



**Motion (Shanghai) Industrial Development Co., Ltd**

**Linear Motion Guide Roller Bearings**



## Track rollers with cylindrical or crowned outer ring – LR Series

- Series LR rollers are also called CAM ROLLERS, can be used in the heavy loads track or used as an idler wheel. They are widely used in the particular application that the friction should be reduced.
  - The outer diameter surface of rollers is shaped to the crowned runner surface with R500 (suffix U), so make the stresses well when rollers working.
  - Rollers take the internal structure design of deep groove ball bearings or double row angular contact ball bearings and have a particularly thick-walled outer ring, so the rollers can accommodate higher loads.
  - Rollers are made of the high-quality bearing steel, processed by heat treatment and precision grind, and are filled with a long service life, high -grade and multi-purposes grease. Rollers take the metal shield (suffix KDD) or rubble seal (suffix NPP) to prevent the dust.
- Characteristics of the guide system that series LR rollers are applied :

### 1. Low resistance, long service life, widely-use

Being cam rollers with crowned runner surface R500, make its stresses in well-distributed between rollers and track when working, thus the stresses centralization are avoided, the friction resistance are reduced and the service life of rollers have been improved a lot. Most of the double row cam rollers can be relubricated through the filling hole on the inner ring to adapt the adverse working conditions.

### 2. Easy installation

After rollers assembled the concentric or eccentric pivot, installation can be made convenient. To adjust the eccentric one's eccentricity, the rollers can get the fitting preload.

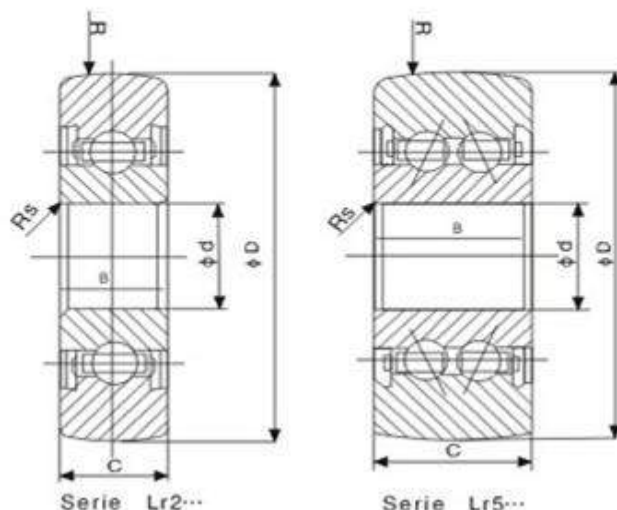
### 3. Smooth running, minimum error

Besides we produce the series LR cam rollers according to the standard of rolling bearings, we also make the strict control on the rotary accuracy of outer ring in order to meet special working mode that inner ring is fixed while outer ring running



# Track rollers with cylindrical or crowned outer ring – type LR

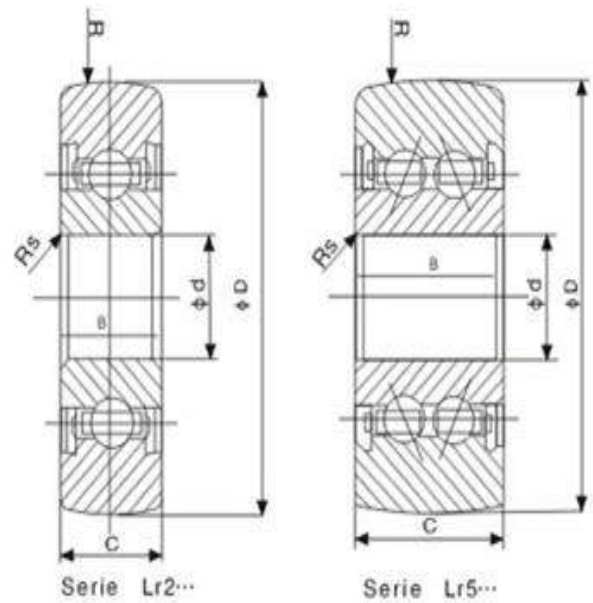
d 4~30 mm



Part No.	Dimensions(mm)						Load		Fatigue limit load	Speed limit		Weight(g)
	D	d	B	C	R	Rs	Cw(N)	Cow(N)	Puw(N)	Seals	Shield	
LR604 NPP	13	4	4	4		0.2	860	350	7	24000	35000	10
LR604 NPPU	13	4	4	4	500	0.2	860	350	7	24000	35000	10
LR604 KDD	13	4	4	4		0.2	860	350	7	24000	35000	10
LR604 KDDU	13	4	4	4	500	0.2	860	350	7	24000	35000	10
LR605 NPP	16	5	5	5		0.2	1190	490	10	23000	33000	10
LR605 NPPU	16	5	5	5	500	0.2	1190	490	10	23000	33000	10
LR605 KDD	16	5	5	5		0.2	1190	490	10	23000	33000	10
LR605 KDDU	16	5	5	5	500	0.2	1190	490	10	23000	33000	10
LR606 NPP	19	6	6	6		0.3	1740	700	40	22000	31000	10
LR606 NPPU	19	6	6	6	500	0.3	1740	700	40	22000	31000	10
LR606 KDD	19	6	6	6		0.3	1740	700	40	22000	31000	10
LR606 KDDU	19	6	6	6	500	0.3	1740	700	40	22000	31000	10
LR607 NPP	22	7	6	6		0.3	2130	870	46	20000	29000	10
LR607 NPPU	22	7	6	6	500	0.3	2130	870	46	20000	29000	10
LR607 KDD	22	7	6	6		0.3	2130	870	46	20000	29000	10
LR607 KDDU	22	7	6	6	500	0.3	2130	870	46	20000	29000	10
LR608 NPP	24	8	7	7		0.3	2750	1250	58	19000	28000	20
LR608 NPPU	24	8	7	7	500	0.3	2750	1250	58	19000	28000	20
LR608 KDD	24	8	7	7		0.3	2750	1250	58	19000	28000	20
LR608 KDDU	24	8	7	7	500	0.3	2750	1250	58	19000	28000	20
LR6000 NPP	28	10	8	8		0.3	3650	1700	52	17000	24000	20
LR6000 NPPU	28	10	8	8	500	0.3	3650	1700	52	17000	24000	20
LR6000KDD	28	10	8	8		0.3	3650	1700	52	17000	24000	20
LR6000KDDU	28	10	8	8	500	0.3	3650	1700	52	17000	24000	20
LR6001NPP	30	12	8	8		0.3	4300	2100	77	16000	22000	30
LR6001NPPU	30	12	8	8	500	0.3	4300	2100	77	16000	22000	30

# Track rollers with cylindrical or crowned outer ring – type LR

d 4~30 mm

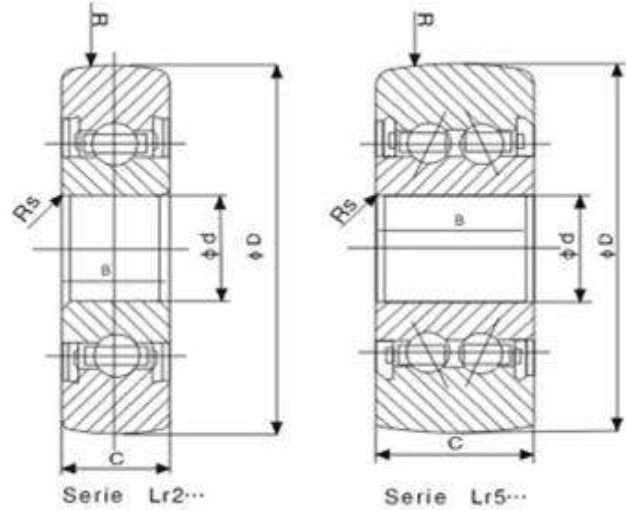


Part No.	Dimensions(mm)						Load		Fatigue limit load P <sub>uw</sub> (N)	Speed limit		Weight(g)
	D	d	B	C	R	Rs	C <sub>w</sub> (N)	C <sub>ow</sub> (N)		Seals	Shield	
LR6001KDD	30	12	8	8		0.3	4300	2100	77	16000	22000	30
LR6001KDDU	30	12	8	8	500	0.3	4300	2100	77	16000	22000	30
LR200NPP	32	10	9	9		0.6	4350	2130	88	13000	17000	50
LR200NPPU	32	10	9	9	500	0.6	4350	2130	88	13000	17000	50
LR200KDD	32	10	9	9		0.6	4350	2130	88	13000	17000	50
LR200KDDU	32	10	9	9	500	0.6	4350	2130	88	13000	17000	50
LR201NPP	35	12	10	10		0.6	5600	2700	112	12000	15000	50
LR201NPPU	35	12	10	10	500	0.6	5600	2700	112	12000	15000	50
LR201KDD	35	12	10	10		0.6	5600	2700	112	12000	15000	50
LR201KDDU	35	12	10	10	500	0.6	5600	2700	112	12000	15000	50
LR201-15NPP	35	12	15	10		0.6	5600	2700	112	12000	15000	70
LR201-15NPPU	35	12	15	10	500	0.6	5600	2700	112	12000	15000	70
LR201-15KDD	35	12	15	10		0.6	5600	2700	112	12000	15000	70
LR201-15KDDU	35	12	15	10	500	0.6	5600	2700	112	12000	15000	70
LR202NPP	40	15	11	11		0.6	6500	3300	136	11000	13000	70
LR202NPPU	40	15	11	11	500	0.6	6500	3300	136	11000	13000	70
LR202KDD	40	15	11	11		0.6	6500	3300	136	11000	13000	70
LR202KDDU	40	15	11	11	500	0.6	6500	3300	136	11000	13000	70
LR202-14NPP	40	15	14.4	11		0.6	6500	3300	136	11000	13000	80
LR202-14NPPU	40	15	14.4	11	500	0.6	6500	3300	136	11000	13000	80
LR202-14KDD	40	15	14.4	11		0.6	6500	3300	136	11000	13000	80
LR202-14 KDDU	40	15	14.4	11	500	0.6	6500	3300	136	11000	13000	80
LR203NPP	47	17	12	12		0.6	8400	4400	183	9000	12000	110



# Track rollers with cylindrical or crowned outer ring – type LR

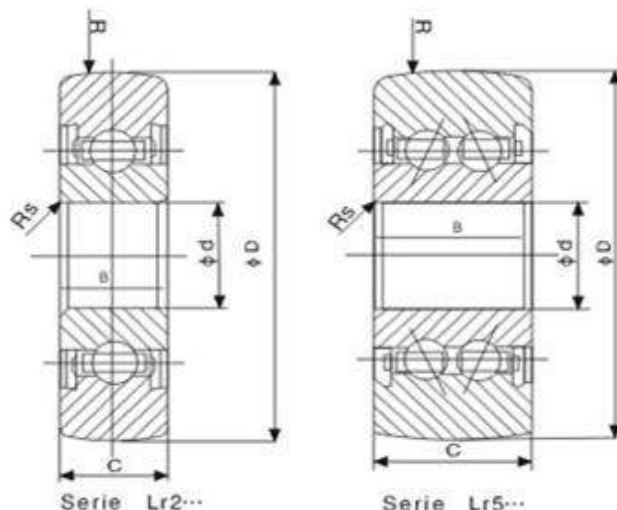
d 4~30 mm



Part No.	Dimensions(mm)						Load		Fatigue limit load Puw(N)	Speed limit		Weight(g)
	D	d	B	C	R	Rs	Cw(N)	Cow(N)		Seals	Shield	
LR203NPPU	47	17	12	12	500	0.6	8400	4400	183	9000	12000	110
LR203KDD	47	17	12	12		0.6	8400	4400	183	9000	12000	110
LR203KDDU	47	17	12	12	500	0.6	8400	4400	183	9000	12000	110
LR204NPP	52	20	14	14		1	10500	5600	233	8000	10000	150
LR204NPPU	52	20	14	14	500	1	10500	5600	233	8000	10000	150
LR204KDD	52	20	14	14		1	10500	5600	233	8000	10000	150
LR204KDDU	52	20	14	14	500	1	10500	5600	233	8000	10000	150
LR205NPP	62	25	15	15		1	12500	7100	291	7000	8500	230
LR205NPPU	62	25	15	15	500	1	12500	7100	291	7000	8500	230
LR205KDD	62	25	15	15		1	12500	7100	291	7000	8500	230
LR205KDDU	62	25	15	15	500	1	12500	7100	291	7000	8500	230
LR206NPP	72	30	16	16		1	16600	9600	391	5500	7500	330
LR206NPPU	72	30	16	16	500	1	16600	9600	391	5500	7500	330
LR206KDD	72	30	16	16		1	16600	9600	391	5500	7500	330
LR206KDDU	72	30	16	16	500	1	16600	9600	391	5500	7500	330
LR207NPP	80	35	17	17		1.1	20200	11900	490	4500	6300	400
LR207NPPU	80	35	17	17	500	1.1	20200	11900	490	4500	6300	400
LR207KDD	80	35	17	17		1.1	20200	11900	490	4500	6300	400
LR207KDDU	80	35	17	17	500	1.1	20200	11900	490	4500	6300	400
LR208NPP	85	40	18	18		1.1	22800	13600	530	4000	5000	450
LR208NPPU	85	40	18	18	500	1.1	22800	13600	530	4000	5000	450
LR208KDD	85	40	18	18		1.1	22800	13600	530	4000	5000	450
LR208KDDU	85	40	18	18	500	1.1	22800	13600	530	4000	5000	450
LR209NPP	90	45	19	19		1.1	22500	13700	564	3600	4500	500
LR209NPPU	90	45	19	19	500	1.1	22500	13700	564	3600	4500	500
LR209KDD	90	45	19	19		1.1	22500	13700	564	3600	4500	500

# Track rollers with cylindrical or crowned outer ring – type LR

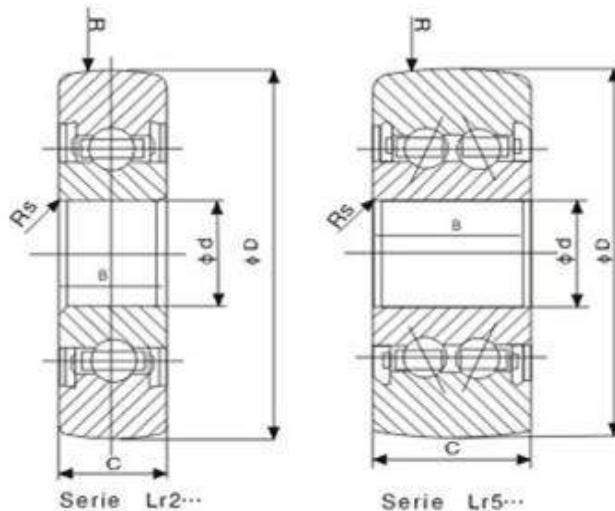
d 4~30 mm



Part No.	Dimensions(mm)						Load		Fatigue limit load	Speed limit		Weight(g)
	D	d	B	C	R	Rs	Cw(N)	Cow(N)	Puw(N)	Seals	Shield	
LR209KDDU	90	45	19	19	500	1.1	22500	13700	564	3600	4500	500
LR50/5NPP	17	5	7	7		0.2	1650	950	39	12000	16000	10
LR50/5NPPU	17	5	7	7	500	0.2	1650	950	39	12000	16000	10
LR50/5KDD	17	5	7	7		0.2	1650	950	39	12000	16000	10
LR50/5KDDU	17	5	7	7	500	0.2	1650	950	39	12000	16000	10
LR50/6NPP	19	6	9	9		0.3	2650	1310	54	11000	15000	20
LR50/6NPPU	19	6	9	9	500	0.3	2650	1310	54	11000	15000	20
LR50/6KDD	19	6	9	9		0.3	2650	1310	54	11000	15000	20
LR50/6KDDU	19	6	9	9	500	0.3	2650	1310	54	11000	15000	20
LR50/7NPP	22	7	10	10		0.3	3300	1690	69	10000	14000	20
LR50/7NPPU	22	7	10	10	500	0.3	3300	1690	69	10000	14000	20
LR50/7KDD	22	7	10	10		0.3	3300	1690	69	10000	14000	20
LR50/7KDDU	22	7	10	10	500	0.3	3300	1690	69	10000	14000	20
LR50/8NPP	24	8	11	11		0.3	4200	2360	120	10000	14000	30
LR50/8NPPU	24	8	11	11	500	0.3	4200	2360	120	10000	14000	30
LR50/8KDD	24	8	11	11		0.3	4200	2360	120	10000	14000	30
LR50/8KDDU	24	8	11	11	500	0.3	4200	2360	120	10000	14000	30
LR5000NPP	28	10	12	12		0.3	4750	2850	118	9000	13000	30
LR5000NPPU	28	10	12	12	500	0.3	4750	2850	118	9000	13000	30
LR5000KDD	28	10	12	12		0.3	4750	2850	118	9000	13000	30
LR5000KDDU	28	10	12	12	500	0.3	4750	2850	118	9000	13000	30
LR5001NPP	30	12	12	12		0.3	4950	3100	128	8500	11000	30
LR5001NPPU	30	12	12	12	500	0.3	4950	3100	128	8500	11000	30
L5001KDD	30	12	12	12		0.3	4950	3100	128	8500	11000	30
LR5001KDDU	30	12	12	12	500	0.3	4950	3100	128	8500	11000	30
LR5002NPP	35	15	13	13		0.3	6500	4100	170	7000	10000	50

# Track rollers with cylindrical or crowned outer ring – type LR

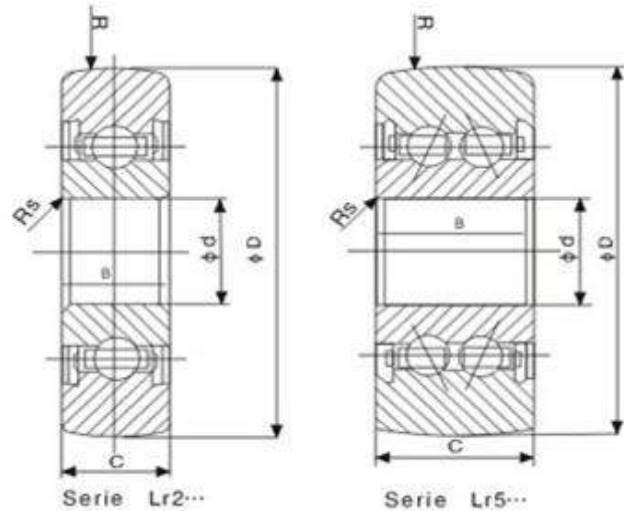
d 4~30 mm



Part No.	Dimensions(mm)						Load		Fatigue	Speed limit		Weight(g)
	D	d	B	C	R	Rs	Cw(N)	Cow(N)	Puw(N)	Seals	Shield	
LR5002NPPU	35	15	13	13	500	0.3	6500	4100	170	7000	10000	50
LR5002KDD	35	15	13	13		0.3	6500	4100	170	7000	10000	50
LR5002KDDU	35	15	13	13	500	0.3	6500	4100	170	7000	10000	50
LR5003NPP	40	17	14	14		0.3	7700	5200	214	6000	9000	70
LR5003NPPU	40	17	14	14	500	0.3	7700	5200	214	6000	9000	70
LR5003KDD	40	17	14	14		0.3	7700	5200	214	6000	9000	70
LR5003KDDU	40	17	14	14	500	0.3	7700	5200	214	6000	9000	70
LR5004NPP	47	20	16	16		0.6	11500	7700	317	5500	8000	120
LR5004NPPU	47	20	16	16	500	0.6	11500	7700	317	5500	8000	120
LR5004KDD	47	20	16	16		0.6	11500	7700	317	5500	8000	120
LR5004KDDU	47	20	16	16	500	0.6	11500	7700	317	5500	8000	120
LR5005NPP	52	25	16	16		0.6	11600	8100	332	4700	7000	150
LR5005NPPU	52	25	16	16	500	0.6	11600	8100	332	4700	7000	150
LR5005KDD	52	25	16	16		0.6	11600	8100	332	4700	7000	150
LR5005KDDU	52	25	16	16	500	0.6	11600	8100	332	4700	7000	150
LR5006NPP	62	30	19	19		1	17200	11100	462	4000	6000	250
LR5006NPPU	62	30	19	19	500	1	17200	11100	462	4000	6000	250
LR5006KDD	62	30	19	19		1	17200	11100	462	4000	6000	250
LR5006KDDU	62	30	19	19	500	1	17200	11100	462	4000	6000	250
LR5007NPP	68	35	20	20		1	17600	13100	490	4000	5300	300
LR5007NPPU	68	35	20	20	500	1	17600	13100	490	4000	5300	300
LR5007KDD	68	35	20	20		1	17600	13100	490	4000	5300	300
LR5007KDDU	68	35	20	20	500	1	17600	13100	490	4000	5300	300
LR5200NPP	32	10	14	14		0.6	6800	4050	168	8000	11000	70
LR5200NPPU	32	10	14	14	500	0.6	6800	4050	168	8000	11000	70
LR5200KDD	32	10	14	14		0.6	6800	4050	168	8000	11000	70
LR5200KDDU	32	10	14	14	500	0.6	6800	4050	168	8000	11000	70

## Track rollers with cylindrical or crowned outer ring – type LR

d 4~30 mm

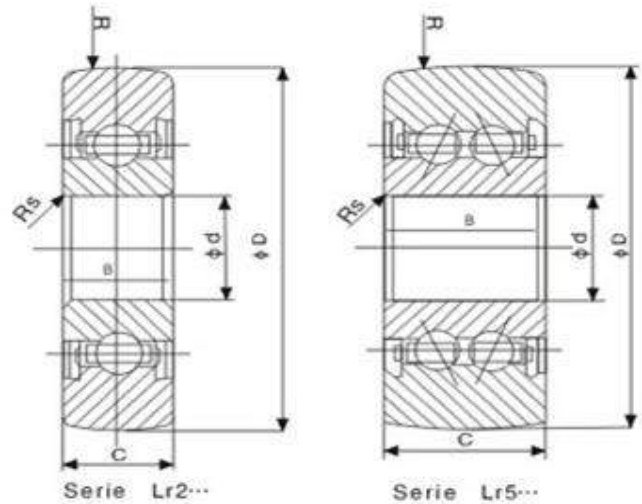


Part No.	Dimensions(mm)						Load		Fatigue limit load	Speed limit		Weight(g)
	D	d	B	C	R	Rs	Cw(N)	Cow(N)	Puw(N)	Seals	Shield	
LR5201NPP	35	12	15.9	15.9		0.6	8600	5100	211	7500	10000	80
LR5201NPPU	35	12	15.9	15.9	500	0.6	8600	5100	211	7500	10000	80
LR5201KDD	35	12	15.9	15.9		0.6	8600	5100	211	7500	10000	80
LR5201KDDU	35	12	15.9	15.9	500	0.6	8600	5100	211	7500	10000	80
LR5202NPP	40	15	15.9	15.9		0.6	9800	6200	258	7000	10000	110
LR5202NPPU	40	15	15.9	15.9	500	0.6	9800	6200	258	7000	10000	110
LR5202KDD	40	15	15.9	15.9		0.6	9800	6200	258	7000	10000	110
LR5202KDDU	40	15	15.9	15.9	500	0.6	9800	6200	258	7000	10000	110
LR5203NPP	47	17	17.5	17.5		0.6	12600	8200	342	5500	7500	170
LR5203NPPU	47	17	17.5	17.5	500	0.6	12600	8200	342	5500	7500	170
LR5203KDD	47	17	17.5	17.5		0.6	12600	8200	342	5500	7500	170
LR5203KDDU	47	17	17.5	17.5	500	0.6	12600	8200	342	5500	7500	170
LR5204NPP	52	20	20.6	20.6		1	15800	10500	433	5000	7000	230
LR5204NPPU	52	20	20.6	20.6	500	1	15800	10500	433	5000	7000	230
LR5204KDD	52	20	20.6	20.6		1	15800	10500	433	5000	7000	230
LR5204KDDU	52	20	20.6	20.6	500	1	15800	10500	433	5000	7000	230
LR5205NPP	62	25	20.6	20.6		1	18500	13000	532	4500	6500	340
LR5205NPPU	62	25	20.6	20.6	500	1	18500	13000	532	4500	6500	340
LR5205KDD	62	25	20.6	20.6		1	18500	13000	532	4500	6500	340
LR5205KDDU	62	25	20.6	20.6	500	1	18500	13000	532	4500	6500	340
LR5206NPP	72	30	23.8	23.8		1	24600	21400	880	3500	5000	510
LR5206NPPU	72	30	23.8	23.8	500	1	24600	21400	880	3500	5000	510
LR5206KDD	72	30	23.8	23.8		1	24600	21400	880	3500	5000	510
LR5206KDDU	72	30	23.8	23.8	500	1	24600	21400	880	3500	5000	510
LR5207NPP	80	35	27	27		1.1	30500	22400	927	2800	3900	660
LR5207NPPU	80	35	27	27	500	1.1	30500	22400	927	2800	3900	660



# Track rollers with cylindrical or crowned outer ring – type LR

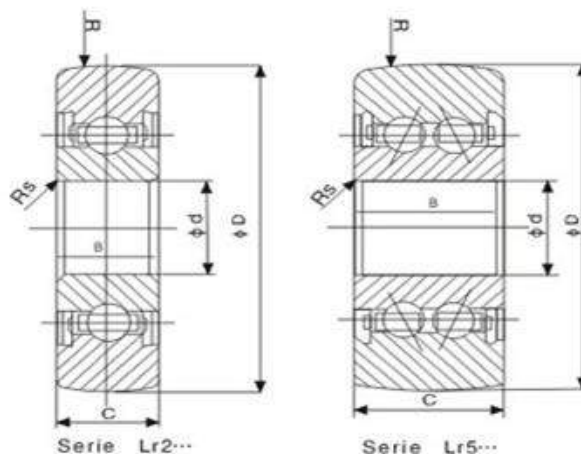
d 4~30 mm



Part No.	Dimensions(mm)						Load		Fatigue limit load	Speed limit		Weight(g)
	D	d	B	C	R	Rs	Cw(N)	Cow(N)	Puw(N)	Seals	Shield	
LR5207KDD	80	35	27	27		1.1	30500	22400	927	2800	3900	660
LR5207KDDU	80	35	27	27	500	1.1	30500	22400	927	2800	3900	660
LR5208NPP	85	40	30.2	30.2		1.1	34500	25500	1060	2500	3500	750
LR5208NPPU	85	40	30.2	30.2	500	1.1	34500	25500	1060	2500	3500	750
LR5208KDD	85	40	30.2	30.2		1.1	34500	25500	1060	2500	3500	750
LR5208KDDU	85	40	30.2	30.2	500	1.1	34500	25500	1060	2500	3500	750
LR5302NPP	47	15	19	19		1	14600	9200	380	6500	10000	150
LR5302NPPU	47	15	19	19	500	1	14600	9200	380	6500	10000	150
LR5302KDD	47	15	19	19		1	14600	9200	380	6500	10000	150
LR5302KDDU	47	15	19	19	500	1	14600	9200	380	6500	10000	150
LR5303NPP	52	17	22.2	22.2		1	17200	11100	462	4700	6500	210
LR5303NPPU	52	17	22.2	22.2	500	1	17200	11100	462	4700	6500	210
LR5303KDD	52	17	22.2	22.2		1	17200	11100	462	4700	6500	210
LR5303KDDU	52	17	22.2	22.2	500	1	17200	11100	462	4700	6500	210
LR5304NPP	62	20	22.2	22.2		1.1	21100	14500	606	4500	6500	340
LR5304NPPU	62	20	22.2	22.2	500	1.1	21100	14500	606	4500	6500	340
LR5304KDD	62	20	22.2	22.2		1.1	21100	14500	606	4500	6500	340
LR5304KDDU	62	20	22.2	22.2	500	1.1	21100	14500	606	4500	6500	340
LR5305NPP	72	25	25.4	25.4		1.1	27500	19500	813	3900	5500	500
LR5305NPPU	72	25	25.4	25.4	500	1.1	27500	19500	813	3900	5500	500
LR5305KDD	72	25	25.4	25.4		1.1	27500	19500	813	3900	5500	500
LR5305KDDU	72	25	25.4	25.4	500	1.1	27500	19500	813	3900	5500	500
LR5306NPP	80	30	30.2	30.2		1.1	36500	26500	1100	3100	4300	670

# Track rollers with cylindrical or crowned outer ring – type LR

d 4~30 mm



Part No.	Dimensions(mm)						Load		Fatigue limit load	Speed limit		Weight(g)
	D	d	B	C	R	Rs	Cw(N)	Cow(N)	Puw(N)	Seals	Shield	
LR5306NPPU	80	30	30.2	30.2	500	1.1	36500	26500	1100	3100	4300	670
LR5306KDD	80	30	30.2	30.2		1.1	36500	26500	1100	3100	4300	670
LR5306KDDU	80	30	30.2	30.2	500	1.1	36500	26500	1100	3100	4300	670
LR5307NPP	90	35	34.9	34.9		1.5	44500	33000	1370	2500	3600	970
LR5307NPPU	90	35	34.9	34.9	500	1.5	44500	33000	1370	2500	3600	970
LR5307KDD	90	35	34.9	34.9		1.5	44500	33000	1370	2500	3600	970
LR5307KDDU	90	35	34.9	34.9	500	1.5	44500	33000	1370	2500	3600	970
LR5308NPP	100	40	36.5	36.5		1.5	56000	42000	1750	2300	3300	1200
LR5308NPPU	100	40	36.5	36.5	500	1.5	56000	42000	1750	2300	3300	1200
LR5308KDD	100	40	36.5	36.5		1.5	56000	42000	1750	2300	3300	1200
LR5308KDDU	100	40	36.5	36.5	500	1.5	56000	42000	1750	2300	3300	1200

## Track Roller with Gothic Arch Groove- LFR Series

Series LFR rollers are the most widely-use and economy product among the linear motion track rollers, and they can suit to the cylindrical track. There are two contact points between the roller and track, so the contact function is favorable.

- Rollers feature double row angular contact ball bearing in its internal structure design and a thick-walled outer ring, so rollers can accommodate higher loads.
- Rollers are made of high-quality chrome steel, processed by heat treatment and precision grind, and are filled with a long service life, high-grade and multi-purposes grease. Rollers mount the metal shield (KDD) or rubber seal (NPP) to prevent the dust. "Motion Bearings" also can provide the rollers with concentric or eccentric pivot. Some types of the rollers can be made from the corrosion resistance stainless steel.

- Characteristics of the guide system that series LFR rollers are applied:

### 1. High allowable speed, low resistance, long service life

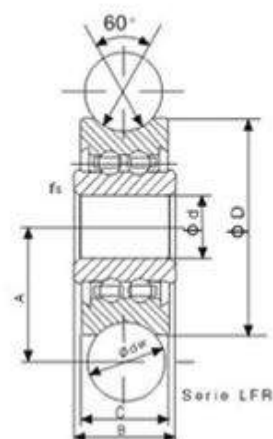
For series LFR rollers, the surface profile of the outer ring is designed as the GOTHIC ARCH. When rollers running, there are two contact points with an angle 60 degrees between the roller and track. So the friction resistance is low and the load is in equality, thus avoiding the stresses concentration and edge effect caused by the error from installation and manufacture, making the track system has the characteristics of high speed, low energy consumption, long service life and minimum noise level.

### 2. Easy installation

As rollers assembled the concentric or eccentric pivot, installation can be made convenient. To adjust the eccentric one's eccentricity, these rollers can get the fitting preload.



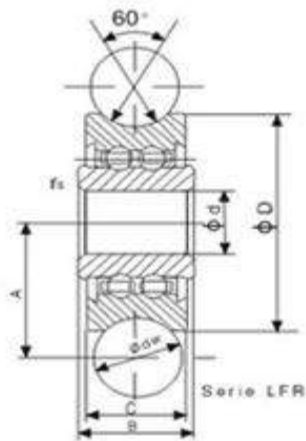
Track rollers with Gothic arch groove – type LFR  
d 4~40 mm



Part No.	Dimension (mm)							Load Rating			Weight(g)
	dw	d	D	C	B	A	rs	Cw(KN)	Cow(KN)	Frperm(KN)	
LFR50/4NPP	5	4	13	6	7	8.04	0.2	1.05	0.85	1.15	3.5
LFR50/5-4KDD	4	5	16	7	8	9	0.2	1.2	0.86	1.3	7.5
LFR50/5-4NPP	4	5	16	7	8	9	0.2	1.2	0.86	1.3	7.5
LFR50/5KDD	6	5	17	7	8	10.5	0.2	1.27	0.82	1.3	8
LFR50/5NPP	6	5	17	7	8	10.5	0.2	1.27	0.82	1.3	8
LFR50/8KDD	6	8	24	11	11	14	0.3	3.67	2.28	1.3	24
LFR50/8NPP	6	8	24	11	11	14	0.3	3.67	2.28	1.3	24
LFR50/8-8KDD	8	8	24	11	11	14.75	0.3	3.67	2.28	1.3	24
LFR50/8-8NPP	8	8	24	11	11	14.75	0.3	3.67	2.28	1.3	24
LFR30/8KDD	10	8	26.8	11	13	16.7	0.3	3.67	2.28	1.3	31
LFR30/8NPP	10	8	26.8	11	13	16.7	0.3	3.67	2.28	1.3	31
LFR5201KDD	10	12	35	15.9	15.9	20.65	0.3	8.5	5.1	5.1	68
LFR5201NPP	10	12	35	15.9	15.9	20.65	0.3	8.5	5.1	5.1	68
LFR5301KDD	10	12	42	19	19	24	0.6	13	7.7	7.5	130
LFR5301NPP	10	12	42	19	19	24	0.6	13	7.7	7.5	130
LFR5301-20KDD	20	12	42	19	19	28	0.6	13	7.7	7.5	125
LFR5301-20NPP	20	12	42	19	19	28	0.6	13	7.7	7.5	125
LFR5302KDD	10	15	47	19	19	26.65	1	16.2	9.2	6.2	163
LFR5302NPP	10	15	47	19	19	26.65	1	16.2	9.2	6.2	163
LFR5201-12KDD	12	12	35	15.9	15.9	21.75	0.3	8.4	5	5.1	68
LFR5201-12NPP	12	12	35	15.9	15.9	21.75	0.3	8.4	5	5.1	68



Track rollers with Gothic arch groove – type LFR  
d 4~40 mm



Part No.	Dimension (mm)							Load Rating			Weight(g)
	dw	d	D	C	B	A	rs	Cw(KN)	Cow(KN)	Frperm(KN)	
LFR5201-14KDD	14	12	39.9	18	20	24	0.3	8.9	5	6.7	107
LFR5201-14NPP	14	12	39.9	18	20	24	0.3	8.9	5	6.7	107
LFR5201-10.4NPP	10	12	39.9	18	20	22	0.3	8.9	5	6.7	115
LFR5204-16KDD	16	20	52	20.6	22.6	31.5	0.6	16.8	9.5	12.1	195
LFR5204-16NPP	16	20	52	20.6	22.6	31.5	0.6	16.8	9.5	12.1	195
LFR5206-20KDD	20	25	72	23.8	25.8	41	0.6	29.5	16.6	20.7	435
LFR5206-20NPP	20	25	72	23.8	25.8	41	0.6	29.5	16.6	20.7	435
LFR5206-25KDD	25	25	72	23.8	25.8	43.5	0.6	29.5	16.4	23.1	425
LFR5206-25NPP	25	25	72	23.8	25.8	43.5	0.6	29.5	16.4	23.1	425
LFR5207-30KDD	30	30	80	27	29	51	1	38	20.8	21.4	660
LFR5207-30NPP	30	30	80	27	29	51	1	38	20.8	21.4	660
LFR5208-40KDD	40	40	98	36	38	62.5	1	54.8	29	55	1360
LFR5208-40NPP	40	40	98	36	38	62.5	1	54.8	29	55	1360
LFR5308-50KDD	50	50	110	44	46	72.5	1.1	53	39.5	69	1400
LFR5308-50NPP	50	50	110	44	46	72.5	1.1	53	39.5	69	1400

## Wire Guides and Straightening Rollers - type A or AT

The straightening, consisting of putting the material back into its original shape. The operation is carried out by the first straightening rollers to remove the residual constraint in the material, due to the winding on the bobbin. This operation is performed by the rollers located in the central part of the straightener. The forming of the wire carried out by the last rollers on the straightener, generally placed at an angle of 90° compared to the angle of the first rollers. Often it is necessary to combine these three steps. That is the reason why the straightener uses 5, 7, 9, 11 or even 13 rollers placed in two planes.

The manufacturing precision of the roller has a major influence on the quality of the final product (wires) as well as on the service life of the rollers. It is therefore essential that the rectified "V" notch on the outer ring has the same geometric characteristics and precision as the rest of the bearing.

Grinding this notch on an assembled standard bearing is risky, as the bearing may be damaged. An acceptable uniformity and geometrical precision can thus not be guaranteed. The service life of the roller is much shorter and the quality of wire drawing suffers accordingly. Among numerous applications using thread guides and straightening rollers.

### Field of Application:

The straightening of cables, strips and wires is performed in steps with successive stages until the final product is obtained. To rationalize the handling between the different steps the material is stocked on reels or on bobbins and takes forms which are not natural.

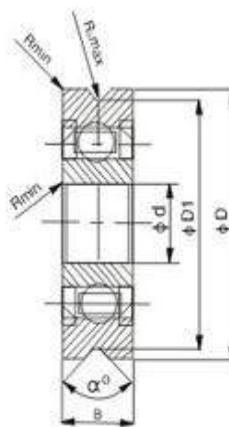
For every production step, it is therefore necessary to carry out the inverse process by taking the material off its support. At that moment, the straightening operation takes place. It may be divided into three steps:

- The following machines use the same type of special rollers:
- Machine tools for fiberglass cables (lawn mowers)
- Machines for spring manufacturing
- Machines for metal wires
- Machines for spooling, un-spooling and rewinding
- Fine and high precision wire drawing



# Wire Guides and Straightening Rollers – type A or AT

d 5~15 mm



Part No.	Dimensions (mm)							Load Ratings		Weight
	d	D	D1	B	Ra	$\alpha$	R	Cw (KN)	Cow(KN)	$\approx$ (g)
A507 ZZ	5	21	19	6	0.5	90	0.3	2.2	0.89	11
A507 2RS	5	21	19	6	0.5	90	0.3	2.2	0.89	11
A603 ZZ	6	21	19	6	0.5	90	0.3	2.2	0.89	11
A603 2RS	6	21	19	6	0.5	90	0.3	2.2	0.89	11
A806 ZZ	8	26	23	7	0.5	90	0.3	3.3	1.37	19
A806 2RS	8	26	23	7	0.5	90	0.3	3.3	1.37	19
A1001 ZZ	10	30	27	8	0.5	90	0.3	4.55	1.97	31
A1001 2RS	10	30	27	8	0.5	90	0.3	4.55	1.97	31
A1002 ZZ	10	35	31	9	0.5	90	0.6	6	2.68	46
A1002 2RS	10	35	31	9	0.5	90	0.6	6	2.68	46
A1500 ZZ	15	47	41	11	0.5	90	0.6	7.6	3.7	104
A1500 2RS	15	47	41	11	0.5	90	0.6	7.6	3.7	104

## Track Rollers with Gothic Arch groove – SG Series

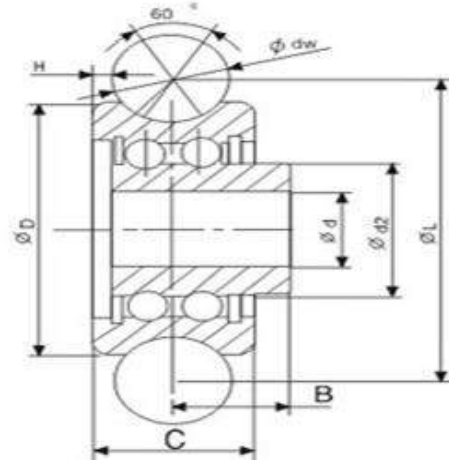
The function of series SG rollers is same as the series LFR rollers. But they are mainly used in the flat track and in the condition required compact structure. After rollers are installed to the slider, the shaft will be not or seldom over the roller's side planes.





# Track rollers with Gothic arch groove – type SG

d 5~8 mm



Part No.	Dimensions (mm)								Load Ratings			Weight
	dw	d	D	C	B	L	d2	H	Cw (KN)	Cow (KN)	Frperm (KN)	≈(g)
SG15	6	5	17	8	5.75	20.46	8.6	1	1.27	0.82	1.3	8
SG15-10	10	5	17	8	5.75	25.5	8.6	1	1.27	0.82	1.3	9
SG20	8	6	24	11	7.25	28.62	11.1	1.2	3.4	1.7	1.3	25
SG25	10	8	30	14	8.5	35.77	13	1.5	3.67	2.28	1.3	49
SG35	12	12	42	19	12.5	48.93	18	1.5	8.5	5.1	5.1	136
SG15N	6	5	17	8	5.75	20.46	8.6	0.5	1.27	0.82	1.3	8
SG20N	8	6	24	11	7.25	28.62	11.1	0.7	3.4	1.7	1.3	25
SG25N	10	8	30	14	8.5	35.77	13	1	3.67	2.28	1.3	49
SG35N	12	12	42	19	12.5	48.93	18	1	8.5	5.1	5.1	136

## Track Roller with "V" Groove Profile – LV Series

Series LV bearings can be widely used in the cylindrical track or " V " profile track with an angle of 120 degrees. Different from the series LFR bearings, series LV bearings are more adaptable to the different track sizes. Each type can be applied with a larger range of track diameters. They are widely used for the heavy-duty track, mobile equipment, wire straightening machine and so on.

- Bearings take the internal structure design of double row angular contact ball bearings and have a thick-walled outer ring, so the bearings can accommodate higher loads.
- Bearings are made of the high-quality chrome steel, processed by heat treatment and precision grind, and are filled with a long service life, high-grade and multi-purposes grease. Bearings take the metal shield to prevent the dust.

Characteristics of the guide system that series LV bearings are applied:

### 1. Low resistance, long service life, widely-uses

The roughness of the " V " profile surface can be reached to Ra0.32 processed by precision grind. The bearings have well parallelism between the "V" profile groove and the mount planes of inner ring relatively. When bearings working, the stresses between the bearing and cylindrical track is in equality and the friction resistance is low.

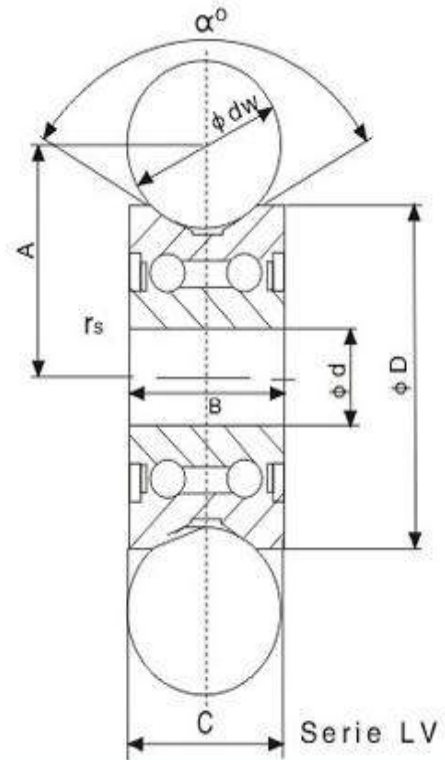
### 2. Easy installation

After bearing assembled the concentric or eccentric pivot, installation will be convenient. To adjust the eccentric one's eccentricity, the bearing can get the fitting preload.



# Track rollers with "V" groove profile – Vee' d Bearings

d 7~20 mm



Part No.	Dimensions (mm)								Loading		Weight
	dw	d	D	b	C	A	$\alpha$	rs	Cw (KN)	Cow(KN)	≈(g)
LV 20/7 ZZ	10	7	22	11	11	14.5	120	0.3	3.78	2.05	17
LV 20/8 ZZ	10	8	30	14	14	18.1	120	0.3	5.13	2.67	49
LV 202-38 ZZ	10	15	38	17	17	22.25	120	0.5	8.47	5.37	87
LV 202-40 ZZ	10	15	40	18	18	22	120	0.5	8.47	5.37	110
LV 201 ZZ	20	12	41	20	20	28	120	0.3	8.47	5.37	130
LV 201-14.2RS	14	12	39.9	20.1	18	24	100	0.5	8.9	5	107
LV 202-41 ZZ	20	15	41	20	20	28	120	0.5	8.47	5.37	116
LV 203 ZZ	20	17	58	25	25	35	120	0.5	14.66	9.1	325
LV 204-57 ZZ	30	20	57	22	22	41	120	0.6	14.66	9.1	290
LV 204-58 ZZ	30	20	58	25	25	41	120	0.6	14.66	9.1	310

## Track Rollers with "W" Profile – W Series

- Guide Wheels are the main components of the Linear Motion system, they can be widely used in the industrial robot, cutting machine, motion track, production flow and so on.
- The surface of outer ring is the "W" profile formed by the two "V" with an angle of 90 degrees. The internal or external side face can be matched separately with the concave or protrudable track that both have a "V" profile with the angle of 90 degrees, and also the internal side face can be matched well with the cylindrical track.
- Wheels feature the internal design of double row angular contact ball bearing and a thick-walled outer ring, so the wheels can accommodate higher loads.

Characteristics of the guide system that series W wheels are applied:

### 1. Low resistance, long service life, widely-use

After precision ground, the roughness of working surface of the series W wheels is fine and the angle of 90 degrees is accurate. The wheels have well parallelism between the "W" profile groove and the mount planes of inner ring relatively. When the wheels running, the stresses between the wheel and the track is in equality and the friction resistance is low.

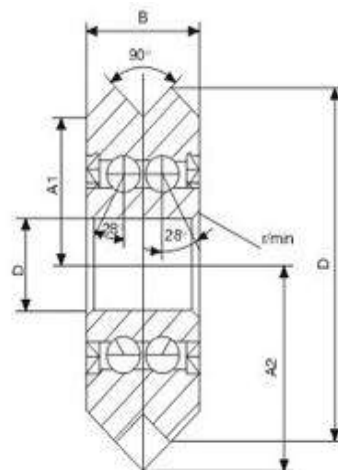
### 2. Easy installation

After wheels assembled the concentric or eccentric bushing, installation can be made convenient. To adjust the eccentric one's eccentricity, the wheels can get the fitting preload.





# W SERIES LINE TRACK ROLLERS BEARING



Part No.	Weight	Dimensions (mm)						Load Ratings	
	≈(g)	d	D	B	A1	A2	rs	Cw (KN)	Cow(KN)
W0	5	4	14.84	6.35	5.94	9.12	0.3	1	0.5
W0X	5	4	14.84	6.35	5.94	9.12	0.3	1	0.5
W1	11	4.763	19.56	7.87	7.93	11.86	0.3	2.2	1
W1X	11	4.763	19.56	7.87	7.93	11.86	0.3	2.2	1
W2	38	9.525	30.73	11.1	12.7	18.24	0.3	4.9	2.5
W2X	38	9.525	30.73	11.1	12.7	18.24	0.3	4.9	2.5
W3	130	12	45.72	15.88	19.05	26.98	0.6	9.4	4.9
W3X	130	12	45.72	15.88	19.05	26.98	0.6	9.4	4.9
W4	280	15	59.94	19.05	25.4	34.93	1	14.8	8.2
W4X	280	15	59.94	19.05	25.4	34.93	1	14.8	8.2
W4XL	580	22	75.39	25.4	31.75	44.45	1.1	20.6	14.3
W4XXL	580	22	75.39	25.4	31.75	44.45	1.1	20.6	14.3

## Other Non-Standard Parts

