

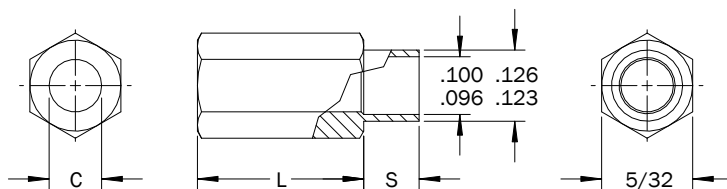
5/32 Hex Swage Spacers

PART DESCRIPTION EXAMPLE

HSSP5/32 — 2 X .250 — C — .126 — STL — Z

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Clearance Hole Code Length Code Shank Length Code Material Code Finish Code



CLEARANCE HOLE

C +.010 -.000	Clearance Hole Code
.062	0
.088	2

SHANK

Panel Thickness	S ±.003	Shank Length Code
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D
3/16	.230	E
1/4	.290	F

FINISH

Finish Code	Finish Description
Z	Zinc with Clear Chromate
Z-BLK	Zinc with Black Chromate
Z-YEL	Zinc with Yellow Chromate
NI	Electroplated Bright Nickel
BLK-OX	Black Oxide
CF	Clear Chemical Film
CF-GOLD	Gold Chemical Film
P	Passivated
PLN	Plain
TIN	Electroplated Bright Tin
TIN-MATTE	Electroplated Matte Tin

LENGTH

Length	L (Length Code) ±.005
3/32	.094
1/8	.125
5/32	.156
3/16	.187
7/32	.219
1/4	.250
9/32	.281
5/16	.312
11/32	.344
3/8	.375
13/32	.406
7/16	.437
15/32	.469
1/2	.500

MATERIAL

Material Code	Material Description
STL	Carbon Steel
SS	Stainless Steel
AL	Aluminum
BRS	Brass

INSTALLATION TOOLING

Length	Anvil Part Number	Swage Punch Part Number	Flare Punch Part Number
3/32–3/16	TL1410	TL1405	TL1289
7/32–7/16	TL1411	TL1405	TL1289
15/32 & 1/2	TL1412	TL1405	TL1289

All dimensions in inches.
Custom sizes, materials, and finishes available.

HSSP 5/32 Hex Swage Spacers

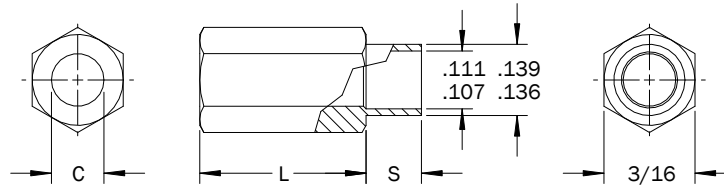
3/16 Hex Swage Spacers - .139 Shank Diameter

PART DESCRIPTION EXAMPLE

HSSP3/16 — 2 X .500 — C — .139 — STL — Z

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Clearance Hole Code Length Code Shank Length Code Material Code Finish Code



CLEARANCE HOLE

C +.010 -.000	Clearance Hole Code
.088	2

LENGTH

Length	L (Length Code) ±.005
3/32	.094
1/8	.125
5/32	.156
3/16	.187
7/32	.219
1/4	.250
9/32	.281
5/16	.312
11/32	.344
3/8	.375
13/32	.406
7/16	.437
15/32	.469
1/2	.500

SHANK

Panel Thickness	S ±.003	Shank Length Code
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D
3/16	.230	E
1/4	.290	F

INSTALLATION TOOLING

Length	Anvil Part Number	Swage Punch Part Number	Flare Punch Part Number
3/32-3/16	TL1413	TL1406	TL1289
7/32-7/16	TL1414	TL1406	TL1289
15/32-11/16	TL1415	TL1406	TL1289
23/32-1	TL1416	TL1406	TL1289

All dimensions in inches.
Custom sizes, materials, and finishes available.

HSSP 3/16 Hex Swage Spacers - .139 Shank Diameter

3/16 Hex Swage Spacers - .139 Shank Diameter

MATERIAL

Material Code	Material Description
STL	Carbon Steel
SS	Stainless Steel
AL	Aluminum
BRS	Brass

FINISH

Finish Code	Finish Description
Z	Zinc with Clear Chromate
Z-BLK	Zinc with Black Chromate
Z-YEL	Zinc with Yellow Chromate
NI	Electroplated Bright Nickel
BLK-OX	Black Oxide
CF	Clear Chemical Film
CF-GOLD	Gold Chemical Film
P	Passivated
PLN	Plain
TIN	Electroplated Bright Tin
TIN-MATTE	Electroplated Matte Tin

HSSP 3/16 Hex Swage Spacers - .139 Shank Diameter

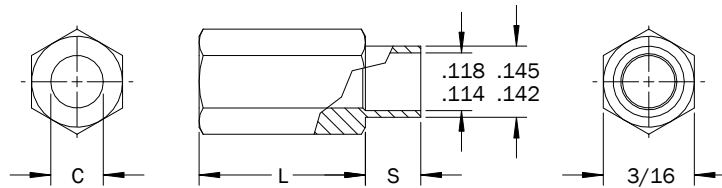
3/16 Hex Swage Spacers - .145 Shank Diameter

PART DESCRIPTION EXAMPLE

HSSP3/16 — 2 X .500 — C — .145 — STL — Z

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Clearance Hole Code Length Code Shank Length Code Material Code Finish Code



CLEARANCE HOLE

C +.010 -.000	Clearance Hole Code
.088	2
.114	4

SHANK

Panel Thickness	S ±.003	Shank Length Code
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D
3/16	.230	E
1/4	.290	F

LENGTH

Length	L (Length Code) ±.005
3/32	.094
1/8	.125
5/32	.156
3/16	.187
7/32	.219
1/4	.250
9/32	.281
5/16	.312
11/32	.344
3/8	.375
13/32	.406
7/16	.437
15/32	.469

Length	L (Length Code) ±.005
1/2	.500
17/32	.531
9/16	.562
19/32	.594
5/8	.625
21/32	.656
11/16	.687
23/32	.719
3/4	.750
25/32	.781
13/16	.812
27/32	.844
7/8	.875
29/32	.906
15/16	.937
31/32	.969
1	1.000

INSTALLATION TOOLING

Length	Anvil Part Number	Swage Punch Part Number	Flare Punch Part Number
3/32-3/16	TL1413	TL1407	TL1289
7/32-7/16	TL1414	TL1407	TL1289
15/32-11/16	TL1415	TL1407	TL1289
23/32-1	TL1416	TL1407	TL1289

All dimensions in inches.
Custom sizes, materials, and finishes available.

HSSP 3/16 Hex Swage Spacers - .145 Shank Diameter

3/16 Hex Swage Spacers - .145 Shank Diameter

MATERIAL

Material Code	Material Description
STL	Carbon Steel
SS	Stainless Steel
AL	Aluminum
BRS	Brass

FINISH

Finish Code	Finish Description
Z	Zinc with Clear Chromate
Z-BLK	Zinc with Black Chromate
Z-YEL	Zinc with Yellow Chromate
NI	Electroplated Bright Nickel
BLK-OX	Black Oxide
CF	Clear Chemical Film
CF-GOLD	Gold Chemical Film
P	Passivated
PLN	Plain
TIN	Electroplated Bright Tin
TIN-MATTE	Electroplated Matte Tin

HSSP 3/16 Hex Swage Spacers - .145 Shank Diameter

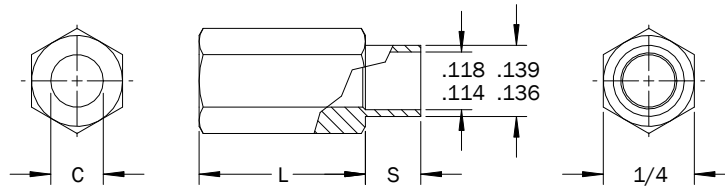
1/4 Hex Swage Spacers - .139 Shank Diameter

PART DESCRIPTION EXAMPLE

HSSP1/4 — 4 X .500 — C — .139 — STL — Z

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Clearance Hole Code Length Code Shank Length Code Material Code Finish Code



CLEARANCE HOLE

C +.010 -.000	Clearance Hole Code
.088	2
.114	4

SHANK

Panel Thickness	S ±.003	Shank Length Code
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D
3/16	.230	E
1/4	.290	F

LENGTH

Length	L (Length Code) ±.005
3/32	.094
1/8	.125
5/32	.156
3/16	.187
7/32	.219
1/4	.250
9/32	.281
5/16	.312
11/32	.344
3/8	.375
13/32	.406
7/16	.437
15/32	.469

Length	L (Length Code) ±.005
1/2	.500
17/32	.531
9/16	.562
19/32	.594
5/8	.625
21/32	.656
11/16	.687
23/32	.719
3/4	.750
25/32	.781
13/16	.812
27/32	.844
7/8	.875
29/32	.906
15/16	.937
31/32	.969
1	1.000

INSTALLATION TOOLING

Length	Anvil Part Number	Swage Punch Part Number	Flare Punch Part Number
3/32-3/16	TL1417	TL1408	TL1289
7/32-7/16	TL1418	TL1408	TL1289
15/32 -11/16	TL1419	TL1408	TL1289
23/32-1	TL1420	TL1408	TL1289

All dimensions in inches.
Custom sizes, materials, and finishes available.

HSSP 1/4 Hex Swage Spacers - .139 Shank Diameter

1/4 Hex Swage Spacers - .139 Shank Diameter

MATERIAL

Material Code	Material Description
STL	Carbon Steel
SS	Stainless Steel
AL	Aluminum
BRS	Brass

FINISH

Finish Code	Finish Description
Z	Zinc with Clear Chromate
Z-BLK	Zinc with Black Chromate
Z-YEL	Zinc with Yellow Chromate
NI	Electroplated Bright Nickel
BLK-OX	Black Oxide
CF	Clear Chemical Film
CF-GOLD	Gold Chemical Film
P	Passivated
PLN	Plain
TIN	Electroplated Bright Tin
TIN-MATTE	Electroplated Matte Tin

HSSP 1/4 Hex Swage Spacers - .139 Shank Diameter

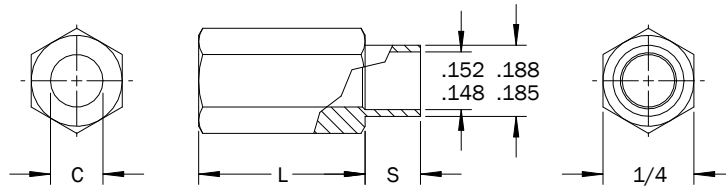
1/4 Hex Swage Spacers - .188 Shank Diameter

PART DESCRIPTION EXAMPLE

HSSP1/4 — 4 X .500 — C — .188 — STL — Z

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Clearance Hole Code Length Code Shank Length Code Material Code Finish Code



CLEARANCE HOLE

C +.010 -.000	Clearance Hole Code
.088	2
.114	4
.140	6

SHANK

Panel Thickness	S ±.003	Shank Length Code
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D
3/16	.230	E
1/4	.290	F

LENGTH

Length	L (Length Code) ±.005
3/32	.094
1/8	.125
5/32	.156
3/16	.187
7/32	.219
1/4	.250
9/32	.281
5/16	.312
11/32	.344
3/8	.375
13/32	.406
7/16	.437

Length	L (Length Code) ±.005
15/32	.469
1/2	.500
17/32	.531
9/16	.562
19/32	.594
5/8	.625
21/32	.656
11/16	.687
23/32	.719
3/4	.750
25/32	.781
13/16	.812
27/32	.844
7/8	.875
29/32	.906
15/16	.937
31/32	.969
1	1.000

INSTALLATION TOOLING

Length	Anvil Part Number	Swage Punch Part Number	Flare Punch Part Number
3/32-3/16	TL1421	TL1409	TL1289
7/32-7/16	TL1422	TL1409	TL1289
15/32-11/16	TL1423	TL1409	TL1289
23/32-1	TL1424	TL1409	TL1289

All dimensions in inches.
Custom sizes, materials, and finishes available.

HSSP 1/4 Hex Swage Spacers - .188 Shank Diameter

1/4 Hex Swage Spacers - .188 Shank Diameter

MATERIAL

Material Code	Material Description
STL	Carbon Steel
SS	Stainless Steel
AL	Aluminum
BRS	Brass

FINISH

Finish Code	Finish Description
Z	Zinc with Clear Chromate
Z-BLK	Zinc with Black Chromate
Z-YEL	Zinc with Yellow Chromate
NI	Electroplated Bright Nickel
BLK-OX	Black Oxide
CF	Clear Chemical Film
CF-GOLD	Gold Chemical Film
P	Passivated
PLN	Plain
TIN	Electroplated Bright Tin
TIN-MATTE	Electroplated Matte Tin

HSSP 1/4 Hex Swage Spacers - .188 Shank Diameter

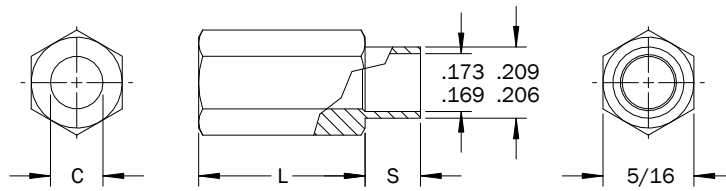
5/16 Hex Swage Spacers - .209 Shank Diameter

PART DESCRIPTION EXAMPLE

HSSP5/16 — 6 X .500 — C — .209 — STL — Z

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Clearance Hole Code Length Code Shank Length Code Material Code Finish Code



CLEARANCE HOLE

C +.010 -.000	Clearance Hole Code
.114	4
.140	6
.166	8

SHANK

Panel Thickness	S ±.003	Shank Length Code
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D
3/16	.230	E
1/4	.290	F

LENGTH

Length	L (Length Code) ±.005
3/32	.094
1/8	.125
5/32	.156
3/16	.187
7/32	.219
1/4	.250
9/32	.281
5/16	.312
11/32	.344
3/8	.375
13/32	.406

Length	L (Length Code) ±.005
7/16	.437
15/32	.469
1/2	.500
17/32	.531
9/16	.562
19/32	.594
5/8	.625
21/32	.656
11/16	.687
23/32	.719
3/4	.750
25/32	.781
13/16	.812
27/32	.844
7/8	.875
29/32	.906
15/16	.937
31/32	.969
1	1.000

INSTALLATION TOOLING

Length	Anvil Part Number	Swage Punch Part Number	Flare Punch Part Number
3/32-3/16	TL1421	TL1409	TL1289
7/32-7/16	TL1422	TL1409	TL1289
15/32-11/16	TL1423	TL1409	TL1289
23/32-1	TL1424	TL1409	TL1289

All dimensions in inches.
Custom sizes, materials, and finishes available.

HSSP 5/16 Hex Swage Spacers - .209 Shank Diameter

5/16 Hex Swage Spacers - .209 Shank Diameter

MATERIAL

Material Code	Material Description
STL	Carbon Steel
SS	Stainless Steel
AL	Aluminum
BRS	Brass

FINISH

Finish Code	Finish Description
Z	Zinc with Clear Chromate
Z-BLK	Zinc with Black Chromate
Z-YEL	Zinc with Yellow Chromate
NI	Electroplated Bright Nickel
BLK-OX	Black Oxide
CF	Clear Chemical Film
CF-GOLD	Gold Chemical Film
P	Passivated
PLN	Plain
TIN	Electroplated Bright Tin
TIN-MATTE	Electroplated Matte Tin

HSSP 5/16 Hex Swage Spacers - .209 Shank Diameter

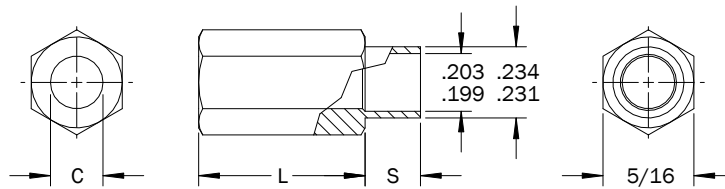
5/16 Hex Swage Spacers - .234 Shank Diameter

PART DESCRIPTION EXAMPLE

HSSP5/16 — 8 X .500 — C — .234 — STL — Z

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Clearance Hole Code Length Code Shank Length Code Material Code Finish Code



CLEARANCE HOLE

C +.010 -.000	Clearance Hole Code
.140	6
.166	8
.192	10

SHANK

Panel Thickness	S ±.003	Shank Length Code
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D
3/16	.230	E
1/4	.290	F

LENGTH

Length	L (Length Code) ±.005
3/32	.094
1/8	.125
5/32	.156
3/16	.187
7/32	.219
1/4	.250
9/32	.281
5/16	.312
11/32	.344
3/8	.375

Length	L (Length Code) ±.005
13/32	.406
7/16	.437
15/32	.469
1/2	.500
17/32	.531
9/16	.562
19/32	.594
5/8	.625
21/32	.656
11/16	.687
23/32	.719
3/4	.750
25/32	.781
13/16	.812
27/32	.844
7/8	.875
29/32	.906
15/16	.937
31/32	.969
1	1.000

INSTALLATION TOOLING

Length	Anvil Part Number	Swage Punch Part Number	Flare Punch Part Number
3/32-3/16	TL1421	TL1485	TL1289
7/32-7/16	TL1422	TL1485	TL1289
15/32-11/16	TL1423	TL1485	TL1289
23/32-1	TL1424	TL1485	TL1289

All dimensions in inches.
Custom sizes, materials, and finishes available.

HSSP 5/16 Hex Swage Spacers - .234 Shank Diameter

5/16 Hex Swage Spacers - .234 Shank Diameter

MATERIAL

Material Code	Material Description
STL	Carbon Steel
SS	Stainless Steel
AL	Aluminum
BRS	Brass

FINISH

Finish Code	Finish Description
Z	Zinc with Clear Chromate
Z-BLK	Zinc with Black Chromate
Z-YEL	Zinc with Yellow Chromate
NI	Electroplated Bright Nickel
BLK-OX	Black Oxide
CF	Clear Chemical Film
CF-GOLD	Gold Chemical Film
P	Passivated
PLN	Plain
TIN	Electroplated Bright Tin
TIN-MATTE	Electroplated Matte Tin

HSSP 5/16 Hex Swage Spacers - .234 Shank Diameter

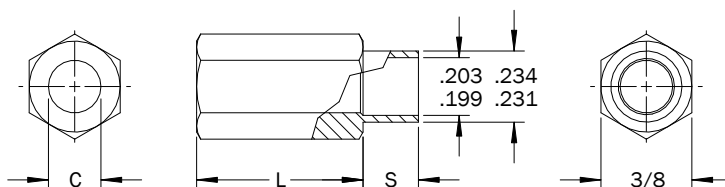
3/8 Hex Swage Spacers

PART DESCRIPTION EXAMPLE

HSSP3/8 — 8 X .500 — C — .234 — STL — Z

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T
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Clearance Hole Code Length Code Shank Length Code Material Code Finish Code



CLEARANCE HOLE

C +.010 -.000	Clearance Hole Code
.140	6
.166	8
.192	10

SHANK

Panel Thickness	S ±.003	Shank Length Code
1/32	.075	A
1/16	.105	B
3/32	.135	C
1/8	.165	D
3/16	.230	E
1/4	.290	F

LENGTH

Length	L (Length Code) ±.005
3/32	.094
1/8	.125
5/32	.156
3/16	.187
7/32	.219
1/4	.250
9/32	.281
5/16	.312
11/32	.344
3/8	.375
13/32	.406

Length	L (Length Code) ±.005
7/16	.437
15/32	.469
1/2	.500
17/32	.531
9/16	.562
19/32	.594
5/8	.625
21/32	.656
11/16	.687
23/32	.719
3/4	.750
25/32	.781
13/16	.812
27/32	.844
7/8	.875
29/32	.906
15/16	.937
31/32	.969
1	1.000

INSTALLATION TOOLING

Length	Anvil Part Number	Swage Punch Part Number	Flare Punch Part Number
3/32-3/16	TL1425	TL1285	TL1289
7/32-7/16	TL1426	TL1285	TL1289
15/32-11/16	TL1427	TL1285	TL1289
23/32-1	TL1428	TL1285	TL1289

All dimensions in inches.
Custom sizes, materials, and finishes available.

HSSP 3/8 Hex Swage Spacers

3/8 Hex Swage Spacers

MATERIAL

Material Code	Material Description
STL	Carbon Steel
SS	Stainless Steel
AL	Aluminum
BRS	Brass

FINISH

Finish Code	Finish Description
Z	Zinc with Clear Chromate
Z-BLK	Zinc with Black Chromate
Z-YEL	Zinc with Yellow Chromate
NI	Electroplated Bright Nickel
BLK-OX	Black Oxide
CF	Clear Chemical Film
CF-GOLD	Gold Chemical Film
P	Passivated
PLN	Plain
TIN	Electroplated Bright Tin
TIN-MATTE	Electroplated Matte Tin

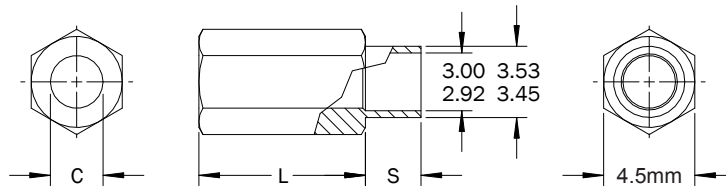
4.5mm Hex Swage Spacers

PART DESCRIPTION EXAMPLE

HSSP4.5 — 2.2 X 15.00 — C — 3.53 — STL — Z

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Clearance Hole Code Length Code Shank Length Code Material Code Finish Code



CLEARANCE HOLE

Thread	C (Clearance Hole Code) +0.3 -0.0
M2	2.2
M2.5	2.7

INSTALLATION TOOLING

Length	Anvil Part Number	Swage Punch Part Number	Flare Punch Part Number
3-5	TL1476	TL1408	TL1289
6-12	TL1477	TL1408	TL1289
13-18	TL1478	TL1408	TL1289
19-25	TL1479	TL1408	TL1289

SHANK

Panel Thickness	S ±0.08	Shank Length Code
0.8	1.9	A
1.6	2.7	B
2.4	3.4	C
3.2	4.2	D
4.8	5.8	E
6.4	7.4	F

LENGTH

Length	L (Length Code) ±0.13
3	3.00
4	4.00
5	5.00
6	6.00
7	7.00
8	8.00
9	9.00
10	10.00
11	11.00
12	12.00
13	13.00
14	14.00

Length	L (Length Code) ±0.13
15	15.00
16	16.00
17	17.00
18	18.00
19	19.00
20	20.00
21	21.00
22	22.00
23	23.00
24	24.00
25	25.00

All dimensions in millimeters.
Custom sizes, materials, and finishes available.

HSSP 4.5mm Hex Swage Spacers

4.5mm Hex Swage Spacers

MATERIAL

Material Code	Material Description
STL	Carbon Steel
SS	Stainless Steel
AL	Aluminum
BRS	Brass

FINISH

Finish Code	Finish Description
Z	Zinc with Clear Chromate
Z-BLK	Zinc with Black Chromate
Z-YEL	Zinc with Yellow Chromate
NI	Electroplated Bright Nickel
BLK-OX	Black Oxide
CF	Clear Chemical Film
CF-GOLD	Gold Chemical Film
P	Passivated
PLN	Plain
TIN	Electroplated Bright Tin
TIN-MATTE	Electroplated Matte Tin

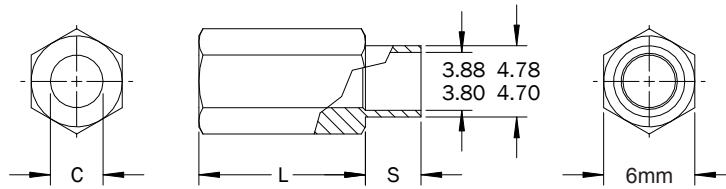
6mm Hex Swage Spacers

PART DESCRIPTION EXAMPLE

HSSP6 — 2.7 X 15.00 — C — 4.78 — STL — Z

T
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T
T

Clearance Hole Code Length Code Shank Length Code Material Code Finish Code



CLEARANCE HOLE

Thread	C (Clearance Hole Code) +0.3 -0.0
M2	2.2
M2.5	2.7
M3	3.2
M3.5	3.7

INSTALLATION TOOLING

Length	Anvil Part Number	Swage Punch Part Number	Flare Punch Part Number
3-5	TL1480	TL1197	TL1289
6-12	TL1481	TL1197	TL1289
13-18	TL1482	TL1197	TL1289
19-25	TL1483	TL1197	TL1289

SHANK

Panel Thickness	S ±0.08	Shank Length Code
0.8	1.9	A
1.6	2.7	B
2.4	3.4	C
3.2	4.2	D
4.8	5.8	E
6.4	7.4	F

LENGTH

Length	L (Length Code) ±0.13
3	3.00
4	4.00
5	5.00
6	6.00
7	7.00
8	8.00
9	9.00
10	10.00
11	11.00
12	12.00
13	13.00
14	14.00

Length	L (Length Code) ±0.13
15	15.00
16	16.00
17	17.00
18	18.00
19	19.00
20	20.00
21	21.00
22	22.00
23	23.00
24	24.00
25	25.00

All dimensions in millimeters.
Custom sizes, materials, and finishes available.

HSSP 6mm Hex Swage Spacers

6mm Hex Swage Spacers

MATERIAL

Material Code	Material Description
STL	Carbon Steel
SS	Stainless Steel
AL	Aluminum
BRS	Brass

FINISH

Finish Code	Finish Description
Z	Zinc with Clear Chromate
Z-BLK	Zinc with Black Chromate
Z-YEL	Zinc with Yellow Chromate
NI	Electroplated Bright Nickel
BLK-OX	Black Oxide
CF	Clear Chemical Film
CF-GOLD	Gold Chemical Film
P	Passivated
PLN	Plain
TIN	Electroplated Bright Tin
TIN-MATTE	Electroplated Matte Tin

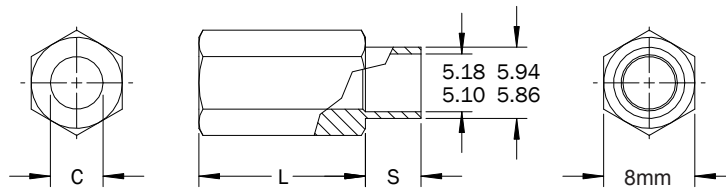
8mm Hex Swage Spacers

PART DESCRIPTION EXAMPLE

HSSP8 — 2.7 X 15.00 — C — 5.94 — STL — Z

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Clearance Hole Code Length Code Shank Length Code Material Code Finish Code



CLEARANCE HOLE

Thread	C (Clearance Hole Code) +0.3 -0.0
M2	2.2
M2.5	2.7
M3	3.2
M3.5	3.7

INSTALLATION TOOLING

Length	Anvil Part Number	Swage Punch Part Number	Flare Punch Part Number
3-5	TL1484	TL1285	TL1289
6-12	TL1485	TL1285	TL1289
13-18	TL1486	TL1285	TL1289
19-25	TL1487	TL1285	TL1289

SHANK

Panel Thickness	S ±0.08	Shank Length Code
0.8	1.9	A
1.6	2.7	B
2.4	3.4	C
3.2	4.2	D
4.8	5.8	E
6.4	7.4	F

LENGTH

Length	L (Length Code) ±0.13
3	3.00
4	4.00
5	5.00
6	6.00
7	7.00
8	8.00
9	9.00
10	10.00
11	11.00
12	12.00
13	13.00
14	14.00

Length	L (Length Code) ±0.13
15	15.00
16	16.00
17	17.00
18	18.00
19	19.00
20	20.00
21	21.00
22	22.00
23	23.00
24	24.00
25	25.00

All dimensions in millimeters.
Custom sizes, materials, and finishes available.

HSSP 8mm Hex Swage Spacers

8mm Hex Swage Spacers

MATERIAL

Material Code	Material Description
STL	Carbon Steel
SS	Stainless Steel
AL	Aluminum
BRS	Brass

FINISH

Finish Code	Finish Description
Z	Zinc with Clear Chromate
Z-BLK	Zinc with Black Chromate
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