

# 90° V-Guide Units

Units / Wheels

**90° V-Guide Unit**

Type	Material	Surface Treatment	Hardness
1-Carriage	BVGU	Black Anodize	—
2-Carriage	BV2GU	BVGUR (P.725)	—

Set: Carriage / Rail

Material: Plate: 5052 Aluminum Alloy

**Carriage**

2-Fixed Side Bushings  
4-Wheels  
4-Screws  
4-Flat Washers  
2-Adjusting Side Bushings

**Rail**

4-C2  
6-d Through  
4-d2 Through  
90°  
T=0.02  
W1=0.025  
20±1.0  
50  
20±1.0  
L  
W  
H

Ⓢ A carriage and rail are provided as a set.  
Ⓢ W1 is the dimension at the intersection of 90°. (Both ends are R machined)

Ⓢ Number of Holes =  $\frac{L-40}{50} + 1$

Part Number Type	No.	L 50mm Increment	W	W1	d	A	B	X1	X2	Y1	Y2	d1	d2	E	F	H	T	Wheel	Bushing		Screw
																			Fixed Side	Adjusting Side	
BVGU	25	90-1740	25	25.74	5.5	80	70	70	40	50	41.59	M5	M3	10	10	17.5	4.5	BVGH1	BVGBS1-C	BVGBS1-E	CB3-22
BV2GU	25L		25	25.74	5.5	120	70	100	80	50	41.59	M5	M3	10	10	17.5	4.5	BVGH1	BVGBS1-C	BVGBS1-E	CB3-22
BV2GU	44	44	44.74	7	120	105	100	80	80	70.14	M6	M6	10	12	24.5	6	BVGH2	BVGBS2-C	BVGBS2-E	CB6-25	

Ⓢ A / X1 / X2 of No. 25L are larger than those of No. 25.

**Part Number Example**

Part Number - L  
BVGU25 - 840

**90° V-Guide Wheels**

Type	Material	Hardness	Seal	Heat Resistant Temperature
*BVGH	52100 Bearing Steel	60-62 HRC min.	Metal Shield	0-100°C
*BVGHS	440C Stainless Steel Equivalent	58-60 HRC min.	Nitrile Rubber	0-100°C
BVGH	440C Stainless Steel Equivalent	58-60 HRC min.	Metal Shield	-30-260°C

Ⓢ For BVGHS No.2 / No.3, the materials are changed to Nitrile Rubber Metal Shield.  
Ⓢ G and H dimensions are for reference only, and subject to change.

Part Number Type	No.	A	B	d	D		MDW		(G)*	(H)*	K	Radial Load (LRmax.) (N)	Thrust Load (LSmax.) (N)
					Between E and F	Inside	Outside						
BVGH	1	19.557	7.874	4.762	15.848	7.924	11.861	1.0	0.5	0.229	1220	252	
	2	30.733	11.099	9.525	25.399	12.700	18.236	1.4	0.7		2650	625	
	3	45.718	15.874	11.999	38.099	19.049	26.974	2.0	1.0		5900	1701	
BVGHS	1	19.557	7.874	4.762	15.848	7.924	11.861	1.0	0.5	0.229	1220	252	
	2	30.733	11.099	9.525	25.399	12.700	18.236	1.4	0.7		2650	625	
	3	45.718	15.874	11.999	38.099	19.049	26.974	2.0	1.0		5900	1701	
BVGH	1	19.557	7.874	4.762	15.848	7.924	11.861	0.508	0.254	0.229	1013	209	
	2	30.733	11.099	9.525	25.399	12.700	18.236	0.762	0.381		2200	519	
	3	45.718	15.874	11.999	38.099	19.049	26.974	0.889	0.432		4897	1412	

kgf=Nx0.101972

**Part Number Example**

Part Number  
BVGH3

# 90° V-Guide Units

Bushings / Single-Sided / Double-Sided Tracks

**90° V-Guide Units – Bushing**

BVGBS E (Eccentric Bushings) C (Fixed Bushings)

Material: 303 Stainless Steel

Part Number Type	No.	Specification	L	D	B	d	Tolerance	Applicable Screws	X	t1	H
BVGBS	2	C E	17.24	9.52	13	6	+0.018 0	M6	— 0.6	6.45	12
BVGBS	3	C E	24.68	11.99	19	8	+0.022 0	M8	— 1.0	9.06	17

**Part Number Example**

Part Number - Spec.  
BVGBS1 - E

**90° V-Guide Units – Single-Sided Tracks**

BVGTNL BVGTNSL

Type	Mounting Hole	Material	Hardness
BVGTNL	Available	1045 Carbon Steel Equivalent	53 HRC min. (90° Edge)
BVGTNSL		420 Stainless Steel Equivalent	40 HRC min. (90° Edge)

Ⓢ Number of Holes =  $\frac{L-40}{50} + 1$

Part Number Type	No.	L 50 mm Increment	E ±0.38	F ±0.38	G ±0.05	J	MD ±0.05	D	B1	N ±0.01	P ±0.02

**Part Number Example**

Part Number - L  
BVGTNL1 - 640

**Part Number Alterations**

Part Number - (MTC) L  
BVGTNL1 - MTC740

Ⓢ Only applicable to Single Sided Track Type BVGTNL.

Alteration	Surface Treatment
Code	MTC
Spec.	Electroless nickel plating is applied. Ⓢ Not available for Stainless Steel Type.

**90° V-Guide Units – Double-Sided Tracks**

Type	Material	Surface Treatment	Hardness
BVGUR	1045 Carbon Steel Equivalent	Black Oxide	58 HRC min. (90° Edge)
BVGURS	440C Stainless Steel Equivalent	—	52 HRC min. (90° Edge)

Ⓢ W1 is the dimension at the intersection of 90°. (Both ends are R machined)  
Ⓢ Number of Holes =  $\frac{L-40}{50} + 1$

Part Number Type	No.	L 50 mm Increment	(W)	W1	T	N ±0.01	P ±0.02	d

**Part Number Example**

Part Number - L  
BVGUR25 - 90