

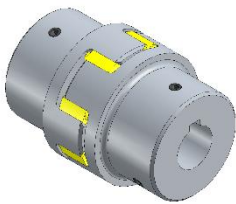
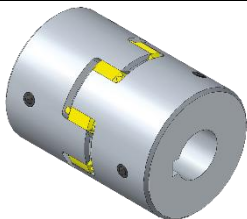
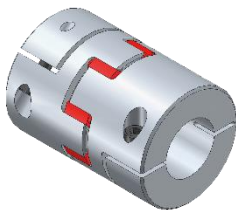
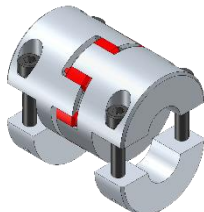
**Installation and Operating Instructions for
WKE Elastomer Couplings**

E 06.714en

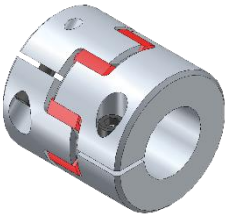
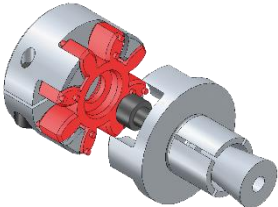
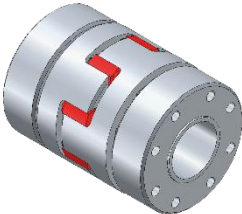
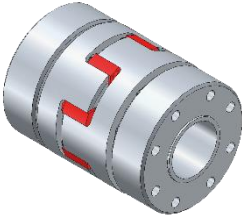
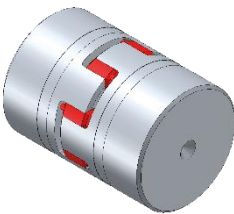
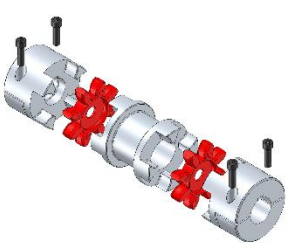


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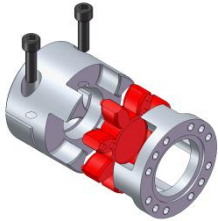
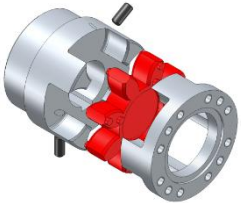
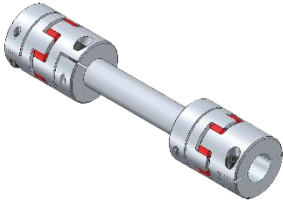
WKE - Jaw couplings for finish drilled and pre-drilled couplings

WKE-D/ST		Coupling with feather key connection 2x WKE-D/ST- hubs 1x sprocket 2x clamping screws – ISO 4029
WKE-D/GJ		Coupling with feather key connection 2x WKE-D/GJ - hubs 1x sprocket 2x clamping screws – ISO 4029
WKE-D/AL		Coupling with feather key connection 2x WKE-D/AL- hubs 1x sprocket 2x clamping screws – ISO 4029
WKE/G		Coupling with feather key connection 2x WKE/G- hubs 1x sprocket 2x (4x) clamping screws – ISO 4029
WKE/N		Coupling with clamping hub 2x WKE/N - hubs 1x sprocket 2x clamping screws – ISO 4762
WKE/H		Coupling with split clamping hub 2x WKE/H - hubs 1x sprocket 4x clamping screws – ISO 4762

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WKE/NK		Coupling with clamping hub – short version 2x WKE/NK - hubs 1x sprocket 2x clamping screws – ISO 4762 Not permitted for ATEX
WKE/ND		Coupling with expansion mandrel 1x WKE/N - hub 1x WKE/ND - hub with expansion mandrel 1x sprocket 2x clamping screw – ISO 4762 Not permitted for ATEX
WKE/S		Coupling with cone clamping ring 2x cone clamping ring 2x cone clamping hub 1x sprocket 12 – 20x clamping screw ISO 4762
WKE/SL		Coupling with cone clamping ring Aluminium design 2x cone clamping ring 2x cone clamping hub 1x sprocket 12 – 20x clamping screw ISO 4762
WKE/RF		Coupling with hub, stainless steel design 2x hub WKE/RF 1x sprocket
WKE/H-DK		Coupling with spacer 2x WKE/H - hubs 1x spacer 2x sprocket 4x clamping screw ISO 4762

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WKE/HF		Coupling with flange attachment 1x WKE/H – hub 1x flange 1x sprocket 2x clamping screw ISO 4762
WKE/GF		Coupling with flange attachment 1x WKE/G – hub 1x flange 1x sprocket 1x (2x) clamping screw ISO 4029
ZWKE/N		Coupling with clamping hub 4x WKE/N – hub 2x sprocket 1x intermediate tube 4x clamping screw ISO 4762
ZWKE/HR		Coupling with split clamping hub 2x WKE/HR – hub 2x adapter hub 2x sprocket 1x intermediate tube 4x clamping screw ISO 4762

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1. Introduction

1.1. About these instructions

These instructions provide information on handling, installing and maintaining the coupling. Please keep them near the coupling.
Read the instructions carefully before using the coupling and follow the instructions.
Pay special attention to the safety information!
We reserve the right to make technical changes in the interest of further development.

1.2. Copyright

The copyright in these instructions remains with RINGSPANN StS GmbH.
This operating manual may not be used in whole or in part without authorization or made available to third parties without our consent.
Contact our factory with any technical questions.

2. Safety instructions

2.1. General information

Only authorized and professionally trained persons may carry out work on the coupling after carefully reading the assembly instructions.
If you are unsure, consult a technician from the supplier and do not start maintenance or assembly/disassembly until all ambiguities have been cleared up.
Furthermore, the coupling may only be used in accordance with the technical data.
Unauthorized structural changes to the elements are not permitted.



Some types in the WKE coupling series are approved for use in areas subject to explosion hazards.
When using in areas subject to explosion hazards, pay attention to the special safety instructions and regulations. The product must be specially marked for this area.
Marking is only carried out if the product is ordered for areas subject to explosion hazards.

2.1.1. Symbols

	Reference to explosion protection	This symbol indicates special features in the field of explosion protection.
	General warning	This symbol warns you to be particularly careful.
	General information	This symbol alerts you to special features.

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2.1.2. Explanation of the Machinery Directive 2006/42/EC

The couplings described here are components within the meaning of the Machinery Directive and a declaration of incorporation is not provided.
Information on safe installation, startup and on safe operation can be found taking the warnings in these operating and assembly instructions into account.

2.1.3. Using the coupling

During transport, assembly and disassembly, operation, care and maintenance, observe the relevant regulations on occupational safety and environmental protection.
Only qualified personnel are allowed to operate, install, maintain and repair the coupling. Information on qualified personnel can be found in the legal information at the beginning of this guide.
If hoists or load handling equipment are used for transport, then they must be suitable for the weight of the coupling.
If the coupling shows noticeable damage, it must not be installed or put into operation.
The coupling may only be operated with a suitable housing or contact protection in accordance with applicable standards. This also applies to test runs and rotation direction checks.

2.1.4. Working on the coupling

Work on the coupling only when it is stationary and in an idle state.
Secure the drive unit against unintentional switching. Place a sign at the switch-on point indicating that the coupling is being worked on. Ensure that the entire system is idle.
Do not reach into the working area of the coupling when it is still in operation. Secure the coupling from accidental contact. Install appropriate guards and covers.

2.2. Intended use

Use the coupling only within the framework of the conditions set out in the service and supply contract and the technical data. Deviating operating conditions are considered not to be in accordance with their intended purpose. The user or operator of the machine or system is solely liable for any damage resulting from this.

When using the coupling, pay particular attention to the following:

- Do not make any modifications to the coupling beyond the permitted machining described in this manual. This also applies to the devices for contact protection.
- The purchaser is solely responsible for all subsequent machining of undrilled or pre-drilled coupling and spare parts as well as of finished machining of coupling and spare parts that they carried out. RINGSPANN StS GmbH does not accept warranty claims arising from improperly carried out reworking.
- Only use original spare parts from RINGSPANN StS. RINGSPANN StS only provides a warranty for original spare parts from RINGSPANN StS. Other spare parts are not approved by RINGSPANN StS GmbH. Spare parts that have not been approved may change the design characteristics of the coupling and thus lead to an impairment of active and/or passive safety.
Any liability and warranty on the part of RINGSPANN StS is excluded for damage caused by the use of spare parts that have not been approved. The same applies to any accessories not supplied by RINGSPANN StS.

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- In the event of changes in the operating conditions (power, speed, changes to the power and work machine), a check of the coupling design is mandatory. Please note that the technical data regarding torque refer exclusively to the sprocket. The transmittable torque of the shaft-hub connection is to be checked by the customer and is their responsibility.
-  When used in explosion-proof areas, the coupling size must be selected so that there is at least a safety of $s = 2.0$ from the system torque to the nominal coupling torque or shaft-hub connection.

Contact our customer service team if you have any questions.

2.3. General warnings



Danger of the coupling bursting

If not used as intended, the coupling may burst.
Flying fragments pose a danger to life.
→ Use the coupling as intended.



Danger from heated coupling parts

Risk of injury due to hot surfaces.
→ Wear appropriate protective equipment (gloves, goggles).



Risk of chemical burns

When handling aggressive cleaning agents, there is a risk of chemical burns.
→ Observe the manufacturer's instructions for handling cleaning agents and solvents.
→ Wear appropriate protective equipment (gloves, goggles).



Physical injury

Risk of injury from falling coupling parts.
→ Secure the coupling against falling.

3. Description

3.1. Description

WKE elastomer couplings described here are universally applicable torsionally flexible and backlash-free jaw couplings in various sizes.

3.1.1 Application area

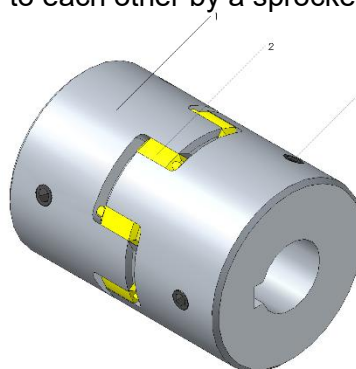
WKE couplings are designed for use in the entire mechanical and plant engineering industry. They are mainly used in drives for torque transmission.

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3.1.2. Design

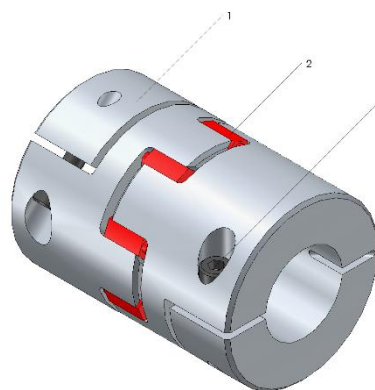
- 3.1.1.1. WKE-D/ST + WKE-D/GJ + WKE-D/AL + WKE/G
WKE-D/ST, WKE-D/GJ, WKE-D/AL and WKE/G elastomer couplings consist of two clamping hubs. These are connected to each other by a sprocket made of elastomer material.

- 1 – Clamping hub
- 2 – Sprocket
- 3 – Stud screw ISO 4029



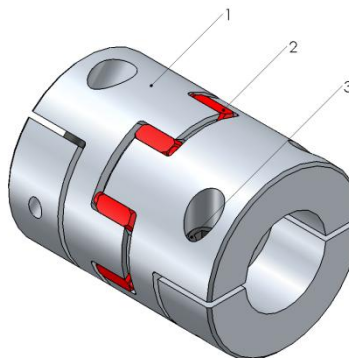
- 3.1.1.2. WKE/N + WKE/NK
WKE/N or WKE/NK elastomer couplings consist of two clamping hubs. These are connected to each other by a sprocket made of elastomer material.

- 1 – Clamping hub
- 2 – Sprocket
- 3 – Cylinder screw ISO 4762



- 3.1.1.3. WKE/H
WKE/H elastomer couplings consist of two split clamping hubs. These are connected to each other by a sprocket made of elastomer material.

- 1 – Split clamping hub
- 2 – Sprocket
- 3 – Cylinder screw ISO 4762

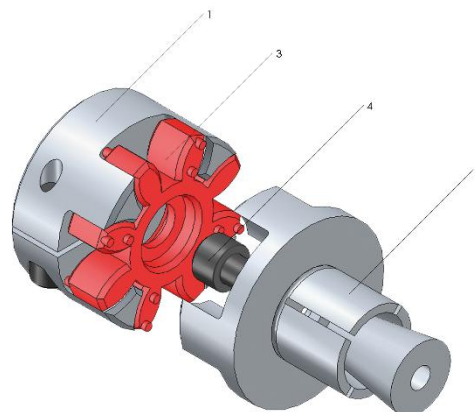


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3.1.1.4. WKE/ND

WKE/ND elastomer couplings consist of a clamping hub and an expansion mandrel hub including clamping cone. These are connected to each other by a sprocket made of elastomer material.

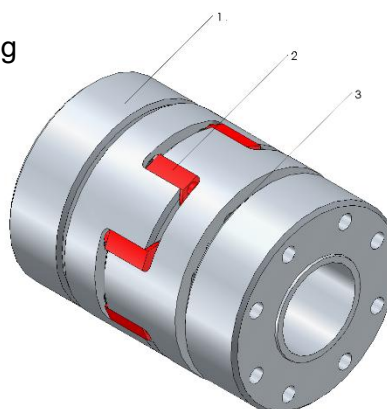
- 1 – Clamping hub
- 2 – Expansion mandrel hub including clamping cone
- 3 – Sprocket
- 4 – Cylinder screw ISO 4762



3.1.1.5. WKE/S + WKE/SL

WKE/S or WKE/SL elastomer couplings consist of two cone hubs with a clamping ring. These are connected to each other by a sprocket made of elastomer material.

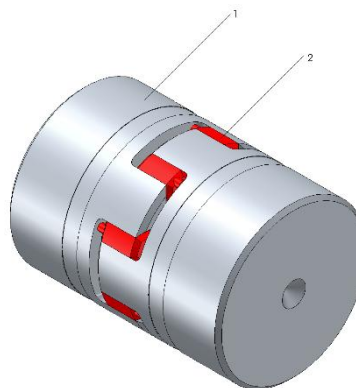
- 1 – Cone hubs including clamping ring
- 2 – Sprocket
- 3 – Cylinder screw ISO 4762



3.1.1.6. WKE/RF

WKE/RF elastomer couplings consist of two hubs. These are connected to each other by a sprocket made of elastomer material.

- 1 – Hub
- 2 – Sprocket

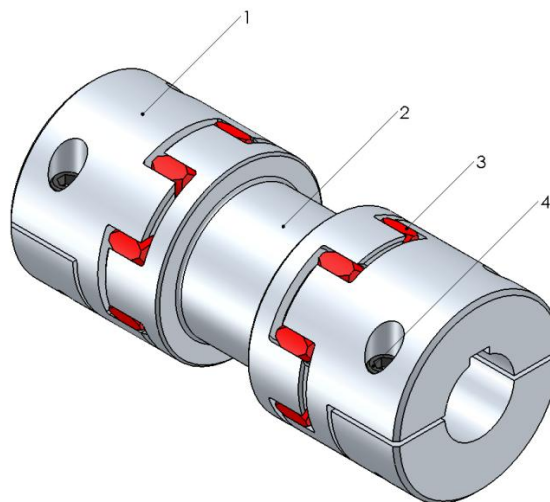


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3.1.1.7. WKE/H-DK

WKE/H-DK elastomer couplings consist of two split clamping hubs and a spacer. These are connected to each other by two sprockets made of elastomer material.

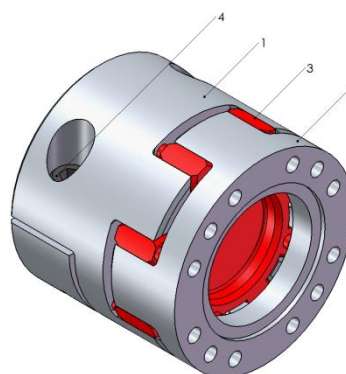
- 1 – Split clamping hub
- 2 – Spacer
- 3 – Sprocket
- 4 – Cylinder screw ISO 4762



3.1.1.8. WKE/HF

WKE/HF elastomer couplings consist of a split clamping hub and a flange. These are connected to each other by a sprocket made of elastomer material.

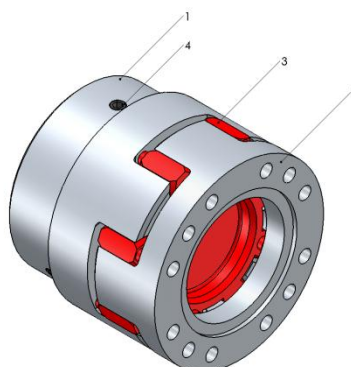
- 1 – Clamping hub
- 2 – Flange
- 3 – Sprocket
- 4 – Cylinder screw ISO 4762



3.1.1.9. WKE/GF

WKE/GF elastomer couplings consist of a clamping hub and a flange. These are connected to each other by a sprocket made of elastomer material.

- 1 – Clamping hub
- 2 – Flange
- 3 – Sprocket
- 4 – Cylinder screw ISO 4762

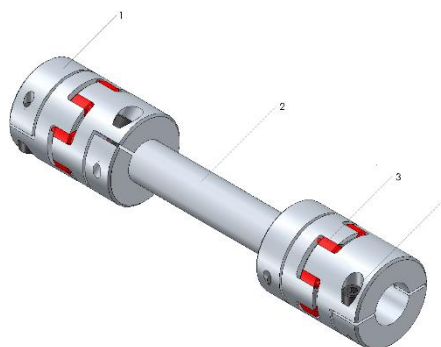


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3.1.1.10. ZWKE/N

Z WKE/N intermediate shaft couplings consist of two assemblies; these include two clamping hubs and a sprocket. These two assemblies are connected to each other by a steel tube.

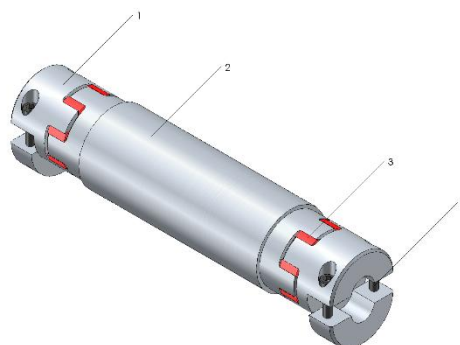
- 1 – Clamping hub
- 2 – Tube
- 3 – Sprocket
- 4 – Cylinder screw ISO 4762



3.1.1.11. ZWKE/HR

Z WKE/HR intermediate shaft couplings consist of two assemblies; these include a split clamping hub, a connector and a sprocket. These two assemblies are connected to each other by an aluminium tube.

- 1 – Split clamping hub
- 2 – Tube
- 3 – Sprocket
- 4 – Cylinder screw ISO 4762

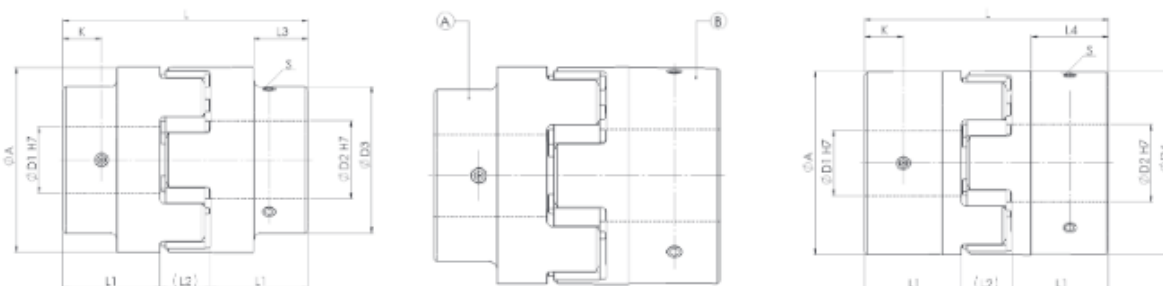


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3.2. Technical data

3.2.1. Geometry data and weight

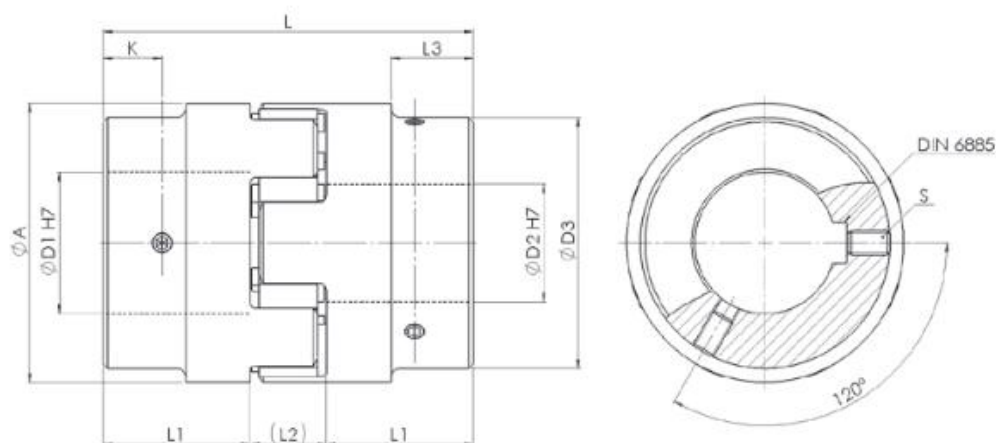
3.2.1.1. WKE-D/ST + WKE-D/GJ + WKE-D/AL



WKE-D/ST			Abmessungen Dimensions											ISO 4029
Größe Size	TKN		L	ØA	Nabe A / Hub A ØD1 / ØD2	Nabe B / Hub B ØD1 / ØD2	ØD3	ØD4	L1	L2	L3	L4	K	S
	92 ShA	98 ShA												
	[Nm]													
14	7,5	12,5	35	30	-	5 - 16	-	-	11	13	-	-	5	M4
19	10	17	66	40	6 - 19	6 - 25	32	39	25	16	20	20	10	M5
24	35	60	78	55	8 - 24	8 - 35	40	52	30	18	24	24	10	M5
28	95	160	90	65	10 - 28	10 - 40	48	62	35	20	28	28	15	M6
38	190	325	114	80	14 - 38	14 - 48	66	77	45	24	37	37	15	M8
42	265	450	126	95	15 - 42	15 - 55	75	92	50	26	40	40	20	M8
48	310	525	140	105	18 - 48	18 - 62	85	102	56	28	45	45	20	M8
55	410	685	160	120	18 - 55	18 - 75	98	117	65	30	52	52	20	M10
65	625	940	185	135	20 - 70	20 - 80	115	132	75	35	61	61	20	M10
75	1280	1920	210	160	30 - 80	30 - 95	135	158	85	40	69	69	25	M10
90	2400	3600	245	200	35 - 97	35 - 110	160	180	100	45	81	81	25	M10
100	3300	4950	270	225	-	35 - 115	-	180	110	50	-	89	30	M12

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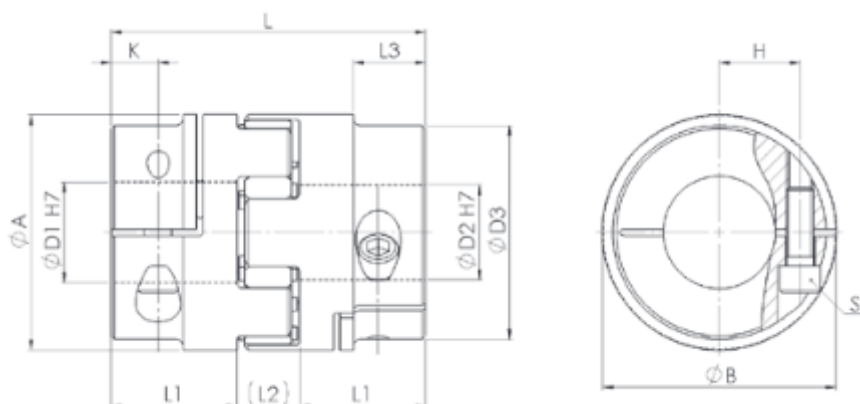
3.2.1.2. WKE/G



WKE/G			Abmessungen Lea-Rebecca Tomm (ltomm@STSDOM.local) ist angemeldet.								ISO 4029	Technische Daten Technical Data			
Größe Size	TKN		L	ØA	ØD1 / ØD2	ØD3	L1	L2	L3	K	S	TA	J	n _{max}	M
	98 ShA	92 ShA										[Nm]	[kg cm²]	[min ⁻¹]	[kg]
	[Nm]											[mm]			
5	0,9	0,5	15	10	2 - 6	-	5	5	-	2,5	1x M3	0,5	0,0004	47500	0,003
7	2	1,2	22	14	3 - 7	-	7	8	-	3,5	1x M3	0,5	0,002	35000	0,007
9	5	3	30	20	4 - 11	-	10	10	-	5	1x M4	1,5	0,011	24000	0,018
14	12,5	7,5	35	30	5 - 16	-	11	13	-	5	2x M4	1,5	0,064	16000	0,045
19	17	10	66	40	6 - 24	-	25	16	-	10	2x M5	2	0,37	12000	0,14
24	60	35	78	55	8 - 32	-	30	18	-	10	2x M5	2	1,71	8700	0,36
28	160	95	90	65	10 - 38	-	35	20	-	15	2x M8	10	3,7	7400	0,53
38	325	190	114	80	12 - 45	-	45	24	-	15	2x M8	10	11,02	6000	1,06
42	450	265	126	95	14 - 55	85	50	26	28	20	2x M8	10	49,6	5000	3,53
48	525	310	140	105	15 - 65	95	56	28	32	20	2x M8	10	99,08	4600	5,34
55	685	410	160	120	20 - 74	110	65	30	37	20	2x M10	17	161,61	4000	6,83
65	940	-	185	135	22 - 80	115	75	35	47	20	2x M10	17	257,6	3500	9,07

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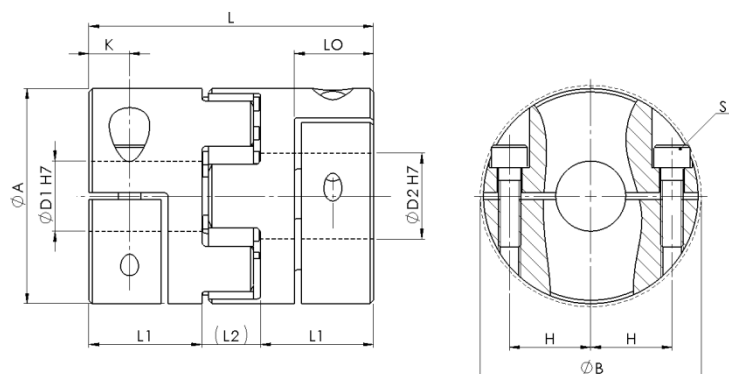
3.2.1.3. WKE/N



WKE/N			Abmessungen Dimensions										ISO 4762	Technische Daten Technical Data			
Größe Size	TKN		L	ØA	ØD1 / ØD2	ØD3	L1	L2	L3	ØB	K	H	S	TA	J	n _{max}	M
	98 ShA	92 ShA												[Nm]	[kg cm²]	[min ⁻¹]	[kg]
	[mm]																
5	0,9	0,5	15	10	2 - 5	-	5	5	-	11,5	2,5	3,5	M1,6	0,3	0,0004	38000	0,003
7	2	1,2	22	14	3 - 7	-	7	8	-	16	3,5	5	M2	0,5	0,002	26000	0,007
9	5	3	30	20	5 - 11	-	10	10	-	23	5	7,3	M2,5	1,3	0,011	18000	0,019
14	12,5	7,5	35	30	6 - 16	-	11	13	-	32	5	11	M3	2	0,063	12000	0,04
19	17	10	66	40	8 - 24	-	25	16	-	45	11	14,5	M6	19	0,37	9500	0,14
24	60	35	78	55	10 - 32	-	30	18	-	57	10,5	20	M6	19	1,65	7000	0,35
28	160	95	90	65	15 - 38	-	35	20	-	70,5	11	24,5	M8	42	3,91	6000	0,51
38	325	190	114	80	15 - 48	-	45	24	-	83	15,5	30	M8	42	10,64	4700	1,03
42	450	265	126	95	19 - 50	85	50	26	28	91	18	32,5	M10	83	48	4000	3,57
48	525	310	140	105	25 - 55	95	56	28	32	104	21	36	M12	145	81,75	3500	4,95
55	685	410	160	120	35 - 68	110	65	30	37	118	26	42,5	M12	145	156,8	3000	9,8
65	940	-	185	135	40 - 72	115	75	35	47	123	33	45	M12	145	297,7	2700	13,6

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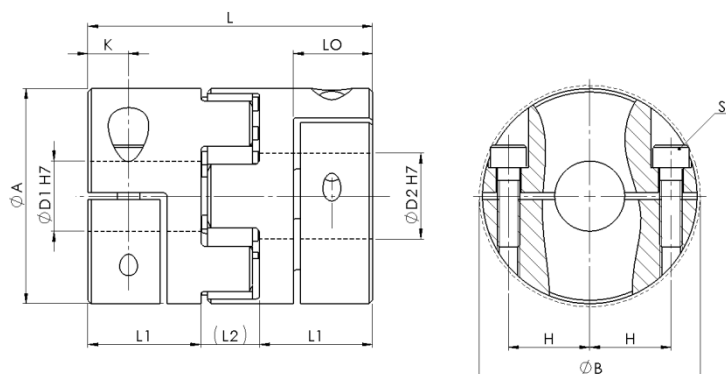
3.2.1.4. WKE/H



WKE/H			Abmessungen Dimensions									ISO 4762	Technische Daten Technical Data			
Größe Size	TKN		L	ØA	ØD1 / ØD2	L1	L2	LO	ØB	K	H	S	TA	J	η _{max}	M
	98 ShA	92 ShA											[Nm]	[kg cm²]	[min ⁻¹]	[kg]
	[mm]												[Nm]	[kg cm²]	[min ⁻¹]	[kg]
14	12,5	7,5	35	30	6 - 16	11	13	9	34	5	11	M4	5	0,056	12000	0,02
19	17	10	66	40	8 - 24	25	16	13,4	44	6	15	M5	11	0,38	9500	0,15
24	60	35	78	55	10 - 32	30	18	21	57	10,5	20	M6	19	1,66	7000	0,35
28	160	95	90	65	15 - 38	35	20	23,5	70,5	11	24,5	M8	42	3,69	6000	0,33
38	325	190	114	80	15 - 48	45	24	33	83	15,5	30	M8	42	10,4	4700	0,98
42	450	265	126	95	19 - 50	50	26	35	95	18	35	M10	83	59,72	4000	4,15
48	525	310	140	105	25 - 60	56	28	32,5	107,5	15	40	M12	145	98,25	3500	5,6
55	685	410	160	120	35 - 68	65	30	48	120	22,75	42,5	M12	145	214,1	3000	10,8
65	940	-	185	135	40 - 70	75	35	56	135	33	43	M12	145	401,6	2700	15,9

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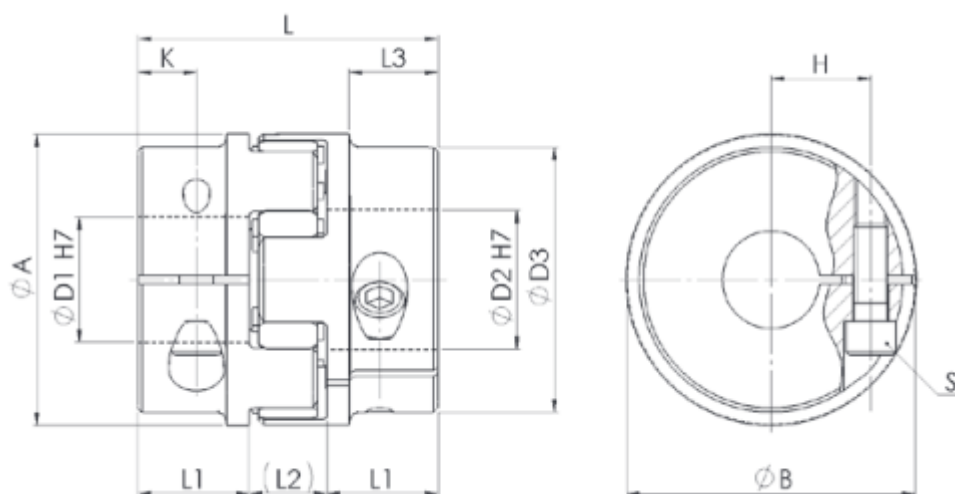
3.2.1.5. WKE/H (cast)



Material	WKE/H	Dimensions										TA
	Size	L	ØA	ØD1-ØD2	L1	L2	L0	ØB	K	H	S ISO 4762 12.9	
		mm										Nm
Cast (EN-GJ-250) or 1.0503	19	66	40	8-23	25	16	13.4	45	6	14.5	M5	10
	24	78	55	10-30	30	18	21	57	10,5	20	M6	17
	28	90	65	15-38	35	20	23.5	70	11	24.5	M8	42
	38	114	80	15-48	45	24	33	83	15,5	30	M8	42
	42	126	95	19-500	50	26	35	95	18	32.5	M10	83
	48	140	105	25-60	56	28	32.5	105	15	40	M12	145
	55	160	120	26-70	65	30	50	120	22,8	42.5	M12	145
	65	185	135	30-80	75	35	60	135	33	43	M12	145
	75	210	160	35-90	85	40	67.5	160	36	55	M16	300
	90	245	200	40-110	100	45	87.5	200	42,3	75	M20	580
	100	270	225	40-110	110	50	84	225	15 65	62	M16	300

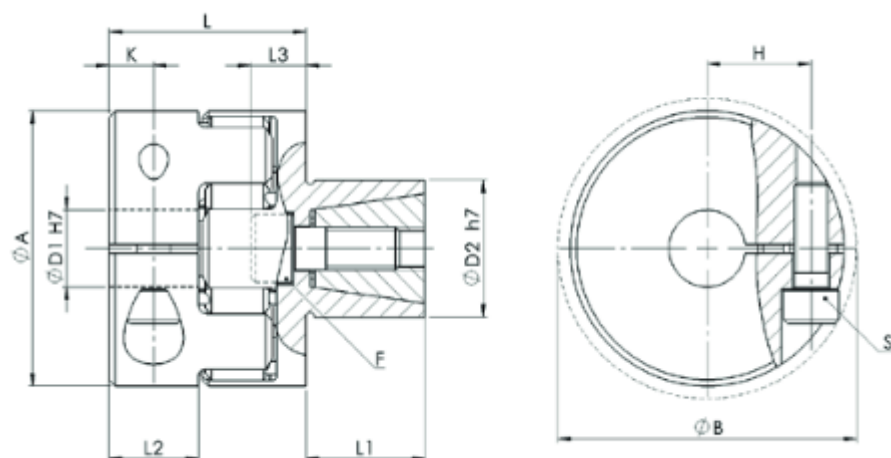
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3.2.1.6. WKE/NK



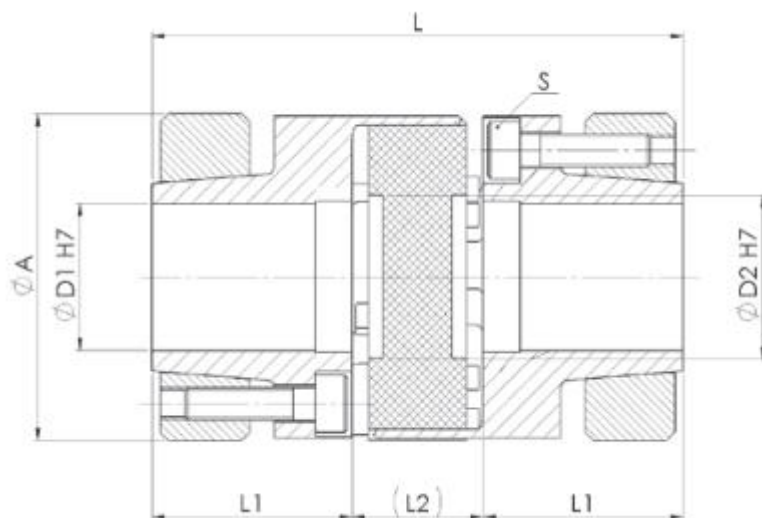
WKE/NK			Abmessungen Dimensions										ISO 4762	Technische Daten Technical Data			
Größe Size	TKN		L	ØA	ØD1 / ØD2	ØD3	L1	L2	L3	ØB	K	H	S	TA	J	η _{max}	M
	98 ShA	92 ShA												[Nm]	[kg cm²]	[min ⁻¹]	[kg]
	[Nm]		[mm]											[Nm]	[kg cm²]	[min ⁻¹]	[kg]
9	5	3	24	20	5 - 11	-	7	10	-	23	3,5	7,3	M2,5	1,3	0,009	18000	0,015
14	12,5	7,5	32	30	6 - 16	-	9,5	13	-	32	5	11	M3	2	0,063	12000	0,04
19	17	10	50	40	8 - 24	-	17	16	-	45	8,5	15,5	M5	11	0,287	9500	0,11
24	60	35	58	55	10 - 32	-	20	18	-	57	10	20	M6	19	1,23	7000	0,26
28	160	95	62	65	15 - 38	-	21	20	-	70,5	10,5	24,5	M8	42	2,53	6000	0,38
38	325	190	86	80	15 - 45	-	31	24	-	85	15,5	30	M10	83	8,16	4700	0,79
42	450	265	94	95	19 - 50	85	34	26	28	91	18	32,5	M10	83	32,9	4000	2,51
48	525	310	108	105	25 - 55	95	40	28	32	104	21	36	M12	145	54,59	3500	3,27

3.2.1.7. WKE/ND



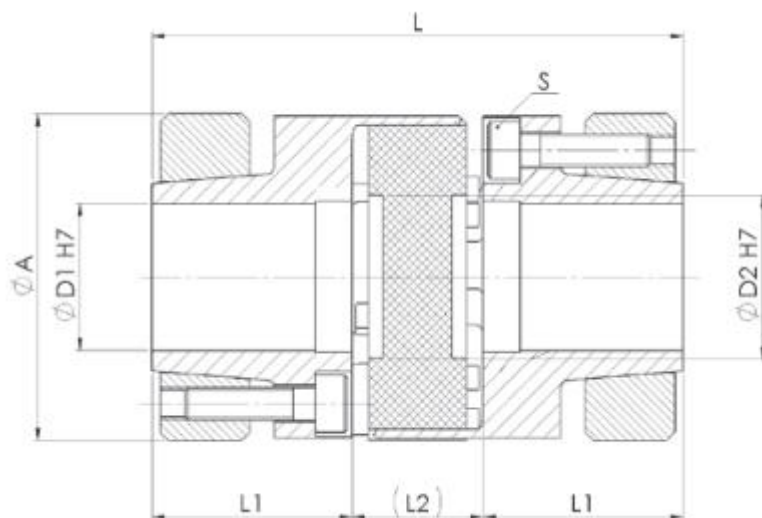
WKE/ND			Abmessungen Dimensions									ISO 4762		Technische Daten Technical Data				
Größe Size	TKN		L	ØA	ØD1	ØD2	L1	L2	ØB	K	H	S	F	TA (S)	TA (F)	J	n _{max}	M
	98 ShA	92 ShA												[Nm]	[Nm]	[kg cm²]	[min ⁻¹]	[kg]
	[Nm]													[Nm]	[kg cm²]	[min ⁻¹]	[kg]	
9	5	3	20	20	5 - 11	10 - 16	12	7	23	3,5	7,3	M2,5	M4	1,3	5	0,01	18000	0,03
14	12,5	7,5	28,5	30	6 - 16	13 - 25	12,5	9,5	32	5	11	M3	M5	2	11	0,07	12000	0,06
19	17	10	42	40	8 - 24	14 - 30	20	17	45	8,5	15,5	M5	M6	11	19	0,28	9500	0,013
24	60	35	46	55	10 - 32	23 - 38	30	20	57	10	20	M6	M8	19	42	1,13	7000	0,33
28	160	95	48	65	15 - 38	26 - 42	36	21	70,5	10,5	24,5	M8	M10	42	83	2,22	6000	0,5
38	325	190	69	80	15 - 45	38 - 60	45	31	85	15,5	30	M10	M12	83	145	8,03	4700	1,1

3.2.1.8. WKE/S



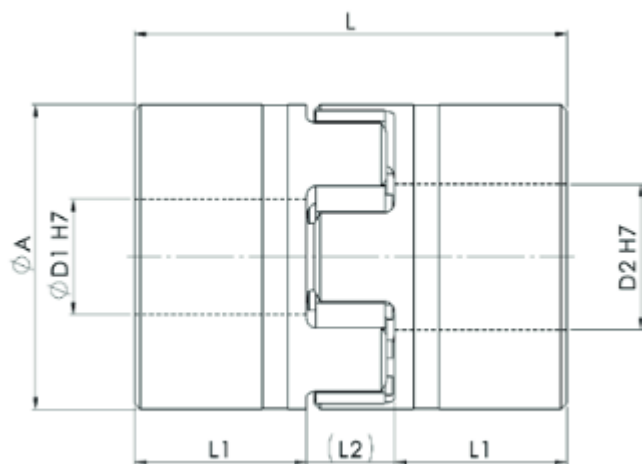
WKE/S			Abmessungen Dimensions					ISO 4762	Technische Daten Technical Data			
Größe Size	TKN		L	ØA	ØD1 / ØD2	L1	L2	S	TA	J	n _{max}	M
	98 ShA	92 ShA										
	[Nm]		[mm]						[Nm]	[kg cm²]	[min ⁻¹]	[kg]
14	12,5	7,5	50	32	5 - 16	18,5	13	M3	2	0,18	25000	0,11
19	17	10	66	40	10 - 20	25	16	M4	5	0,57	18500	0,23
24	60	35	78	55	10 - 28	30	18	M5	6	2,68	13900	0,57
28	160	95	90	65	15 - 40	35	20	M5	6	6,06	11800	0,86
38	325	190	114	80	20 - 48	45	24	M6	19	16,91	9600	1,54
42	450	265	126	95	27 - 50	50	26	M8	42	58,8	8000	4,05
48	525	310	140	105	30 - 55	56	28	M10	83	95,95	7100	5,42
55	685	410	160	120	40 - 65	65	30	M10	83	185,2	6350	7,91
65	940	0	185	135	42 - 80	75	35	M12	145	327	5600	10,75

3.2.1.9. WKE/SL



WKE/SL			Abmessungen Dimensions					ISO 4762	Technische Daten Technical Data			
Größe Size	TKN		L	ØA	ØD1 / ØD2	L1	L2	S	TA	J	n _{max}	M
	98 ShA	92 ShA							[Nm]	[kg cm²]	[min ⁻¹]	[kg]
	[Nm]								[mm]			
14	12,5	7,5	50	32	5 - 16	18,5	13	M3	2	0,04	25000	0,07
19	17	10	66	40	10 - 20	25	16	M4	5	0,19	18500	0,14
24	60	35	78	55	10 - 28	30	18	M5	11	0,78	13900	0,35
28	160	95	90	65	15 - 40	35	20	M5	11	1,7	11800	0,53
38	325	190	114	80	20 - 48	45	24	M6	19	5,17	9600	0,97
42	450	265	126	95	27 - 50	50	26	M8	42	11,17	8000	1,7
48	525	310	140	105	30 - 55	56	28	M10	83	18,81	7100	2,22

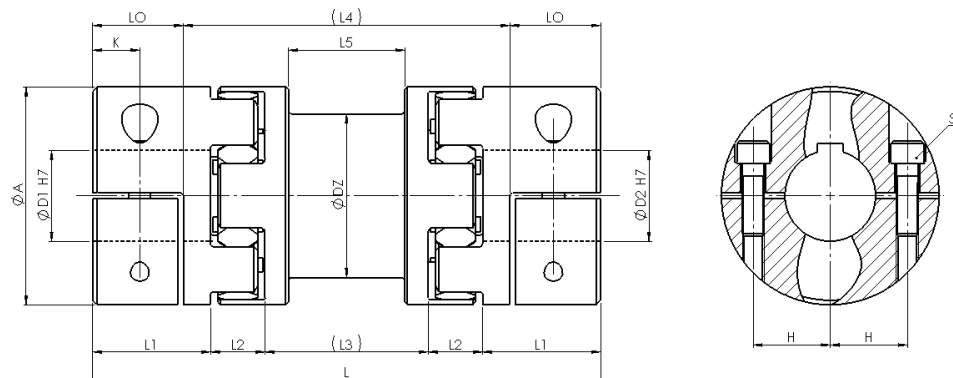
3.2.1.10. WKE/RF



WKE/RF			Abmessungen Dimensions					Technische Daten Technical Data	
Größe Size	TKN		L	ØA	ØD1 / ØD2	L1	L2	n _{max}	M
	98 ShA	92 ShA							
	[Nm]								
19	17	10	66	40	6 - 24	25	16	14000	0,56
24	60	35	78	55	8 - 30	30	18	10600	1,22
28	160	95	90	65	10 - 38	35	20	8500	1,97
38	325	190	114	80	12 - 45	45	24	7100	3,9
42	450	265	126	95	14 - 55	50	26	6000	6,03
48	525	310	140	105	15 - 65	56	28	5600	8,21

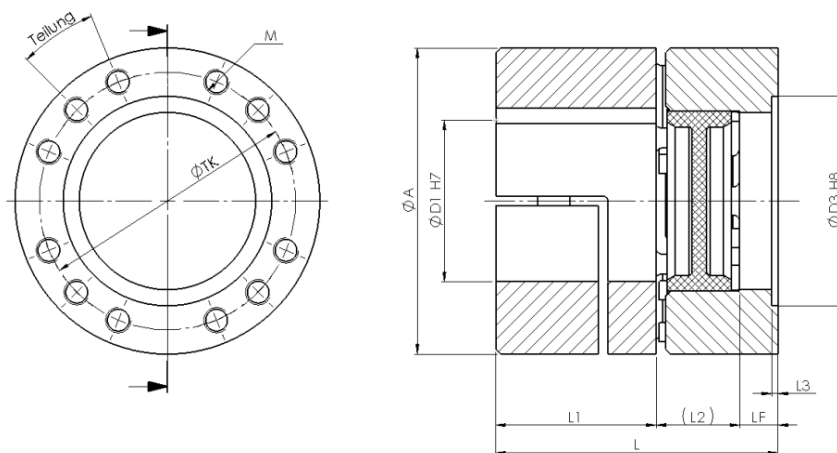
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3.2.1.11. WKE/H-DK



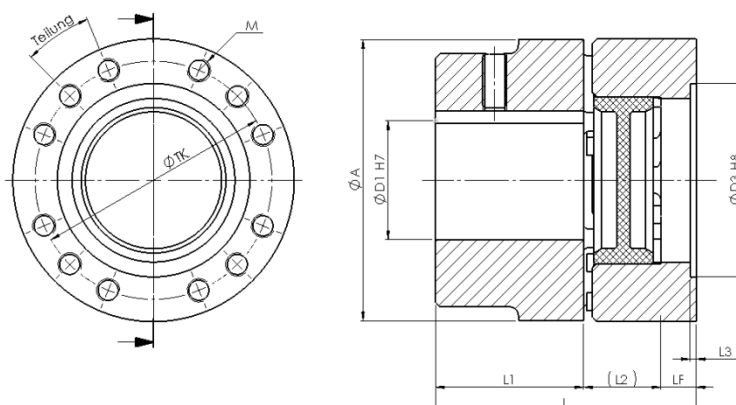
Material	WKE/H-DK	Dimensions													S ISO 4762 12.9	TA
	Size	L	ØA	ØD1-ØD2	ØDZ	L1	L2	L3	L0	L4	L5	K	H			
		mm														
Cast (EN-GJ-250)	24	142	55	10-30	40	30	18	46	21	100	34	10,5	20	M6	17	
		182			40					86	140					74
	28	147	65	15-38	45	35	20	77	23.5	100	23	11	24.5	M8	42	
		187			45					37	140					63
	38	166	80	15-48	80	45	24	28	33	100	-	15.5	30	M8	42	
		206			60					68	140					52
		246			60					108	180					92
	42	170	95	19-50	95	50	26	18	35	100	-	18	32.5	M10	83	
		210			70					58	140					38
		250			70					98	180					78
	48	190	105	25-60	105	56	28	22	45	100	-	21	40	M12	145	
		230			75					62	140					40
		270			75					102	180					80
	55	200	120	30-70	120	65	30	10	50	100	-	26	42.5	M12	145	
		240			90					50	140					30
		280			90					90	180					70
	65	252	135	30-80	135	75	35	32	56	140	-	33	43	M12	145	
		292			100					72	180					44
	75	275	160	30-90	160	85	40	25	67.5	140	-	36	55	M16	362	
		315			120					65	180					40
	90	355	200	40-110	200	100	45	65	87.5	180	-	42.3	75	M20	580	

3.2.1.12. WKE/HF



Cast (EN-GJ-250) or 1.0503	WKE/HF	Dimensions										
	Size	L	ØA	ØD1	L1	L2	LF	ØTK	ØD3	L3	M	Splitting
		mm										
	24	56	55	10-30	30	18	8	57	10.5	20	8x M5	8x45°
	28	65	65	15-38	35	20	10	70	11	24.5	8x M6	8x45°
	38	79	80	15-48	45	24	10	83	15.5	30	8x M8	8x45°
	42	88	95	19-500	50	26	12	95	18	32.5	12x M8	16x22,5°
	48	96	105	25-60	56	28	12	105	15	40	12x M8	16x22,5°
	55	111	120	26-70	65	30	16	120	22.8	42.5	8x M10	8x45°
	65	126	135	30-80	75	35	16	135	33	43	12x M10	16x22,5°
	75	144	160	35-90	85	40	19	160	36	55	15x M12	20x18°
	90	165	200	40-110	100	45	20	200	42.3	75	15x M16	20x18°
100	185	225	40-110	110	50	25	225	15	62	15x M16	20x18°	

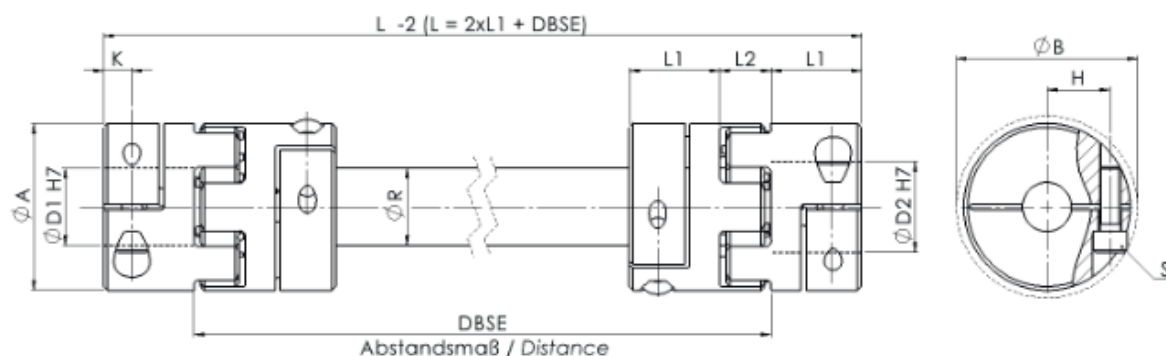
3.2.1.13. WKE/GF



Cast (EN-GJ-250) or 1.0503	WKE/GF	Dimensions										
	Size	L	ØA	ØD1	L1	L2	LF	ØTK	ØD3	L3	M	Splitting
		mm										
	24	56	55	10-30	30	18	8	57	10.5	20	8x M5	8x45°
	28	65	65	15-38	35	20	10	70	11	24.5	8x M6	8x45°
	38	79	80	15-48	45	24	10	83	15.5	30	8x M8	8x45°
	42	88	95	19-500	50	26	12	95	18	32.5	12x M8	16x22,5°
	48	96	105	25-60	56	28	12	105	15	40	12x M8	16x22,5°
	55	111	120	26-70	65	30	16	120	22.8	42.5	8x M10	8x45°
	65	126	135	30-80	75	35	16	135	33	43	12x M10	16x22,5°
	75	144	160	35-90	85	40	19	160	36	55	15x M12	20x18°
	90	165	200	40-110	100	45	20	200	42.3	75	15x M16	20x18°
	100	185	225	40-110	110	50	25	225	15	62	15x M16	20x18°

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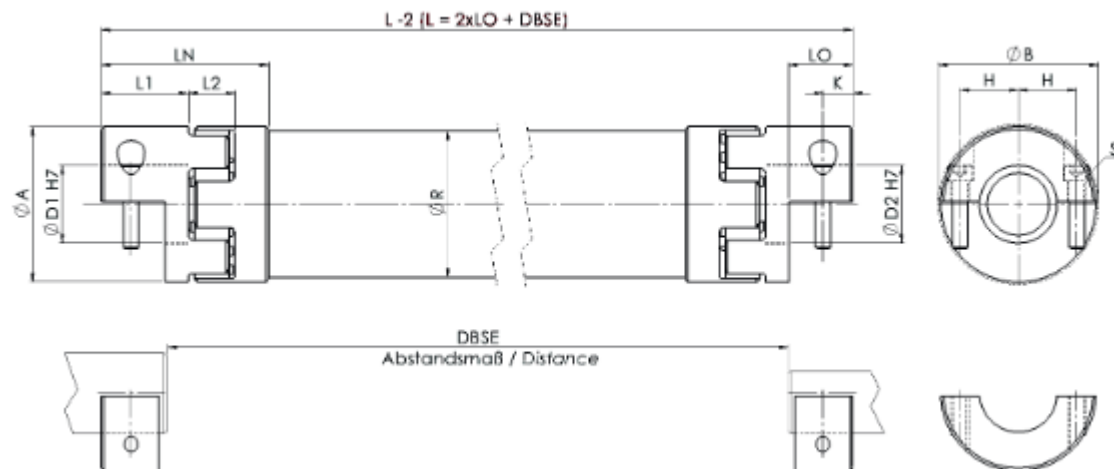
3.2.1.14. ZWKE/N



ZWKE/N		Abmessungen Dimensions									ISO 4762	Technische Daten Technical Data	
Größe Size	TKN	L	ØA	ØD1 / ØD2	L1	L2	ØR	ØB	K	H	S	TA	CT
	98 ShA											[Nm]	[Nm/rad]
	[Nm]											[Nm]	[Nm/rad]
14	12,5	80 - 2000	30	6 - 16	11	13	16	32	5	11	M3	2	510
19	17	135 - 2000	40	8 - 24	25	16	20	45,5	11	14,5	M6	19	966
24	60	160 - 2000	55	10 - 32	30	18	25	57	10,5	20	M6	19	2635
28	160	185 - 2000	65	15 - 38	35	20	30	70,5	11	24,5	M8	42	5549
38	325	230 - 2000	80	15 - 48	45	24	40	83	15,5	30	M8	42	15250
42	450	255 - 2000	95	19 - 50	50	26	40	91	18	32,5	M10	83	15250
48	525	290 - 2000	105	25 - 55	56	28	50	104	21	36	M12	145	42050

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3.2.1.15. ZWKE/HR



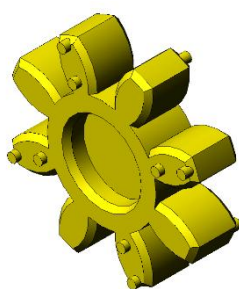
ZWKE/HR		Abmessungen Dimensions											ISO 4762	Technische Daten Technical Data	
Größe Size	TKN	L	ØA	ØD1 / ØD2	LN	LO	L1	L2	ØR	ØB	K	H	s	TA	CT
	98 ShA														
	[Nm]													[mm]	
14	12,5	85 - 3000	30	6 - 16	36	16,6	20	13	30	33	7,5	10,5	M4	5	730
19	17	135 - 3000	40	8 - 23	51,5	18,6	25	16	40	45	8,5	15,5	M5	11	1775
24	60	165 - 3000	55	10 - 32	73	32	40	18	50	58,5	15	21	M6	19	6450
28	160	205 - 3000	65	15 - 38	77,5	37	47	20	60	70	17,5	24	M8	42	11500
38	325	250 - 3000	80	15 - 46	96,5	42	55	24	75	86	20	30	M10	83	24000
42	450	265 - 3000	95	19 - 50	98	35	50	26	90	95	18	35	M10	83	58000
48	525	285 - 3000	105	25 - 60	118	52	65	28	100	105	25	38	M12	145	73000

3.3. Sprocket

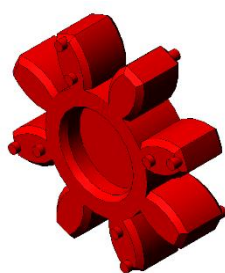
3.3.1. Function

The compensating element of the elastomer coupling is the sprocket. This transmits the torque in a vibration-damping manner. The sprocket decisively determines the properties of the complete coupling or the entire drive train.

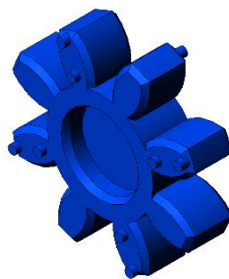
3.3.2. Properties



92 Shore A



98 Shore A



80 Shore A



64 Shore D

Shore hardness	Colour	Material	Temperature range	Properties
92 Shore A	yellow	PUR	-40 °C to +90 °C	Good cushioning
98 Shore A	red	PUR	-30 °C to +90 °C	Good cushioning
80 Shore A	blue	PUR	-50 °C to +80 °C	Very good cushioning
64 Shore D	green	PUR Hytrel	-40 °C to +120 °C	High torsional rigidity

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3.3.3. Torques and offset values during normal operation

Size	Shore hardness	Offset (max. values)			Torque [Nm]
		ΔK_a	ΔK_r	ΔK_w	
		[mm]		[°]	
5	80 Sh A	+0.4 -0.2	0.12	1.1	0.3
	92 Sh A		0.06	1	0.5
	98 Sh A		0.04	0.9	0.9
7	80 Sh A	+0.6 -0.3	0.15	1.1	0.7
	92 Sh A		0.1	1	1.2
	98 Sh A		0.06	0.9	2
	64 Sh D		0.04	0.8	2.4
9	80 Sh A	+0.8 -0.4	0.19	1.1	1.8
	92 Sh A		0.13	1	3
	98 Sh A		0.08	0.9	5
	64 Sh D		0.05	0.8	6
14	80 Sh A	+1.0 -0.5	0.21	1.1	4
	92 Sh A		0.15	1	7.5
	98 Sh A		0.09	0.9	12.5
	64 Sh D		0.06	0.8	16
19	80 Sh A	+1.2 -0.5	0.15	1.1	5
	92 Sh A		0.1	1	10
	98 Sh A		0.06	0.9	17
	64 Sh D		0.04	0.8	21
24	92 Sh A	+1.4 -0.5	0.14	1	35
	98 Sh A		0.1	0.9	60
	64 Sh D		0.07	0.8	75
28	92 Sh A	+1.5 -0.7	0.15	1	95
	98 Sh A		0.11	0.9	160
	64 Sh D		0.08	0.8	200
38	92 Sh A	+1.8 -0.7	0.17	1	190
	98 Sh A		0.12	0.9	325
	64 Sh D		0.09	0.8	405
42	92 Sh A	+2.0 -1.0	0.19	1	265
	98 Sh A		0.14	0.9	450
	64 Sh D		0.1	0.8	560
48	92 Sh A	+2.1 -1.0	0.23	1	310
	98 Sh A		0.16	0.9	525
	64 Sh D		0.11	0.8	655
55	92 Sh A	+2.2 -1.0	0.24	1	410
	98 Sh A		0.17	0.9	685
	64 Sh D		0.12	0.8	825
65	98 Sh A	+2.6 -1.0	0.18	0.9	940
	64 Sh A		0.13	0.8	1175

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3.4. Technical data

Additional information about the couplings and the sprockets can be found in our product catalogue, on our homepage or on request at RINGSPANN StS.

4. Operational planning

4.1. Operational planning

Check the delivery for damage and completeness. Report any damage and/or missing parts immediately in writing or by telephone to RINGSPANN StS GmbH.

4.2. Transport of the coupling



Serious physical injury due to improper transport

To avoid injuries of any kind, use only hoists and load handling equipment with sufficient load capacity during transport. In addition, RINGSPANN StS recommends wearing safety shoes.

4.3. Storage of the coupling



Material damage through improper storage

Negative changes in the physical properties of the coupling and/or damage to the coupling.

→ Please note the instructions for storing the coupling.

Unless expressly ordered otherwise, the coupling hubs are delivered preserved and can be stored for up to 6 months.

Under favourable storage conditions the properties of the sprockets remain unchanged for up to 5 years.

Tips on storing the coupling

→ Make sure that the storage space is dry (humidity <65 %) and dust-free.

→ Make sure that there is no condensation.

→ Do not store the coupling with corrosive chemicals, acids, alkalis, etc.

→ Make sure that there is no ozone-generating equipment in the storage room, e.g. fluorescent light sources, mercury vapour lamps or high-voltage electrical equipment.

→ Store the couplings on suitable supports or in suitable containers.

4.3.1. Long-term storage



Material damage through incorrect long-term storage

Negative changes in the physical properties of the coupling and/or damage to the coupling.

→ Please note the information on long-term storage.

1. See the following table for the required type of corrosion protection

Corrosion protection	Properties	Indoor storage	Outdoor storage
Spray oil	Corrosion inhibitors	Up to 12 months	Up to 4 months
Rust Ban 393 or similar	Long-term wax-based corrosion protection	Up to 36 months	Up to 12 months
Emulsion cleaner + VCI film	Casting system, reusable	Up to 5 years	Up to 5 years

2. Remove the elastomer components. These must not come into contact with cleaning agents and long-term preservatives.
3. Clean the coupling parts.
4. Apply the specified preservation.
5. Store the coupling parts and the elastomer components separately.

5. Assembling



Instructions for assembling the coupling

- Use only undamaged components for assembling the coupling.
- Keep to the assembly sequence.
- To ensure that the coupling is installed without danger, ensure that there is sufficient space and the installation site is tidy and clean.
- If a dimensional drawing was created for the coupling, give priority to the entries in this.
- We recommend checking the holes, shaft, groove and key for dimensional accuracy before assembly.
- Be aware of the risk of ignition in areas subject to explosion hazards!



5.1. Overview of the preparatory work

Preparatory work is not necessary, as the coupling is delivered drilled, grooved and balanced.

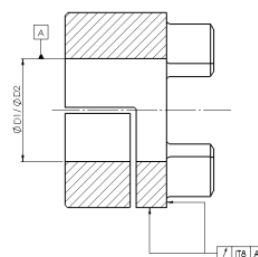
The balancing is carried out according to customer requirements or according to the half-key agreement (DIN ISO 21940-32) with balancing quality G16 (DIN ISO 1940).

5.2. Notes on the finished bore



The maximum permissible bore diameters $\varnothing D1/\varnothing D2$ (see product catalogue) must not be exceeded. If these values are not adhered to, the coupling may break. Flying fragments pose a danger to life.

- When the hub bore is manufactured by the customer, the concentricity or axial running accuracy must be observed.
- Be sure to adhere to the values for $\varnothing D1/\varnothing D2$.
- Align the hubs carefully when inserting the finished bore.





The buyer bears sole responsibility in the case of all subsequent processing that they carry out on undrilled or pre-drilled, as well as finished coupling and spare parts.

RINGSPANN StS GmbH shall not be liable for warranty claims arising from improperly carried out rework.

RINGSPANN StS GmbH only supplies undrilled or pre-drilled coupling and spare parts at the express request of the customer. These parts are also marked with the symbol .

Size	19	24	28	38	42	48	55	65	75	90	100
Thread	M5	M5	M8	M8	M8	M8	M10	M10	M10	M12	M12
Clearance	10	10	15	15	20	20	20	20	25	30	30
TA	2	2	10	10	10	10	17	17	17	40	40

Recommended fit pairings according to DIN 748/1

Bore [mm]		Shaft tolerance	Bore tolerance
Over	To		
	50	k6	H7 (Standard)
50		m6	

If a keyway is provided in the hub, it must be designed with the tolerance field ISO JS9 (standard) under normal operating conditions and with ISO P9 in difficult operating conditions (frequently changing direction of rotation, shock load, etc.). The keyway should be preferably attached between the cams.

The customer must check the transmittable torque of the shaft-hub connection and it is their responsibility.

5.3. Mounting the coupling

5.3.1. WKE/G

1. Unscrew the set screws so that a collision with the key or shaft is no longer possible.
2. Clean the bores and shaft ends.
3. Tighten the coupling hubs onto the shaft ends with a suitable device and bring them into the correct axial position.
4. Secure the coupling part with the set screws. The shaft must not protrude or stand back on the inside of the hub.
5. Tighten the set screws with the specified tightening torque TA.
6. If you have removed the sprocket, reinsert it.
7. Move the clamping hubs in the axial direction until the L2 dimension is reached.

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5.3.2. WKE/N + WKE/NK + ZWKE/N

1. Loosen the cylinder screws.
2. Clean the bores and shaft ends.
3. Tighten the coupling hubs onto the shaft ends with a suitable device and bring them into the correct axial position.
4. The shaft must not protrude or stand back on the inside of the hub.
5. Tighten the cylinder screws with the specified tightening torque TA.
6. If you have removed the sprocket, reinsert it.
7. Move the clamping hubs in the axial direction until the L2 dimension is reached.

5.3.3. WKE/H + ZWKE/HR

1. Remove the half-shells from the base body.
2. Plug the hub base bodies together with the sprocket.
3. Place the assembled unit with the half shells and the clamping screws on the shaft ends of the drive and driven machine.
4. First, screw the parts together by hand until the hub base bodies with the half shells are firmly attached to the shaft.
5. Secure the clamping hub by alternating the cylinder screws. Tighten the cylinder screws alternately in several stages up to the specified tightening torque TA.

5.3.4. WKE/ND

1. Loosen the cylinder screw and the expansion mandrel
2. Clean, degrease/de-oil and dry the hollow shaft bore and the clamping seat of the clamping hub with expansion mandrel.
3. Insert the expansion hub with cylinder screw into the hollow shaft with the expansion mandrel.
4. Tighten the cylinder screw with the specified tightening torque TA.
5. If you have removed the sprocket, reinsert it.
6. Move the hubs in the axial direction until the L2 dimension is reached.

5.3.5. WKE/S + WKE/SL

1. Loosen the cylinder screws.
2. Clean the bores and shaft ends.
3. Assemble the coupling halves and bring them into the correct axial position.
4. The shaft must not protrude or fall short on the inside of the hub.
5. Tighten the cylinder screw crosswise in several stages up to the specified tightening torque.
6. Replace the sprocket
7. Move the coupling halves in the axial direction until the L2 dimension is reached.

5.3.6. WKE/RF

1. Clean the bores and shaft ends.
2. Tighten the coupling hubs onto the shaft ends with a suitable device and bring them into the correct axial position.
3. Secure the coupling part. The shaft must not protrude or fall short on the inside of the hub.
4. If you have removed the sprocket, reinsert it.
5. Move the clamping hubs in the axial direction until the L2 dimension is reached.

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5.3.7. WKE/H-DK

1. Remove the half-shells from the base body.
2. Insert the hub base bodies together with the sprockets and the spacer.
3. Place the assembled unit with the half shells and the clamping screws on the shaft ends of the drive and driven machine.
4. First, screw the parts together by hand until the hub base bodies with the half shells fit closely to the shaft.
5. Move the clamping hubs in the axial direction until the L2 dimension (see *Table 3.2.1*) is reached.
6. Secure the clamping hub by alternating the clamping screws. Tighten the screws with a suitable torque wrench to the tightening torques TA given in the table (see *Table 3.2.1*).
7. Align the sprockets centrally between the clamping hubs and the centre piece and check the L2 dimension (failure to observe the L2 dimension may damage the coupling).

5.3.8. WKE/HF

1. Remove the half-shell from the base body.
2. Mount the clamping hub with the half shell and the clamping screws on the shaft end of the drive unit or driven machine.
3. Secure the hub by tightening the clamping screws until it fits closely to the shaft.
4. Place the driving flange in front of the flange of the drive unit or driven machine
5. First, tighten the parts by hand.
6. Tighten the screws with a suitable torque wrench to the tightening torques TA given in the table.
7. Insert the hub base body together with the sprocket and the flange.
8. Align the sprocket centrally between the clamping hub and the flange and check the L2 dimension (see *Table 3.2.1*.) (failure to observe the L2 dimension may damage the coupling).

5.3.9. WKE/GF

1. Mount the clamping hub with the set screws on the shaft end of drive unit or driven machine.
2. Secure the hub by tightening the threaded screws until it fits closely to the shaft.
3. Place the driving flange in front of the flange of the drive unit or driven machine.
4. First, tighten the parts by hand.
5. Tighten the screws with a suitable torque wrench to the tightening torques TA given in the table.
6. Insert the hub base body together with the sprocket and flange.
7. Align the sprocket centrally between the clamping hub and the flange and check the L2 dimension (see *Table 3.2.1*.) (failure to observe the L2 dimension may damage the coupling).

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5.4. Aligning the coupling

5.4.1. Purpose of aligning

The shafts connected by the coupling are never on an ideally accurate axis, but have a certain offset.

Offset in the coupling leads to resetting forces that can put undue strain on the adjacent machine parts (e.g. the bearing).

The offset values during operation result from the following:

- Assembly-related offset
Misalignment due to inaccuracy in alignment
- Operational offset
e.g.: load-related deformation, thermal expansion

By aligning after mounting, you minimize offset. Low misalignment in the coupling has the following advantages:

- Reduced wear of the elastomer components
- Reduced reset forces
- Offset reserves for the operation of the coupling

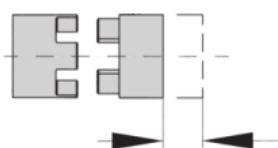


To ensure a long life of the coupling and avoid hazards when used in areas subject to explosion hazards, the shaft ends must be precisely aligned. Be sure to comply with the specified displacement values. If the values are exceeded, the coupling will be damaged.

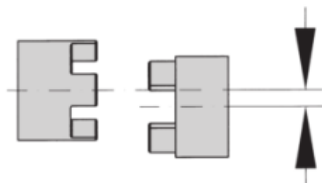
The more precisely the coupling is aligned, the longer its service life. When used in areas subject to explosion hazards for explosion group IIC (marking II 2GD c IIC T X), only half the displacement values are permissible.

5.4.2. Possible offsets

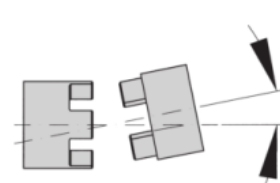
axial
 ΔK_a



radial
 ΔK_r



angled
 ΔK_w



On page 8 you will find max. permissible guideline values for the individual offset types. They offer security against operational influences, such as thermal expansions and or subsidence of foundations.

If multiple offset types occur at the same time, the max. permissible offset values must be reduced. The total actual offsets as a percentage of the maximum value may not exceed 100%.



Precise alignment of the elastomer couplings significantly increases the service life of the sprockets. The loads on the adjacent bearings are reduced and the smoothness of the entire drive train is positively influenced. For drives with very high speeds, we recommend aligning the elastomer coupling with a dial gauge.

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6. Startup

Carry out various tests beforehand to ensure a safe startup.

When used in hazardous areas, all screw connections must also be secured against self-loosening, e.g. gluing with Loctite (medium-strength).



6.1. Tests before startup



Danger

Overload conditions can occur during the startup of the coupling.

The coupling can burst and metal parts can be blown off.

Flying fragments pose a danger to life.

→ Perform the tests before startup.

→ Do not touch the rotating coupling.

→ Remove the cover only allowed when the coupling is stationary.

1. Check the bolt tightening torques of the coupling according to tightening torques and spanner sizes (see product catalogue)
2. Check the tightening torques of the foundation screws of the coupled machines.
3. Check the distance L2 of the coupling (see product catalogue) and correct it if necessary.
4. Check that the housings (coupling protection, contact protection) are mounted and that the function of the coupling is not impaired by the housing. This also applies to the test runs and rotation direction checks.

6.2. Guard

The cover must be electrically conductive and included in the equipotential bonding.

Aluminium pump supports (magnesium content less than 7.5%) and damping rings (NBR) are approved as connecting elements between the pump and the electric motor. The cover may only be removed when the coupling is stationary.



When using the coupling in areas at risk of dust explosion, the operator must ensure that dust does not accumulate **in dangerous quantities** between the cover and the coupling.

The coupling must not run in a dust fill.

For covers with unsealed openings in the top, light metals should not be used if the couplings are used as devices of device group II (preferably made of stainless steel).

The minimum distance "Sr" of the guard for parts to be rotated must be at least the values mentioned below.

If the protective device is designed as a cover, regular openings can be arranged from the point of view of explosion protection, which must not exceed the following dimensions:

Openings	Cover [mm]		
	Top	Sides	Spacing "Sr"
Circular – max. diameter	4	8	≥ 10
Rectangular – side length	4	8	≥ 10
Straight or curved slot – max. side length/height	Not permitted	8	≥ 20

6.3. Coupling coating



If coated (primer, paints, ...) couplings are used in hazardous areas, the requirements for conductivity and layer thickness must be observed. For paint applications up to 200 µm, an electrostatic charge is not to be expected. Multiple applications with layer thicknesses of more than 200 µm for explosion group IIC are not permitted.

7. Operations

7.1 Normal operation of the coupling

In normal operation, the coupling runs quietly and vibration-free.

7.2 Fault – causes and remedy

Behaviour that deviates from normal operation is a fault and must be rectified immediately.

During the operation of the coupling, pay attention to the following:

- Changed running noises
- Sudden shocks/vibrations

7.2.1 What to do in the event of malfunctions



Danger of bursting the coupling

Flying fragments pose a danger to life.

- Shut the system down immediately in the event of malfunctions.
- When carrying out repair work, please note the possible causes of the fault and the instructions for remedying faults.

If there is a fault in the coupling during operation, follow these steps:

1. Switch off the drive immediately.
2. Initiate the necessary repair measures in compliance with the applicable safety regulations.

If you cannot determine the cause or cannot carry out the repair with your own resources, please contact us.

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7.2.2 Identify the cause of the fault

Faults often occur due to application errors, or they are caused by operational reasons due to wear and tear of wear parts or changes to the system.
The faults and causes of faults listed below are only indications for troubleshooting. In the case of a complex system, involve all components of the system in troubleshooting.



Bodily injury

Injury caused by rotating parts.

- Carry out work on the coupling only when it is stationary.
- Secure the drive unit against unintentional startup.
- Attach a sign to the switch-on point indicating that work is being done on the coupling.
- Before starting work, make sure that the system is idle.

The coupling is only approved for the areas of application specified in this manual. Follow the guidelines in the section on intended use (s. 2.2).



Improper use can turn the coupling into an ignition source.

EU Directive 2014/34/EU requires special care from the manufacturer and user.



Proper operation in the sense of explosion protection or EU Directive 2014/34/EU is not guaranteed if operated with a worn sprocket and subsequent contact of metal parts.

7.2.3 Possible causes

- Unsuitable coupling
- Assembly-related causes
- Maintenance-related causes
- Specific assembly and maintenance-related causes

7.2.4 Rectifying faults

- Replace worn parts
- Correct a changed orientation

8. Service

8.1 Maintenance intervals



Risk of injury due to coupling rupture

The coupling can burst if the maintenance intervals are not complied with. Flying fragments pose a danger to life.

- Observe all maintenance requirements in this section.



Risk of injury due to coupling bursting

If the maximum permissible backlash is exceeded, the coupling can burst. Flying fragments pose a danger to life.

→ Check the actual wear and tear of the sprocket as well.



Bodily injury caused by rotating parts

→ Carry out work on the coupling only when it is stationary.

→ Secure the drive unit against unintentional startup.

→ Attach a sign to the switch-on point indicating that work is being done on the coupling.

→ Before starting work, make sure that the system is idle.

Check the backlash between the coupling parts at the specified service intervals.

- For backlash-free applications, wear and tear on the sprocket is not permitted. As soon as you notice backlash, replace the sprocket.
- For other applications, you can find the maximum permissible backlash for the different types in the section "Maximum permissible backlash" (8.2).

Service intervals

Initial service	Follow-up service
3 months after startup	Every 12 months

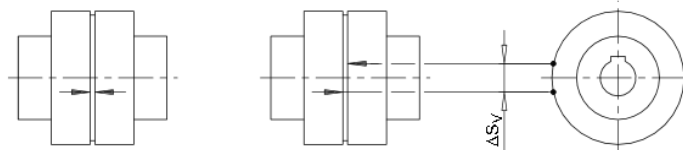


→ If necessary, set tighter maintenance intervals according to the actual wear detected.

→ After the first startup of the coupling, check the tightening torques of the screws at normal service intervals.

8.2 Maximum permissible backlash

To determine the backlash, turn a coupling part to the limit without torque. Apply a mark to both halves of the coupling according to the illustration below. Turn the coupling part in the opposite direction until it stops. As a result, the markings move apart. The distance between the markings results in the backlash.



Size	5	7	9	14	19	24	28	38	42	48	55	65	75	90	100
Max. permissible backlash ΔS_v [mm]	0.4	0.6	1	1	1	1.3	1.7	2	2.4	2.7	3	3.3	3.6	4	4.2

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8.3 Replacing wear parts



Danger of the coupling bursting

If you do not follow the specifications for replacing the coupling parts given here, this may cause the coupling to burst during operation. There is a danger to life due to flying fragments.

→ Observe all specifications for replacing the coupling parts.

Replace the sprocket when the maximum allowable backlash is reached.

Procedure

1. Secure the coupling against falling.
2. Move the coupled machines apart.
3. If available, remove the spacer radially.
4. Remove the sprocket/sprockets.
5. Insert a new sprocket or sprockets. Please note the information in the section "Use and storage of the sprockets" (4.3.).

When reassembling the coupling parts, observe the instructions in the chapters "Assembly" (5.3.) and "Startup" (6.).

8.4 Disassemble the coupling part (hub)

Procedure

1. Secure the coupling against falling.
2. Move the coupled machines apart.
3. If available, remove the spacer radially.
4. Secure the coupling parts against falling.
5. Loosen the cylinder screw or threaded screws
6. Disconnect the coupling hub or flange. Use appropriate lifting equipment.
7. Check the coupling hub, flange and/or spacer and shaft for damage and protect from corrosion.
8. Replace damaged parts.

When reassembling the coupling parts, observe the instructions in the chapters "Assembly" (5.3.) and "Startup" (6.).

9. Service and Support

Contact

For spare parts orders or technical questions, please contact us.

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10. Disposal

Disposing of the coupling

Dispose of the coupling parts in accordance with applicable national regulations or recycle them.

11. Spare parts

11.1

To ensure the operational readiness of the coupling, keep important spare parts in stock at the installation site.



Original spare parts

Only use original spare parts from RINGSPANN StS GmbH. RINGSPANN StS GmbH only assumes liability for original spare parts. Other spare parts are not approved by RINGSPANN StS.

Spare parts may alter the design characteristics of the coupling and thus impair active and/or passive safety.

If spare parts that have not been approved are used, all liability and warranty on the part of RINGSPANN StS expires. The same applies to any accessories not supplied by RINGSPANN StS.

Information when ordering spare parts

- StS order number with item
- StS drawing number (if available)
- Coupling design and coupling size
- Part number (3.2.2)
- Dimensions of the spare part (e.g. bore, bore tolerance, keyway, balancing, ...)
- Special dimensions (e.g. flange connection dimensions, intermediate sleeve length or brake drum dimensions)
- Any special features of the spare part (e.g. temperature resistance, electrical insulation, operating fluid, use in areas subject to explosion hazards)
- Number of units

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12. Annex 1

12.1 Intended use in hazardous areas



RINGSPANN StS elastomer couplings are suitable for use in accordance with EU Directives 2014/34/EU.

12.2 Example of marking

		Device group	Category	Ignition protection type	Explosion group	Temperature data	Device protection level
CE		II	2G	Ex h	IIC	T6 ... T4	Gb
		II	2D	Ex h	IIIC	T80 °C ... T120°C	Db
		-30 °C ≤ Ta ≤ +60 °C ... +90 °C					
Operating/ambient temperatures							

Device group	Meaning
I	Approved for underground operation
II	Approved for all other areas of application

Category	Approved for zone	Zone description
1G	0	Area in which explosive atmospheres are present as a mixture of air and flammable gases, vapours or mists constantly, for long periods of time or frequently.
2G	1	Area in which an explosive atmosphere can form as a mixture of air and flammable gases, vapours or mists during normal operation.
3G	2	Area in which an explosive atmosphere as a mixture of air and flammable gases, vapours or mists normally does not occur or only occurs for a short time during normal operation.
1D	20	Area with conditions such as Zone 0, with air-dust atmosphere.
2D	21	Area with conditions such as Zone 1, with air-dust atmosphere.
3D	22	Area with conditions such as Zone 2, with air-dust atmosphere.

(Device category: G = Gas | D = Dust)

Ignition protection type	Description
Ex h	Constructive safety: the risk of ignition is avoided by the design of the device.

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Temperature class / max. surface temperature	IIA	IIB (includes IIA)	IIC (includes IIA + IIB)
T1 / 450°C	Acetone, ammonia, methane	Town (illuminating) gas	Hydrogen
T2 / 300°C	Ethyl alcohol, n- butane, cyclohexane	Ethylene, ethylene oxide	Ethin /Acetylene)
T3 / 200°C	Petrol, heating oil, diesel fuel	Ethyl glycol, hydrogen sulphide	
T4 / 135°C	Acetaldehyde	Ethyl ether	
T5 / 100°C			
T6 / 85°C			Carbon disulphide

Device protection level in accordance with IEC 60079	Significance
Ga	Very high level of protection
Gb	High level of protection
Gc	Extended level of protection
Da	Very high level of protection
Db	High level of protection
Dc	Extended level of protection

Additional marking	Significance
X	Special conditions of use (from description)
U	The part is a component. Conformity must be declared after installation in a device.

12.3 Elastomer couplings

with keyway

CE		II	2G	Ex h	IIC T6 ... T4	Gb
		II	2D	Ex h	IIIC T80 °C ... T110 °C	Db
		-30 °C ≤ Ta ≤ +60 °C ... 90 °C				

without keyway

CE		II	3G	Ex h	IIC T6 ... T4	Gb
		II	3D	Ex h	IIIC T80 °C ... T110 °C	Db
		-30 °C ≤ Ta ≤ +60 °C ... 90 °C				

All dimensions and materials of the standard models are largely retained.

ATEX elastomer couplings are equipped with sprockets in versions 64 ShD, 80 ShA, 92ShA or 98ShA. Their conductivity prevents electrostatic charging and the resulting sparking.

The design corresponds to all permissible offset values, speeds and transmittable torques of the standard coupling.

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For other safety reasons, such as machinery directives, ATEX elastomer couplings may only be operated in an enclosed housing. Input and output sides must be monitored to ensure immediate shutdown in the event of a cam breakage.

12.4 Permissible materials in the Ex area

The following materials may be combined in explosion groups **IIA**, **IIB** and **IIC**:

- EN-GJL-250 (GG 25)
- EN-GJS-400-15 (GGG 40)
- Steel
- Stainless steel

Semi-finished aluminium products with a magnesium content of up to 7.5% and a yield strength of $R_{p0.2} \geq 250 \text{ N/mm}^2$ are approved for areas with areas subject to explosion hazards.

Aluminium die-casting is generally excluded for the areas with areas subject to explosion hazards. Ex coupling marking for areas with areas subject to explosion hazards
Couplings for use in areas with areas subject to explosion hazards are marked complete for the respective permissible operating conditions on at least one component, and marked by an Ex mark on the outer diameter of the hub or on the front side of the other components. The elastic sprocket is **not** marked.

- The marking with explosion group IIC includes explosion groups IIA and IIB.

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12.5 EU Declaration of Conformity

EU Declaration of Conformity

*within the meaning of EU Directive 2014/34/EU of 26.02.2014
and with the legislation adopted for its implementation*

The manufacturer RINGSPANN StS GmbH, D-63843 Niedernberg - declares that the

WKE Elastomer Couplings

described in this operating/assembly manual and realised with explosion-proof designs

are devices within the meaning of Article 2, 1 of Directive 2014/34/EU
and meet the essential safety and health requirements set out in Annex II of Directive 2014/34/EU.

The coupling referred to here meets the requirements of the following standards/directives:

DIN EN 1127-1
EN ISO 80079-36
EN ISO 80079-37
CLC/TR 50404

The WKE coupling complies with the requirements of Directive 2014/34/EU.

Can be used in:  II 2GD c IIC T X/I M2 c X

StS Coupling GmbH, as the manufacturer, also declares compliance with the new
requirements of the new standard editions for the above-mentioned product.

In accordance with Article 13 (1) b) ii of Directive 2014/34/EU, the technical documentation
is deposited with the notified body. Deposit number 097/19_E1

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Place

28.07.2026
Date

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