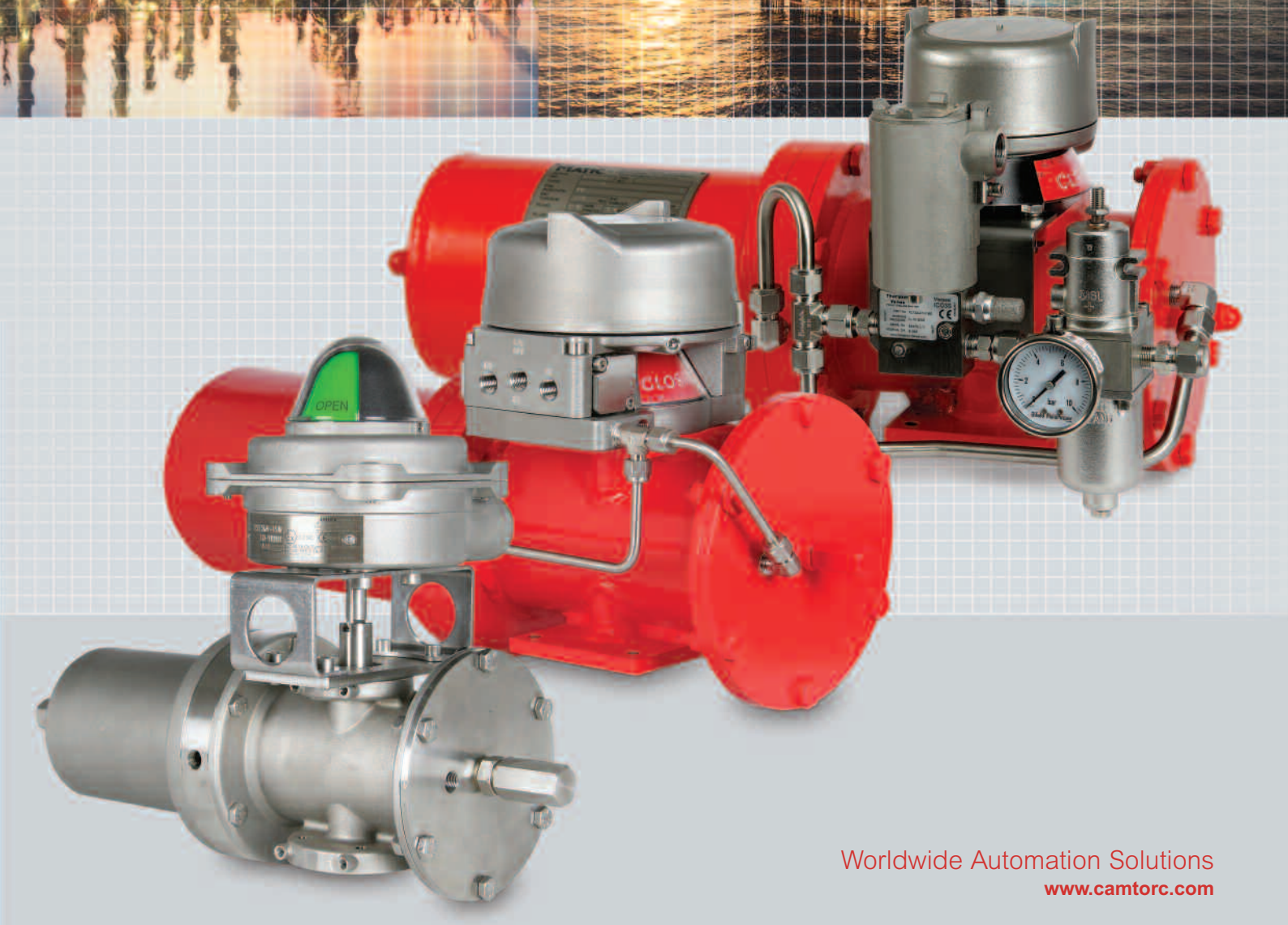
Pneumatic, Hydraulic & Electro-Hydraulic

Actuator Systems for Valves and Dampers

Camtorc



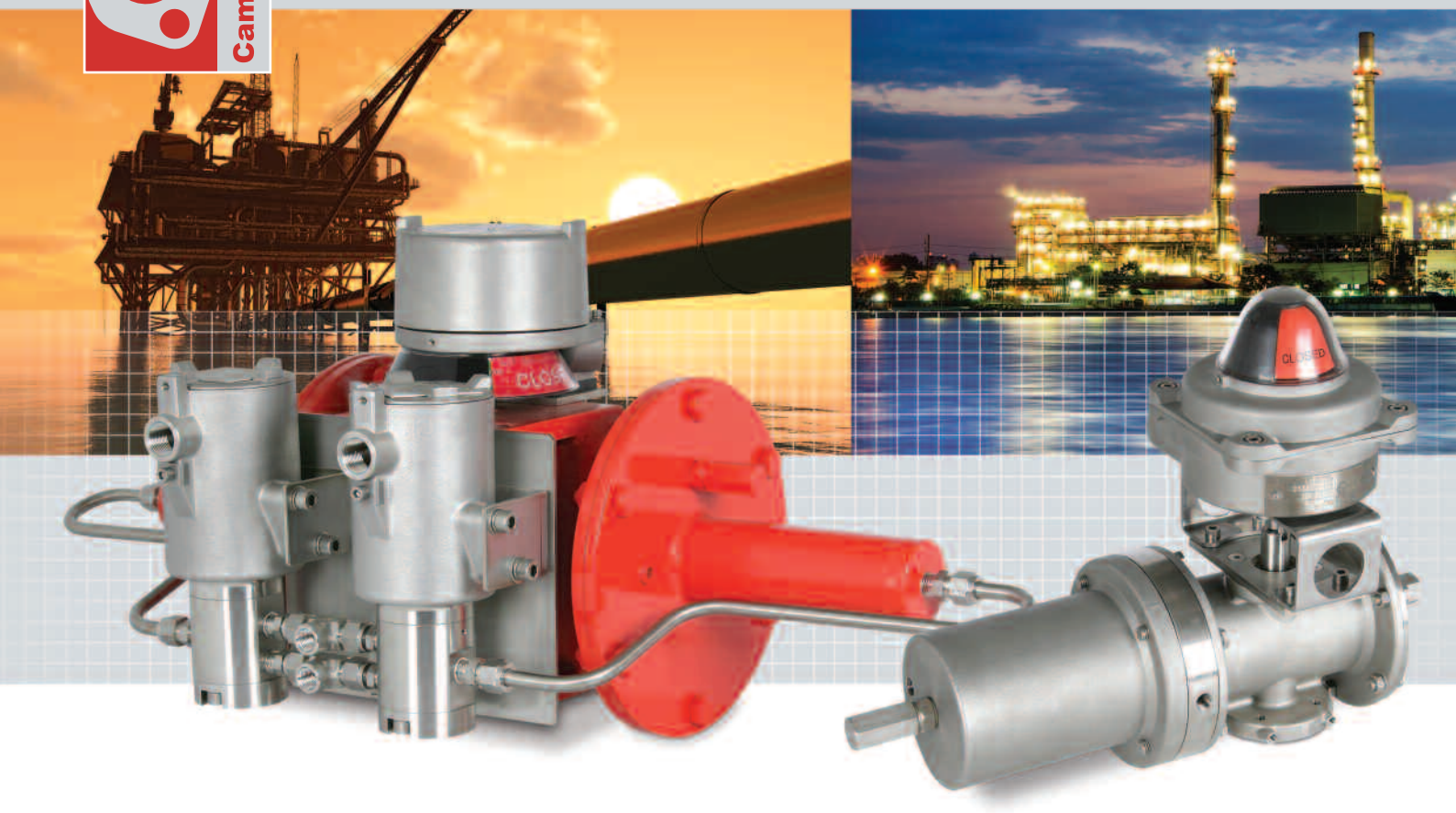
Worldwide Automation Solutions

www.camtorc.com

Camtorc series Types S & SX

Pneumatic, Hydraulic & Electro-Hydraulic

Camtorc series Type S & Type SX are available for pneumatic and hydraulic applications in either double acting or spring return configurations with a full range of control accessories. Materials of construction include bodies in either steel (Type S) or 316SS (Type SX) spring cylinders and internal components are of steel or 316SS construction with drive shafts of 316 or 17-4PH stainless steel.



Actuator Design Criteria

Rotation
0° to 95° rotation with adjustable end stops.

Torque Range
Double Acting: 10 to 30,000 Nm
Spring Return: 10 to 20,000 Nm (Spring End).

Supply Pressure Range
Pneumatic Actuators: 2 to 10 barg*.
Hydraulic Actuators: Low - 3 to 10 barg* / High - 10 to 210 barg*.
Optional – Higher pressure versions up to 400 barg available on request.
(*Routine overpressure test of 1.5 times the maximum operating pressure).

Ambient Temperature Range
Nitrile Seals: -20°C to +60°C (T6)
Viton Seals: -20°C to +130°C (T3)
EPDM 70 Seals: -40°C to +130°C (T4).
Optional – High (+170°C) / low (-45°C) temperature versions available on request.

Operating Media
Pneumatic Actuators: Air (dry or lubricated) or non-corrosive gas operating media.
Hydraulic Actuators: Mineral oil or equal operating fluid.

Ingress Protection
Weatherproof to IP65 / 66.

Hazardous Certification
ATEX II 2 G IIC c T* (*Dependent on seal materials).

Power Supply (Electro-Hydraulic)
230 VAC or 24 VDC Optional – *Other voltages available on request*

Camtorc series Types CS & CX

Pneumatic, Hydraulic & Electro-Hydraulic

Camtorc series Type CS & Type CX modular construction actuators are available for pneumatic or hydraulic applications in either double acting or spring return configurations with a full range of control accessories. Materials of construction include in either steel construction (Type CS) or 316 stainless steel construction (Type CX) with drive shafts of 316 or 17-4PH stainless steel.

Features and Benefits

- Cam Design
  The unique cam design offers simple, backlash free operation providing extended life of seals and components.
- High Integrity Construction
  Camtorc series actuators only utilize steel and stainless steel materials for all actuator components (no iron) and are fully tested on assembly to provide superior operational life.
- Paint Finish
  As standard, Type S & Type CS steel actuators are finished with an offshore 2-pack epoxy paint finish (other paint specifications available on request) and Type SX & Type CX 316 stainless steel actuators are supplied in a natural finish.
- Full Torque Output.
  The pneumatic spring return version at the beginning of the spring stroke has a 15% increase in torque output, providing extra power for the break torque and at the end of spring. Type S & Type SX standard actuator models torque output has the same spring return torque as that of the double acting actuator.
- Modular Design (Type CS & Type CX)
  The simple removal of the pneumatic piston cylinder and / or spring cylinder allows for routine maintenance without having to disconnect the actuator from the process valve.
- Long Spring Life.
  All springs are stress relieved after forming to ensure a long life.
- Whole Life Cost
  Camtorc actuators are exceptionally low wearing providing low maintenance and the optimum Whole Life Cost solution for the customer.
- Mounting Connections
  The mounting to valves or dampers is according to ISO 5211 and the fitting of positioners & valve monitoring systems is according to VDI / VDE 3845.

Product reliability and ease of maintenance is the hallmark of the Camtorc series actuator

Pneumatic, Hydraulic & Electro-Hydraulic

Actuator Systems for Valves and Dampers

Control Systems

The control systems for actuators are of fundamental importance for providing actuator performance, functionality and reliability. Our engineers have considerable experience in this field and can supply bespoke control systems for valve actuation to satisfy all of the end client's operational requirements.

These include:

- BDV (Blow Down Valve) systems.
- ESD (Emergency Shut Down) systems.
- PST (Partial Stroke Test) systems.
- Modulating systems.
- Solenoid Control - 3/2-Way Single Coil, 5/2-Way Single or Dual Coil versions in both General Purpose and Hazardous Area Options (ATEX / IECEx Certified Ex ia, Ex d & Ex m).
- Position Feedback Monitors - Mechanical or Proximity End of Travel Switch / Sensor, 4 to 20 mA Feedback or Bus Communication versions in both General Purpose and Hazardous Area Options (ATEX / IECEx Certified Ex ia & Ex d).
- Positioner Control - Pneumatic, Electro-Pneumatic or Digital versions in both General Purpose and Hazardous Area Options (ATEX / IECEx Ex ia & Ex d).
- Miscellaneous Controls - Speed Control, Pilot Valves, Quick Exhaust Systems, Partial Closing Test Systems, Pressure Relief Valves and Others.

Automation Centre

Our engineers work with the latest SolidWorks 3D CAD system, producing accurate detailed and 'As Built' general arrangement drawings. For those customers requiring technical drawings, certain drawings are available in a SolidWorks .easm format that enables full 3-D viewing of our products using Free Downloadable Software.

Refurbishment Services

Actuators that are in need of repairs or overhaul can be sent to Camtorc, where trained engineers carry out all necessary work. This important service from Camtorc enables our customers to maximise the working life of product purchased.

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