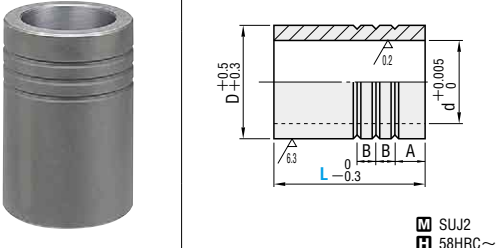


BALL GUIDE BUSHINGS FOR DIE SETS

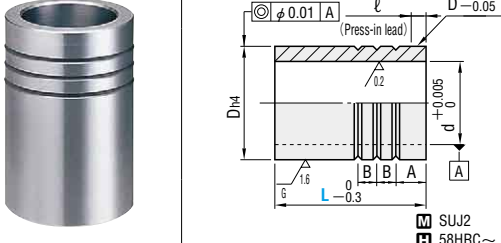
BALL GUIDE BUSHINGS FOR DIE SETS

—DETACHABLE TYPE—

RoHS **MBB** (Devcon adhesive type)



RoHS **LBB** (Loctite adhesive type)



M SUJ2
58HRC~

Catalog No.		L		Base unit price 1~9 pieces	
Type	PD			MBB	LBB
MBB (Devcon adhesive type)	20	50		Quotation	
	22	50	60		
	25	60	80		
	28	60	80		
32	80	100			
LBB (Loctite adhesive type)	38	80	100		
	45	100	120		
	50	100	120		
	60	100	120		

PD	MBB·LBB					
Post diameter	d	D _{H4}	ℓ	A	B	
20	+0.020	26	37	0	4	10
22	+0.015	28	40			
25		31	45	-0.007	5	12
28	+0.025	36	50	0		
32	+0.020	40	55	-0.008	6	15
38	+0.030	48	64			
45	+0.025	55	74	0	6	15
50	+0.035	60	83			
60	+0.030	70	95			

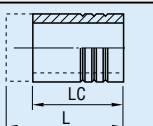
Do not use a cooling-fit for the bushings. In the same way as with sub-zero treatment, cooling causes residual austenite to transform into martensite and expand. This expands both the bushing inner and outer diameters, rendering the bushing unusable.

Order **Catalog No.** — **L**
MBB 50 — 120

Alterations **Catalog No.** — **L(LC)**
LBB 22 — LC45

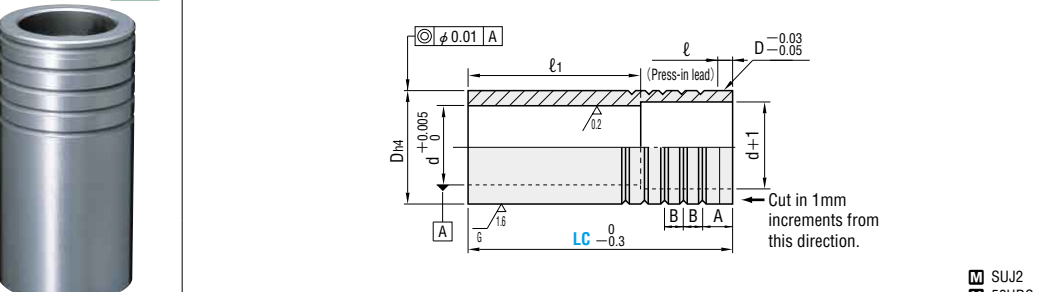
Days to Ship **Quotation**

Price **Quotation**

Alteration	Code	Spec.	1Code
	LC	Full length change L/2 ≤ LC < L 1mm increments	Quotation

Long type ball guide bushings for die sets

RoHS **LBB** (Loctite adhesive type)



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Do not use a cooling-fit for the bushings. In the same way as with sub-zero treatment, cooling causes residual austenite to transform into martensite and expand. This expands both the bushing inner and outer diameters, rendering the bushing unusable.

d	D _{H4}	ℓ	A	B	Effective sliding length ℓ ₁	Catalog No.	LC	Base unit price
Type	PD	1mm increments	1~9 pieces					
26	37	0	4	7×7 pieces	60	LBB	20	51 ~ 120
28	40						22	61 ~ 120
31	45	-0.007	5	10×5 pieces	80		25	81 ~ 120
36	50	0					28	81 ~ 150
40	55	-0.008	6	10×6 pieces	100		32	101 ~ 150
48	64						0	38
55	74	0	6	10×8 pieces	120	45	121 ~ 180	
60	83					0	50	121 ~ 200
70	95	-0.010				60	121 ~ 200	

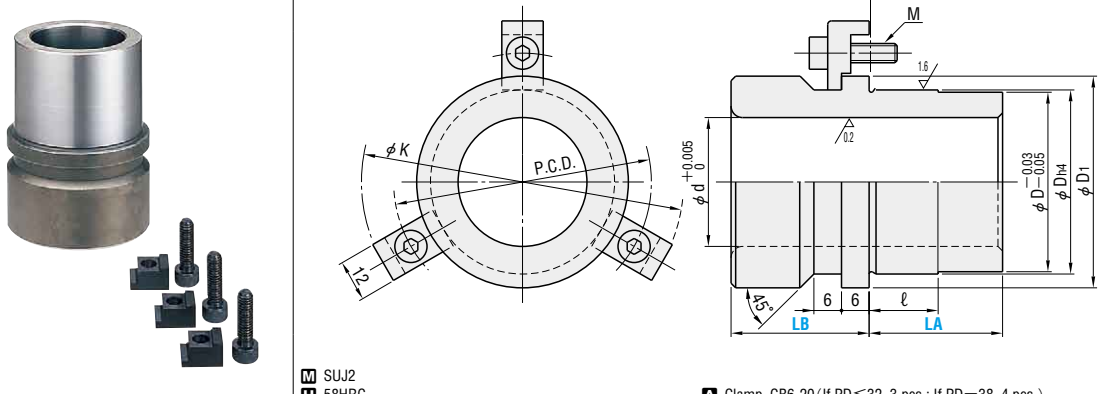
Order **Catalog No.** — **LC**
LBB 22 — LC100

Days to Ship **Quotation**

Price **Quotation**

If there is only one groove remaining as the result of cutting, a second groove is added.
LC51-59, in the case of PD20, effective slide length (ℓ₁) becomes short.

RoHS **RBB** (Detachable type)



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Clamp, CB6-20 (If PD ≤ 32, 3 pcs.; If PD = 38, 4 pcs.)

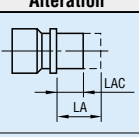
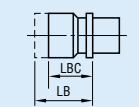
PD	Post diameter	d	D _{H4}	D ₁	ℓ	P.C.D.	K	M	Catalog No.		Base unit price 1~9 pieces		
									Type	PD		LA	LB
RBB	20	+0.020 +0.015	26	37	0	55	71	6	RBB	20	30	20	
											22	35	25
												30	20
	25	35	25										
		40	40										
	28	35	25										
		40	40										
	32	40	40										
		50	50										
	38	40	40										
		50	50										

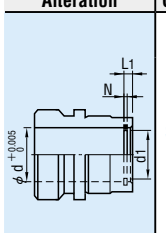
Order **Catalog No.** — **LA** — **LB**
RBB 25 — 40 — 40

Days to Ship **Quotation**

Price **Quotation**

Alterations **Catalog No.** — **LA(LAC)** — **LB(LBC)** — **(SNC)**
RBB 20 — LAC32 — 25

Alteration	Code	Spec.	1Code
	LAC	LA dimension change ℓ + 2 ≤ LAC < LA 1mm increments	Quotation
	LBC	LB dimension change 6 ≤ LBC < LB 1mm increments	

Alteration	Code	Spec.	1Code
	SNC	Installation of a snap ring onto the lower die bushing.	Quotation
		For applications, see P.849.	