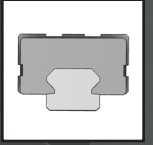


LINEAR BEARINGS & RAIL



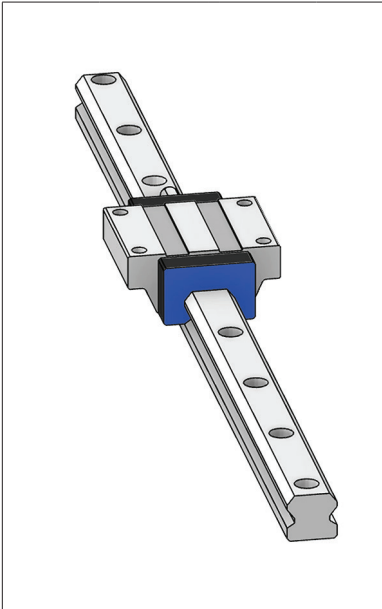
AirTAC



- Industry Standard Rail Sizes - 15MM, 20MM, 25MM, 30MM, 35MM & 45MM
- Manufactured Utilizing the Most Advanced High Precision Machining Available
- High Accuracy, Linearity, & Parallelism

How to Order

Block & Rail Assembly

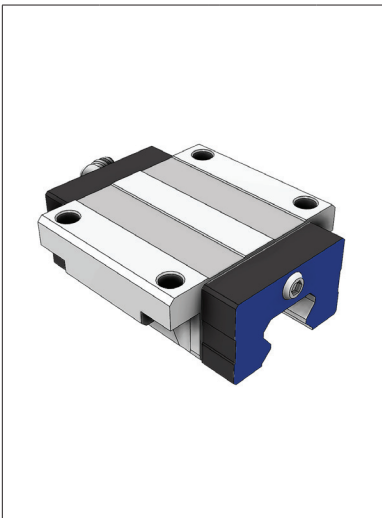


LSH25F1N1X220S20AH-M6

1 2 3 4 5 6 7 8

1	Rail Width	15: 15MM 20: 20MM 25: 23MM 30: 28MM 35: 34MM 45: 45MM
2	Block Style	H: Square Type F1: Flange Type (Top Mounting) F2: Flange Type (Bottom Mounting) F3: Flange Type (Top & Bottom Mounting)
3	Block Type	N: Standard L: Long
4	Number of Blocks	1: One 2: Two 3: Three 4: Four (Amount of Blocks on a Single Rail)
5	Rail Length	Specify Length in MM (Ex: 220: 220MM)
6	Preload	A: None B: Light Preload C: Medium Preload
7	Accuracy	N: Normal H: High
8	Block/Rail Mounting Screw	M4: M4X0.7 Block Threads & Rail Hole for M4 Screw (LSH15 Only) M5: M5X0.8 Block Threads & Rail Hole for M5 Screw (LSH20 Only) M6: M6X1 Block Threads & Rail Hole for M6 Screw (LSH25 Only) M8: M8X1.25 Block Threads & Rail Hole for M8 Screw (LSH30 & LSH35 Only) M12: M12X1.25 Block Threads & Rail Hole for M12 Screw (LSH45 Only)

Block Only

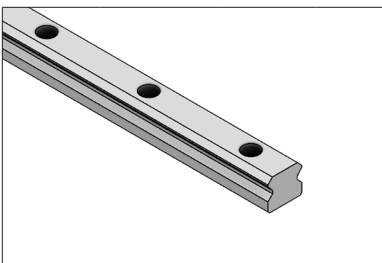


LSH25BK-F1N-H-D-M6

1 2 3 4 5 6

1	Rail Width	15: 15MM 20: 20MM 25: 23MM 30: 28MM 35: 34MM 45: 45MM
2	Block Style	H: Square Type F1: Flange Type (Top Mounting) F2: Flange Type (Bottom Mounting) F3: Flange Type (Top & Bottom Mounting)
3	Block Type	N: Standard L: Long
4	Accuracy	N: Normal H: High
5	Preload	D: None B: Light Preload C: Medium Preload
6	Block/Rail Mounting Screw	M4: M4X0.7 Block Threads & Rail Hole for M4 Screw (LSH15 Only) M5: M5X0.8 Block Threads & Rail Hole for M5 Screw (LSH20 Only) M6: M6X1 Block Threads & Rail Hole for M6 Screw (LSH25 Only) M8: M8X1.25 Block Threads & Rail Hole for M8 Screw (LSH30 & LSH35 Only) M12: M12X1.25 Block Threads & Rail Hole for M12 Screw (LSH45 Only)

Rail Only

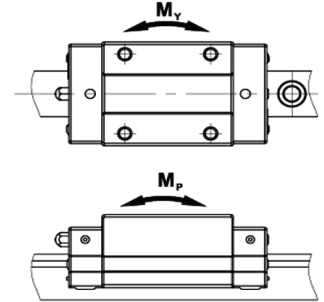
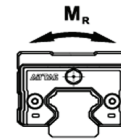
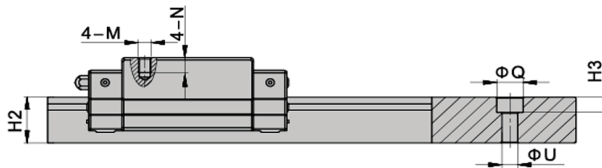
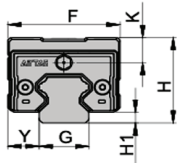
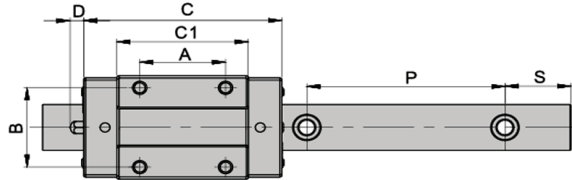
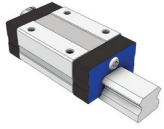


LSH25RLX220-S20-H-D

1 2 3

1	Rail Width	15: 15MM 20: 20MM 25: 23MM 30: 28MM 35: 34MM 45: 45MM
2	Rail Length	Specify Length in MM (Ex: 220: 220MM)
3	Accuracy	N: Normal H: High

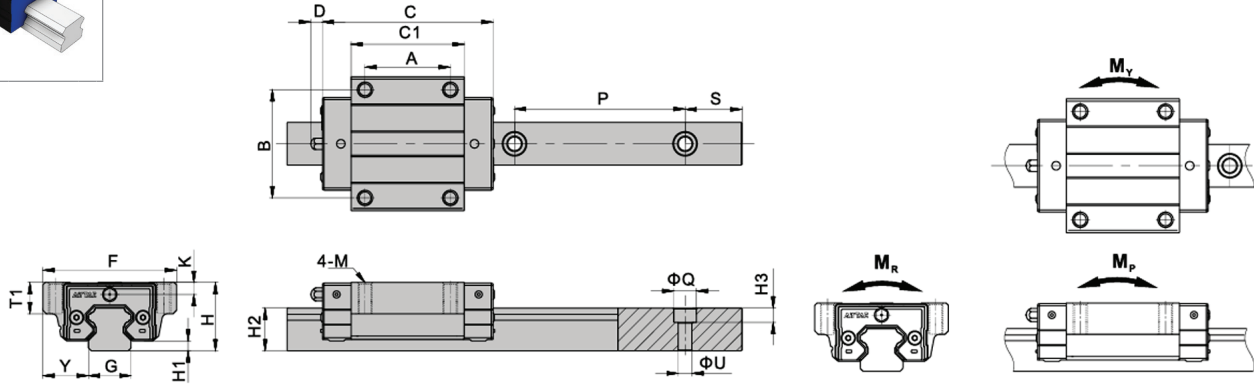
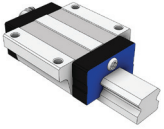
"H" Type - Square Block Dimensions



Model/Item	External Dimension (mm)							Block Dimension (mm)							Rail Dimension (mm)						
	H	H1	F	Y	C			C1	A	B	K	D	M	N	G	H2	P	S	ϕQ	ϕU	H3
					Standard (Blank)	Double oil scrapers(DD)	Oil scraper+Metal scraper(ZZ)														
LSH15HN	28	3.5	34	9.5	60	67	64.5	40	26	26	8.3	6	M4X0.7	5	15	15	60	20	8	4.8	5.3
LSH20HN	30	4.3	44	12	76.5	84.5	81	52	36	32	6.5	12.5	M5X0.8	6	20	17.5	60	20	9.5	5.8	8.5
LSH20HL	30	4.3	44	12	90.5	98.5	95	66	50	32	6.5	12.5	M5X0.8	6	20	17.5	60	20	9.5	5.8	8.5
LSH25HN	40	6.5	48	12.5	83.5	91.5	88	58.5	35	35	10.9	12.5	M6X1.0	8	23	22	60	20	11.2	7	9
LSH25HL	40	6.5	48	12.5	105	113	109.5	80	50	35	10.9	12.5	M6X1.0	8	23	22	60	20	11.2	7	9
LSH30HN	45	6.5	60	16	95.5	103.5	100.5	70.5	40	40	11	13	M8X1.25	10	28	26	80	20	14.2	9	12
LSH30HL	45	6.5	60	16	118	126	123	93	60	40	11	13	M8X1.25	10	28	26	80	20	14.2	9	12
LSH35HN	55	7	70	18	109	118	114	80	50	50	16.2	12.5	M8X1.25	12	34	29	80	20	14.2	9	12
LSH35HL	55	7	70	18	134.5	143.5	139.5	105.5	72	50	16.2	12.5	M8X1.25	12	34	29	80	20	14.2	9	12
LSH45HN	70	10	86	20.5	132	141	137	98	60	60	20	16	M10X1.5	17	45	38	105	22.5	20	14	17
LSH45HL	70	10	86	20.5	164	173	169	130	80	60	20	16	M10X1.5	17	45	38	105	22.5	20	14	17

Model/Item	Mounting Screw	Dynamic Load Rating(kN)	Static Load Rating(kN)	Static Rated Moment (kN.m)			Weight	
		C	C ₀	M _R	M _P	M _V	Block(kg)	Rail(kg/m)
LSH15HN	M4	11.3	17.9	0.12	0.12	0.12	0.2	1.43
LSH20HN	M5	18.6	28.6	0.27	0.25	0.25	0.33	2.23
LSH20HL	M5	22.2	37.6	0.35	0.34	0.34	0.41	2.23
LSH25HN	M6	26.9	39.4	0.44	0.38	0.38	0.53	3.32
LSH25HL	M6	32.9	53.0	0.58	0.57	0.57	0.7	3.32
LSH30HN	M8	37.4	55.0	0.66	0.67	0.67	0.91	4.5
LSH30HL	M8	45.7	73.1	0.88	0.91	0.91	1.17	4.5
LSH35HN	M8	50.8	72.3	1.05	0.92	0.92	1.26	6.37
LSH35HL	M8	61.9	96.1	1.52	1.45	1.45	1.68	6.37
LSH45HN	M12	80.7	110.3	1.95	1.62	1.62	2.72	10.7
LSH45HL	M12	98.5	146.9	2.59	2.92	2.92	3.60	10.7

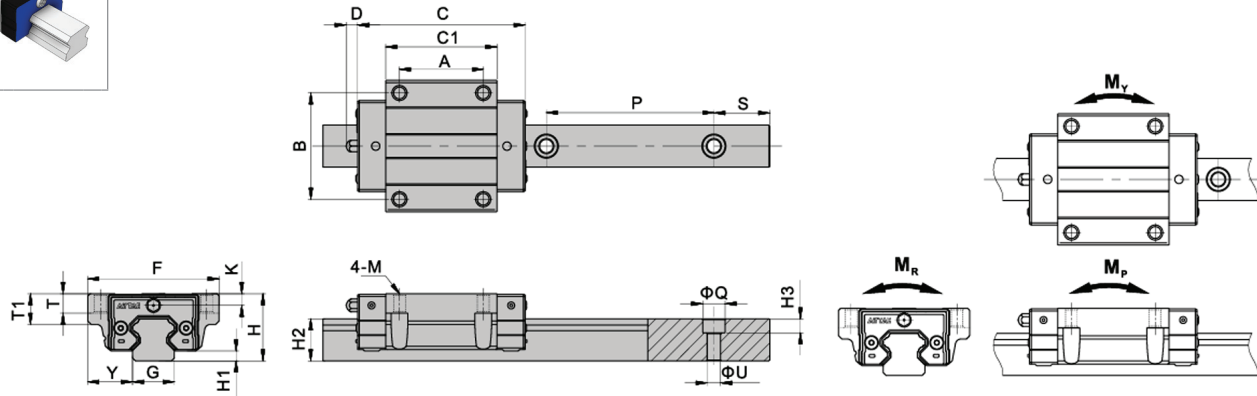
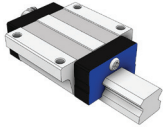
"F1" Type - Top Mount Flange Block Dimensions



Model/Item	External Dimension (mm)							Block Dimension (mm)							Rail Dimension (mm)						
	H	H1	F	Y	C			C1	A	B	K	D	M	T1	G	H2	P	S	ΦQ	ΦU	H3
					Standard (Blank)	Double oil scrapers(DD)	Oil scraper+Metal scraper(ZZ)														
LSH15F1N	24	3.5	47	16	60	67	64.5	40	30	38	4.3	6	M5X0.8	11	15	15	60	20	8	4.8	5.3
LSH20F1N	30	4.3	63	21.5	76.5	84.5	81	52	40	53	6.5	12.5	M6X1.0	10	20	17.5	60	20	9.5	5.8	8.5
LSH20F1L	30	4.3	63	21.5	90.5	98.5	95	66	40	53	6.5	12.5	M6X1.0	10	20	17.5	60	20	9.5	5.8	8.5
LSH25F1N	36	6.5	70	23.5	83.5	91.5	88	58.5	45	57	6.9	12.5	M8X1.25	16	23	22	60	20	11.2	7	9
LSH25F1L	36	6.5	70	23.5	105	113	109.5	80	45	57	6.9	12.5	M8X1.25	16	23	22	60	20	11.2	7	9
LSH30F1N	42	6.5	90	31	95.5	103.5	100.5	70.5	52	72	8	13	M10X1.5	18	28	26	80	20	14.2	9	12
LSH30F1L	42	6.5	90	31	118	126	123	93	52	72	8	13	M10X1.5	18	28	26	80	20	14.2	9	12
LSH35F1N	48	7	100	33	109	118	114	80	62	82	9.2	12.5	M10X1.5	21	34	29	80	20	14.2	9	12
LSH35F1L	48	7	100	33	134.5	143.5	139.5	105.5	62	82	9.2	12.5	M10X1.5	21	34	29	80	20	14.2	9	12
LSH45F1N	60	10	120	37.5	132	141	137	98	80	100	10	16	M12X1.75	22	45	38	105	22.5	20	14	17
LSH45F1L	60	10	120	37.5	164	173	169	130	80	100	10	16	M12X1.75	22	45	38	105	22.5	20	14	17

Model/Item	Mounting Screw	Dynamic Load Rating(kN)	Static Load Rating(kN)	Static Rated Moment (kN.m)			Weight	
		C	C ₀	M _R	M _P	M _V	Block(kg)	Rail(kg/m)
LSH15F1N	M4	11.3	17.9	0.12	0.12	0.12	0.2	1.43
LSH20F1N	M5	18.6	28.6	0.27	0.25	0.25	0.40	2.23
LSH20F1L	M5	22.2	37.6	0.35	0.34	0.34	0.8	2.23
LSH25F1N	M6	26.9	39.4	0.44	0.38	0.38	0.59	3.32
LSH25F1L	M6	32.9	53.0	0.58	0.57	0.57	0.85	3.32
LSH30F1N	M8	37.4	55.0	0.66	0.67	0.67	1.09	4.5
LSH30F1L	M8	45.7	73.1	0.88	0.91	0.91	1.38	4.5
LSH35F1N	M8	50.8	72.3	1.05	0.92	0.92	1.32	6.37
LSH35F1L	M8	61.9	96.1	1.52	1.45	1.45	1.8	6.37
LSH45F1N	M12	80.7	110.3	1.95	1.62	1.62	2.77	10.7
LSH45F1L	M12	98.5	146.9	2.59	2.92	2.92	3.67	10.7

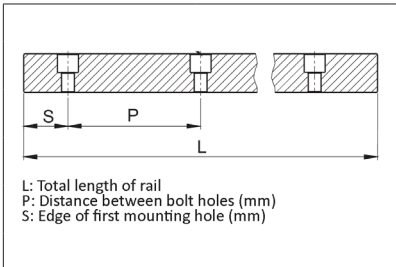
“F3” Type - Top and Bottom Mount & “F2” Type - Bottom Flange Block Dimensions



Model/Item	External Dimension(mm)							Block Dimension(mm)						Rail Dimension(mm)									
	H	H1	F	Y	C			C1	A	B	K	D	M		T	T1	G	H2	P	S	ΦQ	ΦU	H3
					Standard (Blank)	Double oil scrapers(DD)	Oil scraper+Metal scraper(ZZ)						Bottom -Mount	Top or Bottom -Mount									
LSH15F2(F3)N	24	3.5	47	16	60	67	64.5	40	30	38	4.3	6	Φ4.5	M5X0.8	7	11	15	15	60	20	8	4.8	5.3
LSH20F2(F3)N	30	4.3	63	21.5	76.5	84.5	81	52	40	53	6.5	12.5	Φ5.7	M6X1.0	9.5	10	20	17.5	60	20	9.5	5.8	8.5
LSH20F2(F3)L	30	4.3	63	21.5	90.5	98.5	95	66	40	53	6.5	12.5	Φ5.7	M6X1.0	9.5	10	20	17.5	60	20	9.5	5.8	8.5
LSH25F2(F3)N	36	6.5	70	23.5	83.5	91.5	88	58.5	45	57	6.9	12.5	Φ6.8	M8X1.25	10	16	23	22	60	20	11.2	7	9
LSH25F2(F3)L	36	6.5	70	23.5	105	113	109.5	80	45	57	6.9	12.5	Φ6.8	M8X1.25	10	16	23	22	60	20	11.2	7	9
LSH30F2(F3)N	42	6.5	90	31	95.5	103.5	100.5	70.5	52	72	8	13	Φ9	M10X1.5	10	18	28	26	80	20	14.2	9	12
LSH30F2(F3)L	42	6.5	90	31	118	126	123	93	52	72	8	13	Φ9	M10X1.5	10	18	28	26	80	20	14.2	9	12
LSH35F2(F3)N	48	7	100	33	109	118	114	80	62	82	9.2	12.5	Φ9	M10X1.5	13	21	34	29	80	20	14.2	9	12
LSH35F2(F3)L	48	7	100	33	134.5	143.5	139.5	105.5	62	82	9.2	12.5	Φ9	M10X1.5	13	21	34	29	80	20	14.2	9	12
LSH45F2(F3)N	60	10	120	37.5	132	141	137	98	80	100	10	16	Φ11	M12X1.75	15	22	45	38	105	22.5	20	14	17
LSH45F2(F3)L	60	10	120	37.5	164	173	169	130	80	100	10	16	Φ11	M12X1.75	15	22	45	38	105	22.5	20	14	17

Model/Item	Mounting Screw	Dynamic Load Rating(kN)	Static Load Rating(kN)	Static Rated Moment (kN.m)			Weight	
				Cr	Mp	Mv	Block(kg)	Rail(kg/m)
LSH15F2(F3)N	M4	11.3	17.9	0.12	0.12	0.12	0.2	1.43
LSH20F2(F3)N	M5	18.6	28.6	0.27	0.25	0.25	0.40	2.23
LSH20F2(F3)L	M5	22.2	37.6	0.35	0.34	0.34	0.8	2.23
LSH25F2(F3)N	M6	26.9	39.4	0.44	0.38	0.38	0.59	3.32
LSH25F2(F3)L	M6	32.9	53.0	0.58	0.57	0.57	0.85	3.32
LSH30F2(F3)N	M8	37.4	55.0	0.66	0.67	0.67	1.09	4.5
LSH30F2(F3)L	M8	45.7	73.1	0.88	0.91	0.91	1.38	4.5
LSH35F2(F3)N	M8	50.8	72.3	1.05	0.92	0.92	1.32	6.37
LSH35F2(F3)L	M8	61.9	96.1	1.52	1.45	1.45	1.8	6.37
LSH45F2(F3)N	M12	80.7	110.3	1.95	1.62	1.62	2.77	10.7
LSH45F2(F3)L	M12	98.5	146.9	2.59	2.92	2.92	3.67	10.7

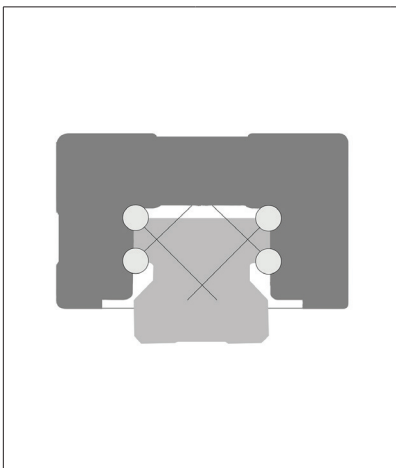
Rail Specifications



Model	LSH15	LSH20	LSH25	LSH30	LSH35
Pitch (P)	60	60	60	80	80
Standard Edge Pitch (S)	20	20	20	20	20
Max Length of Rail for Standard Edge	4000	4000	4000	3960	3960
Max Length (Lmax)	4000	4000	4000	4000	4000

Dimensions Noted in MM

Product Features



1. Self-Adjusting Ability

The X-shaped (45°-45°) groove design makes the rail self-aligning. Even if small variations exist on the mounting surface, the design of the LSD & LSH series can help absorb the misalignment and maintain high precision along with smooth and stable linear motion.

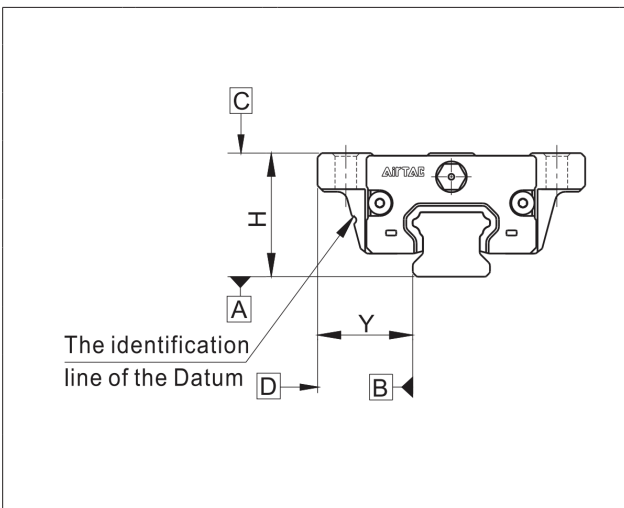
2. Innovative Design: Low Profile, High Rigidity, Equal Load in Four Directions

The design of the rail profile and four rows of steel ball bearings allows the bearing block to achieve the ideal two-point contact. It can withstand the action and reaction force from both radial and lateral directions. In addition, a pre-load can be applied to increase rigidity if necessary. The reduced height and length of the slide block and height of the rail help to achieve a compact bearing rail solution.

3. Interchangeable

The LSD & LSH Series are manufactured with strict tolerances and dimensional accuracy. This precision paired with the ball retainers allows for interchangeability when within the same spec.

Accuracy & Parallelism

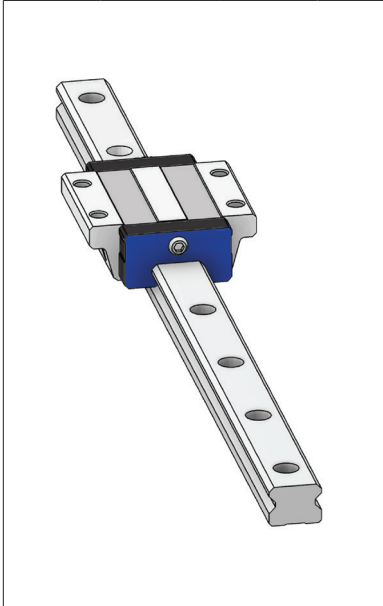


Accuracy Standards						
Accuracy	N: Normal		H: High		P: Precision	
Model	15/20	25/30/35	15/20	25/30/35	15/20	25/30/35
Tolerance of Height H	+/- 0.1		+/- 0.3	+/- 0.4	+/- 0.015	+/- 0.02
Variation of height r H	0.02	0.025	0.01	0.015	0.006	0.007
Tolerance of width Y	+/- 0.1		+/- 0.3	+/- 0.4	+/- 0.015	+/- 0.02
Variation of width r Y	0.02	0.03	0.01	0.015	0.006	0.007
Parallelism of C-surface relative to A-surface	Parallelism of raceway (Refer to Table 1)					
Parallelism of D-surface relative to B-surface	Parallelism of raceway (Refer to Table 1)					

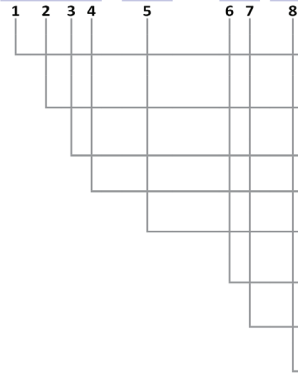
Accuracy Rail Length (MM)	100 & Under	100-200	200-300	300-500	500-700	700-900	900-1100	1100-1500	1500-1900	1900-2500	2500-3100	3100-3600	3600-4000	
Parallelism of the Raceway (µm)	Normal Grade	12	14	15	17	20	22	24	26	28	31	33	36	37
	High Grade	7	9	10	12	13	15	16	18	20	22	25	27	28

How to Order

Block & Rail Assembly

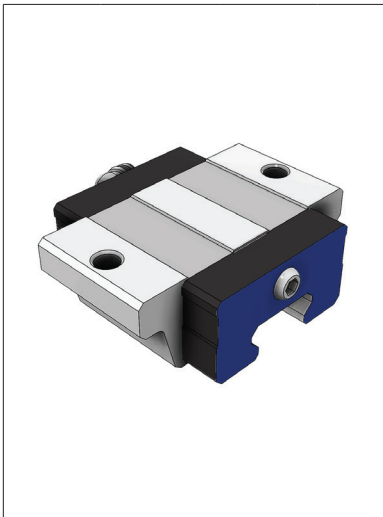


LSD25F1N1 X 220 S20AH-M6

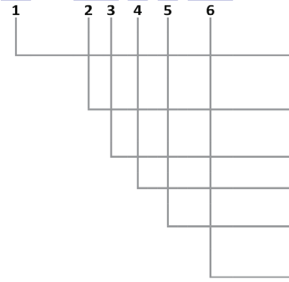


1	Rail Width	15: 15MM 20: 20MM 25: 23MM 30: 28MM 35: 34MM
2	Block Style	H: Square Type F1: Flange Type (Top Mounting) F2: Flange Type (Bottom Mounting) F3: Flange Type (Top & Bottom Mounting)
3	Block Type	S: Short N: Standard
4	Number of Blocks	1: One 2: Two 3: Three 4: Four (Amount of Blocks on a Single Rail)
5	Rail Length	Specify Length in MM (Ex: 220: 220MM)
6	Preload	A: None B: Light Preload C: Medium Preload
7	Accuracy	N: Normal H: High
8	Block/Rail Mounting Screw	M4: M4X0.7 Block Threads & Rail Hole for M4 Screw (LSH15 Only) M5: M5X0.8 Block Threads & Rail Hole for M5 Screw (LSH20 Only) M6: M6X1 Block Threads & Rail Hole for M6 Screw (LSH25 Only) M8: M8X1.25 Block Threads & Rail Hole for M8 Screw (LSH30 & LSH35 Only)

Block Only

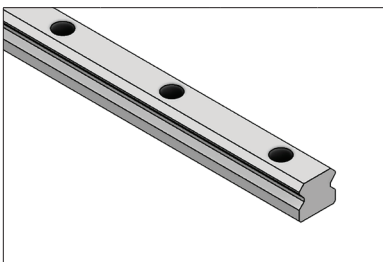


LSD25BK-F1S-H-D-M6

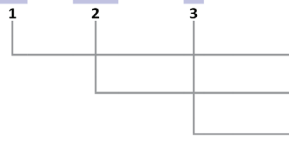


1	Rail Width	15: 15MM 20: 20MM 25: 23MM 30: 28MM 35: 34MM
2	Block Style	H: Square Type F1: Flange Type (Top Mounting) F2: Flange Type (Bottom Mounting) F3: Flange Type (Top & Bottom Mounting)
3	Block Type	S: Short N: Standard
4	Accuracy	N: Normal H: High
5	Preload	D: None B: Light Preload SB: Medium Preload
6	Block/Rail Mounting Screw	M4: M4X0.7 Block Threads & Rail Hole for M4 Screw (LSH15 Only) M5: M5X0.8 Block Threads & Rail Hole for M5 Screw (LSH20 Only) M6: M6X1 Block Threads & Rail Hole for M6 Screw (LSH25 Only) M8: M8X1.25 Block Threads & Rail Hole for M8 Screw (LSH30 & LSH35 Only)

Rail Only

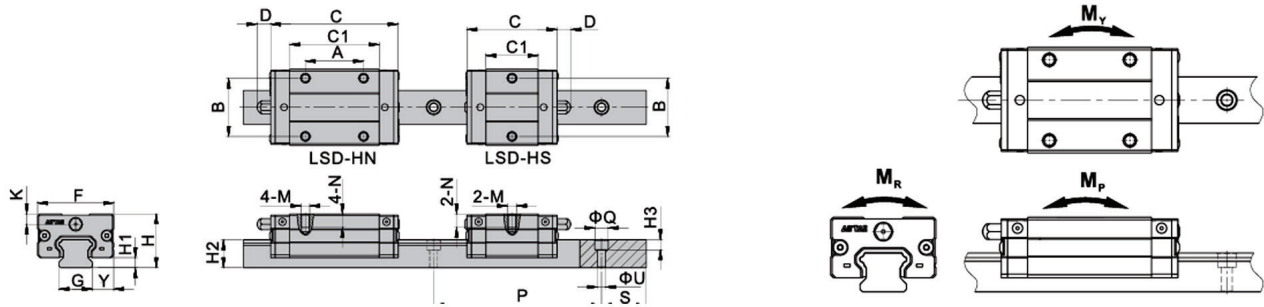
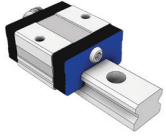


LSH25RLX220-S20-H-D



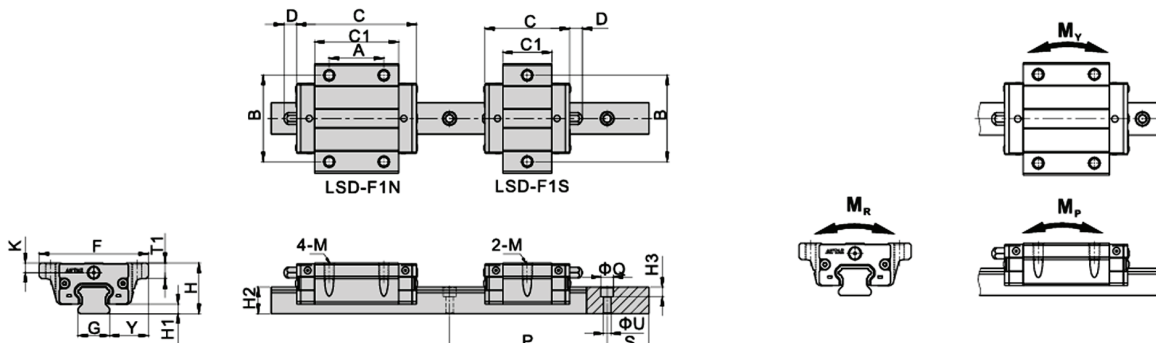
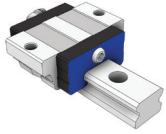
1	Rail Width	15: 15MM 20: 20MM 25: 23MM 30: 28MM 35: 34MM 45: 45MM
2	Rail Length	Specify Length in MM (Ex: 220: 220MM)
3	Accuracy	N: Normal H: High

“H” Type - Square Block Dimensions



Model/Item	External Dimension (mm)					Block Dimension (mm)							Rail Dimension (mm)							
	H	H1	F	Y	C	C1	A	B	K	D	M	N	G	H2	P	S	ΦQ[Note]	ΦU	H3	
LSD15HS	24	4.5	34	9.5	40.5	23.5	-	26	4.6	6	M4X0.7	6	15	12.5	60	20	8(6)	4.8(3.5)	5.3(4.5)	
LSD15HN	24	4.5	34	9.5	57	40	26	26	4.6	6	M4X0.7	6	15	12.5	60	20	8(6)	4.8(3.5)	5.3(4.5)	
LSD20HS	28	6	42	11	46	29	-	32	6.2	13	M5X0.8	7	20	15.5	60	20	9.5	5.8	8.5	
LSD20HN	28	6	42	11	65	48	32	32	6.2	13	M5X0.8	7	20	15.5	60	20	9.5	5.8	8.5	
LSD25HS	33	7	48	12.5	59	36.5	-	35	7.2	13	M6X1.0	9	23	18	60	20	11.2	7	9	
LSD25HN	33	7	48	12.5	83	60.5	35	35	7.2	13	M6X1.0	9	23	18	60	20	11.2	7	9	
LSD30HS	42	9	60	16	68.5	41.5	-	40	7.2	13	M8X1.25	12	28	23	80	20	11.2(14.2)	7(9)	9(12)	
LSD30HN	42	9	60	16	97	70	40	40	7.2	13	M8X1.25	12	28	23	80	20	11.2(14.2)	7(9)	9(12)	
LSD35HS	48	11	70	18	73.5	46.5	-	50	8.5	13	M8X1.25	12	34	27.5	80	20	14.2	9	12	
LSD35HN	48	11	70	18	106.5	79.5	50	50	8.5	13	M8X1.25	12	34	27.5	80	20	14.2	9	12	
Model/Item	Mounting Screw	Dynamic Load Rating(kN)		Static Load Rating(kN)		Static Rated Moment (kN.m)			Weight											
		C	C ₀	M _r	M _p	M _y	Block(kg)	Rail(kg/m)												
LSD15HS	M4(M3)	5.0	9.5	0.07	0.04	0.04	0.09	1.23												
LSD15HN	M4(M3)	8.9	16.5	0.12	0.10	0.10	0.15	1.23												
LSD20HS	M5	7.2	13.5	0.13	0.06	0.06	0.14	2.11												
LSD20HN	M5	12.1	22.4	0.20	0.15	0.15	0.23	2.11												
LSD25HS	M6	11.5	20.8	0.22	0.11	0.11	0.26	2.76												
LSD25HN	M6	19.3	34.7	0.36	0.31	0.31	0.42	2.76												
LSD30HS	M6(M8)	19.8	30.0	0.38	0.20	0.20	0.44	4.60												
LSD30HN	M6(M8)	28.3	50.3	0.65	0.53	0.53	0.75	4.60												
LSD35HS	M8	29.2	40.7	0.66	0.33	0.33	0.74	6.27												
LSD35HN	M8	42.7	70.2	1.02	0.72	0.72	1.17	6.27												

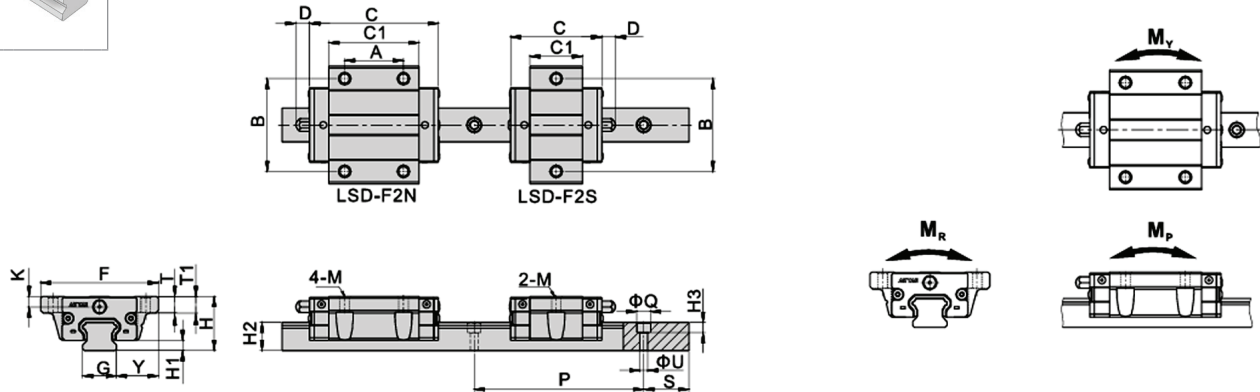
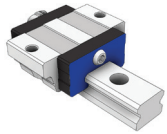
"F1" Type - Top Mount Flange Block Dimensions



Model/Item	External Dimension (mm)							Block Dimension (mm)							Rail Dimension (mm)						
	H	H1	F	Y	C			C1	A	B	K	D	M	T1	G	H2	P	S	ΦQ[Note]	ΦU	H3
					Standard (Blank)	Double oil scrapers(DD)	Oil scraper+Metal scraper(ZZ)														
LSD15F1S	24	4.5	52	18.5	40.5	47.5	45	23.5	-	41	4.6	6	M5X0.8	7.5	15	12.5	60	20	8(6)	4.8(3.5)	5.3(4.5)
LSD15F1N	24	4.5	52	18.5	57	64	61.5	40	26	41	4.6	6	M5X0.8	7.5	15	12.5	60	20	8(6)	4.8(3.5)	5.3(4.5)
LSD20F1S	28	6	59	19.5	46	53	50.5	29	-	49	6.2	13	M6X1.0	9.5	20	15.5	60	20	9.5	5.8	8.5
LSD20F1N	28	6	59	19.5	65	72	69.5	48	32	49	6.2	13	M6X1.0	9.5	20	15.5	60	20	9.5	5.8	8.5
LSD25F1S	33	7	73	25	59	66	63.5	36.5	-	60	7.2	13	M8X1.25	10.5	23	18	60	20	11.2	7	9
LSD25F1N	33	7	73	25	83	90	87.5	60.5	35	60	7.2	13	M8X1.25	10.5	23	18	60	20	11.2	7	9
LSD30F1S	42	9	90	31	68.5	76.5	73.5	41.5	-	72	7.2	13	M10X1.5	10.5	28	23	80	20	11.2(14.2)	7(9)	9(12)
LSD30F1N	42	9	90	31	97	105	102	70	40	72	7.2	13	M10X1.5	10.5	28	23	80	20	11.2(14.2)	7(9)	9(12)
LSD35F1S	48	11	100	33	73.5	81.5	78.5	46.5	-	82	8.5	13	M10X1.5	13.5	34	27.5	80	20	14.2	9	12
LSD35F1N	48	11	100	33	106.5	114.5	111.5	79.5	50	82	8.5	13	M10X1.5	13.5	34	27.5	80	20	14.2	9	12

Model/Item	Mounting Screw	Dynamic Load Rating(kN)	Static Load Rating(kN)	Static Rated Moment (kN.m)			Weight	
		C	C _o	M _R	M _p	M _y	Block(kg)	Rail(kg/m)
LSD15F1S	M4(M3)	5.0	9.5	0.07	0.04	0.04	0.12	1.23
LSD15F1N	M4(M3)	8.9	16.5	0.12	0.10	0.10	0.21	1.23
LSD20F1S	M5	7.2	13.5	0.13	0.06	0.06	0.18	2.11
LSD20F1N	M5	12.1	22.4	0.20	0.15	0.15	0.31	2.11
LSD25F1S	M6	11.5	20.8	0.22	0.11	0.11	0.36	2.76
LSD25F1N	M6	19.3	34.7	0.36	0.31	0.31	0.60	2.76
LSD30F1S	M6(M8)	19.8	30.0	0.38	0.20	0.20	0.61	4.60
LSD30F1N	M6(M8)	28.3	50.3	0.65	0.53	0.53	1.03	4.60
LSD35F1S	M8	29.2	40.7	0.66	0.33	0.33	0.93	6.27
LSD35F1N	M8	42.7	70.2	1.02	0.72	0.72	1.50	6.27

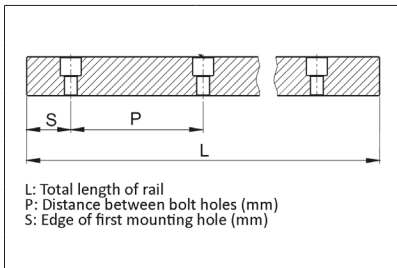
“F3” Type - Top and Bottom Mount & “F2” Type - Bottom Flange Block Dimensions



Model/Item	External Dimension (mm)							Block Dimension (mm)							Rail Dimension (mm)								
	H	H1	F	Y	C			C1	A	B	K	D	M		T	T1	G	H2	P	S	ΦQ [Note]	ΦU [Note]	H3 [Note]
					Standard (Blank)	Double oil scrapers (DD)	Oil scraper +Metal craper (ZZ)						Bottom-Mount	Top or Bottom-Mount									
LSD15F2(F3)S	24	4.5	52	18.5	40.5	47.5	45	23.5	-	41	4.6	6	Φ4.5	M5X0.8	7	7.5	15	12.5	60	20	8(6)	4.8(3.5)	5.3(4.5)
LSD15F2(F3)N	24	4.5	52	18.5	57	64	61.5	40	26	41	4.6	6	Φ4.5	M5X0.8	7	7.5	15	12.5	60	20	8(6)	4.8(3.5)	5.3(4.5)
LSD20F2(F3)S	28	6	59	19.5	46	53	50.5	29	-	49	6.2	13	Φ5.7	M6X1.0	9	9.5	20	15.5	60	20	9.5	5.8	8.5
LSD20F2(F3)N	28	6	59	19.5	65	72	69.5	48	32	49	6.2	13	Φ5.7	M6X1.0	9	9.5	20	15.5	60	20	9.5	5.8	8.5
LSD25F2(F3)S	33	7	73	25	59	66	63.5	36.5	-	60	7.2	13	Φ6.8	M8X1.25	10	10.5	23	18	60	20	11.2	7	9
LSD25F2(F3)N	33	7	73	25	83	90	87.5	60.5	35	60	7.2	13	Φ6.8	M8X1.25	10	10.5	23	18	60	20	11.2	7	9
LSD30F2(F3)S	42	9	90	31	68.5	76.5	79.5	41.5	-	72	7.2	13	Φ9	M10X1.5	10	10.5	28	23	80	20	11.2(14.2)	7(9)	9(12)
LSD30F2(F3)N	42	9	90	31	97	105	102	70	40	72	7.2	13	Φ9	M10X1.5	10	10.5	28	23	80	20	11.2(14.2)	7(9)	9(12)
LSD35F2(F3)S	48	11	100	33	73.5	81.5	78.5	46.5	-	82	8.5	13	Φ9	M10X1.5	13	13.5	34	27.5	80	20	14.2	9	12
LSD35F2(F3)N	48	11	100	33	106.5	114.5	111.5	79.5	50	82	8.5	13	Φ9	M10X1.5	13	13.5	34	27.5	80	20	14.2	9	12

Model/Item	Mounting Screw	Dynamic Load Rating(kN)	Static Load Rating(kN)	Static Rated Moment (kN.m)			Weight	
				C _o	M _R	M _p	M _v	Block(kg)
LSD15F2(F3)S	M4(M3)	5.0	9.5	0.07	0.04	0.04	0.12	1.23
LSD15F2(F3)N	M4(M3)	8.9	16.5	0.12	0.10	0.10	0.21	1.23
LSD20F2(F3)S	M5	7.2	13.5	0.13	0.06	0.06	0.18	2.11
LSD20F2(F3)N	M5	12.1	22.4	0.20	0.15	0.15	0.31	2.11
LSD25F2(F3)S	M6	11.5	20.8	0.22	0.11	0.11	0.36	2.76
LSD25F2(F3)N	M6	19.3	34.7	0.36	0.31	0.31	0.60	2.76
LSD30F2(F3)S	M6(M8)	19.8	30.0	0.38	0.20	0.20	0.61	4.60
LSD30F2(F3)N	M6(M8)	28.3	50.3	0.65	0.53	0.53	1.03	4.60
LSD35F2(F3)S	M8	29.2	40.7	0.66	0.33	0.33	0.93	6.27
LSD35F2(F3)N	M8	42.7	70.2	1.02	0.72	0.72	1.50	6.27

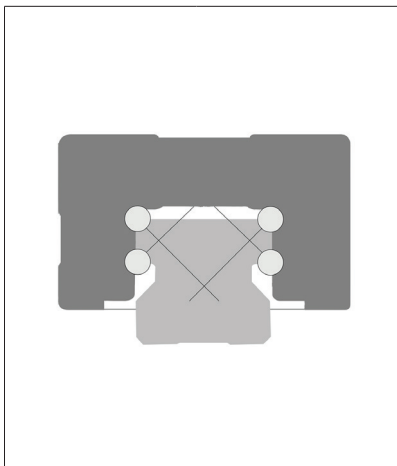
Rail Specifications



Model	LSD15	LSD20	LSD25	LSD30	LSD35
Pitch (P)	60	60	60	80	80
Standard Edge Pitch (S)	20	20	20	20	20
Max Length of Rail for Standard Edge	4000	4000	4000	3960	3960
Max Length (Lmax)	4000	4000	4000	4000	4000

Dimensions Noted in MM

Product Features



1. Self-Adjusting Ability

The X-shaped (45°-45°) groove design makes the rail self-aligning. Even if small variations exist on the mounting surface, the design of the LSD & LSH series can help absorb the misalignment and maintain high precision along with smooth and stable linear motion.

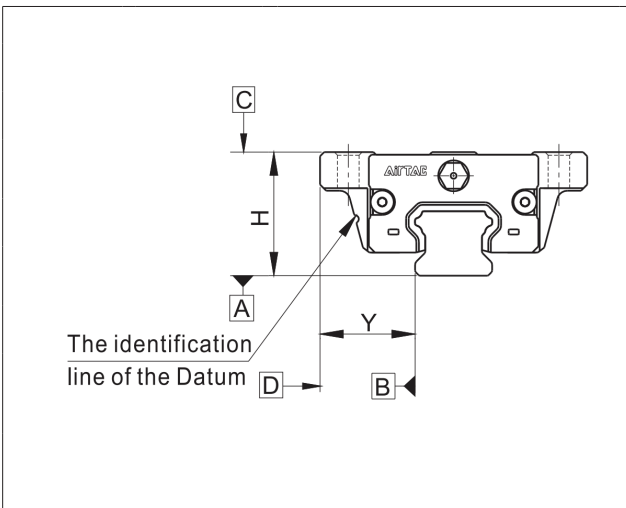
2. Innovative Design: Low Profile, High Rigidity, Equal Load in Four Directions

The design of the rail profile and four rows of steel ball bearings allows the bearing block to achieve the ideal two-point contact. It can withstand the action and reaction force from both radial and lateral directions. In addition, a pre-load can be applied to increase rigidity if necessary. The reduced height and length of the slide block and height of the rail help to achieve a compact bearing rail solution.

3. Interchangeable

The LSD & LSH Series are manufactured with strict tolerances and dimensional accuracy. This precision paired with the ball retainer allows for interchangeability when within the same spec.

Accuracy & Parallelism

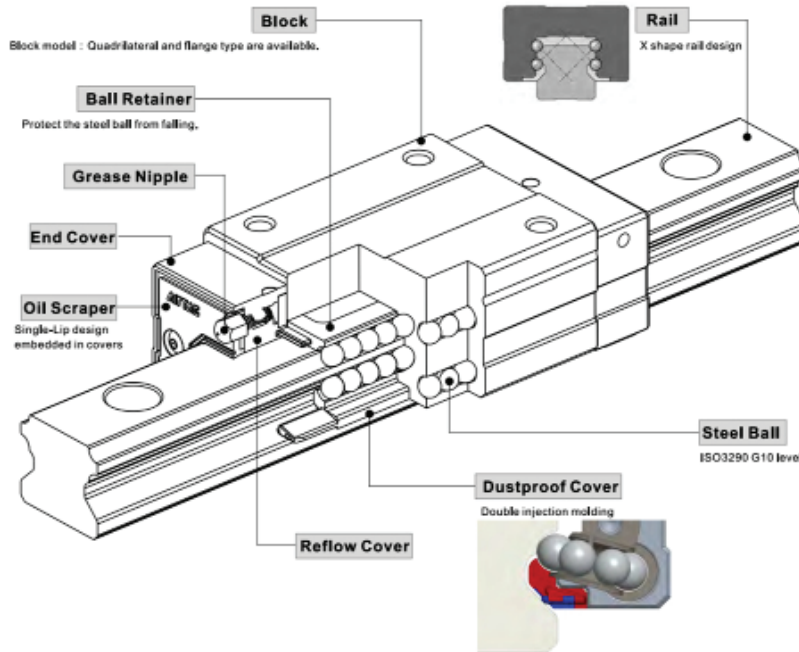


Accuracy	Accuracy Standards					
	N: Normal		H: High		P: Precision	
Model	15/20	25/30/35	15/20	25/30/35	15/20	25/30/35
Tolerance of Height H	+/- 0.1		+/- 0.3	+/- 0.4	+/- 0.015	+/- 0.02
Variation of height r H	0.02	0.025	0.01	0.015	0.006	0.007
Tolerance of width Y	+/- 0.1		+/- 0.3	+/- 0.4	+/- 0.015	+/- 0.02
Variation of width r Y	0.02	0.03	0.01	0.015	0.006	0.007
Parallelism of C-surface relative to A-surface	Parallelism of raceway (Refer to Table 1)					
Parallelism of D-surface relative to B-surface	Parallelism of raceway (Refer to Table 1)					

Accuracy Rail Length (MM)	100 & Under	100-200	200-300	300-500	500-700	700-900	900-1100	1100-1500	1500-1900	1900-2500	2500-3100	3100-3600	3600-4000	
Parallelism of the Raceway (µm)	Normal Grade	12	14	15	17	20	22	24	26	28	31	33	36	37
	High Grade	7	9	10	12	13	15	16	18	20	22	25	27	28

Construction Features

The LSD & LSH Series Linear Bearings & Rail Offer well Engineered Construction Which Allow for Long Term Functionality and Easy Maintenance



Specifications

- Precision Ground
- Rail Material: JIS S55C
- Case Hardness : 58-61.5
- Case Depth: 0.3mm
- Block Material: JIS SCM420H
- Ball Bearing: ISO 3290 G10Grade
- Ball Bearing Tolerance : 0.2 μm

Online Rail Life Expectancy Calculator Available - Go to the rail section of www.ThePneumaticStore.com for more Info



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LSH theoretical lifespan calculation program (beta)

1. Model selection:

2. Installation diagram:

2. Installation selection:

(1) Installation type:

(2) Num of rail and block:

