



PFEIFER

**Dimensioning tables
(for) lifting anchors**



Table of content

The suitable anchor for every component	4	Dimensioning table	
Component recommendations		Threaded anchors for stairs	18
Anchors	4	Allround anchor short	18
Threaded anchor system	6	Basics	19
Possible combinations of Threaded anchor system	7	Minimum dimensions and distances	20
Anchors → Lifting device →		Spherical head anchor system	21
Accessories	7	Dimensioning tables	
Formwork fixing → Fixing type →		Spherical head anchors	22
Lifting device	8	WK anchor, WK bar anchor	22
Formwork fixing →		DR Anchor	23
Recess cover (lock)	9	Basics	24
Dimensioning table		Minimum dimensions and spacing	25
Threaded anchors	10	Wire loop anchor system	27
Allround anchor, Waved anchor,		Dimensioning table	
Bar anchor, Flat steel anchor,		for BS anchors	28
Screw anchor, Sleeve (anchor sleeve)	10	BS Anchor	28
Basics	11	Basics	29
Minimum dimensions and spacing	12	Minimum dimensions and spacing	30

Additionally to these dimensioning tables, the currently valid product installation instructions must be taken into account.

Lifting

Threaded anchor system p. 6

The Threaded anchor system consists of lifting anchors and lifting devices as anchoring points as well as an extensive range of accessories. The components are screwed together. The system is suitable for transporting a wide variety of precast concrete elements.

Spherical head anchor system p. 19

The main focus of the Spherical head anchor system for transporting precast concrete parts is on applications where the speed of the anchoring process is crucial. By threading the slotted groove of the lifting device into the anchor head protruding from the concrete, a component can be attached easily and quickly.

Wire loop anchor system p. 25

When heavy loads need to be transported cost-effectively, the Wire loop anchor system is the ideal solution. The system offers anchors with load capacities of up to 990 kN (99 t) per anchor. This allows even the heaviest bridge elements and trusses to be transported and moved economically.

Note:

If you have any questions about the dimensioning tables, please contact the PFEIFER technical support on +49 8331 937 345.

The information provided applies only and exclusively to the **PFEIFER products** described. Mixing or transfer to another product or manufacturer is not possible.

- **ATTENTION:** Products of competitors with similar designations, may appear comparable, but with lower load capacities. Hazard potential!

The suitable anchor for every component

Component recommendations Anchors

Anchor	Component					
	Precast-wall ¹⁾	L-wall	Ceiling/slab	TT slab	Foundation	Balcony
Allround anchor long	✓		✓	✓		
Allround anchor short			✓		✓	✓
Waved anchor long	✓		✓	✓		✓
Waved anchor short			✓		✓	
Bar anchor	✓		✓			✓
Sleeve (anchor sleeve)	✓		✓			
Flat steel anchor			✓		✓	✓
Bolt anchor		✓	✓		✓	✓
DR anchor	✓		✓		✓	✓
WK anchor long	✓			✓		
WK anchor short			✓		✓	✓
WK bar anchor	✓					
BS Anchor	✓		✓	✓	✓	

¹⁾ FT = precast concrete element



Note: These are component recommendations only!
Other combinations may also be possible!

Bauteil						Anchor
Stairs/ Grand-stand	Beams/ Truss/joist	Support/ bar compo- nent	Pipe/tank	Shaft/ Shell- segment	Room cell/ garage	
✓	✓					Allround anchor long
✓						Allround anchor short
✓	✓	✓			✓	Waved anchor long
		✓				Waved anchor short
✓	✓	✓		✓	✓	Bar anchor
✓					✓	Sleeve (anchor sleeve)
						Flat steel anchor
✓						Bolt anchor
			✓			DR anchor
	✓	✓				WK anchor long
		✓				WK anchor short
		✓			✓	WK bar anchor
✓	✓					BS Anchor

Threaded anchor system

The Threaded anchor system consists of various lifting anchors for installation in precast concrete elements and the corresponding lifting devices. Anchors and lifting devices are simply screwed together and guarantee a safe and technically qualified anchorage point on the component.

Your advantages

- ▶ Load capacities from 5 kN (0.5 t) to 220 kN (22 t)
- ▶ A solution for every application
- ▶ Robust round thread
- ▶ Colour coding
- ▶ Extensive range of accessories

Guideline

- ▶ According to VDI BV-BS 6205 in interpretation of the EC Machinery Directive 2006/42/EC and EN 13155
- ▶ Safe work equipment in the sense of the Occupational Safety and Health Act According to the Industrial safety regulations



Further information is available at
www.pfeifer.info/thread-system

Possible combinations Threaded anchor system

Anchor → Lifting device → Accessories

		Anchor							
		Allround anchor long Rd12-Rd52	Allround anchor short Rd30-Rd52	Waved anchor long Rd12-Rd60	Waved anchor short Rd12-Rd42	Bar anchor Rd12-Rd52	Sleeve (anchor sleeve) Rd12-Rd52	Flat steel anchor Rd12-Rd52	Bolt anchor Rd12-Rd30
Lifting device	Lifting loop eye 0°-45° Rd12-Rd52	✓	✓	✓	✓	✓	✓	✓	✓
	Lifting loop 0°-30° Rd24/Rd30/Rd36/Rd42/Rd52	✓	✓	✓	✓	✓	✓	✓	✓
	Flared lifting loop 0°-90° Rd12/Rd16/Rd20/Rd24/Rd30/Rd36	✓	✓	✓	✓	✓	✓	✓	✓
	Special lifting loop 0°-90° Rd12-Rd60	✓	✓	✓	✓	✓	✓	✓	✓
	Swivel eye 0°-90° Rd12-Rd60	✓	✓	✓	✓	✓	✓	✓	✓
Accessories	Nail plate M12-M52	✓	✓	✓	✓	✓		✓	✓
	Nail plate for swivel eye M36-M52	✓	✓	✓	✓	✓		✓	✓
	Fixing screw flat M12-M52	✓	✓	✓	✓	✓	✓	✓	✓
	Fixing screw medium M12-M52	✓	✓	✓	✓	✓	✓	✓	✓
	Fixing screw deep M12-M52	✓	✓	✓	✓	✓	✓	✓	✓
	Fixing screw without head M12-M60	✓	✓	✓	✓	✓	✓	✓	✓
	Recess plate plastic M12-M52	✓	✓	✓	✓	✓	✓	✓	✓
	Recess plate steel M12-M52	✓	✓	✓	✓	✓	✓	✓	✓
	Magnetic plate M12-M36	✓	✓	✓	✓	✓	✓	✓	✓
	Adapter Rd/M12-Rd60	✓	✓	✓	✓	✓	✓	✓	✓
	Data clip Rd12-Rd60	✓	✓	✓	✓	✓	✓	✓	✓
Retworking screw Rd12-Rd60	✓	✓	✓	✓	✓	✓	✓	✓	

Formwork fixing → Type of fixing → Lifting device

		Type of fixing to the formwork					Lifting device				
		Screw-on through hole using fixing screw/M-screw Formwork material: wood, plastic, steel	Screwing on without drilling using self-tapping screw Formwork material: wood, plastic	Nailing Formwork material: wood, plastic	Gluing on Formwork material: wood, plastic, steel	Magnetic Shuttering material: steel	Lifting loop eye 0°-45° Rd12-52	Lifting loop 0°-30° Rd24/Rd30/Rd36/Rd42/Rd52	Flared lifting loop 0°-90° 0°-90° Rd12/Rd16/Rd20/Rd24/Rd30/Rd36	Special lifting loop 0°-90° Rd12-Rd60	Swivel eye 0°-90° Rd12-Rd60
Shuttering attachment to anchor	Fastening screw without head M12-M60 - flush with surface -	✓					✓	✓	✓	✓	✓
	Fixing screw flat M12-M52 - recessed -	✓					✓	✓	✓		
	Fixing screw medium M12-M52 - recessed -	✓					✓	✓	✓		
	Fixing screw deep M12-M52 - recessed -	✓					✓	✓			
	Recessed plate plastic for M12-M36 in combination with fixing screw medium - recessed - recess plate plastic	✓	✓	✓	✓		✓	✓	✓	✓	✓
	Recess plate plastic for M42/M52 in combination with fastening screw medium - recessed - recess plate steel	✓	✓	✓	✓		✓	✓		✓	✓
	Recess plate steel for M12-M36 in combination with fastening screw medium - recessed - recess plate steel	✓	✓	✓			✓	✓	✓	✓	✓
	Recess plate steel for M42/M52 in combination with fastening screw medium - recessed -	✓	✓	✓			✓	✓		✓	✓
	Magnetic plate M12-M36 - recessed -					✓	✓	✓	✓	✓	✓
	Nail plate M12/M16/M20/M24/M30 - recessed -		✓	✓	✓		✓	✓	✓	Rd12, Rd16	Rd12
	Nail plate M36-M52 - recessed -		✓	✓	✓		✓	✓	✓		
	Nail plate for swivel eye M36 - recessed -		✓	✓	✓		✓	✓	✓	✓	✓
	Nail plate for swive eye M42/M52 - recessed -		✓	✓	✓		✓	✓		✓	✓

Formwork fastening → Recess fastener

		Recess fastener										
		External cap small Plastic	Cover cap flat stainless steel	Cover cap medium Concrete	Cover cap medium Stainless steel	Cover cap deep stainless steel	External cap large plastic	Cover plate concrete large Concrete	Cover plate concrete large stainless steel	Cover plate Concrete	Cover plate stainless steel	
Formwork fixing to anchor	Fixing screw without head M12-M60 – flush with the surface –	✓										
	Fixing screw flat M12-M52 – recessed –	✓	✓									
	Fixing screw medium M12-M52 – recessed –	✓		✓	✓							
	Fixing screw deep M12-M52 – recessed –	✓				✓						
	Recessed plate plastic for M12-M36 in combination with fastening screw medium	✓	✓				✓	✓	✓			
	Recess plate plastic for M42/M52 in combination with fixing screw medium	✓	✓					✓	✓			
	Recess plate steel for M12-M36 in combination with fastening screw medium – recessed –	✓	✓				✓	✓	✓			
	Recess plate steel for M42/M52 in combination with fastening screw medium – recessed – Magnetic plate	✓	✓					✓	✓			
	Magnetic plate M12-M36 – recessed –	✓	✓				✓	✓	✓			
	Nail plate M12/M16/M20/M24/M30 – recessed –	✓	✓							✓	✓	
	Nail plate M36-M52 – recessed –	✓	✓	✓	✓							
	Nail plate for swivel eye M36 – recessed –	✓	✓				✓	✓	✓			
	Nail plate for swivel eye M42/M52 – recessed –	✓	✓					✓	✓			

Dimensioning table threaded anchors



Allround anchor, Waved anchor, Bar anchor, Flat steel anchor, Bolt anchor, Sleeve (anchor sleeve)

If the installation situation differs, the calculation method according to the general design principles for lifting anchors can be used for an individual anchor design.

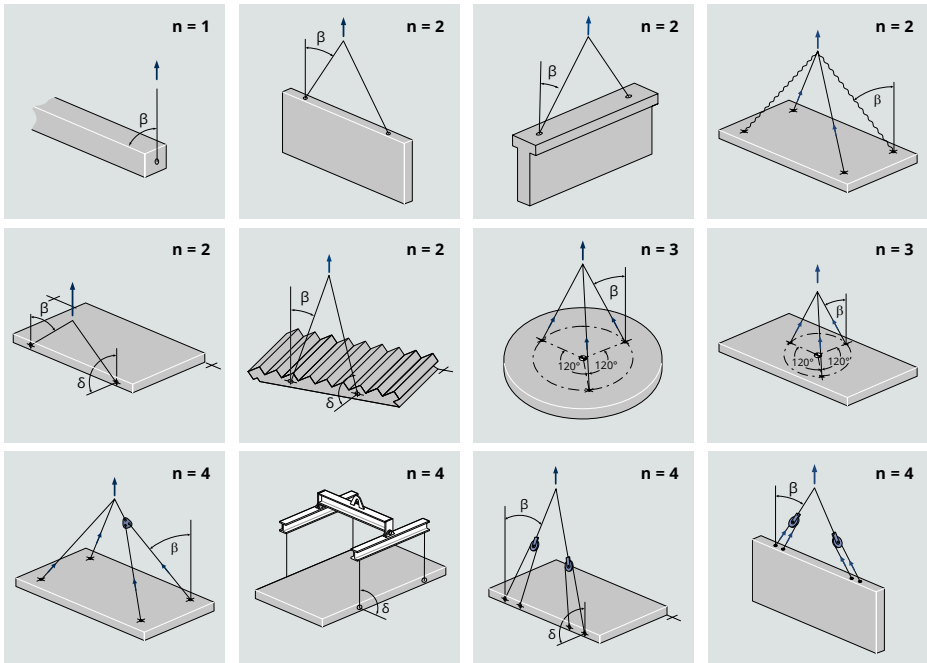
Load angle ^{a2)} →	↓ Number of load-bearing anchors „n“ ↓											
	n = 1	n = 2				n = 3			n = 4			
	$\beta \leq 90^\circ$	$\beta \leq 12,5^\circ$	$\beta \leq 30^\circ$	$\beta \leq 45^\circ$	$\beta \leq 30^\circ$ $\delta \leq 90^\circ$ ¹⁾	$\beta \leq 12,5^\circ$	$\beta \leq 30^\circ$	$\beta \leq 45^\circ$	$\beta \leq 12,5^\circ$	$\beta \leq 30^\circ$	$\beta \leq 45^\circ$	$\beta \leq 30^\circ$ $\delta \leq 90^\circ$ ¹⁾
↓ Component weight [t] ↓	↓ Anchor size ↓											
1,0	Rd 20	Rd 16	Rd 16	Rd 16	Rd 16	Rd 12	Rd 12	Rd 16	Rd 12	Rd 12	Rd 12	Rd 12
1,5	Rd 20	Rd 16	Rd 16	Rd 20	Rd 16	Rd 16	Rd 16	Rd 16	Rd 12	Rd 16	Rd 16	Rd 16
2,0	Rd 30	Rd 20	Rd 20	Rd 20	Rd 20	Rd 16	Rd 16	Rd 20	Rd 16	Rd 16	Rd 16	Rd 16
2,5	Rd 30	Rd 20	Rd 20	Rd 24	Rd 20	Rd 16	Rd 20	Rd 20	Rd 16	Rd 16	Rd 16	Rd 16
3,0	Rd 30	Rd 20	Rd 24	Rd 30	Rd 24	Rd 20	Rd 20	Rd 20	Rd 16	Rd 16	Rd 20	Rd 16
3,5	Rd 36	Rd 24	Rd 30	Rd 30	Rd 30	Rd 20	Rd 24	Rd 24	Rd 16	Rd 20	Rd 20	Rd 20
4,0	Rd 36	Rd 30	Rd 30	Rd 30	Rd 30	Rd 20	Rd 24	Rd 30	Rd 20	Rd 20	Rd 20	Rd 20
4,5	Rd 36	Rd 30	Rd 30	Rd 36	Rd 30	Rd 20	Rd 24	Rd 30	Rd 20	Rd 20	Rd 24	Rd 20
5,0	Rd 42	Rd 30	Rd 30	Rd 36	Rd 30	Rd 24	Rd 30	Rd 30	Rd 20	Rd 20	Rd 24	Rd 20
5,5	Rd 42	Rd 30	Rd 36	Rd 36	Rd 36	Rd 24	Rd 30	Rd 30	Rd 20	Rd 24	Rd 30	Rd 24
6,0	Rd 42	Rd 30	Rd 36	Rd 36	Rd 36	Rd 30	Rd 30	Rd 30	Rd 20	Rd 24	Rd 30	Rd 24
6,5	Rd 52	Rd 36	Rd 36	Rd 36	Rd 36	Rd 30	Rd 30	Rd 30	Rd 24	Rd 24	Rd 30	Rd 24
7,0	Rd 52	Rd 36	Rd 36	Rd 42	Rd 36	Rd 30	Rd 30	Rd 36	Rd 24	Rd 30	Rd 30	Rd 30
7,5	Rd 52	Rd 36	Rd 36	Rd 42	Rd 36	Rd 30	Rd 30	Rd 36	Rd 24	Rd 30	Rd 30	Rd 30
8,0	Rd 52	Rd 36	Rd 36	Rd 42	Rd 36	Rd 30	Rd 36	Rd 36	Rd 30	Rd 30	Rd 30	Rd 30
8,5	Rd 52	Rd 36	Rd 42	Rd 42	Rd 42	Rd 30	Rd 36	Rd 36	Rd 30	Rd 30	Rd 30	Rd 30
9,0	Rd 52	Rd 36	Rd 42	Rd 52	Rd 42	Rd 30	Rd 36	Rd 36	Rd 30	Rd 30	Rd 36	Rd 30
9,5	Rd 52	Rd 42	Rd 42	Rd 52	Rd 42	Rd 36	Rd 36	Rd 36	Rd 30	Rd 30	Rd 36	Rd 30
10,0		Rd 42	Rd 42	Rd 52	Rd 42	Rd 36	Rd 36	Rd 36	Rd 30	Rd 30	Rd 36	Rd 30
10,5		Rd 42	Rd 42	Rd 52	Rd 42	Rd 36	Rd 36	Rd 42	Rd 30	Rd 30	Rd 36	Rd 30
11,0		Rd 42	Rd 52	Rd 52	Rd 52	Rd 36	Rd 36	Rd 42	Rd 30	Rd 36	Rd 36	Rd 36
11,5		Rd 42	Rd 52	Rd 52	Rd 52	Rd 36	Rd 36	Rd 42	Rd 30	Rd 36	Rd 36	Rd 36
12,0		Rd 42	Rd 52	Rd 52	Rd 52	Rd 36	Rd 36	Rd 42	Rd 30	Rd 36	Rd 36	Rd 36
12,5		Rd 52	Rd 52	Rd 52	Rd 52	Rd 36	Rd 36	Rd 42	Rd 36	Rd 36	Rd 36	Rd 36
13,0		Rd 52	Rd 52	Rd 52	Rd 52	Rd 36	Rd 42	Rd 42	Rd 36	Rd 36	Rd 36	Rd 36
13,5		Rd 52	Rd 52	Rd 52	Rd 52	Rd 36	Rd 42	Rd 52	Rd 36	Rd 36	Rd 36	Rd 36
14,0		Rd 52	Rd 52	-	Rd 52	Rd 36	Rd 42	Rd 52	Rd 36	Rd 36	Rd 42	Rd 36
14,5		Rd 52	Rd 52	-	Rd 52	Rd 42	Rd 42	Rd 52	Rd 36	Rd 36	Rd 42	Rd 36
15,0		Rd 52	Rd 52	-	Rd 52	Rd 42	Rd 42	Rd 52	Rd 36	Rd 36	Rd 42	Rd 36
15,5		Rd 52	Rd 52	-	Rd 52	Rd 42	Rd 42	Rd 52	Rd 36	Rd 36	Rd 42	Rd 36
16,0		Rd 52	Rd 52	-	Rd 52	Rd 42	Rd 52	Rd 52	Rd 36	Rd 36	Rd 42	Rd 36
16,5		Rd 52	Rd 52	-	Rd 52	Rd 42	Rd 52	Rd 52	Rd 36	Rd 36	Rd 42	Rd 36
17,0		Rd 52	-	-	-	Rd 42	Rd 52	Rd 52	Rd 36	Rd 42	Rd 42	Rd 42
17,5		Rd 52	-	-	-	Rd 42	Rd 52	Rd 52	Rd 36	Rd 42	Rd 52	Rd 42
18,0		Rd 52	-	-	-	Rd 42	Rd 52	Rd 52	Rd 36	Rd 42	Rd 52	Rd 42
18,5		Rd 52	-	-	-	Rd 52	Rd 52	Rd 52	Rd 36	Rd 42	Rd 52	Rd 42
19,0		Rd 56	-	-	-	Rd 52	Rd 52	Rd 52	Rd 42	Rd 42	Rd 52	Rd 42
19,5		Rd 56	-	-	-	Rd 52	Rd 52	Rd 52	Rd 42	Rd 42	Rd 52	Rd 42
20,0		Rd 56	-	-	-	Rd 52	Rd 52	Rd 52	Rd 42	Rd 42	Rd 52	Rd 42
20,5		Rd 56	-	-	-	Rd 52	-	-	Rd 42	-	-	-
21,0		Rd 56	-	-	-	Rd 52	-	-	Rd 42	-	-	-
21,5		Rd 56	-	-	-	Rd 52	-	-	Rd 42	-	-	-
22,0		Rd 56	-	-	-	Rd 52	-	-	Rd 42	-	-	-
22,5		Rd 56	-	-	-	Rd 52	-	-	Rd 42	-	-	-
23,0		Rd 60	-	-	-	Rd 52	-	-	Rd 42	-	-	-
30,0		Rd 60	-	-	-	Rd 56	-	-	Rd 52	-	-	-

¹⁾ Laying down/lifting up with ground contact

²⁾ Rd 56/Rd 60 with inclined pull > 12.5° → Contact us at 08331/937-345 or support-bt@pfeifer.de

Basics

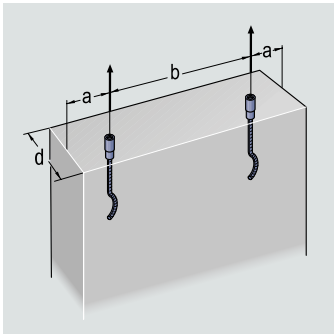
- ▶ Technical guideline VDI/BV-BS 6205 in interpretation of directive 2006/42/EC
- ▶ (Machinery Directive) and EN 13155
- ▶ Concrete strength from $f_{c,cube} = 15 \text{ N/mm}^2$
- ▶ Symmetrical installation of the anchors to the centre line
- ▶ Lifting with portal or mobile crane: dynamic factor $\psi_{dyn} = 1.3$
- ▶ Observe the minimum degree of reinforcement of the component according to the technical information of the respective anchors.
- ▶ For diagonal and transverse pull, observe additional reinforcement according to the technical information of the respective anchor (depending on concrete strength).
- ▶ Retention reinforcement at the anchor may be necessary
- ▶ (depending on selected anchor type)
- ▶ Observe minimum dimensions and spacing according to the technical information of the respective anchors.
- ▶ Number of load-bearing anchors „n“, see examples below:



Edge installation – Minimum dimensions and spacing

Waved anchor long, bar anchor, sleeve (anchor sleeve)

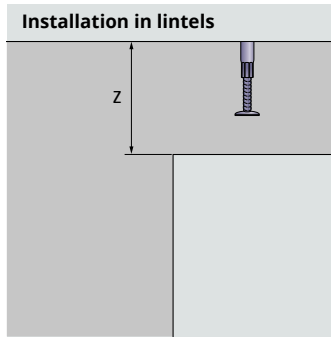
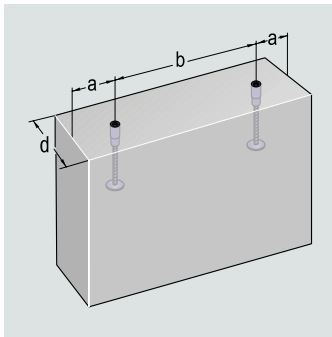
Type/Size	Wall thickness min d [mm]				Edge distance min a [mm]	Centre distance min b [mm]
	$0^\circ < \beta \leq 12,5^\circ$	$12,5^\circ < \beta \leq 30^\circ$	$30^\circ < \beta \leq 45^\circ$	Transverse pull		
Rd 12	55	55	60	60	150	300
Rd 16	65	65	80	80	200	400
Rd 20	90	90	110	110	275	550
Rd 24	100	100	125	125	300	600
Rd 30	120	120	140	140	350	700
Rd 36	130	130	150	210	500	1000
Rd 42	140	140	160	240	500	1000
Rd 52	150	150	170	280	600	1200
Rd 56	150	-	-	-	1250	2500
Rd 60	200	-	-	-	1600	3200



Edge installation – minimum dimensions and spacing

Allround anchor long

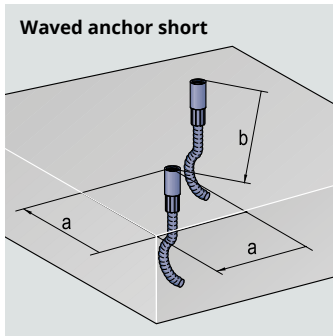
Type/Size	Wall thickness min d [mm]		Edge distance min a [mm]	Centre distance min b [mm]	Component height min z [mm]
	$0^\circ < \beta \leq 45^\circ$ [mm]	Querzug [mm]			
Rd 12	60	60	150	300	170
Rd 16	80	80	200	400	230
Rd 20	90	110	275	550	300
Rd 24	100	125	300	600	335
Rd 30	120	140	350	700	430
Rd 36	150	210	500	1000	535
Rd 42	160	240	500	1000	630
Rd 52	200	280	600	1200	850



Flat installation – Minimum dimensions and distances

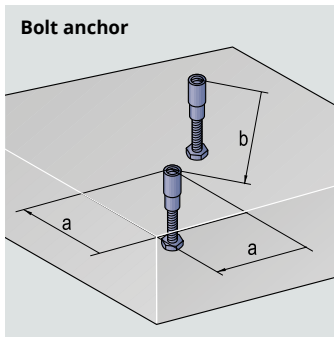
Waved anchor short

Size	Edge distance min a [mm]	Centre distance min b [mm]	Slab thickness min d [mm]
Rd 12	95	200	130
Rd 16	135	260	195
Rd 20	170	350	215
Rd 24	220	440	270
Rd 30	275	550	320
Rd 36	300	600	405
Rd 42	400	800	470



Bolt anchor

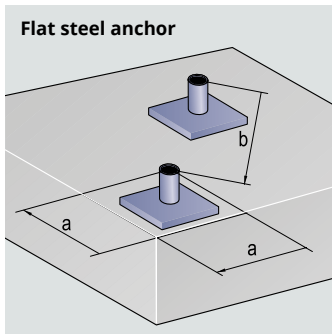
Size	Edge distance min a [mm]	Centre distance min b [mm]	Slab thickness min d [mm]
Rd 12	130	260	95
Rd 16	155	290	100
Rd 20	300	470	150
Rd 24	345	510	160
Rd 30	475	630	190



Flat installation – Minimum dimensions and distances

Flat steel anchor

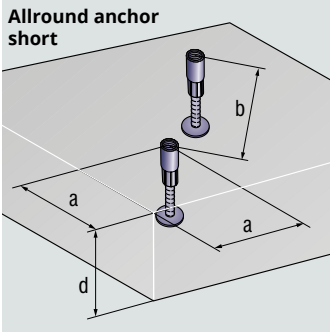
Size	Edge distance min a [mm]	Centre distance min b [mm]	Slab thickness min d [mm]
Rd 12	150	300	75
Rd 16	280	460	85
Rd 20	340	680	100
Rd 24	340	680	120
Rd 30	440	880	140
Rd 36	590	1180	160
Rd 42	650	1300	170
Rd 52	790	1580	200



Flat installation – Minimum dimensions and distances

Allround anchor short

Type	Edge distance min a [mm]	Centre distance min b [mm]	Slab thickness min d [mm]
Rd 30	490	980	200
Rd 36	650	1300	250
Rd 42	770	1540	300
Rd 52	1050	2100	400



Dimensioning table threaded anchors for stairs

Allround anchor short

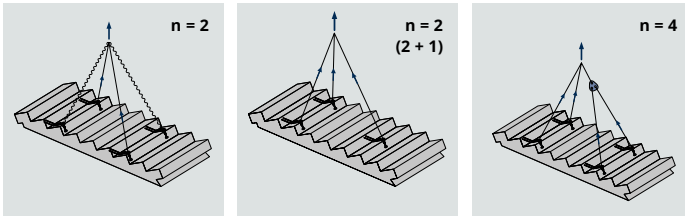
If the installation situation differs (e.g. spiral staircases, landings, etc.), please contact our technical support for an individual installation recommendation. See contact details on the back.

↓ Component weight [t] ↓	↓ Number of load-bearing anchors „n“ ↓		
	n = 2	n = 2 (2 + 1)	n = 4
	↓ Anchor size ↓		
1,0	Rd 20	Rd 20	Rd 20
1,5	Rd 20	Rd 20	Rd 20
2,0	Rd 20	Rd 20	Rd 20
2,5	Rd 24	Rd 24	Rd 20
3,0	Rd 30	Rd 30	Rd 20
3,5	Rd 30	Rd 30	Rd 20
4,0	Rd 36	Rd 36	Rd 20
4,5	Rd 36	Rd 36	Rd 20
5,0	Rd 36	Rd 36	Rd 24
5,5	Rd 36	Rd 36	Rd 24
6,0	-	-	Rd 30
6,5	-	-	Rd 30
7,0	-	-	Rd 30
7,5	-	-	Rd 36
8,0	-	-	Rd 36
8,5	-	-	Rd 36
9,0	-	-	Rd 36
9,5	-	-	Rd 36
10,0	-	-	Rd 36
10,5	-	-	Rd 36
11,0	-	-	Rd 36
11,5	-	-	Rd 36
11,8	-	-	Rd 36



Basics

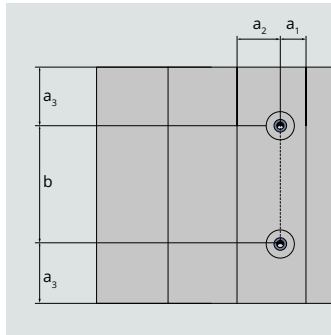
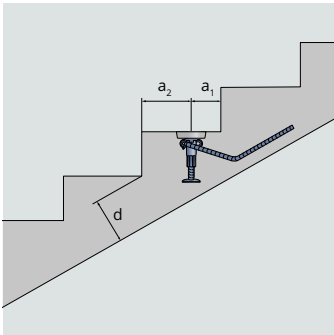
- ▶ Standardised application in straight prefabricated stairs
- ▶ Installation of the anchors in the tread of the steps
- ▶ Decisive load cases: „Alignment in exact assembly position without ground contact“ and „Assembly“.
- ▶ Technical guideline VDI/BV-BS 6205 in interpretation of directive 2006/42/EC (Machinery Directive) and EN 13155
- ▶ Concrete strength from $f_{c,cube} = 20 \text{ N/mm}^2$
- ▶ Lifting with portal or mobile crane: dynamic factor $\Psi_{dyn} = 1.3$
- ▶ Observe minimum degree of reinforcement of the step surface plate according to the technical information of the anchor – steps can be executed unreinforced!
- ▶ Maximum load angle per load case are observed (see technical brochure of the anchor)
- ▶ Additional reinforcement required at the anchor (see technical brochure of the anchor)
- ▶ Compliance with all minimum dimensions and distances
- ▶ Symmetrical installation of the anchors to the centre line
- ▶ In the case of three anchors, two of the anchors must be installed at the top of the stairs in the walking direction (see picture below)
- ▶ At least two „free“ stair treads between stair treads with installed anchors
- ▶ Installation of the anchors only from the second step onwards (starting from the entrance and exit of the stairs)
- ▶ Number of load-bearing anchors „n“, see examples below:



Minimum dimensions and spacing

Allround anchor short

Anchor size	Edge distances			Centre distance	Tread thickness stairs
	max a_1 [mm]	min a_2 [mm]	min a_3 [mm]	min b [mm]	min d [mm]
Rd 20	110	180	250	500	160
Rd 24	110	180	250	500	160
Rd 30	110	180	250	500	160
Rd 36	110	180	350	700	200



Spherical head anchor system

The main focus of the spherical head anchor system for the transport of precast concrete elements is on applications where the speed of the lifting process is crucial. This is already made clear by the emphatic name of the system lifter **„WK-Quicklift“**. It promises a fast attachment of the transport anchors. The system also has different anchor variants for the most diverse applications.

Your advantages

- ▶ Load capacities from 13 kN (1.3 t) to 200 kN (20 t)
- ▶ Ideal for highly reinforced building components
- ▶ Safe load distribution
- ▶ Economical due to fast anchoring
- ▶ Safe due to clear marking

Guideline

- ▶ According to VDI BV-BS 6205 in interpretation of EC Machinery Directive 2006/42/EC and EN 13155
- ▶ Safe work equipment in the sense of the Occupational Health and Safety Act in accordance with the Industrial Safety regulation



Further information is available at
www.pfeifer.info/spherical-head-anchor-system

Dimensioning tables spherical head anchors



WK anchor, WK bar anchor

If the installation situation differs, the calculation method according to the general design principles for lifting anchors can be used for an individual anchor design.

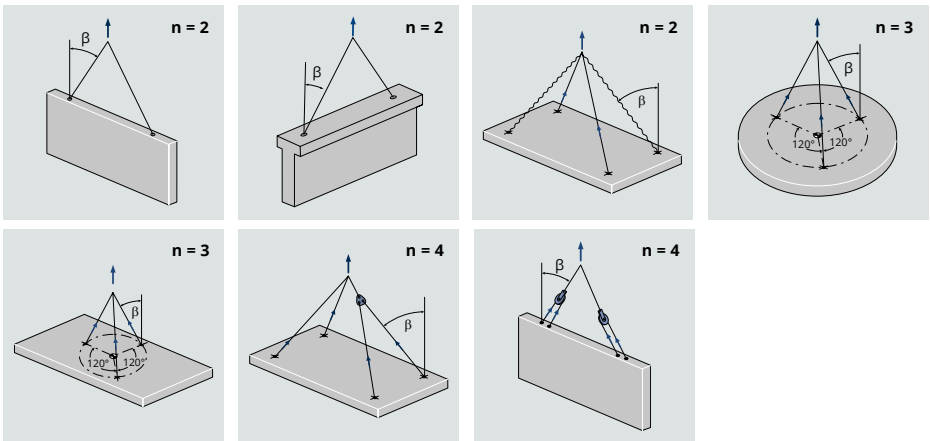
Load angle →	↓ Number of load-bearing anchors „n“ ↓								
	n = 2			n = 3			n = 4		
	β ≤ 10°	β ≤ 20°	β ≤ 30°	β ≤ 10°	β ≤ 20°	β ≤ 30°	β ≤ 10°	β ≤ 20°	β ≤ 30°
↓ Component weight [t] ↓	↓ Anchor size ↓								
1,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0
1,5	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0
2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0
2,5	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0
3,0	WK-2,0	WK-2,5	WK-2,5	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0
3,5	WK-2,5	WK-2,5	WK-4,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0	WK-2,0
4,0	WK-4,0	WK-4,0	WK-4,0	WK-2,0	WK-2,0	WK-2,5	WK-2,0	WK-2,0	WK-2,0
4,5	WK-4,0	WK-4,0	WK-4,0	WK-2,0	WK-2,5	WK-2,5	WK-2,0	WK-2,0	WK-2,0
5,0	WK-4,0	WK-4,0	WK-4,0	WK-2,5	WK-2,5	WK-4,0	WK-2,0	WK-2,0	WK-2,0
5,5	WK-4,0	WK-4,0	WK-5,0	WK-2,5	WK-4,0	WK-4,0	WK-2,0	WK-2,0	WK-2,5
6,0	WK-4,0	WK-5,0	WK-5,0	WK-4,0	WK-4,0	WK-4,0	WK-2,0	WK-2,5	WK-2,5
6,5	WK-5,0	WK-5,0	WK-5,0	WK-4,0	WK-4,0	WK-4,0	WK-2,5	WK-2,5	WK-2,5
7,0	WK-5,0	WK-5,0	WK-6,3	WK-4,0	WK-4,0	WK-4,0	WK-2,5	WK-2,5	WK-4,0
7,5	WK-5,0	WK-6,3	WK-6,3	WK-4,0	WK-4,0	WK-4,0	WK-2,5	WK-4,0	WK-4,0
8,0	WK-6,3	WK-6,3	WK-6,3	WK-4,0	WK-4,0	WK-5,0	WK-4,0	WK-4,0	WK-4,0
8,5	WK-6,3	WK-6,3	WK-8,0	WK-4,0	WK-4,0	WK-5,0	WK-4,0	WK-4,0	WK-4,0
9,0	WK-6,3	WK-6,3	WK-8,0	WK-4,0	WK-5,0	WK-5,0	WK-4,0	WK-4,0	WK-4,0
9,5	WK-6,3	WK-8,0	WK-8,0	WK-5,0	WK-5,0	WK-5,0	WK-4,0	WK-4,0	WK-4,0
10,0	WK-8,0	WK-8,0	WK-8,0	WK-5,0	WK-5,0	WK-6,3	WK-4,0	WK-4,0	WK-4,0
10,5	WK-8,0	WK-8,0	WK-8,0	WK-5,0	WK-5,0	WK-6,3	WK-4,0	WK-4,0	WK-4,0
11,0	WK-8,0	WK-8,0	WK-10,0	WK-5,0	WK-6,3	WK-6,3	WK-4,0	WK-4,0	WK-5,0
11,5	WK-8,0	WK-8,0	WK-10,0	WK-6,3	WK-6,3	WK-6,3	WK-4,0	WK-4,0	WK-5,0
12,0	WK-8,0	WK-10,0	WK-10,0	WK-6,3	WK-6,3	WK-6,3	WK-4,0	WK-5,0	WK-5,0
12,5	WK-10,0	WK-10,0	WK-10,0	WK-6,3	WK-6,3	WK-6,3	WK-5,0	WK-5,0	WK-5,0
13,0	WK-10,0	WK-10,0	WK-10,0	WK-6,3	WK-6,3	WK-8,0	WK-5,0	WK-5,0	WK-5,0
13,5	WK-10,0	WK-10,0	WK-15,0	WK-6,3	WK-6,3	WK-8,0	WK-5,0	WK-5,0	WK-6,3
14,0	WK-10,0	WK-10,0	WK-15,0	WK-6,3	WK-8,0	WK-8,0	WK-5,0	WK-5,0	WK-6,3
14,5	WK-10,0	WK-15,0	WK-15,0	WK-8,0	WK-8,0	WK-8,0	WK-5,0	WK-6,3	WK-6,3
15,0	WK-10,0	WK-15,0	WK-15,0	WK-8,0	WK-8,0	WK-8,0	WK-5,0	WK-6,3	WK-6,3
15,5	WK-15,0	WK-15,0	WK-15,0	WK-8,0	WK-8,0	WK-8,0	WK-6,3	WK-6,3	WK-6,3
16,0	WK-15,0	WK-15,0	WK-15,0	WK-8,0	WK-8,0	WK-10,0	WK-6,3	WK-6,3	WK-6,3
16,5	WK-15,0	WK-15,0	WK-15,0	WK-8,0	WK-8,0	WK-10,0	WK-6,3	WK-6,3	WK-6,3
17,0	WK-15,0	WK-15,0	WK-15,0	WK-8,0	WK-8,0	WK-10,0	WK-6,3	WK-6,3	WK-8,0
17,5	WK-15,0	WK-15,0	WK-15,0	WK-8,0	WK-10,0	WK-10,0	WK-6,3	WK-6,3	WK-8,0
18,0	WK-15,0	WK-15,0	WK-15,0	WK-8,0	WK-10,0	WK-10,0	WK-6,3	WK-6,3	WK-8,0
18,5	WK-15,0	WK-15,0	WK-15,0	WK-10,0	WK-10,0	WK-10,0	WK-6,3	WK-8,0	WK-8,0
19,0	WK-15,0	WK-15,0	WK-15,0	WK-10,0	WK-10,0	WK-10,0	WK-6,3	WK-8,0	WK-8,0
19,5	WK-15,0	WK-15,0	WK-15,0	WK-10,0	WK-10,0	WK-10,0	WK-8,0	WK-8,0	WK-8,0
20,0	WK-15,0	WK-15,0	WK-20,0	WK-10,0	WK-10,0	WK-15,0	WK-8,0	WK-8,0	WK-8,0

DR anchor 

		↓ Number of load-bearing anchors „n“ ↓								
		n = 2			n = 3			n = 4		
Load angle →		$\beta \leq 10^\circ$	$\beta \leq 20^\circ$	$\beta \leq 30^\circ$	$\beta \leq 10^\circ$	$\beta \leq 20^\circ$	$\beta \leq 30^\circ$	$\beta \leq 10^\circ$	$\beta \leq 20^\circ$	$\beta \leq 30^\circ$
↓ Component weight [t] ↓		↓ Anchor size ↓								
1,0		DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3
1,5		DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3
2,0		DR-2,5	DR-2,5	DR-2,5	DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3
2,5		DR-2,5	DR-2,5	DR-2,5	DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3	DR-1,3
3,0		DR-2,5	DR-2,5	DR-2,5	DR-2,5	DR-2,5	DR-2,5	DR-1,3	DR-1,3	DR-1,3
3,5		DR-2,5	DR-2,5	DR-5,0	DR-2,5	DR-2,5	DR-2,5	DR-1,3	DR-1,3	DR-2,5
4,0		DR-5,0	DR-5,0	DR-5,0	DR-2,5	DR-2,5	DR-2,5	DR-2,5	DR-2,5	DR-2,5
4,5		DR-5,0	DR-5,0	DR-5,0	DR-2,5	DR-2,5	DR-2,5	DR-2,5	DR-2,5	DR-2,5
5,0		DR-5,0	DR-5,0	DR-5,0	DR-2,5	DR-2,5	DR-5,0	DR-2,5	DR-2,5	DR-2,5
5,5		DR-5,0	DR-5,0	DR-5,0	DR-2,5	DR-5,0	DR-5,0	DR-2,5	DR-2,5	DR-2,5
6,0		DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-2,5	DR-2,5	DR-2,5
6,5		DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-2,5	DR-2,5	DR-2,5
7,0		DR-5,0	DR-5,0	DR-7,5	DR-5,0	DR-5,0	DR-5,0	DR-2,5	DR-2,5	DR-5,0
7,5		DR-5,0	DR-7,5	DR-7,5	DR-5,0	DR-5,0	DR-5,0	DR-2,5	DR-5,0	DR-5,0
8,0		DR-7,5	DR-7,5	DR-7,5	DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-5,0
8,5		DR-7,5	DR-7,5	DR-7,5	DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-5,0
9,0		DR-7,5	DR-7,5	DR-7,5	DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-5,0
9,5		DR-7,5	DR-7,5	DR-7,5	DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-5,0	DR-5,0
10,0		DR-7,5	DR-7,5	DR-10,0	DR-5,0	DR-5,0	DR-7,5	DR-5,0	DR-5,0	DR-5,0
10,5		DR-7,5	DR-7,5	DR-10,0	DR-5,0	DR-5,0	DR-7,5	DR-5,0	DR-5,0	DR-5,0
11,0		DR-7,5	DR-10,0	DR-10,0	DR-5,0	DR-7,5	DR-7,5	DR-5,0	DR-5,0	DR-5,0
11,5		DR-10,0	DR-10,0	DR-10,0	DR-7,5	DR-7,5	DR-7,5	DR-5,0	DR-5,0	DR-5,0
12,0		DR-10,0	DR-10,0	DR-10,0	DR-7,5	DR-7,5	DR-7,5	DR-5,0	DR-5,0	DR-5,0
12,5		DR-10,0	DR-10,0	DR-10,0	DR-7,5	DR-7,5	DR-7,5	DR-5,0	DR-5,0	DR-5,0
13,0		DR-10,0	DR-10,0	DR-10,0	DR-7,5	DR-7,5	DR-7,5	DR-5,0	DR-5,0	DR-5,0
13,5		DR-10,0	DR-10,0	DR-15,0	DR-7,5	DR-7,5	DR-7,5	DR-5,0	DR-5,0	DR-7,5
14,0		DR-10,0	DR-10,0	DR-15,0	DR-7,5	DR-7,5	DR-7,5	DR-5,0	DR-5,0	DR-7,5
14,5		DR-10,0	DR-15,0	DR-15,0	DR-7,5	DR-7,5	DR-7,5	DR-5,0	DR-7,5	DR-7,5
15,0		DR-10,0	DR-15,0	DR-15,0	DR-7,5	DR-7,5	DR-10,0	DR-5,0	DR-7,5	DR-7,5
15,5		DR-15,0	DR-15,0	DR-15,0	DR-7,5	DR-7,5	DR-10,0	DR-7,5	DR-7,5	DR-7,5
16,0		DR-15,0	DR-15,0	DR-15,0	DR-7,5	DR-7,5	DR-10,0	DR-7,5	DR-7,5	DR-7,5
16,5		DR-15,0	DR-15,0	DR-15,0	DR-7,5	DR-10,0	DR-10,0	DR-7,5	DR-7,5	DR-7,5
17,0		DR-15,0	DR-15,0	DR-15,0	DR-7,5	DR-10,0	DR-10,0	DR-7,5	DR-7,5	DR-7,5
17,5		DR-15,0	DR-15,0	DR-15,0	DR-10,0	DR-10,0	DR-10,0	DR-7,5	DR-7,5	DR-7,5
18,0		DR-15,0	DR-15,0	DR-15,0	DR-10,0	DR-10,0	DR-10,0	DR-7,5	DR-7,5	DR-7,5
18,5		DR-15,0	DR-15,0	DR-15,0	DR-10,0	DR-10,0	DR-10,0	DR-7,5	DR-7,5	DR-7,5
19,0		DR-15,0	DR-15,0	DR-15,0	DR-10,0	DR-10,0	DR-10,0	DR-7,5	DR-7,5	DR-7,5
19,5		DR-15,0	DR-15,0	DR-15,0	DR-10,0	DR-10,0	DR-10,0	DR-7,5	DR-7,5	DR-7,5
20,0		DR-15,0	DR-15,0	DR-20,0	DR-10,0	DR-10,0	DR-15,0	DR-7,5	DR-7,5	DR-10,0

Basics

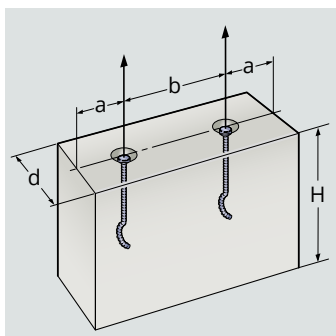
- ▶ Technical guideline VDI/BV-BS 6205 in interpretation of directive 2006/42/EC (Machinery Directive) and EN 13155
- ▶ Concrete strength from $f_{c,cube} = 15 \text{ N/mm}^2$
- ▶ Symmetrical installation of the anchors to the centre line
- ▶ Lifting with portal or mobile crane: dynamic factor $\psi_{dyn} = 1.3$
- ▶ Minimum degree of reinforcement of the component according to the technical information of the respective anchors
- ▶ For diagonal pull, observe additional reinforcement according to the technical information of the respective anchor.
- ▶ Retention reinforcement at the anchor may be necessary (depending on the type of anchor selected)
- ▶ Observe the minimum dimensions and spacing according to the technical information of the respective anchor
- ▶ Number of load-bearing anchors „n“, see examples below:



Minimum dimensions and spacing

WK anchor, long form/WK bar anchor

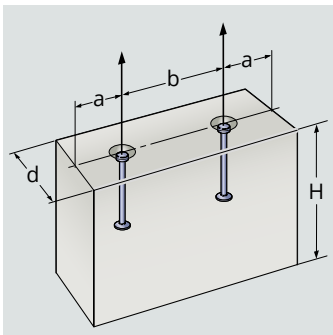
Type/ Size	Anchor height h [mm]	Edge distance min a [mm]	Centre distance min b [mm]	Component height min H [mm]	Component thickness min d	
					$0^\circ < \beta \leq 12,5^\circ$ [mm]	$12,5^\circ < \beta \leq 30^\circ$ [mm]
WK 2,0	350/380	275	550	440	90	100
WK 2,5	400/470	300	600	800	100	100
WK 4,0	450/520	350	700	1000	120	140
WK 5,0	520/650	425	850	1000	120	160
WK 6,3	570/630	500	1000	1000	130	180
WK 8,0	620/840	500	1000	1100	140	200
WK 10,0	900/920	600	1200	1100	140	240
WK 15,0	1200/1200	1250	2500	1300	150	350
WK 20,0	1400/1400	1600	3200	1500	200	450



Minimum dimensions and distances

DR Anchor

Type/Size	Anchor height h [mm]	Edge distance min a [mm]	Centre distance min b [mm]	Component height min H [mm]	Component thickness min d [mm]
DR 1,3	120	390	390	440	80
DR 2,5	170	445	445	800	100
DR 5,0	240	765	765	1000	160
DR 7,5	300	945	945	1100	180
DR 10,0	340	1065	1065	1100	240
DR 15,0	400	1245	1245	1250	350
DR 20,0	500	1545	1545	1550	450



Wire loop anchor system

If high loads have to be transported cost-effectively, the wire loop anchor system is the ideal solution. When embedded in concrete, the wire loop of the anchor protrudes from the component, which allows it to be attached to the crane hook. Wire loop anchors are suitable for a wide variety of components.

Their advantages

- ▶ Load capacities from 8 kN (0.8 t) to 990 kN (99 t)
- ▶ Ideal for highly reinforced components
- ▶ Economical due to fast attachment
- ▶ Safe due to clear marking

Guideline

- ▶ According to VDI BV-BS 6205 in interpretation of the EC Machinery Directive 2006/42/EC and EN 13155
- ▶ Safe work equipment in the sense of the Occupational Health and Safety Act in accordance with the Industrial Safety regulations



Further information is available at
www.pfeifer.info/wire-rope-loop-anchor-system



Dimensioning table wire loop anchor

BS Anchor

If the installation situation differs, the calculation method according to the general design principles for lifting anchors can be used for an individual anchor design.

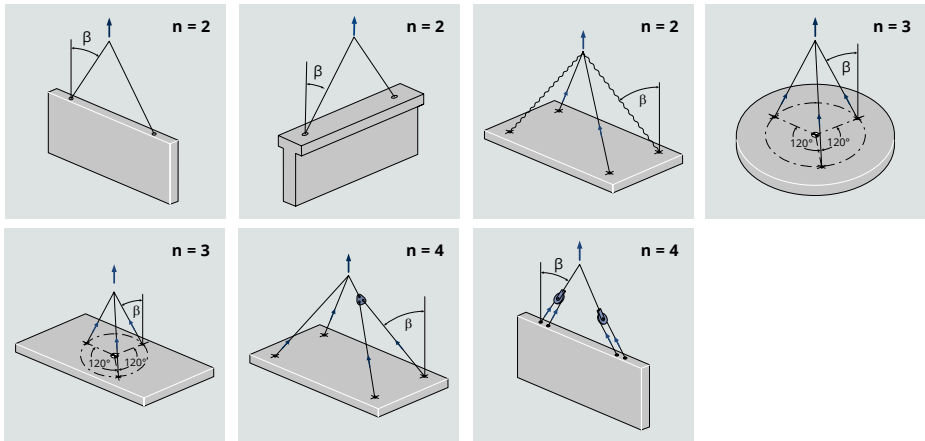
Load angle →	↓ Number of load-bearing anchors „n“ ↓					
	n = 2		n = 3		n = 4	
	β ≤ 15°	β ≤ 30°	β ≤ 15°	β ≤ 30°	β ≤ 15°	β ≤ 30°
↓ Component weight [t] ↓	↓ Anchor size ↓					
1,0	BS-0,8	BS-0,8	BS-0,8	BS-0,8	BS-0,8	BS-0,8
1,5	BS-1,2	BS-1,2	BS-0,8	BS-0,8	BS-0,8	BS-0,8
2,0	BS-1,6	BS-1,6	BS-1,2	BS-1,2	BS-0,8	BS-0,8
2,5	BS-2,0	BS-2,0	BS-1,2	BS-1,6	BS-1,2	BS-1,2
3,0	BS-2,5	BS-2,5	BS-1,6	BS-1,6	BS-1,2	BS-1,2
3,5	BS-2,5	BS-4,0	BS-1,6	BS-2,0	BS-1,2	BS-1,6
4,0	BS-4,0	BS-4,0	BS-2,0	BS-2,5	BS-1,6	BS-1,6
4,5	BS-4,0	BS-4,0	BS-2,5	BS-2,5	BS-1,6	BS-2,0
5,0	BS-4,0	BS-4,0	BS-2,5	BS-4,0	BS-2,0	BS-2,0
5,5	BS-4,0	BS-5,2	BS-2,5	BS-4,0	BS-2,0	BS-2,5
6,0	BS-5,2	BS-5,2	BS-4,0	BS-4,0	BS-2,5	BS-2,5
6,5	BS-5,2	BS-5,2	BS-4,0	BS-4,0	BS-2,5	BS-2,5
7,0	BS-5,2	BS-6,3	BS-4,0	BS-4,0	BS-2,5	BS-4,0
7,5	BS-5,2	BS-6,3	BS-4,0	BS-4,0	BS-4,0	BS-4,0
8,0	BS-6,3	BS-6,3	BS-4,0	BS-5,2	BS-4,0	BS-4,0
8,5	BS-6,3	BS-8,0	BS-4,0	BS-5,2	BS-4,0	BS-4,0
9,0	BS-6,3	BS-8,0	BS-5,2	BS-5,2	BS-4,0	BS-4,0
9,5	BS-8,0	BS-8,0	BS-5,2	BS-5,2	BS-4,0	BS-4,0
10,0	BS-8,0	BS-8,0	BS-5,2	BS-5,2	BS-4,0	BS-4,0
10,5	BS-8,0	BS-8,0	BS-5,2	BS-6,3	BS-4,0	BS-4,0
11,0	BS-8,0	BS-10,0	BS-5,2	BS-6,3	BS-4,0	BS-5,2
11,5	BS-8,0	BS-10,0	BS-5,2	BS-6,3	BS-4,0	BS-5,2
12,0	BS-10,0	BS-10,0	BS-6,3	BS-6,3	BS-5,2	BS-5,2
12,5	BS-10,0	BS-10,0	BS-6,3	BS-6,3	BS-5,2	BS-5,2
13,0	BS-10,0	BS-10,0	BS-6,3	BS-8,0	BS-5,2	BS-5,2
13,5	BS-10,0	BS-12,5	BS-6,3	BS-8,0	BS-5,2	BS-5,2
14,0	BS-10,0	BS-12,5	BS-6,3	BS-8,0	BS-5,2	BS-6,3
14,5	BS-10,0	BS-12,5	BS-8,0	BS-8,0	BS-5,2	BS-6,3
15,0	BS-12,5	BS-12,5	BS-8,0	BS-8,0	BS-5,2	BS-6,3
15,5	BS-12,5	BS-12,5	BS-8,0	BS-8,0	BS-6,3	BS-6,3
16,0	BS-12,5	BS-12,5	BS-8,0	BS-10,0	BS-6,3	BS-6,3
16,5	BS-12,5	BS-12,5	BS-8,0	BS-10,0	BS-6,3	BS-6,3
17,0	BS-12,5	BS-16,0	BS-8,0	BS-10,0	BS-6,3	BS-8,0
17,5	BS-12,5	BS-16,0	BS-8,0	BS-10,0	BS-6,3	BS-8,0
18,0	BS-12,5	BS-16,0	BS-10,0	BS-10,0	BS-6,3	BS-8,0
18,5	BS-12,5	BS-16,0	BS-10,0	BS-10,0	BS-6,3	BS-8,0
19,0	BS-16,0	BS-16,0	BS-10,0	BS-10,0	BS-8,0	BS-8,0
19,5	BS-16,0	BS-16,0	BS-10,0	BS-10,0	BS-8,0	BS-8,0
20,0	BS-16,0	BS-16,0	BS-10,0	BS-12,5	BS-8,0	BS-8,0



Note: BS heavy-duty anchors are available including dimensioning recommendations by the PFEIFER technical support. For contact details see back page.

Basics

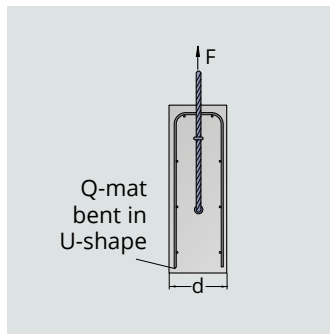
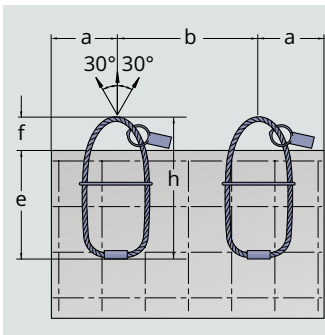
- ▶ Technical Guideline VDI/BV-BS 6205 in interpretation of Directive 2006/42/EC (Machinery Directive) and EN 13155
- ▶ Concrete strength from $f_{c,cube} = 15 \text{ N/mm}^2$
- ▶ Symmetrical installation of the anchors to the centre line
- ▶ Lifting with portal or mobile crane: dynamic factor $\psi_{dyn} = 1.3$
- ▶ Observe minimum degree of reinforcement of the component according to the technical information of the anchor
- ▶ Observe the minimum dimensions and distances according to the technical information of the anchor.
- ▶ Number of load-bearing anchors „n“, see examples below:



Minimum dimensions and distances

Protruding, parallel installation

Type/Size	Anchor height h [mm]	Embedment depth e [mm]	Anchor projection f [mm]	$f_{c,cube} = 15 \text{ N/mm}^2$			$f_{c,cube} = 30 \text{ N/mm}^2$		
				Component thickness min d [cm]	Centre distance min b [cm]	Edge distance min a [cm]	Component thickness min d [cm]	Centre distance min b [cm]	Edge distance min a [cm]
BS 0,8	205	145	60	7	54	27	5	54	27
BS 1,2	230	165	65	9	62	31	6	62	31
BS 1,6	250	180	70	12	69	35	8	69	35
BS 2,0	300	220	80	14	83	42	10	83	42
BS 2,5	325	240	85	16	89	45	11	89	45
BS 4,0	370	270	100	22	100	50	15	100	50
BS 5,2	380	280	100	29	103	52	20	103	52
BS 6,3	425	310	115	32	115	58	22	115	58
BS 8,0	480	350	130	40	129	65	28	129	65
BS 10,0	535	395	140	44	146	73	31	146	73
BS 12,5	590	440	150	56	162	81	39	162	81
BS 16,0	670	500	170	62	186	93	43	186	93
BS 20,0	750	570	180	68	212	106	48	212	106
BS 25,0	850	650	200	75	241	121	53	241	121



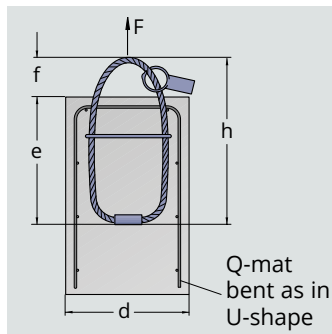
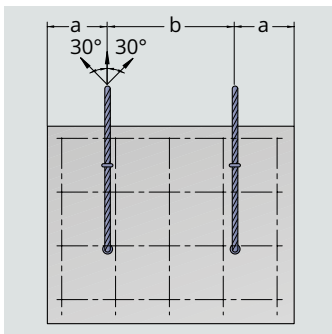
Note:

For recessed installation, please observe the information in the valid data sheet of the PFEIFER BS Anchor System!

Minimum dimensions and distances

Protruding, vertical installation

Type/Size	Anchor height h [mm]	Embedment depth e [mm]	Anchor projection f [mm]	$f_{c,cube} = 15 \text{ N/mm}^2$			$f_{c,cube} = 30 \text{ N/mm}^2$		
				Component thickness min d [cm]	Centre distance min b [cm]	Edge distance min a [cm]	Component thickness min d [cm]	Centre distance min b [cm]	Edge distance min a [cm]
BS 0,8	205	145	60	13,5	54	27	13,5	54	27
BS 1,2	230	165	65	14	62	31	14	62	31
BS 1,6	250	180	70	17	69	35	17	69	35
BS 2,0	300	220	80	17,5	83	42	17,5	83	42
BS 2,5	325	240	85	18	89	45	18	89	45
BS 4,0	370	270	100	22	100	50	22	100	50
BS 5,2	380	280	100	29	103	52	22	103	52
BS 6,3	425	310	115	32	115	58	27,5	115	58
BS 8,0	480	350	130	40	129	65	28	129	65
BS 10,0	535	395	140	44	146	73	31	146	73
BS 12,5	590	440	150	56	162	81	39	162	81
BS 16,0	670	500	170	62	186	93	43	186	93
BS 20,0	750	570	180	68	212	106	48	212	106
BS 25,0	850	650	200	75	241	121	53	241	121



Note:

For recessed installation, please observe the information in the valid data sheet of the PFEIFER BS Anchor System!



PFEIFER

International

Sales

+49 (0) 83 31-937-231

Technical Support

+49 (0) 83 31-937-345

export-bt@pfeifer.de

www.pfeifer.info/concrete-inserts