CTT
Coil Tubing Technology, Inc.

# CTT Rotating Tool (Patented)

## Operational Application's:

- Provide Rotational Alignment of Tool String Through the Wellhead
- Rotate Work Strings Off of Liner Tops and into Pipe I.D.
- Allows Rotation of the Work String Through Tight Places
- Rotating an Overshot onto a "Fish"
- Rotation of a Wireline Grab to Fish Wireline

## Operational Advantages:

- Eliminate Costly PDM (motor) Run Charges
- Better Control of the Work String Downhole
- Large I.D. of the Rotating Tool Permits Drop Ball Passage
- Internal and External "Stops" Within the "CTT Rotating Tool" make the Tool Compatible with Fishing and Jarring Operations
- The "CTT Rotating Tool" Mechanism can be set for Left Hand as well as Right Hand Rotation
- The "CTT Rotating Tool" can be set for Less Than (1) Rotation (Additional Rotations available upon request up to 18 per cycle).

## Description

The "CTT Rotating Tool" is a product specifically designed and developed for use in coiled tubing and wireline operations to mechanically induce rotation of components in the work string. The "CTT Rotating Tool" is designed to provide up to (8) full 360 degree revolutions per cycle with rotation initiated when 50 pounds of weight is set down on the tool.

## Operational Instructions

Below are general operating instructions to assist in the usage of the "CTT Rotating Tool."

- What is required to make a successful "CTT Rotating Tool" run:
  - Minimum restrictions
  - In fishing applications determine the tool size and use a "CTT Rotating Tool" of equal diameter or larger than the Jars and Amplidynes to be utilized
  - Amount of rotation desired
  - Rotating Tool placement in the work string. It is recommended that the tool be utilized below the CT Connector, BPV, Disconnect, Circulating Subs, Amplidynes, or Jars
- Determine what tool or tools are to be run below the "CTT Rotating Tool" (i.e. overshot wireline grab, packer, etc.).
- In the event the "CTT Rotating Tool" is run on slick line be sure that all tool joints below the tool are sufficiently torqued to prevent backlash when wrapping wire.

Basic Operating Procedures

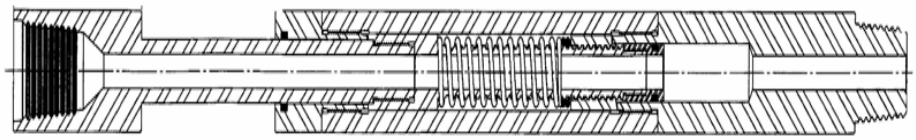
- CT Operation – fishing or rotating work string through a restriction or off a line top.
  - Place the "CTT Rotating Tool" on a 1" test ball and manually operate prior to making up in the string. This will require up to 50# of applied weight.
  - Make up BHA
  - Install "CTT Rotating Tool"
  - Pull test string
  - Install overshot or wireline grab
- Wireline Operation – rotation to fish wireline.
  - Place the "CTT Rotating Tool" on a 1" test ball and manually operate the tool prior to making up in the work string.
  - Place at least 50# of weight bars above the "CTT Rotating Tool"
  - Make sure to sufficiently Loctite and torque all connections.

The "CTT Rotating Tool" will rotate downhole when a weight of 50# or greater is applied. To reset the tool just lift the tool up 12" and the tool will be reset by the internal spring. The tool is again ready for rotation.

CTT
Coil Tubing Technology, Inc.

# CTT Rotating Tool
# (Patented)

| OD SIZE | STANDARD CONNECTION | LENGTH Ft. | BORE I.D. | ROTATIONS PER CYCLE | TEMPERATURE °F |
|---|---|---|---|---|---|
| 1.69 | 1" MT | 32" | .562 | 4 - 360° | 500 |
| 1.75 | 1" MT | 32" | .562 | 4 - 360° | 500 |
| 2.125 | 1-1/2" MT | 42" | .625 | 4 - 360° | 500 |
| 2.875 | 2-3/8" PAC | 42" | .812 | 4 - 360° | 500 |



| | 1.688 "CTT Rotating Tool" | 1.750 "CTT Rotating Tool" | 2.125 "CTT Rotating Tool" | 2.875 "CTT Rotating Tool" |
|---|---|---|---|---|
| Assembly Part Number | 80-1688 | 80-1750 | 80-2125 | 80-2875 |
| Outside Diameter ( Inches) | 1.168" | 1.750" | 2.125" | 2.875" |
| Inside Diameter ( Inches ) | 0.562" | 0.562" | 0.625" | 0.812" |
| Overall Length (Open) | 35" | 35" | 42" | 47" |
| Approximate Weight | 25 Lbs. | 30 Lbs. | 45 Lbs. | 80 Lbs. |
| Standard Tool Joint | 1" AMMT Pin Down / Box Up | 1" AMMT Pin Down / Box Up | 1 ½" AMMT Pin Down / Box Up | 2 3/8" PAC Pin Down / Box Up |
| *Operational* | | | | |
| Maximum Overpull Weight (Lbs.) | 15,000 Lbs. | 20,000 Lbs. | 30,000 Lbs. | 40,000 Lbs. |
| Maximum Setdown Weight (Lbs.) | 15,000 Lbs. | 20,000 Lbs. | 30,000 Lbs. | 40,000 Lbs. |
| Torsional Yield (Ft.-Lbs.) | 1,300 Ft. Lbs. | 1,500 Ft. Lbs. | 1,800 Ft. Lbs. | 2,100 Ft. Lbs. |
| Tensile Yield | 64,000 | 68,000 | 68,000 | 88,000 |
| Temperature Rating (F) | 500 F | 500 F | 500 F | 500 F |