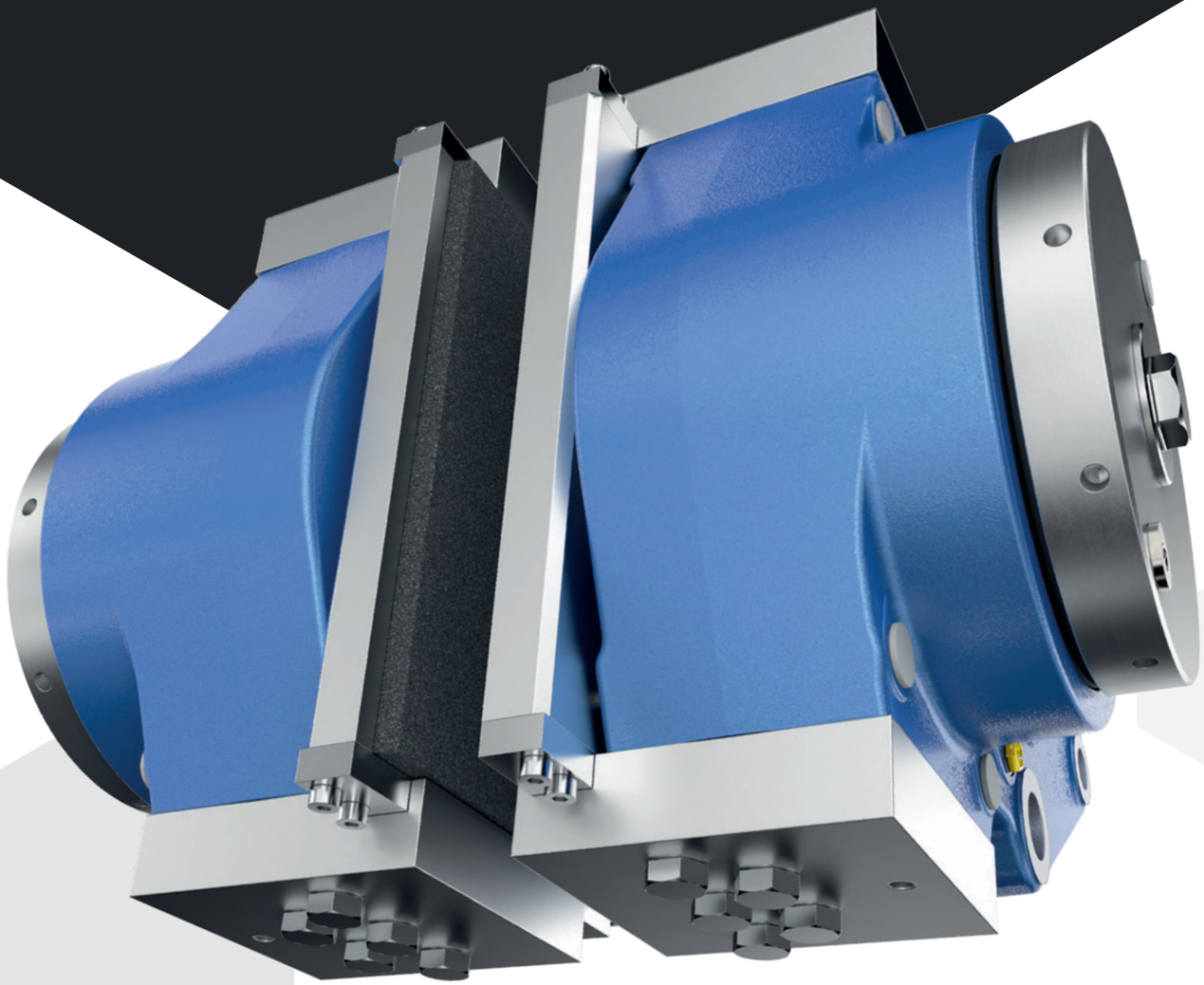
Made for Motion KTR



Brake systems

KTR-STOP®
EMB-STOP
SBT Systems

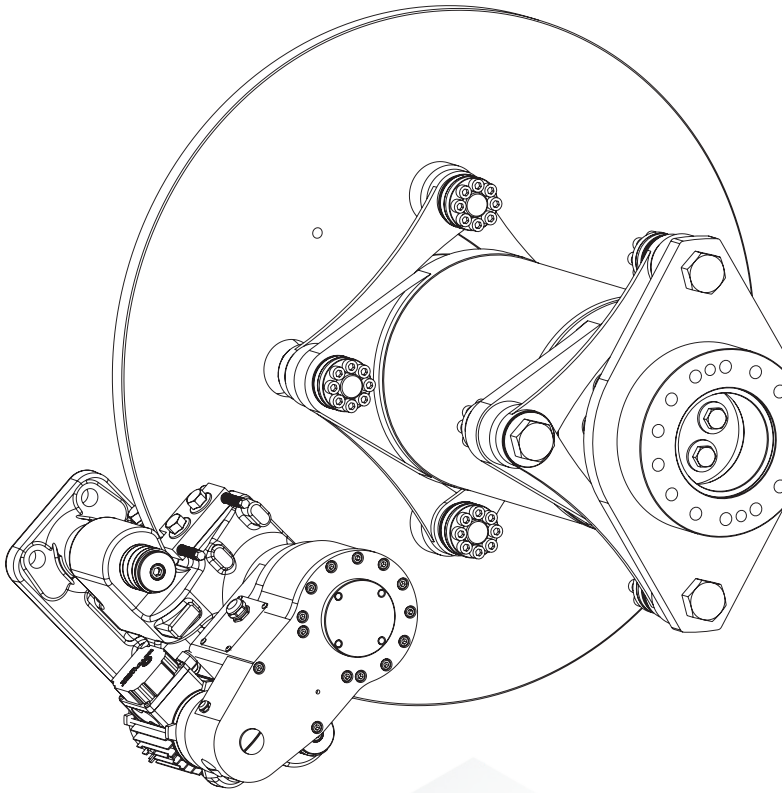
2026/27
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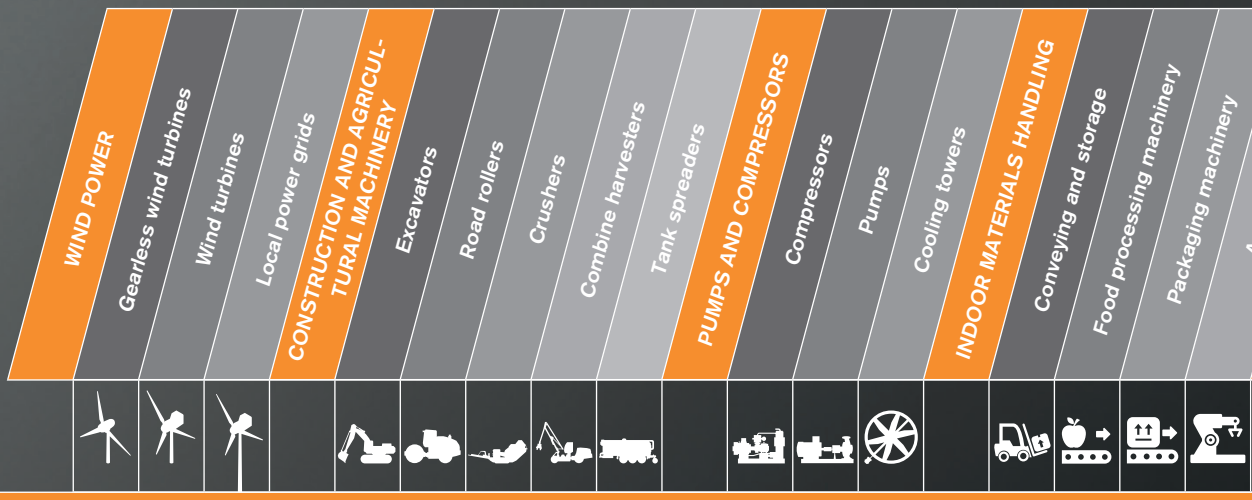
An innovative ambience for innovative ideas

KTR-STOP® and EMB-STOP - these two brake systems have been consolidated since 2014. We are specifically proud of the location: the „Competence Center for Brake Systems“. It is located in Schloß Holte-Stukenbrock in East Westphalia and the head office of the new KTR Brake Systems GmbH.

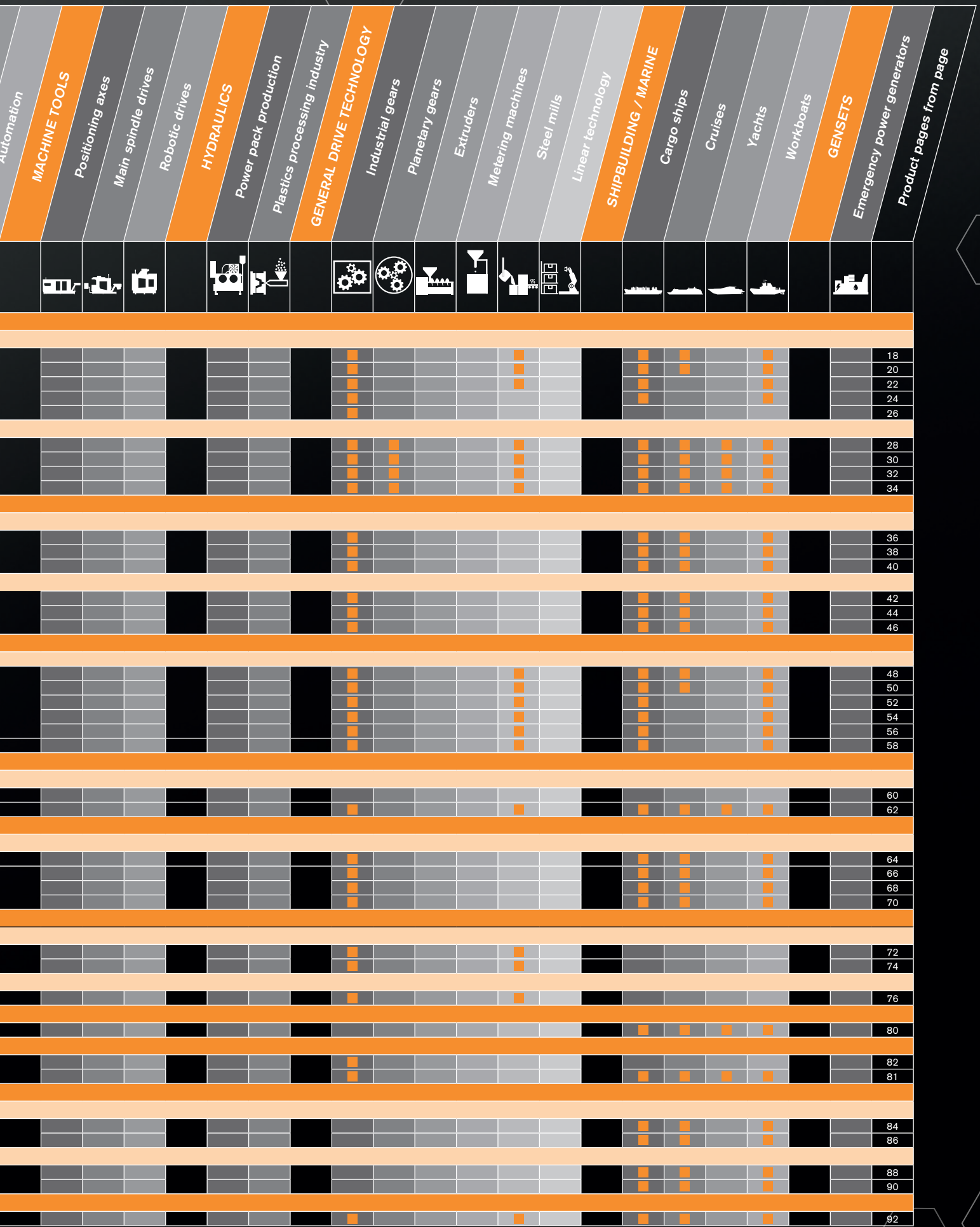
By the way: The Competence Center well deserves its name. Since KTR develops all measures dealing with brake systems in these state-of-the-art premises. The brake components of both series are developed, designed and tested here. A special cryogenic cooling chamber allows for tests even with temperatures down to -50 °C making the brakes ready for wind and weather in this way.



SUMMARY OF PRODUCTS/INDUSTRIES



	WIND POWER	Gearless wind turbines	Wind turbines	Local power grids	CONSTRUCTION AND AGRICULTURAL MACHINERY	Excavators	Road rollers	Crushers	Combine harvesters	Tank spreaders	PUMPS AND COMPRESSORS	Compressors	Pumps	Cooling towers	INDOOR MATERIALS HANDLING	Conveying and storage	Food processing machinery	Packaging machinery
PASSIVE FLOATING CALIPER BRAKES																		
Hydraulic brake system																		
KTR-STOP® XS-xx-F	■	■			■								■		■			
KTR-STOP® S-xx-F	■	■			■								■		■			
KTR-STOP® M-xxx-F	■	■																
KTR-STOP® XL-xxx-F																		
KTR-STOP® XXL-xxxx-F																		
Electromechanical brake system																		
EMB-STOP XS-P-xx-F	■	■											■		■			
EMB-STOP S-P-xx-F Soft-Braking	■	■											■		■			
EMB-STOP S-P-xx-F Fast-Braking													■		■			
EMB-STOP M-P-xx-F Fast-Braking													■		■			
ACTIVE FLOATING CALIPER BRAKES																		
Hydraulic brake system																		
KTR-STOP® XS-A-F	■	■											■					
KTR-STOP® S-A-F	■	■											■					
KTR-STOP® M-A-F	■	■											■					
Electromechanical brake system																		
EMB-STOP XS-A-xx-F	■	■											■					
EMB-STOP S-A-xx-F	■	■											■					
EMB-STOP L-A-xxx-F	■	■											■					
PASSIVE FIXED CALIPER BRAKES																		
Hydraulic brake system																		
KTR-STOP® XS-xx					■								■		■			
KTR-STOP® S-xx					■								■		■			
KTR-STOP® M-xxx																		
KTR-STOP® L light-xxx																		
KTR-STOP® L-xxx																		
KTR-STOP® XL-xxx																		
ACTIVE FIXED CALIPER BRAKE																		
Hydraulic brake system																		
KTR-STOP® M-D	■	■																
KTR-STOP® L light-A																		
YAW BRAKES																		
Hydraulic brake system																		
KTR-STOP® YAW XS	■	■			■								■					
KTR-STOP® YAW S	■	■			■								■					
KTR-STOP® YAW M	■	■			■								■					
KTR-STOP® YAW L	■	■			■								■					
THRUSTER BRAKES																		
Electrohydraulic brake system																		
KTR-STOP® TB S																		
KTR-STOP® TB T																		
Electrohydraulic thrusters																		
KTR-STOP® TB thruster																		
STOP-BLOCK-TURN-SYSTEM																		
SBT System																		
Electrical control systems																		
IntelliRamp®																		
EMB-STOP Control Box	■	■											■					
ROTOR LOCK																		
Hydraulic system																		
KTR-STOP® RL S	■	■																
KTR-STOP® RL M	■	■																
Electromechanical system																		
EMB-STOP RL S	■	■																
EMB-STOP RL M	■	■																
HUBS WITH BRAKE DISKS																		
KTR-STOP® NBS					■								■		■			

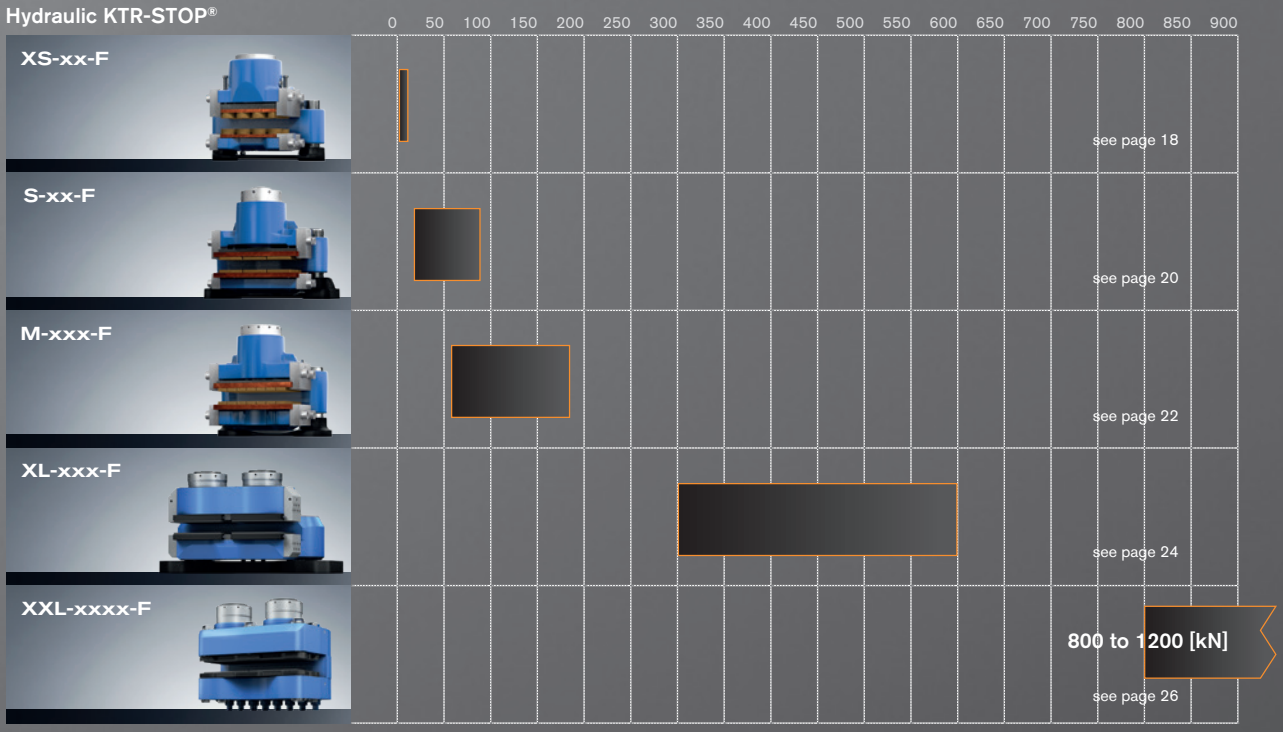

Automation
MACHINE TOOLS
Positioning axes
Main spindle drives
Robotic drives
HYDRAULICS
Power pack production
Plastics processing industry
GENERAL DRIVE TECHNOLOGY
Industrial gears
Planetary gears
Extruders
Metering machines
Steel mills
Linear technology
SHIPBUILDING / MARINE
Cargo ships
Cruises
Yachts
Workboats
GENSETS
Emergency power generators
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Clamping forces of brake systems

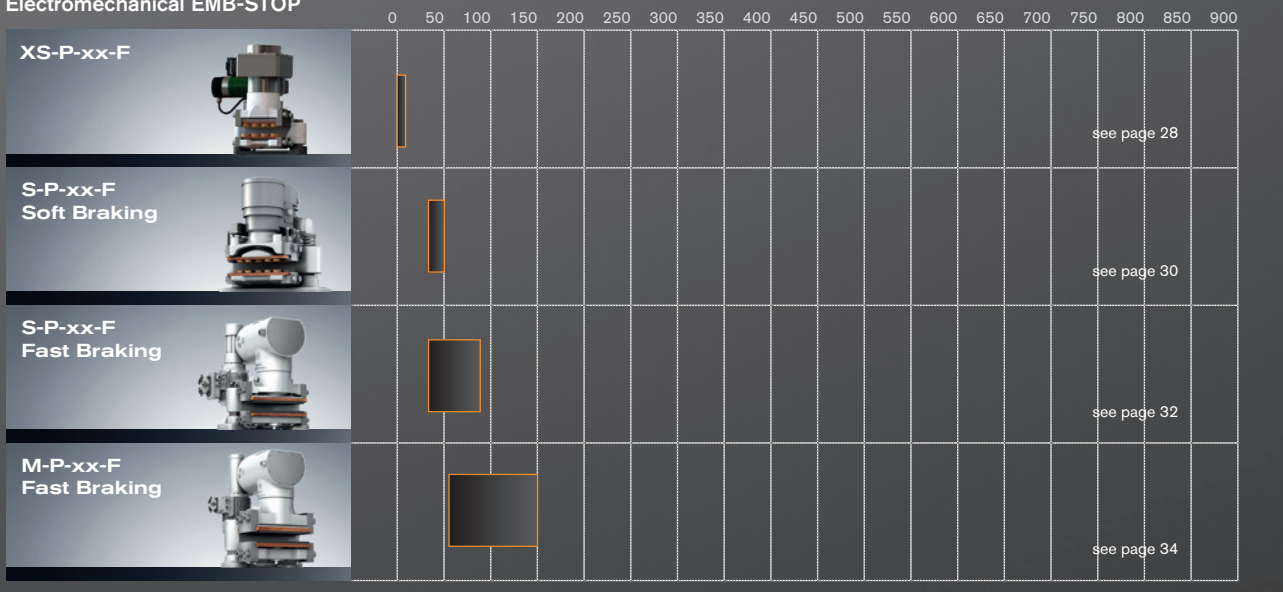
Passive floating caliper brakes

Clamping forces [kN]

Hydraulic KTR-STOP®



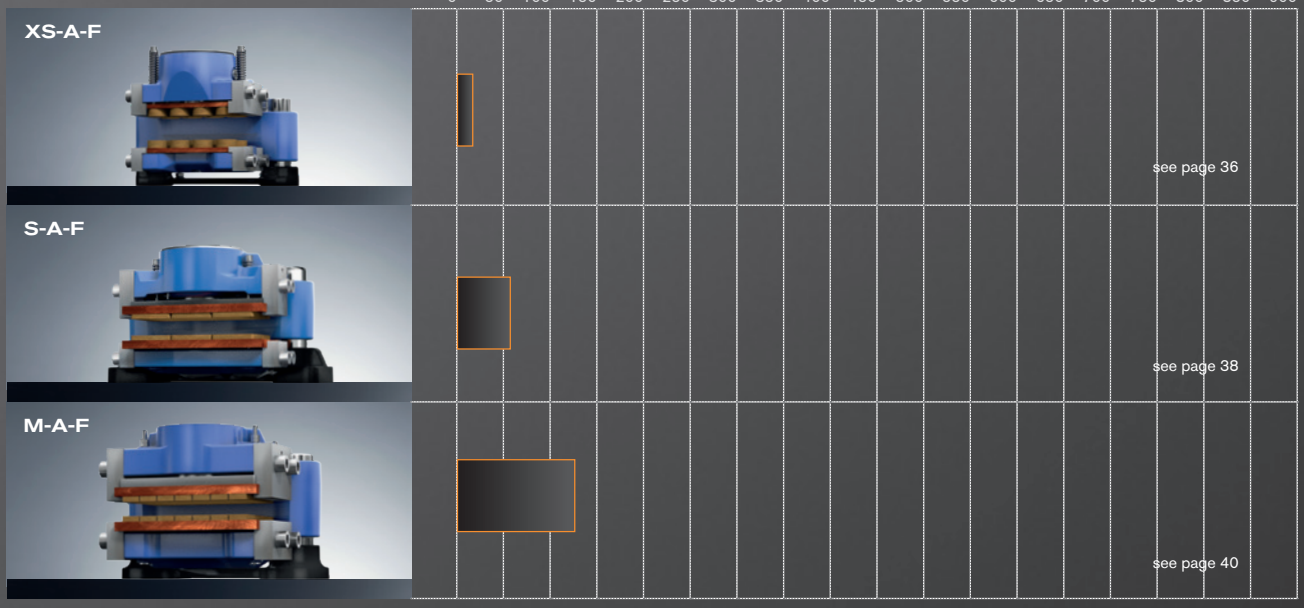
Electromechanical EMB-STOP



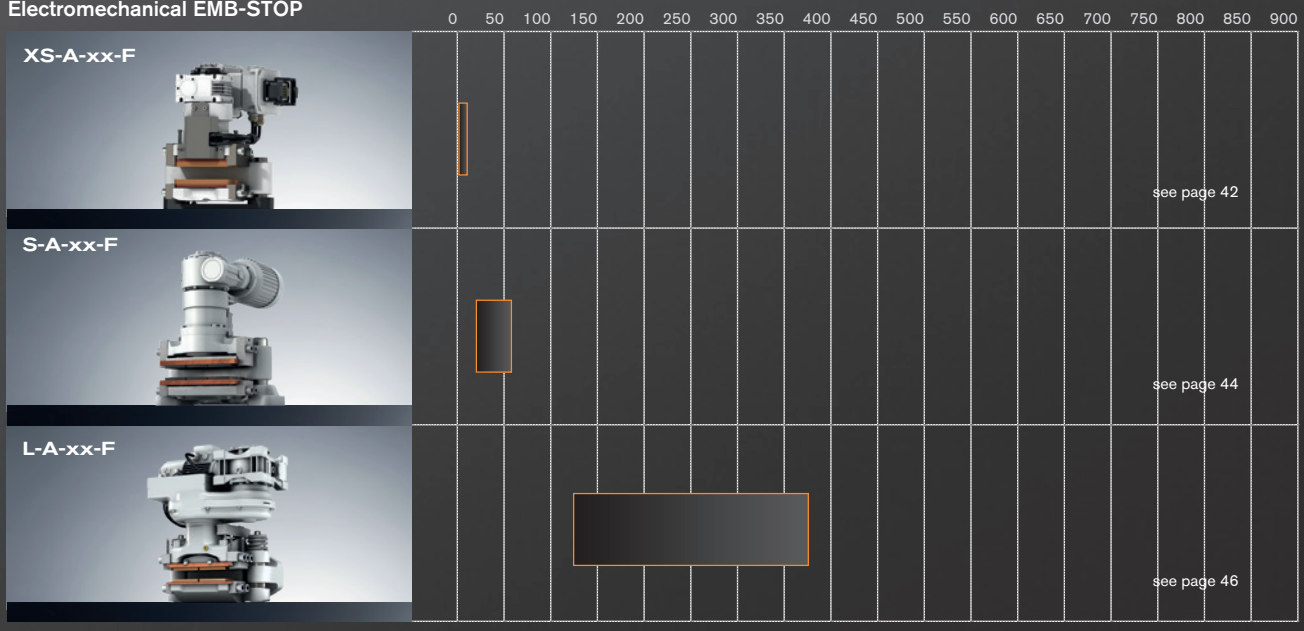
Active floating caliper brakes

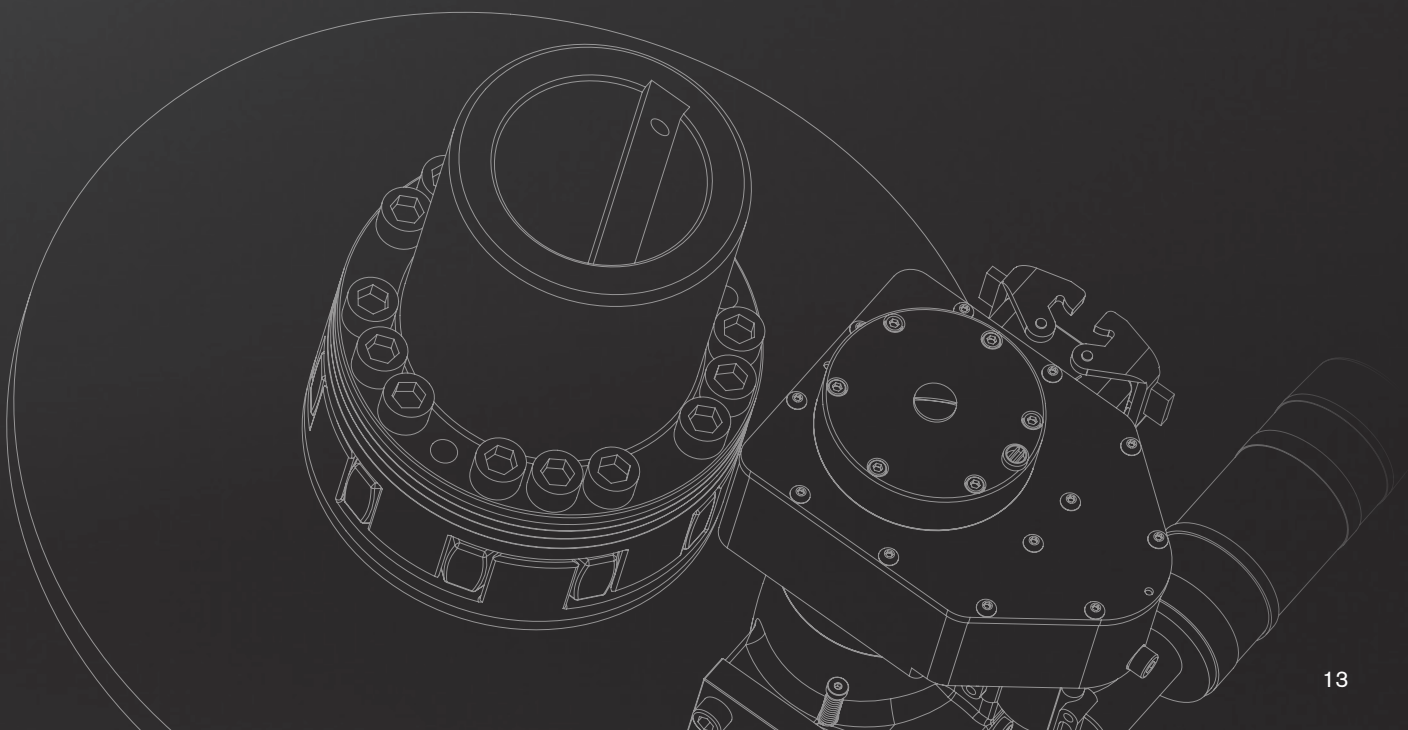
Clamping forces [kN]

Hydraulic KTR-STOP®



Electromechanical EMB-STOP





Clamping forces of brake systems

Passive fixed caliper brakes

Hydraulic KTR-STOP®

Clamping forces [kN]

0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900

XS-xx 

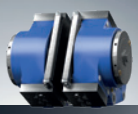
see page 48

S-xx 

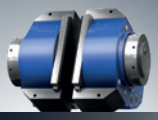
see page 50

M-xxx 

see page 52

L light-xxx 

see page 54

L-xxx 

see page 56

XL-xxx 

see page 58

Active fixed caliper brake

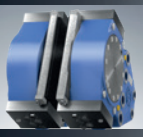
Hydraulic KTR-STOP®

Clamping forces [kN]

0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900

M-D 

see page 60

L light-A 

see page 62

Yaw brakes

Hydraulic KTR-STOP®

Clamping forces [kN]

0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900

YAW XS 

see page 64

YAW S 

see page 66

YAW M 

see page 68

YAW L 

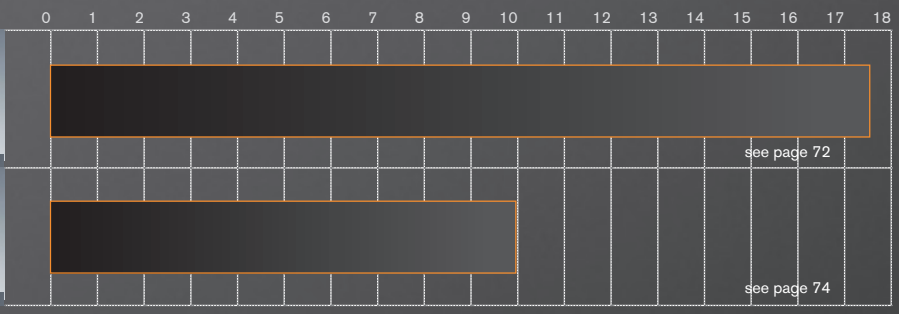
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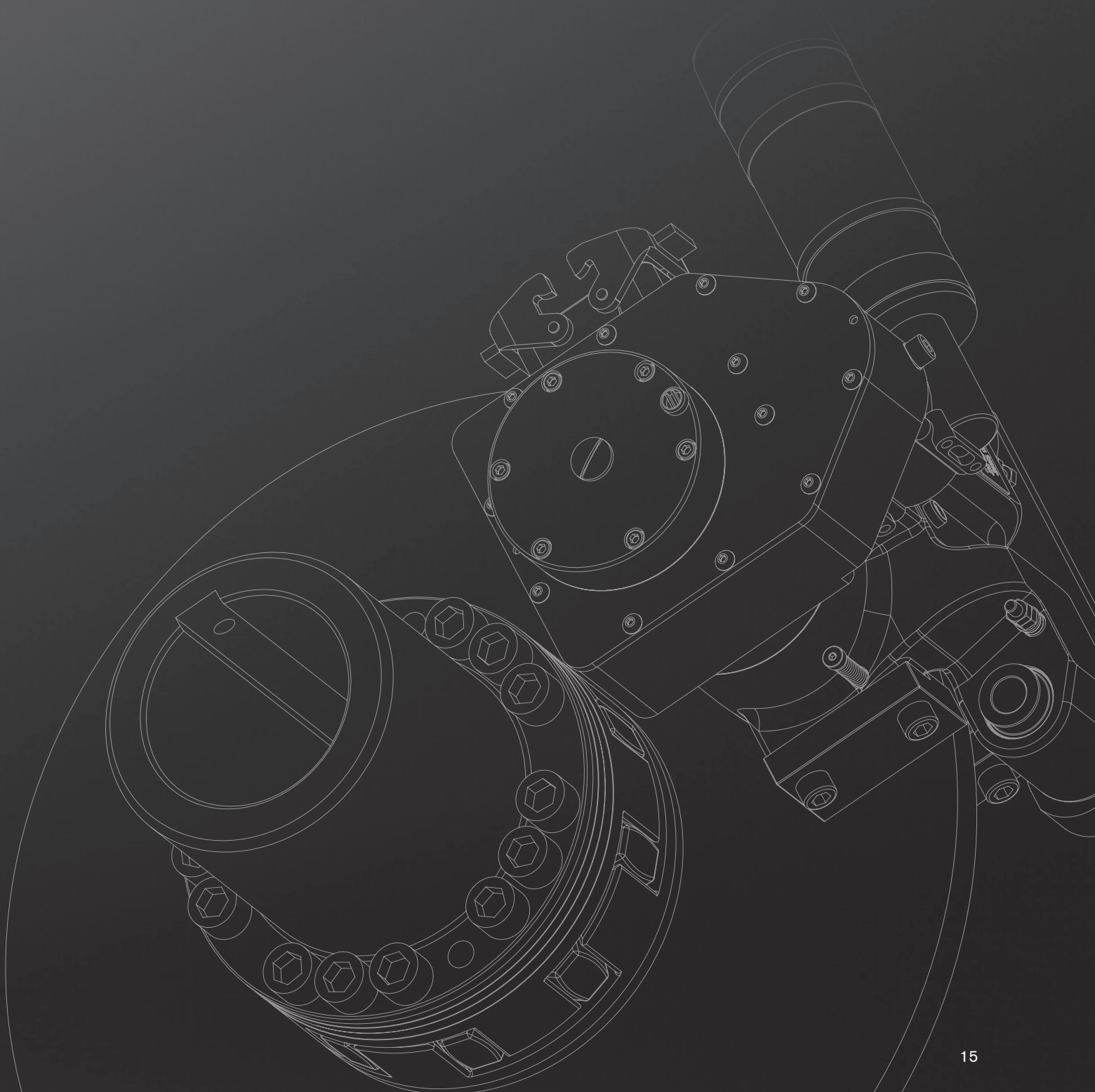
Thruster brakes

Electrohydraulic KTR-STOP® TB



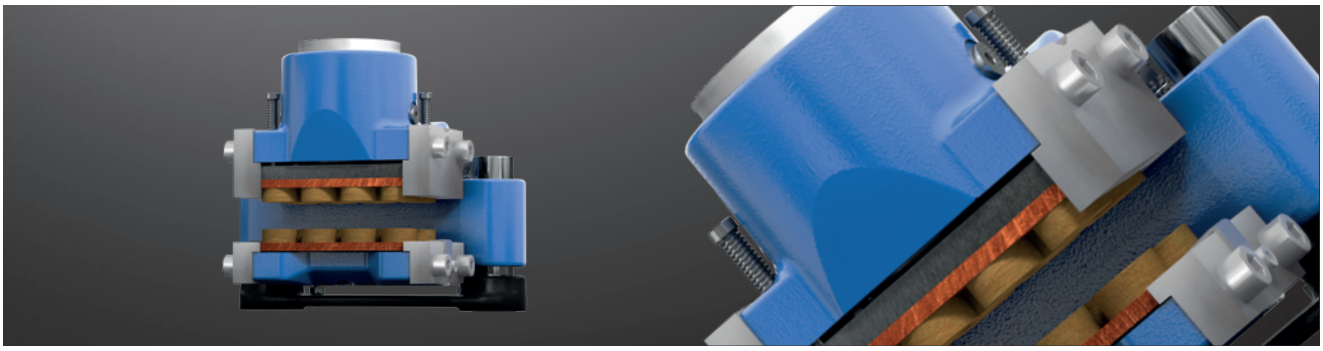


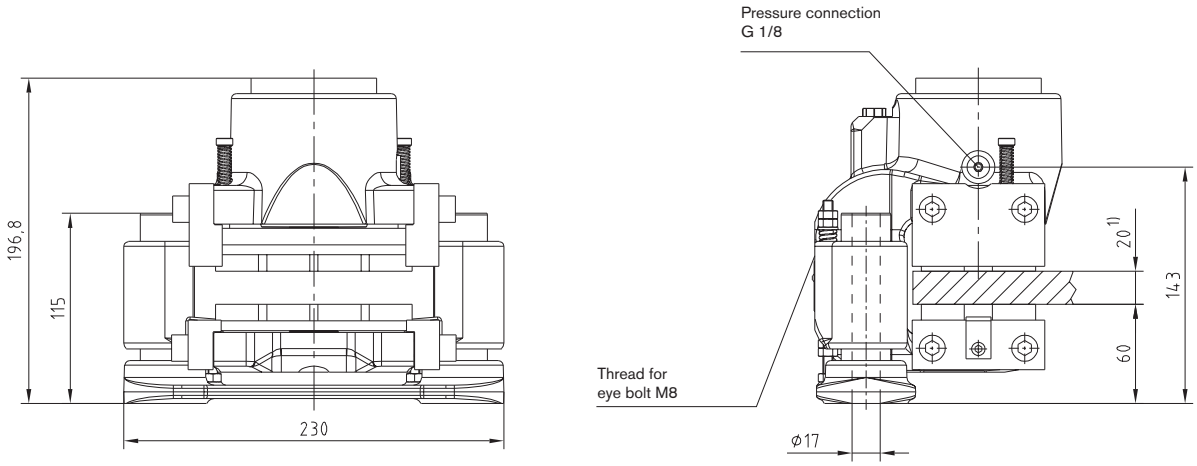


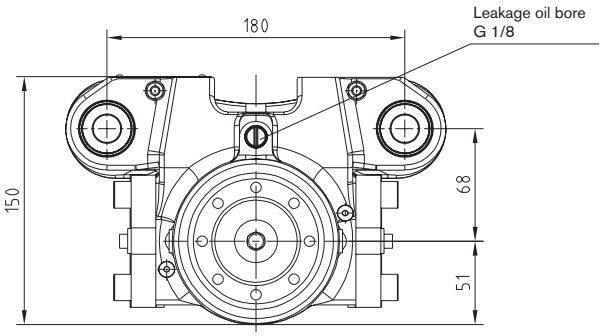


KTR-STOP® XS-xx-F
Passive floating caliper brakes

Hydraulic brake system







KTR-STOP® XS-xx-F				
Total weight [1]		Approx. 18 kg	Max. operating pressure	200 bars
Width of brake pad		70 mm	Thickness of brake disk [3]	20 mm, 30 mm
Surface per brake pad	organic	8,000 mm²	Pressure connection	G 1/8
	sinter	5,800 mm²	Leakage oil bore	G 1/8
Max. wear per brake pad		5 mm	Floating range on axes - towards mounting surface	5 mm
Rated coefficient of friction [2]		μ = 0.4	Floating range on axes - away from mounting surface	5 mm
Total brake piston surface - complete brake		11 cm²	Min. diameter of brake disk ØDA	300 mm
Volume with 1 mm stroke - complete brake		1.1 cm³	Operating temperature	-20 °C to +50 °C

[1] Dimensions and weight depending on thickness of brake disk.
[2] The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.
[3] Other thickness of brake disk available on request.

Ordering example:

KTR-STOP®	XS	-	6	-	F	B	-	20
KTR brake	Size of brake		Clamping force		Floater	Variant		Thickness of brake disk

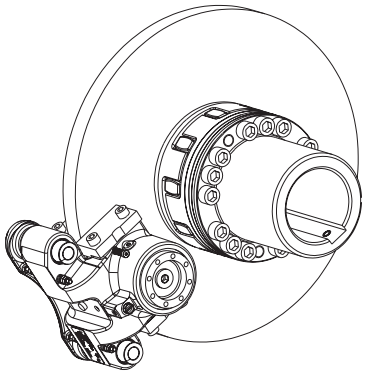
Brake types						
Brake type	Clamping force F_c [kN]	Loss of power [3] [%]	Opening pressure [bar]	Braking torque [Nm] with brake disk Ø [mm]		
				315	560	800
KTR-STOP® XS-2-F	2	11.0	30	180	370	570
KTR-STOP® XS-3-F	3	5.5	40	270	560	850
KTR-STOP® XS-4-F	4	3.0	50	360	750	1140
KTR-STOP® XS-5-F	5	8.5	70	450	940	1420
KTR-STOP® XS-6-F	6	6.5	80	540	1130	1710
KTR-STOP® XS-7-F	7	4.5	90	640	1320	1990
KTR-STOP® XS-8-F	8	16.5	120	730	1510	2280
KTR-STOP® XS-9-F	9	12.0	130	820	1700	2570
KTR-STOP® XS-10-F	10	10.0	140	910	1890	2850
KTR-STOP® XS-11-F	11	8.5	150	1000	2080	3140
KTR-STOP® XS-12-F	12	11.0	160	1090	2270	3420
KTR-STOP® XS-13-F	13	9.5	170	1190	2460	3710
KTR-STOP® XS-14-F	14	8.5	180	1280	2650	3990
KTR-STOP® XS-15-F	15	8.0	190	1370	2840	4280

[3] With a stroke of 1 mm (0.5 mm wear of brake pad on each side)

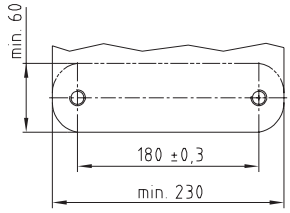
Calculation of brake disk

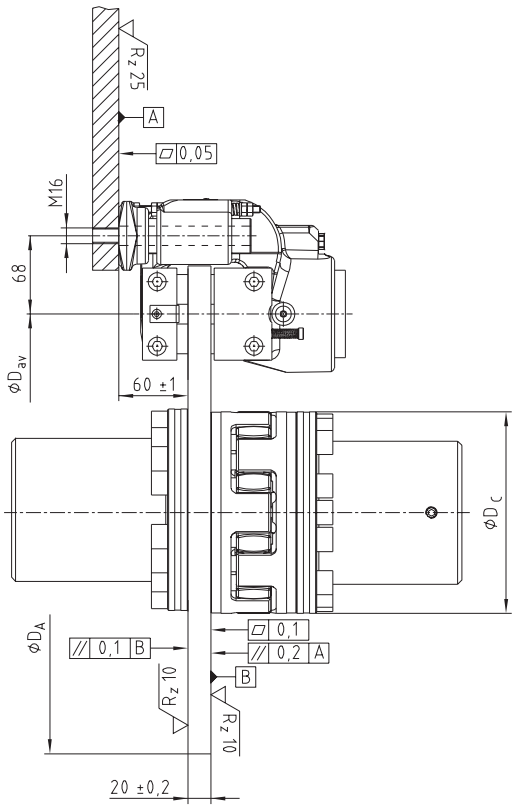
$$D_{C\ max.} = D_A - 195$$

$$D_{av} = D_A - 86$$



Connection dimensions of brake





$$F_b = F_c \cdot 2 \cdot \mu$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

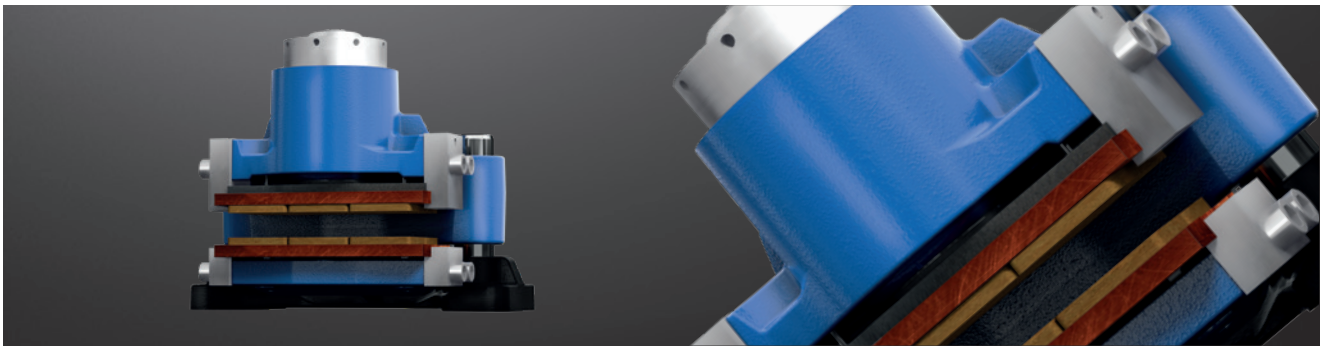
F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

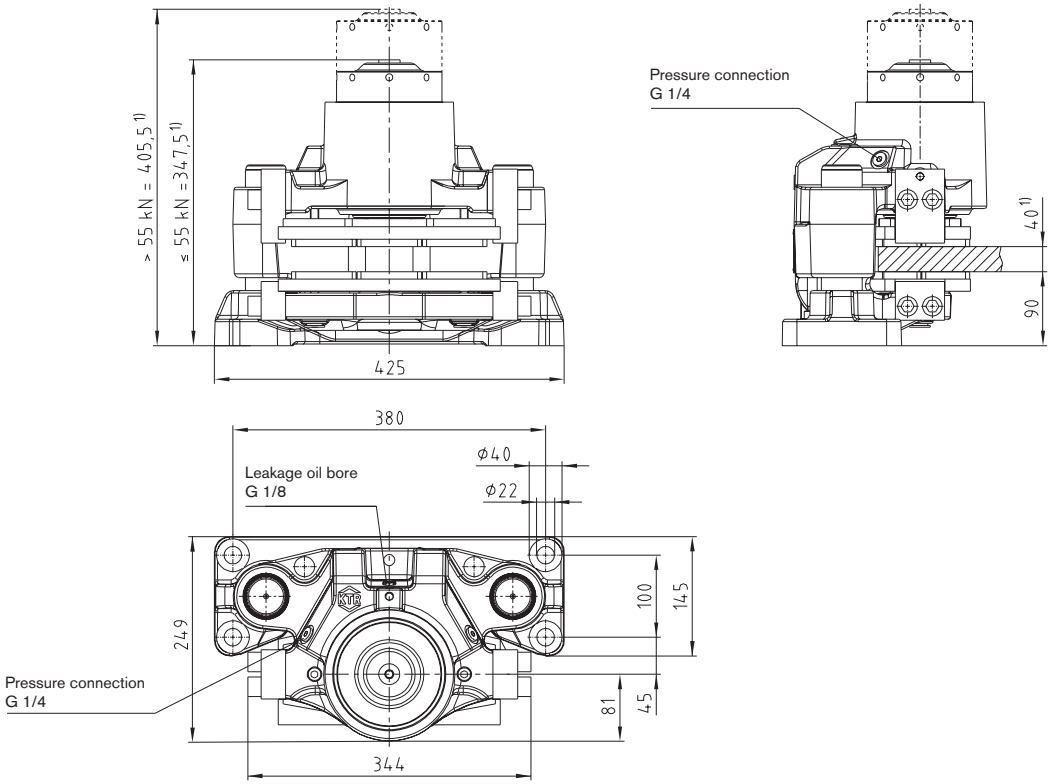
Optional

- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® S-xx-F
Passive floating caliper brakes

Hydraulic brake system





KTR-STOP® S-xx-F			
Total weight 10 - 55 kN	Approx. 90 kg [1]	Max. operating pressure	200 bars
Total weight 60 - 80 kN	Approx. 95 kg [1]	Thickness of brake disk [3]	20 mm, 30 mm, 40 mm
Width of brake pad	125 mm	Pressure connection	G 1/4
Surface per brake pad organic	28,700 mm2	Leakage oil bore	G 1/8
sinter	26,800 mm2	Floating range on axes - towards mounting surface	5 mm
Max. wear per brake pad	6 mm	Floating range on axes - away from mounting surface	10 mm
Rated coefficient of friction [2]	μ = 0.4	Min. diameter of brake disk ØDA	500 mm
Total brake piston surface - complete brake	69 cm^2	Operating temperature	-20 °C to +50 °C
Volume with 1 mm stroke - complete brake	6.9 cm^3		

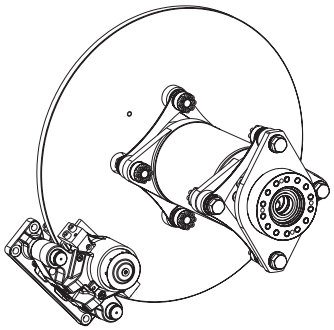
[1] Dimensions and weight depending on thickness of brake disk.
[2] The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.
[3] Other thickness of brake disk available on request.

Ordering example:

KTR-STOP®	S	-	40	-	F	B	-	30
KTR brake	Size of brake		Clamping force		Floater	Variant		Thickness of brake disk

Brake types						
Brake type [3]	Clamping force F_C [kN]	Loss of power [3] [%]	Opening pressure [bar]	Braking torque [Nm] with brake disk Ø [mm]		
				500	710	1000
KTR-STOP® S-10-F	10	4.5	20	1400	2300	3400
KTR-STOP® S-15-F	15	2.0	30	2200	3400	5200
KTR-STOP® S-20-F	20	4.5	40	2900	4600	6900
KTR-STOP® S-25-F	25	5.0	50	3700	5800	8700
KTR-STOP® S-30-F	30	3.5	60	4400	6900	10400
KTR-STOP® S-35-F	35	8.0	80	5100	8100	12100
KTR-STOP® S-40-F	40	6.5	90	5900	9200	13900
KTR-STOP® S-45-F	45	6.0	100	6600	10400	15600
KTR-STOP® S-50-F	50	5.5	100	7400	11600	17400
KTR-STOP® S-55-F	55	5.0	110	8100	12700	19100
KTR-STOP® S-60-F	60	7.0	130	8800	13900	20800
KTR-STOP® S-65-F	65	6.0	140	9600	15000	22600
KTR-STOP® S-70-F	70	5.0	150	10300	16200	24300
KTR-STOP® S-75-F	75	4.5	160	11100	17400	26100
KTR-STOP® S-80-F	80	5.0	170	11800	18500	27800

[3] With a stroke of 1 mm (0.5 mm wear of brake pad on each side)



Calculation of brake disk

up to $ØD_A$ = 1000 mm

$D_{C\ max.} = D_A - 305$

$D_{av} = D_A - 130$

from $ØD_A$ = 1000 mm to $ØD_A$ = 1800 mm

$D_{C\ max.} = D_A - 295$

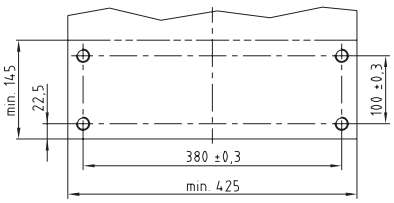
$D_{av} = D_A - 120$

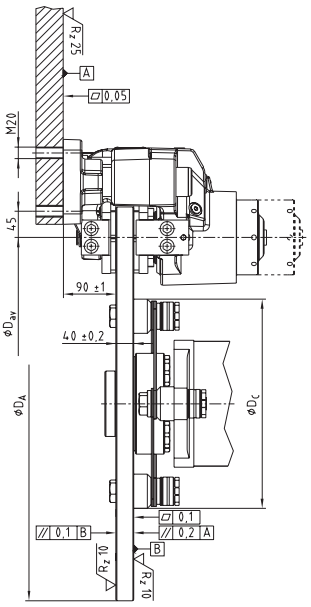
from $ØD_A$ = 1800 mm

$D_{C\ max.} = D_A - 285$

$D_{av} = D_A - 110$

Connection dimensions of brake





$$F_b = F_c \cdot 2 \cdot \mu$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

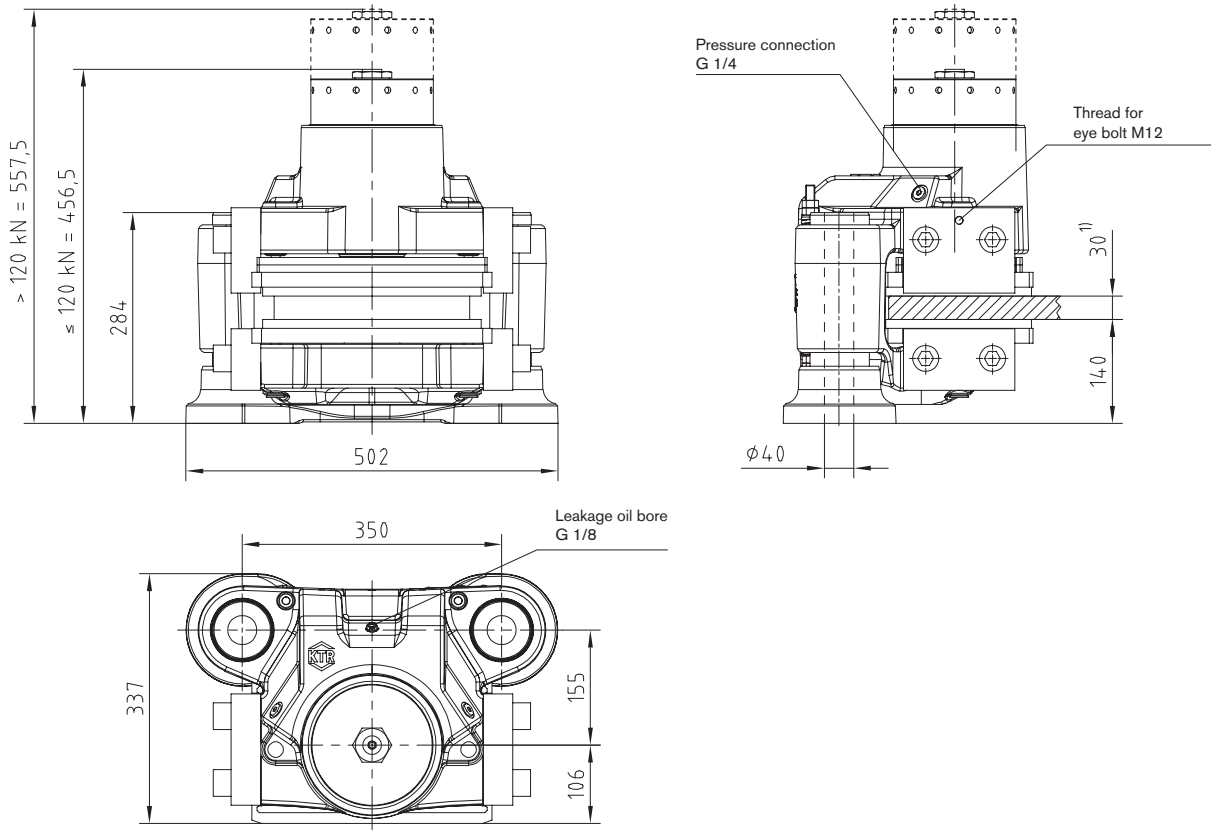
Optional

- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® M-xxx-F
Passive floating caliper brakes

Hydraulic brake system





KTR-STOP® M-xxx-F				
Total weight ≤ 120 kN		Approx. 220 kg [1]	Max. operating pressure	200 bars
Total weight 125 - 180 kN		Approx. 235 kg [1]	Thickness of brake disk [3]	30 mm, 40 mm, 50 mm
Width of brake pad		200 mm	Pressure connection	G 1/4
Surface per brake pad	organic	57,900 mm2	Leakage oil bore	G 1/8
	sinter	53,500 mm2	Floating range on axes - towards mounting surface	5 mm
Max. wear per brake pad		8 mm	Floating range on axes - away from mounting surface	below 120 kN = 10 mm
Rated coefficient of friction [2]		μ = 0.4		above 120 kN = 5 mm
Total brake piston surface - complete brake		137.4 cm^2	Min. diameter of brake disk ØDA	800 mm
Volume with 1 mm stroke - complete brake		13.74 cm^3	Operating temperature	-20 °C to +50 °C

[1] Dimensions and weight depending on thickness of brake disk.
[2] The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.
[3] Other thickness of brake disk available on request.

Ordering example:

KTR-STOP®	M	-	100	-	F	B	-	40
KTR brake	Size of brake		Clamping force		Floater	Variant		Thickness of brake disk

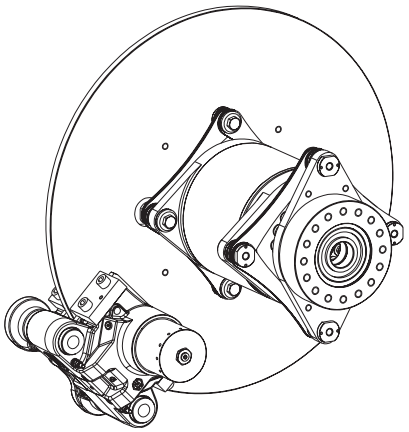
Brake types						
Brake type	Clamping force F_c [kN]	Loss of power [3] [%]	Opening pressure [bar]	Braking torque [Nm] with brake disk Ø [mm]		
				800	1500	2000
KTR-STOP® M-60-F	60	6.5	60	14400	31200	43200
KTR-STOP® M-70-F	70	5.0	70	16800	36400	50400
KTR-STOP® M-80-F	80	4.0	80	19200	41600	57600
KTR-STOP® M-90-F	90	8.5	100	21600	46800	64800
KTR-STOP® M-100-F	100	7.0	110	24000	52000	72000
KTR-STOP® M-110-F	110	6.5	120	26400	57200	79200
KTR-STOP® M-120-F	120	8.5	130	28800	62400	86400
KTR-STOP® M-130-F	130	5.0	140	31200	67600	93600
KTR-STOP® M-140-F	140	4.5	150	33600	72800	100800
KTR-STOP® M-150-F	150	7.5	165	36000	78000	108000
KTR-STOP® M-160-F	160	7.0	180	38400	83200	115200
KTR-STOP® M-170-F	170	6.5	190	40800	88400	122400
KTR-STOP® M-180-F	180	6.0	190	43200	93600	129600

[3] With a stroke of 1 mm (0.5 mm wear of brake pad on each side)

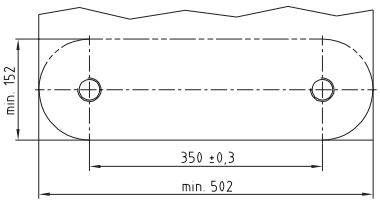
Calculation of brake disk

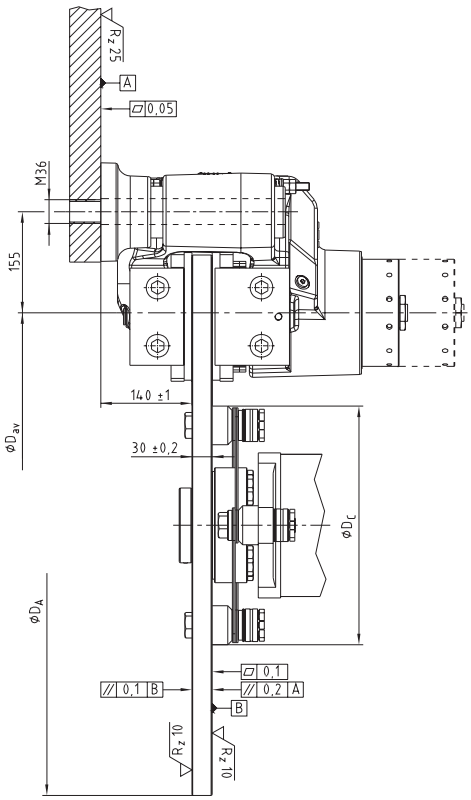
$D_{C\ max.} = D_A - 420$

$D_{av} = D_A - 200$



Connection dimensions of brake





$F_b = F_c \cdot 2 \cdot \mu$

$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$

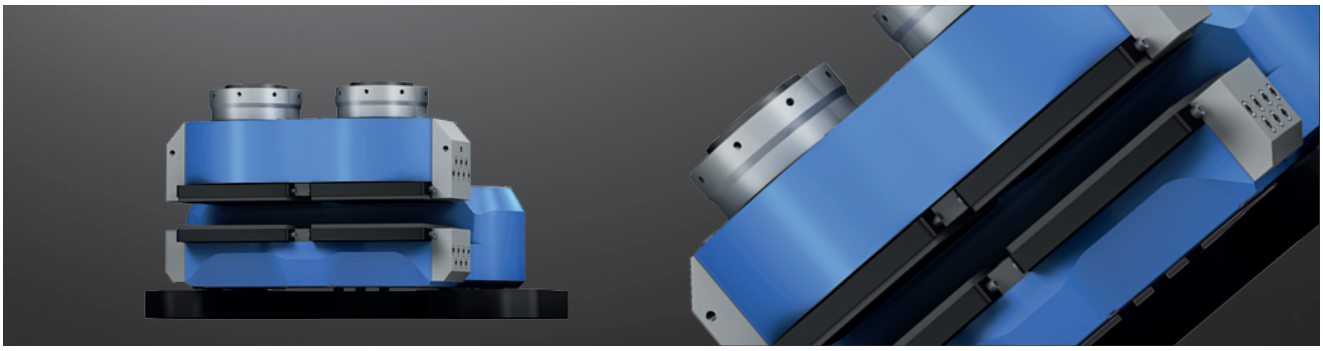
F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

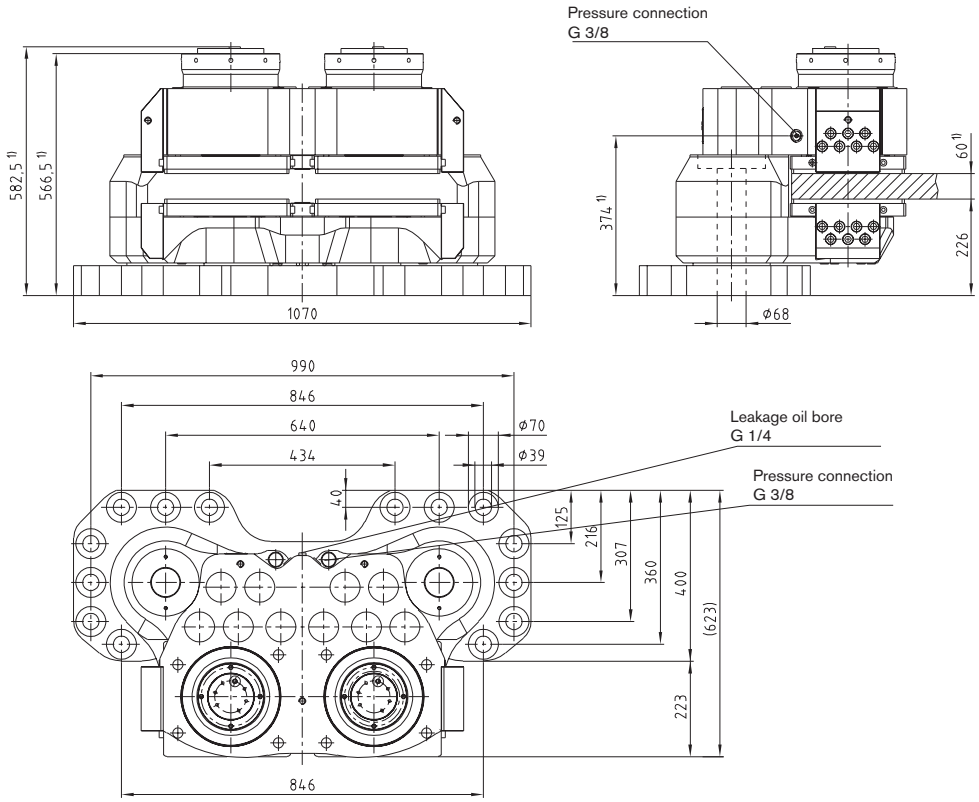
Optional

- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® XL-xxx-F
Passive floating caliper brakes

Hydraulic brake system





KTR-STOP® XL-xxx-F			
Total weight	Approx. 1080 kg 1)	Thickness of brake disk 3)	40 mm, 60 mm, 80 mm
Width of brake pad	270 mm	Pressure connection	G 3/8
Surface of each brake pad (organic/sinter)	76,800 mm²	Leakage oil bore	G 1/4
Max. wear per brake pad	6 mm	Floating range on axes - towards mounting surface	5 mm
Rated coefficient of friction 2)	μ = 0.4	Floating range on axes - away from mounting surface	10 mm
Total brake piston surface - complete brake	452 cm²	Min. diameter of brake disk ØDA	1,500 mm
Volume with 1 mm stroke - complete brake	45.2 cm³	Operating temperature	-20 °C to +50 °C
Max. operating pressure	200 bars		

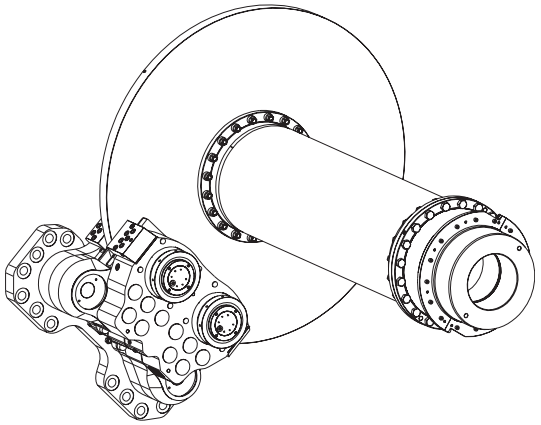
1) Dimensions and weight depending on thickness of brake disk.
2) The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.
3) Other thickness of brake disk available on request.

Ordering example:

KTR-STOP®	XL	-	600	-	F	A	-	60
KTR brake	Size of brake		Clamping force		Floater	Variant		Thickness of brake disk

Brake types						
Brake type [3]	Clamping force F_C [kN]	Loss of power [4] [%]	Opening pressure [bar]	Braking torque [Nm] with brake disk Ø [mm]		
				1500	3000	4000
KTR-STOP® XL-400-F	400	4.5	130	198000	438000	598000
KTR-STOP® XL-500-F	500	7.5	160	247000	547000	747000
KTR-STOP® XL-600-F	600	6	190	296000	656000	896000

[3] Other brake types on request
[4] With a stroke of 1 mm (0.5 mm wear of brake pad on each side)

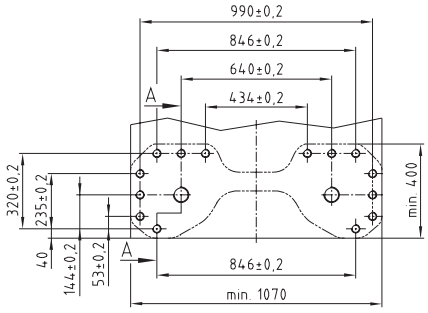


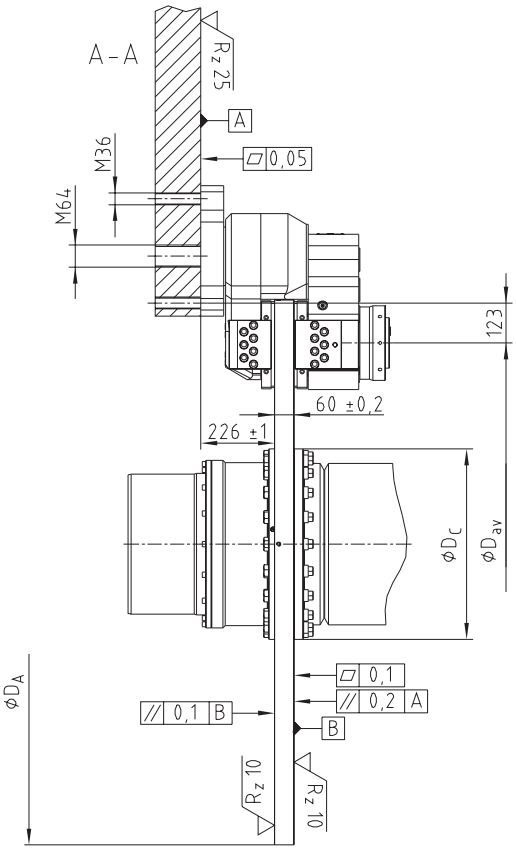
Calculation of brake disk

$$D_{C\ max.} = D_A - 570$$

$$D_{av} = D_A - 230$$

Connection dimensions of brake





$$F_b = F_c \cdot 2 \cdot \mu$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

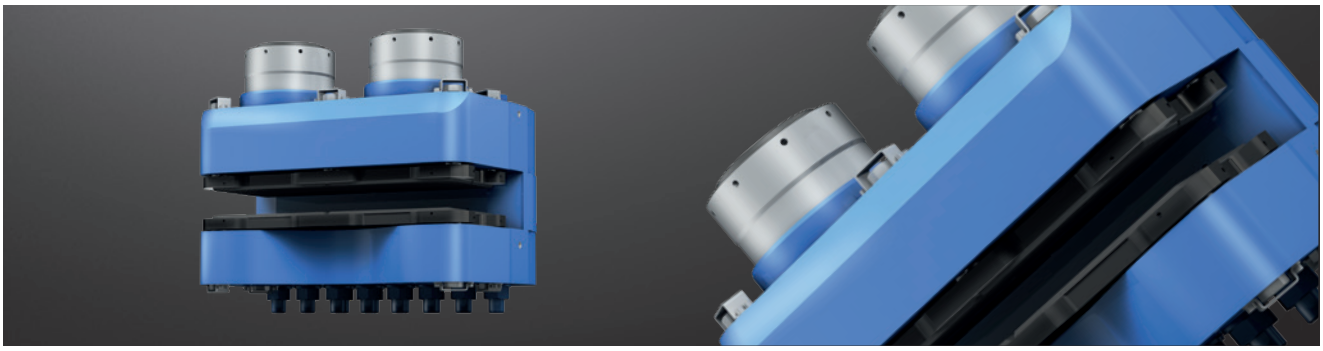
F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

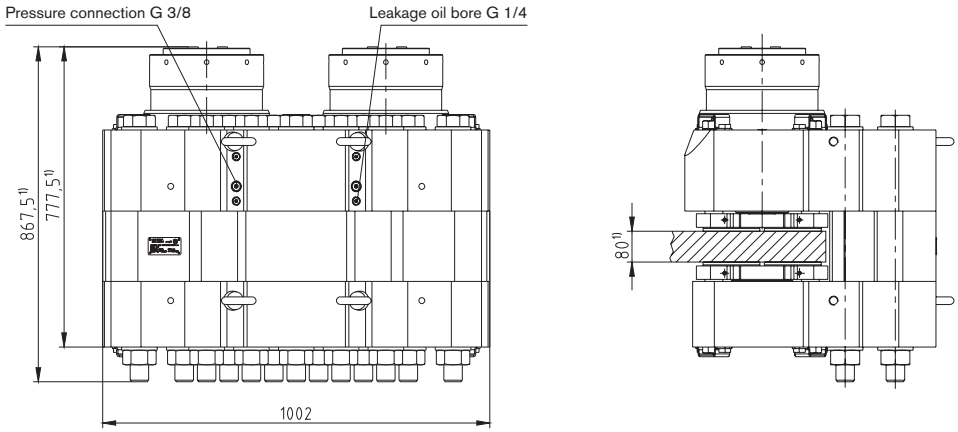
Optional

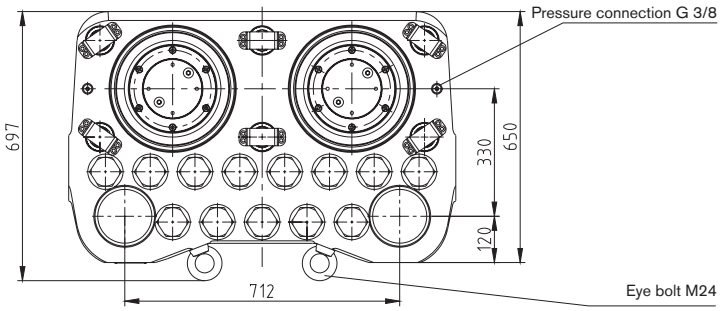
- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® XXL-xxxx-F
Passive floating caliper brakes

Hydraulic brake system







KTR-STOP® XXL-xxxx-F				
Total weight		Approx. 2200 kg	Volume with 1 mm stroke - complete brake	92.4 cm³
Width of brake pad		340 mm	Max. operating pressure	220 bars
Surface per brake pad	organic	238,700 mm²	Thickness of brake disk 3)	60 mm, 80 mm, 100 mm, 120 mm
	sinter metal	-	Pressure connection	G 3/8
Max. wear per brake pad		8 mm	Leakage oil bore	G 1/4
Rated coefficient of friction 2)		μ = 0.4	Min. diameter of brake disk ØDA	6,000 mm
Total brake piston surface - complete brake		924 cm²	Operating temperature	-20 °C to +50 °C

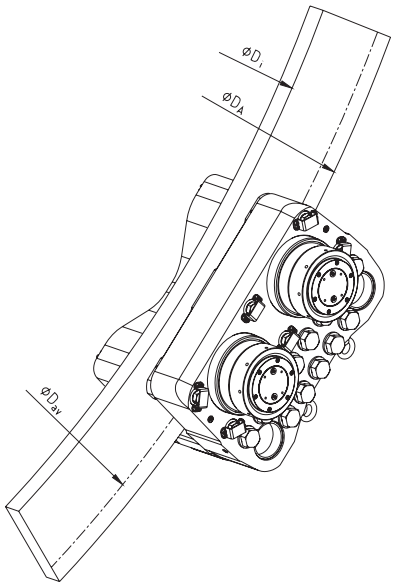
1) Dimensions and weight depending on thickness of brake disk.
2) The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.
3) Other thickness of brake disk available on request.

Ordering example:

KTR-STOP®	XXL	-	1000	-	F	A	-	80
KTR brake	Size of brake		Clamping force		Floater	Variant		Thickness of brake disk

Brake types			
Brake type [3]	Clamping force F_C [kN]	Loss of power [4] [%]	Opening pressure [bar]
KTR-STOP® XXL-800-F	800	6	125
KTR-STOP® XXL-1000-F	1000	4.5	150
KTR-STOP® XXL-1200-F	1200	4	175

[3] Other brake types on request
[4] With a stroke of 1 mm (0.5 mm wear of brake pad on each side)

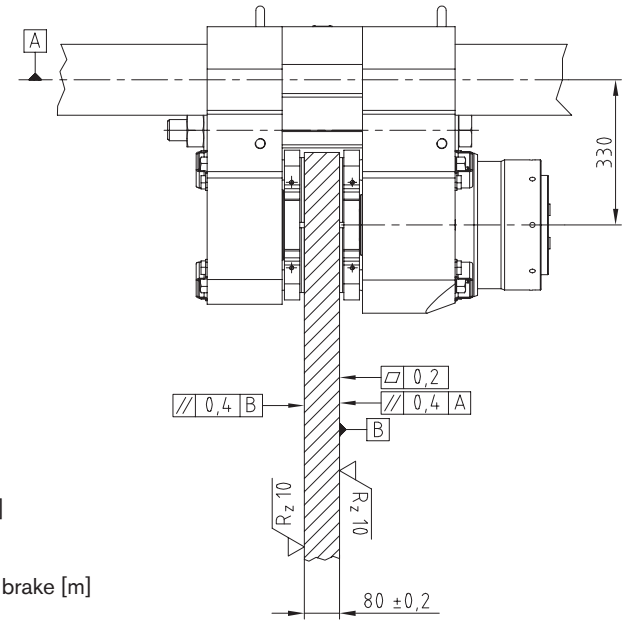


Calculation of brake disk

$$D_{C\,max.} = D_A - 780$$

$$D_{av} = D_A - 330$$

Connection dimensions of brake



$$F_b = F_c \cdot 2 \cdot \mu$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

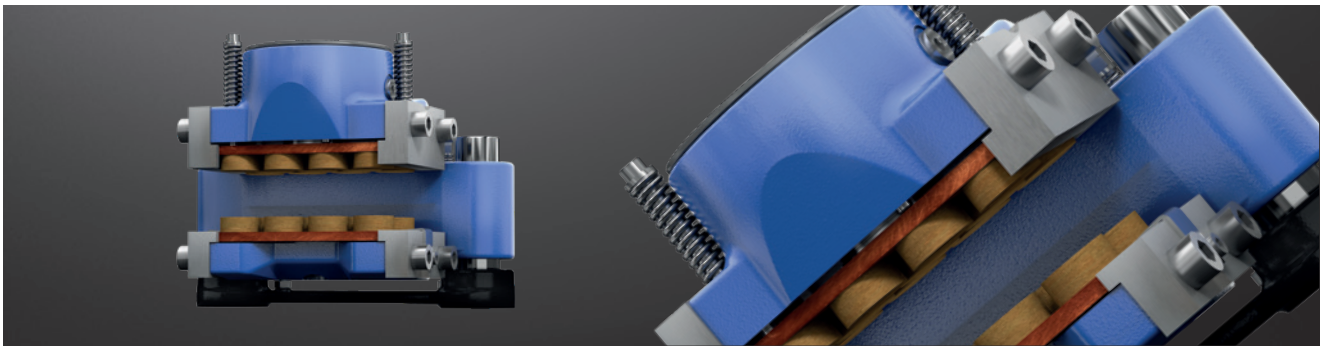
F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

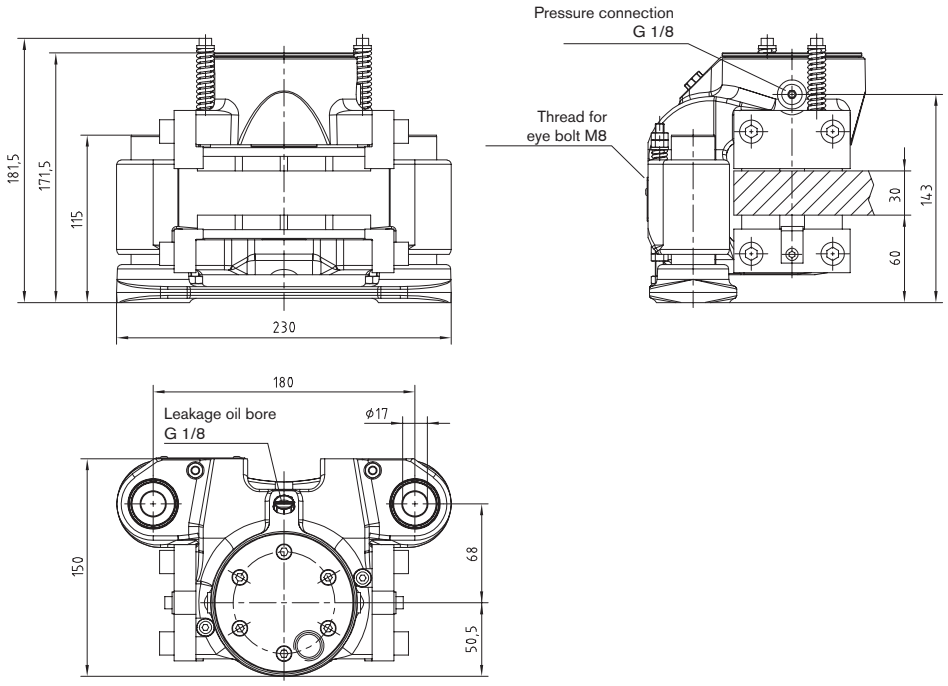
Optional

- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® XS-A-F
Active floating caliper brakes

Hydraulic brake system





KTR-STOP® XS-A-F				
Total weight		Approx. 18 kg [1]	Max. operating pressure	105 bars
Width of brake pad		70 mm	Thickness of brake disk [3]	20 mm, 30 mm
Surface per brake pad	organic	8,000 mm2	Pressure connection	G 1/8
	sinter	5,800 mm2	Leakage oil bore	G 1/8
Max. wear per brake pad		5 mm	Floating range on axes - towards mounting surface	5 mm
Rated coefficient of friction [2]		μ = 0.4	Floating range on axes - away from mounting surface	5 mm
Total brake piston surface - complete brake		15.9 cm²	Min. diameter of brake disk ØDA	300 mm
Volume with 1 mm stroke - complete brake		1.59 cm³	Operating temperature	-20 °C to +50 °C
Max. clamping force		16.5 kN		

[1] Weight depending on thickness of brake disk.
[2] The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.
[3] Other thickness of brake disk available on request.

Braking torque [Nm] with brake disk Ø [mm]			
Brake disk Ø [mm]	315	560	800
Braking torque [Nm]	1510	3120	4710

Calculation of braking force/braking torque

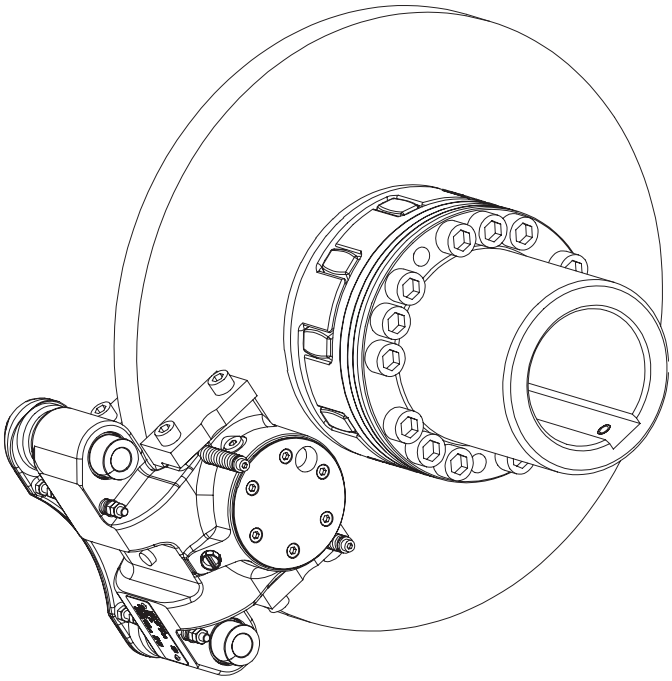
$$F_b = F_c \cdot 2 \cdot \mu$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

Ordering example:

KTR-STOP®	XS	-	A	-	F	B	-	30
KTR brake	Size of brake		Active		Floater	Variant		Thickness of brake disk

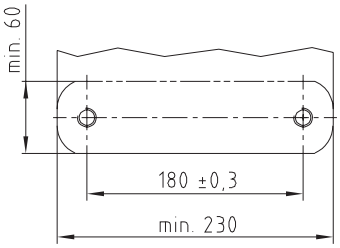


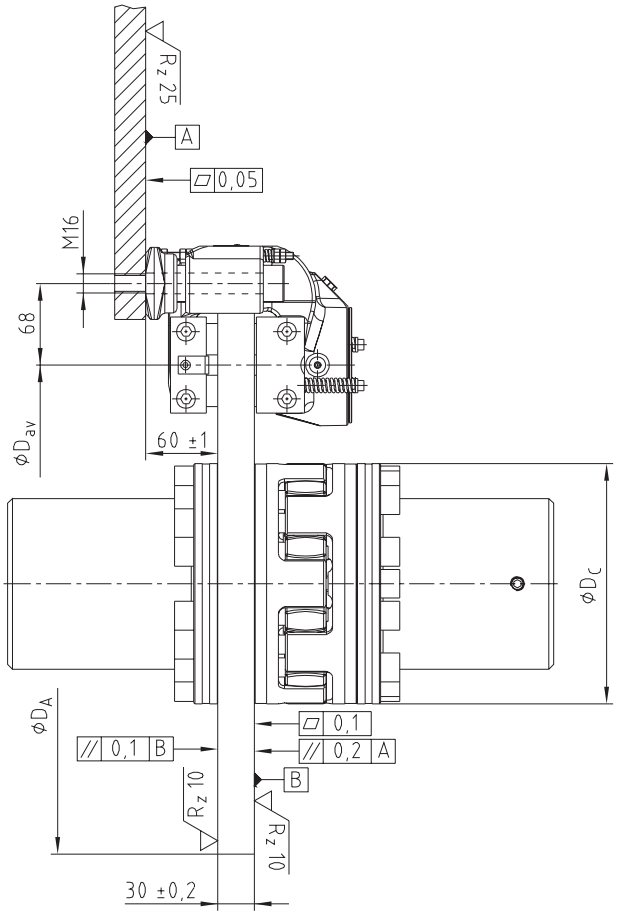
Calculation of brake disk

$D_{C\ max.} = D_A - 195$

$D_{av} = D_A - 86$

Connection dimensions of brake



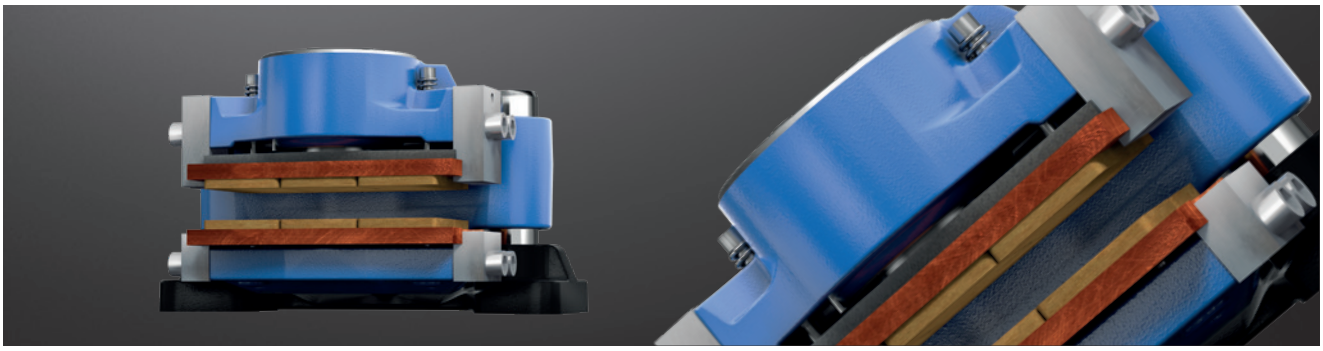


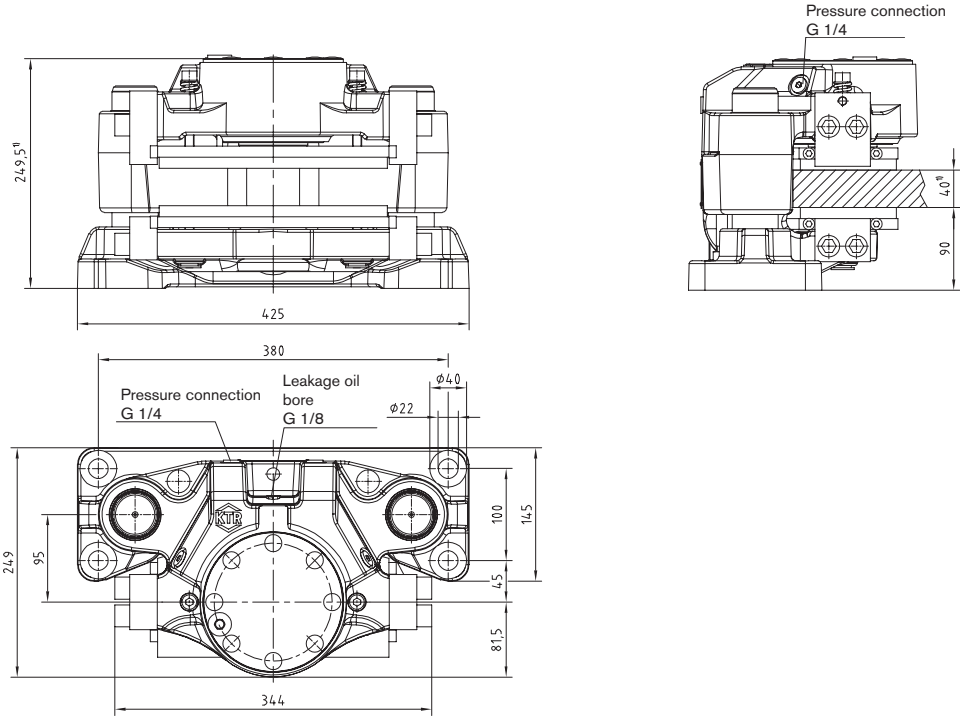
Optional

- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® S-A-F
Active floating caliper brakes

Hydraulic brake system





KTR-STOP® S-A-F				
Total weight		Approx. 76 kg [1]	Max. operating pressure	125 bars
Width of brake pad		125 mm	Thickness of brake disk [3]	20 mm, 30 mm, 40 mm
Surface per brake pad	organic	28,700 mm2	Pressure connection	G 1/4
	sinter	26,800 mm2	Leakage oil bore	G 1/8
Max. wear per brake pad		6 mm	Floating range on axes - towards mounting surface	5 mm
Rated coefficient of friction [2]		μ = 0.4	Floating range on axes - away from mounting surface	10 mm
Total brake piston surface - complete brake		44.2 cm^2	Min. diameter of brake disk ØDA	500 mm
Volume with 1 mm stroke - complete brake		4.42 cm^3	Operating temperature	-20 °C to +50 °C
Max. clamping force		55 kN		

[1] Dimensions and weight depending on thickness of brake disk.
[2] The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.
[3] Other thickness of brake disk available on request.

Braking torque [Nm] with brake disk Ø [mm]			
Brake disk Ø [mm]	500	710	1000
Braking torque [Nm]	8100	12700	19100

Calculation of braking force/braking torque

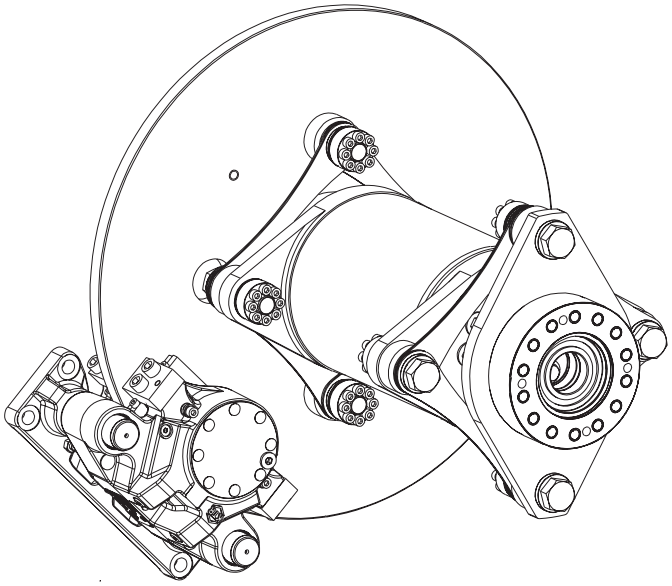
$$F_b = F_c \cdot 2 \cdot \mu$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

Ordering example:

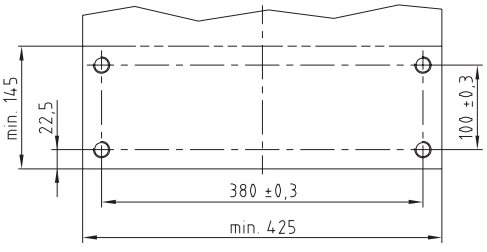
KTR-STOP®	S	-	A	-	F	B	-	30
KTR brake	Size of brake		Active		Floater	Variant		Thickness of brake disk

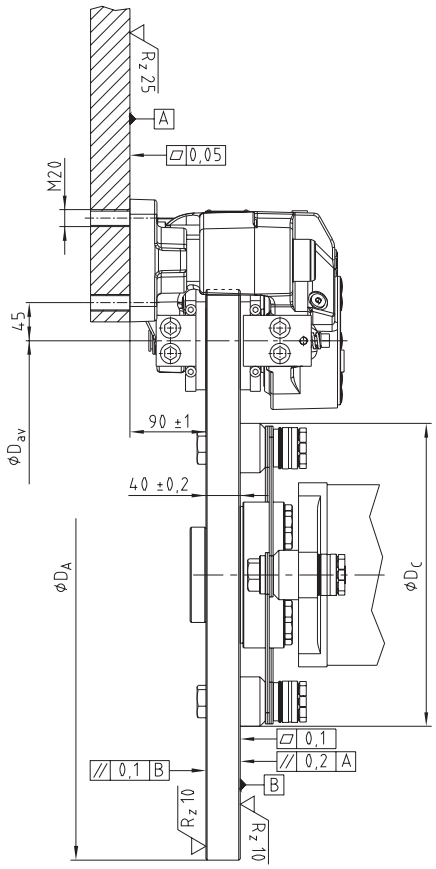


Calculation of brake disk

up to $ØD_A$ = 1000 mm	from $ØD_A$ = 1000 mm to $ØD_A$ = 1800 mm	from $ØD_A$ = 1800 mm
$D_{C\ max.} = D_A - 305$	$D_{C\ max.} = D_A - 295$	$D_{C\ max.} = D_A - 285$
$D_{av} = D_A - 130$	$D_{av} = D_A - 120$	$D_{av} = D_A - 110$

Connection dimensions of brake



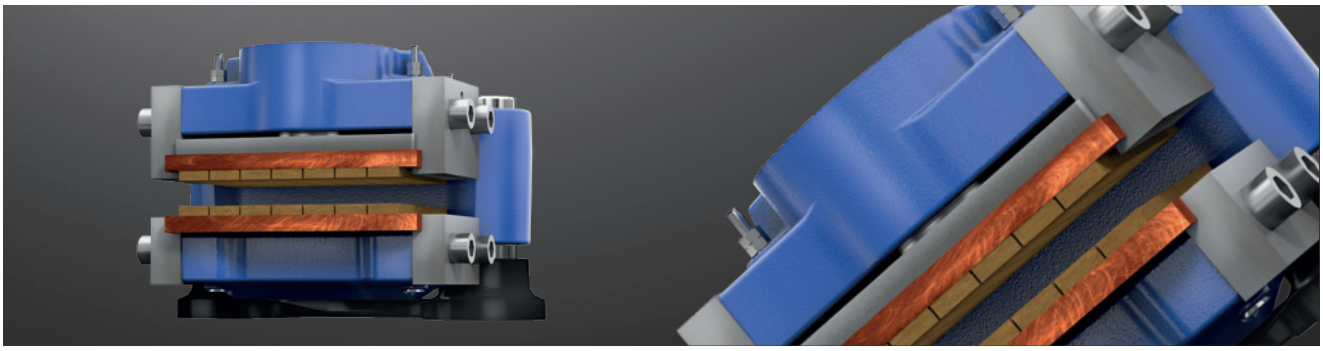


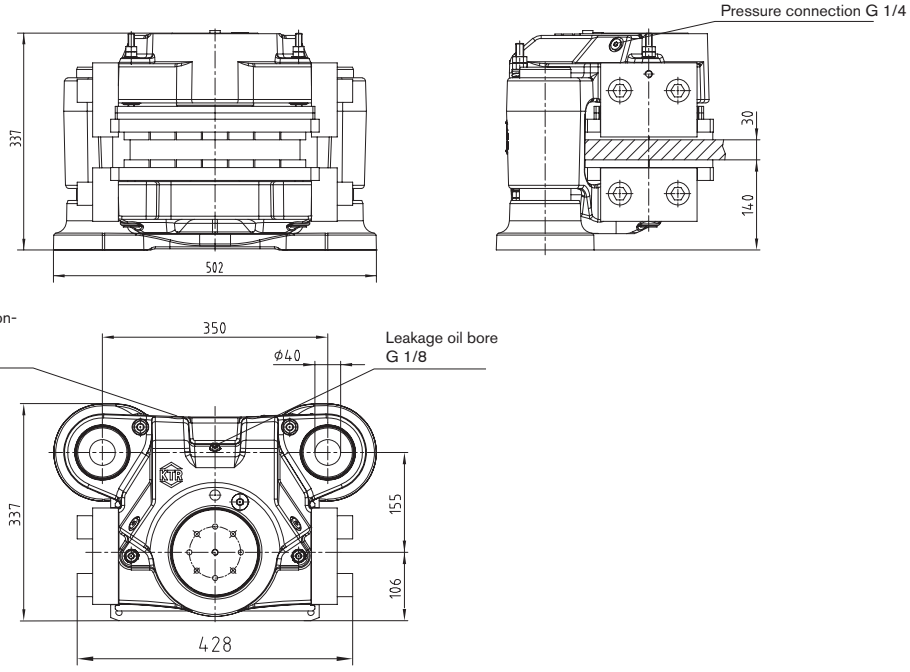
Optional

- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® M-A-F
Active floating caliper brakes

Hydraulic brake system





KTR-STOP® M-A-F				
Total weight		Approx. 235 kg [1]	Max. operating pressure	115 bars
Width of brake pad		200 mm	Thickness of brake disk [3]	30 mm, 40 mm, 50 mm
Surface per brake pad	organic	57,900 mm2	Pressure connection	G 1/4
	sinter	53,500 mm2	Leakage oil bore	G 1/8
Max. wear per brake pad		8 mm	Floating range on axes - towards mounting surface	5 mm
Rated coefficient of friction [2]		μ = 0.4	Floating range on axes - away from mounting surface	10 mm
Total brake piston surface - complete brake		113 cm^2	Min. diameter of brake disk ØDA	800 mm
Volume with 1 mm stroke - complete brake		11.3 cm^3	Operating temperature	-20 °C to +50 °C
Max. clamping force		130 kN		

[1] Weight depending on thickness of brake disk.
[2] The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.
[3] Other thickness of brake disk available on request.

Braking torque [Nm] with brake disk Ø [mm]			
Brake disk Ø [mm]	800	1500	2000
Braking torque [Nm]	31200	67600	93600

Calculation of braking force/braking torque

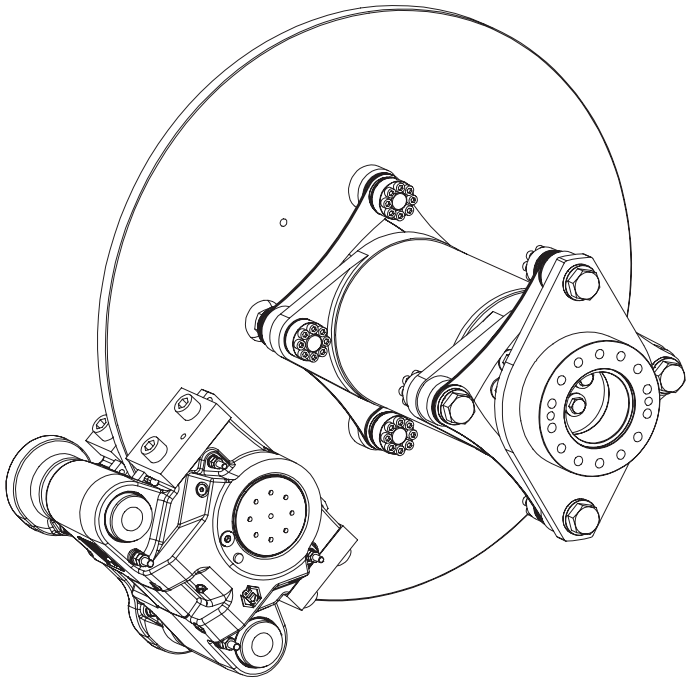
$$F_b = F_c \cdot 2 \cdot \mu$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

Ordering example:

KTR-STOP®	M	-	A	-	F	B	-	40
KTR brake	Size of brake		Active		Floater	Variant		Thickness of brake disk

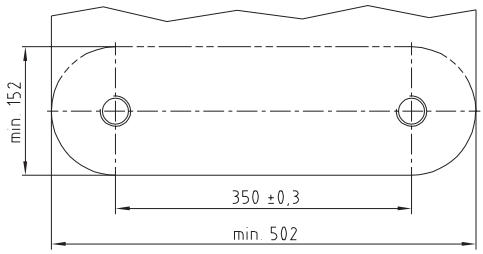


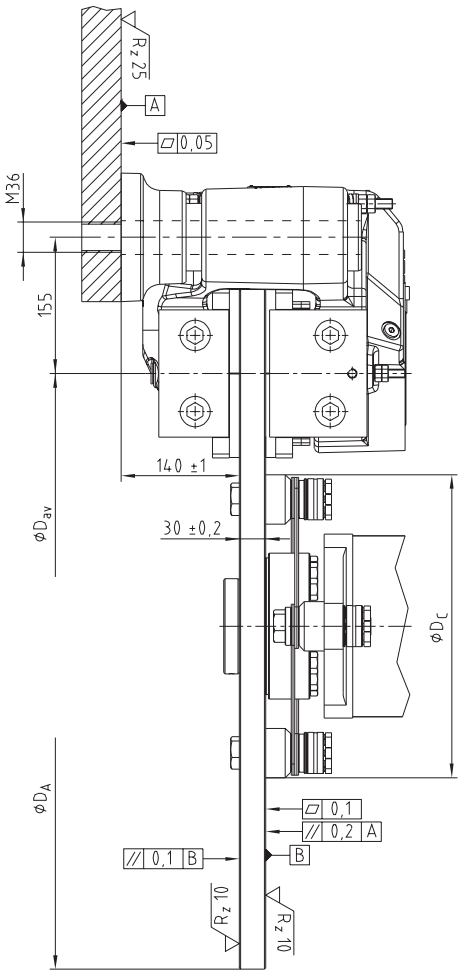
Calculation of brake disk

$D_{C\ max.} = D_A - 420$

$D_{av} = D_A - 200$

Connection dimensions of brake



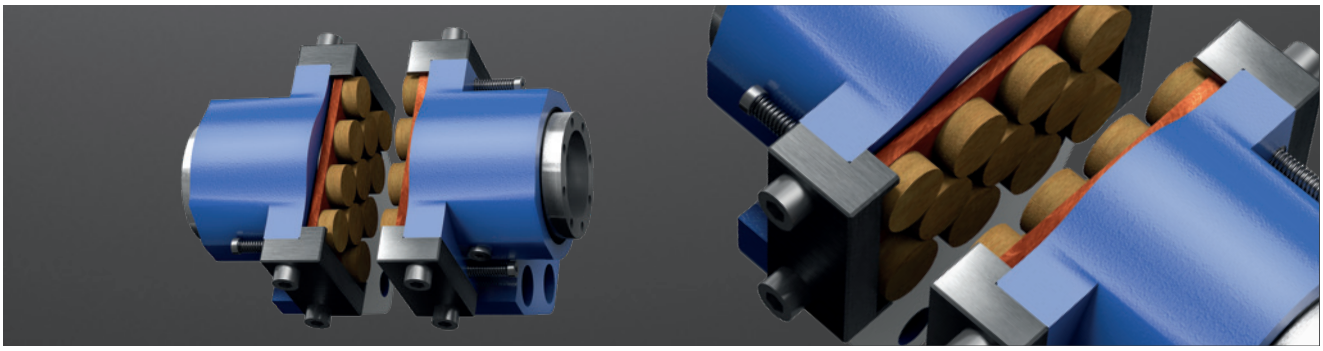


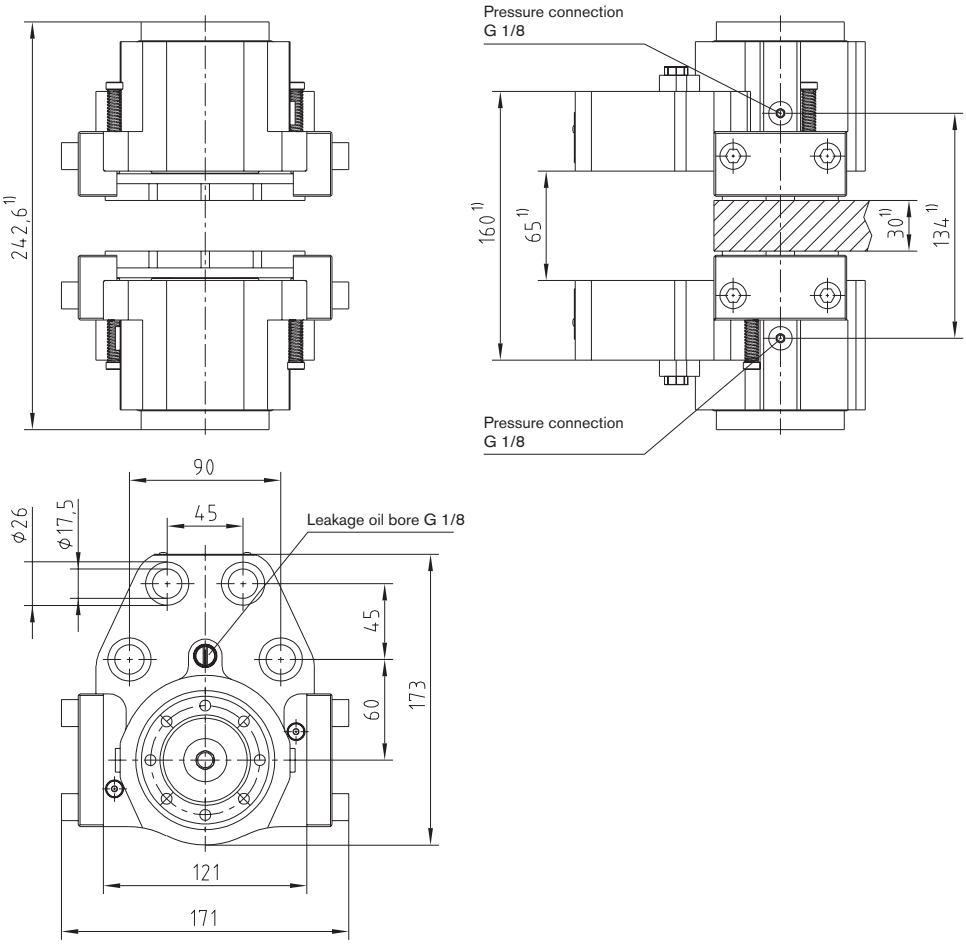
Optional

- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® XS-xx
Passive fixed caliper brakes

Hydraulic brake system





KTR-STOP® XS-xx			
Total weight	Approx. 20 kg	Volume with 1 mm stroke - complete brake	2.2 cm³
Width of brake pad	70 mm	Max. operating pressure	200 bars
Surface per brake pad organic	8,000 mm²	Min. thickness of brake disk	20 mm
sinter	5,800 mm²	Pressure connection	G 1/8
Max. wear per brake pad	5 mm	Leakage oil bore	G 1/8
Rated coefficient of friction 2)	μ = 0.4	Min. diameter of brake disk ØDA	300 mm
Total brake piston surface - complete brake	22 cm²	Operating temperature	-20 °C to +50 °C

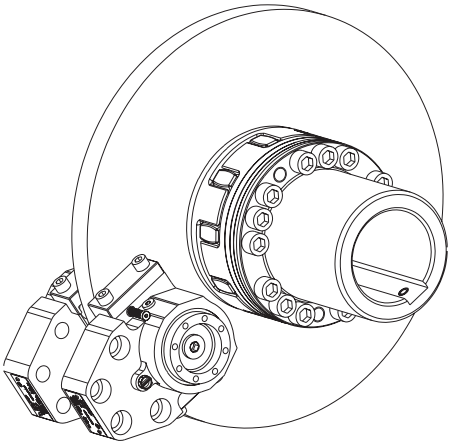
1) Dimensions depending on thickness of brake disk.
2) The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.

Ordering example:

KTR-STOP®	XS	6	A	30	65
KTR brake	Size of brake	Clamping force	Variant	Thickness of brake disk	Thickness of stand

Brake types						
Brake type	Clamping force F_C [kN]	Loss of power [3] [%]	Opening pressure [bar]	Braking torque [Nm] with brake disk Ø [mm]		
				315	560	800
KTR-STOP® XS-2	2	11.0	30	180	370	570
KTR-STOP® XS-3	3	5.5	40	270	560	850
KTR-STOP® XS-4	4	3.0	50	360	750	1140
KTR-STOP® XS-5	5	8.5	70	450	940	1420
KTR-STOP® XS-6	6	6.5	80	540	1130	1710
KTR-STOP® XS-7	7	4.5	90	640	1320	1990
KTR-STOP® XS-8	8	16.5	120	730	1510	2280
KTR-STOP® XS-9	9	12.0	130	820	1700	2570
KTR-STOP® XS-10	10	10.0	140	910	1890	2850
KTR-STOP® XS-11	11	8.5	150	1000	2080	3140
KTR-STOP® XS-12	12	11.0	160	1090	2270	3420
KTR-STOP® XS-13	13	9.5	170	1190	2460	3710
KTR-STOP® XS-14	14	8.5	180	1280	2650	3990
KTR-STOP® XS-15	15	8.0	190	1370	2840	4280

[3] With a stroke of 1 mm (1 mm wear of brake pad)

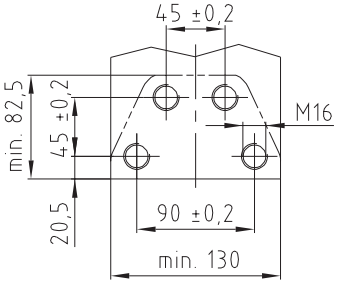


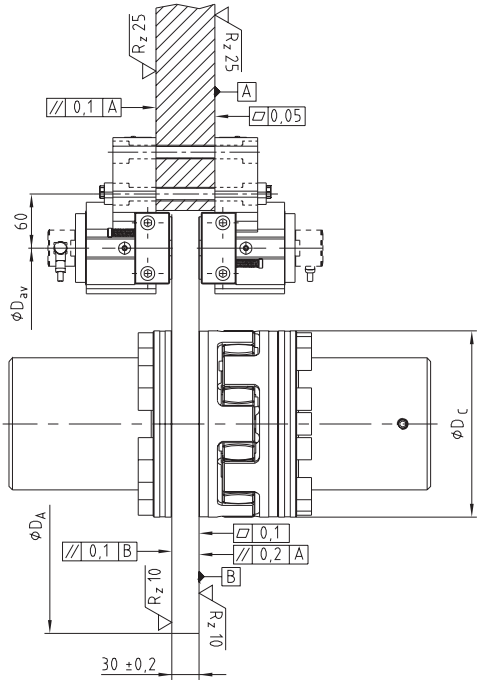
Calculation of brake disk

$$D_{C\ max.} = D_A - 195$$

$$D_{av} = D_A - 86$$

Connection dimensions of brake





$$F_b = F_c \cdot 2 \cdot \mu$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

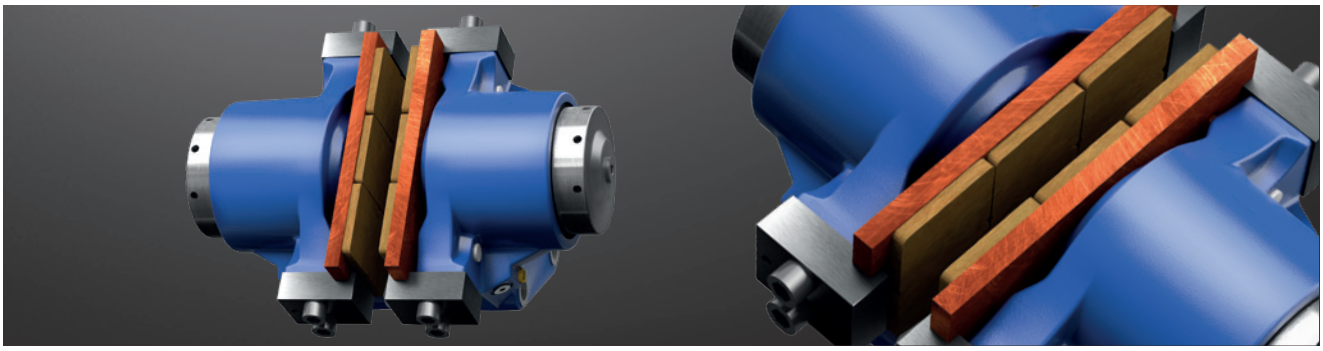
F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

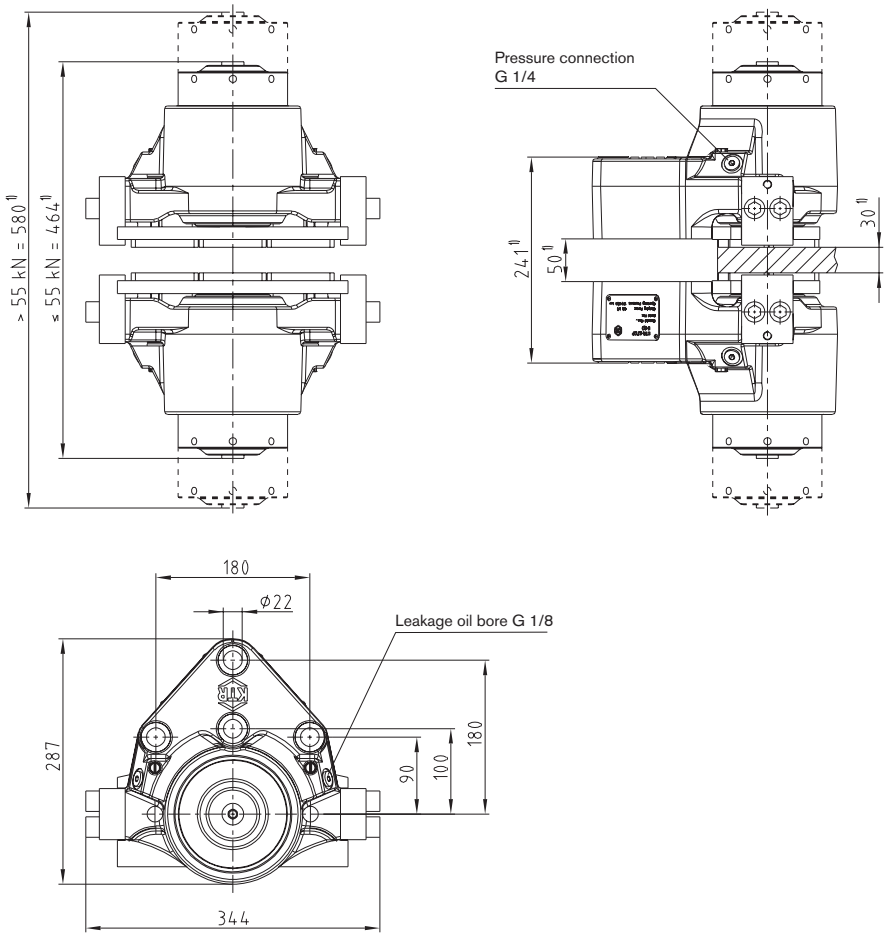
Optional

- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® S-xx
Passive fixed caliper brakes

Hydraulic brake system





KTR-STOP® S-xx			
Total weight 10 - 55 kN	Approx. 95 kg	Volume with 1 mm stroke - complete brake	13.8 cm³
Total weight 60 - 80 kN	Approx. 100 kg	Max. operating pressure	200 bars
Width of brake pad	125 mm	Min. thickness of brake disk	20 mm
Surface per brake pad organic	28,700 mm²	Pressure connection	G 1/4
sinter	26,800 mm²	Leakage oil bore	G 1/8
Max. wear per brake pad	6 mm	Min. diameter of brake disk ØDA	500 mm
Rated coefficient of friction 2)	μ = 0.4	Operating temperature	-20 °C to +50 °C
Total brake piston surface - complete brake	138 cm²		

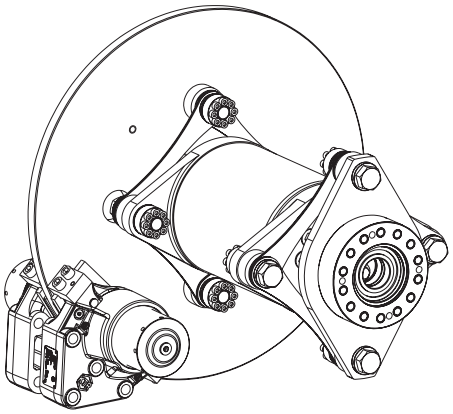
1) Dimensions depending on thickness of brake disk.
2) The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.

Ordering example:

KTR-STOP®	S	40	B	-	30	-	50
KTR brake	Size of brake	Clamping force	Variant		Thickness of brake disk		Thickness of stand

Brake types						
Brake type [3]	Clamping force F_C [kN]	Loss of power [3] [%]	Opening pressure [bar]	Braking torque [Nm] with brake disk Ø [mm]		
				500	710	1000
KTR-STOP® S-10	10	4.5	20	1400	2300	3400
KTR-STOP® S-15	15	2	30	2200	3400	5200
KTR-STOP® S-20	20	4.5	40	2900	4600	6900
KTR-STOP® S-25	25	5.0	50	3700	5800	8700
KTR-STOP® S-30	30	3.5	60	4400	6900	10400
KTR-STOP® S-35	35	8.0	80	5100	8100	12100
KTR-STOP® S-40	40	6.5	90	5900	9200	13900
KTR-STOP® S-45	45	6.0	100	6600	10400	15600
KTR-STOP® S-50	50	5.5	100	7400	11600	17400
KTR-STOP® S-55	55	5.0	110	8100	12700	19100
KTR-STOP® S-60	60	7.0	130	8800	13900	20800
KTR-STOP® S-65	65	6.0	140	9600	15000	22600
KTR-STOP® S-70	70	5.0	150	10300	16200	24300
KTR-STOP® S-75	75	4.5	160	11100	17400	26100
KTR-STOP® S-80	80	5.0	170	11800	18500	27800

[3] With a stroke of 1 mm (1 mm wear of brake pad)



Calculation of brake disk

up to ØD_A = 1500 mm

$D_{C\ max.} = D_A - 300$

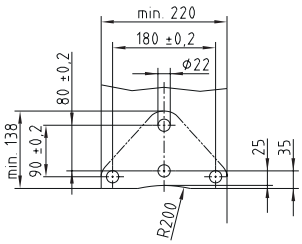
$D_{av} = D_A - 125$

from ØD_A = 1500 mm

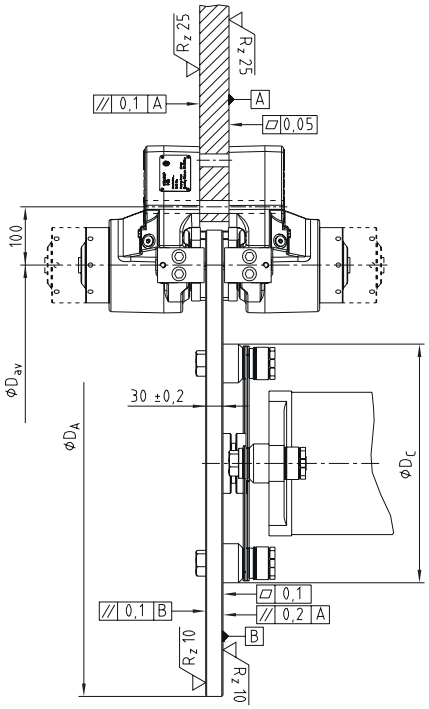
$D_{C\ max.} = D_A - 295$

$D_{av} = D_A - 120$

Connection dimensions of brake



Other dimensions available on request



$F_b = F_c \cdot 2 \cdot \mu$

$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$

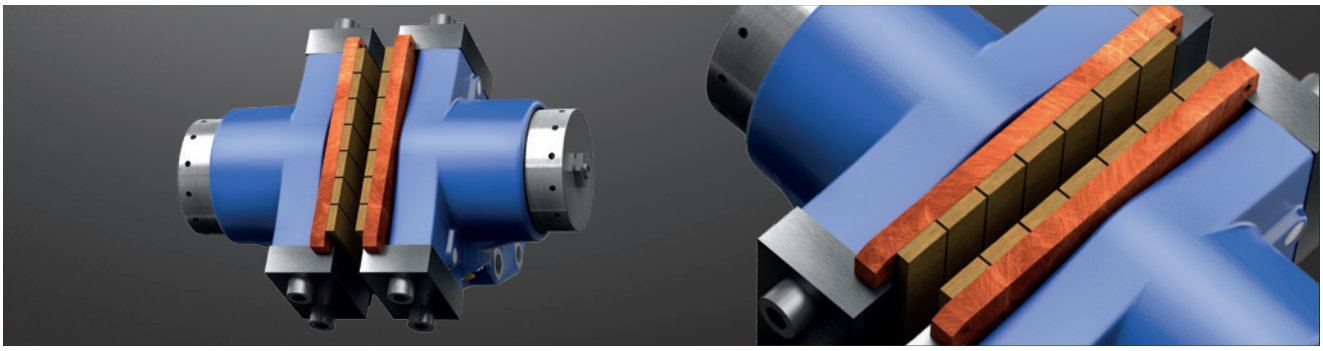
F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

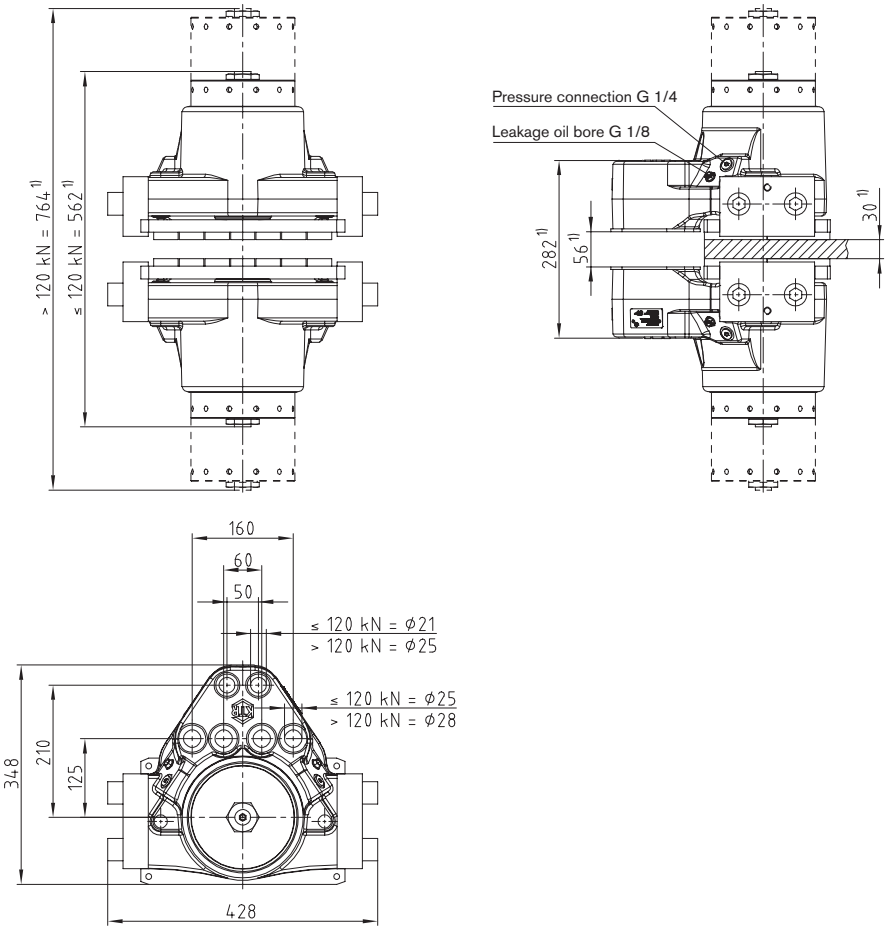
Optional

- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® M-xxx
Passive fixed caliper brakes

Hydraulic brake system





KTR-STOP® M-xxx				
Total weight ≤ 120 kN		Approx. 200 kg	Volume with 1 mm stroke - complete brake	27.48 cm³
Total weight 125 - 180 kN		Approx. 215 kg	Max. operating pressure	200 bars
Width of brake pad		200 mm	Min. thickness of brake disk	30 mm
Surface per brake pad	organic	57,900 mm²	Pressure connection	G 1/4
	sinter	53,500 mm²	Leakage oil bore	G 1/8
Max. wear per brake pad		10 mm	Min. diameter of brake disk ØDA	800 mm
Rated coefficient of friction 2)		μ = 0.4	Operating temperature	-20 °C to +50 °C
Total brake piston surface - complete brake		274.8 cm²		

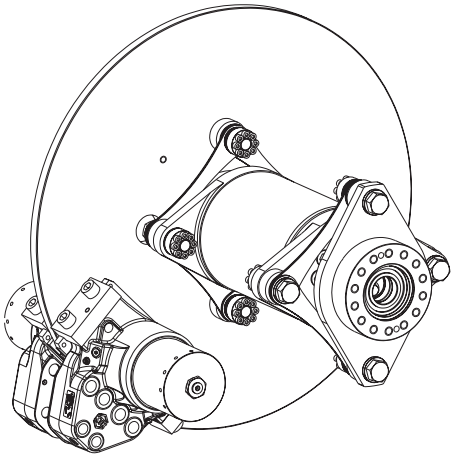
1) Dimensions depending on thickness of brake disk.
2) The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.

Ordering example:

KTR-STOP®	M	-	100	B	-	40	-	66
KTR brake	Size of brake		Clamping force	Variant		Thickness of brake disk		Thickness of stand

Brake types						
Brake type	Clamping force F_C [kN]	Loss of power [3] [%]	Opening pressure [bar]	Braking torque [Nm] with brake disk Ø [mm]		
				800	1500	2000
KTR-STOP® M-60	60	6.5	60	14400	31200	43200
KTR-STOP® M-70	70	5.0	70	16800	36400	50400
KTR-STOP® M-80	80	4.0	80	19200	41600	57600
KTR-STOP® M-90	90	8.5	100	21600	46800	64800
KTR-STOP® M-100	100	7.0	110	24000	52000	72000
KTR-STOP® M-110	110	6.5	120	26400	57200	79200
KTR-STOP® M-120	120	8.5	130	28800	62400	86400
KTR-STOP® M-130	130	5.0	140	31200	67600	93600
KTR-STOP® M-140	140	4.5	150	33600	72800	100800
KTR-STOP® M-150	150	7.5	165	36000	78000	108000
KTR-STOP® M-160	160	7.0	180	38400	83200	115200
KTR-STOP® M-170	170	6.5	190	40800	88400	122400
KTR-STOP® M-180	180	6.0	190	43200	93600	129600

[3] With a stroke of 1 mm (1 mm wear of brake pad)

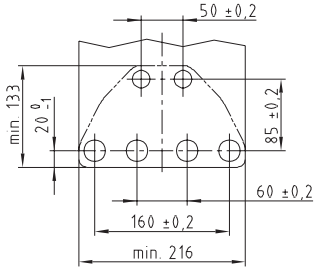


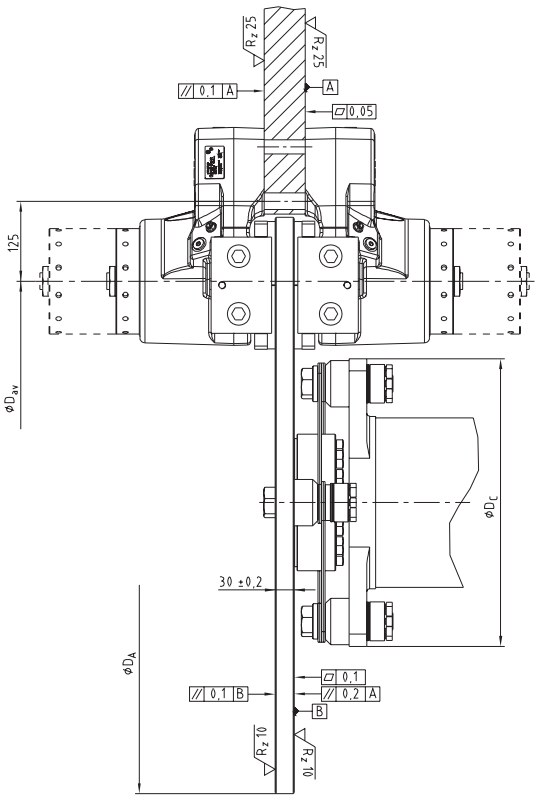
Calculation of brake disk

$$D_{C\ max.} = D_A - 420$$

$$D_{av} = D_A - 200$$

Connection dimensions of brake





$$F_b = F_c \cdot 2 \cdot \mu$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

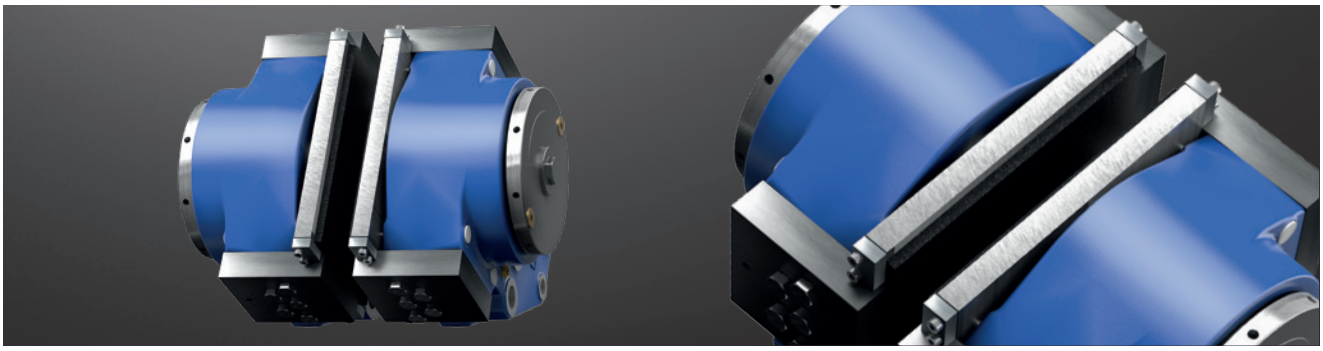
F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

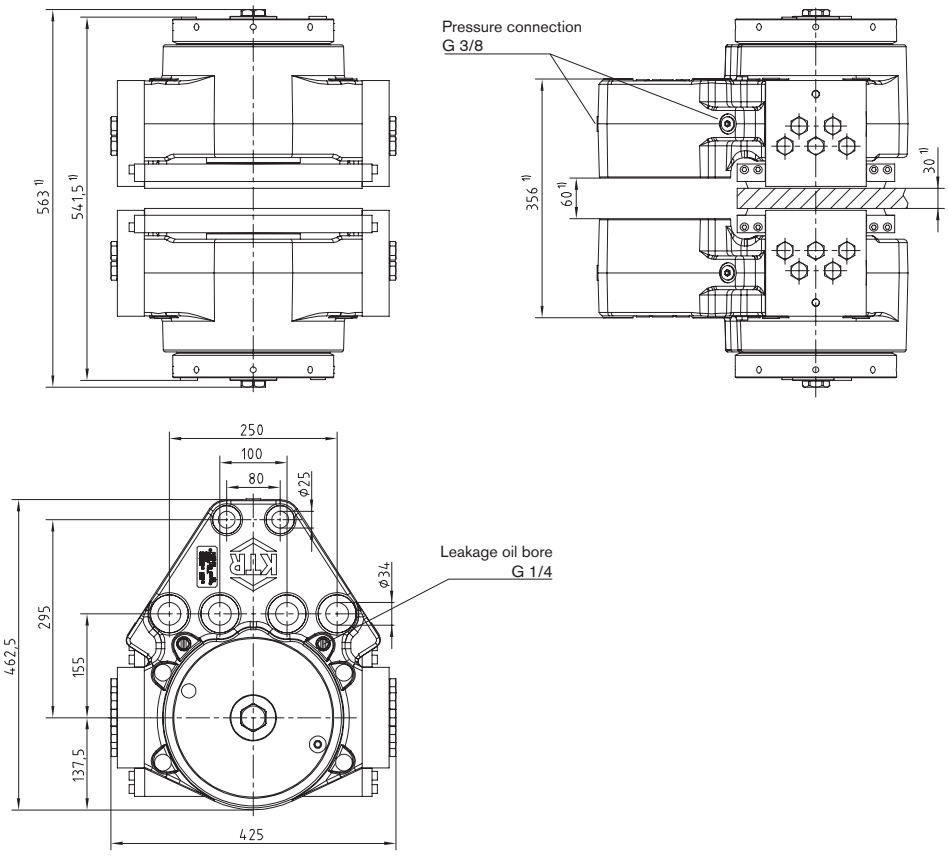
Optional

- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® L light-xxx
Passive fixed caliper brakes

Hydraulic brake system





KTR-STOP® L light-xxx			
Total weight	Approx. 312 kg	Max. operating pressure	200 bars
Width of brake pad	324 mm	Min. thickness of brake disk	30 mm
Surface per brake pad	65,600 mm²	Pressure connection	G 3/8
Max. wear per brake pad	10 mm	Leakage oil bore	G 1/4
Rated coefficient of friction 2)	μ = 0.4	Min. diameter of brake disk ØDA	1000 mm
Total brake piston surface - complete brake	279.2 cm²	Operating temperature	-20 °C to +50 °C
Volume with 1 mm stroke - complete brake	27.92 cm³		

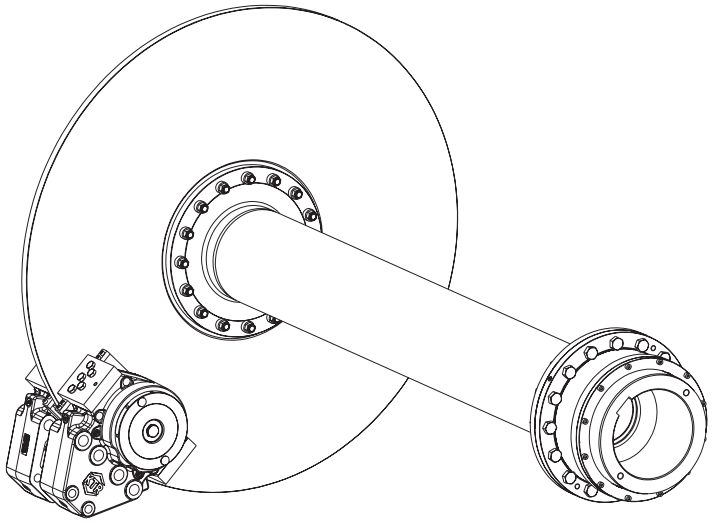
1) Dimensions depending on thickness of brake disk.
2) The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.

Ordering example:

KTR-STOP®	L light	200	A	30	-	60
KTR brake	Size of brake	Clamping force	Variant	Thickness of brake disk		Thickness of stand

Brake types						
Brake type	Clamping force F_C [kN]	Loss of power [4] [%]	Opening pressure [bar]	Braking torque [Nm] with brake disk Ø [mm]		
				1000	2000	3000
KTR-STOP® L light-100	100	4.0	95	30800	70800	110800
KTR-STOP® L light-120	120	3.5	105	36900	84900	132900
KTR-STOP® L light-140	140	8.5	130	43100	99100	155100
KTR-STOP® L light-160	160	8.0	170	49200	113200	177200
KTR-STOP® L light-180	180	8.0	175	55400	127400	199400
KTR-STOP® L light-200	200	7.5	185	61600	141600	221600
KTR-STOP® L light-220	220	6.5	200	67700	155700	243700

[4] With a stroke of 1 mm (1 mm wear of brake pad)

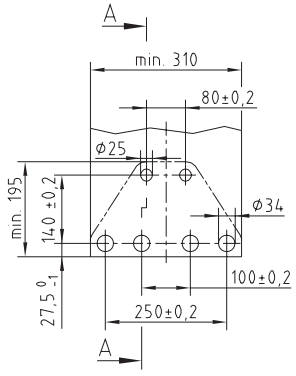


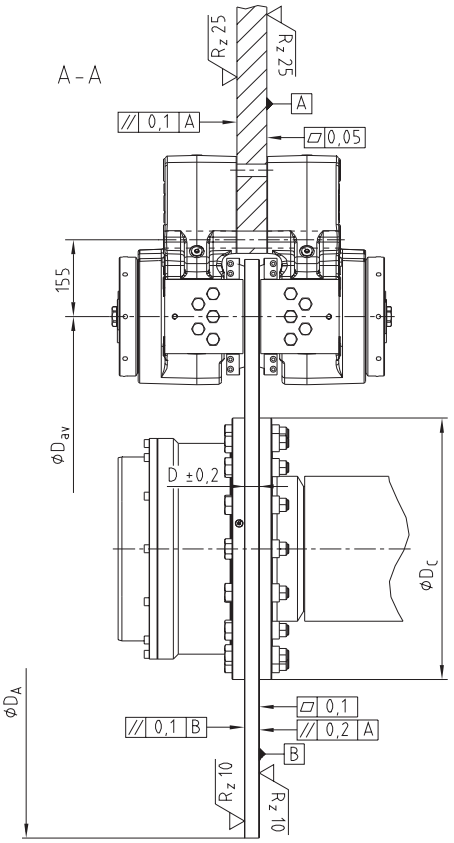
Calculation of brake disk

$$D_{C\ max.} = D_A - 510$$

$$D_{av} = D_A - 220$$

Connection dimensions of brake





$$F_b = F_c \cdot 2 \cdot \mu$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

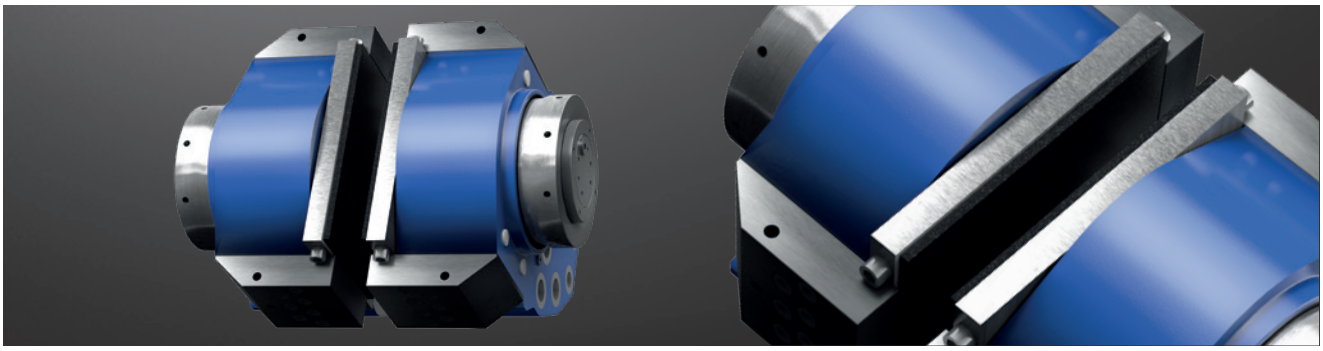
F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

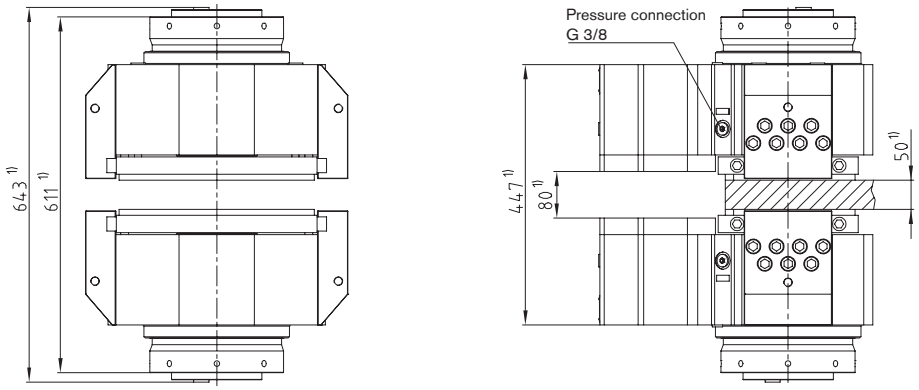
Optional

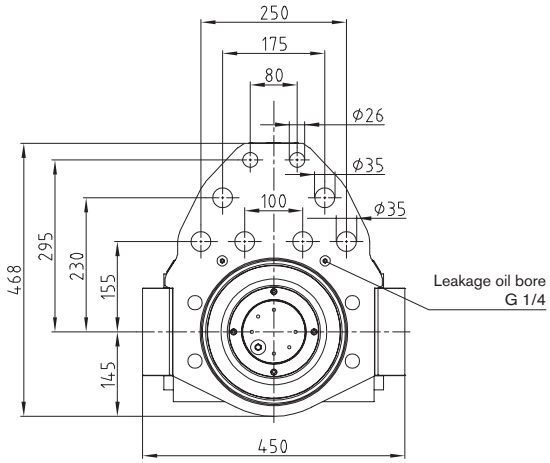
- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® L-xxx
Passive fixed caliper brakes

Hydraulic brake system







KTR-STOP® L-xxx			
Total weight	Approx. 455 kg	Max. operating pressure	200 bars
Width of brake pad	240 mm	Min. thickness of brake disk	30 mm
Surface of each brake pad (organic)	73,100 mm²	Pressure connection	G 3/8
Max. wear per brake pad	6 mm	Leakage oil bore	G 1/4
Rated coefficient of friction 2)	μ = 0.4	Min. diameter of brake disk ØDA	1000 mm
Total brake piston surface - complete brake	452 cm²	Operating temperature	-20 °C to +50 °C
Volume with 1 mm stroke - complete brake	45.2 cm³		

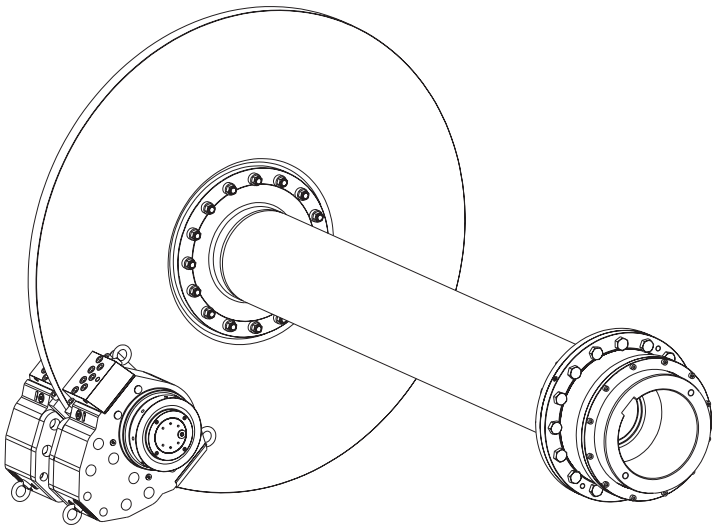
1) Dimensions depending on thickness of brake disk.
2) The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.

Ordering example:

KTR-STOP®	L	200	A	50	-	80
KTR brake	Size of brake	Clamping force	Variant	Thickness of brake disk		Thickness of stand

Brake types						
Brake type	Clamping force F_C [kN]	Loss of power [3] [%]	Opening pressure [bar]	Braking torque [Nm] with brake disk Ø [mm]		
				1000	2000	3000
KTR-STOP® L 200	200	4.5	120	61000	141000	221000
KTR-STOP® L 250	250	7.5	160	77000	177000	277000
KTR-STOP® L 300	300	6.0	180	92000	212000	332000

[3] With a stroke of 1 mm (1 mm wear of brake pad)

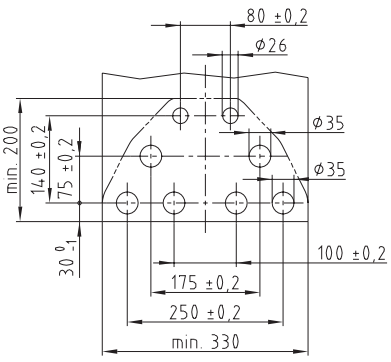


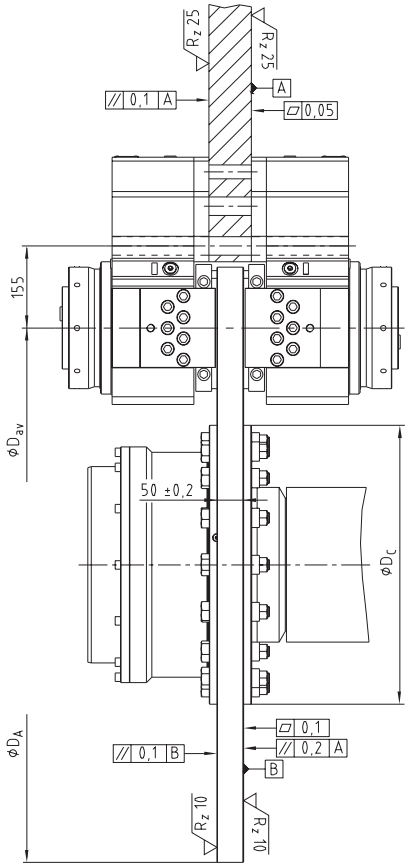
Calculation of brake disk

$$D_{C\ max.} = D_A - 570$$

$$D_{av} = D_A - 230$$

Connection dimensions of brake





$$F_b = F_c \cdot 2 \cdot \mu$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

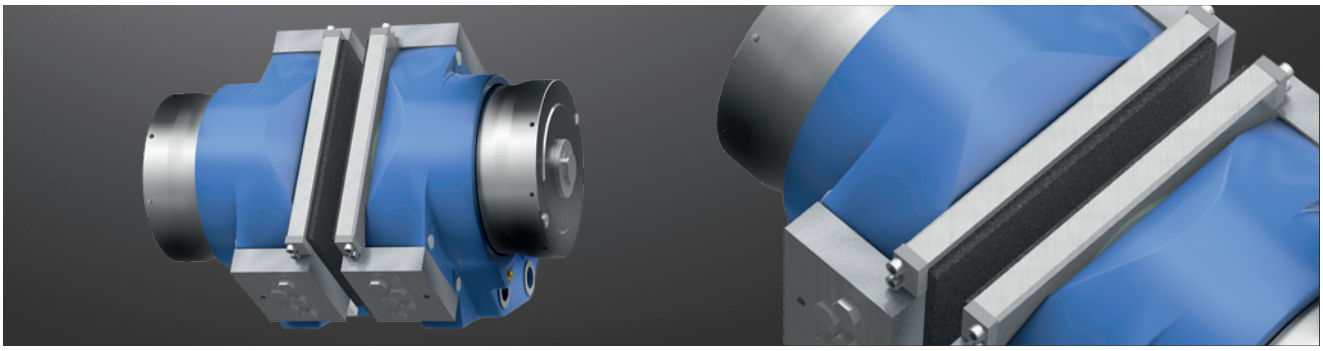
F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

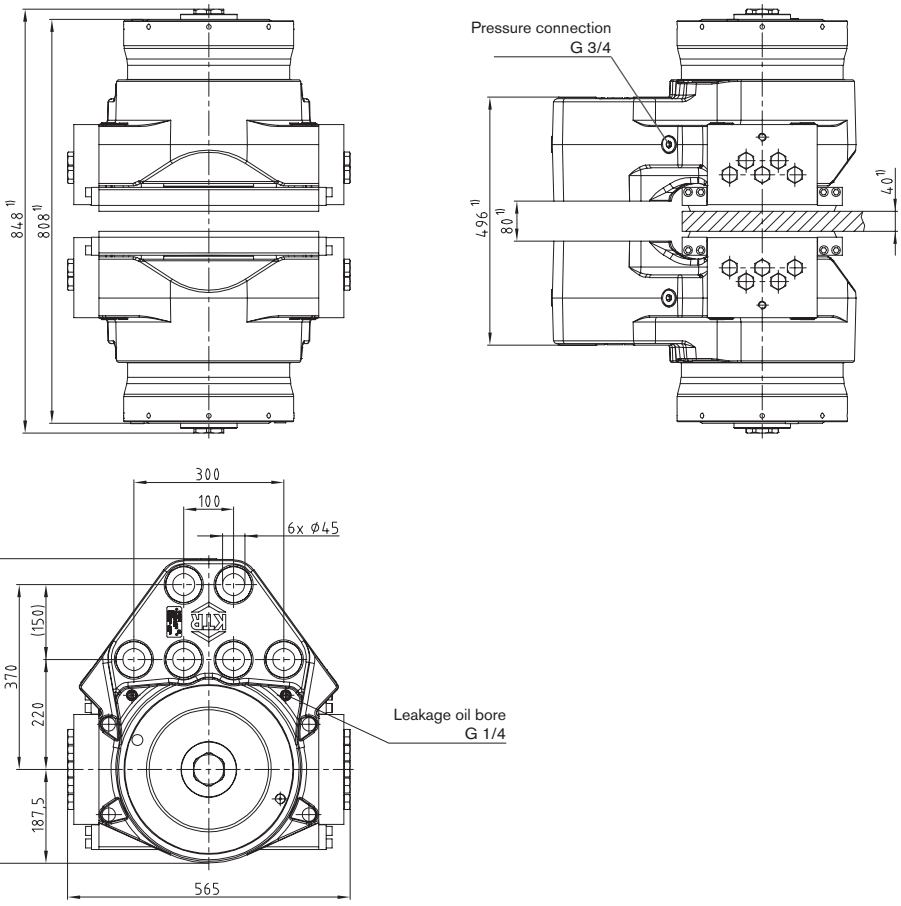
Optional

- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad

KTR-STOP® XL-xxx
Passive fixed caliper brakes

Hydraulic brake system





KTR-STOP® XL-xxx			
Total weight	Approx. 823 kg	Max. operating pressure	200 bars
Width of brake pad	290 mm	Min. thickness of brake disk	40 mm
Surface of each brake pad (organic)	126300 mm2	Pressure connection	G 3/4
Max. wear per brake pad	10 mm	Leakage oil bore	G 1/4
Rated coefficient of friction 2)	μ = 0.4	Min. diameter of brake disk ØDA	1500 mm
Total brake piston surface - complete brake	848 cm²	Operating temperature	-20 °C to +50 °C
Volume with 1 mm stroke - complete brake	84.8 cm³		

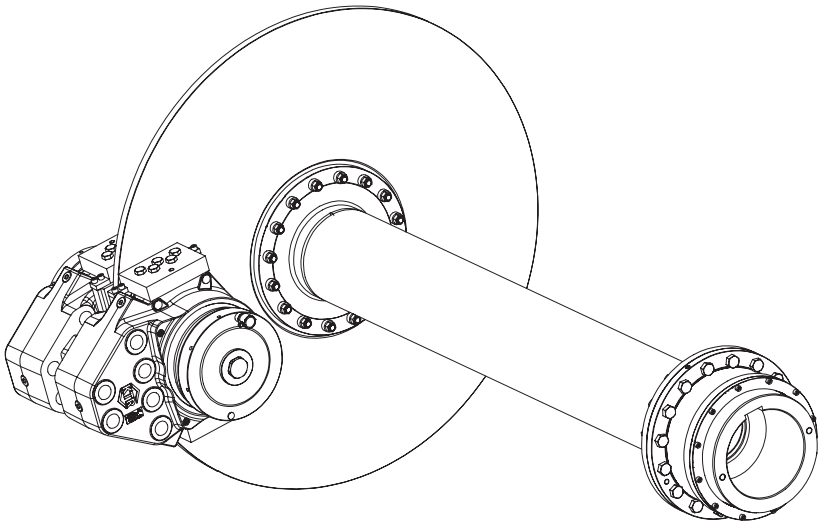
1) Dimensions depending on thickness of brake disk.
2) The friction coefficient each depends on the application resp. material of the brake pad; please consult with KTR.

Ordering example:

KTR-STOP®	XL	250	B	40	-	80
KTR brake	Size of brake	Clamping force	Variant	Thickness of brake disk		Thickness of stand

Brake types						
Brake type	Clamping force F_C [kN]	Loss of power [3] [%]	Opening pressure [bar]	Braking torque [Nm] with brake disk Ø [mm]		
				1500	2500	3500
KTR-STOP® XL-250	250	6.2	80	117000	217000	317000
KTR-STOP® XL-300	300	6.5	90	140400	260400	380400
KTR-STOP® XL-350	350	7.0	110	163800	303800	443800
KTR-STOP® XL-400	400	6.1	120	187200	347200	507200
KTR-STOP® XL-450	450	6.4	140	210600	390600	570600
KTR-STOP® XL-500	500	5.5	160	234000	434000	634000

[3] With a stroke of 1 mm (1 mm wear of brake pad)

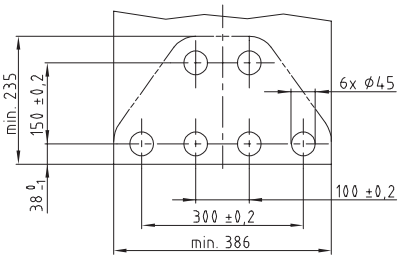


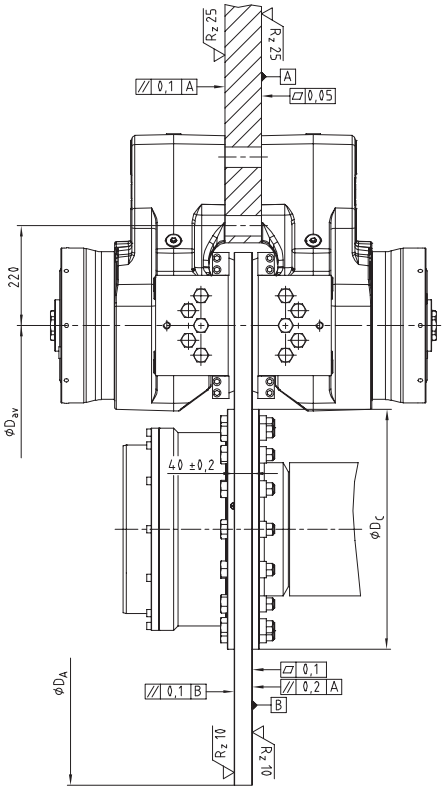
Calculation of brake disk

$$D_{C\ max.} = D_A - 670$$

$$D_{av} = D_A - 330$$

Connection dimensions of brake





$$F_b = F_c \cdot 2 \cdot \mu$$

$$M_b = z \cdot F_b \cdot \frac{D_{av}}{2}$$

F_b = Braking force [kN]
F_c = Clamping force [kN]
M_b = Braking torque [kNm]
z = Number of brakes
D_{av} = Effective diameter of brake [m]

Optional

- Various colours available
- Sensor indicating wear and condition of pad
- Temperature sensor
- Alternative materials of brake pad