



Grieson® – the cryogenic liquid fuel gas

Grieson®
has two strings to once bow



Grieson® – the best way to use it

Grieson® – liquid supply as required

Grieson® is supplied with affordable expenditure in cryogenic liquid form, stored in vacuum insulated tanks – cryogenic vaporizer tanks – and fed into the supply system in gaseous form through an evaporator. The cryogenic vaporizer tanks are available in sizes to meet your requirements.

Grieson® is approved by TÜV Rheinland, Deutsche Bundesbahn, the Welding Training and Experimental Institute in Duisburg and German Lloyd.

Storage capacity of cryogenic vaporizer tanks for Grieson® at 18 bar operating pressure

Cryogenic Vaporizer Tank CT	Geom. Content [m ³]	Capacity [kg]
22	2,23	940
25	2,64	1110
30	3,00	1260
36	3,53	1500
50	4,82	2025
64	6,45	2700
70	7,00	2930
75	7,00	2940
Other sizes on request		



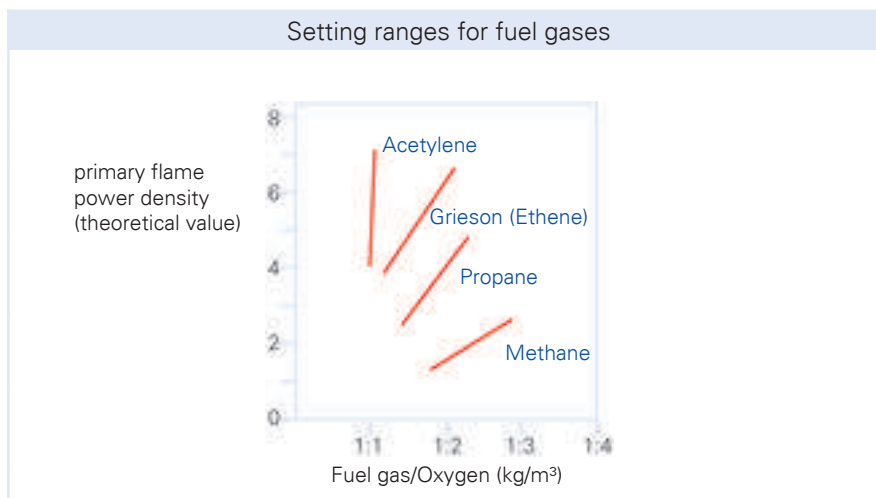
Mechanical flame cutting with multitouch operation



Grieson® – summing up the advantages

The examples show the versatility of Grieson®

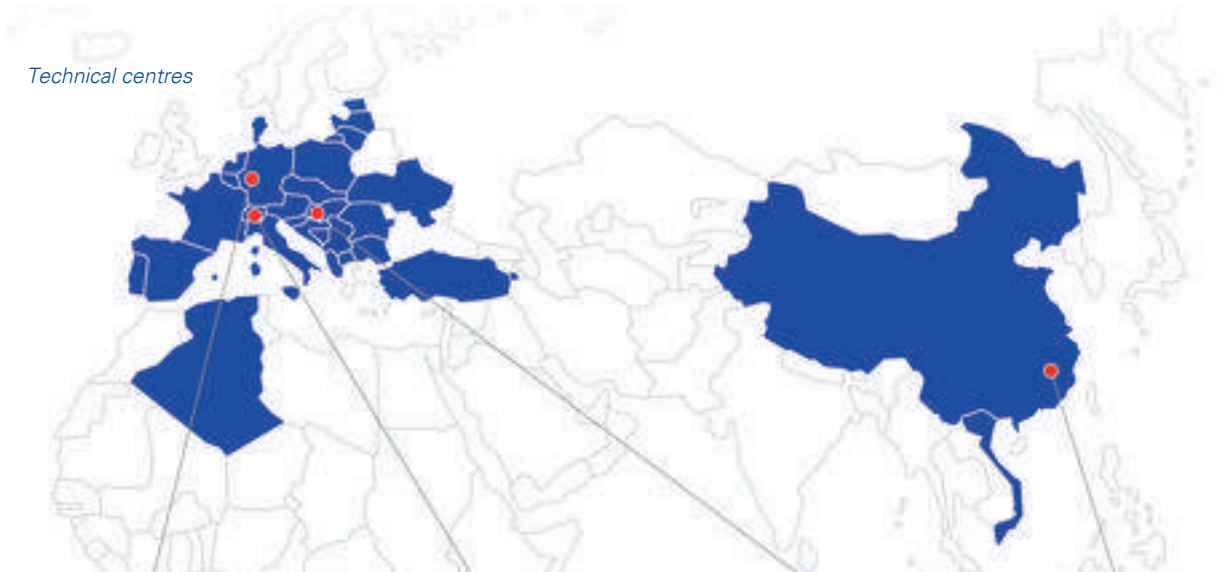
Messers Grieson® is a high performance fuel gas, combining high output with high quality in nearly all applications. Grieson® offers a high energy flame with low oxygen consumption. Grieson® gives more safety, because it is lighter than air. So it can also be used in confined workplaces (e.g. in shipbuilding) and underground in excavations and shafts. Grieson® is flexible. Depending on the manufacturers existing pipeline systems, pressure regulators and torches can be easily converted for Grieson®. The supply equipment is subject to the Pressurized Vessel Order.



Technical specifications	
Molar mass	28 kg/kmol
Density in gaseous form at 1 bar and 0 °C at 1 bar and 15 °C	1,26 kg/m³ 1,17kg/m³
Relative density (air = 1)	0,9749
Boiling point at 1.03 bar	-103,8 °C (196,35 K)
Density liquid at boiling point	0,569 kg/l
Critical temperature	9,25 °C (282,4 K)
Critical pressure	50,7 bar
Combustion temperature with O ₂	2950 °C (3223,15 K)
Lower calorific value	47 600 kJ/kg
Ignition limit in air	2,7 – 34 Vol. %
Ignition limit in O ₂	2,9 – 80 Vol. %
Evaporation heat	483 kJ/kg

Advice, Delivery, Service

Technical centres



Krefeld



Dällikon



Budapest



Shanghai

Technical centres – sources for innovation

For the development of new technologies in the field of welding and cutting, Messer operates technical centres in Germany, Switzerland, Hungary and China. These facilities provide ideal conditions for innovative projects as well as customer presentations and training courses.

Portfolio of gases – comprehensive and clear

Messer offers a spectrum of gases that extends well beyond the standard fare: it ranges from just the right gas for each application, and clear, application-oriented product designations to the continuous introduction of new gas mixtures designed to address current trends.

Specialised on-site consulting – right where you need it

Specifically in the context of your particular application, we can show you how to optimise the efficiency and quality of your processes. Along with process development, we support you with troubleshooting and process development.

Cost analyses – fast and efficient

We will be glad to analyze your existing processes, develop optimisation proposals, support process modifications and compare the results with the original conditions – because your success is also our success.

Training courses – always up to date

For the optimal handling of our gases, we can train you on processes and how to use them. Our training courses illustrate the use of various shielding gases for welding and explain how to handle them safely. This also includes the storage of the gases and the safe transport of small quantities. Information and training materials for your plant are also part of the service, of course.

You can also download this brochure and many others from the Internet as a PDF file:
www.messergroup.com



Messer Group GmbH
Gahlingspfad 31
47803 Krefeld
Tel. +49 2151 7811-0
Fax +49 2151 7811-503
welding-technology@messergroup.com
www.messergroup.com