



Fail-Safe Electromagnetic
Motor Brakes
FDX Series
IP 67 Seawater proof

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Company Information:

PRECIMA Magnettechnik GmbH was founded in the year 1981 and is today established as an independent, medium sized, innovative family owned brake manufacturer. With our staff of more than 150 employees we develop and produce a wide range of electro-magnetic operated brakes and clutches for all kinds of applications in machine and other industries. Our standard range of products covers a performance scope of braking torques between 0.5 - 1,500 Nm.

Thanks to our advanced CNC machining technology and well organized assembling lines we produce more than 500,000 units per year. The high rate of self manufactured parts provides us with a maximum of flexibility and allows for short response times. Our own highly qualified engineering and development departments are specialized in producing customized brake solutions on a very high technical and economic standard.





The new FDX series is a completely enclosed robust IP67 spring applied failsafe brake.

The new FDX series was specially designed for those applications involving harsh ambient conditions like offshore equipment.

All FDX parts are manufactured from robust and corrosion resistant materials and the IP67 enclosure ensures the protection of the internal working parts over its lifetime, from any outside influence.



Seawater resistant manual hand release

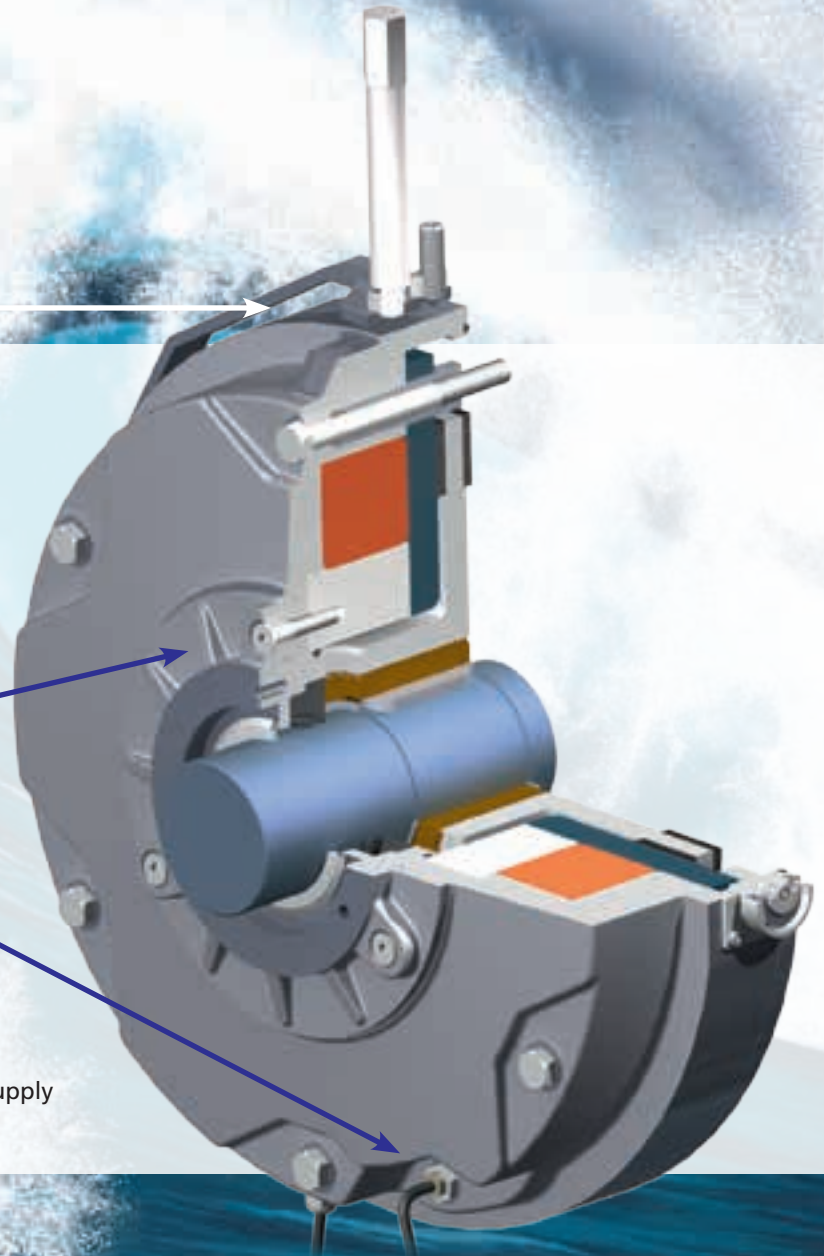
- Solid and robust material
- Sealed against Seawater
- Lockable in brake release position for maintenance

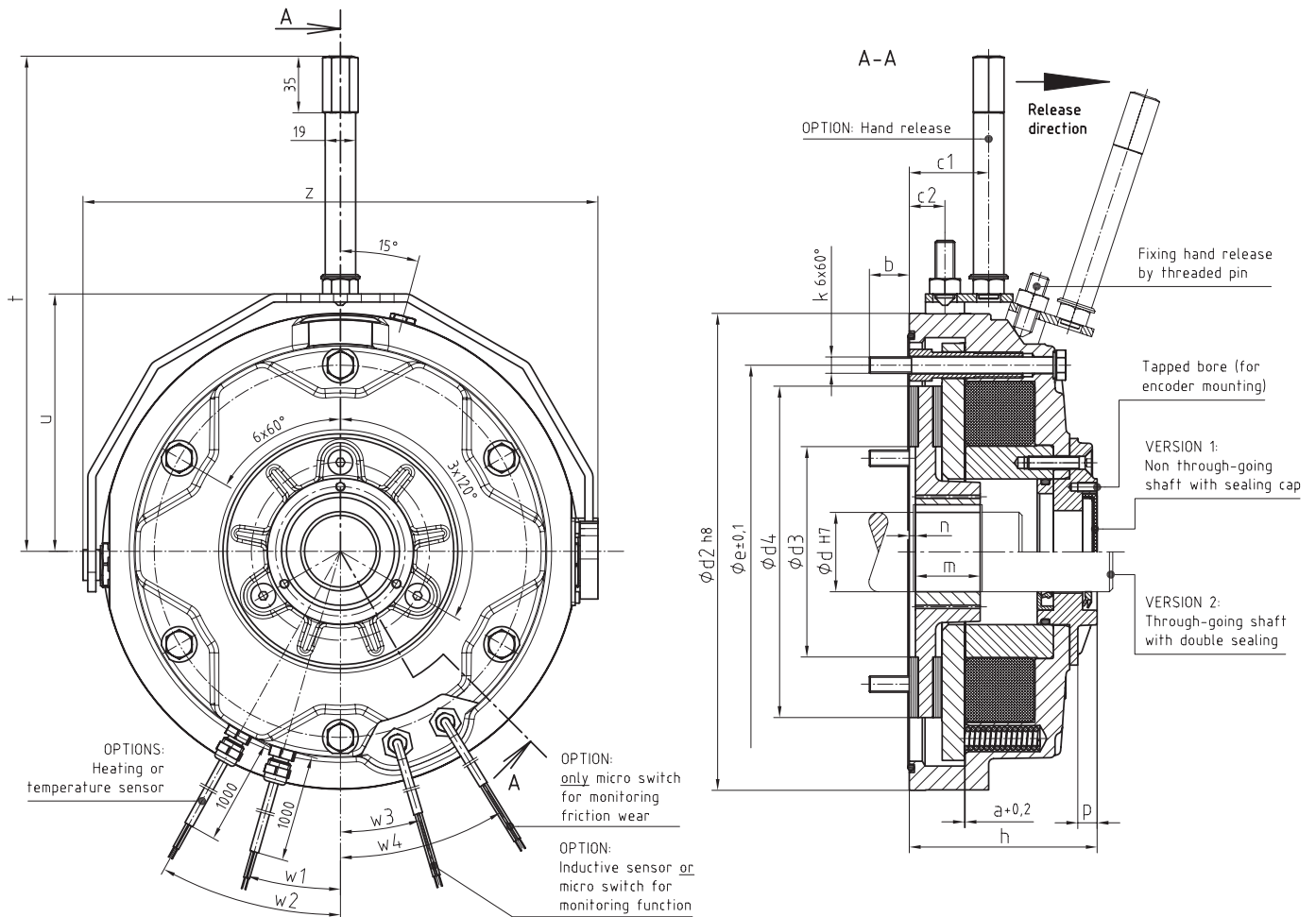
Uniquely designed machined sealing flange

- To fit double shaft seals when through shaft is necessary
- To fit rubber coated sealing cap to ensure complete enclosure of the brake

Inductive sensor

- For reliable monitoring of brake release
- Maintenance free
- Easy to check and correct setting if needed
- Available as open or closed contact for AC or DC supply





Size	Nominal braking torque (Nm)	P 20°C Activation (Watt)	P 20°C Holding (Watt)	a (+0,2)	b	c1	c2	ød H7	ød2 (h8)	ød3	ød4
FDX 26	250 / 375*)	432	108	0,5	23,5	49	22	40/45/50	294	130	204
FDX 30	500 / 725*)	560	140	0,5	21,5	49	22	50/55/60/65**	342	180	255
FDX 40	1000 / 1500*)	560	140	0,6	22	49	22	65/70/75/80**	436	258	330

Size	øe (±0,1)	h	k (6 x 60°)	m	n	p	t	u	w1	w2	w3	w4	z
FDX 26	230	116	M10	40	4	17	306	159	16°	29°	16,5°	35,5°	318
FDX 30	278	122	M10	50	4	17	330	183	15°	25°	12,5°	28,5°	365
FDX 40	360	138	M12	70	4	17	376	229	8,5°	16,5°	14°	12°	455

Dimensions in mm, Standard keyway in accordance with DIN 6885/1 - JS9

*) Holding brake, **) Keyway in accordance with DIN 6885/3 - JS9

Brake / Construction Type	Electro-magnetic released Fail-Safe Spring Applied Brake		
Name / Type	FDX 26	FDX 30	FDX 40
Version	Standard		
Protection Class	IP 67		
Max. ON Time	100%		
Ambient Temperature	-40 bis +40°C		
Weight	30 kg	45 kg	80 kg
Moment of Inertia (rotor and hub)	6,65 x 10 ⁻³ kgm ²	19,5 x 10 ⁻³ kgm ²	44,5 x 10 ⁻³ kgm ²
Max. Speed (Working Brake / Holding Brake)	with balanced rotor: 3000 / 6000 rpm		
for shaft diameters (d)	40, 45, 50 mm	50, 55, 60, 65 mm	65, 70, 75, 80 mm
Nominal Braking Torque (M _b) (Working Brake / Holding Brake)	250 / 375 Nm	500 / 725 Nm	1000 / 1500 Nm
Braking Torque during operation (deviation from M _b)	Working Brake: -30% (brand-new) // ±20% (after run-in period) Holding Brake: ±20% (brand-new) // -10% / +30% (after run-in period)		
Input Voltage	400 V AC		
Coil Voltage	180 V DC *)		
Power (P, Release / Hold)	*) : 432 / 108 W	*) : 560 / 140 W	*) : 560 / 140 W
Life Time Friction Work until rotor exchange	2,8 x 10 ⁹ J	3,7 x 10 ⁹ J	4,9 x 10 ⁹ J
Air Gap Setting brand-new brake	0,5 ^{+0,2} mm	0,5 ^{+0,2} mm	0,6 ^{+0,2} mm
Air Gap maximum	1,9 mm	1,9 mm	1,7 mm
Braking Time DC / AC (=> DC-connected / AC-connected ***)	40 ms **) / 600 ms	60 ms **) / 800 ms	160 ms **) / 3 s
Release Time ***)	160 ms *)	140 ms *)	320 ms *)
Dimensions	See data sheet: M98-080		
Rectifier PMG 480	See data sheet: T90-156		

Options:

Inductive Switch: Input Voltage / Rated Normal Current <small>Sensors according to T90-147 (DC) resp. T90-158 (AC)</small>	10...36 V DC / ≤ 200 mA 90...250 V AC / ≤ 100 mA		
Heating Input Voltage / Heating Power	230 V AC / 70 W	230 V AC / 128 W	230 V AC / 180 W

*) operated with rectifier PMG 480 at 20°C

**) new air gap setting and operated with rectifier PMG 480

***) the listed Braking Times and Release Times are average values (deviation ±30%)

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