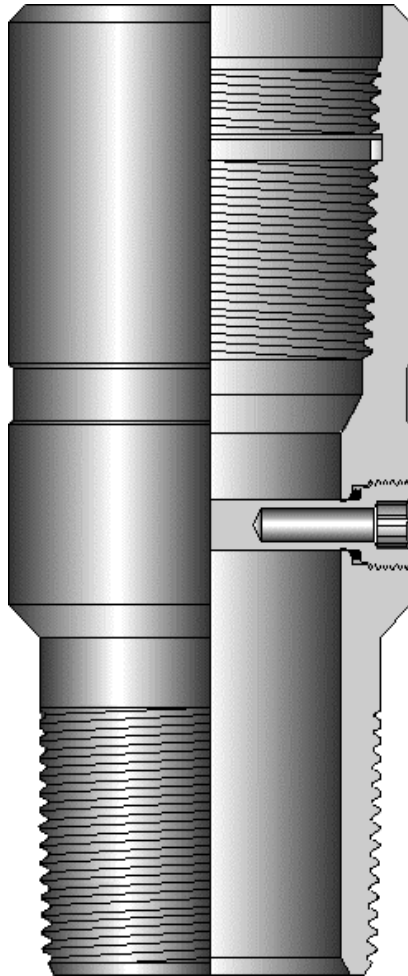


Description

The Pressure Release (KOBÉ) Sub allows equalization of the tubing conveyed perforating string to the annulus. Communication is achieved by breaking the hollow pin with either the Drop Bar or wireline logging tools.



This tool is most commonly placed below the production packer and above the Differential Sub when using a Mechanical (Percussion) Firing Head. In this application, the production packer may be pressure tested from below by breaking the Hollow Frangible Pin of the KOBÉ Sub with wireline logging tools. The packer may be tested by applying hydraulic pressure above the packer in the tubing-casing annulus. After retrieval of the logging tools, the Drop Bar may be released from surface to fire the guns.

Features and Benefits

- breaking of the Hollow Frangible Pin is done mechanically, reducing the number of hydraulic operations required on a TCP job
- simple design ensures reliability and high pressure ratings

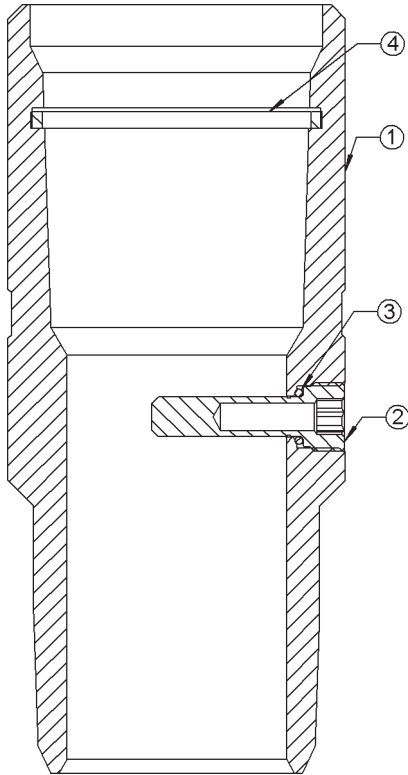
Specifications

	2-3/8 in (60.3 mm)		2-7/8 in (73.0 mm)		3-1/2 in (88.9 mm)	
Maximum OD	3.062 in	77.8 mm	3.688 in	93.6 mm	4.50 in	114.3 mm
Minimum ID	1.995 in	50.6 mm	2.441 in	62.0 mm	2.992 in	76 mm
Overall Length	8.0 in	203 mm	8.0 in	203 mm	8.0 in	203 mm
Maximum Temperature ¹	250°F (121°C)					
Maximum Pressure	10,000 psi	68.9 MPa	10,000 psi	68.9 MPa	10,000 psi	68.9 MPa
Connection	2-3/8 in (60.3 mm) EU		2-7/8 in (73.0 mm) EU		3-1/2 in (88.9 mm)	
Product Number	TC-110-2375-080		TC-110-2875-080		TC-110-3500-080	

¹The 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

Pressure Release (KOBÉ) Sub
 TC-110-2375-XXX
 TC-110-2875-XXX
 TC-110-3500-XXX

Owen Oil Tools



Item	Part Number	Qty	Description
--	TC-110-2375-080	--	KOBÉ Sub 2-3/8" EU (L-80)
1	TC-110-0000-080	1	KOBÉ Sub Body 2-3/8" EU, L-80
2	TC-110-0005-000	1	Equalizing Plug (O-ring)
3	OOO-N569-012	1	O-Ring 90 Durometer Nitrile
4	MI-305-2375-000	1	2-3/8" EU Thread API Seal Ring

Item	Part Number	Qty	Description
--	TC-110-2375-110	--	KOBÉ Sub 2-3/8" EU (P-110)
1	TC-110-0000-110	1	KOBÉ Sub Body 2-3/8" EU, P-110
2	TC-110-0005-000	1	Equalizing Plug (O-ring)
3	OOO-N569-012	1	O-Ring 90 Durometer Nitrile
4	MI-305-2375-000	1	2-3/8" EU Thread API Seal Ring

Item	Part Number	Qty	Description
--	TC-110-2875-080	--	KOBÉ Sub 2-7/8" EU (L-80)
1	TC-110-0002-080	1	KOBÉ Sub Body 2-3/8" EU, L-80
2	TC-110-0005-000	1	Equalizing Plug (O-ring)
3	OOO-N569-012	1	O-Ring 90 Durometer Nitrile
4	MI-305-2875-000	1	2-7/8" EU Thread API Seal Ring

Item	Part Number	Qty	Description
--	TC-110-2875-110	--	KOBÉ Sub 2-7/8" EU (P-110)
1	TC-110-0002-110	1	KOBÉ Sub Body 2-7/8" EU, P-110
2	TC-110-0005-000	1	Equalizing Plug (O-ring)
3	OOO-N569-012	1	O-Ring 90 Durometer Nitrile
4	MI-305-2875-000	1	2-7/8" EU Thread API Seal Ring

Item	Part Number	Qty	Description
--	TC-110-3500-080	--	KOBÉ Sub 3-1/2" EU, L-80
1	TC-110-0004-080	1	KOBÉ Sub Body 3-1/2" EU, L-80
2	TC-110-0005-000	2	Equalizing Plug (O-ring)
3	OOO-N569-012	2	O-Ring 90 Durometer Nitrile
4	MI-305-3500-000	1	Seal Ring 3-1/2" EU

Item	Part Number	Qty	Description
--	TC-110-3500-110	--	KOBÉ Sub 3-1/2" EU (P-110)
1	TC-110-0004-110	1	KOBÉ Sub Body 3-1/2" EU, P-110
2	TC-110-0005-000	2	Equalizing Plug (O-ring)
3	OOO-N569-012	2	O-Ring 90 Durometer Nitrile
4	MI-305-3500-000	1	Seal Ring 3-1/2" EU

Item	Part Number	Qty	Description
--	TC-110-2375-099	--	Redress Kit KOBÉ Sub 2-3/8" EU
2	TC-110-0005-000	1	Equalizing Plug (O-ring)
3	OOO-N569-012	1	O-Ring 90 Durometer Nitrile
4	MI-305-2375-000	1	2 3/8" EU Thread Seal Ring

Item	Part Number	Qty	Description
--	TC-110-2875-099	--	Redress Kit KOBÉ Sub 2-7/8" EU
2	TC-110-0005-000	1	Equalizing Plug (O-ring)
3	OOO-N569-012	1	O-Ring 90 Durometer Nitrile
4	MI-305-2875-000	1	2 7/8" EU Thread Seal Ring

Item	Part Number	Qty	Description
--	TC-110-3500-099	--	Redress Kit KOBÉ Sub 3 1/2" EU
2	TC-110-0005-000	1	Equalizing Plug (O-ring)
3	OOO-N569-012	1	O-Ring 90 Durometer Nitrile
4	MI-305-3500-000	1	3 1/2" EU Thread Seal Ring