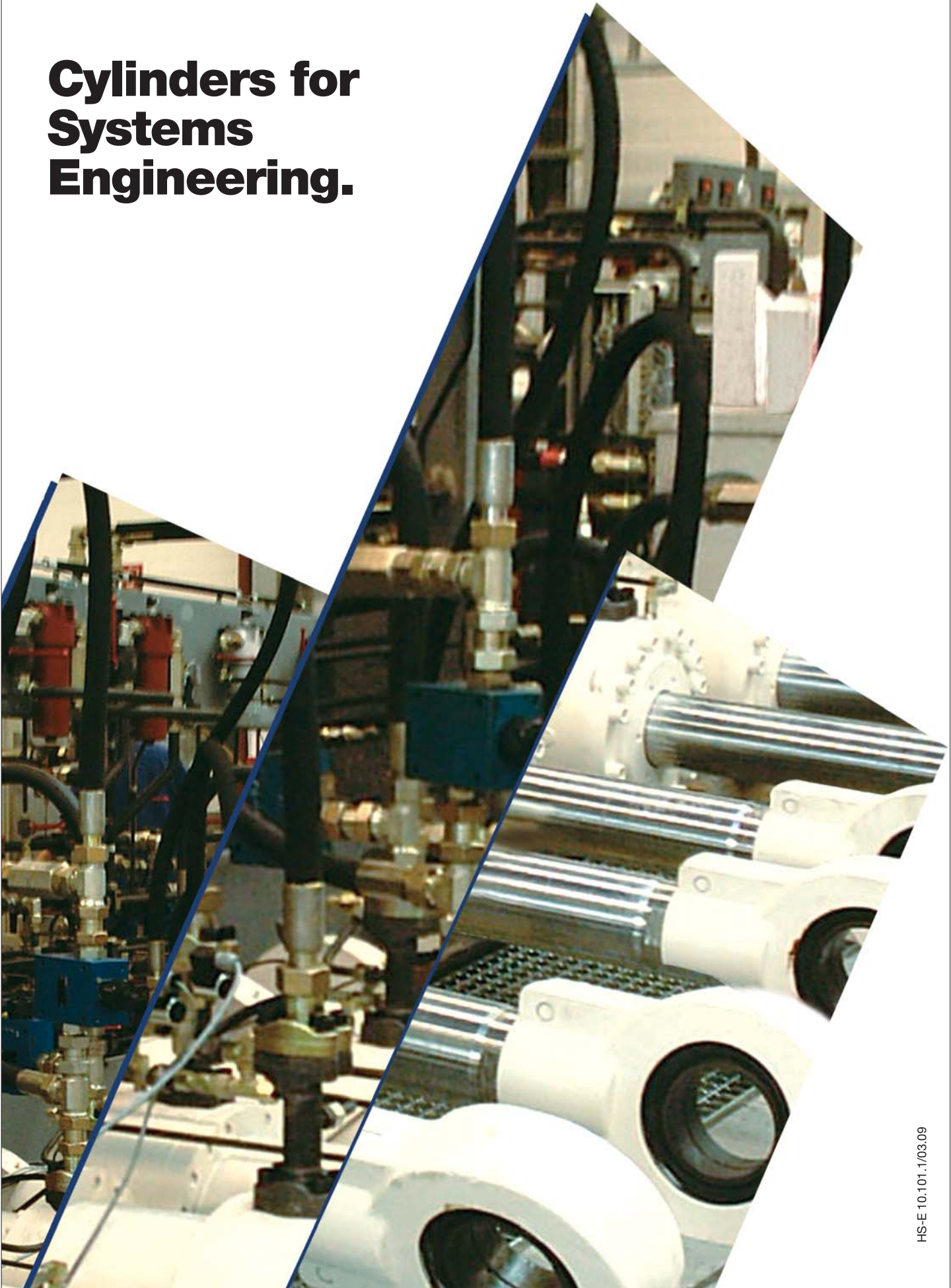


Cylinders for Systems Engineering.





Competence.

More than 40 years experience in development and production of individually designed cylinders makes HYDROSAAR your competent partner. Innovative thinking, flexibility, technical competence and permanent readiness to go unusual ways are the guarantee of our success.

Our Goals.

Making sure that our customers are given satisfaction, competent problem solutions, professional and requirement oriented support and deliveries on schedule.

Quality.

Permanent surveillance of all processes. From design to mounting, control of single parts as well as the final products, the measuring surveillance, contamination control of all hydraulic oils used.

Our top goal:

- High quality
- constant improvement of our quality
- permanent observation of our production and control of the goods produced

Quality concerns our whole efficiency on all levels of our company:

- determination of our customers needs on schedule and specification conform delivery of the products
- installation
- repair

Our level of quality is shown in a very tight and individual cooperation with our customers and suppliers. And in constant training and continuation of employee education.

Technology.

For high demands on our final products we use up-to-date technologies: 3D-calculation, FEM and simulations for optimized designs.

Flexibility in Production.

Through qualified, highly motivated experts and modern machinery equipment with all possibilities of treatment and processing.

Solutions out of one Hand.

Wherever you need us, we are there to help you find the best solution. For each application from the component to the complete system.

Global Authorisations.

- TÜV Deutschland
- Lloyds Register
- German Lloyd
- Gost-authorization Russia
- American Bureau of Shipment
- Büro Veritas
- etc.



Service.

Professional Service for all Cases.



Disassembly stand HYDROSAAR



Before repair work ...



... and after repair work.

Assembly, Installation, Maintenance, Repair Work and Rebuilding.

Repair work is one of our strengths regarding our service-offer, right next to the production of our powerful products.

Because of our experience concerning the dealing with cylinders world wide, we have created a service-area around the repair of cylinders.

Cylinders of all types and makes are disassembled and an expert assessment is done in our workshop. Based on an analysis of the damage we draw up an estimate.

According to the customers wish we are able to use different repair methods. In the course of repair and rebuilding work HYDROSAAR offers all commonly used methods of chemical and physical surface finishing.

Surface-treatment procedures:

- Galvanic methods,
- Flamespraying method,
- plating,
- high velocity flame spraying,
- welding procedure (PTA, plating)

All repaired cylinders have to undergo an intensive quality testing and therefore fulfill the highest quality standards.

Repair possibilities:

- up to 10 m
- up to 10 t (individual weight)
- Ø up to 1,000 mm

Cylinders and Cylinder Systems.

Wherever Roughness is usual – for Example: under Water and at Sea.



Dredge Ships.



Cylinder with stroke: 4 m, weight: 8 t

Ship Unloading Units (CSU).



Cylinders with stroke: 6 m, weight: 14 t

Ship Loading Units.



Cylinders from HYDROSAAR withstand aggressive salty seawater, sea air, dirt and dust.

Cylinders and Cylinder Systems for Ships and Offshore.

Especially in these aggressive surroundings the cylinders are highly demanded. We prepare our high quality products by using well selected materials, special coatings and resistant sealings.

The special design of all components used for cylinders and cylinder systems from HYDROSAAR are guaranteed for an extreme operating life in extreme surroundings.

In Underground Mining and in Surface Mining.



Cylinder for Special Plant Engineering, for Example Ship Covers.



To load ships with watersoluble bulk goods. Special hydraulic process engineering cover devices for ships have been developed and furnished with special cylinders by HYDROSAAR.

Fin Stabilization System for a Ferry.



Hydraulic unit with stabilization cylinders.

Cylinders for Material Handling, Bucket Wheel Excavator.



Special demands here are maintenance-free, long lasting. The cylinders are designed for the use in very aggressive surroundings. As for example: copper dust, iron ore, coal, surface mining.

Wagon Tripler Units.



Low stick-slip cylinders with distance measuring systems and servo valves for exact positioning and controlling.

The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not described, please contact the relevant technical department. Subject to technical modifications.



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