

Filling cart for SF₆ gas

For emission-free filling and refilling

Model GFU08

Applications

- Emission-free filling and refilling of SF₆ gas compartments
- Generation of emissions reports in accordance with IPCC directives

Special features

- Ergonomic design and robust design enables easy transportation
- Precise refilling thanks to the high-accuracy scales with large digital display (option)
- Large selection of vacuum pumps for every application (option)



Fig.: Model GFU08-C

Description

Modular design

The GFU08 series of modular gas cylinder transport carts are used for the filling and refilling of SF₆ gas in the required gas compartment. The modular design enables worldwide application through the various mechanical and electrical connections.

The model range is divided into 4 versions:

- Model GFU08-B: Filling cart
- Model GFU08-W: Filling cart with scales
- Model GFU08-E: Filling cart with vacuum pump
- Model GFU08-C: Filling cart with scales and vacuum pump

High-performance vacuum pumps

Models GFU08-E and GFU08-C are fitted with vacuum pumps. With these, the air is extracted from the SF₆ gas compartments so that, afterwards, a professional filling can be made with SF₆ gas.

The basic version of the vacuum pump (model GVP-10) already has a suction throughput of 10 m³/h for fast pumping out, down to a final partial pressure of $\leq 2.0 \times 10^{-2}$ mbar [$< 1.5 \times 10^{-2}$ Torr].

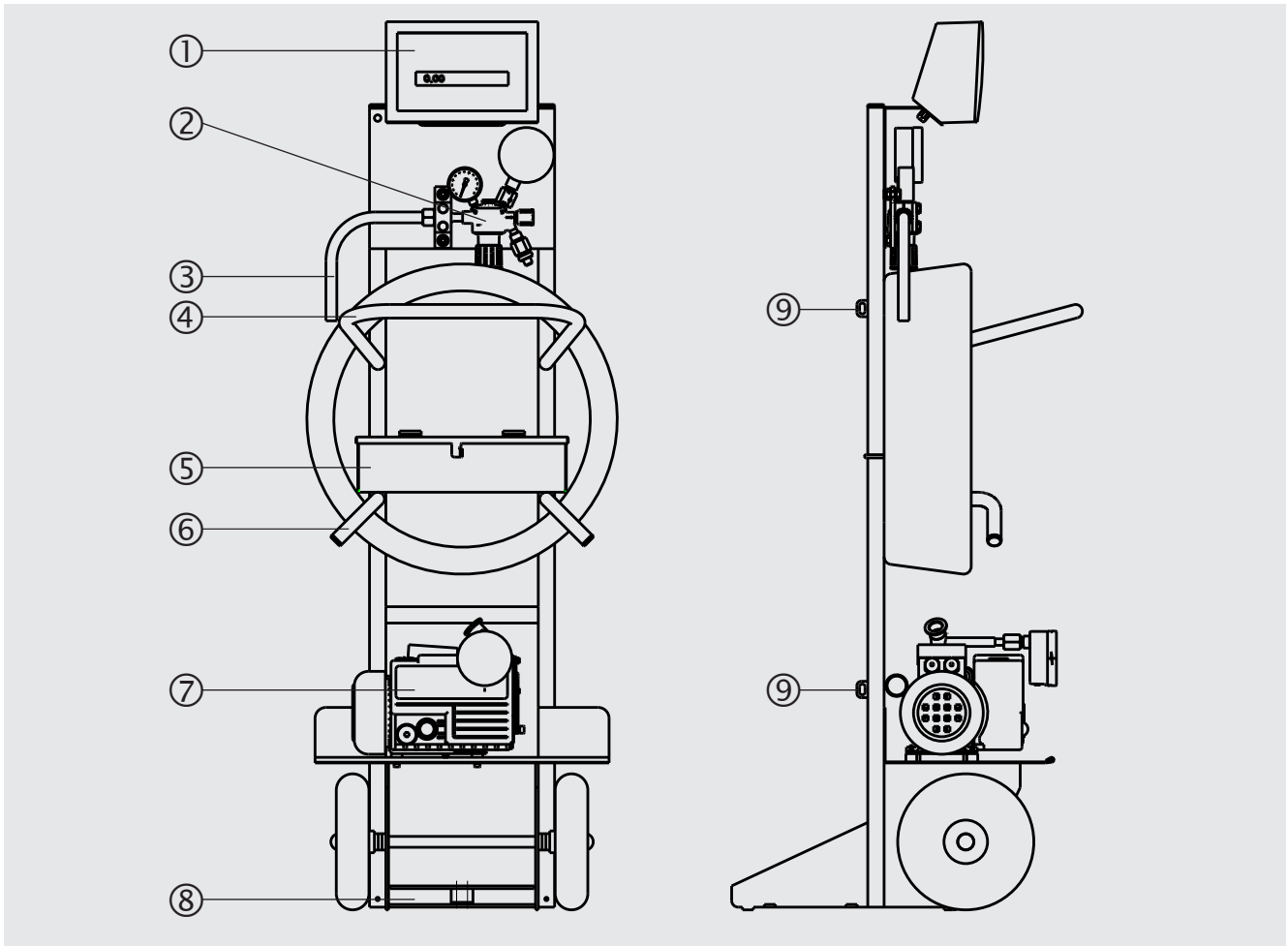
For larger volumes, more powerful vacuum pumps are available, with a suction throughput of up to 44 m³/h. With 2-stage pumps, the final pressure can be reduced down to $< 2.0 \times 10^{-3}$ mbar [$< 1.5 \times 10^{-3}$ Torr]. The risk of either too high humidity or air concentration in the SF₆ gas compartment is therefore not a consideration.

High-accuracy scales

High-accuracy scales determine exactly the filled SF₆ gas volume. Thus, the model GFU08 filling cart is an ideal tool for using the mass-balance method in accordance with the IPCC directive for the preparation of emission reports.

The flat design of the scales enables easy loading and unloading of the heavy gas cylinder by only one person.

Overview



- ① Digital display of the scales
- ② Pressure reducer
- ③ Connection for SF₆ gas cylinder
- ④ Transport handle
- ⑤ Tool box (option)

- ⑥ Brackets for hose winding
- ⑦ Vacuum compressor
- ⑧ Scales
- ⑨ SF₆ gas cylinder strapping

Transport cart

Transport cart without scales and vacuum compressor	
Integrated pressure reducer	
Connection for SF ₆ gas cylinder	W 21.8 x 1/14" DIN 477 Connecting hose with bend protection; length 0.8 m [31.5"]
Max. initial pressure	200 bar (2,900 psi)
Max. output pressure	10 bar (145 psi)
SF₆ gas cylinder strapping	2 x lashing strap with automatic retractor 25 mm x 1.8 m [1 x 70"] 250 daN lashing force (in accordance with EN 12195-2)
Filling hose	Stainless steel hose with wire braiding Self-sealing valves, DN 8 Length 6 m [235"] (other lengths on request)
Wheels	Solid rubber, 250 x 60 mm [9.8 x 2.4"]
Tool box (option)	Size 380 x 100 x 100 mm [15 x 3.9 x 3.9"]
Weight	approx. 37 kg [81.6 lbs] (transport cart without scales and vacuum compressor)

Scales (option)

Specifications	
Rated load	125 kg [275 lbs]
Maximum load	200 kg [440 lbs]
Accuracy	±25 g (±0.02 % of the rated load) ±10 g (±0.008 % of the rated load) (option)
Digital display	6-digit 20 mm [0.8"] high LCD LED backlighting
Rechargeable battery pack	DC 12 V, rechargeable NiMH
Charger	AC 110 ... 240 V, 50/60 Hz
Operating environment	
Ambient temperature	-10 ... +50 °C [14 ... 122 °F]
Humidity	< 90 % r. h., non-condensing
Ingress protection	IP65
Weight	3 kg (overall weight of the transport cart and scales: 40 kg)

Vacuum pump (option)

Model	Working principle	Nominal pumping speed	Final partial pressure	Weight
GVP-10	Single-stage rotary vane pump	10.8 m ³ /h [6.4 cfm]	≤ 2.0 x 10 ⁻² mbar [< 1.5 x 10 ⁻² Torr]	13.0 kg [28.7 lbs]
S16	Single-stage rotary vane pump	16.0 m ³ /h [9.4 cfm]	≤ 1.0 mbar [≤ 0.75 Torr]	20.5 kg [45.3 lbs]
S25	Single-stage rotary vane pump	26.0 m ³ /h [15.3 cfm]	≤ 0.5 mbar [≤ 0.4 Torr]	26.0 kg [57.4 lbs]
S40	Single-stage rotary vane pump	44.0 m ³ /h [25.9 cfm]	≤ 0.5 mbar [≤ 0.4 Torr]	45.0 kg [99.3 lbs]
D16	Two-stage rotary vane pump	18.9 m ³ /h [11.1 cfm]	< 2.0 x 10 ⁻³ mbar [< 1.5 x 10 ⁻³ Torr]	26.0 kg [57.3 lbs]
D25	Two-stage rotary vane pump	29.5 m ³ /h [17.4 cfm]	< 2.0 x 10 ⁻³ mbar [< 1.5 x 10 ⁻³ Torr]	32.0 kg [70.6 lbs]

Voltage supply	
GVP-10	1-phase, AC 230 V/115 V, 50 Hz/60 Hz
S16	
S25	
S40	3-phase, AC 400 V/230 V, 50 Hz/60 Hz
D16	
D25	

Mounted pressure gauge

Robust model 213.40 Bourdon tube pressure gauge, copper alloy, heavy-duty version

Scale range: -1 ... 0 bar

Vacuum hose

Stainless steel hose with wire braiding

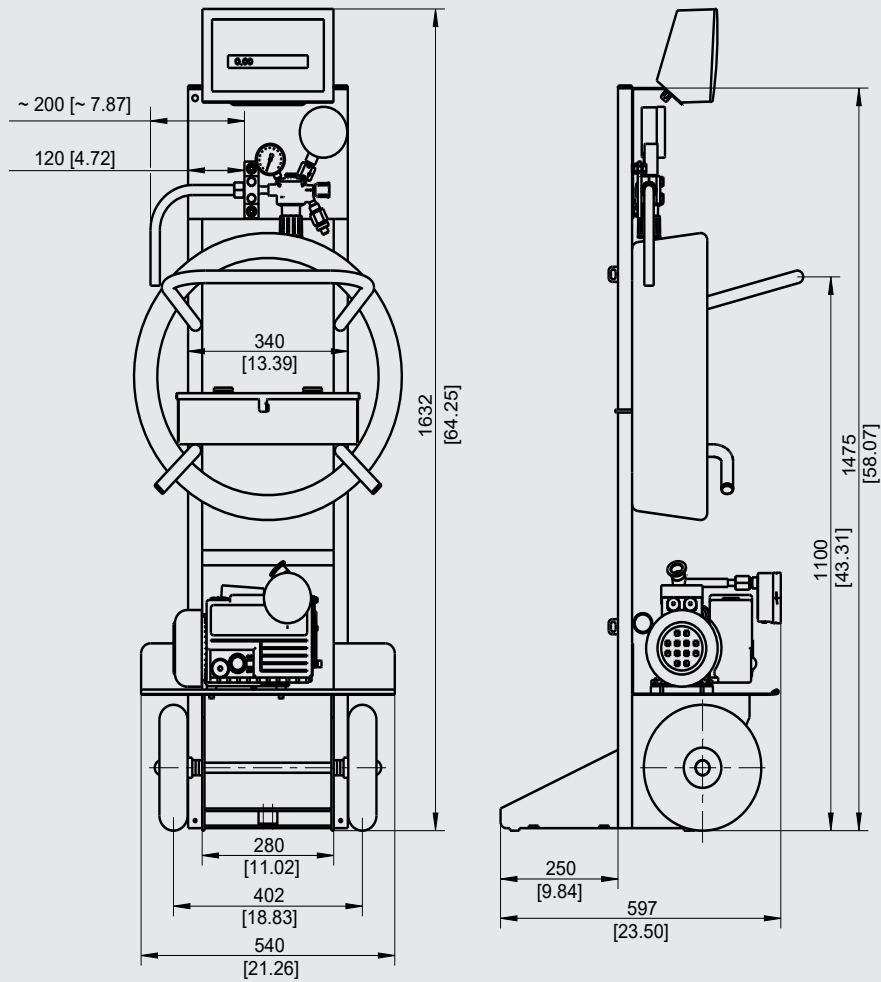
Self-sealing valves, DN 8 female

Length 6 m [235"] (other lengths on request)

Accessories and spare parts

Description	Article number
Open-ended spanner SW 30	14008398
Adapter, DN 20 female to DN 8 male	14096583
Adapter, DN 20 male to DN 8 female	14284870

Dimensions in mm [in]



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