

A-1 -5.5 LW Series (Wide rail type)

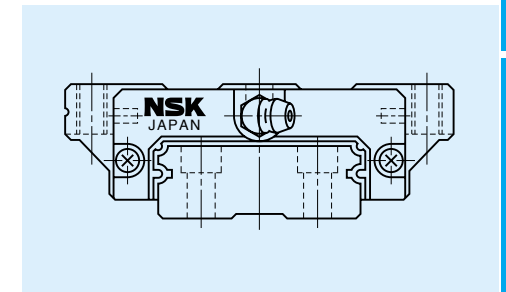
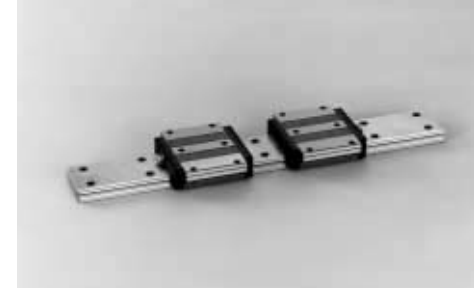


Fig. I -5•17 LW Series

(1) Ideal for use of single rail

Thanks to the wide rail, rigidity and load carrying capacity are high against moment load from rolling direction. This makes LW linear guides ideal in use of single rail as the guide way bearing.

(2) Large load carrying capacity against vertical direction

Contact angle is set at 50 degrees. This enhances load carrying capacity from vertical direction as well as rigidity.

(3) High resistance to impact load

Same as the LH and LS series, the offset gothic-arch grooves support a large load, such as an impact, by four rows.

(4) High accuracy

Fixing master rollers is easy thanks to the gothic-arch groove. This makes easy and accurate measuring of ball grooves.

(5) Easy to handle, and designed with safety in mind.

Balls are retained in the retainer and do not fall out when a ball slide is withdrawn from the rail.

(6) Interchangeable series is available (short delivery time)

The series enables random matching of rails and ball slides (interchangeability) for prompt delivery.

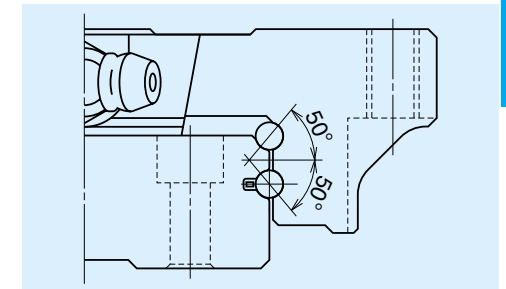
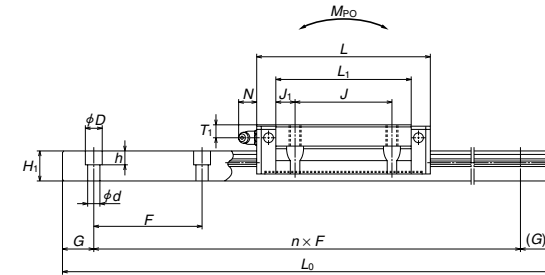
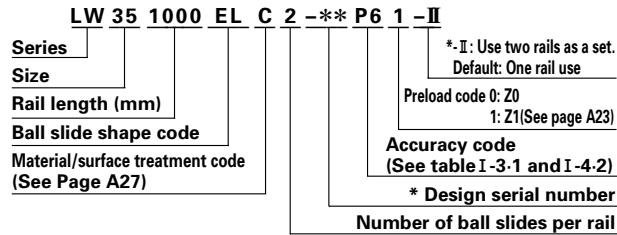


Fig. I -5•18 Balls in contact



Dimensions of LW Series (Preloaded assembly)

LW-EL (Wide rail type)



* Please note that we assign the design number, and omit the last code (II) that indicates a use of two rails as a set to finalize the reference number as product identification.

Table. I-5-23

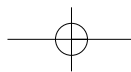
Model No.	Assembly			Ball slide														Grease fitting		
	Height H	E	W ₂	Width W	Length L	Mounting hole						B ₁	L ₁	J ₁	K	T	Hole size	T ₁	N	
						B	J	M × pitch × l	l ₂	Q ₂	B ₂									B ₃
LW17EL	17	2.5	13.5	60	51.4	53	26	M4×0.7×6	3.2	3.3	3.5	35	4.5	14.5	6	φ3	4	3		
LW21EL	21	3	15.5	68	58.8	60	29	M5×0.8×8	3.7	4.4	4	41	6	18	8	M6×0.75	4.5	11		
LW27EL	27	4	19	80	74	70	40	M6×1×10	6	5.3	5	56	8	23	10	M6×0.75	6	11		
LW35EL	35	4	25.5	120	108	107	60	M8×1.25×14	9	6.8	6.5	84	12	31	14	M6×0.75	8	11		
LW50EL	50	4.5	36	162	140.6	144	80	M10×1.5×18	14	8.6	9	108	14	45.5	18	Rc1/8	14	14		

Unit: mm

Rail		Basic load rating					Ball dia.	Weight							
Width W ₁	Height H ₁	Pitch B ₂	Mounting bolt hole d × D × h	G (recomm ended)	Max. length L _{0max}	Dynamic C (N)	Static C ₀	Static moment			D _w	Ball slide (kg)	Rail (kg/m)		
								M _{RO}	M _{PO}	M _{VO}					
33	8.7	18	40	4.5×7.5×5.3	7.5	15	1000	5600	11300	135	44	37	2.381	0.2	2.1
37	10.5	22	50	4.5×7.5×5.3	7.5	15	1600	6450	13900	185	66	55	2.381	0.3	2.9
42	15	24	60	4.5×7.5×5.3	9	20	2000	12800	26900	400	171	143	3.175	0.5	4.7
69	19	40	80	7×11×9	14.5	20	2400	33000	66500	1690	645	545	4.762	1.5	9.6
90	24	60	80	9×14×12	15	20	3000	61500	117000	3900	1530	1280	6.350	4.0	15.8

The basic dynamic load rating is a load that furnishes 50 km rating fatigue life; it is a vertical and constant load to the ball slide mounting surface.

When converting the basic dynamic load rating C to the dynamic load rating C₁₀₀ for 100 km rating fatigue life, divide the C by 1.26



LW Series (interchangeable parts)

NSK

Standard stock

A 80

Dimensions of LW Series (Interchangeable ball slide)

LAW-EL (Wide rail type)

LA W 17 EL Z - K

Interchangeable ball slide code
 Series
 Size
 Ball slide shape code (See Table I-2*2)

Option code
 -K: Equipped with standard NSK K1
 Preload code
 Default: Fine clearance
 S: Slight preload

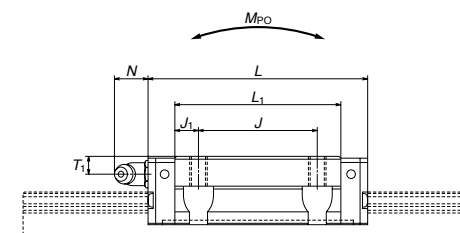
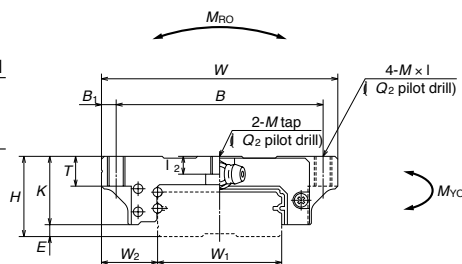


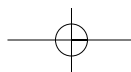
Table. I-5*24

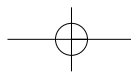
Model No.	Assembly			Ball slide												
	Height	E	W ₂	Width	Length	Mounting tap hole						B ₁	L ₁	J ₁	K	T
						B	J	M × pitch × l	I ₂	Q ₂	B					
H	E	W ₂	W	L	B	J	M × pitch × l	I ₂	Q ₂	B ₁	L ₁	J ₁	K	T		
LAW17EL	17	2.5	13.5	60	51.4	53	26	M4×0.7×6	3.2	3.3	3.5	35	4.5	14.5	6	
LAW21EL	21	3	15.5	68	58.8	60	29	M5×0.8×8	3.7	4.4	4	41	6	18	8	
LAW27EL	27	4	19	80	74	70	40	M6×1×10	6	5.3	5	56	8	23	10	
LAW35EL	35	4	25.5	120	108	107	60	M8×1.25×14	9	6.8	6.5	84	12	31	14	
LAW50EL	50	4.5	36	162	140.6	144	80	M10×1.5×18	14	8.6	9	108	14	45.5	18	

Unit: mm

Grease fitting			Basic load rating					Ball dia.	Weight
			Dynamic C	Static C ₀	Static moment				
Hole size	T ₁	N			(N)	(N)	M _{RO}	M _{PO}	M _{VO}
φ 3	4	3	5600	11300	135	44	37	2.381	0.2
M6×0.75	4.5	11	6450	13900	185	66	55	2.381	0.3
M6×0.75	6	11	12800	26900	400	171	143	3.175	0.5
M6×0.75	8	11	33000	66500	1690	645	545	4.762	1.5
Rc1/8	14	14	61500	117000	3900	1530	1280	6.350	4.0

The basic dynamic load rating is a load that furnishes 50 km rating fatigue life; it is a vertical and constant load to the ball slide mounting surface.
 When converting the basic dynamic load rating C to the dynamic load rating C₁₀₀ for 100 km rating fatigue life, divide the C by 1.26





LW Series (interchangeable parts)

Dimensions of LW Series (Interchangeable ball slide)



Example of reference number

Regular rail (non-butting rail)

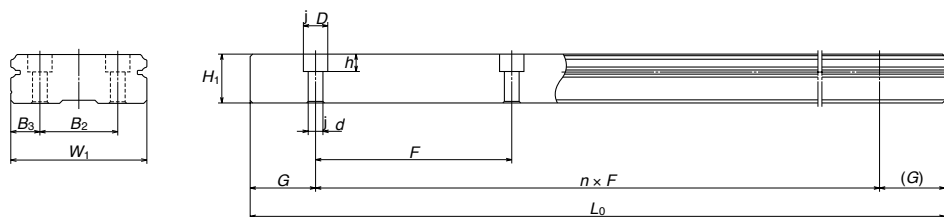
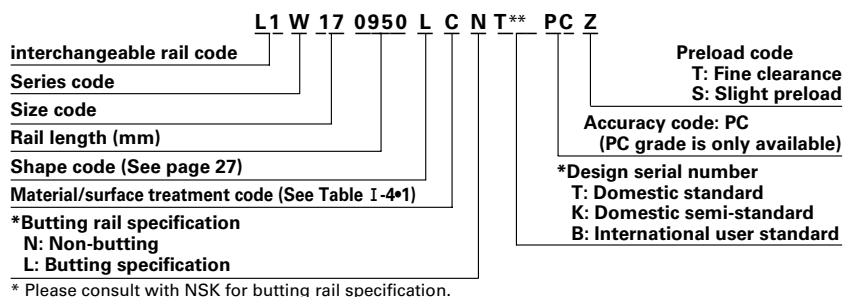


Table I-5*25

Unit: mm

Model No.	Rail								
	Width W_1	Height H_1	B_2	Pitch F	Mounting bolt hole $d \times D \times h$	B_3	G (recommended)	Max. length L_{0max}	Weight (Kg / m)
L1W17	33	8.7	18	40	4.5×7.5×5.3	7.5	15	1000	2.1
L1W21	37	10.5	22	50	4.5×7.5×5.3	7.5	15	1600	2.9
L1W27	42	15	24	60	4.5×7.5×5.3	9	20	2000	4.7
L1W35	69	19	40	80	7×11×9	14.5	20	2400	9.6
L1W50	90	24	60	80	9×14×12	15	20	3000	15.8



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A-I-5.6 LE Series (Miniature wide rail type)

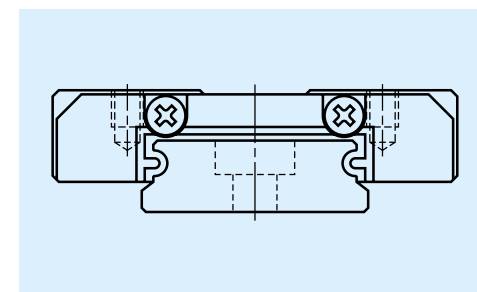
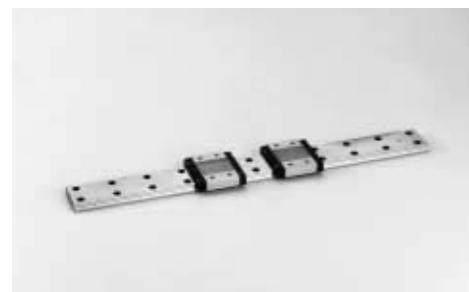


Table I-5*19 LE Series

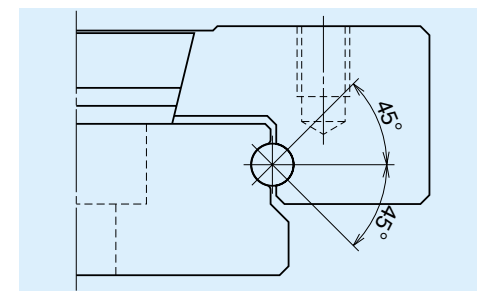


Table I-5*20 Balls in contact

(1) Ideal for use of single rail

LE Series linear guides are miniature, wide rail type. Thanks to the wide rail, load carrying capacity is high against moment load from rolling direction.

(2) Equal load carrying capacity in vertical and lateral directions

Contact angle is set at 45 degrees, equally dispersing the load from vertical and lateral directions. This also provides equal rigidity in the two directions.

(3) Guides are super-thin.

Super-thin guides owe their design to the single ball groove on right and left sides (gothic-arch).

(4) Highly accurate

Fixing the master rollers is easy thanks to the gothic-arc groove. Groove measuring is accurate and easy.

(5) Stainless steel is standard.

Rails and ball slides are made of martensitic stainless steel.

(6) Ball retainer is available in some series.

Some series come with a ball retainer (ball slide model: AR and TR). Balls are retained in the retainer and do not fall out when a ball slide is withdrawn from the rail (interchangeable ball slides come with a ball retainer).

(7) Interchangeable series is available (short delivery time).

The series enables random matching of rails and ball slides (interchangeability) for prompt delivery.

