



PRESSURE CONTROL EQUIPMENT

TIS Manufacturing is a specialist in the design, manufacture, refurbishment and rental of well service and subsea control equipment for the oil and gas industry.

Our equipment is built to the highest quality and safety standards, and is supported by unrivalled after sales service.



TIS Manufacturing offers comprehensive experience in engineering and operation of well service and subsea control equipment, allowing us to provide superior bespoke solutions to suit the unique requirements of our global client base.

INDEX

WIRELINE VALVES	4
APOLLO WIRELINE VALVES	4
TRITON WIRELINE VALVES	6
WIRELINE VALVE CONSUMABLES	8
MULTI-LINE SEALS & RAM GUIDES	9
STUFFING BOXES	10
STUFFING BOXES	10
LIQUID SEAL STUFFING BOXES	12
LIGHTWEIGHT TOP SHEAVES	13
GREASE INJECTION HEADS	14
GREASE INJECTION HEADS	14
HYDRAULIC LINE WIPERS	15
SWABBING HEADS	16
HYDRAULIC TOOL CATCHERS	17
TOOL TRAPS	18
IN-SITU TEST SUBS & IN-SITU LIFT-TEST CAPS	19
PUMP IN TEES	20
LUBRICATORS	21
LUBRICATOR & RISER SECTIONS	21
INTEGRAL LUBRICATORS	23
ANCILLARY EQUIPMENT	25
CROSSOVERS & TUBING ADAPTERS	25
WELLHEAD FLANGE ADAPTERS	27
RIG-UP DOLLIES	28
LIFT-TEST CAPS & LIFTING CAPS	29
TEST CAPS & STUMPS	30
THREAD PROTECTORS & O-RINGS	31
TOOL STRING MULTI SPADES & LUBRICATOR CLAMPS	32
WIRELINE SHEAVES	33
PCE TRANSPORTATION FRAMES	34
PRESSURE CONTROL SERVICES	35

WIRELINE VALVES | APOLLO WIRELINE VALVES

TIS Wireline Valves are designed to provide a positive seal and retain well pressure around stationary slickline or braided wire during well service operations.

The **TIS Apollo Wireline Valve** product range features units specifically engineered to operate in extreme offshore conditions.

A robust design gives the operator maximum reliability, flexibility and ease of use, while carrying out routine well intervention work.

TIS Apollo Wireline Valves are available with the following options:

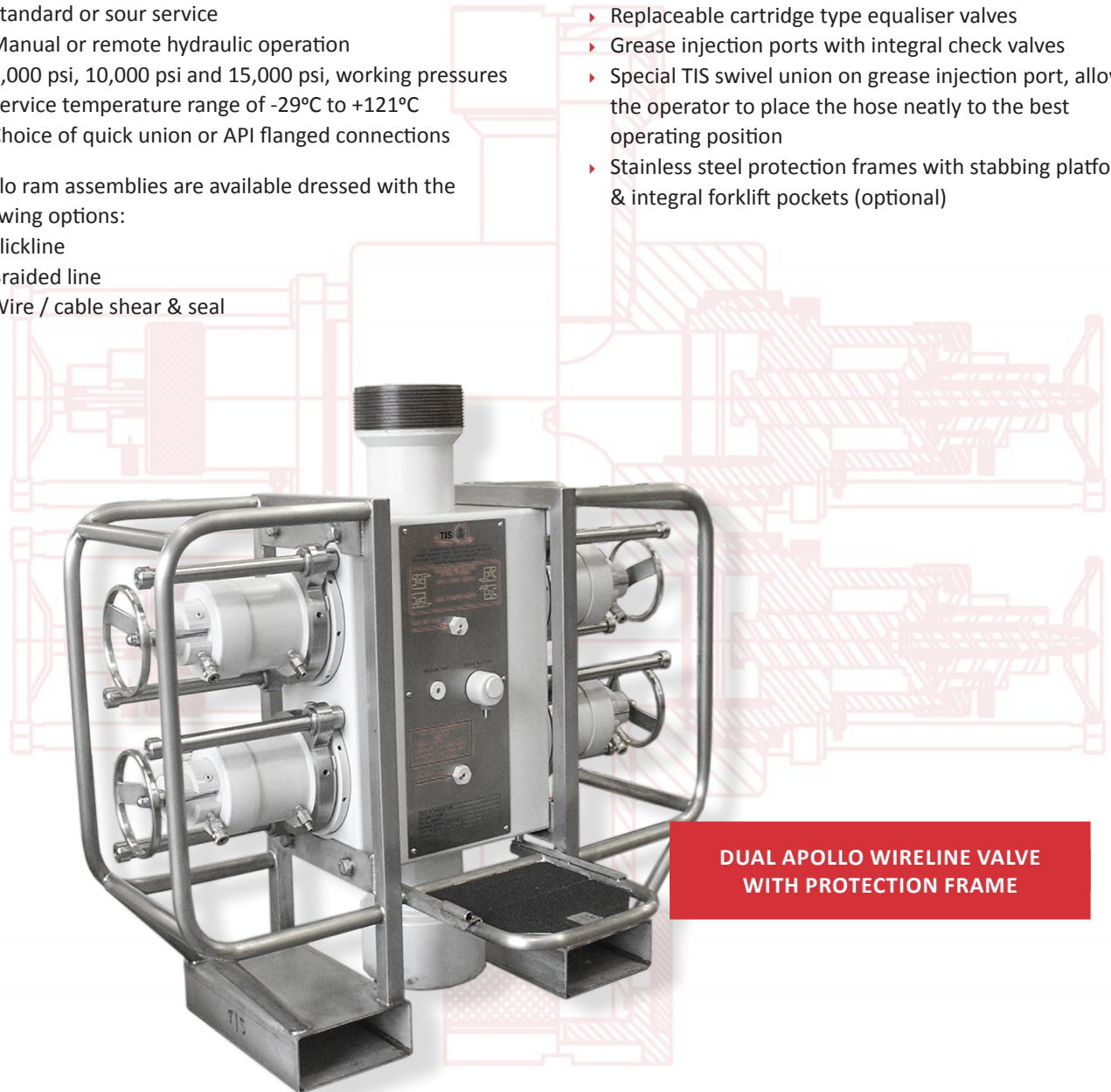
- ▶ 3.00" ID to 9.00" ID through bores
- ▶ Single, dual, triple and quadruple ram configurations
- ▶ Standard or sour service
- ▶ Manual or remote hydraulic operation
- ▶ 5,000 psi, 10,000 psi and 15,000 psi, working pressures
- ▶ Service temperature range of -29°C to +121°C
- ▶ Choice of quick union or API flanged connections

Apollo ram assemblies are available dressed with the following options:

- ▶ Slickline
- ▶ Braided line
- ▶ Wire / cable shear & seal

Technical features include:

- ▶ Operator friendly design, no tools required for redress
- ▶ Compact mono-block forged bodies
- ▶ Weld repairable valve bodies
- ▶ Keyless ram bores
- ▶ Compact short hydraulic cylinders
- ▶ Orientation key design, allows complete flexibility to arrange ram configuration as required, including inverting rams for braided line operations
- ▶ External ram position indicators
- ▶ Non rising manual stems
- ▶ Stainless steel one-piece pistons
- ▶ Stainless steel ram support rods
- ▶ Large cross-section ram seals
- ▶ Inner seal retaining bars
- ▶ Replaceable cartridge type equaliser valves
- ▶ Grease injection ports with integral check valves
- ▶ Special TIS swivel union on grease injection port, allows the operator to place the hose neatly to the best operating position
- ▶ Stainless steel protection frames with stabbing platform & integral forklift pockets (optional)



**DUAL APOLLO WIRELINE VALVE
WITH PROTECTION FRAME**

WIRELINE VALVES | APOLLO WIRELINE VALVES

ORDERING APOLLO WIRELINE VALVES IS A SIMPLE 4-STAGE PROCESS...

STAGE 1	▶	Body	0002-00017-TIS
STAGE 2	▶	Rams	0002-00019-TIS
STAGE 3	▶	Quick Union Set	0045-00002-TIS
STAGE 4	▶	Protection Frame	TR-A-1007

EXAMPLE

5,000psi 3.00" Dual Apollo Wireline Valve with Rams dressed for $\frac{3}{16}$ " Wire, 5" 4Thd 'O' Type Quick Union set and Protection frame

STAGE 1 - WIRELINE VALVE BODY SUB ASSEMBLY

THRO' BORE	WORKING PRESSURE	TYPE	PART NUMBER	REDRESS KIT
3.00"	5,000 psi	Single	0002-00016-TIS	0002-00016-KIT
3.00"	5,000 psi	Dual	0002-00017-TIS	0002-00017-KIT
3.00"	5,000 psi	Triple	0002-00018-TIS	0002-00018-KIT
3.00"	5,000 psi	Quad	0002-00028-TIS	0002-00028-KIT
3.00"	10,000 psi	Single	0002-00009-TIS	0002-00009-KIT
3.00"	10,000 psi	Dual	0002-00008-TIS	0002-00008-KIT
3.00"	10,000 psi	Triple	0002-00015-TIS	0002-00015-KIT
3.00"	10,000 psi	Quad	0002-00029-TIS	0002-00029-KIT
4.00"	5,000 psi	Single	0003-00009-TIS	0003-00009-KIT
4.00"	5,000 psi	Dual	0003-00010-TIS	0003-00010-KIT
4.00"	5,000 psi	Triple	0003-00011-TIS	0003-00011-KIT
4.00"	5,000 psi	Quad	0003-00026-TIS	0003-00026-KIT
4.00"	10,000 psi	Single	0003-00005-TIS	0003-00005-KIT
4.00"	10,000 psi	Dual	0003-00003-TIS	0003-00003-KIT
4.00"	10,000 psi	Triple	0003-00008-TIS	0003-00008-KIT
4.00"	10,000 psi	Quad	0003-00027-TIS	0003-00027-KIT
5 $\frac{1}{8}$ "	5,000 psi	Single	0004-00019-TIS	0004-00019-KIT
5 $\frac{1}{8}$ "	5,000 psi	Dual	0004-00020-TIS	0004-00020-KIT
5 $\frac{1}{8}$ "	5,000 psi	Triple	0004-00021-TIS	0004-00021-KIT
5 $\frac{1}{8}$ "	5,000 psi	Quad	0004-00028-TIS	0004-00028-KIT
5 $\frac{1}{8}$ "	10,000 psi	Single	0004-00014-TIS	0004-00014-KIT
5 $\frac{1}{8}$ "	10,000 psi	Dual	0004-00017-TIS	0004-00017-KIT
5 $\frac{1}{8}$ "	10,000 psi	Triple	0004-00018-TIS	0004-00018-KIT
5 $\frac{1}{8}$ "	10,000 psi	Quad	0004-00026-TIS	0004-00026-KIT
6 $\frac{3}{8}$ "	5,000 psi	Single	0009-00007-TIS	0009-00007-KIT
6 $\frac{3}{8}$ "	5,000 psi	Dual	0009-00008-TIS	0009-00008-KIT
6 $\frac{3}{8}$ "	5,000 psi	Triple	0009-00012-TIS	0009-00012-KIT
6 $\frac{3}{8}$ "	5,000 psi	Quad	0009-00020-TIS	0009-00020-KIT
6 $\frac{3}{8}$ "	10,000 psi	Single	0009-00009-TIS	0009-00009-KIT
6 $\frac{3}{8}$ "	10,000 psi	Dual	0009-00001-TIS	0009-00001-KIT
6 $\frac{3}{8}$ "	10,000 psi	Triple	0009-00011-TIS	0009-00011-KIT
6 $\frac{3}{8}$ "	10,000 psi	Quad	0009-00021-TIS	0009-00021-KIT

STAGE 2 - WIRELINE RAM SUB ASSEMBLY

THRO' BORE	WORKING PRESSURE	TYPE	PART NUMBER	REDRESS KIT
3.00"	10,000 psi	0.125"	0002-00007-TIS	0002-00007-KIT
3.00"	10,000 psi	$\frac{3}{16}$ "	0002-00019-TIS	0002-00019-KIT
3.00"	10,000 psi	$\frac{7}{32}$ "	0002-00020-TIS	0002-00020-KIT
3.00"	10,000 psi	$\frac{1}{4}$ "	0002-00006-TIS	0002-00006-KIT
3.00"	10,000 psi	$\frac{3}{16}$ "	0002-00021-TIS	0002-00021-KIT
3.00"	10,000 psi	$\frac{15}{32}$ "	0002-00022-TIS	0002-00022-KIT
3.00"	10,000 psi	Shear/Seal	0002-00012-TIS	0002-00012-KIT
4.00"	10,000 psi	0.125"	0003-00002-TIS	0003-00002-KIT
4.00"	10,000 psi	$\frac{3}{16}$ "	0003-00012-TIS	0003-00012-KIT
4.00"	10,000 psi	$\frac{7}{32}$ "	0003-00013-TIS	0003-00013-KIT
4.00"	10,000 psi	$\frac{1}{4}$ "	0003-00014-TIS	0003-00014-KIT
4.00"	10,000 psi	$\frac{3}{16}$ "	0003-00015-TIS	0003-00015-KIT
4.00"	10,000 psi	$\frac{15}{32}$ "	0003-00016-TIS	0003-00016-KIT
4.00"	10,000 psi	Shear/Seal	0003-00004-TIS	0003-00004-KIT
5 $\frac{1}{4}$ "	10,000 psi	0.125"	0004-00013-TIS	0004-00013-KIT
5 $\frac{1}{4}$ "	10,000 psi	$\frac{3}{16}$ "	0004-00023-TIS	0004-00023-KIT
5 $\frac{1}{4}$ "	10,000 psi	$\frac{7}{32}$ "	0004-00016-TIS	0004-00016-KIT
5 $\frac{1}{4}$ "	10,000 psi	$\frac{1}{4}$ "	0004-00022-TIS	0004-00022-KIT
5 $\frac{1}{4}$ "	10,000 psi	$\frac{3}{16}$ "	0004-00024-TIS	0004-00024-KIT
5 $\frac{1}{4}$ "	10,000 psi	$\frac{15}{32}$ "	0004-00025-TIS	0004-00025-KIT
5 $\frac{1}{4}$ "	10,000 psi	Shear/Seal	0004-00015-TIS	0004-00015-KIT
6 $\frac{1}{2}$ "	10,000 psi	0.125"	0009-00004-TIS	0009-00004-KIT
6 $\frac{1}{2}$ "	10,000 psi	$\frac{3}{16}$ "	0009-00013-TIS	0009-00013-KIT
6 $\frac{1}{2}$ "	10,000 psi	$\frac{7}{32}$ "	0009-00014-TIS	0009-00014-KIT
6 $\frac{1}{2}$ "	10,000 psi	$\frac{1}{4}$ "	0009-00015-TIS	0009-00015-KIT
6 $\frac{1}{2}$ "	10,000 psi	$\frac{3}{16}$ "	0009-00016-TIS	0009-00016-KIT
6 $\frac{1}{2}$ "	10,000 psi	$\frac{15}{32}$ "	0009-00017-TIS	0009-00017-KIT
6 $\frac{1}{2}$ "	10,000 psi	Shear/Seal	0009-00006-TIS	0009-00006-KIT

STAGE 3 - QUICK UNION SET SUB ASSEMBLY

THRO' BORE	WORKING PRESSURE	QUICK UNION	PART NUMBER
3.00"	5,000 psi	5 $\frac{1}{2}$ "-4x2 'B' Type	0059-00001-TIS
3.00"	5,000 psi	5"-4Thd 'O' Type	0045-00002-TIS
3.00"	10,000 psi	6 $\frac{3}{8}$ "-4Thd 'B' Type	0061-00004-TIS
3.00"	10,000 psi	5 $\frac{1}{4}$ "-4Thd 'O' Type	0046-00019-TIS
4.00"	5,000 psi	7"-5Thd 'B' Type	0063-00001-TIS
4.00"	5,000 psi	6 $\frac{1}{2}$ "-4Thd 'O' Type	0047-00009-TIS
4.00"	10,000 psi	8 $\frac{1}{4}$ "-4x2 'B' Type (10k)	0065-00001-TIS
4.00"	10,000 psi	8 $\frac{3}{8}$ "-4Thd 'O' Type	0053-00001-TIS
5 $\frac{1}{8}$ "	5,000 psi	8 $\frac{1}{4}$ "-4x2 'B' Type (5k)	0064-00001-TIS
5 $\frac{1}{8}$ "	5,000 psi	8 $\frac{1}{4}$ "-4Thd 'O' Type	0052-00001-TIS
5 $\frac{1}{8}$ "	10,000 psi	8 $\frac{3}{8}$ "-4x2 'B' Type	0078-00002-TIS
5 $\frac{1}{8}$ "	10,000 psi	9"-4Thd 'O' Type	0054-00014-TIS
6 $\frac{3}{8}$ "	5,000 psi	9 $\frac{1}{8}$ "-4x2 'B' Type	0066-00002-TIS
6 $\frac{3}{8}$ "	5,000 psi	9 $\frac{1}{2}$ "-4Thd 'O' Type	0055-00004-TIS
6 $\frac{3}{8}$ "	10,000 psi	13"-4Thd 'B' Type	0067-00002-TIS
6 $\frac{3}{8}$ "	10,000 psi	11 $\frac{1}{2}$ "-4Thd 'O' Type	0056-00002-TIS

STEP 4 - PROTECTION FRAME

THRO' BORE	TYPE	PART NUMBER
3.00"	Single	TR-A-1013
3.00"	Dual	TR-A-1007
3.00"	Triple	TR-A-1014
3.00"	Quad	TR-A-1020
4.00"	Single	TR-A-1010
4.00"	Dual	TR-A-1003
4.00"	Triple	TR-A-1015
4.00"	Quad	TR-A-1021
5 $\frac{1}{8}$ "	Single	TR-A-1005
5 $\frac{1}{8}$ "	Dual	TR-A-1004
5 $\frac{1}{8}$ "	Triple	TR-A-1016
5 $\frac{1}{8}$ "	Quad	TR-A-1022
6 $\frac{3}{8}$ "	Single	TR-A-1018
6 $\frac{3}{8}$ "	Dual	TR-A-1012
6 $\frac{3}{8}$ "	Triple	TR-A-1017
6 $\frac{3}{8}$ "	Quad	TR-A-1023

WIRELINE VALVES | TRITON WIRELINE VALVES

TIS Wireline Valves are designed to provide a positive seal and retain well pressure around stationary slickline or braided wire during well service operations.

The **TIS Triton Wireline Valve** product range features units specifically engineered to operate in remote areas where weight and size restrictions are key considerations.

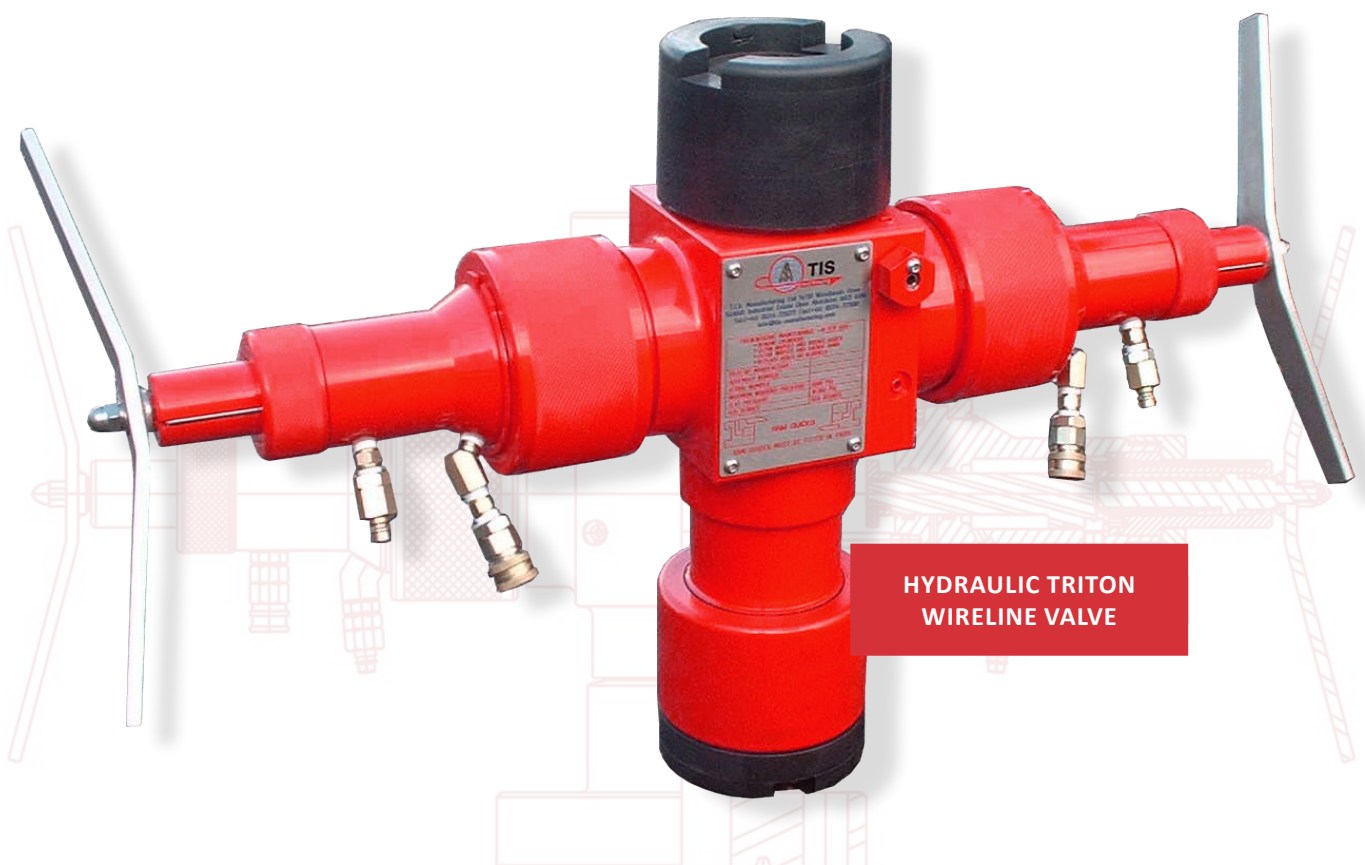
A lightweight and compact design gives the operator maximum reliability, flexibility and ease of use, while carrying out routine well intervention work.

TIS Triton Wireline Valves are available with the following options:

- ▶ 3.00" ID & 4.00" ID through bores
- ▶ Single ram configurations
- ▶ Standard or sour service
- ▶ Manual or remote hydraulic operation
- ▶ 5,000 psi working pressure
- ▶ Service temperature range of -29°C to +121°C
- ▶ Choice of quick union or API flanged connections
- ▶ Rams dressed for slick line or braided line operations

Technical features include:

- ▶ Operator friendly design, no tools required for redress
- ▶ Compact mono-block lightweight bodies
- ▶ Compact lightweight cylinders with external ram position indicators
- ▶ Non rising manual stems
- ▶ Stainless steel one-piece pistons.
- ▶ Keyless ram bores, allows for ram inversion when used in dual configuration with braided cable
- ▶ Large cross-section ram seals
- ▶ Inner seal retaining bars
- ▶ Replaceable cartridge type equaliser valves.
- ▶ Integral check valves on grease injection ports



WIRELINE VALVES | TRITON WIRELINE VALVES

ORDERING TRITON WIRELINE VALVES IS A SIMPLE 2-STAGE PROCESS...

STAGE 1	▶	Body	0003-00020-TIS
STAGE 2	▶	Rams	0003-00021-TIS

EXAMPLE

5,000psi 4.00" Triton Manual Valve with 7"-5Thd 'B' Type Connections
with Rams dressed for 0.125" Wire.

STAGE 1 - WIRELINE VALVE BODY SUB ASSEMBLY

MANUAL	THRO' BORE	WORKING PRESSURE	TYPE	PART NUMBER
	3.00"	5,000 psi	5 ½"-4x2 'B' Type	0002-00025-TIS
	3.00"	5,000 psi	5"-4Thd 'O' Type	0002-00013-TIS
	4.00"	5,000 psi	7"-5Thd 'B' Type	0003-00020-TIS
	4.00"	5,000 psi	6 ½"-4Thd 'O' Type	0003-00019-TIS

OR

HYDRAULIC	THRO' BORE	WORKING PRESSURE	TYPE	PART NUMBER
	3.00"	5,000 psi	5 ½"-4x2 'B' Type	0002-00024-TIS
	3.00"	5,000 psi	5"-4Thd 'O' Type	0002-00003-TIS
	4.00"	5,000 psi	7"-5Thd 'B' Type	0003-00018-TIS
	4.00"	5,000 psi	6 ½"-4Thd 'O' Type	0003-00017-TIS

STAGE 2 - WIRELINE RAM SUB ASSEMBLY

THRO' BORE	WORKING PRESSURE	TYPE	PART NUMBER
3.00"	5,000 psi	0.125" dia	0002-00007-TIS
3.00"	5,000 psi	¼" dia	0002-00019-TIS
3.00"	5,000 psi	⅜" dia	0002-00020-TIS
3.00"	5,000 psi	½" dia	0002-00006-TIS
3.00"	5,000 psi	¾" dia	0002-00021-TIS
4.00"	5,000 psi	0.125" dia	0003-00021-TIS
4.00"	5,000 psi	¼" dia	0003-00022-TIS
4.00"	5,000 psi	⅜" dia	0003-00023-TIS
4.00"	5,000 psi	½" dia	0003-00024-TIS
4.00"	5,000 psi	¾" dia	0003-00025-TIS



MANUAL TRITON
WIRELINE VALVE

WIRELINE VALVES | WIRELINE VALVE CONSUMABLES

FRONT SEALS

DESCRIPTION	PART NUMBER
3" Ram Front Seal 0.125" dia wire	0002-00001-C
3" Ram Front Seal 1/16" dia wire	0002-00007-C
3" Ram Front Seal 1/32" dia wire	0002-00008-C
3" Ram Front Seal 1/4" dia wire	0002-00051-C
3" Ram Front Seal 3/16" dia wire	0002-00006-C
3" Ram Front Seal 1/2" dia wire	0002-00006-C
4" Ram Front Seal 0.125" dia wire	0003-00004-C
4" Ram Front Seal 1/16" dia wire	0003-00011-C
4" Ram Front Seal 1/32" dia wire	0003-00002-C
4" Ram Front Seal 1/4" dia wire	0003-00052-C
4" Ram Front Seal 3/16" dia wire	0003-00003-C
5 1/8" Ram Front Seal 0.125" dia wire	0004-00001-C
5 1/8" Ram Front Seal 1/16" dia wire	0004-00004-C
5 1/8" Ram Front Seal 1/32" dia wire	0004-00005-C
5 1/8" Ram Front Seal 1/4" dia wire	0004-00086-C
5 1/8" Ram Front Seal 3/16" dia wire	0004-00003-C
6 3/8" Ram Front Seal 0.125" dia wire	0009-00002-C
6 3/8" Ram Front Seal 1/16" dia wire	0009-00003-C
6 3/8" Ram Front Seal 1/32" dia wire	0009-00004-C
6 3/8" Ram Front Seal 1/4" dia wire	0009-00046-C
6 3/8" Ram Front Seal 3/16" dia wire	0009-00005-C



FRONT SEAL

RAM GUIDES

DESCRIPTION	PART NUMBER
3" Ram Guide 0.125" dia wire	0002-00004-C
3" Ram Guide 1/16" dia wire	0002-00084-C
3" Ram Guide 1/32" dia wire	0002-00090-C
3" Ram Guide 1/4" dia wire	0002-00076-C
3" Ram Guide 3/16" dia wire	0002-00091-C
4" Ram Guide 0.125" dia wire	0003-00009-C
4" Ram Guide 1/16" dia wire	0003-00013-C
4" Ram Guide 1/32" dia wire	0003-00012-C
4" Ram Guide 1/4" dia wire	0003-00053-C
4" Ram Guide 3/16" dia wire	0003-00014-C
5 1/8" Ram Guide 0.125" dia wire	0004-00008-C
5 1/8" Ram Guide 1/16" dia wire	0004-00045-C
5 1/8" Ram Guide 1/32" dia wire	0004-00046-C
5 1/8" Ram Guide 1/4" dia wire	0004-00087-C
5 1/8" Ram Guide 3/16" dia wire	0004-00047-C
6 3/8" Ram Guide 0.125" dia wire	0009-00008-C
6 3/8" Ram Guide 1/16" dia wire	0009-00013-C
6 3/8" Ram Guide 1/32" dia wire	0009-00014-C
6 3/8" Ram Guide 1/4" dia wire	0009-00047-C
6 3/8" Ram Guide 3/16" dia wire	0009-00015-C



RAM GUIDE

OUTER SEALS

DESCRIPTION	PART NUMBER
3" Ram Outer Seal	0002-00002-C
4" Ram Outer Seal	0003-00005-C
5 1/8" Ram Outer Seal	0004-00005-C
6 3/8" Ram Outer Seal	0009-00001-C



OUTER SEAL

SHEAR BLADES

DESCRIPTION	PART NUMBER
3" Ram Top Blade	0002-00085-C
3" Ram Bottom Blade	0002-00086-C
4" Ram Top Blade	0003-00046-C
4" Ram Bottom Blade	0003-00047-C
5 1/8" Ram Top Blade	0004-00038-C
5 1/8" Ram Bottom Blade	0004-00037-C
6 3/8" Ram Top Blade	0009-00040-C
6 3/8" Ram Bottom Blade	0009-00041-C



SHEAR BLADES

WIRELINE VALVES | MULTI-LINE SEALS & RAM GUIDES

TIS MULTI-SEAL ELEMENTS 10,000 PSI WMP H2S SERVICE					
SIZE	SEAL P/N	CYLINDER PRESSURE	RANGE	TEMPERATURE	RAM GUIDES P/N
3"	0002-00109-C	3,000psi	Blind to 3/16"	-20°F to +320°F	0002-00047-C
4"	0003-00090-C	3,000psi	Blind to 3/16"	-20°F to +320°F	0003-00047-C
5 1/2"	0004-00115-C	3,000psi	Blind to 3/16"	-20°F to +320°F	0004-00047-C
6 3/4"	0009-00075-C	3,000psi	Blind to 3/16"	-20°F to +320°F	0009-00047-C

IMPORTANT: When testing with multi-line seals, TIS Manufacturing recommends using a rod of the maximum size of the seal to prevent undue extrusion of the rubber and shortening the life of the seal.



STUFFING BOXES

TIS Stuffing Boxes are designed to retain well pressure around moving and stationary wire while guiding slickline wire into the top of the lubricator stack.

A composite sheave wheel provides a lightweight means of deploying of the wire accurately while increasing its field service life.

TIS offer three types of conventional stuffing box

1. Manual Stuffing Boxes
2. Hydraulic Stuffing Boxes
3. Chemical Injection Stuffing Boxes

(An integral chemical injection systems coats the wire with inhibitor chemicals and de-icing agents. This feature acts as a fluid barrier between the well and the stuffing box, which prevents hydrates forming in the stuffing box)

TIS Stuffing Boxes are available with the following options:

- ▶ 5,000 psi, 10,000 psi and 15,000 psi working pressures
- ▶ Standard or sour service
- ▶ Service temperature range of -29°C to +121°C
- ▶ Choice of quick union connections
- ▶ Choice of wire size

Technical features include:

- ▶ Lightweight composite sheave and bracket sub-assemblies for easy manual handling
- ▶ Slide opening gate on sheave bracket for installation or removal of the wire while in operational arrangement
- ▶ Spring-loaded keeper blocks to prevent wire jump
- ▶ All internal hard component parts manufactured from brass material to increase the field life of the wire.
- ▶ Choice of conventional blow out plunger or ball safety check

Technical features (Chemical Injection Stuffing Boxes only) include:

- ▶ Small liquid chamber
- ▶ Additional felt packing
- ▶ Integral check valve on inlet manifold and ball safety check in place of a blow out plunger



HYDRAULIC STUFFING BOX

STUFFING BOXES

HYDRAULIC STUFFING BOXES

WORKING PRESSURE	QUICK UNION	WIRE SIZE	PART NUMBER	REDRESS KIT
5,000 psi	5 1/2"-4x2 'B' Type	0.108"	0035-00039-TIS	0035-00039-KIT
5,000 psi	5 1/2"-4x2 'B' Type	0.125"	0035-00040-TIS	0035-00040-KIT
5,000 psi	5"-4Thd 'O' Type	0.108"	0035-00023-TIS	0035-00023-KIT
5,000 psi	5"-4Thd 'O' Type	0.125"	0035-00020-TIS	0035-00020-KIT
10,000 psi	6 3/16"-4Thd 'B' Type	0.108"	0035-00024-TIS	0035-00024-KIT
10,000 psi	6 3/16"-4Thd 'B' Type	0.125"	0035-00037-TIS	0035-00037-KIT
10,000 psi	5 3/4"-4Thd 'O' Type	0.108"	0035-00038-TIS	0035-00038-KIT
10,000 psi	5 3/4"-4Thd 'O' Type	0.125"	0035-00031-TIS	0035-00031-KIT

MANUAL STUFFING BOXES

WORKING PRESSURE	QUICK UNION	WIRE SIZE	PART NUMBER	REDRESS KIT
5,000 psi	5 1/2"-4x2 'B' Type	0.108"	0035-00041-TIS	0035-00041-KIT
5,000 psi	5 1/2"-4x2 'B' Type	0.125"	0035-00042-TIS	0035-00042-KIT
5,000 psi	5"-4Thd 'O' Type	0.108"	0035-00043-TIS	0035-00043-KIT
5,000 psi	5"-4Thd 'O' Type	0.125"	0035-00044-TIS	0035-00044-KIT

CHEMICAL INJECTION STUFFING BOXES

WORKING PRESSURE	QUICK UNION	WIRE SIZE	PART NUMBER	REDRESS KIT
5,000 psi	5 1/2"-4x2 'B' Type	0.108"	0035-00050-TIS	0035-00050-KIT
5,000 psi	5 1/2"-4x2 'B' Type	0.125"	0035-00051-TIS	0035-00051-KIT
5,000 psi	5"-4Thd 'O' Type	0.108"	0035-00052-TIS	0035-00052-KIT
5,000 psi	5"-4Thd 'O' Type	0.125"	0035-00053-TIS	0035-00053-KIT
10,000 psi	6 3/16"-4Thd 'B' Type	0.108"	0035-00054-TIS	0035-00054-KIT
10,000 psi	6 3/16"-4Thd 'B' Type	0.125"	0035-00055-TIS	0035-00055-KIT
10,000 psi	5 3/4"-4Thd 'O' Type	0.108"	0035-00049-TIS	0035-00049-KIT
10,000 psi	5 3/4"-4Thd 'O' Type	0.125"	0035-00027-TIS	0035-00027-KIT



CHEMICAL INJECTION STUFFING BOX

STUFFING BOXES | LIQUID SEAL STUFFING BOXES

TIS Liquid Seal Stuffing Boxes are designed for use in combination with a TIS Stuffing Box to retain well pressure, typically while performing slickline operations on HP/HT wells.

TIS Liquid Seal Stuffing Boxes are available with the following options:

- ▶ 10,000 psi and 15,000 psi working pressures
- ▶ Standard or sour service
- ▶ Service temperature range of -29°C to +121°C
- ▶ Choice of quick union connections
- ▶ Choice of wire size

Technical features include:

- ▶ Ball safety check valve sub-assembly which contains well pressure in the event of the wire breaking
- ▶ Conventional hydraulic packing nut that can be operated in the event of losing the grease seal
- ▶ Wire wiper system to clean well deposits from the wire
- ▶ All injection ports have integral ball safety check valves to prevent the loss of well pressure
- ▶ Grease injection ports include swivel manifolds complete with quick release couplings to prevent hoses protruding and reduce risk of collision or damage.
- ▶ Spring-loaded keeper blocks to prevent wire jump

LIQUID SEAL STUFFING BOXES				
WORKING PRESSURE	QUICK UNION	WIRE SIZE	PART NUMBER	REDRESS KIT
5,000 psi	5-1/2"-4x2 'B' Type	0.108"	0074-00014-TIS	0074-00014-KIT
5,000 psi	5-1/2"-4x2 'B' Type	0.125"	0074-00015-TIS	0074-00015-KIT
5,000 psi	5"-4Thd 'O' Type	0.108"	0074-00016-TIS	0074-00016-KIT
5,000 psi	5"-4Thd 'O' Type	0.125"	0074-00017-TIS	0074-00017-KIT
10,000 psi	6-3/8"-4Thd 'B' Type	0.108"	0074-00018-TIS	0074-00018-KIT
10,000 psi	6-3/8"-4Thd 'B' Type	0.125"	0074-00019-TIS	0074-00019-KIT
10,000 psi	5-3/4"-4Thd 'O' Type	0.108"	0074-00013-TIS	0074-00013-KIT
10,000 psi	5-3/4"-4Thd 'O' Type	0.125"	0074-00012-TIS	0074-00012-KIT

LIQUID SEAL FLOW TUBE SETS	
WIRE SIZE	PART NUMBER
0.108"	0074-00020-TIS
0.125"	0074-00009-TIS



LIQUID SEAL STUFFING BOX

STUFFING BOXES | LIGHTWEIGHT TOP SHEAVES

TIS Lightweight Top Sheaves are designed to control the direction and accuracy of wire deployment during wireline operation.

Sheave wheels are produced from a robust composite material which is lightweight, ensures dimensional stability and reduces wear on the wire.

Composite spring-loaded keeper blocks prevent wire jump during operations and sheave bracket bearings allow the sheave to rotate and line-up with the bottom pulley.

The sheave bracket is mounted to the stuffing box on adjustable heavy duty taper roller bearings which are fitted with seals at the top and bottom.

TOP SHEAVES			
MAX WIRE SIZE	WHEEL SIZE	MAX LINE PULL	PART NUMBER
0.125"	16"	3,600 lbs	SH-A-4002-1
0.125"	16"	3,600 lbs	SH-A-4003
0.125"	16"	3,600 lbs	SH-A-4004 *
0.160"	20"	4,250 lbs	SH-A-4005 **

**To suit B type stuffing box*

***Easy de-mountable type*



GREASE INJECTION HEADS

TIS Grease Injection Heads are designed to retain well pressure around moving and stationary wire while guiding braided wire into the top of the lubricator stack.

Specifically engineered to increase the field service life of the cable, the lightweight construction also allows for manual handling of the units.

Typically, a standard (10K) head comprises of the following

1. Quick union pin & collar connection with integral ball safety check
2. Four flow tubes
3. Grease injection and return manifolds
4. Hydraulic pack off sub-assembly
5. Optional hydraulic line wiper assembly

TIS Grease Injection Heads are available with the following options:

- ▶ 5,000 psi, 10,000 psi and 15,000 psi working pressure
- ▶ Standard or sour service
- ▶ Service temperature range of -29°C to +121°C
- ▶ Choice of quick union connections
- ▶ Choice of cable size

Technical features include:

- ▶ Unique short series, flow tube design reduces operating height
- ▶ Compact pack off rubber design reduces operating height
- ▶ Integral ball safety check valve within the quick union pin connection
- ▶ Special TIS swivel unions on grease injection and return manifolds, allow the operator to place the hoses neatly to the best operating position
- ▶ The grease injection port is fitted with an integral safety check valve
- ▶ Upper and lower bushings are manufactured from Brass material to increase the field life of the cable
- ▶ Facility to install a hydraulic line wiper assembly. A brass wear bushing is provided on the top of the pack off sub-assembly. The wear bushing is removed to install the line wiper.

TIS Grease Injection Heads (Standard Flow Tube Size) are also available, designed to accept standard bowen-type flow tubes.

Suitable flow tube technical information and part numbers are available on request.

GREASE INJECTION HEADS

WORKING PRESSURE	QUICK UNION	WIRE SIZE	PART NUMBER	REDRESS KIT
5,000 psi	5 ½"-4x2 'B' Type	⅜"	0033-00029-TIS	0033-00029-KIT
5,000 psi	5 ½"-4x2 'B' Type	⅜"	0033-00030-TIS	0033-00030-KIT
5,000 psi	5 ½"-4x2 'B' Type	⅜"	0033-00031-TIS	0033-00031-KIT
5,000 psi	5"-4Thd 'O' Type	⅜"	0033-00032-TIS	0033-00032-KIT
5,000 psi	5"-4Thd 'O' Type	⅜"	0033-00033-TIS	0033-00033-KIT
5,000 psi	5"-4Thd 'O' Type	⅜"	0033-00034-TIS	0033-00034-KIT
10,000 psi	6 ⅝"-4Thd 'B' Type	⅜"	0033-00026-TIS	0033-00026-KIT
10,000 psi	6 ⅝"-4Thd 'B' Type	⅜"	0033-00027-TIS	0033-00027-KIT
10,000 psi	6 ⅝"-4Thd 'B' Type	⅜"	0033-00028-TIS	0033-00028-KIT
10,000 psi	5 ¾"-4Thd 'O' Type	⅜"	0033-00025-TIS	0033-00025-KIT
10,000 psi	5 ¾"-4Thd 'O' Type	⅜"	0033-00007-TIS	0033-00007-KIT
10,000 psi	5 ¾"-4Thd 'O' Type	⅜"	0033-00024-TIS	0033-00024-KIT

LIQUID SEAL FLOW TUBE SETS

NOMINAL WIRE SIZE	MAX WIRE DIA.	PART NUMBER
⅜"	0.184"	0033-00016-TIS
⅜"	0.189"	0033-00012-TIS
⅜"	0.192"	0033-00017-TIS
⅜"	0.197"	0033-00023-TIS
⅜"	0.215"	0033-00015-TIS
⅜"	0.219"	0033-00011-TIS
⅜"	0.223"	0033-00009-TIS
⅜"	0.227"	0033-00013-TIS
⅜"	0.309"	0033-00019-TIS
⅜"	0.314"	0033-00020-TIS
⅜"	0.317"	0033-00021-TIS
⅜"	0.321"	0033-00022-TIS

GREASE INJECTION HEADS (STANDARD FLOW TUBE SIZE)

WORKING PRESSURE	QUICK UNION	WIRE SIZE	PART NUMBER	REDRESS KIT
5,000 psi	5"-4Thd 'O' Type	⅜"	0033-30002-TIS	0033-30002-KIT
5,000 psi	4 ¾"-4Thd 'B' Type	⅜"	0033-30003-TIS	0033-30003-KIT
10,000 psi	5 ¾"-4Thd 'O' Type	⅜"	0033-30000-TIS	0033-30000-KIT
10,000 psi	6 ⅝"-4Thd 'B' Type	⅜"	0033-30001-TIS	0033-30001-KIT

GREASE INJECTION HEADS | HYDRAULIC LINE WIPERS

TIS Hydraulic Line Wipers are designed for use in combination with TIS Grease Injection Heads to remove excess grease from the braided wire when retrieving tools from the well.

A packing element is hydraulically energised around the cable to remove the grease, while a drain port on the side allows the grease to migrate down a hose to a waste bucket.

TIS Hydraulic Line Wipers are available with the following options:

- ▶ Choice of connection - TIS acme or quick union
- ▶ Choice of cable size

Technical features include:

- ▶ Compact packing element design reduces operating height
- ▶ Upper and lower bushings are manufactured from brass material to increase the field life of the cable

HYDRAULIC LINE WIPERS		
WIRE SIZE	PART NUMBER	REDRESS KIT
3/16" dia.	0033-00005-TIS	0033-00005-KIT
7/32" dia.	0033-00008-TIS	0033-00008-KIT
9/16" dia.	0033-00035-TIS	0033-00035-KIT

TIS GREASE INJECTION HEAD WITH LINE WIPER

GREASE INJECTION HEAD (STANDARD FLOW TUBE SIZE) WITH LINE WIPER

GREASE INJECTION HEADS | SWABBING HEADS

TIS Swabbing Heads are designed to maintain a low pressure fluid seal around braided wire during swabbing operations.

TIS Swabbing Heads are available with the following options:

- ▶ 5,000 psi working pressure
- ▶ Standard service
- ▶ Choice of quick union connection
- ▶ Choice of cable size

Technical features include:

- ▶ Ball safety check valve in male quick union connection
- ▶ Compact packing element design reduces operating height
- ▶ Upper and lower bushings are manufactured from brass material to increase the field life of the wire

SWABBING HEADS			
QUICK UNION	WIRE SIZE	PART NUMBER	REDRESS KIT
5 1/2"-4x2 'B' Type	3/16" dia	0033-00036-TIS	0033-00036-KIT
5 1/2"-4x2 'B' Type	7/32" dia	0033-00037-TIS	0033-00037-KIT
5 1/2"-4x2 'B' Type	1/4" dia	0033-00038-TIS	0033-00038-KIT
5"-4Thd 'O' Type	3/16" dia	0033-00039-TIS	0033-00039-KIT
5"-4Thd 'O' Type	7/32" dia	0033-00040-TIS	0033-00040-KIT
5"-4Thd 'O' Type	1/4" dia	0033-00041-TIS	0033-00041-KIT

SWABBING HEADS FLOW TUBE SETS			
QUICK UNION	MAX WIRE SIZE	PART NUMBER	REDRESS KIT
3/16"	0.184" dia	0033-00042-TIS	0033-00042-KIT
3/16"	0.189" dia	0033-00043-TIS	0033-00043-KIT
3/16"	0.192" dia	0033-00044-TIS	0033-00044-KIT
3/16"	0.197" dia	0033-00045-TIS	0033-00045-KIT
7/32"	0.215" dia	0033-00046-TIS	0033-00046-KIT
7/32"	0.219" dia	0033-00047-TIS	0033-00047-KIT
7/32"	0.223" dia	0033-00048-TIS	0033-00048-KIT
7/32"	0.227" dia	0033-00049-TIS	0033-00049-KIT
5/16"	0.309" dia	0033-00050-TIS	0033-00050-KIT
5/16"	0.314" dia	0033-00051-TIS	0033-00051-KIT
5/16"	0.317" dia	0033-00052-TIS	0033-00052-KIT
5/16"	0.321" dia	0033-00053-TIS	0033-00053-KIT

SWABBING HEAD



HYDRAULIC TOOLCATCHERS

TIS Hydraulic Toolcatchers are designed as a safety measure for catching the tool string using collets at the top of the lubricator stack in the event of the wire being stripped from the rope socket.

Once the tool string has passed through the toolcatcher section, pressure is applied via a valve to fix lock the collets in position so that objects wider than the wire can only pass in one direction.

TIS offer two types of tool catchers

1. Conventional Tool Catcher
(with quick union connections.)
2. Grease Control Head type
(with a flow tube connection and integral ball safety check.)

TIS Hydraulic Tool Catchers are available with the following options:

- 5,000 psi, 10,000 psi and 15,000 psi working pressures
- Standard or sour service
- Service temperature range of -29°C to +121°C
- Choice of quick union connections
- Choice of fishing neck engagement

Technical features include

- Compact operator friendly design
- Can be set up to engage the following fishing necks:
1.00" / 1.187" / 1.375" / 1.750" / 2.313"

HYDRAULIC TOOLCATCHERS				
WORKING PRESSURE	QUICK UNION	FISH NECK	PART NUMBER	REDRESS KIT
5,000 psi	5 1/2"-4x2 'B' Type	1.00"	0027-00012-TIS	0027-00012-KIT
5,000 psi	5 1/2"-4x2 'B' Type	1.187"	0027-00013-TIS	0027-00013-KIT
5,000 psi	5 1/2"-4x2 'B' Type	1.375"	0027-00014-TIS	0027-00014-KIT
5,000 psi	5 1/2"-4x2 'B' Type	1.750"	0027-00015-TIS	0027-00015-KIT
5,000 psi	5 1/2"-4x2 'B' Type	2.313"	0027-00016-TIS	0027-00016-KIT
5,000 psi	5"-4Thd 'O' Type	1.00"	0027-00017-TIS	0027-00017-KIT
5,000 psi	5"-4Thd 'O' Type	1.187"	0027-00018-TIS	0027-00018-KIT
5,000 psi	5"-4Thd 'O' Type	1.375"	0027-00019-TIS	0027-00019-KIT
5,000 psi	5"-4Thd 'O' Type	1.750"	0027-00020-TIS	0027-00020-KIT
5,000 psi	5"-4Thd 'O' Type	2.313"	0027-00021-TIS	0027-00021-KIT
10,000 psi	6 3/4"-4Thd 'B' Type	1.00"	0027-00007-TIS	0027-00007-KIT
10,000 psi	6 3/4"-4Thd 'B' Type	1.187"	0027-00008-TIS	0027-00008-KIT
10,000 psi	6 3/4"-4Thd 'B' Type	1.375"	0027-00009-TIS	0027-00009-KIT
10,000 psi	6 3/4"-4Thd 'B' Type	1.750"	0027-00010-TIS	0027-00010-KIT
10,000 psi	6 3/4"-4Thd 'B' Type	2.313"	0027-00011-TIS	0027-00011-KIT
10,000 psi	5 3/4"-4Thd 'O' Type	1.00"	0027-00006-TIS	0027-00006-KIT
10,000 psi	5 3/4"-4Thd 'O' Type	1.187"	0027-00005-TIS	0027-00005-KIT
10,000 psi	5 3/4"-4Thd 'O' Type	1.375"	0027-00003-TIS	0027-00003-KIT
10,000 psi	5 3/4"-4Thd 'O' Type	1.750"	0027-00022-TIS	0027-00022-KIT
10,000 psi	5 3/4"-4Thd 'O' Type	2.313"	0027-00004-TIS	0027-00004-KIT

TIS Multi-catch Hydraulic Toolcatchers are also available, designed to engage multiple fishing necks without requiring changeout of internals.

MULTI-CATCH HYDRAULIC TOOLCATCHERS				
WORKING PRESSURE	QUICK UNION	FISH NECKS	PART NUMBER	REDRESS KIT
5,000 psi	4 1/2"-4Thd 'B' Type	1.187", 1.375", 1.750"	0027-00034-TIS	0027-00034-KIT
5,000 psi	5"-4Thd 'O' Type	1.187", 1.375", 1.750"	0027-00033-TIS	0027-00033-KIT
10,000 psi	5 3/4"-4Thd 'O' Type	1.187", 1.375", 1.750"	0027-00035-TIS	0027-00035-KIT
10,000 psi	6 3/4"-4Thd 'B' Type	1.187", 1.375", 1.750"	0027-00036-TIS	0027-00036-KIT

MULTI-CATCH HYDRAULIC TOOLCATCHER



TOOLTRAPS

TIS Tool Traps are designed as a safety measure to prevent the tool string from falling down the well using a spring loaded flapper mechanism, and positioned at the base of the lubricator stack.

Once the tool string has passed through the tool trap section, the semi-circular flappers close creating a barrier with a hole that allows the wire to continue being deployed or recovered.

TIS offer two types of tool traps

1. Hydraulic Tool Trap
(uses two spring loaded flappers which are opened and closed by means of a hydraulic piston for deployment, and automatically opens and closes on recovery of the tool string.)
2. Manual Tool Trap
(typically used in 3.00" ID, 5,000 psi operations and uses a single flapper valve which is manually opened for deployment, and automatically opens and closes on recovery of the tool string.)

TIS Tool Traps are available with the following options:

- ▶ 5,000 psi, 10,000 psi and 15,000 psi working pressures
- ▶ Standard or sour service
- ▶ Service temperature range of -29°C to +121°C
- ▶ Choice of quick union connections

Technical features include:

- ▶ Counter balance operating handle acts as a visual indicator on the manual tool trap
- ▶ An external indicator rod attached to the hydraulic piston provides positive indication of flapper position on the hydraulic tool trap

HYDRAULIC TOOL TRAPS				
THRO' BORE	WORKING PRESSURE	QUICK UNION	PART NUMBER	REDRESS KIT
3.00"	5,000 psi	5 1/2"-4x2 'B' Type	0034-00002-TIS	0034-00002-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	0034-00001-TIS	0034-00001-KIT
3.00"	10,000 psi	6 3/4"-4Thd 'B'	0034-00009-TIS	0034-00009-KIT
3.00"	10,000 psi	5 3/4"-4Thd 'O' Type	0034-00010-TIS	0034-00010-KIT
4.00"	5,000 psi	7"-5Thd 'B' Type	0034-00003-TIS	0034-00003-KIT
4.00"	5,000 psi	6 1/2"-4Thd 'O' Type	0034-00004-TIS	0034-00004-KIT
4.00"	10,000 psi	8 1/4"-4x2 'B' Type (10k)	0034-00011-TIS	0034-00011-KIT
4.00"	10,000 psi	8 3/4"-4Thd 'O' Type	0034-00012-TIS	0034-00012-KIT
5 1/4"	5,000 psi	8 1/4"-4x2 'B' Type (5k)	0034-00005-TIS	0034-00005-KIT
5 1/4"	5,000 psi	8 1/4"-4Thd 'O' Type	0034-00006-TIS	0034-00006-KIT
5 1/4"	10,000 psi	8 3/4"-4x2 'B' Type	0034-00013-TIS	0034-00013-KIT
5 1/4"	10,000 psi	9"-4Thd 'O' Type	0034-00014-TIS	0034-00014-KIT
6 3/4"	5,000 psi	9 3/4"-4x2 'B' Type	0034-00007-TIS	0034-00007-KIT
6 3/4"	5,000 psi	9 1/2"-4Thd 'O' Type	0034-00008-TIS	0034-00008-KIT
6 3/4"	10,000 psi	13"-4Thd 'B' Type	0034-00015-TIS	0034-00015-KIT
6 3/4"	10,000 psi	11 1/2"-4Thd 'O' Type	0034-00016-TIS	0034-00016-KIT

MANUAL TOOL TRAPS				
THRO' BORE	WORKING PRESSURE	QUICK UNION	PART NUMBER	REDRESS KIT
3.00"	5,000 psi	5 1/2"-4x2 'B' Type	0034-00017-TIS	0034-00017-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	0034-00018-TIS	0034-00018-KIT



HYDRAULIC TOOLTRAP

IN-SITU TEST SUBS & IN-SITU LIFT-TEST CAPS

TIS In-situ Test Subs & **TIS In-situ Lift-Test Caps** are designed to provide an economic and time efficient means for pressure testing the lubricator stack prior to exposing it to live well pressure.

The stack must be tested each time the bottom connection is broken, which can cost a large amount of time without this section in use.

TIS In-situ Test Subs are available with the following options:

- ▶ 3.00" ID to 9.00" ID Through bores
- ▶ Standard or sour service
- ▶ 5,000 psi, 10,000 psi and 15,000 psi, working pressures
- ▶ Service temperature range of -29°C to +121°C
- ▶ Choice of primary quick union connection

Technical features include:

- ▶ An isolation valve is built into the injection manifold as a safety feature, allowing the operator to shut off the port after testing and well pressure from migrating to the hand pump in the event of an o' ring failure
- ▶ The injection manifold also has a TIS swivel union which allows the operator to position the hose neatly to the convenient operating position



IN-SITU TEST SUB



IN-SITU LIFT-TEST CAP

IN-SITU TEST SUBS

THRO' BORE	WORKING PRESSURE	QUICK UNION	PART NUMBER	REDRESS KIT
3.00"	5,000 psi	5 1/2"-4x2 'B' Type	0044-00008-TIS	0044-00008-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	0044-00009-TIS	0044-00009-KIT
3.00"	10,000 psi	6 3/8"-4Thd 'B'	0044-00010-TIS	0044-00010-KIT
3.00"	10,000 psi	5 3/4"-4Thd 'O' Type	0044-00011-TIS	0044-00011-KIT
4.00"	5,000 psi	7"-5Thd 'B' Type	0044-00012-TIS	0044-00012-KIT
4.00"	5,000 psi	6 1/2"-4Thd 'O' Type	0044-00013-TIS	0044-00013-KIT
4.00"	10,000 psi	8 1/4"-4x2 'B' Type (10k)	0044-00014-TIS	0044-00014-KIT
4.00"	10,000 psi	8 3/8"-4Thd 'O' Type	0044-00015-TIS	0044-00015-KIT
5 1/4"	5,000 psi	8 1/4"-4x2 'B' Type	0044-00016-TIS	0044-00016-KIT
5 1/4"	5,000 psi	8 1/4"-4Thd 'O' Type (5k)	0044-00017-TIS	0044-00017-KIT
5 1/4"	10,000 psi	8 3/8"-4x2 'B' Type	0044-00018-TIS	0044-00018-KIT
5 1/4"	10,000 psi	9"-4Thd 'O' Type	0044-00004-TIS	0044-00004-KIT
6 3/8"	5,000 psi	9 3/8"-4x2 'B' Type	0044-00019-TIS	0044-00019-KIT
6 3/8"	5,000 psi	9 1/2"-4Thd 'O' Type	0044-00020-TIS	0044-00020-KIT
6 3/8"	10,000 psi	13"-4Thd 'B' Type	0044-00021-TIS	0044-00021-KIT
6 3/8"	10,000 psi	11 1/2"-4Thd 'O' Type	0044-00002-TIS	0044-00002-KIT

IN-SITU LIFT / TEST CAPS

SIZE	WORKING PRESSURE	SAFE WORKING LOAD	PART NUMBER
3"	10,000 psi	5 Ton	0044-00024-TIS
4"	10,000 psi	5 Ton	0044-00025-TIS
5 1/4"	10,000 psi	5 Ton	0044-00005-TIS
6 3/8"	10,000 psi	5 Ton	0044-00003-TIS

PUMP-IN TEES

TIS Pump-in Tees are designed to provide a large flow fluid entry path into the lubricator stack to complete hydrostatic testing or pump fluid into the well.

This section can be positioned below or above the Wireline Valve, depending on operator preference.

TIS offer two types of pump-in tee assemblies

1. Conventional types
(typically each assembly comprises of; an extended female quick union connection with thread half side outlet(s) and quick union pin and collar.)
2. Integral types
(comprising of a one-piece body with integral quick union connections and thread half side outlet(s), with the quick union collar attached to the body by means of a special TIS segment set.)

TIS Pump-in Tees are available with the following options:

- ▶ 3.00" ID, 9.00" ID Through bores
- ▶ 5,000 psi, 10,000 psi and 15,000 psi working pressures
- ▶ Standard or sour service
- ▶ Service temperature range of -29°C to +121°C
- ▶ Choice of quick union or API flanged connections
- ▶ Single or dual side connections
- ▶ A choice of connection on thread half, side outlet
- ▶ A choice of connection used to attach the thread half to the main body

Technical features include:

- ▶ Unless specified otherwise, all pump-in tee assemblies with working pressures up to 10,000 psi will be provided with FIG 2" 1502 thread half connections
- ▶ Choices of connection type used to connect thread half to the body include: Integral, acme or line-pipe screwed connection, standard API flange connection or a special TIS flange connection

PUMP-IN TEES				
THRO' BORE	WORKING PRESSURE	QUICK UNION	PART NUMBER	REDRESS KIT
3.00"	5,000 psi	5 1/2"-4x2 'B' Type	0072-00020-TIS	0072-00020-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	0072-00021-TIS	0072-00021-KIT
3.00"	10,000 psi	6 3/4"-4Thd 'B' Type	0072-00007-TIS	0072-00007-KIT
3.00"	10,000 psi	5 3/4"-4Thd 'O' Type	0072-00013-TIS	0072-00013-KIT
4.00"	5,000 psi	7"-5Thd 'B' Type	0072-00022-TIS	0072-00022-KIT
4.00"	5,000 psi	6 1/2"-4Thd 'O' Type	0072-00023-TIS	0072-00023-KIT
4.00"	10,000 psi	8 1/4"-4x2 'B' Type (10k)	0072-00017-TIS	0072-00017-KIT
4.00"	10,000 psi	8 3/4"-4Thd 'O' Type	0072-00014-TIS	0072-00014-KIT
5 1/4"	5,000 psi	8 1/4"-4x2 'B' Type (5k)	0072-00024-TIS	0072-00024-KIT
5 1/4"	5,000 psi	8 1/4"-4Thd 'O' Type	0072-00025-TIS	0072-00025-KIT
5 1/4"	10,000 psi	8 3/4"-4x2 'B' Type	0072-00018-TIS	0072-00018-KIT
5 1/4"	10,000 psi	9"-4Thd 'O' Type	0072-00004-TIS	0072-00004-KIT
6 3/4"	5,000 psi	9 1/8"-4x2 'B' Type	0072-00015-TIS	0072-00015-KIT
6 3/4"	5,000 psi	9 1/2"-4Thd 'O' Type	0072-00016-TIS	0072-00016-KIT
6 3/4"	10,000 psi	13"-4Thd 'B' Type	0072-00019-TIS	0072-00019-KIT
6 3/4"	10,000 psi	11 1/2"-4Thd 'O' Type	0072-00010-TIS	0072-00010-KIT



PUMP IN TEE

LUBRICATOR & RISER SECTIONS | CONVENTIONAL LUBRICATORS

TIS Lubricator & Riser Sections are designed to retain well pressure while deploying wireline tools during well service operations.

Available in standard (6 – 10ft) or bespoke lengths, sections are fitted with standard quick unions and coupled together to provide sufficient length to accommodate the tool string and working pressure.

TIS offer two types of lubricator & riser sections

1. Conventional types
(typically each assembly comprises of a lubricator tube, double box collar complete with bleed port(s), quick union pin and collar down and quick union box up.)
2. Integral types
(comprising of a one-piece tube with integral quick union connections and upset containing a bleed port (optional), with the quick union collar attached to the body by means of a special TIS segment set.)

TIS Lubricator & Riser Sections are available with the following options:

- ▶ 3.00" ID, 9.00" ID Through bores
- ▶ 3ft to 20ft length options
- ▶ 5,000 psi, 10,000 psi and 15,000 psi working pressures
- ▶ Standard or sour service
- ▶ Service temperature range of -29°C to +121°C
- ▶ Choice of quick union or API flanged connections
- ▶ Choice of bleed port connections

Technical features include:

- ▶ Components are screwed together by means of a special TIS acme connection which has a primary o-ring seal and secondary metal to metal seal

Technical features (Integral Lubricators only) include:

- ▶ Quick union collars can be very quickly and easily removed for cleaning, inspection, etc
- ▶ Sections can be provided with an optional full re-cut facility on quick union connections.

CONVENTIONAL LUBRICATORS						
THRO' BORE	WORKING PRESSURE	QUICK UNION	LENGTH	½" NPT PORT	PART NUMBER	REDRESS KIT
3.00"	5,000 psi	5 ½"-4x2 'B' Type	6ft	None	0037-00030-TIS	0037-00030-KIT
3.00"	5,000 psi	5 ½"-4x2 'B' Type	8ft	None	0037-00031-TIS	0037-00031-KIT
3.00"	5,000 psi	5 ½"-4x2 'B' Type	10ft	None	0037-00032-TIS	0037-00032-KIT
3.00"	5,000 psi	5 ½"-4x2 'B' Type	6ft	1 off	0037-00033-TIS	0037-00033-KIT
3.00"	5,000 psi	5 ½"-4x2 'B' Type	8ft	1 off	0037-00034-TIS	0037-00034-KIT
3.00"	5,000 psi	5 ½"-4x2 'B' Type	10ft	1 off	0037-00035-TIS	0037-00035-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	6ft	None	0037-00036-TIS	0037-00036-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	8ft	None	0037-00037-TIS	0037-00037-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	10ft	None	0037-00038-TIS	0037-00038-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	6ft	1 off	0037-00019-TIS	0037-00019-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	8ft	1 off	0037-00039-TIS	0037-00039-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	10ft	1 off	0037-00018-TIS	0037-00018-KIT
3.00"	10,000 psi	6 ¾"-4Thd 'B' Type	6ft	None	0037-00040-TIS	0037-00040-KIT
3.00"	10,000 psi	6 ¾"-4Thd 'B' Type	8ft	None	0037-00041-TIS	0037-00041-KIT
3.00"	10,000 psi	6 ¾"-4Thd 'B' Type	10ft	None	0037-00042-TIS	0037-00042-KIT
3.00"	10,000 psi	6 ¾"-4Thd 'B' Type	6ft	1 off	0037-00043-TIS	0037-00043-KIT
3.00"	10,000 psi	6 ¾"-4Thd 'B' Type	8ft	1 off	0037-00044-TIS	0037-00044-KIT
3.00"	10,000 psi	6 ¾"-4Thd 'B' Type	10ft	1 off	0037-00004-TIS	0037-00004-KIT
3.00"	10,000 psi	5 ½"-4Thd 'O' Type	6ft	None	0037-00045-TIS	0037-00045-KIT
3.00"	10,000 psi	5 ½"-4Thd 'O' Type	8ft	None	0037-00046-TIS	0037-00046-KIT
3.00"	10,000 psi	5 ½"-4Thd 'O' Type	10ft	None	0037-00047-TIS	0037-00047-KIT
3.00"	10,000 psi	5 ½"-4Thd 'O' Type	6ft	1 off	0037-00048-TIS	0037-00048-KIT
3.00"	10,000 psi	5 ½"-4Thd 'O' Type	8ft	1 off	0037-00015-TIS	0037-00015-KIT
3.00"	10,000 psi	5 ½"-4Thd 'O' Type	10ft	1 off	0037-00003-TIS	0037-00003-KIT
4.00"	5,000 psi	7"-5Thd 'B' Type	6ft	None	0016-00019-TIS	0016-00019-KIT
4.00"	5,000 psi	7"-5Thd 'B' Type	8ft	None	0016-00020-TIS	0016-00020-KIT
4.00"	5,000 psi	7"-5Thd 'B' Type	10ft	None	0016-00021-TIS	0016-00021-KIT
4.00"	5,000 psi	7"-5Thd 'B' Type	6ft	1 off	0016-00022-TIS	0016-00022-KIT
4.00"	5,000 psi	7"-5Thd 'B' Type	8ft	1 off	0016-00023-TIS	0016-00023-KIT
4.00"	5,000 psi	7"-5Thd 'B' Type	10ft	1 off	0016-00024-TIS	0016-00024-KIT
4.00"	5,000 psi	6 ½"-4Thd 'O' Type	6ft	None	0016-00025-TIS	0016-00025-KIT
4.00"	5,000 psi	6 ½"-4Thd 'O' Type	8ft	None	0016-00026-TIS	0016-00026-KIT
4.00"	5,000 psi	6 ½"-4Thd 'O' Type	10ft	None	0016-00027-TIS	0016-00027-KIT
4.00"	5,000 psi	6 ½"-4Thd 'O' Type	6ft	1 off	0016-00028-TIS	0016-00028-KIT
4.00"	5,000 psi	6 ½"-4Thd 'O' Type	8ft	1 off	0016-00029-TIS	0016-00029-KIT
4.00"	5,000 psi	6 ½"-4Thd 'O' Type	10ft	1 off	0016-00030-TIS	0016-00030-KIT
4.00"	10,000 psi	8 ¼"-4x2 'B' Type (10k)	6ft	None	0016-00013-TIS	0016-00013-KIT
4.00"	10,000 psi	8 ¼"-4x2 'B' Type (10k)	8ft	None	0016-00014-TIS	0016-00014-KIT
4.00"	10,000 psi	8 ¼"-4x2 'B' Type (10k)	10ft	None	0016-00015-TIS	0016-00015-KIT
4.00"	10,000 psi	8 ¼"-4x2 'B' Type (10k)	6ft	1 off	0016-00016-TIS	0016-00016-KIT
4.00"	10,000 psi	8 ¼"-4x2 'B' Type (10k)	8ft	1 off	0016-00017-TIS	0016-00017-KIT
4.00"	10,000 psi	8 ¼"-4x2 'B' Type (10k)	10ft	1 off	0016-00018-TIS	0016-00018-KIT
4.00"	10,000 psi	8-¾" -4 Thd 'O' Type	6ft	None	0016-00010-TIS	0016-00010-KIT
4.00"	10,000 psi	8-¾" -4 Thd 'O' Type	8ft	None	0016-00011-TIS	0016-00011-KIT
4.00"	10,000 psi	8-¾" -4 Thd 'O' Type	10ft	None	0016-00012-TIS	0016-00012-KIT
4.00"	10,000 psi	8-¾" -4 Thd 'O' Type	6ft	1 off	0016-00008-TIS	0016-00008-KIT
4.00"	10,000 psi	8-¾" -4 Thd 'O' Type	8ft	1 off	0016-00005-TIS	0016-00005-KIT
4.00"	10,000 psi	8-¾" -4 Thd 'O' Type	10ft	1 off	0016-00009-TIS	0016-00009-KIT



LUBRICATOR & RISER SECTIONS | CONVENTIONAL LUBRICATORS

CONVENTIONAL LUBRICATORS						
THRO' BORE	WORKING PRESSURE	QUICK UNION	LENGTH	½" NPT PORT	PART NUMBER	REDRESS KIT
5 ½"	5,000 psi	8 ¼"-4x2 'B' Type (5k)	6ft	None	0039-00012-TIS	0039-00012-KIT
5 ½"	5,000 psi	8 ¼"-4x2 'B' Type (5k)	8ft	None	0039-00013-TIS	0039-00013-KIT
5 ½"	5,000 psi	8 ¼"-4x2 'B' Type (5k)	10ft	None	0039-00014-TIS	0039-00014-KIT
5 ½"	5,000 psi	8 ¼"-4x2 'B' Type (5k)	6ft	1 off	0039-00015-TIS	0039-00015-KIT
5 ½"	5,000 psi	8 ¼"-4x2 'B' Type (5k)	8ft	1 off	0039-00016-TIS	0039-00016-KIT
5 ½"	5,000 psi	8 ¼"-4x2 'B' Type (5k)	10ft	1 off	0039-00017-TIS	0039-00017-KIT
5 ½"	5,000 psi	8 ¼"-4Thd 'O' Type	6ft	None	0039-00018-TIS	0039-00018-KIT
5 ½"	5,000 psi	8 ¼"-4Thd 'O' Type	8ft	None	0039-00019-TIS	0039-00019-KIT
5 ½"	5,000 psi	8 ¼"-4Thd 'O' Type	10ft	None	0039-00020-TIS	0039-00020-KIT
5 ½"	5,000 psi	8 ¼"-4Thd 'O' Type	6ft	1 off	0039-00021-TIS	0039-00021-KIT
5 ½"	5,000 psi	8 ¼"-4Thd 'O' Type	8ft	1 off	0039-00022-TIS	0039-00022-KIT
5 ½"	5,000 psi	8 ¼"-4Thd 'O' Type	10ft	1 off	0039-00023-TIS	0039-00023-KIT
5 ½"	10,000 psi	8 ½"-4x2 'B' Type	6ft	None	0039-00028-TIS	0039-00028-KIT
5 ½"	10,000 psi	8 ½"-4x2 'B' Type	8ft	None	0039-00029-TIS	0039-00029-KIT
5 ½"	10,000 psi	8 ½"-4x2 'B' Type	10ft	None	0039-00030-TIS	0039-00030-KIT
5 ½"	10,000 psi	8 ½"-4x2 'B' Type	6ft	1 off	0039-00025-TIS	0039-00025-KIT
5 ½"	10,000 psi	8 ½"-4x2 'B' Type	8ft	1 off	0039-00026-TIS	0039-00026-KIT
5 ½"	10,000 psi	8 ½"-4x2 'B' Type	10ft	1 off	0039-00027-TIS	0039-00027-KIT
5 ½"	10,000 psi	9"-4Thd 'O' Type	6ft	None	0039-00031-TIS	0039-00031-KIT
5 ½"	10,000 psi	9"-4Thd 'O' Type	8ft	None	0039-00032-TIS	0039-00032-KIT
5 ½"	10,000 psi	9"-4Thd 'O' Type	10ft	None	0039-00033-TIS	0039-00033-KIT
5 ½"	10,000 psi	9"-4Thd 'O' Type	6ft	1 off	0039-00024-TIS	0039-00024-KIT
5 ½"	10,000 psi	9"-4Thd 'O' Type	8ft	1 off	0039-00009-TIS	0039-00009-KIT
5 ½"	10,000 psi	9"-4Thd 'O' Type	10ft	1 off	0039-00005-TIS	0039-00005-KIT
6 ½"	5,000 psi	9 ½"-4Thd 'O' Type	6ft	None	0038-00017-TIS	0038-00017-KIT
6 ½"	5,000 psi	9 ½"-4Thd 'O' Type	8ft	None	0038-00018-TIS	0038-00018-KIT
6 ½"	5,000 psi	9 ½"-4Thd 'O' Type	10ft	None	0038-00019-TIS	0038-00019-KIT
6 ½"	5,000 psi	9 ½"-4Thd 'O' Type	6ft	1 off	0038-00020-TIS	0038-00020-KIT
6 ½"	5,000 psi	9 ½"-4Thd 'O' Type	8ft	1 off	0038-00021-TIS	0038-00021-KIT
6 ½"	5,000 psi	9 ½"-4Thd 'O' Type	10ft	1 off	0038-00022-TIS	0038-00022-KIT
6 ½"	5,000 psi	9 ½"-4x2 'B' Type	6ft	None	0038-00014-TIS	0038-00014-KIT
6 ½"	5,000 psi	9 ½"-4x2 'B' Type	8ft	None	0038-00015-TIS	0038-00015-KIT
6 ½"	5,000 psi	9 ½"-4x2 'B' Type	10ft	None	0038-00016-TIS	0038-00016-KIT
6 ½"	5,000 psi	9 ½"-4x2 'B' Type	6ft	1 off	0038-00024-TIS	0038-00024-KIT
6 ½"	5,000 psi	9 ½"-4x2 'B' Type	8ft	1 off	0038-00025-TIS	0038-00025-KIT
6 ½"	5,000 psi	9 ½"-4x2 'B' Type	10ft	1 off	0038-00023-TIS	0038-00023-KIT
6 ½"	10,000 psi	11 ½"-4 Thd 'O' Type	6ft	None	0038-00011-TIS	0038-00011-KIT
6 ½"	10,000 psi	11 ½"-4 Thd 'O' Type	8ft	None	0038-00012-TIS	0038-00012-KIT
6 ½"	10,000 psi	11 ½"-4 Thd 'O' Type	10ft	None	0038-00013-TIS	0038-00013-KIT
6 ½"	10,000 psi	11 ½"-4 Thd 'O' Type	6ft	1 off	0038-00004-TIS	0038-00004-KIT
6 ½"	10,000 psi	11 ½"-4 Thd 'O' Type	8ft	1 off	0038-00001-TIS	0038-00001-KIT
6 ½"	10,000 psi	11 ½"-4 Thd 'O' Type	10ft	1 off	0038-00003-TIS	0038-00003-KIT
6 ½"	10,000 psi	13"-4Thd 'B' Type	6ft	None	0038-00008-TIS	0038-00008-KIT
6 ½"	10,000 psi	13"-4Thd 'B' Type	8ft	None	0038-00009-TIS	0038-00009-KIT
6 ½"	10,000 psi	13"-4Thd 'B' Type	10ft	None	0038-00010-TIS	0038-00010-KIT
6 ½"	10,000 psi	13"-4Thd 'B' Type	6ft	1 off	0038-00005-TIS	0038-00005-KIT
6 ½"	10,000 psi	13"-4Thd 'B' Type	8ft	1 off	0038-00006-TIS	0038-00006-KIT
6 ½"	10,000 psi	13"-4Thd 'B' Type	10ft	1 off	0038-00007-TIS	0038-00007-KIT



CONVENTIONAL LUBRICATOR



LUBRICATOR & RISER SECTIONS | INTEGRAL LUBRICATORS

INTEGRAL LUBRICATORS (W/NPT PORT)					
THRO' BORE	WORKING PRESSURE	QUICK UNION	LENGTH	PART NUMBER	REDRESS KIT
3.00"	5,000 psi	5 1/2"-4x2 'B' Type	6ft	0037-00051-TIS	0037-00051-KIT
3.00"	5,000 psi	5 1/2"-4x2 'B' Type	8ft	0037-00052-TIS	0037-00052-KIT
3.00"	5,000 psi	5 1/2"-4x2 'B' Type	10ft	0037-00053-TIS	0037-00053-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	6ft	0037-00049-TIS	0037-00049-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	8ft	0037-00021-TIS	0037-00021-KIT
3.00"	5,000 psi	5"-4Thd 'O' Type	10ft	0037-00050-TIS	0037-00050-KIT
3.00"	10,000 psi	6 3/8"-4Thd 'B' Type	6ft	0037-00054-TIS	0037-00054-KIT
3.00"	10,000 psi	6 3/8"-4Thd 'B' Type	8ft	0037-00055-TIS	0037-00055-KIT
3.00"	10,000 psi	6 3/8"-4Thd 'B' Type	10ft	0037-00056-TIS	0037-00056-KIT
3.00"	10,000 psi	5 1/2"-4Thd 'O' Type	6ft	0037-00057-TIS	0037-00057-KIT
3.00"	10,000 psi	5 1/2"-4Thd 'O' Type	8ft	0037-00058-TIS	0037-00058-KIT
3.00"	10,000 psi	5 1/2"-4Thd 'O' Type	10ft	0037-00059-TIS	0037-00059-KIT
4.00"	5,000 psi	7"-5Thd 'B' Type	6ft	0016-00031-TIS	0016-00031-KIT
4.00"	5,000 psi	7"-5Thd 'B' Type	8ft	0016-00032-TIS	0016-00032-KIT
4.00"	5,000 psi	7"-5Thd 'B' Type	10ft	0016-00033-TIS	0016-00033-KIT
4.00"	5,000 psi	6 1/2"-4Thd 'O' Type	6ft	0016-00034-TIS	0016-00034-KIT
4.00"	5,000 psi	6 1/2"-4Thd 'O' Type	8ft	0016-00035-TIS	0016-00035-KIT
4.00"	5,000 psi	6 1/2"-4Thd 'O' Type	10ft	0016-00036-TIS	0016-00036-KIT
4.00"	10,000 psi	8 1/4"-4x2 'B' Type (10k)	6ft	0016-00037-TIS	0016-00037-KIT
4.00"	10,000 psi	8 1/4"-4x2 'B' Type (10k)	8ft	0016-00038-TIS	0016-00038-KIT
4.00"	10,000 psi	8 1/4"-4x2 'B' Type (10k)	10ft	0016-00039-TIS	0016-00039-KIT
4.00"	10,000 psi	8 3/8"-4Thd 'O' Type	6ft	0016-00040-TIS	0016-00040-KIT
4.00"	10,000 psi	8 3/8"-4Thd 'O' Type	8ft	0016-00041-TIS	0016-00041-KIT
4.00"	10,000 psi	8 3/8"-4Thd 'O' Type	10ft	0016-00042-TIS	0016-00042-KIT
5 1/8"	5,000 psi	8 3/4"-4x2 'B' Type (5k)	6ft	0039-00042-TIS	0039-00042-KIT
5 1/8"	5,000 psi	8 3/4"-4x2 'B' Type (5k)	8ft	0039-00043-TIS	0039-00043-KIT
5 1/8"	5,000 psi	8 3/4"-4x2 'B' Type (5k)	10ft	0039-00044-TIS	0039-00044-KIT
5 1/8"	5,000 psi	8 3/4"-4Thd 'O' Type	6ft	0039-00039-TIS	0039-00039-KIT
5 1/8"	5,000 psi	8 3/4"-4Thd 'O' Type	8ft	0039-00040-TIS	0039-00040-KIT
5 1/8"	5,000 psi	8 3/4"-4Thd 'O' Type	10ft	0039-00041-TIS	0039-00041-KIT
5 1/8"	10,000 psi	8 3/8"-4x2 'B' Type	6ft	0039-00036-TIS	0039-00036-KIT
5 1/8"	10,000 psi	8 3/8"-4x2 'B' Type	8ft	0039-00037-TIS	0039-00037-KIT
5 1/8"	10,000 psi	8 3/8"-4x2 'B' Type	10ft	0039-00038-TIS	0039-00038-KIT
5 1/8"	10,000 psi	9"-4Thd 'O' Type	6ft	0039-00035-TIS	0039-00035-KIT
5 1/8"	10,000 psi	9"-4Thd 'O' Type	8ft	0039-00006-TIS	0039-00006-KIT
5 1/8"	10,000 psi	9"-4Thd 'O' Type	10ft	0039-00001-TIS	0039-00001-KIT
6-5.8"	5,000 psi	9 3/8"-4x2 'B' Type	6ft	0038-00026-TIS	0038-00026-KIT
6-5.8"	5,000 psi	9 3/8"-4x2 'B' Type	8ft	0038-00027-TIS	0038-00027-KIT
6-5.8"	5,000 psi	9 3/8"-4x2 'B' Type	10ft	0038-00028-TIS	0038-00028-KIT
6-5.8"	5,000 psi	9 1/2"-4Thd 'O' Type	6ft	0038-00029-TIS	0038-00029-KIT
6-5.8"	5,000 psi	9 1/2"-4Thd 'O' Type	8ft	0038-00030-TIS	0038-00030-KIT
6-5.8"	5,000 psi	9 1/2"-4Thd 'O' Type	10ft	0038-00031-TIS	0038-00031-KIT
6-5.8"	10,000 psi	13"-4Thd 'B' Type	6ft	0038-00032-TIS	0038-00032-KIT
6-5.8"	10,000 psi	13"-4Thd 'B' Type	8ft	0038-00033-TIS	0038-00033-KIT
6-5.8"	10,000 psi	13"-4Thd 'B' Type	10ft	0038-00034-TIS	0038-00034-KIT
6-5.8"	10,000 psi	11 1/2"-4Thd 'O' Type	6ft	0038-00035-TIS	0038-00035-KIT
6-5.8"	10,000 psi	11 1/2"-4Thd 'O' Type	8ft	0038-00036-TIS	0038-00036-KIT
6-5.8"	10,000 psi	11 1/2"-4Thd 'O' Type	10ft	0038-00037-TIS	0038-00037-KIT

INTEGRAL LUBRICATORS



LUBRICATOR & RISER SECTIONS | INTEGRAL LUBRICATORS

INTEGRAL LUBRICATORS (W/HIGH PRESSURE PORT)

THRO' BORE	WORKING PRESSURE	QUICK UNION	LENGTH	PART NUMBER	REDRESS KIT
2 5/16"	15,000 psi	6 5/16"-4Thd 'B' Type	6ft	0036-00001-TIS	0036-00001-KIT
2 5/16"	15,000 psi	6 5/16"-4Thd 'B' Type	8ft	0036-00002-TIS	0036-00002-KIT
2 5/16"	15,000 psi	6 5/16"-4Thd 'B' Type	10ft	0036-00003-TIS	0036-00003-KIT
2 5/16"	15,000 psi	6 5/16"-4Thd 'O' Type	6ft	0036-00004-TIS	0036-00004-KIT
2 5/16"	15,000 psi	6 5/16"-4Thd 'O' Type	8ft	0036-00005-TIS	0036-00005-KIT
2 5/16"	15,000 psi	6 5/16"-4Thd 'O' Type	10ft	0036-00006-TIS	0036-00006-KIT
3.00"	15,000 psi	7"-5Thd 'B' Type	6ft	0037-00060-TIS	0037-00060-KIT
3.00"	15,000 psi	7"-5Thd 'B' Type	8ft	0037-00061-TIS	0037-00061-KIT
3.00"	15,000 psi	7"-5Thd 'B' Type	10ft	0037-00062-TIS	0037-00062-KIT
3.00"	15,000 psi	7 1/2"-4Thd 'O' Type	6ft	0037-00063-TIS	0037-00063-KIT
3.00"	15,000 psi	7 1/2"-4Thd 'O' Type	8ft	0037-00064-TIS	0037-00064-KIT
3.00"	15,000 psi	7 1/2"-4Thd 'O' Type	10ft	0037-00065-TIS	0037-00065-KIT
4.00"	15,000 psi	9 1/2"-4Thd 'O' Type	6ft	0016-00043-TIS	0016-00043-KIT
4.00"	15,000 psi	9 1/2"-4Thd 'O' Type	8ft	0016-00044-TIS	0016-00044-KIT
4.00"	15,000 psi	9 1/2"-4Thd 'O' Type	10ft	0016-00045-TIS	0016-00045-KIT
5 1/8"	15,000 psi	12 1/4"-4Thd 'O' Type	6ft	0039-00045-TIS	0039-00045-KIT
5 1/8"	15,000 psi	12 1/4"-4Thd 'O' Type	8ft	0039-00046-TIS	0039-00046-KIT
5 1/8"	15,000 psi	12 1/4"-4Thd 'O' Type	10ft	0039-00047-TIS	0039-00047-KIT

INTEGRAL LUBRICATORS

ANCILLARY EQUIPMENT | CROSSOVERS & TUBING ADAPTERS

TIS Quick Union Crossovers & TIS Tubing Adapters are designed to provide a transition between different connections used during wireline and completion operations.

TIS Quick Union Crossovers are used for standard wireline operations and typically employ a pin and collar connection down by a box connection up.

TIS Tubing Adapters are used for completion operations and typically employ an API pin connection down by a quick union box connection up. Rated for lower working pressures, they require a torque connection on the pin to provide a seal.

TIS Quick Union Crossovers & TIS Tubing Adapters are available with the following options:

- ▶ 5,000 psi, 10,000 psi and 15,000 psi working pressures
- ▶ Standard or sour service
- ▶ Service temperature range of -29°C to +121°C
- ▶ Choice of quick union connections
- ▶ Choice of pin connections

Technical features include:

- ▶ On two piece crossovers, component parts are screwed together by means of a special TIS acme connection, which has a primary o-ring seal and secondary metal to metal seal
- ▶ Variations to pin connections on tubing adapters, can be supplied within current API Specifications.

QUICK UNION CROSSOVERS					
THRO' BORE	WORKING PRESSURE	MALE & COLLAR QUICK UNION	FEMALE QUICK UNION	PART NUMBER	REDRESS KIT
3.00"	5,000 psi	5 1/2"-4x2 'B' Type	5"-4Thd 'O' Type	0059-00003-TIS	0059-00003-KIT
3.00"	5,000 psi	5 3/4"-4Thd 'O' Type	5 1/2"-4x2 'B' Type	0046-00023-TIS	0046-00023-KIT
3.00"	5,000 psi	5 3/4"-4Thd 'O' Type	5"-4Thd 'O' Type	0046-00024-TIS	0046-00024-KIT
3.00"	5,000 psi	6 3/8"-4Thd 'B' Type	5 1/2"-4X2 'B' Type	0061-00006-TIS	0061-00006-KIT
3.00"	5,000 psi	6 3/8"-4Thd 'B' Type	5"-4Thd 'O' Type	0061-00007-TIS	0061-00007-KIT
3.00"	10,000 psi	6 3/8"-4Thd 'B' Type	5 3/4"-4Thd 'O' Type	0061-00008-TIS	0061-00008-KIT
3.00"	5,000 psi	6 1/2"-4Thd 'O' Type	5 1/2"-4x2 'B' Type	0047-00011-TIS	0047-00011-KIT
3.00"	5,000 psi	6 1/2"-4Thd 'O' Type	5"-4Thd 'O' Type	0047-00012-TIS	0047-00012-KIT
3.00"	5,000 psi	6 1/2"-4Thd 'O' Type	6 3/8"-4Thd 'B' Type	0047-00014-TIS	0047-00014-KIT
3.00"	10,000 psi	6 1/2"-4Thd 'O' Type	5 3/4"-4Thd 'O' Type	0047-00013-TIS	0047-00013-KIT
3.00"	5,000 psi	7"-5Thd 'B' Type	5 1/2"-4x2 'B' Type	0063-00004-TIS	0063-00004-KIT
3.00"	5,000 psi	7"-5Thd 'B' Type	5"-4Thd 'O' Type	0063-00005-TIS	0063-00005-KIT
3.00"	5,000 psi	7"-5Thd 'B' Type	6 3/8"-4Thd 'B' Type	0063-00005-TIS	0063-00005-KIT
3.00"	5,000 psi	7"-5Thd 'B' Type	5 3/4"-4Thd 'O' Type	0063-00006-TIS	0063-00006-TIS
4.00"	5,000 psi	7"-5Thd 'B' Type	6 1/2"-4Thd 'O' Type	0063-00007-TIS	0063-00007-KIT
3.00"	5,000 psi	8 3/4"-4x2 'B' Type (10k)	5 1/2"-4x2 'B' Type	0065-00007-TIS	0065-00007-KIT
3.00"	5,000 psi	8 3/4"-4x2 'B' Type (10k)	5"-4Thd 'O' Type	0065-00006-TIS	0065-00006-KIT
3.00"	10,000 psi	8 3/4"-4x2 'B' Type (10k)	6 3/8"-4Thd 'B' Type	0065-00003-TIS	0065-00003-KIT
3.00"	10,000 psi	8 3/4"-4x2 'B' Type (10k)	5 3/4"-4Thd 'O' Type	0065-00005-TIS	0065-00005-KIT
4.00"	5,000 psi	8 3/4"-4x2 'B' Type (10k)	7"-5Thd 'B' Type	0065-00008-TIS	0065-00008-KIT
4.00"	10,000 psi	8 3/4"-4x2 'B' Type (10k)	6 1/2"-4Thd 'O' Type	0065-00009-TIS	0065-00009-KIT
3.00"	5,000 psi	8 3/8"-4Thd 'O' Type	5 1/2"-4x2 'B' Type	0053-00004-TIS	0053-00004-KIT
3.00"	5,000 psi	8 3/8"-4Thd 'O' Type	5"-4Thd 'O' Type	0053-00005-TIS	0053-00005-KIT
3.00"	10,000 psi	8 3/8"-4Thd 'O' Type	6 3/8"-4Thd 'B' Type	0053-00007-TIS	0053-00007-KIT
3.00"	10,000 psi	8 3/8"-4Thd 'O' Type	5 3/4"-4Thd 'O' Type	0053-00006-TIS	0053-00006-KIT
4.00"	5,000 psi	8 3/8"-4Thd 'O' Type	7"-5Thd 'B' Type	0053-00008-TIS	0053-00008-KIT
4.00"	5,000 psi	8 3/8"-4Thd 'O' Type	6 1/2"-4Thd 'O' Type	0053-00009-TIS	0053-00009-KIT
4.00"	10,000psi	8 3/8"-4Thd 'O' Type	8 3/4"-4x2 'B' Type (10k)	0053-00010-TIS	0053-00010-KIT
3.00"	5,000 psi	8 1/4"-4x2 'B' Type (5k)	5 1/2"-4x2 'B' Type	0064-00005-TIS	0064-00005-KIT
3.00"	5,000 psi	8 1/4"-4x2 'B' Type (5k)	5"-4Thd 'O' Type	0064-00006-TIS	0064-00006-KIT
3.00"	5,000 psi	8 1/4"-4x2 'B' Type (5k)	6 3/8"-4Thd 'B' Type	0064-00002-TIS	0064-00002-KIT
3.00"	5,000 psi	8 1/4"-4x2 'B' Type (5k)	5 3/4"-4Thd 'O' Type	0064-00004-TIS	0064-00004-KIT
4.00"	5,000 psi	8 1/4"-4x2 'B' Type (5k)	7"-5Thd 'B' Type	0064-00007-TIS	0064-00007-KIT
4.00"	5,000 psi	8 1/4"-4x2 'B' Type (5k)	6 1/2"-4Thd 'O' Type	0064-00008-TIS	0064-00008-KIT
4.00"	5,000 psi	8 1/4"-4x2 'B' Type (5k)	8 3/4"-4x2 'B' Type	0064-00009-TIS	0064-00009-KIT
3.00"	5,000 psi	8 1/4"-4Thd 'O' Type	5 1/2"-4x2 'B' Type	0052-00013-TIS	0052-00013-KIT
3.00"	5,000 psi	8 1/4"-4Thd 'O' Type	5"-4Thd 'O' Type	0052-00014-TIS	0052-00014-KIT
3.00"	5,000 psi	8 1/4"-4Thd 'O' Type	6 3/8"-4Thd 'B' Type	0052-00005-TIS	0052-00005-KIT
3.00"	5,000 psi	8 1/4"-4Thd 'O' Type	5 3/4"-4Thd 'O' Type	0052-00006-TIS	0052-00006-KIT
4.00"	5,000 psi	8 1/4"-4Thd 'O' Type	7"-5Thd 'B' Type	0052-00007-TIS	0052-00007-KIT
4.00"	5,000 psi	8 1/4"-4Thd 'O' Type	6 1/2"-4Thd 'O' Type	0052-00008-TIS	0052-00008-TIS
4.00"	5,000 psi	8 1/4"-4Thd 'O' Type	8 3/4"-4x2 'B' Type (10k)	0052-00009-TIS	0052-00009-KIT
4.00"	5,000 psi	8 1/4"-4Thd 'O' Type	8 3/8"-4Thd 'O' Type	0052-00010-TIS	0052-00010-KIT
5 1/8"	5,000 psi	8 1/4"-4Thd 'O' Type	8 1/4"-4x2 'B' Type (10k)	0052-00011-TIS	0052-00011-KIT
3.00"	5,000 psi	8 3/8"-4x2 'B' Type	5 1/2"-4x2 'B' Type	0078-00005-TIS	0078-00005-KIT
3.00"	5,000 psi	8 3/8"-4x2 'B' Type	5"-4Thd 'O' Type	0078-00006-TIS	0078-00006-KIT
3.00"	10,000 psi	8 3/8"-4x2 'B' Type	6 3/8"-4Thd 'B' Type	0078-00001-TIS	0078-00001-KIT
3.00"	10,000 psi	8 3/8"-4x2 'B' Type	5 3/4"-4Thd 'O' Type	0078-00003-TIS	0078-00003-KIT
4.00"	5,000 psi	8 3/8"-4x2 'B' Type	7"-5Thd 'B' Type	0078-00007-TIS	0078-00007-KIT
4.00"	5,000 psi	8 3/8"-4x2 'B' Type	6 1/2"-4Thd 'O' Type	0078-00008-TIS	0078-00008-KIT
4.00"	10,000 psi	8 3/8"-4x2 'B' Type	8 1/4"-4x2 'B' Type (10k)	0078-00009-TIS	0078-00009-KIT
4.00"	10,000 psi	8 3/8"-4x2 'B' Type	8 3/8"-4Thd 'O' Type	0078-00010-TIS	0078-00010-KIT
5 1/8"	5,000 psi	8 3/8"-4x2 'B' Type	8 3/4"-4x2 'B' Type (5k)	0078-00011-TIS	0078-00011-KIT
5 1/8"	5,000 psi	8 3/8"-4x2 'B' Type	8 1/4"-4Thd 'O' Type	0078-00012-TIS	0078-00012-KIT
3.00"	5,000 psi	9"-4Thd 'O' Type	5 1/2"-4x2 'B' Type	0054-00026-TIS	0054-00026-KIT
3.00"	5,000 psi	9"-4Thd 'O' Type	5"-4Thd 'O' Type	0054-00008-TIS	0054-00008-KIT

ANCILLARY EQUIPMENT | CROSSOVERS & TUBING ADAPTERS

QUICK UNION CROSSOVERS

THRO' BORE	WORKING PRESSURE	MALE & COLLAR QUICK UNION	FEMALE QUICK UNION	PART NUMBER	REDRESS KIT
3.00"	10,000 psi	9"-4Thd 'O' Type	6 3/4"-4Thd 'B' Type	0054-00023-TIS	0054-00023-KIT
3.00"	10,000 psi	9"-4Thd 'O' Type	5 1/2"-4Thd 'O' Type	0054-00017-TIS	0054-00017-KIT
4.00"	5,000 psi	9"-4Thd 'O' Type	7"-5Thd 'B' Type	0054-00024-TIS	0054-00024-KIT
4.00"	5,000 psi	9"-4Thd 'O' Type	6 1/2"-4Thd 'O' Type	0054-00006-TIS	0054-00006-KIT
4.00"	10,000 psi	9"-4Thd 'O' Type	8 1/4"-4x2 'B' Type (10k)	0054-00005-TIS	0054-00005-KIT
4.00"	10,000 psi	9"-4Thd 'O' Type	8 3/4"-4Thd 'O' Type	0054-00025-TIS	0054-00025-KIT
5 1/2"	5,000 psi	9"-4Thd 'O' Type	8 1/4"-4x2 'B' Type (5k)	0054-00027-TIS	0054-00027-KIT
5 1/2"	10,000 psi	9"-4Thd 'O' Type	8 3/4"-4x2 'B' Type	0054-00028-TIS	0054-00028-KIT
3.00"	5,000 psi	9 1/2"-4Thd 'O' Type	5 1/2"-4x2 'B' Type	0055-00013-TIS	0055-00013-KIT
3.00"	5,000 psi	9 1/2"-4Thd 'O' Type	5"-4Thd 'O' Type	0055-00012-TIS	0055-00012-KIT
3.00"	5,000 psi	9 1/2"-4Thd 'O' Type	6 3/4"-4Thd 'B' Type	0055-00014-TIS	0055-00014-KIT
3.00"	5,000 psi	9 1/2"-4Thd 'O' Type	5 3/4"-4Thd 'O' Type	0055-00015-TIS	0055-00015-KIT
4.00"	5,000 psi	9 1/2"-4Thd 'O' Type	7"-5Thd 'B' Type	0055-00016-TIS	0055-00016-KIT
4.00"	5,000 psi	9 1/2"-4Thd 'O' Type	6 1/2"-4Thd 'O' Type	0055-00008-TIS	0055-00008-KIT
4.00"	5,000 psi	9 1/2"-4Thd 'O' Type	8 1/4"-4x2 'B' Type (10k)	0055-00019-TIS	0055-00019-KIT
4.00"	5,000 psi	9 1/2"-4Thd 'O' Type	8 3/4"-4Thd 'O' Type	0055-00020-TIS	0055-00020-KIT
5 1/2"	5,000 psi	9 1/2"-4Thd 'O' Type	8 1/4"-4x2 'B' Type (5k)	0055-00018-TIS	0055-00018-KIT
5 1/2"	5,000 psi	9 1/2"-4Thd 'O' Type	8 1/4"-4Thd 'O' Type	0055-00017-TIS	0055-00017-KIT
5 1/2"	5,000 psi	9 1/2"-4Thd 'O' Type	8 3/4"-4x2 'B' Type	0055-00010-TIS	0055-00010-KIT
5 1/2"	5,000 psi	9 1/2"-4Thd 'O' Type	9"-4Thd 'O' Type	0055-00001-TIS	0055-00001-KIT
3.00"	5,000 psi	9 3/4"-4X2 'B' Type	5 1/2"-4x2 'B' Type	0066-00017-TIS	0066-00017-KIT
3.00"	5,000 psi	9 3/4"-4X2 'B' Type	5"-4Thd 'O' Type	0066-00016-TIS	0066-00016-KIT
3.00"	5,000 psi	9 3/4"-4Thd 'B' Type	6 3/4"-4Thd 'B' Type	0066-00015-TIS	0066-00015-KIT
3.00"	5,000 psi	9 3/4"-4X2 'B' Type	5 3/4"-4Thd 'O' Type	0066-00014-TIS	0066-00014-KIT
4.00"	5,000 psi	9 3/4"-4X2 'B' Type	7"-5Thd 'B' Type	0066-00013-TIS	0066-00013-KIT
4.00"	5,000 psi	9 3/4"-4X2 'B' Type	6 1/2"-4Thd 'O' Type	0066-00012-TIS	0066-00012-KIT
4.00"	5,000 psi	9 3/4"-4x2 'B' Type	8 1/4"-4x2 'B' Type (10k)	0066-00011-TIS	0066-00011-KIT
4.00"	5,000 psi	9 3/4"-4x2 'B' Type	8 3/4"-4Thd 'O' Type	0066-00010-TIS	0066-00010-KIT
5 1/2"	5,000 psi	9 3/4"-4x2 'B' Type	8 1/4"-4x2 'B' Type (5k)	0066-00009-TIS	0066-00009-KIT
5 1/2"	5,000 psi	9 3/4"-4x2 'B' Type	8 1/4"-4Thd 'O' Type	0066-00008-TIS	0066-00008-KIT
5 1/2"	5,000 psi	9 3/4"-4x2 'B' Type	8 3/4"-4x2 'B' Type	0066-00007-TIS	0066-00007-KIT
5 1/2"	5,000 psi	9 3/4"-4x2 'B' Type	9"-4Thd 'O' Type	0066-00004-TIS	0066-00004-KIT
6 1/2"	5,000 psi	9 3/4"-4x2 'B' Type	9 1/2"-4Thd 'O' Type	0066-00006-TIS	0066-00006-KIT
3.00"	5,000 psi	11 1/2"-4Thd 'O' Type	5 1/2"-4x2 'B' Type	0056-00022-TIS	0056-00022-KIT
3.00"	5,000 psi	11 1/2"-4Thd 'O' Type	5"-4Thd 'O' Type	0056-00021-TIS	0056-00021-KIT
3.00"	10,000 psi	11 1/2"-4Thd 'O' Type	6 3/4"-4Thd 'B' Type	0056-00020-TIS	0056-00020-KIT
3.00"	10,000 psi	11 1/2"-4Thd 'O' Type	5 3/4"-4Thd 'O' Type	0056-00019-TIS	0056-00019-KIT
4.00"	5,000 psi	11 1/2"-4Thd 'O' Type	7"-5Thd 'B' Type	0056-00018-TIS	0056-00018-KIT
4.00"	5,000 psi	11 1/2"-4Thd 'O' Type	6 1/2"-4Thd 'O' Type	0056-00017-TIS	0056-00017-KIT
4.00"	10,000 psi	11 1/2"-4Thd 'O' Type	8 3/4"-4Thd 'O' Type	0056-00016-TIS	0056-00016-KIT
4.00"	10,000 psi	11 1/2"-4Thd 'O' Type	8 1/4"-4x2 'B' Type (10k)	0056-00015-TIS	0056-00015-KIT
5 1/2"	5,000 psi	11 1/2"-4Thd 'O' Type	8 1/4"-4Thd 'O' Type	0056-00014-TIS	0056-00014-KIT
5 1/2"	5,000 psi	11 1/2"-4Thd 'O' Type	8 1/4"-4x2 'B' Type (5k)	0056-00013-TIS	0056-00013-KIT
5 1/2"	10,000 psi	11 1/2"-4Thd 'O' Type	8 3/4"-4x2 'B' Type	0056-00012-TIS	0056-00012-KIT
5 1/2"	10,000 psi	11 1/2"-4Thd 'O' Type	9"-4Thd 'O' Type	0056-00005-TIS	0056-00005-KIT
6 1/2"	5,000 psi	11 1/2"-4Thd 'O' Type	9 3/4"-4x2 'B' Type	0056-00010-TIS	0056-00010-KIT
6 1/2"	5,000 psi	11 1/2"-4Thd 'O' Type	9 1/2"-4Thd 'O' Type	0056-00011-TIS	0056-00011-KIT



2 PIECE CROSSOVER



3 PIECE CROSSOVER

ANCILLARY EQUIPMENT | WELLHEAD FLANGE ADAPTERS

TIS Wellhead Flange Adapters are designed to connect a pressure control stack to an API wellhead for wireline operations.

TIS Wellhead Flange Adapters are available with the following options:

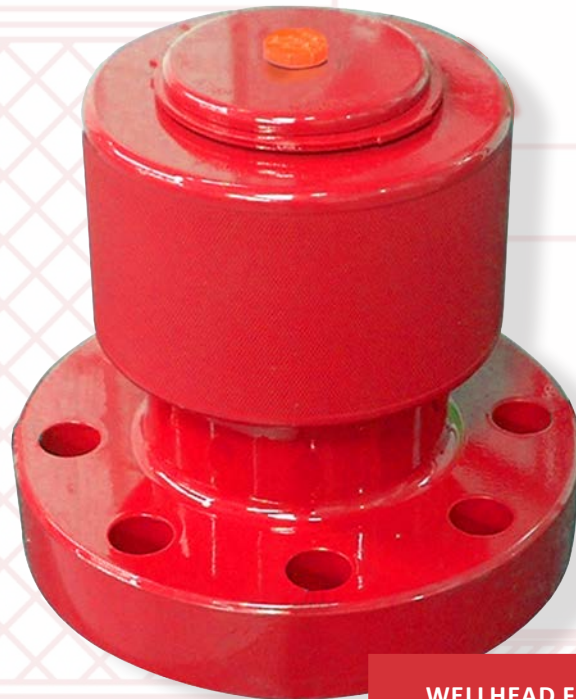
- ▶ Inner seal retaining bars
- ▶ Replaceable cartridge type equaliser valves.
- ▶ Integral check valves on grease injection ports
- ▶ Choice of through bores from 2 1/16" ID upwards
- ▶ Choice of material: alloy steel, stainless steel and nickel alloys
- ▶ Inlays on ring grooves
- ▶ Choice of working pressures from 2,000 psi to 15,000 psi
- ▶ Standard or sour service
- ▶ Choice of fluid and temperature rating
- ▶ Choice of API flanged connections
- ▶ Choice of quick union connections
- ▶ Choice of internal lifting thread
- ▶ Bleed port

Technical features include:

- ▶ Manufactured from weld repairable material

WELLHEAD FLANGE ADAPTERS

API FLANGE	RING GROOVE	WORKING PRESSURE	QUICK UNION	PART NUMBER
3 1/2"	API R35	5,000 psi	5 1/2"-4x2 'B' Type	0075-00033-C
3 1/2"	API R35	5,000 psi	5"-4Thd 'O' Type	0075-00034-C
3 1/4"	API BX154	10,000 psi	6 1/4"-4Thd 'B'	0075-00014-C
3 1/4"	API BX154	10,000 psi	5 3/4"-4Thd 'O' Type	0075-00035-C
4 1/4"	API R39	5,000 psi	7"-5Thd 'B' Type	0075-00005-C
4 1/4"	API R39	5,000 psi	6 1/2"-4Thd 'O' Type	0075-00138-C
4 1/4"	API BX155	10,000 psi	8 1/4"-4x2 'B' Type (10k)	0075-00037-C
4 1/4"	API BX155	10,000 psi	8 3/4"-4Thd 'O' Type	0075-00038-C
5 1/2"	API R44	5,000 psi	8 3/4"-4x2 'B' Type (5k)	0075-00039-C
5 1/2"	API R44	5,000 psi	8 3/4"-4Thd 'O' Type	0075-00040-C
5 1/2"	API BX169	10,000 psi	8 3/4"-4x2 'B' Type	0075-00041-C
5 1/2"	API BX169	10,000 psi	9"-4Thd 'O' Type	0075-00042-C
7 1/4"	API R46	5,000 psi	9 3/4"-4x2 'B' Type	0075-00044-C
7 1/4"	API R46	5,000 psi	9 1/2"-4Thd 'O' Type	0075-00045-C
7 1/4"	API BX156	10,000 psi	13"-4Thd 'B' Type	0075-00043-C
7 1/4"	API BX156	10,000 psi	11 1/2"-4Thd 'O' Type	0075-00018-C



WELLHEAD FLANGE ADAPTER

ANCILLARY EQUIPMENT | RIG-UP DOLLIES

TIS Rig-up Dollies are designed to assist operators in safely moving an assembled lubricator stack from a horizontal to a vertical position.

As the lubricator stack is raised and lowered, the weight is distributed evenly through the wheels while safely maintaining the best lifting angle.

TIS Rig-up Dollies are available with the following options:

- ▶ Choice of quick union connections
- ▶ Choice of wheel and axle size

Technical features include:

- ▶ Lightweight plastic construction
- ▶ Detachable stainless steel axle with plastic wheels

RIG-UP DOLLIES		
QUICK UNION	DOLLY PART NUMBER	WHEEL SET PART NUMBER
5 ½"-4x2 'B' Type	0059-00011-C	RD-A-1007
5"-4Thd 'O' Type	0045-00020-C	RD-A-1007
6 ¾"-4Thd 'B'	0061-00036-C	RD-A-1007
5 ¾"-4Thd 'O' Type	0046-00031-C	RD-A-1007
7"-5Thd 'B' Type	0063-00014-C	RD-A-1007
6 ½"-4Thd 'O' Type	0047-00025-C	RD-A-1008
8 ¼"-4x2 'B' Type (10k)	0065-00013-C	RD-A-1008
8 ¾"-4Thd 'O' Type	0053-00014-C	RD-A-1008
8 ¼"-4x2 'B' Type (5k)	0064-00022-C	RD-A-1008
8 ¼"-4Thd 'O' Type	0052-00002-C	RD-A-1008
8 ¾"-4x2 'B' Type	0078-00001-C	RD-A-1008
9"-4Thd 'O' Type	0054-00023-C	RD-A-1008
9 ¾"-4x2 'B' Type	0066-00001-C	RD-A-1008
9 ½"-4Thd 'O' Type	0055-00007-C	RD-A-1008
13"-4Thd 'B' Type	0067-00007-C	RD-A-1009
11 ½"-4Thd 'O' Type	0056-00006-C	RD-A-1009



ANCILLARY EQUIPMENT | LIFT-TEST CAPS & LIFTING CAPS

TIS Lift-Test Caps & **TIS Lifting Caps** are both designed for lifting heavy pressure control equipment products safely.

TIS Lift-Test Caps are pressure retaining and employ a bleed port, while TIS Lifting Caps are non pressure retaining and are simply used for lifting.

TIS Lift-Test Caps & TIS Lifting Caps are available with the following options:

- ▶ 5,000 psi, 10,000 psi and 15,000 psi working pressures
- ▶ Standard or sour service
- ▶ Service temperature range of -29°C to +121°C
- ▶ Choice of quick union connections
- ▶ Choice of safe working loads
- ▶ Choice of integral or standard lifting eye
- ▶ Choice of bleed port thread

Technical features include:

- ▶ Lifting plate type caps allow the operator to spin the collar on and off while still connected to the tugger
- ▶ Standard lifting eyes are pinned in position to prevent them backing off while in service.



LIFT-TEST CAP

LIFT-TEST CAPS

THRO' BORE	WORKING PRESSURE	QUICK UNION	SAFE WORKING LOAD	PART NUMBER
3.00"	5,000 psi	5 1/2"-4x2 'B' Type	3 Ton	0059-00004-TIS
3.00"	5,000 psi	5 1/2"-4x2 'B' Type	5 Ton	0059-00005-TIS
3.00"	5,000 psi	5"-4Thd 'O' Type	3 Ton	0045-00003-TIS
3.00"	5,000 psi	5"-4Thd 'O' Type	5 Ton	0045-00004-TIS
3.00"	10,000 psi	6 3/4"-4Thd 'B'	3 Ton	0061-00009-TIS
3.00"	10,000 psi	6 3/4"-4Thd 'B'	5 Ton	0061-00010-TIS
3.00"	10,000 psi	5 3/4"-4Thd 'O' Type	3 Ton	0046-00018-TIS
3.00"	10,000 psi	5 3/4"-4Thd 'O' Type	5 Ton	0046-00016-TIS
4.00"	5,000 psi	7"-5Thd 'B' Type	3 Ton	0063-00008-TIS
4.00"	5,000 psi	7"-5Thd 'B' Type	5 Ton	0063-00009-TIS
4.00"	5,000 psi	6 1/2"-4Thd 'O' Type	3 Ton	0047-00015-TIS
4.00"	5,000 psi	6 1/2"-4Thd 'O' Type	5 Ton	0047-00008-TIS
4.00"	10,000 psi	8 1/4"-4x2 'B' Type (10k)	3 Ton	0065-00010-TIS
4.00"	10,000 psi	8 1/4"-4x2 'B' Type (10k)	5 Ton	0065-00011-TIS
4.00"	10,000 psi	8 3/4"-4Thd 'O' Type	3 Ton	0053-00013-TIS
4.00"	10,000 psi	8 3/4"-4Thd 'O' Type	5 Ton	0053-00012-TIS
5 1/2"	5,000 psi	8 1/4"-4x2 'B' Type (5k)	3 Ton	0064-00010-TIS
5 1/2"	5,000 psi	8 1/4"-4x2 'B' Type (5k)	5 Ton	0064-00011-TIS
5 1/2"	5,000 psi	8 1/4"-4Thd 'O' Type	3 Ton	0052-00013-TIS
5 1/2"	5,000 psi	8 1/4"-4Thd 'O' Type	5 Ton	0052-00014-TIS
5 1/2"	10,000 psi	8 3/4"-4x2 'B' Type	3 Ton	0078-00013-TIS
5 1/2"	10,000 psi	8 3/4"-4x2 'B' Type	5 Ton	0078-00014-TIS
5 1/2"	10,000 psi	9"-4Thd 'O' Type	3 Ton	0054-00030-TIS
5 1/2"	10,000 psi	9"-4Thd 'O' Type	5 Ton	0054-00002-TIS
6 3/4"	5,000 psi	9 3/4"-4x2 'B' Type	3 Ton	0066-00018-TIS
6 3/4"	5,000 psi	9 3/4"-4x2 'B' Type	5 Ton	0066-00003-TIS
6 3/4"	5,000 psi	9 1/2"-4Thd 'O' Type	3 Ton	0055-00022-TIS
6 3/4"	5,000 psi	9 1/2"-4Thd 'O' Type	5 Ton	0055-00007-TIS
6 3/4"	10,000 psi	13"-4Thd 'B' Type	3 Ton	0067-00004-TIS
6 3/4"	10,000 psi	13"-4Thd 'B' Type	5 Ton	0067-00005-TIS
6 3/4"	10,000 psi	11 1/2"-4Thd 'O' Type	3 Ton	0056-00025-TIS
6 3/4"	10,000 psi	11 1/2"-4Thd 'O' Type	5 Ton	0056-00003-TIS

LIFTING CAPS

QUICK UNION	SAFE WORKING LOAD	PART NUMBER
5 1/2"-4x2 'B' Type	3 Ton	0059-00007-TIS
5 1/2"-4x2 'B' Type	5 Ton	0059-00006-TIS
5"-4Thd 'O' Type	3 Ton	0045-00005-TIS
5"-4Thd 'O' Type	5 Ton	0045-00006-TIS
6 3/4"-4Thd 'B'	3 Ton	0061-00011-TIS
6 3/4"-4Thd 'B'	5 Ton	0061-00012-TIS
5 3/4"-4Thd 'O' Type	3 Ton	0046-00025-TIS
5 3/4"-4Thd 'O' Type	5 Ton	0046-00020-TIS
7"-5Thd 'B' Type	3 Ton	0063-00010-TIS
7"-5Thd 'B' Type	5 Ton	0063-00011-TIS
6 1/2"-4Thd 'O' Type	3 Ton	0047-00016-TIS
6 1/2"-4Thd 'O' Type	5 Ton	0047-00006-TIS
8 1/4"-4x2 'B' Type (10k)	3 Ton	0065-00012-TIS
8 1/4"-4x2 'B' Type (10k)	5 Ton	0065-00013-TIS
8 3/4"-4Thd 'O' Type	3 Ton	0053-00014-TIS
8 3/4"-4Thd 'O' Type	5 Ton	0053-00002-TIS
8 1/4"-4x2 'B' Type (5k)	3 Ton	0064-00012-TIS
8 1/4"-4x2 'B' Type (5k)	5 Ton	0064-00013-TIS
8 1/4"-4Thd 'O' Type	3 Ton	0052-00015-TIS
8 1/4"-4Thd 'O' Type	5 Ton	0052-00016-TIS
8 3/4"-4x2 'B' Type	3 Ton	0078-00015-TIS
8 3/4"-4x2 'B' Type	5 Ton	0078-00016-TIS
9"-4Thd 'O' Type	3 Ton	0054-00031-TIS
9"-4Thd 'O' Type	5 Ton	0054-00020-TIS
9 3/4"-4x2 'B' Type	3 Ton	0066-00019-TIS
9 3/4"-4x2 'B' Type	5 Ton	0066-00020-TIS
9 1/2"-4Thd 'O' Type	3 Ton	0055-00023-TIS
9 1/2"-4Thd 'O' Type	5 Ton	0055-00005-TIS
13"-4Thd 'B' Type	3 Ton	0067-00006-TIS
13"-4Thd 'B' Type	5 Ton	0067-00007-TIS
11 1/2"-4Thd 'O' Type	3 Ton	0056-00026-TIS
11 1/2"-4Thd 'O' Type	5 Ton	0056-00008-TIS

ANCILLARY EQUIPMENT | TEST CAPS & STUMPS

TIS Test Caps & TIS Stumps are designed for testing pressure control equipment by connecting to the top and bottom of a section respectively to create a seal, with a bleed port on the test cap.

TIS Test Caps & TIS Stumps are available with the following options:

- ▶ 5,000 psi, 10,000 psi and 15,000 psi working pressures
- ▶ Standard or sour service
- ▶ Service temperature range of -29°C to +121°C
- ▶ Choice of quick union connections
- ▶ Choice of bleed port thread

TEST CAP



TEST CAPS SETS

THRO' BORE	WORKING PRESSURE	QUICK UNION	PART NUMBER
3.00"	5,000 psi	5 1/2"-4x2 'B' Type	0059-00002-TIS
3.00"	5,000 psi	5"-4Thd 'O' Type	0045-00001-TIS
3.00"	10,000 psi	6 3/8"-4Thd 'B'	0061-00002-TIS
3.00"	10,000 psi	5 3/4"-4Thd 'O' Type	0046-00022-TIS
4.00"	5,000 psi	7"-5Thd 'B' Type	0063-00002-TIS
4.00"	5,000 psi	6 1/2"-4Thd 'O' Type	0047-00010-TIS
4.00"	10,000 psi	8 1/4"-4x2 'B' Type	0065-00004-TIS
4.00"	10,000 psi	8 3/8"-4Thd 'O' Type	0053-00003-TIS
5 1/4"	5,000 psi	8 1/4"-4x2 'B' Type (10k)	0064-00003-TIS
5 1/4"	5,000 psi	8 1/4"-4Thd 'O' Type	0052-00002-TIS
5 1/8"	10,000 psi	8 3/8"-4x2 'B' Type (5k)	0078-00004-TIS
5 1/4"	10,000 psi	9"-4Thd 'O' Type	0054-00021-TIS
6 3/8"	5,000 psi	9 3/8"-4x2 'B' Type	0066-00005-TIS
6 3/8"	5,000 psi	9 1/2"-4Thd 'O' Type	0055-00009-TIS
6 3/8"	10,000 psi	13"-4Thd 'B' Type	0067-00003-TIS
6 3/8"	10,000 psi	11 1/2"-4Thd 'O' Type	0056-00009-TIS

STUMPS

THRO' BORE	WORKING PRESSURE	QUICK UNION	PART NUMBER
3.00"	5,000 psi	5 1/2"-4x2 'B' Type	0059-00010-C
3.00"	5,000 psi	5"-4Thd 'O' Type	0045-00019-C
3.00"	10,000 psi	6 3/8"-4Thd 'B'	0061-00015-C
3.00"	10,000 psi	5 3/4"-4Thd 'O' Type	0046-00030-C
4.00"	5,000 psi	7"-5Thd 'B' Type	0063-00029-C
4.00"	5,000 psi	6 1/2"-4Thd 'O' Type	0047-00013-C
4.00"	10,000 psi	8 1/4"-4x2 'B' Type	0065-00012-C
4.00"	10,000 psi	8 3/8"-4Thd 'O' Type	0053-00010-C
5 1/4"	5,000 psi	8 1/4"-4x2 'B' Type (10k)	0064-00021-C
5 1/4"	5,000 psi	8 1/4"-4Thd 'O' Type	0052-00010-C
5 1/8"	10,000 psi	8 3/8"-4x2 'B' Type (5k)	0078-00012-C
5 1/4"	10,000 psi	9"-4Thd 'O' Type	0054-00008-C
6 3/8"	5,000 psi	9 3/8"-4x2 'B' Type	0066-00022-C
6 3/8"	5,000 psi	9 1/2"-4Thd 'O' Type	0055-00031-C
6 3/8"	10,000 psi	13"-4Thd 'B' Type	0067-00006-C
6 3/8"	10,000 psi	11 1/2"-4Thd 'O' Type	0056-00007-C

ANCILLARY EQUIPMENT | THREAD PROTECTORS & O-RINGS

TIS Thread Protectors are designed to prevent damage to screw threads on pressure control equipment, eliminating the risk of accidental disengagement.

Moulded in hard wearing durable rubber, thread protectors are typically connected during transportation and when equipment is not in operation.

THREAD PROTECTORS				
THRO' BORE	WORKING PRESSURE	QUICK UNION	MALE PART NUMBER	FEMALE PART NUMBER
3.00"	5,000 psi	5 ½"-4x2 'B' Type	0059-00008-C	0059-00009-C
3.00"	5,000 psi	5"-4Thd 'O' Type	0045-00004-C	0045-00005-C
3.00"	10,000 psi	6 ¾"-4Thd 'B'	0061-00010-C	0061-00011-C
3.00"	10,000 psi	5 ¾"-4Thd 'O' Type	0046-00005-C	0046-00004-C
4.00"	5,000 psi	7"-5Thd 'B' Type	0063-00010-C	0063-00009-C
4.00"	5,000 psi	6 ½"-4Thd 'O' Type	0047-00007-C	0047-00008-C
4.00"	10,000 psi	8 ¼"-4x2 'B' Type (10k)	0065-00002-C	0065-00003-C
4.00"	10,000 psi	8 ¾"-4Thd 'O' Type	0053-00004-C	0053-00003-C
5 ¼"	5,000 psi	8 ¼"-4x2 'B' Type (5k)	0064-00009-C	0064-00010-C
5 ¼"	5,000 psi	8 ¼"-4Thd 'O' Type	0052-00004-C	0052-00003-C
5 ¼"	10,000 psi	8 ¾"-4x2 'B' Type	0078-00006-C	0078-00005-C
5 ¼"	10,000 psi	9"-4Thd 'O' Type	0054-00011-C	0054-00012-C
6 ¾"	5,000 psi	9 ¾"-4x2 'B' Type	0066-00010-C	0066-00011-C
6 ¾"	5,000 psi	9 ½"-4Thd 'O' Type	0055-00004-C	0055-00005-C
6 ¾"	10,000 psi	13"-4Thd 'B' Type	0067-00004-C	0067-00005-C
6 ¾"	10,000 psi	11 ½"-4Thd 'O' Type	0056-00004-C	0056-00005-C



MALE THREAD PROTECTOR



FEMALE THREAD PROTECTOR



QUICK UNION O-RINGS

TIS Quick Union O-Rings are designed to maintain a positive seal at the point of connection between pressure control sections or valves.

O-Rings are available in a range of materials, such as Viton or HNBR, to suit client specific operational well conditions as required.

QUICK UNION O-RINGS				
THRO' BORE	WORKING PRESSURE	QUICK UNION	VITON SEAL RING PART NUMBER	HNBR SEAL RING PART NUMBER
3.00"	5,000 psi	5 ½"-4x2 'B' Type	OR1A-GNJ-D-IMP	OR4A-GNJ-D-IMP
3.00"	5,000 psi	5"-4Thd 'O' Type	OR1A-FMK-C-IMP	OR4A-FMK-C-IMP
3.00"	10,000 psi	6 ¾"-4Thd 'B'	OR1A-FNG-C-IMP	OR4A-FNG-C-IMP
3.00"	10,000 psi	5 ¾"-4Thd 'O' Type	OR1A-GNF-D-IMP	OR4A-GNF-D-IMP
4.00"	5,000 psi	7"-5Thd 'B' Type	OR1A-HLL-E-IMP	OR4A-HLL-E-IMP
4.00"	5,000 psi	6 ½"-4Thd 'O' Type	OR1A-GNM-D-IMP	OR4A-GNM-D-IMP
4.00"	10,000 psi	8 ¼"-4x2 'B' Type (10k)	OR1A-GPM-D-IMP	OR4A-GPM-D-IMP
4.00"	10,000 psi	8 ¾"-4Thd 'O' Type	OR1A-HLL-E-IMP	OR4A-HLL-E-IMP
5 ¼"	5,000 psi	8 ¼"-4x2 'B' Type (5k)	OR1A-HMM-E-IMP	OR4A-HMM-E-IMP
5 ¼"	5,000 psi	8 ¼"-4Thd 'O' Type	OR1A-HMH-E-IMP	OR4A-HMH-E-IMP
5 ¼"	10,000 psi	8 ¾"-4x2 'B' Type	OR1A-HML-E-IMP	OR4A-HML-E-IMP
5 ¼"	10,000 psi	9"-4Thd 'O' Type	OR1A-HMM-E-IMP	OR4A-HMM-E-IMP
6 ¾"	5,000 psi	9 ¾"-4x2 'B' Type	OR1A-HNG-E-IMP	OR4A-HNG-E-IMP
6 ¾"	5,000 psi	9 ½"-4Thd 'O' Type	OR1A-HNG-E-IMP	OR4A-HNG-E-IMP
6 ¾"	10,000 psi	13"-4Thd 'B' Type	OR1A-HNL-E-IMP	OR4A-HNL-E-IMP
6 ¾"	10,000 psi	11 ½"-4Thd 'O' Type	OR1A-HNH-E-IMP	OR4A-HNH-E-IMP

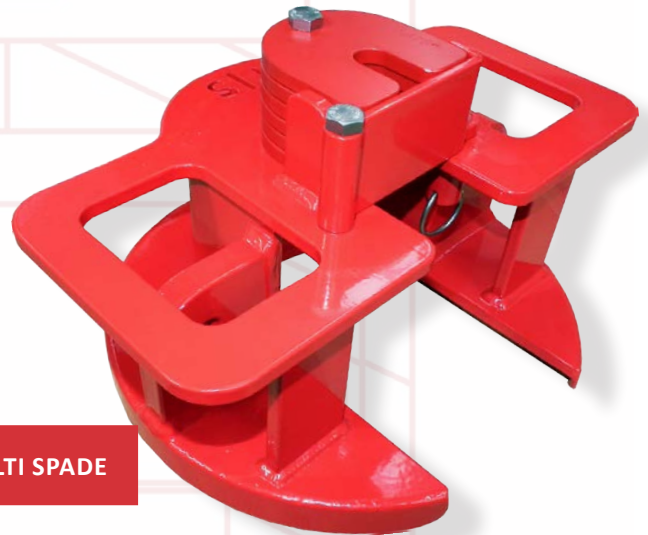
ANCILLARY EQUIPMENT | MULTI SPADES & LIFTING CLAMPS

TIS Tool String Multi Spade are designed to suspend downhole tools for maintenance work or connecting with other tools.

Standard units are suitable for use with quick union sizes up to and including 13" diameter, and contain six sizes of fishing neck retainer spades - 0.875", 1.000", 1.187", 1.375", 1.750" & 2.313".

Technical features include:

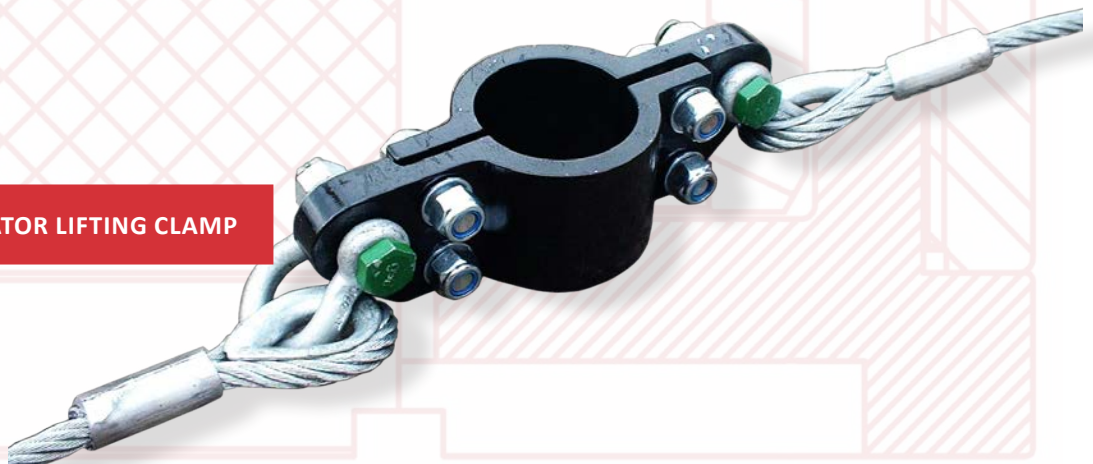
- ▶ DNV 2.22 rated for 2 ton max lifting & load bearing
- ▶ Assembly includes 2 off lifting eyes



TOOL STRING MULTI SPADE

TIS Lubricator Lifting Clamps are designed to lift lubricators and other pressure control equipment in a safe and controlled method.

Spreader bars and sling sets are also available for all clamp assemblies, with both a standard product range and bespoke lifting equipment available to suit any application.



LUBRICATOR LIFTING CLAMP

WIRELINE SHEAVES & ACCESSORIES

TIS Wireline Sheaves are specifically designed for application with TIS Wireline Units and TIS Wireline Masts during well intervention operations.

Sheave Wheels are produced from a robust composite material which is lightweight, ensures dimensional stability, reduces inertia, increases accuracy and increases life of the wire.

Technical features include:

- ▶ Sheave Wheel made from aerospace-grade composite material
- ▶ Dressed for all slickline & braided line wire sizes
- ▶ Spring-loaded Keeper Blocks
- ▶ Lightweight & robust design



FLOOR STAND



SUPPORT BRACKET & LINE WIPER



WIRELINE SHEAVE

STANDARD WIRELINE SHEAVES & ACCESSORIES

WHEEL DIAMETER	MAXIMUM WIRE SIZE	MAXIMUM LINEPULL	SHEAVE PART NUMBER	FLOOR STAND PART NUMBER	SUPPORT BRACKET PART NUMBER	LINE WIPER PART NUMBER
410mm 16"	0.125"	1,632kg 3,600lbs	SH-A-2004	SH-A-3006	SH-A-3001	SH-A-3003
410mm 16"	7/32"	3,742kg 8,250lbs	SH-A-2002-3	SH-A-3005	SH-A-3001	N/A
510mm 20"	0.160"	1,928kg 4,250lbs	SH-A-2006	SH-A-3010	SH-A-3012	SH-A-3011
560mm 22"	5/16"	9,072kg 20,000lbs	SH-A-2003	SH-A-3007	SH-A-3008	N/A

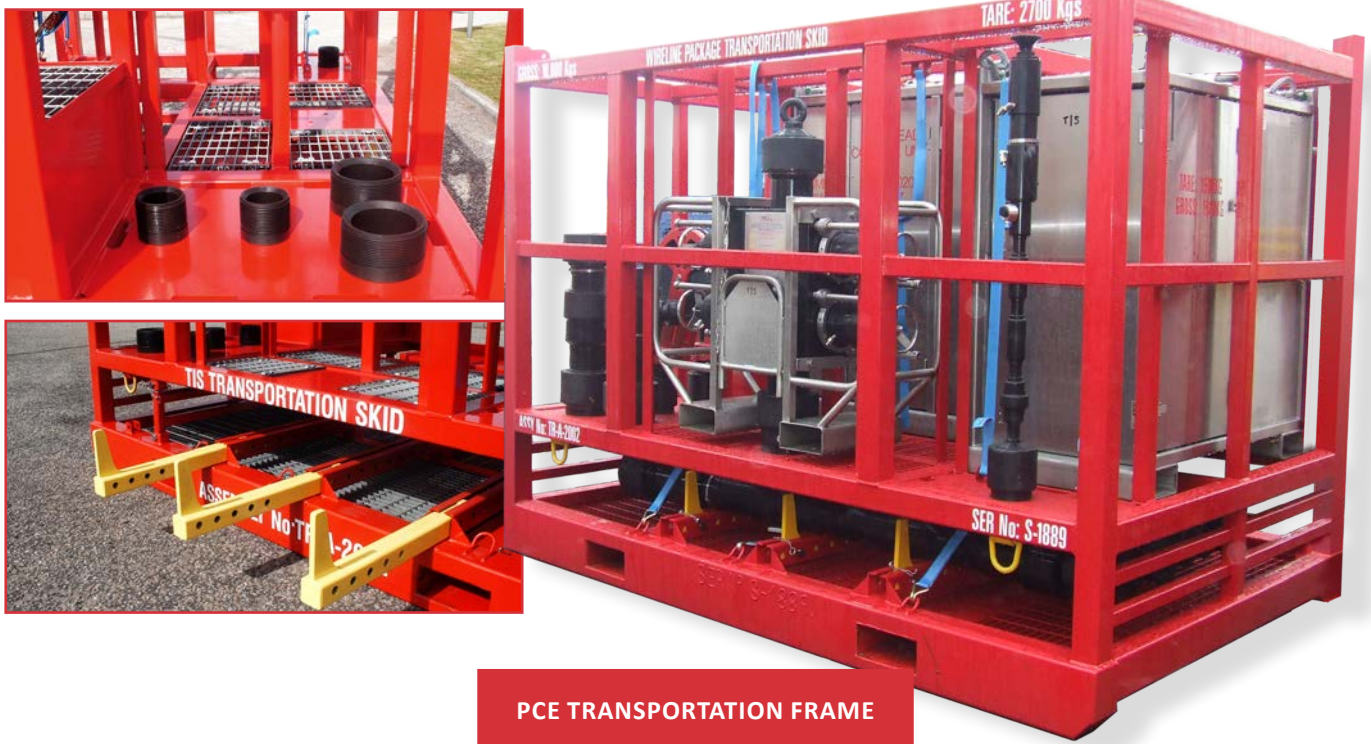
PCE TRANSPORTATION FRAMES

TIS PCE Transportation Frames are designed to provide a protective housing for a range of pressure control equipment packages and single units.

Bespoke and standard units can be engineered to meet specific operational requirements, adhere to industry standards, and accommodate multiple pieces of equipment.

Technical features include:

- ▶ DNV certified lifting frame & sling set
- ▶ Integral/external lifting & tie down points
- ▶ Frame integral quick union mounting stumps
- ▶ Slide-out lubricator rack
- ▶ Storage boxes for consumables & spares
- ▶ Carbon or stainless steel construction



PCE TRANSPORTATION FRAME



SKID FOR WELL CONTROL PANEL



SKID FOR QUAD WIRELINE VALVE



VERTICAL LUBRICATOR STORAGE SKID

PRESSURE CONTROL SERVICES



SURVEYS & RECERTIFICATION

Our experienced QA Inspection department coupled with an extensive range of measuring equipment, testing equipment and thread gauges, allow us to provide reliable recertification services for pressure control equipment in two packages.

The **TIS Annual Certification Package** ensures that client equipment is serviced on a yearly basis, including new replacement components as required and completion of extensive industry compliant pressure testing.

The **TIS Major Certification Package** ensures that client equipment has a comprehensive service and overhaul every five years, including a complete strip down, dimensional inspection, new replacement components as required, re-dress with new elastomers and completion of extensive industry compliant pressure testing.

PRESSURE TESTING

Our Aberdeen facility features two pressure testing bays for testing a wide range of pressure control equipment up to a maximum of 22,500 psi.

All pressure testing is documented via chart recorder systems, with bay-mounted cameras used for remote monitoring and designated third party witnessing available as required.



tis-manufacturing.com

t: +44 (0) 1224 775277 | f: +44 (0) 1224 729426 | e: sales@tis-manufacturing.com
Kirkhill Place | Kirkhill Industrial Estate | Aberdeen AB21 0GU | UK