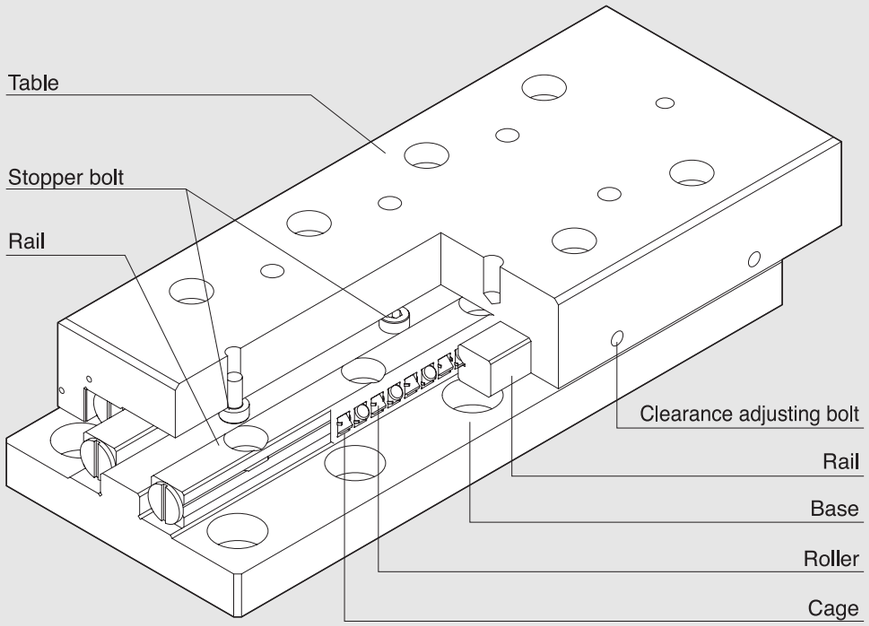
CROSS ROLLER TABLE



The SBC cross roller table is a precision table assembled with SBC cross guides (SCVR type). Since there is minimal elastic deformation the table achieves high rigidity and stable linear motion. The tables can be used for OA equipment, Automation-assembly machines and Optical measurement devices.

[Cross Roller Table Model Type]

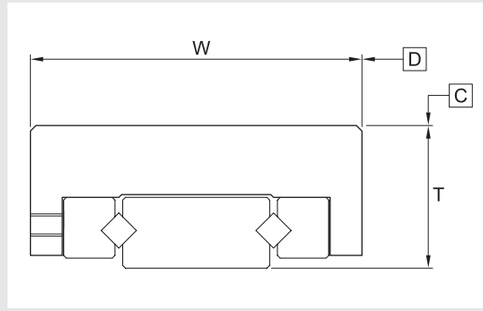
- SCVRT Type : Miniature Type (Base Tapped-hole)
- SCVRT-A Type : Miniature Type (Base Mounting-hole)
- SCVRU Type

Cross Roller Guide

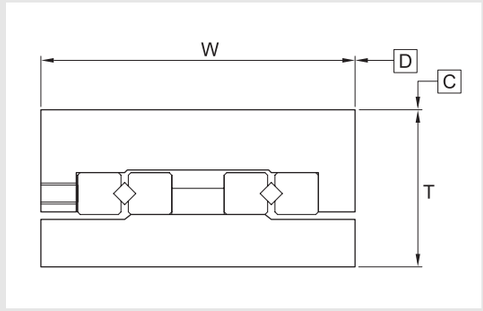
Cross Roller Table SCVRT Type, SCVRU Type

Accuracy

The running accuracy of a cross roller table is measured with dial indicators as shown in Figure below. The tolerance of table height C and D are shown in the dimension tables.



(SCVRT, SCVRT-A Type)



(SCVRU Type)

Precautions

[Cross Roller Table Model Type]

When machining additional features into the Table and the Base of the Cross Roller Table, please observe the precautions below.

❶ Prevent cutting chips and foreign substance from entering the Cross Roller Guide.

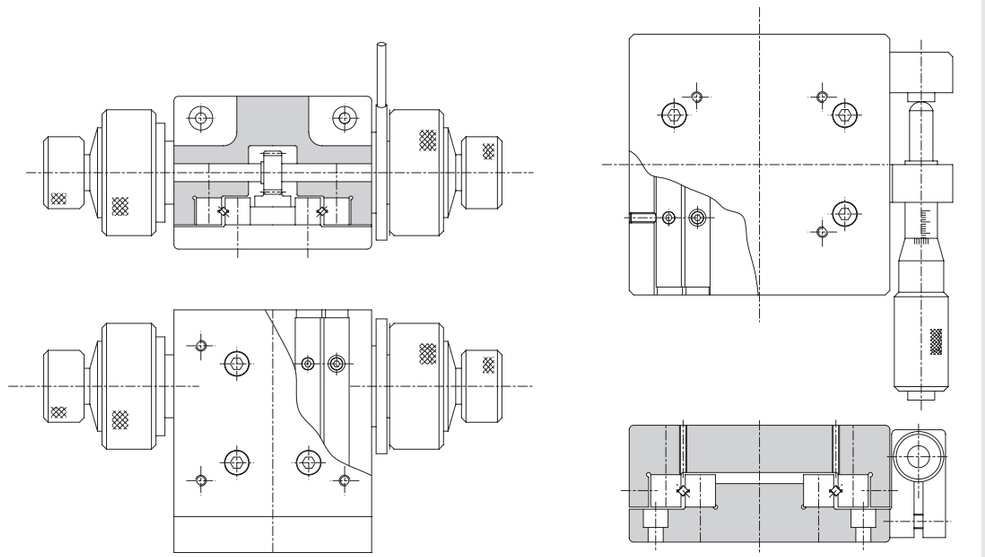
❷ Design the mounting holes as blind holes, not penetrating (thru) holes. For additional machining, please contact SBC Linear.

❹ The preload of the Cross Roller Table is fixed to the proper level. Please do not adjust the preload adjustment bolts.

[Cage Creep]

WheThe Roller Cage moves accurately but may be drift (cage creep) due to vibrations, inertia or impact. Please mount an external stop for the table to control the travel.

[Example]



(Rack & Pinion)

(Micro head)

Ordering Example

[SCVRT Miniature Type (Base Tapped-hole)]

SCVRT 2035 – T – R
[1] [2] [3]

[1] Model No. : SCVRT(Base Tapped-hole)
[2] Additional processing : No Symbol (Standard), T (Additional processing)
[3] Surface Treatment : No symbol (Standard), R (Surface Treatment)

[SCVRT-A Miniature Type (Base Mounting-hole)]

SCVRT 2035A – T – R
[1] [2] [3]

[1] Model No. : SCVRT-A (Base Mounting-hole)
[2] Additional processing : No Symbol (Standard), T (Additional processing)
[3] Surface Treatment : No symbol (Standard), R (Surface Treatment)

[SCVRU]

SCVRU 2035 – T – R
[1] [2] [3]

[1] Model No. : SCVRU
[2] Additional processing : No Symbol (Standard), T (Additional processing)
[3] Surface Treatment : No symbol (Standard), R (Surface Treatment)

※ When ordering surface treatment, please include the symbol of the surface treatment.

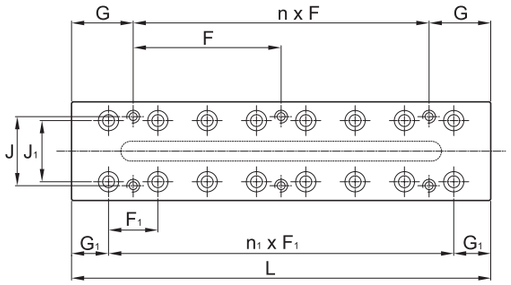
❶ Standard , Black Chrome coating (Raydent treatment), Fluorocarbon resin coating, Hard Chrome plating

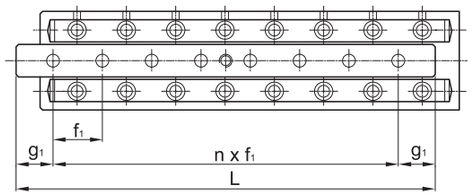
❷ Contact SBC for special surface treatments.

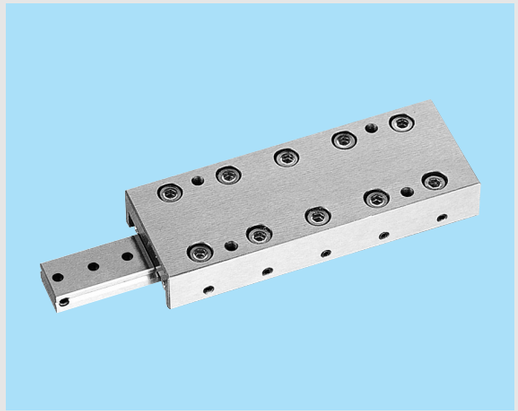
Cross Roller Guide

Cross Roller Table SCVRT Type

SCVRT1 Miniature Type (Base Tapped-hole)







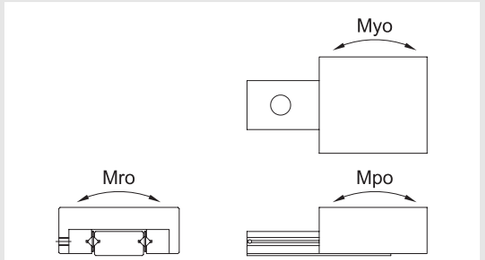
(Unit : mm)

Model No.	Max Stroke	Major Dimensions				Top Dimensions							
		W ±0.1	T ±0.1	L	Mass [g]	J	nxF	G	m2	n1xF1	J1	D1	G1
SCVRT 1025	12	20	8	25	23	14	1x18	3.5	M2.6	1x10	12.4	4.1	7.5
SCVRT 1035	18			35	32		1x28	3.5		2x10			
SCVRT 1045	25			45	42		1x20	12.5		3x10			
SCVRT 1055	32			55	52		1x30	12.5		4x10			
SCVRT 1065	40			65	62		2x20	12.5		5x10			
SCVRT 1075	45			75	72		1x30	22.5		6x10			
SCVRT 1085	50			85	82		2x30	12.5		7x10			

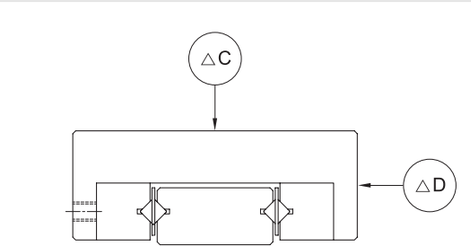
(Unit : mm)

End Dimensions						Base Dimensions mounting-hole position			No. of Rollers	Basic load rating [kN]		Static permissible moment [N.m]			Accuracy [㎛]	
T1	T2	H	W1	A	m	m1	nxf1	g1	Z	C	Co	Mpo	Myo	Mro	△C	△D
7.5	3.5	4	6.7	5.5	M2	M2.6	2x7.5	5	5	0.28	0.27	0.75	0.46	0.69	2	4
							2x10	7.5	7	0.38	0.41	1.23	0.85	1.03		
							3x10		10	0.56	0.69	2.18	1.67	1.72		5
							4x10		12	0.65	0.82	2.97	2.35	2.06		
							5x10		14	0.73	0.96	3.87	3.17	2.40		
							6x10		18	0.87	1.27	6.05	5.16	3.19		
							7x10		20	0.94	1.37	7.32	6.37	3.43		

* Static permissible moment



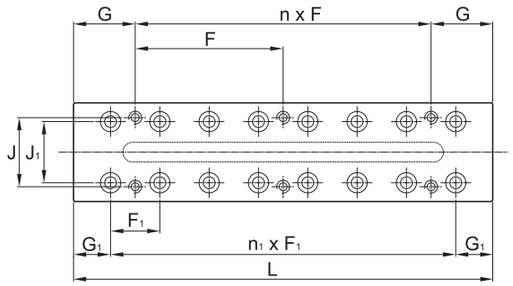
* Accuracy

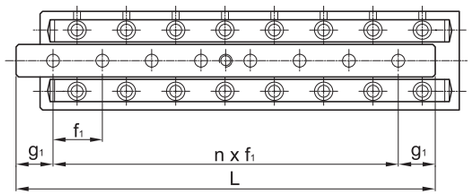


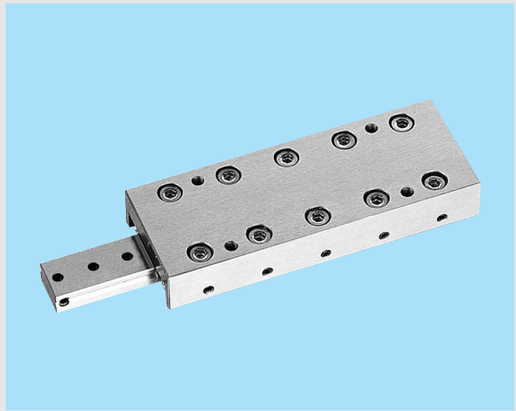
Cross Roller Guide

Cross Roller Table SCVRT Type

SCVRT2 Miniature Type (Base Tapped-hole)







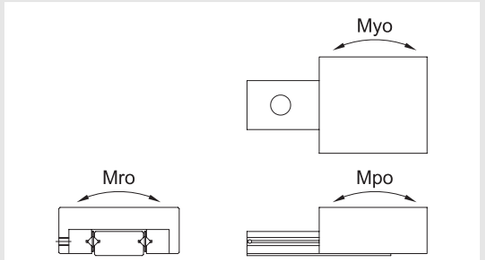
(Unit : mm)

Model No.	Max Stroke	Major Dimensions				Top Dimensions							
		W ±0.1	T ±0.1	L	Mass [g]	J	nxF	G	m2	n1xF1	J1	D1	G1
SCVRT 2035	18	30	12	35	78	22	1x28	3.5	M3	1x15	20	6	10
SCVRT 2050	30			50	113		1x43	3.5		2x15			
SCVRT 2065	40			65	147		1x30	17.5		3x15			
SCVRT 2080	50			80	184		1x45	17.5		4x15			
SCVRT 2095	60			95	220		2x30	17.5		5x15			
SCVRT 2110	70			110	257		1x45	32.5		6x15			
SCVRT 2125	80			125	290		2x45	17.5		7x15			

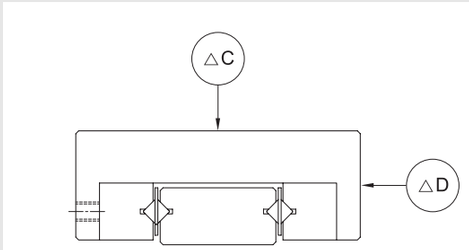
(Unit : mm)

End Dimensions						Base Dimensions mounting-hole position			No. of Rollers	Basic load rating [kN]		Static permissible moment [N.m]			Accuracy [㎛]	
T1	T2	H	W1	A	m	m1	nxf1	g1	Z	C	Co	Mpo	Myo	Mro	△C	△D
11.5	5.5	6	12.2	8.5	M2	M3	1x20	7.5	5	0.51	0.51	2.29	1.37	2.21	2	4
							2x15	5	7	0.69	0.76	3.76	2.65	3.32		
							3x15		9	0.85	0.98	5.62	4.22	4.25		5
							4x15		12	0.98	1.27	9.10	7.26	5.52		
							5x15		14	1.18	1.57	11.8	9.71	6.80		
							6x15		17	1.47	2.06	16.7	14.1	8.93		
							7x15		19	1.57	2.25	20.4	17.5	9.77		

* Static permissible moment



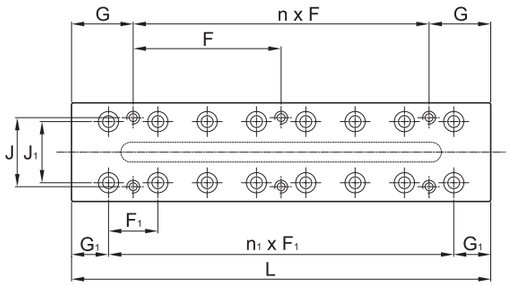
* Accuracy

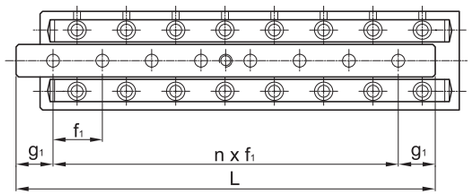


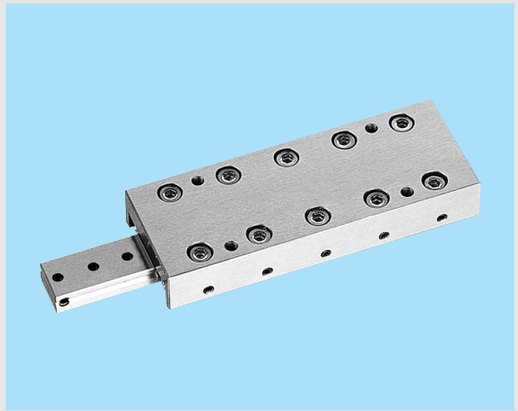
Cross Roller Guide

Cross Roller Table SCVRT Type

SCVRT3 Miniature Type (Base Tapped-hole)







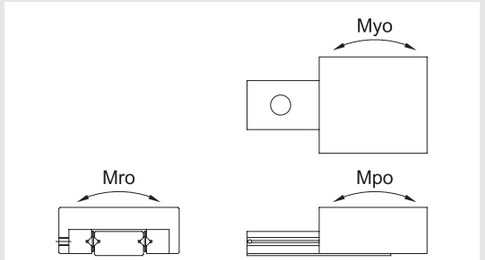
(Unit : mm)

Model No.	Max Stroke	Major Dimensions				Top Dimensions							
		W ±0.1	T ±0.1	L	Mass [g]	J	nxF	G	m2	n1xF1	J1	D1	G1
SCVRT 3055	30	40	16	55	229	30	1x40	7.5	M4	1x25	28.4	7.5	15
SCVRT 3080	45			80	336		1x65	7.5		2x25			
SCVRT 3105	60			105	442		1x50	27.5		3x25			
SCVRT 3130	75			130	551		1x75	27.5		4x25			
SCVRT 3155	90			155	657		2x50	27.5		5x25			
SCVRT 3180	105			180	766		1x75	52.5		6x25			
SCVRT 3205	130			205	871		2x75	27.5		7x25			

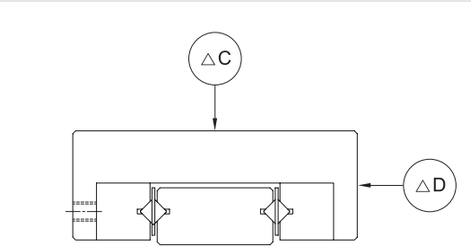
(Unit : mm)

End Dimensions						Base Dimensions mounting-hole position			No. of Rollers	Basic load rating [kN]		Static permissible moment [N.m]			Accuracy [㎛]	
T1	T2	H	W1	A	m	m1	nxf1	g1	Z	C	Co	Mpo	Myo	Mro	△C	△D
15.5	7.5	8	16	11.5	M2	M4	1x35	10	6	1.27	1.37	9.85	6.57	7.97	2	5
							2x35	15	10	2.16	2.84	22.2	17	16.5		
							3x25		13	2.94	4.22	34.8	28.1	24.4	5	6
							4x25		17	3.63	5.69	55.8	47.1	33.3		
							5x25		20	3.92	6.37	74.7	64.6	36.9		
							6x25		24	4.02	6.57	104	92.3	38.1		
							7x25		26	4.22	7.16	120	107	41.5		

* Static permissible moment



* Accuracy

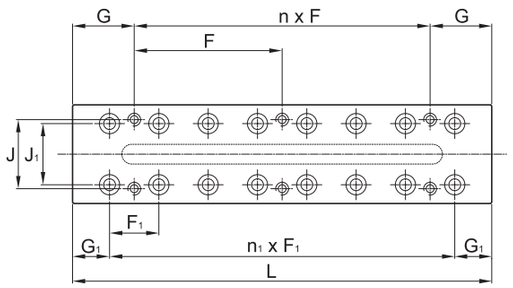


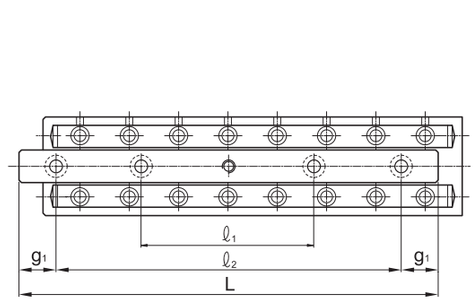
Cross Roller Guide

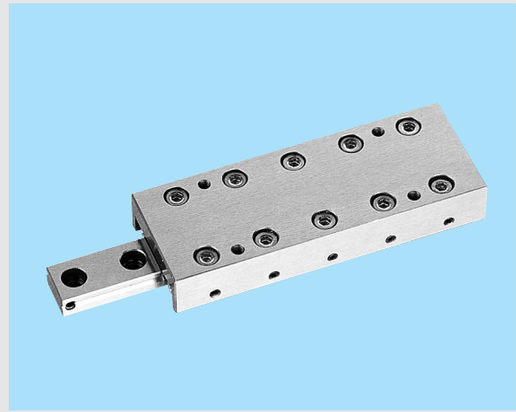
Cross Roller Table SCVRT Type

Cross Roller Table SCVRT Type

SCVRT1-A Miniature Type (Base Mounting-hole)







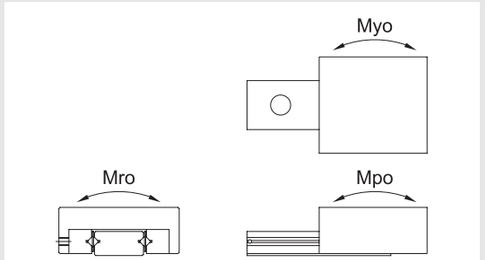
(Unit : mm)

Model No.	Max Stroke	Major Dimensions				Top Dimensions							
		W ±0.1	T ±0.1	L	Mass [g]	J	nxF	G	m2	n1xF1	J1	D1	G1
SCVRT 1025A	12	20	8	25	23	14	1x18	3.5	M2.6	1x10	12.4	4.1	7.5
SCVRT 1035A	18			35	32		1x28	3.5		2x10			
SCVRT 1045A	25			45	42		1x20	12.5		3x10			
SCVRT 1055A	32			55	52		1x30	12.5		4x10			
SCVRT 1065A	40			65	62		2x20	12.5		5x10			
SCVRT 1075A	45			75	72		1x30	22.5		6x10			
SCVRT 1085A	50			85	82		2x30	12.5		7x10			

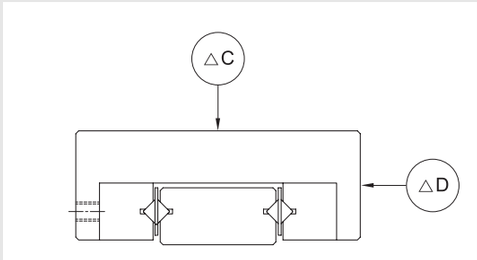
(Unit : mm)

End Dimensions						Base Dimensions mounting-hole position						No. of Rollers	Basic load rating [kN]		Static permissible moment [N.m]			Accuracy [㎛]	
T1	T2	H	W1	A	m	m1	D	h	ℓ1	ℓ2	g1	Z	C	Co	Mpo	Myo	Mro	△C	△D
7.5	3.5	4	6.7	5.5	M2	2.5	4.1	2.2	-	18	3.5	5	0.28	0.27	0.75	0.46	0.69	2	4
									-	25	5	7	0.38	0.41	1.23	0.85	1.03		
									25	38	3.5	10	0.56	0.69	2.18	1.67	1.72		5
									29	48	3.5	12	0.65	0.82	2.97	2.35	2.06		
									31	55	5	14	0.73	0.96	3.87	3.17	2.40		
									35	65	5	18	0.87	1.27	6.05	5.16	3.19		
									40	75	5	20	0.94	1.37	7.32	6.37	3.43		

* Static permissible moment



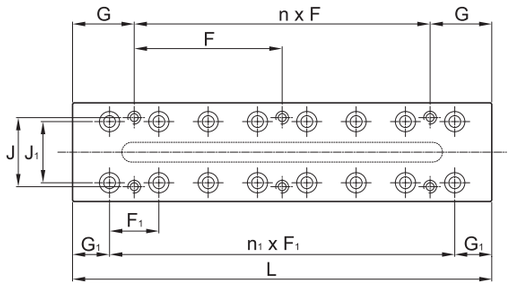
* Accuracy

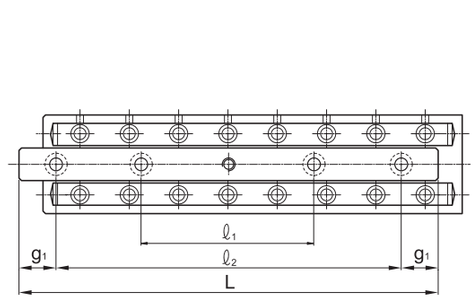


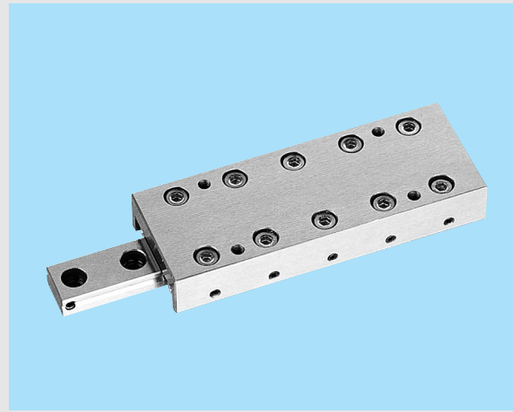
Cross Roller Guide

Cross Roller Table SCVRT Type

SCVRT2-A Miniature Type (Base Mounting-hole)







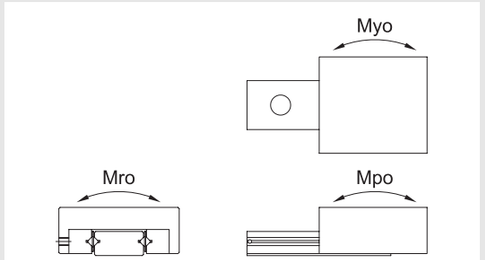
(Unit : mm)

Model No.	Max Stroke	Major Dimensions				Top Dimensions							
		W ±0.1	T ±0.1	L	Mass [g]	J	nxF	G	m2	n1xF1	J1	D1	G1
SCVRT 2035A	18	30	12	35	78	22	1x28	3.5	M3	1x15	20	6	10
SCVRT 2050A	30			50	113		1x43	3.5		2x15			
SCVRT 2065A	40			65	147		1x30	17.5		3x15			
SCVRT 2080A	50			80	184		1x45	17.5		4x15			
SCVRT 2095A	60			95	220		2x30	17.5		5x15			
SCVRT 2110A	70			110	257		1x45	32.5		6x15			
SCVRT 2125A	80			125	290		2x45	17.5		7x15			

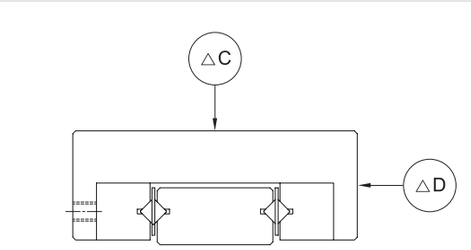
(Unit : mm)

End Dimensions						Base Dimensions mounting-hole position						No. of Rollers	Basic load rating [kN]		Static permissible moment [N.m]			Accuracy [㎛]	
T1	T2	H	W1	A	m	m1	D	h	ℓ1	ℓ2	g1	Z	C	Co	Mpo	Myo	Mro	△C	△D
11.5	5.5	6	12.2	8.5	M2	3.5	6	3.2	-	25	5	5	0.51	0.51	2.29	1.37	2.21	2	4
									-	35	7.5	7	0.69	0.76	3.76	2.65	3.32		
									33	55	5	9	0.85	0.98	5.62	4.22	4.25		5
									40	70	5	12	0.98	1.27	9.10	7.26	5.52		
									45	85	5	14	1.18	1.57	11.8	9.71	6.80		
									50	95	7.5	17	1.47	2.06	16.7	14.1	8.93		
									55	110	7.5	19	1.57	2.25	20.4	17.5	9.77		

* Static permissible moment



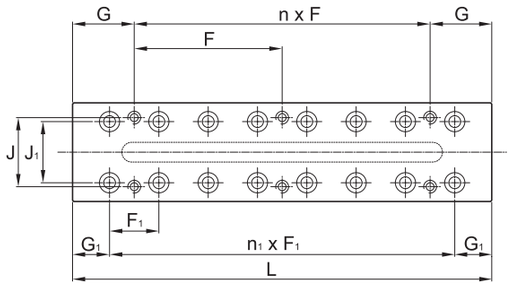
* Accuracy

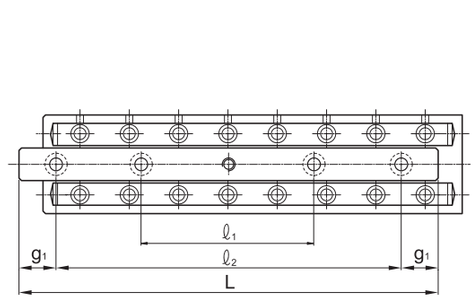


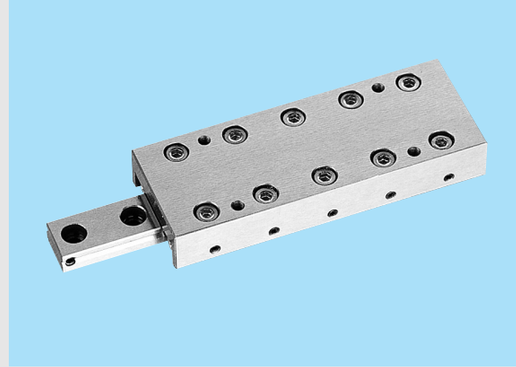
Cross Roller Guide

Cross Roller Table SCVRT Type

SCVRT3-A Miniature Type (Base Mounting-hole)







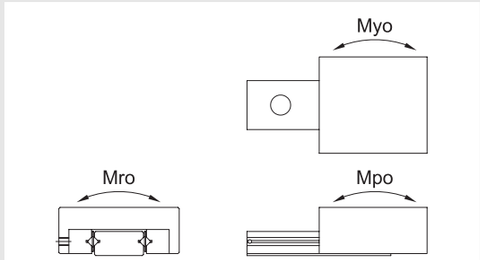
(Unit : mm)

Model No.	Max Stroke	Major Dimensions				Top Dimensions							
		W ±0.1	T ±0.1	L	Mass [g]	J	nxF	G	m2	n1xF1	J1	D1	G1
SCVRT 3055A	30	40	16	55	229	30	1x40	7.5	M4	1x25	28.4	7.5	15
SCVRT 3080A	45			80	336		1x65	7.5		2x25			
SCVRT 3105A	60			105	442		1x50	27.5		3x25			
SCVRT 3130A	75			130	551		1x75	27.5		4x25			
SCVRT 3155A	90			155	657		2x50	27.5		5x25			
SCVRT 3180A	105			180	766		1x75	52.5		6x25			
SCVRT 3205A	130			205	871		2x75	27.5		7x25			

(Unit : mm)

End Dimensions						Base Dimensions mounting-hole position						No. of Rollers	Basic load rating [kN]		Static permissible moment [N.m]			Accuracy [㎛]	
T1	T2	H	W1	A	m	m1	D	h	ℓ1	ℓ2	g1	Z	C	Co	Mpo	Myo	Mro	△C	△D
15.5	7.5	8	16	11.5	M2	4.5	7.5	4.2	-	40	7.5	6	1.27	1.37	9.85	6.57	7.97	2	6
									43	68	6	10	2.16	2.84	22.2	17	16.5		
									55	90	7.5	13	2.94	4.22	34.8	28.1	24.4	3	6
									65	115	7.5	17	3.63	5.69	55.8	47.1	33.3		
									958	140	7.5	20	3.92	6.37	74.7	64.6	36.9		
									85	165	7.5	24	4.02	6.57	104	92.3	38.1		
									90	190	7.5	26	4.22	7.16	120	107	41.5		

* Static permissible moment



* Accuracy