



Keeps your machinery running!

Corporate**Lønne Group**

The Lønne Group was founded in 1949 in Bergen and the present owner and Chairman of the Board, Terje Lønne took over the company in 1968. Since then the company specialized in Electric Motors, Gear Boxes, Transmissions and Bearings, and step by step became a leading Nordic supplier within drive technology. Besides still being a total supplier of high quality components, Lønne has developed the business areas into enigneered solutions and service. The competence is organized to serve all the Nordic countries locally, at the same time as Lønne keep up the strong reputation as an internationally experienced supplier of instant and effective service world wide.

Lønne Quality Management System Standards is certified for ISO 9001:2008






For further information, please have a look at our website or feel free to call us!



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General Info Ball Bearings

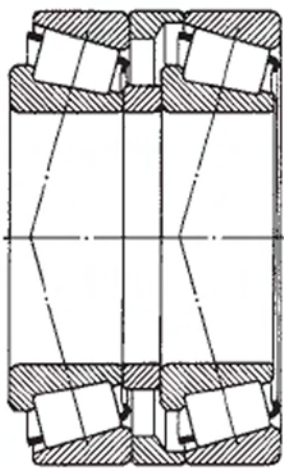
	Name	Series	Characteristics
	<p>Deep groove ball bearings</p> <ul style="list-style-type: none"> • single row, open • single row with Z- shield • single row with HRS/ RSR/ RS1/ RSH seals or low- friction seals • single row with radial groove in the outer ring, model NR • single row with filling slots • double row, open • made of stainless steel 	<p>60, 62, 63, 64, 160, 161, 618, 619 60, 62, 63, 160 60, 62, 63, 618, 619 60, 62, 63, 64 2,3 42, 43 W60, W62, W63, W618, W619/ SS60-619</p>	<p>Particularly versatile and affordable bearing. Easy to assemble and self-retaining. Suitable for high to very high speeds. High radial and axial load carrying capacity.</p>
	<p>Insert ball bearings</p> <ul style="list-style-type: none"> • with eccentric ring - inner ring extended on one side - inner ring extended on both sides • with grub screw in the inner ring - inner ring extended on one side - inner ring extended on both sides • on clamping sleeve with standard inner ring 	<p>INA GRAE...NPPB GE...KRRB GYE...KRRB + H23 17262(00), 7263(00)</p>	<p>SKF YET 2 YEL 2 YAR 2 YSA 2 K</p> <p>Sealed on both sides and filled with grease grooved ball bearings. The outer ring is designed with a spherical outer surface and allows, along with the respective housings, to compensate for misalignment. The tolerance of the bore ball bearings deviating from the normal deep groove ball bearings, the wide inner ring and the eccentric, screw or adapter sleeves simplify assembly and disassembly and also allow the use of commercially available, drawn shafts</p>
	<p>Self-aligning ball bearings</p> <ul style="list-style-type: none"> • open, with cylindrical bore • open, with tapered bore • sealed on both sides • with wide inner ring 	<p>12, 13, 14, 22, 23 12 K, 13 K, 22 K, 23 K 22 -2RS1K), 23-2RS1 112, 113</p>	<p>Bearings are insensitive to static misalignment or deflection of the shaft. For high speeds and predominantly radial loads.</p>
	<p>Angular contact ball bearings</p> <ul style="list-style-type: none"> • Single row - Single bearings - Single bearings for assembly in pairs - Precision bearings • Double row - Open - with shields - with seals • Four point contact bearings 	<p>70, 72, 73, 74 70, 72, 73 70, 719, 72,73 30, 32, 33 30-2Z, 32-2Z, 33-2Z 30-2RS, 32-2RS1, 33-2RS1 QJ2, QJ3, QJ10</p>	<p>Bearings with tracks set opposite to each other in the direction of the bearing axis in the inner and outer ring. They are therefore particularly suitable for bearing arrangements, which have to accommodate combined loads, i.e. simultaneously operating axial and radial loads. The single row bearings can absorb axial loads in one direction only and are therefore positioned against a second bearing.</p>
	<p>Cam rollers</p> <ul style="list-style-type: none"> • narrow design - with cylindrical bearing surface - with spherical bearing surface • wide design - with cylindrical bearing surface - with spherical bearing surface 	<p>LR 2...NPP 3612(00) R/ LR2...NPPU 3057(00) C-2Z/ LR52...KDD 3058(00) C-2Z/ LR52...KDDU</p>	<p>Ball bearings, sealed and filled with grease with a particularly thick-walled outer ring which might accommodate high and shock loads. They are ready for installation and suitable for immediate use in all types of cam mechanisms, guide ways, conveyors, etc.</p>

General Info Roller Bearings

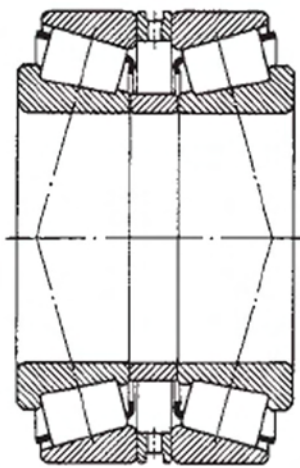
Name	Series	Characteristics	Image
<p>Single row cylindrical roller bearings</p> <ul style="list-style-type: none"> • with a flangeless race - Inner ring without flange, Design NU - Outer ring without flange, Design N • with flanges on both races • two on the outer ring, one on the inner ring, Design NJ • two on the outer ring, one on the inner ring and loose flanged wheel. Design NUP • two on the inner ring, one on the outer ring, Design NF 	<p>2, 3, 4, 10, 18, 19, 20, 22, 23 2, 3 2,3, 4, 10, 22, 23 2, 3, 4, 22, 23 2,3</p>	<p>Radial bearings for high load and speeds. Separable, i.e. inner and outer rings can be mounted separately. The bearings with flangeless races allow axial displacements between shaft and housing in both directions, i.e. the unrestricted track expansion compensation, within the bearing.</p>	
<p>Double row cylindrical roller bearings</p> <ul style="list-style-type: none"> • with flangeless inner ring, Design NNU - with cylindrical bore - with tapered bore • with flangeless outer ring, Design NN - with cylindrical bore - with tapered bore 	<p>49 49 K 30 30K</p>	<p>High- precision bearings with a low cross section, high radial load carrying capacity and lower suspension for high speeds. In special dimensions suitable for use in machine tools. The bearings allow axial displacements between shaft and housing in both directions, i.e. the unrestricted track expansion compensation, within the bearing.</p>	
<p>Full- type cylindrical roller bearings</p> <ul style="list-style-type: none"> • single row bearings - non- separable, Design NCF/ SL 18 - separable, Design NJG/ SL 19 • double row bearings - sealed on both sides, Design NNF/ SL 04, NNC/ SL 01, NNCL/ SL 02 	<p>29 23 50</p>	<p>Bearings without cage. They thus have the highest number of rollers and allow particularly heavy duty, space- saving bearings and generally have a small section height in relation to the width. Because of the special kinematic conditions in the bearing, they still do not reach the high speeds that can be achieved by bearings with cage.</p>	
<p>Spherical roller bearings</p> <ul style="list-style-type: none"> • with cylindrical bore • with tapered bore, taper 1:12 • with tapered bore, taper 1:30 • sealed on both sides and filled with grease 	<p>213, 222, 223, 230, 231 240, 241, 248, 249 213, 222, 223, 230, 231, 239 240, 241, 248, 249 222,230,231,232,239,240, 241</p>	<p>Angular movement bearings, which are insensitive to misalignment or deflections of the waves. All-purpose bearings for heavy loads, both in radial and axial directions.</p>	

Name	Series	Characteristics
	<p>Single row tapered roller bearings</p> <ul style="list-style-type: none"> • Single bearing, metric 302, 303, 313, 320, 322, 323, 329, 330, 331, 332 • Single bearing, inch 358/354 HM 911245/210 	<p>The bearings are designed to accommodate combined, i.e. simultaneously operating radial and axial loads. The single row bearings can accommodate axial loads only in one direction. They are therefore positioned against a second symmetrically arranged bearing. They are separable, that is, the inner ring with roller set can be installed separately from the outer ring. The fitted set of bearings are considered for mountings, for which the load-carrying capacity of a bearing is not sufficient or the shaft is to be guided in both directions.</p>

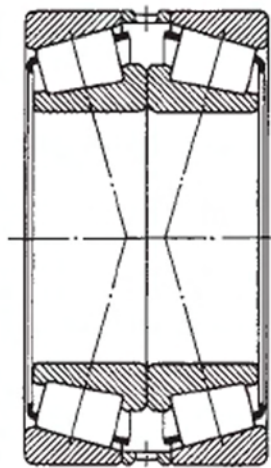
Single bearing, 302-322 aligned in tandem arrangement design DT, in O- arrangement design DB, in X arrangement design DF



Tandem- Arrangement





O- Arrangement



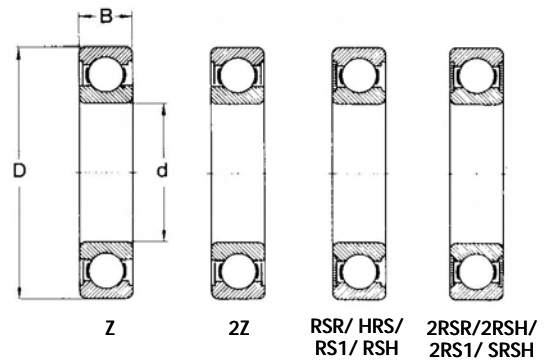
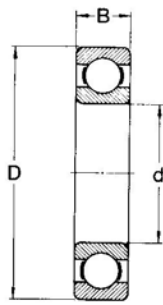
X- Arrangement

General Info Thrust Bearings

Name	Series	Characteristics	
<p>Thrust deep groove ball bearings</p> <ul style="list-style-type: none"> • operate in single direction - with even housing washers - with spherical housing washer and support washer • operate in both directions - with even housing washers - with spherical housing washers and support washers 	<p>511, 512, 513, 514 532+U2, 533+U3, 534+U4</p> <p>522, 523, 524 542+U2, 543+U3, 544+U4</p>	<p>Suitable to absorb axial loads in one direction. They can therefore support the shaft on one side, however, they should not be loaded radially. The bearings are separable, the installation of the bearing components can therefore be carried out separately and hence is simple. Suitable to absorb axial loads in both directions. They can therefore support the guidance of the shaft on both sides. However, they should not be loaded radially. The bearings are separable.</p>	
<p>Spherical roller thrust bearings</p> <ul style="list-style-type: none"> • with sheet steel cage • with brass cage 	<p>293, 294 292, 293, 294</p>	<p>Thrust bearings with raceways arranged with angle to the bearing axis. Therefore, compared to the other thrust bearings, they can also absorb radial loads in addition to the thrust loads. Furthermore, the bearings are angular moving and therefore insensitive to misalignment of the shaft to the housing. The bearings are separable</p>	

Ball Bearings

Series 600/160

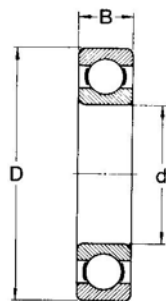


Type	Dimensions		
	d mm	D mm	B mm
606 2Z	6	17	6
607	7	19	6
607 2Z	7	19	6
607 2RSR/ HRS/ RS1/ RSH	7	19	6
608	8	22	7
608 2Z	8	22	7
608 2RSR/ HRS/ RS1/ RSH	8	22	7
609 2Z	9	24	7
609 2RSR/ HRS/ RS1/ RSH	9	24	7
623 2Z	3	10	4
623 2RSR/ HRS/ RS1/ RSH	3	10	4
624 2Z	4	13	5
625 2Z	5	16	5
625 2RSR/ HRS/ RS1/ RSH	5	16	5
626 2Z	6	19	6
626 2RSR/ HRS/ RS1/ RSH	6	19	6
627 2Z	7	22	7
627 2RSR/ HRS/ RS1/ RSH	7	22	7
628 2Z	8	24	8
629	9	26	8
629 2Z	9	26	8
629 2RSR/ HRS/ RS1/ RSH	9	26	8
634 2Z	4	16	5
635 2Z	5	19	6
688 2Z	8	16	5

Type	Dimensions		
	d mm	D mm	B mm
16002	15	32	8
16003	17	35	8
16004	20	42	8
16005	25	47	8
16006	30	55	9
16007	35	62	9
16008	40	68	9
16009	45	75	10
16010	50	80	10
16011	55	90	11
16012	60	95	11
16013	65	100	11
16014	70	110	13
16015	75	115	13
16016	80	125	14
16017	85	130	14
16018	90	140	16
16019	95	145	16
16020	100	150	16
16021	105	160	18
16022	110	170	19
16024	120	180	19
16026	130	200	22
16028	140	210	22
16030	150	225	24
16032	160	240	25
16034	170	260	28
16036	180	280	31
16038	190	290	31
16040	200	310	34

Ball Bearings

Series 61800, 61900

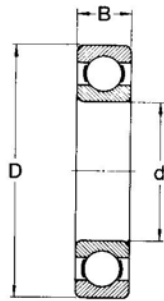


Type	Dimensions		
	d mm	D mm	B mm
61800	10	19	5
61800 ZZ	10	19	5
61800 2RSR/ HRS/ RS1/ RSH	10	19	5
61801	12	21	5
61801 ZZ	12	21	5
61801 2RSR/ HRS/ RS1/ RSH	12	21	5
61802	15	24	5
61802 ZZ	15	24	5
61802 2RSR/ HRS/ RS1/ RSH	15	24	5
61803	17	26	5
61803 ZZ	17	26	5
61803 2RSR/ HRS/ RS1/ RSH	17	26	5
61804	20	32	7
61804 ZZ	20	32	7
61804 2RSR/ HRS/ RS1/ RSH	20	32	7
61805	25	37	7
61805 ZZ	25	37	7
61805	25	37	7
61806	30	42	7
61806 2RSR/ HRS/ RS1/ RSH	30	42	7
61906 ZZ	30	42	7
61807	35	47	7
61807 2RSR/ HRS/ RS1/ RSH	35	47	7
61808	40	52	7
61808 2RSR/ HRS/ RS1/ RSH	40	52	7
61809	45	58	7
61809 2RSR/ HRS/ RS1/ RSH	45	58	7
61810	50	65	7
61810 2RSR/ HRS/ RS1/ RSH	50	65	7
61811	55	72	9
61811 ZZ	55	72	9
61811 2RSR/ HRS/ RS1/ RSH	55	72	9
61812	60	78	10
61812 2RSR/ HRS/ RS1/ RSH	60	78	10
61813	65	85	10
61813 2RSR/ HRS/ RS1/ RSH	65	85	10
61814	70	90	10
61814 2RSR/ HRS/ RS1/ RSH	70	90	10
61815	75	95	10
61815 2RSR/ HRS/ RS1/ RSH	75	95	10
61817 2RSR/ HRS/ RS1/ RSH	85	110	13
61818 2RSR/ HRS/ RS1/ RSH	90	115	13
61821 2RSR/ HRS/ RS1/ RSH	105	130	13
61832	160	200	20
61834	170	215	22
61840 MA	200	250	24

Type	Dimensions		
	d mm	D mm	B mm
61900	10	22	6
61900 ZZ	10	22	6
61900 2RSR/ HRS/ RS1/ RSH	10	22	6
61901	12	24	6
61901 ZZ	12	24	6
61901 2RSR/ HRS/ RS1/ RSH	12	24	6
61902	15	28	7
61902 ZZ	15	28	7
61902 2RSR/ HRS/ RS1/ RSH	15	28	7
61903	17	30	7
61903 ZZ	17	30	7
61903 2RSR/ HRS/ RS1/ RSH	17	30	7
61904	20	37	9
61904 ZZ	20	37	9
61904 2RSR/ HRS/ RS1/ RSH	20	37	9
61905	25	42	9
61905 ZZ	25	42	9
61905 2RSR/ HRS/ RS1/ RSH	25	42	9
61906	30	47	9
61906 ZZ	30	47	9
61906 2RSR/ HRS/ RS1/ RSH	30	47	9
61907	35	55	10
61907 ZZ	35	55	10
61907 2RSR/ HRS/ RS1/ RSH	35	55	10
61908	40	62	12
61908 ZZ	40	62	12
61908 2RSR/ HRS/ RS1/ RSH	40	62	12
61909	45	68	12
61909 ZZ	45	68	12
61909 2RSR/ HRS/ RS1/ RSH	45	68	12
61910	50	72	12
61910 2RSR/ HRS/ RS1/ RSH	50	72	12
61911	55	80	13
61912	60	85	13
61913	65	90	13
61914	70	100	16
61915	75	105	16
61917	85	120	18

Ball Bearings

Series 60

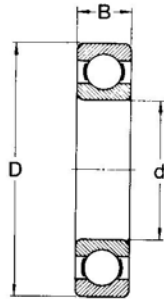


Type	Dimensions		
	d mm	D mm	B mm
6000	10	26	8
6000 2Z	10	26	8
6000 RSR/ HRS/ RS1/ RSH	10	26	8
6000 2RSR/ HRS/ RS1/ RSH	10	26	8
6001	12	28	8
6001 2Z	12	28	8
6001 2RSR/ HRS/ RS1/ RSH	12	28	8
6002	15	32	9
6002 2Z	15	32	9
6002 2RSR/ HRS/ RS1/ RSH	15	32	9
6003	17	35	10
6003 2Z	17	35	10
6003 2RSR/ HRS/ RS1/ RSH	17	35	10
6004	20	42	12
6004 2Z	20	42	12
6004 2RSR/ HRS/ RS1/ RSH	20	42	12
6005	25	47	12
6005 Z	25	47	12
6005 2Z	25	47	12
6005 2RSR/ HRS/ RS1/ RSH	25	47	12
6006	30	55	13
6006 Z	30	55	13
6006 2Z	30	55	13
6006 2RSR/ HRS/ RS1/ RSH	30	55	13
6007	35	62	14
6007 2Z	35	62	14
6007 2RSR/ HRS/ RS1/ RSH	35	62	14
6008	40	68	15
6008 2Z	40	68	15
6008 2RSR/ HRS/ RS1/ RSH	40	68	15
6009	45	75	16
6009 2Z	45	75	16
6009 2RSR/ HRS/ RS1/ RSH	45	75	16
6010	50	80	16
6010 2Z	50	80	16
6010 2RSR/ HRS/ RS1/ RSH	50	80	16
6011	55	90	18
6011 2Z	55	90	18
6011 2RSR/ HRS/ RS1/ RSH	55	90	18
6012	60	95	18
6012 2Z	60	95	18
6012 2RSR/ HRS/ RS1/ RSH	60	95	18

Type	Dimensions		
	d mm	D mm	B mm
6013	65	100	18
6013 2Z	65	100	18
6013 2RSR/ HRS/ RS1/ RSH	65	100	18
6014	70	110	20
6014 2Z	70	110	20
6014 2RSR/ HRS/ RS1/ RSH	70	110	20
6015	75	115	20
6015 2Z	75	115	20
6015 2RSR/ HRS/ RS1/ RSH	75	115	20
6016	80	125	22
6016 2Z	80	125	22
6016 2RSR/ HRS/ RS1/ RSH	80	125	22
6017	85	130	22
6017 2Z	85	130	22
6017 RSR/ HRS/ RS1/ RSH	85	130	22
6018	90	140	24
6018 2Z	90	140	24
6018 2RSR/ HRS/ RS1/ RSH	90	140	24
6019	95	145	24
6019 2Z	95	145	24
6019 2RSR/ HRS/ RS1/ RSH	95	145	24
6020	100	150	24
6020 2Z	100	150	24
6020 2RSR/ HRS/ RS1/ RSH	100	150	24
6021	105	160	26
6021 2Z	105	160	26
6021 2RSR/ HRS/ RS1/ RSH	105	160	26
6022	110	170	28
6022 2Z	110	170	28
6022 2RSR/ HRS/ RS1/ RSH	110	170	28
6024	120	180	28
6024 2Z	120	180	28
6024 2RSR/ HRS/ RS1/ RSH	120	180	28
6026	130	200	33
6028	140	210	33
6030	150	225	35
6030 2RSR/ HRS/ RS1/ RSH	150	225	35
6032 M	160	240	28
6034 M	170	260	42
6036 M	180	280	46
6038 M	190	290	46
6040 M	200	310	51
6044 M	220	340	56

Ball Bearings

Series 62

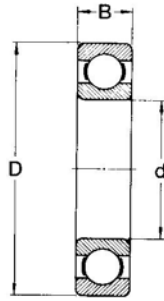


Type	Dimensions		
	d mm	D mm	B mm
6200	10	30	9
6200 2Z	10	30	9
6200 2RSR/ HRS/ RS1/ RSH	10	30	9
6201	12	32	10
6201 2Z	12	32	10
6201 2RSR/ HRS/ RS1/ RSH	12	32	10
6202	15	35	11
6202 2Z	15	35	11
6202 2RSR/ HRS/ RS1/ RSH	15	35	11
6203	17	40	12
6203 2Z	17	40	12
6203 2RSR/ HRS/ RS1/ RSH	17	40	12
6204	20	47	14
6204 2Z	20	47	14
6204 2RSR/ HRS/ RS1/ RSH	20	47	14
6205	25	52	15
6205 2Z	25	52	15
6205 RSR/ HRS/ RS1/ RSH	25	52	15
6205 2RSR/ HRS/ RS1/ RSH	25	52	15
6206	30	62	16
6206 2Z	30	62	16
6206 2RSR/ HRS/ RS1/ RSH	30	62	16
6207	35	72	17
6207 Z	35	72	17
6207 2Z	35	72	17
6207 2RSR/ HRS/ RS1/ RSH	35	72	17
6208	40	80	18
6208 2Z	40	80	18
6208 2RSR/ HRS/ RS1/ RSH	40	80	18
6209	45	85	19
6209 2Z	45	85	19
6209 2RSR/ HRS/ RS1/ RSH	45	85	19
6210	50	90	20
6210 Z	50	90	20
6210 2Z	50	90	20
6210 2RSR/ HRS/ RS1/ RSH	50	90	20
6211	55	100	21
6211 2Z	55	100	21
6211 2RSR/ HRS/ RS1/ RSH	55	100	21
6212	60	110	22
6212 2Z	60	110	22
6212 2RSR/ HRS/ RS1/ RSH	60	110	22

Type	Dimensions		
	d mm	D mm	B mm
6213	65	120	23
6213 2Z	65	120	23
6213 2RSR/ HRS/ RS1/ RSH	65	120	23
6214	70	125	24
6214 Z	70	125	24
6214 2Z	70	125	24
6214 2RSR/ HRS/ RS1/ RSH	70	125	24
6215	75	130	25
6215 2Z	75	130	25
6215 2RSR/ HRS/ RS1/ RSH	75	130	25
6216	80	140	26
6216 Z	80	140	26
6216 2Z	80	140	26
6216 RSR/ HRS/ RS1/ RSH	80	140	26
6216 2RSR/ HRS/ RS1/ RSH	80	140	26
6217	85	150	28
6217 2Z	85	150	28
6217 2RSR/ HRS/ RS1/ RSH	85	150	28
6218	90	160	30
6218 2Z	90	160	30
6218 2RSR/ HRS/ RS1/ RSH	90	160	30
6219	95	170	32
6219 2Z	95	170	32
6220	100	180	34
6220 2Z	100	180	34
6220 2RSR/ HRS/ RS1/ RSH	100	180	34
6221	105	190	36
6221 2Z	105	190	36
6222	110	200	38
6222 2Z	110	200	38
6224	120	215	40
6226	130	230	40
6228	140	250	42
6230	150	270	45
6232 M	160	290	48
6234 M	170	310	52
6236 M	180	320	52
6238 M	190	340	55
6240 M	200	360	58

Ball Bearings

Series 63



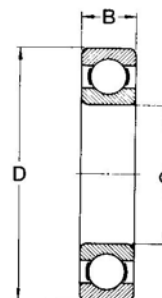
Type	Dimensions		
	d mm	D mm	B mm
6300	10	35	11
6300 2Z	10	35	11
6300 2RSR/ HRS/ RS1/ RSH	10	35	11
6301	12	37	12
6301 2Z	12	37	12
6301 2RSR/ HRS/ RS1/ RSH	12	37	12
6302	15	42	13
6302 2Z	15	42	13
6302 2RSR/ HRS/ RS1/ RSH	15	42	13
6303	17	47	14
6303 2Z	17	47	14
6303 2RSR/ HRS/ RS1/ RSH	17	47	14
6304	20	52	15
6304 2Z	20	52	15
6304 2RSR/ HRS/ RS1/ RSH	20	52	15
6305	25	62	17
6305 Z	25	62	17
6305 2Z	25	62	17
6305 2RSR/ HRS/ RS1/ RSH	25	62	17
6306	30	72	19
6306 2Z	30	72	19
6306 2RSR/ HRS/ RS1/ RSH	30	72	19
6307	35	80	21
6307 Z	35	80	21
6307 2Z	35	80	21
6307 2RSR/ HRS/ RS1/ RSH	35	80	21
6308	40	90	23
6308 Z	40	90	23
6308 2Z	40	90	23
6308 RSR/ HRS/ RS1/ RSH	40	90	23
6308 2RSR/ HRS/ RS1/ RSH	40	90	23
6309	45	100	25
6309 Z	45	100	25
6309 2Z	45	100	25
6309 2RSR/ HRS/ RS1/ RSH	45	100	25

Type	Dimensions		
	d mm	D mm	B mm
6310	50	110	27
6310 Z	50	110	27
6310 2Z	50	110	27
6310 2RSR/ HRS/ RS1/ RSH	50	110	27
6311	55	120	29
6311 2Z	55	120	29
6311 2RSR/ HRS/ RS1/ RSH	55	120	29
6312	60	130	31
6312 2Z	60	130	31
6312 2RSR/ HRS/ RS1/ RSH	60	130	31
6313	65	140	33
6313 2Z	65	140	33
6313 2RSR/ HRS/ RS1/ RSH	65	140	33
6314	70	150	35
6314 Z	70	150	35
6314 2Z	70	150	35
6314 2RSR/ HRS/ RS1/ RSH	70	150	35
6315	75	160	37
6315 2Z	75	160	37
6315 2RSR/ HRS/ RS1/ RSH	75	160	37
6316	80	170	39
6316 2Z	80	170	39
6316 2RSR/ HRS/ RS1/ RSH	80	170	39
6317	85	180	41
6317 2Z	85	180	41
6318	90	190	43
6318 2Z	90	190	43
6318 2RSR/ HRS/ RS1/ RSH	90	190	43
6319	95	200	45
6320	100	215	47
6321	105	225	49
6322	110	240	50
6324	120	260	55
6326 M C3	130	280	58
6328 M C3	140	300	62
6330 M C3	150	320	65
6334 M C3	170	360	72

Ball Bearings

Series 60 Stainless steel

Type	Dimensions		
	d mm	D mm	B mm
W/ SS 6000 2RS	10	26	8
W/ SS 6001 2RS	12	28	8
W/ SS 6002 2RS	15	32	9
W/ SS 6003 2RS	17	35	10
W/ SS 6004 2RS	20	42	12
W/ SS 6005 2RS	25	47	12
W/ SS 6006 2RS	30	55	13
W/ SS 6007 2RS	35	62	14
W/ SS 6008 2RS	40	68	15
W/ SS 6009 2RS	45	75	16
W/ SS 6010 2RS	50	80	16



Series 62 Stainless steel

Type	Dimensions		
	d mm	D mm	B mm
W/ SS 6200 2RS	10	30	9
W/ SS 6201 2RS	12	32	10
W/ SS 6202 2RS	15	35	11
W/ SS 6203 2RS	17	40	12
W/ SS 6204 2RS	20	47	14
W/ SS 6205 2RS	25	52	15
W/ SS 6206 2RS	30	62	16
W/ SS 6207 2RS	35	72	17
W/ SS 6208 2RS	40	80	18
W/ SS 6209 2RS	45	85	19
W/ SS 6210 2RS	50	90	20

Series 63 stainless steel








Type	Dimensions		
	d mm	D mm	B mm
W/ SS 6300 2RS	10	35	11
W/ SS 6301 2RS	12	37	12
W/ SS 6302 2RS	15	42	13
W/ SS 6303 2RS	17	47	14
W/ SS 6304 2RS	20	52	15
W/ SS 6305 2RS	25	62	17
W/ SS 6306 2RS	30	72	19
W/ SS 6307 2RS	35	80	21
W/ SS 6308 2RS	40	90	23
W/ SS 6309 2RS	45	100	25
W/ SS 6310 2RS	50	110	27

Series 600 stainless steel

Type	Dimensions			Items
	d mm	D mm	B mm	
W/ SS 606 ZZ	6	17	6	115432
W/ SS 608 2RS	8	22	7	115431
W/ SS 626 2RS	6	19	6	115421

General Info Needle Bearings

Needle bearings have low space requirements. They are available in the following models:

	Name	Series	Bore \varnothing	Characteristics
	Needle roller assemblies single row double row	K... K...ZW	3-265 24- 95	Needle roller assemblies are ready- to- mount, self- contained bearing components. They provide roller bearings with a high load carrying capacity in case of minimal radial space, if the shaft and housing bore can serve as raceways and have the same rigidity and quality as bearing journals.
	Needle bushings single or double row, sealed on one or both sides	HK... HK...RS/2RS	3-60 8-50	Needle bushings are needle bearings with a deep drawn, thin- walled outer ring. They are characterised by a very low sectional height and high load carrying capacity.
	Needle bushes single or double row, sealed	BK... BK...RS	3-45 14- 25	Needle bushes are needle bearings with a deep drawn, thin- walled outer ring. They are characterised by a very low sectional height and high load carrying capacity.
	Needle bearings with flanges without inner ring single row double row	NK... RNA49... RNA69... RNA48...	5-110 14-100 16-110 120-415	Needle bearings with and without inner ring <ul style="list-style-type: none"> • are components made of machined outer rings, needle roller assemblies and removable inner rings • are small- sized due to the small radial height • have an oil groove and oil hole in the outer ring <ul style="list-style-type: none"> - Outer ring exceptions: NK, FW 10 mm NKI, d 7mm
	Needle bearings with flanges with inner ring single row double row	NKI... NA49... NA48... NA69...	5-110 14-100 16-110 120-415	Sealed needle bearings <ul style="list-style-type: none"> • are protected from dirt and splash water by lip seals • are greased with lithium complex soap grease DIN 51825- KP2N-25 • can be re- lubricated over inner and outer ring.
	Needle bearings with flanges sealed on one or both sides without inner ring with inner ring	RNA49...RS RNA49...2RS NA49...RS NA49...2RS	14- 58 14- 58 10- 50 10- 50	Design and safety instructions <ul style="list-style-type: none"> • For bearings without inner ring, design shaft as a roller bearing raceway • For bearings with inner ring, do not exceed displacement distance. Use wider inner ring in case of a larger value; order inner ring separately. • Dimensions of the sealing rings of series G and SD are customised to the bearing and can be combined with the wider inner rings of the IR series. • Do not exceed allowable operating temperature of +120 °C (continuous operation) for needle bearings with plastic cages (supplementary designation TN). • During grease lubrication, grease the bearing before mounting.

General Info Needle Bearings



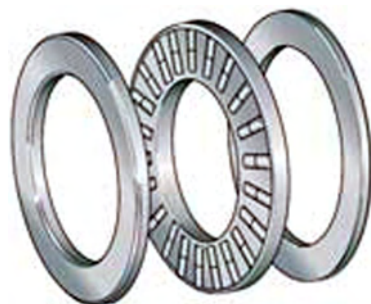
Name	Series	Bore Ø	Characteristics
Needle bearings without flanges without inner ring single row double row	RNAO... RNAO...	5-100 18- 60	Needle bearings without flanges <ul style="list-style-type: none"> • are components made of removable needle roller assemblies and machined outer rings and inner rings • Inner ring, outer ring and needle roller assemblies can be mounted separately • are small- sized due to the small radial height • double row bearings can be re- lubricated through the oil groove and oil hole in the outer ring.



Needle bearings without flanges without inner ring single row double row	NAO... NAO...	6-90 23-30	Needle bearings without flanges, without inner ring <ul style="list-style-type: none"> • require that a hardened and ground shaft can be used as a raceway. Needle bearings without flanges, with inner ring <ul style="list-style-type: none"> • are used when the shaft is not designed as a roller bearing raceway.
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Movable needle bearings without inner ring with inner ring	RPNA... PNA...	15- 45 12- 40	Movable needle bearings have a raceway ring with a convex spherical outer surface. Two plastic bearing rings with a concave spherical inside surface that is encased in a drawn sheet steel sleeve are fitted over the raceway ring, enabling the bearing to align itself. Movable needle bearings are therefore insensitive to misalignment of the shaft relative to the housing.
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Needle thrust bearings Needle roller thrust assemblies Washer Thrust washer Shaft washer Housing washer Cylindrical roller thrust bearings	AXK... LS... AS... WS... GS... 81... 89...	04-160 06-160 04-160 15-320 15-320 15-320 15-320	Needle thrust bearings can accommodate heavy axial loads and shock loads. These bearings provide a high degree of stiffness within a minimum axial space requirement.
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Combine Needle Bearing



Name	Series	Bore Ø	Characteristics
Needle angular contact ball bearings operate in single direction operate in both directions	NKIA59... NKIB59...	12-70 12-70	In needle ball bearings, a radial needle bearing and an angular contact ball bearing are combined into a very low level roller bearing that can absorb the high radial and smaller thrust loads and allows high speeds.

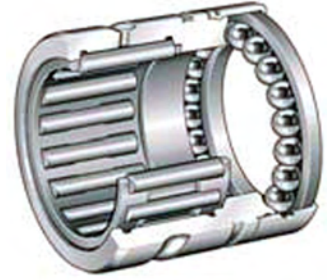


Needle thrust ball bearings without holding flap, for oil lubrication with holding flap, for grease lubrication	NKX... NKX...Z	10-70 10-70	Needle- thrust ball bearings of the NKX or NKX... Z series are combinations of needle bearings with thrust deep groove ball bearings of the 511 series and can absorb high axial loads in one direction in addition to the radial loads. They can move the shaft axially in a direction.
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General Info Combined Needle

Combined Needle Bearing

Name	Series	Bore Ø	Characteristics
Needle thrust ball bearings cageless thrust ball bearings for oil lubrication for grease lubrication	NX... NX...Z	7-35 7-35	Needle roller/ cageless thrust ball bearings of the NX or NX... Z series are suitable for applications where there are moderate radial loads and lighter, single direction axial loads.
Needle cylindrical roller thrust bearings without holding flap, for oil lubrication with holding flaps, for grease lubrication	NKXR... NKXR...Z	15-50 15-50	Needle cylindrical roller thrust bearings of the NKXR or NKXR... Z series combine a radial needle bearing and a cylindrical roller thrust bearing based on the 811 series. They are primarily used in applications where the axial load carrying capacity of needle thrust ball bearings is not sufficient.



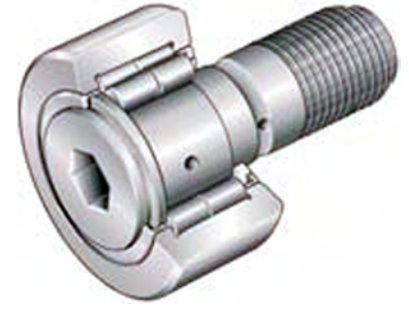
Crossed roller bearings

Name	Series	Bore Ø	Characteristics
Crossed roller bearings	SX	70-500	<ul style="list-style-type: none"> absorb axial forces on both sides as well as radial forces and tilting moments consist of outer and inner rings, rolling elements, spacers and holding rings



Cam rollers

Name	Series	Bore Ø	Characteristics
Cam rollers with an axial guidance by stop collar with cage, Crowned rolling surface Cylindrical rolling surface full type Crowned rolling surface	KR... (PP) KR...X(PPX) KRV... (PP) KRV...X(PPX)	16-90 16-90 16-90 16-90	<p>Cam rollers are ready- to- mount, non-separable supporting rollers that have a solid bolt instead of the inner ring. This bolt is threaded so that the curve rollers can be quickly and easily attached to appropriate machine components by means of a hexagonal nut.</p> <p>All versions also available in sealed quality (PP, PPX)!</p>
Cylindrical rolling surface			
Cam rollers with an axial guidance by cylindrical rollers Crowned rolling surface Cylindrical rolling surface	NUKR...A NUKR...XA PWKR...2RSA	35-90 35-90 35-90	<ul style="list-style-type: none"> optimised INA profile cageless, with axial guidance of the outer ring through rolling elements double lip seal for operating temperatures from -30°C to +120°C, limited by the grease and sealing ring material Outer diameter of 35 mm to 110 mm



General Info Yoke Track Rollers



Track Rollers

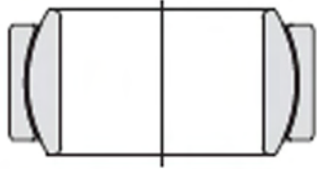
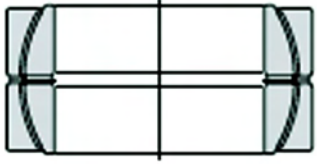
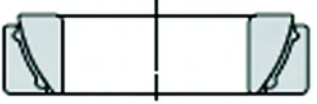

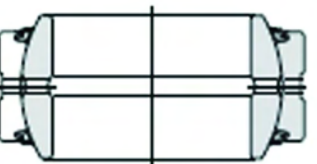

Name	Series	Bore Ø	Characteristics	
Supporting rollers without axial guidance without inner ring, crowned rolling surface	RSTO...	5-50	Supporting Rollers <ul style="list-style-type: none"> • are units consisting of outer ring, needle roller assemblies or cageless or full- type rolling element sets, with and without inner ring • are also mounted on axles • have thick- walled outer rings with profiled outer surface • absorb high radial forces • are greased with lithium complex soap grease DIN 51,825- KP2N-25 • can be re- lubricated over the inner ring • are protected from dirt and splash water by <ul style="list-style-type: none"> - lip seals - Gap type seals - Labyrinth seals. . 	
cylindrical rolling surface without inner ring with seal	RSTO...X	5-50		
Crowned rolling surface	RNA...2RS	6-50		
Cylindrical rolling surface with inner ring	RNA...2RSX	10-58		
Crowned rolling surface	STO...	6-50		
Cylindrical rolling surface with inner ring and seal	STO...X	6-50		
Crowned rolling surface	NA...2RS	6-50		
Cylindrical rolling surface	NA...2RSX	6-50		
Track rollers with an axial guidance by contact washers	NATR...	5-50		Supporting Rollers without ring <ul style="list-style-type: none"> • require that a hardened and ground shaft can be used as a raceway.
Crowned rolling surface	NATR...X	5-50		
Cylindrical rolling surface	NATV...	5-50		
Cageless	NATV...X	5-50		
Crowned rolling surface	NATR...	15-50		
Cylindrical rolling surface sealed on both sides	NATR...X PWTR...2RS	15-50 15-50		



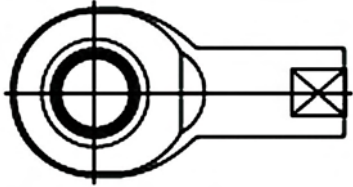
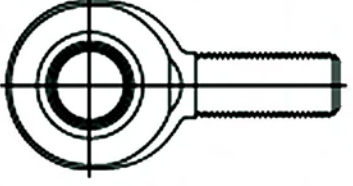
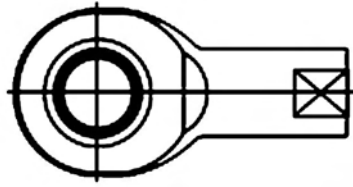
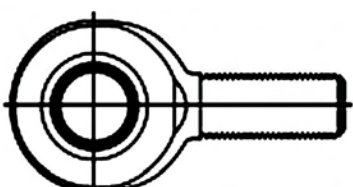

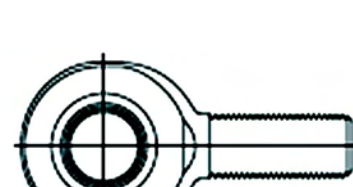
Ball Bearings Track Rollers

Name	Series	Bore Ø	Characteristics
Track rollers single row or double row lip seal / cover disk	LR 6 LR 60 LR 2 LR 50 LR 52 LR 53	4- 8 10-12 10-45	Track rollers are non- separable, single or double row units with particularly thick- walled outer rings. These bearings can support high radial loads in addition to axial forces in both directions. The outer surface of the outer rings is crowned or cylindrical. Designs with a crowned outside surface are used, if there is misalignment in relation to the raceway and edge stresses must be avoided Track rollers are available with inner ring, with pins and with plastic cover on the outer ring.
Track rollers single row or double without eccentric, lip seals/ cover disk and cover	ZL2...- DRS	16-25	



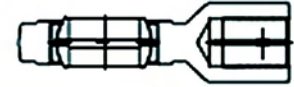
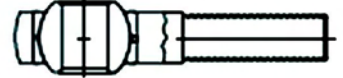
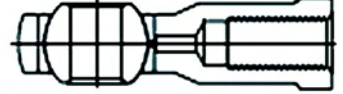
Spherical Plain Bearings

	INA	SKF	Bore Ø	Sliding pair
<p>Radial plain spherical bearings / Maintenance- free</p> 	<p>GE.UK GE.FW</p>	<p>GE.C GEH.C GE.CJ2</p>	<p>4 mm - 30 mm 10 mm - 25 mm 35 mm - 60 mm</p>	<p>Hard chromium & composite</p>
		<p>GER.FS GEC.FSA</p>	<p>100 mm - 1000 mm 320 mm - 1250 mm</p>	<p>Steel or Hard chromium & GFK + PTFE fabric</p>
<p>Angular contact plain spherical bearings / Maintenance- free</p> 		<p>GAC.F</p>	<p>25 mm - 120 mm</p>	<p>Hard chromium & GFK + PTFE fabric</p>
<p>Spherical plain thrust bearings / Maintenance- free</p> 		<p>GX.F</p>	<p>17 mm - 120 mm</p>	<p>Hard chromium & GFK + PTFE fabric</p>
<p>Radial plain spherical bearings / Require maintenance</p> 	<p>GE.DO GE.DO GE.DO-2RS GE.FO-2RS</p>	<p>GE.E GE.ES GE.ES-2RS GEH.ES-2RS</p>	<p>4 mm - 12 mm 15 mm - 200 mm 15 mm - 300 mm 20 mm - 120 mm</p>	<p>Steel & Steel</p>
	<p>GE.LO</p>	<p>GEG.ESA GEG.ES GEM.ES-2RS</p>	<p>12 mm 16 mm - 200 mm 20 mm - 80 mm</p>	<p>Steel & Steel</p>
<p>Other models: Maintenance- free</p>		<p>GE.TGR GE.TE-2RS GE.TA-2RS GE.TG3A-2RS</p>	<p>12 mm - 90 mm 25 mm - 90 mm 100 mm - 300 mm 100 mm - 200 mm</p>	<p>Steel or Hard chromium & PTFE fabric Steel or Hard chromium & PTFE fabric Steel or Hard chromium & PTFE fabric Steel or Hard chromium & PTFE fabric</p>
<p>Require maintenance</p>		<p>GEZ.ES GEZ.ES-2RS</p>	<p>12,7 mm - 152,4 mm 25,4 mm - 152,4 mm</p>	<p>Steel & Steel Steel & Steel</p>

Maintenance- Free Swivel Heads

Type Right- hand thread	Type Left- hand thread	Bore Ø	Sliding pair	
GIR.UK/ SI.C	GIL.UK/ SIL.C	6 mm-30 mm	Hard chromium & composite	
GAR.UK/ SA.C	GAL.UK/ SAL..C	6 mm - 30 mm	Hard chromium & composite	
GIR.UK2RSA/ SI.TE-2RS GIR/ S1A.TE-2RS	GIL.UK2RSA/ SIL.TE-2RS GIL/ SILA.TE-2RS	35 mm-70 mm 35 mm - 70 mm	Hard chromium & PTFE fabric	
GAR.UK2RSA/ SA.TE-2RS GAR/ SAA.TE-2RS	GAL.UK2RSA/ SAL.TE-2RS GAL/ SALA.TE-2RS	35 mm-70 mm 35 mm - 70 mm	Hard chromium & PTFE fabric	
GIKR/ SIKB.F GIKR/ SIKB.F/ VZ019	GIKL/ SILKB.F	5 mm-20 mm 5 mm - 20 mm	Steel & GFK + PTFE fabric	
GAKR/ SAKB.F	GAKL/ SALKB.F	5 mm-20 mm	Steel & GFK + PTFE fabric	

Maintenance- Free Swivel Heads

	Type Right- hand thread	Type Left- hand thread	Bore Ø	Sliding pair
	GIR.DO/ SI.E GIR.DO/ SI.ES GIR.DO-2RS/ SI.ES-2RS GIR.DO-2RS/ SI.AES-2RS	GIL.DO/ SI.E GIL.DO/ SI.ES GIL.DO-2RS/ SI.ES-2RS GIL.DO-2RS/ SI.AES-2RS	6 mm - 12 mm 15 mm - 30 mm 35 mm - 80 mm 40 mm - 80 mm	Steel & Steel
	GAR.DO/ SA.E GAR.DO/ SA.ES GAR.DO-2RS/ SA.ES-2RS GAR.DO-2RS/ SAA.ES-2RS	GAL.DO/ SA.E GAL.DO/ SA.ES GAL.DO-2RS/ SAL.ES-2RS GAL.DO-2RS/ SALA.ES-2RS	6 mm - 12 mm 15 mm - 30 mm 35 mm - 80 mm 40 mm - 80 mm	Steel & Steel
	GIHNRKG- LO- A/ SIQG.ESA GIHNRKG- LO- A/ SIQG.ES GIHRK.DO/ SIR.ES	GIHNRKLG- LO- A/ SIQGG.ESA GIHRLK- LO- A/ SIQGG.ES	12 mm - 12 mm 16 mm - 100 mm 16 mm - 200 mm 25 mm - 120 mm	Steel & Steel
	GAKR- PB/ SAKAC.M	GAKL- PB/ SALKAC.M	5 mm - 30 mm	Steel & Bronze
	GIKR- PB/ SIKAC.M SIKAC.M/ VZ019	GAKL- PB/ SILKAC.M	5 mm - 30 mm	Steel & Bronze

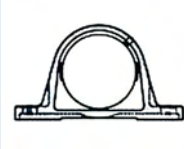
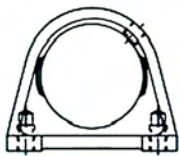
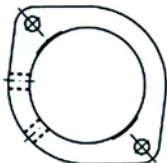
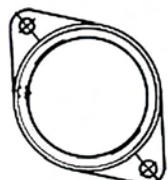
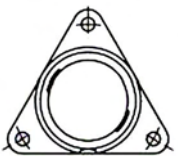
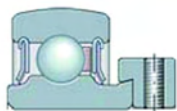
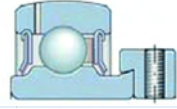
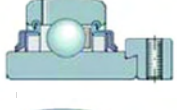





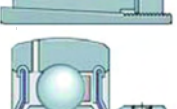

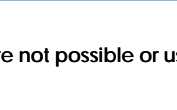
INTERCHANGE

SKF		INA
C	=	UK
E	=	DO
ES	=	DO
TE2RS	=	UK 2RSA

Convertible Table Bearings Units

INA	RHP	SKF	FYH	ASAHI	FAFNIR
AY..NPPB			SB2..	B2..	
FLCTE *	LFTC..EC	FYTF..FJ	ALF2..	FHLCTE2..	FLCT
FLCTEY *	LFTC..A		BLF2..	BLCTE2..	
G(E)..KRRB	10..DECG	YEL	NA2..	FG..	G(E)..KRRB
GAY..NPPB	12..G		SB2..	B2..	GYAE..RRB
GLCTE	LFTC..EC	FYTF..FJ	ALF2..	FHLCTE2..	
GLCTEY	LFTC..A		BLF2..	BLCTE2..	
GRA(E)..NPPB	12..EC G	YET	SA2..	FH2..ER	GRA..RRB
GY(E)..KRRB	10..G	YAR	UC2..	UC2..	
PAK	SL..EC	SYB..FM			VAK
PAKY	SL..A				
PASE	NP..EC	SY..FM	ALP2..	FHP2..	
PASEY	NP..A		BLP2..	BP2..	
PB	LPB..EC	P..FM	SAPP2..	FHPP2..	PB
PBY	LPB..A		SBPP2..F	BPP2..	
PCJ	SF..EC	FY..FM		FHF2..	VCD
PCJT	SFT..EC	FYTB..FM		FHFL2..	VCDT
PCJTY	SFT..A			BFL2..	
PCJY	SF..A			BF2..	
PSHE	SNP.EC		SAPA2..		
PSHEY	SNP.A				
PTU	ST..EC	TU..FM	SAT.2	FHT2..	
PTUY	ST..A			BT2	
RA	SLFE..EC	PF..FM	SAPF2..	FHPF2..	RA
RAE..NPPB	12..EC		SA2..	FH2..	RA..RRB
RAK	SL..DEC	SYB..WM		FGAK2..	RAK
RAKY	SL	SYB..TM	SL2..		RAKY
RASE	NP..DEC	SY..WM	WAP2..	FGP2..	RAS
RASEY	NP	SY..TM	UCP2..	UCP2..	
RASEY..MP	MP				
RAT	SLFL..EC	PFT..FM	SAPFL2..	FHPFL2..	RAT
RATR	SLFT..EC	PFD..FM		FHPFT2..	
RATRY	SLFT..A			BPFT2..	
RATY	SLFL..A		SBPFL2..	BPFL2..	
RAY	SLFE..A		SBPF2..	BPF2..	
RBY	LPB	P..TM			
RCJ	SF..DEC	FY..WM		FGF2..	RCJ
RCJT	SFT..DEC	FYTB..WM		FGFL2..	RCJT
RCJTY	SFT	FYTB..TM			
RCJY	SF	FY..TM	UCF2..	UCF2..	
RCJY..MSF	MSF		UCFX2..		
RFEY..MFC	MFC				
RGLCTE	LFTC..DEC				
RGLCTEY	LFTC				
RPB	LPBR..EC			FHPR2..	RPB
RR	SLFE..DEC	PF..WM			RR
RRT	SLFL..DEC	PFT..WM			RRT
RRTR	SLFT..DEC	PFD..WM			RRTR
RRTY	SLFL	FPT..TM			
RRTRY	SLFT	PFD..TM			
RRY	SLFE	PF..TM			
RSHE	SNP..DEC		NAPA2..		
RSHEY	SNP				
RTU	ST..DEC	TU.WM	NAT2..	FGT2..	RTU
RTUY	ST..DEC	TU..TM			
TASE	TNP..DEC				TAS
TCJ	TSF..DEC				TCJ
TCJT	TSFT..DEC				
TTU	TST..DEC				TTU

Housing Units

		Housing				
		Pedestal bearing		Twin hole flange bearing		Three hole flange bearing
						
		GG.ASE SY.M GG.SAO 1)	GG.SHE SYF	GG.LCTE 2) FYTF. GG.GLCTE	GG.CJT FYTB...M GG.CFT GG.CJTZ	GG.CFTR
RAE...- NPP- B YET., d = 12 to 50 mm				FLCTE 2)		
GRAE...- NPP- B YEL., d = 12 to 60 mm		PASE SY...FM	PSHE	GLCTE	PGJT ----- PGJT	PCFTR
GE...- KRR- B YET., d = 17 to 120 mm		RASE	RSHE		RCJT ----- RCJTZ	only on request
GE...- KIT- B d = 20 to 80 mm		TASE	TSHE		TCJT	only on request
GE...- KLL- B - T d = 20 to 50 mm		LASE	only on request		LCJT	only on request
GNE...- KRR- B1) d = 30 to 100 mm		RSAO				
GLE...- KRR- B d = 20 to 70 mm		RASEL	only on request		only on request	only on request
GSH...-2RSRB... BTN d = 20 to 50 mm		RASEA	only on request		RCJTA	only on request
AY...- NPP- B GAY...NPP- B.. d = 12 to 30 mm				FLXTEY2		
GAY - NPP- B YAT.. d = 12 to 60 mm		PASEY	PSHEY	FLCTEY 2	PCJTY	only on request
GYE...- KRR- B YAR...2 YAR...2RF d = 12 to 90 mm		RASEY	RSHEY		RCJTY	only on request

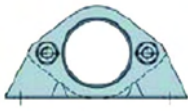


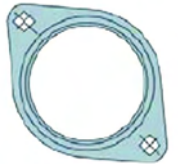


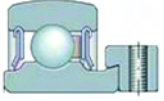

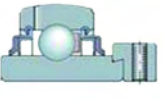
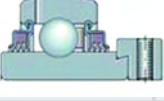
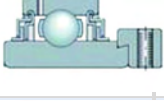


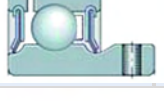

Combinations that are not possible or useful. ¹⁾ Heavy series ²⁾ Without lubrication hole

Housing Units

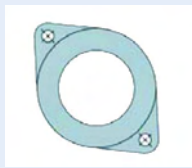
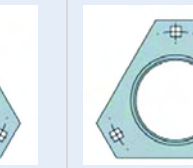
Four hole flange bearing	Four hole flange bearing	Clamping assembly housing				
						
GG.ME	GG.CJ FY...M	GG.TUE TU..M	GG HUE GG...- HUSE	GG.HE	GG.SFT	GG...- MSTU
GG.MEO1)	GG.CJO 1)	GG.TUEO 1)				
GG.FE - FYC ..	GG.CF					
						MSTU
PME	PCJ ----- PCF	PTUE	PHUSE	PHE	PSFT	
RME ----- RFE	RCJ	RTUE	only on request		only on request	only on request
TME ----- TFE	TCJ	TTUE	only on request		only on request	only on request
only on request	only on request	only on request	only on request	only on request	only on request	only on request
RMEO	RCJO	RTUEO				
only on request	RCJL	only on request	only on request	only on request	only on request	only on request
only on request	only on request	only on request	only on request	only on request	only on request	only on request
						only on request
PMEY	PCJY	PTUEY	only on request		only on request	
RMEY	RCJY	RTUE	only on request	only on request	only on request	only on request

Other sizes and combinations on request

Housing Units2

		Housing				
		Pedestal bearing			Twin hole flange bearing	
						
		GEH... PBS	GEH... BT R.	GEH... BT GRG...- RABR R.	FLAN...- LST (2 pieces)	FLANL- MST (2 pieces) PFT..
RAIE...- NPP- B d = 20 to 30 mm				RPB	RALT	
RAE...- MPP-8 YET.. d = 12 to 40 mm			PB	RPB		RAT
GRAE...- NPP- B YET.. d = 20 to 60 mm						
GE...- KRR- B YEL...2F YEL...2RF d = 17 to 60 mm		Order housing / bearing separately	Order housing / bearing separately	Order housing / bearing separately		Order housing / bearing separately
GE...- KIT- B d = 20 to 60 mm		Order housing / bearing separately	Order housing / bearing separately			Order housing / bearing separately
GE...- KLL- B d=20 to 50 mm		Order housing / bearing separately	Order housing / bearing separately			Order housing / bearing separately
GLE...- KRR- B d = 20 to 60 mm		Order housing / bearing separately	Order housing / bearing separately			Order housing / bearing separately
GSH...-2RSR- B ...BTN d = 20 to 50 mm		Order housing / bearing separately	Order housing / bearing separately			Order housing / bearing separately
(G)AY...- NPP- B YAT.. d = 12 to 60 mm		Order housing / bearing separately		RPB		RPB
GYE...- KRR- B YAR... 2F d = 12 to 60 mm		Order housing / bearing separately	Order housing / bearing separately			Order housing / bearing separately

Housing Units

Three hole flange bearing					
					
FLAN..- CSLT FLAN..- CST	FLAN..- RCSMF GRG..- RCSM	FLA IM.- MSB PF.. (2 pieces)	FLAN..- MSA PLAN..- MSB PF..	FLAN - LSTR (2 pieces)	PLAN , MSTR PFD.. (2 pieces)
PCSLT				RALTR	
	RCSMF	RA			RATR
		RA	GRA		
		Order housing / bearing separately	Order housing / bearing separately		RRTR
		Order housing / bearing separately	Order housing / bearing separately		Order housing / bearing separately
		Order housing / bearing separately	Order housing / bearing separately		Order housing / bearing separately
		Order housing / bearing separately	Order housing / bearing separately		Order housing / bearing separately
		RAY			RATRY
		RRY	GRRY		Order housing / bearing separately

Other sizes and combinations on request.

Pedestal and Flange Bearing Housing Units

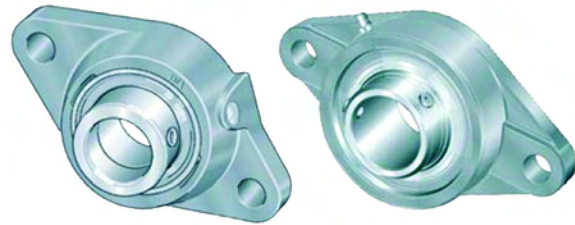
Product Overview

Pedestal bearing housing units - longer base PASE



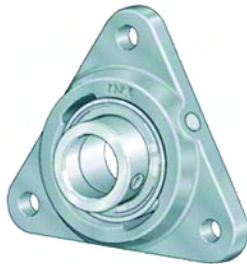
- Cast iron housings GG ASE
- Insert roller bearings GRAE..NPPB
 - Inner ring extended on one side
 - P seals on both sides
- For shafts of 12 mm to 60 mm

Twin hole flange bearing housing units PCJT



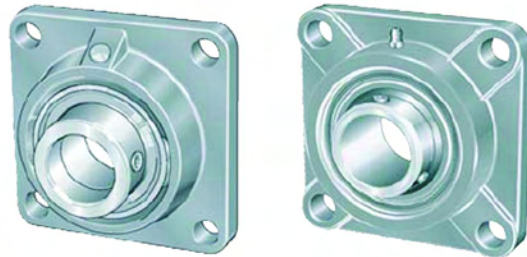
- Cast iron housings GG CJT
- Insert roller bearings GRAE..NPPB
 - Inner ring extended on one side
 - P seals on both sides
- For shafts of 12 mm to 60 mm

Three hole flange bearing housing units PCFTR



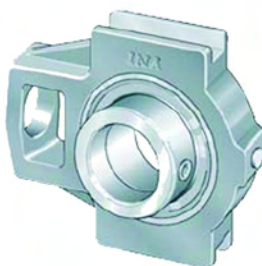
- Cast iron housings GG CFTR
- Insert roller bearings GRAE..NPPB
 - Inner ring extended on one side
 - P seals on both sides
- For shafts of 12 mm to 50 mm

Four hole flange bearing housing units PCJ



- Cast iron housings GG CJ
- Insert roller bearings GRAE..NPPB
 - Inner ring extended on one side
 - P seals on both sides
- For shafts of 12 mm to 60 mm

Clamping assembly housing units - Cast iron PTUE



- Cast iron housings GGTUE
 - Cast- on eye with bore for threaded rod
 - Guide grooves on both sides
- Insert roller bearings GRAE..NPPB
 - Inner ring extended on one side
 - P seals on both sides
- For shafts of 20 mm to 60 mm

Clamping assembly housing units - Steel sheet MSTU



- Steel sheet housings GEH MSTU
- Insert roller bearings RAE..NPPB
 - Inner ring extended on one side
 - P seals on both sides
 - Cannot be re- lubricated
- For shafts of 25 mm to 30 mm

Pedestal and Flange Bearing Housing Units

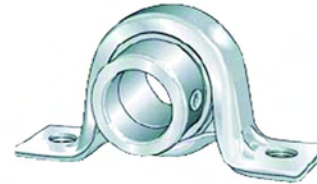
Product Overview

Pedestal bearing housing units PBS



- Steel sheet housings GEH...PBS-
Corrotect coated
- Two parts, parts screwed together
- Insertroller bearings RAE..NPPB
- Inner ring extended on one side
- P seals on both sides
- For shafts of 12 mm to 40 mm

Pedestal bearing housing units PBY



- Steel sheet housings GEH...BT-
Corrotect coated
- Two parts, parts screwed together
- Insertroller bearings AY..NPPB
- Inner ring extended on one side
- P seals on both sides
- For shafts of 12 mm to 30 mm

Flange bearing housing units RAT/ RALT



- RAT
- Steel sheet housings MST
- Insertroller bearings RAE..NPPB
- For shafts of 12 mm to 40 mm
- RALT
- Steel sheet housings LST
- Insertroller bearings RAE..NPPB,
Rolling element sets based on Series 60
- For shafts of 20 mm to 25 mm

Flange bearing housing units RALTR/ RATR



- RALTR
- Steel sheet housings LSTR
Insertroller bearings RAE..NPPB,
Rolling element sets based on Series 60
- For shafts of 20 mm to 30 mm
- RATR
- Steel sheet housings MSTR
- Insertroller bearings RAE..NPPB,
- For shafts of 20 mm to 25 mm




















Flange bearing housing units GRA/ RA



- GRA: Steel sheet housings MSB/ MSA
RA: Steel sheet housings MSB
- Insertroller bearings GRAE..NPPB or RAE..NPPB
- Inner ring extended on one side
- P seals on both sides
- GRA can be re- lubricated
- GRA for shafts of 20 mm to 50 mm
- RA for shafts of 12 mm to 60 mm

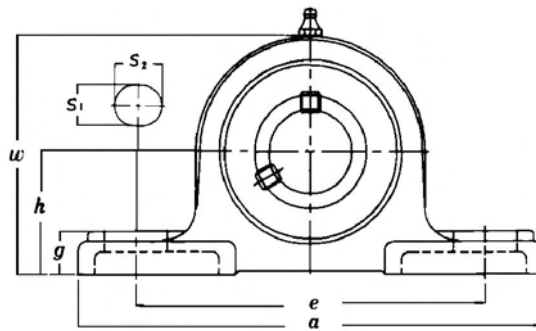
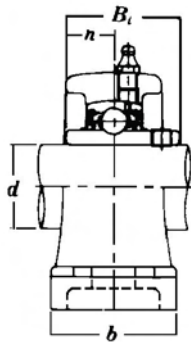
Bearing Units

Japanese Designations

	Z- screw locking			Eccentric lock ring locking			Adapter sleeve locking			
										
	UC200	UC300	UCX00	SB200	NA200	NA300	SA200	UK200	UK300	
	P PL LP	UCP200	UCP300	UCPX00	SBLP200	NAPL200	NAP300	SALP200	UKP200	UKP300
	F NF	UCF200	UCF300	UCFX00		NANF200	NAF300		UKF200	UKF300
	FL NFL	UCFL200	UCFL300	UCFLX00	BLF BPFTD	NANFL200	NAFL300	ALF APFTD	UKFL200	UKFL300
	T	UCT200	UCT300	UCTX00		NAT200	NAT300		UKT200	UKT300
	FC FCF	UCFC200 UCFC F200	UCFC300	UCFCX00		NAFC200	NAFC300		UKFC200	UKFC300
	C	UCC200	UCC300	UCCX00		NAC200	NAC300		UKC200	UKC300
	PH	UCPH200	UCPH300	UCPHX00		NAPH200			UKPH200	
	PA	UCPA200	UCPA300	UCPAX00		NAPA200			UKPA200	
	FB	UCFB200	UCFB300	UCFBX00		NAFB200			UKFB200	
	FA	UCFA200	UCFA300	UCFAX00		NAFA200			UKFA200	
	HA	UCHA200	UCHA300	UCHAX00		NAHA200			UKHA200	

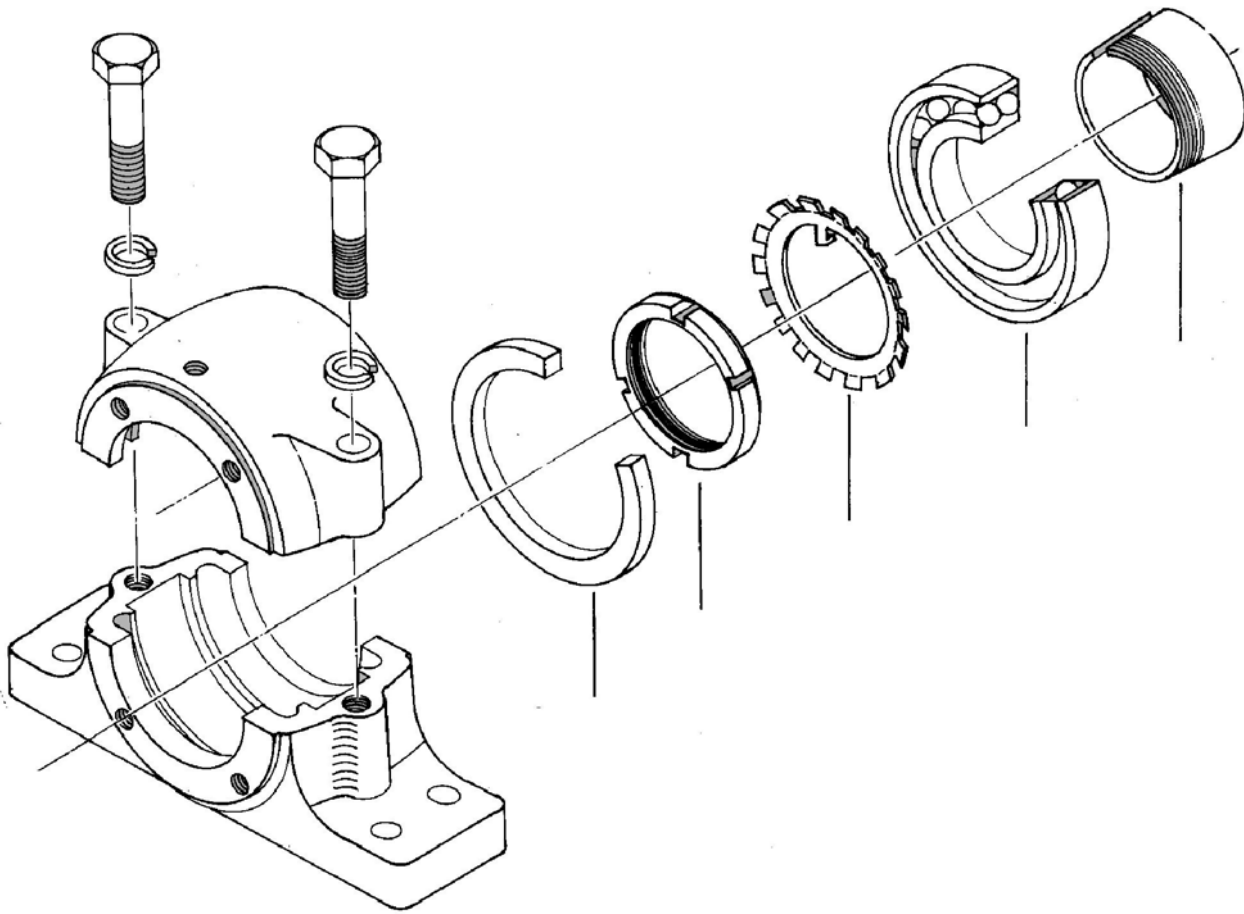
Bearing Units

Serie UCP2



Type (UCP)	Axle dia.		Dimensions (mm)										Bolt	Bearing (UC)	Housing	Weight (kg) UCP	Items
	d		h	a	e	b	s ₁	s ₂	g	w	n	B ₁					
	(inn)	(mm)															
202 202-10 203	5/8	15 17	30,2	127	95	38	13	19	12	60	12,7	31	M10	202 202-10 203	P203	0,6	114691 114690
204-12 204	3/4	20	33,3	127	95	38	13	19	13	64	12,7	31	M10	204-12 204	P204	0,66	114689
205-14 205-15 205	7/8 15/16	25	36,5	140	105	38	13	19	13	71	14,3	34	M10	205-14 205-15 205	P205	0,8	114688
205-16	1													205-16			
206-18 206	1-1/8	30	42,9	165	121	48	17	21	15	84	15,9	38,1	M14	206-18 206	P206	1,3	114687
206-19	1-3/16													206-19			
207-20 207-21 207-22 207	1-1/4 1-5/16 1-3/8	35	47,6	167	127	48	17	21	16	93	17,5	42,9	M14	207-20 207-21 207-22 207	P207	1,6	114685
207-23	1-7/16													207-23			
208-24 208-25 208	1-1/2 1-9/16	40	49,2	184	137	54	17	21	17	98	19	49,2	M14	208-24 208-25 208	P208	2	114684
209-26 209-27 209-28 209	1-5/8 1-11/16 1-3/4	45	54	190	146	54	17	21	17	106	19	49,2	M12	209-26 209-27 209-28 209	P209	2,2	114683
210-30 210-31 210	1-7/8 1-15/16	50	57,2	206	159	60	20	22	19	113	19	51,6	M16	210-30 210-31 210	P210	2,9	114681
211-32 211-34 211	2 2-1/8	55	63,5	219	171	60	20	22	19	125	22,2	55,6	M16	211-32 211-34 211	P211	3,6	114678
211-35	2-3/16													211-35			
212-36 212	2-1/4	60	69,9	241	184	70	20	25	22	138	25,4	65,1	M16	212-36 212	P212	4,9	114677
212-38 212-39	2-3/8 2-7/16													212-38 212-39			
213-40 213	2-1/2	65	76,2	265	203	70	25	30	25	150	25,4	65,1	M20	213-40 213	P213	5,9	114675
214-44 214	2-3/4	70	79,4	266	210	72	25	30	28	156	30,2	74,6	M20	214-44 214	P214	6,8	114674
215 215-48	3	75	82,6	275	217	74	25	30	28	162	33,3	77,8	M20	215 215-48	P215	7,4	114673
216		80	88,9	292	232	78	25	35	32	174	33,3	82,6	M20	216	P216	9	114672
217-52 217	3-1/4	85	95,2	310	247	83	25	40	32	185	34,1	85,7	M20	217-52 217	P217	10,8	114671
218-56 218	3-1/2	90	101,6	327	262	88	27	45	34	198	39,7	96	M22	218-56 218	P218	13	114670

Split Cast Iron Housing



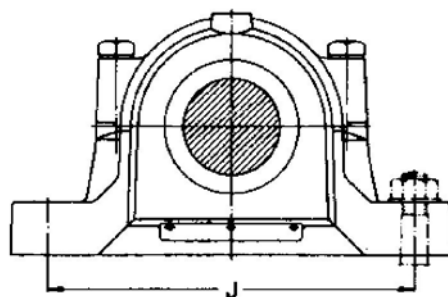
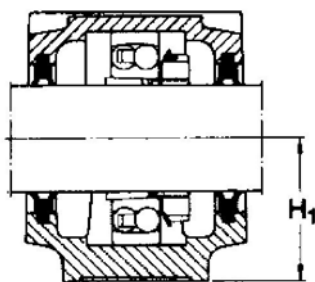
English
Sleeve
Ball bearing or roller bearing
MB series lock washer
KM collar nut
FRB guide ring
SNL cast iron housing

Split cast iron housing is adapted to spherical ball or roller bearing, which can be mounted directly on axle that can be plain, with flat or adapter sleeve.

The bearing raceway is manufactured to H8 tolerance suitable for sliding bearing, which allows axial displacement in both directions.

If the bearing functions as guide bearing, then a guide ring is placed on each side of the bearing in the housing.

Bearing Housing
Bearing housing assembly
Series SNL 500-600



Shaft Diameter mm	Bearing housing Without seal	Seals TSNA- G	Dimensions		Fits in:		
			H1	J	Bearing	Adapter Sleeve	Guide ring x number FRB
20	SNL505	TSNA-505 G	40	130	1205- K	H 205	5/52 x 2
20	SNL 505	TSNA-505 G	40	130	2205- K	H 305	3.5/52 x 2
20	SNL505	TSNA-505 G	40	130	22205K	H 305	3.5/52 x 2
20	SNL 506-605	TSNA-605 G	50	150	1305- K	H 305	7.5/62 x 2
20	SNL 506-605	TSNA-605 G	50	150	2305- K	H 2305	8/62 x 1
25	SNL 506-605	TSNA-506 G	50	150	1206- K	H 206	8/62 x 2
25	SNL 506-605	TSNA-506 G	50	150	2206- K	H 306	6/62 x 2
25	SNL 506-605	TSNA-506 G	50	150	22206- K	H 306	6/62 x 2
25	SNL 507-606	TSNA-606 G	50	150	1306- K	H 306	7/72 x 2
25	SNL 507-606	TSNA-606 G	50	150	2306- K	H 2306	7/72 x 1
30	SNL 507-606	TSNA-507 G	50	150	1207- K	H 207	8.5/72 x 2
30	SNL 507-606	TSNA-507 G	50	150	2207- K	H 307	5.5/72 x 2
30	SNL 507-606	TSNA-507 G	50	150	22207- K	H 307	5.5/72 x 2
30	SNL 508-607	TSNA-607 G	60	170	1307- K	H 307	9/80 x 2
30	SNL 508-607	TSNA-607 G	60	170	2307- K	H 2307	8/80 x 1
35	SNL 508-607	TSNA-508 G	60	170	1208- K	H 208	10.5/80x2
35	SNL 508-607	TSNA-508 G	60	170	2208- K	H 308	8/80 x 2
35	SNL 508-607	TSNA-508 G	60	170	22208- K	H 308	8/80 x 2
35	SNL 510-608	TSNA-608 G	60	170	1308- K	H 308	9/90 x 2
35	SNL 510-608	TSNA-608 G	60	170	2308- K	H 2308	8/90 x 1
40	SNL 509	TSNA-509 G	60	170	1209- K	H 209	5.5/85 x 2
40	SNL 509	TSNA-509 G	60	170	2209- K	H 309	7/85 x 1
40	SNL509	TSNA-509 G	60	170	22209- K	H 309	7/85 x 1
40	SNL 511-609	TSNA-609 G	70	210	1309- K	H 309	9.5/100x2
40	SNL 511-609	TSNA-609 G	70	210	2309- K	H 2309	8/100 x 1
40	SNL 511-609	TSNA-609 G	70	210	21309- K	H 309	9.5/100x2
45	SNL 510-608	TSNA-510 G	60	170	1210- K	H 210	10.5/90x2
45	SNL 510-608	TSNA-510 G	60	170	2210- K	H 310	9/90 x 2
45	SNL 510-608	TSNA-510 G	60	170	22210- K	H 310	9/90 x 2
45	SNL 512-610	TSNA-610 G	70	210	1310- K	H 310	10.5/110x2
45	SNL 512-610	TSNA-610 G	70	210	2310- K	H 2310	8/110 x 1
45	SNL 512-610	TSNA-610 G	70	210	21310- K	H 310	10.5/110x2
50	SNL 511-609	TSNA-511 G	70	210	1211- K	H 211	11.5/100x2
50	SNL 511-609	TSNA-511 G	70	210	2211- K	H 311	9.5/100x2
50	SNL 511-609	TSNA-511 G	70	210	22211- K	H 311	9.5/100x2
50	SNL 513-611	TSNA-611 G	80	230	1311- K	H 311	11/120x2
50	SNL 513-611	TSNA-611 G	80	230	2311- K	H 2311	8/120 x 1
50	SNL 513-611	TSNA-611 G	80	230	21311- K	H 311	11/120x2
55	SNL 512-610	TSNA-512 G	70	210	1212- K	H 212	13/110x2
55	SNL 512-610	TSNA-512 G	70	210	2212- K	H 312	10/110x2
55	SNL 512-610	TSNA-512 G	70	210	22212- K	H 312	10/110x2
55	SNL 515-612	TSNA-612 G	80	230	1312- K	H 312	12.5/130x2
55	SNL 515-612	TSNA-612 G	80	230	2312- K	H 2312	10/130 x 1
55	SNL 515-612	TSNA-612 G	80	230	21312- K	H 312	12.5/130x2

Bearing Housing

Series 3 SNL 500-600

Shaft Diameter mm	Bearing housing Without seal	Seals TSNA- G	Dimensions		Fits in:		
			H1	J	Bearing	Adapter sleeve	Guide ring x number FRB
60	SNL 513-611	TSNA-513 G	80	230	1213- K	H 213	14/120x2
60	SNL 513-611	TSNA-513 G	80	230	2213- K	H 313	10/120x2
60	SNL 513-611	TSNA-513 G	80	230	22213- K	H 313	10/120x2
60	SNL 516-613	TSNA-613 G	95	260	1313- K	H 313	12.5/140x2
60	SNL 516-613	TSNA-613 G	95	260	2313- K	H 2313	10/140 x 1
60	SNL 516-613	TSNA-613 G	95	260	21313- K	H 313	12.5/140x2
60	SNL 516-613	TSNA-613 G	95	260	22313- K	H 2313	10/140 x 1
65	SNL 515-612	TSNA-515 G	80	230	1215- K	H 215	15.5/130x2
65	SNL 515-612	TSNA-515 G	80	230	2215- K	H 315	12.5/130x2
65	SNL 515-612	TSNA-515 G	80	230	22215- K	H 315	12.5/130x2
65	SNL 518-615	TSNA-615 G	100	290	1315- K	H 315	14/160x2
65	SNL 518-615	TSNA-615 G	100	290	2315- K	H 2315	10/160 x 1
65	SNL 518-615	TSNA-615 G	100	290	21315- K	H 315	14/160x2
65	SNL 518-615	TSNA-615 G	100	290	22315- K	H 2315	10/160 x 1
70	SNL 516-613	TSNA-516 G	95	260	1216- K	H 216	16/140x2
70	SNL 516-613	TSNA-516 G	95	260	2216- K	H 316	12.5/140x2
70	SNL 516-613	TSNA-516 G	95	260	22216- K	H 316	12.5/140x2
70	SNL 519-616	TSNA-616 G	112	290	1316- K	H 316	14.5/170x2
70	SNL 519-616	TSNA-616 G	112	290	2316- K	H 2316	10/170 x 1
70	SNL 519-616	TSNA-616 G	112	290	21316- K	H 316	14.5/170x2
70	SNL 519-616	TSNA-616 G	112	290	22316- K	H 2316	10/170 x 1
75	SNL 517	TSNA-517 G	95	260	1217- K	H 217	16.5/150x2
75	SNL 517	TSNA-517 G	95	260	2217- K	H 317	12.5/150x2
75	SNL 517	TSNA-517 G	95	260	22217- K	H 317	12.5/150x2
75	SNL 520-617	TSNA-617 G	112	320	1317- K	H 317	14.5/180x2
75	SNL 520-617	TSNA-617 G	112	320	2317- K	H 2317	10/180 x 1
75	SNL 520-617	TSNA-617 G	112	320	21317- K	H 317	14.5/180x2
75	SNL 520-617	TSNA-617 G	112	320	22317- K	H 2317	10/180 x 1
80	SNL 518-615	TSNA-518 G	100	290	1218- K	H 218	17.5/160x2
80	SNL 518-615	TSNA-518 G	100	290	2218- K	H 318	12.5/160x2
80	SNL 518-615	TSNA-518 G	100	290	22218- K	H 318	12.5/160x2
80	SNL 518-615	TSNA-518 G	100	290	23218- K	H 2318	12.5/160 x 1
85	SNL 519-616	TSNA-519 G	112	290	1219- K	H 219	18.8/170x2
85	SNL 519-616	TSNA-519 G	112	290	2219- K	H 319	12.5/170x2
85	SNL 519-616	TSNA-519 G	112	290	22219- K	H 319	12.5/170x2
85	SNL 522-619	TSNA-619 G	125	350	1319- K	H 319	17.5/200 x 2
85	SNL 522-619	TSNA-619 G	125	350	2319- K	H 2319	6.5/200 x 2
85	SNL 522-619	TSNA-619 G	125	350	21319- K	H 319	17.5/200x2
85	SNL 522-619	TSNA-619 G	125	350	22319- K	H 2319	6.5/200 x 2
90	SNL 520-617	TSNA-520 G	112	230	1220- K	H 220	18/180x2
90	SNL 520-617	TSNA-520 G	112	230	2220- K	H 320	12/180x2
90	SNL 520-617	TSNA-520 G	112	230	22220- K	H 320	12/180x2
90	SNL 520-617	TSNA-520 G	112	230	23220- K	H 2320	9.7/180x2
90	SNL 524-622	TSNA-620 G	140	350	1320- K	H 320	19.5/215x2
90	SNL 524-622	TSNA-620 G	140	350	2320- K	H 2320	6.5/215x2
90	SNL 524-622	TSNA-620 G	140	350	21320- K	H 320	19.5/215x2
90	SNL 524-622	TSNA-620 G	140	350	22320- K	H 2320	6.5/215x2
100	SNL 522-619	TSNA-522 G	125	350	1222- K	H 222	21/200 x 2
100	SNL 522-619	TSNA-522 G	125	350	2222- K	H 322	13.5/200x2
100	SNL 522-619	TSNA-522 G	125	350	22222- K	H 322	13.5/200x2
100	SNL 522-619	TSNA-522 G	125	350	23222- K	H 2322	5.1/200x2
110	SNL 524-620	TSNA-524 G	140	350	1224- K	H 3124	22/215x2
110	SNL 524-620	TSNA-524 G	140	350	22224- K	H 3124	14/215x2
110	SNL 524-620	TSNA-524 G	140	350	23224- K	H 2324	14/215x2
115	SNL 526	TSNA-526 G	150	380	22226- K	H 3126	13/230x2
115	SNL 526	TSNA-526 G	150	380	23226- K	H 2326	5/230 x 2
125	SNL 528	TSNA-528 G	150	420	22228- K	H 3128	15/250x2
125	SNL 528	TSNA-528 G	150	420	23228- K	H 2328	5/250 x 2
135	SNL 530	TSNA-530 G	160	450	22230- K	H 3130	16.5/270x2
135	SNL 530	TSNA-530 G	160	450	23230- K	H 2330	5/270 x 2
140	SNL 532	TSNA-532 G	170	470	22232- K	H 3132	17/290x2
140	SNL 532	TSNA-532 G	170	470	23232- K	H 2332	5/290 x 2

Bearing Housing Seals

Series TSNA



TSN...G
Double seal



TSN...A
V- Ring



TSN...C
Felt seal



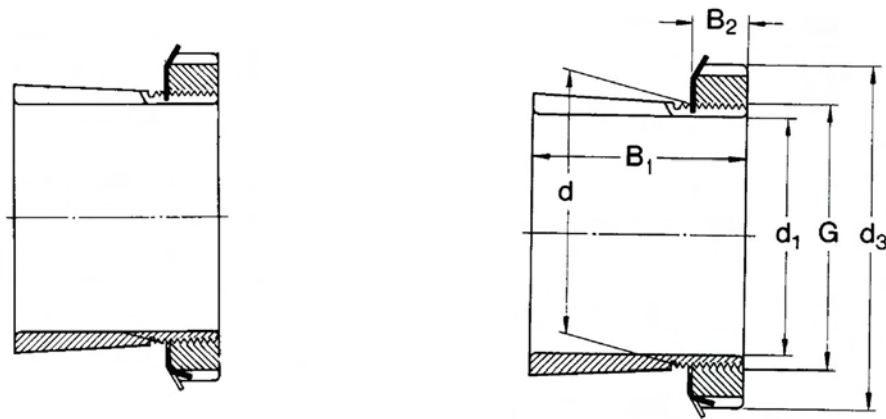
TSN...S
Labyrinth seal

d	Type TSNA G
20	TSN 505 G TSN 605 G
25	TSN 506 G TSN 606 G
30	TSN 507 G TSN 607 G
35	TSN 508 G TSN 608 G
40	TSN 509 G TSN 609 G
45	TSN 510 G TSN 610 G
50	TSN 511 G TSN 611 G
55	TSN 512 G TSN 612 G
60	TSN 513 G TSN 613 G
65	TSN 515 G TSN 615 G
70	TSN 516 G TSN 616 G
75	TSN 517 G TSN 617 G
80	TSN 518 G
85	TSN 519 G TSN 619 G
90	TSN 520 G TSN 620 G
100	TSN 522 G
110	TSN 524 G
115	TSN 526 G
125	TSN 528 G
135	TSN 530 G
140	TSN 532 G

Type TSNA A
TSN 505 A TSN 605 A
TSN 506 A TSN 606 A
TSN 507 A TSN 607 A
TSN 508 A TSN 608 A
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TSN 518 A
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TSN 520 A TSN 620 A
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TSN 532 A

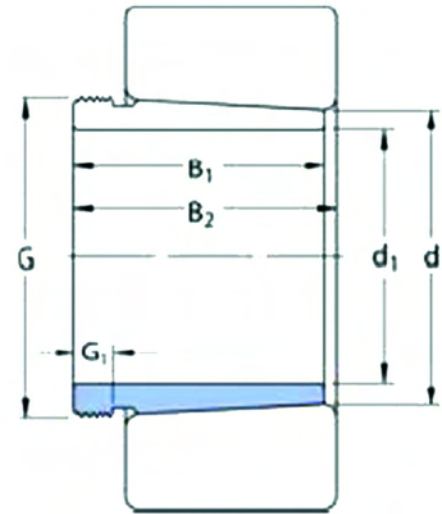
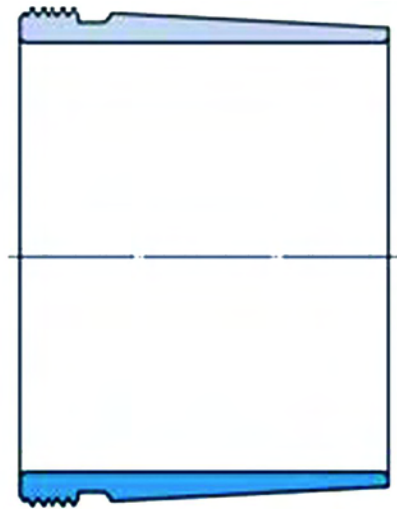
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TSN 518 C
TSN 519 C TSN 619 C
TSN 520 C TSN 620 C
TSN 522 C
TSN 524 C
TSN 526 C
TSN 528 C
TSN 530 C
TSN 532 C

Adapter Sleeves



d1	d	Dimensions d3	B1	B2	G	Weight kg	Complete clamping sleeve	Code fitting nut	Locking device
20	25	38	26	8	M 25x1,5	0.070	H 205	KM 5	MB 5
	25	38	29	8	M 25x1.5	0.075	H 305	KM 5	MB 5
25	30	45	27	8	M 30x1.5	0.10	H 206	KM 6	MB 6
		45	31	8	M 30x1.5	0.11	H306	KM 6	MB 6
		45	38	8	M 30x1.5	0.13	H 2306	KM 6	MB 6
30	35	52	29	9	M 35x1.5	0.12	H 207	KM 7	MB 7
		52	35	9	M 35x1.5	0.14	H 306	KM 7	MB 7
		52	43	9	M 35x1.5	0.17	H 2307	KM 7	MB 7
35	40	58	26	10	M 40x1.5	0.17	H 208	KM 8	MB 8
		58	35	10	M 40x1.5	0.19	H 307	KM 8	MB 8
		58	43	10	M 40x1.5	0.22	H 2308	KM 8	MB 8
40	45	65	33	11	M 45x1.5	0.23	H 209	KM 9	MB 9
		65	39	11	M 45x1.5	0.25	H 309	KM 9	MB 9
		65	50	11	M 45x1.5	0.28	H 2309	KM 9	MB 9
45	50	70	35	12	M 50x1.5	0.27	H 210	KM 10	MB 10
		70	42	12	M 50x1.5	0.30	H 310	KM 10	MB 10
		70	55	12	M 50x1.5	0.36	H 2310	KM 10	MB 10
50	55	75	37	12	M 55x1.5	0.31	H 211	KM 11	MB 11
		75	45	12	M 55x1.5	0.35	H 311	KM 11	MB 11
		75	59	12	M 55x1.5	0.42	H 2311	KM 11	MB 11
55	60	80	38	13	M 60x1.5	0.35	H 212	KM 12	MB 12
		80	47	13	M 60x1.5	0.39	H 312	KM 12	MB 12
		80	62	13	M 60x1.5	0.48	H 2312	KM 12	MB 12
60	65	85	40	14	M 65x1.5	0.40	H 213	KM 13	MB 13
		85	50	14	M 65x1.5	0.46	H 313	KM 13	MB 13
		85	65	14	M 65x1.5	0.55	H 2313	KM 13	MB 13

Withdrawal Sleeves



d1	d	Dimensions in mm B1	B2	G	Weight kg	Withdrawal sleeve	Code matching mounting nuts	Hydraulic nuts
35	40	29	32	M 45x1.5	0.090	AH 308	KM 9	-
		40	43	M 45x1.5	0.13	AH 2308	KM 9	-
40	45	31	34	M 50x1.5	0.12	AH 309	KM 10	HMV 10
		44	47	M 50x1.5	0.16	AH 2309	KM 10	HMV 10
45	50	35	38	M 55x2	0.13	AHX310	KM 11	HMV 11
		50	53	M 55x2	0.19	AHX 2310	KM 11	HMV 11
50	55	37	40	M 60x2	0.16	AHX311	KM 12	HMV 12
		54	57	M 60x2	0.26	AHX 2311	KM 12	HMV 12
55	60	40	43	M 65x2	0.19	AHX 312	KM 13	HMV 13
		58	61	M 65x2	0.30	AHX 2312	KM 13	HMV 13
60	65	42	45	M 70x2	0.22	AH 313 G	KM 14	HMV 14
		61	64	M 75x2	0.39	AH 2313	KM 15	HMV 15
65	70	43	47	M 75x2	0.24	AH 314 G	KM 15	HMV 15
		64	68	M 80x2	0.45	AHX 2314	KM 16	HMV 16
70	75	45	49	M 80x2	0.29	AH 315 G	KM 16	HMV 16
		68	72	M 85x2	0.53	AHX 2315	KM 17	HMV 17
75	80	48	52	M 90x2	0.37	AH 316	KM 18	HMV 18
		71	75	M 90x2	0.57	AHX 2316	KM 18	HMV 18
80	85	52	56	M 95x2	0.43	AHX 317	KM 19	HMV 19
		74	78	M 95x2	0.65	AHX 2317	KM 19	HMV 19
85	90	53	57	M 100x2	0.46	AHX 318	KM 20	HMV 20
		63	67	M 100x2	0.57	AHX 3218	KM 20	HMV 20
		79	83	M 100x2	0.76	AHX 2318	KM 20	HMV 20
90	95	57	61	M 105x2	0.54	AHX 319	KM 21	HMV 21
		85	89	M 105x2	0.90	AHX 2319	KM 21	HMV 21
95	100	59	63	M 110x2	0.58	AHX 320	KM 22	HMV 22
		64	68	M 110x2	0.66	AHX 3120	KM 22	HMV 22
		73	77	M 110x2	0.76	AHX 3120	KM 22	HMV 22
		90	94	M 110x2	1.00	AHX 2320	KM 22	HMV 22

Balls According to DIN5401 / ISO3290



GRADE	Corresponds to the earlier class	DW Nominal Over	Weight mm TO	Dw Limit deviations μm	Dw μm max	Ra μm max	V DwI. μm max	V DwA μm max	IG μm
G3		-	12,7	+/- 5.32	0.08	0.010	0.13		0.5
G5	I	-	12.7	+/- 5.63	0.13	0.014	0.25		1
G10	II	-	25.4	+/- 9.75	0.25	0.020	0.50		1
G16	II	-	25.4	+/- 11.4	0.40	0.025	0.80		2
G20	III	-	38.1	+/- 11.5	0.50	0.032	1.00		2
G28	III	-	50.8	+/- 13.7	0.70	0.050	1.40		2
G40	III	-	100	+/- 19	1.00	0.060	2.00		4
G80	III	-	100	+/- 14	2.00	0.100		4	4
G100	III	-	150	+/- 47.5	2.50	0.100	5.00		10
G200	IV	-	150	+/- 72.5	5.00	0.150	10.00		10
G300	IV	-	25.4	+/- 70	10.00	0.200	-	20	20
G300	IV	25.4	50.8	+/- 105	15.00	0.200		30	30
G300	IV	50.8	75	+/- 140	20.00	0.200	-	40	40
G500	V	-	25.4	+/- 75	25.00	-	-	50	50
G500	V	25.4	5.80	+/- 112.5	25.00		-	75	75
G500	V	50.8	75	+/- 150	25.00			100	100
G500	V	75	100	+/- 187.5	32.00	-		125	125
G500	V	100	125	+/- 225	38.00			150	150
G500	V	125	150	+/- 262.5	44.00			175	175
G600	V	All		+/- 200	-			400	
G700	V	All		+/-1000	-	-	-	2000	

Balls

Standard material

- Quality balls with a diameter of 0.3 mm to 250 mm
- in special sizes on request

Material	Carbon steel and Chrome steel		Chromium steel
	Carbon unhardened	Carbon hardened	
Material no.	1.0010	1.0616	1.3505
Name	D6	C85	100Cr6
AISI	1010	1086	E52100
Material in %			
	C max. 0.10	0.83 - 0.88	0.90 - 1.05
	Si max. 0.30	0.10 - 0.30	0.15 - 0.35
	Mn max. 0.50	0.30 - 0.70	0.25 - 0.45
	Cr		1.35 - 1.65
	Ni		max. 0.30
	Mo		
	P max. 0.07	max. 0.04	max. 0.030
	S max. 0.06	max. 0.04	max. 0.025
Hardness (HRC)		60-66	60-66
Specific Weight	7.85	7.85	7.85
Characteristics	weldable unhardened	hardened high load carrying capacity and resilience	through- hardened excellent wear resistance
Application area	for cost- efficient storage and castors	for cost- efficient storage, castors, furniture fittings, ball rails	Precision ball bearings, valve balls, ball guides, linear guides, screw assemblies

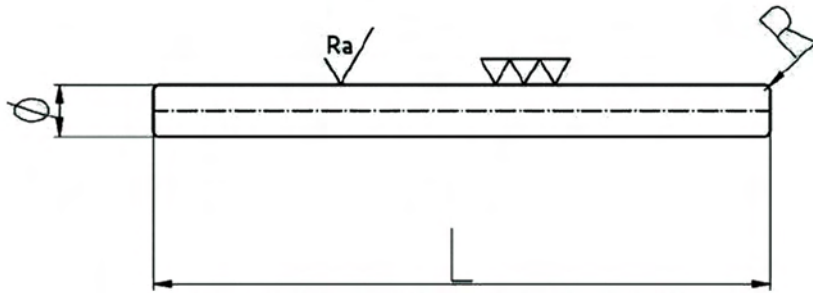
Material	Material		Non- chromium hardened steel
	Material no.	1.4034	
Name	X46Cr13	X45Cr13	X105CrMo17
AISI	420C	420C	440C
Material in %			
	C 0.42 - 0.50	0.42-0.50	0.95 - 1.20
	Si max. 1.00	max. 1.00	max. 1.00
	Mn max. 1.00	max. 1.00	max. 1.00
	Cr 12.5 - 14.5	12.5-14.5	16.0 - 18.0
	Ni		
	Mo		0.40 - 0.80
	P max. 0.045	max. 0.04	max. 0.04
	S max. 0.030	max. 0.03	max. 0.02
Hardness (HRC)	55 - 58	55 - 58	56 - 60
Specific Weight	7.75	7.75	7.75
Characteristics	through- hardened martensitic stainless steel; resistant to fresh water, steam, oil, gasoline	same as 1.4034	same as 1.4034 but higher C content
Application area	for bearings, valve balls, medicine	same as 1.4034	for applications requiring very high hardness, such as bearings and valves

Upon request we also manufacture in the following materials:

- Roller and ball bearing steel
- Stainless steel hardened
- Stainless steel unhardened
- Carbon steel
- Carbide
- Ceramics
- Plastic

Needle rollers according to DIN5402

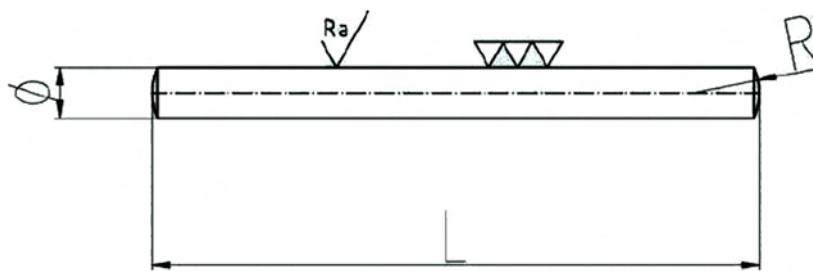
Needle rollers



Diameter: 1.0 mm-6.0 mm
 Length: mm 5.8 mm-49.8
 Material: 100Cr6 (1.3505)
 Hardness: HRC 60-66 (670 - 840 HV)

Form NRA

Rounded, polished surfaces



(Available as standard from approx. 5 mm, available in smaller diameters on request)

Form NRB
Flat surface

Grade	Sorting intervals	Tolerances		Roundness Ra
		Length	Roundness	
G5	5 µm	h13	2.5 µm	0.20 µm
G3	3 µm	h13	1.5 µm	0.15 µm
G2	2 µm	h13	1 µm	0.10 µm

We can provide needle rollers specially on request:

- Material stainless steel hardened 1.4034/1.3541 - AISI 420
- Special body according to customer's design
- Small quantities in individual packages
- Axles and shafts

Application areas:

- Roller bearings in machinery, vehicle manufacturing and transmission manufacturing
- Needle roller assemblies
- Gimbal joints in machinery and vehicle manufacturing
- Linear motion slides - guideways
- Control valves in hydraulics
- Axles for electric motors
- Shafts for machinery and equipment

Mounting and Removal Tools.

Mechanical Tools



FAG Mounting tool sets

FITTING- TOOL- ALU-10-55

- FAG mounting tool sets allow economical and secure mounting of rolling bearings up to 50 mm bore.
- Can also be used to mount sleeves, seals and similar parts

Included:

Mounting rings	33pcs
Fore bearing bore	10- 50 mm
OD up to	110 mm
Mounting sleeves	3 pcs
Hammer recoilless	1 kg



FAG Two- arm extractor 54

- For extraction of complete rolling bearings or tightly fitted inner rings as well as other parts e.g. gears
- Grip width 10 - 350 mm,
- Grip depth up to 250 mm Available as set with 6 extractors or
- individually



FAG PULLER – HYD 100 .. 300

- Extra strong hydraulic extractor with integral hand pump
- Extraction force up to 300 kN
- Grip width up to 540 mm
- Grip depth up to 375 mm
- Stroke up to 100 mm



FAG Pump 1000 - 0,71

- Hand pump for mounting and dismantling of rolling bearings.
- Mounting of press fit up to approx. 50 N/ mm2 contact pressure.
- Also for driving up hydraulic nuts.

Maintenance Products.

Heaters - Instruments



FAG Induction Heater 20

- Rapid, energy- efficient device for both single and batch mounting of rolling bearings.
- Power consumption 3,6 kW



FAG Motion Guard Champion

Lubricator sets

The automatic lubricator Motion Guard Champion is filled with Arcanol MULTITOP and is available in sizes 120 cm³ and 250 cm³ as a complete lubricator set comprising:

- A drive unit
- An adapter
- An LC unit with battery set



FAG TACHOMETER

Digital hand tachometer

- Direct speed measurement using an adapter, track wheel and measurement stylus
- Non- contact optical speed measurement using a reflective mark.



FAGTempCheck PLUS

Infrared thermometer

- Contact free measurement
- Temperature range -32°C and +530°C
- State of the art infrared temperature measurement technology

Lubricating Greases

Corrosion protection	Description	Temperature Min.	range (*1) Max.	Thickening agent/ Base oil	Kinematic viscosity of the base oil (*2)
+	All- purpose industrial and automotive grease	-30°C	120°C	Lithium soap/ mineral oil	110
0	All- purpose industrial and automotive grease	-30°C	120°C	Lithium soap/ mineral oil	120
+	High- pressure grease	-20°C	110°C	Lithium soap/ mineral oil	200
+	Food- compatible grease	-20°C	110°C	Aluminium complex soap / Medical white oil	130
+	Food- compatible high- pressure grease	-20°C	120°C	Aluminium complex soap / PAO andEster oil	266
+	High viscosity grease with solid lubricant additives	-20°C	120°C	Lithium soap/ mineral oil	500
+	Extremely high viscosity, Solid lubricant additives	-10°C	120°C	Lithium- Calcium soap/ Mineral oil	1.020
+	Low- temperature grease, high speed grease	-50°C	110°C	Lithium soap/ Synthetic mineral oil	18
+	Food- compatible low- temperature grease	-45°C	120°C	Aluminium complex soap / PAO andEster oil	30
0	Biodegradable, low toxicity	-40°C	90°C	Lithium- Calcium soap / Synthetic ester oil	110
+	High- pressure grease, low temperature grease	-30°C	110°C	Lithium soap/ mineral oil	200
+	Grease for a large temperature range, High- pressure grease	-30°C	140°C	Lithium complex soap / Mineral oil	185
+	High viscosity high- pressure grease, High- temperature grease	-20°C	150°C	Calcium sulfonate complex soap/ Mineral oil	400
+	High- performance grease	-40°C	150°C	Polyurea/ Mineral oil	96
0	Bearing grease for extreme temperatures	-40°C	260°C	PTFE/ Synthetic oil (fluorinated Polyether)	400

+ = Recommended, 0 = Suitable

(*1) Min. = Minimum operating temperature

Max.= Maximum operating temperature, performance limit

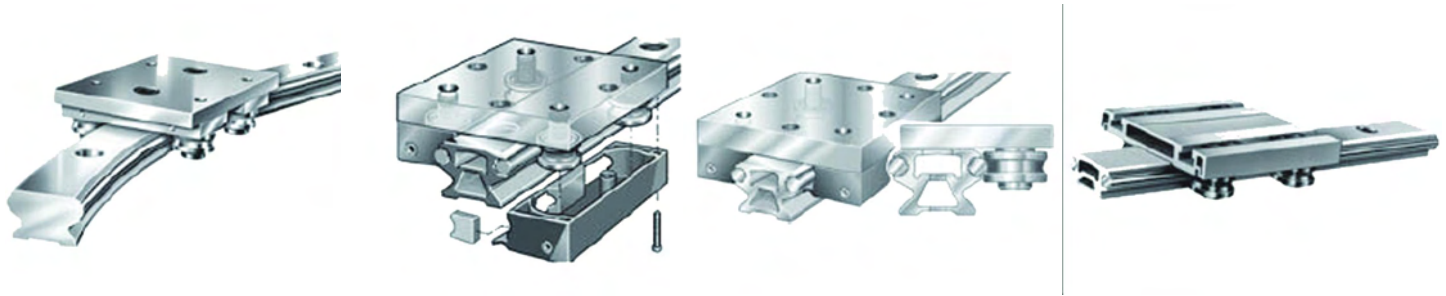
(*2) mm²/ s at 40 °C



TEMP90	TEMP110	TEMP120	TEMP200	SPEED2,6	VIB3	BIO2	FOOD2
(L12V)	(L30V)	(L195V)	(L79V)	(L75V)	(L166V)	(-)	(-)
Mixed thickener	Lithium complex	Polycarbamide	PTFE	Polycarbamide	Lithium complex	Mixedthickener	Aluminium complex
Synthetic oil	Synthetic oil	Synthetic oil	Fluorinated polyether oil	Synthetic oil	Mineral oil	Synthetic oil	White oil
ISO VG 100	ISO VG 68	ISO VG 460	ISO VG 220- 460	ISO VG 22	ISO VG 150	ISO VG 68	ISO VG 100
2	2-3	2	2	2-3	3	2	1-2
- 30... +140	- 40... +160	- 30... +180	- 30... +250	- 30... +120	- 30... +150	- 30... +120	- 30... +120
+90	+110	+120	+200	+80	+90	+80	+70
Special grease for ball and roller bearings	Special grease for ball and roller bearings	Special grease for ball and roller bearings	Special grease for ball and roller bearings	Special grease for ball bearings	Special grease for ball and roller bearings	Special grease for ball and roller bearings	Special grease for ball and roller bearings
in couplings, electric motors, automotive engineering	in electrical machinery, automotive engineering	in continuous casting plant	in track rollers in baking machinery, piston pins in compressors, kiln trucks, chemical plant	in machine tools, instrument engineering	in blade adjusters in wind turbine rotors, packaging machinery, rail vehicles	in environmentally harmful applications	in applications with food contact; H1 to USDA
with high temperature, high load	with high temperature, high speed	with high temperature, high load	with very high temperature, chemically aggressive environment	with very highspeed, lowtemperature	with high temperature, high load, oscillating motion		
++	++	+	++	++	+	+	+
+	++	++	++	0	+	0	-
0	+	-	--	++	-	0	0
0	0	++	+	--	+	0	0
0	0	0	-	-	++	0	0
0	0	0	0	0	0	0	0
0	0	0	0	+	-	+	++

Track Roller Guides

Track roller guides

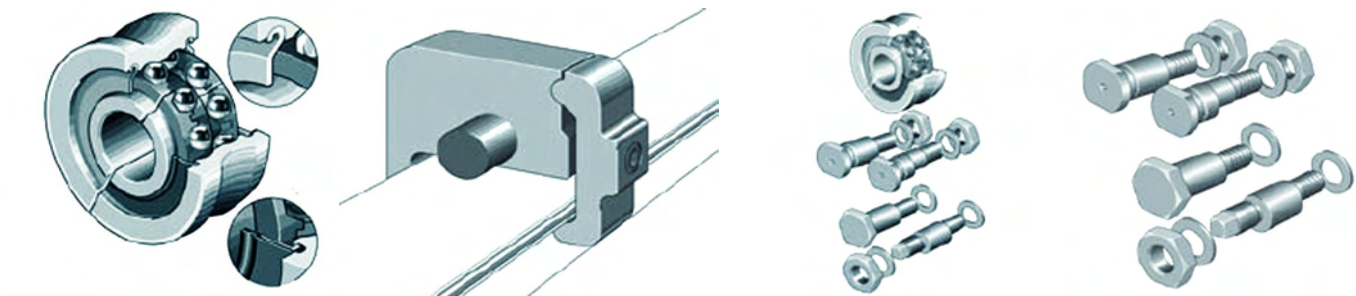


Low cost and low weight - these are the characteristics of the hollow section carriage LFCL. It runs free- of- play on the mounting rails LFS. The parallelism tolerance of these mounting rails is only 20 µm. Therefore, the hollow section carriage LFCL does not require an eccentric pin for clearance adjustment. The hollow section carriage is delivered with slotted sliding blocks plus mounted track rollers and cover caps. The pins are tightened to the required tightening moment.

The robust, open carriage LFL...SF is suitable for all applications in which powerful linear guides with a simple structure are required. The open carriage LFL...SF is free- of- play on the mounting rails LFS. The eccentric pins for clearance adjustment are omitted as in the case of the hollow section carriage LFCL. The carriage is supplied with mounted track rollers.

With the closed compact carriage LFL- B, track roller guides that have to work in a dirty environment can be implemented in a simple way. Track roller guides for this series consist of a mounting rail LFS and a car plate LFL- B with four sustainable rollers and a choice of two cover caps AB LFL- B made of plastic to seal the track roller raceways. High precision run through free- of- play carriages.

The carriage LFDC moves on curved elements LFS...R and straight mounting rails. The combination of curved and coordinated straight mounting rails allow guideways with curves, as well as sealed oval and circular guideways. The bogie carriages LFDC consists of a car plate made of steel, two pivoting mounting rails of anodised aluminum, which are mounted radially and axially with maintenance-free Permaglide plate bearing material. The carriage is supplied with mounted track rollers. Two central pins are tightened to the required tightening moment. Two eccentric pins are screwed tightly. With their help, the carriage is installed free- of- play on the track.



The construction of the track rollers LFR corresponds to double row angular contact ball bearings without filling notches and can therefore accommodate axial loads in both directions. The strengthened outer ring of the track rollers LFR allows high radial loads. Shields protect from contamination.

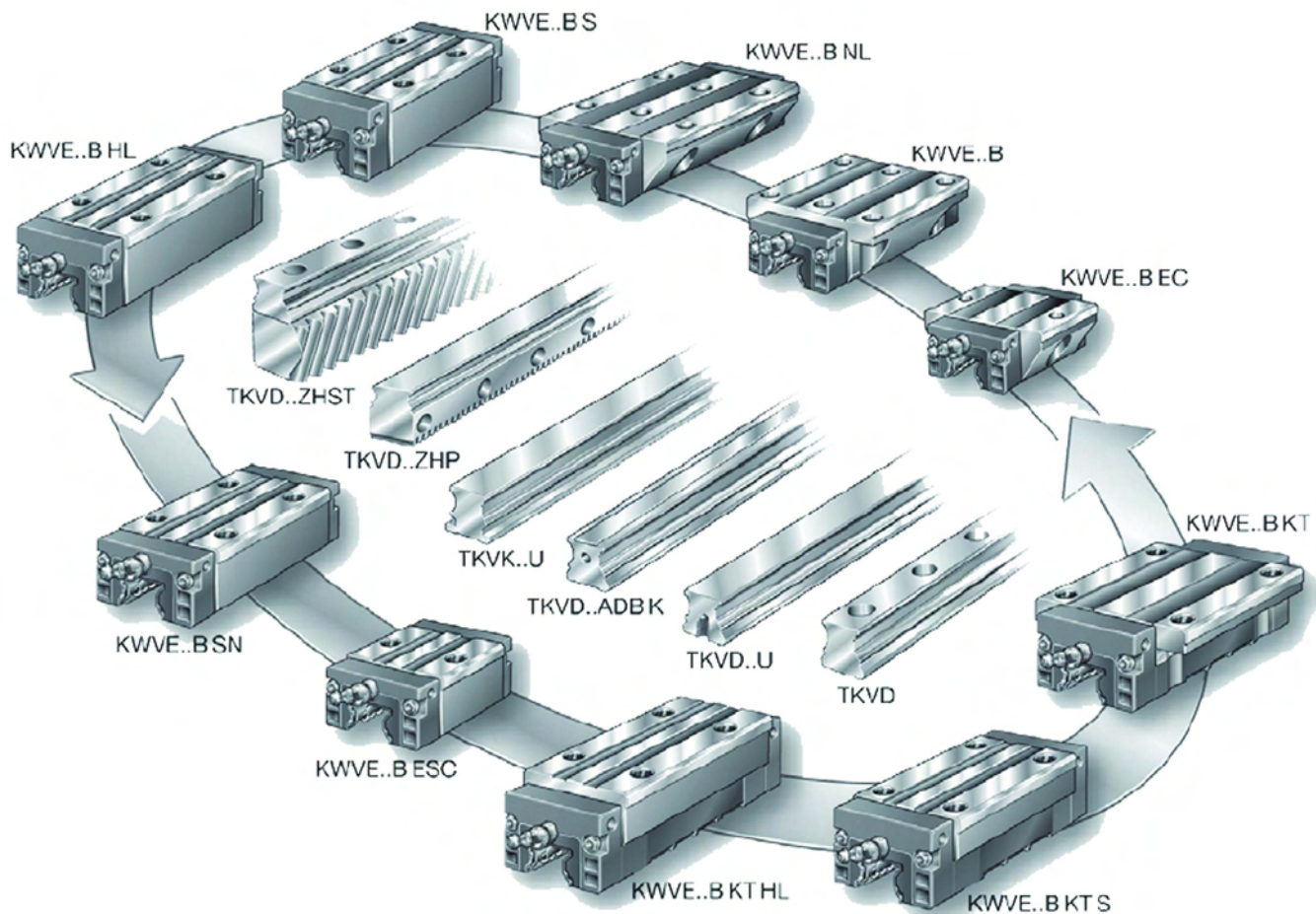
Track rollers with ground seals are available on request. LFR track rollers are lubricated with high quality lithium soap- based grease during their shelf life.

The pins LFE and LFZ are usually made of high quality screw steel. With the help of the eccentric pins LFE and LFE..A1, track roller guides can be installed free- of- play.

All track roller guides are available on request in corrosion- resistant construction and mounting rails in different designs.

Monorail Guidance Systems

Four- row Ball monorail guidance system KUVE



KUVE, The four- row ball monorail guidance system

Dynamic, highly durable, little space required, low moving masses, low maintenance or maintenance- free, high operational safety! The four- row ball monorail guidance system KUVE meets these requirements.

Advantages of the KUVE Series are:

- six car cross sections plus four car types of the E series run on the same track per dimension (normal, long, narrow, high, low, narrow- low)
- extra- wide model for high moment load capacity
- reduced rolling body diameter for high rigidity and smoothness
- optimised sealing

- for applications where the drive is on the rail, the KUVE- ZHP design is available, in which the rails are provided with teeth and the cars with side mounting holes.
- for particularly quiet operation, ball bearing units with quad spacers (plastic spacer cars) are available. A quad spacer takes on two rolling elements of the pressure and rail raceway. As the balls do not touch, there is no collision noise.
- Four- row ball monorail guidance systems KUVE with integrated electronic- magnetic measuring system are mounted units. The absolutely digital length measurement (LSMD) is supplied with an electronic analysis system. In the incremental length measurement (LMST), this is already integrated in the measuring head.

Because of the various models and designs, we can only provide a brief overview of the extensive range here. Please call us so that we can assist you in the selection. We will be glad to send you our special catalogs on request.

Appendix

Environmental Protection - Information Requirement

Electric and electronic products - so- called EE products - often contain large quantities of toxins which can damage our health and the environment. Therefore, all importers and producers of EE products are obliged to take responsibility for their products until they have been scrapped and recycled.

You may return any cast- off Lönne products to a Lönne Warehouse. Lönne is obliged to fulfil the authorities' requirements regarding an environmentally sound handling of EE- waste in accordance with the EE regulations, as well as managing all reporting to the Norwegian Pollution Control Authority and the EE register.

Price Policy

Prices occur in special lists on requirement in specified currency, ex warehouse exclusive packaging. The sales tax (value added tax) is not included in the prices. It shall be debited separately at the respective rate according to the applicable legal regulations.

The exchange rate used for invoicing will be adjusted if it has changed by more than 2,00% in relation to the

NOK/ EUR exchange rate 8,10.
SEK/ EUR exchange rate 9,39
DKK/ EUR exchange rate 7,46

Terms and Conditions of Sales and Delivery

For customers with a seat in one of the Nordic countries (except Iceland), The General Terms of Payment and Delivery by the National Association of Machinery Wholesalers shall apply.

For customers with a seat outside the Nordic countries, The General Terms of Payment and Delivery shall apply according to agreement.

General

We hereby reserve the right to change content of data in this catalogue at any time without notice.

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All product names occurring or referred to in this catalogue are or may be registered trademarks belonging to their respective producers or trademark owners.

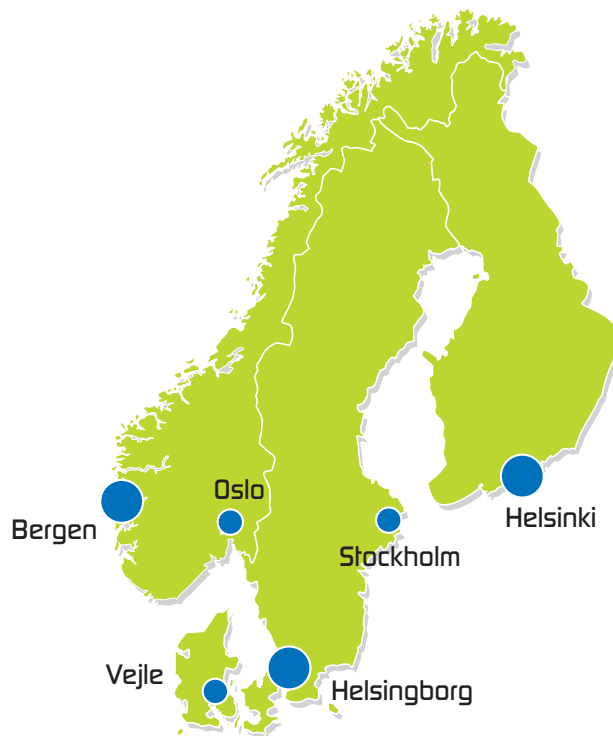
The dimensions are in mm.
Illustrations are not binding.

General Export and Import Regulations regarding Lönne Product Range of Drives and Controls will be subject to the Export Import Regulations actual in the area of delivery.

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- Chapter 1 Electric Motors
- Chapter 2 Variators
- Chapter 3 Frequency Inverters
- Chapter 4 Servo Controls
- Chapter 5 Machine Controls
- Chapter 6 Worm Gear Boxes
- Chapter 7 Helical Gear Boxes
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