



SYSTEM SEPERATION & PLASTIC MANIFOLD



HEATING & COOLING MATS

PREFABRICATED PRODUCTS

TUBES, SUPPLY & RETURN LINES

CONNECTION COMPONENTS

FITTINGS

MEASUREMENT & CONTROL TECHNOLOGY

SYSTEM SEPERATION PLASTIC MANIFOLD

FIXING MATERIAL

TOOLS & ASSEMBLY KIT

9 Separation System & Plastic Manifold

9.1 SEPARATION SYSTEMS

The system solutions offered by Clina use PP capillary tube mats and PP pipes which are oxygen-diffusion-open. Since the presence of oxygen leads to corrosion, it is essential to design the secondary circuit with corrosion-resistant materials. This also applies to the circulation pump. We recommend the use of plastics, stainless steel, bronze, red bronze or copper. Of course, the offered assembly does meet these requirements.

Until the saturation limit is reached, oxygen, not to be confused with air, enters the system. Due to the oxygen diffusion through the PP, a system separation is implemented using a stainless steel plate heat exchanger.

This ensures a complete and thus a material separation of the primary and secondary circuit. In order to reliably protect the Clina system from dirt and corrosion, we recommend using our separation systems.

Clina offers separation systems with performances of 3,5 to 94pprox.. 50 KW. These separation systems mainly consist of the following components:

- controlled bronze or stainless steel circulating pump
- stainless steel - plate heat exchanger
- constant flow temperature control
- safety valve
- over-temperature-protection device
- membrane safety valve
- membrane expansion tank with connecting-kit

The entire station is built on a stable, galvanized mounting frame and prior to delivery it is subjected to a leak test with 10 bar water pressure.



TECHNICAL DATA												
ITEM NO.	PERFOR- MANCE KW	WT TYPE	TEMP. °C PRIM. F/RF	TEMP. °C SEC. F/RF	PRESSURE LOSS HE SEC. KPA	PUMP PRIMARY	PUMP SECONDARY	CONNECTIONS PRIMARY	CONNECTIONS SECONDARY	WIDTH* mm	HEIGHT* mm	DEPTH* mm
TS-MINI 3,5	3,5	GBS 220H - 10	45/31	34/30	<10	-	Grundfos UPM3 15-70N Hybrid	3/4" male thread	3/4" male thread	407	565	250
TS-MINI 5,0	5	GBS 220H - 20	45/31	34/30	<10	-	Grundfos UPM3 15-70N Hybrid	3/4" male thread	3/4" male thread	407	565	250
TS8-ECO	8	GBS 300H - 24	45/35	34/30	< 10	-	Grundfos UPM3 15-70N Hybrid	1" female thread	1 1/4" female thread	480	845	345
TS10-ECO	10	GBS 300H - 30	45/35	34/30	< 10	-	Grundfos UPM3 15-70N Hybrid	1" female thread	1 1/4" female thread	480	845	345
TS15-ECO	15	GBS 300H - 40	45/35	34/30	< 10	-	Grundfos UPM3 15-70N Hybrid	1" female thread	1 1/4" female thread	480	845	345
TS20-ECO	20	GBS 300H - 50	45/35	34/30	< 10	-	Grundfos UPM3 15-70N Hybrid	1" female thread	1 1/4" female thread	480	845	345
TS30-ECO	30	GBS 300H - 50	45/37	35/30	< 10	-	Grundfos Magna3 32- 100N Hybrid	1 1/4" female thread	2" female thread	650	895	400
TP8-ECO	8	GBS 300H - 24	45/35	34/30	< 10	Wilo Stratos Para 15/1-9	Grundfos UPM3 15-70N Hybrid	1" female thread	1 1/4" female thread	480	845	345
TP10-ECO	10	GBS 300H - 30	45/35	34/30	< 10	Wilo Stratos Para 15/1-9	Grundfos UPM3 15-70N Hybrid	1" female thread	1 1/4" female thread	480	845	345
TP15-ECO	15	GBS 300H - 40	45/35	34/30	< 10	Wilo Stratos Para 15/1-9	Grundfos UPM3 15-70N Hybrid	1" female thread	1 1/4" female thread	480	845	345
TP20-ECO	20	GBS 300H - 50	45/35	34/30	< 10	Wilo Stratos Para 15/1-9	Grundfos UPM3 15-70N Hybrid	1" female thread	1 1/4" female thread	480	845	345
TP30-ECO	30	GBS 300H - 50	45/37	35/30	< 10	Wilo Para MAXO 25- 180-08-F02 I	Grundfos Magna3 32- 100N Hybrid	1 1/4" female thread	2" female thread	650	895	400

* Housing dimensions, plus the external screw connections

* The expansion tank, which is connected via a flexible hose, is located outside the housing and not taken into account regarding its dimensions.

All products are subject to availability. We reserve the right to use equivalent or higher quality material.

Separation system heating consist of:

heat exchanger, high efficiency circulating pump, safety devices, expansion tank, constant temperature control, etc. to separate the corrosion resistant secondary heating/cooling circuit from the primary circuit; design: white housing on assembly frame

SEPARATION SYSTEM WITH HIGH EFFICIENCY PUMP ON THE SECONDARY SIDE, WITHOUT HOUSING

TECHNICAL DATA

ITEM NO.	PERFORMANCE KW
TS Mini 3,5	3,5
TS Mini 5,0	5,0

SEPARATION SYSTEM WITH HIGH EFFICIENCY PUMP ON THE SECONDARY SIDE, WITH HOUSING

TECHNICAL DATA

ITEM NO.	PERFORMANCE KW
TS8 - Eco	8,0
TS10 - Eco	10,0
TS15 - Eco	15,0
TS20 - Eco	20,0
TS30 - Eco	30,0
TS35 - Eco	35,0

SEPARATION SYSTEM WITH HIGH EFFICIENCY PUMP ON THE SECONDARY AND THE PRIMARY SIDE, WITH HOUSING

TECHNICAL DATA

ITEM NO.	PERFORMANCE KW
TP8 - Eco	8,0
TP10 - Eco	10,0
TP15 - Eco	15,0
TP20 - Eco	20,0
TP30 - Eco	30,0
TP35 - Eco	35,0

We deliver Separation Systems customized for your project!

Therefore, we need the following information:

- total operating performance of the station/system in KW
- system temperatures of the primary and secondary side
- the maximum pressure loss on the secondary side
- the required head of the pump on the secondary side
- a sketch if necessary
- max. possible installation dimensions

9.2 Plastic Manifold

Clina Plastic Manifolds have the task to distribute the water flows of the secondary circuit to the different zones according to the specifications. This way the hydraulic balancing as well as the single room regulation is realized via the electro-thermal actuators (2-point control) controlled by the room regulators.

- plastic manifolds (-20 °C to + 90 °C) with integrated air chambers for thermal insulation in the colours red and blue
- flow unit with integrated shut-off device, can be changed and equipped with an actuator
- return flow unit with integrated, adjustable flow meter, protecting cap with eyelet seal
- manifold connection unit with 1½" male thread and 1" female thread and four additional ½" bore holes for e.g., deaerator, feed and vent cock, thermometer; the manifold connection is possible from the right or the left side
- outlet screw connections of the separate circuits, ¾" male thread Euroconus for plastic, copper/soft steel or multi-layer composite pipes

PLASTIC MANIFOLD

TECHNICAL DATA

DESCRIPTION	ITEM NO.
2 -fold flow manifold and return flow collector, pre-installed flow meter yellow 1,7 - 7,8 l/min (100 - 465 l/h)	KVT02
3-fold, analogue as above mentioned	KVT03
4-fold, analogue as above mentioned	KVT04
5-fold, analogue as above mentioned	KVT05
6-fold, analogue as above mentioned	KVT06
7-fold, analogue as above mentioned	KVT07
8-fold, analogue as above mentioned	KVT08
9-fold, analogue as above mentioned	KVT09
10-fold, analogue as above mentioned	KVT10
11-fold, analogue as above mentioned	KVT11
12-fold, analogue as above mentioned	KVT12



MANIFOLD CONNECTION KIT

TECHNICAL DATA

DESCRIPTION	manifold connection kit incl. 2 manual air vent valves 1/2", 2 plugs 1/2", 2 feed and vent valves 1/2", 2 thermometer with immersion sleeve 1/2", 1 sheet self-adhesive label
ITEM NO.	KVAG



BALL VALVE WITH HEXAGON SOCKET SPANNER

TECHNICAL DATA

DESCRIPTION	ball valve 1 1/2" screwcap x 1" female thread with hexagon socket, spanner size 5 mm, incl. flat gasket
ITEM NO.	KVKHI



BALL VALVE WITH LOCKING HANDLE

TECHNICAL DATA

DESCRIPTION ball valve 1 1/2" screwcap x 1" female thread with locking handle, "heavy design", incl. flat gasket

ITEM NO. KVCHK



UNIVERSAL WALL HOLDER

TECHNICAL DATA

DESCRIPTION universal wall holder, noise-reduced, 103-105 mm high, incl. installation kit (2 wall holders with mounting material)

ITEM NO. KVWH



COMPRESSION FITTING

TECHNICAL DATA

DESCRIPTION compression fitting 3/4" with Euroconus for PP-pipe 20 x 2,0 mm (1 pair), tightening torque 40 Nm

ITEM NO. KVKR20

