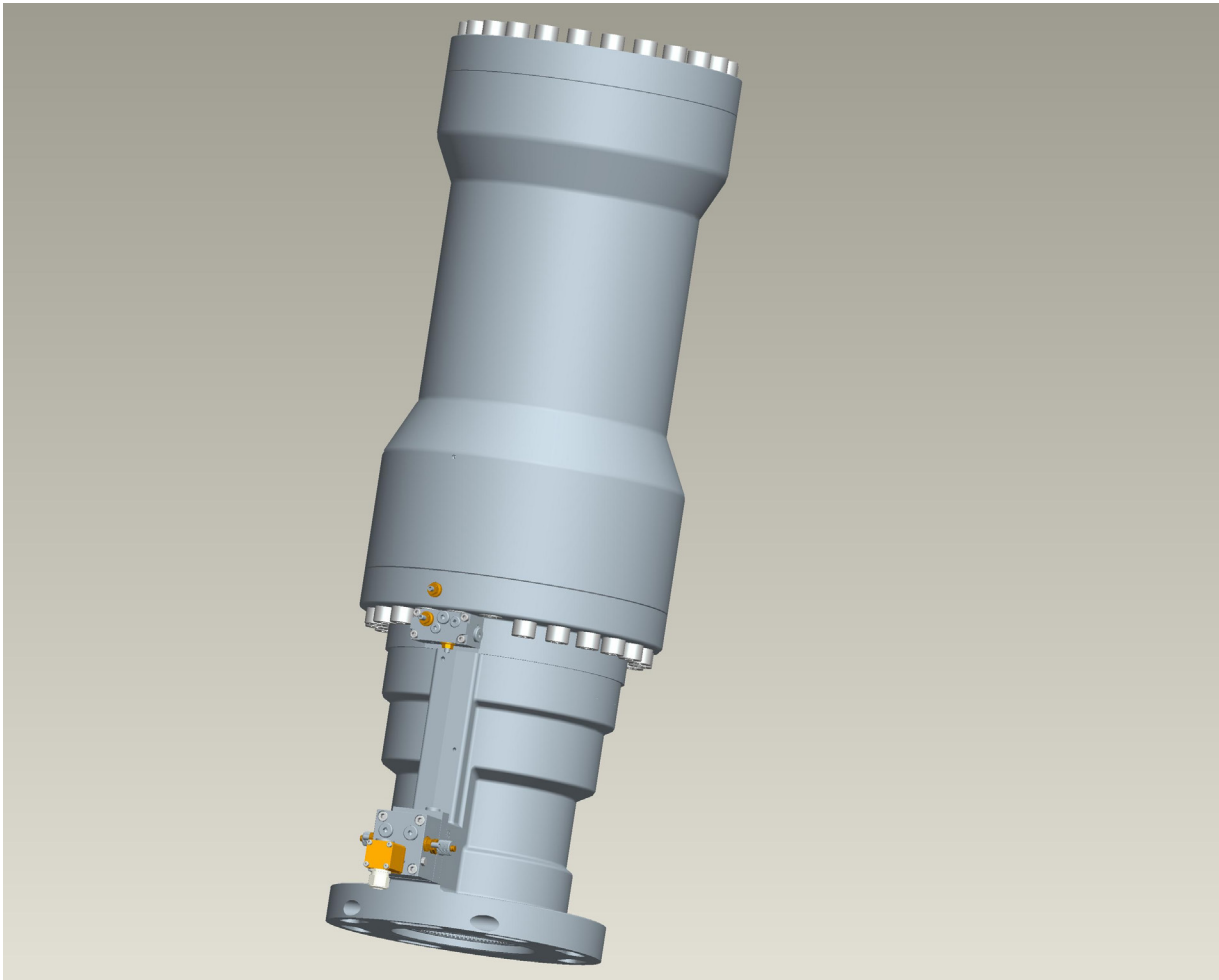


Damcos™ BRCF HT

Hydraulic Fail Safe Balanced Rotary Actuator 90° (Quarter-turn)



The BRCF Actuator for Fail-Safe Operation of Quarter-Turn Valves

- Unique and simple design with cross-over valve.
- Spring action by means of dished springs.
- Easy adaption to all well-known quarter-turn valves.
- Reliable and rugged, with more than 30 years service records on basic design.
- Compact with high-torque output.
- Also for operation in rough environment.
- Unlimited mounting positions and with built-in adjustments for end stops of rotary movement.
- Balanced rotary principle eliminates side forces and bending of valve shaft.

Standard Optionals

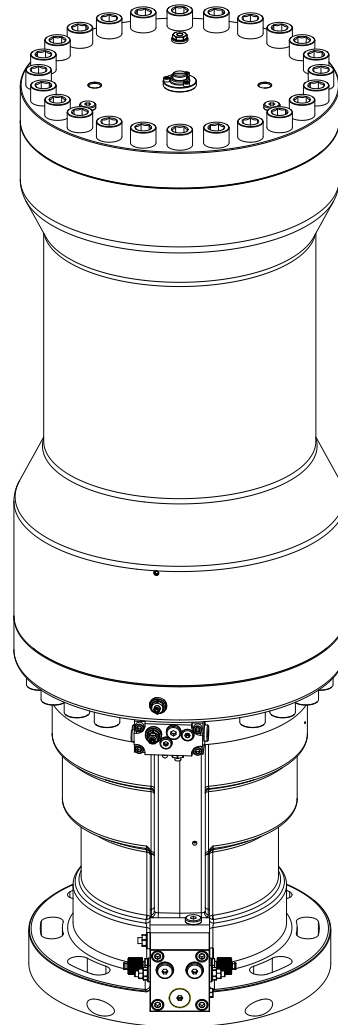
- El on/off
- Connection block with f. ex. filter
- Quick connection for emergency operation with portable hand pump
- Epoxy coating

On request spec. features as:

- Flushing valve built into the connection block making it possible to flush the system without disconnection of pipes.

Control Equipment

The BRCF actuators are designed for pipe connection to the G 1/4 actuator port.



Technical specification

Temperature range:	-20°C to +80°C, seals NBR (other temp. ranges on request)
Housing:	GGG 40
Piston:	GGG 40
Output shaft:	SS 2142
Dished springs:	50 CrV4
Indicator shaft:	AISI 316
Intermediate flange:	St 52-3
Adapter:	SS 2142
Coating:	Primer: Min. 40 micron, type Hempel EE 13140 Top coat: min. 25 micron alkyd, red no. 51320

Description

The following description is for fail-closing actuator:

The actuator (valve) is opened when hydraulic pressure is applied to the BRCF HT B-port.

The pressurized oil is led into 2 chambers, one for compressing the springs and one for turning the actuator (valve). As springs are compressed separately from the actuator piston movement, the full applied pressure will give almost same torque as same size BRC delivers at same pressure.

During valve opening there will be a return flow from the actuator, led through A-port to tank.

If pressure in B-port is reduced below a certain level, a valve in control block will change over thereby initiating closing of the actuator (valve).

The spring-pressurized oil is used for closing the actuator (valve), and the oil that was used for opening the actuator valve is then led through A-port back to tank. During this movement the closing torque falls from start closing torque (70% of nominal torque) to min closing torque (40% of nominal torque).

When the actuator (valve) is only 10% open the valve block changes again and the actuator will close at full nominal torque.

Closed position

In closed position the valve will be kept closed by means of hydraulic pressure generated by the spring force. If some minor leakage in the actuator-system appears, the spring piston will be pressed to its end position making a mechanical connection keep the actuator in closed position.

As B-port is used for opening flow and A-port is used for opening and closing flow both ports must be connected to the hydraulic system; A-port always to tank line.

Because of the way the oil is flowing during operation, hydraulic position indicator can not be used.

For same reason direct position indication must be used.

Classification

Meets requirements from the major classification and approval authorities like:

- Det norske Veritas
- Lloyd's Register of Shipping
- American Bureau of Shipping
- RINA
- Russian Register of Shipping
- Bureau Veritas
- Germanischer Lloyd
- U.S. Coast Guard

Manufacture

The BRCF actuators are manufactured in accordance with the guidelines for quality system stated in the ISO standard.

After assembly each actuator is flushed according to ISO 4406 21/19/16 standard and plugged.

Flushing according to ISO 4406 18/16/13 standard can be performed on request.

Operating Restrictions

Please observe specific rules and demands from the classification societies and authorities concerning operating pressure and temperature range.

(Example - ABS: Max. operating pressure = 20% of burst pressure.). For extreme cycle speeds, loads and lifetime expectations please consult manufacturer.

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