

TACOSOL CIRC ER HE

SINGLE LINE SOLAR STATION



Pump assembly with high-efficiency pumps, balancing valve and optional safety subassembly for solar heating energy systems.

DESCRIPTION

Hydraulic balancing and flow measurement can be carried out directly on the station in the case of the TacoSol Circ ER HE solar station. The integrated TacoSetter Inline 130 allows the volume flow in the primary circuit to be precisely and conveniently adjusted and checked. Systems that are correctly balanced hydraulically ensure optimal energy transfer from the collector panel to the heat storage unit and therefore allow economical operation of the solar system.

Using scales that are pre-calibrated for inhibitors, specialists locally can adjust and check the flow values. Training and costly measuring devices are no longer needed.

INSTALLATION POSITION

The solar station must be installed vertically. The installation can be carried out by a single installer.

ADVANTAGES

Compact

- Equipped with all the necessary valves and components

Simple

- Hydraulic balancing and functional checking of the system with TacoSetter Inline 130
- Pump can be changed with ease as it is lockable on the intake and output sides
- Simple filling, draining and servicing of the system owing to multifunctional ball valve

Efficient

- Highly efficient system operation owing to permanent air separation with use of HE pumps

Flexible

- Flexibility thanks to the option of integrating control systems

OPERATION

In combination with a solar controller, the solar station transports the solar liquid heated in the collector to the hot water/drinking water storage tank via a heat exchanger.

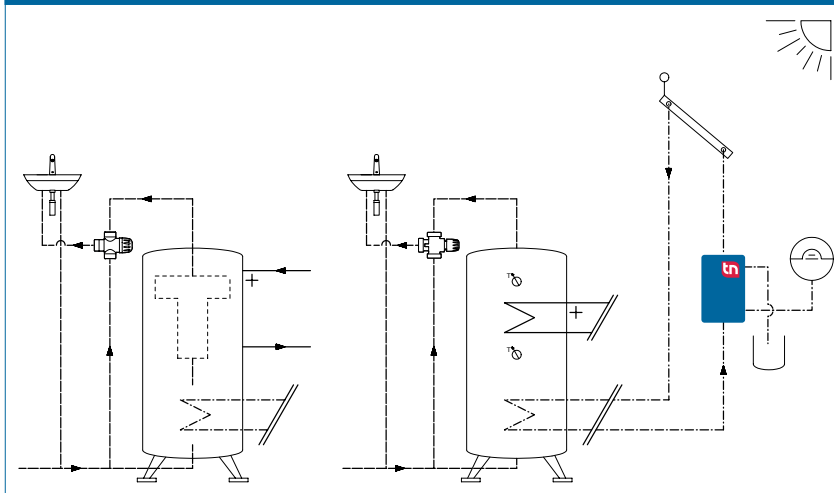
The integrated TacoSetter Inline 130 balancing valve enables the volume flow to be adjusted to the performance of the collector or heat exchanger and checked.

The flow measurement of this balancing valve is based on the principle of a float. The regulating screw on the flow meter is used to adjust the flow. The reading position is the lower edge of the float element.

BUILDING CATEGORIES

- Apartments, apartment blocks
- Single family homes, housing estates
- Multiple dwelling units

SYSTEM/BASIC DIAGRAM



TACOSOL CIRC ER HE | SINGLE LINE DESIGN WITH SAFETY SUBASSEMBLY

SPECIFICATION TEXT

See www.taconova.com

TECHNICAL DATA

General

- Max. operating temp. $T_{0\ max}$: 110 °C
- Max. operating pressure $P_{0\ max}$: 8 bar
- Actuating pressure of the integrated safety valve: 6 bar
- k_{VS} value and measurement range according to „Type overview“ table
- Thread according to DIN 2999/ISO 7 and ISO 228
- Measuring accuracy $\pm 10\ %$ of the final value
- For pump performance, see data sheet Grundfos UPM3 15-105/130

Material

- Valve housing: Brass
- Internal parts: Stainless steel, brass, plastic; borosilicate (sight glass)
- O-ring seals: EPDM
- Flat seals: AFM34
- Insulation: EPP

Electric connection data

- Grundfos UPM3 15-105/130
 - Mains voltage: 230 VAC $\pm 10\ %$
 - Mains frequency: 50 Hz
 - Power consumption:
 - Speed P1 [W] min. 2 // max. 45
 - I1/I [A] min 0.04 max. 0.48
 - Protection class: IPX4D
 - $EEL \leq 0.20$

Fluids

- Water mixtures with typical additives used against corrosion and freezing (display scale for medium viscosity $\nu = 2,3\ \text{mm}^2/\text{s}$)
- Heating water (VDI 2035; SWKI BT 102-01; ÖNORM H 5195-1)
- Cold water

TYPE OVERVIEW

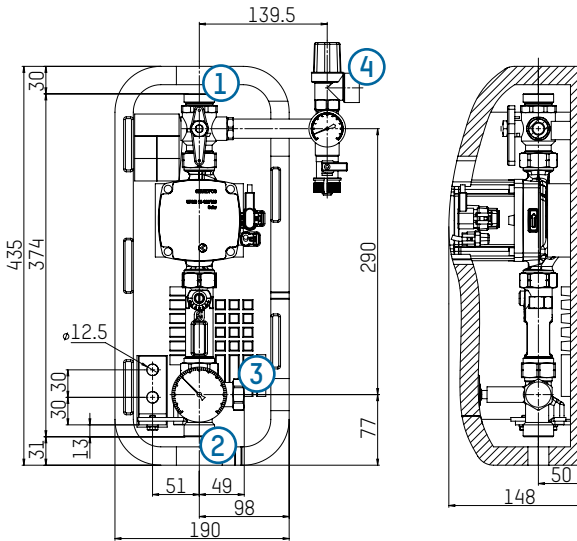
TacoSol Circ ER HE | Single line design with safety subassembly with high-efficiency circulating pump

Order no.	$k_{VS}^{1)}$	Measuring range ²⁾
270.9006.345	1.5	1,5 – 6,0 l/min
270.9016.345	3.3	4,0 – 16,0 l/min
270.9028.345	3.5	8,0 – 28,0 l/min

¹⁾ k_{VS} [m³/h] at $\nu = 1\ \text{mm}^2/\text{s}$

²⁾ Reading scale for water-glycol mix with $\nu = 2,3\ \text{mm}^2/\text{s}$

DIMENSIONAL DRAWING



- 1 Connection of collector return (AG ISO 228, G 1" flat sealing and cutting ring)
- 2 Connection of storage return (AG ISO 228, G 1" flat sealing and cutting ring)
- 3 Connection of expansion vessel (AG ISO 228, G 3/4" flat sealing and cutting ring)
- 4 Connection of safety valve drainage line (IG DIN 2999 / ISO 7, Rp 3/4")

TACOSOL CIRC ER HE | SINGLE LINE DESIGN

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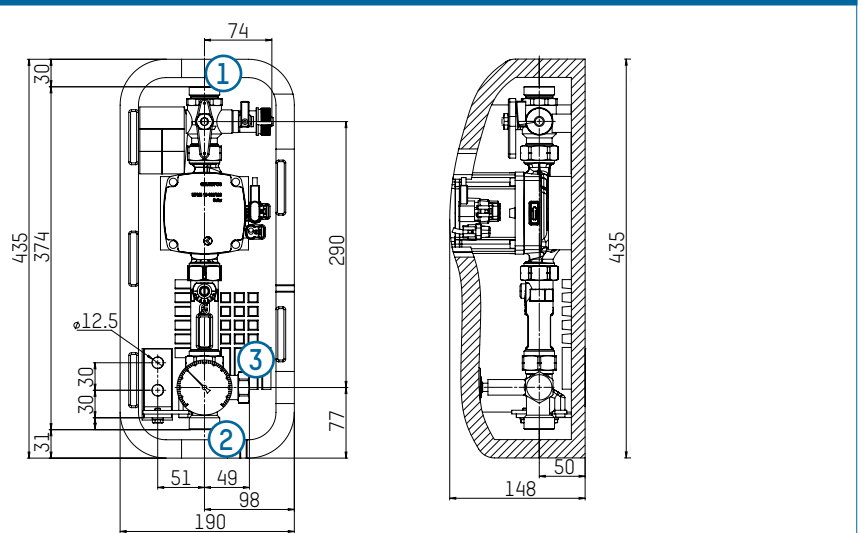
TacoSol Circ ER HE | Single line design with high-efficiency circulating pump

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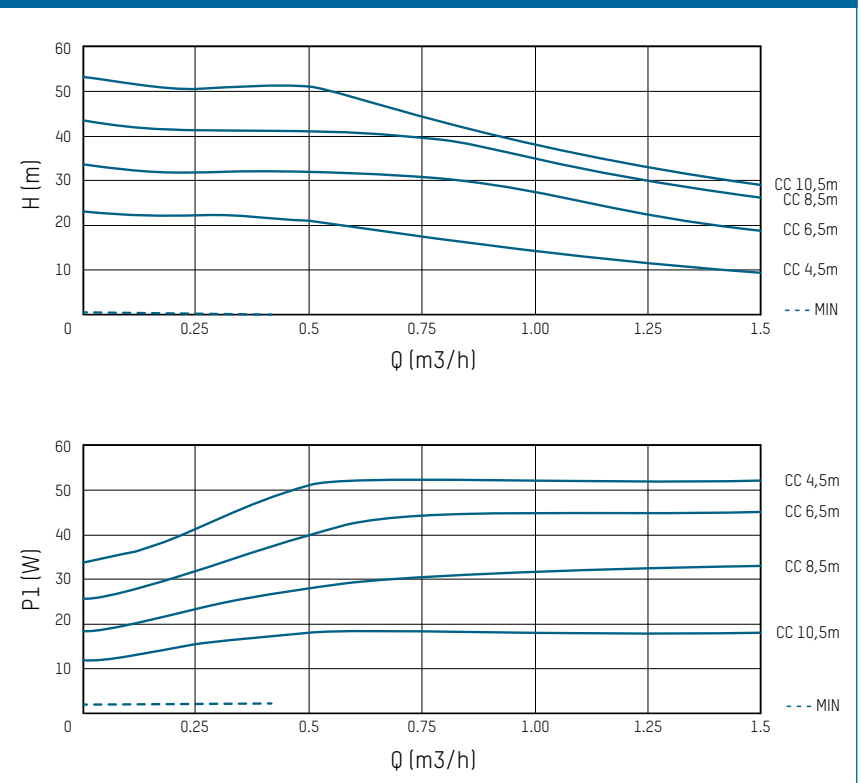
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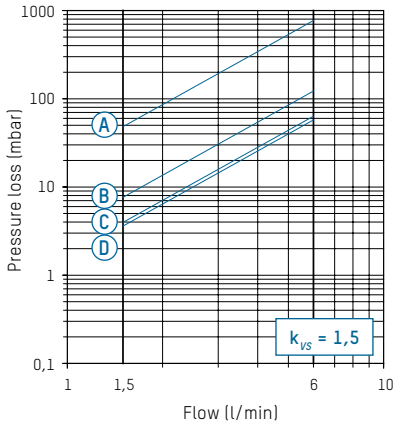
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PUMP CHARACTERISTIC

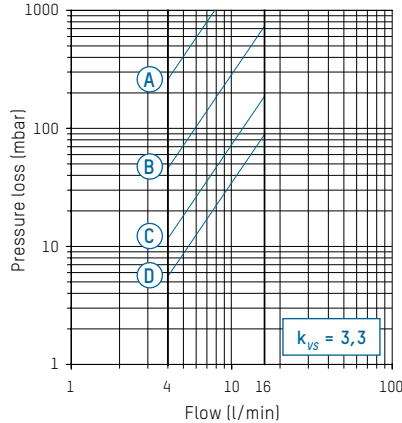


PRESSURE LOSS DIAGRAMS

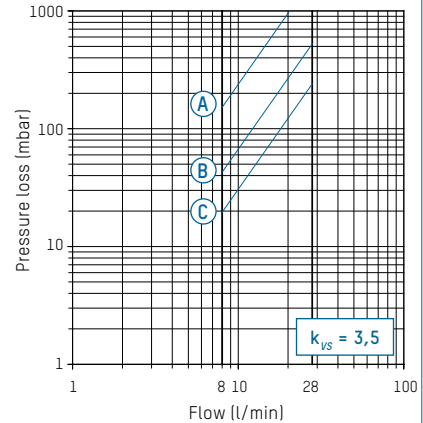
270.X006.XXX (DN 20 | 1" | 1,5...6 l/min)



270.X016.XXX (DN 20 | 1" | 4...16 l/min)



270.X028.XXX (DN 20 | 1" | 8...28 l/min)



A – D Return characteristics of valve position for TacoSetter Inline 130

ACCESSORIES



SOLDER JOINT PRESSURE FITTING

Flat sealing connector joint, consisting of a soldered connecting nipple, lock nut and flat seal suitable for solar technology

Order no.	G x mm	Version for
210.5331.019	1" x 18 mm	Copper pipe 18 mm
210.5332.019	1" x 22 mm	Copper pipe 22 mm



FILL AND DRAIN COCK 3WAY CONNECTOR

For connection to the expansion vessel connector piece, consisting of a T- joint with fill and drain cock, lock nut with G 3/4" internal thread with flat seal suitable for solar technology, G 3/4" outer thread connector.

Order no.	DN	G
296.7001.354	20	3/4"



EXPANSION VESSEL MOUNTING BRACKET WITH QUICK ACTION COUPLING

For mounting the expansion vessel on the wall with quick-action shut-off coupling 1 x internal thread, 1 x external thread G 3/4".

Order no.	DN	G
296.7002.000	20	3/4"



STAINLESS STEEL TUBE

For connecting the expansion vessel, incl. 3/4" lock nut and flat seals suitable for solar technology.

Order no.	DN	G	Length
296.7003.000	20	3/4"	0,5 m



SOLAR CONTROLLER SOREL

Order no.	Type	Info
296.7016.000	TDC 4	Complex solar systems and high efficiency pumps