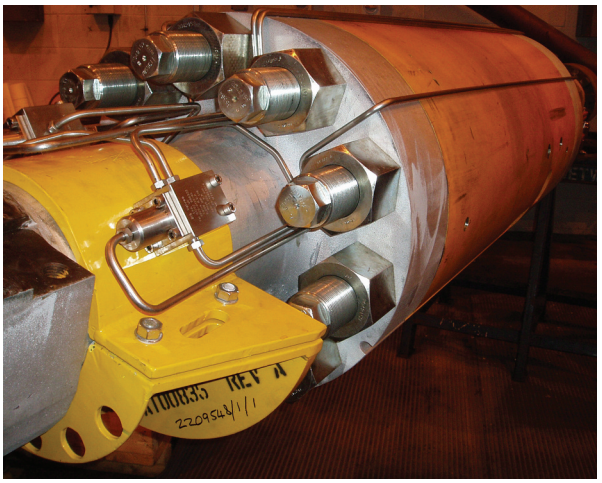
ELSA®-OW (Open Water)

Open water lubricator valves are used when running subsea production trees/intervention systems on tubing or drill pipe in open water, i.e. no marine riser. Positioned between the tree/intervention running tool and the rig floor, the valves enable safe deployment and retrieval of intervention tools into and out of the well. This provides a safety barrier during 'live well' operations and enables cutting of coiled tubing and or wireline in event of emergency.

Due to the exposure to the marine environment and lack of external riser, these valves must be able to tolerate higher bending moments than experienced by in riser valves.



Applications:

Completion installation, workover and intervention operations on vertical and horizontal subsea xmas trees from mobile offshore drilling units in water depths up to 10,000 ft (3048m)

Running production trees on tubing or drill pipe in open water

Specifically designed to suit environments where high levels of entrained solids and aggressive media are present in the completion fluids e.g. reservoir fracturing applications, as well as high load cases in an open water environment

In-line well isolation barrier during completion and / or well clean up operations

Used in open water emergency disconnect package / low riser package (EDP / LRP) operations

Benefits:

Single bi-directional sealing ball valve with "Fail as is" design

Pump-through capability for well equalisation or bullheading

Collared or flanged connections with integral end subs machined to specific drill pipe thread

Control either via umbilical or ROV (secondary)

Provides shut-in capability should tree valves be disabled during interventions

Valve can cut wire and coiled tubing

Drill string can be pressure tested after intervention tooling has been introduced into the well

Valves capable of tolerating high bending moments

High integrity ball valve construction protects seal surface from debris damage

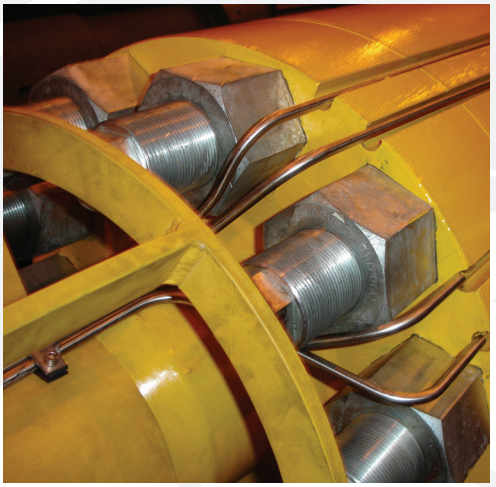
Available up to 7.375" internal diameter

Available up to 13,600 PSI WP

To allow chemicals to be injected directly into the well stream through a dual sealing/backflow valve arrangement, with injection point below the ball

High debris tolerant valve / seat mechanism

Well isolation / below rotary table test valve



ELSA®-OW (Open Water)

Technical Specifications:

6 1/8" 15k

Standards	API 6A - specification for wellhead and christmas tree equipment
	API 14A - specification for subsurface safety valve equipment
	ISO 13628-7 - design & operation of subsea production systems
Service	NACE MR0175 / ISO 15156 - materials for use in H_2S - containing environments in oil and gas production
Temperature Range	-5ºC to +70ºC (23ºF to 158ºF)
Working Pressure	13,600 psi (938 bar)
Test Pressure	20,400 psi (1,407 bar)
Tensile Load @ 0 psig	1,936,000 lbf (8,611,754 N)
Tensile Load @ Working Pressure	1,640,000 lbf (7,295,081 N)
Working Pressure Control Ports	10,000 psi (690 bar)
Working Pressure Chemical Injection	13,600 psi (938 bar)
Bending Moment @ 0 psig	419,700 ft lbs (569,036 Nm)
Bending Moment @ WP	355,400 ft lbs (481,858 Nm)
Maximum Torque	30,000 ft lbs (40,675 Nm)
Pump Through	Yes
Overall Length without Adapters	62.87" (1597 mm)
Outside Diameter (Max)	24.2" (615 mm)
Internal Diameter (Nom)	6.125" (155.58 mm)
Weight (Approx)	12,100 lbs (5,500 kgs)

5" 10k

Standards	API 6A - specification for wellhead and christmas tree equipment
	API 14A - specification for subsurface safety valve equipment
Service	NACE MR0175 / ISO 15156 - materials for use in H_2S - containing environments in oil and gas production
Temperature Range	-18ºC to +121ºC (0ºF to 250ºF)
Working Pressure	10,000 psi (690 bar)
Test Pressure	15,000 psi (1,034 bar)
Tensile Load @ 0 psig	Up to 927,000 lbf (4,123,500 N)
Tensile Load @ WP	Up to 720,000 lbf (3,202,718 N)
Working Pressure Control Ports	10,000 psi (690 bar)
Bending Moment @ WP	Up to 220,400 ft lbs (298,822 Nm)
Maximum Torque	30,000 ft lbs (40,675 Nm)
Pump Through	Yes
Overall Length with Adapters	104.5" (2654 mm)
Outside Diameter (Max)	15.0" (381 mm)
Internal Diameter (Nom)	5.000" (127 mm)
Weight (Approx)	2,000 lbs (909 kgs)
Cutting Capability	Ø1.5" x 0.175" WT (94Ksi) Coil c/w 9/32" Wireline

7 3/8" 10K

Standards	API 6A - specification for wellhead and christmas tree equipment
	API 14A - specification for subsurface safety valve equipment
	ISO 13628-7 - design & operation of subsea production systems
Service	NACE MR0175 / ISO 15156 - materials for use in H_2S - containing environments in oil and gas production
Temperature Range	0°C to 150°C (32°F to 302°F)
Maximum Working Pressure	10,000 psi (690 bar)
Test Pressure	15,000 psi (1,034 bar)
Tensile Load @ 0 psig	up to 1,936,000 lbf (8,611,754 N)
Tensile Load @ Working Pressure	up to 1,640,000 lbf (7,295,081 N)
Working Pressure Control Ports	10,000 psi (690 bar)
Bending Moment @ 0 psig	up to 419,700 ft lbs (569,036 Nm)
Bending Moment @ WP	up to 355,400 ft lbs (481,858 Nm)
Maximum Torque	30,000 ft lbs (40,675 Nm)
Pump Through	Yes
Overall Length without Adapters	62.87" (1597 mm)
Outside Diameter (Max)	24.2" (615 mm)
Internal Diameter (Nom)	7.375" (187mm)
Weight (Approx)	12,100 lbs (5,500 kgs)