

# FASEK

GROUP



MODULAR ACTUATOR AND  
CONTROL TECHNOLOGY FOR

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- gas industry
- oil industry
- petrochemical industry
- chemical industry
- water industry



### **FEHA - FASEK Electro Hydraulic Actuator**

FEHA control system is compact and maintenance-friendly designed system. This control system operates within a wide range of electrical current power and voltage. FEHA is also available as a full Ex d assembled version and it is designed for temperatures up to -60°C. It is designed to operate aligned with solar collectors and fuel cells, due to the fact that the system's power consumption is minimized while on standby. Several operating cycles are possible with energy from the hydraulic accumulator.

Current supply: 24VDC, 230VAC, 400VAC

Hydraulic pressure: up to 200 bar; IP 65

Temperature range: -60°C to +60°C



### **FEHA-S - FASEK Elektro Hydraulic Actuator small**

FEHA-S system design compared to FEHA design is more compact and affordable design. This system also operates with different voltage and is suitable for small valves sizes ranging up to 10 inch.

Current supply: 24VDC, 230VAC, 400VAC

Hydraulic pressure: up to 160 bar;

Water protection: IP 65

Temperature range: -40°C to +60°C



### **FGA - FASEK Gas Actuator**

The FGA control system operates by using gas directly from the pipeline. This affordable solution leads gas pressure through two solenoid valves directly into the cylinder. Depending on requirements it can be equipped with an additional hydraulic pump to be used in emergency situations. This system can be operated with gas mixed with hydrogen sulphide. An additional gas accumulator ensures operation during emergency situations, and has the ability to carry out several further cycles. Standard delivery contains a connection for nitrogen bottle necessary for manual operation.

Current supply: 24VDC, 110VAC, 230VAC

(Other voltages are possible and can be enquired)



### **FGOA - FASEK Gas over Oil Actuator**

Like the FGA the FGOA also operates by using gas directly from the pipeline. The gas pressure delivers power for the actuator. There are two „gas over oil“ tanks between the control system and the actuator, which act as medium separators. These medium separators can also be used with mediums, which are difficult to handle. The FGOA can be equipped with an additional hydraulic pump, as well. An additional pressure tank ensures operation during power fail out. Standard delivery contains a connection for nitrogen bottle necessary for manual operation.

Current supply: 24VDC, 110VAC, 230VAC

(Other voltages are possible and can be enquired)



### **FPA - FASEK PNEUMATIC ACTUATOR**

The low cost control system is the FPA. This system operates the actuator by using two solenoid valves incorporated in an available pneumatic system. The FPA operates with air supply up to 16 bar without a pressure controller. It can be also equipped with an additional hydraulic pump. Additional equipment for air-treatment is available on request. An additional pressure tank ensures operation during power fail out.

Current supply: 24VDC, 110VAC, 230VAC

(Other voltages are possible and can be enquired)

# FASEK

## ACTUATOR

### Possibilities of actuator-cylinder combinations

All cylinders can be mounted on each side of the actuator  
This results in a multitude of possible combinations

Size of housing	
40	1.600 Nm
60	3.900 Nm
80	10.200 Nm
110	28.500 Nm
150	61.000 Nm
220	150.000 Nm
300	205.000 Nm
450	500.000 Nm

↓ ↓ ↓ Ø Piston (responsible for opening)  
 ↓ ↓ ↓ (0 - if no cylinder exists or SR for spring-return cylinder)  
 ↓ ↓ ↓ Ø Piston (responsible for closing)  
 ↓ ↓ ↓ (0 - if no cylinder exists or SR for spring-return cylinder)  
 ↓ Lever Arm Length in mm  
 FASEK Actuator Quarter (or Scotch Yoke)  
 Linear  
 Rack and Pinion

#### Pneumatic cylinder



#### All cylinders available for using in RP-actuators



#### Spring Cylinder



#### Hydraulic Cylinder



#### Spring Cylinder (multiple springs)



#### Gas cylinder



#### Rack and pinion actuator



- The cylinders' inner surfaces are protected against corrosion
- The mechanical end stops are adjustable without any leakage effects and absorb the whole kinetic energy
- End stop caps made of stainless steel
- The actuator's body is built to fit the ball valve stem connection  
No additional assembly-kit is required
- Over pressure venting valve in housing
- The body contains a relief valve for ventilation
- Standard connectors for all conventional limit switch boxes
- Standard coating: sapphire blue RAL 5003
- ATEX certificate for mechanical explosion protection
- PED certificate for pressure equipment
- IP Code - IP 68

# FASEK

## SPECIALS



### ***Fasek Electronic Linebreak System - FELS***

Fasek electronic line break system checks the pressure status in the pipeline. In case of pressure difference to pressure set point, it gives the contact and sends a report. With potential-free contacts, which close in case of an error, it can be operated with most actuators. Marginal pressure differences do not influence the behaviour of FELS, so that false alarms due to pressure variations can be eliminated. Alarm and alert informations are saved in an EProm and can be read out via an interface. FELS can also be used as high or low pressure pilot. It requires less than 50mA under operating conditions and can therefore be operated with a small solar panel or a battery back-up. Almost all transmitters from 4mA to 20mA for two wire connections and 24VDC supplies are compatible with FELS.



### ***Fasek Pneumatic Linebreak System - FPLS***

The FPLS is a pneumatic-mechanical system that checks the pressure status in the pipeline. It operates hydraulic-, gas- or pneumatic control system through mechanical valve in case of pressure drop. This type is frequently used when electrical current not available and electric signals cannot be processed. The picture on the left shows an FPLS with a gas control system (FGA).



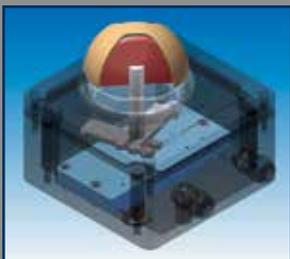
### ***High-Low Pressure Pilot***

The High-Low Pressure Pilot checks the pressure and operates via mechanical pressure switch. It switches hydraulic-, gas- or pneumatic control systems by a mechanical valve in case of pressure variations and actuator moves the ball valve in the „open“ or „close“ position. The High Pressure Pilot achieves a switch repeat accuracy of AG1 and is activated by increasing pressure. The Low Pressure Pilot is activated by decreasing pressure. These types of pilots can be directly integrated in most Fasek control systems. The picture on the left shows a High Pressure Pilot (red cap) integrated in the FEHA hydraulic control system.



### ***Main Hydraulic System***

Main hydraulic system is developed and assembled according to latest technical and customer's requirements. It is often used in cases where several actuators are operated and controlled. Very often in caverns and probes, where wing and master valves are used. The advantage is that several actuators can be separately controlled while using a single hydraulic accumulator.



### ***Limit Switch Box***

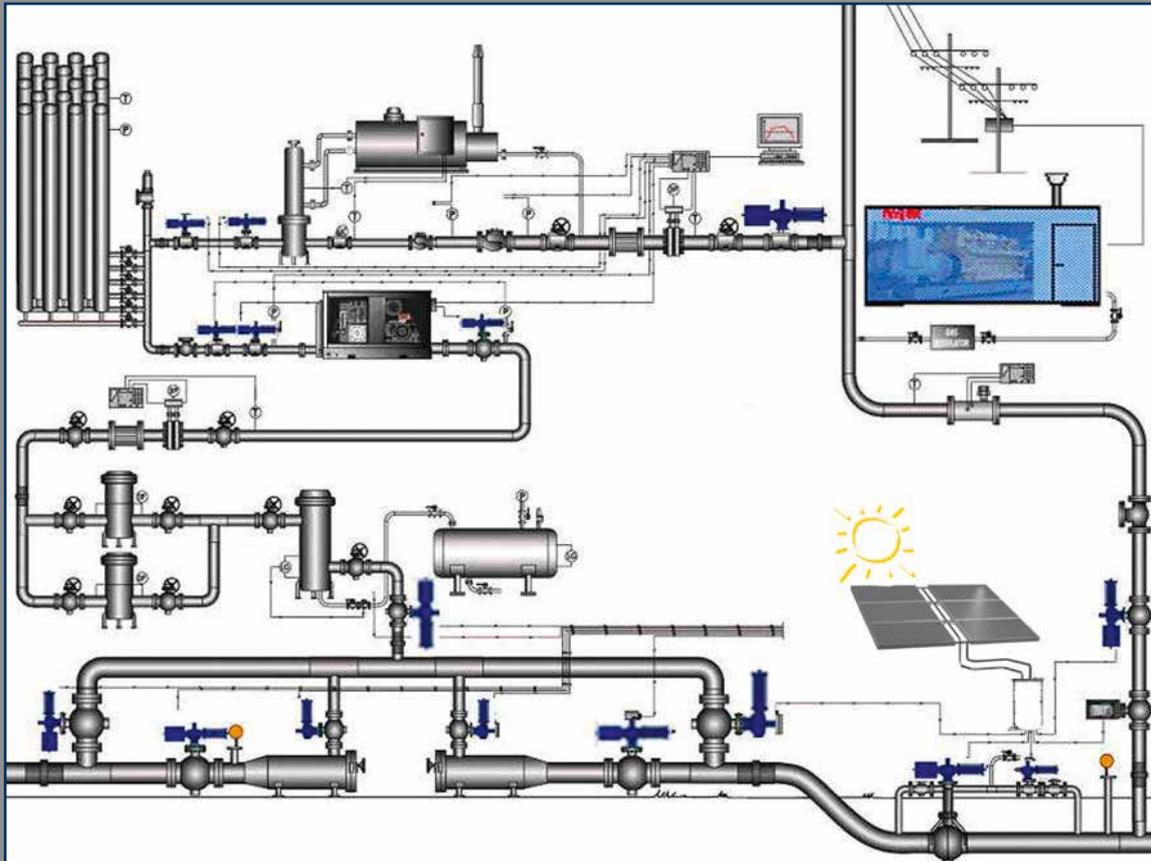
The new generation of the FASEK limit switch box can be equipped with potential free change over switches, proximity switch or potentiometer (analogue position indication). The combination of several limit switches is possible.

## Overall concept for pipelines and gas stations

Based on Fasek Engineering and Production GMBH's long lasting experience and due the close cooperation with customers and engineering companies the number of delivered complete projects over the last few years has grown considerably.

Fasek is able to offer detailed project engineering and to propose the right technical choice of products needed by technology requirements. In addition, Fasek can offer complete procurement procedure and supervision during start up of installed equipment.

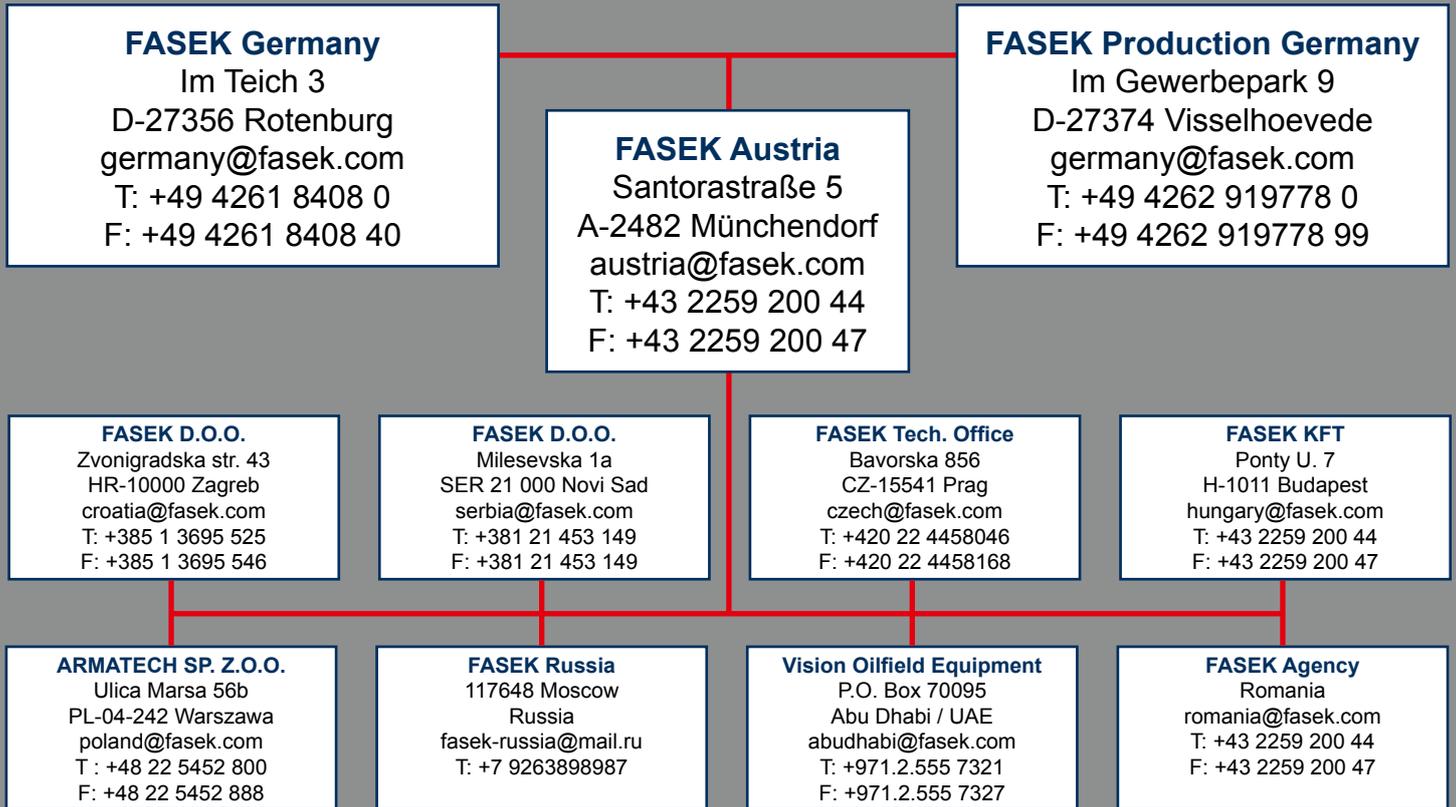
This "one-stop-shop" solution allows achievement of perfect results by minimisation of time and project investment. Such kind of project solutions have been offered since 1992 and gained a reputable standing.



Up to now Fasek has delivered product groups such as valve stations including actuators, remote control systems, scraper stations, filter and regulating stations, gas heaters, cogeneration units, solar powered valve stations and gas storage units, to name just a few.

Fasek supplies products and technical design according to customer requirements and specifications





Fasek is worldwide represented by well known and reliable partner companies in order to support local customers as good as possible. Please inquire for your country at our sales headquarters in Austria and we will inform you about contact data for your area.

## Fasek Service

Fasek Service Division was established in 2007 due to growing interest feed back from our customers. The main activity includes installation and service of valves, actuators, scraper stations and wellhead equipment. Service and maintenance activities take place directly on site or in our well equipped workshop. Service and modernisation of old control systems has already been carried out successfully in the Czech Republic, Slovakia, Croatia, Slovenia, Serbia, Bosnia and Austria. Fasek can provide service and training for our customers at our service locations.

For important applications Fasek can provide special 24 hour stand by service to our customers. Specially equipped four wheel service cars ensure service activities along pipeline routes. Our staff is well trained and certified and has the approval from our customers and our suppliers. Training and technical updates in our service organisation and in the workshops of our main suppliers are standard procedures within our quality management system.



ISO 9001:2008  
ISO 14001:2009  
SCC\*:2011



Gost  
RTN



ATEX  
PED  
SIL