- **Ready-to-install set with pressure hose, check valve and alarm cable.**
- **Highly efficient ECM-Technology, fully automatic and blockage resistant, electronic level sensing system and protection class IP 44.**
- **Long-term quiet operation.**
- **Small dimensions and attractive design, easy to install through clip-on bracket.**

Lowara TP1 Condensate Removal Pump

Innovative spherical motor design for condensing boilers and air conditioning / cooling systems

LOWARA
a xylem brand

Lowara TP1 Condensate Removal Pump

Applications
The TP1condensate removal pump is a lifting station, suitable for all applications where the removal of condensate fluid is not possible by gravity.

The TP1 is designed for condensate:-
- Gas and oil condensing boilers (heating capacity max. 200 kW) with a pH value of 2.0 and higher.
- Air-conditioning systems, cooling and refrigeration systems.
- Air dehumidifiers and evaporators.

For very acidic condensates (pH-values below 2.7), for furnaces where not-sulphur-reduced heating oil is used, and for installations with a heating capacity of more than 200 kW a neutralizing device must be connected upstream. Please observe additional local sewage regulations.

Design / Function
The basic elements of the condensate pump TP1 is a tank for the condensate, a pump which drains the condensate into a pressure hose and a control which starts and stops the pump, lights showing the status of the unit and opens an alarm relay if there is a problem.

In comparison with traditional condensate pumps a series of innovative improvements has been made throughout the development process. The TP1 condensate pump saves energy, has a very low noise level and virtually guarantees trouble free operation:

Tank
The tank is manufactured from acid resistant ABS material. It holds 0.5 litre of condensate and therefore is sufficient even if additional water comes in through the chimney. Baffles inside the tank prevent waves and corresponding cycling of the unit caused by the inflow of liquid.
To prevent blockage of the pump, a tank sump is integrated into the tank in which dirt particles can accumulate. The tank can be easily cleaned and flushed if necessary.
A second fill opening at the top can accommodate the drain hose from the boiler pressure relief valve.

Pump
At the bottom of the tank a very efficient spherical motor pump with permanent magnet rotor has been integrated.

Its power consumption is only a fraction of that of comparable conventional condensate removal pumps.

The electrical part of the pump is completely separated from the wet part, thereby making it splash water protected. The TP1 condensate removal pump is completely enclosed; accidental touching of live components (for example through the ventilation slots of conventional units) is completely impossible.

The spherical motor pump operates very quietly. The only moving part of the pump is the spherical rotor/impeller unit which rides on an ultra-hard ceramic bearing ball. Since this bearing design excludes the formation of bearing play over time, the quiet operation will be maintained over the whole life of the unit.
A blockage of the condensate removal pump is extremely unlikely. Since the rotor is held in place magnetically, and since it can evade small dirt particles by tilting, a safe start-up even after prolonged shutdown periods is assured.

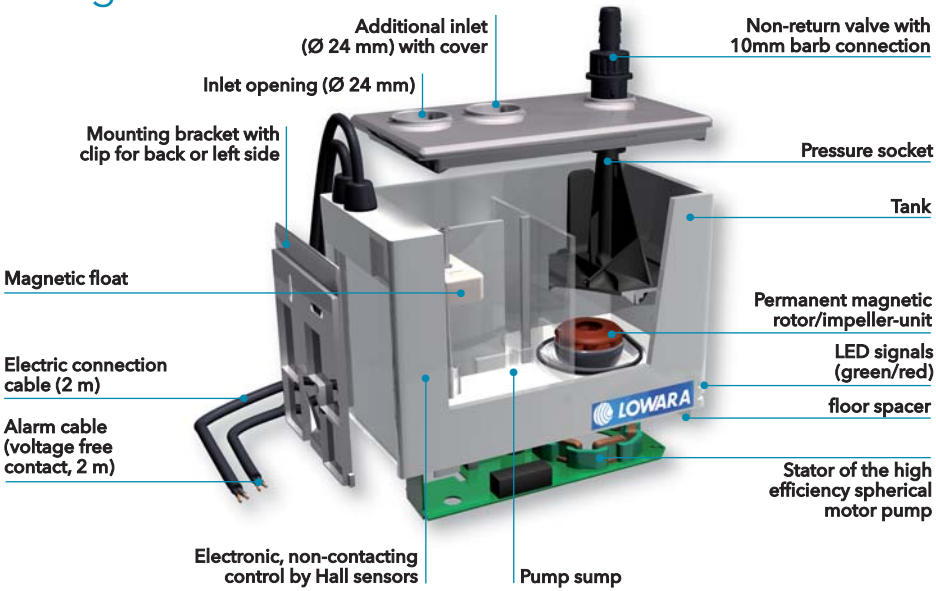
Control
Starting and stopping of the pump as well as the opening of the potential free safety contact are realized in the TP1 condensate removal pump by way of an electronic level sensing system. Electronic Hall sensors placed on the pc board behind the tank wall are activated by a small magnet inside a float. The advantage of this design is that it is safe from corrosive attack, which can happen with mechanical level switches placed above the tank.

Technical Data

Supply voltage	100 - 240 Volt
Power consumption P1	25 Watt
Current draw	0.1 - 0.2 A
Protection class	IP 44 / Class F
Acid resistance	pH2 or higher
Pump	Electronically commutated spherical motor with permanent magnet rotor / impeller
Max. Pump head	5.4 metres head
Max. Flow rate	460 l/h
Noise level (Lw)	46 [dB(A)]
Max. system temperature	+60°C
Min. ambient temperature	non-freezing, non condensing.
Safety contact	Relay open when triggered, capacity 250 VA
Tank volume	0.7l (usable volume 0.5l)
Package dimensions	215 x 215 x 180mm
Package weight	1.6 kg

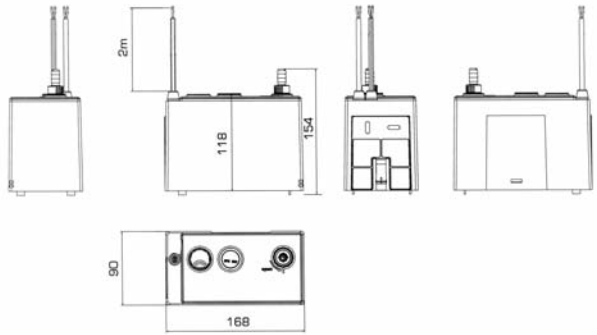
Please check your local requirements and ordinances regarding the discharge of condensate.

Design

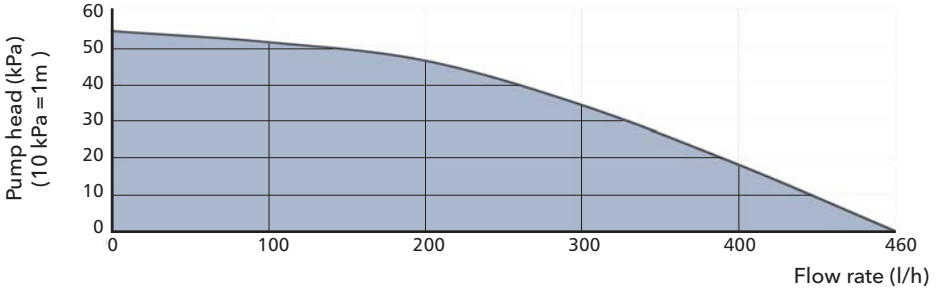


Pump dimensions

Dimensions in mm



Pump curve TP1



About Xylem

Xylem (XYL) is a leading global water technology provider, enabling customers to transport, treat, test and efficiently use water in public utility, residential and commercial building services, industrial and agricultural settings. The company does business in more than 150 countries through a number of market-leading product brands, and its people bring broad applications expertise with a strong focus on finding local solutions to the world's most challenging water and wastewater problems. Launched in 2011 from the spinoff of the water-related businesses of ITT Corporation, Xylem is headquartered in White Plains, N.Y., with 2011 revenues of $3.8 billion and 12,500 employees worldwide.

The name Xylem is derived from classical Greek and is the tissue that transports water in plants, highlighting the engineering efficiency of our water-centric business by linking it with the best water transportation of all - that which occurs in nature. For more information, please visit us at **www.xyleminc.com**

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