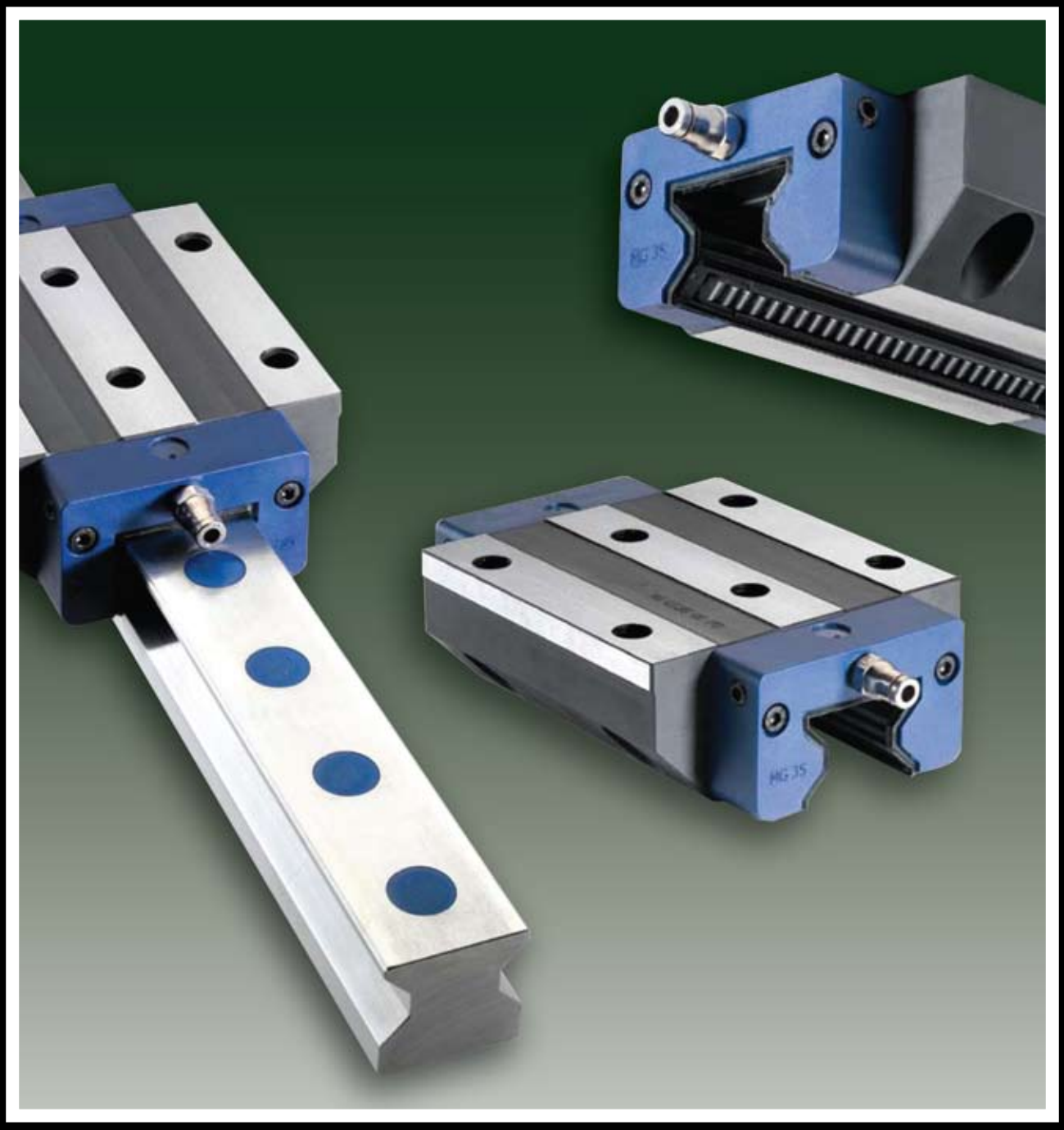
LINEAR RAIL SYSTEM WITH ROLLERS



ROLLCO

SPECIALIZED
ON LINEAR MOTION

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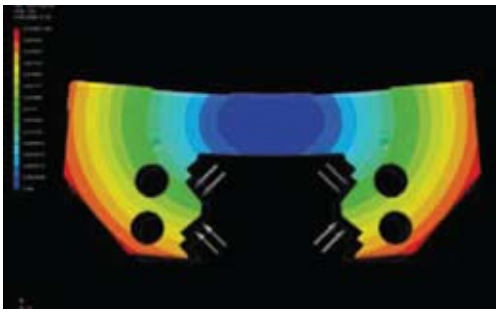
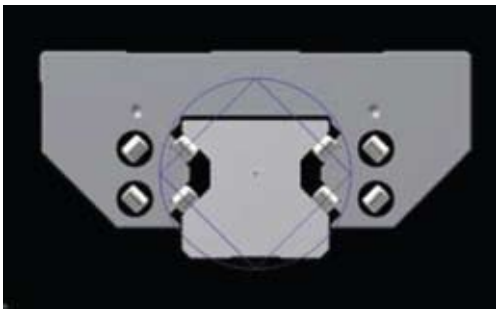
Introduction

The Rollco Roller Guides are high developed solutions for the high tech industry. The optimized shape of the rails, the roller guides with logarithmic profiles and the integrated lubrication system multiplies the economical as well as the technical advantages.

- Rails optimized on preload and load capacity
- Rollers with logarithmical profiles guarantees long lifetime, high load capacity and stiffness
- The integrated distribution in the front panel ensures the supply of the tracks with minimal oil or grease
- Rollers placed in O-shape gives a uniform load on all sides - documented by FEM-analyses
- Large contact surface on the entire load zone
- High operational safety - the construction eliminates transitions between the plastic and steel parts
- Integrated wipers protect the guides in dirty environments. Designed to reduce the leakage of lubricant significantly
- Manufacturing by machinery at the forefront of technology and automated quality control lead to high quality

FEM-analyse of LC block





Rollers in O-shape

Order Code

An example of the roller guide numbering system is shown in the following example:

Model Number: RMG 35 SC 2 L598 Q1 P2

Product type

Size such as 25,35,45,55

Runner block type:
SC: narrow-short LC: wide-short
SL: narrow-long LL: wide-long

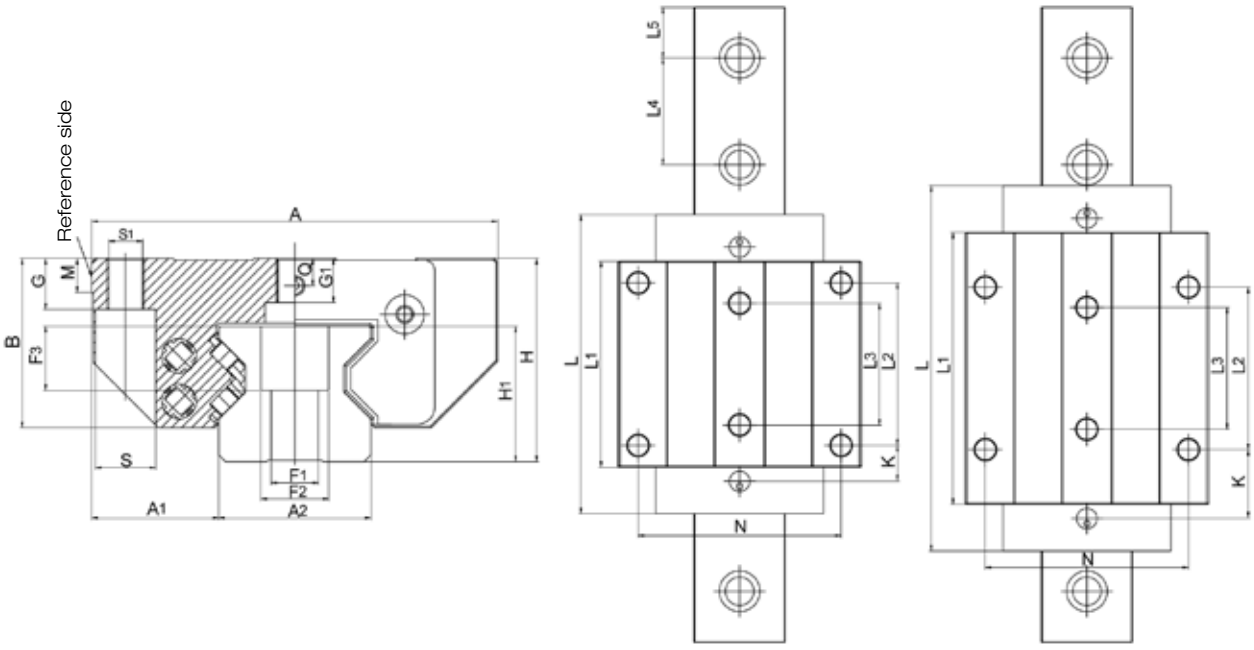
Number of runner blocks on the rail

Rail length (mm)

Accuracy classes (Q0, Q1, Q2, Q3)

Preload classes (P2,P3)

Wide Block Type LC/LL



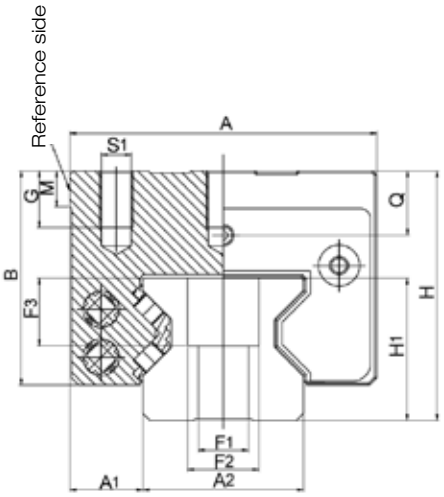
LC **LL**

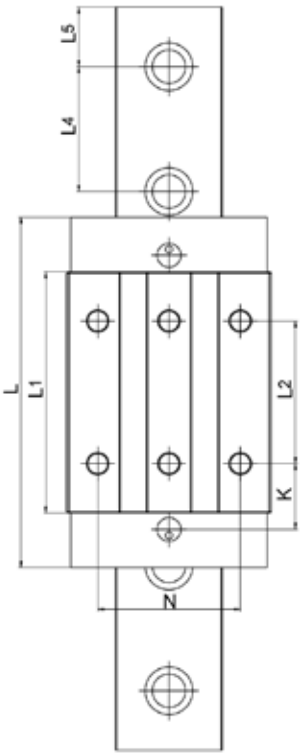
Dimensions: mm

Type

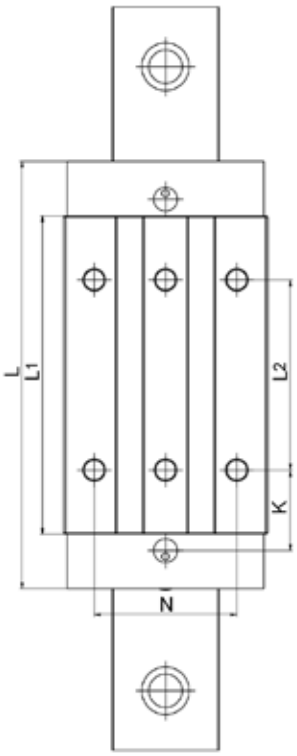
	H	A	A1	A2	H1	B	L	L1	L2	L3	L4	L5	N	S	S1	G	G1	F1	F2	F3	M	Q	K
25 LC	36	70	23,5	23	24,5	29,5	90,2	62	45	40	30	14	57	11	M8	9	6,5	7	11	11,5	7,5	5,5	14
25 LL	36	70	23,5	23	24,5	29,5	109,7	81,5	45	40	30	14	57	11	M8	9	6,5	7	11	11,5	7,5	5,5	23,7
35 LC	48	100	33	34	32	41	119,3	80	62	52	40	19	82	15	M10	12	10	9	15	17	8	7,9	15,5
35 LL	48	100	33	34	32	41	142,3	103	62	52	40	19	82	15	M10	12	10	9	15	17	8	7,9	27
45 LC	60	120	37,5	45	40	50	147,3	101,3	80	60	52,5	25	100	18	M12	15	12	14	20	19	10	8	17,6
45 LL	60	120	37,5	45	40	50	179,8	133,8	80	60	52,5	25	100	18	M12	15	12	14	20	19	10	8	33,9
55 LC	70	140	43,5	53	48	57	173	120	95	70	60	29	116	20	M14	18	13,5	16	24	22	12	9	21,5
55 LL	70	140	43,5	53	48	57	215	162	95	70	60	29	116	20	M14	18	13,5	16	24	22	12	9	42

Narrow Block Type SC/SL





SC



SL

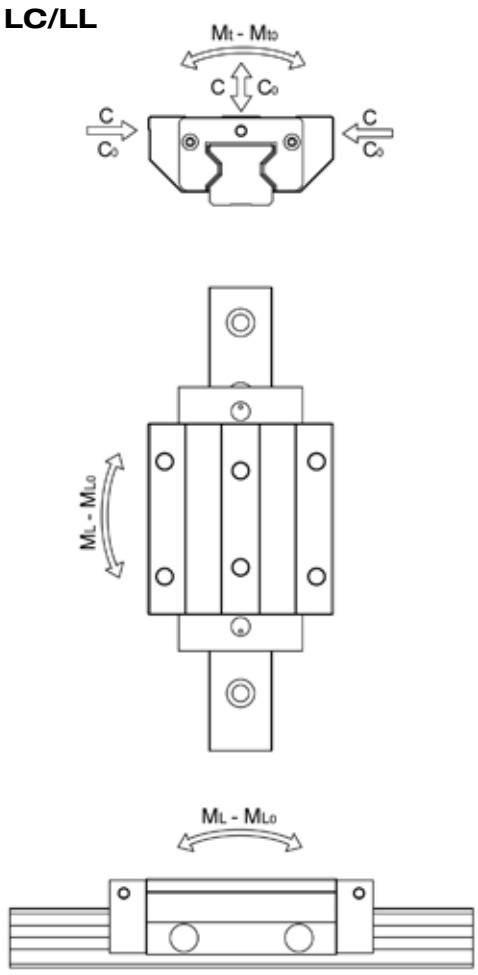
Dimensions: mm

Type

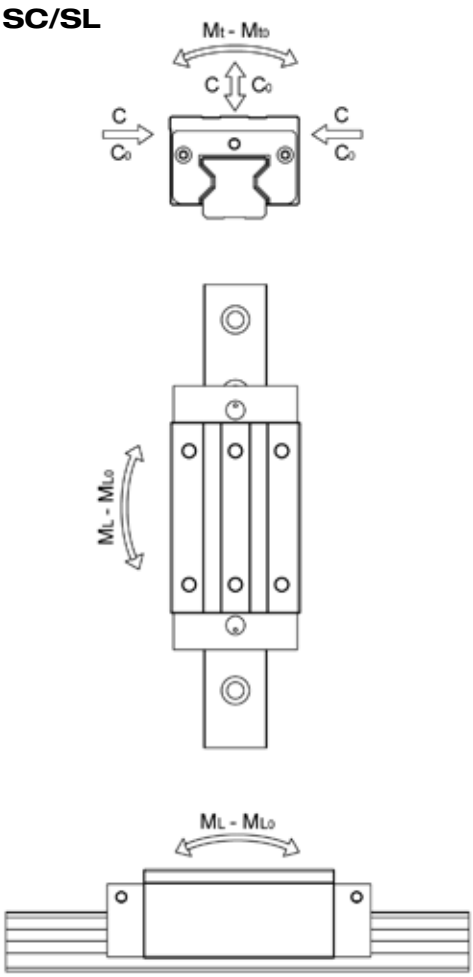
	H	A	A1	A2	H1	B	L	L1	L2	L4	L5	N	S1	G	F1	F2	F3	M	Q	K
25 SC	40	48	12,5	23	24,5	33,5	90,2	62	35	30	14	35	M6	9	7	11	11,5	7,5	9,5	19
25 SL	40	48	12,5	23	24,5	33,5	109,7	81,5	50	30	14	35	M6	9	7	11	11,5	7,5	9,5	21,2
35 SC	55	70	18	34	32	48	119,3	80	50	40	19	50	M8	12	9	15	17	8	14,9	21,5
35 SL	55	70	18	34	32	48	142,3	103	72	40	19	50	M8	12	9	15	17	8	14,9	22
45 SC	70	86	20,5	45	40	60	147,3	101,3	60	52,5	25	60	M10	18	14	20	19	10	18	27,6
45 SL	70	86	20,5	45	40	60	179,8	133,8	80	52,5	25	60	M10	18	14	20	19	10	18	33,9
55 SC	80	100	23,5	53	48	67	173	120	75	60	29	75	M12	19	16	24	22	12	19	31,5
55 SL	80	100	23,5	53	48	67	215	162	95	60	29	75	M12	19	16	24	22	12	19	42

Load Capacity and Static Moment

LC/LL



SC/SL

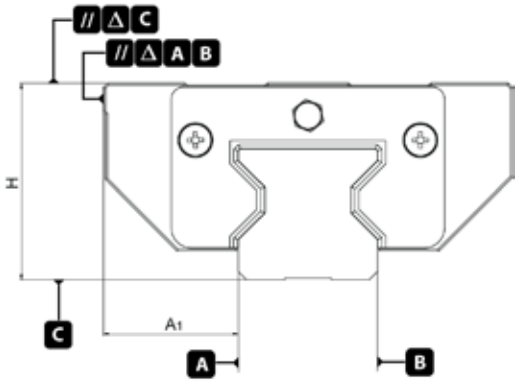


Type	Load capacity (N)		Static Moment (Nm)			
	C	C0	Mt	Mt0	ML	ML0
25 LC/SC	28700	57600	431	863	285	570
25 LL/SL	38900	76800	583	1150	491	970
35 LC/SC	53300	99000	1179	2192	674	1235
35 LL/SL	72600	136000	1595	3014	1187	2243
45 LC/SC	95000	184000	2617	5070	1538	2979
45 LL/SL	119500	242200	3293	6672	2444	4951
55 LC/SC	132600	256000	4503	8707	2576	4981
55 LL/SL	176000	351000	5977	11915	4470	8910

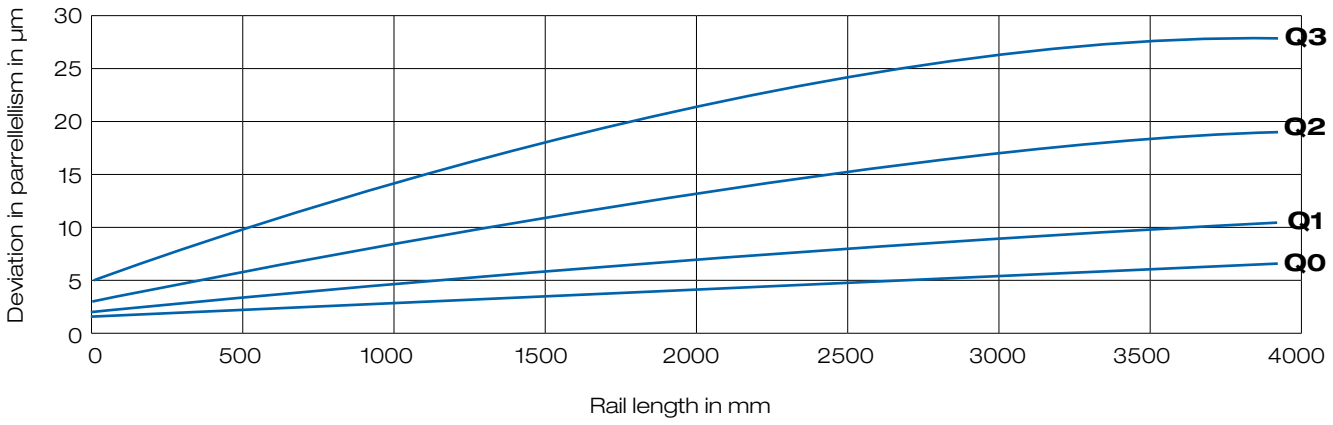
Precision Class

Unit: µm

	Grade levels			
	Q0	Q1	Q2	Q3
Measurement of H	± 5 µm	± 10 µm	± 20 µm	± 30 µm
Measurement of A1	± 5 µm	± 7 µm	± 20 µm	± 20 µm
Measurement of H when more blocks on one rail	± 3 µm	± 5 µm	± 7 µm	± 15 µm
Measurement of A1 when more blocks on one rail	± 3 µm	± 5 µm	± 7 µm	± 15 µm
Running accuracy ΔC to A-B	See diagram below			



Running Accuracy - block on rail



Preload Class

Preload Class	Preload	Precision Class
P2	0,08 x C	Q0 / Q1 / Q2 / Q3
P3	0,13 x C	Q0 / Q1 / Q2 / Q3

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Linear Rail System with Rollers - 2009-01

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