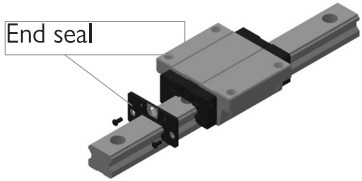
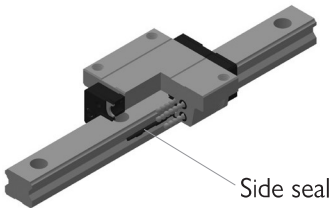
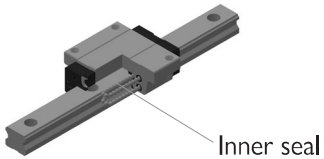
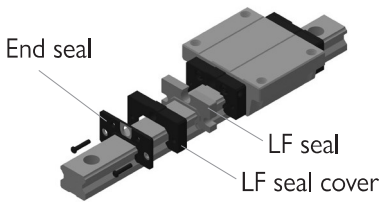
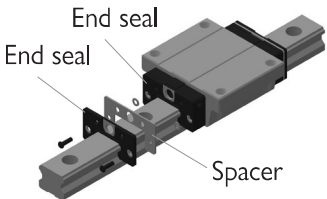
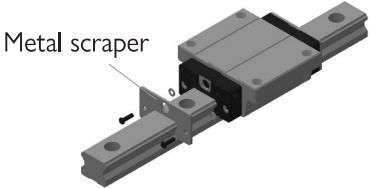
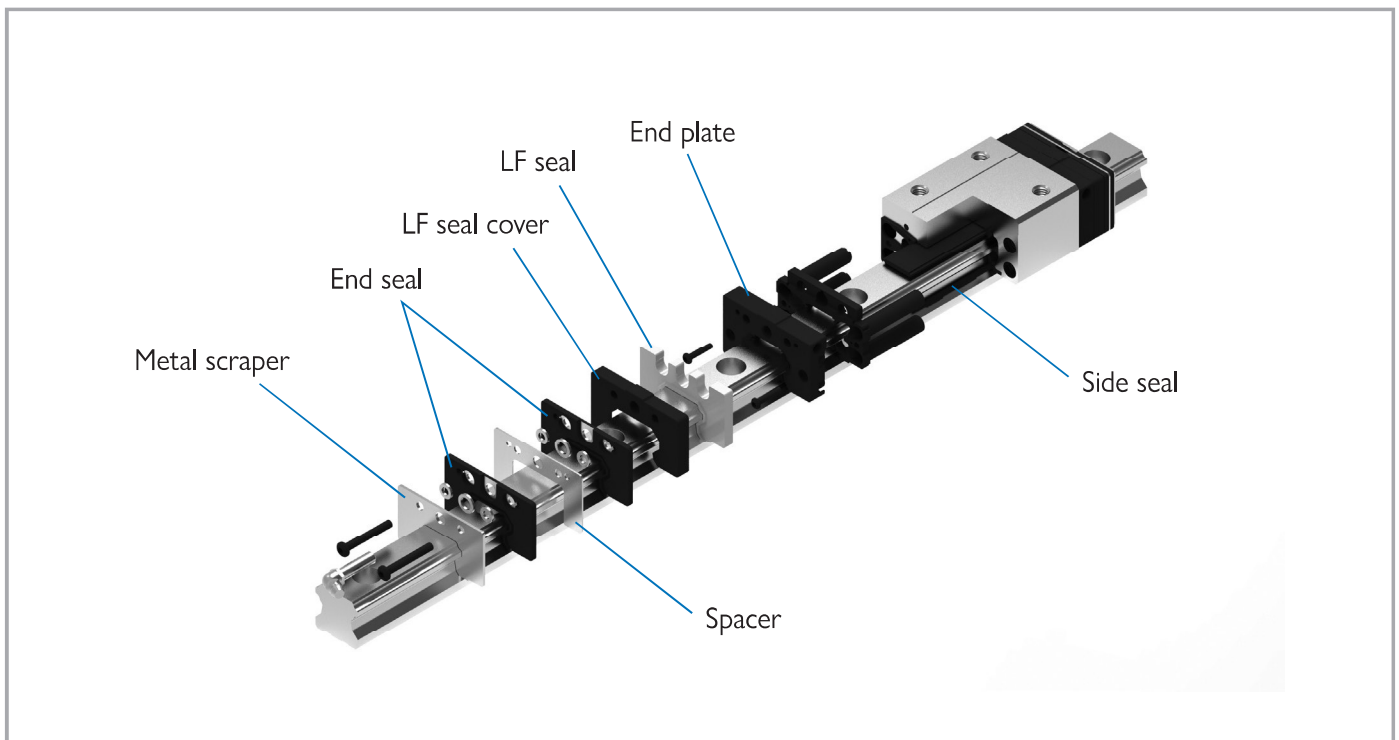


13 Options

1. Seal and rail cap

Item	Seal attachment position	Applied environments
End seal		<ul style="list-style-type: none"> • Where there is a lot of dust or particles
Side seal		<ul style="list-style-type: none"> • Where foreign substance can easily flow in from the flank or bottom • Where the assembled linear motion guide moves in a vertical, horizontal, or reverse direction
Inner seal		<ul style="list-style-type: none"> • Where there are a lot of cutting chips or foreign substance • Where cutting chips or foreign substances are highly likely to flow into a block
LF seal		<ul style="list-style-type: none"> • Where a long interval of refilling is needed due to a narrow space • An environment at 40°C or so • Where there needs to avoid any contact with organic solvents, such as thinner or milky white oil
Double seal		<ul style="list-style-type: none"> • Where strong sealing is needed due to a lot of dust or cutting chips
Metal scarpers		<ul style="list-style-type: none"> • Where spatters, such as slag or metal powder, arise in welding

Symbol List of Optional Parts



Symbol	Optional parts
UU	End seal
SS	Side seal+ Inner seal + End seal
DD	Side seal+ Inner seal + End seal+ Spacer+ End seal
ZZ	Side seal+ Inner seal + End seal+ Metal scraper
KK	Side seal+ Inner seal + End seal+ Spacer+ End seal+ Metal scraper
UUUF	LF Unit+ End seal
SSLF	Side seal+ Inner seal + LF Unit+ End seal
DDLf	Side seal+ Inner seal + LF Unit+ End seal+ Spacer+ End seal
ZZLf	Side seal+ Inner seal + LF Unit+ End seal+ Metal scraper
KKLf	Side seal+ Inner seal + LF Unit+ End seal+ Spacer+ End seal+ Metal scraper

Optional-parts mapping table by model number

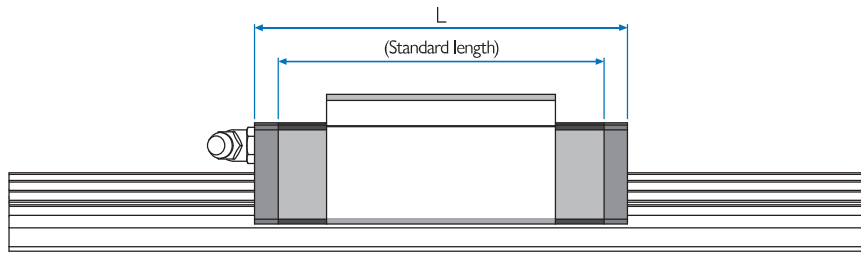
Model No.		Full ball type								Spacer ball chain type					Full roller type	
		H		HB	S		HS		M	MB	H...S		HS...S		S...S	R
		15~25	30~55	17~35	15~25	25	30~35	5~20	5~15	15~25	30~35	25	30~35	15~25	25~65	
End seal	UU	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Side seal	-	•	•*1)	-	•	•	•*1)	-	-	•	•*1)	•	•*1)	•	-	
Inner seal	-	•	•	-	•	•	•	-	-	•	•	•	•	•	-	
Side seal +Inner seal +End seal	SS	•	•	•*2)	•	•	•	-	-	•	•	•	•	•	•*2)	
Side seal +Inner seal +End seal +Metal scraper	ZZ	•	•	•	•	•	•	-	-	•	•	•	•	•	•*3)	
Side seal +Inner seal +Double seal	DD	•	•	•	•	•	•	-	-	•	•	•	•	•	•*3)	
Side seal +Inner seal +End seal +Metal scraper	KK	•	•	•	•	•	•	-	-	•	•	•	•	•	•*3)	
LF seal +End seal	UULF	•	•	•	•	•	•	•	•	•	•	•	•	•	•*3)	
LF seal +Side seal +Inner seal +End seal	SSLF	•	•	•	•	•	•	-	-	•	•	•	•	•	•*3)	
LF seal +Side seal +Inner seal +Double seal	DDLf	•	•	•	•	•	•	-	-	•	•	•	•	•	•*3)	
LF seal +Side seal +Inner seal +End seal +Metal scraper	ZZLF	•	•	•	•	•	•	-	-	•	•	•	•	•	•*3)	
LF seal +Side seal +Inner seal +Double seal +Metal scraper	KKLF	•	•	-	•	•	•	-	-	•	•	•	•	•	•*3)	

*1) In H,HS, H...S, and HS...S Series, the basic optional part of model no. 30 and no. 35 is Inner Seal.

*2) In H Series (model no. 45 and no. 55) and HB Series and R Series, Side Seal and Inner Seal is an integral type.

*3) In R Series, if it is necessary to apply LF seal and metal scrapper, please contact us.

Dimension Table of the Installation of Optional Parts



Unit : mm

	Model No.	L									
		UU	SS	ZZ	DD	KK	UULF	SSLF	DDLf	ZZLF	KKLF
H	15 FN/RN/FN...S/RN...S	56.5	56.5	60.7	61.5	65.7	70.5	70.5	75.5	74.7	79.7
	15 FL/RL/FL...S/RL...S	64.8	64.8	69	69.8	74	78.8	78.8	83.8	83	88
	20 FN/RN/FN...S/RN...S	73.2	73.2	78.2	79.4	84.4	87.2	87.2	93.4	92.2	98.4
	20 FL/RL/FL...S/RL...S	89.1	89.1	94.1	95.3	100.3	103.1	103.1	109.3	108.1	114.3
	25 FN/RN/FN...S/RN...S	83.2	93.2	89.2	90.4	96.4	97.2	97.2	104.4	103.2	110.4
	25 FL/RL/FL...S/RL...S	103.1	103.1	109.1	110.3	116.3	117.1	117.1	124.3	123.1	130.3
	30 FN/RN/FN...S/RN...S	99.3	99.3	105.3	106.5	112.5	113.3	113.3	120.5	119.3	126.5
	30 FL/RL/FL...S/RL...S	121.5	121.5	127.5	128.7	134.7	135.5	135.5	142.7	141.5	148.7
	35 FN/RN/FN...S/RN...S	111.8	111.8	117.8	119	125	125.8	125.8	133	131.8	139
	35 FL/RL/FL...S/RL...S	137.2	137.2	143.2	144.4	150.4	151.2	151.2	158.4	157.2	164.4
	45 FN/RN/FN...S/RN...S	139	139	148.9	-	-	154	154	-	163.9	-
	45 FL/RL/FL...S/RL...S	170.8	170.8	180.7	-	-	185.8	185.8	-	195.7	-
	55 FN/RN/FN...S/RN...S	163	163	172.9	-	-	179	179	-	188.9	-
	55 FL/RL/FL...S/RL...S	201.1	201.1	211	-	-	217.1	217.1	-	227	-
	HB	17 F/R	51	51	54.6	-	-	61.2	61.2	-	64.8
21 F/R		59	59	63.4	-	-	69.2	69.2	-	73.6	-
27 F/R		72.5	72.5	76.9	-	-	85.1	85.1	-	89.5	-
35 F/R		105.3	105.3	110.9	-	-	120.3	120.3	-	125.9	-
15 FC/RC/FC...S/RC...S		39.8	39.8	44	44.8	49	53.8	53.8	58.8	58	63
S	15 FN/RN/FN...S/RN...S	56.5	56.5	60.7	61.5	65.7	70.5	70.5	75.5	74.7	79.7
	20 FC/RC/FC...S/RC...S	47.8	47.8	52.8	54	59	61.8	61.8	68	66.8	73
	20 FN/RN/FN...S/RN...S	66.8	66.8	71.8	73	78	80.8	80.8	87	85.8	82
	25 FC/RC/FC...S/RC...S	59.4	59.4	65.4	66.6	72.6	73.4	73.4	80.6	79.4	86.6
	25 FN/RN/FN...S/RN...S	83.2	83.2	89.2	90.4	96.4	97.2	97.2	104.4	103.2	110.4
HS	25 RN/RN...S	83.2	83.2	89.2	90.4	96.4	97.2	97.2	104.4	103.2	110.4
	25 RL/RL...S	103.1	103.1	109.1	110.3	116.3	117.1	117.1	124.3	123.1	130.3
	30 RN/RN...S	99.3	99.3	105.3	106.5	112.5	113.3	113.3	120.5	119.3	126.5
	30 RL/RL...S	121.5	121.5	127.5	128.7	134.7	135.5	135.5	142.7	141.5	148.7
	35 RN/RN...S	111.8	111.8	117.8	119	125	125.8	125.8	133	131.8	139
	35 RL/RL...S	137.2	137.2	143.2	144.4	150.4	151.2	151.2	158.4	157.2	164.4

Unit : mm

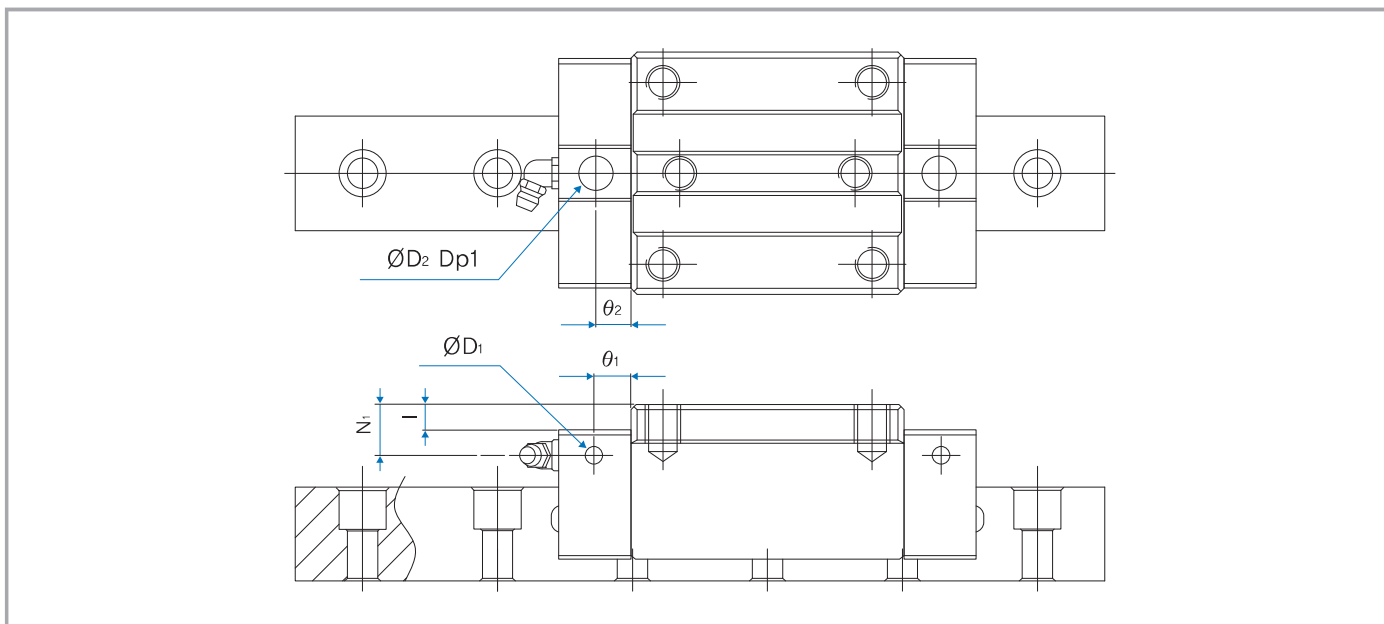
	Model No.	L	
		UU	UULF
M	5 C	17	21.4
	5 N/NA	20	24.4
	7 C	19.8	24.8
	7 N	24.3	29.3
	7 L/LA	31.8	36.8
	9 C	22.4	27.4
	9 N	31.3	36.3
	9 L/LA	41.4	46.4
	12 C	26.4	32.4
	12 N	34.9	40.9
	12 L	45.4	51.4
	15 C	34.4	41.4
	15 N	44.4	51.4
	15 L	59.4	66.4
	20 C	39.8	46.8
	20 N	51.8	58.8
	20 L	69.8	76.8

Unit : mm

	Model No.	L	
		UU	UULF
MB	5C	21	25.4
	5N	25	29.4
	7C	24	29
	7N	33	38
	7L	43.5	48.5
	9C	28.1	33.1
	9N	40.2	45.2
	9L	52	57
	12C	31.1	37.1
	12N	44.5	50.5
	12L	59.7	65.7
	13C	35.3	42.3
	13N	49.2	56.2
	13L	68.6	75.6
	15C	42.8	49.8
15N	56.6	63.6	
15L	75.8	82.8	

2. Oil inlet

In R Series, it is possible to refill on the side and top. The standard specification of an oil inlet is 'not run through', in order to prevent foreign substances from flowing in a block. For use, please contact WON ST



Unit : mm

Model No.	Hole for a side nipple			Top oil inlet				
	Ø ₁	N ₁	D ₁	D ₂	(O-ring)	l	Ø ₂	
R	25F(L)	6	5.5	3.3	10.2	P7	0.4	6
	30F(L)	6	6	5.1	10.2	P7	0.4	6.5
	35F(L)	12	7.6	5.1	10.2	P7	0.4	7.25
	45F(L)	12	8	5.1	10.2	P7	0.4	7
	55F(L)	13.5	9	5.1	10.2	P7	0.4	8
	65F(L)	18.5	13.75	5.4	10.2	P7	0.4	11
	25R(L)	6	9.5	3.3	10.2	P7	4.4	6
	30R(L)	6	9	5.1	10.2	P7	3.4	6.5
	35R(L)	12	14.6	5.1	10.2	P7	7.4	7.25
	45R(L)	12	18	5.1	10.2	P7	10.4	7
	55R(L)	13.5	19	5.1	10.2	P7	10.4	8
	RS	25R(L)	6	5.5	3.3	10.2	P7	0.4
35R(L)		12	7.6	5.1	10.2	P7	0.4	7.25
45R(L)		12	8	5.1	10.2	P7	0.4	7
55R(L)		13.5	9	5.1	10.2	P7	0.4	8
65R(L)		18.5	13.75	5.4	10.2	P7	0.4	11

3. Grease nipple

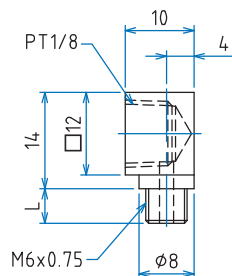
WON ST provides various types of grease nipples necessary for lubricating a linear motion system.

A-Ø3	A-M3	A-M5	B-M6F	B-PT1/8
HW 17, 21	M 15, 20 MB 13, 15	H 15 S 15	H 20, 25, 30, 35 HW 27, 35 S 20, 25	H 45, 55

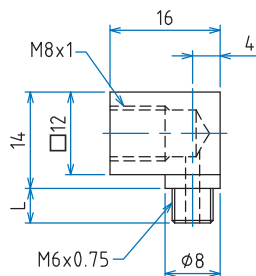
Applied model no.	Nipple model no.	Thread (L) length									
		UU	SS	DD	ZZ	KK	UULF	SSLF	DDLFL	ZZLF	KKLF
HB17, HB21	A-Ø3	4	4	-	6.5	-	9	9	-	11	-
M15, M20, MB13, MB15	A-M3	4.2	4.2	-	-	-	7.7	7.7	-	-	-
S-H15	A-M5	5	5	7.5	7.5	10	12	12	14.5	14.5	17
S-H20	B-M6F	7	7	10	10	12	14.5	14.5	17	17	19
S-H25, 30		7	7	12	12	14.5	14.5	14.5	19	19	22
H35		10	10	14.5	14.5	17	17	17	19	19	22
HB27		5	5	-	7	-	12	12	-	14.5	-
HB35		5	5	-	10	-	12	12	-	17	-
H45, H55	B-PT 1/8	8	8	-	11	-	15.5	15.5	-	18	-

4. Connection of oil pipes

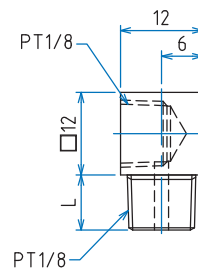
WOL Type



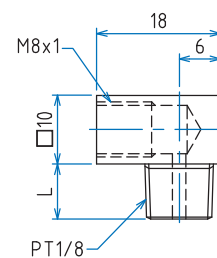
WOL-A



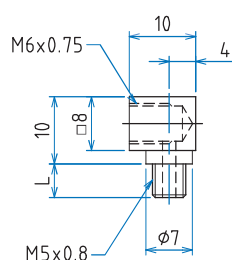
WOL-B



WOL-C

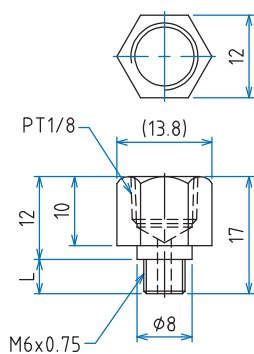


WOL-D

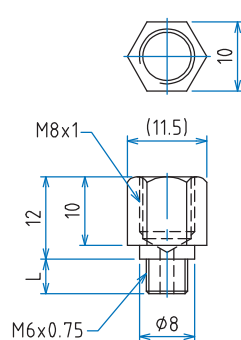


WOL-E

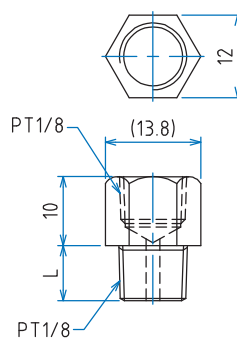
WOS Type



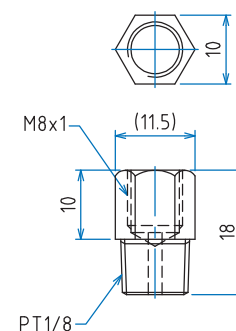
WOS-A



WOS-B



WOS-C



WOS-D

Applied model no.	Nipple model no.	Thread (L) length									
		UU	SS	DD	ZZ	KK	UULF	SSLF	DDLFL	ZZLF	KKLF
S-H15	WOL-E	5	5	7.5	7.5	10	12	12	14.5	14.5	17
S-H20	WOS-B	7	7	10	10	12	14.5	14.5	17	17	19
S-H25, H30	WOL-A, WOL-B WOS-A, WOS-B	7	7	12	12	14.5	14.5	14.5	19	19	22
H35		10	10	14.5	14.5	17	17	17	19	19	22
HB27		5	5	-	7	-	12	12	-	14.5	-
HB35		5	5	-	10	-	12	12	-	17	-
H45, H55	WOL-C, WOL-D WOS-C, WOS-D	8	8	-	11	-	15.5	15.5	-	18	-