

Easy to install, commission and control

Equipped with automatic water replenishment

Increases energy efficiency in heating and cooling systems

TTM NoXygen® M650

Removes gases and refills the heating system

TTM NoXygen® M650 is a fully automatic vacuum degasser for heating and cooling systems that can be connected for control, regulation and monitoring via Modbus RTU. Energy losses, corrosion and sound problems in the systems are mainly caused by a high gas concentration in the system fluid.

TTM NoXygen® M650 is provided with an automatic water-refilling system. When the gases are eliminated by degassing the hydronic system, the system pressure decreases, and the unit automatically refills the system with dilution water until the pre-set system pressure is obtained. The displays on the unit how much water that has been filled into the system.

TTM NoXygen® M650 prevents above stated problems by using an effective method that keeps the system free of gases that gives higher energy efficiency, lower maintenance cost and longer lifetime of the system components. TTM NoXygen® can be installed in both existing and new systems.

Installation advantages

- Rapid degassing function
- Monitors the quantity of water refilled into the system
- Automatically refills system fluid

Operational advantages

- Reduces operating costs
- Prevents corrosion on system components
- No need to vent radiators
- Increases energy efficiency in heating and cooling systems
- Minimises noise problems in heating and cooling systems
- Removes gases from the system fluid
- Prevents degradation of refrigerant liquids
- The automation for control, regulation and monitoring is connected via Modbus-RTU, RS485

2026-10

NoXygen®
Degasser

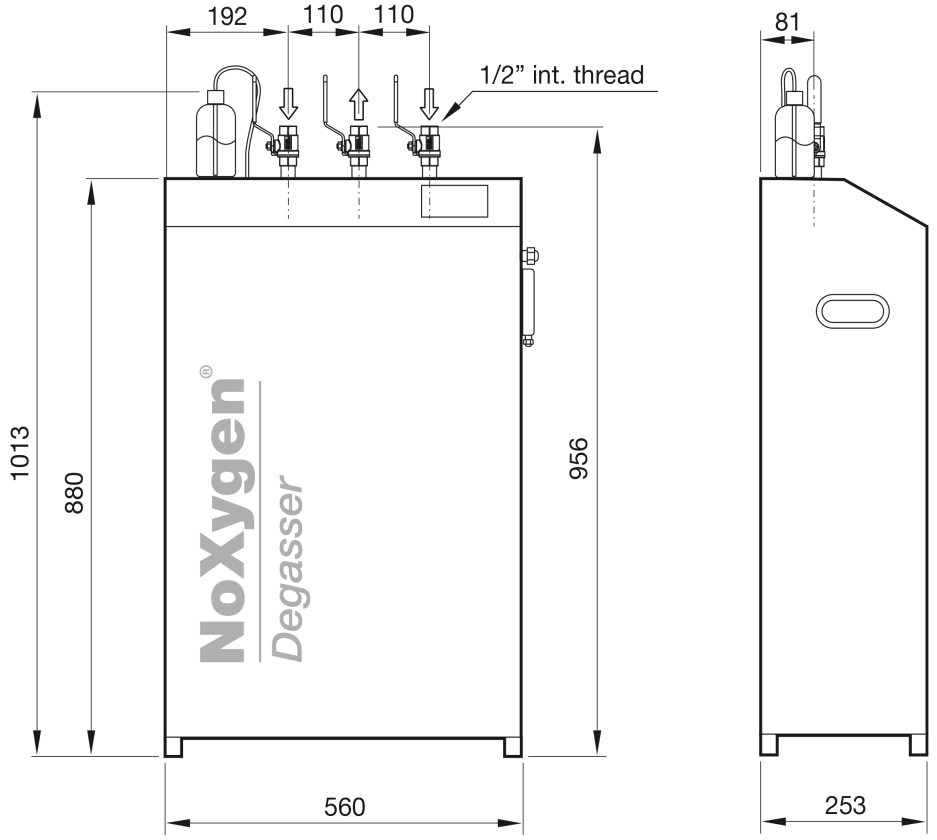
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Technical data

Model	NoXygen® M650 Modbus
Article number	520948
Connection to DUC	Modbus RTU (RS485)
Maximum load	-
Ambient temperature (°C)	0 – +40°C
Backflow preventer	Type CA (according to: EN 1717)
Capacity, degassed fluid	130-180 l/h
Dims. (WxHxD) mm	560 × 956 × 253
Electrical data / Voltage	1~230 V, 50 Hz, plug
Energy consumption	25 – 60 kWh/year *
Internal Fuse (A)	10A
Medium temperature (°C)	0 – +70°C
Noise level (dB)	61 dB
Operating range, system pressure in connection point	+0.8 – 5.0 bar
Permitted fluids	Water without chemical additives
Pressure class (PN)	PN10
Rated current (A)	5.0 A
Rated power (kW)	0.75 kW
Weight	32 kg
Connection dimension	R15 (G½)
Protection class (IP)	IP44
Vacuum capacity during degassing	Down to -0.9 Bar

*) Operation with 30 days of rapid deaeration results in an energy consumption of 70 – 170 kWh during the first year, depending on system pressure.

Drawing



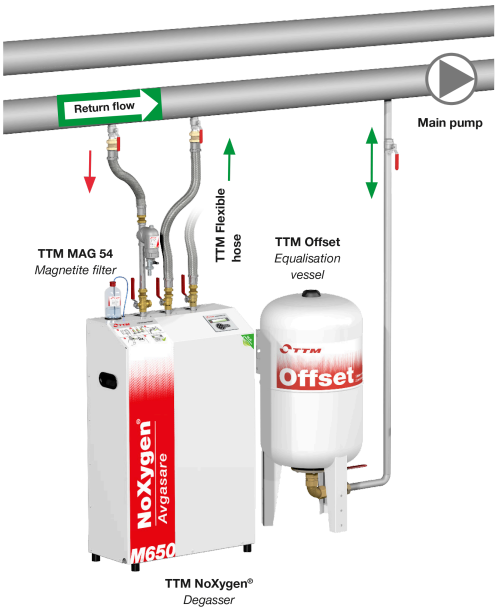
Operating principle

TTM NoXygen® removes dissolved and free gases in heating, heat recovery or cooling systems by reducing the system pressure down to -0.9 bar. Dissolved gases in the system fluid are released under a significant pressure reduction and form free gas bubbles, which can then be vented off. Deaeration takes place entirely independently of the existing system pressure or fluid temperature.

When TTM NoXygen® is installed for the first time, the unit automatically starts in rapid degassing mode. This means that TTM NoXygen® quickly reduces the gas content in the system and then, once the gases have been removed, transitions to maintenance degassing.

The vacuum degasser is intended for permanent installation to keep the system free from free and dissolved gases over the long term. If the process is stopped, the gas content in the system will gradually increase, as no fluid system is completely diffusion-tight. Should the system ever need to be drained of system fluid, the new system fluid is effectively degassed through the unit's rapid degassing mode.

TTM NoXygen® is suitable for system volumes from 1 m3 to 50 m3. In system volumes exceeding 50 m3 or where faster degassing is desired, TTM NoXygen® units can be installed in series in the return line of the common header.



Accessories

MAG 76

The recommendation is to install TTM MAG 76 together with TTM NoXygen® if it is known that magnetite or other particles are present in the system fluid.

Article number: 506188

Expansion vessel 60L PN10

Expansion vessel used together with NoXygen® negative-pressure deaerator in systems sensitive to pressure variations. NOTE! Does NOT fit with Noxygen® C6100. See TTM Offset 200 for more information.

Article number: 518853

Pack of 3 hoses R15 (G½)

Compatible with NoXygen M650. Two connection nipples with gaskets are included for each hose.

Article number: 517733

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