



ÜV Überlastschutz u. Verbindungssysteme GmbH

No backlash , torsionally rigid sprung couplings
No backlash flexible split couplings
No backlash plug-in sprung couplings



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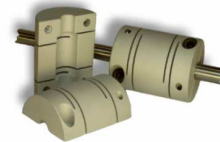
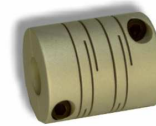
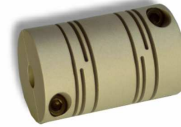
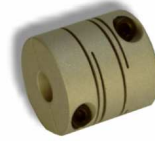
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Product range sprung couplings

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Sprung coupling TYPE 30/31 - up to 30 Ncm

Characteristics:

- Compact dimensions
- Aluminum alloy
- Potential-free installation possible
- Maintenance-free and non-wearing
- Operational temperature of up to 200°C
- Low moment of inertia
- Full radius on spring slots

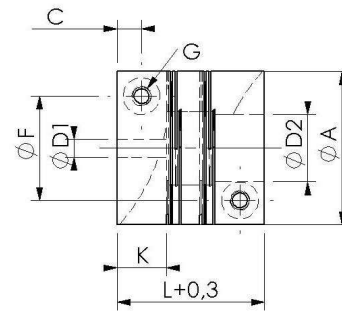
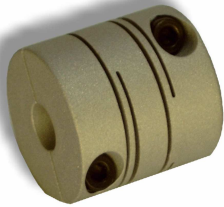
Application:

For installing in

- Stepped drivers
- Synchro resolvers
- Potentiometer
- Tacho-generators, etc.

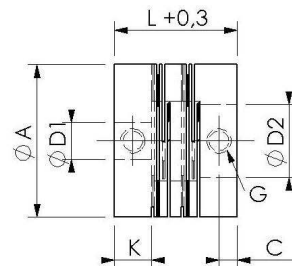
Available with keyway according to DIN 6885.

TYPE 30 up to 30 Ncm



Size	M_N (Ncm)	Rotation speeds up to (min^{-1})	Allowed shaft misalignment in mm (lateral)	Allowed shaft misalignment in mm (axial)	Moment of inertia (app. g cm^2)	Weight (app. in g)	Spring constant (Torque Nm/rad)	L	A	G (DIN EN ISO 4762) (Old DIN912)	D1/D2	D1/D2 (Standard)	C	K	F
20	25	15000	0,15	0,3	8,7	14	84	19,5	20	M2,5	3...8	6H7	3	6	13
25	30	15000	0,15	0,3	26,2	25	126	24	25	M3	3...12	6H7	4	8	17

TYPE 31 up to 30 Ncm



Size	M_N (Ncm)	Rotation speeds up to (min^{-1})	Allowed shaft misalignment in mm (lateral)	Allowed shaft misalignment in mm (axial)	Moment of inertia (app. g cm^2)	Weight (app. in g)	Spring constant (Torque Nm/rad)	L	A	G (DIN 916)	D1/D2	D1/D2 (Standard)	C	K
20	25	15000	0,15	0,3	7,1	11	84	16	20	M3	4...12	6H7	2,25	4,3
25	30	15000	0,15	0,3	21,8	22	126	20	25	M4	6...12	6H7	3	6



Sprung coupling TYPE 32.1/32.2 - up to 1,4 Nm

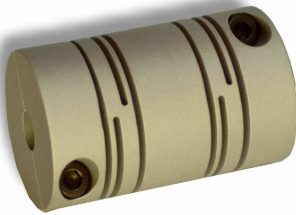
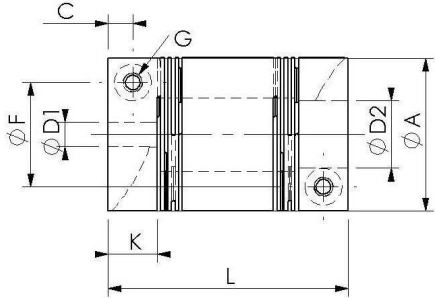
Characteristics:

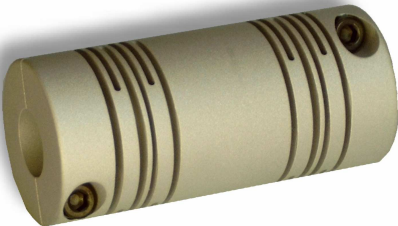
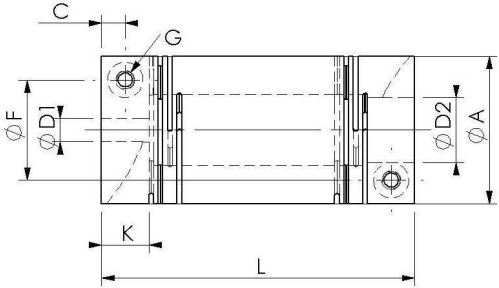
- Low moment of inertia
- Very high rotational speeds possible
- Aluminum alloy
- Operational temperature of up to 200°C
- Maintenance-free and non-wearing
- Full radius on spring slots
- Compensates for higher shaft misalignments

Application:

For installing in rotating measurement
For example :

- Stepped drivers,
- Synchro resolvers
- Potentiometer,
- Measuring drivers etc.

TYPE 32.1 up to 1,4 Nm														
														
Size	M_N (Nm)	Allowed shaft misalignment in mm (lateral)	Allowed shaft misalignment in mm (axial)	Moment of inertia (app. g cm ²)	Weight (app. in g)	Spring constant (Torque Nm/rad)	L	A	G (DIN EN ISO 4762) (Old DIN912)	D1/D2	D1/D2 (Standard)	C	F	K
20	0,28	0,5	1	13	19	98	29	20	M2,5	3...8	6H7	3	13	6
25	0,8	0,6	1,5	41	40	195	39	25	M3	4...12	6H7	4	17	8
30	1,4	0,7	1,8	96	67	295	45	30	M4	6...12,7	10H7	4,5	20,5	9

TYPE 32.2 - up to 0,85 Nm														
														
Size	M_N (Nm)	Allowed shaft misalignment in mm (lateral)	Allowed shaft misalignment in mm (axial)	Moment of inertia (app. g cm ²)	Weight (app. in g)	Spring constant (Torque Nm/rad)	L	A	G (DIN EN ISO 4762) (Old DIN912)	D1/D2	D1/D2 (Standard)	C	F	K
20	0,17	1	2	18	25	66	41	20	M2,5	3...8	6H7	3	13	6
25	0,5	1,4	3	56	51	119	53	25	M3	4...12	6H7	4	17	8
30	0,85	1,8	3,6	138	90	165	65	30	M4	6...12,7	10H7	4,5	20,5	9



Plug in sprung coupling TYPE 36 - up to 3,5 Nm

Characteristics:

- Low moment of inertia
- Very high rotational speeds possible
- No backlash
- Operational temperature of up to 150°C
- Potential-free installation possible
- Full radius on spring slots
- Self-centering

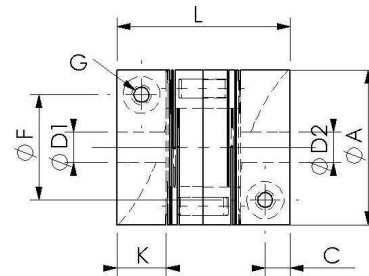
Application:

For installing in

- Stepped drivers
- Synchro resolvers
- Potentiometer
- Measuring drivers
- Low output drives, etc.

Available with keyway according to DIN 6885.

TYPE 36 - up to 3,5 Nm



Size	M_N (Nm)	Allowed shaft misalignment in mm (lateral)	Allowed shaft misalignment in mm (axial)	Moment of inertia (app. g cm ²)	Torsional rigidity (Nm/rad)	Weight (app. in g)	L	A	G (DIN EN ISO 4762) (Old DIN912)	D1/D2	D1/D2 (Standard)	C	F	K
20	0,2	0,15	0,25	11	72	18	24	20	M2,5	3...8	6H7	3	13	6
25	0,45	0,15	0,25	34	144	34	28	25	M3	5...12	6H7	4	17	8
30	1	0,18	0,30	90	232	68	38	30	M4	6...12,7	10H7	4,5	20,5	9
40	3,5	0,20	0,30	362	336	145	48	40	M5	10...20	12H7	5,5	27	11

Ordering details

For example:

TYPE 36 - 30 Ø 10H7 Ø 12H7

 Type Size D1 D2

Delivery of couplings for each application.

**Because of our experience
over many years we are
able to produce
sprung couplings in
many different variations.**

See also page 15.



Sprung coupling TYPE 34/35 - up to 29 Nm

Characteristics:

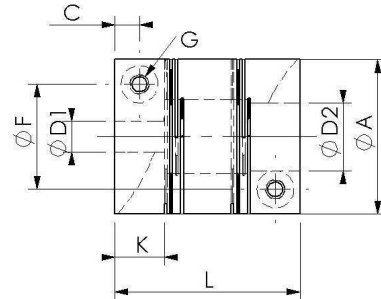
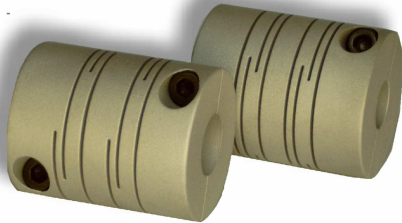
- Low moment of inertia
- Very high rotational speeds possible
- Aluminum alloy
- Operational temperature of up to 200°C
- Maintenance-free and non-wearing
- Full radius on spring slots
- Compensates for higher shaft misalignments
- Potential-free installation possible

Application:

For installing in

- Stepped drivers
- Synchro resolvers
- Potentiometer
- Measuring drivers
- Tachometer generators
- Low output drives, etc.

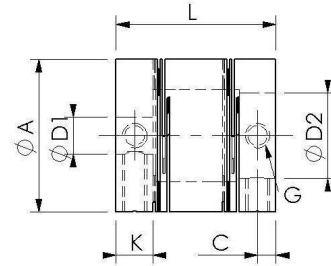
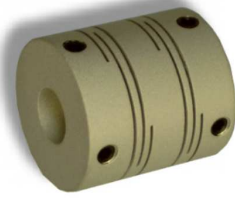
TYPE 34 up to 29Nm



Size	M _N (Nm)	Allowed shaft misalignment in mm (lateral)	Allowed shaft misalignment in mm (axial)	Spring constant in N/mm (lateral)	Spring constant in N/mm (axial)	Moment of inertia (app. g cm ²)	Weight (app. in g)	Spring constant (Torque Nm/rad)	L	A	G (DIN EN ISO 4762) (Old DIN 912)	D1/D2	D1/D2 (Standard)	C	F	K
20	1,4	0,20	0,40	135	150	11	18	295	26	20	M2,5	3...8	6H7	3	13	6
20.1	0,7	0,20	0,40	65	73	11	17	175	26	20	M2,5	3...8	6H7	3	13	6
25	4,50	0,20	0,40	147	158	32	32	950	30	25	M3	5...12	6H7	4	17	8
25.1	2,0	0,20	0,40	68	77	31	30	520	30	25	M3	5...12	6H7	4	17	8
30	7,0	0,25	0,45	178	225	88	63	2030	40	30	M4	6...12,7	10H7	4,5	20,5	9
30.1	3,0	0,25	0,45	83	83	84	59	880	40	30	M4	6...12,7	10H7	4,5	20,5	9
40	13,5	0,25	0,50	212	269	348	140	4060	50	40	M5	6...20	12H7	5,5	27	11
40.1	5,0	0,25	0,50	98	112	340	135	1500	50	40	M5	6...20	12H7	5,5	27	11
50	29,0	0,25	0,50	243	302	1096	270	8600	65	50	M6	15...26	16H7	7,5	36	15
50.1	8,0	0,25	0,50	112	126	1050	265	3200	65	50	M6	15...26	16H7	7,5	36	15



TYPE 35 up to 29Nm



Size	M _N (Nm)	Allowed shaft misalignment in mm (lateral)	Allowed shaft misalignment in mm (axial)	Spring constant in N/mm (lateral)	Spring constant in N/mm (axial)	Moment of inertia (app. g cm ²)	Weight (app. in g)	Spring constant (Torque Nm/rad)	L	A	G (4 x DIN 916 90° displaced)	D1/D2	D1/D2 (Standard)	C	K
20	1,4	0,20	0,40	135	150	11	18	295	23	20	M3	4...12	6H7	2,25	4,5
20.1	0,7	0,20	0,40	65	73	11	17	175	23	20	M3	4...12	6H7	2,25	4,5
25	4,5	0,20	0,40	147	158	32	32	950	26	25	M4	6...14	6H7	3	6
25.1	2,0	0,20	0,40	68	77	31	30	520	26	25	M4	6...14	6H7	3	6
30	7,0	0,25	0,45	178	225	88	63	2030	36	30	M5	10...16	10H7	3,5	7
30.1	3,0	0,25	0,45	83	83	84	59	880	36	30	M5	10...16	10H7	3,5	7
40	13,5	0,25	0,50	212	269	348	140	4060	50	40	M8	10...20	12H7	5,5	11
40.1	5,0	0,25	0,50	98	112	340	135	1500	50	40	M8	10...20	12H7	5,5	11
50	29,0	0,25	0,50	243	302	1010	250	8600	60	50	M8	15...30	16H7	6,25	12,5
50.1	8,0	0,25	0,50	112	126	970	245	3200	60	50	M8	15...30	16H7	6,25	12,5

Ordering details

For example: **TYPE 35 - 25.1 Ø 10H7 Ø 10H7**

⏟
⏟
⏟
⏟

Type
Size
D1
D2

For extended coupling state length required.

Flexible Split coupling TYPE 300 - up to 200 Nm

Characteristics:

- Can be fitted without adjusting shafts
- Very high rotational speeds possible
- No backlash
- Operational temperature of up to 200°C
- Full radius on spring slots
- Aluminum alloy

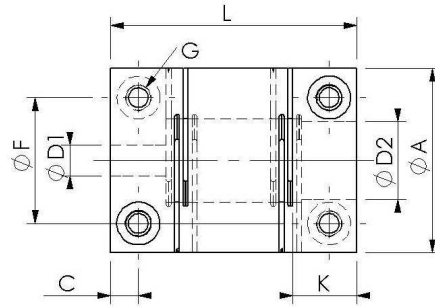
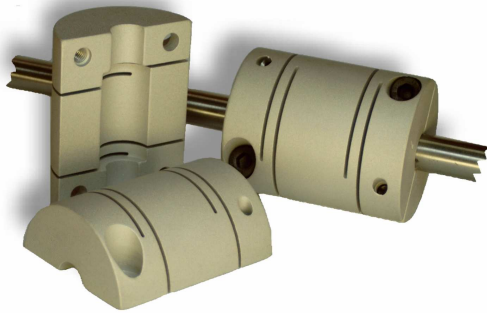
Application:

- Industrial robots
- Handling devices
- Packing machines
- Textile machines
- Woodworking machines etc.

Sizes 20, 30 and 40 are suitable for installation in:

- Stepped drivers
- Stepped motors
- Tachometer generators u. s. w.

TYPE 300 - up to 200 Nm



Size	M_N (Nm)	Allowed shaft misalignment in mm (lateral)	Allowed shaft misalignment in mm (axial)	Moment of inertia (app. g cm ²)	Torsional rigidity (Nm/rad)	Weight (app. in g)	L	A	G (DIN EN ISO 4762) (Old DIN912)	D1/D2	C	F	K
20	0,2	0,25	0,30	11	0,30	17	26	20	M2,5	3...8	3	13	6
30	3,7	0,25	0,30	87	1,8	60	40	30	M4	5...12,7	4,5	20,5	9
40	6,5	0,30	0,30	345	3,7	135	50	40	M5	8...20	5,5	27	11
60	43	0,30	0,30	1850	31	580	83	59	M6	16...30	7,5	41	15
80	105	0,35	0,35	7500	48	1550	104	79	M8	20...45	10	55	20
100	200	0,35	0,35	29000	98	3000	130	99	M12	25...50	12	68	24



Split sprung coupling TYPE 370 up to 900Nm

Characteristics:

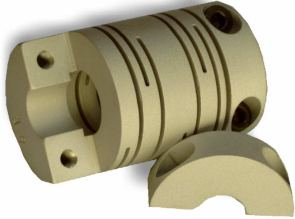
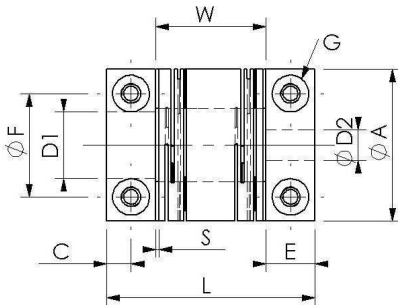
- Aluminum alloy
- Operational temperature of up to 200°C
- Maintenance-free and non-wearing
- Full radius on spring slots
- No backlash and torsional rigidity
- Installation with fixed shafts where the shafts are not moved.

Application:

For installing in

- Linear and compound and tables
- Industrial robots
- Machine tools
- Handling systems
- Textile machines
- Woodworking machines etc.

Sizes 20, 30 and 40 are suitable for installation in Stepped drivers, Synchro resolvers, Tachometer generators, Potentiometers etc.

TYPE 370 up to 900 Nm																	
																	
Size	M _N (Nm)	Torsional rigidity (10 ³ Nm/rad)	Allowed shaft misalignment in mm (lateral)	Allowed shaft misalignment in mm (axial)	Spring constant in N/mm (lateral)	Spring constant in N/mm (axial)	Moment of inertia (app. 10 ⁻³ kg m ²)	Weight (app. in kg)	W	L	A	G (DIN EN ISO 4762) (Old DIN912)	D1/D2	S	C	F	E
20	1,4	0,29	0,2	0,4	135	150	0,0012	0,021	17	30	20	M2,5	3...8	1	3	13	6
20.1	0,7	0,17	0,2	0,4	65	73	0,0012	0,020	17	30	20	M2,5	3...8	1	3	13	6
25	4,5	0,95	0,2	0,4	147	158	0,0036	0,036	17	34	25	M3	5...12	1	4	17	8
25.1	2,0	0,52	0,2	0,4	68	77	0,0035	0,034	17	34	25	M3	5...12	1	4	17	8
30	7,0	2,0	0,25	0,45	178	225	0,01	0,073	26,6	46,2	30	M4	6...12,7	1,6	4,5	20,5	9
30.1	3,0	0,88	0,25	0,45	83	83	0,01	0,069	26,6	46,2	30	M4	6...12,7	1,6	4,5	20,5	9
40	13,5	4,0	0,25	0,45	212	269	0,04	0,160	33,6	57,2	40	M5	10...20	1,6	5,5	27	11
40.1	5,0	1,5	0,25	0,45	98	112	0,04	0,154	33,6	57,2	40	M5	10...20	1,6	5,5	27	11
50	29,0	8,6	0,25	0,45	243	302	0,12	0,31	41,8	73,8	50	M6	15...26	2	7,5	36	15
50.1	8,0	3,2	0,25	0,45	112	126	0,12	0,3	41,8	73,8	50	M6	15...26	2	7,5	36	15
60	70	39	0,25	0,45	257	306	0,19	0,45	51	83	59	M6	20...30	2	7,5	41	15
70	115	56	0,25	0,45	380	342	0,5	0,7	60	98	69	M8	24...35	2	9	47	18
80	165	61	0,25	0,45	394	361	0,8	1,0	62	104	79	M8	26...45	2	10	55	20
90	240	88	0,25	0,45	407	402	2,0	1,5	73,5	122	89	M10	26...50	2,5	11,5	62	23
100	325	121	0,25	0,45	434	421	3,1	1,9	79,5	130	99	M12	30...50	2,5	12	68	24
120	550	202	0,30	0,45	512	490	6,5	3,0	86	145	119	M14	36...60	3	14	82	28
140	900	306	0,30	0,45	608	558	13,5	4,6	91	166	139	M16	50...75	3	18	97	36

Sprung coupling TYPE 330/340 - up to 900 Nm

Characteristics:

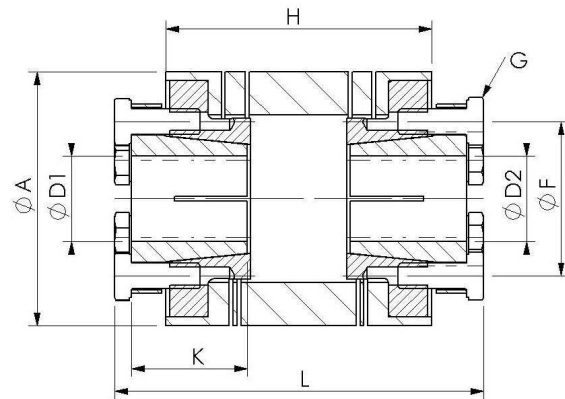
- Operational temperature of up to 200°C
- No backlash and torsional rigidity
- Maintenance-free and non-wearing
- Very high rotational speeds possible
- Full radius on spring slots
- Tapered bores and bushings are not slotted

Application:

For installing in

- Industrial robots
- Packing machines
- Machine tools
- Handling systems
- Textile machines
- Chain systems

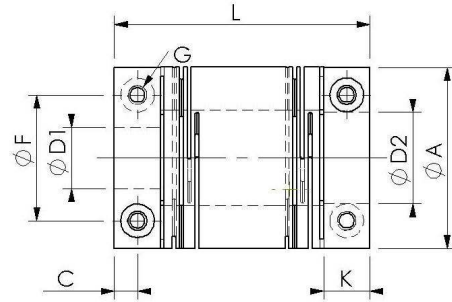
TYPE 330 up to 900 Nm



Size	M_N (Nm)	Allowed shaft misalignment in mm (lateral)	Allowed shaft misalignment in mm (axial)	Spring constant in N/mm (lateral)	Spring constant in N/mm (axial)	Moment of inertia (app. 10^{-3} kg m ²)	Weight (app. in kg)	Torsional rigidity (10^3 Nm/rad)	L	A	6 x G DIN933 (60°displaced)	D1/D2	H	F	K
60	70	0,25	0,45	257	306	0,25	0,6	34	88	59	M6	15...24	63	36	32
70	115	0,25	0,45	380	342	0,65	1,0	53	94	69	M6	18...24	68	36	32
80	165	0,25	0,45	394	361	1,0	1,6	55	105	79	M6	20...38	75	51	35
90	240	0,25	0,45	407	402	2,2	2,3	82	115	89	M6	30...38	85	51	35
100	325	0,25	0,45	434	421	3,5	3,2	112	130	99	M8	26...48	94	65	42
120	550	0,30	0,45	512	490	6,8	4,6	187	140	119	M8	30...48	102	65	42
140	900	0,30	0,45	608	558	14,0	6,7	285	156	139	M10	35...60	107	82	50



TYPE 340 up to 900Nm



Size	M _N (Nm)	Allowed shaft misalignment in mm (lateral)	Allowed shaft misalignment in mm (axial)	Spring constant in N/mm (lateral)	Spring constant in N/mm (axial)	Moment of inertia (app. 10 ⁻³ kg m ²)	Weight (app. in kg)	Torsional rigidity (10 ³ Nm/rad)	L	A	G (DIN EN ISO 4762) (Old DIN 912)	D1/D2	F	C	K
60	70	0,25	0,45	257	306	0,19	0,45	39	83	59	M6	20...30	41	7,5	15
70	115	0,25	0,45	380	342	0,5	0,7	56	98	69	M8	24...35	47	9	18
80	165	0,25	0,45	394	361	0,8	1,0	61	104	79	M8	26...45	55	10	20
90	240	0,25	0,45	407	402	2,0	1,5	88	122	89	M10	26...50	62	11,5	23
100	325	0,25	0,45	434	421	3,1	1,9	121	130	99	M12	30...50	68	12	24
120	550	0,30	0,45	512	490	6,5	3,0	202	145	119	M14	36...60	82	14	28
140	900	0,30	0,45	608	558	13,5	4,6	306	166	139	M16	50...75	97	18	36

Ordering details

For example: **TYPE 340 – 80 Ø 10H7 Ø 12H7**
 Type Size D1 D2

For extended coupling state length required.
 Available with keyway according to DIN 6885 in many cases.

Samples for longer type-variantions:





Calculations

<p><u>Moment while accelerating the motor</u></p> $M_o = \frac{F_1 * J_{Mot} * n * V}{9,55 * T_A * \eta}$ $F_1 = \frac{J_M + J_{Masch}}{J_{Mot}}$ <p><u>Moment while accelerating the coupling</u></p> $M_k = M_b * \frac{J_{Masch} * V}{J_{Masch} + J_{Mot}}$ <p><u>Moment while cutting</u></p> $M_s = \frac{F_A * S * L}{\eta * 628}$ <p>In many cases the user can use the Moment of the motor.</p> $Md = \frac{9550 * P}{n}$	<p>F₁ = Inertia factor J_{Mot} = Moment of inertia - motor (kg m²) J_{Mach} = Moment of inertia - machine (kg m²) n = RPM difference (min⁻¹) T_A = Start time in seconds η = Degree of efficiency F_A = Cutting force (axial vector in N) S = Spindle pitch (cm) L = Withstanding ratio (app. 3 in Nm) P = Power (kW) V = Safety factor</p>
<p><u>Interpretation</u></p> <p>In order to achieve the maximum life-span of the coupling, the following criteria must be observed:</p>	<ol style="list-style-type: none"> 1. The maximum load must not be higher than the nominal moment of the coupling itself. 2. The shaft misalignment must be adapted to the compensation possibilities of the coupling. 3. The assembly must be carried out properly.

Important Points for Assembly and Disassembly

<ol style="list-style-type: none"> 1. Align the shafts 2. Clean shaft and bores (a thin film of oil is recommended) 3. Connect both shafts using the coupling (TYPE 330/340) 4. Tighten bolts in diagonally (TYPE 330) 	<p>Disassembly TYPE 330</p> <ol style="list-style-type: none"> 1. Loosen retaining screws. 2. Force taper off against bellows holder (3 threads per taper bushing provided)
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Tightening torque of bolts:

Size	Tightening torque in Nm
M 2,5	1
M 3	1,5
M 4	3,5
M 5	7
M 6	12
M 8	25
M 10	50
M 12	85
M 14	135
M 16	220
M 20	430



Description

The shaft/hub connection is always an exact fit in order to guarantee no backlash. The tapered fitting with the normally keywayed tapered bush as well as the basic type of connection ensures a maximum play between shaft and hub of 0,05mm.

The fit should be a moving fit (between running and slide) to make a quick and simple assembly possible. In highly dynamic power trains (small shaft diameter – large transfer of torque), we recommend those types using the taper clamping element.

The basic type of connection, however, makes assembly much easier for many types of applications.

Pre-drilled taper bushings are not slotted.

Special couplings

You didn't find a coupling for your use in our catalogue? No problem- just call us. Longer or wider couplings are always possible. We also can offer holes or threat circles in our products.



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