

STAF Linear Guide

Cage & Non Cage types on the same profile rail.



High accuracy

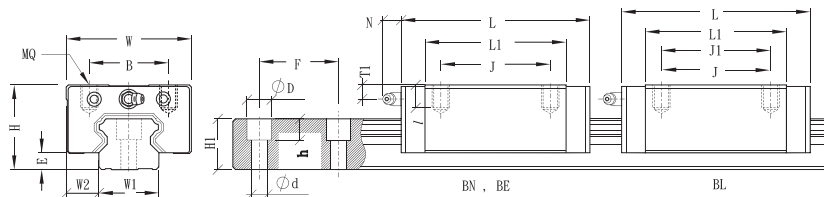
Low noise

Smoothness

- ▶ Smooth running due to new ball re-circulation (patent)
- ▶ Smooth chain running due to no gap re-circulation (patent)
- ▶ Low friction running due to new chain lubrication system (patent)

BGX & BGC SERIES (H-B)

© BL : BGX → J1 ; BGC → J



Model	Assembly-mm				Block-mm								Rail-mm						Rating load-kN			Static moment - kN-m			Block kg	Rail kg/m		
	H	W	W2	E	L	B	J	J1	MQ	I	L1	Oil H	T1	N	W1	H1	F	d	D	h	C-BGX	C-BGC	C0	M _x			M _y	M _z
H15BN	28	34	9.5	3.3	58.6	26	26		M4	6.0	40.2	M4X0.7	9.5	(5)	15	13.0	60	4.5	7.5	6.0	9.3	11.5	19.6	0.136	0.117	0.117	0.19	1.28
H20BN	30	44	12.0	4.5	69.3	32	36		M5	6.5	48.5	M6X1	7.1	(15.6)	20	16.3	60	6.0	9.5	8.5	14.3	17.7	30.5	0.285	0.220	0.220	0.31	2.15
H20BL	30	44	12.0	4.5	82.1	32	36	50	M5	6.5	61.3	M6X1	7.1	(15.6)	20	16.3	60	6.0	9.5	8.5	18.6	23.0	39.5	0.369	0.361	0.361	0.36	2.15
H20BE	30	44	12.0	4.5	97.3	32	50		M5	6.5	76.5	M6X1	7.1	(15.6)	20	16.3	60	6.0	9.5	8.5	22.1	27.3	48.9	0.456	0.557	0.557	0.47	2.15
H25BN	40	48	12.5	5.8	79.2	35	35		M6	9.0	57.5	M6X1	14.2	(15.6)	23	19.2	60	7.0	11.0	9.0	20.1	24.8	41.1	0.440	0.352	0.352	0.45	2.88
H25BL	40	48	12.5	5.8	93.9	35	35	50	M6	9.0	72.2	M6X1	14.2	(15.6)	23	19.2	60	7.0	11.0	9.0	25.9	31.9	52.8	0.566	0.568	0.568	0.66	2.88
H25BE	40	48	12.5	5.8	108.6	35	50		M6	9.0	86.9	M6X1	14.2	(15.6)	23	19.2	60	7.0	11.0	9.0	29.2	36.0	63.3	0.679	0.819	0.819	0.80	2.88
H30BN	45	60	16.0	7.0	94.8	40	40		M8	12.0	67.8	M6X1	13	(15.6)	28	22.8	80	9.0	14.0	12.0	29.7	36.7	54.6	0.706	0.551	0.551	0.91	4.45
H30BL	45	60	16.0	7.0	105.0	40	40	60	M8	12.0	78.0	M6X1	13	(15.6)	28	22.8	80	9.0	14.0	12.0	38.5	47.5	70.7	0.915	0.821	0.821	1.04	4.45
H30BE	45	60	16.0	7.0	130.5	40	60		M8	12.0	103.5	M6X1	13	(15.6)	28	22.8	80	9.0	14.0	12.0	42.9	52.9	86.7	1.122	1.336	1.336	1.36	4.45
H35BN	55	70	18.0	7.5	111.5	50	50		M8	12.0	80.5	M6X1	18.5	(15.6)	34	26.0	80	9.0	14.0	12.0	42.4	52.3	81.1	1.282	0.972	0.972	1.50	6.25
H35BL	55	70	18.0	7.5	123.5	50	50	72	M8	12.0	92.5	M6X1	18.5	(15.6)	34	26.0	80	9.0	14.0	12.0	52.9	65.4	101.4	1.602	1.396	1.396	1.80	6.25
H35BE	55	70	18.0	7.5	153.5	50	72		M8	12.0	122.5	M6X1	18.5	(15.6)	34	26.0	80	9.0	14.0	12.0	58.3	71.9	125.3	1.981	2.286	2.286	2.34	6.25
H45BN	70	86	20.5	8.9	129.0	60	60		M10	18.0	94.0	M8X1.25	24.4	(16)	45	31.1	105	14.0	20.0	17.0	58.0	71.6	108.9	2.300	1.524	1.524	2.28	9.60
H45BL	70	86	20.5	8.9	145.0	60	60	80	M10	18.0	110.0	M8X1.25	24.4	(16)	45	31.1	105	14.0	20.0	17.0	69.0	85.1	129.5	2.736	2.122	2.122	2.67	9.60
H45BE	70	86	20.5	8.9	174.0	60	80		M10	18.0	139.0	M8X1.25	24.4	(16)	45	31.1	105	14.0	20.0	17.0	79.7	98.4	163.3	3.449	3.379	3.379	3.35	9.60
H55BN	80	100	23.5	12.7	155.0	75	75		M12	22.0	116.0	M8X1.25	24.0	(16)	53	38.0	120	16.0	23.0	20.0	69.8	86.2	133.4	3.303	2.304	2.304	3.42	13.80
H55BL	80	100	23.5	12.7	193.0	75	75	95	M12	22.0	154.0	M8X1.25	24.0	(16)	53	38.0	120	16.0	23.0	20.0	94.2	116.3	178.9	4.428	4.101	4.101	4.57	13.80
H55BE	80	100	23.5	12.7	210.0	75	95		M12	22.0	171.0	M8X1.25	24.0	(16)	53	38.0	120	16.0	23.0	20.0	127.7	157.7	253.6	6.279	6.458	6.458	5.08	13.80

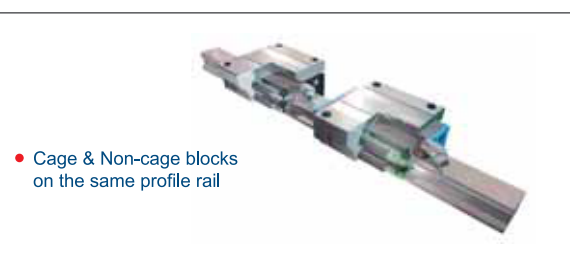
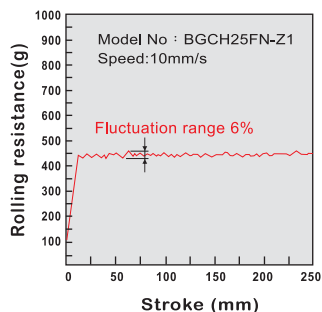
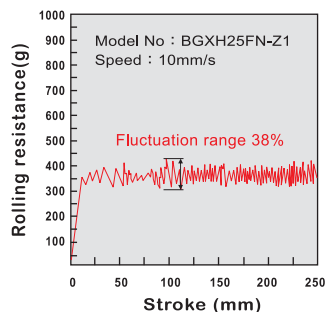
- Equal load capacities in four directions
- High rigidity 4-row angular contact
- Integral all-round double sealing



- High seppd-low noises
- Interchangeability
- No ball drop



Only 1/6-1/10 Fluctuation range for cage block



Accuracy Standard

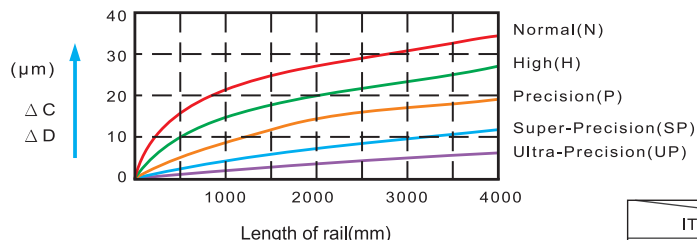
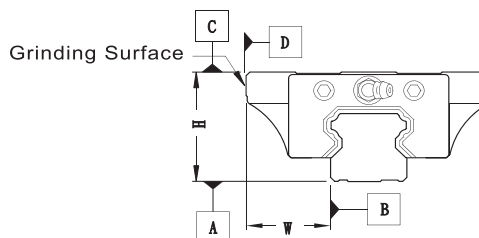


Fig. 1-1 BG rail length and running parallelism



ITEM	GRADE	Unit : mm				
		Normal(N)	High(H)	Precision(P)	Super-Precision (SP)	Ultra-Precision (UP)
Tolerance of height (H)		±0.1	±0.04	0 -0.04	0 -0.02	0 -0.01
Tolerance of width (W)		±0.1	±0.04	0 -0.04	0 -0.02	0 -0.01
Difference of heights (ΔH)		0.03	0.02	0.01	0.005	0.003
Difference of widths (ΔW)		0.03	0.02	0.01	0.005	0.003
Running parallelism of BG Block surface [C] with respect to surface [A]		ΔC Refer to Fig. 1-1				
Running parallelism of BR Block surface [D] with respect to surface [B]		ΔD Refer to Fig. 1-1				

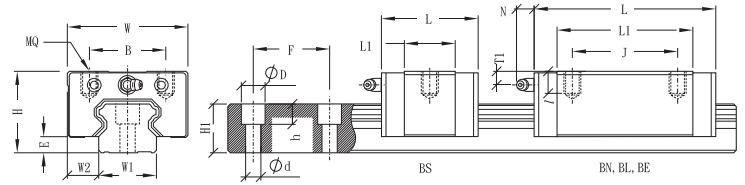
High accuracy

Low noise

Low friction

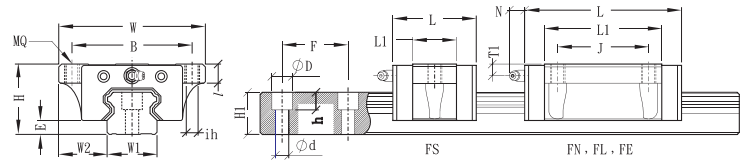
Low vibration

BGX & BGC SERIES (S-B)



Model	Assembly-mm				Block-mm									Rail-mm						Rating load-kN			Static moment - kN-m			Block	Rail
	H	W	W2	E	L	B	J	MQ	I	L1	Oil H	T1	N	W1	H1	F	d	D	h	C-BGX	C-BGC	C0	M _x	M _y	M _z		
S15BS	24	34	9.5	3.3	40.6	26		M4	4.8	22.2	M4X0.7	5.5	(5)	15	13.0	60	4.5	7.5	6.0	4.6	5.7	9.8	0.068	0.032	0.032	0.10	1.28
S15BN	24	34	9.5	3.3	58.6	26	26	M4	4.8	40.2	M4X0.7	5.5	(5)	15	13.0	60	4.5	7.5	6.0	9.3	11.5	19.6	0.136	0.117	0.117	0.17	1.28
S15BL	24	34	9.5	3.3	66.1	26	26	M4	4.8	47.7	M4X0.7	5.5	(5)	15	13.0	60	4.5	7.5	6.0	11.3	13.9	23.7	0.164	0.169	0.169	0.18	1.28
S15BE	24	34	9.5	3.3	81.1	26	34	M4	4.8	62.7	M4X0.7	5.5	(5)	15	13.0	60	4.5	7.5	6.0	13.7	16.9	31.4	0.217	0.293	0.293	0.22	1.28
S20BS	28	42	11.0	4.5	48.3	32		M5	5.5	27.5	M6X1	5.1	(15.6)	20	16.3	60	6.0	9.5	8.5	7.4	9.1	15.7	0.146	0.064	0.064	0.17	2.15
S20BN	28	42	11.0	4.5	69.3	32	32	M5	5.5	48.5	M6X1	5.1	(15.6)	20	16.3	60	6.0	9.5	8.5	14.3	17.7	30.5	0.285	0.220	0.220	0.26	2.15
S25BS	33	48	12.5	5.8	54.0	35		M6	6.8	32.3	M6X1	7.2	(15.6)	23	19.2	60	7.0	11.0	9.0	10.3	12.7	21.0	0.225	0.101	0.101	0.21	2.88
S25BN	33	48	12.5	5.8	79.2	35	35	M6	6.8	57.5	M6X1	7.2	(15.6)	23	19.2	60	7.0	11.0	9.0	20.1	24.8	41.1	0.440	0.352	0.352	0.38	2.88
X25BN	36	48	12.5	5.8	79.2	35	35	M6	9.0	57.5	M6X1	10.2	(15.6)	23	19.2	60	7.0	11.0	9.0	20.1	24.8	41.1	0.440	0.352	0.352	0.40	2.88
X25BL	36	48	12.5	5.8	93.9	35	35	M6	9.0	72.2	M6X1	10.2	(15.6)	23	19.2	60	7.0	11.0	9.0	25.9	31.9	52.8	0.566	0.568	0.568	0.54	2.88
X25BE	36	48	12.5	5.8	108.6	35	50	M6	9.0	86.9	M6X1	10.2	(15.6)	23	19.2	60	7.0	11.0	9.0	29.2	36.0	63.3	0.679	0.819	0.819	0.67	2.88
S30BS	42	60	16.0	7.0	64.2	40		M8	10.0	37.2	M6X1	10	(15.6)	28	22.8	80	9.0	14.0	12.0	14.7	18.2	27.0	0.350	0.150	0.150	0.50	4.45
S30BN	42	60	16.0	7.0	94.8	40	40	M8	10.0	67.8	M6X1	10	(15.6)	28	22.8	80	9.0	14.0	12.0	29.7	36.7	54.6	0.706	0.551	0.551	0.80	4.45
S30BL	42	60	16.0	7.0	105.0	40	40	M8	10.0	78.0	M6X1	10	(15.6)	28	22.8	80	9.0	14.0	12.0	38.5	47.5	70.7	0.915	0.821	0.821	0.94	4.45
S30BE	42	60	16.0	7.0	130.5	40	60	M8	10.0	103.5	M6X1	10	(15.6)	28	22.8	80	9.0	14.0	12.0	42.9	52.9	86.7	1.122	1.336	1.336	1.16	4.45
S35BS	48	70	18.0	7.5	75.5	50		M8	10.0	44.5	M6X1	11.5	(15.6)	34	26.0	80	9.0	14.0	12.0	21.2	26.2	40.7	0.643	0.269	0.269	0.80	6.25
S35BN	48	70	18.0	7.5	111.5	50	50	M8	10.0	80.5	M6X1	11.5	(15.6)	34	26.0	80	9.0	14.0	12.0	42.4	52.3	81.1	1.282	0.972	0.972	1.20	6.25
S35BL	48	70	18.0	7.5	123.5	50	50	M8	10.0	92.5	M6X1	11.5	(15.6)	34	26.0	80	9.0	14.0	12.0	52.9	65.4	101.4	1.602	1.396	1.396	1.40	6.25
S35BE	48	70	18.0	7.5	153.5	50	72	M8	10.0	122.5	M6X1	11.5	(15.6)	34	26.0	80	9.0	14.0	12.0	58.3	71.9	125.3	1.981	2.286	2.286	1.84	6.25
S45BN	60	86	20.5	8.9	129.0	60	60	M10	15.5	94.0	M8X1.25	14.4	(16)	45	31.1	105	14.0	20.0	17.0	58.0	71.6	108.9	2.300	1.524	1.524	1.64	9.60
S45BL	60	86	20.5	8.9	145.0	60	60	M10	15.5	110.0	M8X1.25	14.4	(16)	45	31.1	105	14.0	20.0	17.0	69.0	85.1	129.5	2.736	2.122	2.122	1.93	9.60
S45BE	60	86	20.5	8.9	174.0	60	80	M10	15.5	139.0	M8X1.25	14.4	(16)	45	31.1	105	14.0	20.0	17.0	79.7	98.4	163.3	3.449	3.379	3.379	2.42	9.60
S55BN	70	100	23.5	12.7	155.0	75	75	M12	18.0	116.0	M8X1.25	14.0	(16)	53	38.0	120	16.0	23.0	20.0	69.8	86.2	133.4	3.303	2.304	2.304	2.67	13.80
S55BL	70	100	23.5	12.7	193.0	75	75	M12	18.0	154.0	M8X1.25	14.0	(16)	53	38.0	120	16.0	23.0	20.0	94.2	116.3	178.9	4.428	4.101	4.101	3.57	13.80
S55BE	70	100	23.5	12.7	210.0	75	95	M12	18.0	171.0	M8X1.25	14.0	(16)	53	38.0	120	16.0	23.0	20.0	127.7	157.7	253.6	6.279	6.458	6.458	3.97	13.80

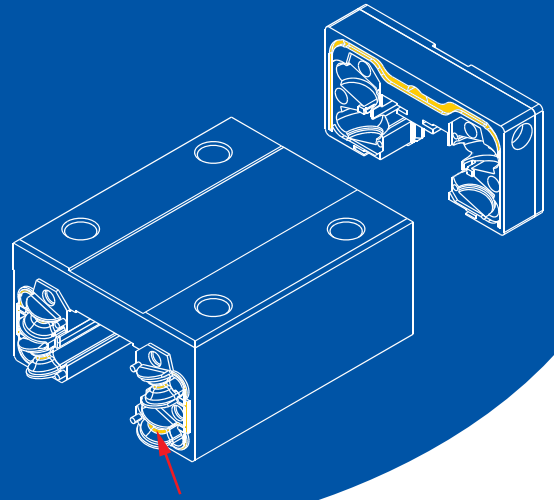
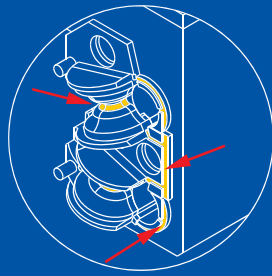
BGX & BGC SERIES (H-F) (S-F)



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Model	Assembly-mm				Block-mm									Rail-mm						Rating load-kN			Static moment - kN-m			Block	Rail	
	H	W	W2	E	L	B	J	MQ	ih	I	L1	Oil H	T1	N	W1	H1	F	d	D	h	C-BGX	C-BGC	C0	M _x	M _y			M _z
H15FN	24	47	16.0	3.3	58.6	38	30	M5	4.4	8.0	40.2	M4X0.7	5.5	(5)	15	13.0	60	4.5	7.5	6.0	9.3	11.5	19.6	0.136	0.117	0.117	0.21	1.28
H15FL	24	47	16.0	3.3	66.1	38	30	M5	4.4	8.0	47.7	M4X0.7	5.5	(5)	15	13.0	60	4.5	7.5	6.0	11.3	13.9	23.7	0.164	0.169	0.169	0.23	1.28
H15FE	24	47	16.0	3.3	81.1	38	30	M5	4.4	8.0	62.7	M4X0.7	5.5	(5)	15	13.0	60	4.5	7.5	6.0	13.7	16.9	31.4	0.217	0.293	0.293	0.29	1.28
S15FS	24	52	18.5	3.3	40.6	41		M5	4.4	8.0	22.2	M4X0.7	5.5	(5)	15	13.0	60	4.5	7.5	6.0	4.6	5.7	9.8	0.068	0.032	0.032	0.12	1.28
S15FN	24	52	18.5	3.3	58.6	41	26	M5	4.4	8.0	40.2	M4X0.7	5.5	(5)	15	13.0	60	4.5	7.5	6.0	9.3	11.5	19.6	0.136	0.117	0.117	0.19	1.28
H20FN	30	63	21.5	4.5	69.3	53	40	M6	5.4	9.0	48.5	M6X1	7.1	(15.6)	20	16.3	60	6.0	9.5	8.5	14.3	17.7	30.5	0.285	0.220	0.220	0.40	2.15
H20FL	30	63	21.5	4.5	82.1	53	40	M6	5.4	9.0	61.3	M6X1	7.1	(15.6)	20	16.3	60	6.0	9.5	8.5	18.6	23.0	39.5	0.369	0.361	0.361	0.46	2.15
H20FE	30	63	21.5	4.5	97.3	53	40	M6	5.4	9.0	76.5	M6X1	7.1	(15.6)	20	16.3	60	6.0	9.5	8.5	22.1	27.3	48.9	0.456	0.557	0.557	0.61	2.15
S20FS	28	59	19.5	4.5	48.3	49		M6	5.4	7.0	27.5	M6X1	5.1	(15.6)	20	16.3	60	6.0	9.5	8.5	7.4	9.1	15.7	0.225	0.101	0.101	0.18	2.15
S20FN	28	59	19.5	4.5	69.3	49	32	M6	5.4	7.0	48.5	M6X1	5.1	(15.6)	20	16.3	60	6.0	9.5	8.5	14.3	17.7	30.5	0.285	0.220	0.220	0.31	2.15
H25FN	36	70	23.5	5.8	79.2	57	45	M8	7.0	10.0	57.5	M6X1	10.2	(15.6)	23	19.2	60	7.0	11.0	9.0	20.1	24.8	41.1	0.440	0.352	0.352	0.57	2.88
H25FL	36	70	23.5	5.8	93.9	57	45	M8	7.0	10.0	72.2	M6X1	10.2	(15.6)	23	19.2	60	7.0	11.0	9.0	25.9	31.9	52.8	0.566	0.568	0.568	0.72	2.88
H25FE	36	70	23.5	5.8	108.6	57	45	M8	7.0	10.0	86.9	M6X1	10.2	(15.6)	23	19.2	60	7.0	11.0	9.0	29.2	36.0	63.3	0.679	0.819	0.819	0.89	2.88
S25FS	33	73	25.0	5.8	54.0	60		M8	7.0	7.0	32.3	M6X1	7.2	(15.6)	23	19.2	60	7.0	11.0	9.0	10.3	12.7	21.0	0.225	0.101	0.101	0.33	2.88
S25FN	33	73	25.0	5.8	79.2	60	35	M8	7.0	7.0	57.5	M6X1	7.2	(15.6)	23	19.2	60	7.0	11.0	9.0	20.1	24.8	41.1	0.440	0.352	0.352	0.50	2.88
H30FS	42	90	31.0	7.0	64.2	72		M10	8.6	11.0	37.2	M6X1	10	(15.6)	28	22.8	80	9.0	14.0	12.0	14.7	18.2	27.0	0.350	0.150	0.150	0.80	4.45
H30FN	42	90	31.0	7.0	94.8	72	52	M10	8.6	11.0	67.8	M6X1	10	(15.6)	28	22.8	80	9.0	14.0	12.0	29.7	36.7	54.6	0.706	0.551	0.551	1.10	4.45
H30FL	42	90	31.0	7.0	105.0	72	52	M10	8.6	11.0	78.0	M6X1	10	(15.6)	28	22.8	80	9.0	14.0	12.0	38.5	47.5	70.7	0.915	0.821	0.821	1.34	4.45
H30FE	42	90	31.0	7.0	130.5	72	52	M10	8.6	11.0	103.5	M6X1	10	(15.6)	28	22.8	80	9.0	14.0	12.0	42.9	52.9	86.7	1.122	1.336	1.336	1.66	4.45
H35FS	48	100	33.0	7.5	75.5	82		M10	8.6	12.0	44.5	M6X1	11.5	(16)	34	26.0	80	9.0	14.0	12.0	21.2	26.2	40.7	0.643	0.269	0.269	1.00	6.25
H35FN	48	100	33.0	7.5	111.5	82	62	M10	8.6	12.0	80.5	M6X1	11.5	(16)	34	26.0	80	9.0	14.0	12.0	42.4	52.3	81.1	1.282	0.972	0.972	1.50	6.25
H35FL	48	100	33.0	7.5	123.5	82	62	M10	8.6	12.0																		

More Oil Space



Model Number Coding

BGC **H** **25** **BN** - **2** - **□** - **L** **500** - **P** - **Z1** - **II**

Slide type :
BGX : non-cage
BGC : cage

Assembly height :
H : high assembly
S : low assembly
X : special assembly

Size : mm

Type and flange :
BN : no flange/standard
BS : no flange/short
BL : no flange/long
BE : no flange/extra long
FN : flange/standard
FS : flange/short
FL : flange/long
FE : flange/extra long

Number of slides

Seal type:

□ : with end & bottom seals
UU : with end seals
SS : with end, bottom & top seals
DD : with double & bottom seals
ZZ : with end, bottom seals & metal scrapers
KK : with double, bottom seals & metal scrapers
EE : with double, bottom & top seals
FF : with end, bottom, top seals & metal scrapers
GG : with double, bottom, top seals & metal scrapers
Lubrication system (LS) :
AA : with end, bottom seals & LS
UA : with end seals & LS
SA : with end, bottom, top seals & LS
DA : with double, bottom seals & LS
ZA : with end, bottom seals, metal scrapers & LS
KA : with double, bottom seals, metal scrapers & LS
EA : with double, bottom, top seals & LS
FA : with end, bottom, top seals, metal scrapers & LS
GA : with double, bottom, top seals, metal scrapers & LS

Preload type :

ZF : clearance
Z0 : zero preload
Z1 : light preload
Z2 : medium preload
Z3 : heavy preload

Accuracy :

N : normal
H : high
P : precision
SP : super-precision
UP : ultra-precision

Rail length

Two rails in parallel

Rail type :

L : standard
C : bolt up from bottom