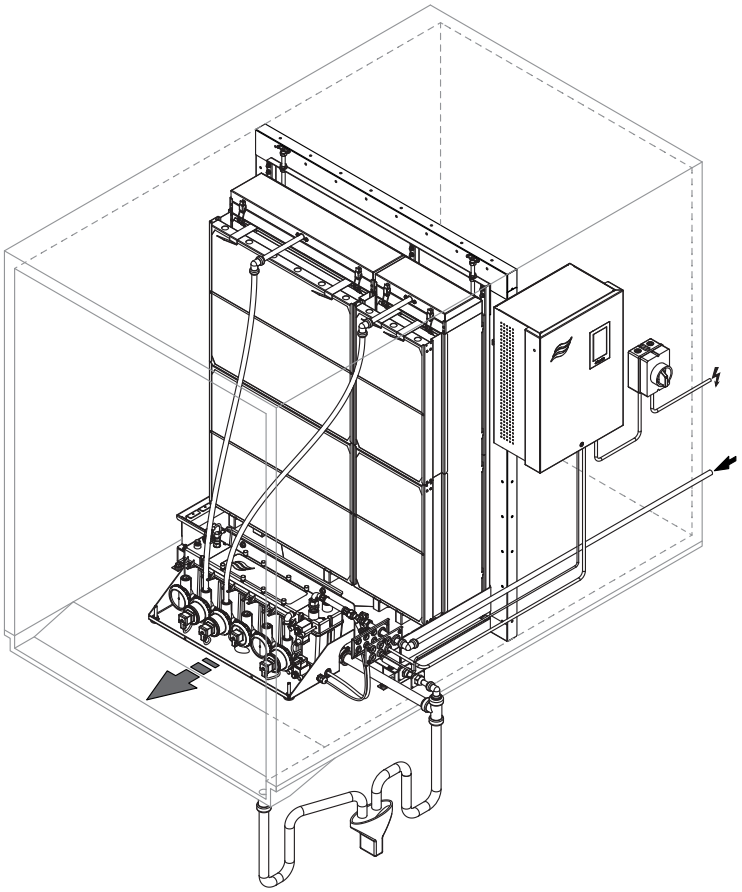
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ME SERIES



PLANNING MANUAL

Adiabatic air humidification/air cooling system
Condair **ME II**

Humidification and Evaporative Cooling

condair

Thank you for choosing Condair

Installation date (MM/DD/YYYY):
Commissioning date (MM/DD/YYYY):
Location ref.:
Model:
Serial number:

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1 Introduction

1.1 Notes on the planning manual

Limitation

The subject of this planning manual is the Condair ME Evaporative Humidifier and Cooler in its different versions.

This planning manual contains:

– system overviews of the different versions of the Condair ME
– available options
– notes on installation requirements (duct, positioning, water quality requirements)
– requirements of the supply water to be used
– unit specifications
– system selection guide

If you have questions after reading this documentation, please contact your Condair representative. They will be glad to assist you.

2 System overview

2.1 System versions

The Condair ME is available in two basic system versions:

– Control system (water is circulated with pumps in the evaporative module and periodically drained)

– Direct feed system (water is drained after flowing down the evaporative cassettes)

Condair ME Control System

Model designation	Description
Condair ME Control	Complete system with software configurable control unit with display. Hydraulic module(s) with pumps can be mounted internally or externally to the AHU/duct.

Condair ME Direct Feed System

Model designation	Description
Condair ME Direct Feed	The **standard version** includes the evaporative module and a hydraulic manifold without valves. The hydraulic manifold must be equipped with a drain and a supply as minimum. If stage control is required the hydraulic manifold can be equipped with stage valves additionally. The purge valve is to be fitted in the water supply line near the water inlet. All valves are available as options or must be supplied by the customer. Additionally two optional control units - one for On/Off control and one for stage control are available.

2.2 System description

2.2.1 Condair ME Control

2.2.1.1 Typical system Condair ME Control with center drain tank and one hydraulic module, internal install (evaporative modules up to 4.2 m/165" wide)

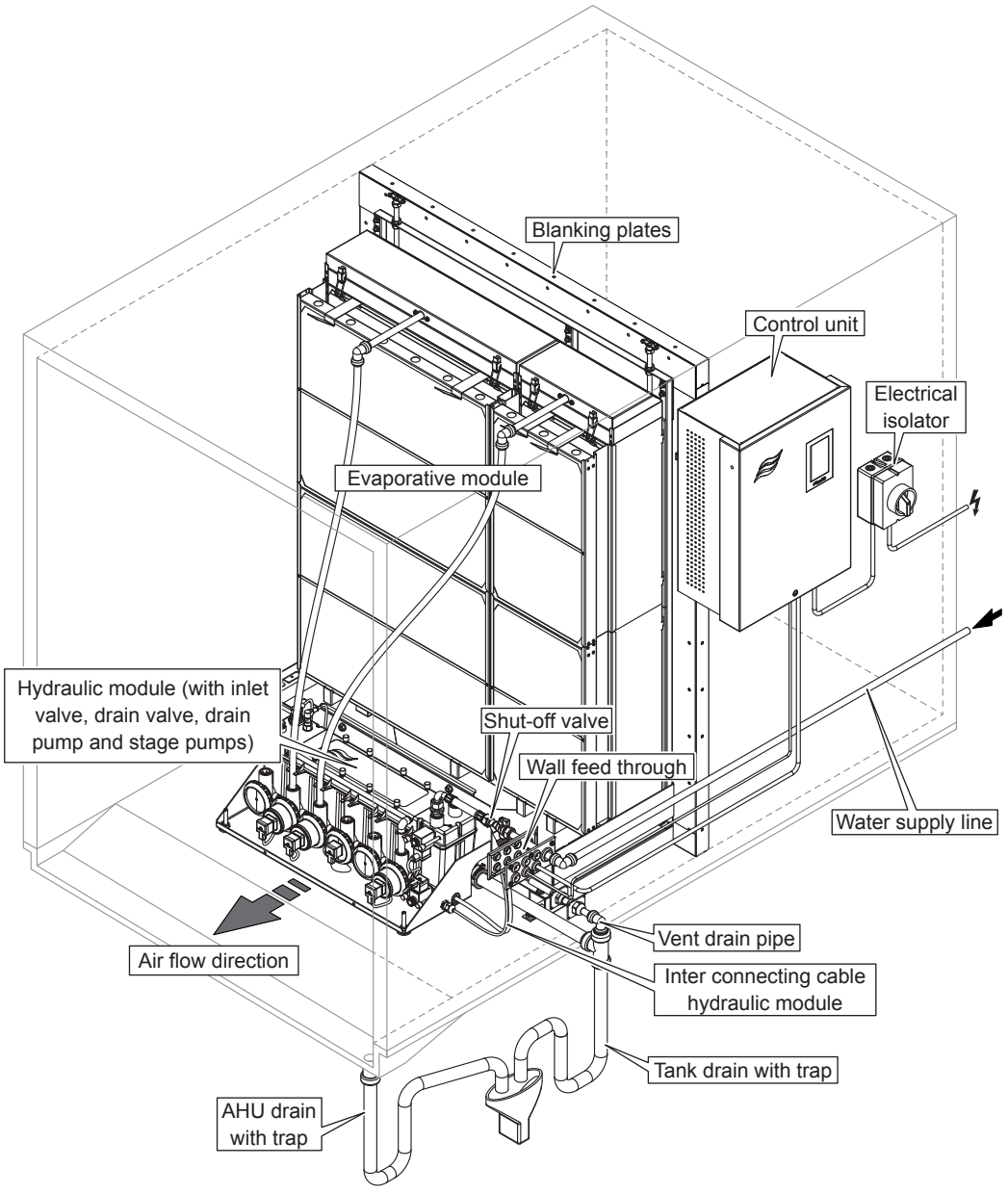


Fig. 1: Typical system Condair ME Control with center drain tank and one hydraulic module, internal install (evaporative modules up to 4.2 m/165" wide)

2.2.1.2 Typical system Condair ME Control with center drain tank and one hydraulic module, external install (evaporative modules up to 4.2 m/165" wide)

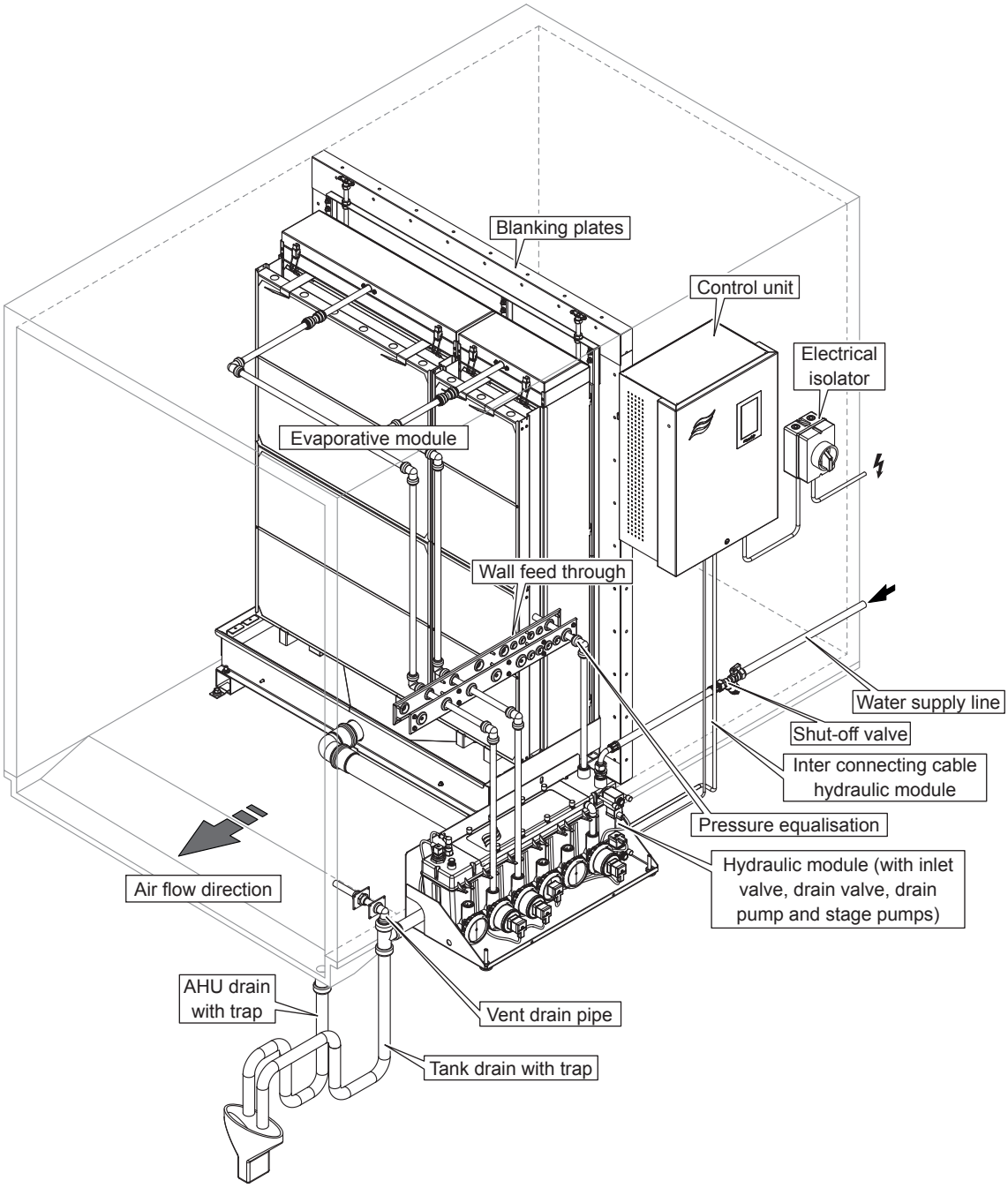


Fig. 2: Typical system Condair ME Control with center drain tank and one hydraulic module, external install (evaporative modules up to 4.2 m/165" wide)

2.2.1.3 Typical system Condair ME Control with side drain tank and one hydraulic module, external install (evaporative modules up to 3 m/118" wide)

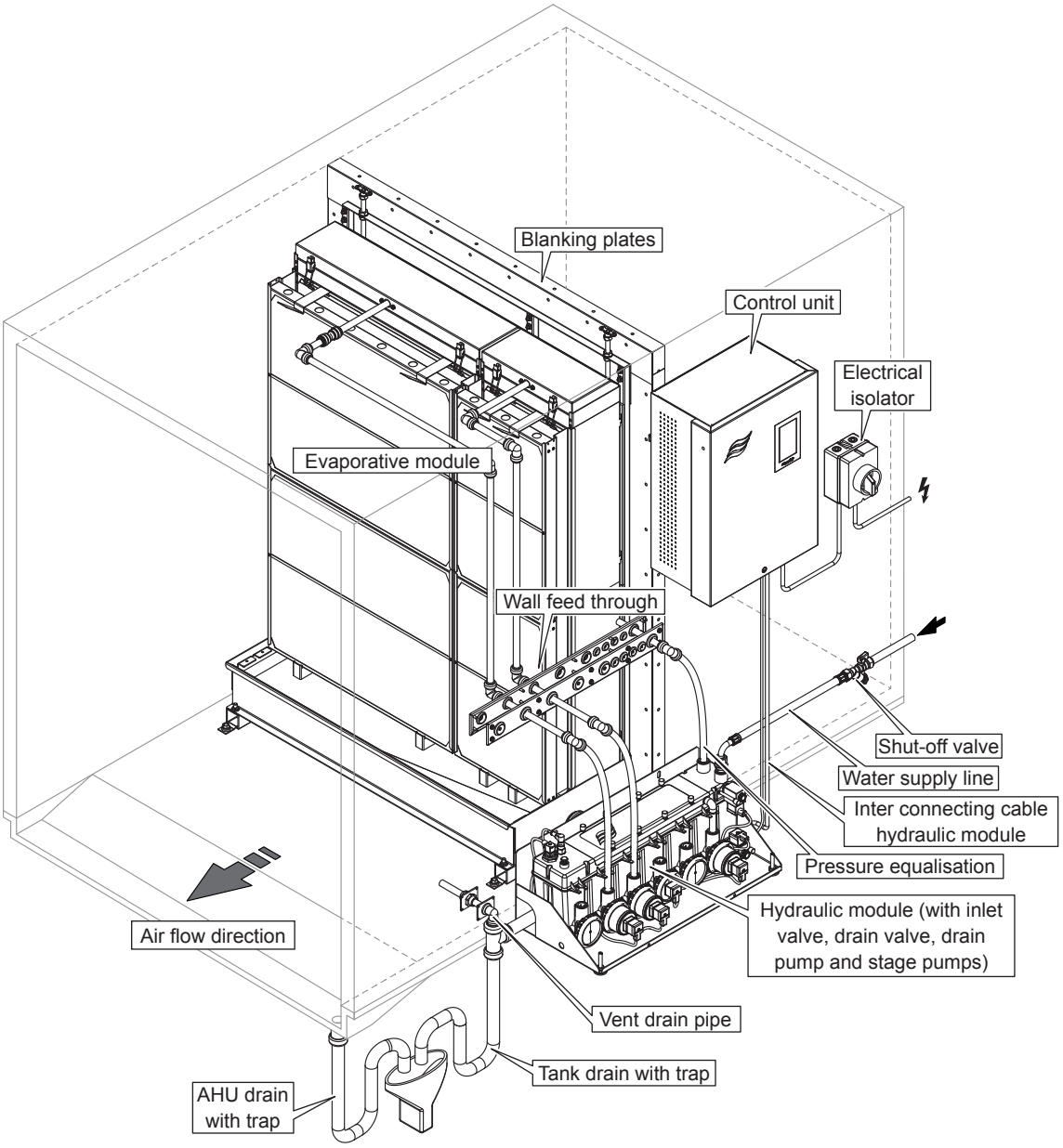


Fig. 3: Typical system Condair ME Control with side drain tank and one hydraulic module, external install (evaporative modules up to 3 m/118" wide)

2.2.1.4 Typical system Condair ME Control with two hydraulic modules, internal install (evaporative modules 3.15 m ... 4.2 m/124" ... 165" wide)

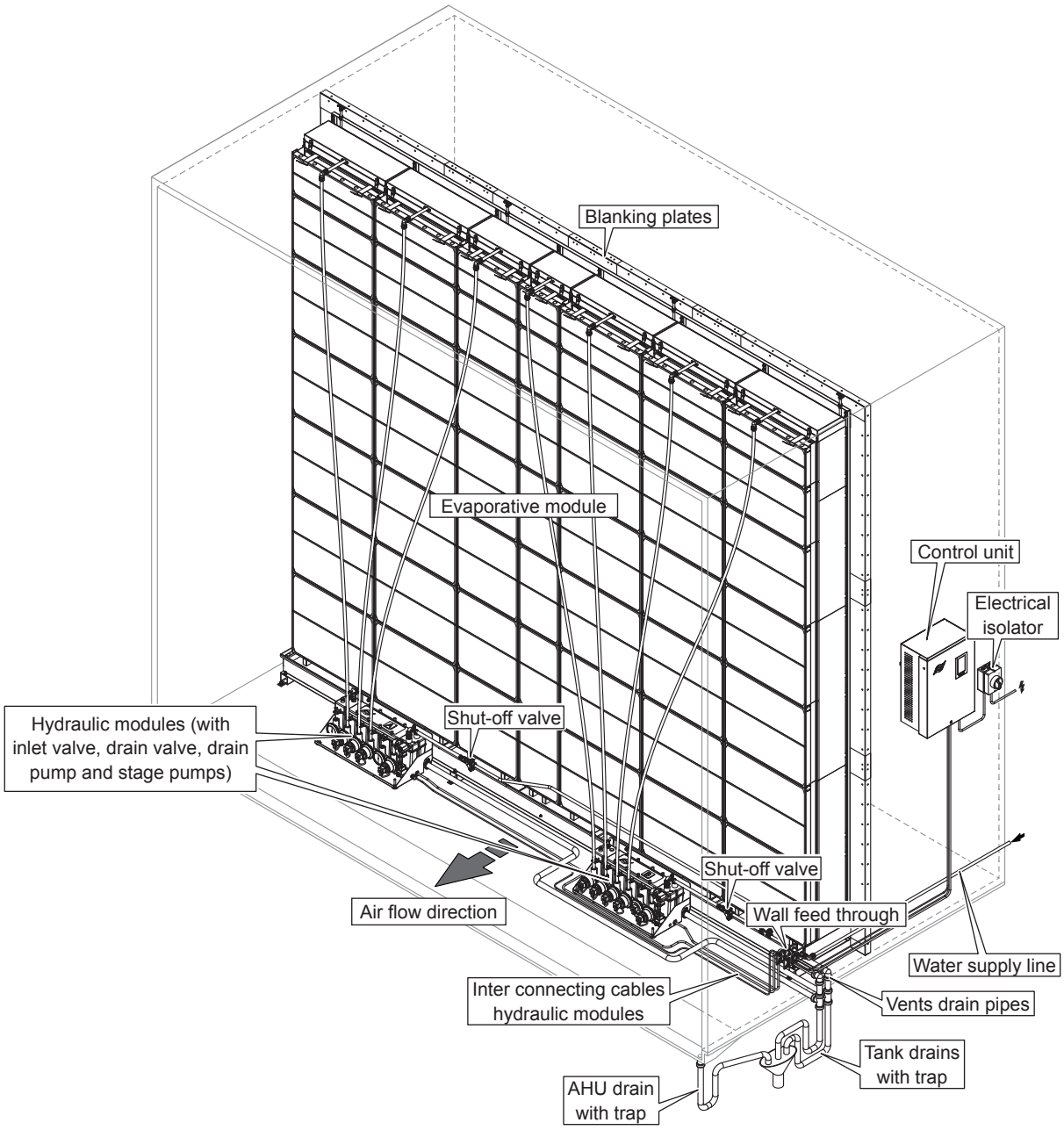


Fig. 4: Typical system Condair ME Control with two hydraulic modules, internal install (evaporative modules 3.15 m ... 4.2 m/124" ... 165" wide)

2.2.1.5 Typical system Condair ME Control with two hydraulic modules, external install (evaporative modules 3.15 m ... 4.2 m/124" ... 165" wide)

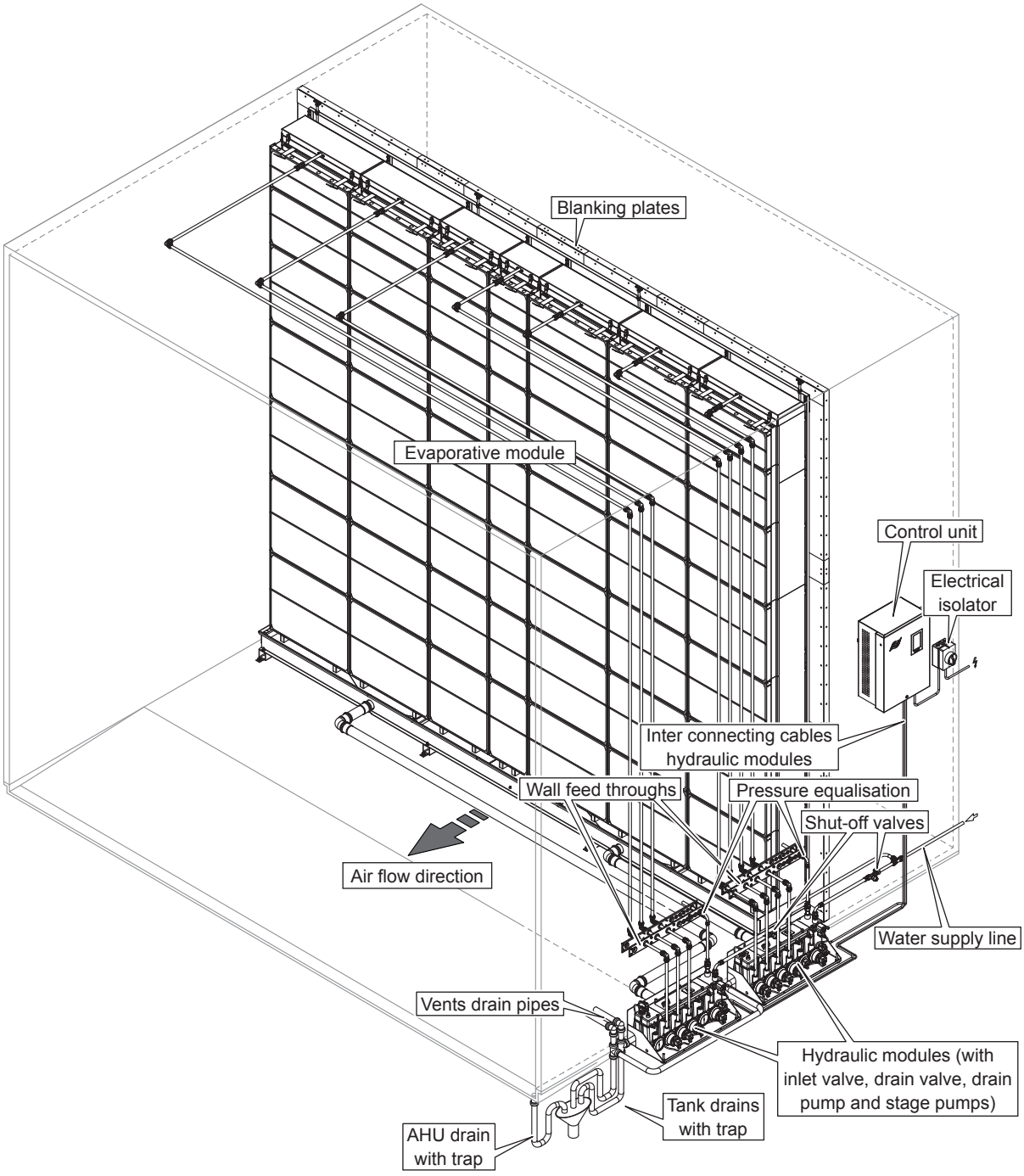


Fig. 5: Typical system Condair ME Control with two hydraulic modules, external install (evaporative modules 3.15 m ... 4.2 m/124" ... 165" wide)

2.2.1.6 Schematic flow diagrams Condair ME Control with one hydraulic module

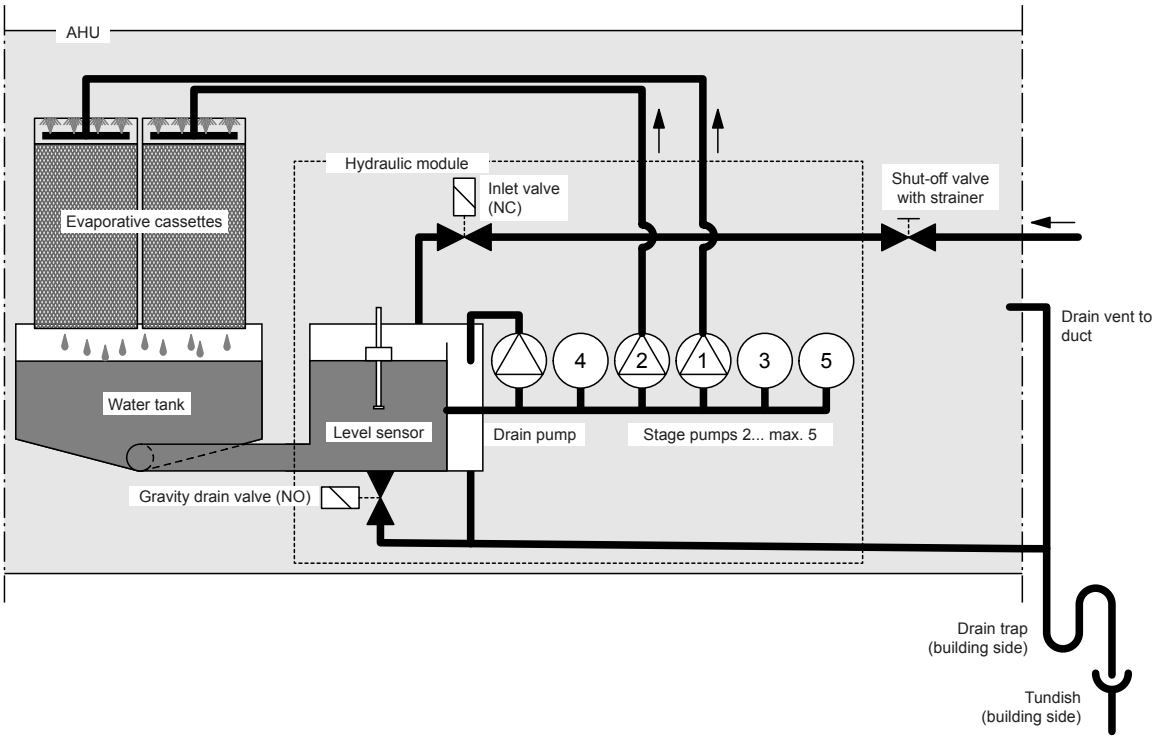


Fig. 6: Schematic flow diagram Condair ME Control with one hydraulic module (internal install)

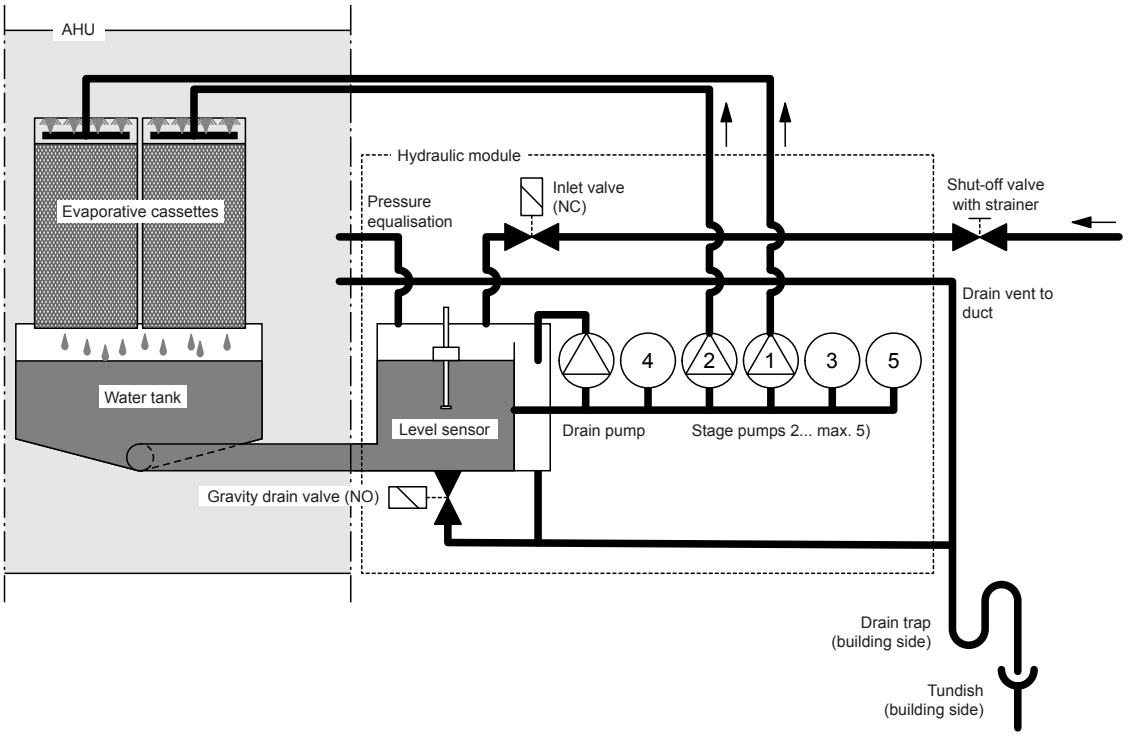


Fig. 7: Schematic flow diagram Condair ME Control with one hydraulic module (external install)

2.2.1.7 Schematic flow diagrams Condair ME Control with two hydraulic modules

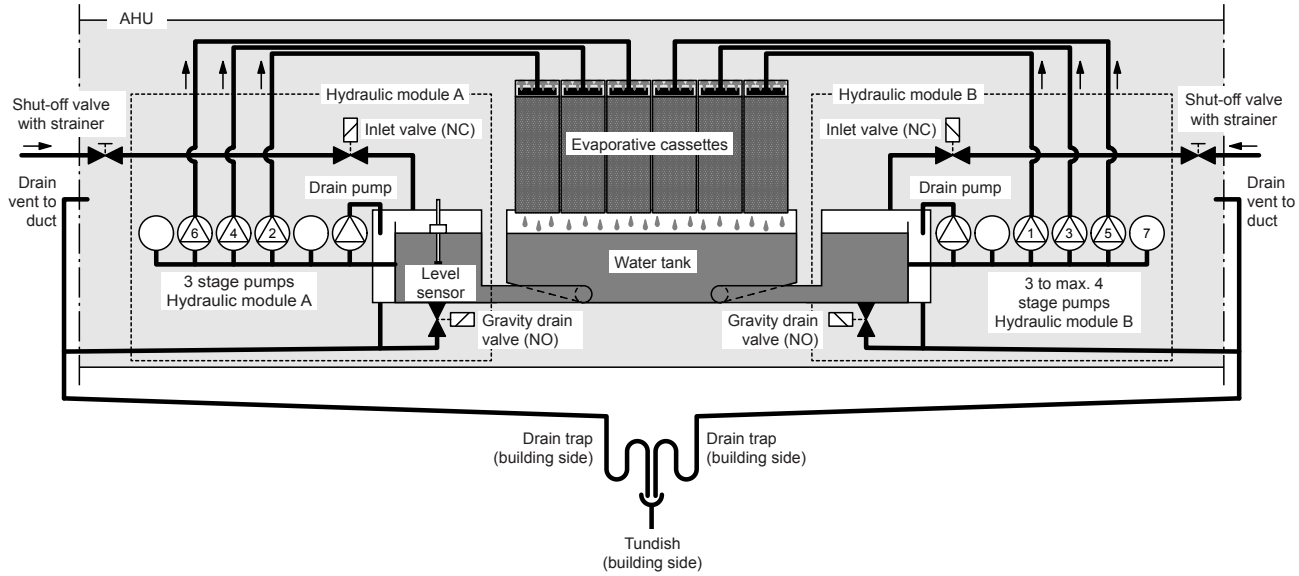


Fig. 8: Schematic flow diagram Condair ME Control with two hydraulic modules (internal install)

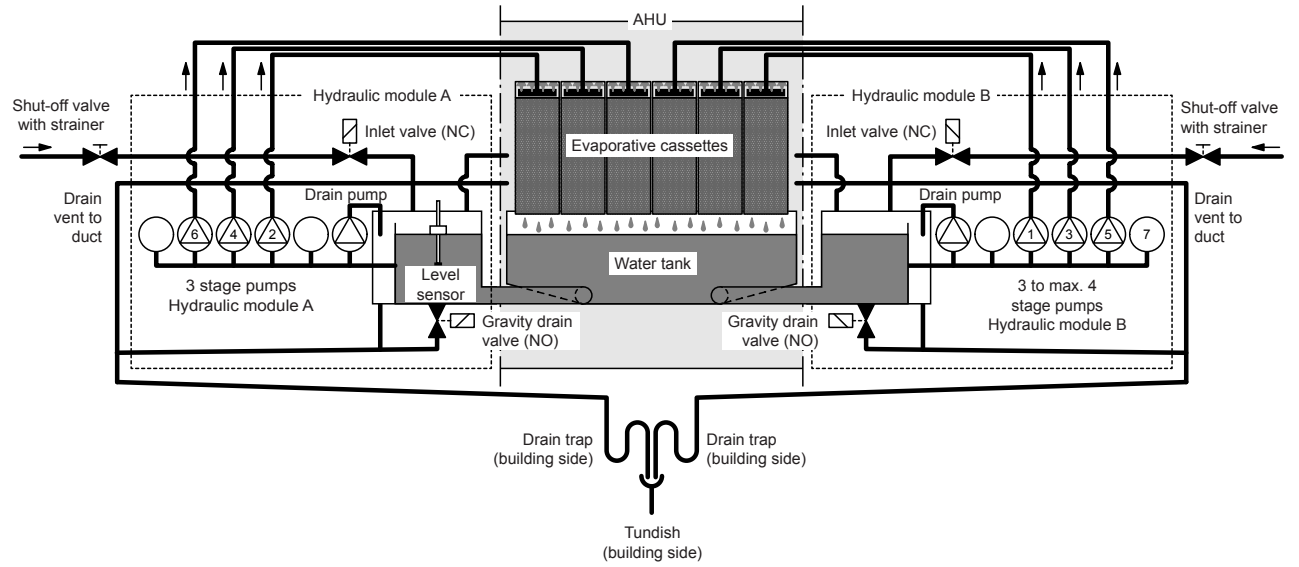


Fig. 9: Schematic flow diagram Condair ME Control with two hydraulic modules (external install)

2.2.1.8 Functional description Condair ME Control

The water tank is filled up to a preset upper level via the level-controlled normally closed (NC) inlet valve(s). When the water level in the water tank drops below a certain limit, the level-controlled inlet valve(s) open until the upper limit is reached again.

The Condair ME Control provides On/Off or stage control by means of the Condair ME Control control unit and the stage pumps. The Condair ME Control control unit processes analog sensor/control signals and uses them to control the stage pumps.

In case of a humidification/cooling request with **activated On/Off control** the inlet valve(s) (NC) open and all stage pumps start and the water flows to the distribution header above the evaporative cassettes.

In case of a humidification/cooling request with **activated stage control** the inlet valve(s) (NC) open, then up to seven stage pumps start (depending on the demand signal and evaporative module size) and the water flows to the distribution headers above the evaporative cassettes.

The distribution pipes inside the distribution headers evenly supply the water to the entire surface of the evaporative cassettes where it flows down and humidifies the air flowing through the evaporative cassettes. The excess water not used for humidification flows to the water tank.

To prevent accumulation of mineral residues and the formation of germs in the water tank, the tank is completely drained periodically (interval or time controlled). Additionally further hygiene functions can be activated: Operation-dependent draining of the water tank (fill cycle, conductivity, temperature or time controlled).

2.2.2 Condair ME Direct Feed

2.2.2.1 Typical system Condair ME Direct Feed with center drain tank and one hydraulic manifold, internal install (evaporative modules up to 3.0 m/118" wide)

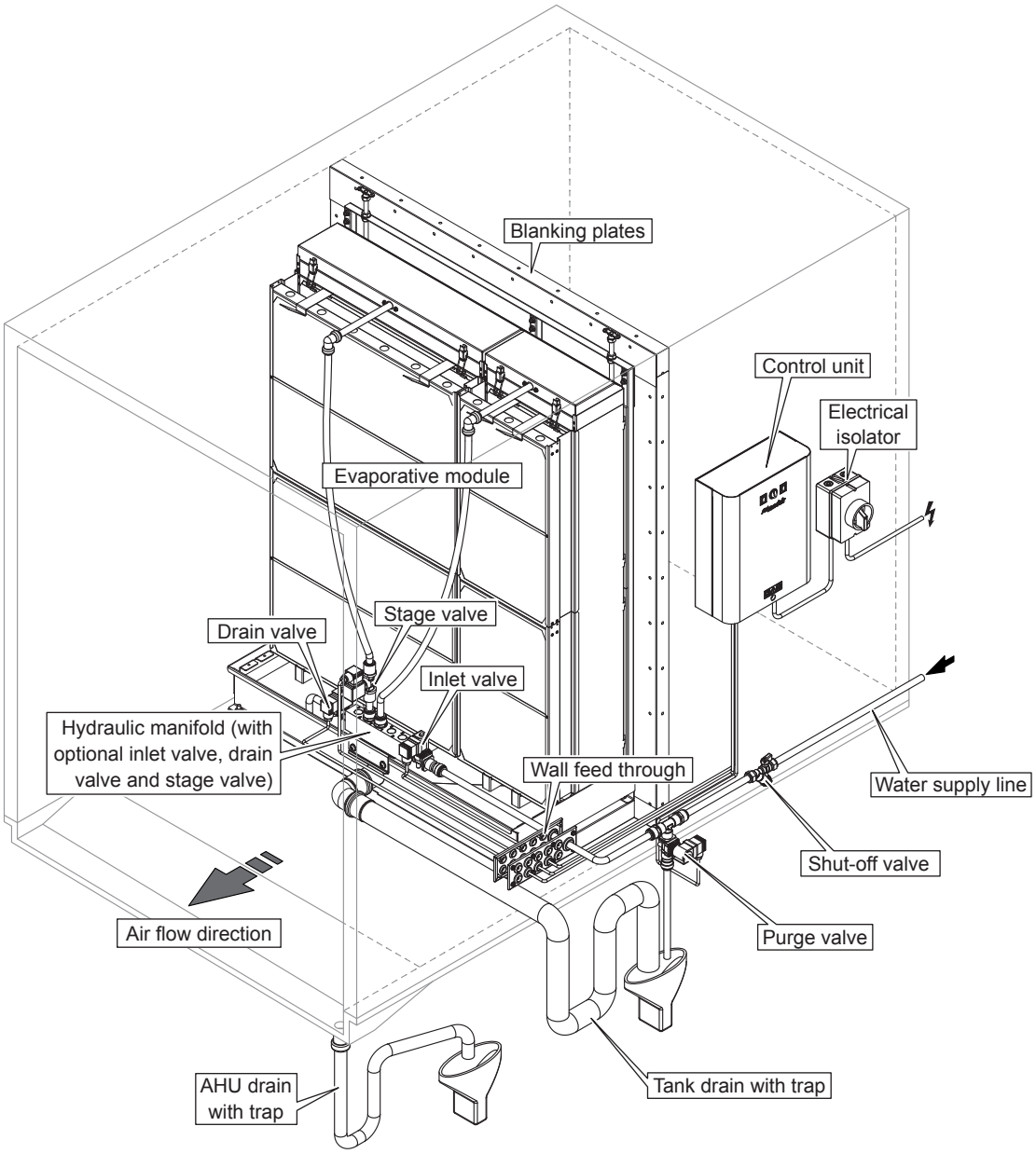


Fig. 10: Typical system Condair ME Direct Feed with center drain tank and one hydraulic manifold, internal install (evaporative modules up to 3.0 m/118" wide)

2.2.2.2 Typical system Condair ME Direct Feed with center drain tank and one hydraulic manifold, external install (evaporative modules up to 3.0 m/118" wide)

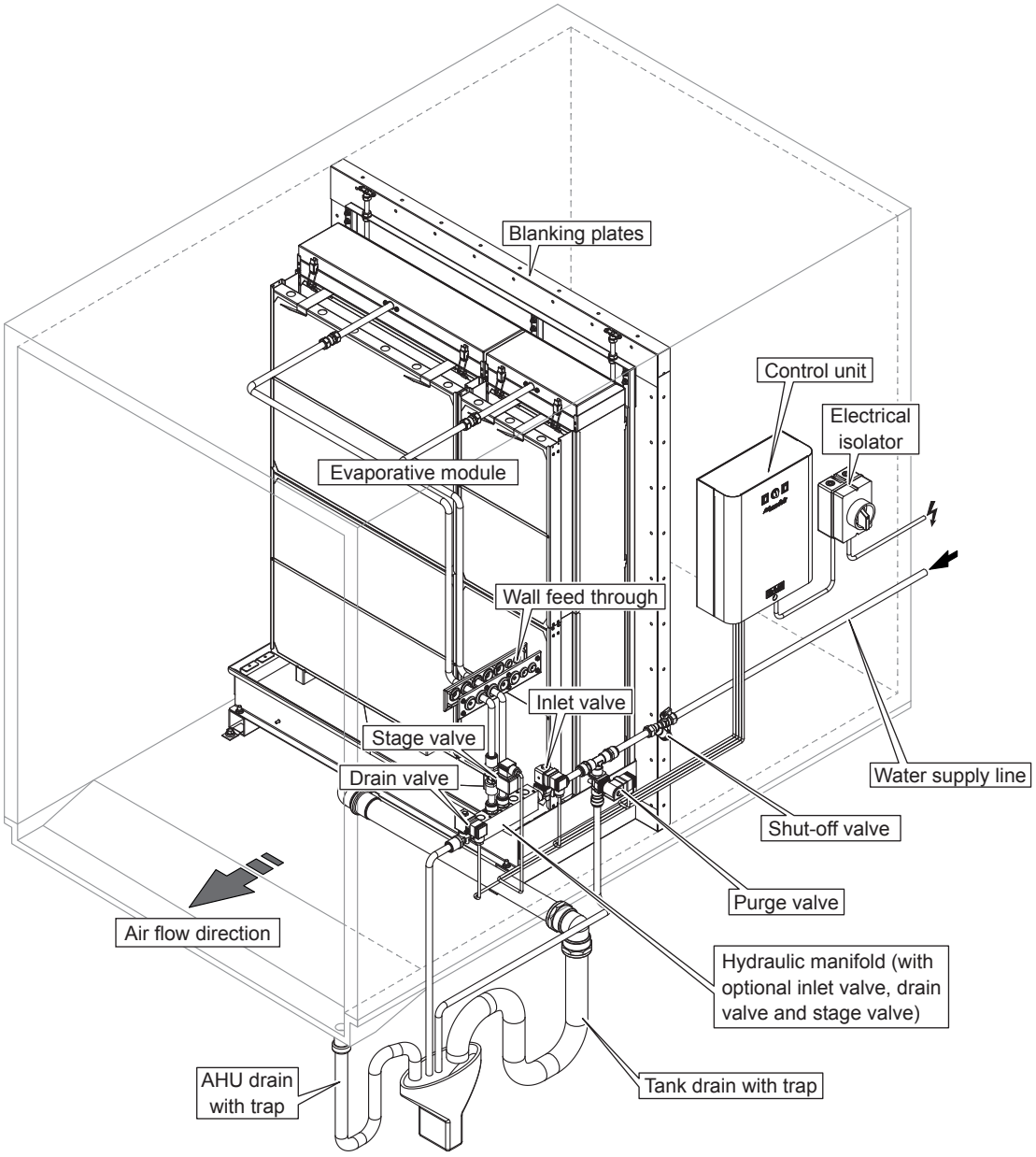


Fig. 11: Typical system Condair ME Direct Feed with center drain tank and one hydraulic manifold, external install (evaporative modules up to 3.0 m/118" wide)

2.2.2.3 Typical system Condair ME Direct Feed with side drain tank and one hydraulic manifold, external install (evaporative modules up to 3 m/118" wide)

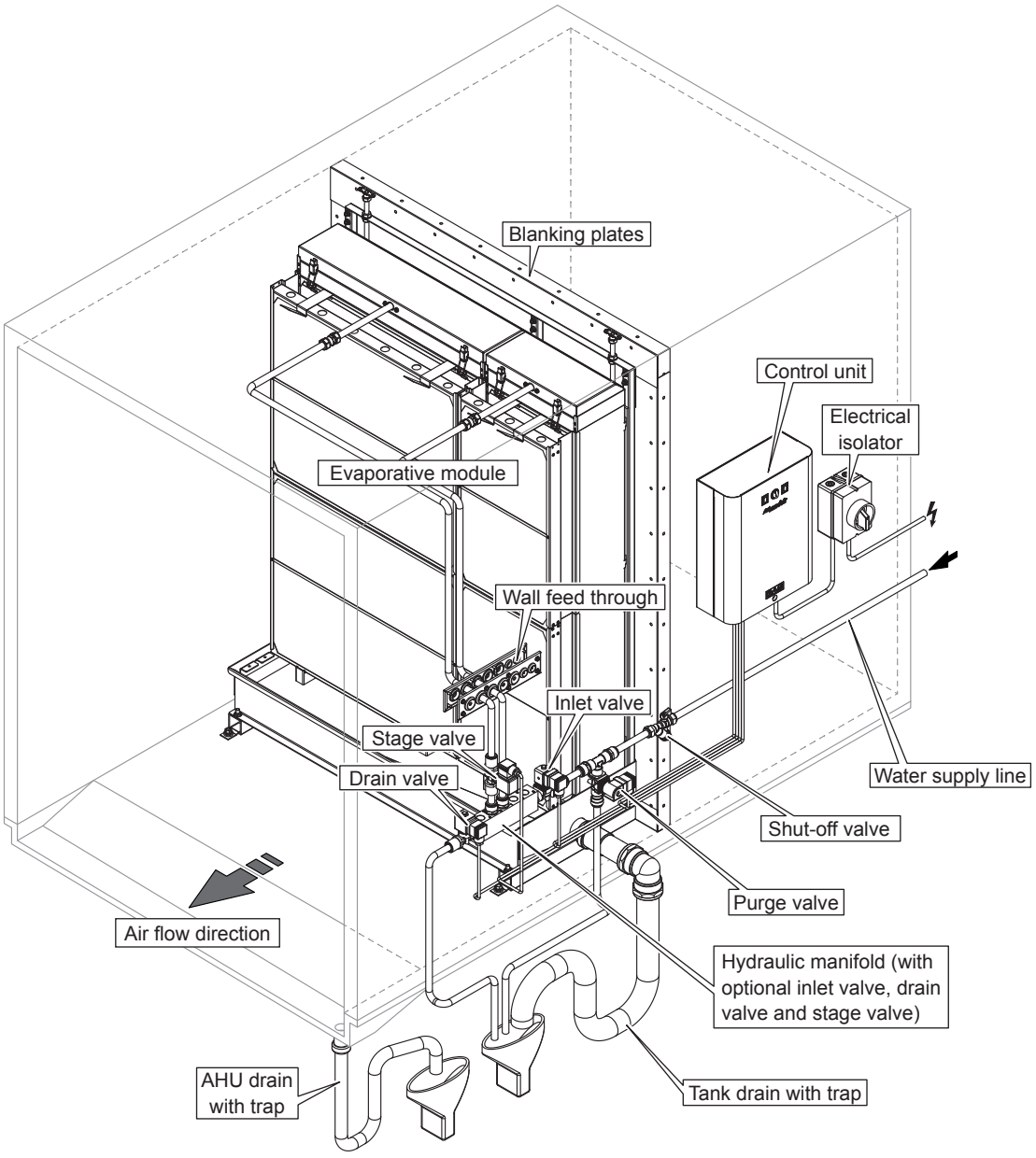


Fig. 12: Typical system Condair ME Direct Feed with side drain tank and one hydraulic manifold, external install (evaporative modules up to 3 m/118" wide)

2.2.2.4 Typical system Condair ME Direct Feed with two hydraulic manifolds, internal install (evaporative modules 3.15 m ... 4.2 m/124" ... 165" wide)

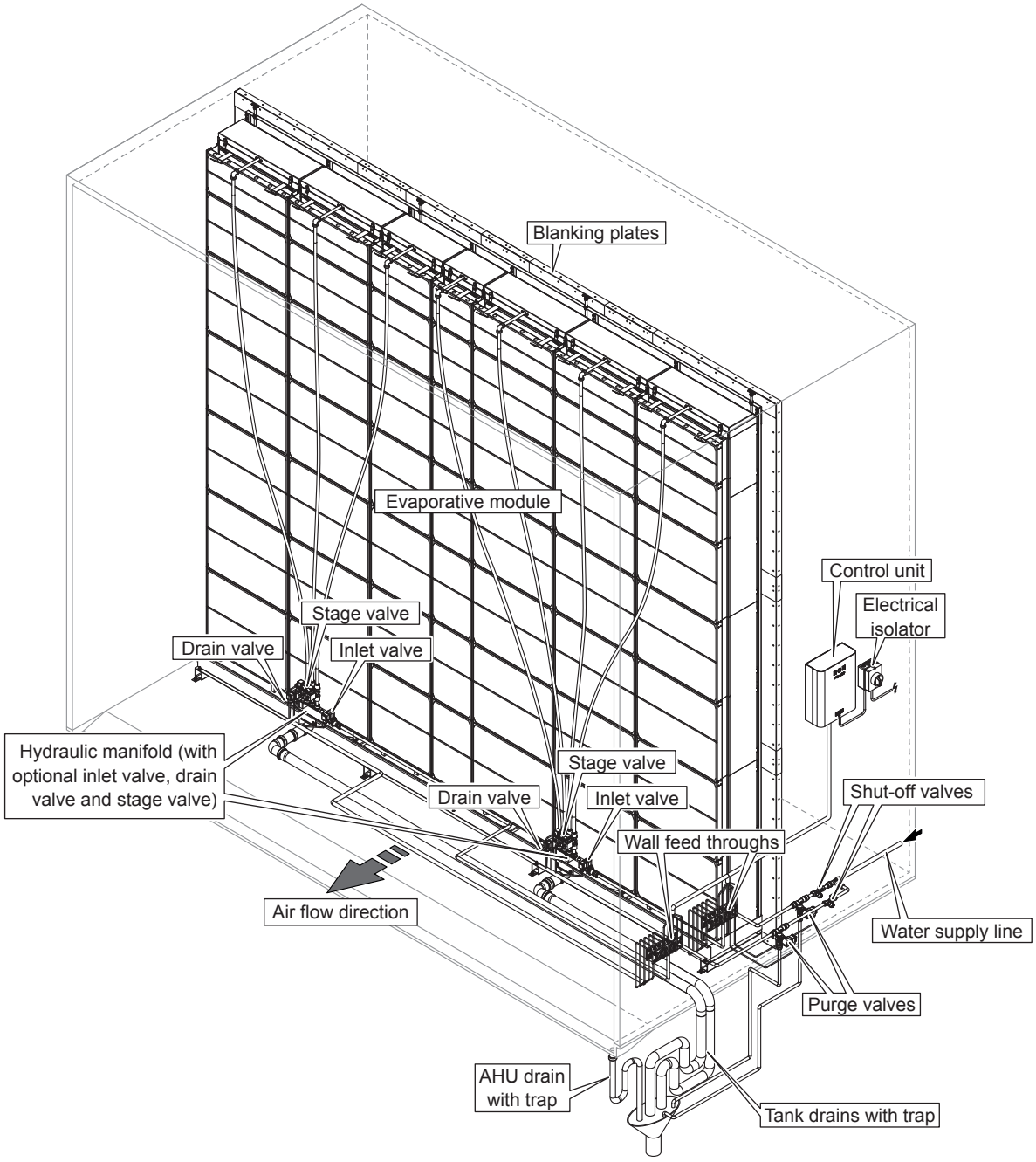


Fig. 13: Typical system Condair ME Direct Feed with two hydraulic manifolds, internal install (evaporative modules 3.15 m ... 4.2 m/124" ... 165" wide)

2.2.2.5 Typical system Condair ME Direct Feed with two hydraulic manifolds, external install (evaporative modules 3.15 m ... 4.2 m/124" ... 165" wide)

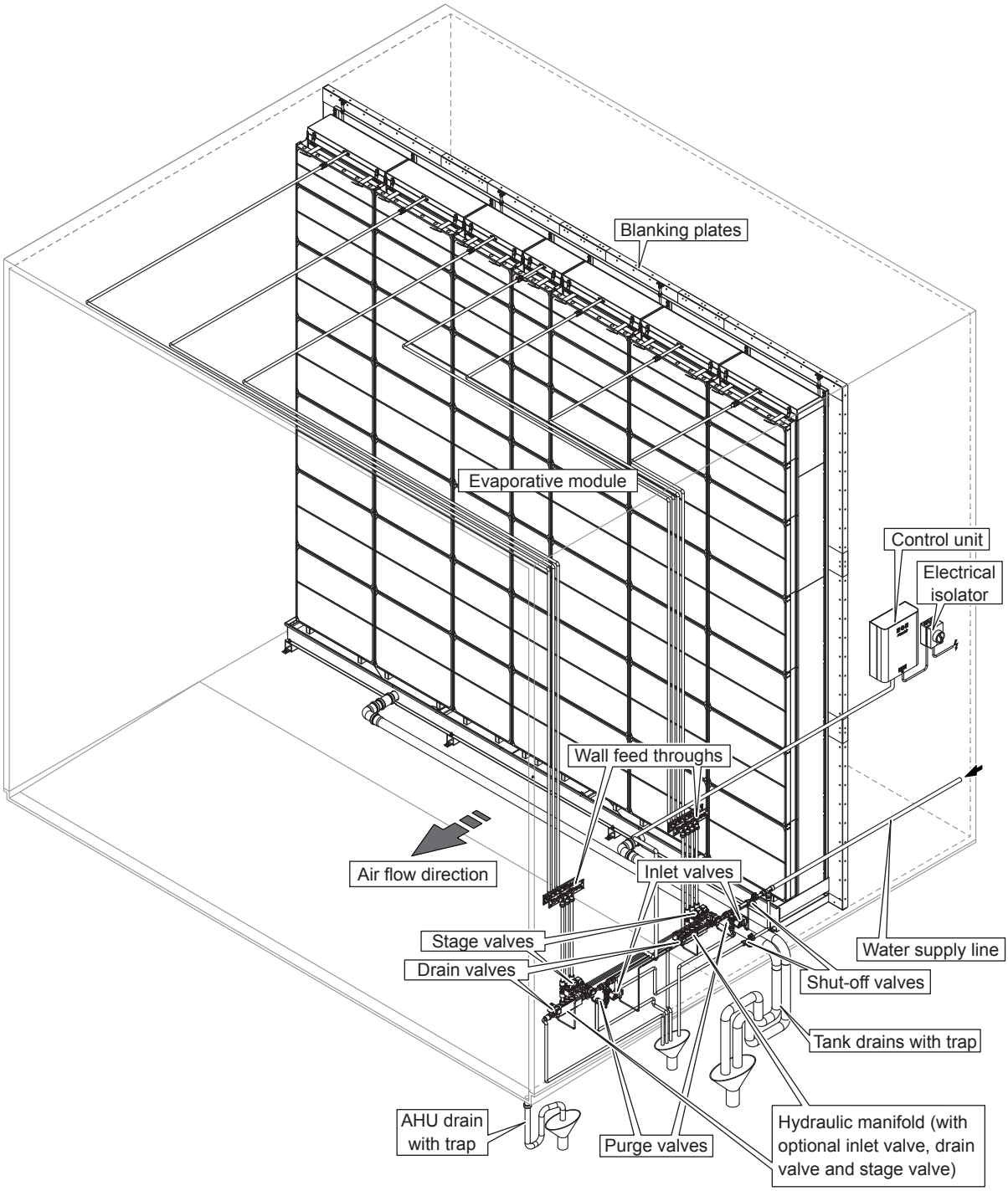


Fig. 14: Typical system Condair ME Direct Feed with two hydraulic manifolds, external install (evaporative modules 3.15 m ... 4.2 m/124" ... 165" wide)

2.2.2.6 Schematic flow diagrams Condair ME Direct Feed systems with one hydraulic module

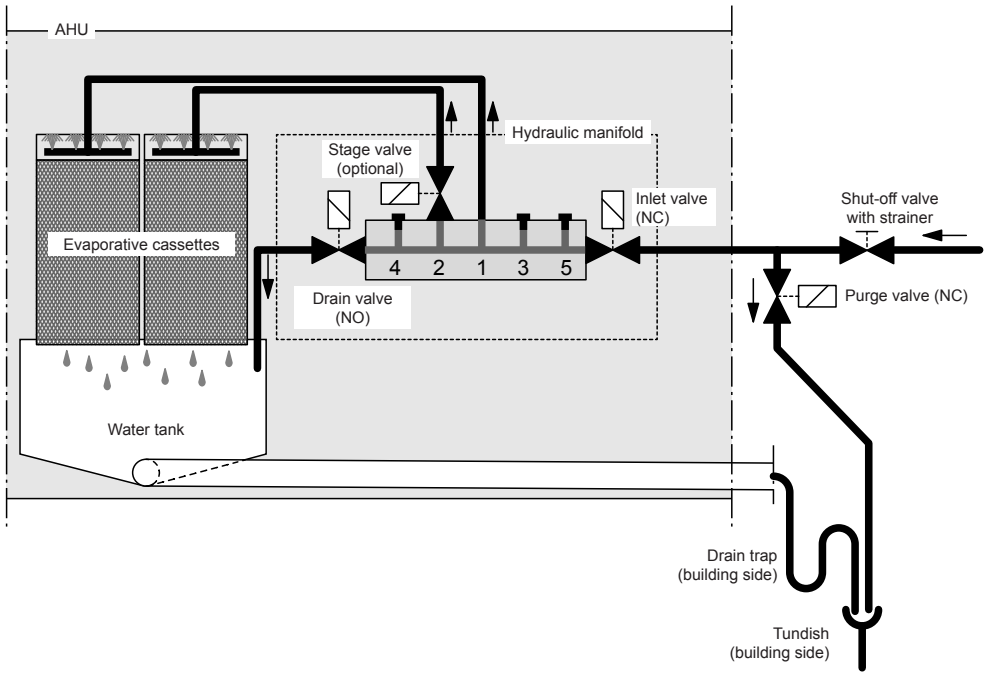


Fig. 15: Schematic flow diagram Condair ME Direct Feed with one hydraulic module (internal install)

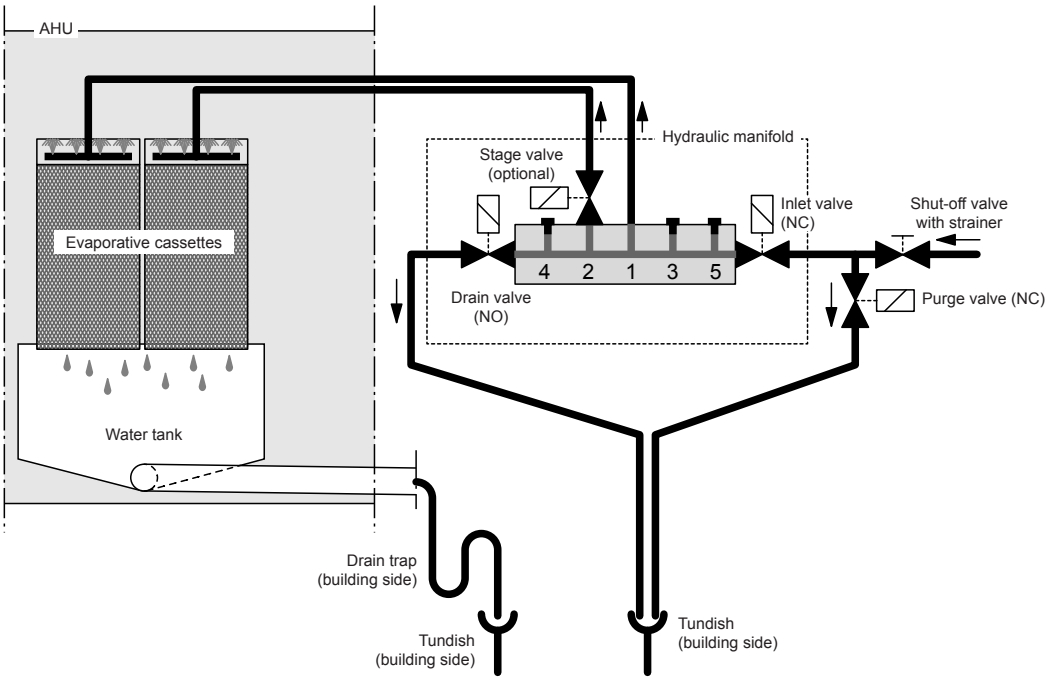


Fig. 16: Schematic flow diagram Condair ME Direct Feed with one hydraulic module (external install)

2.2.2.7 Schematic flow diagrams Condair ME Direct Feed systems with two hydraulic modules

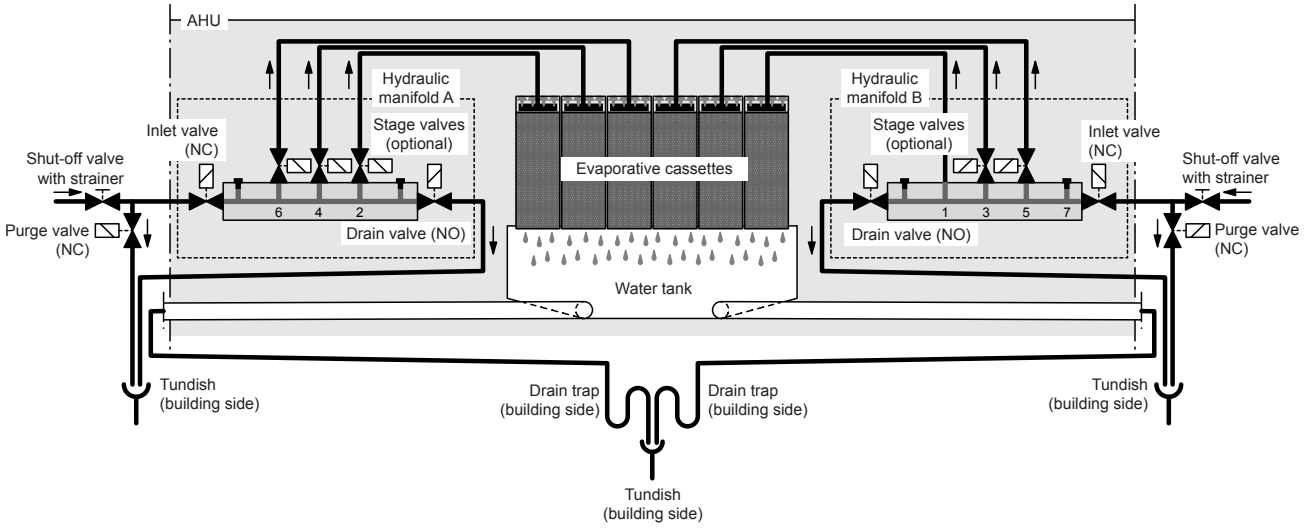


Fig. 17: Schematic flow diagram Condair ME Direct Feed System with two hydraulic modules (internal install)

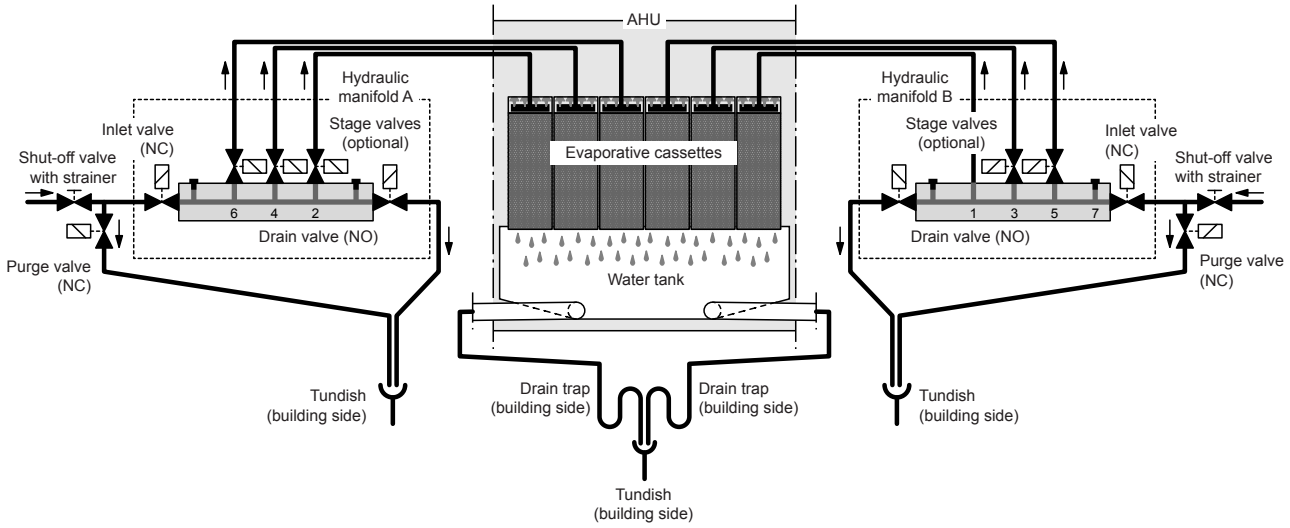


Fig. 18: Schematic flow diagram Condair ME Direct Feed with two hydraulic modules (external install)

2.2.2.8 Functional description ME Direct Feed

As standard the Condair ME Direct Feed is operated with On/Off control (requires a drain and a inlet valve fitted to the hydraulic manifold(s) (both valves available as options) and a customer supplied On/Off control or the optional direct feed On/Off control unit).

Equipped with the optional stage valves and the optional direct feed stage control unit, stage control can be established.

In case of a humidification/cooling request with **standard On/Off control** the drain valve(s) (NO) close(s) and the inlet valve(s) (NC) open(s) and the water flows to the distribution headers above the evaporative cassettes.

In case of a humidification/cooling request with **optional stage control unit** the drain valve(s) (NO) close(s) and the inlet valve(s) (NC) open(s). Depending on the demand signal and the evaporative module size additionally up to six stage valves open to control the supply of water to the distribution headers of the corresponding evaporative cassette banks.

The distribution pipes inside the distribution header evenly supply the water to the entire surface of the evaporative cassettes where it flows down and humidifies the air flowing through the evaporative cassette matrix. The excess water not used for humidification flows to the water tank and then directly to the drain.

Both optional direct feed control units (On/Off control unit and stage control unit) support time based flushing of the water supply line once the purge valve is fitted in the supply line. Every 20 hours the water supply line is flushed via the purge valve to prevent water stagnation in the water supply line which can lead to the growth of micro-organisms in the water supply line. Additionally the optional stage control unit will drain the stage pipework every 20 hours to prevent water stagnation in the stage pipes that are not in use.

2.3 Evaporative cassettes/droplet separator

Evaporative cassettes

The Condair ME evaporative cassettes are available in two different evaporative materials with different humidification efficiencies:

Material	Type	Cassette depth	Maximum humidification efficiency
Glass fibre (F-Type)	F75	100 mm (4")	75 %
	F85	150 mm (6")	85 %
	F95	200 mm (8")	95 %
Glass fibre (C-Type)	C85	200 mm (8")	85 %
	C95	300 mm (12")	95 %
Polyester	P85	200 mm (8")	85 %
	P95	300 mm (12")	95 %

The different media types of the Condair ME evaporative cassettes have different performance characteristics to suit application requirements. Contact your local Condair distributor for assistance with selecting the most appropriate media for your application.

Droplet separator

The droplet separator cassettes are available in two different materials and must be used if the face velocity is high in order to prevent water droplets being carried away in the air stream:

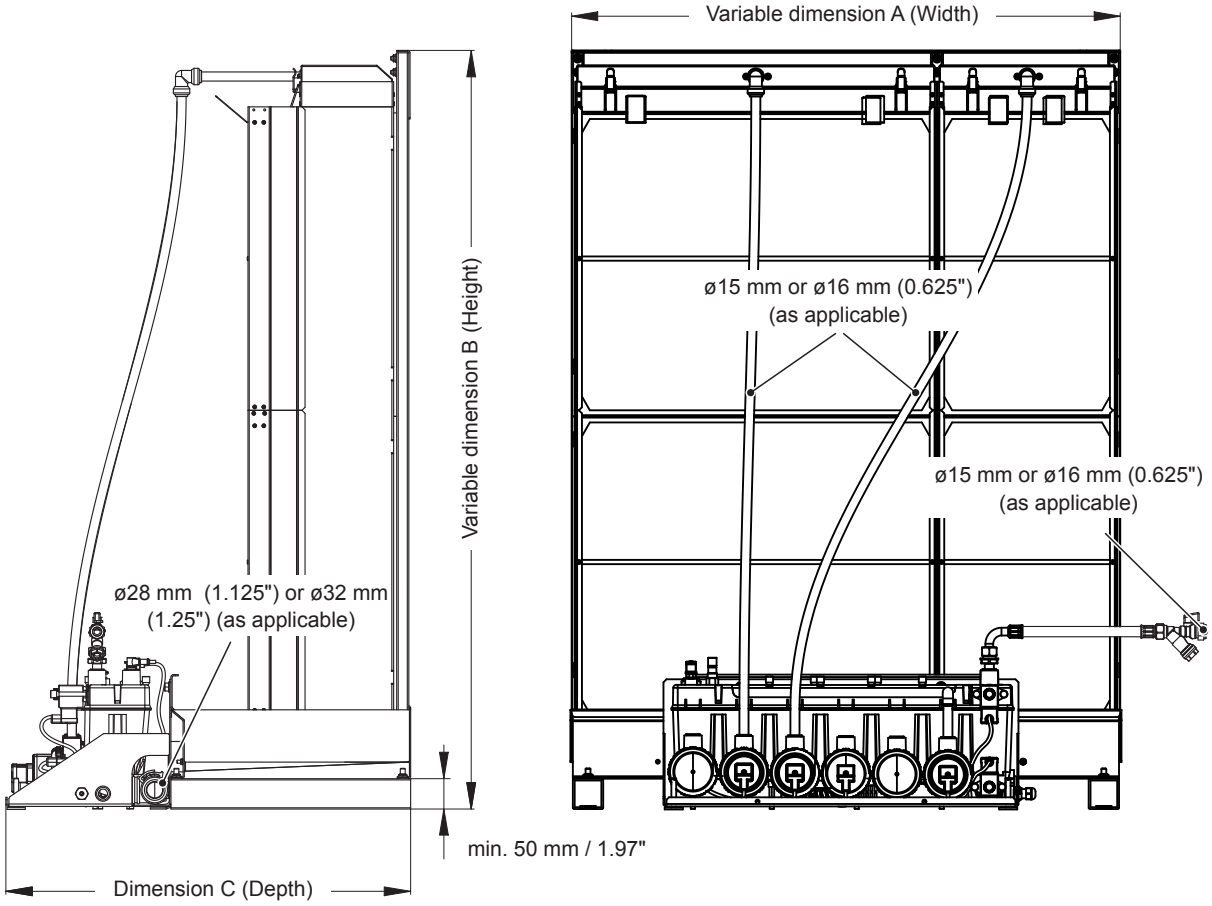
Material	Media depth (Nominal dimensions)
Glass fibre	35 mm (1.38")
Polyester	65 mm (2.56")

Droplet separators allow the operation of the Condair ME with a maximum face velocity of 4.5 m/s.
Important: Face velocity will be greater than the duct air velocity and requires calculating. Your local Condair distributor can advise whether droplet separators are required for your application

Note: A deeper tank is required when polyester or glass fibre (C-type) evaporative cassettes are selected.

2.4 Evaporative module dimensions, internal install

Dimensions evaporative module Condair ME Control with one hydraulic module, internal install (up to 4.2 m/165" wide)

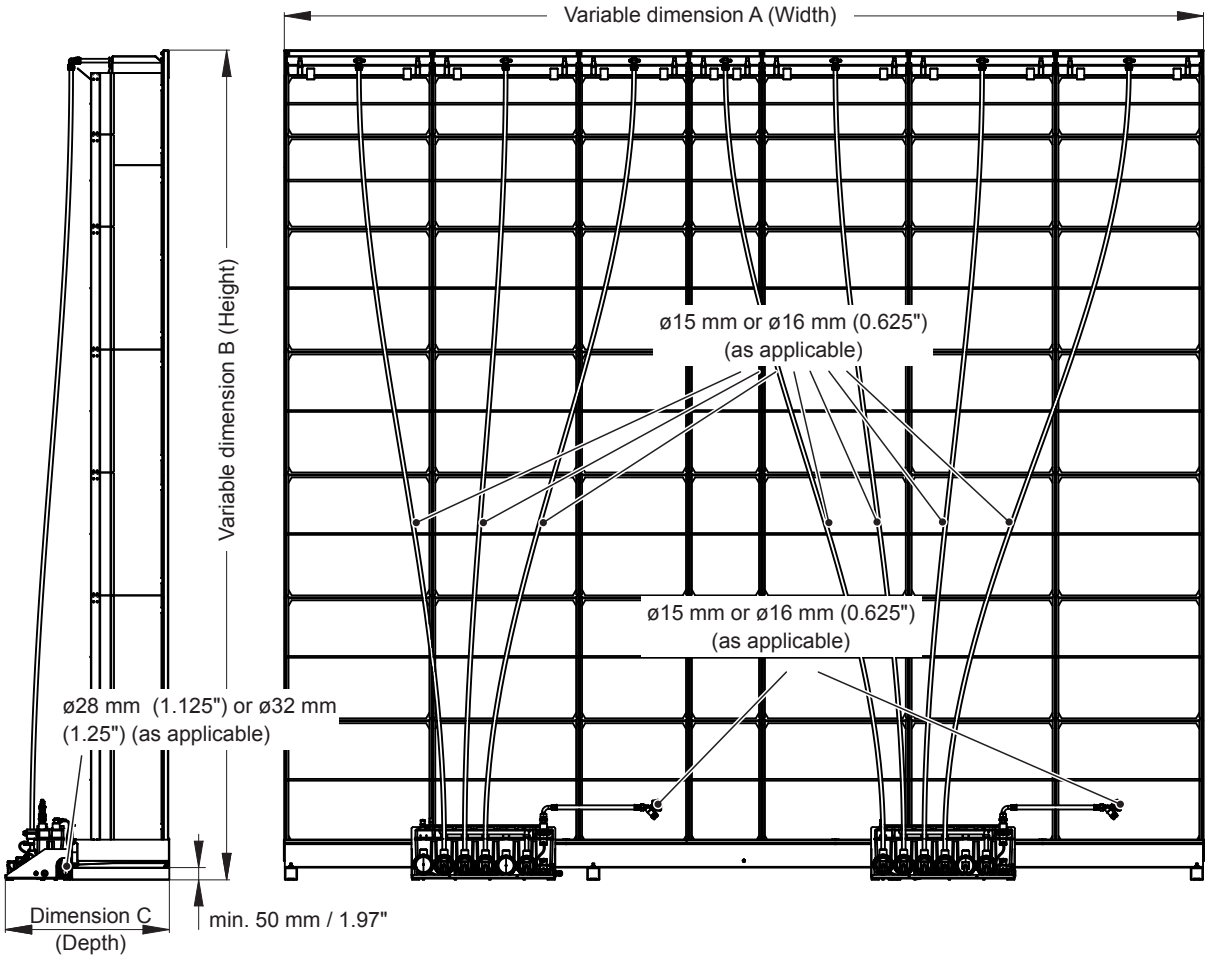


Dimension C (Depth):

F-type fibre cassettes F75/F85/F95:	667 mm / 26.26"
C-type fibre cassettes C85/C95:	797 mm / 31.38"
Polyester cassettes P85/P95:	797 mm / 31.38"

Fig. 19: Dimensions evaporative module Condair ME Control with one hydraulic module, internal install (up to 4.2 m/165" wide)

Dimensions evaporative module Condair ME Control with two hydraulic modules, internal install (3.15 m ... 4.2 m/124" ... 165" wide)

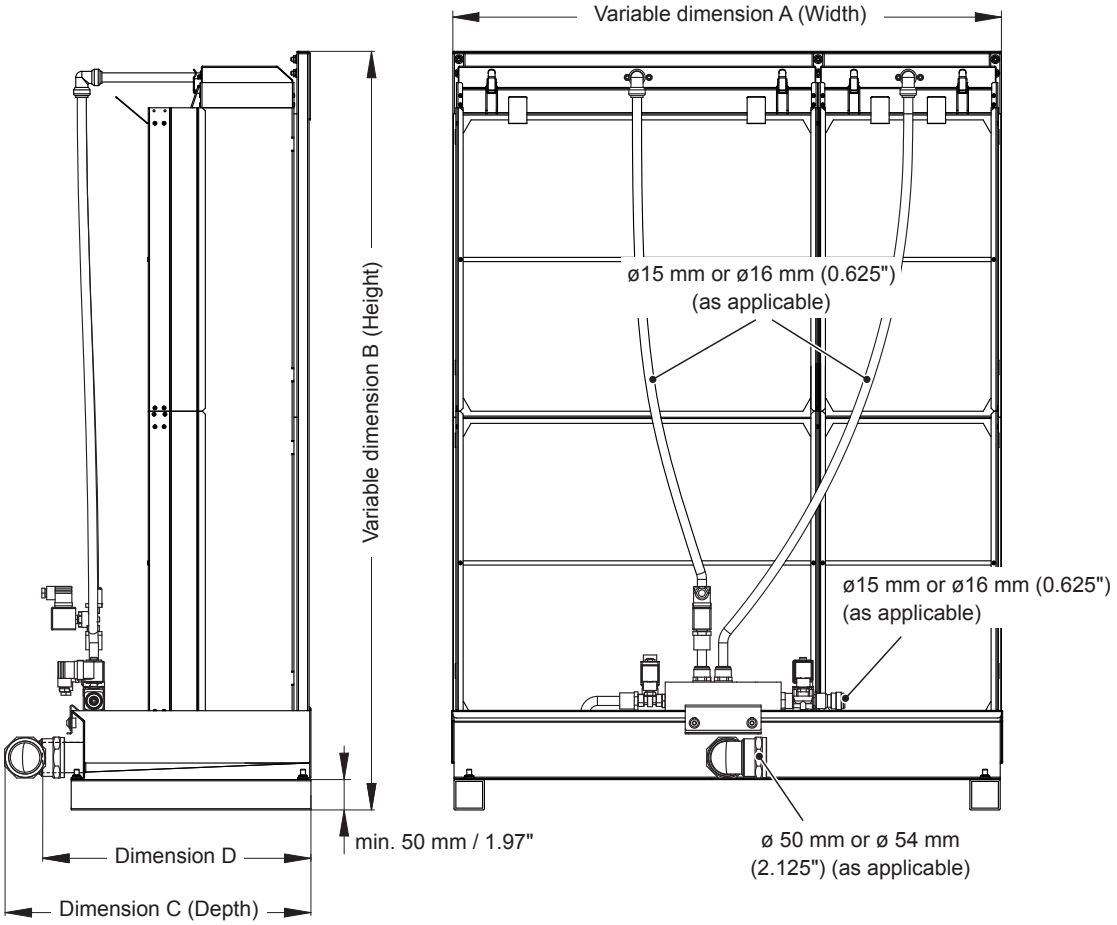


Dimension C (Depth):

F-type fibre cassettes F75/F85/F95:	667 mm / 26.26"
C-type fibre cassettes C85/C95:	797 mm / 31.38"
Polyester cassettes P85/P95:	797 mm / 31.38"

Fig. 20: Dimensions evaporative module Condair ME Control with two hydraulic modules, internal install (3.15 m ... 4.2 m/124" ... 165" wide)

Dimensions evaporative module Condair ME Direct Feed with one hydraulic module, internal install (up to 3 m/118" wide)



Dimension C (Depth with elbow connector fitted):

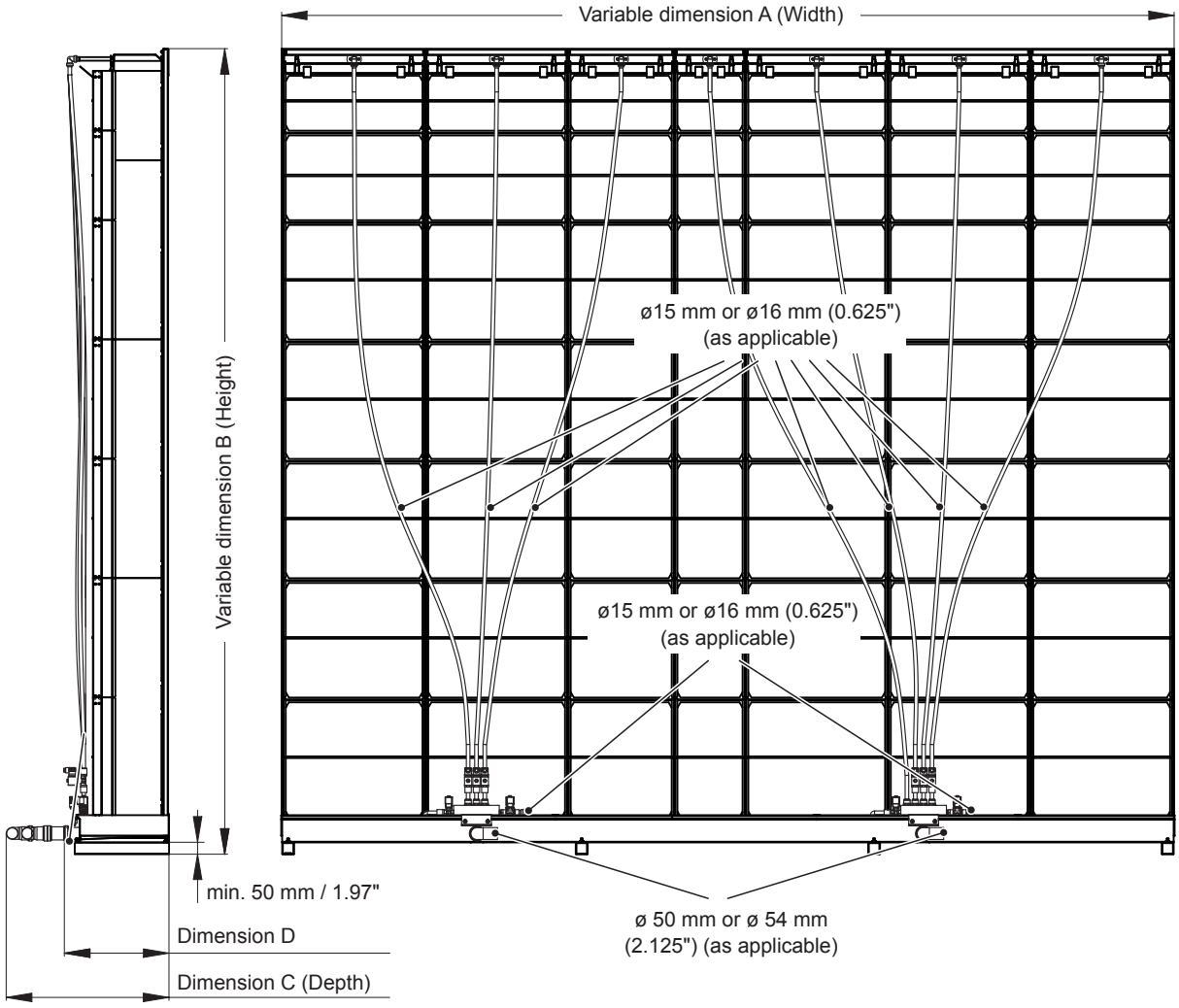
F-type fibre cassettes F75/F85/F95:	505 mm / 19.88"
C-type fibre cassettes C85/C95:	635 mm / 25.00"
Polyester cassettes P85/P95:	635 mm / 25.00"

Dimension D (Depth without elbow connector fitted):

F-type fibre cassettes F75/F85/F95:	443 mm / 17.44"
C-type fibre cassettes C85/C95:	573 mm / 22.56"
Polyester cassettes P85/P95:	573 mm / 22.56"

Fig. 21: Dimensions evaporative module Condair ME Direct Feed with one hydraulic module, internal install (up to 3 m/118" wide)

Dimensions evaporative module Condair ME Direct Feed with two hydraulic modules, internal install (3.15 m ... 4.2 m/124" ... 165" wide)



Dimension C (Depth with elbow connector fitted):

F-type fibre cassettes F75/F85/F95:	640 mm / 25.20"
C-type fibre cassettes C85/C95:	770 mm / 30.31"
Polyester cassettes P85/P95:	770 mm / 30.31"

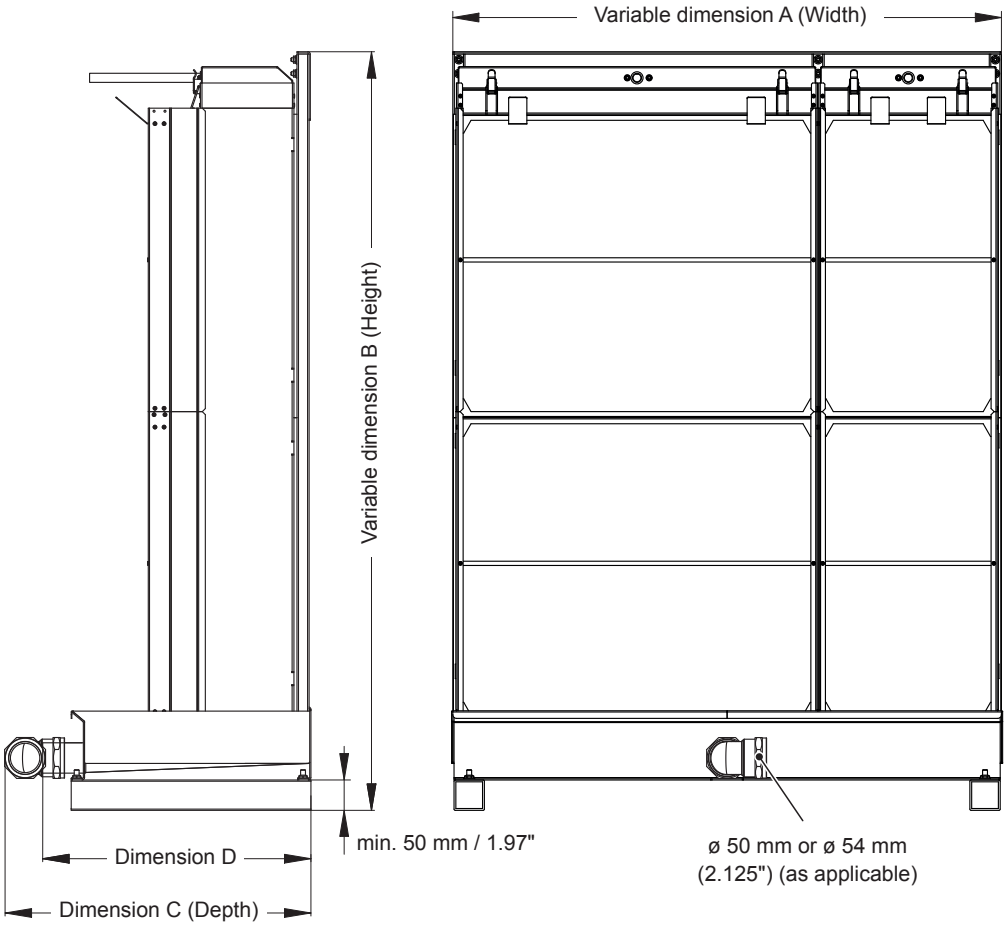
Dimension D (Depth without elbow connector fitted):

F-type fibre cassettes F75/F85/F95:	443 mm / 17.44"
C-type fibre cassettes C85/C95:	573 mm / 22.56"
Polyester cassettes P85/P95:	573 mm / 22.56"

Fig. 22: Dimensions evaporative module Condair ME Direct Feed with two hydraulic modules, internal install (3.15 m ... 4.2 m/124" ... 165" wide)

2.5 Evaporative module dimensions (external install)

Dimensions evaporative module Condair ME Control (up to 4.2 m/165" wide) and ME Direct Feed (up to 3.0 m/118" wide) with centre drain tank with one hydraulic module/manifold, external install



Dimension C (Depth with elbow connector fitted):

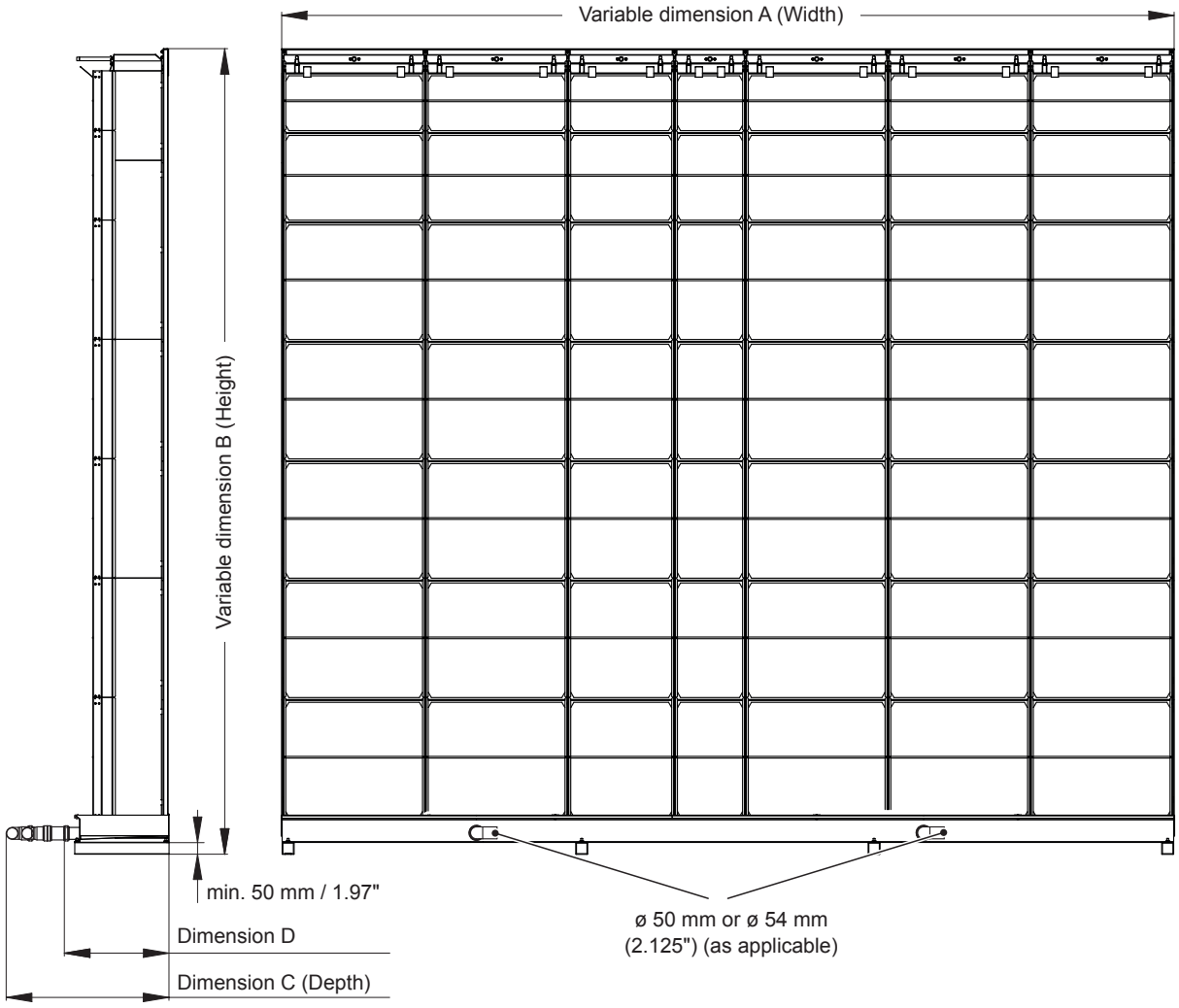
F-type fibre cassettes F75/F85/F95:	505 mm / 19.88"
Polyester cassettes P85/P95:	635 mm / 25.00"
C-type fibre cassettes C85/C95:	635 mm / 25.00"

Dimension D (Depth without elbow connector fitted):

F-type fibre cassettes F75/F85/F95:	443 mm / 17.44"
Polyester cassettes P85/P95:	573 mm / 22.56"
C-type fibre cassettes C85/C95:	573 mm / 22.56"

Fig. 23: Dimensions evaporative module Condair ME Control (up to 4.2 m/165" wide) and ME Direct Feed (up to 3.0 m/118" wide) with centre drain tank with one hydraulic module/manifold, external install

Dimensions evaporative module Condair ME Control and ME Direct Feed with two hydraulic modules/manifolds, external install (3.15 m ... 4.2 m/124" ... 165" wide)



Dimension C (Depth with elbow connector fitted):

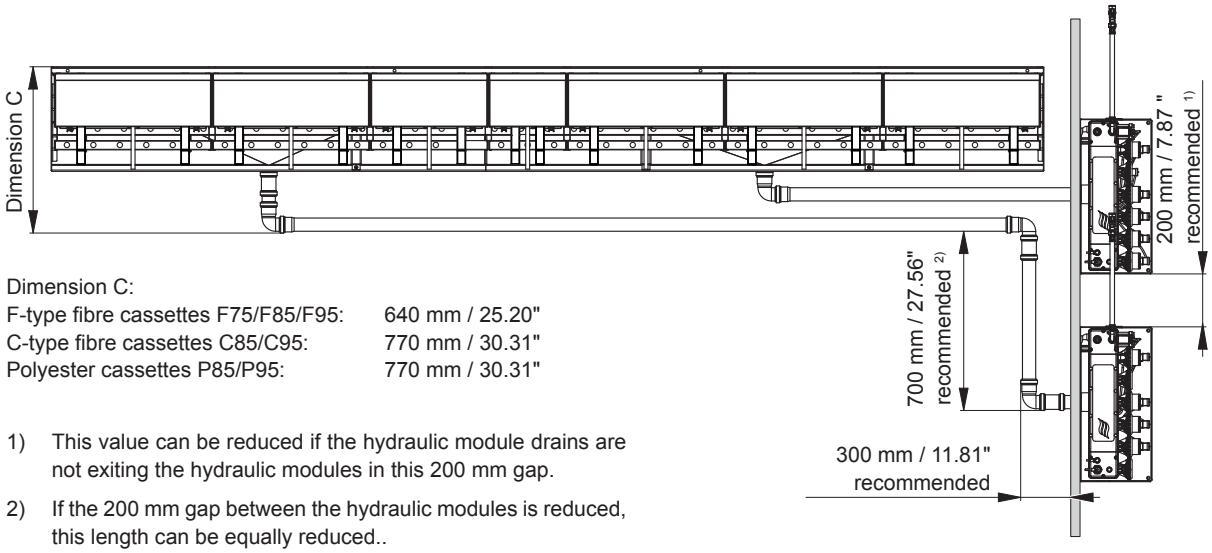
F-type fibre cassettes F75/F85/F95:	640 mm / 25.20"
C-type fibre cassettes C85/C95:	770 mm / 30.31"
Polyester cassettes P85/P95:	770 mm / 30.31"

Dimension D (Depth without elbow connector fitted):

F-type fibre cassettes F75/F85/F95:	443 mm / 17.44"
C-type fibre cassettes C85/C95:	573 mm / 22.56"
Polyester cassettes P85/P95:	573 mm / 22.56"

Fig. 24: Dimensions evaporative module Condair ME Control and ME Direct Feed with two hydraulic modules/manifolds, external install (3.15 m ... 4.2 m/124" ... 165" wide)

Typical dimensions evaporative module Condair ME Control with two hydraulic modules, external install (3.15 m ... 4.2 m/124" ... 165" wide)



Dimension C:

F-type fibre cassettes F75/F85/F95:	640 mm / 25.20"
C-type fibre cassettes C85/C95:	770 mm / 30.31"
Polyester cassettes P85/P95:	770 mm / 30.31"

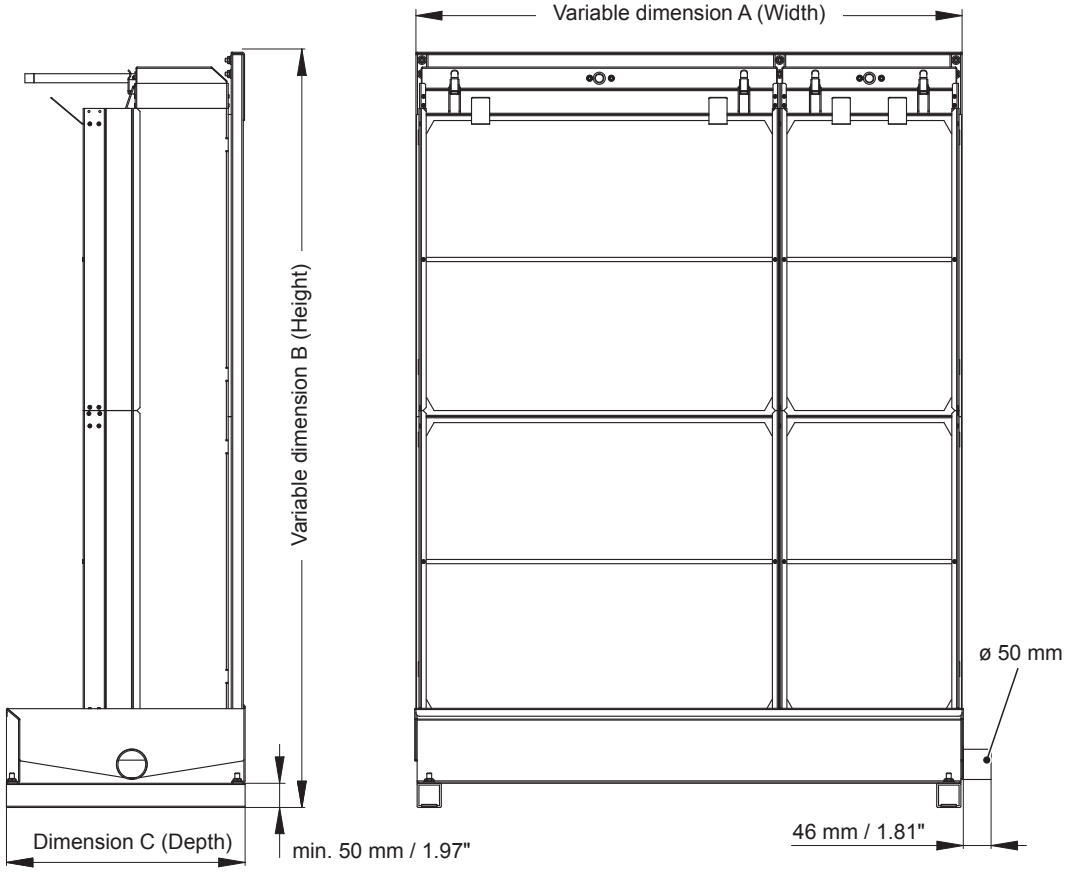
1) This value can be reduced if the hydraulic module drains are not exiting the hydraulic modules in this 200 mm gap.

2) If the 200 mm gap between the hydraulic modules is reduced, this length can be equally reduced..

Fig. 25: Typical dimensions evaporative module Condair ME Control with two hydraulic modules, external install (3.15 m ... 4.2 m/124" ... 165" wide)

Note: the figure above shows typical pipe-work layout. The pipe-work layout can be changed to suit the installation location.

Dimensions evaporative module Condair ME Control and ME Direct Feed with side drain tank with one hydraulic module, external install (up to 3 m/118" wide)



Dimension C (Depth):

F-type fibre cassettes F75/F85/F95:	395 mm / 15.56"
Polyester cassettes P85/P95:	525 mm / 20.67"
C-type fibre cassettes C85/C95:	525 mm / 20.67"

Fig. 26: Dimensions evaporative module Condair ME Control and ME Direct Feed with side drain tank with one hydraulic module, external install (up to 3 m/118" wide)

2.6 Dimensions table Condair ME Control

Dimension	Internal install Condair ME Control (centre drain tank)	External install Condair ME Control (centre drain tank)	External install Condair ME Control (side drain tank)
A (Width)	608 mm (23.94")		608 mm (23.94")
	758 mm (29.84")		758 mm (29.84")
	908 mm (35.75")		908 mm (35.75")
	1058 mm (41.65")		1058 mm (41.65")
	1208 mm (47.56")		1208 mm (47.56")
	1355 mm (53.35")		1355 mm (53.35")
	1505 mm (59.25")		1505 mm (59.25")
	1655 mm (65.16")		1655 mm (65.16")
	1805 mm (71.07")		1805 mm (71.07")
	1952 mm (76.85")		1952 mm (76.85")
	2102 mm (82.76")		2102 mm (82.76")
	2252 mm (88.66")		2252 mm (88.66")
	2402 mm (94.57")		2402 mm (94.57")
	2549 mm (100.35")		2549 mm (100.35")
	2699 mm (106.26")		2699 mm (106.26")
	2849 mm (112.17")		2849 mm (112.17")
	2999 mm (118.07")		2999 mm (118.07")
	3146 mm (123.86") [1] / 3146 mm (123.86") [2]		N/A
	3296 mm (129.76") [1] / 3296 mm (129.76") [2]		N/A
	3443 mm (135.55") [1] / 3446 mm (135.67") [2]		N/A
	3593 mm (141.46") [1] / 3596 mm (141.57") [2]		N/A
	3740 mm (147.24") [1] / 3743 mm (147.36") [2]		N/A
	3890 mm (153.15") [1] / 3893 mm (153.27") [2]		N/A
	4037 mm (158.94") [1] / 4043 mm (159.17") [2]		N/A
	4187 mm (164.84") [1] / 4193 mm (165.08") [2]		N/A
B (Height)	625 mm (24.61")		
	750 mm (29.53")		
	875 mm (34.45")		
	1000 mm (39.37")		
	1125 mm (44.29")		
	1250 mm (49.21")		
	1375 mm (54.13")		
	1500 mm (59.06")		
	1625 mm (63.98")		
	1750 mm (68.9")		
	1875 mm (73.82")		
	2000 mm (78.74")		
	2125 mm (83.66")		
	2250 mm (88.58")		
	2375 mm (93.5")		
	2500 mm (98.43")		
	2625 mm (103.35")		
	2750 mm (108.27")		
	2875 mm (113.19")		
	3000 mm (118.11")		
	3125 mm (123.03")		
	3250 mm (127.95")		
	3375 mm (132.87")		
	3500 mm (137.80")		
	3625 mm (142.72")		
	3750 mm (147.64")		
	3875 mm (152.56")		
	4000 mm (157.48")		

Dimension	Internal install Condair ME Control (centre drain tank)	External install Condair ME Control (centre drain tank)	External install Condair ME Control (side drain tank)
C (Depth)			
F-Type Fibre Cassettes F75/F85/F95 (evaporative module width up to 3004 mm)	667 mm (26.26")	443 mm (17.44") 505 mm (19.92") with elbow connector fitted	395 mm (15.56")
F-Type Fibre Cassettes F75/F85/F95 (evaporative module width 3154...4201 mm)	667 mm (26.26")	443 mm (17.44") 640 mm (25.2") with elbow connectors fitted [3]	N/A
Polyester Cassettes P85/P95 (evaporative module width up to 3004 mm)	797 mm (31.38")	573 mm (22.56") 635 mm (25.00") with elbow connector fitted	525 mm (20.67")
Polyester Cassettes P85/P95 (evaporative module width 3154...4201 mm)	797 mm (31.38")	573 mm (22.56") 770 mm (30.31") with elbow connectors fitted [3]	N/A
C-Type Fibre Cassettes C85/C95 (evaporative module width up to 3004 mm)	797 mm (31.38")	573 mm (22.56") 635 mm (25.00") with elbow connector fitted	525 mm (20.67")
C-Type Fibre Cassettes C85/C95 (evaporative module width 3154...4201 mm)	797 mm (31.38")	573 mm (22.56") 770 mm (30.31") with elbow connectors fitted [3]	N/A
Water supply connector [4]	ø15 mm or ø16 mm (0.625") compression fitting as applicable		
Water drain connector tank [4]	ø50 mm or ø54 mm (2.125") as applicable (connects directly to hydraulic module)	ø50 mm or ø54 mm (2.125") as applicable	ø50 mm (hydraulic module connecting pipe supplied)
Water drain connector hydraulic module [4]	ø28 mm (1.125") or ø32 mm (1.250") as applicable		

[1] Dimensions apply to systems with one hydraulic module.

[2] Dimensions apply to systems with two hydraulic modules.

[3] See *Fig. 25* for details of required pipework clearances.

[4] Pipe diameters that are listed as "as applicable" will match standard pipe sizes for the country to which the Condair ME Control is being delivered, unless a different destination country is specified.

2.7 Dimensions table Condair ME Direct Feed

Dimension	Internal install Condair ME Direct Feed (centre drain tank)	External install Condair ME Direct Feed (centre drain tank)	External install Condair ME Direct Feed (side drain tank)
A (Width)	608 mm (23.94")		608 mm (23.94")
	758 mm (29.84")		758 mm (29.84")
	908 mm (35.75")		908 mm (35.75")
	1058 mm (41.65")		1058 mm (41.65")
	1208 mm (47.56")		1208 mm (47.56")
	1355 mm (53.35")		1355 mm (53.35")
	1505 mm (59.25")		1505 mm (59.25")
	1655 mm (65.16")		1655 mm (65.16")
	1805 mm (71.07")		1805 mm (71.07")
	1952 mm (76.85")		1952 mm (76.85")
	2102 mm (82.76")		2102 mm (82.76")
	2252 mm (88.66")		2252 mm (88.66")
	2402 mm (94.57")		2402 mm (94.57")
	2549 mm (100.35")		2549 mm (100.35")
	2699 mm (106.26")		2699 mm (106.26")
	2849 mm (112.17")		2849 mm (112.17")
	2999 mm (118.07")		2999 mm (118.07")
	3146 mm (123.86")		N/A
	3296 mm (129.76")		N/A
	3446 mm (135.67")		N/A
	3596 mm (141.57")		N/A
	3743 mm (147.36")		N/A
	3893 mm (153.27")		N/A
	4043 mm (159.17")		N/A
	4193 mm (165.08")		N/A
B (Height)	625 mm (24.61")		
	750 mm (29.53")		
	875 mm (34.45")		
	1000 mm (39.37")		
	1125 mm (44.29")		
	1250 mm (49.21")		
	1375 mm (54.13")		
	1500 mm (59.06")		
	1625 mm (63.98")		
	1750 mm (68.9")		
	1875 mm (73.82")		
	2000 mm (78.74")		
	2125 mm (83.66")		
	2250 mm (88.58")		
	2375 mm (93.5")		
	2500 mm (98.43")		
	2625 mm (103.35")		
	2750 mm (108.27")		
	2875 mm (113.19")		
	3000 mm (118.11")		
	3125 mm (123.03")		
	3250 mm (127.95")		
	3375 mm (132.87")		
	3500 mm (137.80")		
	3625 mm (142.72")		
	3750 mm (147.64")		
	3875 mm (152.56")		
	4000 mm (157.48")		

Dimension	Internal install Condair ME Direct Feed (centre drain tank)	External install Condair ME Direct Feed (centre drain tank)	External install Condair ME Direct Feed (side drain tank)
C (Depth)			
F-Type Fibre Cassettes F75/F85/F95 (evaporative module width up to 3004 mm)	443 mm (17.44") 505 mm (19.92") with elbow connector fitted		395 mm (15.56")
F-Type Fibre Cassettes F75/F85/F95 (evaporative module width 3154...4201 mm)	443 mm (17.44") 640 mm (25.2") with elbow connectors fitted		N/A
Polyester Cassettes P85/P95 (evaporative module width up to 3004 mm)	573 mm (22.56") 635 mm (25.00") with elbow connector fitted		525 mm (20.67")
Polyester Cassettes P85/P95 (evaporative module width 3154...4201 mm)	573 mm (22.56") 770 mm (30.31") with elbow connector fitted		N/A
C-Type Fibre Cassettes C85/C95 (evaporative module width up to 3004 mm)	573 mm (22.56") 635 mm (25.00") with elbow connector fitted		525 mm (20.67")
C-Type Fibre Cassettes C85/C95 (evaporative module width 3154...4201 mm)	573 mm (22.56") 770 mm (30.31") with elbow connector fitted		N/A
Water supply connector [1)]	ø15 mm or ø16 mm (0.625") connector as applicable		
Water drain connector tank [1)]	ø50 mm or ø54 mm (2.125") as applicable		ø50 mm (connecting pipe supplied)
Water drain connector hydraulic manifold [1)]	1/2" BSPF port, blanked as standard or 1/4" BSPF port/ø 10 mm connector on optional drain valve kit		

[1)] Pipe diameters that are listed as "as applicable" will match standard pipe sizes for the country to which the Condair ME Direct Feed is being sold, unless a different destination country is specified.

2.8 System weights

For system weights please contact your Condair representative.

2.9 Recommended clearance for hydraulic modules (external install)

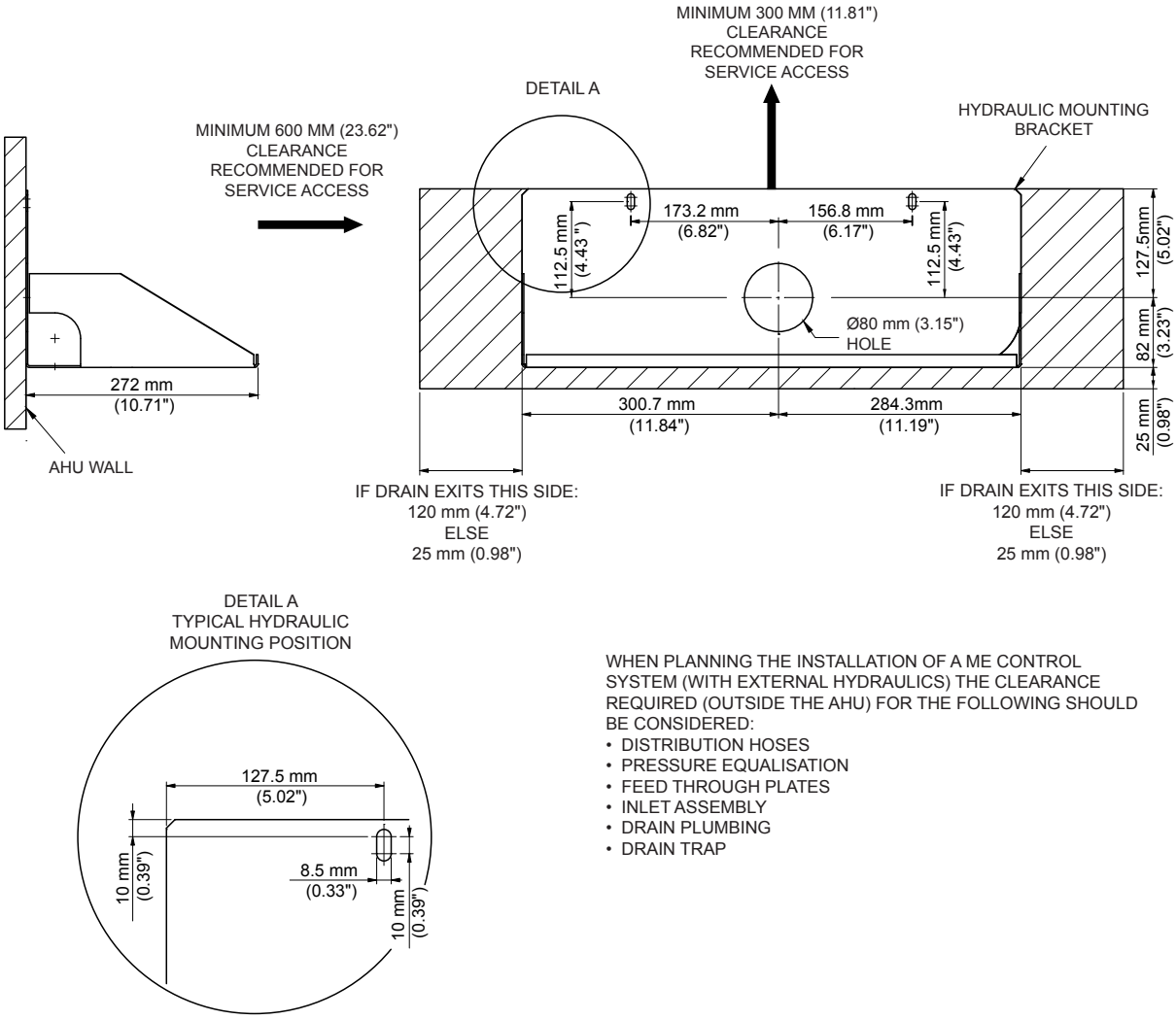


Fig. 27: Dimensions/clearances Condair ME Control hydraulic module (external install)

Note: If installing a Condair ME Control system that is greater than 3000 mm wide a second hydraulic module may be included. The same clearance as shown above will be required for the second hydraulic module.

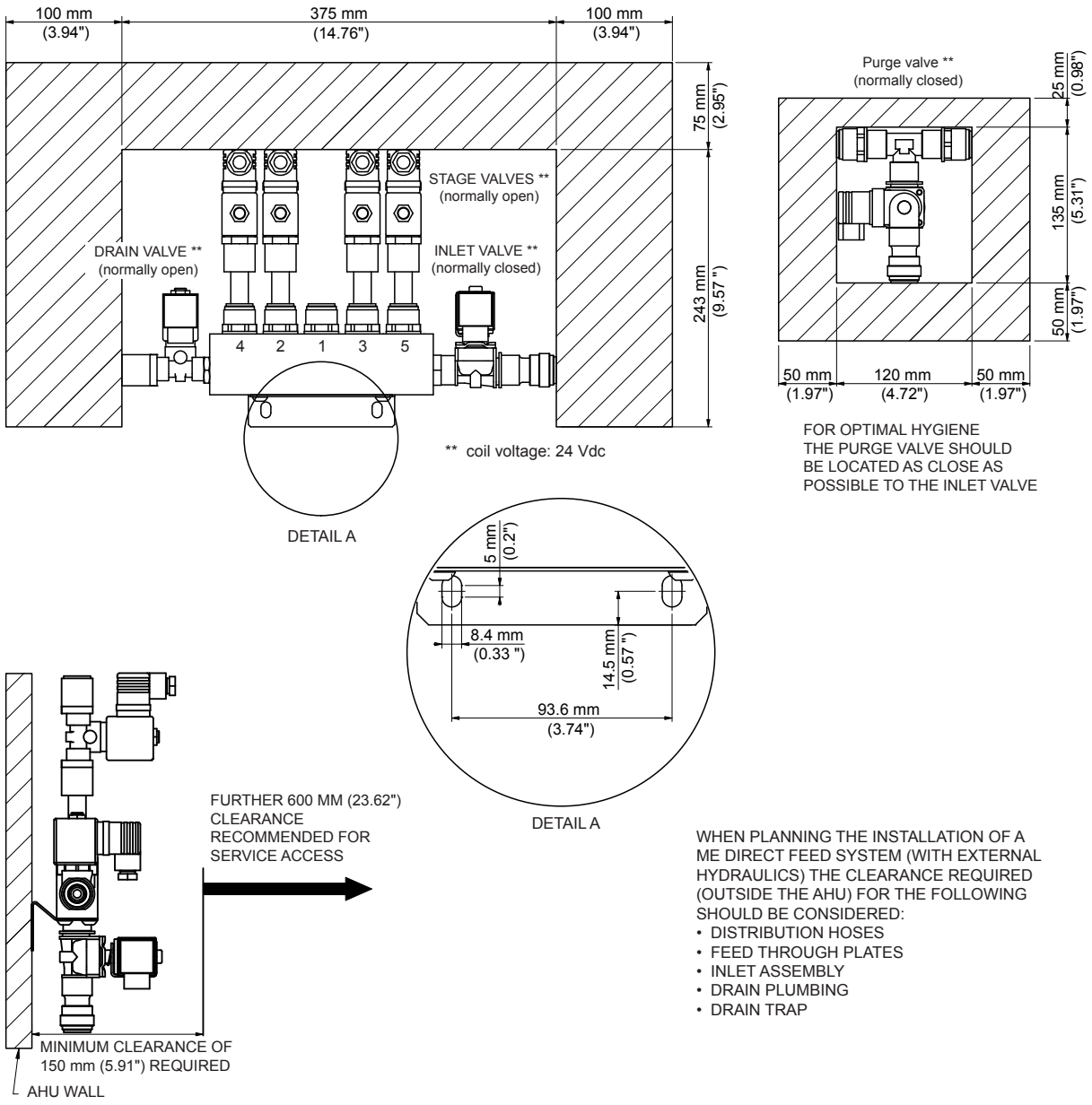


Fig. 28: Dimensions/clearances Condair ME Direct Feed hydraulic manifold (external install)

Note: If installing a Condair ME Direct Feed system that is greater than 3000 mm wide a second hydraulic manifold may be included. The same clearance as shown above will be required for the second hydraulic manifold.

2.10 Recommended clearance for Condair ME control units

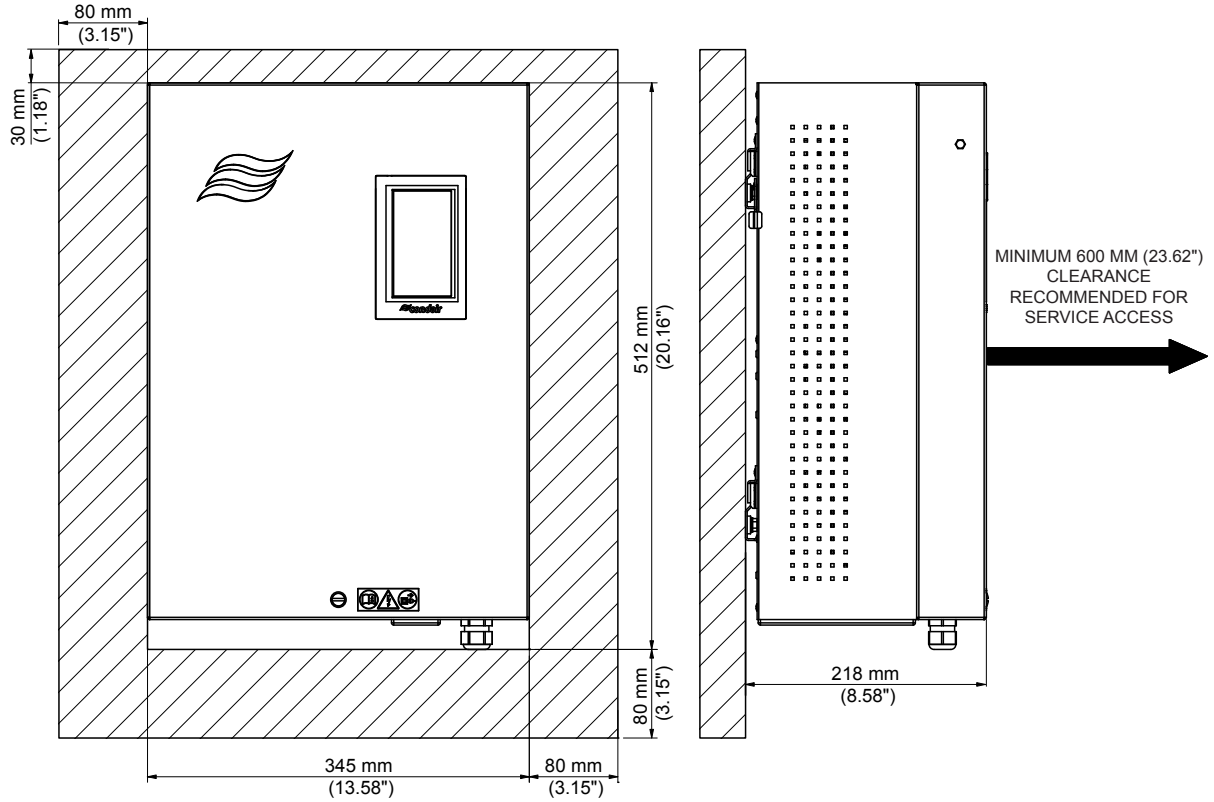


Fig. 29: Recommended clearance Condair ME Control control unit

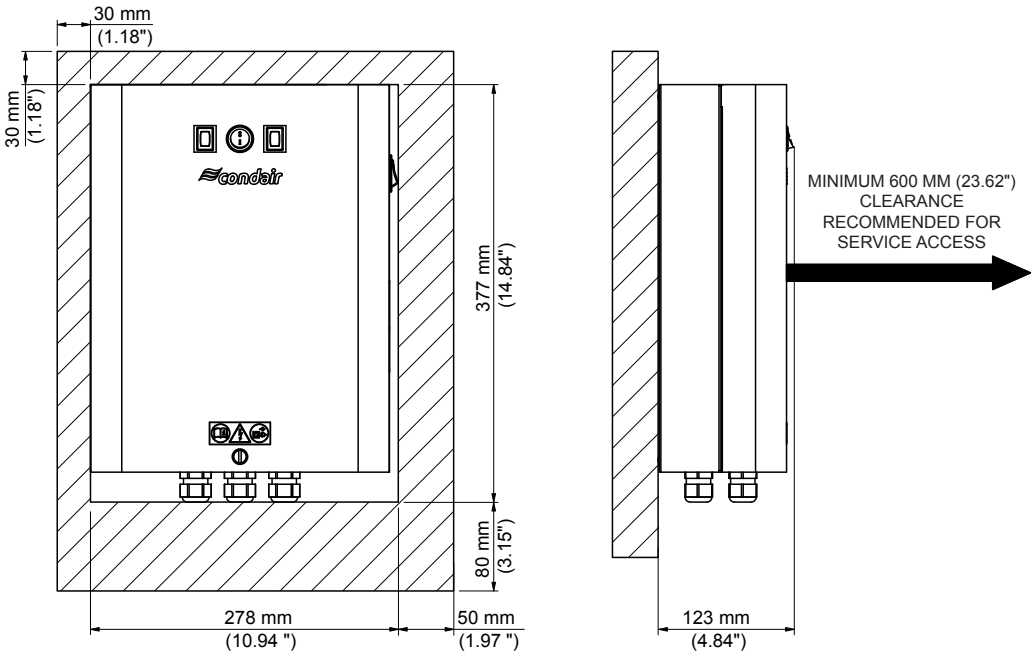


Fig. 30: Recommended clearance Condair ME Direct Feed control unit

2.11 Operating range

Operating parameter	Range
Minimum continuous operating air temperature	10 °C (50 °F)
Maximum continuous operating air temperature	60 °C (140 °F)
Admissible ambient temperature (control unit)	1...40 °C (33.8...104 °F)
Admissible ambient humidity (control unit)	max. 75 %rh (not condensing)
Maximum feed water temperature	20 °C (68 °F)
Maximum matrix face velocity (with droplet separator)	4.5 m/s (886 fpm)
Admissible water supply pressure	2...5 bar (29...72.5 psi)
Water quality	(see *Section 3.4*)
Electrical supply	100-240 V / 1~ / 50/60 Hz
Power consumption Condair ME Control (up to 3 m wide)	< 278 W (5 stages, no options **fitted)**
Power consumption Condair ME Control (over 3 m wide)	< 536 W (7 stages, no options **fitted)**

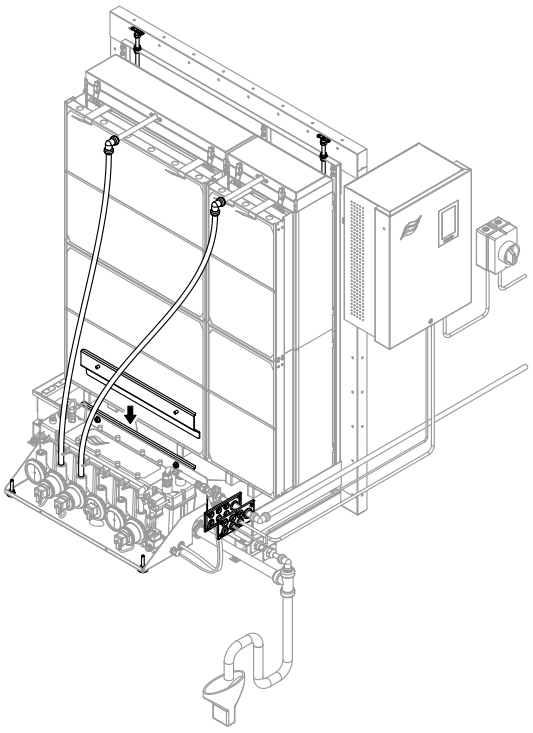
2.12 Options

Options	**Condair ME Control**	**Condair ME Direct Feed**
Glass fibre Media Composite non particle-releasing glass fibre media with anti-microbial impregnation and A2, S2, d0 (UL Class 1) fire rating. Available in different types and efficiencies: F-Type: 75% (100 mm/4"), 85% (150 mm/6") & 95% (200 mm/8") efficiency. C-Type: 85% (200 mm/8"), 95% (300 mm/12") efficiency	•	•
Polyester Media Robust patented synthetic media with hygroscopic impregnation and DIN EN53483 Class F1 fire rating. Available in 85% (200 mm/8"), 95% (300 mm/12") efficiencies.	•	•
Droplet Separator Droplet catching matrix increasing maximum face velocity limit without droplet carry-over to 4.5 m/s (886 fpm).	•	•
Evaporative Module Blanking Kit to prevent air bypassing the evaporative module within the duct / AHU.	•	•
Hydraulic Module Cover Provides additional mechanical protection for the hydraulic module(s).	•	
External Installation Kits Kits to install the hydraulic module(s) outside the duct / AHU (see *Section 2.13.2*,*Section 2.13.4* and *Section 2.13.5* for more details).	•	•
Remote Fault Indication Provides volt-free contacts for remote fault and service requirement indication for BMS systems.	•	
Freeze Protection Sensor Low temperature protection system to prevent damage to the Condair ME in winter conditions.	•	
BMS Connectivity LonWorks communication protocol for remote system monitoring. (BACnet & Modbus are included on the ME-Control as standard)	•	

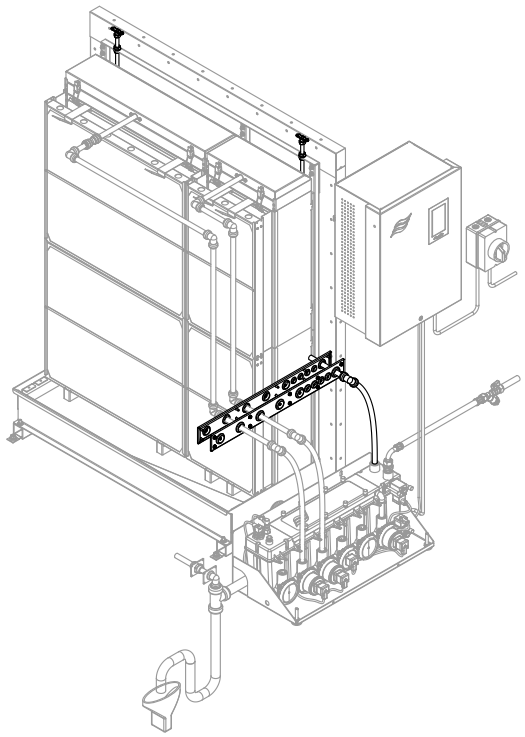
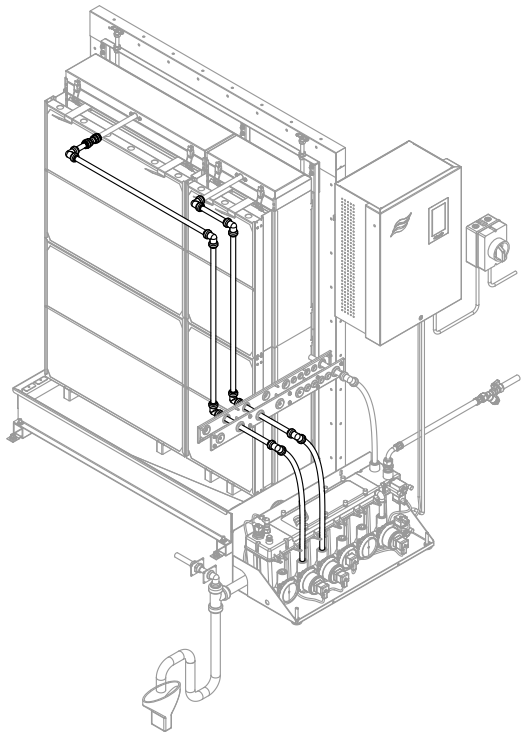
Options	Condair ME Control	Condair ME Direct Feed
Leak Detection Provides additional fault indication for the Condair ME by monitoring for standing water detected in duct / AHU.	•	
Conductivity monitoring Water conductivity controlled system with thermal compensation to maintain hygiene and minimise media scaling.	•	
Submerged UV Submerged ultra-violet steriliser installed in the evaporative module tank to enhance system hygiene. Available to suit systems 900 mm (35.43") wide or greater.	•	
PureFlo Silver-ion anti-microbial system installed in the water supply line to enhance system hygiene with a residual effect.	•	•
In-Line UV Ultra-violet steriliser installed in the water supply line to enhance hygiene	•	•
Dosing Pump Dosing system for use with polyester media to enhance water absorption on system start-up.	•	•
Stage Valves Valve kit which facilitates stage control of direct feed systems using customer controls or the Condair ME Direct Feed stage control unit. Available in 2, 3, 4, 5, 6 and 7 stage versions.		•
Inlet, Drain and Purge valve Various combinations of valves for customers who wish to create their own basic on/off direct feed control system.		•
On/Off Control Unit On/Off control unit for simple control of Condair ME Direct Feed systems which includes timed purge function to enhance system hygiene.		•
Stage Control Unit Stage control unit for simple analogue control of Condair ME Direct Feed systems which includes timed purge function to enhance system hygiene.		•

2.13 Overview installation kits

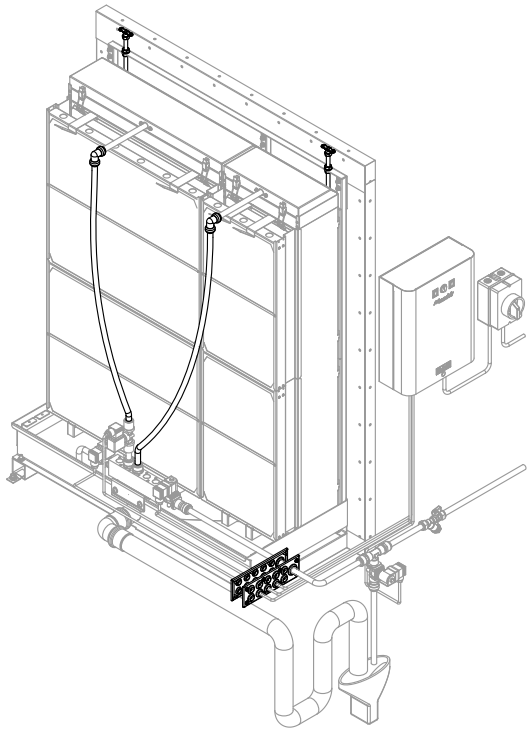
2.13.1 Internal installation kits Condair ME Control

Installation Kit	Description
Condair ME Control - Internal install kit	
	Provided with all internally installed systems. Comprises: – Stage hoses (to connect the hydraulic module to the headers) – Hydraulic module mounting bracket (to attach the hydraulic module to tank) – Hydraulic module feet (to support the hydraulic module) – Duct wall feed through (for passing the water supply line and wiring through the AHU/duct wall) – Cassette framework drop-rods (for securing the cassette framework to the top of the AHU/duct wall)

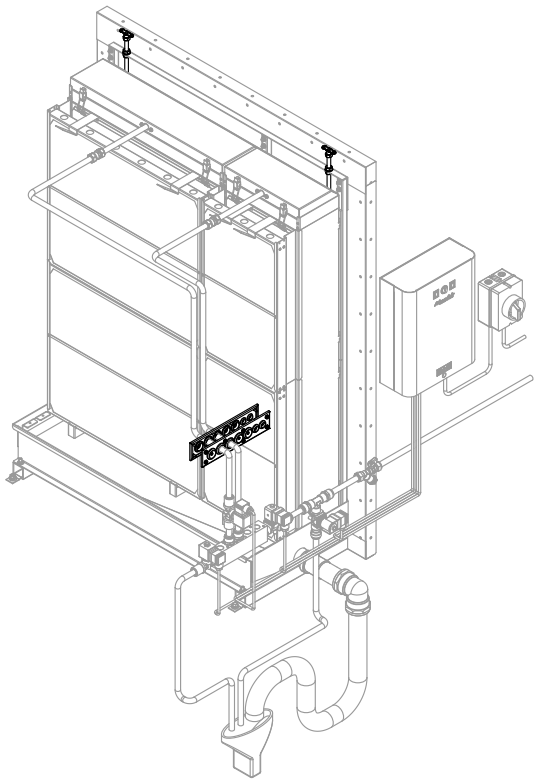
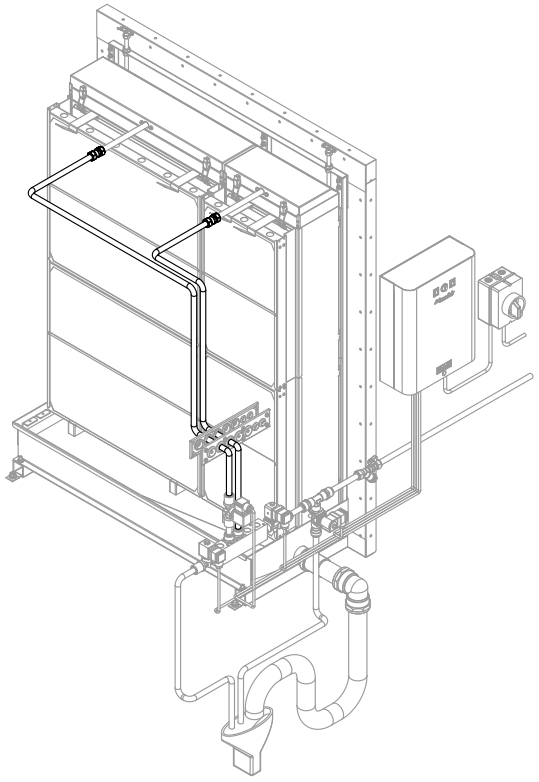
2.13.2 External installation kits Condair ME Control

Condair ME Control - Basic external install kit	
	Provided with all externally installed systems. Comprises: – Duct wall feed through (for passing stage pipes and wiring through the AHU/duct wall) – Cassette framework drop-rods (to secure the cassette framework to the top of the AHU/ duct) – Pressure equalisation hose (ensures the pressure in the duct and the hydraulic module match)
Condair ME Control - Additional external install kit	
	Optional additional external install kit as a supplement to the basic external install kit. Comprises: – Rigid stage pipe and fittings in plastic or stainless (to connect the hydraulic module to the headers) **Important: For installations in accordance with UL998 the plastic kit must not be used.**

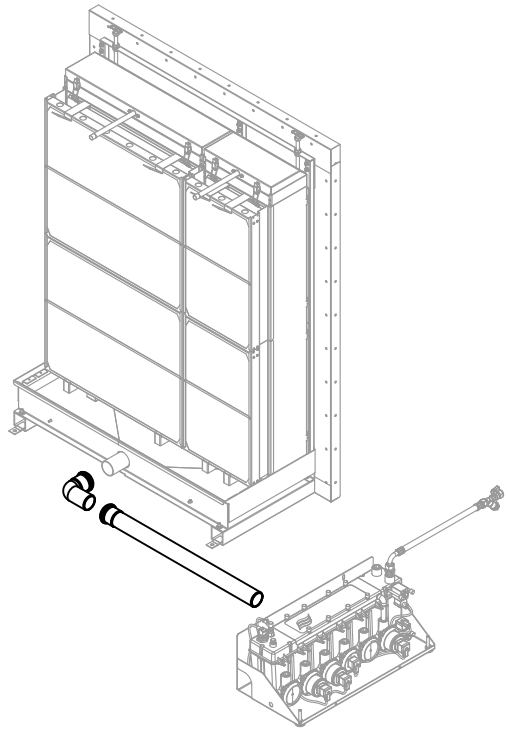
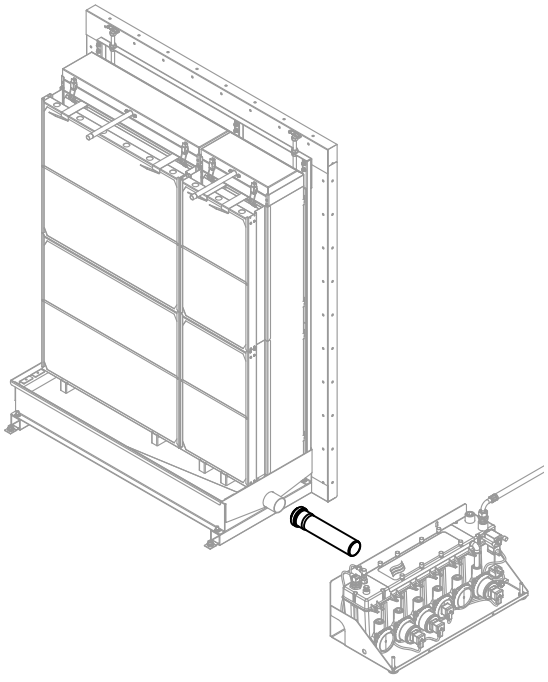
2.13.3 Internal installation kits Condair ME Direct Feed

Installation Kit	Description
Condair ME Direct Feed - Internal install kit	
	Provided with all internally installed systems. Comprises: – Stage hoses (to connect the hydraulic module to the headers) – Duct wall feed through (for passing the water supply line and wiring through the AHU/duct wall) – Cassette framework drop-rods (for securing the cassette framework to the top of the AHU/duct wall)

2.13.4 External installation kits Condair ME Direct Feed

Condair ME Direct Feed - Basic external install kit	
	Provided with all externally installed systems. Comprises: – Duct wall feed through (for passing stage pipes and wiring through the AHU/duct wall) – Cassette framework drop-rods (to secure the cassette framework to the top of the AHU/ duct)
Condair ME Direct Feed - Additional external install kit	
	Optional additional external install kit as a supplement to the basic external install kit. Comprises: – Rigid stage pipe and fittings in plastic or stainless (to connect the hydraulic module to the headers) **Important: For installations in accordance with UL998 the plastic kit must not be used.**

2.13.5 Tank coupling kits

Centre drain coupling kit - (plastic or stainless)	
	Added to optional additional external install kit if system has centre tank spigot with an external hydraulic module. Comprises: – Elbow (to connect to the tank spigot) – Pipe (to connect from the elbow to the hydraulic module) – The plastic kit also includes 2 spare pipe couplings & 2 extra elbows (allowing for a more complex pipe route) **Important: For installations in accordance with UL998 the plastic kit must not be used.**
Side drain coupling kit	
	Provided with all side drain tanks. Comprises: – 250 mm / 9.84" length of push-fit stainless pipe to connect the tank spigot to the hydraulic module

2.14 Side drain tank spigot location

If ordering a side drain tank it will be necessary to specify on which end of the tank the spigot should be located. The ends of the tank are identified as left or right while looking in the direction of the air flow in the AHU/air duct.

If ordering a Condair ME with a side drain tank, ensure there is adequate clearance for the hydraulic module where the tank spigot exits the AHU/air duct.

Note: side drain tanks are **not available for Condair ME systems that are over 3 m wide**.

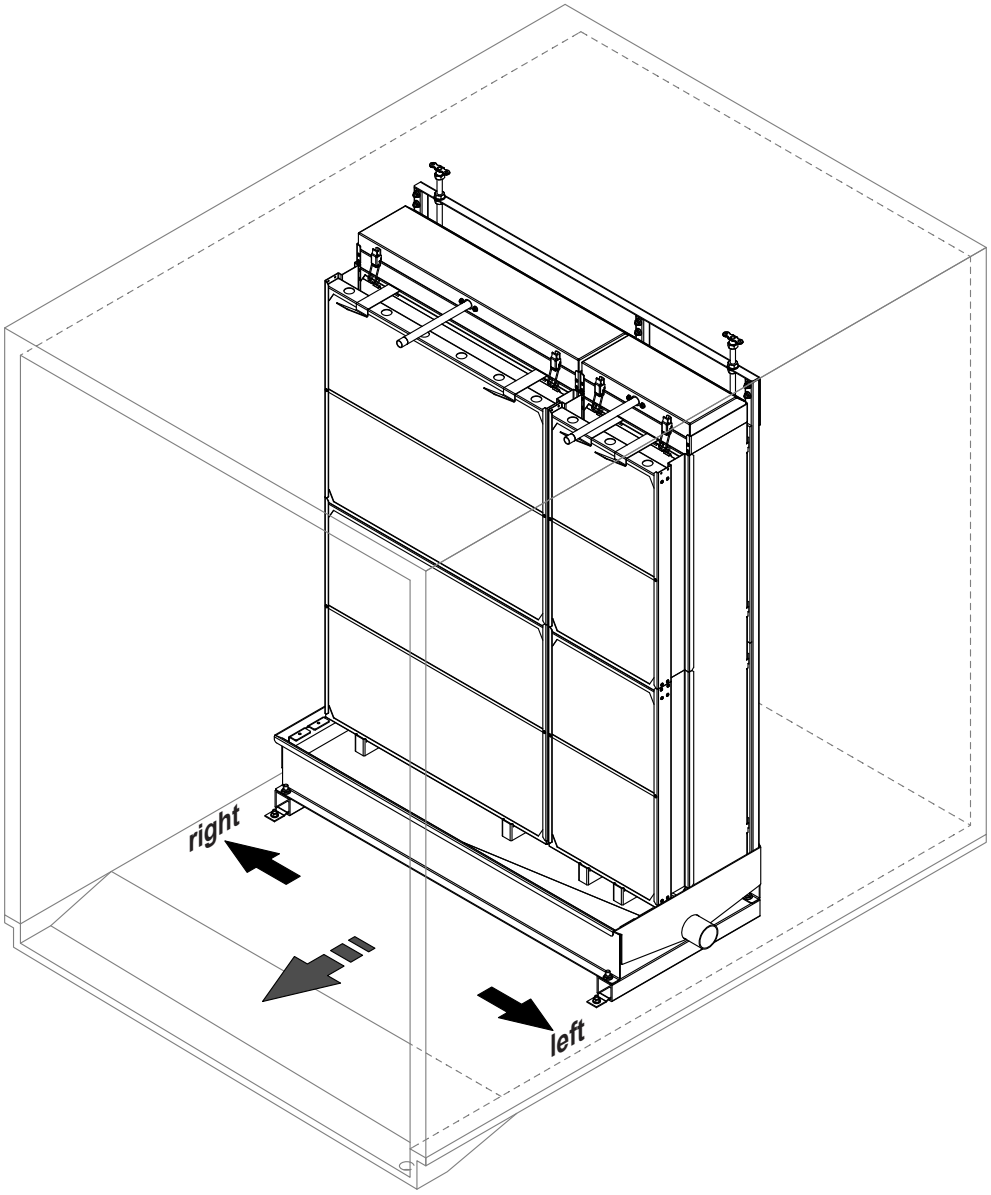


Fig. 31: Side drain tank spigot location

3 Installation requirements

3.1 Requirements regarding the AHU/air duct

The following requirements regarding the AHU/air duct must be observed:

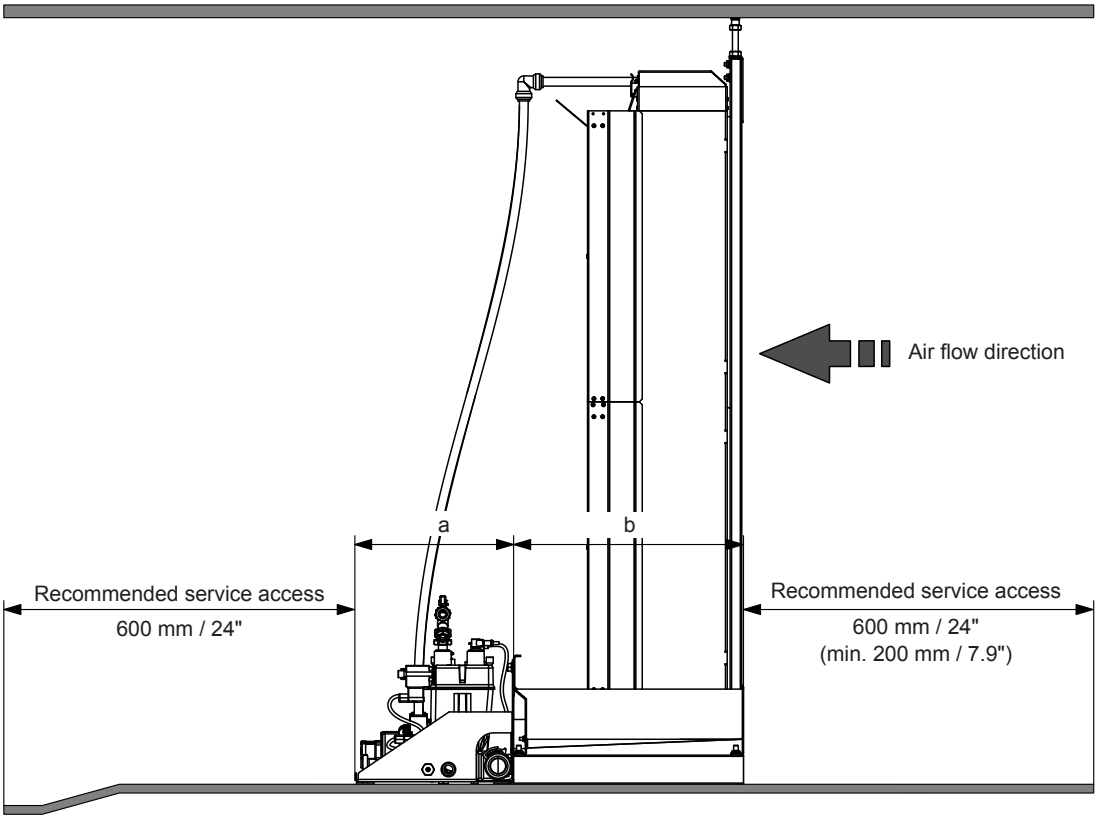
- The AHU/air duct floor must be designed with a loading capacity capable of supporting the evaporative module's weight. The weight of the evaporative module must be calculated. Please contact your Condair representative in this matter.
- In the area where the evaporative module is installed the floor of the AHU/air duct must offer a plane support (lengthwise and crosswise).
- The duct/AHU section where the evaporative module is to be installed must be waterproof.
- Downstream, directly after the evaporative module a **drain pan with provision for running water to waste** must be installed. The drain must be connected via a drain trap to the waste water line of the building. The drain trap must be sufficiently high, so that the drain trap is not emptied by the air pressure in the duct. The drain pan and the drain trap must be accessible for cleaning and disinfection as part of the periodic maintenance of the system.
- For installation and maintenance sufficiently large maintenance doors before and after the evaporative module must be available in the AHU/air duct.
- The supply air must be filtered. We recommend to install an **ISO ePM1 ≥ 50 % air filter or equivalent (MERV 13)** before the evaporative module. If no air filter or an air filter with lower quality is installed an increased maintenance will result.
- An **even air flow over the full cross section** of the evaporative module must be guaranteed.
- In case of low ambient temperature the AHU/air duct must be insulated to prevent the moist air from condensing inside the duct.
- If the AHU/air duct is equipped with a heating coil, make sure it is at least 600 mm (24") away from the evaporative module.
- Appropriate clearance must be available for the hydraulic module(s)/hydraulic manifold(s) (and associated plumbing) when installing externally.

3.2 Requirements regarding the positioning of the control unit

- The control unit can be mounted directly outside to the AHU/air duct or to a wall or stand (not supplied).
- The cable(s) supplied for connecting the hydraulic module(s) to the control unit are 10 m long. Consequently the control unit and cable routing should be positioned such that a 10 m cable will reach from the hydraulic module to the control unit.
- The control unit is protected according to **IP21**. Make sure the control unit is installed in a drip-proof location and the admissible ambient conditions are complied with (see technical data in the operation manual to the Condair ME Control).
- The control unit must always be positioned outside the AHU/air duct.
- The power supply to the control unit must be equipped with an electrical isolator (not supplied) installed within 1 m (39") for purposes of maintenance and emergencies. When positioning the control unit make sure the electrical isolator can be mounted within that distance.
- The power supply to the control unit must be protected with a 10 A time delay (slow acting) fuse. The connection of the control unit via a fault current protection switch with a 30 mA trigger current is recommended.
  Note: The additional protection of the power supply via an fault current protection switch with 30mA tripping current is recommended for safety reasons. However, the local electrical installation regulations must be observed and adhered to.

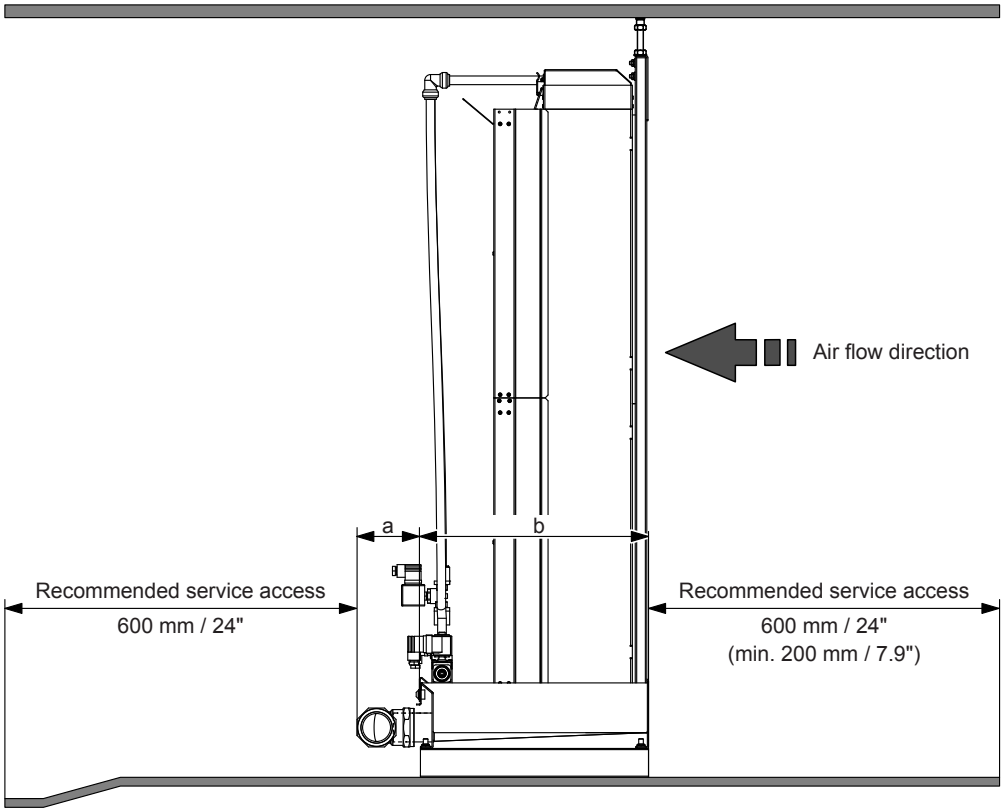
3.3 Requirements regarding the positioning of the evaporative module

– For inspection, commissioning and maintenance we recommend a minimum free space of 600 mm (24") before and after the evaporative module.



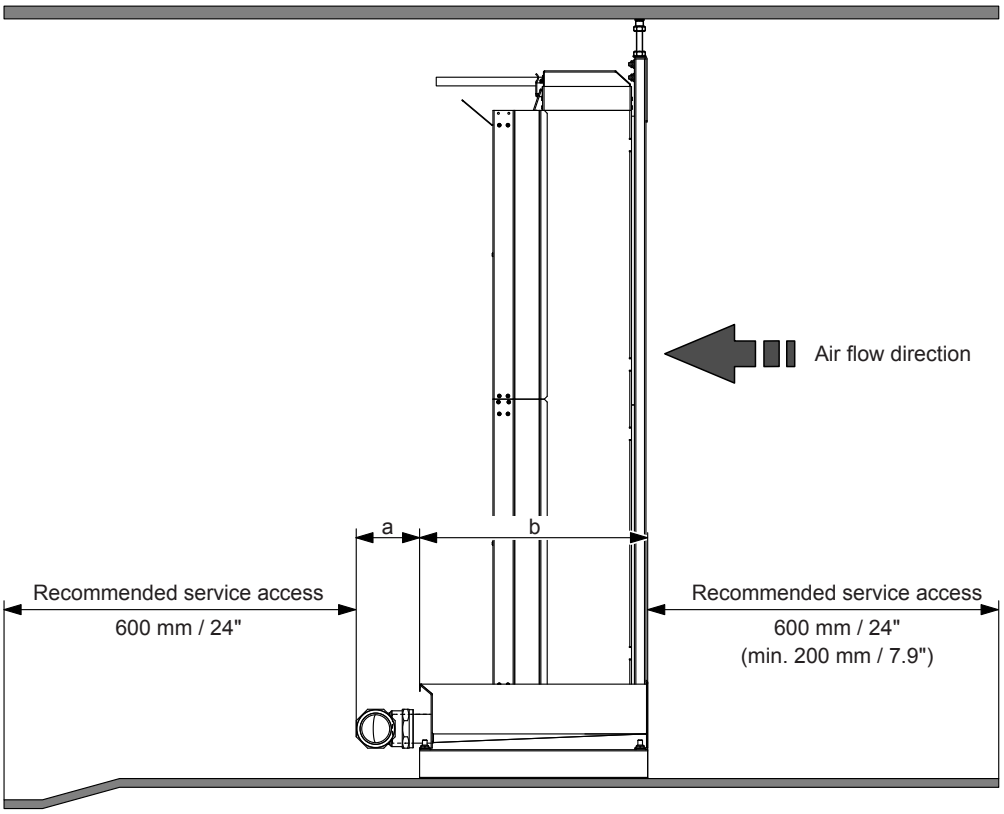
Dimension "a":	
ME Control (internal install, up to 3 m wide):	272 mm / 10.7"
ME Control (internal install, 3.15 m to 4.2 m wide):	272 mm / 10.7"
Dimension "b":	
F-type fibre cassettes F75/F85/F95:	395 mm / 15.6"
Polyester cassettes P85/P95:	525 mm / 20.7"
C-type fibre cassettes C85/C95:	525 mm / 20.7"

Fig. 32: Dimensions/Positioning of the Condair ME Control evaporative module with centre drain tank, internal install



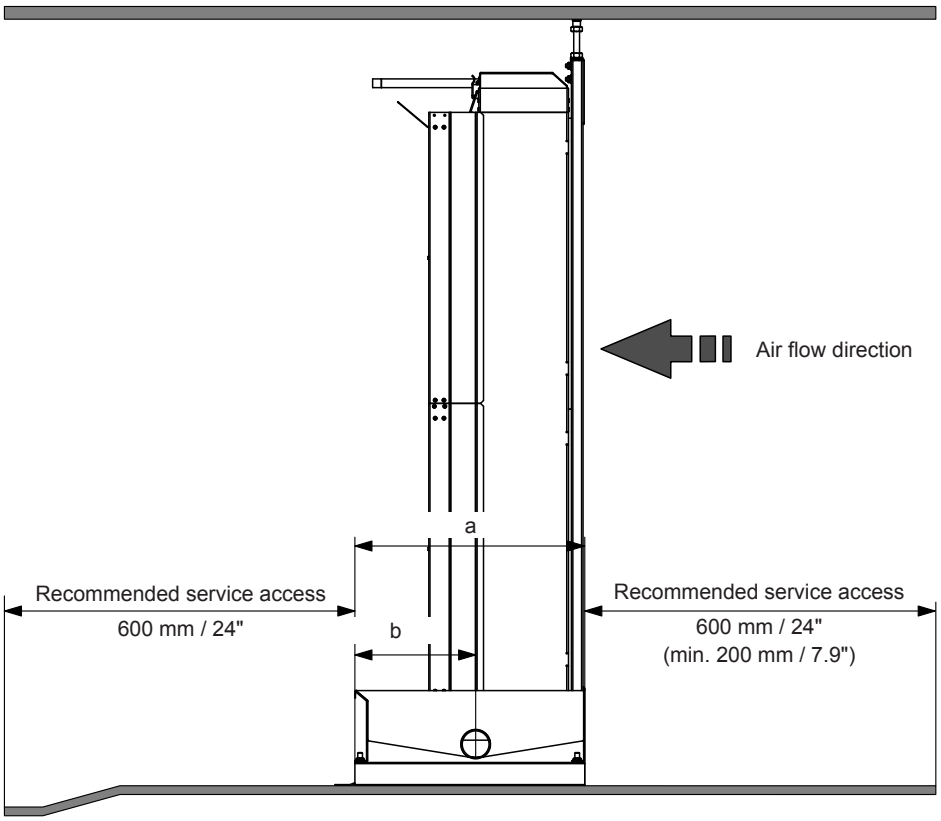
Dimension "a":	
ME Direct Feed (internal install, up to 3 m wide):	111 mm / 4.4"
ME Direct Feed (internal install, 3.15 m to 4.2 m wide):	245 mm / 9.6"
Dimension "b":	
F-type fibre cassettes F75/F85/F95:	395 mm / 15.6"
Polyester cassettes P85/P95:	525 mm / 20.7"
C-type fibre cassettes C85/C95:	525 mm / 20.7"

Fig. 33: Dimensions/Positioning of the Condair ME Direct Feed evaporative module with centre drain tank, internal install



Dimension "a":	
ME Control (external install, up to 3 m wide):	111 mm / 4.4"
ME Control (external install, 3.15 m to 4.2 m wide):	245 mm / 9.6"
ME Direct Feed (external install, up to 3 m wide):	111 mm / 4.4"
ME Direct Feed (external install, 3.15 m to 4.2 m wide):	245 mm / 9.6"
Dimension "b":	
F-type fibre cassettes F75/F85/F95:	395 mm / 15.6"
Polyester cassettes P85/P95:	525 mm / 20.7"
C-type fibre cassettes C85/C95:	525 mm / 20.7"

Fig. 34: Dimensions/Positioning of the Condair ME Control and Condair ME Direct Feed evaporative module with centre drain tank, external install

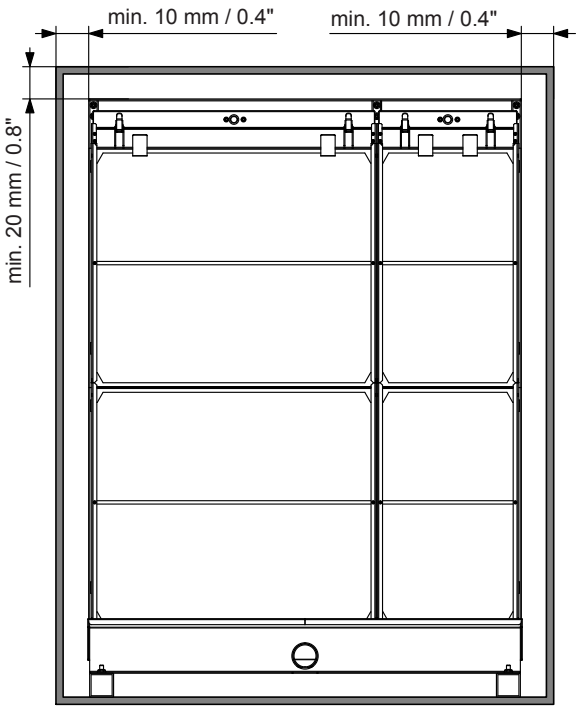


Dimension "a":	
F-type fibre cassettes F75/F85/F95:	395 mm / 15.6"
Polyester cassettes P85/P95:	525 mm / 20.7"
C-type fibre cassettes C85/C95:	525 mm / 20.7"
Dimension "b":	
F-type fibre cassettes F75/F85/F95:	208 mm / 8.2"
Polyester cassettes P85/P95:	273 mm / 10.7"
C-type fibre cassettes C85/C95:	273 mm / 10.7"

Fig. 35: Dimensions/Positioning of the evaporative module with side drain tank

– The following side and top clearances must be observed, when positioning the unit.

evaporative module with **centre** drain tank



evaporative module with **side** drain tank

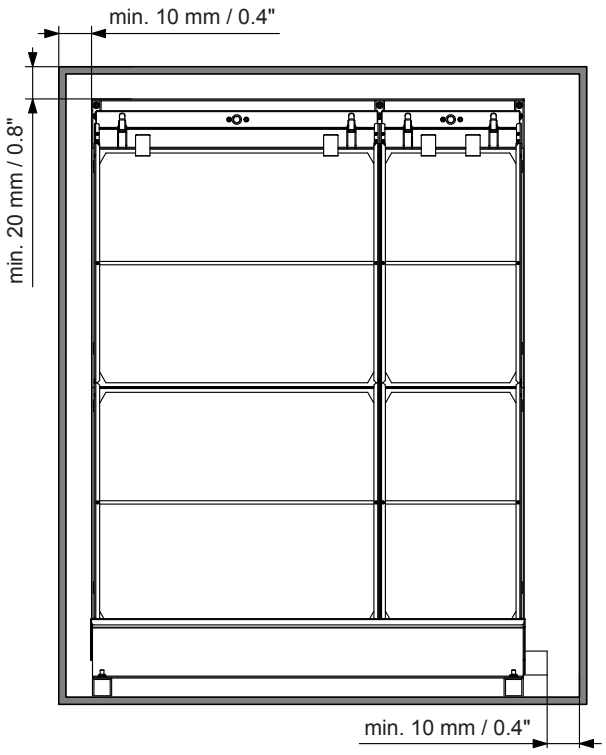


Fig. 36: Minimum side and top clearance for evaporative module with centre and side drain tank

– If possible, the evaporative module should be positioned on the **negative pressure**, i.e. suction side of the fan (Position 1 in the diagram below).

The maximum matrix face velocity is 4.5 m/s / 886 fpm (with droplet separator), for both installation positions.

Note: Laminar air flow must be provided for system efficiency and to avoid droplet carryover!

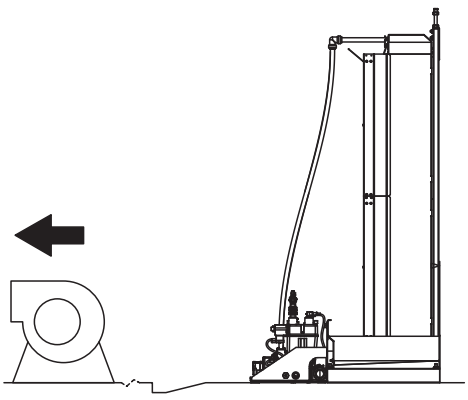
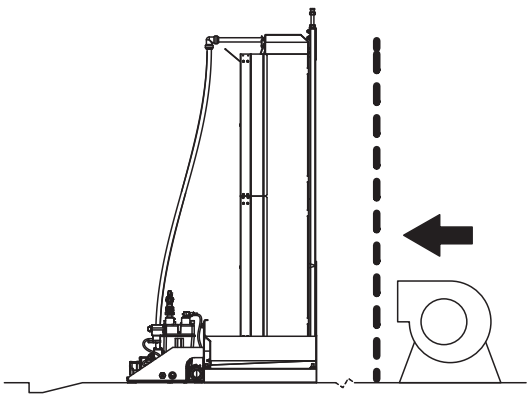
Position 1 – Negative pressure (fan suction)	**Position 2 – Positive pressure (fan discharge)**
	

Fig. 37: Mounting position in relation to the fan position

3.4 Inlet water quality requirements

Condair advises that the Condair ME must be connected to a **clean, wholesome (drinking water quality) mains water supply**. For areas of hard water and to minimise scale build up the water supply may be treated by a reverse osmosis system (RO).

Reverse osmosis

For Condair ME systems supplied with RO water the system must be operated within the following parameters. The use of RO water fed tanks and reservoirs is only permitted as part of a managed and hygiene monitored water system and should form part of the water system risk assessment.

System	Conductivity
Condair ME Control	> 5 µS cm-1 at 20 °C (68 °F)
Condair ME Direct Feed	> 30 µS cm-1 at 20 °C (68 °F)

Other water supplies

There is a growing demand to utilise sustainable water sources to help overcome scarcity challenges and recycle water. It is possible to use high-quality, treated effluent for non-wholesome applications. The following gives guidance on reclaimed water quality that may be acceptable for use within the Condair ME. "Effluent treated water" must be treated by an appropriate water treatment method and risk assessed to ensure it is safe and suitable for use in the Condair ME unit. It is the responsibility of the user to ensure that the water supply system is part of a managed, hygiene monitored water system, risk assessed and complies with the local regulations and bylaws.

Below are example water conditions that would allow a Condair ME to operate within specification.

Parameter	Content in supply water	Concern
Temperature	< 20 °C (68 °F)	Warm water favours growth of bacteria
Aluminium	-	No specific concerns
Ammonium	< 0.50 mg/l	Odour passed to air
Calcium	< 300 mg/l	Scale formation
Chloride	< 300 mg/l	Corrosion of stainless steel
Colour	None	Not directly a concern
Copper	< 1 mg/l	Deposits and corrosion stimulation
Conductivity	< 650 µS cm-1 at 20°C (68 °F)	Total hardness and scale formation.
pH	6.5 to 9.5	Acid or Alkali damage to equipment.
Iron	< 0.5 mg/l	Deposit formation on oxidation and a critical support role in Legionella growth.
Manganese	< 0.1 mg/l	Deposit formation
Nitrate	-	No specific concerns
Nitrite	-	No specific concerns
Odour	Acceptable to users	Smell passed to air
Sulphate	< 250 mg/l	No specific comments
Sodium	-	No specific concerns
Total organic carbon	-	No specific concerns
Turbidity	< 5 NTU	No specific concerns
Colony count 22°C	< 1000 cfu/ml	Indicator of contaminated water supply
Coliform bacteria	< 10 cfu/100 ml	Indicator of poor water quality
Legionella bacteria	< 50 cfu/1000 ml	Risk of Legionella
Pseudomonas species	< 10 cfu/100 ml	Indicator of slime forming potential

Controlled substances

DANGER!

Many of the following controlled substances are toxic; for example vinyl chloride is highly toxic, flammable and carcinogenic and could be evaporated off the matrix and passed to the airflow. Therefore it is important to note that any supply water coming from complex waste water, which may contain these contaminates should be carefully risk assessed by a water treatment specialist.

Controlled substances
Clostridium perfringens (including spores)
Acrylamide
Antimony
Arsenic
Benzene
Benzo(a)pyrene
Boron
Bromate
Cadium
Chromium
Cyanide
1,2-dichloroethane

Controlled substances
Epichlorohydrin
Fluoride
Lead
Mercury
Nickel
Pesticides
Polycyclic aromatic hydrocarbons
Selenium
Tetrachloroethene and Trichloroethene
Trihalomethanes
Vinyl chloride

Water monitoring

The Condair ME water system must be monitored for hygiene as part of the maintenance programme for the building in which it is installed.

Disinfection Chemical

Depending on the system hygiene, it is advised that preventative disinfection chemical should be added to the Condair ME water tank (Condair ME Control only) at an appropriate frequency, such as a monthly basis.

Any chemical used must be allowed as per local water regulations at the site of install and be of mild concentration. Condair recommends the use of a Hydrogen Peroxide (H_2O_2) based product with a concentration of 5-7.5 % (e.g. Sanosil S010).

Note: Adding disinfection chemicals will increase the conductivity in the tank. This should be taken into account on systems where a conductivity control system is in use (refer to the software section in the operation manual).

If you are in any doubt about the suitability of water quality please contact your Condair representative who will be pleased to support you.

4 Specification

4.1 Specification for the Condair ME Control

General:

1. The humidifiers will comply fully with "New Approach" CE Directives and UL requirements.
2. The humidifier evaporative glass fibre material shall be A2-S2,-D0 (UL Class 1) fire rating and be non-particle releasing.
3. The humidifier should have the option of utilising polyester evaporate material with a fire rating DIN EN 53438 Class F1.
4. The humidifier shall be powered by a 100-240 V single phase 50/60 Hz power supply with a low power consumption of less than 278 W for humidifiers up to 3 m wide, and less than 536 W for humidifiers between 3.15 m and 4.2 m wide.
5. The humidifier shall be designed to optimise the airflow across its surface area and allow evaporation of the desired quantity of water, with no carry-over of water droplets into the airstream.
6. The rate of evaporation shall be dictated by the air volume and temperature, humidifier physical dimensions and the matrix depth. The depth of matrix used shall govern the efficiency of the system up to 95%.
7. The construction of this humidifier will allow for an optional droplet seperator to be fitted to ensure no droplet carryover up to a maximum face velocity of 4.5 m/s (886 fpm).
8. The humidifier shall be evaporative adiabatic type and consequently incorporate a free cooling effect following the enthalpy line on the psychometric chart.
9. All evaporative module metalwork shall be 304 stainless steel that includes a water distribution system to ensure uniform delivery of the water across the evaporative surface.
10. The evaporative humidifier shall include a patented compact self contained hydraulic unit that incorporates a water tank and up to 5 pumps that can be mounted inside or outside the AHU. The hydraulic unit shall include Biomaster antimicrobial additive.
11. The hydraulic unit(s) shall be installed either inside, or outside the air handling unit to allow for maintenance of the hydraulic unit(s) to be carried out without interrupting the supply air.
12. The humidifier will have a pump assisted drain to minimise hygiene cycle duration. All tank sizes should drain in <15 minutes.
13. The humidifier overflow shall be integrated into a single drain connection for simple installation.
14. A maximum of 7 stage control shall be available as standard and controlled by up to 7 24 Vdc electronically commutated pumps which require no mechanical alteration to control flow rates.
15. Each humidifier must include a separate programmable control unit. The control unit must provide for fully automatic control of the humidification system.
16. The control unit will include a touch screen control unit that allows software based commissioning and shows detailed operational, service and fault conditions.
17. Where necessary the control unit may be located up to 10 meters away from the evaporative module. It shall be pre-wired with 10 m (394") of cable.

18. The control unit shall be capable of accepting the following methods of humidity control:
    - Humidistat/thermostat or BMS interlock.
    - Integral programmable on/off timer.
    - Supported control signals: 0-5V, 1-5V, 0-10V, 2-10V, 0-16V, 3.2-16V, 0-20V, 0-20mA, 4-20mA
19. The control unit will have both a service time counter and real time hours run counter, in addition to a PureFlo counter.
20. The control unit will initiate and control water quality dependent cleaning cycles to control the build up of concentrates in the Module Tank.
21. The control unit must initiate timed drain down of the module tank at least once every 24 hrs of inactivity to prevent stagnation. In the event of no demand for humidity, the tank will drain and remain empty.
22. Systems 900 mm (35.4") or wider can be supplied with a submerged UV water treatment system that kills micro-organisms in the reservoir. Fault detection included.
23. The humidifier shall be designed to be fully evaporative so that there is no aerosol carry over, which might carry microbes.
24. The humidifier shall be commissioned by a customer services engineer, approved supplier, or other suitably trained individual.
25. Conductivity option shall be available.
26. USB fault log download / software upgrade capability.
27. Modbus and BACnet connectivity included as standard.
28. LonWorks BMS option shall be available.

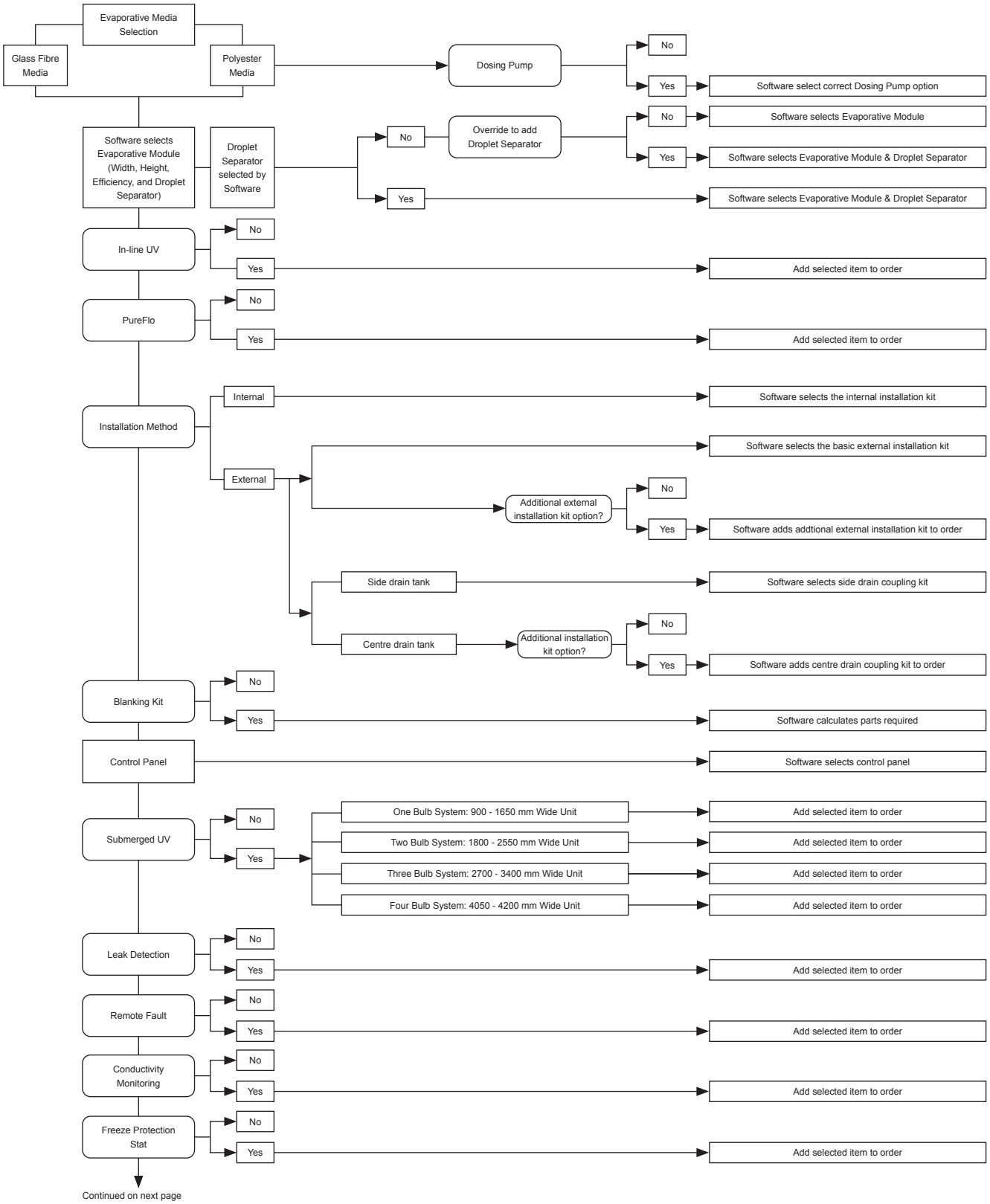
4.2 Specification for the Condair ME Direct Feed

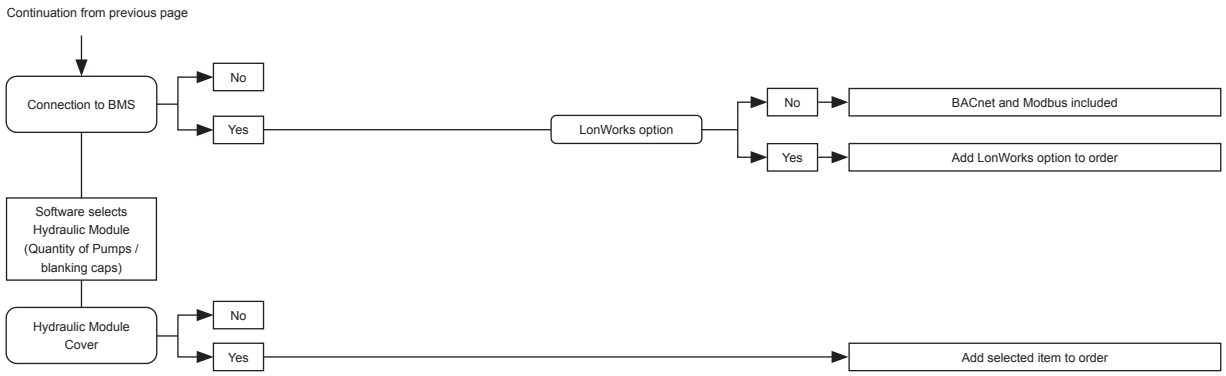
General:

1. The humidifier will comply fully with "New Approach" CE Directives.
2. The humidifier evaporative glass fibre material shall be A2-S2,-D0 (UL Class 1) fire rating and be non-particle releasing.
3. The humidifier should have the option of utilising polyester evaporate material with a fire rating DIN EN 53438 Class F1.
4. The humidifier shall be powered by a 100- 240V single phase 50/60 Hz power supply with a low power consumption of less than 120 W.
5. The humidifier shall be designed to optimise the airflow across its surface area and allow evaporation of the desired quantity of water, with no carry-over of water droplets into the airstream.
6. The rate of evaporation shall be dictated by the air volume and temperature, humidifier physical dimensions and the matrix depth. The depth of matrix used shall govern the efficiency of the system up to 95%.
7. The construction of this humidifier will allow for an optional droplet seperator to be fitted to ensure no droplet carryover up to a maximum face velocity of 4.5 m/s (886 fpm).
8. The humidifier shall be evaporative adiabatic type and consequently incorporate a free cooling effect following the enthalpy line on the psychometric chart.
9. All evaporative module metalwork shall be 304 stainless steel that includes a water distribution system to ensure uniform delivery of the water across the evaporative surface.
10. The hydraulic unit shall be installed either inside, or outside the air handling unit to allow for maintenance of the hydraulic unit to be carried out without interrupting the supply air.
11. A 7 stage control option shall be available.
12. Where necessary the optional control unit may be located up to 10 meters away from the evaporative module. It shall be pre-wired with 10 m (394") of cable.
13. The option to use the following humidity control methods shall be available:
    - Humidistat/thermostat or BMS interlock
    - 0-10Vdc or 2-10Vdc control signal (stage control unit only)
14. The humidifier shall be designed to be fully evaporative so that there is no aerosol carry over, which might carry microbes.
15. The humidifier shall be commissioned by a customer services engineer, approved supplier, or other suitably trained individual.

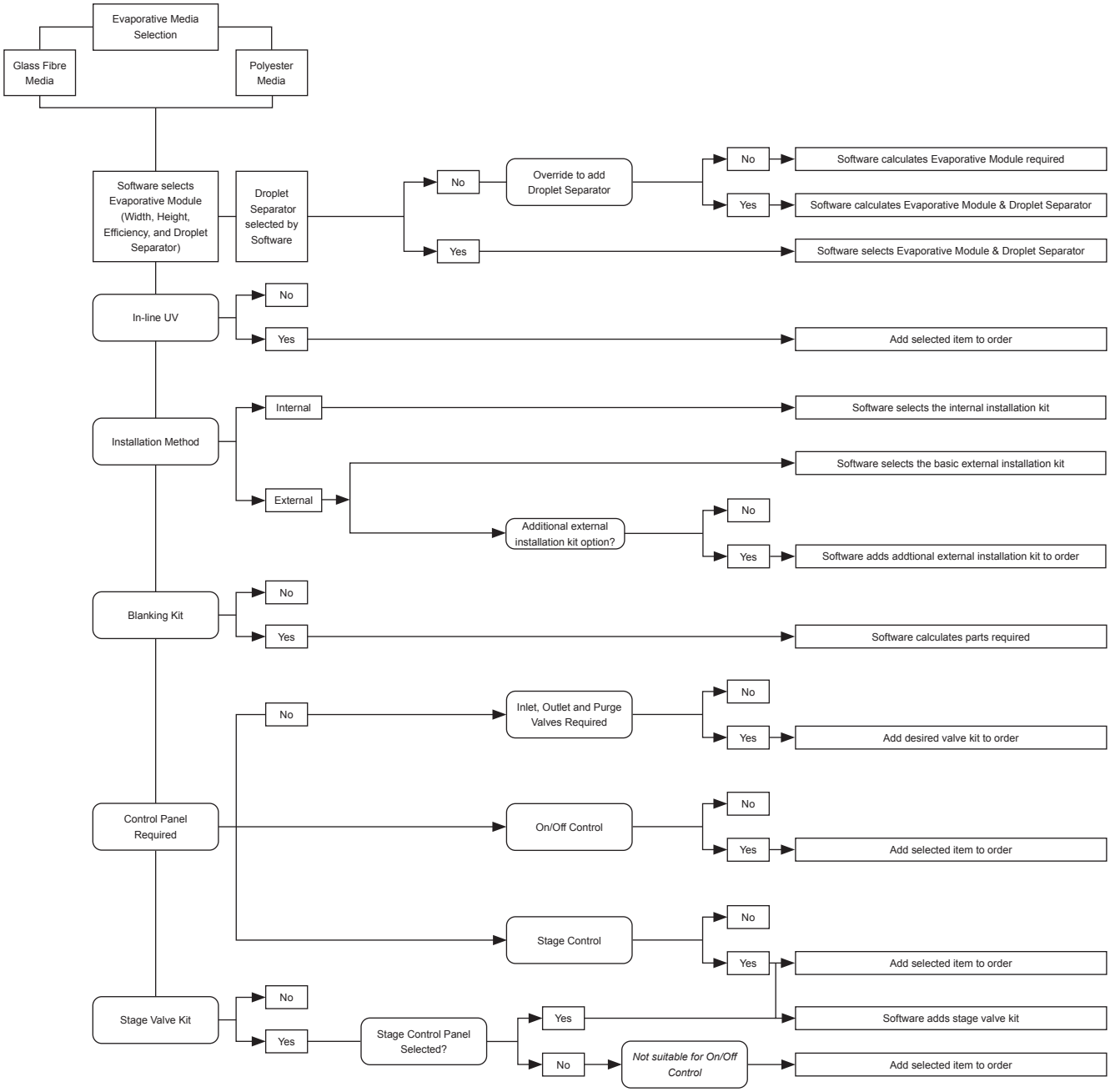
5 System selection charts

5.1 System selection Condair ME Control




Continuation from previous page
Connection to BMS
No
Yes
LonWorks option
No
BACnet and Modbus included
Yes
Add LonWorks option to order
Software selects Hydraulic Module (Quantity of Pumps / blanking caps)
Hydraulic Module Cover
No
Yes
Add selected item to order

5.2 System selection Condair ME Direct Feed



Notes

CONSULTING, SALES AND SERVICE:



CH94/0002.00

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