

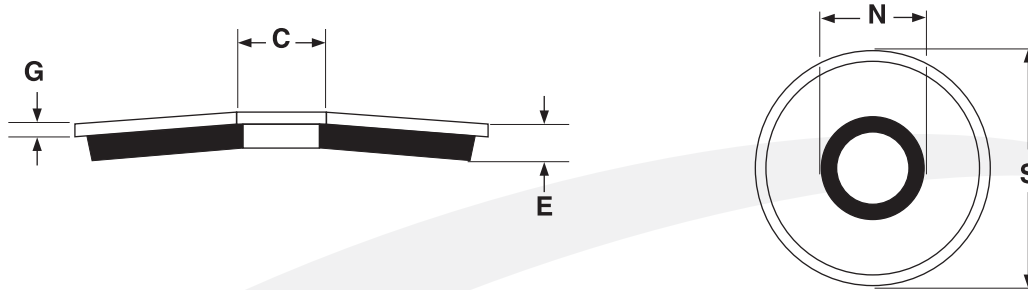
Head dimensions of self-piercing screws differ from those of standard tapping screws.

| HEX WASHER HEAD SLOTTED SELF-PIERCING SCREWS | | | | | | | | | | | | | | | | |
|--|--------------------|------|-------------|------|-----------------|------|------------------|------|------------|------|------------|------|----------------|------|----------------|------|
| Size | A | | H | | F | | U | | J | | T | | D | | d | |
| | Width Across Flats | | Head Height | | Washer Diameter | | Washer Thickness | | Slot Width | | Slot Depth | | Major Diameter | | Minor Diameter | |
| | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min |
| 6-18 | .250 | .244 | .093 | .080 | .328 | .302 | .025 | .015 | .048 | .039 | .053 | .033 | .141 | .136 | .102 | .096 |
| 7-16 | .250 | .244 | .093 | .080 | .328 | .302 | .029 | .017 | .048 | .039 | .062 | .040 | .158 | .152 | .114 | .108 |
| 8-15 | .250 | .244 | .110 | .096 | .348 | .322 | .031 | .019 | .054 | .045 | .074 | .052 | .168 | .162 | .123 | .116 |
| 10-12 | .250 | .244 | .110 | .096 | .414 | .384 | .031 | .019 | .054 | .045 | .074 | .052 | .194 | .188 | .133 | .126 |
| 10-12 | .312 | .305 | .120 | .105 | .414 | .384 | .031 | .019 | .060 | .050 | .074 | .052 | .194 | .188 | .133 | .126 |
| 10-16 | .312 | .305 | .120 | .105 | .414 | .384 | .031 | .019 | .060 | .050 | .074 | .052 | .194 | .188 | .133 | .126 |
| 12-11 | .312 | .305 | .150 | .133 | .432 | .398 | .039 | .022 | .067 | .056 | .093 | .077 | .221 | .215 | .162 | .155 |
| 14-10 | .375 | .366 | .190 | .171 | .520 | .479 | .050 | .029 | .075 | .064 | .111 | .082 | .254 | .247 | .200 | .178 |
| Tolerance on Length | | | | | | | | | ±0.05 | | | | | | | |

NOTE: There is no single standard for self-piercing screw dimensions. These values are offered as a guide; deviations from these specifications may occur.

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| Description | A slotted hex washer head thread forming tapping screw with a single lead thread rolled to the tip of an extra sharp point, and a second thread spaced 180° apart. |
| Applications/ Advantages | May be used in thin metal (less than .050 thick). Eliminates need for pre-drilled or pre-punched holes. Undercut area beneath the head allows greater length of thread engagement. Twin lead threads help to reduce driving torque. |
| Material | AISI 1018 - 1022 or equivalent steel |
| Heat Treatment | Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum. |
| Surface Hardness | Rockwell C45 minimum |
| Case Depth | <i>No. 6 diameter:</i> .002 - .007 <i>No. 7 thru 12 diameter:</i> .004 - .009 <i>1/4" diameter:</i> .005 - .011 |
| Core Hardness (after tempering) | Rockwell C28 - 38 |
| Plating | See Appendix-A for plating information. |

With Neo-EPDM Sealing Washers **SELF-PIERCING**



| NEO-EPDM WASHERS USED WITH SELF PIERCING & SELF DRILLING SCREWS | | | | | | | | | |
|---|-----------------------------------|------|----------------------------------|------|----------------------------|---------------------------------|------|---------------------------|------|
| For Use with Screw of this Nominal Diameter | S | | N | | G | C | | E | |
| | Outside Diameter of Steel Section | | Inside Diameter of Steel Section | | Thickness of Steel Section | Inside Diameter of EPDM Section | | Thickness of EPDM Section | |
| | Max | Min | Max | Min | Ref | Max | Min | Max | Min |
| 8 | .507 | .491 | .212 | .196 | .031 | .149 | .126 | .087 | .070 |
| 10 | .507 | .491 | .212 | .196 | .031 | .149 | .023 | .087 | .070 |
| 12 | .558 | .542 | .243 | .227 | .031 | .197 | .172 | .087 | .070 |
| 14 | .617 | .601 | .275 | .259 | .031 | .232 | .208 | .087 | .070 |

NOTE: There is no single standard for Neo-EPDM dimensions. These values are offered as a guide; deviations from these specifications may occur.

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|----------------------------------|--|
| Description | A thin conically-shaped circular steel stamping with a centrally located hole, bonded to a similarly shaped rubber-like piece which has a slightly smaller outside and inside diameter. When these washers are assembled (rubber side down) to self-piercing or self-drilling screws, those fasteners become "sealing screws". |
| Applications / Advantages | When properly assembled, this washer: (a) offers protection against leakage; (b) provides load bearing qualities superior to that of a regular flat washer; (c) reduces the chance of the fastening becoming loose due to vibration; (d) minimizes damage to the mating surface caused by contact with a steel washer. Self-piercing sealing screws are used in thin metals (less than .050" thick). Self-drilling sealing screws may be used in thicker metals, depending on the diameter of the screw and length of the drill point (consult a self-drilling screw selection chart). |
| Material | <i>Steel Section of washer:</i> 20 gauge steel <i>Elastic Section of washer:</i> Style 40 EPDM sheet |
| Hardness | <i>EPDM material:</i> Shore A 65 - 75 (Durometer scale) |
| Plating | <i>Steel Section of washer:</i> Galvanized |