



Explosion proof certified products



***Solutions for Life***



Responsible products

## ATEX Certified Switches



### ATEX certified electromagnetic level switches:

Design and produce level sensors with on / off signal, SPDT and with signal continuously.

Float level sensors, electromagnetic, electromechanical, resistive, analog. Applications for the hydraulic sector, food-vending, appliance, medical, automotive, rail etc



### ATEX certified Pressure & Vacuum switches:

Pressure and vacuum switches with adjustable set point and fixed-pressure switches.

Pressure switch with changeover contacts (SPDT), Mini pressure. Setting ranges from -1 to 400 bar. Differential pressure, electrical and visual alarm for filter clogging.

Features: NO or NC contacts — Pressure 10-400 Bar — Diaphragms: NBR/FKM/EPDM/CR/Silicon/HNBR



### ATEX certified Temperature switches:

Thermostats and temperature sensors. Bimetal thermostat with NO, NC or SPDT. Temperature sensors NTC, PTC, PT100 and PT1000. Solutions with materials, fasteners and electrical connections, developed for specific customer needs.

Features: from 25° to 120°C with intervals of 5°C— Brass or stainless Steel—NO, NC or SPDT contacts—Max pressure 80 Bar





# 200 Series



The MAC Valves 200 Series is a direct solenoid operated 3-way poppet valve.

This unique series is available for Hazardous Location applications

**Class I/Div B,C, & D – Class II/Div E,F, & G**

**Port size: 1/8" - 1/4" with a Flow (Max): 500 NI**

It also features a short stroke solenoid, a balanced poppet and powerful return spring. These features translate into high shifting forces, fast consistent response times and long life.

The Atex certified 200 series can be used as pilot valve on bodies of pilot assisted valves.  
As example you see below a 800 bistable series body with two 200 series pilot valves

The 800 series has of flow of 1400 NI/min

The 200 series can be mounted on all pilot assisted Mac Valves

Possibilities to create : 2/2, 3/2, 4/2, 5/2, 5/3 NO-NC valves for pneumatic use



## ATEX certified pulse valves for dust collectors

ATEX certified Pulse Valves are available since mid 2019.

Two operating modes are covered by the ATEX certification: one version with remote bleed pilot and the other one with electrical bleed pilot.

With the remote bleed pilot the valve can be actuated pneumatically, without any additional command signal.

The electrical pilot is an ATEX certified solenoid operated 200 series valve mounted on a remote bleed valve.

Each valve (remote bleed and 200 series operated valves) has its own identification plate mentioning the certification class and the protection mode.

This new ATEX certification is resulting from an important demand for that kind of certified products.



MAC's vastly improved technology is changing dust collection methodology.

- Designed for high efficiency
- Eliminates common failure points
- Lowers maintenance costs
- Reduces safety risks, downtime and potential liability
- Makes conversion quick and easy with a bolt-on design
- Optimized for harsh environments
- Significantly decreases energy costs



Over 40 years of experiences in development, production and worldwide distribution of solenoid and pressure-operated valves makes GSR Ventiltechnik your partner for reliable valves technology sustainable quality standards

Mostly of the valves can be equipped with an ATEX certified solenoid:

**PTB 03 ATEX Q-040-5**

Beside our standard product range, we are covering:

- High temperature up to 450°C
- Cryogenic applications up to -196°C
- High-pressure applications up to 1200 bar
- Low-pressure applications up to -0.9 bar



Single valve up to 450 bar, also available as 6-fold or 3-fold valve block



Gas supply valve



Pilot valve for pneumatic drives



Pneumatically actuated single valve in the connection sizes 1/4"-2"



Solenoid actuated single valve in the connection sizes 1/4"-2"



Dispenser Block



Priority Panel

**Coil .178 - Connection with 3m cable:** Power: DC: 5,2 Watt / AC: 5,3VA, Ambient: -20°C up to +50°C, Medium: -20°C up to +80°C

**Coil .148 - Connection with 3m cable:** Power: DC: 10 Watt / AC: 8,5VA, Ambient: -20°C up to +50°C, Medium: -20°C up to +80°C

**Coil .048 - Connection Terminal box:** Power: DC: 10 Watt / AC: 8,5VA, Ambient: -40°C up to +60°C, Medium: -40°C up to +60°C

**Coil A278 - Connection Terminal box and heatsink:** Power: 47 Watt, Ambient: -40°C up to +70°C, Medium: -40°C up to +70°

**Coil .808 - Connection Terminal box:** Power: 24 Watt, Ambient: -40°C up to +60°C, Medium: -40°C up to +60°C

**Coil .328 - Connection Terminal box:** Power: 23 Watt, Ambient: -40°C up to +60°C, Medium: -40°C up to +60°C

**Coil .248 - Connection Terminal box:** Power: 30 Watt, Ambient: -40°C up to +60°C, Medium: -40°C up to +60°C

**Coil .278 - Connection: Terminal box:** Power: 47 Watt, Ambient: -40°C up to +40°C, Medium: -40°C up to +40°C

**Coil .358 - Connection: Terminal box:** Power: 75 Watt, Ambient: -40°C up to +40°C, Medium: -40°C up to +40°C





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## *ATEX Fluid & Steam Solenoid Valves*



M&M solenoid valves are manufactured with high quality materials only to warranty a durable performance as well as high reliability.

They have a robust construction particularly suitable for industrial applications and offer the maximum compatibility with fluids thanks to a wide choice of seal materials.

Our expertise in engineering and in-house manufacturing ensure high quality repetitiveness and reliable lead times.

### ATEX II 2 GD

#### **D262/263**

Normally closed  
2/2 way direct acting  
1/8" – 1/4"



#### **D362/363**

Normally closed  
3/2 way direct acting  
1/8" – 1/4"



#### **D223/224/225**

Normally closed  
2/2 way pilot operated  
1 1/4" – 2"



#### **D298/299**

Normally closed  
2/2 way direct acting  
1/8" – 1/4"



#### **D204/205/206/222**

Normally closed  
2/2 way pilot operated  
3/8" – 1"

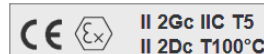




## Complete range of ATEX certified pneumatic components



The wide range of A.P.I.'s cylinders includes a full line of compact cylinder. The Series CI and CIN conform to ISO 21287 with bores from 16 to 125 mm. The Series CS, CD and CDN are UNITOP standard with bores from 12 to 100 mm. All according to ATEX 2014/34/UE Directive. The Series DU and DUN are redesigned for space-saving with bores from 6 to 32 mm. The Series CIX and CIXN conform to ISO 21287 standard, fully made of Stainless Steel and available on request according to ATEX 2014/34/UE Directive.



The new cylinders according to DIN ISO 15552 standard in AISI 316L Stainless Steel Series AMX proposed by A.P.I. are available in bores from 32 mm to 200 mm, and are realized with round tube and external tie-rods, standard with adjustable cushionings and scraper ring in special polyurethane specially developed for the applications it is intended for. These pneumatic cylinders are characterized by a modern, clean and tidy design, also in details, as the mirror polishing.

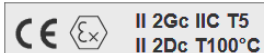


The Namur valves of this series are available in size 1/4" G with function 3/2 and 5/2 both solenoid/spring and solenoid/solenoid. The series is available in accordance to ATEX 2014/34/UE in classification II 2Gc IIB T5 / II 2Dc T100°C. The valves supplied with special coils, directly supplied in accordance to ATEX 2014/34/EU in various classifications: Non-sparking coil Ex nA, Intrinsic Safety Ex ia, Encapsulated Coil Ex dm, Flameproof Coil Ex db and Encapsulated Coil Ex mb.



These valves, solenoid/spring and solenoid/solenoid, with functions 3/2, 5/2 and 5/3, are available 1/8", 1/4" and 1/2" sizes for all the pneumatically operated and the electrically operated versions.

These pneumatic components are suitable both in-line and mounted on collectors or on multi-position bases, as well as in applications that need Namur interface, and on request are available according to ATEX 2014/34/UE Directive in various classifications.



All the valves Series AX1 are manufactured in accordance with ATEX 2014/34/UE Directive, in 5 different classifications (including intrinsic safety Ex ia, encapsulated coil Ex dm, and encapsulated flameproof coil Ex db) and therefore can operate in potentially explosive environments.

These features make those pneumatic components good for applications in the Food & Beverage, in the chemical pharmaceutical and medical sectors, but particularly suitable for Oil & Gas and Mining industry



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## *ATEX Certified Offshore Components*

**rotork<sup>®</sup>**  
**MIDLAND**

Since 1956, Midland have been known internationally as one of the oil & gas industries premier designers and manufacturers of 316L stainless steel control equipment. Over the years Midland have developed an enviable reputation for high quality products, reliability and innovation.

Midlands ability to interrogate problems and provide comprehensive solutions for the control of hydraulic and pneumatic actuated process valves, on both onshore and offshore installations, whether fixed or floating production facilities including FPSO's, repeatedly delivering impressive results worldwide, sets us apart from our competitors.



As a specialist manufacturer of stainless steel large flow air service equipment Rotork Midland offer comprehensive, purpose designed, engineered and manufactured solutions for filtration and regulation of compressed air and gases for the actuation industries.



A range of 3/2 pilot operated poppet valves in stainless steel 316L for use on gases. Specifically designed for harsh environments, designed for actuator control. Rotork Midlands' 1750 series is available in 1/4" to 3" **NPT** port sizes. 316L construction makes this valve range ideal for severe service / hazardous environments.

3/2 function for cylinder or actuator control incorporating:

- Low power consumption
- Low temperature options
- High flow rates
- Relevant industry approvals including SIL
- Sweet (natural) and sour gases as well as low pressure hydraulic, mineral or water
- Hazardous protection concepts





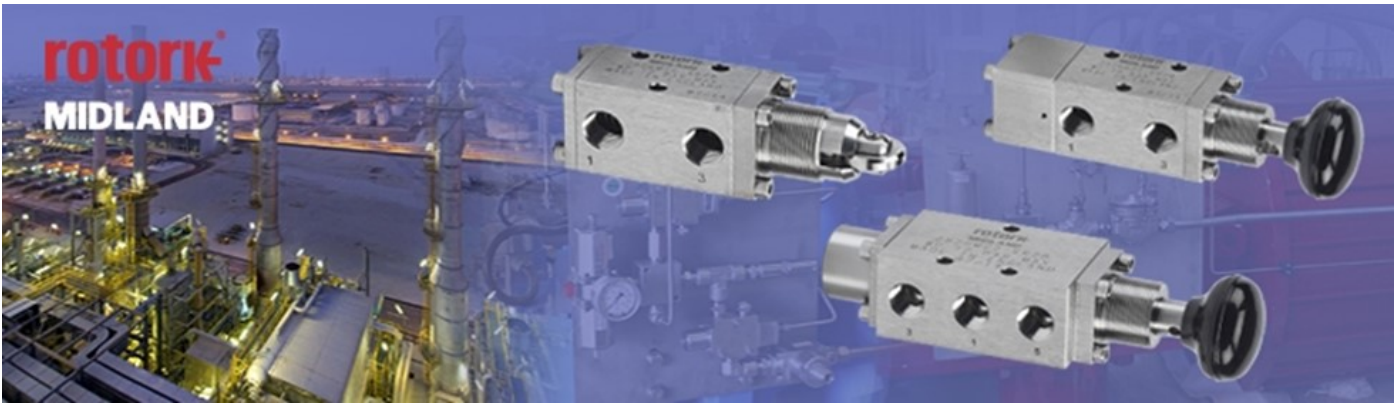


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## *ATEX Certified Offshore Components*

**rotork<sup>®</sup>**  
**MIDLAND**



Midland-ACS range of compact 3/2 and 5/2 pilot solenoid operated spool valves in 316L Stainless Steel for use on gases. Specifically designed for severe environments.



Rotork Midland manufactures a full range of ancillary products in 316L stainless steel to compliment our full range of products. Suitable for use in industrial and severe environments, we have a range of solutions for all your control valve requirements.



Rotork Midland offers a range of direct acting 3/2 solenoid valves for the oil, gas and petrochemical industries. The 67 Series and 70 Series are 316L stainless steel direct acting 3/2 solenoid valves primarily designed for actuator control. The valves offer maximum internal and external protection from liquids and gases, for use in severe environments, with a variety of functions - normally closed, normally open and diverter.



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## ATEX Certified Control panels

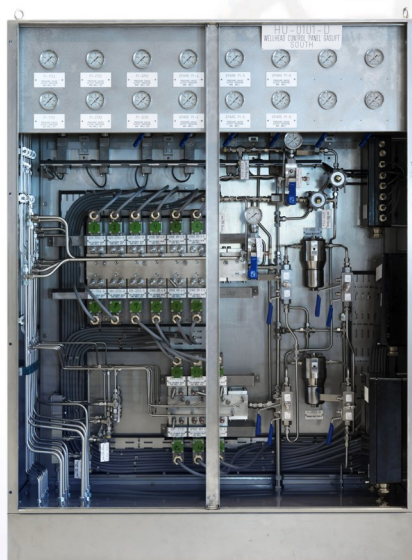
# MIDLAND-ACS

Severe & Hazardous Area Experts

### HYDRAULIC & PNEUMATIC LOCAL CONTROL PANELS

Local Control Panels for hydraulic and pneumatic actuators can be supplied to meet project requirements, be it for a simple On/Off actuator, a control system for the accurate positioning of Choke or Globe control valves, or ESD actuator local control panels with partial stroking facilities.

Manufactured in 316 stainless steel with IP66/67 ingress protection the panels are suitable for the most hazardous, severe and corrosive environments. Both our hydraulic and pneumatic valve control systems, can be produced as manifold design to eliminate costly pipework and fittings, resulting in weight and space savings.



CERTIFICATION OPTIONS AVAILABLE



All components meet the requirements demanded by ATEX and a multitude of individual international certifying authorities. MBTF, SFF and PFD data is also available upon request to enable engineers to calculate SIL requirements.



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## Explosion proof Longvale switches

### Hazardous Location Instrumentation

Proximity Switches  
Flow Switches  
Valve Indication & Enclosures

Unrivalled reliability... whatever the industry



**euroSwitch**  
A Longvale Brand



**Proximity Switch – Magnetic – ES Series:** The Euroswitch ES Series require external magnetic actuation utilising reed switch technology. Globally certified they are used in some of the most arduous and hazardous applications around the world where a reliable signal is required making them a cost effective solution for your application.

**Proximity Switch – Ferrous – FS Series:** The Euroswitch FS Series uses an internal array of magnets enabling it to sense carbon steel. Globally certified they are used in some of the most arduous and hazardous applications where a reliable signal is required making them a cost effective solution for your application.

**Flow Switch:** The Euroswitch FL Series ultra-compact flow switch is designed and engineered to monitor liquid, gas and air flows. Globally certified, they are used in some of the most arduous and hazardous applications around the world where a reliable signal is required. Offering a highly accurate design with no mechanical linkage.

**Vibration Sensors:** Euroswitch VS Series with state of the art, highly accurate annular shear design, Globally certified they are used in some of the most arduous and hazardous applications around the world. Euroswitch are able to offer an extensive range of vibration sensors including a choice of acceleration and velocity outputs.



**Explosion Proof:**

Zone 1, IECEx & ATEX Exd (Zone 1 & Zone 21), UL/CSA (Class I, Div 1)

**Intrinsically Safe:**

Zone 0, IECEx & ATEX Exia (Zone 0 & Zone 20), UL/CSA (Zone 0)

**Other Regional Approvals Include:**

TRCU, INMETRO & KOSHA

**Extreme Low Temperatures:** -60°C/-76°F.

Suitable for use in the design of safety functions up to SIL2 or SIL3.



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## Explosion proof switches

**euroSwitch**  
A Longvale Brand

**Pressure Switch:** The Euroswitch PS range of pressure switches and clogging indicators are available for reliable indication in general industrial applications and are approved for use in ATEX, IECEx, UL/CSA, TRCU and INMETRO hazardous zones.

- Pressure sensing ranges upto 1035 bar
- Multi approved, ATEX, IECEx, UL CSA, INMETRO, TRCU
- Zone 0, 1, 2, 20, 21, 22
- UL/CSA Class 1 & 2 Division 1 & 2 Groups A-G
- Integral 360° Adjustable Wireable Connection Head / Junction Box



### Static/Differential Pressure Sensing:

Benefiting from a 316 stainless steel construction and compact dimensions, the PS range provides tangible benefits over the market competition, whilst offering unique benefits such as the integral wireable connection head allowing the user to terminate directly at the switch, thereby negating the need for an additional junction box and associated mounting kit. There are versions available for indication of static or differential pressure. Differential switches are best suited to high pressure applications such as well pump and compressor pressure control, filter condition monitoring, and high static pressure control.

### Clogging Indicators:

Clogging indicators are a type of differential pressure switch used in hydraulic systems to provide notification to the user when a filter element needs replacing due to the increased differential pressure measured across the filter element. The user is then able to make the system safe and change the filter element.



### Wireable Connection Heads - Technology Overview

The Euroswitch Wireable Connection Head is unique in the hazardous area market and offers the benefits of a micro junction box integrated directly within the sensor. This patented technology is available on the majority of our instrumentation in one of three designs, namely W, WL or WLR. All designs are certified to the latest global protection standards.

### Subsea Proximity/Limit Switch Range

The Euroswitch Subsea range has been designed to offer highly reliable position indication fully submerged, certified at depths of up to 6850m (10,000psi). The range is available in a variety of switch lengths and housing options. The Euroswitch FS Subsea range can directly sense ferrous steel and for increased sensing ranges a target magnet can be used.





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## ATEX Hydrogen Valves



**CLARK COOPER**  
SPECIALIZING IN ADVANCED APPLICATIONS



The reduced port EX40 is great for a wide range of media. This pilot operated valve has become a popular and effective choice in the emerging Hydrogen Dispensing market. The EX40 is also an excellent valve to control the flow of high pressure air, water, hydrogen, nitrogen, and other gases or light liquids compatible with materials of construction. The EX40 is the highest pressure valve in our collection and offers a cartridge design that alleviates your demanding maintenance requirements. The EX40 requires a 100 PSIG minimum pressure differential between inlet and outlet for operation. The valve's simple design with few moving components have made it a great choice for inlet pressures as high as 15,000 PSIG. The Normally Closed EX40 must be mounted upright and vertical. Filters

Power:	22 Watts
Insulation:	Class "H"
Duty:	Continuous
Connection:	1/2" NPT, 18" Leads
Enclosure	
Explosion Proof (Standard):	NEMA 3, 3S, 4, 4X, 7, 9
General Service:	NEMA 1, 2, 3, 3S, 4, 4X



The EX30 is great for a wide range of pressures and many different fluids and gases. This direct acting valve offers a solution to a variety of applications to control the flow of high pressure air, water, hydrogen, nitrogen and other gases or light liquids compatible with materials of construction. Suitable for cryogenic applications, this low flow, high pressure valve packages great versatility in a compact design for pressures up to 10,000 PSIG. No minimum pressure is required for opening, and it will not "burp" due to any rapid spikes in inlet pressure. Both the Normally Closed and Normally Open versions can be universally mounted, as a standard. They both may be mounted in any orientation.



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## ATEX Venturies



Stainless steel venturi - 80% of vacuum – ATEX certified

**Series : 2EJIX**

Ø de buse en mm: 1 - 1,6 – 2 - 3,2 - 4 - 5

Niveau de vide : 810mbar

Débit aspiré : 42 – 124 – 180 – 362 - 580 – 965

Silencieux: Oui



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## *Antistatic flexible multi-layer hose*



Polyamide 12 of petro-chemical origin, made of two layers of antistatic polyamide 12 HIPHL and one middle layer of PA 12 PHL with improved barrier properties. (Electrical resistance over length:  $<10\Omega/\text{cm}$  - Electrical resistivity:  $<103\Omega\cdot\text{cm}$  ).

The outer and inner layers of antistatic PA 12 are electrically conductive (it makes it able to eliminate electrostatic charges), anti-static and heat stabilized.

They are combined with a PA 12 PHL with superior barrier properties to reduce the permeation of particles that is one of the main defects of the mono-wall antistatic tubing.



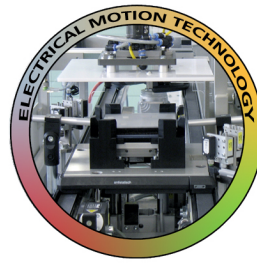
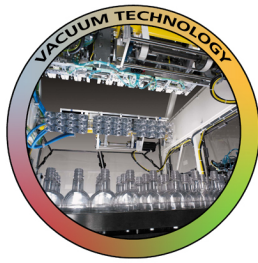
TEMPERATURE: Products of the series 12RA can be used in a temperature range from  $-20^{\circ}\text{C}$  to  $80^{\circ}\text{C}$ .

TOLERANCE :  $\pm 0,1$  on wall thickness

$\pm 0,1$  on outer  $\varnothing$

$\pm 0,5\%$  on weight





*We look forward to your application.*

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