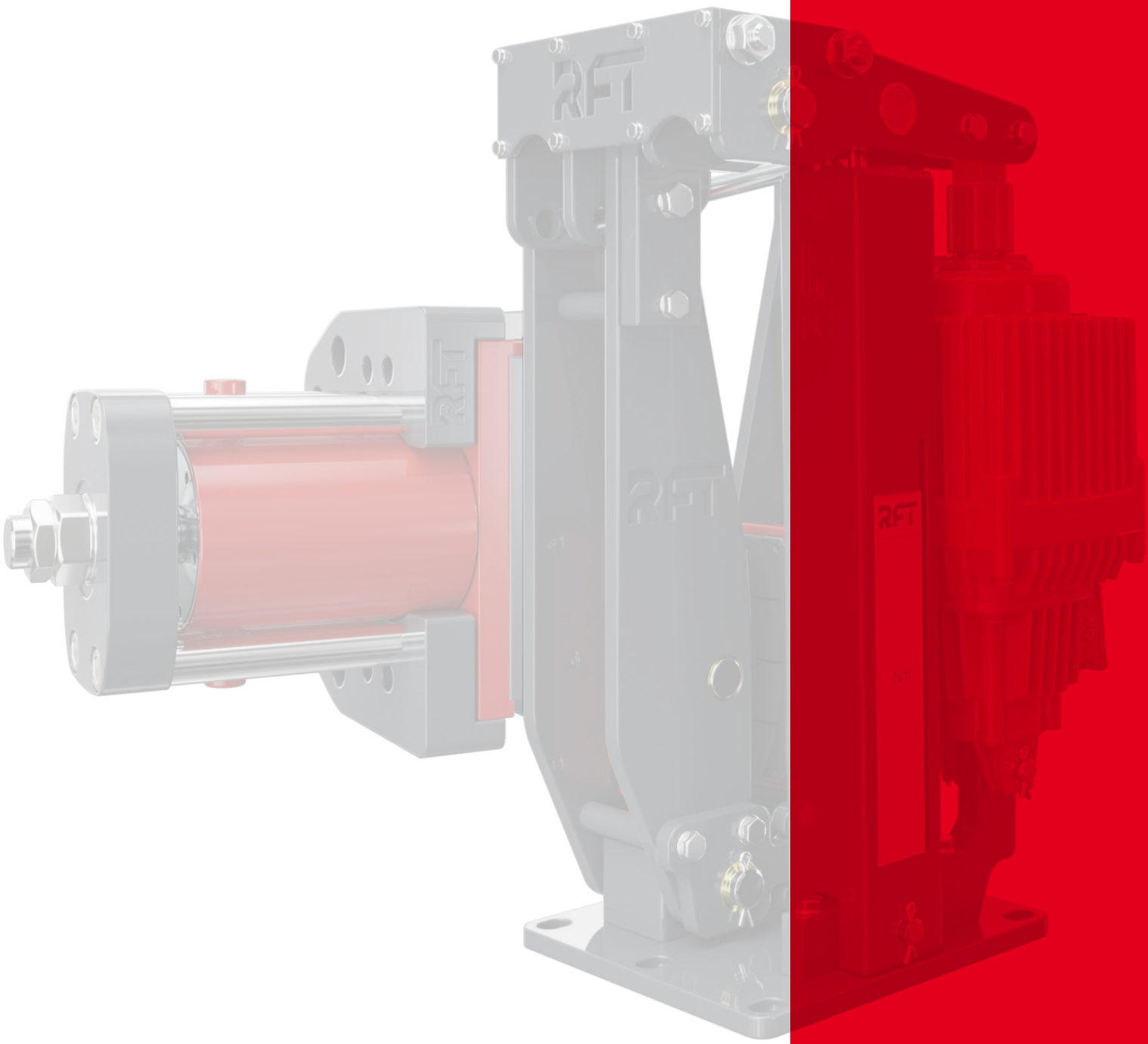
TECHNICAL CATALOGUE

RFT DISC BRAKES



ORIGINAL – MADE IN GERMANY

RÖMER FÖRDERTECHNIK



TYP RSTN

- Max. braking torque: 23.800 Nm
- Sinter brake pads
- For brake discs: Ø 200 mm up to Ø 1250 mm

For further informations see technical catalogue.



ORIGINAL – MADE IN GERMANY

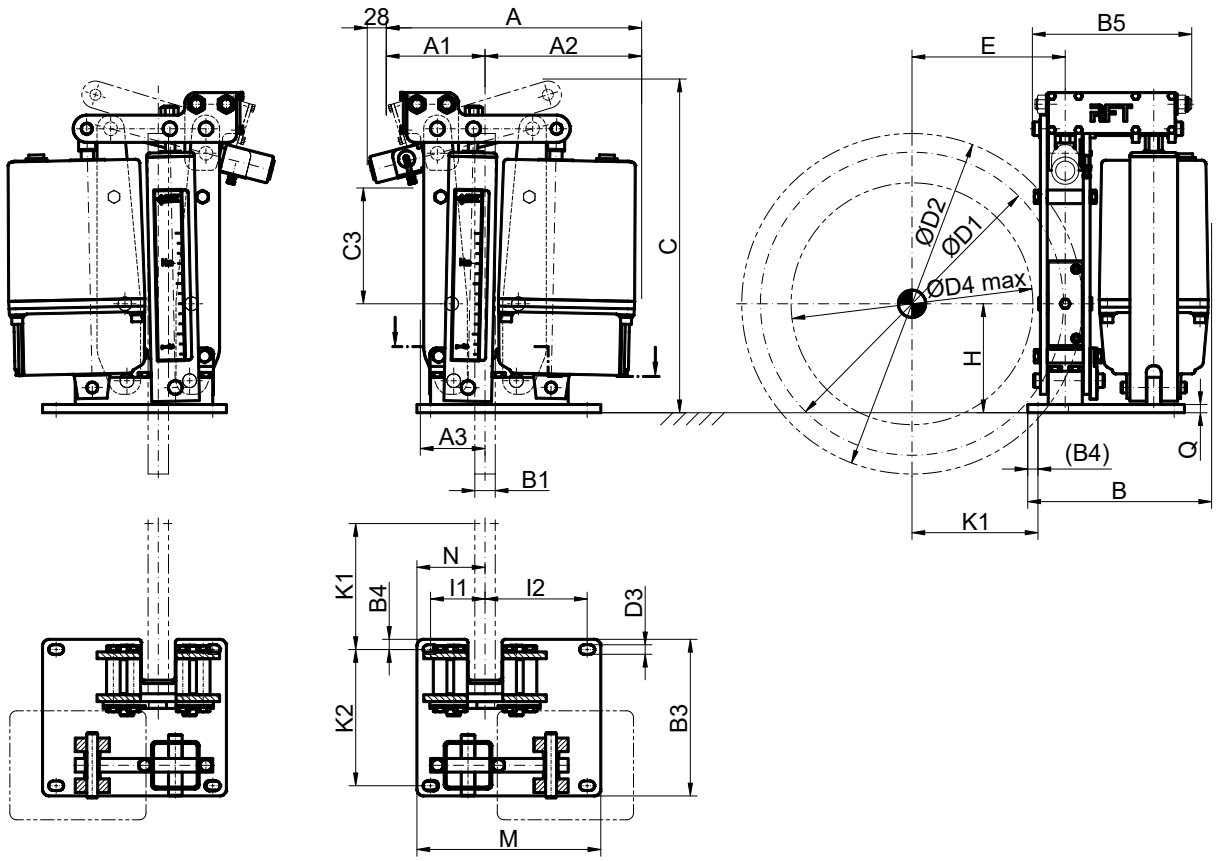
RFT
RÖMER FÖRDERTECHNIK

Disc Brake RSTN-0

electro-hydraulically actuated, synchronous lifting mechanism SLM

Technical Data

RÖMER FÖRDERTECHNIK



Left hand version (L) **Right hand version (R)**

Dimensions in mm

Brake disc						Brake lining	Weight	Thruster type	max. Braking torque [Nm] at μ_{dyn}= 0,4 [1]			
D2	B1 [4]	D1	D4	E	K1	AB [cm²]	[kg] [2]	**DIN 15430:** RBL-TH:		**Ed 250-60** TH-256		**Ed 350-60** TH-356
250	30 (20)	195	114	100,5	60,5	34,5	32,5			240		390
280		225	144	115,5	75,5					275		450
315		260	179	133	93					320		520
355		300	219	153	113					365		600
400		345	264	175,5	135,5					420		690
450		395	314	200,5	160,5					480		785
500		445	364	225,5	185,5					545		890
						Max. Pad force ca.				3060 N		5000 N

Thruster acc. to DIN 15430	A	A1	A2	A3	B	B3	B4	B5	C	C3	D3	H	I1	I2	K2	M	N	Q
Ed 250-60	385	145	240	95	270	230	15	235	490	170	14	160	80	150	200	270	100	12
Ed 350-60																		

1) The different operation factors can influence the friction coefficient μ. They should thus be taken into consideration in addition to the guiding rules of DIN 15434 and FEM 1.001, part 1 when dimensioning the brake.

The specified braking torques apply to dynamic braking on brake discs made of steel with sintered brake linings working at operating temperature and sliding speeds v up to 60 m/s. The operating temperature should not exceed 350 °C and the max. thermal flow density $\dot{q} = p \cdot \mu \cdot v = 800$ W/cm². For individual emergency stop brakes in conjunction with frequency-controlled drives, a maximum limit of 1200 W/cm² applies for a single brake application.

The holding torque of statically closing brakes could be lower.

2) Weight of the brake without thruster

3) For brakes with automatic wear compensator AVN the dimensions A and A1 are increased by 28 mm.

4) Brakes for discs with thickness B1 = 20 mm are available on request, too.

Römer Fördertechnik GmbH • Nielandstraße 53 • 58300 Wetter • GERMANY
Email: info@roemer-foerdertechnik.de • Phone: +49 (0) 23 35 / 80 29 – 0

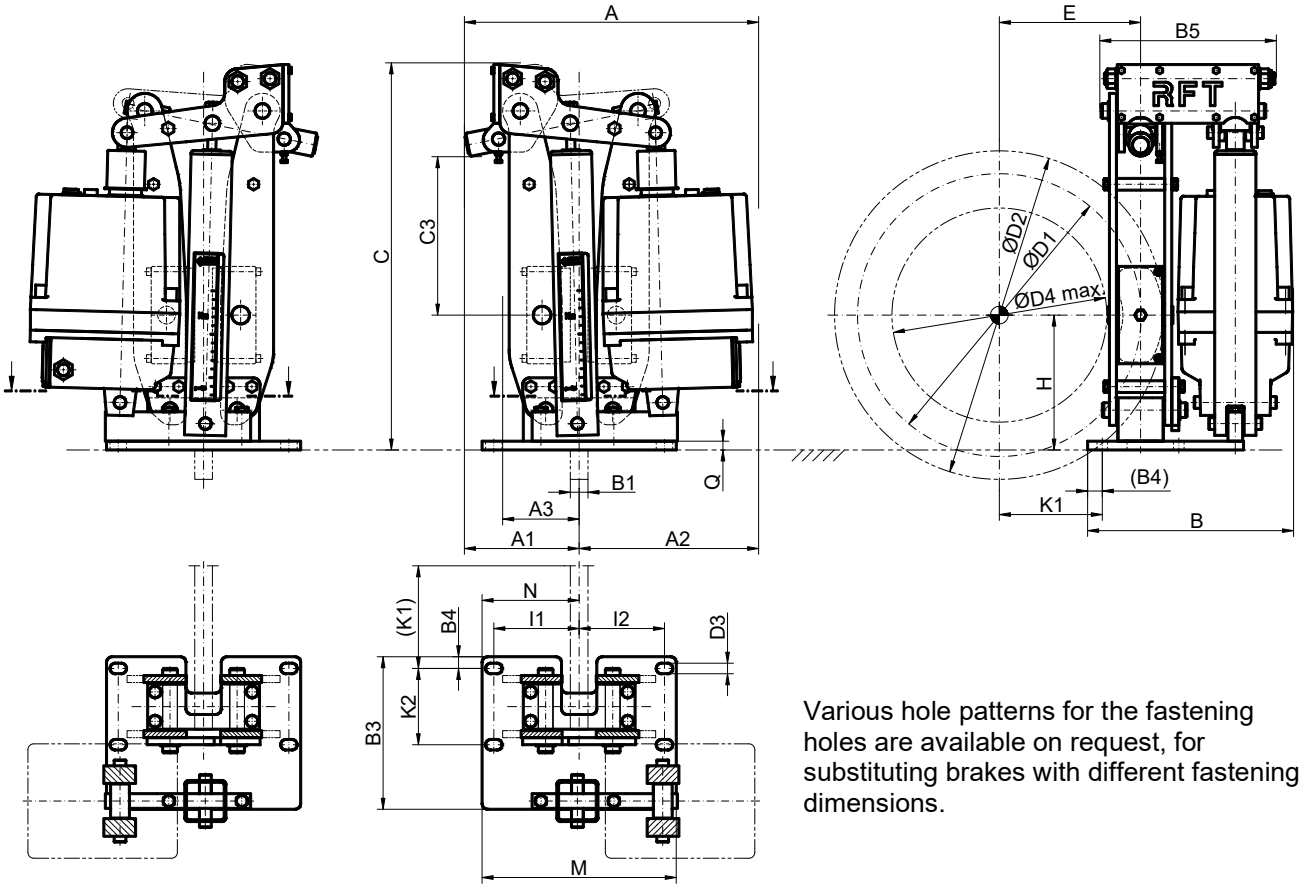
Modifications reserved – 240419
Web: www.roemer-foerdertechnik.de

Disc Brake RSTN-1

electro-hydraulically actuated, synchronous lifting mechanism SLM

Technical Data

RÖMER FÖRDERTECHNIK



Various hole patterns for the fastening holes are available on request, for substituting brakes with different fastening dimensions.

Left hand version (L) **Right hand version (R)**

Dimensions in mm

Brake disc						Brake lining	Weight	Thruster type	max. Braking torque [Nm] at μ_{dyn}= 0,4 [1]			
D2	B1	D1	D4	E	K1	AB [cm²]	[kg] [2]	**DIN 15430:** RBL-TH:	**Ed 250-60** TH 256	**Ed 350-60** TH 356	**Ed 500-60** TH-506	**Ed 800-60** TH-806
315	30	237	120	118	53	105	76		300	390	760	1200
355		277	160	138	73				350	455	890	1400
400		322	205	160	95				405	525	1030	1600
450		372	255	185	120				465	605	1190	1850
500		422	305	210	145				525	685	1350	2100
560		482	365	240	175				600	780	1540	2400
630		552	435	275	210				690	900	1760	2750
710		632	515	315	250				790	1030	2015	3150
						Max. Pad force ca.			3130 N	4075 N	8000 N	12450 N

Thruster according to DIN 15430	A	A1	A2	A3	B	B3	B4	B5	C	C3	D3	H	I1	I2	K2	M	N	Q
Ed 250-60	470	195	275	130	322	260	20	300	660	260	18	230	145	145	130	330	165	15
Ed 350-60	465		270		322					260								
Ed 500-60	500		305		350					270								
Ed 800-60	500		305		350					270								

1) The different operation factors can influence the friction coefficient μ. They should thus be taken into consideration in addition to the guiding rules of DIN 15434 and FEM 1.001, part 1 when dimensioning the brake.

The specified braking torques apply to dynamic braking on brake discs made of steel with sintered brake linings working at operating temperature and sliding speeds v up to 60 m/s. The operating temperature should not exceed 350 °C and the max. thermal flow density $\dot{q} = p \cdot \mu \cdot v = 800$ W/cm². For individual emergency stop brakes in conjunction with frequency-controlled drives, a maximum limit of 1200 W/cm² applies for a single brake application.

The holding torque of statically closing brakes could be lower.

2) Weight of the brake without thruster

Römer Fördertechnik GmbH • Nielandstraße 53 • 58300 Wetter • GERMANY
Email: info@roemer-foerdertechnik.de • Phone: +49 (0) 23 35 / 80 29 – 0

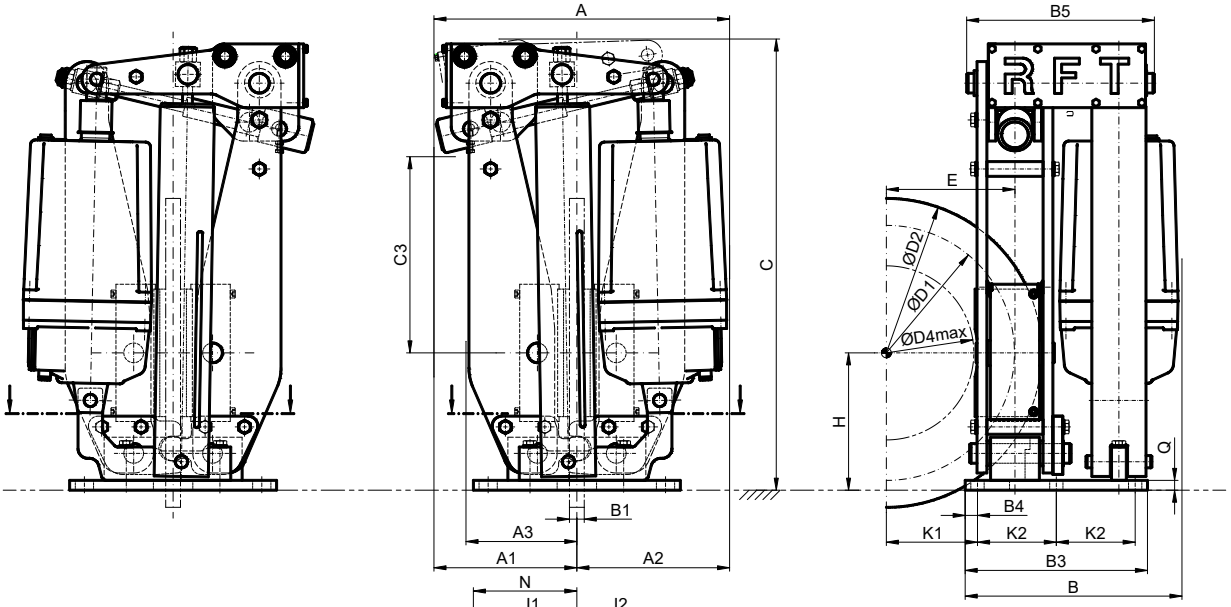
Modifications reserved – 240419
Web: www.roemer-foerdertechnik.de

Disc Brake RSTN-2

electro-hydraulically actuated, synchronous lifting mechanism SLM

Technical Data

RÖMER FÖRDERTECHNIK



Various hole patterns for the fastening holes are available on request, for substituting brakes with different fastening dimensions.
All RSTN-2 brakes in standard version are additionally provided with the hole pattern of the RST-2 disc brakes and can be exchanged for them.

Left hand version (L) **Right hand version (R)**

Dimensions in mm

Brake disc						Brake lining	Weight	Thruster type	max. Braking torque [Nm] at μ_{dyn}= 0,4 [1]			
D2	B1	D1	D4	E	K1	AB [cm²]	[kg] [2]	**DIN 15430:** RBL-TH:	**Ed 500-60** TH-506	**Ed 800-60** TH-806	**Ed 1250-60** TH-1306	**Ed 2000-60** TH-2006
450	30	359	196	173	95	170	155		1050	1670	2560	4050
500		409	246	198	120				1195	1900	2910	4600
560		469	306	228	150				1375	2180	3340	5300
630		539	376	263	185				1575	2500	3830	6100
710		619	456	303	225				1810	2870	4400	7000
800		709	546	348	270				2100	3320	5100	8100
900		809	646	398	320				2400	3790	5820	9240
1000		909	746	448	370				2695	4255	5640	10385
						Max. Pad force ca.			7400 N	11700 N	17980 N	28550 N

Thruster acc. to DIN 15430	A	A1	A2	A3	B	B3	B4	B5	C	C3	D3	H	I1	I2	K2	M	N	Q
Ed 500-60	615	255	360	165	410	370	25	380	870	350	27	280	180	180	160	420	210	15
Ed 800-60	615		360		415													
Ed 1250-60	605		350		430													
Ed 2000-60	605		350		435													

1) The different operation factors can influence the friction coefficient μ. They should thus be taken into consideration in addition to the guiding rules of DIN 15434 and FEM 1.001, part 1 when dimensioning the brake.

The specified braking torques apply to dynamic braking on brake discs made of steel with sintered brake linings working at operating temperature and sliding speeds v up to 60 m/s. The operating temperature should not exceed 350 °C and the max. thermal flow density $\dot{q} = p \cdot \mu \cdot v = 800$ W/cm². For individual emergency stop brakes in conjunction with frequency-controlled drives, a maximum limit of 1200 W/cm² applies for a single emergency brake application.

The holding torque of statically closing brakes could be lower.

2) Weight of the brake without thruster

Römer Fördertechnik GmbH • Nielandstraße 53 • 58300 Wetter • GERMANY
Email: info@roemer-foerdertechnik.de • Phone: +49 (0) 23 35 / 80 29 – 0

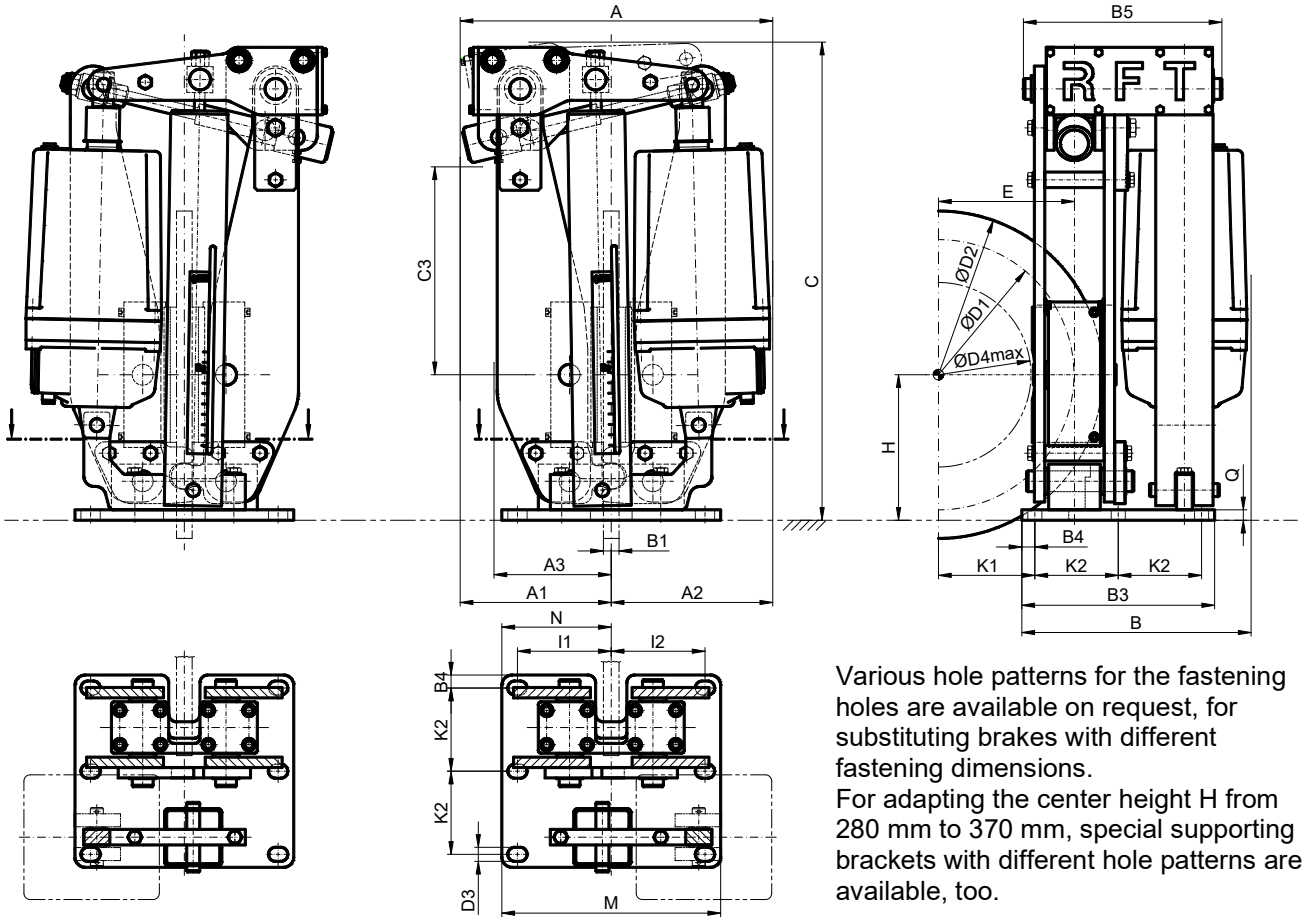
Modifications reserved – 240419
Web: www.roemer-foerdertechnik.de

Disc Brake RSTN-3

electro-hydraulically actuated, synchronous lifting mechanism SLM

Technical Data

RÖMER FÖRDERTECHNIK



Various hole patterns for the fastening holes are available on request, for substituting brakes with different fastening dimensions.
For adapting the center height H from 280 mm to 370 mm, special supporting brackets with different hole patterns are available, too.

Left hand version (L)

Right hand version (R)

Dimensions in mm

Brake disc						Brake lining	Weight	Thruster type	max. Braking torque [Nm] at μ_{dyn}= 0,4 [1]			
D2	B1	D1	D4	E	K1	AB [cm²]	[kg] [2]	**DIN 15430:** RBL-TH:	**Ed 2000-60** TH-2006	**Ed 3000-60** TH-3006	**Ed 4000-60** TH-4006	**Ed 4000-80** TH-4008
500	30	390	225	196	120	263	275		4030	5950	7940	10400
560		450	285	226	150	270			4660	6850	9150	12000
630		520	355	261	185				5380	7950	10600	13900
710		600	435	301	225				6200	9150	12200	16000
800		690	525	346	270				7140	10530	14000	18400
900		790	625	396	320				8170	12050	16000	21100
1000		890	725	446	370				9210	13580	18000	23800
						Max. Pad force ca.			25,8 kN	38,1 kN	50,7 kN	66,6 kN

Thruster acc. to DIN 15430	A	A1	A2	A3	B	B3	B4	B5	C	C3	D3	H	I1	I2	K2	M	N	Q
Ed 2000-60	600	290	310	225	440	370	25	400	920	400	27	280	180	180	160	420	210	20
Ed 3000-60																		
Ed 4000-60																		
Ed 4000-80	608	298							940	420								

1) The different operation factors can influence the friction coefficient μ. They should thus be taken into consideration in addition to the guiding rules of DIN 15434 and FEM 1.001, part 1 when dimensioning the brake.

The specified braking torques apply to dynamic braking on brake discs made of steel with sintered brake linings working at operating temperature and sliding speeds v up to 60 m/s. The operating temperature should not exceed 350 °C and the max. thermal flow density $\dot{q} = p \cdot \mu \cdot v = 800$ W/cm². For individual emergency stop brakes in conjunction with frequency-controlled drives, a maximum limit of 1200 W/cm² applies for a single emergency brake application.

The holding torque of statically closing brakes could be lower.

2) Weight of the brake without thruster

Römer Fördertechnik GmbH • Nielandstraße 53 • 58300 Wetter • GERMANY
Email: info@roemer-foerdertechnik.de • Phone: +49 (0) 23 35 / 80 29 – 0

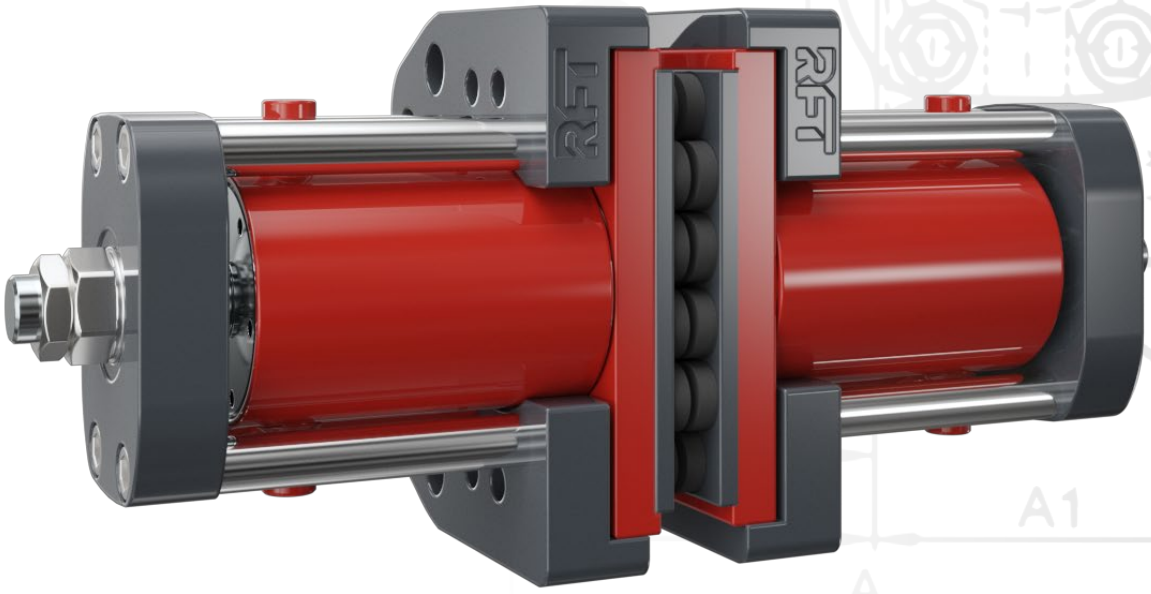
Modifications reserved – 240419
Web: www.roemer-foerdertechnik.de



TYP SCFH

- Safety disc brake direct acting at the board disc of a rope drum
- Sizes: SCFH 1-20 up to SCFH 4–400
- Max contact force: from 20 kN up to 400 kN (at air gap 2 mm)
- Sinter brake pads
- Hydraulic control

For further informations see technical catalogue.



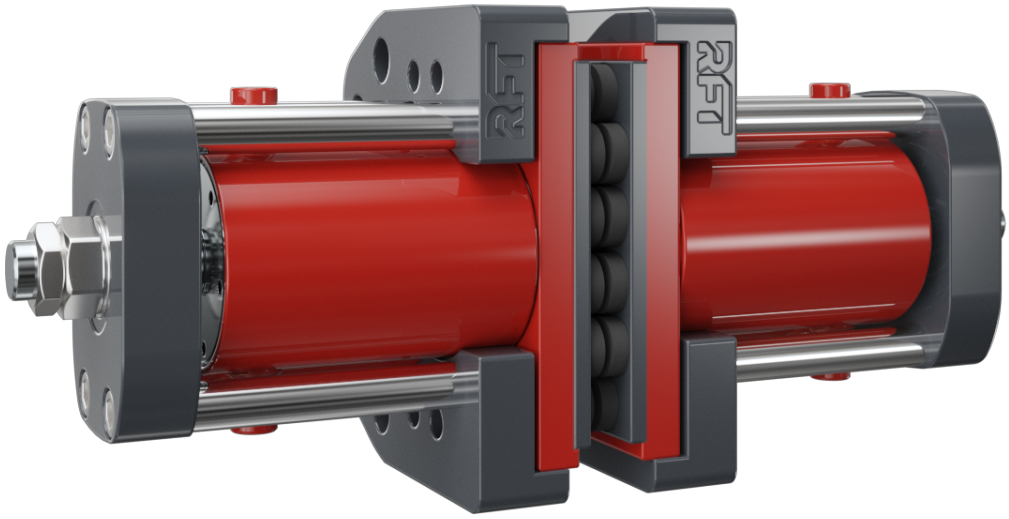
ORIGINAL – MADE IN GERMANY

RÖMER FÖRDERTECHNIK

Disc Brake Caliper SCFH

Direct acting, hydraulic release.

RÖMER FÖRDERTECHNIK



Operating Principle

- Spring applied braking force
- Hydraulic release
- Fail Safe (if power fails the brake applies)

Arrangement

- Direct acting without linkages
- Fixed, not floating

Notable Features

- High braking torque, direction of rotation independent
- Supplied ready assembled, with pre-tensioned braking springs
- Two identical halves, and can be mounted in any position
- Manual adjustment for brake wear. Air-gap adjustable in the range of 1 to 3 mm
- standard low wear sintered pads with μ = 0,4
- Encapsulated hydraulic system. The hydraulic piston is fitted behind the spring-pack, away from the friction zone. As a result the hydraulic seals and fluid are not subjected to braking heat, and no cooling is required to achieve reliable long term sealing and operation.

Römer Fördertechnik GmbH • Nielandstraße 53 • 58300 Wetter • GERMANY
Email: info@roemer-foerdertechnik.de • Phone: +49 (0) 23 35 / 80 29 – 0

Modifications reserved – 240419
Web: www.roemer-foerdertechnik.de

Options and Accessories:

- Monitoring switches to indicate brake open, brake closed, brake lining wear
- Manual release, using a hand pump on the Hydraulic Power Pack
- Hydraulic Power Pack, which can also be configured to operate multiple calipers
- Special versions for very high or very low temperatures
- Hydraulic systems with hardly inflammable or biodegradable hydraulic fluids
- Brake discs either with hub or flange mounting

Technical Data

Performance Data:

Size	Spring Pack	Pad force F_{an} per cylinder at airgap (s)			Brake Pad		Hydraulic Release Pressure	weight
		s = 1 mm	**s = 2 mm**	s = 3 mm	Friction Coeff. μ [1]	Surface area [cm²]	[bar] [3]	[kg] [2]
SCFH-1 - 80	80	85,5 kN	**76,6 kN**	68,3 kN	0,4	132	180	85
SCFH-1 - 60	60	57,9 kN	**54,3 kN**	50,7 kN	0,4	132	120	85
SCFH-1 - 50	50	51,2 kN	**49,3 kN**	47,4 kN	0,4	132	100	85
SCFH-1 - 40	40	39,9 kN	**38,5 kN**	37,2 kN	0,4	132	85	85
SCFH-1 - 30	30	30,1 kN	**29,0 kN**	28,0 kN	0,4	132	60	85
SCFH-1 - 20	20	20,0 kN	**19,6 kN**	19,3 kN	0,4	132	45	85
SCFH-2 - 140	140	156 kN	**140 kN**	122 kN	0,4	280	195	155
SCFH-2 - 120	120	136 kN	**120 kN**	102 kN	0,4	280	170	155
SCFH-2 - 100	100	117 kN	**100 kN**	81,6 kN	0,4	280	150	155
SCFH-3 - 240	240	255 kN	**240 kN**	222 kN	0,4	320	200	280
SCFH-3 - 180	180	197 kN	**180 kN**	162 kN	0,4	320	155	280
SCFH-4 - 400	400	435 kN	**400 kN**	365 kN	0,4	570	215	540
SCFH-4 - 300	300	321 kN	**300 kN**	278 kN	0,4	570	155	540

1) Various factors can affect the friction coefficient μ, including surface speed, contact pressure, thermal loading, contact surface condition, brake disc material and environmental conditions. For brake selection, those factors should be considered in addition to the guidelines given in DIN 15434.
The given braking torques are valid for dynamic braking with heat generation and rubbing speed up to 25 m/s for organic pads, or 60 m/s for sintered pads. The service temperature of organic pads should not exceed 250 °C, and sintered pads should not exceed 600 °C. The values indicated refer to the brake discs out of steel, for divergent materials low limiting values can be necessary

2) Mass of caliper without mounting pedestal or hydraulic power pack

3) Max. allowable hydraulic pressure: 250 bar.

Determining the Brake Torque:

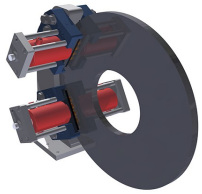
The effective brake torque of a complete brake caliper is calculated using the following formula

$T_{Br} = \mu \cdot F_{an} \cdot D1$

The effective diameter D1 can be found using the formula below on this page.

Alternatively, the effective braking torque can be taken from the displayed diagram.

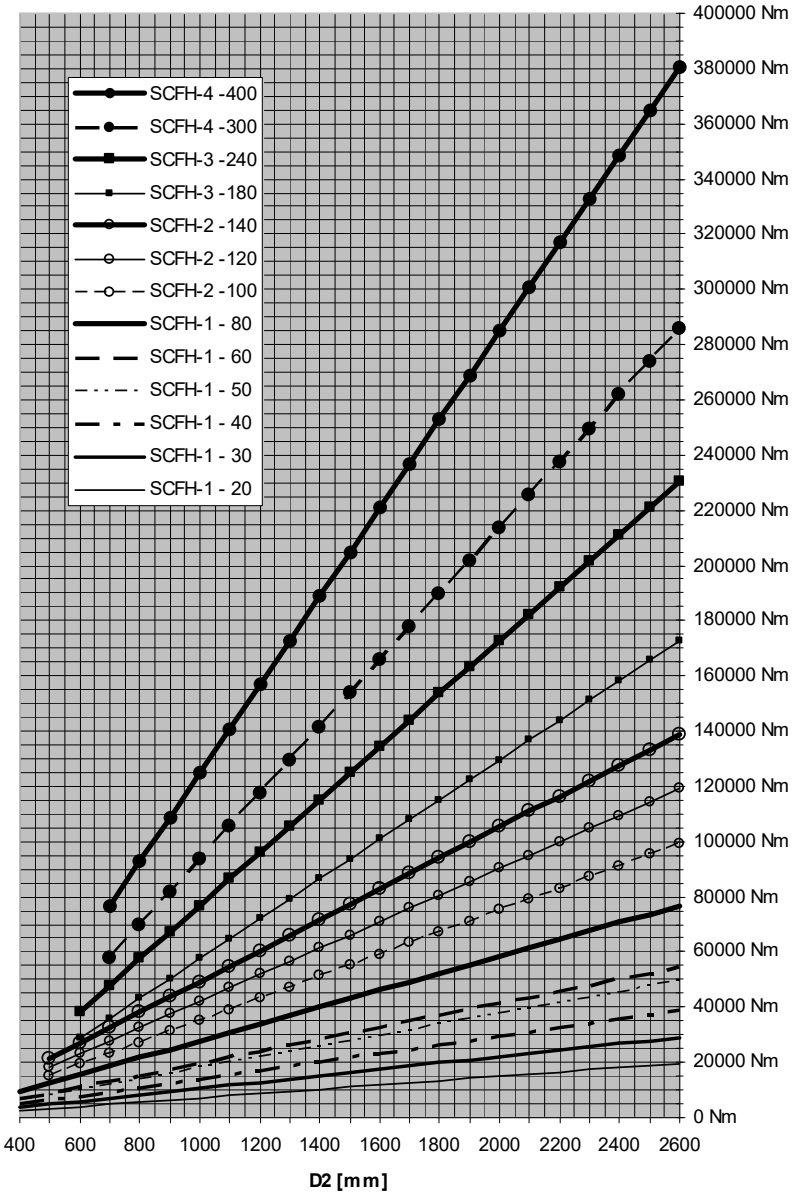
Combinations of multiple calipers are possible to get a wide range of contact force.



Examples:

4 x SCFH – 4 => 1600 kN
contact force
for s = 2 mm airgap

1 x SCFH-1-80 => 77 kN
1 x SCFH-2-120 => 120 kN
2 x SCFH-1-80 => 154 kN
1 x SCFH-3-240 => 240 kN
4 x SCFH-1-80 => 308 kN
2 x SCFH-3-240 => 480 kN
2 x SCFH-4-400 => 800 kN
4 x SCFH-3-240 => 960 kN



Special Design and combinations on request!

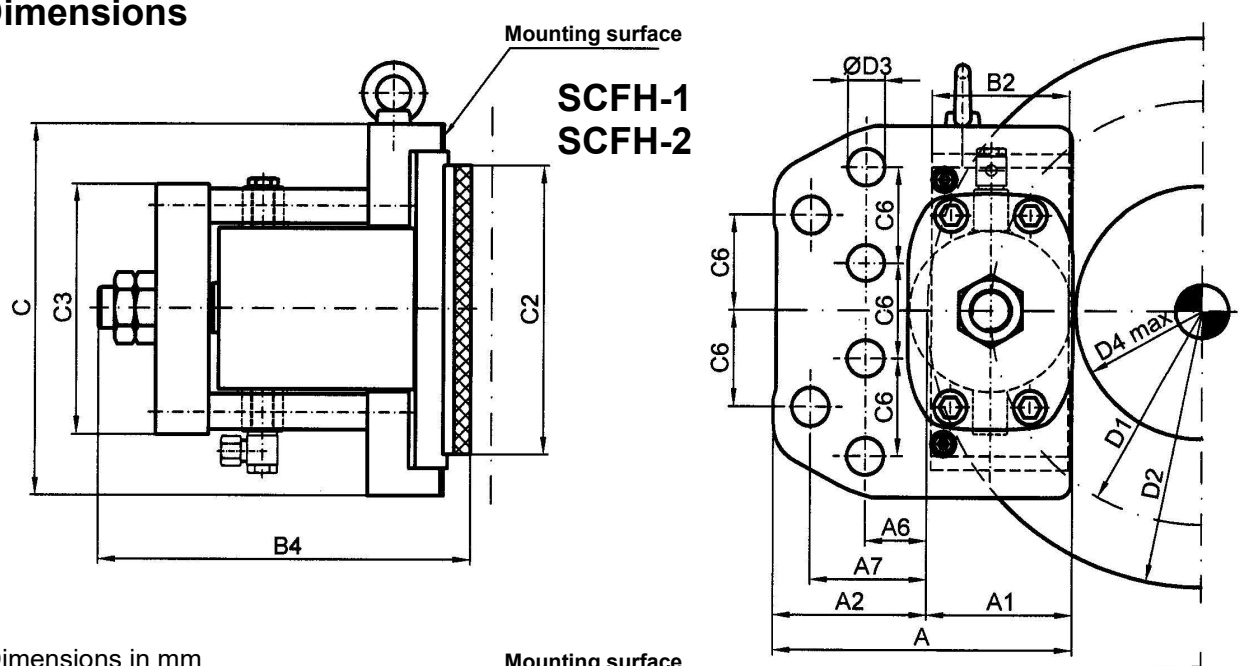
Dimensions dependent on the brake disc:

Size	D2	B1	B_{max}	B3	B6	D1	$D4_{max}$
SCFH-1			620 + B1	532 + B1	40 + B1	D2 - 92	D2 - 215
SCFH-2			720 + B1	596 + B1	50 + B1	D2 - 120	D2 - 305
SCFH-3			810 + B1	692 + B1	60 + B1	D2 - 200	D2 - 440
SCFH-4			950 + B1	825 + B1	70 + B1	D2 - 220	D2 - 490

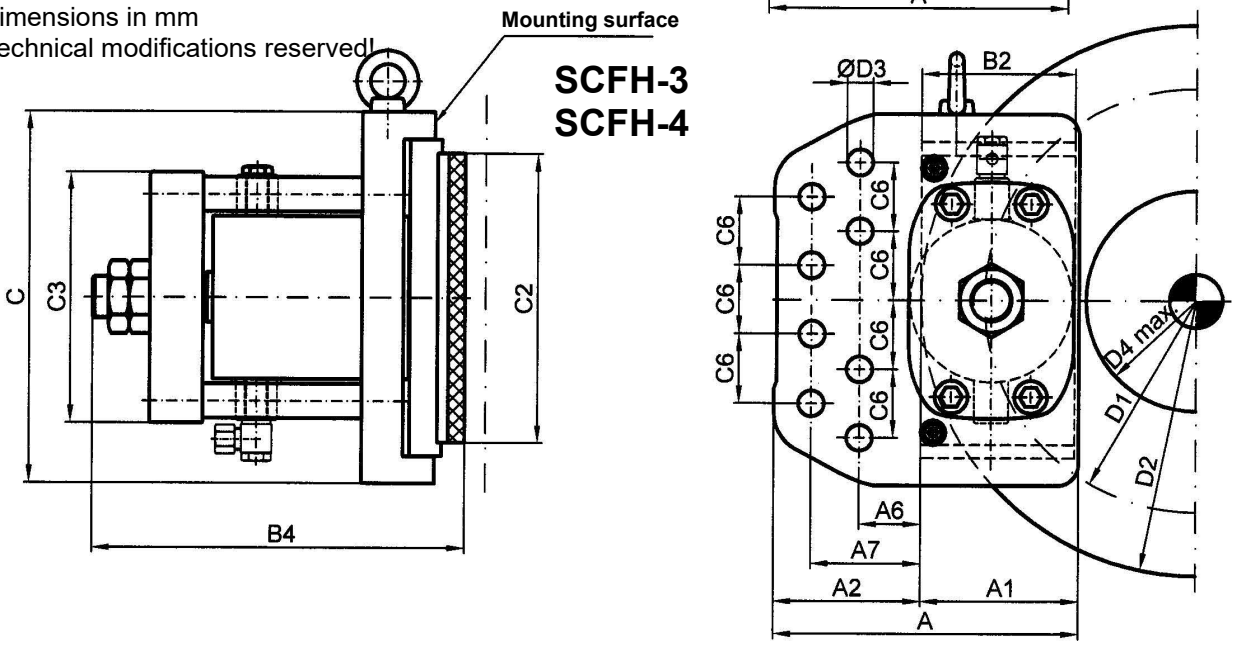
Brake disc outer diameter D2, and disc thickness B1 are customer supplied dimensions.

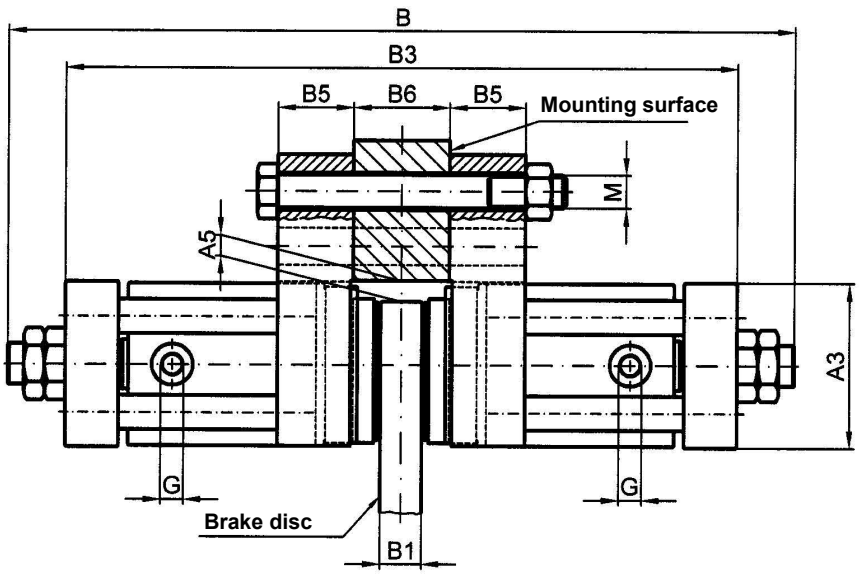
Size	A	A1	A2	A3	A5	A6	A7	B2	B4	B5	C	C2	C3	C6	D3	G	M
SCFH-1	213	106	107	120	15	40	80	100	302	55	270	210	182	70	27 (6x)	G3/8	M24 (8.8)
SCFH-2	306	156	150	152	15	45	110	130	360	67	320	260	220	75	31 (6x)	G3/8	M30 (8.8)
SCFH-3	390	220	170	180	12	35	135	200	405	70	360	300	270	75	31 (8x)	G3/8	M30 (8.8)
SCFH-4	440	240	200	180	12	55	155	225	475	94	480	410	310	100	38 (8x)	G1/2	M36 (8.8)

Dimensions



Dimensions in mm
Technical modifications reserved!





WE ARE RFT.

RÖMER Fördertechnik GmbH
Nielandstr. 53
58300 Wetter/Ruhr
Germany

+49 (0) 2335 80290
info@roemer-foerdertechnik.de
www.rft-germany.com

RÖMER FÖRDERTECHNIK

As from: 04.24 – Design: Erik Meurers · www.plusminusvier.de