

# Insulated Bushings

Copper Alloy  
Straight Type  
SO#50SP2

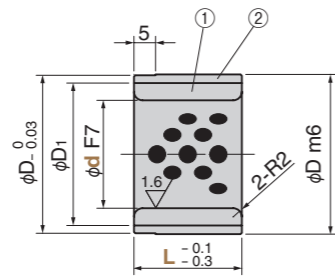


# Insulated Washers

Copper Alloy  
Washer Type  
SO#50SP2



IB

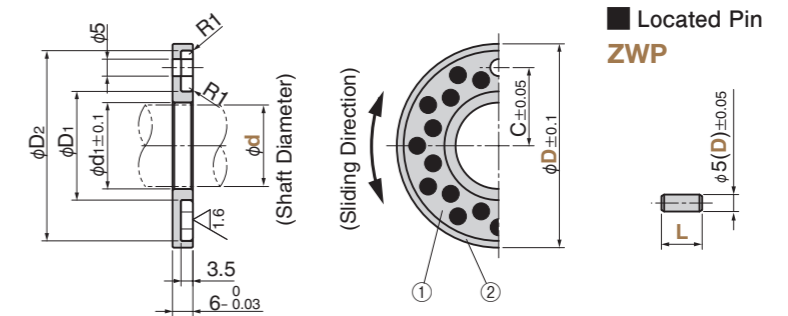


Recommended mating post tolerance: e7  
Recommended housing hole tolerance: H7

Material ① Base Copper alloy (SO-2)  
Solid lubricant (GR-1)  
② Insulation(SO#25-61N)

⚠ Operation range temperature is  $-40 \sim +100^{\circ}\text{C}$

IW



■ Located Pin  
ZWP

Material ① Base Copper alloy (SO-2)  
Solid lubricant (GR-1)  
② Insulation (SO#25-61N)

⚠ Operation range temperature is  $-40 \sim +100^{\circ}\text{C}$

d F7	D m6	D <sub>1</sub>	Catalog No.	d	L
16	28	22	IB	16	20
25	37	33		25	16
30	42	37		30	20
35	52	38		35	17
		44			20

Order Catalog No. IB d 25 — L 16

d <sub>1</sub>	D <sub>1</sub>	D <sub>2</sub>	C	Catalog No.	d	D
25.4	35	62	26	IW	25	70
30.4	40	62	27		30	70
	40	80	31			90

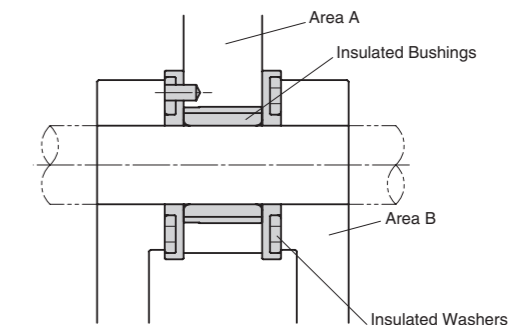
Order Catalog No. IW d 30 — D 70

■ Located Pin

Catalog No.	D	L
ZWP	5	5
		10
		12

Order Catalog No. ZWP D 5 — L 5

■ Example



(Part of welding gun)  
Area A is electrically separated from area B.

## Operation Range (Bronze Bushing)

Lubricant Type	Lubricating Condition	Environment Condition	Max. Allowable Load P N/mm <sup>2</sup>	Max. Allowable Sliding Speed V m/min	Max. Allowable PV value N/mm <sup>2</sup> · m/min	Operation Range Temperature °C
GR-1	No lubrication	Atmosphere	100	15	150	-50 ~ +300
	Regular lubrication (Grease)			30		200

⚠ The operation temperature range of insulator (w) is  $-40$  to  $+100^{\circ}\text{C}$ .

## Physical Properties (Bronze Bushing)

Specific Gravity	Hardness HB	Elongation %	Tensile Strength N/mm <sup>2</sup>	Linear Expansion Coefficient $\times 10^{-5}/^{\circ}\text{C}$
7.9	210 or more	12 or more	755 or more	1.9