

# ACTUATION & CONTROLS



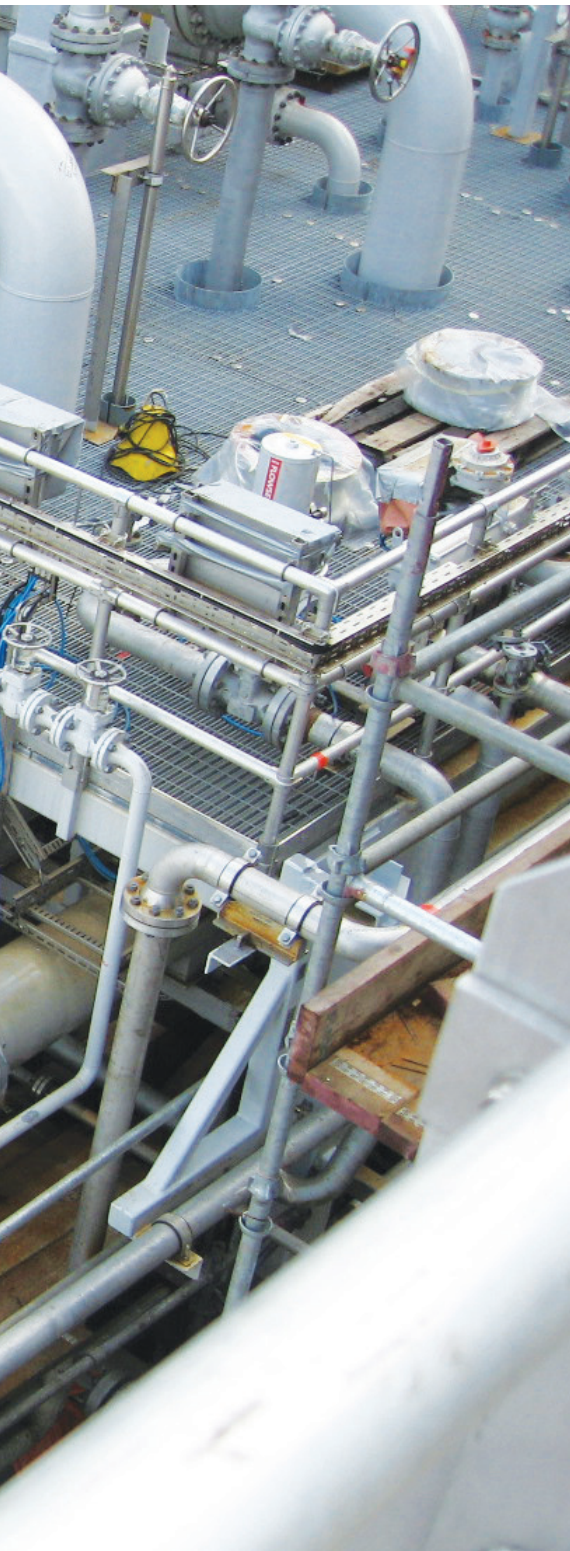
ACTUATION & CONTROLS - SERVICES - VALVES





OUR KNOWLEDGE AND EXPERIENCE  
SECURES UPTIME AND PREDICTABLE  
RUNNING CONDITIONS.





## SOLUTIONS FOR VALVE AUTOMATION

**HAAKON ELLINGSEN AS HAS A LONG HISTORY OF SUPPLYING VALVE AUTOMATED SOLUTIONS TO OFFSHORE, ONSHORE AND MARINE INDUSTRY**

Our scope of supply ranges from single actuators, control panels and limit switch boxes to complete valve assemblies. We size and customize solutions according to the highest specifications to meet both economic and technical requirements.

We focus on light and compact solutions, saving space, weight and money. With in-house facilities and competence to test and document complete actuated valve assemblies, we offer local fast track deliveries whenever needed.

We are proud to be the acknowledged valve automation specialist in Norway, supplying high quality products combined with field service experience.

## ACTUATION

**HAAKON ELLINGSEN AS OFFER A WIDE RANGE OF ELECTRICAL, PNEUMATIC AND HYDRAULIC ACTUATORS**

The actuator range covers from small rack & pinion models to larger scotch yoke models, to electrical multi-turn and quarter-turn actuators. Depending on application and operating condition, we size and select the suitable actuator according to the highest specifications and needs.

## CONTROL PANELS

**WE COMBINE QUALITY PRODUCTS WITH DECADES OF EXPERIENCE TO DESIGN, ENGINEER AND PROVIDE THE MOST BENEFICIAL SOLUTIONS FOR VALVE AUTOMATION**

Depending on application and specification, we deliver control panels directly mounted onto the actuator or as a standalone unit. For bigger projects, we engineer cabinets controlling larger valve clusters.

Together with our customers, we are proud to have established a new standard in the industry for local compact control panels.

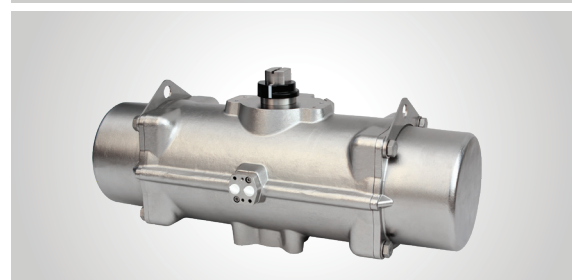
## PNEUMATIC & HYDRAULIC PISTON ACTUATORS

Complete range of compact quarter-turn and linear actuators for on-off and modulating control. For small to medium sized quarter-turn valves, we recommend the rack & pinion type actuators for best economical running conditions.

For bigger valves and higher torque demands, the preference would be scotch yoke actuators, securing best possible running conditions.

We select the suitable actuator by use of efficient design and calculation tools. Our ability to find solutions even for challenging high torque applications at low supply pressure, gives our clients security in operation. In addition, we engineer and manufacture open and closed brackets with adapters suitable for the torque values of the valve.

- Double-acting and spring-return configurations
- Wide range of material combinations
- Coating according to customer demands
- Certified to ATEX 94/9/EC
- Safety Integrity Level SIL 3
- Certified in accordance with PED 97/27/EC
- Torque output to 300,000 Nm



## COMPACT ACTUATOR DESIGN IS THE IDEAL SOLUTION WHEN SPACE IS LIMITED



## ELECTRIC ACTUATORS

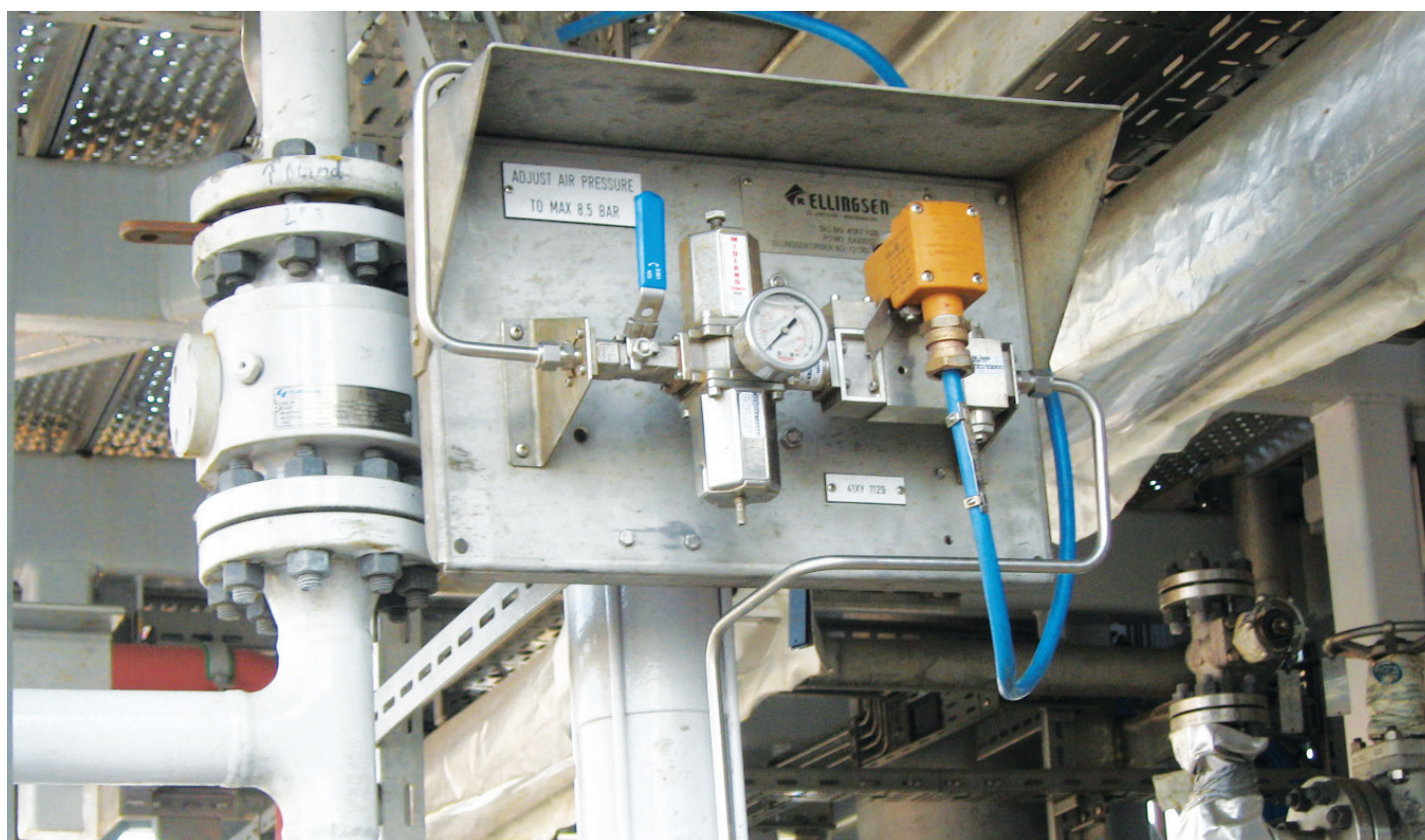
We offer electric multi-turn actuators with advanced intelligent communication technology. Electric actuators offer advantages such as space efficiency and easy installation due to operation by electric power supply.

With increased demand for integrated operations (IO) and predictive maintenance, electric actuators offer the perfect choice for optimum valve monitoring.

New technology also features electrical actuators suitable for emergency shut off valves (spring return)

- Safety Integrity Level SIL 3
- Supports all bus protocols
- Suitable for remote operated shut-off valves
- Reducing space and weight





## PNEUMATIC & HYDRAULIC CONTROL PANELS

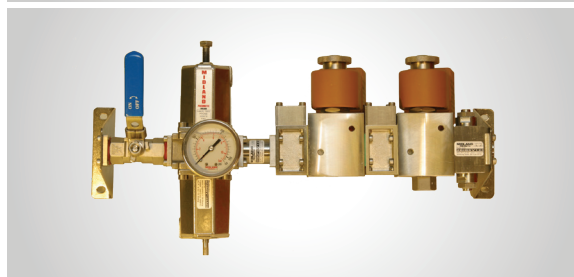
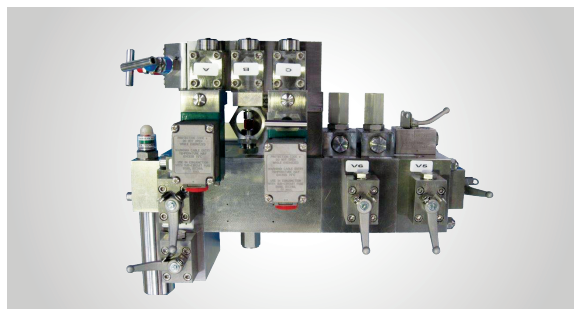
Haakon Ellingsen AS offers standard compact panels for PSD, ESD and BDV applications. All other configurations and customized solutions are available from our engineering department.

Our speciality is modular design with high focus on weight and space savings, life cycle cost (LCC), shorter down time, plug'n play replacement and simplified service. Module-based control panels reduce the risk of leakage compared to traditional fitting and tubing solutions.

To reduce LCC we have a set of solutions to protect the equipment against high wear and tear, like the integrated closed loop exhaust system.

Our innovative engineering solutions secure the end user cost savings and higher uptime.

- Spring-return, one, two and three signals
- Double-acting, one and two signals
- Sizes: pneumatic ¼" – 2", hydraulic DN5 – DN50
- Pressure: pneumatic 20 barg, hydraulic 690 barg
- Feature all electrical configurations
- Mounting directly on actuator, standpipe, frame or wall back plate, cabinet or fire protected, all in material AISI 316



## CUSTOM MADE COMPONENTS

In order to support package builders, we have a broad range of products and components suitable and ready to be mounted in small and larger skid- and system packages. We hold a stock of high runners based on our 50 years of experience in field supply. All stocked items will have full traceability and certificates according to the highest Norsok demands.

### SOLENOID VALVES:

- Solenoid valves for pneumatic  $\frac{1}{4}$ "-3/8"NPT and hydraulic  $\frac{1}{4}$ "-1" NPT
- 316SS material
- Safety Integrity Level SIL 3
- All known Ex classifications, ATEX/IECEx and several specials
- 2, 3, 4 and 5 way operation

### LIMIT SWITCH BOXES:

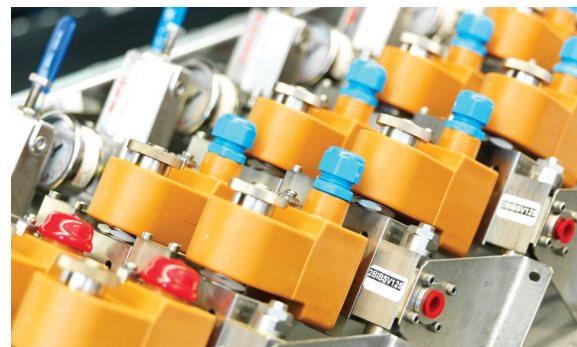
- Heavy duty design
- Housing in SS316
- Numerous switch selections for position feedback
- IP 66/67
- SO F05 and Namur shaft mounting pattern
- Open or closed bracket for actuator connection
- Magnetic switches

### LEVEL INDICATORS:

- Bypass Level Indicator, magnetic float and rollers
- Magnetic Float Level Transmitter
- Top and Side Mounted Level Indicator
- Magnetic Float Switches Horizontal
- Suspended Float Switches
- Flow and Temperature Switches
- Guided wave radar sensor

### OTHER ACCESSORIES:

- Lubricators
- Manual direction valves
- Ancillary valves
- Special compact valves
- Chemical injection valves
- Fitting & tubing
- Cable glands
- Pulsation dampers



# QUALITY PRODUCTS AND COMPONENTS FOR FLUID CONTROL TO OIL & GAS

## OTHER PRODUCTS

### RUPTURE DISCS:

- Reverse buckling disk in sizes: 1"-10"
- Solid metal design, large range of material options
- Low burst pressure from a few millibar to over 4800 barg, and non-fragmentation design.
- Designed for cryogenic, gas, liquid or two phase service. High operation ratio
- Vacuum/back pressure and pulsating operating resistant

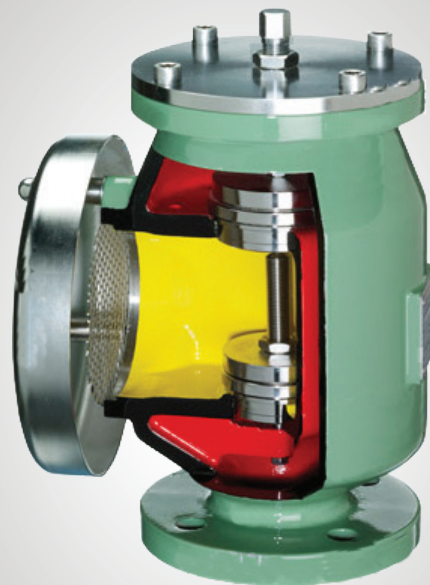
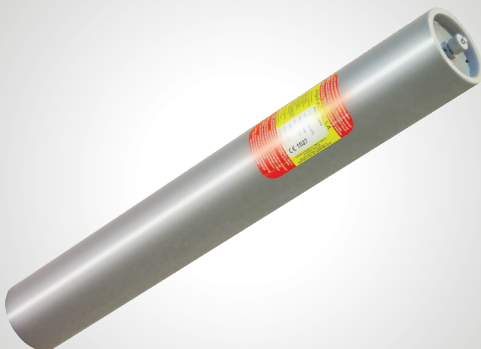
### ACCUMULATORS:

- Energy storage, pulsating absorption, keeping the pressure in leaking circuits
- Fitted with a self-centering anti-extrusion button insert, prevents deformed when the accumulator is charged with gas

### FLAME ARRESTERS AND VENTS:

- In-line deflagration/detonation flame arresters
- End of line deflagration arresters
- Endurance burning flame arresters
- Pressure/vacuum vents
- Conformance according to Directive 94/9/EC
- Certified by EC type test certificate, e.g. DNV, IBExU, BAM, PTB.

- Several material choices
- Piston type and bladder type
- Design pressures of up to 800 bar







## ELLINGSEN GROUP

Ellingsen Group consists of the following companies; Haakon Ellingsen AS, Ellingsen Systems AS and Ellingsen Indutech AS.

Ellingsen Group supply products for valves, actuation, instrumentation, pumps and engineered system solutions, to oil & gas, marine and land based industrial market. We combine quality products with decades of experience to design, engineer and provide the most beneficial solutions.

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OUR OVERALL VISION:  
TO BE OUR CUSTOMERS  
BEST CHOICE