

12 Types of Linear Motion Guide

1. Linear Motion Guide H Series

1) Structure of H Series

WON Linear Motion Guide H Series has a four-row circular arc-groove structure in the raceway groove of a rail or a block and is a 4-direction equal load type which can bear equal load rating for vertical compression load, tensile load, and horizontal load as the rolling element is combined with balls at 45 degree, which reduces friction resistance to ensure smooth motion and long life.

Also if the ball is preloaded, it can enhance the rigidity of Linear Motion guide and minimize Linear Motion guide's displacement for external load.

2) Features of H Series

- a. High quality and very effective in realizing high precision and elimination of labor
- b. High rigidity and high precision which can realize the stable travel for a longtime
- c. Great wear resistance and friction resistance which ensures a long life
- d. Great auto-adjusting and error-absorbing abilities with the face-to-face duplex structure same to D/F combination of ball bearing
- e. Various specifications for easy design
- f. Easy to use due to great compatibility between a rail and a block

2. Spacer Chain Guide H-S Series

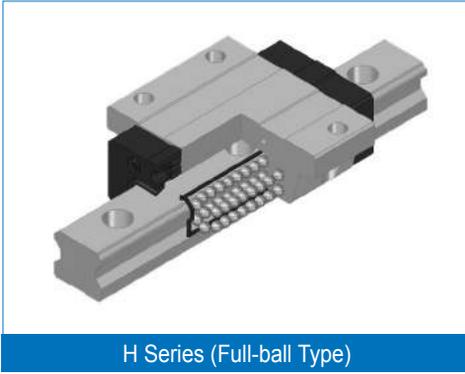
1) Structure of H-S Series

Linear Motion Guide H-S Series has a 4-direction equal load type which is identical to H Series and has an auto-adjusting face-to-face D/F structure. It uses balls as a rolling element and combines a spacer between balls to prevent them from colliding each other during the rolling motion. Therefore it makes less noise and more stable circulating motion than a full-ball type to realize quiet running and the spacer act as the pocket of lubricant to obtain longer life than H Series.

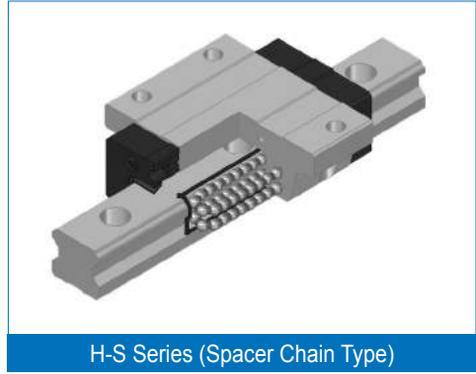
2) Features of H-S Series

- a. As a spacer-incorporated type which improves frictional properties and prevents the collision of balls, it not only allows stable circulating motion and smooth running but also reduces noise. If special lubricating seal is attached to lengthen life, maintenance-free operations can be achieved.
- b. Collision between balls and the loss of oil film are prevented by applying a resin spacer to improve life and generate less particles and dust.
- c. High quality in realizing high precision and high velocity so it could create large effect on elimination of power loss.
- d. High rigidity and high precision which can realize the stable travel for a long time
- e. Great wear resistance and friction resistance which ensures a long life
- f. Great auto-adjusting and error-absorbing abilities with the face-to-face duplex structure same to D/F combination of ball bearing
- g. Various specifications for easy design
- h. Easy to use due to great compatibility between a rail and a block

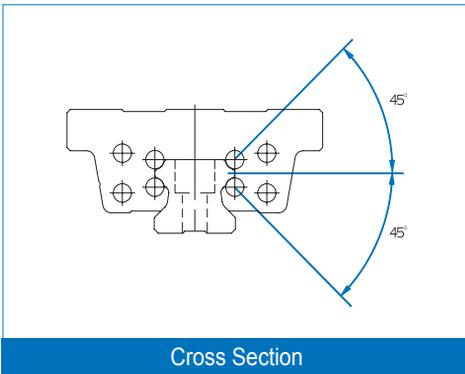
Linear Motion Guide



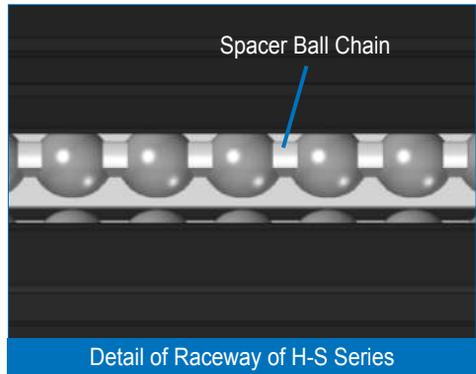
H Series (Full-ball Type)



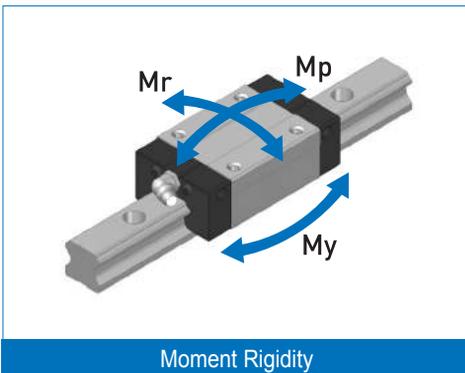
H-S Series (Spacer Chain Type)



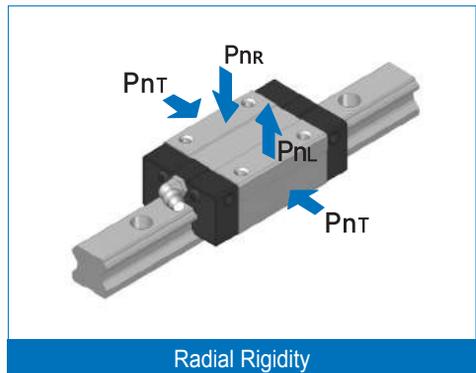
Cross Section



Detail of Raceway of H-S Series

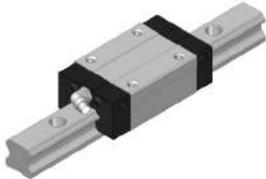
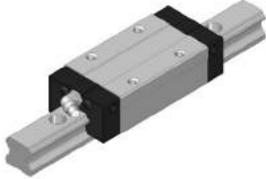


Moment Rigidity

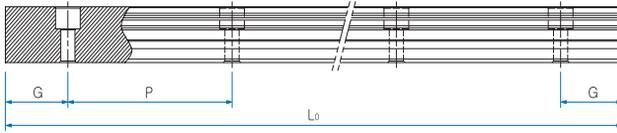


Radial Rigidity

Types and Features

Category	Type	Shape & Features		
Flange type	H-F H-SF		<ul style="list-style-type: none"> - With the tapped flange of a block, a general type which can be assembled both from bottom to top and from top to bottom - A 4-direction equal load type with high rigidity and high load <p>S Series is a low-noise low-dust raise type with improved life due to zero friction between balls since a spacer retainer is applied.</p>	Machine tool X, Y, Z axis, CNC machining center, CNC shelf, CNC tapping center, Electric injection machine, 3D engraving machine, laser processor, milling machine, welder for exclusive use, EDM electric spark machine, automation device, Various transport system, FPD inspection equipment,
	H-FL H-SFL		<ul style="list-style-type: none"> - Having the cross section identical to that of H-F Series, it increased load rating by extending the whole length (L₁) of Linear Motion guide block - A 4-direction equal load type with high rigidity and high load <p>S Series is a low-noise low-dust raise type with improved life due to zero friction between balls since a spacer retainer is applied.</p>	
Compact type	H-R H-SR		<ul style="list-style-type: none"> - With the tapped top side of a block, a compact type that the width of Linear Motion guide block is minimized - A 4-direction equal load type with high rigidity and high load <p>S Series is a low-noise low-dust raise type with improved life due to zero friction between balls since a spacer retainer is applied.</p>	Various transport system, FPD inspection equipment, Industrial robots, ATC, Precision X-Y table, Various industrial machine
	H-RL H-SRL		<ul style="list-style-type: none"> - Having the cross section identical to that of H-R Series, it increased load rating by extending the whole length (L₁) of Linear Motion guide block - A 4-direction equal load type with high rigidity and high load <p>S Series is a low-noise low-dust raise type with improved life due to zero friction between balls since a spacer retainer is applied.</p>	

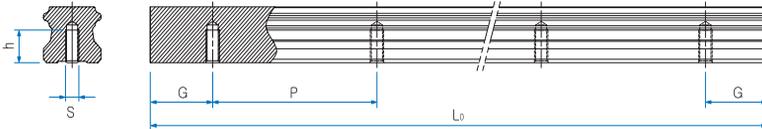
Standard and maximum length of a rail



Unit : mm

Model No.	H15	H20	H25	H30	H35	H45	H55
Standard length	160	160	220	280	440	570	780
	220	220	280	360	520	675	900
	280	280	340	440	600	780	1020
	∴	340	400	520	680	885	∴
	1360	∴	460	600	760	∴	2820
	1480	1960	∴	∴	∴	2880	2940
	1600	2080	2200	2520	2680	2985	3060
		2200	2320	2680	2840	3090	
		2440	2840	3000			
			3000				
Standard pitch P	60	60	60	80	80	105	120
G	20	20	20	20	20	22.5	30
Max. length	4000						

Standard tap hole type of a rail



Model No.	S	h(mm)
H15	M5	8
H20	M6	10
H25	M6	12
H30	M8	15
H35	M8	17
H45	M12	24
H55	M14	24