

PILOT UNIT FOR GAS MEMBRANE SEPARATION GSU V01-500/35

BASIC DESCRIPTION

Pilot unit for gas membrane separation GSU V01-500/35 is suitable for laboratory and pilot tests of low capacity membrane modules with maximal flow of 500 NI/min and pressure up to 35 bar.

This unit can be used for non-aggressive gases, for potentially flammable gases or explosive gases, but is necessary to ensure work outside explosion limit. The main potential applications are biogas purification or nitrogen and oxygen separation.

Configuration of unit connection can be set as: single-pass, feed and bleed (partial reflux) or closed loop with the possibility of using one or two membrane modules.

MAIN PARTS

- main reservoir of compressed gas
- buffer gas pressure vessel – 4 pcs (2x27 a 2x10 liters)
- sensors or controllers of pressure, flow and temperature
- screw pump, shut-off valves, filters
- electrical cabinet

Pilot unit GSU V01-500/35



OPTIONAL ACCESSORIES

- membrane separation modules
- moderate-pressure compressor
- desulphurization unit
- gas analyzer
- heating

SPARE PARTS

- membrane separation modules
- mechanical filter
- desulphurization adsorbent

SPECIFICATION OF PILOT UNIT GSU V01-500/35

Parameter	Unit	Value
Max. number of modules	pc	2
Flow to the compressor suction	NI/min Nm ³ /hour	0 – 500 0-30
Maximum/minimum allowable pressure (PS)	bar abs bar abs in permeate	0/35 0-2
Safety valve	bar	40
Test pressure	bar abs bar abs only in permeate	2/35 2
Maximum/minimum allowable temperature (TS)	°C	50/5
Critical temperature	°C	0/55
Maximum electrical power	kW/A	18.8/32
Unit dimension (l x w x h) – without compressor and pretreatment	cm	245 x 150 x 195

Temperatures and pressures are monitored electronically and when exceeding the set limit values will activate the warning or the automatic control system intervention such as electrical disconnection of individual parts.