

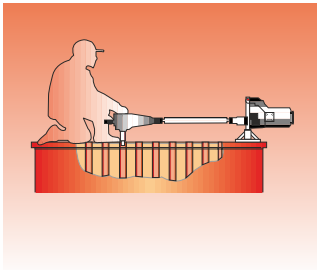
Boiler Tube Expander

'T - 1000' Series (Flare) - 3 Plain Rollers & 3 Flare Rollers

Most ideal for inaccessible areas

- Water boxes
- Small diameter drums

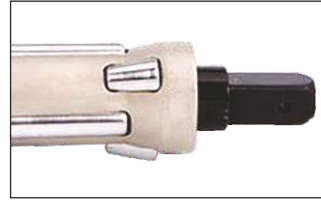
Tritorc believes in offering solutions to overcome any installation problem.



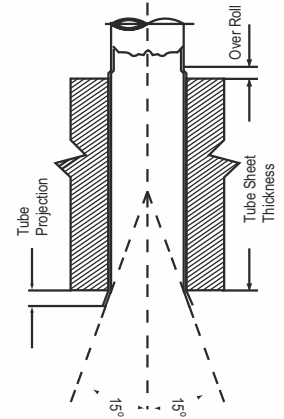
One of our drive systems helps overcome a problem caused by a difficult access...

- Reduces operator fatigue
- Ensures operator safety
- Increases productivity
- Maintains consistent accuracy

| TUBE SIZE | | | | Min I.D. Tool Enters | | Max Expansion of Tool | | TUBE EXPANDER MODEL | | | | |
|------------------------------|---------|-----------|---------|----------------------|-------|-----------------------|-------|----------------------------|----------------|------------------|------------------|------------------|
| O.D. inch | THK bwg | O.D. inch | THK bwg | | | | | Tube Sheet Thickness Range | | | | |
| | | | | mm | inch | mm | inch | 1/2" to 3/4" | 7/8" to 1.1/4" | 1.3/8" to 1.3/4" | 1.7/8" to 2.1/4" | 2.3/8" to 2.3/4" |
| Tube Sheet Thickness Codes > | | | | | | | | 3 | 5 | 7 | 9 | 11 |
| 1 | 13 - 14 | | | 19.7 | 0.775 | 23.4 | 0.921 | T1079/3 | T1079/5 | | | |
| | 15 - 16 | | | 20.7 | 0.814 | 24.4 | 0.961 | T1083/3 | T1083/5 | | | |
| 1.1/4 | 7 | | | 21.7 | 0.854 | 25.5 | 1.004 | T1087/3 | T1087/5 | | | |
| | 8 - 9 | | | 22.7 | 0.893 | 26.5 | 1.043 | T1091/3 | T1091/5 | | | |
| | 10 | | | 23.7 | 0.933 | 28.1 | 1.105 | T1095/3 | T1095/5 | | | |
| | 11-13 | | | 24.7 | 0.972 | 29.0 | 1.142 | T1099/3 | T1099/5 | | | |
| | 14 - 15 | | | 25.7 | 1.011 | 30.0 | 1.181 | T1103/3 | T1103/5 | | | |
| 1.1/2 | 16 | | | 27.8 | 1.094 | 33.0 | 1.299 | T1111/3 | T1111/5 | | | |
| | 10-12 | | | 30.7 | 1.280 | 35.0 | 1.378 | T1118/3 | T1118/5 | | | |
| 1.3/4 | 13-16 | | | 32.7 | 1.287 | 38.0 | 1.496 | T1126/3 | T1126/5 | | | |
| | 8-9 | 2 | 3 | 34.7 | 1.366 | 40.0 | 1.575 | T1134/3 | T1134/5 | T1134/7 | T1134/9 | T1134/11 |
| | 10 - 12 | 2 | 4 - 5 | 36.7 | 1.444 | 42.5 | 1.673 | T1142/3 | T1142/5 | T1142/7 | T1142/9 | T1142/11 |
| 2 | 13 - 16 | 2 | 6 | 38.7 | 1.523 | 44.5 | 1.752 | T1150/3 | T1150/5 | T1150/7 | T1150/9 | T1150/11 |
| | 7 - 9 | 2.1/4 | 6 | 40.7 | 1.602 | 47.0 | 1.850 | T1158/3 | T1158/5 | T1158/7 | T1158/9 | T1158/11 |
| | 10-12 | 2.1/4 | 4 - 5 | 42.7 | 1.681 | 49.0 | 1.929 | T1166/3 | T1166/5 | T1166/7 | T1166/9 | T1166/11 |
| | 13-16 | 2.1/4 | 6 | 44.7 | 1.760 | 51.5 | 2.027 | T1174/3 | T1174/5 | T1174/7 | T1174/9 | T1174/11 |
| 2.1/4 | 16 | 2.1/2 | 3 | 46.7 | 1.838 | 54.0 | 2.126 | T1181/3 | T1181/5 | T1182/7 | T1182/9 | T1182/11 |
| | 10 - 13 | 2.1/2 | 4 - 5 | 48.7 | 1.917 | 56.0 | 2.205 | T1189/3 | T1189/5 | T1189/7 | T1189/9 | T1189/11 |
| | 14 - 16 | 2.1/2 | 6 | 50.7 | 1.996 | 60.0 | 2.362 | T1197/3 | T1197/5 | T1197/7 | T1197/9 | T1197/11 |
| 2.1/2 | 7-10 | | | 52.7 | 2.074 | 62.0 | 2.441 | T1205/3 | T1205/5 | T1205/7 | T1205/9 | T1205/11 |
| | 11-13 | 3 | 2 | 54.7 | 2.135 | 64.0 | 2.520 | T1213/3 | T1213/5 | T1213/7 | T1213/9 | T1213/11 |
| | 14-16 | | | 56.7 | 2.323 | 66.0 | 2.598 | T1221/3 | T1221/5 | T1221/7 | T1221/9 | T1221/11 |



| SPARE ROLLERS SET MODEL | | | | | SPARE MANDREL MODEL | |
|----------------------------|----------------|------------------|------------------|------------------|---------------------|-----------------------|
| Tube Sheet Thickness Range | | | | | Drum Type | Short Series Mandrels |
| 1/2" to 3/4" | 7/8" to 1.1/4" | 1.3/8" to 1.3/4" | 1.7/8" to 2.1/4" | 2.3/8" to 2.3/4" | | |
| 3 | 5 | 7 | 9 | 11 | | |
| 0793-FS | 0795-FS | | | | TMP-83 | |
| 0833-FS | 0835-FS | | | | | |
| 0873-FS | 0875-FS | | | | TMP-91 | 1/2" |
| 0953-FS | 0955-FS | | | | | |
| 0953-FS | 0955-FS | | | | TMP-99 | |
| 0993-FS | 0995-FS | | | | | |
| 1033-FS | 1035-FS | | | | TMP-118 | TMPS-1,2,3 |
| 1113-FS | 1115-FS | | | | | |
| 1183-FS | 1185-FS | | | | TMP-126 | TMPS-1,2,3 |
| 1263-FS | 1265-FS | | | | | |
| 1263-FS | 1265-FS | 1267-FS | 1269-FS | 12611-FS | TMP-134 | TMPS-2,3,4 |
| 1423-FS | 1425-FS | 1427-FS | 1429-FS | 14211-FS | | |
| 1503-FS | 1505-FS | 1507-FS | 1509-FS | 15011-FS | TMP-150 | 3/4" |
| 1583-FS | 1585-FS | 1587-FS | 1589-FS | 15811-FS | | |
| 1663-FS | 1665-FS | 1667-FS | 1669-FS | 16611-FS | TMP-174 | TMPS-3,4,5,6 |
| 1743-FS | 1745-FS | 1747-FS | 1749-FS | 17411-FS | | |
| 1813-FS | 1815-FS | 1817-FS | 1819-FS | 18111-FS | TMP-197 | TMPS-4,5,6,7,8 |
| 1743-FS | 1745-FS | 1747-FS | 1749-FS | 17411-FS | | |
| 2053-FS | 2055-FS | 2057-FS | 2059-FS | 20511-FS | TMP-197 | 1" |
| 2053-FS | 2055-FS | 2057-FS | 2059-FS | 20511-FS | | |
| 2133-FS | 2135-FS | 2137-FS | 2139-FS | 21311-FS | TMP-221 | TMPS-7,8,9,10,11 |
| 2213-FS | 2215-FS | 2217-FS | 2219-FS | 22111-FS | | |
| 2213-FS | 2215-FS | 2217-FS | 2219-FS | 22111-FS | | TMPS-6,7,8,9,10,11 |
| 2053-FS | 2055-FS | 2057-FS | 2059-FS | 20511-FS | | TMPS-7,8,9,10,11,12 |
| 2133-FS | 2135-FS | 2137-FS | 2139-FS | 21311-FS | | TMPS-7,8,9,10,11,12 |
| 2213-FS | 2215-FS | 2217-FS | 2219-FS | 22111-FS | | TMPS-7,8,9,10,11,12 |



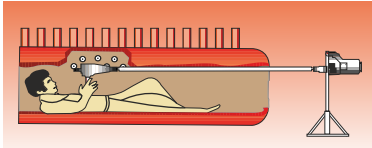
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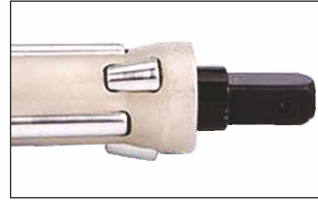
Tritorc offers solutions to overcome any installation problem.



A typical example of an inaccessible area where Tritorc drive system ensures...

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- Increases productivity
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|------------------------------|---------|-----------|---------|---------------------------------|-------|----------------------------------|-------|----------------------------|----------------|------------------|------------------|------------------|
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| | | | | | | | | 1/2" to 3/4" | 7/8" to 1.1/4" | 1.3/8" to 1.3/4" | 1.7/8" to 2.1/4" | 2.3/8" to 2.3/4" |
| Tube Sheet Thickness Codes > | | | | | | | | 3 | 5 | 7 | 9 | 11 |
| 2.3/4 | 7 - 9 | | | 58.7 | 2.311 | 68.0 | 2.677 | T1229/3 | T1229/5 | T1229/7 | T1229/9 | T1229/11 |
| | 10 - 12 | | | 60.7 | 2.389 | 70.0 | 2.756 | T1237/3 | T1237/5 | T1237/7 | T1237/9 | T1237/11 |
| | 13 - 16 | | | 62.7 | 2.468 | 72.0 | 2.835 | T1244/3 | T1244/5 | T1244/7 | T1244/9 | T1244/11 |
| 3 | 7 - 8 | | | 64.7 | 2.547 | 74.0 | 2.913 | T1252/3 | T1252/5 | T1252/7 | T1252/9 | T1252/11 |
| | 10 - 12 | | | 66.7 | 2.625 | 76.0 | 2.992 | T1260/3 | T1260/5 | T1260/7 | T1260/9 | T1260/11 |
| | 13 - 14 | | | 68.7 | 2.704 | 78.0 | 3.071 | T1268/3 | T1268/5 | T1268/7 | T1268/9 | T1268/11 |
| | 15 - 16 | | | 70.7 | 2.783 | 80.0 | 3.150 | T1276/3 | T1276/5 | T1276/7 | T1276/9 | T1276/11 |
| 3.1/4 | 7 - 11 | | | 72.7 | 2.862 | 82.0 | 3.228 | T1284/3 | T1284/5 | T1284/7 | T1284/9 | T1284/11 |
| | 12 - 14 | | | 74.7 | 2.940 | 84.0 | 3.307 | T1292/3 | T1292/5 | T1292/7 | T1292/9 | T1292/11 |
| | 15 - 16 | 3.1/2 | 7 - 9 | 76.6 | 3.019 | 86.0 | 3.386 | T1300/3 | T1300/5 | T1300/7 | T1300/9 | T1300/11 |
| 3.1/2 | 10 - 12 | | | 78.7 | 3.098 | 88.0 | 3.465 | T1308/8 | T1308/5 | T1308/7 | T1308/9 | T1308/11 |
| | 13 - 15 | | | 80.7 | 3.177 | 92.0 | 3.622 | T1315/3 | T1315/5 | T1315/7 | T1315/9 | T1315/11 |
| | 16 | 3.3/4 | 7 - 8 | 82.7 | 3.255 | 94.0 | 3.701 | T1323/3 | T1323/5 | T1323/7 | T1323/9 | T1323/11 |
| 3.3/4 | 9 - 12 | | | 84.7 | 3.334 | 96.0 | 3.780 | T1331/3 | T1331/5 | T1331/7 | T1331/9 | T1331/11 |
| | 13 - 16 | | | 86.7 | 3.413 | 98.0 | 3.858 | T1339/3 | T1339/5 | T1339/7 | T1339/9 | T1339/11 |
| 4 | 7 - 8 | | | 88.7 | 3.492 | 100.0 | 3.937 | T1347/3 | T1347/5 | T1347/7 | T1347/9 | T1347/11 |
| | 9 - 12 | | | 90.7 | 3.507 | 102.0 | 4.016 | T1355/3 | T1355/5 | T1355/7 | T1355/9 | T1355/11 |
| | 13 - 15 | | | 92.7 | 3.649 | 104.0 | 4.094 | T1363/3 | T1363/5 | T1363/7 | T1363/9 | T1363/11 |
| | 16 | 4.1/4 | 7 - 8 | 94.7 | 3.728 | 106.0 | 4.173 | T1370/3 | T1370/5 | T1370/7 | T1370/9 | T1370/11 |
| 4.1/4 | 9 - 11 | | | 96.7 | 3.807 | 108.0 | 4.252 | T1378/3 | T1378/5 | T1378/7 | T1378/9 | T1378/11 |
| | 12 - 16 | | | 98.7 | 3.885 | 110.0 | 4.331 | T1386/3 | T1386/5 | T1386/7 | T1386/9 | T1386/11 |
| | 7 - 14 | | | 100.7 | 3.964 | 111.0 | 4.407 | T1394/3 | T1394/5 | T1394/7 | T1394/9 | T1394/11 |



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| 3 | 5 | 7 | 9 | 11 | | |
| 2213-FS | 2215-FS | 2217-FS | 2219-FS | 22111-FS | TMP-244 | TMPS-8,9,10,11,12,13 |
| 2373-FS | 2375-FS | 2377-FS | 2379-FS | 23711-FS | | |
| 2523-FS | 2525-FS | 2527-FS | 2529-FS | 25211-FS | | |
| 2523-FS | 2525-FS | 2527-FS | 2529-FS | 25211-FS | TMP-268 | TMPS-10,11,12,13,14 |
| 2603-FS | 2605-FS | 2607-FS | 2609-FS | 26011-FS | | |
| 2683-FS | 2685-FS | 2687-FS | 2689-FS | 26811-FS | TMP-300 | TMPS-12,13,14,15,16 |
| 2763-FS | 2765-FS | 2767-FS | 2769-FS | 27611-FS | | |
| 2843-FS | 2845-FS | 2847-FS | 2849-FS | 28411-FS | | |
| 2923-FS | 2925-FS | 2927-FS | 2929-FS | 29211-FS | TMP-347 | TMPS-15,16,17,18,19 |
| 3153-FS | 3155-FS | 3157-FS | 3159-FS | 31511-FS | | TMPS-14,15,16,17,18,19 |
| 3233-FS | 3235-FS | 3237-FS | 3239-FS | 32311-FS | | |
| 3313-FS | 3315-FS | 3317-FS | 3319-FS | 33111-FS | TMP-394 | |
| 3553-FS | 3555-FS | 3557-FS | 3559-FS | 35511-FS | | |
| 3633-FS | 3635-FS | 3637-FS | 3639-FS | 36311-FS | | |
| 3553-FS | 3555-FS | 3557-FS | 3559-FS | 35511-FS | TMP-394 | TMPS-17,18,19,20,21 |
| 3633-FS | 3635-FS | 3637-FS | 3639-FS | 36311-FS | | |
| 3703-FS | 3705-FS | 3707-FS | 3709-FS | 37011-FS | | |
| 3783-FS | 3785-FS | 3787-FS | 3789-FS | 37811-FS | TMP-394 | |
| 3863-FS | 3865-FS | 3867-FS | 3869-FS | 38611-FS | | |
| 3943-FS | 3945-FS | 3947-FS | 3949-FS | 39411-FS | | |

