

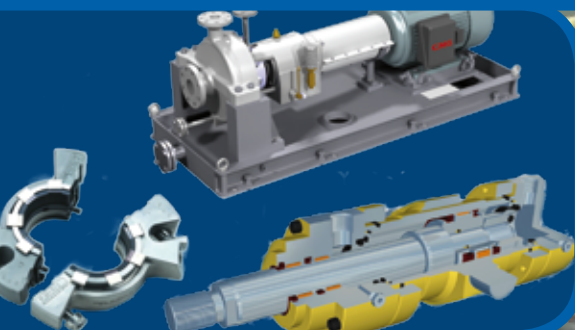
**PUMPS
HYDRAULIC CYLINDERS
SEALING PRODUCTS**



fuglesangs



WORLD WIDE | PRODUCTS • SOLUTIONS • REPAIR • ENGINEERING



SOLVING TECHNICAL PROBLEMS SINCE 1916



**”Large enough to handle
– small enough to care”**



WHO WE ARE AND WHAT WE DO



Fuglesangs Group

The Fuglesangs Group can be traced back to 1855, when the company G.R. Fuglesangs Sønner AS was established in Oslo, Norway. This entity still acts as a holding company for the Fuglesangs Group of companies.



Fuglesangs has set out to be a world leading supplier of solutions and services in the area of pumps, hydraulic cylinders and sealing technology. This includes having focus on always delivering the optimal product or service for the job at hand. Close to our heart is our passion for problem solving and also for helping our customers, no matter when or where the problem arises.

"...dealing with challenging applications is our core business."

Our competitive advantage is our ability to offer solutions which reduce total costs for the end-user. This includes supplying new equipment, performing repairs, fabrication, upgrades, modifications, as well as taking on preventive maintenance or system design-related tasks. We work in our in-house facilities or at the customer location, whichever is most convenient.

Recent reference projects:

AIBEL	Submersible sludge pumps
AKER SOLUTIONS	Hydraulics & pumps
BW OFFSHORE	Deepwell pumps
HOEGH LNG	Sealing program and cargo equipment
NORSK HYDRO	Hydraulic cylinder program
MAERSK	Mechanical seals

Fuglesangs Ltd AS, Norway

Group headquarters in Oslo. Stock, repair and fabrication workshops in Oslo, Holmestrand and Sarpsborg. Sales offices in Bergen, Kristiansand and Porsgrunn.

Fuglesangs Trading AS, Norway

Sale of steel, exotic metal products and plastics. See: www.fuglesangs.net

Fuglesangs BV, The Netherlands

Sales, service, repair and fabrication workshop in the harbor area of Rotterdam.

Fuglesangs (Singapore) Pte Ltd, Singapore

Sales, service, repair and fabrication workshop in the Tuas area in Singapore.

Fuglesangs UK Ltd, United Kingdom

Sales, service and repair in Glasgow.





CENTRIFUGAL PUMPS

SEAWATER, FRESHWATER, MUD, SLURRY, CHEMICALS

Capacity:	< 4500 m ³ /hr
Pressure/Head:	< 400 m
Materials:	Cast iron, NiAlBr, SS316, (S)Duplex, Aluminium, Monel, Hastelloy, Titanium
Miscellaneous:	Single & multi-stage Vertical & horizontal configuration Submersible and dry-mounted DIN and ANSI norms available



SUBMERSIBLE PUMPS

WATER, SAND, MUD, SLURRY

Capacity:	< 800 m ³ /hr
Head:	< 85m
Materials:	Cast iron, Chrome steel, Aluminum, Other on request
Miscellaneous:	Speciality is drilling mud, slurries and high rock content High depth and high pressure subsea versions available Hydraulically or electrically driven Extremely robust executions



PROCESS PUMPS

HYDROCARBONS, WATER, CHEMICALS

Capacity:	< 1600 m ³ /hr
Pressure/Head:	< 600 m
Materials:	Carbon Steel, (S) Duplex
Miscellaneous:	API 610 - 10th edition Vertical & horizontal configuration Single & multi-stage



COMPOSITE PUMPS

ACIDS, SEAWATER, SLURRIES

Capacity:	< 800 m ³ /hr
Pressure/Head:	< 100 m
Materials:	Injection molded thermoset resins
Miscellaneous:	Horizontal and vertical designs High quality engineered composites, with silica option for demanding applications. Outstanding lifetime compared with exotic metals like (S)Duplex and Hastelloy C



SCREW, LOBE, PISTON & MEMBRANE PUMPS

HIGH PRESSURE, VISCOUS MEDIA & METERING

Capacity:	< 1000 m ³ /hr
Head:	< 415 bar
Materials:	Cast Iron, SS316, engineered plastics or other options
Miscellaneous:	Mono as well as 2/3 spindles Options for API 674/675/676 EX & ATEX certificates available





JETEX™ PACKING EXTRACTOR SYSTEM

REMOVE PACKINGS FROM VALVES, FLANGES & PUMPS IN SECONDS

Description:	Pump system that uses only air and water – no chemicals or electricity
Air inlet pressure:	< 6-8 bar
Water outlet pressure:	< 900-1380 bar
Weight:	25 kg
Includes:	Hose, gun, nozzles, tool-kit & transport box



PUMP SKIDS & ENGINEERED FLUID SYSTEMS

INJECTION, DRILLING MUD RETURN, METERING, CLEANING

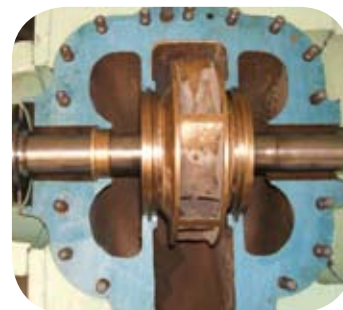
Capacity:	< 48 m ³ /hr
Pressure/Head:	< 415 bar
Materials:	Various material combinations depending on the application requirements
Miscellaneous:	High quality compact systems EX & ATEX certificates available Certification according to relevant class society



PUMP REPAIR & RECONDITIONING

WORKSHOPS & INTERNATIONAL TRAVEL-CREW

- Conventional & emergency repairs
- Practically any make & model
- Laser alignment
- Vibration monitoring
- Pump maintenance & upgrade programmes
- 24/7 availability



PUMP SPARE PARTS

PUMP SPARE PARTS FOR MAJOR MARINE PUMP BRANDS

Pump types:	Hamworthy, Kvaerner, Naniwa, Shinko, Taiko-Kikai, Teikoku, Thune-Eureka
Materials:	Cast iron, SS 316, NiAlBr, composite resins and other materials
Miscellaneous:	Original and replacement parts, like impeller, mechanical seal, shaft, bearing, casing, etc



ENGINEERED SOLUTIONS

CAPABILITIES BEYOND THE PUMP

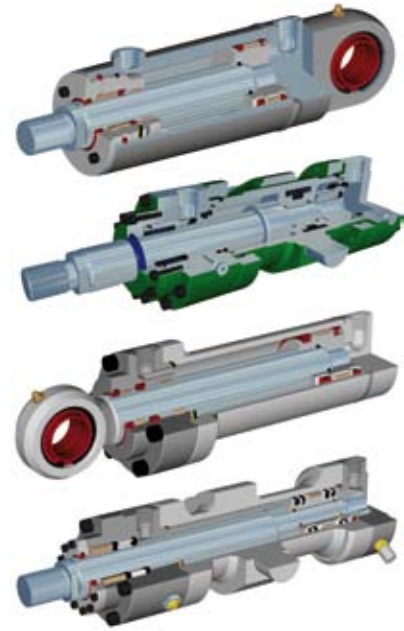
- Predictive & standardized maintenance systems
- Cargo system upgrade
- Ultra compact chemical injection solutions
- Valves, piping and sealing solutions for LNG systems
- Split-seal technology for simplified maintenance
- Energy savings – programmes



HYDRAULIC CYLINDERS

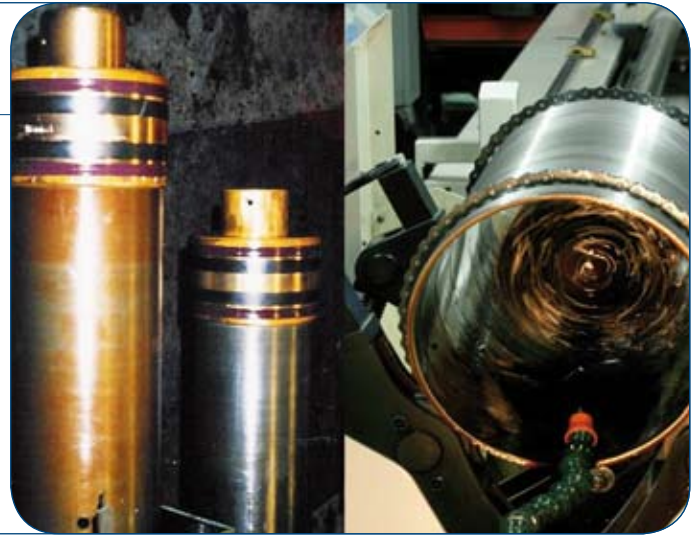
HYDRAULIC CYLINDERS FOR ALL DEMANDING APPLICATIONS

Types:	Single and double-acting
Design:	Tailor-made or according to standards, such as ISO 6022
Seals:	Standard elastomers or high performance co-polymers
Bearing bands:	High performance self-lubricating materials
Miscellaneous:	Designed to endure in demanding environments and for simplified maintenance Class certificates available



CYLINDER REPAIRS & UPGRADING ALL BRANDS OF HYDRAULIC CYLINDERS

- High accuracy polishing of cylinder tube
- Various coating options (offshore-grade chroming, etc.)
- Materials optimized for the application
- Expert-level execution
- Re-design & optimization of cylinders



HYDRAULIC SOLUTIONS CAPABILITIES BEYOND THE CYLINDER

- Failure-analysis of hydraulic systems
- Power packs, pumps & motors
- Swivels
- Hydraulic hoses
- Seal upgrade programmes



SEALING PRODUCTS

MECHANICAL SEALS

FOR ALL ROTATING APPLICATIONS

Types:	OEM, single-spring, single/double cartridge, split and gas seals
Face Materials:	Ceramic, carbon, silicon carbide, tungsten carbide, SS316
Elastomer Materials:	Nitrile, Viton, EPDM, PTFE, Chemlast, Kalrez, Aflas
Barrier Fluid Systems:	According to API plans or customer specification
Miscellaneous:	Chesterton distributor Designed for standard as well as demanding environments



PACKING, SEALS & CUSTOM SOLUTIONS

FOR STATIC, ROTATING AND RECIPROCATING APPLICATIONS

Types:	Gaskets, braided packing, o-rings, split seal systems, fluid sealing
Materials:	Polymers, graphite, carbon, mineral fibres, spiral-wound, steeltrap, PTFE
LNG sealing:	Complete program for plant and ship-wide LNG sealing
Split seals:	Expert know-how in a variety of split seal designs for several applications
Miscellaneous:	Chesterton distributor Equipment sealed include: valves, pumps, flanges, hatch covers, manifolds, heat exchangers, winches, piping, winches, boilers, reactors, condensers and other types Hatch cover equipment, packings, survey & supervision



MECHANICAL SEAL RECONDITIONING

COMPLETE STATE-OF-THE-ART FACILITIES FOR MECHANICAL SEAL REPAIR

- Detailed inspection and reporting
- Failure analysis under digital microscope
- Lapping of most seal face materials: SS, RSC, SSC, Tungsten, etc
- All seal faces are checked under monochromatic light
- All seals are vacuum or pressure-tested
- Large stock of mechanical seals and seal parts





NORWAY (main office):

Fuglesangs Ltd. AS
Nedre Skøyen vei 11
P.O. Box 174, Skøyen
0212 Oslo, Norway

Telephone: +47 22 542000
Telefax: +47 22 542001

oslo@fuglesangs.com

THE NETHERLANDS:

Fuglesangs BV
Sluisjesdijk 48, Port #2006
3087 AH Rotterdam
The Netherlands

Telephone: +31 10 428 6430
Telefax: +31 10 428 6431

rotterdam@fuglesangs.com

SINGAPORE:

Fuglesangs (Singapore) Pte. Ltd.
41 Tuas View Close
Singapore 637478

Telephone: +65 65 588060
Telefax: +65 65 588056

singapore@fuglesangs.com

www.fuglesangs.com

