

C4-FN handling equipment

For filling, cleaning and recovery of C4-FN gas mixtures

Model GPU-N-3000

WIKA data sheet SP 63.31

Applications

Filling, cleaning, recovery, evacuation and venting of switchgear and equipment filled with C4-FN gas mixtures

- Oil-less compressor for partially liquefied storage
- On-site gas filtration to the desired humidity
- Temperature-compensated filling with highest filling accuracy
- Smart recovery of partially liquefied gas mixtures
- Gas analysis connection for verification of gas quality

Description

GPU-N platform for effective and safe C4-FN gas handling

The handling equipment of the GPU platform enables the complete process from initial filling to treatment to be carried out safely, effectively and intuitively.

High standards and quality

The fully automated handling equipment offers powerful, compatible components and materials tailored to C4-FN gas mixtures. The gas flow is optimised for the specific conditions of C4-FN-based gas mixtures. For additional safety, the instrument includes internal modelling of gas condition phase transitions to prevent partial liquefaction of the gas and to ensure that a homogeneous gas mixture is available for the filling process into the switchgear gas compartment.

Humidity in C4-FN gas mixtures is considered highly significant. Therefore, the WIKA handling equipment offers humidity sensors at several measuring locations in the system to detect humidity comprehensively during recovery and filling processes.



C4-FN handling equipment, model GPU-N-3000 with 600-litre tank

The WIKA handling equipment is an efficient and reliable solution that exceeds the current IEC standards for handling C4-FN.

The 10" touchscreen promises convenient and intuitive handling.

The fully automated handling equipment enables easy gas handling with additional service processes, e.g. the quick and easy replacement of filter elements (including saturation indication), pressure reduction to transport pressure, pressure relief of the high-pressure connections or a vacuum stabilisation test.

For enhanced safety, monitoring sensors are installed inside the instrument to detect leaks and high concentrations of CO₂ and C4-FN, warn the user and stop the process. Contamination is avoided through innovative trend analyses during recovery processes.

A gas exchange is possible without any external C4-FN handling equipment or additional compressors.

Specifications

Basic information		
Display		
Type of display	10" colour display with touchscreen	
Connections		
Gas-insulated switchgear (GIS)	1 x valve DN 20 (M48 x 2) Colour-coded in green	Pressure range: 0 ... 12 bar abs. [0 ... 175 psi abs.]
Gas cylinder	2 x valves DN 20 (M48 x 2) Colour-coded in green	Pressure range: 0 ... 100 bar abs. [0 ... 1,450 psi abs.]
Atmosphere (air), selectable	1 x valve DN 20 (M48 x 2) Colour-coded in green	Pressure range: 0 ... 1.2 bar abs. [0 ... 17 psi abs.]
Measuring connection (storage tank)	1 x valve DN 8 (M28 x 1.5) Colour-coded in green + adapter DN 8 to Quick Coupling	-
Operating voltage	■ AC 360 ... 500 V, 3-phase, 50/60 Hz ■ AC 200 ... 264 V, 3-phase, 50/60 Hz ■ AC 600 V, 3-phase, 50/60 Hz	
Molecular sieve as filter element	Particle filter: 1 µm Max. water absorption: 75 g [2.65 oz]	
Filter element	Particle filter: 0.1 µm	
Integrated tank, storage capacity	■ 600 litres ■ 1,000 litres	
Integrated gas cylinder scales	Scales with pull-out, fixed to the GPU	Measuring range 0 ... 120 kg [0 ... 264.56 lb] Accuracy: ±50 g [±1.76 oz]
Function expansion	■ Additional process connection for the simultaneous evacuation of air from gas compartments ■ 1 x valve DN 40 for connection to gas-insulated switchgear ■ Increase of inlet and filling pressure to max. 15 bar abs. [217.56 psi abs.]	
Tyres	Solid rubber, Ø 200 mm [7.87 in], with rollover protection Chassis with solid rubber wheels, 406 x 103 mm [15.98 x 4.05 in]	
Ingress protection	IP54	
Material	Stainless steel pipes Seals and sealing elements suitable for use with C4-FN and CO ₂ gas mixtures	
Humidity sensor	GDHT-20 in the suction and filling line for measurement of humidity, temperature, pressure and density	
Weight		
With empty 600-litre tank	Approx. 1,800 kg [3,969 lb]	
With empty 1,000-litre tank	Approx. 2,000 kg [4,410 lb]	

Operating conditions	
Operating temperature	0 ... 50 °C [32 ... 122 °F]
Storage temperature range	-20 ... +60 °C [-4 ... +140 °F]
Humidity	< 95 % relative humidity
Condensation	Non-condensing

Oil-less compressor (C4-FN gas)	
Output pressure	Gas flow rate
100 bar abs. [1,450.38 psi abs.]	13.2 m³/h

Oil-less vacuum compressor (C4-FN gas)	
Final vacuum	Gas flow rate
< 1 mbar abs. [0.015 psi abs.]	43 m³/h

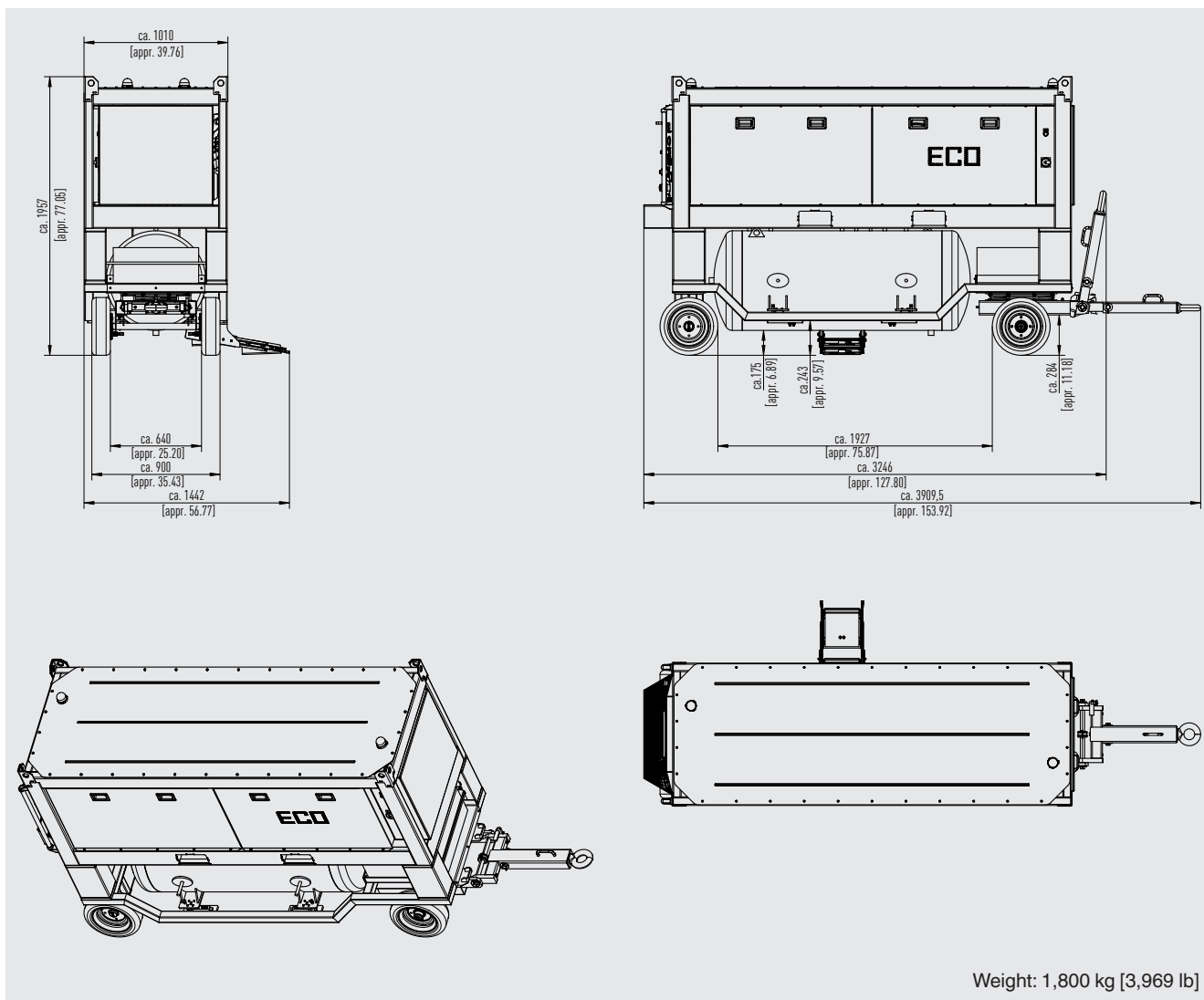
Vacuum pump (air)	
Final vacuum	Gas flow rate
< 0.1 mbar abs. [0.0015 psi abs.]	76 m³/h 120 m³/h

Approvals

Logo	Description	Country
	EU declaration of conformity	European Union
	EMC Directive	
	Machinery Directive	
	RoHS directive	

→ For approvals and certificates, see website

Dimensions in mm [in]



Ordering information

To order the described product, the order number is sufficient.

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