Installation instructions MultiAirChill

The following text lists information about the requirements for installing our refrigeration units with flammable refrigerants. This ensures operational safety on site.

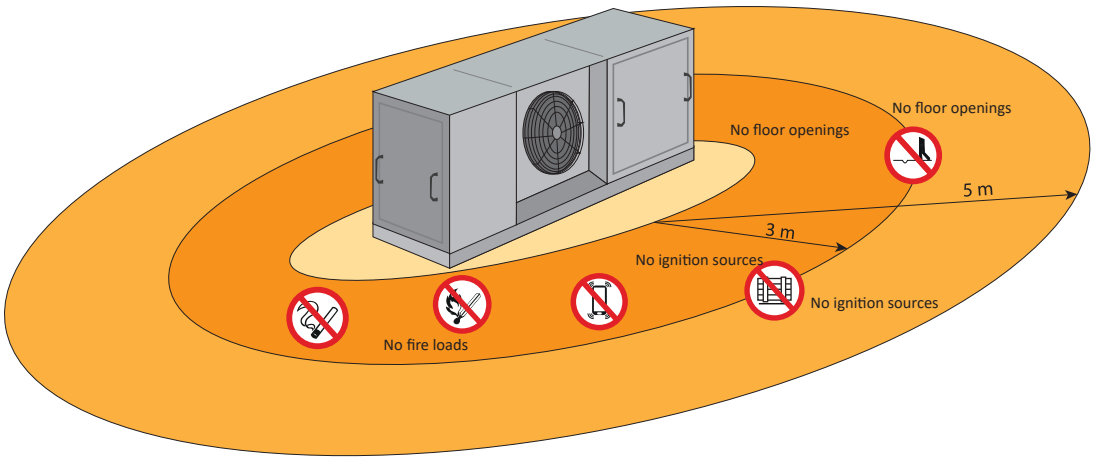
Installation of the MultiAirChill outdoors. The MultiAirChill is designed for outdoor installation. The system is designed to be technically watertight in the long term. The housing is sufficiently mechanically ventilated so that no potentially explosive atmosphere can arise in the event of a possible leak. No division into zones is necessary.

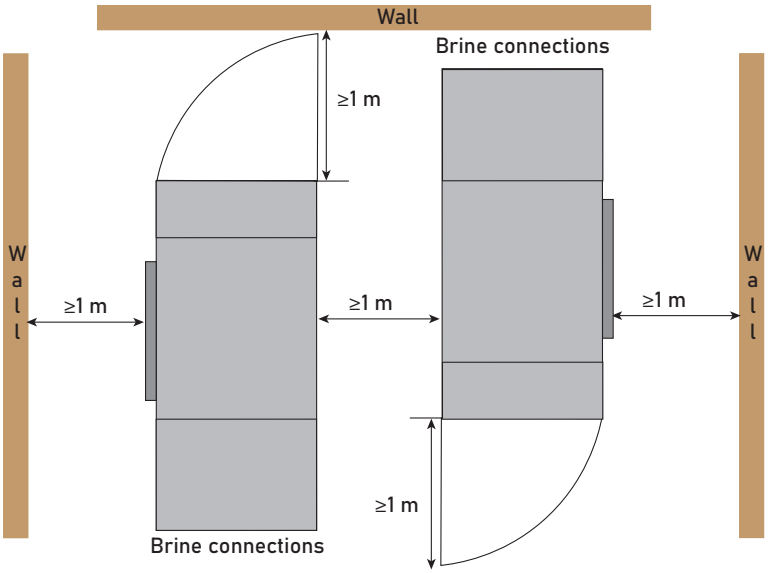
Further information in the operating instructions: Analysis and assessment of the dangers and risks. The refrigerants R290, R1270 and R600a are heavier than air. The refrigeration system must therefore be set up so that no refrigerant can get into a building in the event of a leak. Furthermore, in the event of a leak, refrigerant must not enter ventilation openings for fresh air, door openings, floor flaps or similar openings. No persons or property may be endangered.

The operator is responsible for checking the local conditions during installation:

- Floor inlets, ventilation openings, floor flaps or similar openings must not be present. We recommend a distance of 5 m.
- Floor sections and depressions in which leaked refrigerant can collect should be avoided. If there are depressed sections in the installation area, gas warning sensors must be used.
- In addition, the limits of use according to the technical data sheet must be observed.

For maintenance purposes there is sufficient space to provide the cooling units. The cooling units must be set up protected from unauthorised persons and measures to avoid mechanical influences.





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Smoking and open fire around the blow-out point are not permitted. No ignition sources may be present. The limit values specified in the table below must not be exceeded.

Maximum permissible surface temperatures and concentrations of refrigerants

Refrigerants	**Maximum surface temperatures** [°C]	**Maximum refrigerant concentrations at potential ignition sources** [kg/m³]
R290	370	0,019
R1270	355	0,023
R600a	360	0,0215

The following security systems are used:

- Two-stage ATEXgas sensor for the flammable refrigerant and fan for delivering flammable gas to the outside as soon as a concentration in the housing of 2000 ppm is exceeded. Safe derivation must be possible.

ATEX gas sensor setting MultiAirChill

Switch-on levels	**Action**	**Recommended setting of the ATEX-gas sensor**
1	The fan safely conveys any escaping refrigerant to the outside and switches the fan off again when the temperature falls below the set value. MultiAirChill remains active.	2000
2	The refrigeration machine is switched off. The fan safely transports any escaping refrigerant to the outside. Once the set value is exceeded, the electrical voltage to the MultiAirChill is restored. The MultiAirChill is reactivated once the set value is exceeded. The ATEX gas sensor remains active at all times.	4000

The MultiChiller is also to be regarded as „energised“ when the gas sensor is triggered!

If you have any questions, please contact Futron GmbH phone: +49 (0) 37 65 / 38 03 - 0.