

HIWIN®

Linear Technology



HIWIN Compact

Linear Guideways
Ballscrews
Linear Stages

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Linear Guideway

HG, EG series

3. Double seals

Thanks to the increased scraper effect, the block has better protection from the ingress of dirt particles.

Table 1.15: Article numbers for end seals

Series/ Size	Article number	Thickness (t ₁) [mm]	Series/ Size	Article number	Thickness (t ₁) [mm]	Series/ Size	Article number	Thickness (t ₁) [mm]
HG 15	HG-15-ES	3	HG 35	HG-35-ES	3.2	EG 15	EG-15-ES	2.0
HG 20	HG-20-ES	3	HG 45	HG-45-ES	4.5	EG 20	EG-20-ES	2.0
HG 25	HG-25-ES	3	HG 55	HG-55-ES	5	EG 25	EG-25-ES	2.0
HG 30	HG-30-ES	3.2	HG 65	HG-65-ES	5	EG 30	EG-30-ES	2.0

4. Scraper

The scraper protects the seals against metal chips and removes large particles of dirt.

Table 1.16: Article numbers for scraper

Series/ Size	Article number	Thickness (t ₂) [mm]	Series/ Size	Article number	Thickness (t ₂) [mm]	Series/ Size	Article number	Thickness (t ₂) [mm]
HG 15	HG-15-SC	1.5	HG 35	HG-35-SC	1.5	EG 15	EG-15-SC	0.8
HG 20	HG-20-SC	1.5	HG 45	HG-45-SC	1.5	EG 20	EG-20-SC	0.8
HG 25	HG-25-SC	1.5	HG 55	HG-55-SC	1.7	EG 25	EG-25-SC	1.0
HG 30	HG-30-SC	1.5	HG 65	HG-65-SC	1.7	EG 30	EG-30-SC	1.0

5. Cover cap for rail fixing holes

The cover caps are used to keep the fixing holes free from chips and dirt. Cover caps are supplied with each rail.

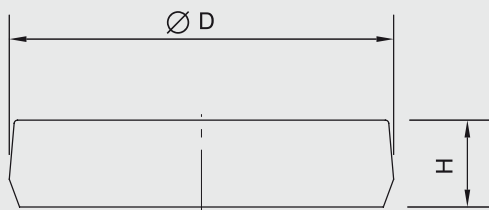


Table 1.17: Cover cap for rail fixing holes

Rail	Screw	Article number	Diameter (D) [mm]	Height (H) [mm]
EGR 15 R	M3	C3	6.3	1.2
HGR 15 / EGR 15 U	M4	C4	7.7	1.1
HGR 20 / EGR 20 R	M5	C5	9.7	2.2
HGR 25 / EGR 25 R / EG R30 R	M6	C6	11.3	2.5
HGR 30 / EGR 30 U	M8	C8	14.3	3.3
HGR 35	M8	C8	14.3	3.3
HGR 45	M12	C12	20.3	4.6
HGR 55	M14	C14	23.5	5.5
HGR 65	M16	C16	26.6	5.5

6. Tightening torques for fixing screws

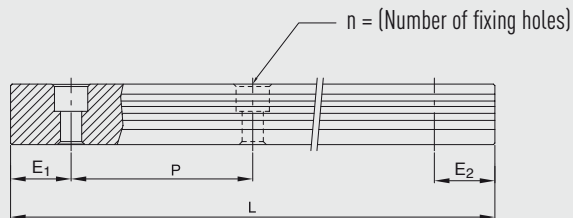
Insufficient tightening of the fixing screws will highly detract from the accuracy of the linear guideway; the following tightening torques are recommended for the respective screw sizes.

Table 1.18: Tightening torque for fixing screws to DIN 912-12.9

Series / Size	Screw size	Torque [Nm]	Series / Size	Screw size	Torque [Nm]
EG15	M3 x 16	2	HG35	M8 x 25	30
HG15 / EG15U	M4 x 16	4	HG45	M12 x 35	120
HG20 / EG20R	M5 x 16	9	HG55	M14 x 45	160
HG25 / EG25 / EG30R	M6 x 20	13	HG65	M16 x 50	200
HG30 / EG30U	M8 x 25	30			

1.1.11 Rail length

HIWIN offers customer-specific lengths. To ensure that the ends of the rails for non-standard lengths are stable, value E must not exceed half the distance between the fixing holes (P). In addition, value $E_{1/2}$ must not be less than $E_{1/2 \text{ min}}$ and must not exceed $E_{1/2 \text{ max}}$ to prevent breakage of the fixing hole.



Formula 1.2

$$L = (n - 1) \cdot P + E_1 + E_2$$

L : Total rail length [mm]

n : Number of fixing holes

P : Distance between two fixing holes [mm]

$E_{1/2}$: Distance from the center of the last fixing hole to the end of the rail [mm]

Table 1.19: Maximum rail lengths

Rail/Size	HGR15 EGR15	HGR 20 EGR 20	HGR 25 EGR 25	HGR 30 EGR 30	HGR35	HGR45	HGR55	HGR65
Hole distance (P)	60	60	60	80	80	105	120	150
E1/2 min	6	7	8	9	9	12	14	15
E1/2 max	54	53	52	71	71	93	106	135
max. length (joint free)	2000	4000	4000	4000	4000	4000	4000	4000

Unit: [mm]

Note: 1. The tolerance for E is 0 to -1 mm for standard, for joint connections 0 to -0.3 mm

2. If no information is provided on the $E_{1/2}$ dimensions, the maximum number of fixing holes is determined taking into account $E_{1/2 \text{ min}}$

3. The rails are shortened to the desired length. If no information on the $E_{1/2}$ dimensions is provided, then the rails are manufactured symmetrically.