

ACS-DX

CONSTRUCTION AND BUILDING TRADE, TOURISM SECTOR, EDUCATIONAL FACILITIES,
OFFICES, COMMERCIAL OFFICE BUILDINGS, SOCIAL FACILITIES



AIR HANDLING UNIT
FOR VRF OUTDOOR UNIT

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H:1.80m



AIR HANDLING UNIT FOR VRF OUTDOOR UNIT

ACS-DX&VRF units offer an innovative and energy efficient solution for applications such as shopping malls, offices, hotels, banks, etc where there is a need for air conditioning and supply of fresh air. In comparison to the air handling units with water, ACS-DX&VRF units are much easier to install and also provide lower installation costs. Thanks to its high-level design features, ACS-DX&VRF is a compact unit that can either be used indoor or outdoor on request.



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TECHNICAL SPECIFICATIONS

1- CASING

ACS-DX & VRF units are EUROVENT certified and tested in accordance with EN 1751: 1988, DIN 1946 /4 : 2008, DIN EN ISO 5167 Standard.

- Maximum deflection for mechanical strength of the casing is compatible with EN 1886 Standard. The positive and negative pressure is compatible with D1(M) Class. Maximum Leakage between -400 Pa and + 700 Pa is compatible with L2 Class. Filter By-Pass Leakage is compatible with F9 Class. Thermal conductivity resistance is compatible with T3 Class. Thermal Bridge is compatible with TBC Class.
- The panels are made of submersion galvanized steel sheets. The outer steel sheets are RAL 9002 polyester powder coated.
- The panels and service doors are double skinned. The steel thickness is a minimum of 1mm for outer sheets and 0,8mm for inner sheets.
- All the interior surfaces of the casing is suitable for washing and cleaning and completely smooth without any welding at the joints.
- 50 mm rockwool insulation is used between the inner and the outer steel sheets of the panels.
- Mounting and dismounting the panels are handled totally externally.
- The air handling unit cells are connected externally by mechanical fasteners.
- On the casing of the air handling units are labels which include the technical specifications of the unit. In addition, on each cell casing, there is an identification label which is long lasting and resistant to humidity and water.
- In case air handling unit cells are partially delivered to the installation place, in order to provide easy and accurate onsite assembly, another identification label is placed on each cell which includes the information of the cell name and cell number.



2 - HEAT RECOVERY CELL

100% fresh air is used. The sorption rotor in the air handling unit substantially reduces the need for humidification in winter conditions and dehumidification in summer conditions by sensible and latent heat transfer. Thus, it provides significant saving in energy consumption during all four seasons. The efficiency rate is between 70% and 85%. Special heat recovery cell applications can also be made using rotary heat exchangers which make only sensible heat transfer.



3 - FREE HEATING - FREE COOLING CELL

When the ACS-DX & VRF unit is in free heating-free cooling position, it runs in the most economical mode without changing the thermal comfort conditions. It compares the indoor and the outdoor temperature values and provides free heating-free cooling, using its 100% mixing dampers and outstanding automation features.



4 - DIRECT EXPANSION COIL CELL

The direct expansion coil (evaporator) of the ACS-DX & VRF unit is split to circuits according to required air handling unit capacity and power of VRF-VRV units. DX coil circuiting arrangement is designed individually in compliance with the capacity of each section. Sensor barrels are mounted on the fin, bending curve and suction pipe of the DX coil and the air handling unit panel is designed accordingly to allow easy access. It is easily accessible for service even after copper pipe welding work is done.



5 - EXHAUST FAN - SUPPLY FAN CELL

ACS-DX & VRF units are equipped with Electronically Commutated (EC) Plug fans which ensure high energy efficiency. EC plug fans allow adjusting airflow and external static pressure (ESP) to the desired set point value. It provides high energy efficiency, low space requirement, reliable and steady operation. EC plug fans eliminate the need for a frequency inverter, resulting in easy handling and low operating and maintenance costs.



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6 - AUTOMATION CELL

The most important feature of the ACS-DX&VRF air handling unit is that power and automation systems (DDC+MCC) come with the unit in an individual waterproof panel. This enables connecting the unit to the building management system (BMS) via RS485 serial board and Modbus protocol. No additional automation and cabling is required.



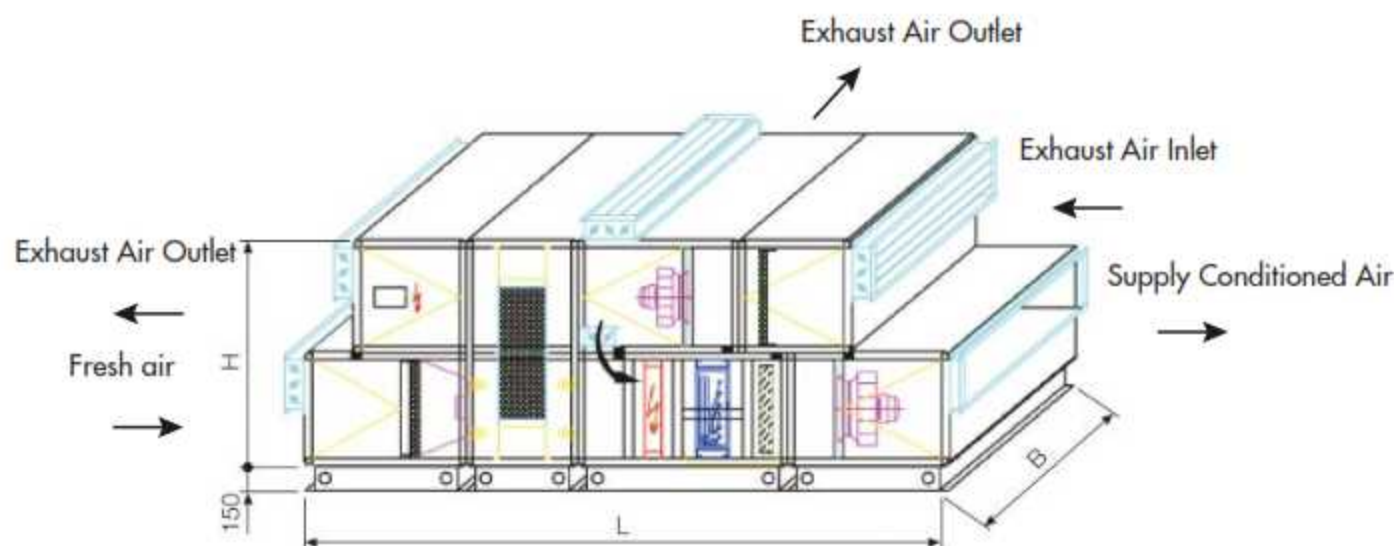
COMMISSIONING SERVICES

Commissioning the ACS DX&VRF units is carried out by the VRF company and AGNOTEX technicians together at the same time. On-site training is provided for the end user. The on-site performance of the unit is checked to ensure proper functioning before being handed over to the end user. This provides absolute assurance and value-added support for the mechanical contractors.



TECHNICAL SPECIFICATIONS

TYPE		ACS - DX 609	ACS - DX 699	ACS - DX 901	ACS - DX 911	ACS - DX 1206	ACS - DX 1216	ACS - DX 1609
Supply Fan Air Flow	m ³ /h	2000 - 4000	4000 - 5000	5000 - 8000	8000 - 11000	12000 - 15000	15000 - 19000	19000 - 25000
Supply Fan Motor power	kW	4.1	4	5.5	7.5	11	15	18.5
Supply Fan Motor speed	rpm	2900	3000	1500	1500	1500	1500	1500
Supply Fan Type		RH40C	RH35C	RH45C	RH50C	RH56C	RH71C	RH71C
Supply Fan External Static Pressure	Pa	400	400	400	400	400	400	400
Exhaust Fan Air Flow	m ³ /h	2000 - 4000	4000 - 6000	6000 - 9000	9000 - 12000	12000 - 15000	15000 - 19000	19000 - 25000
Exhaust Fan Motor power	kW	2.2	3	4	5.5	7.5	7.5	11
Exhaust Fan Motor speed	rpm	3550	3000	1500	1500	1500	1500	1500
Exhaust Fan Type		RH31C	RH35C	RH45C	RH50C	RH56C	RH71C	RH71C
Exhaust Fan External Static Pressure	Pa	400	400	400	400	400	400	400
Elec preheater max. capacity Outdoor max. air temp. : 3°C Outlet temp. of rotor : 14.5°C		12	18	27	36	45	58	76
DX coil Max. cooling cap. (In acc.w. the no of circuits)	kW	22 - 44	28 - 56	(42 - 56) (84)	(56 - 84) (112)	(84-112) (112-140)	(84-112) (140 - 168)	(112-168) (196-224)
DX coil Max. heating cap. (In acc.w. the no of circuits)	kW	25 - 50	31.5 - 63	(47 - 63) (94)	(63 - 94) (126)	(94-126) (126-157)	(94-126) (157 - 189)	(126-189) (220-252)
Number of Circuits for DX Coil	pc	1 - 2	1 - 2	1 - 2 - 3	2 - 3 - 4	2 - 3 - 4 - 5	2 - 3 - 4 - 5 - 6	4 - 5 - 6 - 7 - 8
Fresh air damper		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prefilter class		G4	G4	G4	G4	G4	G4	G4
2. stage filter class		F7	F7	F7	F7	F7	F7	F7
Rotary Heat Exchanger		Enthalpy	Enthalpy	Enthalpy	Enthalpy	Enthalpy	Enthalpy	Enthalpy
Electric Control Panel (Internal / External)		Internal	Internal	Internal	Internal	Internal	Internal	Internal
BMS outlet (Yes/No) MODBUS		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total max. electric power	kW/h	20	27	38	51	63	82	107
Dimensions	W	mm	1020	1325	1325	1630	1935	1935
	H	mm	1430	1430	2040	2040	2650	3260
	L	mm	4000	4000	4305	4305	4610	5220
Weight	kg	1088	1276	1716	2069	2502	2964	3546



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Heating Cooling Air Conditioning



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- ✓ Saving in energy
- ✓ Quality in production
- ✓ Customer satisfaction in service



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