

Catalogue

# TORQTIGHT

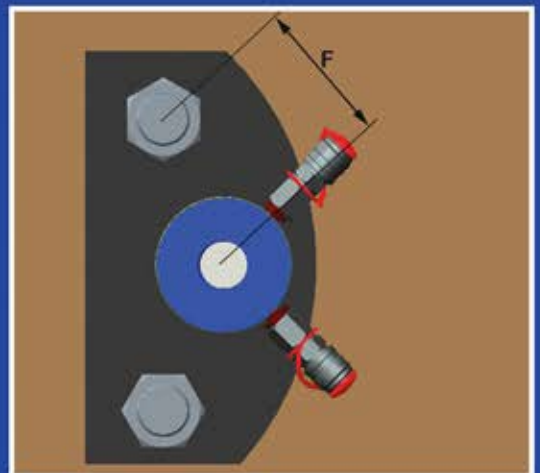
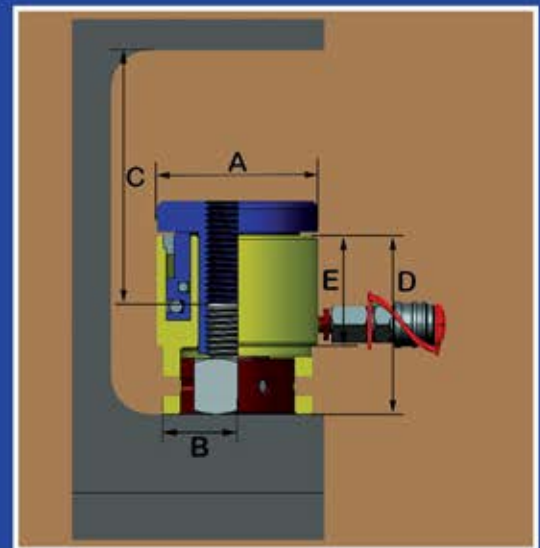
Stud Tensioners



# Hydraulic Stud Tensioners



| Model No.     | Stud Thread | Capacity Kn | Tons  | Effective Area (cm <sup>2</sup> ) | Stroke mm | A mm | B mm | C mm | D mm | E mm | F mm | Weight Kgs |
|---------------|-------------|-------------|-------|-----------------------------------|-----------|------|------|------|------|------|------|------------|
| TTST-24-M16   | M16         | 235         | 24    | 16.0                              | 10        | 74   | 30   | 68   | 80   | 45   | 52   | 3.4        |
| TTST-24-M18   | M18         | 235         | 24    | 16.0                              | 10        | 74   | 30   | 68   | 80   | 45   | 52   | 3.4        |
| TTST-24-M20   | M20         | 235         | 24    | 16.0                              | 10        | 74   | 24   | 68   | 80   | 45   | 52   | 3.4        |
| TTST-24-M22   | M22         | 235         | 24    | 16.0                              | 10        | 74   | 24   | 68   | 80   | 45   | 52   | 3.4        |
| TTST-24-M24   | M24         | 235         | 24    | 16.0                              | 10        | 74   | 24   | 68   | 80   | 45   | 52   | 3.4        |
| TTST-24-M27   | M27         | 235         | 24    | 16.0                              | 10        | 74   | 24   | 68   | 80   | 45   | 52   | 3.4        |
| TTST-44-M27   | M27         | 434         | 44.25 | 29.5                              | 15        | 105  | 30   | 90   | 95   | 56   | 68   | 5.0        |
| TTST-44-M30   | M30         | 434         | 44.25 | 29.5                              | 15        | 105  | 34   | 90   | 95   | 56   | 68   | 5.0        |
| TTST-44-M33   | M33         | 434         | 44.25 | 29.5                              | 15        | 105  | 34   | 90   | 95   | 56   | 74   | 5.0        |
| TTST-44-M36   | M36         | 434         | 44.25 | 29.5                              | 15        | 105  | 34   | 90   | 100  | 56   | 74   | 5.0        |
| TTST-44-M39   | M39         | 434         | 44.25 | 29.5                              | 15        | 105  | 38   | 90   | 100  | 56   | 80   | 5.0        |
| TTST-82-M39   | M39         | 805         | 82    | 54.6                              | 15        | 135  | 38   | 100  | 110  | 56   | 86   | 10         |
| TTST-82-M42   | M42         | 805         | 82    | 54.6                              | 15        | 135  | 38   | 100  | 110  | 56   | 94   | 10         |
| TTST-82-M45   | M45         | 805         | 82    | 54.6                              | 15        | 135  | 42   | 100  | 120  | 56   | 100  | 10         |
| TTST-82-M48   | M48         | 805         | 82    | 54.6                              | 15        | 135  | 44   | 100  | 120  | 56   | 100  | 10         |
| TTST-82-M52   | M52         | 805         | 82    | 54.6                              | 15        | 135  | 54   | 100  | 120  | 56   | 106  | 10         |
| TTST-128-M48  | M48         | 1255        | 128   | 85.3                              | 15        | 165  | 48   | 110  | 120  | 58   | 108  | 20         |
| TTST-128-M52  | M52         | 1255        | 128   | 85.3                              | 15        | 165  | 48   | 110  | 120  | 58   | 108  | 20         |
| TTST-128-M56  | M56         | 1255        | 128   | 85.3                              | 15        | 165  | 58   | 110  | 124  | 58   | 118  | 20         |
| TTST-128-M60  | M60         | 1255        | 128   | 85.3                              | 15        | 165  | 58   | 110  | 124  | 58   | 128  | 20         |
| TTST-128-M64  | M64         | 1255        | 128   | 85.3                              | 15        | 165  | 58   | 110  | 124  | 58   | 134  | 20         |
| TTST-184-M64  | M64         | 1805        | 184   | 122.6                             | 15        | 198  | 68   | 110  | 135  | 60   | 132  | 24         |
| TTST-184-M68  | M68         | 1805        | 184   | 122.6                             | 15        | 198  | 80   | 115  | 145  | 60   | 140  | 24         |
| TTST-184-M72  | M72         | 1805        | 184   | 122.6                             | 15        | 198  | 80   | 115  | 148  | 60   | 145  | 26         |
| TTST-184-M76  | M76         | 1805        | 184   | 122.6                             | 15        | 198  | 80   | 115  | 148  | 60   | 154  | 26         |
| TTST-265-M76  | M76         | 2600        | 265   | 176.6                             | 15        | 233  | 77   | 120  | 155  | 64   | 154  | 40         |
| TTST-265-M80  | M80         | 2600        | 265   | 176.6                             | 15        | 233  | 78   | 120  | 155  | 64   | 156  | 40         |
| TTST-265-M85  | M85         | 2600        | 265   | 176.6                             | 15        | 233  | 77   | 120  | 155  | 64   | 168  | 40         |
| TTST-265-M90  | M90         | 2600        | 265   | 176.6                             | 15        | 233  | 88   | 120  | 155  | 64   | 174  | 40         |
| TTST-265-M95  | M95         | 2600        | 265   | 176.6                             | 15        | 233  | 100  | 120  | 168  | 64   | 196  | 40         |
| TTST-265-M100 | M100        | 2600        | 265   | 176.6                             | 15        | 233  | 108  | 120  | 175  | 64   | 200  | 40         |



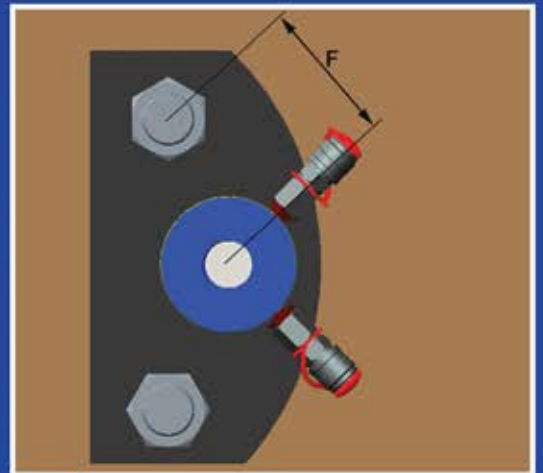
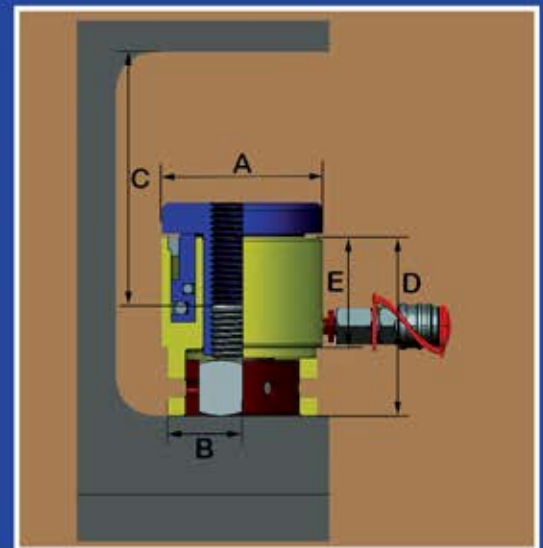
## FEATURES

- SPEED OPERATION.
- HIGH POWER WEIGHT RATIO.
- SUITABLE FOR METRIC AND IMPERIAL STUDS.
- SINGLE ACTING DESIGN.
- SUITABLE FOR SINGLE OR MULTI TENSIONING APPLICATION.
- WEAR RESISTANT PLATED PISTONS.
- CHOICE OF MANUAL OR AIR OPERATED PUMPS.
- 1500 BAR MAXIMUM WORKING PRESSURE.
- HIGH PRESSURE STANDARD QUICK COUPLERS FITTED.
- MAXIMUM STROKE BLOW OUT PROTECTION.
- SPECIAL DESIGN TENSIONERS AVAILABLE ON REQUEST.

# Hydraulic Stud Tensioners



| Model No.    | Stud Thread | Capacity Kn | Tons  | Effective Area (cm <sup>2</sup> ) | Stroke mm | A mm | B mm | C mm | D mm | E mm | F mm | Weight Kgs |
|--------------|-------------|-------------|-------|-----------------------------------|-----------|------|------|------|------|------|------|------------|
| TTST-24-075  | 3/4"        | 235         | 24    | 16.0                              | 10        | 74   | 24   | 68   | 80   | 45   | 52   | 3.4        |
| TTST-24-087  | 7/8"        | 235         | 24    | 16.0                              | 10        | 74   | 24   | 68   | 80   | 45   | 52   | 3.4        |
| TTST-24-100  | 1"          | 235         | 24    | 16.0                              | 10        | 74   | 24   | 68   | 80   | 45   | 52   | 3.4        |
| TTST-24-112  | 1.1/8"      | 235         | 24    | 16.0                              | 10        | 74   | 24   | 68   | 80   | 45   | 52   | 3.4        |
| TTST-44-112  | 1.1/8"      | 434         | 44.25 | 29.5                              | 15        | 105  | 30   | 90   | 95   | 56   | 68   | 5.0        |
| TTST-44-125  | 1.1/4"      | 434         | 44.25 | 29.5                              | 15        | 105  | 34   | 90   | 100  | 56   | 74   | 5.0        |
| TTST-44-137  | 1.3/8"      | 434         | 44.25 | 29.5                              | 15        | 105  | 38   | 90   | 100  | 56   | 80   | 5.0        |
| TTST-44-150  | 1.1/2"      | 805         | 82    | 54.6                              | 15        | 135  | 38   | 100  | 110  | 56   | 86   | 10         |
| TTST-82-150  | 1.1/2"      | 805         | 82    | 54.6                              | 15        | 135  | 38   | 100  | 110  | 56   | 94   | 10         |
| TTST-82-162  | 1.5/8"      | 805         | 82    | 54.6                              | 15        | 135  | 42   | 100  | 120  | 56   | 100  | 10         |
| TTST-82-175  | 1.3/4"      | 805         | 82    | 54.6                              | 15        | 135  | 44   | 100  | 120  | 56   | 100  | 10         |
| TTST-82-187  | 1.7/8"      | 805         | 82    | 54.6                              | 15        | 135  | 54   | 100  | 120  | 56   | 106  | 10         |
| TTST-82-200  | 2"          | 1255        | 128   | 85.3                              | 15        | 165  | 48   | 110  | 120  | 58   | 108  | 20         |
| TTST-128-187 | 1.7/8"      | 1255        | 128   | 85.3                              | 15        | 165  | 48   | 110  | 120  | 58   | 108  | 20         |
| TTST-128-200 | 2"          | 1255        | 128   | 85.3                              | 15        | 165  | 58   | 110  | 124  | 58   | 118  | 20         |
| TTST-128-225 | 2.1/4"      | 1255        | 128   | 85.5                              | 15        | 165  | 58   | 110  | 124  | 58   | 118  | 20         |
| TTST-128-250 | 2.1/2"      | 1255        | 128   | 85.3                              | 15        | 165  | 58   | 110  | 124  | 58   | 134  | 20         |
| TTST-184-250 | 2.1/2"      | 1805        | 184   | 122.6                             | 15        | 198  | 68   | 110  | 135  | 60   | 132  | 24         |
| TTST-184-275 | 2.3/4"      | 1805        | 184   | 122.6                             | 15        | 198  | 80   | 115  | 148  | 60   | 145  | 26         |
| TTST-184-300 | 3"          | 1805        | 184   | 122.6                             | 15        | 198  | 80   | 115  | 148  | 60   | 154  | 26         |
| TTST-265-300 | 3"          | 2600        | 265   | 176.6                             | 15        | 233  | 77   | 120  | 155  | 64   | 154  | 40         |
| TTST-265-325 | 3.1/4"      | 2600        | 265   | 176.6                             | 15        | 233  | 77   | 120  | 155  | 64   | 168  | 40         |
| TTST-265-350 | 3.1/2"      | 2600        | 265   | 176.6                             | 15        | 233  | 88   | 120  | 155  | 64   | 174  | 40         |
| TTST-265-375 | 3.3/4"      | 2600        | 265   | 176.6                             | 15        | 233  | 100  | 120  | 168  | 64   | 196  | 40         |
| TTST-265-400 | 4"          | 2600        | 265   | 176.6                             | 15        | 233  | 108  | 120  | 175  | 64   | 200  | 40         |



## FEATURES

- SPEED OPERATION.
- HIGH POWER WEIGHT RATIO.
- SUITABLE FOR METRIC AND IMPERIAL STUDS.
- SINGLE ACTING DESIGN.
- SUITABLE FOR SINGLE OR MULTI TENSIONING APPLICATION.
- WEAR RESISTANT PLATED PISTONS.
- CHOICE OF MANUAL OR AIR OPERATED PUMPS.
- 1500 BAR MAXIMUM WORKING PRESSURE.
- HIGH PRESSURE STANDARD QUICK COUPLERS FITTED.
- MAXIMUM STROKE BLOW OUT PROTECTION.
- SPECIAL DESIGN TENSIONERS AVAILABLE ON REQUEST.

# Hand Pumps & Air Operated Pumps



## Hand Pumps

| Model No.   | Working Pressure Bar | Oil Flow  | Oil Tank Capacity | Pressure Gauge                | Weight |
|-------------|----------------------|---|-------------------|-------------------------------|--------|
| TT-PL-16210 | 1000                 | 32CM <sup>3</sup> @ 30 BAR<br>1.6CM <sup>3</sup> @ 1000 BAR | 2.4 LTRS          | 0-1000 Bar<br>Glycerin filled | 8 Kgs  |
| TT-PL-16410 | 1000                 | 32CM <sup>3</sup> @ 30 BAR<br>1.6CM <sup>3</sup> @ 1000 BAR | 4.3 LTRS          | 0-1000 Bar<br>Glycerin filled | 12 Kgs |
| TT-PL-16810 | 1000                 | 32CM <sup>3</sup> @ 30 BAR<br>1.6CM <sup>3</sup> @ 1000 BAR | 8.0 LTRS          | 0-1000 Bar<br>Glycerin filled | 18 Kgs |
| TT-PL-16216 | 1600                 | 32CM <sup>3</sup> @ 30 BAR<br>1.6CM <sup>3</sup> @ 1600 BAR | 2.4 LTRS          | 0-1600 Bar<br>Glycerin filled | 8 Kgs  |
| TT-PL-16416 | 1600                 | 32CM <sup>3</sup> @ 30 BAR<br>1.6CM <sup>3</sup> @ 1600 BAR | 4.3 LTRS          | 0-1600 Bar<br>Glycerin filled | 12 Kgs |
| TT-PL-16816 | 1600                 | 32CM <sup>3</sup> @ 30 BAR<br>1.6CM <sup>3</sup> @ 1600 BAR | 8.0 LTRS          | 0-1600 Bar<br>Glycerin filled | 18 Kgs |

## FEATURES

- SPEED OPERATION.
- HIGH POWER WEIGHT RATIO.
- SIX MODELS TO SELECT
- SINGLE ACTING DESIGN.
- TWO STAGE PUMPS.
- GLYCERIN FILLED PRESSURE GAUGE.
- SUITABLE FOR SINGLE OR MULTI TENSIONING APPLICATIONS.
- CHOICE OF MANUAL OR AIR OPERATED PUMPS.
- 1600 BAR MAXIMUM WORKING PRESSURE.
- HIGH PRESSURE STANDARD QUICK COUPLERS FITTED.
- 3:1 SAFETY FACTOR ON HOSES.
- FOUR PORT MANIFOLD BLOCK FITTED WITH COUPLERS.
- AIR OPERATED PUMP FITTED WITH FRL UNIT.
- EASY TO OPERATE
- LIGHT WEIGHT COMPACT CONSTRUCTION
- STATIONARY / PORTABLE
- PNEUMATIC DRIVE
- NO HEAT, FLAME OR SPARK RISK
- ADDITIONAL BUILT-IN HAND PUMP FOR BACK-UP

## Air Operated Pumps

| Model No.   | Working Pressure Bar | Pressure Ratio | Oil Flow           | Tank Capacity | Air Input | Weight |
|-------------|----------------------|----------------|--------------------|---------------|-----------|--------|
| TT-M189-2   | 1600                 | 1:350          | 1.0CM <sup>3</sup> | 5 Litres      | 5-6 Bar   | 10 Kgs |
| TT-MPU-3505 | 1800                 | 1:350          | 1.3CM <sup>3</sup> | 5 Litres      | 5-6 Bar   | 20 Kgs |
| TT-MPU-300L | 3000                 | 1:315          | 3.2CM <sup>3</sup> | 30 Litres     | 5-6 Bar   | 30 Kgs |

## TENSIONING OPERATION

TENSIONING PERMITS THE SIMULTANEOUS TIGHTENING OF MULTIPLE BOLTS; THE TOOLS ARE CONNECTED IN SEQUENCE VIA A HIGH-PRESSURE HOSE ASSEMBLY TO A SINGLE PUMP UNIT. THIS ENSURES EACH TOOL DEVELOPS THE EXACT SAME LOAD AND PROVIDES A UNIFORM CLAMPING FORCE ACROSS THE JOINT. THIS IS ESPECIALLY IMPORTANT FOR PRESSURE CONTAINING VESSELS REQUIRING EVEN GASKET COMPRESSION TO AFFECT A SEAL.

## GENERAL PROCEDURE

STEP 1: THE BOLT TENSIONER IS FITTED OVER THE STUD.

STEP 2: HYDRAULIC PRESSURE IS APPLIED TO THE TENSIONER WHICH THEN STRETCHES THE STUD

STEP 3: THE STUD'S NUT IS WOUND DOWN AGAINST THE JOINT FACE.

STEP 4: PRESSURE IS RELEASED AND THE TOOL REMOVED.

THE BOLT BEHAVE LIKE A SPRING, WHEN THE PRESSURE IS RELEASED THE BOLT IS UNDER TENSION AND ATTEMPTS TO CONTACT, CREATING THE REQUIRED CLAMPING FORCE ACROSS THE JOINT



**HTW-5S BEING USED FOR TIGHTENING CORE STUD BOLTS IN BHEL SITE.**



**HTW-7D BEING USED ON LW-35 TON DUMPER FOR TIGHTENING & LOOSENING THE WHEEL BOLTS AT LAFARGE CEMENTS**



**HTW-8D BEING USED ON BEML ROPE HOVEL DRUM FOUNDATION BOLTS.**



**HTW-8D BEING USED ON THE COAL HANDLING UNIT AT JSW BELLARY**



**HTW-7D BEING USED FOR BOLT TIGHTENING ON THE LAUNCHING GANTRY USED FOR BRIDGE CONSTRUCTION BY L&T ECC AT BANGALORE**



**HTW-8D BEING USED ON GM LOCO ENGINE CRABNUT AT DIESEL LOCO SHED SWR, HUBLI**



**HTW-2T SWYWN No. ALONG WITH FIXTURE FOR TIGHTENING & LOOSENING ENGINE HEAD BOLTS OF ALCO ENGINE**



**HTW-4X WITH 360°X360° SWIVEL USED FOR TIGHTENING MAIN BEARING NUTS IN DIESEL LOCO SHED**



**HTW-2L WITH SPECIAL REACTION SOCKET BEING USED ON CATERPILLER ENGINE CRANK SHAFT BOLTS AT HINDUSTAN POWER PLUS, HOSUR**



**HTW-15S BEING USED ON HYDRO STATOR CORE BOLTS AT BHEL TALA BHUTAN**



**HTW-7T BEING USED FOR CRAB NUT OF WDG4 LOCO FOR TIGHTENING & LOOSENING**



**MICRO PROCESSOR CONTROLLED HYDRAULIC TORQUE WRENCH SYSTEM SUPPLIED TO DIESEL LOCO SHED SWR HUBLI**



**HTW-15D BEING USED ON CORE STUD BOLTS AT BHEL, BHOPAL**



**HTW-50S (15000KGM) TORQUE WRENCH USED FOR TIGHTENING TURBINE GENERATOR SHAFT COUPLING BOLT AT NTPC KOLDAM PROJECT.**



**HTW-75S BEING USED AT JSL-STEEL PLANT ORISSA FOR TIGHTENING COUPLING BOLTS**