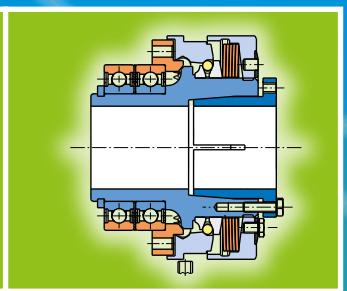
mayr®

your reliable partner

EAS®-HSC/EAS®-HSE

High-speed safety clutches for high-speed applications



P.4090.V01.EN

www.mayr.com

Construction and Development

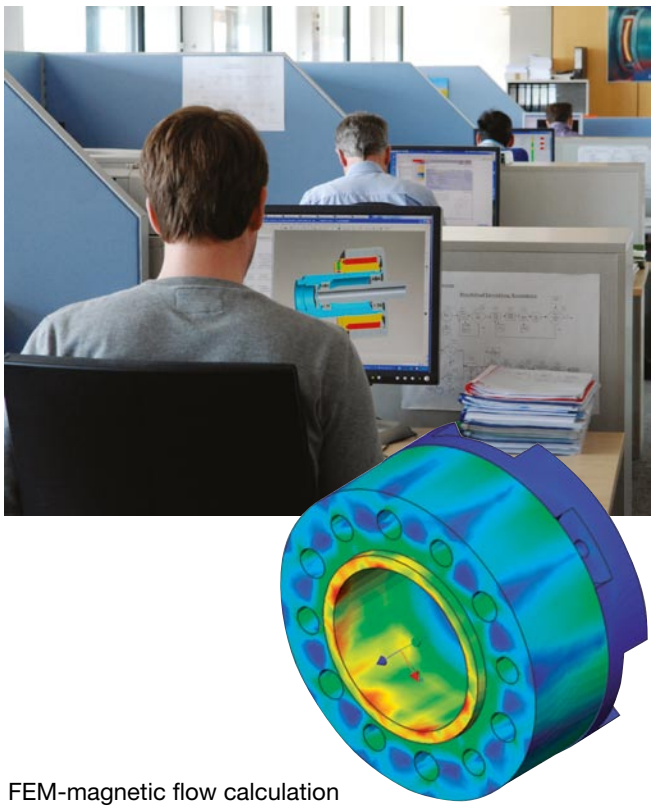
Innovations for Your Success

With our innovative and economical solutions, we are able to set new records in the field of power transmission. Our many worldwide patents prove our constant ambition to develop better and technologically superior products.

Highly qualified engineers, high-performance 3D-CAD-systems and the most up-to-date FEM calculation aids used in our Development and Construction departments mean that our business is perfectly equipped to offer our customers effective solutions.

Experts for all Power Transmission Questions

Exploit our know-how, gained by decades of experience in the development, production and application of power transmission products. Our experts in Construction and Development are happy to advise you personally and competently when selecting and dimensioning the drive solution you require.



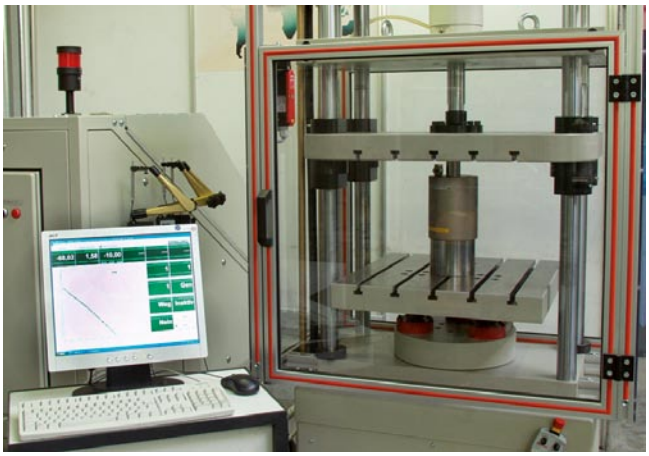
FEM-magnetic flow calculation for a ROBA-stop® safety brake

From Prototype to Finished Product

No mayr® product is released onto the market until it has proved its functional capabilities and reliability in extreme, long-term tests.

The spectrum of testing stands is as varied as our range of products:

- ❑ Friction work test stands
- ❑ Wear test stands
- ❑ Noise measurement room with highly accurate noise measurement inspection devices
- ❑ Torque inspection stands up to 200,000 Nm
- ❑ Impact alternating load test stands
- ❑ Force test stands
- ❑ Linear movement test stands
- ❑ Continuous performance test stands
- ❑ Magnetic flow measurement test stands
- ❑ High-speed test stands up to 20,000 rpm
- ❑ Misalignment and angular misalignment test stands
- ❑ Load and measurement test stands for DC motors



Product Data: Our 24-hour Service

Our website offers you detailed information 24 hours per day, 365 days per year with no delays. Here you can find not only the latest catalogues and technical documentation but also CAD-files for cost-saving construction of our products.

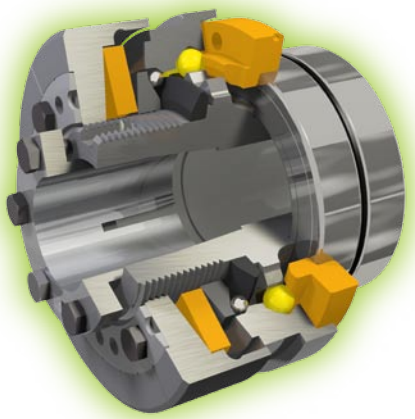
Unsurpassed - Our Standard Program

For safety clutches, safety brakes, backlash-free shaft couplings and high-quality DC drives, we offer you a complete product range with market and branch optimised constructions and designs.

EAS®-HSC / EAS®-HSE
The perfect safety clutches for all fast-running drives

Characteristics

- ❑ Positive locking overload clutch
- ❑ Complete separation
- ❑ Synchronous re-engagement
- ❑ Balanced when completely installed
- ❑ Diverse mounting variations
- ❑ High torsional rigidity
- ❑ High performance density
- ❑ Low mass moment of inertia
- ❑ High speeds of up to 12,000 rpm
  (up to 20,000 rpm possible as special design)



EAS®-HSC torque limiting clutch
Torque range: 5 Nm – 1,000 Nm
Speeds of up to 12,000 rpm

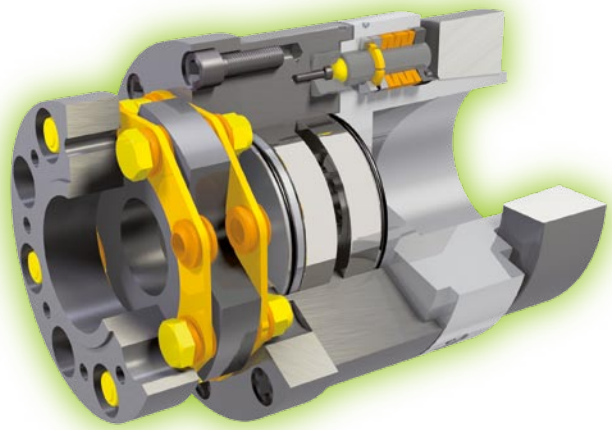
Compact, with a high performance density

In comparison to the torque limiting clutches common on the market, the new EAS®-HSC and EAS®-HSE test stand clutches possess numerous special technical features. The extremely compact design of these clutches is immediately obvious. A high performance density reduces the rotating masses and has a positive effect on the running smoothness and machine dynamics.

High balance quality

The basic pre-requisite for the use of a torque limiting clutch in high-speed applications is amongst other things the high balance quality of each individual component in order to achieve optimum running smoothness of the drive line when these components are combined.

Torque limiting clutches consist of many individual components, which must not change their positions when the clutch is installed or after overload. This is ensured through design measures. In addition, the clutch is balanced in completely installed condition to a balance quality of G 2,5 - reference speed 3000 rpm.



EAS®-HSE torque limiting clutch
Torque range: 100 Nm – 8,400 Nm
Speeds of up to 12,000 rpm (up to 20,000 rpm possible as special design).

Ideal for use in test stands

We specialise in the development of customer-tailored solutions. Contact us if our standard-design EAS®-HSC and EAS®-HSE clutches do not provide the optimum solution for your test stand.

We will modify our standard products precisely according to your wishes, or develop an economic, customer-specific solution especially for you.

Profit from our 50 years of experience in the development, manufacture and implementation of test stand clutches.

Further test stand clutches and couplings

ROBA®-DS – torsionally rigid shaft coupling

ROBA®-DS shaft couplings transfer the nominal coupling torque using frictional locking and backlash-free even with full displacement and with alternating torques.

ROBA®-DSM – measuring machine element

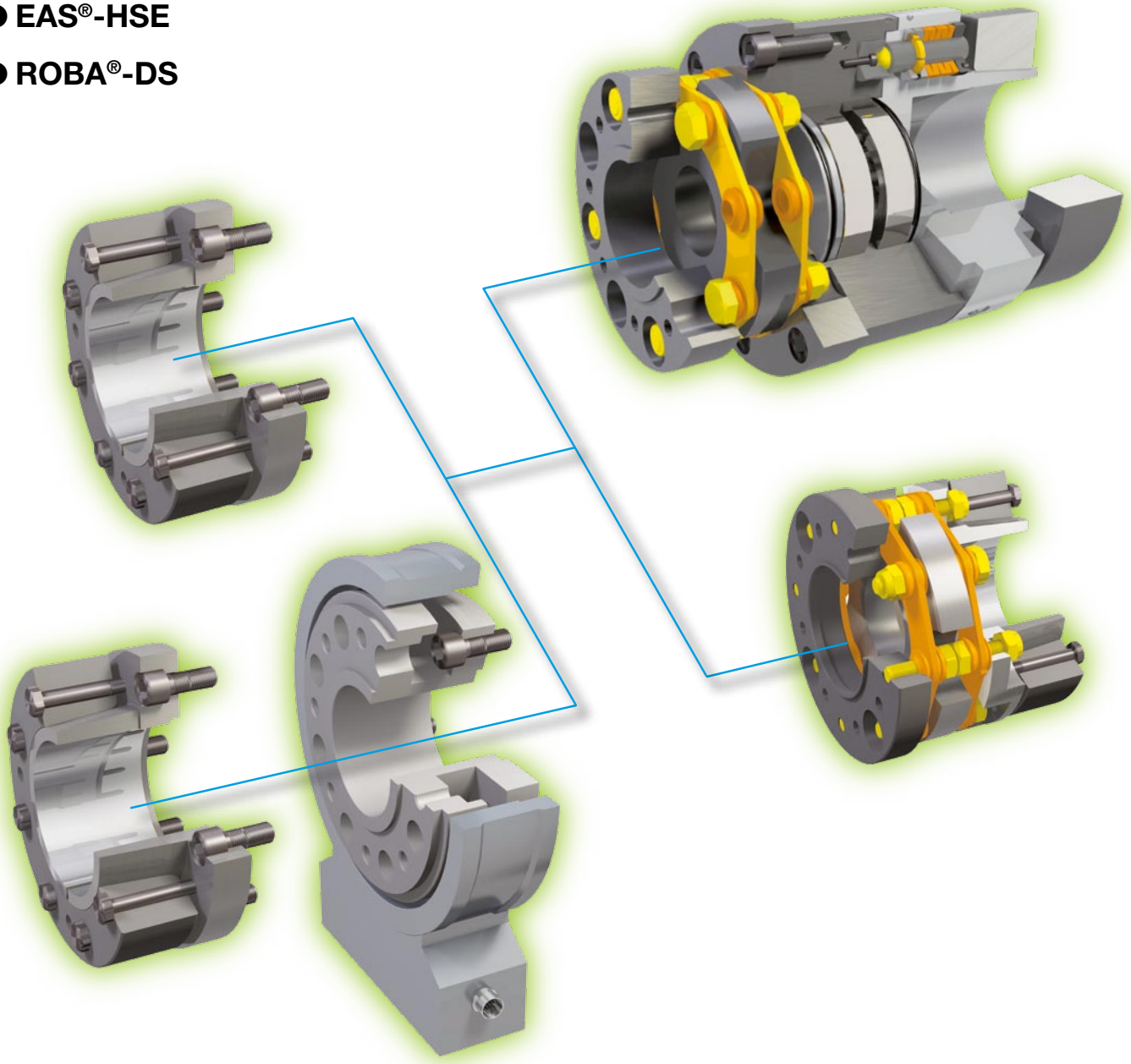
Integrated into tried and tested, backlash-free shaft compensation couplings, the ROBA®-DSM permits condition monitoring of machines and systems.

ROBATIC® – electromagnetic clutch

Energised to engage, electromagnetic pole face clutch for static and virtually static applications.

Configuration possibilities

- **EAS®-HSC**
- **EAS®-HSE**
- **ROBA®-DS**



With torque measuring flange

The construction of the system permits extremely high flexibility with regard to the connection points (hubs) and the output-side mounting parts (shaft coupling, ROBA®-HSC and ROBA®-HSE).

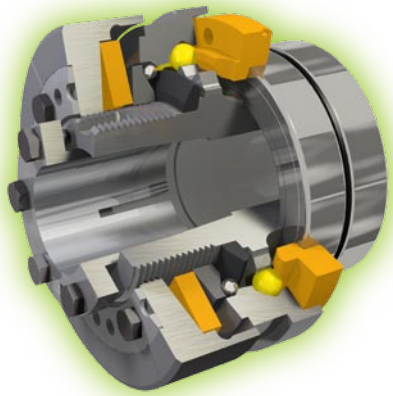
Standard market torque measuring flanges can be adapted.
Contact *mayr*® to obtain more details on your measuring flange

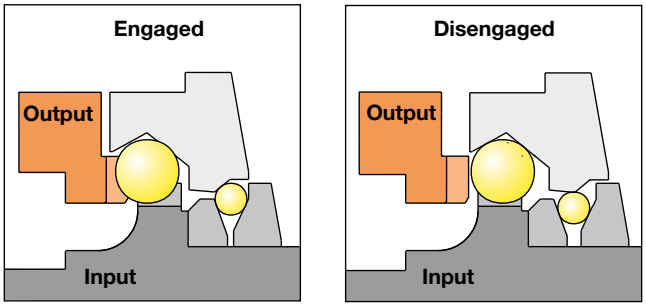
EAS®-HSC

Function in case of overload

If the set limit torque is exceeded, the clutch disengages. The torque drops immediately. A mounted limit switch detects the disengagement movement and switches off the drive. The limit switch signal can also be used for other control functions.

The EAS®-HSC High-Speed-Compact completely disconnects the input and output side and remains in this condition until it is purposely re-engaged by hand or using devices.





During operation, EAS®-HSC clutches transfer the torque backlash-free and ensure that the drive components slow down freely after overload.

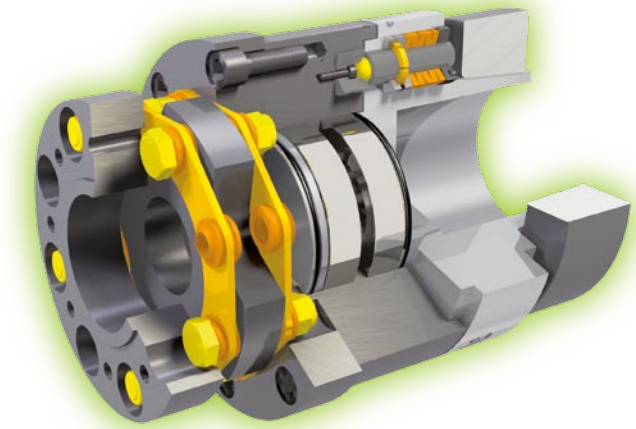
During the overtravel time, no engagement impacts occur which might have a negative effect on the drive line.

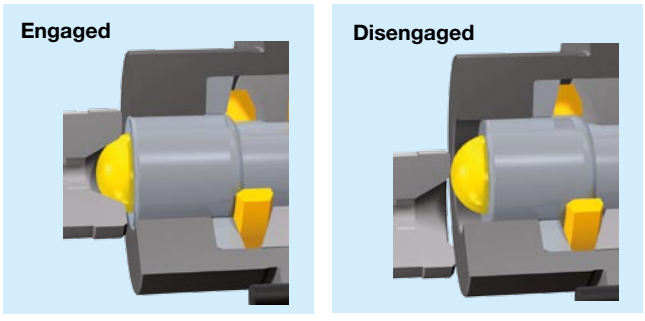
The design permits re-engagement only at the disengagement position.

EAS®-HSE

Function in case of overload

- If the proportional circumferential force on the individual elements proves too large, the resulting axial force causes an axial movement of the bolt via the ball/calotte system and therefore the disconnection of the torque transmission.
- The maximum circumferential force is individually determined through the adjusting nut and *mayr*®-cup springs. The transmittable torque is determined in this way.
- Due to the axial stroke of the bolt (ball carrier), the control segments move radially outwards and thus cause axial overload.
- Re-engagement of the balls through a bolt stroke in the direction of the calotte takes place manually.

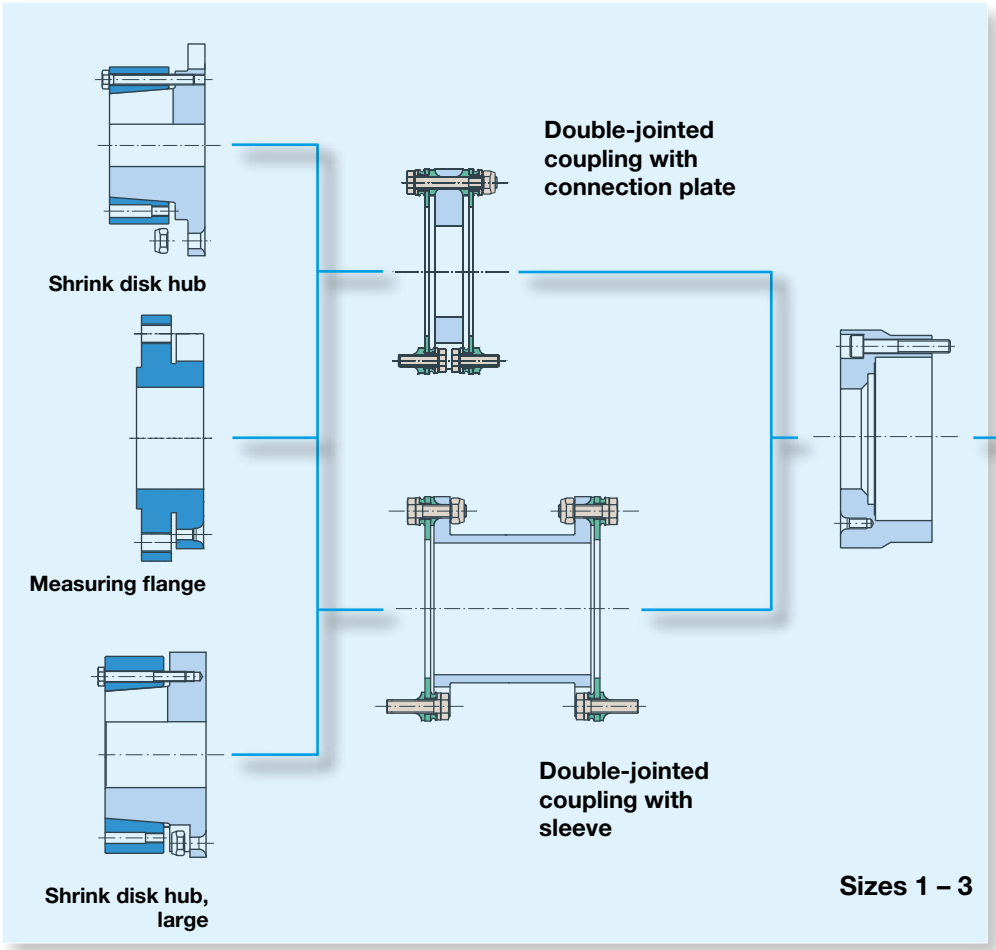


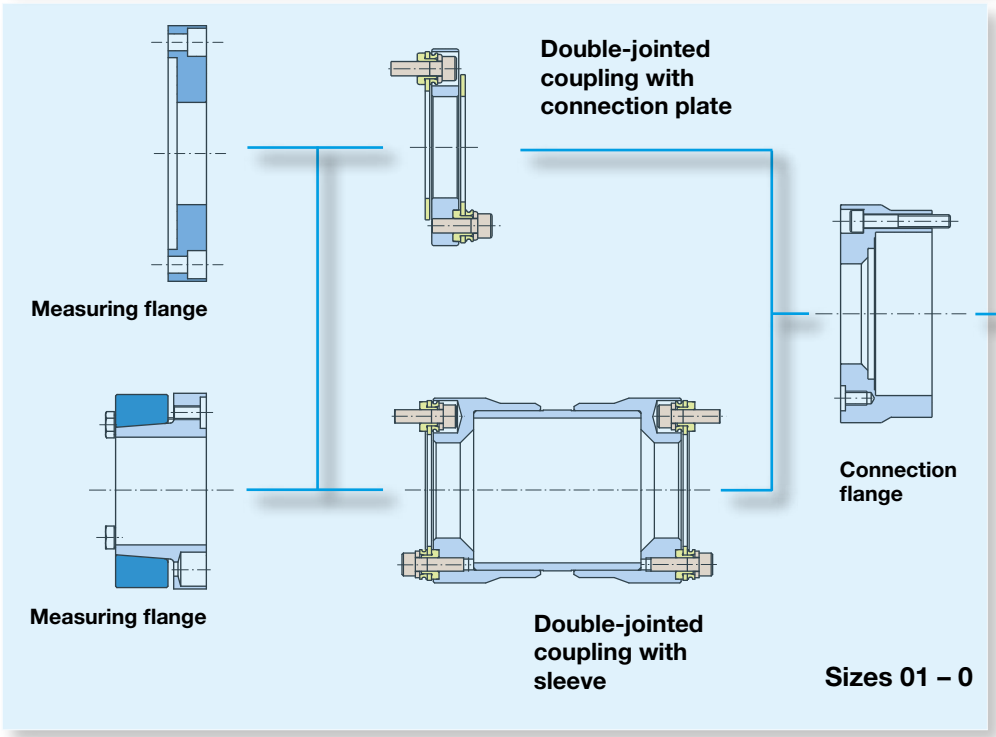


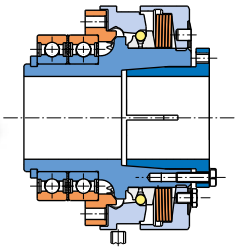
During operation, EAS®-HSE clutches transfer the torque with low backlash and ensure that the drive components slow down freely after overload.

Reliable, precise torque limitation through positive locking torque adjustment. Complete disconnection of the drive line on overload – no engagement impacts. Quick re-engagement without special tools being necessary. High balance quality.

Configuration possibilities/Standard designs
EAS®-HSC







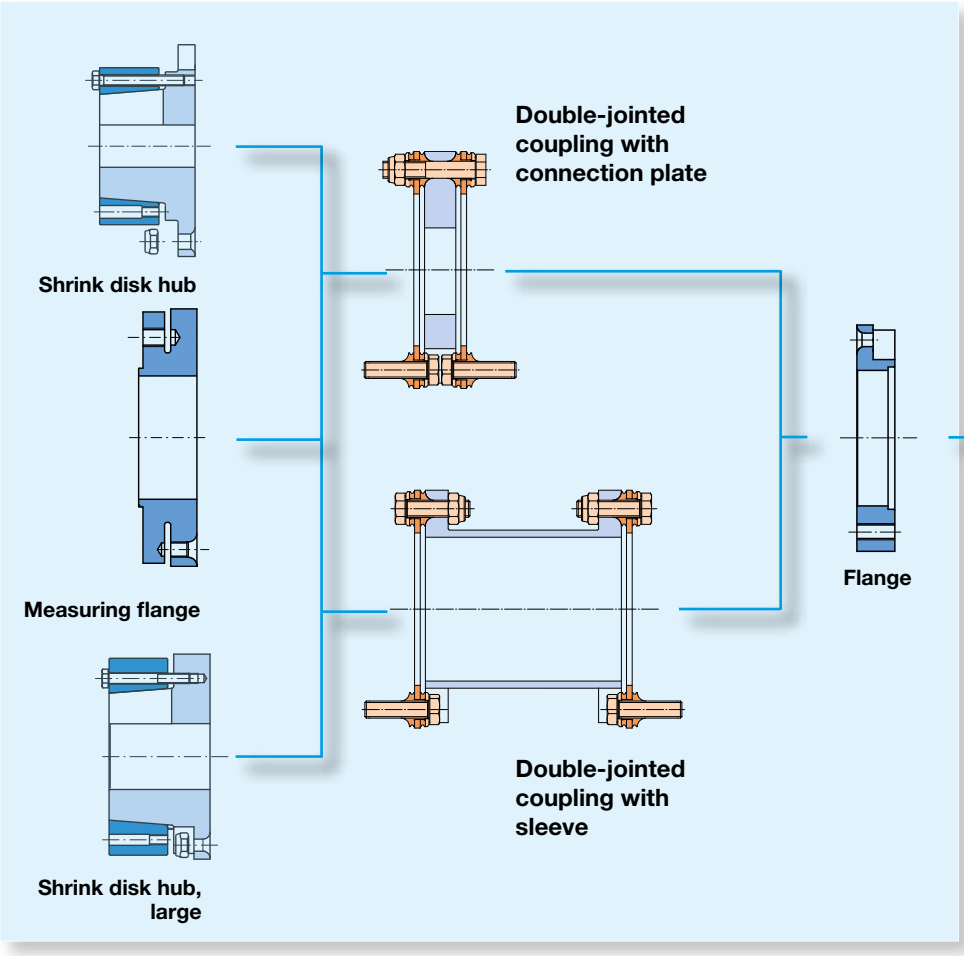
EAS®-HSC
Basic type flange design

Sleeve variants:

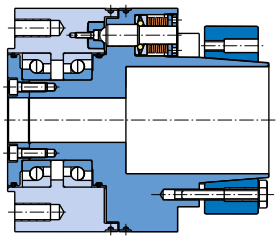
- Sleeve 1
- Special sleeve of variable length
- Cranked tube
- CFRP sleeve
- GFRP sleeve
- Axially divisible sleeve

We are happy to advise you on the dimensioning and configuration of your optimum design.

Configuration possibilities/Standard designs
EAS®-HSE



EAS®-HSE
Basic type flange design
Standard element



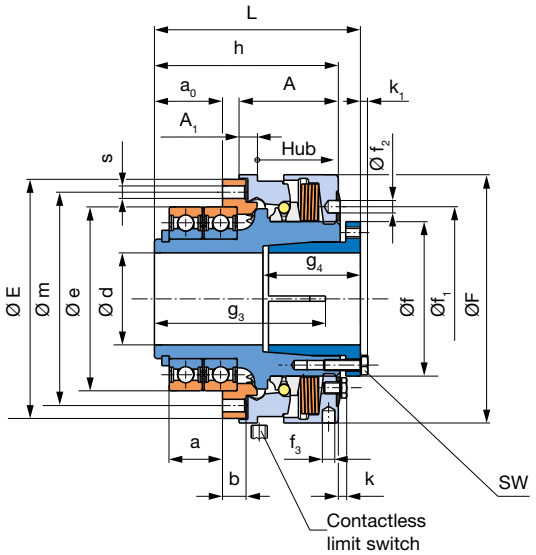
Sleeve variants:

- Sleeve 1
- Special sleeve of variable length
- CFRP sleeve
- CFRP sleeve
- GFRP sleeve
- Axially divisible sleeve

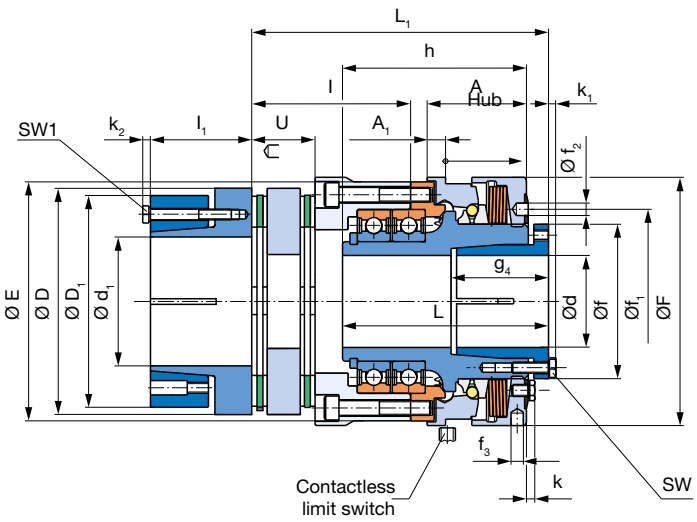
We are happy to advise you on the dimensioning and configuration of your optimum design.

EAS®-HSC

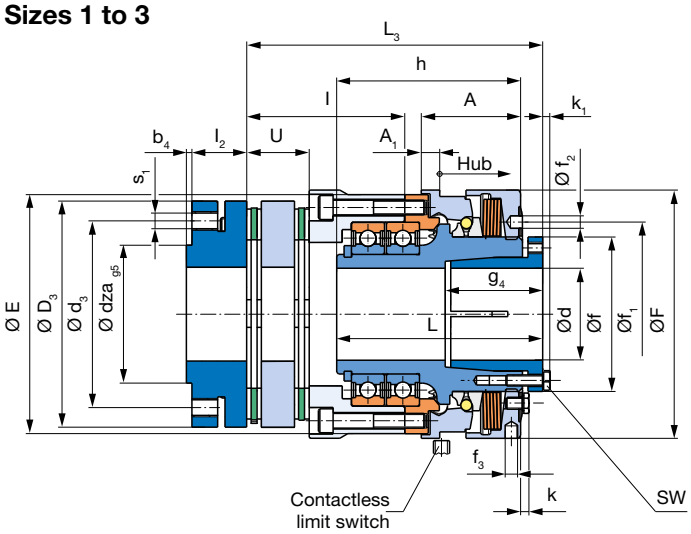
EAS®-side cone bushing: Type 4090._1300
Basic type
Sizes 01 to 3



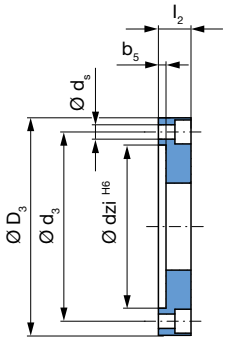
EAS®-side cone bushing: Type 4096._131 2/9
ROBA®-DS-side shrink disk hub
Sizes 01 to 3



EAS®-side cone bushing: Type 4096._1319
ROBA®-DS-side for measuring flange
Sizes 1 to 3



EAS®-side cone bushing: Type 4096._13_ _
ROBA®-DS-side for measuring flange
Sizes 01 to 0



Order number

Cone bushing		1			Torque adjustment value
Basic type [3]	0		0	Basic type	
with ROBA®-DS [4]	6		1	Connection plate	
			2	Sleeve [2]	

__ / 4 0 9 __ . __ 1 3 __ __ / __ / __ / __ / __

Sizes	Torque range [1]		Basic type		Bore Hub 1	Bore Hub 2	With limit switch, see pages 13 – 14 (optional)
01 to 3	Medium	5	Shrink disk hub	0	Ø d^{H6}	Ø d_1^{H6}	
	High	6	Measuring flange	2			
	Very high	7	Shrink disk hub, large	6			
	Maximum [2]	8		9			

Example: Order number 1 / 4096.61312.0 / 23 /25 /60 / limit switch 055.002.5

1) See Technical data, limit torque for overload M_G, other torques on request
2) When using a sleeve, please contact *mayr*®
3) With basic type, only 4090._1300 possible
4) Not possible with ROBA®-DS 4090._1300

Technical data				Size [1]				
				01	0	1	2	3
Limit torques for overload [1) 2)]	Type 409_.513 _ _	M_G	[Nm]	5 – 12,5	10 – 25	20 – 50	40 – 100	80 – 200
	Type 409_.613 _ _	M_G	[Nm]	10 – 25	20 – 50	40 – 100	80 – 200	160 – 400
	Type 409_.713 _ _	M_G	[Nm]	20 – 50	40 – 100	80 – 200	160 – 400	320 – 800
	Type 409_.813 _ _	M_G	[Nm]	25 – 62,5	50 – 125	100 – 250	200 – 500	400 – 1000
Max. speed [11)]		n_{max}	[rpm]	12000	10000	9000	7000	6000
Max. speed	Type 409_.813_ _	n_{max}	[rpm]	8000	7000	6000	5000	4000
Thrust washer stroke on overload coupling			[mm]	2	2,6	3,2	3,8	4,3
Nominal torques, torsionally rigid coupling		T_{KN}	[Nm]	100	150	420	650	1000
Permitted misalignments	axial [12)]	ΔK_a	[mm]	0,3	0,35	0,3	0,35	0,4
	radial	ΔK_r	[mm]	0,06	0,05	0,05	0,08	0,1
	angular	ΔK_w	[°]	0,3	0,6	0,45	0,45	0,45

Mass moments of inertia and weights [10)]				Size				
				01	0	1	2	3
EAS®-hub-side	Type 4090._1300	I	[10^{-3} kgm²]	0,448	1,210	2,572	5,171	11,412
EAS®-pressure flange-side	Type 4090._1300	I	[10^{-3} kgm²]	0,101	0,560	0,777	1,416	2,800
ROBA®-DS-side	Type 4096._131²/₉	I	[10^{-3} kgm²]	0,856	1,839	3,887	8,213	17,344
	Type 4096._1316	I	[10^{-3} kgm²]	0,863	1,655	3,847	8,517	15,444
Weights	Type 4090._1300	m	[kg]	0,973	1,770	2,765	3,968	6,340
	Type 4096._131²/₉	m	[kg]	2,071	3,421	5,529	8,260	12,983
	Type 4096._1316	m	[kg]	1,893	3,211	5,442	8,194	12,364

Tensioning screws and screw-on bores				Size				
				01	0	1	2	3
In cone bushing, EAS®-side	Quantity, dimension	M	[mm]	6 × M4	6 × M4	8 × M4	8 × M5	8 × M6
	Wrench opening	SW	[mm]	7	7	7	8	10
	Tightening torque	T_A	[Nm]	4	4	4	8	12
In shrink disk, ROBA®-DS-side	Quantity, dimension	M_1	[mm]	4 × M5	6 × M5	6 × M5	6 × M5	6 × M6
	Wrench opening	SW_1	[mm]	8	8	8	8	10
	Tightening torque	T_A	[Nm]	6	6	8,5	8,5	14
Screw-on bores in pressure flange	Quantity, dimension	s	[mm]	12 x M4	12 x M5	12 x M6	12 x M6	12 x M8
	Pitch			8 x 45° / 6 x 60°				

Dimensions [mm]		Size				
		01	0	1	2	3
A		34	40	45	50	55
A_1		8	9	10	10	10
a [5)]		15	20	26	29	29
a_0		18	24	31	35	37
b		6	7	9	10	12
E		65	80	95	110	130
e_{h5} [6)]		47	62	75	90	100
F		70	85	100	115	135
f		38	44	56	70	84
f_1		50	55	70	84	100
f_2		5	5	5	6	7
f_3		4	6	6	6	6
Pitch		4 x 90°				
Minimum shaft length	g_3	50	60	76	83	93
	g_4	34	39	42	48	53
h		55	68	82	91	101
k		2,8	2,8	3,5	4,0	4,0
k_1		2,8	2,8	2,8	3,5	4,0
L [7)]		62	76	90	100	112
m		56	71	85	100	116

Dimensions [mm]		Size				
		01	0	1	2	3
ROBA®-DS		10	15	25	40	64
Type 4096._131²/₉	D	69	79	89	104	123
	D_1 [8)]	68	78	82	100	115
	D_1 [9)]	68	78	64	74	84
	k_2	3,5	3,5	3,5	3,5	4
	L_1 [7)]	88,3	103	123	138,8	161
	l	44,3	51	64	73,8	86
	l_1 [8)]	32	37,5	45	50	55
	l_1 [9)]	32	37,5	40	45	50
	U	15,3	15,8	22	26,2	34
Type 4096._1316	b_4	-	-	2	2	3
	b_5	3,5	3,5	-	-	-
	D_3	100	100	99	123	123
	d_3	87	87	84	101,5	101,5
	s_1	6,6	6,6	M8	M10	M10
	Pitch	8 x 45°				
		-	-	6 x 60°		
	dza $_{g5}$	-	-	57	75	75
	dzi ^{H6}	75	75	-	-	-
	l_2	15	19	25	30,2	29,8

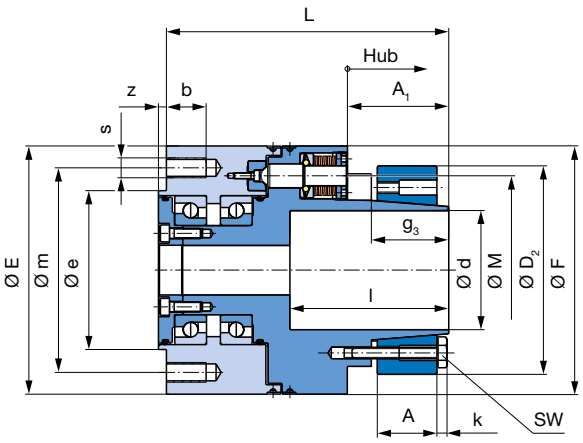
Bores [mm]			Size				
			01	0	1	2	3
EAS®-side	d^{H6} [2) 4)]	d_{min}	10	15	22	32	35
		d_{max}	20	25	35	45	55
ROBA®-DS-side	ROBA®-DS		10	15	25	40	64
	d_1^{H6} [3) 8)]	$d_{1\,min}$	19	25	32	40	45
		$d_{1\,max}$	38	45	52	60	70
	d_1^{H6} [3) 9)]	$d_{1\,min}$	19	25	20	25	30
		$d_{1\,max}$	38	45	36	45	45

1) Further sizes for smaller and larger torques available on request
2) Observe shaft load in maximum torque range
3) Shaft tolerance up to Ø 38 $_{h6}$, over Ø 38 $_{h8}$
4) Transmittable torques available with smaller bores on request
5) Mounting tolerance + 0,1
6) Tolerance user-side H6
7) Dimensions in released condition (shorter in tensioned condition)
8) Only valid for type 4096._13_9
9) Only valid for type 4096._13_2
10) Mass moments of inertia and weights apply for maximum bore
11) Higher speeds available on request
12) Only permitted as a static or virtually static value

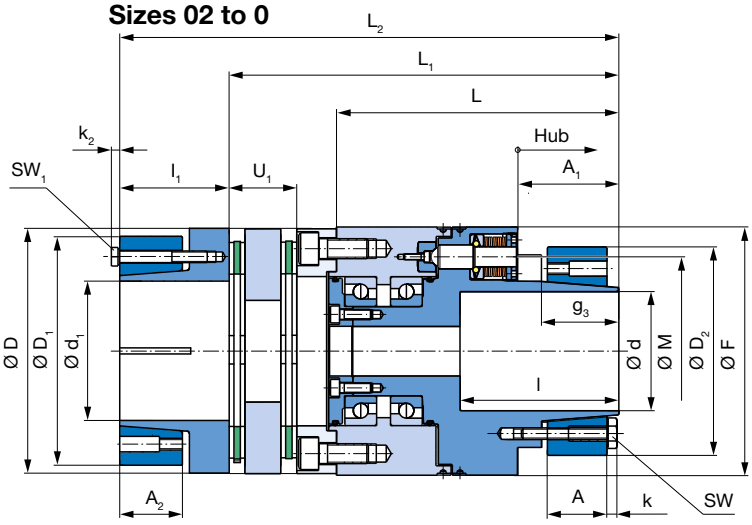
We reserve the right to make dimensional and constructional alterations.

EAS®-HSE

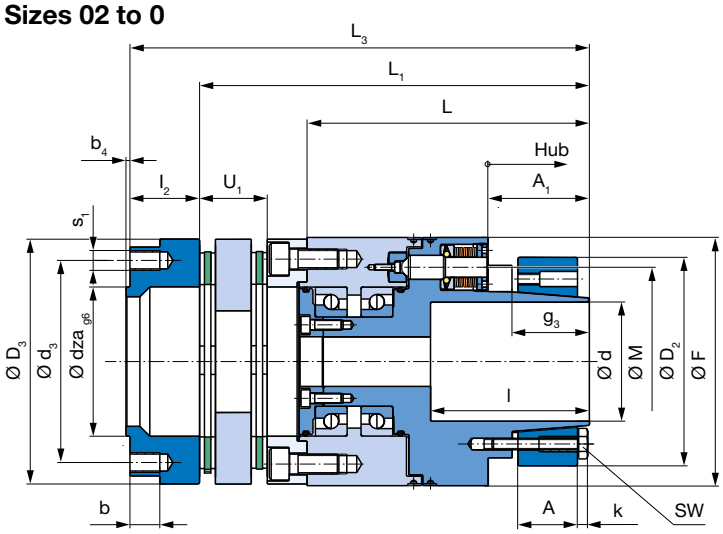
EAS®-side shrink disk hub: Type 4030.60400
Basic type
Sizes 02 to 0



EAS®-side shrink disk hub: Type 4036.60412/9
ROBA®-DS-side shrink disk hub
Sizes 02 to 0



EAS®-side shrink disk hub: Type 4036.60416
ROBA®-DS-side for measuring flange
Sizes 02 to 0



Order number

Standard element		0	0 Basic type 1 Connection plate 2 Sleeve [2]		Torque adjustment value
Basic type [3] with ROBA®-DS [4]	0 6				

__ / 4 0 3 __ . __ 0 4 __ __ / __ / __ / __

Sizes	Torque range [1] [3]		Basic type		Bore Hub 1	Bore Hub 2
02 to 0	Medium	4	Shrink disk hub	2	Ø d^{H6}	Ø d_1^{H6}
	High	5	Measuring flange	6		
	Very high	6	Shrink disk hub, large	9		
	Maximum	7				

Example: Order number 1 / 4036.60416 / 52 / 70 / 1250

1) See Technical data, limit torque for overload M_G, other torques on request
2) When using a sleeve, please contact *mayr*®
3) With basic type, only 4030._0400 possible
4) Not possible with ROBA®-DS 4030._0400

Technical data		EAS®-element Number	EAS®-element Type			Size 1) 02	Size 1) 01	Size 1) 0	
Limit torques for overload 1) 2)	Type 403_.404 _	2	440.604.0	M_G	[Nm]	100 – 250	325 – 650	1400 – 2800	–
	Type 403_.504 _ _	4	440.604.0	M_G	[Nm]	250 – 500	685 – 1250	2800 – 5600	–
	Type 403_.604 _ _	6	440.604.0	M_G	[Nm]	375 – 750	1000 – 2000	–	4200 – 8400
	Type 403_.704 _ _	8	440.604.0	M_G	[Nm]	500 – 1000	1250 – 2500	–	–
EAS®-element (Size)						02	01	0	
Max. speed 10)				n_{max}	[rpm]	12000	10000	7000	7000
Bolt stroke on overload					[mm]	2,5	4	6	6
Nominal torques, torsionally rigid coupling				T_{KN}	[Nm]	1100	2600	5800	9500
Permitted misalignments	axial 11)			ΔK_a	[mm]	0,4	0,5	0,45	0,5
	radial			ΔK_r	[mm]	0,1	0,1	0,1	0,1
	angular			ΔK_w	[°]	0,4	0,4	0,3	0,3

Tensioning screws and screw-on bores					Size 02	Size 01	Size 0	
In shrink disk, EAS®-side	Quantity, dimension	M	[mm]		4 × M8	8 × M8	8 × M12	
	Wrench opening	SW	[mm]		13	13	19	
	Tightening torque	T_A	[Nm]		36	36	93	
In shrink disk, ROBA®-DS-side	Quantity, dimension	M_1	[mm]		6 × M6	6 × M8	8 × M10	8 × M12
	Wrench opening	SW_1	[mm]		10	13	17	19
	Tightening torque	T_A	[Nm]		10	36	56	93
Screw-on bores in pressure flange	Pitch, dimension	s	[mm]		6 × 60° M10	6 × 60° M14	8 × 45° M20	8 × 45° M20

Mass moments of inertia and weights 9)				Size 02	Size 01	Size 0	
EAS®-hub-side	Type 4030._04 _ _	I	[10^{-3} kgm²]	10,271	47,180	341,804	
EAS®-pressure flange-side	Type 4030._04_ _	I	[10^{-3} kgm²]	8,081	37,321	233,775	
ROBA®-DS-side	ROBA®-DS			64	160	500	850
	Type 4036._0416	I	[10^{-3} kgm²]	10,223	40,896	193,757	281,625
	Type 4036._041²/₉	I	[10^{-3} kgm²]	12,024	53,899	241,013	405,591
Weights	Type 4030._0400_	m		8,77	22,457	68,790	
	Type 4036._0416	m	[kg]	13,220	32,154	93,939	100,044
	Type 4036._041²/₉	m	[kg]	14,083	84,615	102,578	115,994

Dimensions [mm]	Size 02	Size 01	Size 0
A	30	38	63
A_1	51	63,4	89
L	142,2	182,4	250
z	4	4	5
b	20	25	42
M	95	133	190
D_2	105	141	234
l	80	100	130
g_3	40	50	75
k	5,3	5,3	7,5
E	125	170	250
e_{h6} 6)	80	105	160
F	125	170	250
m	103	140	210

Dimensions [mm]		Size 02	Size 01	Size 0	
ROBA®-DS		64	160	500	850
Type 4036._1312/9	D	123	167	198	234
	D_1 7)	115	162	198	234
	D_1 8)	84	118	198	234
	L_1	162,2	250,8	344	359
	L_2 7)	251,2	320,8	439	474
	L_2 8)	246,2	310,8	439	474
	U_1	34	40,4	52	65
	l_1 7)	55	70	95	115
	l_1 8)	50	60	95	115
	k_2	4	5,3	6,4	7,5
	A_2	31,5	39	51	63
Type 4036._1316	dza $_{g6}$	75	90	110	140
	d_3	101,5	130	155,5	196
	D_3	123	167	210	252
	b_4	2	2,8	2,8	3
	b	15	14	26	29
	s_1 Pitch	8 × 45°			
	s_1 Dimension	M10	M12	M14	M16
	l_2	35	35	36	29
	L_3	231,2	285,8	380	388

Bores [mm]			Size 02	Size 01	Size 0	
EAS®-side	d H7 2)	d_{min}	48	47	70	
		d_{max}	60	75	120	
ROBA®-DS-side	ROBA®-DS		64	160	500	850
	d_1 H7 3) 7)	$d_{1\,min}$	45	65	60	70
		$d_{1\,max}$	70	100	100	120
	d_1 H7 3) 8)	$d_{1\,min}$	30	40	60	70
		$d_{1\,max}$	45	65	100	120

1) Further sizes for smaller and larger torques available on request
2) Observe shaft load in maximum torque range
3) Shaft tolerance up to Ø 38 $_{h6}$, over Ø 38 $_{h8}$
4) Transmittable torques available with smaller bores on request
5) Mounting tolerance + 0,1
6) Tolerance user-side H6
7) Only valid for type 4096._13_9
8) Only valid for type 4096._13_2
9) Mass moments of inertia and weights apply for maximum bore
10) Higher speeds available on request
11) Only permitted as a static or virtually static value

We reserve the right to make dimensional and constructional alterations.

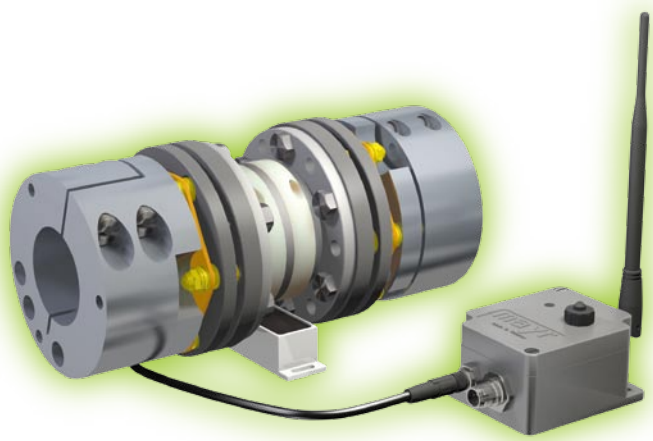
Other test stand clutches and couplings

ROBA®-DSM
Torque measurement coupling

Measurement ranges 190 Nm – 1,600 Nm
Accuracy < 1 %
Bandwidth 3.5 kHz, usable resolution 12 Bit

- ❑ Integrated into tried and tested, backlash-free shaft compensation coupling
- ❑ Simple electrical and mechanical installation
- ❑ Robust and reliable machine element
- ❑ Absolutely maintenance-free

Can be combined with ROBA®-DS shaft couplings and EAS®-torque limiting clutches

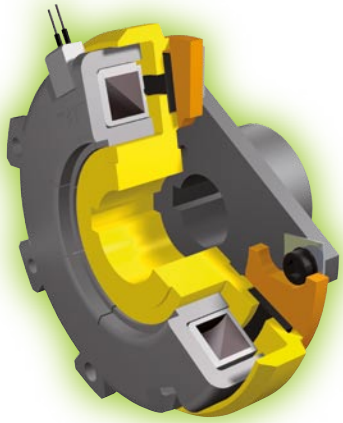


For detailed Technical data, see Catalogue
ROBA®-DSM **P.971005.V_ _._ _**

ROBATIC®-electromagnetic clutch

Torque range 10 Nm – 640 Nm
Speeds up to 8,600 rpm

- ❑ Short switching times/high switching frequency
- ❑ High performance density
- ❑ Large permitted shaft diameter
- ❑ High torque reliability
- ❑ Simple installation
- ❑ Compact construction

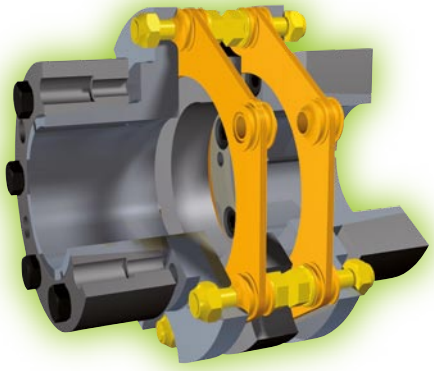


For detailed technical data, see Catalogue
ROBATIC® **K.500.V_ _._ _**

ROBA®-DS shaft coupling

Torque range 3 Nm - 110,000 Nm
Speeds up to 13,600 rpm

- ❑ Resistant to alternating loads up to 100% of the nominal torque, up to Size 2200
- ❑ Low mass moment of inertia due to high performance density
- ❑ Completely backlash-free up to the nominal torque
- ❑ High misalignment compensation capability with low restoring forces
- ❑ High torsional rigidity up to the nominal torque
- ❑ Completely wear-free and maintenance-free
- ❑ Optimum design due to high diversity of variants



For detailed technical data, see Catalogue
ROBA®-DS **K.950.V_ _._ _**

ROBA®-DS shaft couplings transmit the coupling nominal torque using frictional locking and backlash-free even with full displacement and alternating torques. The maximum performance density permits the use of the respective smallest size. The mass moment of inertia and the diameter are minimised.

Maximum running smoothness due to highly precise components and complete balancing.

Limit Switch Type 055.00_.5 (contactless)

CE cULus E189728

Application

This device is used for measuring and monitoring axial and radial disengaging movements, e.g. on EAS®-clutches. It acts as a control sensor for electronic and mechanical sequences.

Function

When the sensor surface of the NAMUR sensor scans a metal control flag (damped), the signal relay is triggered, is deenergised and drops. Contacts 1 - 2 are opened. Damping is possible from all sides.

Electrical Connection (Terminal)

1 – 2 – 3	floating changeover-contacts
5 – 6	Connection input voltage

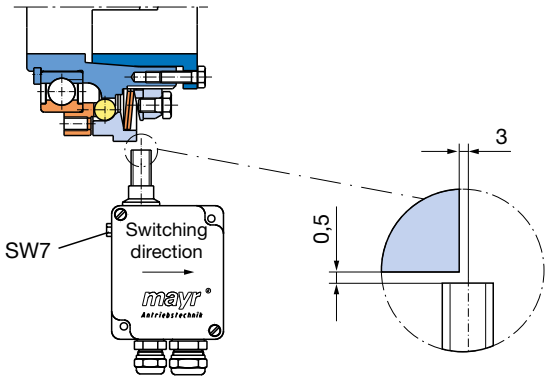
Design

The electronic amplifier is installed in a light metal housing. The limit switch is fixed using two screw-on mounting links attached diagonally with M4 cap screws.

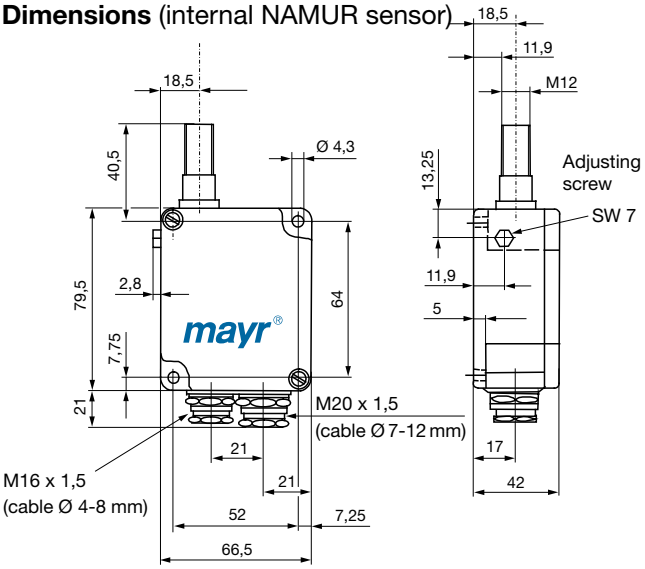
Technical Data

Input voltage (dependent on design)	230 VAC, ±10 %, 50–60 Hz 115 VAC, ±10 %, 50–60 Hz 24 VDC, PELV, ±5 %, protected against reverse polarity, for overvoltage category II connection
Power consumption	max. 1,5 VA
Ambient temperature	-10 °C bis +60 °C limit switch -25 °C bis +60 °C NAMUR sensor
Protection	IP 54
Conductor cross-section	max. 2,5 mm² / AWG 14
Weight	400 g / 14 oz
Protection fuse	0,1 A/fast acting at 24 VDC (in system)
Signalling relay	Potential-free two-way contacts Contact load max. 250 VAC/12 A Contact material AgNi 90/10 max. switching frequency 20 Hz at min. load, 0,1 Hz at max. load
NAMUR sensor internal	Installed in a light metal housing, operating distance SN 2 mm, flush fitting, max. switching frequency 2 kHz, the zero point can be set per 1 mm by means of the lateral adjusting screw SW 7
NAMUR sensor external	metal housing M12 x 1, operating-distance SN 2 mm, flush fitting, max. switching frequency 2 kHz, standard cable length 2 m, max. 100 m with special design, protection IP 67

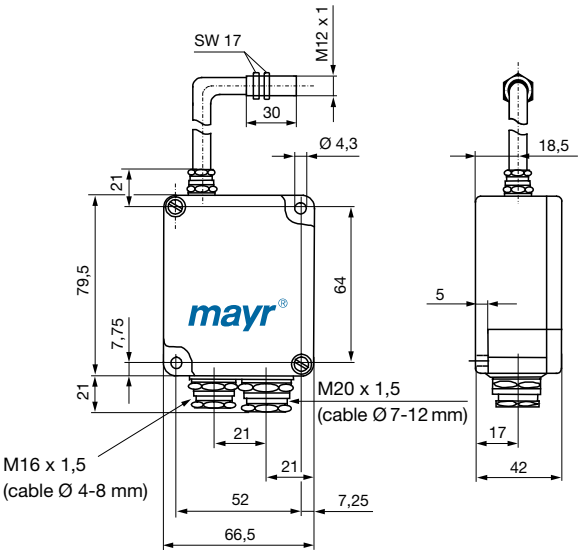
Installation



Dimensions (internal NAMUR sensor)



Dimensions (external NAMUR sensor)



Order number

0 5 5 . 0 0 __ . 5 / __

Contactless sensing		Connection voltage
Sensor external	1	230 VAC
Sensor internal	2	115 VAC
		24 VDC

Limit Switch Type 055.012.6 (Contactless, with mounting flange)

Application

The inductive proximity switch monitors and detects operating conditions on EAS® overload clutches. Axial movements caused by overload or switching procedures are registered by the proximity switch. The signal can be used for further process controlling e.g. for drive switch-off.

Function

When the overload clutch disengages, the inductive proximity switch converts from a damped to an undamped condition and the signal level on the output (2) changes from the input voltage value to 0V.

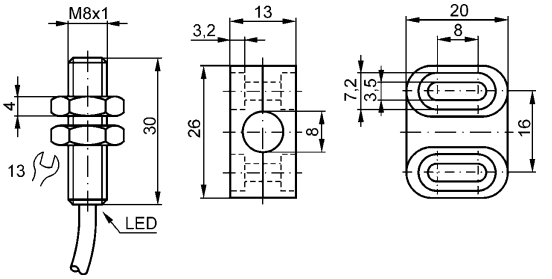
Electrical Connection

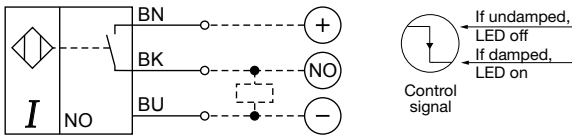
1	L+	BN (brown)
2	NO contact	BK (black)
3	L-	BU (blue)

Technical Data

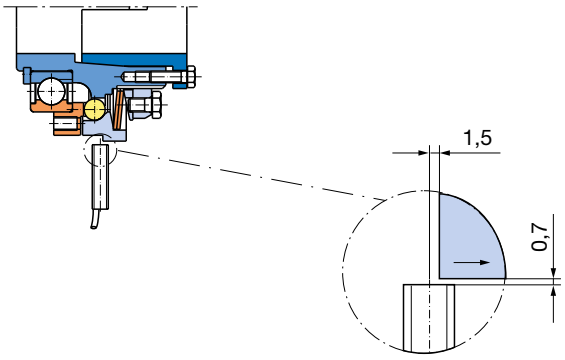
Identification code	NBB1,5-8GM30-E2-Y
Construction size	M8 x 1
Type of construction	Rustproof stainless steel
Input voltage	10 – 30 VDC PELV
No-load current	≤ 15 mA
Power capacity	100 mA
Contact type	PNP/NO contact
Switching distance S_n	1,5 mm, flush installation
Assured switching distance S_a	1,2 mm
Characteristics	Inverse polarity protection Clocking short circuit protection Switching condition indicator via LED
Connection type	Cable 3 m/PUR
Tightening torque	10 Nm
Connection cross-section	0,14 mm² / AWG 26
Ambient temperature	-25 °C bis +70 °C
Protection	IP 67
Accessories	Mounting flange

Dimensions (mm)





Installation



Order number

0 5 5 . 0 1 2 . 6 / __

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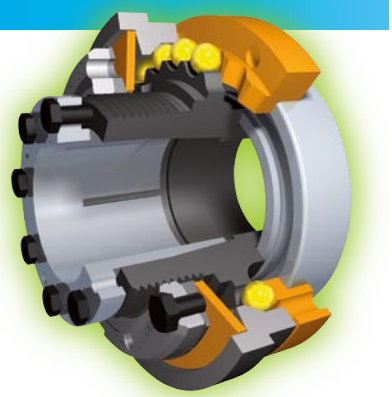
Connection voltage

10 – 30 VDC

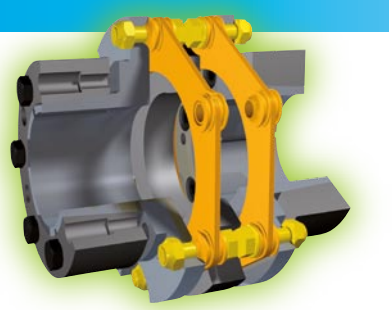
Product Summary

Safety Clutches/Overload Clutches



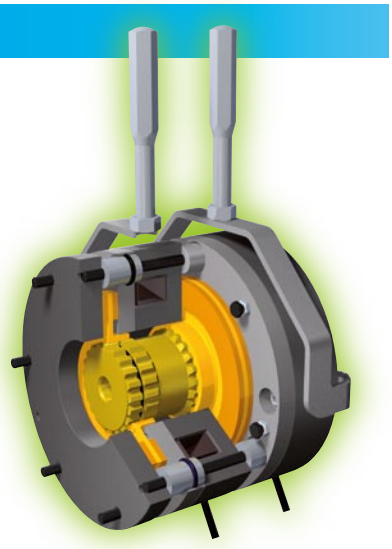
- **EAS®-Compact®/EAS®-NC**
  Positive locking and completely backlash-free torque limiting clutches
- **EAS®-smartic®**
  Cost-effective torque limiting clutches, quick installation
- **EAS®-element clutch/EAS®-elements**
  Load-disconnecting protection against high torques
- **EAS®-axial**
  Exact limitation of tensile and compressive forces
- **EAS®-Sp/EAS®-Sm/EAS®-Zr**
  Load-disconnecting torque limiting clutches with switching function
- **ROBA®-slip hub**
  Load-holding, frictionally locked torque limiting clutches
- **ROBA®-contitorque**
  Magnetic continuous slip clutches

Shaft Couplings



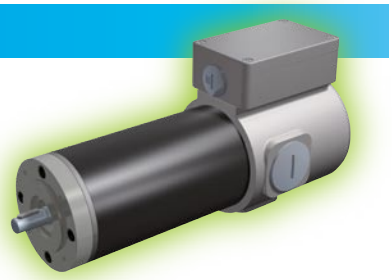
- **smartflex®**
  Perfect precision couplings for servo and stepping motors
- **ROBA®-ES**
  Backlash-free and damping for vibration-sensitive drives
- **ROBA®-DS/ROBA®-D**
  Backlash-free, torsionally rigid all-steel couplings
- **EAS®-control-DS**
  Cost-effective torque-measuring couplings

Electromagnetic Brakes/Clutches



- **ROBA-stop® standard**
  Multifunctional all-round safety brakes
- **ROBA-stop®-M motor brakes**
  Robust, cost-effective motor brakes
- **ROBA-stop®-S**
  Water-proof, robust monoblock brakes
- **ROBA-stop®-Z/ROBA-stop®-silenzio®**
  Doubly safe elevator brakes
- **ROBA®-diskstop®**
  Compact, very quiet disk brakes
- **ROBA®-topstop®**
  Brake systems for gravity loaded axes
- **ROBA®-linearstop**
  Backlash-free brake systems for linear motor axes
- **ROBATIC®/ROBA®-quick/ROBA®-takt**
  Electromagnetic clutches and brakes, clutch brake units

DC Drives



- **tendo®-PM**
  Permanent magnet-excited DC motors
- **tendo®-SC**
  1 quadrant and 4 quadrant transistor controllers

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06/06/2013 SC/LK