

STAR – Ball Rail Systems

Guide Rails with Mounting Hole Plugs

Guide rails 1605-.0.-

for mounting from above,
complete with plastic mounting
hole plugs

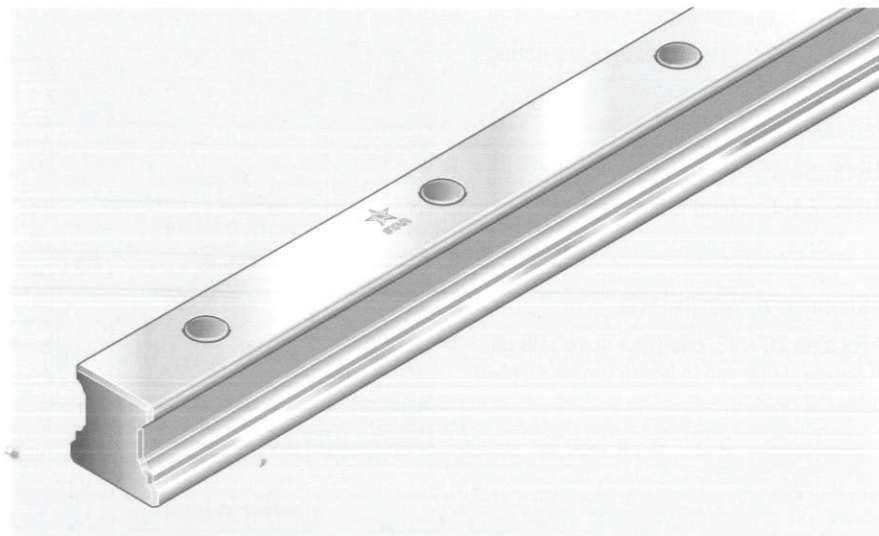
For special applications:

– Guide rails with steel mounting hole
plugs for sizes 25 to 65 in accuracy
classes SP, P, H, N

Part numbers: **1606-.5.-**

Steel mounting hole plugs to be ordered
separately.

Observe the mounting instructions for steel
mounting hole plugs.



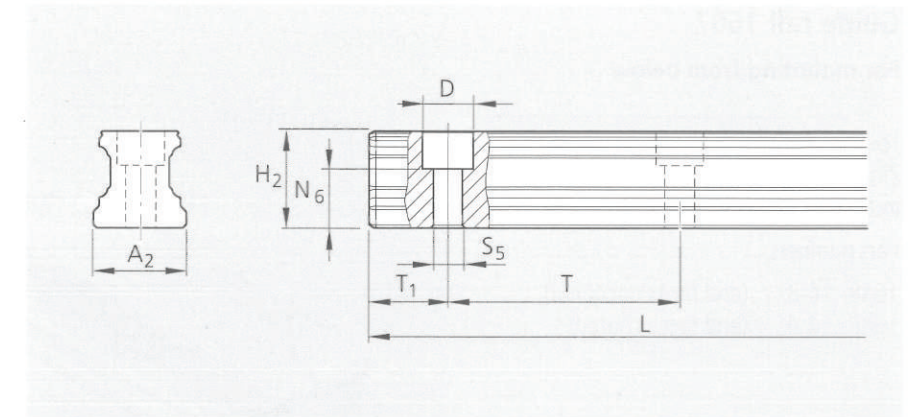
Part numbers and rail lengths

Size	Accuracy class	Guide Rail		Recommended rail length						
		One-piece Part number, Rail length L (mm)	Composite Part number, Number of sections Rail length L (mm)	Hole spacing T (mm)	Number of holes n _B / Rail length L (mm)					
15	UP	1605-109-31,.....	1605-109-3,.....		60	2 / 116	7 / 416	12 / 716	20 / 1196	40 / 2396
	SP	1605-101-31,.....	1605-101-3,.....							
	P	1605-102-31,.....	1605-102-3,.....							
	H	1605-103-31,.....	1605-103-3,.....							
	N	1605-104-31,.....	1605-104-3,.....							
20	UP	1605-809-31,.....	1605-809-3,.....	60	3 / 176	8 / 476	13 / 776	22 / 1316	50 / 2996	
	SP	1605-801-31,.....	1605-801-3,.....							
	P	1605-802-31,.....	1605-802-3,.....							
	H	1605-803-31,.....	1605-803-3,.....							
	N	1605-804-31,.....	1605-804-3,.....							
25	UP	1605-209-31,.....	1605-209-3,.....	60	For size 15: max. 50/2996					
	SP	1605-201-31,.....	1605-201-3,.....							
	P	1605-202-31,.....	1605-202-3,.....							
	H	1605-203-31,.....	1605-203-3,.....							
	N	1605-204-31,.....	1605-204-3,.....							
30	UP	1605-709-31,.....	1605-709-3,.....	80	2 / 156	7 / 556	12 / 956	20 / 1596	40 / 3196	
	SP	1605-701-31,.....	1605-701-3,.....							
	P	1605-702-31,.....	1605-702-3,.....							
	H	1605-703-31,.....	1605-703-3,.....							
	N	1605-704-31,.....	1605-704-3,.....							
35	UP	1605-309-31,.....	1605-309-3,.....	80	3 / 236	8 / 636	13 / 1036	22 / 1756	50 / 3996	
	SP	1605-301-31,.....	1605-301-3,.....							
	P	1605-302-31,.....	1605-302-3,.....							
	H	1605-303-31,.....	1605-303-3,.....							
	N	1605-304-31,.....	1605-304-3,.....							
45	UP	1605-409-31,.....	1605-409-3,.....	105	4 / 316	9 / 716	14 / 1116	25 / 1996		
	SP	1605-401-31,.....	1605-401-3,.....							
	P	1605-402-31,.....	1605-402-3,.....							
	H	1605-403-31,.....	1605-403-3,.....							
	N	1605-404-31,.....	1605-404-3,.....							
55	UP	1605-509-31,.....	1605-509-3,.....	120	5 / 396	10 / 796	16 / 1276	30 / 2396		
	SP	1605-501-31,.....	1605-501-3,.....							
	P	1605-502-31,.....	1605-502-3,.....							
	H	1605-503-31,.....	1605-503-3,.....							
	N	1605-504-31,.....	1605-504-3,.....							
65	UP	1605-609-31,.....	1605-609-3,.....	150	6 / 476	11 / 876	18 / 1436	35 / 2796		
	SP	1605-601-31,.....	1605-601-3,.....							
	P	1605-602-31,.....	1605-602-3,.....							
	H	1605-603-31,.....	1605-603-3,.....							
	N	1605-604-31,.....	1605-604-3,.....							

Special version:
Zinc-iron coating with yellow chromating
in accuracy class N.

Part numbers:

- 1646-.14-3. (end faces uncoated)
- 1646-.14-4. (end faces coated)



Size	Dimensions (mm)									Mass kg/m
	A ₂	H ₂ ¹⁾	N ₆ ^{±0.5}	D	S ₅	T ₁₅ ^{±0.5}	T _{1 min}	T	L _{max} ²⁾	
15	15	16.20	10.3	7.4	4.4	28.0	10	60	3000	1.4
20	20	20.55	13.2	9.4	6.0	28.0	10	60	4000	2.4
25	23	24.25	15.2	11.0	7.0	28.0	10	60	4000	3.2
30	28	28.35	17.0	15.0	9.0	38.0	12	80	4000	5.0
35	34	31.85	20.5	15.0	9.0	38.0	12	80	4000	6.8
45	45	39.85	23.5	20.0	14.0	50.5	16	105	4000	10.5
55	53	47.85	29.0	24.0	16.0	58.0	18	120	4000	16.2
65	63	59.85	38.5	26.0	18.0	73.0	20	150	4000	22.4

1) Dimension H₂ with Rail Seal

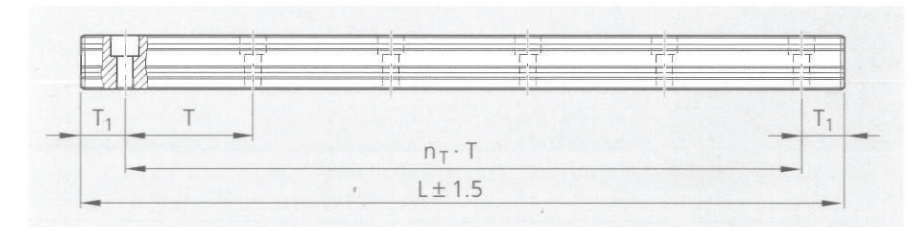
2) For sizes 20 – 45, one-piece guide rails
up to approx. 6000 mm in length can be
supplied in special cases

Ordering a guide rail

- Wherever possible, the recommended
rail lengths as per table should be used.

Ordering example 1:

Guide rail size 35,
accuracy class H,
rail length 1756 mm,
(21 · T, number of holes n_B = 22)
Ordering data: **1605-303-31, 1756 mm**



$$L = n_B \cdot T - 4$$

or

$$L = n_T \cdot T + 2 \cdot T_{15}$$

L = rail length (mm)
 T = hole spacing*) (mm)
 T₁₅ = preferred dimension*) (mm)
 n_B = number of holes
 n_T = number of spaces
 *) see tables for values

Intermediate lengths

Calculation of rail length L and ordering
examples:

- The preferred dimension is T₁₅
- If T₁₅ cannot be used, then
 - Select an end space T₁ between
T₁₅ and T_{1 min}
 - Do not go below the minimum
spacing T_{1 min}!

Note

- T₁, T_{1 min}, T₁₅ are the same at either
end of the rail.

Ordering example 2 (up to L_{max}):

Guide rail size 35,
accuracy class H,
rail length 1676 mm,
(20 · T, preferred dimension T₁₅ = 38 mm;
number of holes n_B = 21)

Ordering data:

Part number, length (mm)
T₁₅ / n_T · T / T₁₅ (mm)
1605-303-31, 1676 mm
38 / 20 · 80 / 38 mm

Rail lengths above L_{max} are made up of
fitted rail sections mounted end to end.

Ordering example 3 (over L_{max}):

Guide rail size 35,
accuracy class H,
rail length 5063 mm, 2 sections
(62 · T, preferred dimension T₁₅ = 38 mm;
number of holes n_B = 63)

Ordering data:

Part number and number of sections,
length (mm)
T₁₅ / n_T · T / T₁₅ (mm)
1605-303-32, 5036 mm
38 / 62 · 80 / 38 mm