

## SELF-DRILLING SCREWS

|     |       | Threads<br>Per Inch |      |      | Minor<br>Diameter |      | Protrusion<br>Allowance |        | Minimum Practical Nominal<br>Screw<br>Lengths, Formed Points |                       |                       |                       | Minimum<br>Torsional<br>Strength, lb |
|-----|-------|---------------------|------|------|-------------------|------|-------------------------|--------|--|-----------------------|-----------------------|-----------------------|--------------------------------------|
|     |       |                     | Max  | Min  | Max               | Min  | #2 Pt.                  | #3 Pt. | 90°<br>Head,<br>#2 Pt  | Csk<br>Head,<br>#2 Pt | 90°<br>Head,<br>#3 Pt | Csk<br>Head,<br>#3 Pt | (STEEL<br>SCREWS<br>ONLY)            |
| 8   | .1640 | 18                  | .166 | .161 | .122              | .116 | .211                    | .251   | 3/8  | 7/16                  | 7/16                  | 1/2                   | 42                                   |
| 10  | .1900 | 16                  | .189 | .183 | .141              | .135 | .235                    | .300   | 7/16   | 1/2                   | 1/2                   | 9/16                  | 61                                   |
| 12  | .2160 | 14                  | .215 | .209 | .164              | .157 | .283                    | .353   | 1/2  | 5/8                   | 1/2                   | 5/8                   | 92                                   |
| 1/4 | .2500 | 14                  | .246 | .240 | .192              | .185 | .318                    | .393   | 1/2  | 5/8                   | 1/2                   | 5/8                   | 150                                  |

| For Use<br>with Screv<br>of this<br>Nominal<br>Diameter | Outside Diameter of Steel Section |      | Inside Diameter of<br>Steel<br>Section |      | Thickness<br>of Steel<br>Section | Inside Diameter of EPDM Section |      | Thickness of EPDM<br>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                            | .126 | .087                         | .070 |
| 12  | .558                              | .542 | .243                                   | .227 | .031                             | .197                            | .172 | .087                         | .070 |
| 14  | .617                              | .601 | .275                                   | .259 | .031                             | .232                            | .208 | .087                         | .070 |

| Description                 | A hex washer head tapping screw with spaced threads and a drill point which drills its own hole. Beneath the head is a thin conically- shaped circular steel washer, bonded to a similarly shaped rubber-like piece which as 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/<br>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-drilling sealing screws may be used to attach roofing or metal walls to steel frames. Consult a self-drilling screw selection chart for the correct size. |
| Material                    | Screw: AISI 1016 - 1024 or equivalent steel<br>Steel Section of washer:20 gauge steel<br>Elastic Section of washer: Style 40 EPDM sheet   |
| Heat<br>Treatment           | Screws shall be quenched in liquid and then tempered by reheating to 625°F minimum.   |
| Case<br>Hardness            | Screw: Rockwell C52 -58 Washer: EPDM material: Shore A 65 - 75 (Durometer scale)  |
| Case Depth of<br>Screw      | No. 4 and 6 diameter: .002007<br>No. 8 thru 12 diameter: .004009<br>1/4" diameter and larger: .005011   |
| Core<br>Hardness            | Rockwell C32 - 40 (after tempering)   |
| Plating                     | See Appendix-A for plating information.   |