

SOLAR-CONTROLS

State-of-the-art technology with zeitgeisty engery supply

Also in this field Praher has been collecting experience for more than 25 years and by using this experience has developed a range of solar controls, that optimally meets the users needs. This range of solar controls consists of the SC 01, SC 02, SC 03 and the Solar Control + Combi Units. Off these units the most efficient solution for the customer can be put together – both technically and in price.





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SC01 SOLAR CONTROLS

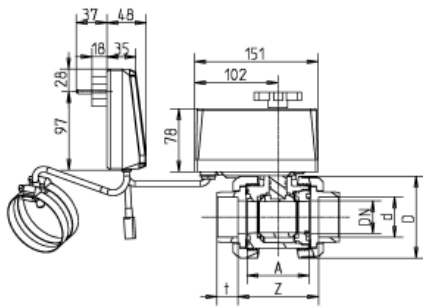
SC01 Solar Controls incl. 2- or 3 Way Solar Ball Valve



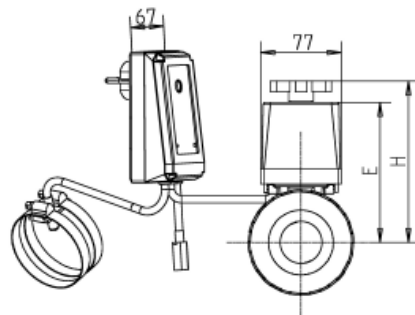
SC01

This consists of a ready to plug-in and compact control box (acc. to DIN), where the required pool water temperature (+20°C - +40°C) can be set manually. Also included are: cold- & warm water temperature sensors (1 each), that have to be fixed on the piping system behind the skimmer or at the solar collector, 10/3m connection cable, 2- or 3 way Praher PVC ball valves DN40/d50 or DN50/d63 with EO510 electric drive MVO 12-230V AC/DC, with integrated venting drill hole in the ball (3 ways), manual override system, IP 54 protection rate, CE.

SC01



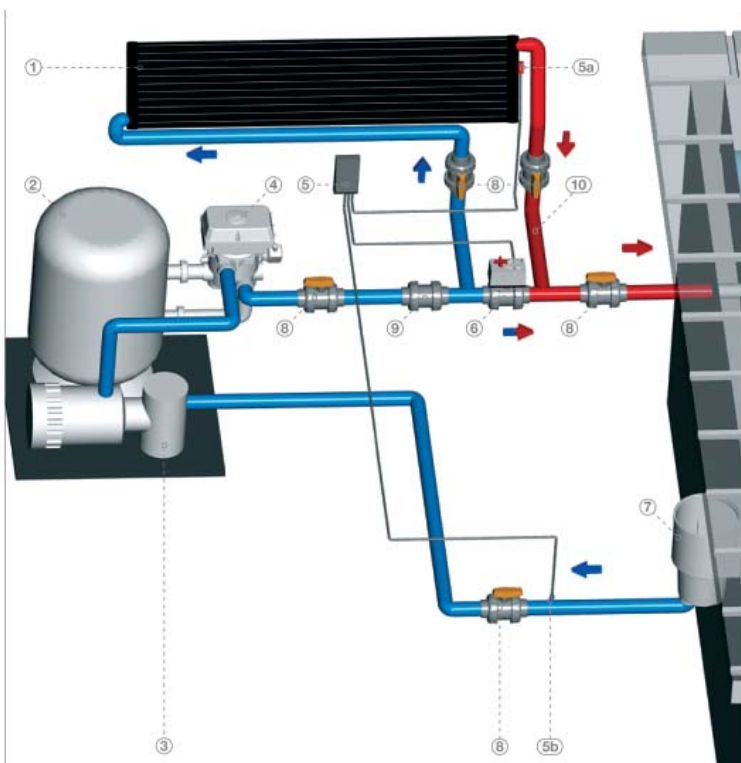
SC01



2Way Ball Valve (DN32-50 S6) incl. SC01

d	mm	40	50	63
DN	mm	32	40	50
G	Inch	1 ¼"	1 ½"	2"
A	mm	77.0	77.0	87.0
D	mm	101.5	101.5	115.3
E	mm	135.0	135.0	142.0
H	mm	155.0	155.0	162.0
t	mm	26.5	31.5	38.5
Z	mm	87.0	87.0	99.0
PN	bar	16.0	16.0	16.0
No.			123520	123521

Installation Manual 2ways - SC01



1. Solar panel
2. Swimming pool filter
3. Filter pump
4. Aquastar E-2000, automatic backwash valve
5. SC01 Solar Control
- 5a. Warm water temperature sensor
- 5b. Cold water temperature sensor
6. EO510 2 way electric ball valves, 12-230V AC/DC
7. Ocean Skimmer DE LUXE M5
8. PVC 2-ways ball valve S6
9. PVC cone check valve S6
10. Energy PVC pipes and fittings

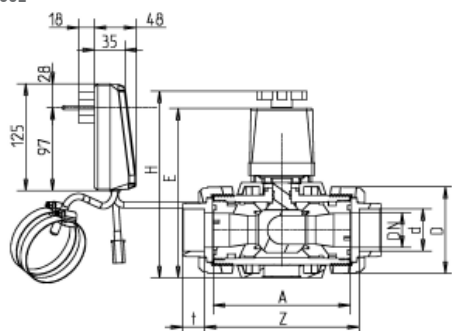


Ready-to-plug in
SC01 solar control;
230V power supply
Plug In - Ready!

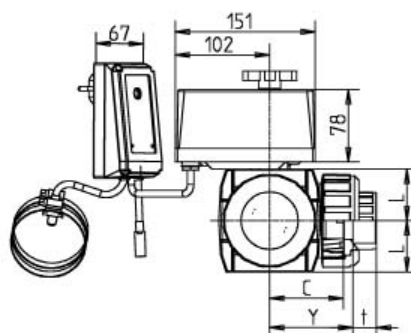
3-way ball valve + SC01 solar control



SC01



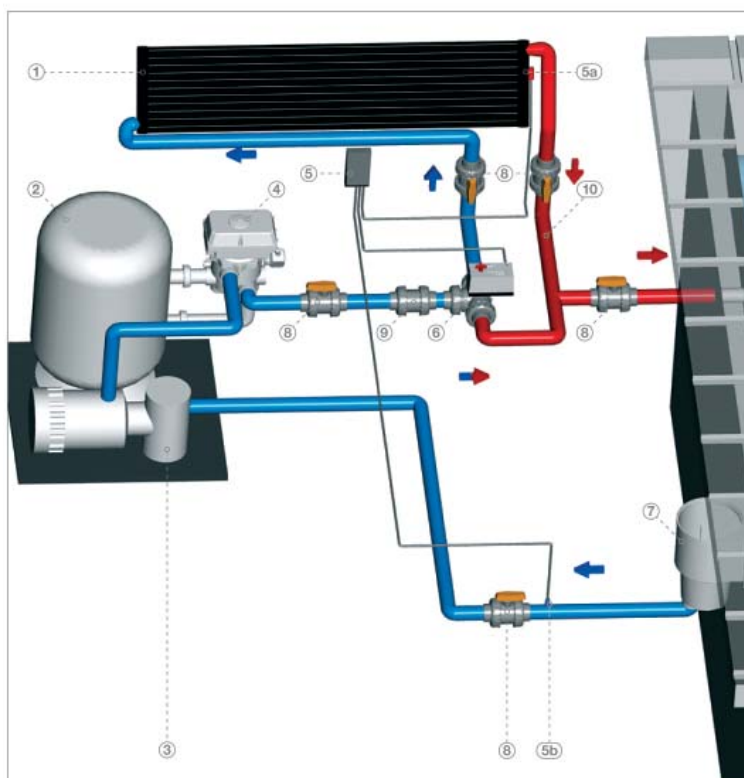
SC01



3-way ball valve (DN32-40 S4)

d	mm	40	50	63
DN	mm	32	40	50
G	Inch	1 ¼"	1 ½"	2"
A	mm	162,0	162,0	181,0
C	mm	81,0	81,0	90,5
D	mm	101,0	101,0	121,5
E	mm	200,0	200,0	216,0
H	mm	220,0	220,0	236,0
L	mm	56,0	56,0	64,0
Y	mm	84,5	85,5	96,5
t	mm	27,5	31,5	38,5
Z	mm	169,0	171,0	193,0
PN	bar	16,0	16,0	16,0
No.			120522	121784

Installation Manual 3ways + SC01



1. Solar panel
2. Swimming pool filter
3. Filter pump
4. Aquastar E-2000, automatic backwash valve
5. SC01 solar control
- 5a. Warm water temperature sensor
- 5b. Cold water temperature sensor
6. Ocean Skimmer DE LUXE M5
7. PVC 2 ways Ball Valve
8. PVC Cone Check Valve
9. Energy PVC Pipes and Fittings
10. Power supply, Plug



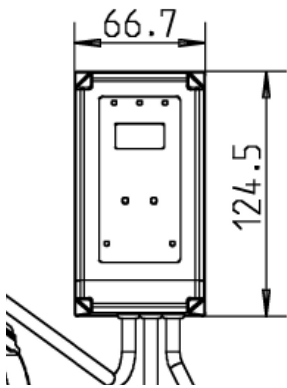
Ready-to-plug in
SC01 solar control;
230V power supply
Plug In – Ready!

SC02 SOLAR CONTROL

SC02 Solar Control

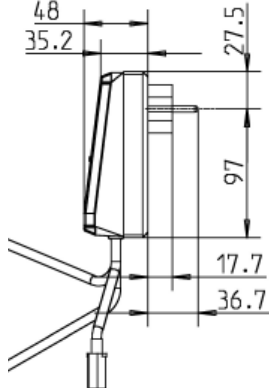


SC02



Installation manual SC02

SC02

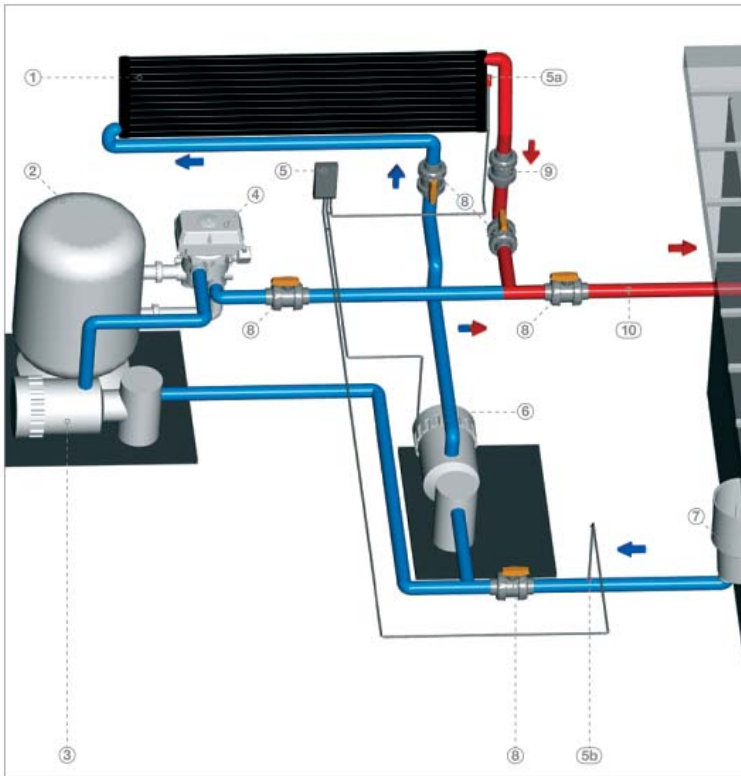


SC02

The SC02 also consists of a compact, ready-to-plug-in control box (acc. to DIN), where the required pool water temperature (+5°C - +60°C) can be set manually. Also this control has got an integrated 'solar pump connection', 230V, for direct control. Digital display, cooling function taking care of keeping the set temperature, even if the pool water temperature is rising (display by 'red blinking Leds'), adjustment for difference in temperature between pool & solar panel from +2 to +20°C/switch from °C to °F simply done, the SC02 solar controls are mainly used for solar heating in private- and hotel pools. This provides substantial extension of the outdoor pool season.
Nr. 120848



Ready-to-plug in
SC02 solar control;
230V power supply
Plug In – Ready!



1. Solar panel
2. Swimming pool filter
3. Filter pump
4. Aquastar E-2000, automatic backwash valve
5. EO510 electric ball valve with integrated SC02 Solar Control
- 5a. Warm water temperature sensor
- 5b. Cold water temperature sensor
6. Solar pump
7. Ocean Skimmer DE LUXE M5
8. PVC 2 ways ball valve S6
9. PVC cone check valve S6
10. Energy PVC pipes and fittings

SC03 SOLAR CONTROL



2 & 3 way Ball Valve + SC03 Solar Control

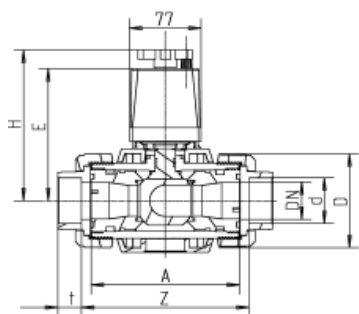


SC03

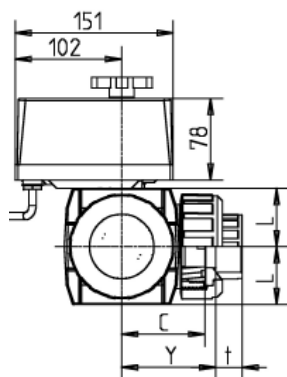
Since more and more steel wall pool users do not want to miss out the advantages of a solar control, Praher developed an economical and efficient 2- and 3 ways valve with integrated solar control. The result is the SC03, which is easily integrated in the hose piping by using hose nozzles (optional accessory). Another possibility is the installation directly at the Ocean V6 or Ocean V4 valve. with this compact solar control SC03 all necessary functions are integrated in the EO510 electric drive. A pool temperature of +20°C to +40°C is possible.

Also included are: cold- & warm water temperature sensors (1 each), that have to be fixed on the piping system behind the skimmer or at the solar collector, 10/3m connection cable, 2- or 3 way Praher PVC ball valves DN40/d50 or DN50/d63 with EO510 electric drive MVO 12-230V AC/DC, with integrated venting drill hole in the ball (3 ways), manual override system, IP 54 protection rate, CE.

SC03



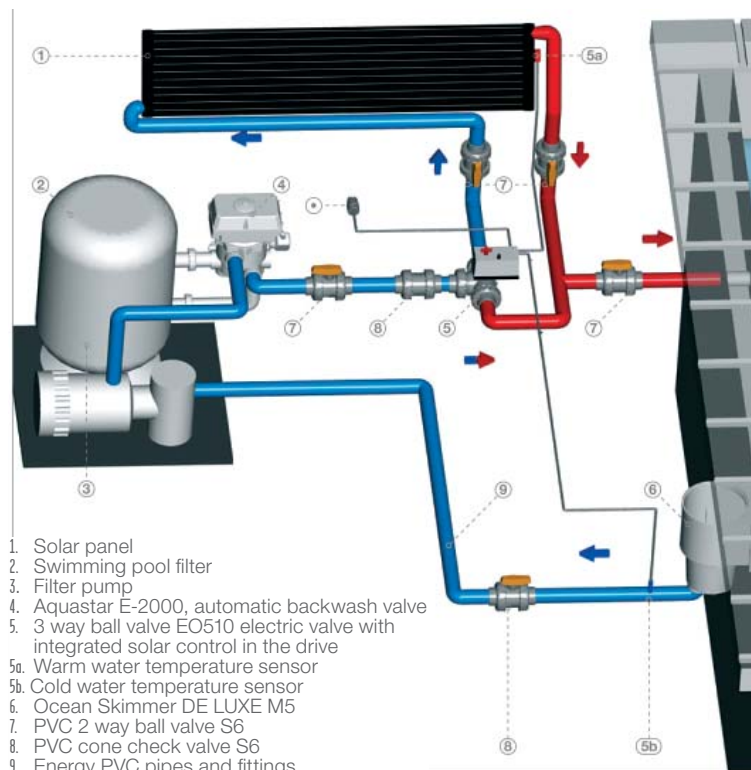
SC03



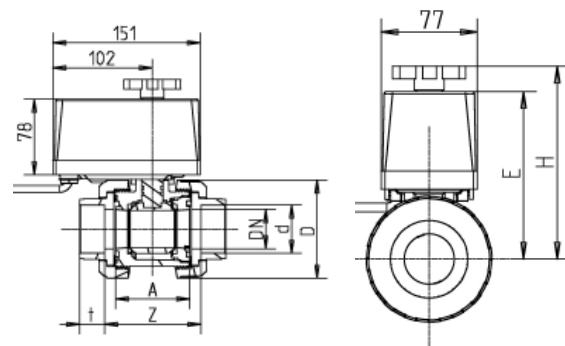
3 Way Ball Valve - SC03 (DN32-40 S4)

d	mm	40	50	63
DN	mm	32	40	50
G	Inch	1 ¼"	1 ½"	2"
A	mm	162,0	162,0	181,0
C	mm	81,0	81,0	90,5
D	mm	101,0	101,0	121,5
E	mm	200,0	200,0	216,0
H	mm	220,0	220,0	236,0
L	mm	56,0	56,0	64,0
Y	mm	84,5	85,5	96,5
t	mm	27,5	31,5	38,5
Z	mm	169,0	171,0	193,0
PN	bar	16,0	16,0	16,0
No.			126564	126565

Installation Manual SC03-3 Ways



1. Solar panel
2. Swimming pool filter
3. Filter pump
4. Aquastar E-2000, automatic backwash valve
5. 3 way ball valve EO510 electric valve with integrated solar control in the drive
- 5a. Warm water temperature sensor
- 5b. Cold water temperature sensor
6. Ocean Skimmer DE LUXE M5
7. PVC 2 way ball valve S6
8. PVC cone check valve S6
9. Energy PVC pipes and fittings
10. Power supply, socket



2 Way Ball Valve - SC03 (DN32-50 S6)

d	mm	40	50	63
DN	mm	32	40	50
G	Inch	1 ¼"	1 ½"	2"
A	mm	77,0	77,0	87,0
D	mm	101,5	101,5	115,3
E	mm	135,0	135,0	142,0
H	mm	155,0	155,0	162,0
t	mm	26,5	31,5	38,5
Z	mm	87,0	87,0	99,0
PN	bar	16,0	16,0	16,0
No.			126566	126567

Detailed technical description (PDF) available on request. info@peraqua.com

Already included extra features

1. potential free contact incl. relays for connection of the filter or solar pump.
2. optional adjustment for 'solar operation' left or right.

SOLAR CONTROL

Solar Control + 2 Way electric valve



SOLAR CONTROL

Here the pool water temperature is warmed via the solar panels. The solar control comes with a connection for EO510 PVC electric valves or filter pump, a cold water temperature sensor with 3m connection cable and a warm water temperature sensor with 20m connection cable..

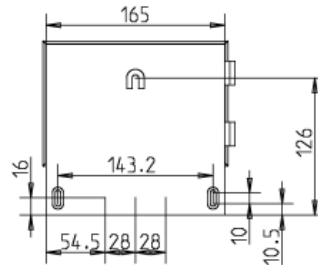
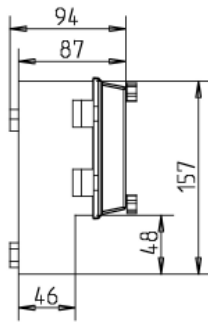
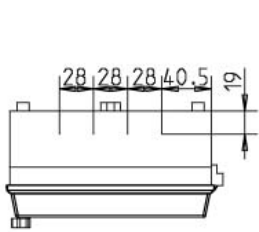
Further technical advantages:

1. Clear cover with quick snap closing
 2. Safety in operation
 3. Certified acc. to EG (low voltage guideline 73/23/EWG, EMV 89/336/EWG)
 4. IP 54 protection rate, CE-labelling
 5. Compact design
- Nr. 130182 (without 2 way electric valve)

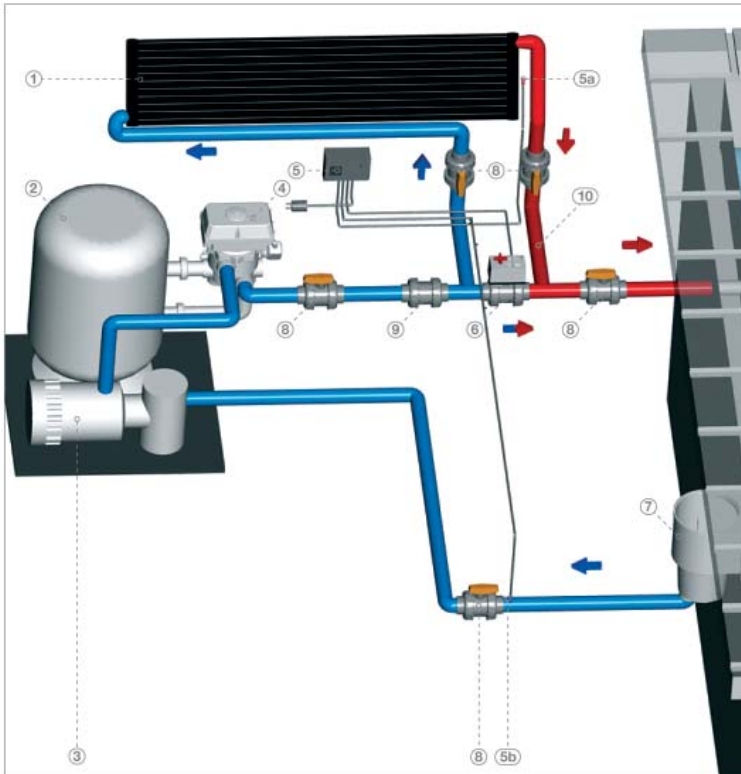
Solar Control

Solar Control

Solar Control

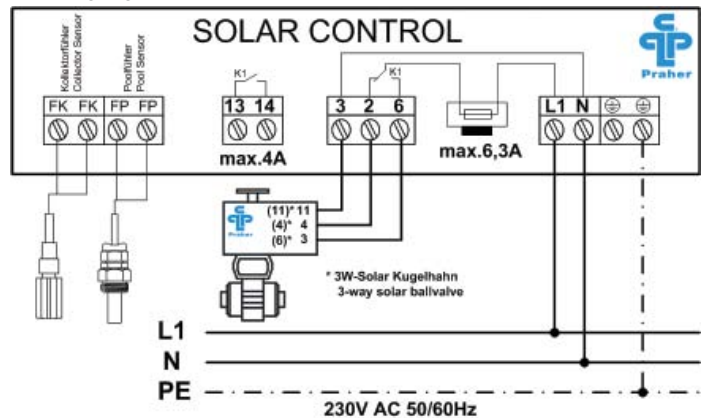


Installation Manual: Solar Control + 2 way electric valve



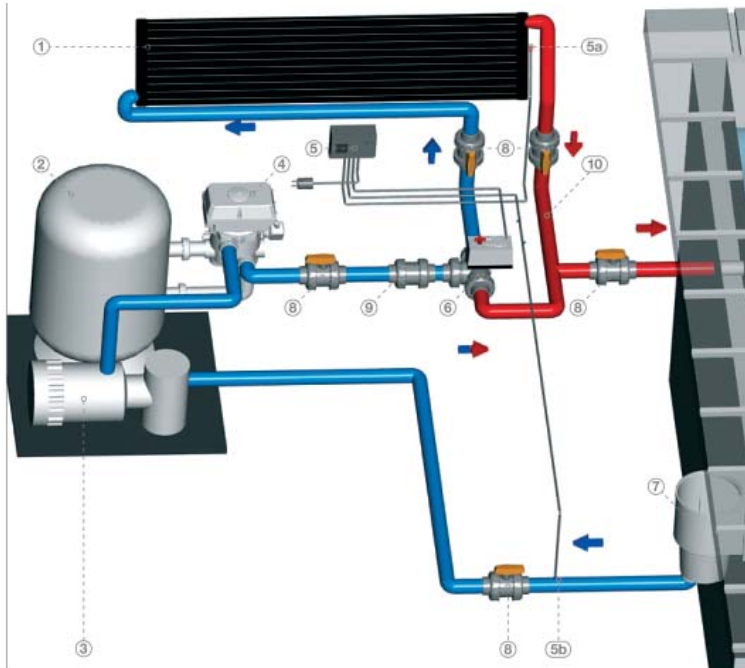
1. Solar panel
2. Swimming pool filter
3. Filter pump
4. Aquastar E-2000 automatic backwash valve
5. EO510 electric ball valve
- 5a. Warm water temperature sensor
- 5b. Cold water temperature sensor
6. 2 way electric ball valve EO510, 12-230V AC/DC
7. Ocean Skimmer DE LUXE M5
8. PVC 2-way ball valve S6
9. PVC cone check valve S6
10. Energy PVC pipes and fittings

Connecting diagram:



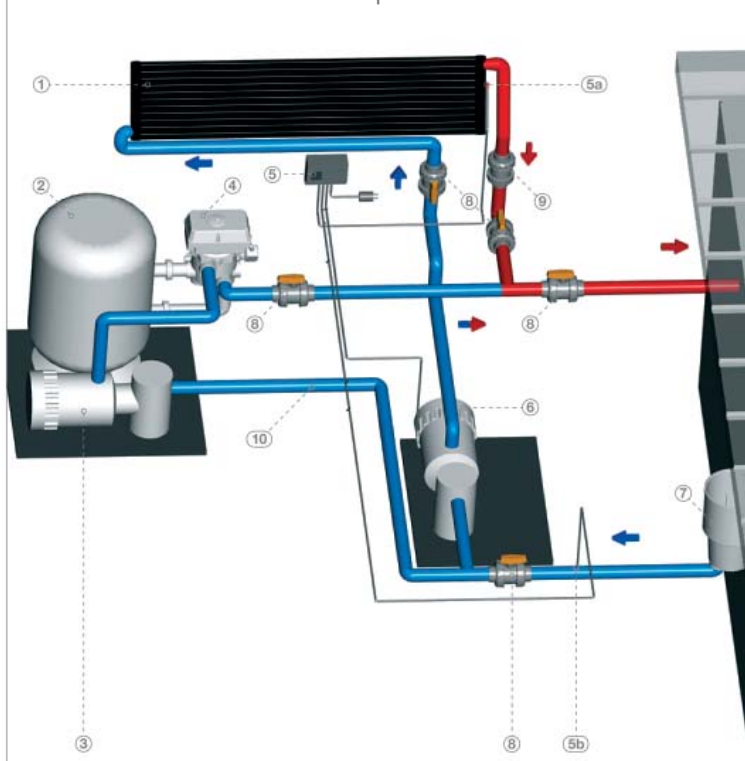
Installation Manual: Solar Control + 3 way electric valve & additional Pump

Installation Manual: Solar Control + 3 way electric valve



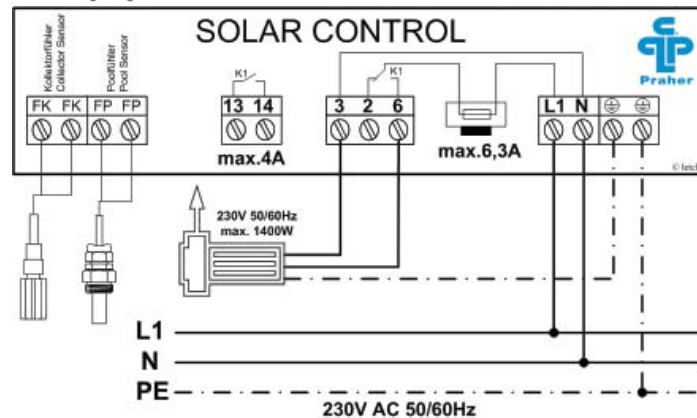
1. Solar panel
2. Swimming pool filter
3. Filter pump
4. Aquastar E-2000 automatic backwash valve
5. Solar Control
- 5a. Warm water temperature sensor
- 5b. Cold water temperature sensor
6. 3 way electric ball valve
EO510 12-230V AC/DC
7. Ocean Skimmer DE LUXE M5
8. PVC 2 way ball valve S6
9. PVC cone check valve S6
10. Energy PVC pipes and fittings

Installation Manual: Solar Control + additional Pump



1. Solar panel
2. Swimming pool filter
3. Filter pump
4. Aquastar E-2000 automatic backwash valve
5. Solar Control
- 5a. Warm water temperature sensor
- 5b. Cold water temperature sensor
6. Solar pump
7. Ocean Skimmer DE LUXE M5
8. PVC 2 way ball valve S6
9. PVC cone check valve S6
10. Energy PVC pipes and fittings

Connecting diagram:



SOLAR CONTROL

SOLAR CONTROL COMBI + 2way Electric Valve



SOLAR CONTROL COMBI

Offers an additional 'filter pump control' and a 'digital pool water temperature display'. More than that, it comes with connection clamps for a filter pump, a solar pump or an EO510 PVC solar electric ball valve.

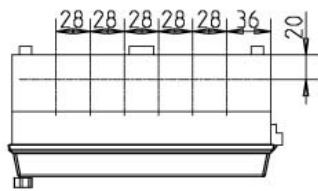
These advantages are topped off by a 'protection against dry running' and a possible 'filter clock by-pass'. Depending on the switch setting, the 'pool-, panel-, or requested temperature' is shown on the display (on request also available with integrated heating control = Combi + version)

Nr. 130194 (without 2 way valve)

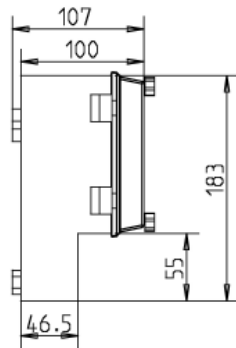
Further technical advantages:

1. Clear cover with quick snap closing
2. Safety in operation
3. Certified acc. to EG (low voltage guideline 73/23/EWG, EMV 89/336/EWG)
4. IP 54 protection rate, CE-labeling
5. Compact design
6. Incl. follow-up time for clock by integrated akku

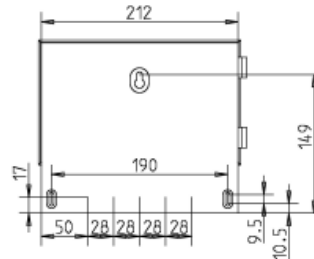
Solar Control Combi



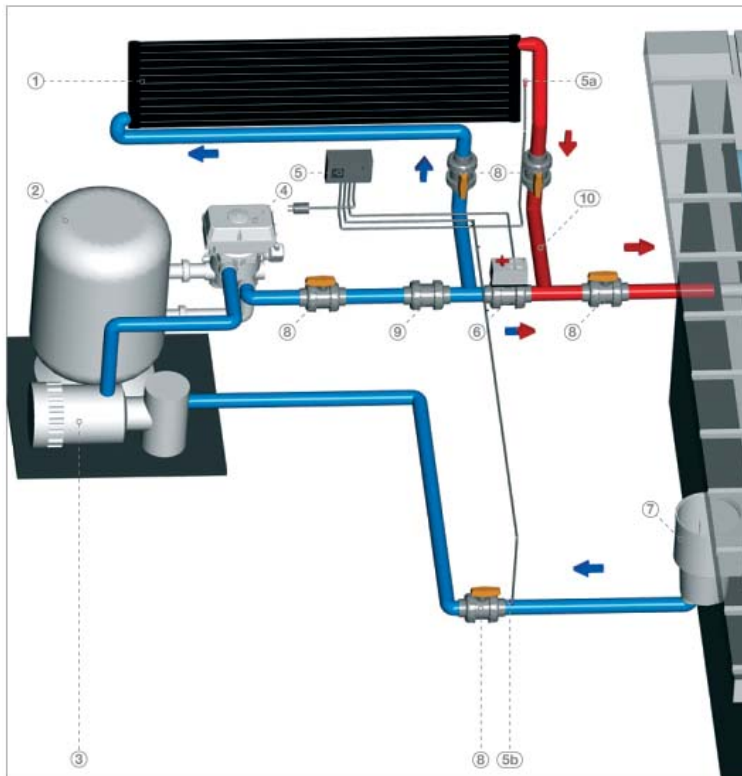
Solar Control Combi



Solar Control Combi

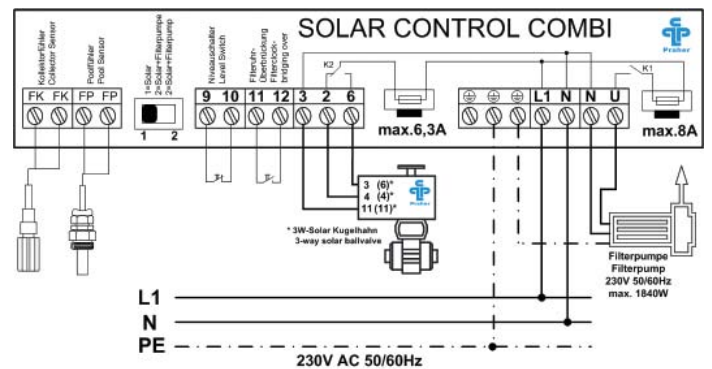


Installation manual Solar Control Combi + PVC 2 way electric valve EO510



1. Solar panel
2. Swimming pool filter
3. Filter pump
4. Aquastar E-2000 automatic backwash valve
5. Solar Control Combi
- 5a. Warm water temperature sensor
- 5b. Cold water temperature sensor
6. 2 way electric ball valve EO510, 12-230V AC/DC
7. Ocean Skimmer DE LUXE M5
8. PVC 2 way ball valve S6
9. PVC cone check valve S6
10. Energy PVC pipes and fittings

Connecting diagram:



OCEAN-SOLARPANEL



OCEAN-Solar PANEL

The TÜV certified absorber, made of HDPE, provides ideal conditions for the solar heating of the pool water.

Ocean swimming pool solar heatings extend the outdoor swimming season by many weeks. They are comfortable, progressive, eco-friendly and cost-saving, because they heat your pool with solar energy for free!

Advantages:

1. Little pressure loss
2. Highly efficient
3. Suitable for temp. up to -50°C
4. Slight weight resistance
5. Simple Installation

Technical datas:

1. Pressure loss ca. 0,003 bar bei 200 l/h/m²
2. Flowrate: 150 - 250 l/m²/h
3. Weight: approx. 6 kg/m² - water volume: 6l/m²
4. Test pressure: 4,5 bar
5. Operating pressure: up to 1,2 bar at 40°C
6. Efficiency factor: up to approx. 85%
7. Capacity: up to 0,85 kWh/m²
8. Temperature resistant at idle running from -50°C – 115°C
9. Dimensions: 1360 x 820mm
10. Connecting pipe: \varnothing 40 mm



OCEAN-Solar Panel

with integrated connection pipe 40 mm
Dimensions 1.320 mm x 820 mm
Nr. 75754, VP 50 pcs.



OCEAN- Solar Panel

with 4 connection spigots 25mm
Dimensions 1280 mm x 820 mm
Nr.75755, VP 50 pcs.

Ocean-Solarpanel + Accessories



OCEAN- Solar Panel
with connection pipe double-sided 40mm
Dimension 1360 mm x 820 mm
Nr. 75756, PU 50 pcs.

Connection Hose
40x5x60 mm
Nr. 75757, PU 100 pcs.

Hose clamps
30-45 mm
Nr. 50187, PU 100 pcs.



Connection Hose
25x3x70 mm
Nr. 75758

Hose clamps
20-32 mm
Nr. 50947, PU 100 pcs.



Technical information:

The pool water can flow through the Ocean solarpanel in every possible direction. The installation length- as well as widthwise is possible. Connection of the single absorber lines according the Tichelmann. We recommend not to connect more than eight absorbers in a row.

Design:

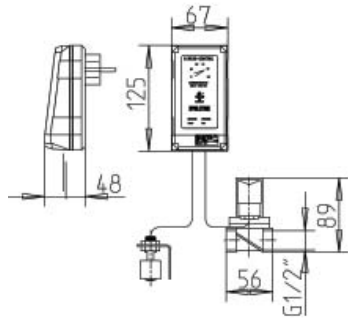
Recommended absorber surface in % of the pool surface for outdoor pools with cover or indoor pools (beginning of May – end of September). Temperature rise 4 – 7°C compared to unheated pools.

Pump capacity:

Recommended is a throughput of 150 – 250 l/m² absorber surface per hour, the required pump type can be easily established. The output generates itself from 'absorber surface x 200l'. The pressure head follows from the height difference of the water level to the absorber plus approx. 5m addition.

WATERLEVEL+TEMP. CONTROL

Niveau Control



EVOLUTION – POOL WATER NIVEAU CONTROL NCO1 with ready-to-plug-in housing.
With time delay switch, which can be set from 2 – 135 sec. Incl. PVC floater for simple installation in the Ocean skimmer M5 & PT, as it is fitted with an integrated, height adjustable retention system for this floater.

130293: Niveau Control NC01 incl. solenoid valve 1/2" thread connection, 230V AC

130287: Niveau Control NC01 incl. PVC 2way ball valve DN20 d25 3/4", 12-230VAC/DC EO510 MVO electric drive



EVOLUTION - WATER NIVEAU CONTROL

Incl. compact control box, PVC floater for simple installation in the Ocean skimmer M5 & PT, as it is fitted with an integrated, height adjustable retention system for his floater. Time delay switch from 4 - 90 sec. This system can be ideally combined with EVOLUTION solenoid valves or PVC 2way electric actuated valves d16 3/8" – d110 4", 12 – 230V AC/DC (also see EVOLUTION automatic valves)

130286 (without valve)



TEMPERATUR CONTROL TC 01

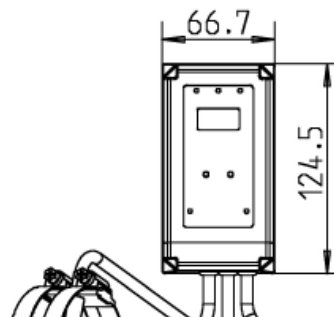
This compact and also ready-to-plug-in control can be ideally used in combination with all popular heat exchangers. Included is a temperature sensor, which is easily installed in the PVC pipe system by 2 hose clamps. The required pool water temperature can be set by a digital display, from 5 – 60°C.

Connection cable 3m, potential free switching contact for controlling the heat exchanger pump, hysteresis can be set from 0,2 – 10°C.

120844, PU: 84 pcs, 1,11 kg

Application: private and public pools, whirlpools, etc

ready-to-plug-in
TC01 temperature control
power supply 230V
plug in – go!



FILTER PUMP CONTROL



CS100 & CS300 & Combi

EVOLUTION FILTER PUMP CONTROLS

For more than 20 years these compact controls have been proving themselves within the global pool industry and distinguish themselves by their reliability and user friendliness. All controls come with a 3m connection cable and dispose of many additional functions (see connecting diagram below). Special models can be developed and manufactured upon special request.

- 130195, CS 100, 230V
- 130213, CS 100 COMBI, 230V
- 130688, CS 300, 400V
- 130270, CS 300 COMBI, 400V

CS 100 COMBI

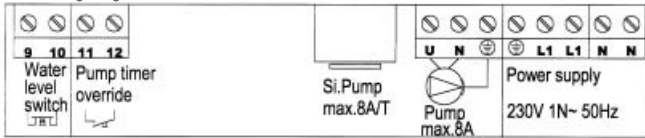
CS 100



Technical data CS 100

Power supply: 230V AC 50-60 Hz
 Pump relay: 230V AC 50-60 Hz 1840W
 Protection rate: IP 54
 Dimensions of housing: 165x155x105
 Filter clock: Type GRÄSSLIN incl. battery with 150 hrs follow-up time

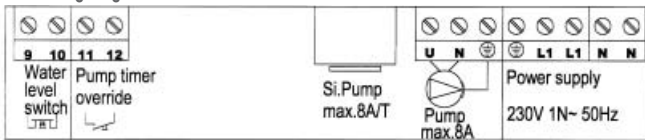
Connecting diagram CS 100



Technical data CS 100 Combi

Power supply: 230V AC 50-60 Hz
 Pump relay: 230V AC 50-60 Hz 1450W
 Heating relay: 230V AC 50-60 Hz 920W
 Difference in temperature: +6 bis +45 C°
 Protection rate: IP 54
 Dimensions of housing: 213x180x125
 Filter clock: Type GRÄSSLIN incl. battery with 150 hrs follow-up time

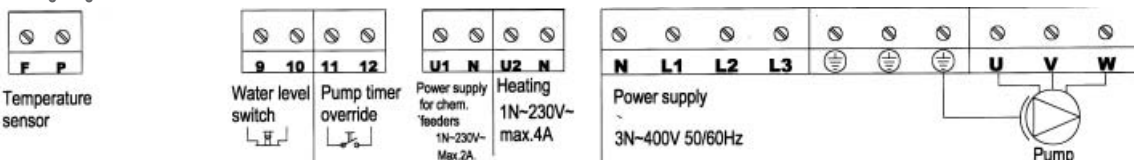
Connecting diagram CS 100 Combi



Technical data CS 300 Combi

Power supply: 400V AC 50-60 Hz
 Pump Relay: 400V AC 50-60 Hz (available with motor circuit-switch)
 Difference in temperature: +6 bis +45 C°
 Heating relay: 230V AC 50-60 Hz 920W
 Power supply for dosing unit: 230V 50/60 Hz max. 460W
 Protection rate: IP 54
 Dimensions of housing: 257x214x157
 Filter clock: Type GRÄSSLIN incl. battery with 150 hrs follow-up time

Connecting diagram CS 300 Combi



Technical data CS 300

Power supply: 400V AC 50-60 Hz
 Pump relay: 400V AC 50-60 Hz (available with motor circuit-switch)
 Power supply for dosing unit: 230V 50/60 Hz max. 460W
 Protection rate: IP 54
 Dimensions of housing: 257x214x157
 Filter clock: Type GRÄSSLIN incl. battery with 150 hrs follow-up time

Connecting diagram CS 300

