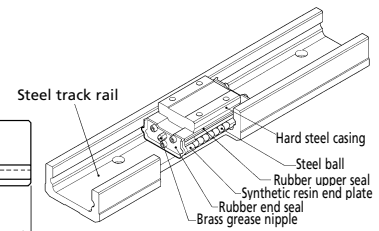
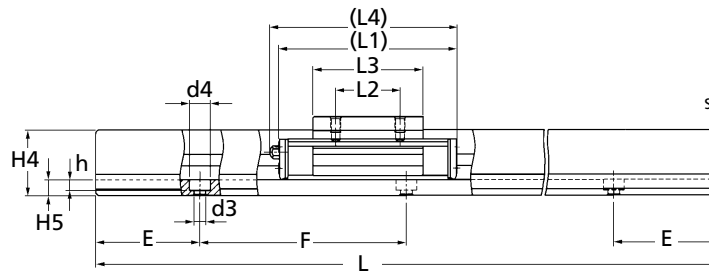
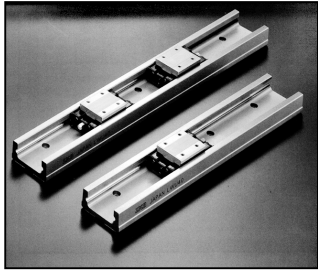


LWU

LINEAR MOTION

Precision Linear Slides (Structural)

U-Series (Non Ball Retained 2 Row 4 Ball Point Contact)



Part Number	L Track Rail Length	No. of Holes	Max. Length	Carriage (Side Unit)	Price Each	
LWU40-120	120	2	720	-	£65.40	
LWU40-180	180	3		-	£98.15	
LWU40-240	240	4		-	£130.85	
LWU40-300	300	5		-	£163.52	
LWU40-420	420	7		-	£228.98	
LWU40-480	480	8		-	£261.68	
LWU40-540	540	9		-	£294.42	
LWU40-600	600	10		-	£327.06	
LWU40-660	660	11		-	£359.79	
LWU40-720	720	12		-	£392.52	
LWU40-C	Carriage				Standard Slide	£97.36
LWU40-CT1	Carriage				Standard Slide *	£103.20
LWU50-160	160	2	800	-	£99.71	
LWU50-240	240	3		-	£149.49	
LWU50-320	320	4		-	£199.37	
LWU50-400	400	5		-	£249.19	
LWU50-480	480	6		-	£299.07	
LWU50-560	560	7		-	£348.90	
LWU50-640	640	8		-	£398.70	
LWU50-720	720	9		-	£448.57	
LWU50-800	800	10		-	£498.37	
LWU50-C	Carriage				Standard Slide	£112.91
LWU50-CT1	Carriage			Standard Slide *	£118.74	
LWU60-200	200	2	1000	-	£210.24	
LWU60-300	300	3		-	£315.37	
LWU60-400	400	4		-	£420.53	
LWU60-500	500	5		-	£525.65	
LWU60-600	600	6		-	£630.74	
LWU60-700	700	7		-	£735.92	
LWU60-800	800	8		-	£841.07	
LWU60-900	900	9		-	£946.17	
LWU60-1000	1000	10		-	£1051.33	
LWU60-C	Carriage				Standard Slide	£132.37
LWU60-CT1	Carriage			Standard Slide *	£138.21	
LWU86-200	200	2	1200	-	£P.O.A	
LWU86-300	300	3		-	£373.75	
LWU86-400	400	4		-	£498.37	
LWU86-500	500	5		-	£622.98	
LWU86-600	600	6		-	£747.56	
LWU86-700	700	7		-	£872.17	
LWU86-800	800	8		-	£996.78	
LWU86-900	900	9		-	£1121.41	
LWU86-1000	1000	10		-	£1245.98	
LWU86-1100	1100	11		-	£1370.59	
LWU86-1200	1200	12	-	£1495.21		
LWU86-C	Carriage			Standard Slide	£167.44	
LWU86-CT1	Carriage			Standard Slide *	£173.30	

A minimum of 1 carriage per rail must be ordered

Material

Carbon Steel Hardened.

Performance

Max. Speed: Size 40 & 50 - 3m/sec. Size 60 - 2m/sec.

Size 86 - 1.66mm/sec.

Max. Temp.: +100°C (Constant), +120° (Intermittent)

Other Info.

Characteristics: The steel balls will drop out if the slide unit is separated from the track rail.

Lubrication: Every 6 months under general use. Every 3 months for daily use. Use a lithium-soap based grease. (Oil can be used).

When ordering track rail, please order carriages required (1, 2, 3, etc.) per rail. For example: 1 x LWU40-240 rail and 2 x LWU40-C carriages = **LWU40-240C2**, Carriages and tracks are produced to suit each individual set.

* Light Pre-load (0.02 C)

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LINEAR MOTION

LWU

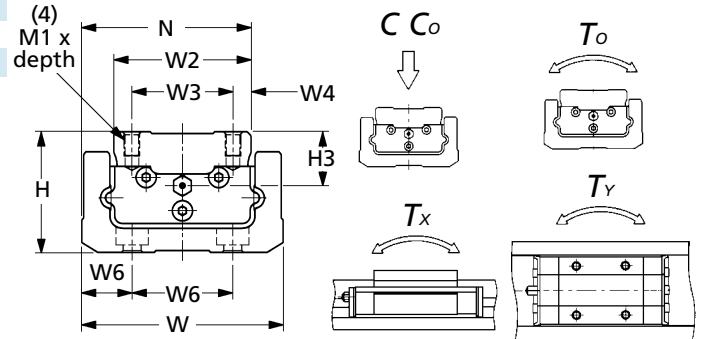
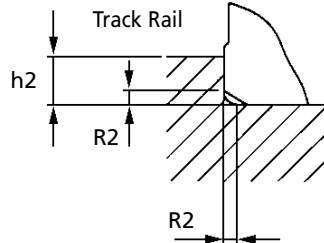
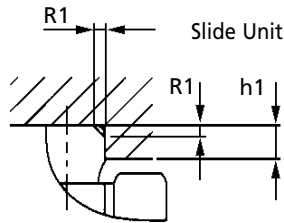
Precision Linear Slides (Structural)

U-Series (Non Ball Retained 2 Row 4 Ball Point Contact)

Model Number	Slide Unit Shoulder Height h_1	Slide Unit Corner Radius R_1 (max)	Track Rail Shoulder Height h_2	Track Rail Corner Radius R_2 (max)
LWU 40	3	0.5	5	1
LWU 50	3	0.5	7	2
LWU 60	3	0.5	9	2
LWU 86	4	0.5	14	2

* Figures shown in T_0 column and upper figures of all T_x and T_y of each model number apply to one slide unit as illustrated right.

The values shown below the single case figures for T_x and T_y are for two slide units in close contact.



	Part Number			
	LWU40	LWU50	LWU60	LWU86
Weight kg				
Carriage (Slide Unit)	0.12	0.27	0.40	1.32
Track Rail per 100mm	2.64	4.05	6.69	14.10
Dimensions of Assembly mm				
H ± 0.10	24.00	30.00	35.00	48.00
N ± 0.10	33.00	42.00	49.00	71.00
Dimensions of Slide Unit mm				
W2	26.00	34.00	38.00	56.00
W3	18.00	25.00	28.00	46.00
W4	4.00	4.50	5.00	5.00
L1	55.00	70.00	83.00	130.00
L2	18.00	25.00	28.00	46.00
L3	31.50	42.80	52.40	93.00
L4	59.00	73.00	90.00	136.00
M1 x Depth	M3 x 5	M4 x 6	M5 x 8	M6 x 12
H3	10.50	13.50	14.50	25.50
Dimensions of Track Rail mm				
W	40.00	50.00	60.00	86.00
H4	19.00	25.00	30.00	42.00
H5	5.00	6.00	8.00	13.00
W5	18.00	25.00	28.00	46.00
W6	11.00	12.50	16.00	20.00
d3	3.40	4.50	5.50	7.00
d4	6.50	8.00	9.50	11.00
h	3.10	4.10	5.40	7.00
E	30.00	40.00	50.00	50.00
F	60.00	80.00	100.00	100.00
Basic Dynamic Load Rating				
C N	7570.00	12000.00	16600.00	35900.00
Basic Static Load Rating				
C_0 N	10100.00	16400.00	22400.00	53400.00
Static Rated Moment				
T_0 N•m	139.00	291.00	441.00	1520.00
T_x T_y N•m (1 Slide)	54.90	118.00	187.00	792.00
T_x T_y N•m (2 Slides)	364.00	738.00	1190.00	4270.00

Performance

Dim Variation Between Carriage Slides on Same Rail: $H = 0.05$, $N = 0.05$

Parallelism in Operation Over: 500mm = 0.012mm, 1000mm = 0.018mm (A to C and D to B). A higher tolerance grade is available. P.O.A.

Load Direction: If upward or downward, as table. If lateral x 0.84.

Dynamic Rating: From a group of the same slide units, 90% achieve a distance of 50×10^3 metres.

For temperatures over 100°C we can supply special high temperature grease (200°C - supplied in syringe) **CG2-SY : £31.80**

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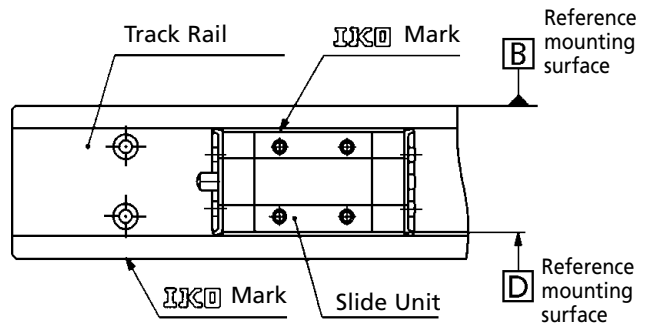
LINEAR MOTION

Precision Linear Slides (Structural)

U-Series (Non Ball Retained 2 Row 4 Ball Point Contact)

LOAD RATING

Basic dynamic load rating (C) is defined as a constant load both in direction and magnitude under which a group of identical Linear Way U are individually operated and 90% of the units in the group can travel over the distance of $50 \times 10^3 \text{m}$ without material damage due to rolling contact fatigue. The basic dynamic load rating of Linear Way U is equal in upward, downward and lateral directions.



Basic static load rating (Co) is defined as a static load that gives a prescribed contact stress at the centre of contact area between rolling elements and raceways receiving the maximum load.

Static rated moment (To, Tx, Ty) is defined as a static moment load that gives a prescribed contact stress at the centre of contact area between rolling elements and raceways receiving the maximum load when a moment is applied. It is the maximum allowable moment under which a rolling element rolls normally. It is generally used in combination with a static safety factor.

LUBRICATION

A quality lithium-soap base grease containing extreme pressure additives (Shell Albania EP Grease 2) is supplied in Linear Way U on delivery. However, the quality of any grease will gradually deteriorate as operating time passes. Therefore, periodic relubrication is necessary. It is generally recommended that the grease is relubricated every six months under general usage and every three months for the daily operation consisting of many cycles and long strokes. A grease nipple is attached to the slide unit. Grease injector nozzles matching each of these are also available.

MOUNTING

Assembly of a slide unit and track rail

The steel balls of IKO Linear Way U will drop off, if the slide unit is separated from the track rail. Therefore, do not separate the slide unit from the track rail. If it is needed to separate it for handling etc. please consult our technical department.

Reference mounting surface

The reference mounting surfaces of the slide unit and track rail of IKO Linear Way U are the side surfaces opposite to the IKO mark. See diagram above.

Corner radius and shoulder height of the reference mounting surface

It is recommended to make a relieved fillet at the corner of the mating reference mounting surface of the machine or equipment, on which LWU is assembled. A round corner can also be used. The table on the previous page shows recommended values for shoulder height and corner radius of the mating reference mounting surface.

Multiple slide units mounted in close distance

When using multiple slide units in close distance to each other, the actual load may be greater than the calculated load depending on the accuracy of the mounting surface and the reference mounting surface of the machine. It is suggested in such cases to assume a greater actual load than the calculated load.

Tightening torque of fastening screws

The table right shows the tightening torque for mounting IKO Linear Way U on a steel part in general application. The torque values 1.2 to 1.5 times higher than the ones in the table are recommended, when subjected to large vibration, impact, fluctuating load or moment load. If the mating part is made of cast iron or aluminium, reduce the tightening torque considering the strength properties of the material.

Bolt Size	Tightening Torque N·m
	Carbon Steel made bolt (strength division 12.9)
M3 x 0.5	1.7
M4 x 0.7	4.0
M5 x 0.8	7.9
M6 x 1.0	13.3

Operating temperature

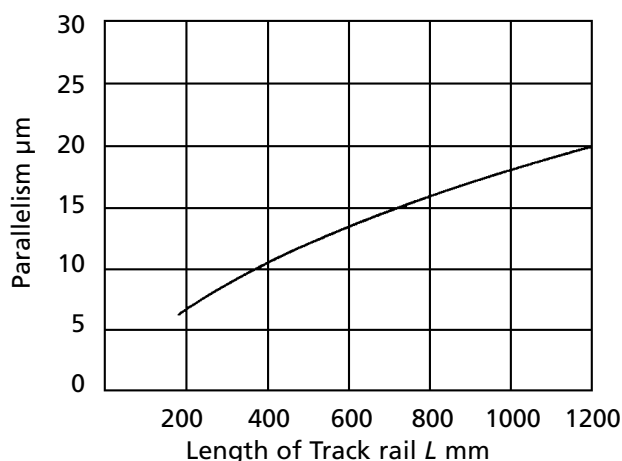
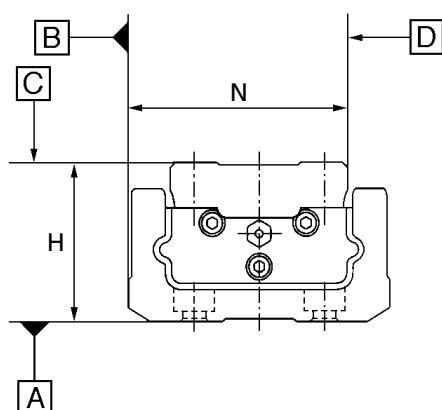
The maximum operating temperature is 120°C and a continuous operation is possible at temperatures up to 100°C. If the temperature in operation is higher than 100°C please contact our technical department.

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LINEAR MOTION

Precision Linear Slides (Structural)

U-Series (Non Ball Retained 2 Row 4 Ball Point Contact)

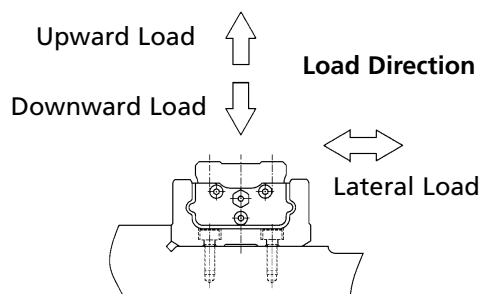


ACCURACY

Accuracies for Linear Ways U series are shown in the above graph and the table below.

Item	Classification (Symbol)	
	Normal (no symbol)	High (H)
Dim. H tolerance	± 0.100	± 0.050
Dim. N tolerance	± 0.100	± 0.050
Dim. variation of H (1)	0.050	0.040
Dim. variation of N (1)	0.050	0.040
Parallelism in operation of C to A	See Preload table below	
Parallelism in operation of D to B	See Preload table below	

Note: (1) The size variation between slide units mounted on the same track rail is indicated.



PRELOAD

Average amount of preload for Linear Way U series are shown below.

Preload Class	Symbol	Preload amount (kgf)	Application
Standard Preload	(no symbol)	0 (1)	<ul style="list-style-type: none"> • Smooth and precise motion
Light Preload	T1	0.02 Co	<ul style="list-style-type: none"> • Minimum vibration • Evenly balanced load. • Smooth and precise motion

Note: (1) Zero or minimal amount of preload. **Remark:** Co means basic static load rating.

LINEAR MOTION