

# MULTIDESIGN ENGINEERING AS

Independent engineering company that is passionate to solve challenges within a timely manner and with high quality.

Your preferred engineering and consultant company.

[MDES.no](https://www.mdes.no)

# WHAT WE CAN DO

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## MECHANICAL DESIGN

Small or large developments.

From concept design through to detailed design including calculations, simulations and other documentation.

Facilitation prototyping, testing and production as needed.

Core area of competence is down-hole tool design and related equipment as well as subsea and topside wells equipment.

New designs, upgrades and modifications, cost analysis, failure investigations and subsequent improvements.

## PROJECT MANAGEMENT

Any scope – small or large.

Advice on project definitions, criteria, planning and follow up.

Design, manufacturing, assembly and testing.

Outsourcing, quality systems implementation, patent applications and drawings.

## DESIGN ADVICE IN PROJECTS

Design reviews, FMECA, failure investigation, cost analysis and improvement.

## TECHNOLOGY AND IP EVALUATION

For example, in a due diligence process.

# PROJECT REFERENCES

Designed, tested and patented several tool-designs within well completion and intervention technology – including ISO 14310 & ISO 14998 qualified equipment.

Technical lead in projects like well construction equipment, intervention equipment – both coil tubing, wire line, completion and logging tools. Topside equipment and mining-equipment construction. Projects carried out according to Norsok, DnV and various API & ISO-standards

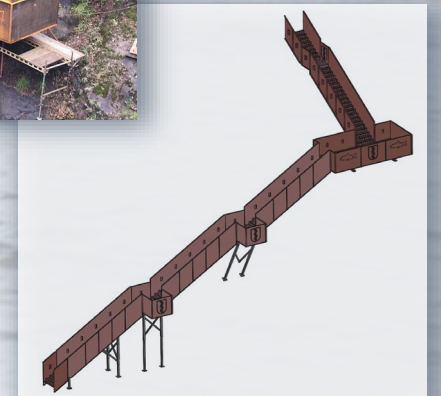
Experience with metallurgy, materials, heat treatment and steel making processes like forging, casting, rolling of bar and plates, oxy cutting and all types of machining operations.

Designed / manufactured several medium and high-pressure test cell for validation testing, FAT testing and similar. According to relevant standards such as NS-EN 13445 Unfired pressure vessels and similar.

New development of a barrier verification tool.

New development of a formation testing tool.

Outdoor hiking trail staircase in Sauda according to Tek 10 and applicable Eurocodes.



# PROJECT TASK EXPERIENCE

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3D modelling and design

Manufacturing drawings –  
machining, welding, forgings.

Documentation such as  
calculation reports  
including FE-analysis,  
assembly manuals,  
operations manuals  
quality specification and  
procedures.

Process documentation –  
top level, engineering and  
manufacturing.

Hands-on - prototype  
assembly and testing at  
clients or in our own workshop

Experience with patent  
process and drawings

General business  
development and  
understanding the  
customer needs



# SOFTWARE KNOWLEDGE

Solidworks 3D CAD design software

Solidworks Simulation FE- analysis

Solidworks Enterprise PDM – data management

Autodesk Inventor Vault – data management

Autodesk Inventor 3D design software

AutoCAD

MathCAD, MATLAB and Smath

Ansys Mechanical

MS office including MS Project and MS Visio

# INHOUSE SOFTWARE POOL

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Solidworks 3D CAD  
design software  
(5 licenses)

Solidworks Simulation  
FE-analysis  
(3 licenses)

Solidworks Enterprise  
PDM – data  
management  
(7 licenses)



DraftSight Enterprise  
(2 licenses)

ANSYS Mechanical  
Enterprise  
(1 license)

MathCAD Prime  
(1 license)

+MS office  
including MP  
Project & MS Visio

# WORKSHOP CAPACITY

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✂ Assembly and testing area



✂ Milling Machine

✂ 75MT Hydraulic Press

✂ Maximator HP fluids pump, 20.000psi

✂ Logging equipment for pressures up to 2.000bar & temperature sensors





✂ Test pit that can accommodate assemblies up to 15 m length.

✂ Industry & Ultrasonic Washer

✂ Overhead Cranes

✂ Welding Equipment in a separate welding and grinding area



# SUMMARY



- ✓ 3 Design engineers with broad multidiscipline background and extensive management experience.
- ✓ We have long experience with business administration and financial management in small to medium size oil service and technology companies
- ✓ Combined we have decades of experience of designing, producing and testing downhole completion and intervention tools.
- ✓ Extensive engineering and project management experience.
- ✓ Global engineering team experience from large international service companies
- ✓ 5 Years of topside experience such as upgrades and new design of temporary equipment.

# REFERENCES

**Archer**

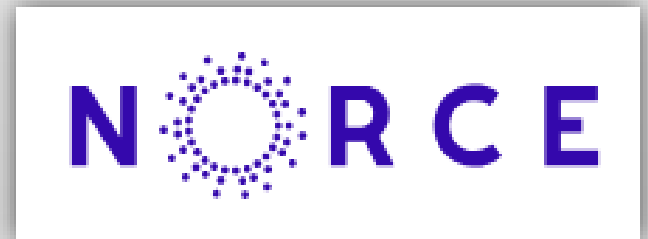
**VERTICE OIL TOOLS**



**RESMAN**



EXEDRA



extender



# THE TEAM



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