

# ST Reamer Screws



- Family of screws designed to attach plywood & dimensional lumber to steel thickness up to .250"
- Small wings help bore a clearance hole to help prevent premature thread engagement in the wood. The wings break off after drilling is completed.
- Wafer head design is used for plywood applications. Flat head design is used for lumber applications.
- Applications include flooring in steel frame homes & truck body beds.

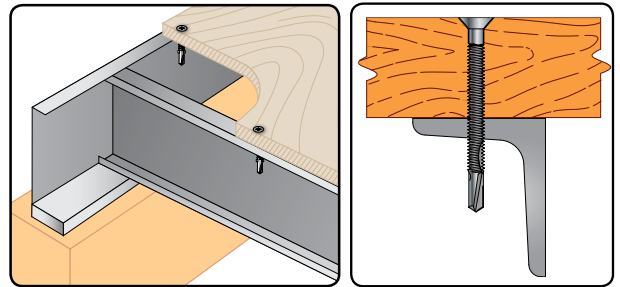
| SIZE            | HEAD STYLE               | CARTON QTY. | WEIGHT/M |
|-----------------|--------------------------|-------------|----------|
| 10-16 x 1-5/8"  | #2 Square/Phillips Combo | 3500        | 9.2/M    |
| 12-24 x 2"      | #3 PFH                   | 2000        | 17.5/M   |
| 12-24 x 2-1/2"  | #3 PFH                   | 2000        | 19.5/M   |
| 1/4-20 x 2-3/4" | #3 PFH                   | 1500        | 28.6/M   |
| 1/4-20 x 3-1/4" | 6 LOBE                   | 1000        | 35.0/M   |



| TECHNICAL INFORMATION | DRILL POINT | MAJOR DIAMETER | MINOR DIAMETER | HEAD DIAMETER | POINT DIAMETER | ULT. TENSILE STRENGTH | MIN. TORSIONAL STRENGTH | NOM. SHEAR STRENGTH |
|-----------------------|-------------|----------------|----------------|---------------|----------------|-----------------------|-------------------------|---------------------|
| 10-16                 | WINGED SD   | .189/.183      | .141/.135      | .440 NOM.     | .156/.151      | 1920 LBS.             | 61 IN-LBS.              | 1633 LBS.           |
| 12-24                 | WINGED SD   | .216/.209      | .165 REF.      | .389 NOM.     | .191/.197      | 2800 LBS.             | 100 IN-LBS.             | 2000 LBS.           |
| 1/4-20                | WINGED SD   | .250/.242      | .187 REF.      | .507/.452     | .226/.220      | 4270 LBS.             | 168 IN-LBS.             | 3000 LBS.           |

| PULL OUT STRENGTH VALUE (LBS. ULT.) | NOM. GAUGE | MATERIAL        |      |      |           |       |                 |
|-------------------------------------|------------|-----------------|------|------|-----------|-------|-----------------|
|                                     |            | HRS PRIMED ONLY |      |      | A36 HRS** |       | G-90 GALVANIZED |
|                                     |            | THICKNESS       |      |      |           |       |                 |
|                                     |            | 16              | 14   | 12   | 3/16"     | 1/4"  | 18              |
|                                     |            | .065            | .070 | .106 | .187      | .250  | .047            |
| 10-16                               |            | 847             | 916  | 1085 | 1920*     |       | 587             |
| 12-24                               |            | 832             | 947  | 1480 | 2582      | 2800* |                 |
| 1/4-20                              |            | 970             | 1165 | 1838 | 3145      | 4270* |                 |

| PULL OVER STRENGTH VALUE (LBS. ULT.) | MATERIAL              | DESIGNATION | CDX PLYWOOD       | 2 x YELLOW PINE |
|--------------------------------------|-----------------------|-------------|-------------------|-----------------|
|                                      | WASHER/ HEAD DIAMETER | THICKNESS   | 15/32" (NOM 1/2") | (1.5 ACTUAL)    |
|                                      | 10-16 (NOTE 3)        |             | 596 (NOTE 1)      | 680             |
|                                      | 12-24                 |             |                   | 1302            |
|                                      | 1/4-20                |             |                   | 1383            |



- NOTES: 1. Wafer head flanges broke during pull over testing in nom. 1/2" plywood value tabulated 1/2" plywood for represents the ultimate strength of the fastener. Pull over strength for plywood thickness is greater than 1/2" can be considered same value as tabulated (596 lbs. ult.)  
 2. Technical data provided herein is to be used as a guide for typical strength characteristics only. All strength values shown are ultimate values expressed in pounds. An appropriate factor of safety must be applied by the user to obtain allowable limits for design.  
 3. Max. plywood thickness for use with this reamer fastener is 3/4."  
 4. Square/Phillips Combo Head available on #10 Diameter.

# InsulDrill™



- #12 diameter screw has 1/4" HWH. Thread design has excellent holding strength in wood.
- #1 drill point will penetrate steel thickness up to 18 gauge.
- Black e-coat corrosion resistant coating is standard on all screws.
- G-90 bonded sealing washer is assembled to the fastener.
- Applications include retrofit & metal panels through rigid insulation to wood.
- Screws are available in all standard ST Fastening Systems colors (wet-paint process).

FOR PROPER INSTALLATION, THE USE OF IMPACT DRIVERS ARE NOT RECOMMENDED FOR POWDER COATED OR ANY WET PAINTED FASTENER

| SIZE        | HEAD STYLE | CARTON QTY. | WEIGHT/M |
|-------------|------------|-------------|----------|
| 12 x 3 3/4" | HWH        | 1000        | 26.5     |
| 12 x 4 1/2" | HWH        | 1000        | 30.7     |
| 12 x 5"     | HWH        | 1000        | 33.4     |
| 12 x 6"     | HWH        | 500         | 39.0     |
| 12 x 7"     | HWH        | 500         | 43.7     |
| 12 x 8"     | HWH        | 500         | 49.7     |

| TECHNICAL INFORMATION | DRILL POINT | MAJOR DIAMETER | MINOR DIAMETER | WASHER/HEAD DIAMETER | HEAD ACROSS FLATS | ULT. TENSILE STRENGTH | MIN. TORSIONAL STRENGTH | NOM. SHEAR STRENGTH |
|-----------------------|-------------|----------------|----------------|----------------------|-------------------|-----------------------|-------------------------|---------------------|
| # 12 Diameter         | SELF-DRILL  | .215 NOM.      | .130 NOM.      | .400 NOM.            | .250 NOM.         | *1723 LBS.            | 125 IN-LBS.             | 1324 LBS.           |

| PULL OUT STRENGTH VALUE (LBS. ULT.) | NOM. GAUGE | GALVANIZED STEEL |     |     |     |     | SUBSTRATE |         |         |          |           | (1) FULL PENETRATION | (2) 1" PENETRATION |  |
|-------------------------------------|------------|------------------|-----|-----|-----|-----|-----------|---------|---------|----------|-----------|----------------------|--------------------|--|
|                                     |            | THICKNESS        |     |     |     |     | 3/4 PLY   | 5/8 PLY | 1/2 PLY | 7/16 OSB | 2x Y.PINE | 2x Y.PINE            |                    |  |
| # 12 Diameter                       |            | 653              | 489 | 406 | 319 | 263 | 795       | 564     | 457     | 177      | 1605      | 976                  |                    |  |

| PULL OVER STRENGTH VALUE (LBS. ULT.) (EPDM ONLY) | DESIGNATION                      | MATERIAL       |       |       |       |       |          |                 |
|--------------------------------------------------|----------------------------------|----------------|-------|-------|-------|-------|----------|-----------------|
|                                                  |                                  | AZ55 GALVALUME |       |       |       | G90   | ALUMINUM | SLOT EDGE PANEL |
|                                                  | NOM. GAUGE                       | THICKNESS      |       |       |       |       |          |                 |
|                                                  |                                  | 29             | 26    | 24    | 22    | 20    | 21       | 29              |
|                                                  |                                  | 0.015          | 0.019 | 0.024 | 0.032 | 0.038 | 0.028    | 0.0175          |
|                                                  | BONDED WASHER (.472" Dia) (12mm) | 671            | 845   | N/A   | N/A   | N/A   | N/A      | N/A             |



- NOTES: 1.\*Tensile strength shown represents ultimate load at which the integral washer brakes from the hex washer head.  
 2. 26 and 29 GA. values shown were obtained using 80 KSI steel sheeting. 24, 22, 20, and 18 GA. values were obtained using 50 KSI minimum steel sheeting.