

SF₆ handling equipment

For filling, cleaning and recovery of SF₆ gas

Models GPU-S-2000 and GPU-S-3000

WIKA data sheet SP 63.16

Applications

Filling, cleaning, recovery, evacuation and venting of SF₆ gas-filled switchgear/equipment and linear accelerators.

Special features

- Oil-less compressor and vacuum compressor
- Option for on-site gas filtration to the desired humidity
- Digital filling control to prevent gas cylinders from freezing
- Low maintenance effort
- SIL 2 certified safety control, sensors and load cell



GPU-S-2000 with 300-litre tank

Description

The right instrument for each application – the GPU platform

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

High standards and quality – model series S

The models GPU-S-2000 and GPU-S-3000 are equipped with an additional SIL 2 safety control that is unique on the market. As a result, operating errors and the escape of SF₆ gas are technically impossible.

All models of the GPU platform are available with a filter process that allows the SF₆ gas to be brought to a lower humidity value directly on-site. Optionally, the GPU can be equipped with a model GDHT-20 transmitter for gas humidity, which enables filtering to a target humidity value.

The SF₆ handling equipment is an efficient and reliable solution that exceeds the current IEC standards for handling SF₆ gas. Low downtimes through long maintenance intervals of more than 2,500 hours or three years make them an extremely durable product that is always ready for use. Intuitive service processes enable, for example, quick and easy replacement of filter elements, pressure reduction to transport pressure or pressure relief of the high-pressure connections.

Specifications

Basic information		
Models		
GPU-B-2000	SF ₆ handling equipment in fully automated basic version	
GPU-S-2000	SF ₆ handling equipment with additional SIL 2 safety control	
GPU-B-3000	SF ₆ handling equipment at the highest performance level	
GPU-S-3000	SF ₆ handling equipment with additional SIL 2 safety control and the highest performance level	
Digital display	10"-colour LCD touchscreen	
Connections		
Gas-insulated switchgear (GIS)	1 x valve DN 20	Pressure range: 0 ... 10 bar abs. [0 ... 145 psi abs.]
Gas cylinder	2 x valve DN 20	Pressure range: 0 ... 50 bar abs. [0 ... 725 psi abs.]
Atmosphere	1 x valve DN 20	Pressure range: 0 ... 1.2 bar abs. [0 ... 17 psi abs.]
Operating voltage	■ AC 400 V, 3-phase, 50/60 Hz ±10 % ■ AC 240 V, 3-phase, 50/60 Hz ±10 % ■ AC 208 V, 3-phase, 50/60 Hz ±10 %	
Filter element	■ Molecular sieve ■ Aluminium oxide ■ Particle filter: 1 µm ■ Max. water absorption: 75 g [2.65 oz] or 2 x 75 g [2.65 oz]	
Integrated tank, storage capacity	■ Without tank ■ 300 litres ■ 600 litres ■ Stowage for 6 gas cylinders ■ Stowage for 10 gas cylinders	
Integrated gas cylinder scales	Without scales	-
	Without scales with pull-out, fixed to the GPU	Measuring range 0 ... 120 kg [0 ... 264.56 lb] Accuracy: ±50 g [±1.76 oz]
	Mobile scales	Measuring range 0 ... 136 kg [0 ... 299.83 lb] Accuracy: ±68 g [±2.4 oz]
Extension of function	■ Humidity sensor to measure the humidity content and filtering to a target humidity value ■ Additional process connection for the simultaneous evacuation of air from gas compartments. ■ 1 x valve DN40 for connection to gas-insulated switchgear ■ Evaporator	
Tyres	■ Solid rubber, Ø 200 mm [7.874 in], with rollover protection ■ Chassis with solig rubber wheels, 406 x 103 mm [15.98 x 4.05 in]	
Ingress protection	IP42	
Weight		
Without tank	Approx. 800 kg [1,764 lb]	
Without tank and wheels	Approx. 800 kg [1,764 lb]	
With empty 300-litre tank	Approx. 1,250 kg [2,756 lb]	
With empty 600-litre tank	Approx. 1,300 kg [2,867 lb]	
With empty stowage for 6 gas cylinders	Approx. 1,050 kg [2,315 lb]	
With empty stowage for 10 gas cylinders	Approx. 1,175 kg [2,591 lb]	

Operating conditions	
Operating temperature	0 ... 40 °C [32 ... 104 °F]
Storage temperature range	-20 ... +60 °C [-4 ... +140 °F]
Humidity	< 95 % relative humidity
Condensation	Non-condensing

Oil-less compressor (SF ₆ gas)	
Output pressure	Gas flow rate
50 bar abs.	■ 6 m ³ /h at 50 Hz
	■ 7.3 m ³ /h at 60 Hz
	■ 10.2 m ³ /h at 50 Hz
	■ 12.3 m ³ /h at 60 Hz
	■ 15 m ³ /h at 50 Hz
	■ 18.5 m ³ /h at 60 Hz

Oil-less vacuum compressor (SF ₆ gas)	
Final vacuum	Gas flow rate
< 5 mbar abs.	■ 4.8 m ³ /h at 50 Hz ■ 5.8 m ³ /h at 60 Hz
< 1 mbar abs.	10 m ³ /h at 50/60 Hz
	■ 18 m ³ /h at 50 Hz
	■ 21 m ³ /h at 60 Hz
	■ 35 m ³ /h at 50 Hz
	■ 43 m ³ /h at 60 Hz

Vacuum pump (air)	
Final vacuum	Gas flow rate
< 0.1 mbar abs.	■ 40 m ³ /h at 50 Hz
	■ 48 m ³ /h at 60 Hz
	■ 63 m ³ /h at 50 Hz
	■ 76 m ³ /h at 60 Hz
	■ 100 m ³ /h at 50 Hz
	■ 120 m ³ /h at 60 Hz
	■ 85 m ³ /h at 50 Hz dry-running vacuum pump
	■ 110 m ³ /h at 60 Hz dry-running vacuum pump

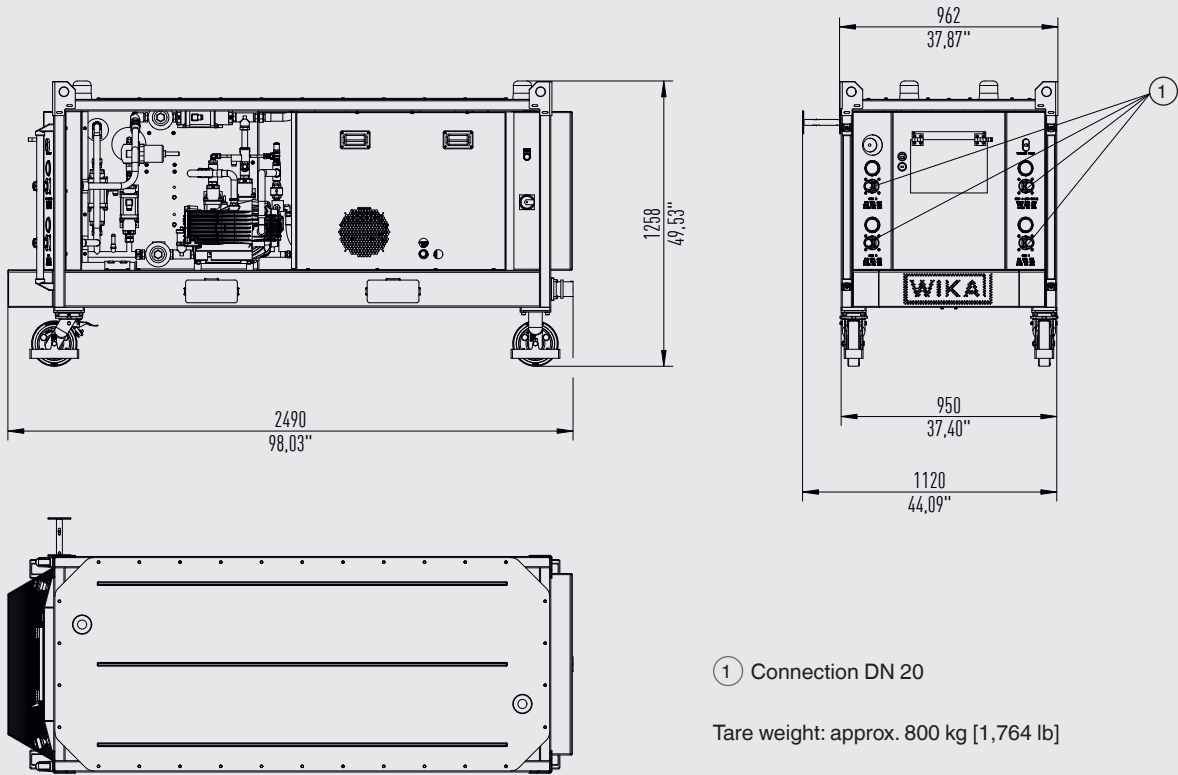
Approvals

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

→ For approvals and certificates, see website

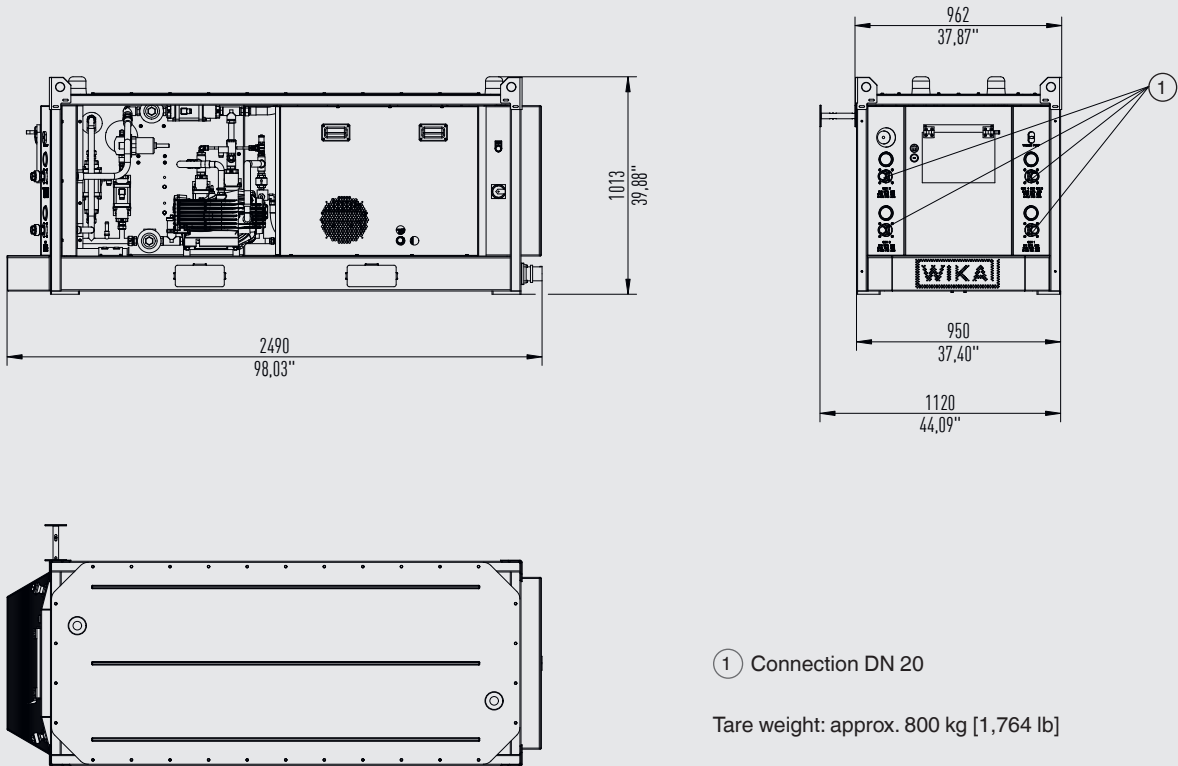
Dimensions in mm [in]

Version without tank



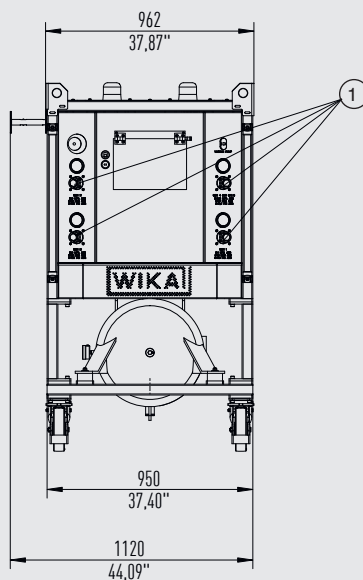
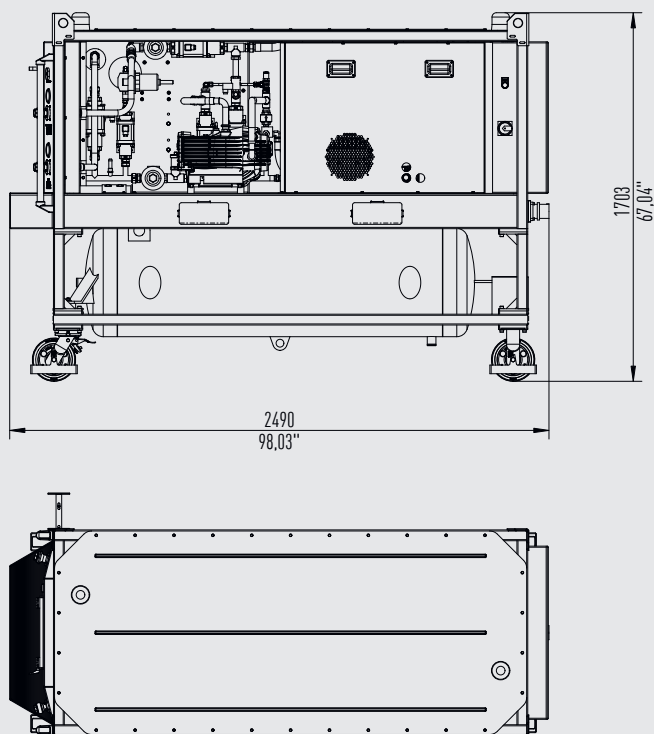
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Version without tank and wheels



14658536.00

Version with 300-litre tank

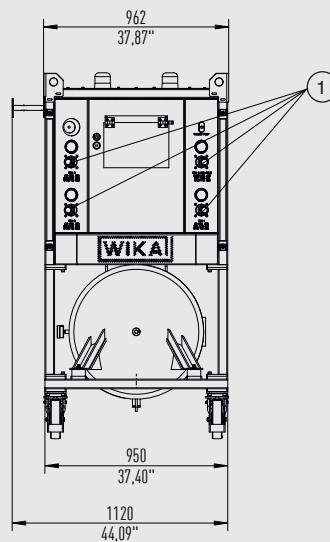
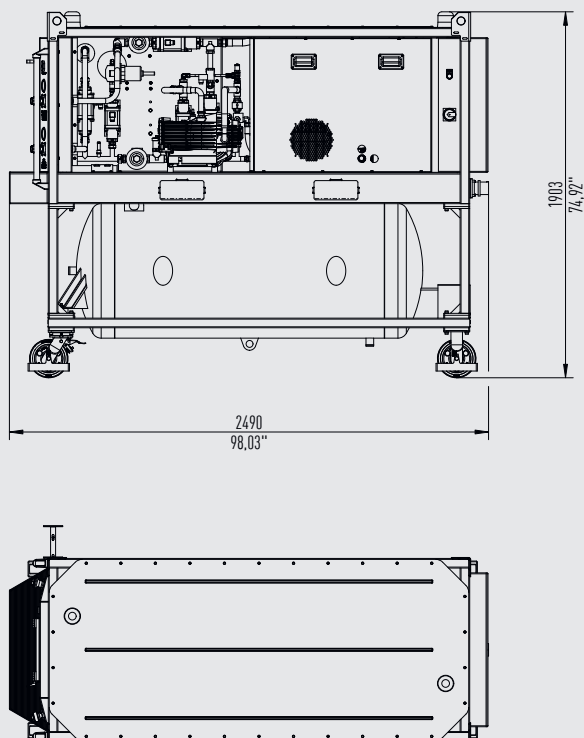


① Connection DN 20

Tare weight: approx. 1,250 kg [2,756 lb]

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Version with 600-litre tank

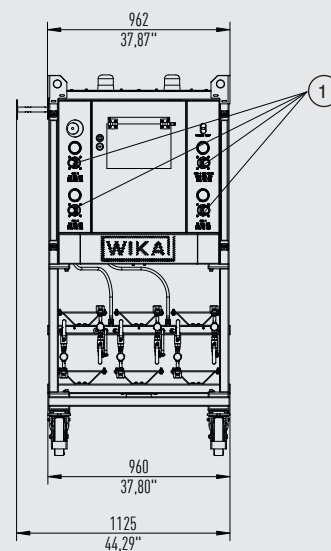
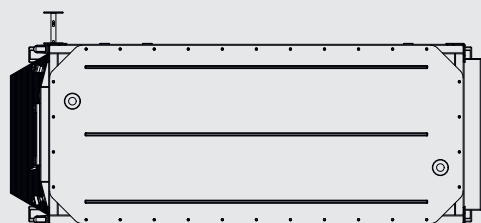
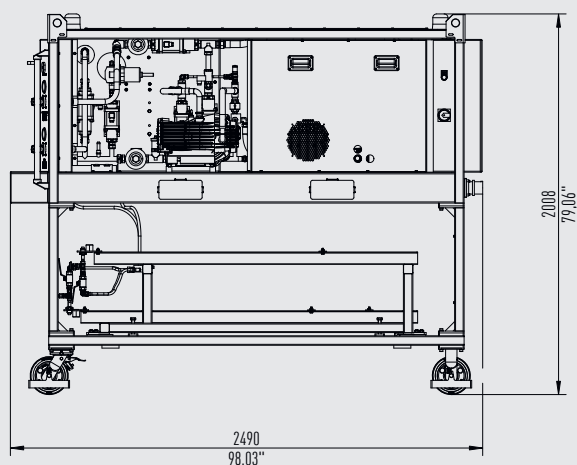


① Connection DN 20

Tare weight: approx. 1,300 kg [2,867 lb]

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Version with stowage for 6 gas cylinders

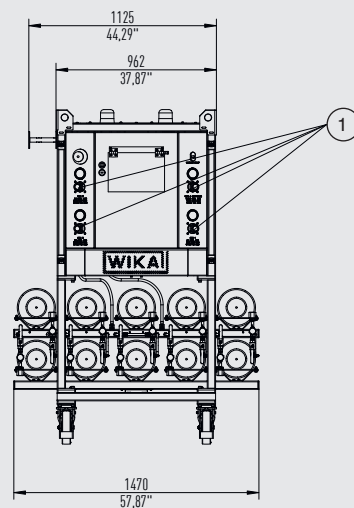
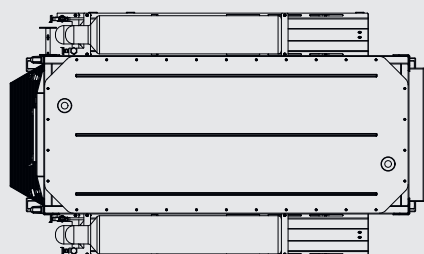
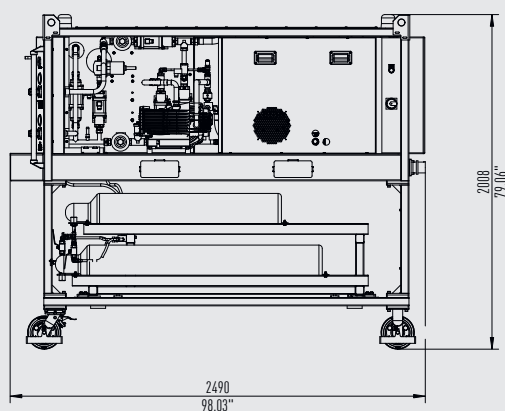


① Connection DN 20

Tare weight: approx. 1,050 kg [2,315 lb]

14658503.00

Version with stowage for 10 gas cylinders



① Connection DN 20

Tare weight: approx. 1,175 kg [2,591 lb]

14658527.00

Accessories and spare parts

Description		Order number
Hoses ¹⁾		
Nominal width DN 8	3 m [9.84 ft]	14294449
	5 m [16.40 ft]	14330878
	10 m [32.81 ft]	14335098
	15 m [49.20 ft]	14307929
Nominal width DN 20	3 m [9.84 ft]	14290070
	5 m [16.40 ft]	14307900
	10 m [32.81 ft]	14327574
	15 m [49.20 ft]	14307926
Adapter		
DN 8 (male) to DN 20 (female), brass		14096583
DN 8 (female) to DN 20 (male), brass		14284870
Oil for vacuum pump, 1 litre		On request
GPU-x-x000 filter set		14418175
Service kit for compressor (SF₆ gas)		On request (serial number of the equipment is required)
Service kit for vacuum compressor (SF₆ gas)		On request (serial number of the equipment is required)
Service kit for vacuum pump (air)		On request (serial number of the equipment is required)
GPU-x-x000 Tarpaulin		14182499 (only for version with 300-litre tank)
Trailer		On request

1) Made of stainless steel; rubber on request

Ordering information

Model / Oil-less vacuum compressor (SF₆ gas) / Vacuum pump (air) / Integrated tank, storage capacity / Accessories

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