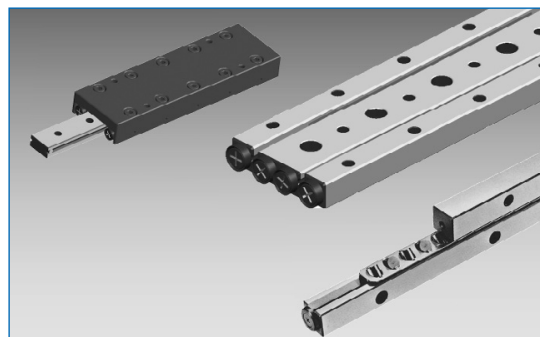


Cross Roller Guide Way Contents



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1 Structure and Features of Cross Roller Guide Way

WON Cross Roller Guide Way is composed of the race rail and roller cage precisely polished. For use, the roller cages assembled in the reverse direction of precise roller are put together with the 90 ° V grooved raceway surface of a race rail. The device has the non-circular and highly-precise linear motion system with low frictional resistance. It is mainly applied to electric discharge machine, optical equipment, measuring equipment, and electronic parts assembly & inspection equipment.

1. Precise and fine linear motion

A cross roller guide way has very low frictional resistance and almost no static and dynamic frictional resistance. Therefore, it supports precise and fine linear motion, obtaining stable linear motion in the conditions of light load and low speed.

2. Low noise

WON Cross Roller Guide Way has a non-circular linear motion system. Therefore, it has no noise of circulation part. Since its roller cage supports a roller at a certain interval, the device runs smoothly without any noise of contact between rollers.

3. High load capacity

Since a cross roller guide way uses a precise roller as a rolling element, it has high rigidity and a high load capacity.

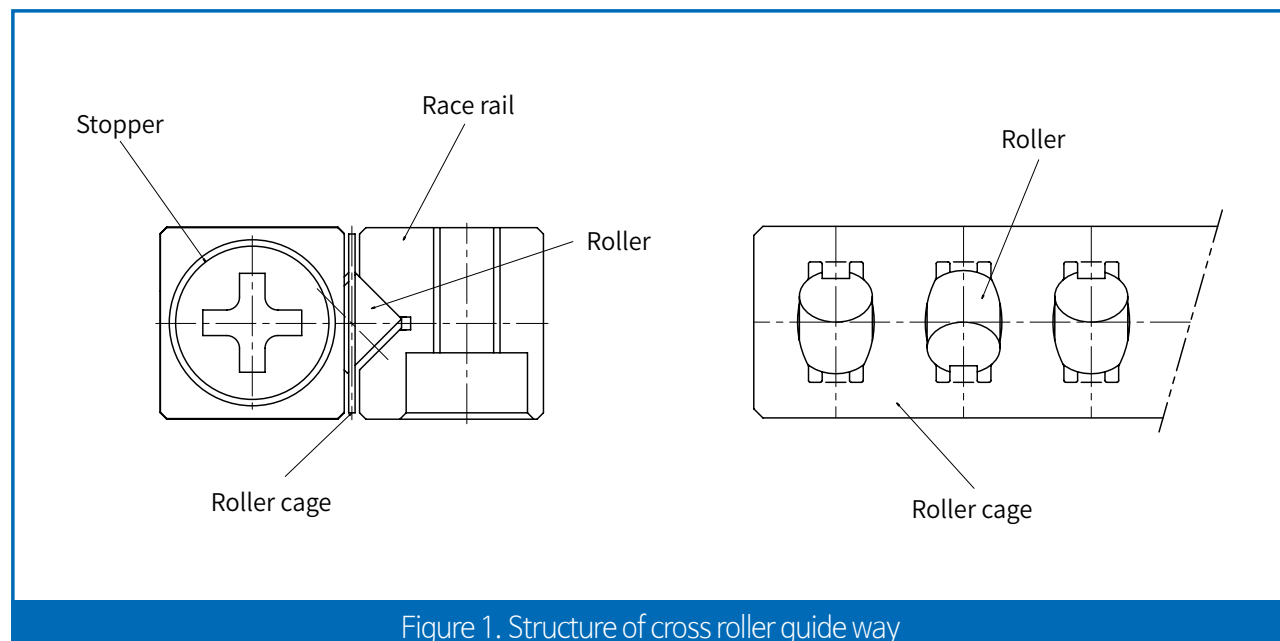
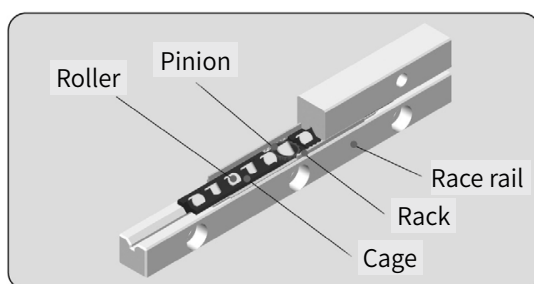


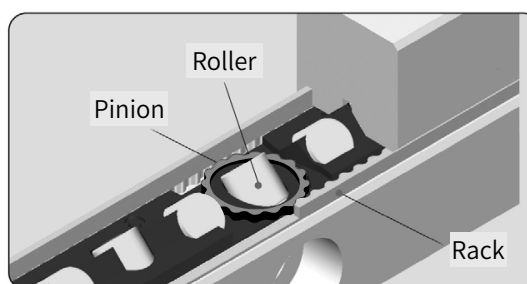
Figure 1. Structure of cross roller guide way

2 WON Anti-Creep Structures and Features of Anti-Creep Cross Roller Guide Way

WON Anti-Creep Cross Roller Guide Way is the product with the rack and pinion gear built in a conventional cross roller guide way. Therefore, it has very high precision and the anti-creep protection.



Structure of WON Anti-Creep cross roller guide way



Details of Anti-Creep part

1. Responses to multiple types of operation

The anti-creep function makes it possible to respond to very high deceleration and acceleration. Unlike a conventional cross roller guide way, this device is safely applicable in difficult service conditions like vertical axis.

2. Low noise and smooth motion

This product adopts a resin cage, rather than a steel cage applied to our other products, in order to minimize the noise of friction between a case and a roller and to implement quiet and smooth running.

3. High load capacity based on complete compatibility of installation dimensions

This product has a unique structure in which a pinion gear wraps of roller a cage. It has the same quantity of rollers and the same load rating and stroke assembly dimension as a general cross roller guide way, so that it has good compatibility for convenient replacement.¹⁾

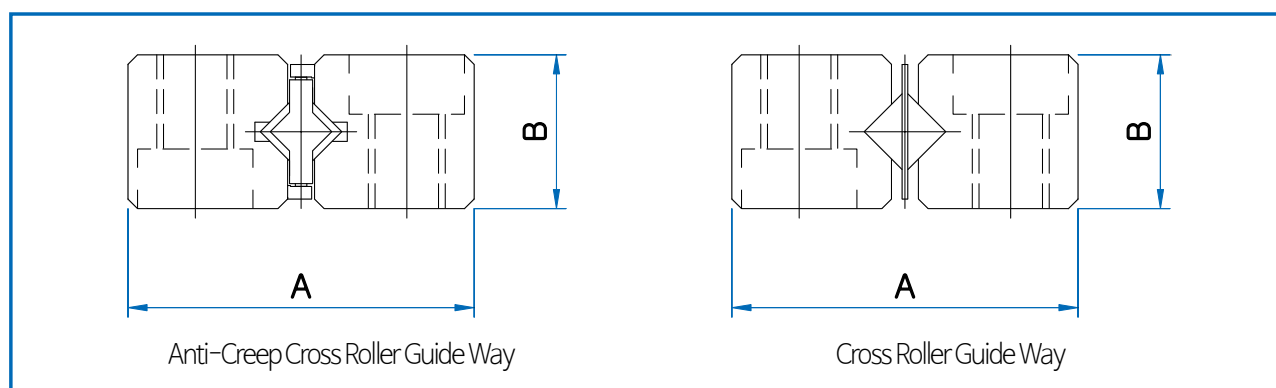
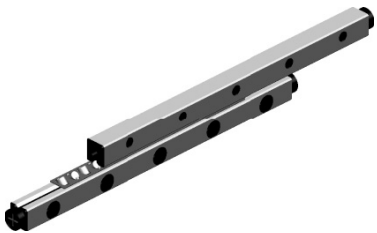


Figure 2. Dimensional compatibility

Note¹⁾ The model numbers 1 & 2 have a different quantity of rollers.

3 Types and Features

Classification	Type	Shape and Feature	
Guide	Roller Cage		In WRG type, the roller cage with the precision rollers crossed at a right angle is put together with the 90 ° V-grooved raceway of an exclusive rail. By mounting two-roll roller guides in parallel, it is possible to bear any load in all directions, which is imposed on the shaft at a right angle. In addition, since preload can be applied simply, the cross roller guide way can become a light sliding device with no clearance and high rigidity.
	WRG WRGO WRG-AC		
	WRGW		
Table	WRGT		A cross roller table is the compact, highly precise and highly rigid unit guiding a finite linear line. A cross roller guide way is put in between a highly precise table and the base.
	WRGU WRGU-AC		

4 Precision

Precision of WON Cross Roller Guide Way is classified into normal, precision, and super precision types.

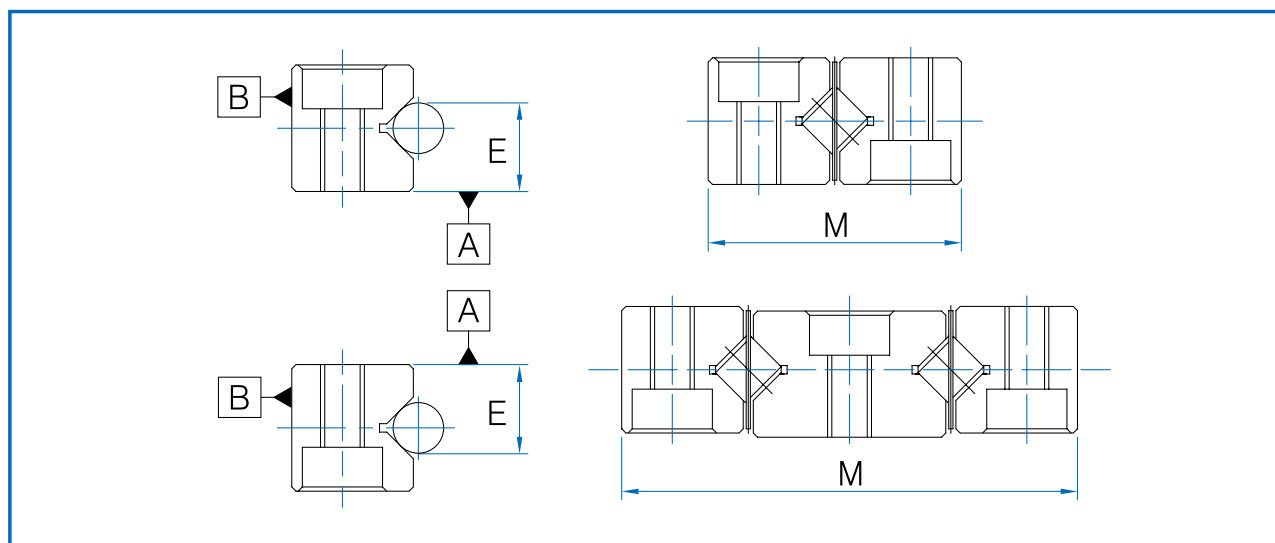


Table 1. Precision of each part of the race rail Unit : mm

Class of precision	Normal	Precision	Super Precision
Symbol	No symbol	H	P
Item			
Parallelism of the race rail for ㉓&㉔ sides	See Table 2.		
Dimensional tolerance of the height E	± 0.02		± 0.01
Difference of the height E	0.02	0.01	0.005
Tolerance of M	0 -0.2		0 -0.1

Table 2. Parallelism of the race rail for ㉓&㉔ sides Unit : μm

Class of precision	Normal (No symbol)	Precision (H)	Super Precision (P)
Length of race rail			
Length > 200	8	4	2
$200 \leq \text{length} < 400$	10	5	3
$400 \leq \text{length} < 600$	14	7	4
$600 \leq \text{length} < 800$	15	9	5
$800 \leq \text{length}$	20	10	5

Note) The difference of the height E is applied to four race rails used on the same plane.

5 Load rating and life

As for the basic load rating C and C_0 , the basic load rating of the running-roller count (Z) actually applied is calculated with the basic load rating C_z and C_{0z} equivalent to one running roller.

Basic dynamic load rating

$$C = \left(\frac{Z}{2} \right)^{\frac{3}{4}} \cdot C_z$$

Basic static load rating

$$C_0 = \left(\frac{Z}{2} \right) \cdot C_{0z} \quad * \left(\frac{Z}{2} \right) = \text{Removal of decimals}$$

Rating life refers to a total travel distance that 90% in one group of linear motion systems, each of which runs under the same condition, can reach without flaking. After the basic dynamic load rating is calculated in the above formula, it is possible to calculate the life of a cross roller guide way in the following formula.

$$L = \left[\left(\frac{f_H \cdot f_T}{f_w} \right) \cdot \left(\frac{C}{P_C} \right) \right]^{\frac{10}{3}} \cdot 100$$

Where L : basic load rating (km)
 C : basic dynamic load rating (kN)
 P_C : Calculated load (kN)
 f_H : Hardness factor
 f_T : Temperature factor
 f_w : Load factor

If stroke length and the number of strokes per minute are given, it is possible to calculate a service life in the following formula.

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

Where L_h : Rating life (hr)
 l_s : Stroke length (m)
 n_1 : Number of strokes per minute (o.p.m.)

Table 3. Hardness factor

A type of race rail	f_H
Carbon steel race rail	1
Stainless steel race rail	0.8

Table 4. Temperature factor

Temperature of linear motion system (°C)	f_T
100	1.00
120	0.97
140	0.93
160	0.88
180	0.82

Table 5. Load factor

Impacts & vibration	Velocity (V)	Measured value of vibration (G)	f_W
No external impacts and vibration	Low speed $V \leq 15\text{m/mim}$	$G \leq 0.5$	1.0 ~ 1.5
Very weak impacts and vibration	Middle speed $15 < V \leq 60\text{m/mim}$	$0.5 \leq G \leq 1.0$	1.5 ~ 2.0
External impacts and vibration	High speed $V > 60\text{m/mim}$	$1.0 \leq G \leq 2.0$	2.0 ~ 3.5

6 Preload

If a cross roller guide way has no appropriate level of preload, it is impossible to obtain the precision needed, or it is possible to cause scratches or shorten its service life. Therefore, fasten an adjustment bolt by checking an allowable preload level.

(* Adjust an adjustment bolt in the same line with a roller.)

Table 6. Allowable preload level of roller cage in the row 1

Unit : μm

Model No.	R1	R2	R3	R4	R5	R9
Allowable preload	-2	-3	-4	-5	-7	-10

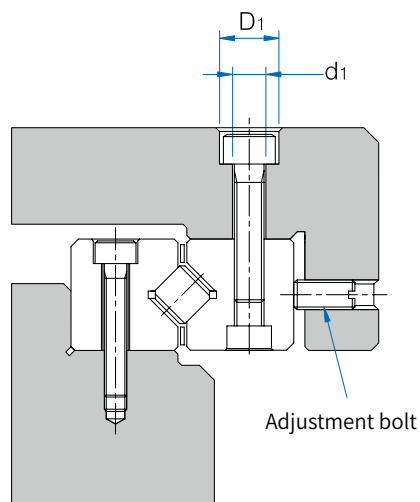


Figure 3. An example of preload adjustment

7 Precision of mounting surface

To obtain a certain level of travel precision, it is required for the mounting face of a race rail to secure more than a level of precision described in Table 1. Generally, polishing process is applied.

8 How to install

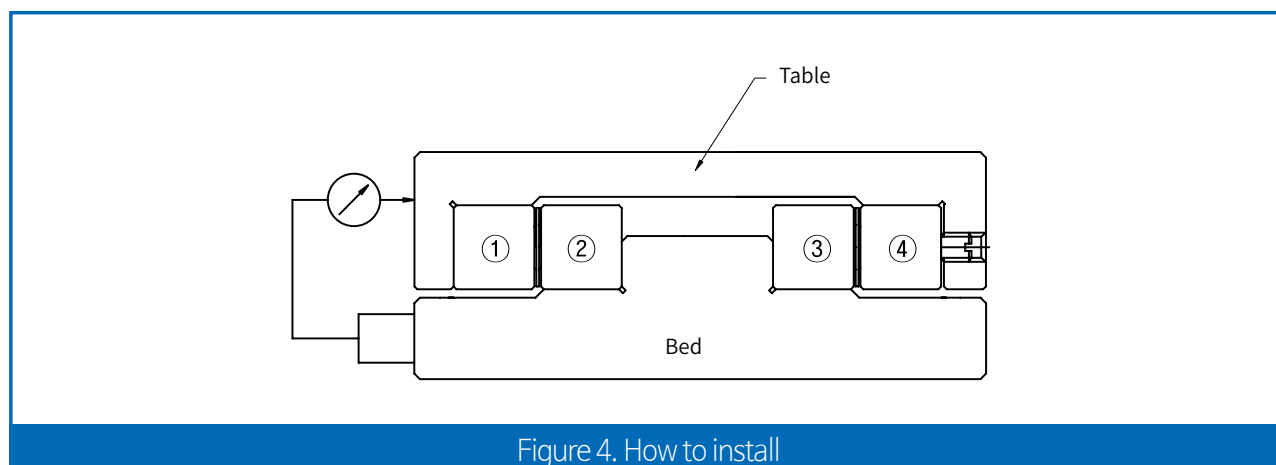


Figure 4. How to install

- 1) Place the mounting surfaces of the race rails ①, ②, and ③ closely and accurately on the bed and table and connect them completely.
- 2) Connect the race rail ④ temporarily with the table and secure a gap enough to push a roller cage into the side.
- 3) Set a dial gauge as shown in Figure 4. Lightly fasten an adjustment bolt until the table has no runout in order to obtain a certain amount of stroke. Set the dial gauge to zero.
- 4) Place the roller cage at the center as shown in Figure 5. Fasten the adjustment bolt with a torque wrench until the dial gauge shows a certain amount of displacement that represents an allowable preload level. Fasten the mounting bolt of the race rail ④ completely.
- 5) Slide the table left and right and fasten another adjustment bolt and mounting bolt (a,e) in the same way as above. Now the installation is complete.

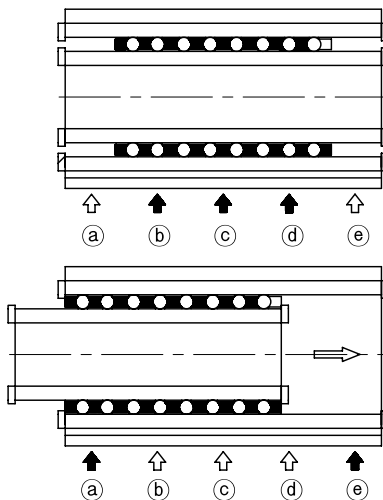
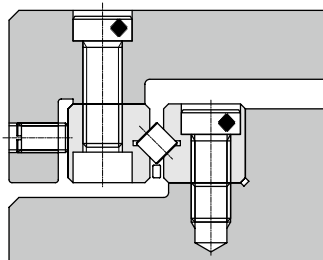
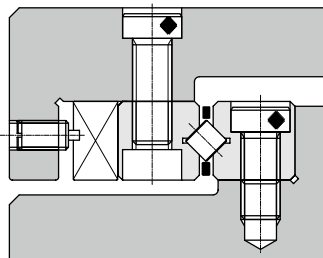


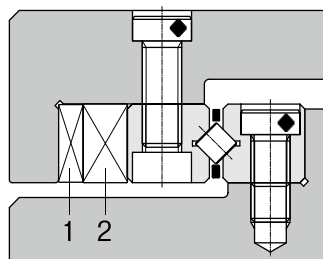
Figure 5. Procedure of fastening an adjustment bolt



Generally, push the rail with the adjustment bolt.



If precision and rigidity are needed, use a holding bar.



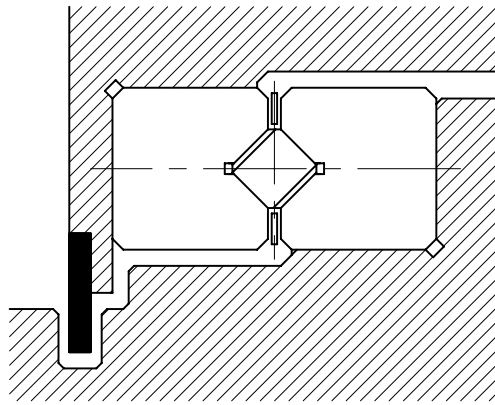
In particular, if high precision and high rigidity are needed, use tapered gibs 1 and 2.

Figure 6. An example of clearance adjustment

9 Lubrication and Dust Proof

WON Cross Roller Guide Way (WRGT, WRGU) is already filled with lithium grease. If you need to refill, it is recommended to use the same type of grease.

If a large amount of foreign substances or dust float, or if a cross roller guide way is exposed to relatively big foreign substances like cutting tips or sand, it is recommended to attach a cover to protect the device.



Cross Roller Guide Way

Figure 7.

10 Caution for Use

1. Installation

If the mounting surface is polished with lower than a required level of precision, or an inappropriate preload level is applied, a race rail can face torsion. In this case, asymmetric load, race rail wear, and a shortened service life occur. Therefore, it is recommended to meet the required precision of the polished surface and level of preload.

2. Stopper

Stoppers are installed on both ends of a race rail only for the purpose of preventing the separation of a roller cage. Therefore, it is required to install a table stopper separately.

3. Use of an equal set

As for WON Cross Roller Guide Way, WRG type has one set of four race rails, and WRGW type one set of three race rails.

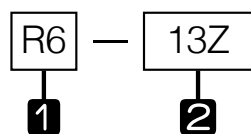
The V-groove difference of each type is adjusted in the set. Therefore, a combination of different sets can cause an error that degrades precision and shortens a service life. Be careful.

4. Handling

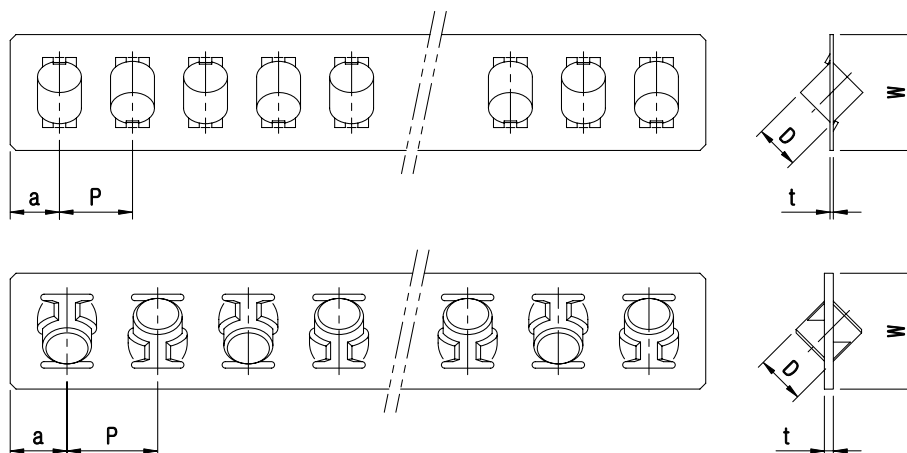
The WON cross roller guideway is meticulously crafted, necessitating careful handling. In the absence of an Anti-Creep cross roller guideway, there's a risk of the roller cage slipping and tilting to one side due to uneven loads and irregular movement. Therefore, it's essential to periodically move it across its full stroke to adjust the position of the roller cage.

Roller Cage

An example of the composition of model name & number



- 1** Model No.
2 Number of rollers



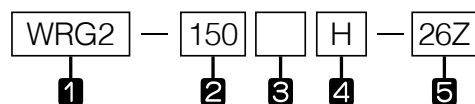
Unit:mm

Model No.	D	t	W	P	a	Cz(kN)	Coz(kN)
R1	1.5	0.2	3.8	2.5	2	0.152	0.153
R2	2	0.25	5	4	2.5	0.276	0.271
R3	3	0.3	7	5	3	0.639	0.611
R4	4	0.3	10.5	7	4.5	1.38	1.35
R6	6	0.6	13.5	10	6	3.78	3.78
R9	9	1.0	19	14	7.5	9.53	9.48

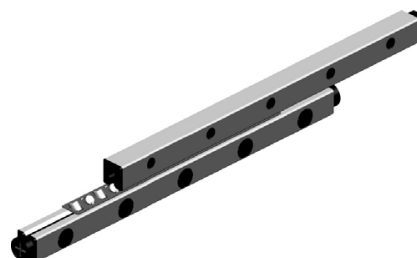
1N $\div$ 0.102kgf

WRG Type

An example of the composition of model name & number



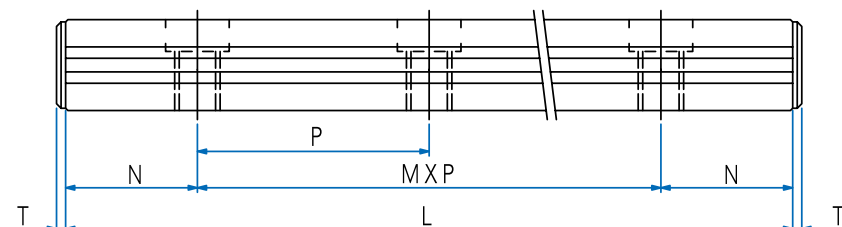
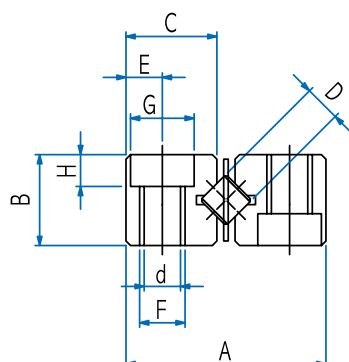
- 1 Model No.
- 2 Length of race rail
- 3 No symbol – Standard race rail / E-Special specification of race rail
- 4 Symbol of precision: No symbol – Normal / H-Precision / P-Super precision
- 5 Number of rollers



Model No.	Max. stroke	D	No. of rollers Z	Main dimensions					
				L	A	B	C	M x P	N
WRG 1020	12	1.5	5	20	8.5	4	3.8	1X10	5
WRG 1030	22		7	30				2X10	
WRG 1040	27		10	40				3X10	
WRG 1050	32		13	50				4X10	
WRG 1060	37		16	60				5X10	
WRG 1070	42		19	70				6X10	
WRG 1080	52		21	80				7X10	
WRG 2030	18	2	5	30	12	6	5.5	1X15	7.5
WRG 2045	24		8	45				2X15	
WRG 2060	30		11	60				3X15	
WRG 2075	44		13	75				4X15	
WRG 2090	50		16	90				5X15	
WRG 2105	64		18	105				6X15	
WRG 2120	70		21	120				7X15	
WRG 2135	84		23	135				8X15	
WRG 2150	90		26	150				9X15	
WRG 2165	96		29	165				10X15	
WRG 2180	102		32	180				11X15	
WRG 3050	28	3	7	50	18	8	8.3	1X25	12.5
WRG 3075	48		10	75				2X25	
WRG 3100	58		14	100				3X25	
WRG 3125	78		17	125				4X25	
WRG 3150	88		21	150				5X25	
WRG 3175	108		24	175				6X25	
WRG 3200	118		28	200				7X25	
WRG 3225	138		31	225				8X25	
WRG 3250	148		35	250				9X25	
WRG 3275	168		38	275				10X25	
WRG 3300	178		42	300				11X25	
WRG 3325	198		45	325				12X25	
WRG 3350	208		49	350				13X25	

Note (1) 1 SET (Race rail: 4EA, Roller cage: 2EA, Stopper: 8EA)

(2) Basic load rating is based on 1 set.



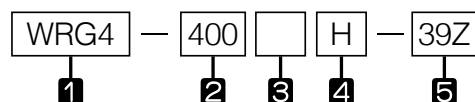
Unit : mm

Dimensions						Basic load rating		Mass (g/set)	Model No.
E	F	d	G	H	T	Dynamic C (kN)	Static Co (kN)		
1.8	M2	1.65	3	1.4	1.5	0.46	0.61	9	WRG 1020
						0.63	0.92	13	WRG 1030
						0.95	1.53	18	WRG 1040
						1.09	1.84	22	WRG 1050
						1.37	2.45	26	WRG 1060
						1.50	2.75	30	WRG 1070
						1.63	3.06	35	WRG 1080
2.5	M3	2.55	4.4	2	2	0.84	1.08	28	WRG 2030
						1.46	2.17	43	WRG 2045
						1.74	2.71	57	WRG 2060
						2.01	3.25	71	WRG 2075
						2.52	4.34	85	WRG 2090
						2.76	4.88	98	WRG 2105
						3.00	5.42	112	WRG 2120
						3.23	5.96	126	WRG 2135
						3.68	7.05	140	WRG 2150
						3.90	7.59	153	WRG 2165
						4.32	8.67	166	WRG 2180
3.5	M4	3.30	6	3.1	2.5	2.71	3.67	98	WRG 3050
						4.06	6.11	148	WRG 3075
						5.28	8.55	195	WRG 3100
						5.86	9.78	242	WRG 3125
						6.98	12.2	289	WRG 3150
						8.05	14.7	336	WRG 3175
						9.08	17.1	384	WRG 3200
						9.58	18.33	431	WRG 3225
						10.56	20.8	478	WRG 3250
						11.52	23.2	525	WRG 3275
						12.45	25.7	572	WRG 3300
						12.91	26.9	619	WRG 3325
						13.82	29.3	647	WRG 3350

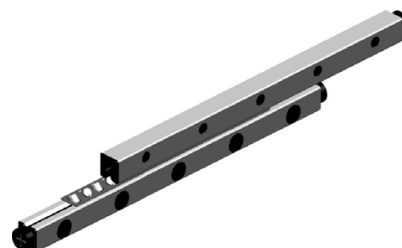
1N ≒ 0.102kgf

WRG Type

An example of the composition of model name & number



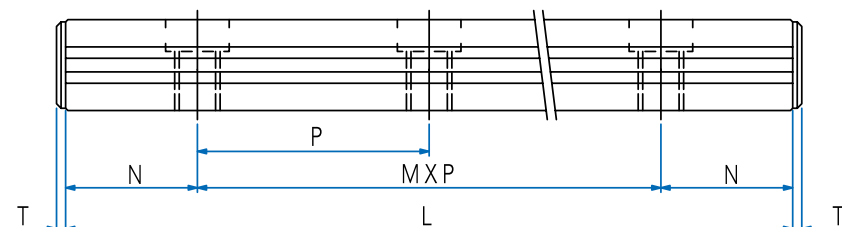
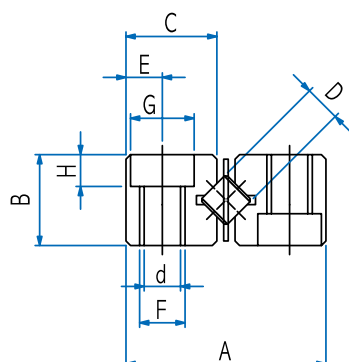
- 1 Model No.
- 2 Length of race rail
- 3 No symbol – Standard race rail / E-Special specification of race rail
- 4 Symbol of precision: No symbol – Normal / H-Precision / P-Super precision
- 5 Number of rollers



Model No.	Max. stroke	D	No. of rollers Z	Main dimensions					
				L	A	B	C	M x P	N
WRG 4080	58	4	7	80	22	11	10.2	1X40	20
WRG 4120	82		11	120				2X40	
WRG 4160	106		15	160				3X40	
WRG 4200	130		19	200				4X40	
WRG 4240	154		23	240				5X40	
WRG 4280	178		27	280				6X40	
WRG 4320	202		31	320				7X40	
WRG 4360	226		35	360				8X40	
WRG 4400	250		39	400				9X40	
WRG 4440	274		43	440				10X40	
WRG 4480	298		47	480				11X40	
WRG 6100	56	6	7	100	31	15	14.2	1X50	25
WRG 6150	96		10	150				2X50	
WRG 6200	136		13	200				3X50	
WRG 6250	156		17	250				4X50	
WRG 6300	196		20	300				5X50	
WRG 6350	216		24	350				6X50	
WRG 6400	256		27	400				7X50	
WRG 6450	276		31	450				8X50	
WRG 6500	316		34	500				9X50	
WRG 6550	336		38	550				10X50	
WRG 6600	376		41	600				11X50	
WRG 9200	118	9	10	200	44	22	20.2	1X100	50
WRG 9300	178		15	300				2X100	
WRG 9400	238		20	400				3X100	
WRG 9500	298		25	500				4X100	
WRG 9600	358		30	600				5X100	
WRG 9700	418		35	700				6X100	
WRG 9800	478		40	800				7X100	
WRG 9900	538		45	900				8X100	
WRG 91000	598		50	1000				9X100	

Note (1) 1 SET (Race rail: 4EA, Roller cage: 2EA, Stopper: 8EA)

(2) Basic load rating is based on 1 set.



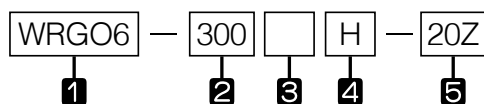
Unit : mm

Dimensions						Basic load rating		Mass (g/set)	Model No.
E	F	d	G	H	T	Dynamic C (kN)	Static Co (kN)		
4.5	M5	4.3	8	4.2	2.5	5.92	8.10	260	WRG 4080
						8.85	13.5	400	WRG 4120
						11.5	18.9	530	WRG 4160
						14.0	24.3	660	WRG 4200
						16.4	29.7	790	WRG 4240
						18.7	35.1	920	WRG 4280
						20.88	40.5	1050	WRG 4320
						23.0	45.9	1180	WRG 4360
						25.1	51.3	1300	WRG 4400
						27.1	56.7	1430	WRG 4440
6	M6	5.2	9.5	5.2	3	29.1	62.1	1530	WRG 4480
						16.4	22.7	630	WRG 6100
						24.5	37.8	950	WRG 6150
						28.2	45.4	1260	WRG 6200
						35.4	60.5	1570	WRG 6250
						42.1	75.6	1800	WRG 6300
						48.5	90.7	2190	WRG 6350
						51.7	98.3	2490	WRG 6400
						57.8	113	2810	WRG 6450
						63.7	128	3110	WRG 6500
9	M8	6.8	10.5	6.2	4	69.5	143	3420	WRG 6550
						72.3	151	3730	WRG 6600
						62.3	94.8	2710	WRG 9200
						81.1	133	4050	WRG 9300
						107	190	5350	WRG 9400
						123	228	6680	WRG 9500
						147	284	8010	WRG 9600
						162	322	9330	WRG 9700
						184	379	10650	WRG 9800
						198	417	11970	WRG 9900
						219	474	13300	WRG 91000

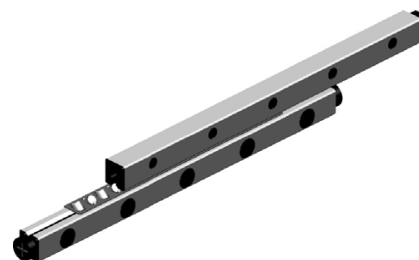
1N ≒ 0.102kgf

WRGO Type

An example of the composition of model name & number



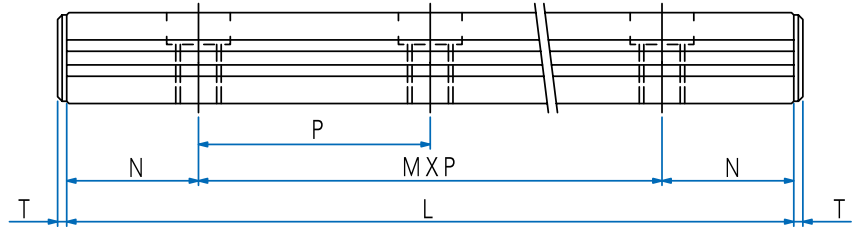
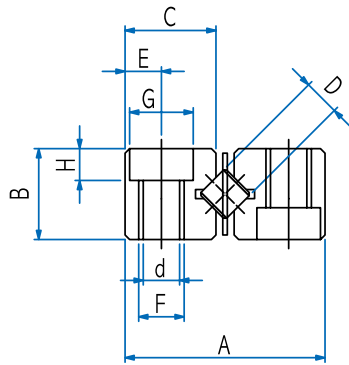
- 1 Model No.
- 2 Length of race rail
- 3 No symbol – Standard race rail / E-Special specification of race rail
- 4 Symbol of precision: No symbol – Normal / H-Precision / P-Super precision
- 5 Number of rollers



Model No.	Max. stroke	D	No. of rollers Z	Main dimensions					
				L	A	B	C	M x P	N
WRGO 6100	56	6	7	100	30	15	14.4	1X50	25
WRGO 6150	96		10	150				2X50	
WRGO 6200	136		13	200				3X50	
WRGO 6250	156		17	250				4X50	
WRGO 6300	196		20	300				5X50	
WRGO 6350	216		24	350				6X50	
WRGO 6400	256		27	400				7X50	
WRGO 6450	276		31	450				8X50	
WRGO 6500	316		34	500				9X50	
WRGO 6550	336		38	550				10X50	
WRGO 6600	376		41	600				11X50	
WRGO 9200	118	9	10	200	40	20	19.2	1X100	50
WRGO 9300	178		15	300				2X100	
WRGO 9400	238		20	400				3X100	
WRGO 9500	298		25	500				4X100	
WRGO 9600	359		30	600				5X100	
WRGO 9700	418		35	700				6X100	
WRGO 9800	478		40	800				7X100	
WRGO 9900	538		45	900				8X100	
WRGO 91000	598		50	1000				9X100	
WRGO 91100	658		55	1100				10X100	
WRGO 91200	718		60	1200				11X100	

Note (1) 1 SET (Race rail: 4EA, Roller cage: 2EA, Stopper: 8EA)

(2) Basic load rating is based on 1 set.



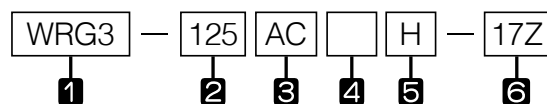
Unit : mm

Dimensions						Basic load rating		Mass (g/set)	Model No.
E	F	d	G	H	T	Dynamic C (kN)	Static Co (kN)		
6	M6	5.2	9.5	5.2	3	16.4	22.7	640	WRGO 6100
						24.5	37.8	940	WRGO 6150
						28.2	45.4	1250	WRGO 6200
						35.4	60.5	1560	WRGO 6250
						42.1	75.6	1860	WRGO 6300
						48.5	90.7	2170	WRGO 6350
						51.7	98.3	2490	WRGO 6400
						57.8	113	2780	WRGO 6450
						63.7	128	3090	WRGO 6500
						69.5	143	3390	WRGO 6550
8	M8	6.8	10.5	6.2	4	72.3	151	3700	WRGO 6600
						62.3	94.8	2280	WRGO 9200
						81.1	133	3400	WRGO 9300
						107	190	4510	WRGO 9400
						123	228	5620	WRGO 9500
						147	284	6740	WRGO 9600
						162	322	7850	WRGO 9700
						184	379	8960	WRGO 9800
						198	417	10070	WRGO 9900
						219	474	11190	WRGO 91000
						232	512	12300	WRGO 91100
						252	569	13410	WRGO 91200

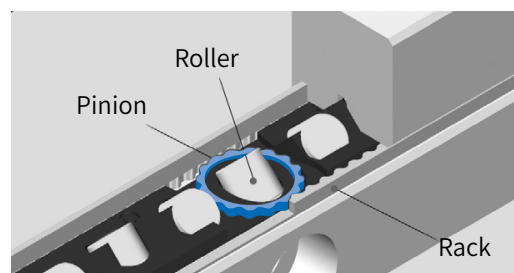
1N ≒ 0.102kgf

WRG-AC Type

An example of the composition of model name & number

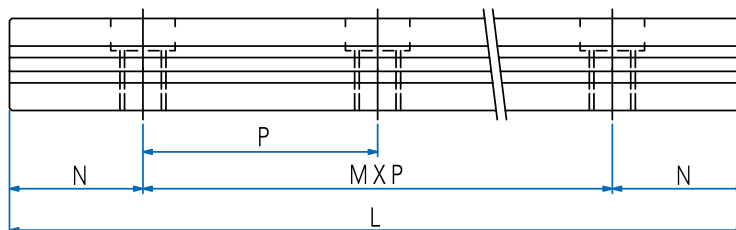
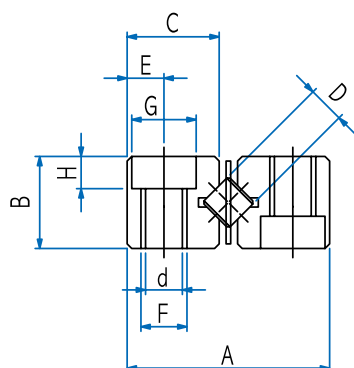


- 1 Model No.
- 2 Length of race rail
- 3 AC-Cage Anti-creep type
- 4 No symbol -Standard race rail / E-Special specification of race rail
- 5 Symbol of precision: No symbol -Normal / H-Precision / P-Super precision
- 6 Number of rollers



Model No.	Max. stroke	D	No. of rollers Z	Main dimensions					
				L	A	B	C	M x P	N
WRG 2030 AC WRG 2045 AC WRG 2060 AC WRG 2075 AC WRG 2090 AC WRG 2105 AC WRG 2120 AC WRG 2135 AC WRG 2150 AC WRG 2165 AC WRG 2180 AC	18 24 30 44 50 64 70 84 90 96 102	2	4 7 10 12 15 17 20 22 25 28 31	30 45 60 75 90 105 120 135 150 165 180	12	6	5.4	1X15 2X15 3X15 4X15 5X15 6X15 7X15 8X15 9X15 10X15 11X15	7.5
WRG3050AC2 WRG3075AC2 WRG3100AC2 WRG3125AC2 WRG3150AC2 WRG3175AC2 WRG3200AC2 WRG3225AC2	24 55 66 78 90 101 113 144	4	6 8 12 16 20 24 28 30	50 75 100 125 150 175 200 225	18	8	8.6	1x25 2x25 3x25 4x25 5x25 6x25 7x25 8x25	12.5
WRG 4080 AC WRG 4120 AC WRG 4160 AC WRG 4200 AC WRG 4240 AC WRG 4280 AC WRG 4320 AC WRG 4360 AC WRG 4400 AC WRG 4440 AC WRG 4480 AC	58 82 106 130 154 178 202 226 250 274 298	4	7 11 15 19 23 27 31 35 39 43 47	80 120 160 200 240 280 320 360 400 440 480	22	11	10.2	1X40 2X40 3X40 4X40 5X40 6X40 7X40 8X40 9X40 10X40 11X40	20

- Note (1) 1 SET (Race rail: 4EA, Roller cage: 2EA, Stopper: 8EA)
 (2) Basic load rating is based on 1 set.
 (3) If a stopper is needed, please make separate description.
 (4) For the vertical use of the device, please contact us.



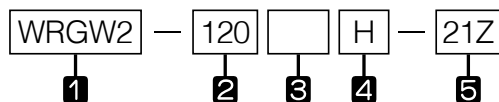
Unit : mm

Dimensions						Basic load rating		Mass (g/set)	Model No.
E	F	d	G	H	T	Dynamic C (kN)	Static Co (kN)		
2.5	M3	2.55	4.4	2	-	0.62	0.73	28	WRG 2030 AC
						0.86	1.10	43	WRG 2045 AC
						1.28	1.83	57	WRG 2060 AC
						1.48	2.20	71	WRG 2075 AC
						1.67	2.56	85	WRG 2090 AC
						1.85	2.93	98	WRG 2105 AC
						2.2	3.66	112	WRG 2120 AC
						2.37	4.03	126	WRG 2135 AC
						2.54	4.39	140	WRG 2150 AC
						2.86	5.13	153	WRG 2165 AC
						3.02	5.49	166	WRG 2180 AC
3.5	M4	3.30	6	3.1	2	6.53	9.37	99	WRG3050AC2
						8.20	12.50	144	WRG3075AC2
						11.27	18.75	190	WRG3100AC2
						14.12	25.00	236	WRG3125AC2
						16.81	31.25	281	WRG3150AC2
						19.38	37.50	327	WRG3175AC2
						21.86	43.75	373	WRG3200AC2
						23.06	46.88	418	WRG3225AC2
4.5	M5	4.3	8	4.2	-	5.92	8.10	260	WRG 4080 AC
						8.85	13.5	400	WRG 4120 AC
						11.5	18.9	530	WRG 4160 AC
						14.0	24.3	660	WRG 4200 AC
						16.4	29.7	790	WRG 4240 AC
						18.7	35.1	920	WRG 4280 AC
						20.88	40.5	1050	WRG 4320 AC
						23.0	45.9	1180	WRG 4360 AC
						25.1	51.3	1300	WRG 4400 AC
						27.1	56.7	1430	WRG 4440 AC
						29.1	62.1	1530	WRG 4480 AC

1N ≒ 0.102kgf

WRGW Type

An example of the composition of model name & number



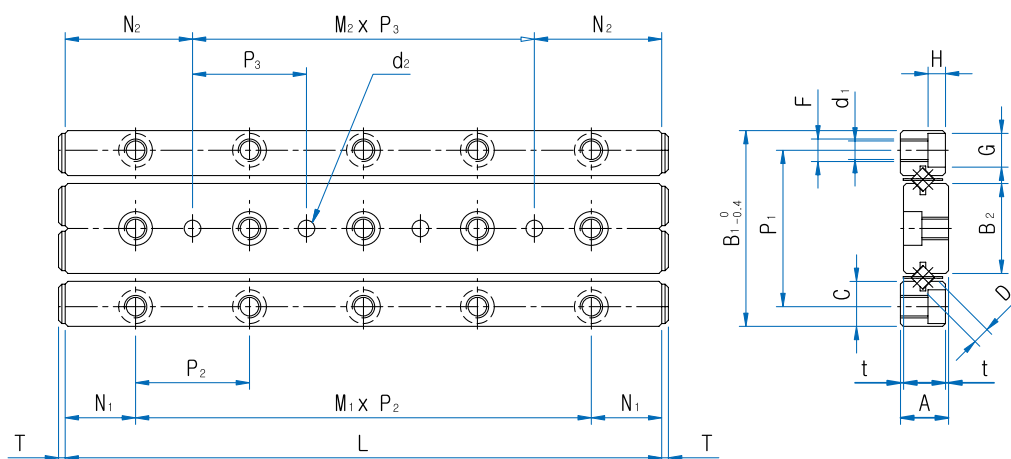
- ❶ Model No.
- ❷ Length of race rail
- ❸ No symbol – Standard race rail / E-Special specification of race rail
- ❹ Symbol of precision: No symbol –Normal / H-Precision / P-Super precision
- ❺ Number of rollers



Model No.	Max. stroke	D	No. of rollers Z	Main dimensions						
				L	A	t	B ₁	B ₂	C	P ₁
WRGW 1020	12	1.5	5	20	4.5	0.5	17	7.6	3.8	13.4
WRGW 1030	22		7	30						
WRGW 1040	27		10	40						
WRGW 1050	32		13	50						
WRGW 1060	37		16	60						
WRGW 1070	42		19	70						
WRGW 1080	52		21	80						
WRGW 2030	18	2	5	30	6.5	0.5	24	11	5.5	19
WRGW 2045	24		8	45						
WRGW 2060	30		11	60						
WRGW 2075	44		13	75						
WRGW 2090	50		16	90						
WRGW 2105	64		18	105						
WRGW 2120	70		21	120						
WRGW 3050	28	3	7	50	8.5	0.5	36	16.6	8.3	29
WRGW 3075	48		10	75						
WRGW 3100	58		14	100						
WRGW 3125	78		17	125						
WRGW 3150	88		21	150						
WRGW 3175	108		24	175						
WRGW 3200	118		28	200						
WRGW 4080	58	4	7	80	11.5	0.5	44	20.4	10.2	35
WRGW 4120	82		11	120						
WRGW 4160	106		15	160						
WRGW 4200	130		19	200						
WRGW 4240	154		23	240						
WRGW 4280	178		27	280						

Note (1) 1 SET (Race rail: 4EA, Roller cage: 2EA, Stopper: 8EA)

(2) Basic load rating is based on 1 set.



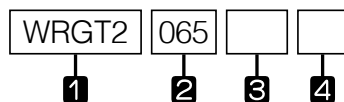
Unit : mm

Dimensions										Basic load rating		Mass (g/set)	Model No.
M ₁ x P ₂	N ₁	M ₂ x P ₃	N ₂	F	d ₁	G	H	T	d ₂	Dynamic C (kN)	Static C ₀ (kN)		
1X10	5	-	10	M2	1.65	3	1.4	1.5	2	0.46	0.61	9	WRGW 1020
2X10		1X10								0.63	0.92	14	WRGW 1030
3X10		2X10								0.95	1.53	18	WRGW 1040
4X10		3X10								1.09	1.84	22	WRGW 1050
5X10		4X10								1.37	2.45	26	WRGW 1060
6X10		5X10								1.50	2.75	31	WRGW 1070
7X10		6X10								1.63	3.06	35	WRGW 1080
1X15	7.5	-	15	M3	2.55	4.4	2	2	3	0.84	1.08	29	WRGW 2030
2X15		1X15								1.46	2.17	43	WRGW 2045
3X15		2X15								1.74	2.71	58	WRGW 2060
4X15		3X15								2.01	3.25	72	WRGW 2075
5X15		4X15								2.52	4.34	83	WRGW 2090
6X15		5X15								2.76	4.38	99	WRGW 2105
7X15		6X15								3.00	5.42	113	WRGW 2120
1X25	12.5	-	25	M4	3.3	6	3.1	2.5	4	2.71	3.67	101	WRGW 3050
2X25		1X25								4.06	6.11	142	WRGW 3075
3X25		2X25								5.28	8.55	197	WRGW 3100
4X25		3X25								5.86	9.78	240	WRGW 3125
5X25		4X25								6.98	12.2	292	WRGW 3150
6X25		5X25								8.06	14.7	339	WRGW 3175
7X25		6X25								9.08	17.1	387	WRGW 3200
1X40	20	-	40	M5	4.3	8	4.2	2.5	5	5.92	8.10	263	WRGW 4080
2X40		1X40								8.85	13.5	401	WRGW 4120
3X40		2X40								11.5	18.9	530	WRGW 4160
4X40		3X40								14.0	24.3	660	WRGW 4200
5X40		4X40								16.4	29.7	787	WRGW 4240
6X40		5X40								18.7	35.1	920	WRGW 4280

1N ≒ 0.102kgf

WRGT Series

An example of the composition of model number

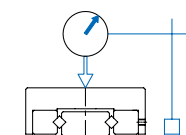
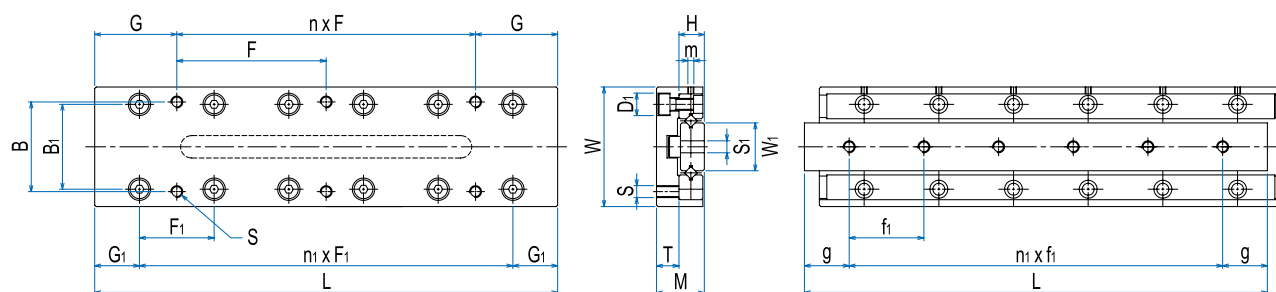


- 1** Model No.
- 2** Length of table
- 3** No symbol – Base tap type
- 4** No symbol- Standard specification / E-Special processing specification

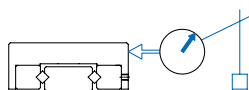
※ For other sizes and specifications than those in the table of dimensions, please contact us.



Model No.	Main dimensions				Dimensions of the table surface									
	Max. stroke	Width W ±0.1	Height M ±0.1	Length L	Position of table attachment tap					F ₁	n ₁ X F ₁	D ₁	B ₁	G ₁
					B	F	n X F	G	S					
WRGT 1025	12	20	8	25	14	18	1 X 18	3.5	M2.6	10	1 X 10	4.1	12.4	7.5
WRGT 1035	18			35		28	1 X 28	3.5			2 X 10			
WRGT 1045	25			45		20	1 X 20	12.5			3 X 10			
WRGT 1055	32			55		30	1 X 30	12.5			4 X 10			
WRGT 1065	40			65		20	2 X 20	12.5			5 X 10			
WRGT 1075	45			75		30	1 X 30	22.5			6 X 10			
WRGT 1085	50			85		30	2 X 30	12.5			7 X 10			
WRGT 2035	18	30	12	35	22	28	1 X 28	3.5	M3	15	1 X 15	6	20	10
WRGT 2050	30			50		43	1 X 43	3.5			2 X 15			
WRGT 2065	40			65		30	1 X 30	17.5			3 X 15			
WRGT 2080	50			80		45	1 X 45	17.5			4 X 15			
WRGT 2095	60			95		30	2 X 30	17.5			5 X 15			
WRGT 2110	70			110		45	1 X 45	32.5			6 X 15			
WRGT 2125	80			125		45	2 X 45	17.5			7 X 15			
WRGT 3055	30	40	16	55	30	40	1 X 40	7.5	M4	25	1 X 25	7.5	28.4	15
WRGT 3080	45			80		65	1 X 65	7.5			2 X 25			
WRGT 3105	60			105		50	1 X 50	27.5			3 X 25			
WRGT 3130	75			130		75	1 X 75	27.5			4 X 25			
WRGT 3155	90			155		50	2 X 50	27.5			5 X 25			
WRGT 3180	105			180		75	1 X 75	52.5			6 X 25			
WRGT 3205	130			205		75	2 X 75	27.5			7 X 25			



Precision : ΔC



Precision : ΔD

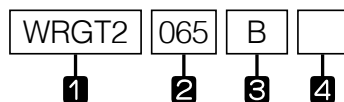
Unit : μm

Dimensions of the side				Dimensions of the base side position of attachment hole				Basic load rating		Precision μm		Model No.
T	H	W ₁	m	S ₁	f ₁	n ₂ x f ₁	g	Dynamic C (kN)	Static C ₀ (kN)	ΔC	ΔD	
7.5	4	6.6	M2	M2.6	7.5	2X7.5	5	0.46	0.61	2	4	WRGT 1025
					10.0	2X10	7.5	0.63	0.92	2	4	WRGT 1035
					10.0	3X10	7.5	0.95	1.53	2	5	WRGT 1045
					10.0	4X10	7.5	1.09	1.84	2	5	WRGT 1055
					10.0	5X10	7.5	1.23	2.14	2	5	WRGT 1065
					10.0	6X10	7.5	1.50	2.75	2	5	WRGT 1075
					10.0	7X10	7.5	1.63	3.06	2	5	WRGT 1085
11.5	6	12.0	M2	M3	20.0	1X20	7.5	0.84	1.08	2	4	WRGT 2035
					15.0	2X15	10	1.17	1.63	2	4	WRGT 2050
					15.0	3X15	10	1.46	2.17	2	5	WRGT 2065
					15.0	4X15	10	2.01	3.25	2	5	WRGT 2080
					15.0	5X15	10	2.27	3.79	2	5	WRGT 2095
					15.0	6X15	10	2.52	4.34	2	5	WRGT 2110
					15.0	7X15	10	2.76	4.88	2	5	WRGT 2125
15.5	8	16.0	M2	M4	35.0	1X35	10	2.71	3.67	2	5	WRGT 3055
					25.0	2X25	15	4.06	6.11	2	5	WRGT 3080
					25.0	3X25	15	4.68	7.33	3	6	WRGT 3105
					25.0	4X25	15	5.86	9.78	3	6	WRGT 3130
					25.0	5X25	15	6.98	12.2	3	6	WRGT 3155
					25.0	6X25	15	8.05	14.7	3	6	WRGT 3180
					25.0	7X25	15	8.57	15.9	3	6	WRGT 3205

1N $\approx$ 0.102kgf

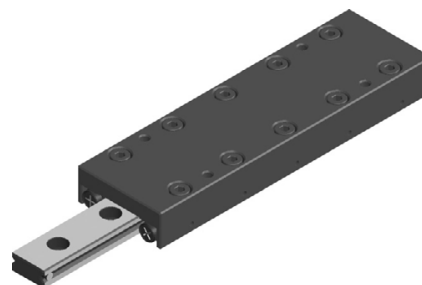
WRGT-B Series

An example of the composition of model number

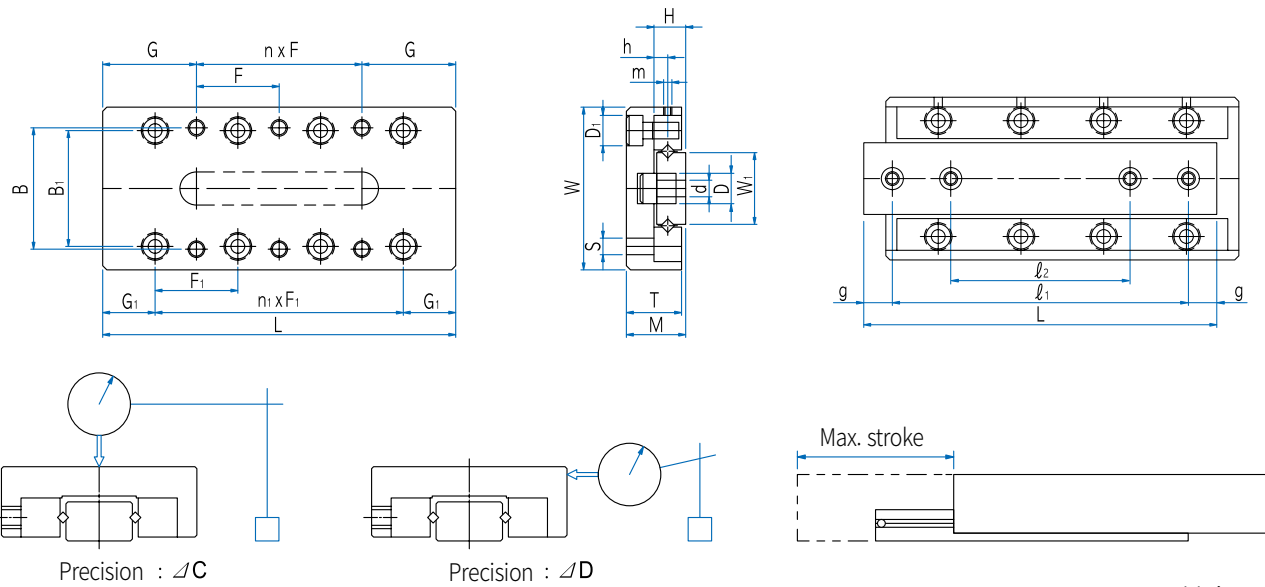


- 1** Model No.
2 Length of table
3 B-Base hole type
4 No symbol-Standard specification / E-Special processing specification

※ For other sizes and specifications than those in the table of dimensions, please contact us.



Model No.	Main dimensions				Dimensions of the table surface									
	Max. stroke	Width W ±0.1	Height M ±0.1	Length L	Position of table attachment tap					F ₁	n ₁ X F ₁	D ₁	B ₁	G ₁
					B	F	n X F	G	S					
WRGT 1025B	12			25		18	1X18	3.5			1X10			
WRGT 1035B	18			35		28	1X28	3.5			2X10			
WRGT 1045B	25			45		20	1X20	12.5			3X10			
WRGT 1055B	32	20	8	55	14	30	1X30	12.5	M2.6	10	4X10	4.1	12.4	7.5
WRGT 1065B	40			65		20	2X20	12.5			5X10			
WRGT 1075B	45			75		30	1X30	22.5			6X10			
WRGT 1085B	50			85		30	2X30	12.5			7X10			
WRGT 2035B	18			35		28	1X28	3.5			1X15			
WRGT 2050B	30			50		43	1X43	3.5			2X15			
WRGT 2065B	40			65		30	1X30	17.5			3X15			
WRGT 2080B	50	30	12	80	22	45	1X45	17.5	M3	15	4X15	6	20	10
WRGT 2095B	60			95		30	2X30	17.5			5X15			
WRGT 2110B	70			110		45	1X45	32.5			6X15			
WRGT 2125B	80			125		45	2X45	17.5			7X15			
WRGT 3055B	30			55		40	1X40	7.5			1X25			
WRGT 3080B	45			80		65	1X65	7.5			2X25			
WRGT 3105B	60			105		50	1X50	27.5			3X25			
WRGT 3130B	75	40	16	130	30	75	1X75	27.5	M4	25	4X25	7.5	28.4	15
WRGT 3155B	90			155		50	2X50	27.5			5X25			
WRGT 3180B	105			180		75	1X75	52.5			6X25			
WRGT 3205B	130			205		75	2X75	27.5			7X25			

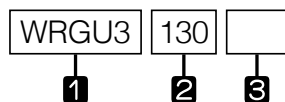
Unit: μm

Dimensions of the side				Dimensions of the base side position of attachment hole				Basic load rating		Precision μm		Model No.
T	H	W ₁	m	dXDXh	ℓ ₁	ℓ ₂	g	Dynamic C (kN)	Static C ₀ (kN)	ΔC	ΔD	
7.5	4	6.6	M2	2.5X4.1X2.2	18	–	3.5	0.46	0.61	2	4	WRGT 1025B
					25	–	5.0	0.63	0.92	2	4	WRGT 1035B
					38	25	3.5	0.95	1.53	2	5	WRGT 1045B
					48	29	3.5	1.09	1.84	2	5	WRGT 1055B
					55	31	5.0	1.23	2.14	2	5	WRGT 1065B
					65	35	5.0	1.50	2.75	2	5	WRGT 1075B
					75	40	5.0	1.63	3.06	2	5	WRGT 1085B
11.5	6	12.0	M2	3.5X6X3.2	25	–	5.0	0.84	1.08	2	4	WRGT 2035B
					35	–	7.5	1.17	1.63	2	4	WRGT 2050B
					55	33	5.0	1.46	2.17	2	5	WRGT 2065B
					70	40	5.0	2.01	3.25	2	5	WRGT 2080B
					85	45	5.0	2.27	3.79	2	5	WRGT 2095B
					95	50	7.5	2.52	4.34	2	5	WRGT 2110B
					110	55	7.5	2.76	4.88	2	5	WRGT 2125B
15.5	8	16.0	M2	4.5X7.5X4.2	40	–	7.5	2.71	3.67	2	5	WRGT 3055B
					68	43	6.0	4.06	6.11	2	5	WRGT 3080B
					90	55	7.5	4.68	7.33	3	6	WRGT 3105B
					115	65	7.5	5.86	9.78	3	6	WRGT 3130B
					140	95	7.5	6.98	12.2	3	6	WRGT 3155B
					165	85	7.5	8.05	14.7	3	6	WRGT 3180B
					190	90	7.5	8.57	15.9	3	6	WRGT 3205B

1N $\approx$ 0.102kgf

WRGU Series

An example of the composition of model name & number

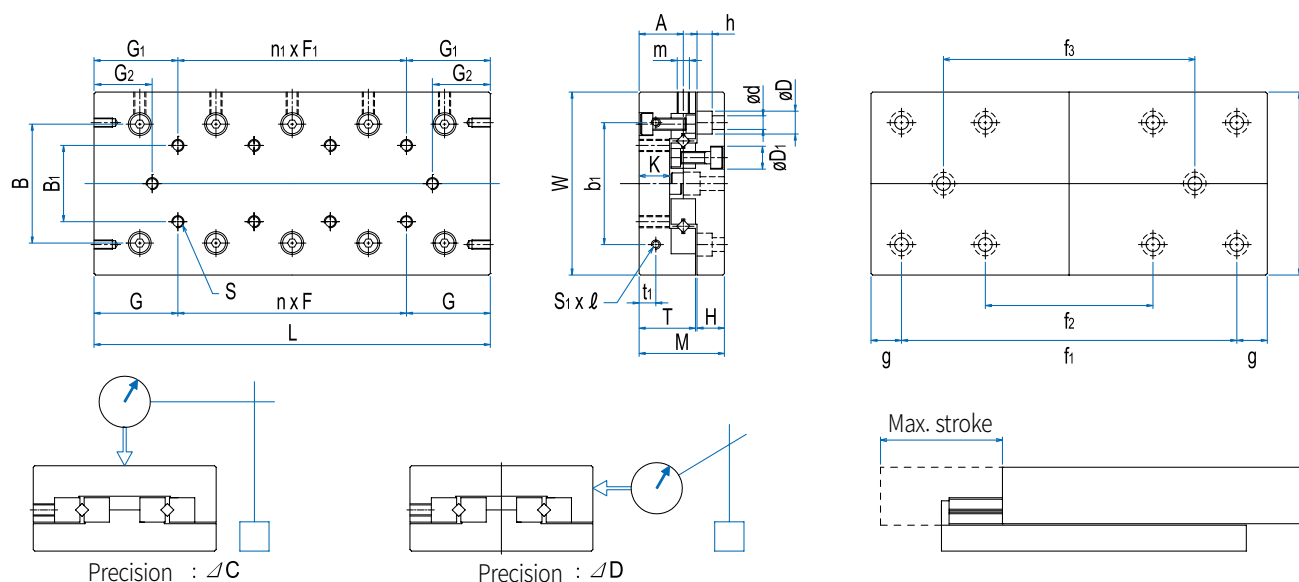


- 1 Model No.
 2 Length of table
 3 No symbol – Standard specification / E-Special processing specification

※ For other sizes and specifications than those in the table of dimensions, please contact us.



Model No.	Main dimensions						Dimensions of the table surface											
	Max. stroke	Width W	Width tolerance	Height M ±0.1	Length L	Mass (kg)	Position of table attachment tap				Side attachment tap position							
							B	nXF	G	S	B ₁	n ₁ XF ₁	G ₁	G ₂	K	b ₁	t ₁	S ₁ X $\varnothing$
WRGU 1025	12	30	-0.2 -0.4	17	25	0.08	18.4	–	12.5	M2	10	1X10	7.5	2.5	6.5	12	2.5	M2X4
WRGU 1035	18				35	0.11		1X10				2X10		4.5				
WRGU 1045	25				45	0.15		2X10				3X10		6				
WRGU 1055	32				55	0.18		3X10				4X10		7.5				
WRGU 1065	40				65	0.21		4X10				5X10		8.5				
WRGU 1075	45				75	0.24		5X10				6X10		11				
WRGU 1085	50				85	0.27		6X10				7X10		13.5				
WRGU 2035	18	40	-0.2 -0.4	21	35	0.2	25	–	17.5	M3	15	1X15	10	3	7.5	16	3.4	M2X4
WRGU 2050	30				50	0.26		1X15				2X15		4.5				
WRGU 2065	40				65	0.34		2X15				3X15		7				
WRGU 2080	50				80	0.42		3X15				4X15		9.5				
WRGU 2095	60				95	0.5		4X15				5X15		12				
WRGU 2110	70				110	0.58		5X15				6X15		14.5				
WRGU 2125	80				125	0.66		6X15				7X15		17				
WRGU 3055	30	60	±0.1	28	55	0.57	39	–	27.5	M4	25	1X25	15	5.5	10	40	5.5	M3X6
WRGU 3080	45				80	0.8		1X25				2X25		10.5				
WRGU 3105	60				105	1.03		2X25				3X25		15.5				
WRGU 3130	75				130	1.26		3X25				4X25		20.5				
WRGU 3155	90				155	1.49		4X25				5X25		25.5				
WRGU 3180	105				180	1.72		5X25				6X25		30.5				
WRGU 3205	130				205	1.95		6X25				7X25		30.5				



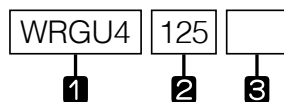
Unit : mm

Dimensions of the side						Dimensions of the base side & position of attachment hole					Basic load rating		Precision mm		Model No.
T	H	d X D X h	D1	A	m	B2	f1	f2	f3	g	Dynamic C (kN)	Static Co (kN)	∇C	∇D	
11	5.5	2.55X4.1X2.5	4.1	9	M2	22	18	-	-	3.5	0.46	0.61	2	4	WRGU 1025
							28	-	-		0.63	0.92	2	4	WRGU 1035
							38	-	-		0.95	1.53	2	4	WRGU 1045
							48	28	-		1.09	1.84	2	5	WRGU 1055
							58	38	-		1.23	2.14	2	5	WRGU 1065
							68	48	-		1.50	2.75	2	5	WRGU 1075
							78	58	-		1.63	3.06	2	5	WRGU 1085
14	6.5	3.5X6X3.5	6.0	11	M3	30	25	-	-	5	0.84	1.08	2	4	WRGU 2035
							40	-	-		1.17	1.63	2	4	WRGU 2050
							55	-	-		1.46	2.17	2	5	WRGU 2065
							70	40	-		2.01	3.25	2	5	WRGU 2080
							85	55	-		2.27	3.79	2	5	WRGU 2095
							100	70	-		2.52	4.34	3	6	WRGU 2110
							115	85	-		2.76	4.88	4	6	WRGU 2125
18.5	9	4.5X7.5X5	7.5	14.5	M4	40	35	-	-	10	2.71	3.67	2	5	WRGU 3055
							60	-	-		4.06	6.11	2	5	WRGU 3080
							85	-	-		4.68	7.33	3	6	WRGU 3105
							110	-	-		5.86	9.78	3	6	WRGU 3130
							135	-	85		6.98	12.2	3	6	WRGU 3155
							160	-	110		8.05	14.7	3	7	WRGU 3180
							185	85	135		8.57	15.9	3	7	WRGU 3205

1N ≒ 0.102kgf

WRGU Series

An example of the composition of model name & number

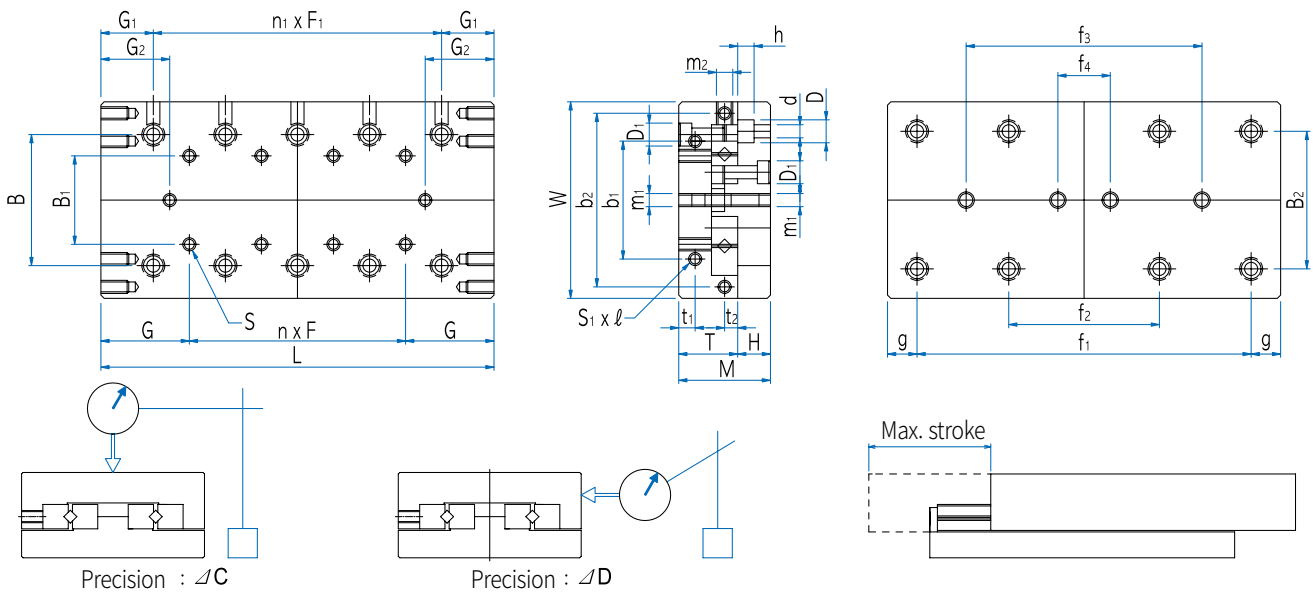


- 1 Model No.
 2 Length of table
 3 No symbol – Standard specification /E-Special processing specification

※ For other sizes and specifications than those in the table of dimensions, please contact us.



Model No.	Main dimensions					Dimensions of the table surface												
	Max. stroke	Width W	Height M ±0.1	Length L	Mass (kg)	Position of table attachment tap				Side attachment tap position								
						B	nXF	G	S	B ₁	nXF ₁	G ₁	G ₂	b ₁	b ₂	t ₁	t ₂	S ₁ X ϕ
WRGU 4085	50	80	35	85	1.5	53	-	42.5	M5	40	1X40	22.5	10.5	55	-	6.5	-	M3X6
WRGU 4125	75			125	2.3		1X40				2X40		18.0					
WRGU 4165	105			165	3.1		2X40				3X40		23.0					
WRGU 4205	135			205	3.8		3X40				4X40		30.5					
WRGU 4245	155			245	4.6		4X40				5X40		38					
WRGU 4285	185			285	5.3		5X40				6X40		43.0					
WRGU 6110	60	100	45	110	3.2	63	-	55	M6	50	1X50	30.0	16.0	60	92	8	15	M4X8
WRGU 6160	95			160	4.6		1X50				2X50		23.5					
WRGU 6210	130			210	6.0		2X50				3X50		31.0					
WRGU 6260	165			260	7.4		3X50				4X50		38.5					
WRGU 6310	200			310	8.7		4X50				5X50		46.0					
WRGU 6360	235			360	10.1		5X50				6X50		53.5					
WRGU 6410	265			410	11.5		6X50				7X50		63.5					
WRGU 9210	130	145	60	210	12.0	96	-	105	M8	85	1X100	55.0	27.0	90	135	11	20	M4X8
WRGU 9310	180			310	17.6		1X100				2X100		52.0					
WRGU 9410	350			410	23.2		2X100				3X100		17.0					
WRGU 9510	450			510	28.8		3X100				4X100		17.0					
WRGU 9610	550			610	34.4		4X100				5X100		17.0					
WRGU 9710	650			710	40.0		5X100				6X1007X		17.0					
WRGU 9810	750			810	45.6		6X100				100		17.0					
WRGU 9910	850			910	51.2		7X100				8X100		17.0					
WRGU 91010	950			1010	56.8		8X100				9X100		17.0					



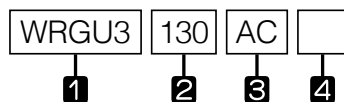
Unit : mm

Dimensions of the side						Dimensions of the base side & position of attachment hole						Basic load rating		Precision mm		Model No.
T	H	d X D X h	D1	m1	m2	B2	f1	f2	f3	f4	g	Dynamic C (kN)	Static Co (kN)	ΔC	ΔD	
24	10.5	5.5X9.5X6	9.5	M4	M4	60	65	-	-	-	10	5.92	8.10	2	5	WRGU 4085
							80	-	-	-	22.5	8.85	13.5	2	6	WRGU 4125
							120	-	-	-	22.5	11.5	18.9	2	7	WRGU 4165
							160	80	-	-	22.5	14.0	24.3	2	7	WRGU 4205
							200	120	-	-	22.5	16.4	29.7	2	7	WRGU 4245
							240	160	-	-	22.5	18.7	35.1	2	7	WRGU 4285
31	13	7X11X7	11	M5	M5	60	90	-	-	-	10	16.4	22.7	2	6	WRGU 6110
							140	-	-	-	10	20.5	30.2	2	6	WRGU 6160
							190	-	90	-	10	28.2	45.4	2	7	WRGU 6210
							240	-	140	-	10	35.4	60.5	2	7	WRGU 6260
							290	-	190	-	10	38.8	68.0	2	8	WRGU 6310
							340	140	240	-	10	45.4	83.2	3	8	WRGU 6360
							390	190	290	-	10	51.7	98.3	4	8	WRGU 6410
43	16	9X14X9	14	M8	M6	90	100	-	-	-	55	52.3	75.8	3	7	WRGU 9210
							200	-	-	-	55	81.1	133	3	7	WRGU 9310
							300	-	100	-	55	81.1	133	4	8	WRGU 9410
							400	-	200	-	55	98.7	171	4	8	WRGU 9510
							500	100	300	-	55	115	209	4	9	WRGU 9610
							600	200	400	-	55	131	246	4	9	WRGU 9710
							700	300	500	100	55	139	265	5	10	WRGU 9810
							800	400	600	200	55	155	303	5	10	WRGU 9910
							900	500	700	300	55	169	341	5	10	WRGU 91010

1N ≒ 0.102kgf

WRGU-AC Series

An example of the composition of model name & number

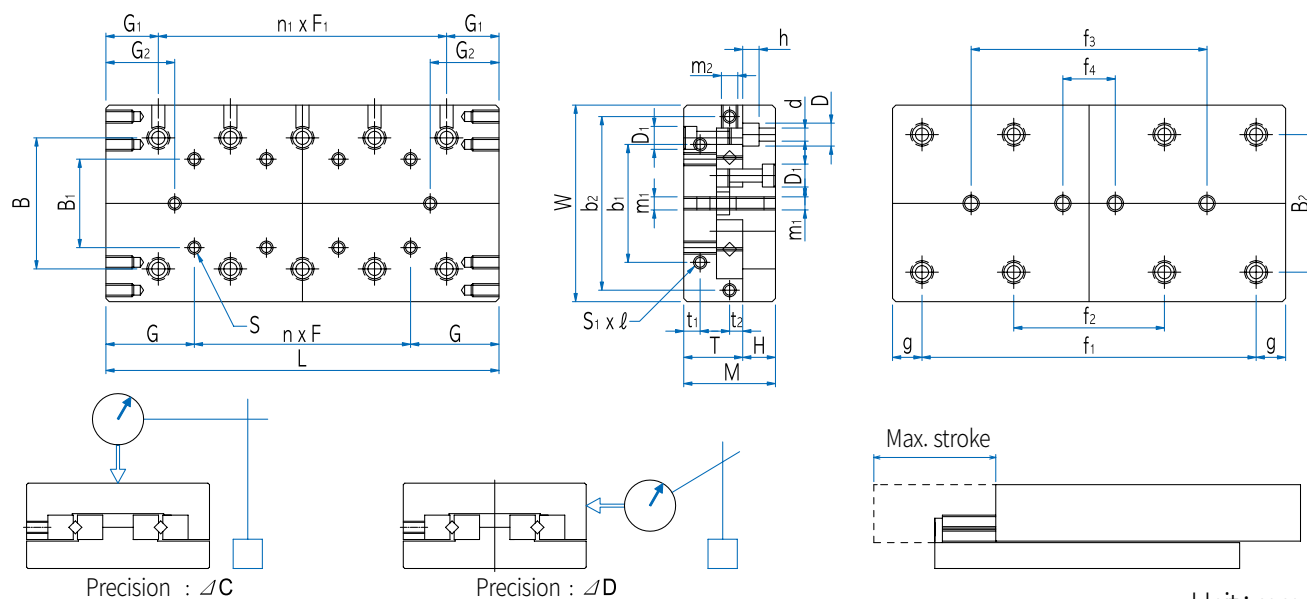


- 1** Model No
2 Length of table
3 AC-Cage anti-creep type
4 No symbol-Standard specification /E-Special processing specification

※ For other sizes and specifications than those in the table of dimensions, please contact us.



Model No.	Main dimensions					Dimensions of the table surface																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	Max. stroke	Width W ±0.1	Height M ±0.1	Length L	Mass (kg)	Position of table attachment tap				Side attachment tap position																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
						B	nXF	G	S	B ₁	n ₁ XF ₁	G ₁	G ₂	b ₁	t ₁	S ₁ X ₁ ∅																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
WRGU 2035 AC	18	40	21	35	0.2	25	-	17.5	M3	15	1X15	10	3	16	3.4	M2X4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
WRGU 2050 AC	30			50	0.26		1X15				2X15		4.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU 2065 AC	40			65	0.34		2X15				3X15		7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU 2080 AC	50			80	0.42		3X15				4X15		9.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU 2095 AC	60			95	0.5		4X15				5X15		12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU 2110 AC	70			110	0.58		5X15				6X15		14.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU 2125 AC	80			125	0.66		6X15				7X15		17																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU3055AC2	24	60	28	55	0.57	39	-	27.5	M4	25	1X25	15	5.5	40	5.5	M3X6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
WRGU3080AC2	55			80	0.8		1X25				2X25		10.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU3105AC2	66			105	1.03		2X25				3X25		15.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU3130AC2	78			130	1.26		3X25				4X25		20.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU3155AC2	90			155	1.49		4X25				5X25		25.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU3180AC2	101			180	1.72		5X25				6X25		30.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU3205AC2	113			205	1.95		6X25				7X25		30.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU 4085 AC	50	80	35	85	1.5	53	-	42.5	M5	40	1X40	22.5	10.5	55	6.5	M3X6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
WRGU 4125 AC	75			125	2.3		1X40				2X40		18.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU 4165 AC	105			165	3.1		2X40				3X40		23.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU 4205 AC	130			205	3.8		3X40				4X40		30.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU 4245 AC	155			245	4.6		4X40				5X40		38.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
WRGU 4285 AC	185						285				5.3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					



Unit : mm

Dimensions of the side						Dimensions of the base side & position of attachment hole					Basic load rating		Precision mm		Model No.
T	H	d X D X h	D1	m1	m2	B2	f1	f2	f3	g	Dynamic C (kN)	Static Co (kN)	ΔC	ΔD	
14	6.4	3.5X6X3.5	6.0	M3	M3	30	25	-	-	5	0.62	0.73	2	4	WRGU 2035 AC
							40	-	-		0.86	1.10	2	4	WRGU 2050 AC
							55	-	-		1.07	1.46	2	5	WRGU 2065 AC
							70	40	-		1.28	1.83	2	5	WRGU 2080 AC
							85	55	-		1.48	2.20	2	5	WRGU 2095 AC
							100	70	-		1.85	2.93	3	6	WRGU 2110 AC
							115	85	-		2.03	3.30	3	6	WRGU 2125 AC
18.5	9	4.5X7.5X5	7.5	M4	M4	40	35	-	-	10	6.53	9.37	2	5	WRGU3055AC2
							60	-	-		8.20	12.50	2	5	WRGU3080AC2
							85	-	90		11.27	18.75	3	6	WRGU3105AC2
							110	-	140		14.12	25.00	3	6	WRGU3130AC2
							135	-	190		16.81	31.25	3	6	WRGU3155AC2
							160	-	240		19.38	37.50	3	7	WRGU3180AC2
							185	85	290		21.86	43.75	3	7	WRGU3205AC2
24	10.5	5.5X9.5X6	9.5	M4	M4	60	65	-	-	10	5.92	8.10	2	5	WRGU 4085 AC
							80	-	-	22.5	8.85	13.5	3	6	WRGU 4125 AC
							120	-	-	22.5	11.5	18.9	3	7	WRGU 4165 AC
							160	80	-	22.5	14.0	24.3	3	7	WRGU 4205 AC
							200	120	-	22.5	16.4	29.7	3	7	WRGU 4245 AC
							240	160	-	22.5	18.7	35.1	3	7	WRGU 4285 AC

1N ≒ 0.102kgf