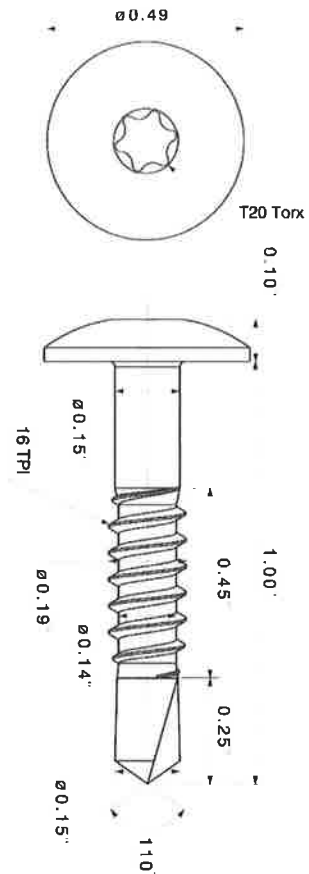


# Technical Information on Offering

| Product information NEW BMSD-S3-#10X1-PN-T20 |                                       |
|--|---------------------------------------|
| Fastener material                            | Stainless steel A2 / AISI304          |
| Drill Point material                         | Carbon steel                          |
| Head style / drive                           | 12 mm dome head D12 with T20 drive    |
| Sealing washer                               | NO Sealing washer                     |
| Thread style / Free zone                     | 16 TPI / 0.3" mm free zone under head |
| Diameter and length                          | #10 x 1" (4.8mm x 25.4mm)             |
| Fastener Grip Range                          | From 0.315" to max 0.531"             |

| Technical Performance Test Results Lab Test # 5115.14 |                                   |
|---|-----------------------------------|
| Pull out of 16 ga (SFS steel)                         | Average 588.9 pounds              |
| Pull out of 18 ga (customer steel)                    | Average 901.9 pounds              |
| Drill speed 16 ga                                     | Average 1.27 sec                  |
| Drill speed 18 ga                                     | Average 3.31 sec                  |
| COMMENTS  | Conclusion see attache Lab Report |

| SFS Quality Check |  |
|-------------------|--|
| Dimension check   | SFS will check the measurements of fastener within standard tolerances |
| Performance check | A drill test into 16 ga  |



Turn ideas into reality. **SFS** intec

# Laboratory Report # 5115.14

|  |                                     |                            |
|--|-------------------------------------|----------------------------|
| <br><b>SFS intec, Inc. Wyomissing, PA</b> | <b>LABORATORY TEST REPORT</b>       |                            |
|  | Date: 7/7/2014<br>Test: Performance | No: 5115.14<br>By: J. Cole |

**SCOPE:**

Determine the pull-out, tensile, shear, torsional, and drill test values for the BMSD-S3-#10 fastener per customer request.

**TEST MATERIAL:**

|  |  |
|--|--|
| <b>Fastener:</b><br>Description: BMSD-S3-#10x1-PN-T20-BIN<br>Materials: 1401556      | <b>Drill Test Settings:</b><br>1800-2000 RPM<br>40lb. load |
| <b>Pull-out Substrate:</b><br>18 gauge Hat channel - 90HRB<br>16 gauge plate - 62HRB |  |

**EQUIPMENT:**

Dillon Model DTM tensile test machine.  
 Dillon 2000 Lb load cell  
 DeWalt DW 284 2000 rpm max Screw Gun.

**TEST METHOD:**

|  |  |
|--|--|
| <b>Tensile Break Load:</b><br>Per T-0756 | <b>Time-Drill Test:</b><br>Per T-0767      |
| <b>Shear Break Load:</b><br>Per T-0752   | <b>Torsional Break Load:</b><br>Per T-0753 |
| <b>Pull-out:</b><br>Per T-0750           |  |

**TEST DATA:**

| Trial     | Pull-out  |             | Shear  | Tensile | Torsional | Drill Time |             |
|-----------|-----------|-------------|--------|---------|-----------|------------|-------------|
|           | 18 ga Hat | 16 ga plate |        |         |           | 18 ga Hat  | 16 ga plate |
| 1         | 791.84    | 602.41      | 1326.4 | 2146.8  | 50        | 2.74       | 1.23        |
| 2         | 1017.7    | 630.5       | 1358.7 | 2083.5  | 55        | 3.49       | 1.44        |
| 3         | 937.75    | 528.86      | 1335.2 | 2056    | 50        | 3.67       | 1.25        |
| 4         | 789.23    | 581.85      | 1392.3 | 2008.2  | 60        | 3.24       | 1.33        |
| 5         | 954.2     | 576.78      | 1364.4 | 1891.9  | 55        | 3.41       | 1.09        |
| 6         | 920.97    | 612.8       | \      | \       | \         | \          | \           |
| Average   | 901.9     | 588.9       | 1355.4 | 2037.3  | 54.0      | 3.31       | 1.27        |
| Std. Dev. | 92.31     | 35.46       | 25.99  | 95.48   | 4.16      | 0.35       | 0.13        |

**Conclusion:**

The strength values expressed herein are ultimate strength values, with the drill times being in seconds, which were the result of laboratory testing. The expressed values may differ from those obtained from field testing. Appropriate safety factors should always be utilized in design and other possible failure modes should also be considered.