

Sample Gas Pumps for Hazardous Areas P 2.72-ATEX, P 2.74-ATEX



The transportation of sample gas in sample conditioning systems requires reliable sample pumps. The corrosive nature of the gas and the potential of condensate formation are the real challenges for any pump.

These sample pumps are equipped with a bellows made from solid PTFE. This design has demonstrated the highest reliability and long lifetime in numerous applications. Designed specifically for harsh gas applications that have entrained liquids present or where condensate is expected to form, it is recommended that the pump head be pointed downwards to accommodate draining of these liquids

A special flange design makes the P2.74-ATEX design suitable for hot applications. The flange is designed in two parts -- one carrying the pump head is installed in a heated cabinet and the other carrying the electrical motor is flanged to the outside of the cabinet keeping the motor in ambient conditions.

The pumps employ explosion-proof motors. The ATEX models are suitable for Category 2.

For easy installation, a support console with vibration dampers is included for the P 2.72-ATEX.

- **Robust and reliable design**
- **Easy to replace valves**
- **Bellow made of one solid piece**
- **Suitable for corrosive gases**
- **Pumps gases with entrained liquid**
- **Low noise**
- **Vibration dampening console**
- **Long life**
- **ATEX versions for Category 2**
- **increased flow rate**

Overview of the basic pump models and links to further information

	One piece Pumps (see drawing 1)	Pumps with intermediate flange (see drawing 2)
Nominal free flow (see flow curve)	700 l/h	700 l/h
ATEX types (Europe) II 2/2 G c IIC T3 X	P2.72-Atex	P2.74-Atex
Weight	7,5 kg	8,5 kg

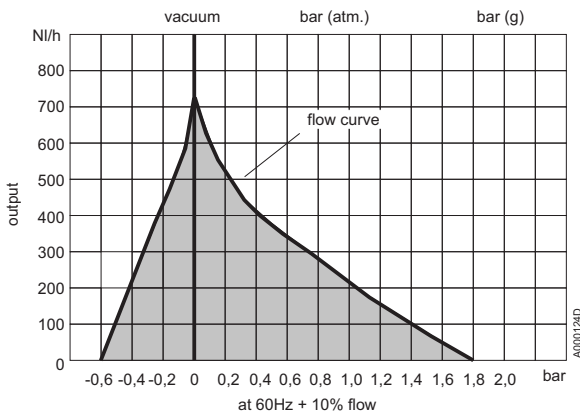
General technical data for all pumps

Power supply	see order number (page 4)
Protection class	Electrical IP 54 Mechanical IP 20
Dead space	8.5 ml

Gas wetted materials:
PTFE, PEEK, 1.4571, 1.4401, Viton

Pumps 700 l/h

Ambient temperature	
Motors 115 V, 230 V	-20 to 50 °C (-4 to 122 °F)
Motor 380 - 420 V	-20 to 40°C (-4 to 104°F)
Pump head	see table at the right
Media temperature valves	see table at the right



Restrictions for sample and ambient temperature

P 2.72 Atex		Media temp.	Pump head temp.
Sample without flammable gases	T3	120 °C (248 °F)	50 °C (122 °F)
Sample with flammable gases above the lower explosion level	T3	50 °C* (122 °F)	50 °C* (122 °F)

P 2.74 Atex		Media temp.	Pump head temp.
Sample without flammable gases	T3	120 °C (248 °F)	100 °C (212 °F)
Sample with flammable gases above the lower explosion level	T3	50 °C* (122 °F)	50 °C* (122 °F)

* At an input pressure from 0 bar to a maximum of 0.5 bar, the pump head and media temperature is a maximum of 45 °C.

Please keep in mind the required protection device for the pump's motor!

Motor protection switches

- For mounting outside of hazardous area

230 V; 380-400 V, 0-1 A	9132020021
115 V, 1.6-2.5 A	9132020030
- For mounting inside of zone 1 or 2 (ATEX only)

230 V; 380-400 V, 0-1 A	9132020036
115 V, 1.6-2.5 A	9132020033

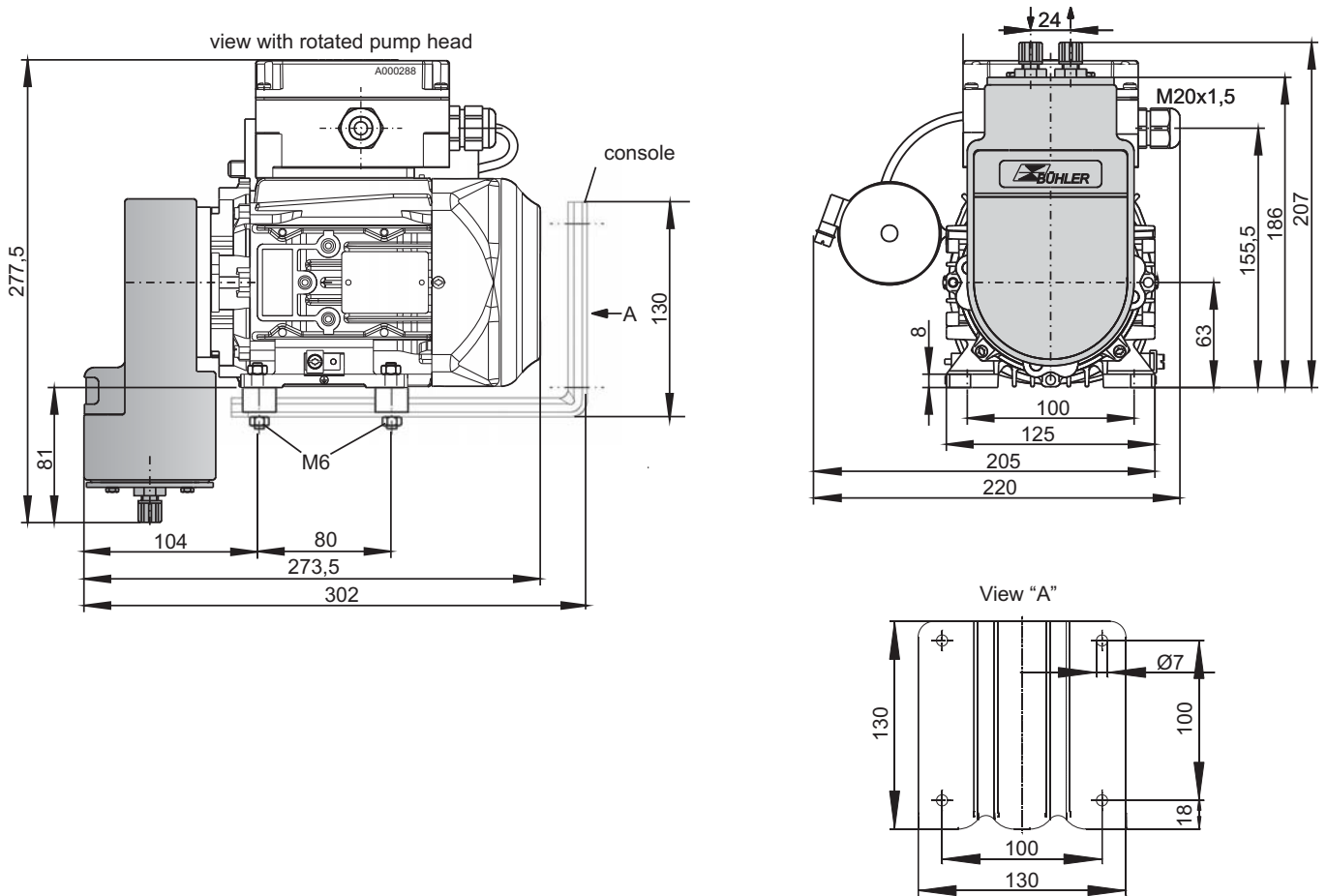
Hints for variations:

Position of pump head:

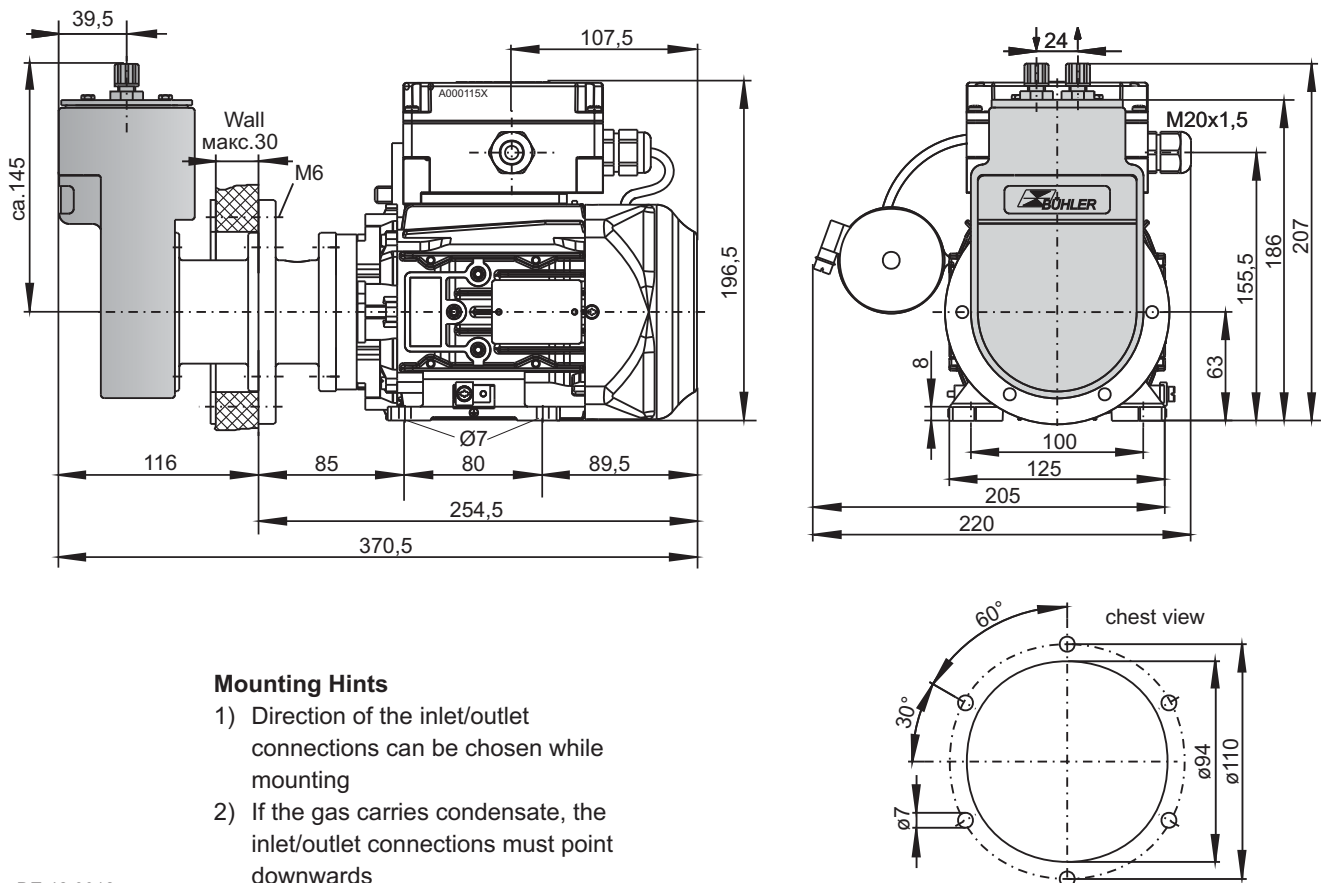
(P2.72 type only):

If the gas contains entrained liquids, the pump head must point downwards. Although the pump head may be turned by the customer as described in the manual, we suggest ordering it in the required configuration.

Dimensions of P 2.72 ATEX (Drawing 1)



Dimensions of P 2.74 ATEX (Drawing 2)



Mounting Hints

- 1) Direction of the inlet/outlet connections can be chosen while mounting
- 2) If the gas carries condensate, the inlet/outlet connections must point downwards

Ordering hints Atex:

Part-no.	42	XX	X	X	2	2	X	9	0	00	Feature
											Basic type
65											P2.72 Atex 700l/h
66											P2.74 Atex 700l/h
											Motor supply
1											230 V 50 Hz. 0,88 A
2											230 V 60 Hz. 0,89 A
3											115 V 50 Hz. 1,76 A
4											115 V 60 Hz. 1,78 A
5											380-400 V 50 Hz. 0,41 A
											Pump head position
1											Normal pos. Vertical
2											Pointing downwards *
											Pump head material
2											SS 1.4571
											Valve material
2											to 140 °C PTFE/PEEK
											Male stud couplings
9											6 mm (standard)
1											8 mm
2											3/8"
4											1/4"
											Mounting accessories
								9			including mounting console and buffer *

*not possible for P2.74 Atex