

Required technical characteristics of spare cooling and steam humidification systems

For Data center "Central"

Cooling system

Internal evaporator block

Dimensions in cm

Height	Width	Depth
до47+/-5	до150+/-5	до113+/-5

Weight in kg – 116kg +/-2kg

Air consumption - 70 +/-2 m³/min

Power consumption in watt - 800 +/-50 watt

Sound power level in dBa - 70 +/-2

Sound pressure level at high rpm dBa - 44 +/-2

Control systems - Remote IP monitor Centralized up to 64 unit

Refrigerant – R32

Power supply – 50hz/220-240v

The possibility of connecting a steam humidifier - is mandatory

Drain pump – required

External condenser unit

Dimensions in cm

Height	Width	Depth
до90+/-5	до112+/-5	45+/-5

Weight in kg – 118kg +/-2=kg

Heat exchanger - Anti-corrosion treatment

Cooling working range - -20^c +46^c

Sound power level in dBa - 76 +/-2

Sound pressure level at high rpm dBa - 57 +/-2

Refrigerant – R32

Expansion valve – Electronic

Capacity regulation - Inverter controlled

Protective devices:

1. High pressure switch
2. High pressure switch
3. Fan drive overload protection
4. Overcurrent relay
5. Inverter overload protection
6. Board fuse

Cooling of the inverter board with a refrigerant – mandatory**Power Supply - Phase 3 ~ 50Hz / 380-415V (Operating Voltage Range - 342-457V)****Power consumption (380-415V) up to - 9 kW at 35C****Cooling capacity Nom. kW - 22Kw +/- 5%**

DC area automatic steam humidification

Terms of reference for installation work

1. The steam humidifier must be wall-mounted type.
2. The steam humidifier must have 3-phase heaters (not electrolyze type designed for a total power consumption of 10-11kW with electric heatersПроизводительность пара – 13-14kg/h.
3. Weight no more than 25-27kg.
4. The fan of the steam supply device must be designed for steam distribution with a volume of up to 17-19kg / h.
5. The steam humidifier must be equipped with an additional, second far end humidity control sensor.
6. The steam humidifier must be able to be connected to an IP network and be controlled remotely.
7. Availability of SNMP and HTTP protocols is obligatory.

Technical conditions for installation work

1. Any Installation works and installation of steam humidifiers in the data center wall with the obligatory use of vacuum cleaners.
2. Installation of the steam coil fan in the room above the steam humidifier.
3. Installing a second humidity sensor – obligatory.
4. Setting network and other parameters of the steam humidifier.
5. Delivery of work with the presence of test protocols and installation as it is built documentation.
6. All cables used are el. power supply - copper, multi-core with double PVC insulate.
7. The installation of cables under the terminals of power breaker must be done with copper sleeves of the appropriate cross-section.

Technical task for installation work and manufacturing of additional units for cooling system

1. Copper pipes with a wall thickness of 0.8mm.
2. Pipes thermal insulation - 3/8 ".
3. Laying the pipeline in mesh trays.
4. Manufacturing of a metal support structure - supports 4.2m wide and 9.4m high for 18 outdoor units of air conditioners (quadrants can be provided additionally upon request).
5. Installation of a metal support structure to the wall and ground of the building - supports for 18 outdoor units of air conditioners.
6. Installation of outdoor units on a metal support structure.
7. Manufacturing of 18 tin, galvanized and painted air diffusers with an angle of rotation of the air flow by 40 degrees (quadrants can be presented additionally upon request).
8. Installation of 18 tin diffusers with an angle of rotation of the air flow by 40 degrees on the external blocks of air conditioners.
9. Manufacturing of 18 tin diffusers with an angle of rotation of the air flow by 90 degrees for indoor units (quadrants can be presented additionally upon request).
10. Installation of 18 tin air diffusers with an angle of rotation of the air flow by 90 degrees on indoor units.
11. Making wall holes for piping and el. Cables.
12. Sealing holes with foam and other necessary materials.
13. Drainage diversion into the existing sewage system with PVC pipes.
14. Installation of a metal Power Distribution box to wall.
15. Installation of a main power breaker in metal PDU wall box.
16. Installation of double el. automatic breaker 25A / 230v each.
17. Installation of mesh trays.
18. Installation of 6m²mm power cables for outdoor units in mesh trays.
19. Installation of electrical power cables 2.5m²mm for indoor units in mesh trays.
20. Labeling of all types of cables.
21. All cables used for el. power supply - copper, multi-core with double PVC insulation.
22. The installation of cables under the terminals of power breaker must be done with copper sleeves of the appropriate cross-section.

Necessary equipment:

1. Air conditioners 22kw 18pcs.
2. Wall type steam humidifier for 13-14kg / h - 2 pcs.
3. Total number of electric distribution metal boxes - 3pcs.
4. Required number: Three-phase Automatic machines for 25A / 380v - 20pcs.
5. Required number: Single-phase automatic machines for 16A / 220v - 20pcs.
6. Required number: Three-phase input Automatic devices for 100A / 380v - 10pcs.