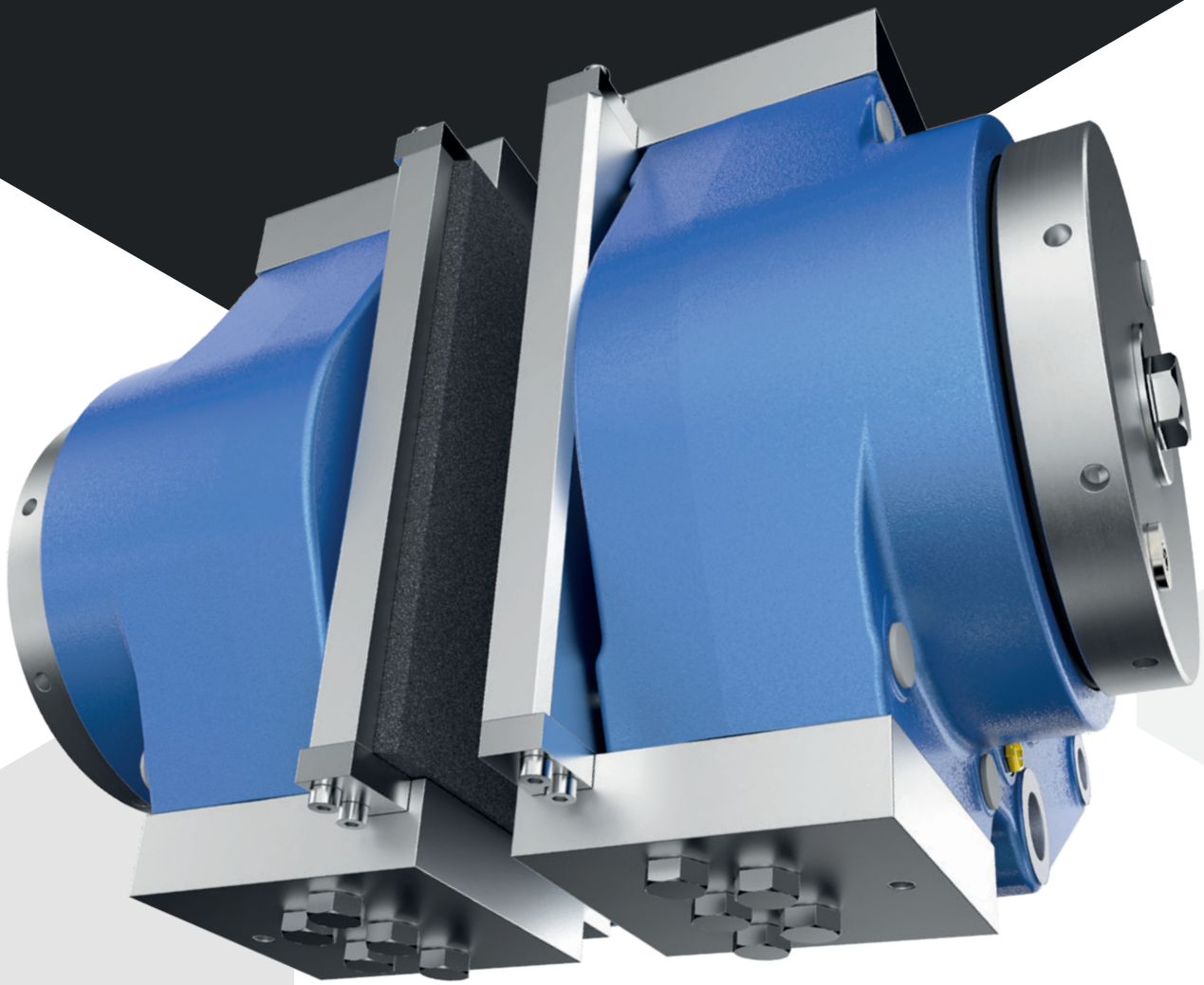
Made for Motion KTR



Brake systems

KTR-STOP®
EMB-STOP
SBT Systems

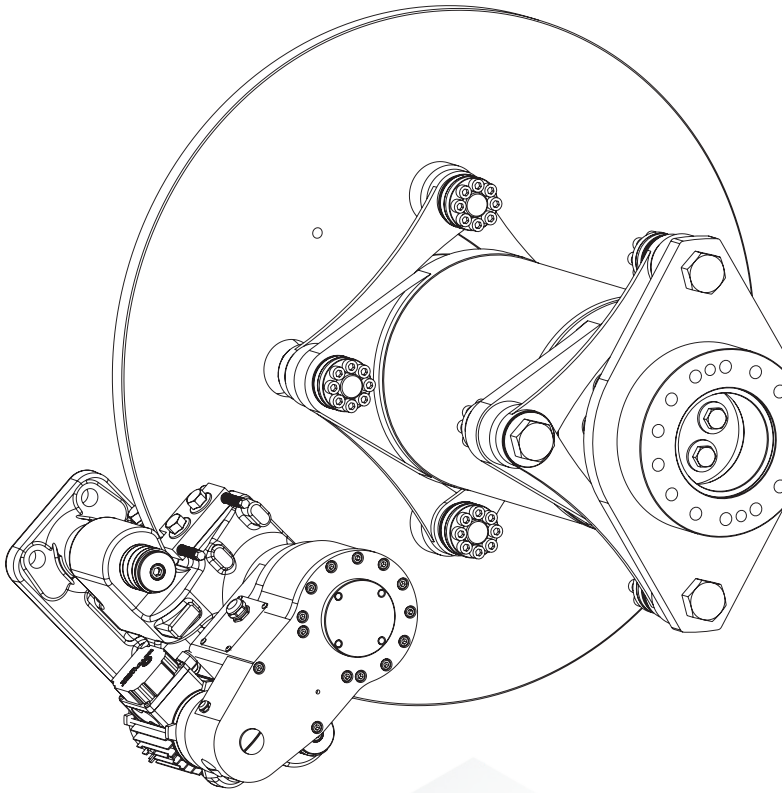
2026/27
www.ktr.com



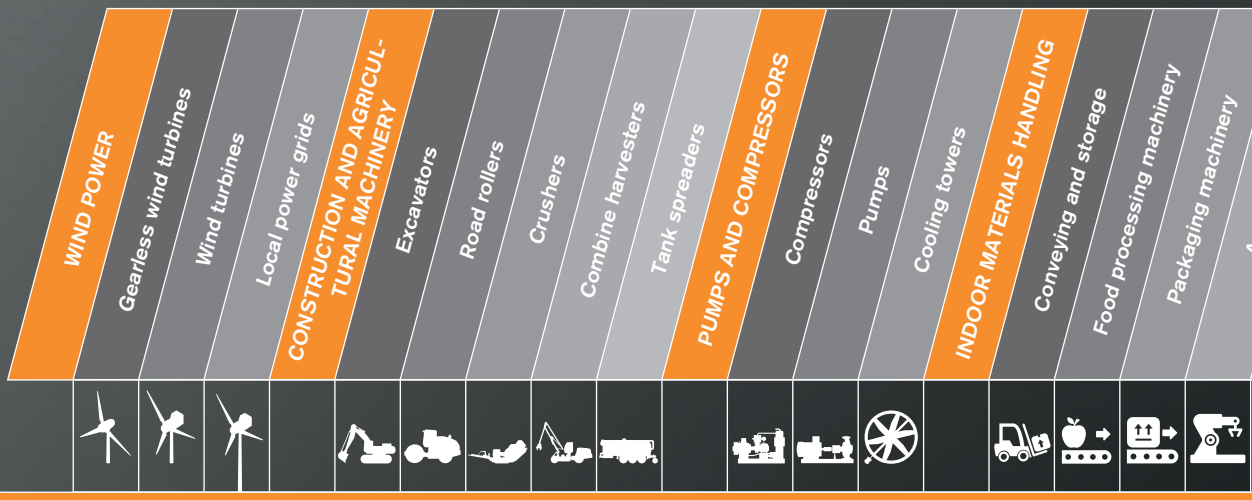
An innovative ambience for innovative ideas

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



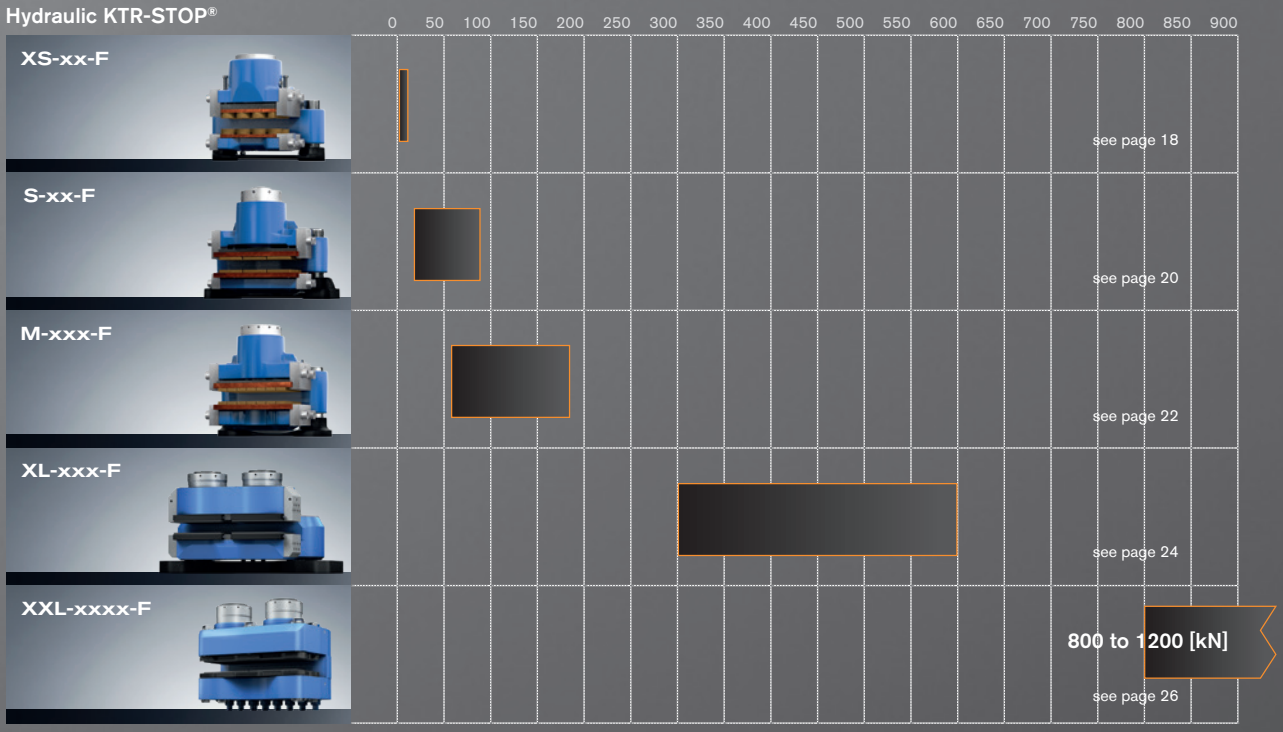
	WIND POWER	Gearless wind turbines	Wind turbines	Local power grids	CONSTRUCTION AND AGRICULTURAL MACHINERY	Excavators	Road rollers	Crushers	Combine harvesters	Tank spreaders	PUMPS AND COMPRESSORS	Compressors	Pumps	Cooling towers	INDOOR MATERIALS HANDLING	Conveying and storage	Food processing machinery	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					■								■		■			

Clamping forces of brake systems

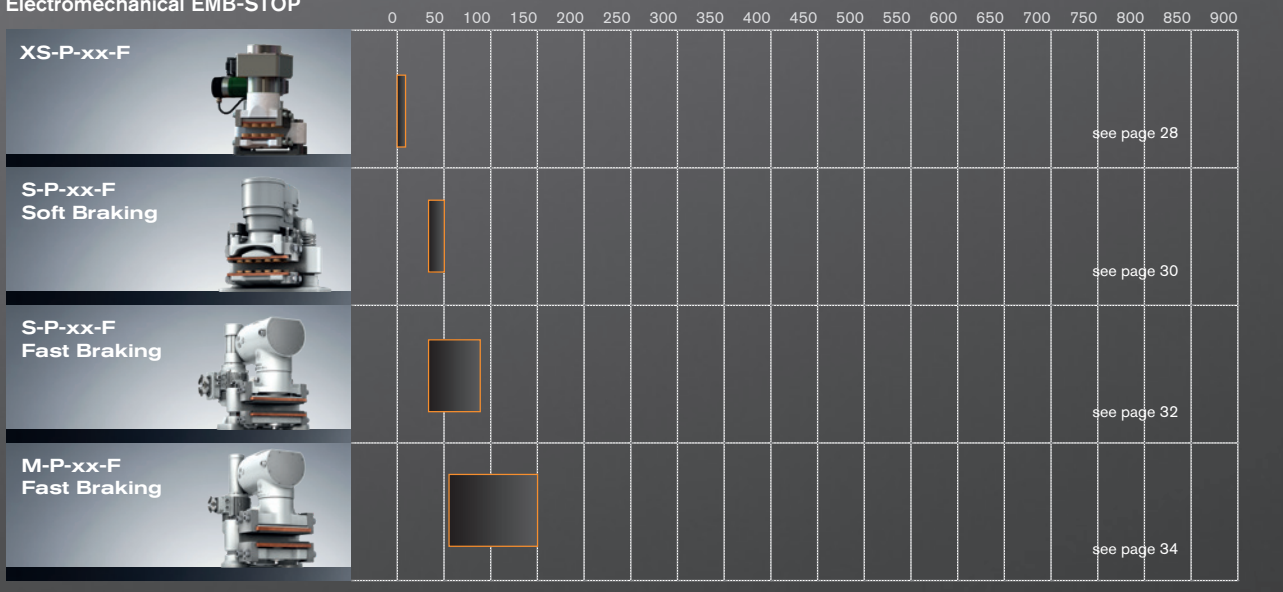
Passive floating caliper brakes

Clamping forces [kN]

Hydraulic KTR-STOP®



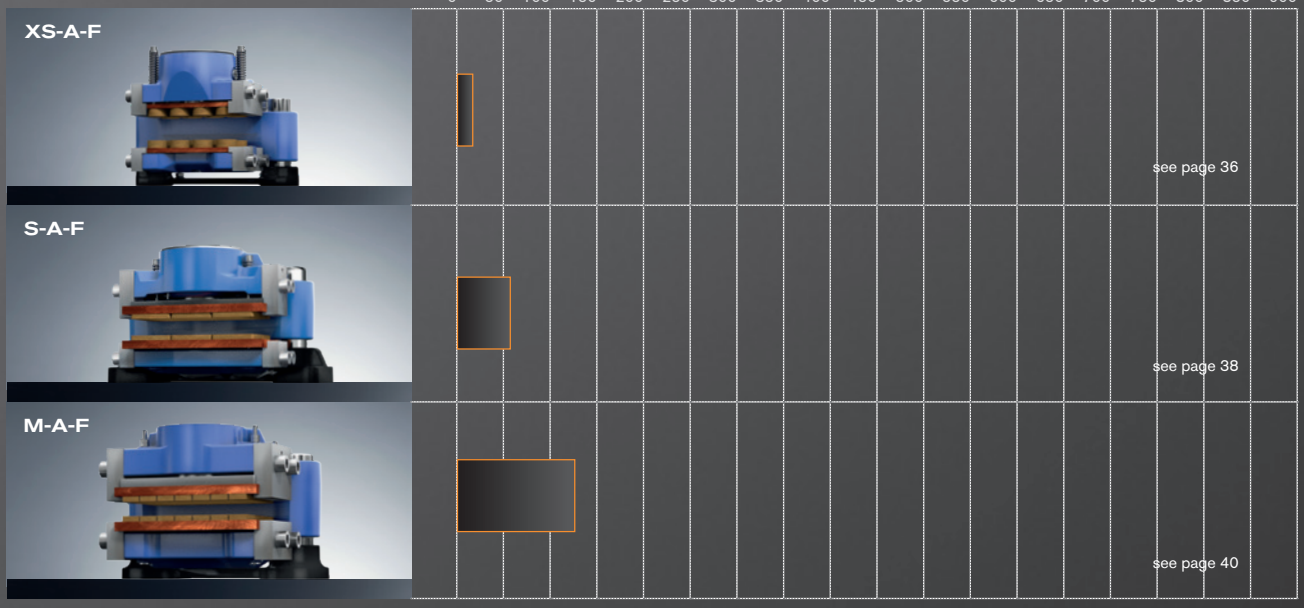
Electromechanical EMB-STOP



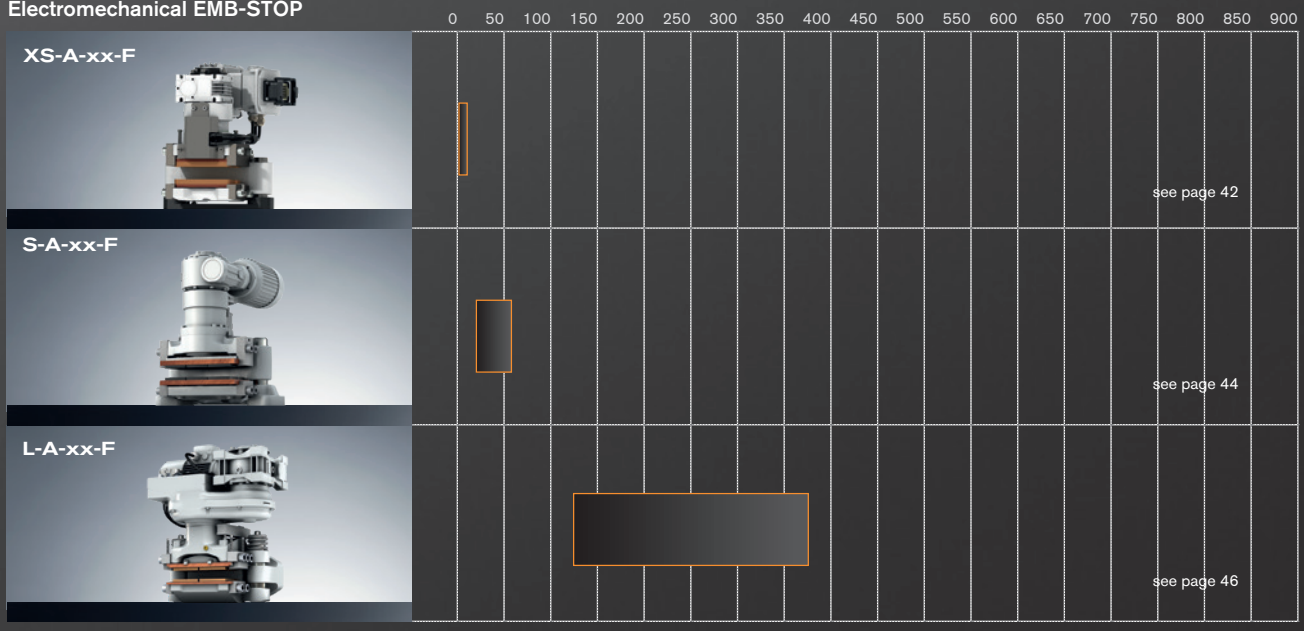
Active floating caliper brakes

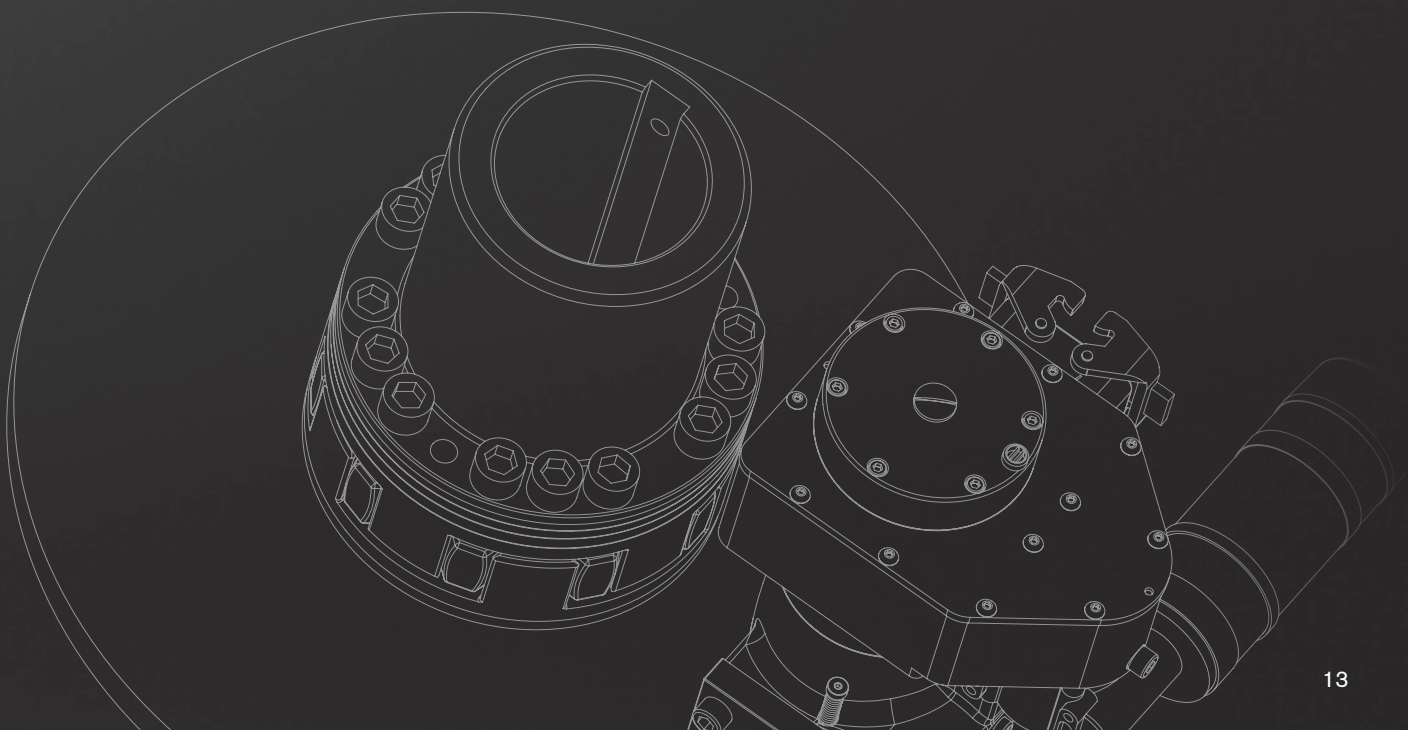
Clamping forces [kN]

Hydraulic KTR-STOP®



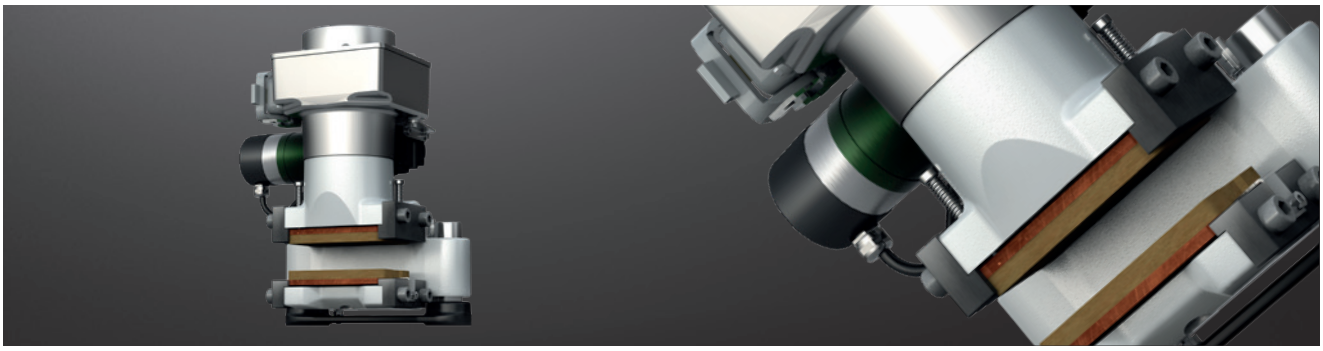
Electromechanical EMB-STOP

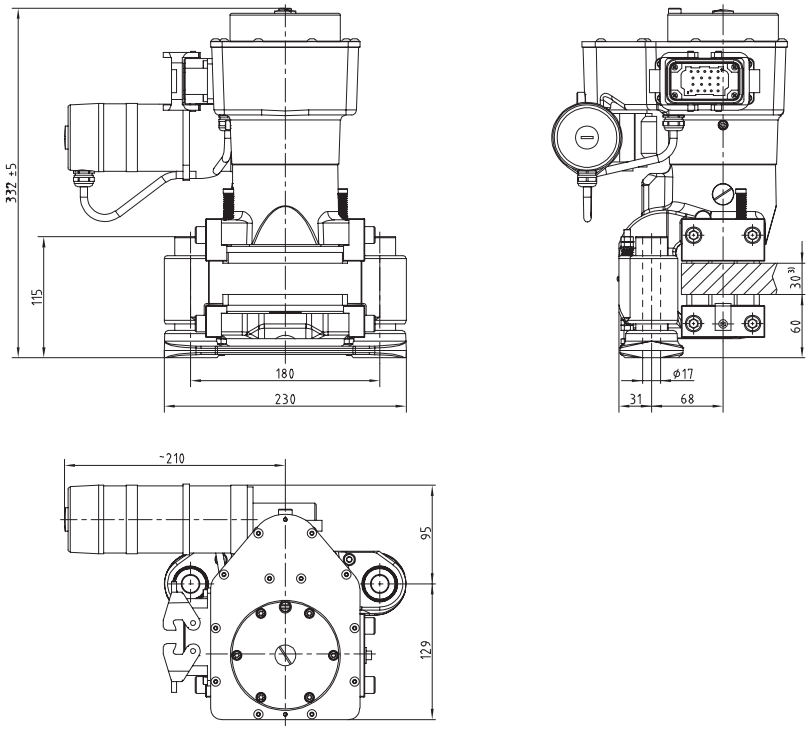




EMB-STOP XS-P-xx-F
Passive floating caliper brakes

Electromechanical brake system





EMB-STOP XS-P-xx-F					
Total weight [1]		Approx. 28 kg	Floating range on axes - away from mounting surface		5 mm
Width of brake pad		70 mm	Min. diameter of brake disk ØDA		300 mm
Surface per brake pad	organic	8,000 mm²	Operating temperature		-20 °C to +50 °C
	sinter metal	5,800 mm²	Closing time		< 0.2 s
Max. wear per brake pad		5 mm	Release time		3.5 s
Coefficient of friction of pad, nominal value [2]		μ = 0.4	Size of industrial connector		Han 10B / Han 18EE (male)
Min. clamping force		6 kN	Motor power		140 W
Max. clamping force		12 kN	Motor voltage		400 VAC, 50 Hz
Power loss with 1mm stroke (0.5 per side) [4]		~ 10%	Limit switch signals, standard		Released, wear
Thickness of brake disk [3]		20 mm, 30 mm	Power of safety coupling - keeping the brake open		22 W @ 24 VDC
Floating range on axes - towards mounting surface		5 mm			

[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.
[4] Each depending on the clamping force.

Calculation of braking force/braking torque

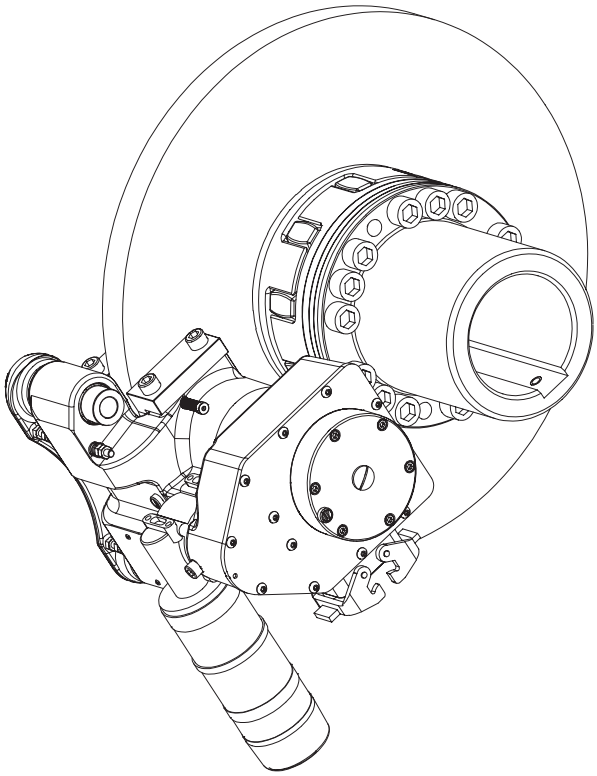
$$F_b = F_c \cdot 2 \cdot \mu$$

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

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:

EMB-STOP	XS	-	P	-	12	-	F	B	-	30
EMB brake	Size of brake		Passive		Clamping force		Floater	Variant		Thickness of brake disk

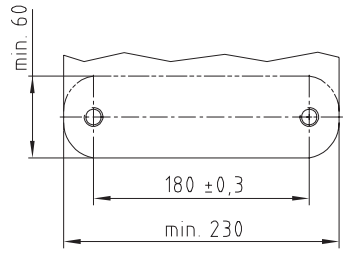


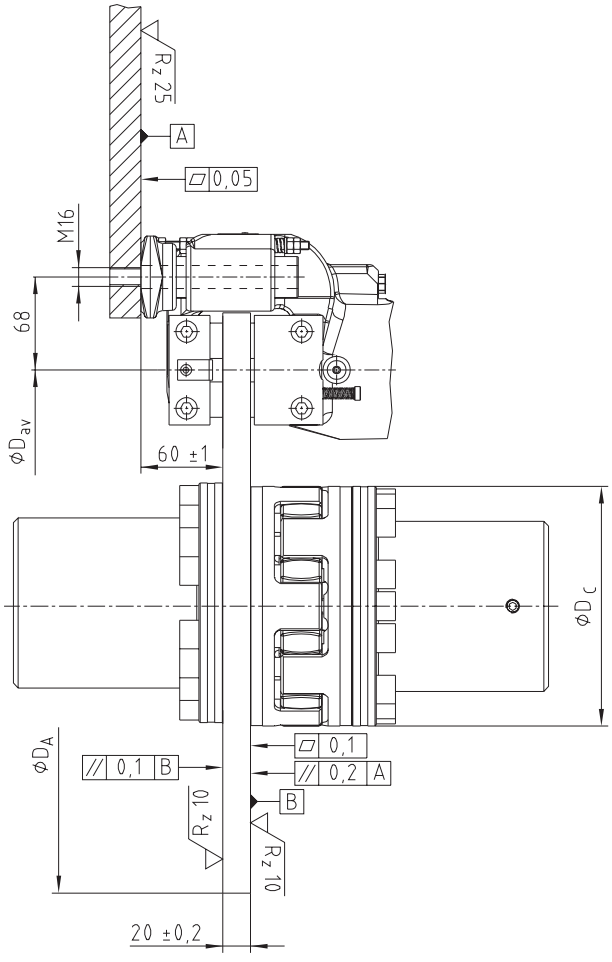
Calculation of brake disk

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

$D_{av} = D_A - 86$

Connection dimensions of brake





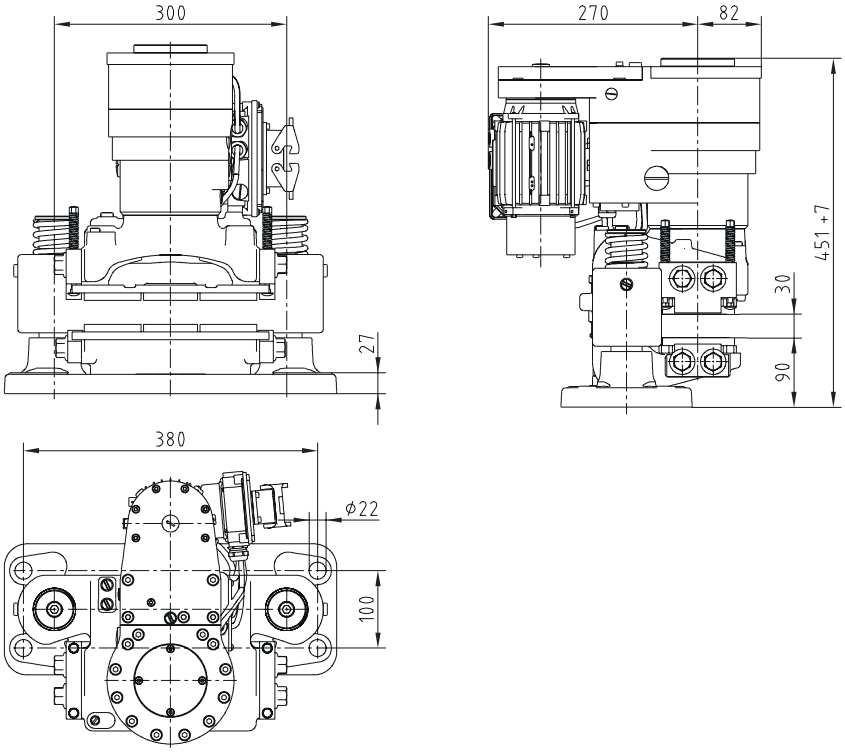
Optional

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

EMB-STOP S-P-xx-F Soft-Braking
Passive floating caliper brakes

Electromechanical brake system





EMB-STOP S-P-xx-F Soft-Braking					
Total weight [1]		Approx. 93 kg	Floating range on axes - away from mounting surface		2 mm
Width of brake pad		95 mm	Min. diameter of brake disk ØDA		500 mm
Surface per brake pad	organic	19,500 mm²	Operating temperature		-15 °C to +50 °C
	sinter metal	14,500 mm²	Closing time		0.5 s
Max. wear per brake pad		5 mm	Release time		3 s
Coefficient of friction of pad, nominal value [2]		μ = 0.4	Size of industrial connector		Han 10B / Han 18EE (male)
Min. clamping force		30 kN	Motor power		260 W
Max. clamping force		55 kN	Motor voltage		400 VAC, 50 Hz
Power loss with 1mm stroke (0.5 per side) [4]		~ 10%	Limit switch signals, standard		Released, wear
Thickness of brake disk [3]		30 mm, 40 mm	Power of safety coupling - keeping the brake open		20 W @ 24 VDC
Floating range on axes - towards mounting surface		2 mm			

[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.
[4] Each depending on the clamping force.

Calculation of braking force/braking torque

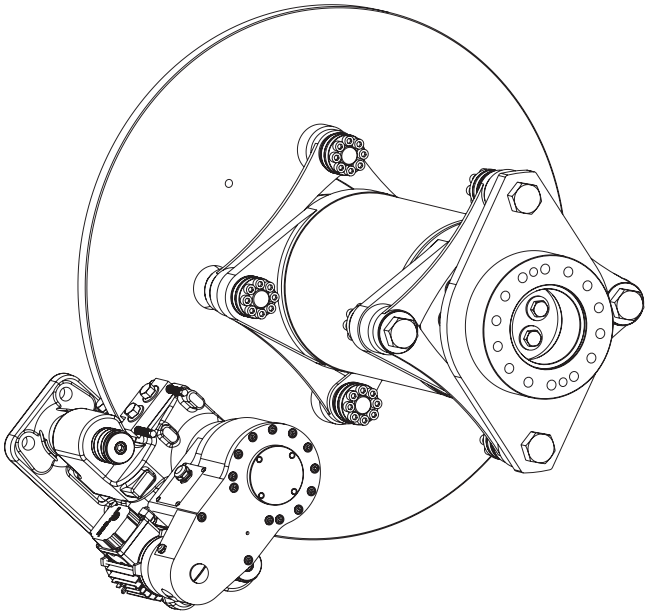
$$F_b = F_c \cdot 2 \cdot \mu$$

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

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:

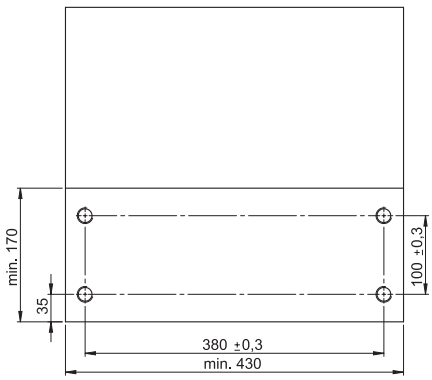
EMB-STOP	S	-	P	-	50	-	F		B	-	30
EMB brake	Size of brake		Passive		Clamping force		Floater		Variant		Thickness of brake disk

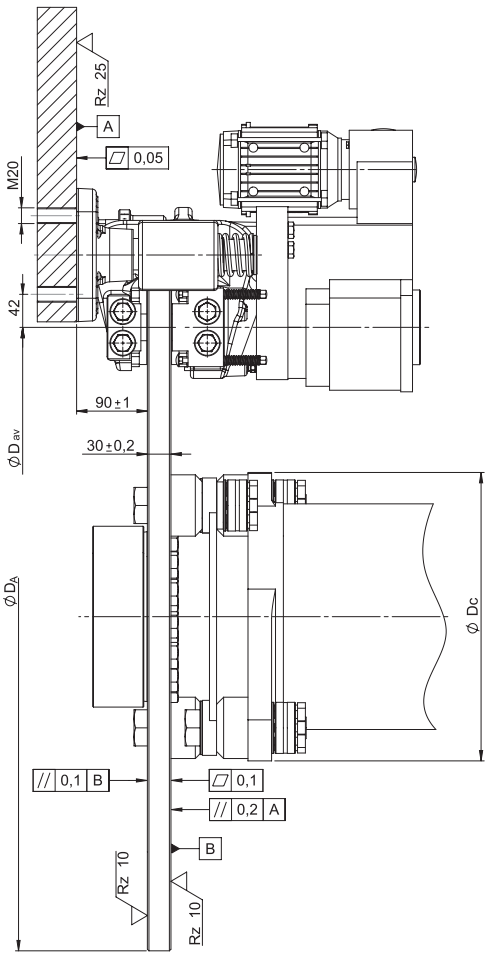


Calculation of brake disk

$ØD_A$ = 500 ... 1000 mm	$ØD_A$ = 1000 ... 1800 mm	$ØD_A$ = 1800 ... 3000 mm
$D_{av} = D_A - 130$	$D_{av} = D_A - 110$	$D_{av} = D_A - 105$

Connection dimensions of brake



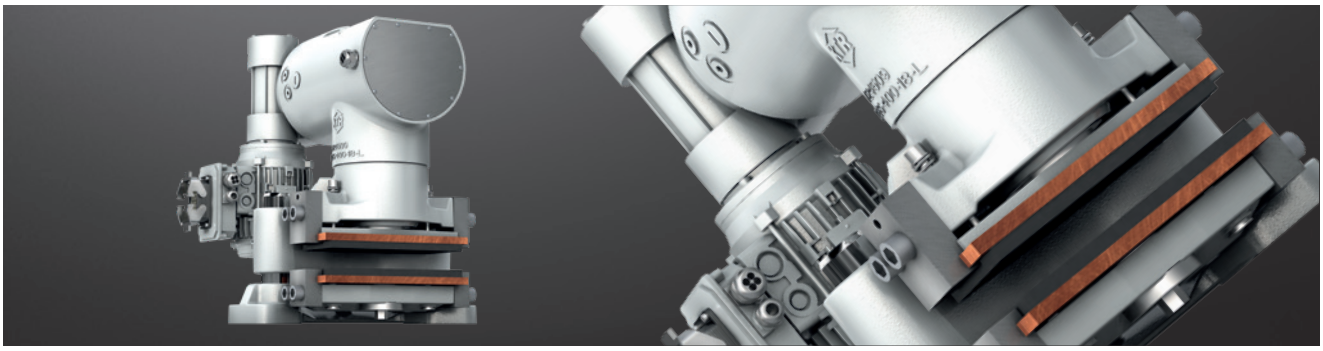


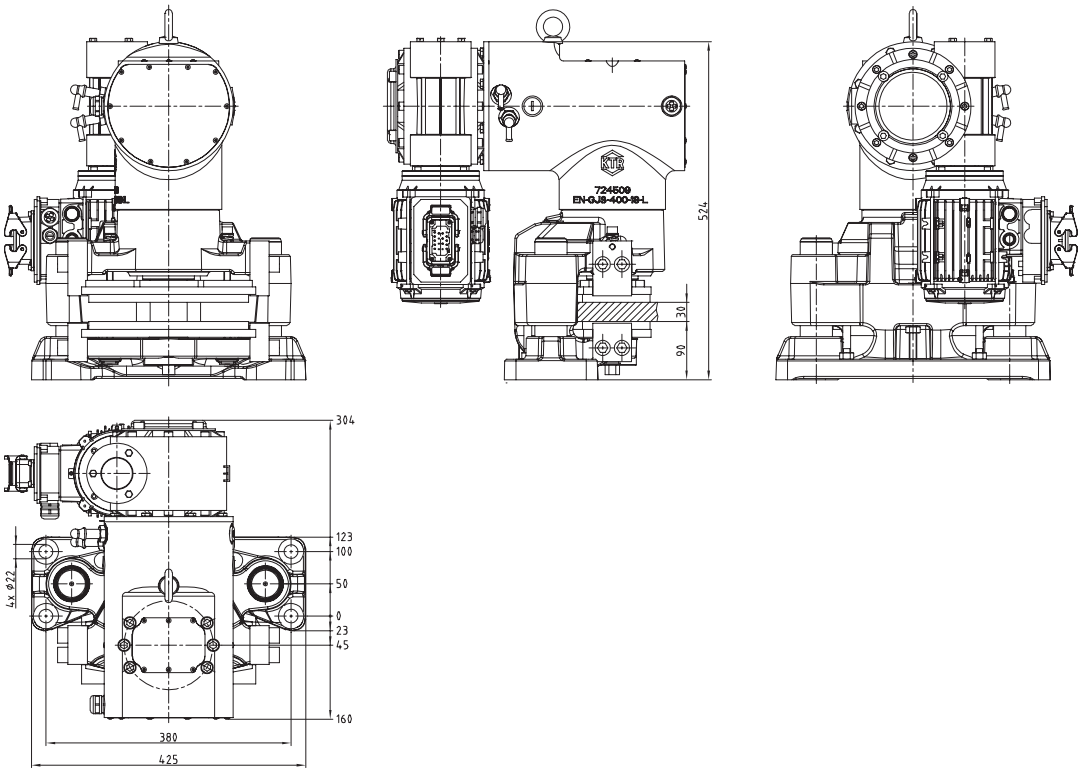
Optional

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

EMB-STOP S-P-xx-F Fast-Braking
Passive floating caliper brakes

Electromechanical brake system





EMB-STOP S-P-xx-F Fast-Braking					
Total weight [1]		Approx. 170 kg	Floating range on axes - away from mounting surface		5 mm
Width of brake pad		110 mm	Min. diameter of brake disk ØDA		500 mm
Surface per brake pad	organic	28,700 mm²	Operating temperature		-30 °C to +50 °C
	sinter metal	26,800 mm²	Closing time		< 0.2 s
Max. wear per brake pad		5 mm	Release time		< 0.5 s
Coefficient of friction of pad, nominal value [2]		μ = 0.4	Size of industrial connector		Han 10B / Han 18EE (male)
Min. clamping force		30 kN	Motor power		1.1 kW
Max. clamping force		80 kN	Motor voltage		400 VAC, 50 Hz
Power loss with 1mm stroke (0.5 per side) [4]		~ 10%	Limit switch signals, standard		Released, wear
Thickness of brake disk [3]		30 mm, 40 mm	Power of safety coupling - keeping the brake open		80 W @ 24 VDC
Floating range on axes - towards mounting surface		5 mm			

[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.
[4] Each depending on the clamping force.

Calculation of braking force/braking torque

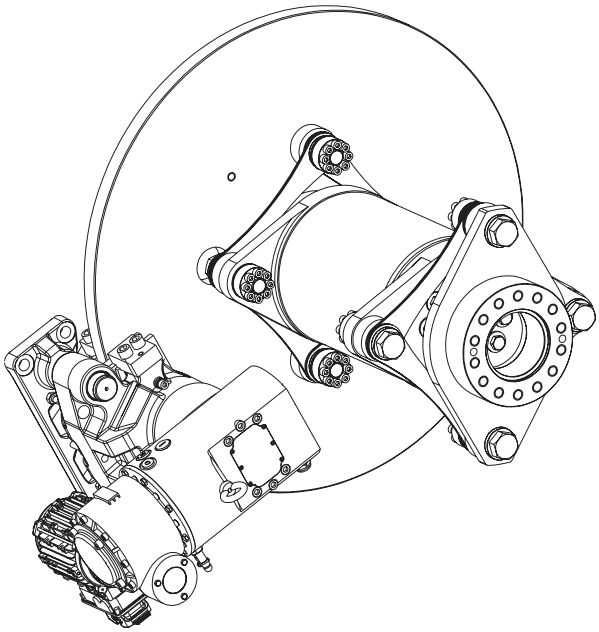
$$F_b = F_c \cdot 2 \cdot \mu$$

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

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:

EMB-STOP	S	-	P	-	50	-	F		B	-	30
EMB brake	Size of brake		Passive		Clamping force		Floater		Variant		Thickness of brake disk



Calculation of brake disk

$ØD_A$ = 500 ... 1000 mm

$D_{av} = D_A - 130$

$ØD_{C\ max.} = D_A - 370$

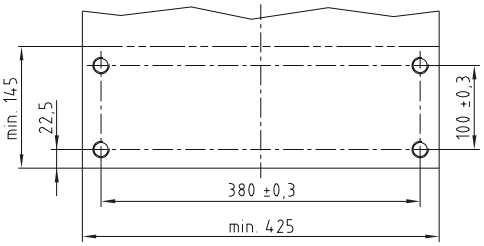
$ØD_A$ = 1000 ... 1800 mm

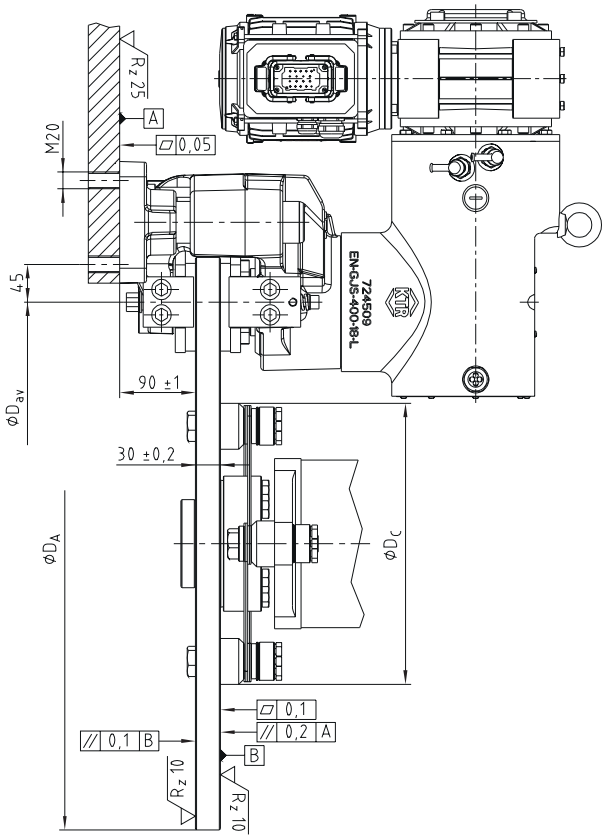
$D_{av} = D_A - 120$

$ØD_A$ = 1800 ... 3000 mm

$D_{av} = D_A - 110$

Connection dimensions of brake



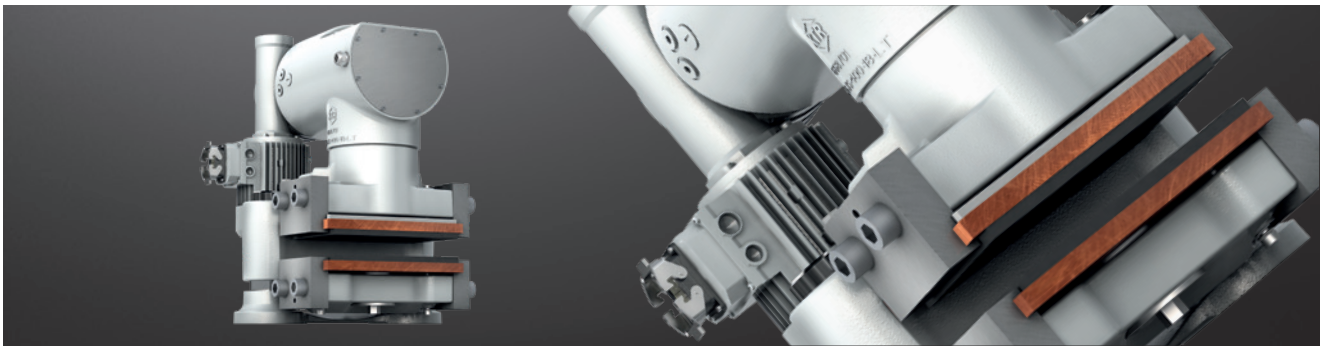


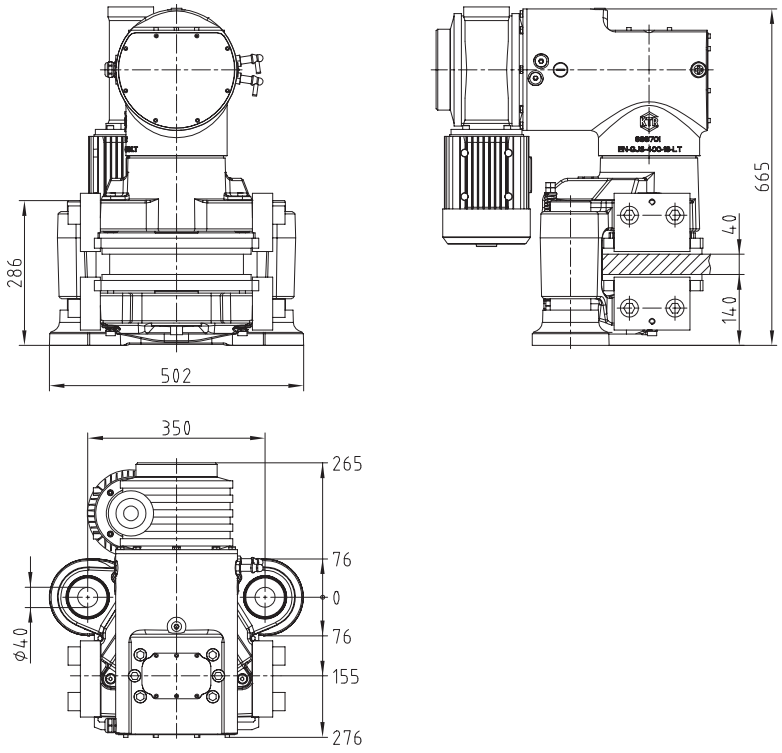
Optional

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

EMB-STOP M-P-xxx-F Fast Braking
Passive floating caliper brakes

Electromechanical brake system





EMB-STOP M-P-xxx-F Fast Braking				
Total weight [1]		Approx. 345 kg	Floating range on axes - away from mounting surface	5 mm
Width of brake pad		200 mm	Min. diameter of brake disk ØDA	800 mm
Surface per brake pad	organic	57,900 mm²	Operating temperature	-30 °C to +50 °C
	sinter metal	53,500 mm²	Closing time	< 0.2 s
Max. wear per brake pad		8 mm	Release time	< 0.5 s
Coefficient of friction of pad, nominal value [2]		μ = 0.4	Size of industrial connector	Han 10B / Han 18EE (male)
Min. clamping force		60 kN	Motor power	1.5 kW
Max. clamping force		150 kN	Motor voltage	400 VAC, 50 Hz
Power loss with 1mm stroke (0.5 per side) [4]		~ 10%	Limit switch signals, standard	Released, wear
Thickness of brake disk [3]		30 mm, 40 mm, 50 mm	Power of safety coupling - keeping the brake open	100 W @ 24 VDC
Floating range on axes - towards mounting surface		5 mm		

[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.
[4] Each depending on the clamping force.

Calculation of braking force/braking torque

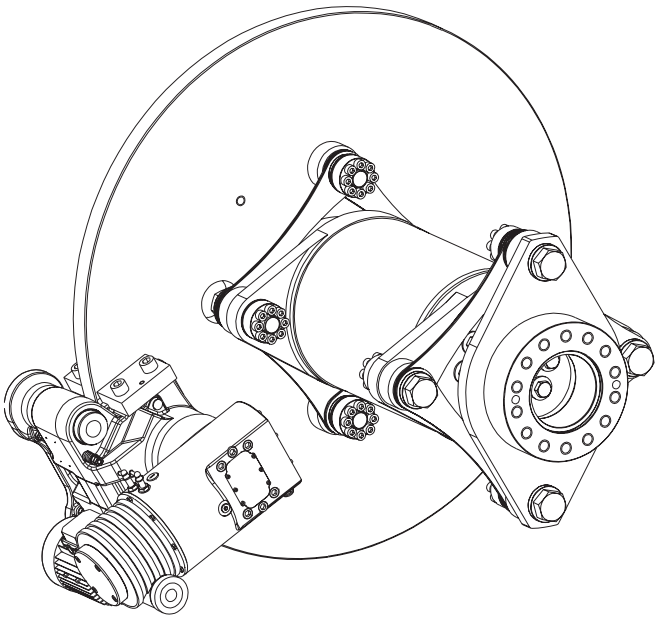
$$F_b = F_c \cdot 2 \cdot \mu$$

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

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:

EMB-STOP	M	-	P	-	50	-	F		B	-	30
EMB brake	Size of brake		Passive		Clamping force		Floater		Variant		Thickness of brake disk

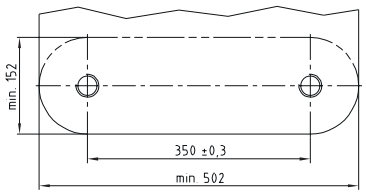


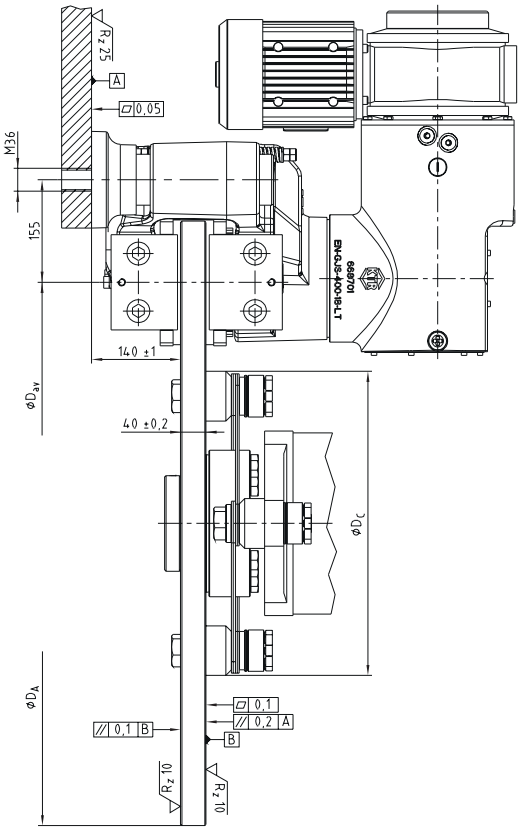
Calculation of brake disk

$D_{av} = D_A - 200$

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

Connection dimensions of brake



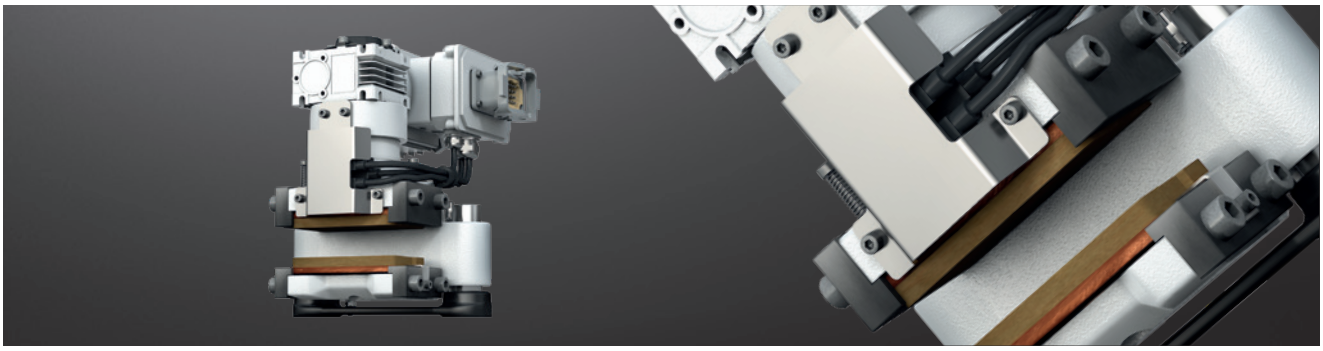


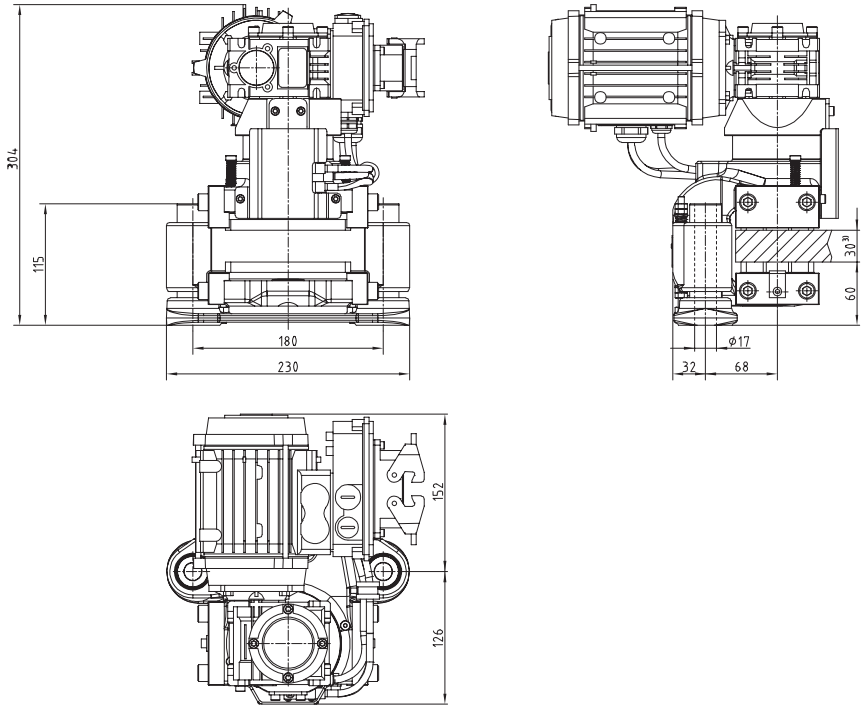
Optional

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

EMB-STOP XS-A-xx-F
Active floating caliper brakes

Electromechanical brake system





EMB-STOP XS-A-xx-F				
Total weight [1]		Approx. 30 kg	Floating range on axes - away from mounting surface	5 mm
Width of brake pad		70 mm	Min. diameter of brake disk ØDA	300 mm
Surface per brake pad	organic	8,000 mm²	Operating temperature	-15 °C to +50 °C
	sinter metal	5,800 mm²	Closing time	1.8 s
Max. wear per brake pad		5mm	Release time	1.8 s
Coefficient of friction of pad, nominal value [2]		μ = 0.4	Size of industrial connector	Han 10B / Han 18EE (male)
Min. clamping force		6 kN	Motor power	120 W
Max. clamping force		14 kN	Motor voltage	400 VAC, 50 Hz
Thickness of brake disk [3]		20 mm, 30 mm	Limit switch signals, standard	Released, braked, wear
Floating range on axes - towards mounting surface		5 mm		

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

Calculation of braking force/braking torque

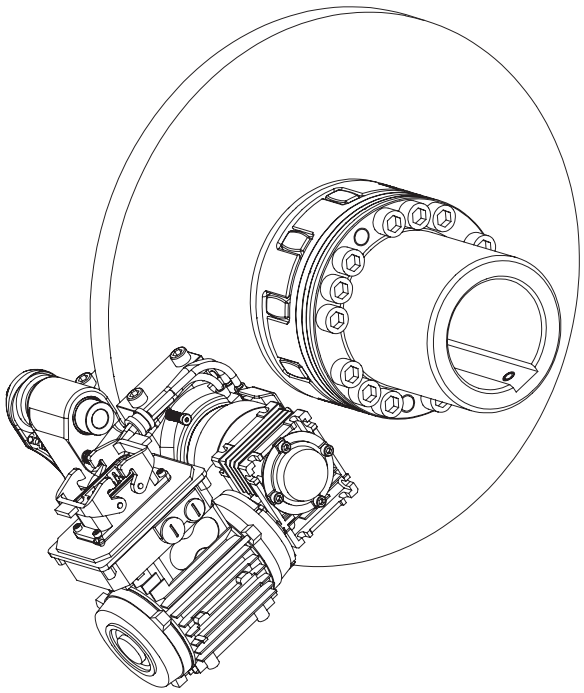
$$F_b = F_c \cdot 2 \cdot \mu$$

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

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:

EMB-STOP	XS	A	12	F	B	30
EMB brake	Size of brake	Active	Clamping force	Floater	Variant	Thickness of brake disk

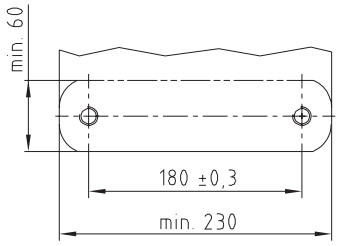


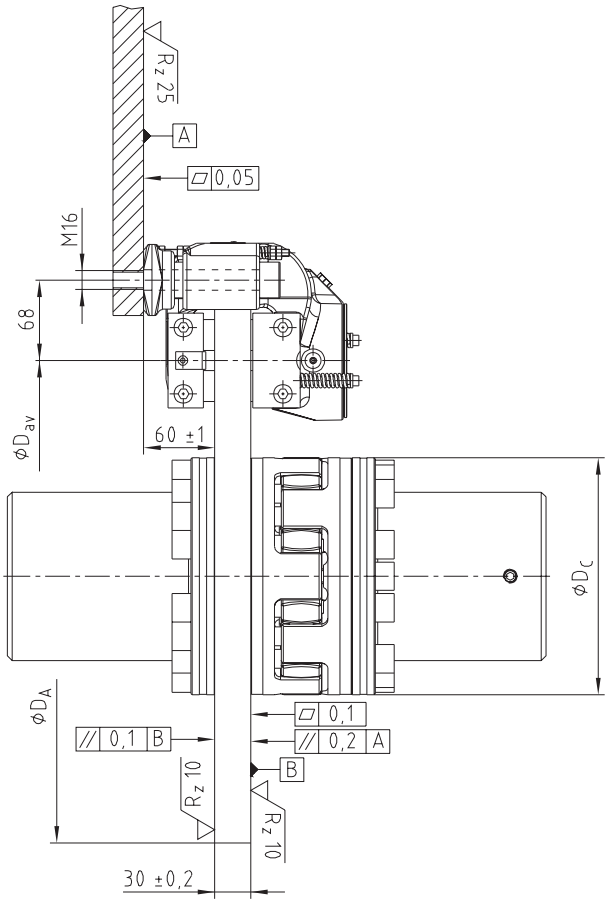
Calculation of brake disk

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

$D_{av} = D_A - 86$

Connection dimensions of brake



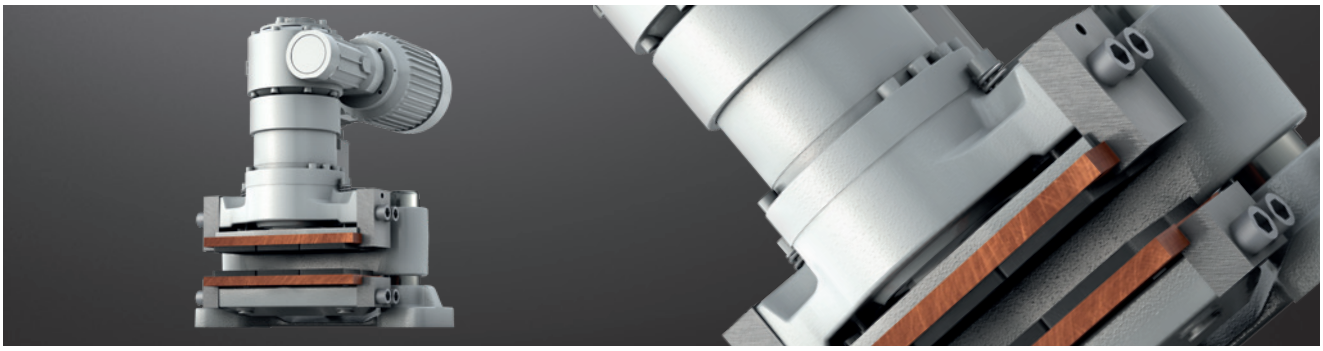


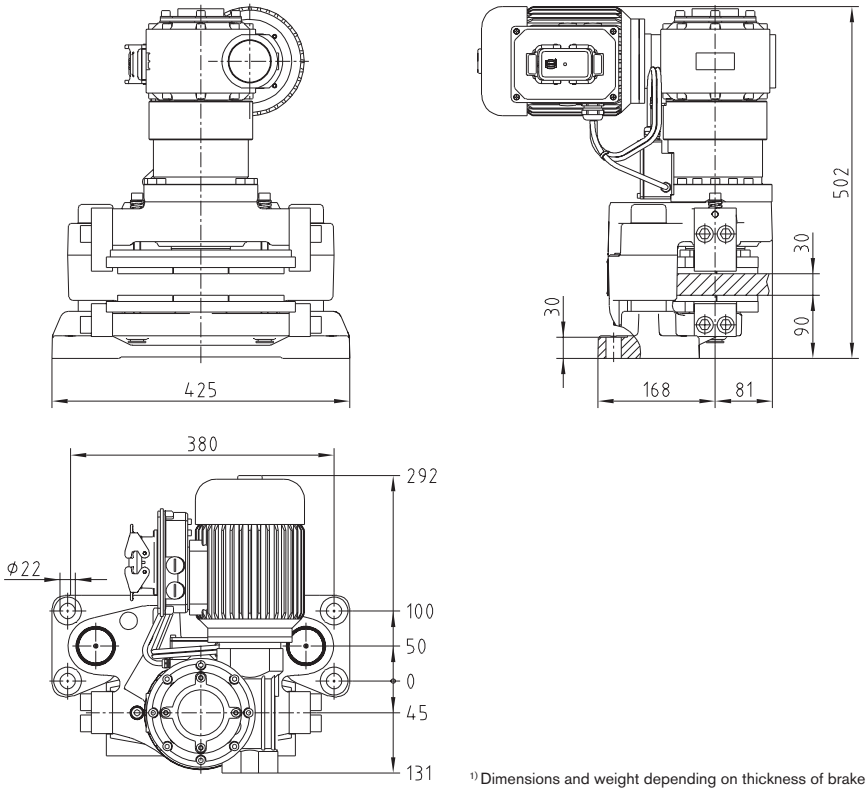
Optional

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

EMB-STOP S-A-xx-F
Active floating caliper brakes

Electromechanical brake system





[1] Dimensions and weight depending on thickness of brake disk.

EMB-STOP S-A-xx-F				
Total weight [1]		Approx. 112 kg	Floating range on axes - away from mounting surface	5 mm
Width of brake pad		120 mm	Min. diameter of brake disk ØDA	500 mm
Surface per brake pad	organic	26,800 mm²	Operating temperature	-30 °C to +50 °C
	sinter metal	26,800 mm²	Closing time	2.5 s
Max. wear per brake pad		5mm	Release time	2.5 s
Coefficient of friction of pad, nominal value [2]		μ = 0.4	Size of industrial connector	Han 10B / Han 18EE (male)
Min. clamping force		30 kN	Motor power	1.35 kW
Max. clamping force		65 kN	Motor voltage	400 VAC, 50 Hz
Thickness of brake disk [3]		30 mm, 40 mm	Limit switch signals, standard	Released, braked, wear
Floating range on axes - towards mounting surface		5 mm		

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

Calculation of braking force/braking torque

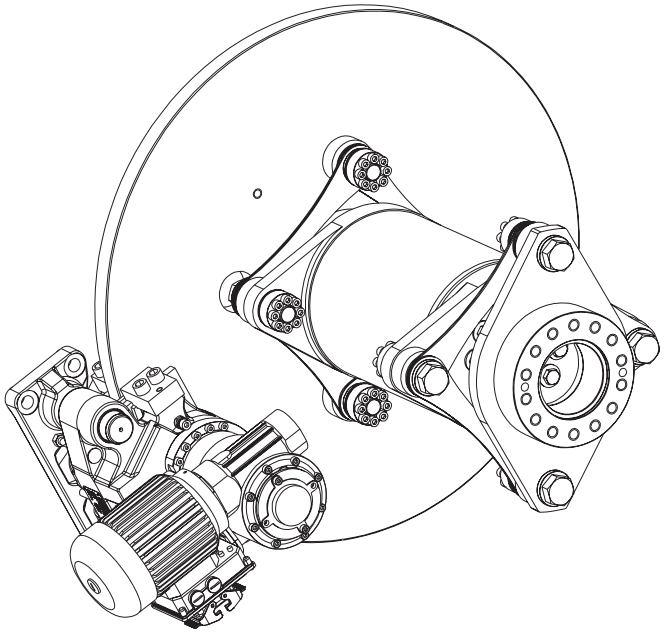
$$F_b = F_c \cdot 2 \cdot \mu$$

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

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:

EMB-STOP	S	A	50	F	B	30
EMB brake	Size of brake	Active	Clamping force	Floater	Variant	Thickness of brake disk



Calculation of brake disk

$ØD_A$ = 500 ... 1000 mm

$D_{av} = D_A - 130$

$ØD_{C\ max.} = D_A - 300$

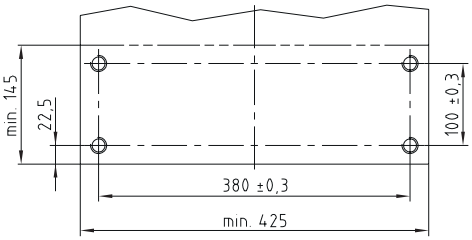
$ØD_A$ = 1000 ... 1800 mm

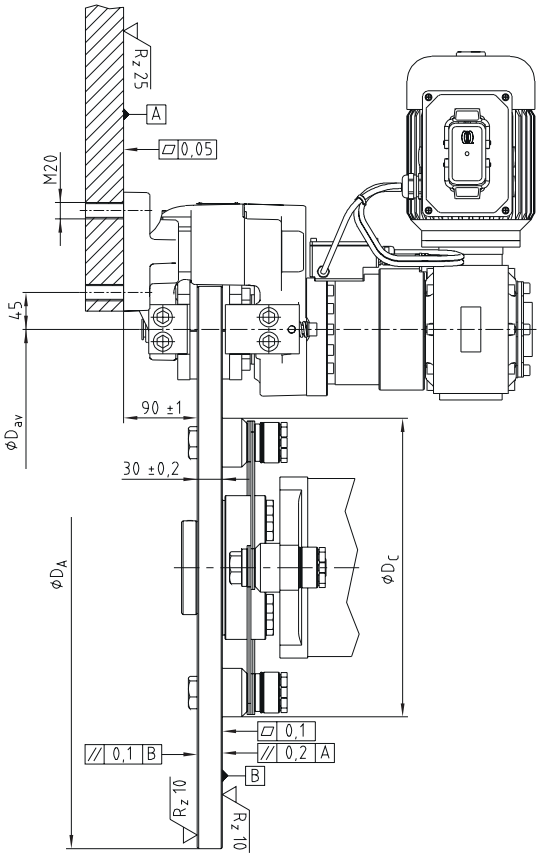
$D_{av} = D_A - 110$

$ØD_A$ = 1800 mm

$D_{av} = D_A - 105$

Connection dimensions of brake





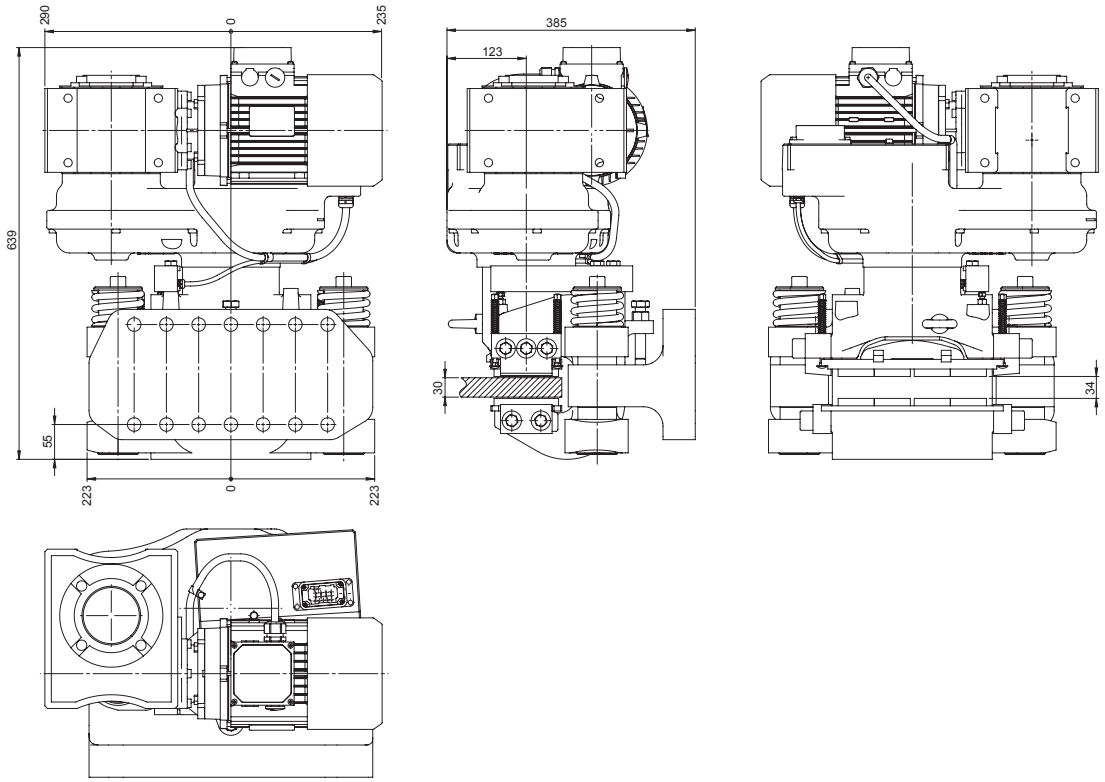
Optional

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

EMB-STOP L-A-xxx-F
Active floating caliper brakes

Electromechanical brake system





EMB-STOP L-A-xxx-F				
Total weight [1]		Approx. 235 kg	Floating range on axes - away from mounting surface	5 mm
Width of brake pad		100 mm	Min. diameter of brake disk ØDA	900 mm
Surface per brake pad	organic	22,400 mm²	Operating temperature	-30 °C to +50 °C
	sinter metal	22,400 mm²	Closing time	3 s
Max. wear per brake pad		8mm	Release time	3 s
Coefficient of friction of pad, nominal value [2]		μ = 0.4	Size of industrial connector	Han 10B / Han 18EE (male)
Min. clamping force		125 kN	Motor power	1.5 kW
Max. clamping force		375 kN	Motor voltage	400 VAC, 50 Hz
Thickness of brake disk [3]		30 mm, 40 mm, 50 mm	Limit switch signals, standard	Released, braked, wear
Floating range on axes - towards mounting surface		5 mm		

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

Calculation of braking force/braking torque

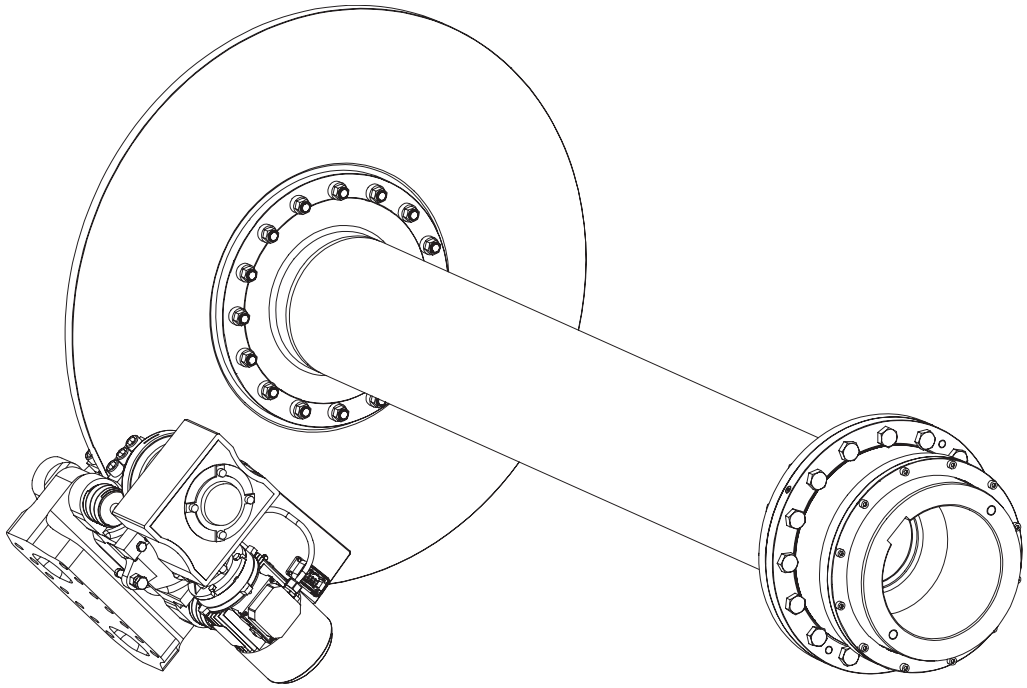
$$F_b = F_c \cdot 2 \cdot \mu$$

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

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:

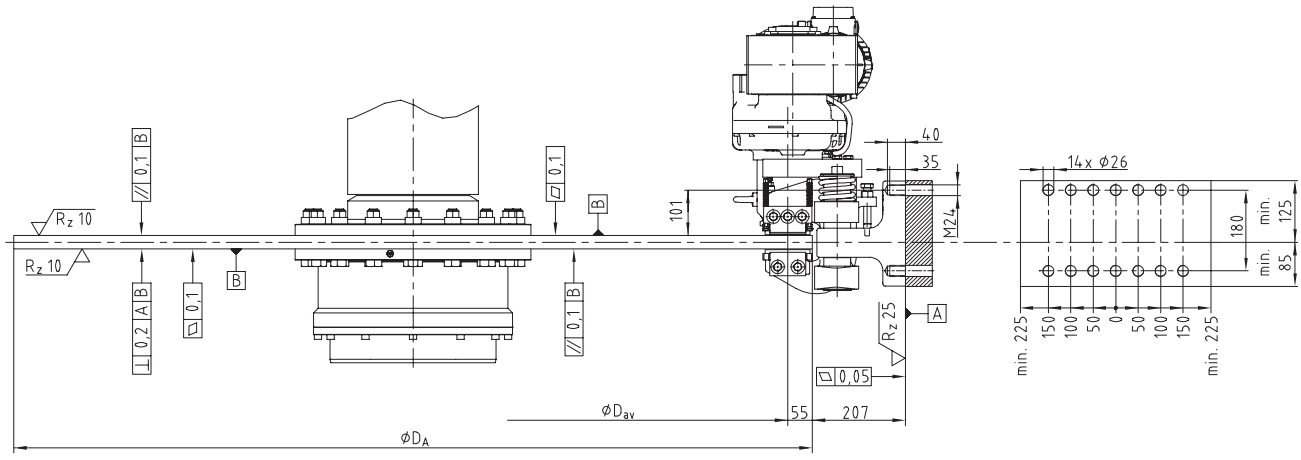
EMB-STOP	L	A	375	F	A	30
EMB brake	Size of brake	Active	Clamping force	Floater	Variant	Thickness of brake disk



Calculation of brake disk

$ØD_A \leq 1800$ mm	$ØD_A > 1800$ mm
$D_{av} = D_A - 130$	$D_{av} = D_A - 120$

Connection dimensions of brake

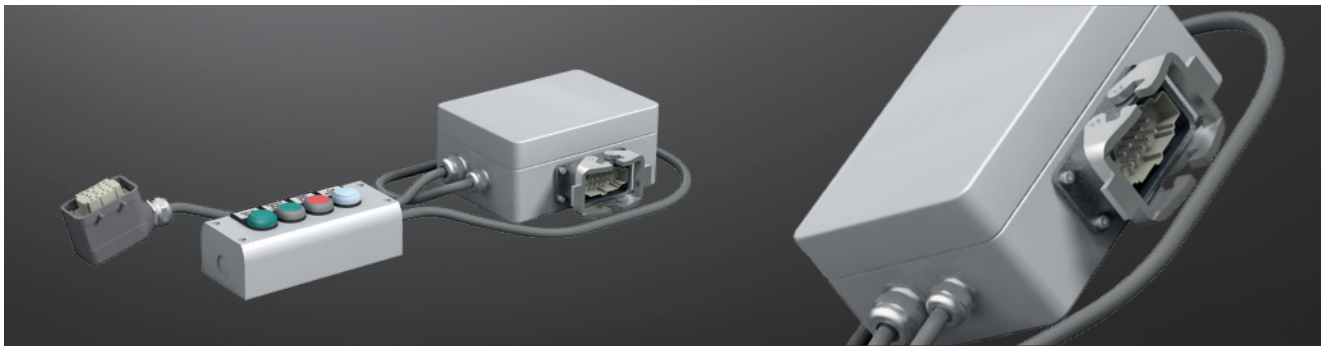


Optional

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

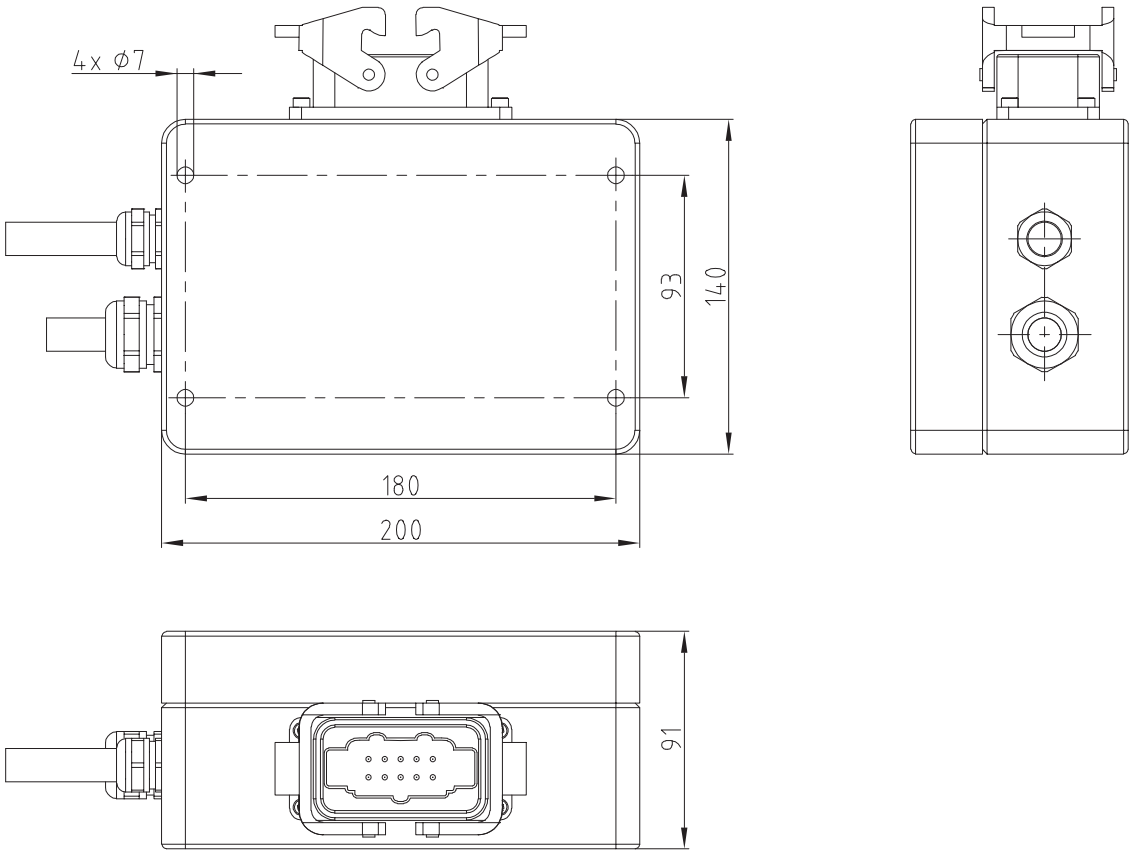
EMB-STOP Control Box
Electronic control system

Description of product



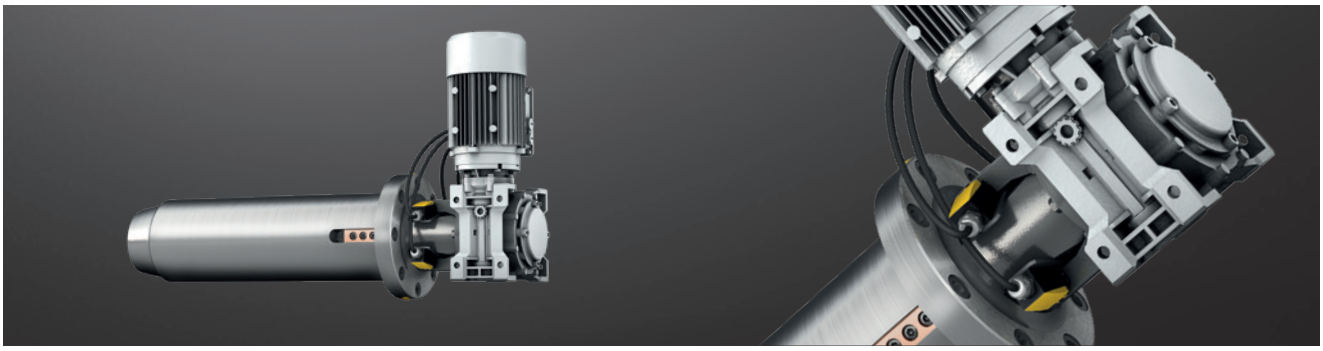
The EMB-STOP Control Box can be used for active and passive electromechanical brakes type EMB-STOP. It forms a simplifying interface between the customer's control and the brake EMB-STOP.

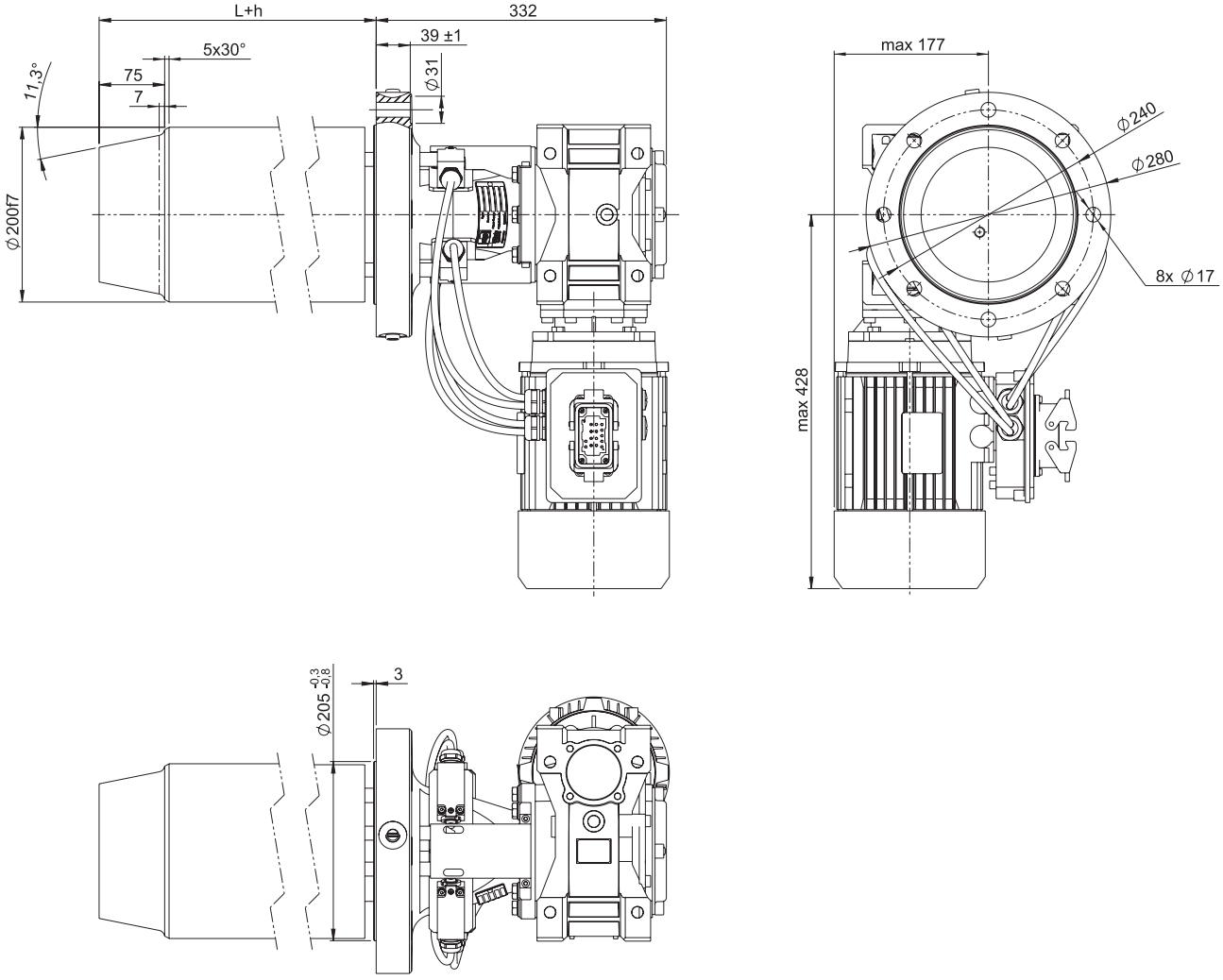
- Simple interface between control and brake → Plug & Play
- Available for active and passive EMB-STOP brakes
- Optionally available with handheld panel → Releasing and applying a brake directly at the source
- Signal control for customised controls
- Control voltage: 24 VDC
- Motor voltage: up to 480 VAC with 50 Hz / 60 Hz
- Relays for potential-free status signals of a brake: brake applied, brake released, wear of brake pad



EMB-STOP RL S
Rotor Lock

Electromechanical system





EMB-STOP RL S			
Max. stroke	75 mm	Motor power	1100 W
Max. shear force [1]	2000 kN	Motor voltage	400 VAC, 50 Hz
Pressure force, axial F+	160 kN	Voltage of electrical signals	230 VAC/24 VDC
Tensile force, axial F-	160 kN	Speed with 50 Hz	160 mm/min.
Total weight, approx. [2]	150 kg	Size of industrial connector	Han 10B / Han 18EE (male)
Limit switch signals, standard	locked, unlocked		

[1] Please note that the shear force refers to the Rotor Lock only.
[2] Weight with L = 355.

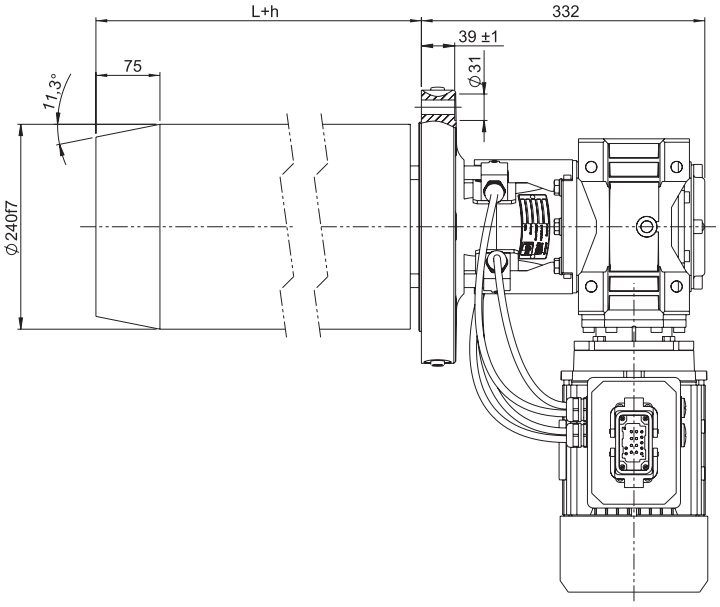
Ordering example:

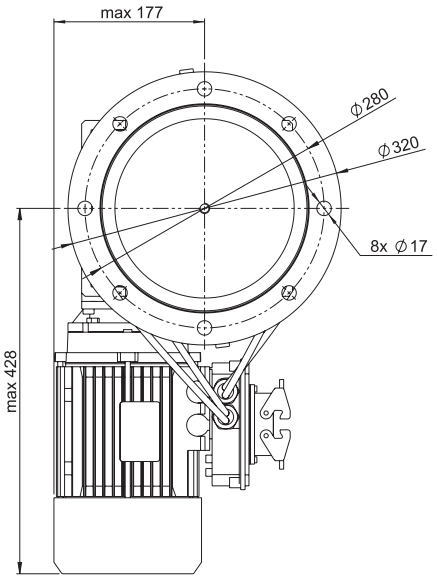
EMB-STOP RL	S	E	355	CON
EMB Rotor Lock	Rotor Lock size	Electrical operation	Mounting length (L)	Contact form (see table)

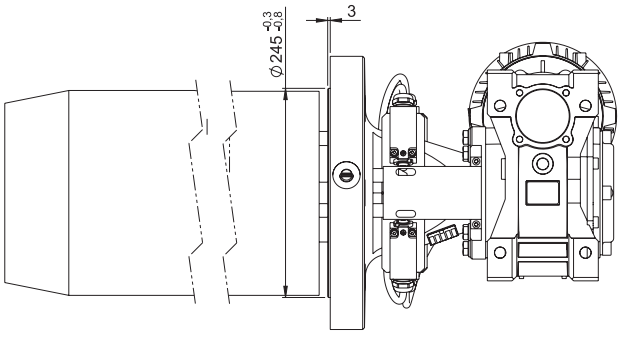
EMB-STOP RL M
Rotor Lock

Electromechanical system









EMB-STOP RL M			
Max. stroke	75 mm	Motor power	1100 W
Max. shear force [1]	4000 kN	Motor voltage	400 VAC, 50 Hz
Pressure force, axial F+	160 kN	Voltage of electrical signals	230 VAC/24 VDC
Tensile force, axial F-	160 kN	Speed with 50 Hz	160 mm/min.
Total weight, approx. [2]	190 kg	Size of industrial connector	Han 10B / Han 18EE (male)
Limit switch signals, standard	locked, unlocked		

[1] Please note that the shear force refers to the Rotor Lock only.
[2] Weight with L = 355.

Ordering example:

EMB-STOP RL	M	E	355	CON
EMB Rotor Lock	Rotor Lock size	Electrical operation	Mounting length (L)	Contact form (see table)