

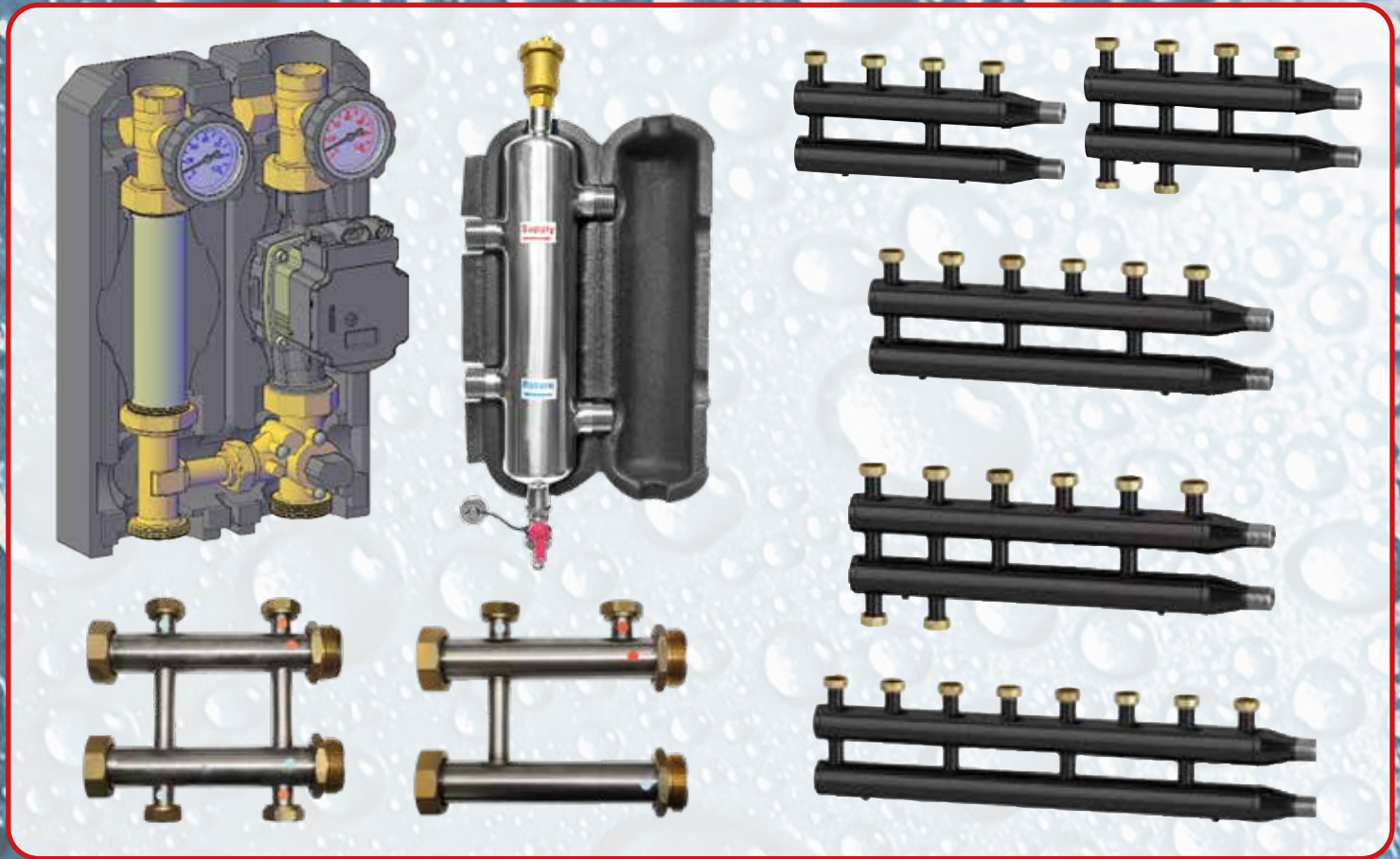


# Pump groups and Manifolds

## HYDRONIC SYSTEMS

### Pre-assembled groups

Updated to: 03/2025



**ANTARES**  
for water & fire

Via degli Alpini, 144 - 55100 LUCCA - ITALY  
Tel. +39 0583 473701 • Fax +39 0583 494366  
ant3@antaresint.com • www.antaresint.com



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### Pre assembled groups for hydronic systems

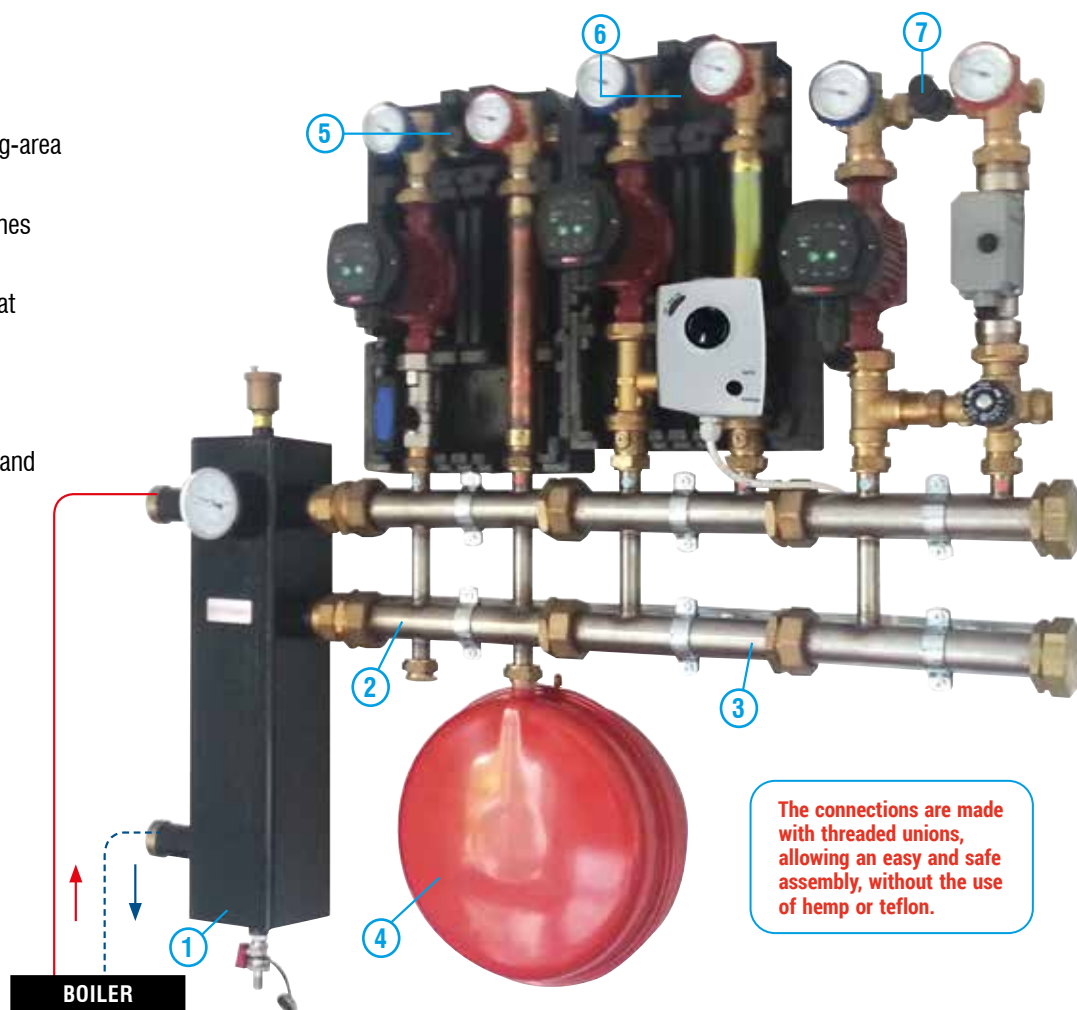
#### Your time is precious!

As you know, it takes a lot of time to create connections to the boiler, pump installations, derivations, drain valves, mixing valves, safety valves, temperature and pressure control devices, shut-off valves, and so on.

Antares offers a safe and fast solution, thanks to pre-assembled groups that can be installed according to your needs, in any type of situation.

#### Usable for:

- Zoned hydronic systems: living-area and sleeping-area.
- Installation of one or more zones with or without mixing valve.
- Installation of one or more heat exchangers.
- Installation of one or more exchangers.
- Installation of expansion tank and of water supply.

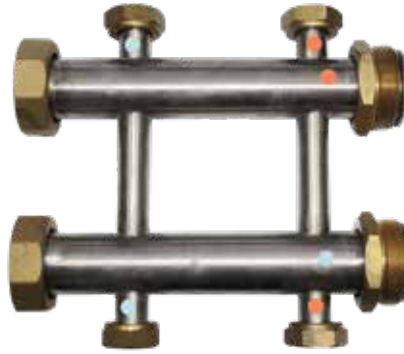


- ① Hydraulic separator, Item E.602
- ② Double opposed manifold module, Item E.600.04, E.600.24
- ③ Simple manifold module, Item E.600.02, E.600.22
- ④ Expansion tank Item E.051
- ⑤ Pump group with circulator pump, shut-off valves, thermometer, over-pressure valve and insulating shell.
- ⑥ Pump group with mixing valve for temperature regulation, circulator pump shut-off valves, thermometers, insulating shell.
- ⑦ Pump groups for temperature lowering in floor heating systems with thermostatic mixing valve, circulator pump, shut-off valves, thermometers, over-pressure by-pass valve, safety thermostat for circulator pump block in case of abnormal overheating of the circuit.

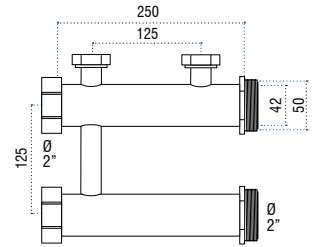
# MODULINOX modular manifolds for hydronic systems



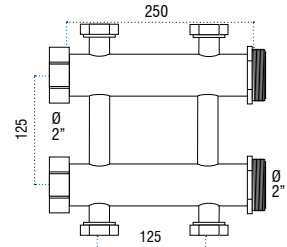
E.600.0-



E.600.2-



E.600.0-



E.600.2-

**E.600 – Modular manifold “MODULINOX” for hydronic systems, double coplanar stainless steel AISI 304, DN 40, with 2 main connections with 2”M. and F. swivel fittings and 1” F. swivel coplanar derivations for pump groups.**

*In/out distance 125 mm. Distance between outlets, all 125 mm.*

Type	Without thermal insulation shell	
Number of outputs	With 2 outlets With 1” F. swivel connections	With 4 opposing outlets With 1” F. swivel connections
Item code	E.600.02	E.600.04
Type	With thermal insulation shell	
Number of outputs	With 2 outlets With 1” F. swivel connections	With 4 opposing outlets With 1” F. swivel connections
Item code	E.600.22	E.600.24



**Manifolds coupling with insulating shell**



E.612.20



G.149.99

**E.612.20 – Pair of end caps 2” F. For manifold type E.600 (N.2 G.150.20)**

**G.149.99 – Pair of brass fittings adapters for installation of DN 25 groups on manifolds with outlets 1” F. swivel (DN 20).**

*Adaptors from 1” 1/2 F. To 1” M.*



E.619.02

**E.619.02 – Pair of clamps for wall mounting of “MODULINOX” manifold E.600**

*Consisting of 2 heavy collars, with adjustable spacer, with dowel and fixing screws.*

## Manifolds for hydronic systems for pump groups DN 20



Configuration A



Configuration B



Configuration E



Configuration C



Configuration D

E.700



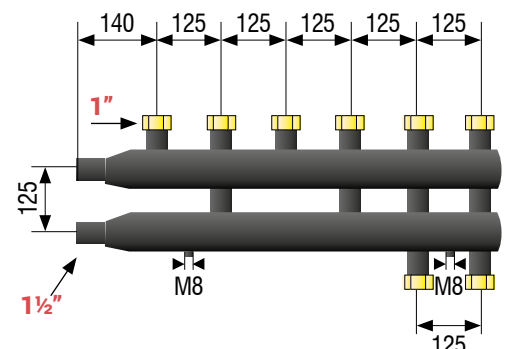
Insulating shell supplied

**E.700 – “FLUIDHUB” coplanar manifold for thermal systems, in coated steel with outlets distance 125 mm., suitable for pumps groups DN 20. Equipped with connection (nut M8) for fixing bracket. Includes insulating shell with centre-to-centre distance 125 mm.**

*Main connections: 1 1/2” M. flat seat with centre-to-centre distance 125 mm.*

*Deviations connections: 1” F. swivel – connection for shelf fixing.*

Item code	Configuration	N° of circuits	Ø Deviations connection
E.700.02	A	2	1” F. swivel
E.700.53	B	3 (2+1)	1” F. swivel
E.700.03	C	3	1” F. swivel
E.700.54	D	4 (3+1)	1” F. swivel
E.700.04	E	4	1” F. swivel



# Manifolds for hydronic systems for pump groups DN 25



Configuration A



Configuration B



Configuration C



Configuration D



Configuration E

E.704

They allow for an easy composition of the hydronic systems. The various configurations provide smaller dimensions, suitable for pump groups usage, thus reducing installation time.

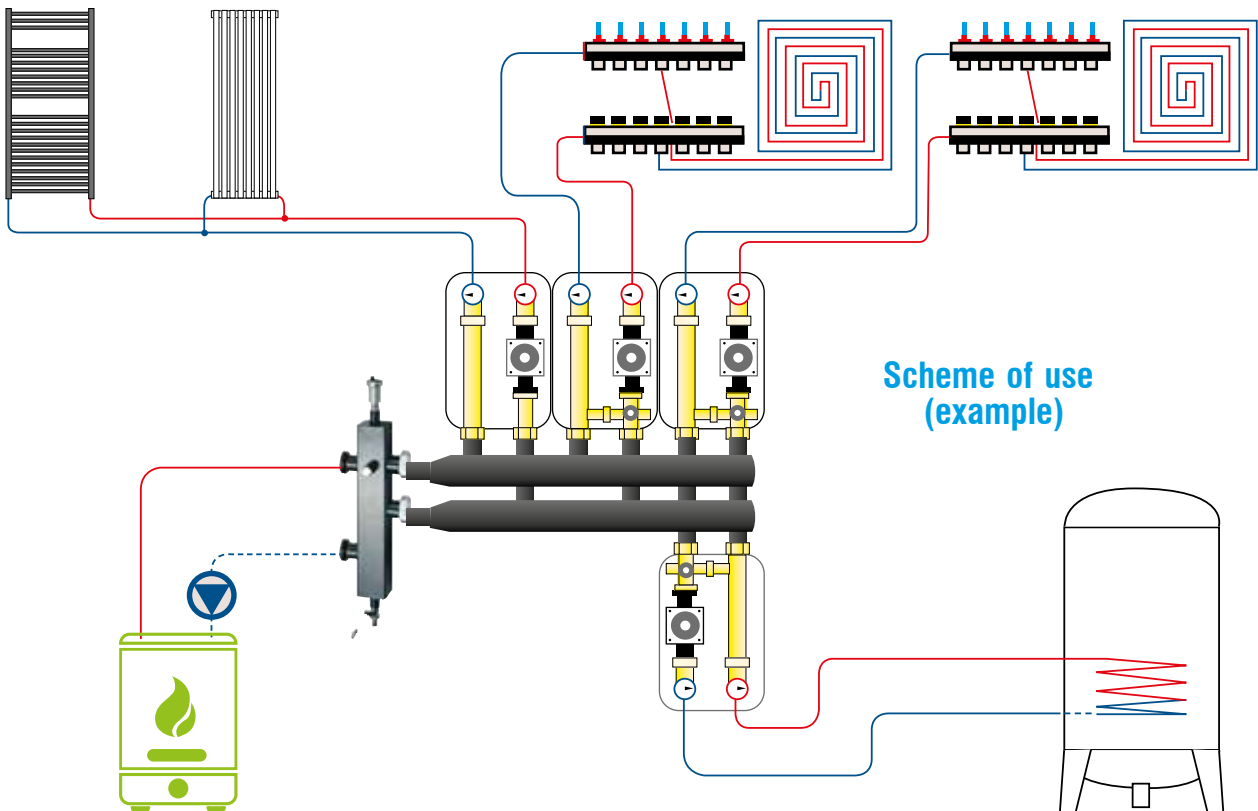
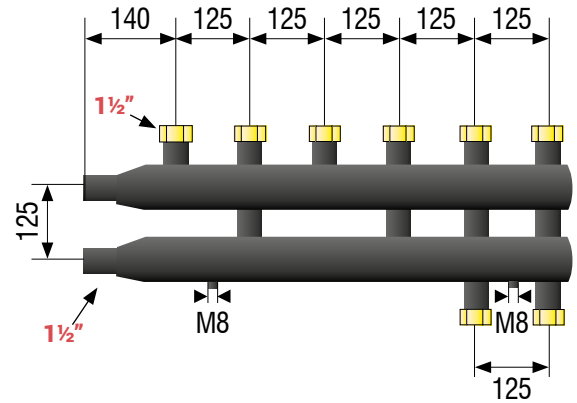


Insulating shell supplied

E.704 - "FLUIDHUB" coplanar manifold for thermal systems, in coated steel with outlets distance 125 mm., suitable for pumps groups DN 25. Equipped with connection (nut M8) for fixing brackets. Includes insulating shell with centre-to-centre distance 125 mm.

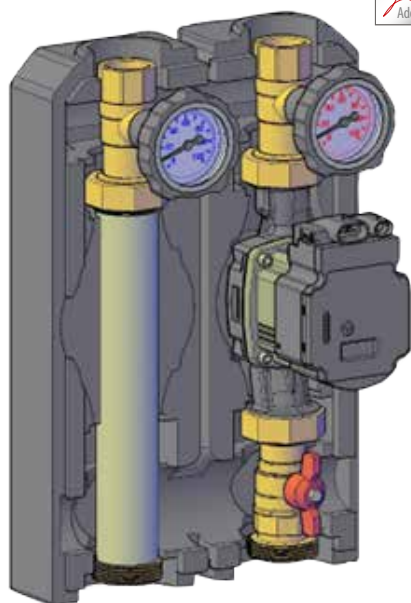
Main connections: 1 1/2" M. Flat seat with centre-to-centre distance 125 mm.  
Deviations connections: 1 1/2" F. swivel - connection for shelf fixing.

Item code	Configuration	N° of circuits	Ø Deviations connection
E.704.22	A	2	1" 1/2 F. swivel
E.704.93	B	3 (2+1)	1" 1/2 F. swivel
E.704.23	C	3	1" 1/2 F. swivel
E.704.94	D	4 (3+1)	1" 1/2 F. swivel
E.704.24	E	4	1" 1/2 F. swivel

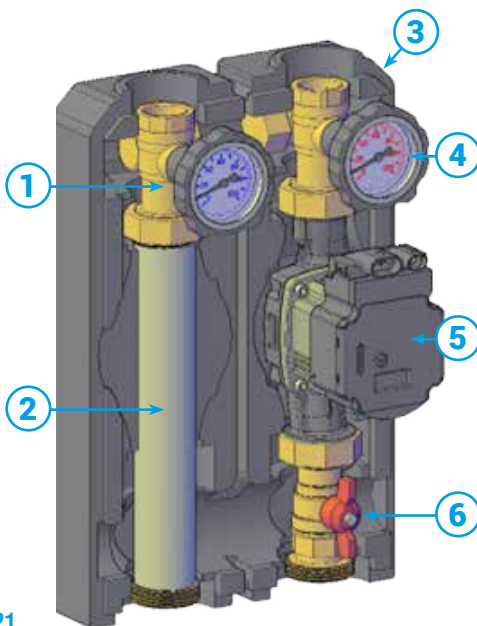


Scheme of use (example)

## Pump groups DN 25



E.621



### COMPONENTS

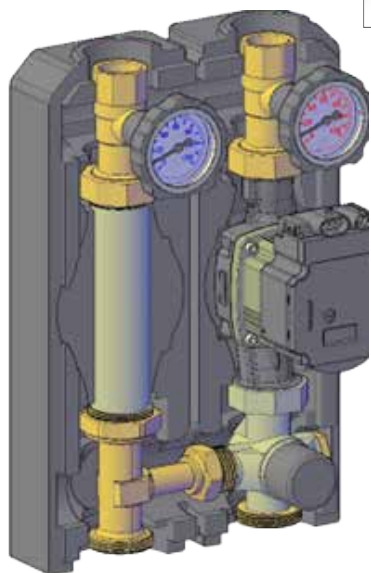
1. Brass blue shut-off valve with thermometer, with or without side connection.
2. Stainless steel alignment spacer
3. Insulating shell in polypropylene
4. Brass red shut-off valve with thermometer with unidirectional valve, with or without side connections
5. High efficiency circulating pump with PWM (for performance characteristics please see circulators section).
6. Shut-off valve for an easy replacement of the pump.

**E.621 – Reversible pump group DN 25, consisting of 2 ball valves with thermometer and unidirectional valve, ball valve for possible replacement on the circulator, alignment spacer and insulating shell. In brass and stainless steel AISI 304.**

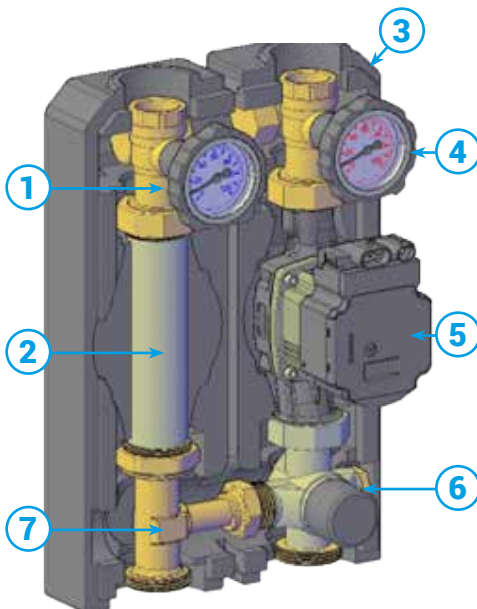
Available with or without ball valve side connections, for safety probes or thermostats or for b-pass valve insertion, to avoid over-pressuring the pump. Available without pump or with various high-efficiency pumps, self-regulating, with 6, 8, 10 mt. head.  
System side connections: 1" F. Manifold side connections: 1 1/2" M.

Without side connections		With side connections	
Item code	Pump	Item code	Pump
E.621.01	Not included	E.621.11	Not included
E.621.02	6 mt. P.110.68	E.621.12	6 mt. P.110.68
E.621.03	8 mt. P.110.88	E.621.13	8 mt. P.110.88
E.621.05	10 mt. P.066.52	E.621.15	10 mt. P.066.52

### Temperature lowering and control



E.623



### COMPONENTS

1. Brass blue shut-off valve with thermometer, with or without side connection
2. Stainless steel alignment spacer
3. Insulating shell in polypropylene
4. Brass red shut-off valve with thermometer and unidirectional valve, with or without side connections.
5. High efficiency circulating pump with PWM (for performance characteristics please see circulators section).
6. Brass 3-way mixing valve.
7. "T" extension joint.

**E.623 – Reversible pump group DN25 for temperature lowering and control at fixed point: 25° - 55°, consisting of 2 ball valves with thermometer and unidirectional valve, 3-way thermostatic valve, alignment spacer and insulating shell. In brass and stainless steel AISI 304.**

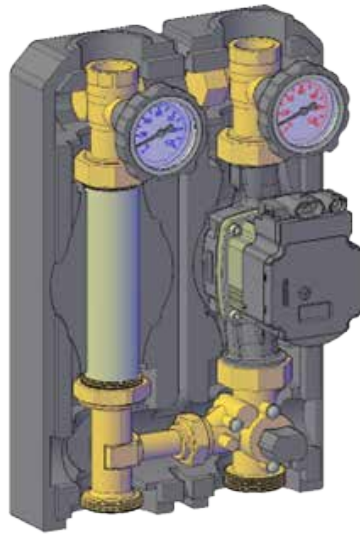
Available with or without ball valve side connections, for safety probes or thermostats or for bypass valve insertion, to avoid over-pressuring the pump. Available without pump or with various high-efficiency pumps, self-regulating, with 6, 8, 10 mt. head.

Thermostatic valve Kv: 3,5

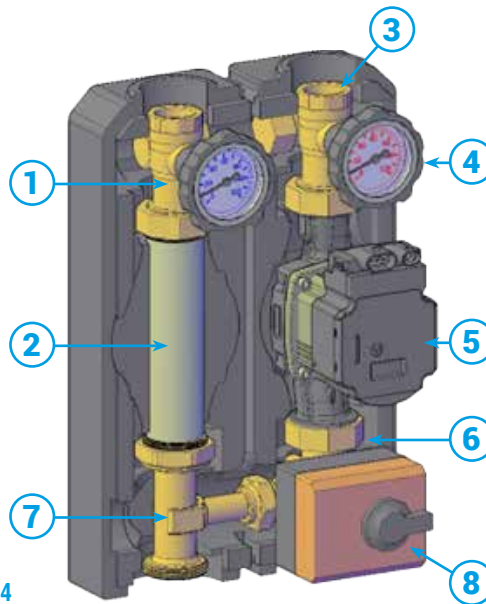
System side connections: 1" F. Manifold side connections: 1 1/2" M.

Without side connections		With side connections	
Item code	Pump	Item code	Pump
E.623.01	Not included	E.623.11	Not included
E.623.02	6 mt. P.110.68	E.623.12	6 mt. P.110.68
E.623.03	8 mt. P.110.88	E.623.13	8 mt. P.110.88
E.623.05	10 mt. P.066.52	E.623.15	10 mt. P.066.52

## Temperature lowering and control



E.624



## COMPONENTS

1. Brass blue shut-off valve with thermometer, with or without side connection
2. Stainless steel alignment spacer
3. Insulating shell in polypropylene
4. Brass red shut-off valve with thermometer and unidirectional valve, with or without side connections.
5. High efficiency circulating pump with PWM (for performance characteristics please see circulators section).
6. Brass 3-way mixing valve.
7. "T" extension joint.
8. Mixing valves activation servomotor.

**E.624 – Reversible pump group DN25 for temperature lowering and control, consisting of 2 ball valves with thermometer and unidirectional valve, 3-way motorisable mixing valve with bypass, alignment spacer and insulating shell. In brass and stainless steel AISI 304.**

With ball valve side connections, for safety probes or thermostats or for the insert of the bypass valve, to avoid over-pressuring the pump. For the simultaneous use of overpressure bypass valve and temperature probe, use accessory E.611.10 on page 119 (W). Available without pump or with various high-efficiency, self-regulating pumps, with 6, 8, 10 mt head. Mixing valve Kv: 10. System side connections: 1" F. Manifold side connections: 1 1/2" M.

### Motorizable

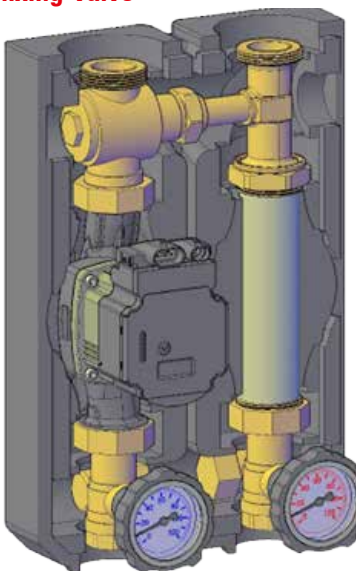
Item code	Pump
E.624.11	Not included
E.624.12	6 mt. P.110.68
E.624.13	8 mt. P.110.88
E.62415	10 mt P.066.52

### Motorized ON/OFF with T.106

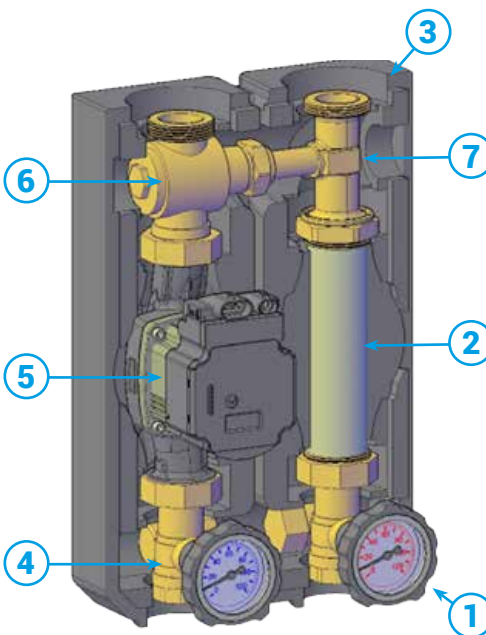
### With integrated thermoregulator T.107

Item code	Pump	Item code	Pump
E.624.21	Not included	E.624.31	Not included
E.624.22	6 mt. P.110.68	E.624.32	6 mt. P.110.68
E.624.23	8 mt. P.110.88	E.624.33	8 mt. P.110.88
E.624.25	10 mt P.066.52	E.624.35	10 mt P.066.52

## Anti-condensation mixing valve



E.627



## COMPONENTS

1. Brass blue shut-off valve with thermometer, with or without side connection
2. Stainless steel alignment spacer
3. Insulating shell in polypropylene
4. Brass red shut-off valve with thermometer and unidirectional valve, with or without side connections.
5. High efficiency circulating pump with PWM (for performance characteristics please see circulators section).
6. Brass 3-way mixing valve.
7. "T" extension joint.

**E.627 - Reversible pump group DN25 for heat generators powered by solid fuels, consisting of 2 ball valves with thermometer and unidirectional valve, 3-way thermostatic bypass valve, alignment spacer and insulating shell. In brass and stainless steel AISI 304.**

With ball valve side connections, for safety probes and thermostats. Available without pump or with various high efficiency modulating pumps, with 8 mt head. Thermostatic valve Kv: 9. Generator side connections: 1" F. Manifold side connections: 1 1/2" M.

### Anti-condensation valve 45°

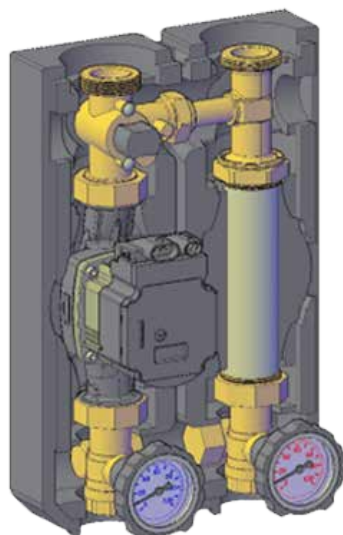
Item code	Pump
E.627.44	Not included
E.627.45	8 mt. P.110.88

### Anti-condensation valve 60°

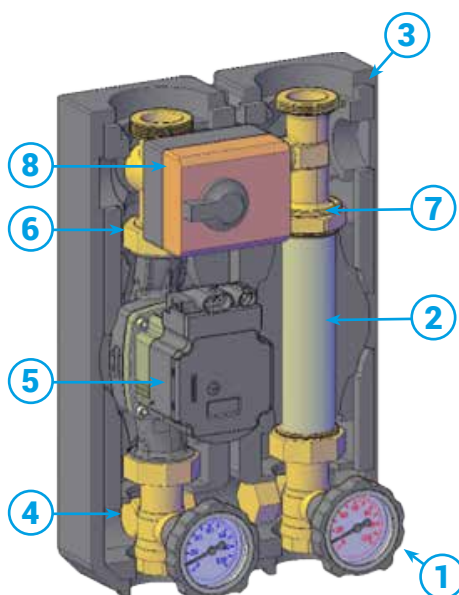
### Anti-condensation valve 70°

Item code	Pump	Item code	Pump
E.627.61	Not included	E.627.71	Not included
E.627.60	8 mt. P.110.88	E.627.70	8 mt. P.110.88

## Anti-condensation with motorised mixing valve



E.628



## COMPONENTS

1. Brass blue shut-off valve with thermometer, with or without side connection
2. Stainless steel alignment spacer
3. Insulating shell in polypropylene
4. Brass red shut-off valve with thermometer and unidirectional valve, with or without side connections.
5. High efficiency circulator pump with PWM (for performance characteristics please see circulators section).
6. Brass 3-way mixing valve.
7. "T" extension joint.
8. Activation servomotor

**E.628 – Reversible anti-condensation motorisable pump group DN25 for heat generators powered by solid fuel, consisting of 2 ball valves with thermometer and unidirectional valve, 3-way motorisable mixing valve with bypass, alignment spacer and insulating shell. In brass and stainless steel AISI 304.**

*With ball valve side connections, for safety probes or thermostat. For the simultaneous use of safety thermostat and temperature probe, use accessory E.611.10 on page 119 (W).*

*Available without pump or with high-efficiency modulating pump, 8mt head. Mixing valve Kv: 10. System side connections: 1" F. Manifold side connections: 1 1/2" M.*

### Motorizable

Motorizable		Motorizable	
Item code	Pump	Item code	Pump
E.628.11	Not included	E.628.31	Not included
E.628.13	8 mt. P.110.88	E.628.33	8 mt. P.110.88
Motorized ON/OFF with T.106		With integrated thermoregulator T.107	
Item code	Pump	Item code	Pump
E.628.21	Not included	E.628.31	Not included
E.628.23	8 mt. P.110.88	E.628.33	8 mt. P.110.88

## Supply of domestic hot water



E.640



## COMPONENTS

1. Brass blue shut-off valve with thermometer.
2. Stainless steel alignment spacer.
3. Insulating shell in polypropylene.
4. Brass red shut-off valve with thermometer and unidirectional valve.
5. High efficiency circulating pump with PWM (for performance characteristics please see circulators section).
6. Brass thermostatic mixing valve.
7. "T" extension joint.
8. Heat exchange unit.
9. N°2 domestic water thermometers.
10. Flowmeter.

**E.640 – Pre-assembled reversible pump group DN25 for the supply of instant hot domestic water, complete of: flow sensor for the automatic start-up of the pump, brazed plates heat exchanger as stated in the chart, high efficiency circulating pump, ball valve with thermometer and check valve, insulating shell.**

*Available with or without mixing thermostatic 3-way valve on domestic side. Connections: manifold side 1 1/2" M. distance 125 - max pressure 10 bar. Sanitary circuit connections 3/4" F.*

Data supplied with: **Primary Circuit: 80/60°C - Secondary Circuit: 15/50°C**

Model	Without thermostatic valve			
Item code	Flow rate l/min.	Absorption KW	Exchanger type	N° of plates
E.640.11	16	35	S.004.74	14
E.640.12	20	50	S.004.70	20
Model	Model: with thermostatic valve for hot domestic water regulation			
Item code	Flow rate l/min.	Absorption KW	Exchanger type	N° of plates
E.640.21	16	35	S.004.74	14
E.640.22	20	50	S.004.70	20

# Manifolds for thermal power stations for pump groups DN 32



Configuration A



Configuration B



Configuration C



Configuration D



Configuration E

E.705

They allow for an easy composition of the thermal system. The various configurations provide smaller dimensions, suitable for the use of pump groups on page 118 (W), reducing installation time.



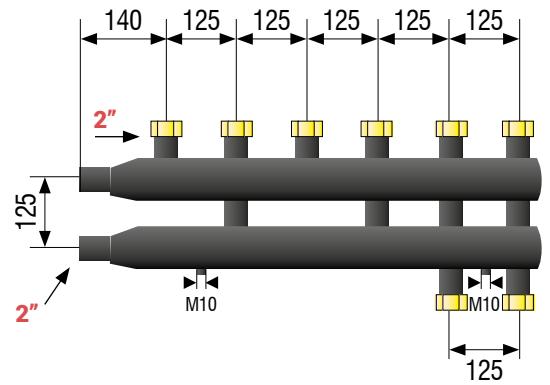
Insulating shell supplied

E.705 – “FLUIDHUB” coplanar manifold for thermal systems, in coated steel with outlets distance 125 mm., suitable for pump groups DN 32. Equipped with connection (nut M10) for fixing brackets. Complete with insulating shell with distance 125 mm.

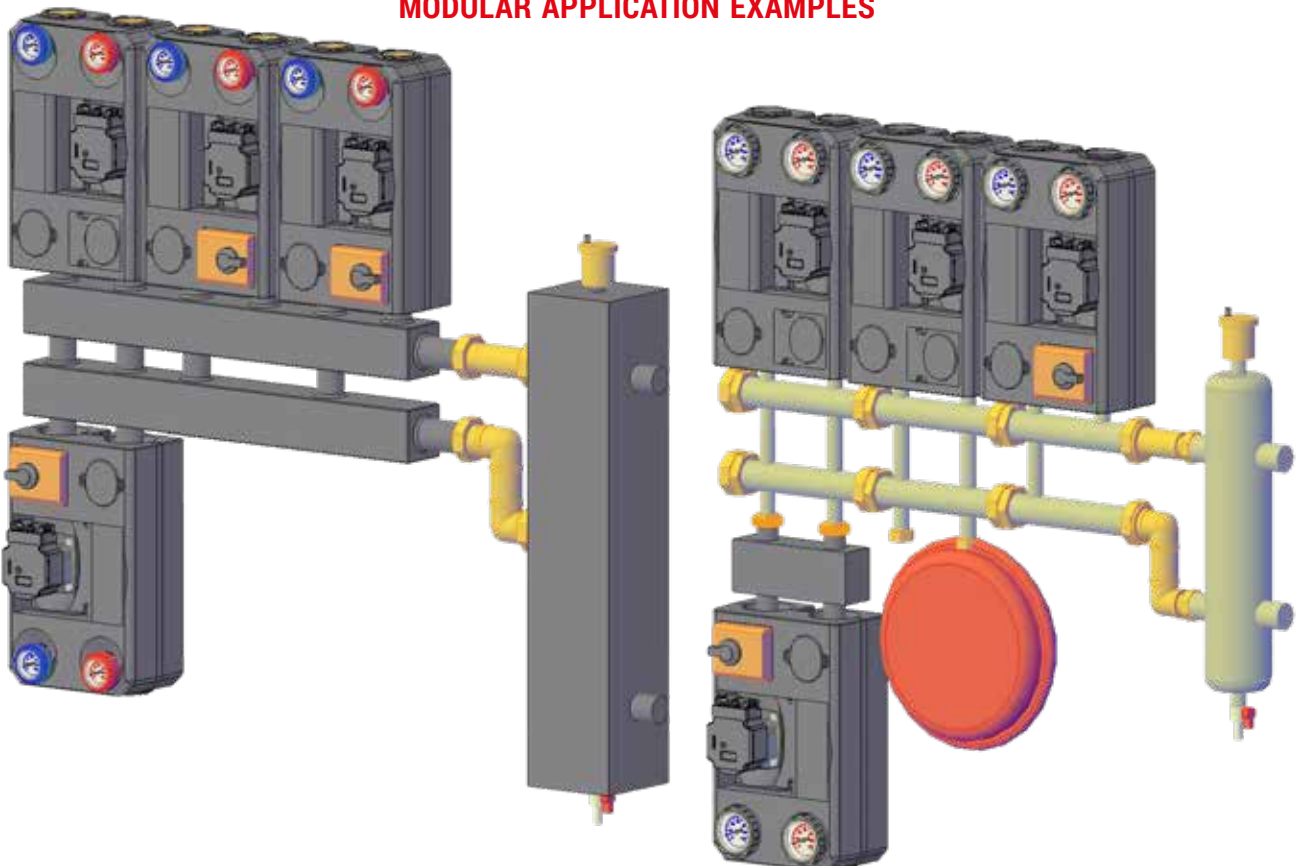
Main connections: 2" M flat with distance 125 mm.

Deviations connections: 2" F. swivel. Connection for shelf fixing.

Item code	Configuration	N° of circuits	Ø Outlets connections
E.705.22	A	2	2" F. swivel
E.705.93	B	3 (2+1)	2" F. swivel
E.705.23	C	3	2" F. swivel
E.705.94	D	4 (3+1)	2" F. swivel
E.705.24	E	4	2" F. swivel

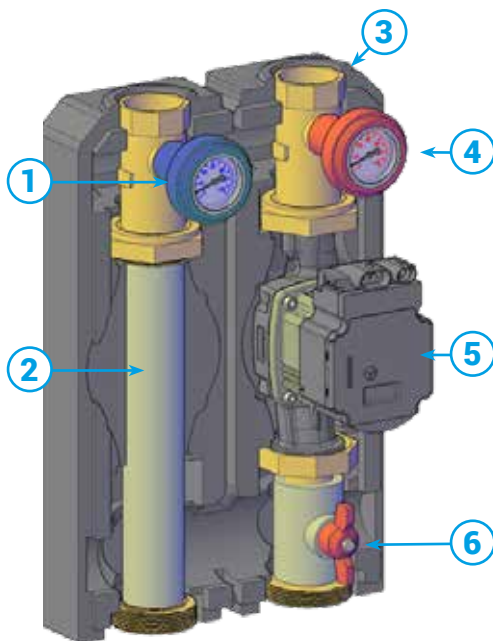
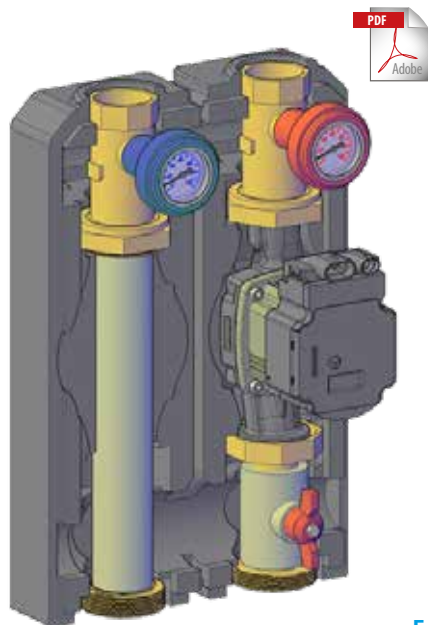


## MODULAR APPLICATION EXAMPLES





## Pump groups DN 32



E.630

### COMPONENTS

1. Brass blue shut-off valve with thermometer, with or without side connection.
2. Stainless steel alignment spacer
3. Insulating shell in polypropylene
4. Brass red shut-off valve with thermometer with unidirectional valve, with or without side connections
5. High efficiency circulating pump with PWM (for performance characteristics please see circulators section).
6. Shut-off valve for an easy replacement of the pump.

**E. 630 – Reversible pump group DN32, consisting of 2 ball valves with thermometer and unidirectional valve, ball valve for possible replacement of the circulator, alignment spacer and insulating shell. In brass and stainless steel AISI 304.**

Available without pump or with high efficiency, self-regulating pump, with 8, 10 mt. head.

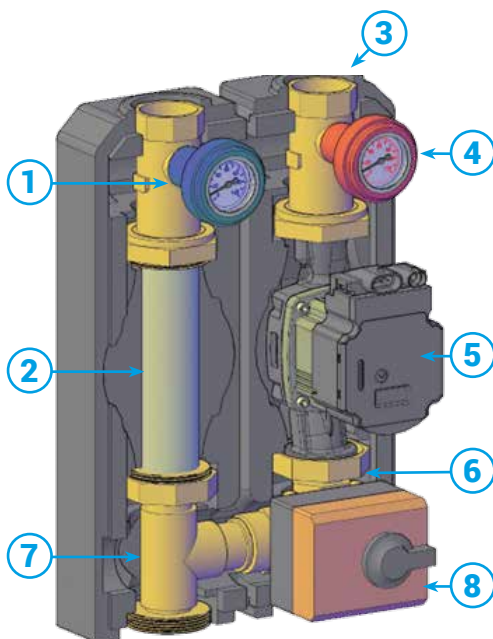
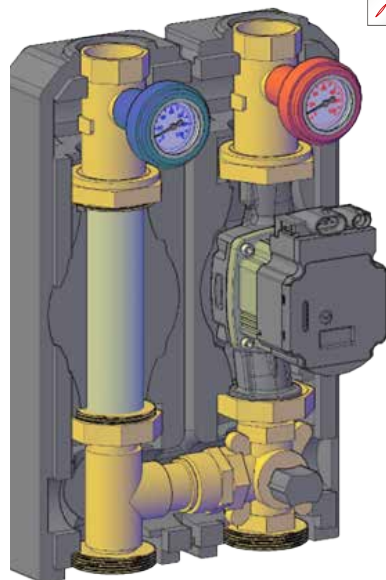
System side connections: 1 1/4" F. Manifold side connections: 2" M.

Version without side connections

#### Version without side connections

Item code	Pump
E.630.01	Not included
E.630.03	6 mt. P110.68
E.630.05	8 mt. P110.88

### Temperature lowering and/or control



E.631

### COMPONENTS

1. Brass blue shut-off valve with thermometer, with or without side connection
2. Stainless steel alignment spacer
3. Insulating shell in polypropylene
4. Brass red shut-off valve with thermometer and unidirectional valve, with or without side connections.
5. High efficiency circulating pump with PWM (for performance characteristics please see circulators section).
6. Brass 3-way mixing valve.
7. "T" extension joint.
8. Mixing valves activation servomotor.

**E.631 – Reversible pump groups DN32 of temperature lowering and control, motorisable, consisting of 2 ball valves with thermometer and unidirectional valve, motorisable 3-way mixing valve, alignment spacer and insulating shell. In brass and stainless steel AISI 304.**

For safety probes or thermostats use accessory E.611.10 on page 119 (W). Available without pump or with various high energy efficiency self-regulating pumps, with 8, 10 mt head.

Mixing valve Kv: 18

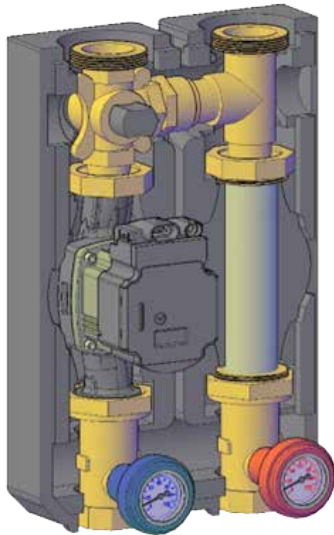
System side connections: 1 1/4" F. Manifold side connections: 2" M.

#### Motorizable

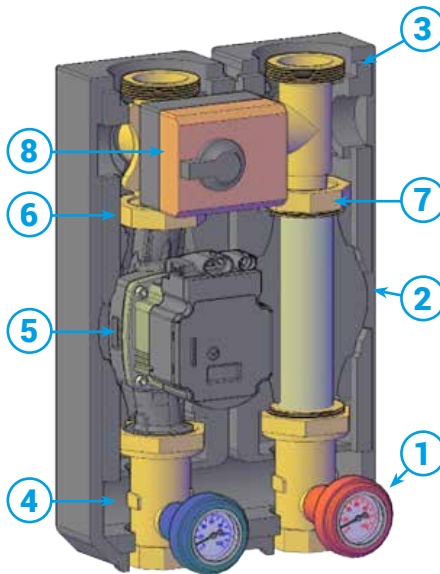
Item code	Pump
E.631.11	Not included
E.631.13	8 mt. P110.82
E.631.15	10 mt. P066.70

Motorized ON/OFF with T.106		With integrated thermoregulator T.107	
Item code	Pump	Item code	Pump
E.631.21	Not included	E.631.31	Not included
E.631.23	8 mt. P110.82	E.631.33	8 mt. P110.82
E.631.25	10 mt. P066.70	E.631.35	10 mt. P066.70

## Temperature lowering and control



E.634



## COMPONENTS

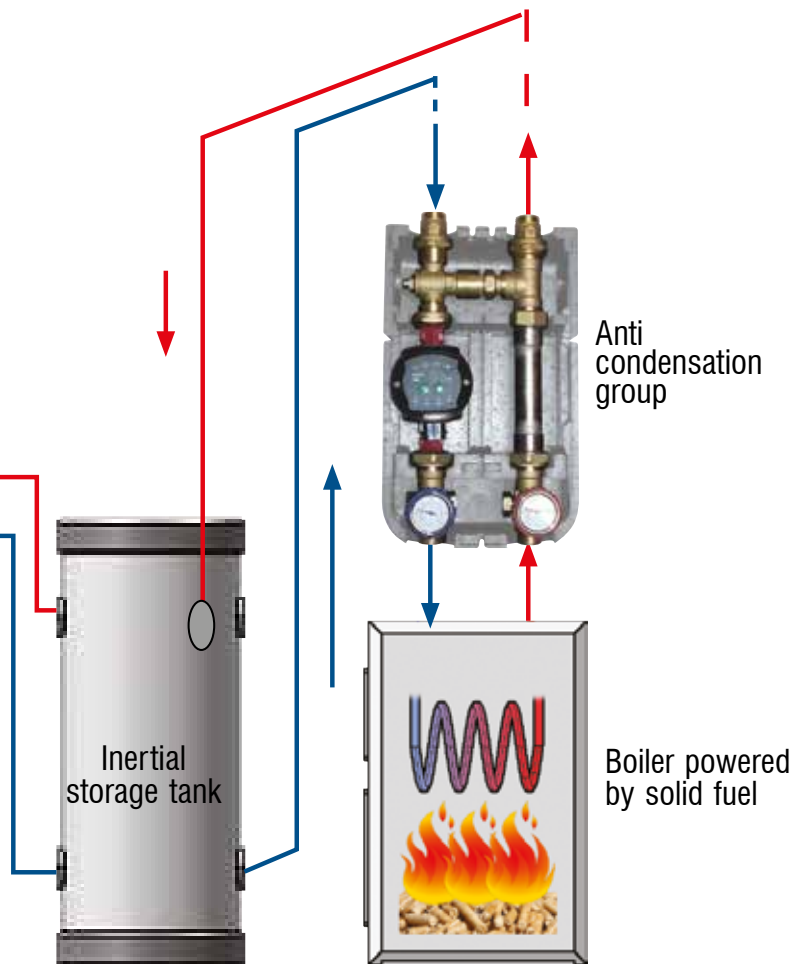
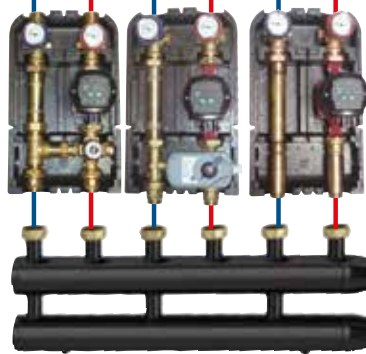
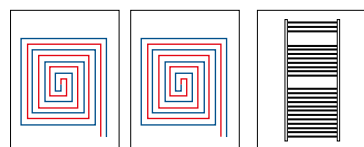
1. Brass blue shut-off valve with thermometer, with or without side connection
2. Stainless steel alignment spacer
3. Insulating shell in polypropylene
4. Brass red shut-off valve with thermometer and unidirectional valve, with or without side connections.
5. High efficiency circulating pump with PWM (for performance characteristics please see circulators section).
6. Brass 3-way mixing valve.
7. "T" extension joint.
8. Mixing valves activation servomotor.

**E.634 – Anti-condensation motorisable reversible pump group DN 32 for heat generators powered by solid fuel, consisting of 2 ball valves with thermometer and unidirectional valve, 3-way motorisable mixing valve, alignment spacer and insulating shell. In brass and stainless steel AISI 304.**

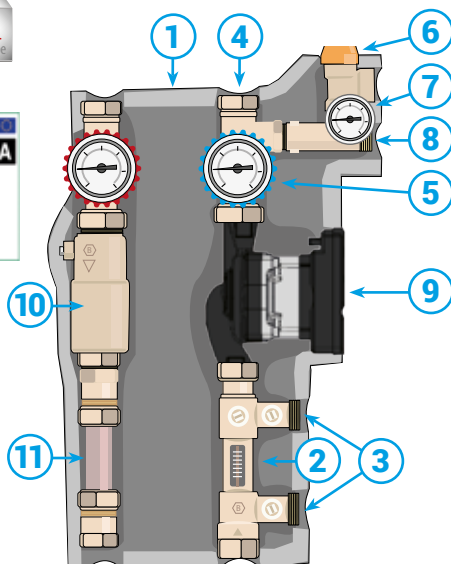
For the use of temperature probe use accessory E.611.14 on page 119 (W). Available without pump or with modulating, high-efficiency pump with 8 mt. head. Mixing valve Kv: 18 System side connections: 1 1/4" F. Manifold side connections: 2" M.

### Motorizable

Motorizable		Motorizable	
Item code	Pump	Item code	Pump
E.634.11	Not included		
E.634.13	8 mt. P.110.82		
Motorised ON/OFF with T.106		With integrated thermoregulator T.107	
Item code	Pump	Item code	Pump
E.634.21	Not included	E.634.31	Not included
E.634.23	8 mt. P.110.82	E.634.33	8 mt. P.110.82



## Solar pump groups



E.651

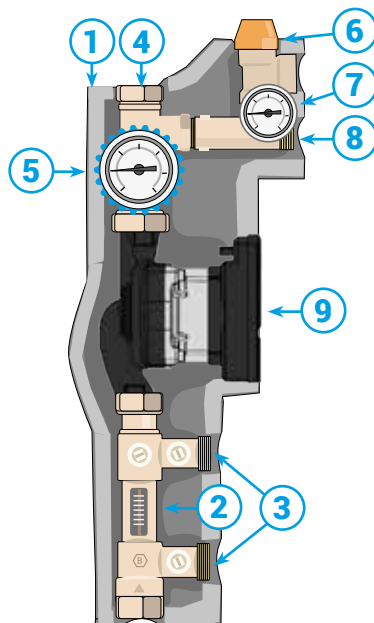
### E.651 composed of:

1. Rigid thermal insulation in EPP.
2. Flowmeter with manual flow control.
3. Drain tap.
4. Shut-off valves and check valves.
5. Valve with blue handle and integrated thermometer (0-160°C).
6. Safety valves for solar powered systems pre-calibrated at 6 bar.
7. Manometer (0-10 bar).
8. Expansion tank connection.
9. "Modulex Hybrid" high-energy efficiency circulating pump P.023.
10. Manual de-aerator.
11. Spacer.

**E.651 – Circulation group for solar systems, two-way with insulating shell and fixing brackets. Composed as stated above.**

Connections  $\frac{3}{4}$ "M. X  $\frac{3}{4}$ "F – For copper pipe connections, see specific union fittings on page 64 (W).

Range contr. of flow rate	2 - 12 lt./min.	8 - 33 lt./min.
Item code	E.651.15	E.651.35



E.654

### E.654 composed of:

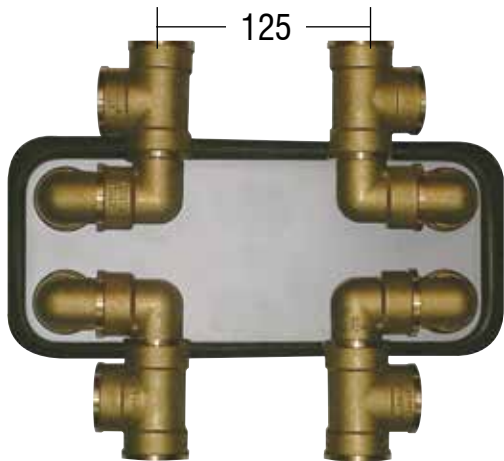
1. Rigid thermal insulation in EPP.
2. Flowmeter with manual flow control.
3. Drain tap.
4. Check valves.
5. Valve with blue handle and integrated thermometer (0-160°C).
6. Safety valves for solar powered systems pre-calibrated at 6 bar.
7. Manometer (0-10 bar).
8. Expansion tank connection.
9. "Modulex Solar" high-energy efficiency circulating pump P.023.

**E.654 – Circulation group for solar powered systems, for return only with insulating shell and wall fixing brackets. Composed as stated above.**

Connections  $\frac{3}{4}$ " M. x  $\frac{3}{4}$ "F. – For copper pipe connections, please see specific union fittings on page 64 (W).

Range contr. of flow rate	2 - 12 lt./min.	8 - 33 lt./min.
Item code	E.654.15	E.654.35

# Thermal exchange groups and circuit separation



E.629



## E.629 – Thermal exchange group, for hydraulic circuits separation.

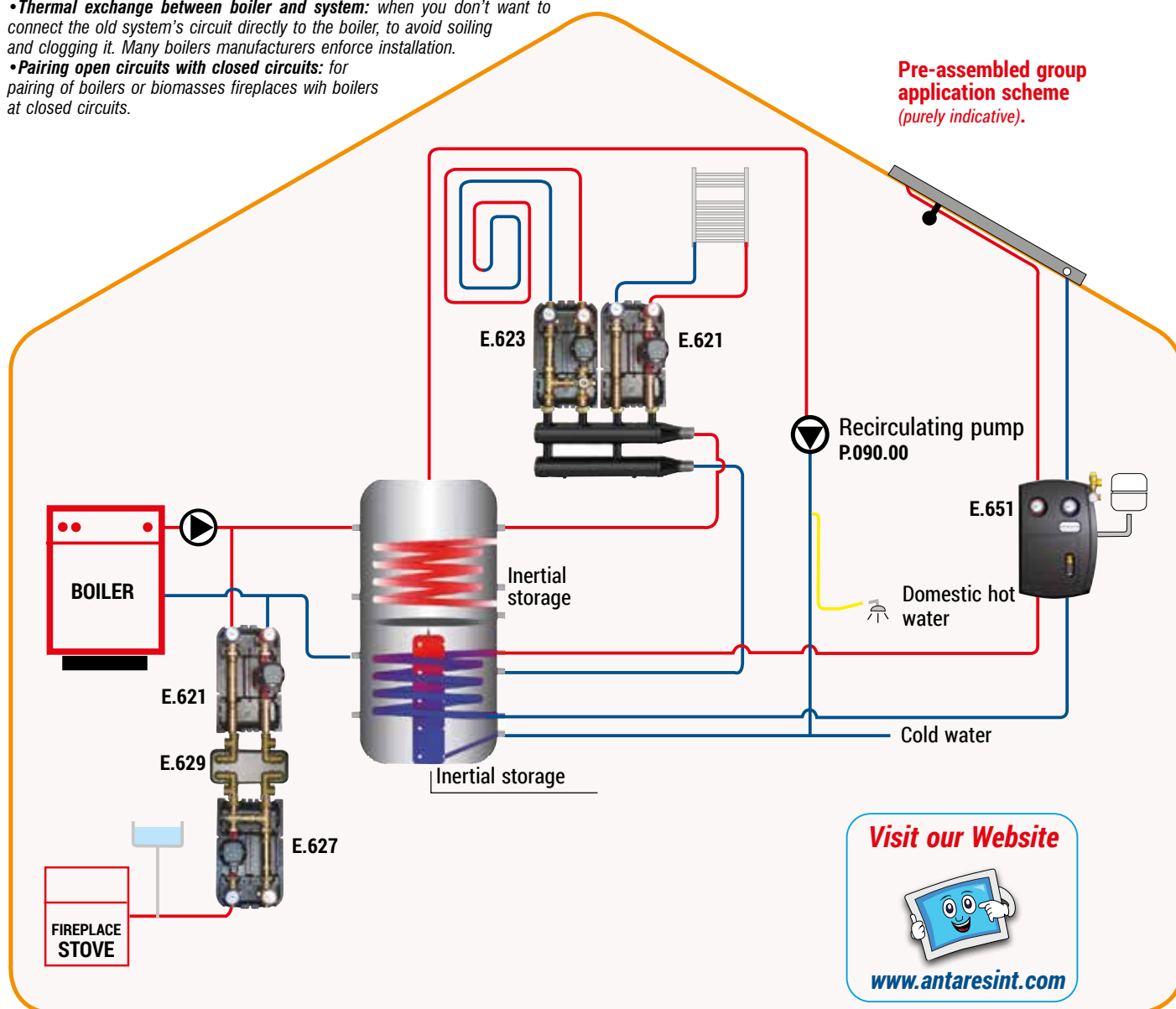
Made for direct connection with anti-condensation groups for biomasses heat generators– E.627 – and for temperature lowering and mixing units for radiant systems – E.623. It is composed of a steel plate exchanger in the defined abilities, pre-assembled necessary connections' fittings and insulating shell. Made for the connection of various items by the four "T" 1" F. fittings. Connections distance: 125 mm.

Item code	For power up to KW	Exchanger type
E.629.25	25 KW	S.009.20*
E.629.35	35 KW	S.009.30*
E.629.45	45 KW	S.009.40*

\*For heat exchanger technical characteristics please see S.009. Pag. 18

### Suitable for:

- Thermal exchange between boiler and system:** when you don't want to connect the old system's circuit directly to the boiler, to avoid soiling and clogging it. Many boilers manufacturers enforce installation.
- Pairing open circuits with closed circuits:** for pairing of boilers or biomasses fireplaces with boilers at closed circuits.



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## Old system decoupler separator with new boiler

**For the installation of new boilers on old systems.** Over time, dirt originated from crystallisation of mineral in the water settles inside the systems. To avoid the mud to damage the new boiler, the installation of a circuit separator of the old system with that of the new boiler is enforced, through the addition of an adequate heat exchanger.

**ANTARES**, to help this operation, realised, in the form of a small cabinet, a "SEPACIR" separator especially made extremely compact to be installed under the wall-hung boilers, in two versions:

- **Complete** with expansion tank (for each model's dimension, please see the dimensions below).
- **Lowered:** without the expansion tank to be installed somewhere else, above the boiler with apposite piping or elsewhere. (dimensions: H = 604 mm – L = 379 mm).

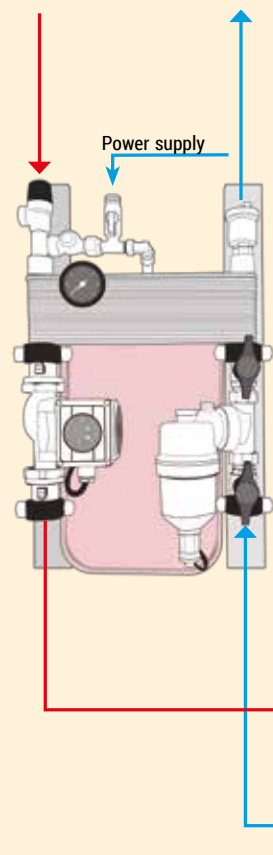
*As the product is very compact, it can installed elsewhere.*



**E.670.0-**



The old system contains dirt?



Install a circuit separator **ANTARES** model "SEPACIR"

**E.670 – Circuit decoupler separator "SEPACIR" with covering. Connections: 3/4" for heating and 1/2" for circuit power supply.**

**Composed of the following components:**

- Steel plates heat exchanger;
- Circulator 6 mt., EU energy label A;
- Expansion tank;
- Safety valve 3 bar;
- Capillary manometer;
- Supply tap;
- 4 ball valves;
- Optional dirt separator;
- Automatic deaerator;
- 4 steel flexible hoses 3/4" expandible;
- 1 steel flexible hose 1/2" expandible;

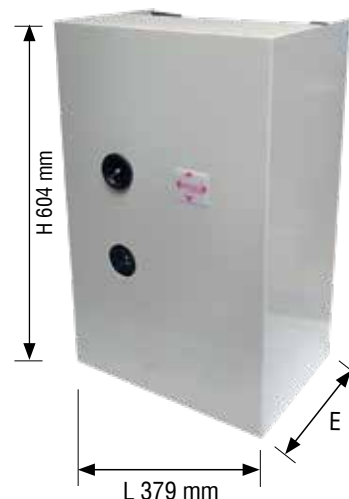
### Model with tank included

Without dirt separator				Without dirt separator			
Item code	Potenza KW	Tank lt.	Depth E	Item code	Potenza KW	Tank lt.	Depth E
E. 670.04	24	8	262 mm	E.670.08	24	8	262 mm
E. 670.02	32	10	262 mm	E.670.07	32	10	262 mm

### Model lowered with external tank supplied

Without dirt separator				Without dirt separator			
Item code	Potenza KW	Tank lt.	Depth E	Item code	Potenza KW	Tank lt.	Depth E
E. 670.34	24	8	164 mm	E. 670.57	24	8	164 mm
E. 670.52	32	10	164 mm	E. 670.58	32	10	164 mm

## Dimensions



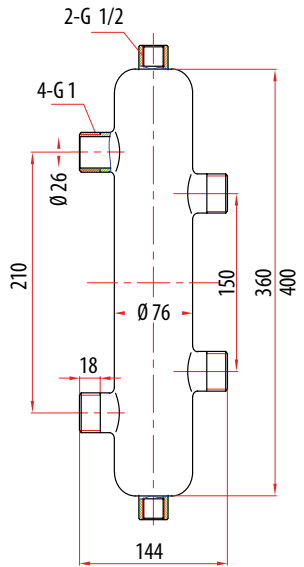
# Hydraulic separators

## Stainless steel hydraulic separators



**DN 25**

**E.690**



**E.690** - - Hydraulic separator DN 25 in stainless steel AISI 304 L complete with thermal insulating shell, automatic deaerator with check-valve and mud draining tap. Flow rate max 3mc/h – pressure max 10 bar.

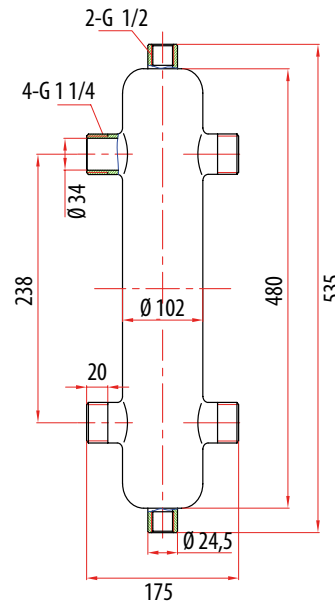
Complete with fixing brackets and plugs. With inner net to help de-aeration and dirtseparation.

Item code	Primary circuit connections	Secondary circuit connections
E.690.10	1" M. flat seat	1" M. flat seat
E.690.14	1 1/4" M. flat seat	1 1/4" M. flat seat
E.690.12	1 1/2" M. flat seat	1 1/2" M. flat seat



**DN 32**

**E.691**



**E.691** - Hydraulic separator DN 32 in stainless steel AISI 304 L complete with thermal insulating shell, automatic de-aerator with check valve and mud draining taps. Flow rate max. 6mc/h – Pressure max. 10 bar.

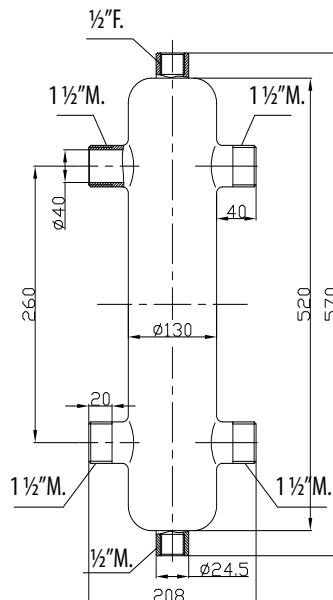
Complete with fixing brackets and plugs. With inner net to help de-aeration and dirtseparation.

Item code	Primary circuit connections	Secondary circuit connections
E.691.14	1 1/4" M. flat seat	1 1/4" M. flat seat
E.691.13	1 1/2" M. flat seat	1 1/4" M. flat seat



**DN 40**

**E.692.00**



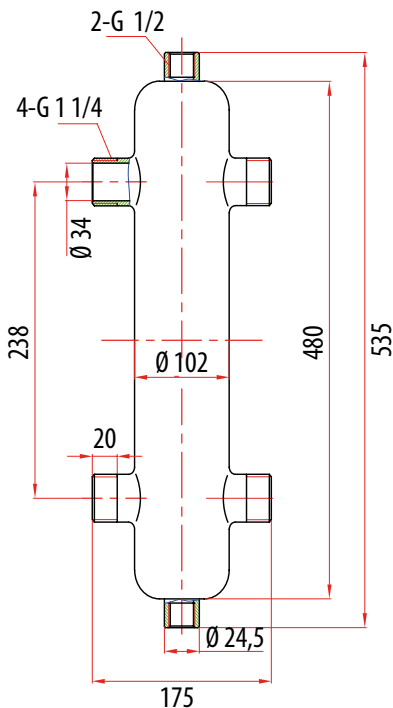
**E.692.00** - Hydraulic separator DN 40 in stainless steel AISI 304 L complete with thermal insulating shell, automatic de-aerator with check valve and mud draining tap. Flow rate max. 8mc/h – Pressure max. 10 bar.

Complete with fixing brackets and plugs. With inner net to help de-aeration and dirtseparation. Connections for primary and secondary circuit 1 1/2" M.

**DN 50**



**E.693.00**



**E.693.00** – Hydraulic separator DN 50 in stainless steel AISI 304 L, complete with thermal insulating shell, automatic de-aerator with check valve and mud draining tap. Flow rate max. 12 mc/h – Pressue max. 10 bar.

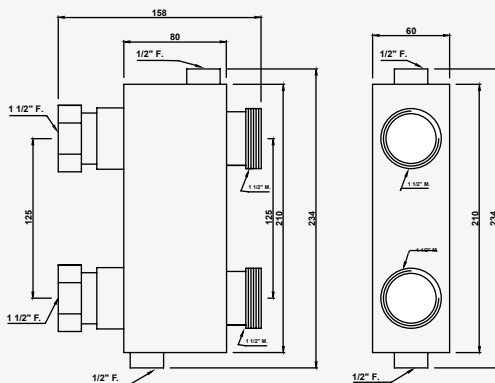
Complete with fixing brackets and plugs. With inner net to help de-aeration and dirt separation. Connections for primary and secondary circuit 2”M.

**Steel hydraulic separators**

**DN 25**



**E.602.15**



**E.602.15** – Compact hydraulic separator DN25, in painted steel, for pump groups and mixing groups, complete with thermal insulation in EPP. In the upper part, complete with connection 1/2” for possible temperature probe or vent, and, in the lower part, connection 1/2” for draining. Compatible with manifold E.600 and E.700, max. two circuits – Pressure max.: 10 bar.

Connections: 1 1/2”F. swivel x 1 1/2”F. swivel on one side.  
Connections: 1 1/2”M. flat seat x 1 1/2”M. flat seat on other side.  
Flow rate: 1.5 m3/h - Conn. position: opposing - Height: 250 mm.

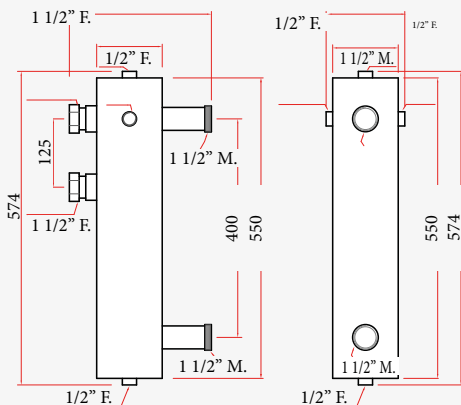
**E.603** - Compact hydraulic separator, in painted steel for manifolds series “MODULINOX” (E.600) and “FLUIHUB” (E.700) complete of thermal insulation in EPP, automatic deaerator and check valve, mud drain tap and frontal connection of 1/2”F. for thermometer, temperature probe or manometer.

Item code	Flow rate m3/h	Primary circuit connections		Secondary circuit connections	
		Ø	Distance	Ø	Distance
E.603.37	3,7	1 1/2”M. flat seat	400 mm.	1 1/2”F. girevole	125 mm.
E.603.94	8,4	2”M. flat seat	500 mm.	2”F. girevole	250 mm.

**DN 25**

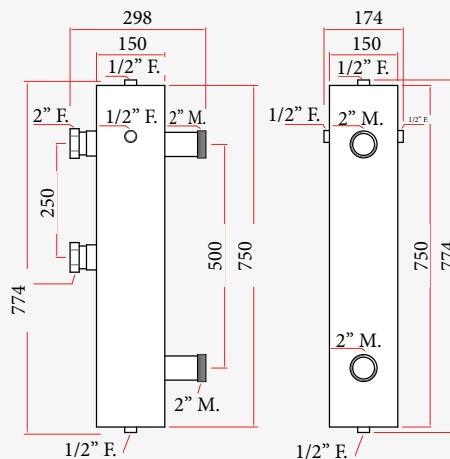


**E.603**



**E.603.37**

**DN 32**



**E.603.94**

## Components and accessories for pump groups



E.143.2-



E.143.1-

### E.143 – 3-way brass mixing valve with bypass, with pump connections 1 1/2" F. swivel or 2" F. swivel

Measure:	DN 25	
Type	With connection fittings aligned: 1 1/2" M. x 1 1/2" F. swivel (E.609.12) with bypass	Just valve Kv10 1 1/2" M. x 1 1/2" F. swivel x 1" M. with bypass
Item code	E.143.22	E.143.12
Measure:	DN 32	
Type	With connection fittings aligned: 2" M. x 2" F. swivel ( E.609.20)	Only valve Kv18 2" M. x 2" F. swivel x 1 1/4" M.
Item code	E.143.23	E.143.13



T.095



### T.095 – Modulating thermoregulator integrated in servomotor, complete with 3-way brass mixing valve and temperature probe. Mixing valve complete with bypass valve and pump connection. Control range: 1° - 100° C. Adjustable opening-closing time 50-150°C. Parametrisable opening and closure sense – Parametrisable heating and cooling mode.

Power supply: 230 Vac. Suitable for:

- Temperature control in floor radiant systems.
- Temperature control to avoid condensation in biomasses fuelpowered systems.
- Temperature control in domestic hot water accumulation or distribution.

Item code	Measure	Valve Kv	Connections Ø
T.095.12	DN 25	10	1 1/2" F. swivel. x 1 1/2" M. x 1" M.
T.095.20	DN 32	18	2" F. swivel. x 2" M. x 1 1/4" M.



E.147.22



E.147.32

### E.147 – 4-way brass thermostatic mixing valve, adjustable 25°-55°C with pump connection 1 1/2" F. swivel – Flow rate KV 3,5.

Suitable for temperature control in floor radiant systems.

Type	With connection fitting aligned 1 1/2" M. x 1 1/2" F. swivel. ( E.609.12)	Only valve 1 1/2" M. x 1 1/2" F. swivel. x 1" M.
Item code	E.147.22	E.147.32

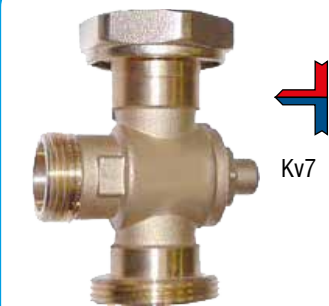
### E.215 - Anti-condensation thermostatic mixing valve for biomasses powered thermal systems with connections suitable for the application of the circulator.

Pressure max 10 bar. Temperature max 100°C.

Item code	Flow range KV	Connections Ø	Calibration temperature °C
E.215.45	9	1 1/2" M. x 1 1/2" F. x 1" M.	45°C x wood
E.215.60		1 1/2" M. x 1 1/2" F. x 1" M.	60°C x pellet
E.215.70		1 1/2" M. x 1 1/2" F. x 1" M.	70°C x pellet
E.215.24	7	1 1/4" M. x 2" F. x 1 1/4" M.	45°C x wood
E.215.26		1 1/4" M. x 2" F. x 1 1/4" M.	60°C x pellet

### E.609 – "T" joint for the aligned connection of two-way connections with mixing valve (E.143 – T.095 – E.147.12 – E.215). Ends distance: 90 mm.

Item code	Measure	Connections Ø
E.609.12	DN 25	1 1/2" F. swivel. x 1 1/2" M. x 1" F. swivel.
E.609.20	DN 32	2" F. swivel. x 2" M. x 1 1/4" F. swivel.



E.215



E.609



T.106

With thermoregulator



T.107.00

### T.106 – Bidirectional servomotor for mixing valves. Pair: 10 Nm – Power 230 Vac – Opening/closure time: 90".

Adequate power to the valves with diameter up to 1 1/2". Rotation angle: 90°

Item code	Model
T.106.00	Opening and closing
T.106.10	Modulating: 10 V. or 4-20 mA with output

### T.107.00 – Bidirectional servomotor for mixing valves complete with modulating thermoregulator for temperature control at a fixed point. Complete of display with two buttons and of temperature probe. Control range: 1°-100°C. pair: 10 Nm – Power 230 Vac – Adjustable opening-closing time 60-150°. Parametrisable opening and closure sense – Parametrisable heating and cooling mode.

Adequate power to the valves with diameter up to 1 1/2". Rotation angle: 90°





E.613



G.146.99

**E.613 - Wall-fixing brackets for pump groups.**

*In steel with screws and plugs.*

Item code	Pump group type
E.613.25	DN 25 - E.704
E.613.32	DN 32 - E.705

**G.146.99 - Pair of brass fittings adapters for the installation of pump groups DN 25 on manifolds with outputs 2"F. swiv. (DN32) – Adaptations from 2"M. to 1 1/2"F.**

**E.611 - "Y" brass fitting with probe temperature well.**

*Well inner diameter: 9 mm.*

Item code	Diameter
E.611.10	1"M. x 1"F.
E.611.14	1 1/4"M. x 1 1/4"F.

**E.615.10 - Balancing differential group for the elimination of over-pressuring caused by automatic shutting-down the system. "H"-like pre-assembled to be applied on to and return pipes.**

*Couplings: 1"M. x 1"M. - 1"M. x 1"M. The valve's calibration is carried out by bringing the needle in correspondence to the value detected on the graded scale impressed on the body of the valve.*

**E.430 – Brass ball valve with pipe union connection for pump, with screwdriver handle.**

Connections Ø	1 1/2" F. swiv. x 1" M.	1 1/2" F. swiv. x 1" F.	1 1/2" F. swiv. x 1 1/2" M.	1 1/2" F. swiv. x copper tube Ø 22	1 1/2" F. swiv. x copper tube Ø 28
Item code	E.430.10	E.430.00	E.430.12	E.430.22	E.430.28

**E.432 – Brass ball valve with pipe union connection for pump, with butterfly handle.**

Type	Without check valve		With check valve
Connections Ø	1"F. x 1 1/2" F. swiv.	1 1/2"M. x 1 1/2" F. swiv.	1"F. x 1 1/2" F. swiv.
Item code	E.432.10	E.432.12	E.432.90

**E.435 - Single-piece ball valve with pump connection and two side connections for possible bypass with coloured thermometer-holder handle and thermometer. Pressure max: 10 bar – Thermometer range: 0°C + 120°C. connections 1"F. z 1 1/2"F. swivel.**

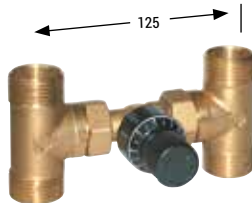
Item code	Handle colour	Model with
E.435.10	Blue	Check valve + valve disconnection
E.435.12	Red	-

**E.437 – Single-piece ball valve with pump connection, with coloured thermometer-holder handle. Pressure max. 10 bar. Thermometer range: 0°C + 120°C.**

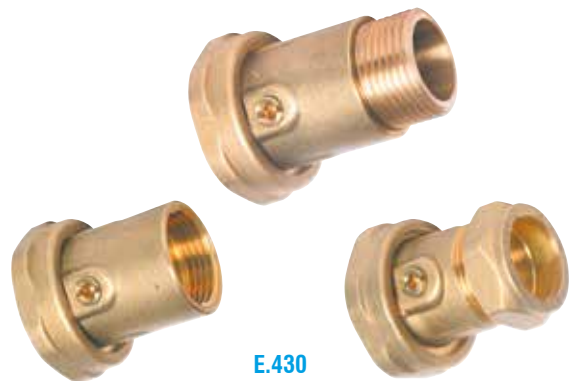
Item code	Connections Ø	Handle colour	Model with
E.437.10	1" F. x 1 1/2" F. swivel	Blue	Check valve
E.437.12	1" F. x 1 1/2" F. swivel	Red	-
E.437.20	1 1/4" F. x 2" F. swivel	Blue	Check valve
E.437.22	1 1/4" F. x 2" F. swivel	Red	-



E.611



E.615.10



E.430



E.432



E.435



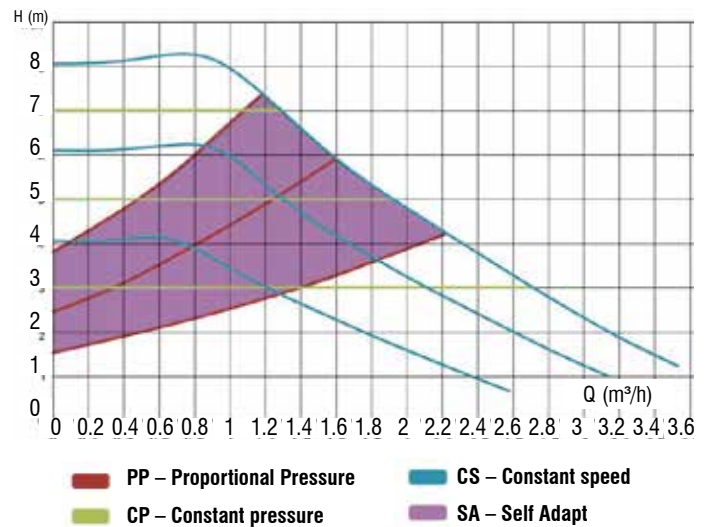
E.437

# Performance characteristics of pump groups components

## Circulating pumps



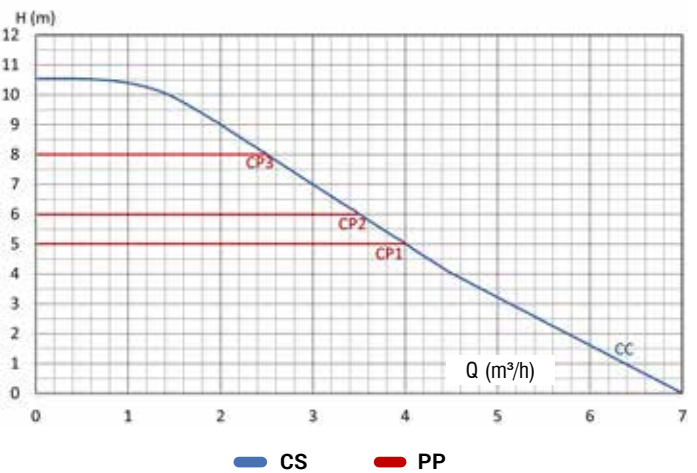
Performance characteristics of the referred circulator in pump group



P110 - Circulators referred to in pump groups

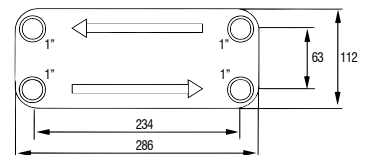
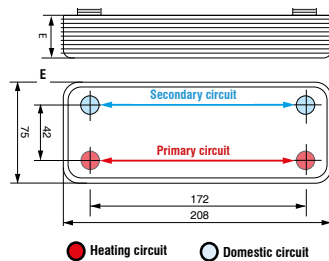


Performance characteristics of the referred circulator in pump group



P066 - Circulators referred to in pump groups

## Exchanger S.004 and S.009 for heat exchange and circuit separation



S.004 – Exchanger type XS 208 x 75 steel brazed plates, with threaded connections 3/4" M. x 1/2" M.

Item code	N° plates	KW	Thickness E mm
S.004.70	20	35	38,4
S.004.80	30	50	51,8

S.009 – exchanger type XS 286 x 116 steel brazed plates, with threaded connections 1" M. x 1" M.

Item code	N° plates	KW	Heat exchange surface mq
S.009.20	20	25	0,49
S.009.30	30	35	0,76
S.009.40	40	45	1,03

**Important:** the data given are explicative, the KE value is in relation to  $\Delta t$  (difference between primary and secondary circuit temperature input and output). The fundamental value for the choice of the exchanger is the thermal exchange surface extent.



## ANTARES in the world

### Management Office:

- ▶ **Italy: LUCCA - Via degli Alpini, 144**
  - Tel. **+39 473701**
  - Mail: **ant3@antaresint.com**
  - WhatsApp: **+39 349 665 6433**
  - Website: **www.antaresint.com**

### Manufacturing and distribution branches:

- ▶ **Italy: LUCCA - Via degli Alpini, 144**
- ▶ **Italy: LUCCA - Via Martini, 111**
- ▶ **Romania: BALDOVINESTI - via Propului, 76**

### Sales Departments:

#### Belgique

207, Av. Louise bte 4 - 1050 Bruxelles  
Tel. 0800 73674 **Numéro Vert**  
www.antaresint.com - be@antaresint.com

#### Deutschland

Feringastrasse 6 - 85774 Unterföhring  
Tel. +49 899 394 8950 - WhatsApp +49 01 762 097 7231  
www.antaresint.com - de@antaresint.com

#### España

C/ Martínez Villergas, 49 - 28027 - Madrid  
Tel. +34 910 626 573 **Número Verde**  
www.antaresint.com - es@antaresint.com

#### France

3 Cours Charlemagne - BP 2597 - 69217 Lyon Cedex 2  
Tel. 0800 506008 **Numéro Vert**  
www.antaresint.com - fr@antaresint.com

#### Ireland

Mespil House, Sussex Road, Dublin 4  
Tel. 1800 553 968 **LO-call PHONE**  
www.antaresint.com - eire@antaresint.com

#### Österreich

Landstrasser Hauptstrasse, 71/2 - 1030 Wien  
Tel. +49 899 394 8950 - WhatsApp +49 01 762 097 7231  
www.antaresint.com - at@antaresint.com

#### Polska

Ul. Tomaszka Zana 39A 20-634 Lublin  
Tel. 00 800 391 1223  
www.antaresint.com - pl@antaresint.com

#### Portugal

Rua Castilho, n° 23-8° B - 1250 - 067 Lisboa  
Tel. +351 800 83 90 42 **Número Verde**  
www.antaresint.com - pt@antaresint.com

#### România

Str. Plopului, 76 - Com. Baldovinesti - 237005 JUD. OLT  
Tel. +40 080 089 0047 - Mobil. 076 058 5909  
www.antaresint.com - ro@antaresint.com

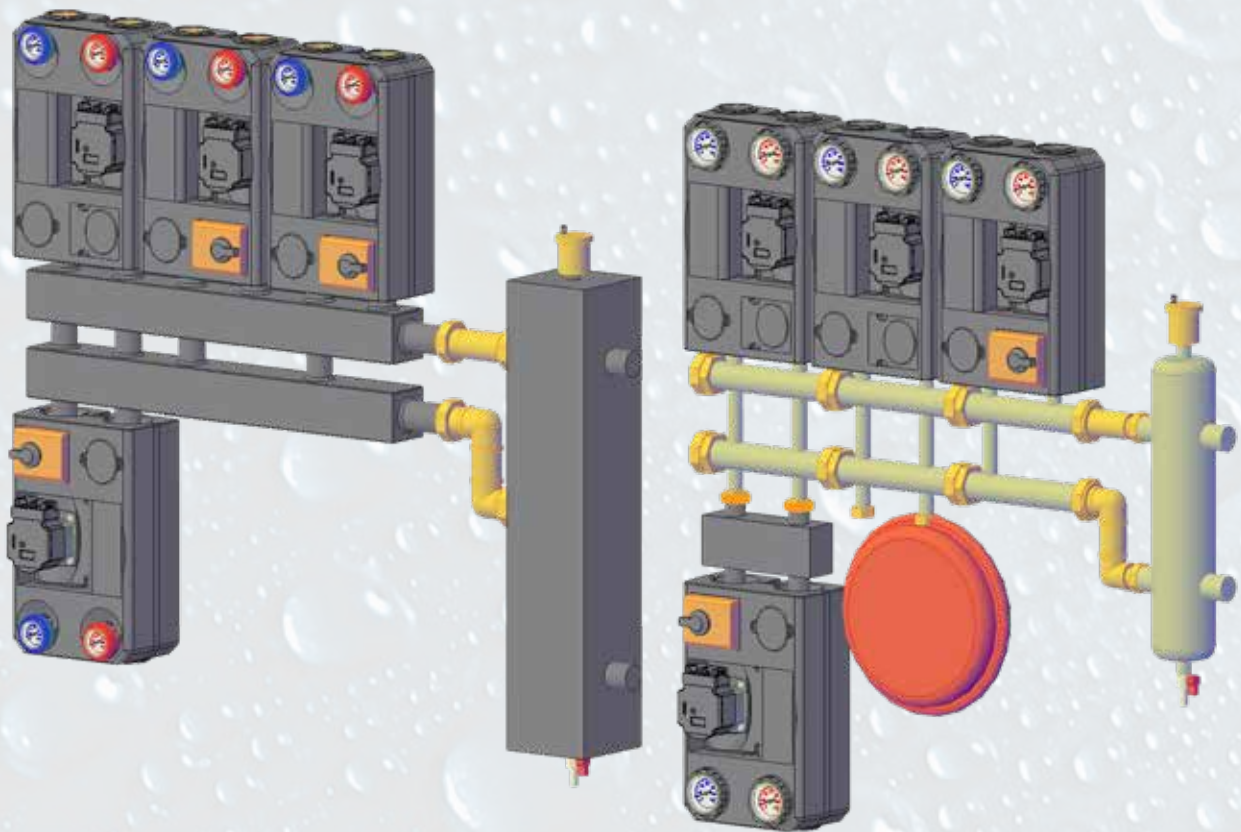
#### U.K.

125 Canterbury Road - Westgate-On-Sea - Kent - CT8 8NL  
Tel. +44 0122 745 8684 **LO-call PHONE**  
www.antaresint.com - uk@antaresint.com



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Via degli Alpini, 144 - 55100 LUCCA - ITALY  
Tel. +39 0583 473701 • Fax +39 0583 494366  
ant3@antaresint.com • www.antaresint.com



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