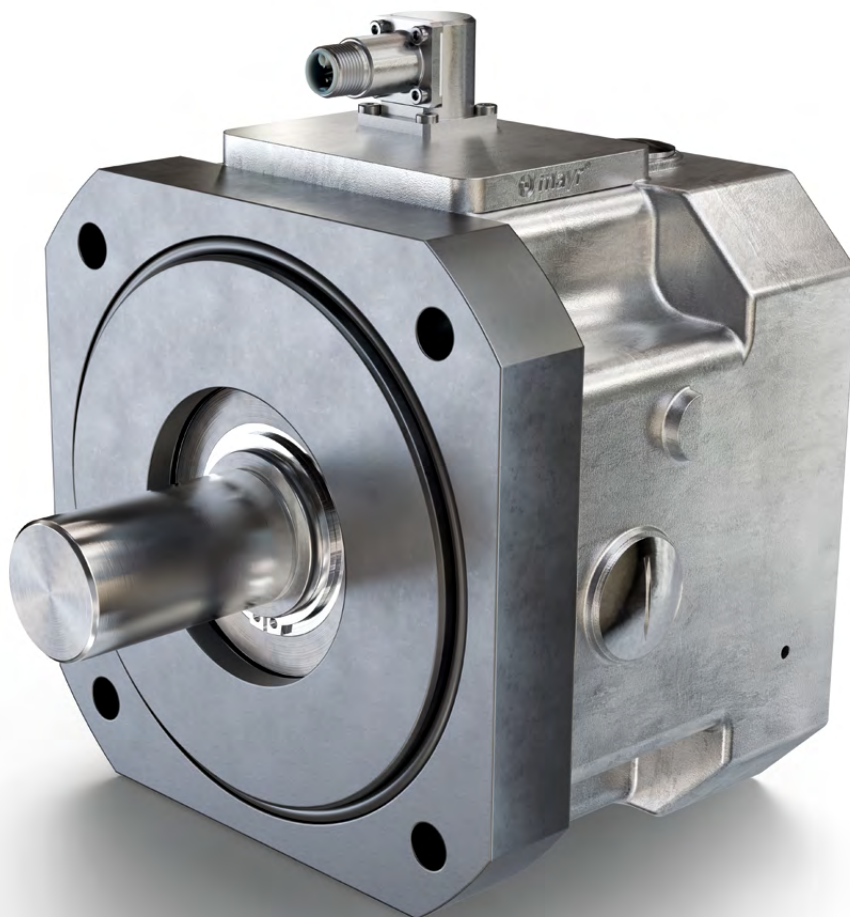




your reliable partner



**ROBA®
topstop®**

Next generation safety:
Smart safety brakes
for vertical axes

www.mayr.com

ROBA[®] topstop[®]

Next generation safety: Smart safety brakes for vertical axes

The ready-to-install safety brake module ROBA[®] topstop[®] is the easiest way of increasing the safety of vertical axes. The safety brake holds the load even when the motor has been removed. As its flange dimensions are adapted to match the servo motor and gearbox, it can be easily integrated or retrofitted. The design with hollow shaft on both sides and an integrated shaft coupling allows spindle shafts to be directly connected. Additionally, the next generation of ROBA[®] topstop[®] is also optimized for functional safety in accordance with

DIN EN ISO 13849-1 and the static brake test. In combination with the ROBA[®] brake-checker[®] and the ROBA[®] gateway, it also opens the door to the world of IoT.



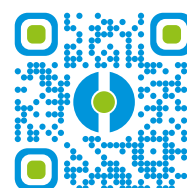
Features:

- Plug-and-play solution for standard servo motors
- Simple solution for system redundancy
- Holds load when motor is dismantled
- Optimized solution for functional safety according to DIN EN ISO 13849-1 and for static brake test
- Sensorless brake monitoring with ROBA[®] brake-checker[®] and data output with ROBA[®] gateway
- Connection via M12 plug as standard
- Closed module with optimized seal
 - ↳ IP66 protection as standard
- Can be regarded as a tried and tested component in terms of the Category 1 of DIN EN ISO 13849-1



DOWNLOAD VALIDATION TOOL

Is your ROBA[®] topstop[®] a “tried and tested component” in terms of the standard? You can now easily check with our validation tool. Comprehensive brake information regarding basic and tried and tested safety principles, tried and tested components, faults lists – structured according to the standard and including B10d safety parameters.

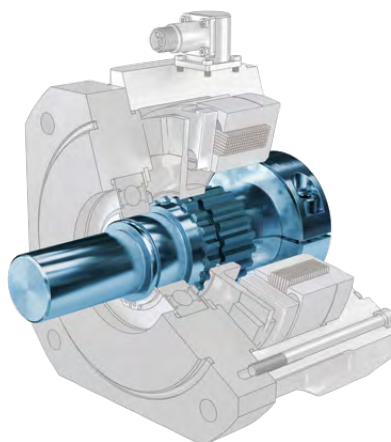


Standard constructional designs

ROBA® topstop® with bearing-supported shaft (Type 8990.000--)

Designed for use between the servo motor and gearbox.

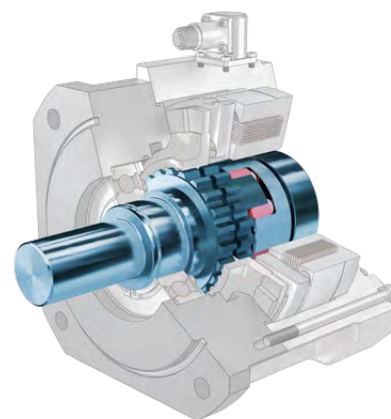
- Drive end:
 - ↳ Clamping hub
- Output side:
 - ↳ Same interface as servo motor



ROBA® topstop® with bearing-supported output shaft and plug-in compensating coupling (Type 8990.0----)

Designed for use between the servo motor and gearbox.

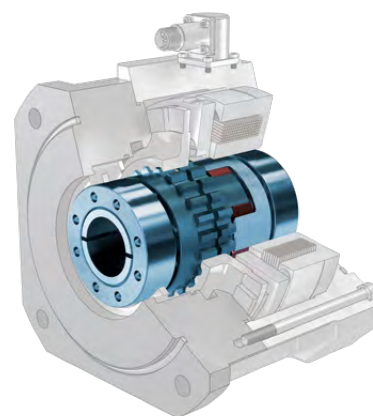
- Drive end:
 - ↳ Plug-in elastomer coupling
 - ↳ Shrink disk hub or clamping hub
- Output side:
 - ↳ Same interface as servo motor



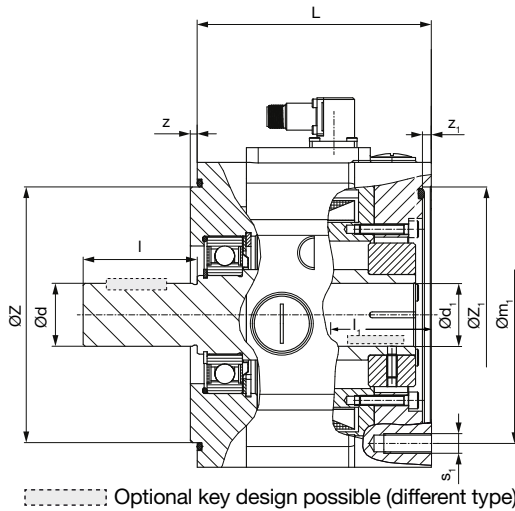
ROBA® topstop® with hollow shaft on both sides and plug-in compensating coupling (Type 8990.1----)

Designed for use between the servo motor and shaft, e.g., spindle shaft.

- Drive end:
 - ↳ Plug-in elastomer coupling
 - ↳ Shrink disk hub or clamping hub
- Output side:
 - ↳ Shrink disk hub

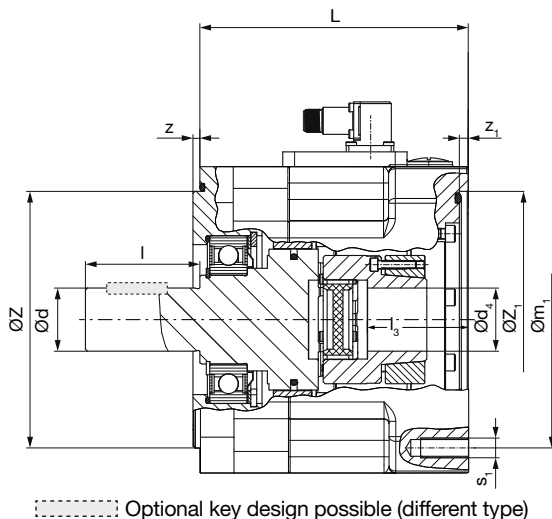


Technical data



ROBA® topstop® with bearing-supported shaft (Type 8990.000--)

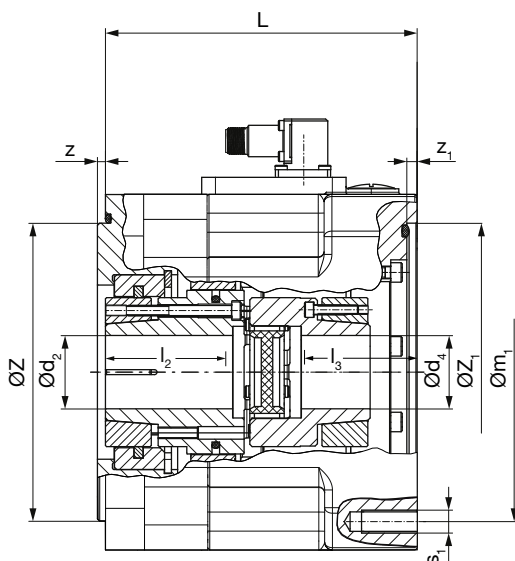
Dimensions	Size						
	[mm]	100	120	150	175	200	260
L	[mm]	80	104	119	138.5	138.5	185
Shaft Ø d _{k6} x l	[mm]	14 x 30	19 x 40	24 x 50	35 x 79	32 x 58	48 x 82
	[mm]	19 x 40	24 x 50	32 x 58	-	38 x 80	42 x 110
	[mm]	-	-	-	-	-	48 x 110
	[mm]	-	-	-	-	-	55 x 110
(Shaft) bore Ø d ₁ ^{F7} x l ₁	[mm]	14 x 45	19 x 55	24 x 68	35 x 90	32 x 90	42 x 110
	[mm]	19 x 45	24 x 55	32 x 68	-	38 x 90	48 x 110
	[mm]	-	-	-	-	-	55 x 110



ROBA® topstop® with bearing-supported output shaft and plug-in compensating coupling (Type 8990.0----)

Dimensions		Size					
		[mm]	120	150	175	200	260
L		[mm]	120	136	160	160	185
Shaft	Ø d _{k6} x l	[mm]	19 x 40	24 x 50	35 x 79	32 x 58	48 x 82
		[mm]	24 x 50	32 x 58	-	38 x 80	42 x 110
		[mm]	-	-	-	-	48 x 110
		[mm]	-	-	-	-	55 x 110
		[mm]	-	-	-	-	55 x 110
Bores	Ø d ₃ ^{F7}	[mm]	15-28*	19-35*	20-45*	20-45*	35-55*
	Ø d ₄ ^{H7}	[mm]	15-28	19-38	20-45	20-45	35-60
Required shaft length	l ₃	[mm]	40-50	50-58	58-80	58-80	80-110

*) Dimensions are applicable to the design with clamping hub

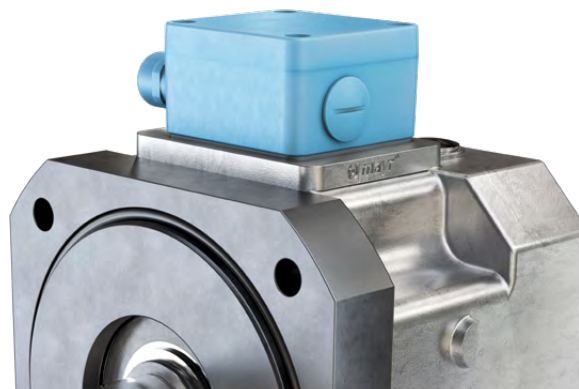
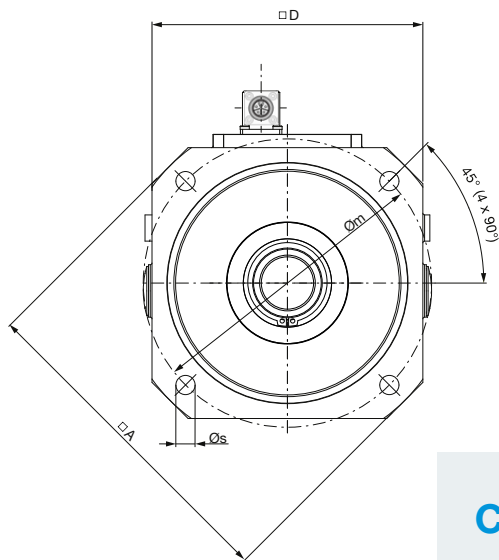


ROBA® topstop® with hollow shaft on both sides and plug-in compensating coupling (Type 8990.1----)

Dimensions		Size					
		[mm]	120	150	175	200	260
L		[mm]	120	136	160	160	185
Bores	Ø d ₂ ^{H6} [mm]		15-28	19-38	20-45	20-45	35-60
	Ø d ₃ ^{F7} [mm]		15-28*	19-35*	20-45*	20-45*	35-55*
	Ø d ₄ ^{H7} [mm]		15-28	19-38	20-45	20-45	35-60
Required shaft length	l ₂ [mm]		25-52	30-60	35-75	35-75	40-80
	l ₃ [mm]		40-50	50-58	58-80	58-80	80-110

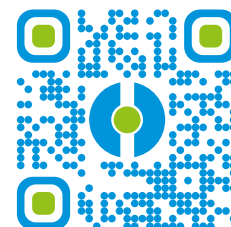
*) Dimensions are applicable to the design with clamping hub

ROBA® topstop® also available with terminal box



CONFIGURE NOW! ➔

Scan the QR code, configure your desired product, and quickly receive your drawing, CAD data, and a non-binding offer.



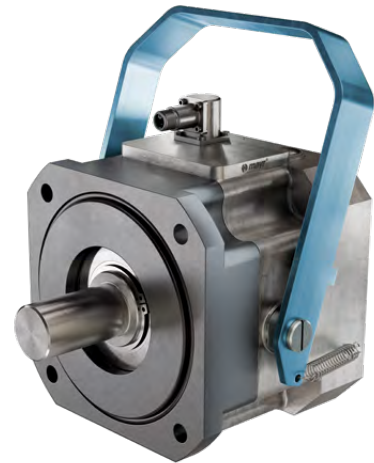
Technical data:

			Size					
			100	120	150	175	200	260
Nominal braking torque ¹⁾ M_N	Standard	[Nm]	6	12	45	70	100	200
	Braking torque tolerance -20 % / +40 %	[Nm]	4.8 / 8.4	9.6 / 16.8	36 / 63	56 / 98	80 / 140	160 / 280
	Increased	[Nm]	12	30	90	120	160	400
	Braking torque tolerance -20 % / +40 %	[Nm]	9.6 / 16.8	24 / 42	72 / 126	96 / 168	128 / 224	320 / 560
Electrical power	P _N	[W]	21	31.5	44	50	60	86
	P _O ²⁾	[W]	66	102	128	128	113	200
	P _H ³⁾	[W]	16	26	32	32	28	50
Maximum speed	n _{max}	[rpm]	6000	5000	4000	4000	3000	3000
Dimensions		Size						
		[mm]	100	120	150	175	200	260
A		[mm]	130	160	190	232	246	345
D		[mm]	100	130	155	176	194	264
m		[mm]	100/115	130	165	200	215	300
m₁		[mm]	100/115	130 (115*)	165	200	215	300
s		[mm]	7/9	9	11	13.5	13.5	18
s₁		[mm]	4 x M6/8	4 x M8	4 x M10	4 x M12	4 x M12	4 x M16
z₁₆ ⁶⁾		[mm]	80	110	130	114.3	180	250
		[mm]	95	95	110	-	130	-
z₁ ^{FB} (x z ₁)		[mm]	80	110x4	130x4.5	114.3	180x5	250
		[mm]	95	95x5	110x5	-	130x6	-
z		[mm]	3	3	3.5	3.5	4	5
z₁		[mm]	4	4/5	4.5/5	10	5/6	10

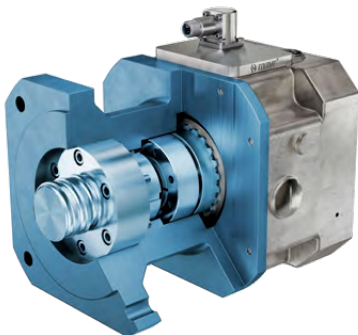
Optional to the standard

ROBA[®] topstop[®] with hand release

The hand release option allows the brake to be released manually in situations where there is no power supply.



Special designs

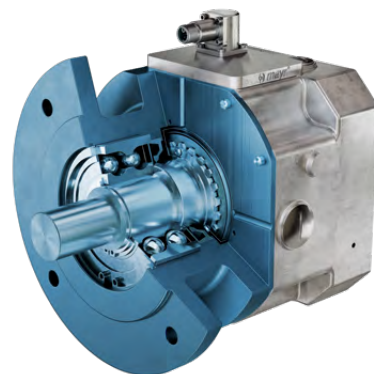


ROBA[®] topstop[®] with integrated shaft coupling and mounting flange with bearing seat for ball screw spindle

This space-optimized solution provides the plug-in compensating coupling as well as the bearing seat of the ball screw spindle directly in the braking system. Due to the intelligent integration of all components, the assembly is only slightly longer than the design without a brake.

ROBA[®] topstop[®] with mounting flange and reinforced bearing for the absorption of axial forces.

ROBA[®] topstop[®] with deep groove ball bearing in two rows is suitable for the absorption of axial forces, e.g., for pulleys or face-gear pinions.



Smart braking system for intelligent production

The ROBA[®] brake-checker[®] is an intelligent module that monitors safety brakes without the need for sensors and simultaneously supplies them with power. The module releases the brake with overexcitation voltage and then lowers to a reduced holding voltage when the brake is released.

The ROBA[®] brake-checker[®] detects the movement of the armature disk through extended analysis of current and voltage, and knows what condition the brake is in, i.e., whether it is applied or released.

In addition to monitoring the switching condition and critical coil temperature, the module also performs preventative function monitoring for wear, functional reserve, and malfunctions.

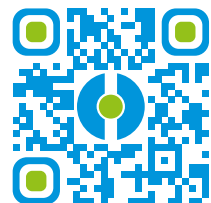
The standard version of the ROBA[®] topstop[®] with standardized plug can be connected directly to the ROBA[®] brake-checker[®] and ROBA[®] gateway – intelligent safety as a plug-and-play solution.



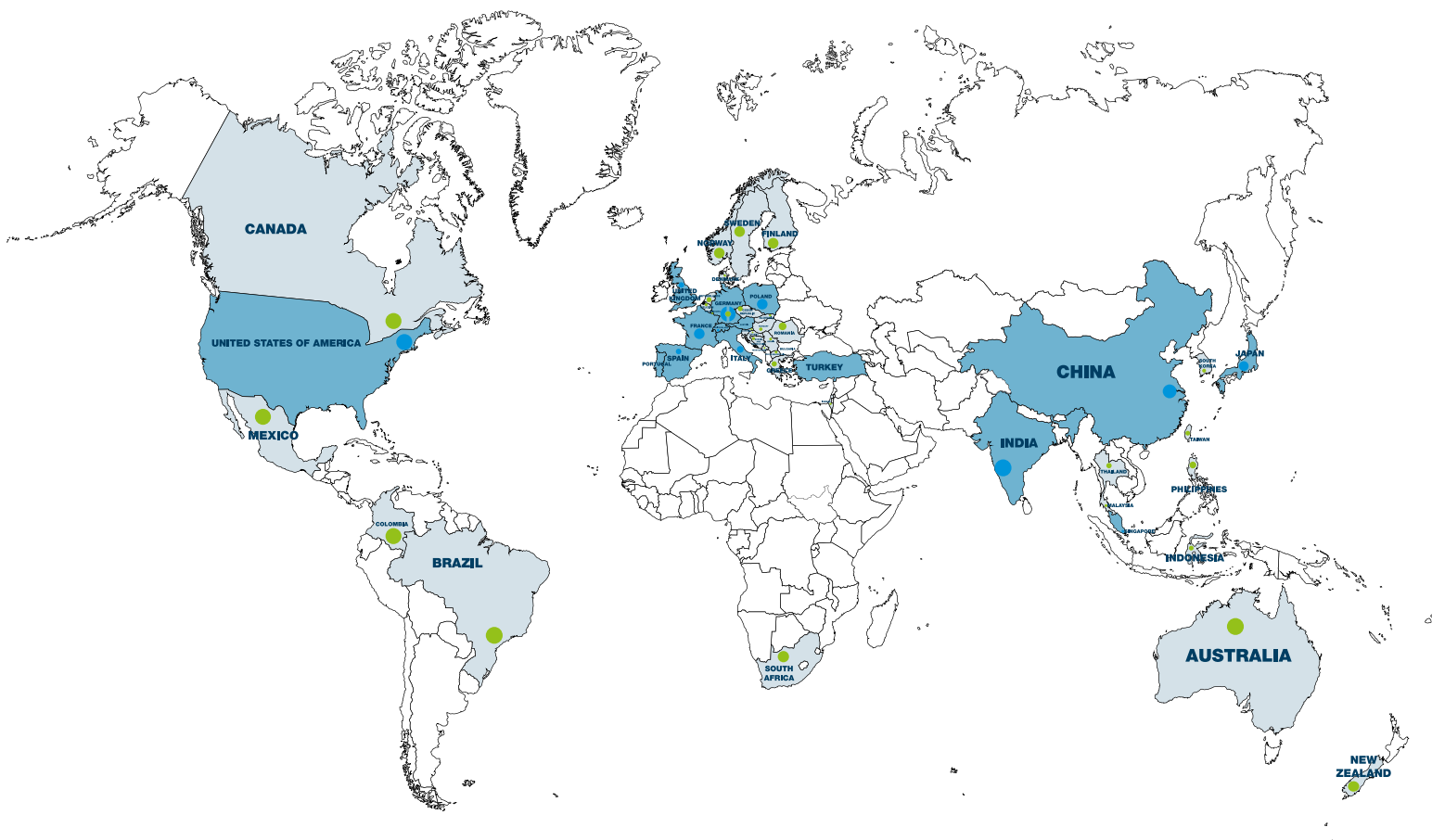
The solution becomes network-compatible when combined with the ROBA[®] gateway module: The two modules are connected via an IrDA interface, enabling the brake data to be retrieved continuously via an Ethernet connection. Via this interface, data on the switching time, current, voltage, resistance, performance, and relative attraction current can be provided. This means that processes can also be evaluated and visually displayed, for example via a dashboard. Anomalies in the process can be detected quickly, and conclusions can be drawn from complex interrelationships. Furthermore, integration into remote maintenance systems is also possible. The supply and monitoring module operates from the control cabinet, i.e., in a protected environment. Dust and dirt do not impact reliable operation.

ADDITIONAL INFORMATION

Are you looking for smart safety solutions? Additional information and downloads for the ROBA[®] brake-checker[®] and ROBA[®] gateway are available here:



**MANY
LOCATIONS
ONE
QUALITY**



 Headquarters  Branch offices  Representatives

mayr® power transmission
Eichenstraße 1
87665 Mauerstetten



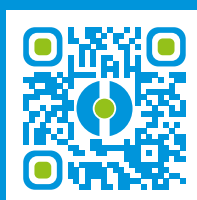
Tel.: +49 (0)8341 804-0



public.mayr@mayr.de



www.mayr.com



ADDITIONAL INFORMATION

For everything you need to know about the ROBA® topstop®, including downloads and configuration – simply scan the QR code!