

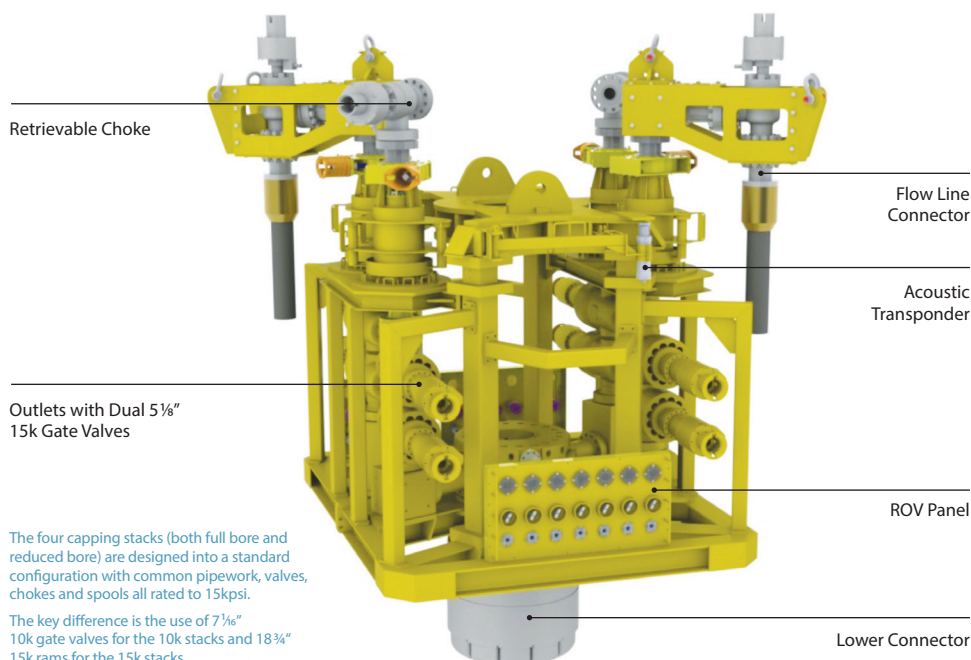
SWIS CAPPING STACK SYSTEM

Oil Spill Response Limited (OSRL) can provide members global access to an integrated intervention system comprising of four capping stacks and two incident response toolkits.

The Capping Stack System: Key Facts

- Four capping systems, including two 18¾" 15k stacks and two 7½" 10k stacks (with ancillary equipment)
- Transportable by sea and/or air
- Available for a variety of international metocean conditions
- Designed for subsea use to a maximum of 3000m water depth
- Stored in four strategic regional locations around the world – Brazil, Norway, Singapore and South Africa
- Manufactured by Trendsetter Engineering

Standardised Capping Platform



KEY FEATURES

- ✓ Flexible to handle a variety of scenarios
- ✓ Retrievable chokes to help gain control of a flowing well
- ✓ 15k connectors, adapter and spacer spools
- ✓ Connects to BOP, flex joint, or top of wellhead
- ✓ 4 x 5½" outlets on the diverter spool
- ✓ Diverter spool providing optimal flow path during installation and shut in
- ✓ Use of Spreader Bar to run the Capping device
- ✓ Acoustic real-time pressure and temperature data to surface

The 10k System

Retrievable Choke

Dual 7 $\frac{1}{16}$ " 10k Gate Valves

Outlets with Dual 5 $\frac{1}{8}$ " 15k Gate Valves

ROV Panel

7 $\frac{1}{16}$ " 10k API Hub

Flow Line Connector

Acoustic Transponder

Lower Connector

The 15k System

Retrievable Choke

18 $\frac{3}{4}$ " Dual 15k Rams

Outlets with Dual 5 $\frac{1}{8}$ " 15k Gate Valves

ROV Panel

H4 Mandrel

Flow Line Connector

Acoustic Transponder

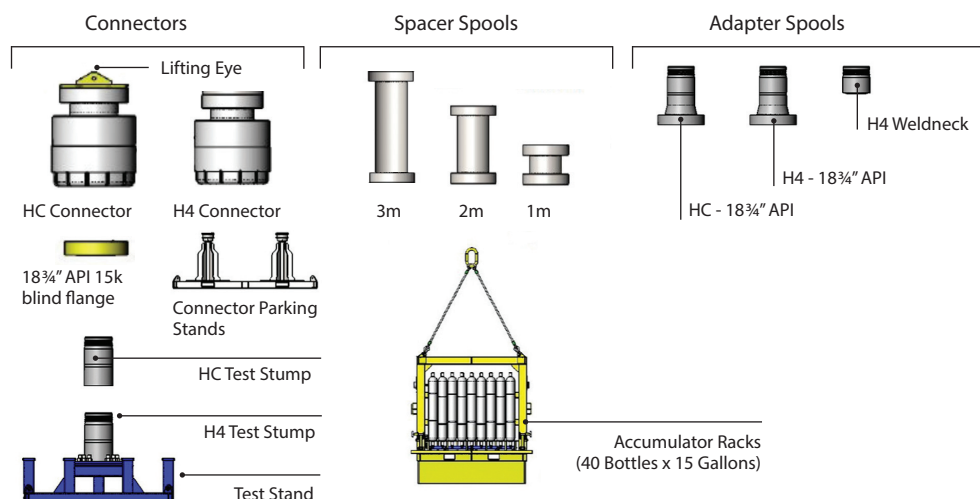
Lower Connector

SPECIFICATION

7 $\frac{1}{16}$ " 10k Capping Device and 18 $\frac{3}{4}$ " 15k Capping Device

| | |
|---------------------|------------------------------------------------------------------------------------------------------|
| Design Pressure | 10 kpsi / 15 kpsi |
| Design Life | 20 years (storage), 6 months (flowing), 2 years (shut) |
| Water Depth | Up to 3000m |
| Flow Rate | 0 to 100 kbd of liquid |
| GOR | 0 to 2000 scf/stb |
| Design Temp | -2°C to 150°C (Operation), -20°C to 40°C (Storage) |
| CO2 | 0 to 10% |
| H2S | 0 to 500 ppm |
| Water Cut | Up to 30% |
| Injection | Dispersant and Hydrate Inhibitor (150 L/min) |
| Outlets | 4 outlets, each with dual 5 $\frac{1}{8}$ " Gate Valves |
| Sealing Device | 10k Stack: 2 x 7 $\frac{1}{16}$ " Gate Valve (fail as is)/ 15k Stack: 2 x 18 $\frac{3}{4}$ " Rams |
| Operation | Third-Party ROV (manual and hydraulic) |
| Measurements | Pressure and Temperature |
| Connectors | H4 and HC 18 $\frac{3}{4}$ " 15kpsi |
| Adapter spools | H4 and HC 18 $\frac{3}{4}$ " by 18 $\frac{3}{4}$ " 15 kpsi API flange |
| Flow Control | Retrievable Choke Valve on each outlet |
| Installation Method | Drill Pipe and / or Wire Line |
| Transportability | Air, Land and Sea |
| Material | NACE MR-0175 Zone 3 |

Ancillary Equipment



Oil Spill Response Ltd
 Lower William Street
 Southampton SO14 5QE
 United Kingdom
 T: +44 (0)23 8033 1551
 F: +44 (0)23 8033 1972
 E: subseaservices@oilspillresponse.com
www.oilspillresponse.com
www.swis-oilspillresponse.com