## Single/Double Block Service Valves

When the retriever is removed to extract the probe or coupon, the service isolation valve maintains line integrity. Roxar offers two types of service isolation valves; a traditional single block valve, which is the smallest and lightest on the market, and a unique double block valve for enhanced safety.

Roxar's double block valve is comparable in both weight and size to most single block valves. Safety regulations often require double block valves for retriever tool operations.



Hydraulic Retriever Tool
The compact Double Acting
Hydraulic Retriever can retrieve
probes and coupons under full
line pressure. By applying pump
pressure in both directions, the
retriever tool can also be used
on lines with no pressure or even
a vacuum.

Required removal clearance from the top of the access fitting starts at 835 mm depending on the probe/holder length (max. 1000mm). Retriever tool cylinder weight starts at 15.5kg. Standard material of construction is stainless steel. Carbon steel construction is optional.

Hydraulic Pump
Roxar's complete Hydraulic
Retrieval System includes a pump,
hoses and carrying cases. Pumps
are designed for manual operation
(hand pumps) or air operation, which
is recommended when pressurized
air is available.







# Hydraulic Retriever and Access Fitting System

A safer way to operate...





# Hydraulic Retriever and Access Fitting System

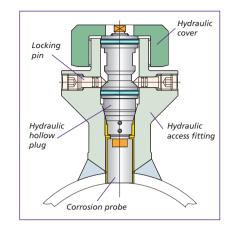
Coupons and probes are commonly installed in high pressure flowlines and vessels to provide critical information on surface corrosion, sand production or other internal conditions. Installing and retrieving these devices under pressure poses a potential hazard for the operator, so safe equipment and thorough training is required.

Roxar's Hydraulic Retrieval System provides a safe and effective means of retrieving coupons and monitoring probes through access fittings under full operating pressure.

# **General System Description**

In the Hydraulic Retrieval System, the probe/coupon holder is connected to a hollow or solid plug, which is installed in a hydraulic access fitting. A heavy-duty cover holds the plug in position during normal operation, and a system of 4 locking pins holds the plug in position during retrieval operations. Installation and retrieval of the plug/probe assembly under pressure is simply done by pumping the plug in and out of the hydraulic access fitting using the double acting hydraulic retrieval tool.

All of our equipment is produced to international standards (NACE specifications). In addition, most of our high pressure equipment is designed and certified in accordance with the Pressure Equipment Directive (PED) that applies in the European Union.



A plug in the access fitting provides the actual pressure seal and serves as the carrier for the equipment to be installed in the pipe.

#### **Hydraulic Fittings**

Roxar's hydraulic access fitting is designed to be used with our hydraulic retrieval tool under full operational pressure. It is available with flareweld, buttweld, flanged and NPT connections, and offers a wide range of materials and sizes.

### **Hydraulic Plugs**

The retriever tool utilizes a hydraulic plug to seal the access fitting and act as the retrievable carrier for the in-line device, such as probes, coupons or sampling equipment. A hollow plug assembly is used for retrieving devices with cable assemblies, and a solid plug assembly is used for retrieving other devices such as coupon holders or injection equipment. Roxar's unique plug assembly has no external threads, eliminating galling problems commom to threaded plugs.

#### **Protective and Pressure Retaining Covers**

To hold the probe in position within the access fitting, a heavy-duty cover is required. When the cover is removed during retrieval operations, four locking pins hold the internal plug in position. All cover types protect the external threads of the access fitting from mechanical and environmental damage.







Roxar's Hydraulic Retrieval and Access Fitting System operates on hydraulic pressure. Compared to traditional mechanical tools the system provides a much higher level of safety through innovative features such as no external moving parts, no internal threaded connections and small, lightweight construction.

Correct positioning of probes and coupons is important for good monitoring results. The small size of the hydraulic retriever tool allows increased flexibility in selecting the best monitoring locations. The system can also be retrofitted to existing mechanical fittings with use of an adapter, making it possible to re-use internally damaged fittings.

The combination of safety features and compact size distinguishes Roxar's Hydraulic Retrieval System as the most reliable and userfriendly retrieval tool available - and the preferred choice of users worldwide. The system is protected by international patents held by Roxar ASA.

# **System Benefits**

#### Safer for operators

- No external moving parts reduced risk of accidents and injuries
- Enhanced safety with double block service valve
- Improved safety in sour service

# Smallest size and operational space requirement in the market

- Increased flexibility in selecting the best monitoring locations.
- Easier and safer to use than heavy mechanical systems

# No internal threads in fitting

• No galling, no seized probes or coupons

## Designed for full line pressure

- Standard version is 420 bar / 6,090 psi
- Optional high-pressure version rated to 690 bar/10,000 psi

# No internal threaded connections in retriever tool cylinder

• Reliable operation even if particles/sand is present in the flow

# More environmentally friendly

• Less than half the discharge of traditional systems

#### Hydraulic Adapte

A hydraulic access fitting adapter is available for converting traditional 2" access fittings to the hydraulic system – even under full line pressure. The adapter can also be used on mechanical access fittings which have suffered internal thread damage, allowing them to be used again.

#### Injection Fittings

For chemical injection and sampling, Roxar also offers T-type access fittings for the hydraulic system.



