P W R

Power & Technology

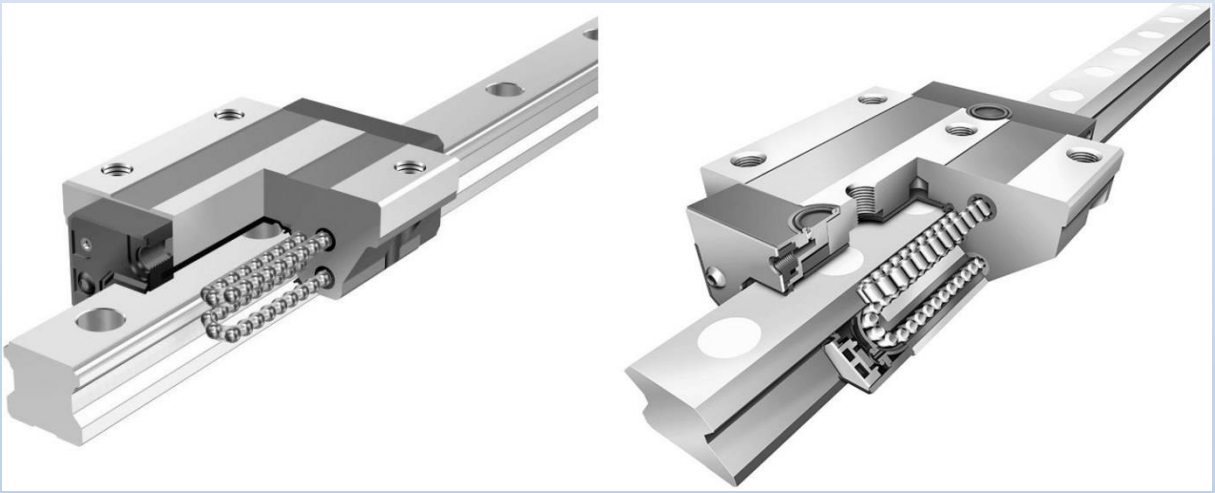
PRECISION TECHNOLOGY

LINEAR GUIDES

SUMMARY

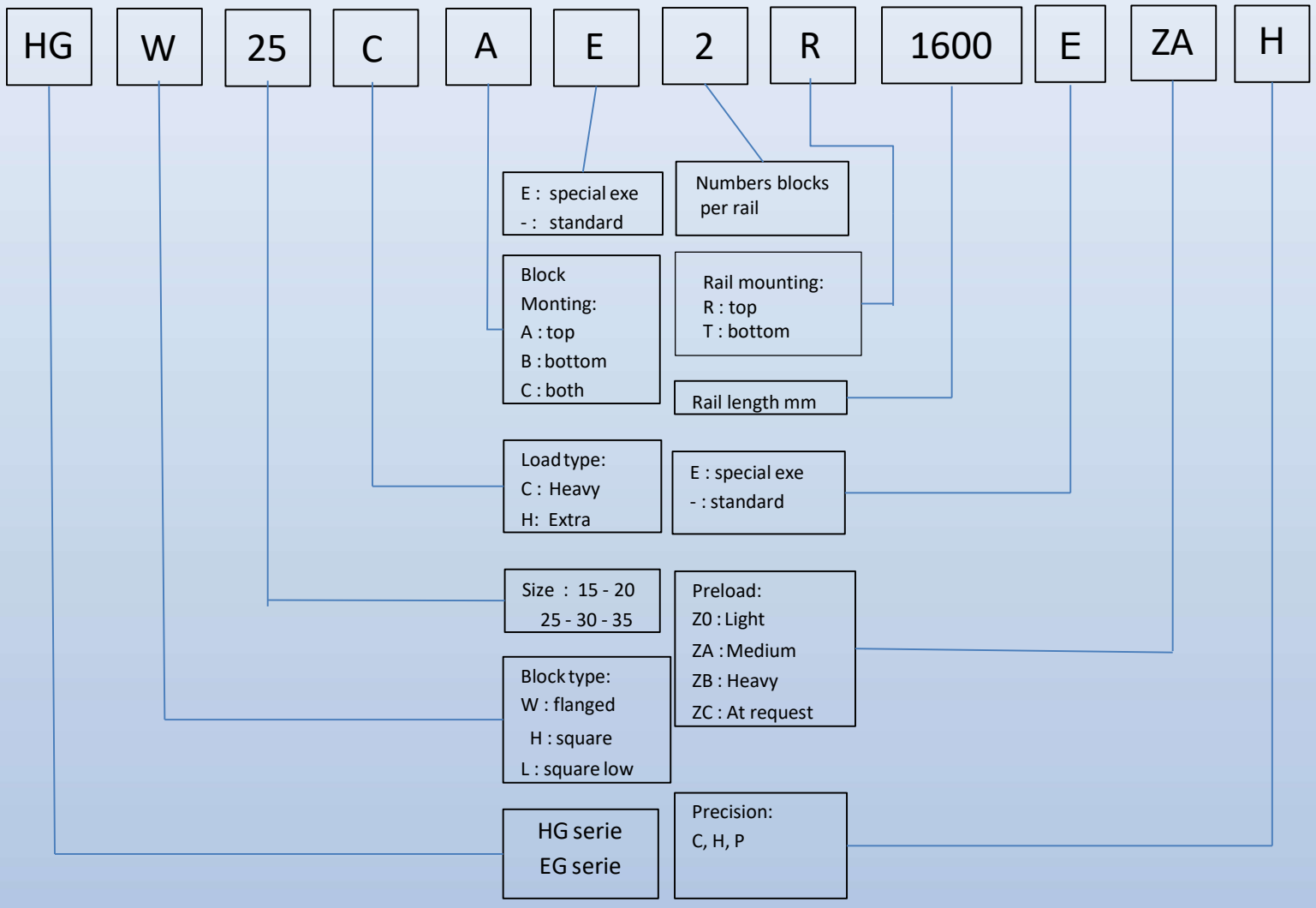
Recirculating linear bearings

"Circulate" means "to move in a circle or circuit; to move or pass through a circuit back to the starting point." And the term "recirculate" means to do this over and over again. Hence, recirculating bearings have rolling elements that move continuously through a circuit, or path, within the bearing. This design allows the bearing to travel any distance, regardless of the bearing length. In other words, where non-recirculating bearings have limited travel, in theory, recirculating bearings have unlimited travel, constrained only by the length of the rail or shaft guideway.

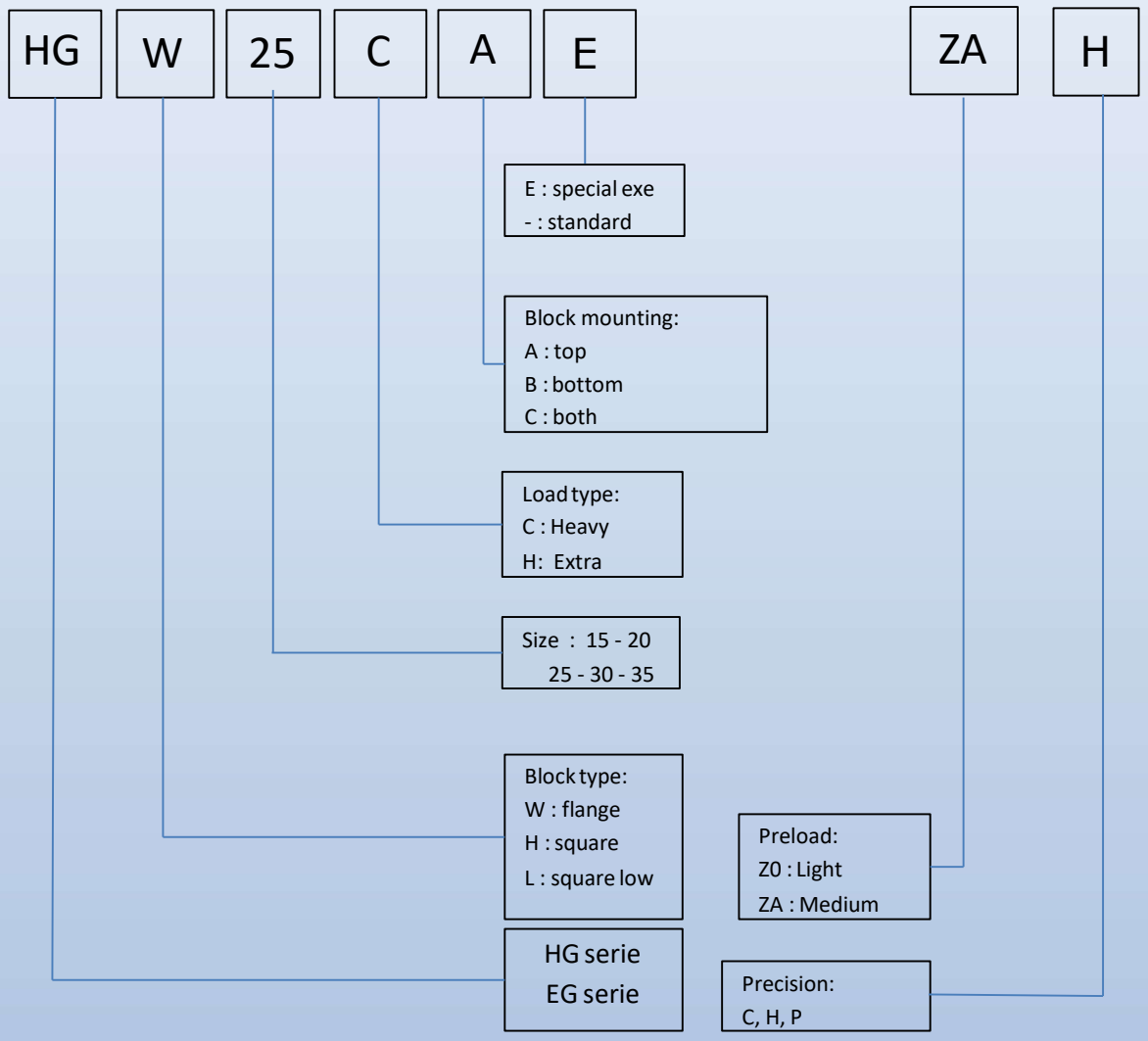


Recirculation does present some challenges though. First, as the balls or rollers circulate through the bearing, they move from a-no-load-carrying zone (sometimes referred to as the return zone) to a load-carrying zone. This variation of the balls (or rollers) from a non-loaded to a loaded state causes pulsations, which affect the bearing's travel accuracy. Improving the smoothness of the circulation process has been a priority for manufacturers in recent years, with new designs for the recirculation zone yielding improved travel accuracies.

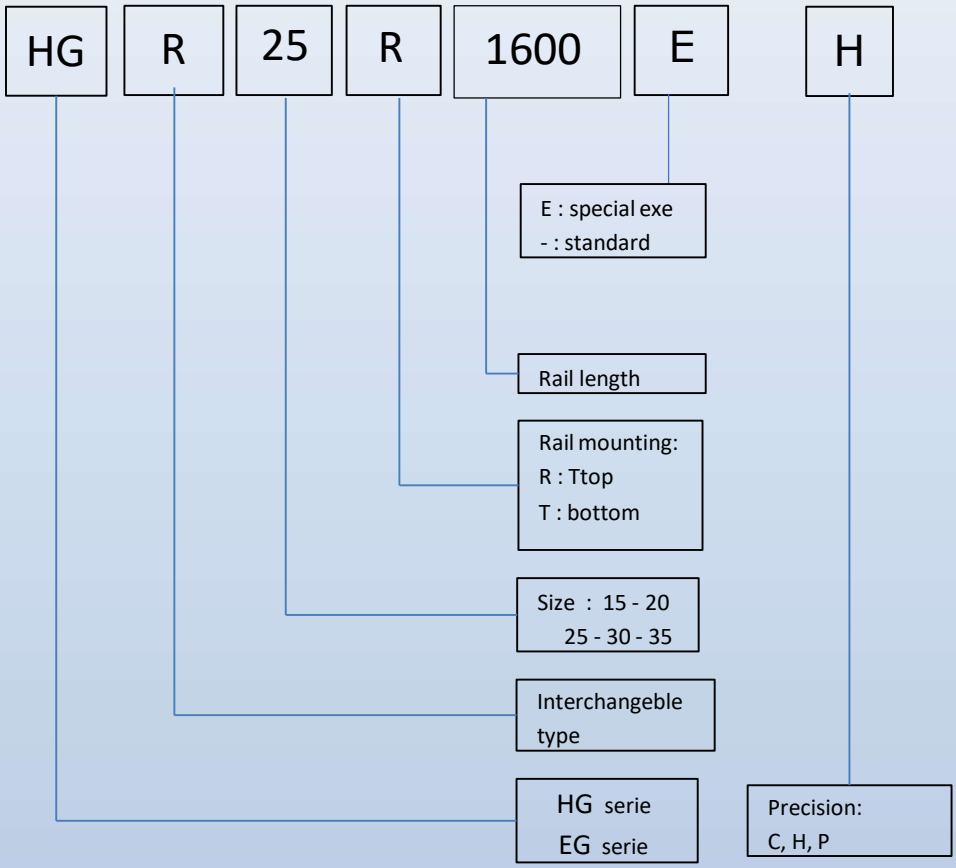
ASSEMBLED LINEAR GUIDE DESIGNATION



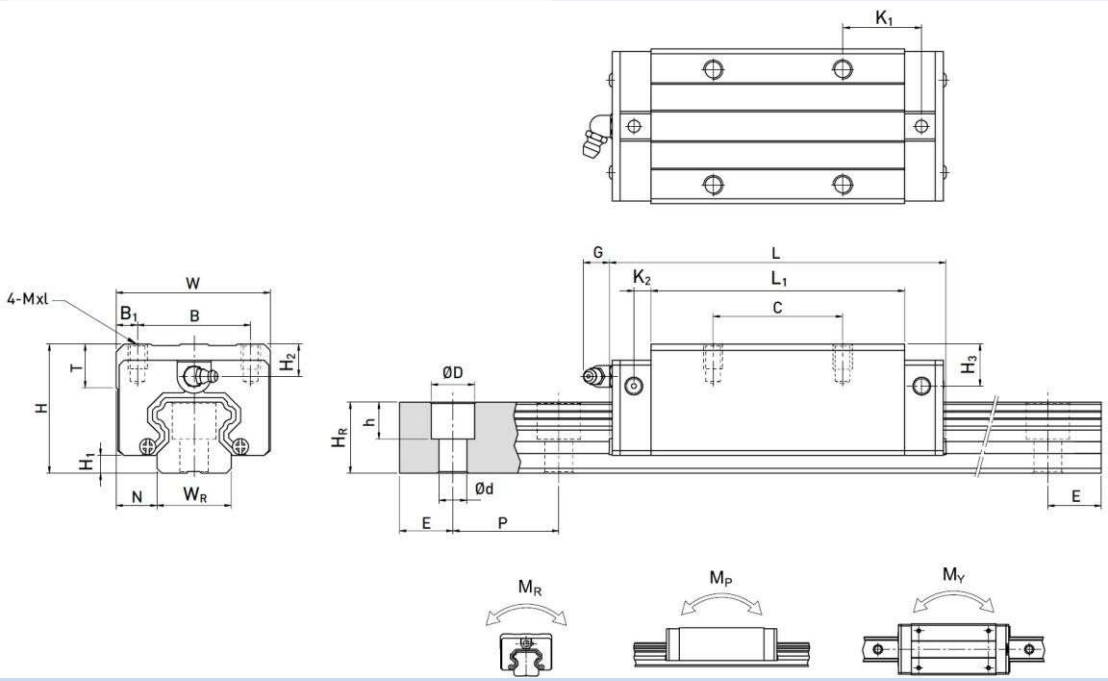
BLOCK DESIGNATION



RAIL DESIGNATION

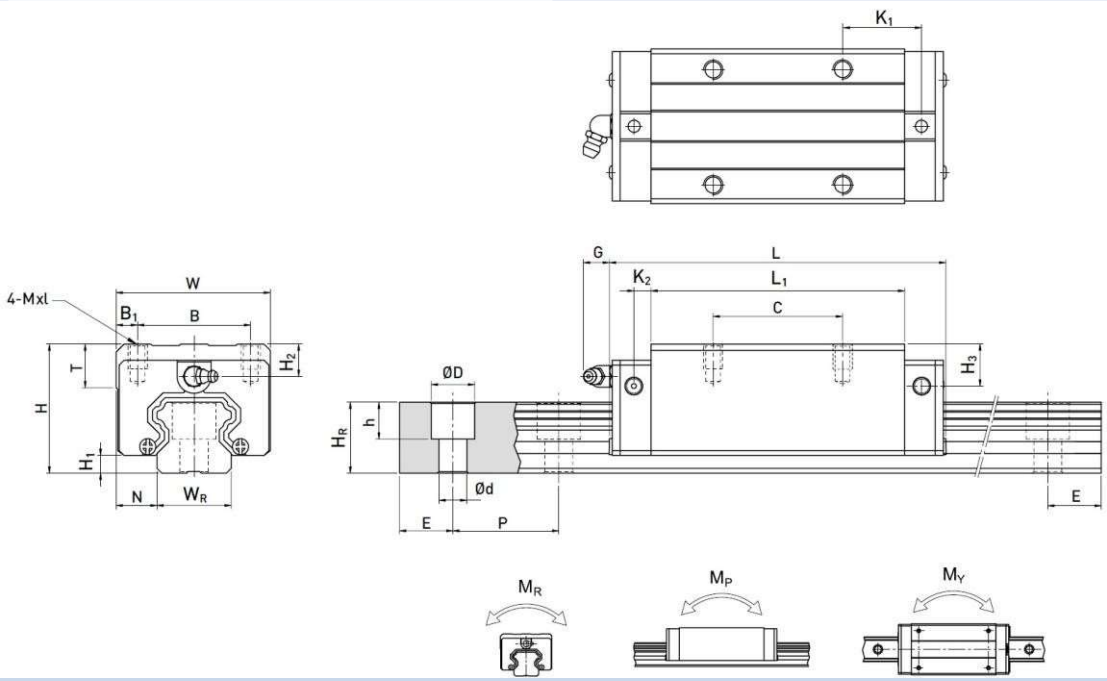


HGH BLOCK SERIE



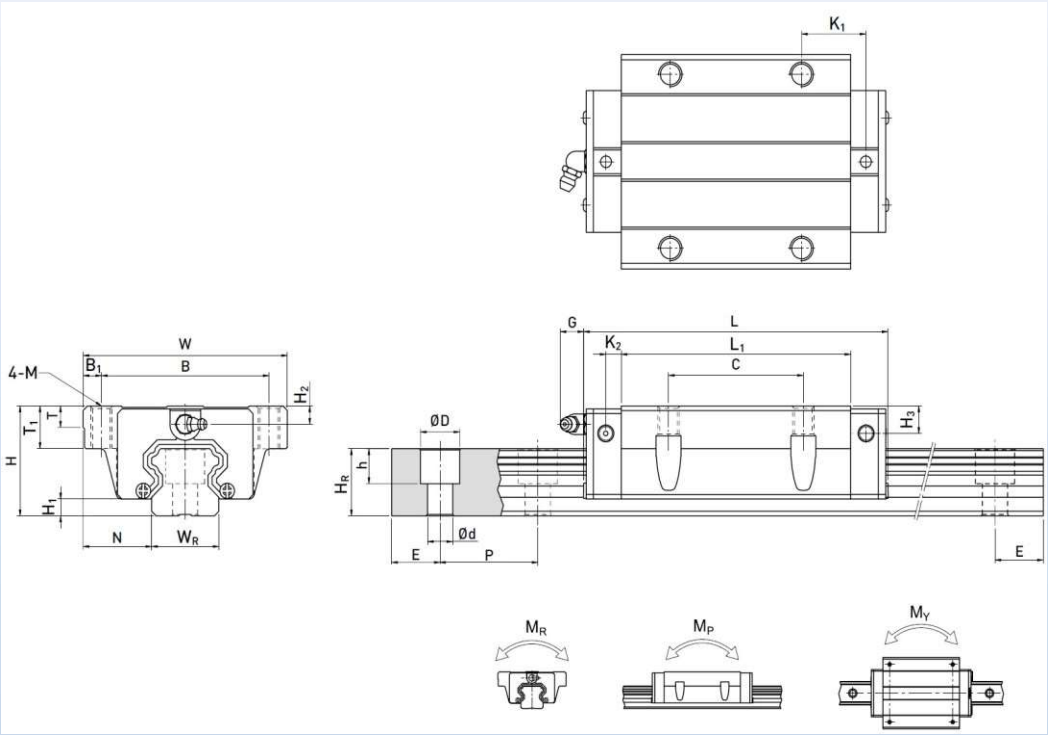
HGH	Dimensions of Assembly [mm]			Dimensions of Block [mm]											
	H	H1	N	W	B	B1	C	L1	L	K1	G	M×I	T	H2	H3
HGH15CA	28	4.3	9.5	34	26	4	26	39.4	61.4	10	5.3	M4×5	6	7.95	7.7
HGH20CA	30	4.6	12	44	32	6	36	50.5	77.5	12.25	12	M5×6	8	6	7
HGH20HA	30	4.6	12	44	32	6	50	65.2	92.2	12.6	12	M5×6	8	6	7
HGH25CA	40	5.5	12.5	48	35	6.5	35	58	84	16.8	12	M6×6	8	10	13
HGH25HA	40	5.5	12.5	48	35	6.5	50	78.6	104.6	19.6	12	M6×6	8	10	13
HGH30CA	45	6	16	60	40	10	40	70	97.4	20.25	12	M8×10	8.5	9.5	13.8
HGH30HA	45	6	16	60	40	10	60	93	120.4	21.75	12	M8×10	8.5	9.5	13.8
HGH35CA	55	7.5	18	70	50	10	50	80	112.4	20.6	12	M8×12	10.2	16	19.6
HGH35HA	55	7.5	18	70	50	10	72	105.8	138.2	22.5	12	M8×12	10.2	16	19.6
HGH45CA	70	9.8	20.5	86	60	13	60	97	139.4	23	12.9	M10×17	16	18.5	30.5
HGH45HA	70	9.8	20.5	86	60	13	80	128.8	171.2	28.9	12.9	M10×17	16	18.5	30.5
HGH55CA	80	13	23.5	100	75	12.5	75	117.7	166.7	27.35	12.9	M12×18	17.5	22	29
HGH55HA	80	13	23.5	100	75	12.5	95	155.8	204.8	36.4	12.9	M12×18	17.5	22	29
HGH65CA	90	15	31.5	126	76	25	70	144.2	200.2	43.1	12.9	M16×20	25	15	15
HGH65HA	90	15	31.5	126	76	25	120	203.6	259.6	47.8	12.9	M16×20	25	15	15

HGH BLOCK SERIE



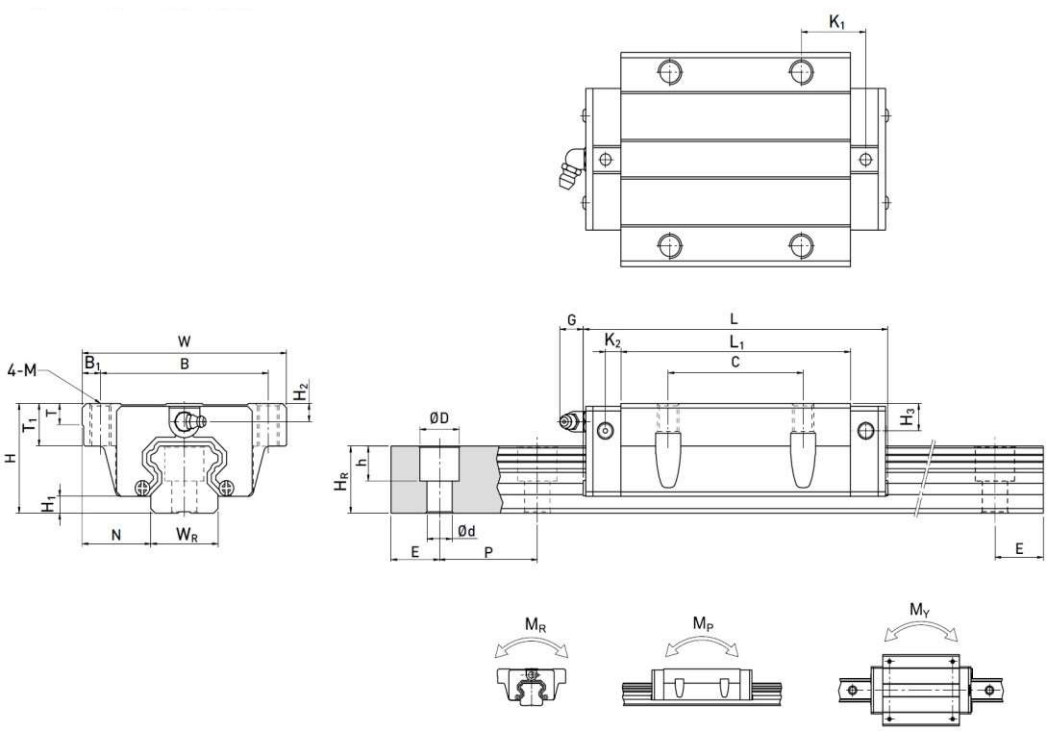
HGH	Mounting Bolt for Rail [mm]	Basic Dynamic Load C [kN]	Basic static Load c0a [kN]	Static rated moment [kNm]			Weight	
							Rail	Block
				MR	MP	MY	[Kg/m]	[Kg]
HGH15CA	**M4X16**	14,70	23,47	0,12	0,10	0,10	0,18	1,45
HGH20CA	**M5X16**	27,10	36,68	0,27	0,20	0,20	0,30	2,21
HGH20HA	**M5X16**	32,70	47,96	0,35	0,35	0,35	0,39	2,21
HGH25CA	**M6X20**	34,90	52,82	0,42	0,33	0,33	0,51	3,21
HGH25HA	**M6X20**	42,20	69,07	0,56	0,57	0,57	0,69	3,21
HGH30CA	**M8X25**	48,50	71,87	0,66	0,53	0,53	0.69	4,47
HGH30HA	**M8X25**	58,60	93,99	0,88	0,92	0,92	1,16	4,47
HGH35CA	**M8X25**	64,60	93,88	1,16	0,81	0,81	1,45	6,30
HGH35HA	**M8X25**	77,90	122,77	1,54	1,40	1,40	1,92	6,30
HGH45CA	**M12X35**	103,80	146,71	1,98	1,55	1,55	2,73	10,41
HGH45HA	**M12X35**	125,30	191,85	2,63	2,68	2,68	3,61	10,41
HGH55CA	**M14X45**	153,20	211,23	3,69	2,64	2,64	4,17	15,08
HGH55HA	**M14X45**	184,90	276,23	4,88	4,57	4,57	5,49	15,08
HGH65CA	**M16X50**	213,20	287,48	6,65	4,27	4,27	7,00	21,18
HGH65HA	**M16X50**	277,80	420,17	9,38	7,38	7,38	9,82	21,18

HGW BLOCK SERIE



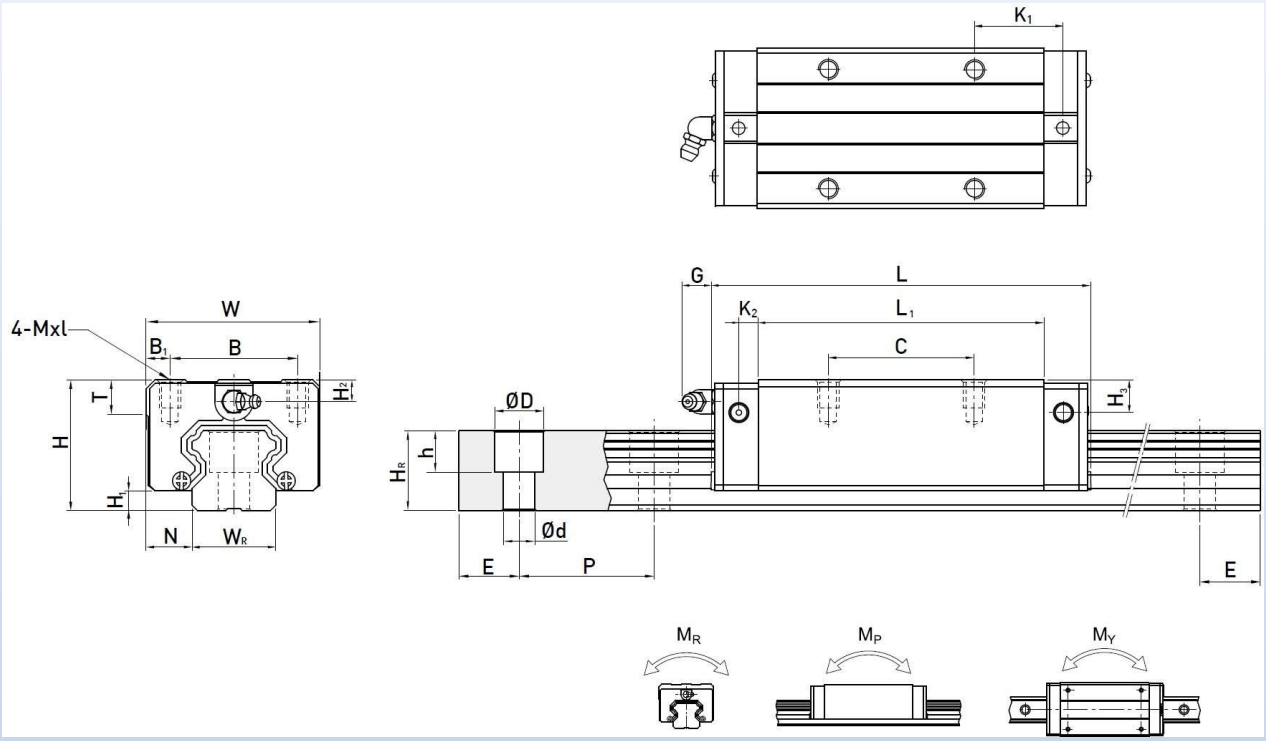
HGW	Dimensions of Assembly [mm]			Dimensions of Block [mm]											
	H	H1	N	W	B	B1	C	L1	L	K1	G	M	T	H2	H3
HGW15CA	24	4,3	16	47	38	4,5	30	39,4	61,4	8	5,3	M5	6	3,95	3,7
HGW20CA	30	4,6	21,5	63	53	5	40	50,5	77,5	10,25	12	M6	8	6	7
HGW20HA	30	4,6	21,5	63	53	5	40	65,2	92,2	17,6	12	M6	8	6	7
HGW25CA	36	5,5	23,5	70	57	6,5	45	58	84	11,8	12	M8	8	6	9
HGW25HA	36	5,5	23,5	70	57	6,5	45	78,6	104,6	22,1	12	M8	8	6	9
HGW30CA	42	6	31	90	72	9	52	70	97,4	14,25	12	M10	8,5	6,5	10,8
HGW30HA	42	6	31	90	72	9	52	93	120,4	25,75	12	M10	8,5	6,5	10,8
HGW35CA	48	7,5	33	100	82	9	62	80	112,4	14,6	12	M10	10,1	9	12,6
HGW35HA	48	7,5	33	100	82	9	62	105,8	138,2	27,5	12	M10	10,1	9	12,6
HGW45CA	60	9,5	37,5	120	100	10	80	97	139,4	13	12,9	M12	15,1	8,5	20,5
HGW45HA	60	9,5	37,5	120	100	10	80	128,8	171,2	28,9	12,9	M12	15,1	8,5	20,5
HGW55CA	70	13	43,5	140	116	12	95	117,7	166,7	17,35	12,9	M14	17,5	12	19
HGW55HA	70	13	43,5	140	116	12	95	155,8	204,8	36,4	12,9	M14	17,5	12	19
HGW65CA	90	15	53,5	170	142	14	110	144,2	200,2	23,1	12,9	M16	25	15	15
HGW65HA	90	15	53,5	170	142	14	110	203,6	259,6	52,8	12,9	M16	25	15	15

HGW BLOCK SERIE



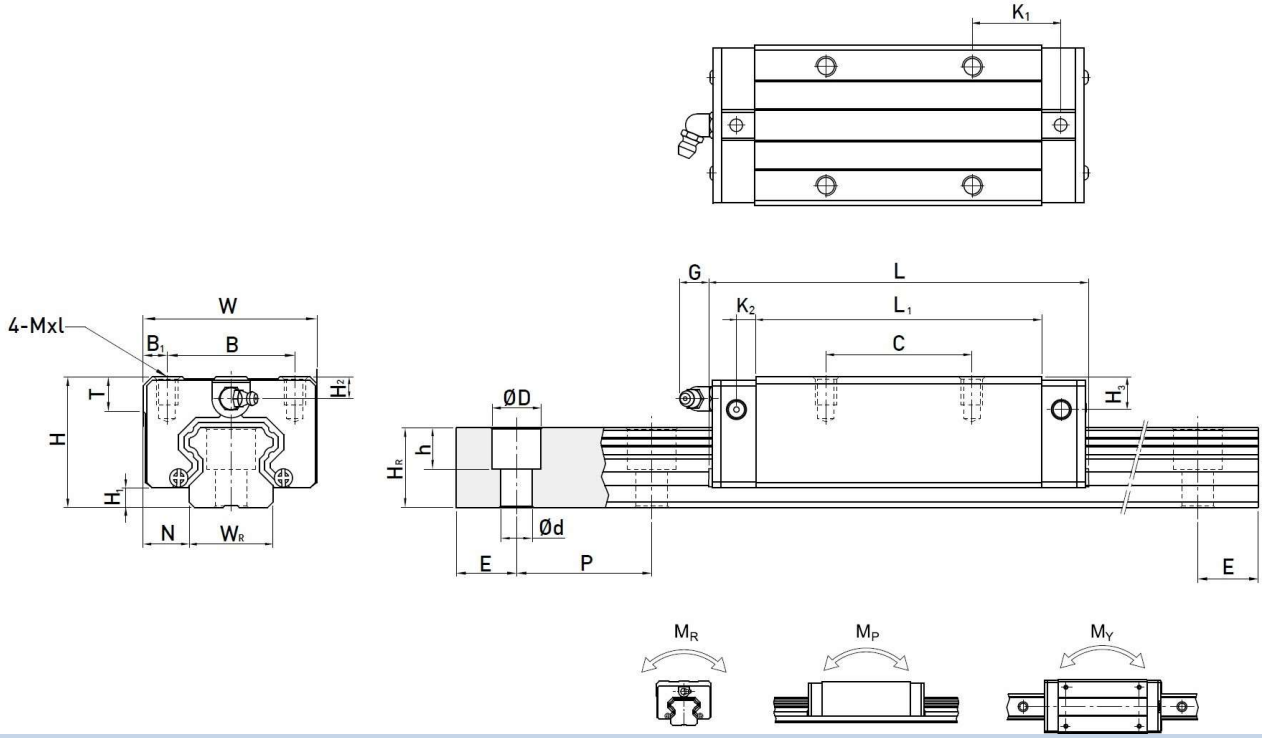
HGW	Mounting Bolt for Rail [mm]l	Basic Dynamic Load C [kN]	Basic static Load c0a [kN]	Static Rated Moment [kN m]			Weight	
				MR	MP	MY	Rail [kg/m]	Block [kg]
HGW15CA	M4×16	14,70	23,47	0,12	0,10	0,10	0.18	1.45
HGW20CA	M5×16	27,10	36,68	0,27	0,20	0,20	0.30	2.21
HGW20HA	M5×16	32,70	47,96	0,35	0,35	0,35	0.39	2.21
HGW25CA	M6×20	34,90	52,82	0,42	0,33	0,33	0.51	3.21
HGW25HA	M6×20	42,20	69,07	0,56	0,57	0,57	0.69	3.21
HGW30CA	M8×25	48,50	71,87	0,66	0,53	0,53	0.68	4.47
HGW30HA	M8×25	58,60	93,99	0,88	0,92	0,92	1.16	4.47
HGW35CA	M8×25	64,60	93,88	1,16	0,81	0,81	1.45	6.30
HGW35HA	M8×25	77,90	122,77	1,54	1,40	1,40	1.92	6.30
HGW45CA	M12×35	103,80	146,71	1,98	1,55	1,55	2.73	10.41
HGW45HA	M12×35	125,30	191,85	2,63	2,68	2,68	3.61	10.41
HGW55CA	M14×45	153,20	211,23	3,69	2,64	2,64	4.17	15.08
HGW55HA	M14×45	184,90	276,23	4,88	4,57	4,57	5.49	15.08
HGW65CA	M16×50	213,20	287,48	6,65	4,27	4,27	7.00	21.18
HGW65HA	M16×50	277,80	420,17	9,38	7,38	7,38	9.82	21.18

HGL BLOCK SERIE



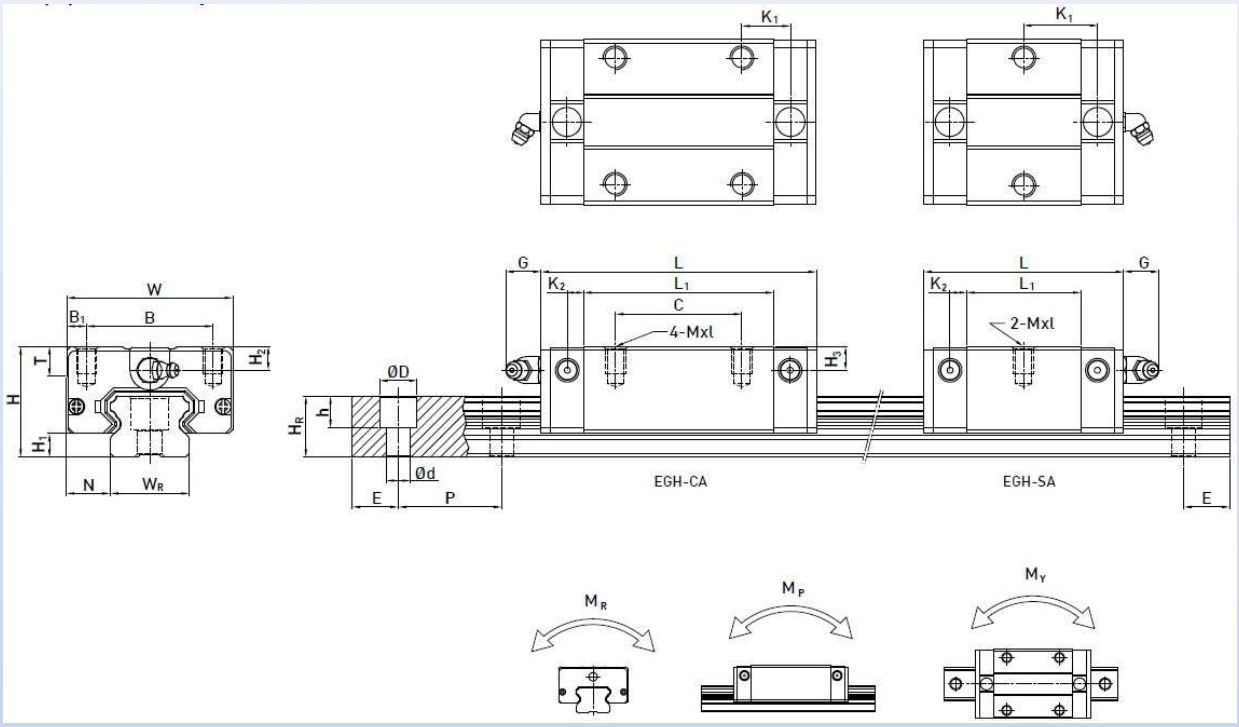
HGL	Dimensions of Assembly [mm]			Dimensions of Block [mm]												
	H	H1	N	W	B	B1	C	L1	L	K1	K2	G	M×I	T	H2	H3
HGL15CA	24	4.3	9.5	34	26	4	26	39.4	61.4	10	4,85	5.3	M4×5	6	3.95	3.7
HGL25CA	36	5.5	12.5	48	35	6.5	35	58	84	16.8	6	12	M6×6	8	6	5
HGL25HA	36	5.5	12.5	48	35	6.5	50	78.6	104.6	19.6	6	12	M6×6	8	6	5
HGL30CA	42	6	16	60	40	10	40	70	97.4	20.25	6	12	M8×10	8.5	6,5	10,8
HGL30HA	42	6	16	60	40	10	60	93	120.4	21.75	6	12	M8×10	8.5	6,5	10,8
HGL35CA	48	7.5	18	70	50	10	50	80	112.4	20.6	7	12	M8×12	10.2	9	12,6
HGL35HA	48	7.5	18	70	50	10	72	105.8	138.2	22.5	7	12	M8×12	10.2	9	12,6
HGL45CA	60	9.8	20.5	86	60	13	60	97	139.4	23	10	12.9	M10×17	16	8,5	20,5
HGL45HA	60	9.8	20.5	86	60	13	80	128.8	171.2	28.9	10	12.9	M10×17	16	8,5	20,5
HGL55CA	70	13	23.5	100	75	12.5	75	117.7	166.7	27.35	11	12.9	M12×18	17.5	12	19
HGL55HA	70	13	23.5	100	75	12.5	95	155.8	204.8	36.4	11	12.9	M12×18	17.5	12	19

HGL BLOCK SERIE



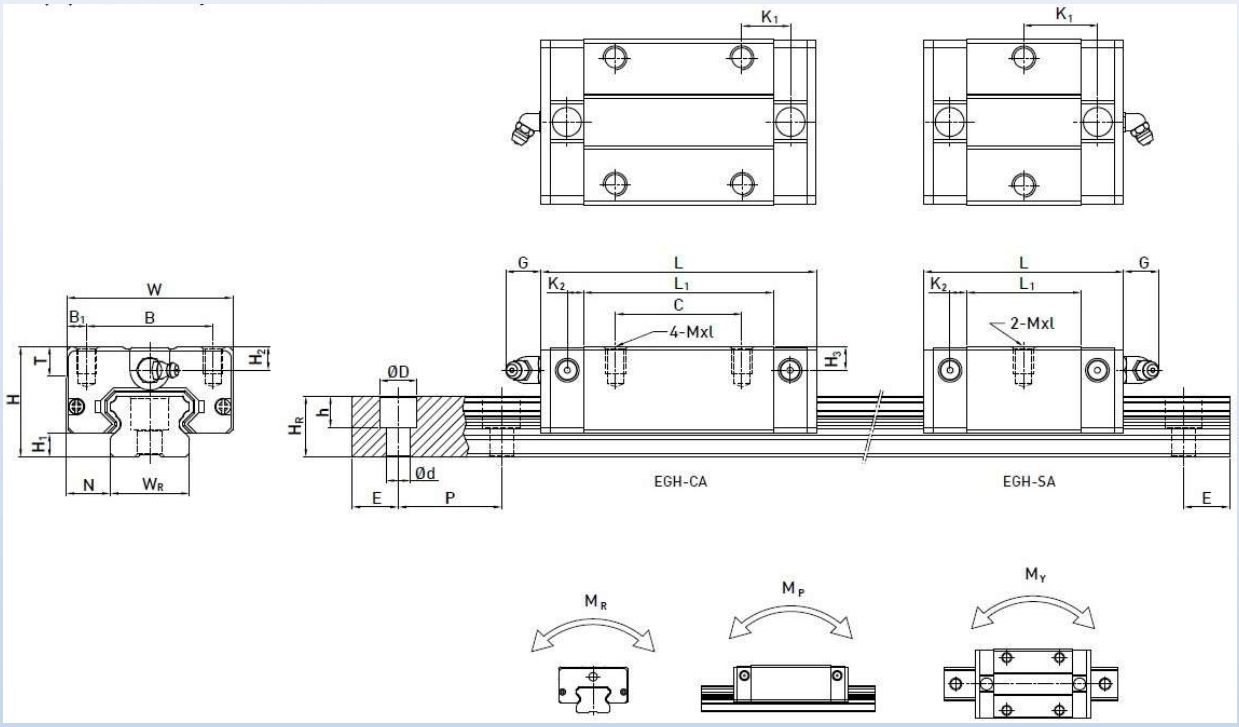
HGL	Mounting Bolt for Rail [mm]	Basic Dynamic Load Rating C(kN)	Basic Static Load Rating Co(kN)	Static Rated Momen [kN m]			Weight	
				MR	MP	MY	Rail [kg/m]	Block [kg]
HGL15CA	**M4×16**	14,70	23,47	0,12	0,10	0,10	0.18	1.45
HGL25CA	**M6x20**	34,90	52,82	0,42	0,33	0,33	0.30	2.21
HGL25HA	**M6×20**	42,20	69,07	0,56	0,57	0,57	0.39	2.21
HGL30CA	**M8×25**	48,50	71,87	0,66	0,53	0,53	0.51	3.21
HGL30HA	**M8×25**	58,60	93,99	0,88	0,92	0,92	0.69	3.21
HGL35CA	**M8×25**	64,60	93,88	1,16	0,81	0,81	0.68	4.47
HGL35HA	**M8×25**	77,90	122,77	1,54	1,40	1,40	1.16	4.47
HGL45CA	**M12×35**	103,80	146,71	1,98	1,55	1,55	1.45	6.30
HGL45HA	**M12×25**	125,30	191,85	2,63	2,68	2,68	1.92	6.30
HGL55CA	**M14×45**	153,20	211,23	3,69	2,64	2,64	2.73	10.41
HGL55HA	**M14×45**	184,90	276,23	4,88	4,57	4,57	3.61	10.41

EGH BLOCK SERIE



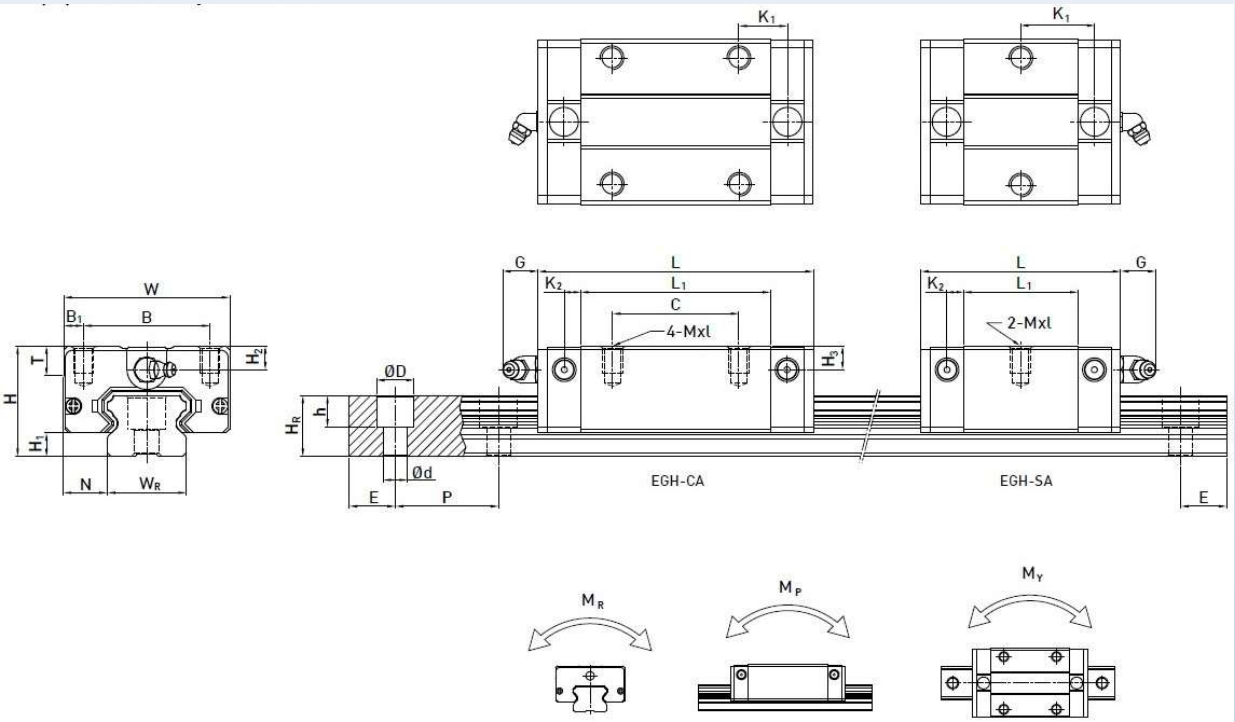
EGH	Dimensions of Assembly [mm]			Dimensions of Block [mm]												
	H	H1	N	W	B	B1	C	L1	L	K1	K2	G	M×l	T	H2	H3
EGH15SA	24	4.5	9.5	34	26	4	-	23.1	40.1	14.8	3.5	5.7	M4×6	6	5.5	6
EGH15CA	24	4.3	9.5	34	26	4	26	39.8	56.8	10.15	3.5	5.7	M4×6	6	5.5	6
EGH20SA	28	6	11	42	32	5	-	29	50	18.75	4.15	12	M5×7	7.5	6	6
EGH20CA	28	6	11	42	32	5	32	48.1	69.1	12.3	4.15	12	M5x7	7.5	6	6
EGH25SA	33	7	12.5	48	35	6.5	-	35.5	59.1	21.9	4.55	12	M6x9	8	8	8
EGH25CA	33	7	12.5	48	35	6.5	35	59	82.6	16.15	4.55	12	M6x9	8	8	8
EGH30SA	42	10	16	60	40	10	-	41.5	69.5	26.75	6	12	M8x12	9	8	9
EGH30CA	42	10	16	60	40	10	40	70.1	98.1	21.05	6	12	M8x12	9	8	9
EGH35SA	48	11	18	70	50	10	-	45	75	28.5	7	12	M8X12	10	8.5	8.5
EGH35CA	48	11	18	70	50	10	50	78	108	20	7	12	M8X12	10	8,5	8.5

EGH BLOCK SERIE



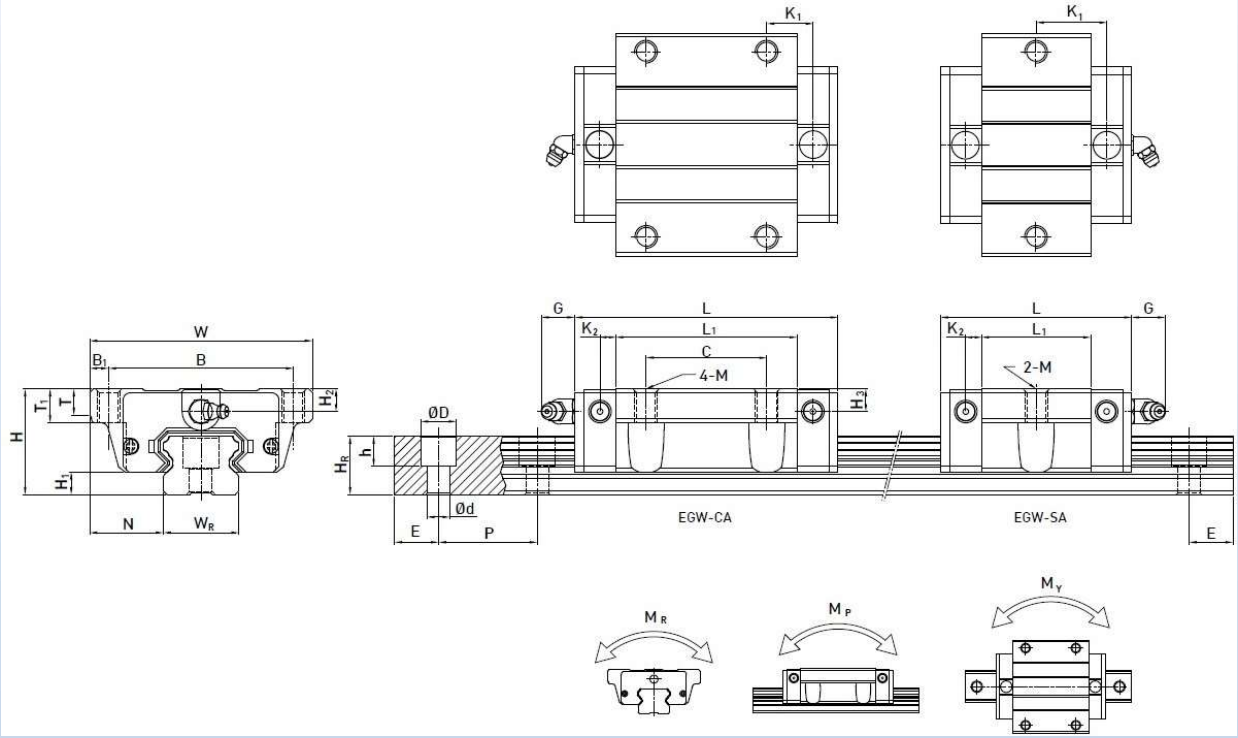
EGH	Mounting Bolt for Rail [mm]	Basic Dynamic Load C [KN]	Basic static Load c0a [KN]	Static rated moment [KNm]			Weight	
				MR	MP	MY	Rail [Kg/m]	Block [Kg]
EGH15SA	**M3X16**	5.35	9.40	0.08	0.04	0.04	1.25	0.09
EGH15CA	**M3X16**	7.83	16.19	0.13	0.10	0.10	1.25	0.15
EGH20SA	**M5X16**	7.23	12.74	0.13	0.06	0.06	2.08	0.15
EGH20CA	**M5X16**	10.31	21.13	0.22	0.16	0.16	2.08	0.24
EGH25SA	**M6X20**	11.40	19.50	0.23	0.12	0.12	2.67	0.25
EGH25CA	**M6X20**	16.27	32.40	0.38	0.32	0.32	2.67	0.41
EGH30SA	**M6X25**	16.42	28.10	0.40	0.21	0.21	4.35	0.45
EGH30CA	**M6X25**	23.70	47.46	0.68	0.55	0.55	4.35	0.76
EGH35SA	**M8X25**	22.66	37.38	0.56	0.31	0.31	6.14	0.66
EGH35CA	**M8X25**	33.35	64.84	0.98	0.69	0.69	6.14	1.13

EGH BLOCK SERIE



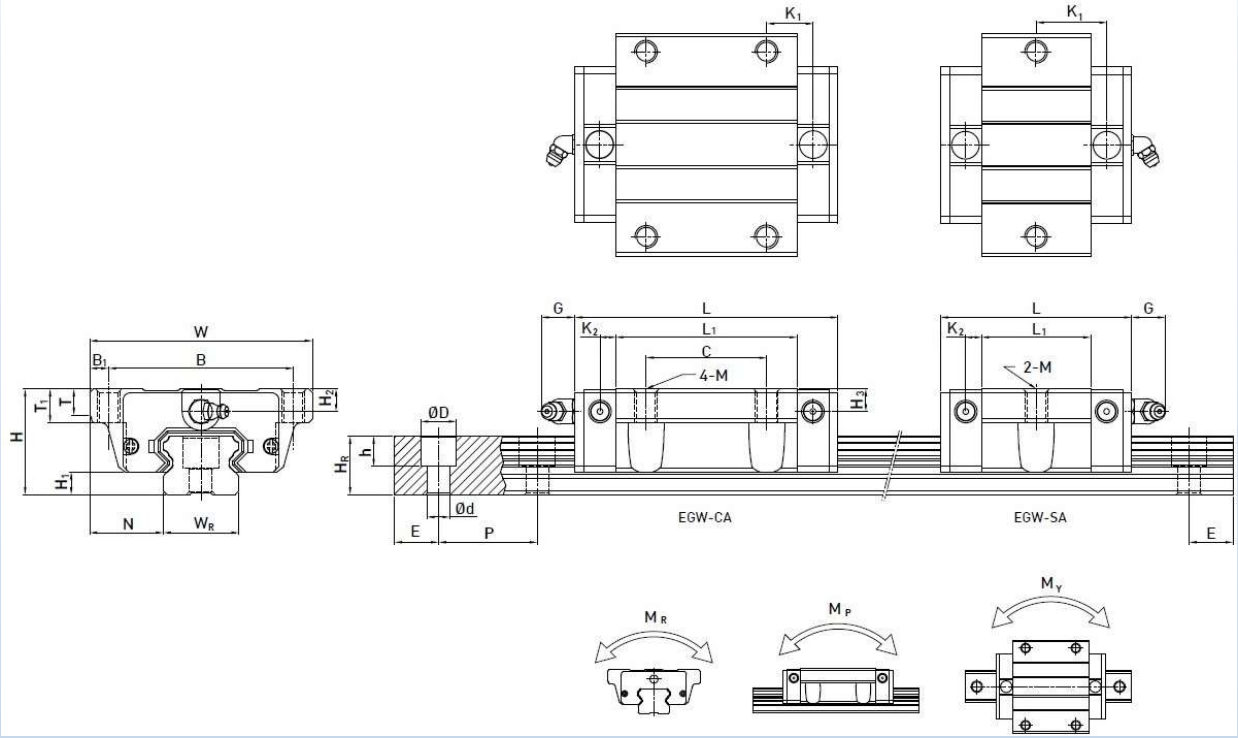
EGH	Dimensions of Rail [mm]						
	WR	HR	D	h	d	P	E
EGH15SA	15	12,5	6	4,5	3,5	60	20
EGH15CA	15	12,5	6	4,5	3,5	60	20
EGH20SA	20	15,5	9,5	8,5	6	60	20
EGH20CA	20	15,5	9,5	8,5	6	60	20
EGH25SA	23	18	11	9	7	60	20
EGH25CA	23	18	11	9	7	60	20
EGH30SA	28	23	11	9	7	80	20
EGH30CA	28	23	11	9	7	80	20
EGH35SA	34	27,5	14	12	9	80	20
EGH35CA	34	27,5	14	12	9	80	20

EGW BLOCK SERIE



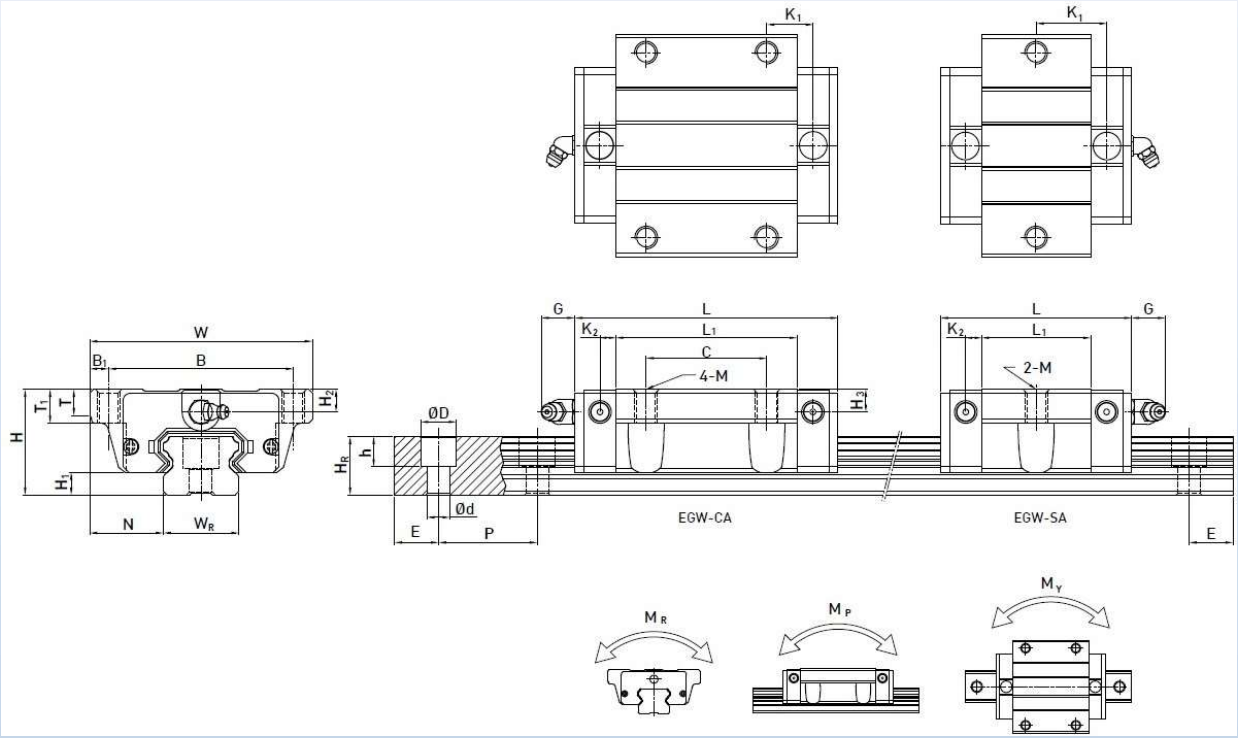
EGW	Dimensions of Assembly [mm]			Dimensions of Block [mm]													
	H	H1	N	W	B	B1	C	L1	L	K1	K2	G	M×l	T	H2	H3	H
EGW15SA	24	4.5	18.5	52	41	5.5	-	23.1	40.1	14.8	3.5	5.7	M5	5	7	5.5	6
EGW15CA	24	4.5	18.5	52	41	5.5	26	39.8	56.8	10.15	3.5	5.7	M5	5	7	5.5	6
EGW20SA	28	6	19.5	59	49	5	-	29	50	18.75	4.15	12	M6	7	9	6	6
EGW20CA	28	6	19.5	59	49	5	32	48.1	69.1	12.3	4.15	12	M6	7	9	6	6
EGW25SA	33	7	25	73	60	6.5	-	35.5	59.1	21.9	4.55	12	M8	7.5	10	8	8
EGW25CA	33	7	25	73	60	6.5	35	59	82.6	16.15	4.55	12	M8	7.5	10	8	8
EGW30SA	42	10	31	90	72	9	-	41.5	69.5	26.75	6	12	M10	7	10	8	9
EGW30CA	42	10	31	90	72	9	40	70.1	98.1	21.05	6	12	M10	7	10	8	9
EGW35SA	48	11	33	100	82	9	-	45	75	28.5	7	12	M10	10	13	8.5	8.5
EGW35CA	48	11	33	100	82	9	50	78	108	20	7	12	M10	10	13	8,5	8.5

EGW BLOCK SERIE



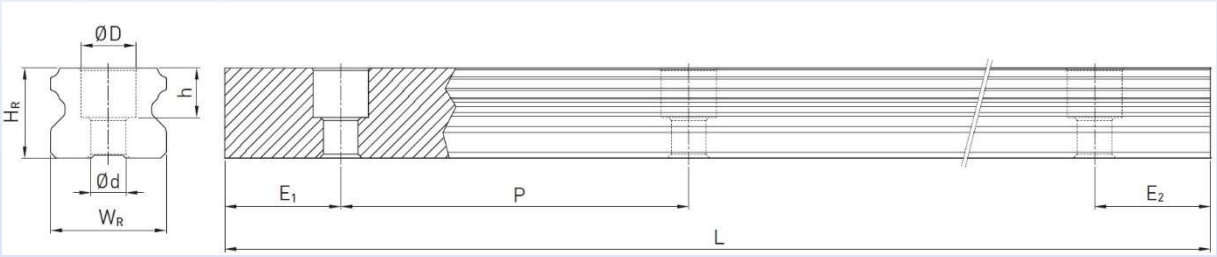
EGW	Mounting Bolt for Rail [mm]	Basic Dynamic Load C [KN]	Basic static Load c0a [KN]	Static rated moment [KNm]			Weight	
				MR	MP	MY	Rail [Kg/m]	Block [Kg]
EGW15SA	**M3X16**	5.35	9.40	0.08	0.04	0.04	1.25	0.12
EGW15CA	**M3X16**	7.83	16.19	0.13	0.10	0.10	1.25	0.21
EGW20SA	**M5X16**	7.23	12.74	0.13	0.06	0.06	2.08	0.19
EGW20CA	**M5X16**	10.31	21.13	0.22	0.16	0.16	2.08	0.32
EGW25SA	**M6X20**	11.40	19.50	0.23	0.12	0.12	2.67	0.35
EGW25CA	**M6X20**	16.27	32.40	0.38	0.32	0.32	2.67	0.59
EGW30SA	**M6X25**	16.42	28.10	0.40	0.21	0.21	4.35	0.62
EGW30CA	**M6X25**	23.70	47.46	0.68	0.55	0.55	4.35	1.04
EGW35SA	**M8X25**	22.66	37.38	0.56	0.31	0.31	6.14	0.84
EGW35CA	**M8X25**	33.35	64.84	0.98	0.69	0.69	6.14	1.45

EGW BLOCK SERIE



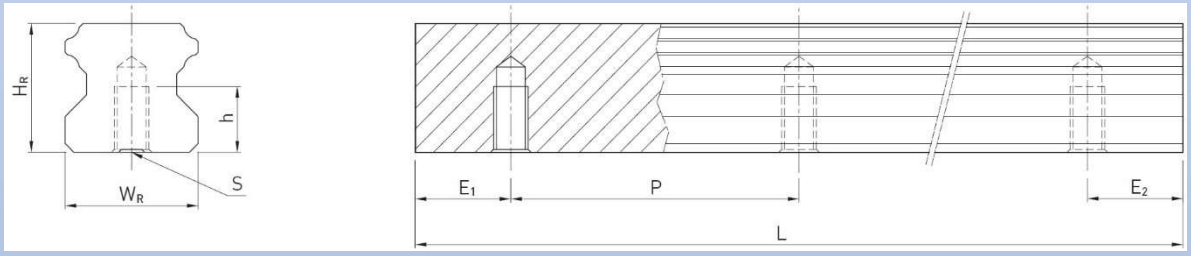
EGW	Dimensions of Rail [mm]						
	WR	HR	D	h	d	P	E
EGW15SA	15	12,5	6	4,5	3,5	60	20
EGW15CA	15	12,5	6	4,5	3,5	60	20
EGW20SA	20	15,5	9,5	8,5	6	60	20
EGW20CA	20	15,5	9,5	8,5	6	60	20
EGW25SA	23	18	11	9	7	60	20
EGW25CA	23	18	11	9	7	60	20
EGW30SA	28	23	11	9	7	80	20
EGW30CA	28	23	11	9	7	80	20
EGW35SA	34	27,5	14	12	9	80	20
EGW35CA	34	27,5	14	12	9	80	20

HGR_R RAIL SERIE



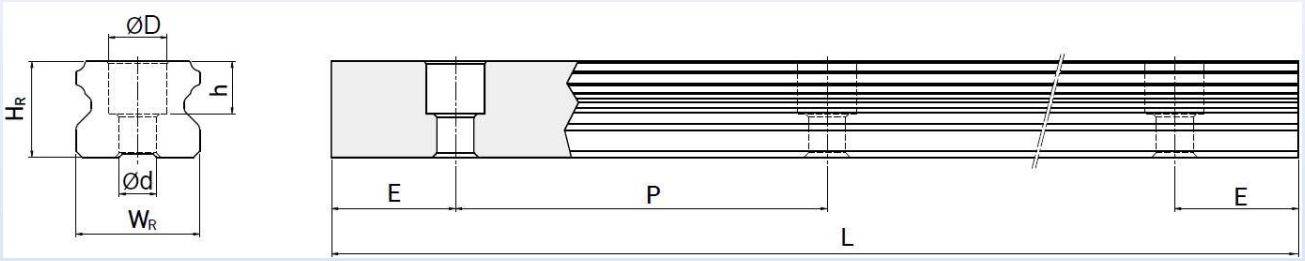
HGR_R	Mounting screws [mm]	Dimensions of Rail [mm]										
		WR	HR	D	h	d	P	L Max	L Max $E_1=E_2$	$E_{1/2}$ min	$E_{1/2}$ Max	Weight [Kg/m]
HGR15R	M4X16	15	15,0	7.5	5.3	4,5	60	4000	3900	6	54	1,45
HGR20R	M5X16	20	17.5	9.5	8.5	6,0	60	4000	3900	7	53	2,21
HGR25R	M6X20	23	22,0	11,0	9,0	7,0	60	4000	3900	8	52	3,21
HGR30R	M8X25	28	26,0	14,0	12,0	9,0	80	4000	3920	9	71	4,47
HGR35R	M8X25	34	29,0	14,0	12,0	9,0	80	4000	3920	9	71	6,3
HGR45R	M12X35	45	38,0	20,0	17,0	14,0	105	4000	3885	12	93	10,41
HGR55R	M14X45	53	44,0	23,0	20,0	16,0	120	4000	3840	14	106	15,08
HGR65R	M16X50	63	53,0	26,0	22,0	18,0	150	4000	3750	15	135	21,18

HGR_T RAIL SERIE



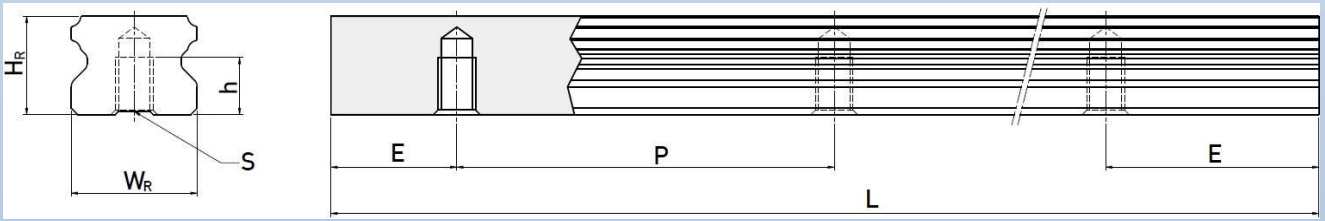
HGR_T	Dimensions of Rail [mm]									
	WR	H_R	S	h	P	L Max	L Max $E_1=E_2$	$E_{1/2}$ min	$E_{1/2}$ Max	Weight [Kg/m]
HGR15T	15	15,0	M5	8,0	60	4000	3900	6	54	1,48
HGR20T	20	17,5	M6	10,0	60	4000	3900	7	53	2,29
HGR25T	23	22,0	M6	12,0	60	4000	3900	8	52	3,35
HGR30T	28	26,0	M8	15,0	80	4000	3920	9	71	4,67
HGR35T	34	29,0	M8	17,0	80	4000	3920	9	71	6,51
HGR45T	45	38,0	M12	24,0	105	4000	3885	12	93	10,87
HGR55T	53	44,0	M14	24,0	120	4000	3840	14	106	15,67

EGR_R RAIL SERIE



EGR_R	Dimensions of Rail [mm]									
	WR	HR	Screws	h	P	L Max	L Max E1=E2	E1/2 min	E1/2 Max	Weight [Kg/m]
EGR15R	15	12.5	M3x16	4.5	60	4000	3900	6	54	1.26
EGR20R	20	15.5	M5x16	8.5	60	4000	3900	7	53	2.15
EGR25R	23	18.0	M6x20	9.0	60	4000	3900	8	52	2.79
EGR30R	28	23.0	M6x25	9.0	80	4000	3920	9	71	4,67
EGR35R	34	27.5	M8x25	12.0	80	4000	3920	9	71	6.34

EGR_T RAIL SERIE



EGR_T	Dimensions of Rail [mm]									
	WR	HR	S	h	P	L Max	L Max E1=E2	E1/2 min	E1/2 Max	Weight [Kg/m]
EGR15T	15	12.5	M5x0.8P	7.0	60	4000	3900	6	54	1.26
HGR20T	20	15.5	M6x1P	9.0	60	4000	3900	7	53	2.15
HGR25T	23	18.0	M6x1P	10.0	60	4000	3900	8	52	2.79
HGR30T	28	23.0	M8x1.25P	14.0	80	4000	3920	9	71	4,67
HGR35T	34	27.5	M8x1.25P	17.0	80	4000	3920	9	71	6.34

HGR_R / HGR_T RAIL

PRELOAD CLASSES

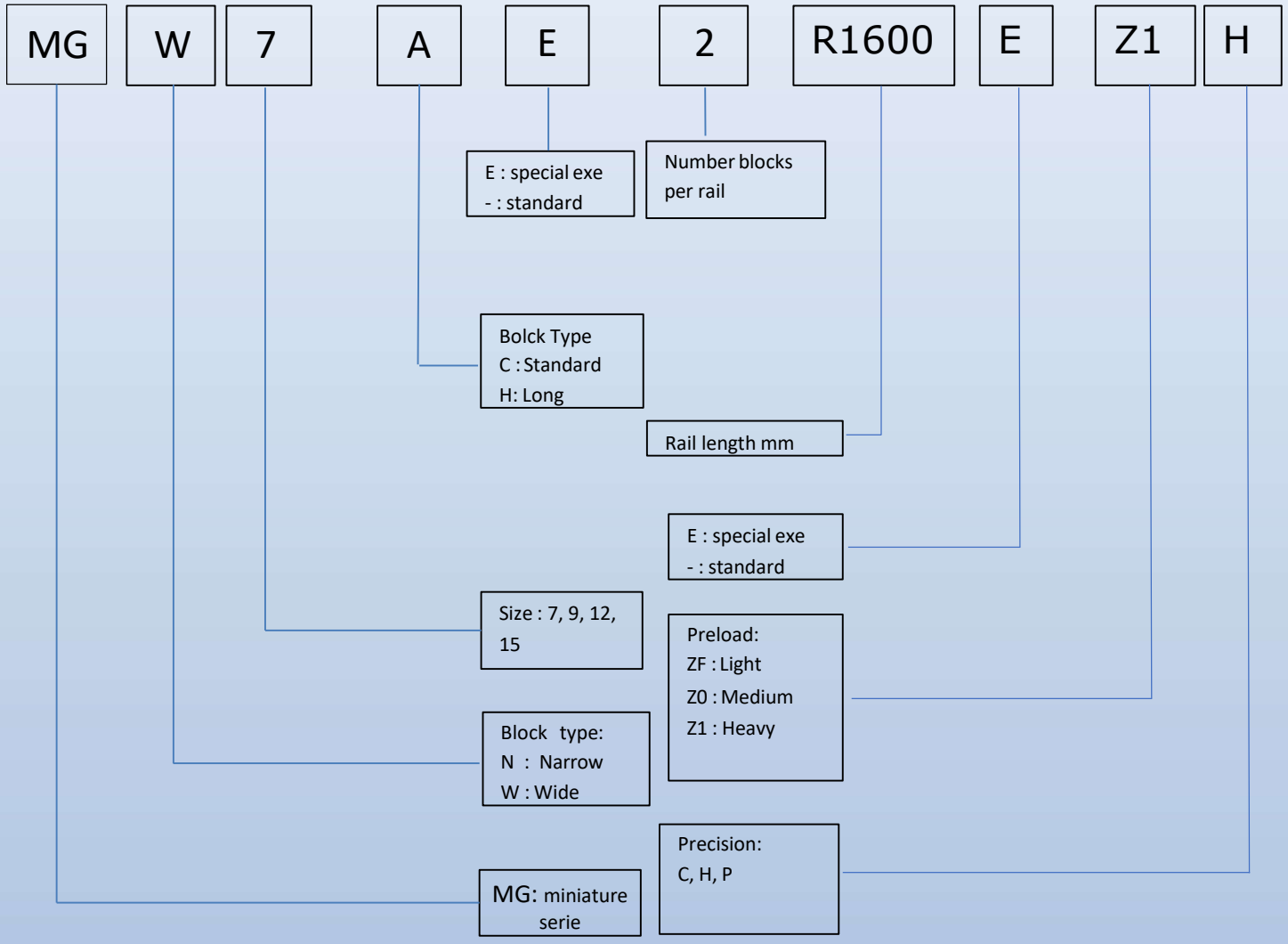
Class	Code	Preload	Condition
Light Preload	Z0	0 ~ 0.02 C	Certain load direction, low impact, Low precision required
Medium Preload	ZA	0.05 ~ 0.07 C	High precision required
Heavy Preload	ZB	0.10 ~ 0.12 C	High rigidity required, with vibration and impact
Special Preload	ZC	At request	Special applications

EGR_R / EGR_T RAIL

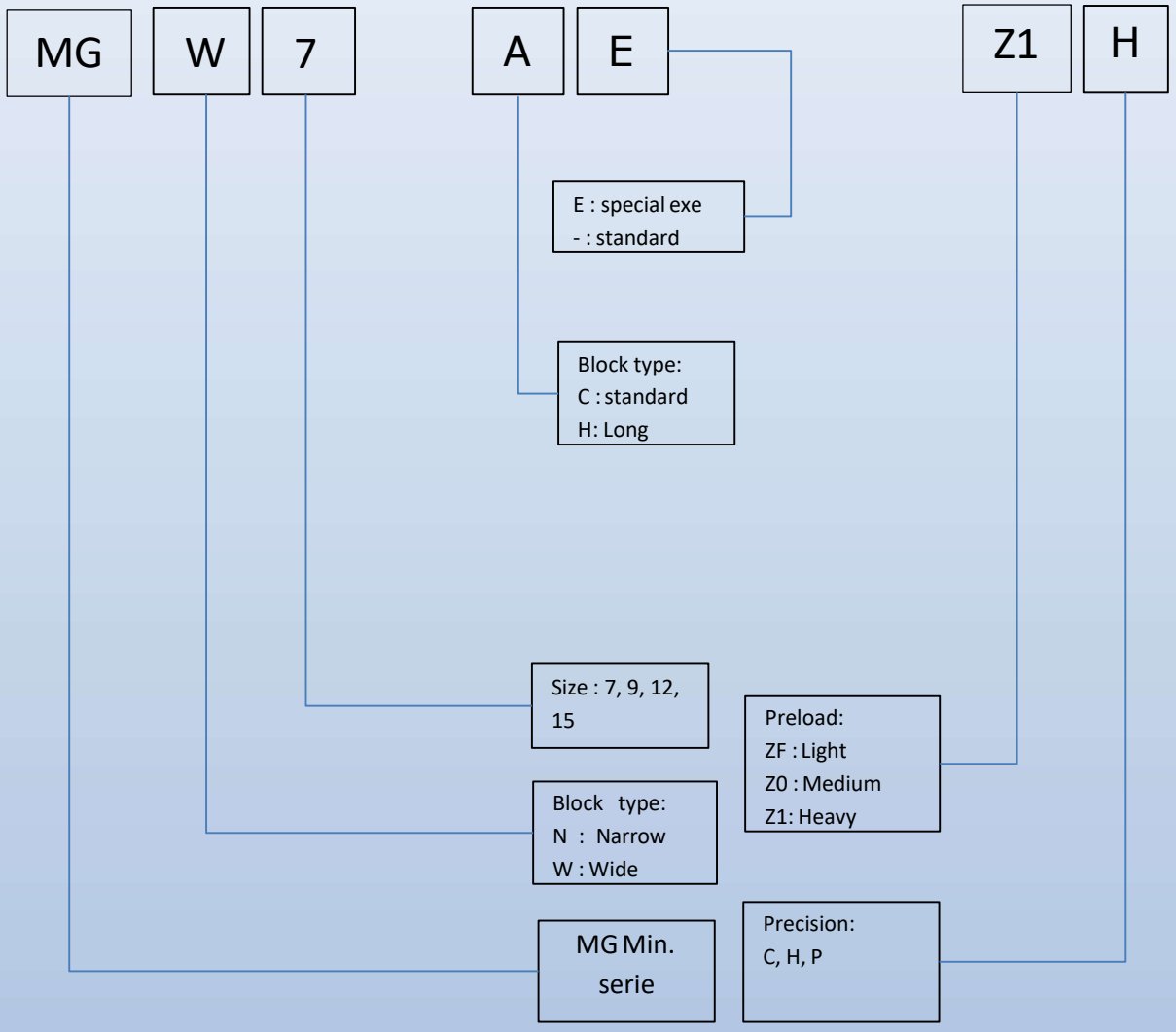
PRELOAD CLASSES

Class	Code	Preload	Condition
Very Light preload	Z0	0 – 0.02 C	Certain load direction, low impact, Low precision required
Light Preload	ZA	0.03 – 0.05 C	Low load and high precision required
Medium Preload	ZB	0.06 – 0.08 C	High rigidity required, with vibration and impact
Special Preload	ZC	At request	Special applications

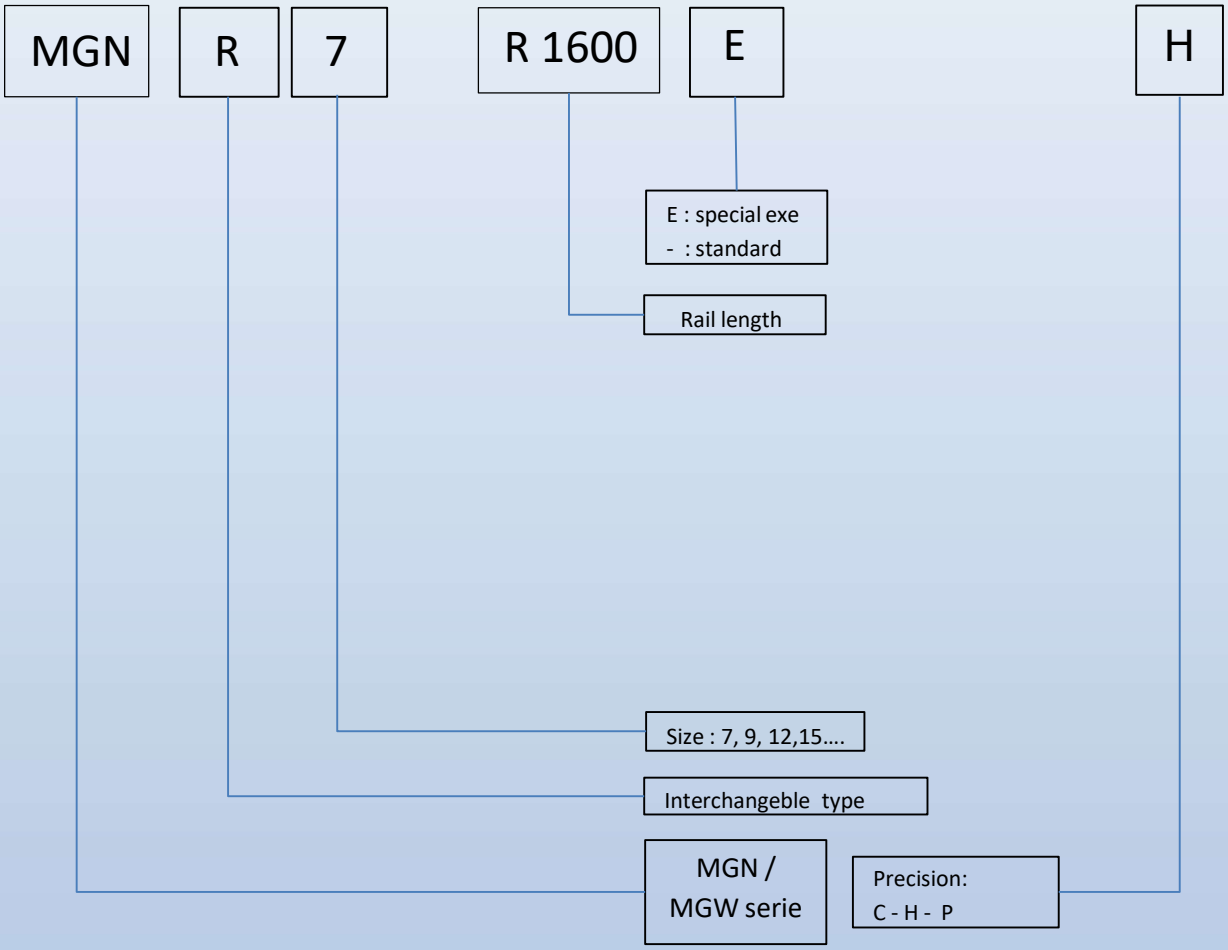
MINIATURE ASSEMBLED LINEAR GUIDE DESIGNATION



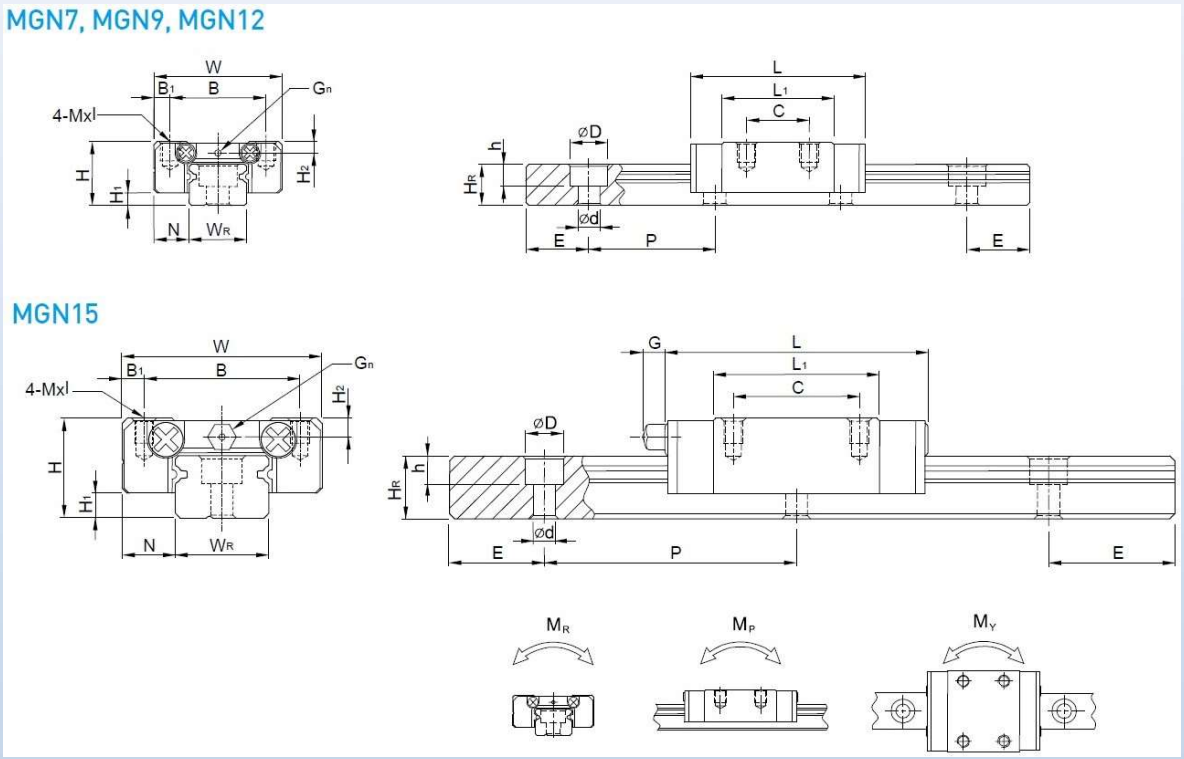
MINIATURE BLOCK DESIGNATION



MINIATURE RAIL DESIGNATION



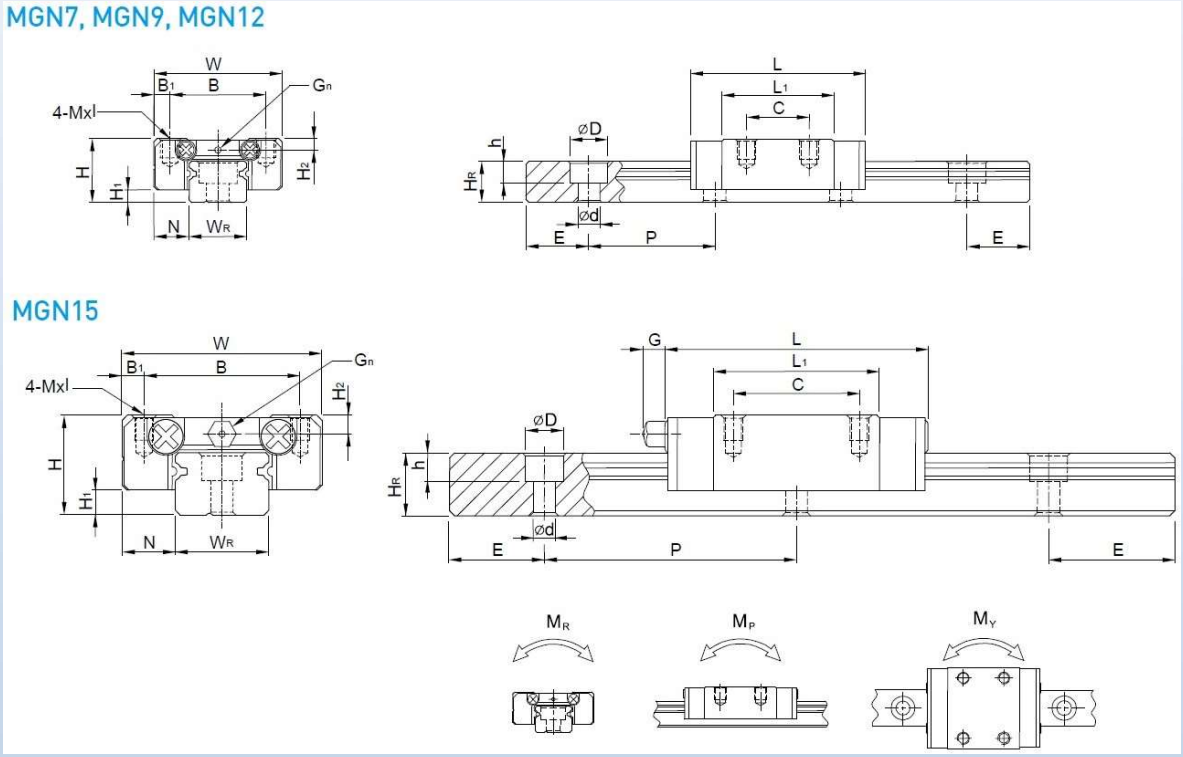
MGN SERIE



MGN	Dimensions of Assembly [mm]			Dimensions of Block [mm]									
	H	H1	N	W	B	B1	C	L1	L	G	Gn	Mxl	H2
MGN7C	8	1.5	5	17	12	2.5	8	13.5	22.5	-	Φ1.2	M2x2.5	1.5
MGN7H	8	1.5	5	17	12	2.5	13	21.8	30.8	-	Φ1.2	M2x2.5	1.5
MGN9C	10	2	5.5	20	15	2.5	10	18.9	28.9	-	Φ1.4	M3x3	1.8
MGN9H	10	2	5.5	20	15	2.5	16	29.9	39.9	-	Φ1.4	M3x3	1.8
MGN12C	13	3	7.5	27	20	3.5	15	21.7	34.7	-	Φ2	M3x3.5	2.5
MGN12H	13	3	7.5	27	20	3.5	20	32.4	45.4	-	Φ2	M3x3.5	2.5
MGN15C	16	4	8.5	32	25	3.5	20	26.7	42.1	4.5	Φ3	M3x4	3
MGN15H	16	4	8.5	32	25	3.5	25	43.4	58.8	4.5	Φ3	M3x4	3

MGN SERIE

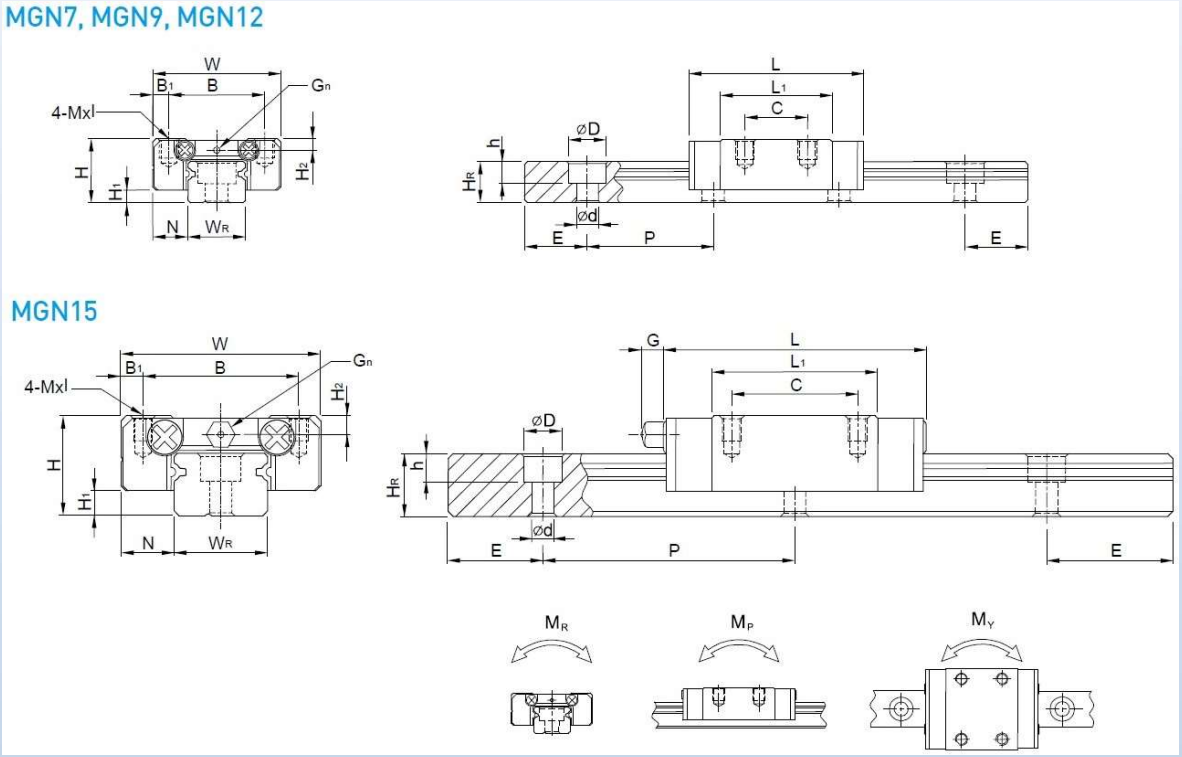
MGN7, MGN9, MGN12



MGN	Dimensions of rail [mm]								
	H2	WR	WB	HR	D	h	d	P	E
MGN7C	1.5	7	7	4.8	4.2	2.3	2.4	15	5
MGN7H	1.5	7	7	4.8	4.2	2.3	2.4	15	5
MGN9C	1.8	9	9	6.5	6	3.5	3.5	20	7.5
MGN9H	1.8	9	9	6.5	6	3.5	3.5	20	7.5
MGN12C	2.5	12	12	8	6	4.5	3.5	25	10
MGN12H	2.5	12	12	8	6	4.5	3.5	25	10
MGN15C	3	15	15	10	6	4.5	3.5	40	15
MGN15H	3	15	15	10	6	4.5	3.5	40	15

MGN SERIE

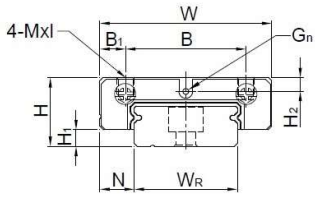
MGN7, MGN9, MGN12

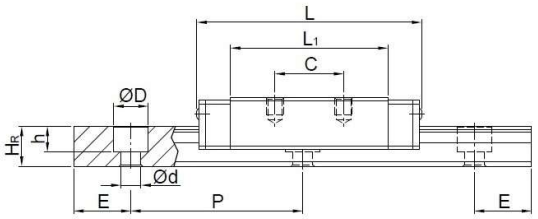


MGN	Mounting Bolt for Rail [mm]	Basic Dynamic Load C [KN]	Basic static Load c0a [KN]	Static rated moment [Nm]			Weight	
				MR	MP	MY	Rail [Kg/m]	Block [Kg]
MGN7C	**M2x6**	0.98	1.24	4.70	2.84	2.84	0.22	0.010
MGN7H	**M2x6**	1.37	1.96	7.64	4.80	4.80	0.22	0.015
MGN9C	**M3x8**	1.86	2.55	11.76	7.35	7.35	0.38	0.016
MGN9H	**M3x8**	2.55	4.02	19.60	18.62	18.62	0.38	0.026
MGN12C	**M3x8**	2.84	3.92	25.48	13.72	13.72	0.65	0.034
MGN12H	**M3x8**	3.72	5.88	32.22	36.26	36.26	0.65	0.054
MGN15C	**M3x10**	4.61	5.59	45.08	21.56	21.56	1.06	0.059
MGN15H	**M3x10**	6.37	9.11	73.50	57.82	57.82	1.06	0.092

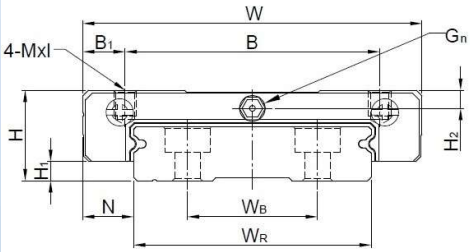
MGW SERIE

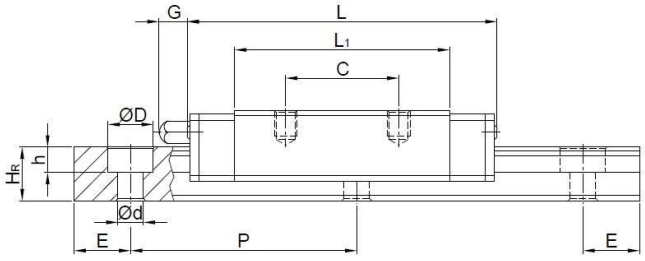
MGW7, MGW9, MGW12

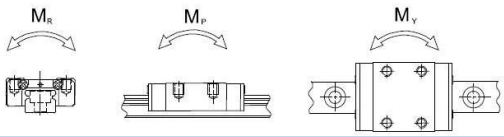




MGW15



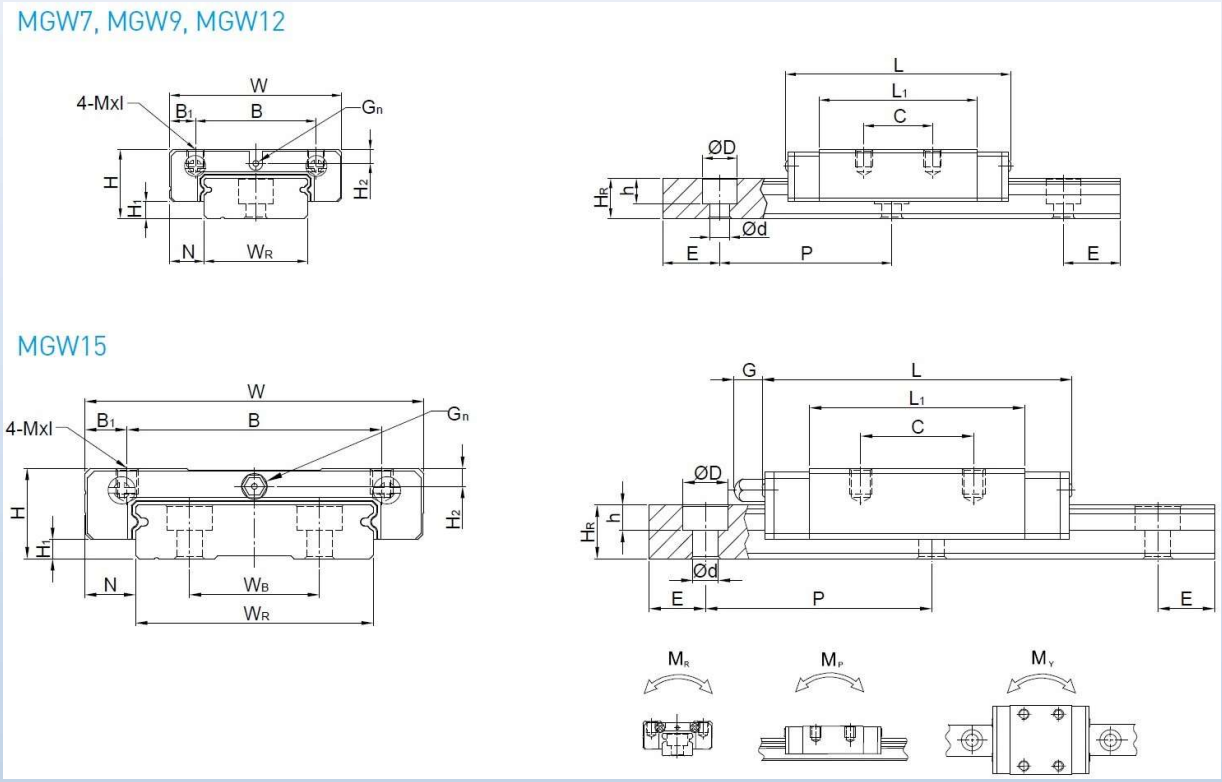




MGW	Dimensions of Assembly [mm]			Dimensions of Block [mm]									
	H	H1	N	W	B	B1	C	L1	L	G	Gn	MxI	H2
MGW7C	9	1.9	5.5	25	19	3	10	21	31.2	-	Φ1.2	M3x3	1.85
MGW7H	9	1.9	5.5	25	19	3	19	30.8	41	-	Φ1.2	M3x3	1.85
MGW9C	12	2.9	6	30	21	4.5	12	27.5	39.3	-	Φ1.2	M3x3	2.4
MGW9H	12	2.9	6	30	23	3.5	24	38.5	50.7	-	Φ1.2	M3x3	2.4
MGW12C	14	3.4	8	40	28	6	15	31.3	46.1	-	Φ1.2	M3x3.6	2.8
MGW12H	14	3.4	8	40	28	6	28	45.6	60.4	-	Φ1.2	M3x3.6	2.8
MGW15C	16	3.4	9	60	45	7.5	20	38	54.8	5.2	Φ3	M4x4.2	3.2
MGW15H	16	3.4	9	60	45	7.5	35	57	73.8	5.2	Φ3	M4x4.2	3.2

MGW SERIE

MGW7, MGW9, MGW12

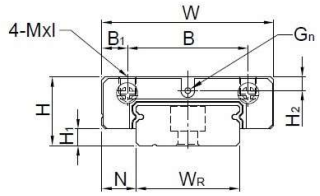


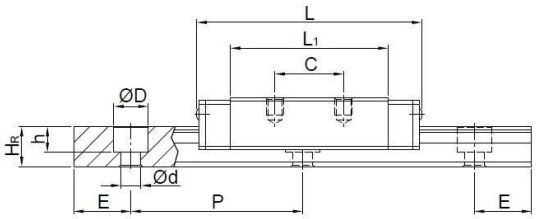
MGW15

MGW	Dimensions of rail [mm]								
	H_2	W_R	W_B	H_R	D	h	d	P	E
MGW7C	1.85	14	-	5.2	6	3.2	3.5	30	10
MGW7H	1.85	14	-	5.2	6	3.2	3.5	30	10
MGW9C	2.4	18	-	7	6	4.5	3.5	30	10
MGW9H	2.4	18	-	7	6	4.5	3.5	30	10
MGW12C	2.8	24	-	8.5	8	4.5	4.5	40	15
MGW12H	2.8	24	-	8.5	8	4.5	4.5	40	15
MGW15C	3.2	42	23	9.5	8	4.5	4.5	40	15
MGW15H	3.2	42	23	9.5	8	4.5	4.5	40	15

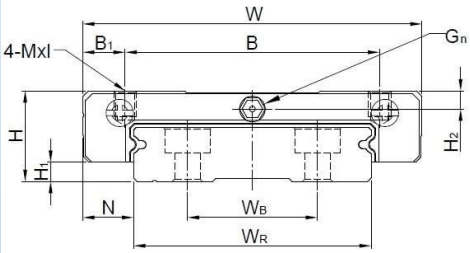
MGW SERIE

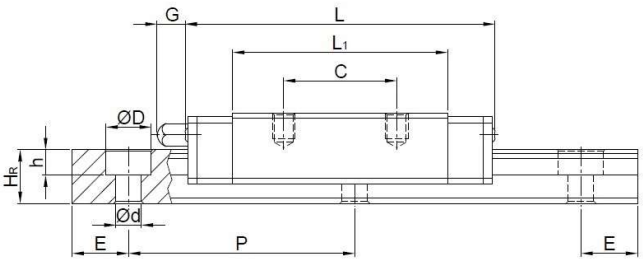
MGW7, MGW9, MGW12

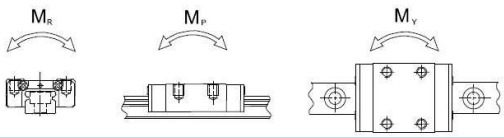




MGW15

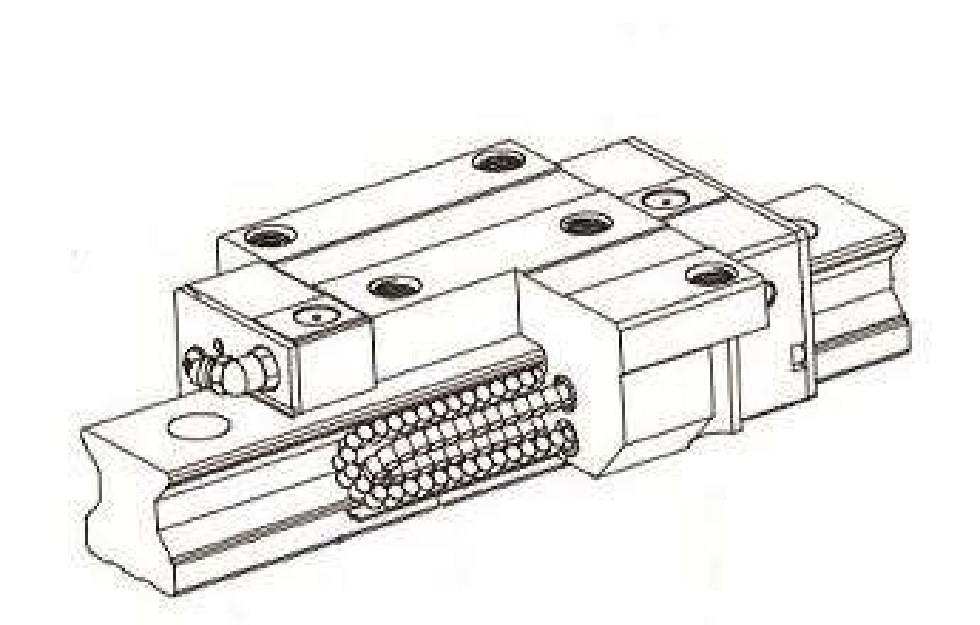






MGW	Mounting Bolt for Rail [mm]	Basic DyWamic Load C [KW]	Basic static Load c0a [KW]	Static rated moment [Nm]			Weight	
				MR	MP	MY	Rail [Kg/m]	Block [Kg]
MGW7C	**M3x6**	1.37	2.06	15.70	7.14	7.14	0.51	0.020
MGW7H	**M3x6**	1.77	3.14	23.45	15.53	15.53	0.51	0.029
MGW9C	**M3x8**	2.75	4.12	40.12	18.96	18.96	0.91	0.040
MGW9H	**M3x8**	3.43	5.89	54.54	34.00	34.00	0.91	0.054
MGW12C	**M4x8**	3.92	5.59	70.34	27.80	27.80	1.49	0.071
MGW12H	**M4x8**	5.10	8.24	102.70	57.37	57.37	1.49	0.103
MGW15C	**M4x10**	6.77	9.22	199.34	56.66	56.66	2.86	0.143
MGW15H	**M4x10**	8.93	13.38	299.01	122.60	122.60	2.86	0.215

ROLLER LINEAR GUIDES



RG SERIE

Roller linear guide HIGH RIGIDITY

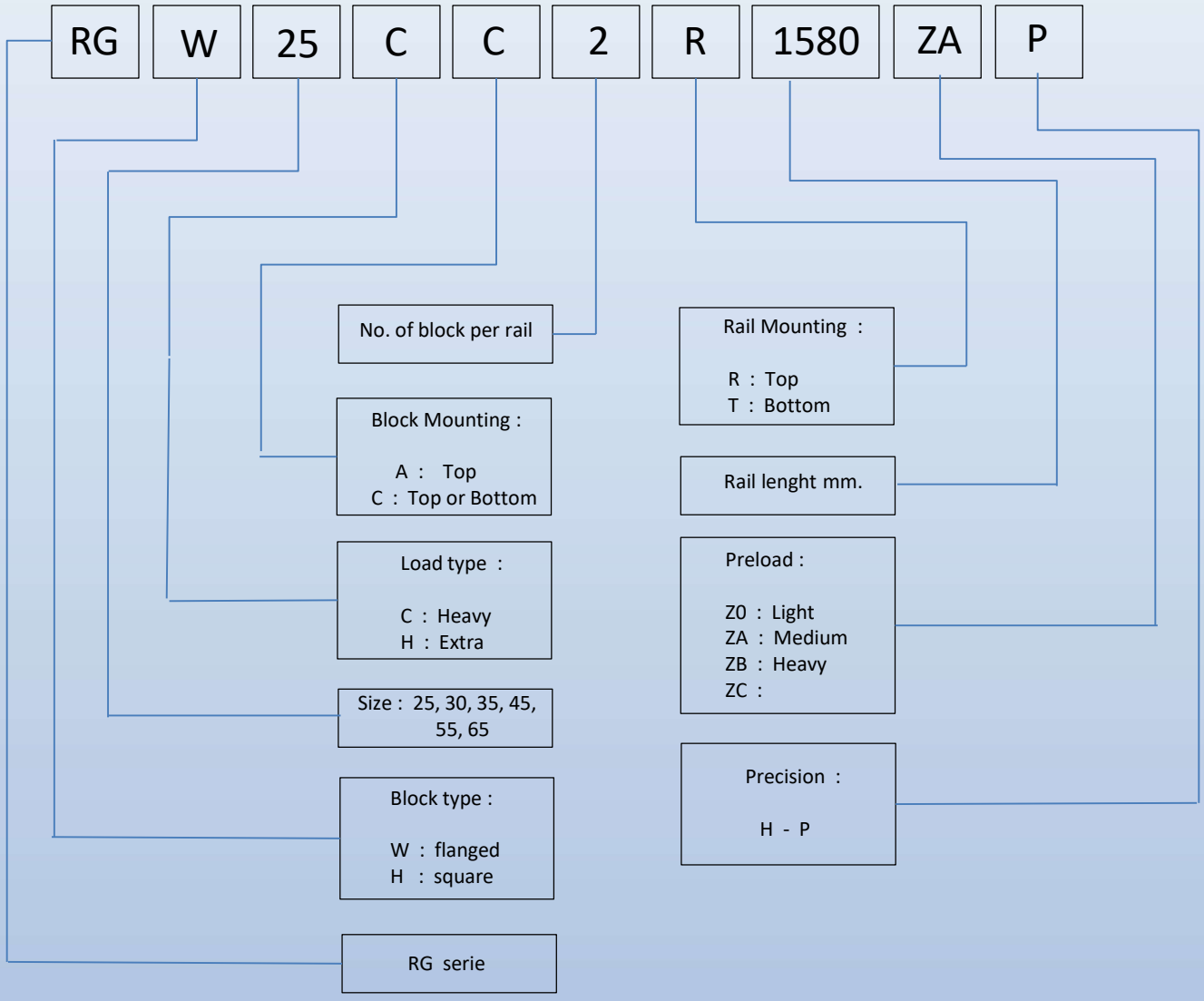
The new PWR RG serie guide has rollers elements instead of steel balls.
They offer rigidity and load extremely high.
They are designed with a contact angle of 45 degrees.
During working phase elastic deformation of linear contact surface is more reduced and offer rigidity and high load in all 4 load directions.

RG serie guarantee high performance to produce components with max precision and are characterized by a longer service life.

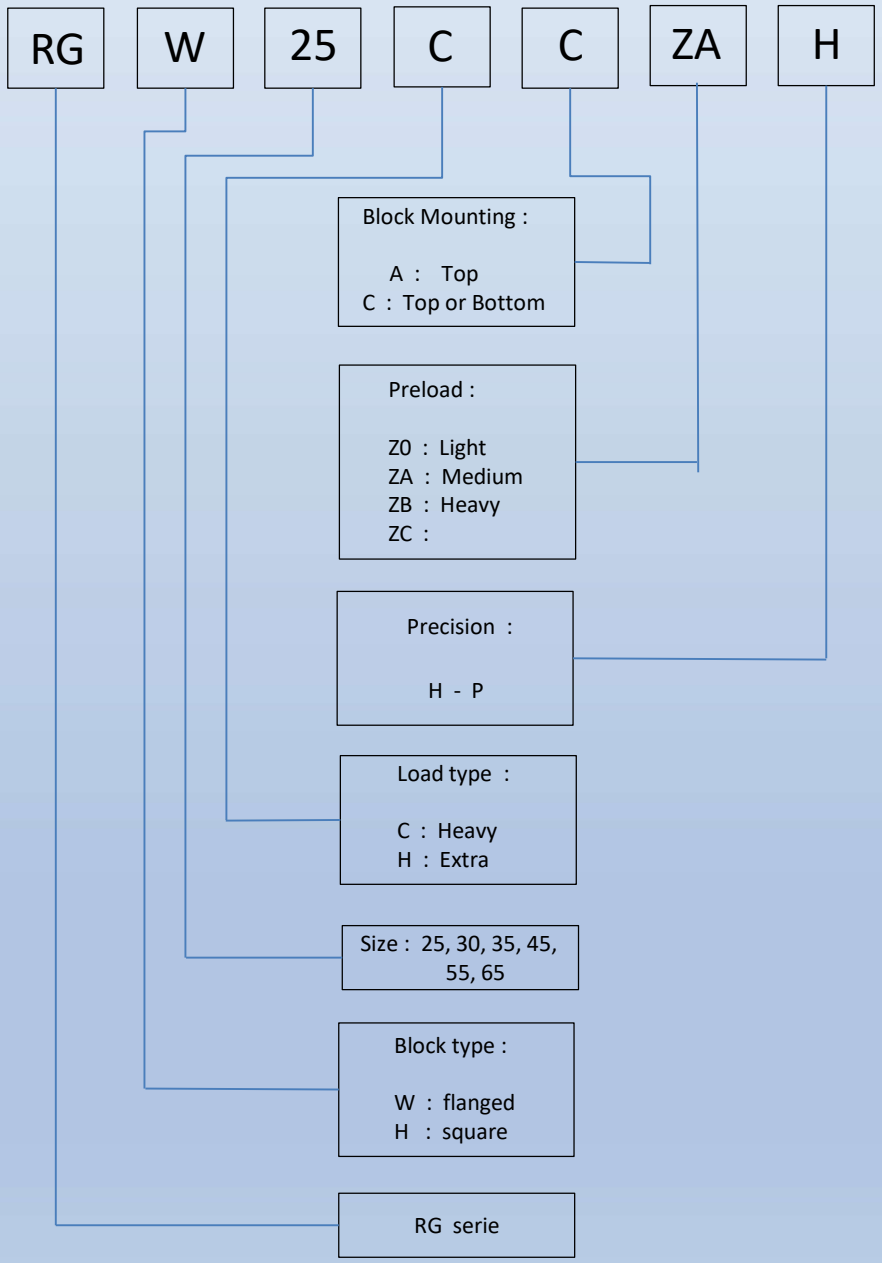
RG serie structure

- 4 Recirculations rollers system
- Contact angle of 45°
- Different seals, it depend which applications - at request

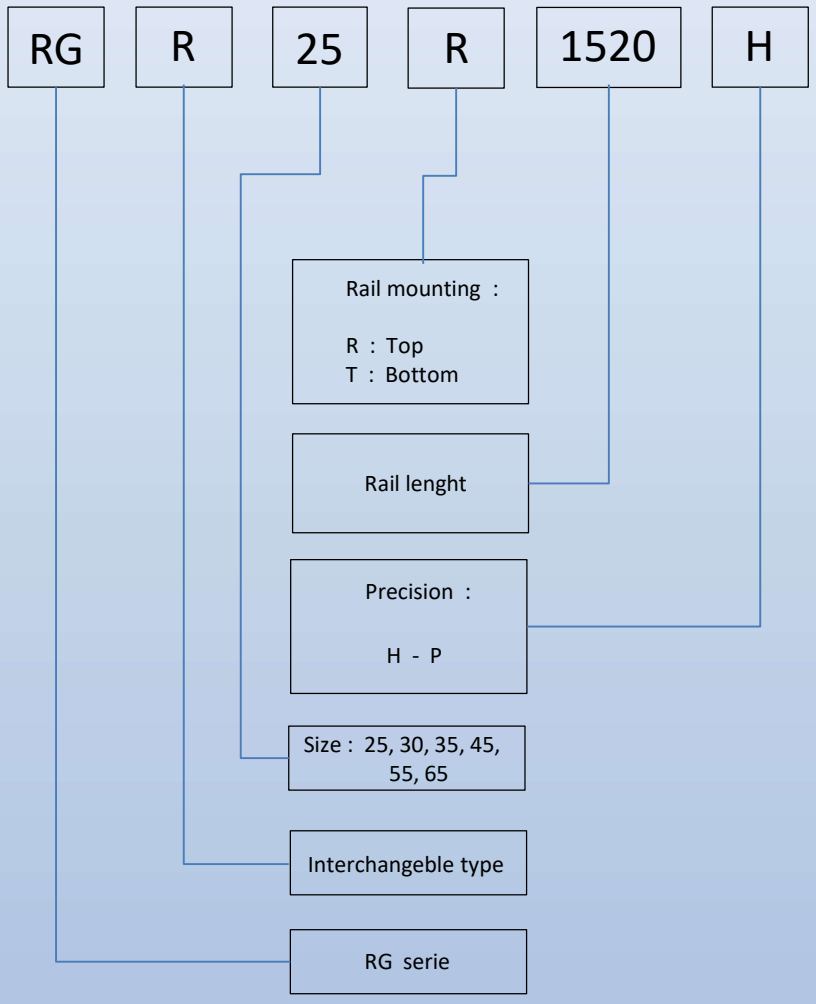
ASSEMBLED ROLLER LINEAR GUIDE DESIGNATION



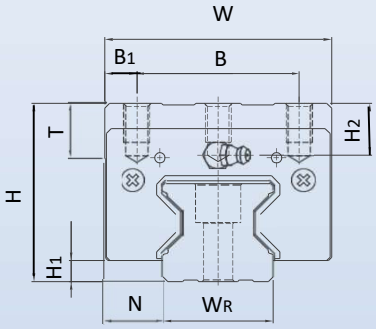
BLOCK DESIGNATION

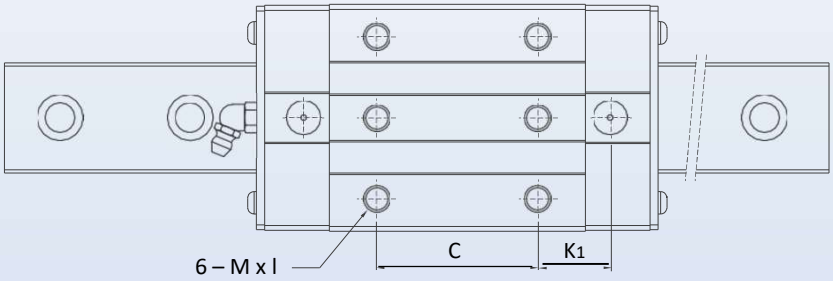


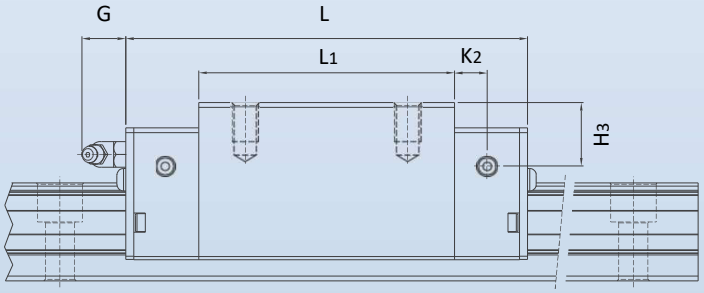
RAIL DESIGNATION



RG-H BLOCK SERIE

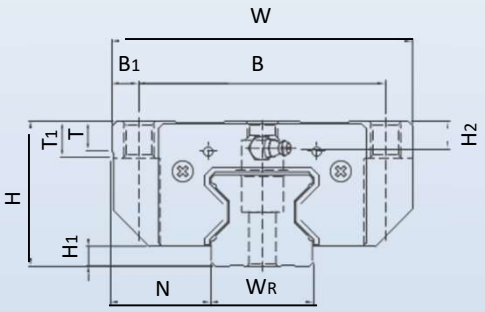


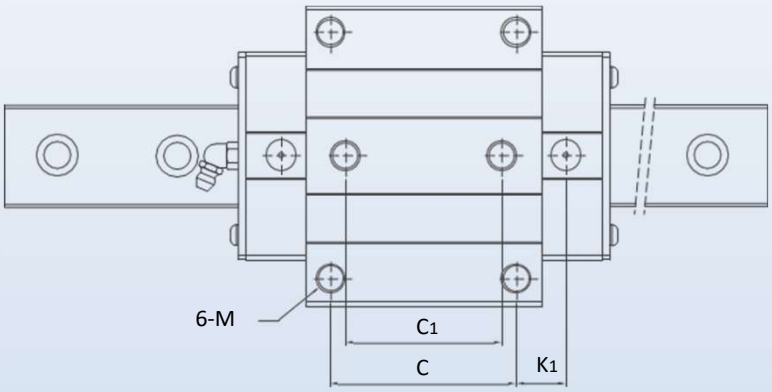


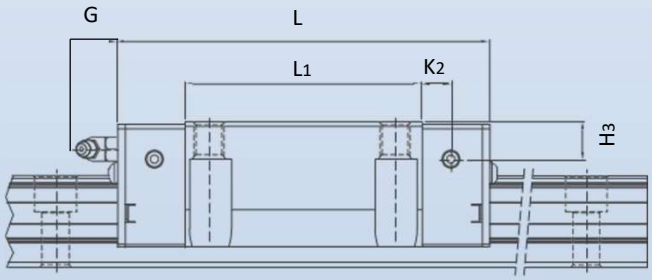


Serie	Dimensions of Assembly [mm]			Dimensions of Block [mm]													Basic Dynamic Load [kN]	Basic Static Load [kN]	Weight [kg]
	H	H_1	N	W	B	B_1	C	L_1	L	K_1	K_2	G	M × l	T	H_2	H_3	C_{dyn}	C_0	
RGH25CA	40	5,5	12,5	48	35	6,5	35	64,5	97,9	20,75	7,25	12	M6×8	9,5	10,2	10	27,7	57,1	0,61
RGH25HA							50	81	114,4	21,5							33,9	73,4	0,75
RGH30CA	45	6	16	60	40	10	40	71	109,8	23,5	8	12	M8×10	9,5	9,5	10,3	39,1	82,1	0,9
RGH30HA							60	93	131,8	24,5							48,1	105,0	1,16
RGH35CA	55	6,5	18	70	50	10	50	79	124	22,5	10	12	M8x12	12	16	19,6	57,9	105,2	1,57
RGH35HA							72	106,5	151,5	25,25							73,1	142,0	2,06
RGH45CA	70	8	20,5	86	60	13	60	106	153,2	31	10	12,9	M10x17	16	20	24	92,6	178,8	3,18
RGH45HA							80	139,8	187	37,9							116,0	230,9	4,13
RGH55CA	80	10	23,5	100	75	12,5	75	125,5	183,7	37,75	12,5	12,9	M12x18	17,5	22	27,5	130,5	252,0	4,89
RGH55HA							95	173,8	232	51,9							167,8	348,0	6,68
RGH65CA	90	12	31,5	126	76	25	70	160	232	60,8	15,8	12,9	M16×20	25	15	15	213,0	411,6	8,89
RGH65HA							120	223	295	67,3							275,3	572,7	12,13

RG-W BLOCK SERIE

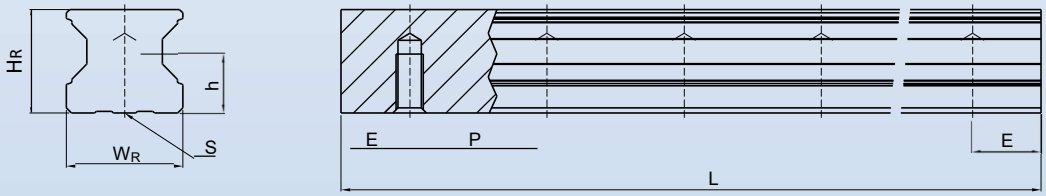






Serie	Dimensions of Assembly [mm]			Dimensions of block [mm]														Basic Dynamic Load [kN]	Basic Static Load [kN]	Weight [kg]
	H	H_1	N	W	B	B_1	C	C_1	L_1	L	K_1	K_2	G	M	T	T_1	H_2	H_3	Cdyn	C_0	
RGW25CC	36	5,5	23,5	70	57	6,5	45	40	64,5	97,9	15,75	7,25	12	M8	9,5	10	6,2	6	27,7	57,1	0,72
RGW25HC									81	114,4	24								33,9	73,4	0,91
RGW30CC	42	6	31	90	72	9	52	44	71	109,8	17,5	8	12	M10	9,5	10	6,5	7,3	39,1	82,1	1,16
RGW30HC									93	131,8	28,5								48,1	105	1,52
RGW35CC	48	6,5	33	100	82	9	62	52	79	124	16,5	10	12	M10	12	13	9	12,6	57,9	105,2	1,75
RGW35HC									106,5	151,5	30,25								73,1	142	2,4
RGW45CC	60	8	37,5	120	100	10	80	60	106	153,2	21	10	12,9	M12	14	15	10	14	92,6	178,8	3,43
RGW45HC									139,8	187	37,9								116	230,9	4,57
RGW55CC	70	10	43,5	140	116	12	95	70	125,5	183,7	27,75	12,5	12,9	M14	16	17	12	17,5	130,5	252	5,43
RGW55HC									173,8	232	51,9								167,8	348	7,61
RGW65CC	90	12	53,5	170	142	14	110	82	160	232	40,8	15,8	12,9	M16	22	23	15	15	213	411,6	11,63
RGW65HC									223	295	72,3								275,3	572,7	16,58

Dimensions for RGR - T (Rail Mounting from Bottom)



Model No.	Dimensions of Rail (mm)						Weight
	W_R	H_R	S	h	P	E	(kg/m)
RGR15T	15	16,5	M5x0,8P	8	30	20	1,86
RGR20T	20	21	M6x1P	10	30	20	2,76
RGR25T	23	23,6	M6x1P	12	30	20	3,36
RGR30T	28	28	M8x1,25P	15	40	20	4,82
RGR35T	34	30,2	M8x1,25P	17	40	20	6,48
RGR45T	45	38	M12x1,75P	24	52,5	22,5	10,83
RGR55T	53	44	M14x2P	24	60	30	15,15
RGR65T	63	53	M20x2,5P	30	75	35	21,24

RG SERIES – Linear guideway

Preload

A preload can be applied to each guideway using oversized rollers. Generally, a linear motion guideway has negative clearance between the raceway and rollers to improve stiffness and maintain high precision. The RG series linear guideway offers four standard preloads for various applications and conditions.

Class	Code	Preload	Condition
Light Preload	Z0	0.02 ~ 0.04 C	Certain load direction, low impact, Low precision required
Medium Preload	ZA	0.07 ~ 0.09 C	High precision required
Heavy Preload	ZB	0.12 ~ 0.14 C	High rigidity required, with vibration and impact

P W R

Power & Technology

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