



transfero

Principles | Range | Benefits

Principles

Transfero is a precision pressure maintenance device with pumps for heating, solar and chilled water systems. Its use is particularly recommended where high performance, compact design and precision are required. In the medium performance range with tight budgets, they can also be used as combination devices with integrated degassing and water make-up.

Operating principle

Pressure maintenance

Transfero is a precision pressure maintenance device ± 0.2 bar. The pressure is measured on the water side with the *pressure transducers* and compared to the calculated target value of the *BrainCube control*. If the pressure falls below this target value, the *pump* switches on, and if the pressure exceeds the target value, the *spill valve* opens. In systems with 2 pumps and 2 spill valves, switching occurs alternately depending on the load, but with same level of precision.

The prerequisite for pressure maintenance is a minimum water level in the primary vessel = water reserve. The water level is measured by the *measuring foot us*, analysed in the *BrainCube* and displayed graphically. If it is signalled that the water level has dropped below the minimum, then the pumps are locked.

Expansion

Heating up

If the temperature in the system increases, then the pressure also rises. The *spill valve* opens when the target value is exceeded, and system water flows into the *airproof butyl bag* of the primary vessel. The air between vessel wall and the bag is displaced to the atmosphere through an open vent.

Cooling down

If the temperature in the system falls, the pressure also decreases. When the pressure drops below the target value, the *pump* switches on and pumps the expanded water back into the system.

So that the smallest volume changes do not immediately run the pump or spill valve, a small pressure buffer vessel is integrated into the Transfero range.

Advantages

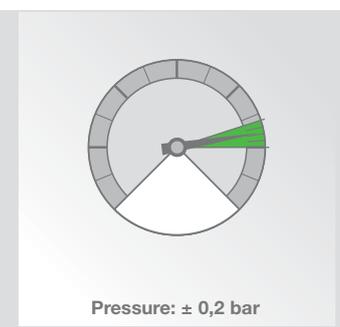
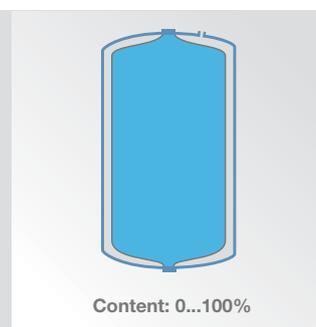
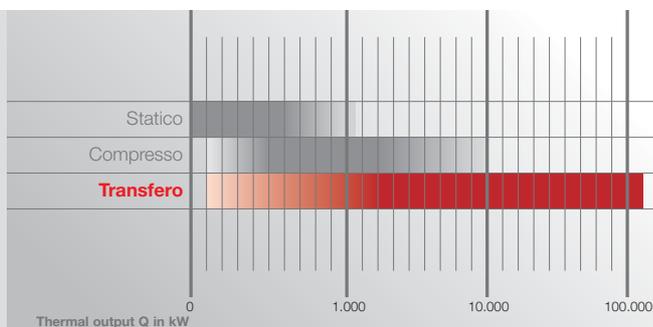
- Precision pressure maintenance with tight pressure tolerances ± 0.2 bar.
- Compact design. Almost the entire vessel volume is available for water acceptance.
- Simple integration of water make-up and degassing [» Transfero TP | TV | TPV](#).
- Almost unlimited performance.

02

High-performance

Compact

Versatile



Transfero – the right choice for both large systems and smaller systems with integrated oxy-stop degassing and water make-up.

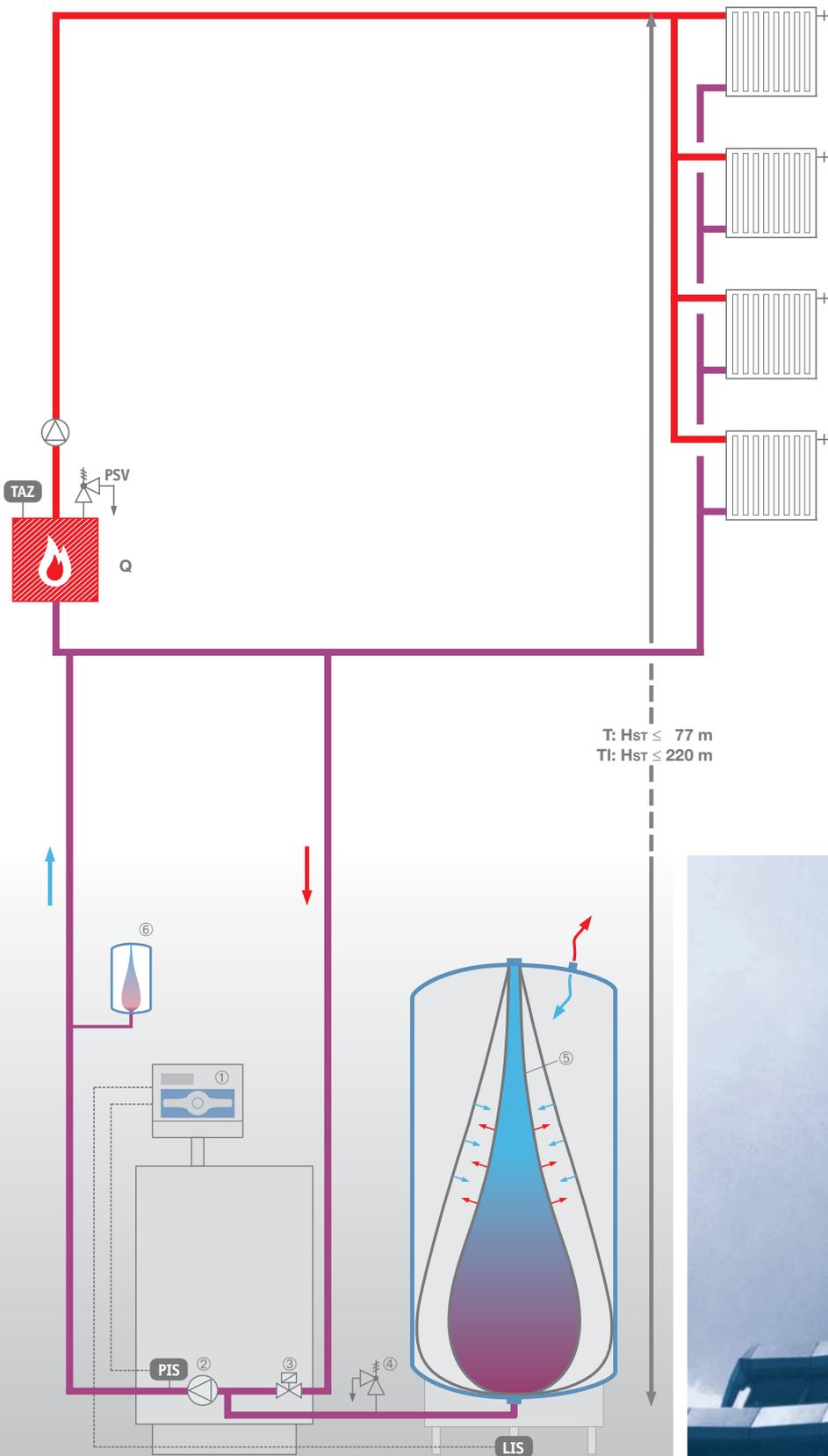
The volume of the airproof butyl bag and the vessel are almost identical, i.e. 100% water-acceptance without over-expansion.

Precision pressure maintenance ± 0.2 bar. Almost unlimited in use.



transfero

PRESSURE MAINTENANCE



The switching points for the cut-in pressure of the pump p_a and the opening pressure of the spill valve p_e are calculated by the BrainCube from the following data:

Hst | m Static height
 TAZ | °C Safety temperature limit

Transfero TecBox

- ① BrainCube control
- ② Pump, cut-in pressure p_a
- ③ Spill valve, opening pressure p_e
- ④ Safety valve, 2 bar
- PIS pressure transducer

- ⑥ **Transfero primary vessel**
- ⑤ airproof butyl bag
- LIS measuring foot for content

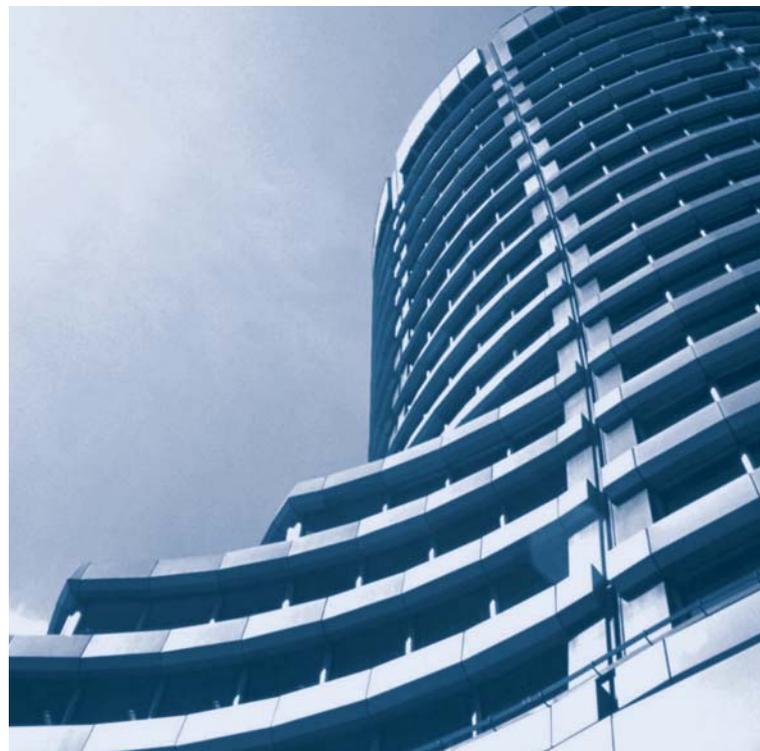
Transfero pressure storage vessel in the Statico range

Optional (not shown here)

Transfero secondary vessel

oxystop degassing (optional) ➤ oxystop extract

fillsafe water make-up ➤ fillsafe extract



The range

Transfero consists of a TecBox, a primary vessel and optional secondary vessels, supplemented by a pressure buffer vessel from the Statico range. The multifunctional intelligence of the BrainCube control creates the prerequisite for a wide range of applications: Standard operation up to 110 °C according to EN 12828, operation of boiler systems over 110 °C, combination with water make-up and/or degassing modules possible.

TecBox **Transfero TecBox with 1 or 2 pumps** **T | TP | TV | TPV | TI**

The TecBox consists of the hydraulics and the BrainCube control.

The intelligence of the newly developed BrainCube is unrivalled. It controls and monitors all processes of precision pressure maintenance, fillsafe water make-up and oxystop degassing. With its self-explanatory menu navigation, illuminated 8-line graphical display and encoder, its operation is pioneering, straightforward and easy to understand. [» BrainCube extract](#)

The hydraulics of the Transfero T | TP | TV | TPV are housed in a high-grade aluminium-plated sheet-steel case. Practical carrying handles make transport and assembly easy. All the hydraulic connections to the primary vessel needed for assembly are included in the delivery scope.

Vessels **Transfero primary and secondary vessels** **TU | TUE | TG | TGE | TGI | TGIH**

The necessary vessel volume can be shared between a primary vessel and optional additional secondary vessels (E). The primary vessel is equipped with a measuring foot for content measurement. The content indicator is a graphical display on the BrainCube. The primary vessel is connected to the TecBox on the water side.

The heart of all Transfero vessels is the airproof butyl bag. Its extraordinary diffusion tightness has been proven in countless practical applications and laboratory tests. [» airproof extract](#)

Combination and extension Transfero T can integrate water make-up modules P and degassing modules V into the TecBox. The unique range of variants T | TP | TV | TPV | TI ensures the right solution for every application. In addition, the Transfero can easily be combined with the individual devices Pleno P and Vento V | VP. Several Transferos can be intelligently connected to one another in master-slave operation or for capacity expansion. [» Pleno brochure](#) | [Vento brochure](#) | [oxystop extract](#) | [BrainCube extract](#)

04

Clear



BrainCube – simple, clear presentation of pressure and content: analogue | digital.

Self-explanatory



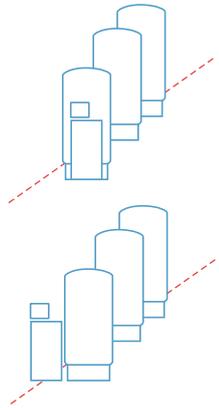
The Braincube speaks your language. You are guided through the menu by self-explanatory instructions. Easy to operate, it intelligently controls all operating processes.



transfero

PRESSURE MAINTENANCE

- For systems according to EN 12828 up to 110 °C,
- CE-tested according to PED/DEP 97/23/EC
- Transfero TecBox** with 1 or 2 pumps up to 10,000 kW
- T for pressure maintenance,
- TP for pressure maintenance and water make-up,
- TV for pressure maintenance and degassing,
- TPV for pressure maintenance, water make-up and degassing,
- positioned in front of or adjacent to the primary vessel
- Transfero vessels**
- TU... 200 -800 litres | TG... 1,000 -5,000 litres



- For equipment according to EN 12828 up to 110 °C and EN 12952, EN 12953 over 110 °C,
- CE-tested according to PED/DEP 97/23/EC
- Transfero TecBox**
- TI with 2 pumps up to 40,000 kW
- Transfero vessels**
- TGI 1,000-5,000 litres,
- TGIH 1,000-5,000 litres (over 110 °C),
- with additional oil hydraulic measuring foot,
- for operation according to EN 12952, EN 12953
- special equipment outside of the indicated data on request.

Elastic – almost like a compressor

In the Transfero with the dynaflex standard, the pressure gradient-controlled pump speed permits elastic starting and stopping dynamics. Together with the self-optimising partial-load operation, this means:

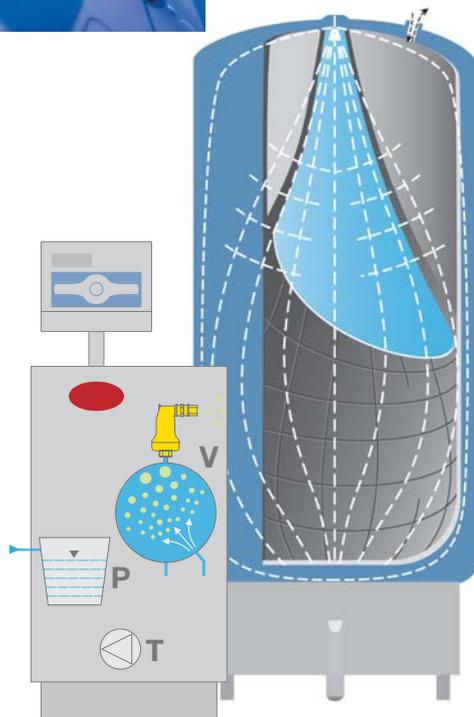
The highest performance with measured expansion with system-protecting, smooth pump operation. The pump switching frequency and the required buffer vessel volume are minimised.

This permits the use of Transfero even on smaller systems, thus opening up a new dimension for combined pressure maintenance, water make-up and degassing systems.

dynaflex

Benefits of PNEUMATEX®

BrainCube



BrainCube – intelligent and easy to operate

The BrainCube is the heart of the complete Pneumatex system. Its futureproof design guarantees:

- optimal ease of operation by means of an encoder
- self-explanatory menu navigation
- fully automatic, self-optimising operation
- updating by means of software updates, multiple languages
- memory function
- RS 485 interface and 2 volt-free outputs

Optional:

- ComCube interface expansion with 6 inputs and 9 outputs
- master-slave and intelligent switching of individual systems

A notable feature is the illuminated 8-line graphical display to show all relevant parameters, as a digital and analogue representation of pressure and content.

» BrainCube extract

dynaflex – The dynamics of a pump, the elasticity of a compressor

The elastic starting and stopping dynamics and self-optimising partial-load operation permit the use of Transfer T even with smaller systems. This opens up a new dimension for combined pressure maintenance, water make-up and degassing systems.

airproof – The safeguard against corrosion

Pneumatex safely protects the expanded water in the airproof butyl bag against oxygen entry. Practical experience in countless systems has shown: airproof is the best safeguard against corrosion. Pneumatex guarantees the airproof standard by means of in-house manufacturing and independent quality control procedures. It comfortably exceeds the requirements of DIN 4807 T3. The 5-year warranty underlines the high quality standard.

» airproof extract

Optional:

oxystop – Closed, effective and optimised

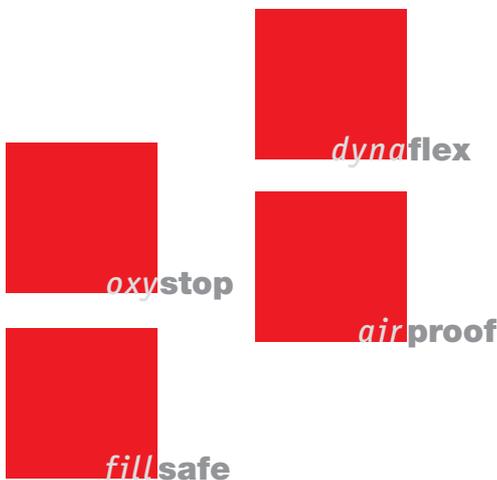
The oxystop degassing guarantees high separation efficiency and high degassing performance and, above all, absolute oxygen tightness. In addition to airproof, oxystop guarantees safety due to a totally sealed system.

» oxystop extract

fillsafe – Guaranteed pressure

Transfero can be combined with water make-up systems. EN 12828 recommends their use as a pressure maintenance monitoring device. In BrainCube controls, all functions for controlled water make-up are already integrated. This includes the water make-up stop for leaks, as well as electronic checking of the water make-up quantity, time and frequency.

» Pleno brochure



A case for Pneumatex

Typical practical example

2700 kW 58 m	Heat output static height
32 m ³	System content
10 bar	permissible operating pressure
80°C / 60°C	Temperature flow/return

A heating system is being planned for a high-rise block of flats with a shopping centre. The investment and operating costs must be optimised.

To ensure high supply safety, complete redundancy of external pressure generation is required.

The heating system is to be monitored and serviced in future by a maintenance company. The operating states of the system will therefore be monitored from an external remote control room. The maintenance costs must be minimised. The strongest emphasis must be placed on durability.

In particular, according to the specifications, there must be no costs for recurring inspections..

» **TIP** When you need to achieve a lot on a tight budget, Transfero pressure maintenance stations as combination devices with integrated degassing and water make-up (TP | TV | TPV) are a good alternative to individual devices.

The Solution

Transfero = TecBox T 10.2 + TG 1500 + SD 35.10

▶ 5,500 kW 59.2 m
▶ 43 m ³
▶ to 10 bar, precision pressure maintenance ± 0.2 bar
▶ 80°C / 60°C (max. 110°C possible)

The TecBox T 10.2 fits the bill perfectly. Its 2 parallel pumps and spill valves offer complete redundancy: a total of 5,500 kW!

The BrainCube, with its data inputs and outputs and RS485 interface, opens up numerous possibilities for connections to an external control room. To ensure low-wear, corrosion-free, protective operation, the expansion vessel contains the airproof butyl bag, oxystop degassing vessel and dynaflex operation of the pressure maintenance pumps.

Transfero vessels are individually safeguarded with 2-bar safety valves. The product of pressure*content remains small. In some countries, the obligatory institutional inspection is then no longer necessary – as in Switzerland, with pressure*content ≤ 3,000 bar*litre or generally on vessels ≤ 2 bar.

The pressure buffer vessel SD 35.10 compensates for minimal pressure variations.

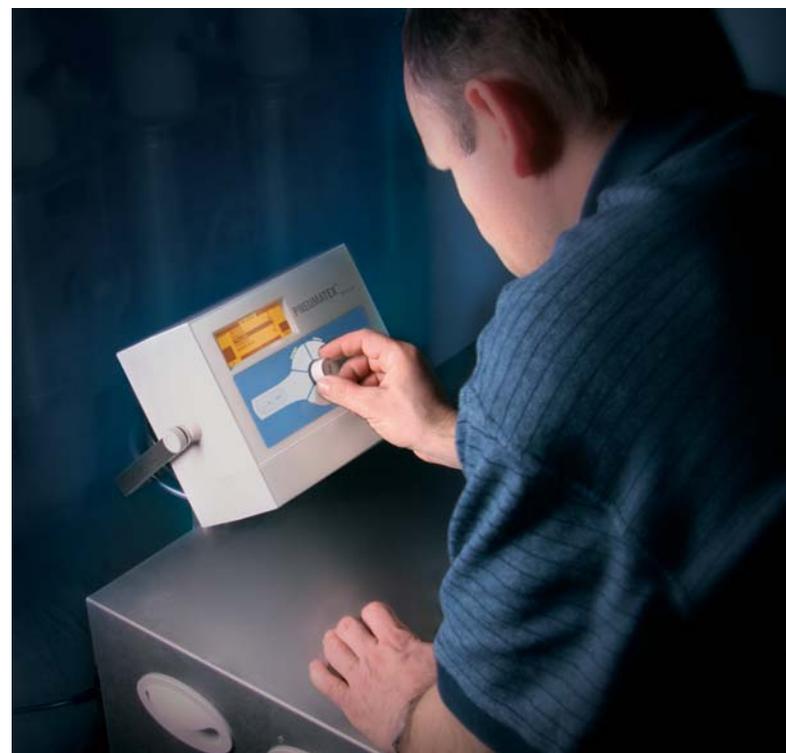
The water make-up and central degassing is performed by a Vento VP, which communicates with the Transfero via the BrainCube control. The failsafe water make-up monitoring ensures additional operating safety.

Quality and passion

With the “Benefits of Pneumatex” it becomes clear that the new Transfero T and TI series give you more. Embodying the renowned Swiss reputation for quality, precision and reliability is what makes a pump pressure maintenance device worthy to carry the name Transfero.

The philosophy “take something good and make it even better” is consistently pursued at Pneumatex. These quality requirements are met thanks to the passionate dedication of our employees. In personal contact with our customers, we exchange opinions, answer questions and devise solutions. Our technical experts are always eager to assist you, in person and on site.

Make the wise choice of partnering with Pneumatex.



| swiss made | **Pneumatex – Dynamic Water Management**

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