HVG Series

HYDROGEN & SYNGAS

adicomp®
ADVANCED GAS COMPRESSORS

HVG Series

Hydrogen and Syngas applications

HVG90

MAIN APPLICATIONS

Whether for refueling fuel cell, as synthetic fuel, feeding into the natural gas network or for steel production, hydrogen is a climate-friendly versatile energy carrier.
Hydrogen but also Syngas is essential as a feedstock and fuel in many industrial processes. These applications include the mobility sector, power generation and storage, fertilizer and refinery.
Adicomp HVG series play a central role in its utilization.
With several years of proven experience of compressing hydrogen, the HVG series is the perfect choice for hydrogen & syngas applications.
Our solutions are optimized to be efficient, cost-effective and suit the specific customer's requirements.

ONE OF THE 10000 SYSTEMS INSTALLED

HVG-18.5 Compression system

- POWER INSTALLED: 22 kW | *30 Hp*
- INLET PRESSURE: 0 bar(g) | *0 psi(g)*
- WORKING PRESSURE: 10 bar(g) | *146 psi(g)*
- FLOW RATE: 0<43<85 Nm^3/h | *0<37<53 SCFM*
- AMBIENT TEMPERATURE: -10/+40 °C | *+14/+104 °F*
- LOCATION: THE NETHERLANDS

SUCTION PRESSURE:
0 < 8.0 bar(g) | *0 < 117 psi(g)*

OPERATING PRESSURE:
3 < 25 bar(g) | : *44 < 363 psi(g)*

FREE GAS DELIVERY:
0 < 3000 Nm3/h | *0 < 1869 SCFM*

ADSORBED POWER:
2.2 < 400 kW | *3 < 550 hp*

HOW IT WORKS

The gas is sucked through a suction filter that removes particles and also acts as a water separator (if required) , then the gas passes through a suction valve. All the components in contact with the gas are made in stainless steel or duly protected, due to the possible presence of aggressive contaminants in the gas. During the gas compression process, the oil is injected inside the rotary screw chamber to perform three main functions: lubrication, sealing and heat absorption. Working in a close circuit with a gas/oil receiver, oil is pressurized to flow through an oil cooler, then filtered before being injected again into the screw compression chamber. The gas separated from the oil through a cartridge flows through the minimum pressure/non-return valve into a cooler and could be treated before leaving the package in accordance with customer requirements. A sophisticated control system in the Adicomp series manage the operating pressure upstream or downstream the unit, and automatically adjusts compressor speed to modulate output according to the availability or demand of biogas.

The strength of the rotary screw technology
The best for continuous and heavy-duty operation, it's easy to maintain; with very little moving and contacting parts, wear and tear are minimized. In addition to the very high energy efficiency achievable while VSD controlled, the rotary screw technology offers many other advantages, including ability to provide a steady flow, handle temperature extremes and variations in demand, reduced noise and no need of special foundations.

Plug & Play
All Adicomp compressors are designed and made to maximize and facilitate the installation. No special operations are required, except for the installation on site, electricity and gas supply. Everything is already wired, connected, tested and, thanks to the commissioning service, you can fine-tune the set-up of the package on site.

Air or water cooled
All Adicomp compressors can be either air cooled or water cooled.

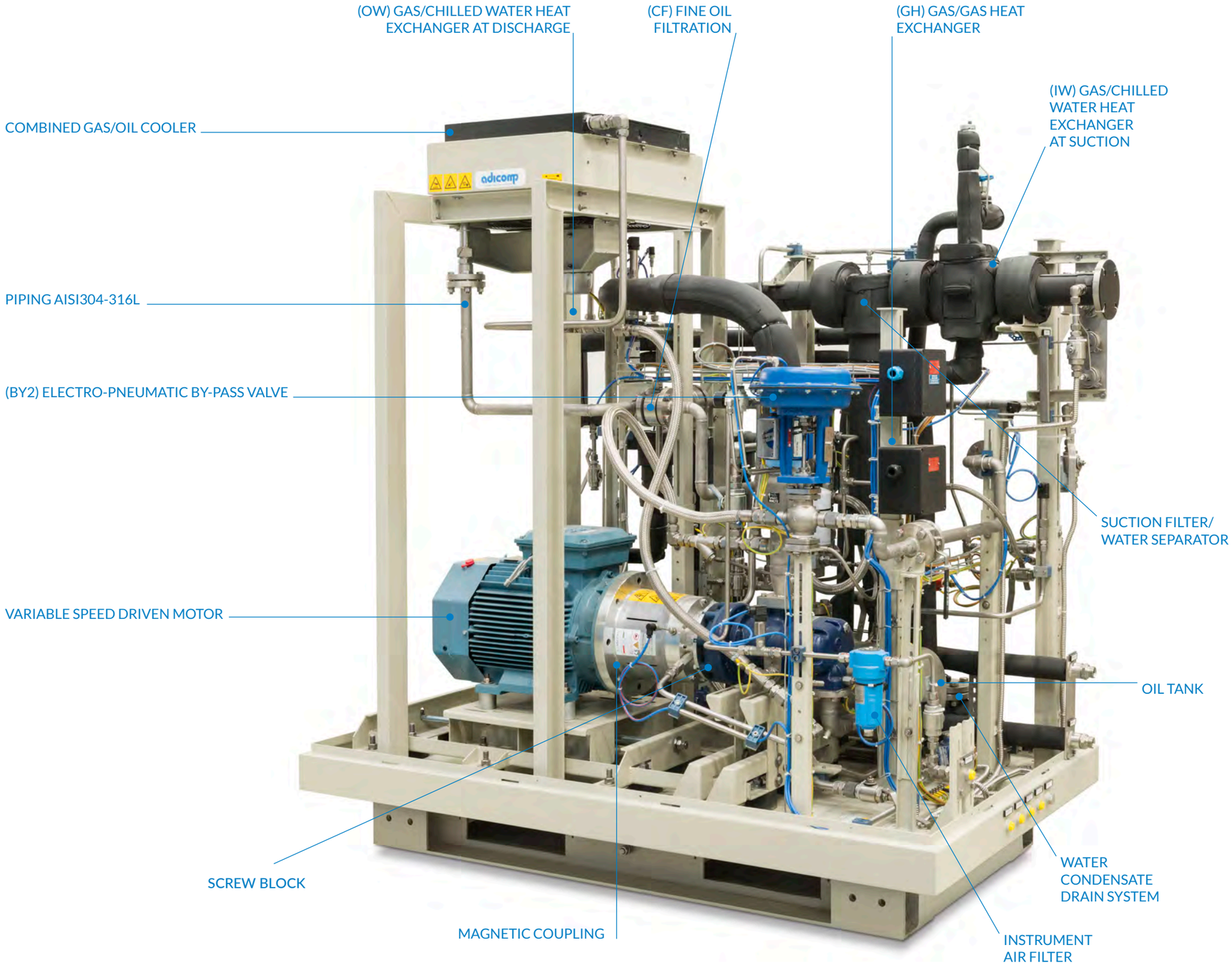
Energy savings, flow control
At Adicomp, weare committed to energy savings. Our compressors are designed to reduce their power consumption as much as possible by always adapting the capacity to the end user needs. Adicomp compressors are fully controlled by VSD, by-pass valve and/or slide valve.

Experience counts
Adicomp is one of the first companies able to compress hydrogen and syngas from different sources. Over the last 25 years we have manufactured and installed over 10000 systems worldwide, facing extremely different applications that allowed us to acquire a high level of know-how acknowledged by the market.

Full control over operation
Thanks to the use of a state-of-art PLC programming you can control the operation of all parts of the compression package, thereby ensuring a perfect use, even remotely.

Customized approach
At Adicomp, products are manufactured to meet specific customer needs. Not vice versa. We listen to customer needs and then transmit them to the engineering department to provide the best solutions. Flexible, efficient and reliable, always.

Product overview



Available Options

- (S) SILENCED
- (WP) - (WS) WEATHERPROOF
- (IW) SUCTION DEWATERING SYSTEM
- (EV) EXPANSION VESSEL
- (BV) BLEED VALVE
- (GOH) WATER COOLED
- (OW) OUTLET DEWATERING SYSTEM
- (GH) RE- HEATING GAS SYSTEM
- (HR) HEAT RECOVERY
- (BY1) MECHANICAL BYPASS VALVE
- (BY2) ROPORTIONAL BYPASS VALVE
- (TC) CONTROLLED OUTLET GAS TEMPERATURE
- (LM) FILTERS PRESSURE INDICATOR
- (PL) PLC
- (MB) MODBUS, (PB) PROFIBUS & (PN) PROFINET REMOTE CONTROL SYSTEMS
- (CC) ACTIVE CARBON COLUMN

Possible configurations

OPEN FRAME
Indoor installation
+3°C/+40°C| *+37.5°F/ +104°F*

WEATHERPROOF
Outdoor installation
-30°C/+40°C| *-22°F/ +104°F*

CONTAINER 40FT
Outdoor installation
-40°C/+40°C| *-40°F/+104°F*

Designed for worldwide installation

HVG series codes & standards

MODELS

HVG2.2	HVG7.5	HVG18.5	HVG45	HVG110	HVG250
HVG3	HVG9	HVG22	HVG55	HVG132	HVG315
HVG4	HVG11	HVG30	HVG75	HVG160	HVG355
HVG5.5	HVG15	HVG37	HVG90	HVG200	HVG400

EU
Hazardous area classification: ATEX zone II
Pressure vessel code compliance: PED
Electrical code compliance: ISO60079
Certified manufacturing organization: ISO 9001-2015 -14001:2015 -45001:2018

USA
Hazardous Area Classification: Class 1, Div 2 as defined per NEC, NFPA70
Pressure Vessel Code Compliance: ASME
Electrical Code Compliance: UL/Control panels and assemblies
Certified manufacturing organization: ISO 9001-2015 -14001:2015 -45001:2018
UL 508A, Standard for Industrial Control Panels
UL 698A, Standard for Industrial Control Panels Relating to Hazardous (Classified) Locations
NFPA 70 National Electric Code
ASME B31.3, Process Piping

CA
Hazardous Area Classification: Class 1, Div 2 as defined per NEC, NFPA70
Pressure Vessel Code Compliance: ASME -CRN
Electrical Code Compliance: UL/Control panels and assemblies
Certified manufacturing organization: ISO 9001-2015 -14001:2015 -45001:2018
UL 508A, Standard for Industrial Control Panels
UL 698A, Standard for Industrial Control Panels Relating to Hazardous (Classified) Locations
NFPA 70 National Electric Code
ASME B31.3, Process Piping

BR
Hazardous area classification: ATEX zone II
Pressure Vessel Code Compliance: ASME-NR13
Electrical Code Compliance: ISO60079 – NR10 Control panels and assemblies
Certified manufacturing organization: ISO 9001-2015 -14001:2015 -45001:2018
ASME B31.3, Process Piping

IN
Hazardous Area Classification: Atex zone II (PESO)
Pressure Vessel Code Compliance: ASME
Electrical Code Compliance: ISO60079 Control panels and assemblies
Certified manufacturing organization: ISO 9001-2015 -14001:2015 -45001:2018
ASME B31.3, Process Piping

Global Presence & Customer Service

Headquartered in Italy, Adicomp provides products and services all over the world through an extensive network of local offices and plants. With more than 25 years of experience and almost 10.000 skids in operation worldwide, Adicomp has grown to be a truly global international company, with a direct presence in over 50 countries and customers in more than 110. The primary driver for that worldwide footprint has been the need and willingness to operate close to our customers.

SPARE PARTS

Adicomp's spare parts ensure high quality and efficiency, offering tailored solutions for maintenance and fleet management. We provide global delivery and handle logistics for optimal transport solutions.

WORLDWIDE SERVICE PARTNERS

Adicomp offers global on-site support with skilled engineers, ensuring fast, quality service and international certifications. They provide assistance from design to installation and after-sales, ensuring reliability and customer satisfaction.

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