

NEW

QEMETA[®]



**The breakthrough
Actuator Solution**

QEMETA®

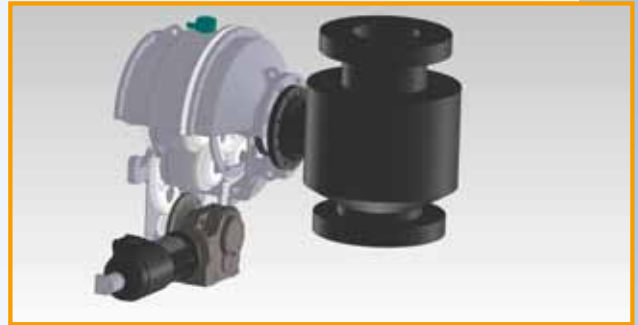
(Quick Electric Motor Emergency Turn Actuator)

is an electric, explosion proof, fail safe positioning actuator for 90° valves. In case of a plant failure or power loss the QEMETA® operates the valve into the pre-determined fail safe position without the requirement of any additional electrical power. In case of an incident the QEMETA® is self-sufficient and safe even with the loss of control voltage.

The functional concept is based on pre-tensioned springs of a planetary gear. The pre-tensioning is done by an electrical motor and it is clamped electromagnetic. As no additional auxiliary energy is needed, like pneumatic or hydraulic systems do, the QEMETA® is maintenance free which makes it safer and more economic for the cost of ownership in comparison to existing solutions.



Head of Gas Cavern, VNG AG, Germany



QEMETA® is an absolutely new and innovative breakthrough actuator solution. The main application at this point is in the gas storage and transmission market where high end metal seated ball valves are being utilized for shut off. The primary application for the first QEMETA® is the head of underground gas storage caves. Other applications include safety relevant installations within the process or hard to reach places, i.e. on safety shut off valves in pipelines.

Generally QEMETA® can be used in any safety relevant installation within a piping system. The working concept is based on not requiring any auxiliary energy which makes the QEMETA® a maintenance free solution which leads to maximum safety, reliability and accessibility of the system **with reducing the cost of ownership to a minimum.** The current delivery range of the QEMETA® stretches from 3.500Nm through 90.000Nm which covers a large range of valve sizes and pressure classes of 90° valves.

Technical Details

Ex-Class:	II 2G Ex
Application Area:	Dust or explosion prone areas Group II
Atmosphere Class:	Gaseous
Zone:	Zone 1, occasional explosion capable Atmosphere Kat 2
Temperature range:	-35 to 40°
Motor:	1,1 to 3,0 kW
Operating Times:	Open / Close: 10s to 80s Emergency Close: 5s to 10s

QEMETA® directly converts electric into potential energy of the tensioned springs. Conventional pneumatic systems have to go through the additional step of converting electric energy into compressed air which in turn converts into potential energy of the tensioned springs.



	QEMETA	Pneumatic
Assembly	Simple Solely electric supply system • E-Actuator + springtensioned planetary gear • Control Unit	Complex Electric + pneumatic supply system • Pneumatic actuator + springtensioned Cylinder • Control unit • Compressor station • Compressor • Air tank • Air treatment / drying • Compressed air pipe system • Pressure reducer • Solenoid valves
Examination/ Functional test	yearly	yearly
Additional inspections	E-Actuator every 3 Years / Safety Related Systems • yearly • Can be performed while installed on valve	Pressure Vessels (i.e. air tank, cylinders, etc.) • every 10 years • Disassembly from valve necessary, external inspection
Maintenance	Maintenance Free	Increased maintenance requirement (especially after 3–5 years after installation) • Wear of gaskets and connection parts • Rapid increase of service hours of compressor due to air leakage of the system • Increased personnel cost/requirement for service of system (localizing issues / leakages) • Noise emission



Cost of Ownership	Low 	High 
Availability	High	Low



Planetary Gear

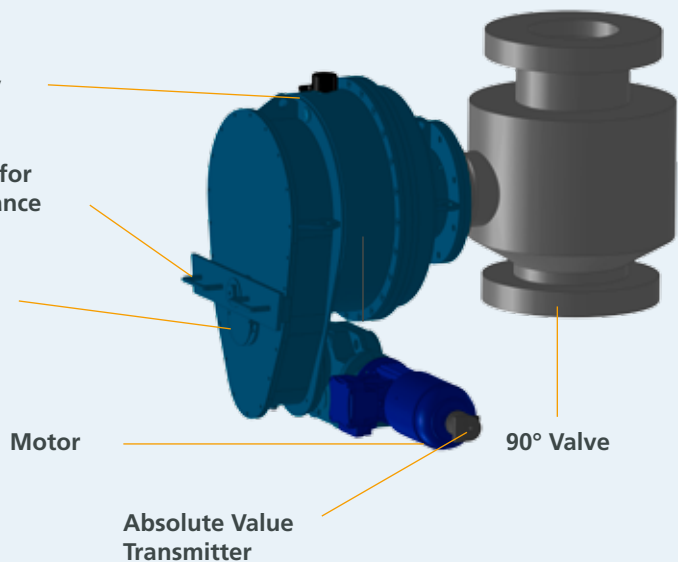
Crossbar for Maintenance

Position Indicator

Motor

Absolute Value Transmitter

90° Valve



**MIAM® – Magdeburger
Industriarmatur Manufaktur**
offers products
made in Germany



MIAM offers effective, competent and especially innovative solutions for application specific problems of valves.

A team of engineers creates solution oriented concepts to design a product which will meet or exceed the customers expectations. Besides the actual development of a customized design the communication with the customer is key in creating the optimal solution.

MIAM® – Magdeburger Industriarmatur Manufaktur
high quality valves and innovative solutions
made in Germany

MIAM

Managing Director: Dr. Matthias Ihlow | Thomas Gersch
MIAM GmbH | Mittagstraße 16 P | D-39124 Magdeburg
Phone: +49 (0) 391-634 1967-0 | Fax: +49 (0) 391-634 1967-99
Internet: www.ava-innova.de | Mail: info@ava-innova.de