

SF₆ service equipment

For filling, cleaning and recovery of SF₆ gas

Model GPU-S-2000 and GPU-S-3000

WIKA data sheet SP 63.16

Applications

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

Special features

- Oil-free compressor
- Oil-free vacuum compressor
- Filtering of particles, humidity and decomposition products
- Low maintenance effort
- Operation via 10" touchscreen
- SIL 2 certified safety control, sensors and load cell



SIL2 | PLd

IEC 61508 / IEC 61511

Description

The right instrument for each application - The GPU platform

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

The platform is available in 4 versions.

- Model GPU-B-2000
SF₆ service equipment in fully automated basic version
- Model GPU-S-2000
SF₆ service equipment with additional SIL 2 safety control
- Model GPU-B-3000
SF₆ service equipment at the highest performance level
- Model GPU-S-3000
SF₆ service equipment with additional SIL 2 safety control and the highest performance level

SF₆ service equipment with 300-litre tank

Extra high safety - 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 optionally 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 WIKA gas humidity sensor, model GDHT-20, which enables filtering to a target value.

The SF₆ service equipment is an efficient and reliable solution that exceeds the current IEC standards for handling SF₆ gas. Low downtimes through long service intervals of more than 2,500 hours make them an extremely durable product that is always ready for use.

Specifications

Voltage supply

- AC 400 V, 3-phase, 50/60 Hz $\pm 10\%$
- AC 240 V, 3-phase, 50/60 Hz $\pm 10\%$
- AC 208 V, 3-phase, 50/60 Hz $\pm 10\%$

Oil-free compressor (SF ₆ gas)	
Gas flow rate	Output pressure
<ul style="list-style-type: none"> ■ 6 m³/h at 50 Hz ■ 7.3 m³/h at 60 Hz 	50 bar abs.
<ul style="list-style-type: none"> ■ 10.2 m³/h at 50 Hz ■ 12.3 m³/h at 60 Hz 	50 bar abs.
<ul style="list-style-type: none"> ■ 15 m³/h at 50 Hz ■ 18.5 m³/h at 60 Hz 	50 bar abs.

Oil-free vacuum compressor (SF ₆ gas)	
Gas flow rate	Final vacuum
<ul style="list-style-type: none"> ■ 4.8 m³/h at 50 Hz ■ 5.8 m³/h at 60 Hz 	< 5 mbar abs.
10 m ³ /h at 50/60 Hz	< 1 mbar abs.
<ul style="list-style-type: none"> ■ 15 m³/h at 50 Hz ■ 18 m³/h at 60 Hz 	< 1 mbar abs.
<ul style="list-style-type: none"> ■ 35 m³/h at 50 Hz ■ 42 m³/h at 60 Hz 	< 1 mbar abs.

Vacuum pump (air) ¹⁾	
Gas flow rate	Final vacuum
<ul style="list-style-type: none"> ■ 25 m³/h at 50 Hz ■ 30 m³/h at 60 Hz 	< 0.1 mbar abs.
<ul style="list-style-type: none"> ■ 40 m³/h at 50 Hz ■ 48 m³/h at 60 Hz 	< 0.1 mbar abs.
<ul style="list-style-type: none"> ■ 63 m³/h at 50 Hz ■ 76 m³/h at 60 Hz 	< 0.1 mbar abs.
<ul style="list-style-type: none"> ■ 100 m³/h at 50 Hz ■ 120 m³/h at 60 Hz 	< 0.1 mbar abs.

1) Oil-free on request

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
Accuracy: ± 50 g
- Mobile scales
Measuring range: 0 ... 136 kg
Accuracy: ± 68 g

Connections	
GIS	1 valve DN 20, pressure range 0 ... 10 bar abs.
Gas cylinder	2 valves DN 20, pressure range 0 ... 50 bar abs.
Atmosphere (optional)	1 valve DN 20, pressure range 0 ... 1.2 bar abs.

Safety systems

Safety control: Based on SIL 2 components, SF₆ gas warning equipment: 0 ... 2,000 ppm_v, based on infrared technology

Filter element

Molecular sieve, aluminium oxide, particle filter 1 μ m
Max. water absorption: 75 g

Control element

10" touchscreen

Permissible ambient temperature

Operation: -10 ... +40 °C [14 ... 104 °F]

Storage: -20 ... +60 °C [-4 ... +140 °F]

Permissible air humidity

< 95 % r. h. (non-condensing)

Ingress protection

IP42

Weight	
Without tank	Approx. 665 kg
With empty 300-litre tank	Approx. 1,000 kg
With empty 600-litre tank	Approx. 1,300 kg
With empty stowage for 6 gas cylinders	Approx. 1,050 kg
With empty stowage for 10 gas cylinders	Approx. 1,175 kg


Tyres

Solid rubber, \varnothing 200 mm, with rollover protection

Options

- Humidity sensor to measure the humidity content and filtering to a target humidity value
- Additional process connection for the simultaneous evacuation and recovery or filling of air
- Evaporators

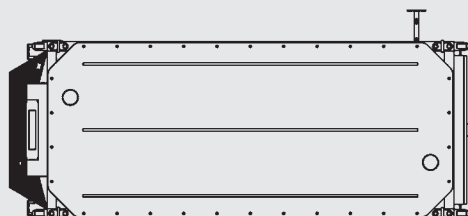
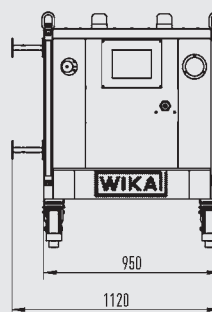
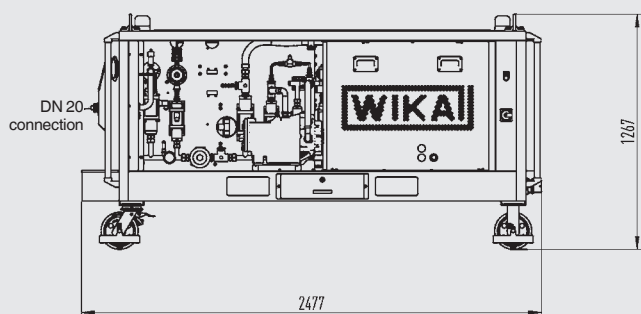
Approvals

Logo	Description	Country
	EU declaration of conformity	European Union
	EMC directive, EN 61326 emission (group 1, class B) and immunity (industrial application)	
	RoHS directive	
	Machinery directive	

→ For approvals and certificates, see website

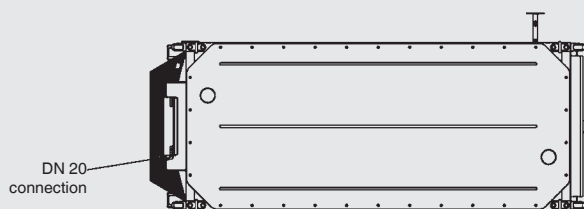
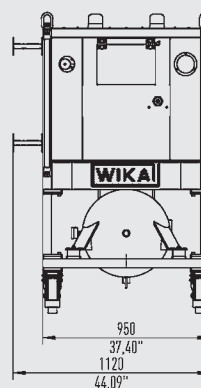
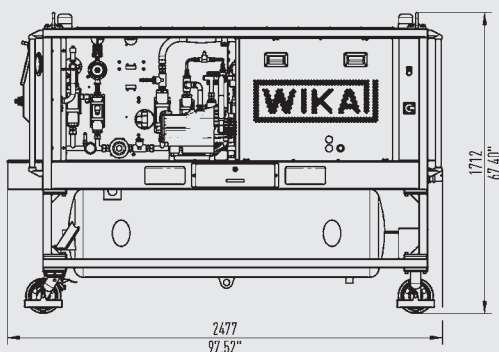
Dimensions in mm

Version without tank



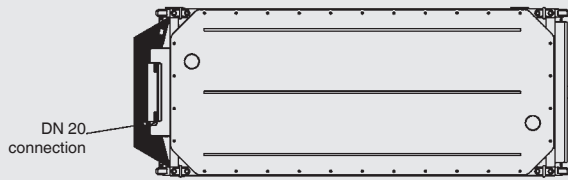
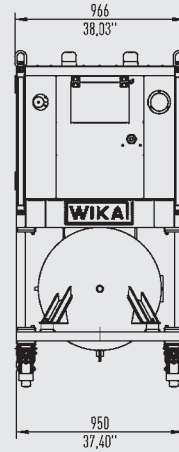
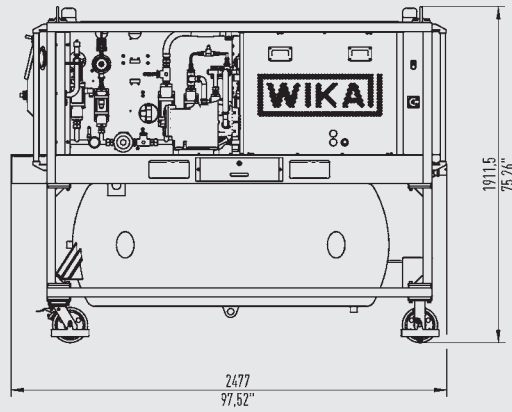
Tare weight: approx. 950 kg

Version with 300-litre tank



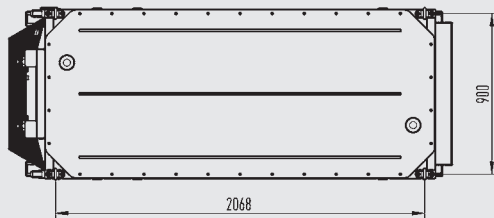
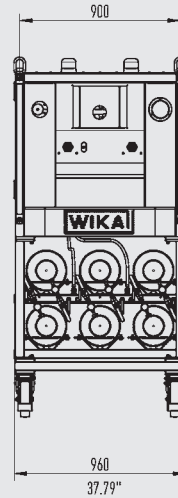
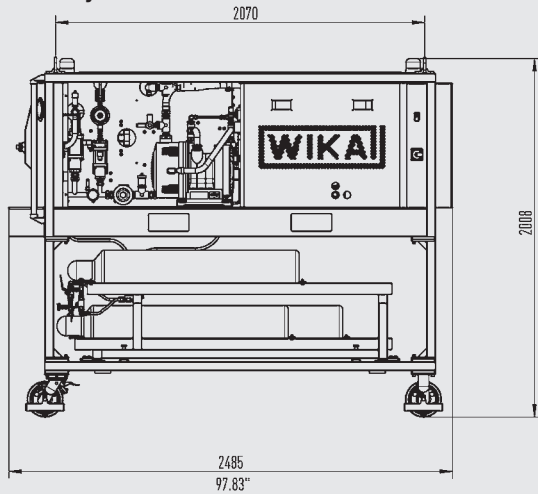
Tare weight: approx. 1,250 kg
Weight (filled): approx. 1,500 kg

Version with 600-litre tank



Tare weight: approx. 1,500 kg
Weight (filled): approx. 2,000 kg

Version with 6-cylinder-rack



Tare weight: approx. 1,050 kg

Accessories

Hoses		Order number	
Nominal width	Length	Stainless steel	Rubber
DN 8	3 m	14294449	On request
	5 m	14330878	On request
	10 m	14335098	On request
	15 m	14307929	On request
DN 20	3 m	14290070	On request
	5 m	14307900	On request
	10 m	14327574	On request
	15 m	14307926	On request

Adapter	Order number
DN 8 (male) to DN 20 (female), brass	14096583
DN 8 (female) to DN 20 (male), brass	14284870

Spare parts and service kits	Order number
Oil for vacuum pump, 1 litre	On request
GPU-x-x000 filter set	14418175
Service kit for compressor (SF ₆ gas)	On request (serial number of the equipment is required)
Service kit for vacuum compressor (SF ₆ 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)
Tarpaulin GPU-x-x000	14182499 (only for version with 300-litre tank)
Pavilion with side pieces for outdoor use	14182512
Trailer	On request

Ordering information

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

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