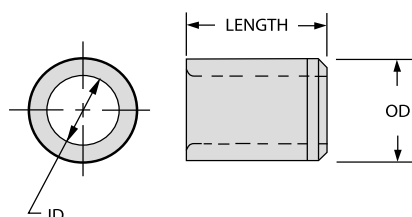
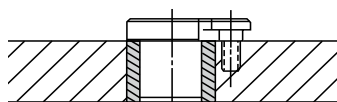


LINER BUSHINGS



APPLICATIONS:

Liners are permanent bushings used to hold renewable drill bushings. The liner's ID has a precise sliding fit with the renewable bushing's OD. The hardened liner accurately locates the renewable bushing and protects the jig plate from wear caused by frequent bushing replacement. Note: Metric liner bushings are the same as metric press-fit bushings.



ORDERING EXAMPLES:

L-32-16	Standard inch liner bushing
L-32-16U	Unground OD
L-40-16-24	Standard inch liner bushing with a choice of ID in that OD size
PM-18-25-12.00	Standard metric liner bushing (same as metric press-fit type)

STANDARD LINER ID TOLERANCES:

3/16 to 3/8"	+0.001/+0.004	8 to 10mm	+0.05/+0.14mm
7/16 to 5/8"	+0.002/+0.005	12 to 18mm	+0.06/+0.17mm
3/4"	+0.003/+0.006	22 to 30mm	+0.07/+0.20mm
7/8 to 1"	+0.004/+0.007	35 to 48mm	+0.09/+0.25mm
1-3/8"	+0.006/+0.010	55 to 78mm	+0.10/+0.29mm
1-3/4"	+0.008/+0.012	85 to 105mm	+0.12/+0.34mm
2-1/4"	+0.010/+0.015	(G6 tolerance)	

ID	OD	LENGTH	ANSI PART NO.
3/16	5/16 .3141-.3138 (.327-.322 UNG)	1/4	L-20-4
		5/16	L-20-5
		3/8	L-20-6
		1/2	L-20-8
		5/8	L-20-10
		3/4	L-20-12
1/4	7/16 .4392-.4389 (.453-.448 UNG)	1/4	L-28-4
		5/16	L-28-5
		3/8	L-28-6
		1/2	L-28-8
		5/8	L-28-10
		3/4	L-28-12

ID	OD	LENGTH	ANSI PART NO.			
5/16	1/2 .5017-.5014 (.520-.515 UNG)	1/4	L-32-4			
		5/16	L-32-5			
		3/8	L-32-6			
		1/2	L-32-8			
		5/8	L-32-10			
		3/4	L-32-12			
		1	L-32-16			
	1-3/8	L-32-22				
	9/16 .5642-.5639 (.582-.577 UNG)	1/4	L-36-4			
		5/16	L-36-5			
		3/8	L-36-6			
		1/2	L-36-8			
		5/8	L-36-10			
		3/4	L-36-12			
1		L-36-16				
3/8	5/8 .6267-.6264 (.645-.640 UNG)	1/4	L-40-4-24			
		5/16	L-40-5-24			
		3/8	L-40-6-24			
		1/2	L-40-8-24			
		5/8	L-40-10-24			
		3/4	L-40-12-24			
		1	L-40-16-24			
		7/16	1/4	L-40-4-28		
			5/16	L-40-5-28		
			3/8	L-40-6-28		
			1/2	L-40-8-28		
			5/8	L-40-10-28		
			3/4	L-40-12-28		
			1	L-40-16-28		
1/2	3/4 .7518-.7515 (.770-.765 UNG)	5/16	L-48-5			
		3/8	L-48-6			
		1/2	L-48-8			
		3/4	L-48-12			
		1	L-48-16			
		1-3/8	L-48-22			
		1-1/2	L-48-24			
		1-3/4	L-48-28			
		2-1/8	L-48-34			
		9/16	7/8 .8768-.8765 (.895-.890 UNG)	5/16	L-56-5-36	
3/8	L-56-6-36					
1/2	L-56-8-36					
5/8	L-56-10-36					
3/4	L-56-12-36					
1	L-56-16-36					
1-1/4	L-56-20-36					
5/8	5/16			L-56-5-40		
	3/8			L-56-6-40		
	1/2			L-56-8-40		
	5/8	L-56-10-40				
	3/4	L-56-12-40				
	1	L-56-16-40				
	1-1/4	L-56-20-40				

CONTINUED ON NEXT PAGE

LINER BUSHINGS

ID	OD	LENGTH	ANSI PART NO.
3/4	1 1.0018-1.0015 (1.020-1.015 UNG)	1/2	L-64-8
		3/4	L-64-12
		1	L-64-16
		1-3/8	L-64-22
		1-1/2	L-64-24
		1-3/4	L-64-28
		2-1/8	L-64-34
		2-1/2	L-64-40
		3	L-64-48
7/8	1-1/4 1.2520-1.2517 (1.270-1.265 UNG)	1/2	L-80-8
		5/8	L-80-10
		3/4	L-80-12
		1	L-80-16
		1-1/4	L-80-20
		1-1/2	L-80-24
1	1-3/8 1.3772-1.3768 (1.395-1.390 UNG)	1/2	L-88-8
		3/4	L-88-12
		1	L-88-16
		1-3/8	L-88-22
		1-1/2	L-88-24
		1-3/4	L-88-28
		2-1/8	L-88-34
		2-1/2	L-88-40
		3	L-88-48
1-3/8	1-3/4 1.7523-1.7519 (1.770-1.765 UNG)	3/4	L-112-12
		1	L-112-16
		1-3/8	L-112-22
		1-1/2	L-112-24
		1-3/4	L-112-28
		2-1/8	L-112-34
		2-1/2	L-112-40
		3	L-112-48
1-3/4	2-1/4 2.2525-2.2521 (2.270-2.265 UNG)	3/4	L-144-12
		1	L-144-16
		1-3/8	L-144-22
		1-1/2	L-144-24
		1-3/4	L-144-28
		2-1/8	L-144-34
		2-1/2	L-144-40
		3	L-144-48
2-1/4	2-3/4 2.2525-2.2521 (2.270-2.265 UNG)	3/4	L-176-12
		1	L-176-16
		1-3/8	L-176-22
		1-1/2	L-176-24
		1-3/4	L-176-28
		2-1/8	L-176-34
		2-1/2	L-176-40
		3	L-176-48

For extended-range bushings (larger sizes) please see our web catalog.