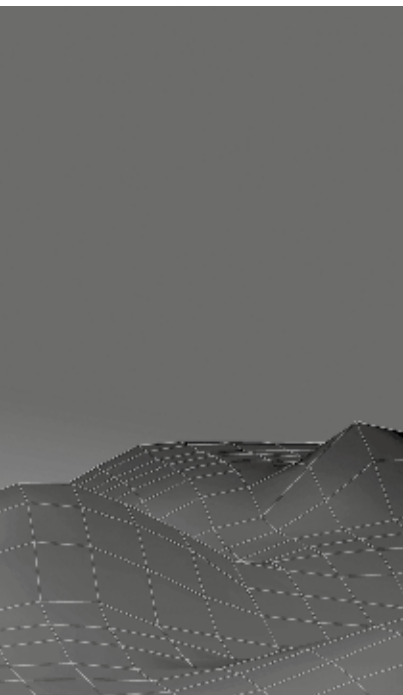




BRAKE SYSTEMS FOR MINING
BRAKING UNLIMITED

Made in Germany



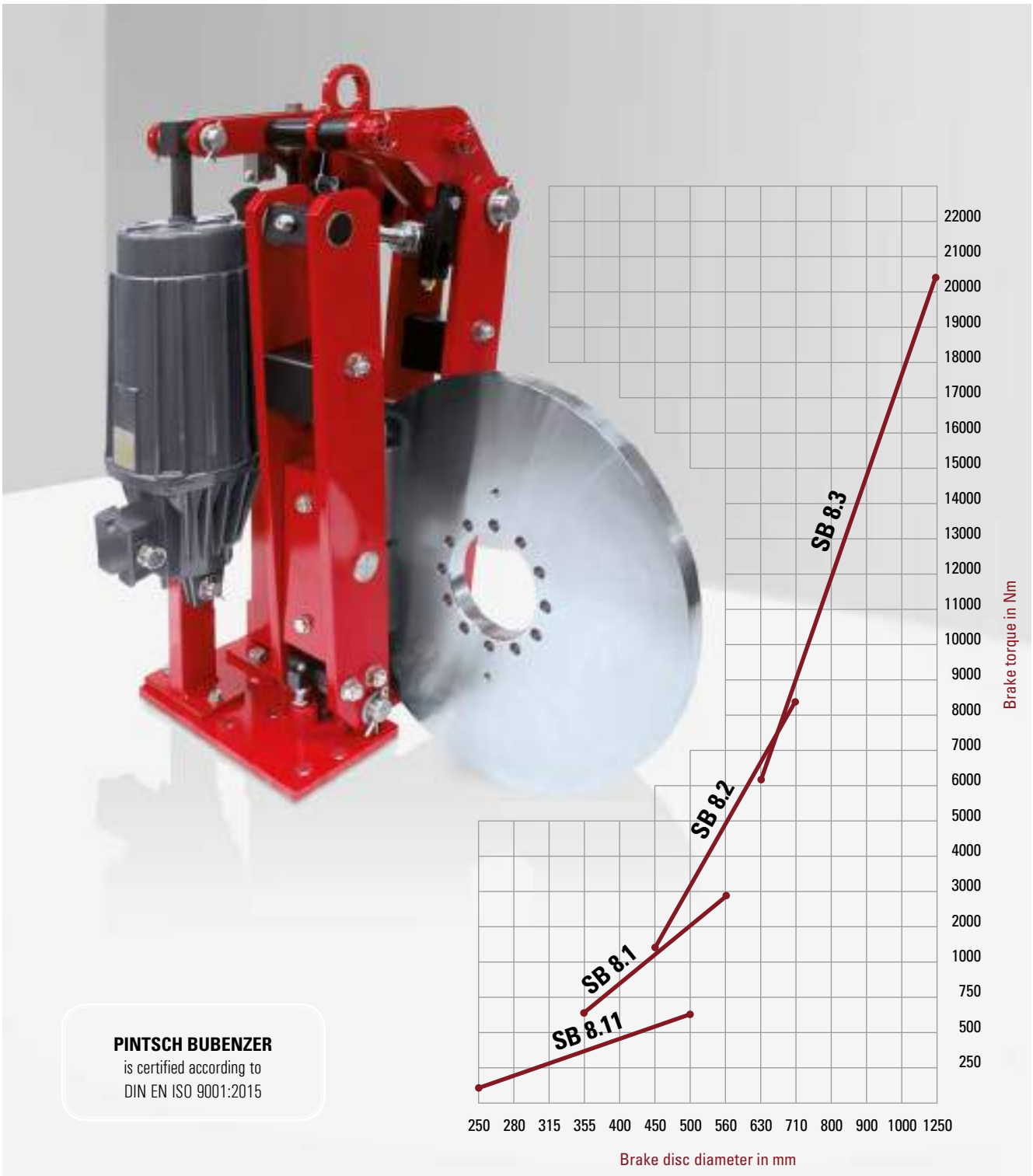
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Content

Thruster Disc Brakes	_____	A7	-	A13
Pneumatic Disc Brakes	_____	J1	-	J8
Hydraulic Disc Brakes	_____	B1	-	B21
Electromagnetic Disc Brakes	_____	C1	-	C6
Drum Brakes, Band Brakes	_____	E1	-	E18
Couplings, Hubs, Discs, Drums	_____	F1	-	F23
Monitoring Systems, Control Systems	_____	G1	-	G16
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Buffers	_____	I1	-	I9


Thruster Disc Brakes SB 8 Series




PINTSCH BUBENZER
is certified according to
DIN EN ISO 9001:2015




Reliable



Compact Design



Robust Construction



Easy Maintenance

Description SB 8



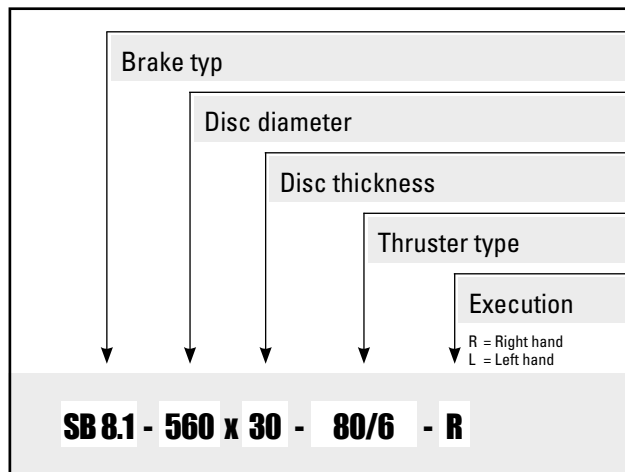
Main Features

- Compact dimensions
- Ideal for belt conveyors in combination with long stroke thrusters
- Sintered linings for high friction speeds
- Organic, non-asbestos linings for low friction speeds
- Continuously adjustable brake spring with torque scale and wear bushing enclosed in a spring tube
- Stainless steel pins and spindles
- Maintenance-free bushings in all hinge points
- Right or left-hand design

Options

- Automatic wear compensator
- Limit switch release control
- Limit switch wear control
- Limit switch manual release
- Manual release lever with or without lock
- Monitoring systems (e.g. VSR/CMB)
- Brake disc with hub or coupling

Ordering Example



Thruster, technical data

Thruster Type	Power (W)	Curr. (A) at 400 V	Weight (kg)
EB 120/40	130	0,4	7,5
EB 220/50	160	0,4	9,3
EB 300/50	140	0,3	10
EB 500/60	200	0,4	13
EB 800/60	260	0,5	19
EB 1250/60	380	0,6	21
EB 2000/60	500	0,7	33
EB 3000/60	550	0,9	39

Data supplied by thruster manufacturer, please take higher start current into consideration, fuses to be minimum 2A



Please Note

We supply a detailed operating manual with every order. Nevertheless, we would point out that brakes are only as safe as the servicing and maintenance performed while they are in operation. The guarantee for the correct functioning of our brakes is therefore only valid if the user adheres to the German DIN standard 15434 part 2 (drum and disc brakes, servicing and maintenance in operation), or to comparable standards in his own country.



PINTSCH BUBENZER Service

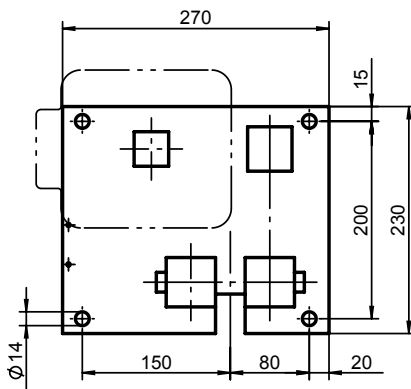
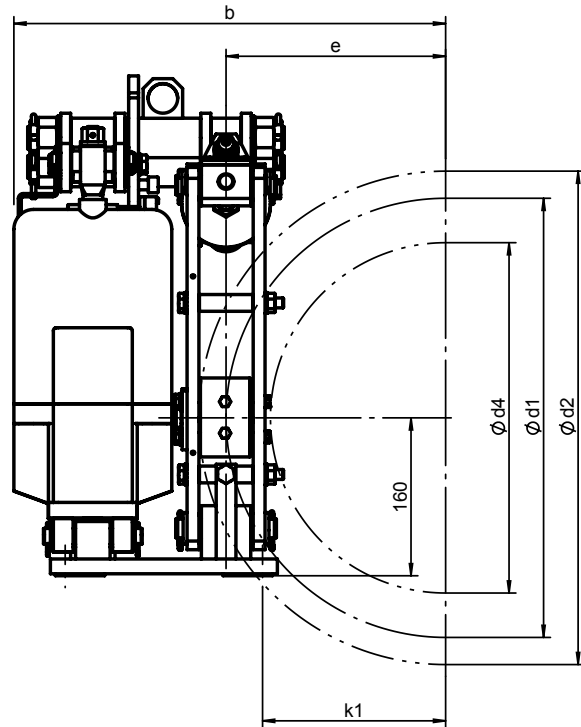
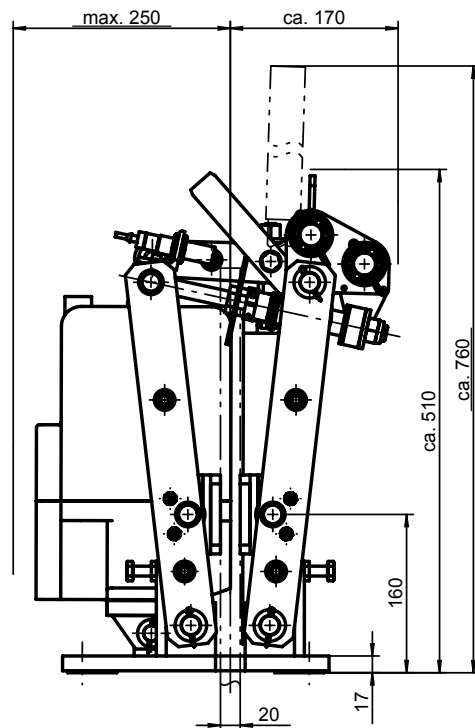
This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on site is possible by PINTSCH BUBENZER service engineers. Drawings as DWG/DXF files for your engineering department are available upon request.

Disc Brake SB 8.11

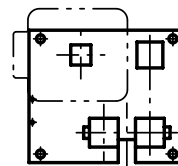
Dimensions and technical data



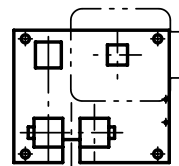
Rev. 03-18
MB-001593 a



Right-hand execution



Left-hand execution



All dimensions in mm
Alterations reserved without notice

*) Average static friction factor of standard material combination

For crane brake layout use safety factors documented in the FEM 1.001, Section 1

The friction coefficient is subject to fluctuations depending on operational-, material- and ambient-conditions! This must be considered during the selection!

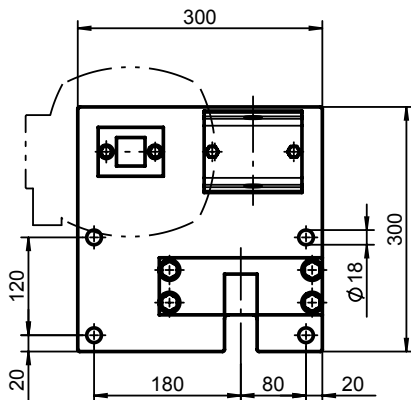
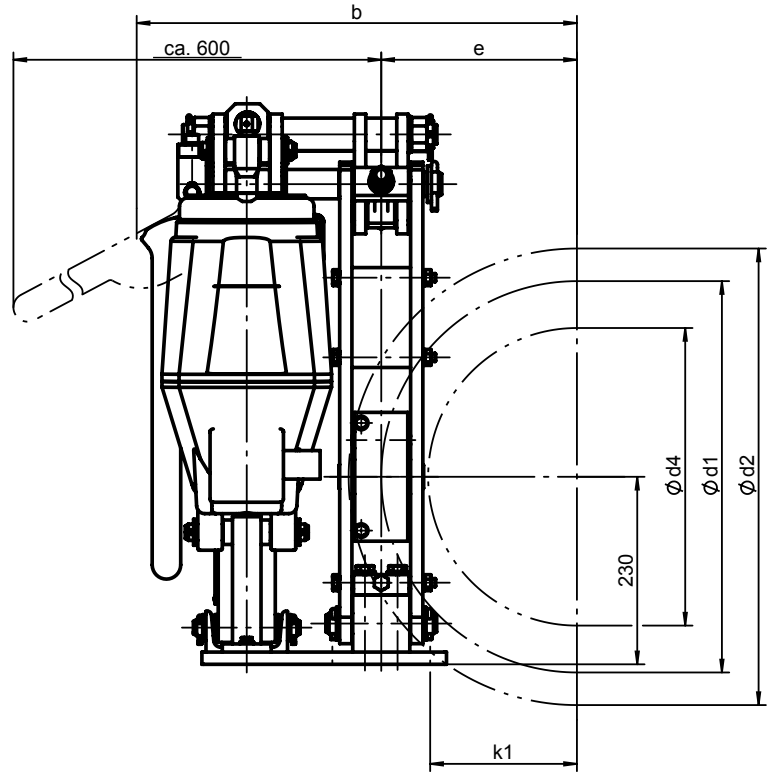
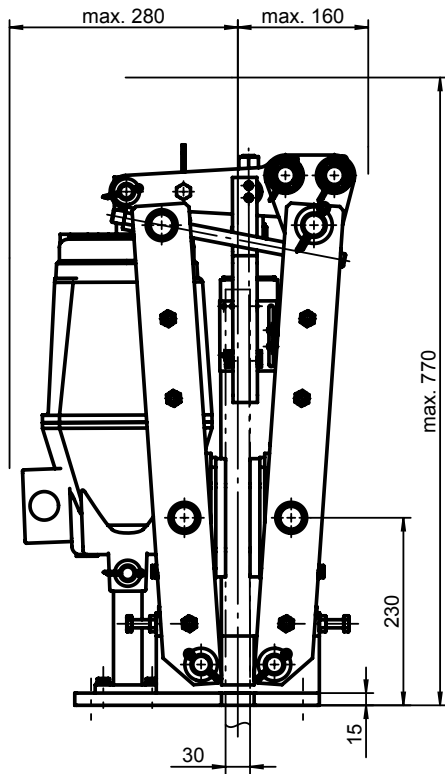
Weight without thruster: ca. 37 kg			Thruster type			EB 120/40 (weight: 7,5 kg) Ed 12/4 (weight: 7,5 kg)			EB 220/50 (weight: 9,5 kg) Ed 23/5 (weight: 10 kg)			EB 300/50 (weight: 10 kg) Ed 30/5 (weight: 14 kg)		
			Contact force in N			1545			2500			3400		
Disc- \varnothing d_2	Fric- tion- \varnothing d_1	Max. hub- \varnothing d_4	b_{max}	e	k_1	* M_{Brmax} (Nm) at $\mu = 0,4$	* M_{Brmin} (Nm) at $\mu = 0,4$	* M_{Brmin} (% from M_{Brmax})	* M_{Brmax} (Nm) at $\mu = 0,4$	* M_{Brmin} (Nm) at $\mu = 0,4$	* M_{Brmin} (% from M_{Brmax})	* M_{Brmax} (Nm) at $\mu = 0,4$	* M_{Brmin} (Nm) at $\mu = 0,4$	* M_{Brmin} (% from M_{Brmax})
250	195	105	325	97,5	60,5	120	60	50	195	117	60	265	133	50
280	225	135	340	112,5	75,5	140	70	50	225	135	60	305	153	50
315	260	170	358	130	93	160	80	50	260	156	60	355	178	50
355	300	210	378	150	113	185	93	50	300	180	60	410	205	50
400	345	255	400	172,5	135,5	215	108	50	345	207	60	470	235	50
450	395	305	425	197,5	160,5	245	123	50	395	237	60	535	268	50
500	445	355	450	222,5	185,5	275	138	50	445	267	60	605	303	50

Disc Brake SB 8.1

Dimensions and technical data

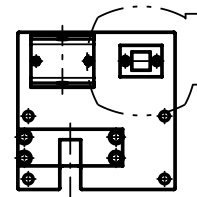
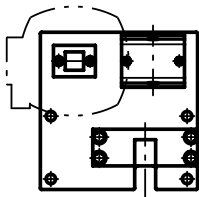


Rev. 03-18
MB-001594 b



Right-hand execution

Left-hand execution



All dimensions in mm
Alterations reserved without notice

*) Average static friction factor of standard material combination

For crane brake layout use safety factors documented in the FEM 1.001, Section 1

The friction coefficient is subject to fluctuations depending on operational-, material- and ambient-conditions! This must be considered during the selection!

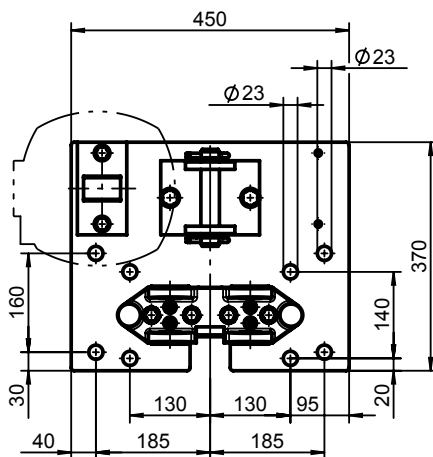
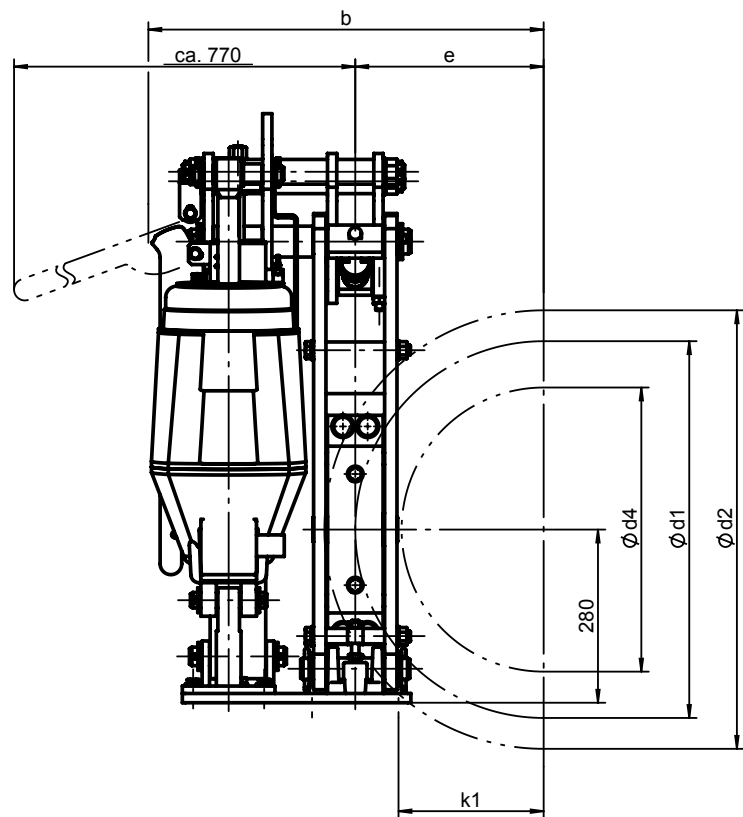
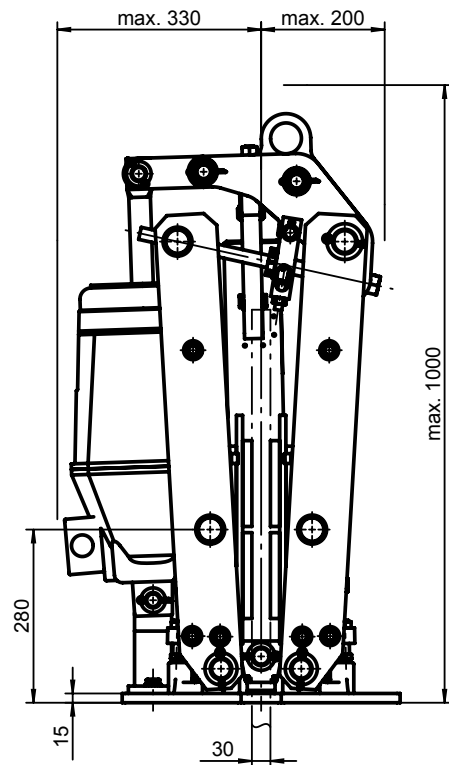
Weight without thruster: ca. 83 kg			Thruster type			EB 300/50 (weight: 10 kg)			EB 500/60 (weight: 13,1 kg) EB 500/120 (weight: 14,8 kg)			EB 800/60 (weight: 19kg) EB 800/120 (weight: 23 kg)		
			Contact force in N			5210			9530			15260		
Disc- \varnothing d_2	Friction- \varnothing d_1	Max. hub- \varnothing d_4	$b_{max.}$	e	k_1	* $M_{Bmax.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (% from $M_{Bmax.}$)	* $M_{Bmax.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (% from $M_{Bmax.}$)	* $M_{Bmax.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (% from $M_{Bmax.}$)
355	275	160	438	137,5	77,5	575	288	50	1050	525	50	1680	1008	60
400	320	205	460	160	100	665	333	50	1220	610	50	1955	1173	60
450	370	255	485	185	125	770	385	50	1410	705	50	2260	1356	60
500	420	305	510	210	150	875	438	50	1600	800	50	2565	1539	60
560	480	365	540	240	180	1000	500	50	1830	915	50	2930	1758	60

Disc Brake SB 8.2

Dimensions and technical data

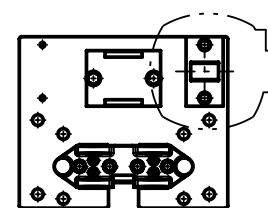
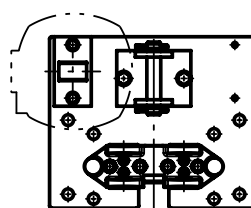


Rev. 03-18
MB-001605 b



Right-hand execution

Left-hand execution



All dimensions in mm
Alterations reserved without notice

*) Average static friction factor of standard material combination

For crane brake layout use safety factors documented in the FEM 1.001, Section 1

The friction coefficient is subject to fluctuations depending on operational-, material- and ambient-conditions! This must be considered during the selection!

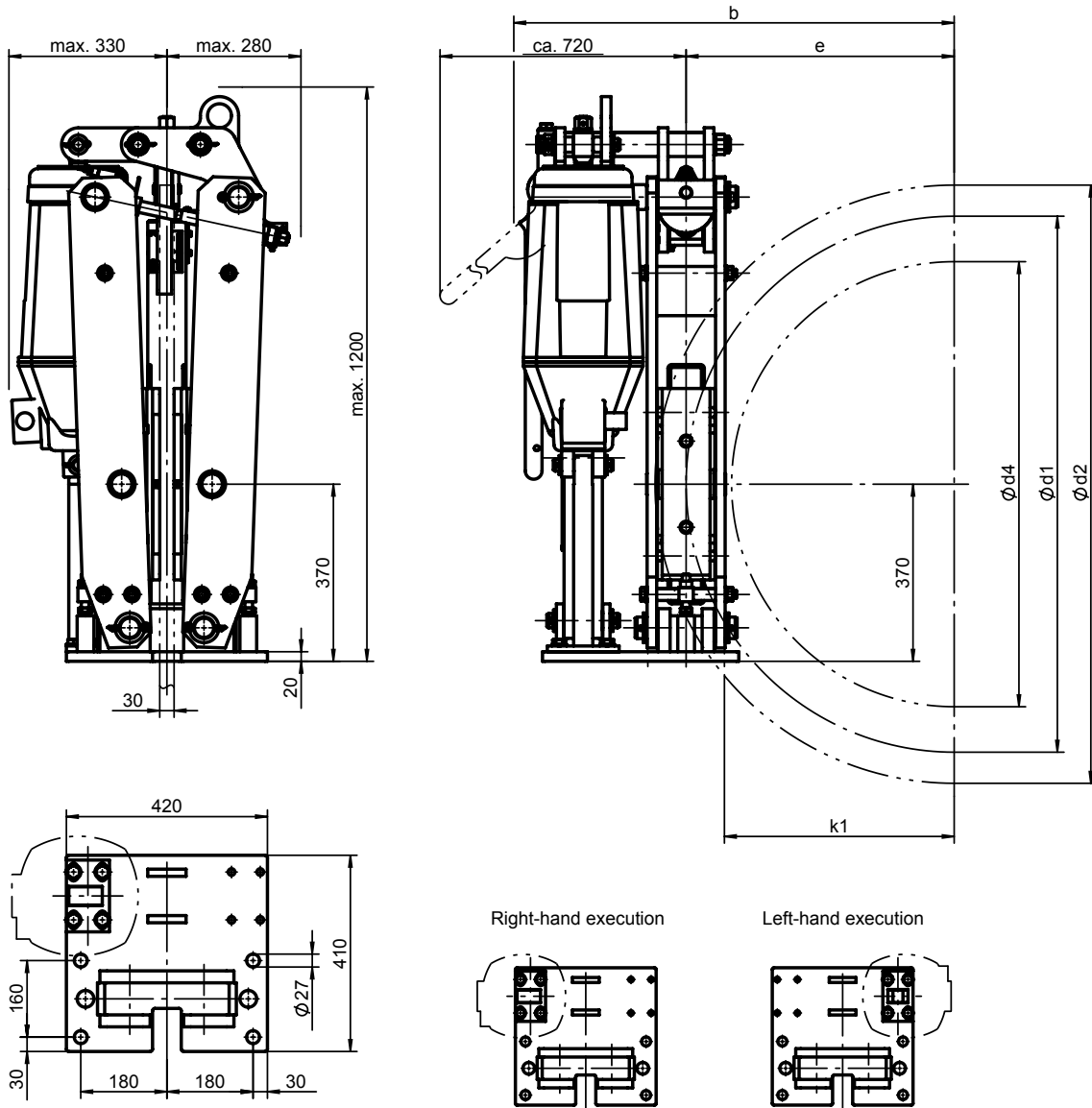
Weight without thruster: ca. 180 kg			Thruster type			EB 500/60 (weight: 13,1 kg) EB 500/120 (weight: 14,8 kg)			EB 800/60 (weight: 19 kg) EB 800/120 (weight: 23 kg)			EB 1250/60 (weight: 20,6 kg) EB 1250/120 (weight: 24,2 kg)			EB 2000/60 (weight: 32,8 kg) EB 2000/120 (weight: 32,8 kg)		
Disc-Ø d ₂	Friction-Ø d ₁	Max. hub-Ø d ₄	Contact force in N			8000			13750			19900			33500		
			b _{max.}	e	k ₁	*M _{Brmax.} (Nm) at μ = 0,4	*M _{Brmin.} (Nm) at μ = 0,4	*M _{Brmin.} (% from M _{Brmax.})	*M _{Brmax.} (Nm) at μ = 0,4	*M _{Brmin.} (Nm) at μ = 0,4	*M _{Brmin.} (% from M _{Brmax.})	*M _{Brmax.} (Nm) at μ = 0,4	*M _{Brmin.} (Nm) at μ = 0,4	*M _{Brmin.} (% from M _{Brmax.})	*M _{Brmax.} (Nm) at μ = 0,4	*M _{Brmin.} (Nm) at μ = 0,4	*M _{Brmin.} (% from M _{Brmax.})
450	350	200	510	175	105	1120	784	70	1925	963	50	2785	1393	50	4690	2345	50
500	400	250	535	200	130	1280	896	70	2200	1100	50	3185	1593	50	5360	2680	50
560	460	310	565	230	170	1470	1029	70	2530	1265	50	3660	1830	50	6165	3083	50
630	530	380	600	265	195	1695	1187	70	2915	1458	50	4220	2110	50	7100	3550	50
710	610	460	640	305	235	1950	1365	70	3355	1678	50	4855	2428	50	8175	4088	50

Disc Brake SB 8.3

Dimensions and technical data



Rev. 03-18
MB-001609 b



All dimensions in mm
Alterations reserved without notice

*) Average static friction factor of standard material combination

For crane brake layout use safety factors documented in the FEM 1.001, Section 1

The friction coefficient is subject to fluctuations depending on operational-, material- and ambient-conditions! This must be considered during the selection!

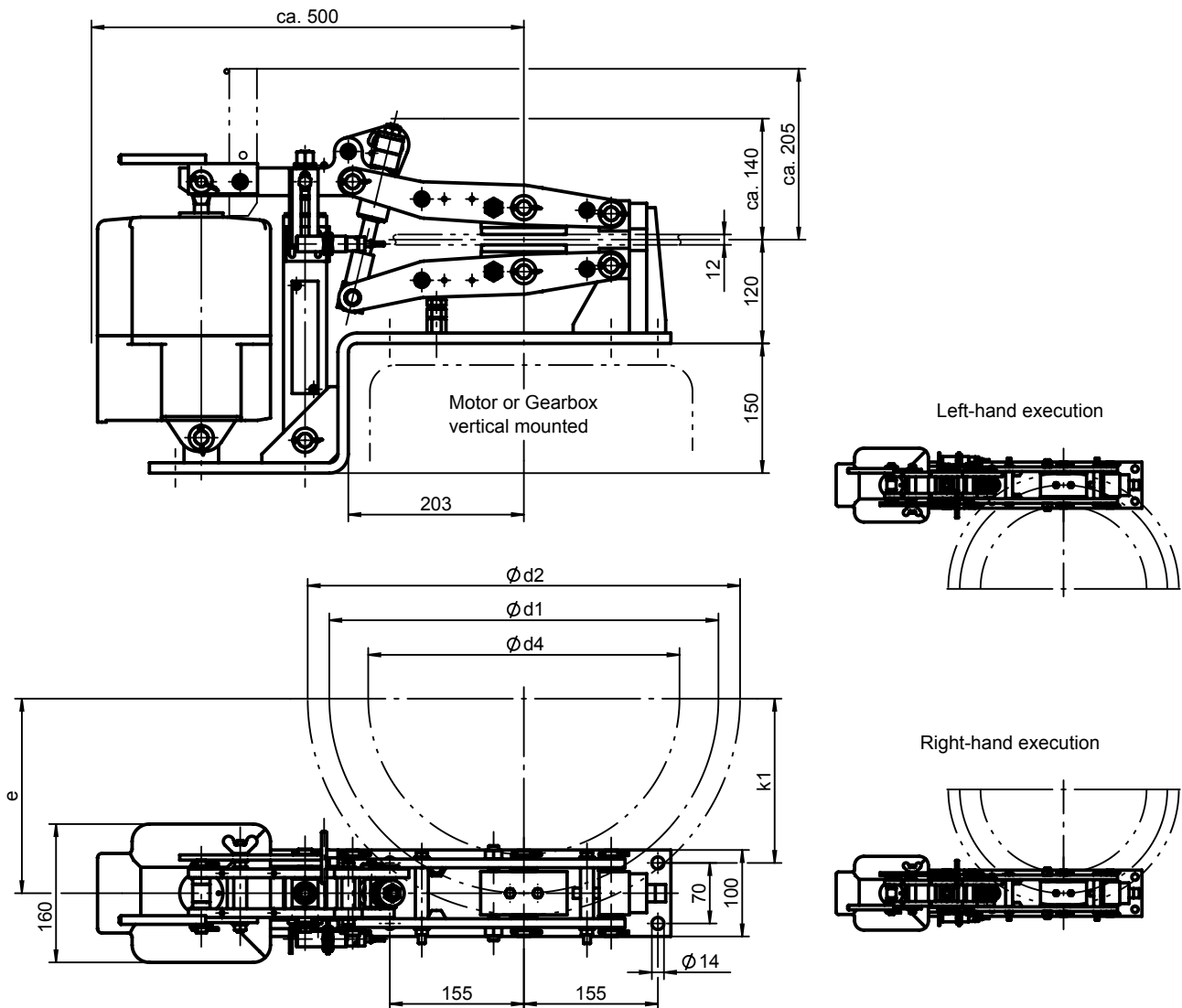
Weight without thruster: ca. 290 kg			Thruster type			EB 2000/60 (weight: 32,8 kg) EB 2000/120 (weight: 32,8 kg)			EB 3000/60 (weight: 39 kg) EB 3000/120 (weight: 39 kg)		
			Contact force in N			31500			45500		
Disc- \varnothing d_2	Friction- \varnothing d_1	Max. hub- \varnothing d_4	$b_{max.}$	e	k_1	* $M_{Bmax.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (% from $M_{Bmax.}$)	* $M_{Bmax.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (% from $M_{Bmax.}$)
630	500	310	610	250	170	6300	3150	50	9100	4550	50
710	580	390	650	290	210	7310	3655	50	10555	5278	50
800	670	480	695	335	255	8440	4220	50	12195	6098	50
900	770	580	745	385	305	9700	4850	50	14015	7008	50
1000	870	680	795	435	355	10960	5480	50	15835	7918	50
1250	1120	930	920	560	480	14110	7055	50	20385	10193	50

Disc Brake SB 22

Dimensions and technical data



Rev. 03-18
MB-001610 a



All dimensions in mm
Alterations reserved without notice

*) Average static friction factor of standard material combination

For crane brake layout use safety factors documented in the FEM 1.001, Section 1

The friction coefficient is subject to fluctuations depending on operational-, material- and ambient-conditions! This must be considered during the selection!

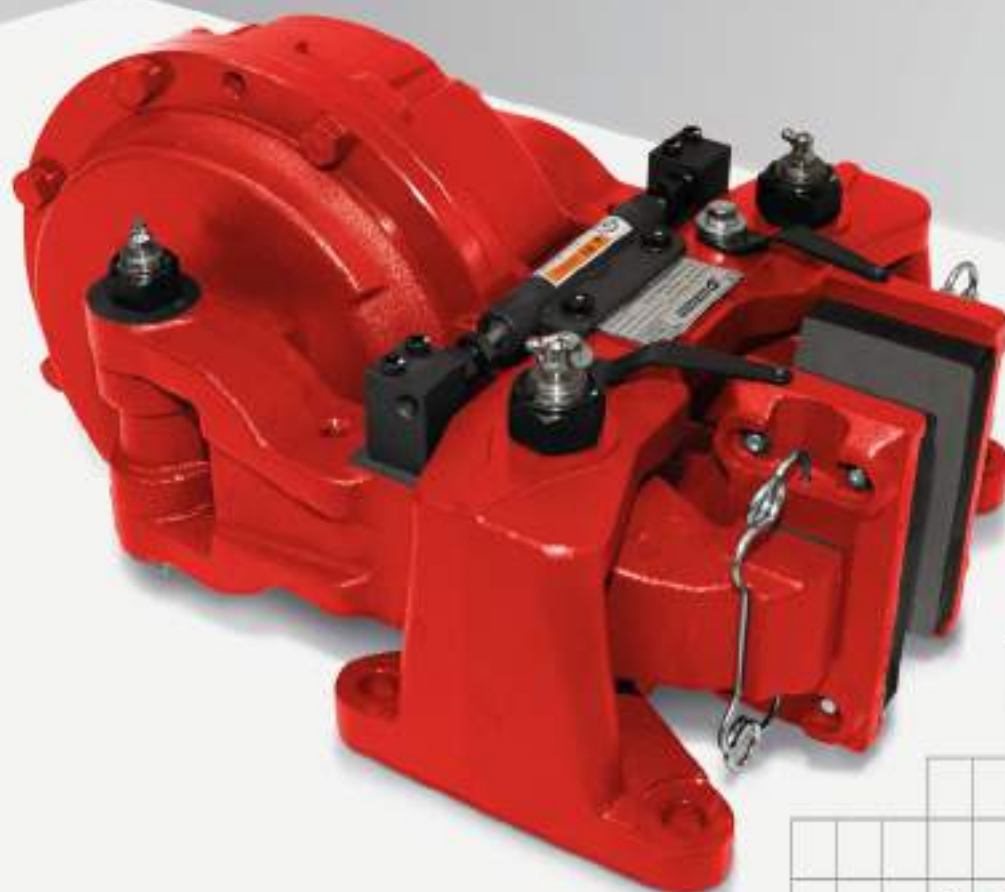
Weight without thruster: ca. 25 kg			Thruster type		Ed 23/5 (weight: 10 kg)			Ed 23/5bb (weight: 10 kg)		
Disc- \varnothing d_2	Friction- \varnothing d_1	Max. hub- \varnothing d_4	Contact force in N		2445			3140		
			e	k_1	* $M_{Bmax.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (% from $M_{Bmax.}$)	* $M_{Bmax.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (Nm) at $\mu = 0,4$	* $M_{Bmin.}$ (% from $M_{Bmax.}$)
200	150	60	75	40	145	109	75	190	114	60
225	175	85	88	53	170	128	75	220	132	60
250	200	110	100	65	195	146	75	250	150	60
280	230	140	115	80	225	169	75	290	174	60
315	265	175	133	98	260	195	75	335	201	60
355	305	215	153	118	300	225	75	385	231	60
400	350	260	175	140	340	255	75	440	264	60
450	400	310	200	165	390	293	75	500	300	60
500	450	360	225	190	440	330	75	565	339	60

Notes



Lined writing area for notes, consisting of 20 horizontal lines spaced evenly down the page.

Disc Brake SB 18 PXi



PINTSCH BUBENZER[®]
is certified according to
DIN EN ISO 9001:2015



Reliable



High Performance



Robust Design



Easy Maintenance

Description SB 18 PXi



Main Features

Spring applied brake, released with pneumatic pressure, simple to operate with low cost control valves

Robust, reliable construction. Well proven in many industrial applications

Simple installation and adjustment for pad wear

Compliant link mechanism to maintain pad in parallel alignment at all times

Even pad wear throughout giving longer lifetime

Simple pad change using spring clips, requiring no special tools

Applications

Can be used in all industrial applications where pneumatic supply is available.

Such as

- Wire and steel rope manufacturing, used as tensioners
- Paper mills, tensioning and emergency
- Forestry equipment, crushers

Special reference is made to the steel industry in all machines used in the process lines such as

- coilers/uncoilers
- transfers
- slitters
- accumulators...

Operating Restrictions

Requires manual adjustment of air gap to compensate for pad wear

High capacity units need lifting equipment for installation



Please Note

We supply a detailed operating manual with every order. Nevertheless, we would point out that brakes are only as safe as the servicing and maintenance performed while they are in operation. The guarantee for the correct functioning of our brakes is therefore only valid if the user adheres to the German DIN standard 15434 part 2 (drum and disc brakes, servicing and maintenance in operation), or to comparable standards in his own country.



PINTSCH BUBENZER Service

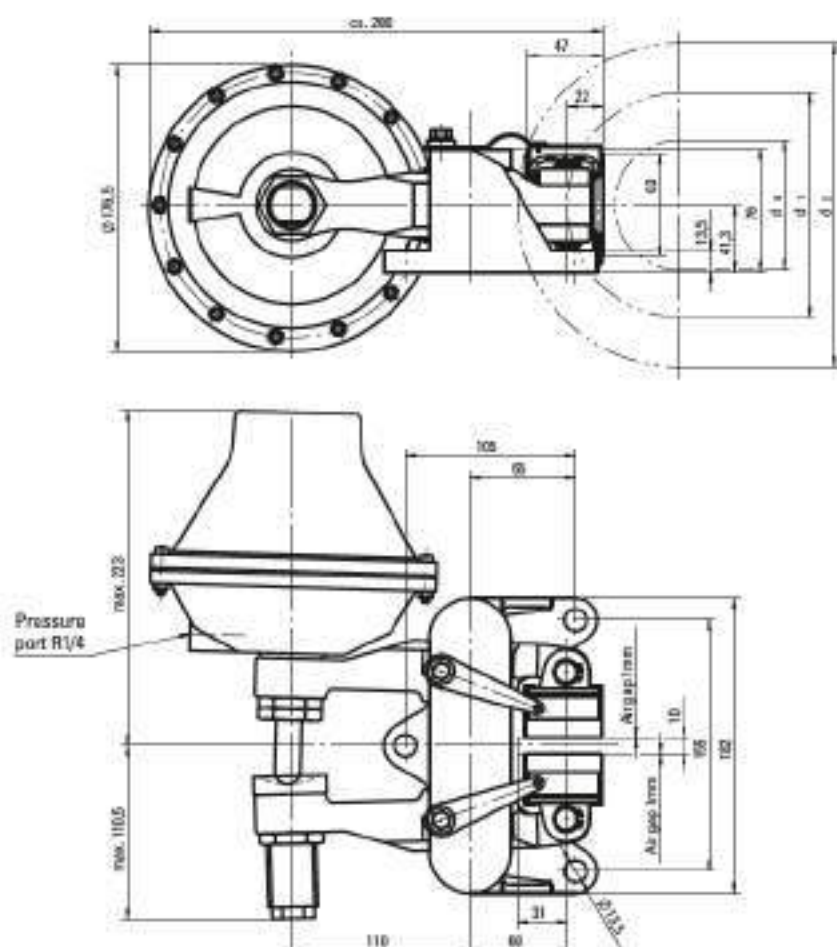
This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on site is possible by PINTSCH BUBENZER service engineers. Drawings as DWG/DXF files for your engineering department are available upon request.

Disc Brake SB 18 PXi

Dimensions and technical data



Rev. 03-14



Brake torque in Nm

$$M_{BR} = F_A (N) \times \mu \times d_1 (mm) / 1000$$

All dimensions in mm

Alterations reserved without notice

*) Theoretical friction factor of standard material combination

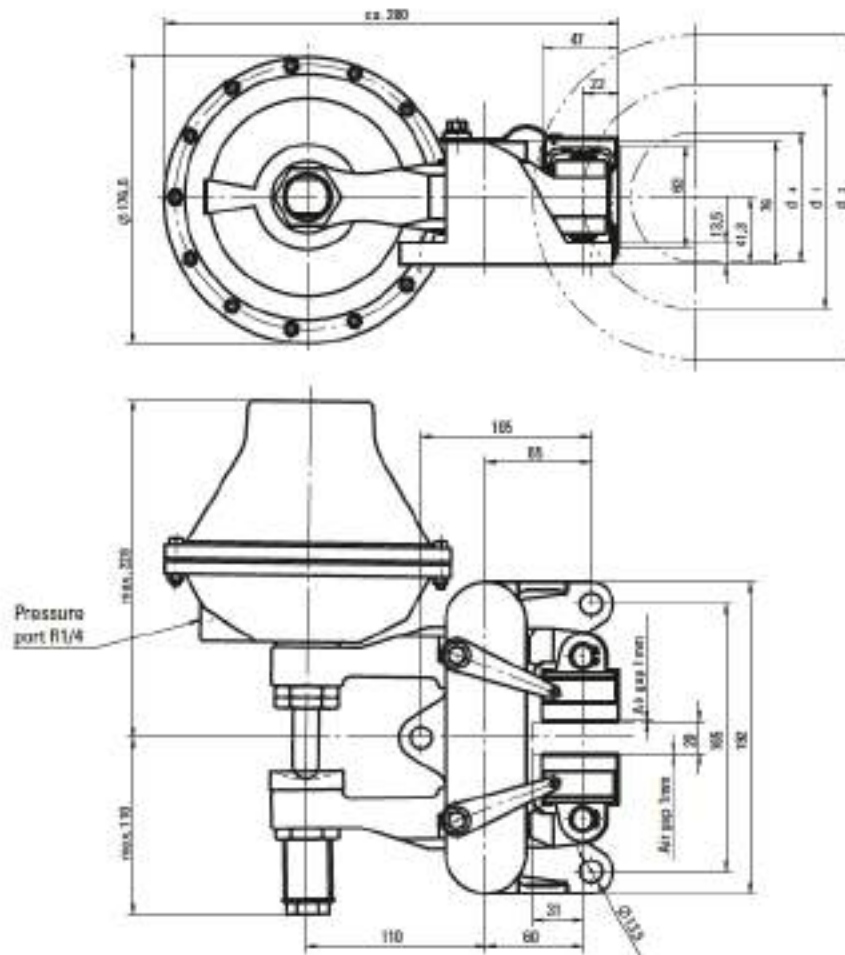
Type		SB 18 PXi - 01	SB 18 PXi - 02
Contact force F_A at 1 mm air gap	N	7410	3840
Brake disc diameter d_2	mm	min. 200	min. 200
Friction diameter d_f	mm	$d_2 - 62$	$d_2 - 62$
Max. perm. hub diameter d_1	mm	$d_2 - 125$	$d_2 - 125$
Brake disc thickness	mm	10	10
Brake pad type		56	56
Max. pad wear (each side)	mm	3,5	3,5
Piston area	cm ²	110	110
Max. operating pressure p_{max}	bar	7	7
Theor. friction coefficient	μ^*	0,30	0,30
Weight	kg	ca. 11	ca. 11

Disc Brake SB 18.1 PXi

Dimensions and technical data



Rev. 03-14



Brake torque in Nm

$$M_{Bz} = F_A (N) \times \mu \times d_1 (mm) / 1000$$

All dimensions in mm

Alterations reserved without notice

*) Theoretical friction factor of standard material combination

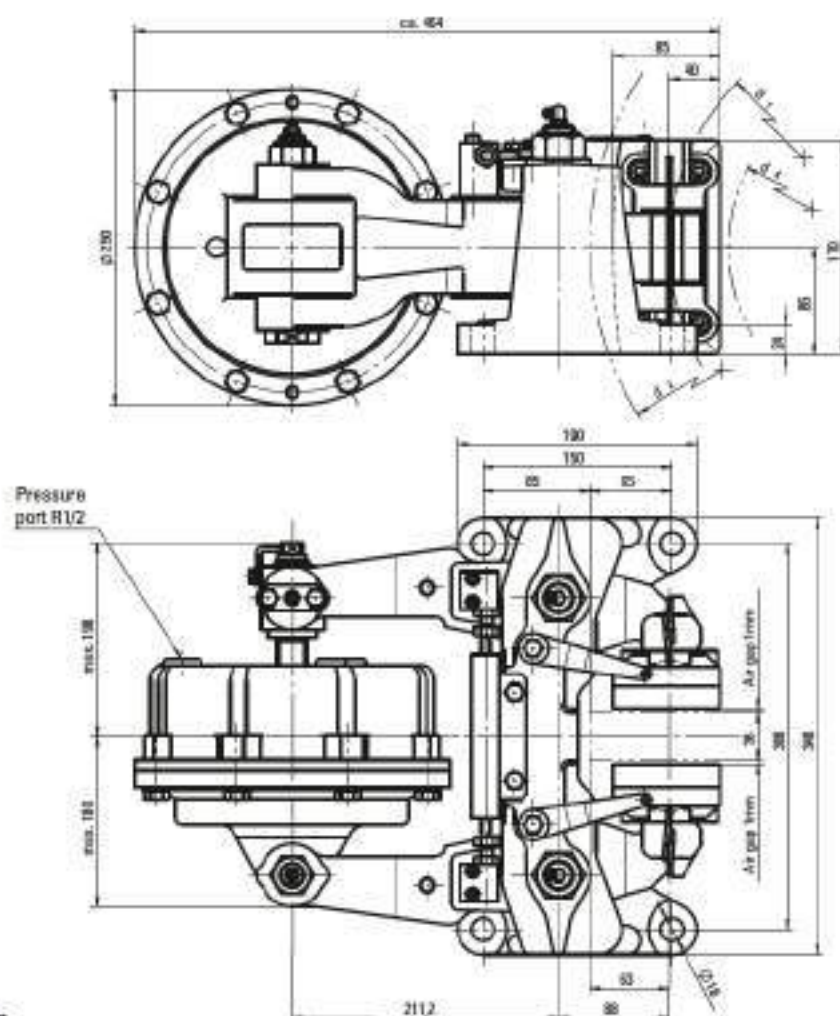
Type		SB 18.1 PXi - 01	SB 18.1 PXi - 02
Contact force F_A at 1 mm air gap	N	7410	3840
Brake disc diameter d_2	mm	min. 200	min. 200
Friction diameter d_1	mm	$d_2 - 62$	$d_2 - 62$
Max. perm. hub diameter d_3	mm	$d_2 - 125$	$d_2 - 125$
Brake disc thickness	mm	20	20
Brake pad type		56	56
Max. pad wear (each side)	mm	3,5	3,5
Piston area	cm ²	110	110
Max. operating pressure p_{max}	bar	7	7
Theor. friction coefficient	μ^*	0,30	0,30
Weight	kg	ca. 12,5	ca. 12,5

Disc Brake SB 18.2 PXi

Dimensions and technical data



Rev. 03-14



Brake torque in Nm
 $M_{Br} = F_A (N) \times \mu \times d_1 (mm) / 1000$

All dimensions in mm
 Alterations reserved without notice

*) Theoretical friction factor of standard material combination

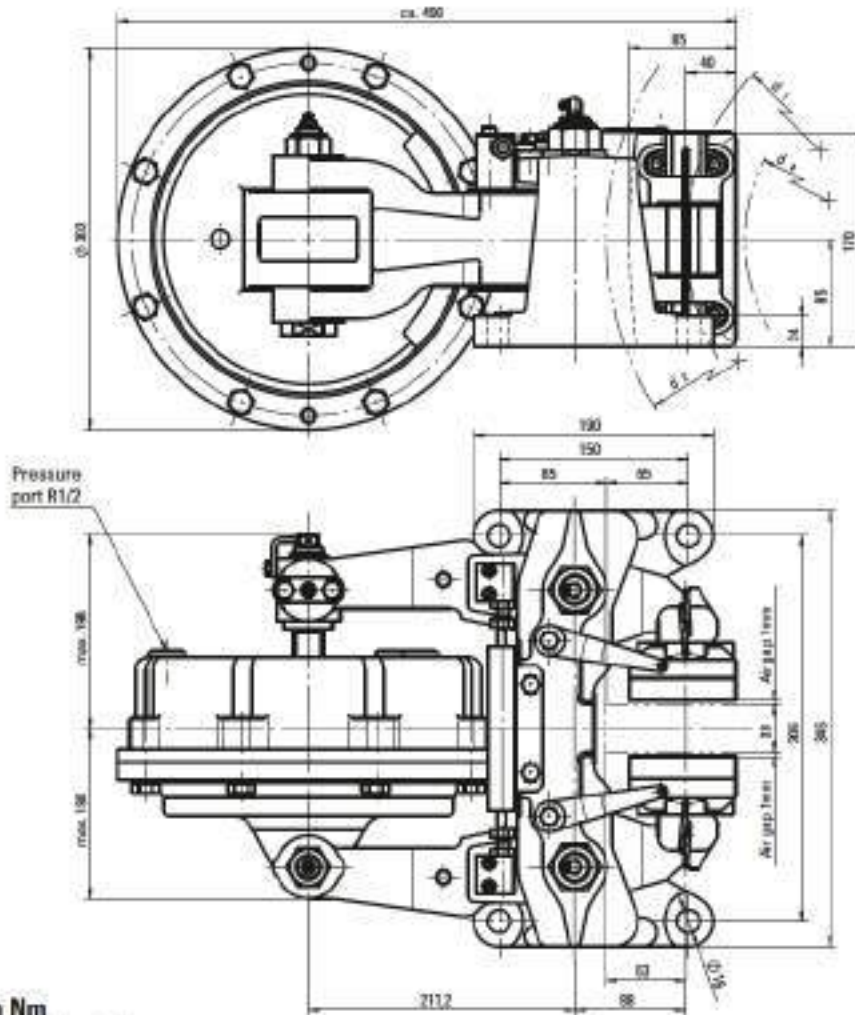
Type		SB 18.2 PXi - 01	SB 18.2 PXi - 02	SB 18.2 PXi - 03
Contact force F_A at 1 mm air gap	N	25550	19940	14960
Brake disc diameter d_2	mm	min. 500	min. 500	min. 500
Friction diameter d_f	mm	$d_2 - 126$	$d_f - 126$	$d_f - 126$
Max. perm. hub diameter d_h	mm	$d_2 - 230$	$d_f - 230$	$d_f - 230$
Brake disc thickness	mm	38	38	38
Brake pad type		57	57	57
Max. pad wear (each side)	mm	7,5	7,5	7,5
Piston area	cm ²	301,6	301,6	301,6
Max. operating pressure p_{max}	bar	7	7	7
Theor. friction coefficient	μ^*	0,30	0,30	0,30
Weight	kg	ca. 66	ca. 66	ca. 66

Disc Brake SB 18.3 PXi

Dimensions and technical data



Rev. 03-14



Brake torque in Nm

$$M_{Bz} = F_A (N) \times \mu \times d_1 (mm) / 1000$$

All dimensions in mm

Alterations reserved without notice

*) Theoretical friction factor of standard material combination

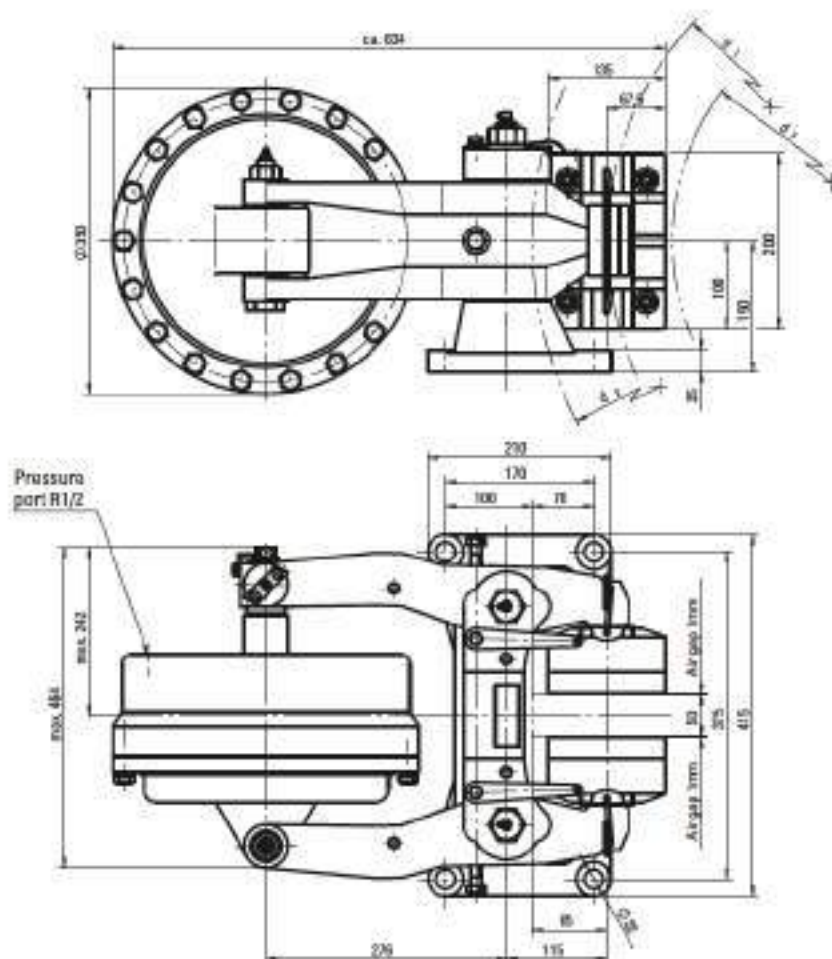
Type		SB 18.3 PXi - 01	SB 18.3 PXi - 02	SB 18.3 PXi - 03
Contact force F_A at 1 mm air gap	N	46280	33730	22480
Brake disc diameter d_2	mm	min. 500	min. 500	min. 500
Friction diameter d_1	mm	$d_2 - 126$	$d_2 - 126$	$d_2 - 126$
Max. perm. hub diameter d_3	mm	$d_2 - 230$	$d_2 - 230$	$d_2 - 230$
Brake disc thickness	mm	38	38	38
Brake pad type		57	57	57
Max. pad wear (each side)	mm	7,5	7,5	7,5
Piston area	cm ²	478,3	478,3	478,3
Max. operating pressure p_{max}	bar	7	7	7
Theor. friction coefficient	μ^*	0,30	0,30	0,30
Weight	kg	ca. 78	ca. 78	ca. 78

Disc Brake SB 18.8 PXi

Dimensions and technical data



Rev. 03-14



Brake torque in Nm

$$M_{Br} = F_A (N) \times \mu \times d_1 (mm) / 1000$$

All dimensions in mm

Alterations reserved without notice

*) Theoretical friction factor of standard material combination

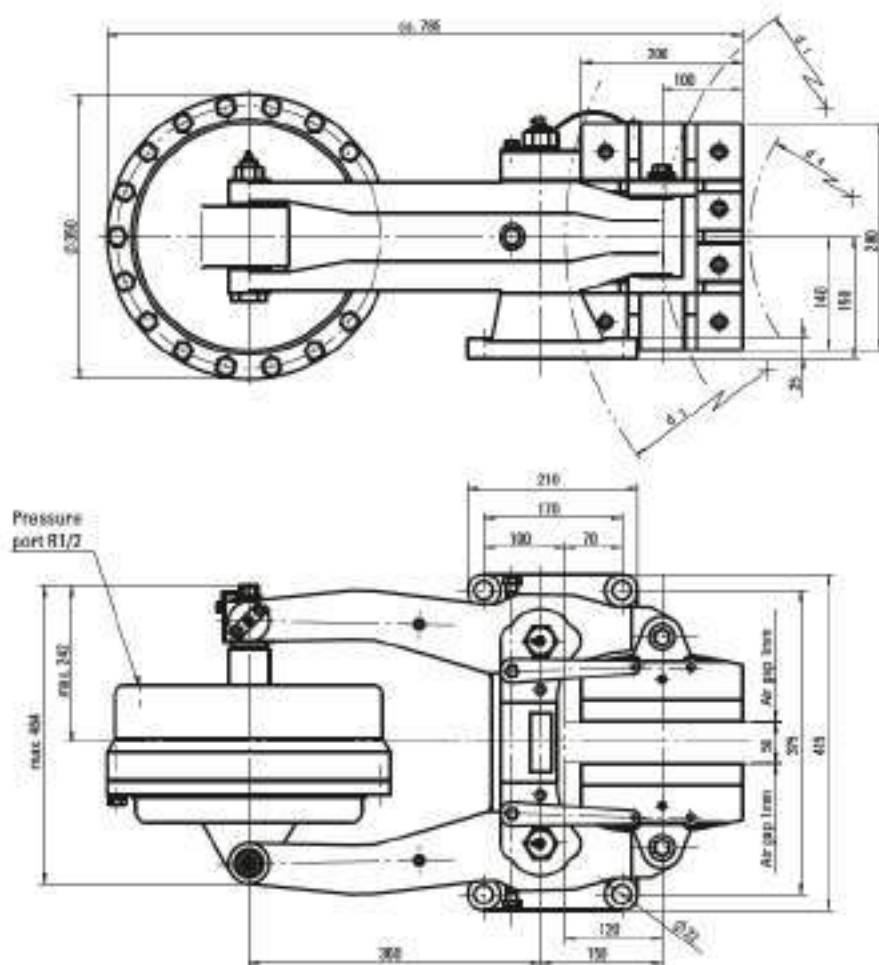
Type		SB 18.8 PXi - 01	SB 18.8 PXi - 02	SB 18.8 PXi - 03	SB 18.8 PXi - 04
Contact force F_A at 1 mm air gap	N	64210	55160	45660	34250
Brake disc diameter d_2	mm	min. 600	min. 600	min. 600	min. 600
Friction diameter d_1	mm	$d_2 - 170$	$d_2 - 170$	$d_2 - 170$	$d_2 - 170$
Max. perm. hub diameter d_4	mm	$d_2 - 325$	$d_2 - 325$	$d_2 - 325$	$d_2 - 325$
Brake disc thickness	mm	50	50	50	50
Brake pad type		59	59	59	59
Max. pad wear (each side)	mm	10	10	10	10
Piston area	cm ²	687	687	687	687
Max. operating pressure p_{max}	bar	7	7	7	7
Theor. friction coefficient	μ^*	0,30	0,30	0,30	0,30
Weight	kg	ca. 140	ca. 140	ca. 140	ca. 140

Disc Brake SB 18.9 PXI

Dimensions and technical data



Rev. 03-14



Brake torque in Nm

$$M_{\text{max}} = F_A (\text{N}) \times \mu \times d_1 (\text{mm}) / 1000$$

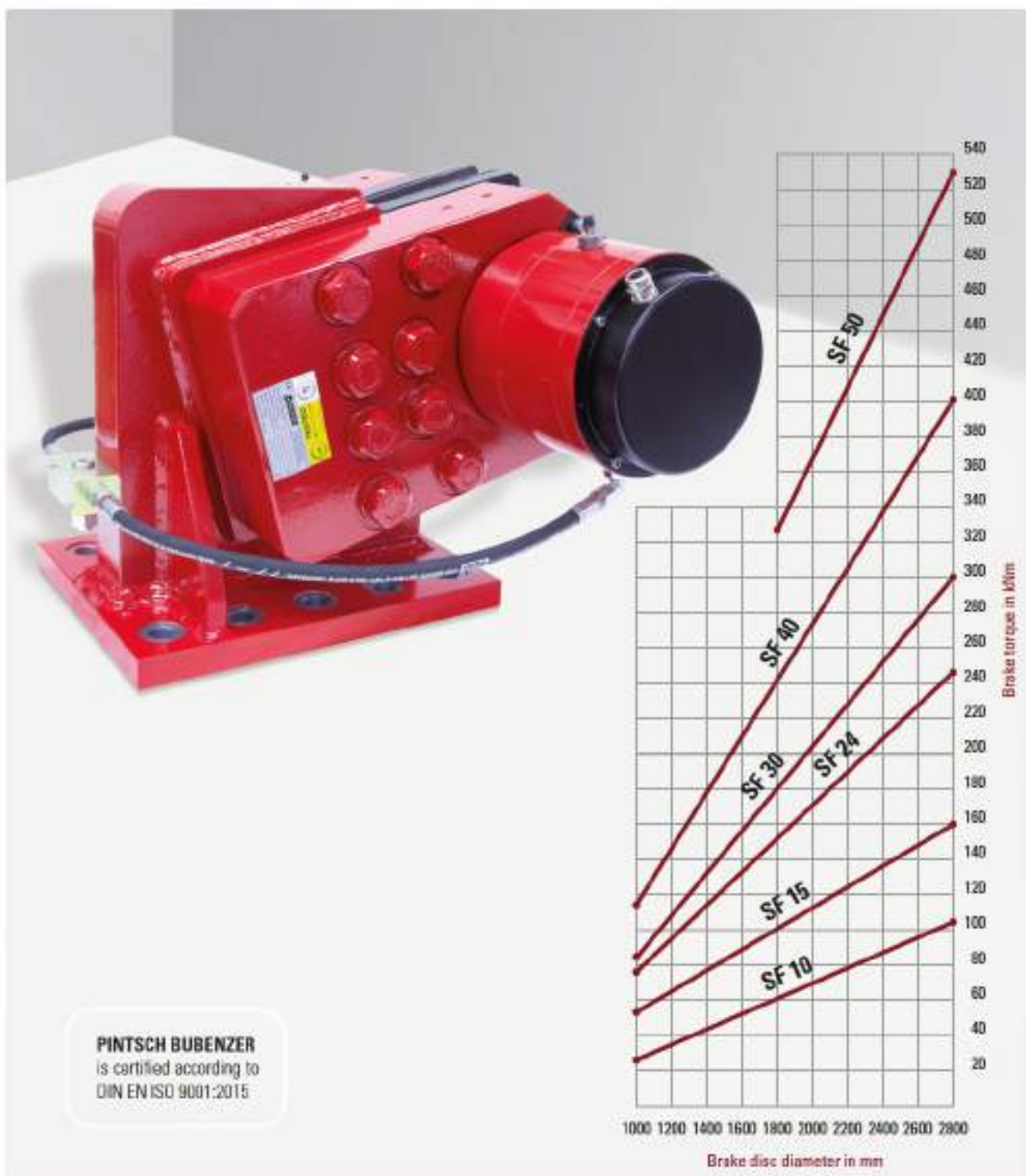
All dimensions in mm

Alterations reserved without notice

*) Theoretical friction factor of standard material combination

Type		SB 18.9 PXI - 01	SB 18.9 PXI - 02	SB 18.9 PXI - 03	SB 18.9 PXI - 04
Contact force F_A at 1 mm air gap	N	64210	55160	45660	34250
Brake disc diameter d_2	mm	min. 900	min. 900	min. 900	min. 900
Friction diameter d_1	mm	$d_2 - 240$	$d_2 - 240$	$d_2 - 240$	$d_2 - 240$
Max. perm. hub diameter d_4	mm	$d_2 - 460$	$d_2 - 460$	$d_2 - 460$	$d_2 - 460$
Brake disc thickness	mm	50	50	50	50
Brake pad type		58	58	58	58
Max. pad wear (each side)	mm	10	10	10	10
Piston area	cm ²	687	687	687	687
Max. operating pressure p_{max}	bar	7	7	7	7
Theor. friction coefficient	μ^*	0,30	0,30	0,30	0,30
Weight	kg	ca. 170	ca. 170	ca. 170	ca. 170

Hydraulic Caliper Disc Brakes SF Series



Reliable



High Performance



Robust Design



Easy Maintenance

Description SF



Main Features

Two identical caliper halves, ready for operation, with spring packs set to nominal force and limit switch release control

Up to 2 mm air gap between brake pad and disc

Easy, manual pad wear compensation

Organic, non-asbestos linings

Options

Limit switch wear control

Sintered linings

Complete piped supports for one or more calipers

Hydraulic power units

Special seals for flameproof fluids

Cleaning pads

Brake discs

CMB contact force measurement

Applications

The high capacity of these brakes makes them particularly suitable as secondary emergency brakes on hoist gears and on downhill conveyor

Other applications are possible in material handling, requiring power and compact design in either direction of rotation, particularly in replacing band brakes

Brakes for use in high duty cycle applications are to be specifically indicated prior to the technical selection procedure

Operating Restrictions

Brakes of this range are tested both mechanically and hydraulically and are set to nominal force. This setting can only be changed by the manufacturer. Operating conditions other than described in this brochure require the manufacturer's approval and may influence the function of the caliper and its components



Please Note

We supply a detailed operating manual with every order. Nevertheless, we would point out that brakes are only as safe as the servicing and maintenance performed while they are in operation. The guarantee for the correct functioning of our brakes is only valid if the user adheres to the German DIN standard 15434 part 2 (drum and disc brakes, servicing and maintenance in operation), or to comparable standards in his own country.



PINTSCH BUBENZER Service

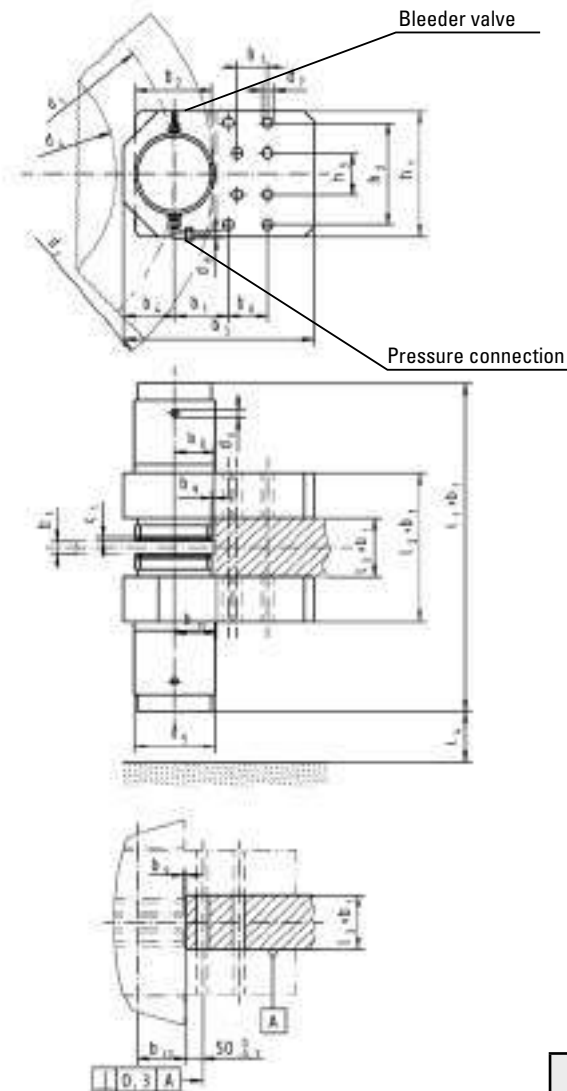
This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on-site by PINTSCH BUBENZER service engineers is possible. Drawings as DWG/DXF files for your engineering department are available upon request.

Disc Brake SF

Dimensions and technical data



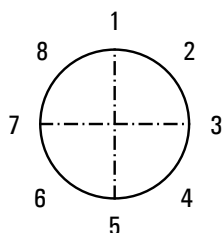
Rev. 04-18



*) Average friction factor of standard material combination

All dimensions in mm. Alterations reserved without notice.

Brake torque M_{Br} in Nm = F_A (kN) x μ x d_1 (mm)



Please indicate required mounting position.

Type SF	10	15	24	30	40
b ₂	165	165	195	280	300
b ₃	410	410	480	640	720
b ₄	110	110	130	155	175
b ₅	115	115	130	200	220
b ₆	85	85	100	110	125
b ₇	60	60	70	110	125
b ₈	85	85	100	140	160
b ₉	5	5	5	5	10
b ₁₀	90	90	105	150	170
c ₁	10	10	10	10	10
d ₅	175	175	225	280	310
d ₆	G1/2"	G1/2"	G1/2"	G1/2"	G1/2"
d ₇	25	25	31	38	50
d ₈	12	12	12	12	12
h ₁	270	270	300	400	480
h ₂	220	220	230	300	375
h ₃	90	90	70	100	125
l ₁	655	680	815	945	985
l ₂	300	300	350	402	506
l ₃	100	100	110	130	110
l _{4min}	110	110	130	180	200
Bolt \emptyset	M24	M24	M30	M36	M48
Bolt material	10.9	10.9	10.9	10.9	10.9
Tighten. torque, Nm	1050	1050	2100	3500	6400
Contact force F_A kN	100	150	240	300	400
Op. pressure bar	140	180	180	210	210
Max. pressure bar	200	200	200	240	240
Release stroke mm	2	2	2	2	2
Oil volume l	0,023	0,023	0,035	0,050	0,052
Pad surface cm ²	398	398	533	1050	1360
Theor. friction μ^*	0,40	0,40	0,40	0,40	0,40
Weight (kg)	200	210	368	750	1180

Data per caliper half

Brake disc data					
	SF10	SF15	SF24	SF30	SF40
d ₁ =	d ₂ -170 mm	d ₂ -170 mm	d ₂ -200 mm	d ₂ -290 mm	d ₂ -320 mm
d ₄ =	d ₂ -420 mm	d ₂ -420 mm	d ₂ -490 mm	d ₂ -620 mm	d ₂ -700 mm

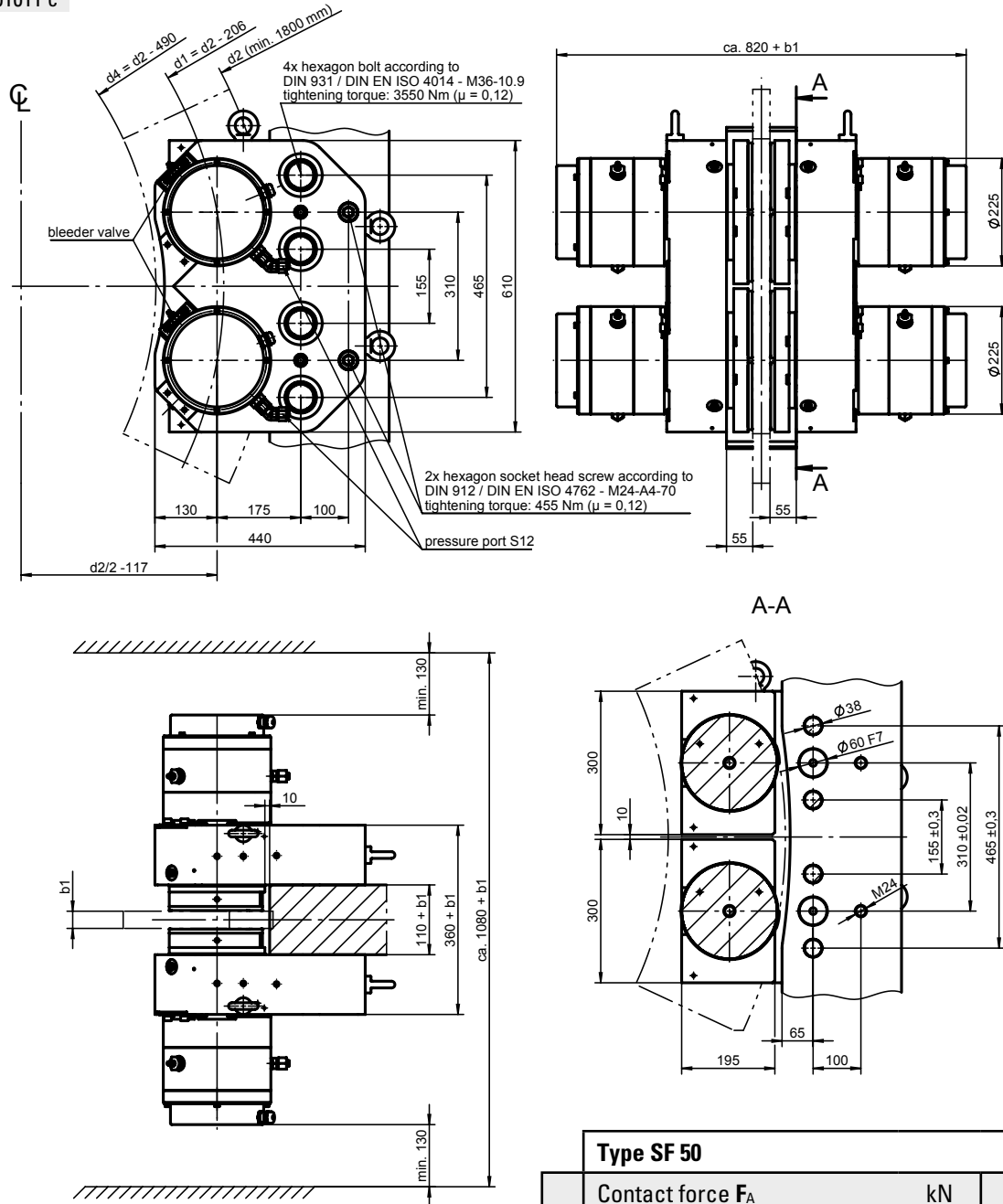
d₂ = Brake disc diameter in mm
d₁ = Friction diameter in mm
d₄ = Max. permissible drum or hub diameter in mm
b₁ = Disc thickness in mm (min. 30)

Disc Brake SF 50

Dimensions and technical data



Rev. 03-18
MB-001011 c



Brake torque M_B , in Nm = F_A (kN) x μ x d_1 (mm)

*) Theor. friction factor of standard material combination

All dimensions in mm
Alterations reserved without notice

Type SF 50			
Data per caliper half	Contact force F_A	kN	510
	Operating pressure p	bar	200
	Max. pressure $p_{max.}$	bar	220
	Release stroke	mm	2
	Oil volume	l	0,07
	Pad surface	cm ²	1040
	Theor. friction factor	μ^*	0,40
Weight (without bracket)	kg	ca. 730	

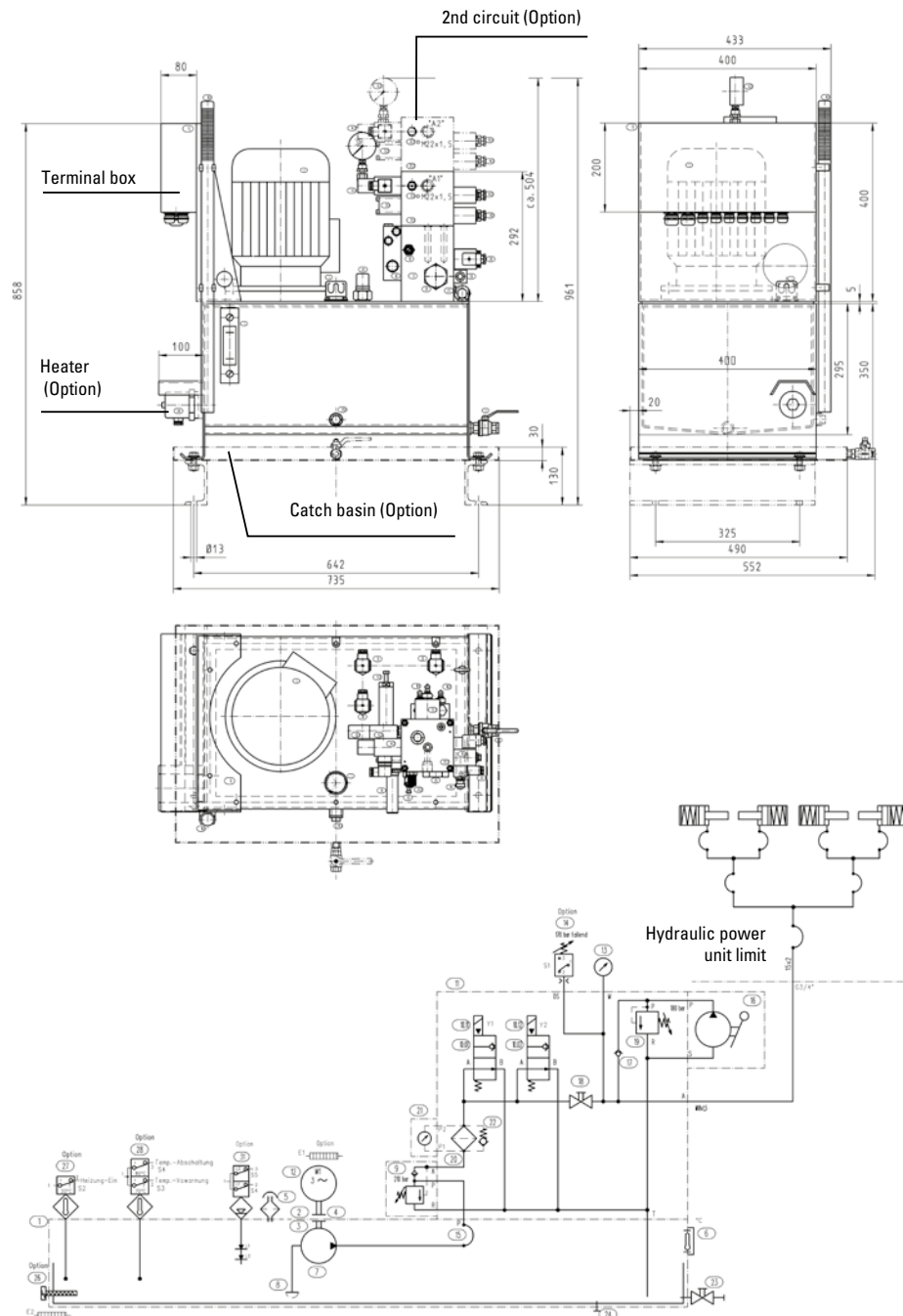
d_2 = Brake disc diameter in mm
 d_1 = Friction diameter in mm
 d_4 = Max. permissible drum or hub diameter in mm
 b_1 = Brake disc thickness in mm (min. 30)

Disc Brake SF

Hydraulic power unit for one or more calipers



Rev. 12-06



Example:	
Standard configuration	
up to 4	SF10/SF15
up to 2	SF24
Motor:	3 kW
Pump:	7,9 l/min
Pressure:	210 bar
Tank:	50 l
Weight:	85 kg

The flow diagram shows the general arrangement of the hydraulic power unit, including hand pump for emergency manual release of the brakes.

The two solenoid valves are connected in parallel (redundancy). After the nominal pressure is reached, the idler valve switches into idle running. The motor is continuously energized.

Pressure switch, temperature switch, heaters, level switch, stainless steel version and other accessories are available options.

Hydraulic power units are also available as dual-circuit power units, e.g. to operate main hoist and boom hoist brakes with one power unit only.

All dimensions in mm
Alterations reserved without notice



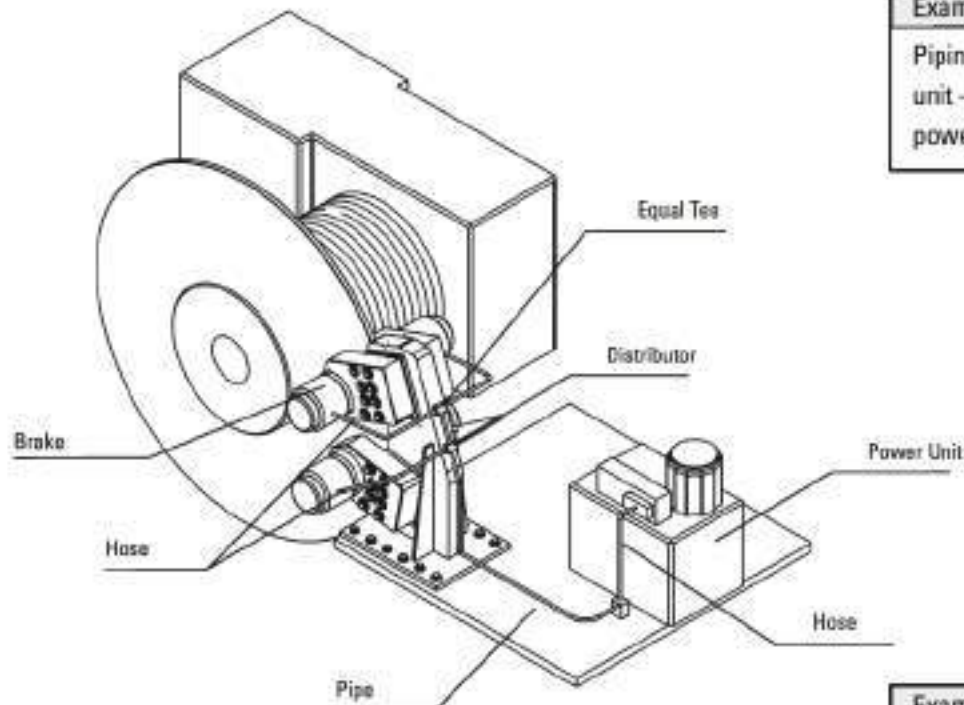
We supply a complete hydraulic and electric diagram according to the order specification with every order.

Piping Samples

Disc brakes SF and BSC

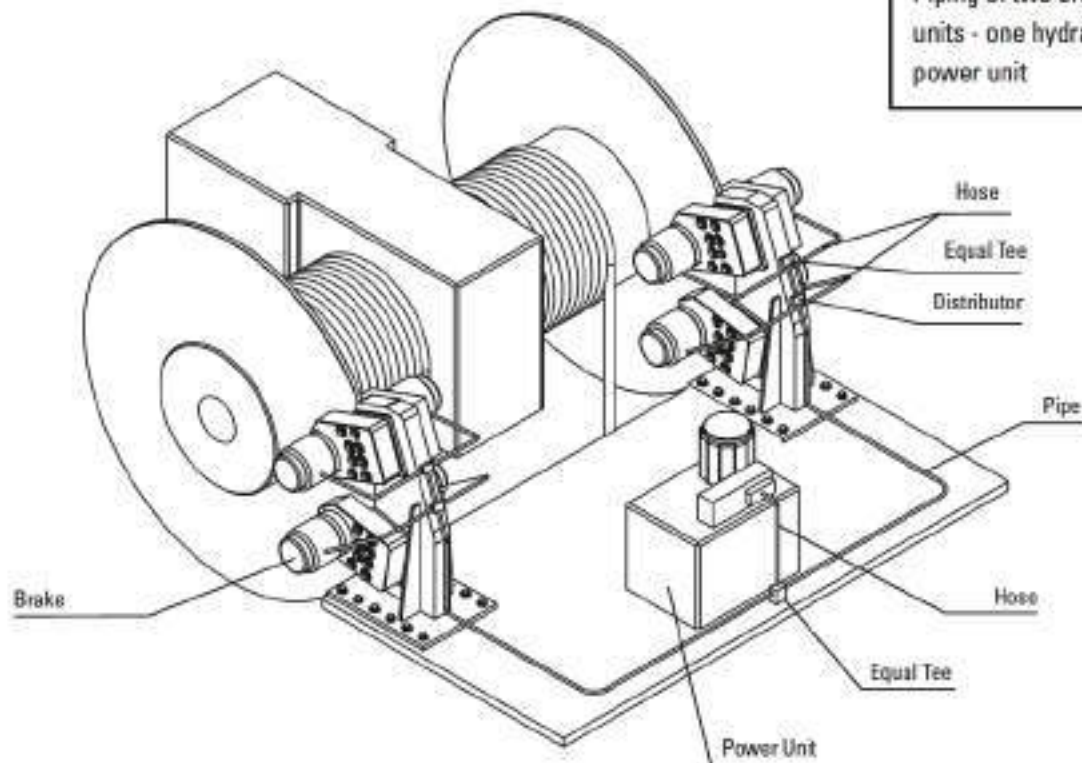


Rev. 09-02



Example:

Piping of one brake unit – one hydraulic power unit



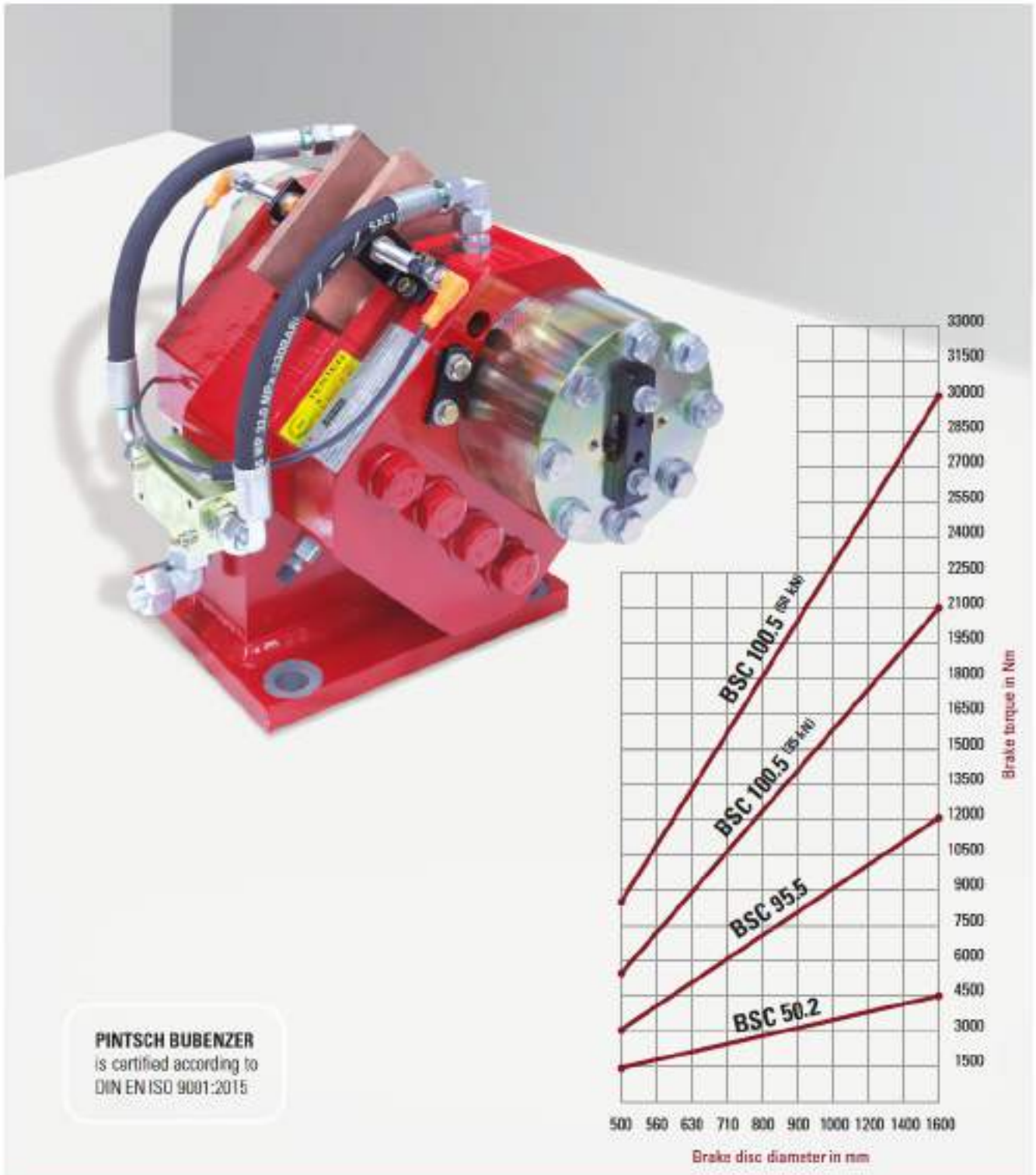
Example:

Piping of two brake units - one hydraulic power unit



Attention: For operating two brake units with one power unit please note, that the power unit should be installed between the brakes in the centre to achieve almost equal pipe length on both sides (equal apply time of brakes).

Hydraulic Caliper Disc Brakes BSC Series



PINTSCH BUBENZER
is certified according to
DIN EN ISO 9001:2015



Reliable



High Performance



Robust



Compact

Description BSC



Main Features

- Two identical caliper halves, ready for operation, with spring packs set to nominal force
- Up to 1 mm air gap between brake pad and disc
- Easy, manual pad wear compensation
- Organic, non-asbestos linings

Options

- Limit switch release control
- Limit switch wear control
- Sintered linings
- Complete piped supports for one or more calipers
- Hydraulic power units
- Special seals for flameproof fluids
- Cleaning pads
- Brake discs

Applications

The high capacity of these brakes makes them particularly suitable as service- or secondary emergency brakes e.g. on hoists, slewing drives and belt conveyors

Other applications are in material handling, mechanical engineering and wind turbine industry, where high holding forces are required independent of the direction of rotation within limited space

Operating Restrictions

Brakes of this range are mechanically and hydraulically tested and are set to nominal force. This setting can only be changed by the manufacturer. Operating conditions other than described in this brochure require the manufacturer's approval and may influence the function of the caliper and its components



Please Note

We supply a detailed operating manual with every order. Nevertheless, we would point out that brakes are only as safe as the servicing and maintenance performed while they are in operation. The guarantee for the correct functioning of our brakes is only valid if the user adheres to the German DIN standard 15434 part 2 (drum and disc brakes, servicing and maintenance in operation), or to comparable standards in his own country.



PINTSCH BUBENZER Service

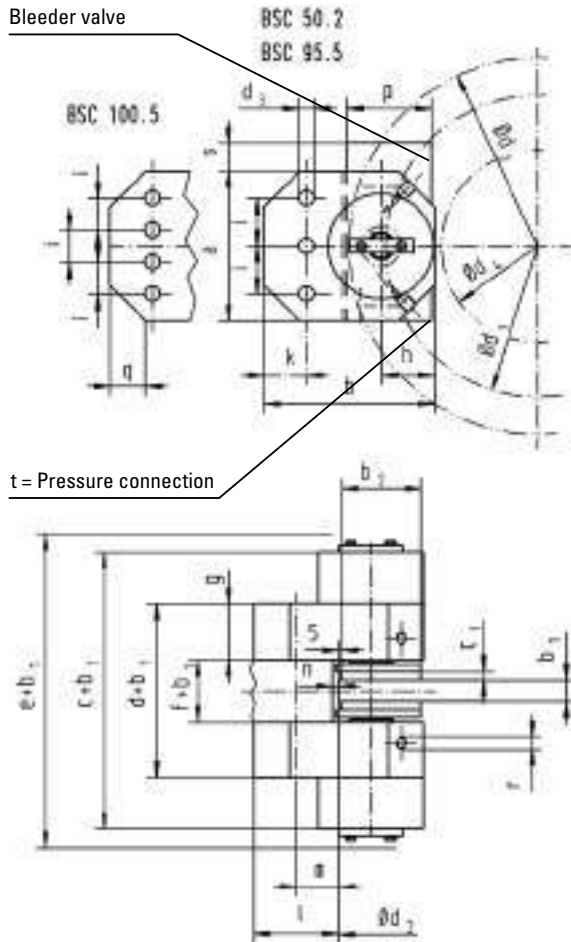
This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on-site by PINTSCH BUBENZER service engineers is possible. Drawings as DWG/DXF files for your engineering department are available upon request.

Disc Brake BSC

Dimensions and technical data



Rev. 03-16

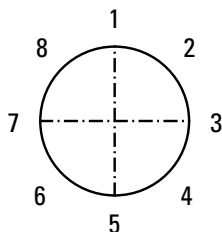


t = Pressure connection

*) Average friction factor of standard material combination

All dimensions in mm
Alterations reserved without notice

Brake torque M_{Br} in Nm = F_A (kN) x μ x d_1 (mm)



Please indicate required mounting position

Type BSC	50.2	95.5	100.5		
a	130	220	210		
b	128	213	240		
b ₂	63	112	112		
c	224	380	360		
c ₁	6	12	12		
d	108	137	215		
d ₃	14	21	22		
e	302	435	412		
f	38	57	57		
g	35	40	79		
h	42	75	75		
i	35	47,5	45		
k	24	32	60		
l	53	78	119		
m	29	46	59		
n	7	8	8		
p	70	120	120		
q	30x30°	25x45°	50x45°		
r	1/4"	3/8"	3/8"		
s	30	34	40		
t	∅10	∅12	∅12		
Bolt ∅	M12	M20	M20		
Bolt material	8.8	8.8	10.9		
Tightening torque Nm	86	410	560		
Data per caliper half	Contact force F_A kN	7	20	35	50
	Op. pressure bar	60	60	100	160
	Max. pressure bar	90	100	180	
	Release stroke mm	1	1	1	
	Oil volume l	0,002	0,004	0,005	
	Pad surface cm ²	73	195	195	
Theor. friction μ^*	0,40	0,40	0,40		
Weight (kg)	12	30	40		

Brake disc data

	BSC 50.2	BSC 95.5	BSC 100.5
d ₁	d ₂ -70 mm	d ₂ -105 mm	d ₂ -105 mm
d ₄	d ₂ -170 mm	d ₂ -284 mm	d ₂ -260 mm

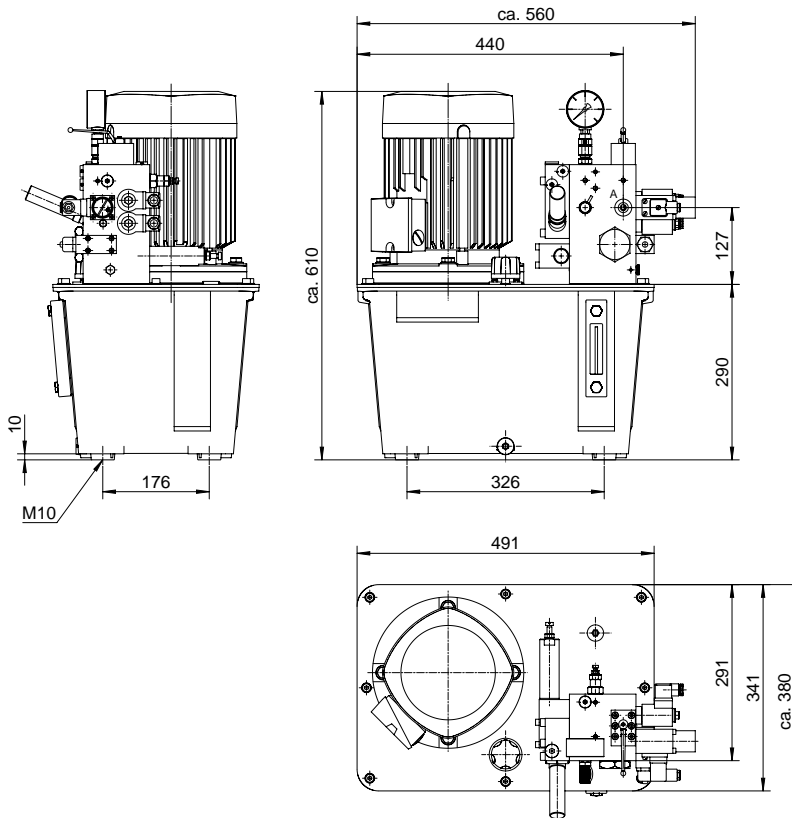
d₂ = Brake disc diameter in mm
d₁ = Friction diameter in mm
d₄ = Max. permissible drum or hub diameter in mm
b₁ = Disc thickness in mm (min. 30)

Disc Brake BSC

Hydraulic power unit for one or more calipers



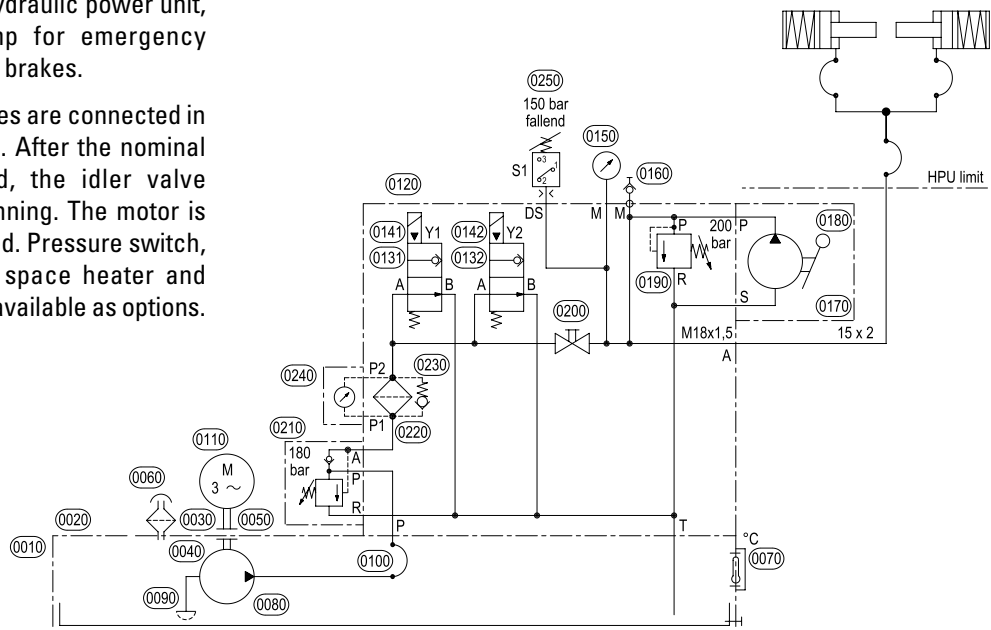
Rev. 05-17



Example:	
Standard configuration up to 4 BSC 100.5	
Motor:	3 kW
Pump:	7,9 l/min at 50 Hz
Pressure:	180 bar
Tank:	30 l

The flow diagram shows the general arrangement of the hydraulic power unit, including hand pump for emergency manual release of the brakes.

The two solenoid valves are connected in parallel (redundancy). After the nominal pressure is reached, the idler valve switches into idle running. The motor is continuously energized. Pressure switch, temperature switch, space heater and other accessories are available as options.



All dimensions in mm
Alterations reserved without notice

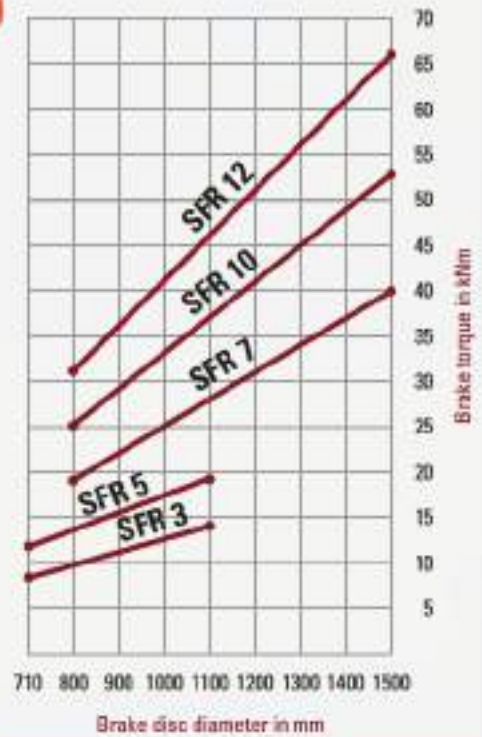


We supply a complete hydraulic and electric diagram according to the order specification with every order.

Hydraulic Caliper Disc Brakes SFR Series



PINTSCH BUBENZER
is certified according to
DIN EN ISO 9001:2015



Reliable



High Performance



Robust Design



Easy Maintenance

Description SFR



Main Features

Monospring caliper brake, ready to operate, with spring pack set to nominal force

Sintered linings

Limit switch release control

Easy, manual pad wear compensation

Horizontal compensation \pm 5 mm

Support for direct gear box mounting

Options

Limit switch wear control

Hydraulic power units

Brake discs and couplings

Seals for special fluids

Sensors for remote monitoring and diagnostic, like e.g. spring force-, temperature-, wear- and release gap monitoring

CMB contact force measurement

Applications

The high capacity of these brakes makes them particularly suitable as rotor brakes in wind turbines

Other applications are possible in material handling, requiring power and compact design in either direction of rotation, e.g. hoisting applications and conveyor belts

Use of the brakes for applications with high duty cycles should be specifically indicated during technical selection procedure

Operating Restrictions

Brakes of this range are tested both mechanically and hydraulically and are set to nominal force. This setting can only be changed by the manufacturer. Operating conditions other than described in this brochure require the manufacturer's approval and may influence the function of the caliper and its components



Please Note

We supply a detailed operating manual with every order. Nevertheless, we would point out that brakes are only as safe as the servicing and maintenance performed while they are in operation. The guarantee for the correct functioning of our brakes is therefore only valid if the user adheres to the German DIN standard 15434 part 2 (drum and disc brakes, servicing and maintenance in operation), or to comparable standards in his own country.



PINTSCH BUBENZER Service

This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on site is possible by PINTSCH BUBENZER service engineers. Drawings as DWG/DXF files for your engineering department are available upon request.

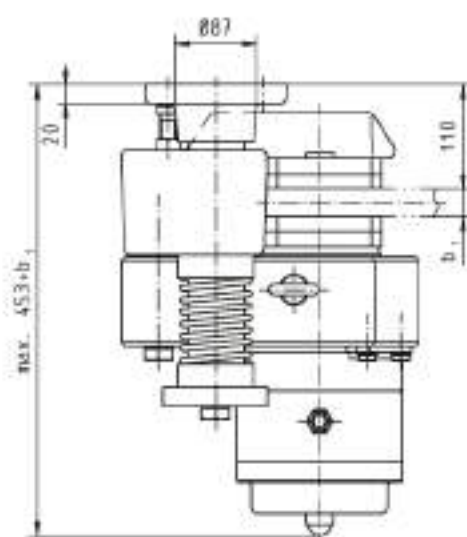
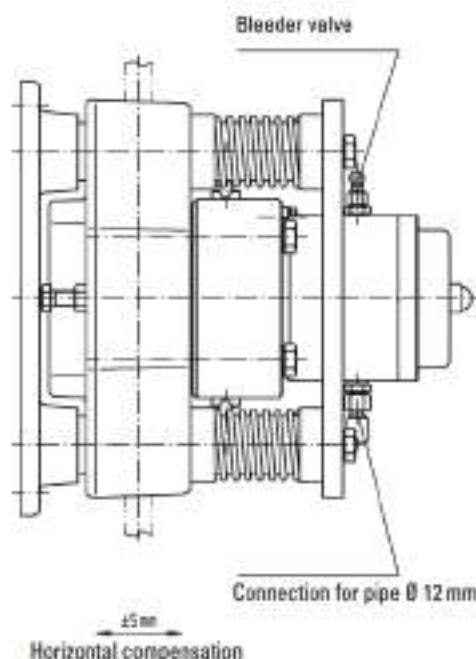
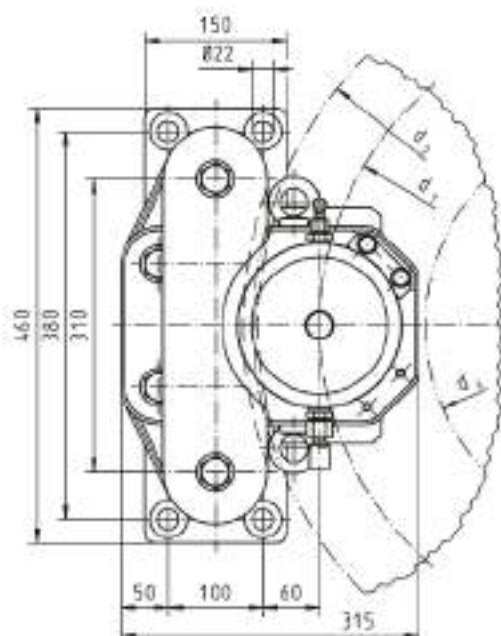
Disc Brake SFR 3-5

Dimensions and technical data



Rev. 05-08

Brake is available also as "hydraulic applied" version (SFRA, upon request)



*) Average friction factor of standard material combination

All dimensions in mm
Alterations reserved without notice

Brake torque M_B in Nm = F_A (kN) x μ x d_1 (mm)



Please indicate mounting position in case of order.

Type SFR		3	5
Contact force F_A	kN	35	50
Operating pressure	bar	35	80
Max. pressure	bar	135	135
Rel. stroke (per side)	mm	1	1
Oil volume	l	0.023	0.023
Pad surface (1 pad)	cm ²	300	300
Theor. friction	μ^*	0.4	0.4
Weight	kg	159	159
Bolt	\emptyset	M20	M20
Bolt material		10.9	10.9
Tighten. torque	Nm	560	560

Brake disc		
Brake disc $\emptyset d_2$	mm	710... 1100
Friction $\emptyset d_1$	mm	d_2 -140
Max. perm. Hub $\emptyset d_3$	mm	d_2 -360
Disc thickness b	mm	30... 40

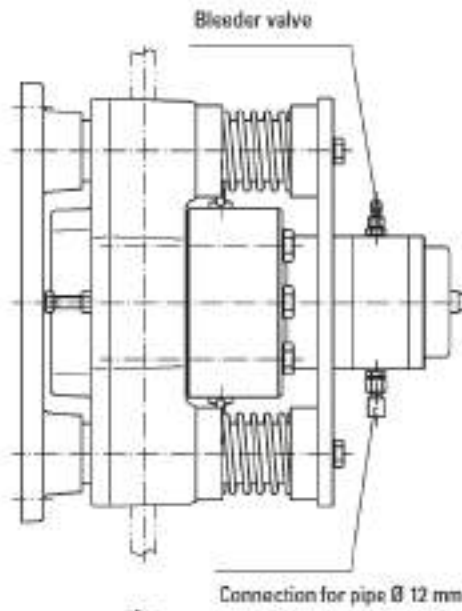
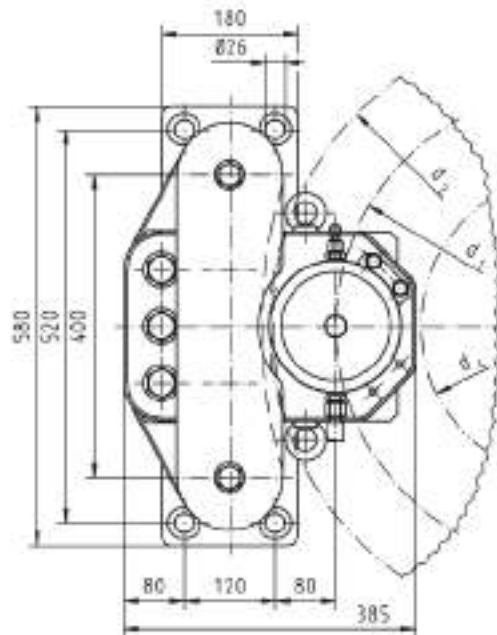
Disc Brake SFR 7-12

Dimensions and technical data

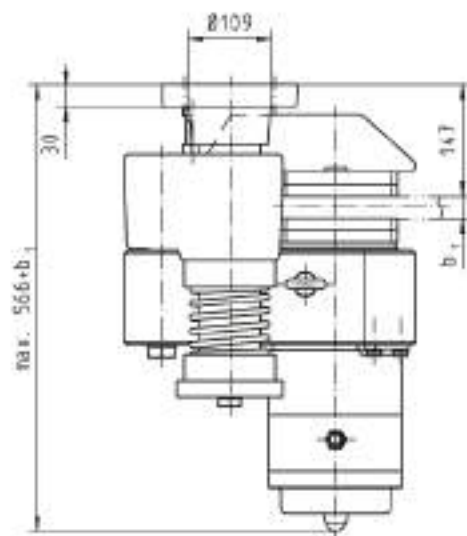


Rev. 01-10

Brake is available also as "hydraulic applied" version (SFRA, upon request)



Horizontal compensation



*) Average friction factor of standard material combination

All dimensions in mm
Alterations reserved without notice

Brake torque M_B in Nm = F_A (kN) x μ x d_i (mm)



Please indicate mounting position in case of order.

Type SFR		7	10	12
Contact force F_A	kN	75	100	125
Operating pressure	bar	130	150	160
Max. pressure	bar	180	180	180
Rel. stroke (per side)	mm	1	1	1
Oil volume	l	0.023	0.023	0.023
Pad surface (1 pad)	cm ²	400	400	400
Theor. friction	μ^*	0.4	0.4	0.4
Weight	kg	279	279	279
Bolt	Ø	M24	M24	M24
Bolt material		10.9	10.9	10.9
Tighten. torque	Nm	960	960	1125

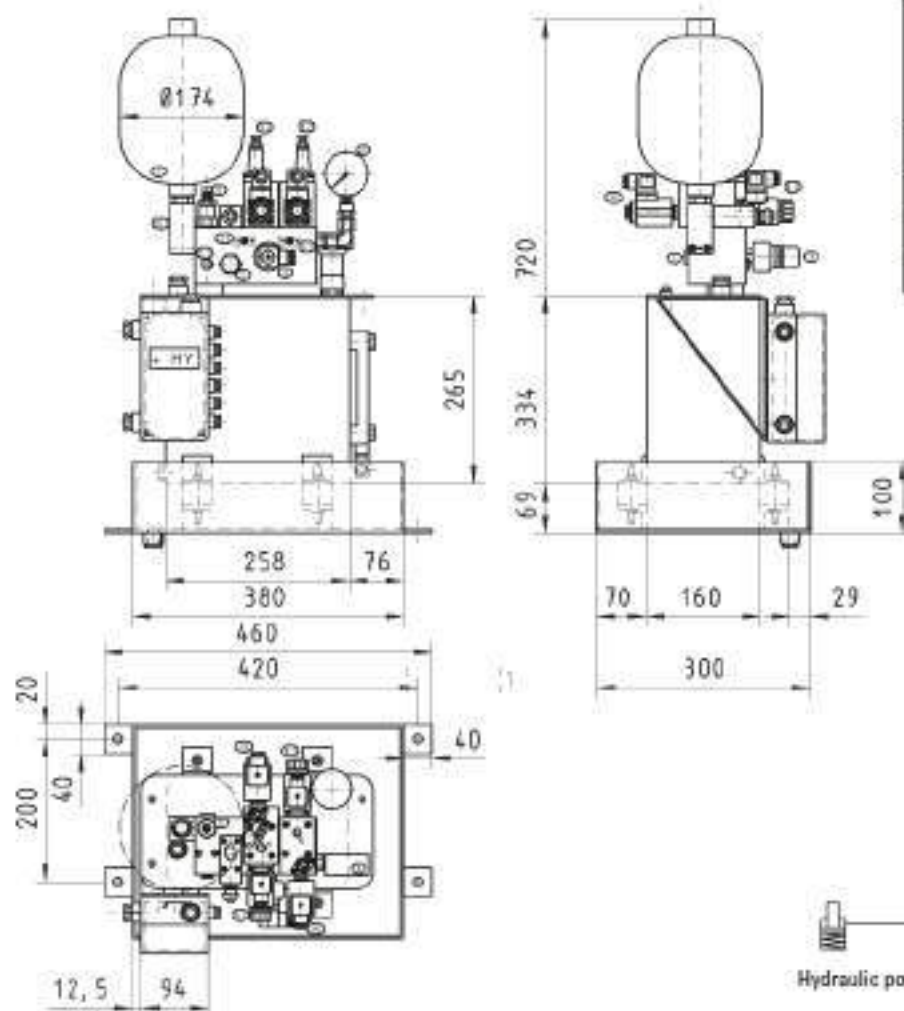
Brake disc		
Brake disc Ø d_0	mm	800... 1700
Friction Ø d_i	mm	d2-140
Max. perm. Hub Ø d_1	mm	d2-395
Disc thickness b_1	mm	38... 40

Disc Brake SFR

Hydraulic power unit, example (please also see page B10)



Rev. 11-03



Example:

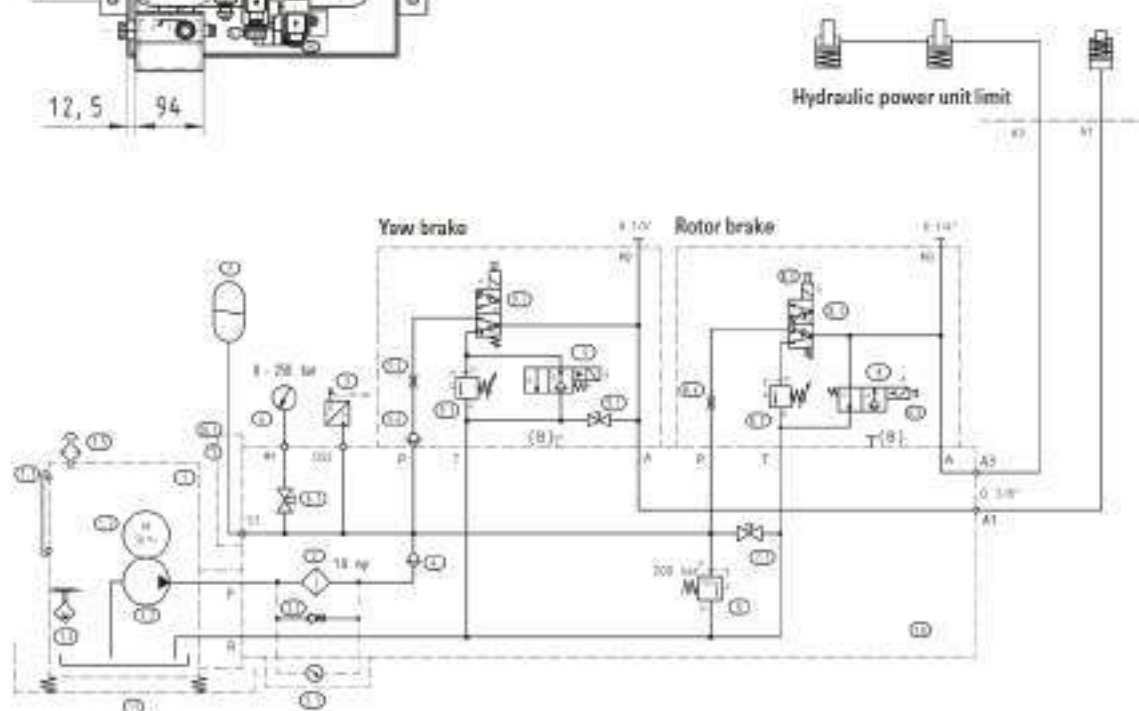
Standard configuration
up to 2 St. SFR (Rotor)
up to 2 St. BAC (Yaw)

Motor: 0,25 kW

Accumulator: 2,8 l

Pressure: 160 bar

Tank: 10 l



All dimensions in mm
Alterations reserved without notice

Spring Set Brakes SFB Series



PINTSCH BUBENZER
is certified according to
DIN EN ISO 9001:2015



Reliable



High Performance



Robust



Easy Maintenance



Compact



Tried and Trusted

Description SFB Series



Main Features

■	Spring applied safety brake
■	Electromechanically released
■	Protection-class IP67
■	Double wear reserve by single air gap adjustment
■	High work capacity
■	High wear resistance because of high abrasion resistance
■	Functional without cover
■	Emergency release screws

Applications

■	Gantry, trolley and hoisting applications
■	Electrical drives for ship winches and deck machinery
■	Jack up systems at offshore systems
■	Dynamic and static use at general industrial applications

Certificates

■	ABS, DNV, LR, GL, RMROS, BV
---	-----------------------------

Options

■	Special brake torque:
■	Lower brake torque = type SFB
■	Higher brake torque = type SFB-SH
■	Holding brake torques available on request
■	Micro- or proximity switches:
■	• Monitoring the function on/off
■	• Maximum air gap (wear-monitoring)
■	Lateral junction box
■	Tacho preparation with all mounting parts
■	Cover bore
■	Shaft sealing
■	Special voltage
■	Anti condensation heater
■	Radial cable outlet
■	Special flange

Electrical equipment

■	One-way, bridge and switching rectifier
■	Protective element
■	Brake control unit = BCU 2001
■	Brake control and monitoring system = BCMS-4



Please Note

We supply a detailed operating manual with every order. Nevertheless, we would point out that brakes are only as safe as the servicing and maintenance performed while they are in operation. The guarantee for the correct functioning of our brakes is only valid if the user adheres to the German DIN standard 15434 part 2 (drum and disc brakes, servicing and maintenance in operation), or to comparable standards in his own country.



PINTSCH BUBENZER Service

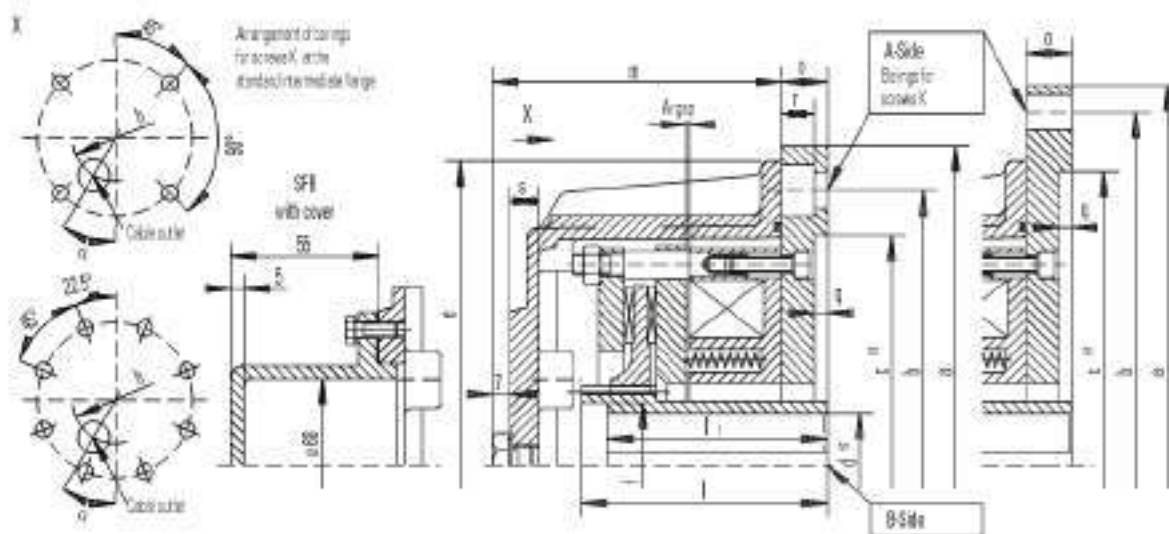
This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on-site by PINTSCH BUBENZER service engineers is possible. Drawings as DWG/DXF files for your engineering department are available upon request.

Spring Set Brake SFB

Electromagnetic Two Disc, Spring Set Brake



Rev. 05-08



Keyways for keys acc. to DIN6895 Bl.1, width accuracy P9. Protection IP67

Alterations reserved without notice

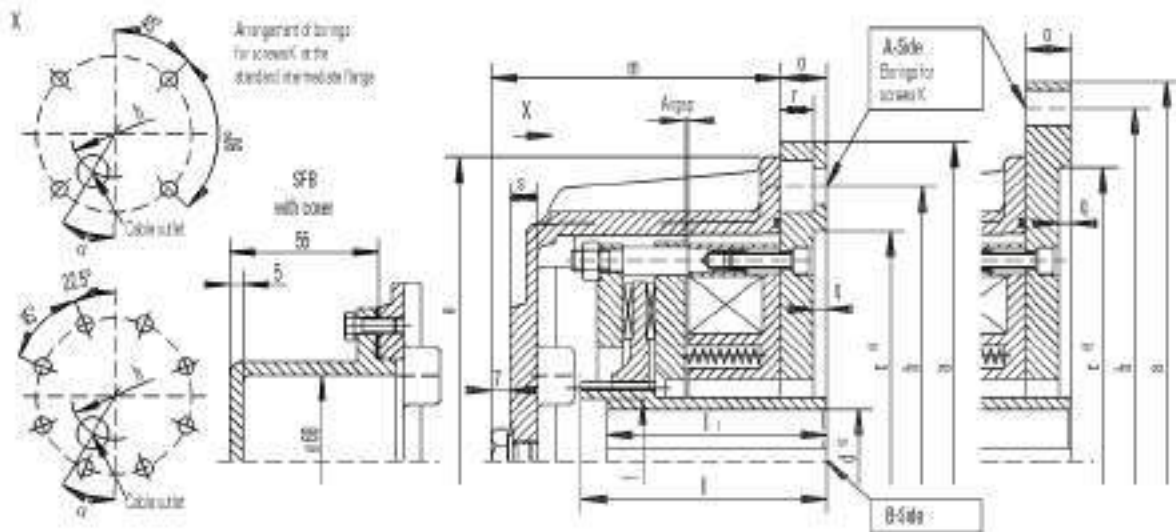
Brake size		SFB 6.3	SFB 10	SFB 16	SFB 25	SFB 40	SFB 63	SFB 100	SFB 160	SFB 250			
Brake torque M2 dynamic acc. to DIN VDE 0590	Nm	63	100	160	250	400	630	1000	1600	2500			
		54	80	130	210	330	520	830	1300	2100			
		45	63	100	160	260	400	600	1050	1650			
Mass moment of inertia	kgm ²	0.0017	0.0037	0.0048	0.0068	0.0175	0.036	0.050	0.128	0.140			
Mass (weight)	kg	19	28	42	55	74	106	168	242	306			
max speed	min ⁻¹	6000	6000	6000	5500	4700	4000	3500	3200	2800			
Coil i. 20° C	Nominal voltage	V DC	110	110	110	110	110	110	110	110			
	Nominal power	W	99	128	158	196	270	344	435	495			
	Nominal current	A	0.90	1.16	1.44	1.78	2.0	2.70	3.13	3.96	4.59		
Air gap, brake OFF	min. mm	0.3	0.3	0.3	0.4	0.4	0.4	0.6	0.4	0.4			
	max. mm	0.9	1.2	1.2	1.3	1.4	1.8	1.8	2.3	2.5			
Diameter mm	B-Side	d Rough boring	26	26	36	36	36	36	36	46	46		
		d ^{HP} Preferential boring	28	28	38	38	48	60	60	65	65		
			32	32	42	42	55	65	65	70	70		
			38	38	48	48	60	75	75	75	75		
					55	55				80	80		
d ^{HP} maximal	40	40	55	55	60	75	75	110	110				
Length mm	e	238	280	280	318	400	440	448	540	556			
	f						95	95	128	128			
	h	150	180	202	214	244	292	330	394	440			
	i	96	96	117	117	142	148	148	191	191			
	i'	96	96	117	117	142	142	142	171	171			
	m	115	118	137	143	169	171	183	211	232			
	s	11	11	11	12	14	15	15	15	15			
k	α	15	15	30	22.5	30	30	30	30	45			
Suitable standard Intermediate flange		A250	A300	A300-1	A350	A400-1	A450-1	A450-1	A550-1	A660			
		A300	A350	A350	A400	A450	A550	A550	A660	A800			
				A400	A450	A550	A660	A660	A800				
		Dimensions of standard intermediate flanges											
Standard intermediate flange		A250	A300	A300-1	A350	A400	A400-1	A450	A450-1	A550	A550-1	A660	A800
Diameter mm	a	250	300	300	350	400	400	450	450	550	550	660	800
	b	215	265	265	300	350	350	400	400	500	500	600	740
	c ^{HP}	180	230	230	250	300	300	350	350	450	450	550	680
Length mm	o	18	18	18	20	22	22	24	24	24	24	30	30
	q	5	5	5	6	6	6	6	6	6	6	7	7
	r	13		13			17.5		17.5		17.5		
	Screws k	4xM12	4xM12	4xM12	4xM16	4xM16	4xM16	4xM12	8xM16	8xM16	8xM16	8xM20	8xM20

Spring Set Brake SFB

Electromagnetic Two Disc, Spring Set Brake



Rev. 05-08



Brake size		SFB 400	SFB 630	SFB 1000	
Brake torque M2 dynamic acc. to DIN VDE 0580	Nm	4000	6300	10000	
		3350	5250	8500	
		2650	4200	7000	
Mass moment of inertia	kgm ²	0.325	0.375	1.007	
Mass (weight)	kg	357	500	750	
max. speed	min ⁻¹	2500	2200	2000	
Coil A, 20° C	Nominal voltage	V DC	110	110	110
	Nominal power	W	553	671	980
	Nominal current	A	5.03	6.10	8.91
Air gap, brake OFF	min. mm	0.4	0.7	0.7	
	max. mm	2.5	2.8	3.1	
Diameter mm	B-Side	d Rough boring	46	58	68
		d ⁴⁰ Preferential boring	65	100	125
			70		
			75		
			80		
d ⁴⁰ maximal	110	125	140		
Length mm	a	460	700	795	
	f	128	140	155	
	h	520	570	620	
	l	191	237	282	
	l'	171	210	255	
	m	272	310	360	
	s	15	15	15	
A	α ³⁰	30	30	30	
Suitable standard intermediate flange		A660-1 A800	A805	A800-1	
		Dimensions of standard intermediate flange			
Standard intermediate flange		A660-1	A805	A800-1	
Diameter mm	a	400	600	800	
	b	400	740	740	
	c ⁴⁰	350	580	680	
Length mm	o	30	30	30	
	q	7	7	7	
	r	21.5		21.5	
	Screws k	8xM20	8xM20	8xM20	

Keyways for keys acc. to DIN6885 Bl.1, width accuracy P9. Protection IP67

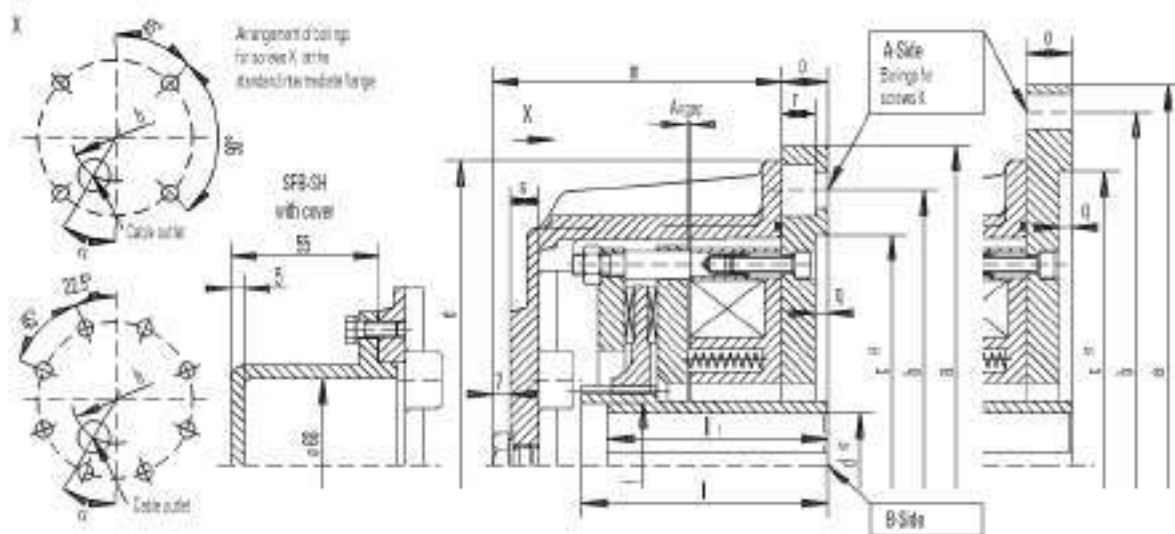
Alterations reserved without notice

Spring Set Brake SFB-SH

Electromagnetic Two Disc, Spring Set Brake
Increased brake torque



Rev. 05-08



Keyways for keys acc. to DIN6895 Bl.1, width accuracy P9. Protection IP67

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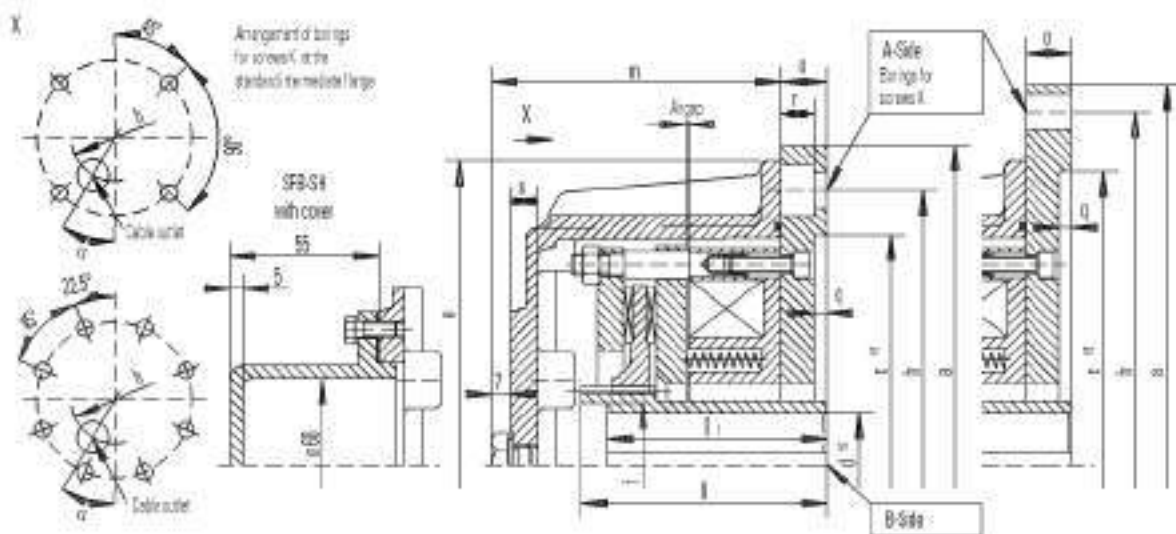
Brake size		SFB 6.3-SH	SFB 10-SH	SFB 16-SH	SFB 25-SH	SFB 40-SH	SFB 63-SH	SFB 100-SH	SFB 160-SH	SFB 250-SH			
Brake torque M2 dynamic acc. to DIN VDE 0590	Nm	80	130	210	350	550	800	1300	2100	3300			
		75	120	190	310	490	750	1200	1900	3000			
		88	110	180	275	440	690	1100	1750	2750			
Mass moment of inertia	kgm ²	0.0017	0.0037	0.0048	0.0068	0.0175	0.036	0.050	0.128	0.140			
Mass (weight)	kg	19	28	42	55	74	106	168	242	306			
max speed	min ⁻¹	6000	6000	6000	5500	4700	4000	3500	3200	2800			
Coil i. 20° C	Nominal voltage	V DC	110	110	110	110	110	110	110	110			
	Nominal power	W	99	128	158	196	270	307	344	435	495		
	Nominal current	A	0.90	1.16	1.44	1.78	2.0	2.70	3.13	3.96	4.59		
Air gap, brake OFF	min. mm	0.3	0.3	0.3	0.4	0.4	0.4	0.6	0.4	0.4			
	max. mm	0.9	1.2	1.2	1.3	1.4	1.8	1.8	2.3	2.5			
Diameter mm	B-Side	d Rough boring	26	26	36	36	36	36	36	46	46		
		d ^{HP} Preferential boring	28	28	38	38	48	60	60	65	65		
			32	32	42	42	55	65	65	70	70		
			38	38	48	48	60	75	75	75	75		
					55	55				80	80		
d ^{HP} maximal	40	40	55	55	60	75	75	110	110				
Length mm	e	238	280	280	318	400	440	448	540	556			
	f						95	95	128	128			
	h	150	180	202	214	244	292	330	394	440			
	l	96	96	117	117	142	148	148	191	191			
	l'	96	96	117	117	142	142	142	171	171			
	m	115	118	137	143	169	171	183	211	232			
	s	11	11	11	12	14	15	15	15	15			
±k	α ^{HP}	15	15	30	22.5	30	30	30	30	45			
Suitable standard intermediate flange		A250	A300	A300-1	A350	A400-1	A450-1	A450-1	A550-1	A660			
		A300	A350	A350	A400	A450	A550	A550	A660	A800			
				A400	A450	A550	A660	A660	A800				
		Dimensions of standard intermediate flange											
Standard intermediate flange		A250	A300	A300-1	A350	A400	A400-1	A450	A450-1	A550	A550-1	A660	A800
Diameter mm	a	250	300	300	350	400	400	450	450	550	550	660	800
	b	215	265	265	300	350	350	400	400	500	500	600	740
	c ^{HP}	180	230	230	250	300	300	350	350	450	450	550	680
Length mm	o	18	18	18	20	22	22	24	24	24	24	30	30
	q	5	5	5	6	6	6	6	6	6	6	7	7
	r	13		13			17.5		17.5		17.5		
	Screws k	4xM12	4xM12	4xM12	4xM16	4xM16	4xM16	8xM16	8xM16	8xM16	8xM16	8xM20	8xM20

Spring Set Brake SFB-SH

Electromagnetic Two Disc, Spring Set Brake
Increased brake torque



Rev. 05-08



Brake size		SFB 400-SH	SFB 630-SH	SFB 1000-SH	
Brake torque M2 dynamic acc. to DIN VDE 0580	Nm	5200	8000	13000	
		4800	7500		
		4400	6900		
Mass moment of inertia	kgm ²	0.325	0.375	1.007	
Mass (weight)	kg	357	500	750	
max. speed	min ⁻¹	2500	2200	2000	
Coil A, 20° C	Nominal voltage	V DC	110	110	110
	Nominal power	W	553	671	980
	Nominal current	A	5.03	6.10	8.91
Air gap, brake OFF	min. mm	0.4	0.7	0.7	
	max. mm	2.5	2.8	3.1	
Diameter mm	B-Side	d Rough boring	46	58	68
		d ⁴⁰ Preferential boring	65	100	125
			70		
			75		
			80		
d ⁴⁰ maximal	110	125	140		
Length mm	a	460	700	795	
	f	128	140	155	
	h	520	570	620	
	l	191	237	282	
	l'	171	210	255	
	m	272	310	360	
	s	15	15	15	
A	α ³⁰	30	30	30	
Suitable standard intermediate flange		A660-1 A800	A800	A800-1	
		Dimensions of standard intermediate flange			
Standard intermediate flange		A660-1	A800	A800-1	
Diameter mm	a	400	600	800	
	b	400	740	740	
	c ⁴⁰	550	680	680	
Length mm	o	30	30	30	
	q	7	7	7	
	r	21.5		21.5	
Screws		k	8xM20	8xM20	

Keyways for keys acc. to DIN6885 Bl.1,
width accuracy P9. Protection IP67

Alterations reserved without notice

Drum Brakes



PINTSCH BUBENZER
is certified according to
DIN EN ISO 9001:2015



Acc. to DIN 15435



Reliable



High Performance



Robust Design



Tried and Trusted

Description Drum Brakes



Main Features

According to DIN 15435 standard
Continuously adjustable brake spring enclosed in a square tube with torque scale
Self-lubricating bushings mean brakes are easy to service, no greasing necessary
Equal air gap by adjustable lever stops
Up to size 400: Levers and base plate made of nodular cast iron
From size 500: Levers and base plate made of welded steel
Different thrusters
Aluminium brake shoes acc. DIN 15435 Bl. 2 with non-asbestos, organic linings
Shoe clamping springs which prevent brake shoes from tilting when released
Pins and main spindle of stainless steel
Uncoated parts and screws galvanized and plated

Options

Automatic wear compensator
Limit switch release control
Limit switch wear control
Limit switch manual release
Manual release lever with or w/o stop
Monitoring systems (e.g. VSR/CMB)
Brake drum with hub or coupling
Weather execution (special paint and coating) for outdoor use

Thrusters, technical data

Thruster Type	Power (W)	Curr. (A) at 400 V	Weight (kg)
Ed 23/5	165	0,5	10
Ed 30/5	200	0,5	14
Ed 50/6	210	0,5	23
Ed 80/6	330	1,2	24
Ed 121/6	330	1,2	39
Ed 201/6	450	1,3	39
Ed 301/6	550	1,4	40

Data supplied by thruster manufacturer, please take higher start current into consideration, fuses to be minimum 2A



Please Note

We supply a detailed operating manual with every order. Nevertheless, we would point out that brakes are only as safe as the servicing and maintenance performed while they are in operation. The guarantee for the correct functioning of our brakes is therefore only valid if the user adheres to the German DIN standard 15434 part 2 (drum and disc brakes, servicing and maintenance in operation), or to comparable standards in his own country.



PINTSCH BUBENZER Service

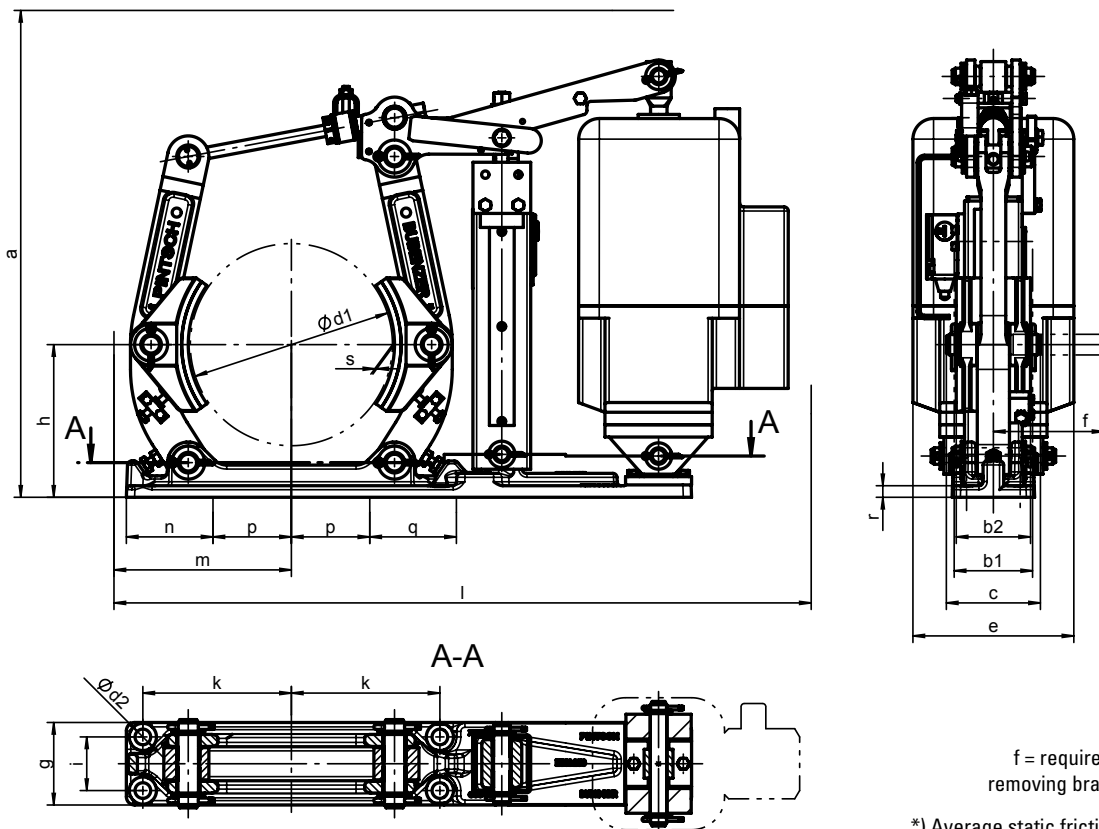
This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on site is possible by PINTSCH BUBENZER service engineers. Drawings as DWG/DXF files for your engineering department are available upon request.

Drum Brake EBN

Dimensions and technical data



Rev. 03-18
MB-001517 c



f = required space for removing brake shoe pin

*) Average static friction factor of standard material combination

All dimensions in mm
Alterations reserved without notice

The friction coefficient is subject to fluctuations depending on operational-, material- and ambient-conditions! This must be considered during the selection!

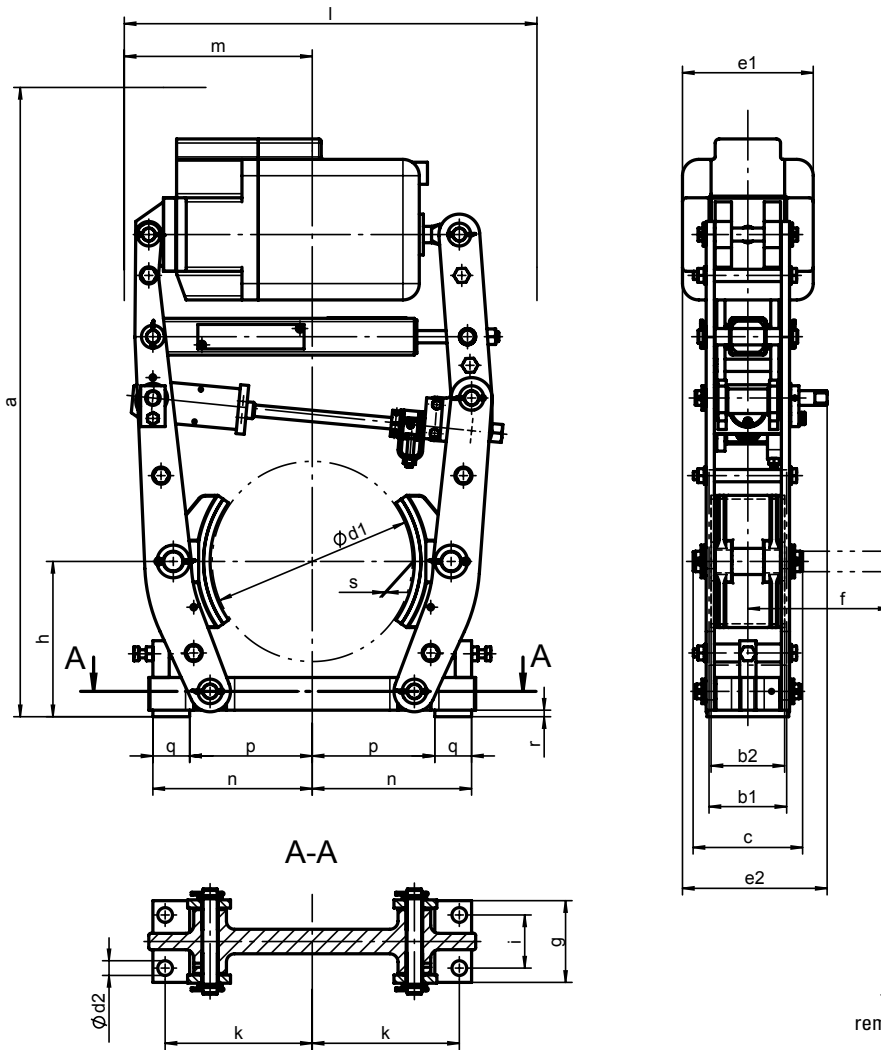
Brake type	Thruster type	*M _{Bmax.} (Nm) at $\mu=0,4$	*M _{Bmin.} (Nm) at $\mu=0,4$	*M _{Bmin.} (% from M _{Bmax.})	a _{max.}	b ₁	b ₂	c	d ₁	d ₂	e	f ca.	g	h	i	k	l _{max.}	m ca.	n	p	q	r	s ca.	kg ca.
EBN 200-23/5	Ed 23/5	265	172	65	510	75	70	96	200	15	160	115	90	155	55	145	665	185	100	70	100	12	1	40
EBN 200-30/5	Ed 30/5	350	193	55	563	75	70	96	200	15	160	115	90	155	55	145	670	185	100	70	100	12	1	46
EBN 200-50/6	Ed 50/6	545	354	65	573	75	70	96	200	15	195	115	90	155	55	145	710	185	100	70	100	12	1,2	53
EBN 250-23/5	Ed 23/5	310	217	70	518	95	90	115	250	19	160	135	100	185	65	180	790	215	105	95	105	14	1	46
EBN 250-30/5	Ed 30/5	450	225	50	581	95	90	115	250	19	160	135	100	185	65	180	795	215	105	95	105	14	1	52
EBN 250-50/6	Ed 50/6	705	529	75	590	95	90	115	250	19	195	135	100	185	65	180	835	215	105	95	105	14	1,2	59
EBN 250-80/6	Ed 80/6	1200	600	50	590	95	90	115	250	19	195	135	100	185	65	180	835	215	105	95	105	14	1,2	60
EBN 315-30/5	Ed 30/5	605	424	70	703	118	110	140	315	19	160	165	110	225	80	220	910	270	110	133	240	14	1	82
EBN 315-50/6	Ed 50/6	1000	600	60	705	118	110	140	315	19	195	165	110	225	80	220	990	270	110	133	240	14	1,2	89
EBN 315-80/6	Ed 80/6	1750	1313	75	705	118	110	140	315	19	195	165	110	225	80	220	990	270	110	133	240	14	1,2	90
EBN 315-121/6	Ed 121/6	2500	1250	50	705	118	110	140	315	19	240	165	110	225	80	220	980	270	110	133	240	14	1,2	102
EBN 400-50/6	Ed 50/6	1125	731	65	705	150	140	167	400	23	195	195	140	270	100	270	1095	315	135	165	280	15	1,4	105
EBN 400-80/6	Ed 80/6	1700	935	55	710	150	140	167	400	23	195	195	140	270	100	270	1095	315	135	165	280	15	1,4	106
EBN 400-121/6	Ed 121/6	2700	1755	65	710	150	140	167	400	23	240	195	140	270	100	270	1085	315	135	165	280	15	1,4	118
EBN 400-201/6	Ed 201/6	4000	2000	50	796	150	140	167	400	23	240	195	140	270	100	270	1085	315	135	165	280	15	1,4	121
EBN 500-50/6	Ed 50/6	1150	748	65	851	190	180	210	500	22	195	245	170	330	130	325	1280	390	155	210	315	20	1,5	161
EBN 500-80/6	Ed 80/6	1740	870	50	851	190	180	210	500	22	195	245	170	330	130	325	1280	390	155	210	315	20	1,5	162
EBN 500-121/6	Ed 121/6	3100	1705	55	851	190	180	210	500	22	240	245	170	330	130	325	1270	390	155	210	315	20	1,5	174
EBN 500-201/6	Ed 201/6	5120	2560	50	851	190	180	210	500	22	240	245	170	330	130	325	1270	390	155	210	315	20	1,5	177
EBN 630-121/6	Ed 121/6	3050	1525	50	995	236	225	250	630	27	240	300	220	410	170	400	1335	470	165	280	330	25	1,8	271
EBN 630-201/6	Ed 201/6	4950	2475	50	1015	236	225	250	630	27	240	300	220	410	170	400	1335	470	165	280	330	25	1,8	274
EBN 630-301/6	Ed 301/6	6025	3012	50	1015	236	225	250	630	27	240	300	220	410	170	400	1335	470	165	280	330	25	1,8	266
EBN 710-121/6	Ed 121/6	3450	1725	50	1110	265	255	280	710	27	240	335	240	460	190	450	1495	520	250	250	450	25	1,8	346
EBN 710-201/6	Ed 201/6	5600	2800	50	1110	265	255	280	710	27	240	335	240	460	190	450	1495	520	250	250	450	25	1,8	349
EBN 710-301/6	Ed 301/6	6920	3460	50	1110	265	255	280	710	27	240	335	240	460	190	450	1495	520	250	250	450	25	1,8	341

Drum Brake EBH

Dimensions and technical data



Rev. 03-18
MB-001561 a



f = required space for removing brake shoe pin

*) Average static friction factor of standard material combination

All dimensions in mm
Alterations reserved without notice

The friction coefficient is subject to fluctuations depending on operational-, material- and ambient-conditions! This must be considered during the selection!

Brake type	Thruster type	*M _{Bmax.} (Nm) at $\mu = 0,4$	*M _{Bmin.} (Nm) at $\mu = 0,4$	*M _{Bmin.} (% from M _{Bmax.})	a _{max.}	b ₁	b ₂	c	d ₁	d ₂	e ₁	e ₂ ca.	f ca.	g	h	i	k	l _{max.}	m ca.	n	p	q	r	s ca.	kg ca.
EBH 200-23/5	Ed 23/5	190	124	65	645	75	70	113	200	14	160	175	150	90	160	55	145	405	195	160	115	45	8	1	31
EBH 200-30/5	Ed 30/5	280	140	50	645	75	70	113	200	14	160	175	150	90	160	55	145	490	225	160	115	45	8	1	35
EBH 250-23/5	Ed 23/5	180	135	75	715	95	90	134	250	18	160	180	180	100	190	65	180	455	225	195	150	45	8	1,2	37
EBH 250-30/5	Ed 30/5	265	172	65	715	95	90	134	250	18	160	180	180	100	190	65	180	505	230	195	150	45	8	1,2	41
EBH 250-50/6	Ed 50/6	390	195	50	755	95	90	134	250	18	195	203	180	100	190	65	180	600	270	195	150	45	8	1,5	50
EBH 315-23/5	Ed 23/5	275	206	75	865	118	110	161	315	18	160	195	215	110	230	80	220	610	285	240	190	50	10	1,1	55
EBH 315-30/5	Ed 30/5	370	185	50	865	118	110	161	315	18	160	195	215	110	230	80	220	610	285	240	190	50	10	1,1	59
EBH 315-50/6	Ed 50/6	640	320	50	905	118	110	161	315	18	195	213	215	110	230	80	220	615	290	240	190	50	10	1,4	73
EBH 315-80/6	Ed 80/6	1120	560	50	905	118	110	161	315	18	195	213	215	110	230	80	220	615	290	240	190	50	10	1,4	75
EBH 400-50/6	Ed 50/6	600	360	60	1010	150	140	206	400	22	195	230	270	140	280	100	270	680	325	295	160	135	10	1,6	106
EBH 400-80/6	Ed 80/6	1025	512	50	1010	150	140	206	400	22	195	230	270	140	280	100	270	680	325	295	160	135	10	1,6	107
EBH 400-121/6	Ed 121/6	1510	906	60	1000	150	140	206	400	22	240	250	270	140	280	100	270	680	325	295	160	135	10	1,6	126
EBH 500-50/6	Ed 50/6	785	393	50	1115	190	180	245	500	22	195	270	330	170	340	130	325	840	420	355	275	80	12	1,7	145
EBH 500-80/6	Ed 80/6	1250	625	50	1125	190	180	245	500	22	195	270	330	170	340	130	325	840	420	355	275	80	12	1,7	146
EBH 500-121/6	Ed 121/6	1960	980	50	1115	190	180	245	500	22	240	270	330	170	340	130	325	900	425	355	275	80	12	1,7	165
EBH 500-201/6	Ed 201/6	3350	1675	50	1115	190	180	245	500	22	240	270	330	170	340	130	325	900	425	355	275	80	12	1,7	165

Enclosures

For drum brakes type EBN - Dimensions and executions



Rev. 04-18

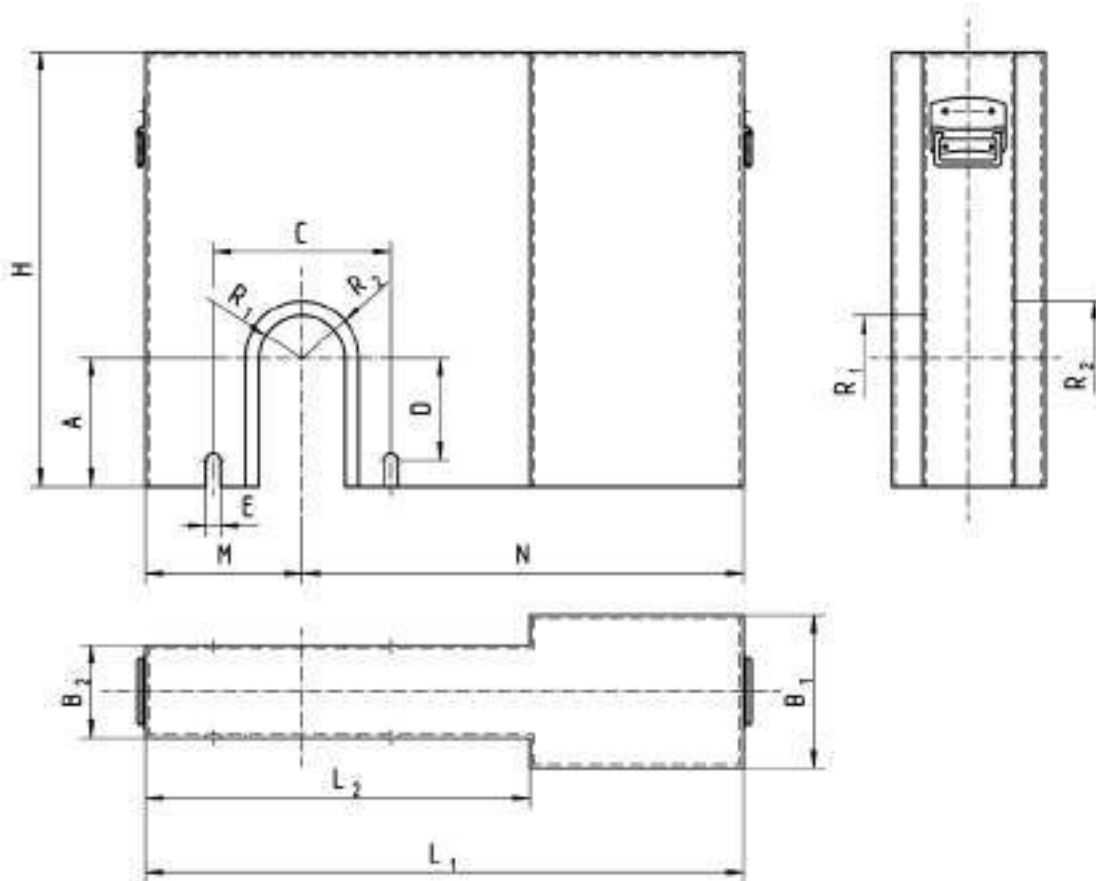


Plate thickness = 1,5 mm
 All enclosures are provided with handles
 Other dimensions upon request

All dimensions in mm
 Alterations reserved without notice

Brake Type	A	B ₁	B ₂	C	D	E	H	L ₁	L ₂	M	N	R _{max.}
EBN 200-23/5	150	180	130	200	118	10	530	690	460	195	495	90
EBN 200-30/5	150	180	130	200	118	10	530	690	460	195	495	90
EBN 200-50/6	150	215	130	200	118	10	580	730	440	195	535	90
EBN 250-23/5	180	180	130	250	143	10	530	810	560	220	590	110
EBN 250-30/5	180	180	130	250	143	10	610	810	560	220	590	110
EBN 250-50/6	180	215	130	250	143	10	610	840	540	220	620	110
EBN 250-80/6	180	215	130	250	143	10	610	840	540	220	620	110



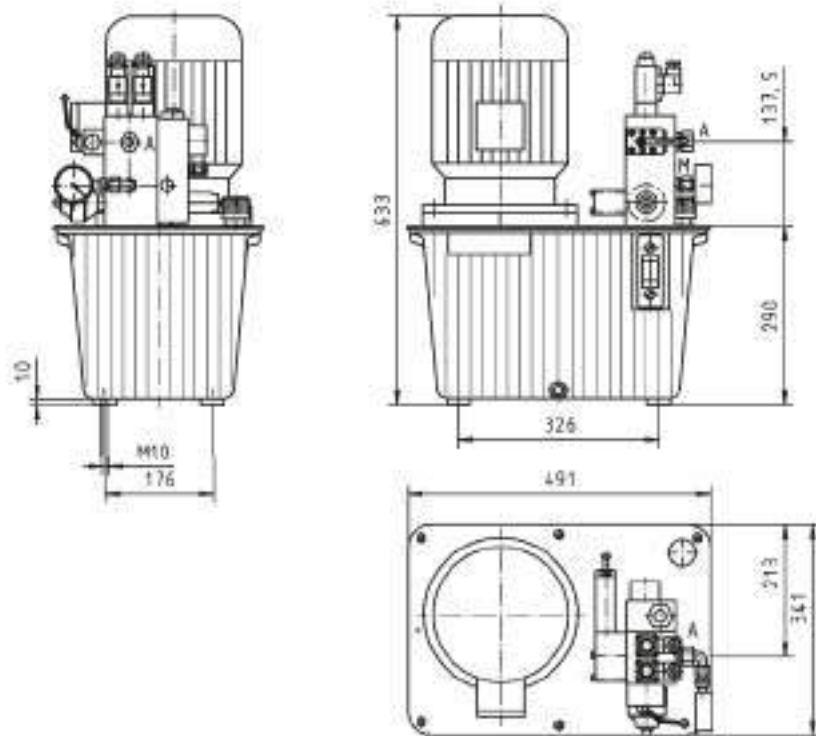
When ordering please advise: Brake type, Dimension „R₁ and R₂“.

Band Brake Type BHB

Hydraulic power unit for one or more brakes



Rev. 09-02



Example:

Motor: 3 kW

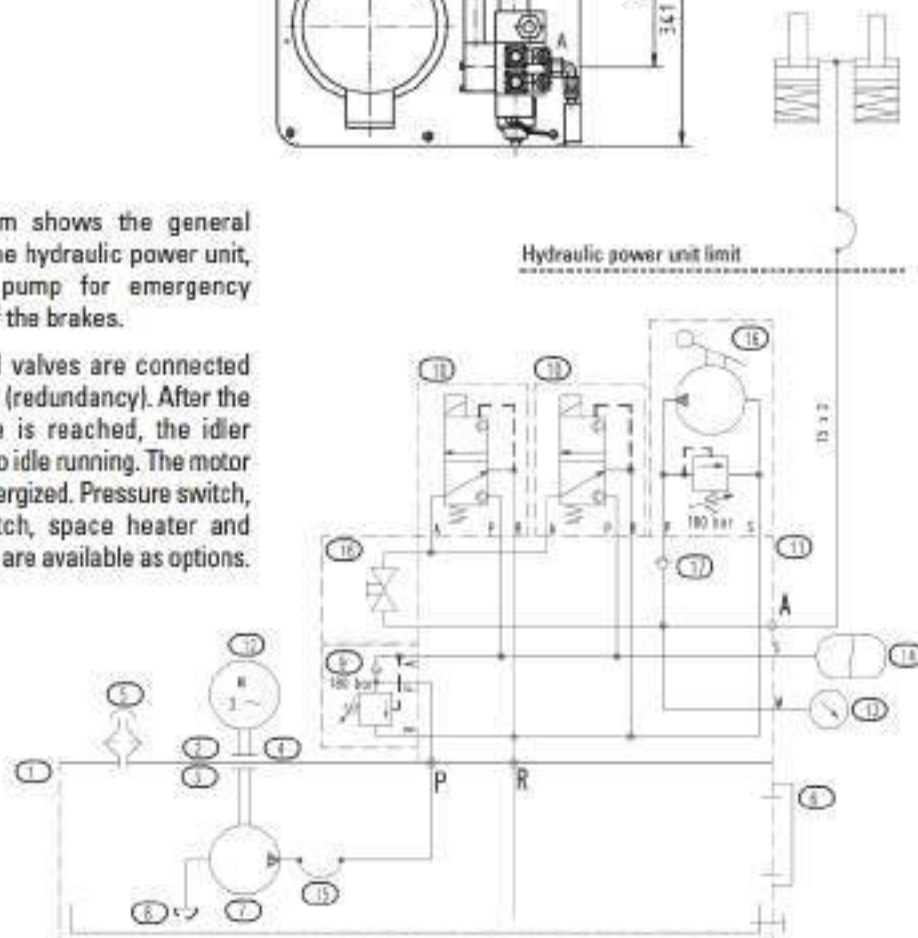
Pump: 9 l/min

Pressure: 180 bar

Tank: 30 l

The flow diagram shows the general arrangement of the hydraulic power unit, including hand pump for emergency manual release of the brakes.

The two solenoid valves are connected directly in parallel (redundancy). After the nominal pressure is reached, the idler valve switches into idle running. The motor is continuously energized. Pressure switch, temperature switch, space heater and other accessories are available as options.

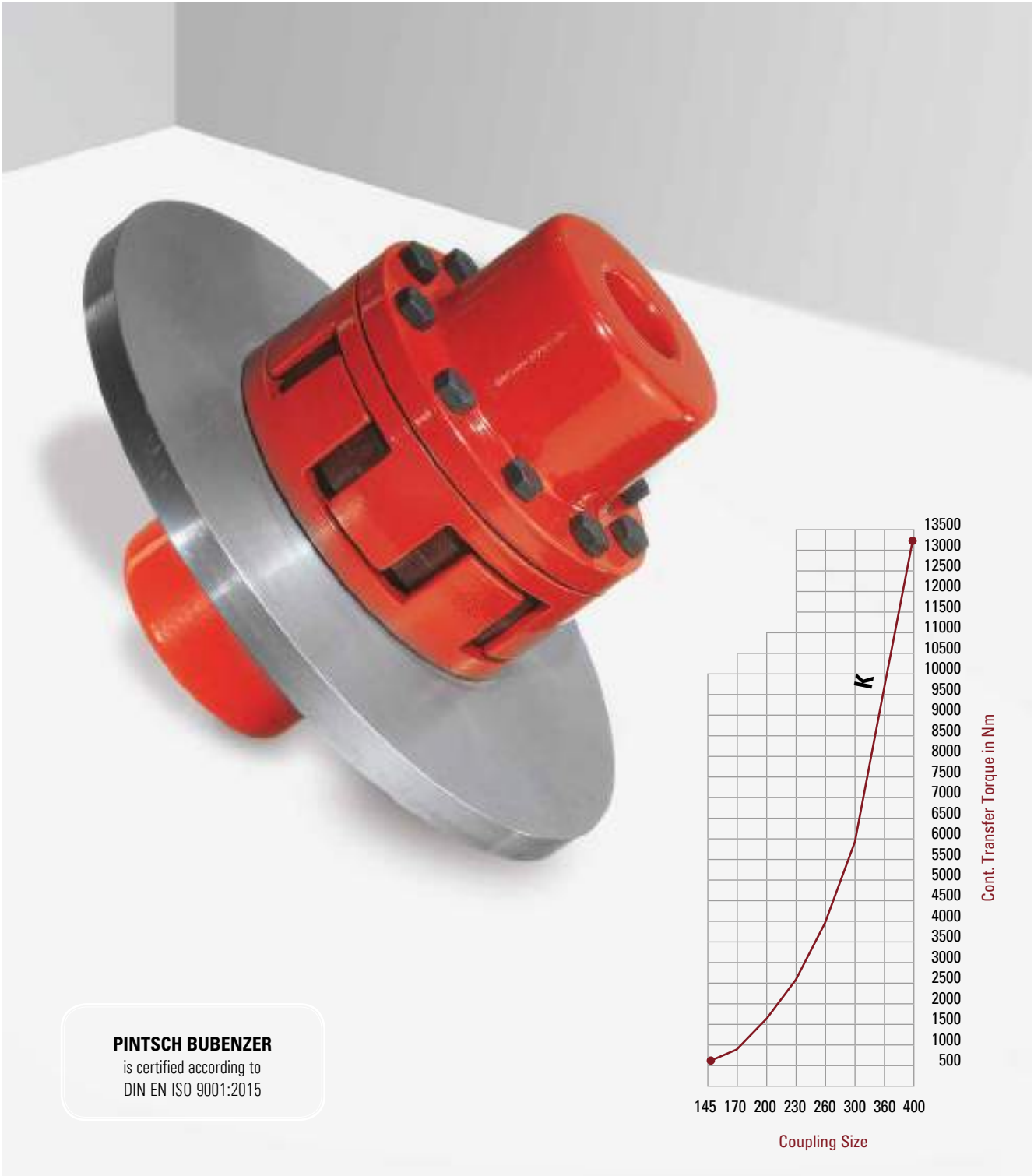


All dimensions in mm
Alterations reserved without notice





We supply a complete hydraulic and electric diagram according to the order specification with every order.

Flexible Coupling Type K



PINTSCH BUBENZER
is certified according to
DIN EN ISO 9001:2015

- 
Torsionally Elastic
- 
Tried and Trusted
- 
High Performance
- 
Robust
- 
Easy Maintenance

Description Coupling Type K



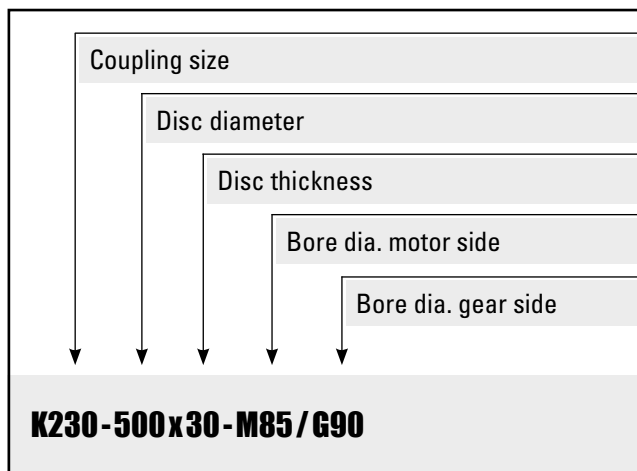
Main Features

Steel coupling, torsionally elastic and puncture-proof
Transmission of torque via elastic intermediate ring
Replacement of the elastic intermediate ring or the brake disc without moving any equipment
Arrangement of the brake disc on the load side to allow the brake torque to be maintained when the motor is disengaged
Vast selection of coupling sizes and brake disc diameters to satisfy most braking and drive requirements

Options

Coupling hubs finish bored and keywayed acc. to DIN 6885
Coupling hubs unbored
Coupling hubs pilot bored
Coupling dynamically balanced according to ISO 1940 Grade: G 2.5; G 6.3
Coupling hubs in special lengths
Coupling hubs in special material
Test certificate DIN EN 10204-3.1

Ordering Example



Applications

These couplings are for use in application with high dynamic loads
Damping of peak torques and vibrations as well as electrical insulation between motor and gearbox are further reasons for the use of this coupling type
The standard material of the elastic intermediate ring Polyurethane (Vulkollan) is suitable for a temperature range of -35°C up to +80°C. For a short time -40°C up to +100°C



Please Note

We supply a detailed operating manual with every order. Couplings are rotating parts and as such a cover must be fitted for the prevention of accidents.



PINTSCH BUBENZER Service

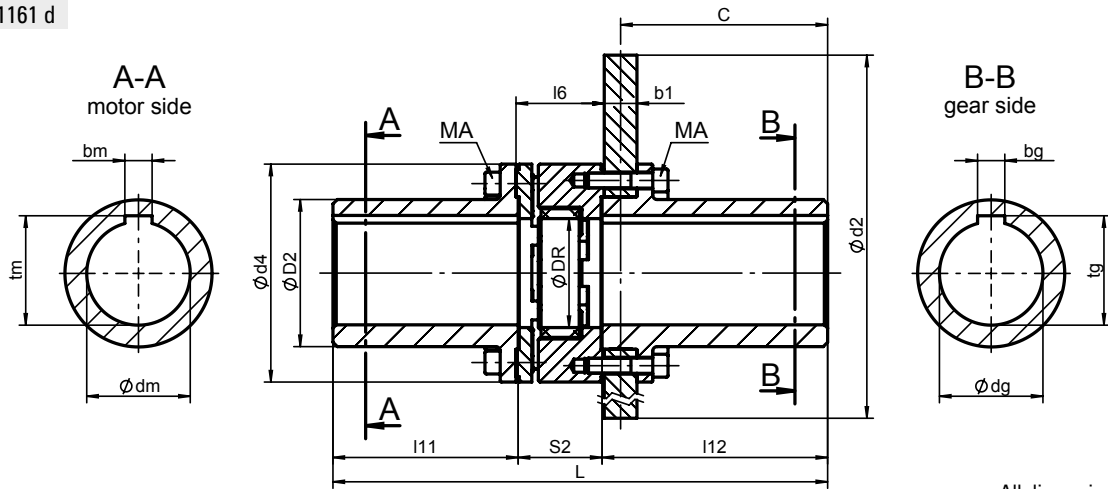
This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on-site by PINTSCH BUBENZER service engineers is possible. Drawings as DWG/DXF files for your engineering department are available upon request.

Flexible Coupling Type K

Dimensions and technical data



Rev. 03-18
MB-001161 d



All dimensions in mm
Alterations reserved without notice

Coupling K (size = d ₄)		145	170	200	230	260	300	360	400
M _{Bmax.}	Nm	1800	2850	4950	7740	11940	17550	29100	40050
T _{KN} (VK60D)	Nm	600	950	1650	2580	3980	5850	9700	13350
n _{max.} at max. disc-Ø	min ⁻¹	3800	3400	3000	2700	2400	2200	1750	1750
d _m max. + d _g max.	mm	65	75	95	110	125	140	160	160
D ₂	mm	92	110	135	160	180	200	225	225
D _R	mm	66	90	100	115	150	162	215	250
L	mm	344,5	374,5	454	458,5	518,5	535,5	627,5	627,5
l ₁₁	mm	110	140	170	170	210	210	250	250
l ₁₂	mm	166,5	166,5	207	207,5	212,5	212,5	252,5	252,5
l ₆	mm	71 +2,5	71 +3	81 +3	86 +3,5	101 +4	118 +4	130 +4	130 +4
S ₂	mm	68	68	77	81	96	113	125	125
C (b ₁ = 30 mm / 40 mm)	mm	150 / -	150 / -	190 / -	190 / -	195 / -	195 / -	235 / 230	235 / 230
M _A (DIN 912-8.8; μ=0,12)	Nm	84	84	132	132	206	410	710	710

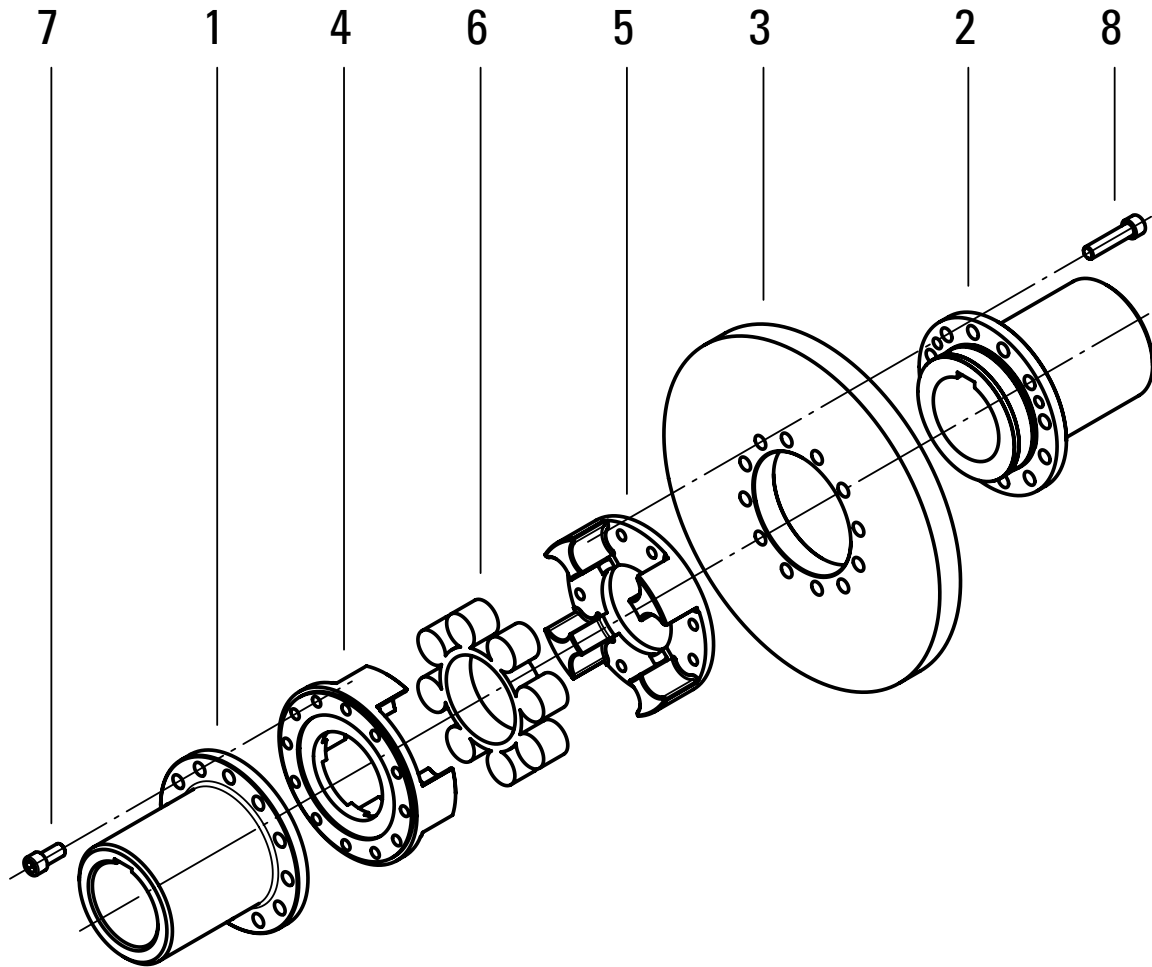
Coupling K (size = d ₄)	kg	Weight								
		of the coupling with steel brake disc								
355 x 30	41	Moment of inertia								
	kgm ²	0,3973								
400 x 30		47	54	76						
		0,6219	0,656	0,801						
450 x 30		55	62	84						
		0,9781	1,016	1,158						
500 x 30			71	93	116	139				
			1,513	1,655	1,782	2,123				
560 x 30				105	128	150				
				2,484	2,611	2,960				
630 x 30					143	168	189			
					3,98	4,330	4,704			
710 x 30						185	225			
						6,563	6,92			
800 x 30							250	311		
							10,52	11,49		
900 x 30		Weights and moments of inertia are not binding, referring to the max. finish bore for the sizes 145 to 300 respectively for a finish bore of 120 mm for the sizes 360 and 400.						342	354	
1000 x 30							376	389		
							25,16	25,65		

Flexible Coupling Type K

Design

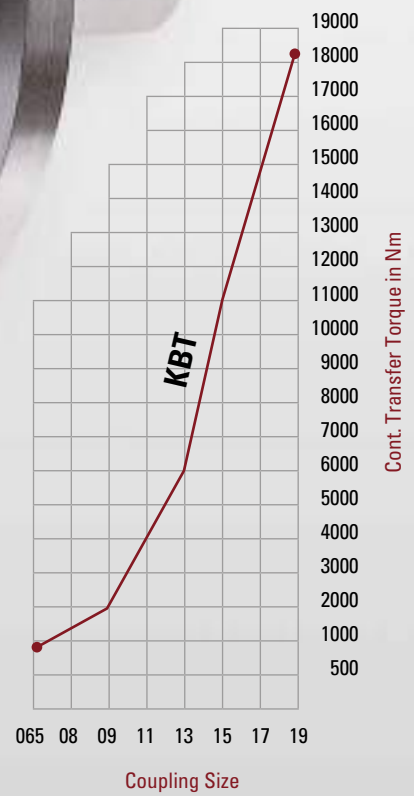


Rev. 10-16



1	Hub, motor side
2	Hub, gear side
3	Brake disc
4	Claw ring, removable
5	Claw ring, removable
6	Elastic intermediate ring
7	Hexagon socket head screw
8	Hexagon socket head screw

Gear Coupling Type KBT



PINTSCH BUBENZER
is certified according to
DIN EN ISO 9001:2015



Torsionally Elastic



Tried and Trusted



High Performance



Robust



Easy Maintenance

Description Coupling Type KBT



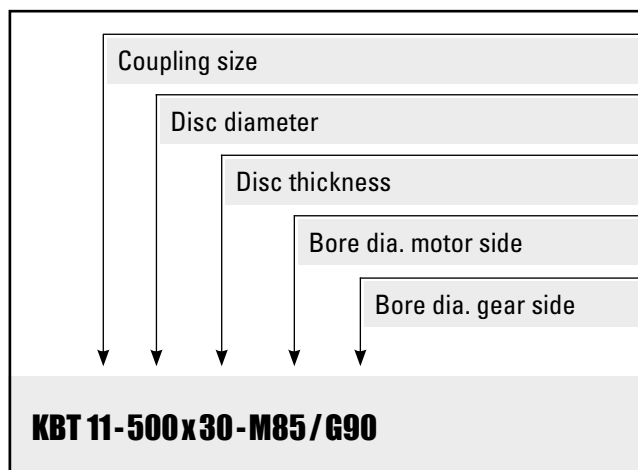
Main Features

Steel coupling with special tooth pattern
Torque transmission via internal geared sleeve and external geared hubs
Replacement of the brake disc or the seals without moving any equipment
High temperature resistance
Low wear
Arrangement of the brake disc on the load side to allow the brake torque to be maintained when the motor is disengaged
Vast selection of coupling sizes and brake disc diameters to satisfy most braking and drive requirements

Options

Coupling hubs finish bored and keywayed acc. to DIN 6885
Coupling hubs unbored
Coupling hubs pilot bored
Coupling dynamically balanced according to ISO 1940 Grade: G 2.5; G 6.3
Hubs in special dimensions
Hubs in special material
Test certificate DIN EN 10204-3.1

Ordering Example



Applications

These couplings are for use in machinery where a torsionally rigid torque is required, especially on frequently varying loads and speeds



Please Note

We supply a detailed operating manual with every order. Couplings are rotating parts and as such a cover must be fitted for the prevention of accidents.



PINTSCH BUBENZER Service

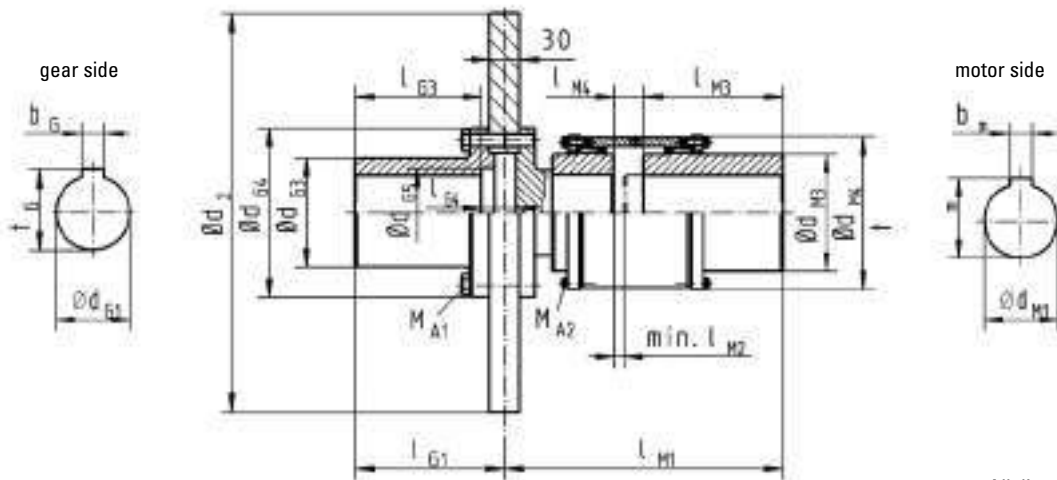
This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on-site by PINTSCH BUBENZER service engineers is possible. Drawings as DWG/DXF files for your engineering department are available upon request.

Gear Coupling Type KBT

Dimensions and technical data



Rev. 09-02



All dimensions in mm
Alterations reserved without notice

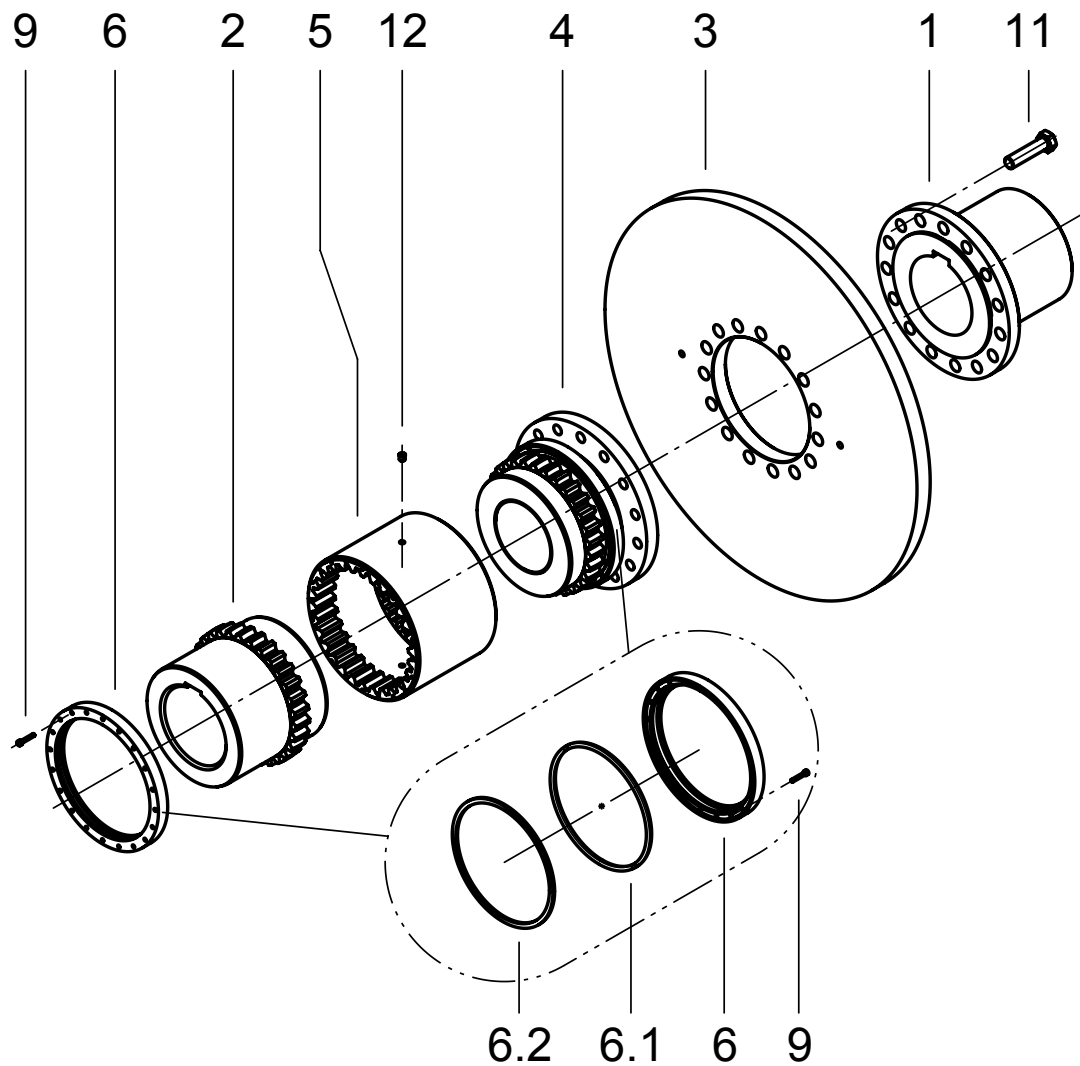
Coupling KBT		065	08	09	11	13	15	17	19
M _{Br} max.	Nm	2000	4000	5000	9250	15250	27500	36500	46000
T _{KN}	Nm	800	1600	2000	3700	6100	11000	14600	18400
n _{max} at max. disc Ø	min ⁻¹	3800	3400	2750	2400	2150	2150	1900	1900
d _{G1} max.	mm	55	75	90	110	120	140	160	195
d _{G3}	mm	85	110	130	160	180	200	225	265
d _{G4}	mm	145	170	200	230	260	300	360	400
d _{G5}	mm	68	88	105	130	140	162	184	225
d _{M1} max.	mm	70	85	95	110	130	155	175	195
d _{M3}	mm	100	118	130	151	178	213	235	263
d _{M4}	mm	140	154	161	186	216	254	282	317
l _{G1}	mm	150	150	190	190	195	195	235	235
l _{G3}	mm	127	127	167	167	172	172	212	212
l _{G4}	mm	35	35	35	35	35	35	35	35
l _{M1}	mm	215	280	310	325	350	385	425	470
l _{M2}	mm	7	10	10	10	10	10	10	10
l _{M3}	mm	110	140	146	165	170	190	200	220
l _{M4}	mm	12	30	17	19	23	24	29	32
Brake disc diameter d ₂ x b ₁ (mm)	355 x 30	43			Weight of the coupling with brake disc				kg
		0,415			Moment of inertia				kgm ²
	400 x 30	49	62	79					
		0,639	0,73	0,752					
	450 x 30	57	70	87					
		0,996	1,09	1,108					
	500 x 30		79	96	119				
			1,585	1,605	1,783				
	560 x 30			108	131	161			
				2,434	2,611	2,915			
630 x 30			123	146	176	229			
			3,802	3,98	4,283	4,955			
710 x 30				166	196	248	310	393	
				6,213	6,516	7,118	8,351	10,23	
800 x 30					221	274	335	418	
					10,11	10,78	11,94	13,83	
900 x 30	Weights and moments of inertia are not binding, referring to the max. finish bore.							367	450
								17,64	19,53

Gear Coupling Type KBT

Design and permissible misalignments

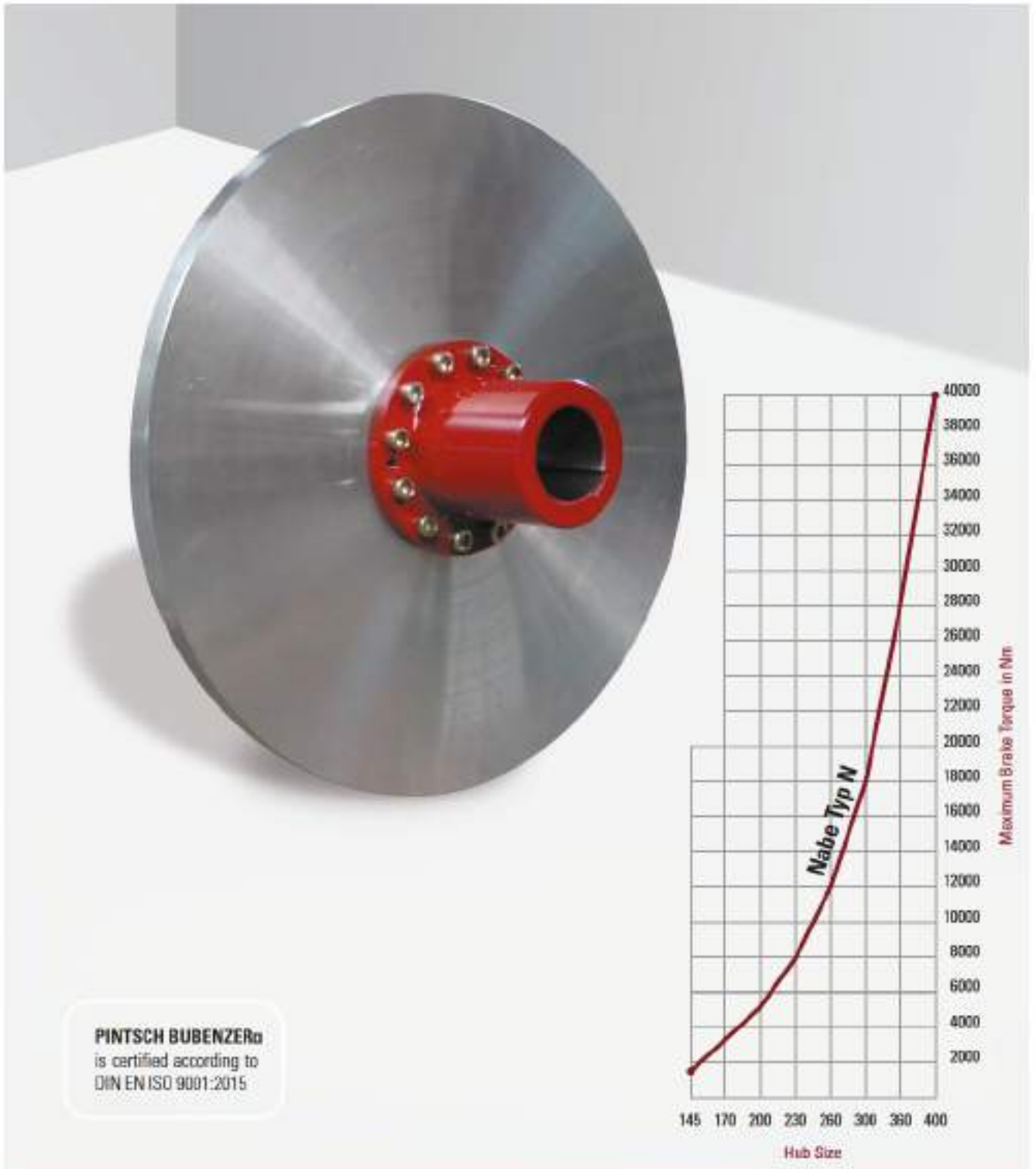


Rev. 09-02



1	Hub, gear side
2	Hub, motor side
3	Brake disc
4	Flange with geared hub
5	Internal geared sleeve
6	Seal carrier with O-ring (6.1) and seal (6.2)
9	Hexagon socket head screw
11	Hexagon bolt
12	Screw plug

Hub with Brake Disc Type N + NX



Safe



Tried and Trusted



Robust



Easy Maintenance

Description Hub Type N + NX



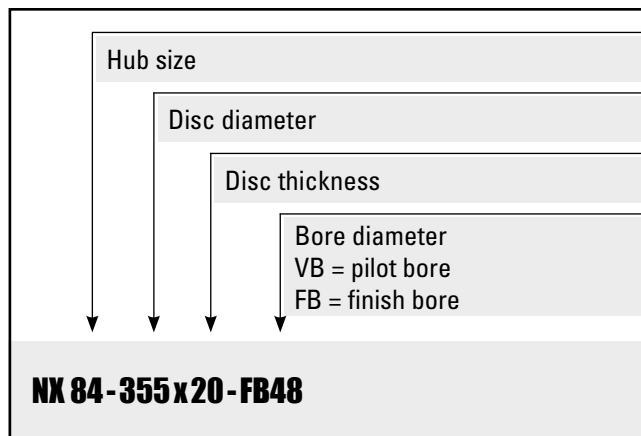
Main Features

- Hub/disc combination for easy exchange of brake disc (type N)
- High accident prevention by fastening ring, no rotating nuts (type N)
- Exchange of brake disc without removing the hub (type N)
- Simple, one-piece design with 20 mm brake disc thickness for SB8.11 + SB17 series brakes (type NX)

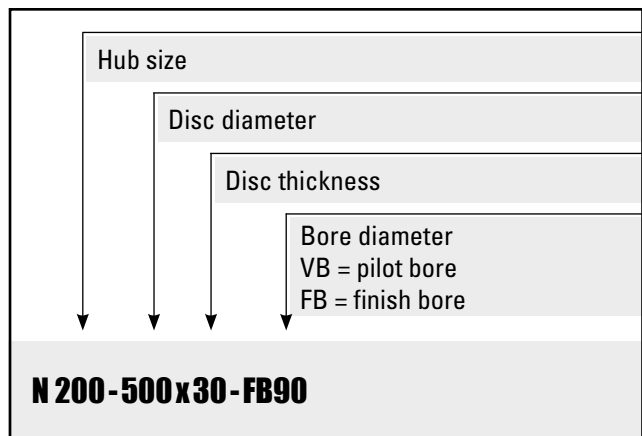
Options

- Hubs finish bored and keywayed acc. to DIN 6885
- Hubs unbored
- Hubs pilot bored
- Hubs with brake disc, dynamically balanced according to ISO 1940 Grade: G 2.5; G 6.3
- Hubs in special dimensions
- Hubs in special material
- Test certificate DIN EN 10204-3.1

Ordering Example



Ordering Example



Applications

All drives, where the brake is not located between motor and gearbox, like brake installation on the second gear box shaft or at the motor end shaft



Please Note

We supply a detailed operating manual with every order. Hubs with brake discs are rotating parts and as such a cover must be fitted for the prevention of accidents.



PINTSCH BUBENZER Service

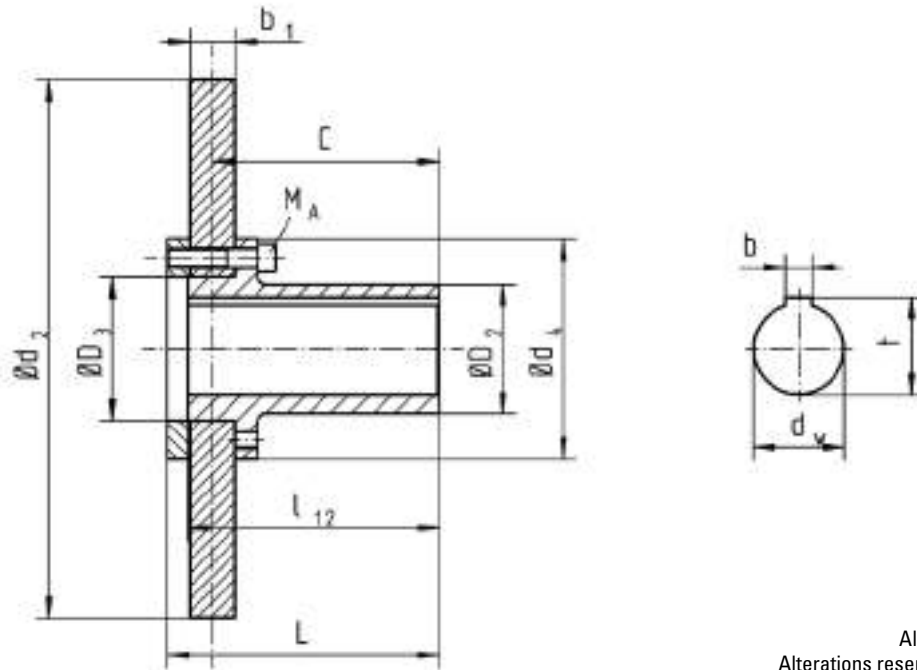
This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on-site by PINTSCH BUBENZER service engineers is possible. Drawings as DWG/DXF files for your engineering department are available upon request.

Hub with Brake Disc Type N

Dimensions and technical data



Rev. 12-06



All dimensions in mm
Alterations reserved without notice

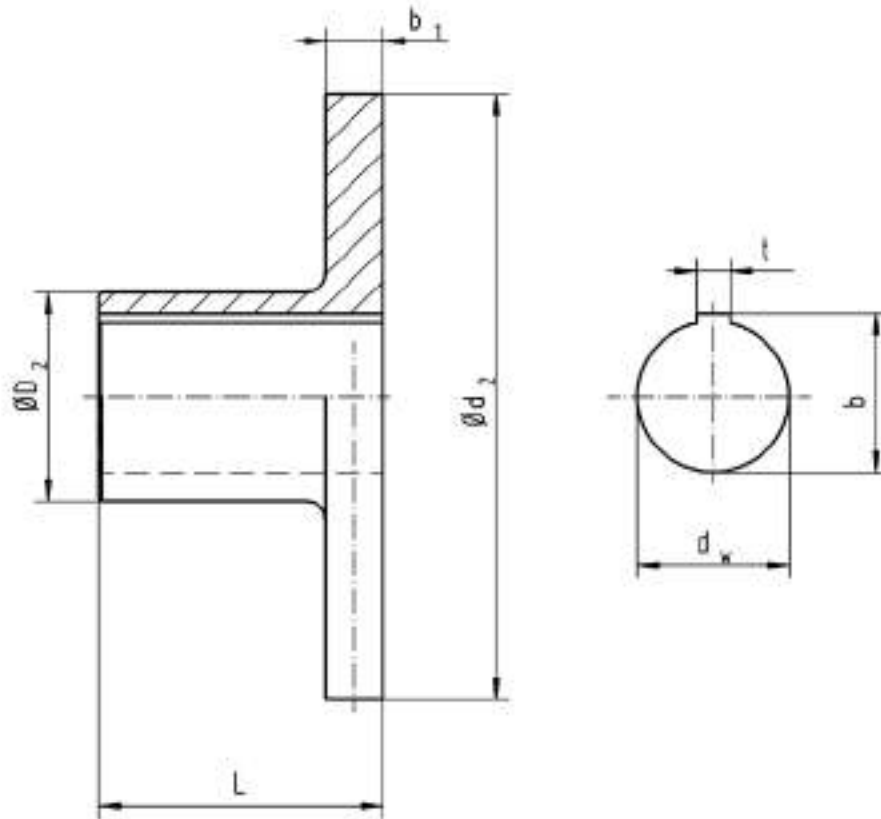
Hub N (size = d ₄)		145	170	200	230	260	300	360	400	
M _{Br} max.	Nm	1800	2850	4950	7740	11940	17550	29100	40050	
n _{max} at max. disc Ø	min ⁻¹	3800	3400	3000	2700	2400	2200	1750	1750	
d _w max.	mm	60	75	95	110	125	140	160	160	
D ₂	mm	85	110	135	160	180	200	225	225	
D ₃	mm	95	120	140	170	200	220	260	300	
L	mm	180	180	220	220	230	230	275	275	
l ₁₂	mm	166,5	166,5	207	207,5	212,5	212,5	252,5	252,5	
C	mm	150	150	190	190	195	195	235*	235*	
M _A (DIN 912-8.8; μ=0,12)	Nm	84	84	132	132	206	410	710	710	
Brake disc diameter d ₂ x b ₁ (mm)	355 x 30	kg kgm ²	28 0,378			Weight of the hub with brake disc Moment of inertia kg kgm ²				
	400 x 30		35 0,603	37 0,612	44 0,653					
			42 0,959	45 0,973	52 1,011					
	500 x 30			54 1,469	60 1,506	67 1,571	77 1,682			
					72 2,335	79 2,399	89 2,51			
	630 x 30					95 3,768	105 3,879	109 4,081		
							124 6,112	128 6,213		
	800 x 30		Weights and moments of inertia are not binding, referring to the max. finish bore for the sizes 145 to 300 respectively for a finish bore of 120 mm for the sizes 360 and 400.					153 9,808	189 10,456	
									221 16,123	232 16,473
	900 x 30								257 24,075	267 24,424
	1000 x 30		* Dimension C = 230 mm at brake disc thickness 40 mm							

Hub with Brake Disc Type NX

Dimensions and technical data



Rev. 12-06

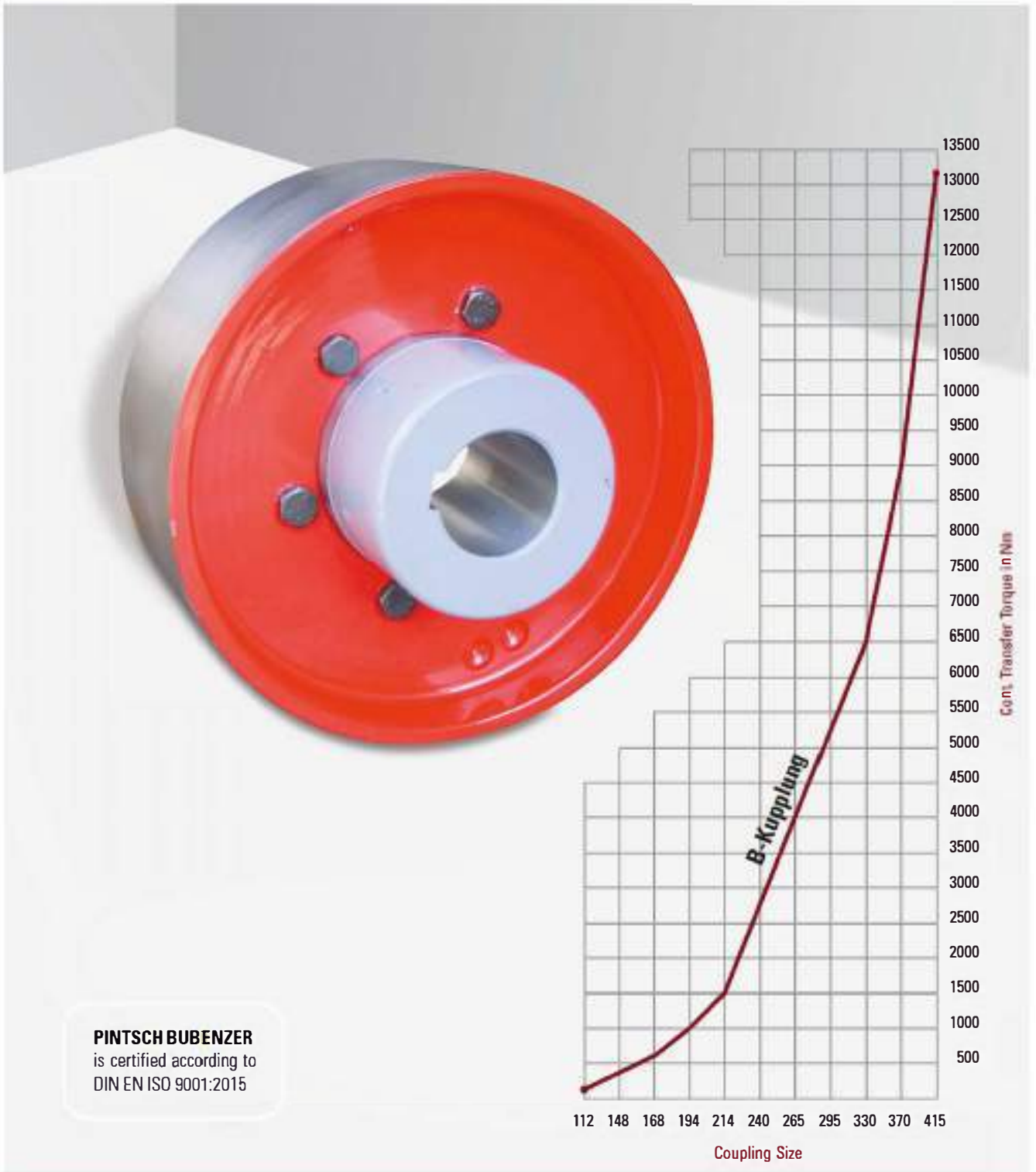


* Higher speeds possible by using sintered linings


All dimensions in mm
Alterations reserved without notice


Hub NX (size = D ₂)			58	64	74	84	92	100	114	
L mm			80	110	110	110	140	140	140	
dw max. mm			38	42	48	55	60	65	70	
	$\eta_{\max.}$ min ⁻¹ *	Thermal capacity kW								
Brake disc diameter d ₂ x b ₁ (mm)	200 x 20	3500	344	5,6	6,2	Weight of the hub with brake disc				kg
				0,025	0,026	Moment of inertia				kgm ²
	225 x 20	3300	399	7,0	7,5	8,1	8,6	9,3	10,9	
				0,040	0,040	0,041	0,042	0,045	0,047	
	250 x 20	3000	474	8,5	9,0	9,6	10,1	10,8	12,4	14,0
				0,060	0,061	0,062	0,063	0,066	0,067	0,072
	280 x 20	2675	567	10,5	11,0	11,6	12,2	13,0	14,5	16,2
				0,095	0,096	0,096	0,097	0,100	0,102	0,107
	315 x 20	2380	653	13,2	13,7	14,3	14,9	15,5	17,1	18,7
				0,153	0,153	0,153	0,154	0,157	0,159	0,164
	355x 20	2100	752		17,0	17,6	18,2	18,9	20,5	22,2
					0,246	0,246	0,274	0,250	0,252	0,257
	400 x 20	1875	863		21,0	21,6	22,2	22,8	24,4	26,0
					0,396	0,396	0,397	0,400	0,402	0,407
450 x 20	1650	986			27,0	27,7	28,4	30,0	31,7	
					0,634	0,635	0,637	0,639	0,645	
500 x 20	1500	1100			33,0	33,7	34,4	36,0	37,7	
					0,956	0,966	0,969	0,970	0,976	


Flexible Coupling Type B-EBT + B-GBT





PINTSCH BUBENZER
is certified according to
DIN EN ISO 9001:2015

- 

Torsionally Elastic
- 

Tried and Trusted
- 

High Performance
- 

Robust
- 

Easy Maintenance

Description Coupling Type B-EBT, B-GBT



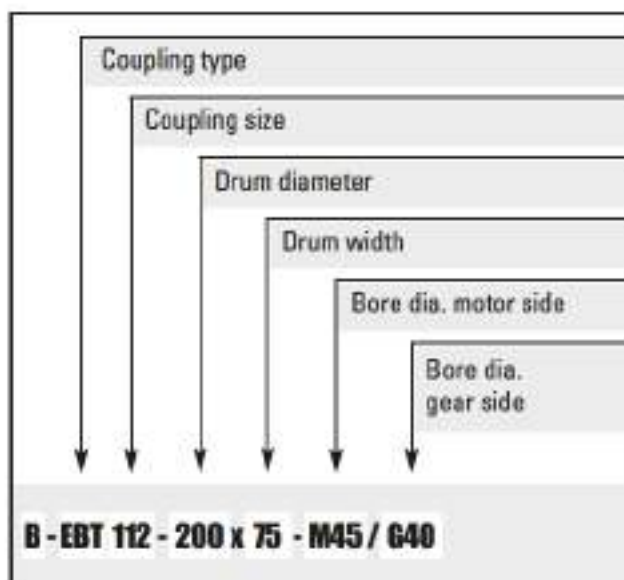
Main Features

- Multi component GG / GGG flexible coupling
- Transmission of torque via elastic intermediate ring
- Replacement of the elastic intermediate ring without moving any equipment (B-GBT only)
- Installation of the brake drum on the load side to allow the brake torque to be maintained when the motor is disengaged
- Vast selection of coupling sizes and brake drum diameters to satisfy most braking and drive requirements

Options

- Coupling hubs ready bored and keywayed (acc. to DIN 6885)
- Coupling hubs with taper bore
- Coupling hubs with two keyway
- Coupling hubs with pilot bore
- Coupling balanced according to ISO 1940-Grade: G 6.3
- Special material for elastic intermediate ring depending on application
- Coupling without brake drum

Ordering Example



Applications

- These couplings are for use in machinery subjected to high dynamic load
- Damping of peak torques and vibrations are further reasons for the use of this coupling type
- The standard material of the elastic intermediate ring is suitable for a temperature range of $-20^{\circ}\text{C} \dots +80^{\circ}\text{C}$



Please Note

We supply a detailed operating manual with every order. Couplings are rotating parts and as such a cover must be fitted for the prevention of accidents.



PINTSCH BUBENZER Service

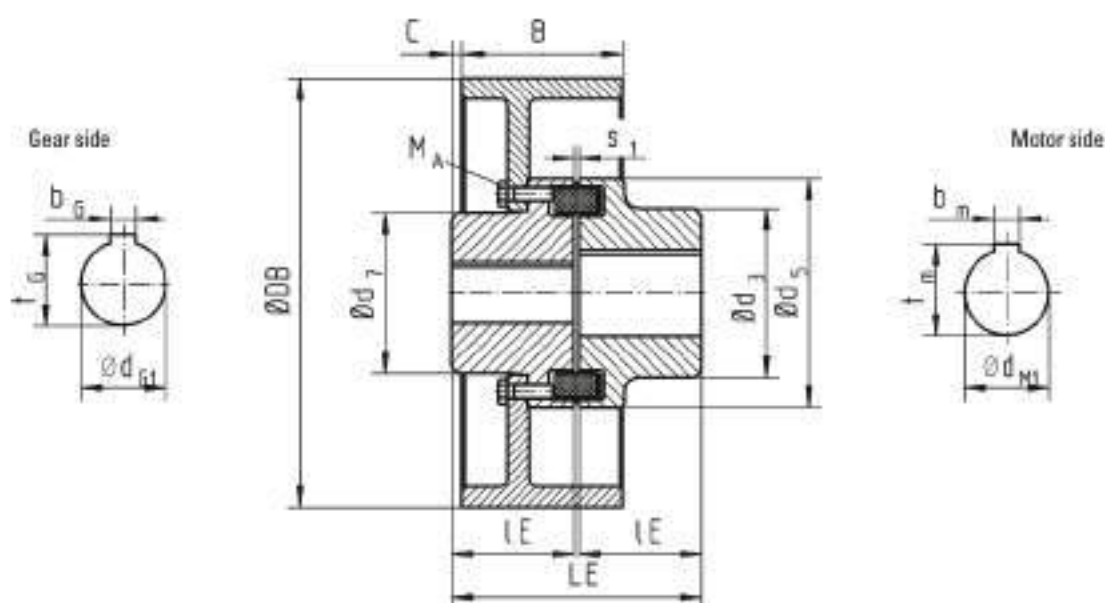
This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on-site by PINTSCH BUBENZER service engineers is possible. Drawings as DWG/DXF files for your engineering department are available upon request.

Flexible Coupling Type B-EBT

Dimensions and technical data



Rev. 12-06



All dimensions in mm
Alterations reserved without notice

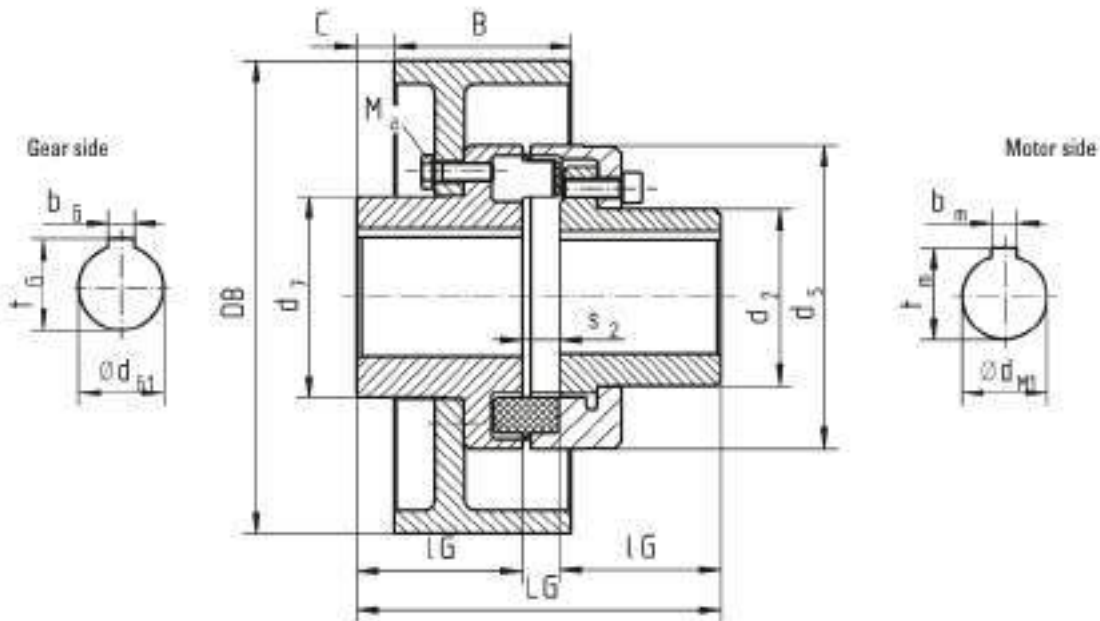
B-EBT (= d ₅)		112	128	148	168	194	214	240	265	295	330	370	415	
M _B max.	Nm	450	550	1000	1600	2750	3350	4200	8700	9800	10600	13500	16000	
T _{KN}	Nm	150	250	390	630	1050	1500	2400	3700	4900	6400	8900	13200	
n _{max}	min ⁻¹	6000	5000	4500	4000	3500	3000	2750	2500	2250	2000	1750	1500	
d _{M1} max.	mm	48	55	65	75	85	95	110	120	130	150	170	190	
d _{G1} max.	mm	42	52	58	72	85	92	102	120	130	150	170	185	
d ₃	mm	79	90	107	124	140	157	179	198	214	248	278	315	
d ₁	mm	68	85	94	118	138	153	168	198	214	248	278	308	
C	mm	11	16	16	*A	16,5	*B	*C	22	*D	*E	15	25	
IE	mm	60	70	80	90	100	110	120	140	150	160	180	200	
LE	mm	123,5	143,5	163,5	183,5	203,5	224	244	285,5	308	328	368	408	
S ₁	mm	3,5±1	3,5±1	3,5±1	3,5±1,5	3,5±1,5	4±2	4±2	5,5±2,5	8±2,5	8±2,5	8±2,5	8±2,5	
M ₀	Nm	25	25	49	49	85	85	85	210	210	210	210	210	
Brake drum diameter DB x B (mm)	200 x 75	9,1	12,3					Weight		of the coupling		kg		
		0,038	0,044					Moment of inertia		with brake drum		kgm ²		
	250 x 95			20,2	26,4									
				0,116	0,14									
	315 x 118				32,9	40,4	49,2							
					0,3511	0,39	0,45							
	400 x 150						63,4	72,6						
						1,056	1,145							
500 x 190							96,6	116,8	133,9					
							2,795	2,99	3,3					
630 x 236									192,9	236,5				
									8,67	9,15				
710 x 265											264,5	313,8	381,1	
											15,26	16,22	17,77	

Flexible Coupling Type B-GBT

Dimensions and technical data



Rev. 12-09



All dimensions in mm
Alterations reserved without notice

B-GBT (= d ₃)		112	128	148	168	194	214	240	265	295	330	370	415
M _B max.	Nm	450	550	1000	1600	2750	3350	4200	8700	9800	10600	13500	16000
T _{KH}	Nm	150	250	390	630	1050	1500	2400	3700	4900	6400	8900	13200
n _{max}	min ⁻¹	6000	5000	4500	4000	3500	3000	2750	2500	2250	2000	1750	1500
d _{M1} max.	mm	46	53	65	75	85	95	100	115	130	135	160	180
d _{G1} max.	mm	42	52	58	72	85	92	102	120	130	150	170	185
d ₂	mm	64,5	74,5	92,5	104,5	121,5	135,5	146	164	181	208	241	275
d ₁	mm	68	85	94	118	138	153	168	198	214	248	278	308
C	mm	11	16	16	*A	16,5	*B	*C	22	*D	*E	15	25
IG	mm	58	68	78	87	97	107	117	137	147	156	176	296
LG	mm	133	154	176	198	221	243	267	310	334	356	399	441
S ₂	mm	15±1	16±1	18±1	21±1,5	24±1,5	26±2	30±2	33±2	37±2,5	40±2,5	43±2,5	45±2,5
M _A	Nm	25	25	49	49	85	85	85	210	210	210	210	210
Brake drum diameter DB x B (mm)	200 x 75	9,1	12,4						Weight		of the coupling		kg
		0,038	0,045						Moment of inertia		with brake drum		kgm ²
	250 x 95			20,2	26,4								
				0,12	0,15								
	315 x 118				32,9	40,9	49,2						
					0,353	0,396	0,46						
	400 x 150						63,4	71,7					
						1,065	1,157						
500 x 190							95,7	115,9	133,7				
							2,807	3,014	3,26				
630 x 236									192,7	233,1			
									8,63	9,183			
710 x 265											261,1	310,8	379,5
											15,29	16,28	17,9

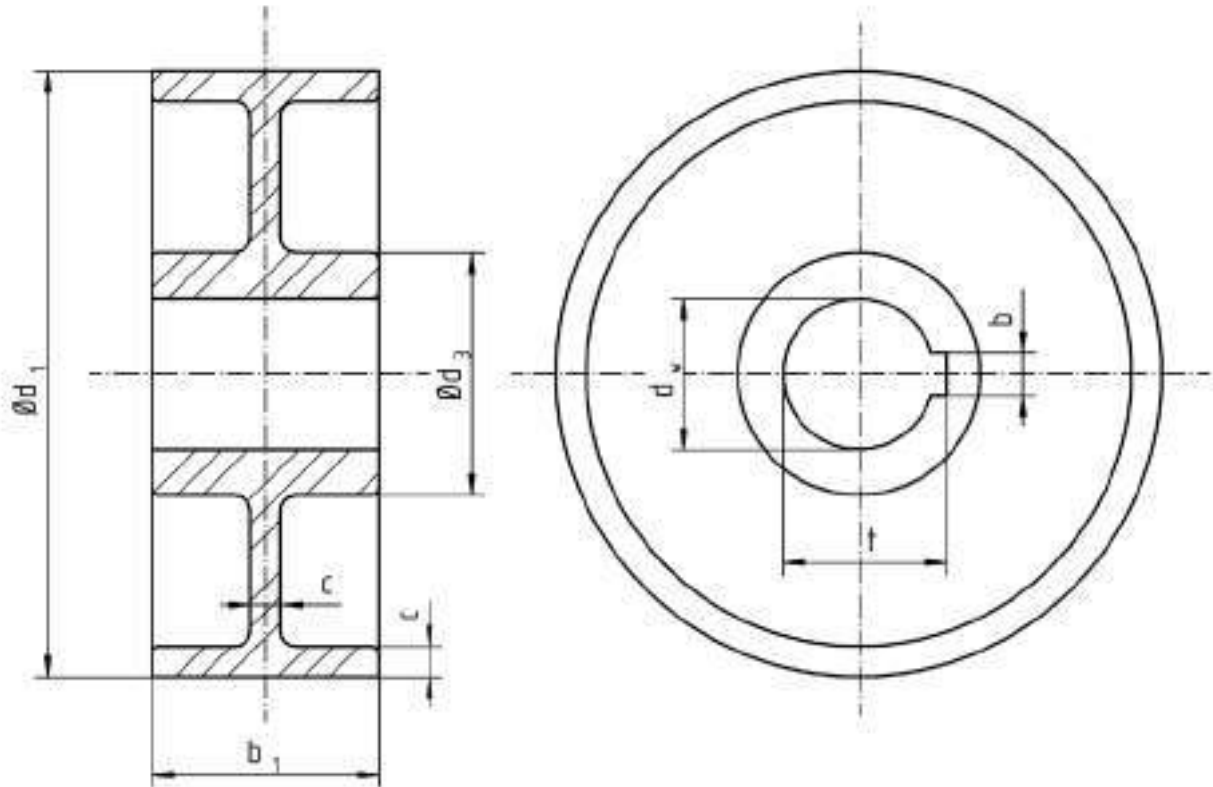
*A Dimension C = 19 mm at Ø 250 mm, 8 mm at Ø 315 mm
 *B Dimension C = 19 mm at Ø 315 mm, 12,5 mm at Ø 400 mm
 *C Dimension C = 18 mm at Ø 400 mm, 9 mm at Ø 500 mm
 *D Dimension C = 30 mm at Ø 500 mm, 5 mm at Ø 630 mm
 *E Dimension C = 11 mm at Ø 630 mm, 0 mm at Ø 710 mm

Brake Drums acc. to DIN 15431

Dimensions and technical data



Rev. 11-16



Material options:	S355J2G3
	Special material
When ordering please indicate:	Brake Drum $\varnothing d_1$
	Material
	Bore $\varnothing d_w$

All dimensions in mm
Alterations reserved without notice

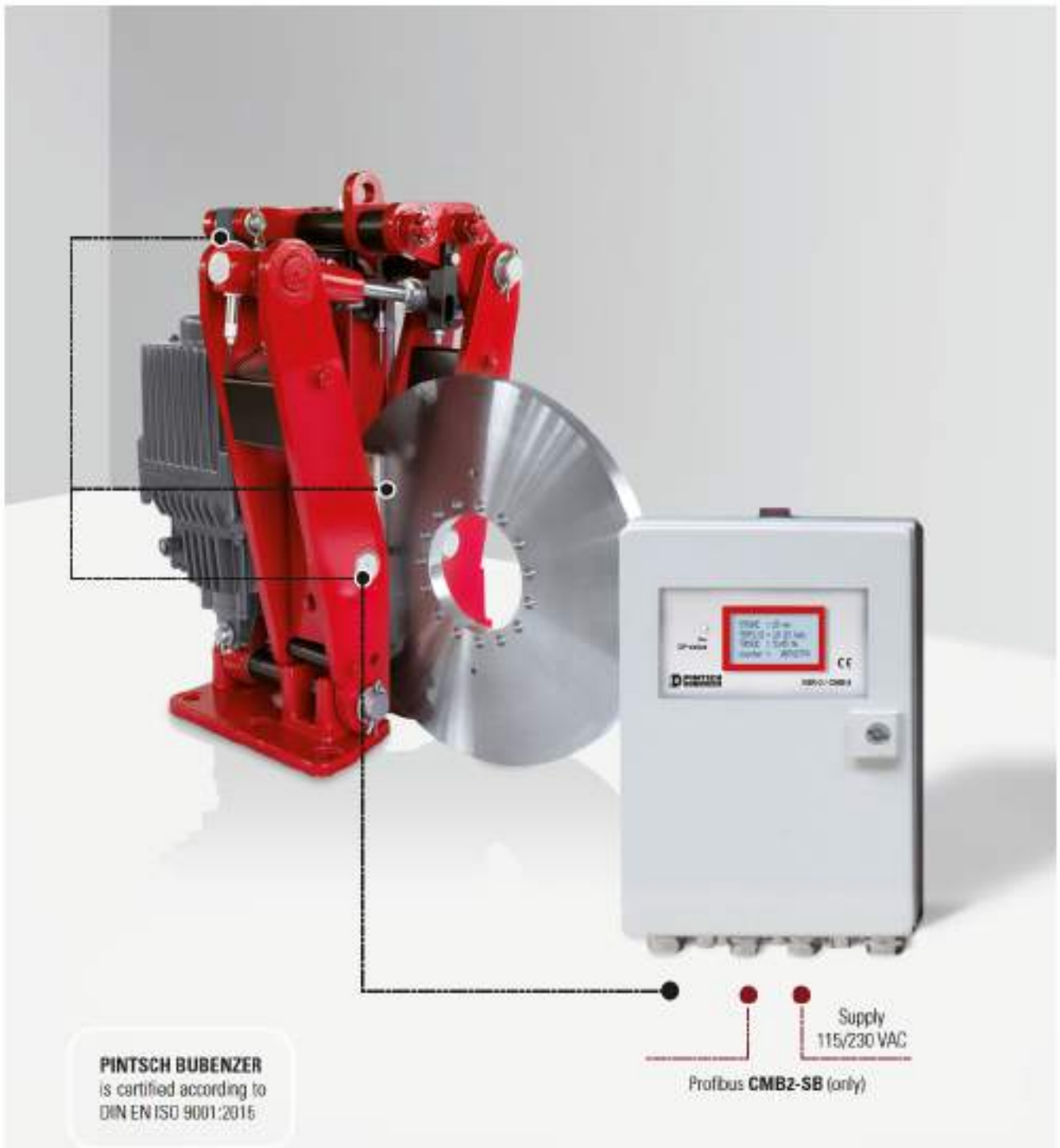
Weights and moments of inertia are not binding, referring to the max. finish bore!

d_1	b_1	c	d_w		d_3	Moment of inertia J kgm ²	Weight kg
			Pilot bored	max. finish bored			
200	75	10	20	50	80	0,042	7,0
250	95	12	25	60	95	0,124	13,0
315	118	15	30	80	115	0,383	24,3
400	150	17	35	90	130	1,151	44,7
500	190	20	50	100	150	3,356	83,1
630	236	25	50	110	170	10,396	160,1
710	265	30	70	120	200	19,869	246,0



The brake drums can be balanced on request if ordered finish bored and keywayed. If requested, brake drums can be made according to customer specifications.

Monitoring System VSR2-SB/CMB2-SB



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is certified according to
DIN EN ISO 9001:2015

Visual indication of

<p>thruster stroke < 5 mm > 20 mm < 55 mm</p>	<p>maximum brake pad temperature</p>	<p>air gap difference between disc and pad surface by measuring the temperature difference between pads caused by unilateral pad rubbing</p>	<p>pad thickness < 5 mm</p>
--	--	--	------------------------------------

Description VSR2-SB/CMB2-SB



In response to requirements to simplify the maintenance of industrial brakes and at the same time to increase their operational safety, PINTSCH BUBENZER offers a retrofitable, compact electronic status indication system to be integrated into the brake as an additional safety device

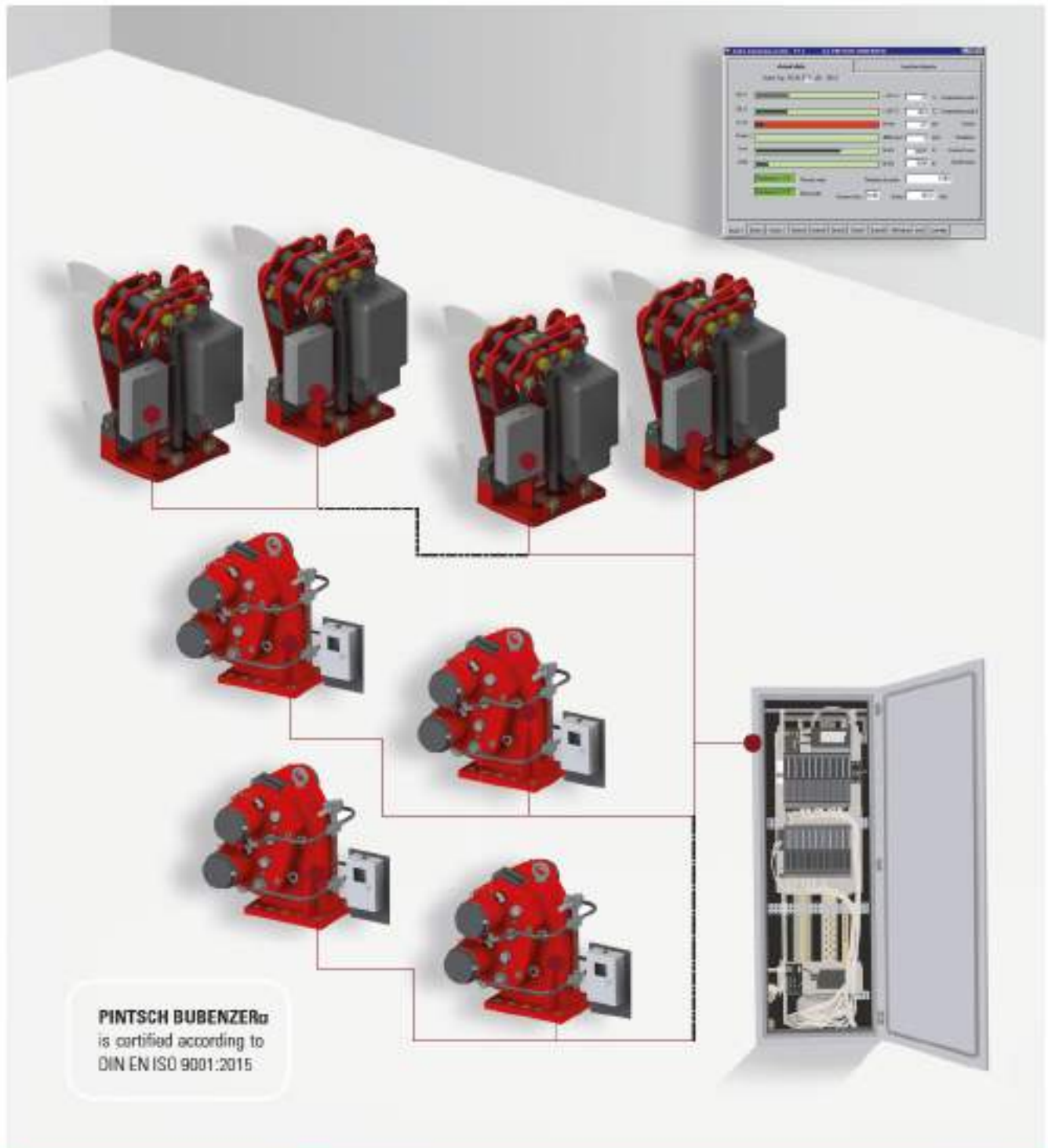
Main Features

- Industrial display with 4 rows of 20 characters for indication of measurement data and error messages
- High ambient temperature range – 20°C.....+70°C
- Protection class IP66
- Internal keypad for parameter change
- Up to 5 m cable length from sensor to electronic box. (Option)
- Brake operation cycle counter (up to 100 Mio. Cycles)
- Supply voltage selection switch 115/230 V AC
- One common error relay contact (VSR2-SB only)
- Profibus (CMB2-SB only). All scaled measures signals and error bits are transferred by bus system to the main control PLC. No analogue inputs in control PLC are required
- Option RPM speed sensor available
- Option: Stainless steel electronic box IP66 for outdoor use

Common parts for VSR2-SB and CMB2-SB

- Supply voltage:** The electronic unit can be connected directly to 110-240 VAC supply voltage. The internal voltage selector switch must be set by the user to the corresponding position 115 or 230 V
- Temperature sensor:** A pair of Pt100 sensors (B) measures the temperature of the each brake pad. If the temperature is too high or if the temperature is unequal from left to right side the unit generates a signal that is displayed in the panel. This reflected to the main control plc if the CMB2-SB unit is added
- Pad wear sensor:** If the minimum brake pad thickness is reached, the sensors (A) send a signal to the electronic box
- Display:** All measured analogue and digital signals and error messages are shown on the display in English language. Other languages are available on request. The display is readable under direct sunshine and has a LED backlight for use in a dark environment, such as steel mills.
- Keypad:** With the internal key pad, the user can adjust parameters such as changing the temperature display from Celsius (°C) to Fahrenheit (°F) or setting of the Profibus address
- Reset button:** The LED pushbutton on top of the electronic box indicates a wrong brake adjustment by a flashing red light. After the problem on the brake is solved, the status of the VSR2-SB / CMB2-SB can be reset to normal operation by pushing the button.
- Proximity switch release control:** This switch and the optional manual release switch are independent from the VSR2-SB/ CMB2-SB and have to be connected to the control plc

Monitoring System VSR2-SB/CMB2-SB



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DIN EN ISO 9001:2015

Permanent monitoring of



Thruster Stroke



Contact Force
Brake Force



Lining
Temperature



Lining Wear



Disc Speed
(optional)

Description VSR2-SB/CMB2-SB



VSR2-SB parts

Stroke sensor: A digital stroke sensor detects an Eldro reserve stroke <5mm or larger than 15 mm

Relay contact: A dry contact (max 250 V 2 A) is connected to terminals 21/22. It is closed in normal status of the VSR2-SB and open, if the system is in error mode, or switched off

CMB2-SB parts

Stroke sensor: The digital stroke sensor of the VSR-SB is replaced by an analogue sensor that measures the position of the thruster piston rod. The reserve stroke is measured and checked that it is at the perfect position of 10 mm with the brake is completely released. The maximum measurement range is 100 mm. The digital sensor is still available as an option

Force sensor: One load cell pin, located in the brake shoe, measures the contact force in the closed condition of the brake. This signal is used to detect an incorrect or broken spring setting. The signal "contact force" (max. 70 kN) is converted in software to the equivalent torque value in Nm. So the displayed value in Nm can be easily compared with the torque value shown on the spring scale

Disc speed RPM sensor: For this option, a special brake disc with marks is needed. A proximity sensor counts the impulses per time period and the RPM value is calculated

Profibus: All measured data (scaled) and warning signals are transferred by the Profibus-DP port to the main control PLC. No expensive analogue inputs (6 pc per brake) are required in the main PLC. The address of the DP slave can be easily set in the electronic box by a parameter change in the software. Up to 126 brakes can be connected to one Profibus master on the main PLC

Signals from brake to main PLC



Please Note

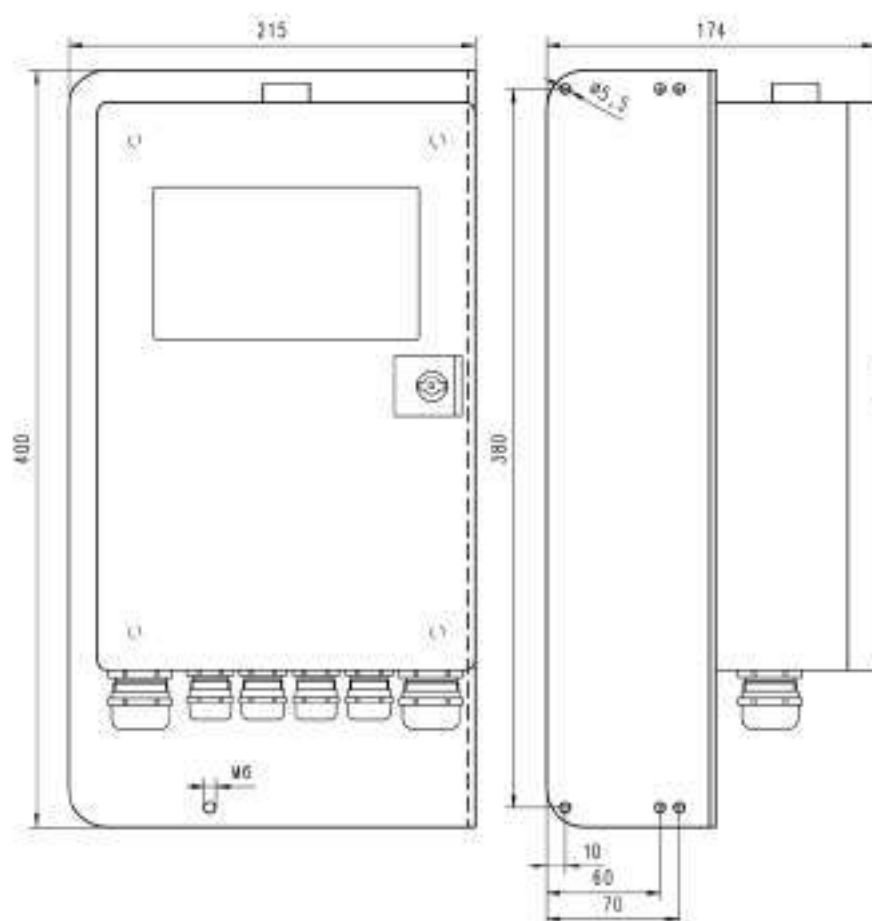
All these readings are logged by the CMB unit and transmitted for visualization. Visualization of sensor output can be provided by a stand-alone PC system or by combining the CMB with an existing crane operating / visualization system (e.g. via Profibus).

Monitoring System VSR2-SB/CMB2-SB

Dimensions and technical data

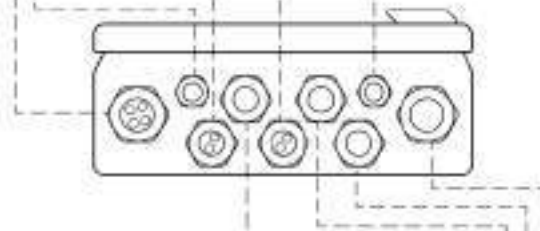


Rev. 12-06



Cable glands wired by PB:

- M25: Padwear1, Padwear2, Stroke, Force
- M12: Temperature 1
- M20: Release, Manual Release
- M20: Speed, Temperature 2
- M12: spare



Cable glands for customer:

- M20: Profibus In, max cable diameter 13 mm
- M20: Profibus Out, max cable diameter 13 mm
- M20: Supply voltage, max cable diameter 13 mm
- M25: Signals to crane, max cable diameter 17 mm

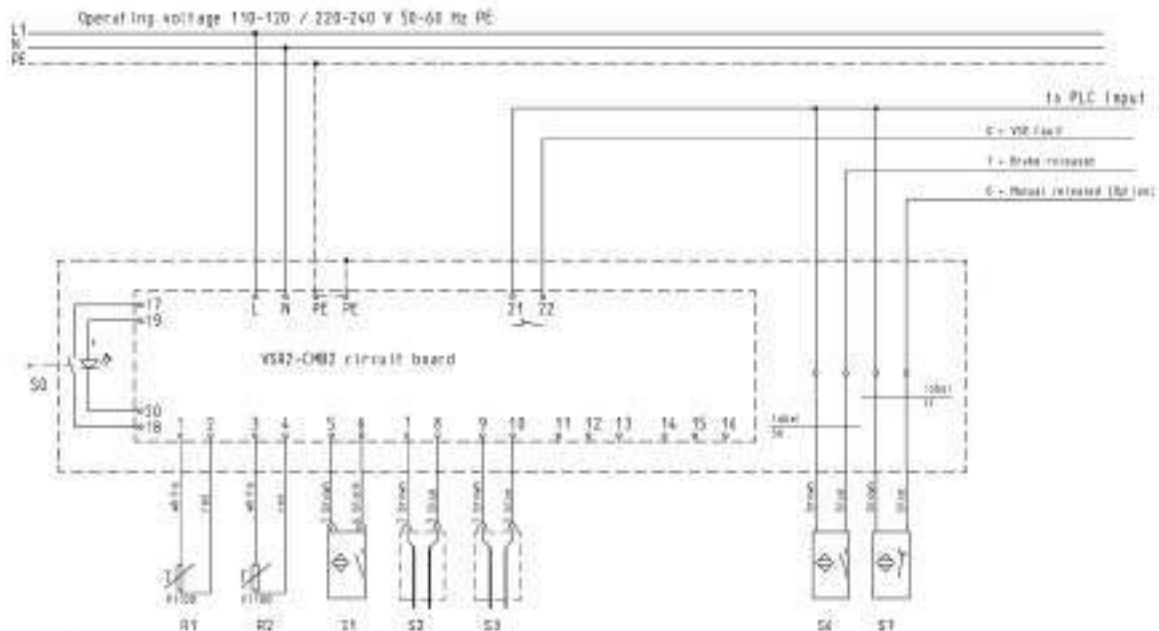
Remark: Force, Profibus In and Out: only for CMB2

Monitoring System VSR2-SB/CMB2-SB

Dimensions and technical data



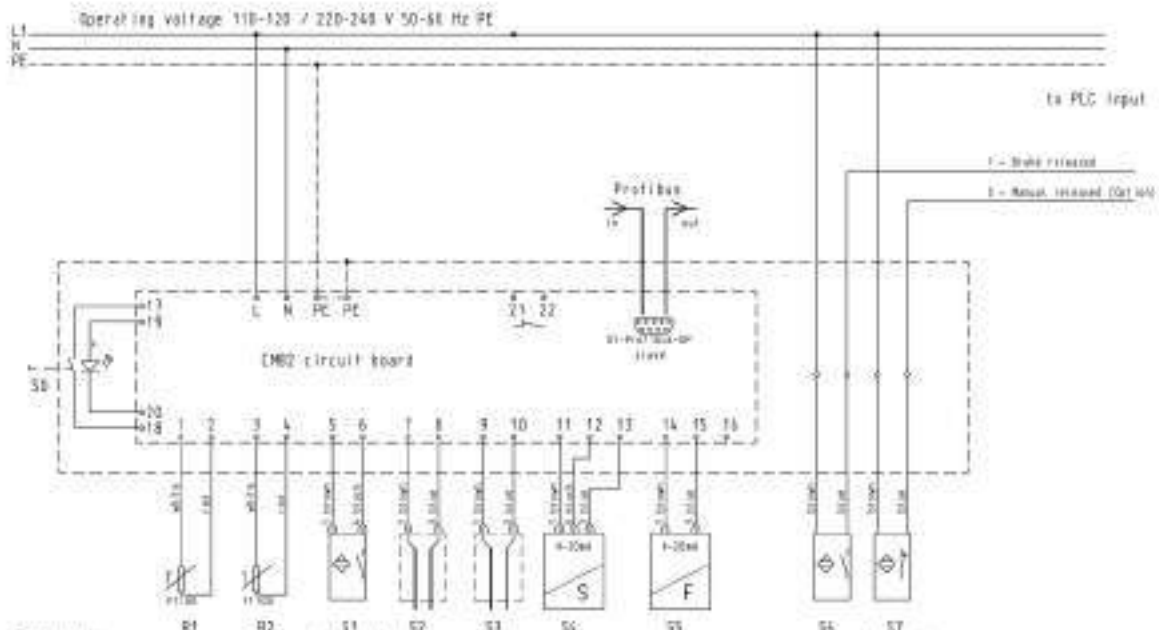
Rev. 09-02



Part list:

- S0 Reset button with LED lamp
- R1 Brake pad 1 temperature sensor
- R2 Brake pad 2 temperature sensor
- S1 Speed sensor (Option)
- S2 Pad 1 wear sensor
- S3 Pad 2 wear sensor
- S4 Proximity switch brake release control 20-240 V AC/DC
- S7 Proximity switch hand release control 20-240 V AC/DC (Option)

VSR2-SB Version

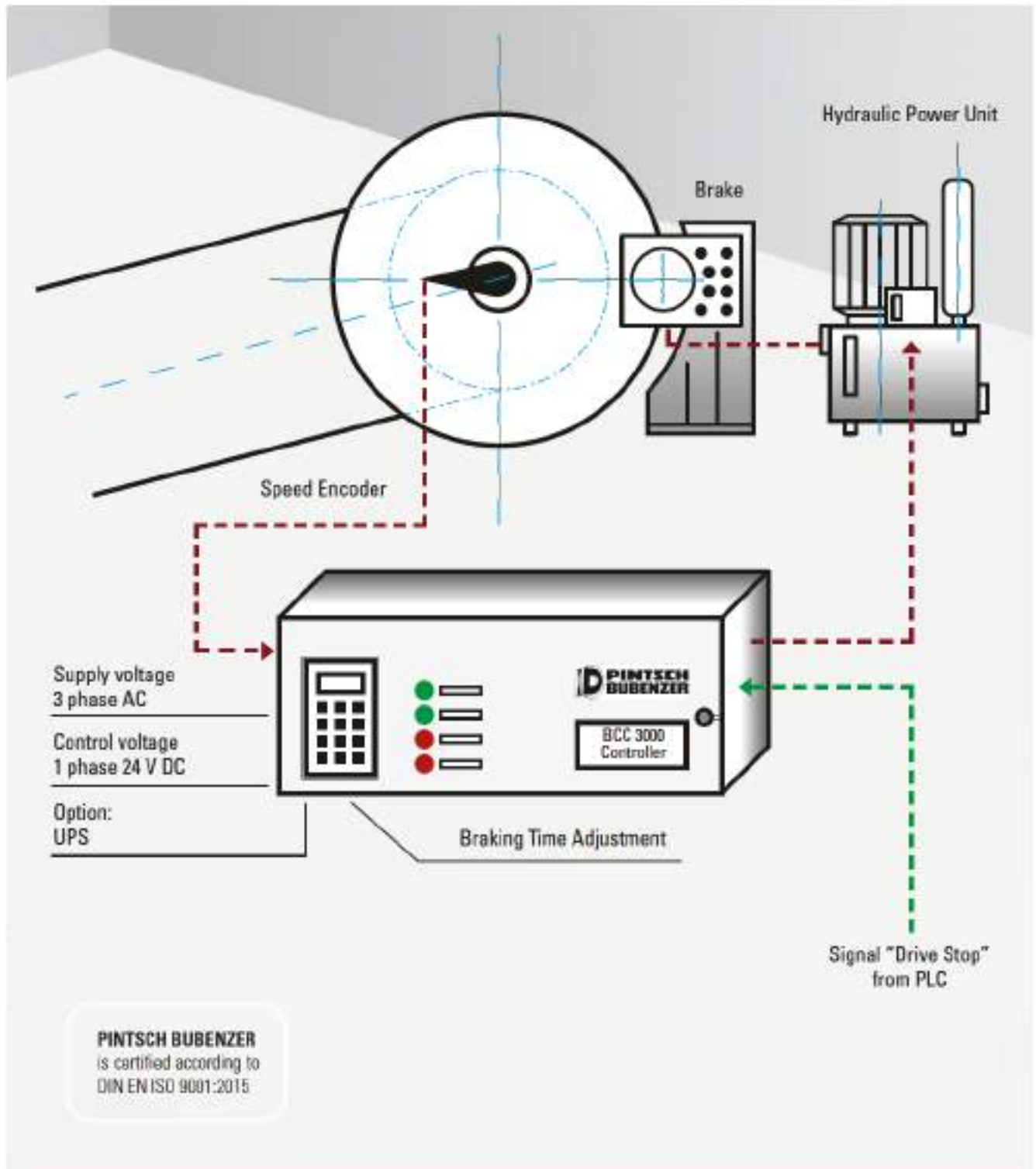


Part list:

- S0 Reset button with LED lamp
- R1 Brake pad 1 temperature sensor
- R2 Brake pad 2 temperature sensor
- S1 Speed sensor (Option)
- S2 Pad 1 wear sensor
- S2 Pad 2 wear sensor
- S4 Analog stroke sensor
- S5 Castrol force sensor
- S6 Proximity switch brake release control 20-240 V AC/DC
- S7 Proximity switch hand release control 20-240 V AC/DC

CMB2-SB Version

Brake Control System BCC 3000



Controlled,
smooth braking



Braking time adjustable
independent of load



Synchronous braking of
several conveyor belts



Increased lifetime of
all drive components



Brake remains
failsafe!

Description BCC 3000



Main Features

The BCC 3000 control system is the ideal solution for a controlled braking of drives, especially on conveyor belts. By the concept of a closed loop control, whereby rated speed and actual speed are in permanent comparison, a drive can be stopped linearly independent of load always in the same (pre-selected) time

The system consists of four components:

A hydraulic power unit equipped with a proportional pressure valve for stepless variable operating pressure

One or more hydraulic caliper brakes, operated by the hydraulic power unit

A speed encoder, measuring the drive speed and submitting it to the controller

The controller itself, equipped as an option with a UPS unit to ensure the closed loop control also in case of power cut-off

Functional Description

The brakes are normally closed by the spring force. After activating the supply and control voltages and the signal "drive start" from the PLC, the hydraulic power unit opens the brakes. After switching off the drive by the "drive stop" signal from the PLC, the controller generates a time ramp for the rated speed. By comparison of rated speed with actual speed, the contact force of the brakes varies accordingly

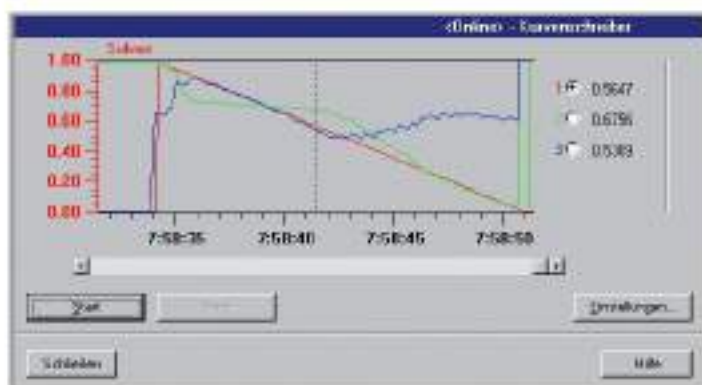
In case of decreased speed resulting from less load or inertia, the contact force of the brake is reduced. On overspeed, the system acts vice versa, i.e. the contact force is increased. At the end of the cycle, the hydraulic pressure goes to zero, and the drive is held with full brake torque

Advantages

Less stress and increased lifetime for all drive components by the "smooth" braking

Synchronous braking of several combined conveyor belts, avoids overflowing of belts on crossings due to different braking times

Furthermore, within certain limits, variations of the friction coefficient between disc and lining are compensated by the continuous control of the brake contact force



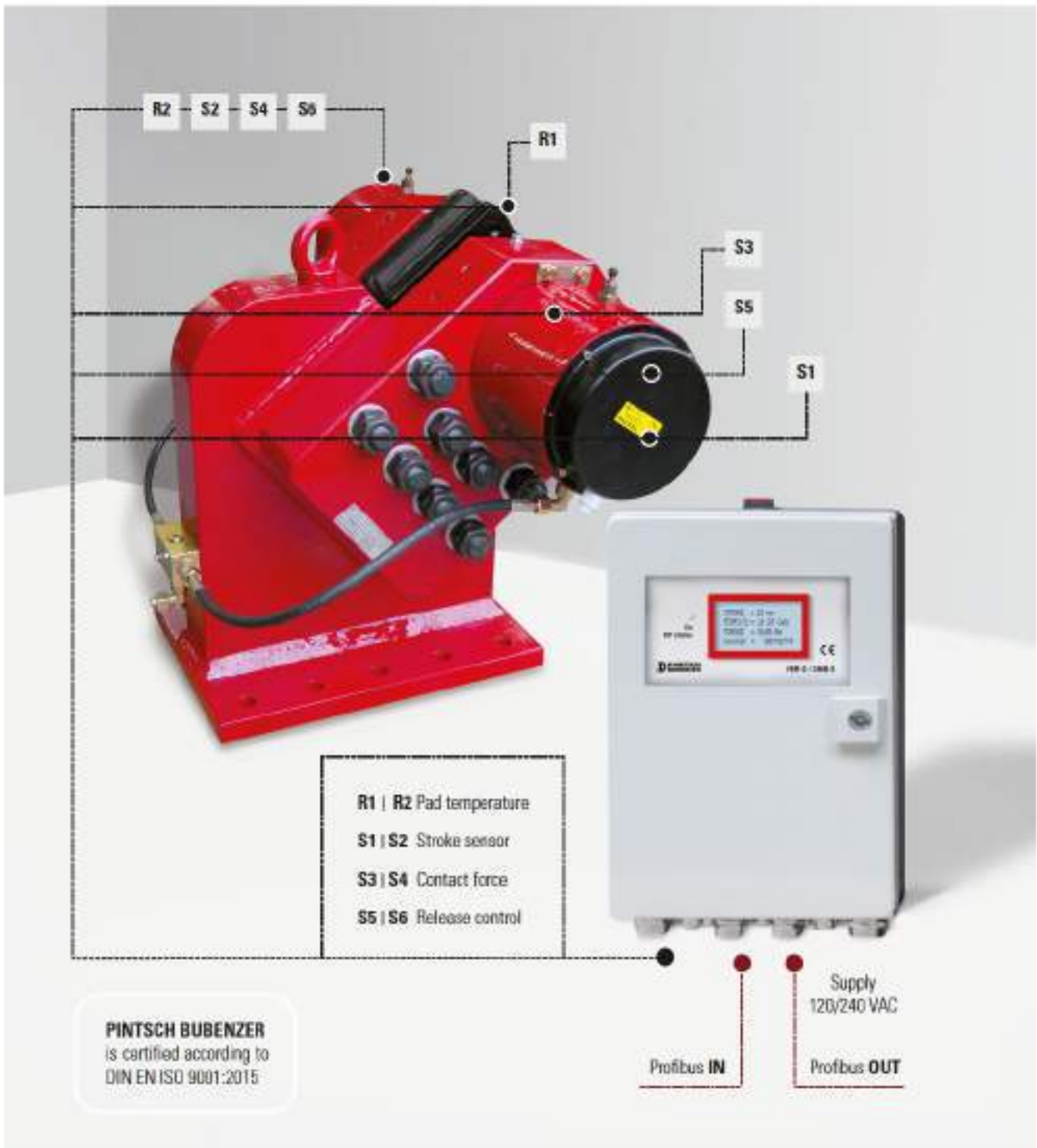
Example:
Pre-selected braking time: 17 seconds

Rated speed

Actual speed

Hydraulic pressure

Monitoring System CMB2-SF



- R1 | R2 Pad temperature
- S1 | S2 Stroke sensor
- S3 | S4 Contact force
- S5 | S6 Release control

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DIN EN ISO 9001:2015



Visual indication of			
Cylinder stroke < 2.5 mm	Maximum brake pad temperature	Air gap difference between disc and pad surface by measuring the temperature difference between pads caused by unilateral pad rubbing	Contact force

Description CMB2-SF



Main Features

Industrial display with 4 rows of 20 characters for indication of measurement data and error messages

High ambient temperature range – 20°C.....+70°C (-4°F.....158°F)

Protection class IP66

Internal keypad for parameter change

Up to 5 m cable length from sensor to electronic box.

Brake operation cycle counter

Supply voltage selection switch 115/230 V AC

Profibus connection. All scaled measure signals and error bits are transferred by bus system to the main control PLC. No expensive analogue inputs in customers PLC are required!

Parts of the system

Supply voltage The electronic unit can be connected directly to 110-240 V AC (50/60 Hz) supply voltage. The internal voltage selector switch must be set by the user to the corresponding position 115 or 230 V

Display All measured analogue and digital signals and error messages are shown on the display in English language. Other languages are available on request. The display is readable under direct sunshine (outdoor and container crane applications) and has a LED backlight for use in a dark environment, such as steel mills.

Keypad With the internal key pad, the user can adjust parameters such as changing the temperature display from Celsius (°C) to Fahrenheit (°F) or setting of the Profibus address.

Reset button The LED pushbutton on top of the electronic box indicates that the brake is outside its normal operating parameters by a flashing red light. When the problem on the brake is solved, the status of the CMB2-SF can be reset by pushing the button. The unit cannot be reset until the adjustments are made and the problem solved.

Pad temperature sensor A pair of Pt100 sensors (R1, R2) measure the temperature of each brake pad. If the temperature is too high, or unequal between left, or right hand side the unit generates a signal that can be sensed by the main control PLC to warn the operator that attention is required.

Contact force sensor A load cell located in each brake cylinder (S3 S4) measures the contact force of the spring pack. This signal is used to detect a spring failure or malfunction of the hydraulic system.

Stroke sensor These analogue sensors (S1, S2) measure the stroke of the piston. If the rated stroke of 2 mm/side increases beyond the maximum value due to pad wear. If the value is higher than 2.5 mm, the customer should readjust the stroke back to 2.0 mm in accordance with the manual. Failure to do so can result in a reduced braking performance. Again a signal bit is set to flag the problem to the control PLC.

Proximity switch release control These 2 switches (S5 S6) are independent from the CMB2-SF and have to be connected directly to the main control PLC to be active.

Relay contact A dry contact (max 250 V 2 A) is connected to terminals 21/22. It is closed in normal status of the CMB2 and open, if the system is in error mode, or switched off. If no Profi-bus is available, this contact can be connected to main control PLC input, to give a common error signal.

Profibus All scaled measured data and warning signals are transferred by the Profibus-DP slave port to the main control PLC. No expensive analogue inputs (6 pcs. per brake) are required in PLC. The address of the DP slave can be easily set in the unit by a parameter change in the software. Up to 126 brakes can be connected to one Profibus master.

Options

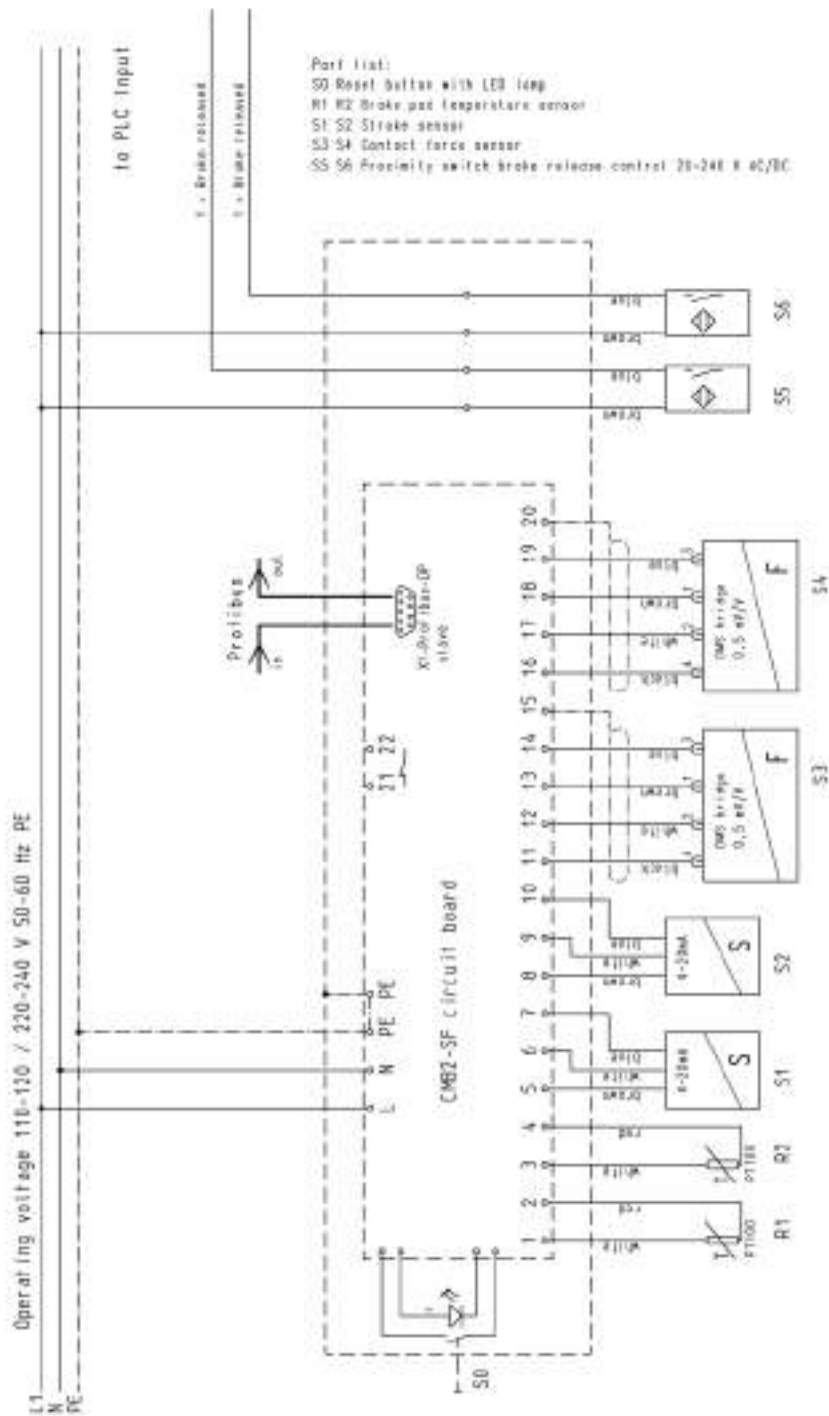
Stainless steel electronic box IP66 for outdoor use

Monitoring System CMB2-SF

Dimensions and technical data



Rev. 12-06

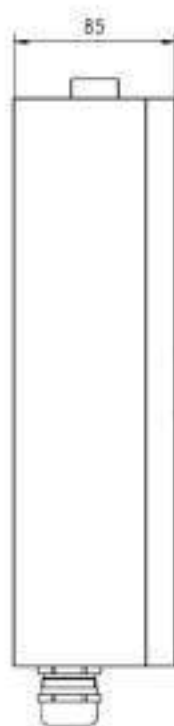
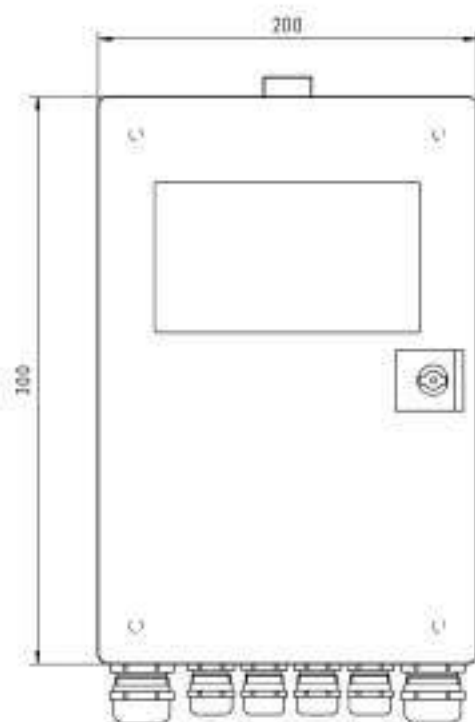


Monitoring System CMB2-SF

Dimensions and technical data



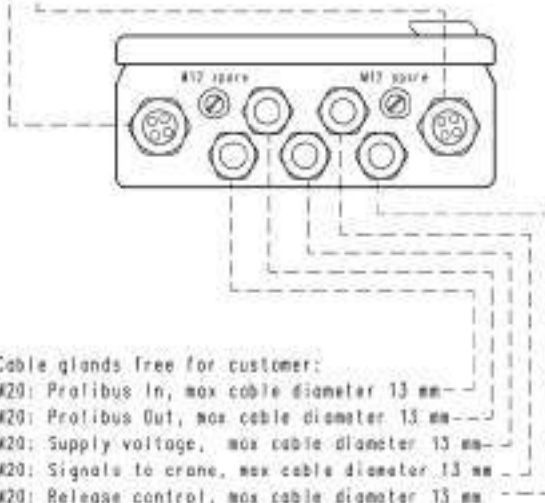
Rev. 09-02



Cable glands wired by P8:

M25: Stroke, Force, Temperature, Release control
left side

M25: Stroke, Force, Temperature, Release control
right side



Cable glands free for customer:

M20: Profibus In, max cable diameter 13 mm

M20: Profibus Out, max cable diameter 13 mm

M20: Supply voltage, max cable diameter 13 mm

M20: Signals to crane, max cable diameter 13 mm

M20: Release control, max cable diameter 13 mm

Rail Clamps Type BSZ



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Safe



Tried and Trusted



High Performance



Robust



Easy Maintenance

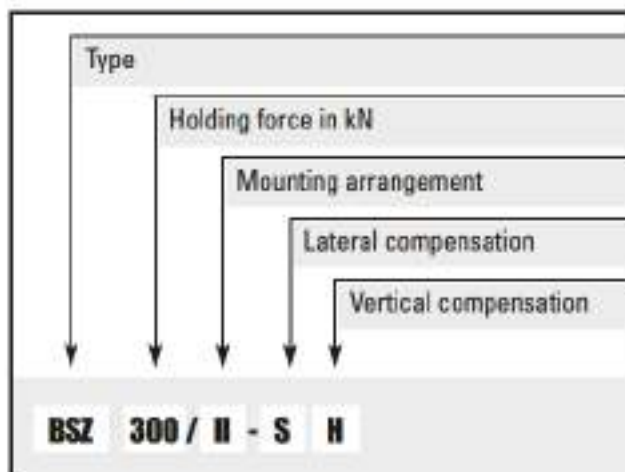
Description BSZ



Main Features

- Rail clamp spring applied
- Apply time: Continuously adjustable 3-12 seconds
- Rail clamp hydraulically released
- Hand pump for emergency release
- Integrated hydraulic power unit, ready piped and wired to terminal box
- Limit switch release control, mechanical or proximity type
- Connection by flange on end face (BSZ/II)
- Connection by flange on top (BSZ/III)
- Static applications
- Holding forces 100-400 kN
- Lateral compensation ± 10 mm

Ordering Example



Options

- Special mounting dimensions
- Holding forces up to 1000 kN
- Lateral compensation ± 25 mm
- Vertical compensation ± 25 mm
- Buffer connection
- Rail sweeper
- Operation of several rail clamps by one hydraulic power unit
- Enclosures of stainless steel

Applications

- As storm brake on all rail mounted equipment, e. g. cranes, stackers, reclaimers etc. Particularly when the rail is mounted above dock level or a rail channel is provided

Operating Restrictions

- Rail clamps of this range are tested both mechanically and hydraulically and are set to nominal force. This setting can only be changed by the manufacturer. Operating conditions other than described in this brochure require the manufacturer's approval and may influence the function of the rail clamp and its components



Please Note

We supply a detailed operating manual with every order. Nevertheless, we would point out that rail clamps are only as safe as the servicing and maintenance performed while they are in operation. The guarantee for the correct functioning of our rail clamps is therefore only valid if the user adheres to the German DIN standard 15019 part 1, table 5. Do not use rail clamps as dynamic brakes.



PINTSCH BUBENZER Service

This includes the installation and commissioning on site by PINTSCH BUBENZER service engineers, if required. Drawings as DWG/DXF files for your engineering department are available upon request.

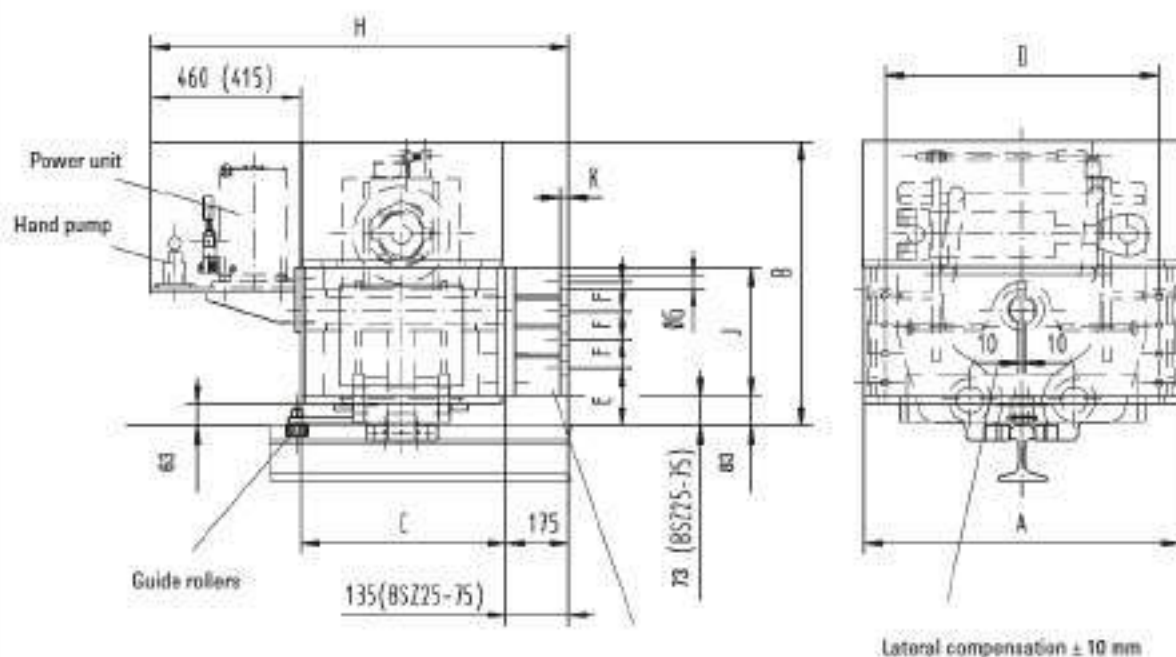
Rail Clamp BSZ/II

Dimensions and technical data



Rev. 10-08

Connection in combination with a flange on the end face



Dimensions D, E, F, G, n and J
by customer data or by table

n = Quantity of fixing holes

All dimensions in mm
Alterations reserved without notice

Type	Holding force	A	B	C	D	E	F	G	H	J	n	K
	kN											
BSZ 25/II	25	650	745	295	500	120	105	17	820	305	6	15
BSZ 50/II	50	650	745	295	500	120	105	21	820	305	6	20
BSZ 75/II	75	650	745	295	500	120	105	21	820	305	6	20
BSZ 80/II	80	690	755	470	500	133	100	21	1060	415	8	25
BSZ 100/II	100	690	755	470	500	133	100	26	1060	415	8	25
BSZ 120/II	120	690	755	470	500	133	100	26	1060	415	8	25
BSZ 140/II	140	690	755	470	500	133	100	30	1060	415	8	25
BSZ 150/II	150	880	790	575	800	120	90	30	1170	358	8	25
BSZ 200/II	200	880	790	575	800	120	90	33	1210	358	8	25
BSZ 250/II	250	880	790	575	800	120	90	33	1210	358	8	25
BSZ 300/II	300	880	790	575	800	120	90	33	1210	358	8	25
BSZ 400/II	400	880	790	575	800	120	90	33	1210	358	8	25

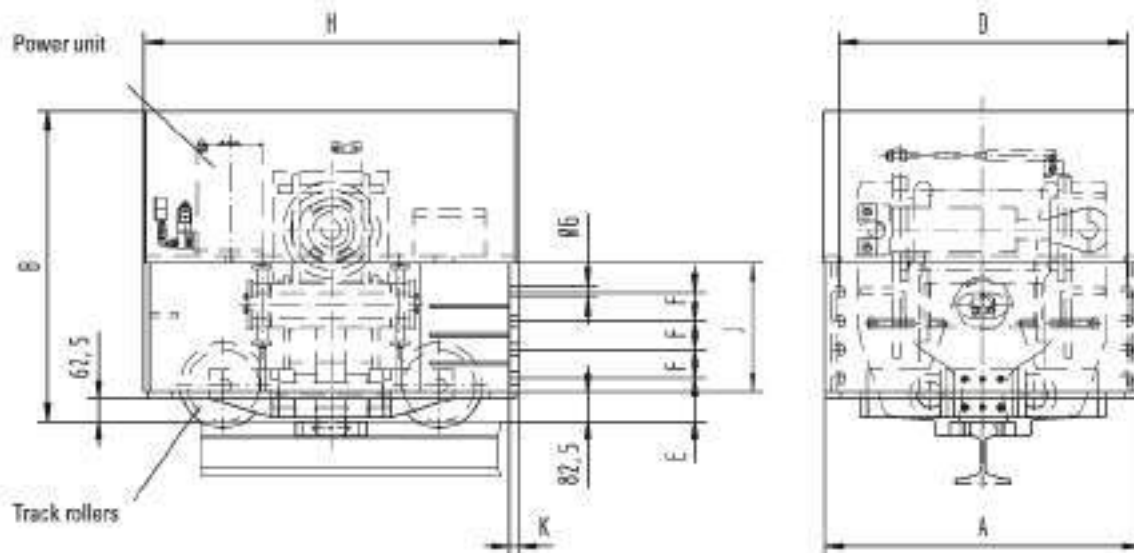
Rail Clamp BSZ/II-SH

Dimensions and technical data



Rev. 10-08

Connection in combination with a flange on the end face



Vertical compensation ± 25 mm
Lateral compensation ± 25 mm

Dimensions D,E,F,G,n and J
by customer data or by table

n - Quantity of fixing holes
m - ca. weight in kg

All dimensions in mm
Alterations reserved without notice

Type	Holding force	A	B	D	E	F	G	H	J	n	K	m
	kN											
BSZ 80/II	80	880	865	800	120	80	26	1040	368	8	25	780
BSZ 100/II	100	880	865	800	120	80	26	1040	368	8	25	820
BSZ 120/II	120	880	865	800	120	80	30	1040	368	8	25	830
BSZ 140/II	140	880	865	800	120	80	30	1040	368	8	25	830
BSZ 150/II	150	880	910	800	120	90	33	1115	368	8	25	1000
BSZ 200/II	200	880	910	800	120	90	33	1115	368	8	25	1060
BSZ 250/II	250	880	910	800	120	90	33	1115	368	8	25	1060
BSZ 300/II	300	880	910	800	120	90	33	1115	368	8	25	1060
BSZ 400/II	400	880	910	800	120	90	33	1115	368	8	25	1100

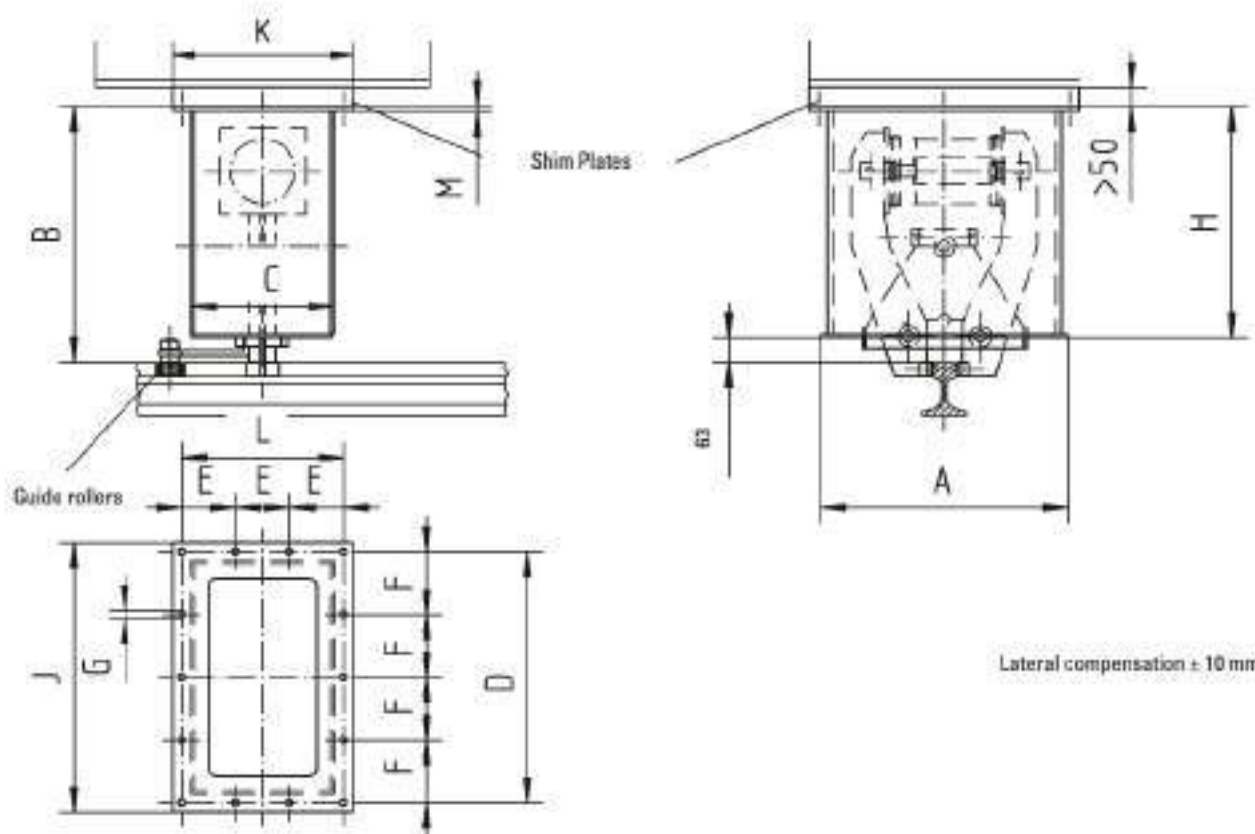
Rail Clamp BSZ/III

Dimensions and technical data



Rev. 10-08

Connection in combination with a flange on top



All dimensions in mm
Alterations reserved without notice

Type	Holding force	A	B	C	D	E	F	G	H	J	K	L	M
	kN												
BSZ 25/III	25	640	698	390	700	150	175	22	635	750	500	450	20
BSZ 50/III	50	640	698	390	700	150	175	22	635	750	500	450	20
BSZ 75/III	75	640	698	390	700	150	175	22	635	750	500	450	20
BSZ 80/III	80	600	750	600	660	100	110	26	687	720	660	600	20
BSZ 100/III	100	600	750	600	660	100	110	26	687	720	660	600	20
BSZ 120/III	120	600	750	600	660	100	110	26	687	720	660	600	25
BSZ 140/III	140	600	750	600	660	100	110	26	687	720	660	600	25
BSZ 150/III	150	900	823	720	950	162	190	26	760	1040	900	810	30
BSZ 200/III	200	900	823	720	950	162	190	26	760	1040	900	810	30
BSZ 250/III	250	900	823	720	950	162	190	26	760	1040	900	810	30
BSZ 300/III	300	900	823	720	950	162	190	26	760	1040	900	810	30
BSZ 400/III	400	900	823	720	950	162	190	26	760	1040	900	810	30

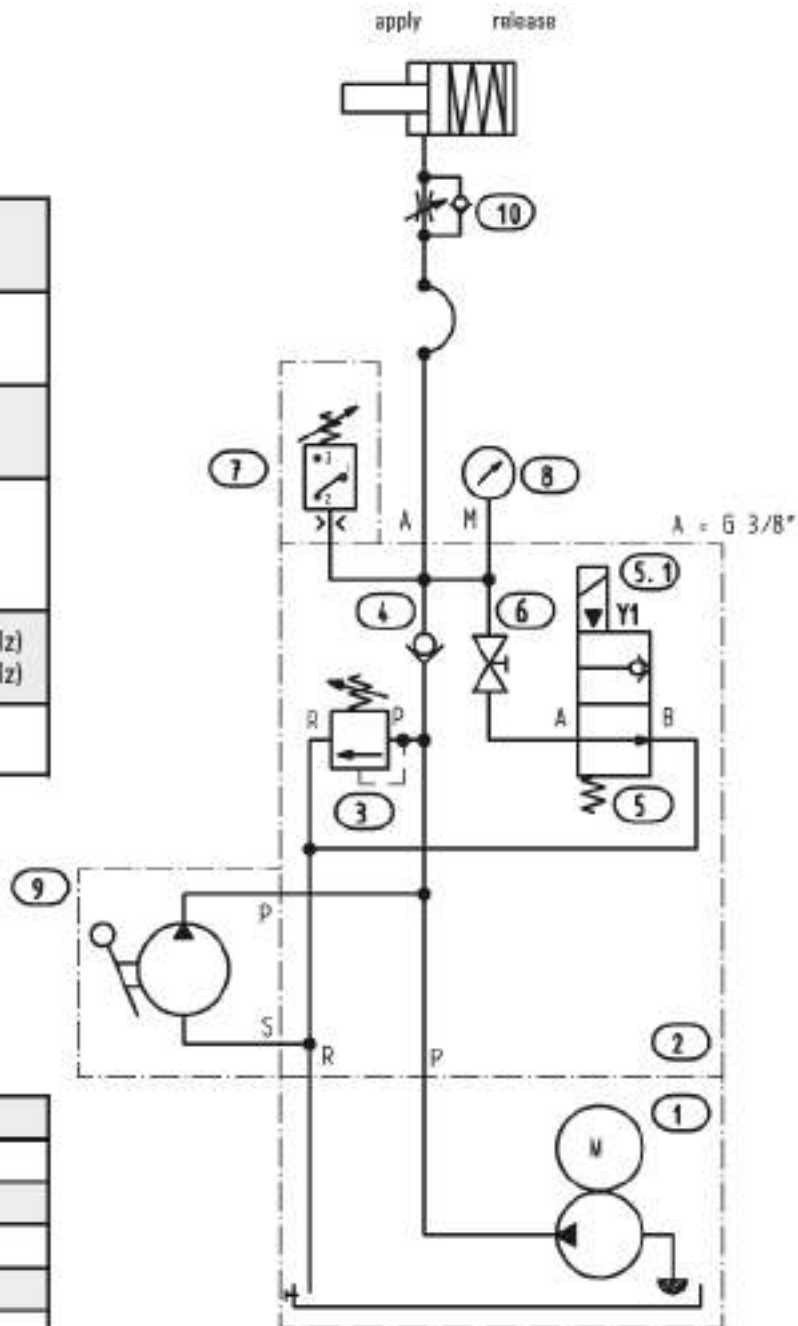
Rail Clamp BSZ

Hydraulic diagram



Rev. 09-02

Q:	4,25 l/min (50 Hz) 5,1 l/min (60 Hz)
p:	250 bar (50Hz) 210 bar (60Hz)
P:	1,1 kW (50 Hz) 1,3 kW (60Hz)
Control voltage:	24 V DC 110 V AC 230 V AC
Supply voltage:	360-440 V AC (50Hz) 380-480 V AC (60Hz)
Tank capacity:	5 Litres



Pos	Qty	Designation
1	1	Hydraulic power unit
2	1	Manifold block
3	1	Pressure valve
4	1	Check valve
5	1	2/2 valve
5.1	1	Plug
6	1	Cock
7	1	Pressure switch
8	1	Pressure gauge
9	1	Hand pump
10	1	Throttle check valve

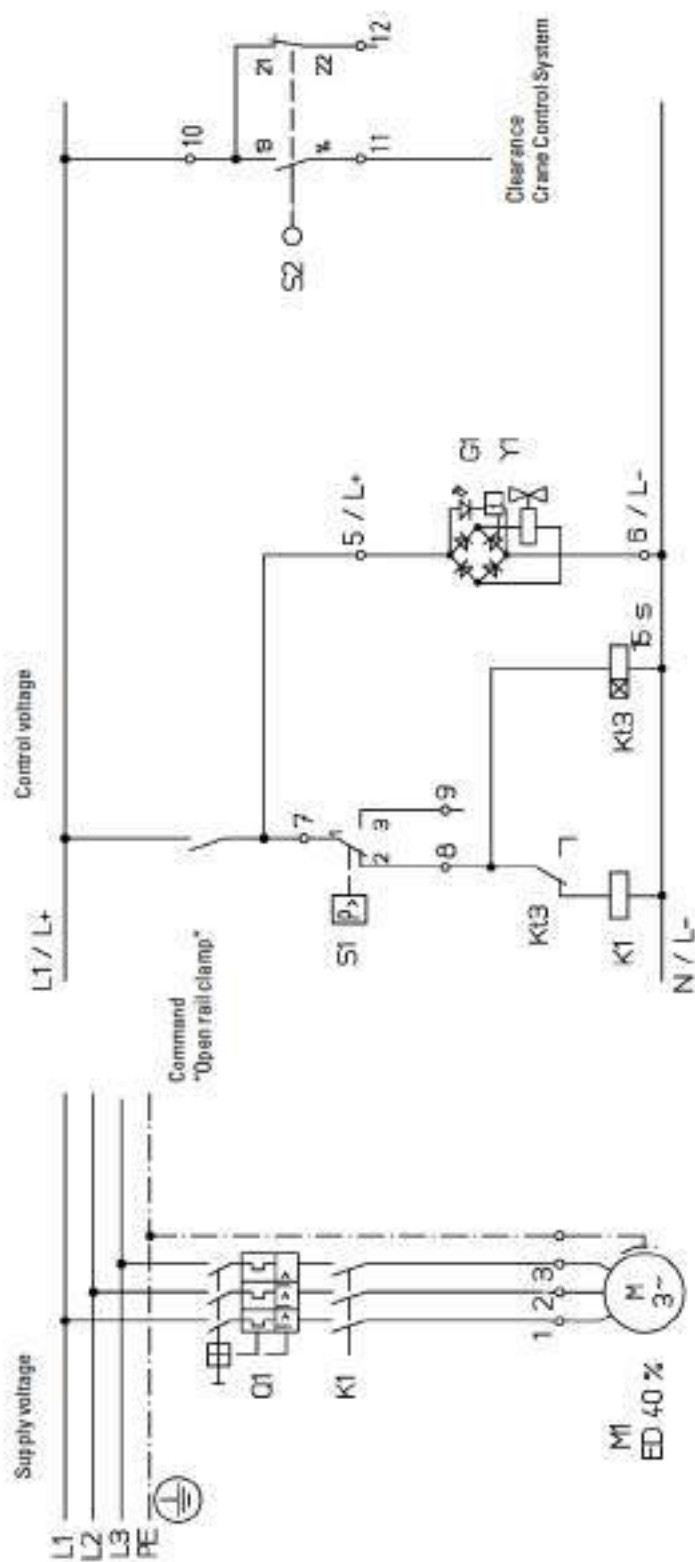
Alterations reserved without notice

Rail Clamp BSZ

Electric diagram



Rev. 09-02



PINTSCH BUBENZER scope of supply	
M1	Hydraulic motor 3 Ph, ED = 40%
Y1	Solenoid valve
G1	Plug
S1	Pressure switch
S2	Limit switch release control

Alterations reserved without notice

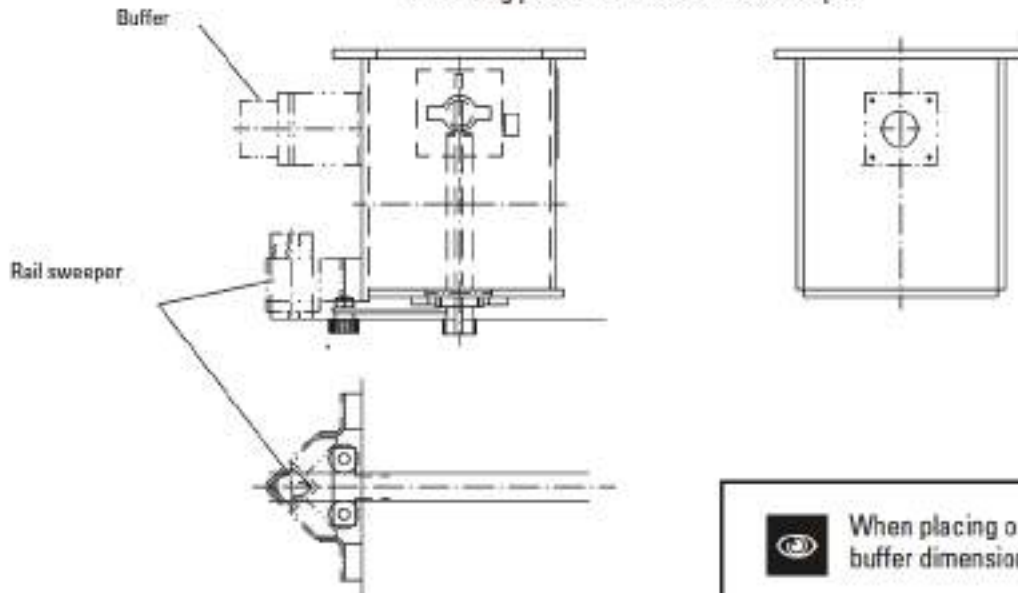
Rail Clamp BSZ

Mounting and rail position



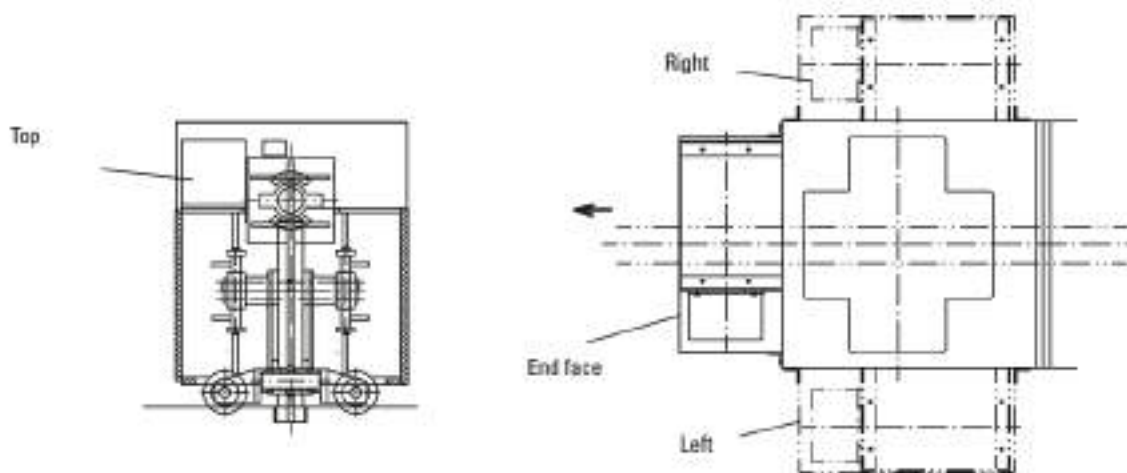
Rev. 09-02

Mounting position buffer and rail sweeper

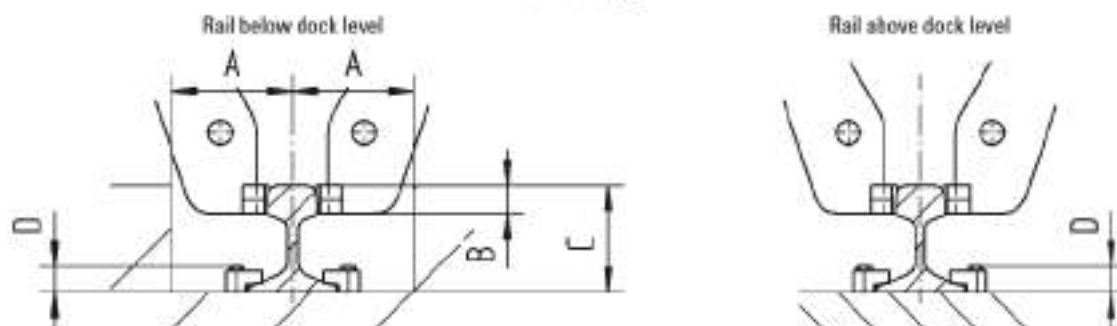


When placing order please indicate buffer dimensions and buffer force.

Mounting position hydraulic power unit



Rail arrangement



Alterations reserved without notice

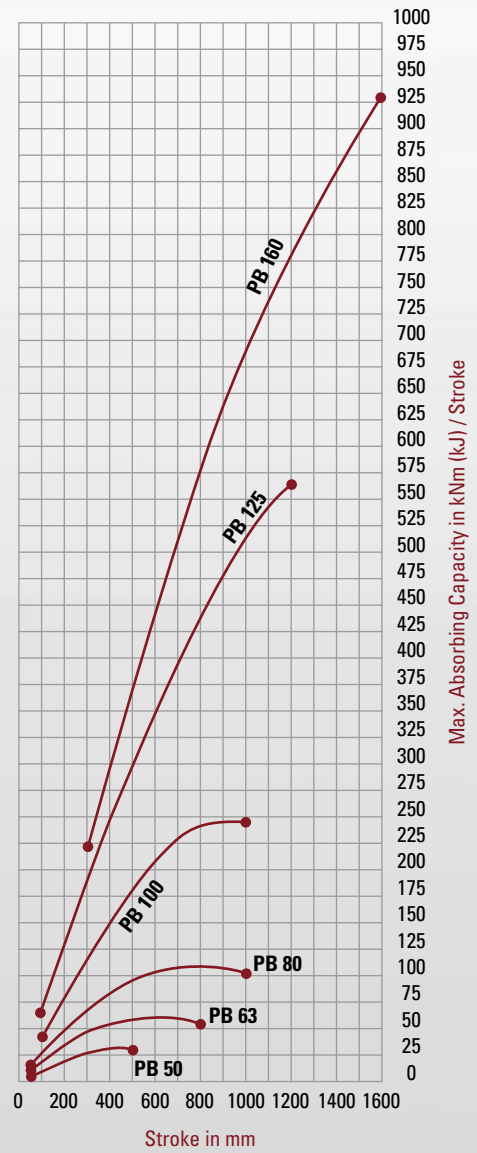


When placing order please indicate dimensions A, B, C and D.

Gas-Hydraulic Buffer PB



PINTSCH BUBENZER
is certified according to
DIN EN ISO 9001:2015



Efficient



Low Maintenance



Reliable



Robust Design

Description PB Buffer



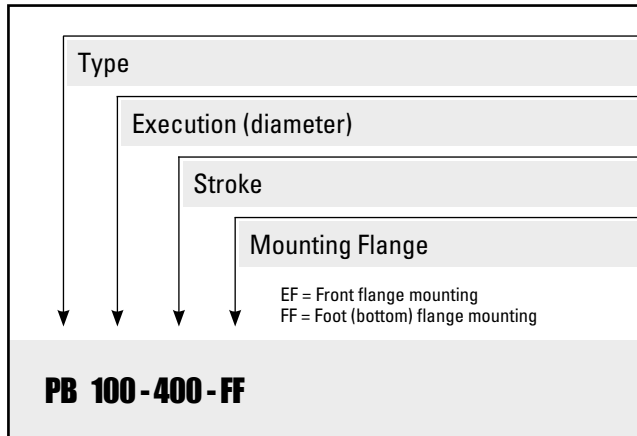
Main Features

- Piston and cylinder of special seamless pipes
- Back mounted or front mounted versions available
- Piston rod IONIT-OX coated (plasma nitriding process)
- Impact speed sensitive damping
- Low maintenance

Options

- Special mounting flanges on request
- Special high and low temperature design
- Safety wire rope
- Protection bellows
- Special design on request
- Seawater resistant paint on request

Ordering Example



Applications

- As impact energy absorber on crane gantries, trolleys, elevators, stackers, reclaimers and other industrial equipment



Please Note

We supply a detailed operating manual with every order. Nevertheless, we would point out that buffers are only as safe as the servicing and maintenance performed while they are in operation. The guarantee for the correct functioning of our buffers is therefore only valid if the user adheres to the installation and operating manual.



PINTSCH BUBENZER Service

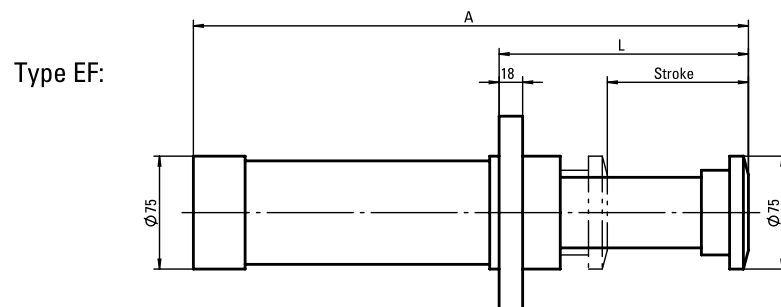
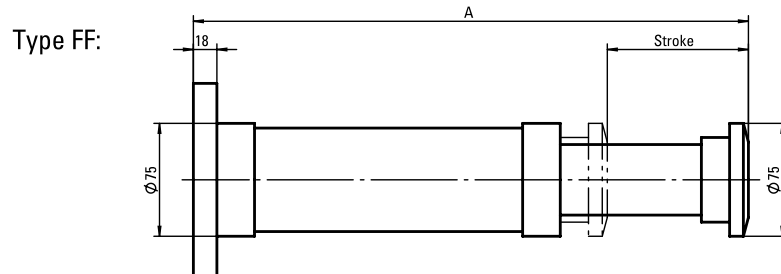
This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on-site by PINTSCH BUBENZER service engineers is possible. Drawings as DWG/DXF files for your engineering department are available upon request.

Buffer Type PB 50

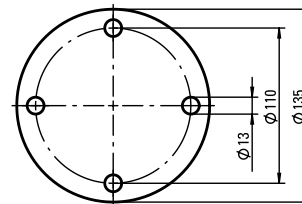
Dimensions and technical data



Rev. 01-16



Flange:



EF = front flange mounting
FF = foot (bottom) flange mounting

All dimensions in mm
Alterations reserved without notice

Stroke	Energy Stroke	* Energy h	Max. buffer force	Inward force	Weight	** Perm. angular deviation	** Perm. angular deviation	A	L
EF FF mm	EF FF kNm (kJ)	EF FF kNm (kJ)	EF FF kN	EF FF kN	EF FF kg	FF degree	EF degree	EF FF mm	EF mm
50	4,5	400	100	5,0	6,6	4,5	5,5	270	145
100	9,0	650	100	6,0	8,2	3,2	4,0	410	195
150	13,6	950	100	6,0	9,8	2,1	2,9	550	245
200	18,1	1250	100	7,0	11,2	1,5	2,3	685	295
250	22,7	1600	100	7,0	12,6	1,3	2,1	825	345
300	27,2	1900	100	7,0	14,0	1,2	1,9	965	395
350	28,6	2000	90	7,0	15,5	1,1	1,8	1105	445
400	29,0	2100	80	7,5	16,9	1,0	1,7	1235	495
450	28,6	2200	70	7,5	18,2	-	1,6	1375	545
500	27,2	2200	60	7,5	19,5	-	1,5	1515	595

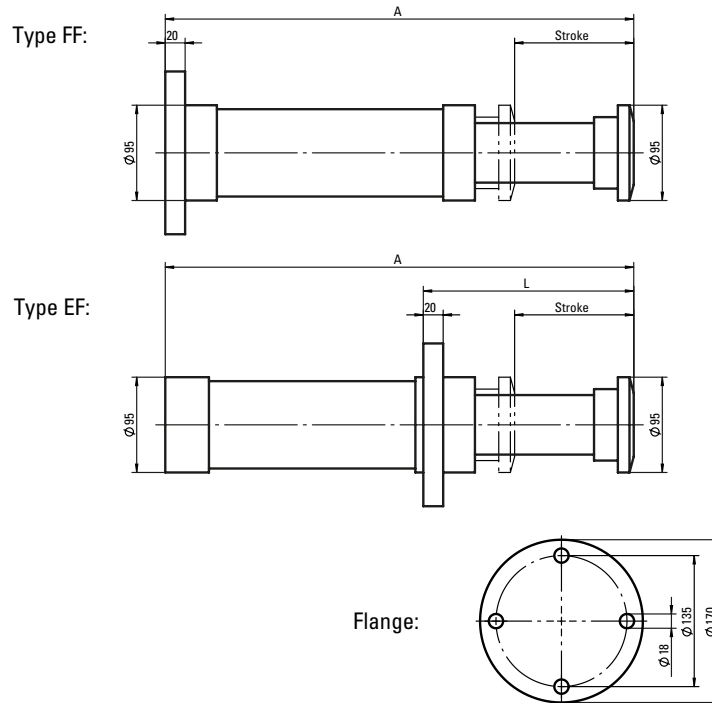
* At an ambient temperature of 30°C
** Relating to the max. permissible buffer force

Buffer Type PB 63

Dimensions and technical data



Rev. 02-16



EF = front flange mounting
FF = foot (bottom) flange mounting

All dimensions in mm
Alterations reserved without notice

Stroke	Energy Stroke	* Energy h	Max. buffer force	Inward force	Weight	** Perm. angular deviation	** Perm. angular deviation	A	L
EF FF mm	EF FF kNm (kJ)	EF FF kNm (kJ)	EF FF kN	EF FF kN	EF FF kg	FF degree	EF degree	EF FF mm	EF mm
50	7,7	600	170	8,0	10,5	4,2	5,0	280	155
100	15,4	1200	170	8,0	13,5	3,2	4,0	425	205
150	23,1	1600	170	9,0	16,0	2,2	3,0	560	255
200	30,9	1850	170	10,0	18,0	1,8	2,4	700	305
250	38,6	2100	170	11,0	20,5	1,6	2,2	835	355
300	46,3	2400	170	11,0	23,0	1,5	2,1	975	405
350	50,9	2600	160	12,0	25,5	1,4	2,0	1115	455
400	54,5	2800	150	12,0	28,0	1,3	1,9	1255	505
450	57,2	2900	140	12,0	30,5	1,2	1,8	1395	555
500	59,0	3000	130	12,0	33,0	1,1	1,6	1535	605
550	60,0	3000	120	15,0	35,0	-	1,5	1650	655
600	60,0	3000	110	15,0	37,0	-	1,4	1785	705
650	59,0	3000	100	15,0	39,5	-	1,3	1925	755
700	57,2	3200	90	15,0	42,0	-	1,2	2060	805
750	54,5	3200	80	15,0	44,5	-	1,1	2200	855
800	50,9	3200	70	15,0	47,0	-	1,0	2340	905

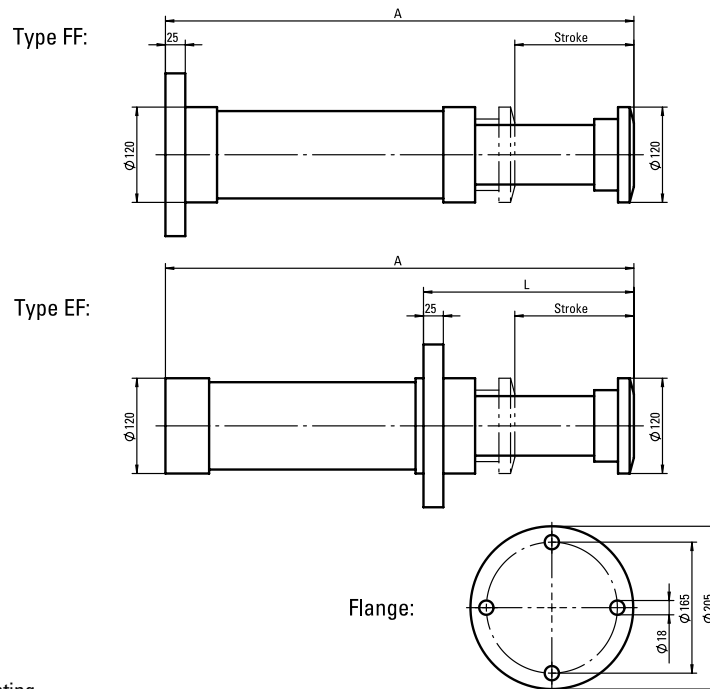
* At an ambient temperature of 30°C
** Relating to the max. permissible buffer force

Buffer Type PB 80

Dimensions and technical data



Rev. 02-16



EF = front flange mounting
FF = foot (bottom) flange mounting

All dimensions in mm
Alterations reserved without notice

Stroke	Energy Stroke	* Energy h	Max. buffer force	Inward force	Weight	** Perm. angular deviation	** Perm. angular deviation	A	L
EF FF mm	EF FF kNm (kJ)	EF FF kNm (kJ)	EF FF kN	EF FF kN	EF FF kg	FF degree	EF degree	EF FF mm	EF mm
50	11,8	600	260	12,0	20	4,2	5,5	290	175
100	23,6	1000	260	12,0	24	24	4,8	440	225
150	35,4	1700	260	12,0	28	28	4,0	590	275
200	47,2	2200	260	12,0	33	33	3,2	740	325
250	59,0	2600	260	15,0	36	36	2,8	870	375
300	68,1	2800	250	15,0	40	40	2,5	1015	425
350	76,3	3000	240	15,0	45	45	2,2	1160	475
400	83,6	3200	230	17,0	48	48	2,0	1285	525
450	90,0	3500	220	17,0	52	52	1,8	1430	575
500	95,4	3800	210	17,0	56	56	1,6	1570	625
550	100,0	4000	200	17,0	60	60	1,5	1715	675
600	103,6	4200	190	17,0	65	65	1,4	1860	725
650	106,3	4300	180	17,0	69	69	1,3	2000	775
700	108,1	4400	170	17,0	73	73	1,2	2145	825
750	109,0	4400	160	17,0	76	76	1,1	2290	875
800	109,0	4500	150	20,0	79	79	1,0	2395	925
900	106,3	4500	130	20,0	88	88	0,9	2685	1025
1000	100,0	4500	110	20,0	96	96	0,8	2970	1125

* At an ambient temperature of 30°C

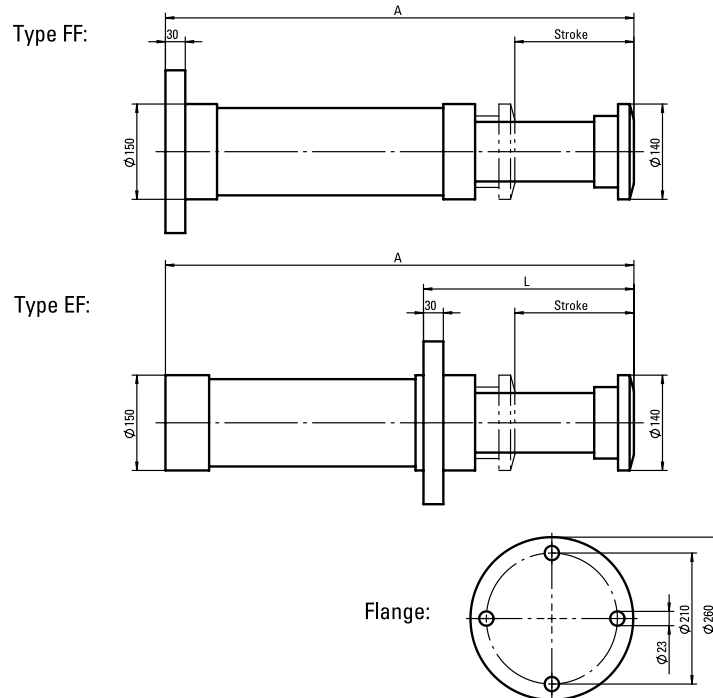
** Relating to the max. permissible buffer force

Buffer Type PB 100

Dimensions and technical data



Rev. 02-16



EF = front flange mounting
FF = foot (bottom) flange mounting

All dimensions in mm
Alterations reserved without notice

Stroke	Energy Stroke	* Energy h	Max. buffer force	Inward force	Weight	** Perm. angular deviation	** Perm. angular deviation	A	L
EF FF mm	EF FF kNm (kJ)	EF FF kNm (kJ)	EF FF kN	EF FF kN	EF FF kg	FF degree	EF degree	EF FF mm	EF mm
100	39	1700	430	20	42	5,0	6,0	460	255
150	59	2300	430	20	49	4,5	5,2	600	305
200	78	2750	430	25	57	4,0	4,5	735	355
250	98	3300	430	25	63	3,5	4,0	875	405
300	117	4000	430	25	70	3,0	3,5	1015	455
350	134	4800	420	25	77	2,2	3,0	1165	505
400	149	5500	410	30	84	1,8	2,5	1280	555
450	163	5850	400	30	90	1,6	2,2	1420	605
500	177	6150	390	30	95	1,4	2,0	1560	655
550	190	6450	380	30	100	1,2	1,9	1695	705
600	202	6700	370	30	106	1,0	1,8	1840	755
650	212	7000	360	30	112	-	1,7	1980	805
700	222	7300	350	30	117	-	1,6	2120	855
750	232	7600	340	30	123	-	1,5	2260	905
800	240	7800	330	30	129	-	1,4	2400	955
900	245	8000	300	30	144	-	1,2	2675	1055
1000	245	8200	270	30	160	-	1,0	2955	1155

* At an ambient temperature of 30°C

** Relating to the max. permissible buffer force

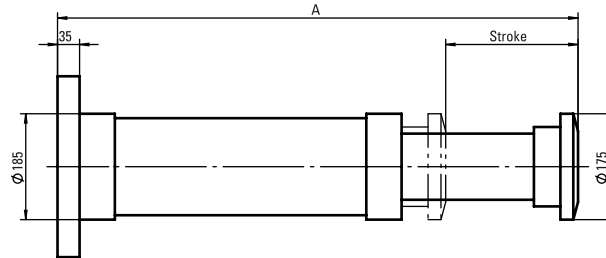
Buffer Type PB 125

Dimensions and technical data

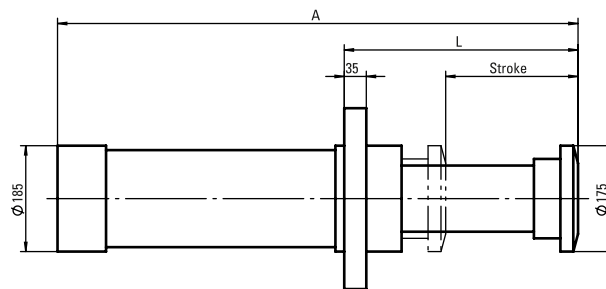


Rev. 02-16

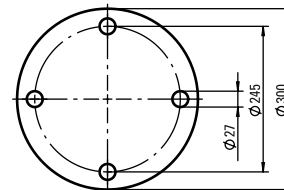
Type FF:



Type EF:



Flange:



EF = front flange mounting
FF = foot (bottom) flange mounting

All dimensions in mm
Alterations reserved without notice

Stroke	Energy Stroke	* Energy h	Max. buffer force	Inward force	Weight	** Perm. angular deviation	** Perm. angular deviation	A	L
EF FF mm	EF FF kNm (kJ)	EF FF kNm (kJ)	EF FF kN	EF FF kN	EF FF kg	FF degree	EF degree	EF FF mm	EF mm
100	62	1800	680	55	60	5,5	6,5	470	251
150	93	2700	680	55	72	5,0	6,0	590	301
200	124	3500	680	55	83	4,4	5,4	730	351
250	155	4300	680	55	95	3,8	4,8	870	401
300	185	5000	680	60	108	3,0	4,0	1000	451
400	247	6500	680	60	133	2,2	3,2	1270	551
500	300	7300	660	60	148	1,5	2,8	1550	651
600	349	8000	640	70	162	1,0	2,4	1800	751
700	394	9000	620	80	182	-	2,2	2050	851
800	436	10000	600	90	198	-	2,0	2300	951
900	474	11000	580	90	215	-	1,8	2560	1051
1000	509	12000	560	90	230	-	1,6	2830	1151
1200	567	13000	520	95	260	-	1,2	3350	1351

* At an ambient temperature of 30°C
** Relating to the max. permissible buffer force

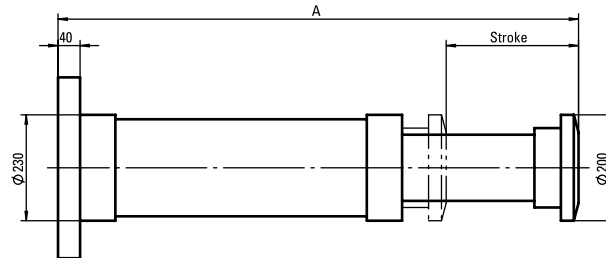
Buffer Type PB 160

Dimensions and technical data

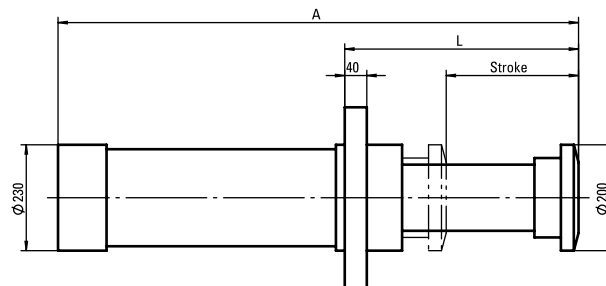


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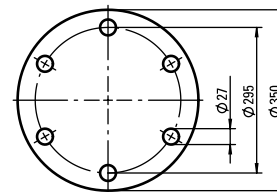
Type FF:



Type EF:



Flange:



EF = front flange mounting
FF = foot (bottom) flange mounting

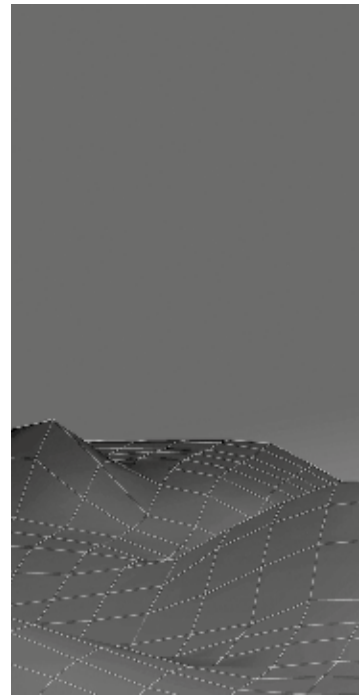
All dimensions in mm
Alterations reserved without notice

Stroke	Energy Stroke	* Energy h	Max. buffer force	Inward force	Weight	** Perm. angular deviation	** Perm. angular deviation	A	L
EF FF mm	EF FF kNm (kJ)	EF FF kNm (kJ)	EF FF kN	EF FF kN	EF FF kg	FF degree	EF degree	EF FF mm	EF mm
300	218	5800	800	85	175	2,4	4,0	1080	420
400	290	7000	800	85	206	2,2	3,5	1370	520
500	363	8300	800	85	237	1,8	3,2	1660	620
600	436	9500	800	85	268	1,3	3,0	1950	720
700	509	10500	800	85	299	-	2,8	2240	820
800	581	11500	800	85	330	-	2,6	2530	920
900	638	12000	780	90	361	-	2,4	2820	1020
1000	690	13500	760	90	391	-	2,2	3100	1120
1100	740	14200	740	120	407	-	2,0	3300	1220
1200	785	15000	720	160	427	-	1,8	3500	1320
1300	827	15300	700	160	454	-	1,6	3780	1420
1400	865	15700	680	160	481	-	1,4	4050	1520
1500	900	16000	660	160	511	-	1,2	4330	1620
1600	930	17000	640	160	539	-	1,0	4600	1720

* At an ambient temperature of 30°C
** Relating to the max. permissible buffer force

Notes

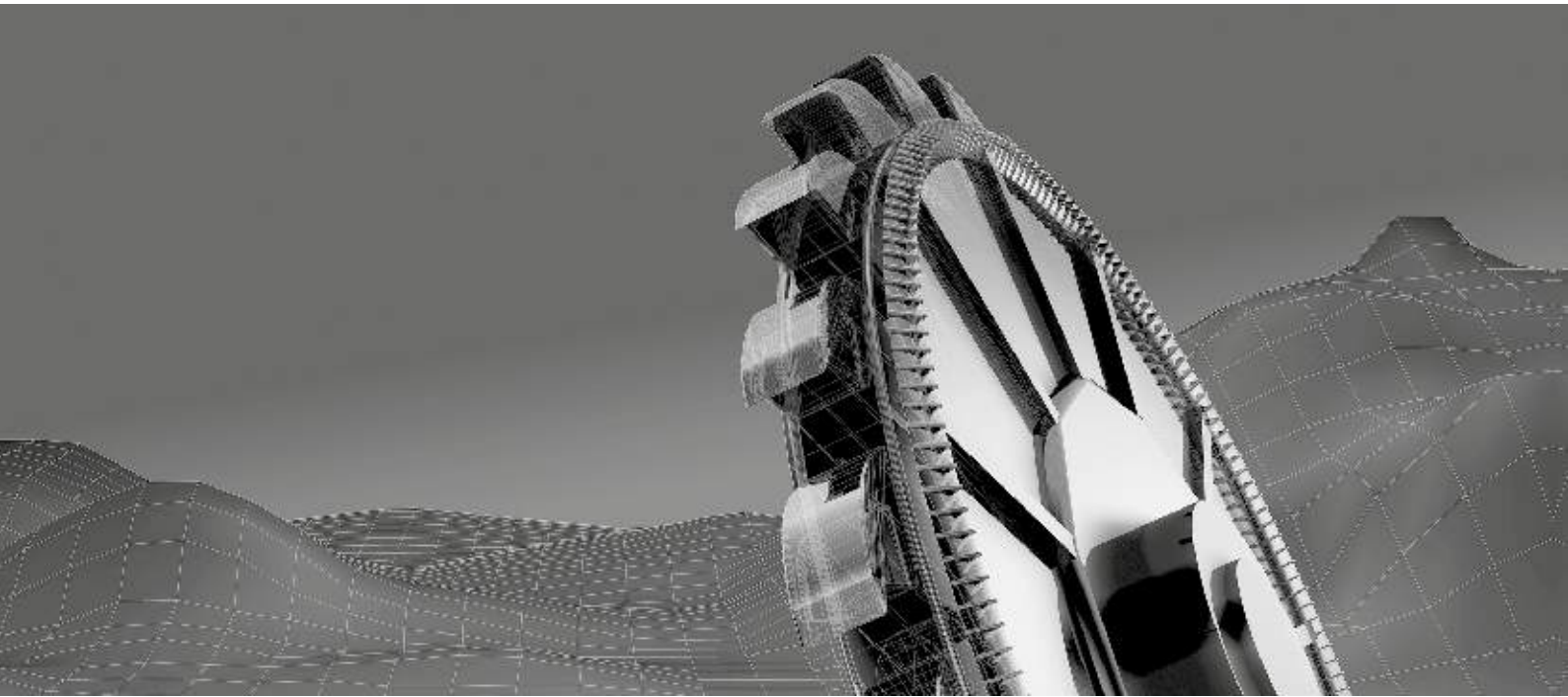




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3rd edition

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