

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



For further approvals,
see page 3

Applications

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

Special features

- Oil-free compressor and 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



SF₆ service equipment with 300-litre tank

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

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

Basic information		
Models		
GPU-B-2000	SF ₆ service equipment in fully automated basic version	
GPU-S-2000	SF ₆ service equipment with additional SIL 2 safety control	
GPU-B-3000	SF ₆ service equipment at the highest performance level	
GPU-S-3000	SF ₆ service equipment with additional SIL 2 safety control and the highest performance level	
Digital display		
Type of display	10"-colour LCD touchscreen	
Connections		
GIS	1 valve DN 20	Pressure range 0 ... 10 bar abs.
Gas cylinder	2 valve DN 20	Pressure range 0 ... 50 bar abs.
Atmosphere	1 valve DN 20	Pressure range 0 ... 1.2 bar abs.
Safety systems		
Safety control	Based on SIL 2 components	
SF ₆ gas warning equipment	0 ... 2,000 ppm _v , based on infrared technology	
Operating voltage		
	<ul style="list-style-type: none"> ■ 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		
	<ul style="list-style-type: none"> ■ Molecular sieve ■ Aluminium oxide ■ Particle filter 1 µm ■ Max. water absorption: 75 g [2,65 oz] 	
Integrated tank, storage capacity		
	<ul style="list-style-type: none"> ■ 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 [264.56 lb] Accuracy: ±50 g [±1.76 oz]
	Mobile scales	Measuring range: 0 ... 136 kg [299,83 lb] Accuracy: ±68 g [±2,4 oz]
Function expansion		
	<ul style="list-style-type: none"> ■ 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 ■ Evaporators 	
Tyres		
	Solid rubber, Ø 200 mm [7.874 in], with rollover protection	
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	-10 ... +40 °C [14 ... 104 °F]
Storage temperature range	-20 ... +60 °C [-4 ... +140 °F]
Relative humidity, condensation	< 95 % r. h. (non-condensing)


Oil-free 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-free 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
	■ 15 m ³ /h at 50 Hz
	■ 18 m ³ /h at 60 Hz
	■ 35 m ³ /h at 50 Hz
	■ 42 m ³ /h at 60 Hz

Vacuum pump (air) 1)	
Final vacuum	Gas flow rate
< 0.1 mbar abs.	■ 25 m ³ /h at 50 Hz
	■ 30 m ³ /h at 60 Hz
	■ 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

1) Oil-free on request

Approvals

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

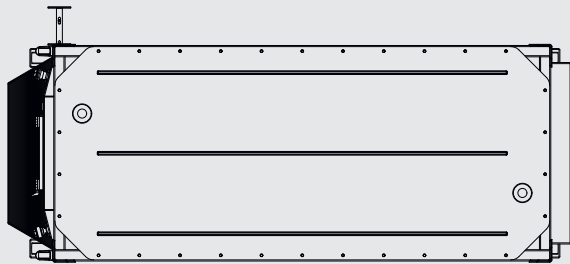
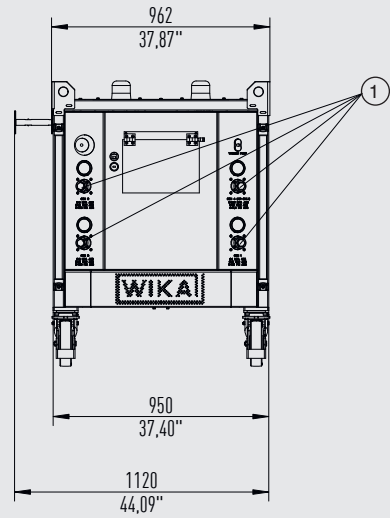
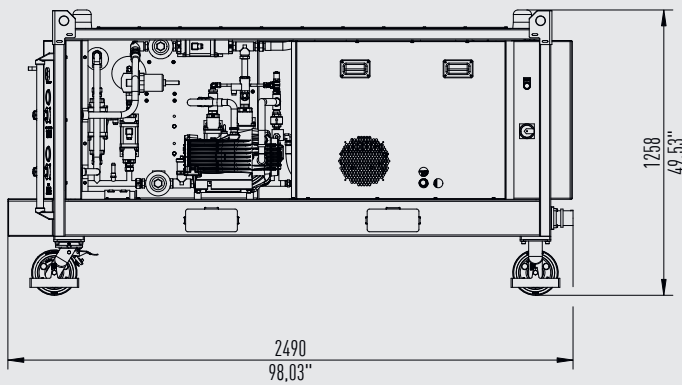
→ For approvals and certificates, see website

Manufacturer's declaration

Logo	Description
	SIL 2 Functional safety

Dimensions in mm [in]

Version without tank

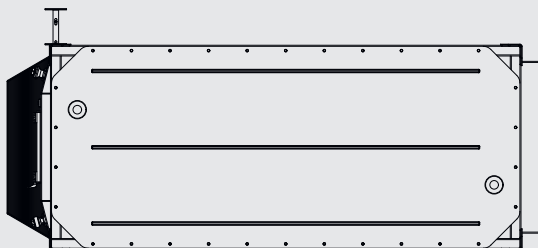
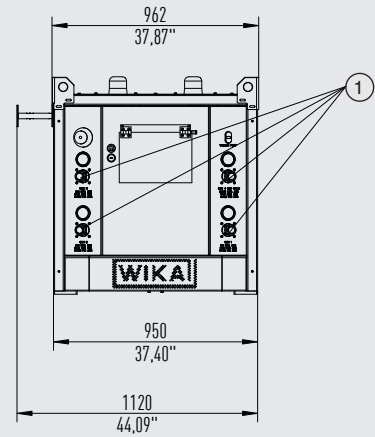
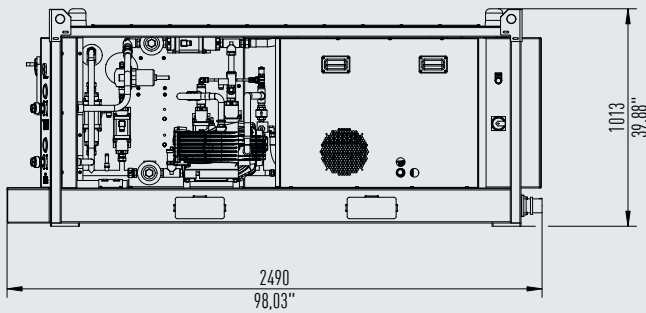


① Connection DN 20

Tare weight: approx. 800 kg [1,764 lb]

14658361.00

Version without Tank and wheels

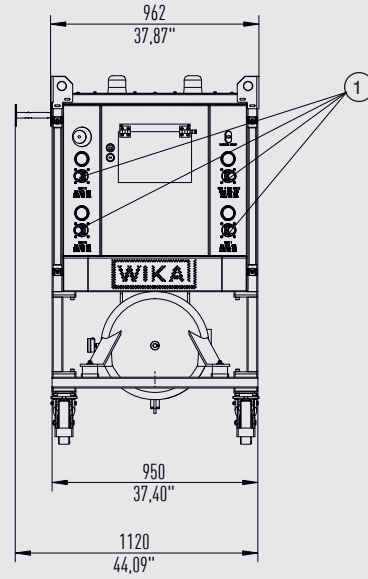
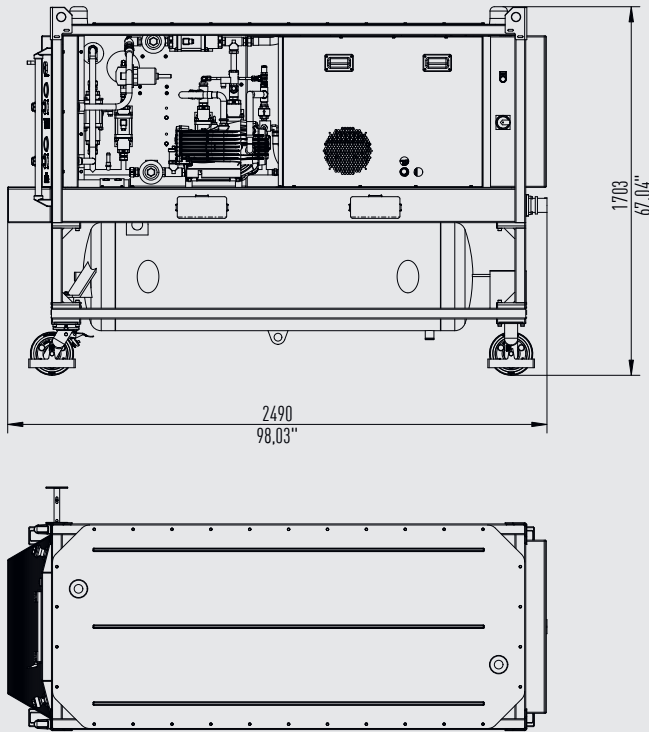


① Connection DN 20

Tare weight: approx. 800 kg [1,764 lb]

14658536.00

Version with 300 litre tank

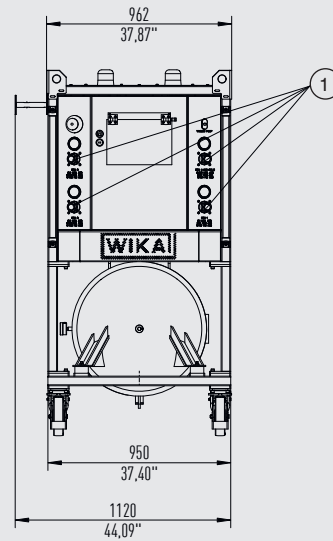
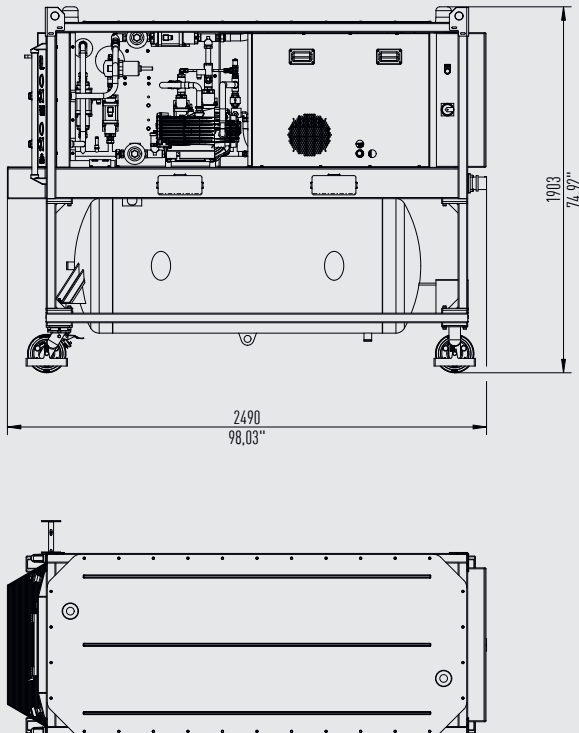


① Connection DN 20

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

14658250.00

Version with 600 litre tank

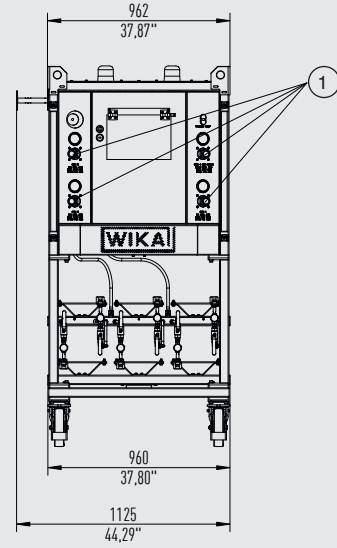
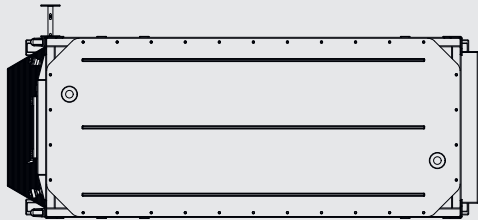
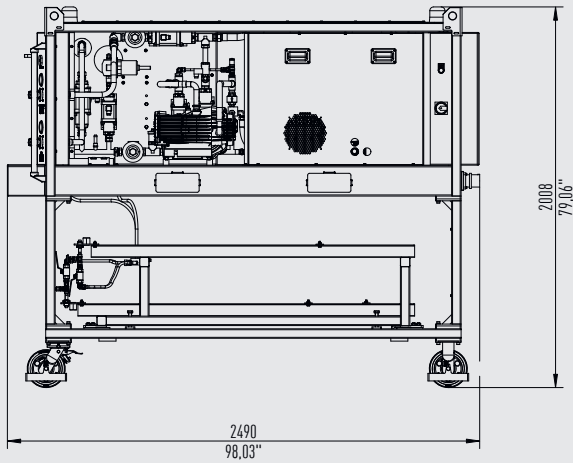


① Connection DN 20

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

14658331.00

Version with storage for 6 gas cylinders

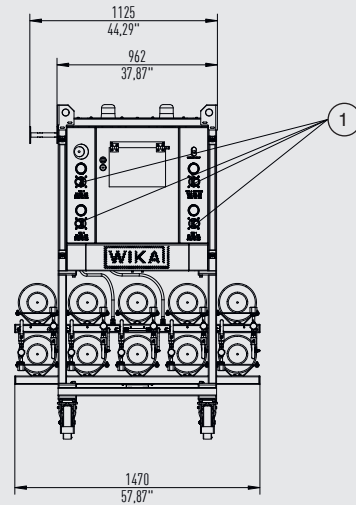
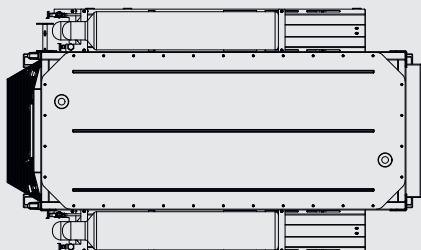
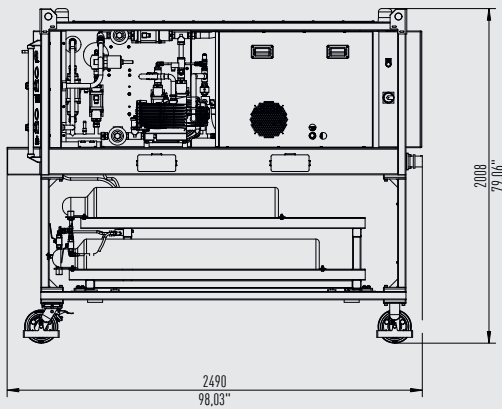


① Connection DN 20

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

14658503.00

Version with storage for 10 gas cylinders



① Connection DN 20

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

14658527.00

Accessories and spare parts

Hoses		Order number	
Nominal width	Length	Stainless steel	Rubber
DN 8	3 m [9.84 ft]	14294449	On request
	5 m [16.40 ft]	14330878	On request
	10 m [32.81 ft]	14335098	On request
	15 m [49.20 ft]	14307929	On request
DN 20	3 m [9.84 ft]	14290070	On request
	5 m [16.40 ft]	14307900	On request
	10 m [32.81 ft]	14327574	On request
	15 m [49.20 ft]	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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