

VRV4
Heat pump
Piping restrictions 1/3

For the reference drawing, see page 2/3.

		Maximum piping length			Maximum height difference			Total piping length	
		Longest pipe (A+[B,G,E,J]) Actual / (Equivalent)	After first branch (B,G,E,J) Actual	After first branch (for multi-outdoor) (D) Actual / (Equivalent)	Indoor-to-outdoor ⁽³⁾ (H1) Outdoor above indoor / (indoor above outdoor)	Indoor-to-indoor (H2)	Outdoor-to-outdoor (H3)		
Standard									
<i>VRV DX indoor units only</i>		165/(190)m	40m ⁽¹⁾	10/(13)m	50/(40)m ⁽³⁾	30m	5m	1000m	
<i>Standard multi-combination</i>									
<i>All multi-outdoor-unit combinations except standard multi-outdoor-unit combinations</i>		135/(160)m	40m ⁽¹⁾	10/(13)m	50/(40)m ⁽³⁾	30m	5m	500m	
Hydrobox connection		135/(160)m	40m	10/(13)m	50/(40)m	15m	5m	300-500m ⁽⁵⁾	
RA connection		100/(120)m	50m ⁽²⁾	-	50/(40)m	15m	-	250m	
AHU connection		Pair	50/(55)m ⁽⁴⁾	-	40/(40)m	-	-	-	
		Multi ⁽⁶⁾	165/(190)m	40m	10/13m	40/(40)m	15m	5m	1000m
		Mix ⁽⁷⁾	165/(190)m	40m	10/13m	40/(40)m	15m	5m	1000m

Remark

For standard multi-outdoor-unit combinations, see 3D079534.

- (1) If all conditions below are met, the limitation can be extended up to 90 m
- The piping length between all indoor units and the nearest branch kit is ≤ 40m.
 - It is necessary to increase the size of the gas and liquid piping if the pipe length between the first and the farthest indoor unit is >40m.
If the increased pipe size is larger than the pipe size of the main pipe, also increase the size of the main pipe.
 - When the piping size is increased, the piping length has to be counted as double.
The total piping length has to be within limitations.
 - The piping length difference between the nearest indoor unit from the first branch to the outdoor unit and the farthest indoor unit to the outdoor unit is ≤ 40m.
- (2) If the piping length between the first branch and the BP box or VRV indoor unit is more than 20m, increase the length of the gas and liquid piping between the first branch and the BP box or VRV indoor unit.
- (3) An extension to up to 90 m is possible without an additional option kit. Respect the following conditions:
- If the outdoor units are positioned higher than the indoor units:
 - Size up the liquid piping
 - A dedicated setting on the outdoor unit is required.
 - If the outdoor units are positioned lower than the indoor units:
 - 40~60m Minimum connection ratio: 80%
 - 60~65m Minimum connection ratio: 90%
 - 65~80m Minimum connection ratio: 100%
 - 80~90m Minimum connection ratio: 110%
 - Size up the liquid piping
A dedicated setting on the outdoor unit is required.
- (4) The allowable minimum length is 5 m.
- (5) In case of multi-outdoor-unit combinations.
- (6) Multiple air handling units (AHU)(EKEXV + EKEQ kits).
- (7) Mix of AHU units and VRV DX indoor
- (8) If the equivalent piping length between is > 90m, size up the main liquid and gas piping.