

# NB

# NEW

# SLIDE WAY

NYT/NYTS type  
NYT-D/NYTS-D type

## HIGH-RIGIDITY COMPACT TYPE SLIDE TABLE With STUDROLLER System



### [ADVANTAGES] STUDROLLER SYSTEM (Rivet Roller Structure)

Anti cage-creeping system allows usage in all orientations and positions.  
Well responsive to high acceleration/deceleration.

### HIGH RIGIDITY · HIGH LOAD RATING

Roller-contact area is larger by 30 to 58% compared to conventional type's. Making the roller-pitch smaller in the cage, the load ratings are 1.2 to 2.5 times higher compared to the SYT equivalent size.

### HIGH ACCURACY

High degree of running parallelism because of the low elastic-deformation roller and precisely ground raceway rails.

### COMPACT DESIGN

Smaller by almost 50% in height and 25 to 30% in width compared to the NVT type.

### ANTI-CORROSION

The NYTS type utilizes martensite stainless steel for corrosion resistance.

Compact Slide Way Table "NYT type" is added to NB Slide Way Series. Incorporating the "STUDROLLER System" in the conventional SYT type, the load ratings are increased by 1.2 to 2.5 times because of the increased roller-raceway contact length and number of rollers compared to the conventional type.

Keeping the dimensional equivalence with SYT type, the "NYT type" is best suited to the vertical application in which non-recirculating linear bearings expose weakness, i.e. cage-slippage

The "NYT type" is also applicable to electronic parts assembling machines for high speed cyclic motion with high acceleration/deceleration.

Taking advantage of low frictional resistance and high accuracy running parallelism, NB Slide Way Series is highly practical and problem-solving equipment in the mechanics and electronics fields.



NIPPON BEARING CO., LTD.

## STUDROLLER SYSTEM

The STUDROLLER System provides complete prevention of roller-cage slippage. The STUDROLLER is a rivet roller, in order to prevent cage-creeping, whose rivets follow the small dimples in the raceway surface. With this unique feature to NB, the STUDROLLER system is ideal to the vertical application using non-recirculating linear bearings.



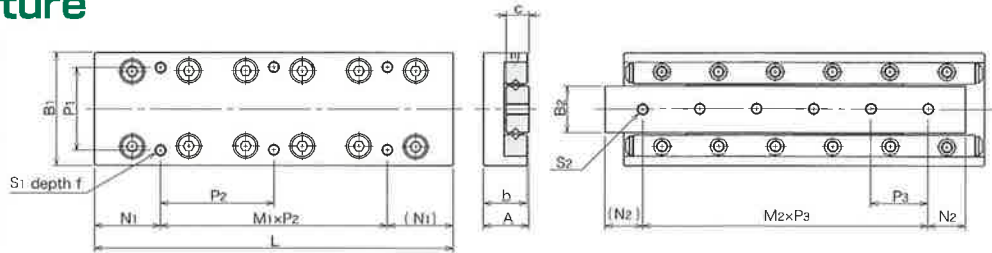
## part number structure

example **NYT 2|065**

specification  
 NYT : standard  
 NYTS : anti-corrosion

size

table length



part number		stroke	major dimensions							table-top mounting hole dimensions				bed-surface mounting hole dimensions				
standard	anti-corrosion	ST mm	A mm		B1 mm		L mm	b mm	B2 mm	c mm	P1 mm	S1 mm	f mm	N1 mm	M1xP2 mm	S2 mm	N2 mm	M2xP3 mm
<b>NYT 2035</b>	<b>NYTS2035</b>	18					35							3.5	1x28		7.5	1x20
<b>2050</b>	<b>2050</b>	30					50							3.5	1x43		10	2x15
<b>2065</b>	<b>2065</b>	40					65							17.5	1x30		10	3x15
<b>2080</b>	<b>2080</b>	50	12	±0.1	30	±0.1	80	11.5	12.4	6	22	M3	5	17.5	1x45	M3	10	4x15
<b>2095</b>	<b>2095</b>	60					95							17.5	2x30		10	5x15
<b>2110</b>	<b>2110</b>	70					110							32.5	1x45		10	6x15
<b>2125</b>	<b>2125</b>	80					125							17.5	2x45		10	7x15
<b>NYT 3055</b>	<b>NYTS3055</b>	30					55							7.5	1x40		10	1x35
<b>3080</b>	<b>3080</b>	45					80							7.5	1x65		15	2x25
<b>3105</b>	<b>3105</b>	60					105							27.5	1x50		15	3x25
<b>3130</b>	<b>3130</b>	75	16	±0.1	40	±0.1	130	15.5	16.7	8	30	M4	7	27.5	1x75	M4	15	4x25
<b>3155</b>	<b>3155</b>	90					155							27.5	2x50		15	5x25
<b>3180</b>	<b>3180</b>	105					180							52.5	1x75		15	6x25
<b>3205</b>	<b>3205</b>	130					205							27.5	2x75		15	7x25

part number		accuracy <sup>※1</sup> (deviation)		basic load rating		allowable load	allowable static moment			mass
standard	anti-corrosion	T μm	S μm	dynamic C N	static Co N	F N	Mp N·m	Mv N·m	Mr N·m	g
<b>NYT 2035</b>	<b>NYTS2035</b>	2	4	1,360	1,520	509	10.1	8.80	9.93	84
<b>2050</b>	<b>2050</b>	2	4	2,330	3,050	1,010	18.9	18.7	15.2	120
<b>2065</b>	<b>2065</b>	2	5	3,190	4,580	1,520	36.9	35.7	25.1	157
<b>2080</b>	<b>2080</b>	2	5	3,990	6,110	2,030	53.2	53.8	28.7	190
<b>2095</b>	<b>2095</b>	2	5	4,740	7,630	2,540	80.3	79.9	38.6	225
<b>2110</b>	<b>2110</b>	2	5	5,460	9,160	3,050	104	106	42.2	265
<b>2125</b>	<b>2125</b>	2	5	6,160	10,600	3,560	130	135	45.8	305
<b>NYT 3055</b>	<b>NYTS3055</b>	2	5	6,150	8,060	2,680	23.6	37.2	25.5	228
<b>3080</b>	<b>3080</b>	2	5	8,440	12,100	4,030	125	119	95.7	345
<b>3105</b>	<b>3105</b>	3	5	10,500	16,100	5,370	188	186	112	450
<b>3130</b>	<b>3130</b>	3	5	14,400	24,200	8,060	302	319	129	570
<b>3155</b>	<b>3155</b>	3	5	16,300	28,200	9,410	508	505	199	665
<b>3180</b>	<b>3180</b>	3	5	18,100	32,200	10,700	630	635	216	780
<b>3205</b>	<b>3205</b>	3	5	19,800	36,300	12,100	763	779	233	890

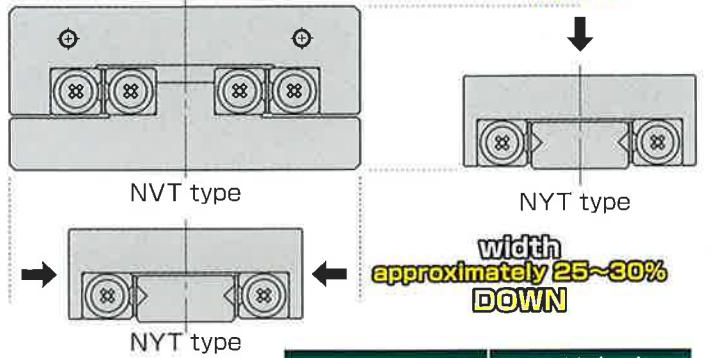
※1 For accuracy (T, S), please refer to the back cover.



# structure



# Dimensional Comparison with NVT type



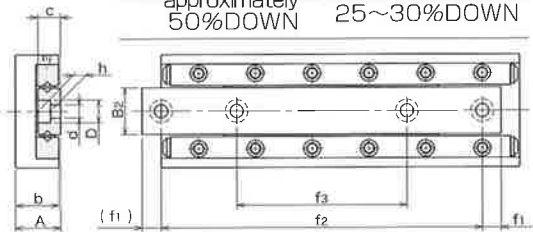
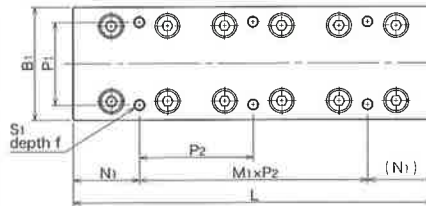
	height (mm)		width (mm)	
size	2	3	2	3
NVT	21	28	40	60
NYT	12	16	30	40

# part number structure

example **NYTS3155-D**

specification  
 NYT : standard  
 NYTS : anti-corrosion

with counterbore  
 table length  
 size



part number		stroke	major dimensions							table-top mounting hole dimensions				bed-surface mounting hole dimensions					
standard	anti-corrosion	ST mm	A mm	tolerance mm	B <sub>1</sub> mm	tolerance mm	L mm	b mm	B <sub>2</sub> mm	c mm	P <sub>1</sub> mm	S <sub>1</sub> mm	f mm	N <sub>1</sub> mm	M <sub>1</sub> ×P <sub>2</sub> mm	d×D×h mm	f <sub>1</sub> mm	f <sub>2</sub> mm	f <sub>3</sub> mm
NYT 2035-D	NYTS2035-D	18	12	±0.1	30	±0.1	35	11.5	12.4	6	22	M3	5	3.5	1×28	3.5×6×3.3	5	25	-
2050-D	2050-D	30					50							7.5	35		-		
2065-D	2065-D	40					65							5	55		33		
2080-D	2080-D	50					80							5	70		40		
2095-D	2095-D	60					95							5	85		45		
2110-D	2110-D	70					110							7.5	95		50		
2125-D	2125-D	80					125							7.5	110		55		
NYT 3055-D	NYTS3055-D	30					16							±0.1	40		±0.1	55	15.5
3080-D	3080-D	45	80	6	68	43													
3105-D	3105-D	60	105	7.5	90	55													
3130-D	3130-D	75	130	7.5	115	65													
3155-D	3155-D	90	155	7.5	140	95													
3180-D	3180-D	105	180	7.5	165	85													
3205-D	3205-D	130	205	7.5	190	90													

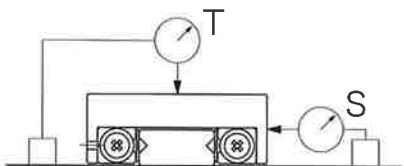
part number		accuracy (deviation)		basic load rating		allowable load	allowable static moment			mass
standard	anti-corrosion	T μm	S μm	C N	static C <sub>0</sub> N	F N	M <sub>P</sub> N·m	M <sub>Y</sub> N·m	M <sub>R</sub> N·m	g
NYT 2035-D	NYTS2035-D	2	4	1,360	1,520	509	10.1	8.80	9.93	84
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※1 For accuracy (T, S), please refer to the back cover.

# SLIDE WAY

## ACCURACY

For NYT(S)/NYT(S)-D type SLIDE TABLE, the motion accuracy is measured by placing indicators at the center of the top and side surface of the table. It is expressed in terms of the indicator deviation when the table is moved the full stroke without any load.



## RATED LIFE

The life of the SLIDE TABLE is calculated using the following equations.

**Rated Life**

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

L: rated life (km)  $f_t$ : temperature coefficient  $f_w$ : applied load coefficient  
C: basic dynamic load rating (N) P: applied load (N)

\* Please refer to page Eng-5 of NB general catalog for the coefficients.

**Life Time**

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

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

## LOAD RATING

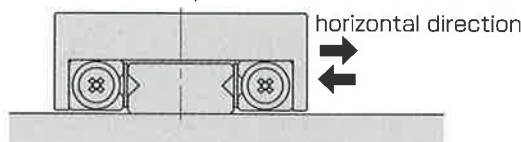
The load rating of the SLIDE TABLE differs depending on the direction of the load.

### 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	$0.7 \times C_0$

### Direction of Load

reverse vertical direction  normal vertical direction 



\* There may be a difference depending on the size.  
Please contact NB for details.

\* In calculation of load ratings, consideration has been given to the holes for STUDROLLERS in the raceway surface.

## USE AND HANDLING PRECAUTIONS

### Careful Handling

Dropping the SLIDE TABLE causes the rolling elements to make dents in the raceway surface. This will prevent smooth motion and affect accuracy. Please be sure to handle with care.

### Dust prevention

Dust and foreign particles affect the accuracy and lifetime of the SLIDE TABLE. Please protect the table with a cover.

### Lubrication

The SLIDE TABLE is prelubricated with lithium soap based grease prior to shipment for immediate use. Please make sure to relubricate with a similar type of grease periodically.

### Adjustment/Installation Screw

The SLIDE TABLE is adjusted to achieve optimum accuracy and preload. Please do not adjust the adjustment screws or rail installation screws.



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