



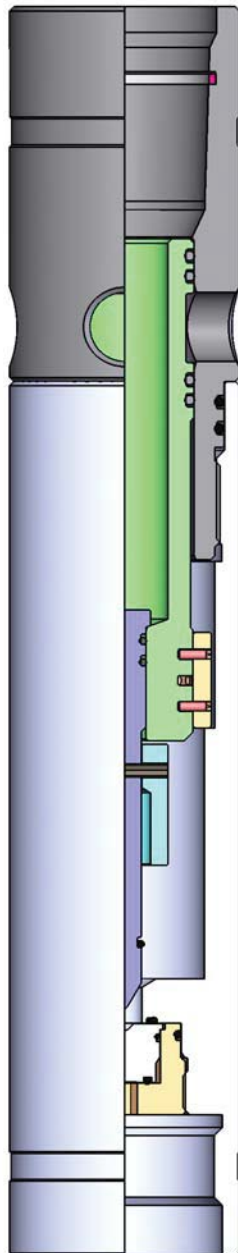
Description

The Absolute Pressure Firing Head with Auto Vent is used in TCP applications where pressure is applied internally to the tubing string in order to detonate the perforating guns. The Absolute Pressure Firing Head with Auto Vent may be converted to the Auto Fill & Vent or to the Non-Vented version with conversion kits.

The pressure applied to the tubing string acts on a piston that is held in place by precision shear pins, with an accuracy of +/-5%. These shear pins are designed to shear at a predetermined load thereby allowing the operator to accurately determine the firing pressure of the head. When activated, the firing pin drives into the percussion initiator thus detonating the gun system. Simultaneously, the automatic drain allows circulation through the tubing string.

Features and Benefits

- Compact size and rugged design make it ideal for use in horizontal or deviated wellbores
- Fits directly onto any Gun Top Sub with GO, 2.750 Acme thread connection
- Tool may easily be converted between Non-Vented, Auto Vent and Auto Fill & Vent versions
- All three versions use the same redress kit (TC-023-2375-199)
- Operating range 2000 psi (14 000 kPa) to 13,000 psi (89.6MPa)



**NOTE**  
2000 psi minimum set pressure

	2-3/8 in (60.3 mm)	
Maximum OD	3.375 in	85.7 mm
Minimum ID of Housing	2.000 in	50.8 mm
Overall Length	18 in	457 mm
Tensile	201,164 lb (89 482 daN)	
Maximum Temperature <sup>1</sup>	250° F (121° C)	
Flow Area	3.142 in <sup>2</sup> (20.27 cm <sup>2</sup> )	
Connections	2-3/8 in (60.3 mm) EU Box Up/GO 2.750 Acme Box Down	
Product (with Auto Vent)	TC-023-2375-100	
Product (with Auto Vent and Fill)	TC-024-2375-100	
Product (Non-Vented)	TC-026-2375-100	
Redress Kit	TC-023-2375-199	
Redress Kit (No shear pins)	TC-023-2375-198	
Shear Pin Kit <sup>2</sup>	SF-010-0130-BAG	

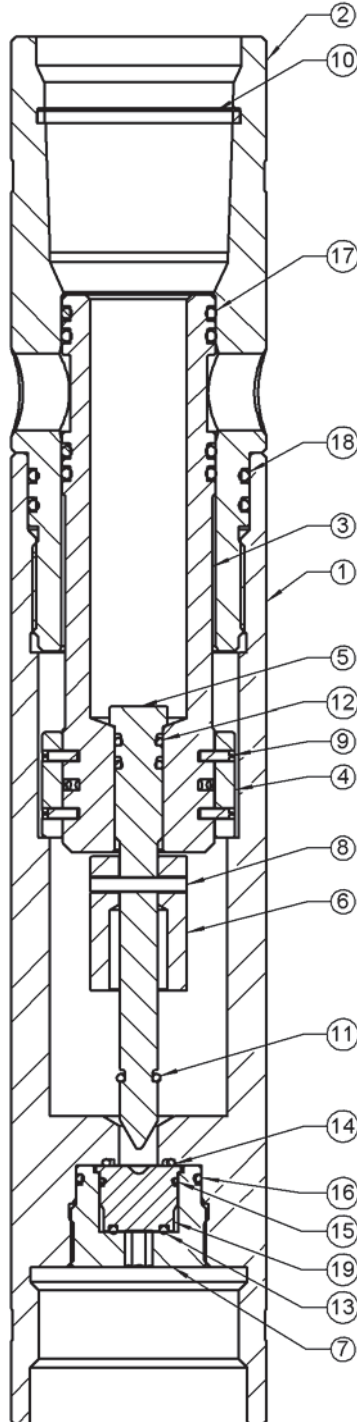
<sup>1</sup>The maximum temperature can be increased to 450° (230°C) by substituting the 90 durometer Nitrile O-rings with 90 durometer Viton O-rings. Refer to the Time vs Temperature chart for Explosives to confirm any explosives requirements

<sup>2</sup>The shear pin kit contains 36 pins for pressure applications up to 62.5 MPa (9,500 psi). For higher pressures, 2 bags are required

# Absolute Pressure Firing Head with Auto Vent

MAN-TC-023-100

Owen Oil Tools



Item	Part Number	Qty	Description
--	<b>TC-023-2375-100</b>	--	<b>Absolute Pressure Firing Head with Auto Vent</b>
1	TC-023-0100-000	1	Bottom Sub 2-3/8" Hydraulic Firing Head
2	TC-023-0101-000	1	Upper Housing 2-3/8" Hydraulic Firing Head (vented)
3	TC-023-0102-000	1	Piston (Auto Vent and Non-Vented Applications)
4	TC-023-0004-000	1	Outer Shear Ring 2-3/8" Hyd Firing Head
5	TC-023-0103-000	1	Firing Pin (CP Initiator)
6	TC-023-0104-000	1	Impact Dampener
7	TC-011-0002-000	1	Initiator Retaining Nut
8	PF-120-0188-125H	1	Roll Pin (OD 0.188", 1.25 LG, Heavy Duty)
9	SF-010-0130-045	36	Shear Pin 0.130" OD, 0.450" LG.
10	MI-305-2375-000	1	2-3/8" EU Thread API Seal Ring
11	OOO-N569-110	1	O-Ring 90 Durometer Nitrile
12	OOO-N569-111	2	O-Ring 90 Durometer Nitrile
13	OOO-N569-113	1	O-Ring 90 Durometer Nitrile
14	OOO-N569-116	1	O-Ring 90 Durometer Nitrile
15	OOO-N569-020	1	O-Ring 90 Durometer Nitrile
16	OOO-N569-127	1	O-Ring 90 Durometer Nitrile
17	OOO-N569-224	4	O-Ring 90 Durometer Nitrile
18	OOO-N569-231	2	O-Ring 90 Durometer Nitrile
19	Reference	1	Percussion Detonator
--	MAN-TC-023	--	Assembly Manual
--	TC-023-2375-199	--	Re-dress Kit for Absolute Firing Head

Item	Part Number	Qty	Description
--	<b>TC-023-2375-199</b>	--	<b>Re-dress Kit for Absolute Pressure Firing Head</b>
6	TC-023-0104-000	1	Impact Dampener
8	PF-120-0188-125H	1	Roll Pin (OD 0.188", 1.25 LG, Heavy Duty)
9	SF-010-0130-045	36	Shear Pin 0.130" OD, 0.450" LG.
10	MI-305-2375-000	1	2-3/8" EU Thread API Seal Ring
11	OOO-N569-110	1	O-Ring 90 Durometer Nitrile
12	OOO-N569-111	2	O-Ring 90 Durometer Nitrile
13	OOO-N569-113	1	O-Ring 90 Durometer Nitrile
14	OOO-N569-116	1	O-Ring 90 Durometer Nitrile
15	OOO-N569-020	1	O-Ring 90 Durometer Nitrile
16	OOO-N569-127	1	O-Ring 90 Durometer Nitrile
17	OOO-N569-224	4	O-Ring 90 Durometer Nitrile
18	OOO-N569-231	2	O-Ring 90 Durometer Nitrile

Use part number TC-023-2375-198 to order the TC-023-2375-199 redress kit without shear pins (item 9)

Use part number TC-023-2375-197 to order the TC-023-2375-199 redress kit with a firing pin (item 5)

Use part number TC-023-2375-196 to order the TC-023-2375-199 redress kit with a firing pin (item 5) and Viton O-rings

**To convert from TC-023-2375-100 to TC-024-2375-100 replace Item #3 with the following parts: TC-024-0100-000 and ST-035-1375-CHR**

**To convert from TC-023-2375-100 to TC-026-2375-100 replace Item #2 with the following part: TC-026-0100-000**