Service Brakes

ELECTROMAGNETIC SERVICE BRAKES

MAIN CHARACTERISTICS

- FAILSAFE BRAKE BY SPRING APPLICATION
- ELECTROMAGNETIC RELEASE
- OPENING PROVING SWITCH

OPTIONS

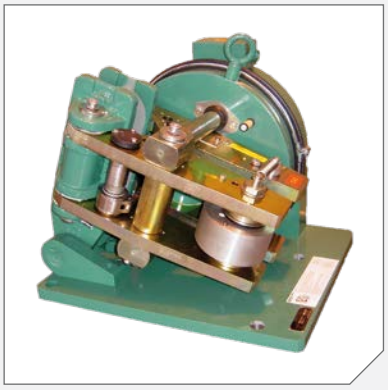
- MECHANICAL RELEASE LEVER
- HYDRAULIC RELEASE
- CLOSING PROVING SWITCH
- MANUAL RELEASE CONTROL SWITCH
- HIGH TEMPERATURE, IRON AND STEEL CONDITIONS

645-650-660

- Association with discs Ø175 to 625
- Manual wear compensation
- Option:
  Mounting on a vertical axis disc

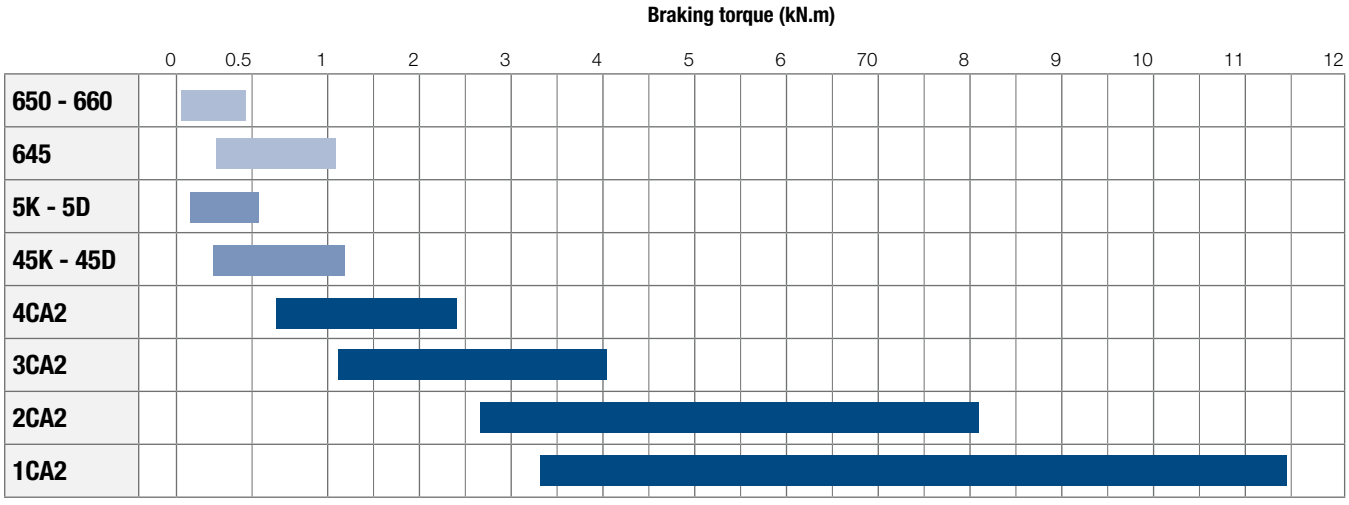
5K - 5D
45K - 45D

- Association with discs Ø315 to 625
- Automatic wear compensation
- Option:
  Mounting on a vertical axis disc



4CA2 - 3CA2
2CA2 - 1CA2

- Association with discs Ø445 to 995
- Automatic wear compensation
- Left and right hand calipers
- Option: Manual wear compensation



Service Brakes

DISC BRAKE - 5K AND 5KR CALIPERS

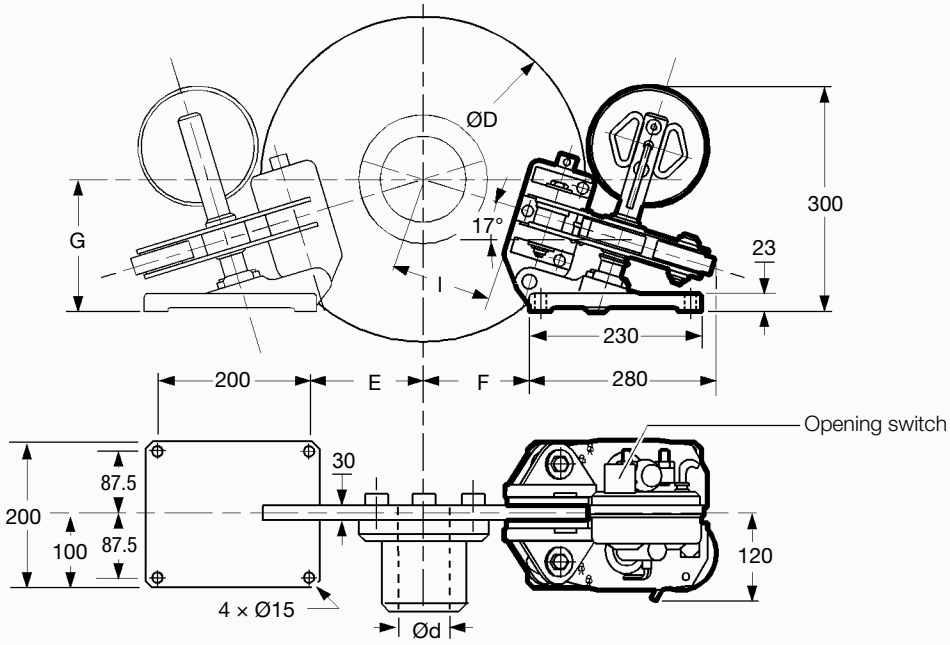
Revision number: T03350-01-D **Revision date: 21.03.2016**

Fail safe braking
Spring application
Electromagnetic release
Automatic wear compensation
Detection of full lining wear
Brake pads with wear indicator
Opening proving switch
With coil supply wire: 2 × 2mm², length 2m

Conditions of use:
- Ambiant temperature - 10°C to + 60°C
- Relative humidity ≤ 70 %
- Dust in atmosphere ≥ 65 µ

Other conditions, consult us.

Options:
- Manual release lever
- Hydraulic release
- Marine protection
- Vertical mounting
- Reduced torque
- Closing proving switch
- Manual release switch



Opening proving switch :

250VAC maxi., 5A maxi., with interrupting capacity: 50VA maxi.

220VDC maxi., 5A maxi., with interrupting capacity: 50W maxi.

Compatible with PLC (Programmable Logic Controllers). An opening switch used with other equipment than PLC must not be reused with a PLC.

The opening switch is delivered with 3 x 0.75mm² cable, length 2m

Weight: 27 kg
Dimensions in mm

Response time at nominal torque : see the leaflet of the associated electrical power supply.

Discs			315	355	395	445	495	550	625
Maximum speed of the disc for nominal torque		rpm	3000	2700	2400	2100	1900	1800	1500
D		mm	315	355	395	445	495	550	625
d		mm	0-50	0-60	0-70	0-70	0-100	0-100	0-100
E		mm	100	120	140	160	190	220	255
F		mm	85	105	125	145	175	205	240
G		mm	160	164	170	180	185	195	205
I (approx. dimension)		mm	72	92	113	135	160	197	233
Caliper 5K :									
Nominal torque for 1 caliper adjustable from - 50% to +20%		N.m.	190	220	260	300	350	390	460
Maximum reaction on shaft	1 caliper	N	1950						
	2 calipers	N	1150						
Caliper 5KR :									
Nominal torque for 1 caliper adjustable from 100% to -50%		N.m.	95	110	130	150	175	195	230
Maximum reaction on shaft	1 caliper	N	815						
	2 calipers	N	480						

DISC BRAKE - 5KE CALIPER

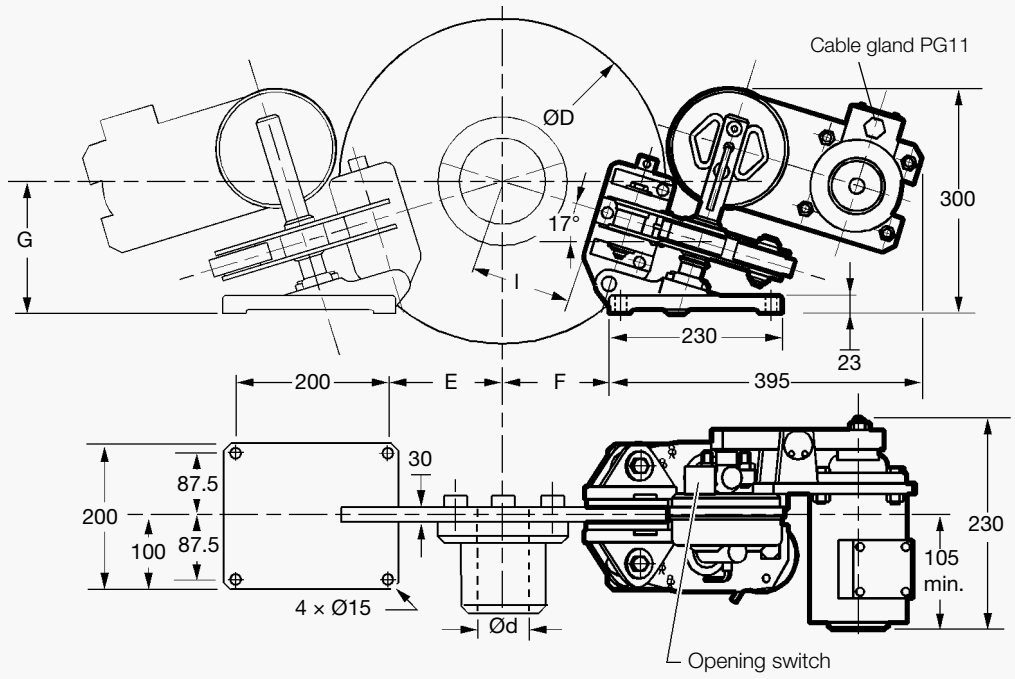
Revision number: T03400-01-D **Revision date: 21.03.2016**

Fail safe braking
Spring application
Electromagnetic release
Electrical progressive braking
Automatic wear compensation
Detection of full lining wear
Opening proving switch
With coil supply wire: 2 × 2mm², length 2m

Conditions of use:
- Ambiant temperature - 10°C to + 60°C
- Relative humidity ≤ 70 %
- Dust in atmosphere ≥ 65 µ

Other conditions, consult us.

Options:
- Hydraulic release
- Marine protection
- Vertical mounting



Opening proving switch :

250VAC maxi., 5A maxi., with interrupting capacity: 50VA maxi.

220VDC maxi., 5A maxi., with interrupting capacity: 50W maxi.

Compatible with PLC (Programmable Logic Controllers). An opening switch used with other equipment than PLC must not be reused with a PLC.

Opening switch is delivered with 3 x 0.75mm² cable, length 2 m

Weight: 45 kg
Dimensions in mm

Response time at nominal torque : see the leaflet of the associated electrical power supply.

Discs			315	355	395	445	495	550	625
Progressive torque for 1 caliper adjustable from 0% to 100% ✱		N.m	190	220	260	300	350	390	460
Nominal torque for 1 caliper adjustable from 100% to -50%		N.m	190	220	260	300	350	390	460
Maximum speed of the disc for nominal torque		rpm	3000	2700	2400	2100	1900	1800	1500
D		mm	315	355	395	445	495	550	625
d		mm	0-50	0-60	0-70	0-70	0-100	0-100	0-100
E		mm	100	120	140	160	190	220	255
F		mm	85	105	125	145	175	205	240
G		mm	160	164	170	180	185	195	205
I (approx. dimension)		mm	72	92	113	135	160	197	233
Maximum reaction on shaft	1 caliper	N	1950						
	2 calipers	N	1150						

✱ For electro with working rate of 40%

Service Brakes

DISC BRAKE - 5D AND 5DR CALIPERS

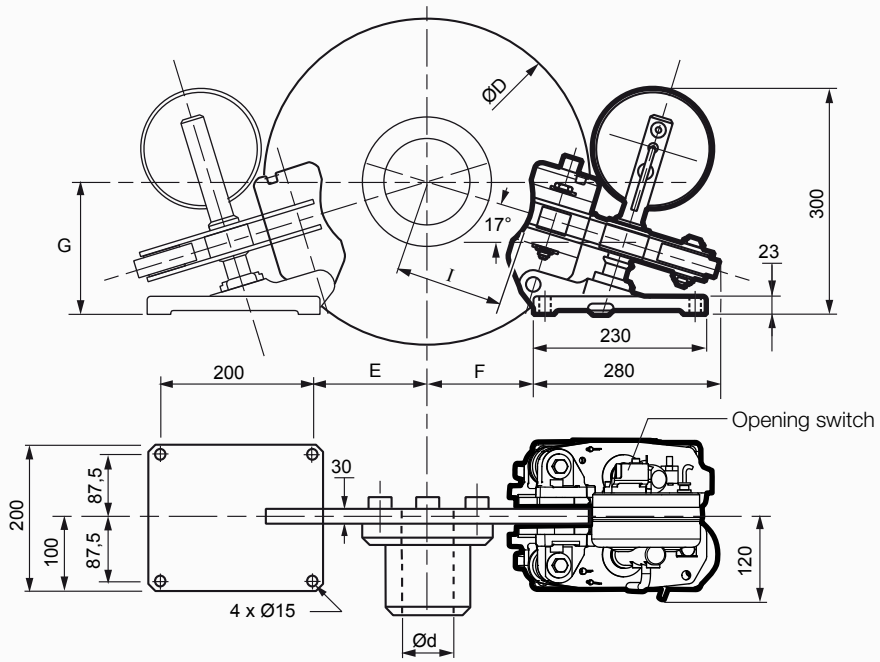
Revision number: T03360-01-E **Revision date: 21.03.2016**

Fail safe braking
Spring application
Electromagnetic release
Automatic wear compensation
Brake pads with wear indicator
Opening proving switch
With coil supply wire: 2 × 2mm², length 2m

Conditions of use:
- Ambiant temperature - 10°C to + 60°C
- Relative humidity ≤ 70 %
- Dust in atmosphere ≥ 65 µ

Other conditions, consult us.

Options:
- Manual release lever
- Hydraulic release
- Marine protection
- Vertical mounting
- Reduced torque
- Closing proving switch
- Manual release switch



Opening proving switch :

250VAC maxi., 5A maxi., with interrupting capacity: 50VA maxi.

220VDC maxi., 5A maxi., with interrupting capacity: 50W maxi.

Compatible with PLC (Programmable Logic Controllers). An opening switch used with other equipment than PLC must not be reused with a PLC.

The opening switch is delivered with 3 x 0.75mm² cable, length 2m

Weight: 27 kg
Dimensions in mm

Response time at nominal torque : see the leaflet of the associated electrical power supply.

Discs			220 M30	260 M30	315 M30	315	355	395	445	495	550	625
Maximum speed of the disc for nominal torque		rpm	4300	3600	3000	3000	2700	2400	2100	1900	1800	1500
D		mm	220	260	315	315	355	395	445	495	550	625
d		mm	20-55	30-55	35-60	0-50	0-60	0-70	0-70	0-100	0-100	0-100
E		mm	65	80	100	100	120	140	160	190	220	255
F		mm	50	65	85	85	105	125	145	175	205	240
G		mm	150	153	160	160	164	170	180	185	195	205
l (approx. dimension)		mm	51	68	88	88	108	128	151	176	213	248
Caliper 5D :												
Nominal torque for 1 caliper adjustable from - 50% to +20%		N.m.	130	150	190	190	220	260	300	350	390	460
Maximum reaction on shaft	1 caliper	N	1950									
	2 calipers	N	1150									
Caliper 5DR :												
Nominal torque for 1 caliper adjustable from 100% to -50%		N.m.	65	75	95	95	110	130	150	175	195	230
Maximum reaction on shaft	1 caliper	N	815									
	2 calipers	N	480									

DISC BRAKE - 5DE CALIPER

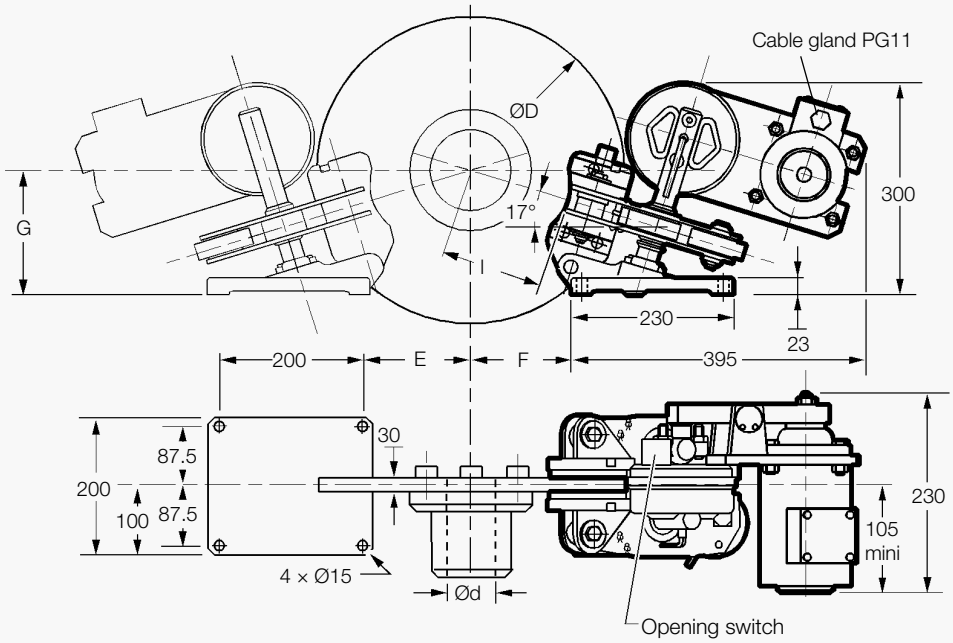
Revision number: T03410-01-D **Revision date: 22.03.2016**

Fail safe braking
Spring application
Electromagnetic release
Electrical progressive braking
Automatic wear compensation
Detection of full lining wear
Opening proving switch
With coil supply wire: 2 × 2mm², length 2m

Conditions of use:
- Ambiant temperature - 10°C to + 60°C
- Relative humidity ≤ 70 %
- Dust in atmosphere ≥ 65 µ

Other conditions, consult us.

Options:
- Hydraulic release
- Marine protection
- Vertical mounting



Opening proving switch :

250VAC maxi., 5A maxi., with interrupting capacity: 50VA maxi.

220VDC maxi., 5A maxi., with interrupting capacity: 50W maxi.

Compatible with PLC (Programmable Logic Controllers). An opening switch used with other equipment than PLC must not be reused with a PLC.

Opening switch is delivered with 3 x 0.75mm² cable, length 2 m

Weight: 45 kg
Dimensions in mm

Response time at nominal torque : see the leaflet of the associated electrical power supply.

Discs			220M30	260M30	315M30	315	355	395	445	495	550	625
Progressive torque for 1 caliper adjustable from 0% to 100% ✱		N.m	130	150	190	190	220	260	300	350	390	460
Nominal torque for 1 caliper adjustable from 100% to -50%		N.m	130	150	190	190	220	260	300	350	390	460
Maximum speed of the disc for nominal torque		rpm	4300	3600	3000	3000	2700	2400	2100	1900	1800	1500
D		mm	220	260	315	315	355	395	445	495	550	625
d		mm	20-55	30-55	35-60	0-50	0-60	0-70	0-70	0-100	0-100	0-100
E		mm	65	80	100	100	120	140	160	190	220	255
F		mm	50	65	85	85	105	125	145	175	205	240
G		mm	150	153	160	160	164	170	180	185	195	205
I (approx. dimension)		mm	51	68	88	88	108	128	151	176	213	248
Maximum reaction on shaft	1 caliper	N	1950									
	2 calipers	N	1150									

✱ For electro with working rate of 40%

Service Brakes

DISC BRAKE - 45K and 45D calipers

Revision number: T00140-01-I **Revision date: 21.03.2016**

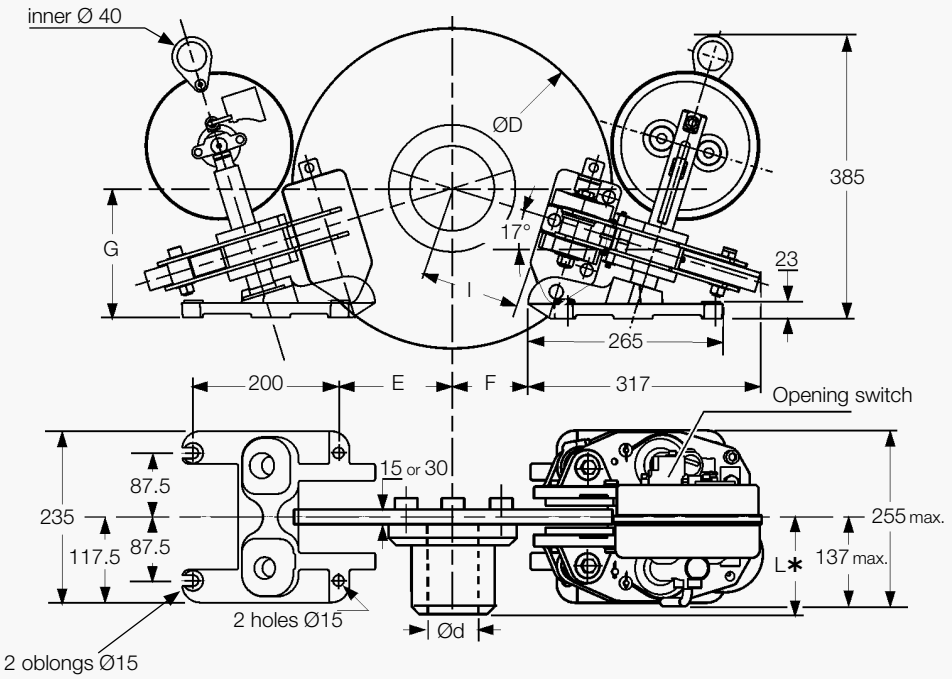
Fail safe braking
Spring application
Electromagnetic release
Automatic linings wear compensation
Opening proving switch
Coil with supply wire: 2 × 2mm², length 2m
Association with 30mm thick discs (or 15mm in option)
Shoes DIN (caliper 45D) for discs thickness 30mm only.

Conditions of use :
- Ambiant temperature -20°C to + 60°C
- Relative humidity ≤ 70 %
- Dust in atmosphere ≥ 65 µ

Other conditions, consult us.

Use:
- Service brake for application ≤ 600 cycles / h
  Possibility of quick manoeuvres :
  1000 cycles/h during 15s every 2 mn

Options:
- Mechanical release lever or hydraulic release
- Manual wear compensation (RM)
- Marine protection
- SIDHT steel industry high temperature
- Bearing brackets for mounting in place of a caliper 645.
- Mounting on a vertical axis disc.
- Closing proving switch
- Manual release switch



Nota :
The 45K-RM and 45D-RM calipers (manual wear compensation option) have the same overall dimensions as the 45K and 45D calipers with automatic wear compensation.

∗ ATTENTION
For discs Ø315 to 395, the length of 137 max. is higher than the length L of the standard hub. Provide space at the rear of the hub by means of a spacer.

Opening proving switch :
250VAC maxi., 5A maxi., with interrupting capacity: 50VA maxi.
220VDC maxi., 5A maxi., with interrupting capacity: 50W maxi.

Compatible with PLC (Programmable Logic Controllers). An opening switch used with other equipment than PLC must not be reused with a PLC.

Weight: 41 kg
Dimensions in mm

Response time at nominal torque : see the leaflet of the associated electrical power supply.
Caliper delivered in standard with WS1-5 lining.
For energy applications. use WS1-3 (torque loss of 20%).

Designation		Discs	solid and thickness 15 mm (option)							ventilated and thickness 30 mm						
D Disc diameter		mm	**315**	**355**	**395**	**445**	**495**	**550**	**625**	**315**	**355**	**395**	**445**	**495**	**550**	**625**
Nominal torque for 1 caliper adjustable from -30% to +20%		N.m	410	470	560	650	750	840	990	410	470	560	650	750	840	990
Maximum speed of the disc for nominal torque		r.p.m.	3000	2700	2400	2100	1900	1800	1500	3000	2700	2400	2100	1900	1800	1500
d		mm	0-75	0-75	0-75	0-75	0-100	0-100	0-100	0-50	0-60	0-70	0-70	0-100	0-100	0-100
E		mm	100	120	140	160	190	220	255	100	120	140	160	190	220	255
F		mm	50	70	90	110	140	170	205	50	70	90	110	140	170	205
G		mm	160	164	170	180	185	195	205	160	164	170	180	185	195	205
I (calipers **45K. 45K-RM**)		mm	75	95	116	138	168	200	236	75	95	116	138	168	200	236
I (caliper **45D**)		mm								75	95	116	138	168	200	236
I (caliper **45D-RM**)		mm								96	116	137	159	189	221	257
Maximum reaction on shaft	1 Caliper	N	4200													
	2 Calipers	N	2450													