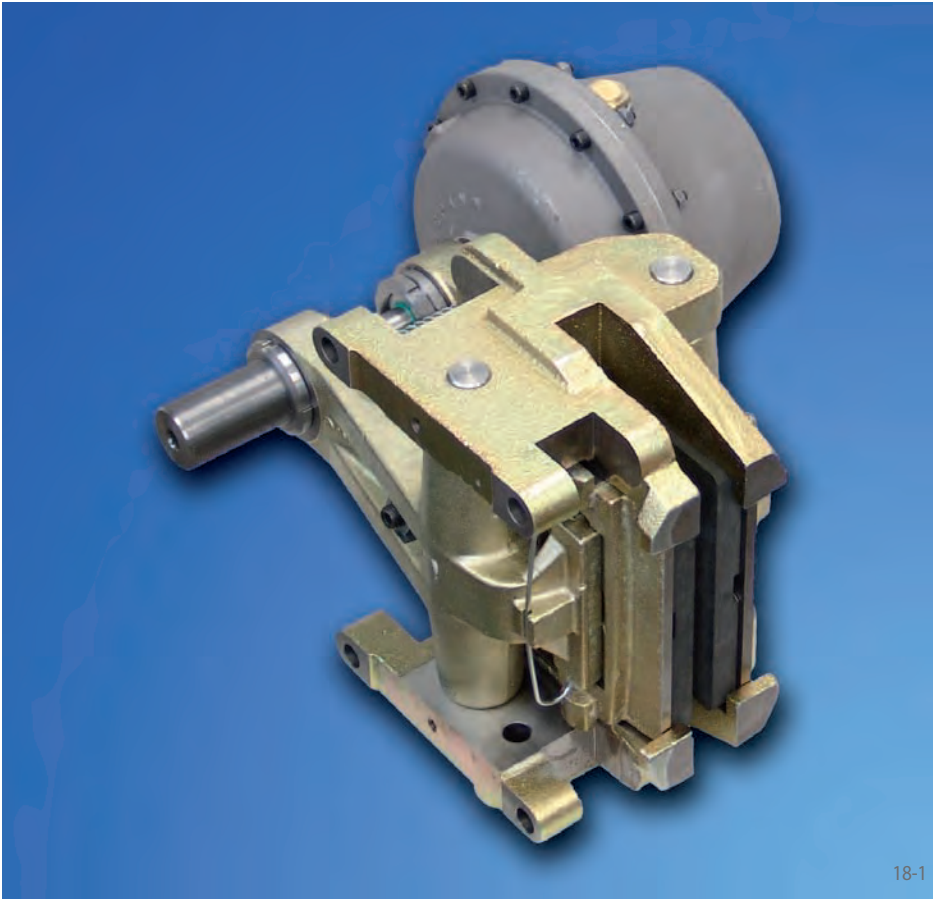


Brake Caliper DU 060 FPM

spring activated – pneumatically released

Morskate®



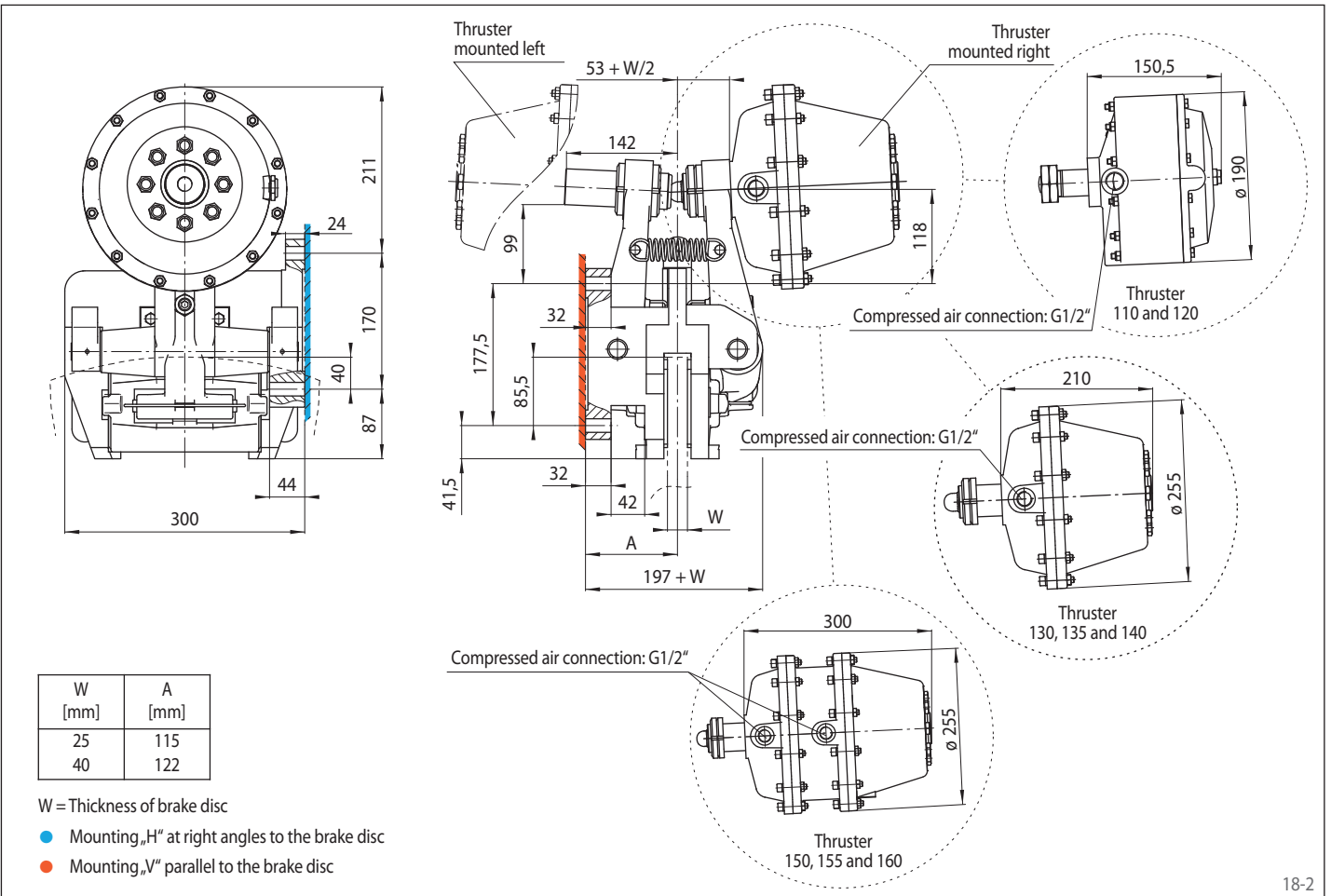
Features

Features	Code
Brake Caliper	D
Mounting to the machine, can be made either parallel or at the right angles to the brake disc	U
Frame size 060	060
Spring activated	F
Pneumatically released	P
Manual adjustment to counter friction block wear	M
Thrusters 110, 120, 130, 135, 140, 150, 155 or 160 are available for selection	110 to 160
Thruster mounted right or left available	R L
For brake discs with thicknesses W of 25 mm or 40 mm	25 40

Example for ordering

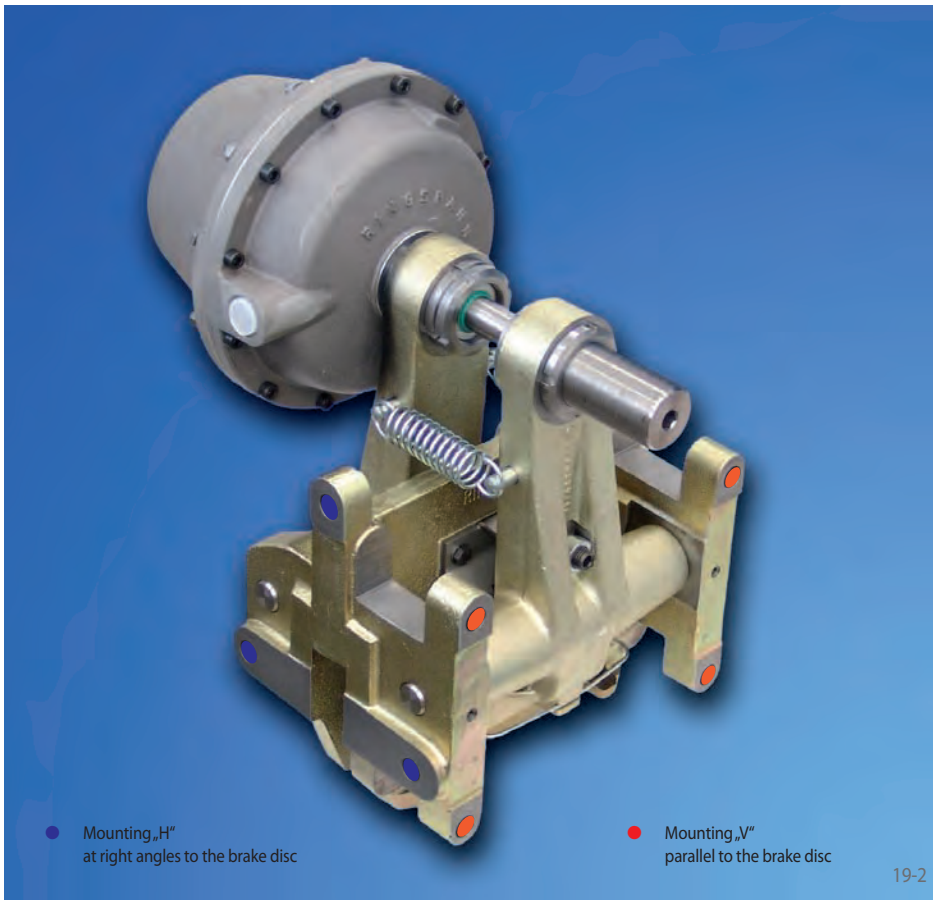
Brake Caliper DU 060 FPM, thruster 130, thruster mounted right, thickness of brake disc 25 mm:

DU 060 FPM - 130 R - 25

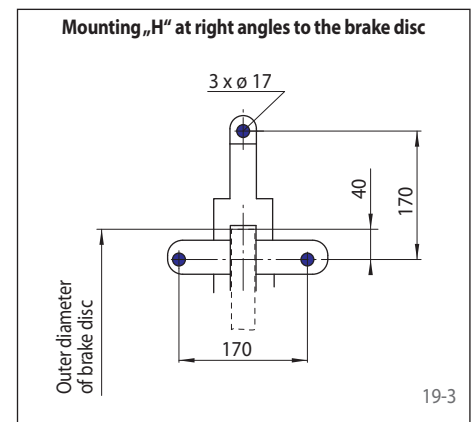
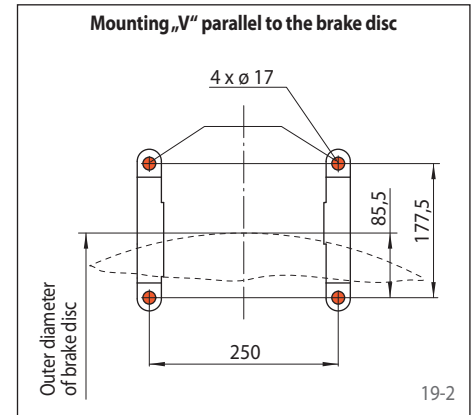


Brake Caliper DU 060 FPM

spring activated – pneumatically released



Frame Design



Technical Data

	Brake Caliper DU 060 FPM							
	with thruster 110	with thruster 120	with thruster 130	with thruster 135	with thruster 140	with thruster 150	with thruster 155	with thruster 160
Brake disc diameter	Braking torque	Braking torque	Braking torque	Braking torque	Braking torque	Braking torque	Braking torque	Braking torque
[mm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]	[Nm]
630	4900	6300	2700	5400	7800	7300	10300	13000
710	5600	7300	3100	6200	9000	8500	12000	15500
800	6500	8400	3600	7200	10300	9700	14000	17500
900	7400	9700	4100	8300	11900	11200	16000	20500
1000	8400	10900	4700	9300	13500	12500	18000	23000
1250	10700	14000	6000	12000	17000	16000	23000	29500
1600	14000	18500	7800	16000	22500	21000	30000	38500
Clamping force	24000 N	31000 N	13200 N	26500 N	38000 N	36000 N	51000 N	65000 N
Air pressure	min. 5 bar max. 8 bar	min. 6,5 bar max. 8 bar	min. 2,8 bar max. 8,5 bar	min. 5,5 bar max. 8,5 bar	min. 8,5 bar max. 10 bar	min. 4,5 bar max. 8,5 bar	min. 5,5 bar max. 8,5 bar	min. 7,6 bar max. 8,5 bar
Air volume per activation	max. 80 cm ³	max. 80 cm ³	max. 200 cm ³	max. 200 cm ³	max. 200 cm ³	max. 400 cm ³	max. 400 cm ³	max. 400 cm ³
Weight	60 kg	60 kg	62 kg	62 kg	62 kg	70 kg	70 kg	70 kg

The braking torques shown in the table are based on a theoretical friction coefficient of 0,4.

Any questions? Please contact us.

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Brake Caliper DV 020 FHM

spring activated – hydraulically released



Features

Features	Code
Brake Caliper	D
Mounting to the machine parallel to the brake disc	V
Frame size 020	020
Spring activated	F
Hydraulically released	H
Manual adjustment to counter friction block wear	M
Thruster 210	210
Thruster mounted right or left available	R L
Thickness of brake disc 12,5 mm	12

Any questions? Please contact us.

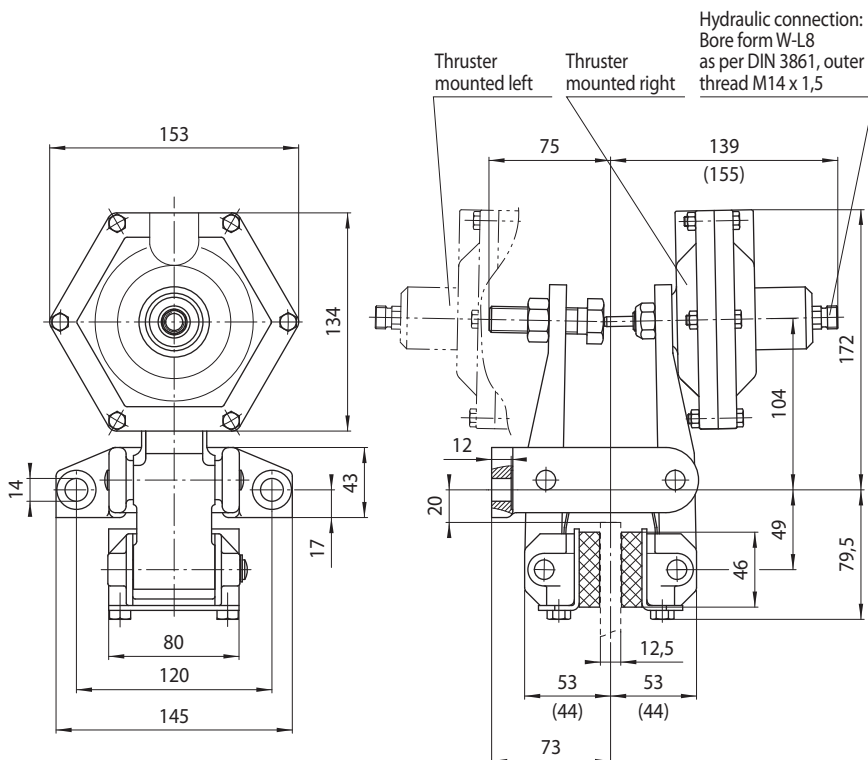
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10 R - 12



Values in brackets resulting with maximum friction block wear.

20-2

Technical Data

Brake Caliper DV 020 FHM with thruster 210	
Brake disc diameter	Braking torque
[mm]	[Nm]
200	200
250	270
300	340
355	420
430	520
520	650
Clamping force	3500 N
Oil pressure	min. 65 bar max. 100 bar
Oil volume per activation	max. 2,5 cm ³
Weight	5,4 kg

The braking torques shown in the table are based on a theoretical friction coefficient of 0,4.

Brake Caliper DH 020 FHM

spring activated – hydraulically released



21-1

Features

Features	Code
Brake Caliper	D
Mounting to the machine at right angles to the brake disc	H
Frame size 020	020
Spring activated	F
Hydraulically released	H
Manual adjustment to counter friction block wear	M
Thruster 210	210
Position of the thruster to the right or left can be determined by turning the brake around during installation	U
Thickness of brake disc 12,5 mm	12

Example for ordering

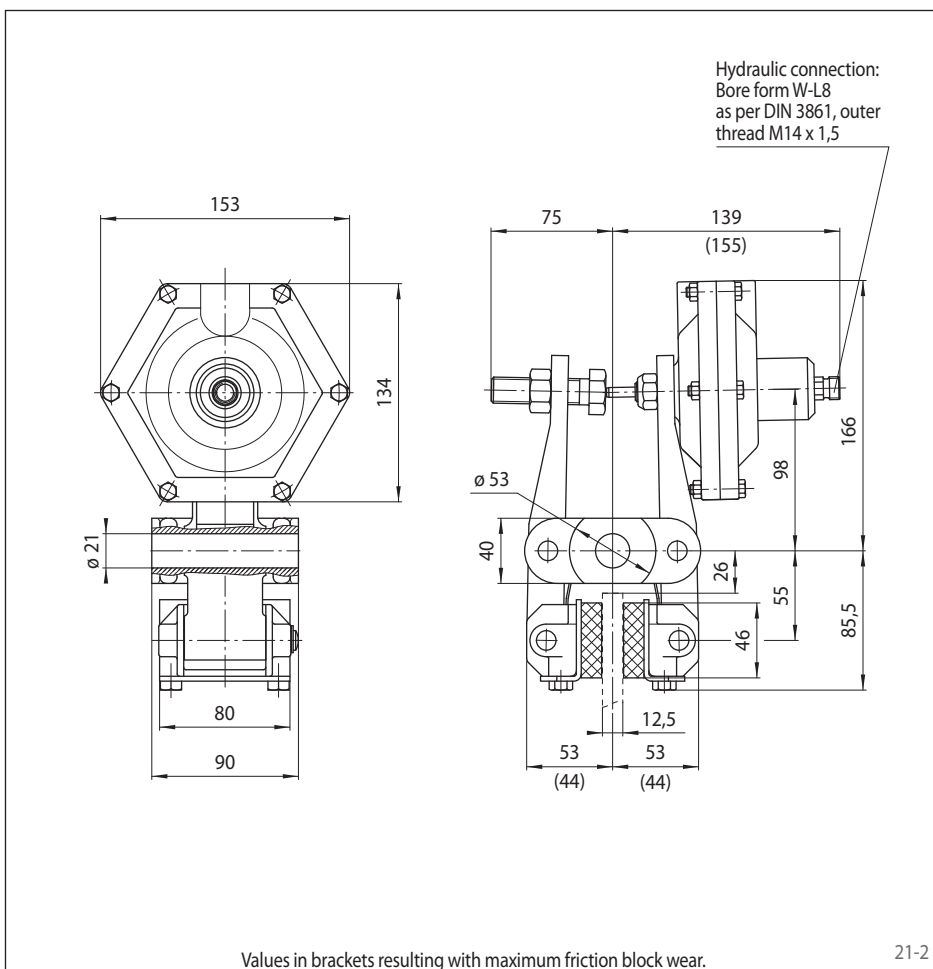
Brake Caliper DH 020 FHM, thruster 210, position of the thruster can be to the right or left, thickness of brake disc 12,5 mm:

DH 020 FHM - 210 U - 12

Technical Data

Brake Caliper DH 020 FHM with thruster 210	
Brake disc diameter [mm]	Braking torque [Nm]
200	200
250	270
300	340
355	420
430	520
520	650
Clamping force	3500 N
Oil pressure	min. 65 bar max. 100 bar
Oil volume per activation	max. 2,5 cm ³
Weight	5,4 kg

The braking torques shown in the table are based on a theoretical friction coefficient of 0,4.



21-2

Brake Caliper DV 030 FHM

spring activated – hydraulically released



22-1

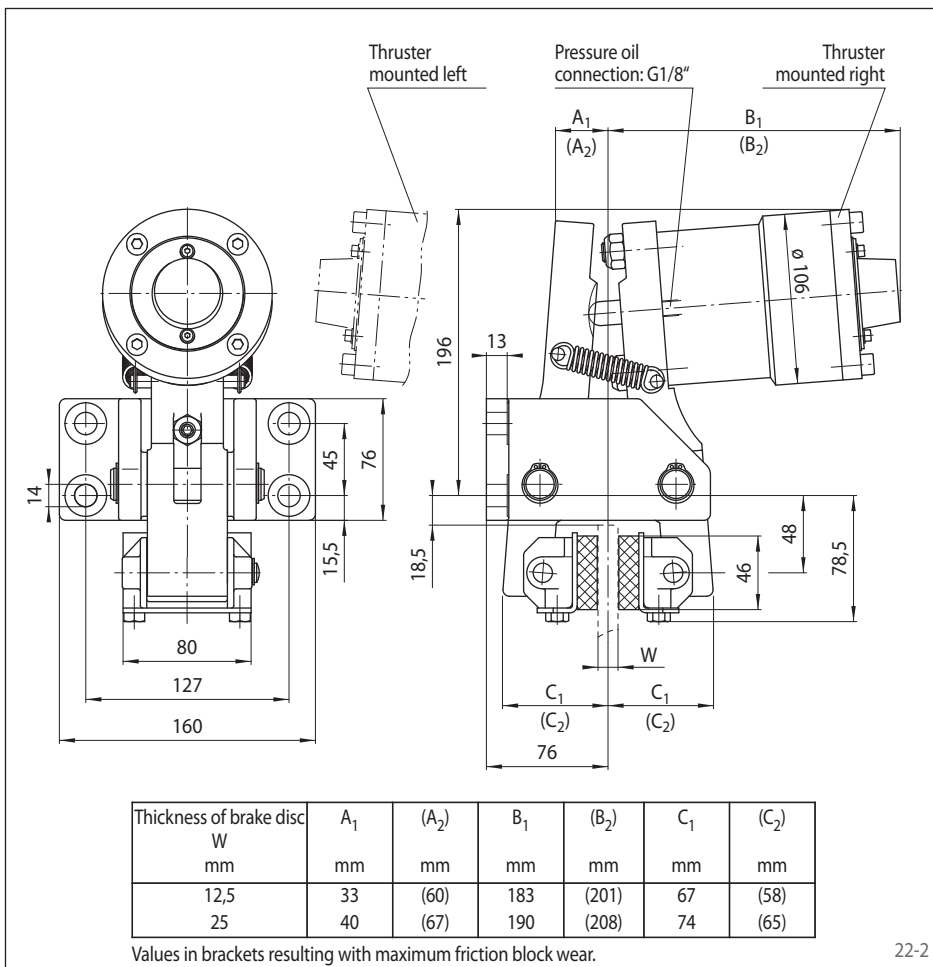
Features

Features	Code
Brake Caliper	D
Mounting to the machine parallel to the brake disc	V
Frame size 030	030
Spring activated	F
Hydraulically released	H
Manual adjustment to counter friction block wear	M
Thruster 220	220
Thruster mounted right or left available	R L
Thickness of brake disc 12,5 mm or 25 mm	12 25

Example for ordering

Brake Caliper DV 030 FHM, thruster 220, thruster mounted right, thickness of brake disc 12,5 mm:

DV 030 FHM - 220 R - 12



22-2

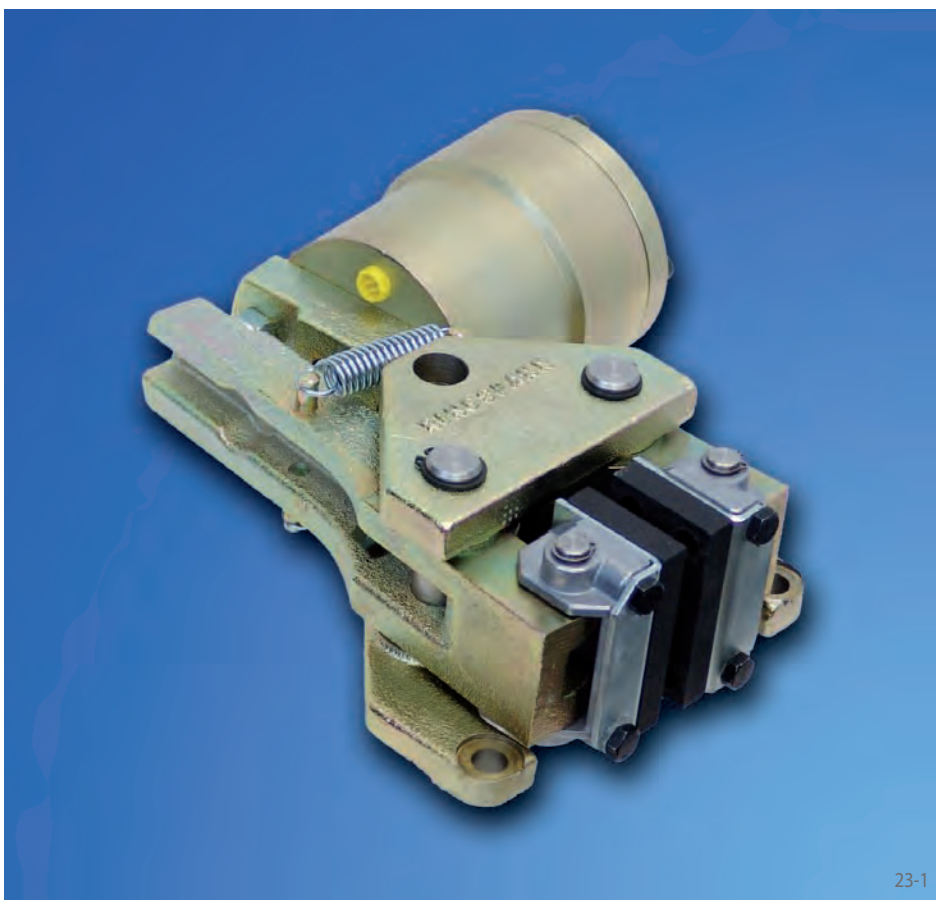
Technical Data

Brake Caliper DV 030 FHM with thruster 220	
Brake disc diameter [mm]	Braking torque [Nm]
200	540
250	730
300	920
355	1150
430	1400
520	1750
Clamping force	9500 N
Oil pressure	min. 24 bar max. 90 bar
Oil volume per activation	max. 7 cm ³
Weight	14,5 kg

The braking torques shown in the table are based on a theoretical friction coefficient of 0,4.

Brake Caliper DH 030 FHM

spring activated – hydraulically released



23-1

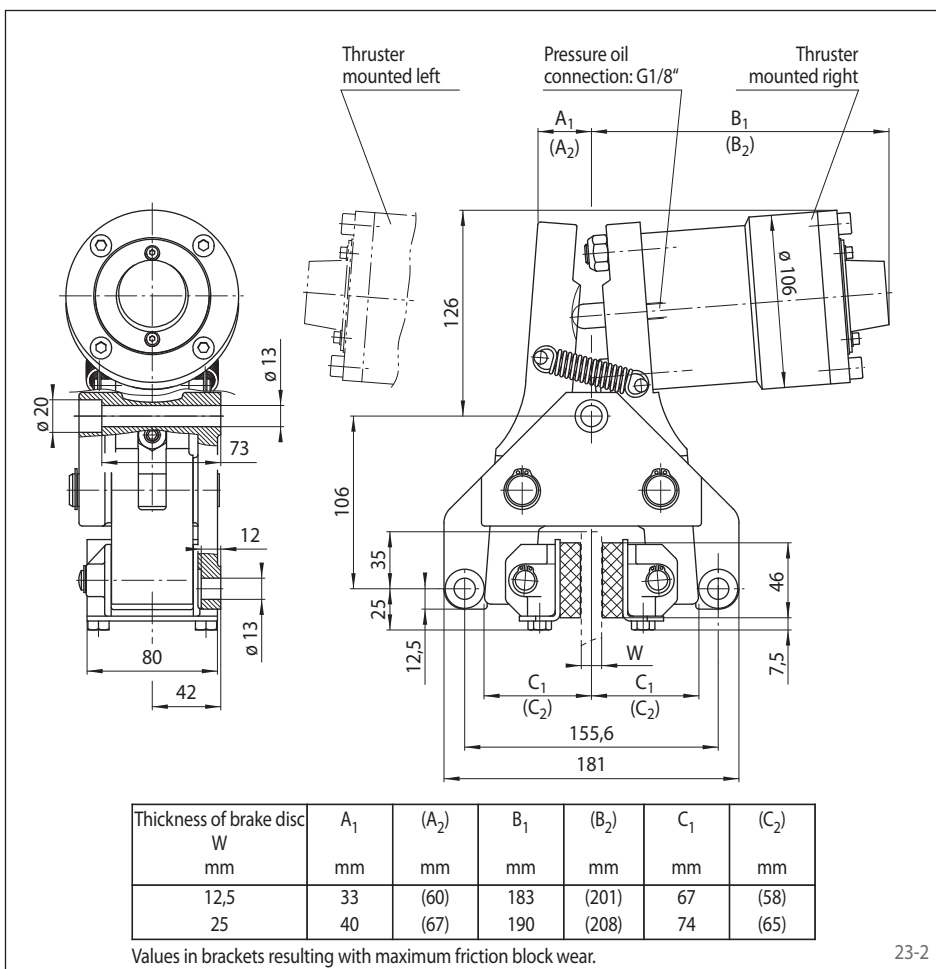
Features

Features	Code
Brake Caliper	D
Mounting to the machine at right angles to the brake disc	H
Frame size 030	030
Spring activated	F
Hydraulically released	H
Manual adjustment to counter friction block wear	M
Thruster 220	220
Thruster mounted right or left available	R L
Thickness of brake disc 12,5 mm or 25 mm	12 25

Example for ordering

Brake Caliper DH 030 FHM, thruster 220, thruster mounted right, thickness of brake disc 12,5 mm:

DH 030 FHM - 220 R - 12



23-2

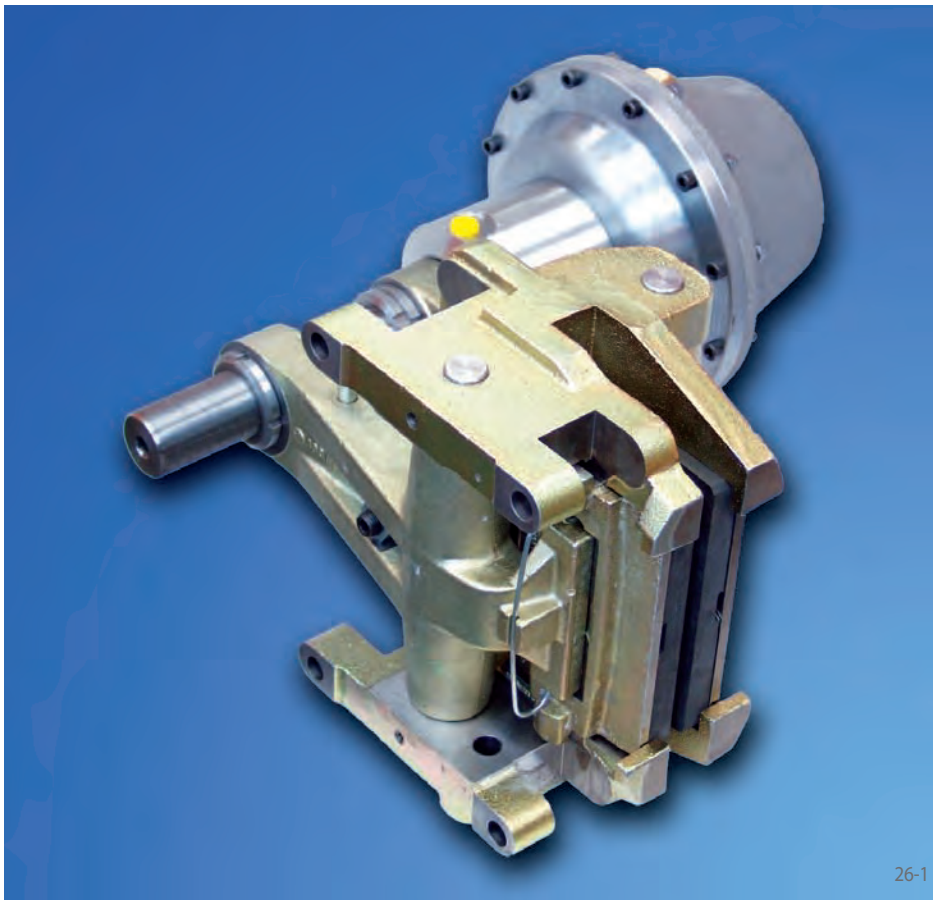
Technical Data

Brake Caliper DH 030 FHM with thruster 220	
Brake disc diameter [mm]	Braking torque [Nm]
200	540
250	730
300	920
355	1150
430	1400
520	1750
Clamping force	9500 N
Oil pressure	min. 24 bar max. 90 bar
Oil volume per activation	max. 7 cm ³
Weight	14,5 kg

The braking torques shown in the table are based on a theoretical friction coefficient of 0,4.

Brake Caliper DU 060 FHM

spring activated – hydraulically released



26-1

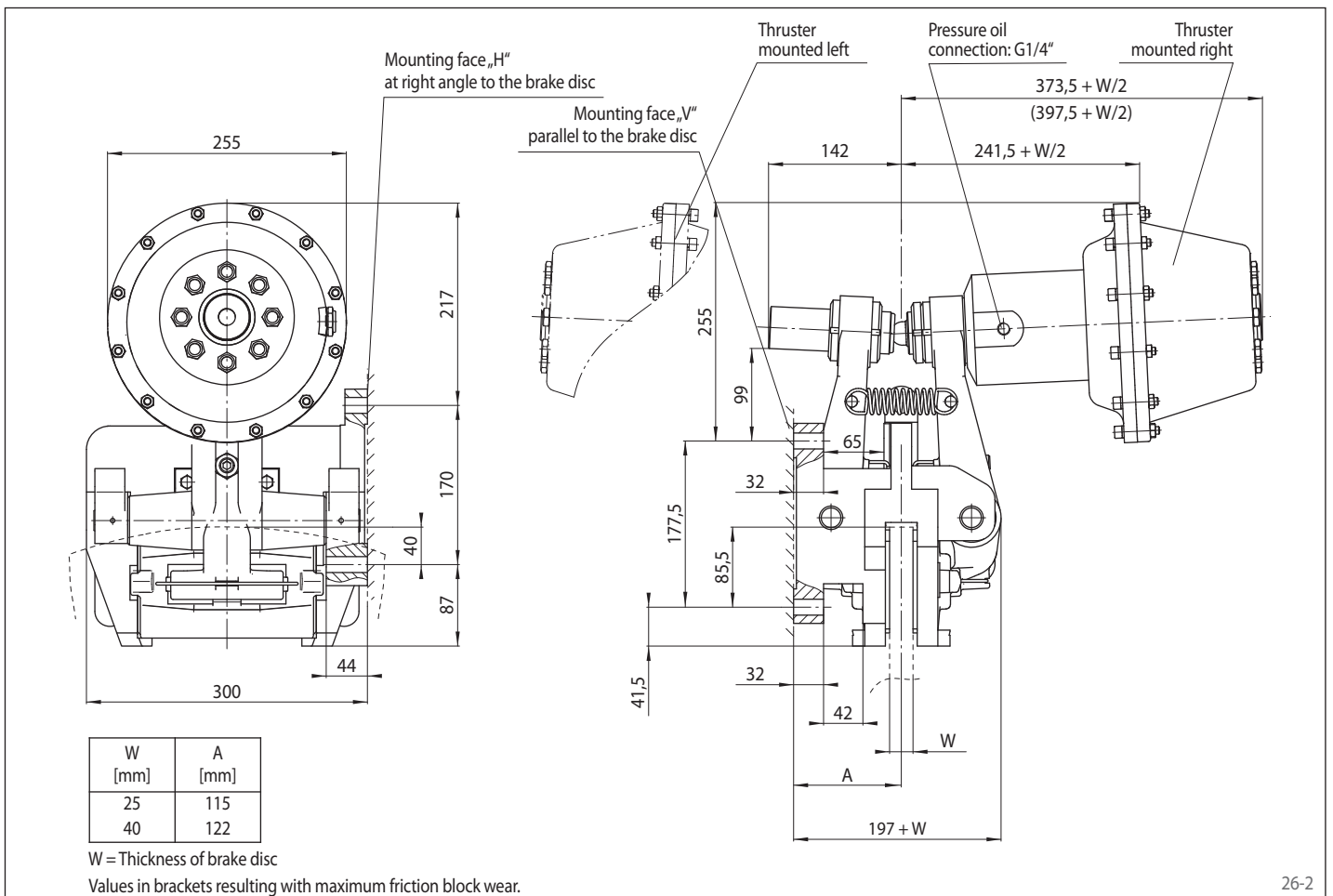
Features

Features	Code
Brake Caliper	D
Mounting to the machine, can be made either parallel or at the right angles to the brake disc	U
Frame size 060	060
Spring activated	F
Hydraulically released	H
Manual adjustment to counter friction block wear	M
Thrusters 340, 350, 360 or 370 are available for selection	340 to 370
Thruster mounted right or left available	R L
For brake discs with thicknesses W of 25 mm or 40 mm	25 40

Example for ordering

Brake Caliper DU 060 FHM, thruster 340, thruster mounted right, thickness of brake disc 25 mm:

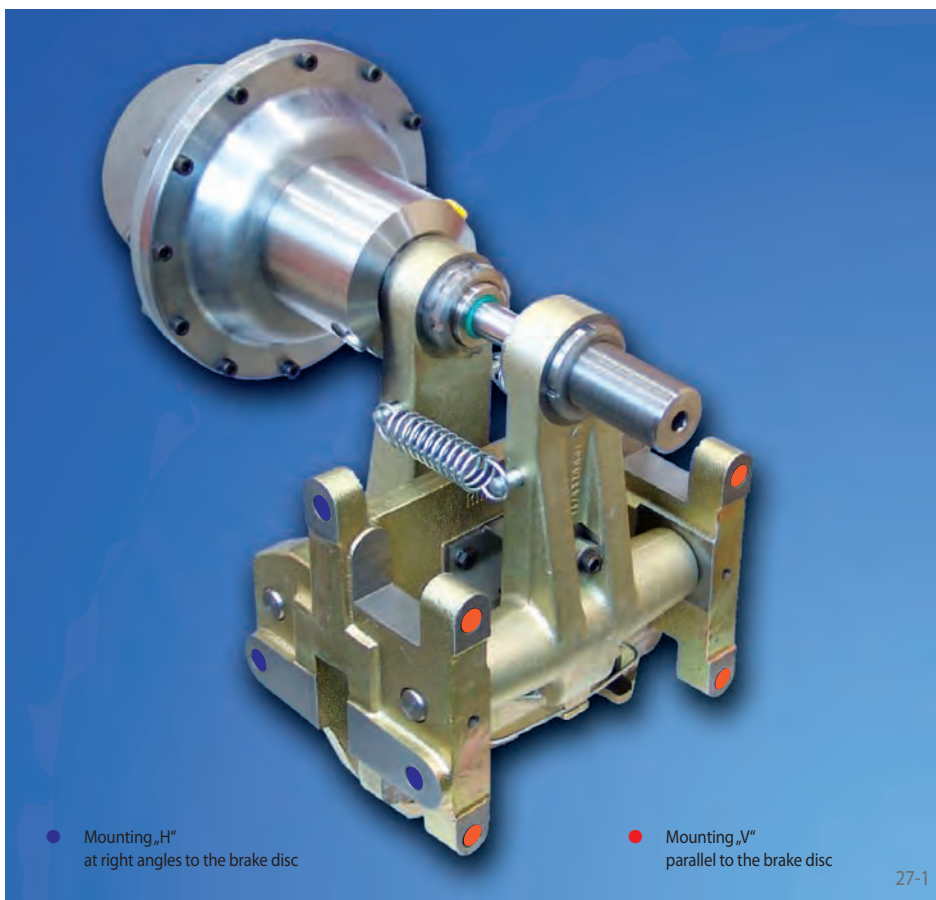
DU 060 FHM - 340 R - 25



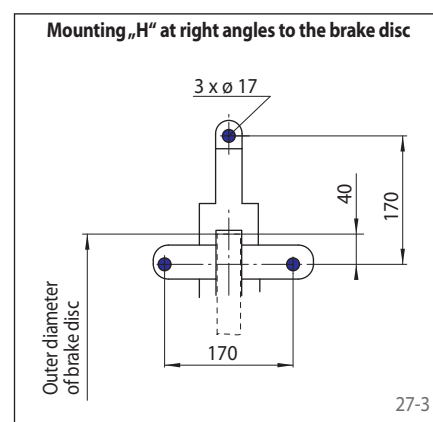
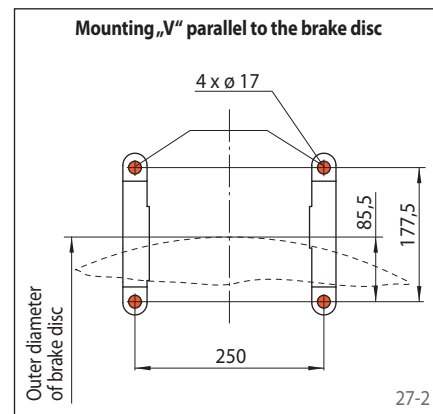
26-2

Brake Caliper DU 060 FHM

spring activated – hydraulically released



Frame Design



Technical Data

Brake disc diameter [mm]	Brake Caliper DU 060 FHM			
	with thruster 340	with thruster 350	with thruster 360	with thruster 370
Braking torque [Nm]	2700	5400	7800	13500
630	2700	5400	7800	13500
710	3100	6200	9000	15500
800	3600	7200	10300	17500
900	4100	8300	11900	20500
1000	4700	9300	13400	23000
1250	6000	12000	17000	29500
1600	7800	15500	22500	38500
Clamping force	13200 N	26500 N	38000 N	65000 N
Oil pressure	min. 20 bar max. 125 bar	min. 30 bar max. 125 bar	min. 50 bar max. 125 bar	min. 80 bar max. 125 bar
Oil volume per activation	max. 158 cm ³	max. 158 cm ³	max. 158 cm ³	max. 158 cm ³
Weight	71 kg	71 kg	71 kg	71 kg

The braking torques shown in the table are based on a theoretical friction coefficient of 0,4.

Brake Caliper DH 012 FEM

spring activated – electromagnetically released



28-1

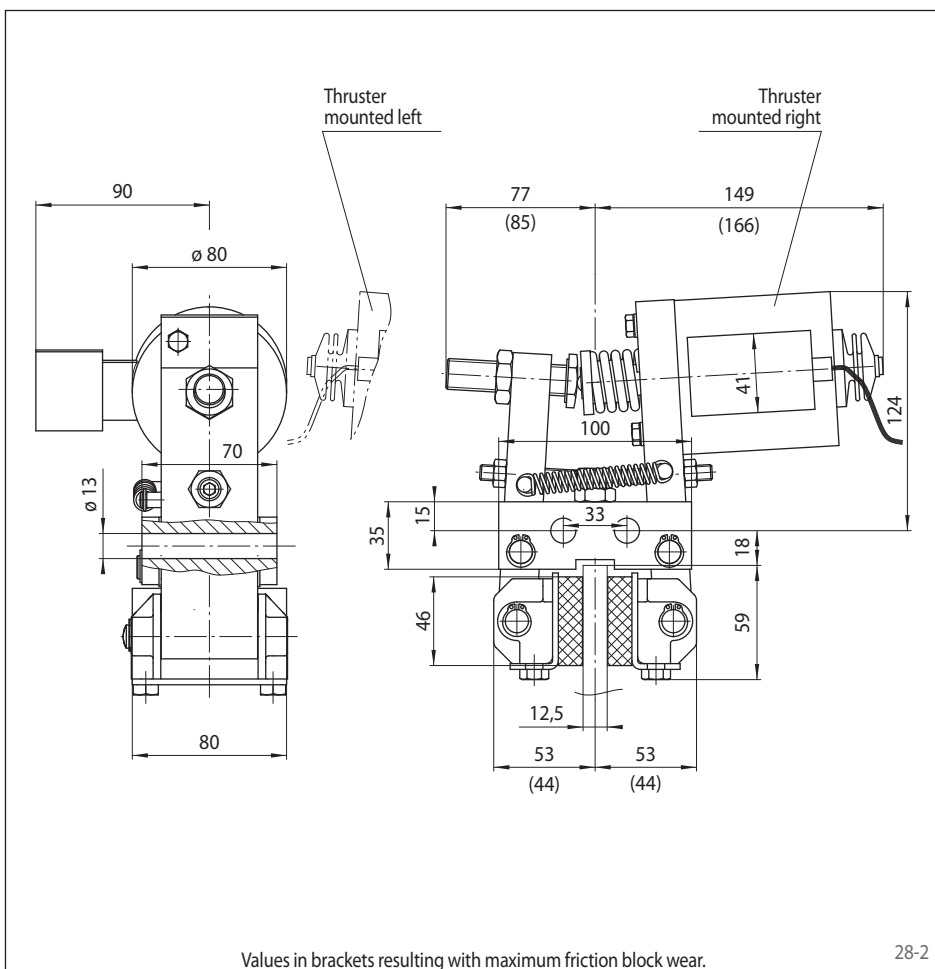
Features

Features	Code
Brake Caliper	D
Mounting to the machine at right angles to the brake disc	H
Frame size 012	012
Spring activated	F
Electromagnetically released	E
Manual adjustment to counter friction block wear	M
Electromagnet for 115 V	410
Electromagnet for 230 V	420
Thruster mounted right or left available	R L
Thickness of brake disc 12,5 mm	12

Example for ordering

Brake Caliper DH 012 FEM, electromagnet for 115 V, thruster mounted right, thickness of brake disc 12,5 mm:

DH 012 FEM - 410 R - 12



Values in brackets resulting with maximum friction block wear.

28-2

Technical Data

Brake disc diameter	Brake Caliper DH 012 FEM	
	with magnet 410 for 115 V	with magnet 420 for 230 V
[mm]	Braking torque [Nm]	Braking torque [Nm]
200	94	94
250	130	130
300	160	160
355	200	200
430	250	250
520	310	310
Clamping force	1650 N	1650 N
Power consumption in open position	12 W (100% duty factor)	
Fuse rating	6A	
Permissible number	600/h permanent activations at 20° C ambient temperature	
Activation time of Brake Caliper	ca. 130 ms	
Release time of Brake Caliper	ca. 160 ms	
Weight	7 kg	

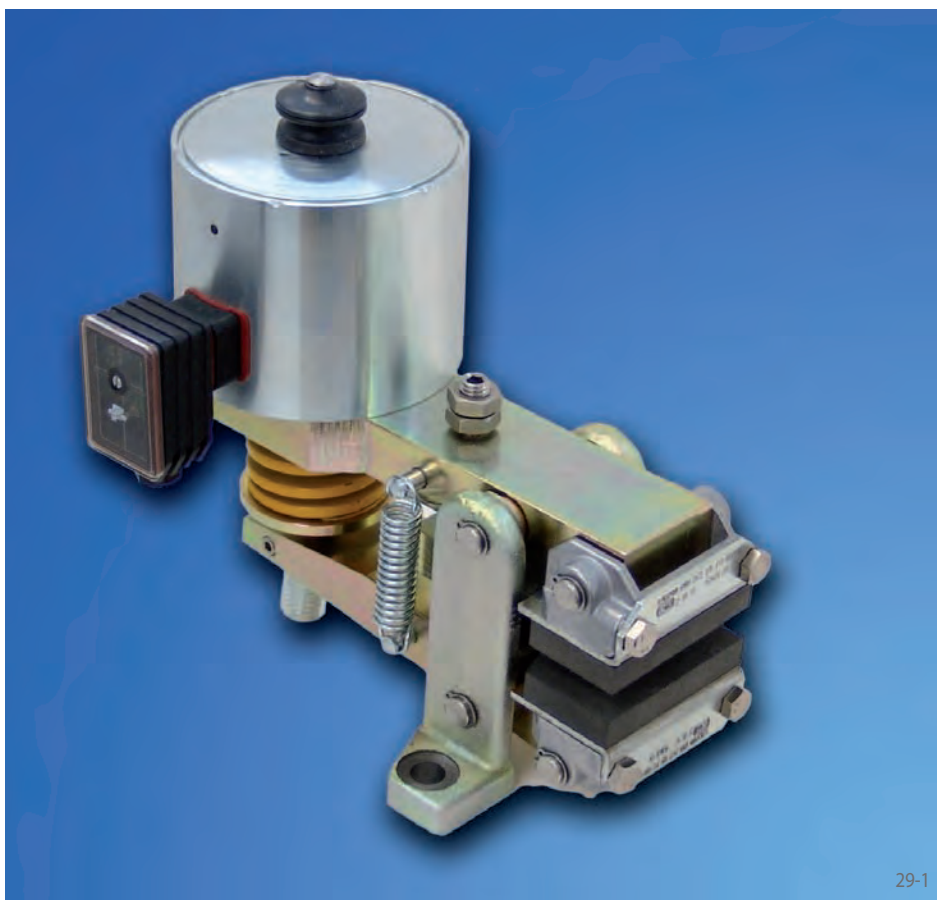
The braking torques shown in the table are based on a theoretical friction coefficient of 0,4.

Accessories

Universal Transformer see page 70.

Brake Caliper DV 020 FEM

spring activated – electromagnetically released



29-1

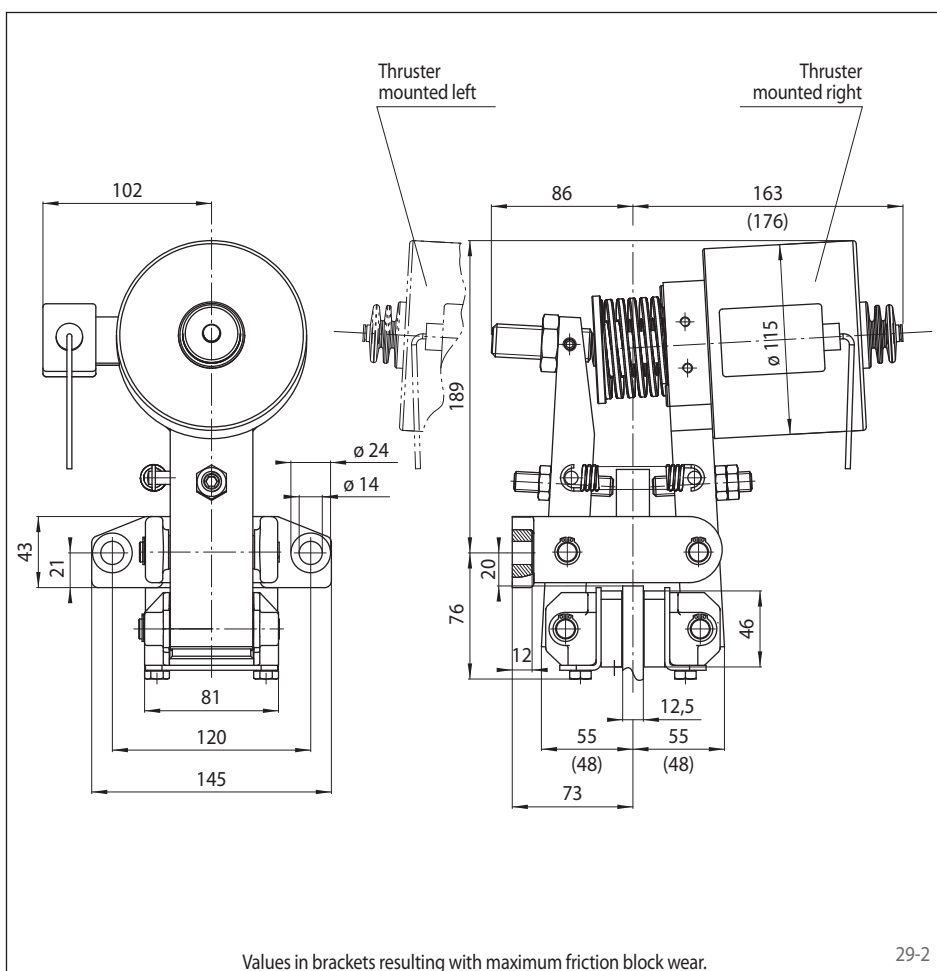
Features

Features	Code
Brake Caliper	D
Mounting to the machine parallel to the brake disc	V
Frame size 020	020
Spring activated	F
Electromagnetically released	E
Manual adjustment to counter friction block wear	M
Electromagnet for 230 V	430
Thruster mounted right or left available	R L
Thickness of brake disc 12,5 mm	12

Example for ordering

Brake Caliper DV 020 FEM, electromagnet for 230 V, thruster mounted right, thickness of brake disc 12,5 mm:

DV 020 FEM - 430 R - 12



29-2

Technical Data

Brake Caliper DV 020 FEM with electromagnet 430 for 230 V	
Brake disc diameter [mm]	Braking torque [Nm]
200	180
250	240
300	300
355	370
430	460
520	570
Clamping force	3400 N
Power consumption in open position	12 W (100% duty factor)
Fuse rating	6A
Permissible number	800/h permanent activations at 20° C ambient temperature
Activation time of Brake Caliper	ca. 120 ms
Release time of Brake Caliper	ca. 150 ms
Weight	15 kg

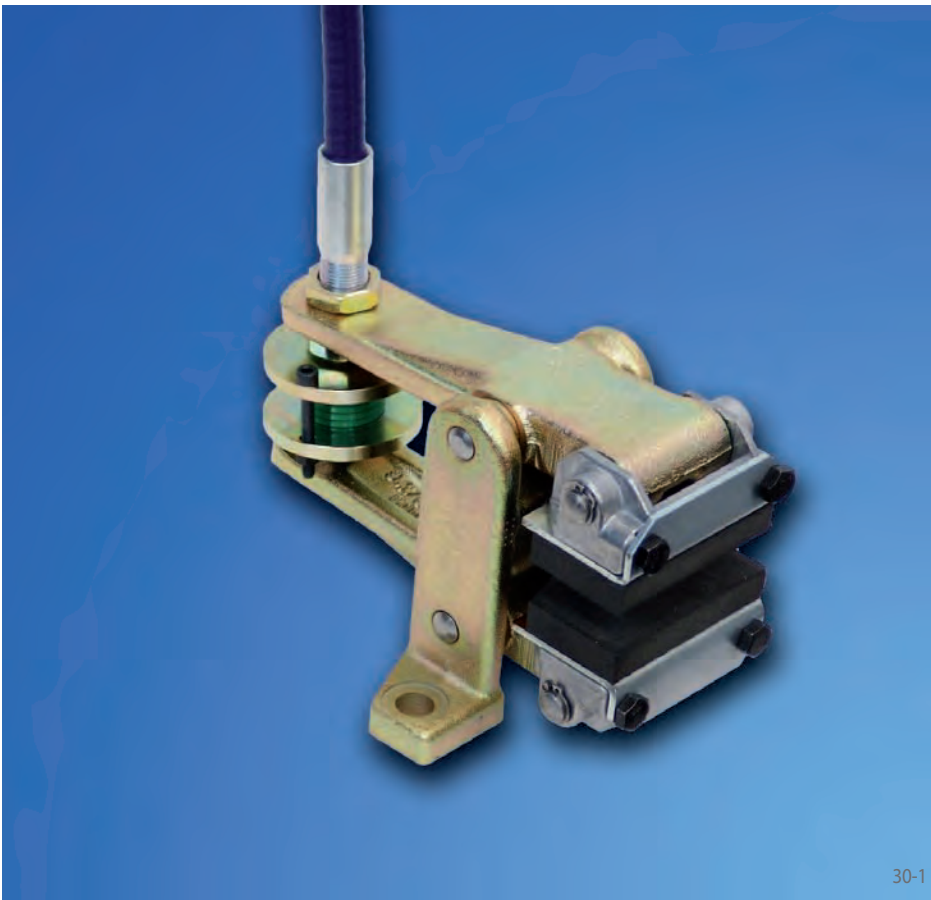
The braking torques shown in the table are based on a theoretical friction coefficient of 0,4.

Accessories

Universal Transformer see page 70.

Brake Caliper DV 020 FKM

spring activated – manually released
by Pull Cable



30-1

Features

Features	Code
Brake Caliper	D
Mounting to the machine parallel to the brake disc	V
Frame size 020	020
Spring activated	F
Manually released	K
Manual adjustment to counter friction block wear	M
Pressure spring 510	510
Pull cable installation mounted right or left available	R L
Thickness of brake disc 12,5 mm	12

Example for ordering

Brake Caliper DV 020 FKM, pressure spring 510, pull cable installation mounted right, thickness of brake disc 12,5 mm:

DV 020 FKM - 510 R - 12

Technical Data

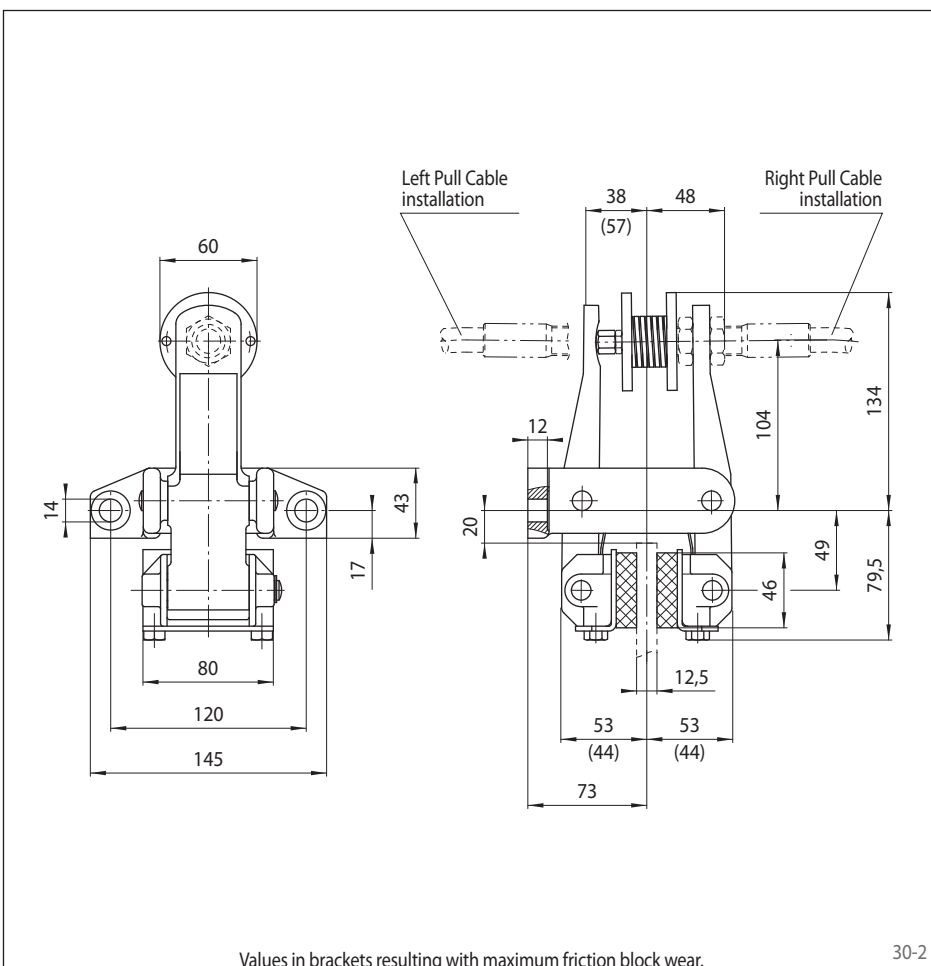
Brake Caliper DV 020 FKM with pressure spring 510	
Brake disc diameter	Braking torque
[mm]	[Nm]
200	160
250	210
300	270
355	330
430	410
520	510
Clamping force	2750 N
Weight	4,4 kg

The braking torques shown in the table are based on a theoretical friction coefficient of 0,4.

Accessories

The Brake Caliper can be delivered fully assembled with Pull Cable and Hand Brake Lever. Please indicate the required cable length.

For further information regarding Pull Cables and Hand Brake Lever see page 71.

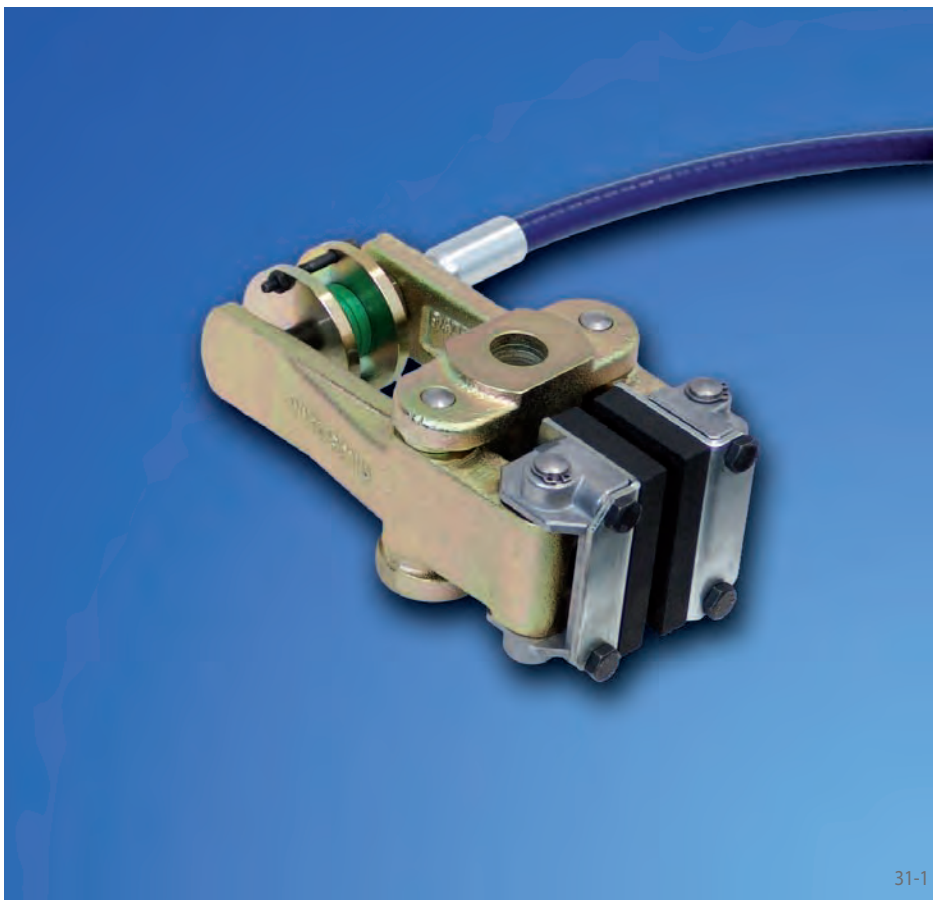


Values in brackets resulting with maximum friction block wear.

30-2

Brake Caliper DH 020 FKM

spring activated – manually released
by Pull Cable



31-1

Features

Features	Code
Brake Caliper	D
Mounting to the machine at right angles to the brake disc	H
Frame size 020	020
Spring activated	F
Manually released	K
Manual adjustment to counter friction block wear	M
Pressure spring 510	510
Position of the pull cable installation to the right or left can be determined by turning the brake during installation	U
Thickness of brake disc 12,5 mm	12

Example for ordering

Brake Caliper DH 020 FKM, pressure spring 510, position of the pull cable installation can be to the right or left, thickness of brake disc 12,5 mm:

DH 020 FKM - 510 U - 12

Technical Data

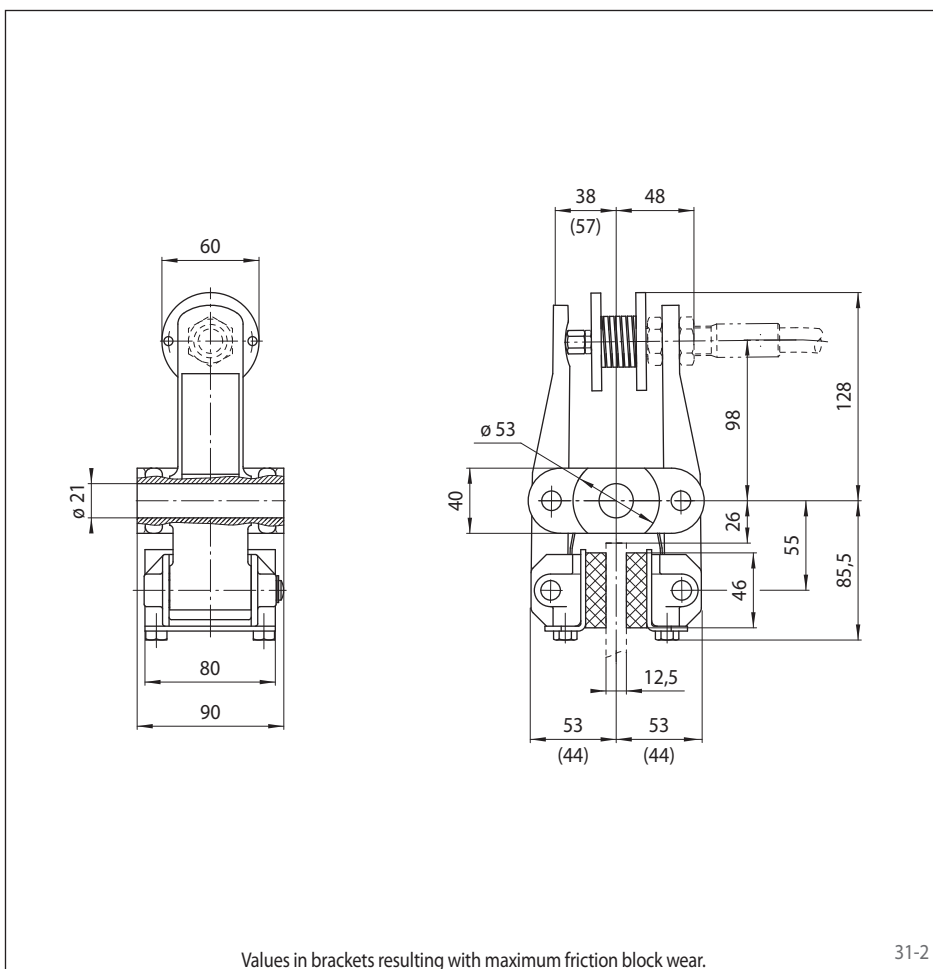
Brake Caliper DH 020 FKM with pressure spring 510	
Brake disc diameter [mm]	Braking torque [Nm]
200	160
250	210
300	270
355	330
430	410
520	510
Clamping force	2750 N
Weight	4,4 kg

The braking torques shown in the table are based on a theoretical friction coefficient of 0,4.

Accessories

The Brake Caliper can be delivered fully assembled with Pull Cable and Hand Brake Lever. Please indicate the required cable length.

For further information regarding Pull Cables and Hand Brake Lever see page 71.



31-2

Brake Caliper DH 005 PFK

pneumatically activated – spring released



33-1

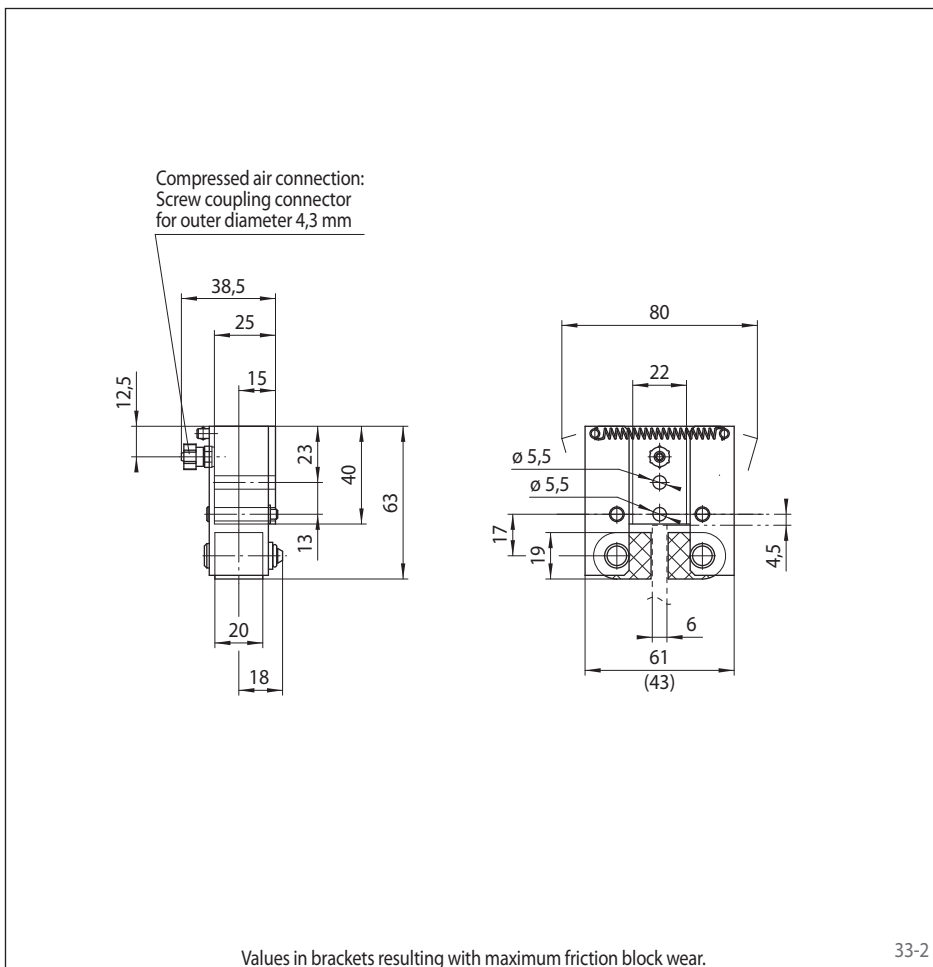
Features

Features	Code
Freno de pinza	D
Mounting to the machine at right angles to the brake disc	H
Frame size 005	005
Pneumatically activated	P
Spring released	F
No adjustment to counter friction block wear	K
Pressure piston 605	605
Pressure piston mounted in central position	M
Thickness of brake disc 6 mm	06

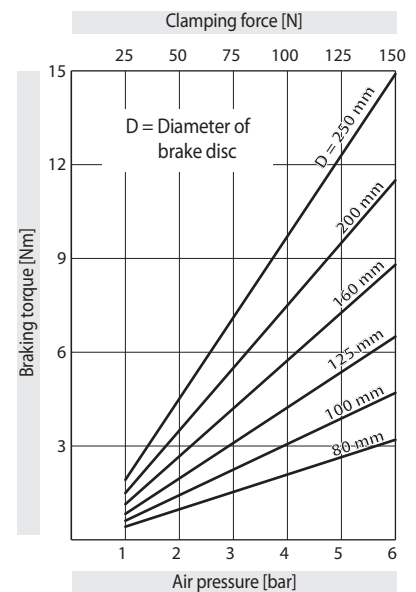
Example for ordering

Freno de pinza DH 005 PFK, pressure piston 605, pressure piston mounted in central position, thickness of brake disc 6 mm:

DH 005 PFK - 605 M - 06



Technical Data



The braking torques shown in the diagram are based on a theoretical friction coefficient of 0,4.

Air pressure: max. 6 bar

Air volume: max. 3 cm³ per activation

Weight: 0,4 kg

Brake Caliper DH 010 PFK

pneumatically activated – spring released



34-1

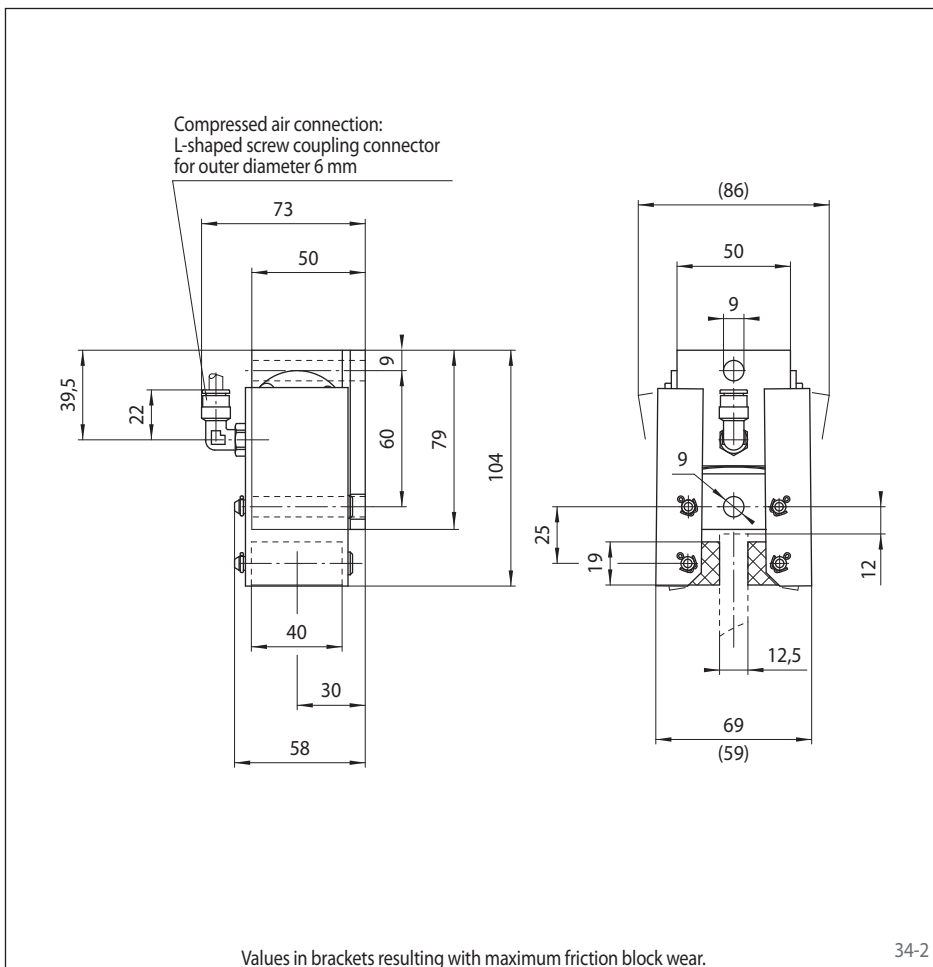
Features

Features	Code
Brake Caliper	D
Mounting to the machine at right angles to the brake disc	H
Frame size 010	010
Pneumatically activated	P
Spring released	F
No adjustment to counter friction block wear	K
Pressure piston 610	610
Pressure piston mounted in central position	M
Thickness of brake disc 12,5 mm	12

Example for ordering

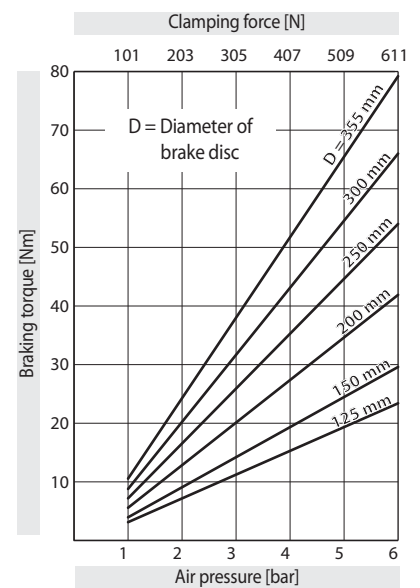
Brake Caliper DH 010 PFK, pressure piston 610, pressure piston mounted in central position, thickness of brake disc 12,5 mm:

DH 010 PFK - 610 M - 12



34-2

Technical Data



The braking torques shown in the diagram are based on a theoretical friction coefficient of 0,4.

Air pressure: max. 6 bar

Air volume: max. 10 cm³
per activation

Weight: 1,1 kg

Brake Caliper DH 015 PFK

pneumatically activated – spring released



35-1

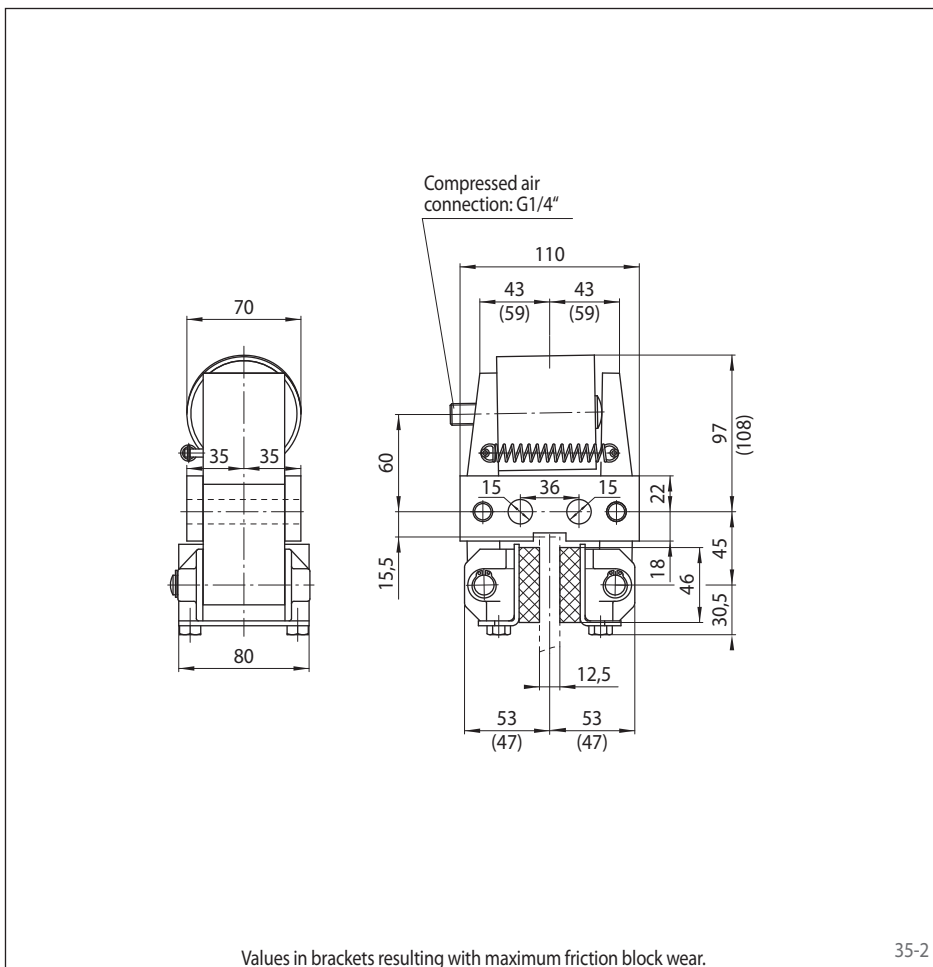
Features

Features	Code
Brake Caliper	D
Mounting to the machine at right angles to the brake disc	H
Frame size 015	015
Pneumatically activated	P
Spring released	F
No adjustment to counter friction block wear	K
Pressure piston 620	620
Pressure piston mounted in central position	M
Thickness of brake disc 12,5 mm	12

Example for ordering

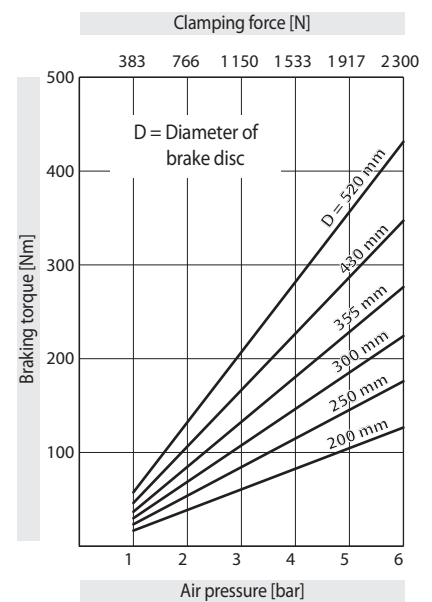
Brake Caliper DH 015 PFK, pressure piston 620, pressure piston mounted in central position, thickness of brake disc 12,5 mm:

DH 015 PFK - 620 M - 12



35-2

Technical Data



The braking torques shown in the diagram are based on a theoretical friction coefficient of 0,4.

Air pressure: max. 6 bar

Air volume: max. 124 cm³ per activation

Weight: 4,6 kg