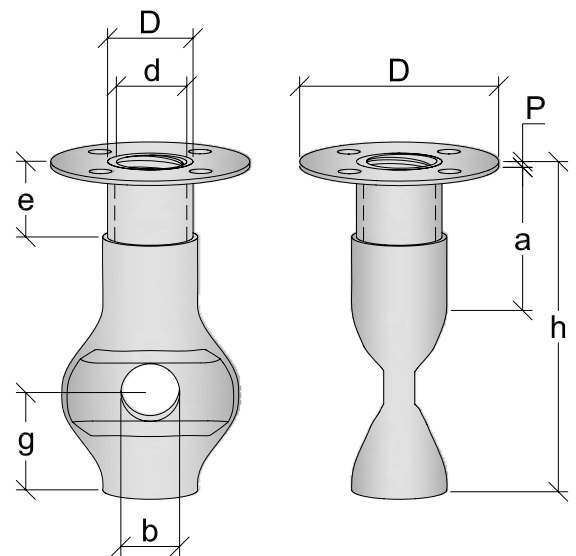
The fixing sockets are by mean of their low height and the individual fixing possibilities suitable for fastening of pillars and props and for receiving axial forces. The fixing sockets are recommended only for fixings, they are not suitable for lifting. They are mainly used for temporary fixings and applications without structural significance.

They are a single point fixing without tolerance and are not recommended where accuracy of fixing position is required or where tolerances cannot be accommodated by other components.

A reinforcement bar has to be inserted through the cross hole thus a safe transmission of the static forces into the concrete is guaranteed. Sockets can be used in concrete with a compressive strength $\geq 25 \text{ N/mm}^2$.

There is a metric thread in the socket, which should be greased before the installation into the precast concrete unit.

Fixing Socket PVA-N can be simply and efficiently nailed to wooden formwork. To prevent dirt and concrete from penetrating into the thread of the socket, Protective Caps are used.



Materials:

- zinc-plated or
- stainless steel

Table 1: Fixing Socket PVA-N (zinc-plated)

Article	Max. working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]	P [mm]	t [mm]	b [mm]	g [mm]
0702N	0,20	M8×40	8	40	10,5	6	25	34	1-2	6,2	8
0706N	0,35	M10×60	10	60	13,5	10	25	34	1-2	6,2	12
0709N	0,50	M12×60	12	60	17,0	12	25	40	1-2	10,0	15
0710N	0,50	M12×65	12	65	17,0	12	25	40	1-2	10,0	15
0712N	1,00	M16×80	16	80	21,3	16	30	44	1-2	12,2	22
0714N	1,00	M16×100	16	100	21,3	16	32	44	1-2	12,2	22
0716N	1,25	M20×100	20	100	26,9	20	40	48	1-2	13,0	22
0720N	1,68	M24×120	24	120	33,7	24	50	57	1-2	17,0	25

Table 2: Fixing Socket PVA-N (stainless steel)

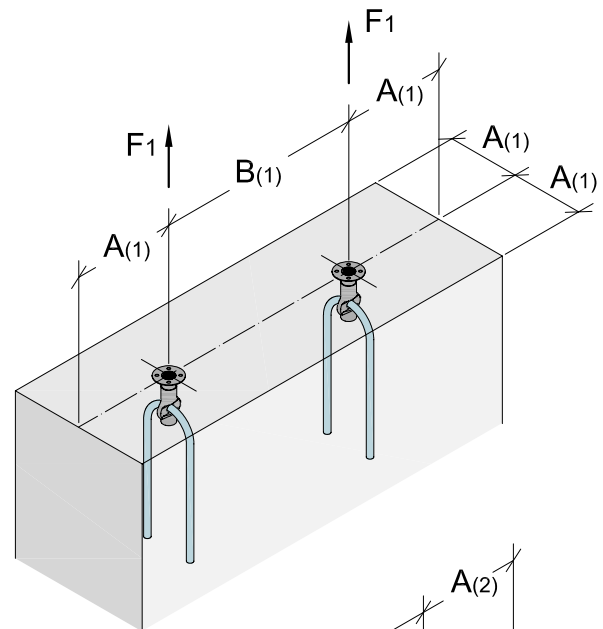
Article	Max. working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]	P [mm]	t [mm]	b [mm]	g [mm]
0702NE	0,20	M8×40	8	40	10,5	6	25	34	1-2	6,2	8
0706NE	0,35	M10×60	10	60	13,5	10	25	34	1-2	6,2	12
0709NE	0,50	M12×60	12	60	17,0	12	25	40	1-2	10,0	15
0710NE	0,50	M12×65	12	65	17,0	12	25	40	1-2	10,0	15
0712NE	1,00	M16×80	16	80	21,3	16	30	44	1-2	12,2	22
0714NE	1,00	M16×100	16	100	21,3	16	32	44	1-2	12,2	22
0716NE	1,25	M20×100	20	100	26,9	20	40	48	1-2	13,0	22
0720NE	1,68	M24×120	24	120	33,7	24	50	57	1-2	17,0	25

Installation Instructions for Fixing Socket PVA-N

1. Straight pull load

Table 3: Minimal dimensions and permissible loads

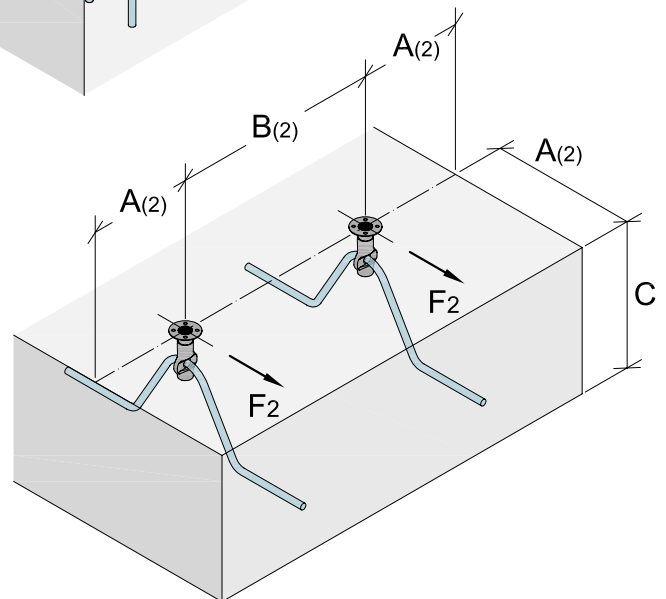
Type	F ₁ [kN]	A(1) _{min} [mm]	B(1) _{min} [mm]
M8×40	2	60	120
M10×60	3,5	150	300
M12×60	5	150	300
M12×65	5	105	210
M16×80	10	120	240
M16×100	10	150	300
M20×100	12,5	150	300
M24×120	16,8	180	360



2. Transversal pull load

Table 4: Minimal dimensions and permissible loads

Type	F ₂ [kN]	A(2) _{min} [mm]	B(2) _{min} [mm]	C _{min} * [mm]
M8×40	2	80	160	65
M10×60	3,5	120	240	85
M12×60	5	120	240	85
M12×65	5	130	260	90
M16×80	10	160	320	105
M16×100	10	200	400	125
M20×100	12,5	200	400	125
M24×120	16,8	240	480	145

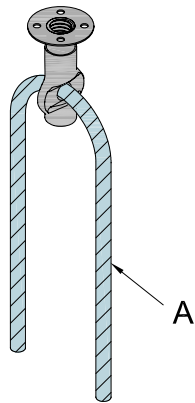


* - for concrete cover 25mm

3. Parallel shear pull load (interaction)

The force components should be calculated according to the following formula: $F_1^2 + F_2^2 = F_{adm}^2$
 It means that the same admissible force applies for an angle of inclination from 0° to 90°

4. Reinforcement



A reinforcement bar (BSt500S):

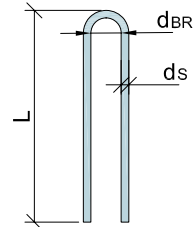


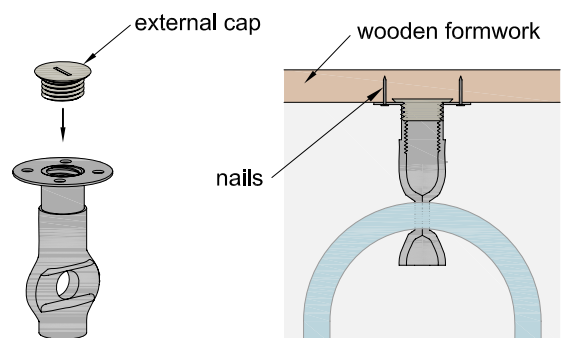
Table 5: Reinforcement bar A (according to DIN 1045-1)

Type	d_s [mm]	L [mm]	d_{BR} [mm]
M8×40	5	150	20
M10×60	6	250	25
M12×60	6	250	25
M12×65	6	250	25
M16×80	10	300	33
M16×100	10	300	40
M20×100	12	350	45
M24×120	12	400	45

5. Accessories of Installation

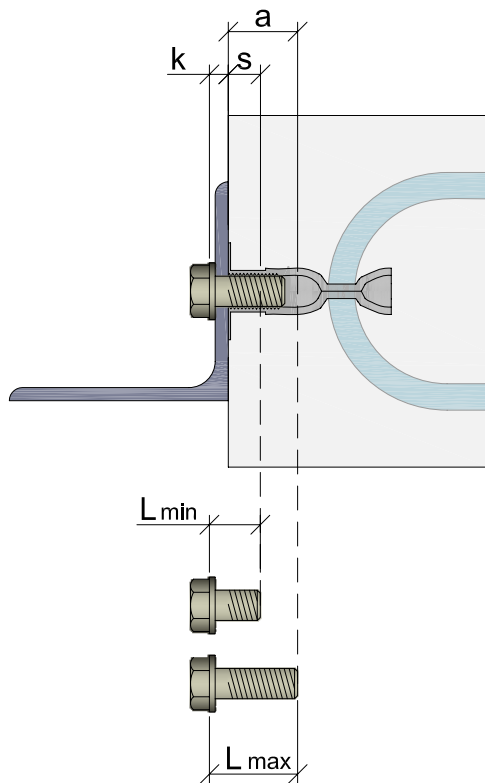
Protective Caps (for more information, look at brochure “Threaded Lifting System”, page 6) are used to seal socket and prevent various substances such as residual concrete, dust, snow etc. from penetrating into the socket, protecting the anchor thread from clogging up.

Through the nailing plate the Socket can be nailed to the formwork



6. Fixing component

An element is attached to the anchor with a standard metric thread fastening bolt and washer.



For all fixing anchors there is a minimum and a maximum screw-in length. Determining the required bolt length:

$$L_{\min} = s + k$$

$$L_{\max} = a + k$$

k – clamp thickness

s – minimum screw-in length (table 6)

a – maximum screw-in length (table 1)

Table 6: Minimum screw-in length

Thread size	s [mm]	
	with recess* =1.5×d	without recess* =1.2×d
M8	12,0	9,6
M10	15,0	12,0
M12	18,0	14,5
M16	24,0	19,5
M20	30,0	24,0
M24	36,0	29,0

* - fixing anchors in recessed position - secured to the formwork with Nailing Plates or Magnetic Holders

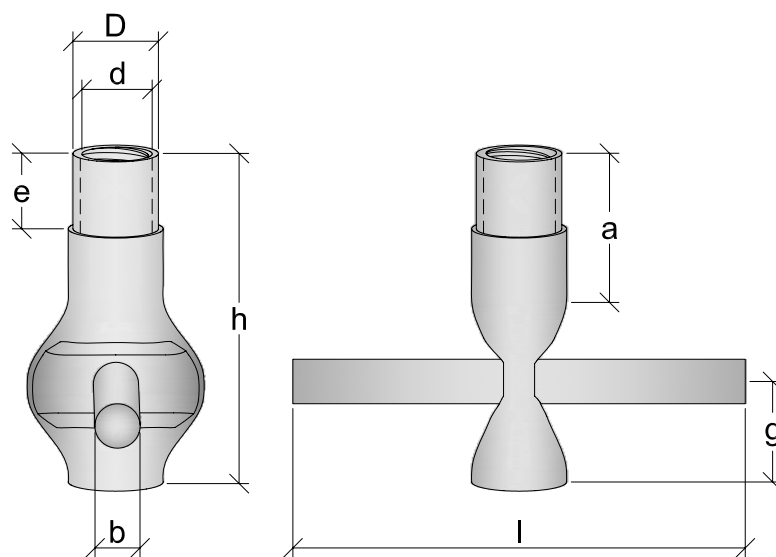
Fixing Socket PVA-H

The fixing sockets are by mean of their low height and the individual fixing possibilities suitable for fastening of pillars and props and for receiving axial forces. The fixing sockets are recommended only for fixings, they are not suitable for lifting. They are mainly used for temporary fixings and applications without structural significance. They are a single point fixing without tolerance and are not recommended where accuracy of fixing position is required or where tolerances cannot be accommodated by other components.

Fixing Socket PVA-H transfer forces directly into the concrete without additional reinforcing steels. Sockets can be used in concrete with a compressive strength $\geq 25 \text{ N/mm}^2$.

There is a metric thread in the socket, which should be greased before the installation into the precast concrete unit.

For fastening to a steel formwork, Magnetic Holders Type HM4 are recommended. Nailing Plates are used to fasten anchors to a wooden formwork. To prevent dirt and concrete from penetrating into the thread of the socket, Protective Caps are used.



Materials:

- zinc-plated or
- stainless steel

Table 1: Fixing Socket PVA-H (zinc-plated)

Article	Maximum working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]	b [mm]	L [mm]	g [mm]
0751	0,10	M6×35	6	35	8.5	6	20	6	50	7
0781	0,20	M8×40	8	40	10.5	6	25	6	50	8
0703Q	0,20	M8×50	8	50	10.5	6	25	6	50	8
0750	0,35	M10×45	10	45	13.5	10	20	6	50	12
0753	0,35	M10×50	10	50	13.5	10	24	6	50	12
0752	0,35	M10×60	10	60	13.5	10	25	6	50	12
0754	0,50	M12×55	12	55	17.0	12	25	10	50	15
0755	0,50	M12×65	12	65	17.0	12	25	10	50	15
0756	0,50	M12×70	12	70	21.3	16	30	10	50	17
0758	1,00	M16×80	16	80	21.3	16	30	10	100	22
0760	1,00	M16×100	16	100	21.3	16	32	10	100	22
0759	1,00	M16×120	16	120	21.3	16	32	10	100	22
0762	1,25	M20×100	20	100	26.9	20	40	13	100	22
0764	1,25	M20×120	20	120	26.9	20	40	13	100	22
0766	1,68	M24×120	24	120	33.7	24	50	17	100	25
0782	2,20	M30×150	30	150	42.0	30	70	22	100	25

Table 2: Fixing Socket PVA-H (stainless steel)

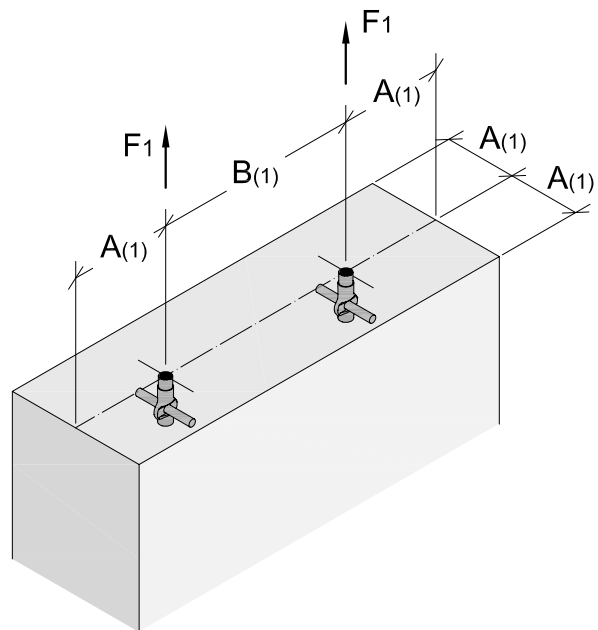
Article	Maximum working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]	b [mm]	L [mm]	g [mm]
0700EQ	0,10	M6×40	6	40	8.5	6	20	6	50	7
0726Q	0,20	M8×40	8	40	10.5	6	25	6	50	8
0723Q	0,20	M8×50	8	50	10.5	6	25	6	50	8
0769	0,35	M10×45	10	45	13.5	10	20	6	50	12
0770	0,50	M12×55	12	55	17.0	12	25	10	50	15
0771	0,50	M12×60	12	65	17.0	12	25	10	50	15
0772	0,50	M12×70	12	70	21.3	16	30	10	50	17
0774	1,00	M16×80	16	80	21.3	16	30	10	100	22
0776	1,00	M16×100	16	100	21.3	16	32	10	100	22
0777	1,00	M16×120	16	120	21.3	16	32	10	100	22
0778	1,25	M20×100	20	100	26.9	20	40	13	100	22
0779	1,25	M20×120	20	120	26.9	20	40	13	100	22
0780	1,68	M24×120	24	120	33.7	24	50	17	100	25

Installation Instructions for Fixing Socket PVA-H

1. Straight pull load

Table 3: Minimal dimensions and permissible loads

Type	F ₁ [kN]	A(1) _{min} [mm]	B(1) _{min} [mm]
M6×35	1	60	120
M8×40	2	60	120
M8×50	2	75	150
M10×45	3,5	75	150
M10×50	3,5	75	150
M10×60	3,5	90	180
M12×55	5	90	180
M12×60	5	90	180
M12×65	5	105	210
M12×70	5	105	210
M16×80	10	120	240
M16×100	10	150	300
M16×120	10	180	360
M20×100	12,5	150	300
M20×120	12,5	180	360
M24×120	16,8	180	360
M30×150	22	225	450

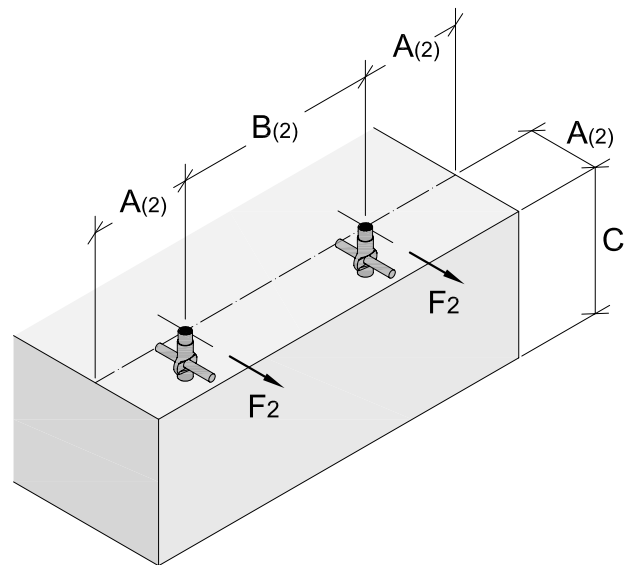


2. Transversal pull load

Table 4: Minimal dimensions and permissible loads

Type	F ₂ [kN]	A(2) _{min} [mm]	B(2) _{min} [mm]	C _{min} * [mm]
M6×35	1	70	140	60
M8×40	2	80	160	65
M8×50	2	100	200	75
M10×45	3,5	90	180	80
M10×50	3,5	100	200	75
M10×60	3,5	120	240	85
M12×55	5	110	220	90
M12×60	5	120	240	85
M12×65	5	130	260	90
M12×70	5	140	280	95
M16×80	10	160	320	105
M16×100	10	200	400	125
M16×120	10	240	480	145
M20×100	12,5	200	400	125
M20×120	12,5	240	480	145
M24×120	16,8	240	480	145
M30×150	22	300	600	175

* - for concrete cover 25mm



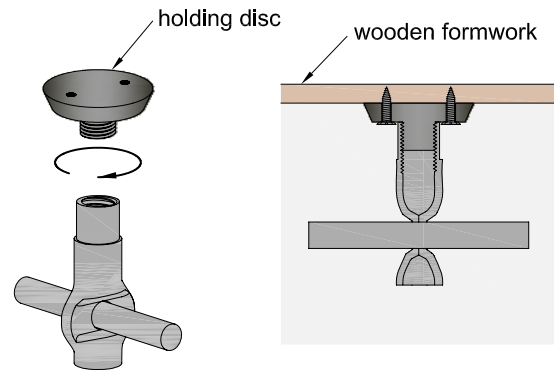
3. Parallel shear pull load (interaction)

The force components should be calculated according to the following formula: $F_1^2 + F_2^2 = F_{adm}^2$

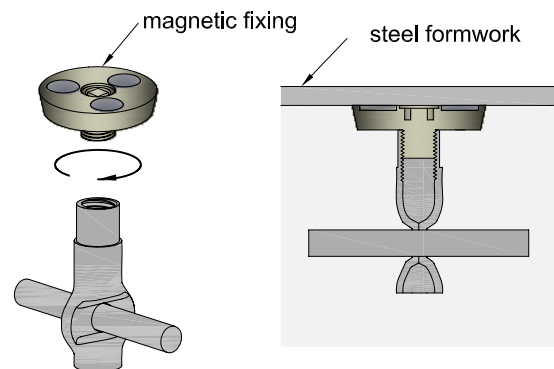
Its means that the same admissible force applies for an angle of inclination from 0° to 90°

4. Accessories of Installation

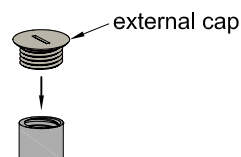
Nailing Plates (for more information, look at brochure “Threaded Lifting System”, page 5) are used when is necessary to fasten sockets to a wooden formwork. They eliminate the possibility of getting concrete or pollution into the sockets.



Magnetic Holder Type HM4 (for more information, look at brochure “Threaded Lifting System”, page 2-4) are used when is necessary to fasten sockets to a steel formwork.

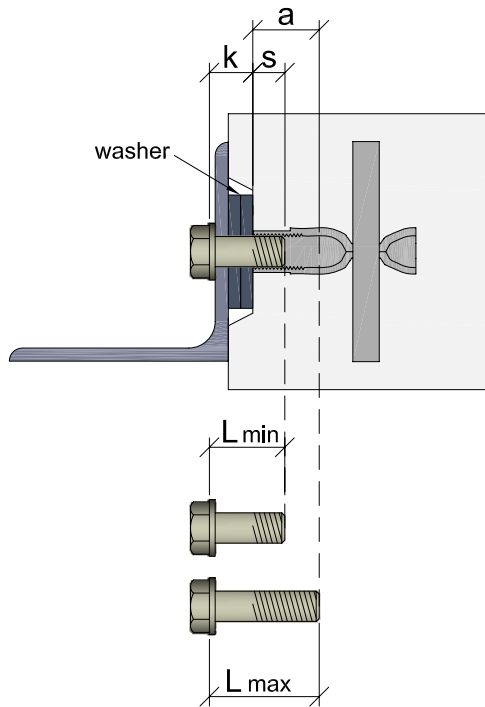


Protective Caps (for more information, look at brochure “Threaded Lifting System”, page 6) are used to seal socket and prevent various substances such as residual concrete, dust, snow etc. from penetrating into the socket, protecting the anchor thread from clogging up.



5. Fixing component

An element is attached to the anchor with a standard metric thread fastening bolt and washer.



For all fixing anchors there is a minimum and a maximum screw-in length. Determining the required bolt length:

$$L_{\min} = s + k$$

$$L_{\max} = a + k$$

k – clamp thickness

s – minimum screw-in length (table 5)

a – maximum screw-in length (table 1)

Table 5: Minimum screw-in length

Thread size	s [mm]	
	with recess* =1.5×d	without recess* =1.2×d
M8	12,0	9,6
M10	15,0	12,0
M12	18,0	14,5
M16	24,0	19,5
M20	30,0	24,0
M24	36,0	29,0

* - fixing anchors in recessed position - secured to the formwork with Nailing Plates or Magnetic Holders

Fixing Socket PVA-NH

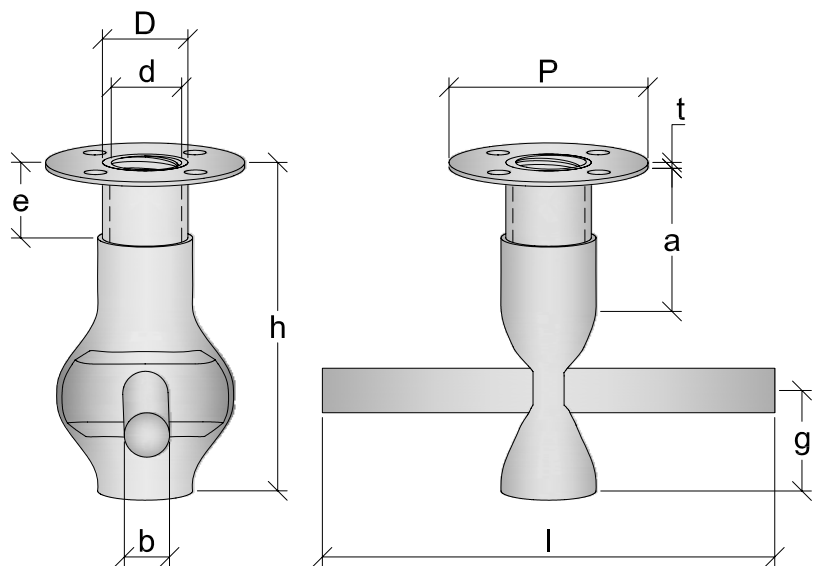
The fixing sockets are by mean of their low height and the individual fixing possibilities suitable for fastening of pillars and props and for receiving axial forces. The fixing sockets are recommended only for fixings, they are not suitable for lifting. They are mainly used for temporary fixings and applications without structural significance.

They are a single point fixing without tolerance and are not recommended where accuracy of fixing position is required or where tolerances cannot be accommodated by other components.

Fixing Socket PVA-NH transfer forces directly into the concrete without additional reinforcing steels. Sockets can be used in concrete with a compressive strength $\geq 25 \text{ N/mm}^2$.

There is a metric thread in the socket, which should be greased before the installation into the precast concrete unit.

Fixing Socket PVA-NH can be simply and efficiently nailed to wooden formwork. To prevent dirt and concrete from penetrating into the thread of the socket, Protective Caps are used.



Materials:

- zinc-plated or
- stainless steel

Table 1: Fixing Socket PVA-NH (zinc-plated)

Article	Max. working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]	P [mm]	t [mm]	L [mm]	b [mm]	g [mm]
0769NP	0,35	M10×45	10	45	13,5	10	20	34	1-2	50	6,2	12
0705NP	0,35	M10×50	10	50	13,5	10	24	34	1-2	50	6,2	12
0752NP	0,35	M10×60	10	60	13,5	10	25	34	1-2	50	6,2	12
0758NP	1,00	M16×80	16	80	21,3	16	30	44	1-2	100	12,2	22
0760NP	1,00	M16×100	16	100	21,3	16	32	44	1-2	100	12,2	22

Table 2: Fixing Socket PVA-NH (stainless steel)

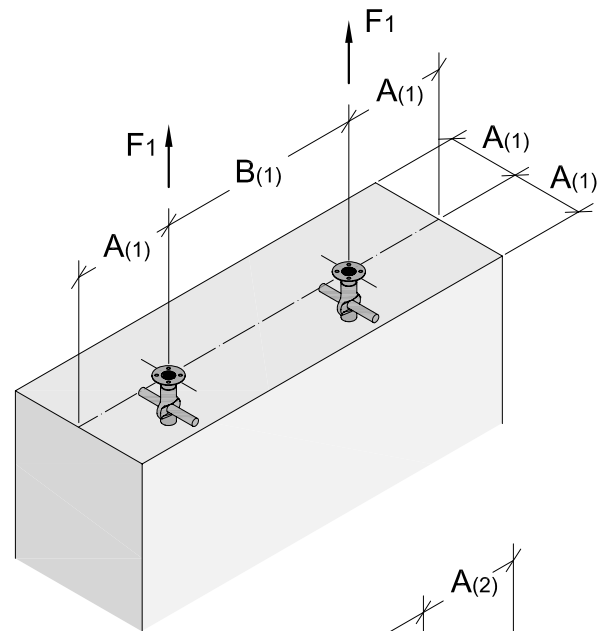
Article	Max. working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]	P [mm]	t [mm]	L [mm]	b [mm]	g [mm]
0769NPE	0,35	M10×45	10	45	13,5	10	20	34	1-2	50	6,2	12
0705NPE	0,35	M10×50	10	50	13,5	10	24	34	1-2	50	6,2	12
0752NPE	0,35	M10×60	10	60	13,5	10	25	34	1-2	50	6,2	12
0758NPE	1,00	M16×80	16	80	21,3	16	30	44	1-2	100	12,2	22
0760NPE	1,00	M16×100	16	100	21,3	16	32	44	1-2	100	12,2	22

Installation Instructions for Fixing Socket PVA-NH

1. Straight pull load

Table 3: Minimal dimensions and permissible loads

Type	F ₁ [kN]	A(1) _{min} [mm]	B(1) _{min} [mm]
M10×45	3,5	75	150
M10×50	3,5	75	150
M10×60	3,5	90	180
M16×80	10	120	240
M16×100	10	150	300

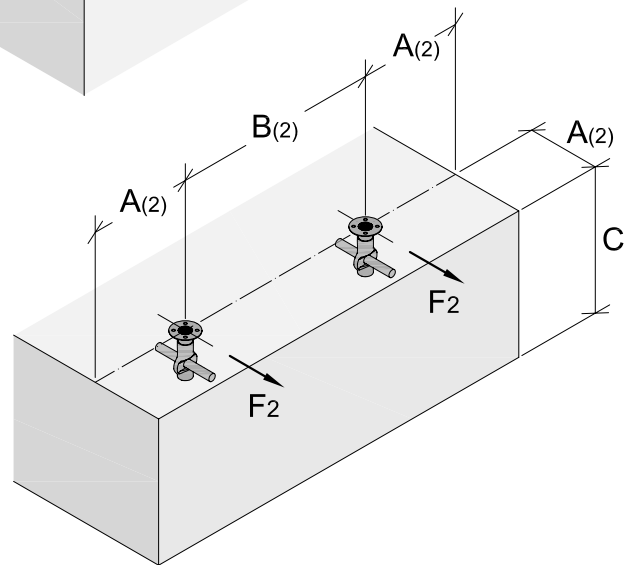


2. Transversal pull load

Table 4: Minimal dimensions and permissible loads

Type	F ₂ [kN]	A(2) _{min} [mm]	B(2) _{min} [mm]	C _{min} * [mm]
M10×45	3,5	90	180	70
M10×50	3,5	100	200	75
M10×60	3,5	120	240	85
M16×80	10	160	320	105
M16×100	10	200	400	125

* - for concrete cover 25mm

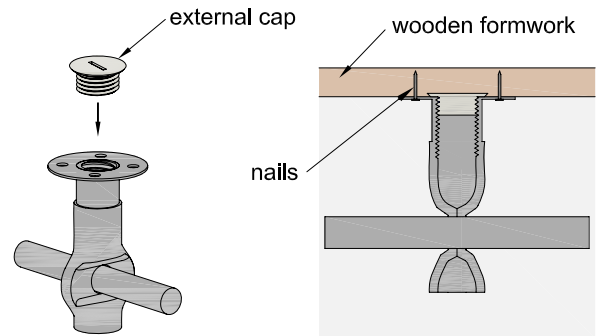


3. Parallel shear pull load (interaction)

The force components should be calculated according to the following formula: $F_1^2 + F_2^2 = F_{adm}^2$
 Its means that the same admissible force applies for an angle of inclination from 0° to 90°

4. Accessories of Installation

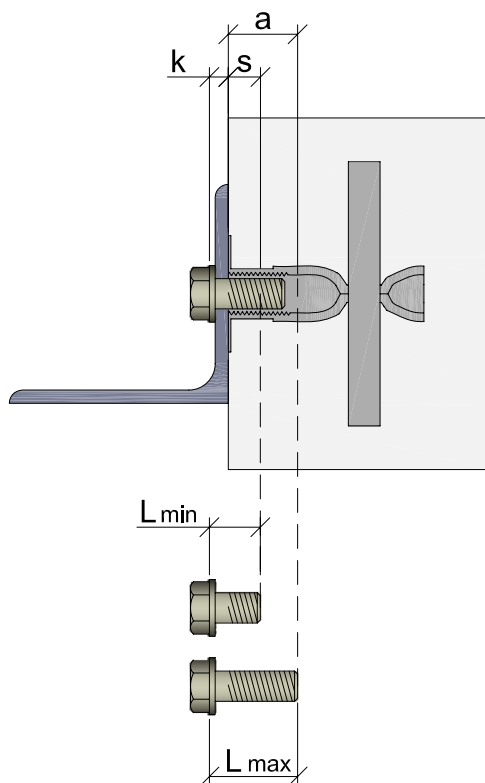
Protective Caps (for more information, look at brochure “Threaded Lifting System”, page 6) are used to seal socket and prevent various substances such as residual concrete, dust, snow etc. from penetrating into the socket, protecting the anchor thread from clogging up.



Through the nailing plate the Socket can be nailed to the formwork

5. Fixing component

An element is attached to the anchor with a standard metric thread fastening bolt and washer.



For all fixing anchors there is a minimum and a maximum screw-in length. Determining the required bolt length:

$$L_{\min} = s + k$$

$$L_{\max} = a + k$$

k – clamp thickness

s – minimum screw-in length (table 5)

a – maximum screw-in length (table 1)

Table 5: Minimum screw-in length

Thread size	s [mm]	
	with recess* =1.5×d	without recess* =1.2×d
M10	15,0	12,0
M16	24,0	19,5

* - fixing anchors in recessed position - secured to the formwork with Nailing Plates or Magnetic Holders

Fixing Socket PVA-T

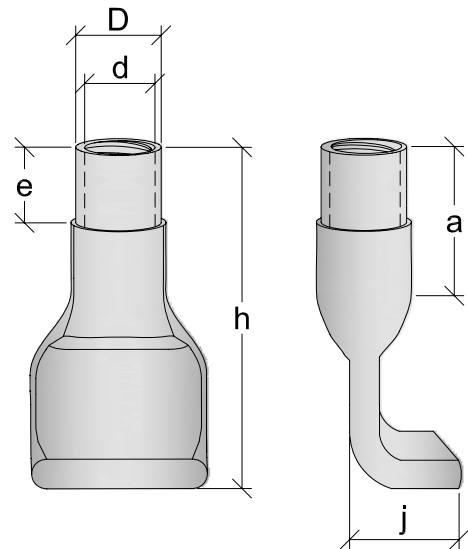
The fixing sockets are by mean of their low height and the individual fixing possibilities suitable for fastening of pillars and props and for receiving axial forces. The fixing sockets are recommended only for fixings, they are not suitable for lifting. They are mainly used for temporary fixings and applications without structural significance.

They are a single point fixing without tolerance and are not recommended where accuracy of fixing position is required or where tolerances cannot be accommodated by other components.

Fixing Socket PVA-T transfer forces directly into the concrete without additional reinforcing steels. Sockets can be used in concrete with a compressive strength $\geq 25 \text{ N/mm}^2$.

There is a metric thread in the socket, which should be greased before the installation into the precast concrete unit.

For fastening to a steel formwork, Magnetic Holders Type HM4 are recommended. Nailing Plates are used to fasten anchors to a wooden formwork. To prevent dirt and concrete from penetrating into the thread of the socket, Protective Caps are used.



Materials:

- zinc-plated or
- stainless steel

Table 1: Fixing Socket PVA-T (zinc-plated)

Article	Maximum working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]	j [mm]
0800	0,20	M8×30	8	30	8.5	6	10	25
0790	0,20	M8×35	8	35	10.5	6	15	25
0801	0,20	M8×50	8	50	10,5	8	25	25
0802	0,30	M10×35	10	35	13.5	10	15	25
0817	0,30	M10×45	10	45	13.5	10	30	25
08171	0,30	M10×60	10	60	13,5	10	30	25
0804	0,40	M12×45	12	45	17,0	12	25	25
0791	0,40	M12×55	12	55	17.0	12	35	25
0804-60	0,40	M12×60	12	60	17.0	12	35	25
0804-70	0,40	M12×70	12	70	17,0	12	40	25
0806	1,0	M16×60	16	60	21,3	16	25	35
0809	1,0	M16×80	16	80	21.3	16	45	35
0808	1,0	M16×90	16	90	21.3	16	45	35
0807	1,0	M16×100	16	100	21,3	16	45	35
0784	1,0	M16×250	16	250	21.3	16	45	35
0820	1,25	M20×70	20	70	26,9	20	30	35
0822	1,25	M20×100	20	100	26,9	20	45	35
0818	1,68	M24×80	24	80	33,7	24	35	40

Table 2: Socket Dowel with Angular End (stainless steel)

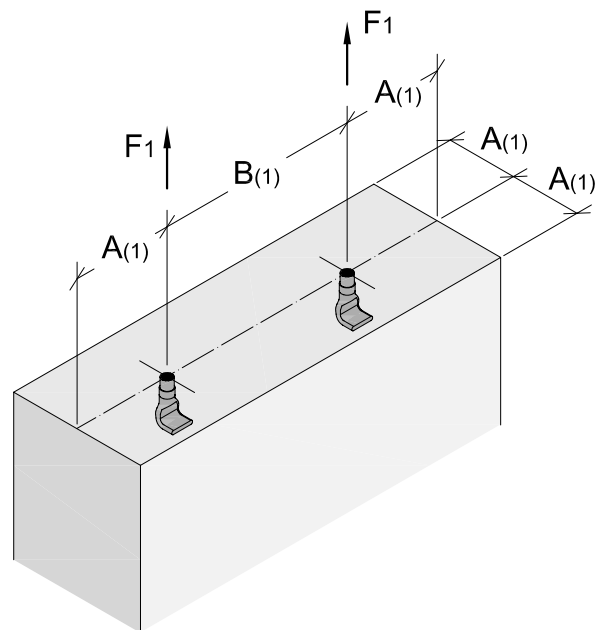
Article	Maximum working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]	j [mm]
0800E	0,20	M8×30	8	30	8.5	6	10	25
0795	0,30	M10×35	10	35	13.5	10	15	25
0804E	0,40	M12×45	12	45	17,0	12	25	25
0810	0,40	M12×70	12	70	17,0	12	40	25
0806E	1,00	M16×60	16	60	21,3	16	25	35
0814	1,00	M16×80	16	80	21.3	16	45	35
0816	1,00	M16×100	16	100	21,3	16	45	35

Installation Instructions for Socket Dowel with Angular End

1. Straight pull load

Table 3: Minimal dimensions and permissible loads

Type	F ₁ [kN]	A(1) _{min} [mm]	B(1) _{min} [mm]
M8×30	2	60	120
M8×35	2	60	120
M8×50	2	75	150
M10×35	3	60	120
M10×45	3	75	150
M10×60	3	90	180
M12×45	4	75	150
M12×55	4	90	180
M12×60	4	90	180
M12×70	4	110	220
M16×60	7	90	180
M16×80	8	120	240
M16×90	9	135	270
M16×100	10	150	300
M16×250	10	375	750
M20×70	8	110	210
M20×100	12,5	150	300
M24×80	12	120	240

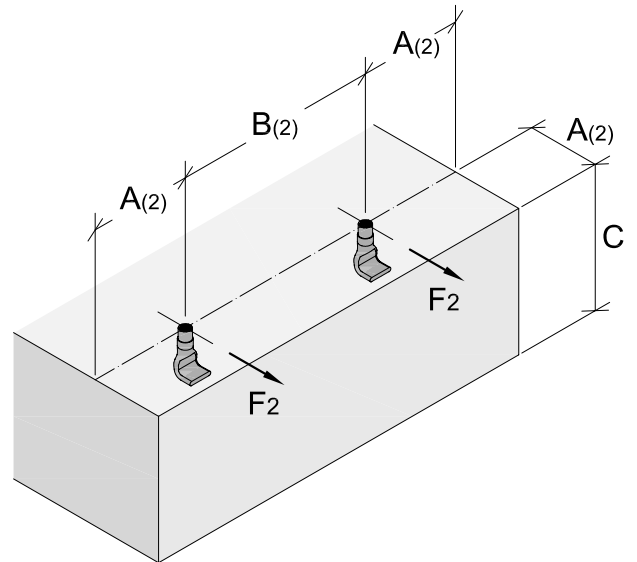


2. Transversal pull load

Table 4: Minimal dimensions and permissible loads

Type	F ₂ [kN]	A(2) _{min} [mm]	B(2) _{min} [mm]	C _{min} * [mm]
M8×30	2	80	160	55
M8×35	2	90	180	60
M8×50	2	125	250	75
M10×35	3	90	180	60
M10×45	3	125	250	70
M10×60	3	150	300	85
M12×45	4	125	250	70
M12×55	4	140	280	80
M12×60	4	150	300	85
M12×70	4	175	350	95
M16×60	10	150	300	85
M16×80	10	200	400	105
M16×90	10	225	450	115
M16×100	10	250	500	125
M16×250	10	625	1250	275
M20×70	12,5	175	350	95
M20×100	12,5	250	500	125
M24×80	16,8	200	400	105

* - for concrete cover 25mm

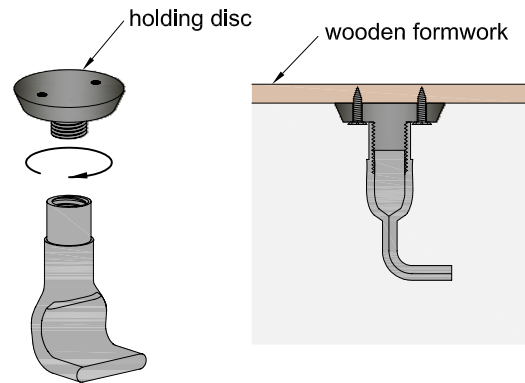


3. Parallel shear pull load (interaction)

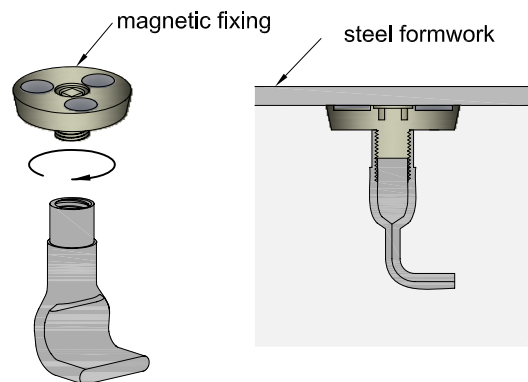
The force components should be calculated according to the following formula: $F_1^2 + F_2^2 = F_{adm}^2$
 Its means that the same admissible force applies for an angle of inclination from 0° to 90°

4. Accessories of Installation

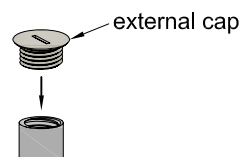
Nailing Plates (for more information, look at brochure “Threaded Lifting System”, page 5) are used when is necessary to fasten sockets to a wooden formwork. They eliminate the possibility of getting concrete or pollution into the sockets.



Magnetic Holder Type HM4 (for more information, look at brochure “Threaded Lifting System”, page 2-4) are used when is necessary to fasten sockets to a steel formwork

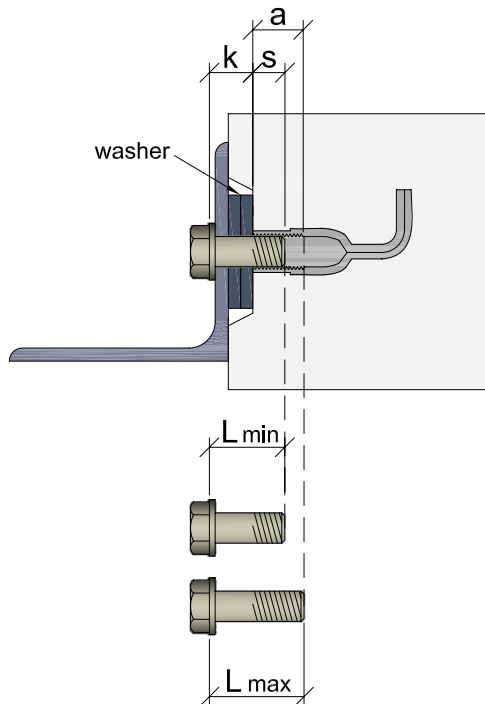


Protective Caps (for more information, look at brochure “Threaded Lifting System”, page 6) are used to seal socket and prevent various substances such as residual concrete, dust, snow etc. from penetrating into the socket, protecting the anchor thread from clogging up.



5. Fixing component

An element is attached to the anchor with a standard metric thread fastening bolt and washer.



For all fixing anchors there is a minimum and a maximum screw-in length. Determining the required bolt length:

$$L_{\min} = s + k$$

$$L_{\max} = a + k$$

k – clamp thickness

s – minimum screw-in length (table 5)

a – maximum screw-in length (table 1)

Table 5: Minimum screw-in length

Thread size	s [mm]	
	with recess* =1.5×d	without recess* =1.2×d
M8	12,0	9,6
M10	15,0	12,0
M12	18,0	14,5
M16	24,0	19,5
M20	30,0	24,0
M24	36,0	29,0

* - fixing anchors in recessed position - secured to the formwork with Nailing Plates or Magnetic Holders

Fixing Socket PVA-W

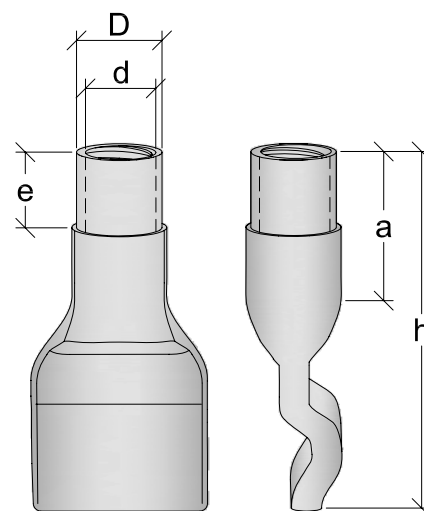
The fixing sockets are by mean of their low height and the individual fixing possibilities suitable for fastening of pillars and props and for receiving axial forces. The fixing sockets are recommended only for fixings, they are not suitable for lifting. They are mainly used for temporary fixings and applications without structural significance.

They are a single point fixing without tolerance and are not recommended where accuracy of fixing position is required or where tolerances cannot be accommodated by other components.

Fixing Socket PVA-W transfer forces directly into the concrete without additional reinforcing steels. Sockets can be used in concrete with a compressive strength $\geq 25 \text{ N/mm}^2$.

There is a metric thread in the socket, which should be greased before the installation into the precast concrete unit.

For fastening to a steel formwork, Magnetic Holders Type HM4 are recommended. Nailing Plates are used to fasten anchors to a wooden formwork. To prevent dirt and concrete from penetrating into the thread of the socket, Protective Caps are used.



Materials:

- zinc-plated or
- stainless steel

Table 1: Fixing Socket PVA-W (zinc-plated)

Article	Maximum working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]
0702W	0,20	M8×40	8	40	10.5	6	25
0703 60W	0,20	M8×60	8	60	10.5	6	25
0703 80W	0,20	M8×80	8	80	10.5	6	25
0710W	0,50	M12×65	12	65	17.0	12	25
0710-1W	0,50	M12×80	12	80	17.0	12	25
0712W	1,00	M16×80	16	80	21.3	16	30
0716W	1,25	M20×100	20	100	26.9	20	40
0720W	1,68	M24×120	24	120	33.7	24	50

Table 2: Fixing Socket PVA-W (stainless steel)

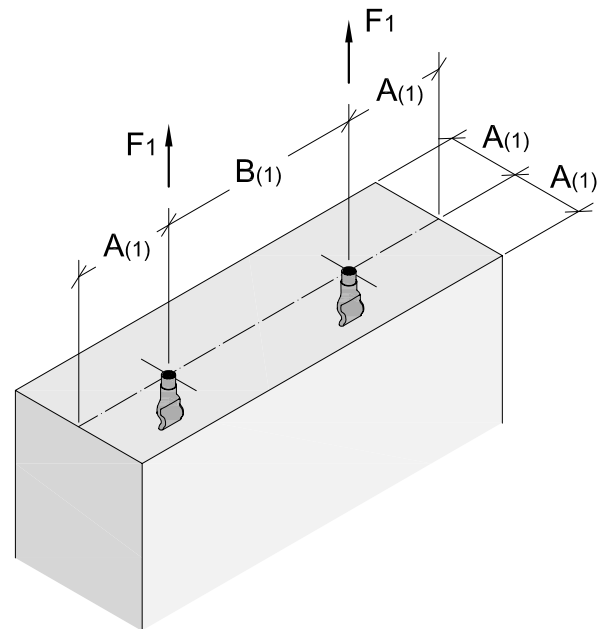
Article	Maximum working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]
0701	0,10	M6×40	6	40	8.5	6	20
0706WE	0,35	M10×60	10	60	17.0	12	25
0731W	0,50	M12×60	12	60	17.0	12	25
0734W	1,00	M16×80	16	80	21.3	16	30
0736W	1,00	M16×100	16	100	21.3	16	32
0738W	1,25	M20×100	20	100	26.9	20	40
0739W	1,68	M24×120	24	120	33.7	24	50

Installation Instructions for Fixing Socket PVA-W

1. Straight pull load

Table 3: Minimal dimensions and permissible loads

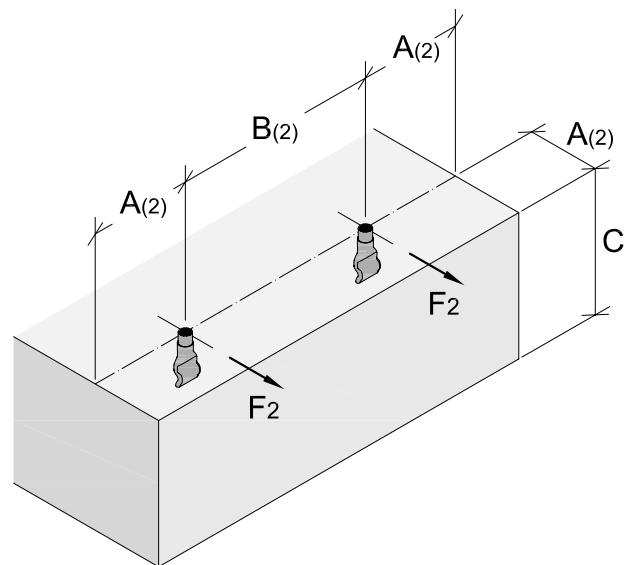
Type	F ₁ [kN]	A(1) _{min} [mm]	B(1) _{min} [mm]
M6×40	1	60	120
M8×40	2	60	120
M8×60	2	90	180
M8×80	2	120	240
M10×60	3,5	90	180
M12×60	5	90	180
M12×65	5	105	210
M12×80	5	120	240
M16×80	10	120	240
M16×100	10	150	300
M20×100	12,5	150	300
M24×120	16,8	180	360



2. Transversal pull load

Table 4: Minimal dimensions and permissible loads

Type	F ₂ [kN]	A(2) _{min} [mm]	B(2) _{min} [mm]	C _{min} [mm]
M6×40	1	100	200	65
M8×40	2	100	200	65
M8×60	2	150	300	85
M8×80	2	200	400	105
M10×60	3,5	150	300	85
M12×60	5	150	300	85
M12×65	5	170	340	90
M12×80	5	200	400	105
M16×80	10	200	400	105
M16×100	10	250	500	125
M20×100	12,5	250	500	125
M24×120	16,8	300	600	145



* - for concrete cover 25mm

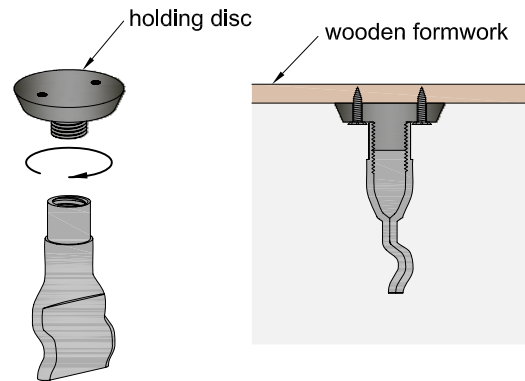
3. Parallel shear pull load (interaction)

The force components should be calculated according to the following formula: $F_1^2 + F_2^2 = F_{adm}^2$

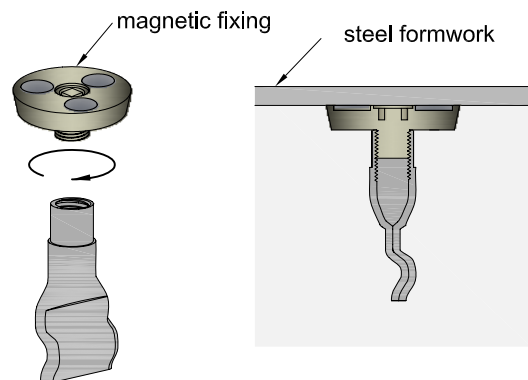
Its means that the same admissible force applies for an angle of inclination from 0° to 90°

4. Accessories of Installation

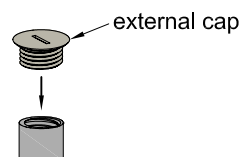
Nailing Plates (for more information, look at brochure “Threaded Lifting System”, page 5) are used when is necessary to fasten sockets to a wooden formwork. They eliminate the possibility of getting concrete or pollution into the sockets.



Magnetic Holder Type HM4 (for more information, look at brochure “Threaded Lifting System”, page 2-4) are used when is necessary to fasten sockets to a steel formwork.

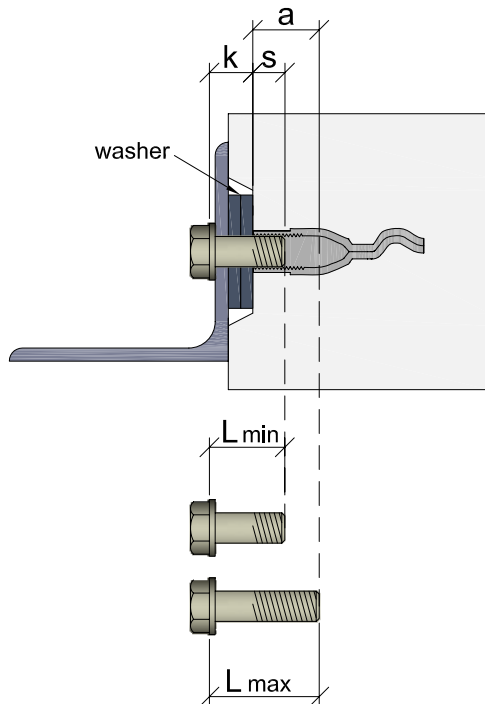


Protective Caps (for more information, look at brochure “Threaded Lifting System”, page 6) are used to seal socket and prevent various substances such as residual concrete, dust, snow etc. from penetrating into the socket, protecting the anchor thread from clogging up.



5. Fixing component

An element is attached to the anchor with a standard metric thread fastening bolt and washer.



For all fixing anchors there is a minimum and a maximum screw-in length. Determining the required bolt length:

$$L_{\min} = s + k$$

$$L_{\max} = a + k$$

k – clamp thickness

s – minimum screw-in length (table 5)

a – maximum screw-in length (table 1)

Table 5: Minimum screw-in length

Thread size	s [mm]	
	with recess* =1.5×d	without recess* =1.2×d
M8	12,0	9,6
M10	15,0	12,0
M12	18,0	14,5
M16	24,0	19,5
M20	30,0	24,0
M24	36,0	29,0

* - fixing anchors in recessed position - secured to the formwork with Nailing Plates or Magnetic Holders

Fixing Socket PVA-WN

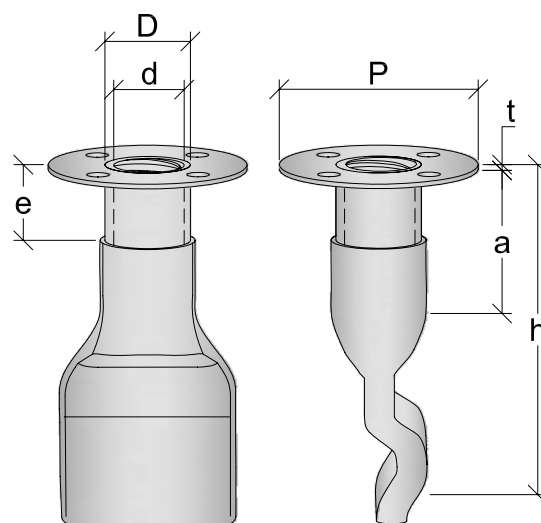
The fixing sockets are by mean of their low height and the individual fixing possibilities suitable for fastening of pillars and props and for receiving axial forces. The fixing sockets are recommended only for fixings, they are not suitable for lifting. They are mainly used for temporary fixings and applications without structural significance.

They are a single point fixing without tolerance and are not recommended where accuracy of fixing position is required or where tolerances cannot be accommodated by other components.

Fixing Socket PVA-WN transfer forces directly into the concrete without additional reinforcing steels. Sockets can be used in concrete with a compressive strength ≥ 25 N/mm².

There is a metric thread in the socket, which should be greased before the installation into the precast concrete unit.

Fixing Socket PVA-WN can be simply and efficiently nailed to wooden formwork. To prevent dirt and concrete from penetrating into the thread of the socket, Protective Caps are used.



Materials:

- zinc-plated or
- stainless steel

Table 1: Fixing Socket PVA-WN (zinc-plated)

Article	Maximum working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]	P [mm]	t [mm]
0702W	0,20	M8×40	8	40	10,5	6	25	34	1-2
0706W	0,35	M10×60	10	60	13,5	10	25	34	1-2
0731W	0,50	M12×60	12	60	17,0	12	25	40	1-2
0710W	0,50	M12×65	16	65	17,0	16	30	40	1-2
0712W	1,00	M16×80	16	80	21,3	16	30	44	1-2
0736W	1,00	M16×100	16	100	21,3	16	32	44	1-2
0716W	1,25	M20×100	20	100	36,9	20	40	48	1-2
0720W	1,68	M24×120	24	120	33,7	24	50	57	1-2

Table 2: Fixing Socket PVA-WN (stainless steel)

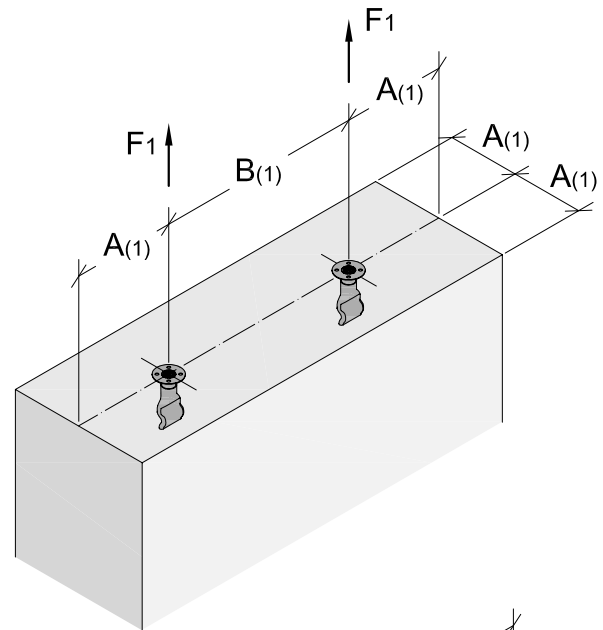
Article	Maximum working load [t]	Type	d [mm]	h [mm]	D [mm]	e [mm]	a [mm]	P [mm]	t [mm]
0702WE	0,20	M8×40	8	40	10,5	6	25	34	1-2
0706WE	0,35	M10×60	10	60	13,5	10	25	34	1-2
0731WE	0,50	M12×60	12	60	17,0	12	25	40	1-2
0710WE	0,50	M12×65	16	65	17,0	16	30	40	1-2
0712WE	1,00	M16×80	16	80	21,3	16	30	44	1-2
0736WE	1,00	M16×100	16	100	21,3	16	32	44	1-2
0716WE	1,25	M20×100	20	100	36,9	20	40	48	1-2
0720WE	1,68	M24×120	24	120	33,7	24	50	57	1-2

Installation Instructions for Fixing Socket PVA-WN

1. Straight pull load

Table 3: Minimal dimensions and permissible loads

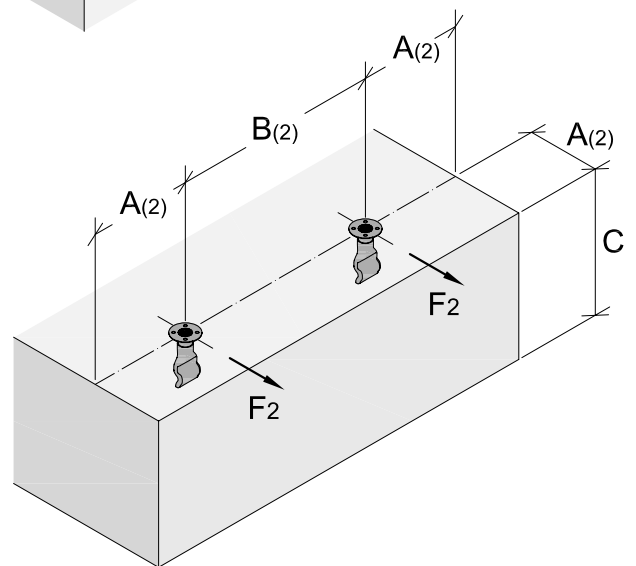
Type	F ₁ [kN]	A(1) _{min} [mm]	B(1) _{min} [mm]
M8×40	2	60	120
M10×60	3,5	90	180
M12×60	5	90	180
M12×65	5	110	220
M16×80	10	120	240
M16×100	10	150	300
M20×100	12,5	150	300
M24×120	16,8	180	360



2. Transversal pull load

Table 4: Minimal dimensions and permissible loads

Type	F ₂ [kN]	A(2) _{min} [mm]	B(2) _{min} [mm]	C _{min} [mm]
M8×40	2	100	200	65
M10×60	3,5	150	300	85
M12×60	5	150	300	85
M12×65	5	170	340	90
M16×80	10	200	400	105
M16×100	10	250	500	125
M20×100	12,5	250	500	125
M24×120	16,8	300	600	145



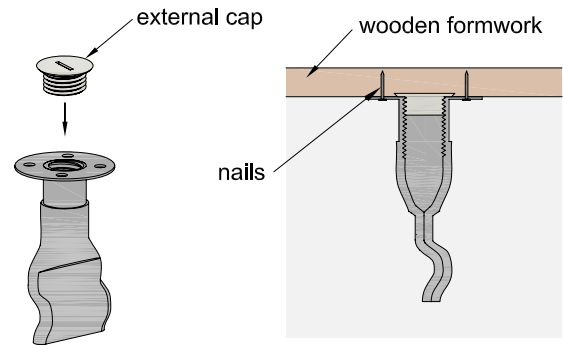
* - for concrete cover 25mm

3. Parallel shear pull load (interaction)

The force components should be calculated according to the following formula: $F_1^2 + F_2^2 = F_{adm}^2$
 Its means that the same admissible force applies for an angle of inclination from 0° to 90°

4. Accessories of Installation

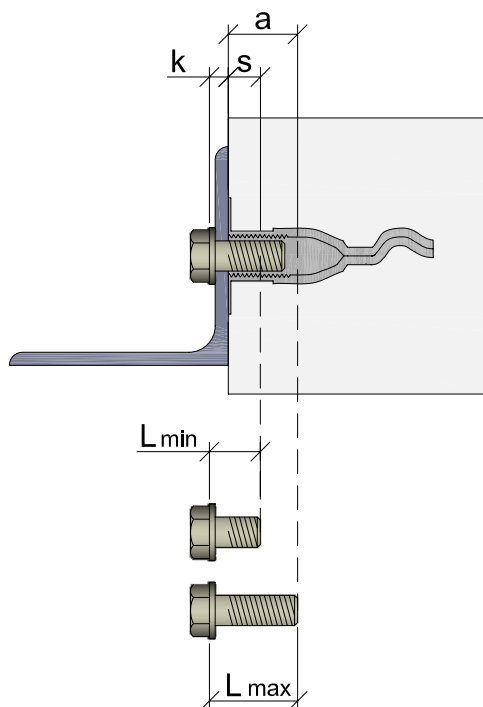
Protective Caps (for more information, look at brochure “Threaded Lifting System”, page 6) are used to seal socket and prevent various substances such as residual concrete, dust, snow etc. from penetrating into the socket, protecting the anchor thread from clogging up.



Through the nailing plate the Socket can be nailed to the formwork

5. Fixing component

An element is attached to the anchor with a standard metric thread fastening bolt and washer.



For all fixing anchors there is a minimum and a maximum screw-in length. Determining the required bolt length:

$$L_{\min} = s + k$$

$$L_{\max} = a + k$$

k – clamp thickness

s – minimum screw-in length (table 5)

a – maximum screw-in length (table 1)

Table 5: Minimum screw-in length

Thread size	s [mm]	
	with recess* =1.5×d	without recess* =1.2×d
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M20	30,0	24,0
M24	36,0	29,0

* - fixing anchors in recessed position - secured to the formwork with Nailing Plates or Magnetic Holders