

Gear rings, screwed on

for crane wheels with slide bearings acc. to DIN 15 075

for crane wheels with anti friction bearings acc. to DIN 15 079 with wheel- $\varnothing d_1 \geq 630$ mm

DIN 15 082

part 1



Designation of a gear ring for wheel- $\varnothing d_1 = 500$ mm, large gear ring form G:

Gear ring G 500.1 DIN 15 082

Form K small gear ring

Form G large gear ring

Without special agreement the gear rings are delivered without fastening bores. In normal case gear ring and wheel are drilled together during assembly.

material:

Gear ring G 200 – G 250 C45 or
42CrMo4+QT

Gear ring G 315 – G 1250 GE300 (GS-60) or
G42CrMo4+QT

Other material and dimensions on request.

Gear rings for crane wheels with anti friction bearings and wheel- $\varnothing \leq 500$ mm see DIN 15 082 Part 2.

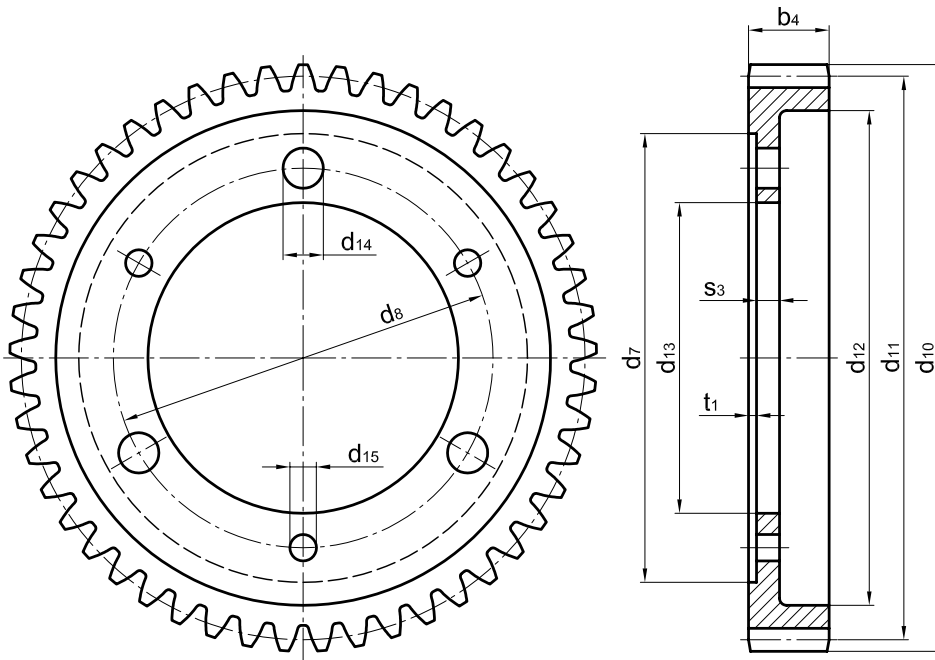
Gear rings, screwed on

for crane wheels with slide bearings acc. to DIN 15 075

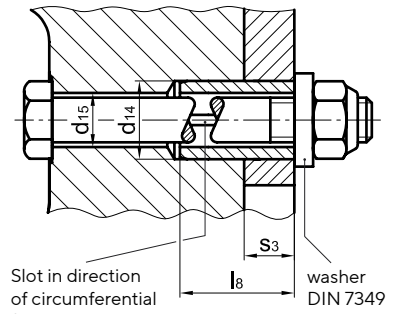
for crane wheels with anti friction bearings acc. to DIN 15 079 with wheel- $\varnothing d_1 \geq 630$ mm

DIN 15 082

Part 1



Shear joint with heavy duty clamping sleeve acc. to, DIN EN ISO 8752 (DIN 1481)



for wheel- \varnothing d_1	clamping sleeve d_{14}	l_8	for screw
200	21	26	M 12
250-315	28	36	M 16
400-500	35	45	M 20
630-900	40	50	M 24
1000-1250	50	55	M 30

for wheel- \varnothing d_1	form	number of teeth ¹⁾	mo- dule	b_4	d_7	d_8	d_{10}	d_{11}	d_{12}	d_{13}	d_{14}	d_{15}	s_3	t_1	number of bores d_{14}/d_{15}	unit weight »[kg]
					H7		h11				H13					
200	G	40	5	40	160	125	210	200	165	90	21	14	12	5	2 / 2	5
250	G	50	5	50	200	155	260	250	210	110	28	18	16	5	2 / 2	10
315	G	52	6	60	260	200	324	312	270	155	28	18	16	5	2 / 2	15
400	K	40	8	65	270	210	336	320	270	150	35	23	18	5	2 / 2	20
	G	50			300	240	416	400	350	180						30
500	K	42	10	70	350	290	440	420	360	230	35	23	20	5	2 / 2	30
	G	49			390	330	510	490	430	270						40
630	K	54	10	80	460	400	560	540	480	335	40	27	22	5	3 / 3	50
	G	62			510	450	640	620	560	380						65
710	K	50	12	90	510	450	624	600	525	380	40	27	22	5	3 / 3	65
	G	58			580	520	720	696	620	450						90
800	K	58	12	100	610	550	720	696	620	480	40	27	22	5	3 / 3	100
	G	66			660	600	816	792	720	530						120
900	K	56	14	110	680	620	812	784	700	550	40	27	22	5	3 / 3	115
	G	63			750	690	910	882	800	620						145
1000	K	64	14	110	790	710	924	896	810	620	50	33	25	5	3 / 3	150
	G	70			840	760	1008	980	895	670						175
1120	K	62	16	125	880	800	1024	992	895	710	50	33	25	10	4 / 4	200
	G	68			950	870	1120	1088	990	780						250
1250	K	70	16	125	1000	920	1152	1120	1020	830	50	33	25	10	4 / 4	230
	G	76			1080	1000	1248	1216	1120	910						270

1) Tooth form according to DIN 867 without profile correction, pressure angle 20 degree.

Gear rings, pressed on

for crane wheels with anti friction bearings acc. to DIN 15 079 with wheel- $\varnothing d_1 \leq 500$ mm
self aligning roller bearings series 222

DIN 15 082

part 2



Form K small gear ring (Photo 1)



Form G large gear ring (Photo 2)

Designation of a gear ring for wheel- $\varnothing d_1 = 500$ mm, large gear ring form G:

Gear ring G 500.2 DIN 15 082

Form K small gear ring

Form G large gear ring

Material: GE300 (GS-60) or
G42CrMo4+QT

Other material and dimensions (e.g. wheels with self aligning roller bearings series 223) on request.

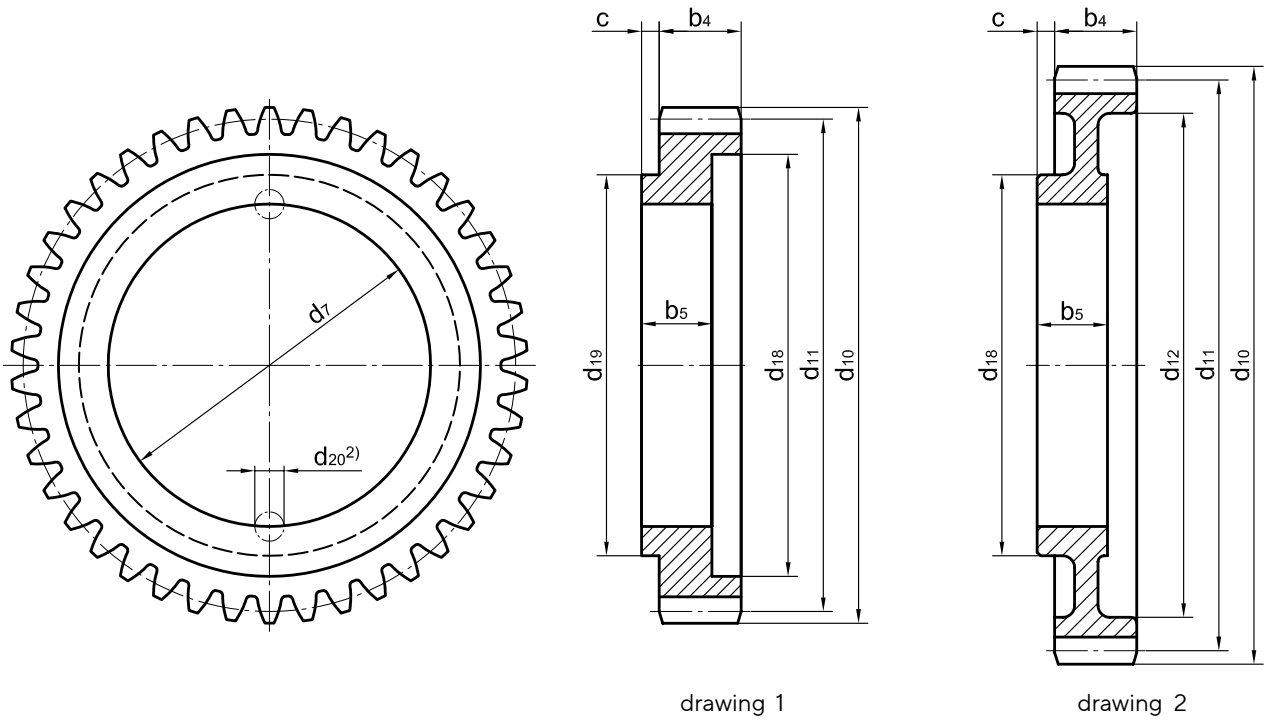
Gear rings for wheels with self aligning roller bearings of wheel- $\varnothing \geq 630$ mm see DIN 15 082 part 1.

Gear rings, pressed on

for crane wheels with anti friction bearings acc. to DIN 15 079 with wheel- $\varnothing d_1$ £ 500 mm
Rolling bearings series 222

DIN 15082

Teil 2



drawing 1

drawing 2

wheel- \varnothing d_1	draw- ing	form	no. of teeth ¹⁾	mo- dule	b_4	b_5	c	d_7 H7	d_{10} h11	d_{11}	d_{12}	d_{18}	d_{19}	d_{20} ¹⁾	for bearings DIN 635-2	unit weight ^{a)} [kg]
315	1	G	52	6	60	45	10	210	324	312	-	270	240	16	22218	18
400	1	K	40	8	65	55	15	230	336	320	-	276	280	16	22220	20
	2	G	50						416	400	350	270	-			32
500	1	K	42	10	70	60	15	275	440	420	-	360	325	25	22224	40
	2	G	49						510	490	430	325	-			52

1) Tooth form according to DIN 867 without appending modification, pressure angle 20 Degree.

2) Shear joint with heavy duty clamping sleeve acc. to DIN EN ISO 8752 (DIN 1481), gear ring drilled together with crane wheel

Bandages, machined

for crane wheels as per DIN

DIN 15 083



Bandage with flanges

Designation of a bandage form B with nominal- $\varnothing d_1 = 630$ mm, gauge $b_1 = 100$ mm:

Bandages B 630 × 100 DIN 15 083

Form S narrow bandages

Form B broad bandages

This standard refers to bandages with running surface profiles acc. to DIN 15072 for crane wheels with bandages acc. to DIN.

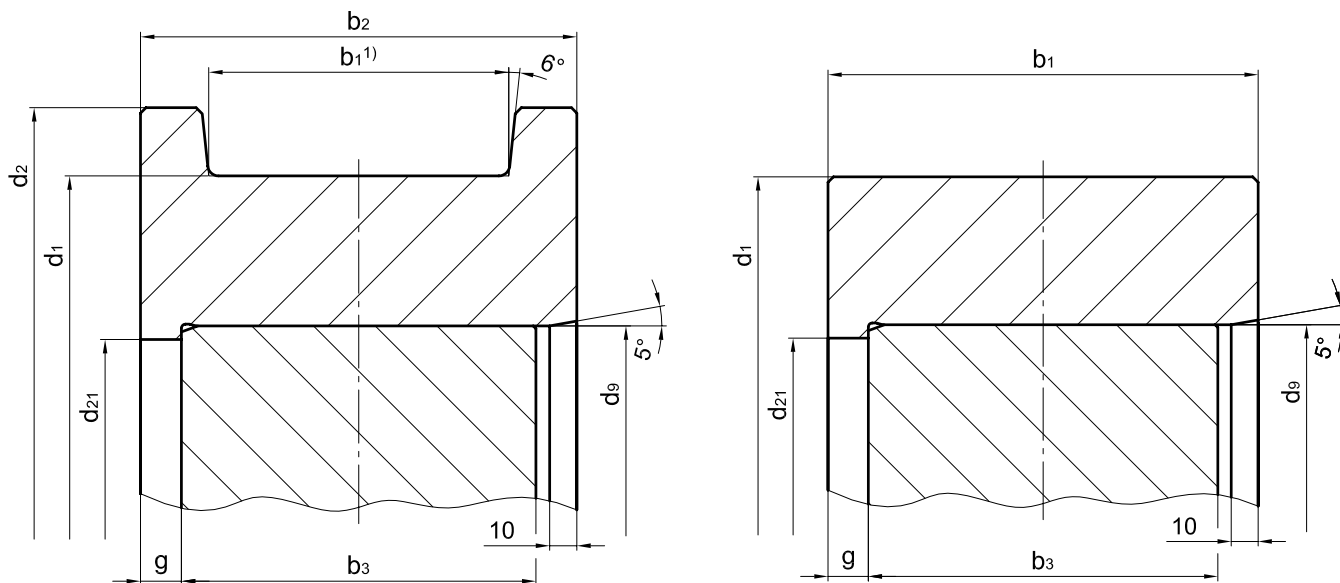
Material: C 60 or
42CrMo4+QT (42CrMo4 V) or
34CrNiMo6+QT (34CrNiMo6 V) or
50CrMo4+QT (50CrMo4 V)

Other material and dimensions on request.

Bandages, machined

for crane wheels as per DIN

DIN 15 083



Bandage with flange

Bandages without flange

form	d ₁	b ₁ ¹⁾	b ₂	b ₃	d ₂	d ₉ ²⁾		d ₂₁	g	unit weight ³⁾ [kg]		
						bandage	wheel body			with flange	without flange	
S	400	55-65	110	80	440	310	+0,1 0	+0,6 +0,5	300	15	55	45
B		70-90	140	110							70	55
S	500	55-65	110	80	540	400	+0,1 0	+0,7 +0,6	390	15	75	60
B		70-90	140	110							95	80
S	630	65-75	120	90	680	520	+0,2 0	+1,0 +0,8	510	15	115	95
B		80-110	160	130							150	125
S	710	75-90	140	100	760	590	+0,2 0	+1,1 +0,9	580	20	160	135
B		95-160	210	170							230	205
S	800	75-90	140	100	850	670	+0,2 0	+1,2 +1,0	660	20	190	-
B		95-160	210	170							280	250
S	900	75-90	140	100	950	760	+0,2 0	+1,4 +1,2	750	20	230	-
B		95-160	210	170							345	300
S	1000	75-90	140	100	1050	850	+0,2 0	+1,5 +1,3	840	20	265	-
B		95-160	210	170							400	350
B	1120	95-160	220	180	1180	960	+0,2 0	+1,7 +1,5	950	20	500	-
B	1250	95-160	220	180	1310	1090	+0,2 0	+1,9 +1,7	1080	20	580	-

1) The dimension of the gauge recess b₁ to be stated with order. For running surface profiles and correspondence of crane rails to running wheel diameter see DIN 15072

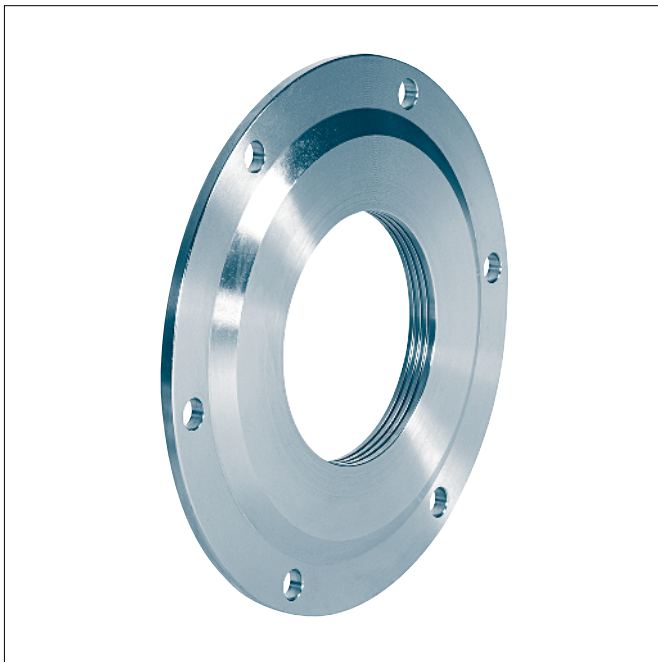
2) Heating temperature of the bandages 250 - 300 °C at 20 °C room temperature. The leading clearance in 40-50 % of the expansion at a heating of the bandage at 230-280 °C.

3) weight refers to max. b₁

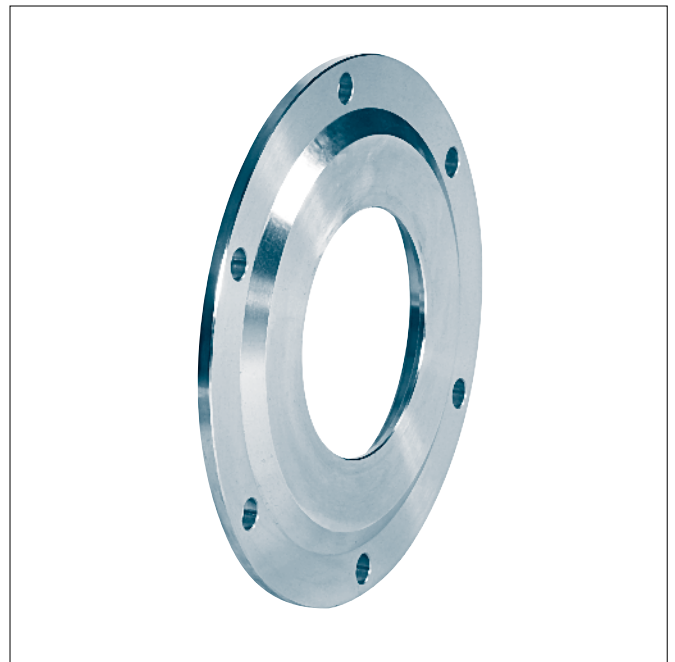
Covers

for wheels acc. to DIN 15 078 and 15 079
Rolling bearings series 222

DIN 15 084



Form A with labyrinth gland



Form B for radial shaft seal rings

Description of a cover form A, for crane wheel- $\varnothing d_1 = 500$ mm:

Covers A 500 DIN 15 084

Form A with labyrinth gland

Form B for radial shaft seal rings

This standard is applicable only for crane wheels acc. to DIN 15078 and DIN 15079 with anti friction bearings series 222.

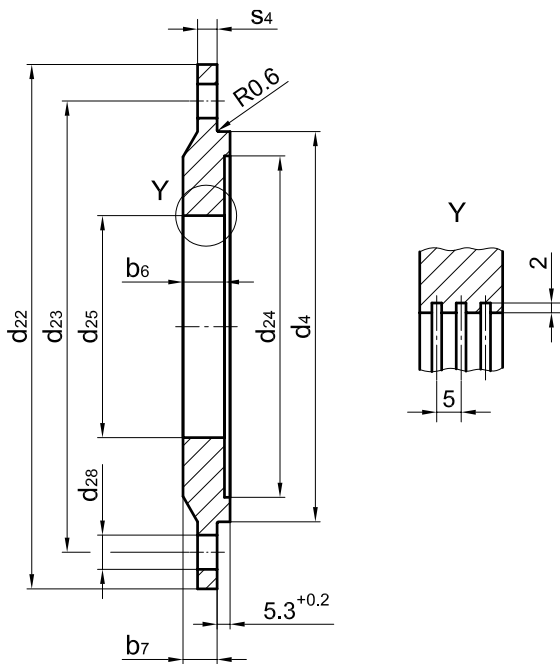
Material: S355J2G3 (St 52-3)

Other material and dimensions (e.g. for crane wheels with anti friction bearings series 223) on request.

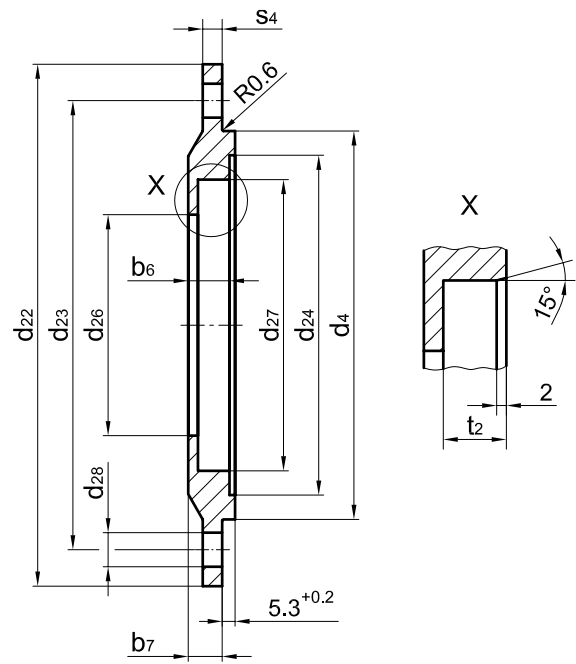
Covers

for wheels acc. to DIN 15 078 and 15 079
Rolling bearings series 222

DIN 15 084



Form A with labyrinth gland¹⁾



Form B for radial shaft seal rings²⁾

for wheel-Ø d_1	d_4	d_{22}	d_{23}	d_{24}	d_{25}	d_{26}	d_{27}	number of bores d_{28}	b_6	b_7	s_4	t_2	radial shaft seal rings acc. to DIN 3760	unit weight °[kg]
315	160	215	185	140	91	91	120	4 × 14	17	14	8	13	A 90 × 120 × 12	3,0
400	180	235	205	160	101	101	125	4 × 14	17	14	8	13	A 100 × 125 × 12	3,5
500	215	280	240	195	121	121	150	6 × 14	17	14	8	13	A 120 × 150 × 12	5,0
630	230	295	260	210	131	131	160	6 × 18	17	14	10	13	A 130 × 160 × 12	6,0
710	270	335	300	250	151	151	180	6 × 18	21	18	10	16	A 150 × 180 × 15	7,5
800	290	355	320	270	161	161	190	6 × 18	21	18	10	16	A 160 × 190 × 15	9,0
900	320	385	350	295	181	181	210	8 × 18	21	18	10	16	A 180 × 210 × 15	11,5
1000	360	425	390	330	201	201	230	8 × 18	21	18	10	16	A 200 × 230 × 15	15,0
1120	400	485	440	370	221	221	250	8 × 23	22	20	12	16	A 220 × 250 × 15	20,0
1250	440	525	480	410	241	241	270	8 × 23	22	20	12	16	A 240 × 270 × 15	22,0

1) Without certain agreement, covers form A will be installed.

2) Sealing lip mounted in exterior position to allow discharge of grease.

Internal bushing and spacers rings

for crane wheels acc. to DIN 15 078 and 15 079
Rolling bearings series 222

DIN 15 086



Internal bush

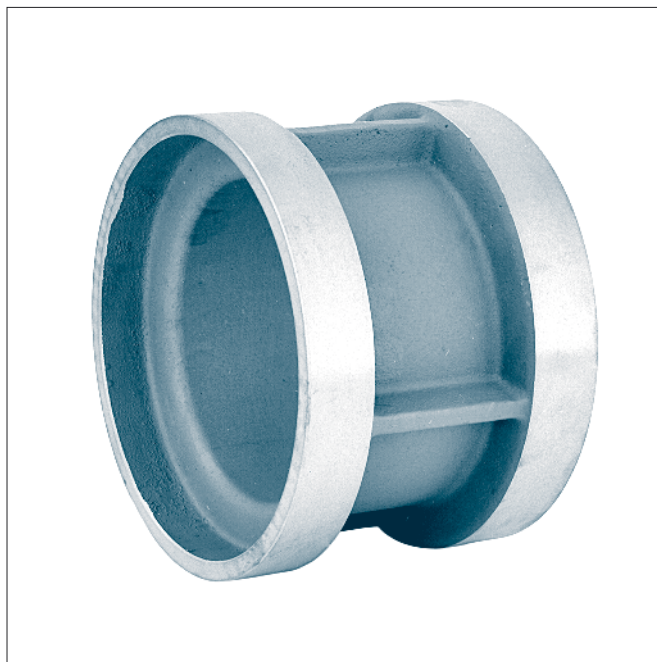
Designation of a internal bush for wheel- $\varnothing d_1 = 500$ mm form B acc. to DIN 15 078 and 15 079:

Internal bush B 500 DIN 15 086

Flattening against rotation mounted on gear ring side.

Material: S355 (St 52)

Other material and dimensions(e.g. for rolling bearings series 223) on request.



Spacer ring

Designation of a spacer ring for wheel- $\varnothing d_1 = 630$ mm form S acc. to DIN 15 078 and 15 079:

Spacer ring S 630 DIN 15 086

Material: S355 (St 52) or
EN-GJS-400-15 (GGG-40)

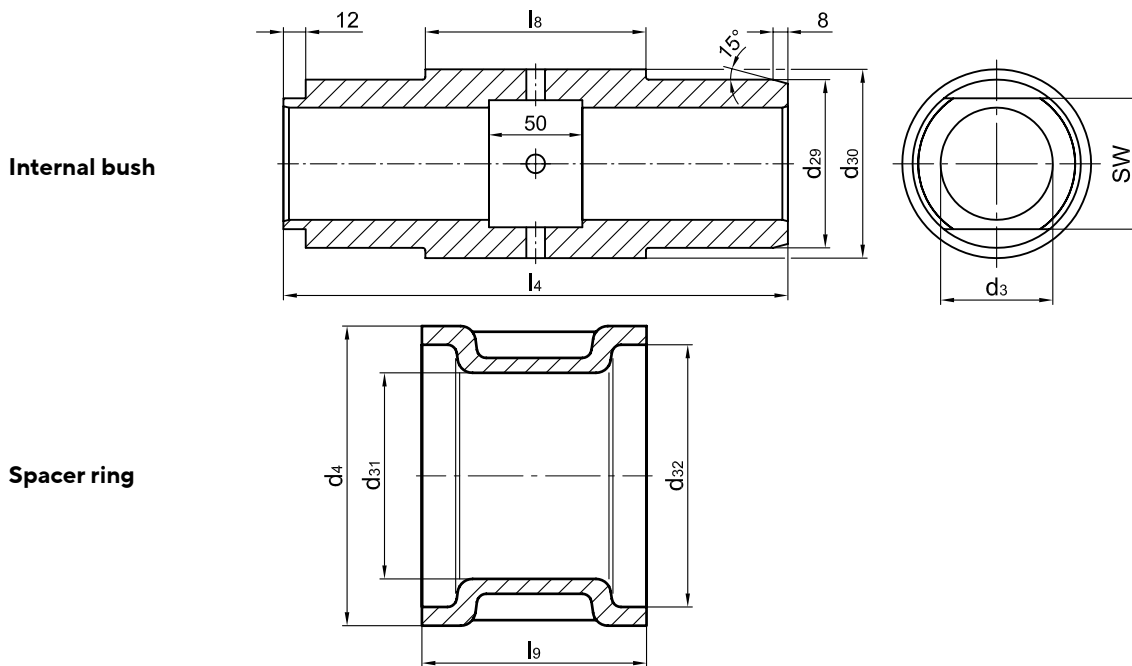
Other material and dimensions(e.g. for rolling bearings series 223) on request.

Internal bushing and spacer rings

for crane wheels acc. to DIN 15 078 and 15 079

Rolling bearings series 222

DIN 15 086



for crane wheel		Rolling bearings		d_3	d_4	d_{29}	d_{30}	d_{31}	d_{32}	l_4	l_8	l_9	width across flats S
Form	d_1	type	width of bearing	D10	-0,2 -0,4	g6				-0,5		+0,2	
S	315	22218	40	60	160	90	101	110	140	250	99,4	100	70
B										270	119,4	120	
S	400	22220	46	80	180	100	113	135	160	280	117,4	118	90
B										310	147,4	148	
S	500	22224	58	90	215	120	132	150	195	290	103,4	104	100
B										320	133,4	134	
S	630	22226	64	100	230	130	145	160	210	330	121,4	122	110
B										370	161,4	162	
S	710	22230	73	110	270	150	164	180	250	370	143,4	144	125
B										440	213,4	214	
S	800	22232	80	125	290	160	175	190	270	390	149,4	150	140
B										460	219,4	220	
S	900	22236	86	140	320	180	214	235	290	410	157,4	158	150
B										480	227,4	228	
S	1000	22240	98	160	360	200	219	275	330	410	123,4	124	175
B										480	193,4	194	
B	1120	22244	108	180	400	220	242	280	380	520	213,4	214	200
B	1250	22248	120	200	440	240	265	320	420	520	189,4	190	220