
GREENFIELD

Premium High Pressure Systems



Seismic Surveying



Industrial Gases



CNG/Biogas/H₂



Atlas Copco



GREENFIELD

GREENFIELD is your specialist for high-pressure systems. With a century of experience in this business we have been able to maintain and even improve our strong market position providing total solutions – from a single compressor to complete systems, including dispensing, storage, enclosure and other accessories required for a successful installation.

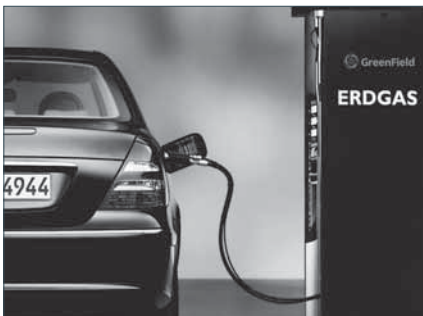
Today, GREENFIELD is the technology leader worldwide with its high-end premium products engineered in Switzerland.

With a century of experience in high-pressure technology and the fact of thousands of compressors installed worldwide, GREENFIELD is ready to serve your needs for peak performance and success in the market.

As part of the Atlas Copco Group GREENFIELD has global access to over 150 markets, which are served through our production facilities either in Switzerland or in the United States.

This comprehensive Sales and Service Network assures our customers direct access to the most reliable and technologically advanced equipment available.

GREENFIELD is Your Total Solution Provider for



Natural gas (CNG/NGV), biogas and H₂ refuelling

GREENFIELD's modular refuelling stations are compact high-performance installations designed for the refuelling of:

- Passenger cars
- Indoor utility vehicles
- Light duty vehicles
- Buses and Heavy duty trucks
- Ferries, canal boats and special vehicles



Industrial Gases (IG)

GREENFIELD has supplied high-pressure compressors and compression systems to hundreds of customers in more than 100 countries worldwide, including all of the major industrial gas companies.

For a wide range of gases:

- Helium
- Hydrogen
- Nitrogen
- Argon, Xenon, Neon
- Air, including breathing air (oilfree)
- Natural gas and other hydrocarbon gases
- Nitrous oxide
- Carbon mono-/dioxide
- HELIOX
- and more

For use in the following applications:

- Gas production plants – feed and product gas
- Cylinder filling
- Offshore, Oil and Gas
- Marine and defence industry
- Fertilisers production
- Chemical/Petrochemical industry
- Purification/Recovery systems
- Gas blanketing
- Inert gas systems
- Air-blast circuit breakers
- Electronics production
- Enhanced oil recovery
- and more



Seismic surveying

Especially for the seismic industry we have developed a compressor system providing the seismic companies with a highly flexible source of high-pressure compressed air as power source for air guns.

GREENFIELD Compressors – the Heart of Peak Performance Compression Systems and Refuelling Stations.

GREENFIELD compressors offer field-proven efficiency and reliability. The gas and pressure-tight crankcase design ensures no gas losses to atmosphere. Our D-Series oil-free units assure that oil neither contaminates the gas nor does oil disposal contaminate the environment. GREENFIELD's compressors are available up to 501 bara. Higher pressure applications on demand.

C-Series

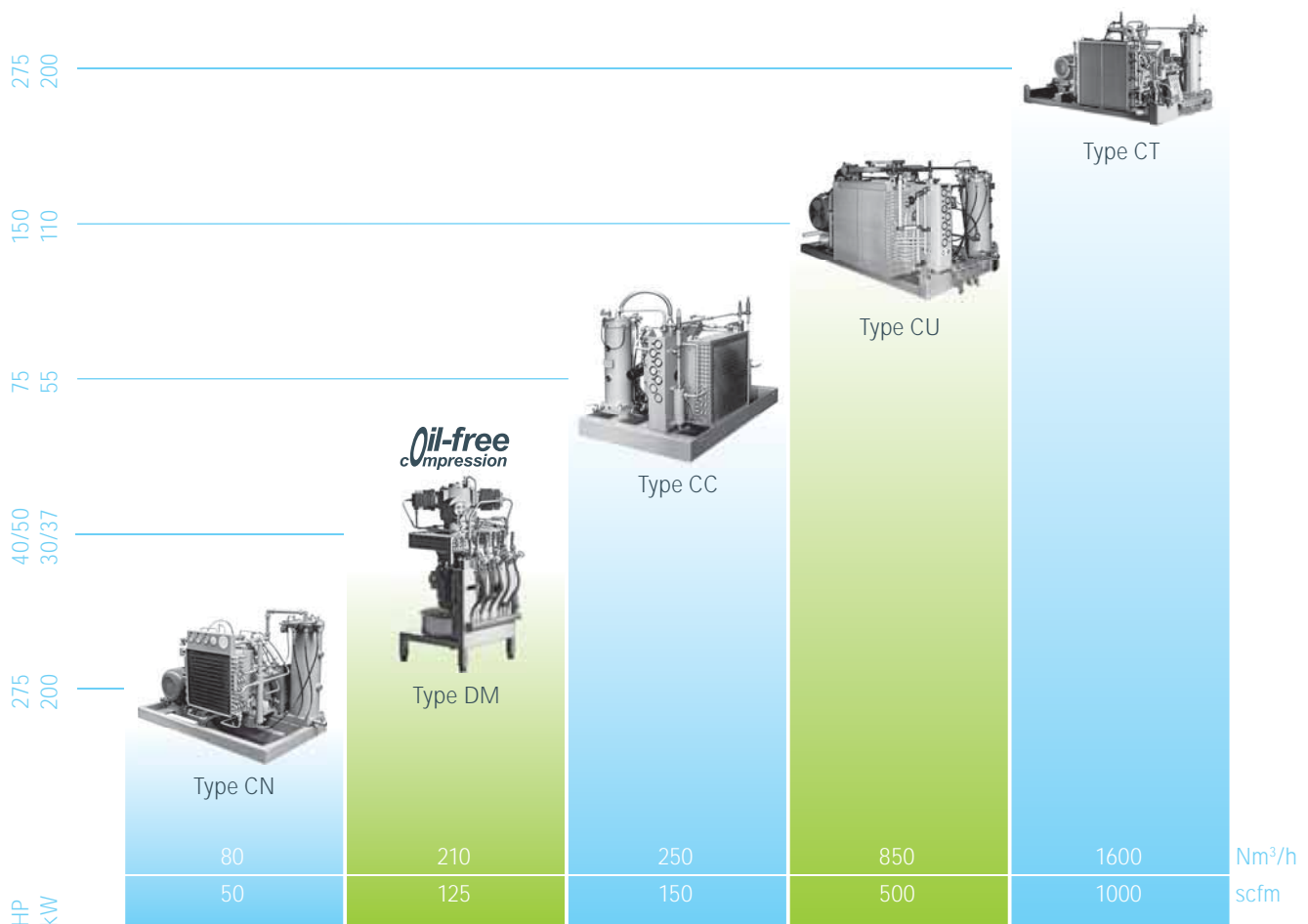
Lubricated trunk-piston compressors.
Air- and water-cooled execution available.
Gas tight up to 19 bara (260 psig):

- Type CT up to 1600 Nm³/h (1000 scfm)
- Type CU up to 850 Nm³/h (500 scfm)
- Type CC up to 250 Nm³/h (150 scfm)
- Type CN up to 80 Nm³/h (50 scfm)

DM-Series

Totally oil-free, hermetically sealed compressors.
This compressor range utilizes GREENFIELD's revolutionary oil-free high-pressure technology.
Gas tight up to 40 bara (570 psig):

- Type DM up to 210 Nm³/h (125 scfm)



GREENFIELD Dispensers – Comprehensive Dispensing Control and Refuelling Technology.

Process-computer-controlled dispensers available in single-, dual- and multi-hose execution. Vehicle fill pressure: 200 bar (3000 psig) or 250 bar (3600 psig), temperature compensated. The FillMaster Series can be equipped with internal or external electronic sequencing, OptiFill® controlled filling process and interface to all commonly used station management systems.

FillMaster Series



FillMaster – COMPACT «The compact solution»

HighMast GF-standard housing with small footprint, available with the latest GREENFIELD technologies.

FillMaster – MODULAR «The flexible solution»

Housing available in various shapes for all station forecourts. SEKA 2 refuelling controls with OptiFill®. Remote monitoring capabilities.



FillMaster – TOP «The high flow solution»

High flow dispenser for rapid filling of heavy-duty trucks and busses.

OptiFill® Software

The maximum safety technology today to completely fill your NGV vehicle, achieved without danger of over-filling.

The unique OptiFill® software developed by GREENFIELD calculates the optimized filling degree under consideration of ambient and gas temperature as well as the heat of compression

effect without neglecting the necessary safety aspects specified by law. Verified and certified by independent authorities and testing labs in Europe and North America, and used around the world in the most stringent applications.

GREENFIELD Solutions – Standard or Customized Compression Systems.

GREENFIELD recognizes that each customer has individual requirements that can only be properly achieved through a complete understanding of their technical and business processes. Therefore GREENFIELD provides both, standard and customized solutions to serve our customers best. Following examples show an extract of our portfolio.



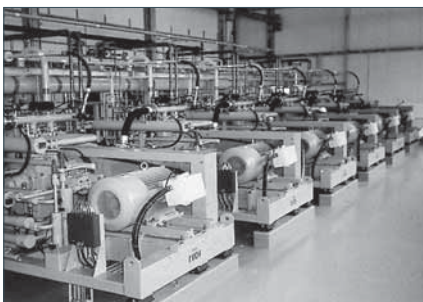
Natural Gas Refuelling Stations

If fast-fill, slow-fill or mother-daughter systems, we have the perfect solution for our customers, who can choose from our standard or tailor made stations.



Helium Packages

The standard helium package assures a 6.0 grade purity at the end of the compression process which is most important in this industry. Three gas sources (balloon gas, pure gas from vaporisers or recycle gas from bottle racks) can be simultaneously connected and compressed up to 350 bara.



Hydrogen Installations

Handling hydrogen in compression processes is rather difficult. Our specially designed pressure- and gas-tight hydrogen compressors do this job to our customers satisfaction.



Seismic Compressor Systems

During the design of the seismic compressor system a special attention was paid to ensure accurate operation and energy consumption savings. The seismic compressors are tested during operation at an inclination angle off 22.5°. These tests were witnessed and verified by the Lloyds Register.

Sophisticated Components and Smart Controls.

We like it compact, easy to operate and maintenance friendly. Wherever possible we use multifunction blocks to save space and reduce fittings to a minimum. Our specially designed control system SEKA II combined with the alarm and information platform CSP offer highest flexibility in operation and equipment diagnostics.



Multifunction Blocks

High- and low-pressure multifunction blocks which incorporate various functions into a common compact block to minimize the number of potential leaks.



SEKA II System Controls

SEKA (failsafe electronic compressor and system control) was developed specifically for the control of compressors and station components. The system allows failsafe solutions to be set up quickly and with minimal maintenance requirements. SEKA is certified for AK3 by TUEV.



Customer Service Portal – CSP

CSP is an Alarm and Information platform allowing you to remotely access your GREENFIELD compressors and stations equipped with SEKA controls from virtually anywhere via internet (SSL ICC secure login) with common web browsers. No additional hardware or software is required to monitor your equipment data in real time.

Customer Services



GREENFIELD's local Service teams are providing and coordinating all major after-sales activities including installation, commissioning and testing of new equipment, maintenance and overhauls including service contracts, upgrades, recommended genuine GREENFIELD spare parts, valve repair, training for maintenance and operations, remote diagnosis of station installations.

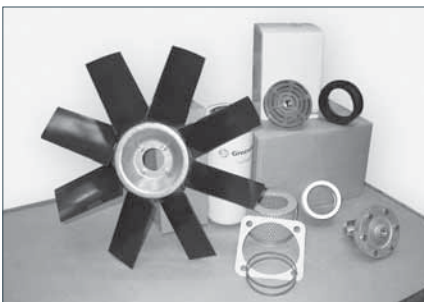
GREENFIELD's teams are strategically located around the world and expertly trained in compressors, controls and vehicle filling technology and are available for both preventive maintenance and emergency service worldwide.

Training



GREENFIELD engineers provide customer trainings for installation & commissioning, operation, monitoring or maintenance either in-house or at the customer's premises. 3 different training levels are available to provide highest flexibility to the customer.

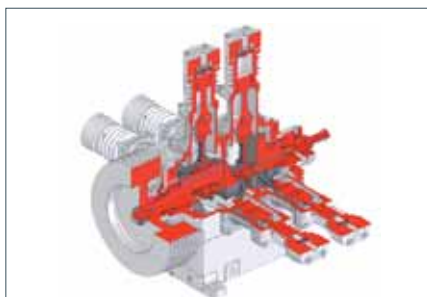
Spare Parts



Genuine GREENFIELD Spare Parts.

To optimize the equipment performance during its life time GREENFIELD offers a wide range of spare parts for service and maintenance purposes. The large parts stock ensures our customers availability and shortest lead times.

Product Development



GREENFIELD has a strong team of engineers who are fully dedicated to new product development in mechanics, electrics, electronics and software.

With the aid of sophisticated tools like 3D-CAD, simulation programs, testing facilities, etc. GREENFIELD is able to maintain its leadership in high-pressure technology.

GREENFIELD reinvests a significant percentage of revenues in new product development.

Testing



Every compressor leaving our factory is fully tested on our high-end electronically controlled test beds for at least 8 hours.

Special testing like for example the 22.5° inclination angle test (picture) for marine applications witnessed by Lloyd's are just another part of the puzzle towards product operating reliability and customer satisfaction.

Satisfied Customers



“The compressors perform very well in what could be described as one of the industries most challenging seismic environments ever.”

Bill Marshall, Chief Mechanic, RXT, responsible engineer for the installation of two GREENFIELD C5T 223 L compressors on board (on deck) a seismic research vessel.

Research Exploration Technology, RXT, specialize in ocean bottom cable seismic data acquisition.



“We have been collaborating successfully with GREENFIELD for more than 10 years, and our experience of the company is excellent. In addition to offering superb products, they have highly competent employees with first-rate professional knowledge.”

Robert Nielsen, Sales Manager, K. LUND Offshore.

K. LUND Offshore engineers and packages compressors and lifting equipment for the oil and gas industry.



“With GREENFIELD compressors we can keep the important 6.0 grade helium purity throughout the process with highest reliability.”

Peter van Ostaeyen, Operations Manager Helium Group EU & ME, Air Products S.A./N.V.

Air Products serves customers in industrial, energy, technology and healthcare markets worldwide with a unique portfolio of atmospheric gases, process and specialty gases, performance materials, and equipment and services.



“We have 10 years of best experience with the oil-free GREENFIELD DM compressors. One big advantage next to the oil-free compression is the innovative maintenance concept.”

Klaus Haase, Manager Refuelling Station Technology, Mainova-EnergieDienste GmbH.

Mainova is a regional energy supplier in Germany and operates several CNG refuelling stations.

GREENFIELD – Benefits at a Glance:

- One-stop resource for compressors, dispensers, solutions and services
 - A century of experience and leader in compression technology
 - 10 000 compressors and more than 1 800 NG-installations in operation worldwide
 - Global presence with local focus – Part of the Atlas Copco Group
 - High class production facilities in Switzerland and the USA
 - Energy efficient equipment – low total costs of ownership
 - Main supplier for most important European NGV-Programs
 - Supplier of the major industrial gas market players and well known universities and institutes around the globe
 - ISO 9001:2000, PED, ATEX certified.
 - MET classified, NRTL and UL-listed (US products)
 - Member of ICAAMC, IANGV, NGVA Europe, NGVC, etc.
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GREENFIELD Europe
www.greenfield-comp.com

Part of the Atlas Copco Group

