

TECHNICAL MANUAL



EST-Fancoil units Sigma - Prisma - Concealed - Low Body

**EUROPO**INTEGRATED
COMFORT
SYSTEMS

INDEX

1. GENERAL INFORMATION

1.1 Applications	4
1.2 Operation	4
1.3 Performances	4
1.4 Operating limits.....	4
1.5 Product range	5
1.6 Selection software	5
1.7 Water connections.....	5
Exploded view ESTSV and ESTSH/AF	6
Exploded view ESTPV and ESTCH.....	7

2. MODELS WITH CABINET

2.1 SIGMA Serie: ESTSV, ESTSV/AF Models.....	8
2.2 SIGMA Serie: ESTSH, ESTSH/AF Models.....	8
2.3 PRISMA Serie: ESTPV, ESTPV/AF Models.....	10
2.4 PRISMA Serie: ESTPH, ESTPH/AF Models.....	10
2.5 LOW BODY Serie: ESTSVR Model	12
2.6 Suggested installation	13

3. MODELS WITHOUT CABINET

3.1 CONCEALED Serie: ESTCV, ESTCV/AF Models.....	14
3.2 CONCEALED Serie: ESTCH, ESTCH/AF Models	14
3.3 LOW BODY Serie: ESTCVR Model.....	16
3.4 Suggested installation	17

4. COMPONENTS

4.1 Inner frame	18
4.2 Coils	18
4.3 Fan deck	18
4.4 Electrical components and controls	19
4.5 Air filter	19
4.6 Housing	19

5. ELECTRICAL ACCESSORIES

5.1 Electric box CBL10	20
5.2 Electric box CBL20	20
5.3 Electric heater KREL	20
5.4 WS – Water sensor	20
5.5 AS – Air sensor	21
5.6 CS – Check sensor.....	21
5.7 PC – Condensate pump.....	21
5.8 Electronic regulators EDCR-EDCL.....	21
5.9 OMNIBUS 360 digital control.....	22
5.9.1 Power Omnibus card - ORBV10	22
5.9.2 Round Touch Console - ORC4xx.....	23
5.9.3 Round Display Console - ORC2xx.....	23
5.9.4 Round Analog Console - ORC3xx.....	23
5.9.5 Round Cabin Console - ORC6xx.....	24
5.9.6 Round Inside Console - ORC11x.....	24
5.9.7 Round IR Console (ORCxx) and remote control (OIR30).....	24
5.10 OMNIBUS 360 Supervision	24
5.10.1 Round Manager - ORS7xx.....	25
5.10.2 Round Master Supervisor - ORS810	25
5.10.3 Round Net - ORS940	25
5.10.4 App Round Clima and Round Clima Plus.....	26

6. REGULATING VALVES

6.1 _3A2 – _2A2 ON/OFF valves.....	26
6.2 J3AM – J2AM Modulating valves.....	26
6.3 Pressure independent valve, ON-OFF.....	28
6.4 Pressure independent valve, modulating.....	28
6.5 Pressure independent valves dimensions	30
6.6 4-pipe Compact kit.....	31
6.7 DT – Shut-off valves	31

7. OTHER ACCESSORIES

7.1 CP – Set of feet.....	32
7.2 ZL – Long socle with feet	32
7.3 PPV – Vertical back panel.....	32
7.4 PPH – Horizontal back panel.....	32
7.5 PAE/V – Vertical external air intake with manual damper	32
7.6 PAE/VM – Vertical external air intake with motorized damper	32
7.7 PAE/H – Horizontal external air intake with manual damper	33
7.8 PAE/HM – Horizontal external air intake with motorized damper	33
7.9 PAE/HAF – Horizontal external air intake (for units with bottom air intake)	33
7.10 PM – Air delivery plenum.....	34
7.11 PM90 – 90° air delivery plenum.....	34
7.12 PA – Air suction plenum	34
7.13 PAS – Air suction plenum with spigots.....	35
7.14 PA90 – 90° air suction plenum.....	35
7.15 RCA – Duct connection.....	35
7.16 RCCMF – Telescopic air outlet connection.....	36
7.17 RCCAF – 90° Telescopic air intake connection.....	36
7.18 GM – Air outlet grill for RCCMF.....	36
7.19 GA – Air intake grill for RCCAF.....	36

8. TECHNICAL DATA

8.1 Air volumes.....	37
8.1.1 EST Serie: Sigma, Prisma, Concealed.....	37
8.1.2 EST Serie: Low Body	39
8.2 Cooling capacities.....	40
8.2.1 EST Serie: Sigma, Prisma, Concealed.....	40
8.2.2 EST Serie: Low Body.....	43
8.3 Heating capacities	45
8.3.1 EST Serie: Sigma, Prisma, Concealed.....	45
8.3.2 EST Serie: Low Body	49
8.4 Electrical data.....	52

9. NOISE LEVELS

9.1 Sound power.....	53
9.2 Sound pressure in a closed environment	53

10. ELECTRICAL CONNECTIONS.....

1

2

3

4

5

6

7

8

9

10

1

1. GENERAL INFORMATION

2

1.1 APPLICATIONS

EST-Fancoils, with brushless motor, are used to directly treat the air in the room where they are installed. They can be used both for heating and cooling applications; in the latter case, the air is also dehumidified.

3

1.2 OPERATION

The effectiveness of an EST-Fancoil is due to the large surface area of the finned heat exchanger (coil) where the air drawn from the room by the fan passes through.

Heating operation: the hot water circulating in the finned coil supplies heat to the air passing through the heat exchanger.

Cooling operation: the chilled water circulating in the finned coil removes heat from the air passing through the heat exchanger.

The air is also dehumidified and the condensed water vapour must be discharged from the unit: suitable drains must therefore be provided to drain the condensed water that collects in the condensate tray.

5

1.3 PERFORMANCES

The performance of an EST-Fancoil can vary greatly with changes in the temperature and in the amount of water circulating through the coil, as well as with changes in the temperature and in the amount of air circulating through the coil.

The air volume is determined by selecting the proper fan speed through continuous regulation (0-100%), by using electronic or digital regulators (also for BMS system), while the water flow rate is determined by the specifications of the system and of the pump. Thermal performances of the unit can be optimised by controlling the inlet flow rate of the water with proper regulating valves (ON/OFF or modulating type), which can be supplied as accessories.

For each model, thermal performances in heating and cooling depend on the number of rows of the coil installed, which gives the opportunity to make the air treatment suit every condition required.

In cooling function, under the same operating conditions, the more rows the heat exchanger has, the more it will dehumidify.

8

1.4 OPERATING LIMITS

Each fancoil can work properly only if the operating limits listed below are respected:

- Maximum operating pressure (water side): 1600 kPa
- Minimum inlet water temperature in cooling: 5 °C
- Maximum inlet water temperature in cooling: 20 °C
- Minimum inlet water temperature in heating: 35 °C
- Maximum inlet water temperature in heating: 85 °C

10

1.5 PRODUCT RANGE

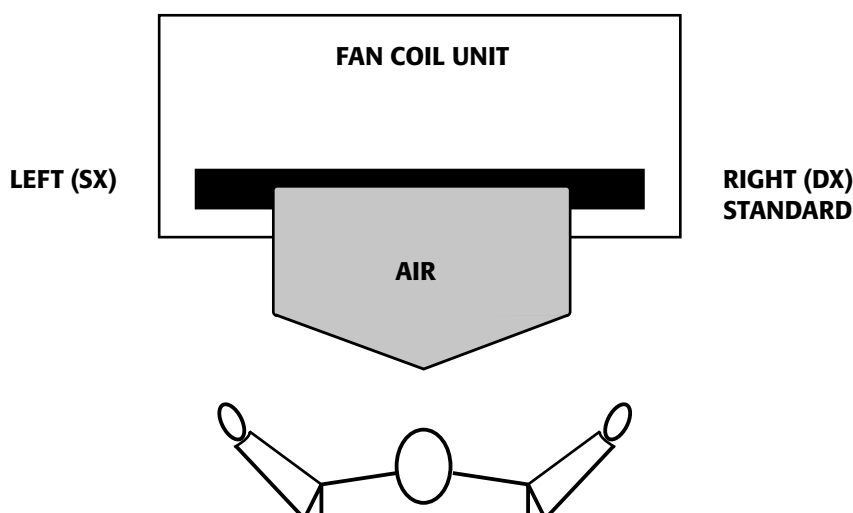
This manual covers the following models of EURAPO fancoil units:

MODEL	INSTALLATION	SIZE
SIGMA SERIE		
ESTSV with cabinet	vertical on the wall/floor (with feet)	512÷528
ESTSV/AF with cabinet and frontal air intake	vertical on the floor (without feet)	512÷528
ESTSH with cabinet	horizontal on the ceiling	512÷528
ESTSH/AF with cabinet and bottom air intake	horizontal on the ceiling	512÷528
PRISMA SERIE		
ESTPV with cabinet	vertical on the wall/floor (with feet)	512÷516
ESTPV/AF with cabinet and frontal air intake	vertical on the floor (without feet)	512÷516
ESTPH with cabinet	horizontal on the ceiling	512÷516
ESTPH/AF with cabinet and bottom air intake	horizontal on the ceiling	512÷516
LOW BODY SERIE		
ESTSVR with cabinet	vertical on the floor (without feet)	512÷516
ESTCVR without cabinet	vertical and concealed	512÷516
CONCEALED SERIE		
ESTCV without cabinet	vertical and concealed	512÷528
ESTCV/AF without cabinet and frontal air intake	vertical and concealed	512÷528
ESTCH without cabinet	horizontal and concealed	512÷528
ESTCH/AF without cabinet and bottom air intake	horizontal and concealed	512÷528

1.6 SELECTION SOFTWARE

To facilitate choosing the correct size of a fan coil for any operating condition (including those differing from the standard ones), EURAPO offers a dedicated computer program: <https://www.geniusplan.it>.

1.7 WATER CONNECTIONS



1

LEGEND

1. Internal structure
2. Fan deck
3. Electric motor with inverter (512÷528 models)
4. Scroll and impeller
5. Electric panel
6. Standard coil (2, 3 or 4 rows)
7. Additional coil
8. Condensate tray
9. Auxiliary drain pan
10. Water discharge plastic pipe
11. Grilles
12. Housing
13. Filter
14. Set of feet
15. Fixing slots

2

3

4

5

6

7

8

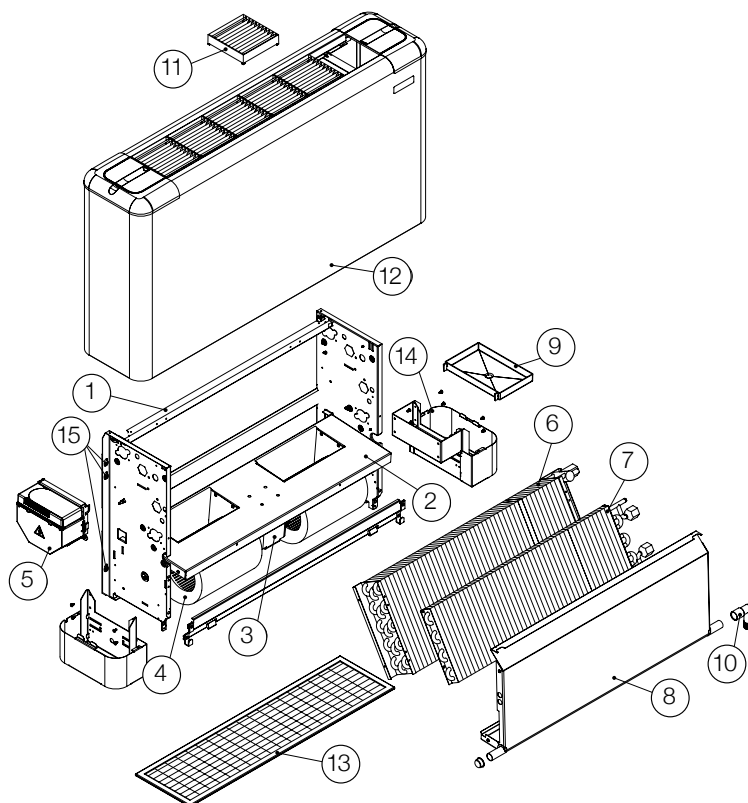
9

10

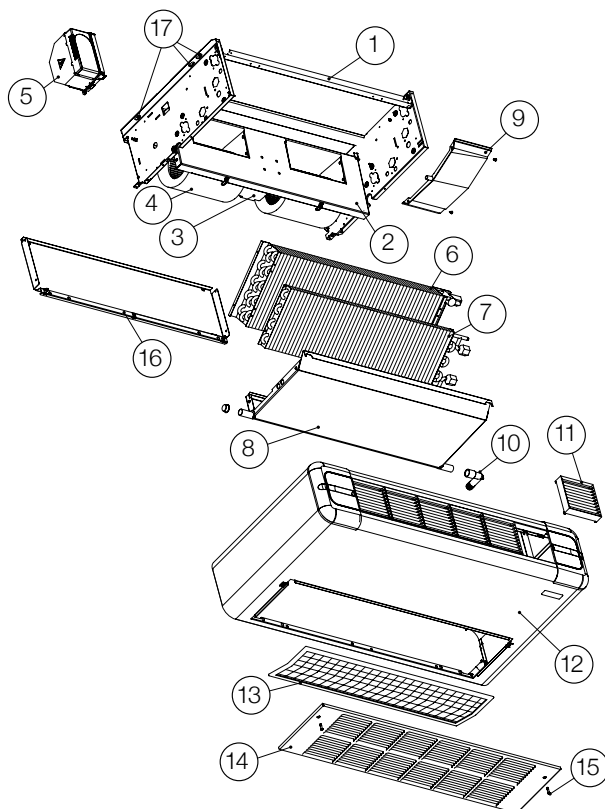
LEGEND

1. Internal structure
2. Fan deck
3. Electric motor with inverter (512÷528 models)
4. Scroll and impeller
5. Electric panel
6. Standard coil (2, 3 or 4 rows)
7. Additional coil
8. Condensate tray
9. Auxiliary drain pan
10. Water discharge plastic pipe
11. Grilles
12. Housing
13. Filter
14. Air intake panel
15. Fixing screws
16. Back inner panel
17. Fixing slots

ESTSV MODEL

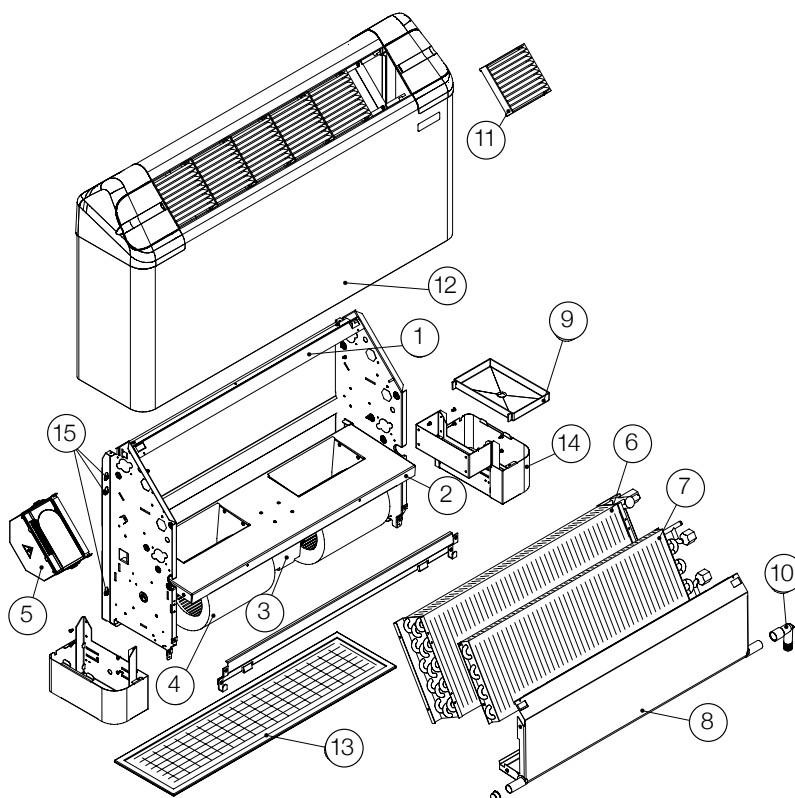


ESTSH/AF MODEL

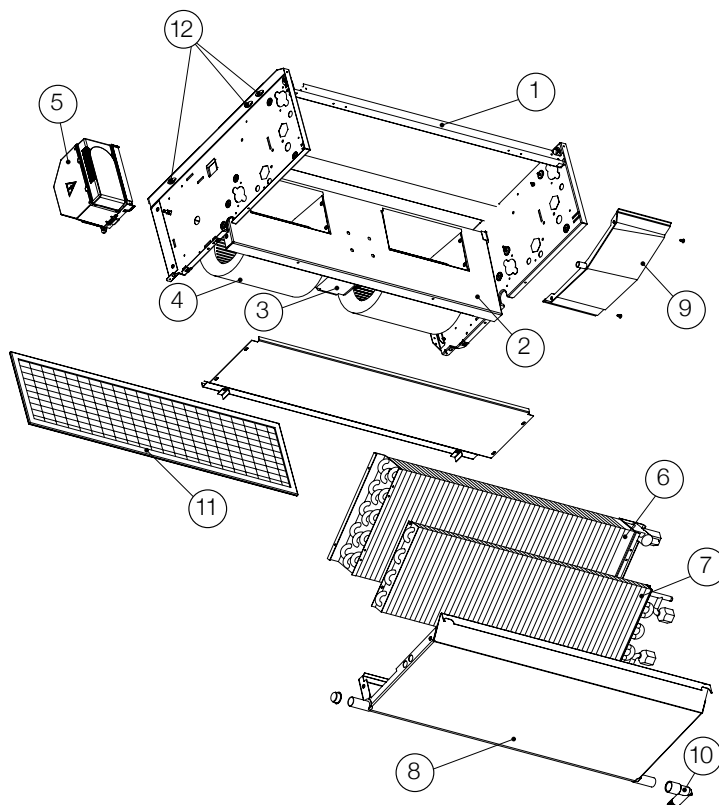


LEGEND

- | | |
|-----|--|
| 1. | Internal structure |
| 2. | Fan deck |
| 3. | Electric motor with inverter
(512÷516 models) |
| 4. | Scroll and impeller |
| 5. | Electric panel |
| 6. | Standard coil (2 or 3 rows) |
| 7. | Additional coil |
| 8. | Condensate tray |
| 9. | Auxiliary drain pan |
| 10. | Water discharge plastic pipe |
| 11. | Grilles |
| 12. | Housing |
| 13. | Filter |
| 14. | Set of feet |
| 15. | Fixing slots |

ESTPV MODEL**LEGEND**

- | | |
|-----|--|
| 1. | Internal structure |
| 2. | Fan deck |
| 3. | Electric motor with inverter
(512÷528 models) |
| 4. | Scroll and impeller |
| 5. | Electric panel |
| 6. | Standard coil (2, 3 or 4 rows) |
| 7. | Additional coil |
| 8. | Condensate tray |
| 9. | Auxiliary drain pan |
| 10. | Water discharge plastic pipe |
| 11. | Filter |
| 12. | Fixing slots |

ESTCH MODEL

1

2

3

4

5

6

7

8

9

10

2. MODELS WITH CABINET

2.1 SIGMA SERIE: ESTSV – ESTSV/AF MODELS



ESTSV MODEL

Vertical units with upper air outlet and bottom (ESTSV) or frontal (ESTSV/AF) air intake, to be installed on the wall (ESTSV) or on the floor (both models, but with a set of feet in white RAL 9003 for ESTSV model).

- grilles can be adjusted in all four directions and are made of heat-resistant ABS
- models equipped with auxiliary drain pan
- 2 pipe systems: 2, 3 or 4 row coils; on 2 or 3 row coil units an electric heater can also be mounted
- 4 pipe systems: additional 1 row coil can be added to units with a 2 or 3 row coil
- standard colour: white casing (RAL 9003) with white grilles and access doors (RAL 9016)



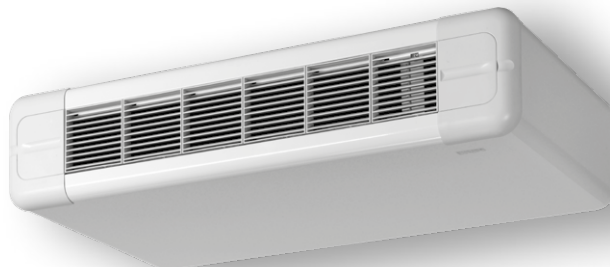
2.2 SIGMA SERIE: ESTSH – ESTSH/AF MODELS



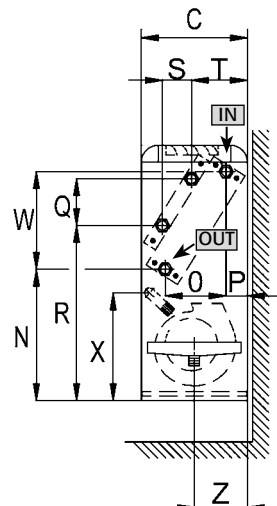
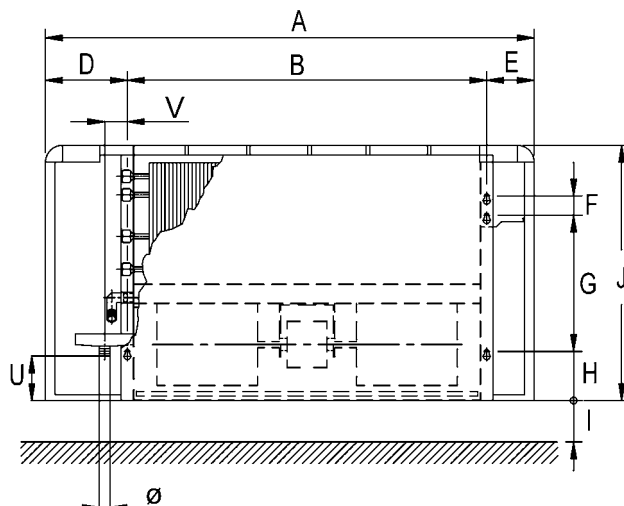
ESTSH MODEL

Horizontal units for ceiling installation with frontal air discharge and rear (ESTSH) or bottom (ESTSH/AF) air intake.

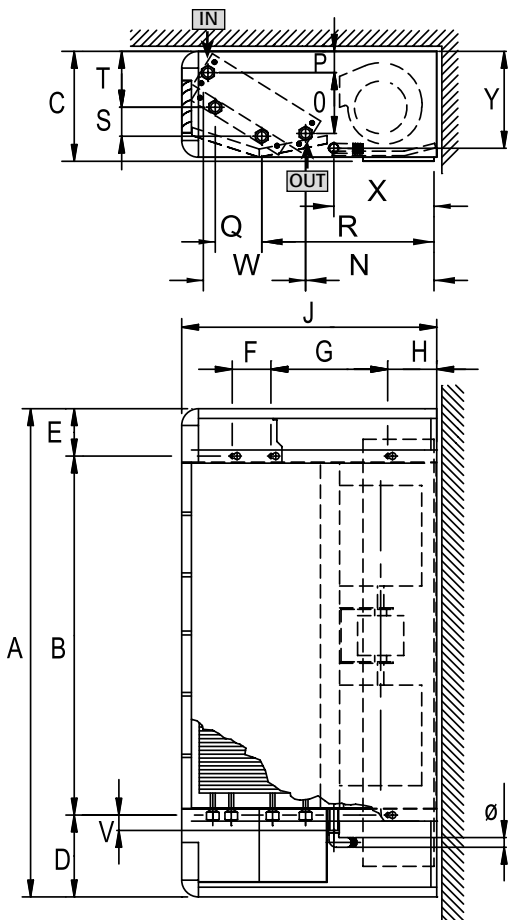
- grilles can be adjusted in all four directions and are made of heat-resistant ABS
- models equipped with auxiliary drain pan
- 2 pipe systems: 2, 3 or 4 row coils; in 2 or 3 row coil units an electric heater can also be mounted
- 4 pipe systems: additional 1 row coil can be added to units with a 2 or 3 row coil
- standard colour: white casing (RAL 9003) with white grilles and access doors (RAL 9016)



ESTSV MODEL



ESTSH/AF MODEL



ESTSV and ESTSH Dimensions and weights

Size	512	514	516	520	522	524	528
A	773	898	1023	1273	1273	1523	1773
B	499	624	749	999	999	1249	1499
C	224	224	224	254	254	254	254
D	174	174	174	174	174	174	174
E	100	100	100	100	100	100	100
F	40	40	40	40	40	40	40
G	280	280	280	356	356	356	356
H	101	101	101	101	101	101	101
I	85	85	85	85	85	85	85
J	538	538	538	614	614	614	614
N	266	266	266	299	299	299	299
O	113	113	113	138	138	138	138
P	48	48	48	53	53	53	53
Q	87	87	87	87	87	87	87
R	335	335	335	409	409	409	409
S	50	50	50	50	50	50	50
T	117	117	117	135	135	135	135
U	90	90	90	116	116	116	116
V	47	47	47	47	47	47	47
W	195	195	195	238	238	238	238
X	219	219	219	252	252	252	252
Z	109	109	109	122	122	122	122
Ø	20	20	20	20	20	20	20
kg	20	23	28	41	44	52	58

ESTSV/AF and ESTSH/AF Dimensions and weights

Size	512	514	516	520	522	524	528
A	773	898	1023	1273	1273	1523	1773
B	499	624	749	999	999	1249	1499
C	233	233	233	263	263	263	263
D	174	174	174	174	174	174	174
E	100	100	100	100	100	100	100
F	40	40	40	40	40	40	40
G	280	280	280	356	356	356	356
H	101	101	101	101	101	101	101
J	538	538	538	614	614	614	614
N	266	266	266	299	299	299	299
O	113	113	113	138	138	138	138
P	48	48	48	53	53	53	53
Q	87	87	87	87	87	87	87
R	335	335	335	409	409	409	409
S	50	50	50	50	50	50	50
T	117	117	117	135	135	135	135
V	28	28	28	28	28	28	28
W	195	195	195	238	238	238	238
X	219	219	219	252	252	252	252
Y	205	205	205	235	235	235	235
Ø	20	20	20	20	20	20	20
kg	21	24	30	43	46	54	61

2.3 PRISMA SERIE: ESTPV – ESTPV/AF MODELS



ESTPV/AF MODEL

Vertical units with upper air outlet and bottom (ESTPV) or frontal (ESTPV/AF) air intake, to be installed on the wall (ESTPV) or on the floor (both models, but with a set of feet in white RAL 9003 for ESTPV model).

- grilles can be adjusted in all four directions and are made of heat-resistant ABS
- models equipped with auxiliary drain pan
- 2 pipe systems: 2 or 3 row coils; on 2 row coil units an electric heater can also be mounted
- 4 pipe systems: additional 1 row coil can be added to units with a 2 or 3 row coil
- standard colour: white casing (RAL 9003), with white grilles and access doors (RAL 9016)



2.4 PRISMA SERIE: ESTPH – ESTPH/AF MODELS



ESTPH MODEL

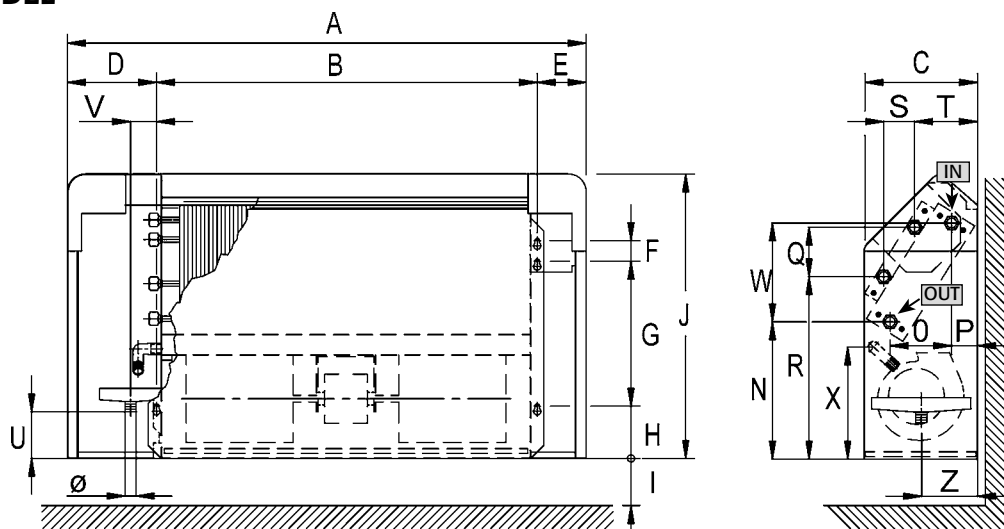
Horizontal units for ceiling installation with frontal air discharge and rear (ESTPH) or bottom (ESTPH/AF) air intake.

Designed for heating only.

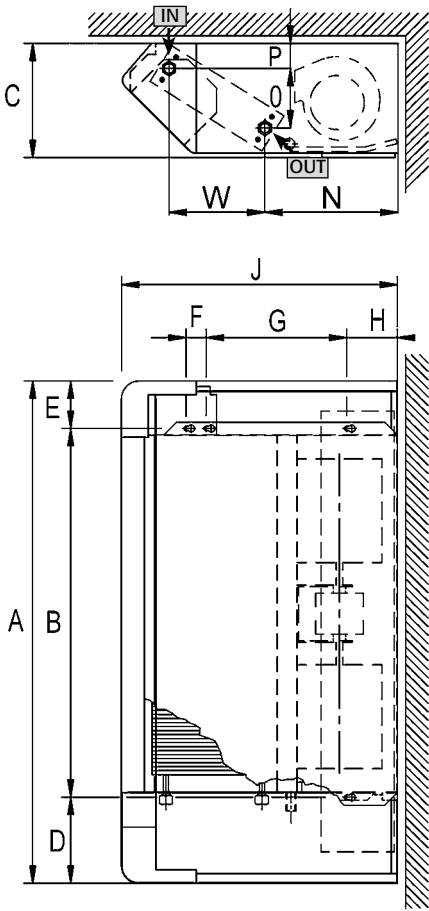
- grilles can be adjusted in all four directions and are made of heat-resistant ABS
- 2 pipe systems: 2 or 3 row coils; in 2 row coil units an electric heater can also be mounted
- standard colour: white casing (RAL 9003) with white grilles and access doors (RAL 9016)



ESTPV MODEL



ESTPH/AF MODEL



ESTPV and ESTPH Dimensions and weights

Size	512	514	516
A	773	898	1023
B	499	624	749
C	226	226	226
D	174	174	174
E	100	100	100
F	40	40	40
G	280	280	280
H	101	101	101
I	85	85	85
J	560	560	560
N	266	266	266
O	113	113	113
P	48	48	48
Q	87	87	87
R	355	355	355
S	50	50	50
T	117	117	117
U	90	90	90
V	47	47	47
W	195	195	195
X	219	219	219
Z	109	109	109
Ø	20	20	20
kg	20	23	27

ESTPV/AF and ESTPH/AF Dimensions and weights

Size	512	514	516
A	773	898	1023
B	499	624	749
C	235	235	235
D	174	174	174
E	100	100	100
F	40	40	40
G	280	280	280
H	101	101	101
J	560	560	560
N	266	266	266
O	113	113	113
P	48	48	48
W	195	195	195
Ø	20	20	20
kg	21	24	28

1

2

3

4

5

6

7

8

9

10

2.5 LOW BODY SERIE: ESTSVR MODEL

Vertical unit in a reduced height (430 mm) with upper air outlet and frontal air intake, to be installed on the floor.

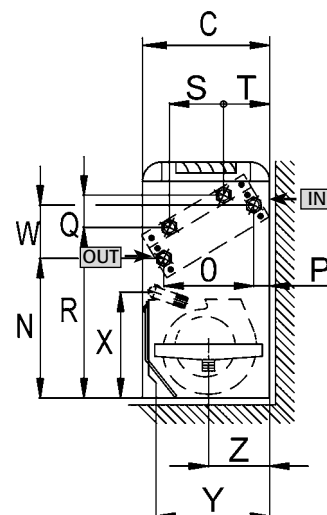
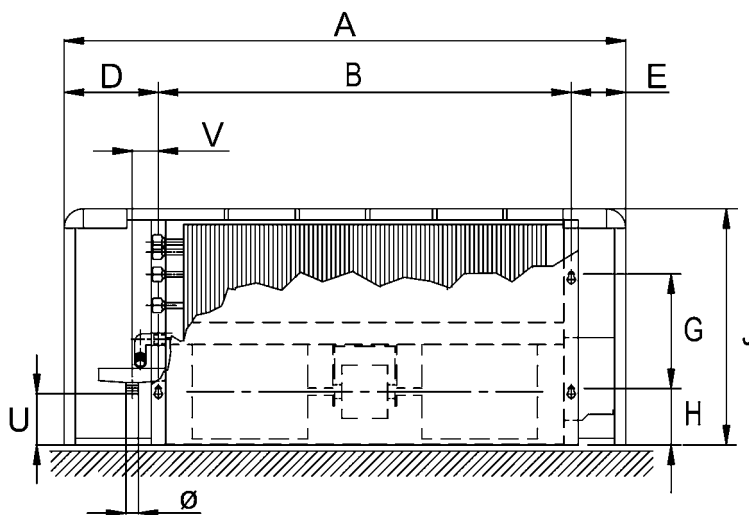
- grilles can be adjusted in all four directions and are made of heat-resistant ABS
- model equipped with auxiliary drain pan
- 2 pipe systems: 2 or 3 row coils; on 2 row coil units an electric heater can also be mounted
- 4 pipe systems: additional 1 row coil can be added to units with a 2 or 3 row coil
- standard colour: white casing (RAL 9003) with white grilles and access doors (RAL 9016)

ESTSVR MODEL



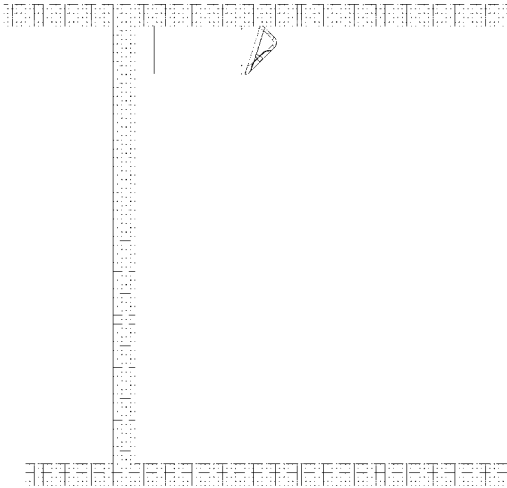
ESTSVR Dimensions and weights

Size	512	514	516
A	773	898	1023
B	499	624	749
C	254	254	254
D	174	174	174
E	100	100	100
G	170	170	170
H	101	101	101
J	430	430	430
N	245	245	245
O	154	154	154
P	31	31	31
Q	47	47	47
R	304	304	304
S	88	88	88
T	87	87	87
U	65	65	65
V	47	47	47
W	84	84	84
X	214	214	214
Z	109	109	109
Ø	20	20	20
kg	17	22	23

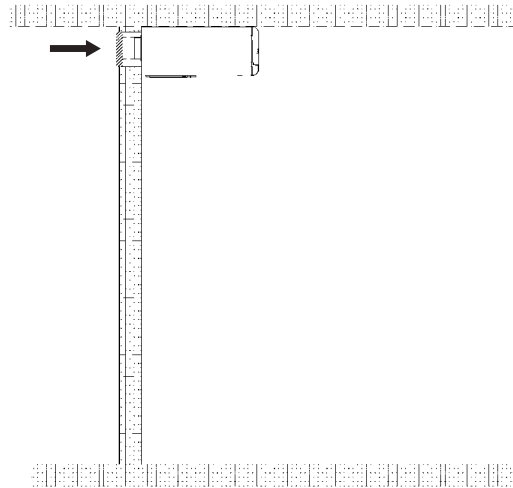


2.6 SUGGESTED INSTALLATION

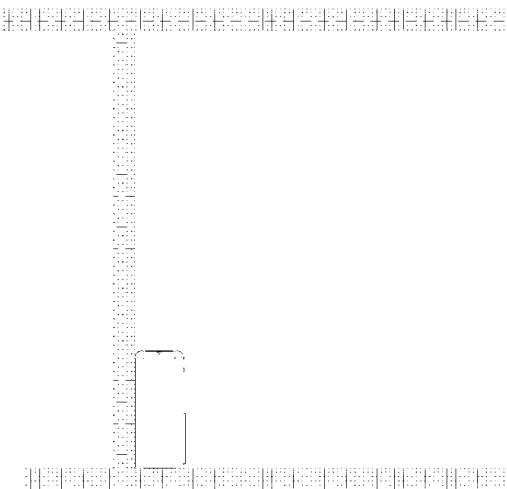
ESTPH



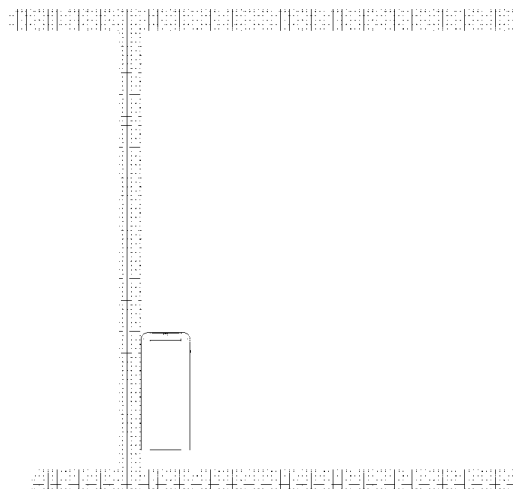
**ESTSH/AF
PAE/HAF**



ESTSV/AF



ESTSV



1

2

3

4

5

6

7

8

9

10

3. MODELS WITHOUT CABINET

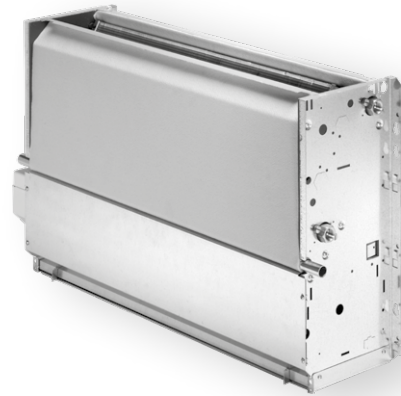
3.1 CONCEALED SERIE: ESTCV – ESTCV/AF MODELS



ESTCV MODEL

Vertical units for concealed installation with upper air outlet and bottom (ESTCV) or frontal (ESTCV/AF) air intake.

- models equipped with auxiliary drain pan
- 2 pipe systems: 2, 3 or 4 row coils; in all units an electric heater can also be mounted
- 4 pipe systems: additional 1 row coil can be added to units with a 2 or 3 row coil; in 4 row coil units, the additional 1 row coil is fitted on the air outlet connection



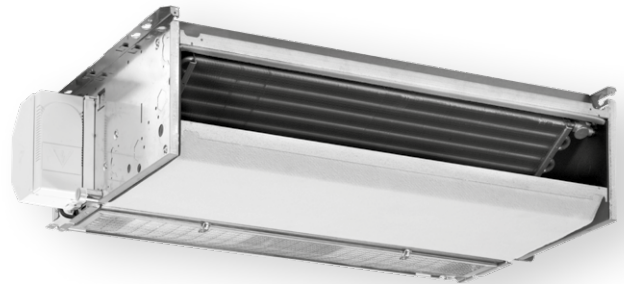
3.2 CONCEALED SERIE: ESTCH – ESTCH/AF MODELS



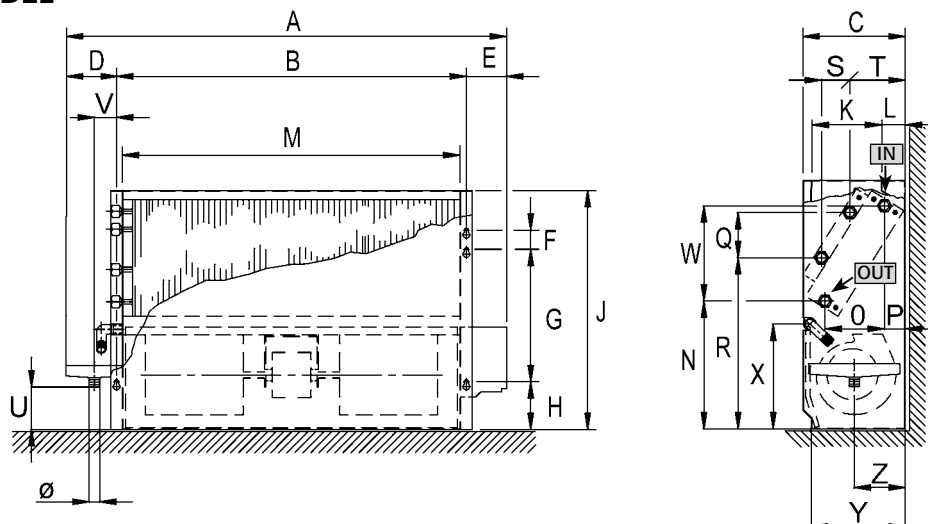
ESTCH/AF MODEL

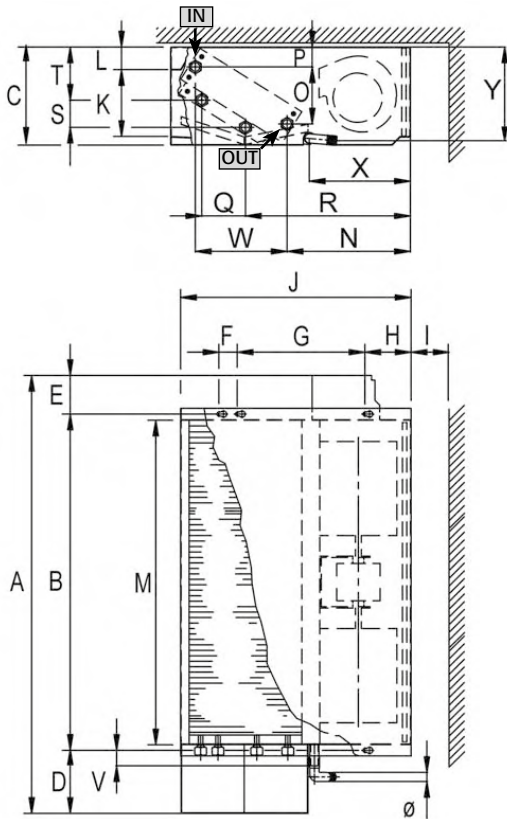
Horizontal units for concealed installation, with frontal air outlet and rear (ESTCH) or bottom (ESTCH/AF) air intake.

- models equipped with auxiliary drain pan
- 2 pipe systems: 2, 3 or 4 row coils; in all units an electric heater can also be mounted
- 4 pipe systems: additional 1 row coil can be added to units with a 2 or 3 row coil; in 4 row coil units, the additional 1 row coil is fitted on the air outlet connection



ESTCV/AF MODEL



ESTCH MODEL**ESTCH and ESTCH/AF Dimensions and weights**

Size	512	514	516	520	522	524	528
A	699	824	949	1199	1199	1449	1699
B	499	624	749	999	999	1249	1499
C	215	215	215	245	245	245	245
D	128	128	128	128	128	128	128
E	72	72	72	72	72	72	72
F	40	40	40	40	40	40	40
G	280	280	280	356	356	356	356
H	101	101	101	101	101	101	101
I	85	85	85	85	85	85	85
J	505	505	505	581	581	581	581
K	110	110	110	125	125	125	125
L	55	55	55	60	60	60	60
M	474	599	724	974	974	1224	1474
N	266	266	266	299	299	299	299
O	113	113	113	138	138	138	138
P	48	48	48	53	53	53	53
Q	87	87	87	87	87	87	87
R	355	355	355	409	409	409	409
S	50	50	50	50	50	50	50
T	117	117	117	135	135	135	135
V	28	28	28	28	28	28	28
W	195	195	195	238	238	238	238
X	219	219	219	252	252	252	252
Y	205	205	205	235	235	235	235
Ø	20	20	20	20	20	20	20
kg	13	16	19	29	31	38	42

ESTCV and ESTCV/AF Dimensions and weights

Size	512	514	516	520	522	524	528
A	680	805	930	1180	1180	1430	1680
B	499	624	749	999	999	1249	1499
C	215	215	215	245	245	245	245
D	109	109	109	109	109	109	109
E	72	72	72	72	72	72	72
F	40	40	40	40	40	40	40
G	280	280	280	356	356	356	356
H	101	101	101	101	101	101	101
J	505	505	505	581	581	581	581
K	110	110	110	125	125	125	125
L	55	55	55	60	60	60	60
M	474	599	724	974	974	1224	1474
N	266	266	266	299	299	299	299
O	113	113	113	138	138	138	138
P	48	48	48	53	53	53	53
Q	87	87	87	87	87	87	87
R	355	355	355	409	409	409	409
S	50	50	50	50	50	50	50
T	117	117	117	135	135	135	135
U	90	90	90	116	116	116	116
V	47	47	47	47	47	47	47
W	195	195	195	238	238	238	238
X	219	219	219	252	252	252	252
Y	200	200	200	230	230	230	230
Z	109	109	109	122	122	122	122
Ø	20	20	20	20	20	20	20
kg	13	16	19	29	31	38	42

1

2

3

4

5

6

7

8

9

10

3.3 LOW BODY SERIE: ESTCVR MODEL

Vertical unit in a reduced height (395 mm) for concealed installation, with upper air outlet and frontal air intake.

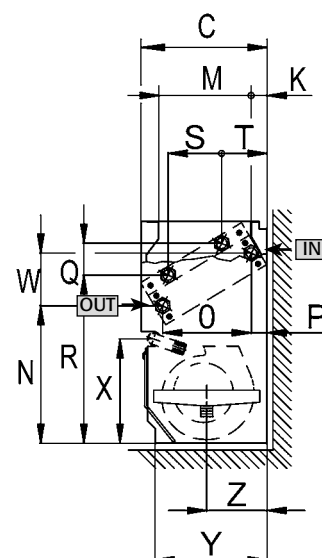
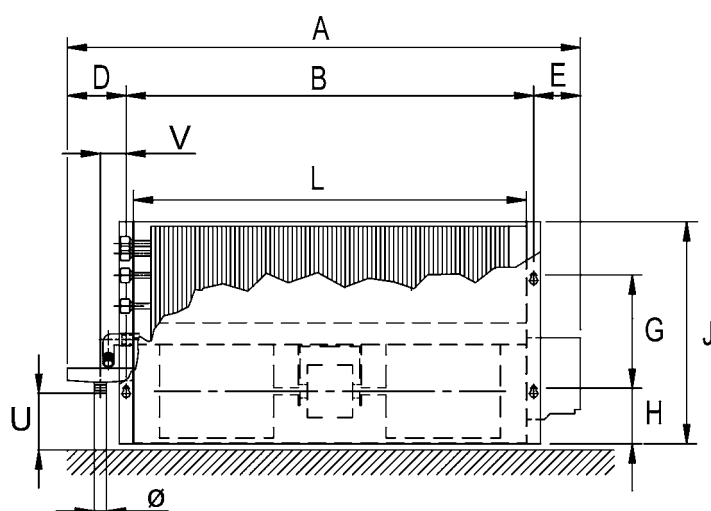
- model equipped with auxiliary drain pan
- 2 pipe systems: 2 or 3 row coils; on 2 row coil units an electric heater can also be mounted
- 4 pipe systems: additional 1 row coil can be added to units with a 2 or 3 row coil

ESTCVR MODEL



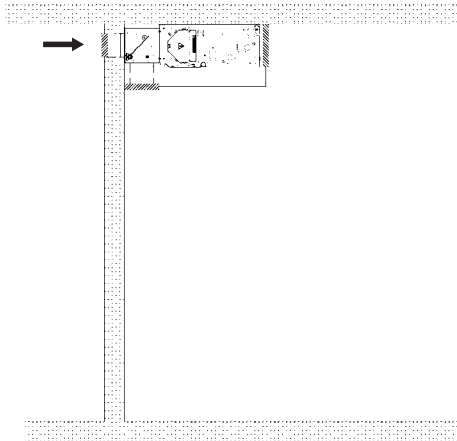
ESTCVR Dimensions and weights

Size	512	514	516
A	680	805	930
B	499	624	749
C	230	230	230
D	108	108	108
E	73	73	73
G	170	170	170
H	101	101	101
J	395	395	395
K	61	61	61
L	474	599	724
M	127	127	127
N	245	245	245
O	154	154	154
P	31	31	31
Q	47	47	47
R	304	304	304
S	88	88	88
T	87	87	87
U	65	65	65
V	47	47	47
W	84	84	84
X	214	214	214
Y	201	201	201
Z	109	109	109
Ø	20	20	20
kg	11	14	16

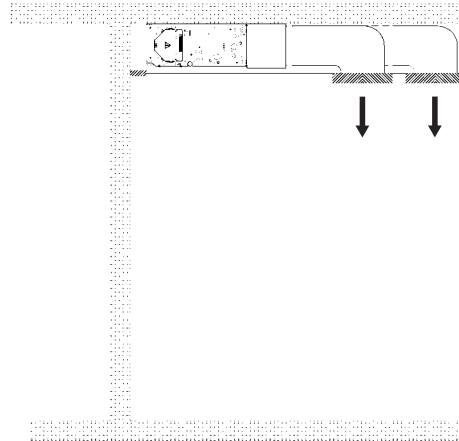


3.4 SUGGESTED INSTALLATION

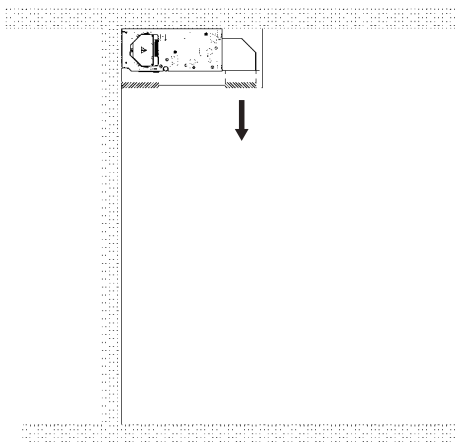
**ESTCH
PAE/HM**



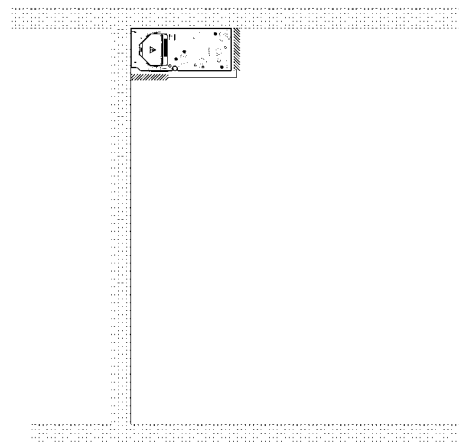
**ESTCH
PM**



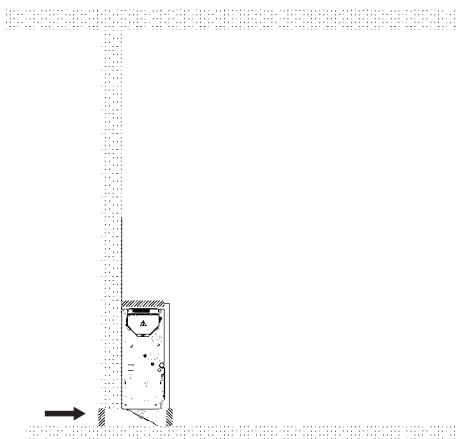
**ESTCH/AF
PM 90°**



ESTCH/AF



**ESTCV
PAE/V**



1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

4. COMPONENTS

4.1 INNER FRAME

The inner frame consists of 2 sides and a back panel assembled together, and of a movable element (condensate tray). It is made of galvanised steel: 8/10 mm thick for models up to size 516, 10/10 mm thick for the other sizes.

The sides have a special structure near the coil connections in order to avoid the headers' deformation while connecting the unit to the system (anti-torsion structure).

All the inner elements are completely lined with closed cell thermal insulation material.

The insulated condensate tray can be taken apart independently of the other components and it is perfectly effective both in vertical and in horizontal position.

The condensed water is discharged from the side (left or right, by choice), through a 20 mm external diameter header.

4.2 COILS

The coils consist of aluminium fin packs and mechanically expanded copper tubes.

Max. operating pressure: 16 bar. Testing pressure: 30 bar. Standard water connections are on the right side of the unit, facing the air outlet; however the coils can be easily removed and reversed on site. Each header is provided with a very handy air valve, to allow air venting or water drainage from the coil. All water connections are 1/2" G (female threaded).

Sigma and Concealed models (sizes 516+528) are also available with **District Cooling** coils, designed with a reduced number of circuits, suitable for functioning with high water temperature difference.

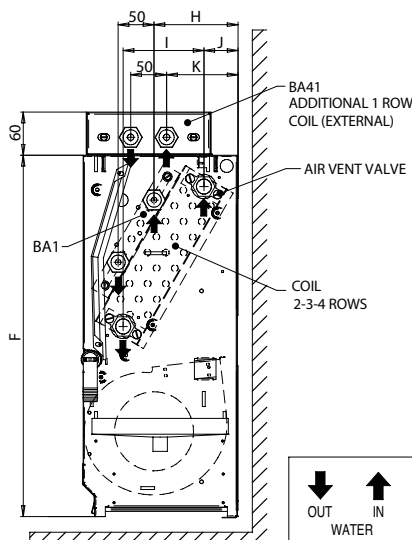


Maximum operating pressure: 16 bar (without valves).

COMPATIBILITY							
Model	ESTSV ESTSV/AF	ESTSH ESTSH/AF	ESTCV ESTCV/AF	ESTCH ESTCH/AF	ESTPV ESTPV/AF	ESTPH ESTPH/AF	ESTSVR ESTSVR
B2 (2 rows)	•	•	•	•	•	•	•
B3 (3 rows)	•	•	•	•	•	•	•
B4 (4 rows)	•	•	•	•			
B2 + BA1 (*)	•	•	•	•	•		•
B3 + BA1 (*)	•	•	•	•	•		•
B4 + BA41 (**)			•	•			

(*) BA1: additional 1 row coil for 4 pipe systems; the coil (for heating only) is placed inside the inner frame, in addition to 2 or 3 row coils.

(**) BA41: additional 1 row coil for 4 pipe systems; the coil (for heating only) is placed outside the frame, fixed on the air outlet (see drawing).



DIMENSIONS					
Size	F	H	I	J	K
512	505	117	113	48	100
514	505	117	113	48	100
516	505	117	113	48	100
520/522	581	135	138	53	104
524	581	135	138	53	104
528	581	135	138	53	104

4.3 FAN DECK

The brushless motor is a component of the EST technology (Energy Saving Technology) applied to the Eurapo product range. It is combined to a dedicated electronic device (inverter), which is provided with DIP SWITCH that can be set on site accordingly to the pressure drop in the system.

The inverter can be managed by specific regulators (Omnibus, for example) which use a modulating signal with 0-10Vdc tension in order to regulate the fan speed. OMNIBUS regulators give the possibility to fully control the fan speed (0-100%) and/or to manually select three fan steps (high, med and low speed): it is actually possible to set in every moment and very easily the three different levels of motor's rotation, in order to fulfil specific thermal or acoustical requirements. Standard motors have an IP40 protection degree and insulation class F (IP44 motors are available on request). All motors operate at 50/60Hz for all sizes power supply is 230V $\pm 10\%$.

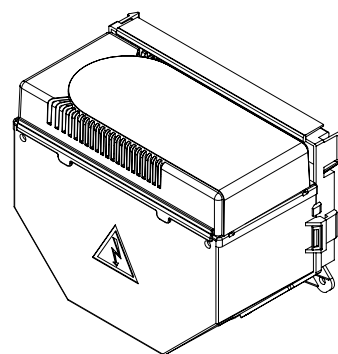
The motor and the scrolls are fixed on a galvanized steel basement (12/10 mm thick for models 512÷516 and 15/10 mm thick from size 520÷528): the motor is located in a proper cradle and fixed with elastic ribbon supports. Each fan assembly is dynamically balanced, to reduce noise and wear of the components to minimum levels; it can be easily removed, independently of the inner frame, by taking off two fixing screws. It consists of a centrifugal fan, one (512 and 514 sizes) or two (516÷528 sizes) aluminium impellers, directly splined to the motor shaft, and of galvanized steel scrolls.

4.4 ELECTRICAL COMPONENTS AND CONTROLS

The electric panel (ESTCBL00) consists of a self-extinguishing plastic box (class V0), which contains a 12 pole terminal board and a DIP switch card.

The plastic box is fixed on the left side (as standard) of the inner frame, and it can be easily pulled out and shifted from the left to the right side when the water connections are reversed.

Every unit is provided with an electric wiring diagram, always showing all the controls (both built-in and remote) and electric accessories eventually mounted on the unit. Everything must be correctly wired in accordance to the diagram, to obtain the requested working conditions of the unit.



ESTCBL00

4.5 AIR FILTER

The air filter consists of a galvanized steel frame and two wide mesh nets enclosing the washable filter element with filtering cells made by non-hygroscopic material. (see page 6, Fig. ESTSV, point 14).

The filter is placed on the bottom part of the unit (except for AF units) and it can be easily removed by releasing its fixing; it can be cleaned by washing with soap and water and drying in open-air. AF models have a shaped filter located behind the air inlet panel and suspended by splines (see page 6, Fig. ESTSH/AF, point 14).

4.6 HOUSING

The housing (see page 6, Fig. ESTSV, point 13) is manufactured with sheet steel painted with oven dried epoxy powders; its thickness is 8/10 mm for 512÷516 sizes and 10/10 mm for 520÷528 sizes. The standard colour is white (RAL 9003).

It is fixed to the inner frame with screws and also with retainers. In models having frontal air intake (AF), the panel covering the filter is fixed with a 1/4 turn screw system and can be taken off by using a screwdriver.

The standard grilles are movable and can be turned into all 4 directions without any tool. They are made of heat-resistant ABS (see page 6, Fig. ESTSV, point 12). At each side of the grilles, two doors in ABS give access to the control panel and to the water connections respectively. Both grilles and access doors are white (RAL 9016).

On request, the full range of RAL colours is available for each model with a slightly increased delivery time.

5. ELECTRICAL ACCESSORIES

5.1 ELECTRIC BOX CBL10

Self-extinguishing plastic box (class V0), which contains a 12 pole terminal board and a voltage transformer (230/24 V~ 10 VA), for the electrical connection of the modulating valves. It can be used in combination to EDCR, EDCL and Omnibus 360 controls.

5.2 ELECTRIC BOX CBL20

Self-extinguishing plastic box (class V0), which contains a 12 pole terminal board and a power relay card (230 V~) for controlling an electric heater. It can be combined with the following regulators: EDCR, EDCL and ORBVxx (Omnibus 360).

5.3 ELECTRIC HEATER KREL

Electric heater supplied with 2 safety thermostats, one with automatic resetting (intervention temperature 75 °C) and the other one with manual resetting (intervention temperature 85 °C), and a power relay card (CBL20).

Table A

		COMPATIBILITY						
Model		ESTSV ESTSV/AF	ESTSH ESTSH/AF	ESTCV ESTCV/AF	ESTCH ESTCH/AF	ESTPV ESTPV/AF	ESTPH ESTPH/AF	ESTSVR ESTCVR
Type of coil	B2	•	•	•	•	•	•	•
	B3	•	•	•	•			
	B4			•	•			

The table A shows the availability of the electric heater for the different models, in relation to the coil mounted on the unit.

Table B

SIZE	512	514	516	520	522	524	528
Power kW	1,0	1,5	2,0	2,5	2,5	3,0	3,5

The table B shows the power of the electric heater for each unit size. An electric heater with a lower power rating than shown can always be installed.

5.4 WS – WATER SENSOR

3m long NTC sensor (10K, 25°C), requested for the automatic S/W switch when a fancoil unit is controlled by a regulator with microprocessor or OMNIBUS 360, in a 2 pipe system, for both heating and cooling operation.

The Summer/Winter changeover works as follows:

- Summer: water temperature < 18 °C ± 1K = cooling on
- water temperature > 20 °C ± 1K = cooling off
- Winter: water temperature > 36 °C = heating on
- water temperature < 34 °C = heating off

The water sensor is not suitable when 2 way valves are mounted on the unit (i.e.: H2A2 or J2AM).



WS

5.5 AS – AIR SENSOR

1 or 3m long NTC sensor (10K, 25°C), to be installed on the fancoil unit's air intake.
It is supplied as standard with the EDCL regulator.
It is optional, on request, for EDCR and ORBVXX controls.

5.6 CS – CHECK SENSOR

1 or 3m long NTC sensor, to be installed on the fancoil unit's air outlet.
In combination with OMNIBUS card, it allows to highlight any faults in the functioning of the fancoil unit, by reporting an alarm signal.

5.7 PC – CONDENSATE PUMP

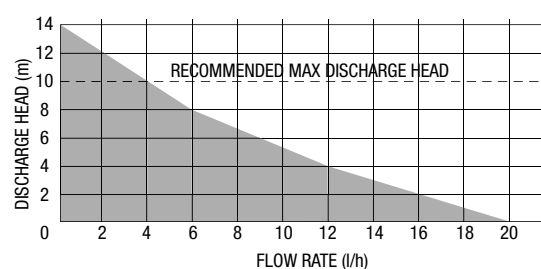
The condensate pump is necessary when the natural water discharge is not allowed.

Functions:

- forced evacuation of the condensed water

Technical features:

- max water flow: 20 l/h
- max water discharge: 10 m head
- max suction: 3 m
- power supply: 230V~ 50/60 Hz
- power: 14 W
- alarm output: NC 8 A - 250 V
- detection levels in mm: running: 16, stop: 11, alarm: 19
- thermal protection (overheating): 115 °C
- sound level at 1 m: 20 db (A)
- no return valve on the outlet



5.8 ELECTRONIC REGULATORS EDCR-EDCL

Microprocessor control designed for water terminal units equipped with brushless motors (EST Inverter Technology).
It permits to control the type of ventilation (fan thermostated or fan continuously running), the fan speeds (0-10V or Auto), SUMMER/WINTER changeover and room temperature thermostat.

EDCR-EDCL CONTROLS FUNCTIONS

Functions	EDCR-EDCL
Ventilation mode (Thermostated - Continuous)	•
Manual (0-10V) or Auto speed selector	•
Automatic S/W changeover (2 pipe system, with WS)	•
Automatic (with dead band) or external (centralized) S/W changeover	•
Room temperature thermostat setting	•
De-stratification function	•
Economy/occupancy contact*	•
Window contact*	•
Frost protection (only with heating valve)	•
Operating mode LED (Summer - Winter)	•
Dirty filter alarm LED	•

* not optoinsulated from 230 V~ power supply net

1

2

3

4

5

6

7

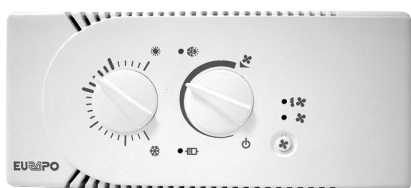
8

9

10

EDCR-EDCL CONTROLS COMPATIBILITY

Compatibility	Ref. EURAPO	EDCR-EDCL
2 and 4 pipe system		•
ON/OFF 230V cooling and heating valve, 2/4 pipe system	_3A2	•
Modulating 24V cooling and heating valve, 2/4 pipe system	J3AM	•
Pressure independent valves 230V, 2/4 pipe system	D2B2	•
Pressure independent valves 24V, 2/4 pipe system	D2BM	•
NTC water sensor for automatic S/W (2 pipe system) and min. water temp. thermostat	WS	•
Electric heater (in alternative to the heating valve)	KREL	•



EDCR



EDCL



5.9 OMNIBUS 360 DIGITAL CONTROL

The digital control OMNIBUS 360 permits a complete and integrated management of a fancoil unit. It is designed either for a stand-alone operating mode, or to be integrated, at different levels, to a centralized Building Automation System, with a serial communication protocol RS-485 (Modbus RTU). The digital regulator can control many fancoil units at the same time (Master/Slave solution), which are connected together by two twisted wires (AWG 22/24).

5.9.1 OPOWER CARD FOR BMS - ORBV10

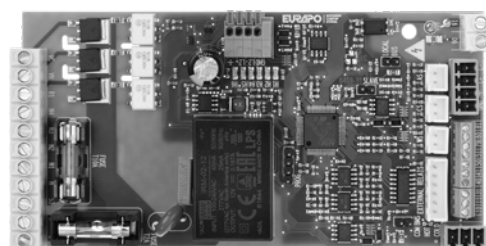
The OPower card mounted on the unit is designed to fully regulate (directly or via Modbus) the water terminal units with brushless motor.

Output/Input management:

- 230V ON/OFF VALVES: no. 2 230V outputs for the management of the Hot water valve and Cold water valve.
- MODULATING VALVES: no. 2 analogue 0/10V outputs for the management of Hot water modulating valve and Cold water modulating valve.
- BRUSHLESS FAN: Analogue 0/10V output for the management of the brushless motor and relative input for the management of any alarms.
- ELECTRIC HEATER: 230V signal for the control of the electric heater.
- ROOM TEMPERATURE: Analogue input for the connection of a NTC water sensor (WS)
- AIR OUTLET TEMPERATURE: Analogue input for the connection of an air outlet temperature sensor (CS).
- WINDOW CONTACT INPUT: Digital input configurable for the management of the window contact.
- MULTIFUNCTION INPUT: Configurable input for the management of differential pressure switch, STANDBY forcing, Season changeover, Motor alarm, Forcing ventilation, Economy mode, External temperature sensor.
- PUMP ALARM/DIFFERENTIAL PRESSURE SWITCH INPUT: Configurable input for the management of the condensate pumps alarm or the differential pressure switch alarm.

Serial Ports of communication:

- MODBUS LOCAL BUS: Communication port 485 with Modbus protocol for the MASTER/SLAVE connection of the units.
- MODBUS BUS CONSOLE: Communication port 485 with Modbus protocol for the connection of the LOCAL CONSOLE.



ORBV10

- MODBUS BMS BUS: Communication port 485 with Modbus protocol for the connection of the BMS supervisor.

Additional multifunction card:

- MULTITASK CARD CONNECTION: The multitask expansion board provides contacts for the control of 24V ON/OFF valves, alarm contact, fan contact or card status via some relays.

5.9.2 ROUND TOUCH CONSOLE - ORC4xx

The console is connected to the OPower card installed on the water terminal unit with a double-insulated 3-conductor cable for information exchange of the RS-485 Console Bus network. The 230V mains power supply is supplied separately. It is equipped with a 4.3" backlit capacitive TFT touch screen and a buzzer for confirming the command selection.

The console can manage the following functions:

- Status: OFF-Comfort-Economy
- Fan: Min, Med, Max, Auto
- Functioning mode: Cooling-Heating-Fan
- Room temperature setting (set-point)
- Weekly program
- Alarms management and visualization
- Parameters management
- Visualization of Input/Output status



ORC436

For a correct operation of the console a NTC air sensor must be mounted on the combined fan coil unit.

5.9.3 ROUND DISPLAY CONSOLE - ORC2xx

The console is connected to the OPower card installed on the water terminal unit with a double-insulated 4-conductor cable for power supply and information exchange of the RS-485 Console Bus network; it is equipped with a LCD backlit screen and four **touch** buttons for the parameters and operation mode settings of the fan coil unit:

- Status: OFF-Comfort-Economy
- Fan: Min, Med, Max, and Auto
- Functioning mode: Cooling-Heating-Fan
- Room temperature setting (set-point)



ORC236

The console is equipped with a NTC sensor for the detection of the room temperature.

The Round Display console can also be used as **Service Tool** (diagnostic tool), allowing:

- Identification by code of any alarm states.
- Modbus address assignment or change and I/O status verification.

5.9.4 ROUND ANALOG CONSOLE - ORC3xx

The console is connected to the OPower card with 4 wires for power supply and information exchange of the RS-485 Console Bus network. The console is composed by:

- 1 knob for the room temperature setting and the deactivation of the water terminal unit;
- 2 buttons for the fan speed selection (Min, Med, Max, Auto) and the operating mode setting (Summer/Winter);
- 1 LED that indicates the operating mode;
- 4 LED for the visualization of the fan speed and any warning status
- 1 NTC integrated air sensor for the detection of the room temperature.



ORC236

1

2

3

4

5

6

7

8

9

10

5.9.5 ROUND CABIN CONSOLE - ORC6xx

The console is connected to the OPower card with 4 wires for power supply and information exchange of the RS-485 Console Bus network. The console is composed by:

- 1 KNOB for the room temperature setting and the operating mode;
- 1 LED that indicates the operating mode (Cooling or Heating) or any alarm or warning;
- 1 NTC integrated air sensor for the detection of the room temperature.



ORC636

5.9.6 ROUND INSIDE CONSOLE - ORC11x

The console is connected to the OPower card housed in the unit with a double insulated 4-wire cable and through this cable it receives power supply and exchanges information via RS-485 Console Bus network.

The console is composed by:

- 1 KNOB for the room temperature setting;
- 2 buttons for the fan speed selection (Min, Med, Max, Auto) and the operating mode setting (Summer/Winter);
- 1 LED that indicates the operating mode;
- 4 LED for the visualization of the fan speed and any warning status



ORC11x

5.9.7 ROUND IR CONSOLE (ORC5xx) AND REMOTE CONTROL (OIR30)

The console is connected to the OPower card with 4 wires for power supply and information exchange of the RS-485 Local Bus network. It can be mounted integrated in the housing of the fancoil (ORC 514) or on the wall (ORC 516).

The console is composed by: 1 NTC integrated air sensor for the detection of the room temperature and 1 LED that indicates the operating mode (Cooling or Heating) or any alarm or warning.



ORC516



OIR30

The console Round IR must be paired to the remote control (OIR 30).

5.10 OMNIBUS 360 SUPERVISION

5.10.1 ROUND MANAGER - ORS7xx (up to 16 units)

It is a supervisor for small system and is composed by 4.3" capacitive TFT touch screen. It allows the centralization of the operating mode of the **OPower** cards, up to a maximum of 16 cards connected to the network. Each single OPower card can be independently managed by using one of the available OConsoles. The provisioning of a Wi-Fi connection allows the connection to a server Cloud and the remote management by the dedicated app **ROUND CLIMA**.

- MODBUS/RTU protocol
- Parameters set-up
- INPUT/OUTPUT status visualization
- Alarms management
- Daily and weekly programming of all units connected to the same network
- Multilanguage



ROUND MANAGER - ORS736

5.10.2 ROUND MASTER SUPERVISOR - ORS810 (UP TO 100 UNITS)

Round Master is a supervisor for medium-size systems with a 7-inch screen and capacitive touch. It allows managing up to **100 OPower** cards connected to the network via the MODBUS RTU serial bus. Each single OPower card can be independently managed by using one of the available OConsoles.

With Round Master it is possible to configure complex scenarios and set up seasonal system programming. The supervisor can manage by one control panel the operation of fan coil units and to integrate and interact with other devices of the HVAC system at the same time:

- cooling and heating unit (chiller/boiler);
- circulating pumps of the HVAC system;
- modulating valves (for radiant systems);
- thermal zone valves;
- hydronic terminal units.

The main features are:

- Wi-Fi connection allows the connection to a server Cloud and the remote management by the dedicated app **ROUND CLIMA PLUS**
- Ethernet connection
- MODBUS/RTU protocol
- Different access level (administrator/super/user)
- Centralized operation
- Set-up parameters configuration
- INPUT/OUTPUT status monitoring
- Daily, weekly and special events program
- Alarms management
- Boost function for a period set by the user
- Remote management via Internet
- USB port for backup and restore of the system

Round Master supervisor is designed to be installed on the wall or to be placed on a table and has an external 230V/24vdc power supply supplied in the installation kit.



ROUND MASTER - ORS810

5.10.3 ROUND NET - ORS940 (UP TO 250 UNITS)

Round Net Web server is an embedded system complete with web server, designed to allow terminal units to be connected and managed via the MODBUS network, ensuring a very high level of control.

Thanks to a latest generation processor and high performance components, it is possible to achieve high computing power. Round Net offers the same functions as the Round Master supervisor, but allows you to manage larger networks, controlling **up to 250 OPower cards**.

Thanks to the Wi-Fi antenna, it is possible to connect to Round Net via the internet, using a common web browser. It can also connect to a Cloud server and be managed remotely via the **ROUND CLIMA PLUS app**.

Round Net is designed for remote wall installation, typically positioned in technical rooms or **thermal power plants** thanks to the presence on the body of useful air intakes.

Round Net has an external 230V/24Vdc power supply supplied in the installation kit.



OCB50

5.10.4 APP ROUND CLIMA AND ROUND CLIMA PLUS

With the **Round Clima** and **Round Clima Plus** mobile applications it is possible to remotely manage the system functions via smartphone and tablet.

The application is compatible with both Android and iOS operating systems.

They are only available paired with Round Manager, Round Master and Round Net devices.



ROUND CLIMA and **ROUND CLIMA PLUS** are available in the following app stores:



6. REGULATING VALVES

6.1 ON/OFF VALVES: 3-WAY WITH 4 WATER CONNECTIONS (_3A2-_3B2) OR 2-WAY (_2A2-_2B2), 1/2"-3/4", 230V, FOR 2 OR 4 PIPE SYSTEMS

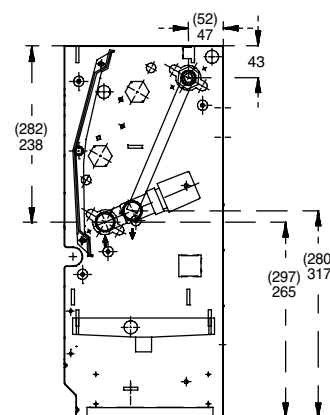
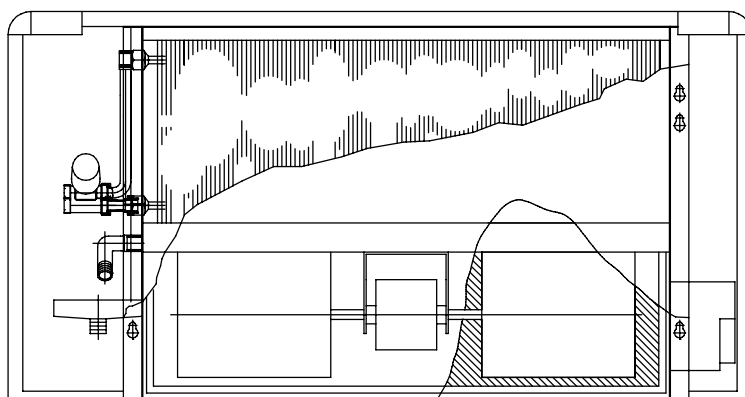
The ON/OFF 3-way regulating valves with bypass and 2-way regulating valves are provided with thermoelectric actuator and connection tubes. The direct water flow is closed by not supplying power to the actuator.

They are suitable for fan coils size 512÷528 and available also with 24V~ (H3B0, H2B0, H3A0, H2A0).

6.2 MODULATING VALVES: 3-WAY WITH 4 WATER CONNECTIONS (J3AM-J3BM) OR 2-WAY (J2AM-J2BM), 1/2"-3/4", 24V, FOR 2 OR 4 PIPE SYSTEMS

The modulating 3-way regulating valves with bypass and 2-way regulating valves are provided with modulating actuator and connection tubes. The direct water flow is closed by not giving the 0-10V signal to the actuator.

They are suitable for fan coils size 512÷528.



ESTSV WITH VALVE. Dimensions between brackets are referred to size 520÷528

REGULATING VALVES TECHNICAL FEATURES

Nominal pressure	PN16	Cod.: H2A2, J2A2, H3A2, J3A2, J2AM, J3AM, H2B2, J2B2, H3B2, J3B2, J2BM, J3BM, H3B0, H2B0, H3A0, H2A0
Fluid	Hot or cold water for HVAC system, according to VDI standard quality or equivalent	Cod.: H2A2, J2A2, H3A2, J3A2, J2AM, J3AM, H2B2, J2B2, H3B2, J3B2, J2BM, J3BM, H3B0, H2B0, H3A0, H2A0
Connection	1/2" GM	Cod.: H2A2, J2A2, H3A2, J3A2, J2AM, J3AM, H3A0, H2A0
	3/4" GM	Cod.: H2B2, J2B2, H3B2, J3B2, J2BM, J3BM, H3B0, H2B0
Max close-off pressure	200kPa	Cod.: H2B2, J2B2, H3B2, J3B2, H3B0, H2B0, J2BM, J3BM
	250kPa	Cod.: J3A2, J2A2, J2AM, J3AM
	300kPa	Cod.: H2A2, H3A2, H3A0, H2A0
Kvs	1,6	Cod.: H2A2, J2A2, H3A2, J3A2, H3A0, H2A0, J2AM, J3AM
	2,5	Cod.: H2B2, J2B2, H3B2, J3B2, J3BM, H3B0, H2B0, J2BM
Material	Brass	Cod.: H2A2, J2A2, H3A2, J3A2, J2AM, J3AM, H2B2, J2B2, H3B2, J3B2, J2BM, J3BM, H3B0, H2B0, H3A0, H2A0
Flow temperature limit	2÷110 °C	Cod.: J2A2, J3A2, J2B2, J3B2, J2AM, J3AM, J2BM, J3BM
	2÷120 °C	Cod.: H3A2, H2A2, H2B2, H3B2, H3B0, H2B0, H3A0, H2A0
Room temperature limit	2÷50 °C	Cod.: H2A2, J2A2, H3A2, J3A2, J2AM, J3AM, H2B2, J2B2, H3B2, J3B2, J2BM, J3BM, H3B0, H2B0, H3A0, H2A0
Actuator	On/Off	Cod.: H2A2, J2A2, H3A2, J3A2, H2B2, J2B2, H3B2, J3B2, H3B0, H2B0, H3A0, H2A0
	Modulating	Cod.: J2AM, J3AM, J2BM, J3BM
Voltage supply	230V ~ ±15% 50/60 Hz	Cod.: H2A2, H3A2, H2B2, H3B2
	230V ~ ±10% 50/60 Hz	Cod.: J2A2, J3A2, J2B2, J3B2
	24V ~ ±15% 50/60 Hz	Cod.: J2AM, J3AM, J2BM, J3BM, H3B0, H2B0, H3A0, H2A0
Control signal	0÷10 Vcc o 0-20mA	Cod.: J2AM, J3AM, J2BM, J3BM
Absorption	3 W	Cod.: H2A2, H3A2, H2B2, H3B2, H3B0, H2B0, H3A0, H2A0
	1,8 W	Cod.: J2A2, J3A2, J2B2, J3B2
Operating power	1,5 W	Cod. J2AM, J3AM, J2BM, J3BM
Opening/closing time	~ 3 MIN	Cod.: H2A2, J2A2, H3A2, J3A2, H2B2, J2B2, H3B2, J3B2, H3B0, H2B0, H3A0, H2A0
Opening/closing time	8s/mm	Cod. J2AM, J3AM, J2BM, J3BM
Protection grade	IP43	Cod.: H2A2, H3A2, H2B2, H3B2, H3B0, H2B0, H3A0, H2A0, J2AM, J3AM, J2BM, J3BM
	IP54	Cod.: J2A2, J3A2, J2B2, J3B2

1

2

3

4

5

6

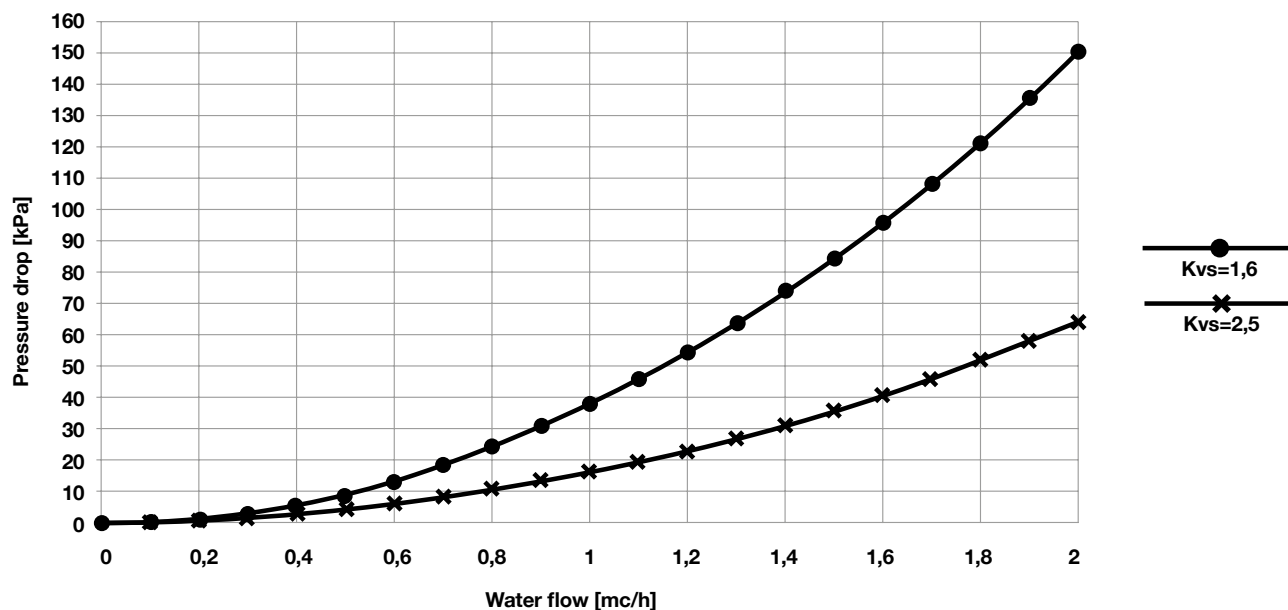
7

8

9

10

PRESSURE DROP DIAGRAM FOR VALVES WITH DIFFERENT KVS



Pressure drop diagram referred to the valve body only

6.3 PRESSURE INDEPENDENT VALVE D2B2 (512÷522) AND D2C2 (524-528), ON/OFF, 2-WAY, FOR 2 OR 4 PIPE SYSTEMS, 230V.

The pressure independent balancing valves, ON/OFF, 2-way are provided with thermoelectric actuator and connection tubes. The direct water flow is closed by not supplying power to the actuator.

6.4 PRESSURE INDEPENDENT VALVE D2BM (512÷222) AND D2CM (524-528), MODULATING (0-10V), 2-WAY, FOR 2 OR 4 PIPE SYSTEMS, 24V.

The pressure independent balancing valves, modulating, 2- way are provided with modulating actuator and connection tubes. The direct water flow is closed by not giving the 0-10V signal to the actuator.

PRESSURE INDEPENDENT VALVES TECHNICAL FEATURES

Nominal pressure	PN16	Cod.: D2B2, D2C2, D2BM, D2CM
Fluid	Hot or cold water for HVAC system, according to VDI standard quality or equivalent	Cod.: D2B2, D2C2, D2BM, D2CM
Connection	G 3/4" M G 1" M*	Cod.: D2B2, D2BM Cod.: D2C2, D2CM
Max close-off pressure	600 kPa	Cod.: D2B2, D2C2, D2BM, D2CM
Material	Brass	Cod.: D2B2, D2C2, D2BM, D2CM
Flow temperature limit	-10÷95 °C	Cod.: D2B2, D2C2, D2BM, D2CM
Room temperature limit	0÷60 °C	Cod.: D2B2, D2C2, D2BM, D2CM
Actuator	On/Off	Cod.: D2B2, D2C2
	Modulating	Cod.: D2BM, D2CM

PRESSURE INDEPENDENT VALVES TECHNICAL FEATURES

Voltage supply	230 VAC 50/60 Hz 24 VAC/DC 50/60 Hz	Cod.: D2B2, D2C2 Cod.: D2BM, D2CM
Control signal	0÷10 Vcc	Cod.: Cod.: D2B2, D2C2, D2BM, D2CM
Absorption	< 2 W 1 W	Cod.: D2B2, D2C2 Cod.: D2BM, D2CM
Operation power	110±10N 100±5N	Cod.: D2B2, D2C2 Cod.: D2BM, D2CM
Opening/closing time (20 °C)	< 3 MIN 30 s/mm or 3-5 MIN	Cod.: D2B2, D2C2 Cod.: D2BM, D2CM
Protection grade	IP54	Cod.: D2B2, D2C2, D2BM, D2CM

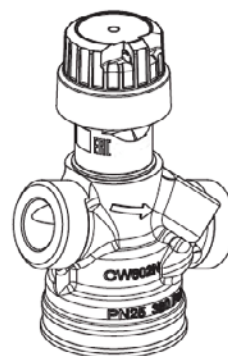
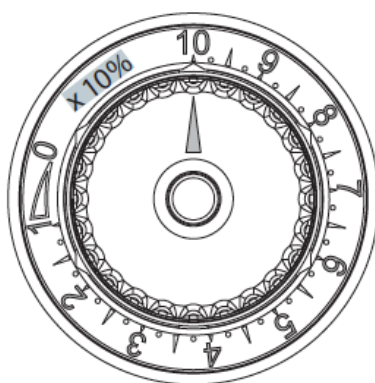
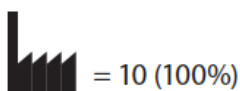
* VALVES KIT ENDS WITH A HYDRAULIC CONNECTION 3/4" GM

PRESSURE INDEPENDENT VALVES REGULATION

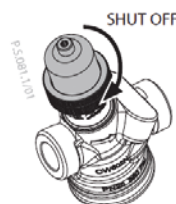
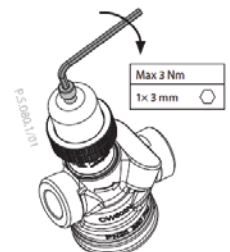
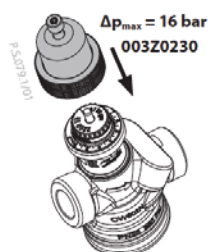
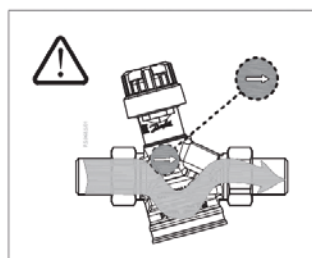
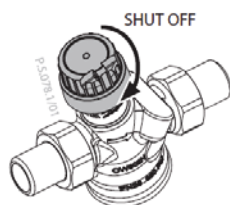
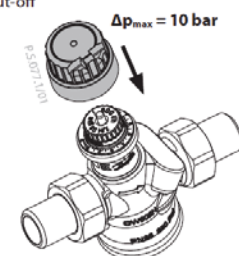
The calculated flow can be adjusted easily without using special tools. To change the presetting (factory setting is 100 %) follow the four steps below:

1. Remove the blue protective cap or the mounted actuator
 2. Raise the grey pointer Turn (clock wise to decrease) to the new presetting
- The presetting scale indicates values from 100 % flow to 0 %. Clock wise turning would decrease the flow value while counter clock wise would increase it.
- If the valve is a DN 15 then the nominal flow = 650 l/h = 100 % presetting. To set a flow of 390 l/h you have to set: $390/650 = 60\%$. Factory presetting is 100 %.

Setting

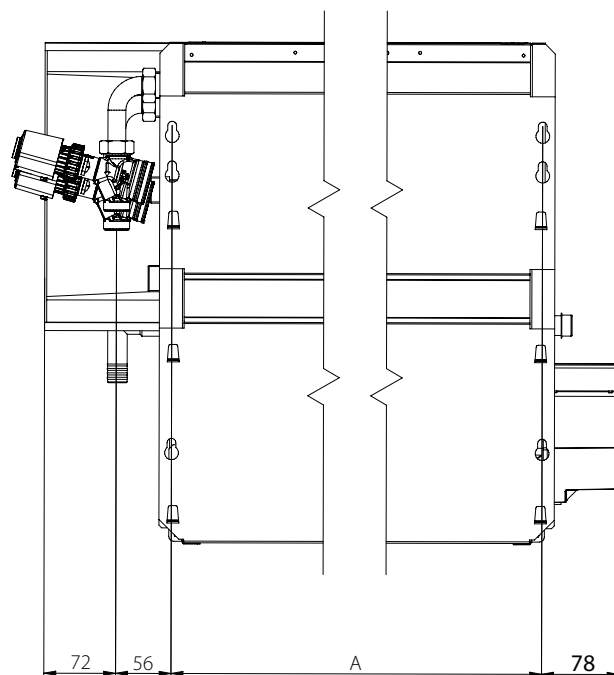
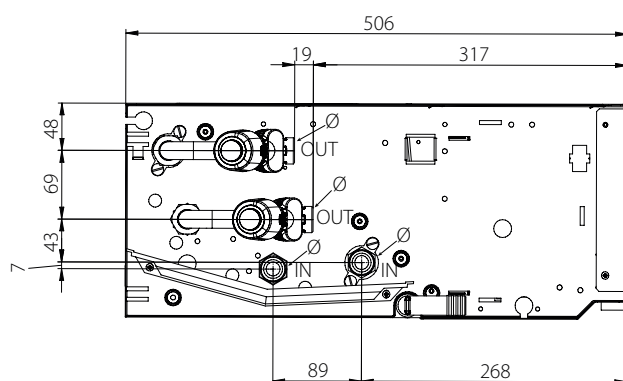


Shut-off



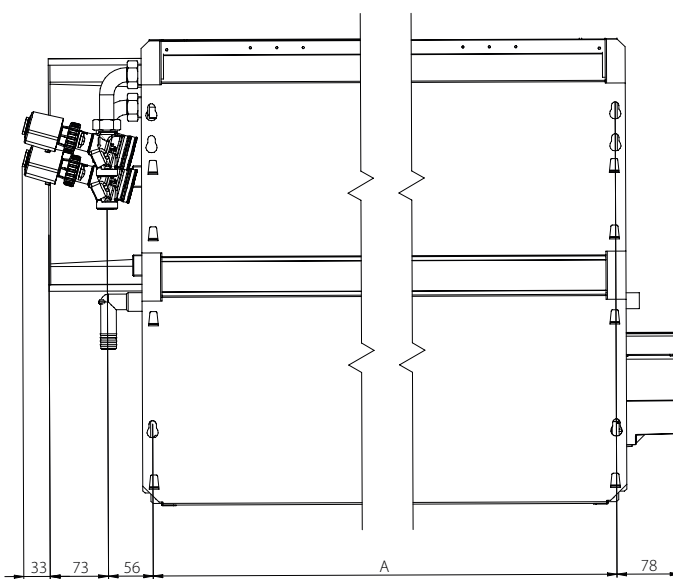
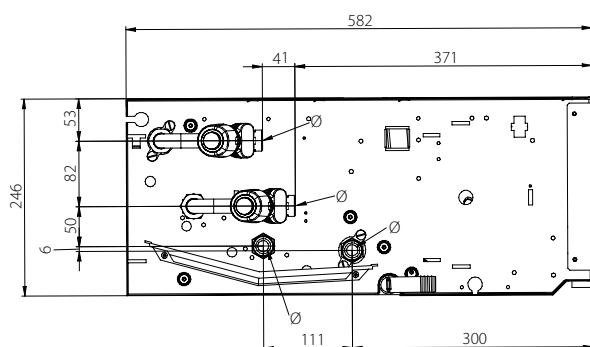
6.5 PRESSURE INDEPENDENT VALVES DIMENSIONS

SIZE	512	514	516
A	499	624	749
Ø	G 3/4" M		



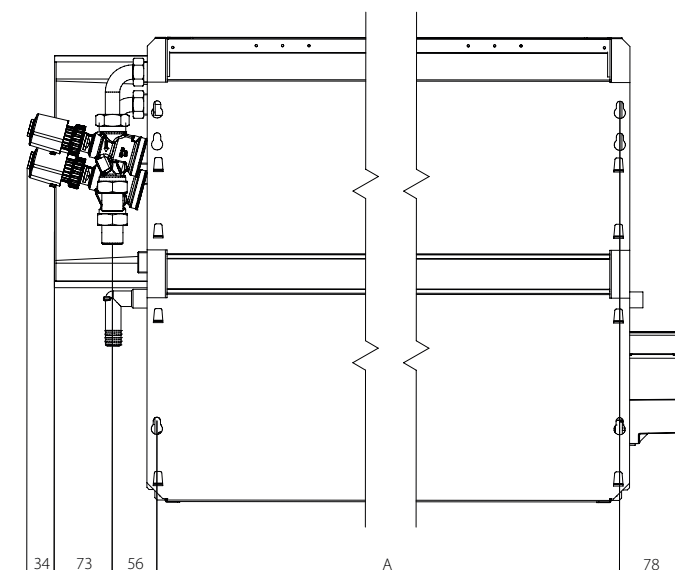
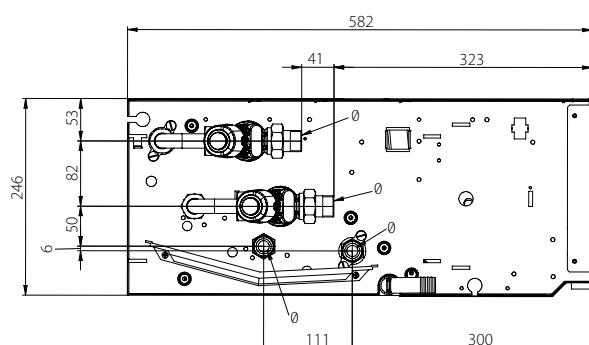
ESTCH WITH D2B2 VALVES 4 PIPE (512÷518)

SIZE	520	522
A	999	999
Ø	G 3/4" M	



ESTCH WITH D2B2 VALVES 4 PIPE (520-522)

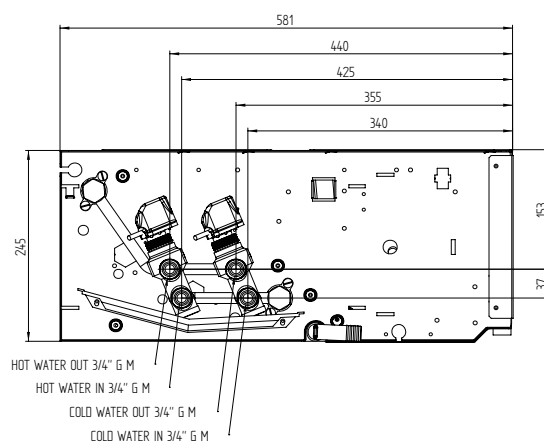
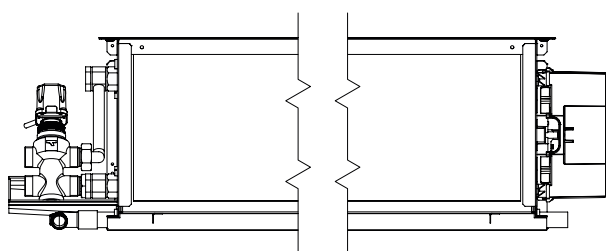
SIZE	524	528
A	1249	1499
Ø	G 3/4" M	



ESTCH WITH D2C2 VALVES 4 PIPE (524-528)

6.6 4-PIPE COMPACT KIT

Hydraulic kit consisting of 2 3-way body valve and 2 ON/OFF 230V actuators. The kit allows, in a 4-pipe system, to use the 3 or 4-row coil for both cooling and heating.



6.7 DT – SHUT-OFF VALVE

It is a full bore ball valve with T handle; it is designed to separate the unit from the piping system if maintenance is required.



MAXIMUM OPERATING PRESSURE WITH VALVES: 10 BAR.

In order to choose the correct type of valve it is necessary to know the system's technical specifications. For this reason the consultant has full responsibility for the correct choice of the valve.

7. OTHER ACCESSORIES

7.1 CP – SET OF FEET

Set of painted steel feet, each of them composed by two elements: a bearing element fixed to the inner frame, on which the unit leans, and a visible element fixed to the previous one. They are designed to cover the water connections and the electric cables.

- Height: 85 mm
- Colour: RAL 9003 (white) for both Sigma and Prisma series

7.2 ZL – LONG SOCLE WITH FEET

Painted steel socle consisting of a set of feet (CP) and a frontal grill. It is designed to cover a vertical external air intake or other accessories.

- Height: 85 mm
- Colour: RAL 9003 (white) for both Sigma and Prisma series

7.3 PPV – VERTICAL BACK PANEL

It is a back panel made of steel painted in the same colour as the casing. It is mounted on vertical units with housing when the back side of the unit is in view.

7.4 PPH – HORIZONTAL BACK PANEL

It is a back panel made of steel painted in the same colour as the casing. It is mounted on horizontal units with housing when the back side of the unit is in view.

7.5 PAE/V – VERTICAL EXTERNAL AIR INTAKE WITH MANUAL DAMPER

PAE/V is a vertical external air intake with supporting feet and manual damper.

All the elements are made of painted steel, in the same colour as the casing. The manual air damper provides the unit with a mixture of return air and outside air. An air intake at the rear of the fan coil must be foreseen to provide fresh outside air.

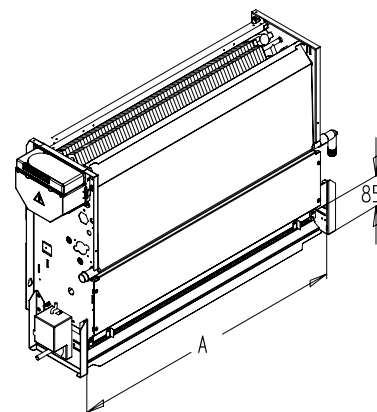
- Mixture rate: 0/100%
- Height: 85 mm
- Colour: RAL 9003 (white) for both Sigma and Prisma series

7.6 PAE/VM – VERTICAL EXTERNAL AIR INTAKE WITH MOTORIZED DAMPER

PAE/VM is a vertical external air intake with supporting feet and motorized damper.

All the elements are made of painted steel. The motorized air damper is regulated by a servomotor and provides the unit with a mixture of return air and outside air. The servomotor operating mode depends on the required working conditions. An air intake at the rear of the fan coil must be foreseen to provide fresh outside air.

- Mixture rate: 0/100%
- Height: 85 mm
- Colour: RAL 9003 (white) for both Sigma and Prisma series
- Servomotor regulation: ON/OFF (code LM230), ON/OFF with spring return (code LF230) or modulating with a proper controller (code LM24)



SIZE	512	514	516	520	522	524	528
A mm	549	674	799	1049	1049	1174	1299

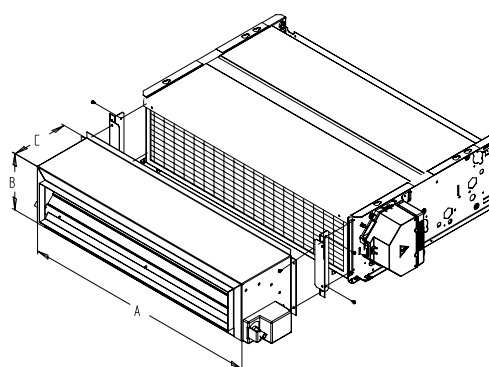
7.7 PAE/H – HORIZONTAL EXTERNAL AIR INTAKE WITH MANUAL DAMPER

Air suction plenum made of galvanized steel sheet, provided with a rectangular collar for the connection to the external air intake. It is mounted on the air intake of the unit, between the external air intake and the filter, which remains accessible for maintenance. A lever located on the side of the unit can operate the manual damper.

SIZE		512	514	516	520	522	524	528
A	mm	476	601	726	976	976	1226	1476
B	mm	176	176	176	206	206	206	206
C	mm	176	176	176	206	206	206	206

7.8 PAE/HM – HORIZONTAL EXTERNAL AIR INTAKE WITH MOTORIZED DAMPER

Air suction plenum made of galvanized steel sheet, provided with a rectangular collar for the connection to the external air intake. It is mounted on the air intake of the unit, between the external air intake and the filter, which remains accessible for maintenance. A servomotor can operate the damper: ON/OFF (code LM230), ON/OFF with spring return (code LF230) or modulating with a proper controller (code LM24).

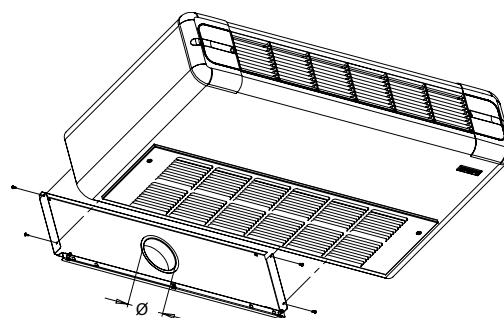


SIZE		512	514	516	520	522	524	528
A	mm	476	601	726	976	976	1226	1476
B	mm	176	176	176	206	206	206	206
C	mm	176	176	176	206	206	206	206

7.9 PAE/HAF – HORIZONTAL EXTERNAL AIR INTAKE (FOR HORIZONTAL UNITS WITH BOTTOM AIR INTAKE)

This external air intake is made of galvanized steel and is installed on the back side of horizontal units with bottom air intake. It is provided with a collar to be located in a hole on the wall, which allows the entrance of outside air.

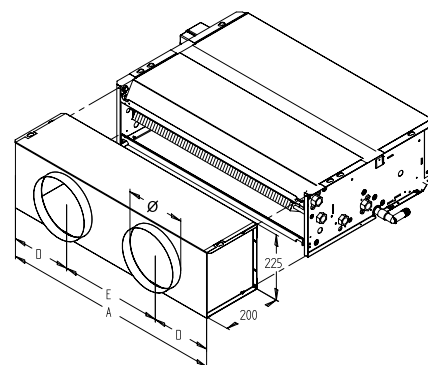
- Collar diameter of units 512÷516: 100 mm
- Collar diameter of units 520÷528: 150 mm



SIZE		512	514	516	520	522	524	528
N. of spigots		1	1	1	1	1	1	1
Spigots external Ø mm		100	100	100	150	150	150	150

7.10 PM – AIR DELIVERY PLENUM

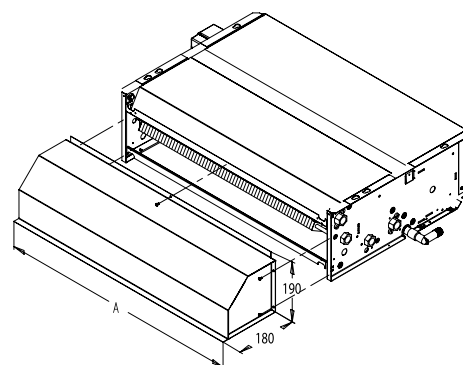
The air delivery plenum is made of galvanized steel sheet, insulated inside, provided with spigots for the connection to the air ducts. It must be mounted on the air outlet of the unit.



SIZE		512	514	516	520	522	524	528
N. of spigots		2	2	2	3	3	3	3
Spigots external Ø	mm	150	150	200	200	200	200	200
A	mm	504	629	754	1004	1004	1254	1504
D	mm	127	139,5	202	152	152	277	377
E	mm	250	350	350	350	350	350	375

7.11 PM90 – 90° AIR DELIVERY PLENUM

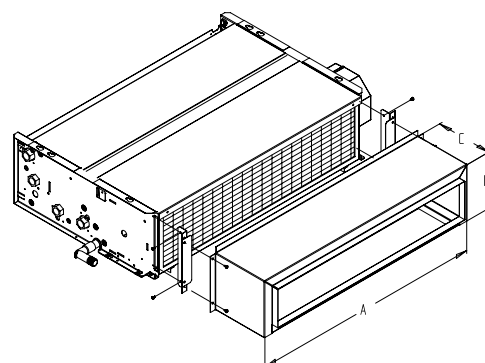
The 90° air delivery plenum is made of galvanized steel sheet, insulated inside, provided with a rectangular collar for the connection to the air duct. It must be mounted on the air outlet of the unit.



SIZE		512	514	516	520	522	524	528
A	mm	504	629	754	1004	1004	1254	1504

7.12 PA – AIR SUCTION PLENUM

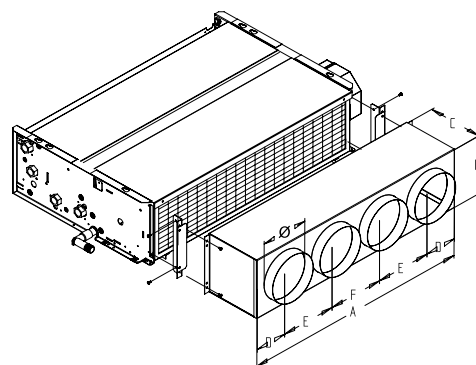
The air suction plenum is made of galvanized steel sheet, provided with a rectangular collar for the connection to the external air intake. It must be mounted on the air intake of the unit, between the external air intake and the filter, which remains accessible for maintenance.



SIZE		512	514	516	520	522	524	528
A	mm	476	601	726	976	976	1226	1476
B	mm	176	176	176	206	206	206	206
C	mm	176	176	176	206	206	206	206

7.13 PAS – AIR SUCTION PLENUM WITH SPIGOTS

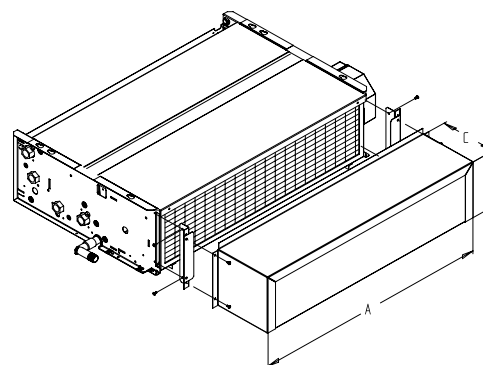
Air suction plenum made of galvanized steel sheet, provided with collars (spigots) for the connection to the external air intake. It must be mounted on the air intake of the unit, between the external air intake and the filter, which remains accessible for maintenance.



SIZE		512	514	516	520	522	524	528
N. of spigots		2	3	4	3	3	4	4
Spigots external Ø	mm	150	150	150	200	200	200	200
A	mm	476	601	726	976	976	1226	1476
B	mm	191	191	191	221	221	221	221
C	mm	176	176	176	206	206	206	206
D	mm	101,8	101,8	101,8	116,8	116,8	126,8	126,8
E	mm	-	-	174	-	-	360	485
F	mm	272	198,5	174	371	371	252	252

7.14 PA90 – 90° AIR SUCTION PLENUM

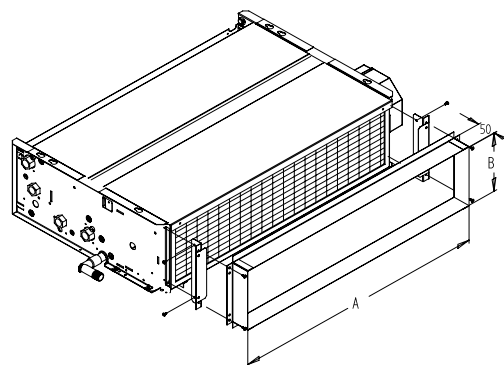
The 90° air suction plenum is made of galvanized steel sheet, provided with a rectangular collar for the connection to the external air intake. It must be mounted on the air intake of the unit, between the external air intake and the filter, which remains accessible for maintenance.



SIZE		512	514	516	520	522	524	528
A	mm	476	601	726	976	976	1226	1476
B	mm	176	176	176	206	206	206	206
C	mm	176	176	176	206	206	206	206

7.15 RCA – DUCT CONNECTION

This duct connection is made of galvanized steel, provided with a rectangular collar for the connection to the suction air duct. It must be mounted on the air intake of the unit, between the duct and the filter, which remains accessible for maintenance.



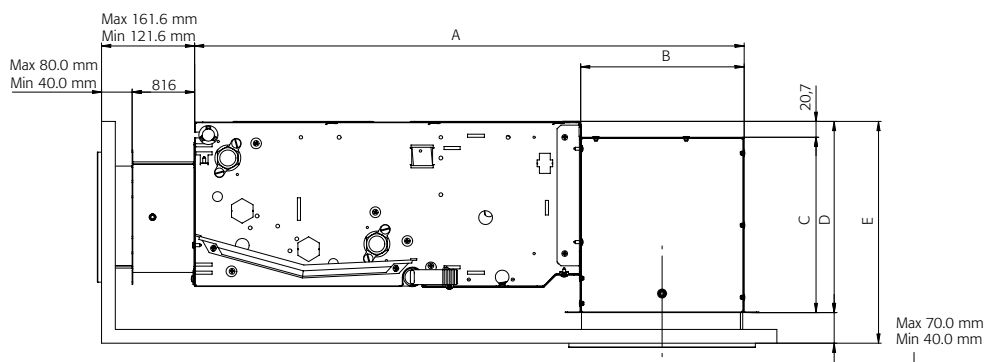
SIZE		512	514	516	520	522	524	528
A	mm	476	601	726	976	976	1226	1476
B	mm	176	176	176	206	206	206	206

7.16 RCCMF – TELESCOPIC AIR OUTLET CONNECTION

The telescopic connection is made of galvanized steel sheet. It is mounted on the air outlet of the unit. See drawing and tables.

7.17 RCCAF – 90° TELESCOPIC AIR INTAKE CONNECTION

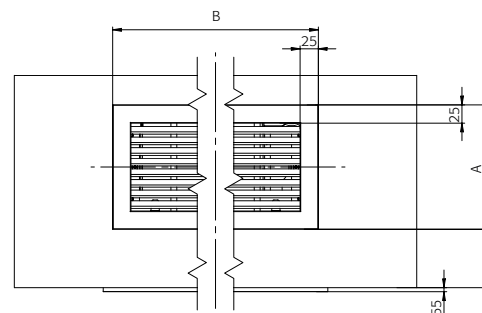
The 90° telescopic air intake connection is made of galvanized steel sheet, it is complete with G3 filter. It is mounted on the air intake of the unit. This connection can be mounted only on the CH unit specially pre-arranged. See drawing and tables.



SIZE		512	514	516	520	522	524	528
A	mm	719	719	719	825	825	825	825
B	mm	214	214	214	244	244	244	244
C	mm	229	229	229	259	259	259	259
D	mm	250	250	250	280	280	280	280
E	Min mm	290	290	290	320	320	320	320
	Max mm	320	320	320	350	350	350	350

7.18 GM – AIR OUTLET GRILL FOR RCCMF

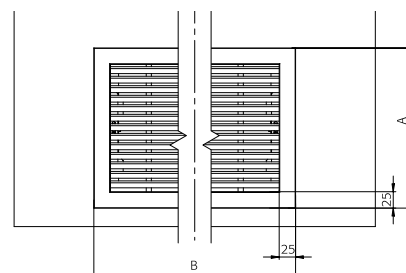
The grill is made of aluminium and it is available also painted (white-RAL 9003). It must be mounted on the telescopic air outlet connection.



SIZE		512	514	516	520	522	524	528
A	mm	170	170	170	185	185	185	185
B	mm	491	616	741	991	991	1241	1491

7.19 GA – AIR INTAKE GRILL FOR RCCAF

The grill is made of aluminium and it is available also painted (white-RAL 9003). It must be mounted on the telescopic air intake connection.



SIZE		512	514	516	520	522	524	528
A	mm	244	244	244	274	274	274	274
B	mm	517	642	767	1017	1017	1267	1517

8. TECHNICAL DATA

8.1 AIR VOLUMES

8.1.1 EST SERIE: SIGMA, PRISMA, CONCEALED

Nominal values (m³/h)

SIZE		512	514	516	520	522	524	528
Fan speed	1 V	-	-	222	334	365	463	515
	2 V	90	112	287	410	462	594	707
	3 V	138	170	347	504	568	715	876
	4 V	187	238	413	590	670	849	1037
	5 V	238	306	489	660	786	964	1202
	6 V	298	373	552	757	904	1080	1370
	7 V	350	440	615	849	999	1209	1540
	8 V	400	508	683	921	1114	1326	1717
	9 V	456	574	746	1013	1209	1450	1887
	10 V	-	-	792	1082	1304	1567	1995



Nominal air volumes refer to standard fan coils with clean air filter, 20 °C room temperature, at sea level, without external static pressure.

1

2

3

4

5

6

7

8

9

10

Values with external static pressure (m³/h)

Pressure drop	(Pa)	10	20	30	40	50
Size 512	4 V	-	-	-	-	-
	5 V	-	-	-	-	-
	6 V	320	250	163	-	-
	7 V	410	361	293	-	-
	8 V	470	430	380	320	250
	9 V	534	499	460	417	369
	10 V	-	-	-	-	-
Size 514	4 V	275	200	115	-	-
	5 V	325	250	165	-	-
	6 V	380	310	233	-	-
	7 V	501	435	364	288	206
	8 V	580	534	481	421	354
	9 V	649	611	568	518	463
	10 V	-	-	-	-	-
Size 516	4 V	368	222	51	-	-
	5 V	496	369	219	-	-
	6 V	580	465	321	147	-
	7 V	674	590	489	371	235
	8 V	792	726	632	511	363
	9 V	855	790	717	633	537
	10 V	943	883	819	752	678
Size 520	4 V	386	152	-	-	-
	5 V	595	410	200	-	-
	6 V	707	526	310	60	-
	7 V	850	690	472	195	-
	8 V	963	828	654	438	183
	9 V	1081	972	822	634	412
	10 V	1193	1085	951	802	636
Size 522	4 V	446	221	-	-	-
	5 V	618	450	282	-	-
	6 V	820	666	444	152	-
	7 V	930	810	638	414	315
	8 V	1062	965	826	647	633
	9 V	1196	1118	1004	868	882
	10 V	1288	1232	1144	1029	1053
Size 524	4 V	671	396	371	-	-
	5 V	905	667	601	211	-
	6 V	1035	832	859	572	350
	7 V	1230	1058	1050	813	595
	8 V	1368	1217	1252	1069	887
	9 V	1543	1404	1426	1292	1141
	10 V	1683	1563	10,0	1498	1362
Size 528	4 V	-	-	-	-	-
	5 V	1146	942	731	512	285
	6 V	1369	1201	1005	780	527
	7 V	1561	1424	1265	1083	879
	8 V	1785	1658	1517	1362	1191
	9 V	1945	1847	1729	1593	1443
	10 V	1973	1923	1866	1796	1711

8.1.2 EST SERIE: LOW BODY

Nominal value (m³/h)

SIZE	512	514	516
Fan speed	1 V	-	224
	2 V	91	290
	3 V	129	358
	4 V	176	423
	5 V	239	486
	6 V	284	551
	7 V	333	636
	8 V	387	701
	9 V	437	767
	10 V		833



Nominal air volumes refer to standard fan coils with clean air filter, 20 °C room temperature, at sea level, without external static pressure.

Value with external static pressure (m³/h)

Pressure drop	(Pa)	10	20	30	40	50
Size 512	1 V	-	-	-	-	-
	2 V	-	-	-	-	-
	3 V	-	-	-	-	-
	4 V	114	50	-	-	-
	5 V	189	100	-	-	-
	6 V	265	197	170	-	-
	7 V	328	282	278	209	117
	8 V	391	353	363	319	263
	9 V	451	416	435	400	361
	10 V	-	-	-	-	-
Size 514	1 V	-	-	-	-	-
	2 V	-	-	-	-	-
	3 V	-	-	-	-	-
	4 V	149	-	-	-	-
	5 V	251	-	-	-	-
	6 V	342	317	220	-	-
	7 V	425	417	354	-	-
	8 V	499	508	464	405	327
	9 V	574	593	561	522	469
	10 V	-	-	-	-	-
Size 516	1 V	-	-	-	-	-
	2 V	91	-	-	-	-
	3 V	204	-	-	-	-
	4 V	330	130	-	-	-
	5 V	445	301	-	-	-
	6 V	525	408	257	-	-
	7 V	622	524	408	275	125
	8 V	713	641	550	434	287
	9 V	782	722	647	552	434
	10 V	869	815	755	682	593

8.2 COOLING CAPACITIES



8.2.1 EST SERIE: SIGMA, PRISMA, CONCEALED

Room temperature: 27 °C D.B. - 47% Humid. IN

Water temperature: 7/12 °C

SIZE			512	514	516	520	522	524	528
2 ROWS									
1 V	Total cooling capacities	kW	-	-	1,25	1,74	1,92	2,52	3,11
	Sensible cooling capacities	kW	-	-	1,01	1,49	1,62	2,05	2,46
	Water flow	l/h	-	-	213	296	325	429	528
	Water pressure drop	kPa	-	-	5,0	2,3	2,6	4,6	8,7
2 V	Total cooling capacities	kW	0,53	0,66	1,52	2,25	2,44	3,03	3,97
	Sensible cooling capacities	kW	0,41	0,54	1,24	1,83	2,01	2,50	3,20
	Water flow	l/h	89	112	259	382	414	517	677
	Water pressure drop	kPa	0,8	1,4	6,9	3,5	4,0	6,2	13,3
3 V	Total cooling capacities	kW	0,70	0,87	1,75	2,59	2,83	3,48	4,65
	Sensible cooling capacities	kW	0,57	0,75	1,44	2,15	2,36	2,89	3,78
	Water flow	l/h	120	147	299	440	483	595	794
	Water pressure drop	kPa	1,3	2,1	8,7	4,4	5,1	7,9	17,4
4 V	Total cooling capacities	kW	0,85	1,20	1,99	2,92	3,21	4,16	5,25
	Sensible cooling capacities	kW	0,71	1,01	1,65	2,44	2,69	3,47	4,31
	Water flow	l/h	145	204	340	497	547	711	898
	Water pressure drop	kPa	1,8	3,6	10,8	5,4	6,3	10,7	21,4
5 V	Total cooling capacities	kW	1,00	1,42	2,23	3,17	3,59	4,55	5,81
	Sensible cooling capacities	kW	0,84	1,23	1,87	2,66	3,04	3,82	4,81
	Water flow	l/h	170	242	379	541	614	779	987
	Water pressure drop	kPa	2,3	4,9	13,1	6,2	7,7	12,5	25,2
6 V	Total cooling capacities	kW	1,19	1,73	2,43	3,50	3,95	4,91	6,35
	Sensible cooling capacities	kW	1,00	1,50	2,04	2,95	3,36	4,15	5,30
	Water flow	l/h	202	295	413	598	671	835	1081
	Water pressure drop	kPa	3,1	6,8	15,1	7,3	8,9	14,1	29,4
7 V	Total cooling capacities	kW	1,43	1,95	2,61	3,78	4,23	5,31	6,88
	Sensible cooling capacities	kW	1,20	1,70	2,21	3,21	3,62	4,50	5,77
	Water flow	l/h	243	332	445	642	720	903	1171
	Water pressure drop	kPa	4,2	8,3	17,1	8,3	10,0	16,1	33,8
8 V	Total cooling capacities	kW	1,56	2,14	2,80	4,00	4,55	5,64	7,38
	Sensible cooling capacities	kW	1,32	1,89	2,38	3,41	3,91	4,81	6,23
	Water flow	l/h	267	365	477	680	776	962	1260
	Water pressure drop	kPa	4,9	9,7	19,3	9,1	11,4	17,9	38,3
9 V	Total cooling capacities	kW	1,70	2,33	2,96	4,27	4,80	5,99	7,85
	Sensible cooling capacities	kW	1,44	2,06	2,53	3,66	4,14	5,13	6,66
	Water flow	l/h	288	397	506	727	820	1021	1341
	Water pressure drop	kPa	5,6	11,2	21,3	10,2	12,5	19,9	42,6
10 V	Total cooling capacities	kW	-	-	3,08	4,46	5,04	6,30	8,14
	Sensible cooling capacities	kW	-	-	2,63	3,83	4,37	5,42	6,92
	Water flow	l/h	-	-	526	761	862	1075	1390
	Water pressure drop	kPa	-	-	22,8	11,0	13,6	21,7	45,4
Water content		l	0,6	0,7	0,9	1,5	1,5	1,9	2,3

Room temperature: 27 °C D.B. - 47% Humid. IN

Water temperature: 7/12 °C

SIZE			512	514	516	520	522	524	528
3 ROWS									
1 V	Total cooling capacities	kW	-	-	1,19	1,92	2,16	2,86	3,39
	Sensible cooling capacities	kW	-	-	0,95	1,52	1,70	2,23	2,58
	Water flow	l/h	-	-	202	328	369	487	578
	Water pressure drop	kPa	-	-	2,3	3,6	4,3	3,4	5,5
2 V	Total cooling capacities	kW	0,56	0,71	1,51 (E)	2,35	2,61	3,69	4,34
	Sensible cooling capacities	kW	0,43	0,54	1,21 (E)	1,83	2,06	2,84	3,36
	Water flow	l/h	95	120	260	400	445	627	740
	Water pressure drop	kPa	1,2	0,7	3,9 (E)	4,9	5,9	5,1	8,3
3 V	Total cooling capacities	kW	0,74 (E)	0,93 (E)	1,84	2,72 (E)	3,05 (E)	4,07 (E)	4,89 (E)
	Sensible cooling capacities	kW	0,54 (E)	0,78 (E)	1,45	1,92 (E)	2,11 (E)	3,13 (E)	3,74 (E)
	Water flow	l/h	127	160	313	468	525	701	842
	Water pressure drop	kPa	1,7 (E)	1,6 (E)	4,8	5,6 (E)	11,1 (E)	5,5 (5)	9,7 (E)
4 V	Total cooling capacities	kW	0,94	1,31	2,33	3,09	3,46	4,86	5,83
	Sensible cooling capacities	kW	0,75	1,05	1,83	2,45	2,77	3,81	4,59
	Water flow	l/h	160	223	397	528	592	829	996
	Water pressure drop	kPa	2,9	2,0	7,1	7,9	9,6	8,1	13,8
5 V	Total cooling capacities	kW	1,12	1,65	2,53 (E)	3,37	3,89	5,36	6,50
	Sensible cooling capacities	kW	0,90	1,31	2,01 (E)	2,67	3,13	4,22	5,16
	Water flow	l/h	190	281	435	575	665	914	1110
	Water pressure drop	kPa	3,9	2,9	8,5 (E)	9,1	11,6	9,6	16,6
6 V	Total cooling capacities	kW	1,43 (E)	1,81 (E)	2,89	3,86 (E)	4,42 (E)	5,64 (E)	6,94 (E)
	Sensible cooling capacities	kW	1,16 (E)	1,48 (E)	2,30	2,78 (E)	3,16 (E)	4,42 (E)	5,50 (E)
	Water flow	l/h	246	312	493	664	761	971	1194
	Water pressure drop	kPa	5,4 (E)	4,8 (E)	10,4	10,6 (E)	22,0 (E)	10,0 (E)	18,5 (E)
7 V	Total cooling capacities	kW	1,57	2,15	3,12	4,03	4,60	6,33	7,73
	Sensible cooling capacities	kW	1,27	1,73	2,50	3,23	3,75	5,04	6,22
	Water flow	l/h	266	367	533	684	782	1081	1313
	Water pressure drop	kPa	6,8	4,6	11,7	12,2	15,3	12,7	22,0
8 V	Total cooling capacities	kW	1,83	2,38	3,36	4,27	4,95	6,76	8,33
	Sensible cooling capacities	kW	1,49	1,93	2,71	3,43	4,05	5,40	6,74
	Water flow	l/h	311	407	574	725	843	1155	1418
	Water pressure drop	kPa	8,9	5,5	13,3	13,5	17,4	14,3	25,1
9 V	Total cooling capacities	kW	1,98 (E)	2,56 (E)	3,56	4,56	5,23	7,19	8,89
	Sensible cooling capacities	kW	1,65 (E)	2,12 (E)	2,89	3,68	4,30	5,78	7,22
	Water flow	l/h	341	441	605	776	892	1230	1513
	Water pressure drop	kPa	9,6 (E)	9,2 (E)	14,5	15,1	19,2	15,9	28,1
10 V	Total cooling capacities	kW	-	-	3,81 (E)	5,05 (E)	5,81 (E)	7,47 (E)	9,18 (E)
	Sensible cooling capacities	kW	-	-	3,14 (E)	3,79 (E)	4,32 (E)	6,09 (E)	7,51 (E)
	Water flow	l/h	-	-	656	869	1000	1286	1580
	Water pressure drop	kPa	-	-	14,6 (E)	16,9 (E)	36,2 (E)	16,8 (E)	31,3 (E)
Water content		l	0,8	1,1	1,3	2,2	2,2	2,9	3,5

(E): Eurovent

Room temperature: 27 °C D.B. - 47% Humid. IN

Water temperature: 7/12 °C

SIZE			512	514	516	520	522	524	528
4 ROWS									
1 V	Total cooling capacities	kW	-	-	1,54	2,22	2,36	3,14	3,40
	Sensible cooling capacities	kW	-	-	1,16	1,69	1,83	2,37	2,59
	Water flow	l/h	-	-	261	378	405	534	581
	Water pressure drop	kPa	-	-	2,1	2,2	2,5	2,9	4,2
2 V	Total cooling capacities	kW	0,65	0,82	1,89	2,61	2,90	3,85	4,84
	Sensible cooling capacities	kW	0,48	0,60	1,45	2,02	2,26	2,95	3,60
	Water flow	l/h	111	140	322	445	495	656	826
	Water pressure drop	kPa	0,7	1,2	2,9	2,9	3,4	4,1	7,5
3 V	Total cooling capacities	kW	0,91	1,13	2,25	3,21	3,57	4,61	5,68
	Sensible cooling capacities	kW	0,69	0,86	1,73	2,47	2,76	3,52	4,34
	Water flow	l/h	154	193	382	546	611	787	966
	Water pressure drop	kPa	1,2	2,0	3,9	4,0	4,8	5,6	9,7
4 V	Total cooling capacities	kW	1,13	1,47	2,60	3,67	4,05	5,33	6,43
	Sensible cooling capacities	kW	0,88	1,14	2,02	2,83	3,17	4,08	5,01
	Water flow	l/h	192	250	443	624	691	908	1095
	Water pressure drop	kPa	1,7	3,0	5,0	5,0	6,0	7,1	12,0
5 V	Total cooling capacities	kW	1,35	1,81	2,98	4,01	4,50	5,90	7,24
	Sensible cooling capacities	kW	1,06	1,42	2,33	3,11	3,57	4,54	5,68
	Water flow	l/h	230	309	508	683	765	1005	1234
	Water pressure drop	kPa	2,3	4,3	6,3	5,8	7,1	8,4	14,7
6 V	Total cooling capacities	kW	1,61	2,11	3,27	4,47	5,02	6,44	8,02
	Sensible cooling capacities	kW	1,27	1,67	2,58	3,49	3,99	4,98	6,34
	Water flow	l/h	274	360	558	761	856	1099	1369
	Water pressure drop	kPa	3,1	5,6	7,3	7,0	8,5	9,8	17,5
7 V	Total cooling capacities	kW	1,82	2,39	3,55	4,88	5,41	7,02	8,78
	Sensible cooling capacities	kW	1,45	1,90	2,81	3,83	4,33	5,46	6,98
	Water flow	l/h	310	408	607	833	923	1199	1498
	Water pressure drop	kPa	3,8	6,9	8,4	8,2	9,7	11,3	20,4
8 V	Total cooling capacities	kW	2,01	2,66	3,85	5,21	5,86	7,52	9,52
	Sensible cooling capacities	kW	1,61	2,13	3,06	4,10	4,72	5,87	7,62
	Water flow	l/h	343	454	657	889	1001	1286	1626
	Water pressure drop	kPa	4,5	8,3	9,7	9,1	11,1	12,7	23,5
9 V	Total cooling capacities	kW	2,21	2,90	4,11	5,59	6,23	8,04	10,21
	Sensible cooling capacities	kW	1,78	2,34	3,29	4,42	5,04	6,30	8,22
	Water flow	l/h	378	496	702	955	1064	1374	1745
	Water pressure drop	kPa	5,2	9,6	10,8	10,3	12,3	14,2	26,4
10 V	Total cooling capacities	kW	-	-	4,29	5,88	6,58	8,50	10,64
	Sensible cooling capacities	kW	-	-	3,45	4,65	5,34	6,69	8,59
	Water flow	l/h	-	-	733	1004	1124	1454	1818
	Water pressure drop	kPa	-	-	11,6	11,2	13,6	15,7	28,4
Water content		l	1,1	1,4	1,7	2,9	2,9	3,8	4,6

8.2.2 EST SERIE: LOW BODY

Room temperature: 27 °C D.B. - 47% Humid. IN

Water temperature: 7/12 °C

SIZE			512	514	516
2 ROWS					
1 V	Total cooling capacities	kW	-	-	1,09
	Sensible cooling capacities	kW	-	-	0,93
	Water flow	l/h	-	-	185
	Water pressure drop	kPa	-	-	2,9
2 V	Total cooling capacities	kW	0,48	-	1,28
	Sensible cooling capacities	kW	0,40	-	1,12
	Water flow	l/h	81	-	218
	Water pressure drop	kPa	0,5	-	3,8
3 V	Total cooling capacities	kW	0,59	-	1,49
	Sensible cooling capacities	kW	0,51	-	1,32
	Water flow	l/h	100	-	252
	Water pressure drop	kPa	0,6	-	4,9
4 V	Total cooling capacities	kW	0,70	1,05	1,67
	Sensible cooling capacities	kW	0,64	0,95	1,49
	Water flow	l/h	120	178	284
	Water pressure drop	kPa	0,9	2,0	6,0
5 V	Total cooling capacities	kW	0,82	1,22	1,84
	Sensible cooling capacities	kW	0,78	1,12	1,65
	Water flow	l/h	140	208	313
	Water pressure drop	kPa	1,1	2,6	7,1
6 V	Total cooling capacities	kW	0,94	1,38	1,99
	Sensible cooling capacities	kW	0,89	1,29	1,80
	Water flow	l/h	162	236	338
	Water pressure drop	kPa	1,4	3,2	8,0
7 V	Total cooling capacities	kW	1,13	1,56	2,18
	Sensible cooling capacities	kW	1,03	1,45	1,98
	Water flow	l/h	192	268	370
	Water pressure drop	kPa	1,9	4,0	9,4
8 V	Total cooling capacities	kW	1,22	1,70	2,33
	Sensible cooling capacities	kW	1,13	1,59	2,12
	Water flow	l/h	209	293	400
	Water pressure drop	kPa	2,1	4,6	10,7
9 V	Total cooling capacities	kW	1,30	1,85	2,47
	Sensible cooling capacities	kW	1,23	1,73	2,25
	Water flow	l/h	224	319	428
	Water pressure drop	kPa	2,4	5,4	12,0
10 V	Total cooling capacities	kW	-	-	2,59
	Sensible cooling capacities	kW	-	-	2,37
	Water flow	l/h	-	-	447
	Water pressure drop	kPa	-	-	13,0
Water content		l	0,4	0,6	0,7

1

2

3

4

5

6

7

8

9

10

1

2

3

4

5

6

7

8

9

10

Room temperature: 27 °C D.B. - 47% Humid. IN

Water temperature: 7/12 °C

SIZE		512	514	516
3 ROWS				
1 V	Total cooling capacities	kW	-	1,18
	Sensible cooling capacities	kW	-	0,98
	Water flow	l/h	-	221
	Water pressure drop	kPa	-	1,7
2 V	Total cooling capacities	kW	0,49	1,53
	Sensible cooling capacities	kW	0,41	1,25
	Water flow	l/h	84	286
	Water pressure drop	kPa	1,2	2,6
3 V	Total cooling capacities	kW	0,61	1,77
	Sensible cooling capacities	kW	0,53	1,48
	Water flow	l/h	104	332
	Water pressure drop	kPa	1,8	3,4
4 V	Total cooling capacities	kW	0,74	2,12
	Sensible cooling capacities	kW	0,67	1,75
	Water flow	l/h	125	396
	Water pressure drop	kPa	2,4	4,5
5 V	Total cooling capacities	kW	0,88	2,34
	Sensible cooling capacities	kW	0,82	1,96
	Water flow	l/h	149	440
	Water pressure drop	kPa	3,2	5,4
6 V	Total cooling capacities	kW	1,18	2,56
	Sensible cooling capacities	kW	1,04	2,16
	Water flow	l/h	200	483
	Water pressure drop	kPa	5,1	6,3
7 V	Total cooling capacities	kW	1,31	2,84
	Sensible cooling capacities	kW	1,17	2,41
	Water flow	l/h	223	537
	Water pressure drop	kPa	6,2	7,6
8 V	Total cooling capacities	kW	1,44	3,03
	Sensible cooling capacities	kW	1,30	2,58
	Water flow	l/h	246	575
	Water pressure drop	kPa	7,2	8,5
9 V	Resa in raffreddamento	kW	1,56	3,22
	Resa in raffreddamento sensibile	kW	1,42	2,76
	Portata d'acqua	l/h	265	608
	Perdita di carico acqua	kPa	8,2	9,3
10 V	Total cooling capacities	kW	-	3,40
	Sensible cooling capacities	kW	-	2,93
	Water flow	l/h	-	644
	Water pressure drop	kPa	-	10,3
Water content		l	0,6	1,1

8.3 HEATING CAPACITIES

8.3.1 EST SERIE: SIGMA, PRISMA, CONCEALED

Room temperature: 20 °C

Water temperature: 45/40 °C

SIZE			512	514	516	520	522	524	528
2 ROWS									
1 V	Heating capacities	kW	-	-	1,42	2,12	2,27	2,91	3,26
	Water flow	l/h	-	-	246	368	395	506	567
	Water pressure drop	kPa	-	-	4,9	2,9	3,2	5,5	8,3
2 V	Heating capacities	kW	0,59	0,76	1,75	2,50	2,75	3,55	4,21
	Water flow	l/h	103	133	304	434	477	618	731
	Water pressure drop	kPa	0,7	1,4	7,1	3,8	4,5	7,8	12,9
3 V	Heating capacities	kW	0,84	1,08	2,03	2,94	3,23	4,11	4,98
	Water flow	l/h	146	188	353	511	561	714	865
	Water pressure drop	kPa	1,3	2,5	9,2	5,0	5,9	10,0	17,2
4 V	Heating capacities	kW	1,07	1,42	2,33	3,32	3,66	4,69	5,66
	Water flow	l/h	186	248	404	578	637	815	984
	Water pressure drop	kPa	2,0	3,9	11,6	6,2	7,4	12,6	21,6
5 V	Heating capacities	kW	1,29	1,74	2,65	3,62	4,13	5,16	6,33
	Water flow	l/h	224	302	460	630	718	897	1100
	Water pressure drop	kPa	2,7	5,6	14,6	7,2	9,1	14,9	26,2
6 V	Heating capacities	kW	1,52	2,02	2,90	4,02	4,58	5,62	6,97
	Water flow	l/h	265	352	504	698	796	977	1212
	Water pressure drop	kPa	3,6	7,2	17,1	8,6	10,9	17,2	31,1
7 V	Heating capacities	kW	1,71	2,29	3,14	4,38	4,93	6,11	7,59
	Water flow	l/h	298	398	546	760	857	1061	1320
	Water pressure drop	kPa	4,4	9,0	19,7	10,0	12,4	19,9	36,2
8 V	Heating capacities	kW	1,89	2,55	3,39	4,65	5,33	6,53	8,21
	Water flow	l/h	328	443	590	807	927	1135	1427
	Water pressure drop	kPa	5,2	10,8	22,5	11,1	14,2	22,4	41,5
9 V	Heating capacities	kW	2,07	2,79	3,62	4,98	5,65	6,96	8,78
	Water flow	l/h	360	484	629	865	982	1210	1527
	Water pressure drop	kPa	6,1	12,7	25,2	12,6	15,7	25,1	46,8
10 V	Heating capacities	kW	-	-	3,78	5,22	5,96	7,36	9,14
	Water flow	l/h	-	-	656	908	1036	1279	1588
	Water pressure drop	kPa	-	-	27,2	13,7	17,2	27,7	50,1
Water content			l	0,6	0,7	0,9	1,5	1,5	1,9

1

2

3

4

5

6

7

8

9

10

1

2

3

4

5

6

7

8

9

10

Room temperature: 20 °C

Water temperature: 45/40 °C

SIZE			512	514	516	520	522	524	528
3 ROWS									
1 V	Heating capacities	kW	-	-	1,54	2,18	2,45	3,11	3,53
	Water flow	l/h	-	-	265	376	423	537	610
	Water pressure drop	kPa	-	-	2,8	3,7	4,0	3,5	5,4
2 V	Heating capacities	kW	0,61	0,80	1,87 (E)	2,59	2,99	3,84	4,62
	Water flow	l/h	105	138	322	447	517	662	797
	Water pressure drop	kPa	1,1	0,8	4,2 (E)	5,0	5,6	5,0	8,5
3 V	Heating capacities	kW	0,78 (E)	1,15 (E)	2,25	3,11 (E)	3,37 (E)	4,50 (E)	5,38 (E)
	Water flow	l/h	134	198	387	535	580	775	926
	Water pressure drop	kPa	2,0 (E)	2,0 (E)	5,4	6,6 (E)	11,5 (E)	5,3 (E)	12,1 (E)
4 V	Heating capacities	kW	1,13	1,52	2,59	3,48	4,06	5,14	6,32
	Water flow	l/h	194	261	447	601	703	887	1091
	Water pressure drop	kPa	3,2	2,2	6,9	8,4	9,5	8,3	14,6
5 V	Heating capacities	kW	1,37	1,86	3,05 (E)	3,80	4,62	5,68	7,10
	Water flow	l/h	236	321	525	658	800	982	1228
	Water pressure drop	kPa	4,4	3,1	8,6 (E)	9,7	11,9	9,9	18,0
6 V	Heating capacities	kW	1,47 (E)	2,18 (E)	3,27	4,44 (E)	4,84 (E)	6,22 (E)	7,67 (E)
	Water flow	l/h	253	375	565	757	833	1071	1320
	Water pressure drop	kPa	6,0 (E)	5,5 (E)	10,4	13,0 (E)	23,5 (E)	9,8 (E)	24,3 (E)
7 V	Heating capacities	kW	1,85	2,48	3,56	4,63	5,58	6,78	8,62
	Water flow	l/h	320	428	615	801	967	1173	1491
	Water pressure drop	kPa	7,4	5,1	12,0	13,7	16,6	13,4	25,2
8 V	Heating capacities	kW	1,96	2,77	3,87	4,93	6,07	7,28	9,37
	Water flow	l/h	354	479	668	853	1052	1260	1621
	Water pressure drop	kPa	8,8	6,2	13,9	15,3	19,2	15,2	29,1
9 V	Heating capacities	kW	2,05 (E)	3,04 (E)	4,14	5,30	6,47	7,80	10,06
	Water flow	l/h	353	523	716	918	1121	1350	1742
	Water pressure drop	kPa	10,8 (E)	10,3 (E)	15,6	17,4	21,4	17,1	33,0
10 V	Heating capacities	kW	-	-	4,40 (E)	5,76 (E)	6,53 (E)	8,43 (E)	10,40 (E)
	Water flow	l/h	-	-	757	991	1124	1451	1790
	Water pressure drop	kPa	-	-	17,3 (E)	21,8 (E)	40,0 (E)	17,2 (E)	43,5 (E)
Water content		l	0,8	1,1	1,3	2,2	2,2	2,9	3,5

Room temperature: 20 °C

Water temperature: 45/40 °C

SIZE			512	514	516	520	522	524	528
4 ROWS									
1 V	Heating capacities	kW	-	-	1,60	2,35	2,54	3,25	3,65
	Water flow	l/h	-	-	275	404	437	560	629
	Water pressure drop	kPa	-	-	1,9	2,2	2,5	2,7	4,3
2 V	Heating capacities	kW	0,63	0,83	2,00	2,81	3,11	4,03	4,80
	Water flow	l/h	108	142	345	484	536	695	828
	Water pressure drop	kPa	0,5	1,0	2,7	2,9	3,5	3,9	6,9
3 V	Heating capacities	kW	0,93	1,20	2,35	3,35	3,70	4,71	5,75
	Water flow	l/h	159	207	406	578	639	813	993
	Water pressure drop	kPa	1,0	1,8	3,6	3,9	4,7	5,1	9,4
4 V	Heating capacities	kW	1,20	1,60	2,73	3,82	4,25	5,43	6,62
	Water flow	l/h	207	277	470	660	733	939	1143
	Water pressure drop	kPa	1,5	3,0	4,7	4,9	5,9	6,6	11,9
5 V	Heating capacities	kW	1,47	1,98	3,14	4,19	4,84	6,03	7,47
	Water flow	l/h	253	342	542	724	836	1042	1291
	Water pressure drop	kPa	2,1	4,3	5,9	5,8	7,4	7,8	14,7
6 V	Heating capacities	kW	1,76	2,33	3,47	4,69	5,42	6,61	8,30
	Water flow	l/h	304	403	599	811	937	1143	1435
	Water pressure drop	kPa	2,9	5,8	7,0	7,0	9,0	9,2	17,6
7 V	Heating capacities	kW	2,00	2,66	3,78	5,15	5,87	7,24	9,11
	Water flow	l/h	346	461	654	890	1015	1252	1576
	Water pressure drop	kPa	3,6	7,2	8,2	8,3	10,4	10,8	20,7
8 V	Heating capacities	kW	2,23	2,99	4,12	5,50	6,40	7,79	9,93
	Water flow	l/h	384	517	712	951	1106	1348	1718
	Water pressure drop	kPa	4,3	8,8	9,5	9,3	12,0	12,2	24,1
9 V	Heating capacities	kW	2,46	3,29	4,42	5,93	6,82	8,36	10,69
	Water flow	l/h	426	569	764	1026	1180	1447	1851
	Water pressure drop	kPa	5,1	10,5	10,7	10,6	13,5	13,8	27,4
10 V	Heating capacities	kW	-	-	4,63	6,25	7,23	8,88	11,17
	Water flow	l/h	-	-	801	1081	1252	1537	1933
	Water pressure drop	kPa	-	-	11,7	11,6	14,9	15,3	29,5
Water content		l	1,1	1,4	1,7	2,9	2,9	3,8	4,6

1

2

3

4

5

6

7

8

9

10

1

2

3

4

5

6

7

8

9

10

Room temperature: 20 °C

Water temperature: 65/55 °C

SIZE			512	514	516	520	522	524	528
1 ROW									
1 V	Heating capacities	kW	-	-	1,34	2,34	2,49	3,11	3,51
	Water flow	l/h	-	-	118	206	218	273	310
	Water pressure drop	kPa	-	-	3,9	3,1	3,4	8,9	7,3
2 V	Heating capacities	kW	0,59	0,78	1,77 (E)	2,70	2,93	3,68	4,34
	Water flow	l/h	51	68	152	237	257	324	382
	Water pressure drop	kPa	0,7	1,4	7,3 (E)	3,9	4,5	12,0	10,4
3 V	Heating capacities	kW	0,87 (E)	1,09 (E)	1,80	3,22 (E)	3,29 (E)	4,09 (E)	4,94 (E)
	Water flow	l/h	75	94	158	277	283	352	425
	Water pressure drop	kPa	1,2 (E)	2,4 (E)	6,4	9,8 (E)	7,7 (E)	15,4 (E)	19,5 (E)
4 V	Heating capacities	kW	0,96	1,29	2,01	3,45	3,75	4,66	5,58
	Water flow	l/h	84	113	177	304	330	410	492
	Water pressure drop	kPa	1,7	3,4	7,8	6,0	6,9	18,0	16,2
5 V	Heating capacities	kW	1,11	1,51	2,40 (E)	3,71	4,15	5,05	6,13
	Water flow	l/h	97	133	207	327	367	445	541
	Water pressure drop	kPa	2,2	4,5	14,2 (E)	6,8	8,3	20,8	19,2
6 V	Heating capacities	kW	1,37 (E)	1,76 (E)	2,44	4,12 (E)	4,35 (E)	5,19 (E)	6,30 (E)
	Water flow	l/h	118	151	212	355	374	447	542
	Water pressure drop	kPa	2,8 (E)	5,4 (E)	10,7	15,9 (E)	14,0 (E)	24,2 (E)	30,7 (E)
7 V	Heating capacities	kW	1,41	1,89	2,56	4,36	4,83	5,83	7,16
	Water flow	l/h	123	167	226	386	428	514	633
	Water pressure drop	kPa	3,3	6,6	12,0	9,1	10,9	26,8	25,3
8 V	Heating capacities	kW	1,53	2,06	2,73	4,59	5,16	6,17	7,66
	Water flow	l/h	134	182	241	406	453	545	677
	Water pressure drop	kPa	3,8	7,7	13,4	9,9	12,0	29,6	28,5
9 V	Heating capacities	kW	1,84 (E)	2,39 (E)	2,87	4,88	5,43	6,52	8,11
	Water flow	l/h	158	206	254	432	477	576	718
	Water pressure drop	kPa	4,7 (E)	9,3 (E)	14,7	11,0	13,2	32,6	31,5
10 V	Heating capacities	kW	-	-	3,20 (E)	5,00 (E)	5,55 (E)	6,46 (E)	7,90 (E)
	Water flow	l/h	-	-	275	430	478	556	680
	Water pressure drop	kPa	-	-	20,2 (E)	23,3 (E)	21,5 (E)	36,0 (E)	46,2 (E)
Water content		l	0,2	0,3	0,4	0,6	0,6	0,8	1,0

8.3.2 EST SERIE: LOW BODY

Room temperature: 20 °C

Water temperature: 45/40 °C

SIZE			512	514	516
2 ROWS					
1 V	Heating capacities	kW	-	-	1,25
	Water flow	l/h	-	-	216
	Water pressure drop	kPa	-	-	3,2
2 V	Heating capacities	kW	0,51	-	1,52
	Water flow	l/h	88	-	262
	Water pressure drop	kPa	0,5	-	4,5
3 V	Heating capacities	kW	0,67	-	1,77
	Water flow	l/h	116	-	307
	Water pressure drop	kPa	0,7	-	5,9
4 V	Heating capacities	kW	0,85	1,27	2,00
	Water flow	l/h	147	220	346
	Water pressure drop	kPa	1,1	2,6	7,2
5 V	Heating capacities	kW	1,05	1,51	2,20
	Water flow	l/h	181	261	382
	Water pressure drop	kPa	1,5	3,5	8,6
6 V	Heating capacities	kW	1,19	1,73	2,40
	Water flow	l/h	206	299	414
	Water pressure drop	kPa	1,9	4,5	9,9
7 V	Heating capacities	kW	1,32	1,94	2,65
	Water flow	l/h	231	335	460
	Water pressure drop	kPa	2,3	5,4	11,8
8 V	Heating capacities	kW	1,46	2,13	2,83
	Water flow	l/h	257	371	493
	Water pressure drop	kPa	2,8	6,5	13,4
9 V	Heating capacities	kW	1,58	2,31	3,01
	Water flow	l/h	275	402	526
	Water pressure drop	kPa	3,1	7,4	15,0
10 V	Heating capacities	kW	-	-	3,18
	Water flow	l/h	-	-	558
	Water pressure drop	kPa	-	-	16,6
Water content		l	0,4	0,6	0,7

1

2

3

4

5

6

7

8

9

10

1

2

3

4

5

6

7

8

9

10

Room temperature: 20 °C

Water temperature: 45/40 °C

SIZE		512	514	516
3 ROWS				
1 V	Heating capacities	kW	-	1,43
	Water flow	l/h	-	260
	Water pressure drop	kPa	-	1,8
2 V	Heating capacities	kW	0,60	1,77
	Water flow	l/h	104	325
	Water pressure drop	kPa	1,2	2,6
3 V	Heating capacities	kW	0,80	2,09
	Water flow	l/h	138	388
	Water pressure drop	kPa	1,9	3,5
4 V	Heating capacities	kW	1,03	2,39
	Water flow	l/h	178	445
	Water pressure drop	kPa	2,9	4,4
5 V	Heating capacities	kW	1,32	2,66
	Water flow	l/h	227	499
	Water pressure drop	kPa	4,4	5,3
6 V	Heating capacities	kW	1,50	2,93
	Water flow	l/h	260	551
	Water pressure drop	kPa	5,6	6,4
7 V	Heating capacities	kW	1,69	3,27
	Water flow	l/h	293	619
	Water pressure drop	kPa	6,8	7,8
8 V	Heating capacities	kW	1,89	3,52
	Water flow	l/h	328	667
	Water pressure drop	kPa	8,3	8,9
9 V	Heating capacities	kW	2,07	3,77
	Water flow	l/h	358	716
	Water pressure drop	kPa	9,7	10,0
10 V	Heating capacities	kW	-	4,00
	Water flow	l/h	-	763
	Water pressure drop	kPa	-	11,2
Water content		l	0,6	0,8

Room temperature: 20 °C

Water temperature: 65/55 °C

SIZE			512	514	516
1 ROW					
1 V	Heating capacities	kW	-	-	1,35
	Water flow	l/h	-	-	119
	Water pressure drop	kPa	-	-	3,9
2 V	Heating capacities	kW	0,75	-	1,60
	Water flow	l/h	65	-	141
	Water pressure drop	kPa	1,0	-	5,3
3 V	Heating capacities	kW	0,97	-	1,83
	Water flow	l/h	84	-	161
	Water pressure drop	kPa	1,6	-	6,7
4 V	Heating capacities	kW	1,20	1,36	2,04
	Water flow	l/h	105	119	179
	Water pressure drop	kPa	2,4	3,7	8,0
5 V	Heating capacities	kW	1,48	1,57	2,22
	Water flow	l/h	130	139	196
	Water pressure drop	kPa	3,4	4,8	9,3
6 V	Heating capacities	kW	1,66	1,78	2,39
	Water flow	l/h	146	157	211
	Water pressure drop	kPa	4,2	6,0	10,7
7 V	Heating capacities	kW	1,85	1,97	2,61
	Water flow	l/h	163	174	231
	Water pressure drop	kPa	5,1	7,1	12,4
8 V	Heating capacities	kW	2,03	2,13	2,77
	Water flow	l/h	179	186	244
	Water pressure drop	kPa	6,0	8,1	13,8
9 V	Heating capacities	kW	2,19	2,29	2,92
	Water flow	l/h	194	201	258
	Water pressure drop	kPa	6,9	9,2	15,1
10 V	Heating capacities	kW	-	-	3,06
	Water flow	l/h	-	-	271
	Water pressure drop	kPa	-	-	16,5
Water content		l	0,2	0,3	0,4

1

2

3

4

5

6

7

8

9

10

8.4 ELECTRICAL DATA

Power supply: 230±10%-1-50/60 [V-ph-Hz]

SIZE			512	514	516	520	522	524	528
Nominal absorbed power	1 V	[W]	-	-	4	4	5	7	8
	2 V	[W]	5	6	5 (E)	6	7	10	13
	3 V	[W]	7 (E)	8 (E)	7	8 (E)	10 (E)	14 (E)	19 (E)
	4 V	[W]	9	10	9	11	14	20	30
	5 V	[W]	12	15	13 (E)	14	22	27	43
	6 V	[W]	15 (E)	23 (E)	17	19 (E)	28 (E)	33 (E)	56 (E)
	7 V	[W]	20	28	22	26	39	47	82
	8 V	[W]	26	38	28	32	52	60	111
	9 V	[W]	31 (E)	54 (E)	35	40	65	77	144
	10 V	[W]	-	-	42 (E)	46 (E)	76 (E)	89 (E)	168 (E)
Nominal absorbed current	1 V	[A]	-	-	0,05	0,05	0,06	0,08	0,09
	2 V	[A]	0,12	0,11	0,06	0,07	0,08	0,10	0,12
	3 V	[A]	0,14	0,11	0,07	0,09	0,11	0,15	0,17
	4 V	[A]	0,14	0,10	0,09	0,11	0,14	0,19	0,26
	5 V	[A]	0,16	0,20	0,13	0,14	0,20	0,25	0,36
	6 V	[A]	0,20	0,22	0,16	0,18	0,24	0,32	0,48
	7 V	[A]	0,22	0,30	0,21	0,24	0,35	0,42	0,67
	8 V	[A]	0,27	0,30	0,26	0,29	0,46	0,54	0,89
	9 V	[A]	0,35	0,38	0,32	0,36	0,57	0,67	1,15
	10 V	[A]	-	-	0,42	0,42	0,68	0,83	1,42

(E): Eurovent



Electrical data refer to standard fan coils with clean filter and without external static pressure. A dirty filter or an external air pressure drop will lower the absorbed power level. The installation of electric accessories increase the absorbed power level.

9. NOISE LEVELS

9.1 SOUND POWER

The acoustic emission characteristics of any noise source is defined as its **«sound power»** (SWL). This typical measurement indicates the total radiated energy which does not vary for a given noise source; that is, it does not depend on the observer, location, distance or any other factor which is not part of the source.

9.2 SOUND PRESSURE IN A CLOSED ENVIRONMENT

The perceived noise radiated from a sound source is something quite different: noise perception is indicated by its **«sound pressure»** (SPL). Even though it is caused by the emission of sound energy, it greatly depends on the environment through which the sound travels, on the distance from the source and on all other circumstances that are not directly related to the primary noise source. Besides the distance from the source, the most important factor that influences the **«sound pressure»** (and, as a result, the perceived noise) in a closed environment is the amount of sound energy reflected off surfaces that have a greater or lesser reflection capacity: it depends, therefore, on the re-transmission of sound energy (**power**) acting upon reflecting surfaces. Covering the walls with sound absorbing material (i.e. material with a low sound reflecting capacity) is the most effective way to reduce the noise level in a closed environment. The following values indicate the sound pressure emitted by the fan coils. By using the EURAPO software for selection it is possible to calculate the new sound pressure level obtained by changing the parameters: room volume, distance from the noise source and reverberation time.

The reverberation time measures the sound characteristics of a room: it increases as the room dimensions increase and decreases as the sound absorption capacity of the structure increases.

Sound power level



(*) Minimum value measurable in laboratory, indicated by Eurovent.

		dB (A)
Size 512	1 V	-
	2 V	30*
	3 V (Eurovent)	30*
	4 V	35
	5 V	41
	6 V (Eurovent)	44
	7 V	50
	8 V	54
	9 V (Eurovent)	55
	10 V	-
Size 514	1 V	-
	2 V	30*
	3 V (Eurovent)	30*
	4 V	38
	5 V	44
	6 V (Eurovent)	48
	7 V	53
	8 V	57
	9 V (Eurovent)	59
	10 V	-
Size 516	1 V	30*
	2 V (Eurovent)	33
	3 V	39
	4 V	45
	5 V (Eurovent)	47
	6 V	52
	7 V	54
	8 V	57
	9 V	59
	10 V (Eurovent)	60
Size 520	1 V	30*
	2 V	31
	3 V (Eurovent)	37
	4 V	40
	5 V	43
	6 V (Eurovent)	48
	7 V	50
	8 V	52
	9 V	55
	10 V (Eurovent)	57
Size 522	1 V	30
	2 V	33
	3 V (Eurovent)	39
	4 V	44
	5 V	48
	6 V (Eurovent)	51
	7 V	55
	8 V	57
	9 V	60
	10 V (Eurovent)	62
Size 524	1 V	33
	2 V	39
	3 V (Eurovent)	43
	4 V	48
	5 V	51
	6 V (Eurovent)	53
	7 V	57
	8 V	59
	9 V	61
	10 V (Eurovent)	63
Size 528	1 V	36
	2 V	44
	3 V (Eurovent)	48
	4 V	52
	5 V	56
	6 V (Eurovent)	59
	7 V	62
	8 V	64
	9 V	66
	10 V (Eurovent)	69

Sound pressure in a closed environment

		dB (A)
Size 512	1 V	-
	2 V	20,5
	3 V (Eurovent)	20,5
	4 V	25,6
	5 V	31,6
	6 V (Eurovent)	34,6
	7 V	41,0
	8 V	44,4
	9 V (Eurovent)	45,6
	10 V	-
Size 514	1 V	-
	2 V	20,5
	3 V (Eurovent)	20,5
	4 V	28,4
	5 V	34,7
	6 V (Eurovent)	38,6
	7 V	43,6
	8 V	47,3
	9 V (Eurovent)	49,6
	10 V	-
Size 516	1 V	20,5
	2 V (Eurovent)	23,6
	3 V	30,1
	4 V	35,4
	5 V (Eurovent)	37,6
	6 V	42,2
	7 V	44,9
	8 V	47,3
	9 V	49,5
	10 V (Eurovent)	50,6
Size 520	1 V	20,5
	2 V	21,7
	3 V (Eurovent)	26,2
	4 V	30,8
	5 V	33,8
	6 V (Eurovent)	37,5
	7 V	40,7
	8 V	42,9
	9 V	45,4
	10 V (Eurovent)	47,6
Size 522	1 V	20,5
	2 V	23,8
	3 V (Eurovent)	29,6
	4 V	34,8
	5 V	38,4
	6 V (Eurovent)	41,6
	7 V	45,4
	8 V	47,7
	9 V	50,4
	10 V (Eurovent)	52,6
Size 524	1 V	23,6
	2 V	29,6
	3 V (Eurovent)	33,6
	4 V	38,6
	5 V	41,7
	6 V (Eurovent)	43,6
	7 V	47,4
	8 V	49,7
	9 V	51,9
	10 V (Eurovent)	53,6
Size 528	1 V	26,3
	2 V	34,2
	3 V (Eurovent)	38,6
	4 V	42,9
	5 V	46,7
	6 V (Eurovent)	49,6
	7 V	52,6
	8 V	54,9
	9 V	56,9
	10 V (Eurovent)	58,9

1

2

3

4

5

6

7

8

9

10

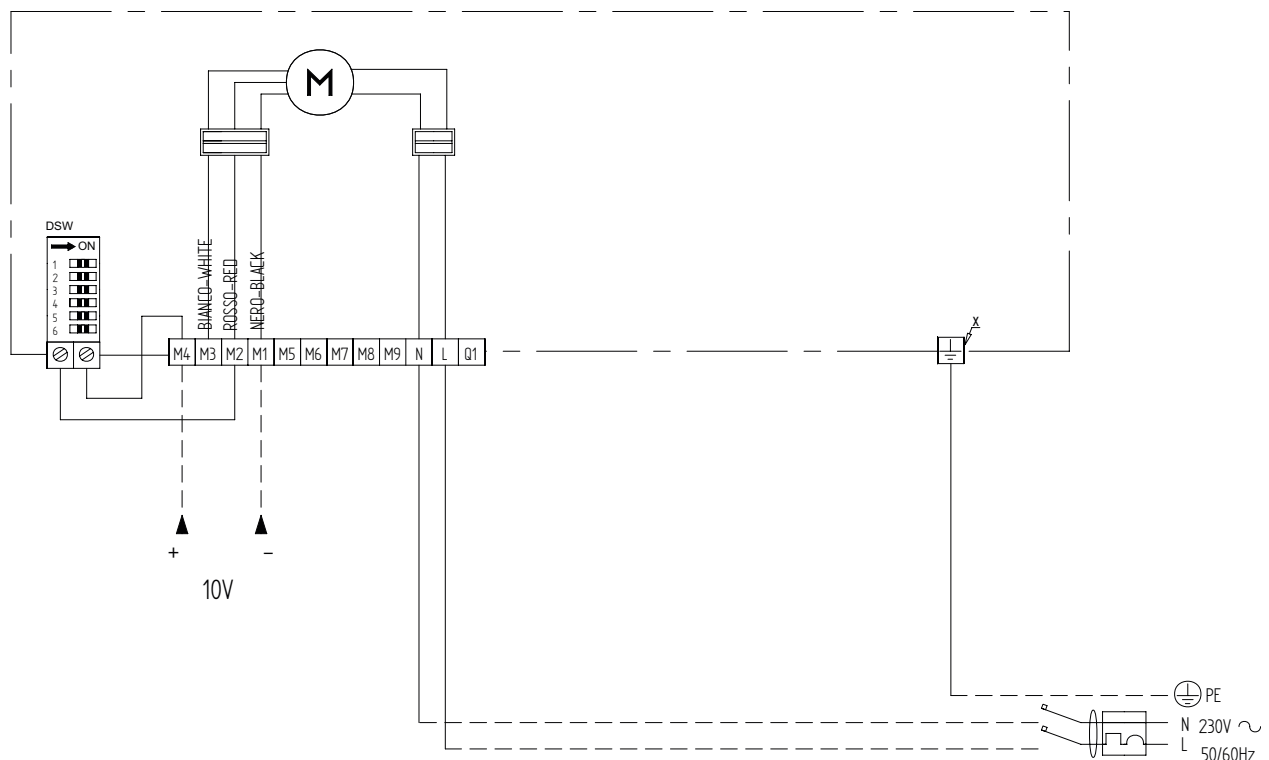
10. ELECTRICAL CONNECTIONS

The following wiring diagrams are the most frequently used for fancoil applications:

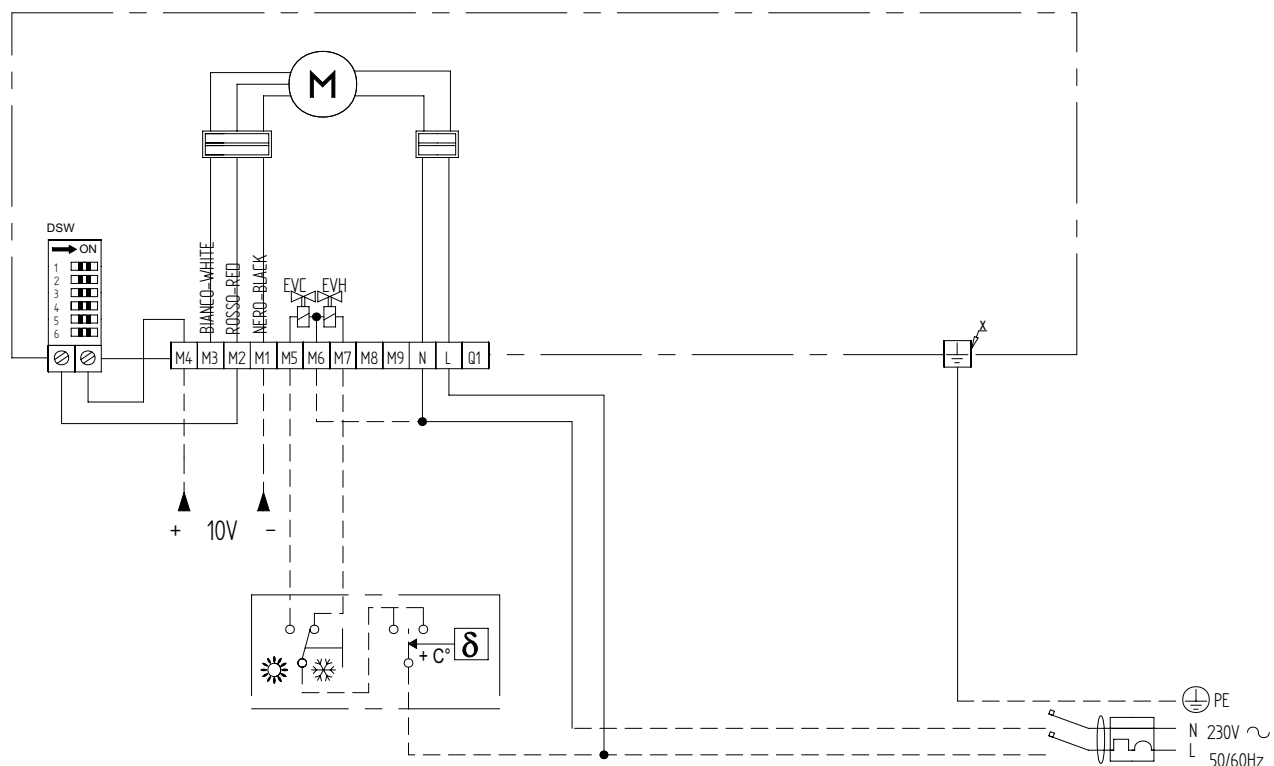
LEGEND (for all the electrical diagrams)

M	Fan motor	PR	Power Relay card
MS	Terminal board for brushless motor	PC	Condensate pump
PE	Earth	EVC	Regulating valve for cooling
N	Neutral	EVH	Regulating valve for heating
L	Phase	TSRM	Safety thermostat with manual resetting
X	CBL00 Terminal board	TSRA	Safety thermostat with automatic resetting
RE	Electric heater	☀️❄️	Summer/Winter switch

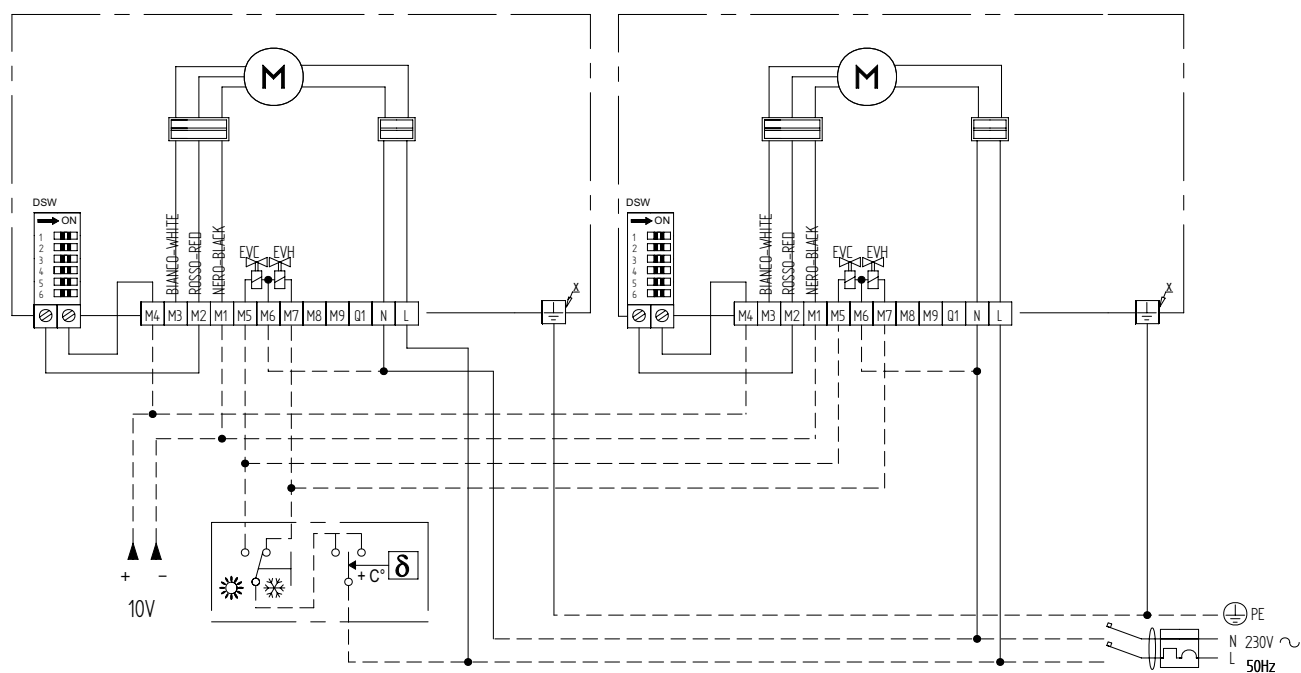
ESTCBL00



ESTCBL00 – EVC – EVH



ESTCBL00 – EVC – EVH – MASTER/SLAVE



NOTE. If other configurations are required, different from the standard ones, please refer to the instruction manual of every specific EURAPO regulator.

EURAPO

Eurapo Srl
Via A. Malignani, 12
33170 Pordenone - Italy
T +39 0434 572552
F +39 0434 28667
info@eurapo.it
www.eurapo.it



ISO 9001 certified company
Cert. n. 731005773



CE



www.eurovent-certification.com
www.certiflash.com



As programs and technologies are always improving, description, data and drawings must be intended as merely indicative and can be modified without any notice.