

Hydraulic tube expansion system

Hydrive



- ❑ Low noise level easy on operator's ears
- ❑ Best suited for boiler tube expansion inside drums
- ❑ Accurate torque control by pressure setting on power pack
- ❑ Safe in operation, 24 v control voltage
- ❑ Smooth
- ❑ Can expand from 3/4" to 4" O.D. in conjunction with 3 drives
- ❑ Competitive prices

Powerpack

| SPECIFICATION | Hydraulic Pump Models | |
|--------------------------------|-----------------------|-----------------|
| | THP-3 | THP-5 |
| Oil Tank Capacity (Litres) | 30 | 45 |
| Hydraulic Oil | SAE VG 68 | SAE VG 68 |
| Maximum Working Pressure (bar) | 100 | 100 |
| Net Weight (kgs) | 80 | 100 |
| Overall Dimensions (mm) | 610*270*985 | 820*320*985 |
| Electric Motor | 3 hp. Single phase | 5 hp. 3 phase |
| Voltage | 230v / 110v | 415v |
| Standard Hose Size (Length) | 1/2" (10 mtrs.) | 1/2" (10 mtrs.) |

Standard scope of supply includes 2 hoses of 1/2" 10 mts long each

Hydraulic expansion drive

| Tube O.D. Steel | Drive Model | No Load Speed with THP -3/5/10 | Weight kg |
|--------------------|----------------|-----------------------------------|--------------|
| 19-38 | THD-4 | 350/480/400 | 9.7 |
| 38-76 | THD-5 | 62/84/70 | 11.0 |
| 50-102 | THD-6 | 40/62/54 | 11.5 |



Electronic Tube Expansion System



Features:

- ❑ Fully Solid State Design.
- ❑ Accurately Calibrated Digitally Torque setting.
- ❑ Connected Drive is automatically recognised & indicated by means of LED indicator on the Torque Controller panel.
- ❑ Slow start has been provided to all the drives for safety.
- ❑ Trip, Reverse & Pause time are adjustable.
- ❑ Manual Reverse provided in case of emergency.
- ❑ Trigger (Hand) & foot mods are available.
- ❑ LED on the panel board indicates the forward, reverse or trip condition of drive.
- ❑ MCB has been provided for the Safety.

Electric Drives use with Torque Controller For Expansion



PED-0



PED-1



PED-2



PED-3

Features:

- ❑ Branded Heavy Duty Motors.
- ❑ High Torque to Weight Ratio.

| Supply Voltage Single Phase 50/60 Hz | Drive Model | Speed I / II | No Load R.P.M. | Expansion Range | | | | Drive Weight Kgs. |
|--|-------------|-----------------|-------------------|-----------------|---------|------------------|----------|----------------------|
| | | | | Steel Tube O.D. | | Copper Tube O.D. | | |
| | | | | inch | mm | inch | mm | |
| 230 V | PED - 0 | I | 2200 | 1/4" - 3/8" | 6 - 10 | 1/4" - 1/2" | 6 - 12 | 2.0 |
| | PED - 1 | I | 1000 | 3/8" - 5/8" | 10 - 16 | 3/8" - 3/4" | 13 - 20 | 2.5 |
| | | II | 1900 | 5/16" - 3/8" | 8 - 13 | 5/16" - 1/2" | 8 - 13 | |
| | PED - 2 | I | 480 | 5/8" - 1.3/4" | 16 - 45 | 5/8" - 2" | 16 - 50 | 7.5 |
| | | II | 1080 | 5/8" - 1.1/4" | 16 - 32 | 5/8" - 1.1/2" | 16 - 38 | |
| | PED - 3 | I | 130 | 1" - 3" | 25 - 76 | 1" - 4" | 25 - 102 | 8.5 |
| | | II | 430 | 1" - 2" | 25 - 50 | 1" - 3" | 25 - 76 | |
| 110 V | PED - 0 | I | 2200 | 1/4" - 3/8" | 6 - 10 | 1/4" - 1/2" | 6 - 12 | 2.0 |
| | PED - 1 | I | 1000 | 3/8" - 5/8" | 10 - 16 | 3/8" - 3/4" | 13 - 20 | 2.5 |
| | | II | 1900 | 5/16" - 3/8" | 8 - 13 | 5/16" - 1/2" | 8 - 13 | |
| | PED - 2 | I | 480 | 5/8" - 1.3/4" | 16 - 45 | 5/8" - 2" | 16 - 50 | 7.5 |
| | | II | 1080 | 5/8" - 1.1/4" | 16 - 32 | 5/8" - 1.1/2" | 16 - 38 | |
| | PED - 3 | I | 130 | 1" - 3" | 25 - 76 | 1" - 4" | 25 - 102 | 8.5 |
| | | II | 430 | 1" - 2" | 25 - 50 | 1" - 3" | 25 - 76 | |

PNEUMATIC TUBE ROLLING DRIVES

FOR HEAT EXCHANGERS



| Model No. | Tube Capacity (inch) | Max Torque Nm | Weight (kg) |
|-------------|----------------------|---------------|-------------|
| T720 - 550 | 1/ 2 | 8.47 | 1.20 |
| T850 - 1250 | 3/4 | 12.20 | 4.80 |
| T850 - 600 | 1 | 21.81 | 4.80 |
| T850 - 400 | 1.1/4 | 36.00 | 4.80 |

FOR BOILERS



| Model No. | Tube Capacity (inch) | Max Torque Nm | Weight (kg) |
|---------------|----------------------|---------------|-------------|
| T72 - RT -190 | 2.5 | 190 | 5.80 |
| T72 - RT - 90 | 4 | 410 | 6.70 |

ERGONOMIC TOOL HOLDING SYSTEM



Most reliable and proven ergo design, work holding system suitable for every application of tube installation and tube removal.

Tool holding system operates on air pressure of 6 bar. This system is very portable and can be used to hold most of the tools and drives required for tube expansion, facing and tube removing operations.

TECHNICAL SPECIFICATION

| Model No. | Vertical Movement | Horizontal Movement | Lift capacity | Allowable Torque |
|-----------|-------------------|---------------------|---------------|------------------|
| TAS - 35 | 3 Feet (915mm) | 5 Feet (1524mm) | 35 Kgs. | 170NM |
| TAS - 55 | 5 Feet (1524mm) | 5 Feet (1524mm) | 35 kgs. | 170NM |

Grooving Tools - 'TST' Series



1/8" X 3/8" X 1/8"

Tools Bits



1/8" X 1/4" X 1/8"

Features:

- ❑ High Production Tool.
- ❑ One Tool for one size only.
- ❑ One piece mandrel construction give you more accuracy.

| Tube O.D. | | Tool Model No. | Spare Tool Bit | |
|---------------|-------|----------------|----------------------------|----------------------------|
| 50/60 Hz Inch | mm | | 1/8" X 3/8" X 1/8" Spacing | 1/8" X 1/4" X 1/8" Spacing |
| 3/8" | 9.52 | TST-375 | TST-371 | TST-371-S |
| 1/2" | 12.70 | TST-875 | TST-501 | TST-501-S |
| 5/8" | 15.87 | TST-500 | TST-621 | TST-621-S |
| 3/4" | 19.05 | TST-750 | TST-751 | TST-751-S |
| 7/8" | 22.22 | TST-625 | TST-751 | TST-751-S |
| 1" | 25.40 | TST-1000 | TST-751 | TST-751-S |
| 1.1/4" | 31.75 | TST-1250 | TST-751 | TST-751-S |
| 1.1/2" | 38.10 | TST-1500 | TST-751 | TST-751-S |
| 2" | 50.80 | TST-2000 | TST-751 | TST-751-S |
| 2.1/2" | 63.50 | TST-2500 | TST-751 | TST-751-S |

'TW' Series



Tool Bits Holder
With Tool Bit



Tools Bit



Circular Form
Cutter

Features:

- ❑ By changing the pilot nose & cutter covers full range of diameters.
- ❑ Length & Depth of cut is adjustable.
- ❑ Cutters are easy to change & resharpenable.

| Tube O.D. | | Tool Model No. | Pilot Nose Model No. | Circular Form Cutter Model No. | Tool Bit Holder Model No. | Spare Tool Bit Model No. |
|---------------|----------|----------------|----------------------|--------------------------------|---------------------------|--------------------------|
| Inch | mm | | | | | |
| 3/8" - 1.1/4" | 9 - 32 | 1TW - 2MT | 1TW - PN | 1TW - CF | 1TW - TBH | 1TW - TB |
| 5/8" - 1.3/4" | 16 - 45 | 3TW - 3MT | 3TW - PN | 3TW - CF | 3TW - TBH | 3TW - TB |
| 3/4" - 1.7/8" | 19 - 48 | 4TW - 4MT | 4TW - PN | 4TW - CF | 4TW - TBH | 4TW - TB |
| 1.1/2" - 4"2" | 38 - 102 | 6TW - 5MT | 6TW - PN | 6TW - CF | 6TW - TBH | 6TW - TB |

TUBE SHEET HOLE REAMER

3/8" - 5" O.D.



Features:

- ❑ High Speed Steel.
- ❑ Best for Condenser, Heat-Exchanger Tube Sheet Reaming.
- ❑ Pls. Enquire For Larger Dia. & long Flute Length.

| Tube O.D. | | Reamer Sizes as per "TEMA" Speci. | | Model No. | Flute Length | | Over All Length | | Morse Taper |
|-----------|-------|-----------------------------------|-------|--------------|--------------|--------|-----------------|--------|-------------|
| Inch | mm | Inch | mm | | Inch | mm | Inch | mm | |
| 3/8" | 9.53 | 0.380 | 9.65 | TR - 095/66 | 2.60 | 66.00 | 5.70 | 146.00 | 1 |
| | | | | TR - 095/101 | 3.97 | 101.00 | 7.12 | 181.00 | |
| | | | | TM - 095/152 | 5.98 | 152.00 | 9.13 | 232.00 | |
| 1/2" | 12.70 | 0.505 | 12.83 | TM - 127/76 | 2.99 | 76.00 | 6.14 | 156.00 | 1 |
| | | | | TM - 127/101 | 3.97 | 101.00 | 7.12 | 181.00 | |
| | | | | TM - 127/152 | 5.98 | 152.00 | 9.13 | 232.00 | |
| 5/8" | 15.87 | 0.631 | 16.03 | TM - 158/87 | 3.42 | 87.00 | 7.36 | 187.00 | 2 |
| | | | | TM - 158/152 | 5.98 | 152.00 | 9.92 | 252.00 | |
| | | | | TM - 158/203 | 7.99 | 203.00 | 11.93 | 303.00 | |
| ** | 16.00 | 0.636 | 16.16 | TM - 160/87 | 3.42 | 87.00 | 7.36 | 187.00 | 2 |
| | | | | TM - 160/152 | 5.98 | 152.00 | 9.92 | 252.00 | |
| | | | | TM - 160/203 | 7.99 | 203.00 | 11.93 | 303.00 | |
| 3/4" | 19.05 | 0.758 | 19.25 | TM - 190/100 | 3.90 | 100.00 | 7.87 | 200.00 | 2 |
| | | | | TM - 190/152 | 5.98 | 152.00 | 9.92 | 252.00 | |
| | | | | TM - 190/203 | 7.99 | 203.00 | 11.93 | 303.00 | |
| ** | 20.00 | 0.795 | 20.20 | TM - 200/100 | 3.90 | 100.00 | 7.87 | 200.00 | 2 |
| | | | | TM - 200/152 | 5.98 | 152.00 | 9.92 | 252.00 | |
| | | | | TM - 200/203 | 7.99 | 203.00 | 11.93 | 303.00 | |
| ** | 22.00 | 0.875 | 22.22 | TM - 220/107 | 4.21 | 107.00 | 8.15 | 207.00 | 2 |
| | | | | TM - 220/152 | 5.98 | 152.00 | 9.92 | 252.00 | |
| | | | | TM - 220/203 | 7.99 | 203.00 | 11.93 | 303.00 | |
| 7/8" | 22.22 | 0.883 | 22.42 | TM - 222/107 | 4.21 | 107.00 | 8.15 | 207.00 | 2 |
| | | | | TM - 222/152 | 5.98 | 152.00 | 9.92 | 252.00 | |
| | | | | TM - 222/203 | 7.99 | 203.00 | 11.93 | 303.00 | |
| ** | 25.00 | 0.994 | 25.25 | TM - 250/115 | 4.53 | 115.00 | 9.53 | 242.00 | 3 |
| | | | | TM - 250/203 | 7.99 | 203.00 | 12.99 | 330.00 | |
| | | | | TM - 250/254 | 10.00 | 254.00 | 15.00 | 381.00 | |
| 1" | 25.40 | 1.010 | 25.65 | TM - 254/115 | 4.53 | 115.00 | 9.53 | 242.00 | 3 |
| | | | | TM - 254/203 | 7.99 | 203.00 | 12.99 | 330.00 | |
| | | | | TM - 254/254 | 10.00 | 254.00 | 15.00 | 381.00 | |
| 1.1/8" | 28.57 | 1.136 | 28.86 | TM - 285/124 | 4.88 | 124.00 | 9.88 | 251.00 | 3 |
| | | | | TM - 285/203 | 7.99 | 203.00 | 12.99 | 330.00 | |
| | | | | TM - 285/254 | 10.00 | 254.00 | 15.00 | 381.00 | |
| 1.1/4" | 31.75 | 1.262 | 32.07 | TM - 317/133 | 5.23 | 133.00 | 11.53 | 293.00 | 4 |
| | | | | TM - 317/203 | 7.99 | 203.00 | 14.29 | 363.00 | |
| | | | | TM - 317/254 | 10.00 | 254.00 | 16.30 | 414.00 | |

TUBE END FACER

3/8" - 2.1/2" O.D.



Stainless Steel

Tools Bits



Carbon Steel



Features:

- ❑ Best for quick facing of projecting ends of Condenser, heat-Exchangers Tubes.
- ❑ Tool supply with set of pilots to suit different I.D. with same O.D.

| Tube O.D. | | Guage | Model No. | Spare Tool Bit | |
|---------------|-------|-------|------------|--------------------------------------|---------------------------|
| 50/60 Hz Inch | mm | | | For Non Ferrous & Carbon Steel Tubes | For Stainless Steel Tubes |
| 3/8" | 9.52 | 16-22 | TTF - 375 | TTFB - 375 | TTFB - 375 - SS |
| 1/2" | 12.70 | 15-20 | TTF - 500 | TTFB - 500 | TTFB - 500 - SS |
| 5/8" | 15.87 | 14-18 | TTF - 625 | TTFB - 625 | TTFB - 625 - SS |
| 3/4" | 19.05 | 10-18 | TTF - 750 | TTFB - 750 | TTFB - 750 - SS |
| 7/8" | 22.22 | 13-18 | TTF - 875 | TTFB - 875 | TTFB - 875 - SS |
| 1" | 25.40 | 11-18 | TTF - 1000 | TTFB - 1000 | TTFB - 1000 - SS |
| 1.1/8" | 28.57 | 11-18 | TTF - 1125 | TTFB - 1125 | TTFB - 1125 - SS |
| 1.1/4" | 31.75 | 11-18 | TTF - 1250 | TTFB - 1250 | TTFB - 1250 - SS |
| 1.3/8" | 34.92 | 11-18 | TTF - 1375 | TTFB - 1375 | TTFB - 1375 - SS |
| 1.1/2" | 38.10 | 11-18 | TTF - 1500 | TTFB - 1500 | TTFB - 1500 - SS |
| 1.5/8" | 41.27 | 11-18 | TTF - 1625 | TTFB - 1625 | TTFB - 1625 - SS |
| 1.3/4" | 44.45 | 11-18 | TTF - 1750 | TTFB - 1750 | TTFB - 1750 - SS |
| 1.7/8" | 47.62 | 11-18 | TTF - 1875 | TTFB - 1875 | TTFB - 1875 - SS |
| 2" | 50.80 | 11-18 | TTF - 2000 | TTFB - 2000 | TTFB - 2000 - SS |
| 2.1/4" | 57.15 | 11-18 | TTF - 2250 | TTFB - 2250 | TTFB - 2250 - SS |
| 2.1/2" | 63.50 | 11-18 | TTF - 2500 | TTFB - 2500 | TTFB - 2500 - SS |

WELD REMOVAL TOOL

1.1/2" - 4" O.D.



Features:

- ❑ Tool suitable for weld removal, Facing, Chamfering (Internal & External) of Condenser, Heat-Exchanger Tubes.
- ❑ This tool can supply with MT Shank suitable for drills.

| Tube O.D. | | Assy Model No. | Spare Tool Bits Model No. |
|-----------|--------|----------------|---------------------------|
| Inch | mm | | |
| 1.1/2" | | TFC - 1500 | TFC - 1500 - TB |
| 1.5/8" | 41.27 | TFC - 1625 | TFC - 1625 - TB |
| 1.3/4" | 44.45 | TFC - 1750 | TFC - 1750 - TB |
| 1.7/8" | 47.62 | TFC - 1875 | TFC - 1875 - TB |
| 2" | 50.80 | TFC - 2000 | TFC - 2000 - TB |
| 2.1/4" | 57.15 | TFC - 2250 | TFC - 2250 - TB |
| 2.1/2" | 63.50 | TFC - 2500 | TFC - 2500 - TB |
| 2.3/4" | 69.85 | TFC - 2750 | TFC - 2750 - TB |
| 3 | 76.20 | TFC - 3000 | TFC - 3000 - TB |
| 3.1/4" | 82.55 | TFC - 3250 | TFC - 3250 - TB |
| 3.1/2" | 88.90 | TFC - 3500 | TFC - 3500 - TB |
| 3.3/4" | 95.25 | TFC - 3750 | TFC - 3750 - TB |
| 4 | 101.60 | TFC - 4000 | TFC - 4000 - TB |

TUBE GUIDE

½" - 3" O.D.



Features:

- To Guide the tube through the tube sheet & baffles plates while insertion of tube.

| Tube O.D. | | Guage | Model No. |
|-----------|-------|-------|------------|
| Inch | mm | | |
| ½" | 12.70 | 16-18 | TTG - 1 |
| | | 19-20 | TTG - 2 |
| | | 21-23 | TTG - 2.5 |
| 5/8" | 15.87 | 12-13 | TTG - 3 |
| | | 14-16 | TTG - 4 |
| | | 17-20 | TTG - 5 |
| | | 22-24 | TTG - 5.5 |
| ¾" | 19.05 | 10-12 | TTG - 6 |
| | | 13-16 | TTG - 7 |
| | | 17-20 | TTG - 8 |
| | | 22-24 | TTG - 8.5 |
| 7/8" | 22.22 | 10-12 | TTG - 9 |
| | | 13-16 | TTG - 10 |
| | | 17-20 | TTG - 11 |
| | | 21-22 | TTG - 11.5 |
| 1" | 25.40 | 8-9 | TTG - 11.5 |
| | | 10-12 | TTG - 12 |
| | | 13-16 | TTG - 13 |
| | | 17-20 | TTG - 14 |
| | | 21-23 | TTG - 14.5 |

| Tube O.D. | | Guage | Model No. |
|-----------|-------|-------|-----------|
| Inch | mm | | |
| 1.1/4" | 31.75 | 10-13 | TTG - 15 |
| | | 14-20 | TTG - 16 |
| 1.3/8" | 34.92 | 8-9 | TTG - 17 |
| | | 10-13 | TTG - 18 |
| | | 14-20 | TTG - 19 |
| 1.1/2" | 38.10 | 8-9 | TTG - 20 |
| | | 10-13 | TTG - 21 |
| | | 14-20 | TTG - 22 |
| 2" | 50.80 | 8-10 | TTG - 23 |
| | | 11-13 | TTG - 24 |
| | | 14-16 | TTG - 25 |
| 2.1/2" | 63.50 | 10-13 | TTG - 26 |
| | | 14-16 | TTG - 27 |

FLARING TOOL



Features:

- To Flare the tube with pneumatic chipping

| Tube O.D. | | Guage | Model No. |
|-----------|-------|-------|-----------|
| Inch | mm | | |
| ½" | 12.70 | 16-22 | TFT - 1 |
| 5/8" | 15.87 | 14-15 | TFT - 2 |
| | | 16-22 | TFT - 3 |
| ¾" | 19.05 | 14-15 | TFT - 4 |
| | | 16-22 | TFT - 5 |
| 7/8" | 22.22 | 14-15 | TFT - 6 |
| | | 16-22 | TFT - 7 |
| 1" | 25.40 | 12-15 | TFT - 8 |
| | | 16-22 | TFT - 9 |
| 1.1/8" | 28.57 | 12-15 | TFT - 10 |
| | | 16-22 | TFT - 11 |
| 1.1/4" | 31.75 | 8-14 | TFT - 12 |
| | | 15-22 | TFT - 13 |
| 1.3/8" | 34.92 | 8-14 | TFT - 14 |
| | | 15-22 | TFT - 15 |
| 1.1/2" | 38.10 | 8-14 | TFT - 16 |
| | | 15-22 | TFT - 17 |

TUBE SHEET HOLE BRUSH



Features:

- To clean the tube sheet bore before tube insertion.

| Tube O.D. | | Model No. |
|-----------|-------|-------------|
| Inch | mm | |
| ½" | 12.70 | TSB - ½ |
| 5/8" | 15.87 | TSB - 5/8 |
| ¾" | 19.05 | TSB - ¾ |
| 7/8" | 22.22 | TSB - 7/8 |
| 1" | 25.40 | TSB - 1 |
| 1.1/4" | 31.75 | TSB - 1.1/4 |
| 1.1/2" | 38.10 | TSB - 1.1/2 |
| 1.3/4" | 44.45 | TSB - 1.3/4 |
| 2" | 50.80 | TSB - 2 |
| 2.1/4" | 57.15 | TSB - 2.1/4 |
| 2.1/2" | 63.50 | TSB - 2.1/2 |
| 2.3/4" | 69.85 | TSB - 2.3/4 |
| 3" | 76.20 | TSB - 3 |

1/4" - 3" O.D.

TUBE LEAK DETECTOR

This Vacuum Tub Leak Detector VLD-3000 simple & accurate method of testing leakages in the tubes of Boiler, Condenser, Heat -Exchanger, Chiller, Cooler, etc.

It works on principle of vacuum in which tool suck the air from tube & create vacuum to a desired reading on gauge.

Steady reading on gauge indicates NO LEAK.

If the reading on the gauge drops it indicates the LEAK tube.



Features:

- ❑ Only one tool necessary for testing multiple tube sizes
- ❑ Compact Tool for checking the tubes for leakage before insertion in tube plate.
- ❑ Simple Design, Light Weight, Quick tube testing. 7 to 8 tubes per minute.
- ❑ InterchangeableSeals for I.D. 10.35mm To 30.65mm
- ❑ Required Air Supply :- Standard 6 to 10 Bar
- ❑ Silent While Testing.

Tube Seals Available-

| Part No. | Tube O.D. Size |
|----------|---------------------------------|
| T - 760 | 1/4" (6.3mm) - 3/4" (19.5mm) |
| T - 1250 | 5/8" (15.9mm) - 1.1/4" (31.7mm) |
| T - 2000 | 1.1/8" (28.6mm) - 2" (50.8mm) |
| T - 3000 | 1.7/8" (47.6mm) - 3" (76.2mm) |

Operating Instructions:



1) Connect air supply to the gun Plug both ends of the tube to be tested with Plugging 'T' handle one end & vacuum gun at other end.



2) Operate slide valve & allow creating vacuum in the tubes.



3) Shut off the slide value when vacuum gauge reaches to the desire pressure. Hold for seconds of gauge shows steady pressure there is no leak.

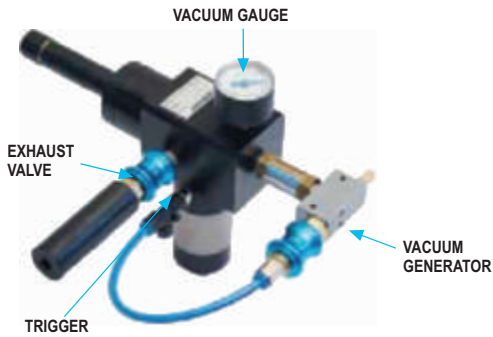


4) If gauge is not showing the steady pressure it means the tube is leak.

Specifications:

- ❑ Cover wide range of tubes with one unit [(tube sizes : 1/4" (6.3mm) to 3" (76.2mm)].
- ❑ Requires 90 psi (6.0 bar) compressed air
- ❑ Air consumption : 26 CFM (720 l/min).

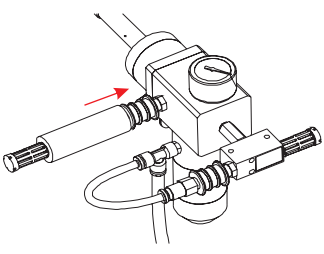
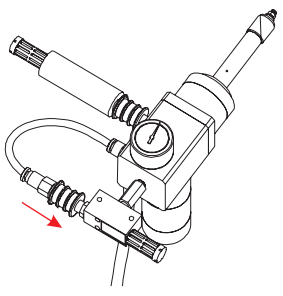
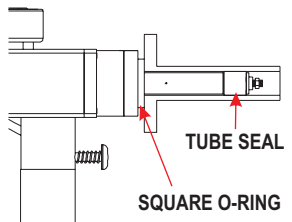
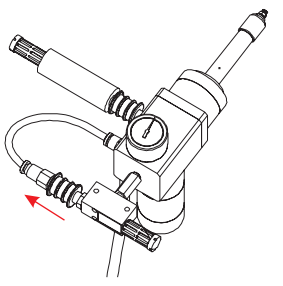
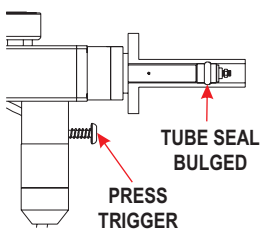
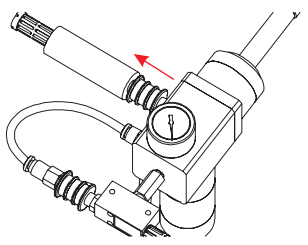
TUBE TO TUBE SHEET JOINT TESTING KIT



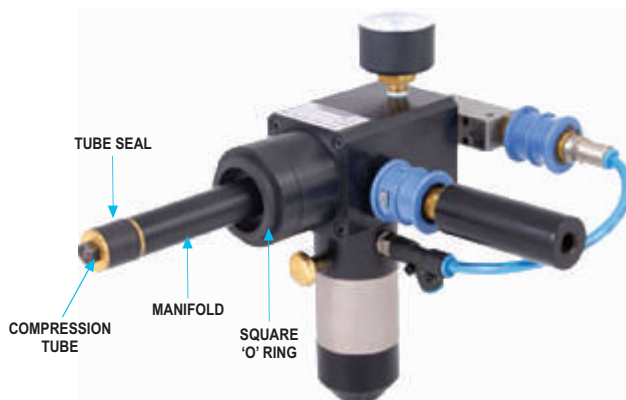
Features :

- Simple, Quick and Reliable tube joint testing. Test 10 tube joints per minute.
- Interchangeable seal sets : Allows testing of tubes from 7.75 mm to 30.63 mm
- ID with easy to replace accessories.
- Joint Testing Gun weights less than 1.5 kg.
- Air supply : Uses standard plant air supplies from 70 psi to 100 psi (4.7 to 6.8 bar).
- Silent during use. Ergonomic design makes testing effortless.
- Each Kit packed in compact and handy case.

SEQUENCE OF OPERATION

| | |
|--|--|
|  <p>A) Close exhaust valve by sliding to extreme right</p> |  <p>D) Slide vacuum valve to right to start generating vacuum. Gauge will indicate vacuum level.</p> |
|  <p>B) Insert manifold till square o-ring firmly sits on tube</p> |  <p>E) Close vacuum slide valve by shifting to left. This will stop vacuum generation. Observe vacuum gauge. Vacuum level falls if the joint is leaking.</p> |
|  <p>C)</p> |  <p>F) After testing the joint release the tube seal by sliding the exhaust to the left. The Joint Testing Kit can be withdrawn after the tube seal collapses.</p> |

TUBE TO TUBE SHEET JOINT TESTING KIT SPECIFICATIONS



| Tube Size | | Tube ID Range | | Tube Seal Part No. | Tube Seal Diameter | | Manifold with Square O ring | Compression Tube Part No. | Square O ring |
|-----------|---------|---------------|---------------|--------------------|--------------------|-------|-----------------------------|---------------------------|---------------|
| O.D. | bwg | mm | inch | | mm | inch | | | |
| 5/8" | 9 | 8.37 | .330 | TTK-300N | 7.5 | .295 | TTM-15-125-5/8 | TTK-15-125 | TTK-16-5/8 |
| | 10-13 | 9.07 - 11.05 | .357 - .435 | TTK-370N | 9 | .354 | | | |
| | 14-15 | 11.67 - 12.23 | .459 - .481 | TTK-450N | 11.6 | .457 | | | |
| | 16-17 | 12.57 - 12.93 | .459 - .509 | TTK-470N | 12.2 | .480 | TTM-15-312-5/8 | TTK-15-312 | |
| | 18-19 | 13.39 - 13.75 | .527 - .541 | TTK-490N | 13.3 | .523 | | | |
| | 20-24 | 14.11 - 14.77 | .555 - .581 | TTK-530N | 13.8 | .543 | | | |
| 3/4" | 9 | 11.55 | .455 | TTK-430N | 10.8 | .425 | TTM-15-312-3/4-1 | TTK-15-312 | TTK-16-3/4 |
| | 10 - 11 | 12.25 - 12.95 | .482 - .510 | TTK-450N | 11.6 | .457 | TTM-15-125-3/4 | TTK-15-125 | |
| | 12 - 13 | 13.53-14.23 | .532 - .560 | TTK-490N | 13.3 | .523 | TTM-15-312-3/4-2 | TTK-15-312 | |
| | 14 - 15 | 14.85 - 15.41 | .584 - .606 | TTK-530N | 13.8 | .543 | | | |
| | 16 - 17 | 15.75 - 16.11 | .620 - .634 | TTK-570N | 15.4 | .606 | | | |
| | 18 - 24 | 16.57 - 17.95 | .652 - 706 | TTK-610N | 16.5 | .649 | | | |
| 7/8" | 8-9 | 13.84 - 14.72 | .544 - .579 | TTK-530N | 13.8 | .543 | TTM-15-312-7/8-1 | TTK-15-312 | TTK-16-7/8 |
| | 10-11 | 15.42 - 16.12 | .607 - .635 | TTK-570N | 15.4 | .606 | | | |
| | 12-13 | 16.7 - 17.4 | .657 - .685 | TTK-610N | 16.5 | .649 | | | |
| | 14-17 | 18.02 - 19.28 | .709 - .759 | TTK-690N | 18 | .708 | TTM-15-312-7/8-2 | | |
| | 18-19 | 19.74 - 20.1 | .777 - .791 | TTK-740N | 19.7 | .775 | | | |
| | 20-24 | 20.46 - 21.12 | .805 - .831 | TTK-790N | 20.1 | .791 | | | |
| 1" | 8-9 | 17.02 - 17.9 | .670 - .704 | TTK-610N | 16.5 | .649 | TTM-15-312-1 | TTK-15-312 | TTK-16-1 |
| | 10-11 | 18.6 - 19.3 | .732 - .760 | TTK-690N | 18 | .708 | | | |
| | 12-13 | 19.88 - 20.58 | .782 - .810 | TTK-740N | 19.7 | .775 | | | |
| | 14-15 | 21.2 - 21.76 | .834 - .856 | TTK-790N | 20.1 | .791 | | | |
| | 16-17 | 22.1 - 22.46 | .870 - .884 | TTK-840N | 21.7 | .854 | TTM-15-405-1 | TTK-15-405 | |
| | 18-19 | 22.92 - 23.28 | .902 - .916 | TTK-870N | 22.9 | .901 | | | |
| | 20-24 | 23.64 - 24.3 | .930 - .956 | TTK-890N | 23.3 | .917 | | | |
| 1.1/8" | 8-9 | 20.19 - 21.07 | .795 - .829 | TTK-790N | 20.1 | .791 | TTM-15-312-1.1/8 | TTK-15-312 | TTK-16-1.1/8 |
| | 10-11 | 21.77 - 22.47 | .857 - .884 | TTK-840N | 21.7 | .854 | TTM-15-405-1.1/8 | TTK-15-405 | |
| | 12-13 | 23.05 - 23.75 | .907 - .935 | TTK-870N | 22.9 | .901 | | | |
| | 14-15 | 24.37 - 24.93 | .959 - .981 | TTK-890N | 23.3 | .917 | | | |
| | 16-17 | 25.27 - 25.63 | .994 - 1.009 | TTK-980N | 25.2 | .992 | | | |
| | 18-19 | 26.09 - 26.45 | 1.027 - 1.041 | TTK-990N | 26.0 | 1.024 | | | |
| | 20-24 | 26.81 - 27.47 | 1.055 - 1.081 | TTK-1040N | 26.8 | 1.055 | | | |
| 1.1/4" | 8-11 | 23.37 - 25.65 | .920 - 1.01 | TTK-890N | 23.3 | .917 | TTM-15-405-1.1/4 | TTK-15-405 | TTK-16-1.1/4 |
| | 12-13 | 26.23 - 26.93 | 1.032 - 1.060 | TTK-990N | 26.0 | 1.024 | | | |
| | 14-17 | 27.55 - 28.81 | 1.084 - 1.134 | TTK-1090N | 27.5 | 1.082 | | | |
| | 18-24 | 29.27 - 30.65 | 1.152 - 1.206 | TTK-1100N | 29.2 | 1.149 | | | |

TUBE / PIPE BEVELING MACHINES

Specially designed to suit the most critical applications with restricted access. These Tools are very rigid, however compact and light weight to facilitate portability and ease of use.

A range of 5 models cover Tube size from 20mm to 306mm O.D. Face Tool head can be mounted either on Electric or Pneumatic Tool as per the requirement. Ideal for on-site pipe Facing, Beveling and Weld preparation.

APPLICATIONS

- Suitable for jobs in restricted access areas
- Useful in shutdown environments on Condensers and Heat Exchangers
- Used for maintenance and new Boiler manufacturing
- Designed to bevel, face and prepare weld edges for heavy wall thickness tubes

FEATURES

- Light weight and portable design
- Quick interchangeability of locking jaws to suit wide range of diameters
- Modular and ergonomic design to suit in toughest working conditions
- Suitable for wide range of tube id's

| Drive | Pneumatic | Electric |
|------------------------|-----------|----------|
| Locking Range (mm) | 20 - 42 | 20 - 42 |
| Ideal Speed (RPM) | 400 | 250 |
| Torque (Nm) | 27.5 | 45.0 |
| Feeding Stroke (mm) | 23 | 23 |
| Pneumatic Power (HP) | 0.60 | -- |
| Air Consumption (cfm) | 16 | -- |
| Air Pressure (psi) | 90 | -- |
| Electric Power (watts) | -- | 650 |
| Weight (kg) | 5.5 | 5.5 |

TFM-2042



| Drive | Pneumatic | Electric |
|------------------------|-----------|----------|
| Locking Range (mm) | 28 - 76 | 28 - 76 |
| Ideal Speed (RPM) | 110 | 140 |
| Torque (Nm) | 84 | 138 |
| Feeding Stroke (mm) | 40 | 40 |
| Pneumatic Power (HP) | 0.83 | -- |
| Air Consumption (cfm) | 42 | -- |
| Air Pressure (psi) | 90 | -- |
| Electric Power (watts) | -- | 595 |
| Weight (kg.) | 5.5 | 11.0 |

TFM - 2876



| Drive | Pneumatic | Electric |
|------------------------|-----------|----------|
| Locking Range (mm) | 51 - 203 | 51 - 203 |
| Ideal Speed (RPM) | 40 | 40 |
| Torque (Nm) | 220 | 240 |
| Feeding Stroke (mm) | 40 | 40 |
| Pneumatic Power (HP) | 1.3 | -- |
| Air Consumption (cfm) | 40 | -- |
| Air Pressure (psi) | 90 | -- |
| Electric Power (watts) | -- | 1800 |
| Weight (kg.) | 26.5 | 30.0 |

TFM - 51203



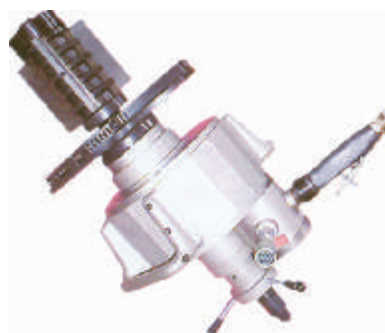
| Drive | Pneumatic | Electric |
|------------------------|-----------|----------|
| Locking Range (mm) | 39 - 104 | 39 - 104 |
| Ideal Speed (RPM) | 60 | 60 |
| Torque (Nm) | 220 | 240 |
| Feeding Stroke (mm) | 40 | 40 |
| Pneumatic Power (HP) | 1.3 | -- |
| Air Consumption (cfm) | 40 | -- |
| Air Pressure (psi) | 90 | -- |
| Electric Power (watts) | -- | 1800 |
| Weight (kg.) | 21.0 | 23.0 |

TFM - 39105

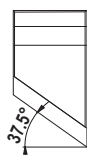


| Drive | Pneumatic | Electric |
|------------------------|-----------|----------|
| Locking Range (mm) | 100-306 | 100-306 |
| Ideal Speed (RPM) | 35 | 31 |
| Torque (Nm) | 180 | 230 |
| Feeding Stroke (mm) | 50 | 50 |
| Pneumatic Power (HP) | 1.9 | -- |
| Air Consumption (cfm) | 60 | -- |
| Air Pressure (psi) | 90 | -- |
| Electric Power (watts) | -- | 1400 |
| Weight (kg.) | 43.0 | 44.0 |

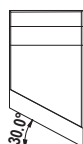
TFM - 99306



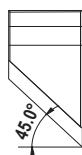
TOOL SET



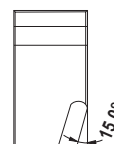
FT-1
(EXT. BEVELLING)



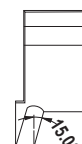
FT-2
(EXT. BEVELLING)



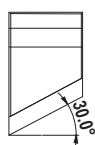
FT-3
(EXT. BEVELLING)



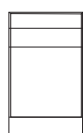
FT-4
(INT. BEVELLING)



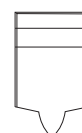
FT-5
(INT. BEVELLING)



FT-6
(INT. BEVELLING)



FT-8
(FACING)



FT-9
(WELD REMOVAL)



FT-10
(‘J’ GROOVING)