

General

Why using a degassing device?

Metering pumps with small flow rates of up to 50 l/h often work imprecisely or must be vented manually if larger amounts of gas or air have entered the metering head.

Air can appear in the head when switching tanks (i.e. when transferring from one tank to the other). Gas bubbles are produced when metering effervescent media, such as bleaching lye or hydrogen peroxide.

Function

The GAS-EX degassing device ensures that the pump can be easily vented in settable intervals, because it returns the medium pressurelessly to the supply tank. If no metering stroke is carried out during the venting phase, gas which may have been present can still appear due to relaxation. If no gas was present, only little or no liquid is returned to the supply tank; this is because liquid cannot expand.

The design has an optimized clearance value so that even small pumps will re-attain full operating pressure right after venting. A nonreturn valve prevents medium from flowing backwards from the pressurized line during the venting phase.

The unit can be set to open every 30 seconds to 45 minutes. The opening duration can be set between 0.5 and 10 seconds. We recommend 2 seconds. Depending on the stroke frequency of the pump, up to three venting strokes can be performed during this time, returning the medium to the supply tank. When operating at full stroke frequency and with venting every 60 seconds, the capacity of the metering pump is reduced by approx. 3%; this must be taken into account when dimensioning the pump. A separate start key which opens the degassing valve for as long as the key is pressed allows the pump to start metering very quickly.

Between the venting phases, the operation of the metering pump is not impaired. 100 % of the medium is led to the metering outlet.

Control

Using the timer, the venting phase can be set to occur between every 30 seconds and every 45 minutes. However, it is also possible to replace the timer with a standard end head in order to allow external control equipment or e.g. a PLC to influence control. It is thus possible to control the venting of the metering pump in dependence of the process and also to chose venting periods of any desired duration and/or to discontinue degassing during the metering process. For instance, gas which accumulated in the system during an idle period on



the weekend can be eliminated in a longer venting phase and the normal metering process then be resumed with periodic degassing.

Design

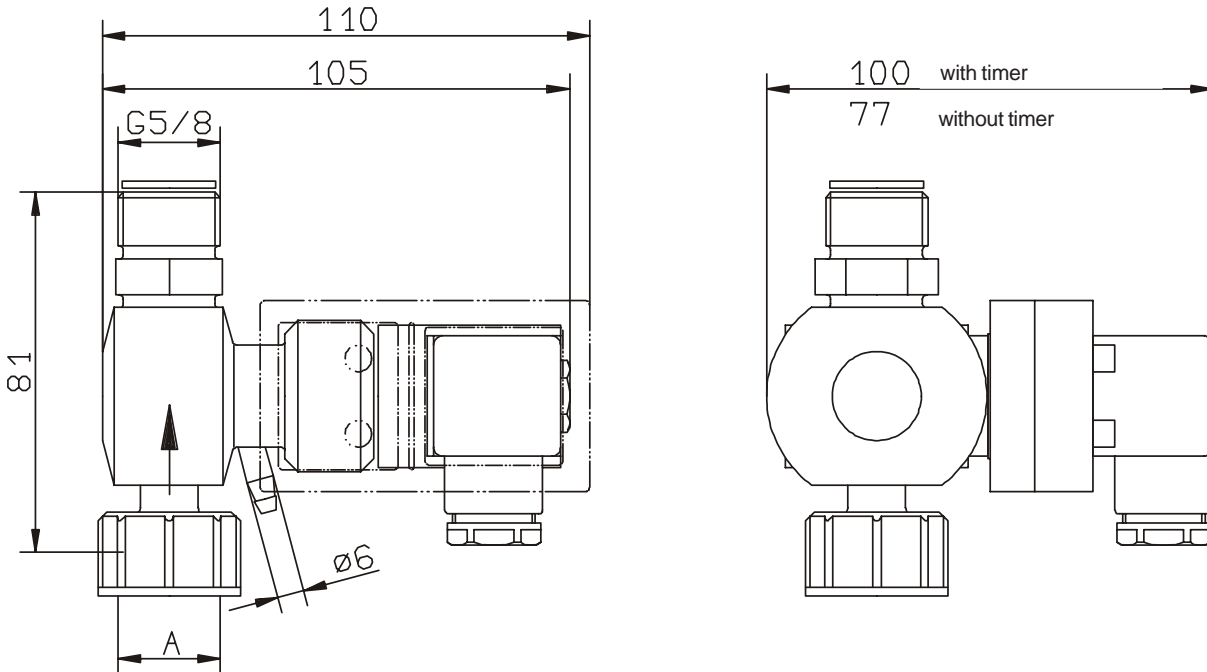
The device can be chosen with a housing made of PVC and transparent acrylic (PMMA). A flow indicator in the form of a white ball which jumps with every metering stroke is located in the connection nozzle.

Installation

The degassing device should be mounted directly on the discharge valve of metering pumps with flow rates of up to 2 l/h. Thus the line volume which has to re-attain operating pressure after venting is kept small. If pumps are integrated in a closed control loop, it is also possible to mount the degassing device on a tank or to vertical walls using an adapter.

The return tubing should preferably be directed downwards below the level of the supply tank.

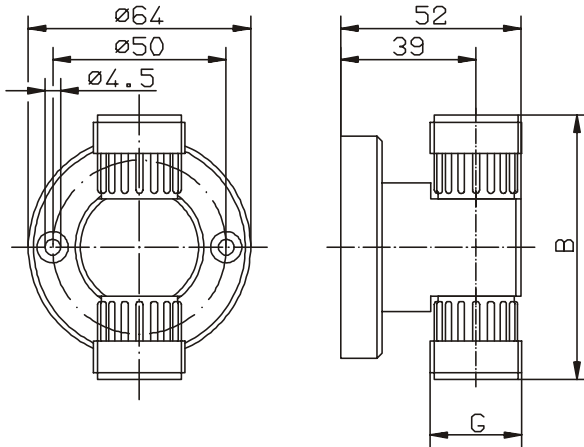
Dimensions



GAS-EX degassing device

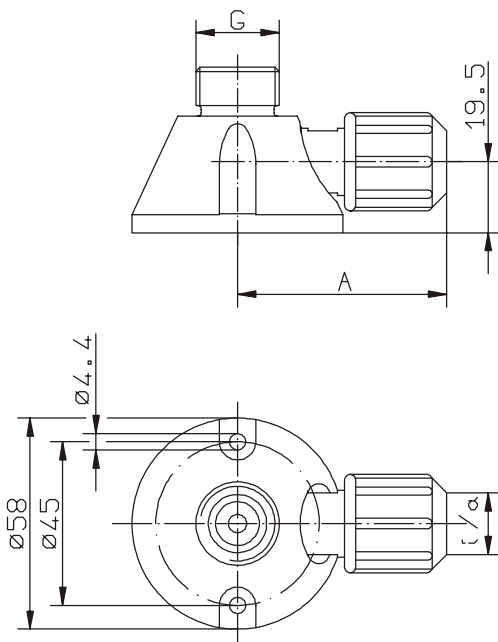
Connection A	Material		Voltage V/Hz		Timer	Part No.
	PVC	PMMA	230/50/60	115/50/60		
G 5/8	X		X		X	13300022
		X	X		X	13300012
	X			X	X	13300023
		X		X	X	13300013
	X		X			13300020
		X	X			13300010
	X			X		13300021
		X		X		13300011
G 3/4	X		X		X	13300018
	X		X			13300019

Wall holder



Part No.	G	B
34563	G 5/8	72
34564	G 3/4	76

Base



Part No.	G	i/a	A
34560	G 5/8	4/6	45
34561		6/12	58
34562	G 3/4	6/12	58

Technical data

Material	Housing other liquid-end parts	transparent PMMA, PVC grey glass, ceramic, PVDF, Viton
Flow rate	- with pulsating flow: - with smoothed flow:	15 l/h 50 l/h
Temperature		max. 35° C
Coil		8 Watt, 230 V / 50/60 Hz or 115 V / 50/60 Hz, Protection Class IP 65, 100 % duration of connection
Timer		24 to 240 V 50/60 Hz Protection Class IP 65
Connecting cable		1.5 m with safety plug