

# ROLLER GUIDES



**ROLLCO**

SPECIALIZED  
ON LINEAR MOTION

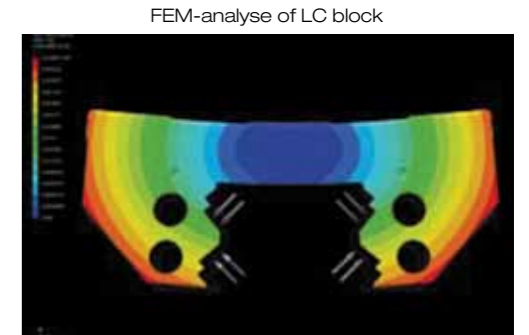
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## Introduction

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 logarithmic 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



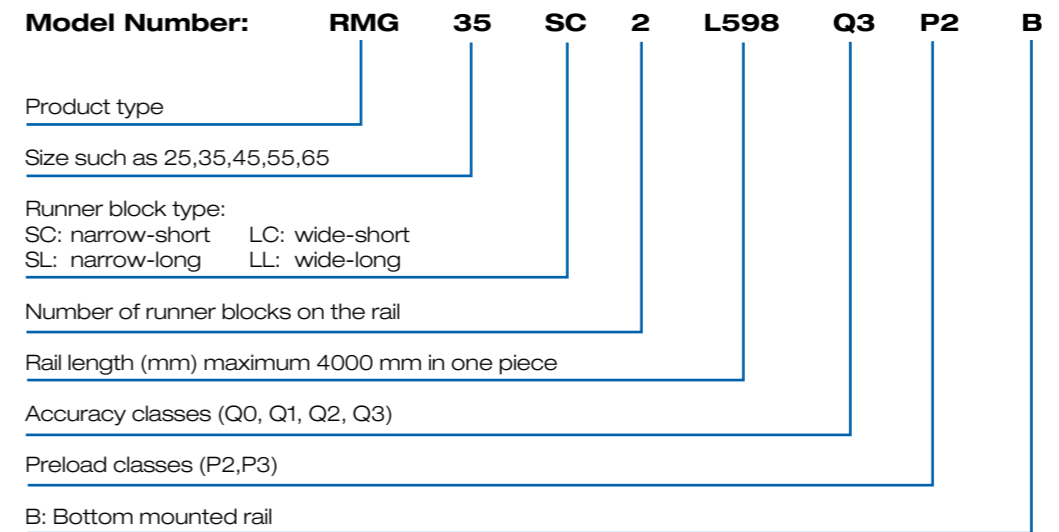
FEM-analysis of LC block



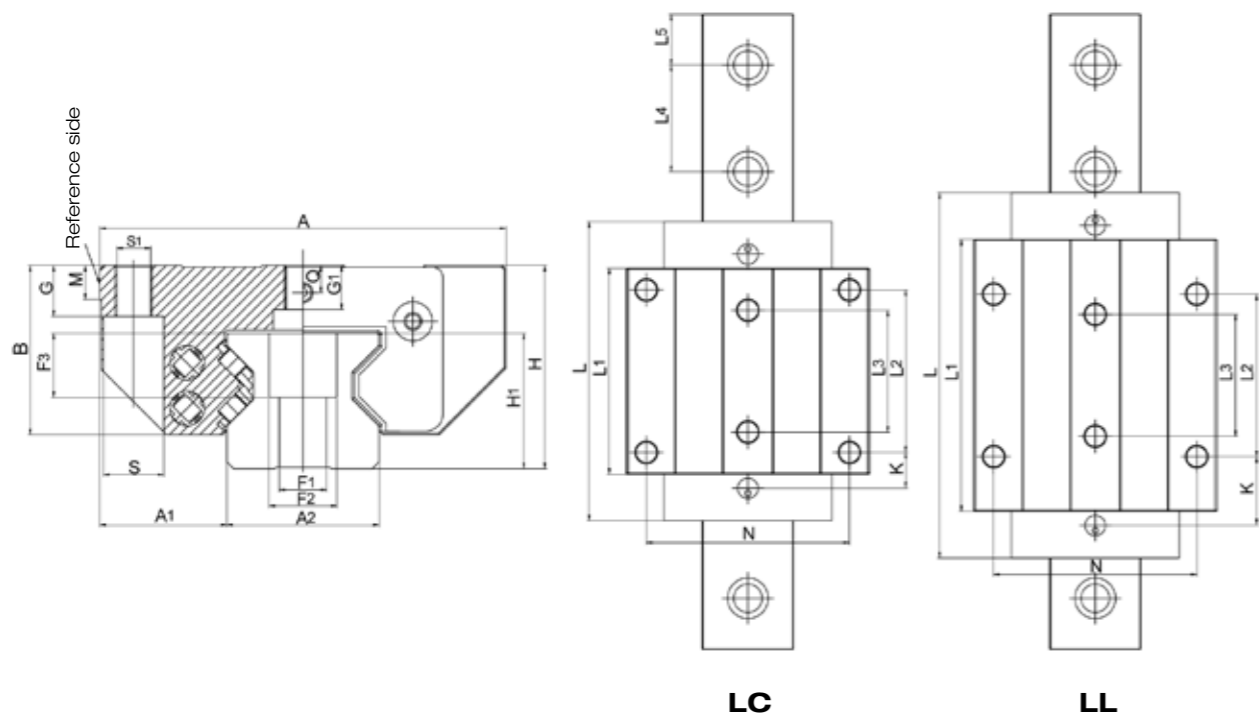
Rollers in O-shape

## Order Code

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



### Wide Block Type LC/LL

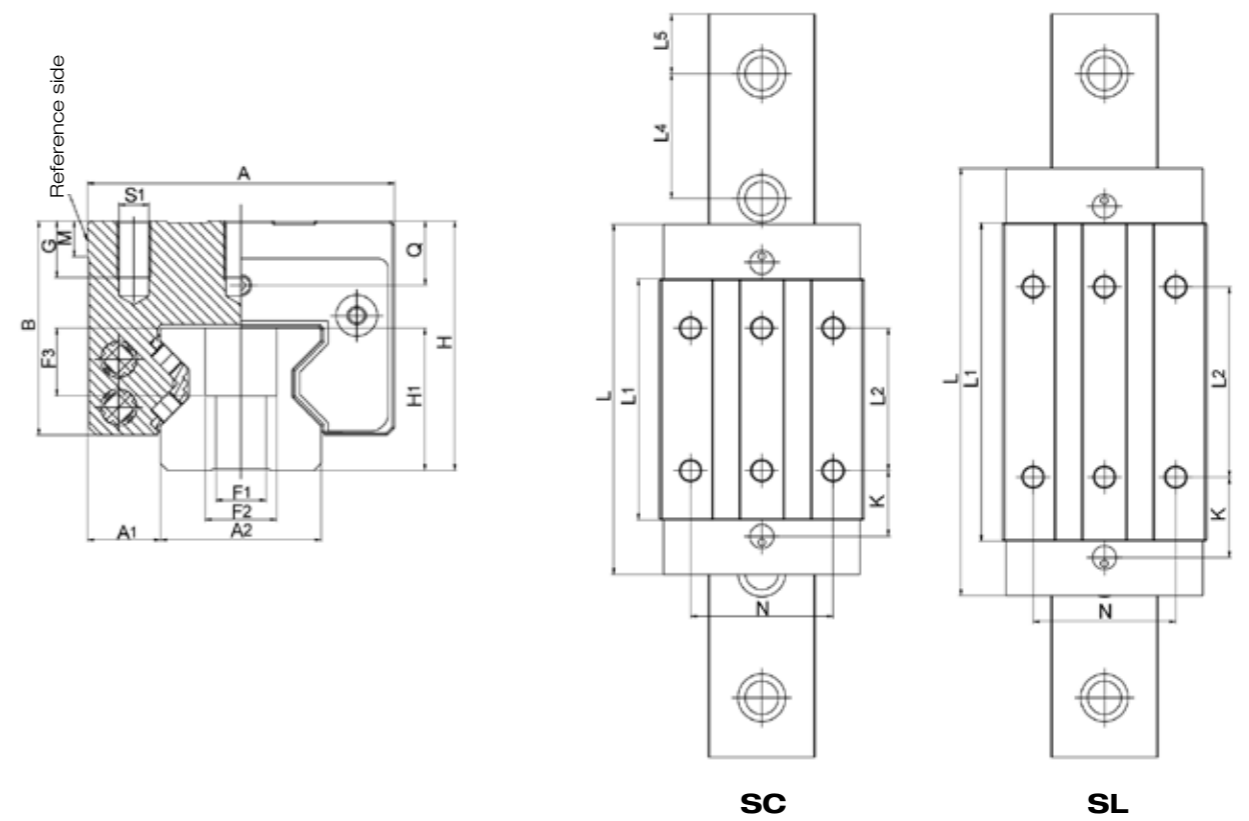


Dimensions: mm

Type

	H	A	A1	A2	H1	B	L	L1	L2	L3	L4	L5	N	S	S1	G	G1	F1	F2	F3	M	Q	K
25LC	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
25LL	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
35LC	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
35LL	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
45LC	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
45LL	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
55LC	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
55LL	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
65LC	90	170	53,5	63	55	78	221,8	159,8	110	82	75	36,5	142	23	M16	22	19,5	18	26	26	15,5	15	29
65LL	90	170	53,5	63	55	78	272,3	210,3	110	82	75	36,5	142	23	M16	22	19,5	18	26	26	15,5	15	54,3

### Narrow Block Type SC/SL

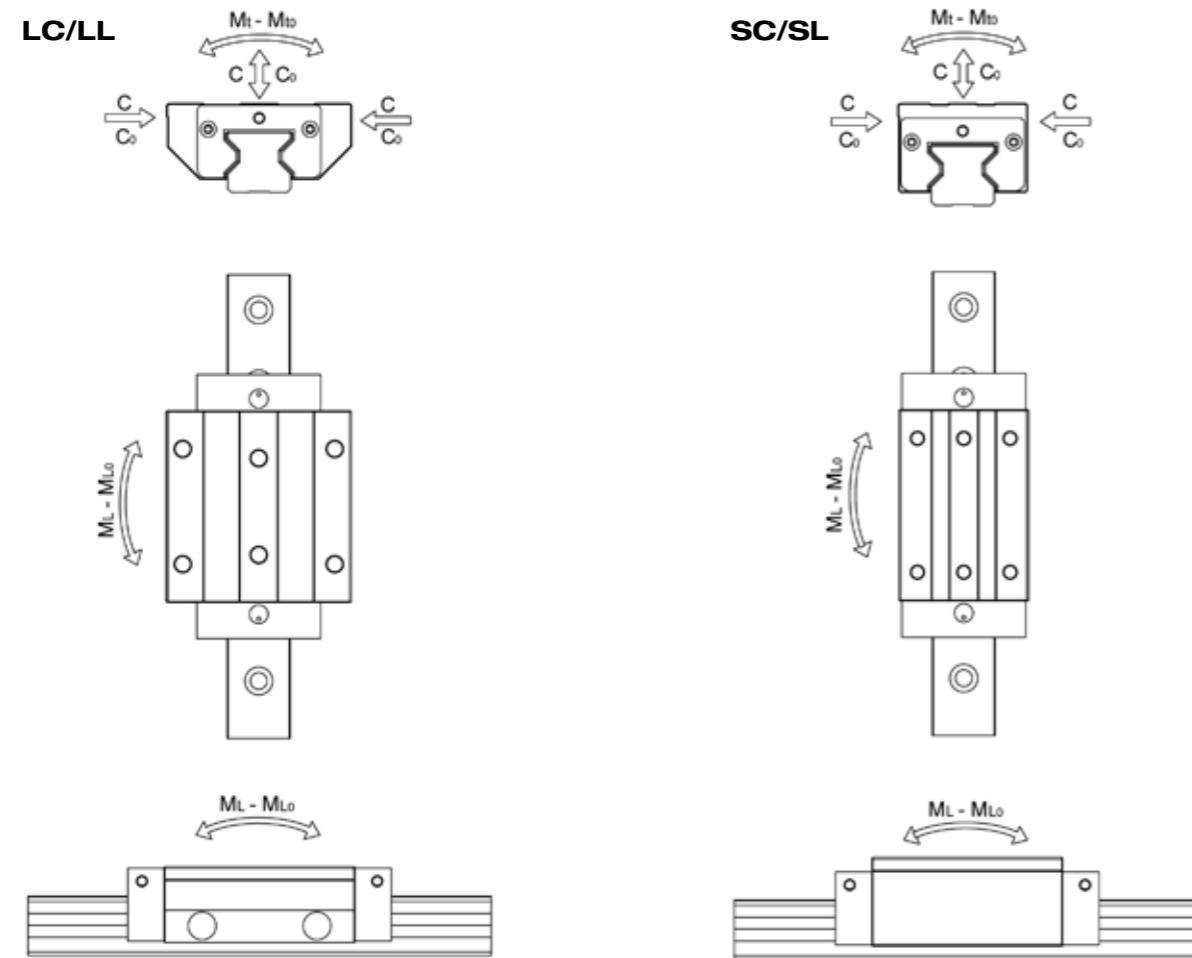


Dimensions: mm

Type

	H	A	A1	A2	H1	B	L	L1	L2	L4	L5	N	S1	G	F1	F2	F3	M	Q	K
25SC	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
25SL	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
35SC	55	70	18	34	32	48	119,3	80	50	40	19	50	M8	12	9	15	17	8	14,9	21,5
35SL	55	70	18	34	32	48	142,3	103	72	40	19	50	M8	12	9	15	17	8	14,9	22
45SC	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
45SL	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
55SC	80	100	23,5	53	48	67	173	120	75	60	29	75	M12	19	16	24	22	12	19	31,5
55SL	80	100	23,5	53	48	67	215	162	95	60	29	75	M12	19	16	24	22	12	19	42
65SC	90	126	31,5	63	55	78	221,8	159,8	70	75	36,5	76	M16	22	18	26	26	15,5	15	49
65SL	90	126	31,5	63	55	78	272,3	210,3	120	75	36,5	76	M16	22	18	26	26	15,5	15	49,2

## Load Capacity and Static Moment

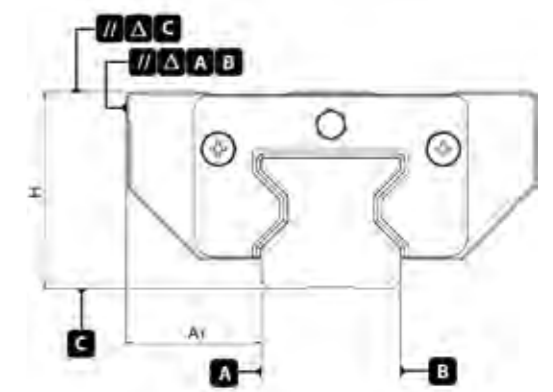


Type	Load capacity (N)		Moment (Nm)			
	C Dynamic	Co Static	Mt Dynamic	Mto Static	ML Dynamic	MLo Static
25 LC/SC	28700	57600	431	863	285	570
2LL/SL	38900	76800	583	1150	491	970
35 LC/SC	53300	99000	1179	2192	674	1235
35 LL/SL	72600	136000	1595	3014	1187	2243
45 LC/SC	95000	184000	2617	5070	1538	2979
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
65 LC/SC	212000	414000	8100	15780	5210	10140
65 LL/SL	276000	579000	10530	22100	8980	11840

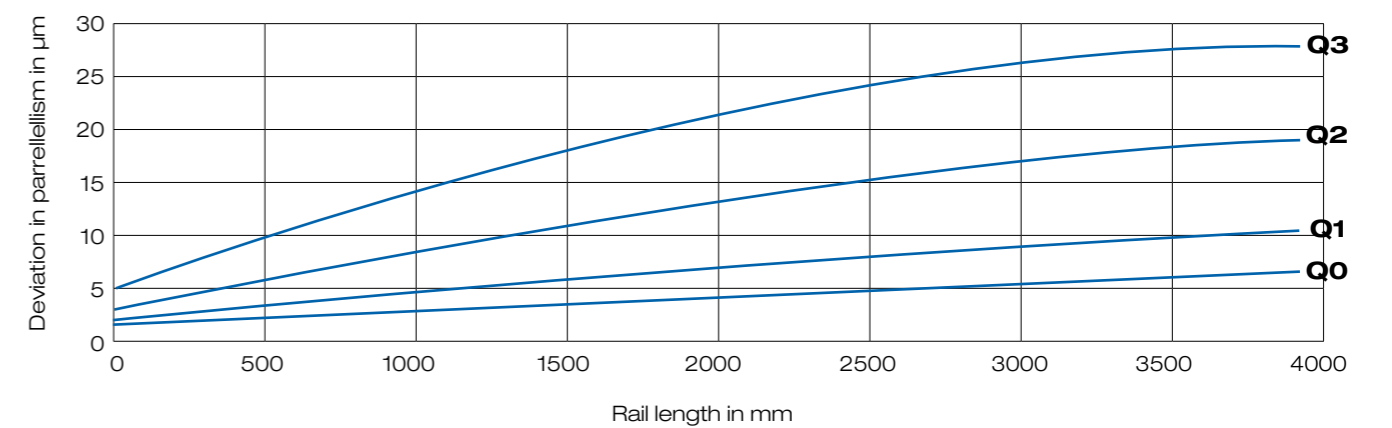
## Precision Class

Unit:  $\mu\text{m}$

	Grade levels			
	Q0	Q1	Q2	Q3
Measurement of H	$\pm 5 \mu\text{m}$	$\pm 10 \mu\text{m}$	$\pm 20 \mu\text{m}$	$\pm 30 \mu\text{m}$
Measurement of A1	$\pm 5 \mu\text{m}$	$\pm 7 \mu\text{m}$	$\pm 20 \mu\text{m}$	$\pm 20 \mu\text{m}$
Measurement of H when more blocks on one rail	$3 \mu\text{m}$	$5 \mu\text{m}$	$7 \mu\text{m}$	$15 \mu\text{m}$
Measurement of A1 when more blocks on one rail	$3 \mu\text{m}$	$5 \mu\text{m}$	$7 \mu\text{m}$	$15 \mu\text{m}$
Running accuracy $\Delta C$ to A-B	See diagram below			



## Running Accuracy - block on rail



## Preload Class

Preload Class	Preload	Precision Class
P2	$0,08 \times C$	Q0 / Q1 / Q2 / Q3
P3	$0,13 \times C$	Q0 / Q1 / Q2 / Q3

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