

EGSA(H/X)-06									
Heating capacity									
Minimum					Maximum				
Flow rate	Entering brine temperature [°C]	Leaving water temperature [°C]	Heating capacity [kW]	COP	Flow rate	Entering brine temperature [°C]	Leaving water temperature [°C]	Heating capacity [kW]	COP
Brine circuit [l/min]					Brine circuit [l/min]				
9	20	35	1,50	9,48	9	20	25	10,62	7,57
9	25	35	2,01	16,19	9	20	35	10,52	5,91
9	20	45	1,31	5,05	9	20	45	10,28	4,68
9	25	45	1,49	6,51	9	20	55	9,23	3,99
9	20	55	1,88	2,87	9	25	25	11,79	8,71
9	25	55	1,60	3,17	9	25	35	11,62	6,57
					9	25	45	11,38	5,16
					9	25	55	9,23	4,54

Domestic hot water operation

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Flow rate	Entering brine temperature [°C]	Domestic hot water tank temperature	Heat-up time (hh:mm:ss)	Capacity	
				Brine side	
				Maximum	Average
[l/min]				[kW]	[kW]
9	20	10 -> 55	01:16:56	7,7	5,94
9	25	10 -> 55	01:10:04	8,5	6,53
9	20	37 -> 55	00:43:58	4,6	3,67
9	25	37 -> 55	00:38:59	5,3	4,39

Installation Restrictions

Safety Valve

The safety valve which is delivered with the unit opens at 3 bar. If design pressure is higher, then this should not be used. Maximum allowed design pressure on brine side is 4 bar. The safety valve selected must open at maximum 4 bar pressure.

Balancing Valve/ Regulating Valve

A balancing valve must be installed on the inlet or outlet brine pipe to limit maximum flow. Without such a valve, brine pump cannot operate correctly and operation of unit cannot be guaranteed. The recommended value for maximum flow rate is 9 l/min.

Hydraulic Separator

A Hydraulic Separator must be installed to separate primary flow circuit (chiller) from secondary flow circuit (EGSA unit)

Expansion Vessel

The brine level vessel delivered with the unit is only meant for single application, not collective application. An expansion vessel must be installed to avoid issues with pump cavitation and to compensate for change in volume of medium as a result of temperature fluctuation.

Freeze Temperature Setting

If water is used as medium, field setting A-04 must be changed to value 0 to avoid break-down.

Check Valve

A check valve must be installed on brine outlet pipe.

Pipe Sizing

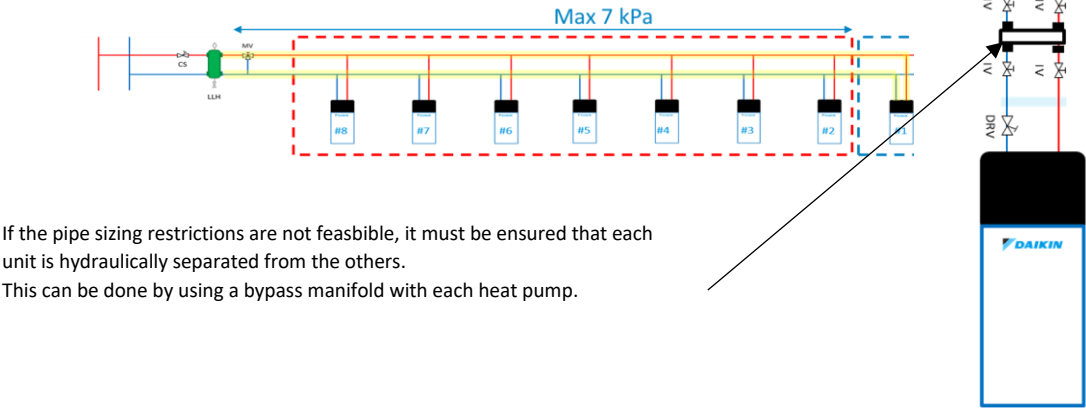
Pressure Drop Restrictions

When the units are installed in a parallel circuit, the maximum allowed pressure drop for the brine pump which is furthest away from the balancing bottle is 7 kPa. (illustrated below)

This pressure drop is calculated at a flow 8 l/min less than the design flow of the common pipe.

For example, if number of units = N and design flow for each apartment = 9 l/min , then 7 kPa is maximum pressure drop at a flow of (9N-8) l/min

If pressure drop is higher, then stable operation cannot be guaranteed.



If the pipe sizing restrictions are not feasible, it must be ensured that each unit is hydraulically separated from the others. This can be done by using a bypass manifold with each heat pump.