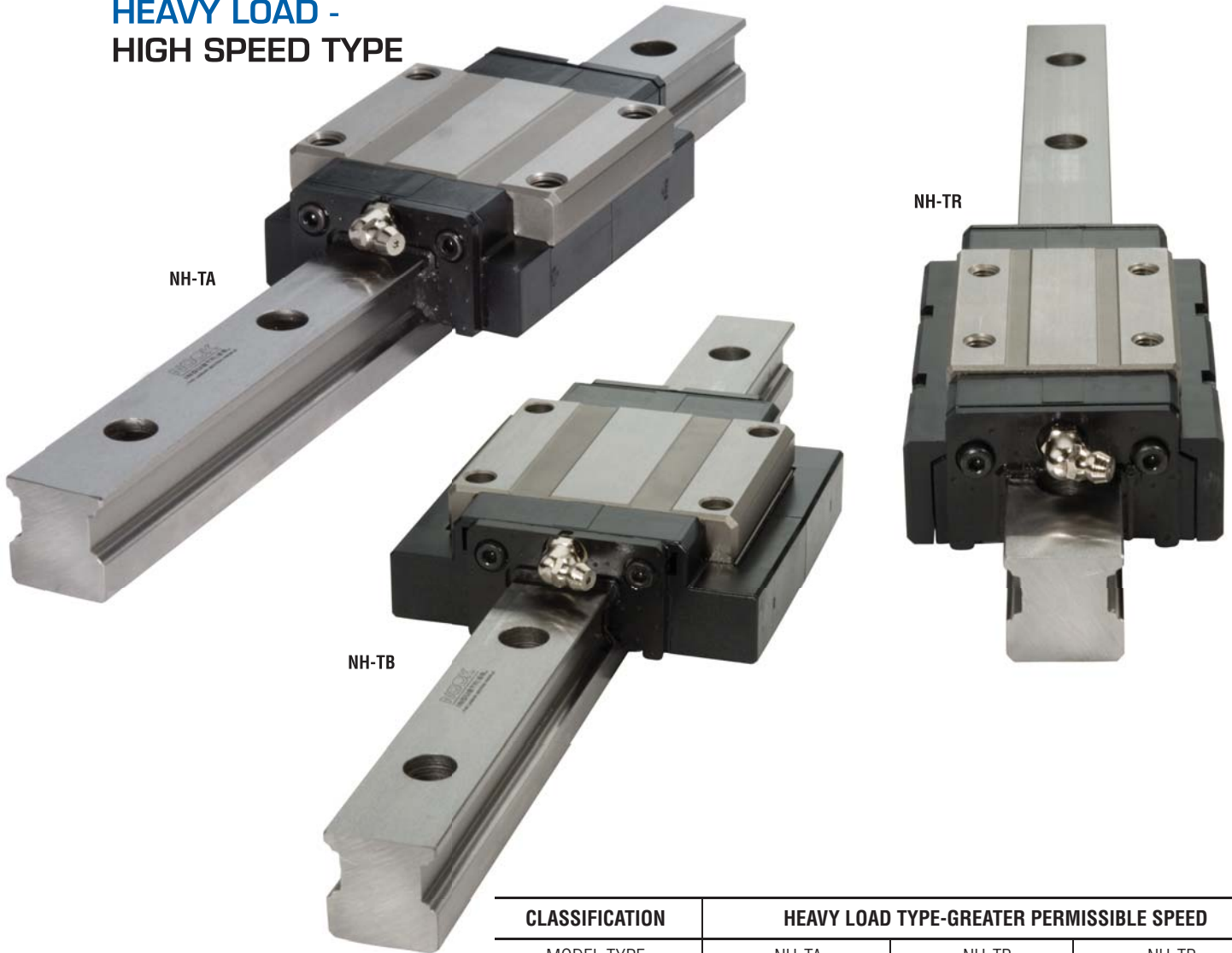
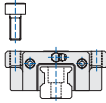
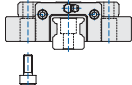
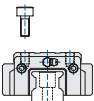


HEAVY LOAD - HIGH SPEED TYPE



CLASSIFICATION	HEAVY LOAD TYPE-GREATER PERMISSIBLE SPEED		
	NH-TA	NH-TB	NH-TR
MODEL TYPE	NH-TA	NH-TB	NH-TR
Mounting Direction			
Main Features	Heavy Load Type-Greater Permissible Speed		
Permissible speed (m/min)	200	200	200
Accuracy	C001-C7	C001-C7	C001-C7
Preload	T-T3	T-T3	T-T3
Vibration Behaviors	◎	◎	◎
Noise	◎	◎	◎

See unit conversion on page 48

○ Low

◎ Very Low

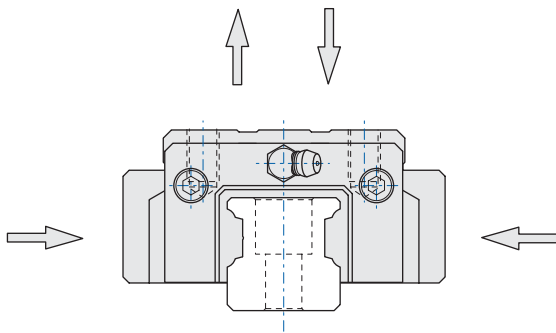
FEATURES

NOOK Profile Rail Design

NOOK Heavy Load and High Speed Type Runner Blocks recirculate the balls via a tube. The four rows of balls on the inner runner block are arranged 2 rows each on either side facing each other and contacting at a 45° angle. As the load is transmitted the balls contact the track at two points at an inclusive angle of 90°. In turn, the contact with the outer track is the same making a square load force configuration.

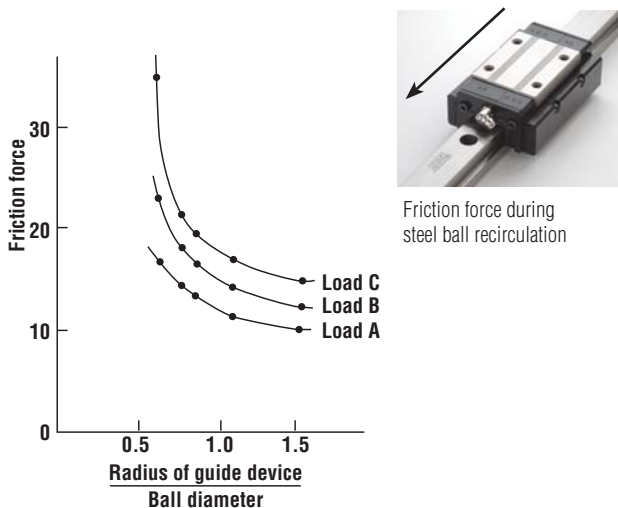
Equal Load in Four Directions

The shape of NOOK runner blocks have an equal rated load capacity in any direction. Equal rigidity is therefore obtained in any of the four loading directions making NOOK runner blocks ideal for single or combination loads.



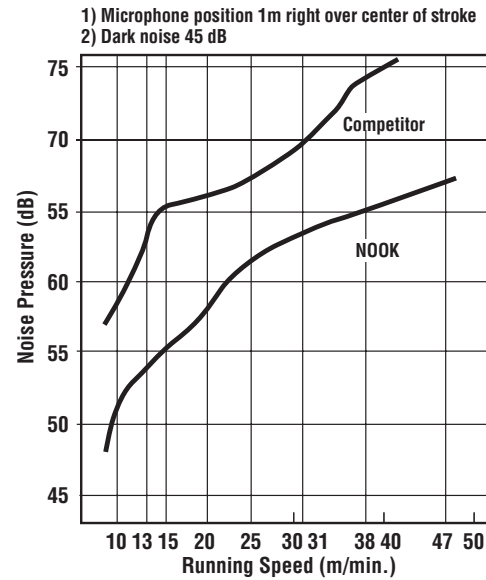
Ratio Ball Recirculation Method

Experiments have shown that a ratio of the ball diameter to the return curvature radius of 1.5:1 results in reduced friction with lower noise signature and lower vibration and less variation in friction at high speeds when compared to normal return ratios of 0.6:1 to 1.1:1 as found in standard systems. NOOK high-speed runner blocks utilize this ratio.



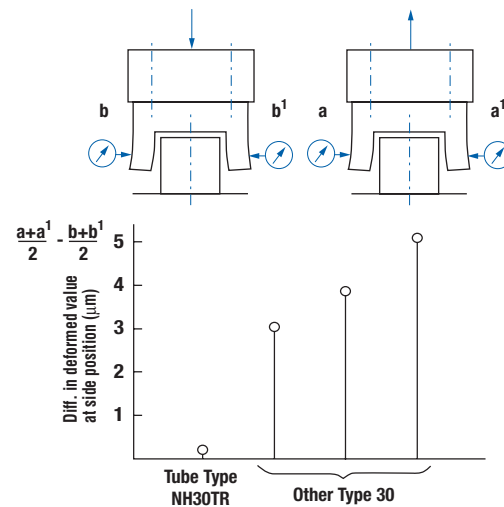
Noise

As a result of the reduction in friction, the noise vibration signature decreases during travel and consequently reduces the audible noise.



Rigidity of Runner Block

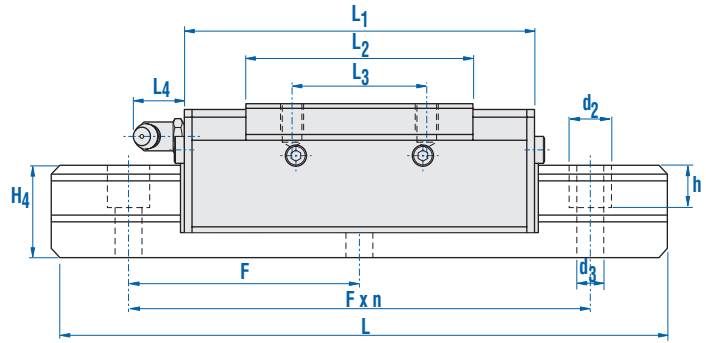
The "Tube" Type NOOK runner block has a solid structure with no return holes for balls as with the conventional runner block. The tube type design offers a stronger construction, giving the advantage of near equal resistance to deformation in both the radial and reverse radial loaded directions at the sides of the runner block.



Consistent Travelling Accuracy

High Speed Type runner blocks have a simple machined form offering continuity of movement at elevated speeds.

NH-TR series
heavy load • high speed
four tapped holes

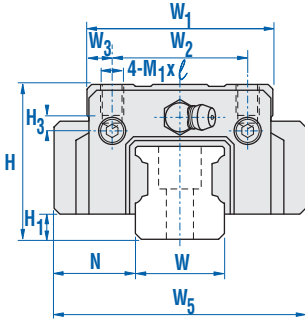


NOOK Precision Profile Rail Systems provide stable and efficient linear motion guidance under variable speeds and high load conditions.

- Interchangeable with other manufacturers
- NH-TR provides Heavy Load with Higher Speeds
- Precision Class: C0001 - C7
- Preload: T - T3
- Maximum Rail Length:
 15, 20, 45, 55, 65 - 3000mm
 25, 30, 35 - 4000mm

Model	assembly dimensions			runner block dimensions										grease fitting
	height H	width W ₁	length L ₁	W ₂	W ₅	L ₃	M ₁ xℓ	L ₂	H ₃	L ₄	W ₃	H ₁		
NH15TR	28	34	71	26	48	26	M4x5	41	6	3	4	4.6	PB1021B	
NH25TR	40	48	97	35	66	35	M6x8	59	8	10	6.5	6.5	B-M6F	
NH30TR	45	60	102	40	81	40	M8x10	59	8	10	10	7.0	B-M6F	
NH35TR	55	70	128	50	92	50	M8x12	80	10	10	10	8.0	B-M6F	
NH45TR	70	86	158	60	112	60	M10x17	102	15	12	13	11	B-PT 1/8	
NH55TR	80	100	189	75	130	75	M12x18	124	18	12	12.5	14	B-PT 1/8	
NH65TR	90	126	225	90	162	70	M16x20	148	23	12	18	14	B-PT 1/8	

See unit conversion on page 48



rail dimensions						load ratings										weights	
height H_4	width W	pitch N	pitch F	$d_3 \times d_2 \times h$	basic load ratings				static moment ratings						block	rail	
					C		C_0		M_A		M_B		M_C		kg	kg/m	
					kN	lbf	kN	lbf	kN-m	lb-in	kN-m	lb-in	kN-m	lb-in			
17	15	9.5	60	4.5 x 7.5 x 7	8.43	1,895	13.53	3,041	0.07	608	0.07	608	0.13	1,128	0.19	1.7	
24	23	12.5	60	7 x 11 x 11	20.00	4,496	34.41	7,736	0.27	2,430	0.27	2,430	0.44	3,906	0.54	3.7	
28	28	16	80	9 x 14 x 14	25.00	5,620	39.71	8,926	0.31	2,778	0.31	2,778	0.62	5,468	0.75	5.3	
32	34	18	80	9 x 14 x 15	37.55	8,441	62.55	14,061	0.64	5,642	0.64	5,642	1.13	9,982	1.5	7.5	
42	45	20.5	105	14 x 20 x 21	60.20	13,532	95.71	21,510	1.30	11,544	1.30	11,544	2.30	20,398	2.8	12.9	
48	53	23.5	120	16 x 23 x 24	90.02	20,232	137.09	30,811	2.22	19,617	2.22	19,617	4.25	37,671	4.5	17.3	
58	63	31.5	150	18 x 26 x 25	141.11	31,714	215.15	48,354	4.21	37,237	4.21	37,237	7.38	65,360	8.7	24.9	

The specifications and data in this publication are believed to be accurate and reliable. However, it is the responsibility of the product user to determine the suitability of Nook Industries products for a specific application. While defective products will be replaced without charge if promptly returned, no liability is assumed beyond such replacement.