

NB

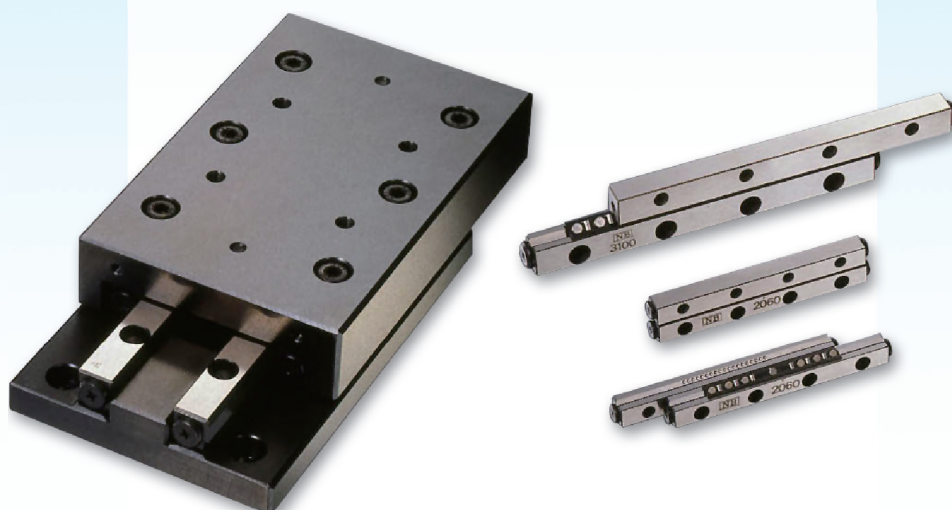
SLIDE WAY

NV type, NVT type, NYT type

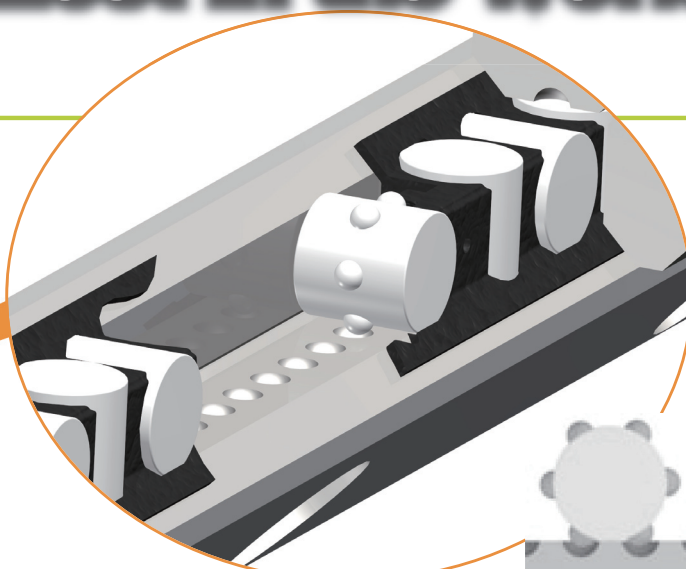
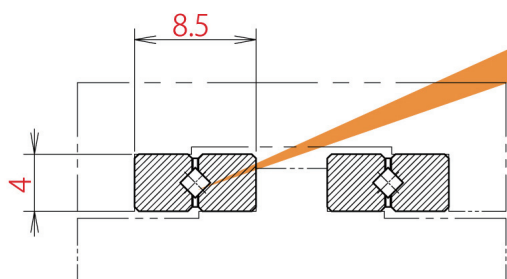
NEW

Non-slip!

The minimum size 1 in the series of NV type STUDROLLER system !



One of the Smallest in the World !!

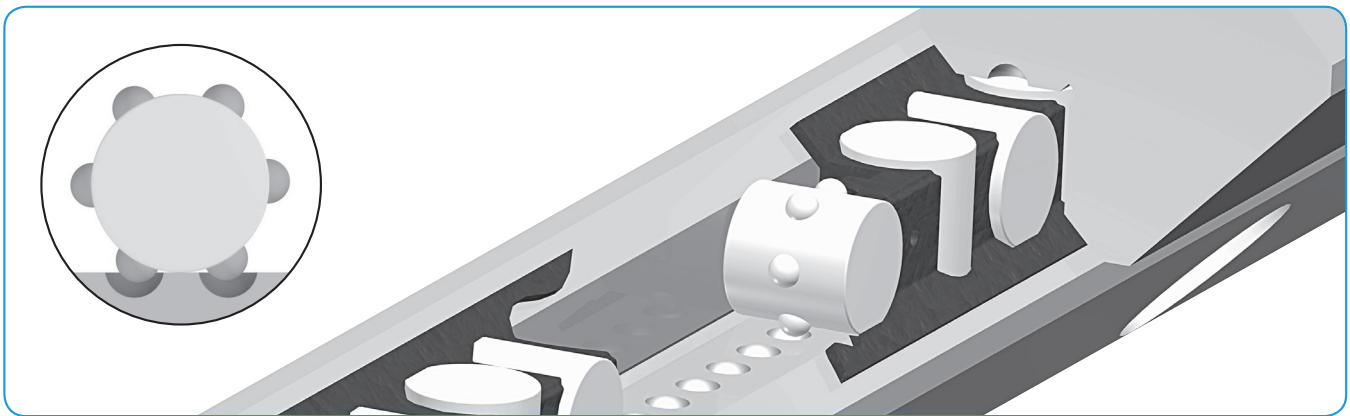


NIPPON BEARING CO.,LTD.

SLIDE WAY

STRUCTURE AND ADVANTAGES

The NB slide way NV type comprises precisely ground rails and R-retainers (made of resin) with built-in STUDROLLERS and precision rollers. The rails have been optimally designed so that the STUDROLLERS move smoothly, and the STUDROLLERS in the R-retainers enable slip-free operation between the raceway surface and suitable for the motion of up and down and very fast cycle, which is the weak field for slide way products.



Non-slip! NV type STUDROLLER System (Rivet Roller Structure)

The STUDROLLER system is based on a new concept to provide complete prevention of roller cage slippage during operation. This system permits usage in all orientations and positions.

Suitable for Minute Motion

Because the frictional resistance is extremely small and there is only little difference between the static and dynamic frictional resistances, the NB slide way is well suited for minute motion, resulting in highly accurate linear movement.

Low-Speed Stability

Since the frictional resistance fluctuation is small even under low-load conditions, stable motion is obtained at from low to high speeds.

High Rigidity and High Load Capacity

Compared to the ball elements, the rollers provide a larger contact area and less elastic deformation, thus the NB slide way has high rigidity and high load capacity.

With new NV rail design, the roller contact area is increased by 30 to 58% (Figure 1). The number of effective rollers is increased by narrowing the roller pitch. Thus, the NV type has the load rating that is 1.3 to 2.5 times that of the SV type.

Low Noise

The slide way never produces recirculation noise nor rollercontact noise due to a use of roller cage, resulting in quiet motion.

All Stainless Steel Type Available

The anti-corrosion SVS/SVWS/NVS-RNS slide ways have all stainless steel components, making them ideal for use in clean room applications.

Figure 1 Roller Contact Profile

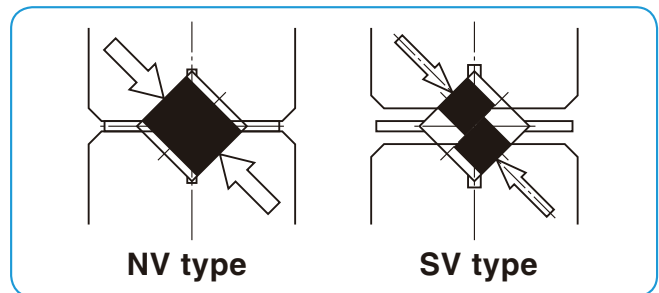


Figure 2 Structure of NV type

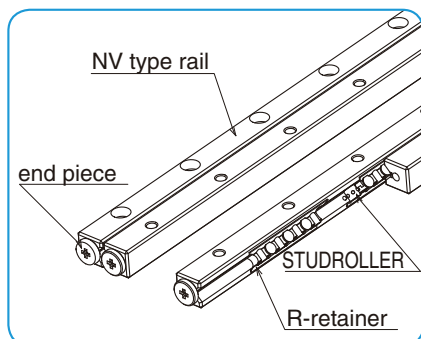


Figure 3 Structure of NVT type

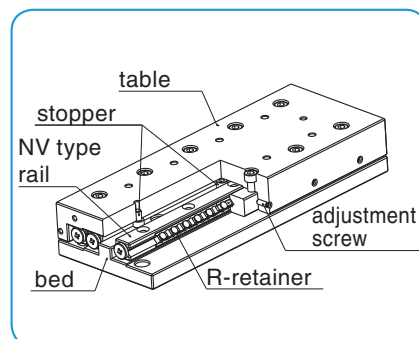
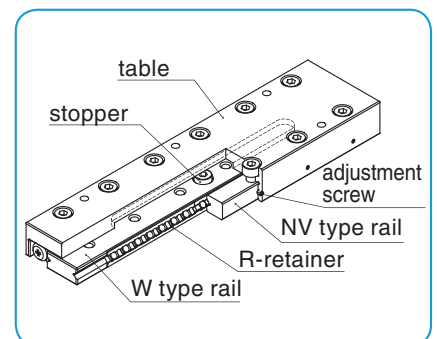


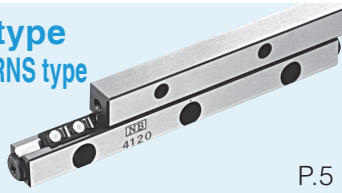
Figure 4 Structure of NYT type



※To the NV type, fastening plates are attached for the purpose of maintaining the center position of the R-retainer before assembly. Please see Installation Procedure on page 3 and remove the fastening plates before use.

TYPES

NV type NVS-RNS type



P.5

The NV slide way consists of a set of four rails, two R-retainers, and eight end pieces. It permits flexible design of the table which will best suit your application. The NVS-RNS type has all stainless steel components, which is suitable for anticorrosion, high temperature and vacuum requirements.

NVT-NVTS type

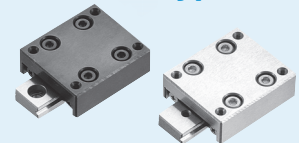


P.11

The NVT type slide table incorporates the NV type slide way. The table and bed have been precision machined to provide a high degree of accuracy and the product can be used, without any need for troublesome accuracy or preload adjustments.

In the NVTS type, the anti-corrosion NVS type slide way is sandwiched between an accurately machined aluminum table and bed.

NYT-NYTS type



P.15
P.17

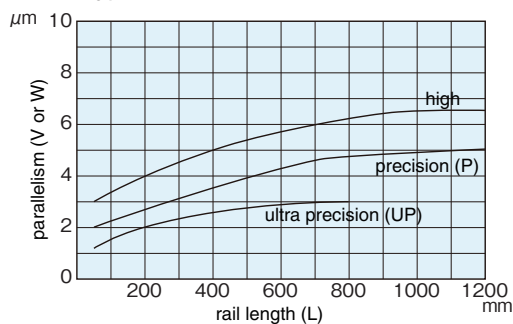
The NYT/NYTS type is a thin, compact slide table, utilizing the studroller system. Either tapped or counterbore mounting type (D type) is available.

The anti-corrosion type NYTS slide table is made of all stainless steel components except for R-retainer.

ACCURACY

The accuracy of the NV type is represented as parallelism measured across the full length with a method shown in Figure 6. It is classified as high (blank), precision (P), or ultra precision (UP). Special accuracies can also be accommodated. Please contact NB for details.

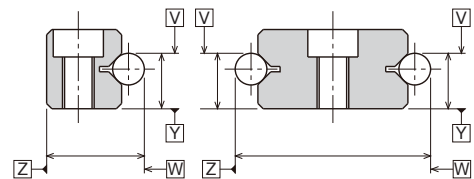
Figure 5 NV Type Parallelism



The motion accuracy of NVT and NYT type is measured by placing indicators at the center of the top and side surface of the table, as illustrated in Figure 7. It is expressed in terms of the indicator deviation when the table is moved the full stroke without any load.

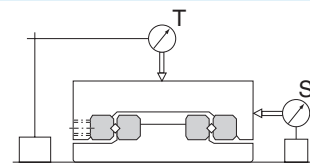
For accuracy, please see the dimension tables.

Figure 6 NV Type Accuracy Measurement Method



Ultra precision grade is available from size 1 to size 9.

Figure 7 NVT · NYT Type Accuracy Measurement Method



RATED LIFE

The life of the slide way and the slide table is calculated with the following equations:

Rated Life

$$L = \left(\frac{f_T}{f_W} \cdot \frac{C}{P} \right)^{10/3} \cdot 50$$

L: rated life (km) f_T : temperature coefficient f_W : applied load coefficient C: basic dynamic load rating (N) P: applied load (N)

Life Time

$$L_h = \frac{L \cdot 10^3}{2 \cdot l_s \cdot n_1 \cdot 60}$$

L_h : life time (hr) l_s : stroke length (m) n_1 : number of cycles per minute (cpm)

LOAD RATING

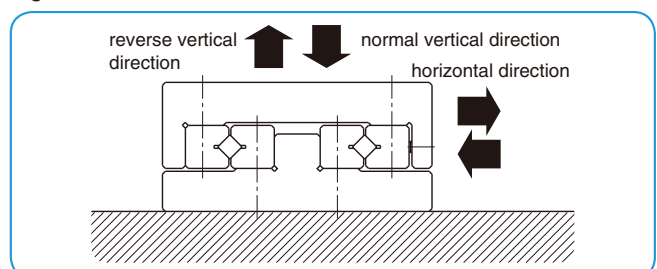
The load rating of the NV, NVT and NYT type differs depending on the direction of the load.

Table 1 Change of Load Rating Corresponding to Load Direction

basic dynamic load rating	normal vertical direction	$1.0 \times C$
	horizontal direction	$0.85 \times C$
	reverse vertical direction	$0.7 \times C$
basic static load rating	normal vertical direction	$1.0 \times C_0$
	horizontal direction	$0.85 \times C_0$
	reverse vertical direction	$0.7 \times C_0$

※ There may be a difference depending on the size. Please contact NB for details. Consideration has been given to holes for STUDROLLERS in the raceway surface in calculation of load ratings.

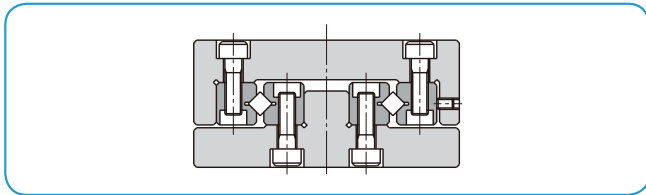
Figure 8 Direction of Load



MOUNTING

Example

Figure 9 NV type



Accuracy of Mounting Surface

To maximize the performance of the NB slide way, it is recommended that the accuracy of the mounting surface to be equal to or greater than the degree of parallelism of the slide way.

- Parallelism of surface 1 against surface A
- Perpendicularity of surface 2 against surface A
- Parallelism of surface 3 against surface B
- Perpendicularity of surface 4 against surface B
- Parallelism of surface 2 against surface C
- Parallelism of surface 4 against surface C

INSTALLATION PROCEDURE OF NV TYPE

Installation Procedure

※Please read “Use and Handling Precautions” before installation.

- (1) Remove burrs, scratches, and dust from the railmounting surface of the bed and the table, be careful to prevent contamination during assembly.
- (2) Apply low-viscosity oil to the contact surfaces, and align the bed and the table. (Figure 11a)
- (3) Set the reference surface onto the mounting surface with the rails fastened. Set the table in the center position, and tighten the adjustment screws lightly so that almost no gap remains. (Figure 11b)
- (4) Keep the table in the center, tighten the rail mounting bolts lightly, loosen the end pieces of both ends, and remove the fastening plates. Following this, lightly retighten the end pieces.
- (5) While maintaining the conditions of (4), gently move the assembly through its stroke to check if the maximum stroke is secured, and if there is no irregularity.
- (6) Move the table to the center and tighten only the adjustment screws on the R-retainer with the recommended torque shown in Table 2. (Figure 11c)
- (7) Gently move the table to one stroke end, and check that the table has surely come into contact with the external mechanical stopper. Following this, tighten the adjustment screws in the same manner as (6). (Figure 11d)
- (8) Move the table to the opposite stroke end, and tighten in the same manner as (6). (Figure 11e)
- (9) Fasten the mounting screws on rails 1, 2, and 3 by tightening with the recommended torque shown in Table 3. (Figure 11f)
- (10) Set the dial indicators to the center of the table and to the side (reference surface) of the table. (Figure 11g)
- (11) Perform the final preload adjustment. While moving the table back and forth, repeat steps (6) to (8) until the dial indicators show a minimum deviation.
- (12) Fasten rail 4 securely with the recommended torque.
- (13) Recheck the motion accuracy while moving the table.
- (14) Tighten the end pieces finally.

Figure 10 Accuracy of Mounting Surface

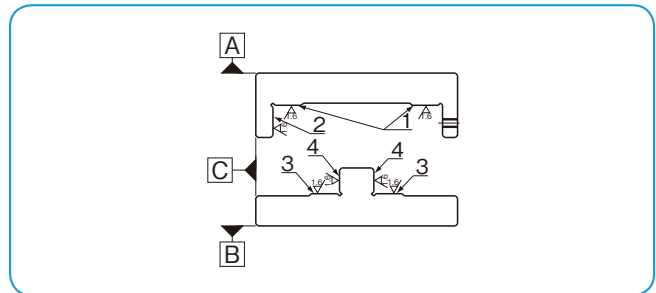


Figure 11 Installation Method

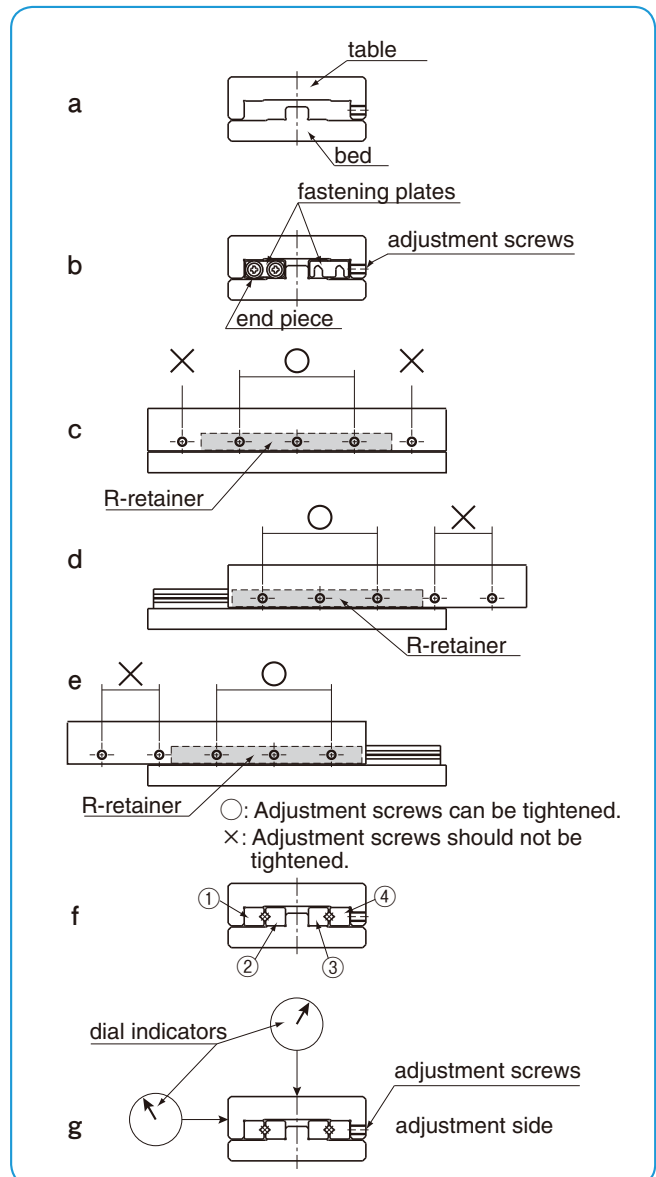


Table 2 Recommended Torque for Adjustment Screw

part number	size	torque
NV1	M2	0.008
NV2	M3	0.012
NV3	M4	0.05
NV4	M4	0.08
NV6	M5	0.20
NV9	M6	0.40

Unit: N·m

Table 3 Recommended Torque for Mounting screw

size	torque
M2	0.4
M3	1.4
M4	3.2
M5	6.6
M6	11.2
M8	27.6

Unit: N·m

(for steel alloy screw)

SPECIAL MOUNTING SCREW BT TYPE

In case of mounting slide way by screws from the counterbore side, threaded holes become the pilot holes. Thus, pilot hole's clearance will be less than a standard clearance hole for a screw. NB offers reduced shoulder screws for mounting SlideWay from bottom when larger screw clearance is required due to preload adjustment or inaccuracy of mating threaded holes. This special mounting screw made of alloy steel is stocked, and custom stainless steel version is available as a special order. Please contact NB for details.

Figure 12 Special Mounting Screw

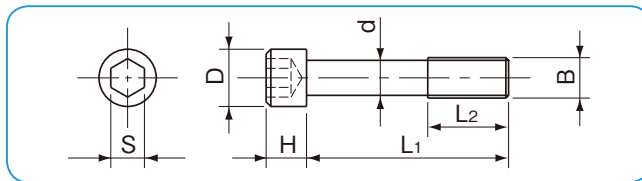
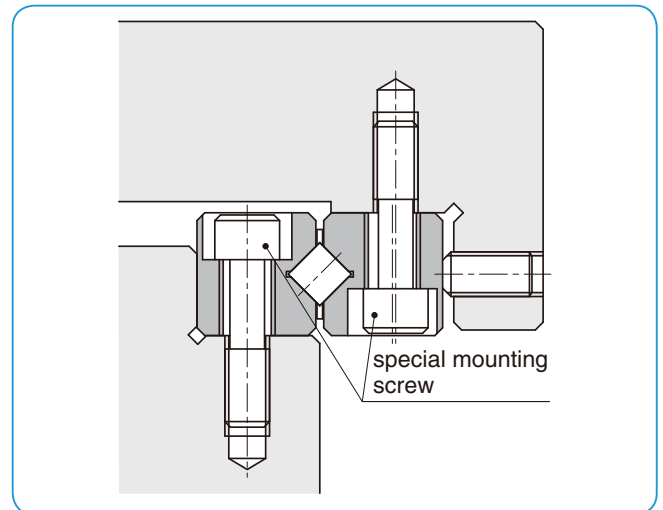


Table 4 Special Mounting Screw

part number	B	d	D	H	L1	L2	S	applicable size
BT 3	M3	2.3	5	3	12	5	2.5	NV 3
BT 4	M4	3.1	5.8	4	15	7	3	NV 4
BT 6	M5	3.9	8	5	20	8	4	NV 6
BT 9	M6	4.6	8.5	6	30	12	5	NV 9
BT12	M8	6.25	11.3	8	40	17	6	NV12



USE AND HANDLING PRECAUTIONS

Careful Handling

Dropping the slide way causes the rolling elements to make dents in the raceway surface. This will prevent smooth motion and will also affect accuracy. Be sure to handle the product with care.

The NV type is packaged as a set of rails and R-retainers. Do not separate or disassemble until assembly/installation is completed. Precision is not guaranteed if disassembled.

Fastening Plates

For the NV type, fastening plates are attached at both end faces of the rails to maintain the R-retainer center position prior to assembly. The fastening plates are not required after the NV type is mounted to a table and bed, however, when removal of the NV type is necessary such as when it will be reassembled, be sure to return the R-retainer to the proper center position, secure the fastening plates with the end pieces, and then remove the NV type.

Specified Allowable Stroke

For the NV type, exceeding the specified stroke (overstroke) shall cause the raceway surface of the rail to be damaged and the performance of the STUDROLLER to drastically deteriorate. Be sure to provide external mechanical stoppers.

Adjustment

Using the product with insufficient accuracy of the mounting surface or before adjusting the preload will cause the motion accuracy of the product to drop and will have a negative influence upon product life and accuracy. Make sure to assemble, install, and adjust the product with care.

Caution against Excess Preload

It is essential to give preload on the Slide Way products in order to assure rigidity and accuracy.

However, excess preload causes damage on the raceways and roller cages/R-retainers.

On installation, please follow the installation procedure and recommended torque on page 3.

Use as a Set

The accuracy of the rails has been matched within each set. Note that the accuracy will be affected when the rails of different sets are combined.

Allowable Load

The allowable load is a load under which the sum of raceway in the contact area subject to the maximum contact stress is small enough to guarantee smooth rolling movement. When very smooth and highly accurate linear motion is required, make sure to use the product within the allowable load.

Stopper

End pieces are attached to each end of the slide way to prevent removal of the cage. Do not use them as a mechanical stopper.

Operating Temperature

The NV type uses resin parts. Please use the product in environments that are lower than 80°C.

Dust Prevention

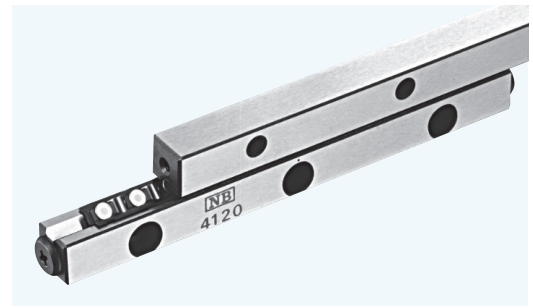
Dust and foreign particles affect the accuracy and lifetime of the slide way. The slide way used in a harsh environment should be protected with a cover.

Lubrication

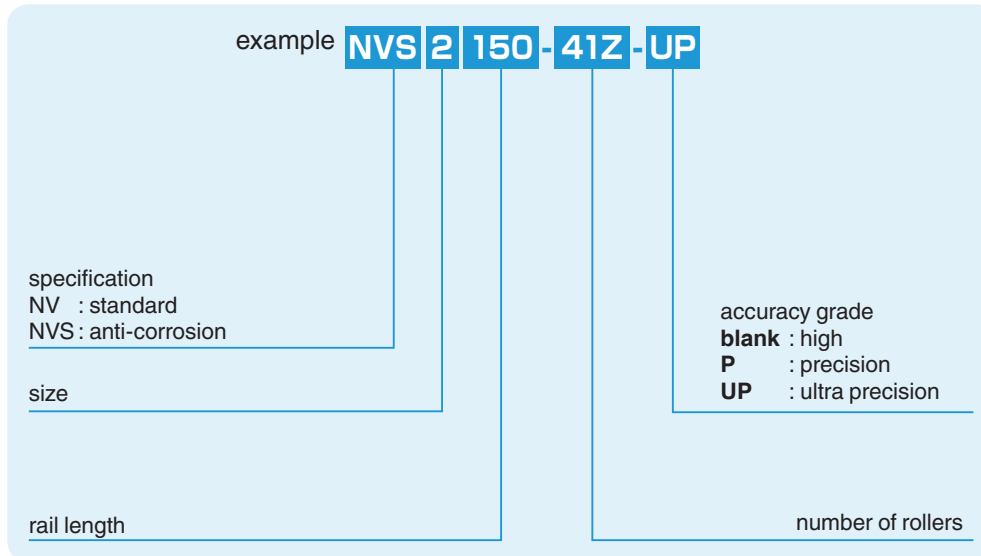
The slide way is prelubricated with lithium soap based grease No. 00 prior to shipment for immediate use. Make sure to relubricate with a similar type of grease periodically depending on the operating conditions. NB provides low dust generation greases for your linear system.

NV TYPE

—NV1 / NV2 / NV3—



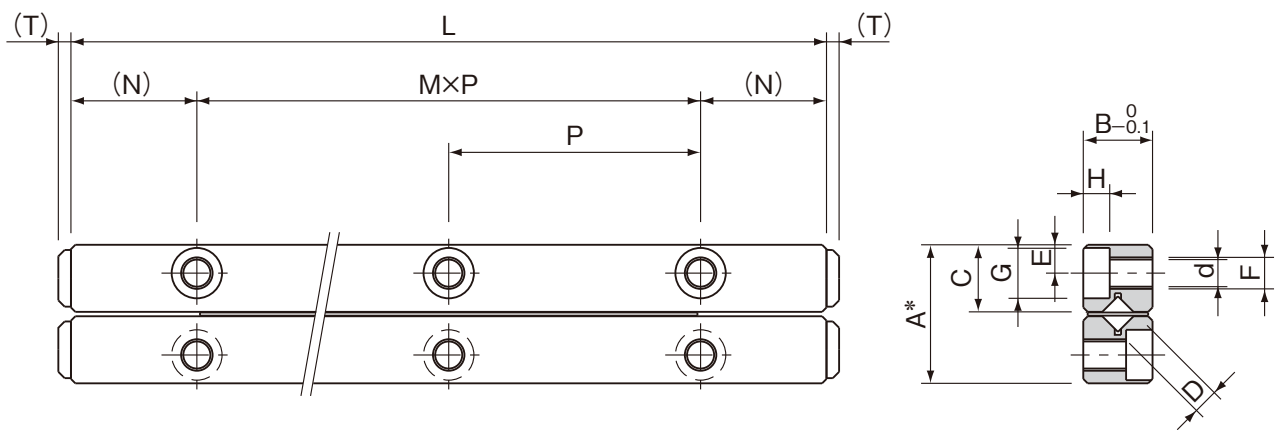
part number structure



※Stainless steel rollers are used for anti-corrosion type.

part number		stroke	roller diameter	number of rollers	L	A	B	C
standard	anti-corrosion	ST mm	D mm	Z	mm	mm	mm	mm
NEW NV1020- 5Z	NVS1020- 5Z	12	1.5	5	20	8.5	4	4.03
NEW 1030- 7Z	1030- 7Z	23		7	30			
NEW 1040-11Z	1040-11Z	28		11	40			
NEW 1050-15Z	1050-15Z	34		15	50			
NEW 1060-19Z	1060-19Z	40		19	60			
NEW 1070-23Z	1070-23Z	45		23	70			
NEW 1080-27Z	1080-27Z	51		27	80			
NV2030- 5Z	NVS2030- 5Z	18	2	5	30	12	6	5.7
2045- 9Z	2045- 9Z	25		9	45			
2060- 15Z	2060-15Z	30		15	60			
2075- 19Z	2075-19Z	40		19	75			
2090- 23Z	2090-23Z	50		23	90			
2105- 27Z	2105-27Z	65		27	105			
2120- 33Z	2120-33Z	70		33	120			
2135- 37Z	2135-37Z	80		37	135			
2150- 41Z	2150-41Z	90		41	150			
2165- 47Z	2165-47Z	95		47	165			
2180- 51Z	2180-51Z	100	51	180				
NV3050- 9Z	NVS3050- 9Z	25	3	9	50	18	8	8.65
3075- 13Z	3075-13Z	48		13	75			
3100- 19Z	3100-19Z	60		19	100			
3125- 23Z	3125-23Z	83		23	125			
3150- 29Z	3150-29Z	90		29	150			
3175- 35Z	3175-35Z	103		35	175			
3200- 41Z	3200-41Z	113		41	200			
3225- 43Z	3225-43Z	150		43	225			

The basic static load rating is the value at the center of the stroke.



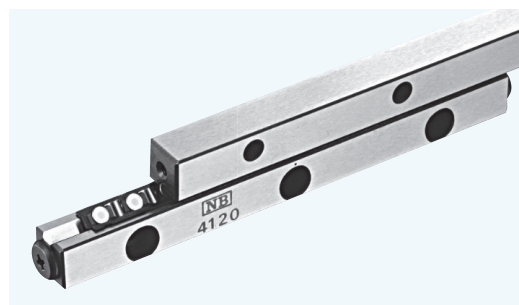
*High grade: -0.2 Precision grade (UP): $A -0.1$ Ultra Precision grade (UP): $A -0.1$
 One set consists of 4 rails, 2 R-retainers, and 8 end pieces.

major dimensions								basic load rating		allowable	mass	size
M x P	N	E	F	d	G	H	T	dynamic	static	load	(one set)	
mm	mm	mm		mm	mm	mm	mm	C	Co	F	g	
								N	N	N		
1 x 10	5	1.8	M2	1.65	3	1.4	0.8	734	849	283	9	1020
2 x 10								1,250	1,690	566	13	1030
3 x 10								1,720	2,540	849	18	1040
4 x 10								2,160	3,390	1,130	22	1050
5 x 10								2,560	4,240	1,410	26	1060
6 x 10								2,960	5,090	1,690	31	1070
7 x 10								3,330	5,940	1,980	35	1080
1 x 15	7.5	2.5	M3	2.55	4.4	2	1.2	1,360	1,520	509	33	2030
2 x 15								2,330	3,050	1,010	49	2045
3 x 15								3,990	6,110	2,030	62	2060
4 x 15								4,740	7,630	2,540	74	2075
5 x 15								5,460	9,160	3,050	91	2090
6 x 15								6,160	10,600	3,560	103	2105
7 x 15								6,830	12,200	4,070	120	2120
8 x 15								7,490	13,700	4,580	132	2135
9 x 15								8,130	15,200	5,090	149	2150
10 x 15								9,370	18,300	6,110	161	2165
11 x 15								9,970	19,800	6,620	174	2180
1 x 25	12.5	3.5	M4	3.3	6	3.1	2	6,150	8,060	2,680	97	3050
2 x 25								8,440	12,100	4,030	140	3075
3 x 25								12,500	20,100	6,720	192	3100
4 x 25								14,400	24,200	8,060	245	3125
5 x 25								16,300	28,200	9,410	290	3150
6 x 25								19,800	36,300	12,100	337	3175
7 x 25								21,500	40,300	13,400	385	3200
8 x 25								23,200	44,300	14,700	434	3225

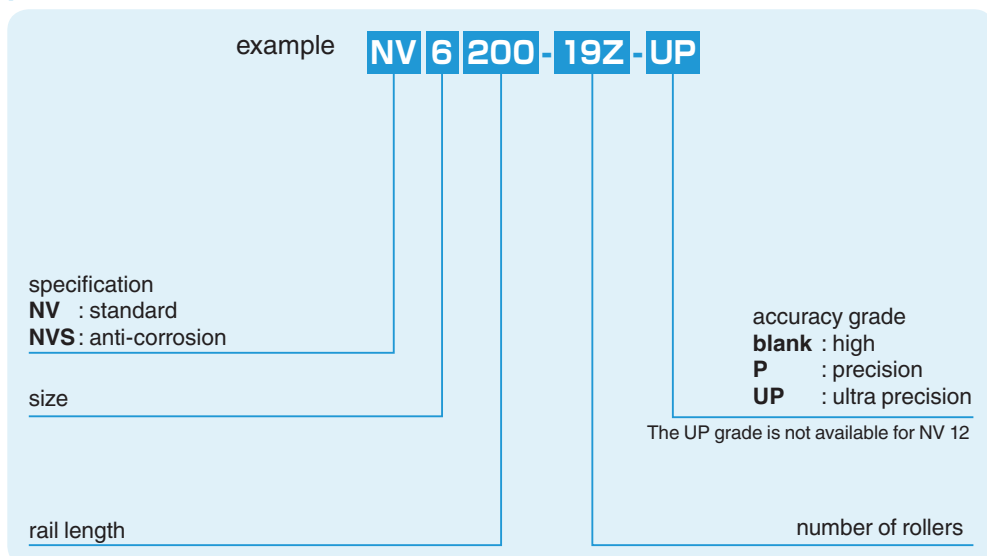
1N ≙ 0.102kgf

NV TYPE

—NV4/NV6/NV9/NV12—



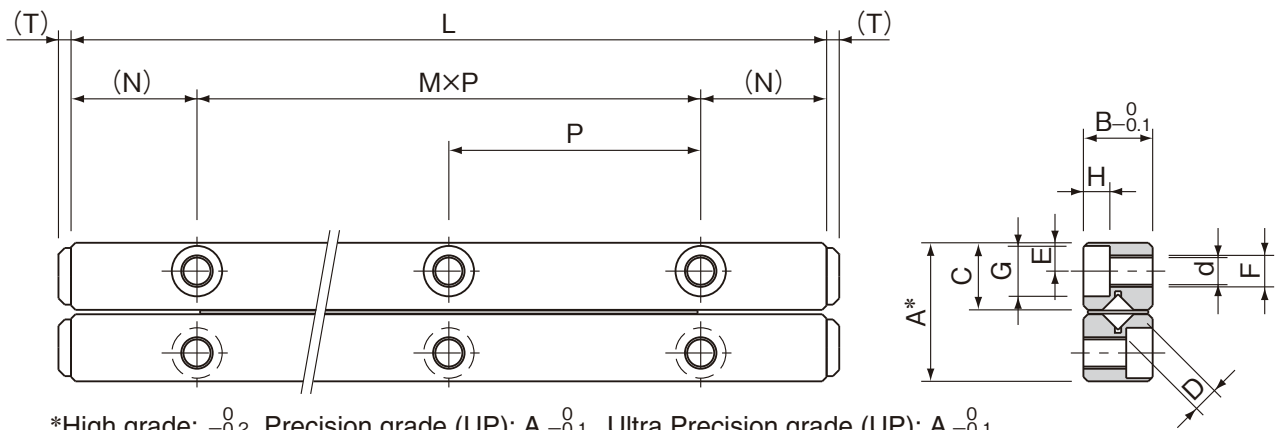
part number structure



※Stainless steel rollers are used for anti-corrosion type.

part number		stroke	roller diameter	number of rollers	L	A	B	C
standard	anti-corrosion	ST mm	D mm	Z	mm	mm	mm	mm
NV4080- 9Z	NVS4080- 9Z	60	4	9	80	22	11	10.65
4120- 17Z	4120- 17Z	75		17	120			
4160- 23Z	4160- 23Z	105		23	160			
4200- 29Z	4200- 29Z	130		29	200			
4240- 37Z	4240- 37Z	143		37	240			
4280- 43Z	4280- 43Z	170		43	280			
NV6100- 9Z	—	63	6	9	100	31	15	15.15
6150- 15Z	—	85		15	150			
6200- 19Z	—	135		19	200			
6250- 25Z	—	158		25	250			
6300- 31Z	—	180		31	300			
6350- 35Z	—	230		35	350			
6400- 39Z	—	275	39	400				
NV9200- 13Z	—	120	9	13	200	44	22	21.5
9300- 21Z	—	170		21	300			
9400- 29Z	—	220		29	400			
9500- 35Z	—	300		35	500			
NV12300- 15Z	—	180	12	15	300	58	28	28.5
12400- 21Z	—	230		21	400			
12500- 27Z	—	280		27	500			
12600- 31Z	—	380		31	600			

The basic static load rating is the value at the center of the stroke.



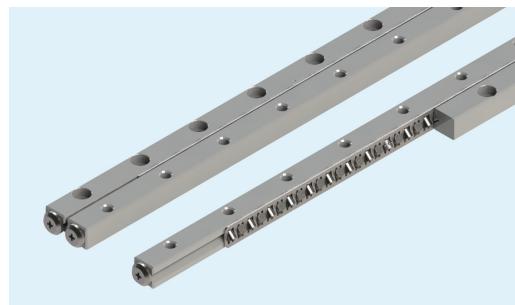
*High grade: -0.2 Precision grade (UP): $A -0.1$ Ultra Precision grade (UP): $A -0.1$
 One set consists of 4 rails, 2 R-retainers, and 8 end pieces.

major dimensions								basic load rating		allowable load F N	mass (one set) g	size
M x P	N	E	F	d	G	H	T	dynamic C N	static Co N			
mm	mm	mm		mm	mm	mm	mm					
1 x 40	20	4.5	M5	4.3	8	4.2	2	12,100	15,700	5,250	265	4080
2 x 40								20,700	31,500	10,500	400	4120
3 x 40								28,500	47,200	15,700	530	4160
4 x 40								32,100	55,100	18,300	660	4200
5 x 40								39,000	70,900	23,600	800	4240
6 x 40								45,600	86,600	28,800	930	4280
1 x 50	25	6	M6	5.2	9.5	5.2	3	29,600	37,500	12,500	650	6100
2 x 50								50,900	75,100	25,000	970	6150
3 x 50								60,600	93,900	31,300	1,300	6200
4 x 50								69,800	112,000	37,500	1,620	6250
5 x 50								87,400	150,000	50,100	1,940	6300
6 x 50								95,800	169,000	56,300	2,360	6350
7 x 50								104,000	187,000	62,600	2,780	6400
1 x 100	50	9	M8	6.8	10.5	6.2	4	96,100	128,000	42,600	2,720	9200
2 x 100								143,000	213,000	71,100	4,080	9300
3 x 100								186,000	298,000	99,500	5,440	9400
4 x 100								226,000	384,000	128,000	6,790	9500
2 x 100	50	12	M10	8.5	13.5	8.2	4	228,000	317,000	105,000	6,770	12300
3 x 100								271,000	397,000	132,000	9,040	12400
4 x 100								352,000	555,000	185,000	11,300	12500
5 x 100								391,000	635,000	211,000	13,560	12600

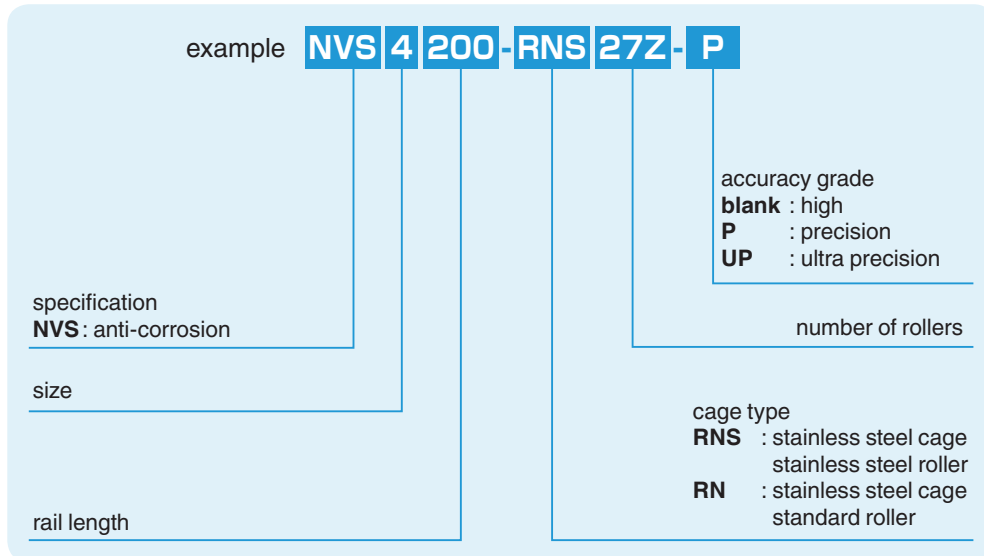
1N \doteq 0.102kgf

NVS-RNS TYPE

— Special Environments Type —

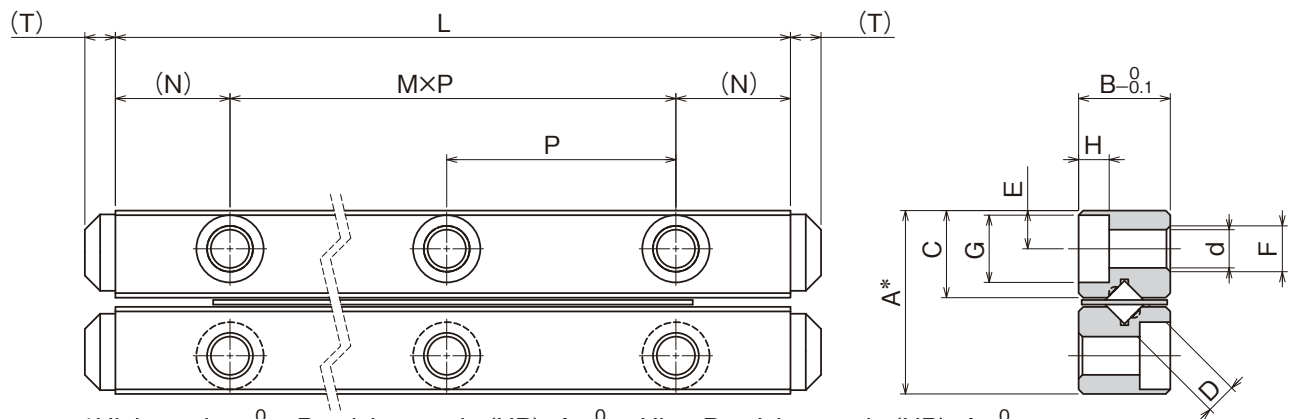


part number structure



part number	stroke ST mm	roller diameter D mm	number of rollers Z	L mm	major dimensions					
					A mm	B mm	C mm	M × P mm	N mm	E mm
NVS 2030-RNS 7Z	15	2	7	30	12	6	5.7	1 × 15	7.5	2.5
2045-RNS11Z	20		11	45				2 × 15		
2060-RNS13Z	30		13	60				3 × 15		
2075-RNS17Z	40		17	75				4 × 15		
2090-RNS21Z	50		21	90				5 × 15		
2105-RNS23Z	65		23	105				6 × 15		
2120-RNS27Z	70		27	120				7 × 15		
2135-RNS31Z	80		31	135				8 × 15		
2150-RNS33Z	90		33	150				9 × 15		
2165-RNS37Z	95		37	165				10 × 15		
2180-RNS43Z	100		43	180				11 × 15		
NVS 3050-RNS 9Z	20		3	9				50		
3075-RNS13Z	38	13		75	2 × 25					
3100-RNS17Z	55	17		100	3 × 25					
3125-RNS21Z	70	21		125	4 × 25					
3150-RNS25Z	85	25		150	5 × 25					
3175-RNS29Z	103	29		175	6 × 25					
3200-RNS33Z	113	33		200	7 × 25					
3225-RNS35Z	150	35		225	8 × 25					
NVS 4080-RNS 9Z	58	4		9	80	22	11	10.65	1 × 40	20
4120-RNS17Z	60		17	120	2 × 40					
4160-RNS21Z	98		21	160	3 × 40					
4200-RNS27Z	115		27	200	4 × 40					
4240-RNS31Z	143		31	240	5 × 40					
4280-RNS37Z	170		37	280	6 × 40					

※Some specification values are different from those of NV standard type. Please contact NB for details.



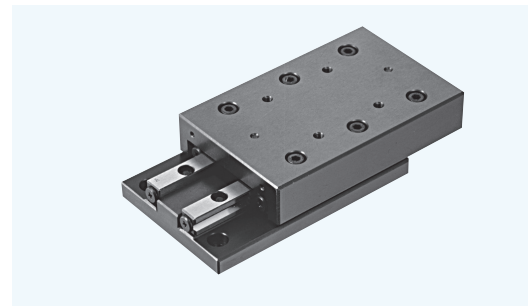
*High grade: -0.2 Precision grade (UP): $A -0.1$ Ultra Precision grade (UP): $A -0.1$
 One set consists of 4 rails, 2 R-retainers, and 8 end pieces.

F	d mm	G mm	H mm	T mm	basic load rating		allowable load F N	mass (one set) g	size
					dynamic C N	static Co N			
M3	2.55	4.4	2	1.2	2,320	3,050	1,010	30	2030
					3,190	4,580	1,520	44	2045
					3,190	4,580	1,520	58	2060
					4,000	6,110	2,030	73	2075
					4,760	7,630	2,540	87	2090
					5,490	9,160	3,050	101	2105
					6,190	10,600	3,560	115	2120
					6,870	12,200	4,070	130	2135
					6,870	12,200	4,070	144	2150
					7,530	13,700	4,580	158	2165
M4	3.3	6	3.1	2	8,800	16,800	5,600	173	2180
					6,150	8,060	2,680	102	3050
					8,460	12,100	4,030	151	3075
					10,600	16,100	5,370	200	3100
					12,600	20,100	6,720	249	3125
					14,500	24,200	8,060	297	3150
					16,400	28,200	9,410	346	3175
					18,200	32,200	10,700	395	3200
M5	4.3	8	4.2	2	19,900	36,300	12,100	443	3225
					12,100	15,700	5,250	269	4080
					20,800	31,500	10,500	405	4120
					24,800	39,300	13,100	536	4160
					32,200	55,100	18,300	670	4200
					35,800	63,000	21,000	801	4240
39,200	70,900	23,600	935	4280					

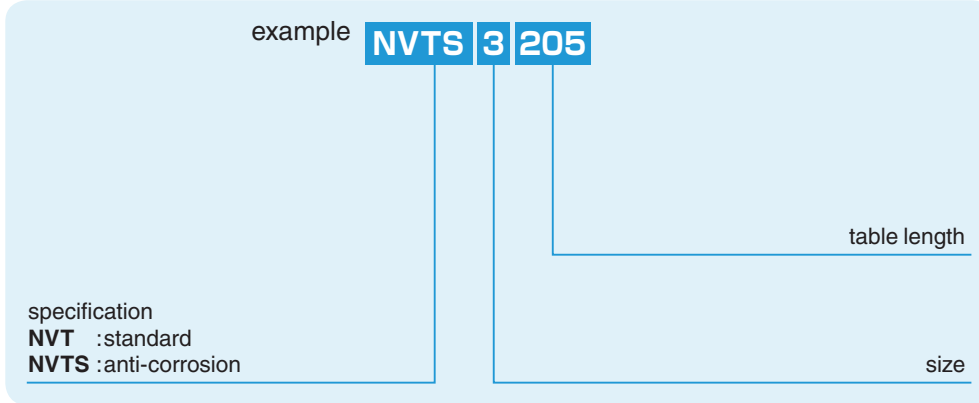
1N≒0.102kgf

NVT TYPE

—NVT1 / NVT2 / NVT3—

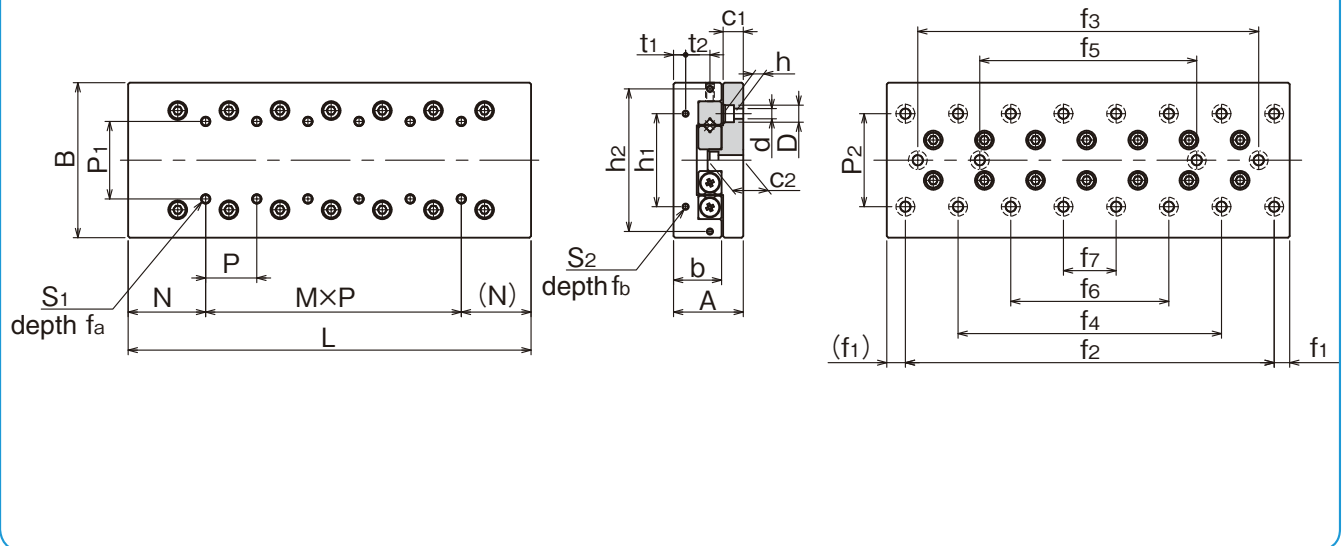


part number structure



part number		stroke ST mm	major dimensions				table-top mounting hole dimensions					table-end mounting hole dimensions					
standard	anti-corrosion		A mm	B mm	L mm	b mm	P ₁ mm	S ₁	f _a mm	N mm	M×P mm	h ₁ mm	h ₂ mm	t ₁ mm	t ₂ mm	S ₂	f _b mm
NEW NVT1025	NVTS1025	12	17±0.1	30 ^{-0.2} _{-0.4}	25	11	10	M2	4	12.5	—	12	—	2.5	—	M2	6
NEW 1035	1035	18			35						1×10						
NEW 1045	1045	25			45						2×10						
NEW 1055	1055	32			55						3×10						
NEW 1065	1065	40			65						4×10						
NEW 1075	1075	45			75						5×10						
NEW 1085	1085	50			85						6×10						
NVT2035	NVTS2035	18	21±0.1	40 ^{-0.2} _{-0.4}	35	14	15	M3	6	17.5	—	16	—	3.4	—	M2	6
2050	2050	30			50						1×15						
2065	2065	40			65						2×15						
2080	2080	50			80						3×15						
2095	2095	60			95						4×15						
2110	2110	70			110						5×15						
2125	2125	80			125						6×15						
2140	2140	90			140						7×15						
2155	2155	100			155						8×15						
2170	2170	110			170						9×15						
2185	2185	120	185	10×15													
NVT3055	NVTS3055	30	28±0.1	60±0.1	55	18.5	25	M4	8	27.5	—	40	—	5.5	—	M3	6
3080	3080	45			80						1×25						
3105	3105	60			105						2×25						
3130	3130	75			130						3×25						
3155	3155	90			155						4×25						
3180	3180	105			180						5×25						
3205	3205	130			205						6×25						
3230	3230	155			230						7×25						

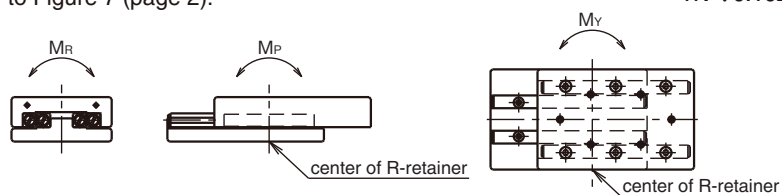
The basic static load rating is the value at the center of the stroke.



P ₂ mm	bed-surface mounting hole dimensions							accuracy※ (deviation)		basic load rating		allowable load F N	allowable static moment			mass		size							
	d×D×h mm	c ₁ mm	c ₂ mm	f ₁ mm	f ₂ mm	f ₃ mm	f ₄ mm	f ₅ mm	f ₆ mm	f ₇ mm	T μm		S μm	C N	C ₀ N	M _P N·m	M _Y N·m		M _R N·m	NVT g	NVTS g				
22	2.5×4.5×2.5	5.5	9	3.5	18	—	—	—	—	—	2	4	734	849	283	3.73	3.18	5.73	87	39	1025				
					28	—	—	—	—	—	—	—	2	4	1,250	1,690	566	1.77	4.24	1.93	124	55	1035		
					38	—	—	—	—	—	—	—	—	2	4	1,720	2,540	849	9.09	10.3	7.67	160	71	1045	
					48	—	28	—	—	—	—	—	—	2	5	2,160	3,390	1,130	14.1	16.7	9.61	195	87	1055	
					58	—	38	—	—	—	—	—	—	—	2	5	2,560	4,240	1,410	24.9	26.7	15.3	231	103	1065
					68	—	48	—	—	—	—	—	—	—	2	5	2,960	5,090	1,690	33.1	36.7	17.2	267	119	1075
					78	—	58	—	—	—	—	—	—	—	2	5	3,330	5,940	1,980	47.8	50.7	23.0	303	136	1085
30	3.5×6.5×3.5	6.5	10.9	5	25	—	—	—	—	—	2	4	1,360	1,520	509	10.1	8.8	13.7	200	95	2035				
					40	—	—	—	—	—	—	—	2	4	2,330	3,050	1,010	18.9	18.7	18.6	287	140	2050		
					55	—	—	—	—	—	—	—	—	2	5	3,190	4,580	1,520	36.9	35.7	32.4	377	182	2065	
					70	—	40	—	—	—	—	—	—	2	5	3,990	6,110	2,030	53.2	53.8	37.3	455	225	2080	
					85	—	55	—	—	—	—	—	—	2	5	4,740	7,630	2,540	80.3	79.9	51.1	550	260	2095	
					100	—	70	—	—	—	—	—	—	3	6	5,460	9,160	3,050	104	106	56	640	295	2110	
					115	—	85	—	—	—	—	—	—	3	6	6,160	10,600	3,560	130	135	60.9	730	340	2125	
					130	—	100	—	70	—	—	—	—	3	6	6,830	12,200	4,070	171	176	74.7	810	370	2140	
					145	—	115	—	85	—	—	—	—	3	6	8,130	15,200	5,090	235	244	88.4	890	410	2155	
					160	—	130	—	100	—	—	—	—	3	7	8,750	16,800	5,600	275	289	93.3	980	450	2170	
40	4.5×8×4.5	9	15	10	175	—	145	—	115	85	3	7	9,370	18,300	6,110	317	338	98.3	1,070	490	2185				
					35	—	—	—	—	—	—	—	2	5	6,150	8,060	2,680	20.8	37.2	27.3	643	303	3055		
					60	—	—	—	—	—	—	—	—	2	5	8,440	12,100	4,030	125	119	140	960	445	3080	
					85	—	—	—	—	—	—	—	—	3	6	10,500	16,100	5,370	188	186	167	1,260	590	3105	
					110	—	—	—	—	—	—	—	—	3	6	14,400	24,200	8,060	300	319	195	1,580	725	3130	
					135	85	—	—	—	—	—	—	—	3	6	16,300	28,200	9,410	508	505	308	1,860	860	3155	
					160	110	—	—	—	—	—	—	—	3	7	18,100	32,200	10,700	630	635	335	2,160	1,000	3180	
					185	135	85	—	—	—	—	—	—	3	7	19,800	36,300	12,100	763	779	362	2,460	1,140	3205	
					210	160	110	—	—	—	3	7	21,500	40,300	13,400	906	936	390	2,780	1,310	3230				

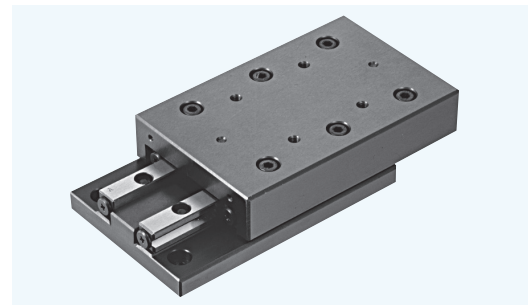
※ For accuracy (T, S), refer to Figure 7 (page 2).

1N ≒ 0.102kgf 1N · m ≒ 0.102kgf · m

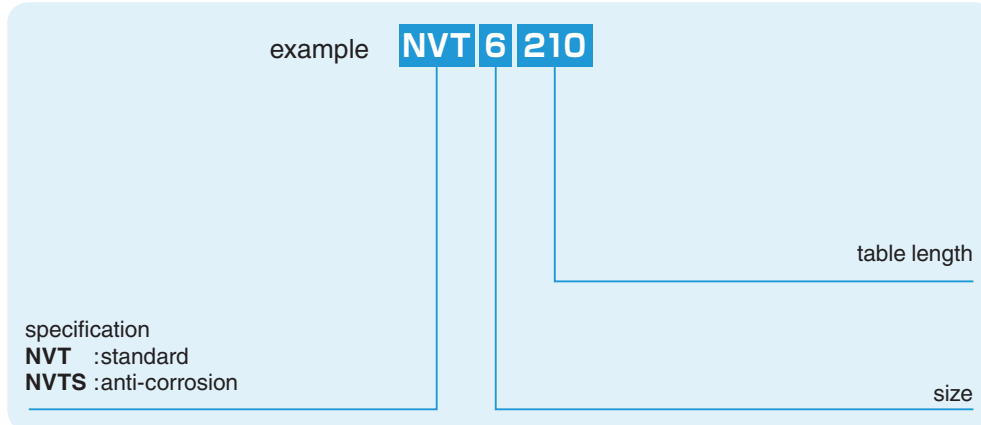


NVT TYPE

—NVT4/NVT6/NVT9—

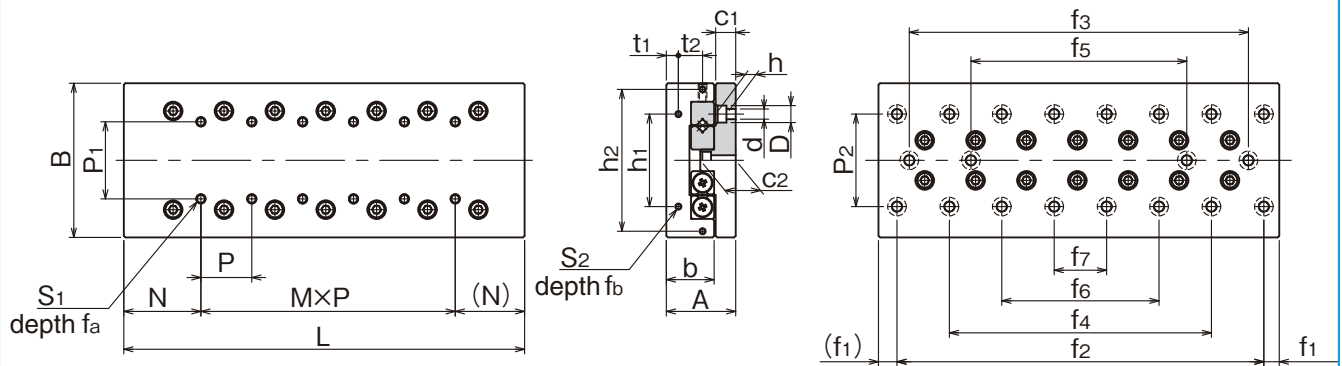


part number structure



part number		stroke	major dimensions				table-top mounting hole dimensions					table-end mounting hole dimensions					
standard	anti-corrosion	ST mm	A mm	B mm	L mm	b mm	P ₁ mm	S ₁	f _a mm	N mm	M×P mm	h ₁ mm	h ₂ mm	t ₁ mm	t ₂ mm	S ₂	f _b mm
NVT4085	NVTS4085	50	35±0.1	80±0.1	85	24	40	M5	10	42.5	—	55	—	6.5	—	M3	6
4125	4125	75			125						1×40						
4165	4165	105			165						2×40						
4205	4205	130			205						3×40						
4245	4245	155			245						4×40						
4285	4285	185			285						5×40						
NVT6110	—	60	45±0.1	100±0.1	110	31	50	M6	12	55	—	60	92	8	15	M4	8
6160	—	95			160						1×50						
6210	—	130			210						2×50						
6260	—	165			260						3×50						
6310	—	200			310						4×50						
6360	—	235			360						5×50						
6410	—	265			410						6×50						
NVT9210	—	130	60±0.1	145±0.1	210	43	85	M8	16	105	—	90	135	11	20	M4	8
9310	—	180			310						1×100						
9410	—	220			410						2×100						
9510	—	300			510						3×100						

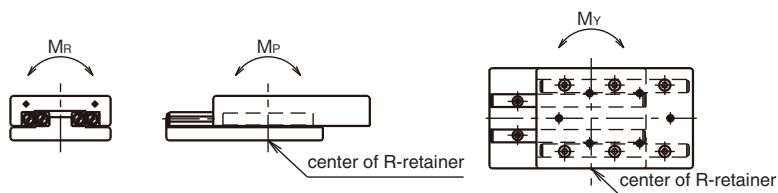
The basic static load rating is the value at the center of the stroke.



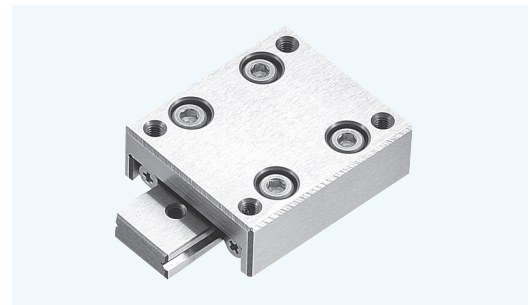
bed-surface mounting hole dimensions											accuracy※ (deviation)		basic load rating dynamic static		allowable load	allowable static moment			mass		size
P ₂ mm	d×D×h mm	c ₁ mm	c ₂ mm	f ₁ mm	f ₂ mm	f ₃ mm	f ₄ mm	f ₅ mm	f ₆ mm	f ₇ mm	T μm	S μm	C N	Co N	F N	M _P N·m	M _Y N·m	M _R N·m	NVT g	NVTS g	
55	5.5×10×5.4	10.5	18	10	65	—	—	—	—	—	2	5	12,100	15,700	5,250	156	147	239	1,710	790	4085
					105	—	—	—	—	—	3	6	20,700	31,500	10,500	327	357	320	2,520	1,160	4125
					145	—	—	—	—	—	3	7	24,700	39,300	13,100	656	660	559	3,320	1,530	4165
					185	105	—	—	—	—	3	7	32,100	55,100	18,300	1,270	1,250	874	4,130	1,900	4205
					225	145	—	—	—	—	3	7	39,000	70,900	23,600	1,740	1,780	956	4,930	2,270	4245
					265	185	—	—	—	—	3	7	42,400	78,700	26,200	2,380	2,400	1,190	5,730	2,630	4285
60	7×11.5×7	13	23	10	90	—	—	—	—	—	3	6	29,600	37,500	12,500	192	303	229	3,300	—	6110
					140	—	—	—	—	—	3	6	40,700	56,300	18,700	937	927	881	4,850	—	6160
					190	90	—	—	—	—	3	7	60,600	93,900	31,300	1,930	1,980	1,300	6,310	—	6210
					240	140	—	—	—	—	3	7	69,800	112,000	37,500	2,660	2,770	1,530	7,790	—	6260
					290	190	—	—	—	—	3	7	78,800	131,000	43,800	4,460	4,410	2,370	9,260	—	6310
					340	240	140	—	—	—	4	8	87,400	150,000	50,100	5,570	5,580	2,600	10,900	—	6360
90	9×14×9	16	29	55	100	—	—	—	—	—	3	6	96,100	128,000	42,600	1,620	2,110	1,810	12,550	—	9210
					200	—	—	—	—	—	3	6	143,000	213,000	71,100	6,500	6,580	4,880	18,000	—	9310
					300	—	—	—	—	—	3	7	186,000	298,000	99,500	12,700	12,700	7,320	24,010	—	9410
					400	—	—	—	—	—	3	7	206,000	341,000	113,000	18,700	18,600	9,760	30,100	—	9510

※ For accuracy (T, S), refer to Figure 7 (page 2).

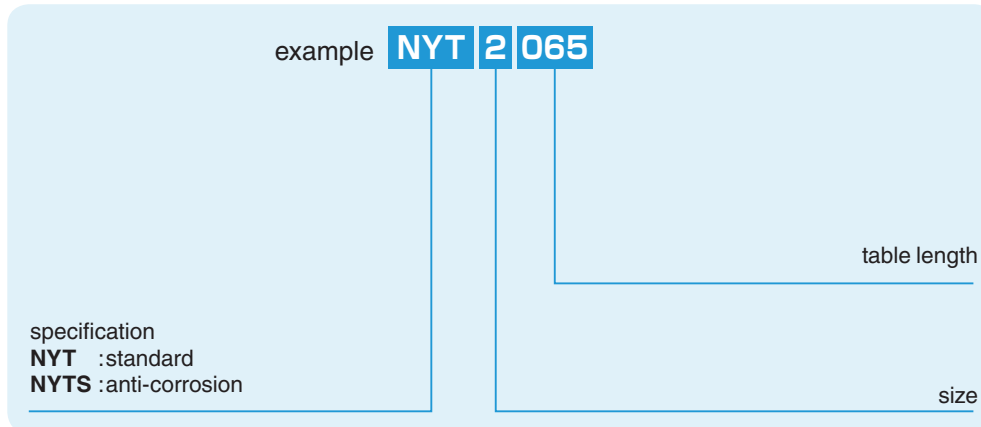
1N ≒ 0.102kgf 1N · m ≒ 0.102kgf · m



NYT TYPE

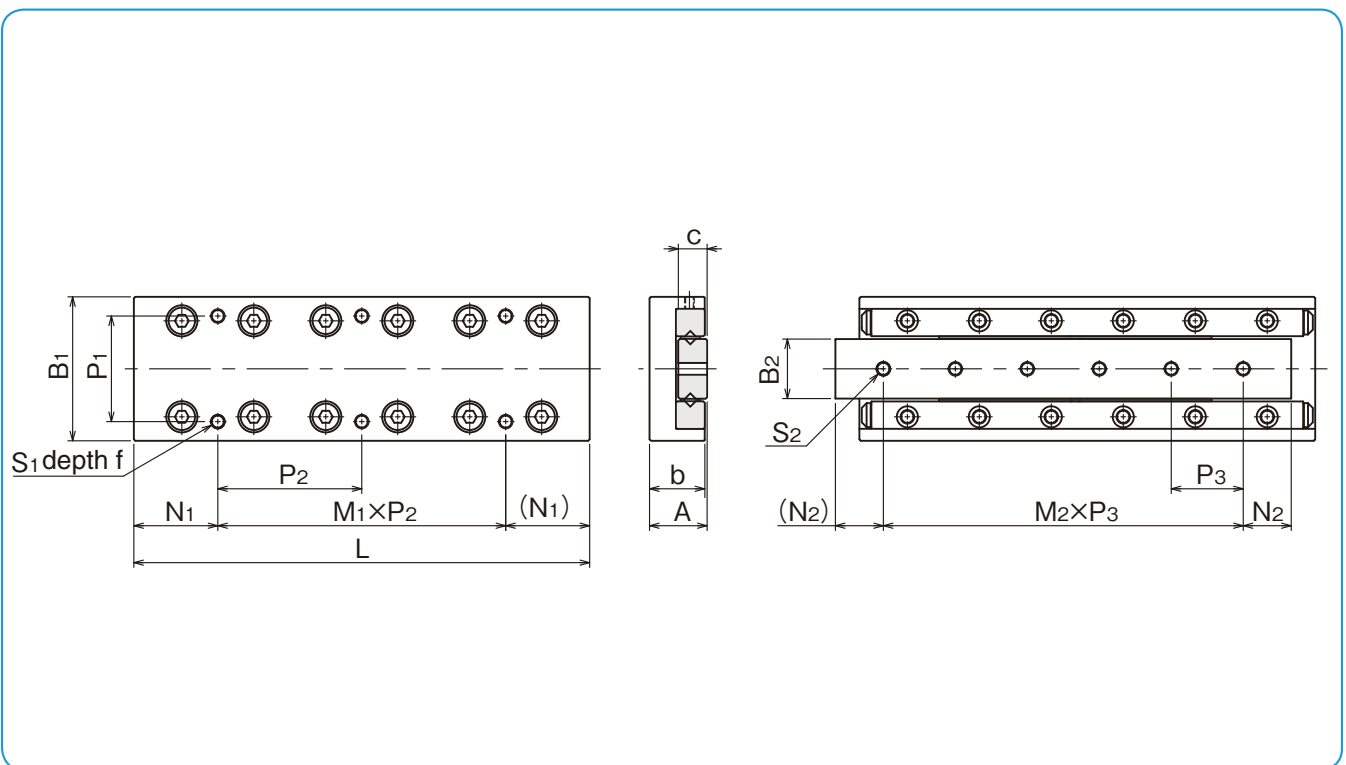


part number structure



part number		stroke ST mm	major dimensions						table-top mounting hole dimensions				
standard	anti-corrosion		A mm	B ₁ mm	L mm	b mm	B ₂ mm	c mm	P ₁ mm	S ₁ mm	f mm	N ₁ mm	M ₁ × P ₂ mm
NEW NYT 1025	NYTS 1025	12	8 ^{±0.1}	20 ^{±0.1}	25	7.5	7.06	4	14	M2.6	3	3.5	1 × 18
NEW 1035	1035	18			35							3.5	1 × 28
NEW 1045	1045	25			45							12.5	1 × 20
NEW 1055	1055	32			55							12.5	1 × 30
NEW 1065	1065	40			65							12.5	2 × 20
NEW 1075	1075	45			75							22.5	1 × 30
NEW 1085	1085	50			85							12.5	2 × 30
NYT 2035	NYTS 2035	18	12 ^{±0.1}	30 ^{±0.1}	35	11.5	12.4	6	22	M3	5	3.5	1 × 28
2050	2050	30			50							3.5	1 × 43
2065	2065	40			65							17.5	1 × 30
2080	2080	50			80							17.5	1 × 45
2095	2095	60			95							17.5	2 × 30
2110	2110	70			110							32.5	1 × 45
2125	2125	80			125							17.5	2 × 45
NYT 3055	NYTS 3055	30	16 ^{±0.1}	40 ^{±0.1}	55	15.5	16.7	8	30	M4	7	7.5	1 × 40
3080	3080	45			80							7.5	1 × 65
3105	3105	60			105							27.5	1 × 50
3130	3130	75			130							27.5	1 × 75
3155	3155	90			155							27.5	2 × 50
3180	3180	105			180							52.5	1 × 75
3205	3205	130			205							27.5	2 × 75

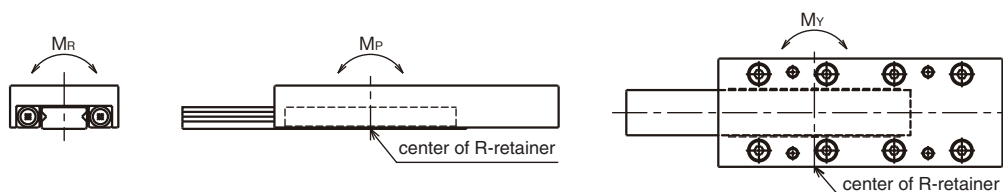
The basic static load rating is the value at the center of the stroke.



bed-surface mounting hole dimensions S ₂	N ₂ mm	M ₂ × P ₃ mm	accuracy※ (deviation)		basic load rating		allowable load F N	allowable static moment			mass g	size
			T μm	S μm	C N	Co N		M _P N · m	M _Y N · m	M _R N · m		
M2.6	5	2 × 7.5	2	4	734	849	283	3.73	3.18	3.18	25	1025
	7.5	2 × 10	2	4	1,250	1,690	566	1.77	4.24	1.07	35	1035
	7.5	3 × 10	2	5	1,720	2,540	849	9.09	10.3	4.26	45	1045
	7.5	4 × 10	2	5	2,160	3,390	1,130	14.1	16.7	5.33	55	1055
	7.5	5 × 10	2	5	2,560	4,240	1,410	24.9	26.7	8.52	65	1065
	7.5	6 × 10	2	5	2,960	5,090	1,690	33.1	36.7	9.59	76	1075
	7.5	7 × 10	2	5	3,330	5,940	1,980	47.8	50.7	12.7	86	1085
M3	7.5	1 × 20	2	4	1,360	1,520	509	10.1	8.80	9.93	84	2035
	10	2 × 15	2	4	2,330	3,050	1,010	18.9	18.7	13.4	120	2050
	10	3 × 15	2	5	3,190	4,580	1,520	36.9	35.7	23.4	157	2065
	10	4 × 15	2	5	3,990	6,110	2,030	53.2	53.8	26.9	190	2080
	10	5 × 15	2	5	4,740	7,630	2,540	80.3	79.9	36.9	225	2095
	10	6 × 15	2	5	5,460	9,160	3,050	104	106	40.4	265	2110
	10	7 × 15	2	5	6,160	10,600	3,560	130	135	44.0	305	2125
M4	10	1 × 35	2	5	6,150	8,060	2,680	23.6	37.2	17.0	228	3055
	15	2 × 25	2	5	8,440	12,100	4,030	125	119	87.2	345	3080
	15	3 × 25	3	5	10,500	16,100	5,370	188	186	104	450	3105
	15	4 × 25	3	5	14,400	24,200	8,060	302	319	121	570	3130
	15	5 × 25	3	5	16,300	28,200	9,410	508	505	191	665	3155
	15	6 × 25	3	5	18,100	32,200	10,700	630	635	208	780	3180
	15	7 × 25	3	5	19,800	36,300	12,100	763	779	225	890	3205

※ For accuracy (T, S), refer to Figure 7 (page 2).

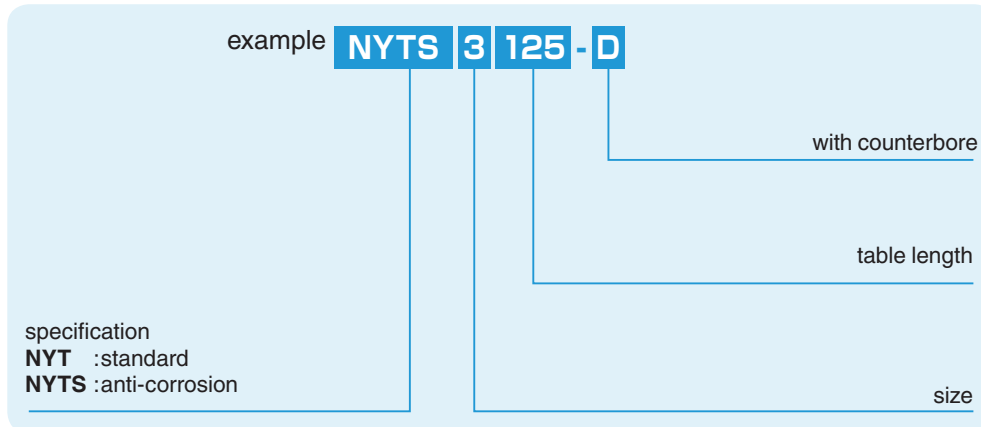
1N ≒ 0.102kgf 1N · m ≒ 0.102kgf · m



NYT-D TYPE

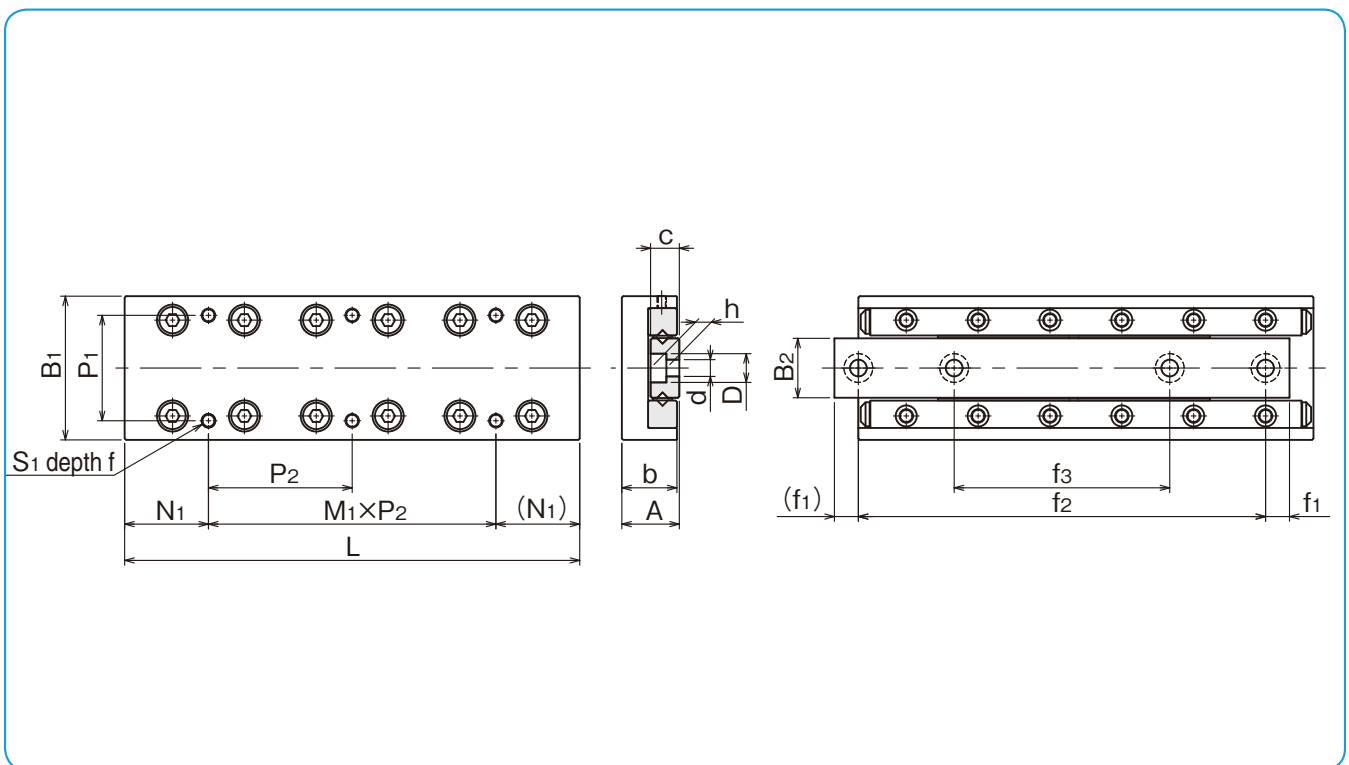


part number structure



part number		stroke ST mm	major dimensions						table-top mounting hole dimensions				
standard	anti-corrosion		A mm	B ₁ mm	L mm	b mm	B ₂ mm	c mm	P ₁ mm	S ₁ mm	f mm	N ₁ mm	M ₁ × P ₂ mm
NEW NYT 1025-D	NYTS 1025-D	12	8±0.1	20±0.1	25	7.5	7.06	4	14	M2.6	3	3.5	1 × 18
NEW 1035-D	1035-D	18			35							3.5	1 × 28
NEW 1045-D	1045-D	25			45							12.5	1 × 20
NEW 1055-D	1055-D	32			55							12.5	1 × 30
NEW 1065-D	1065-D	40			65							12.5	2 × 20
NEW 1075-D	1075-D	45			75							22.5	1 × 30
NEW 1085-D	1085-D	50			85							12.5	2 × 30
NYT 2035-D	NYTS 2035-D	18	12±0.1	30±0.1	35	11.5	12.4	6	22	M3	5	3.5	1 × 28
2050-D	2050-D	30			50							3.5	1 × 43
2065-D	2065-D	40			65							17.5	1 × 30
2080-D	2080-D	50			80							17.5	1 × 45
2095-D	2095-D	60			95							17.5	2 × 30
2110-D	2110-D	70			110							32.5	1 × 45
2125-D	2125-D	80			125							17.5	2 × 45
NYT 3055-D	NYTS 3055-D	30	16±0.1	40±0.1	55	15.5	16.7	8	30	M4	7	7.5	1 × 40
3080-D	3080-D	45			80							7.5	1 × 65
3105-D	3105-D	60			105							27.5	1 × 50
3130-D	3130-D	75			130							27.5	1 × 75
3155-D	3155-D	90			155							27.5	2 × 50
3180-D	3180-D	105			180							52.5	1 × 75
3205-D	3205-D	130			205							27.5	2 × 75

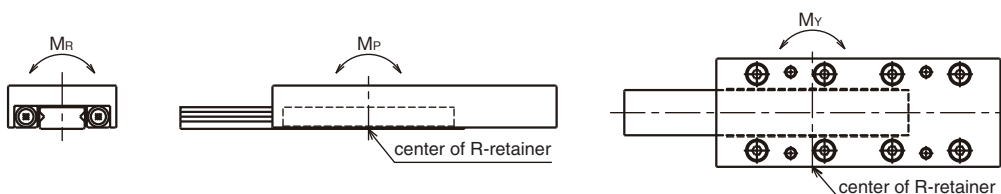
The basic static load rating is the value at the center of the stroke.



bed-surface mounting hole dimensions d × D × h mm	f ₁ mm	f ₂ mm	f ₃ mm	accuracy※ (deviation)		basic load rating		allowable load F N	allowable static moment			mass g	size
				T μm	S μm	C N	Co N		M _P N · m	M _Y N · m	M _R N · m		
2.5 × 4.1 × 2.2	3.5	18	—	2	4	734	849	283	3.73	3.18	3.18	25	1025
	5	25	—	2	4	1,250	1,690	566	1.77	4.24	1.07	35	1035
	3.5	38	25	2	5	1,720	2,540	849	9.09	10.3	4.26	45	1045
	3.5	48	29	2	5	2,160	3,390	1,130	14.1	16.7	5.33	55	1055
	5	55	31	2	5	2,560	4,240	1,410	24.9	26.7	8.52	65	1065
	5	65	35	2	5	2,960	5,090	1,690	33.1	36.7	9.59	76	1075
	5	75	40	2	5	3,330	5,940	1,980	47.8	50.7	12.7	86	1085
3.5 × 6 × 3.3	5	25	—	2	4	1,360	1,520	509	10.1	8.80	9.93	84	2035
	7.5	35	—	2	4	2,330	3,050	1,010	18.9	18.7	13.4	120	2050
	5	55	33	2	5	3,190	4,580	1,520	36.9	35.7	23.4	157	2065
	5	70	40	2	5	3,990	6,110	2,030	53.2	53.8	26.9	190	2080
	5	85	45	2	5	4,740	7,630	2,540	80.3	79.9	36.9	225	2095
	7.5	95	50	2	5	5,460	9,160	3,050	104	106	40.4	265	2110
4.5 × 7.5 × 4.3	7.5	110	55	2	5	6,160	10,600	3,560	130	135	44.0	305	2125
	7.5	40	—	2	5	6,150	8,060	2,680	23.6	37.2	17.0	228	3055
	6	68	43	2	5	8,440	12,100	4,030	125	119	87.2	345	3080
	7.5	90	55	3	5	10,500	16,100	5,370	188	186	104	450	3105
	7.5	115	65	3	5	14,400	24,200	8,060	302	319	121	570	3130
	7.5	140	95	3	5	16,300	28,200	9,410	508	505	191	665	3155
	7.5	165	85	3	5	18,100	32,200	10,700	630	635	208	780	3180
7.5	190	90	3	5	19,800	36,300	12,100	763	779	225	890	3205	

※ For accuracy (T, S), refer to Figure 7 (page 2).

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