

Bushings for Locating Pins

Ceramic / Inner Groove Straight / Shouldered

■ **Features:** Bushings for Locating Pins - Ceramics - excel in heat resistance, insulation, and abrasion resistance.

■ **Ceramics**

JBC

RoHS10

Material: Zirconia

Ordering Example **Part Number** - **L**
JBC16 - 20

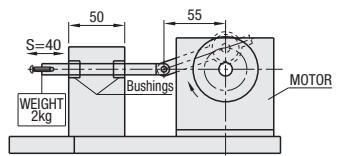
Part Number		L Selection		R	D	Unit Price
Type	dg6					JBC
JBC	6	+0.012	8 10	1	10	
	8	+0.014	10 12		12	
	10	+0.005			15	
	12	+0.017	10 12 16	2	18	
	13				22	
	15				25	
	16				26	
20	+0.009	20	3	30		

■ **Properties**

Item	Unit	Part Number JBC
Specific Gravity	g/cm ³	6.0
Moisture Absorption Ratio	%	0
Vickers Hardness	HV	1300
Flexural Strength	kg/mm ²	100
Linear Expansion Coefficient	x10 ⁻⁶ /°C	10.0
Thermal Conductivity	cal/cm·sec·°C	0.007
Volume Inherent Resistivity	Ω·cm	3x10 ¹²

- ⚠ Avoid pressing Ceramic Bushing in. It may crack when struck hard. Use of Loctite is recommended.
- ⚠ Strength may degrade when used at the temperature over 100°C for extended durations, or when operating temperature varies from normal to high repeatedly.
- ⚠ For orders larger than indicated quantity, please request a quotation.

■ **Bushings for Locating Pins - Ceramic Abrasion Data**



Sample	Inner Diameter (Before Test)	Inner Diameter (After Test)	Difference
Ceramic JBC10-10	10.011	10.012	0.001
Steel JBA10-10	10.008	10.037	0.029

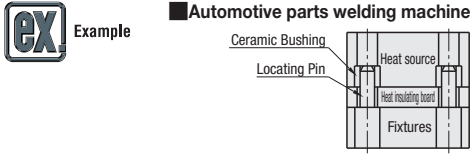
■ **Test Conditions**

- <Measuring Method>
Apply load on the bush by reciprocating Ø10 round shaft with 40mm stroke with a 2kg weight on the end in the crank mechanism (left diagram).
- <Measuring Instrument Overview>
- Operation Hours : 60 hours each
 - Lubricant: JIS Machine Oil (Tellus 32) * drip-feed every 2 hours
 - Round Shaft Stroke : 40mm
 - Temperature : 25-27°C

■ **Testing Results**

Ceramics excel in abrasion resistance compared to steel. Suitable for long-term use with locating pins insertion and extraction, maintaining an excellent abrasion resistance.

■ **Automotive parts welding machine**



How to Mount: Set a plastic board. Using a plastic hammer, press Ceramic Bushing slightly in.
Circumstance: Set it between heat source and fixtures with high accuracy but transfer minimum heat to fixtures.

■ **Straight** ■ **Shouldered**

RoHS10

Material	Hardness	Type	
		Straight	Shouldered
SUJ2	58HRC~	LCB	LCH
FC250 (Special Solid Lubricant)	-	LCBZ	LCHZ

LCB (Standard) LCBZ (No Lubrication)

⚠ L dimensions 5, 6 of LCB (standard) have one groove at L/2 position.

LCH (Standard) LCHZ (No Lubrication)

■ **Straight**

Part Number	D _{H8}	L Selection	D _{1m6}	ℓ	R	Unit Price	
						LCB	LCBZ
(Standard) LCB	5	*5 *6 *8 *10 *12 *16	10	0.021	1.5		
	6	6 8 10 *12 *16	12	2	0.5		
	8	8 10 12 16 20	14	0.025	1		
	10	16					
	12	18					
(No Lubrication) LCBZ	13	10 12 16 20 25	18	0.029	1.2		
	15	16 *20 25 30	25				
	16	26					
	20	16 20 25 30	30				
	25	20 25 30 35	35			0.034	2

■ **Shouldered**

Part Number	D _{H8}	L Selection	D _{1m6}	ℓ	R	Unit Price	
						LCH	LCHZ
(Standard) LCH	5	*8 *10 *12 *16	10	0.021	1.5		
	6	8 10 *12 *16	12	2	0.5		
	8	8 10 12 16 20	14	0.025	1		
	10	16					
	12	18					
(No Lubrication) LCHZ	13	10 12 16 20 25	18	0.029	1.2		
	15	16 20 25 30	25				
	16	26					
	20	16 20 25 30	30				
	25	20 25 30 35	35			0.034	2

⚠ L Dimensions marked with * are available for LCB only. ⚠ For orders larger than indicated quantity, please check with WOS. ⚠ L Dimensions marked with * are available for LCH only. ⚠ For orders larger than indicated quantity, please check with WOS.

Ordering Example **Part Number** - **L**
LCB10 - 12
LCBZ12 - 20
LCH25 - 30
LCHZ25 - 35