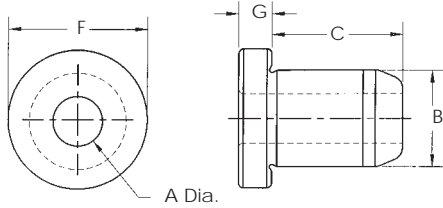


DRILL JIG BUSHINGS



Head Liner

Type HL

Finish Ground & Unground O.D.

Inside Diameter Range Size (A)	Outside Diameter		Length Inches (C)	ANSI Symbol†	Price Code
	Finish Ground Size (B)	Unground Size			
5/16" (.3126 - .3129)	.5017 .5014	1/2"	5/16	HL-32-5	114
			3/8	HL-32-6	117
			1/2	HL-32-8	117
			3/4	HL-32-12	121
			1	HL-32-16	135
1/2" (.5002 - .5005)	.7518 .7515	3/4"	1 3/8	HL-32-22	149
			5/16	HL-48-5	115
			3/8	HL-48-6	117
			1/2	HL-48-8	117
			3/4	HL-48-12	121
1" (.7503 - .7506)	1.0018 1.0015	1"	1	HL-48-16	128
			1 3/8	HL-48-22	136
			1 1/2	HL-48-24	141
			1 3/4	HL-48-28	147
			2 1/8	HL-48-34	156
1 3/8" (1.0004 - 1.0007)	1.3772 1.3768	1 3/8"	1/2	HL-64-8	126
			3/4	HL-64-12	130
			1	HL-64-16	133
			1 3/8	HL-64-22	136
			1 1/2	HL-64-24	143
1 1/2" (1.3756 - 1.3760)	1.7523 1.7519	1 3/4"	1 3/4	HL-64-28	151
			2 1/8	HL-64-34	161
			2 1/2	HL-64-40	177
			3	HL-64-48	228
			1/2	HL-88-8	144
1 3/4" (2.2510 - 2.2515)	2.2525 2.2521	2 1/4"	3/4	HL-88-12	136
			1	HL-88-16	144
			1 3/8	HL-88-22	150
			1 1/2	HL-88-24	153
			1 3/4	HL-88-28	161
2 1/4" (2.2510 - 2.2515)	2.7526 2.7522	2 3/4"	2 1/8	HL-88-34	171
			2 1/2	HL-88-40	185
			3	HL-88-48	246
			3/4	HL-112-12	158
			1	HL-112-16	163
2 3/8" (2.2510 - 2.2515)	2.7526 2.7522	2 3/4"	1 3/8	HL-112-22	170
			1 1/2	HL-112-24	176
			1 3/4	HL-112-28	182
			2 1/8	HL-112-34	195
			2 1/2	HL-112-40	210
2 7/8" (2.2510 - 2.2515)	2.7526 2.7522	2 3/4"	3	HL-112-48	261
			3/4	HL-144-12	191
			1	HL-144-16	184
			1 3/8	HL-144-22	192
			1 1/2	HL-144-24	198
2 1/2" (2.2510 - 2.2515)	2.7526 2.7522	2 3/4"	1 3/4	HL-144-28	205
			2 1/8	HL-144-34	218
			2 1/2	HL-144-40	231
			3	HL-144-48	264
			3/4	HL-176-12	216
2 1/4" (2.2510 - 2.2515)	2.7526 2.7522	2 3/4"	1	HL-176-16	203
			1 3/8	HL-176-22	218
			1 1/2	HL-176-24	222
			1 3/4	HL-176-28	229
			2 1/8	HL-176-34	241
2 1/2" (2.2510 - 2.2515)	2.7526 2.7522	2 3/4"	2 1/2	HL-176-40	249
			3	HL-176-48	270

ANSI HEAD LINER HEAD DIMENSIONS

Body O.D. (B)	(F)	(G)
1/2"	5/8"	3/32"
3/4"	7/8"	3/32"
1	1-1/8"	1/8"
1-3/8"	1-1/2"	1/8"
1-3/4"	1-7/8"	3/16"
2-1/4"	2-3/8"	3/16"
2-3/4"	2-7/8"	3/16"

I.D. TOLERANCES ABS & ANSI STANDARD

Standard Drill Sizes	I.D.	Tolerance
3/16" - 3/8"	Nominal	+ .0001" - + .0004"
7/16" - 5/8"	Nominal	+ .0002" - + .0005"
3/4"	Nominal	+ .0003" - + .0006"
7/8" - 1"	Nominal	+ .0004" - + .0007"
1-3/8"	Nominal	+ .0006" - + .0010"
1-3/4"	Nominal	+ .0008" - + .0012"
2-1/4"	Nominal	+ .0010" - + .0015"

† All bushings are finished ground unless the letter "U" appears with the bushings type or the ANSI symbol.