Brake Caliper DA 505/450/445 FEM/FEA

spring activated – electromagnetically released

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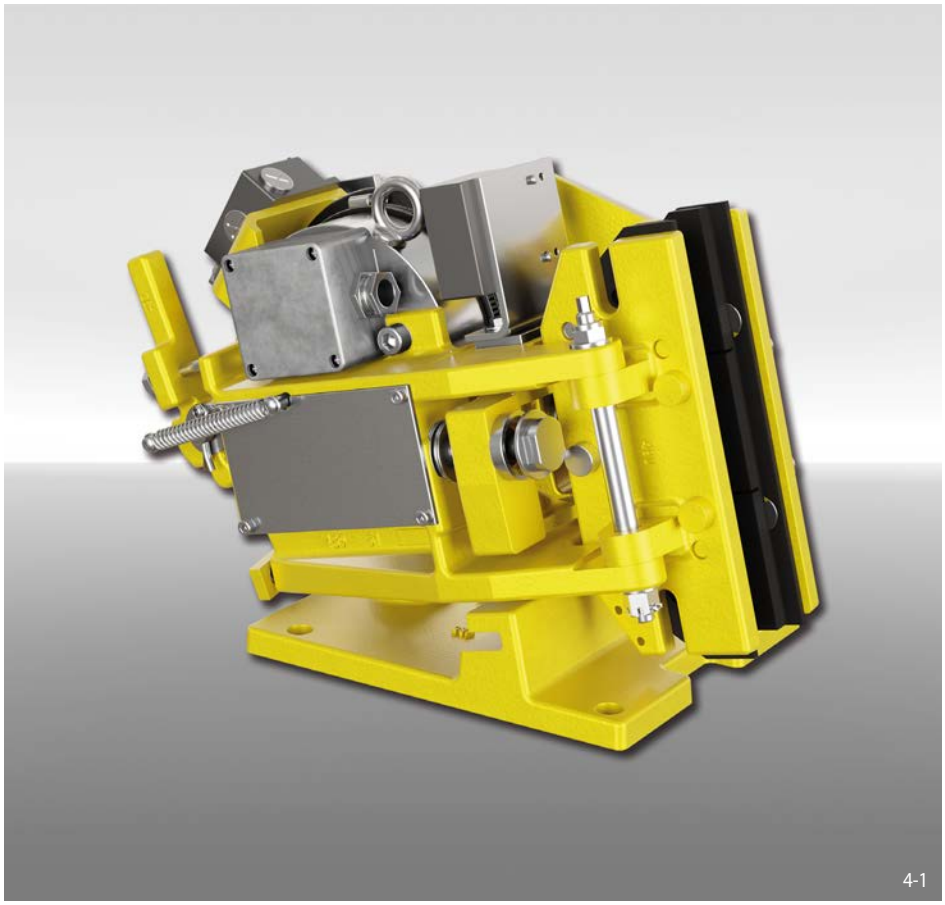

Features	Code
Brake Caliper	D
Mounting to the machine at right angles to the brake disc	A
Frame size 505, 450 or 445	505 450 445
Spring activated	F
Electromagnetically released	E
Manual or automatic adjustment to accommodate friction block wear	M A
Supply voltage 65 VAC	065
Electromagnet mounted in central position	M
Thickness of brake disc 12,7 mm, 15 mm or 30 mm	12 15 30

Example for ordering

Brake Caliper DA 505 FEM, supply voltage 65 VAC, electromagnet mounted in central position, thickness of brake disc 15 mm:

DA 505 FEM - 065 M - 15

Technical Data

	Bremse DA … FEM / FEA		
	505	450	445
Brake disc diameter mm	Braking torque Nm	Braking torque Nm	Braking torque Nm
355	240	490	620
430	310	630	790
520	390	800	1000
630	490	1000	1250
710	560	1150	1430
800	640	1310	1640
Clamping force	2250 N	4600 N	5750 N
Response time*	200 ms	200 ms	200 ms
Power consumption in open position	15 W	45 W	50 W
Power when opening the brake (< 1 s)	475 W	1000 W	1100 W
Max. number of actuation	450 (ESE 6850) 1000 (ESE 61850)	450 (ESE 6850) 450 (ESE 61850)	450 (ESE 6850) 450 (ESE 61850)
Weight	34 kg	34 kg	36 kg

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

* The response time is the duration from switching off the power supply to reaching 80% of the maximum clamping force (at Ta = 20 °C).

Working conditions

- Ambient temperature: -20 °C / +60 °C
- Air humidity: <90%

Optional monitoring switches

- Switching sensors for status signals: "brake open",„brake pad wear control" (FEM), "brake lining wear limit" (FEA) and "manual release activated"
- 240 VAC 1,5 A; 250 VDC 0,1 A
- Cable Entry PG11
- Protection type IP66

Options

- Corrosion protected design
- Friction linings with wear indicator cables or sintered friction linings (for high temperatures)
- 24 V Coil (modified response time)

Notes

- Lever for manual release
- Fastening:
  4 screws M14, class 8.8 with tightening torque 121 Nm ±10% μ 0,15 (not supplied)

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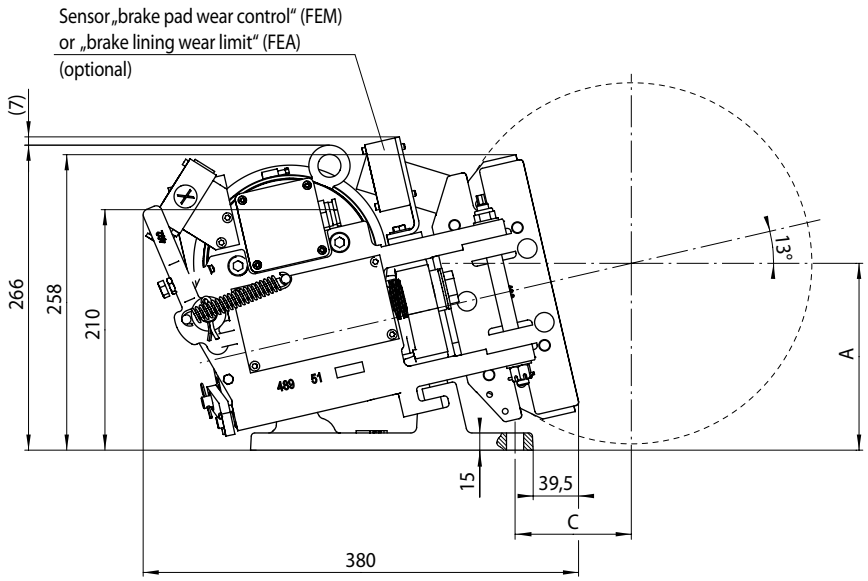
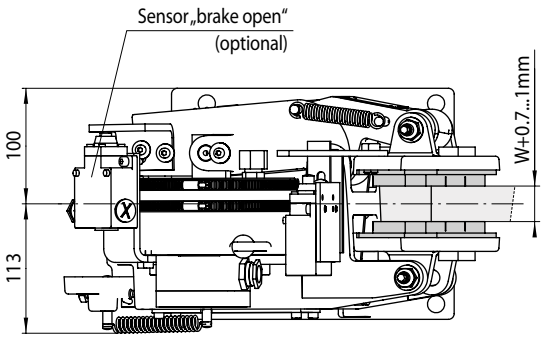
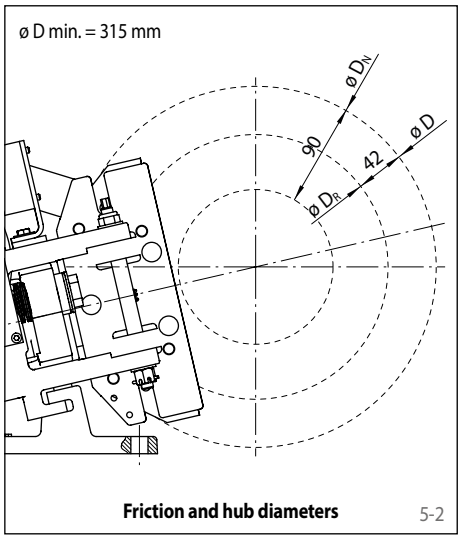




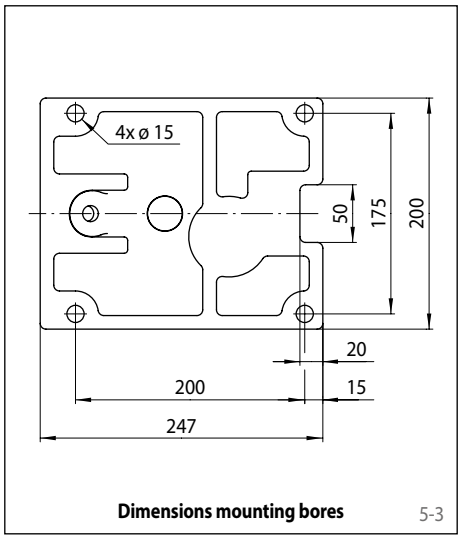
Brake disc diameter mm	A mm	C mm
355	167,8	120,9
430	176,2	157,4
520	186,2	201,2
630	198,6	254,8
710	207,5	293,8
800	217,6	337,6

5-1

Mounting



Friction and hub diameters 5-2



Dimensions mounting bores 5-3

Calculation of the friction diameter

$D_R = D - 82$ mm

Calculation of the hub diameter

$D_N = D - 180$ mm

Calculation of the braking torque

$M_B = F_K \cdot D_R \cdot \mu$

Calculation of distance A

$A = 0{,}112 \times D + 128$ mm

Calculation of distance C

$C = 0{,}5 \times D + 22$ mm

Formula symbols

D = Outer diameter brake disc [mm]
D_N = Hub diameter [mm]
D_R = Friction diameter [mm]
F_K = Clamping force [N]
M_B = Braking torque [Nm]
μ = Friction coefficient