## **Support Units**

**Overview** 



### Existing Part

				Produc				
Shape	Туре	Fixed Side	e [Part N	umber]	Support Sid	de [Part	Number]	Features
		Bearing used	Part I	Number	Bearing used	Part	Number	
	Standard	Japanese Made Angular Contact Bearing Class P5	BSW BSWN BSWR		Japanese Made Radial Bearing	bun Bunm Bunr		Industry Standard
	Economy	Japanese Made Angular Contact Bearing Class P0	BSWE BSWEM BSWER		-	-	-	Angular Contact Bearing Class PO is used
	Radial	Japanese Made Radial Bearing	BSWZ BSWZM		-	-	-	Radial Bearing used.
	Compact	Japanese Made Angular Contact Bearing Class P0	BSQ BSQM	O	Japanese Made Radial Bearing	BUQ BUQM	O	Easy to use in a limited width space. Suitable for small devices.
Square	Low Profile	Japanese Made Angular Contact Bearing Class P5	BSV BSVM		Japanese Made Radial Bearing	buv Buvm		Lower profile linear motion units can be made. Recommended to use together with Compact Nut. (BSSC in <b>P.687~</b> )
	Narrow Pitch	Japanese Made Angular Contact Bearing Class P5	BSA BSAM	0-	Japanese Made Radial Bearing	bua Buam		Easy to use in a limited width space. Suitable for small devices.
	With Damper	Japanese Made Angular Contact Bearing Class P5	BSWD		Japanese Made Radial Bearing	BUND		Unnecessary to design a damper mechanism.
	[Fixed Side] With Dowel Holes [Support Side] With Retaining Ring	Japanese Made Angular Contact Bearing Class P5	BSWG BSWGN	C	Japanese Made Radial Bearing	BTN BTNM		[BSWG/BSWGN] Easy locating of the housing. [BTN, BTNM] Easy to assemble while preventing the bearing from falling off.
	AC Servo Motor Bracket	Japanese Made Angular Contact Bearing Class P5	BJS BJSM	<b>0</b> .	-	-	-	Ball screws and motors shaft centering are secured by only mounting and aligning a motor with a build-in pilot.
	Standard	Japanese Made Angular Contact Bearing Class P5	BRW BRWN BRWR	Ċ,	Japanese Made Radial Bearing	bur Burm Burr		Industry Standard
Round	Economy	Japanese Made Angular Contact Bearing Class PO	BRWE BRWEM BRWER		-	-	-	Angular Contact Bearing Class PO is used.
	Radial	Japanese Made Radial Bearing	BRWZ BRWZM		-	-	-	Radial Bearing used.

#### Specification Differences between **Existing Parts and Parts**

- parts have different bearing load rating from the existing products.
- Select the ball screw suitable for the usage criteria, otherwise it will affect the device's lifespan performance and its positioning performance.



### **Selection Points**

•We recommend support units be used together with ball screws.

- Consider using for devices requiring medium precision positioning, medium load application or medium-low operation frequency.
- Consider using existing parts for high precision positioning, high load application, or high operation frequency.



#### <Combination of Ball Screws and Support Units>

Ball		Support U	nits
Screw Root Dia.	Shape	Fixed Side	Support Side
Precision C-BSS	Square	C-BSW C-BSFW*	C-BUN C-BUFN*
Rolled C-BSSC	Round	C-BRW	C-BUR
		* Excludes C-BSFW	15,20, C-BUFN15,2

## **Overview of Support Units**

**Technique and Structure** 



### Structure of Support Units



Shape of Support Units and Mounting Examples



### **Combination with MISUMI Ball Screws**

### Combination of Ball Screws and Support Units

When selecting Support Units for Ball Screws, note that it can be combined if dimensions of bearing installation part on Fixed Side of the Ball Screw [Fig. 1] and bearing I.D. of the Support Unit [Fig. 2] are the same.





[Fig. 2] <Example of Support Unit BSW12>

	Accuracy Grade C3	BSX0601	-	BSX0801 BSX0802 BSX1002	-	BSX1202 BSX1205	BSX1505	-	-	-
t Number	Accuracy Grade C5	-	BSS1002 C-BSS1002	BSS0802 BSS1202	BSS1004 BSS1205 BSS1204 BSS1210	BSS1010	Step ① BSS15 C-BSS15	BSS20	BSS25	-
Ball Screw Part	Accuracy Grade C7	BSST0802	BSSE1002 BSST1004	BSSE0802 BSSE1202	BSSE1004 BSSE1205 BSSE1210 BSST1204	-	BSSE15	BSSE20	BSSE25	
Ball	Accuracy Grade C10	BSSR08	BSSR10 BSSZ10 BSSC10 C-BSSC10	-	BSSR12 BSSZ12 BSSC12 C-BSSC12	BSSR14	BSSR15 BSSZ15 BSSC15 BSBR15 C-BSSC15	BSSR20	BSSR25 BSSZ25 BSSC25 BSBR25 BSSR28 BSSZ28 C-BSSC25	BSSR32
	Shaft Dia. of Ball Screws ing Installation Part)	Ø6	Ø8		Ø10		Step ② Ø12	Ø15	Ø20	Ø25
	pport Units earing I.D.)	No.6 No.6L	No.8S	No.8	No.10S	No.1022 No.10	Step ③ No.12	No.152 No.15*	No.20*	No.25

[Example] Step ① Confirm that shaft diameter of the Ball Screw is 15.

\* Except C-BSFW15,20, C-BUFN15,20

 Step (2)
 Confirm that dimension of the bearing installation part on fixed side of the Ball Screw is Ø12.

 Step (3)
 Determine that corresponding bearing I.D. of the Support Unit is No.12.

#### Combination of Fixed Side and Support Side Support Units

				Combination of Fixed Side and Support Side Support Units							
Туре	Туре	Fixed Side	Page	Support Side	Page						
		BSW		BUN							
	Standard	BSWN	P761	BUNM	P.762						
		BSWR		BUNR							
	C-VALUE	C-BSW	P.763/765	C-BUN	P.764/766						
	C-VALUE	C-BSFW*	F.703/705	C-BUFN*	F.704/700						
		BSWE		BUN							
	Economy	BSWEM	P.775	BUNM	P.762						
		BSWER		BUNR							
ſ	Radial Bearing	BSWZ	P.775	BUN	P.762						
Square	Туре	BSWZM	F.775	BUNM	F.702						
ſ	Compact	BSQ	P771	BUQ	P.772						
	Compact	BSQM	F.//1	BUQM	F.//2						
ſ	Low Profile Type	BSV	P.771	BUV	P.772						
	Low Profile Type	BSVM	P.//1	BUVM	P.//2						
	Narrow Mounting	BSA	P.771	BUA	P.772						
	Hole Pitch Type	BSAM	F.//1	BUAM	F.//2						
ĺ	with Dowel Holes	BSWG	P.773	BUN	P.762						
	with Dowel Holes	BSWGN	F.//3	BUNM	F.702						
ĺ	with Damper	BSWD	P.773	BUND	P.774						
		BRW		BUR							
	Standard	BRWN	P.767	BURM	P.768						
		BRWR		BURR	1						
ĺ	C-VALUE	C-BRW	P.769	C-BUR	P.770						
Round		BRWE		BUR							
	Economy	BRWEM	P.776	BURM	P.768						
	-	BRWER		BURR							
	Radial Bearing	BRWZ	0770	BUR	D700						
	Туре	BRWZM	P.776	BURM	P.768						
			* Exclud	es C-BSFW15,20	), C-BUFN15,20.						

#### Support Units - Square (Fixed Side) Mounting Interface Accuracies



# It is possible to use MISUMI support units in combination with non-MISUMI standard ball screws.

Selection Procedure

Select the MISUMI support unit using the following procedure.

### Step ①

Step 2

#### Check the ball screw specifications

Check the specifications of the customers' ball screw. It is necessary to machine the shaft ends in the following shape.



\* The support side generally has the same shaft end dimensions for both precision and rolled types.

### Selection of Compatible Support Units

Check the shaft end dimensions of the customers' ball screw and select a support unit from the following compatibility chart.

#### • Ball Screw/Support Unit Compatibility Chart





• Ball Screw/Support Unit Compatibility Chart

#### Critical Bearing Performances

		Existing Product		C-VALUE Products			
Bearing Type	Japanese mad	e JIS 5 Class Angular Co	ontact Bearing	Japanese mad	e JIS 5 Class Angular Co	ontact Bearing	
Туре	BSW/BRW/BSA/ BSV/BSWG/BSWD/BJS			C-BSW/C-BRW/C-BSFW			
d	Allowable Axial Load (N)	Basic Dynamic Load Rating (N)	Bearing Type	Allowable Axial Load (N)	Basic Dynamic Load Rating (N)	Bearing Type	
6	1040	2670	70M6DF/P5	720	1880	70M6DF/P5	
8	1450	4400	70M8DF/P5	1010	3090	70M8DF/P5	
10	2730	6100	7000DF/P5	1910	4260	7000DF/P5	
12	3040	6650	7001DF/P5	2120	4660	7001DF/P5	
15	3370	7600	7002DF/P5	2350	5320	7002DF/P5	
20	8260	17900	7204DF/P5	5780	12490	7204DF/P5	
25	9960	20200	7205DF/P5	-	-	-	

Bearing Type	JIS 0 (	Class Angular Contact B	earing	Radial Bearing			
Туре		BSWE/BSQ/BRWE		BSWZ/BRWZ			
d	Allowable Axial Load (N) Basic Dynamic Load Rating (N)		Bearing Type	Allowable Axial Load (N)	Basic Dynamic Load Rating (N)	Bearing Type	
6	-	-	-	780	2190	606ZZ	
8	-	-	-	1300	3350	608ZZ	
10	2730	6100	7000DF/Standard Grade	2300	4550	6000ZZ	
12	3040	6650	7001DF/Standard Grade	2600	5100	6001ZZ	
15	3370	7600	7002DF/Standard Grade	2900	5600	6002ZZ	
20	8260	17900	7204DF/Standard Grade	8100	12800	6204ZZ	
25	9960	20200	7205DF/Standard Grade	-	-	-	

#### Bearing's Accuracies

Oute	er Ring								Unit: µm	
Nominal Bearing O.D. Flat Surface Average O.D. Dim. D					Difference	Radial I	Run-out	Axia	Play	
1	D			)mp		K	ea	S	ea	
m	ım	Cla	ss 5	Class 0		Class 5	Class 0	Class 5	Class 0	ĺ
over	or Less	more than	or Less	more than	or Less	Ma	ax.	Max.		
6	18	0	-5	0	-8	5	15	8	-	
18	30	0	-6	0	-9	6	15	8	-	ĺ
30	50	0	-7	0	-11	7	20	8	-	
50	80	0	-9	0	-13	8	25	10	-	

Inne	r Ring							I	Unit: µn
Nominal E	Bearing I.D.	Flat Surfa	ce Average	e I.D. Dim.	Difference	Radial I	Run-out	Axial Play	
	d		∆dmp				ia	Sia	
m	m	Cla	ss 5	Class 0		Class 5	Class 0	Class 5	Class (
over	or Less	more than	or Less	more than	or Less	Ma	ax.	Max.	
2.5	10	0	-5	0	-8	4	10	7	-
10	18	0	-5	0	-8	4	10	7	-
18	30	0	-6	0	-10	4	13	8	-
							(Evt	ract from	IS 8151/

Both radial run-out and axial play stand for measurement method of bearing rotational accuracy.

C-BSW

C-BSEV

8

15 20 15 20 25 50 11 10S 12 10 5 10 14.5 10

**12** 15.5 12 5

20 27.5 20 8

**15** 19.5 15

Since Inner Ring Radial Run-out (Kia), Outer Ring Radial run-out (Kea), Inner Ring Axial Play (Sia), and Outer Ring Axial Play (Sea) are all different, contact us for more detail

#### Included Collar Size



smaller than the previous 8S and 10S versions. Use it in accordance with ball screw fixed side dimensions



		No	м	Fine Thread	в	m	d	D
		6	6	M6*0.75	5.5	M3	10	14.5
T T	Inct	8	8	M8*1.0	6.5	M3	13	17
	Product	10	10	M10*1.0	8	M4	16	20
	gЪ	12	12	M12*1.0	8	M4	17	22
	stin	15	15	M15*1.0	10	M4	21	25
<u> </u>	Existing	20	20	M20*1.0	13	M4	26	35
		25	25	M25*1.0	15	M5	33	43
tector. <b>2-212</b>		6	6	M6*0.75	5	M3	10	14.5
ity.	ш	8	8	M8*1.0	6.5	M3	13	17
	LU	10	10	M10*1.0	8	M3	15	20
	C-VALUE	12	12	M12*1.0	8	M3	17	22
	0	15	15	M15*1.0	8	M3	21	25
		20	20	M20*1.0	11	M4	26	35

#### Cautions on Accessories



#### Assembly of Support Units

Installing Support Units incorrectly would cause degradation of accuracies and service life expectancy. Considerable care must be taken during installation.

#### **1**Pre-Installing Preparation

Find a sufficient work area that is as dust-free and moisture-free as possible. Make sure there is little variation in temperature. Choose a clean location and prepare necessary tools on a workbench.

#### (2)Inspection of Shafts and Support Units

Confirm that there is no dust, foreign substance or burr on the shaft and on bearing I.D. If burrs are recognized, remove them with a oilstone etc. and brush or wipe off chips thoroughly.

#### **③Installing Support Units to Ball Screw Shafts** Bearing Nut, Set Piece Prepare a Ball Screw and a Support Unit. Collar is installed on Colla · Insert fixed side shaft end into the Support Unit. Rolled Ball Screws. Cautions on Insertion Insert the shaft straight not to interfere with the Support Unit. $\Leftrightarrow$ Also, watch for curled back oil seal lip. 6.5 Do not disassemble. Apply some grease for smooth insertion. · Temporarily tighten the bearing nut. Confirm the deflection. · Install a radial bearing on ball screw support side. Secure the bearing with a retaining ring · Maintain tip run-out to be as small as possible. Nut Tiahtening Nut Tightening М М Torque (N·cm) Torque (N·cm) 4 160 12 1370 2350 200 15 245 20 4700 400 25 8430 930 Value is for reference only (4) Precautions on Installation of Bearing Nut ①Lightly tighten the bearing nut. Tighten to 1/3 of the recommended torgue (see table). 2 Place the screw shaft on a set of V-blocks, place a dial indicator at A or B as shown, and rotate the shaft while seeking for a position where the largest indicator deflection is observed. (3)Using a hammer or other appropriate tools as shown, lightly tap the bearing nut at the aforementioned angular position until the indicator reading becomes minimum. (4) Divide the recommended torque on the table into two to three steps while repeating the step Clamp the screw shaft and tap (3) up to full recommended tightening torque. with the unit raised to prevent V Block damage to the bearing. (5)Installation of Support Side Bearing Unit and Accuracy Check · Move the carriage toward the support side bearing unit and align. · Reciprocate the carriage so that it travels smoothly throughout the whole stroke. Table · Fully tighten the mounting screws while checking the accuracy of each part. If the outcome is not satisfactory, repeat the preceding Confirm the deflection. steps until smooth motion is obtained. NIC: Confirm the tightening torque. Measure a travel distance

#### **Precautions on Support Unit Installation**

When inserting ball screws into fixed side support units, some cases will be slip-fit and others may be light press-fit cases.

If the fit appears to be a light-press, do not force the bearing onto the screw shaft in a tilted manner, and do not strike the bearing inner ring as well as support unit housing. In case if there is any interference between the screw shaft and the bearing inner ring, gently press the bearing using a spacer corresponding with the inner ring by either a press or a jack. It is necessary to ease shock to the bearing as much as possible. Furthermore, do not bend the screw shaft. If there is any interference between the screw shaft and the bearing inner ring, do not insert the ball screw forcibly. Remove the screw at once and correct the swell on the shaft, then try reassembling.



Main Body

#### <sup>r</sup> Store Accessories with care since they are required when assembling.

### Support Units - Fixed Side, Square Standard

Points of comparison between similar products | Consider using these parts when the usage environment is high-load application and high operation frequency. SSurface Treatment ndustrv Standard Type terial Fixed Side only Support Side SET (1)(3) 6)(7) (1)(3)(6)(7) BSW BSW-SET Black Oxide EN 1.1191 EN 1.0038 BSWN SWN-SET Electroless Nickel Plating Equiv. Equiv. BSWB TRC Plating d=6~8 B1 T 2-d1Through L2 L3 d2Counterbore DepthL M 00 × Petere Ð \_ . . \_ . स्<u>र</u>्व्युच्चे Ŧ Component Details (4) L/2 L/2 Quantity Number Part Name Bearing Housing 1 Set d=10~25 0 d=20 qular contac 
 3
 Cover
 1

 ④
 0il Seal
 2

 ⑤
 Hex Socket Head Cap Screw\*
 4
 22 2-d1Through 42 d2Counterbore Depth& \* 4 Mounting Holes Collar Bearing Nut (with Set Piece) Ø \_\_\_\_ 0 h-0.03 ר Oil Seal ④ is not included in d=6. -(a) 🕐 d=8 comes with one Oil Seal ④ Do not disassemble the fixed side main body (1), (2), (3) and (4), as they must remain assembled. d=25 30 L/2 L/2 48 BSWR bearing is filled with low dust generation grease. (?) d25 is not counterbored. \* Screws (5) for BSWR and BSWN are Stainless Steel Type. В \* 4 Mounting Holes For No.8S and 10S, the I.D. of oil seal is smaller than the previous No.8S and No.10S versions. 💽 When used together with a MISUMI ball screw, there is one support unit accessory collar spare. Part Number Oil Seal Support d L. в B<sub>1</sub> H1 Р d2 M (Fine) L1 L3 н dı L2 h т Applicable Shaft Dia. Side No. Туре SET 6 20 22.5 3.5 42 25 13 18 20 30 5.5 9.5 M6x0.75 6 12 **8S** 10 8 23 26 4 52 32 17 25 26 38 6.6 11 14 M8x1.0 8 11.5 1022 40 22 32 14 10S 10 M10x1.0 17 12 43 25 35 **BSW** 10 24 6 29.5 6 70 36 52 9 14 14 -SET 33 **BSWN** 1223 41 23 (Only when 12 M12x1.0 19 15 **BSWR** 12 rchasing in Set 43 25 35 1526 46 26 36 1528 15 25 6 38 5 80 48 28 41 38 60 22 20 M15x1.0

50 \*30

20 42 10 52 10 95 58 25 48 13 59 14 105 68 35 66 25 85 11 25 Take care in combining No.20 with Ball Screw BSSZ(K)2510, BSSR(K)2510 or BSST2510. The ball screw nut may come in contact with the bottom surfaces

Ordering	Part Number
Example	BSW15

15

20

🕐 Ball Screw Compatibility Chart 🔊 P.756

W15 (Fixed-side single type) BSW15-SET (SET part type)



11 17 15

M20x1.0

M25x1.5

30

35

25

31

40 56 45 75



For customers using in conjunction with fixed side and support side SET part overview We recommend a SET, which allows the fixed side and support side to be ordered as one set. 5% price reduction when ordering in SETs SET part 0 Fixed Side Support Side

Black Oxide	e		Electroless Nickel Plating			LTBC Plating			
SET Part	SET	parts	SET Part	SET	parts	SET Part	SET	parts	
Number	Fixed Side Part Number	Support Side Part Number	Number	Fixed Side Part Number	Support Side Part Number	Number	Fixed Side Part Number	Support Side Part Number	
BSW6-SET	BSW6	BUN6	BSWN6-SET	BSWN6	BUNM6	BSWR6-SET	BSWR6	BUNR6	
BSW8S-SET	BSW8S	BUN8	BSWN8S-SET	BSWN8S	BUNM8	BSWR8S-SET	BSWR8S	BUNR8	
BSW8-SET	BSW8	BUN8	BSWN8-SET	BSWN8	BUNM8	BSWR8-SET	BSWR8	BUNR8	
BSW1022-SET	BSW1022	BUN1022	BSWN1022-SET	BSWN1022	BUNM1022	BSWR1022-SET	BSWR1022	BUNR1022	
BSW10S-SET	BSW10S	BUN10	BSWN10S-SET	BSWN10S	BUNM10	BSWR10S-SET	BSWR10S	BUNR10	
BSW10-SET	BSW10	BUN10	BSWN10-SET	BSWN10	BUNM10	BSWR10-SET	BSWR10	BUNR10	
BSW1223-SET	BSW1223	BUN1223	BSWN1223-SET	BSWN1223	BUNM1223	BSWR1223-SET	BSWR1223	BUNR1223	
BSW12-SET	BSW12	BUN12	BSWN12-SET	BSWN12	BUNM12	BSWR12-SET	BSWR12	BUNR12	
BSW1526-SET	BSW1526	BUN1526	BSWN1526-SET	BSWN1526	BUNM1526	BSWR1526-SET	BSWR1526	BUNR1526	
BSW1528-SET	BSW1528	BUN1528	BSWN1528-SET	BSWN1528	BUNM1528	BSWR1528-SET	BSWR1528	BUNR1528	
BSW15-SET	BSW15	BUN15	BSWN15-SET	BSWN15	BUNM15	BSWR15-SET	BSWR15	BUNR15	
BSW20-SET	BSW20	BUN20	BSWN20-SET	BSWN20	BUNM20	BSWR20-SET	BSWR20	BUNR20	
BSW25-SET	BSW25	BUN25	BSWN25-SET	BSWN25	BUNM25	BSWR25-SET	BSWR25	BUNR25	

# Support Units - Fixed Side, Square

### Support Units - Support Side, Square

Standard

#### Similar parts listed page 💵 P.762



Stocker elevator device
 Lift in stepped increments for every work insertion
 Medium precision/low frequency positioning





SET Part	SET parts							
Number	Fixed Side Part Number	Support Side Part Number						
C-BSW6-SET	C-BSW6	C-BUN6						
C-BSW8S-SET	C-BSW8S	C-BUN8						
C-BSW8-SET	C-BSW8	C-BUN8						
C-BSW10S-SET	C-BSW10S	C-BUN10						
C-BSW10-SET	C-BSW10	C-BUN10						
C-BSW12-SET	C-BSW12	C-BUN12						
C-BSW15S-SET	C-BSW15S	C-BUN15						
C-BSW15-SET	C-BSW15	C-BUN15						
C-BSW20-SET	C-BSW20	C-BUN20						

### **Support Units - Fixed Side, Square**

### **Standard Narrow Pitch Type**

Points of comparison

### Support Units - Support Side, Square

**Standard Narrow Pitch Type** 

#### Similar parts listed page DE P.762



C-VALUE parts' load rating are different from similar parts. (For details, see P.754)

Part Nu	mber	Support Side	d	L	L1	L2	1.0	в	н	h	D.	H1	Р	N	C1	<b>C</b>	da	da	dз	l	М	т	Oil Seal Applicable	C-BSFW	C-BSFW-SET
Туре	No.	SET	u	L	LI	L2	L3	В	п	n	DI	-	F		Ci	02	uı	u2	us	k	(Fine Thread)		Shaft Dia.	Unit Price	Unit Price
	10S		10						39	22	34			15						5	M10x1.0	16	12		
	10	-SET	10	25	5	29	5	60	39	22	34	32.5	46	15	13	6	6.6	11	5.5	5	WITUXT.U	10	14		
C-BSFW	12	(Only when							43	25	35			18		0	0.0		5.5	1.5	M12x1.0	19	15		
	15	purchased in Sets)	15	27	6	32	6	70	48	28	40	38	54	10	15					6.5	M15x1.0	22	20		
	20		20	35	8	43	8	88	60	34	52	50	70	22	19	8	9	14	6.6	8.5	M20x1.0	30	27.5		



• For details of Bearings mounting interface accuracies of Support Units, see DE P.759

🕐 Ball Screw Compatibility Chart 🔊 P.756

- The second secon ( No.15 and No.20 are not used with MISUMI ball screws. See P.758
- "Ball Screw/Support Unit Mapping Table" for third-party ball screws. Look at the ball screw shaft diameters Ø20, Ø28, Ø30, and Ø32.



Similar parts listed page 🔊 P.761





Part Nun	nber	d		в	н	h	B1	H1	р	N	v	بام	da	da	e	Bearing Part	Retaining Ring	C-BUFN	
Туре	No.	u	L.	Б	п	n	DI	- 11	P		v	d1	d2	d3	L L	Number	Retaining Ring	Unit Price	
	10	8		60	39	22	34	32.5	46	15	22				5	B608ZZ	STWN, S8		
	12	8	20	00	43	25	35	52.5	40	10	26	6.6	11	5.5	1.5	B6000ZZ	STWN, S10		
C-BUFN	15	15	15 70	70	48	28	40	38	54	18	32	0.0 11 3.		0.0		6.5	B6002ZZ	STWN, S15	
	20	20		88	60	34	52	50	70	28	42	9	14	14 6.6		B6004ZZ	STWN, S20		



C-BUFN15 (Support side, separate item)

- Tor details of Bearings mounting interface accuracies of Support Units,
- see **E P.759** Ball Screw Compatibility Chart **B P756**
- Store Accessories with care since they are required when assembling.
- No.15 and No.20 are not used with MISUMI ball screws. See P.758 "Ball
- Screw/Support Unit Mapping Table" for third-party ball screws. Look at
- the ball screw shaft diameters Ø20, Ø28, Ø30, and Ø32.



SET Part	SET	parts
Number	Fixed Side Part Number	Support Side Part Number
C-BSFW10-SET	C-BSFW10	C-BUFN10
C-BSFW10S-SET	C-BSFW10S	C-BUFN10
C-BSFW12-SET	C-BSFW12	C-BUFN12
C-BSFW15-SET	C-BSFW15	C-BUFN15
C-BSFW20-SET	C-BSFW20	C-BUFN20

# Support Units - Fixed Side, Round

Surface Treatment

Туре

Standard

Standard

Industry Standard





 SET part overview
 For customers using in conjunction with fixed side and support side to be ordered as one set. 5% price reduction when ordering in SETs

 SET part
 Control of the second sec

Black Oxid	e		Electroless	<b>Nickel Plating</b>		LTBC Plating				
SET Part	SET	parts	SET Part	SET	parts	SET Part	SET	parts		
Number	Fixed Side Part Number	Support Side Part Number	Number	Fixed Side Part Number	Support Side Part Number	Number	Fixed Side Part Number	Support Side Part Number		
BRW6L-SET	BRW6L	BUR6	BRWN6L-SET	BRWN6L	BURM6	BRWR6L-SET	BRWR6L	BURR6		
BRW6-SET	BRW6	BUR6	BRWN6-SET	BRWN6	BURM6	BRWR6-SET	BRWR6	BURR6		
BRW8S-SET	BRW8S	BUR6	BRWN8S-SET	BRWN8S	BURM6	BRWR8S-SET	BRWR8S	BURR6		
BRW8-SET	BRW8	BUR6	BRWN8-SET	BRWN8	BURM6	BRWR8-SET	BRWR8	BURR6		
BRW10S-SET	BRW10S	BUR10	BRWN10S-SET	BRWN10S	BURM10	BRWR10S-SET	BRWR10S	BURR10		
BRW10-SET	BRW10	BUR10	BRWN10-SET	BRWN10	BURM10	BRWR10-SET	BRWR10	BURR10		
BRW12-SET	BRW12	BUR12	BRWN12-SET	BRWN12	BURM12	BRWR12-SET	BRWR12	BURR12		
BRW15-SET	BRW15	BUR15	BRWN15-SET	BRWN15	BURM15	BRWR15-SET	BRWR15	BURR15		
BRW20-SET	BRW20	BUR20	BRWN20-SET	BRWN20	BURM20	BRWR20-SET	BRWR20	BURR20		
BRW25-SET	BRW25	BUR25	BRWN25-SET	BRWN25	BURM25	BRWR25-SET	BRWR25	BURR25		

## **Support Units - Fixed Side, Round**

### **Support Units - Support Side, Round**

Standard

#### Similar parts listed page



Part Nur	nber	Support Side	d	L	н	F	Е	D	Α	P.C.D	в	Lı	<b>T</b> 1	dı	d2		м	т	Oil Seal	C-BRW	C-BRW-SET
Туре	No.	SET	u		п	Г	E	D	A	P.U.D	Б		11	u	uz		(Fine Thread)		Applicable Shaft Dia.	Unit Price	Unit Price
	6		6	20	7	13	22	22	35	28	28	5.5	3.5	2.9	5.5	3.5	M6x0.75	12	9.5		
	8 <b>S</b>	]	0	23	0	- 4	00	00	40	35	05	7		0.4	0.5		Mout 0	14	10		
	8	1	8	23	9	14	26	28	43	35	35	7	4	3.4	6.5	4	M8x1.0	14	11.5		
	10S	-SET	10					0.4	50	40	40						M10u1 0	10	12		
C-BRW	10	(Only when		27	10		29.5	34	52	42	42	7.5	5	4.5	8	4	M10x1.0	16	14		
	12	purchased in Sets)	12	1		17		36	54	44	44	ĺ					M12x1.0	19	15		
	15S	1	15	00	15		00	40	<u></u>	50	50	10			0.5	<u> </u>	M15.1 0	00	19.5		
	15	1	15	32	15		36	40	63	50	52	10	6	5.5	9.5	6	M15x1.0	22	20		
	20	1	20	52	22	30	50	57	85	70	68	8	10	6.6	11	10	M20x1.0	30	25		



Tor details of Bearings in addition to mounting interface accuracies of Support Units, Included Collar and Bearing Nut, see 🔊 P.759 P756 Ball Screw Compatibility Chart 🔊 P756

Store Accessories with care since they are required when assembling.

### Component Details Part Name Number Housing Oversea manufactured radial bearing Retaining Ring (STWN, S)



Part Nur	nber	4		н	F	D	•	P.C.D	в	v	مار	d2		Bearing Part	Detaining Ding	C-BUR
Туре	No.	d	L .	-	<b>_</b>		A	P.C.D	Р	V	d1	u2		Number	Retaining Ring	Unit Price
	6	6	10	6	4	22	36	28	28	17	24	6.5		B606ZZ	STWN, S6	
	10	8	12 7	5	28	43	35	35	22	3.4	0.0	4	B608ZZ	STWN, S8		
C-BUR	12	10	15	7	8	34	52	42	42	26	4.5	8		B6000ZZ	STWN, S10	
	15	15	17	9	°	40	63	50	52	32	5.5	9.5	5.5	B6002ZZ	STWN, S15	
	20	20	20	11	9	57	85	70	68	47	6.6	11	6.5	B6204ZZ	STWN, S20	



C-BUR15 (Support Side separate item model number)



SET Part Number	SET	parts
SET Part Number	Fixed Side Part Number	Support Side Part Number
C-BRW6-SET	C-BRW6	C-BUR6
C-BRW8S-SET	C-BRW8S	C-BUR6
C-BRW8-SET	C-BRW8	C-BUR6
C-BRW10S-SET	C-BRW10S	C-BUR10
C-BRW10-SET	C-BRW10	C-BUR10
C-BRW12-SET	C-BRW12	C-BUR12
C-BRW15-SET	C-BRW15	C-BUR15
C-BRW15S-SET	C-BRW15S	C-BUR15
C-BRW20-SET	C-BRW20	C-BUR20

### Support Units - Fixed Side, Square <for Limited Space>

Compact Type / Low Profile Type / Mounting Hole Narrow Pitch Type

Support Units - Support Side, Square <for Limited Space> Compact Type / Low Profile Type / Mounting Hole Narrow Pitch Type



Tanta dimensions as the Fixed Side Support Units with compact in height and width. Use it together with Fixed Side Support Units.



Part Nun	nber												BUQ	BUQM
Туре	No.	d	L	В	н	h	P	V	M	l	Bearing Type	Retaining Ring	Unit Price	Unit Price
Type	140.												1 ~ 10 pc (s).	1 ~ 10 pc (s).
	8	6	15	32	32	17	23	17	5	6	B606ZZ	STWN, S6		
BUQ	10	8		36	43	25	26	22		10	B608ZZ	STWN, S8		
BUQM	12	10	20	30	43	20	20	26	6	10	B6000ZZ	STWN, S10		
	15	15		46	52	30	34	32	]	12	B6002ZZ	STWN, S15		





Part Number

BUQ

BUV10

Ordering Example



### Support Units - Fixed Side, Square <Convenient>

Type with Damper / Type with Dowel Holes

### Support Units - Support Side, Square <Convenient>

Type with Damper / Type with Retaining Ring



#### 🕐 \* Take care in combining No.20 with Ball Screw BSSZ(K)2510, BSSR(K)2510 or BSST2510. The ball screw nut may come in contact with the bottom surfaces Ordering Example BSWG15 RSWD1

#### Features of Support Units with Dowel Holes

There is a method of pressing against vertical dowel pins for locating support units. However, care is required when tightening the mounting screws so as not to cause clearances between the pins and the support unit.

Using the Support Units with Dowel Holes reduces the assembling time as troublesome adjustments for the clearance will not be needed any more. Method of Pressing against Vertically Placed Dowel Pins Using the Support Units with Dowel Holes

When tightening the mounting screws, clearance between the pins and the wall may be created. If this clearance exists readiustment is required

As the dowel holes are provided with the Support Units locating is easy







Part Number 🕐 For details of Bearings in addition to mounting interface accuracies of Support Units, Included Collar and Bearing Nut, see 🖭 P.759

TBC Plating products are filled with low dust generation grease for cleanrooms. BUND15

**BTN15** The store Accessories with care since they are required when assembling

### Support Units - Fixed Side, Square <Cost Reduction>

#### Economy / Radial Bearing Type



• When No.=15 H dimension is taller than Standard by 2mm.

🔊 \* Take care in combining No.20 with Ball Screw BSSZ (K) 2510, BSSR (K) 2510 or BSST2510. The ball screw nut may come in contact with the bottom surfaces.



⑦For details of Bearings in addition to mounting interface accuracies of Support Units, Included Collar and Bearing Nut, see BE P759
⑦For Combination of Ball Screws and Support Units, see BE P756

### Support Units - Fixed Side, Round <Cost Reduction>

Economy / Radial Bearing Type



### Support Units - Support Side, Round <Convenient>

### Support Units - Fixed Side, Square <Convenient>

Type with Retaining Ring



Part Number Orderina Fxamnle BUR15



Details of Bearings in addition to mounting interface accuracies of Support Units. Included Collar and Bearing Nut 🔊 P.759 (PLTBC Plating products are filled with low dust generation grease for cleanrooms. Store Accessories with care since they are required when assembling.



Motor part numbers and specifications are subject to change. Refer to motor manufacturer's specifications. Selection of motors, ball screws and couplings should be made upon confirming user's application specific criteria. Other motors and couplings not listed in the chart can also be used. Consult with mounting dimensions and specifications of each product. When selecting ball screws, use MISUMI Technical Calculation Software: http://fa.misumi.jp/ (Free)

Corporation

**Integrated AC Servo Motor Bracket** 

### **Support Units Peripherals**

Stoppers for Ball Screws / Precision Collars for Support Units

# Brackets for Ball Screws

Block Type



Precision Collars for	BUSC	As BUSC is slightly larger than the included collar in 0.D., it is effective in bearing oil retention. The LTBC Plating used		Part Num	nber	D	v		Unit Price
Support Units		helps for low particle generation.		Туре	No.		v	L	1 ~ 10 pc (s).
		$\leftarrow$			10	14.5	10	5.5	
					12	15.4	12	5.5	
				BUSC	15	20.4	15	10	
					20	25.4	20	11	
	+0.05	$V_{+0.05}$ $D_{0}^{+0.05}$ $D_{0}^{+0.05}$ Surface Treatment: LTBC Plating			25	31.3	25	14	
	LO	D <sup>+0.05</sup> Surface Treatment: LTBC Plating	-						
RoHS									

Ordering Example BUSC15 There are a lineup of variations that match the nut sizes of the MISUMI ball screws.



Part Nu	mber	Н													MISU	JMI Ball S	
Туре	No.	Selection	A	В	P.C.D.	к	M1xℓ	D	l1	F	L	l2	lз	M2xℓ	BSX (C3)	BSS (C5) BSSE (C7)	BS [] [] (C10)
	801X	10 20	30	H+8	19	30	M3x5	12.4	24	8	16	3	10	M3x5	0801	-	-
	802S	18 20 23 25	40	H+13	27	45	INI3X3	20.4	30	14	28	8			0802	0802	-
	802C	17 20 23 25	40	H+10	24	30	M4x7	16.4	30	12					-	-	0802
	802R	17 20 23 25 28 30	43	H+12	30	0		20.4	34	17	24	6			-	-	0802
	804R	17 20 23 25 28 30				30	M3x 5	1	-		24	Ŭ	12	M4x 8	-	-	0804
	1002R	17 20 23 25 28 30	50	H+13.5	33	00		23.4	42	16					-	-	1002
	1002X	17 20 23 25 28 30	43	H+15.5	31	45			34		26	7			1002	-	-
	1002S 1004S	17 20 23 25 28 30 35 40 20 23 25 28 30 35 40	50	H+14	36			26.4	40	22	24 32	6 10	10		-	1002	-
	1004S		52 50	H+14 H+13	36		M4x 7	26.4	42 40	18	32	10	16		-	1004	- 1004
	1004C	17         20         23         25         28         30         35         40           17         20         23         25         28         30         35         40	50	H+13 H+14	31	30	WI4X /	26.4	40	22	27	6	15		-	-	1004
	1004R	17 20 23 25 28 30 35 40 17 20 23 25 28 30 35 40	52		36	30		20.4	42	_ 22	21	0	15		-	-	1004
	1010K	17 20 23 25 28 30 35 40	52	H+15	30			28.4	42	23	34	7	20		-	1010	-
	1202S	20 23 25 28 30 35 40		H+17	33		1	25.4		15	28	8	14		1202	1202	
	1202S	23 25 28 30 35 40	50	H+20.5	41	45	M5x 7	30.4	40		34	7	20	M5x10	1202	1202	
	1204S	20 23 25 28 30 35 40	52	H+14	33		WIJA /	24.4	42	20	27	6			-	-	1204
	12040	20 23 25 28 30 35 40	52	H+15			M4x 7	24.4	42		29	7	15		-	-	1204
	12055	20 23 25 28 30 35 40	1	11110	40						36	8			1205	1205	- 1204
	12105	20 23 25 28 30 35 40	60	H+16	41		M5x 7	30.4	50	24					-	1210	1210
BNFB	1405R	20 23 25 28 30 35 40			40		M4x 7	1			40	10			-	-	1405
BNFM	1505C	20 23 25 28 30 35 40 45	1		42		M5x 7	31.4				-	20		-	-	1505
	1505R	20 23 25 28 30 35 40 45		1	44		M4x 7				34	7			-	-	1505
BNFR	1505S	20 23 25 28 30 35 40 45	1		45			34.4		28	36	8			1505	1505	-
BNFA	1510S	20 23 25 28 30 35 40 45	62	H+17	45				50		42	11	1	M6x12	-	1510	-
	1510C	20 23 25 28 30 35 40 45	02		42		M5x 7	31.4	52	24	38	7	24		-	-	1510
	1510R	20 23 25 28 30 35 40 45	1		45	30		34.4	1	28	44	1 1	30		-	-	1510
	1520S	23 25 28 30 35 40 45	1		45			34.4		28	50				-	1520	1520
	2005C	25 28 30 35 40 45	72	H+19	49		M6x10	36.4	60	26	40	1	20		-	-	2005
	2010C	25 28 30 35 40 45		n+19				30.4		20	50	10	30		-	-	2010
	2005S	25 28 30 35 40 45	76	H+20	53		M6x10		64	34	55		35	M8x16	-	2005	-
	2005R	25 28 30 35 40 45	68		50		M4x 7	40.4	56		40		20	MOXIO		-	2005
	2020R	25 28 30 35 40 45		H+19.5			M5x 7			32	70	15	40			-	2020
	2505C	28 30 35 40 45 55	76	H+24	53		M6x10	42.4	64		40		20			-	2505
	2505R	28 30 35 40 45 55	10	H+21	55		M5x 7	43.4	62	38	60		40	M10x20		-	2505
	2010S	28 30 35 40 45 55	82	H+23	59			46.4	70	40	55		35			2010/2020	-
	2525R	28 30 35 40 45 55			60		M6x10	47.4			90		70	M8x16		-	2525
	2505S	30 35 40 45 55	76	H+28.5		45		L	64	32	40		20		-	2505	-
	2010R	35 40 45 55	84	H+26	67			52.4	72	46	60	10	40		-	-	2010
	2510S	35 40 45 55	94		68		M8x12		80	44	55		35	M10x20		2510/2520	-
	2510R	35 40 45 55	100	H+30	78	30	Mouto	60.4	86	54	60		40	Mouto	-	-	2510
	2806R 3232R	35 40 45 55	87	H+26	65		M6x10	50.4	75	42	75			M8x16	-	-	2806 3232
	3232R 3210R	35 40 45 55	106	H+30	74 85		M8x12	58.4 67.4	86	50	75		55	M10x20		-	3232
	as 2 holes	40 45 55 . • No C is for C10 Rolled Ball Screws C	116	H+33	85			0/.4	96	58	80		60			-	3210

Ordering Part Number - H Example BNFB802S - 20



