



**BIOGAS**

**BVG/UVG Series**

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

# Wet gases applications



BVG250

## BVG SERIES

SUCTION PRESSURE:  
50 < 1000 mbar(g) | 0.7 < 14.5 psi(g)

OPERATING PRESSURE:  
6 < 10 bar(g) | 87 < 146 psi(g)

FREE GAS DELIVERY:  
0 < 4500 Nm<sup>3</sup>/h | 0 < 2800 SCFM

ADSORBED POWER:  
3 < 700 kW | 4 < 939 hp

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

- PRESSURE SWING ADSORPTION
- BOILER FEEDING
- WATER WASHING SCRUBBING
- CO<sub>2</sub> RECIRCULATION
- VAPOR RECOVERY

## UVG SERIES

SUCTION PRESSURE:  
50 < 1000 mbar(g) | 0.7 < 14.5 psi(g)

OPERATING PRESSURE:  
10,5 < 25 bar(g) | 152 < 363 psi(g)

FREE GAS DELIVERY:  
0 < 3800 Nm<sup>3</sup>/h | 0 < 2370 SCFM

ADSORBED POWER:  
3 < 700 kW | 4 < 939 hp

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

- MEMBRANES TECHNOLOGY
- TURBINES FEEDING
- BOILER FEEDING
- GAS ENGINE FEEDING
- VAPOR RECOVERY



UVG110

## HOW IT WORKS

These biogas compressor series have been mainly designed for feeding biogas upgrading systems. The function of the biogas feed compressor is to elevate the pressure of the incoming biogas as well as improving the gas quality.

As per Adicomp common process, the wet gas is sucked through a suction filter\* acting also as a water separator with automatic condensate drainer, then the gas passes through a suction control valve before entering into the rotary screw block.

During the gas compression process, oil circulates in a close circuit, and it is injected into the screw block to perform three main functions: lubrication, sealing and heat absorption.

Immediately after the compression, the excess of oil is removed by a gas/oil separator ; once separated, both oil and gas are cooled down by the compressor main cooler. If required the gas can be further cooled and filtered thus reducing the dew point down to 5°C/41°F, oil at 0.01mg/m<sup>3</sup>; at the end of the process the compressed gas can also be re-heated leaving the skid at a specific controlled temperature achieving the highest gas quality standards required by the customer.

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 the availability or demand of biogas.

All the components in contact with the gas are made in stainless steel or duly protected, due to the presence of H<sub>2</sub>S, CO<sub>2</sub> and or other aggressive contaminants.

Providing adequate conditions maintenance intervals are ex-

tended at 8000 operating hours.

\*For the UVG22<UVG90 and BVG22<BVG55 ranges, it available on request.



### 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.



### Heat recovery

Up to 75% of the heat generated by the screw compressor can be recovered and used to feed with hot water various utilities and thereby reduce overall energy costs. How? Thanks to the heat recovery through dedicated heat exchangers between hot oil /warm water and/or the hot compressed gas/warm water.



### 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

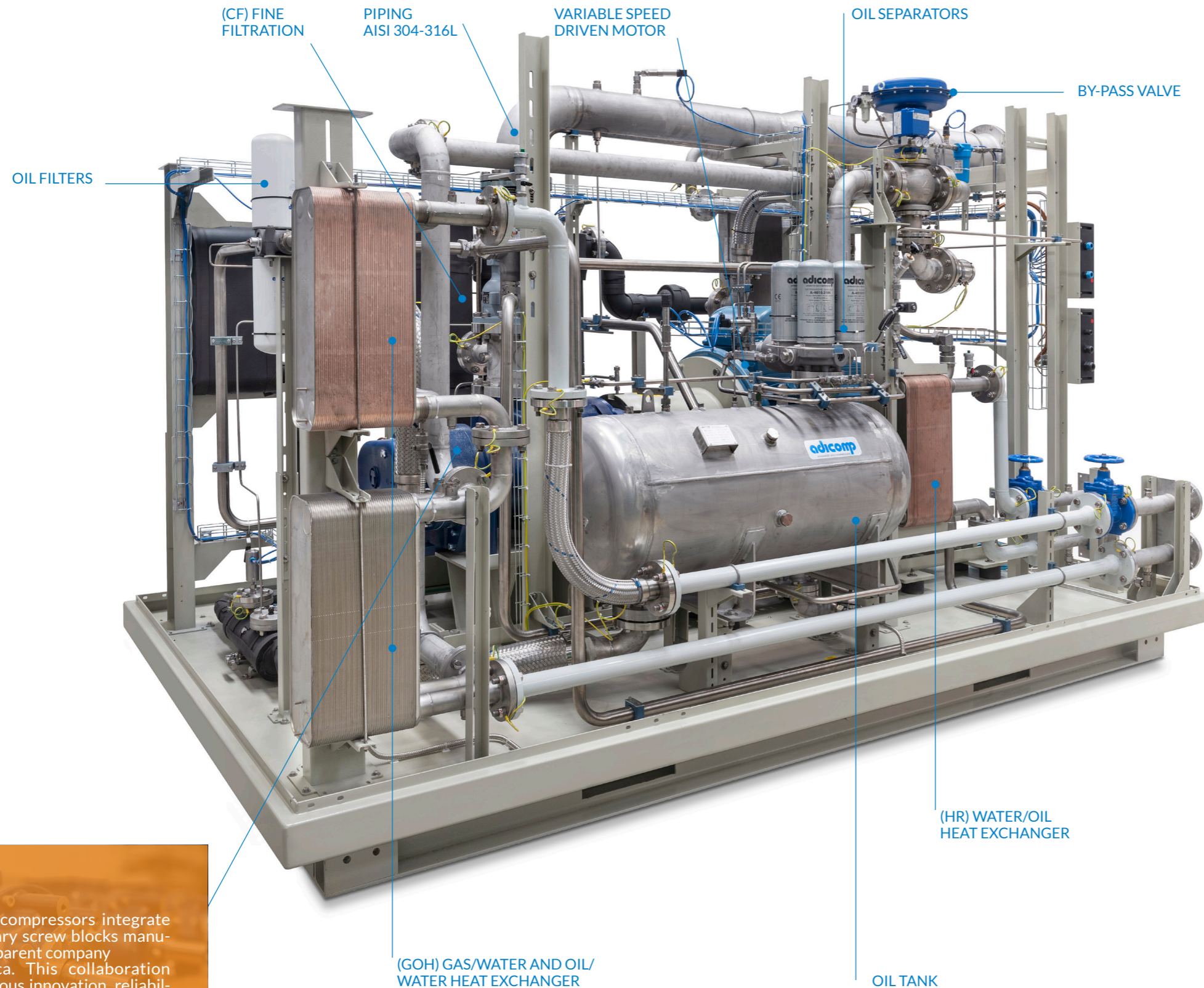
At Adicomp, products are manufactured to meet specific customer needs. Not vice versa. We listen to customer requirements and then transmit them to the engineering department to provide the best solutions. Flexible and reliable, always.



### Gas quality

Adicomp's compressors, designed with its own integrated gas treatment system, always ensure the required gas quality.

## Product overview



### SCREW BLOCK

Most Adicomp compressors integrate heavy-duty rotary screw blocks manufactured by the parent company Termomeccanica. This collaboration ensures continuous innovation, reliability and cutting-edge technology in every compressor we produce.



## Available Options

- (S) SILENCED & (SS) SUPER SILENCED
- (WP)-(WS) WEATHERPROOF
- (IW) SUCTION DEWATERING SYSTEM
- (SF) SUCTION FILTER
- (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
- (SR) SILOXANE REMOVAL SYSTEM

## 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



## BVG/UVG Series

# Wet gases applications



BVG110

### COMMITTED TO EXCEPTIONAL SOLUTIONS

For the past 25 years, Adicomp has been the main market leader in low- and medium-pressure compressor systems for a wide number of applications.

These Biogas Compressor series have been mainly designed for feeding biogas upgrading systems. The function of the biogas feed compressor is to elevate the pressure of the incoming biogas as well as improving the gas quality.

### INTEGRATED GAS CONDITIONING SYSTEM

Every BVG & UVG compressor can be customized according to the customer's needs, with different configurations for different compressed gas quality or environmental conditions. Available for indoor, out door standard or extreme environmental conditions, every single compressor can integrate a dedicated gas conditioning system mainly suitable to dry the compressed gas down to 5°C/41°F, removing the residual oil particules down to 0.01 mg/m3 (Class 1) and re-heated the gas at the desire temperature. ,



## Main technical data

### BVG series 75<700

SUCTION PRESSURE:  
**50 < 1000 mbar(g) | 0,7 < 14,5 psi(g)**

OPERATING PRESSURE:  
**4.0 < 10.0 bar(g) | 58 < 146 psi(g)**

FREE GAS DELIVERY:  
**0 < 4500 Nm3/h | 0 < 2800 SCFM**

ADSORBED POWER:  
**75 < 700 kW | 100 < 939 hp**

### TECHNICAL PROPERTIES

- DIRECT COUPLED
- AIR OR WATER COOLED
- (VSD) VARIABLE SPEED DRIVE CONTROLLED
- DESIGNED ONTO A EASY HANDLING SKID OR ENCLOSURE
- SUITABLE FOR DIFFERENT ENVIRONMENTAL CONDITIONS
- INTEGRATED SUCTION GAS FILTER EQUIPPED WITH AUTOMATIC CONDENSATE DRAINER EX
- BLEED VALVE DEPRESSURIZATION
- EQUIPPED WITH BY-PASS VALVE
- ELECTRONIC CONTROLLED BY PLC THROUGH COLOUR TOUCH SCREEN 7"
- EXTENDED MAINTENANCE INTERVAL 8000H
- DESIGNED FOR HAZARDOUS AREA INSTALLATION

### MODELS

BVG75	BVG200	BVG450
BVG90	BVG250	BVG500
BVG110	BVG315	BVG550
BVG132	BVG355	BVG650
BVG160	BVG400	BVG700

### OVERALL DIMENSION MODELS 75<315

3600*2000*2200h cm   118*66*72h ft TP In DN150 PN16   TP out DN50 PN40 TP In 6" RF #150   TP out 2" RF #300	BVG75 BVG90 BVG110
4100*2350*3000h cm   135*77*98h ft TP in DN250 PN16   TP out DN80 PN40 TP In 10" RF #150   TP out 3" RF #300	BVG132 BVG160 BVG200
5200*2350*3000h cm   171*77*98h ft TP in DN250 PN16   TP out DN80 PN40 TP In 10" RF #150   TP out 3" RF #300	BVG250 BVG315

### UVG series 110<700

SUCTION PRESSURE:  
**50 < 1000 mbar(g) | 0,7 < 14,5 psi(g)**

OPERATING PRESSURE:  
**10.5 < 25.0 bar(g) | 152 < 363 psi(g)**

FREE GAS DELIVERY:  
**0 < 3800 Nm3/h | 0 < 2370 SCFM**

ADSORBED POWER:  
**110 < 700 kW | 150 < 939 hp**

### TECHNICAL PROPERTIES

- DIRECT COUPLED
- AIR OR WATER COOLED
- (VSD) VARIABLE SPEED DRIVE CONTROLLED
- DESIGNED ONTO A EASY HANDLING SKID OR ENCLOSURE
- SUITABLE FOR DIFFERENT ENVIRONMENTAL CONDITIONS
- INTEGRATED SUCTION GAS FILTER EQUIPPED WITH AUTOMATIC CONDENSATE DRAINER EX
- BLEED VALVE DEPRESSURIZATION
- EQUIPPED WITH BY-PASS VALVE
- ELECTRONIC CONTROLLED BY PLC THROUGH COLOUR TOUCH SCREEN 7"
- EXTENDED MAINTENANCE INTERVAL 8000H
- DESIGNED FOR HAZARDOUS AREA INSTALLATION

### OVERALL DIMENSION MODELS 110<400

3600*2000*2200 cm   118*66*72h ft TP In DN150 PN16   TP out DN50 PN40 TP In 6" RF #150   TP out 2" RF #300	UVG110 UVG132 UVG160
4100*2350*3000 cm   135*77*98h ft TP in DN250 PN16   TP out DN80 PN40 TP In 10" RF #150   TP out 3" RF #300	UVG200 UVG250 UVG315
5200*2350*3000 cm   171*77*98h ft TP in DN250 PN16   TP out DN80 PN40 TP In 10" RF #150   TP out 3" RF #300	UVG355 UVG400

## BVG/UVG Series

# Wet gases applications



UVG55

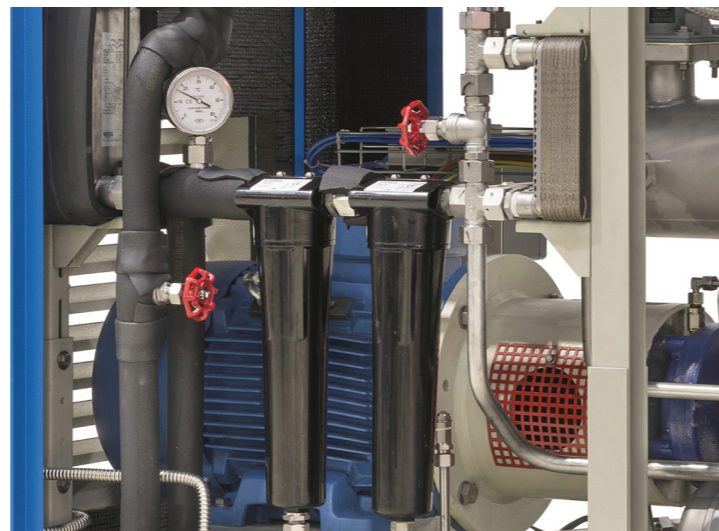
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## Main technical data

### BVG series 22<55

SUCTION PRESSURE:  
**50 < 1000 mbar(g) | 0.7 < 14,5 psi(g)**

OPERATING PRESSURE:  
**6 < 10 bar(g) | 87 < 145 psi(g)**

FREE GAS DELIVERY:  
**0 < 389 Nm<sup>3</sup>/h | 0 < 242 SCFM**

ADSORBED POWER:  
**22 < 55 kW | 30 < 75 hp**

### TECHNICAL PROPERTIES

- DIRECT COUPLED
- AIR OR WATER COOLED
- (VSD) VARIABLE SPEED DRIVE CONTROLLED
- DESIGNED ONTO A EASY HANDLING SKID OR ENCLOSURE
- SUITABLE FOR DIFFERENT ENVIRONMENTAL CONDITIONS
- BLEED VALVE DEPRESSURIZATION
- EQUIPPED WITH BY-PASS VALVE
- ELECTRONIC CONTROLLED BY PLC THROUGH COLOUR TOUCH SCREEN 7"
- EXTENDED MAINTENANCE INTERVAL 8000H
- DESIGNED FOR HAZARDOUS AREA INSTALLATION

### MODELS

BVG22	BVG45
BVG30	BVG55
BVG37	

### OVERALL DIMENSION MODELS 22<55

2000*1700*2230h cm   66*56*73h ft TP In DN80 PN16   TP out DN25 PN40 TP In 3" RF #150   TP out 1" RF #300	BVG22 BVG30
2500*2000*2230h cm   82*66*73h ft TP In DN100 PN16   TP out DN40 PN40 TP In 4" RF #150   TP out 1-1/2" RF #300	BVG37 BVG45 BVG55

### UVG series 22<90

SUCTION PRESSURE:  
**50 < 1000 mbar(g) | 0,7 < 14,5 psi(g)**

OPERATING PRESSURE:  
**10,5 < 18 bar(g) | 152 < 261 psi(g)**

FREE GAS DELIVERY:  
**0 < 455 Nm<sup>3</sup>/h | 0 < 283 SCFM**

ADSORBED POWER:  
**22 < 90 kW | 30 < 100 hp**

### TECHNICAL PROPERTIES

- DIRECT COUPLED
- AIR OR WATER COOLED
- (VSD) VARIABLE SPEED DRIVE CONTROLLED
- DESIGNED ONTO A EASY HANDLING SKID OR ENCLOSURE
- SUITABLE FOR DIFFERENT ENVIRONMENTAL CONDITIONS
- BLEED VALVE DEPRESSURIZATION
- EQUIPPED WITH BY-PASS VALVE
- ELECTRONIC CONTROLLED BY PLC THROUGH COLOUR TOUCH SCREEN 7"
- EXTENDED MAINTENANCE INTERVAL 8000H
- DESIGNED FOR HAZARDOUS AREA INSTALLATION

### MODELS

UVG22	UVG55
UVG30	UVG75
UVG37	UVG90
UVG45	

### OVERALL DIMENSION MODELS 22<90

2000*1700*2230h cm   66*56*73h ft TP In DN80 PN16   TP out DN25 PN40 TP In 3" RF #150   TP out 1" RF #300	UVG22 UVG30 UVG37 UVG45
2500*2000*2230h cm   82*66*73h ft TP In DN100 PN16   TP out DN40 PN40 TP In 4" RF #150   TP out 1-1/2" RF #300	UVG55 UVG75 UVG90

## Designed for worldwide installation

### BVG-UVG series codes & standards



#### 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.



Termomeccanica Group



[adcomp.com](http://adcomp.com)

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