

Field instrumentation:



**Level measurement:** Magnetrol is a manufacturer of level and flow products for process application. Magnetrol can supply level instruments within most of the type of measuring principle to suit the different needs in the application.



**Level and Sight Flow Glasses:** Clark Reliance is a holding company that owns several companies including Jerguson and Jacoby-Tarbox.

**Jerguson** is a manufacture of **level indicators**, magnetic, transparent and reflex type that can handle pressure up to 690 Bar.

**Jacoby-Tarbox** manufactures **flow glass** in different sizes and material for the offshore and onshore industry. Anderson Separators manufactures large gas separators, liquid separators for the petrochemical industry.



**Coriolis mass flow meter:** Rheonik manufacture Coriolis mass flow meters for both liquid and gas applications. Ranges from 0.002 Kg/min (0.12 Kg/hour) up to 25,000 Kg/min (1500,000 Kg/hour) with pipe sizes up to 12". Rheonik are providing meters for pressures up to 1400 bar.



**Ultrasonic clamp-on flowmeter:** Katronic is a highly specialised manufacturer of ultrasonic clamp-on flowmeters for use on various pipe materials and diameters over a range of 10mm to 6500mm. For many different applications, and can be used for all types of liquids. Can be delivered with ATEX approval and SS316 for offshore use. Easy to operate with intuitive menus and unique audible sensor positioning assistant.



**Sensors and gauges for temperature measurement:** Rüeger has specialized in the development and manufacture of temperature instruments. Particularly electrical temperature sensors, bimetallic and gas pressure thermometers and multi-probes.



**Pressure and temperature switches:** Beta manufacture products in aluminium, cast iron or stainless steel to suit to roughest condition you may get in a process plant off-shore or on-shore, with Marine approvals and ATEX / IECEx approvals.



**Differential pressure instruments:** Mid-West product range cover simple filter indicator to the most accurate differential gauges with high static pressure combined with very low differential pressure. They also manufacture pitot flow elements and pressure snubbers and gauge protectors.



**Pressure gauges, Thermometers and Thermowells:** Stewarts manufacture these product in a wide range of different sizes, pressure classes and materials. Also for subsea use.

Valves:



**Gas and air pressure regulators:** Insert Deal manufacture regulators from 1/8" size up to 4" diameter. They cover a full range of regulators for instrument air as well as for gas application up to 220 bar. We keep a stock of 1/4" and 1/2" sizes filter regulators as well as lubricators in Stainless Steel.



**Pneumatic control valves:** Hafner manufacture pneumatic (low pressure) control valves, operated by hand, solenoid, pilot or in combination of those. The valves can be delivered in complete stainless steel material including coil housing and the solenoid valves can be EEx d, EEx ia or EEx me certified.



**Hydraulic control valves:** Tiefenbach manufacture hydraulic control valves, operated by solenoids, pneumatic or hydraulic pilots or in combination. These valves are delivered with "Zero-Leakage" which in static pressurized system is of vital value in an offshore installation. Their solenoid valves can be delivered in pressure up to 700 bar and the solenoid can be EEx d, EEx ia or EEx me certified.



**High pressure fitting and valves:** Nova Swiss is the European leader in high pressure fitting, tubing and valves, and their products include both imperial and a metric range to suit the different needs in different markets. The pressure rating they work to is up to 150.000 PSI whereas the less than 30.000 PSI range is the more common one. All their products for pressure below 30.000 PSI is made in according to the NACE standard.



**Instrument valves and manifolds:** Oliver Valves manufacture instrument valves and manifolds including Double Block & Bleed (DBB) both for **topside** and **subsea** application. The valve configuration can be Needle, Ball and/or Gate valves. Oliver manufactures isolation, sampling and injection valves in sizes up to 14" flanges and full bore in pressure ranges from 150lbs to class 2500lbs (API 10000). Fire-safe in accordance to BS6755 part 2. The valves are available in a wide range of materials.



**Control and safety valves:**

**BH Masoneilan** (earlier **Dresser**) has manufactured process **control** valves since 1882. A wide range of standard products and high knowledge of valves, give BH Masoneilan the industry leading solutions for any application. BH Masoneilan offer very reliable control valves for applications like compressor anti-surge, high pressure valves, turbine by-pass and feed water for boilers under startup.

**BH Consolidated** manufacture **safety** valves and is one of the leaders within the industry since 1879, with more than hundreds years of experience in design, engineering and



production. BH Consolidated offer a wide range of products which give reliable protection for the plants personnel and equipment.

### **N-Line Valves®**

**Choke valves:** N-Line Valves provides engineered flow control solutions for upstream oil and gas production. Control Chokes and Valves are available in a full range of materials and configurations size 1" to 16" and pressure classes with high quality. Consisting of: Severe service control chokes, Axial flow choke valves, Engineered special application valves – and including stepping actuators. For offshore and onshore production, secondary recovery and injection applications.



**Actuated on-off valves:** Spacx (earlier BSM) Actuators & Controls manufacture a wide range of high quality actuators for quarter turn and linear valves, also in complete 316SS. Due to highly qualified engineers and flexible production, Spacx Actuators & Controls are able to produce complete actuators and control systems within a very short time. Spacx has knowledge of and experience with deliveries to Norwegian companies in accordance with Norsok and other technical requirements.



**Rupture disc:** Continental Disc Corporation (CDC) is an overpressure company manufacturing rupture safety disc (bursting disc) in all material. To suit the given application needed either that being in a down-hole application thousands of meters down in the ground or to protect a pressure vessel in a process application. And for vacuum protecting vessels/systems. They also provide an optional electrical bursting signal.



**Ball valves:** Italian Erresse manufacture a wide range of high quality trunnion and floating ball valves. And has a range of metal and soft seated ball valves with wide selection of models, also suitable for low temperature applications including for cryogenic processes. And pressure class up to ASME 4500, API 15000 psi. Design as side or top entry and fully welded.

### Fire & Gas detectors:



**Gas detectors:** MSA manufacture portable gas detectors, fixed gas detectors for different type of gasses (HC, H2S, H2 etc), gas controllers, stack gas analysers and dust monitoring systems. **Gassonic** manufacture the well known observer acoustic gas leak detector suitable for installation on a petrochemical plant offshore or onshore. The detector detects a 0,1Kg/sec gas leak up to 12 meters.



**Fire and gas alarm devices:** MEDC are world leaders in design and development of electrical equipment for use in hazardous areas. MEDC manufacture alarm beacons, manual call points, sounders, status lights, speakers, emergency luminaires and helideck lighting etc.



**Gas and flame detectors:** Spectrex manufacture IR open path gas detectors and optical flame detectors. The open path detectors use a unique flash type light source that gives high speed detection and prevents false alarms from solar radiation. The flame detectors are well known in the North-Sea, as used on many of the platforms in the North-Sea.



**Gas detectors:** Senscient manufacture open path gas detectors based on laser technology. This technology can be used for specific gasses like CH4 or H2S. It is approximate 10 times more tolerate to contamination compared to IR technology. The laser light will also be able to detect gasses in very heavy snow and fog due to the lights are not filtered by water like the IR technology.

For **more information** about each of the suppliers – see [www.hi-as.no](http://www.hi-as.no)

Rev 20.08.2020