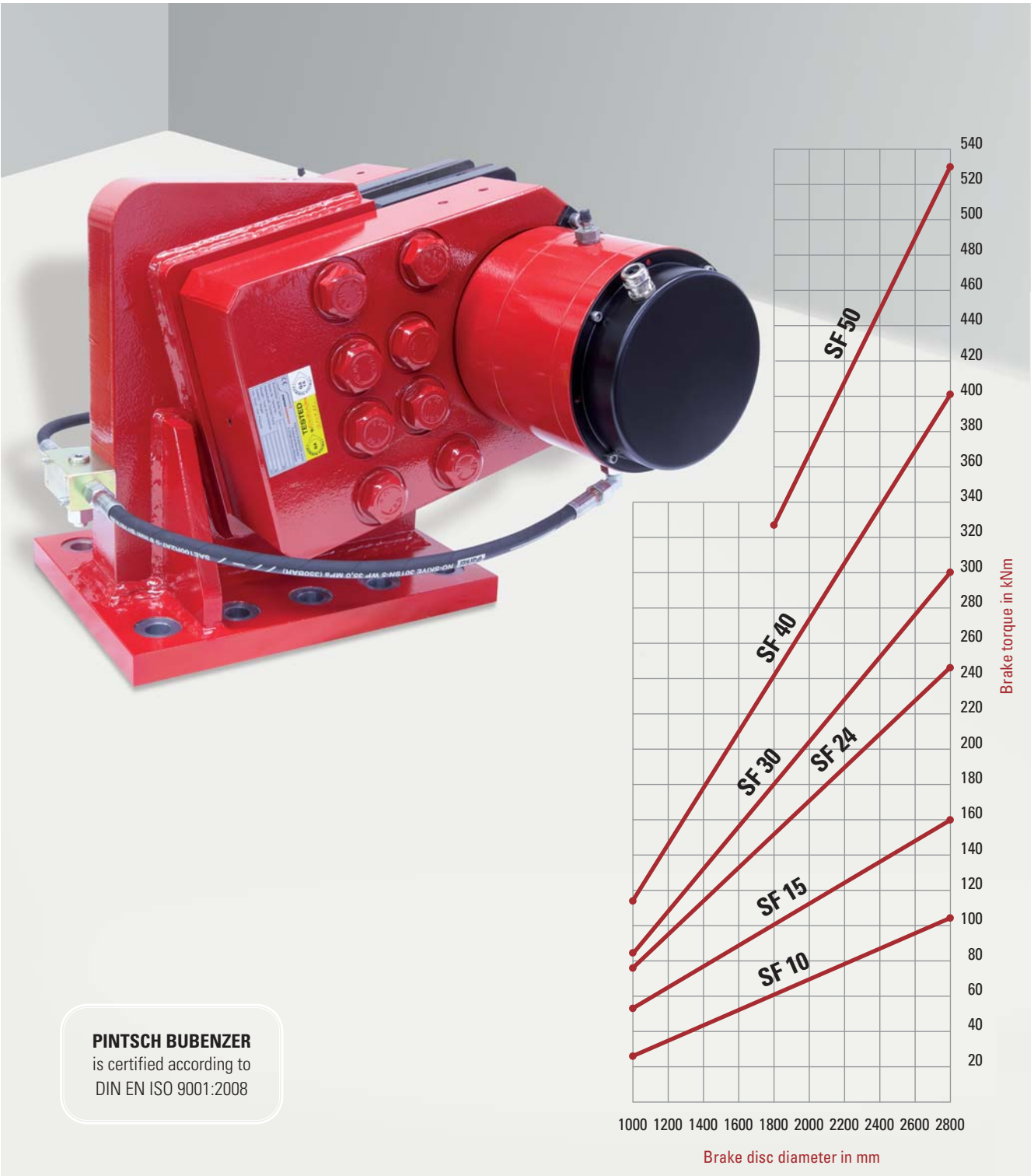


Hydraulic Caliper Disc Brakes SF Series



PINTSCH BUBENZER
is certified according to
DIN EN ISO 9001:2008



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

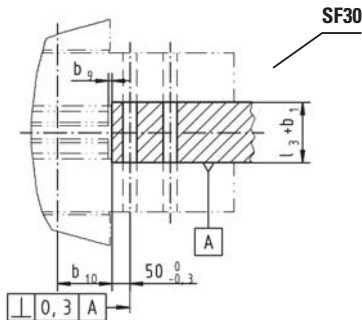
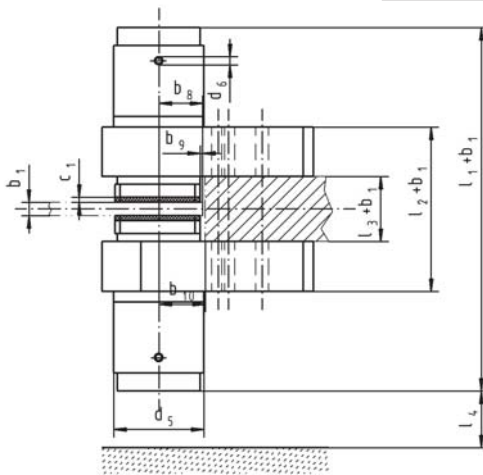
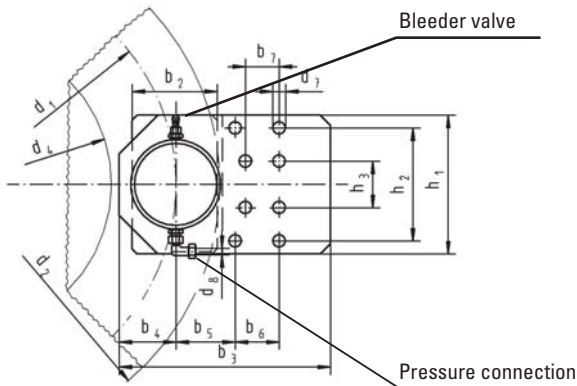
This includes the verification of the brake selection, if required. A detailed questionnaire is provided for this purpose. Installation and commissioning on-site by PINTSCH BUBENZER service engineers is possible. Drawings as DWG/DXF files for your engineering department are available upon request.

Disc Brake SF

Dimensions and technical data



Rev. 12-06

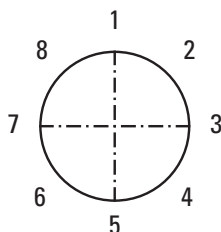


Type SF	10	15	24	30	40
b ₂	165	165	195	280	300
b ₃	410	410	480	640	720
b ₄	110	110	130	155	175
b ₅	115	115	130	200	220
b ₆	85	85	100	110	125
b ₇	60	60	70	110	125
b ₈	85	85	100	140	160
b ₉	5	5	5	5	10
b ₁₀	90	90	105	150	170
c ₁	10	10	10	10	10
d ₅	175	175	225	290	310
d ₆	3/8"	3/8"	3/8"	3/8"	3/8"
d ₇	25	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	650	690	810	940	981
l ₂	292	292	342	402	502
l ₃	100	100	110	130	110
l _{4min}	40	110	130	180	200
Bolt	ø 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	427	427	570	1050	1360
Theor. friction μ*	0,40	0,40	0,40	0,40	0,40
Weight (kg)	200	210	368	760	1180

Data per caliper half

*) 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 d₁ (mm)



Please indicate required mounting position.

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

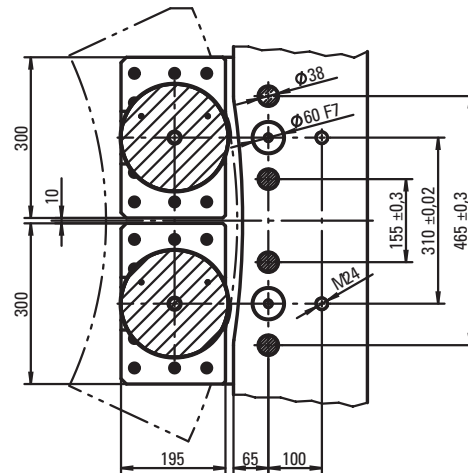
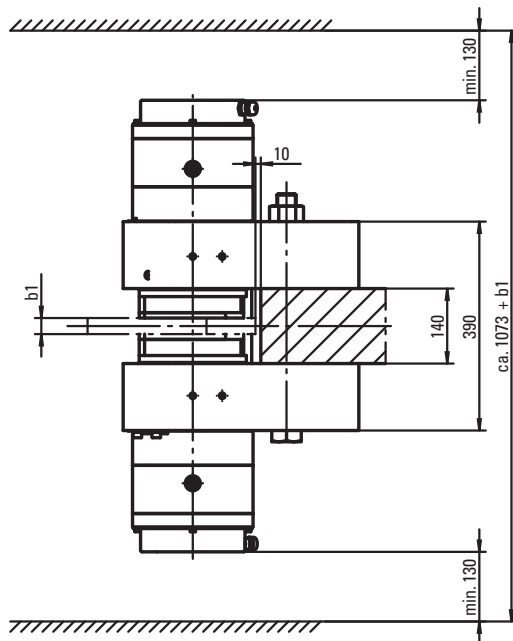
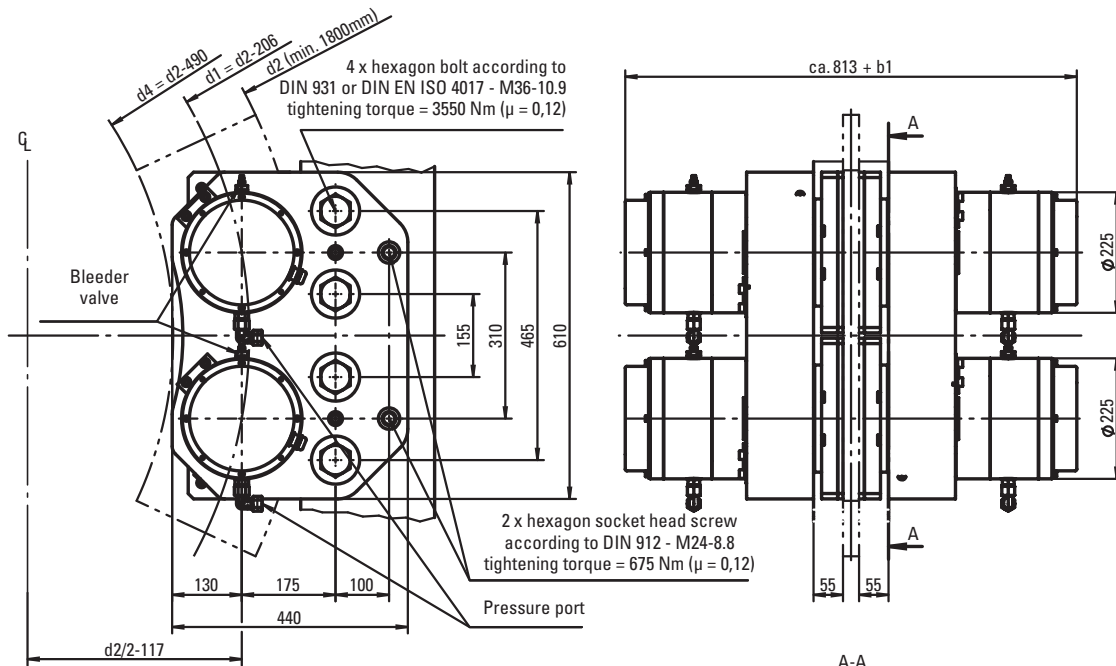
d₂ = Brake disc diameter in mm
d₁ = Friction diameter in mm
d₄ = Max. permissible drum or hub diameter in mm
b₁ = Disc thickness in mm (min. 30)

Disc Brake SF 50

Dimensions and technical data



Rev. 02-14



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

Type SF 50			
Data per caliper half	Contact force F_A	kN	510
	Operating pressure p	bar	180
	Max. pressure p_{max}	bar	200
	Release stroke	mm	2
	Oil volume	l	0,07
	Pad surface	cm ²	1100
	Theor. friction factor	μ^*	0,40
	Weight (without bracket)	kg	ca. 730

*) Theor. friction factor of standard material combination

All dimensions in mm
Alterations reserved without notice

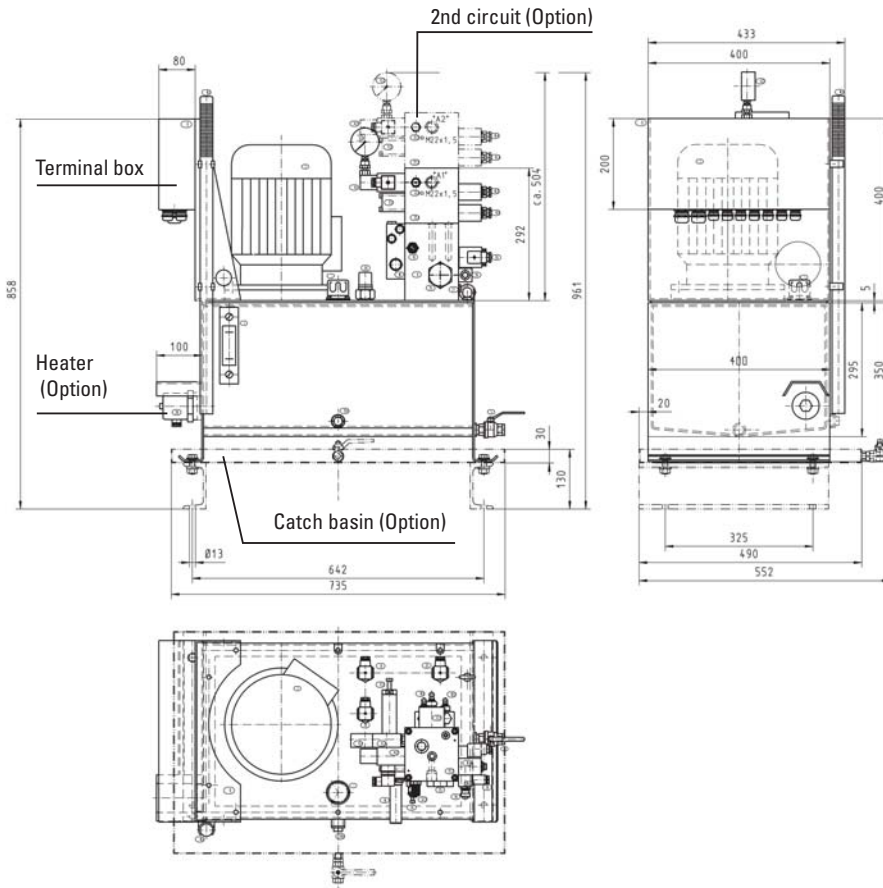
d_2 = Brake disc diameter in mm
 d_1 = Friction diameter in mm
 d_4 = Max. permissible drum or hub diameter in mm
 b_1 = Brake disc thickness in mm (min. 30)

Disc Brake SF

Hydraulic power unit for one or more calipers



Rev. 12-06



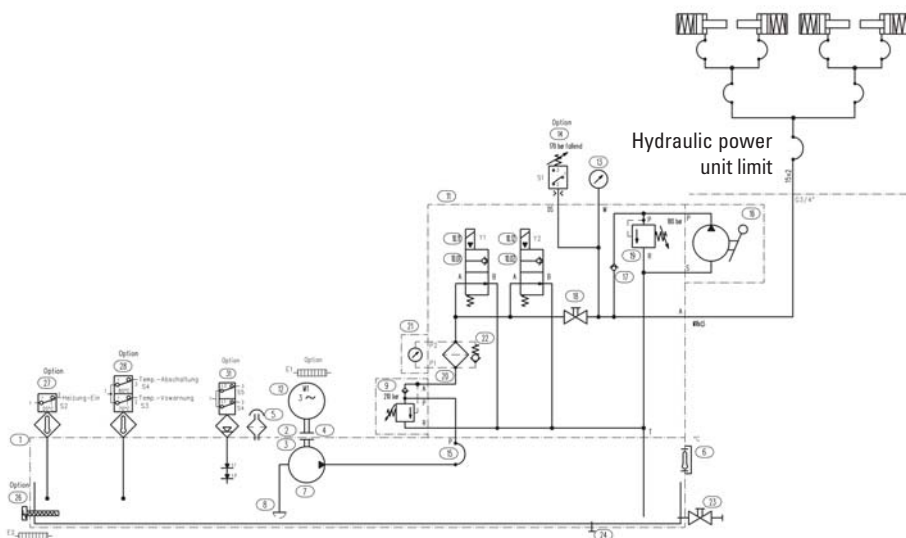
Example:	
Standard configuration	
up to 4	SF10/SF15
up to 2	SF24
Motor:	3 kW
Pump:	7,9 l/min
Pressure:	210 bar
Tank:	40 l
Weight:	85 kg

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.

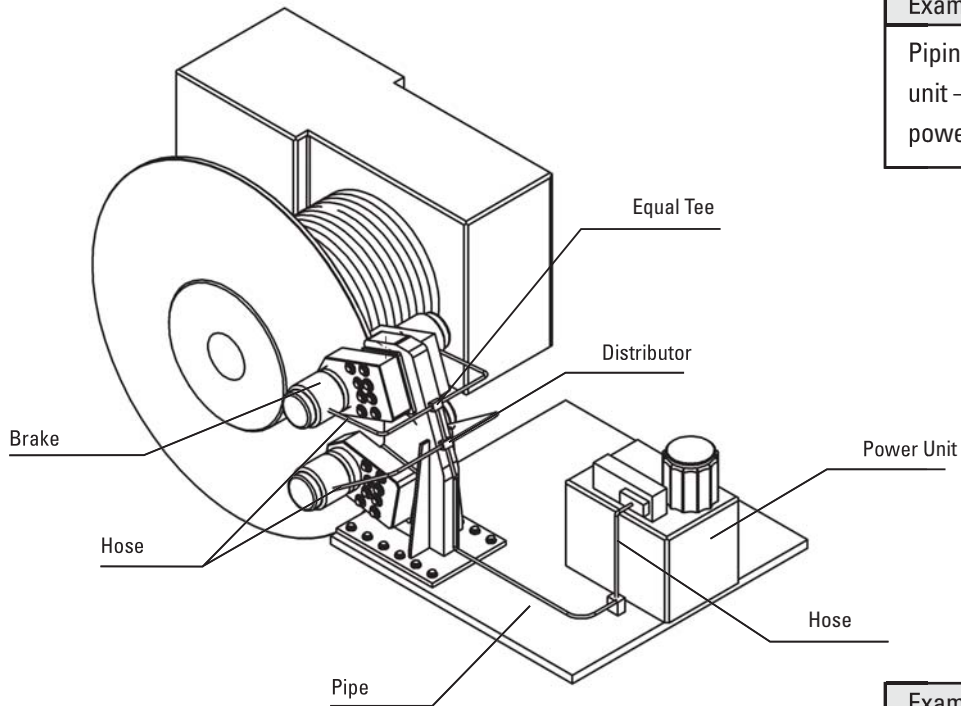
Piping Samples

Disc brakes SF and BSC

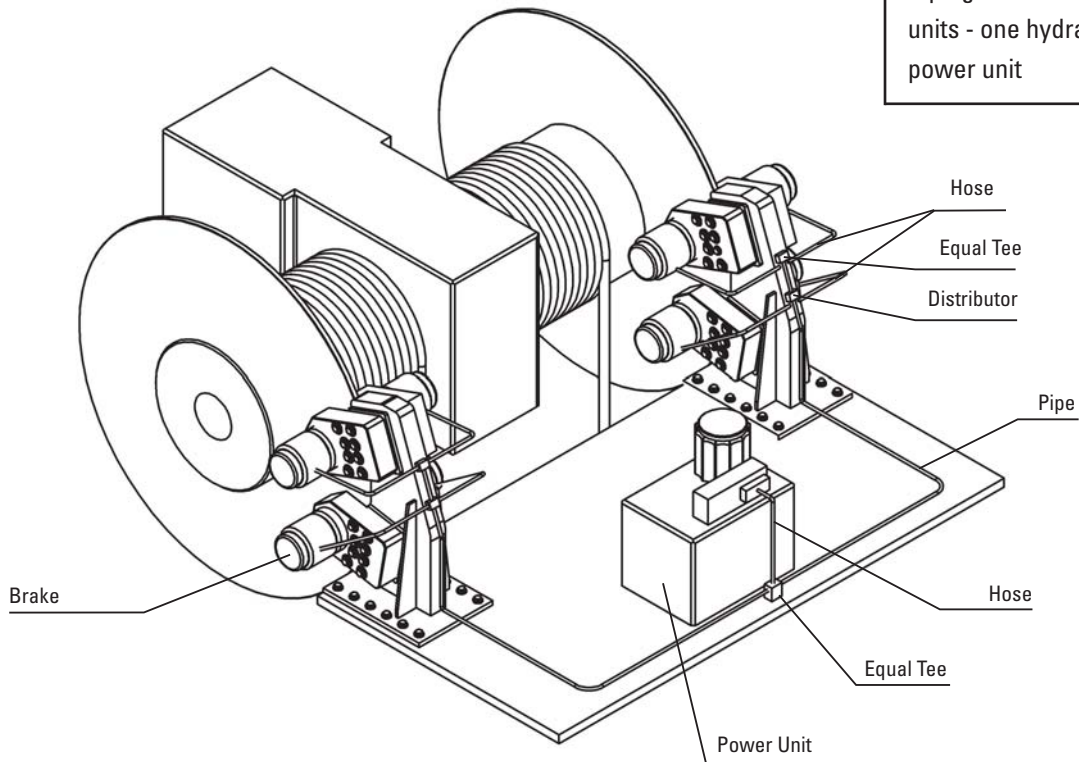


Rev. 09-02

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).