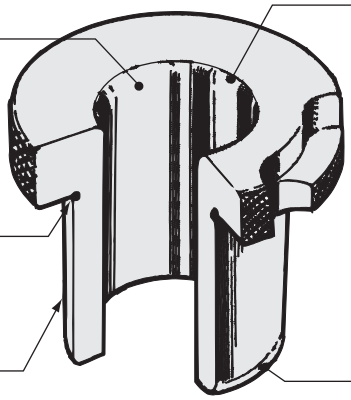
Drill Jig Bushing



I.D.
Bushings are made in 3 different types for precise drilling, drilling and reaming. Available in increments of 0.1 mm according to size of drill or reamer.

UNDERCUT
Two-way undercut allows bushings to fit flush on top of jig.

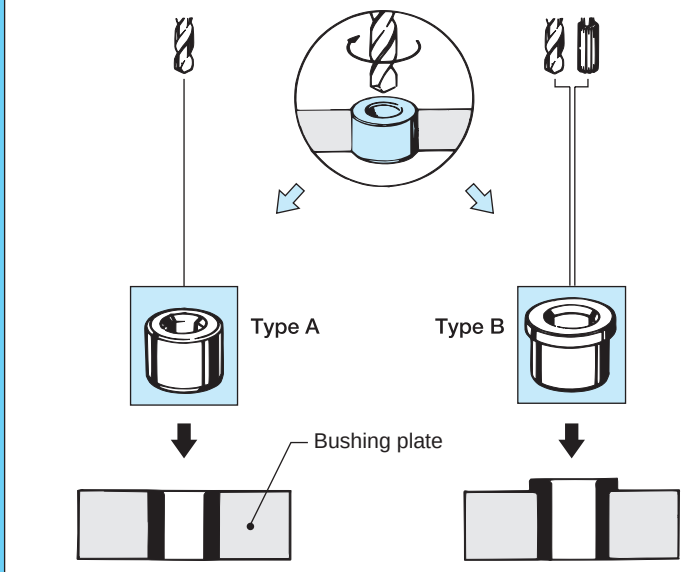
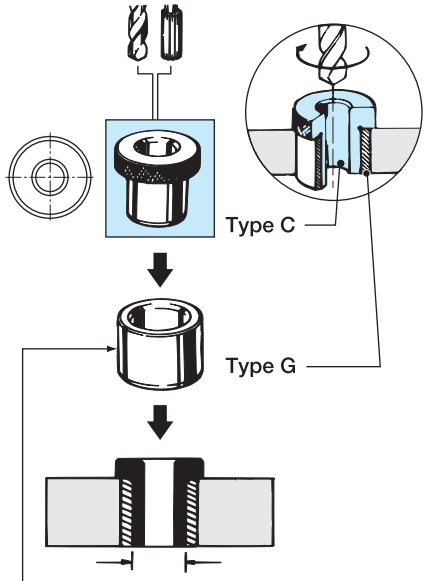
O.D.
Highly precise finish based on I.D.

RADIUS
Blended and polished for smooth entry of cutting tool.

HARDNESS
H.R.C60° ~ 64°for long wear free.

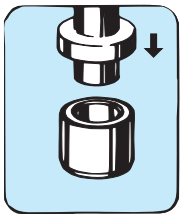
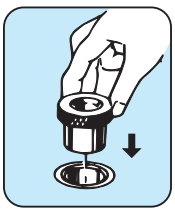
MATERIAL
JIS SK-5 or selected steel.

CHAMFERS
Chamfers on Bushings permit easy insertion.

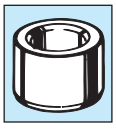
Type	PRESS FIT BUSHING		RENEWABLE BUSHING
Designation	HEADLESS Type A	HEADED Type B	ROUND Type C
Tool applied / Shape and sequence of fitting-in / Sectional view			

Bushings that have the same O.D. are interchangeable with each other.

HOW TO INSTALL A JIG BUSHING

PRESS FIT BUSHING Type A, B, G	RENEWABLE BUSHING Type C, D, E, F
How to press-fit 	
Press the bushing correctly into the bush plate.	Renewable bushing can be inserted by hand.

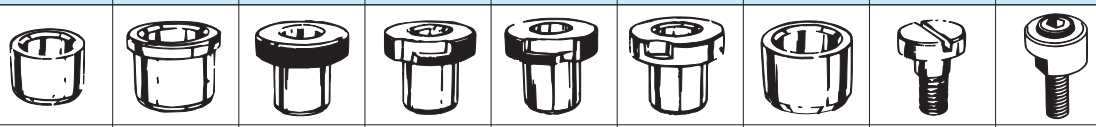
LINER BUSHING Type G



This Guides the renewable bushing for smoothe insertion or replacement.

Inch to Metric (mm) → Inch × 25.4
Metric (mm) to Inch → Metric ÷ 25.4 or Metric × 0.03937

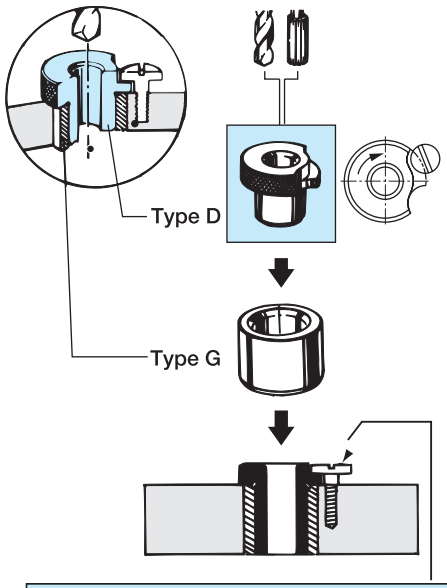
Special / Custom Sizes on request

Name	Press fit bushing		Renewable bushing				Headless liner bushing	Lock screw	Round clamp
	Headless	Headed	Round	Right slip	Left slip	Fixed			
Shape									
Higher accuracy	SA	SB	SC	SD	SE	SF	G	T	R
Standard accuracy	A	B	C	D	E	F			
Reaming	—	BR	CR	DR	ER	FR			

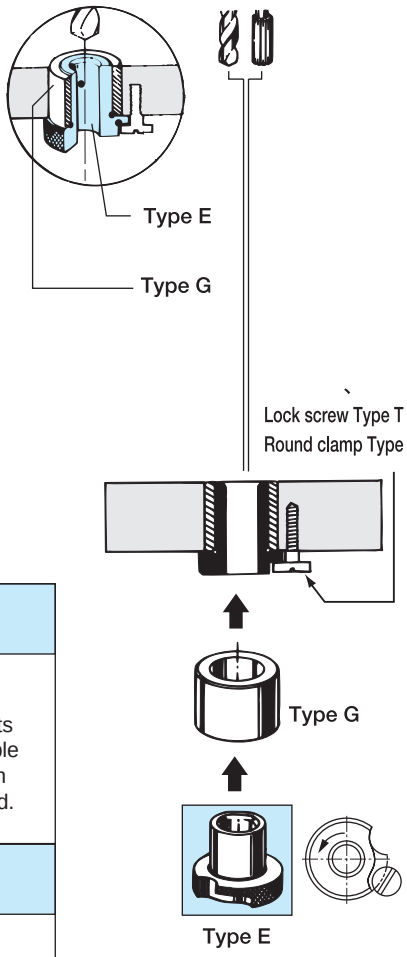
S···for higher accuracy R···for reaming

RENEWABLE BUSHING

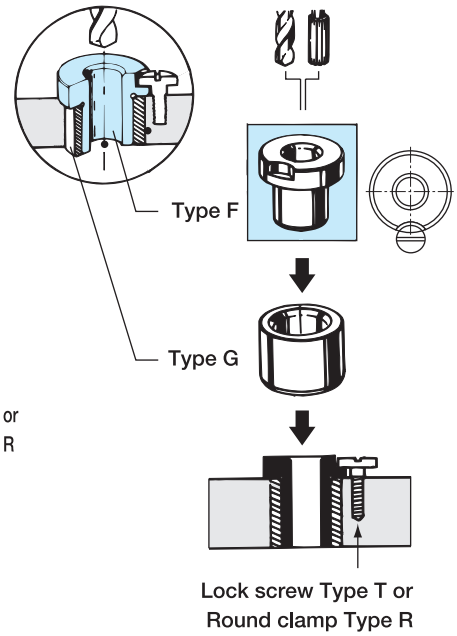
(R)SLIP RENEWABLE Type D



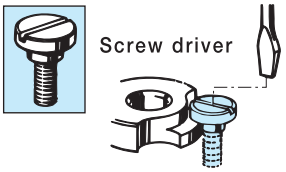
(L)SLIP RENEWABLE Type E



FIXED RENEWABLE Type F

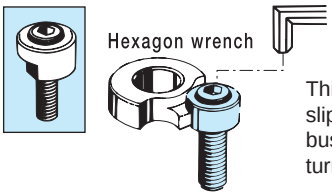


LOCK SCREW Type T



This Prevents slip renewable bushing from turning round.

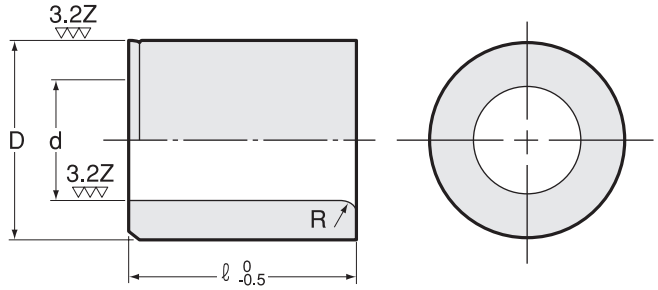
ROUND CLAMP Type R



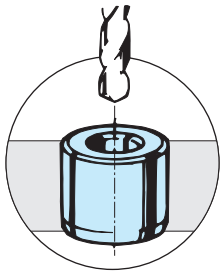
This Prevents slip renewable bushing from turning round.

Type A

Headless Press Fit Bushing Type A



Example



※ 1.Bushing with I.D. size smaller than 3.0mm uses 30 degreed chamfered radius (R).

Tolerance of I.D.

d	0.8 ~ 1.5	1.6 ~ 3.0	3.1 ~ 6.0	6.1 ~ 10.0	10.1 ~ 18.0	18.1 ~ 30.0	30.1 ~ 50.0	50.1 ~ 55.0
SA（G6）	–	+0.008 +0.002	+0.012 +0.004	+0.014 +0.005	+0.017 +0.006	+0.020 +0.007	+0.025 +0.009	+0.029 +0.010
A	+0.025 +0.002	+0.025 +0.002	+0.030 +0.004	+0.036 +0.005	+0.043 +0.006	+0.052 +0.007	+0.062 +0.009	+0.074 +0.010

Concentric runout (T.I.R.) of O.D.to I.D.

d	0.8 ~ 1.5	1.6 ~ 18.0	18.1 ~ 50.0	50.1 ~ 55.0
SA	–	0.005 or less	0.008 or less	0.010 or less
A	0.012 or less	0.012 or less	0.020 or less	0.025 or less

1.Renewable bushing cannot be used together with headless press fit bushing, which can be used only with headless liner bushing (Type G).
2.Bore a hole in bushing plate at H7 for bushing with O.D. (D) p6.Tolerance of hole bored by reamer with O.D. m5 is H7.

I.D.(d) of hole in bushing plate	0.8 ~ 3.0	3.1 ~ 6.0	6.1 ~ 10.0	10.1 ~ 18.0	18.1 ~ 30.0	30.1 ~ 50.0	50.1 ~ 55.0
Tolerance H7	+0.010 0	+0.012 0	+0.015 0	+0.018 0	+0.021 0	+0.025 0	+0.030 0

Inch to Metric (mm) → Inch × 25.4
Metric (mm) to Inch → Metric ÷ 25.4 or Metric × 0.03937

Special / Custom Sizes on request

SA····· For higher accuracy
A····· For standard accuracy

d	D (p6)	R	Grade	ℓ										
				6	8	10	12	16	20	25	30	35	45	55
0.8 ~ 1.0	3 +0.012 +0.006	※1												
			A	○	○									
1.1 ~ 1.5	4 +0.020 +0.012	※1												
			A	○	○									
1.6 ~ 2.0	5 +0.020 +0.012	※1	SA		○	○	○							
			A		○	○	○							
2.1 ~ 3.0	7 +0.024 +0.015	※1	SA		○	○	○							
			A		○	○	○							
3.1 ~ 4.0	8 +0.024 +0.015	1	SA			○	○	○						
			A			○	○	○						
4.1 ~ 6.0	10 +0.024 +0.015	1	SA			○	○	○						
			A			○	○	○						
6.1 ~ 8.0	12 +0.029 +0.018	2	SA				○	○	○					
			A				○	○	○					
8.1 ~ 10.0	15 +0.029 +0.018	2	SA				○	○	○					
			A				○	○	○					
10.1 ~ 12.0	18 +0.029 +0.018	2	SA					○	○	○				
			A					○	○	○				
12.1 ~ 15.0	22 +0.035 +0.022	2	SA					○	○	○				
			A					○	○	○				
15.1 ~ 18.0	26 +0.035 +0.022	2	SA						○	○	○			
			A						○	○	○			
18.1 ~ 22.0	30 +0.035 +0.022	3	SA						○	○	○			
			A						○	○	○			
22.1 ~ 26.0	35 +0.042 +0.026	3	SA							○	○	○		
			A							○	○	○		
26.1 ~ 30.0	42 +0.042 +0.026	3	SA							○	○	○		
			A							○	○	○		
30.1 ~ 35.0	48 +0.042 +0.026	4	SA								○	○	○	
			A								○	○	○	
35.1 ~ 42.0	55 +0.051 +0.032	4	SA								○	○	○	
			A								○	○	○	
42.1 ~ 48.0	62 +0.051 +0.032	4	SA									○	○	○
			A									○	○	○
48.1 ~ 55.0	70 +0.051 +0.032	4	SA									○	○	○
			A									○	○	○

Ordering Example

SA - 6.0 × 10
d ℓ

Code

0000 012 060 12
Code (A:011, SA:012) d ℓ

Inch to Metric (mm) → Inch × 25.4
Metric (mm) to Inch → Metric ÷ 25.4 or Metric × 0.03937

Special / Custom Sizes on request