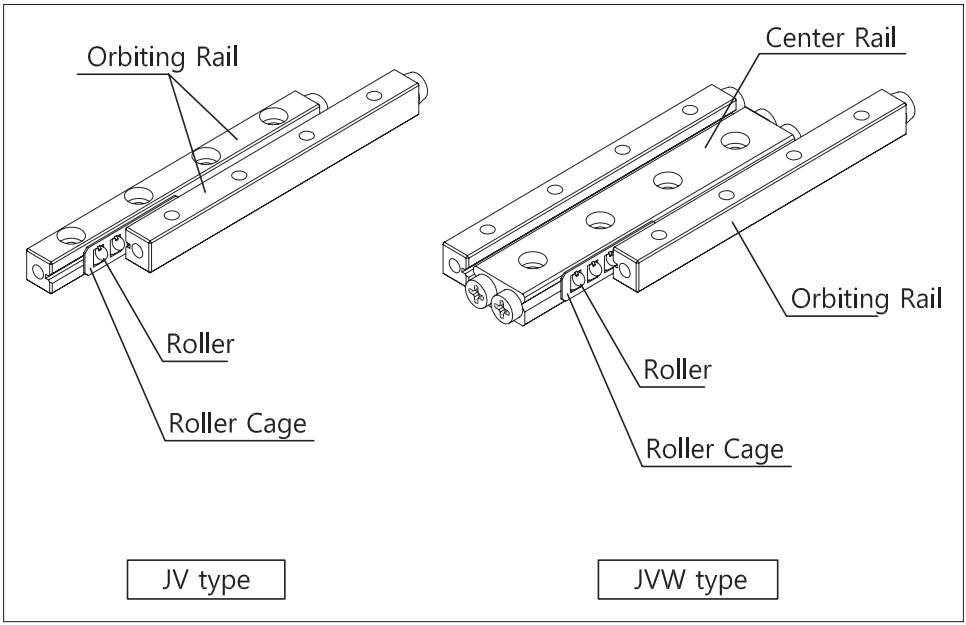
Cross Roller Slide Guide



JV1 / JV2 / JV3 / JV4 / JV6 / JV9 / JVNB6 / JVNB9
JVW1 / JVW2 / JVW3 / JVW4
JC1 / JC2 / JC3 / JC4 / JC6 / JC9

Cross Roller Slide Guide

〈Fig. 1〉 Structure of cross roller guide JV type and JVW type



■ Structure

BSQ cross roller guide JV type is a guide instrument by assembling cage actively between two-patterned orbiting planes after making V-shaped two-surfaces as an orbiting groove. It is a highly rigid and precise linear motion system of limited type since rollers are arranged orthogonally so it may receive load from various directions. there are various kinds to choose from. It is in a wide range of applications in precision equipments such as OA instruments and peripherals, or in slides such as optical meter, optical stage, and handling equipments.

■ Features

Cross roller guide JV type is used by combining roller cage, which is assembled by arranging precision roller orthogonally, with the roller surface of 90 V groove which is manufactured onto its specialized rail. Since double-ranged roller guide is attached horizontally, the load from all directions passing through the axle at a right angle can be received.

■ High rigidity

There is no clearance since applying preload is quite simple. Furthermore, the contact length between the roller and the contact plane is long so that high rigidity can be obtained.

■ Soft motion

BSQ cross roller guide JV type is at an orbiting surface of high precision. Plus, the roller with no skew phenomenon and accurate maintenance for its size is assembled into the cage, so that soft rolling motion with low rolling resistance without stick-slips can be acquired.

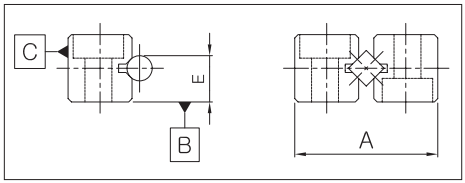
■ Easy to fix

Fixing holes in the orbiting plane are manufactured with counter and tap process. For fixing onto the orbiting plane, thus, there are two methods; the one is to fix it onto tap of machine and installments. The other is to push the bolt from the machine and equipments and fix it. So there's no limitation to the fixing structure. Since orbiting plane has uniform structure of two-patterned orbiting planes in the inside, fixing structure is quite simple. therefore, there is no manufacturing error in fixing part and linear motion of high precision can be obtained.

■ Accuracy size

Precision of a rail specialized for cross roller guide is classified into highly superior group and precision group according to 〈table. 1〉

〈Fig. 2〉

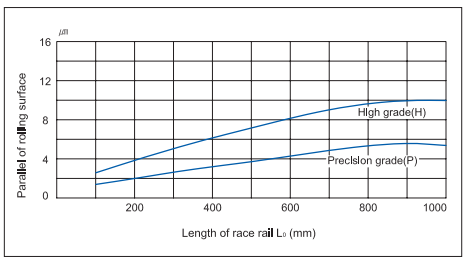


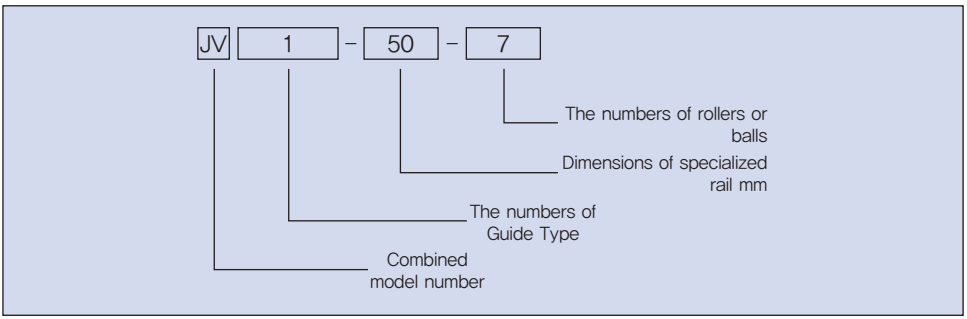
〈Table. 1〉

Grade of precision	Highly superior group	precision group
Symbols / Items	H	P
Parallel of rolling surface to the side of B and C	Refer to 〈Fig. 2〉	
Parallel of rolling surface to the side of B and C	±0.02	±0.01
Pair deviation of height E Note)	0.01	0.005
Permissible deviation in dimensions of width A	0 −0.2	0 −0.1

Note) Pair deviation of height E is applied to four-patterned rail used for the same surface.

〈Fig. 3〉 Length of a race rail and parallel of rolling surface





■ Formation of model number

Cross roller guide is organized as model number as follow. '1 set' in the number mentioned above means combination of four-patterned rail and two-patterned cage.

■ Formation of model number C_0

If excessive load is given to JV type when it is stalled or in motion, there occurs permanent transformation between rolling surface and vibrator. Basic static load capacity (C_0) is the load when the sum of permanent transformation volume of the rolling surface and vibrator is 0.0001 times more the diameter of the latter (Refer to Load capacity of each direction in B-11). If the sum of permanent transformation volume breaks 0.0001 times of the diameter, its motion will be adversely affected. Static safety factor (fs) to the load should be considered in order to prevent it. (Refer to static safety factor B-11)

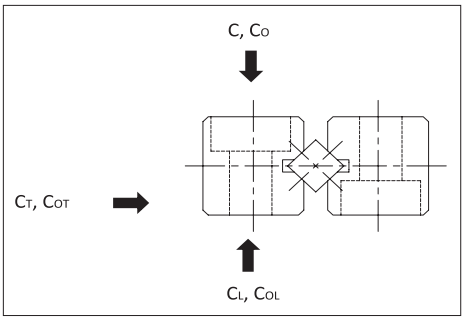
■ Basic dynamic load capacity

When each of JV types in the first group is in motion, the load that does not transform its size at the direction where 90% of the first group's rated life span reaches L=100km is called basic dynamic load capacity C, which can be used for calculating life span. (refer to B-12 rated life span L)

■ Load capacity in each direction

When each of JV types in the first group is in motion, the load that does not transform its size at the direction where 90% of the first group's rated life span reaches L=100km is called basic dynamic load capacity C, which can be used for calculating life span. (refer to B-12 rated life span L)

〈Fig. 4〉



$$C = C_L = \left(\frac{Z}{2}\right)^{\frac{3}{4}} \times C_Z,\ C_T = 2C$$

$$C_O = C_{OL} = \left(\frac{Z}{2}\right) \times C_{OZ},\ C_{OT} = 2C_O$$

Remove numbers coming after the decimal point for $\frac{Z}{2}$

C_Z : Basic dynamic load capacity in the dimension table (kN)
C_{OZ} : Basic static load capacity in the dimension table (kN)
Z : The number of vibrator under use
(The number within valid load)

■ Static safety factor fs

Sudden external force can be created when JV type stops or is in motion due to vibration, impact or maneuvered stall. For this, static safety factor to the applies load needs to be taken into account.

$$fs = \frac{C_o}{P_c}$$

f_S : Static Safety factor C_O : Basic static load capacity
P_C : Calculated load

Machine for use	Load condition	Lower limit of fs
Standard industrial machine	With vibration or impact Without vibration or impact	1.0~1.3 2.0~3.0
Machine tools	With vibration or impact Without vibration or impact	1.0~1.5 2.5~7.0

■ Rated life span L

The life span of cross roller guide can be calculated with the following formula after basic dynamic load capacity is calculated.

$$L = \left(\frac{f_T}{f_W} \bullet \frac{C}{P_C}\right)^{\frac{10}{3}} \times 100$$

L : Rated life span (km)
(It's the total distance where 90% of the first group can reach without flaking when each of the same JV type in the first group is put in motion under the same condition.)
C : Basic dynamic load capacity (kN)
P_C : Calculated load (kN)
f_T : Temperature factor 〈Refer to picture 5〉
f_W : Load factor 〈Refer to table 3〉

When the length and lap number of stroke is uniform, service life can be figured by using the following formula after rated life span (L) is calculated from the formula mentioned above.

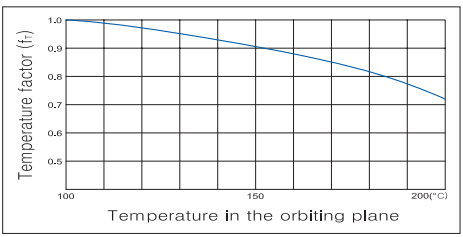
$$L_h = \frac{L \times 10^6}{2 \times \ell_s \times n_1 \times 60}$$

L_h : Life time (h)
ℓ_s : Length of stroke (mm)
n_1 : Lap number per minute (min^{-1})

■ f_T : Temperature factor

When the environment temperature where the direct-acting system is used is over 100℃, temperature factor below should be multiplied considering the possible adverse effect caused by high temperature.

〈Fig. 4〉



Note) In case that environment temperature is over 100℃, contact BSQ.

■ f_W : Load factor

Shuffling machines is likely to be affected by vibration or impact during drive. while driving high-speed, particularly, it is a lot more difficult to calculate each value precisely. Therefore, if the load applied to the direct-acting system cannot be calculated or the impact of speed vibration is large, the load factor in the table below should be divided into the basic load capacity (c) and (Co).

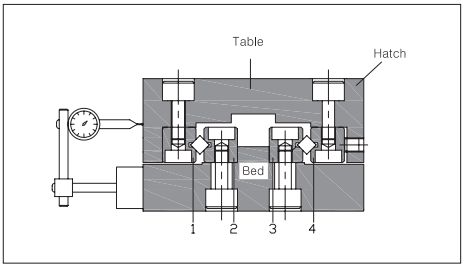
〈Table. 3〉

Vibration • Impact	Velocity (V)	fW
Meager	For meager speed $V \leqq 0.25$ m/s	1.0~1.2
Small	For low speed $0.25 < V \leqq 1.0$ m/s	1.2~1.5
Average	For average speed $1.0 < V \leqq 2.0$ m/s	1.5~2.0
Large	For high speed $V > 2.0$ m/s	2.0~3.5

■ Formation of model number

When using clearance adjust bolt

〈Fig. 6〉 Fixing cross roller guide



① Stick rail 2 and 3 to the base and rail 1 to the fixing plane precisely, and then firmly fasten the rail fixing bolt.

② Fasten rail 4 to the table temporarily.
Note) A fixing bolt for rails should be designed to be able to be fastened after being fixed.

③ Locate the base and tabled according to the 〈Fig. 6〉 and then, insert the roller cage from the end. In case the cage failed to be inserted due to no clearance, try installing again after moving the rail 4 to the side to adjust bolt.

④ Set the dial gauge according to the 〈Fig. 6〉. Regulate all adjust bolts uniformly by pushing the table gently on both sides until no vibration can be felt.

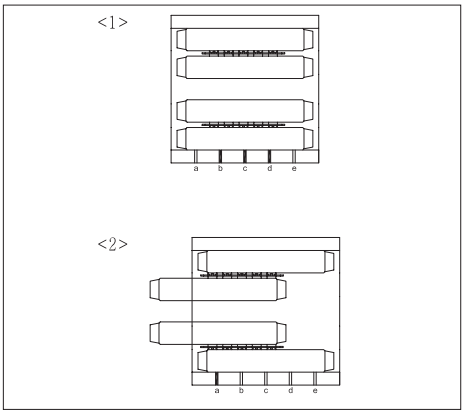
⑤ Fix the stopper at the end of the rail.

⑥ Rectify the location of the cage in order to obtain some scale of strokes by moving the table.

⑦ Locate the roller cage in the middle of a rail according to the 〈Fig. 7〉 (1). Fasten the adjust bolts b, c, and d within the range of a roller uniformly by using a torque wrench until the dial gauge is the preload of the roller cage in the first row.

⑧ Follow the procedure in the aforementioned and fasten the rest of the adjust bolts a and e by moving the table according to the 〈Fig. 7〉 (2).
Note) When assembling several groups, calculate the fastening torque or slide frictional resistance force for the first group of adjust bolt. Then, from the second group, almost the same preload can be applied when assembled with same fastening torque or slide frictional resistance force of the first group.

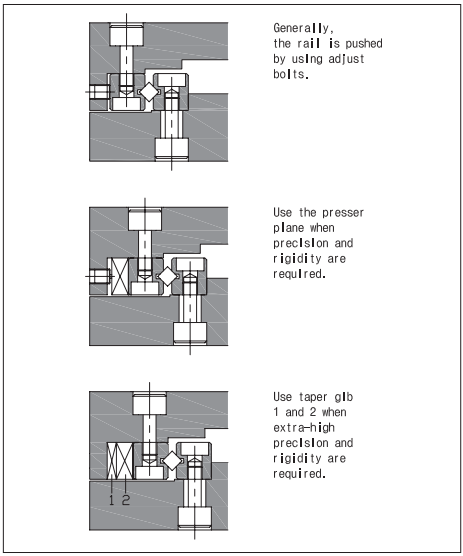
〈Fig. 7〉 Fastening order of adjust bolts



■ Examples of clearance adjustment

Please design the adjust bolts in away to press the same board with roller.

〈Fig. 8〉 Examples of clearance adjustment



■ Preload of cross roller guide

Excess preload is the cause of errors such as denting or shortened service life. When fastening the adjust bolts, checking displacement value of the roller's fixing plane is needed. Permissible preload of the roller cage in the first row is displayed in the dimension table.

■ Precision of fixing plane

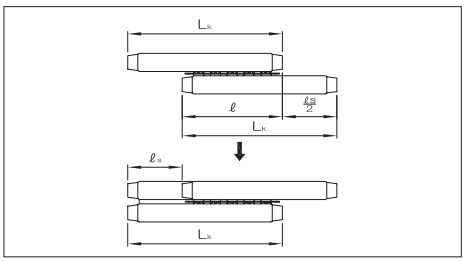
In order to obtain highly accurate driving precision, precision tolerance such as parallel or straightness of the rail fixing plane is required. The parallel and sectional level of the rail fixing plane is recommended to map with more than the equivalent of the parallel of a rail based on the grinding work (B–10 〈Fig .3〉). Likewise, the rail should be fixed precisely in the fixing plane.

■ Cautions when using

■ Length of a rail

Roller cage moves to the same direction as a half of table movement. Given that the length of a cage ℓ and that of stroke ℓs, the length of a rail (Lk) should be in order for a cage not to be overhung the orbiting plane.

$$L_k \geqq \ell + \frac{\ell_s}{2}$$



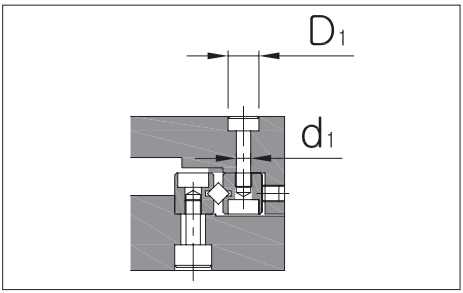
■ About stopper

Stopper is attached to the sectional aide of a rail to prevent the cage from omitting. But the cage's frequent collision with the stopper, for example, due to over strokes creates the stopper's wear and loosening of its fixed screws. It certainly leads to the falling of a cage. Therefore, separate stopper occurrence of over strokes as well as the collision of a cage can be prevented.

■ Component parts

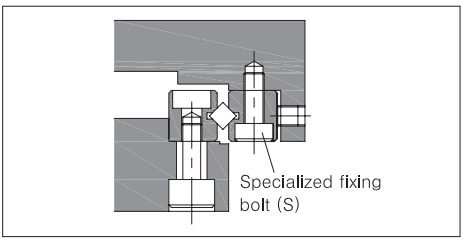
Fixing rails where clearance adjustment is needed should be fixed by using screw holes manufactured in a rail according to 〈Fig. 9〉. In this case, bolt holes (d1), and (D1) needs to be manufactured in proportion to adjusted quantity.

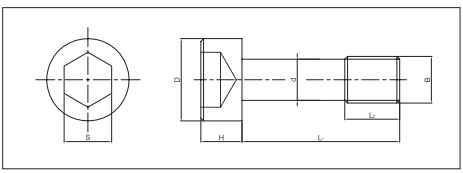
〈Fig. 9〉



If specific structure calls for fixing like the 〈Fig. 10〉, fixing bolt (S) of this rail should have its own fixing bolt just like the one displayed in the 〈Table. 4〉.

〈Fig. 10〉





(Unit : mm)

Model No.	B	d	D	H	L1	L2	S	Supported rail
MBT 3	M3×0.5	2.6	5	3	12	5	2.5	MVR 3
MBT 4	M4×0.7	3.5	5.8	4	15	7	3	MVR 4
MBT 6	M5×0.8	4.4	8	5	20	8	4	MVR 6
MBT 9	M6	5.3	8.5	6	30	11	5	MVR 9

JV 1

크로스 롤러 슬라이드 가이드
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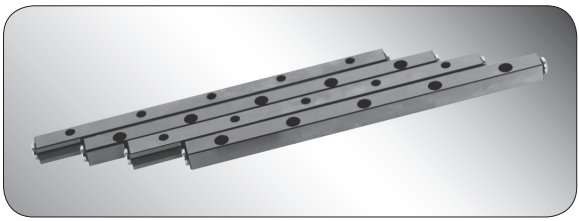
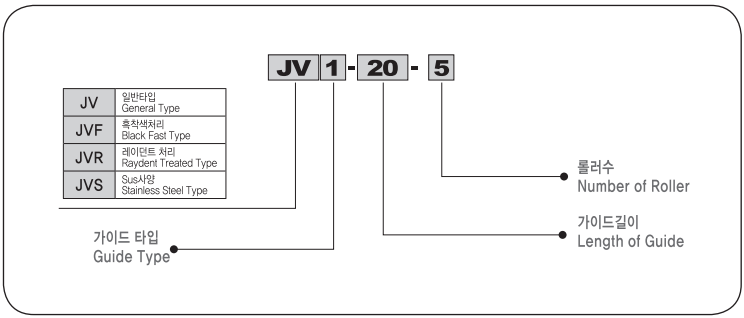
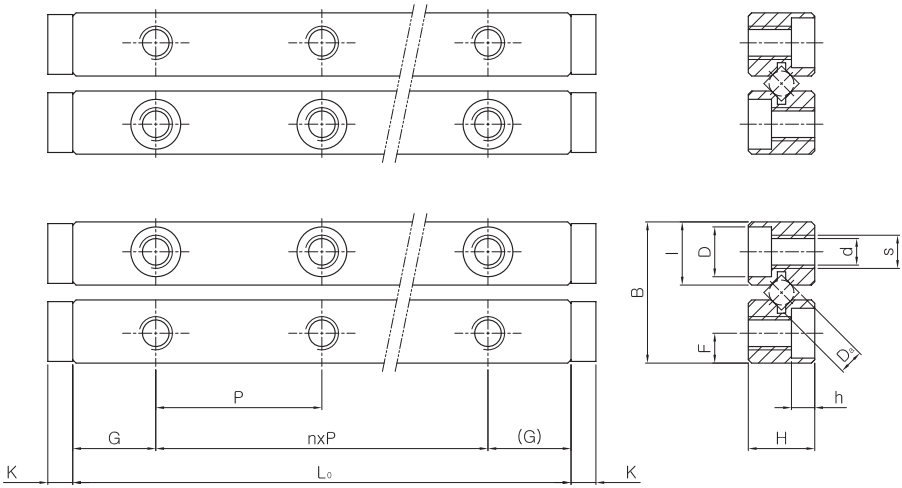




Specification / Model	스토로크 Stroke	주 요 치 수							
		조합지수	Combination Dimension		장 착 치 수				
		B	H	Lo	n x P	G	I	F	S
JV 1 – 20 – 5	12	8.5	4	20	1 x 10	5	3.8	1.8	M2 x 0.4
JV 1 – 30 – 7	22			30	2 x 10				
JV 1 – 40 – 10	27			40	3 x 10				
JV 1 – 50 – 13	32			50	4 x 10				
JV 1 – 60 – 16	37			60	5 x 10				
JV 1 – 70 – 19	42			70	6 x 10				
JV 1 – 80 – 21	52			80	7 x 10				



(Unit : mm)

Main Dimension						허용예압량 Permissible Preload δ μm	기본정격하중(롤러 1개당) Basic Proper Load (Per 1 roller)		질량(레일) Weight of Rail Kg/m
Assembling Dimension				케이지길이 Length of Cage	롤러수 The number of roller		Cz KN	Coz KN	
d	D	h	K	C	Z				
1.65	3	1.4	1.5	14	5	−2	0.152	0.153	0.11
				19	7				
				26.5	10				
				34	13				
				41.5	16				
				49	19				
				54	21				

1kN = 102kgf

JV 2

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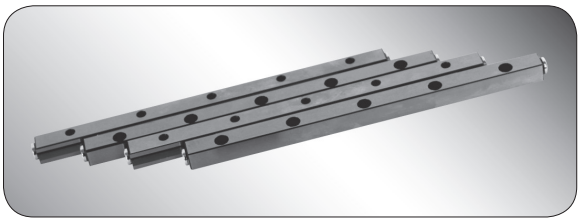
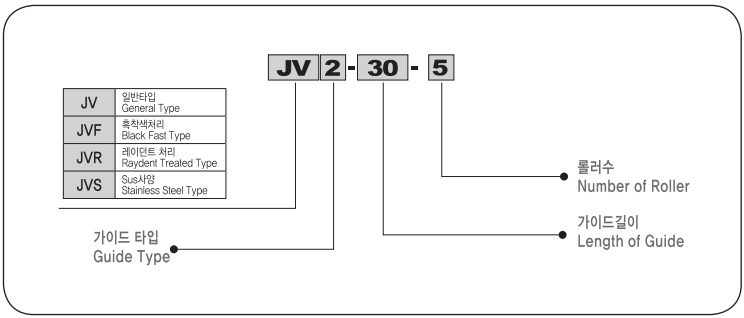
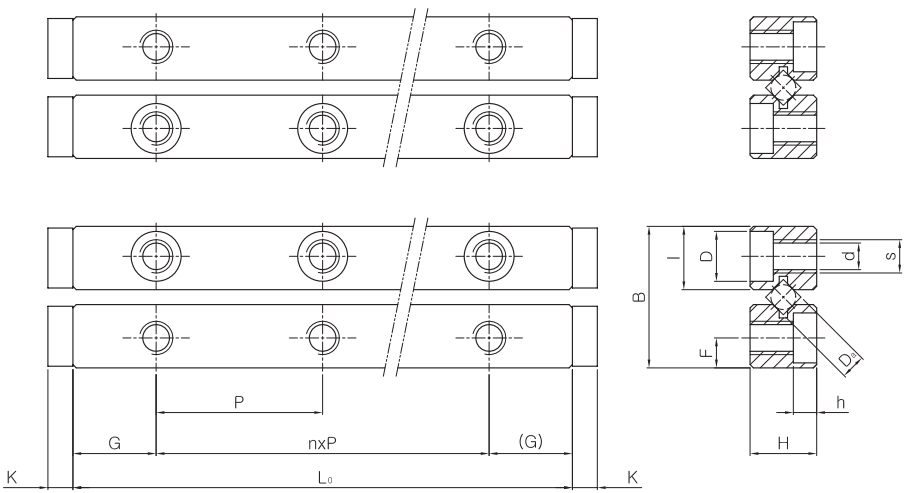




Specification / Model	스토로크 Stroke	주 요 치 수							
		조합지수 Combination Dimension			장 착 치 수				
		B	H	Lo	n x P	G	I	F	S
JV 2 – 30 – 5	18	12	6	30	1 x 15	7.5	5.6	2.5	M3 x 0.5
JV 2 – 45 – 8	24			45	2 x 15				
JV 2 – 60 – 11	30			60	3 x 15				
JV 2 – 75 – 13	44			75	4 x 15				
JV 2 – 90 – 16	50			90	5 x 15				
JV 2 – 105 – 18	64			105	6 x 15				
JV 2 – 120 – 21	70			120	7 x 15				
JV 2 – 135 – 23	84			135	8 x 15				
JV 2 – 150 – 26	90			150	9 x 15				
JV 2 – 165 – 29	96			165	10 x 15				
JV 2 – 180 – 32	102			180	11 x 15				



(Unit : mm)

Main Dimension						허용예압량 Permissible Preload δ μm	기본정격하중(롤러 1개당) Basic Proper Load (Per 1 roller)		질량(레일) Weight of Rail Kg/m
Assembling Dimension				케이지길이 Length of Cage	롤러수 The number of roller		Cz KN	Coz KN	
d	D	h	K	C	Z				
2.55	4.4	2	2	21	5	−3	0.276	0.271	0.23
				33	8				
				45	11				
				53	13				
				65	16				
				73	18				
				85	21				
				93	23				
				105	26				
				117	29				
				129	32				

1kN = 102kgf

JV 3

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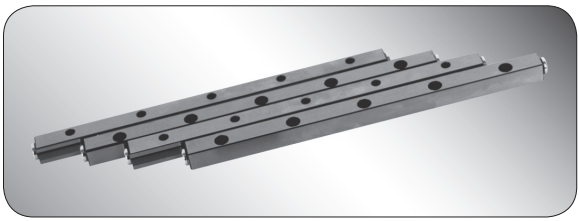
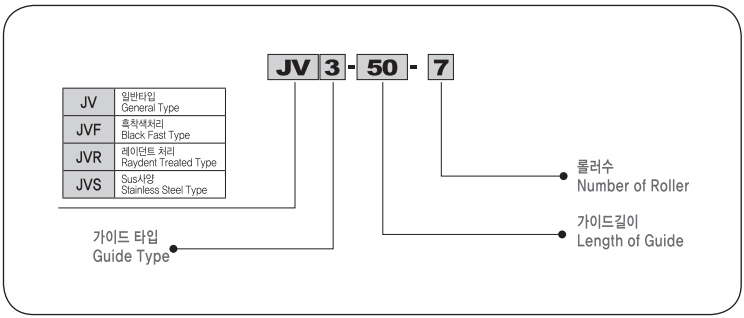
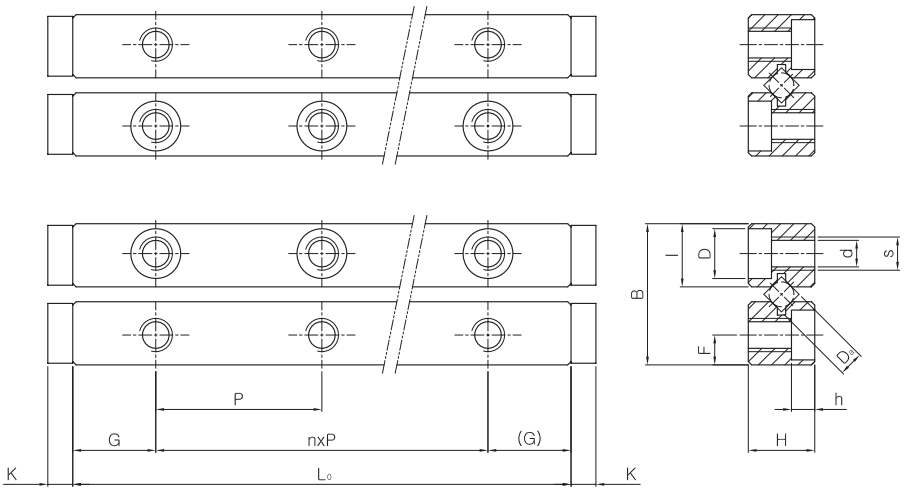
Crossed – Roller Slide Guide





Specification / Model	스토로크 Stroke	주 요 치 수							
		조합지수 Combination Dimension			장 착 치 수				
		B	H	Lo	n x P	G	I	F	S
JV 3 – 50 – 7	28	18	8	50	1 x 25	12.5	8.3	3.5	M4 x 0.7
JV 3 – 75 – 10	48			75	2 x 25				
JV 3 – 100 – 14	58			100	3 x 25				
JV 3 – 125 – 17	78			125	4 x 25				
JV 3 – 150 – 21	88			150	5 x 25				
JV 3 – 175 – 24	108			175	6 x 25				
JV 3 – 200 – 28	118			200	7 x 25				
JV 3 – 225 – 31	138			225	8 x 25				
JV 3 – 250 – 35	148			250	9 x 25				
JV 3 – 275 – 38	168			275	10 x 25				
JV 3 – 300 – 42	178			300	11 x 25				



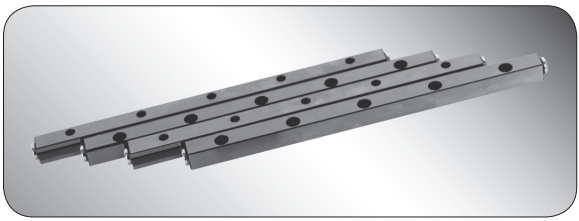
(Unit : mm)

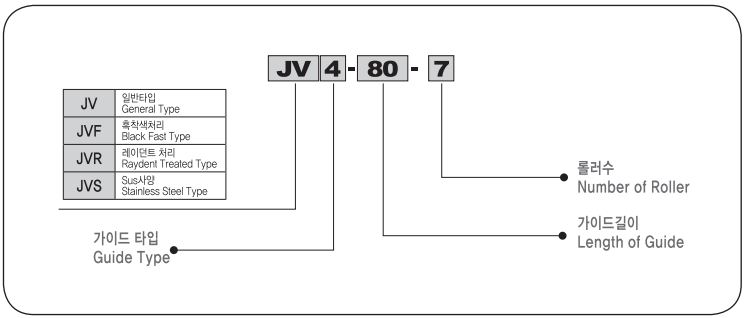
Main Dimension						허용예압량 Permissible Preload δ μm	기본정격하중(롤러 1개당) Basic Proper Load (Per 1 roller)		질량(레일) Weight of Rail Kg/m
Assembling Dimension				케이지길이 Length of Cage	롤러수 The number of roller		Cz KN	Coz KN	
d	D	h	K	C	Z				
3.3	6	3.1	2.5	36	7	−4	0.639	0.611	0.45
				51	10				
				71	14				
				86	17				
				106	21				
				121	24				
				141	28				
				156	31				
				176	35				
				191	38				
				211	42				

1kN = 102kgf

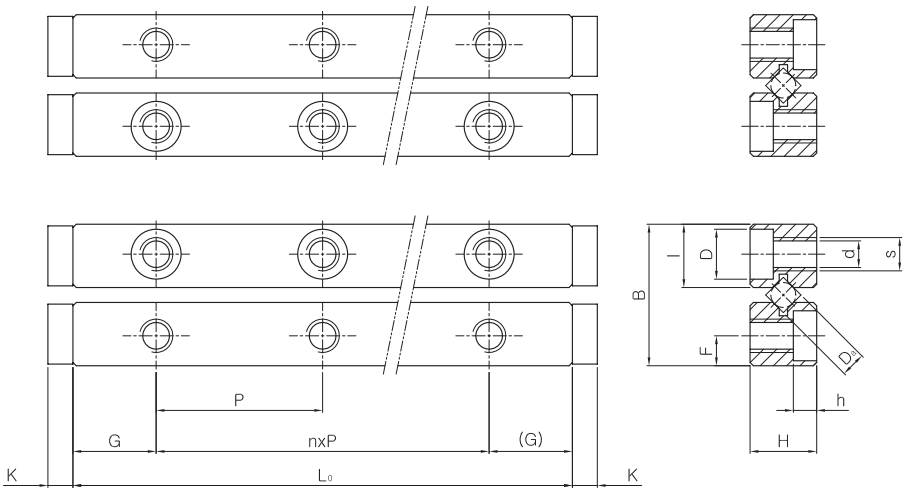
JV 4

크로스 롤러 슬라이드 가이드
Crossed – Roller Slide Guide





Specification / Model	스토로크 Stroke	주 요 치 수							
		조합지수 Combination Dimension			장 착 치 수				
		B	H	Lo	n x P	G	I	F	S
JV 4 – 80 – 7	58	22	11	80	1 x 40	20	10.2	4.5	M5 x 0.8
JV 4 – 120 – 11	82			120	2 x 40				
JV 4 – 160 – 15	106			160	3 x 40				
JV 4 – 200 – 19	130			200	4 x 40				
JV 4 – 240 – 23	154			240	5 x 40				
JV 4 – 280 – 27	178			280	6 x 40				
JV 4 – 320 – 31	202			320	7 x 40				
JV 4 – 360 – 35	226			360	8 x 40				
JV 4 – 400 – 39	250			400	9 x 40				
JV 4 – 440 – 43	274			440	10 x 40				
JV 4 – 480 – 47	298			480	11 x 40				



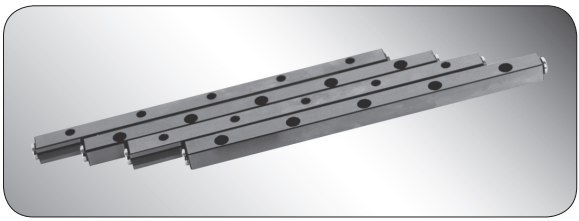
(Unit : mm)

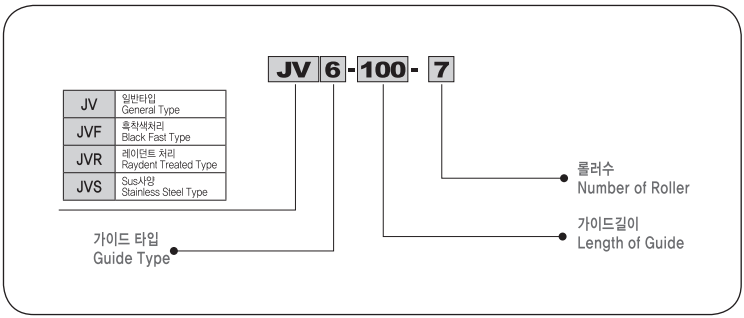
Main Dimension						허용예압량 Permissible Preload δ μm	기본정격하중(롤러 1개당) Basic Proper Load (Per 1 roller)		질량(레일) Weight of Rail Kg/m
Assembling Dimension				케이지길이 Length of Cage	롤러수 The number of roller		Cz KN	Coz KN	
d	D	h	K	C	ZZ				
4.3	8	4.2	2.5	51	7	−5	1.38	1.35	0.8
				79	11				
				107	15				
				135	19				
				163	23				
				191	27				
				219	31				
				247	35				
				275	39				
				303	43				
				331	47				

1kN = 102kgf

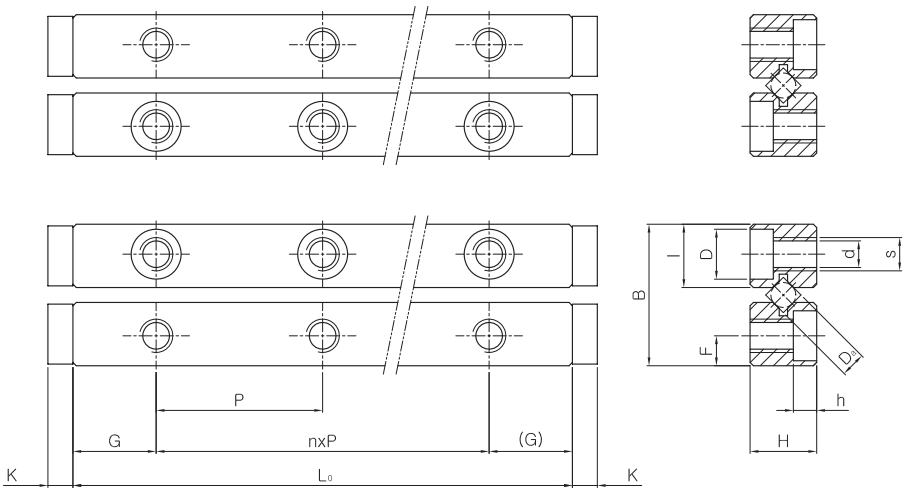
JV 6

크로스 롤러 슬라이드 가이드
Crossed – Roller Slide Guide





Specification / Model	스토로크 Stroke	주 요 치 수							
		조합지수 Combination Dimension			장 착 치 수				
		B	H	Lo	n x P	G	I	F	S
JV 6 – 100 – 7	56	30	15	100	1 x 50	25	14.4	6	M6 x 1.0
JV 6 – 150 – 10	96			150	2 x 50				
JV 6 – 200 – 13	136			200	3 x 50				
JV 6 – 250 – 17	156			250	4 x 50				
JV 6 – 300 – 20	196			300	5 x 50				
JV 6 – 350 – 24	216			350	6 x 50				
JV 6 – 400 – 27	256			400	7 x 50				
JV 6 – 450 – 31	276			450	8 x 50				
JV 6 – 500 – 34	316			500	9 x 50				
JV 6 – 550 – 38	336			550	10 x 50				
JV 6 – 600 – 41	376			600	11 x 50				



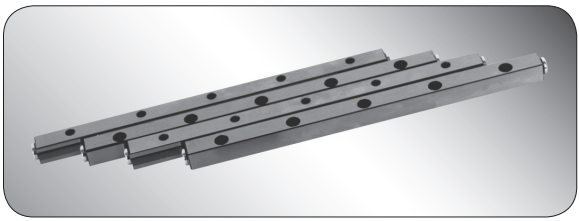
(Unit : mm)

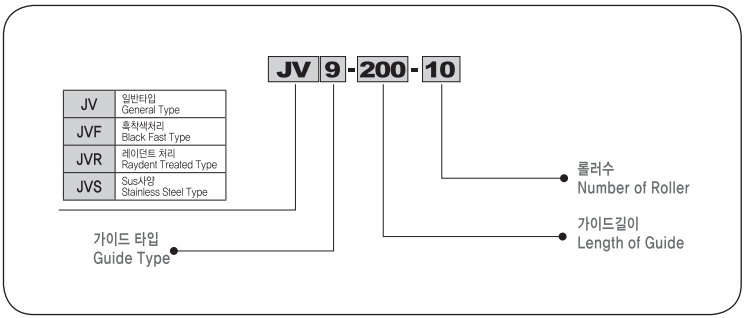
Main Dimension						허용예압량 Permissible Preload δ μm	기본정격하중(롤러 1개당) Basic Proper Load (Per 1 roller)		질량(레일) Weight of Rail Kg/m
Assembling Dimension				케이지길이 Length of Cage	롤러수 The number of roller		Cz KN	Coz KN	
d	D	h	K	C	Z				
5.2	9.5	5.2	3	72	7	−7	3.78	3.78	1.5
				102	10				
				132	13				
				172	17				
				202	20				
				242	24				
				272	27				
				312	31				
				342	34				
				382	38				
				412	41				

1kN = 102kgf

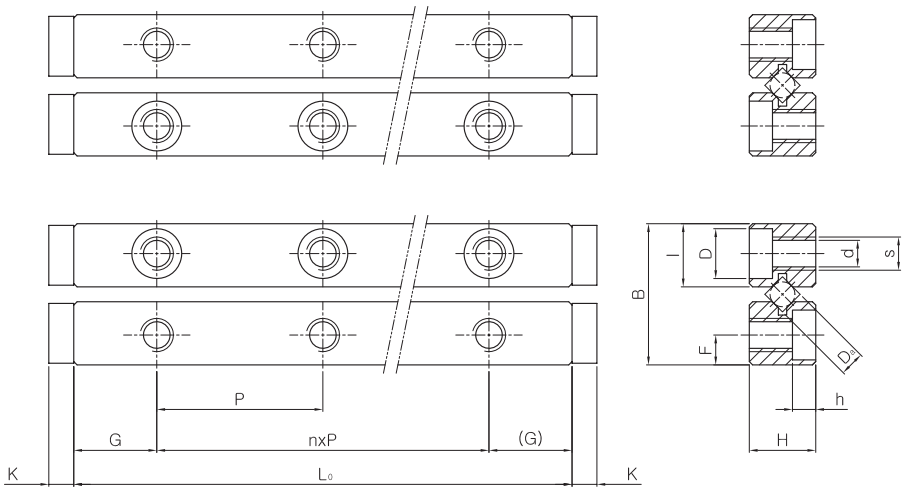
JV 9

크로스 롤러 슬라이드 가이드
Crossed – Roller Slide Guide





Specification / Model	스토로크 Stroke	주 요 치 수							
		조합지수 Combination Dimension			장 착 치 수				
		B	H	Lo	n x P	G	I	F	S
JV 9 – 200 – 10	118	40	20	200	1 x 100	50	19.2	8	M8 x 1.25
JV 9 – 300 – 15	178			300	2 x 100				
JV 9 – 400 – 20	238			400	3 x 100				
JV 9 – 500 – 25	298			500	4 x 100				
JV 9 – 600 – 30	358			600	5 x 100				
JV 9 – 700 – 35	418			700	6 x 100				
JV 9 – 800 – 40	478			800	7 x 100				
JV 9 – 900 – 45	538			900	8 x 100				
JV 9 – 1000 – 50	598			1000	9 x 100				
JV 9 – 1100 – 55	658			1100	10 x 100				
JV 9 – 1200 – 60	718			1200	11 x 100				



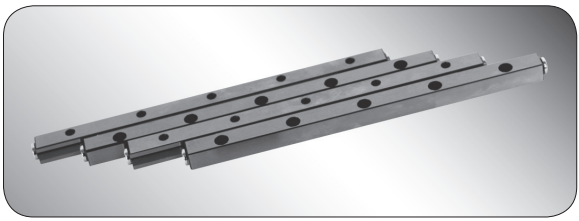
(Unit : mm)

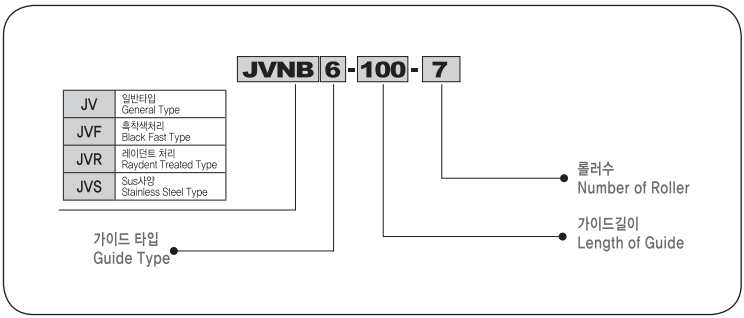
Main Dimension						허용예압량 Permissible Preload δ μm	기본정격하중(롤러 1개당) Basic Proper Load (Per 1 roller)		질량(레일) Weight of Rail Kg/m
Assembling Dimension				케이지길이 Length of Cage	롤러수 The number of roller		Cz KN	Coz KN	
d	D	h	K	C	Z				
6.8	10.5	6.2	3	141	10	−10	9.53	9.48	3.2
				211	15				
				281	20				
				351	25				
				421	30				
				491	35				
				561	40				
				631	45				
				701	50				
				771	55				
				841	60				

1kN = 102kgf

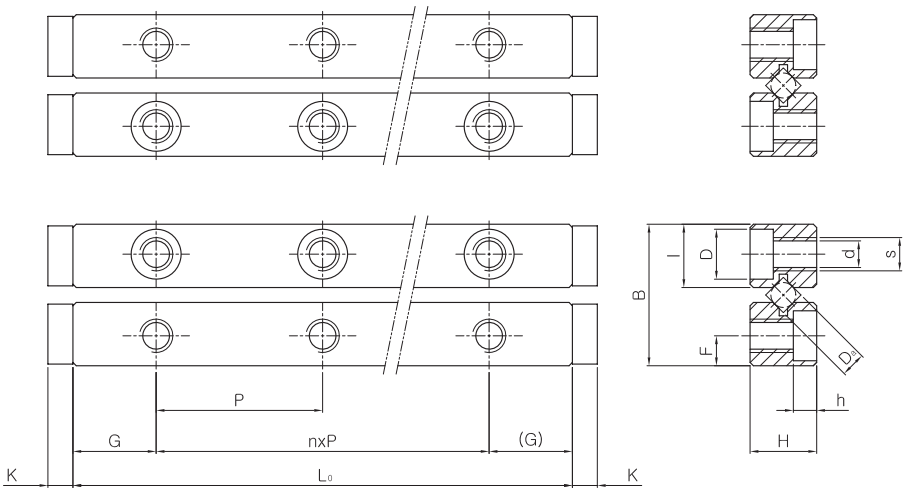
JVNB 6

크로스 롤러 슬라이드 가이드
Crossed – Roller Slide Guide





Specification / Model	스토로크 Stroke	주 요 치 수							
		조합지수 Combination Dimension			장 착 치 수				
		B	H	Lo	n x P	G	I	F	S
JVNB 6 – 100 – 7	56	31	15	100	1 x 50	25	14.2	6	M6 x 1.0
JVNB 6 – 150 – 10	96			150	2 x 50				
JVNB 6 – 200 – 13	136			200	3 x 50				
JVNB 6 – 250 – 17	156			250	4 x 50				
JVNB 6 – 300 – 20	196			300	5 x 50				
JVNB 6 – 350 – 24	216			350	6 x 50				
JVNB 6 – 400 – 27	256			400	7 x 50				
JVNB 6 – 450 – 31	276			450	8 x 50				
JVNB 6 – 500 – 34	316			500	9 x 50				
JVNB 6 – 550 – 38	336			550	10 x 50				
JVNB 6 – 600 – 41	376			600	11 x 50				



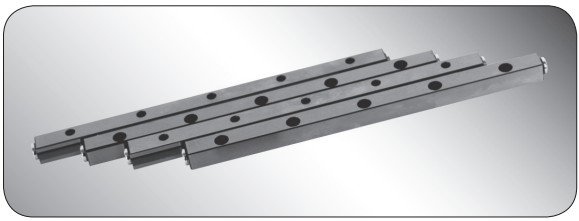
(Unit : mm)

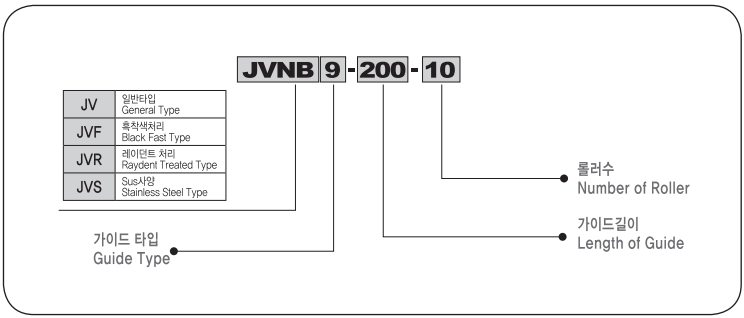
Main Dimension						허용예압량 Permissible Preload δ μm	기본정격하중(롤러 1개당) Basic Proper Load (Per 1 roller)		질량(레일) Weight of Rail Kg/m
Assembling Dimension				케이지길이 Length of Cage	롤러수 The number of roller		Cz KN	Coz KN	
d	D	h	K	C	Z				
5.2	9.5	5.2	3	72	7	−7	3.78	3.78	1.5
				102	10				
				132	13				
				172	17				
				202	20				
				242	24				
				272	27				
				312	31				
				342	34				
				382	38				
				412	41				

1kN = 102kgf

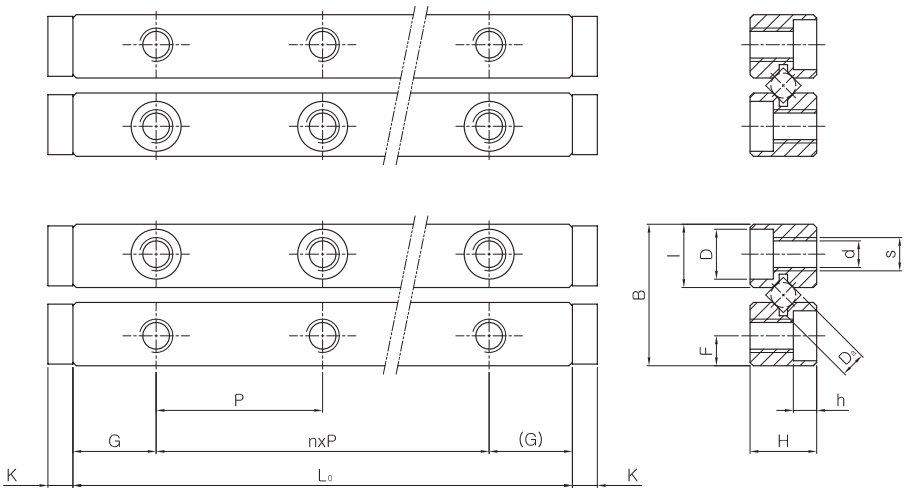
JVNB 9

크로스 롤러 슬라이드 가이드
Crossed – Roller Slide Guide





Specification / Model	스토로크 Stroke	주 요 치 수							
		조합지수 Combination Dimension			장 착 치 수				
		B	H	Lo	n x P	G	I	F	S
JVNB 9 – 200 – 10	118	44	22	200	1 x 100	50	20.2	9	M8 x 1.25
JVNB 9 – 300 – 15	178			300	2 x 100				
JVNB 9 – 400 – 20	238			400	3 x 100				
JVNB 9 – 500 – 25	298			500	4 x 100				
JVNB 9 – 600 – 30	358			600	5 x 100				
JVNB 9 – 700 – 35	418			700	6 x 100				
JVNB 9 – 800 – 40	478			800	7 x 100				
JVNB 9 – 900 – 45	538			900	8 x 100				
JVNB 9 – 1000 – 50	598			1000	9 x 100				



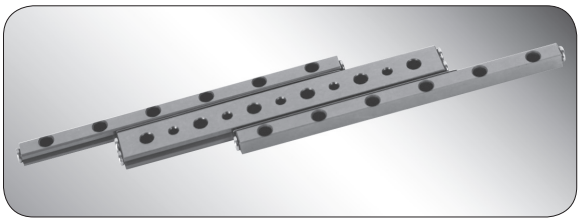
(Unit : mm)

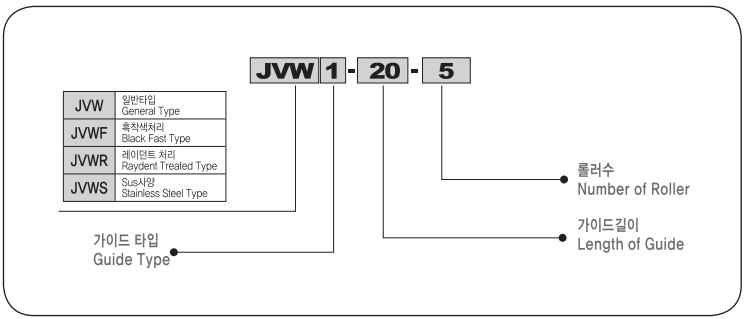
Main Dimension						허용예압량 Permissible Preload δ μm	기본정격하중(롤러 1개당) Basic Proper Load (Per 1 roller)		질량(레일) Weight of Rail Kg/m
Assembling Dimension				케이지길이 Length of Cage	롤러수 The number of roller		Cz KN	Coz KN	
d	D	h	K	C	Z				
6.8	10.5	6.2	3	141	10	−10	9.53	9.48	3.2
				211	15				
				281	20				
				351	25				
				421	30				
				491	35				
				561	40				
				631	45				
				701	50				

1kN = 102kgf

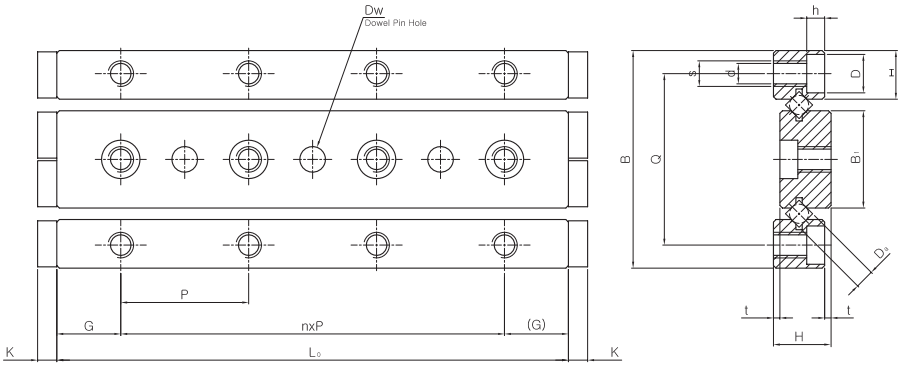
JVW 1

와이드 타입, 크로스 롤러 슬라이드 가이드
Wide Type, Crossed – Roller Slide Guide





Specification / Model	스토로크 Stroke	Da	롤러수 The number of roller Z	주 요 치 수						
				Lo	H	t	B	B1	l	Q
JVW 1 – 20 – 5	12	1.5	5	20	4.5	0.5	17	7.6	3.8	13.4
JVW 1 – 30 – 7	22		7	30						
JVW 1 – 40 – 10	27		10	40						
JVW 1 – 50 – 13	32		13	50						
JVW 1 – 60 – 16	37		16	60						
JVW 1 – 70 – 19	42		19	70						
JVW 1 – 80 – 21	52		21	80						



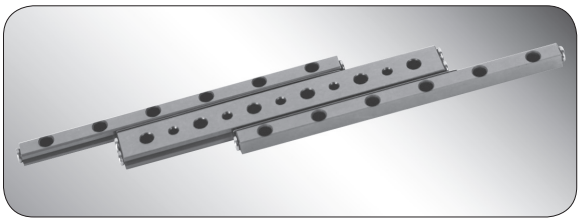
(Unit : mm)

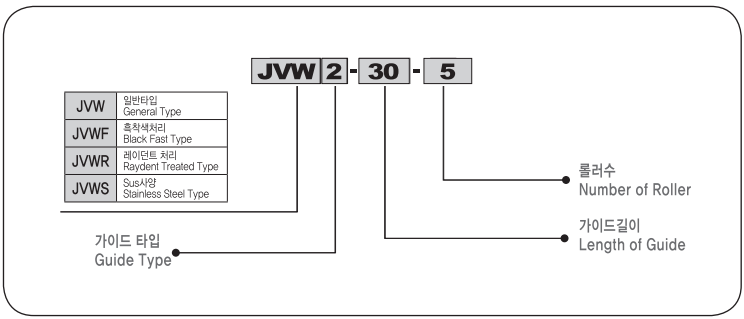
Main Dimension								기본정격하중 Basic Proper Load		질량(레일) Weight of Rail
n x P	G	S	d	D	h	K	Dw	Cz KN	Coz KN	Kg/m
1 x 10	5	M2 x 0.4	1.65	3	1.4	1.5	2 + 0.020	34	31	0.46
2 x 10								46	47	
3 x 10								68	78	
4 x 10								78	94	
5 x 10								96	125	
6 x 10								105	140	
7 x 10								114	156	

1kN = 102kgf

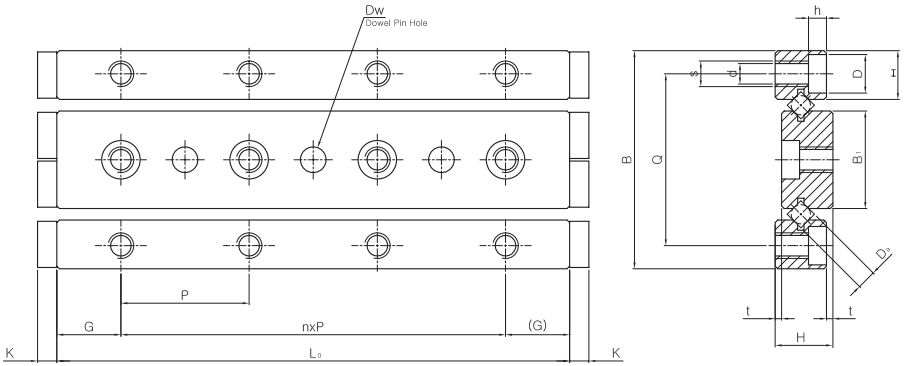
JVW 2

와이드 타입, 크로스 롤러 슬라이드 가이드
Wide Type, Crossed – Roller Slide Guide





Specification / Model	스토로크 Stroke	Da	롤러수 The number of roller Z	주 요 치 수 Lo	H	t	B	B1	l	Q
JVW 2 – 30 – 5	18	2	5	30	6.5	0.5	24	11	5.5	19
JVW 2 – 45 – 8	24		8	45						
JVW 2 – 60 – 11	30		11	60						
JVW 2 – 75 – 13	44		13	75						
JVW 2 – 90 – 16	50		16	90						
JVW 2 – 105 – 18	64		18	105						
JVW 2 – 120 – 21	70		21	120						



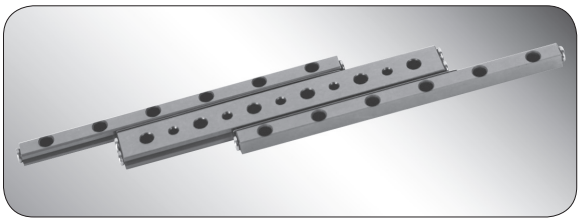
(Unit : mm)

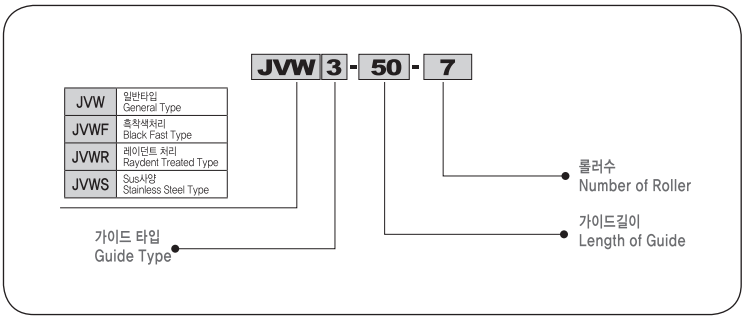
Main Dimension								기본정격하중 Basic Proper Load		질량(레일) Weight of Rail
n x P	G	S	d	D	h	K	Dw	Cz KN	Coz KN	Kg/m
1 x 15	7.5	M3 x 0.5	2.55	4.4	2	2	3 + 0.020	59	59	0.98
2 x 15								100	118	
3 x 15								118	147	
4 x 15								135	176	
5 x 15								168	235	
6 x 15								184	265	
7 x 15								199	294	

1kN = 102kgf

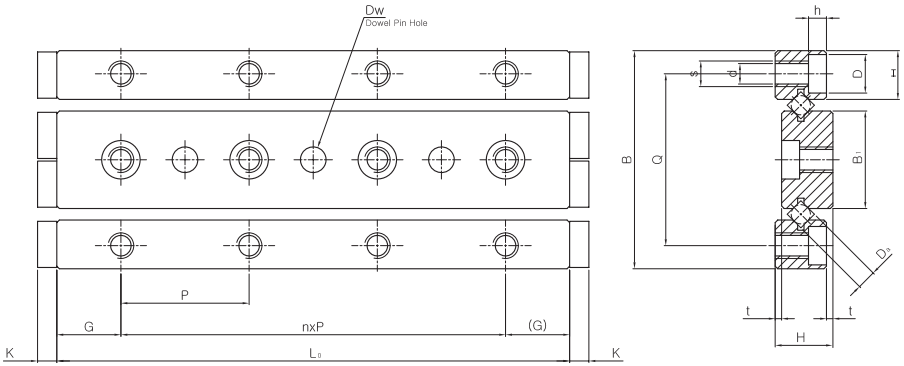
JVW 3

와이드 타입, 크로스 롤러 슬라이드 가이드
Wide Type, Crossed – Roller Slide Guide





Specification / Model	스토로크 Stroke	Da	롤러수 The number of roller Z	주 요 치 수						
				Lo	H	t	B	B1	I	Q
JVW 3 – 50 – 7	28	3	7	50	8.5	0.5	36	16.6	8.3	29
JVW 3 – 75 – 10	48		10	75						
JVW 3 – 100 – 14	58		14	100						
JVW 3 – 125 – 17	78		17	125						
JVW 3 – 150 – 21	88		21	150						
JVW 3 – 175 – 24	108		24	175						
JVW 3 – 200 – 28	118		28	200						



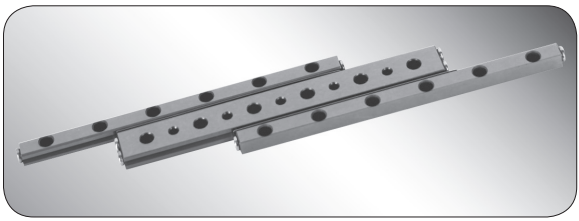
(Unit : mm)

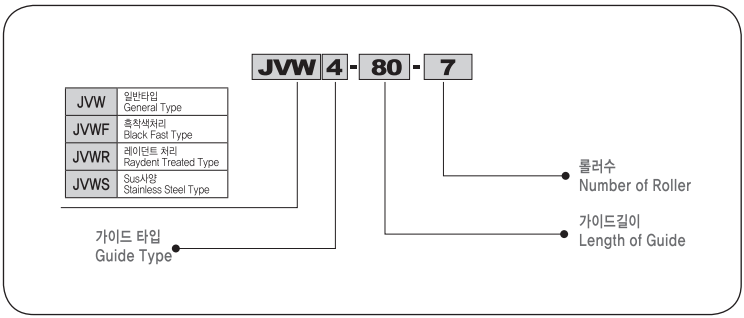
Main Dimension								기본정격하중 Basic Proper Load		질량(레일) Weight of Rail
n x P	G	S	d	D	h	K	Dw	Cz KN	Coz KN	Kg/m
1 x 25	12.5	M4 x 0.7	3.3	6	3.1	2.5	4	180	212	1.94
2 x 25								264	353	
3 x 25								340	494	
4 x 25								376	565	
5 x 25								444	706	
6 x 25								510	847	
7 x 25								572	988	

1kN = 102kgf

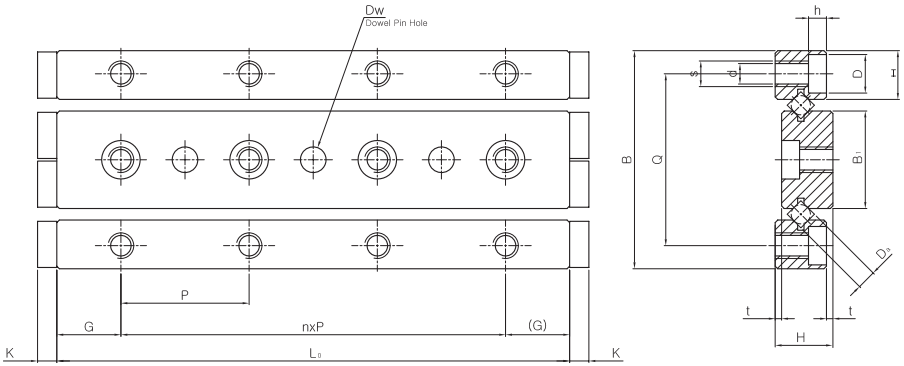
JVW 4

와이드 타입, 크로스 롤러 슬라이드 가이드
Wide Type, Crossed – Roller Slide Guide





Specification / Model	스토로크 Stroke	Da	롤러수 The number of roller Z	주 요 치 수						
				Lo	H	t	B	B1	l	Q
JVW 4 – 80 – 7	58	4	7	80	11.5	0.5	44	20.4	10.2	35
JVW 4 – 120 – 10	82		11	120						
JVW 4 – 160 – 15	106		15	160						
JVW 4 – 200 – 19	130		19	200						
JVW 4 – 240 – 23	154		23	240						
JVW 4 – 280 – 27	178		27	280						



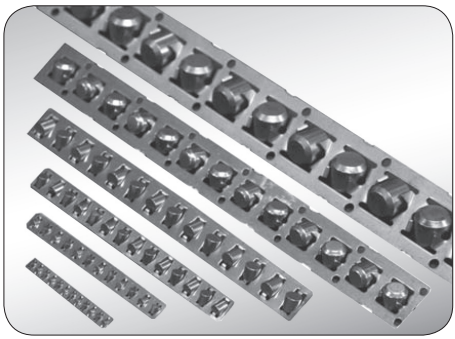
(Unit : mm)

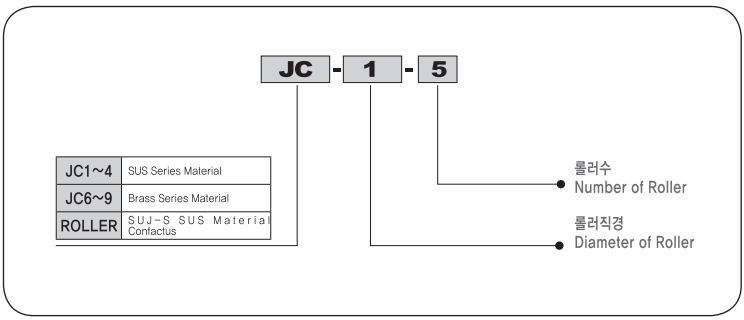
Main Dimension								기본정격하중 Basic Proper Load		질량(레일) Weight of Rail
n x P	G	S	d	D	h	K	Dw	Cz KN	Coz KN	Kg/m
1 x 40	20	M5 x 0.8	4.3	8	4.5	2.5	5	356	435	3.36
2 x 40								522	725	
3 x 40								672	1020	
4 x 40								812	1310	
5 x 40								943	1600	
6 x 40								1070	1890	

1kN = 102kgf

JC

롤러 케이지
Roller Cage

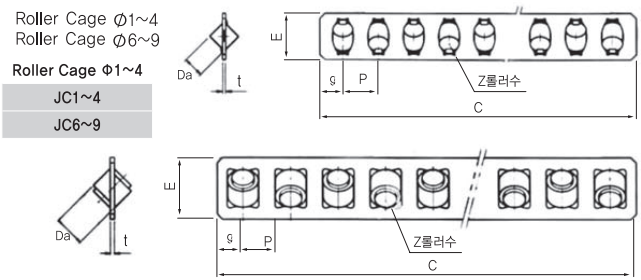




Roller Cage ∅1~4
Roller Cage ∅6~9

Roller Cage Φ1~4

JC1~4
JC6~9



Model \ Specification	적용가이드 Applicable Guide	주 요 치 수 Main Dimension					기본정격하중 Basic Proper Load	
		Da	t	E	P	g	Cz KN	Coz KN
JC 1	JV 1	1.5	0.2	3.5	2.5	2	0.069	21.6
JC 2	JV 2	2	0.3	5	4	2.5	0.127	39.2
JC 3	JV 3	3	0.4	7	5	3	0.275	87.3
JC 4	JV 4	4	0.4	9	7	4.5	0.637	155
JC 6	JV 6	6	0.8	13	10	6	1.76	353
JC 9	JV 9	9	1.2	18	14	7.5	4.36	784