



MG Monoguide recirculating linear rollers bearing

second generation

"Evolution is done"



The new recirculating linear rollers bearing MG Monoguide from **Rosa-Sistemi** is a well developed solution for the high tech industry. 30 years of experience, an intense deep analysis of existing systems and a methodical engineering are leading to a new definition of linear roller bearings. Optimized geometry of the roller raceways, rollers with logarithmic profile and an integrated optimized lubrication system are increasing the technical and economical value. The goal of the development – low personal and substantial resources for any kind of application – is achieved with this product.

Strong



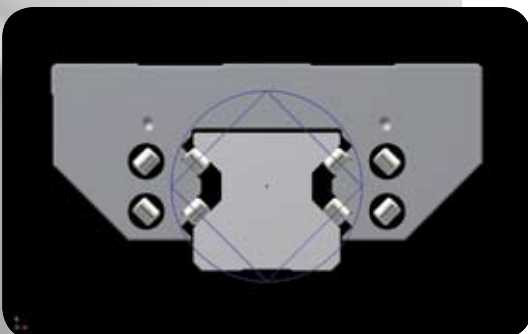
1 **Optimized roller raceway:**
FEM analysis of deformations by preload and loads results in an optimal geometry for each preload class

2 **Logarithmic profiled rollers**
with a highest accuracy in shape and low tolerances guarantee a long lifetime, high loads and stiffness

3 **Only one connection**
to the lubrication system in any mounting application
The integrated channels in front plate ensure lubrication with low quantities of grease or oil

4 **"O" shape geometry:**
due to the selected roller arrangement, the MG Monoguide has high load capacity equal in any direction

FEM-analyse of LC block



"O" shape geometry

points



Smooth and constant running
due to optimized roller
recirculating ways

5

High reliability:
reduced number of components
and low related transitions
are leading to optimal
running characteristics

6

Integrated sealing:
to protect the raceways
of the block even in dirty
applications and to reduce the
lubrication cycles

7

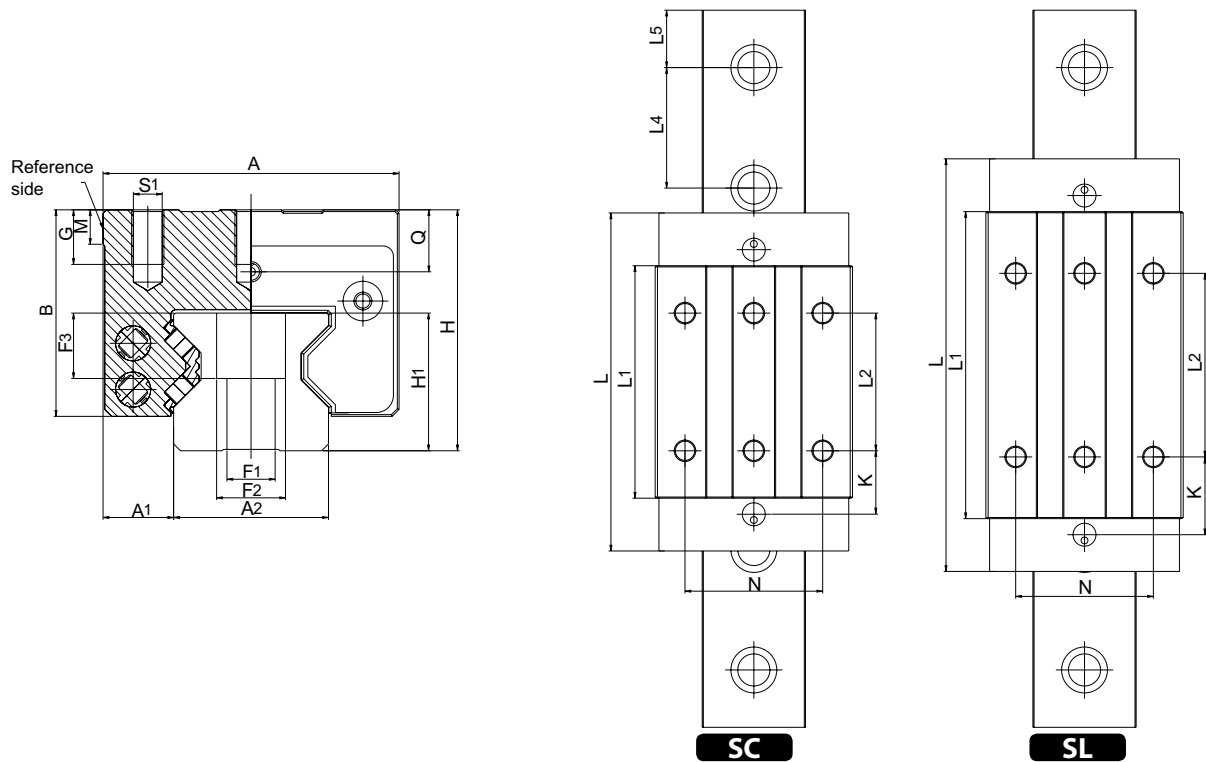
Automated manufacturing processes
and integrated quality checks
on measuring machines are leading to
a constant high quality output

8

Order code

MG	35	SC	2	L150	Q1	P2	II	Rails on same plane
Product type	Rail size (25,35,45,55)	Block type	Number of blocks on the rail	Rail length	accuracy class (Q0, Q1, Q2, Q3)	Preload (P2, P3)		
		SC: narrow-short LC: wide-short SL: narrow-long LL: wide-long						

Narrow block type **SC/SL**

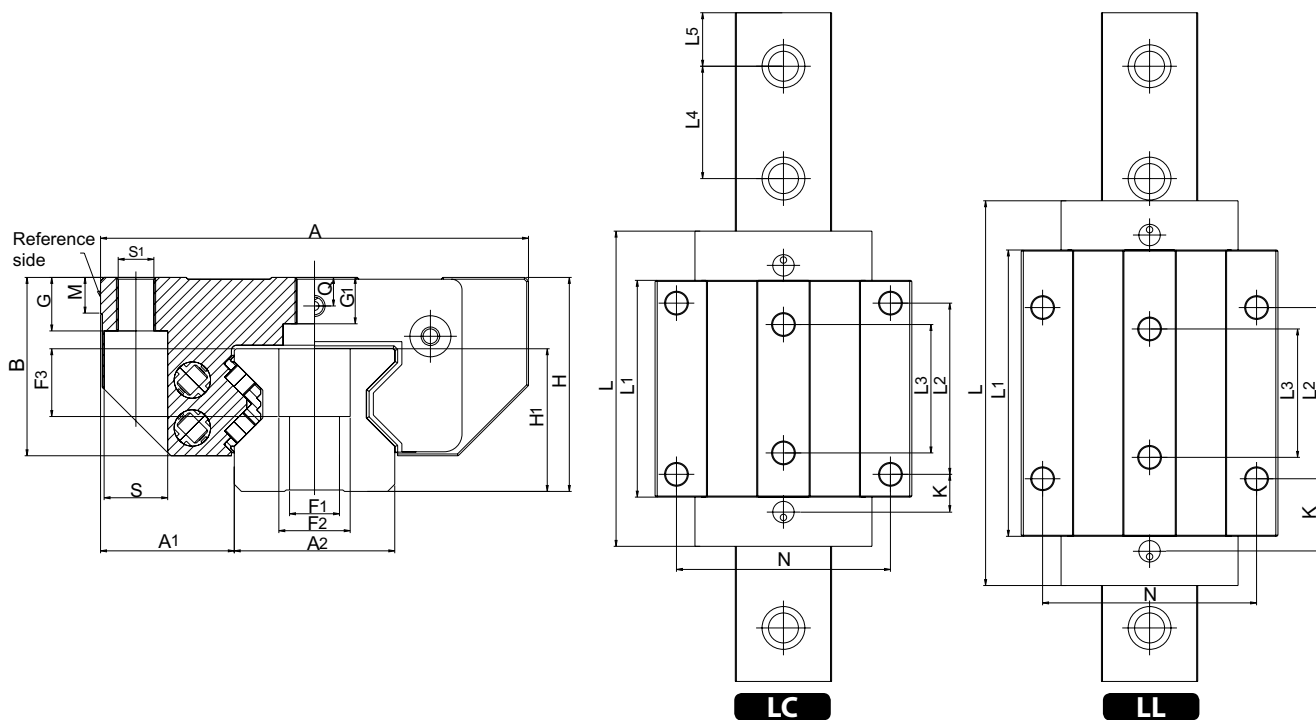


Dimensions (mm)

Size	H	A	A ₁	A ₂	H ₁	B	L	L ₁	L ₂	L ₄	L ₅	N	S ₁	G	F ₁	F ₂	F ₃	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							109.7	81.5	50											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							142.3	103	72											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							179.8	133.8	80											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							215	162	95											42

Dimensional characteristics like DIN 645/1 norm

Wide block type **LC/LL**



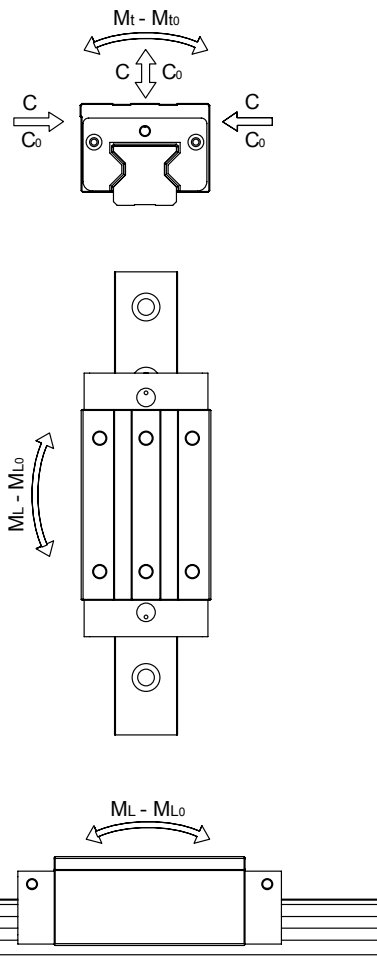
Dimensions (mm)

Size	H	A	A ₁	A ₂	H ₁	B	L	L ₁	L ₂	L ₃	L ₄	L ₅	N	S	S ₁	G	G ₁	F ₁	F ₂	F ₃	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							109.7	81.5															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							142.3	103															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							179.8	133.8															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							215	162															42

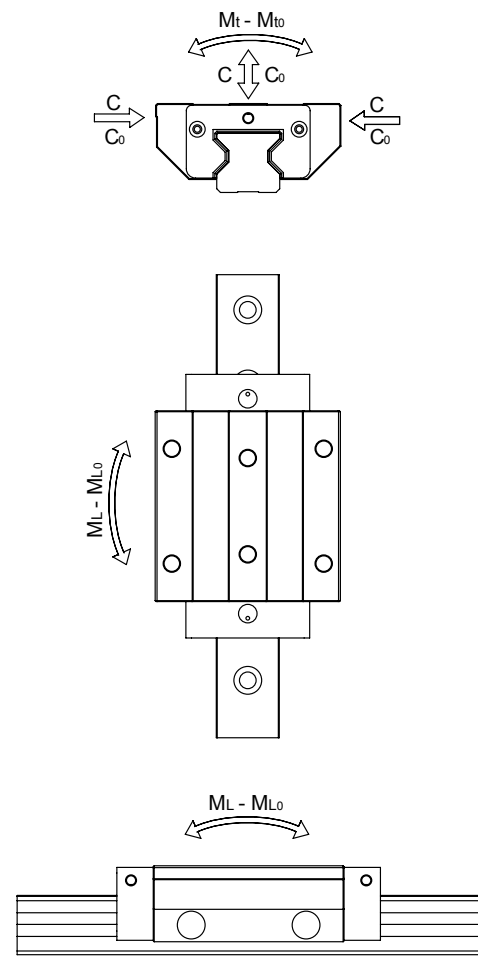
Dimensional characteristics like DIN 645/1 norm

Load capacity and permissible moments

SC/SL



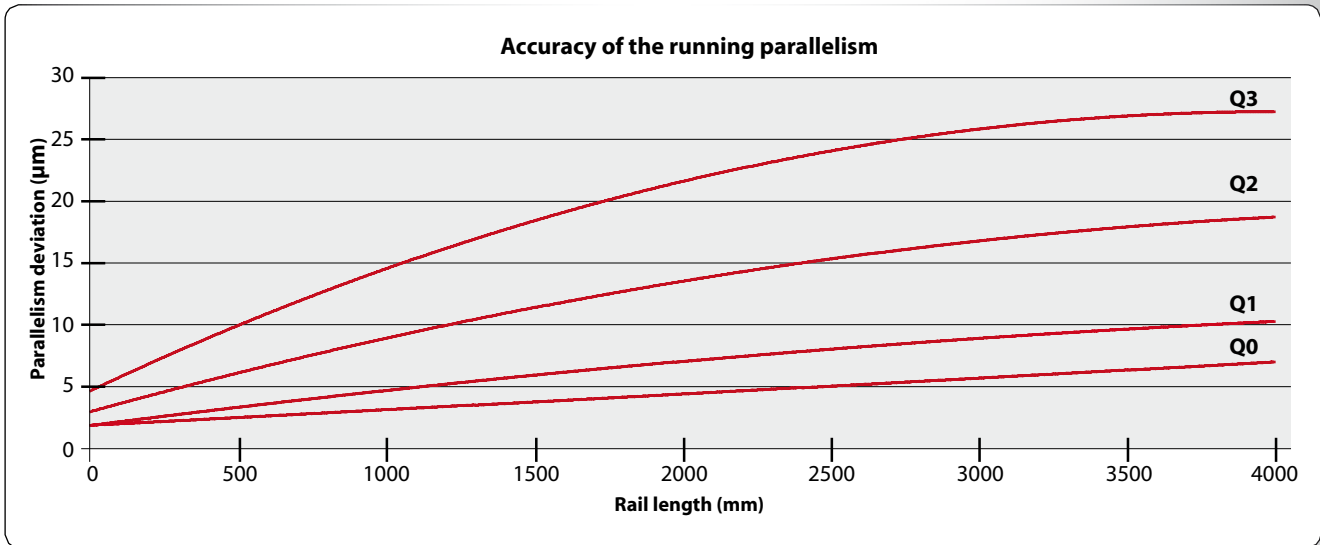
LC/LL



Size	C (N)	C ₀ (N)	M _t (Nm)	M _{t0} (Nm)	M _L (Nm)	M _{L0} (Nm)
25 SC / LC	28 700	57 600	431	863	285	570
25 SL / LL	38 900	76 800	583	1150	491	970
35 SC / LC	53 300	99 000	1179	2192	674	1253
35 SL / LL	72 600	136 000	1595	3014	1187	2243
45 SC / LC	95 000	184 000	2617	5070	1538	2979
45 SL / LL	119 500	242 200	3293	6672	2444	4951
55 SC / LC	132 600	256 000	4503	8707	2576	4981
55 SL / LL	176 000	351 000	5977	11915	4470	8910



Tolerances	Accuracy class			
	Q0	Q1	Q2	Q3
Tolerance on H dimension (variation as to nominal dimension)	$\pm 5 \mu\text{m}$	$\pm 10 \mu\text{m}$	$\pm 20 \mu\text{m}$	$\pm 30 \mu\text{m}$
Tolerance on A1 dimension (variation as to nominal dimension)	$\pm 5 \mu\text{m}$	$\pm 7 \mu\text{m}$	$\pm 20 \mu\text{m}$	$\pm 20 \mu\text{m}$
Variation on H dimension between blocks of the same rail	$3 \mu\text{m}$	$5 \mu\text{m}$	$7 \mu\text{m}$	$15 \mu\text{m}$
Variation on A1 dimension between blocks of the same rail	$3 \mu\text{m}$	$5 \mu\text{m}$	$7 \mu\text{m}$	$15 \mu\text{m}$
Parallelism deviation ΔC and $\Delta A-B$	See diagram below			



Preload class

Type	Preload value	Available accuracy class
P2	$0.08 \cdot C$	Q0 Q1 Q2 Q3
P3	$0.13 \cdot C$	Q0 Q1 Q2 Q3

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