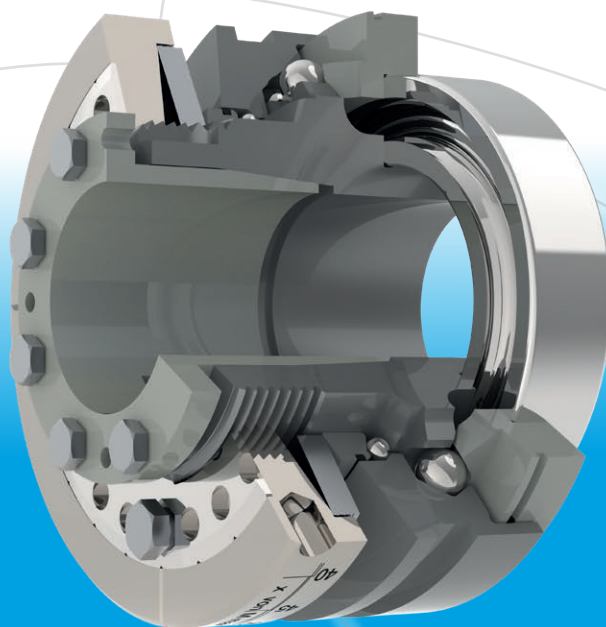




*your reliable partner*



**EAS<sup>®</sup>-compact<sup>®</sup>-F**

# We safeguard the movements of this world



## Specialists in power transmission for more than a century

*mayr*<sup>®</sup> power transmission is one of the most traditional and yet most innovative German companies in the field of power transmission. From modest beginnings in the year 1897, the family enterprise from the Allgäu region has developed into the world market leader. Today, approximately 700 employees work at the headquarters in Mauerstetten; about 1200 employees work for the company worldwide.

### An unsurpassed standard product range

*mayr*<sup>®</sup> power transmission offers a wide variety of torque limiters, safety brakes, backlash-free shaft misalignment compensation couplings and high-quality DC drives. Regarding customer-specific requirements, too, the company possesses the expertise to develop customized and economical solutions. This is why numerous renowned machine manufacturers trust in holistic solutions by *mayr*<sup>®</sup> power transmission.

### Represented worldwide

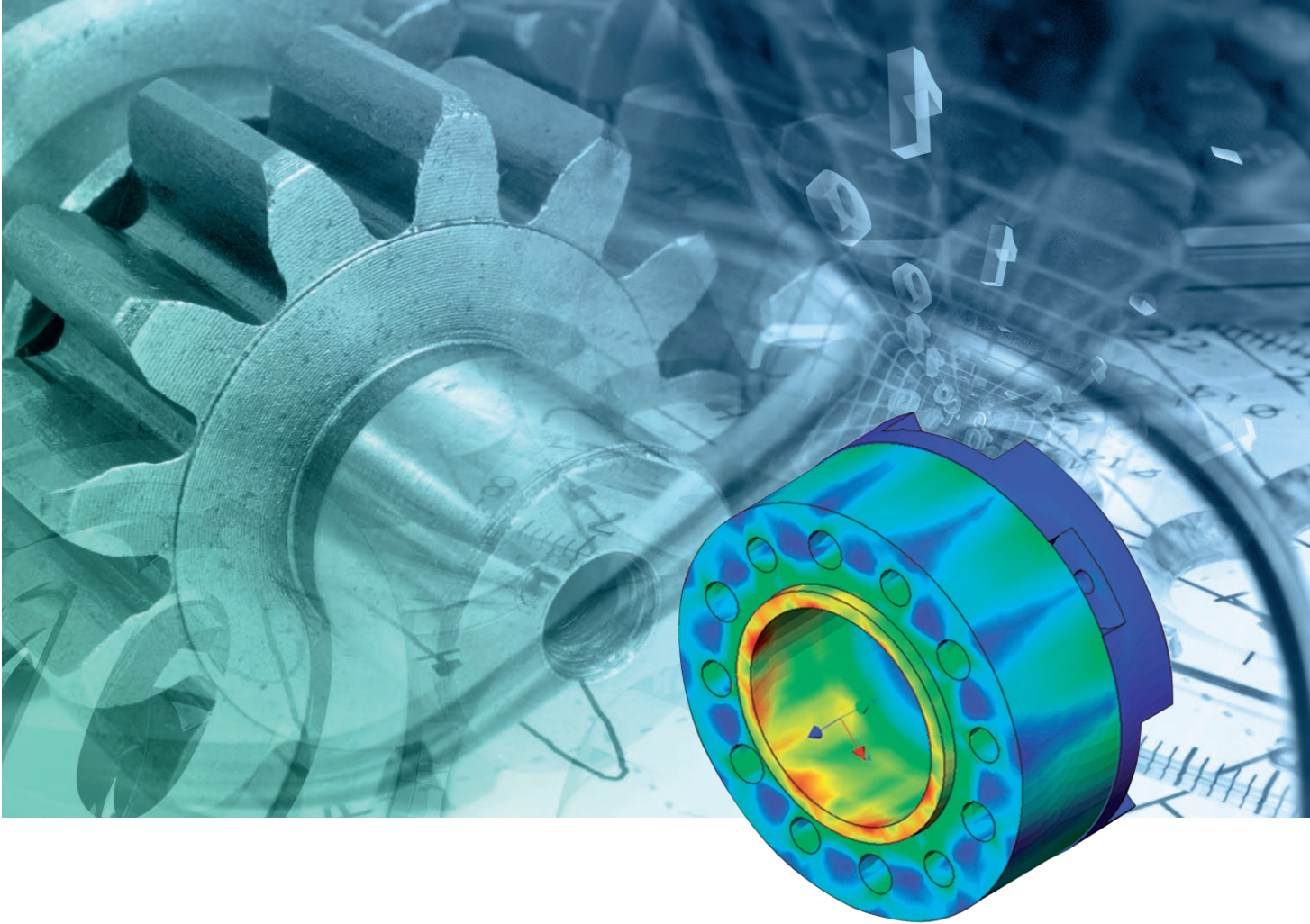
With eight subsidiaries in Germany, sales offices in the USA, France, Great Britain, Italy, Singapore and Switzerland as well as 36 additional country representatives, *mayr*<sup>®</sup> is available in all important industrial areas, guaranteeing optimum customer service around the globe.

## Never compromise on safety

We make no compromises where safety is concerned. Only top products of a perfect quality guarantee that no people are injured or machines damaged in case of malfunctions, collisions and other hazardous situations. The safety of your employees and machines is our motivation to always provide the best and most reliable clutches, couplings or brakes.

*mayr*<sup>®</sup> power transmission holds numerous ground-breaking patents, and is the global market or technological leader for

- application-optimised **safety brakes**, for example for passenger elevators, stage technology and gravity-loaded axes
- **Torque limiters** to protect against expensive overload damage and production losses and
- backlash-free **servo couplings**.



## Tradition and innovation – the best of both worlds

Tradition and innovation do not contradict each other - on the contrary. They are the two supporting pillars which have guaranteed stability and reliability for generations. Long-term stability, independence as well as a good reputation and satisfied customers are important values for a family enterprise rich in tradition.

Therefore, we place emphasis on:

- Tested product quality,
- Optimum customer service,
- Comprehensive know-how,
- Global presence,
- Successful innovations and
- Effective cost management.

By pursuing our own objective of always offering our customers the technologically most advanced and most economical solution, we have been able to gain the trust of many leading industrial companies from all branches and from all over the world as a reliable partner.

Place your trust in our know-how and our more than 50 years of experience in the areas of torque limiters, safety brakes and shaft couplings.

## Tested quality and reliability

*mayr*<sup>®</sup> products are subject to meticulous quality inspections. These include quality assurance measures during the design process as well as a comprehensive final inspection. Only the best, tested quality leaves our place of manufacture. All products are rigorously tested on calibrated test stands, and adjusted precisely to the requested values. An electronic database in which the measured values are archived together with the associated serial numbers guarantees 100 % traceability. On request, we confirm the product characteristics with a test protocol.

The certification of our quality management according to DIN EN ISO 9001:2000 confirms the quality-consciousness of our colleagues at every level of the company.



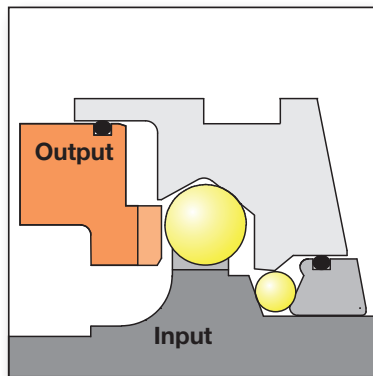
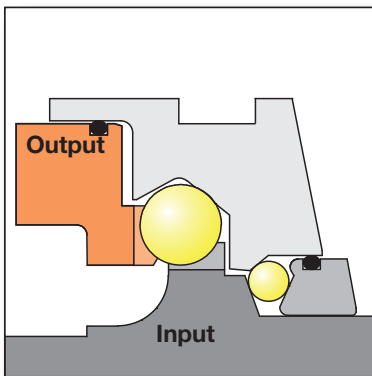
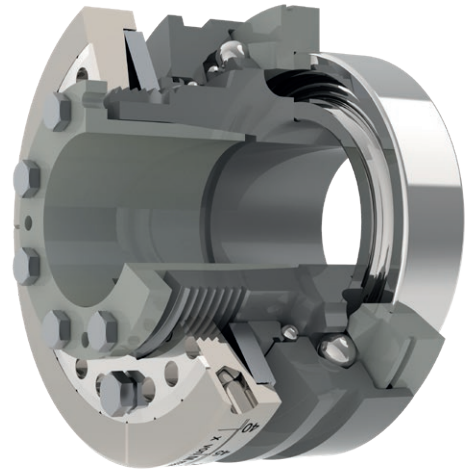
## EAS<sup>®</sup>-compact<sup>®</sup>-F – Disengaging torque limiting clutch

### Function

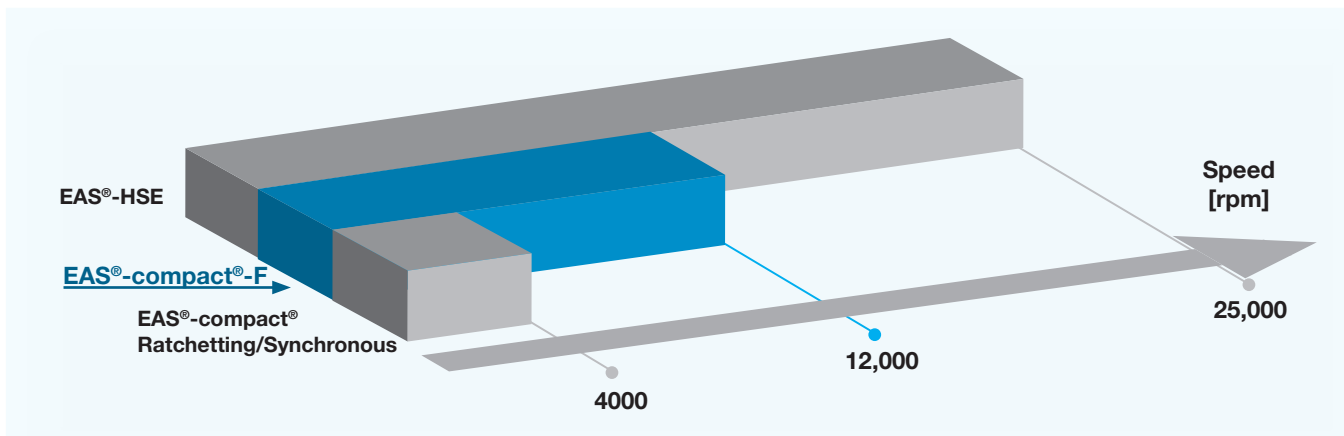
EAS<sup>®</sup>-compact<sup>®</sup>-F overload clutches separate the input and output almost residual torque-free on overload and remain in this state until they are deliberately re-engaged by hand or using devices

They are the ideal protective element for fast-running drives and large mass moments of inertia.

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



When in operation, the EAS<sup>®</sup>-compact<sup>®</sup>-F clutches transmit the torque backlash-free. On overload occurrence, they ensure free run-out of the drive components.



EAS<sup>®</sup>-compact<sup>®</sup>-F overload clutches are suitable for fast running drives up to 12,000 rpm.

## EAS®-compact®-F

### Special characteristics

- Disengaging torque limiting clutch
- Sealed functional components O-rings reliably prevent lubricant from being thrown out of the clutch even at high speeds.
- Good running characteristics and low imbalance even at high speeds due to centred components.
- Backlash-free torque transmission
- High performance density
- Calibrated torque adjustment
- Precise torque limitation with high repeat accuracy

### Your Advantages

#### EAS®-compact®-F

- reliably protects against expensive overload damage and loss of production
- separates input and output almost residual torque-free on overload.
- is ideal for fast running drives and high mass moments of inertia.

## Contents

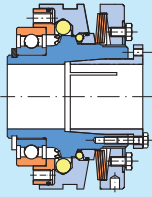
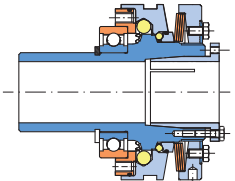
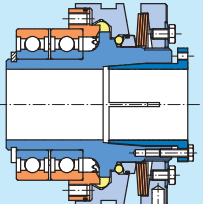
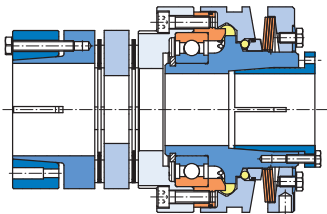
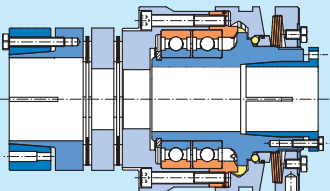
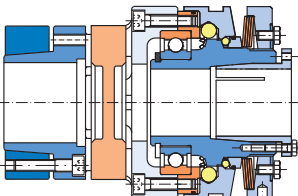
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**EAS®-compact®-F overload clutches of the Types 419\_5\_4\_ , 419\_6\_4\_ und 419\_7\_4\_ are also available in ATEX design according to the directive 2014/34/EU (ATEX 114).**

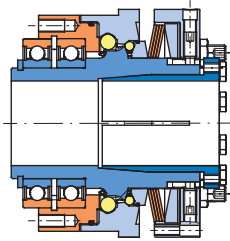
# Summary of constructional designs EAS®-compact®-F

## Sizes 01 bis 3

<p><b>EAS®-compact®-F short hub</b></p> 	<p>Torque: 5 to 1000 Nm</p> <p>Sizes 01 to 3</p> <p>Type 4190._.400</p>	<ul style="list-style-type: none"> <li>Flange clutch for direct installation of drive elements with the resulting radial force approximately in the bearing centre</li> </ul> <p>With cone bushing                      Type 4190._.0400 With key hub                                Type 4190._.3400</p> <p style="text-align: right;"><b>Page 8</b></p>
<p><b>EAS®-compact®-F long protruding hub</b></p> 	<p>Torque: 5 to 1000 Nm</p> <p>Sizes 01 to 3</p> <p>Type 4190._.400</p>	<ul style="list-style-type: none"> <li>Flange clutch for very wide drive elements or elements with a very small diameter</li> <li>Suitable bearings for the drive element are ball bearings, needle bearings or plain bearings.</li> </ul> <p>With cone bushing                      Type 4190._.1400 With key hub                                Type 4190._.4400</p> <p style="text-align: right;"><b>Page 10</b></p>
<p><b>EAS®-compact®-F for high-speed applications</b></p> 	<p>Torque: 5 to 1000 Nm</p> <p>Speed 6000 - 12000 rpm</p> <p>Sizes 01 to 3 2-bearing design</p> <p>Type 4190._.2300</p>	<ul style="list-style-type: none"> <li>Flange clutch for direct installation of drive elements with the resulting radial force approximately in the bearing centre</li> <li>High speed</li> <li>matched paired bearing</li> </ul> <p>With cone bushing                      Type 4190._.2300</p> <p style="text-align: right;"><b>Page 12</b></p>
<p><b>EAS®-compact®-F torsionally rigid</b></p> 	<p>Torque: 5 to 1000 Nm</p> <p>Sizes 01 to 3</p> <p>Type 4196._.4._.</p>	<ul style="list-style-type: none"> <li>Double shaft design with a robust disk pack coupling</li> <li>Compensation for axial, radial and angular shaft misalignments</li> <li>High torsional rigidity</li> </ul> <p><b>Hub designs:</b>  <u>EAS®-side/torsionally rigid side</u>  Cone bushing/Shrink disk hub    Type 4196._.04_2/9  Key hub/Clamping hub                Type 4196._.34_4  Key hub/Key hub                         Type 4196._.34_0</p> <p style="text-align: right;"><b>Page 14</b></p>
<p><b>EAS®-compact®-F torsionally rigid for high-speed applications</b></p> 	<p>Torque: 5 to 1000 Nm</p> <p>Speed 6000 - 12000 rpm</p> <p>Sizes 01 to 3 2-bearing design</p> <p>Type 4196._.23._.</p>	<ul style="list-style-type: none"> <li>Double shaft design with a robust disk pack coupling</li> <li>Compensation for axial, radial and angular shaft misalignments</li> <li>High torsional rigidity</li> <li>High speed</li> </ul> <p><b>Hub designs:</b>  <u>EAS®-side/torsionally rigid side</u>  Cone bushing/shrink disk hub    Type 4196._.23_2/9  Cone bushing/Measurement flange Type 4196._.23_M</p> <p style="text-align: right;"><b>Page 16</b></p>
<p><b>EAS®-compact®-F lastic backlash-free</b></p> 	<p>Torque: 5 to 1000 Nm</p> <p>Sizes 01 to 3</p> <p>Type 4194._.4._.</p>	<ul style="list-style-type: none"> <li>Double shaft design with a flexible, backlash-free coupling</li> <li>Compensation for axial, radial and angular shaft misalignments</li> <li>High damping characteristics</li> </ul> <p><b>Hub designs:</b>  <u>EAS®-side/flexible side</u>  Cone bushing/Clamping hub        Type 4194._.04_0  Cone bushing/Shrink disk hub    Type 4194._.04_1  Key hub/Key hub                        Type 4194._.34_2</p> <p style="text-align: right;"><b>Page 18</b></p>

## EAS<sup>®</sup>-compact<sup>®</sup>-F - Sizes 4 and 5

### EAS<sup>®</sup>-compact<sup>®</sup>-F short hub



Torque:  
120 to 3000 Nm

Sizes 4 to 5  
as 2-bearing design

Type 4190.\_.400

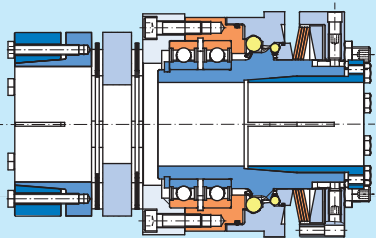
- Flange clutch for direct installation of drive elements with the resulting radial force approximately in the bearing centre
- stable paired bearing

With cone bushing  
With key hub

Type 4190.\_.2400  
Type 4190.\_.5400

Page 20

### EAS<sup>®</sup>-compact<sup>®</sup>-F torsionally rigid



Torque:  
120 to 3000 Nm

Sizes 4 to 5  
as 2-bearing design

Type 4196.\_.4.\_.

- Double shaft design with a robust disk pack coupling
- Compensation for axial, radial and angular shaft misalignments
- High torsional rigidity

**Hub designs:**

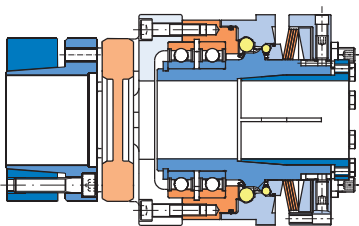
EAS<sup>®</sup>-side/torsionally rigid side

Cone bushing/Shrink disk hub Type 4196.\_.24.\_.9

Key hub/Key hub Type 4196.\_.54.\_.0

Page 22

### EAS<sup>®</sup>-compact<sup>®</sup>-F lastic backlash-free



Torque:  
120 to 1500 Nm

Size 4  
as 2-bearing design

Type 4194.\_.4.\_.

- Double shaft design with a flexible, backlash-free coupling
- Compensation for axial, radial and angular shaft misalignments
- High damping characteristics

**Hub designs:**

EAS<sup>®</sup>-side/flexible side

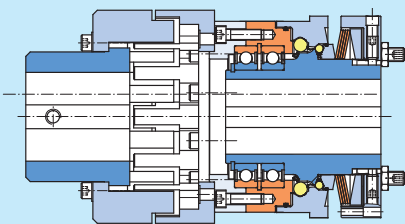
Cone bushing/Clamping hub Type 4194.\_.24.\_.0

Cone bushing/Shrink disk hub Type 4194.\_.24.\_.1

Key hub/key hub Type 4194.\_.54.\_.2

Page 24

### EAS<sup>®</sup>-compact<sup>®</sup>-F lastic



Torque:  
240 to 3000 Nm

Size 5  
as 2-bearing design

Type 4194.\_.4.\_.2

- Double shaft design with a flexible coupling
- Compensation for axial, radial and angular shaft misalignments

**Hub designs:**

EAS<sup>®</sup>-side/flexible side

Key hub/key hub Type 4194.\_.54.\_.2

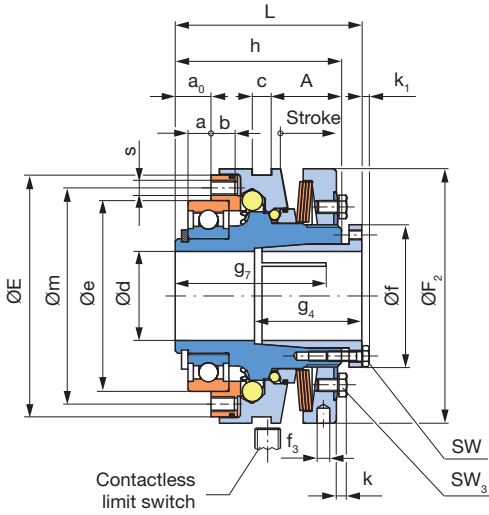
Cone bushing/key hub Type 4194.\_.24.\_.2

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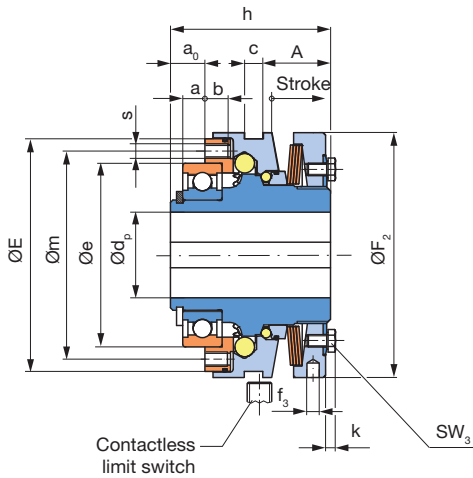
**EAS<sup>®</sup>-compact<sup>®</sup>-F short hub**

**Type 4190. \_\_ 400, Sizes 01 bis 3**

**with cone bushing**  
**Type 4190. \_0400**



**with keyway**  
**Type 4190. \_3400**



**Order Number**

		Overload	<b>4</b>	Hub bore Ø d <sup>H7</sup> / Ø d <sub>p</sub> <sup>H7</sup>		Torque adjustment value (Optional)	
			▼		▼		▼
		_ / 4 1 9 0 . _ _ 4 0 0 . _ / _ /					
		▲	▲	▲			▲
<b>Sizes</b>	<b>Torque range</b> <sup>1)</sup>		<b>0</b>	short hub cone bushing		With limit switch see page 29 (option)	
<b>01</b>	medium	<b>5</b>	<b>3</b>	short hub keyway			
<b>to</b>	high	<b>6</b>					
<b>3</b>	very high maximum	<b>7</b> <b>8</b>					

**Example: Order number 1 / 4190.60400 / 25 / 60 / limit switch 055.002.5**

1) See Technical Data, limit torque for overload M<sub>G</sub>



## EAS<sup>®</sup>-compact<sup>®</sup>-F short hub

Technical Data				Size <sup>1)</sup>				
				01	0	1	2	3
Limit torques for overload <sup>1)</sup>	Type 4190.5_400	M <sub>G</sub>	[Nm]	5 – 12.5	10 – 25	20 – 50	40 – 100	80 – 200
	Type 4190.6_400	M <sub>G</sub>	[Nm]	10 – 25	20 – 50	40 – 100	80 – 200	160 – 400
	Type 4190.7_400	M <sub>G</sub>	[Nm]	20 – 50	40 – 100	80 – 200	160 – 400	320 – 800
	Type 4190.8_400	M <sub>G</sub>	[Nm]	25 – 62.5	50 – 125	100 – 250	200 – 500	400 – 1000
Max. speed	n <sub>max</sub>	[rpm]	8000	7000	6000	5000	4000	
Thrust washer stroke on overload		[mm]	2.0	2.6	3.2	3.8	4.3	

Mass moments of inertia and weights <sup>10)</sup>				Size				
				01	0	1	2	3
Hub-side	Type 4190.70400	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.424	1.101	2.338	4.578	10.105
	Type 4190.73400	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.414	1.083	2.380	4.542	9.967
Pressure flange-side	Type 4190.70400	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.091	0.224	0.612	1.167	2.492
	Type 4190.73400	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.091	0.224	0.612	1.167	2.492
Weights	Type 4190.70400	m	[kg]	0.88	1.52	2.38	3.35	5.25
	Type 4190.73400	m	[kg]	0.82	1.46	2.42	3.39	5.25

Screws and screw-on bores				Size				
				01	0	1	2	3
Tensioning screws in cone bushing	Number, dimensions	M	[mm]	6 x M4	6 x M4	8 x M4	8 x M5	8 x M6
	Wrench opening	SW	[mm]	7	7	7	8	10
	Tightening torque	T <sub>A</sub>	[Nm]	4	4	4	8	13
Locking screws in adjusting nut	Number, dimensions	M <sub>3</sub>	[mm]	2 x M5	2 x M4	2 x M5	2 x M6	2 x M6
	Wrench opening	SW <sub>3</sub>	[mm]	8	7	8	10	10
	Tightening torque	T <sub>A</sub>	[Nm]	5	2.5	5	9	9
Screw-on bores in pressure flange <sup>9)</sup>	Number, dimensions	s	[mm]	8 x M4	8 x M5	8 x M6	8 x M6 *	8 x M8 *
	* Screws quality class 12.9 must be used to secure the drive element.							

Dimensions [mm]		Size				
		01	0	1	2	3
A		18.5	23.5	27.5	31	35
a <sup>2)</sup>		5	7	9	10	10
a <sub>0</sub>		8	11	14	16	18
b		6	7	9	10	12
c		7.5	7.5	7.5	9	10
E		65	80	95	110	130
e <sub>h5</sub> <sup>3)</sup>		47	62	75	90	100
F <sub>2</sub>		70	85	100	115	135
f		38	44	56	70	84
f <sub>3</sub>		4	6	6	6	6
		4 x 90°				
Minimum shaft length	g <sub>4</sub>	34	39	42	48	53
	g <sub>7</sub>	40	47	58	64	74
h		45	55	65	72	82
k		3.7	3.2	4	5	5
k <sub>1</sub>		2.8	2.8	2.8	3.5	4.0
L <sup>4)</sup>		52	63	73	81	93
m		56	71	85	100	116

Bores [mm]		Size				
		01	0	1	2	3
d <sup>5) 6)</sup>	d <sub>min</sub>	10	15	22	32	35
	d <sub>max</sub>	20	25	35	45	55
d <sub>p</sub>	d <sub>p min</sub> <sup>7)</sup>	12	15	22	28	32
	d <sub>p max</sub> <sup>8)</sup>	20	25	30	40	50

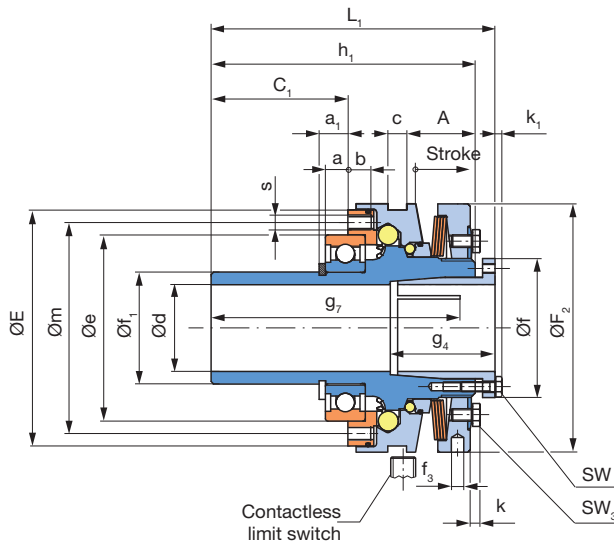
We reserve the right to make dimensional and constructional alterations.

- 1) Further sizes for smaller and larger torques available on request
- 2) Mounting tolerance + 0.1
- 3) Tolerance user-side H7
- 4) Dimensions in untensioned condition (shorter in tensioned condition)
- 5) Shaft tolerance up to Ø 38<sub>h6</sub> over Ø 38<sub>h8</sub>
- 6) Transmittable torques available with smaller bores on request
- 7) Smaller bores for low torques available on request
- 8) Larger bores available on request
- 9) The screw-on bores in the pressure flange are not angle-synchronous to the hub keyway in the standard version.
- 10) Mass moment of inertia and weight are valid for maximum bore and Type 419\_7\_-----

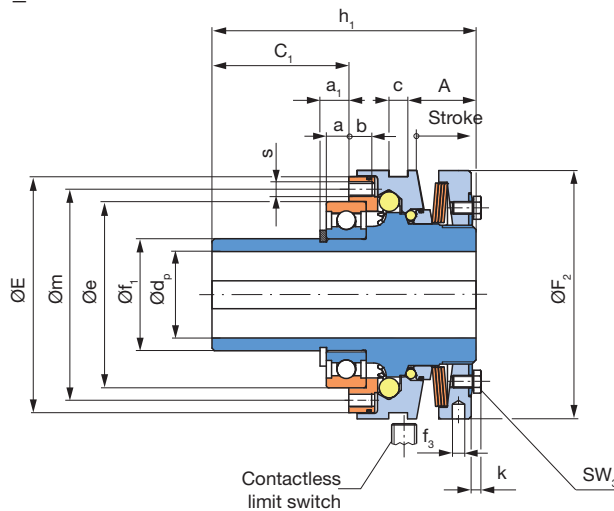
# EAS<sup>®</sup>-compact<sup>®</sup>-F long protruding hub

Type 4190. \_\_ 400, Sizes 01 bis 3

with cone bushing  
Type 4190. \_1400



with keyway  
Type 4190. \_4400



## Order Number

Order Number		Overload	Hub bore	Torque adjustment
		4	$\varnothing d^{H7} / \varnothing d_p^{H7}$	value (Optional)
__ / 4 1 9 0 . __ __ 4 0 0 . __ / __ /		▼	▼	▼
▲	▲	▲	▲	▲
<b>Sizes</b> 01 to 3	<b>Torque range</b> <sup>1)</sup> medium high very high maximum	5 6 7 8	1 4	With limit switch see page 29 (option)
1 long hub cone bushing				
4 long hub Keyway				

Example: Order number 1 / 4190.61400 / 25 / 60 / limit switch 055.002.5

1) See Technical Data, limit torque for overload  $M_G$

## EAS<sup>®</sup>-compact<sup>®</sup>-F long protruding hub

Technical Data				Size <sup>1)</sup>				
				01	0	1	2	3
Limit torques for overload <sup>1)</sup>	Type 4190.5_400	M <sub>G</sub>	[Nm]	5 – 12.5	10 – 25	20 – 50	40 – 100	80 – 200
	Type 4190.6_400	M <sub>G</sub>	[Nm]	10 – 25	20 – 50	40 – 100	80 – 200	160 – 400
	Type 4190.7_400	M <sub>G</sub>	[Nm]	20 – 50	40 – 100	80 – 200	160 – 400	320 – 800
	Type 4190.8_400	M <sub>G</sub>	[Nm]	25 – 62.5	50 – 125	100 – 250	200 – 500	400 – 1000
Max. speed	n <sub>max</sub>	[rpm]	8000	7000	6000	5000	4000	
Thrust washer stroke on overload		[mm]	2.0	2.6	3.2	3.8	4.3	

Mass moments of inertia and weights <sup>10)</sup>				Size				
				01	0	1	2	3
Hub-side	Type 4190.71400	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.446	1.154	2.471	4.776	10.474
	Type 4190.74400	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.426	1.134	2.481	4.791	10.474
Pressure flange-side	Type 4190.71400	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.091	0.224	0.612	1.167	2.492
	Type 4190.74400	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.091	0.224	0.612	1.167	2.492
Weights	Type 4190.71400	m	[kg]	0.97	1.72	2.58	3.66	5.66
	Type 4190.74400	m	[kg]	0.90	1.65	2.70	3.82	5.81

Screws and screw-on bores				Size				
				01	0	1	2	3
Tensioning screws in cone bushing	Number, dimensions	M	[mm]	6 x M4	6 x M4	8 x M4	8 x M5	8 x M6
	Wrench opening	SW	[mm]	7	7	7	8	10
	Tightening torque	T <sub>A</sub>	[Nm]	4	4	4	8	13
Locking screws in adjusting nut	Number, dimensions	M <sub>3</sub>	[mm]	2 x M5	2 x M4	2 x M5	2 x M6	2 x M6
	Wrench opening	SW <sub>3</sub>	[mm]	8	7	8	10	10
	Tightening torque	T <sub>A</sub>	[Nm]	5	2.5	5	9	9
Screw-on bores in pressure flange <sup>9)</sup>	Number, dimensions	s	[mm]	8 x M4	8 x M5	8 x M6	8 x M6 *	8 x M8 *
	* Screws quality class 12.9 must be used to secure the drive element.							

Dimensions [mm]		Size				
		01	0	1	2	3
A		18.5	23.5	27.5	31	35
a <sup>2)</sup>		5	7	9	10	10
a <sub>1</sub>		6.5	8.75	11.5	13	14
b		6	7	9	10	12
C <sub>1</sub>		33	43	55	67	73
c		7.5	7.5	7.5	9	10
E		65	80	95	110	130
e <sub>h5</sub> <sup>3)</sup>		47	62	75	90	100
F <sub>2</sub>		70	85	100	115	135
f		38	44	56	70	84
f <sub>1,h6</sub>		30	40	45	55	65
f <sub>3</sub>		4	6	6	6	6
Minimum shaft length	g <sub>4</sub>	34	39	42	48	53
	g <sub>7</sub>	65	72	100	115	129
h <sub>1</sub>		70	87	106	123	137
k		3.7	3.2	4	5	5
k <sub>1</sub>		2.8	2.8	2.8	3.5	4.0
L <sub>1</sub> <sup>4)</sup>		77	95	114	132	148
m		56	71	85	100	116

Bores [mm]		Size				
		01	0	1	2	3
d <sup>5) 6)</sup>	d <sub>min</sub>	10	15	22	32	35
	d <sub>max</sub>	20	25	35	45	55
d <sub>P</sub>	d <sub>P min</sub> <sup>7)</sup>	12	15	22	28	32
	d <sub>P max</sub> <sup>8)</sup>	20	25	30	40	50

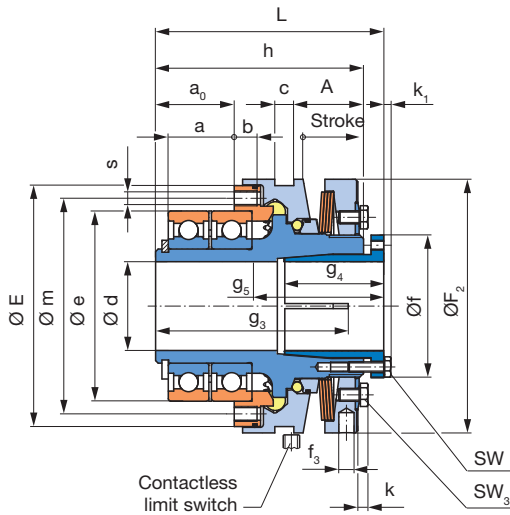
We reserve the right to make dimensional and constructional alterations.

- 1) Further sizes for smaller and larger torques available on request
- 2) Mounting tolerance + 0.1
- 3) Tolerance user-side H7
- 4) Dimensions in untensioned condition (shorter in tensioned condition)
- 5) Shaft tolerance up to Ø 38<sub>h6</sub> over Ø 38<sub>h8</sub>
- 6) Transmittable torques available with smaller bores on request
- 7) Smaller bores for low torques available on request
- 8) Larger bores available on request
- 9) The screw-on bores in the pressure flange are not angle-synchronous to the hub keyway in the standard version.
- 10) Mass moment of inertia and weight are valid for maximum bore and Type 419\_7\_-----

# EAS<sup>®</sup>-compact<sup>®</sup>-F for high-speed applications

Type 4190.\_2300, Sizes 01 bis 3

with cone bushing  
Type 4190.\_2300



## Order Number

		Synchronous Overload <b>3</b>		Hub bore Ø d <sup>H6</sup>		Torque adjustment value (Optional)	
		▼		▼		▼	
_ / 4 1 9 0 . _ 2 3 0 0 . _ / _ /							
▲		▲		▲		▲	
<b>Sizes</b> 01 to 3	<b>Torque range</b> <sup>1)</sup> medium high very high maximum	5 6 7 8	<b>2</b>	2-bearing design cone bushing		With limit switch see page 29 (option)	

**Example: Order number 1 / 4190.62300 / 25 / 60 / limit switch 055.002.5**

1) See Technical Data, limit torque for overload M<sub>G</sub>

## EAS®-compact®-F for high-speed applications

Technical Data				Size <sup>1)</sup>				
				01	0	1	2	3
Limit torques for overload <sup>1)2)</sup>	Type 4190.52300	M <sub>G</sub>	[Nm]	5 – 12.5	10 – 25	20 – 50	40 – 100	80 – 200
	Type 4190.62300	M <sub>G</sub>	[Nm]	10 – 25	20 – 50	40 – 100	80 – 200	160 – 400
	Type 4190.72300	M <sub>G</sub>	[Nm]	20 – 50	40 – 100	80 – 200	160 – 400	320 – 800
	Type 4190.82300	M <sub>G</sub>	[Nm]	25 – 62.5	50 – 125	100 – 250	200 – 500	400 – 1000
Max. speed <sup>8)</sup>		n <sub>max</sub>	[rpm]	12000	10000	9000	7000	6000
Max. speed	Type 4190.82300	n <sub>max</sub>	[rpm]	8000	7000	6000	5000	4000
Thrust washer stroke on overload			[mm]	2	2.6	3.2	3.8	4.3

Mass moments of inertia and weights <sup>7)</sup>				Size				
				01	0	1	2	3
Hub-side	Type 4190.72300	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.446	1.139	2.462	4.771	12.305
Pressure flange side	Type 4190.72300	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.104	0.284	0.801	1.574	3.110
Weight	Type 4190.72300	m	[kg]	0.97	1.71	2.70	3.84	5.85

Tensioning screws and screw-on bores				Size				
				01	0	1	2	3
In cone bushing EAS®-side	Number, dimensions	M	[mm]	6 x M4	6 x M4	8 x M4	8 x M5	8 x M6
	Wrench opening	SW	[mm]	7	7	7	8	10
	Tightening torque	T <sub>A</sub>	[Nm]	4	4	4	8	13
Locking screws in adjusting nut	Number, dimensions	M <sub>3</sub>	[mm]	2 x M5	2 x M4	2 x M5	2 x M6	2 x M6
	Wrench opening	SW <sub>3</sub>	[mm]	8	7	8	10	10
	Tightening torque	T <sub>A</sub>	[Nm]	5	2.5	5	9	9
Screw-on bores in pressure flange	Number, dimensions	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	18.5	23.5	27.5	31	35	
a <sup>4)</sup>	15.2	20.2	26.2	29.2	29.2	
a <sub>0</sub>	18	24	31	35	37	
b	6	7	9	10	12	
c	7.5	7.5	7.5	9	10	
E	65	80	95	110	130	
e <sub>HS</sub> <sup>5)</sup>	47	62	75	90	100	
F <sub>2</sub>	70	85	100	115	135	
f	38	44	56	70	84	
f <sub>3</sub>	4	6	6	6	6	
Pitch	4 x 90°					
Minimum shaft length	g <sub>3</sub>	50	60	76	83	93
	g <sub>5</sub>	g <sub>4</sub> + 0.5 x d				
g <sub>4</sub>	34	39	42	48	53	
h	55	68	82	91	101	
k	3.7	3.2	4	5	5	
k <sub>1</sub>	2.8	2.8	2.8	3.5	4.0	
L <sup>6)</sup>	62	76	90	100	112	
m	56	71	85	100	116	

Bores [mm]		Size					
		01	0	1	2	3	
EAS®-side	d <sup>H6</sup> <sup>2)3)</sup>	d <sub>min</sub>	10	15	22	32	35
		d <sub>max</sub>	20	25	35	45	55

- 1) Further sizes for smaller and larger torques available on request
- 2) Please observe the shaft load in max. torque range.
- 3) Transmittable torques available with smaller bores on request
- 4) Mounting tolerance + 0.1
- 5) Tolerance user-side H6
- 6) Dimensions in untensioned condition (shorter in tensioned condition)
- 7) Mass moments of inertia and weights are valid for maximum bore and Type 419\_7\_ \_ \_ \_
- 8) Higher speeds on request

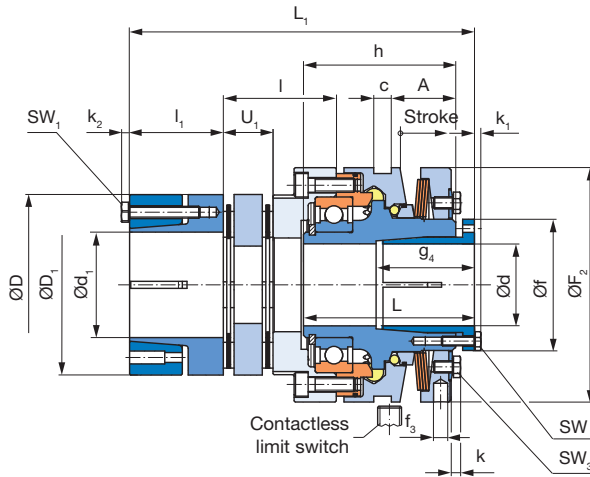
We reserve the right to make dimensional and constructional alterations.



## EAS<sup>®</sup>-compact<sup>®</sup>-F torsionally rigid

Type 4196. \_\_ 4 \_\_, Sizes 01 to 3

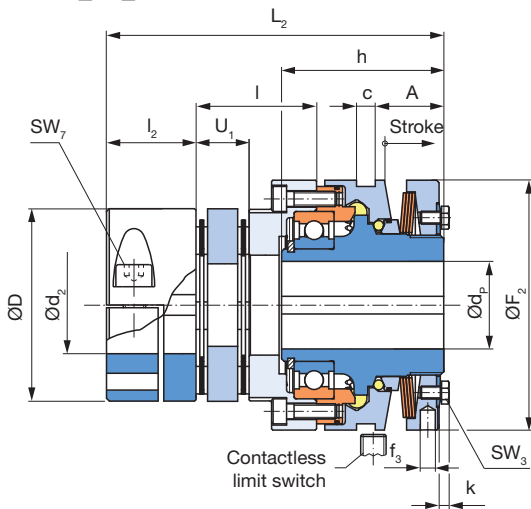
EAS<sup>®</sup>-side cone bushing,  
ROBA<sup>®</sup>-DS-side shrink disk hub  
Type 4196. 04\_2 and Type 4196. 04\_9



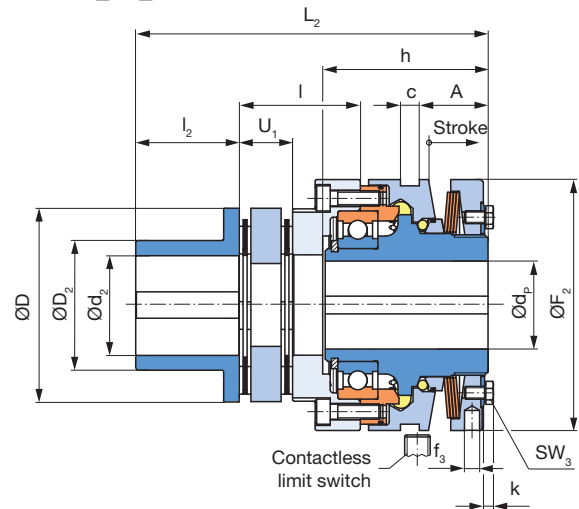
All EAS<sup>®</sup>-compact<sup>®</sup>-F clutches can be combined with almost all components of the ROBA<sup>®</sup>-DS backlash-free shaft coupling. The Types shown here represent only a selection of the most established designs.

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

EAS<sup>®</sup>-side key hub,  
ROBA<sup>®</sup>-DS-side clamping hub with keyway  
Type 4196. 34\_4



EAS<sup>®</sup>-side key hub,  
ROBA<sup>®</sup>-DS-side key hub  
Type 4196. 34\_0



### Order Number

short hub cone bushing	0	Overload	4	torsionally rigid coupling	Torque adjustment value (Optional)
short hub keyway	3			0 Single-jointed coupling	
				1 Connection plate	
				2 Sleeve	

\_\_ / 4 1 9 6 . \_\_ \_\_ 4 \_\_ . \_\_ / \_\_ / \_\_ / \_\_

<b>Sizes</b>	<b>Torque range</b> <sup>1)</sup>		Key hub	0	Hub 1 bore	Hub 2 bore	with Limit switch
01	medium	5	Shrink disk hub	2	Ø d <sup>H7</sup>	Ø d <sub>1</sub> <sup>H7</sup>	see
to	high	6	Clamping hub	4		Ø d <sub>1</sub> <sup>H7</sup>	page 29
3	very high	7	Shrink disk hub, large	9	Ø d <sub>p</sub> <sup>H7</sup>	Ø d <sub>2</sub> <sup>H7</sup>	(option)
	maximum	8					

Example: Order Number 1 / 4196.63400 / 30 / 30 / 60 / Limit switch 055.002.5

1) See Technical Data, limit torque for overload M<sub>G</sub>

## EAS®-compact®-F torsionally rigid

Technical Data				Size				
				01	0	1	2	3
Limit torques for overload	Type 4196.5_4_ _	M <sub>G</sub>	[Nm]	5 – 12.5	10 – 25	20 – 50	40 – 100	80 – 200
	Type 4196.6_4_ _	M <sub>G</sub>	[Nm]	10 – 25	20 – 50	40 – 100	80 – 200	160 – 400
	Type 4196.7_4_ _	M <sub>G</sub>	[Nm]	20 – 50	40 – 100	80 – 200	160 – 400	320 – 800
	Type 4196.8_4_ _	M <sub>G</sub>	[Nm]	25 – 62.5	50 – 125	100 – 250	200 – 500	400 – 1000
Max. speed	n <sub>max</sub>	[rpm]	8000	7000	6000	5000	4000	
Thrust washer stroke on overload		[mm]	2.0	2.6	3.2	3.8	4.3	
Nominal torques, torsionally rigid coupling	T <sub>KN</sub>	[Nm]	100	150	300	650	1100	
Permitted misalignments	axial <sup>1)</sup>	ΔK <sub>a</sub>	[mm]	0.9	1.1	0.8	1.1	1.3
	radial	ΔK <sub>r</sub>	[mm]	0.20	0.20	0.20	0.25	0.30
	angular	ΔK <sub>w</sub>	[°]	2.0	2.0	1.4	1.4	1.4

Mass moments of inertia and weights <sup>8)</sup>				Size				
				01	0	1	2	3
EAS®-hub-side	Type 4196.704_2/9	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.424	0.943	2.279	4.421	10.396
	Type 4196.734_4	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.414	0.917	2.193	4.205	9.867
ROBA®-DS-side	Type 4196.704_2/9	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.852	2.395	2.915	9.543	21.443
	Type 4196.734_4	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.706	2.086	2.417	7.815	18.215
Weights	Type 4196.704_2/9	m	[kg]	1.86	3.34	4.34	7.81	12.75
	Type 4196.734_4	m	[kg]	1.64	3.07	4.01	7.12	14.94

Screws				Size				
				01	0	1	2	3
In cone bushing EAS®-side	Number, dimensions	M	[mm]	6 x M4	6 x M4	8 x M4	8 x M5	8 x M6
	Wrench opening	SW	[mm]	7	7	7	8	10
	Tightening torque	T <sub>A</sub>	[Nm]	4	4	4	8	13
Locking screws in adjusting nut	Number, dimensions	M <sub>3</sub>	[mm]	2 x M5	2 x M4	2 x M5	2 x M6	2 x M6
	Wrench opening	SW <sub>3</sub>	[mm]	8	7	8	10	10
	Tightening torque	T <sub>A</sub>	[Nm]	5	2.5	5	9	9
In shrink disk ROBA®-DS-side	Number, dimensions	M <sub>1</sub>	[mm]	4 x M5	6 x M5	6 x M5	6 x M5	6 x M6
	Wrench opening	SW <sub>1</sub>	[mm]	8	8	8	8	10
	Tightening torque	T <sub>A</sub>	[Nm]	6	6	6	8.5	10
In clamping hub ROBA®-DS-side	Number, dimensions	M <sub>7</sub>	[mm]	1 x M8	1 x M8	-	-	-
	Wrench opening	SW <sub>7</sub>	[mm]	6	6	-	-	-
	Tightening torque	T <sub>A</sub>	[Nm]	33	33	-	-	-

Dimensions [mm]	Size					
	01	0	1	2	3	
A	18.5	23.5	27.5	31	35	
c	7.5	7.5	7.5	9	10	
F <sub>2</sub>	70	85	100	115	135	
f	38	44	56	70	84	
f <sub>3</sub>	4	6	6	6	6	
	4 x 90°					
Minimum shaft length	g <sub>4</sub>	34	39	42	48	53
h	45	55	65	72	82	
k	3.7	3.2	4	5	5	
k <sub>1</sub>	2.8	2.8	2.8	3.5	4.0	
L <sup>2)</sup>	52	63	73	81	93	

Dimensions [mm]	Size				
	01	0	1	2	3
ROBA®-DS	10	15	16	40	64
D	69	79	77	104	123
D <sub>1</sub> <sup>6)</sup>	-	-	77	100	115
D <sub>1</sub> <sup>7)</sup>	68	78	53	74	84
D <sub>2</sub>	-	-	50	70	80
k <sub>2</sub>	3.5	3.5	3.5	3.5	4
L <sub>1</sub> <sup>2) 6)</sup>	-	-	147.2	170	197
L <sub>1</sub> <sup>2) 7)</sup>	110.3	128	142.2	165	192
l	34.3	38.5	48.2	55	67
l <sub>1</sub> <sup>6)</sup>	-	-	45	50	55
l <sub>1</sub> <sup>7)</sup>	32	37.5	40	45	50
L <sub>2</sub>	103.3	116	139.2	166	196
l <sub>2</sub>	32	33.5	40	55	65
U <sub>1</sub>	15.3	15.8	21.2	26.2	34

Bores [mm]			Size				
			01	0	1	2	3
EAS®-side	d <sup>3)</sup>	d <sub>min</sub>	10	15	22	32	35
		d <sub>max</sub>	20	25	35	45	55
	d <sub>p</sub>	d <sub>p min</sub>	12	15	22	28	32
ROBA®-DS-side	d <sub>1</sub> <sup>4) 6)</sup>	d <sub>p max</sub>	20	25	30	40	50
		d <sub>1 min</sub>	-	-	25	40	45
	d <sub>1</sub> <sup>4) 7)</sup>	d <sub>1 max</sub>	-	-	45	60	70
		d <sub>1 min</sub>	19	25	14	25	30
	d <sub>2</sub>	d <sub>2 min</sub>	19 <sup>5)</sup>	25 <sup>5)</sup>	16	25	30
	d <sub>2 max</sub>	35 <sup>5)</sup>	42 <sup>5)</sup>	32	50	55	

- 1) Only permitted as a static or virtually static value
- 2) Dimensions in untensioned condition (shorter in tensioned condition)
- 3) Shaft tolerance up to Ø 38<sub>h6</sub>, over Ø 38<sub>h8</sub>
- 4) Recommended shaft tolerance g<sub>6</sub>
- 5) Recommended shaft tolerance k<sub>6</sub>
- 6) Only valid for Type 4196\_0\_9

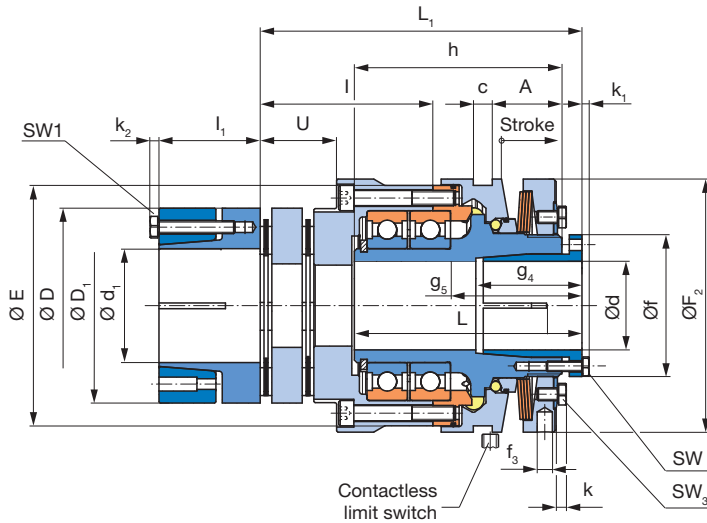
- 7) Only valid for Type 4196\_0\_2
- 8) Mass moments of inertia and weights are valid for maximum bore and Type 419\_7\_ \_ \_ \_

We reserve the right to make dimensional and constructional alterations.

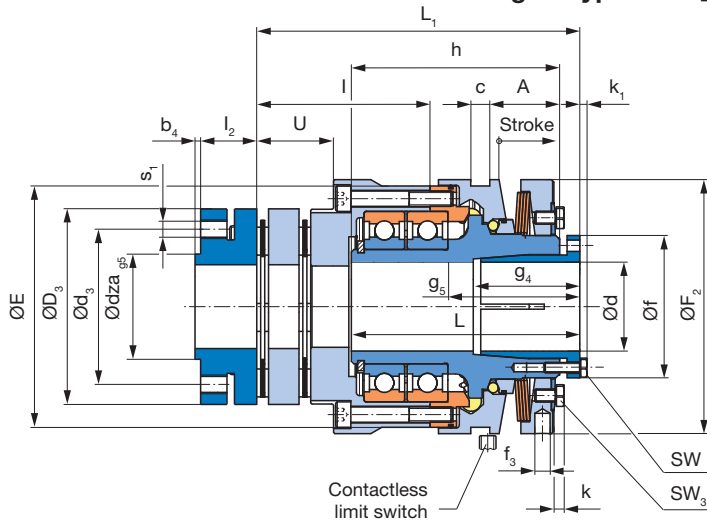
# EAS<sup>®</sup>-compact<sup>®</sup>-F torsionally rigid for high-speed applications

Type 4196.\_23\_., Sizes 01 to 3

EAS<sup>®</sup>-side cone bushing,  
ROBA<sup>®</sup>-DS-side shrink disk hub - Type 4196.\_2312 and Type 4196.\_2319



EAS<sup>®</sup>-side cone bushing,  
ROBA<sup>®</sup>-DS-side for measurement flange - Type 4196.\_231M



## Order Number

2-bearing design cone bushing	<b>2</b>	Synchronous Overload	<b>3</b>	torsionally rigid coupling	Torque adjustment value (Optional)
				<b>0</b> Single-jointed coupling <b>1</b> Connection plate <b>2</b> Sleeve <sup>2)</sup>	
<div style="display: flex; justify-content: space-around; align-items: center;"> <span>▼</span> <span>▼</span> <span>▼</span> <span>▼</span> </div>					
<div style="display: flex; justify-content: space-around; align-items: center;"> <span>▲</span> <span>▲</span> <span>▲</span> <span>▲</span> <span>▲</span> </div>					
<b>Sizes</b>	<b>Torque range</b> <sup>1)</sup>	Shrink disk hub	<b>2</b>	Hub 1 bore	Hub 2 bore
<b>01</b>	medium	Shrink disk hub, large	<b>9</b>	Ø d <sup>H6</sup>	Ø d <sub>1</sub> <sup>H7</sup>
<b>to</b>	high	Flange for measurement flange	<b>M</b>		
<b>3</b>	very high maximum				with Limit switch see page 29 (Option)

Example: Order number 1 / 4196.62312 / 23 / 25 / 60 / limit switch 055.002.5

1) See Technical Data, limit torque for overload M<sub>e</sub>  
2) When using a sleeve, please contact mayr<sup>®</sup> power transmission

## EAS®-compact®-F torsionally rigid for high-speed applications

Technical Data				Size <sup>1)</sup>					
				01	0	1	2	3	
Limit torques for overload <sup>1)2)</sup>	Type 4196.523 _ _	M <sub>G</sub>	[Nm]	5 – 12.5	10 – 25	20 – 50	40 – 100	80 – 200	
	Type 4196.623 _ _	M <sub>G</sub>	[Nm]	10 – 25	20 – 50	40 – 100	80 – 200	160 – 400	
	Type 4196.723 _ _	M <sub>G</sub>	[Nm]	20 – 50	40 – 100	80 – 200	160 – 400	320 – 800	
	Type 4196.823 _ _	M <sub>G</sub>	[Nm]	25 – 62.5	50 – 125	100 – 250	200 – 500	400 – 1000	
Max. speed <sup>1)</sup>		n <sub>max</sub>	[rpm]	12000	10000	9000	7000	6000	
Max. speed	Type 4196.823 _ _	n <sub>max</sub>	[rpm]	8000	7000	6000	5000	4000	
Thrust washer stroke on overload				[mm]	2	2.6	3.2	3.8	4.3
Nominal torques, torsionally rigid coupling			T <sub>KN</sub>	[Nm]	100	150	300	650	1000
Permitted misalignments	axial <sup>1)</sup>	ΔK <sub>a</sub>	[mm]	0.3	0.35	0.25	0.35	0.4	
	radial	ΔK <sub>r</sub>	[mm]	0.06	0.06	0.06	0.08	0.1	
	angular	ΔK <sub>w</sub>	[°]	0.6	0.6	0.45	0.45	0.45	

Mass moments of inertia and weights <sup>8)</sup>				Size				
				01	0	1	2	3
EAS®-hub-side	Type 4196.7231_	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.433	1.139	2.462	4.771	12.305
ROBA®-DS-side	Type 4196.7231 <sup>2/9</sup>	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.933	2.107	3.960	9.781	20.455
	Type 4196.72316	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.969	1.848	3.837	10.091	18.553
Weights	Type 4196.7231 <sup>2/9</sup>	m	[kg]	2.05	3.26	5.17	8.13	12.50
	Type 4196.72316	m	[kg]	1.89	3.05	4.83	8.04	11.88

Tensioning screws and screw-on bores				Size				
				01	0	1	2	3
In cone bushing EAS®-side	Number, dimensions	M	[mm]	6 × M4	6 × M4	8 × M4	8 × M5	8 × M6
	Wrench opening	SW	[mm]	7	7	7	8	10
	Tightening torque	T <sub>A</sub>	[Nm]	4	4	4	8	13
Locking screws in adjusting nut	Number, dimensions	M <sub>3</sub>	[mm]	2 × M5	2 × M4	2 × M5	2 × M6	2 × M6
	Wrench opening	SW <sub>3</sub>	[mm]	8	7	8	10	10
	Tightening torque	T <sub>A</sub>	[Nm]	5	2.5	5	9	9
In shrink disk ROBA®-DS-side	Number, dimensions	M <sub>1</sub>	[mm]	4 × M5	6 × M5	6 × M5	6 × M5	6 × M6
	Wrench opening	SW <sub>1</sub>	[mm]	8	8	8	8	10
	Tightening torque	T <sub>A</sub>	[Nm]	6	6	8.5	8.5	14

Dimensions [mm]	Size				
	01	0	1	2	3
A	18.5	23.5	27.5	31	35
c	7.5	7.5	7.5	9	10
E	65	80	95	110	130
F <sub>2</sub>	70	85	100	115	135
f	38	44	56	70	84
f <sub>3</sub>	4	6	6	6	6
Pitch	4 x 90°				
Minimum shaft length	g <sub>5</sub>	g <sub>4</sub> + 0.5 × d			
g <sub>4</sub>	34	39	42	48	53
h	55	68	82	91	101
k	3.7	3.2	4	5	5
k <sub>1</sub>	2.8	2.8	2.8	3.5	4.0
L <sup>2)</sup>	62	76	90	100	112
l	44.3	51	68.2	73.8	86
U	15.3	15.8	21.2	26.2	34

Dimensions [mm]	Size					
	01	0	1	2	3	
ROBA®-DS	10	15	16	40	64	
Type 4196._231 <sup>2/9</sup>	D	69	79	77	104	123
	D <sub>1</sub> <sup>6)</sup>	-	-	77	100	115
	D <sub>1</sub> <sup>7)</sup>	68	78	53	74	84
	k <sub>2</sub>	3.5	3.5	3.5	3.5	4
	L <sup>2)</sup>	88.3	103	127.2	138.8	161
	l <sub>1</sub> <sup>6)</sup>	-	-	45	50	55
	l <sub>1</sub> <sup>7)</sup>	32	37.5	40	45	50
Type 4196._231M	b <sub>4</sub>	3	2	3	2	3
	D <sub>3</sub>	102	102	99	123	123
	d <sub>3</sub>	84	84	84	101.5	101.5
	s <sub>1</sub>	M8	M8	M8	M10	M10
	Pitch	6 x 60°		8 x 45°		
	dza <sub>g5</sub>	57	57	57	75	75
	l <sub>2</sub>	12	15	10	30.2	29.8

Bores [mm]	Size									
	01	0	1	2	3					
EAS®-side	d <sup>H6/3)</sup>	d <sub>min</sub>	10	15	22	32	35			
		d <sub>max</sub>	20	25	35	45	55			
ROBA®-DS-side	ROBA®-DS					10	15	25	40	64
	d <sub>1</sub> <sup>H6/4)6)</sup>	d <sub>1 min</sub>	-	-	25	40	45			
		d <sub>1 max</sub>	-	-	45	60	70			
	d <sub>1</sub> <sup>H6/4)7)</sup>	d <sub>1 min</sub>	19	25	14	25	30			
d <sub>1 max</sub>		38	45	26	45	45				

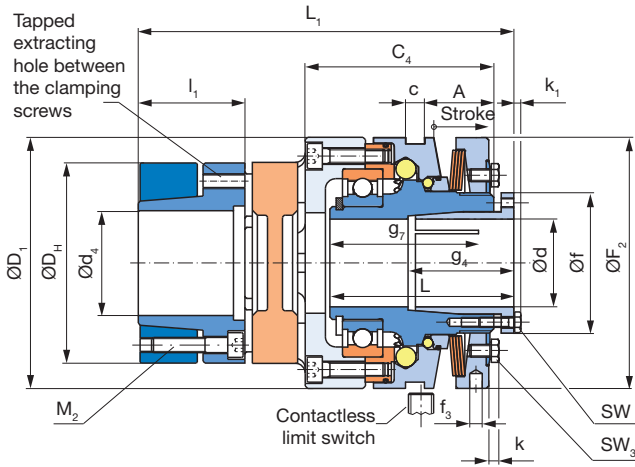
- 1) Only permitted as a static or virtually static value
- 2) Dimensions in untensioned condition (shorter in tensioned condition)
- 3) Shaft tolerance up to Ø 38<sub>h6</sub> over Ø 38<sub>h8</sub>
- 4) Recommended shaft tolerance<sup>g6</sup>
- 5) Transmittable torques available with smaller bores on request
- 6) Only valid for Type 4196.\_13\_9
- 7) Only valid for Type 4196.\_13\_2
- 8) Mass moments of inertia and weights are valid for maximum bore and Type 419.\_7\_ \_ \_ \_
- 9) Higher speeds on request

We reserve the right to make dimensional and constructional alterations.

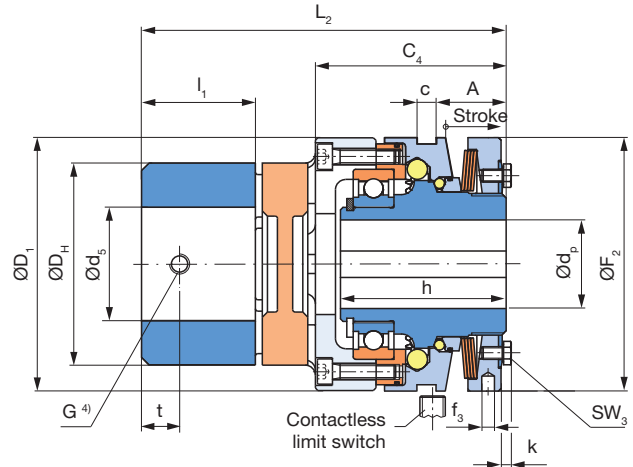
**EAS<sup>®</sup>-compact<sup>®</sup>-F lastic backlash-free**

**Type 4194. \_\_ 4 \_\_, Sizes 01 to 3**

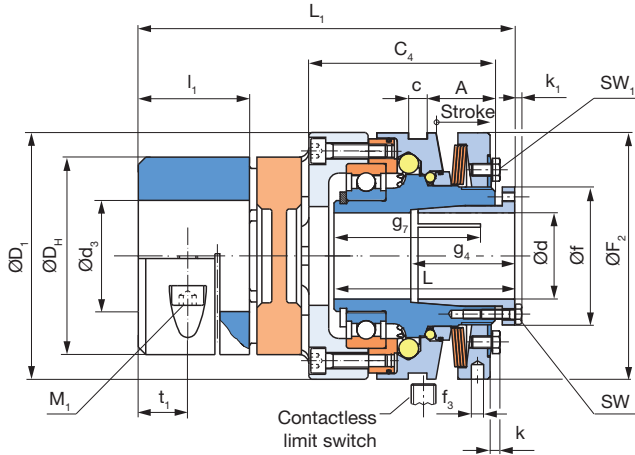
**EAS<sup>®</sup>-side cone bushing,  
ROBA<sup>®</sup>-ES-side shrink disk hub - Type 4194. \_04 \_1**



**EAS<sup>®</sup>-side key hub,  
ROBA<sup>®</sup>-ES-side key hub - Type 4194. \_34 \_2**



**EAS<sup>®</sup>-side cone bushing,  
ROBA<sup>®</sup>-ES-side clamping hub - Type 4194. \_04 \_0**



**Order Number**

short hub cone bushing	0	Overload	4	flexible coupling	Torque adjustment value (Optional)
short hub key	3				
				3 92 Shore A	
				4 98 Shore A	
				6 64 Shore D	

\_\_ / 4 1 9 4 . \_\_ 4 \_\_ . \_\_ / \_\_ / \_\_ / \_\_

<b>Sizes</b>	<b>Torque range</b> <sup>1)</sup>		Clamping hub	0	Hub 1 bore	Hub 2 bore	with Limit switch
01	medium	5	Shrink disk hub	1	Ø d <sup>H7</sup> <sub>3</sub>	Ø d <sup>F7</sup> <sub>3</sub>	see page 29
to	high	6	Key hub	2	Ø d <sub>p</sub>	Ø d <sup>H7</sup> <sub>4</sub>	(option)
3	very high	7				Ø d <sup>H7</sup> <sub>5</sub>	
	maximum	8					

**Example: Order number 1 / 4194.60430 / 22 / 25 / 60 / limit switch 055.002.5**

- See Technical Data, limit torque for overload M<sub>G</sub>
- The transmittable torques on the flexible coupling "T<sub>KN</sub>" are dependent on factors such as temperature, torsional rigidity, etc., see also coupling dimensioning ROBA<sup>®</sup>-ES catalogue K.940.V\_ \_ or contact the manufacturer.

- Furthermore, the transmittable torques of the flexible coupling are dependent on the bore diameter d<sub>3</sub> or d<sub>4</sub>, see also Table 1 on page 28.
- Dimensions in untensioned condition (shorter in tensioned condition)



## EAS®-compact®-F lastic backlash-free

Technical Data				Size					
				01	0	1	2	3	
Limit torques <sup>2)</sup> for overload	Type 4194.5_4_	M <sub>G</sub>	[Nm]	5 – 12.5	10 – 25	20 – 50	40 – 100	80 – 200	
	Type 4194.6_4_	M <sub>G</sub>	[Nm]	10 – 25	20 – 50	40 – 100	80 – 200	160 – 400	
	Type 4194.7_4_	M <sub>G</sub>	[Nm]	20 – 50	40 – 100	80 – 200	160 – 400	320 – 800	
	Type 4194.8_4_	M <sub>G</sub>	[Nm]	25 – 62.5	50 – 125	100 – 250	200 – 500	400 – 1000	
Max. speed		n <sub>maxi</sub>	[rpm]	8000	7000	6000	5000	4000	
Thrust washer stroke on overload			[mm]	2.0	2.6	3.2	3.8	4.3	
Nominal and maximum torques <sup>2)</sup> , flexible coupling	92 Shore A	T <sub>KN</sub> /T <sub>K max</sub>	[Nm]	35 / 70	95 / 190	190 / 380	265 / 530	310 / 620	
	98 Shore A	T <sub>KN</sub> /T <sub>K max</sub>	[Nm]	60 / 120	160 / 320	325 / 650	450 / 900	525 / 1050	
	64 Shore D	T <sub>KN</sub> /T <sub>K max</sub>	[Nm]	75 / 150	200 / 400	405 / 810	560 / 1120	655 / 1310	
Permitted misalignments	axial	ΔK <sub>a</sub>	[mm]	1.4	1.5	1.8	2.0	2.1	
		92 Shore A	ΔK <sub>r</sub>	[mm]	0.14	0.15	0.17	0.19	0.21
	radial	98 Shore A	ΔK <sub>r</sub>	[mm]	0.10	0.11	0.12	0.14	0.16
		64 Shore D	ΔK <sub>r</sub>	[mm]	0.07	0.08	0.09	0.10	0.11
	angular	92 Shore A	ΔK <sub>w</sub>	[°]	1.0	1.0	1.0	1.0	1.0
		98 Shore A	ΔK <sub>w</sub>	[°]	0.9	0.9	0.9	0.9	0.9
64 Shore D	ΔK <sub>w</sub>	[°]	0.8	0.8	0.8	0.8	0.8		

Mass moments of inertia and weights <sup>10)</sup>				Size				
				01	0	1	2	3
EAS®-hub-side	4194.704_--	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.424	1.101	2.388	4.578	10.105
	4194.734_--	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.414	1.083	2.380	4.542	9.967
	4194.704_0	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.277	0.681	1.788	7.349	14.505
ROBA®-ES-side	4194.704_1	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.355	0.817	2.236	7.323	14.143
	4194.734_2	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	0.278	0.681	1.866	7.352	14.495
	4194.704_0	m	[kg]	1.19	2.04	3.29	6.95	10.54
Weights	4194.704_1	m	[kg]	1.30	2.21	3.69	7.04	10.23
	4194.734_2	m	[kg]	1.15	1.97	3.35	6.87	10.40

Screws				Size				
				01	0	1	2	3
In cone bushing EAS®-side	Number, dimensions	M	[mm]	6 x M4	6 x M4	8 x M4	8 x M5	8 x M6
	Wrench opening	SW	[mm]	7	7	7	8	10
	Tightening torque	T <sub>A</sub>	[Nm]	4	4	4	8	13
In shrink disk ROBA®-ES-side	Number, dimensions	M <sub>2</sub>	[mm]	4 x M5	8 x M5	8 x M6	4 x M8	4 x M10
	Wrench opening	SW <sub>2</sub>	[mm]	4	4	5	6	8
	Tightening torque	T <sub>A</sub>	[Nm]	6	6	10.5	30	52
In clamping hub ROBA®-ES-side	Number, dimensions	M <sub>1</sub>	[mm]	1 x M6	1 x M8	1 x M8	1 x M10	1 x M12
	Wrench opening	SW <sub>1</sub>	[mm]	5	6	6	8	10
	Tightening torque	T <sub>A</sub>	[Nm]	10	25	25	70	120
Locking screws in adjusting nut	Number, dimensions	M <sub>3</sub>	[mm]	2 x M5	2 x M4	2 x M5	2 x M6	2 x M6
	Wrench opening	SW <sub>3</sub>	[mm]	8	7	8	10	10
	Tightening torque	T <sub>A</sub>	[Nm]	5	2.5	5	9	9

Dimensions [mm]	Size				
	01	0	1	2	3
A	18.5	23.5	27.5	31	35
c	7.5	7.5	7.5	9	10
C <sub>4</sub>	52	63.5	75	82	94
D <sub>1</sub>	70	85	100	115	135
D <sub>H</sub>	55	65	80	95	105
F <sub>2</sub>	70	85	100	115	135
f	38	44	56	70	84
f <sub>3</sub>	4	6	6	6	6
Pitch	4 x 90°				
Min. shaft length g <sub>4</sub>	34	39	42	48	53
G	M5 <sup>7)</sup>	M6 <sup>7)</sup>	M8 <sup>7)</sup>	M8 <sup>7)</sup>	M8
h	45	55	65	72	82
k	3.7	3.2	4	5	5
k <sub>1</sub>	2.8	2.8	2.8	3.5	4.0
L <sup>3)</sup>	52	63	73	81	93
L <sub>1</sub> <sup>3)</sup>	107	126.5	152	167	189
L <sub>2</sub>	100	118.5	144	158	178
l <sub>1</sub>	30	35	45	50	56
t	10	15	15	20	25
t <sub>1</sub>	12	13.5	20	20	21

Bores [mm]		Size					
		01	0	1	2	3	
EAS®- side	d <sub>p</sub>	d <sub>p min</sub> <sup>8)</sup>	12	15	22	28	32
		d <sub>p max</sub> <sup>9)</sup>	20	25	30	40	50
ROBA®-ES- side	d <sup>4) 5)</sup>	d <sub>min</sub>	10	15	22	32	35
		d <sub>max</sub>	20	25	35	45	55
	d <sub>3</sub> <sup>2) 6)</sup>	d <sub>3 min</sub>	15	19	20	28	35
		d <sub>3 max</sub>	28	35	45	50	55
d <sub>4</sub> <sup>2) 6)</sup>	d <sub>4 min</sub>	15	19	20	28	35	
	d <sub>4 max</sub>	28	38	45	50	60	
d <sub>5</sub>	d <sub>5 min</sub>	8	10	12	14	20	
	d <sub>5 max</sub>	28	38	45	55	60	

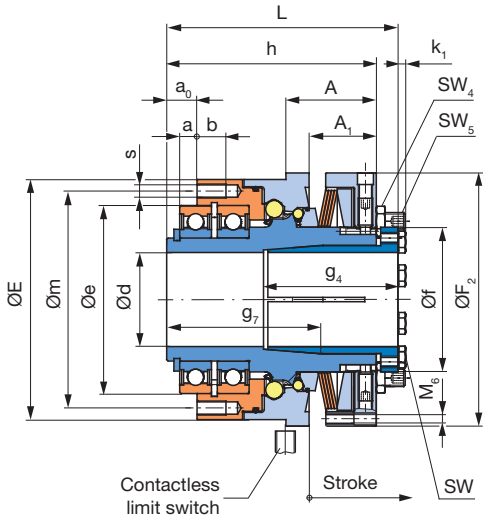
We reserve the right to make dimensional and constructional alterations.

- 4) Shaft tolerance up to Ø 38<sub>hg1</sub> over Ø 38<sub>hs</sub>
- 5) Transmittable torques available with smaller bores on request
- 6) Shaft tolerance: k6
- 7) Keyway 180° offset to "G"
- 8) Smaller bores for smaller torques available on request
- 9) Larger bores available on request
- 10) Mass moments of inertia and weights are valid for maximum bore and Type 419\_7\_-----

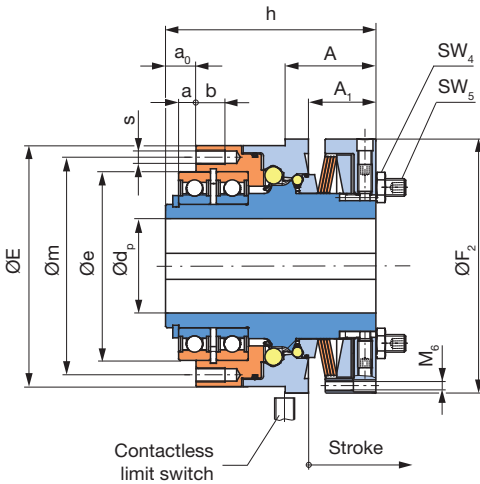
# EAS<sup>®</sup>-compact<sup>®</sup>-F short hub

Type 4190.\_ \_ 400, Sizes 4 und 5

with cone bushing  
Type 4190.\_2400



with keyway  
Type 4190.\_5400



## Order Number

		Overload	<b>4</b>	Hub bore $\varnothing d^{H7} / \varnothing d_p^{H7}$		Torque adjustment value (Optional)	
			▼		▼		▼
		_ / 4 1 9 0 . _ _ 4 0 0 . _ / _ /					
		▲	▲	▲			▲
<b>Sizes</b>	<b>Torque range</b> <sup>1)</sup>		<b>2</b>	2-bearing design cone bushing		With limit switch see page 29 (option)	
<b>4</b>	medium	<b>5</b>	<b>5</b>	2-bearing design keyway			
<b>to</b>	high	<b>6</b>					
<b>5</b>	very high maximum	<b>7</b> <b>8</b>					

Example: Order number 4 / 4190.62400 / 25 / 60 / limit switch 055.002.5

1) See Technical Data, limit torque for overload  $M_G$

## EAS<sup>®</sup>-compact<sup>®</sup>-F short hub

Technical Data				Size <sup>1)</sup>	
				4	5
Limit torques for overload <sup>1)</sup>	Type 4190.5_400	M <sub>G</sub>	[Nm]	120 – 300	240 – 600
	Type 4190.6_400	M <sub>G</sub>	[Nm]	240 – 600	480 – 1200
	Type 4190.7_400	M <sub>G</sub>	[Nm]	480 – 1200	960 – 2400
	Type 4190.8_400	M <sub>G</sub>	[Nm]	600 – 1500	1200 – 3000
Max. speed		n <sub>max</sub>	[rpm]	3500	3000
Thrust washer stroke on overload			[mm]	5.5	6.5

Mass moments of inertia and weights <sup>10)</sup>				Size	
				4	5
Hub-side	Type 4190.72400	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	48.427	163.554
	Type 4190.75400	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	47.907	161.378
Pressure flange-side	Type 4190.72400	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	19.534	65.291
	Type 4190.75400	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	19.534	65.291
Weights	Type 4190.72400	m	[kg]	17.13	34.32
	Type 4190.75400	m	[kg]	16.66	34.97

Screws and screw-on bores				Size	
				4	5
Tensioning screws in cone bushing	Number, dimensions	M	[mm]	8 x M8	8 x M10
	Wrench opening	SW	[mm]	13	16
	Tightening torque	T <sub>A</sub>	[Nm]	32	63
Pins/threads in adjusting nut	Wrench opening	SW <sub>4</sub>	[mm]	18	18
	Wrench opening	SW <sub>5</sub>	[mm]	6	6
	Number, dimensions	M <sub>6</sub>	[mm]	3 x M8	3 x M8
Screw-on bores in pressure flange <sup>9)</sup>	Number, dimensions	s	[mm]	8 x M10	8 x M12
	* Screws quality class 12.9 must be used to secure the drive element.				

Dimensions [mm]	Size		
	4	5	
A	62.5	80	
A <sub>1</sub>	46.5	60	
a <sup>2)</sup>	12	13	
a <sub>0</sub>	21	23	
b	20	20	
E	166	215	
e <sub>h5</sub> <sup>3)</sup>	130	160	
F <sub>2</sub>	175	225	
f	100	134	
Minimum shaft length	g <sub>4</sub>	93	118
	g <sub>7</sub>	110	130
h	145	175	
k <sub>1</sub>	5.3	6.4	
L <sup>4)</sup>	160	193	
m	150	185	

Bores [mm]	Size		
	4	5	
d <sup>5) 6)</sup>	d <sub>min</sub>	40	45
	d <sub>max</sub>	65	85
d <sub>P</sub>	d <sub>P min</sub> <sup>7)</sup>	40	45
	d <sub>P max</sub> <sup>8)</sup>	65	80

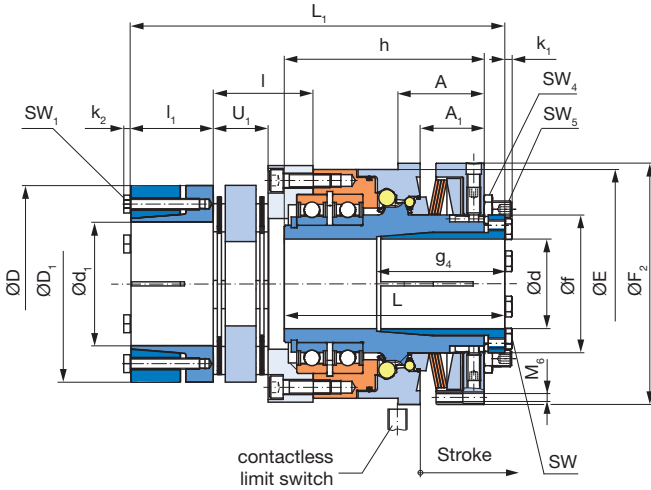
We reserve the right to make dimensional and constructional alterations.

- 1) Further sizes for smaller and larger torques available on request
- 2) Mounting tolerance + 0.1
- 3) Tolerance user-side H7
- 4) Dimensions in untensioned condition (shorter in tensioned condition)
- 5) Shaft tolerance up to Ø 38<sub>h6</sub> over Ø 38<sub>h8</sub>
- 6) Transmittable torques available with smaller bores on request
- 7) Smaller bores for low torques available on request
- 8) Larger bores available on request
- 9) The screw-on bores in the pressure flange are not angle-synchronous to the hub keyway in the standard version.
- 10) Mass moments of inertia and weights are valid for maximum bore and Type 419\_7\_-----

## EAS<sup>®</sup>-compact<sup>®</sup>-F torsionally rigid

Type 4196. \_\_ 4 \_\_, Sizes 4 and 5

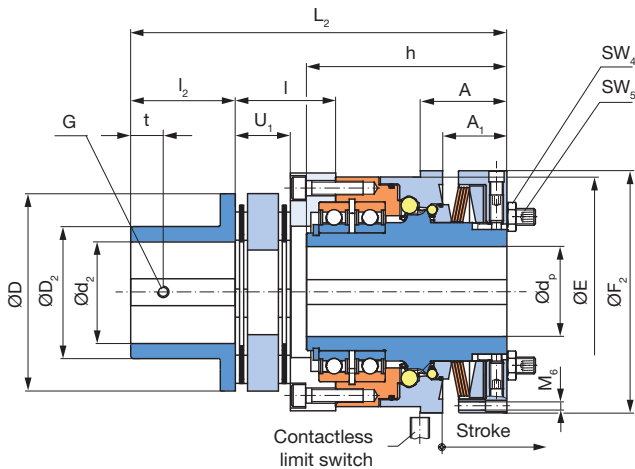
EAS<sup>®</sup>-side cone bushing,  
ROBA<sup>®</sup>-DS-side shrink disk hub - Type 4196. \_24\_9



All EAS<sup>®</sup>-compact<sup>®</sup>-F clutches can be combined with almost all components of the ROBA<sup>®</sup>-DS backlash-free shaft coupling. The Types shown here represent only a selection of the most established designs.

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

EAS<sup>®</sup>-side key hub,  
ROBA<sup>®</sup>-DS-side key hub - Type 4196. \_54\_0



### Order Number

2-bearing design		Overload		torsionally rigid coupling		Torque adjustment value (Optional)	
Cone bushing	2	4		0	Single-jointed coupling		
Key hub	5	4		1	Connection plate		
				2	Sleeve		
__ / 4 1 9 6 . __ 4 __ . __ / __ / __ / __							
<b>Sizes</b>	<b>Torque range</b> <sup>1)</sup>	Key hub		0	Hub 1 bore	Hub 2 bore	with Limit switch
4	medium	Shrink disk hub, large		9	Ø d <sup>H7</sup>	Ø d <sub>1</sub> <sup>H7</sup>	see page 29
and	high				Ø d <sub>p</sub> <sup>H7</sup>	Ø d <sub>1</sub> <sup>H7</sup>	page 29
5	very high					Ø d <sub>2</sub> <sup>H7</sup>	(option)
	maximum						

Example: Order number 5 / 4196.62409 / 70 / 70 / 1500 / limit switch 055.002.5

1) See Technical Data, limit torque for overload M<sub>G</sub>

## EAS®-compact®-F torsionally rigid

Technical Data				Size	
				4	5
Limit torques for overload	Type 4196.5_4_ _ _	$M_G$	[Nm]	120 – 300	240 – 600
	Type 4196.6_4_ _ _	$M_G$	[Nm]	240 – 600	480 – 1200
	Type 4196.7_4_ _ _	$M_G$	[Nm]	480 – 1200	960 – 2400
	Type 4196.8_4_ _ _	$M_G$	[Nm]	600 – 1500	1200 – 3000
Max. speed		$n_{max}$	[rpm]	3500	3000
Thrust washer stroke on overload			[mm]	5.5	6.5
Nominal torques, torsionally rigid coupling		$T_{KN}$	[Nm]	1600	3500
Permitted misalignments	axial <sup>1)</sup>	$\Delta K_a$	[mm]	1.5	1.2
	radial	$\Delta K_r$	[mm]	0.30	0.25
	angular	$\Delta K_w$	[°]	1.4	1.0

Mass moments of inertia and weights				Size	
				4	5
EAS®-hub-side	Type 4196.724_9	$I$	[10 <sup>-3</sup> kgm <sup>2</sup> ]	48.427	163.554
	Type 4196.754_0	$I$	[10 <sup>-3</sup> kgm <sup>2</sup> ]	47.907	161.378
ROBA®-DS-side	Type 4196.724_9	$I$	[10 <sup>-3</sup> kgm <sup>2</sup> ]	50.958	151.614
	Type 4196.754_0	$I$	[10 <sup>-3</sup> kgm <sup>2</sup> ]	43.123	137.661
Weights	Type 4196.724_9	$m$	[kg]	25.41	51.54
	Type 4196.754_0	$m$	[kg]	23.68	47.69

Screws				Size	
				4	5
In cone bushing EAS®-side	Number, dimensions	$M$	[mm]	8 x M8	8 x M10
	Wrench opening	$SW$	[mm]	13	16
	Tightening torque	$T_A$	[Nm]	32	63
In shrink disk ROBA®-DS-side	Number, dimensions	$M_1$	[mm]	6 x M8	8 x M8
	Wrench opening	$SW_1$	[mm]	13	13
	Tightening torque	$T_A$	[Nm]	25	35
Pins/threads in adjusting nut	Wrench opening	$SW_4$	[mm]	18	18
	Wrench opening	$SW_5$	[mm]	6	6
	Number, dimensions	$M_6$	[mm]	3 x M8	3 x M8

Dimensions [mm]	Size	
	4	5
A	62.5	80
A <sub>1</sub>	46.5	60
D	143	167
D <sub>1</sub>	143	164
D <sub>2</sub>	100	121
E	166	215
F <sub>2</sub>	175	225
f	100	134
G	<sup>2)</sup>	M12
Min. shaft length $g_4$	93	118
h	145	175
k <sub>1</sub>	5.3	6.4
k <sub>2</sub>	5.3	5.3
L <sup>3)</sup>	160	193
L <sub>1</sub> <sup>3)</sup>	267	331
L <sub>2</sub>	267	328
l	68	86
l <sub>1</sub>	60	75
l <sub>2</sub>	75	90
t	21	25
U <sub>1</sub>	35.2	44.4

Bores [mm]		Size		
		4	5	
EAS®-side	$d^{4)}$	$d_{min}$	40	45
		$d_{max}$	65	85
	$d_p$	$d_{p min}$	40	45
		$d_{p max}$	65	80
ROBA®-DS-side	$d_1^{5)}$	$d_{1 min}$	55	50
		$d_{1 max}$	90	85
	$d_2$	$d_{2 min}$	35	45
		$d_{2 max}$	70	90

We reserve the right to make dimensional and constructional alterations.

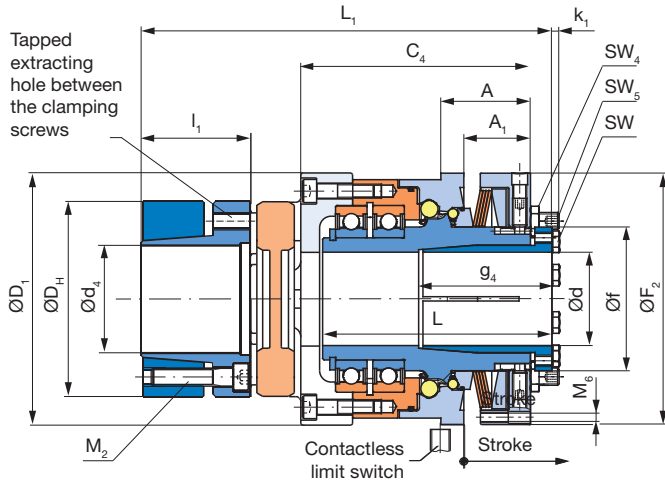
- 1) Only permitted as a static or virtually static value
- 2) Up to Ø 44 M8, over Ø 44 M10
- 3) Dimensions in untensioned condition (shorter in tensioned condition)
- 4) Shaft tolerance  $_{H6}$
- 5) Recommended shaft tolerance  $_{g6}$



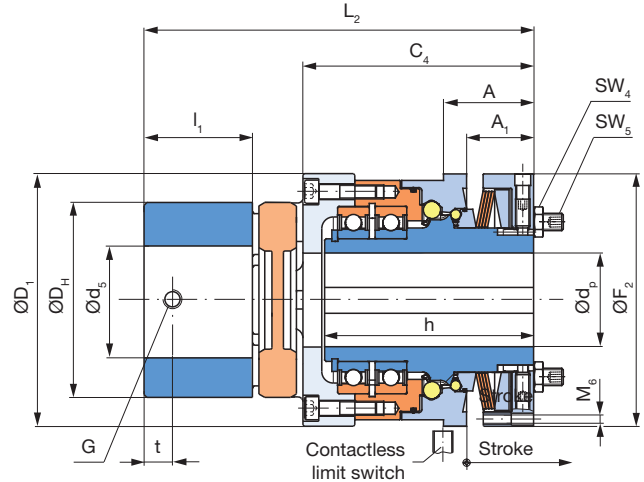
**EAS<sup>®</sup>-compact<sup>®</sup>-F lastic backlash-free**

**Type 4194. \_\_ 4 \_\_, Size 4**

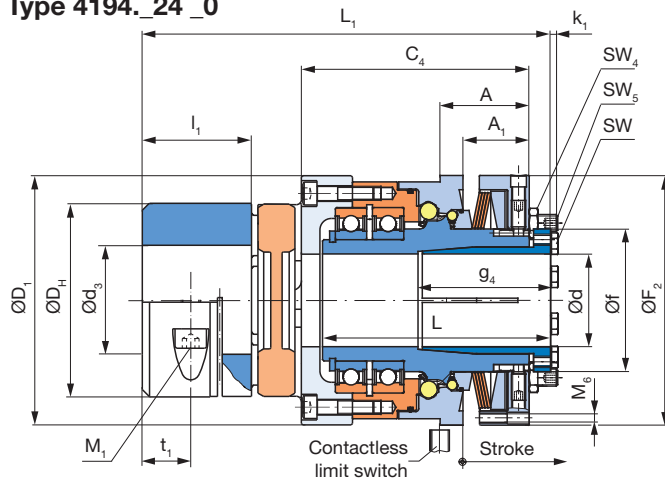
**EAS<sup>®</sup>-side cone bushing,  
ROBA<sup>®</sup>-ES-side shrink disk hub  
Type 4194. 24 \_1**



**EAS<sup>®</sup>-side key hub,  
ROBA<sup>®</sup>-ES-side key hub  
Type 4194. 54 \_2**



**EAS<sup>®</sup>-side cone bushing,  
ROBA<sup>®</sup>-ES-side clamping hub  
Type 4194. 24 \_0**



- 2) The transmittable torques on the flexible coupling "T<sub>KN</sub>" are dependent on factors such as temperature, torsional rigidity, etc., see also coupling dimensioning ROBA<sup>®</sup>-ES catalogue K.940.V\_\_ or contact the manufacturer. Furthermore, the transmittable torques of the flexible coupling are dependent on the bore diameter d<sub>3</sub> or d<sub>4</sub>, see also Table 1 on page 28.
- 3) Dimensions in untensioned condition (shorter in tensioned condition)
- 4) Shaft tolerance up to Ø 38<sub>h8</sub>, over Ø 38<sub>h8</sub>

**Order Number**

**2-bearing design**  
Cone bushing  
Key hub

2  
5

Overload

4

**flexible coupling**

3 92 Shore A  
4 98 Shore A  
6 64 Shore D

Torque adjustment  
value (Optional)

\_\_ / 4 1 9 4 . \_\_ 4 \_\_ . \_\_ / \_\_ / \_\_ / \_\_

**Sizes**  
4

**Torque range**<sup>1)</sup>  
medium  
high  
very high  
maximum

5  
6  
7  
8

Clamping hub  
Shrink disk hub  
Key hub

0  
1  
2

Hub 1  
bore  
Ø d<sup>H7</sup>  
Ø d<sub>p</sub>

Hub 2  
bore  
Ø d<sub>3</sub><sup>F7</sup>  
Ø d<sub>4</sub><sup>H7</sup>  
Ø d<sub>5</sub><sup>H7</sup>

with  
Limit switch  
see  
page 29  
(option)

**Example: Order number 4 / 4194.62430 / 22 / 25 / 60 / limit switch 055.002.5**

1) See Technical Data, limit torque for overload M<sub>0</sub>

## EAS®-compact®-F lastic backlash-free

Technical Data				Size	
				4	
Limit torques <sup>2)</sup> for overload	Type 4194.5_4_ _	$M_G$	[Nm]	120 - 300	
	Type 4194.6_4_ _	$M_G$	[Nm]	240 - 600	
	Type 4194.7_4_ _	$M_G$	[Nm]	480 - 1200	
	Type 4194.8_4_ _	$M_G$	[Nm]	600 - 1500	
Max. speed		$n_{maxi}$	[rpm]	3500	
Thrust washer stroke on overload				[mm]	5.5
Nominal and maximum torques <sup>2)</sup> , flexible coupling	92 Shore A	$T_{KN}/T_{K max}$	[Nm]	900 / 1800	
	98 Shore A	$T_{KN}/T_{K max}$	[Nm]	1040 / 2080	
	64 Shore D	$T_{KN}/T_{K max}$	[Nm]	1250 / 2500	
Permitted misalignments	axial	$\Delta K_a$	[mm]	2.6	
	radial	92 Shore A	$\Delta K_r$	[mm]	0.25
		98 Shore A	$\Delta K_r$	[mm]	0.18
		64 Shore D	$\Delta K_r$	[mm]	0.13
	angular	92 Shore A	$\Delta K_w$	[°]	1.0
		98 Shore A	$\Delta K_w$	[°]	0.9
64 Shore D		$\Delta K_w$	[°]	0.8	

Screws				Size
				4
In cone bushing EAS®-side	Number, dimensions	$M$	[mm]	8 x M8
	Wrench opening	$SW$	[mm]	13
	Tightening torque	$T_A$	[Nm]	32
In shrink disk ROBA®-ES-side	Number, dimensions	$M_2$	[mm]	4 x M12
	Wrench opening	$SW_2$	[mm]	10
	Tightening torque	$T_A$	[Nm]	100
In clamping hub ROBA®-ES-side	Number, dimensions	$M_1$	[mm]	1 x M14
	Wrench opening	$SW_1$	[mm]	12
	Tightening torque	$T_A$	[Nm]	200
Pins/threads in adjusting nut	Wrench opening	$SW_4$	[mm]	18
	Wrench opening	$SW_5$	[mm]	6
	Number, dimensions	$M_6$	[mm]	3 x M8

Mass moments of inertia and weights				Size
				4
	Type			
EAS®-hub-side	4194.724_ _	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	48.427
	4194.754_ _	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	47.907
ROBA®-ES-side	4194.724_0	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	61.228
	4194.724_1	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	60.527
	4194.754_2	I	[10 <sup>-3</sup> kgm <sup>2</sup> ]	61.740
Weights	4194.724_0	m	[kg]	27.92
	4194.724_1	m	[kg]	27.86
	4194.754_2	m	[kg]	27.44

Dimensions [mm]	Size
	4
A	62.5
A <sub>1</sub>	46.5
C <sub>4</sub>	160
D <sub>1</sub>	175
D <sub>H</sub>	135
F <sub>2</sub>	175
f	100
Min. shaft length g <sub>4</sub>	93
G	M10
h	145
k <sub>1</sub>	5.3
L <sup>3)</sup>	160
L <sub>1</sub> <sup>3)</sup>	285
L <sub>2</sub>	270
l <sub>1</sub>	75
t	20
t <sub>1</sub>	27.5

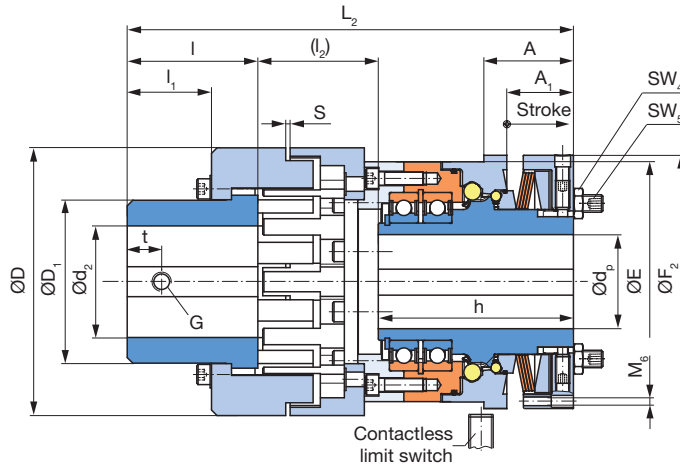
Bores [mm]			Size
			4
EAS®- side	d <sub>p</sub> <sup>4)</sup>	d <sub>p min</sub>	40
		d <sub>p max</sub>	65
	d <sup>4)</sup>	d <sub>min</sub>	40
		d <sub>max</sub>	65
ROBA®- ES - side	d <sub>3</sub> <sup>2)</sup>	d <sub>3 min</sub>	45
		d <sub>3 max</sub>	80
	d <sub>4</sub> <sup>2)</sup>	d <sub>4 min</sub>	45
		d <sub>4 max</sub>	75
	d <sub>5</sub>	d <sub>5 min</sub>	38
		d <sub>5 max</sub>	80

We reserve the right to make dimensional and constructional alterations.

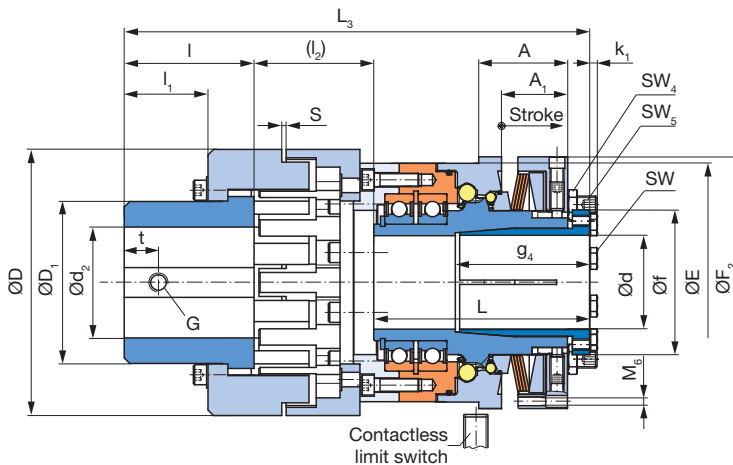
# EAS<sup>®</sup>-compact<sup>®</sup>-F lastic

Type 4194.\_\_4\_2, Size 5

**EAS<sup>®</sup>-side key hub,  
lastic-side key hub  
Type 4194.\_54\_2**



**EAS<sup>®</sup>-side cone bushing,  
lastic-side key hub  
Type 4194.\_24\_2**



## Order Number

**2-bearing design**  
Cone bushing  
Key hub

2  
5

Overload

4

**flexible coupling**

1 Perbunan 72  
2 Perbunan 82

Torque adjustment  
value (Optional)

\_\_ / 4 1 9 4 . \_\_ \_\_ 4 \_\_ . \_\_ / \_\_ / \_\_ / \_\_

Size

**Torque range**<sup>1)</sup>  
medium  
high  
very high  
maximum

5  
6  
7  
8

Key hub

2

Hub 1  
bore  
 $\varnothing d^{H7}$   
 $\varnothing d_p$

Hub 2  
bore  
 $\varnothing d_2^{H7}$

with  
Limit switch  
see  
page 29  
(option)

**Example: Order Number 5 / 4194.62412 / 60 / 60 / 800 / Limit switch 055.002.5**

## EAS<sup>®</sup>-compact<sup>®</sup>-F lastic

Technical Data				Size	
				5	
Limit torques for overload	Type 4194.5_4_2	$M_G$	[Nm]	240	– 600
	Type 4194.6_4_2	$M_G$	[Nm]	480	– 1200
	Type 4194.7_4_2	$M_G$	[Nm]	960	– 2400
	Type 4194.8_4_2	$M_G$	[Nm]	1200	– 3000
Max. speed		$n_{max}$	[rpm]	3000	
Thrust washer stroke on overload			[mm]	6.5	
Nominal torques, flexible coupling	Type 4194.5_4_2	$T_{KN}$	[Nm]	2400	
	Type 4194.6_4_2	$T_{KN}$	[Nm]	2400	
	Type 4194.7_4_2	$T_{KN}$	[Nm]	2400	
	Type 4194.8_4_2	$T_{KN}$	[Nm]	3700	
Permitted misalignments <sup>2)</sup>	axial	$\Delta K_a$	[mm]	2.0	
	radial	$\Delta K_r$	[mm]	0.3	
	angular	$\Delta K_w$	[°]	0.07	

Mass moments of inertia and weights				Size	
				5	
EAS <sup>®</sup> -hub-side	Type 4194.724_2	$I$	[10 <sup>-3</sup> kgm <sup>2</sup> ]	163.554	
	Type 4194.754_2	$I$	[10 <sup>-3</sup> kgm <sup>2</sup> ]	161.378	
lastic-side	Type 4194.7 <sup>2</sup> / <sub>6</sub> 4_2	$I$	[10 <sup>-3</sup> kgm <sup>2</sup> ]	363.398	
Weights	Type 4194.724_2	$m$	[kg]	68.28	
	Type 4194.754_2	$m$	[kg]	67.91	

Screws				Size	
				5	
In cone bushing EAS <sup>®</sup> -side	Number, dimensions	$M$	[mm]	8 x M10	
	Wrench opening	$SW$	[mm]	16	
	Tightening torque	$T_A$	[Nm]	63	
Pins/threads in adjusting nut	Wrench opening	$SW_4$	[mm]	18	
	Wrench opening	$SW_5$	[mm]	6	
	Number, dimensions	$M_6$	[mm]	3 x M8	

Dimensions [mm]	Size	
	5	
A	80	
A <sub>1</sub>	60	
D	240	
D <sub>1</sub>	146	
E	215	
F <sub>2</sub>	225	
f	134	
G	M12	
	(up to bore d <sub>2</sub> = 58) M10	
g <sub>4</sub>	118	
h	175	
k <sub>1</sub>	6.4	
L <sup>1)</sup>	193	
L <sub>2</sub>	400	
L <sub>3</sub> <sup>1)</sup>	418	
l	117	
l <sub>1</sub>	75.5	
l <sub>2</sub>	108	
S	4 ±0.5	
t	31	

Bores [mm]			Size	
			5	
EAS <sup>®</sup> -side	d <sub>p</sub>	d <sub>p min</sub>	45	
		d <sub>p max</sub>	80	
	d <sup>3)</sup>	d <sub>min</sub>	45	
		d <sub>max</sub>	85	
lastic-side	d <sub>2</sub>	d <sub>2 min</sub>	50	
		d <sub>2 max</sub>	100	

We reserve the right to make dimensional and constructional alterations.

- 1) Dimensions in untensioned condition (shorter in tensioned condition)
- 2) The values refer to 1500 rpm
- 3) Shaft tolerance h8

## Frictionally-locking Transmittable Torques

**Table 1: Assignment of the bore diameters  $d_3/d_4$  on the flexible coupling to the transmittable torque “ $T_R$ ”**  
**EAS®-compact®-F lastic backlash-free - Type 4194.\_\_\_\_0 and Type 4194.\_\_\_\_1**

		Bore		EAS®-compact®-F - Size					
				01	0	1	2	3	4
Frictionally-locking transmittable torques	$T_R$ [Nm]	Ø 15	$d_3$	34	-	-	-	-	-
			$d_4$	67	-	-	-	-	-
		Ø 16	$d_3$	36	-	-	-	-	-
			$d_4$	78	-	-	-	-	-
		Ø 19	$d_3$	43	79	-	-	-	-
			$d_4$	109	194	-	-	-	-
		Ø 20	$d_3$	45	83	83	-	-	-
			$d_4$	121	214	247	-	-	-
		Ø 22	$d_3$	50	91	91	-	-	-
			$d_4$	143	255	299	-	-	-
		Ø 24	$d_3$	54	100	100	-	-	-
			$d_4$	166	296	352	-	-	-
		Ø 25	$d_3$	57	104	104	-	-	-
			$d_4$	178	317	379	-	-	-
		Ø 28	$d_3$	63	116	116	208	-	-
			$d_4$	212	381	463	275	-	-
		Ø 30	$d_3$	-	124	124	228	-	-
			$d_4$	-	423	519	345	-	-
		Ø 32	$d_3$	-	133	133	248	-	-
			$d_4$	-	462	567	390	-	-
		Ø 35	$d_3$	-	145	145	280	350	-
			$d_4$	-	528	653	505	565	-
		Ø 38	$d_3$	-	-	158	315	390	-
			$d_4$	-	594	739	620	700	-
		Ø 40	$d_3$	-	-	166	340	420	-
			$d_4$	-	-	797	700	800	-
		Ø 42	$d_3$	-	-	174	365	455	-
			$d_4$	-	-	855	785	900	-
		Ø 45	$d_3$	-	-	187	404	505	545
			$d_4$	-	-	942	910	1055	1345
		Ø 48	$d_3$	-	-	-	442	560	590
			$d_4$	-	-	-	1010	1150	1425
		Ø 50	$d_3$	-	-	-	470	600	630
			$d_4$	-	-	-	1105	1265	1595
		Ø 52	$d_3$	-	-	-	-	640	662
			$d_4$	-	-	-	-	1350	1680
		Ø 55	$d_3$	-	-	-	-	705	710
			$d_4$	-	-	-	-	1530	1945
		Ø 58	$d_3$	-	-	-	-	-	764
			$d_4$	-	-	-	-	1720	2210
Ø 60	$d_3$	-	-	-	-	-	800		
	$d_4$	-	-	-	-	1840	2395		
Ø 62	$d_3$	-	-	-	-	-	840		
	$d_4$	-	-	-	-	-	2575		
Ø 65	$d_3$	-	-	-	-	-	900		
	$d_4$	-	-	-	-	-	2855		
Ø 68	$d_3$	-	-	-	-	-	954		
	$d_4$	-	-	-	-	-	3140		
Ø 70	$d_3$	-	-	-	-	-	990		
	$d_4$	-	-	-	-	-	3330		
Ø 72	$d_3$	-	-	-	-	-	1032		
	$d_4$	-	-	-	-	-	3525		
Ø 75	$d_3$	-	-	-	-	-	1095		
	$d_4$	-	-	-	-	-	3825		
Ø 78	$d_3$	-	-	-	-	-	1158		
	$d_4$	-	-	-	-	-	-		
Ø 80	$d_3$	-	-	-	-	-	1200		
	$d_4$	-	-	-	-	-	-		

Frictionally-locking transmittable torques

**Clamping hub Ø  $d_3$**   
Valid for F7/k6

**Shrink disk hub Ø  $d_4$**   
Valid for H7/k6

The transmittable torques of the clamping connection take the max. tolerance backlash of the shaft tolerance k6/ bores F7 or H7 into account.

If the tolerance backlash is larger, the torque decreases.

# Limit Switch Type 055.00\_5 (Contactless)

## Application

This device is used for measuring and monitoring axial and radial disengagement 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 signalling relay is triggered, is deenergised and drops. Contacts 1 - 2 are opened. Damping is possible from all sides.

## Electrical Connection (Terminals)

- 1 - 2 - 3 Floating change-over contacts
- 5 - 6 Connection input voltage

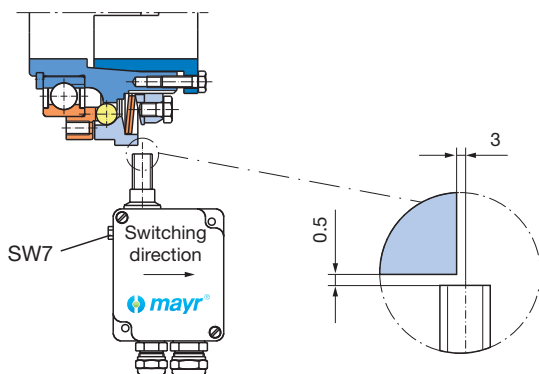
## Design

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.

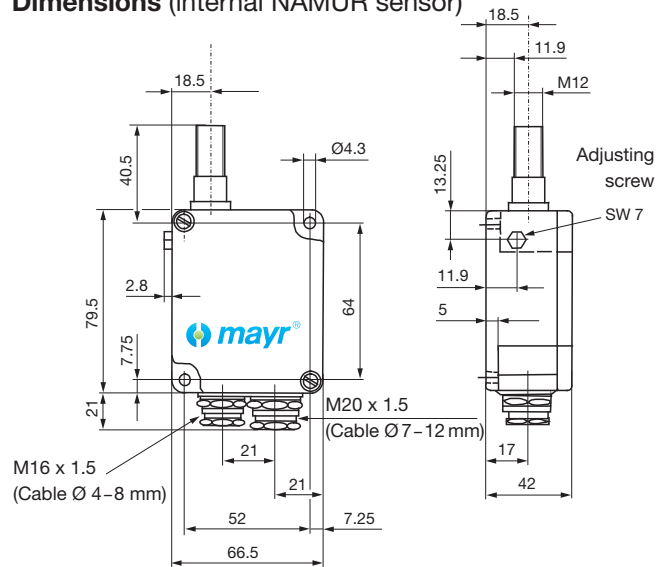
## Technical data

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 up to +60 °C limit switch -25 °C up to +60 °C NAMUR sensor
Protection	IP54
Conductor cross-section	Max. 2.5 mm <sup>2</sup> / AWG 14
Weight	400 g / 14 oz
Device fuses	0.1 A/fast acting at 24 VDC (in system)
Signalling relay	Floating change-over 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, switching distance $S_n$ 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, switching distance $S_n$ 2 mm, flush fitting, max. switching frequency 2 kHz, standard cable length 2 m, max. 100 m on special design, protection IP67

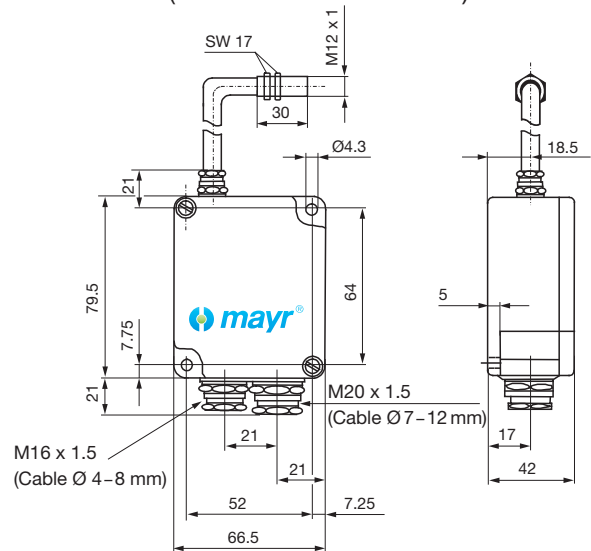
## Installation



## 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<sup>®</sup> 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.

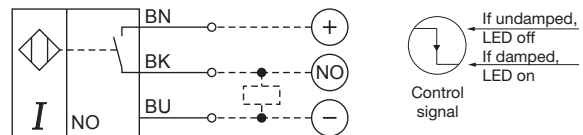
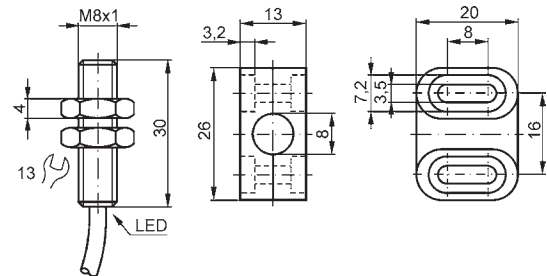
### Electrical Connection

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

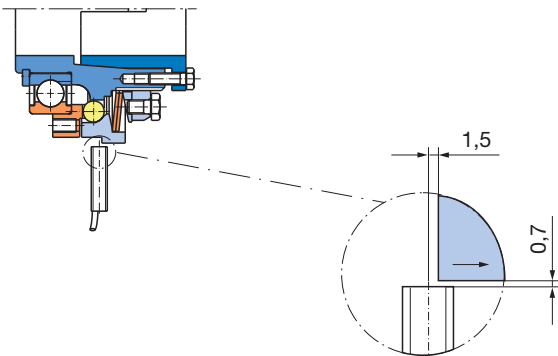
### Technical Data

Name	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
Current carrying capacity	100 mA
Contact type	PNP NO contact
Switching distance $S_n$	1.5 mm, flush fitting
Assured switching distance $S_a$	1.2 mm
Characteristics	Reverse voltage protection Clocking short circuit protection Switching condition indicator via LED
Connection type	cable 3 m/PUR
Tightening torque	10 Nm
Conductor cross section	0.14 mm <sup>2</sup>
Ambient temperature	-25 °C up to +70 °C
Protection	IP67
Accessories	Mounting flange

### Dimensions (mm)



### Installation



### Order Number

0 5 5 . 0 1 2 . 6 / \_

Connection voltage  
10 – 30 VDC



## Product Summary

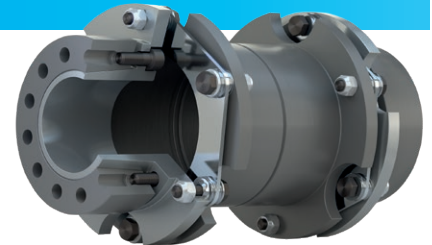
### Torque Limiters/Overload Clutches

- ❑ **EAS<sup>®</sup>-compact<sup>®</sup>/EAS<sup>®</sup>-NC/EAS<sup>®</sup>-smartic<sup>®</sup>**  
Positive locking and completely backlash-free torque limiting clutches
- ❑ **EAS<sup>®</sup>-reverse**  
Reversing re-engaging torque limiting clutch
- ❑ **EAS<sup>®</sup>-element clutch/EAS<sup>®</sup>-elements**  
Load-disconnecting protection against high torques
- ❑ **EAS<sup>®</sup>-axial**  
Exact limitation of tensile and compressive forces
- ❑ **EAS<sup>®</sup>-Sp/EAS<sup>®</sup>-Sm/EAS<sup>®</sup>-Zr**  
Load-disconnecting torque limiting clutches with switching function
- ❑ **ROBA<sup>®</sup>-slip hubs**  
Load-holding, frictionally locked torque limiting clutches
- ❑ **ROBA<sup>®</sup>-contitorque**  
Magnetic continuous slip clutches
- ❑ **EAS<sup>®</sup>-HSE**  
High-speed torque limiters for high-speed applications



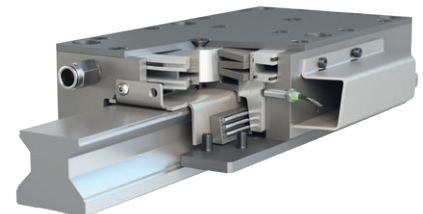
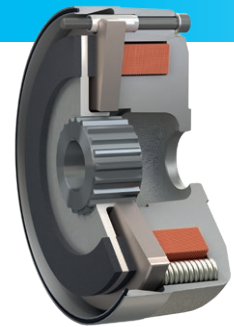
### Shaft Couplings

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



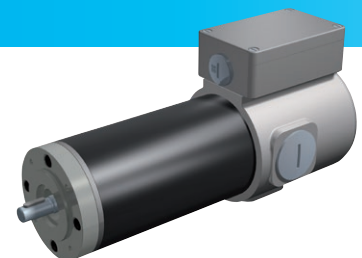
### Electromagnetic Brakes/Clutches

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



### DC Drives

- ❑ **tendo<sup>®</sup>-PM**  
Permanent magnet-excited DC motors





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