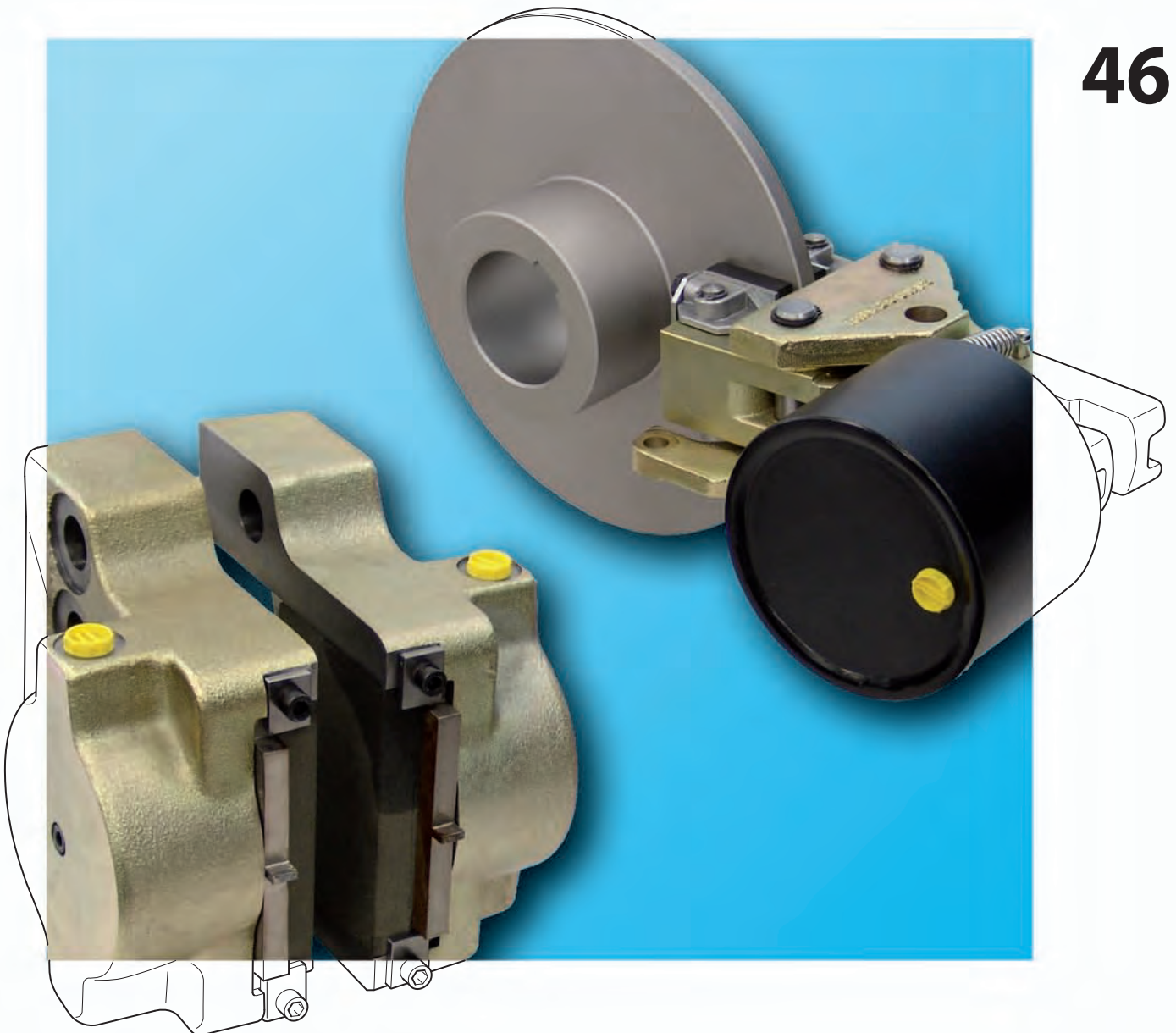


Industrial Brakes

Brake Calipers • Clamping Units

46



Any questions? Please contact us.

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	10 ²	10 ³	10 ⁴	10 ⁵	10 ⁶	Parallel to brake disc	At right angles to brake disc	Manual	Auto- matic	
Brake Calipers spring activated – pneumatically released										
DH 010 FPM	10 - 50						●	●		9
DV 020 FPM	90 - 650					●		●		10
DH 020 FPM	90 - 650						●	●		11
DV 030 FPM	370 - 1 850					●		●		12
DH 030 FPM	370 - 1 850						●	●		13
DV 030 FPA	120 - 1 500					●			●	14
DH 030 FPA	120 - 1 500						●		●	15
DV 035 FPM	820 - 5 700					●		●		16
DH 035 FPM	820 - 5 700						●	●		17
DU 060 FPM	2 700 - 38 500					●	●	●		18
Brake Calipers spring activated – hydraulically released										
DV 020 FHM	200 - 650					●		●		20
DH 020 FHM	200 - 650						●	●		21
DV 030 FHM	540 - 1 700					●		●		22
DH 030 FHM	540 - 1 700						●	●		23
DV 030 FHA	620 - 2 000					●			●	24
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Brake Calipers spring activated – manually released										
DV 020 FKM	160 - 510					●		●		30
DH 020 FKM	160 - 510						●	●		31
Brake Calipers pneumatically activated – spring released										
DH 005 PFK	3 - 15						●			33
DH 010 PFK	24 - 80						●			34
DH 015 PFK	130 - 430						●			35
DV 020 PFK	200 - 650					●				36
DH 020 PFK	200 - 650						●			37
DV 030 PFK	470 - 2 800					●				38
DH 030 PFK	470 - 2 800						●			39
DV 035 PFM	1 600 - 4 500					●		●		40
DH 035 PFM	1 600 - 4 500						●	●		41
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* The braking torques relate to the standard brake discs shown in this catalogue. Higher braking torques are possible by the use of several brake calipers or larger brake disc diameters.

Type	Braking torque* [Nm]					Type of mounting brake at machine		Adjustment in case of friction block wear		Page
	10 ²	10 ³	10 ⁴	10 ⁵	10 ⁶	Parallel to brake disc	At right angles to brake disc	Manual	Auto- matic	
Brake Calipers manually activated – manually released										
DH 010 MSM	20 - 75						●	●		45
DV 020 MSM	160 - 520					●		●		46
DH 020 MSM	160 - 520						●	●		47
DV 020 MKM	180 - 600					●		●		48
DH 020 MKM	180 - 600						●	●		49
Brake Calipers spring activated – hydraulically released										
HS 075 FHM	10 400 - 40 500					●		●		50
HW 075 FHM	10 400 - 40 500					●		●		52
Brake Calipers hydraulically activated – non-releasing										
HI 150 HUK	120 000 - 240 000					●				54
HW 150 HUK	120 000 - 240 000					●				56
HI 180 HUK	160 000 - 340 000					●				54
HW 180 HUK	160 000 - 340 000					●				56
Brake Calipers hydraulically activated – spring released										
HW 040 HFA	550 - 1 300					●			●	58
HW 063 HFA	1 900 - 4 690					●			●	59
HS 075 HFK	10 300 - 31 700					●				60
HW 075 HFK	10 300 - 31 700					●				62
HW 100 HFA	8 500 - 21 200					●			●	64
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* The braking torques relate to the standard brake discs shown in this catalogue. Higher braking torques are possible by the use of several brake calipers or larger brake disc diameters.

Design and Function of Brakes

No Drives without Disc Brakes

For a long time now Disc Brakes have been tried and tested in the aviation and automotive industry, and increasing awareness of operatio-

nal safety and ever stricter rules on accident prevention have made them indispensable. After all, wherever there is acceleration, there

must also be braking. A reliable and economic solution to these problems are RINGSPANN Disc Brakes.

Advantages of RINGSPANN-Disc Brakes

The following features make the RINGSPANN Disc Brakes stand out:

- The well thought-out design of RINGSPANN Disc Brakes permits a **simple and space-saving arrangement**, even in existing installations.
- Due to the even friction surfaces the RINGSPANN Disc Brakes are not subject to any automatic amplification effect which is always a problem with drum brakes. Therefore, disc brakes guarantee **high torque stability** even when friction variations occur.

- The open design of the RINGSPANN Disc Brakes with their excellent ventilation characteristics guarantee **ideal heat dissipation**; this is a precondition for high braking power with a compact brake volume.
- The considerably **lower inertia moment** compared with that of drum brakes permits economical dimensioning, shortened cycle times and reduced energy consumption.
- Highly wear-resistant friction material and large braking surfaces ensure long intervals between maintenance. The practical and robust design of RINGSPANN Disc Brakes guarantees that **maintenance is easy and**

uncomplicated. The friction pads are easily replaced without the need to dismount the brake.

- RINGSPANN Disc Brakes are fitted with **swivel mounted friction blocks**; this ensures that the friction blocks are always in full face contact with the brake disc. When the brake is released, the friction blocks are lifted safely off the brake by a spring, irrespective of the installation arrangement.

For each Application the right Solution

RINGSPANN Disc Brakes require minimal installation dimensions. Brake Calipers or Brake Saddles may be arranged in any position on brake discs of varying diameters. By using several Brake Calipers on the same disc it is possible to increase the braking torque without the need to enlarge the installation dimensions to any great extent.

The universal concept of the RINGSPANN Disc Brake fulfills various functions:

- **Stopping brake**
- **Control brake**
- **Holding brake**

As a **stopping brake**, it brings a rotating shaft to a standstill in a short time, for example during a power failure or an emergency stop.

As a **control brake**, it effectively maintains material tension.

As a **holding brake**, it prevents the unintended start of a stationary shaft.

The Product Range

RINGSPANN offers a comprehensive range of Disc Brakes:

- **Spring activated Brake Calipers**; release is either pneumatic, hydraulic, electromagnetic or manual by means of a pull cable.

- **Pneumatically activated Brake Calipers**; spring released
- **Manually activated Brake Calipers**; manually released with a threaded hand wheel or a pull cable

- **Hydraulically activated Brake Calipers**; spring released
- **Spring activated Clamping Unit**; hydraulically or pneumatically released

Accessories

The following accessories are available for special applications:

- Two standard types of **brake discs** are available with diameters ranging from 125 mm up to 1 000 mm
- All brakes can be supplied with an **electric indicator for friction block wear**
- Inductive proximity switches for **monitoring the operating condition** "brake released" available

- To prolong the operating life, **friction blocks with double the friction surface** are available for Brake Calipers sizes 12, 15, 20 and 30
- **Special friction linings** are available for particular requirements

Areas of Application for Brakes

Amusement rides

Assembly stations

Belt conveyors

Construction machines

Conveyors

Cranes

Elevators and escalators

Extruder, machines for rubber and plastics

Fans and ventilators

Foundry machines

Machines for food industry

Packaging machines

Paper machines

Printing machines

Ship drives

Shredders

Steel mills

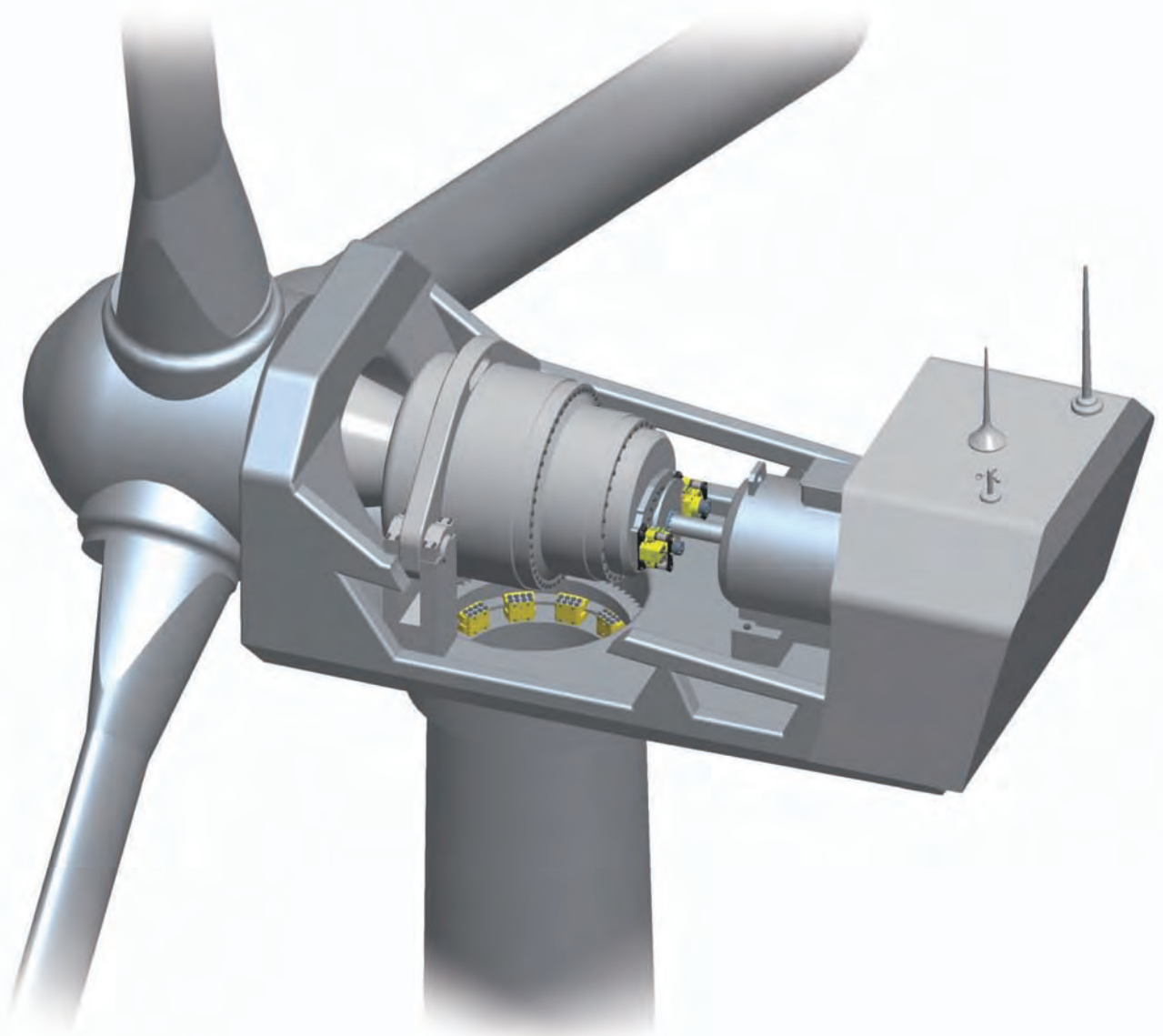
Stranding lines

Test benches

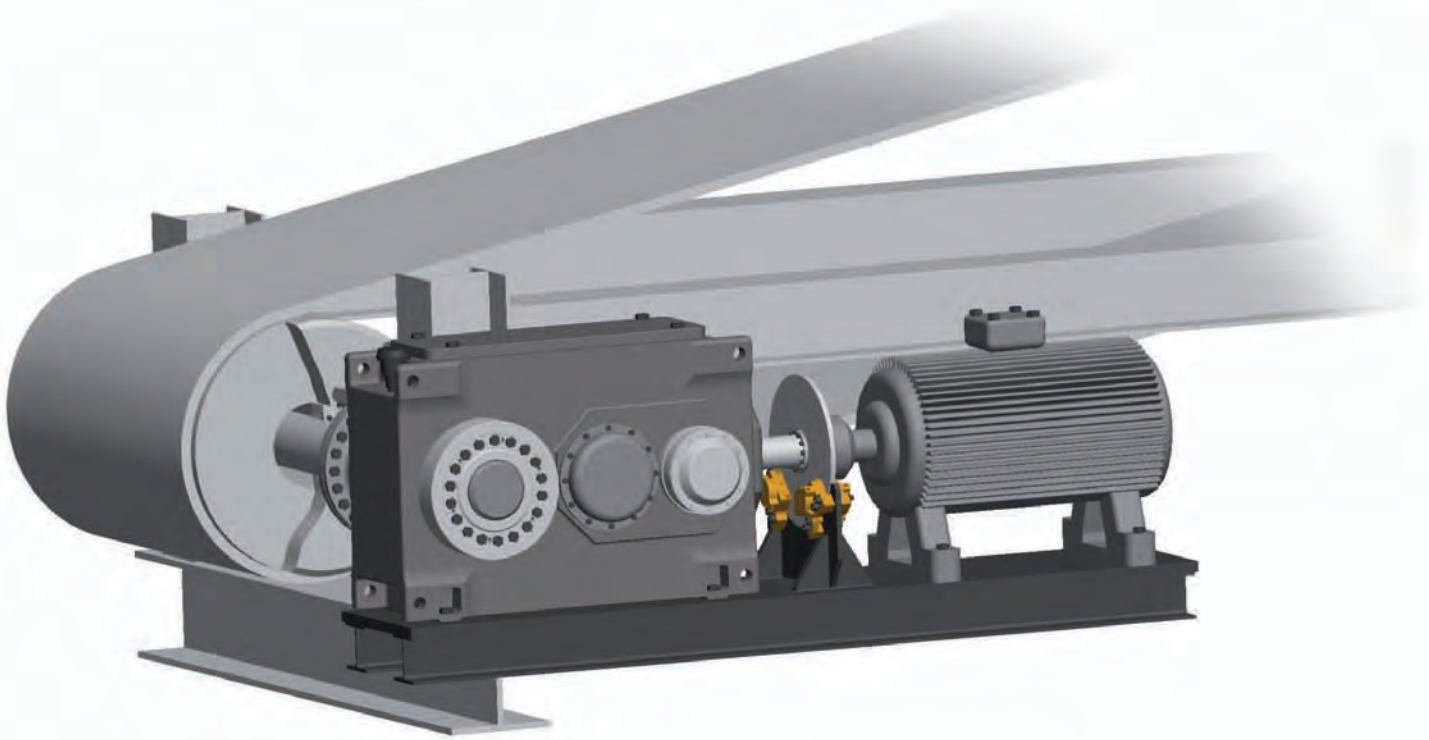
Textile machines

Wind turbines

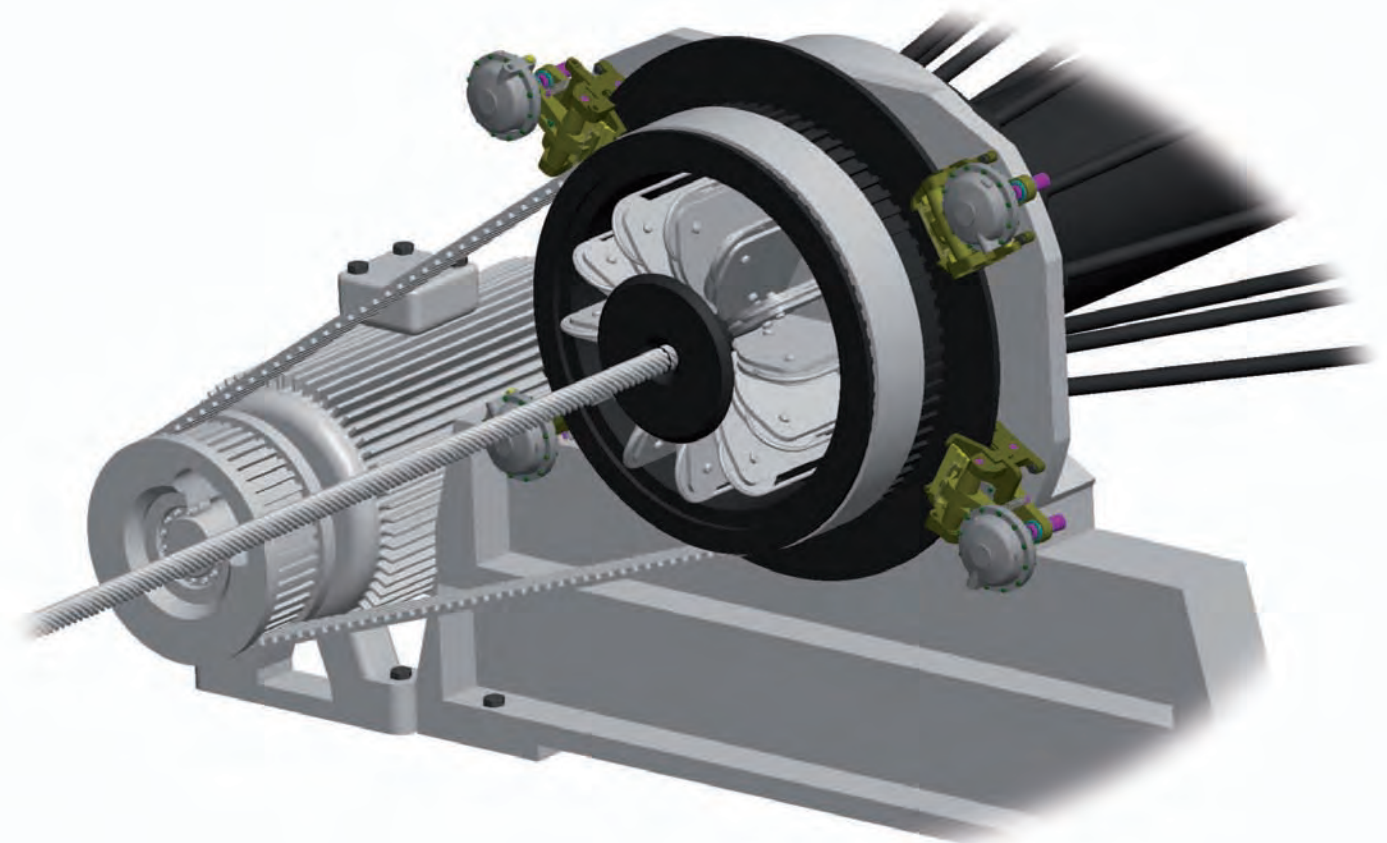
Wire and tube machines



Wind turbines



Belt conveyors



Stranding lines

Brake Caliper DH 010 FPM

spring activated – pneumatically released



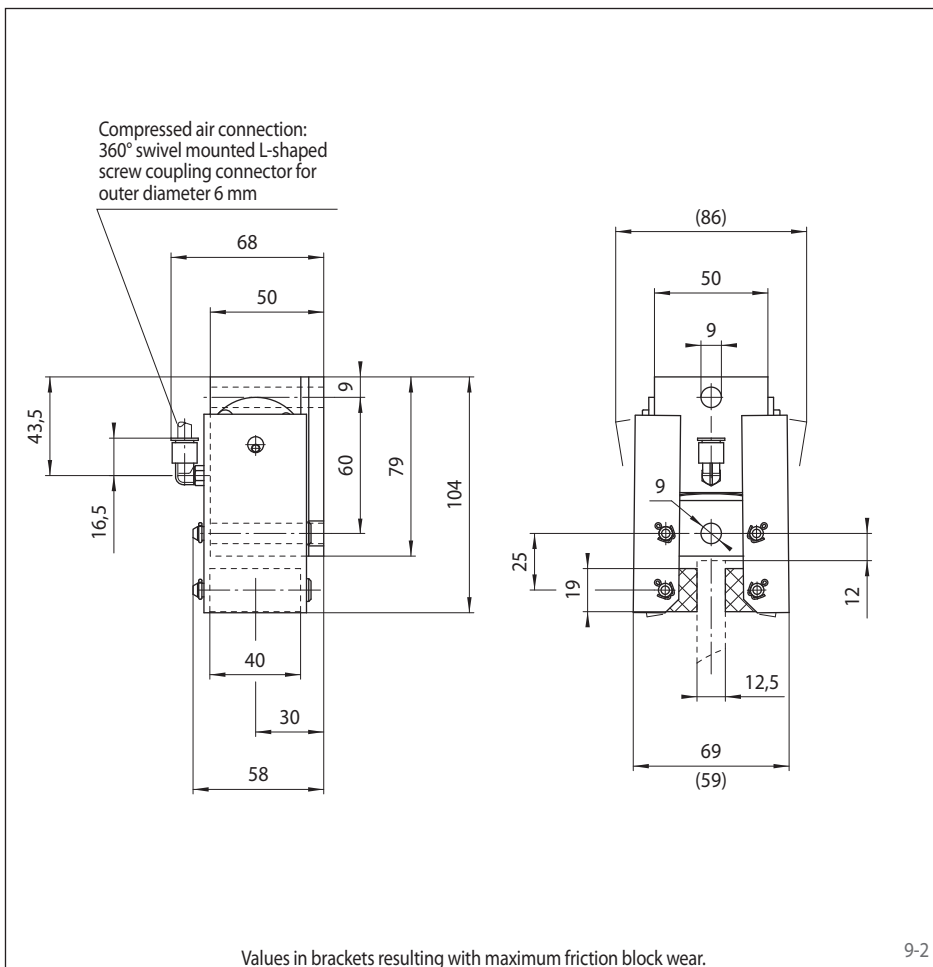
Features

Features	Code
Brake Caliper	D
Mounting to the machine at right angles to the brake disc	H
Frame size 010	010
Spring activated	F
Pneumatically released	P
Manual adjustment to counter friction block wear	M
Designs 010 or 012 are available for selection	010 012
Piston mounted in central position	M
Thickness of brake disc 12,5 mm	12

Example for ordering

Brake Caliper DH 010 FPM, design 010, piston mounted in central position, thickness of brake disc 12,5 mm:

DH 010 FPM - 010 M - 12



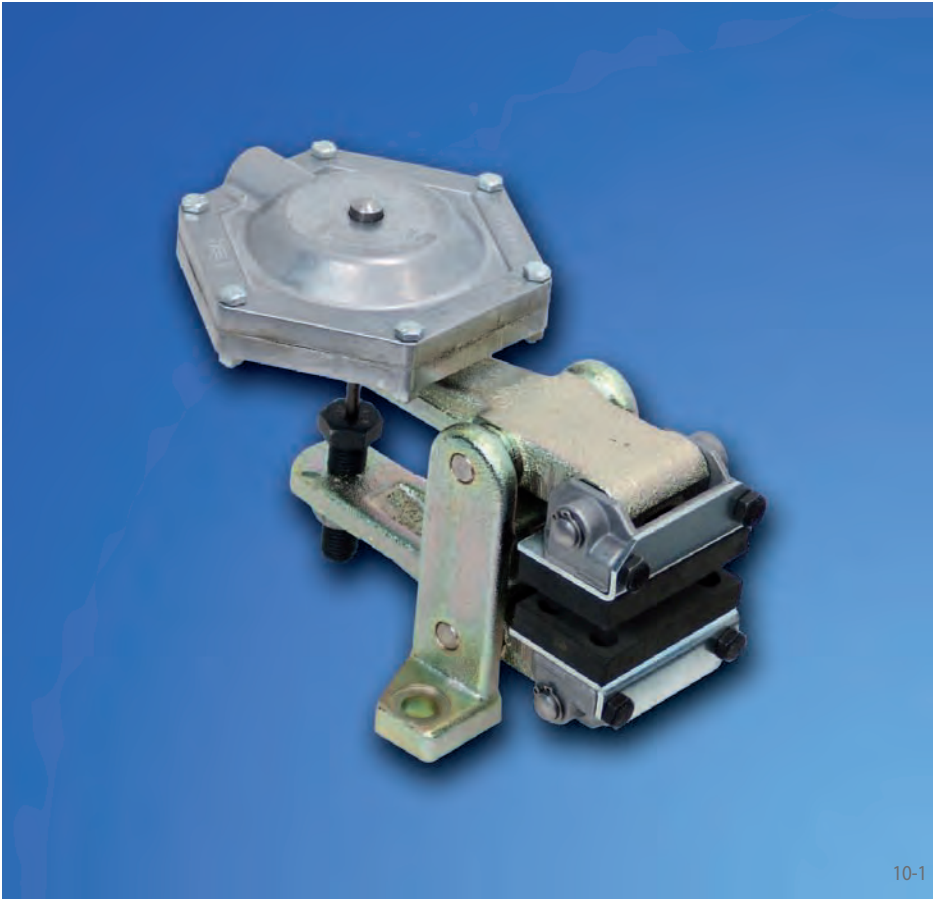
Technical Data

Brake disc diameter	Brake Caliper DH 010 FPM	
	with design 010	with design 012
[mm]	Braking torque [Nm]	Braking torque [Nm]
125	10	15
150	14	19
200	20	26
250	26	34
300	32	41
355	38	50
Clamping force	290 N	375 N
Air pressure	min. 4 bar max. 8 bar	min. 5 bar max. 8 bar
Air volume per activation	max. 3 cm ³	max. 3 cm ³
Weight	1 kg	1 kg

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

Brake Caliper DV 020 FPM

spring activated – pneumatically released



10-1

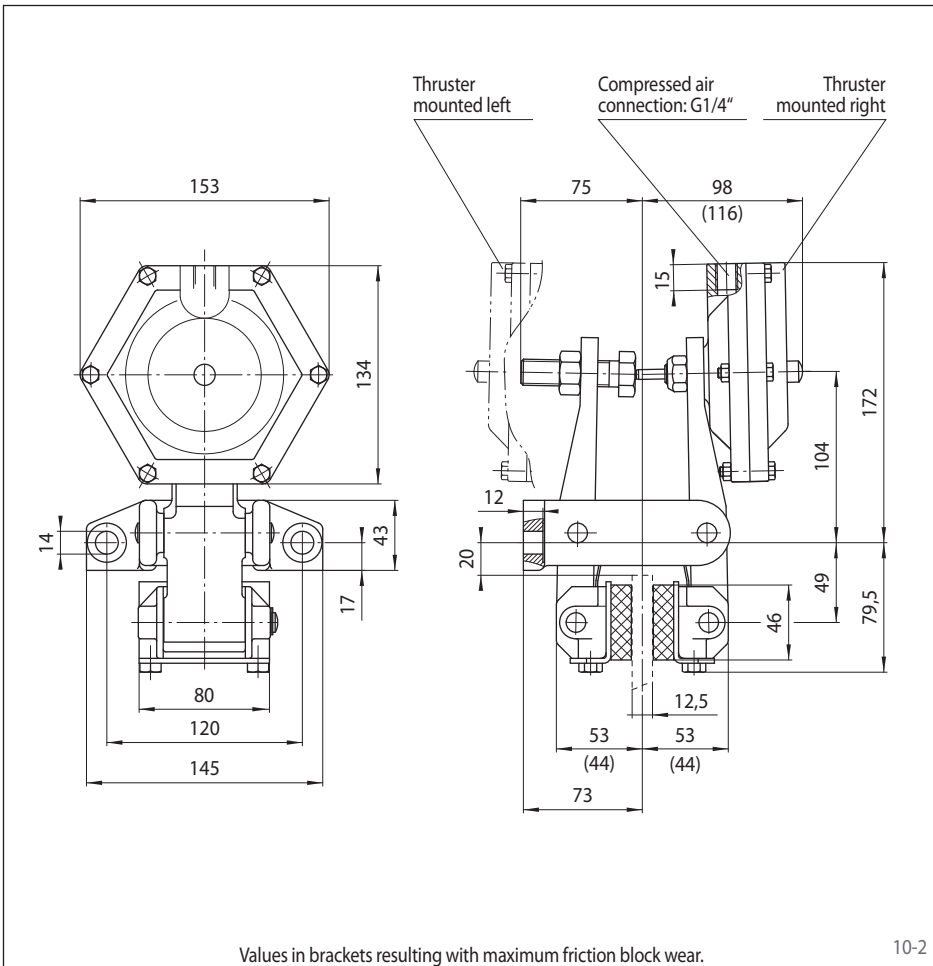
Features

Features	Code
Brake Caliper	D
Mounting to the machine parallel to the brake disc	V
Frame size 020	020
Spring activated	F
Pneumatically released	P
Manual adjustment to counter friction block wear	M
Thrusters 020, 030 or 040 are available for selection	020 030 040
Thruster mounted right or left available	R L
Thickness of brake disc 12,5 mm	12

Example for ordering

Brake Caliper DV 020 FPM, thruster 020, thruster mounted right, thickness of brake disc 12,5 mm:

DV 020 FPM - 020 R - 12



Values in brackets resulting with maximum friction block wear.

10-2

Technical Data

Brake disc diameter	Brake Caliper DV 020 FPM		
	with thruster 020	with thruster 030	with thruster 040
Braking torque	Braking torque	Braking torque	Braking torque
[mm]	[Nm]	[Nm]	[Nm]
200	97	130	200
250	130	180	270
300	170	220	340
355	200	270	420
430	250	340	520
520	310	430	650
Clamping force	1700 N	2300 N	3500 N
Air pressure	min. 2,6 bar max. 7 bar	min. 3,5 bar max. 7 bar	min. 5 bar max. 7 bar
Air volume per activation	max. 17 cm ³	max. 17 cm ³	max. 17 cm ³
Weight	5,2 kg	5,2 kg	5,2 kg

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

Brake Caliper DH 020 FPM

spring activated – pneumatically released



11-1

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
Pneumatically released	P
Manual adjustment to counter friction block wear	M
Thrusters 020, 030 or 040 are available for selection	020 030 040
Position of the thruster 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

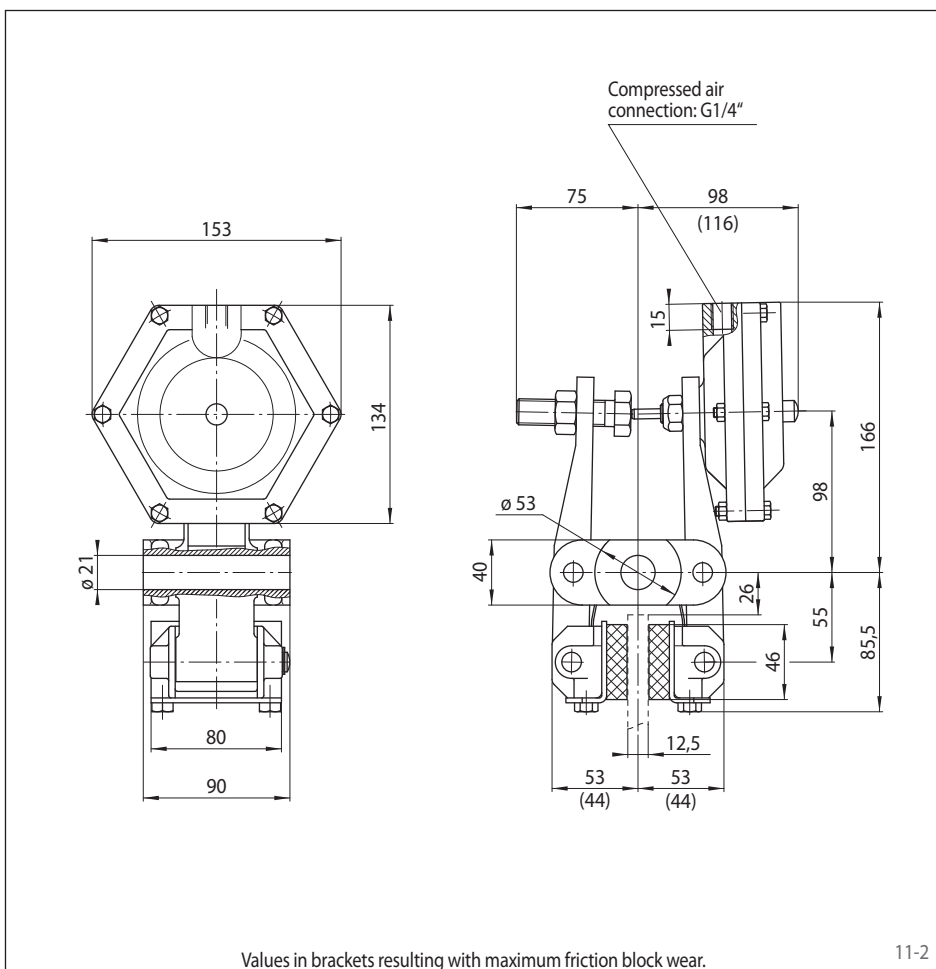
Brake Caliper DH 020 FPM, thruster 020, position of the thruster can be to the right or left, thickness of brake disc 12,5 mm:

DH 020 FPM - 020 U - 12

Technical Data

	Brake Caliper DH 020 FPM		
	with thruster 020	with thruster 030	with thruster 040
Brake disc diameter	Braking torque	Braking torque	Braking torque
[mm]	[Nm]	[Nm]	[Nm]
200	97	130	200
250	130	180	270
300	170	220	340
355	200	270	420
430	250	340	520
520	310	430	650
Clamping force	1 700 N	2 300 N	3 500 N
Air pressure	min. 2,6 bar max. 7 bar	min. 3,5 bar max. 7 bar	min. 5 bar max. 7 bar
Air volume per activation	max. 17 cm ³	max. 17 cm ³	max. 17 cm ³
Weight	5,2 kg	5,2 kg	5,2 kg

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



11-2

Brake Caliper DV 030 FPM

spring activated – pneumatically released



12-1

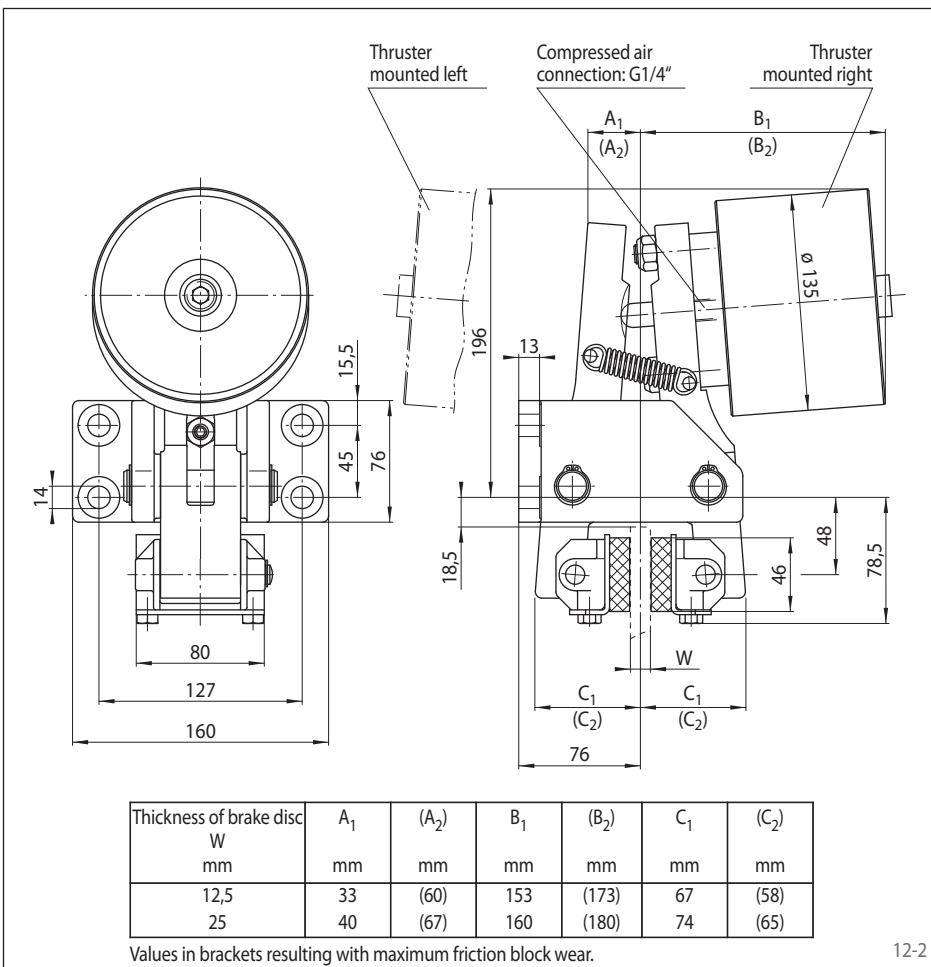
Features

Features	Code
Brake Caliper	D
Mounting to the machine parallel to the brake disc	V
Frame size 030	030
Spring activated	F
Pneumatically released	P
Manual adjustment to counter friction block wear	M
Thrusters 050 or 060 are available for selection	050 060
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 FPM, thruster 050, thruster mounted right, thickness of brake disc 12,5 mm:

DV 030 FPM - 050 R - 12



12-2

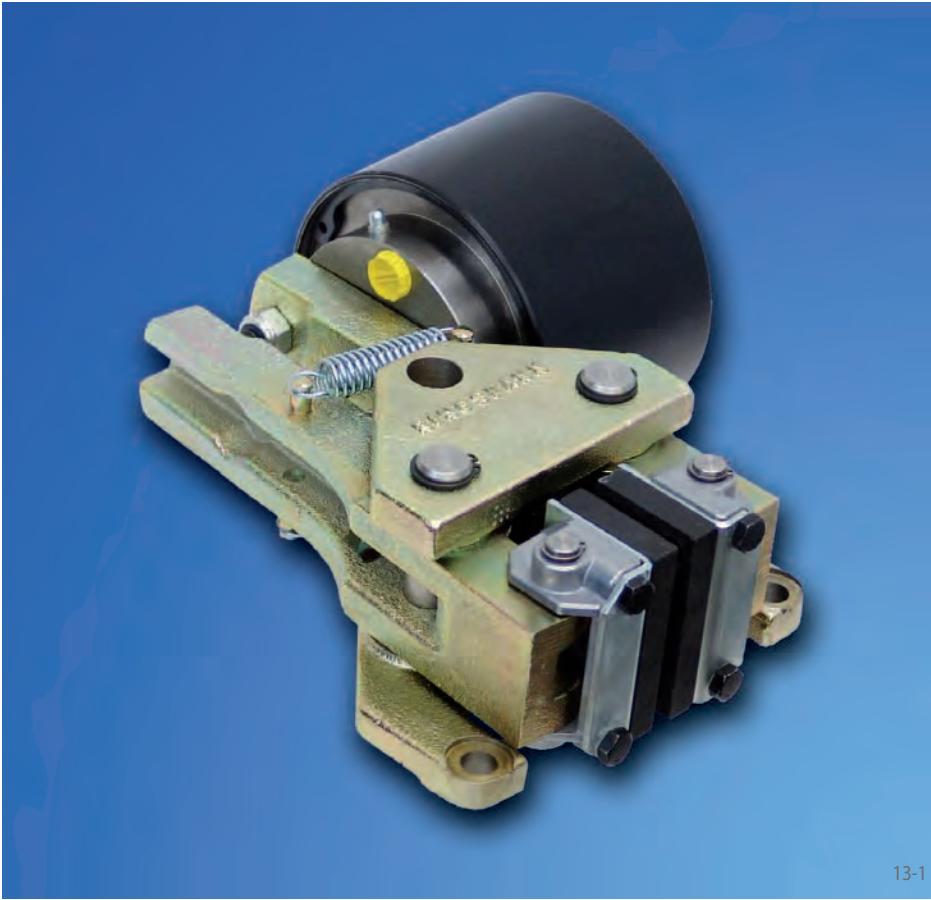
Technical Data

Brake disc diameter [mm]	Brake Caliper DV 030 FPM	
	with thruster 050 [Nm]	with thruster 060 [Nm]
200	370	560
250	500	760
300	640	960
355	780	1200
430	980	1500
520	1200	1850
Clamping force	6600 N	10000 N
Air pressure	min. 4,2 bar max. 8 bar	min. 5 bar max. 8 bar
Air volume per activation	max. 48 cm ³	max. 48 cm ³
Weight	13 kg	13,5 kg

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

Brake Caliper DH 030 FPM

spring activated – pneumatically released



13-1

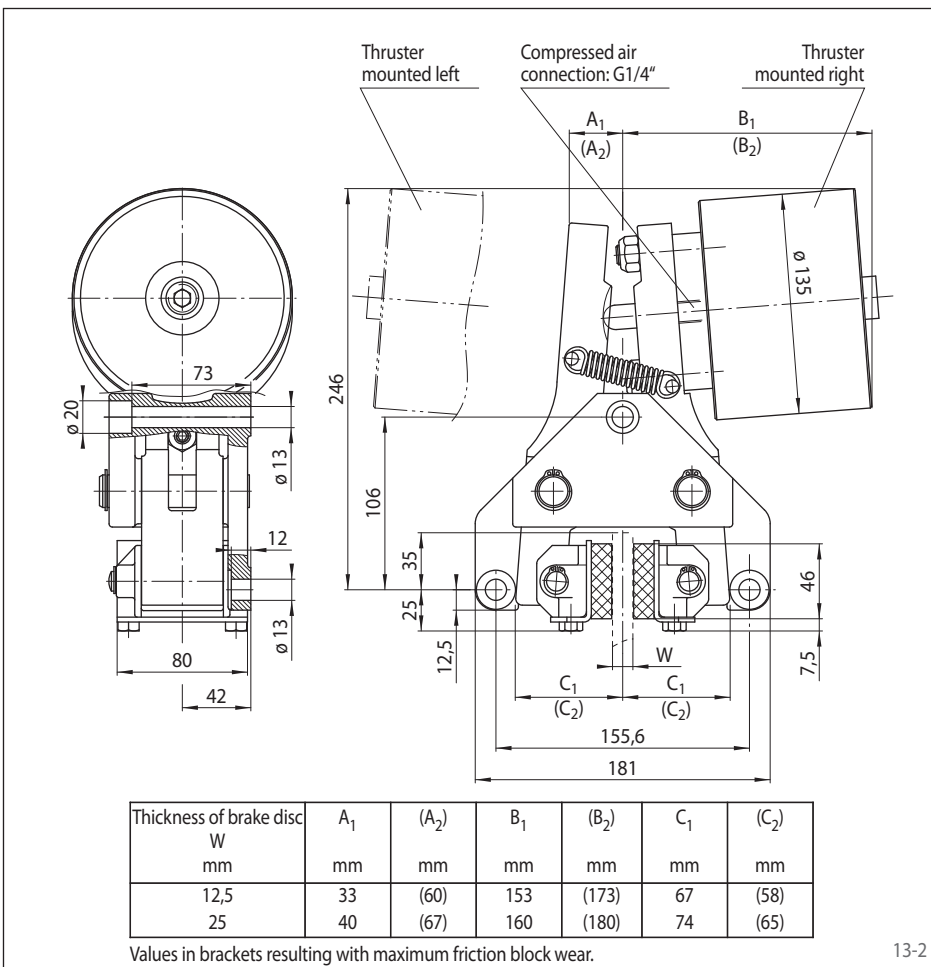
Features

Features	Code
Brake Caliper	D
Mounting to the machine at right angles to the brake disc	H
Frame size 030	030
Spring activated	F
Pneumatically released	P
Manual adjustment to counter friction block wear	M
Thrusters 050 or 060 are available for selection	050 060
Thrusters 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 FPM, thruster 050, thruster mounted right, thickness of brake disc 12,5 mm:

DH 030 FPM - 050 R - 12



13-2

Technical Data

Brake disc diameter [mm]	Brake Caliper DH 030 FPM	
	with thruster 050 [Nm]	with thruster 060 [Nm]
200	370	560
250	500	760
300	640	960
355	780	1200
430	980	1500
520	1200	1850
Clamping force	6600 N	10000 N
Air pressure	min. 4,2 bar max. 8 bar	min. 5 bar max. 8 bar
Air volume per activation	max. 48 cm ³	max. 48 cm ³
Weight	13 kg	13,5 kg

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

Brake Caliper DV 030 FPA

spring activated – pneumatically released



14-1

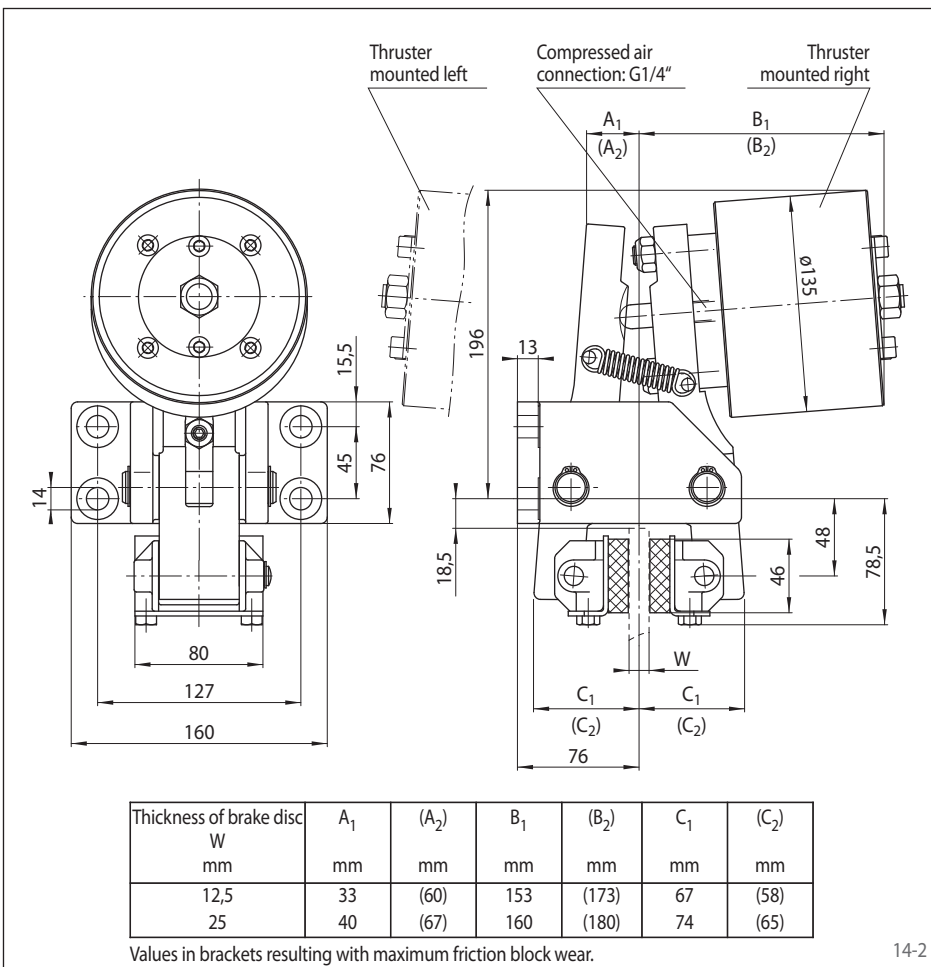
Features

Features	Code
Brake Caliper	D
Mounting to the machine parallel to the brake disc	V
Frame size 030	030
Spring activated	F
Pneumatically released	P
Automatic adjustment to counter friction block wear	A
Thrusters 070, 075, 080 or 090 are available for selection	070 to 090
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 FPA, thruster 070, thruster mounted right, thickness of brake disc 12,5 mm:

DV 030 FPA - 070 R - 12



14-2

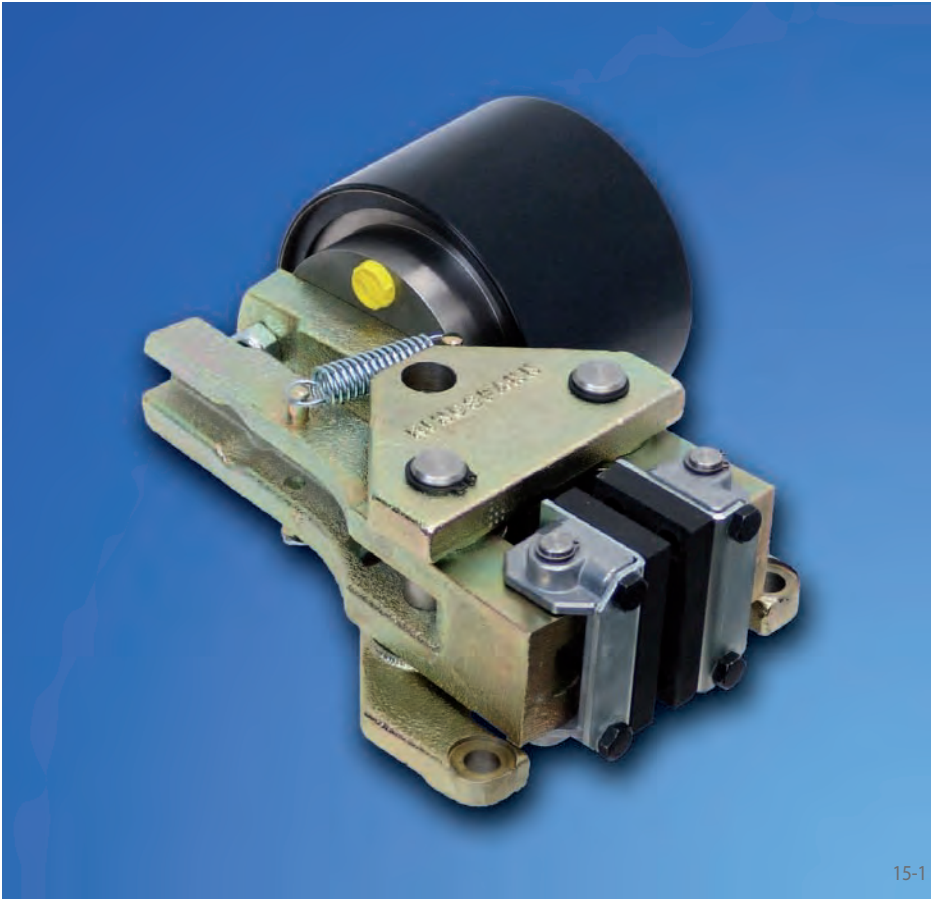
Technical Data

Brake disc diameter [mm]	Brake Caliper DV 030 FPA			
	with thruster 070	with thruster 075	with thruster 080	with thruster 090
200	120	180	410	450
250	160	240	560	610
300	200	300	700	770
355	250	370	860	950
430	310	460	1100	1200
520	390	570	1350	1500
Clamping force	2100 N	3100 N	7300 N	8000 N
Min. air pressure	1,7 bar	2,5 bar	4,5 bar	5 bar
Max. air pressure	8 bar			
Air volume per activation	max. 48 cm ³			
Weight	13,9 kg			

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

Brake Caliper DH 030 FPA

spring activated – pneumatically released



15-1

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
Pneumatically released	P
Automatic adjustment to counter friction block wear	A
Thrusters 070, 075, 080 or 090 are available for selection	070 to 090
Thruster mounted right or left available	R L
Thickness of brake disc 12,5 mm or 25 mm	12 25

Example for ordering

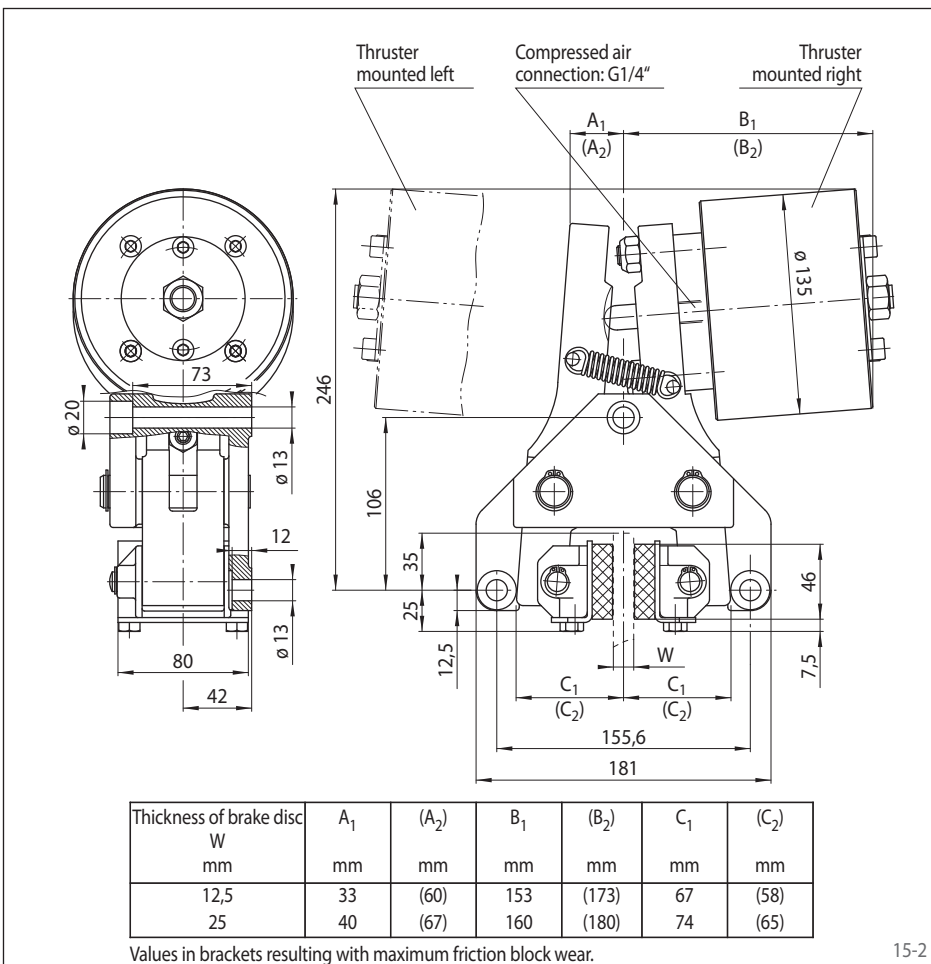
Brake Caliper DH 030 FPA, thruster 070, thruster mounted right, thickness of brake disc 12,5 mm:

DH 030 FPA - 070 R - 12

Technical Data

Brake disc diameter	Brake Caliper DH 030 FPA			
	with thruster 070	with thruster 075	with thruster 080	with thruster 090
Braking torque	Braking torque	Braking torque	Braking torque	Braking torque
[mm]	[Nm]	[Nm]	[Nm]	[Nm]
200	120	180	410	450
250	160	240	560	610
300	200	300	700	770
355	250	370	860	950
430	310	460	1100	1200
520	390	570	1350	1500
Clamping force	2100 N	3100 N	7300 N	8000 N
Min. air pressure	1,7 bar	2,5 bar	4,5 bar	5 bar
Max. air pressure	8 bar			
Air volume per activation	max. 48 cm ³			
Weight	13,9 kg			

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



15-2

Brake Caliper DV 035 FPM

spring activated – pneumatically released



16-1

Features

Features	Code
Brake Caliper	D
Mounting to the machine parallel to the brake disc	V
Frame size 035	035
Spring activated	F
Pneumatically released	P
Manual adjustment to counter friction block wear	M
Thrusters 100, 110 or 120 are available for selection	100 110 120
Thruster mounted right available	R
Thickness of brake disc 12,5 mm, 25 mm, 30 mm or 40 mm	12 25 30 40

Example for ordering

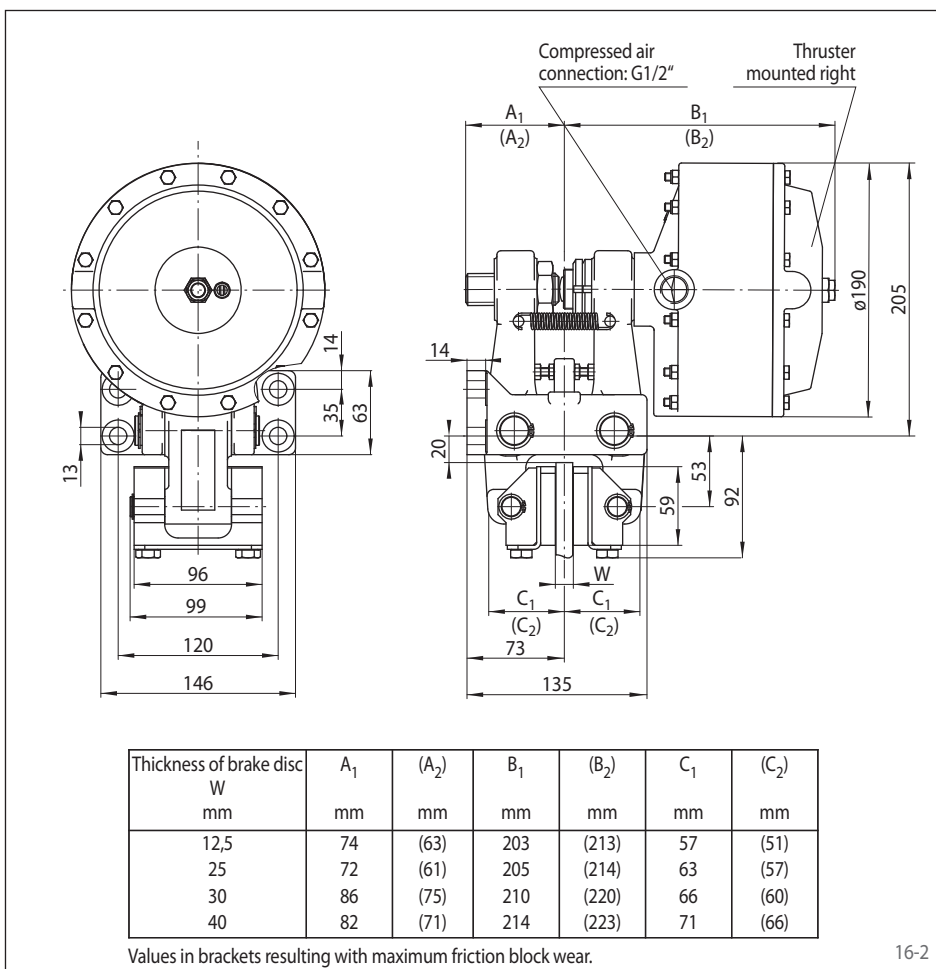
Brake Caliper DV 035 FPM, thruster 110, thruster mounted right, thickness of brake disc 12,5 mm:

DV 035 FPM - 110 R - 12

Technical Data

Brake disc diameter	Brake Caliper DV 035 FPM		
	with thruster 100	with thruster 110	with thruster 120
Braking torque	Braking torque	Braking torque	Braking torque
[mm]	[Nm]	[Nm]	[Nm]
300	820	1400	1800
355	1000	1700	2300
430	1300	2200	2800
520	1600	2700	3500
630	2000	3300	4400
710	2300	3800	5000
800	2600	4300	5700
Clamping force	8800 N	14800 N	19500 N
Air pressure	min. 3 bar max. 8 bar	min. 5 bar max. 8 bar	min. 6,5 bar max. 8 bar
Air volume per activation	max. 250 cm ³	max. 250 cm ³	max. 250 cm ³
Weight	12 kg	12 kg	12 kg

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



16-2

Brake Caliper DH 035 FPM

spring activated – pneumatically released



17-1

Features

Features	Code
Brake Caliper	D
Mounting to the machine at right angles to the brake disc	H
Frame size 035	035
Spring activated	F
Pneumatically released	P
Manual adjustment to counter friction block wear	M
Thrusters 100, 110 or 120 are available for selection	100 110 120
Thruster mounted right or left available	R L
Thickness of brake disc 12,5 mm, 25 mm, 30 mm or 40 mm	12 25 30 40

Example for ordering

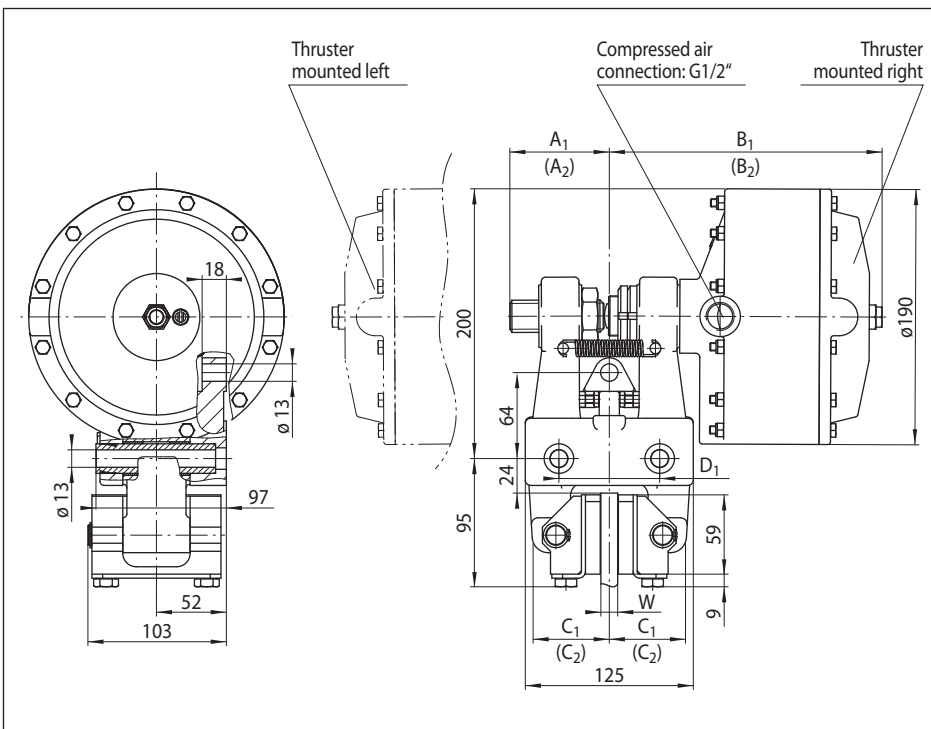
Brake Caliper DH 035 FPM, thruster 110, thruster mounted right, thickness of brake disc 12,5 mm:

DH 035 FPM - 110 R - 12

Technical Data

Brake disc diameter	Brake Caliper DH 035 FPM		
	with thruster 100	with thruster 110	with thruster 120
Braking torque	Braking torque	Braking torque	Braking torque
[mm]	[Nm]	[Nm]	[Nm]
300	820	1400	1800
355	1000	1700	2300
430	1300	2200	2800
520	1600	2700	3500
630	2000	3300	4400
710	2300	3800	5000
800	2600	4300	5700
Clamping force	8800 N	14800 N	19500 N
Air pressure	min. 3 bar max. 8 bar	min. 5 bar max. 8 bar	min. 6,5 bar max. 8 bar
Air volume per activation	max. 250 cm ³	max. 250 cm ³	max. 250 cm ³
Weight	12 kg	12 kg	12 kg

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



Thickness of brake disc W mm	A ₁ mm	(A ₂) mm	B ₁ mm	(B ₂) mm	C ₁ mm	(C ₂) mm	D ₁ mm
12,5	74	(63)	203	(213)	57	(51)	75
25	72	(61)	205	(214)	63	(57)	84
30	86	(75)	210	(220)	66	(60)	75
40	82	(71)	214	(223)	71	(66)	84

Values in brackets resulting with maximum friction block wear.

17-2