

Laboratory Gas Scrubber LGW DN40



Fig. 1
LGW DN40/1



Fig. 2
LGW DN40/2



Fig. 3
LGW DN40/3

Application

Laboratory gas scrubber LGW DN40 is a compact system for extracting and washing out harmful, gaseous substances from discharge air. It is used in chemical laboratories during testing, in production, filling, draining and cleaning of equipment and also whenever very small flows of discharge air have to be drawn off.

LGW DN40 is available in three standard models in order meet the most varied operating conditions. An overview of design and scope of supply can be seen in table 1.

Function

The main function of the gas scrubber is to work as a jet scrubber which, in its capacity as an ejector, extracts and conveys gases without using an additional ventilator. The scrubbing liquid serves as the motive medium. The mixture of gas and fluid is separated in a centrifugal separator arranged downstream. This is designed in such a way that the formation of foam is largely avoided. The scrubbing liquid flows back into the pump supply tank where it is recycled by means of a magnetically coupled pump. For the fine cleaning process, the gas flows through a counter-flow scrubbing column which is positioned on top of the centrifugal separator located before the outlet. Pump heat and solution or reaction heat produced during the scrubbing process can be removed via a gas cooler which is installed in the pump pressure piping

Laboratory gas scrubber LGW DN40 is distinguished by the following characteristics:

- o maintenance free and easy to use
- o easily transported
- o corrosion resistant because of PP design
- o auto-suction, no ventilator required
- o no pressure loss up to 2.3 m³/hr
- o partial load efficiency
- o resistant to fouling
- o high reliability

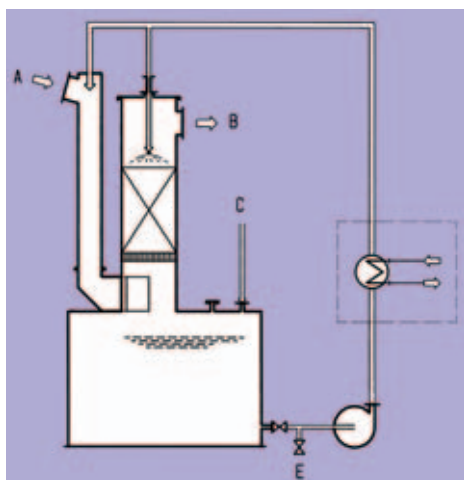


Fig. 4
General construction of LGW DN40/1 and LGW DN 40/2
A = Gas inlet
B = Gas outlet
C = Process liquid
E = Discharge

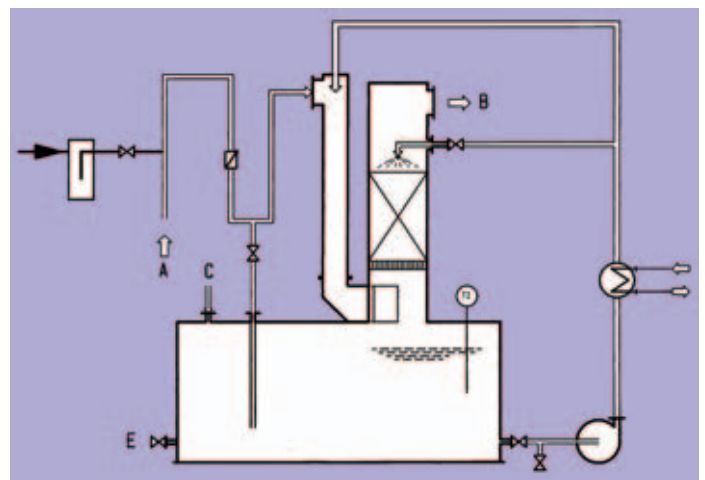


Fig. 5
General construction of LGW DN40/3
A = Gas inlet
B = Gas outlet
C = Process liquid
E = Discharge

Laboratory Gas Scrubber LGW DN40

Technical data

Gas suction flow	max. 2.3 m ³ /hr
Gas temperature	max. 80 °C
Scrubbing liquid	water, diluted caustics and acids
Liquid flow	1.56 m ³ /h
Temperature in cycle	approx. 50 °C
Tank volume	20 litres
Motor power	0.18 kW
Voltage, frequency,	
Protection type	220/380 V, 50 Hz EEx e II T3
Revolutions	2,800 r.p.m.
Weight, empty	approx. 25 kg

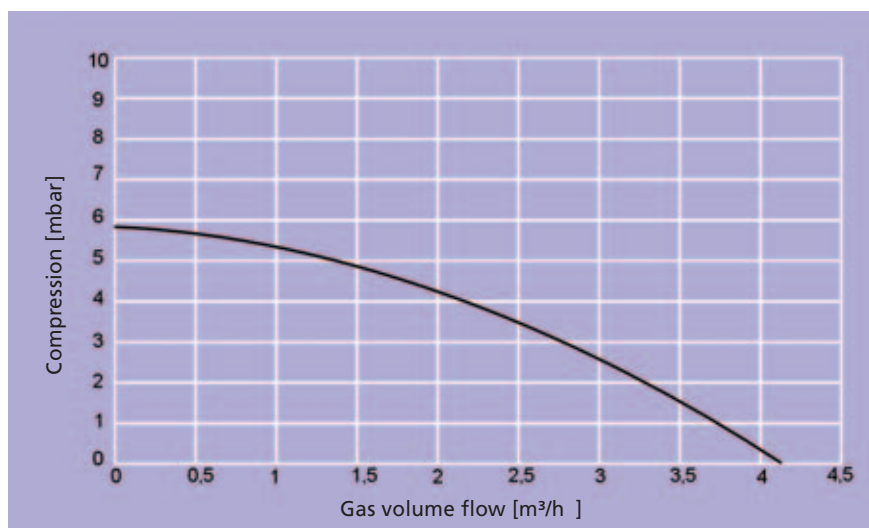


Fig. 9

Standard equipment

Components	LGW DN40/1	LGW DN40/2	LGW DN40/3
Jet scrubber	PP	PP	PP
Centrifugal separator	PP	PP	PP
Pump supply tank	PP	PP	PP
Counter-flow column	PP	PP	PP
Nozzles and packing	PP	PP	PP
Circulation pump with magnetic coupling	PP	PP	PVDF
Cooler	–	glass	glass
Liquid piping + shut-off fittings	PP	PP	PP
Bubble counter	–	–	glass
Thermometer with submersible sheath	–	–	Titan

Table 1

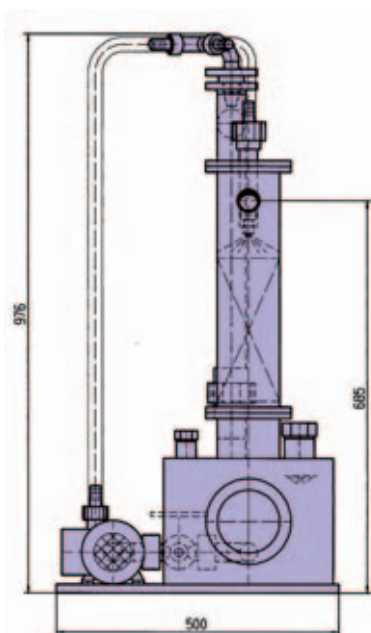


Fig. 6
LGW DN40/1

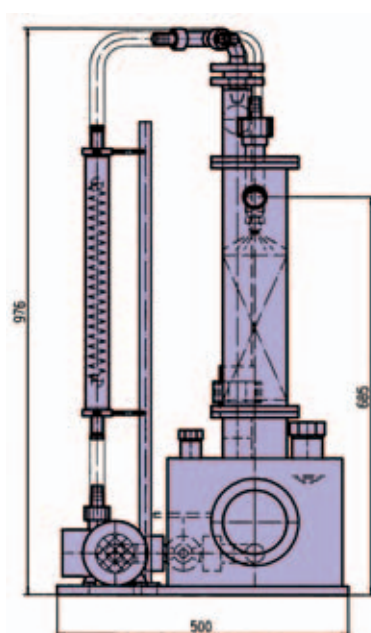


Fig. 7
LGW DN40/2

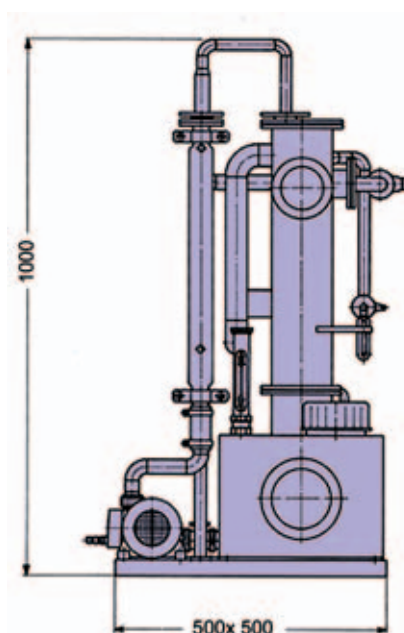


Fig. 8
LGW DN40/3

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