

Laboratory Gas Scrubber LGW DN80

Application

Laboratory gas scrubber LGW DN80 is intended for gas scrubbing in chemical laboratories, for pilot plants and for small chemical and pharmaceutical businesses.

Gas volume flows up to 150 m³/hr can be cleaned without loss in pressure. It is used for tests, in production, and for the filling, drainage and cleaning of equipment during breakdowns and repair work, i.e. in any situation where, for a short period of time or in continuous operation, small flows of discharge air have to be drawn off and cleaned.

Laboratory gas scrubber LGW DN80 can absorb noxious substances, separate dusts, condense vapours and saturate and cool hot gases. Laboratory gas scrubber LGW DN80 is mounted as a compact unit, ready for operation, on an easily manoeuvrable trolley. Its main dimensions have been selected in such a way that is

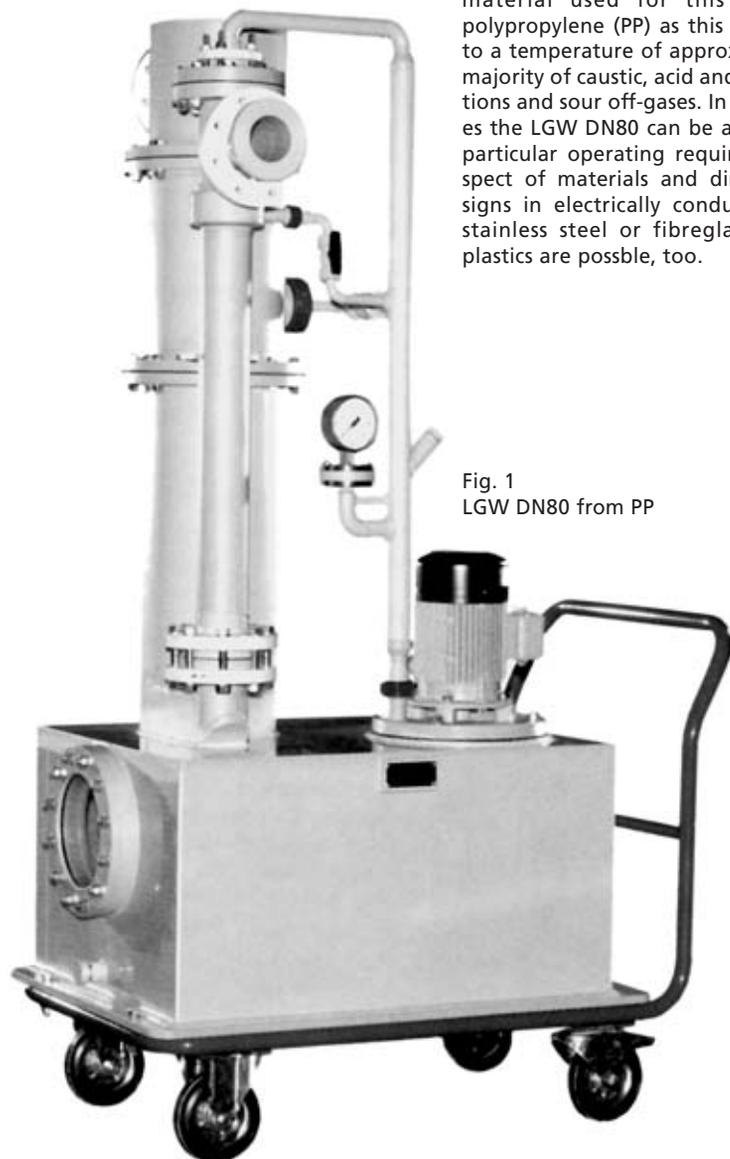


Fig. 1
LGW DN80 from PP

can pass through normal doorways and can be transported in normal lifts. The material used for this scrubber is polypropylene (PP) as this is resistant up to a temperature of approx. 80°C for the majority of caustic, acid and alkaline solutions and sour off-gases. In individual cases the LGW DN80 can be adapted to the particular operating requirements in respect of materials and dimensions. Designs in electrically conductive plastics, stainless steel or fibreglass reinforced plastics are possible, too.

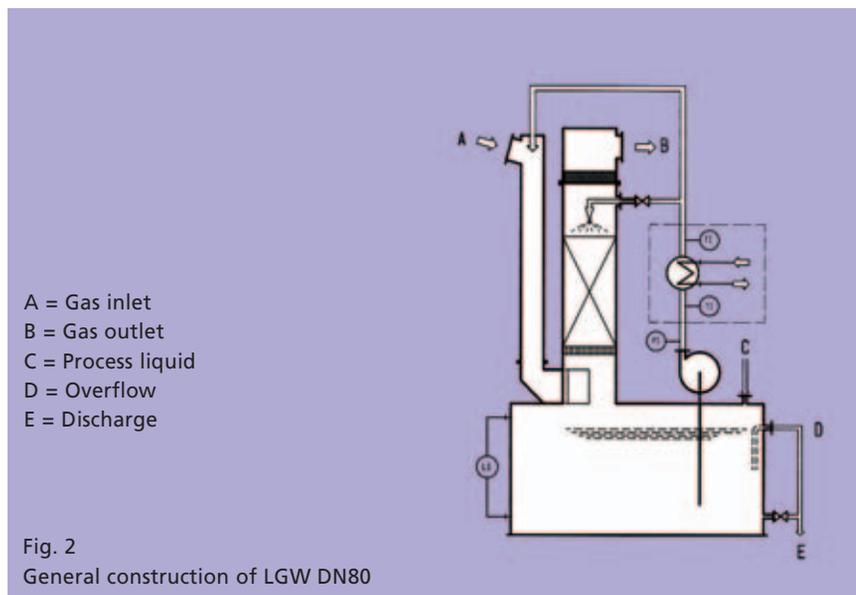


Fig. 2
General construction of LGW DN80

Function

The main function of the gas scrubber is that of a jet scrubber which acts as an ejector and extracts and conveys the gases without an additional ventilator. The motive medium serves as the scrubbing liquid. The gas/liquid mixture is separated in a centrifugal separator which is arranged downstream. This is designed in such a way that any formation of foam is largely avoided. The scrubbing liquid flows back into the liquid supply tank from where it is recycled by means of a submergible pump. The gas also flows through a counter-flow scrubbing column arranged downstream which is provided either with the scrubbing liquid from the circulation pump or, if necessary, with fresh scrubbing liquid. Entrained liquid droplets are separated in a demister arranged downstream before the gas outlet. Solution or reaction heat occurring during the scrubbing process can be drawn off either by constantly feeding in fresh liquid with the corresponding liquid overflow or through the additional installation of a submergible cooler.

Laboratory gas scrubber LGW DN80 is distinguished by the following characteristics:

- z maintenance free and easy to use
- z mobile and easy to manoeuvre
- z corrosion resistant through suitable choice of materials
- z easily adapted and extended
- z auto-suction, no ventilator required
- z no pressure loss up to 150 m³/hr
- z large load area, works well on partial load
- z resistant to fouling
- z high reliability

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Technical data for the standard design

Gas suction flow	5 -150 m ³ /hr
Gas temperature	max. 80 °C
Scrubbing liquid	water, diluted caustic solution and acids
Liquid flow	6 m ³ /hr
Delivery head	17 mLC
Tank volume	190 litres
Motor power	1.85 kW
Voltage, frequency,	
Protection type	220/380 V, 50 Hz
EEx e II T3	
Revolutions	2,900 r.p.m.
Weight, empty	approx. 130 kg

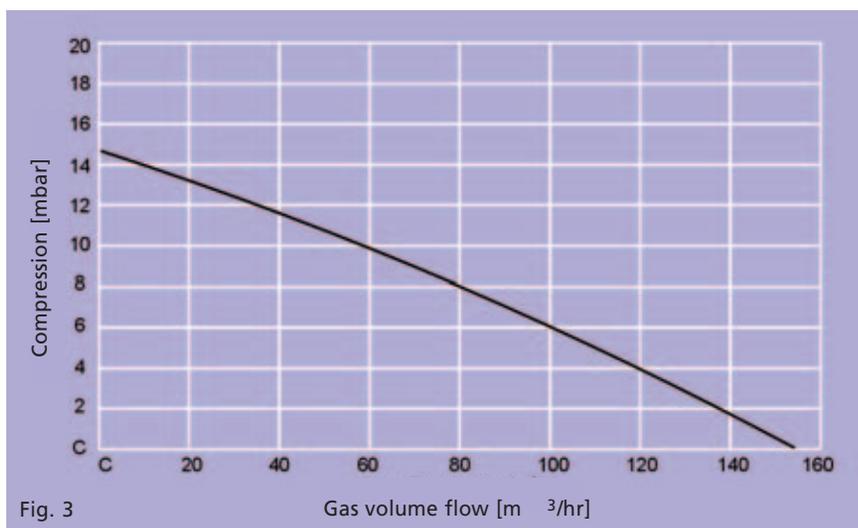


Fig. 3

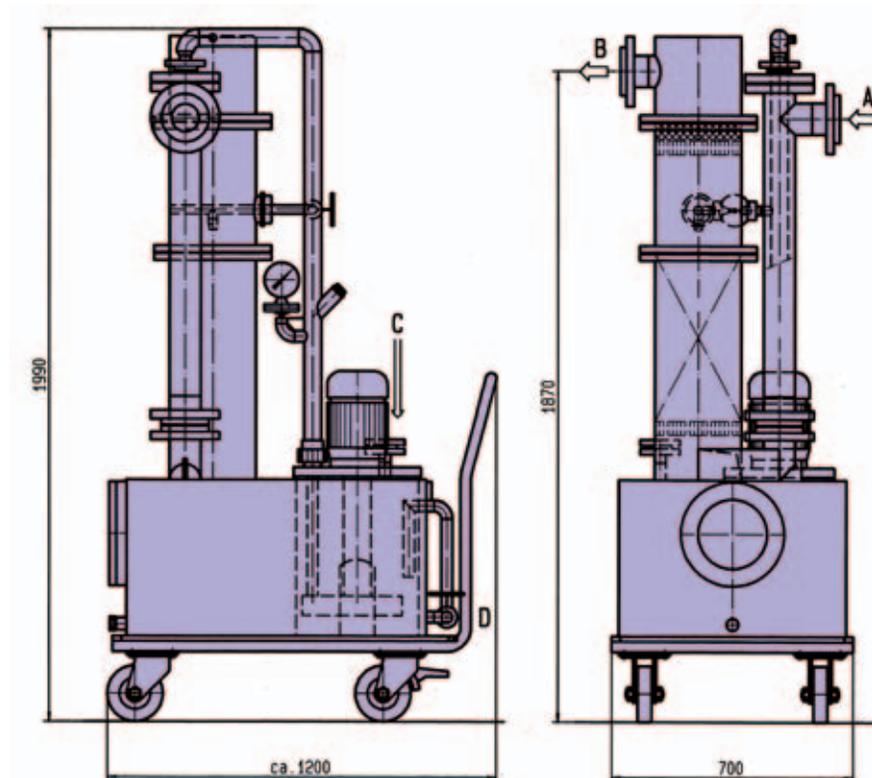


Fig. 4 Main dimensions in mm

A = Gas inlet	(DN 80, PN 10)
B = Gas outlet	(DN 80, PN 10)
C = Process liquid	(DN 25, PN 10)
D = Liquid outlet	(Ø 32 x 3, PN 10)

For all inquiries please use our questionnaire

Standard equipment

Jet scrubber	PP
Centrifugal separator with pump supply and counter flow scrubbing column	PP
Nozzles, demister and packing	PP
Submersible pump	PP (parts in contact with product)
Liquid piping and shut-off fittings	PP
Manometer	PP / PTFE / stainless steel
Trolley	steel

Optional

1. motor EEx d II T4 (1.6 kW)
2. submersible cooler made of Hastelloy C4 or 1.4571
3. submersible pH transmitter
4. with connection cable
5. without trolley (stationary)
6. design in stainless steel, fibreglass reinforced plastics, Hastelloy, titanium etc.