NHB SERIES
PARALLEL TYPE

Mechanical Hands
Linear Guide Specification
Mechanical Hands

Specifications

● Parallel type mechanical hands

Item \ Basic model		NHBMRP-10	NHBMP-10	NHBMRP-16	NHBMP-16	NHBMRP-20	NHBMP-20
Nominal diameter (NHBDPG equivalent) mm [in.]		10 [0.394]		16 [0.630]		20 [0.787]	
Operation type		Single acting normally open type	Single acting normally closed type	Single acting normally open type	Single acting normally closed type	Single acting normally open type	Single acting normally closed type
Operation method		Operating by external force type when closed	Operating by external force type when open	Operating by external force type when closed	Operating by external force type when open	Operating by external force type when closed	Operating by external force type when open
Returning method		Compression spring					
Operating temperature range °C [°F]		0～60 [32～140]					
Maximum operating frequency cycle/min		100					
Lubrication		Required (Apply grease to the sliding portion)					
Repeatability mm [in.]		±0.01 [±0.0004]					
Gripping force N [lbf.]	-L	3.4 [0.76]		4.4 [0.99]		6.5 [1.46]	
	-M	4.5 [1.01]		6.4 [1.44]		8.3 [1.87]	
Pushing force Note1 N [lbf.]	-L	23.5 [5.28]		32.3 [7.26]		47.0 [10.57]	
	-M	32.3 [7.26]		47.0 [10.57]		58.8 [13.22]	
Allowable pushing force N [lbf.]		50 [11.2]		130 [29.2]		210 [47.2]	
Lever ratio Note2		1 : 2.1					
Mass g [oz.]		60 [2.12]		135 [4.76]		245 [8.64]	

Notes: 1. Pushing force refers to the external force required to completely open the lever against the spring force constantly exerted in the closed direction.
2. Lever ratio expresses the "pushing distance : lever open distance (stroke)" where the pushing distance on the rear rod is assumed to be 1.

● Parallel type linear guide specification mechanical hands

Item \ Basic model		NHBMPG-8	NHBMPG-10	NHBMPG-16	NHBMPG-20
Nominal diameter (NHBDPG equivalent) mm [in.]		8 [0.315]	10 [0.394]	16 [0.630]	20 [0.787]
Operation type		Single acting normally closed type			
Operation method		Operating by external force type when open			
Returning method		Compression spring			
Operating temperature range °C [°F]		0～60 [32～140]			
Maximum operating frequency cycle/min		100			
Lubrication		Required (Apply grease to the sliding portion)			
Repeatability mm [in.]		±0.01 [±0.0004]			
Gripping force N [lbf.]	-L	1.6 [0.36]	3.4 [0.76]	4.4 [0.99]	6.5 [1.46]
	-M	2.6 [0.58]	4.5 [1.01]	6.4 [1.44]	8.3 [1.87]
Pushing force Note1 N [lbf.]	-L	12.2 [2.74]	19.6 [4.41]	27.4 [6.16]	28.2 [6.34]
	-M	17.2 [3.87]	27.4 [6.16]	39.2 [8.81]	40.7 [9.15]
Allowable pushing force N [lbf.]		30 [6.7]	50 [11.2]	130 {[29.2]	210 [47.2]
Open/closed stroke mm [in.]		4.8 [0.189]	6.8 [0.268]	11.2 [0.441]	14.9 [0.587]
Lever ratio Note2		1 : 2		1 : 2.2	
Mass g [oz.]		31 [1.09]	78 [2.75]	156 [5.50]	312 [11.0]

Notes: 1. Pushing force refers to the external force required to completely open the lever against the spring force constantly exerted in the closed direction.
2. Lever ratio expresses the "pushing distance : lever open distance (stroke)" where the pushing distance on the rear rod is assumed to be 1.