

# Technical Data

## Travel speed

$$v_{\max} = 3 \text{ m/s}$$

Speeds of up to 5 m/s are possible. Service life is limited by wear of plastic parts.

## Acceleration

$$a_{\max} = 250 \text{ m/s}^2$$

Only with preloaded systems. For non-preloaded systems:  $a_{\max} = 50 \text{ m/s}^2$

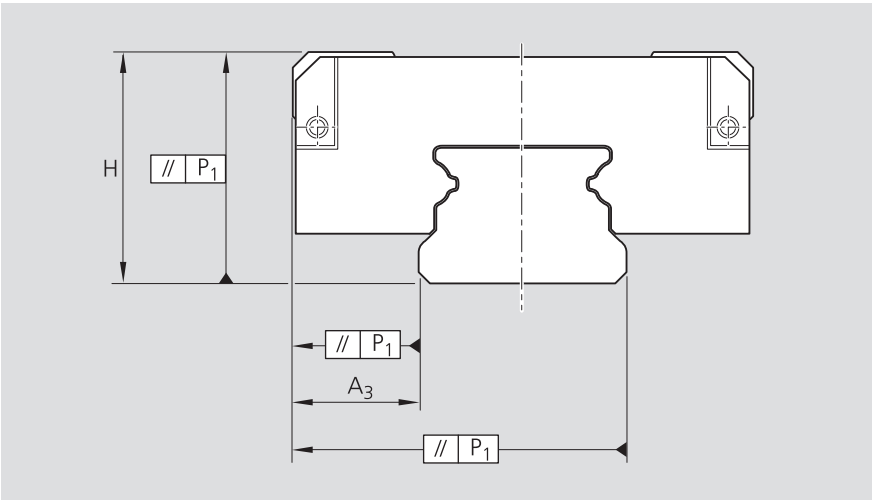
## Operating temperature range

$$-10 \text{ }^\circ\text{C} \dots 80 \text{ }^\circ\text{C}$$

Brief peaks up to 100 °C are permissible.

## Accuracy classes and their tolerances (µm)

Miniature Ball Rail Systems are offered in 3 different accuracy classes.

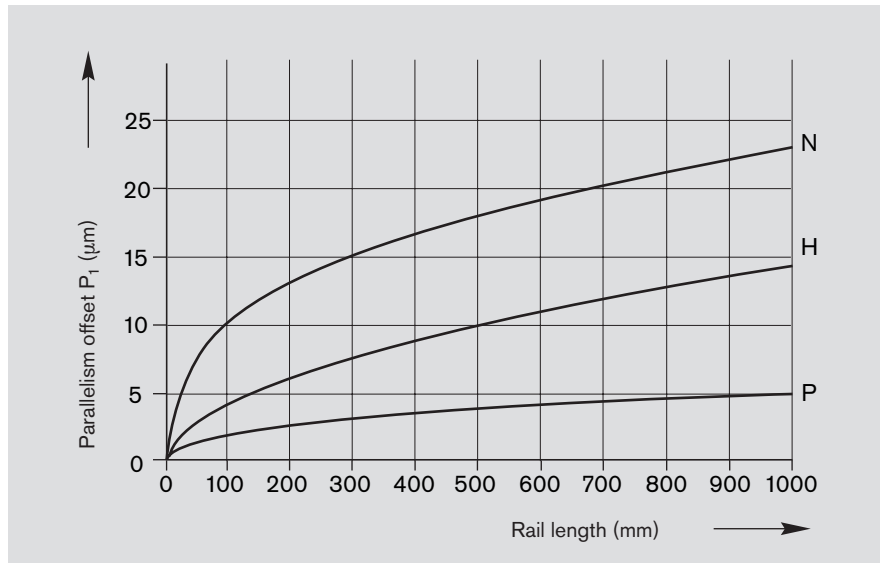


Accuracy class	Dimensional tolerance (µm)		Max. difference in dimensions H and A <sub>3</sub> on the same rail ΔH, ΔA <sub>3</sub> (µm)
	H	A <sub>3</sub>	
P	± 10	± 10	7
H	± 20	± 20	15
N	± 30	± 30	20

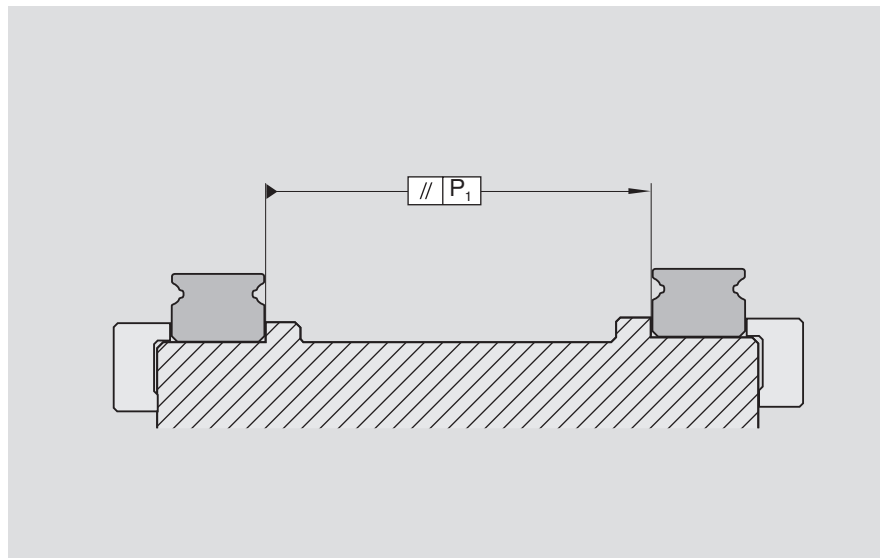
Measured at middle of runner block <sup>1)</sup>		For any block/rail combination at any position on rail
		For different runner blocks at same position on rail

1) For dimensions H and ΔH, the middle of the runner block is calculated from the mean of the two measuring points shown.

**Parallelism offset  $P_1$  of the Ball Rail System in service**



**Parallelism offset of the installed rails measured on the guide rails and on the runner blocks**



Size	Parallelism offset $P_1$ (mm)	
	Clearance	Preload
<b>Standard Guide Rails R0445</b>		
7	0.004	0.002
9/M3	0.005	0.002
12	0.008	0.004
15	0.017	0.008
20	0.025	0.016
<b>Wide Guide Rails R0455</b>		
9/M3	0.010	0.004
12 B	0.014	0.006
15 B	0.018	0.011