

CVG Series

CARBON DIOXIDE

**adcomp**<sup>®</sup>  
ADVANCED GAS COMPRESSORS

# CO<sub>2</sub> compression & gas treatment



CVG 18.5

## MAIN APPLICATIONS

The CO<sub>2</sub> compression and treatment stations are designed to be Plug & Play in order to maximize and facilitate the installation at the customer's site. The core of the machine consists of an oil injected screw block, directly coupled to an electric motor by a flexible or magnetic coupling and controlled by an inverter from the HMI panel.

Available with or without gas treatment system, this series has been designed for the following main applications :

- CO<sub>2</sub> LIQUEFACTION
- METHANATION
- FOOD APPLICATION
- BIOGAS UPGRADING
- CO<sub>2</sub> RECYCLING

## ONE OF THE 10000 SYSTEMS INSTALLED

### CVG55-18.0 DG Compression system

- POWER INSTALLED: 75 kW | 100 Hp
- INLET PRESSURE: 1 bar(g) | 15 psi(g)
- WORKING PRESSURE: 18 bar(g) | 262 psi(g)
- FLOW RATE: 0<250<500 Nm<sup>3</sup>/h | 0<156<312 SCFM
- AMBIENT TEMPERATURE: -20/+40 °C | -4/+104 °F
- LOCATION: FRANCE



SUCTION PRESSURE:  
**0 < 1000 mbar(g) | 0 < 15 psi(g)**

OPERATING PRESSURE:  
**4.0 < 25 bar(g) | 58 < 363 psi(g)**

FREE GAS DELIVERY:  
**0 < 6000 Nm<sup>3</sup>/h | 0 < 3738 SCFM**

ADSORBED POWER:  
**2.2 < 700 kW | 3 < 970 hp**

## HOW IT WORKS

The CO<sub>2</sub> compression and treatment stations are designed on an easy-to-handle skid or enclosure. They can be oil-injected rotary screw or multistage reciprocating pump, directly coupled or belt-driven by an inverter-controlled electric motor. All the components in contact with the gas are made of stainless steel or duly protected, due to the presence of CO<sub>2</sub> and also possible aggressive contaminants into the gas.

In the Earth's atmosphere, carbon dioxide is found at an average concentration of 413 ppm/m<sup>3</sup>. Due to the increasing consumption of fossil fuels over the past two centuries, this concentration has steadily increased, aggravating the greenhouse effect.

Can CO<sub>2</sub> be integrated in a circular economy? To date, there are numerous CO<sub>2</sub> applications: it can be stored and/or reused for other applications such as agriculture, food, chemical industries, materials and laser cutting, combustion, and dry ice. Adicomp supplies high-tech compressors, for gas recirculation in upgrading, for the methanization processes, liquefaction or food applications that require the use of food grade oil. Adicomp provides a complete 'plug & play' package that compresses and delivers carbon dioxide with characteristics and qualities that meet the requirements of various applications.



### 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.



### Energy savings, flow control

At Adicomp, we keep an eye on 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.



### 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.



### Experience counts

Adicomp has been one of the first companies able to compress raw biogas coming from the digester, landfill and waste water plant. In over 25 years we provided 10000 systems worldwide, facing extremely different applications that allowed us to acquire a high level of know-how acknowledged by the market.



### Customized approach

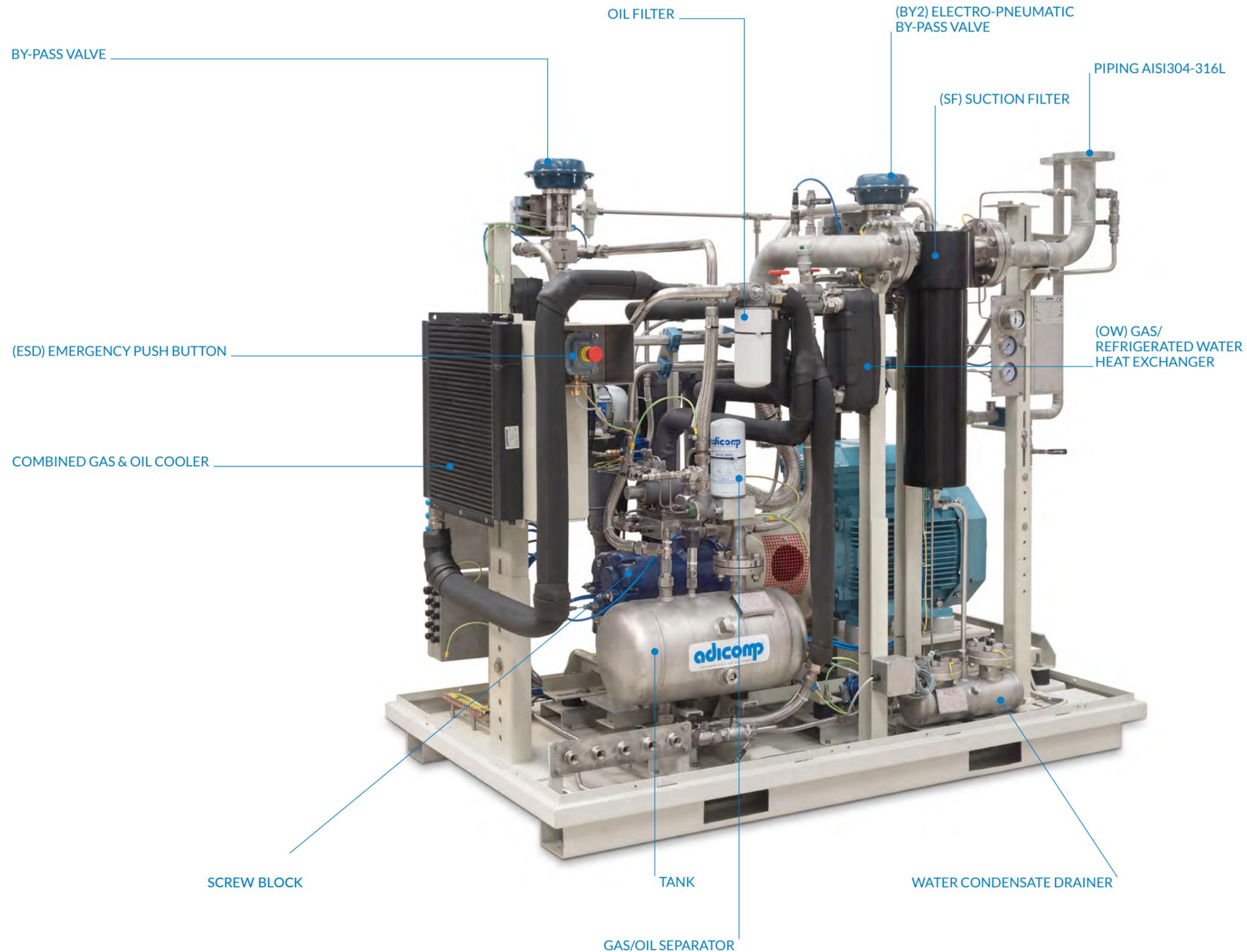
At Adicomp, products are manufactured to meet specific customer needs. Not vice versa. We listen to customer requirements and then transmit them to the engineering department to provide the best solutions. Flexible and reliable, always.



### Air or water cooled

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

# Product overview



# Available Options

- (S) SILENCED (SS) SUPER SILENCED
- (WP)-(WS) WEATHERPROOF
- (IW) SUCTION DEWATERING SYSTEM
- (EV) EXPANSION VESSEL
- (BV) BLEED VALVE
- (GOH) WATER COOLED
- (OW) OUTLET DEWATERING SYSTEM
- (CM)-(CF) MEDIUM AND FINE FILTRATION
- (GH) RE- HEATING GAS SYSTEM
- (HR) HEAT RECOVERY
- (BY1) MECHANICAL BYPASS VALVE
- (BY2) PROPORTIONAL 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

## CVG series codes & standards

### MODELS

CVG2.2	CVG9	CVG30	CVG90	CVG250	CVG500
CVG3	CVG11	CVG37	CVG110	CVG315	CVG550
CVG4	CVG15	CVG45	CVG132	CVG355	CVG600
CVG5.5	CVG18.5	CVG55	CVG160	CVG400	CVG650
CVG7.5	CVG22	CVG75	CVG200	CVG450	CVG700



#### 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.

