

Perforating torch system (PTS) tubing punch

The perforating torch system (PTS) is recommended for tubing punch operations using Expro's Combined Trigger Unit (CTU) on slickline or e-line, and is deployed without the need for radio silence or explosives.

The PTS is a patented device used to punch tubing, casing, drill pipe and coil tubing. The PTS utilises a proprietary mixture of powdered metals contained inside the torch body which burn at very high temperature on ignition by the gas generator. The resultant molten plasma is then ejected through the patented nozzle section and perforates the target tubing.

The PTS (SP) series does not use explosives or hazardous chemicals, the tool can be shipped almost anywhere in the world within 24 hours, saving significant time and associated costs, while remaining compliant with safety regulations.

2-7/8" 7.9# Tubing
Circulating Pyro Torch®
cut @ 20,000psi



4-1/2" 15.1# Tubing
Circulating Pyro Torch®
cut @ 20,000psi



Applications

Perforating of tubing, casing, drill pipe or coiled tubing for circulation purposes

Benefits

- Cost effective service run on slickline or e-line
- No explosives or dangerous chemicals required for use
- Non-hazmat rated
- No special storage, handling, or disposal problems
- Causes no flaring or swelling in tubing
- Perforates all stainless steels, Monel, Inconel and plastic coated pipe
- Can be run through small restrictions to perforate larger diameter pipe
- Can be used in close contact pipe conditions
- Can perforate in dry pipe conditions
- Patented pressure balance anchor system eliminates movement, slipping, or sticking problems associated with other anchors
- The complete system is safe to use in radio sensitive areas

Operation

The perforating torch cutter assembly is lowered into the well to the desired depth. Activation of the thermal generator activator activates the primary fuel load causing an increase in internal pressure.

Following internal pressure rise, plasma exits thru the side of the torch nozzle and perforates the target pipe. With single nozzle systems the PTC cutting jet forces the tool against the wall of the pipe producing high frictional forces between the PTC and the wall of the pipe resulting in a stabilised torch and successful penetration.

Technical specifications

Part number	Description	Recommended use	Pressure PSI
PTS-SP-0750-200	3/4" OD	CT up to 1-1/2" OD	0 to 4,000psi
PTS-SP-0750-300	3/4" OD	CT up to 1-1/2" OD	4,000 – 10,000psi
PTS-SP-0875-200	7/8" OD	CT 1-1/2" to 1-3/4" OD	0 to 4,000psi
PTS-SP-0875-300	7/8" OD	CT 1-1/2" to 1-3/4" OD	4,000 – 10,000psi
PTS-SP-1000-200	1" OD	CT 1-3/4" to 2" OD	0 to 4,000psi
PTS-SP-1000-300	1" OD	CT 1-3/4" to 2" OD	4,000 – 10,000psi
PTS-SP-1000-200	1" OD	CT 2", 2-1/16" OD 3.25 lb/ft	0 to 4,000psi
PTS-SP-1000-300	1" OD	CT 2", 2-1/16" OD 3.25 lb/ft	4,000 – 10,000psi
PTS-SP-1375-200	1-3/8" OD	2-3/8" OD 4.7 to 5.95 lb/ft	0 to 4,000psi
PTS-SP-1375-300	1-3/8" OD	2-3/8" OD 4.7 to 5.95 lb/ft	4,000 – 10,000psi
PTS-SP-1375-300	1-3/8" OD	2-7/8" OD 6.5 to 8.7 lb/ft	0 to 4,000psi
PTS-SP-1375-400	1-3/8" OD	2-7/8" OD 6.5 to 8.7 lb/ft	4,000 – 10,000psi
PTS-SP-1375-300	1-3/8" OD	2-7/8" OD 9.3 to 11.7 lb/ft	0 to 4,000psi
PTS-SP-1375-400	1-3/8" OD	2-7/8" OD 9.3 to 11.7 lb/ft	4,000 – 10,000psi
PTS-SP-1688-200	1-11/16" OD	3-1/2" OD 9.3 to 10.2 lb/ft	0 to 4,000psi
PTS-SP-1688-300	1-11/16" OD	3-1/2" OD 9.3 to 10.2 lb/ft	4,000 – 10,000psi
PTS-SP-2500-200	2-1/2" OD	4-1/2" OD 9.50 to 15.5 lb/ft	0 to 4,000psi
PTS-SP-2500-300	2-1/2" OD	4-1/2" OD 9.50 to 15.5 lb/ft	4,000 – 10,000psi
PTS-SP-2937-200	2-15/16" OD	5-1/2" OD 14.0 to 23.0 lb/ft	0 to 4,000psi
PTS-SP-2937-300	2-15/16" OD	5-1/2" OD 14.0 to 23.0 lb/ft	4,000 – 10,000psi