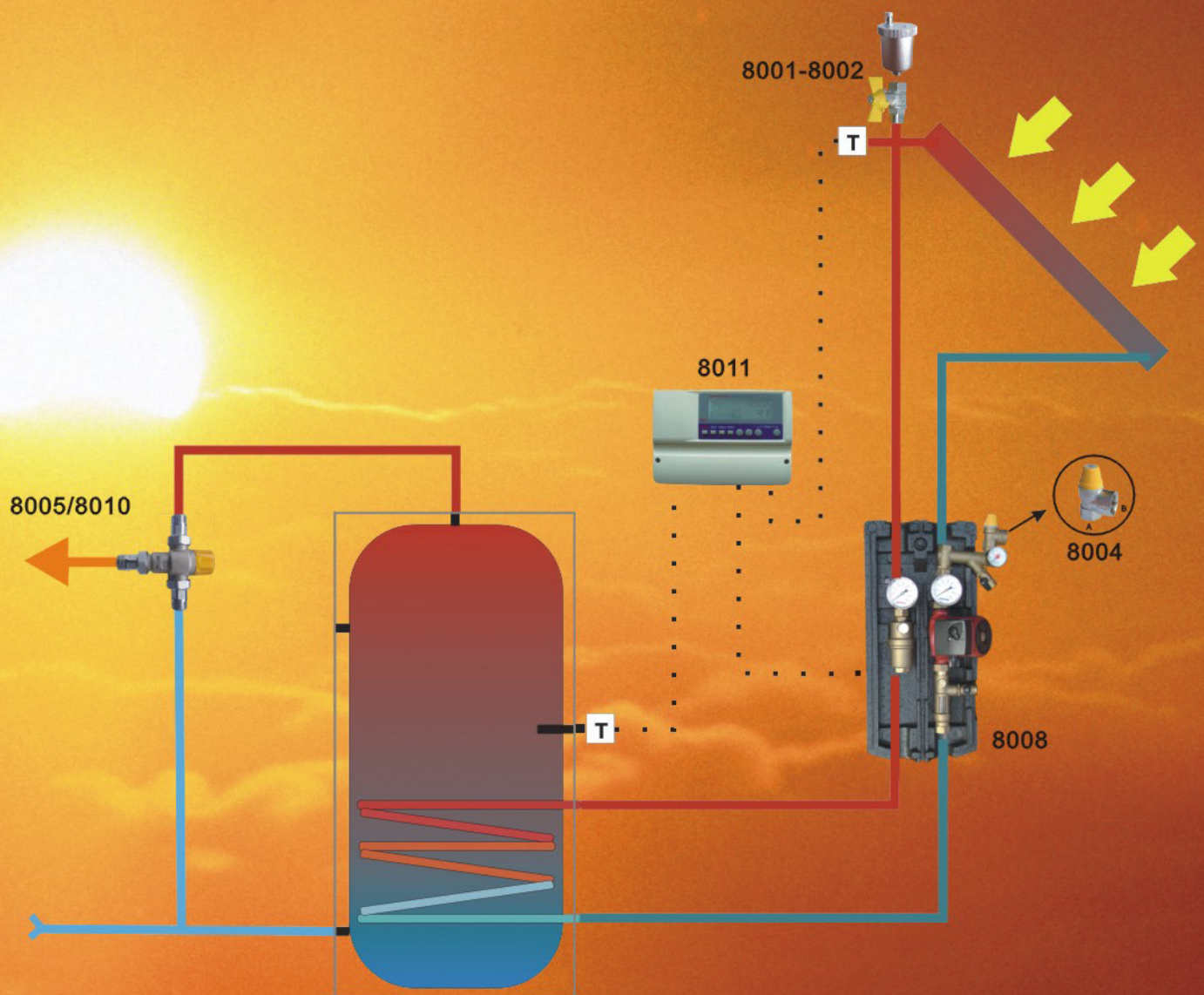


AC-FIX SOLAR

GLOBAL PIPING SYSTEMS, S.L.



8001 -AUTOMATIC AIR VENT 太阳能自动排气阀



Technical specifications/技术及构造特征:

Max. working pressure: 10 bar
最大工作压力: 10 bar
Max. discharge pressure: 5 bar
最大排气压力: 5 bar
Working temperature: -30 - 180°C
工作温度范围: -30 - 180°C
Connection size: 3/8" M
接口口径: 3/8" M
Medium: water - glycol solution (max. glycol 50%)
介质: 水-乙二醇溶液 (乙二醇最大百分比50%)
Material:
材质:
- Body: brass, chrome plated
阀体: 黄铜, 镀铬
- Seals: high resistance elastomer
密封: 高韧性弹性胶体
- Cover: brass, chrome plated
阀盖: 黄铜, 镀铬
- Float: high resistance polymer
浮球: 高韧性聚合物

Function/功能:

Automatic air vents for solar systems are used in the closed circuits of solar heating systems. They open the drain piston with the float according to the fluid's level present in the cabin.

太阳能自动排气阀运用于太阳能一次闭式循环系统上, 通过浮球随水面的上下升降打开排气活塞, 自动排除系统中存在的气体。

The shut-off valves are used in combination with the automatic air vents to isolate them after filling the circuit of solar heating systems with water and glycol solutions.

截止阀的作用是在太阳能系统注满水和乙二醇溶液后将自动排气阀与系统断开。

This series of automatic air vents has been specially designed for solar heating systems, and it's suitable to work with high temperatures and glycol solutions.

这类自动排气阀是针对太阳能系统设计, 能在乙二醇溶液的系统内连续高温状态下使用。

The main characteristic of this series of air vents is the resistance to temperatures. As it is used outside the houses, the solar heating system may reach the high temperature of 200°C, or reach the low temperature of -30°C.

这类排气阀最显著的特点就是耐温性。由于其在户外使用, 太阳能系统可能达到200°C的高温, 或者达到-30°C的低温。

Working details/工作原理:

When the air accumulated in the air vent cabin is rising, the float drops as the fluid level is dropping. The control spindle connected to the float opens the piston of the air vent and the air is evacuated. The fluid level can increase (there is empty space in the cabin) and allows the air vent's piston to close.

当聚集在排气阀的排气舱内的空气上升时, 浮球会随着液面的下降而下降。与浮球相连的阀杆带动排气活塞打开, 将气体排除, 液面随之上升关闭排气活塞。

To ensure a correct operating performance of the air vent, the water pressure must remain below the maximum discharge pressure.

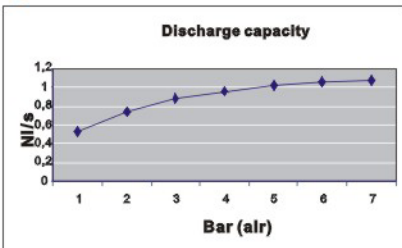
为了确保排气阀的正常运行, 水压必须低于最大排气压力。

Maintenance/维护:

Close the shut-off valve which is before the automatic air vent to isolate it from the system. Open the top cover of the air vent with a tool, then wash the float and the air vent piston, because if impurities are stocked on the float or on the piston, it will affect the air vent's normal work.

关闭自动排气阀前端的截止阀, 使之与系统隔离。用工具拧开自动排气阀阀盖, 然后清洗浮球和排气阀活塞, 因为如果杂质漂浮在浮球上, 或粘附于活塞处会影响阀门正常工作。

Hydraulic characteristics/水力特征:



Installation/安装方式:

8001 and 8002 series must be installed in a vertical position (as shown in the application diagram), and on the top of the solar heating system panels or at points in the circuit where the air gathers easily. The shut-off valve must be installed before the automatic air vent (the air vent has to be shut off when the system is operating for the first time or when it's full).

8001及8002系列必须垂直安装 (见运用图示) 在太阳能系统的集热板上端或者空气容易聚集的地方。截止阀必须安装在自动排气阀的前端 (当系统初次运行或注水完毕时, 排气阀应该自动关闭)。

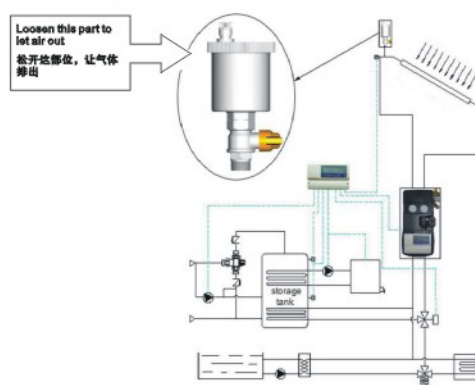
8002 -SHUT-OFF VALVE 截止阀



Technical specifications/技术及构造特征:

Max. working pressure: 10 bar
最大工作压力: 10 bar
Working temperature: -30 - 200°C
工作温度范围: -30 - 200°C
Connection size: 3/8" F x 3/8" M
接口口径: 3/8" F x 3/8" M
Medium: water-glycol solution (max. glycol 50%)
介质: 水-乙二醇溶液 (乙二醇最大百分比50%)
Material:
材质:
- Body: brass, chrome plated
阀体: 黄铜, 镀铬
- Ball: brass, chrome plated
球体: 黄铜, 镀铬
- Seals: high resistance elastomer
密封: 高韧性弹性胶体

Application Diagram/运行图示:



8004 –SAFETY RELIEF VALVE 太阳能安全泄压阀



Technical specifications: 技术及构造特征:

Medium: water-glycol solution
介质: 水、乙二醇溶液
(max. glycol 50%)
(乙二醇最大百分比: 50%)
Nominal pressure: PN 10
公称压力: PN 10
Opening overpressure: 10%
最大开启压力: 10%
Closing differential: 20%
最大关闭压力: 20%
Working temperature: -30 -160°C
工作温度范围: -30 -160°C
Power rating (discharge capacity): 50 (kW)
泄压功率(排量): 50 (kW)
Connection sizes (AxB): 1/2" F x 3/4" F
接口口径 (AxB): 1/2" F x 3/4" F

Material:

材质:
- Body: brass, chrome plated
阀体: 黄铜, 镀铬
- Seal: high resistance elastomer
密封: 高韧性弹性胶
- Spring: stainless steel
弹簧: 不锈钢
- Handle: PA6G30
手柄: PA6G30

Function/功能:

These safety relief valves for solar heating systems are used to control the pressure in the primary circuits of solar heating systems. When the pressure in the system reaches the set pressure of the safety relief valve, the product opens to release the fluid automatically. It prevents the pressure in the system from reaching levels that might damage the equipments of the solar heating system.

这些太阳能安全泄压阀用于控制太阳能一次循环系统的压力。当系统压力达到安全泄压阀设定值时, 安全阀将会自动开启, 排出液体, 释放压力。它防止可能因系统压力过大而破坏太阳能系统设备。

This series of safety relief valves has been specially designed for solar heating systems, and they are suitable to work at high temperature with a glycol solution. 此系列的太阳能安全泄压阀是专门针对太阳能系统设计, 适合在乙二醇溶液系统内连续高温工作。

Working details/工作原理:

The piston is controlled by the preset spring. When the pressure in the system is higher than the pressure applied by the spring on the piston, the piston is fully opened to discharge the high pressure fluid; when the pressure in the system is lower than the pressure applied by the spring on the piston, the piston closes automatically. The set pressure of the spring defines the maximum working pressure of the system.

活塞由预置弹簧控制, 当系统压力高于弹簧对活塞的设定压力时, 活塞完全打开将系统内的高压水卸掉; 当系统压力低于弹簧对活塞的设定压力时, 活塞将自动关闭。弹簧的设定压力限制系统的最大工作压力。

Special construction/特殊构造:

The piston and the gasket of the spring are made of high resistance elastomer to resist to glycol and high temperatures.

弹簧的活塞及垫圈是高韧性弹性胶而制, 可以抵制高温及乙二醇的腐蚀。

The safety relief valve is made of resistant material because of the changes of temperature and the UV rays outside of the house (where safety valves can be installed). 由于户外(安全阀适于安装的地方)的温度的变化及防止紫外线的照射, 太阳能安全泄压阀是由耐高温的材料而制。

Product range/产品范围:

| Code代码 | 8004-01 | 8004-02 | 8004-03 | 8004-04 | 8004-05 | 8004-06 |
|-----------------|---------|---------|---------|---------|---------|---------|
| Pressure压力(bar) | 2.5 | 3 | 4 | 6 | 8 | 10 |

Installation and important points/安装方式及重点:

The safety relief valve must be installed near where the system is filled. It's strongly advised to assemble the valve vertically or horizontally (never upside down), to avoid impurities to be stuck on the piston. The safety relief valves must be installed according to the flow direction indicated by the arrow on the body of the valve.

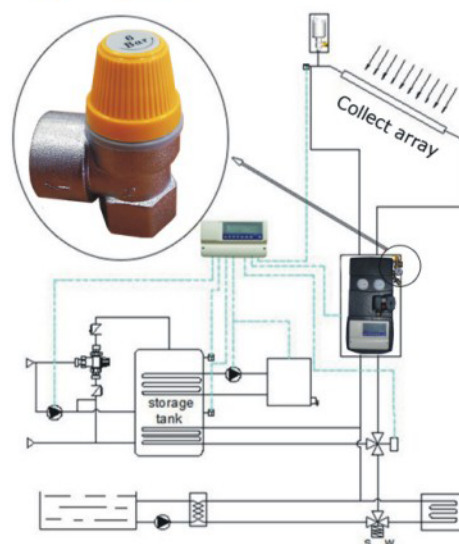
太阳能安全泄压阀必须安装在太阳能一次系统的循环注水组件安装点附近。强烈建议垂直或水平(不要上下颠倒)安装安全阀, 这样可以避免杂质堆积在活塞上。安全泄压阀必须根据阀门主体上的箭头标示的流向安装。

Important: there shouldn't be any shut-off devices between the safety relief valve and the circulation system. Installation of the discharge pipe: The drain outlet of the safety relief valve must be connected to a discharge pipe. This pipe has to be connected to a specific container. The glycol solution can't be drained off the system and rejected in the culvert (or directly outside of the house).

重点: 在安全阀与系统连接的管路内不能有任何形式的开关设备。

泄压管道的安装: 安全阀的出水口必须连接一根排水管。管子必须连接一个特定的容器。乙二醇溶液不能排出系统, 不能排入下水道(或直接排到室外)。

Application Diagram/运行图示:



8005 –ADJUSTABLE THERMOSTATIC MIXING VALVE FOR SOLAR THERMAL SYSTEMS 可调式太阳能恒温混合阀



Technical specifications: 技术及构造特征:

Temperature range of outlet: 30 – 65°C
出水调节范围: 30 – 65°C

Accuracy: $\pm 2^\circ\text{C}$

精确度: $\pm 2^\circ\text{C}$

Max. hydrostatic pressure: 14 bar

最高静压: 14 bar

Max. dynamic pressure: 5 bar

最高动压: 5 bar

Min. dynamic pressure: 0.2 bar

最低动压: 0.2 bar

Max. temperature: 100°C

最高温度: 100°C

Max. inlet pressure ratio (H/C or C/H): 2:1

冷热水最大工作比例 (冷/热或热/冷): 2:1

Connector size: 3/4" M

接口口径: 3/4" M

Min. temperature difference between hot and mixed water: 15°C

保证温度精确所需的热水进水温度与混合出水温度的最小差值: 15°C

Min. flow rate to ensure stable temperature: 5 l/min

保证温度精确所需的最低出水流量: 5 l/min

Material:

材质:

– Body: DZR brass, chrome plated

阀体: DZR铜, 镀铬

– Seals: EPDM

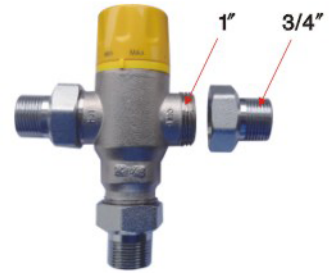
密封: EPDM

– Springs: stainless steel

弹簧: 不锈钢

– Cartridge: brass

阀芯: 黄铜



Resistance to high temperature:

耐高温:

The components inside the valve are made of high resistance material and can work continuously with temperature of 100°C.

阀门内部的调节元件均为耐高温材料, 能保证在100°C高温下连续正常地工作。

Resistance to scale:

防水垢

The elements inside the mixing valve are made of special anti-scale materials (low friction). It prevents the deposit of scale for long term working performance.

混合阀内部的活动元件是(低摩擦力的)特殊防垢材料而制, 可防止水垢堆积, 保证了阀门的长期使用寿命。

Function/功能:

The 8005 series is used in solar heating systems for hot water application. It is designed to maintain the set temperature of the mixed water supplied when there are variations of temperature and pressure conditions (incoming hot and cold water) or water's flow rate.

8005系列运用于太阳能生活热水系统中。它能在冷热水进水压力、温度以及用水量变化时自动维持设定好的混合出水温度。

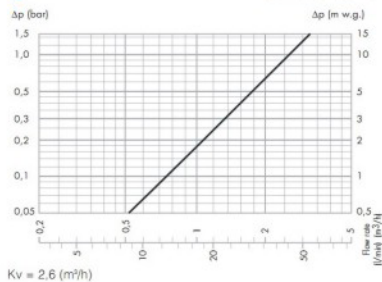
The controlling element of the automatic thermostatic mixing valve is the temperature sensor. It is fully immersed in the water outlet passage. As the sensor reacts to the changes of water temperature, it regulates continuously the proportion of cold and hot water coming into the valve. The flow of cold and hot water is controlled by a piston which slides into a cylinder located between the hot and cold inlets. The temperature of the mixed water in the outlet is always determined by the settings.

自动恒温混合阀的控制元件是温度传感器, 它完全浸于出水口处。因为传感器能感应水温的变化, 它能持续控制冷热水的进水比例。冷热水的进水量是通过冷热水进水阀座之间有个同向运动的活塞来调节的。出水端处混合水的温度通常是设定好的。

Temperature adjustment table/调节刻度对应温度表:

| Position 刻度 | Min./Max. 最低/最高 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------------|--------------------|----|----|----|----|----|----|----|
| Temperature (°C) | 27/67 | 32 | 38 | 44 | 49 | 53 | 58 | 63 |

Hydraulic characteristics/流量曲线图:



Installation/安装:

The pipework must be flushed out before the installation of the mixing valve to prevent impurities to stay in. We recommend to install filters at the inlets of cold and hot water.

在安装恒温混合阀之前, 必须先对系统进行彻底的冲洗, 确保没有杂质存在。建议在恒温混合阀的冷热水进水端安装过滤器。

The installation of the valve can be done horizontally or vertically.

恒温混合阀可以垂直或水平安装。

In systems with thermostatic mixing valves, we recommend to install check valves to avoid accidental reverse water flow.

在恒温混合阀的系统中, 建议安装止回阀, 以防意外的反向水流。

Locking the setting/锁定设定:

After setting the temperature, the setting can be locked at the desired value using the control knob.

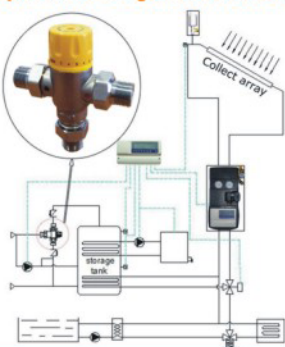
在温度设定好之后, 可以通过调节手柄将数量锁定在所要求的位置。

In order to do this, unscrew the lock screw on the upper part of the control knob, remove the knob and put it back on so that the internal reference couples with the protrusion on the knob carrier ring nut.

为此, 松开调节手柄上方的锁紧螺丝, 拿掉手柄, 再装回去, 装回去的时候, 手柄的内部件要正好与手柄固定环上的突出部分相配合。



Application Diagrams/运用图示:



8010 -ANTI-SCALD ADJUSTABLE THERMOSTATIC MIXING VALVE FOR SOLAR THERMAL SYSTEMS 太阳能专用防烫可调式恒温混合阀



Resistance to high temperature:

耐高温:

The components inside the valve are made of high resistance material and can work continuously with temperature of 100°C.

阀门内部的调节元件均为耐高温材料，能保证在100°C高温下连续正常地工作。

Resistance to scale:

防水垢:

The elements inside the mixing valve are made of special anti-scale materials (low friction).

It prevents the deposit of scale for long term working performance. This product is also equipped with filters at the inlets of cold and hot water to optimize the resistance to scale.

混合阀内部的活动元件是（低摩擦力的）特殊防垢材料而制，可防止水垢堆积，保证阀门的长期使用寿命。这个产品在冷热水的进水端处也配有过滤器，因此能优化其防水垢的性能。

Check valves:

止回阀:

This series integrates check valves in the hot and cold water inlets to prevent undesirable fluid backflow.

这一系列在冷热水进水端处安装了止回阀，防止意外的反向水流。

Anti-scald:

防烫伤:

The series has an anti-scald function.

这一系列有防烫伤的功能。

Function/功能:

The 8010 series is used in solar heating systems for hot water application. It is designed to maintain the set temperature of the mixed water supplied when there are variations of temperature and pressure conditions (incoming hot and cold water) or water's flow rate.

8010系列运用于太阳能生活热水系统中。它能在冷热水进水压力、温度以及用水量变化时自动维持设定好的混合出水温度。

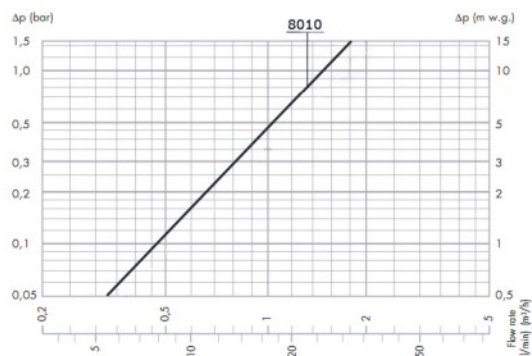
The series has also an anti-scald function which prevents from accidental scalds by shutting off the hot water flow in case of a failure of cold water supply. This series can be used continuously at high temperatures of incoming hot water from the solar storage tank.

这一系列的恒温混合阀也有防烫伤的功能，如果冷水供应中断，会自动关闭热水，防止意外的烫伤。这一系列可在太阳能储热水箱连续高温出水的情况下使用。

The controlling element of the automatic thermostatic mixing valve is the temperature sensor. It is fully immersed in the water outlet passage. As the sensor reacts to the changes of water temperature, it regulates continuously the proportion of cold and hot water coming into the valve. The flow of cold and hot water is controlled by a piston which slides into a cylinder located between the hot and cold inlets. The temperature of the mixed water in the outlet is always determined by the settings.

自动恒温混合阀的控制元件是温度传感器，它完全浸于出水口处。因为传感器能感应水温的变化，它能持续控制冷热水的进水比例。冷热水的进水量是通过冷热水进水阀座之间有个同向运动的活塞来调节的。出水端处混合水的温度通常是设定好的。

Hydraulic characteristics/流量曲线图:



| Code | Ø | Kv (m³/h) |
|------|------|-----------|
| 8010 | 1/2" | 1.5 |

Technical specifications:

技术及构造特征:

Temperature range of outlet: 35 – 55 °C

出水调节范围: 35 – 55 °C

Accuracy: ±2°C

精确度: ±2°C

Max. hydrostatic pressure: 10 bar

最高静压: 10 bar

Max. dynamic pressure: 5 bar

最高动压: 5 bar

Max. temperature: 100°C

最高温度: 100°C

Max. inlet pressure ratio (H/C or C/H): 2:1

冷热水最大工作比例（冷/热或热/冷）: 2:1

Min. temperature difference between hot and mixed water: 10°C

保证温度精确所需的热水进水温度与混合出水温度的最小差值: 10°C

Min. flow rate to ensure stable temperature: 4 l/min

保证温度精确所需的最低出水流量: 4 l/min

Connector size: 1/2" M

接口口径: 1/2" M

Material:

材质:

– Body: DZR brass, chrome plated

阀体: DZR铜, 镀铬

– Seals: EPDM

密封件: EPDM

– Springs: stainless steel

弹簧: 不锈钢

– Cartridge: brass

阀芯: 黄铜

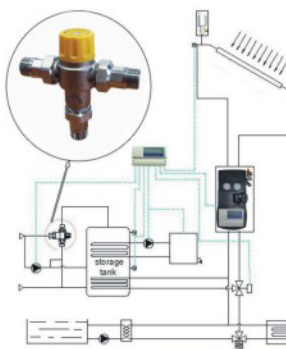


Installation/安装:

The pipework must be flushed out before the installation of the mixing valve to prevent impurities to stay in. The installation of the valve can be done horizontally or vertically.

在安装恒温混合阀之前，必须先对系统进行彻底的冲洗，确保没有杂质存在。恒温混合阀可以垂直或水平安装。

Application Diagrams/运用图示:



8011 - INTELLIGENT CONTROLLER FOR SOLAR THERMAL SYSTEMS. 太阳能智能控制器



CE

Main functions/主要功能:

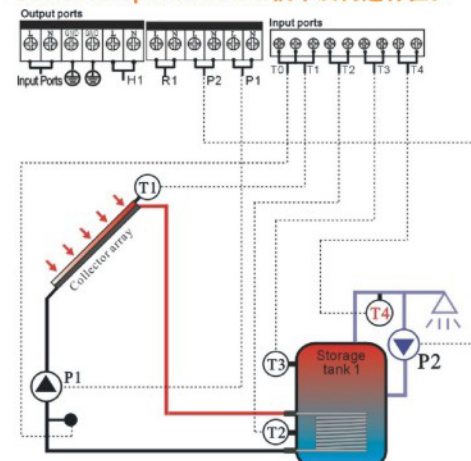
1. SYSTEM (ONE SYSTEM)
系统 (一个系统)
2. D.T.O & D.T.F Temperature difference controlling the solar circuit pump
控制太阳能循环泵的D.T.O & D.T.F温差功能
3. THET Timing heating
THET定时加热
4. EM Emergency collector temperature (emergency switch-off temperature of collector)
EM紧急收集器温度 (紧急断开收集器温度)
5. CMX Maximum limited collector temperature (collector cooling function)
CMX集热器的最高限制温度 (集热器冷却功能)
6. CMN Low temperature protection of collector
CMN集热器低温保护
7. CFR Frost protection of collector
CFR集热器防冻保护
8. SMX Maximum temperature of tank
SMX水箱最高温度
9. REC Tank re-cooling function
REC水箱重复冷却功能
10. C-F Celsius and Fahrenheit temperature transferring
C-F摄氏温度及华氏温度的转换
11. DVWG Anti-legionella function
DVWG抗菌功能
12. CIRC Temperature controlled hot water circulation pump
CIRC温度控制的热水循环泵
13. nMIN Solar circulation pump speed adjusting (RPM speed controlling)
nMIN调整太阳能循环泵的速度 (RPM速度控制)
14. OHQM Thermal energy measuring
OHQM热能测量
15. INTV Pump interval function
INTV泵间歇功能
16. BYPR High temperature by-pass function (Tank temperature automatically adjusting)
BYPR高温旁流功能 (自动调节水箱温度)
17. Holiday function
假日功能
18. HND Manual mode
HND手动模式
19. PASS Password setting
PASS密码设置
20. LOAD Recovery to factory setting
LOAD返回出厂设置
21. Manual Heating
手动加热
22. Temperature query function
温度查询功能
23. Memory Protection
记忆保护
24. Anti-dry heating protection
防干燥加热保护
25. Screen protection
屏幕保护
26. Trouble protection
故障保护

Function/功能:

Our 8011 series is an intelligent controller with the typical set-up for a collector-storage. The circulation pump must operate only when the collector can supply a useful gain of energy to the storage tank. This controller is complete and the parameter programming can be done by the installer directly following faithfully the indications.

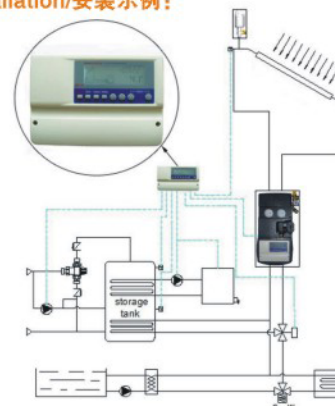
我们的8011系列是一个能够恢复集热器与储存箱之间循环装置的智能控制器。循环泵必须在集热器把水供应到储存箱时,才能运行。控制器是完整的,安装工可以根据显示直接来设置参数。

Technical specifications/技术及构造特征:



1. Appearance of the controller: 200mm x 140mm x 43mm
控制器外形尺寸: 200mm x 140mm x 43mm
2. Power supply: AC230V \pm 10%
电源: AC230V \pm 10%
3. Power consumption: < 3W
功耗: < 3W
4. Accuracy of temperature measuring: $\pm 2^\circ\text{C}$
测温精度: $\pm 2^\circ\text{C}$
5. Range of collector temperature measuring: $-10 \sim 220^\circ\text{C}$
集热器测温范围: $-10 \sim 220^\circ\text{C}$
6. Range of tank temperature measuring: $0 \sim 110^\circ\text{C}$
水箱测温范围: $0 \sim 110^\circ\text{C}$
7. Max. suitable power of pumps: 600W
循环泵最大功率: 600W
8. Max. suitable power of electrical heater: 1500W
电加热器最大功率: 1500W
9. Inputs: 2 x Pt1000 sensor ($\leq 500^\circ\text{C}$) for collector (silicon cable $\leq 280^\circ\text{C}$), 3 x NTC10K, B3950 sensor ($\leq 135^\circ\text{C}$) for tank (PVC cable $\leq 105^\circ\text{C}$).
输入: 2个集热器温度传感器Pt1000 ($\leq 500^\circ\text{C}$), (硅线 $\leq 280^\circ\text{C}$); 3个水箱温度传感器NTC10K, B=3950 ($\leq 135^\circ\text{C}$), (PVC线 $\leq 105^\circ\text{C}$)
10. Outputs: 3 relays, for circulation pumps or 3-way electromagnetic valve 1 relay for electrical heater
输出: 3个继电器用于循环泵或三支路电磁阀, 1个继电器用于电加热器
11. Ambient temperature: $-10 \sim 50^\circ\text{C}$
环境温度: $-10 \sim 50^\circ\text{C}$
12. Waterproof grade: IP40
防水等级: Ip40

Example of installation/安装示例:



8008 –CIRCULATION UNIT FOR SOLAR THERMAL SYSTEMS, FLOW AND RETURN. 太阳能循环组件、供回水连接型



Technical specifications/技术特征:

Medium: water-glycol solution (max. glycol 50%)
 介质: 水、乙二醇溶液 (乙醇最大百分比: 50%)
 Max. working temperature (except parts with lower specifications): 180°C
 最高工作温度 (较低标准的部件除外): 180°C
 Max. working pressure: 10 bar
 最大工作压力: 10 bar
 Temp. range of safety valve: -30 – 160°C
 安全泄压阀的温度范围: -30 – 160°C
 Setting pressure of safety valve: 6 bar
 安全泄压阀的设定压力: 6 bar
 Min. opening pressure for check valve: Δp : 2 kPa
 止回阀最小开启压力: Δp : 2 kPa
 Flow meter adjustment range: 1 – 13 l/min
 流量计调节范围: 1 – 13 l/min
 Max. temperature of flow meter: 120°C
 流量计最高温度: 120°C
 Pressure range of pressure gauge: 0 – 6 bar
 压力表范围: 0–6 bar
 Temperature range of flow and return temperature gauges: 0 – 160°C
 供回水温度表范围: 0 – 160°C
 In-Out connections size: 3/4" F
 接口口径: 3/4" F
 Connection size of fill/drain valve: 3/4" M
 注液/泄水阀接口口径: 3/4" M

Product range/产品范围:

Circulation unit without controller/不带控制器的循环组件

| Code代码 | 8008-1/G | 8008-1/W | 8008-1/GP | 8008-1/O |
|-------------------------|----------------------|------------------|-----------|---------------------|
| Circulation pump 循环泵 | Grundfos Solar 15-60 | Wilo ST 15/6 ECO | Greenpro | Without pump 不带泵 |

Circulation unit with controller/带控制器的循环组件

| Code代码 | 8008-2/G | 8008-2/W | 8008-2/GP | 8008-2/O |
|-------------------------|----------------------|------------------|-----------|---------------------|
| Circulation pump 循环泵 | Grundfos Solar 15-60 | Wilo ST 15/6 ECO | Greenpro | Without pump 不带泵 |

Application Diagram/运用图示:



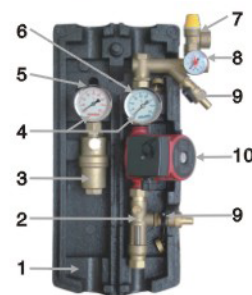
Function/功能:

Circulation units for solar thermal systems are used in the primary circuit of solar heating systems to control the temperature of the hot water storage. The unit contains functional and safety devices for an optimized circuit control. It is a compact and integral solution and properly isolated that allows recovering the thermal energy from the sun.

太阳能循环组件运用于一次集热循环系统, 控制储热水箱的温度。这个组件包含了功能与安全设备的最佳系统控制。这是一个紧凑完整的方案, 并适当隔离, 允许太阳能的热量补偿。

Components/元件名称:

1. EPP insulation box
EPP预制保温壳
2. Flow rate regulator with flow meter
流量调节器
3. Air vent (air separator)
排气装置(空气分离器)
4. Shut-off and check valves (x2) (behind the temperature gauges)
止回球阀(x2) (在温度计后面)
5. Flow temperature gauge
供水温度计
6. Return temperature gauge
回水温度计
7. Safety relief valve
安全泄压阀
8. Fitting connector with pressure gauge
带压力表的连接口
9. Fill/drain valve (x2)
注液/泄水阀(x2)
10. Circulation pump
循环泵



Remark: the circulation unit is delivered with the cover part of the insulation box.
 注: 循环组件是与预制保温壳的绝缘盒一起发货的。

Construction details/构造细节:

Check valves are built into the ball valves of the temperature gauge connectors. To allow the fluid flowing in both directions, it is necessary to open the handle of the ball valve (45°). The movement of the ball will open the check valve. In normal system operation, the ball valves must be fully open.

与温度表连接的球阀内部带有止回阀。为了使液体能双向流通, 有必要将球阀手柄 (45°) 旋转开启。球体的转动会打开止回阀。在系统正常运行时, 球阀必须完全打开。

The flow meter has a built-in adjustable flow limiter.

流量计有一个内置的可调流量限制器。

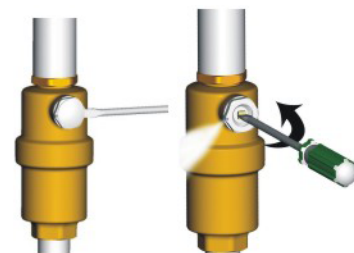
The circulation unit with flow and return connection is equipped with a manual air vent device located on the flow line. The air of the circulation unit is collected at the top of the air vent.

循环组件在流通管道上的出水和回水连接处配有手动排气装置。循环组件内的空气收集在排气装置的顶部。

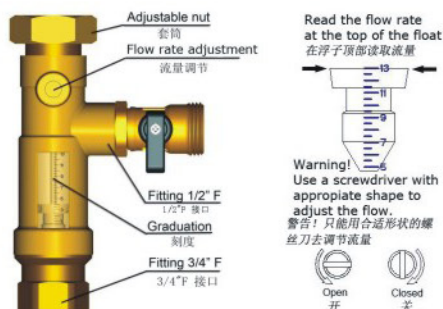
Air separator/空气分离器:

The solar circulation unit, version with flow and return connection, is equipped with an air vent (air separator) on the flow line. The gases, separated from the thermal carrier fluid, are collected at the top of the air vent (air separator). The collected gases must be evacuated from time to time (every day after putting into operation and later, depending on the quantity of air, about once a week or once a month) using the manual air vent with a screwdriver. To maintain optimal efficiency of the solar heating system, later, it is necessary to vent the system every six months by using the manual air vent.

太阳能循环组件的供回水连接型号的供水回路上有排气阀 (空气分离器)。从热流体上分离出来的气体聚集在排气阀 (空气分离器) 上部区域。聚集的气体必须经常用螺丝刀打开手动排气阀排出 (系统运行之后, 建议每天一次, 之后, 取决于空气含量, 大概一周一次或者一个月一次)。为了维持太阳能系统的最佳效率, 系统正常运行后, 有必要每6个月手动排气一次。



Flow meter/流量计:



Connection to the pump and controller/泵与控制器的连接

1. Loosen the screws ①②, move cover upwards and take the cover away.
松开螺丝①②, 向上打开盖子并取走盖子。

2. Depending on the type of installation, the cables may enter the device through the rear hole of the case ④ or the lower side hole of the case ⑤

根据不同的安装方法, 电线可以通过盒子背部的孔④或者盒子下面的孔⑤进入设备。

Cables come from the rear ④:

从背部④进入的电线:
Remove the plastic flaps from the rear side of the case using an appropriate tool.

使用适当的工具移开盒子背部的塑料盖。

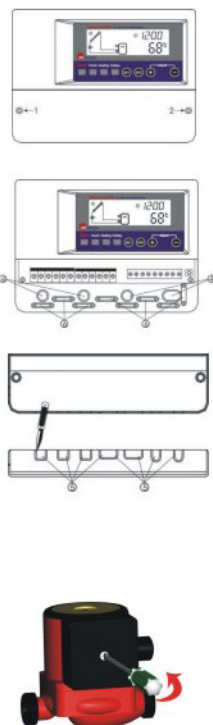
Cables come from the below ⑤:

从下面⑤进入的电线:
Cut the left and right plastic flaps using an appropriate tool (e.g. knife) and break them out of the case.

使用适当的工具(如小刀)切掉左边及右边的盖子, 然后将它们取出。

3. Open the back cover of the pump. After opening the cover, do not touch the speed selector handle on the back cover.

打开泵的后盖, 盖子打开后, 不要触动后盖上的速度选择手柄。



4. Loose the screw on the right side of the pump slightly. **Warning: Don't screw it out.** Penetrate the cable through the hole of nut 2 (see fig.1).

稍微拧松泵右侧的螺丝。警告: 不要拧下来。电线从螺帽2的孔内穿入(如图1)。

Then push down the three connection switches (described as 1 in the fig.1) separately until you see the small hole

然后分别向下按下三个接线开关(如图1所示的1)直至露出小孔。

Put the corresponding cables (cables are distinguished by color) into these holes. After the connection, stop pushing down the connection switches.

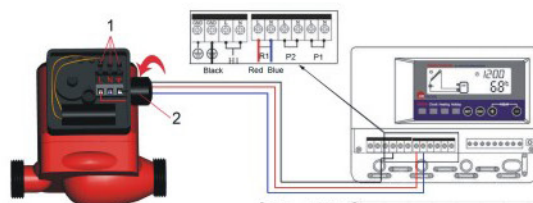
把相对应的电线(电线由颜色区分)穿入这些孔内, 接好后, 松开接线开关。

Then tighten nut 2. Close the back cover of the pump.

然后拧紧螺帽2, 盖上泵的后盖。

About the connection with the controller, the connecting lines should be connected with R1 and GND. The connection of cables should be the same as the connection of pump. (That is L-L and N-N.)

关于与控制器的连接, 控制器一端的连线应接在R1端口和GND端口, 电线的连接要与泵的连接相同(即L-L, N-N)。

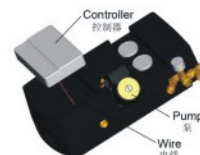


(Fig 1. 图1)

5. The way of wiring 接线方式

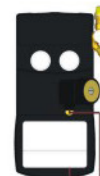
The wire can be connected through inside of the EPP insulation box to the controller. If using this way, the wire must be suitable to be used for a long time at more than 120°C

电线可以通过EPP预置保温壳的内部连接到控制器上。如果使用这种方法, 电线必须能在大于120°C的高温下长期使用。



Instead, the wire can be connected through outside of the EPP insulation box to the controller.

另外, 电线可以通过EPP预置保温壳外部连接到控制器上。



AC-FIX SOLAR

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