

POWER AND MOTION CONTROL FOR SUBSEA APPLICATIONS

- HYDRAULICS
- PNEUMATICS
- ELECTROMECHANICS
- SLIDING BEARINGS



LEADING SUPPLIER OF POWER AND MOTION CONTROL WITH A CENTURY OF EXPERIENCE

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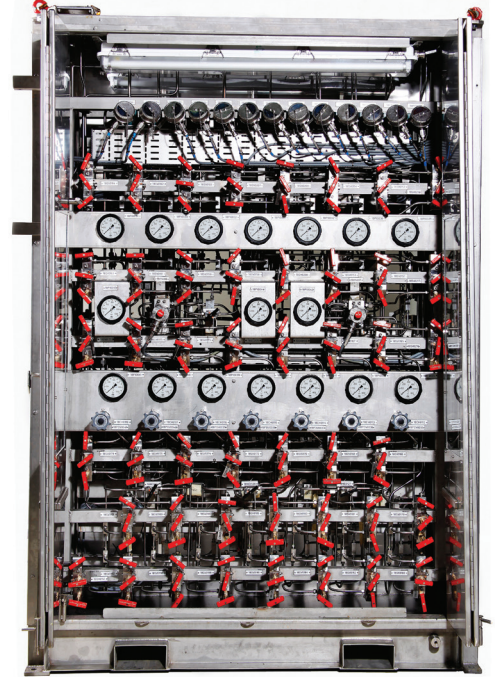
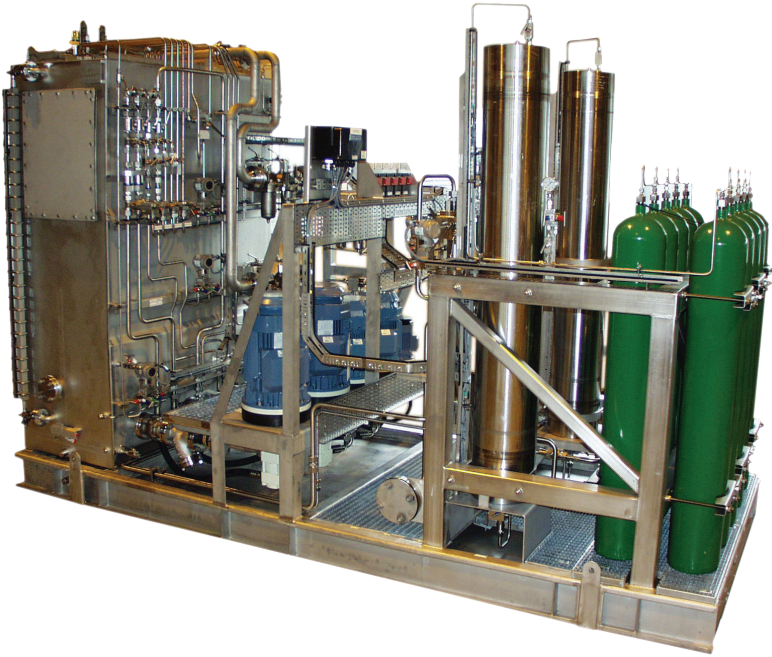
Ever since 1912, Servi Group has been a key player within Power and Motion Control, with particular emphasis on the marine and offshore industry. We follow our customers all over the world and supply high quality components, sophisticated total solutions, and a comprehensive range of repair and maintenance services.



POWER AND MOTION CONTROL FOR SUBSEA

- Subsea Control Systems
- Test & Flushing Equipment
- Top Side HPU's
- Accumulator Racks
- Special Accumulators and Cylinders

HYDRAULIC SYSTEMS & TEST UNITS



THE ORMEN LANGE PROJECT

Servi delivered the hydraulic packages which control the process valves in the processing plant at Nyhamna in Møre og Romsdal (on the West coast of Norway), as well as the land-based hydraulic supply units of the control system of the 24 subsea wells in the Ormen Lange field.

Our technologically skilled, cross-trained employees have a high degree of product and application knowledge. This expertise combined with a wide range of high quality products enable us to design and manufacture the best solutions based on customer specifications - with regard to both technical and commercial aspects.

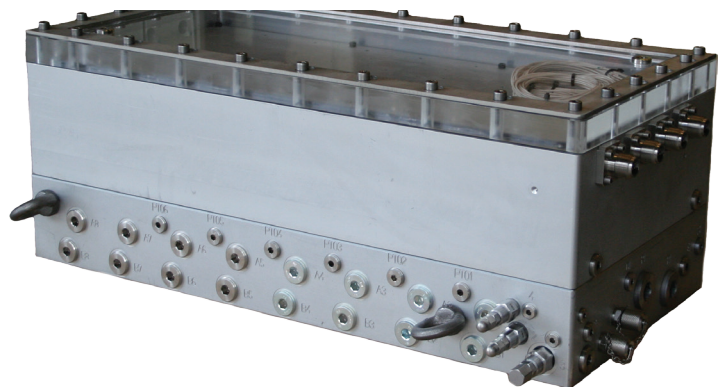
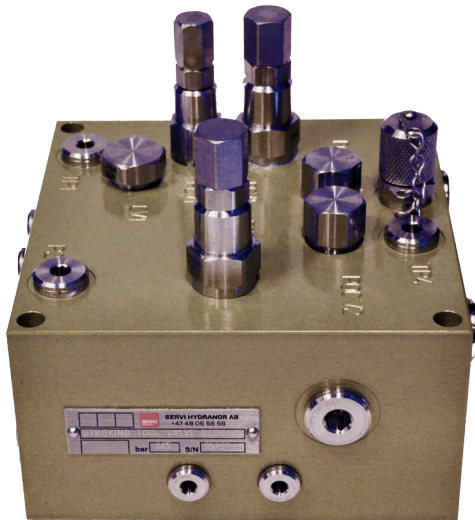
Due to our extensive product range and experience, we can meet most requirements cost-effectively by using standard components. When special design is necessary, we have the knowledge and experience to provide bespoke components and systems.

Servi is the leading manufacturer of hydraulic systems in Norway, with production facilities in Trondheim, Ski, Kongsberg, Ulsteinvik, Stavanger and Kristiansand.

TEST- AND FLUSHING UNITS

HPU's for testing and flushing subsea equipment onshore.

VALVES AND VALVE BLOCKS



MANUFACTURER OF HYDRAULIC VALVES AND VALVE BLOCKS

Servi Hydranor is one of Norway's leading suppliers and manufacturers of valves and valve blocks. We have a long tradition in this field and boast modern production facilities in Kongsberg, Ski and Kristiansand.

PRODUCT RANGE

- Hydraulic valves with high flow 200 -1500 lpm.
- Hydraulic valves with pressure from 200 -350bar (760bar).
- Proportional directional valves

PRODUCTION

Material:

- Stainless steel 316
- Ductile Iron GJS-400-15
- Seawater resistant aluminium AW-6082-T
- Carbon steel
- Stainless steel 304, 316

Production capability:

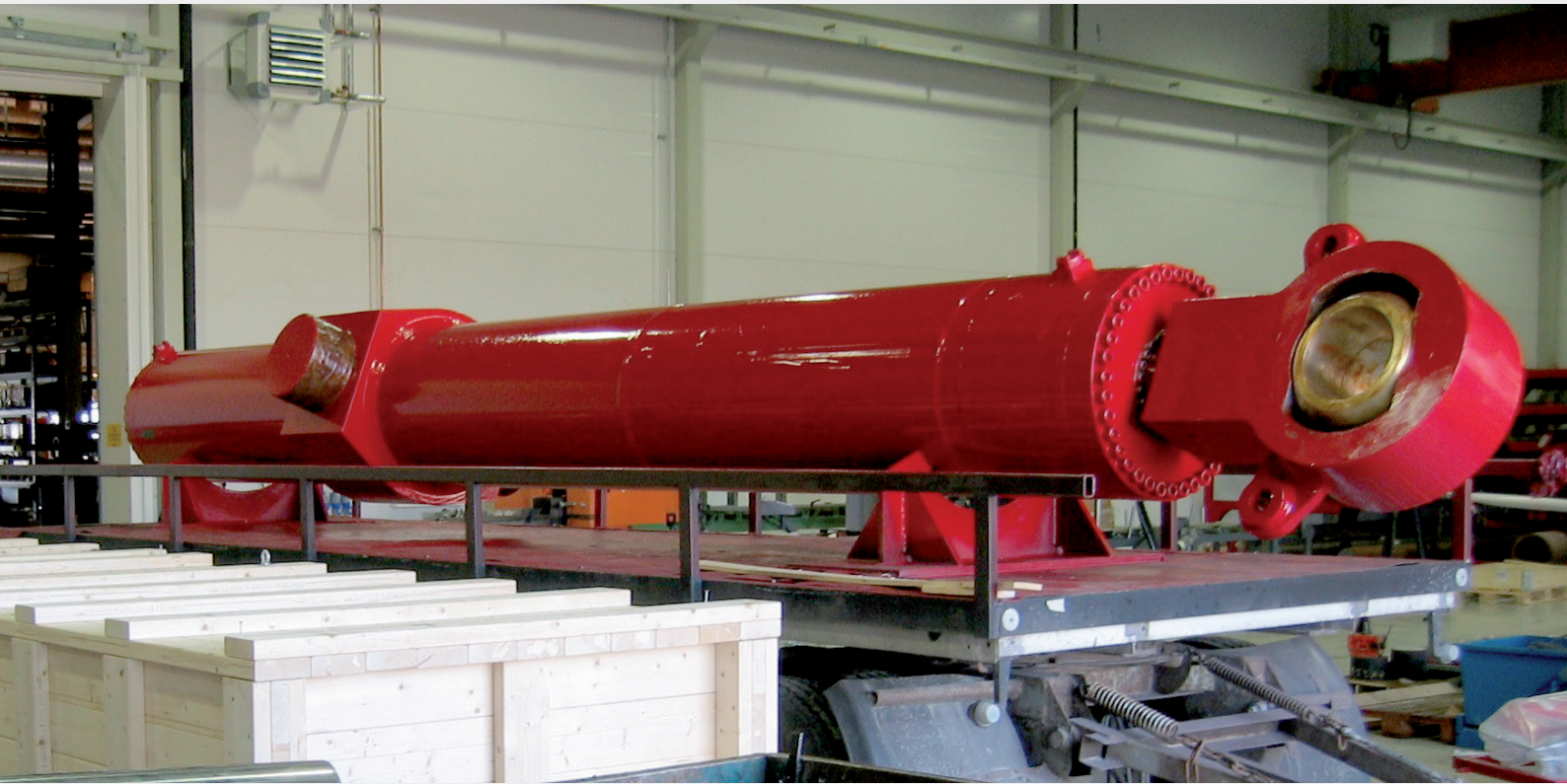
- Machining of manifolds and blocks

Sizes:

- 800mm in diameter of work piece (rectangle within)
- 1000mm in work height
- 1200 kg table load

Components and systems are corrosion protected according to customer requirements.

HYDRAULIC CYLINDERS



CYLINDERS

Servi Cylinderservice AS offers a wide range of standard hydraulic cylinders, but most of the production is based on customised solutions.

We deliver cylinders with pistons in diameters 20-800 mm, strokes up to 12 m, depending on dimension and design, both in black and non-corrosive material qualities.

Special cylinders

We manufacture cylinders for different purposes in the field of offshore, hydro power, marine/ship, subsea and land based industry. All with different designs, dimensions, pressure classes, materials, integrated valves and sensors, for example tension cylinders for risers on floating platforms.

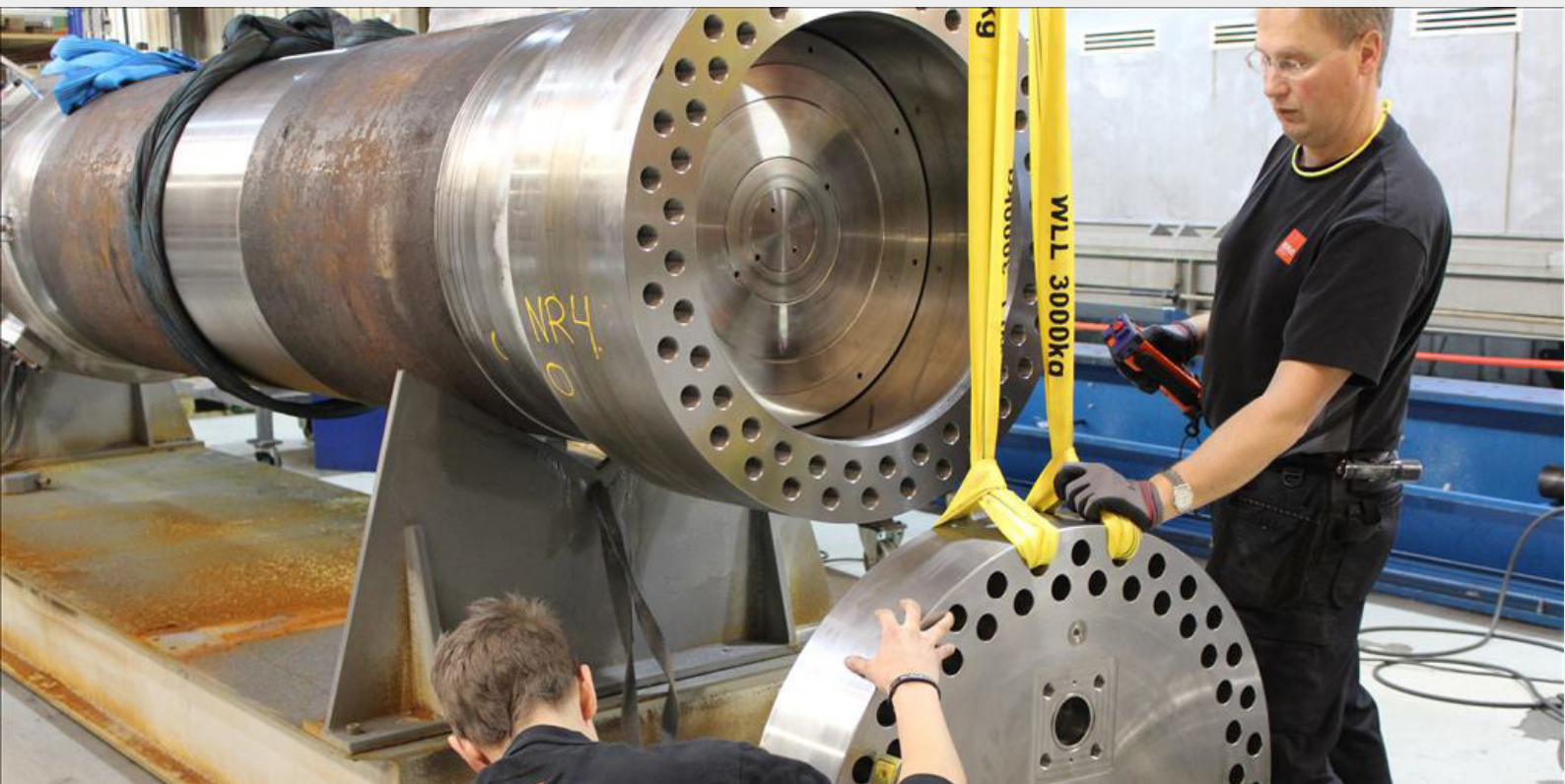
Telescopic cylinders

We design and produce telescopic cylinders for any industrial application.

Single operated / plunger cylinders

We have for several years delivered plunger cylinders for lifting of bow ports, ramps, ferry berths etc.

HYDRAULIC ACCUMULATORS



PISTON ACCUMULATORS

We design and manufacture accumulators according to customer specifications, in most types of materials, for example limit switches, burst discs, external and internal position sensors, accumulators for subsea use, etc.

Accumulators are produced in the dimensions Ø 40 – Ø 700 mm for up to 3000 Bar. Accumulators are CE approved according to PED.

The approvals also cover Pressure Tanks and Subsea Compensators.

BLADDER ACCUMULATORS

Both CE/PED and ASME models available. Special sub-sea flange connections for BOP's can also be delivered.



GREASE SYSTEMS



PISTON ACCUMULATORS

We design and manufacture accumulators according to customer specifications, in most types of materials, for example limit switches, burst discs, external and internal position sensors, accumulators for subsea use, etc.

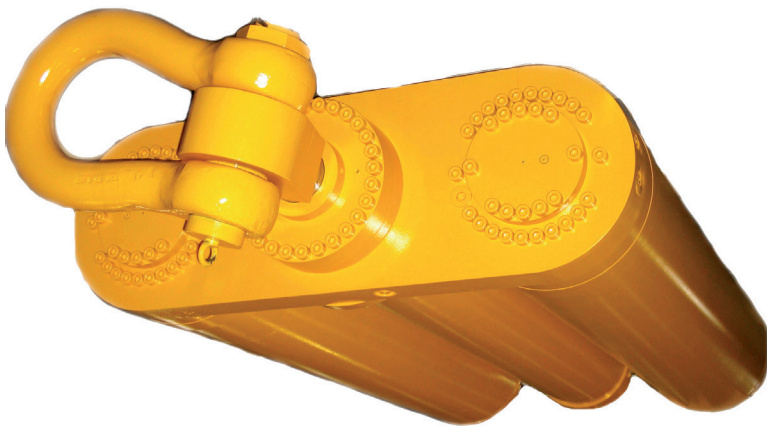
Accumulators are produced in the dimensions Ø 40 – Ø 700 mm for up to 3000 Bar. Accumulators are CE approved according to PED.

The approvals also cover Pressure Tanks and Subsea Compensators.

BLADDER ACCUMULATORS

Both CE/PED and ASME models available. Special sub-sea flange connections for BOP's can also be delivered.

DAMPERS / ABSORBERS



SERVI CYLINDERSERVICE DAMPERS

Standard dampers with or without accumulators for depths up to 1000 m. Custom-made seawater compensated dampers can also be delivered. These can be used at any water depth, but need to be designed for the specific mass being landed. The landing dampers can be designed for a max permissible g-force in the landing process, in cases where sensitive equipment is being immersed.



ENIDINE ABSORBERS

Shock and vibration isolators for structures, modules and racks with high energy capacity and a wide range of temperatures and materials. Soft landing dampers for lowering equipment to the sea floor.

PUMPS & ROTARY ACTUATORS



DYNEX HIGH PRESSURE PUMPS

Fixed displacement pumps are compatible with a variety of water-based and other low-lubricity fluids. Bi-directional shaft rotation provides constant direction of output flow regardless of drive shaft rotation.

MAINTENANCE-FREE DESIGN

The single fluid checkball design uses the pumped fluid for internal bearing lubrication. This eliminates the risk of fluid cross-contamination, possible in other designs with isolated lubrication. It also saves the cost of a lubrication circuit.

RELIABLE HIGH PRESSURE

Individual piston check valves provide long service life and greater volumetric efficiency, especially at high pressures and with low-lubricity fluids.

The check valves take the place of a valve plate in other pump designs. With no rotating sealing surface, checkball pumps are resistant to wearing and scoring.

- High quality, fixed displacement, «checkball» type piston pump
- Specially designed for offshore and subsea applications
- Extremely well suited for low viscosity fluid
- Max operating pressure 1040 bar



ROTARY ACTUATORS

High quality rotary actuators.

Different type of construction:

Vane, Helical, Rack and Pinion. Standard or customer made.

For topside or subsea use.

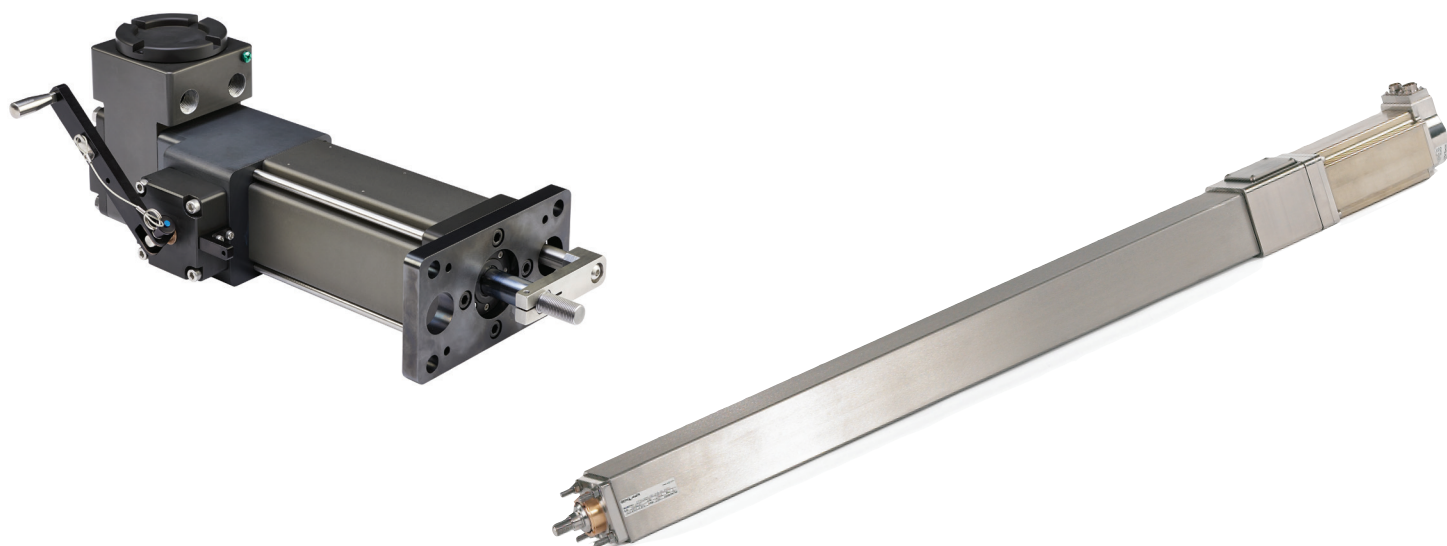
A wide range of sizes are available.

Helical construction up to 250.000Nm.

Rack and pinion up to 350.000Nm.

Angle of rotation up to 360gr as standard, and up to 1.500gr as special.

ELECTROMECHANICS

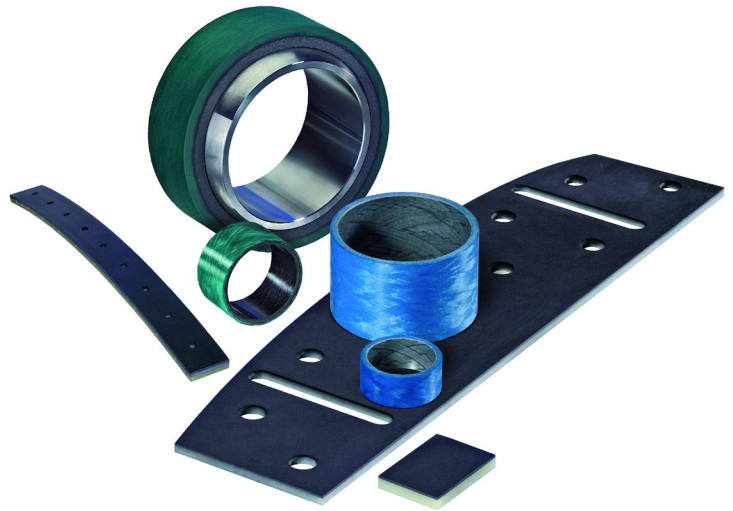
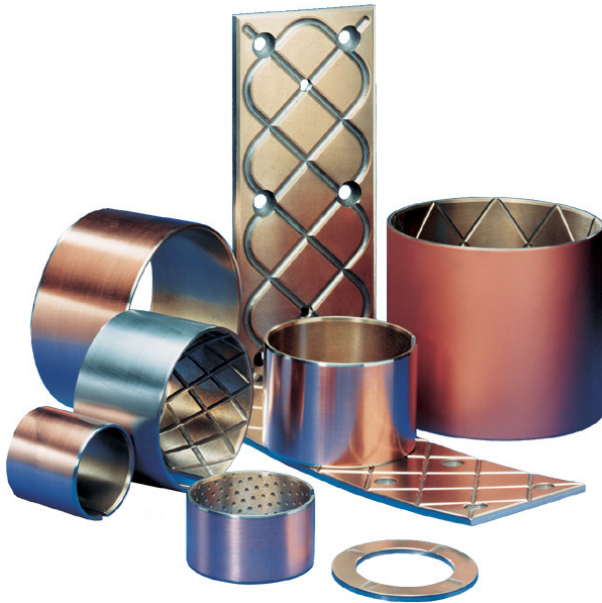


ELECTROMECHANICAL ACTUATORS

We offer standard components from Exlar & MOOG, for top side use.

- Ex d compatible
- Large temperature range (arctic conditions)
- Possibility of high speed
- Integrated positioning
- Excellent accuracy and repeatability
- Ability to synchronise execution of several actuators
- Low maintenance requirements
- Holding brake
- High efficiency
- Available in SS316

SLIDING BEARINGS



ADVANCED SELF-LUBRICATING, MAINTENANCE-FREE SLIDING BEARINGS

from the leading German manufacturer DEVA, in several materials well suited for demanding subsea applications.

Working in close partnership with Deva, we have the experience, the competence and the resources necessary to provide the best solution for our customers' bearing requirement. The strong R&D capabilities of Deva, teamed with our experienced engineers, puts us in a unique position to assist where an effective, reliable, long-lasting and safe bearing solution is required.

Corrosion resistant, field proven materials – metals and advanced composites – as well as high quality engineering, production and product control make the Deva bearings ideal for demanding subsea applications. Relevant certifications and approvals for the subsea business are provided on demand.

SERVICE, REPAIR AND TESTING - WORLD WIDE



24/7 WORLD WIDE SERVICE

We offer world wide service, trouble shooting and mounting, and also pro-active maintenance on automation, hydraulic and mechanical equipment.

In our service- and maintenance department we take on single assignments and/or more comprehensive service contracts.

You can reach us at any time on our 24 h service tel +47 64 97 97 00.

SERVI TEST CENTER

Several leading manufacturers – including Kawasaki, Eaton/Vickers, Hawe and Moog – have certified Servi to undertake repairs on their behalf. We also repair products from other suppliers.

Our customers demand more than 'just' a repair. In Servi Test Center, we can verify and document the performance of repaired pumps, valves and motors, and also undertake full-scale block solution testing.

Servi Test Center enables us to quality-assure repaired components and complex block solutions to match our customers' requirements.

CLOSE TO THE CUSTOMER WITH A GLOBAL NETWORK



Our main office is situated in Ski/Norway.
You can reach all our offices by phone on
+47 64 97 97 97, or by sending e-mail to:
post@servi.no.

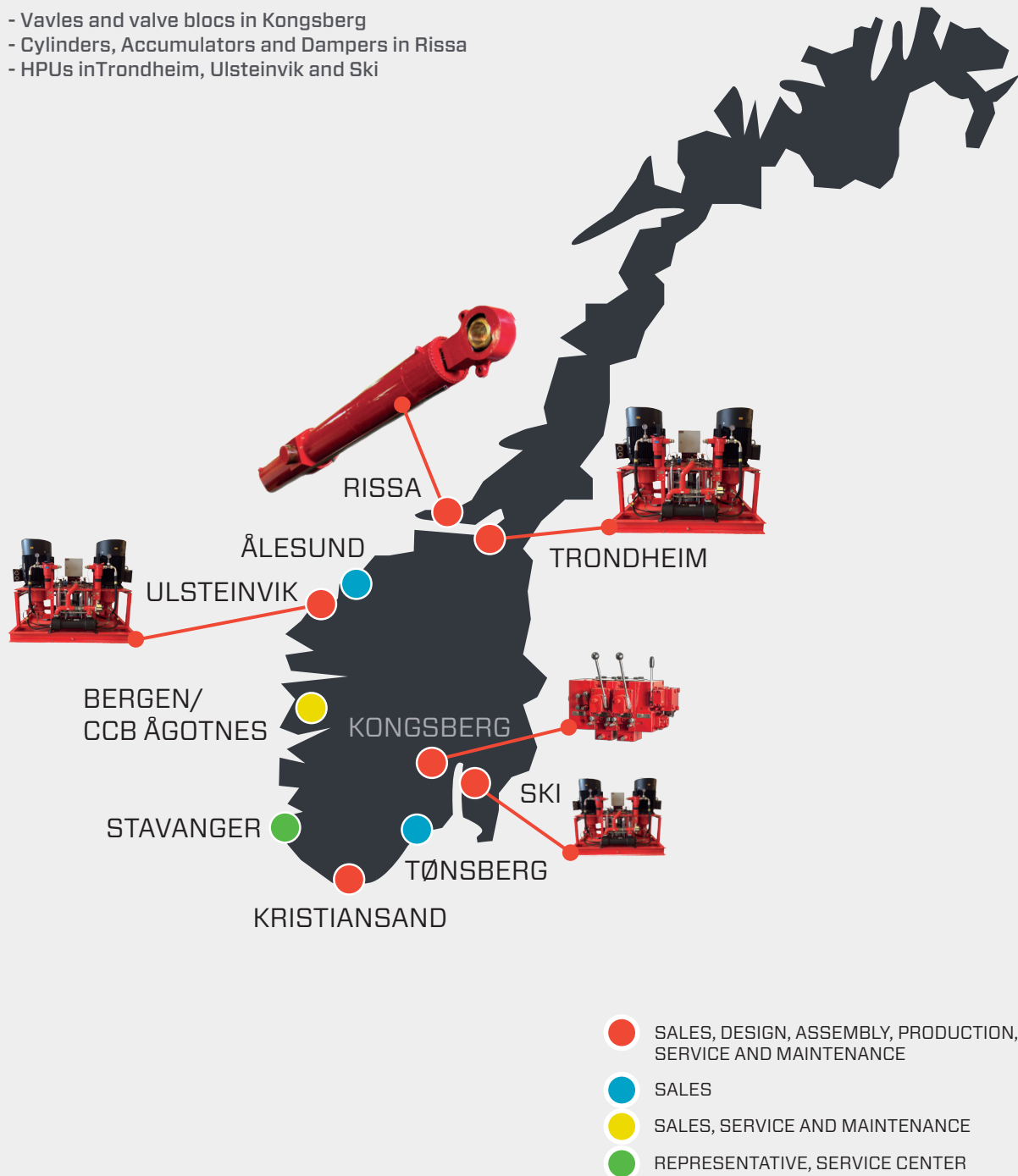
We assist our customers worldwide:
24/7 Tel +47 64 97 97 00

- SALES, DESIGN, ASSEMBLY, SERVICE AND MAINTENANCE
- SALES
- REPRESENTATIVE, SERVICE AND MAINTENANCE

EXPERTISE AND PRODUCTION FACILITIES

Servi is Northern Europe's leading manufacturer of:

- Vavles and valve blocs in Kongsberg
- Cylinders, Accumulators and Dampers in Rissa
- HPUs in Trondheim, Ulsteinvik and Ski



SERVI GROUP

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