

740072-0001

Heat Pump Arrays

Colmac Heat pumps are arrangeable into arrays. Arrays are comprised of a leader and a number of followers (see Figure 1). Figure 1 is an example of a four-unit array.



Figure 1

The control of the heat pump array sequencing, lead lag or staging is done through the leader heat pump. There can only be one leader in the array. Any heat pump in an array may be configured as a leader or a follower (See Colmac Bulletin # 740071-0001). The heat pumps communicate with each other via Ethernet. On each machine there are two Ethernet bulkheads, one on the top and one on the lower left (see figures 2 & 3).

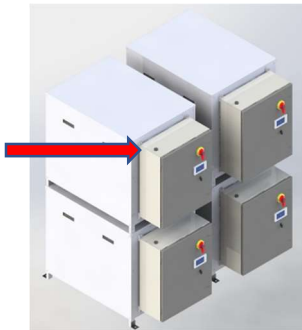


Figure 2



Figure 3

Any of the ethernet bulkheads may be used to connect the units into the array (see Figure 4 & 5). Either configuration achieves the same goal.

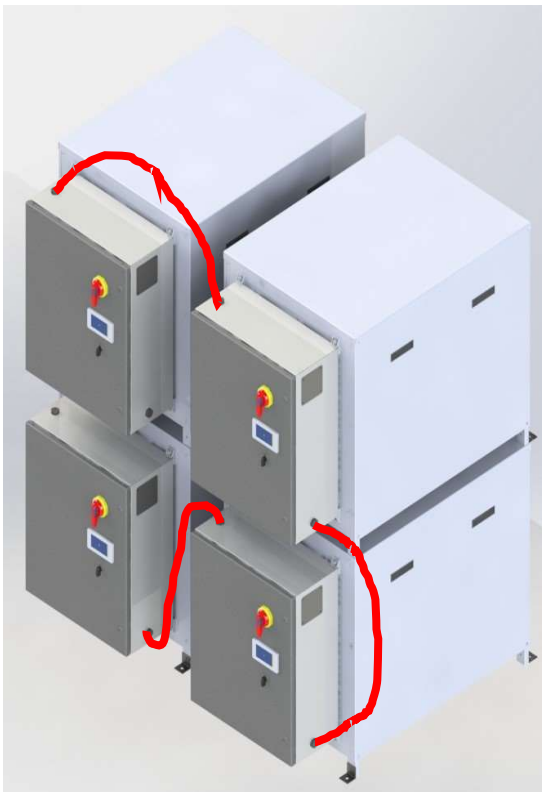
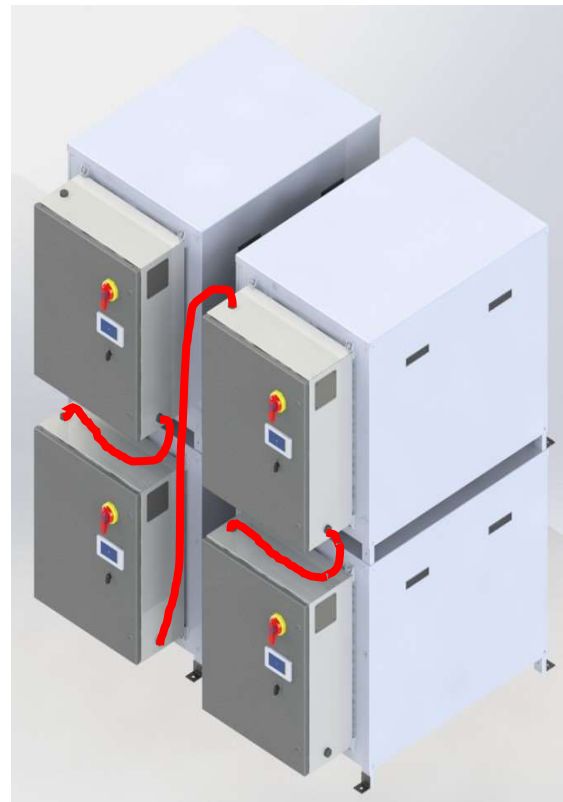


Figure 4



The unused Ethernet bulkhead on the leader unit is used to tie into the BMS system if Ethernet is the protocol. Colmac does not provide the Cat5 cable to achieve this connection.

The CxV series come with a remote Screen. Due to the versatility of the unit installation options, the touch screen is not mounted to the chassis of the machine See Figure 5. It is designed to be placed remotely in a protected environment or if coupled to a master controller not used at all.



Figure 5

If the remote touch screen is to be used for unit control and monitoring, it is to be plugged in to the port marked “PDGx SCREEN POWER OVER ETHERNET” (Figure 6). CAT 5 cable will need to be run between the unit and the screen to the location it will be placed at. A water resistant port plug a Mencon EV45V3-8MP-FW (Colmac # 100211-0002) is the mating unit for the plug use on the unit and touch screen (See Figures 7 & 8). The touch screen is not UV rated. If the Screen is to be mounted outdoors an appropriate UL and water-resistant enclosure should be employed.

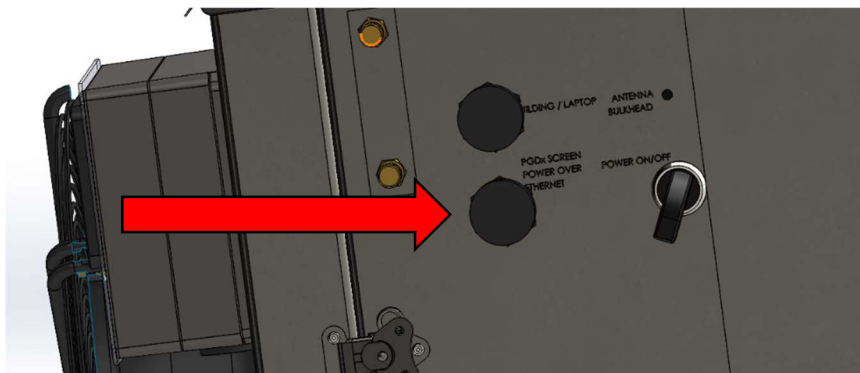


Figure 6

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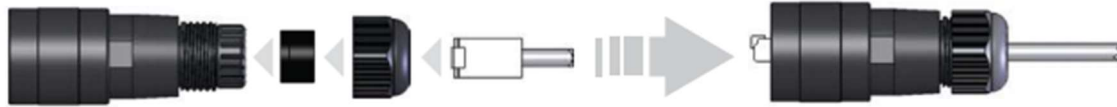


Figure 7 Colmac Part Number 100211-0002



Figure 8

Inter connection between units in the leader follower configuration or a CxS Supervisorial System uses the Ethernet port marked "BUILDING / LAPTOP" (Figure 9). Interconnection between units utilized in the leader follower configuration are similar as describe above (See Figure 4). All of these connections should also utilize the waterproof connectors (Figure 7).



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