

# GMN

## Ball Bearing Clutches

# GMN

# Ball Bearing Clutches



Shaft Extract of DIN ISO 286-2

Shaft-diameter	Normal size in mm; Tolerance Zone in $\mu\text{m}$										
	above	3	6	10	18	30	50	80	120	180	250
to	6	10	18	30	50	80	120	180	250	315	
Tolerance Zone n	6	+16	+19	+23	+28	+33	+39	+45	+52	+60	+66
	7	+8	+10	+12	+15	+17	+20	+23	+27	+31	+34
Tolerance Zone n	6	+20	+25	+30	+36	+42	+50	+58	+67	+77	+86
	7	+8	+10	+12	+15	+17	+20	+23	+27	+31	+34

Housing Extract of DIN ISO 286-2

Housing-diameter	Normal size in mm; Tolerance Zone in $\mu\text{m}$										
	above	3	6	10	18	30	50	80	120	180	250
to	6	10	18	30	50	80	120	180	250	315	
Tolerance Zone N	6	-5	-7	-9	-11	-12	-14	-16	-20	-22	-25
	7	-13	-16	-20	-24	-28	-33	-38	-45	-51	-57
Tolerance Zone N	6	-4	-4	-5	-7	-8	-9	-10	-12	-14	-14
	7	-16	-19	-23	-28	-33	-39	-45	-52	-60	-62

Keyways Extract of DIN 6885, page 3

Shaft-diameter	Normal size in mm; Tolerance Zone in $\mu\text{m}$					
	above	12	17	22	30	38
to	17	22	30	38	44	
Key (BxH)	5x3	6x4	8x5	10x6	12x6	
Tolerance Zone P9 for groove width		-12		-15		-18
Keyway depth 1,9		2,5	3,1	3,7	3,9	
Tolerance		+100		+200		
Housing keyway depth		1,2	1,6	2	2,4	2,2
Tolerance				+100		

0.001 mm = 0.000039 inch

# GMN

GMN Paul Müller Industrie GmbH & Co. KG

Äußere Bayreuther Straße 230  
D - 90411 Nürnberg

Telefon: +49 (0) 9 11 - 56 91 - 4 18 / 4 14 / 2 43  
Telefax: +49 (0) 9 11 - 56 91 - 5 69  
E-Mail: [vertrieb.at@gmn.de](mailto:vertrieb.at@gmn.de)

Internet: [www.gmn.de](http://www.gmn.de)

Detailed information about our whole range could be found on the internet

## [www.gmn.de](http://www.gmn.de)

- ✓ Datasheets
- ✓ Catalogue download
- ✓ Type research
- ✓ Drawings
- ✓ Torque
- ✓ CAD-data



Our GMN Ball Bearing Clutches combine perfectly a **ball bearing** and a **freewheel-clutch in one unit only**.

All main dimensions in accordance with DIN 625, series 62, row 2.

The clutches are available also with the established RS-seals as well as with keyway-support in **exactly the same dimensions**.

Types 'RS' and '2RS' are pre-greased.

# GMN

## Ball Bearing Clutches

After installation a radial clearance between C2 and C5 is completed.

To create a clearance C2 the shaft should be manufactured at the highest and the housing at the lowest limit of the allowed tolerances.

Our Ball Bearing Clutches are characterized by **high indexing accuracy** and by **high transferable torque**.

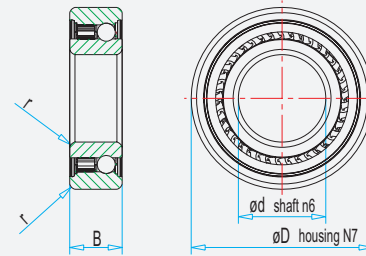
These clutches are combining the technical **and** economical advantages of our clutch system for a wide range of applications.

# GMN

### GMN Ball Bearing Clutch

Outer ring: **Press fit**  
Inner ring: **Press fit**

## FK

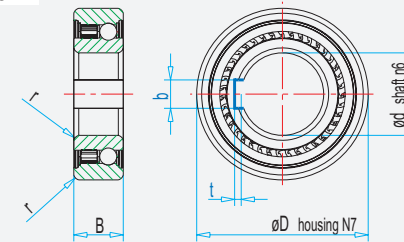


Order name		Dimensions [mm]				Torque	max. speed	Load capacities [N]	
Part.no.	Name	d	D	B	r	M [Nm]	n [rpm]	C dyn.	C <sub>0</sub> stat.
301065	FK 6203	17	40	12	1,0	45	3700	6555	3175
301079	FK 6203 RS	17	40	12	1,0	45	3700	6555	3175
301068	FK 6204	20	47	14	1,5	62	3200	7325	3870
301085	FK 6204 RS	20	47	14	1,5	62	3200	7325	3870
301087	FK 6204 2RS	20	47	14	1,5	62	3200	7325	3870
301070	FK 6205	25	52	15	1,5	104	2800	7980	4570
301093	FK 6205 RS	25	52	15	1,5	104	2800	7980	4570
301092	FK 6205 2RS	25	52	15	1,5	104	2800	7980	4570
301074	FK 6206	30	62	16	1,5	148	2400	8450	5290
301101	FK 6206 RS	30	62	16	1,5	148	2400	8450	5290
301103	FK 6206 2RS	30	62	16	1,5	148	2400	8450	5290
♦ 301077	FK 6207	35	72	17	2,7	228	1900	9295	6700
♦ 301107	FK 6207 RS	35	72	17	2,7	228	1900	9295	6700
♦ 301108	FK 6207 2RS	35	72	17	2,7	228	1900	9295	6700
♦ 301078	FK 6208	40	80	18	2,7	350	1900	9295	6700
♦ 301109	FK 6208 RS	40	80	18	2,7	350	1900	9295	6700
♦ 301110	FK 6208 2RS	40	80	18	2,7	350	1900	9295	6700
301098	FK 6304-2 RS	20	52	15	1,5	104	2800	7980	4570

### GMN Ball Bearing Clutch

Outer ring: **Press fit**  
Inner ring: **keyway**

## FKN

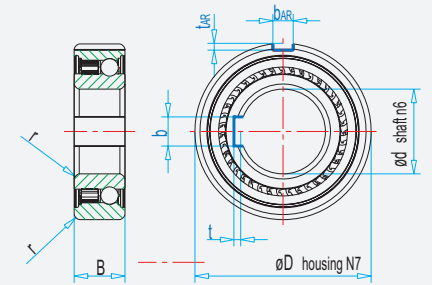


Order name		Dimensions [mm]				Keyway [mm]		Torque	max. speed	Load capacities [N]	
Part.no.	Name	d	D	B	r	b	t	M [Nm]	n [rpm]	C dyn.	C <sub>0</sub> stat.
301112	FKN 6203	17	40	12	1,0	5	1,2	45	3700	6555	3175
301114	FKN 6203 RS	17	40	12	1,0	5	1,2	45	3700	6555	3175
301120	FKN 6204	20	47	14	1,5	6	1,6	62	3200	7325	3870
301123	FKN 6204 RS	20	47	14	1,5	6	1,6	62	3200	7325	3870
301125	FKN 6204 2RS	20	47	14	1,5	6	1,6	62	3200	7325	3870
301131	FKN 6205	25	52	15	1,5	8	2,0	104	2800	7980	4570
301133	FKN 6205 RS	25	52	15	1,5	8	2,0	104	2800	7980	4570
301130	FKN 6205 2RS	25	52	15	1,5	8	2,0	104	2800	7980	4570
301145	FKN 6206	30	62	16	1,5	8	2,0	148	2400	8450	5290
301147	FKN 6206 RS	30	62	16	1,5	8	2,0	148	2400	8450	5290
301143	FKN 6206 2RS	30	62	16	1,5	8	2,0	148	2400	8450	5290
♦ 301156	FKN 6207	35	72	17	2,7	10	3,3	228	1900	9295	6700
♦ 301157	FKN 6207 RS	35	72	17	2,7	10	3,3	228	1900	9295	6700
♦ 301158	FKN 6207 2RS	35	72	17	2,7	10	3,3	228	1900	9295	6700
♦ 301161	FKN 6208	40	80	18	2,7	12	3,3	350	1900	9295	6700
♦ 301162	FKN 6208 RS	40	80	18	2,7	12	3,3	350	1900	9295	6700
♦ 301163	FKN 6208 2RS	40	80	18	2,7	12	3,3	350	1900	9295	6700

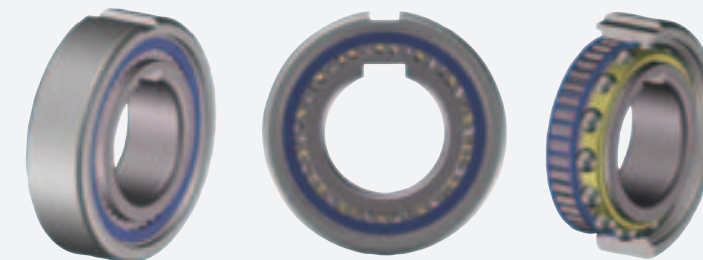
### GMN Ball Bearing Clutch

Outer ring: **Keyway**  
Inner ring: **Keyway**

## FKNN



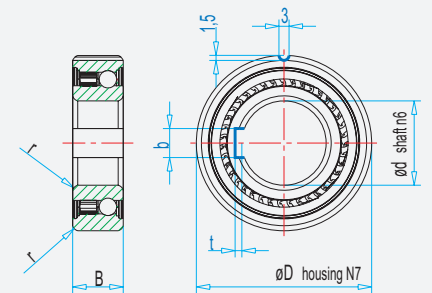
Order name		Dimensions [mm]				Keyway IR [mm]		Keyway OR [mm]		Torque	max. speed	Load capacities [N]	
Part.no.	Name	d	D	B	r	b	t	b <sub>AR</sub>	t <sub>AR</sub>	M [Nm]	n [rpm]	C dyn.	C <sub>0</sub> stat.
305989	FKNN 6203	17	40	12	1,0	5	1,2	2	1,0	45	3700	6555	3175
305990	FKNN 6203 RS	17	40	12	1,0	5	1,2	2	1,0	45	3700	6555	3175
305992	FKNN 6204	20	47	14	1,5	6	1,6	3	1,5	62	3200	7325	3870
305993	FKNN 6204 2RS	20	47	14	1,5	6	1,6	3	1,5	62	3200	7325	3870
305995	FKNN 6205	25	52	15	1,5	8	2,0	6	2,0	104	2800	7980	4570
305996	FKNN 6205 2RS	25	52	15	1,5	8	2,0	6	2,0	104	2800	7980	4570
305998	FKNN 6206	30	62	16	1,5	8	2,0	6	2,0	148	2400	8450	5290
305999	FKNN 6206 2RS	30	62	16	1,5	8	2,0	6	2,0	148	2400	8450	5290
♦ 306001	FKNN 6207	35	72	17	2,7	10	3,3	8	2,5	228	1900	9295	6700
♦ 306002	FKNN 6207 2RS	35	72	17	2,7	10	3,3	8	2,5	228	1900	9295	6700
♦ 306004	FKNN 6208	40	80	18	2,7	12	3,3	10	3,0	350	1900	9295	6700
♦ 306005	FKNN 6208 2RS	40	80	18	2,7	12	3,3	10	3,0	350	1900	9295	6700



### GMN Ball Bearing Clutch

Outer ring: **Keyway half-round**  
Inner ring: **Keyway**

## FKNS



Order name		Dimensions [mm]				Keyway IR [mm]		Torque	max. speed	Load capacities [N]	
Part.no.	Name	d	D	B	r	b	t	M [Nm]	n [rpm]	C dyn.	C <sub>0</sub> stat.
301127	FKNS 6204-2RS	20	47	14	1,5	6	1,6	62	3200	7325	3870
301135	FKNS 6205-2RS	25	52	15	1,5	8	2,0	127	2800	7980	4570
301149	FKNS 6206-2RS	30	62	16	1,5	8	2,0	179	2400	8450	5290

**Conversion Factors:**  
1 mm = 0.03937 in; 1 Nm = 0.737 ft lb

Torque capacity stated is valid for the freewheel of series FKN, FKNN und FKNS itself, but not for keyways. Keyways at the inner ring are manufactured according to DIN 6885, page 3, P9 with back clearance as well as tolerance zone according to DIN ISO 286-2.  
♦ Sizes 6207, 6208: housing tolerances N6-keyway depths according to DIN 6885, page 1. (Tolerance please find on the back side).