

VRV5
Heat recovery
Piping restrictions

		Maximum piping length			Maximum height difference			Total piping length
		Longest pipe from the outdoor unit or the last multi-outdoor piping branch Actual / Equivalent Maximum: -(A+B1+C1, A+B2+C2, A+B1+C3, A+B1+D+C4, A+B1+D+C5)-	Longest pipe after first branch or multi -BS- unit Actual Maximum: -(B1+C1, B2+C2, B1+C3, B1+D+C4, B1+D+C5)-	Longest pipe from the outdoor unit to the last multi-outdoor piping branch Actual / Equivalent Maximum: -(E)-	Indoor-to-outdoor Outdoor unit higher than indoor unit / Indoor unit higher than outdoor unit Maximum: -(H1)-	Indoor-to-indoor Maximum: -(H2)-	Outdoor-to-outdoor Maximum: -(H3)-	Piping length
Single outdoor units and standard multi-outdoor-unit combinations > ·20hp	-VRV DX R32- indoor unit	165/190 m ^(*)2)	40 m ^{(*)3(*)4)}	10/13 m	50/40 m ^(*)2)	15 m	5 m	1000 m
		120/165 m ^(*)3)	40 m ^{(*)3(*)4)}		50/40 m ^(*)2)	30 m		
	AHU ^(*)5)	165/190 m ^(*)3)	40 m		50/40 m	15 m		
Standard multi-outdoor-unit combinations ≤·20hp- and free multi-outdoor-unit combinations	-VRV DX R32- indoor unit	135/160 m ^(*)3)	40 m ^{(*)3(*)4)}	10/13 m	50/40 m ^(*)2)	15 m	5 m	500 m
	AHU ^(*)5)		40 m		50/40 m			

		Maximum piping length	Maximum height difference
		AHU ^(*)5)	EKEXVA → AHU: (F)

Notes

- If all conditions below are met, the limitation can be extended up to 90 m
 - The piping length between all indoor units and the multi -BS- unit is ≤ ·40- m.
 - It is required to size up the liquid piping between the first branch kit or multi -BS- unit and the last branch kit or last multi -BS- unit.
It is not required to size up the liquid piping between the multi -BS- unit and indoor units.
It is required to size up the liquid piping which is downstream of the multi -BS- unit, if the last branch kit is located downstream of the multi -BS- unit.
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 to the outdoor unit and the farthest indoor unit to the outdoor unit is ≤ ·40-m.
- If all conditions below are met, the limitation can be extended up to 90 m
 - If the outdoor units are positioned higher than the indoor units:
 - 2.1.1 Minimum connection ratio: ·80%-
 - 2.1.2 Size up the liquid piping
 - 2.1.3 Outdoor unit setting
For more information, refer to the service manual.
 - If the outdoor units are positioned lower than the indoor units:
 - 2.2.1 Size up the liquid piping
 - 2.2.2 Outdoor unit setting
For more information, refer to the service manual.
- If the equivalent piping is > ·90-m, size up the main liquid piping.
- Limit of ·40- m piping length between multi -BS- unit and indoor unit is depending upon room size (cfr. Safety system)
- Possible combinations
 - Multi ·AHUs-
 - Mix of ·DX- units and ·AHUs-