

Gas Odorization System GOE 07



PRODUCT INFORMATION

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Worldwide**



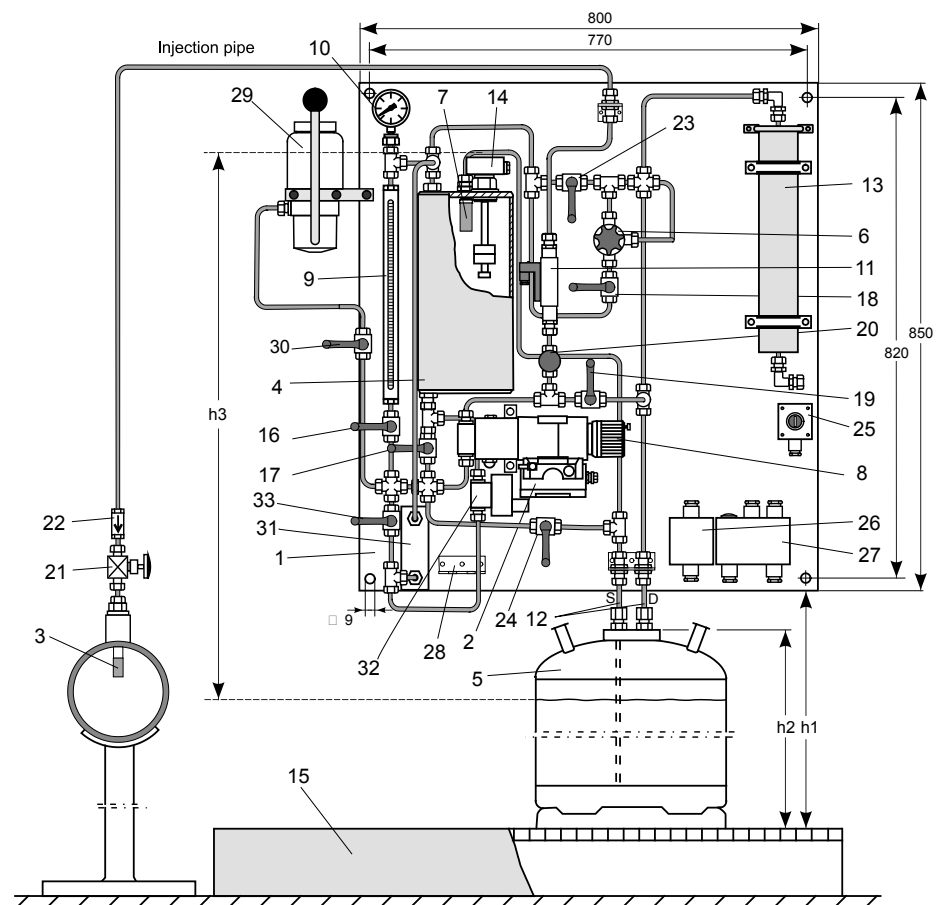
Gas Odorization System GOE 07

Features, method of operation

Features

- Operates according to the suction method
- Safe and easy-to-operate stainless-steel design with clamping-ring connection (SWAGELOK)
- Diaphragm proportioning pump with solenoid actuator [EEx e]
 - Infinitely variable for volume-proportional odorization
 - High proportioning accuracy
- Permanently filled 5-litre reserve tank with level indicator
- Manual proportioning check
- Changing the odorant tank is possible without interrupting operation
- Integrated hand vacuum pump Easy start-up for filling the reserve tank for the first time
- Venting the pump head poses no problem even if the gas line is under pressure
- Convertible to sulfur-free odorant
- Flushing device (option)
- Measuring device for delivery rate (option)

1. Mounting plate
 2. Proportioning pump
 3. Injection nozzle
 4. Reserve tank
 5. Interchangeable odorant tank
 6. Hand vacuum pump
 7. Sintered metal filter
 8. Stroke setting unit
 9. Measuring burette
 10. Vacuum gauge
 11. Flow monitor (option)
 12. Connecting hoses
 13. Activated carbon filter
 14. Float switch, reserve tank
 15. Stainless-steel collector
 16. Stopcock, measuring burette
 17. Stopcock, reserve tank
 18. Stopcock, vacuum pump
 19. Stopcock, starting circuit
 20. Shut-off valve, injection pipe, with restrictor
 21. Shut-off valve, injection nozzle
 22. Non-return valve
 23. Venting valve, reserve tank
 24. Drain valve, reserve tank
 25. Manual button
 26. Connection box, proportioning pump
 27. Intrinsically safe (EEx i) connection box for manual button, flow monitor and float switch
 28. Hose clamp
 29. Flushing device (option)
 30. Shut-off valve flushing device
 31. Measuring device for delivery rate ODM (option)
 32. Solenoid valve for ODM
 33. Shut-off valve ODM
- Max. installation height from the lower edge of the odorant tank
 $h_1 = 1100$ mm with THT
 $h_2 = 900$ mm with mercaptans
 - Suction height
 $h_3 =$ Filling level of the odorant tank (Value through vacuum gauge, item 10)
 - Weight without items 5, 15 approx. 30 kg



Method of operation

The odorization system operates in accordance with the injection method. The volume-proportional pulses received from a measuring device for volume at base conditions cause the electromagnetically operated diaphragm proportioning pump (2) to perform strokes

through a control unit. With each stroke, the pump delivers the preset odorant quantity (mm) via the injection nozzle (3) into the gas flow. The odorization pump (2) replenishes its supply of odorant by drawing odorant from the odorant tank (5) through a permanently filled 5-litre reserve tank (4). The level of the reserve tank only falls when the odorant tank is empty.

Start-up

Using an integrated hand vacuum pump (6), a vacuum is built up in the pipes upstream of the odorization pump, which first fills the reserve tank. The vacuum persists and makes the system self-priming. Afterwards, the odorization pump needs to be vented for 1 minute and the system is ready for operation.

Operation

The odorant quantity in mm³ per stroke has to be set at the stroke setting unit of the odorization pump depending on the required odorant concentration. A scaling factor for the frequency of the control pulses has to be programmed on the associated control unit. In this way, the pulse sequence of a measuring device for volume at base conditions is turned into suitable stroke frequency of the pump and odorization is performed in proportion to the volume.

Manual proportioning check

It is possible to check the preset volume being injected (mm³ per stroke) at any time using the measuring burette (9) which is connected parallel to the reserve tank. At the same time, the measuring burette is used for checking the odorant level.

Level indicator

Continuous odorant level indication is provided by the vacuum gauge (10) which is installed as standard. It is also used for checking the functional performance of

the system at the same time. In the case of malfunctions or an empty odorant tank, the system cannot build up a vacuum.

Options

- **Delivery monitoring:** The flow monitor of Type FS-01 (11) which is installed in the outlet pipe of the odorization pump monitors the delivery of the odorant into the piping with each pump stroke.
- **Level monitoring,** float switch (14) in the reserve tank.
- **Stainless-steel cabinet,** for installation of the odorization system.
- **Floor stand,** for locating the odorization system.

Accessories

- 2 flexible PTFE connecting hoses (12) with stainless-steel sheathing.
- Injection nozzle (3) with non-return valve (22) and shut-off valve (21).
- Stainless-steel safety collector (15) for odorant (50, 100 and 200 litres).
- Odorant tank for transportation and storage (5) of THT, approved by GGVE/GGVS and DVGW as per DIN 30 650 (25, 50 and 200 litres).
- Activated carbon filter as odor trap for installation in the venting pipe (13). Its location has already been provided.
- Insulating coupling for the injection pipe, dia. 6 mm, for the electrical isolation of the piping and the odorization system, with Swagelok fitting.

Specifications				
Pump type	MH-6-47		MH-6-65	
Displacement (mm ³ / stroke)	10 - 80		12 - 150	
max. operating pressure (bar)	40		20	
max. (min.) number of strokes per hour	7200 (60)		7200 (60)	
Solenoid actuator	Single solenoid actuator, degree of protection EEx e G 4 196 V DC / 100% ED/0, 133 A			
Design	Reciprocating diaphragm pump and ruby ball valves			
Parts in contact with fluid	Stainless steel, ruby, PTFE			
Injectable fluids	Liquids, e.g. tetrahydrothiophene, mercaptans			
Operating temperature range	+5°C to +40°C			
Pump type	MH-6-47		MH-6-65	
Odorant concentration (mg/Nm ³)	10	20	10	20
max. (min.) pumpstrokes (strokes per h)	7200 (60)	7200 (60)	7200 (60)	7200 (60)
Odorizabel gas flow:				
max. displacement (Nm ³ /h)	57600 (480)	28800 (240)	108000 (900)	54000 (450)
min. displacement (Nm ³ /h)	7200 (60)	3600 (30)	8640 (72)	4320 (36)

For More Information

To learn more about RMG's advanced gas solutions, contact your RMG account manager or visit www.rmg.com

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