

# PROCHEM

Stainless Steel Specialists

*Product solutions for a world of difference*

## VALVES AND ACTUATORS ATC



PIPING PRODUCTS



INSTRUMENTATION



VALVES AND ACTUATORS



MANUFACTURING



INDENT SERVICE



HYDRAULIC



# ATC

**COMPACT**

# Actuator Solutions and **SYSTEMS**



With ultra compactness, superior reliability and unique design flexibility, the ATC actuator is in a class of its own.



The Actuator Technology Company (ATC), based in The Netherlands, has been founded to accommodate the specific market need for a compact spring return actuator to operate quarter turn and linear operated valves. Applications that particularly benefit from this compact design are those where installation space is limited, like on topsides, high-pressure manifolds, internal /external turret areas and (vertical mounted) riser valves. A compact actuator design could also benefit the handling, mounting and alignment in case large valve sizes/high pressure ratings apply. Due to the enhanced actuator design, ATC actuators are also installed in shallow to ultra deepwater, and available complete with ROV interfacing and receptacles to ISO 13628-8 2002.

The ATC actuators are SIL 3 compliant to IEC 61508 and are manufactured in compliance with the ISO 9001 2000 quality procedures at ATC's new advanced assembling facilities, comprising a total area of 5000 m2. The company's impressive track record with the major end users and contractors confirms the high-end quality of the ATC organization and its revolutionary actuator design.



**The ATC actuator design is based on:**

- **Compactness**
- **Reliability**

# Compactness

The ATC compact actuator is considerably smaller than a traditional scotch yoke actuator and this results in space savings up to 500%. This design flexibility, combined with the innovative integration of all actuator parts, results in the most compact actuator available in the market. In virtually all applications, irrespective of hydraulic or pneumatic operation, the ATC actuator diameter is smaller than the face-to-face dimension of the valve.



# Reliability

The ATC actuator offers the highest level of reliability available on the market. The simplicity of the ATC actuator design involves a minimal number of parts, and therefore the ATC spring return actuator is the ideal solution to enhance safety and reliability. In the standard configuration, the ATC actuators are fully pressure balanced, airtight and watertight, self-lubricating and maintenance free.

A complete FMECA has been carried out, including verification of the complete installed base. As a result, TUV Rheinland has certified the ATC actuators to SIL 3, following the IEC 61508, based on a 1oo1 architecture applied.



**The ATC actuator offers:**

- The most compact actuator available.
- Spring return and double acting.
- Quarter turn and linear.
- Simple highly efficient operating mechanism.
- Output torques up to 1,000,000 Nm / 8,850,750 in-lbs.
- Output thrust up to 1100 KN / 250 Klbf.
- Standard hydraulic supply pressures up to 345 barg / 5000 psig.
- Pneumatic supply range from LP instrument air to HP line gas.
- HIPPS and ESD design and reliability.
- SIL 3 certified and Type A (field proven) to IEC 61508.
- Considerable displacement savings up to 50%.
- Subsea, splash zones and harsh topside environments.
- Cryogenic, standard offshore and high temperature applications.
- High integrity environmental sealing.
- Lifetime lubrication.
- Maintenance free.



**PROCHEM SOLUTIONS: Offshore Demands No Problem**

Australia's largest oil and gas owner operator required ultra compact hydraulic quarter turn actuators with the highest level of reliability. Needed to operate 900 (36") NB 1500# metal seated ESDVs with high levels of torque, the application was offshore in a below platform deck environment.

ATC worked tirelessly to engineer a compact solution with output torques exceeding 550,000 Nm, and these ATC actuators are in service offshore in the North West Shelf of WA.

**SPRING RETURN HYDRAULIC ACTUATORS**

The standard ATC spring return actuator is the most compact actuator available in the market.

**SPRING RETURN PNEUMATIC ACTUATORS**

Due to the innovative design, the ATC pneumatic spring return actuator is available in dimensions which are close to the hydraulic version and therefore uniquely compact.

**LINEAR TOPSIDES AND SUBSEA ACTUATORS**

The ATC linear actuator offers significant advantages over available types on the market.

**ACTUATORS FOR SAFETY RELATED SYSTEMS**

The ATC spring return actuator offers an enhanced reliability. The actuator is certified by TUV Rheinland to meet SIL 3, following the IEC 61508 and based on a 1oo1 architecture applied.

**COMPACT DOUBLE BLOCK & BLEED (DBB) VALVE ACTUATORS**

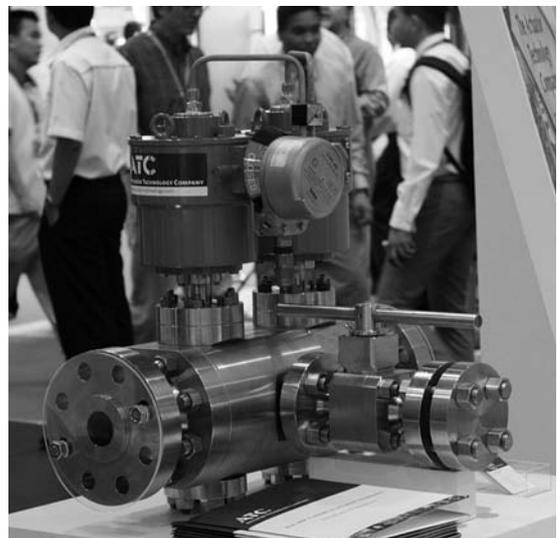
The ultra compact ATC actuator allows for “redundant actuation” within one valve body (DBB) rather than using two individually installed valves. This optimisation results in a considerable reduction in pipe length, flanges, adapter sets and has the most impact in cases where exotic pipe materials are applied.

**ATC DOUBLE ACTING ACTUATORS**

The ATC double acting actuator is based on the same unique design approach and flexibility as applies to the spring return range.

**ATC SUBSEA ACTUATORS**

ATC has a complete line of sub-sea actuators available, suitable for shallow water applications and installation in ultra deep waters, including ROV interfacing and receptacles.





**PROCHEM SOLUTIONS:**

**Compact Design and High Reliability**

*Prochem and ATC developed an excellent relationship with a senior engineer whilst working together on another actuator requirement for a WA oil and gas client. When the engineer subsequently left Perth to work for another oil and gas major in South East Asia, he soon discovered the need for compact, high reliability hydraulic quarter turn actuators. In fact, over 30 pieces were required in less than 10 weeks.*

*Not only could ATC meet the most stringent of reliability requirements (SIL 3), a compact design for an offshore requirement, but they could offer an ultra fast expedited delivery, and the actuators have since installed and running flawlessly ever since.*



*Project delivery of ATC pneumatic spring return compact actuators.*

*The above photos concern installations of actuators on the North West Shelf of Australia.*



**ACTUATOR TECHNOLOGY COMPANY**

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