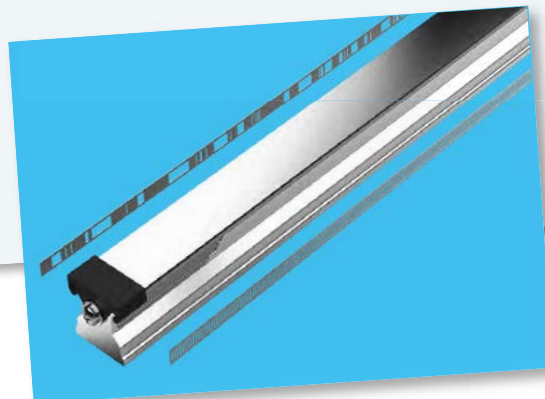
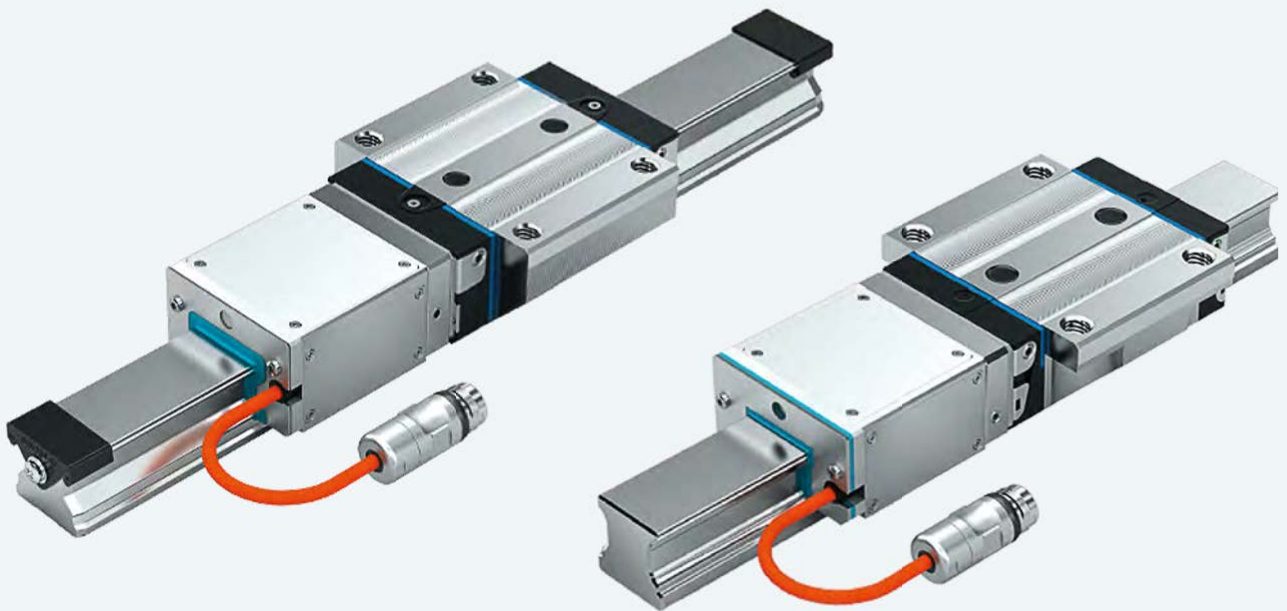


Integrated measuring system IMS

for ball and roller rail systems



Product overview and type designation, ball guide rails

Ball guide rails with cover strip and protective end caps and integrated scale



Ball guide rails with plastic¹⁾ mounting hole plugs and integrated scale



¹⁾only for applications without dirt contamination

Available versions

Ball guide rails SNS	Size									
	20		25		30		35		45	
	P	S	P	S	P	S	P	S	P	S
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ = Available versions

Type designation ball guide rails with scale (example)

I	M	S	2	x	-	K	S	A	-	0	2	0	-	S	N	S	-	P	-	M	A	-	A	B	-	1	-	xx	-	A	3	-	D
										1				2				3			4		5		6		7		8		9		

I for IMS-I (incremental)
A for IMS-A (absolute)

see option coding

1 Size	Feature	Designation
	020	Size 20
	025	Size 25
	030	Size 30
	035	Size 35
	045	Size 45

2 Format	Feature	Designation
	SNS	Slimline, normal, standard height
	SNO	SNS without groove (on request)

3 Accuracy class	Feature	Designation
	P	Precision
	S	Super precision (SP)

4 Fastening	Feature	Designation
	MA	Mounting from above

5 Cover

Feature	Designation
AB	With cover strip and protective end caps
AK	With plastic mounting hole plugs

7 Coding

Feature	Designation
IMS-I	
R0	Without referencing
R1	With 1 reference mark
R2	With 2 reference marks
R3	With 3 reference marks
R4	With 4 reference marks
R5	With 5 reference marks
IMS-A	
AC	With absolute code band

6 Number of sections

Feature	Designation
1	Number of sections

8 Accuracy class scale

Feature	Designation
A3	3 μm
A5	5 μm

9 Documentation

Feature	Designation
D	Standard documentation

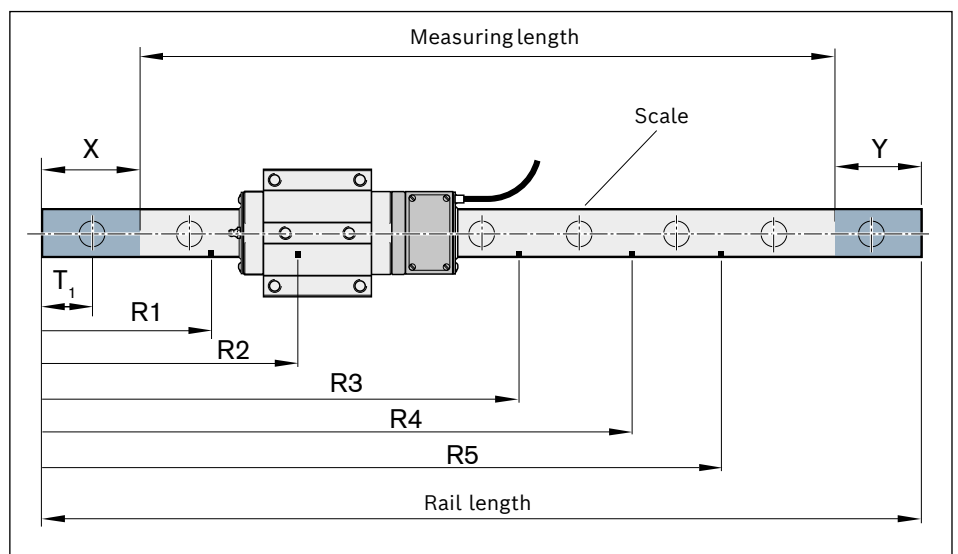
IMS-I
Permitted positions of single reference marks (7 Coding, feature: R1 ... R5)

Due to mechanical limit conditions, the reference mark positions should be chosen as specified in the drawing below. No reference marks may be positioned in the areas X and Y. That is, possible positions are for R1 ... R5 in such a way that these are $>X$ and $>Y$. Specify the positions in increments of 1 mm.

Example: Size 20: $R_1 = 155$ mm, $R_n = \text{rail length} - 63$ mm, with cover strip and protective end caps (AB).

Between the single reference marks there must be a minimum space of 10 mm.

Size	Dimensions (mm)			
	Feature AB (R1605 .6. ..)		Feature AK (R1605 .0. ..)	
	X	Y	X	Y
20	154	62	134	42
25	170	62	150	42
30	184	62	164	42
35	203	62	183	42
45	238	62	218	42



R1 ... R5 Positions of the reference marks

Ball guide rails SNS with cover strips and protective caps



- ▶ For mounting from above, with cover strip made of corrosion-resistant spring steel per EN 10088 and screw-down plastic protective end caps (with threaded mounting holes on end faces)
- ▶ With integrated scale

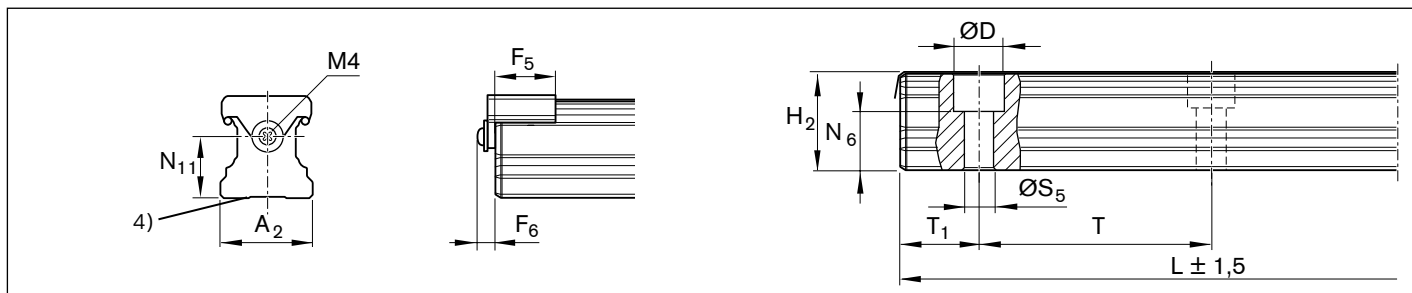
Notes

- ▶ Secure the cover strip!
- ▶ As an alternative, the cover strip can be secured with screws and washers.
- ▶ Protective caps with screws and washers are included in the scope of delivery.
- ▶ Note mounting instructions. See the chapter entitled "Mounting instructions".
- ▶ For ordering examples, see the "Ordering examples" section.

Available versions

SNS	Size									
	20		25		30		35		45	
	P	S	P	S	P	S	P	S	P	S
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ = Available versions



Dimensions (mm)

Size	A ₂	D	F ₅	F ₆	H ₂ ¹⁾	H ₂ ⁵⁾	L _{min}	L _{max}	N ₆ ^{±0.5}	N ₁₁	ØS ₅	T	T _{1 min} ²⁾	T ₁₅ ³⁾	T _{1 max}	Mass m (kg/m)
20	20	9.4	14.0	6.5	20.75	20.55	260	4 500	13.2	13	6	60	13	28.0	50	2.4
25	23	11.0	15.2	6.5	24.45	24.25	280	4 500	15.2	15	7	60	13	28.0	50	3.2
30	28	15.0	15.2	7.0	28.55	28.35	290	4 500	17.0	18	9	80	16	38.0	68	5.0
35	34	15.0	18.0	7.0	32.15	31.85	310	4 500	20.5	22	9	80	16	38.0	68	6.8
45	45	20.0	20.0	7.0	40.15	39.85	350	4 500	23.5	30	14	105	18	50.5	89	10.5

¹⁾Dimension H₂ with cover strip

Size 20 - 30 with 0.2 mm cover strip

Size 35 - 45 with 0.3 mm cover strip

²⁾For end spaces below T_{1min}, no threaded holes in end faces possible. Secure the cover strip.

³⁾Recommended: preferred dimension T₁₅ with tolerances ± 0.75.

⁴⁾For manufacturing reasons, rails may have a flat underside (without groove).

⁵⁾Dimension H₂ without cover strip

Ball guide rails SNS with plastic mounting hole plugs



- ▶ For mounting from above with plastic mounting hole plugs
- ▶ With integrated scale

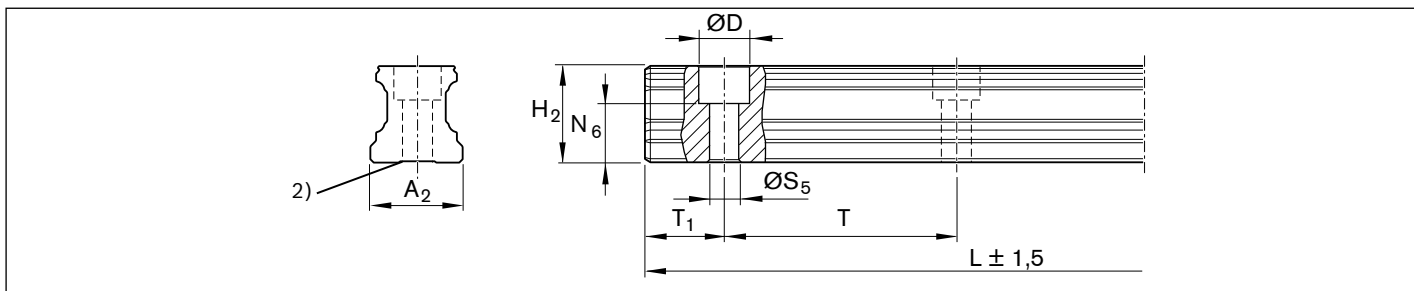
Notes:

- ▶ Plastic mounting hole plugs included in scope of supply.
- ▶ Note mounting instructions. See the chapter entitled “Mounting instructions”.
- ▶ For ordering examples, see the “Ordering examples” section.

Available versions

SNS	Size										
	20		25		30		35		45		
	P	S	P	S	P	S	P	S	P	S	
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ = Available versions



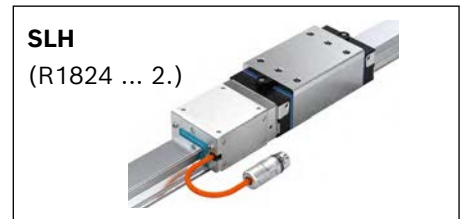
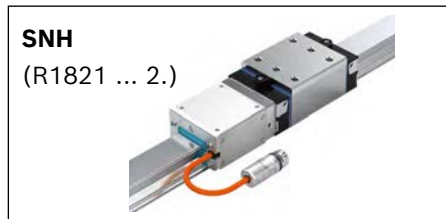
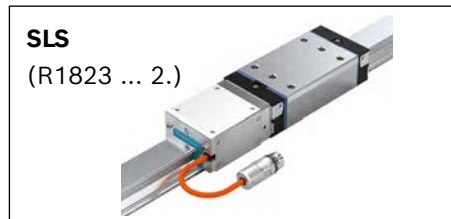
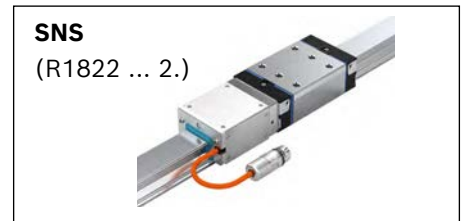
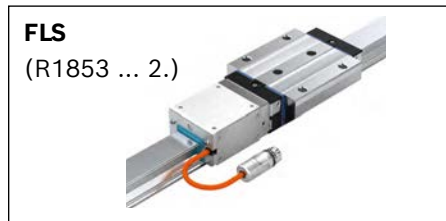
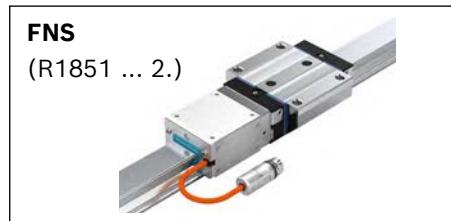
Dimensions (mm)

Size	A ₂	D	H ₂	L _{min}	L _{max}	N ₆ ^{±0.5}	S ₅	T	T _{1 min}	T _{1S} ¹⁾	T _{1 max}	Mass m (kg/m)
20	20	9.4	20.55	220	4 500	13.2	6.0	60	10	28.0	50	2.4
25	23	11.0	24.25	240	4 500	15.2	7.0	60	10	28.0	50	3.2
30	28	15.0	28.35	250	4 500	17.0	9.0	80	12	38.0	68	5.0
35	34	15.0	31.85	270	4 500	20.5	9.0	80	12	38.0	68	6.8
45	45	20.0	39.85	310	4 500	23.5	14.0	105	16	50.5	89	10.5

¹⁾Recommended: preferred dimension T_{1S} with tolerances ± 0.75.

²⁾For manufacturing reasons, rails may have a flat underside (without groove).

Product overview and type key roller runner blocks



Available versions

Roller runner block	Size															
	35				45				55				65			
	P		S		P		S		P		S		P		S	
	C2	C3	C2	C3	C2	C3	C2	C3	C2	C3	C2	C3	C2	C3	C2	C3
FNS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FLS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SNS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SLS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SNH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
SLH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				

✓ = Available versions