

C4-G057R01V1

## Economy Series for C4-FN

### Alternative Insulating Gases – Our joint contribution to climate protection

The service carts of the G057R01 ECONOMY series have been specially designed for gaseous and liquid storage of gas mixtures for the complete gas handling of Alternative Insulating Gases. With the device series for gas mixtures with C4-FN, DILO sets highest priorities to zero emissions. This allows the complete gas handling of Alternative Insulating Gases to be carried out efficiently and safely on site in the usual way.

Modern control technology in conjunction with a user-friendly interface in several languages make device operation simple and convenient. Operation via mobile end devices such as smartphones, tablets or laptops is available as an option. The external cover of the device protects the integrated components and considerably reduces noise. This series offers fully automated operation via a 10" touch screen with protective cover shielding from sunlight and dust. The swivelling touch screen allows ergonomic working at the optimum working height. For data exchange additional USB and Ethernet connections are integrated. Thanks to the automated special functions the devices can be easily maintained without emissions. The use of couplings adapted to the type of gas prevents unintended confusion and guarantees operating safety.

Switching between different mixing ratios of the Alternative Gas is possible at any time with the optionally available compressor unit for easy gas recovery of the service cart. Thanks to the integrated buffer tank it is easy to homogeneously fill the gas compartments, independent of the gas compartment size.



*The actual product may differ slightly from the image.*

## Standard version

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- oilfree DILO compressor (5.7 m<sup>3</sup>/h [at 50 Hz]; 6.8 m<sup>3</sup>/h [at 60 Hz]), pressure 100 bar
- oilfree suction pump for recovery of gas mixtures (17.2 m<sup>3</sup>/h [at 50 Hz]; 21.0 m<sup>3</sup>/h [at 60 Hz]), final vacuum 1 mbar)
- vacuum pump for evacuation of air; delivery rate (configurable)
- evaporator
- dry filter (molecular sieve)
- particle filter 1 µm
- operation and indication of important process parameters via 10" touch screen with protective cover
- indication units in bar / mbar, kPa or psi / torr to be selected on the touch screen
- fork lift slots
- crane eyelets
- fixing and steerable rollers (configurable)
- drawer for tools and accessories
- 2 m long storage connecting hose, DILO coupling DN8
- digital weighing scales for gas mixture cylinders (with automatic switch-off function), 0 - 120 kg with tare function, accuracy ± 0.02 %
- induction heating system for cylinders up to max. 250 mm Ø (recommended diameters 230 mm - 250 mm)
- integrated buffer vessel (configurable) for storage of homogenous gas mixtures
- wrenches for DILO couplings and filters
- paint: green-anthracite

## Special features

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- Gas type: C4-FN
- Gas recovery: < 1 mbar
- Filling of gas: 0 - 12 bar
- Evacuation of air: < 1 mbar
- Maximum storage pressure: 100 bar
- Operation: automatic
- DILO couplings: DN20

## Advantages & functions

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- gas recovery down to 1 mbar
- storage pressure of up to 100 bar for efficient gas storage
- filling of the gas compartment up to 15 bar (optional)
- quick gas withdrawal from partially liquefied mixtures from storage vessels by means of an induction heating system
- compressor unit for gas recovery of the service cart for easy switching between different mixing ratios (optional)
- all versions are available with pressure vessels (integratable features) with CE marking or optionally with SQL or ASME approval
- integrated special functions for easy maintenance and safe transport

## Technical data

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Dimensions (W x H x D)	1,000 x 2,020 x 1,850 mm - Standard version (600 l pressure vessel)
Weight	1,280 kg - Standard version (600 l pressure vessel)
Dimensions (W x H x D)	1,185 x 2,110 x 2,650 mm - Version: 600l pressure vessel, chassis with solid tyre wheels
Weight	1,400 kg above-mentioned version
Dimensions (W x H x D)	1,000 x 2,020 x 2,600 mm - Version: 1000 l pressure vessel, fixing and steerable rollers
Weight	1,540 kg above-mentioned version
Dimensions (W x H x D)	1,185 x 2,110 x 3,350 mm - Version: 1000l pressure vessel, chassis with solid tyred wheels
Weight	1,660 kg above-mentioned version
Ambient temperature	0 to +45 °C
Operating temperature	0 to +45 °C
Storage temperature	-20 to +60 °C
Protection class	IP54
Sound level	< 70 dB

## Configuration

Material	
Special material (Stainless)	Special material with stainless steel/aluminium components
Standard material (brass)	Standard material with brass components
Screen	
10" touch panel	Operation of the device and indication of the process parameters via 10" colour touch panel
10" touch panel + WLAN	Operation of the device and indication of the process parameters via 10" colour touch panel + WLAN
10" touch panel+WLAN+Cosy NA	Operation of the device and indication of the process parameters via 10" colour touch panel + WLAN + Cosy 4G
10" touch panel+WLAN+Cosy EU	Operation of the device and indication of the process parameters via 10" colour touch panel + WLAN + Cosy 4G
Operating voltage range	
208-240 V / 60 Hz	208-240 V / 60 Hz, 3-phase current with neutral conductor (L1, L2, L3, N, PE)
380-420V 50Hz; 380-480V 60Hz	380-420 V / 50 Hz / 380-480 V / 60 Hz, 3-phase current with neutral conductor (L1, L2, L3, N, PE)
200 V / 50/60 Hz	200 V / 50/60 Hz, 3-phase current with neutral conductor (L1, L2, L3, N, PE)
208-240 V / 50 Hz	208-240 V / 50 Hz, 3-phase current with neutral conductor (L1, L2, L3, N, PE)
600 V / 60 Hz	600 V / 60 Hz, 3-phase current with neutral conductor (L1, L2, L3, N, PE)
Vacuum pump	
Without vacuum pump	
40m <sup>3</sup> /h; <1mbar(S01-03+S06+S07)	Vacuum pump for evacuation of air (40 m <sup>3</sup> /h at 50 Hz, 48 m <sup>3</sup> /h at 60 Hz, final vacuum < 1 mbar)
40 m <sup>3</sup> /h; < 1 mbar (S04)	Vacuum pump for evacuation of air (40 m <sup>3</sup> /h at 50 Hz, 48 m <sup>3</sup> /h at 60 Hz, final vacuum < 1 mbar)
40 m <sup>3</sup> /h; < 1 mbar (S05)	Vacuum pump for evacuation of air (40 m <sup>3</sup> /h at 50 Hz, 48 m <sup>3</sup> /h at 60 Hz, final vacuum < 1 mbar)
63m <sup>3</sup> /h; <1mbar(S01-03+S06+S07)	Vacuum pump for evacuation of air (63 m <sup>3</sup> /h at 50 Hz, 76 m <sup>3</sup> /h at 60 Hz, final vacuum < 1 mbar)
63 m <sup>3</sup> /h; < 1 mbar (S04)	Vacuum pump for evacuation of air (63 m <sup>3</sup> /h at 50 Hz, 76 m <sup>3</sup> /h at 60 Hz, final vacuum < 1 mbar)
63 m <sup>3</sup> /h; < 1 mbar (S05)	Vacuum pump for evacuation of air (63 m <sup>3</sup> /h at 50 Hz, 76 m <sup>3</sup> /h at 60 Hz, final vacuum < 1 mbar)
100m <sup>3</sup> /h;<1mbar(S01-03+S06+S07)	Vacuum pump for evacuation of air (100 m <sup>3</sup> /h at 50 Hz, 120 m <sup>3</sup> /h at 60 Hz, final vacuum < 1 mbar)
100 m <sup>3</sup> /h; < 1 mbar (S04)	Vacuum pump for evacuation of air (100 m <sup>3</sup> /h at 50 Hz, 120 m <sup>3</sup> /h at 60 Hz, final vacuum < 1 mbar)
100 m <sup>3</sup> /h; < 1 mbar (S05)	Vacuum pump for evacuation of air (100 m <sup>3</sup> /h at 50 Hz, 120 m <sup>3</sup> /h at 60 Hz, final vacuum < 1 mbar)
60m <sup>3</sup> /h; <0.0067mbar(S01-04;07)	Vacuum pump for evacuation of air, 2-stage with exhaust filter, type RH0060 Nominal suction capacity: 55 m <sup>3</sup> /h at 50 Hz, 65 m <sup>3</sup> /h at 60 Hz, final vacuum 0.0067 mbar

60 m <sup>3</sup> /h; < 0.0067 mbar (S05)	Vacuum pump for evacuation of air, 2-stage with exhaust filter, type RH0060 Nominal suction capacity: 55 m <sup>3</sup> /h at 50 Hz, 65 m <sup>3</sup> /h at 60 Hz, final vacuum 0.0067 mbar
<b>Automatic function shut down</b>	
without automatic	Without automatic switch off function
with automatic	With automatic switch off function (evacuation of air, filling of C4/C5-gas mixtures, recovery of C4/C5-gas mixtures) when reaching the corresponding final values
<b>Filling pressure + parallel operation</b>	
fill.press. 12barw/o paral. (P)	1 x coupling for evacuation of air, recovery and filling of C4/C5 gas; Filling of the gas compartment with C4/C5 gas up to max. pa 12 bar (Standard material brass)
fill.press.12bar with paral.(P)	1 x coupling for evacuation of air, recovery and filling of C4/C5 gas; Filling of the gas compartment with C4/C5 gas up to max. pa 12 bar (Standard material brass) 1 x coupling for evacuation of air
fill.press. 15barw/o paral. (P)	1 x coupling for evacuation of air, recovery and filling of C4/C5 gas; Filling of the gas compartment with C4/C5 gas up to max. pa 15 bar (Standard material brass)
fill.press.15bar with paral.(P)	1 x coupling for evacuation of air, recovery and filling of C4/C5 gas; Filling of the gas compartment with C4/C5 gas up to max. pa 15 bar (Standard material brass) 1 x coupling for evacuation of air
fill.press. 12barw/o paral. (C)	1 x coupling for evacuation of air, recovery and filling of C4/C5 gas; Filling of the gas compartment with C4/C5 gas up to max. pa 12 bar (Special material stainless steel)
fill.press.12bar with paral.(C)	1 x coupling for evacuation of air, recovery and filling of C4/C5 gas; Filling of the gas compartment with C4/C5 gas up to max. pa 12 bar (Special material stainless steel) 1 x coupling for evacuation of air
fill.press. 15barw/o paral. (C)	1 x coupling for evacuation of air, recovery and filling of C4/C5 gas; Filling of the gas compartment with C4/C5 gas up to max. pa 15 bar (Special material stainless steel)
fill.press.15bar with paral.(C)	1 x coupling for evacuation of air, recovery and filling of C4/C5 gas; Filling of the gas compartment with C4/C5 gas up to max. pa 15 bar (Special material stainless steel) 1 x coupling for evacuation of air
<b>Device covering</b>	
Standard - Sheet-metal cover	
Tarpaulin	
<b>Integrateable features (pressure vessel, chassis and rollers)</b>	
600l / 25bar CE / rollers	C4-B173R12G057V1 600 l / 25 bar pressure tank in accordance with 2014/68/EU regulations and CE marked with fixing and steerable rollers
1000l / 25bar CE / rollers	C4-B173R13G057V1 1000 l / 25 bar pressure tank in accordance with 2014/68/EU regulations and CE marked with fixing and steerable rollers
600l / 25bar CE / chassis	C4-B172R12G057V1 600 l / 25 bar pressure tank in accordance with 2014/68/EU regulations and CE marked with electronic weight indication and chassis with solid tired wheels
1000l / 25bar CE / chassis	C4-B172R13G057V1 1000 l / 25 bar pressure tank in accordance with 2014/68/EU regulations and CE marked with electronic weight indication and chassis with solid tired wheels

600l / 25bar SQL;CN/ rollers	C4/C5-B173R82G057V1/CN 600 l / 25 bar pressure tank (Made in China) with SQL approval with fixing and steerable rollers
1000l / 25bar SQL;CN / rollers	C4/C5-B173R83G057V1/CN 1000 l / 25 bar pressure tank (Made in China) with SQL approval with fixing and steerable rollers
600l / 25bar SQL;CN / chassis	C4/C5-B172R82G057V1/CN 600 l / 25 bar pressure tank (Made in China) with SQL approval, electronic weight indication and chassis with solid tired wheels
1000l / 25bar SQL;CN / chassis	C4/C5-B172R83G057V1/CN 1000 l / 25 bar pressure tank (Made in China) with SQL approval, electronic weight indication and chassis with solid tired wheels
600l / 25bar SQL;GE/ rollers	C4/C5-B173R82G057V1/GE 600 l / 25 bar pressure tank (Made in Germany) with SQL approval with fixing and steerable rollers
1000l / 25bar SQL;GE/rollers	C4/C5-B173R83G057V1/GE 1000 l / 25 bar pressure tank (Made in Germany) with SQL approval with fixing and steerable rollers
600l / 25bar SQL;GE / chassis	C4/C5-B172R82G057V1/GE 600 l / 25 bar pressure tank (Made in Germany) with SQL approval, electronic weight indication and chassis with solid tired wheels
1000l / 25bar SQL;GE / chassis	C4/C5-B172R83G057V1/GE 1000 l / 25 bar pressure tank (Made in Germany) with SQL approval, electronic weight indication and chassis with solid tired wheels
600l / 25bar ASME / rollers	C4/C5-B173R72G057V1 600 l / 25 bar pressure tank with ASME approval with fixing and steerable rollers
1000l / 25bar ASME / rollers	C4/C5-B173R73G057V1 1000 l / 25 bar pressure tank with ASME approval with fixing and steerable rollers
600l / 25bar ASME / chassis	C4/C5-B172R72G057V1 600 l / 25 bar pressure tank with ASME approval, electronic weight indication and chassis with solid tired wheels
1000l / 25bar ASME / chassis	C4/C5-B172R73G057V1 1000 l / 25 bar pressure tank with ASME approval, electronic weight indication and chassis with solid tired wheels
600l / 25bar Korea / rollers	C4/C5-B173R62G057V1 600 l / 25 bar pressure tank according to Korean standard with fixing and steerable rollers
1000l / 25bar Korea / rollers	C4/C5-B173R63G057V1 1000 l / 25 bar pressure tank according to Korean standard with fixing and steerable rollers
600l / 25bar Korea / chassis	C4/C5-B172R62G057V1 600 l / 25 bar pressure tank according to Korean standard, electronic weight indication and chassis with solid tired wheels
1000l / 25bar Korea / chassis	C4/C5-B172R63G057V1 1000 l / 25 bar pressure tank according to Korean standard, electronic weight indication and chassis with solid tired wheels
<b>Recovery units for gas change</b>	
without recovery unit	
with recovery unit	Integrated recovery unit for complete gas recovery of the service cart before filling with new gas or a new mixing ratio. The gas is stored in an external cylinder to be connected.
<b>Transport lock</b>	
without transportation lock	without transportation lock for fixing and steerable rollers
with transportation lock	with transportation lock for fixing and steerable rollers to store the device in a safe way (e.g. on a truck) and to relieve the load from the fixing- and steerable rollers.
<b>Vacuum indication</b>	

Standard indication	0 - 100 mbar, resolution 0.1 mbar
High-precision indication A	Vacuum sensor for gas compartment A, indicating range 1x10-5 mbar
High-precision indication B	Vacuum sensor for gas compartment B, indicating range 1x10-5 mbar
High-precision indication A+B	Vacuum sensor for gas compartment A and gas compartment B, indicating range 1x10-5 mbar

### Optional accessories

C4-6-1048-R435	Annual maintenance kit for G057R01 with standard vacuum pump (40 m <sup>3</sup> /h)
C4-6-1048-R436	Annual maintenance kit for G057R01 with 6-057VP-R001 (63 m <sup>3</sup> /h) / R002 (100 m <sup>3</sup> /h) vacuum pump
C4-6-1048-R437	Annual maintenance kit for G057R01 with 2-stage 6-057VP-R007 vacuum pump (55 m <sup>3</sup> /h)
6-1373-R013	Spare parts kit for compressor (piston rings)
6-1373-R004	Spare parts kit for compressor (valve seats)
C4-6-1101-R124	Spare filter kit (for dry and particle filter)
C4-6-1069-R050 C	5 m long wire braided hose DN20 with protective metal sheathing with coupling tongue part on both ends DN20 (M48x2) - C4-FN
C4-6-1024-R050 C	Wire-braided hose, 5 m long, coupling tongue part DN20 (C4-VK/F-02/20 C , M48x2) on both ends, PN 40 bar
K400R01G01V1	Cylinder heating ring (inductive) for cylinders with diameters from 250 to 270 mm
6-1053-R003/1M	Electrical connecting cable 5x6 AWG9 (available lengths 5 - 30 m)
6-1053-R004/1M	Electrical connecting cable 5x16 AWG5 (available lengths 5 - 30 m)
C4-B077R22	Portable pre-filter unit (p <sub>e</sub> 50 bar)

### Packaging

3-751-R018-C	Packing for G057R01 + G170R01 with 600l buffer tank
3-751-R014-C	Packing for G057R01 + G170R01 with 1000l buffer tank

### Note

For the 380 - 480 V voltage range the following cable is required: 6-1053-R003

For the 200 - 240 V voltage range the following cable is required: 6-1053-R004