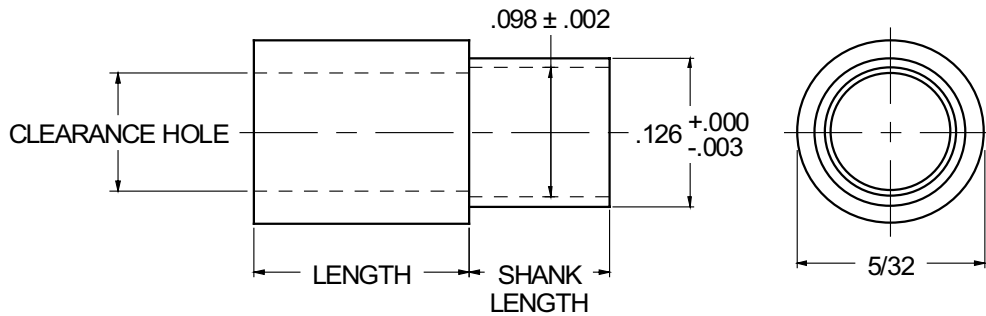




5/32 ROUND SWAGE SPACERS



MATERIAL	CODE
ALUMINUM	AL
BRASS	BR
STAINLESS STEEL	SS

NOTE: See Page A4 for additional materials and specifications.

PANEL THICKNESS	SHANK LENGTH ± .003	CODE
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D

NOTE: See Page A5 for additional shank lengths.

LENGTH	CODE
1/8	0.125
3/16	0.187
1/4	0.250
5/16	0.312
3/8	0.375
7/16	0.437
1/2	0.500

CLEARANCEHOLE +.010 / -.000	BASIC PART NO.
.062	6302
.088	6309

PANEL HOLE SIZE
.128 - .131

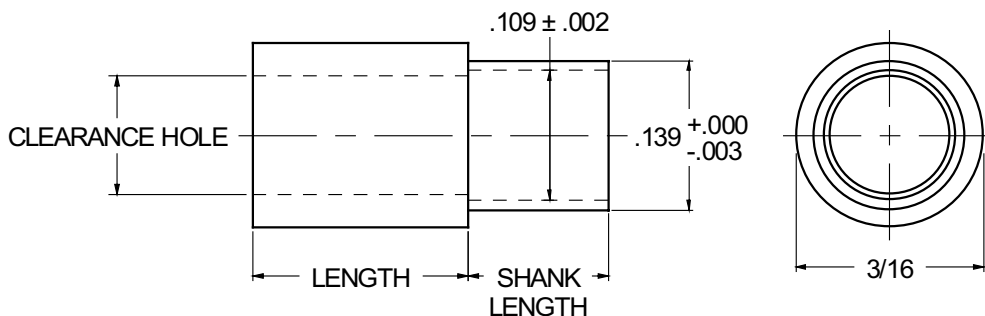
SWAGETOOLING		
PUNCH	ANVIL	BODYLENGTH
126	156-1	1/8 - 3/16
	156-2	1/4 - 7/16
	156-3	1/2 - 11/16
	156-4	3/4 - 1"

CODE	FINISH	CODE	FINISH
00	Plain — None	33	Black Zinc
01	Passivate MIL-F-14072-E300	34*	Zinc QQ-Z-325, Type II, CL 3 — Clear Chromate
02	Caustic Etch	35	Zinc QQ-Z-325, Type I, CL 3
03	Bright Dip — Brass	36	Zinc QQ-Z-325, Type II, CL 3 — Yellow Chromate
11	Anodize MIL-A-8625C, Type I Chromic Hot Water Seal — Dark Grey	42	Electro Tin MIL-T-10727, Type I (Dull)
12	Anodize MIL-A-8625C, Type II Sulphuric Hot Water Seal — Clear	43	Electro Tin MIL-T-10727 C, Type I (Bright)
13	Anodize MIL-A-8625C, Type II Sulphuric Dichromate Seal — Yellow Green	44	Electro Tin (Solder) MIL-F-14072 M230/M222
14	Anodize MIL-A-8625C — Black	48	Copper / Nickel / Bright Tin
21	Iridite MIL-C-5541 — Clear	50	Black Oxide MIL-C-13924 — Steel
22*	Iridite MIL-C-5541 — Gold #14	51	Black Oxide MIL-F-495 — Brass
31	Cadmium QQ-P-416, CL 2 — Clear Chromate	52	Black Oxide MIL-C-13924 — Stainless Steel
32	Cadmium QQ-P-416, CL 2 — Color Chromate	61	Nickel QQ-N-290 CL 1, Type VI KC
		63	Ductile Nickel
		66	Electroless Nickel
		91	Silver QQ-S-365

*Standard finishes: Zinc (Clear Chromate) on brass material, Iridite (Gold #14) on aluminum material.



3/16 ROUND SWAGE SPACERS .139 Shank Diameter



ORDERING CODE	XX	XXXX	X	—	XXXX	—	XX
	MATERIAL	BASIC PART NUMBER	SHANK CODE		LENGTH CODE		FINISH

MATERIAL	CODE
ALUMINUM	AL
BRASS	BR
STAINLESS STEEL	SS

NOTE: See Page A4 for additional materials and specifications.

PANEL THICKNESS	SHANK LENGTH	CODE
	± .003	
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D

NOTE: See Page A5 for additional shank lengths.

LENGTH	CODE
1/8	0.125
3/16	0.187
1/4	0.250
5/16	0.312
3/8	0.375
7/16	0.437
1/2	0.500
9/16	0.562
5/8	0.625
11/16	0.687
3/4	0.750
13/16	0.812
7/8	0.875
15/16	0.937
1"	1.000

CLEARANCE HOLE	BASIC PART NO.
+ .010 / - .000	
.088	6304
.101	6316

PANEL HOLE SIZE
.141 - .144

SWAGE TOOLING		
PUNCH	ANVIL	BODY LENGTH
139	187-1	1/8 - 3/16
	187-2	1/4 - 7/16
	187-3	1/2 - 11/16
	187-4	3/4 - 1"

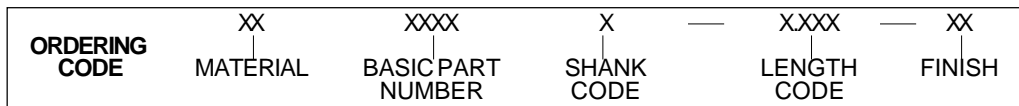
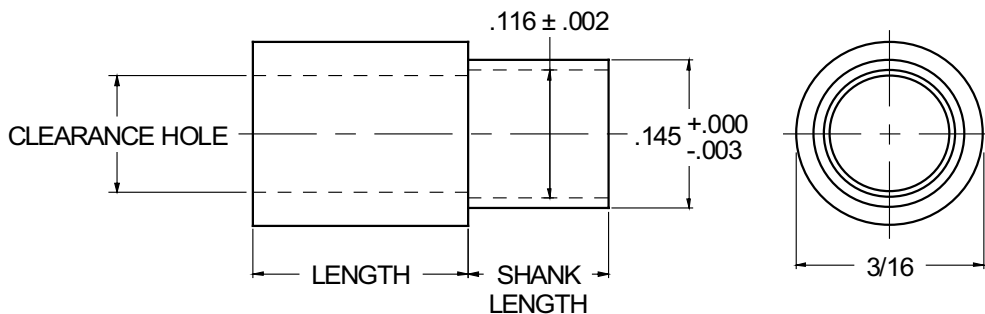
CODE	FINISH	CODE	FINISH
00	Plain — None	33	Black Zinc
01	Passivate MIL-F-14072-E300	34*	Zinc QQ-Z-325, Type II, CL 3 — Clear Chromate
02	Caustic Etch	35	Zinc QQ-Z-325, Type I, CL 3
03	Bright Dip — Brass	36	Zinc QQ-Z-325, Type II, CL 3 — Yellow Chromate
11	Anodize MIL-A-8625C, Type I Chromic Hot Water Seal — Dark Grey	42	Electro Tin MIL-T-10727, Type I (Dull)
12	Anodize MIL-A-8625C, Type II Sulphuric Hot Water Seal — Clear	43	Electro Tin MIL-T-10727 C, Type I (Bright)
13	Anodize MIL-A-8625C, Type II Sulphuric Dichromate Seal — Yellow Green	44	Electro Tin (Solder) MIL-F-14072 M230/M222
14	Anodize MIL-A-8625C — Black	48	Copper / Nickel / Bright Tin
21	Iridite MIL-C-5541 — Clear	50	Black Oxide MIL-C-13924 — Steel
22*	Iridite MIL-C-5541 — Gold #14	51	Black Oxide MIL-F-495 — Brass
31	Cadmium QQ-P-416, CL 2 — Clear Chromate	52	Black Oxide MIL-C-13924 — Stainless Steel
32	Cadmium QQ-P-416, CL 2 — Color Chromate	61	Nickel QQ-N-290 CL 1, Type VI KC
		63	Ductile Nickel
		66	Electroless Nickel
		91	Silver QQ-S-365

*Standard finishes: Zinc (Clear Chromate) on brass material, Iridite (Gold #14) on aluminum material.

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3/16 ROUND SWAGE SPACERS .145 Shank Diameter



MATERIAL	CODE
ALUMINUM	AL
BRASS	BR
STAINLESS STEEL	SS

NOTE: See Page A4 for additional materials and specifications.

PANEL THICKNESS	SHANK LENGTH ± .003	CODE
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D

NOTE: See Page A5 for additional shank lengths.

CLEARANCEHOLE +.010 / -.000	BASIC PART NO.
.114	6315

PANEL HOLE SIZE
.147 - .150

LENGTH	CODE
1/8	0.125
3/16	0.187
1/4	0.250
5/16	0.312
3/8	0.375
7/16	0.437
1/2	0.500
9/16	0.562
5/8	0.625
11/16	0.687
3/4	0.750
13/16	0.812
7/8	0.875
15/16	0.937
1"	1.000

SWAGETOOLING		
PUNCH	ANVIL	BODYLENGTH
145	187-1	1/8 - 3/16
	187-2	1/4 - 7/16
	187-3	1/2 - 11/16
	187-4	3/4 - 1"

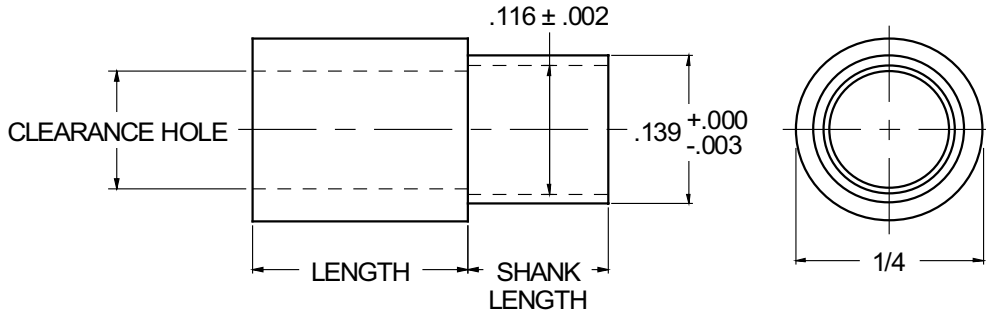
CODE	FINISH	CODE	FINISH
00	Plain — None	33	Black Zinc
01	Passivate MIL-F-14072-E300	34*	Zinc QQ-Z-325, Type II, CL 3 — Clear Chromate
02	Caustic Etch	35	Zinc QQ-Z-325, Type I, CL 3
03	Bright Dip — Brass	36	Zinc QQ-Z-325, Type II, CL 3 — Yellow Chromate
11	Anodize MIL-A-8625C, Type I Chromic Hot Water Seal — Dark Grey	42	Electro Tin MIL-T-10727, Type I (Dull)
12	Anodize MIL-A-8625C, Type II Sulphuric Hot Water Seal — Clear	43	Electro Tin MIL-T-10727 C, Type I (Bright)
13	Anodize MIL-A-8625C, Type II Sulphuric Dichromate Seal — Yellow Green	44	Electro Tin (Solder) MIL-F-14072 M230/M222
14	Anodize MIL-A-8625C — Black	48	Copper / Nickel / Bright Tin
21	Iridite MIL-C-5541 — Clear	50	Black Oxide MIL-C-13924 — Steel
22*	Iridite MIL-C-5541 — Gold #14	51	Black Oxide MIL-F-495 — Brass
31	Cadmium QQ-P-416, CL 2 — Clear Chromate	52	Black Oxide MIL-C-13924 — Stainless Steel
32	Cadmium QQ-P-416, CL 2 — Color Chromate	61	Nickel QQ-N-290 CL 1, Type VI KC
		63	Ductile Nickel
		66	Electroless Nickel
		91	Silver QQ-S-365

*Standard finishes: Zinc (Clear Chromate) on brass material, Iridite (Gold #14) on aluminum material.

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1/4 ROUND SWAGE SPACERS .139 Shank Diameter



ORDERING CODE	XX	XXXX	X	—	XXX	—	XX
	MATERIAL	BASIC PART NUMBER	SHANK CODE		LENGTH CODE		FINISH

MATERIAL	CODE
ALUMINUM	AL
BRASS	BR
STAINLESS STEEL	SS

NOTE: See Page A4 for additional materials and specifications.

PANEL THICKNESS	SHANK LENGTH	CODE
	± .003	
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D

NOTE: See Page A5 for additional shank lengths.

LENGTH	CODE
1/8	0.125
3/16	0.187
1/4	0.250
5/16	0.312
3/8	0.375
7/16	0.437
1/2	0.500
9/16	0.562
5/8	0.625
11/16	0.687
3/4	0.750
13/16	0.812
7/8	0.875
15/16	0.937
1"	1.000

CLEARANCEHOLE	BASIC PART NO.
+ .010 / - .000	
.088	6306
.114	6305

PANEL HOLE SIZE
.141 - .144

SWAGETOOLING		
PUNCH	ANVIL	BODYLENGTH
139	250-1	1/8 - 3/16
	250-2	1/4 - 7/16
	250-3	1/2 - 11/16
	250-4	3/4 - 1"

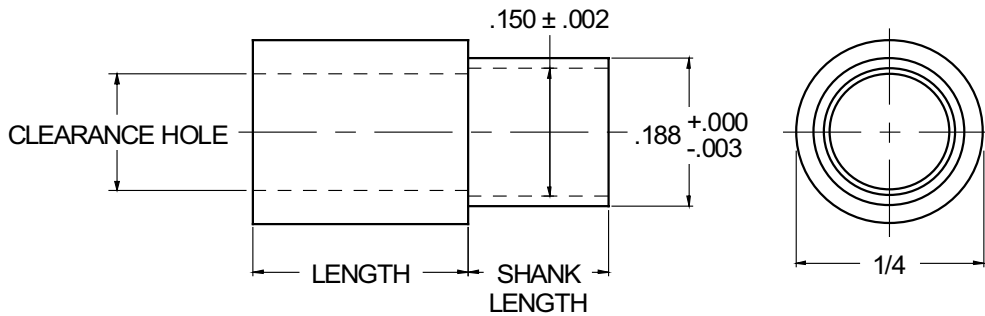
CODE	FINISH	CODE	FINISH
00	Plain — None	33	Black Zinc
01	Passivate MIL-F-14072-E300	34*	Zinc QQ-Z-325, Type II, CL 3 — Clear Chromate
02	Caustic Etch	35	Zinc QQ-Z-325, Type I, CL 3
03	Bright Dip — Brass	36	Zinc QQ-Z-325, Type II, CL 3 — Yellow Chromate
11	Anodize MIL-A-8625C, Type I Chromic Hot Water Seal — Dark Grey	42	Electro Tin MIL-T-10727, Type I (Dull)
12	Anodize MIL-A-8625C, Type II Sulphuric Hot Water Seal — Clear	43	Electro Tin MIL-T-10727 C, Type I (Bright)
13	Anodize MIL-A-8625C, Type II Sulphuric Dichromate Seal — Yellow Green	44	Electro Tin (Solder) MIL-F-14072 M230/M222
14	Anodize MIL-A-8625C — Black	48	Copper / Nickel / Bright Tin
21	Iridite MIL-C-5541 — Clear	50	Black Oxide MIL-C-13924 — Steel
22*	Iridite MIL-C-5541 — Gold #14	51	Black Oxide MIL-F-495 — Brass
31	Cadmium QQ-P-416, CL 2 — Clear Chromate	52	Black Oxide MIL-C-13924 — Stainless Steel
32	Cadmium QQ-P-416, CL 2 — Color Chromate	61	Nickel QQ-N-290 CL 1, Type VI KC
		63	Ductile Nickel
		66	Electroless Nickel
		91	Silver QQ-S-365

*Standard finishes: Zinc (Clear Chromate) on brass material, Iridite (Gold #14) on aluminum material.

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1/4 ROUND SWAGE SPACERS .188 Shank Diameter



ORDERING CODE	XX	XXXX	X	—	X,XXX	—	XX
	MATERIAL	BASIC PART NUMBER	SHANK CODE		LENGTH CODE		FINISH

MATERIAL	CODE
ALUMINUM	AL
BRASS	BR
STAINLESS STEEL	SS

NOTE: See Page A4 for additional materials and specifications.

PANEL THICKNESS	SHANK LENGTH	CODE
	± .003	
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D

NOTE: See Page A5 for additional shank lengths.

LENGTH	CODE
1/8	0.125
3/16	0.187
1/4	0.250
5/16	0.312
3/8	0.375
7/16	0.437
1/2	0.500
9/16	0.562
5/8	0.625
11/16	0.687
3/4	0.750
13/16	0.812
7/8	0.875
15/16	0.937
1"	1.000

CLEARANCEHOLE	BASIC PART NO.
+ .010 / - .000	
.114	6311
.140	6310

PANEL HOLE SIZE
.190 - .193

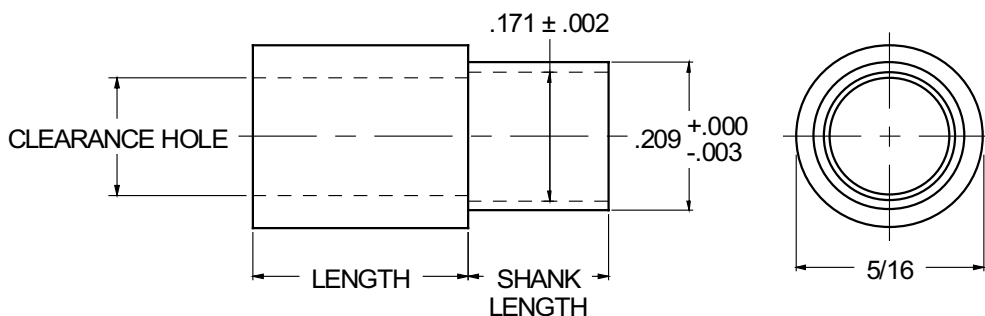
SWAGETOOLING		
PUNCH	ANVIL	BODYLENGTH
188	250-1	1/8 - 3/16
	250-2	1/4 - 7/16
	250-3	1/2 - 11/16
	250-4	3/4 - 1"

CODE	FINISH	CODE	FINISH
00	Plain — None	33	Black Zinc
01	Passivate MIL-F-14072-E300	34*	Zinc QQ-Z-325, Type II, CL 3 — Clear Chromate
02	Caustic Etch	35	Zinc QQ-Z-325, Type I, CL 3
03	Bright Dip — Brass	36	Zinc QQ-Z-325, Type II, CL 3 — Yellow Chromate
11	Anodize MIL-A-8625C, Type I Chromic Hot Water Seal — Dark Grey	42	Electro Tin MIL-T-10727, Type I (Dull)
12	Anodize MIL-A-8625C, Type II Sulphuric Hot Water Seal — Clear	43	Electro Tin MIL-T-10727 C, Type I (Bright)
13	Anodize MIL-A-8625C, Type II Sulphuric Dichromate Seal — Yellow Green	44	Electro Tin (Solder) MIL-F-14072 M222
14	Anodize MIL-A-8625C — Black	48	Copper / Nickel / Bright Tin
21	Iridite MIL-C-5541 — Clear	50	Black Oxide MIL-C-13924 — Steel
22*	Iridite MIL-C-5541 — Gold #14	51	Black Oxide MIL-F-495 — Brass
31	Cadmium QQ-P-416, CL 2 — Clear Chromate	52	Black Oxide MIL-C-13924 — Stainless Steel
32	Cadmium QQ-P-416, CL 2 — Color Chromate	61	Nickel QQ-N-290 CL 1, Type VI KC
		63	Ductile Nickel
		66	Electroless Nickel
		91	Silver QQ-S-365

*Standard finishes: Zinc (Clear Chromate) on brass material, Iridite (Gold #14) on aluminum material.



5/16 ROUND SWAGE SPACERS .209 Shank Diameter



ORDERING CODE	XX	XXXX	X	—	XXX	—	XX
	MATERIAL	BASIC PART NUMBER	SHANK CODE		LENGTH CODE		FINISH

MATERIAL	CODE
ALUMINUM	AL
BRASS	BR
STAINLESS STEEL	SS

NOTE: See Page A4 for additional materials and specifications.

PANEL THICKNESS	SHANK LENGTH ± .003	CODE
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D

NOTE: See Page A5 for additional shank lengths.

CLEARANCEHOLE +.010 / -.000	BASIC PART NO.
.166	6319

PANEL HOLE SIZE
.211 - .214

LENGTH	CODE
1/8	0.125
3/16	0.187
1/4	0.250
5/16	0.312
3/8	0.375
7/16	0.437
1/2	0.500
9/16	0.562
5/8	0.625
11/16	0.687
3/4	0.750
13/16	0.812
7/8	0.875
15/16	0.937
1"	1.000

SWAGETOOLING		
PUNCH	ANVIL	BODYLENGTH
209	312-1	1/8 - 3/16
	312-2	1/4 - 7/16
	312-3	1/2 - 11/16
	312-4	3/4 - 1"

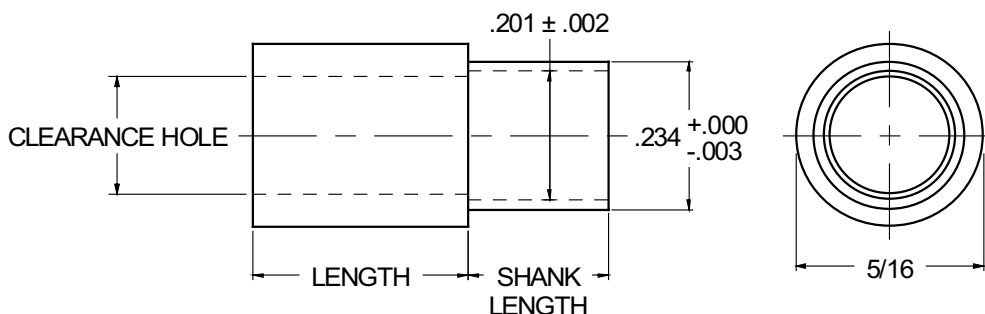
CODE	FINISH	CODE	FINISH
00	Plain — None	33	Black Zinc
01	Passivate MIL-F-14072-E300	34*	Zinc QQ-Z-325, Type II, CL 3 — Clear Chromate
02	Caustic Etch	35	Zinc QQ-Z-325, Type I, CL 3
03	Bright Dip — Brass	36	Zinc QQ-Z-325, Type II, CL 3 — Yellow Chromate
11	Anodize MIL-A-8625C, Type I Chromic Hot Water Seal — Dark Grey	42	Electro Tin MIL-T-10727, Type I (Dull)
12	Anodize MIL-A-8625C, Type II Sulphuric Hot Water Seal — Clear	43	Electro Tin MIL-T-10727 C, Type I (Bright)
13	Anodize MIL-A-8625C, Type II Sulphuric Dichromate Seal — Yellow Green	44	Electro Tin (Solder) MIL-F-14072 M230/M222
14	Anodize MIL-A-8625C — Black	48	Copper / Nickel / Bright Tin
21	Iridite MIL-C-5541 — Clear	50	Black Oxide MIL-C-13924 — Steel
22*	Iridite MIL-C-5541 — Gold #14	51	Black Oxide MIL-F-495 — Brass
31	Cadmium QQ-P-416, CL 2 — Clear Chromate	52	Black Oxide MIL-C-13924 — Stainless Steel
32	Cadmium QQ-P-416, CL 2 — Color Chromate	61	Nickel QQ-N-290 CL 1, Type VI KC
		63	Ductile Nickel
		66	Electroless Nickel
		91	Silver QQ-S-365

*Standard finishes: Zinc (Clear Chromate) on brass material, Iridite (Gold #14) on aluminum material.

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5/16 ROUND SWAGE SPACERS .234 Shank Diameter



ORDERING CODE	XX	XXXX	X	—	XXXX	—	XX
	MATERIAL	BASIC PART NUMBER	SHANK CODE		LENGTH CODE		FINISH

MATERIAL	CODE
ALUMINUM	AL
BRASS	BR
STAINLESS STEEL	SS

NOTE: See Page A4 for additional materials and specifications.

PANEL THICKNESS	SHANK LENGTH ± .003	CODE
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D

NOTE: See Page A5 for additional shank lengths.

LENGTH	CODE
1/8	0.125
3/16	0.187
1/4	0.250
5/16	0.312
3/8	0.375
7/16	0.437
1/2	0.500
9/16	0.562
5/8	0.625
11/16	0.687
3/4	0.750
13/16	0.812
7/8	0.875
15/16	0.937
1"	1.000

CLEARANCEHOLE +.010 / -.000	BASIC PART NO.
.140	6307
.166	6303
.192	6318

PANEL HOLE SIZE
.236 - .239

SWAGETOOLING		
PUNCH	ANVIL	BODYLENGTH
234	312-1	1/8 - 3/16
	312-2	1/4 - 7/16
	312-3	1/2 - 11/16
	312-4	3/4 - 1"

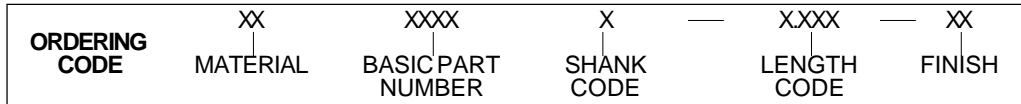
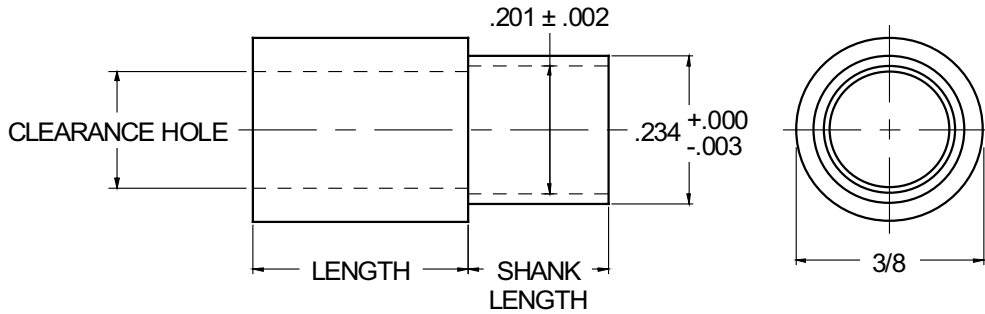
CODE	FINISH	CODE	FINISH
00	Plain — None	33	Black Zinc
01	Passivate MIL-F-14072-E300	34*	Zinc QQ-Z-325, Type II, CL 3 — Clear Chromate
02	Caustic Etch	35	Zinc QQ-Z-325, Type I, CL 3
03	Bright Dip — Brass	36	Zinc QQ-Z-325, Type II, CL 3 — Yellow Chromate
11	Anodize MIL-A-8625C, Type I Chromic Hot Water Seal — Dark Grey	42	Electro Tin MIL-T-10727, Type I (Dull)
12	Anodize MIL-A-8625C, Type II Sulphuric Hot Water Seal — Clear	43	Electro Tin MIL-T-10727 C, Type I (Bright)
13	Anodize MIL-A-8625C, Type II Sulphuric Dichromate Seal — Yellow Green	44	Electro Tin (Solder) MIL-F-14072 M230/M222
14	Anodize MIL-A-8625C — Black	48	Copper / Nickel / Bright Tin
21	Iridite MIL-C-5541 — Clear	50	Black Oxide MIL-C-13924 — Steel
22*	Iridite MIL-C-5541 — Gold #14	51	Black Oxide MIL-F-495 — Brass
31	Cadmium QQ-P-416, CL 2 — Clear Chromate	52	Black Oxide MIL-C-13924 — Stainless Steel
32	Cadmium QQ-P-416, CL 2 — Color Chromate	61	Nickel QQ-N-290 CL 1, Type VI KC
		63	Ductile Nickel
		66	Electroless Nickel
		91	Silver QQ-S-365

*Standard finishes: Zinc (Clear Chromate) on brass material, Iridite (Gold #14) on aluminum material.

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3/8 ROUND SWAGE SPACERS



MATERIAL	CODE
ALUMINUM	AL
BRASS	BR
STAINLESS STEEL	SS

NOTE: See Page A4 for additional materials and specifications.

PANEL THICKNESS	SHANK LENGTH ± .003	CODE
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D

NOTE: See Page A5 for additional shank lengths.

LENGTH	CODE
1/8	0.125
3/16	0.187
1/4	0.250
5/16	0.312
3/8	0.375
7/16	0.437
1/2	0.500
9/16	0.562
5/8	0.625
11/16	0.687
3/4	0.750
13/16	0.812
7/8	0.875
15/16	0.937
1''	1.000

CLEARANCEHOLE +.010 / -.000	BASIC PART NO.
.140	6312
.166	6314
.192	6317

PANEL HOLE SIZE
.236 - .239

SWAGETOOLING		
PUNCH	ANVIL	BODYLENGTH
234	375-1	1/8 - 3/16
	375-2	1/4 - 7/16
	375-3	1/2 - 11/16
	375-4	3/4 - 1''

CODE	FINISH	CODE	FINISH
00	Plain — None	33	Black Zinc
01	Passivate MIL-F-14072-E300	34*	Zinc QQ-Z-325, Type II, CL 3 — Clear Chromate
02	Caustic Etch	35	Zinc QQ-Z-325, Type I, CL 3
03	Bright Dip — Brass	36	Zinc QQ-Z-325, Type II, CL 3 — Yellow Chromate
11	Anodize MIL-A-8625C, Type I Chromic Hot Water Seal — Dark Grey	42	Electro Tin MIL-T-10727, Type I (Dull)
12	Anodize MIL-A-8625C, Type II Sulphuric Hot Water Seal — Clear	43	Electro Tin MIL-T-10727 C, Type I (Bright)
13	Anodize MIL-A-8625C, Type II Sulphuric Dichromate Seal — Yellow Green	44	Electro Tin (Solder) MIL-F-14072 M230/M222
14	Anodize MIL-A-8625C — Black	48	Copper / Nickel / Bright Tin
21	Iridite MIL-C-5541 — Clear	50	Black Oxide MIL-C-13924 — Steel
22*	Iridite MIL-C-5541 — Gold #14	51	Black Oxide MIL-F-495 — Brass
31	Cadmium QQ-P-416, CL 2 — Clear Chromate	52	Black Oxide MIL-C-13924 — Stainless Steel
32	Cadmium QQ-P-416, CL 2 — Color Chromate	61	Nickel QQ-N-290 CL 1, Type VI KC
		63	Ductile Nickel
		66	Electroless Nickel
		91	Silver QQ-S-365

*Standard finishes: Zinc (Clear Chromate) on brass material, Iridite (Gold #14) on aluminum material.

A27