

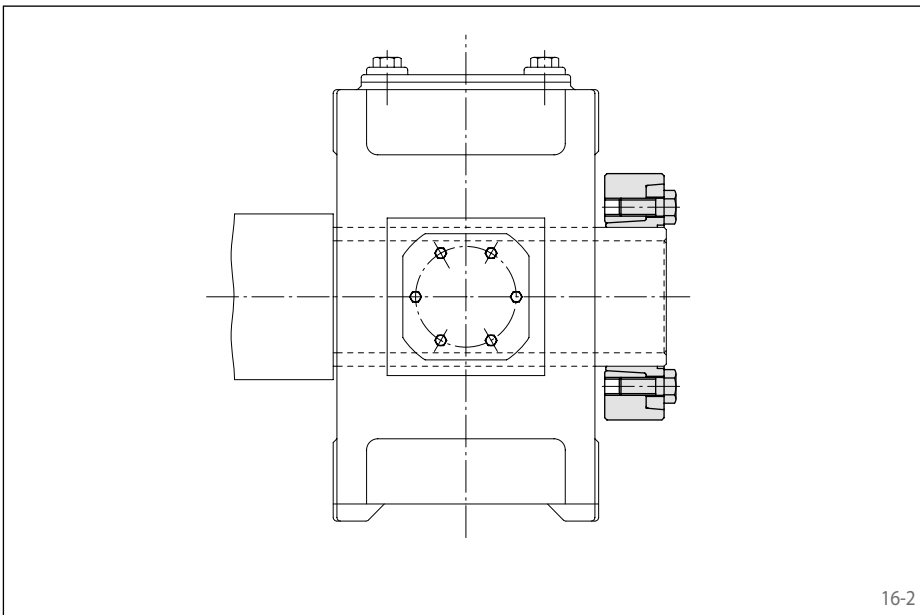
two-part design  
high torque capacity



16-1

## Features

- High torque capacity
- Transmissible torque of 70 Nm up to 4025 000 Nm
- Easy, quick assembly by tightening clamping screws without a torque wrench
- Distance-controlled assembly ensures guaranteed transmissible torques
- Enclosed design, therefore impervious to dirt
- True running even at high speeds
- Centres the hollow shaft or hub to the shaft
- For hollow shafts or hubs with outer diameters of 16 mm up to 620 mm



16-2

## Application example

Backlash free connection of a hollow-shaft gearbox to a machine shaft with a Shrink Disc RLK 608 E. The backlash free connection reduces the risk of fretting corrosion. As a result, the connection can be easily disassembled even after long periods of operation.

## Transmissible torques and axial forces

The transmissible torques or axial forces listed on the following two pages are subject to the following tolerances, surface characteristics and material requirements. Please contact us in the case of deviations.

### Tolerances

$d_w$		Hollow shaft bore ISO	Shaft ISO	Joint clearance	
> mm	≤ mm			min. mm	max. mm
10	18	H7	h6	0	0,029
18	30			0	0,034
30	50			0	0,041
50	80			0	0,049
80	120			0	0,057
120	160			0	0,065
160	180	H7	g6	0,014	0,079
180	250			0,015	0,090
250	315			0,017	0,101
315	400			0,018	0,111
400	500			0,020	0,123
500	630			0,022	0,136

Other fits may be selected, provided the joint clearance between the shaft and the hollow shaft remains within the indicated ranges.

### Surfaces

Average surface roughness at the contact surfaces between the shaft and the hollow shaft  $R_z = 10 \dots 25 \mu\text{m}$ .

### Materials

The following apply to the shaft and the hollow shaft:

- Yield strength  $R_e \geq 360 \text{ N/mm}^2$
- E-module ca.  $206 \text{ kN/mm}^2$

## Installation

Please request our installation and operating instructions for Shrink Discs RLK 608 E.

## Simultaneous transmission of torque and axial force

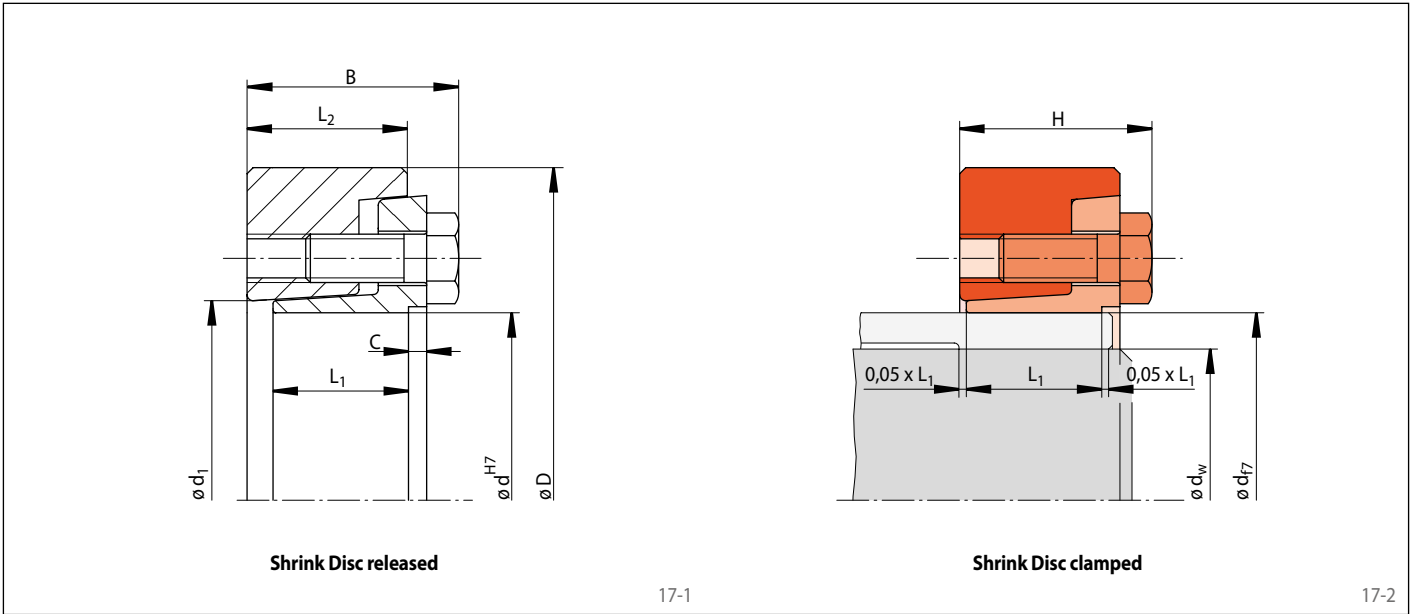
The transmissible torques  $M$  which are shown in the tables apply for axial forces  $F = 0 \text{ kN}$  and conversely, the indicated axial forces  $F$  apply to torques  $M = 0 \text{ Nm}$ . If torque and axial force are to be transmitted simultaneously, the transmissible torque and the transmissible axial force are reduced. Please refer to the technical points on page 35.

## Example for ordering

Shrink Disc RLK 608 E for hollow shaft with an outer diameter  $d = 155 \text{ mm}$ :

- RLK 608-155 E  
Article number 4200-155801-E00000

two-part design  
high torque capacity

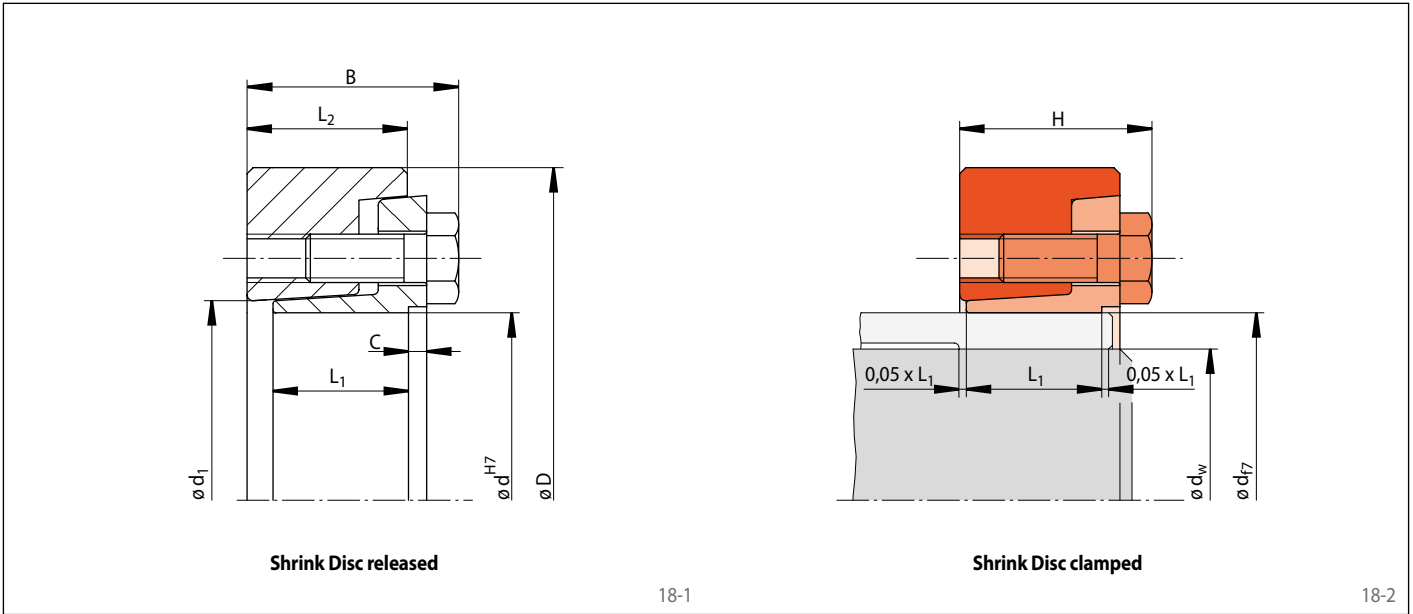


Dimensions									Technical Data					Article number	
Size d mm	D mm	d <sub>1</sub> mm	B mm	L <sub>1</sub> mm	L <sub>2</sub> mm	C mm	H mm	d <sub>w</sub> * mm	Transmissible torque or axial force**		Clamping screws				Weight
									M Nm	F kN	Number	Size	Length mm	kg	
16	41	16,8	19,6	12,5	14,5	1	18,5	13 14	70 90	11 13	3	M 6	12	0,1	4200-016801-E00000
18	44	18,8	19,6	12,5	14,5	1	18,5	15 16	90 125	12 16	4	M 6	12	0,2	4200-018801-E00000
24	50	25,7	22,5	15,1	17	1	21,0	19 20 22	180 235 310	19 24 28	5	M 6	16	0,2	4200-024801-E00000
30	60	32	25	16,5	19	2	23,0	24 25 26	370 420 465	31 34 36	6	M 6	16	0,3	4200-030801-E00000
36	72	38	28	18	20,5	2	25,8	27 30 33	600 790 1000	45 53 61	5	M 8	20	0,5	4200-036801-E00000
44	80	47	30	20	22,5	2	27,8	34 35 37	830 900 1050	49 52 57	6	M 8	20	0,6	4200-044801-E00000
50	90	53	33	22	24,5	2	29,8	38 40 42	1540 1750 1980	81 88 95	8	M 8	20	0,8	4200-050801-E00000
55	100	58	35	23	26,5	3	31,8	42 45 48	1800 2190 2580	88 98 108	8	M 8	20	1,1	4200-055801-E00000
62	110	66	35	23	26,5	3	31,8	48 50 52	2590 2850 3150	108 115 121	9	M 8	20	1,3	4200-062801-E00000
68	115	72	35	23	26,5	3	31,8	50 55 60	2680 3390 4180	107 123 139	9	M 8	20	1,4	4200-068801-E00000
75	138	79	40	25	29	3	35,4	55 60 65	4390 5400 6500	160 180 200	10	M 10	25	2,4	4200-075801-E00000
80	141	84	40	25	29	3	35,4	60 65 70	4590 5560 6600	153 171 189	10	M 10	25	2,4	4200-080801-E00000
90	155	94	46	30	35	4	41,4	65 70 75	6140 7300 8600	189 210 230	10	M 10	30	3,4	4200-090801-E00000
100	170	104	51	34	40	5	46,4	70 75 80	7850 9250 10780	224 245 270	12	M 10	30	4,6	4200-100801-E00000
110	185	114	59	39	46	6	53,5	80 85 90	14000 16000 18300	350 379 405	12	M 12	35	6,2	4200-110801-E00000
120	200	124	63	42	49	6	56,5	85 90 95	15300 17500 19900	360 390 410	12	M 12	35	7,7	4200-120801-E00000

\* The shaft diameters d<sub>w</sub> listed in the table are selected examples. For other shaft diameters d<sub>w</sub> see the technical specifications on page 35.

\*\* Torques and axial forces are calculated with a friction coefficient of 0.15 between hollow shaft and shaft. This friction coefficient is achieved due to the state of the art for clean and dry joints of two steel materials.

two-part design  
high torque capacity

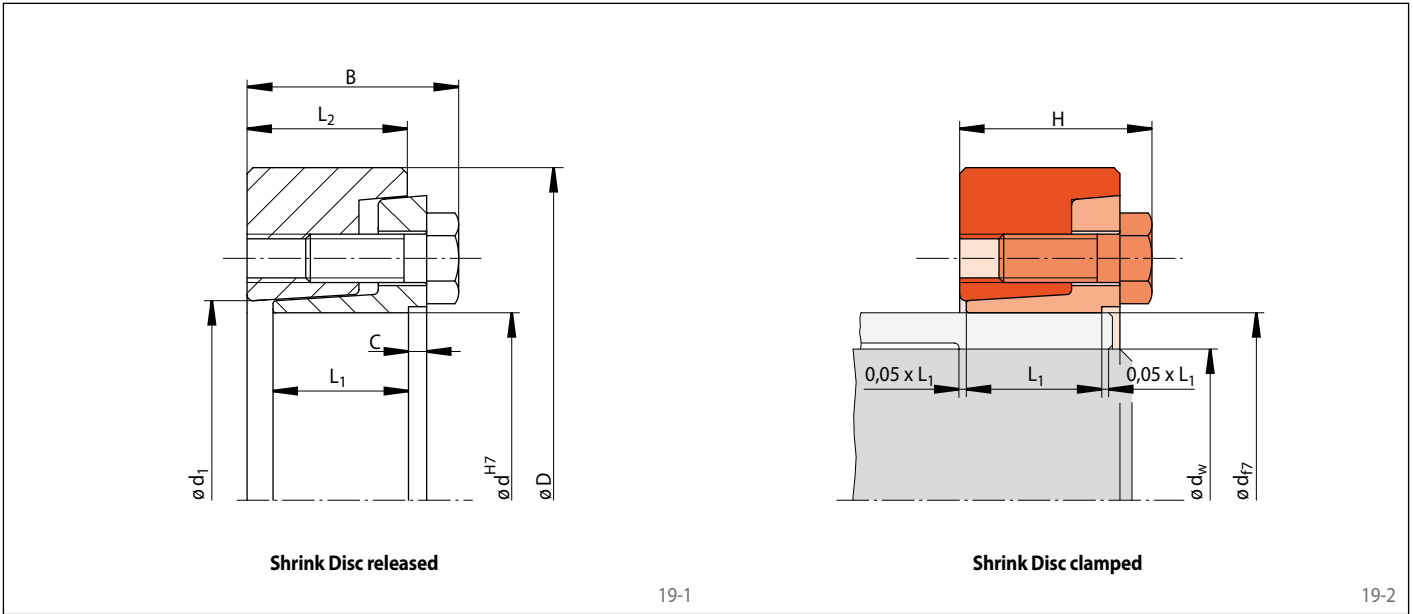


Dimensions									Technical Data					Article number	
Size d mm	D mm	d <sub>1</sub> mm	B mm	L <sub>1</sub> mm	L <sub>2</sub> mm	C mm	H mm	d <sub>w</sub> * mm	Transmissible torque or axial force**		Clamping screws				Weight kg
									M Nm	F kN	Number	Size	Length mm		
125	215	132	63	42	49	6	56,5	90	17050	380	12	M 12	35	9,2	4200-125801-E00000
								95	19300	405					
								100	21800	430					
130	230	139	68	46	53	6	60,5	95	22900	480	14	M 12	35	11,7	4200-130801-E00000
								100	25700	515					
								110	32000	580					
140	230	144	71	46	53	6	61,8	100	23900	475	12	M 14	40	10,8	4200-140801-E00000
								105	26750	510					
								115	32800	570					
150	263	159	75	50	57	6	65,8	110	31750	575	12	M 14	40	16,3	4200-150801-E00000
								115	35100	610					
								125	42300	675					
155	263	159	75	50	57	6	65,8	110	32200	585	12	M 14	40	15,8	4200-155801-E00000
								115	35600	620					
								125	42900	685					
160	290	169	82	56	63	6	73,0	120	50300	835	12	M 16	50	22,6	4200-160801-E00000
								125	55100	880					
								135	65200	965					
165	290	169	82	56	63	6	73,0	120	50600	840	12	M 16	50	22,0	4200-165801-E00000
								125	55400	880					
								135	65500	970					
170	300	179	82	56	63	6	73,0	130	54500	835	12	M 16	50	23,6	4200-170801-E00000
								135	59300	875					
								145	69500	960					
175	300	179	82	56	63	6	73,0	130	55100	845	12	M 16	50	22,9	4200-175801-E00000
								135	60000	885					
								145	70250	970					
180	320	191	99	72	79	6	89,0	140	86400	1230	16	M 16	50	33,9	4200-180801-E00000
								145	93300	1280					
								155	108000	1390					
185	320	191	99	72	79	6	89,0	140	84900	1210	16	M 16	50	33,0	4200-185801-E00000
								145	91800	1260					
								155	106300	1370					
190	320	195	100	71	79	7	89,0	150	81600	1080	16	M 16	50	33,0	4200-190801-E00000
								155	87800	1100					
								165	100900	1220					
195	340	206	100	71	79	7	89,0	150	94300	1250	16	M 16	50	37,6	4200-195801-E00000
								155	101400	1300					
								165	116400	1400					
200	340	206	100	71	79	7	89,0	150	95300	1270	16	M 16	50	36,6	4200-200801-E00000
								155	102400	1320					
								165	117500	1425					
220	370	228	121	87	95	7	107,5	160	141600	1770	16	M 20	60	51,6	4200-220801-E00000
								170	161500	1900					
								180	182600	2000					
240	405	248	127	92	100	7	112,5	170	167600	1970	18	M 20	60	65,3	4200-240801-E00000
								180	189700	2100					
								200	237900	2380					

\* The shaft diameters d<sub>w</sub> listed in the table are selected examples. For other shaft diameters d<sub>w</sub> see the technical specifications on page 35.

\*\* Torques and axial forces are calculated with a friction coefficient of 0.15 between hollow shaft and shaft. This friction coefficient is achieved due to the state of the art for clean and dry joints of two steel materials.

two-part design  
high torque capacity



Dimensions									Technical Data				Article number		
Size	D	d <sub>1</sub>	B	L <sub>1</sub>	L <sub>2</sub>	C	H	d <sub>w</sub> *	Transmissible torque or axial force**		Clamping screws			Weight	
d mm	mm	mm	mm	mm	mm	mm	mm	mm	M Nm	F kN	Number	Size	Length mm	kg	
260	430	268	137	102	110	7	122,5	190	218 500	2 300	21	M 20	60	79,1	4200-260801-E00000
								200	244 500	2 440					
								220	300 900	2 725					
280	460	288	150	115	123	7	135,5	210	297 300	2 830	22	M 20	60	100,0	4200-280801-E00000
								220	329 100	2 990					
								240	397 500	3 300					
300	485	308	160	122	131	8	146	220	342 100	3 110	20	M 24	80	117,3	4200-300801-E00000
								230	376 500	3 270					
								250	450 300	3 600					
320	520	328	156	116	125	8	140	240	411 300	3 430	18	M 24	80	129,5	4200-320801-E00000
								250	449 000	3 590					
								270	529 300	3 920					
340	570	347	168	127	136	8	151	250	500 100	4 000	20	M 24	80	175,5	4200-340801-E00000
								260	544 000	4 190					
								280	637 500	4 550					
360	590	369	174	133	142	8	157	270	582 000	4 310	20	M 24	80	191,3	4200-360801-E00000
								280	629 600	4 500					
								300	730 600	4 870					
390	650	400	195	146	153	6	175	290	794 100	5 480	18	M 27	100	255,1	4200-390801-E00000
								300	853 200	5 690					
								320	977 800	6 110					
420	670	427	211	160	167	6	189	320	967 900	6 050	18	M 27	80	280,6	4200-420801-E00000
								330	1 034 000	6 270					
								350	1 172 000	6 700					
440	725	449	225	173	180	6	202	340	1 213 000	7 140	21	M 27	100	368,5	4200-440801-E00000
								350	1 291 000	7 370					
								370	1 453 000	7 850					
460	745	468	228	173	180	6	202	360	1 416 000	7 870	21	M 27	100	381,1	4200-460801-E00000
								370	1 500 000	8 110					
								390	1 676 000	8 600					
480	780	490	251	195	202	6	226	380	1 679 000	8 840	20	M 30	110	470,8	4200-480801-E00000
								390	1 775 000	9 100					
								410	1 973 000	9 630					
500	835	511	252	195	202	6	226	400	1 891 000	9 460	21	M 30	110	557,0	4200-500801-E00000
								410	1 993 000	9 720					
								430	2 205 000	10 300					
530	870	542	271	209	216	6	240	430	2 432 000	11 300	24	M 30	120	633,9	4200-530801-E00000
								440	2 553 000	11 600					
								460	2 804 000	12 200					
560	900	573	276	214	221	6	245	450	2 542 000	11 300	24	M 30	120	676,4	4200-560801-E00000
								460	2 664 000	11 600					
								480	2 915 000	12 100					
590	950	604	295	230	238	6	262	470	3 011 000	12 800	28	M 30	130	813,5	4200-590801-E00000
								480	3 148 000	13 100					
								500	3 432 000	13 700					
620	970	639	319	252	260	6	284	500	3 419 000	13 700	28	M 30	130	892,1	4200-620801-E00000
								520	3 716 000	14 300					
								540	4 025 000	14 900					

\* The shaft diameters d<sub>w</sub> listed in the table are selected examples. For other shaft diameters d<sub>w</sub> see the technical specifications on page 35.

\*\* Torques and axial forces are calculated with a friction coefficient of 0.15 between hollow shaft and shaft. This friction coefficient is achieved due to the state of the art for clean and dry joints of two steel materials.