

# Leonardo™ TDAR-TUAR



**Direct expansion air cooled units**  
Backward curved fans

**Range**  
From 20 to 65 kW

Leonardo Evolution™ direct expansion precision air conditioning units designed for environments where high-tech apparatus are used : web hotels, telephone exchanges, large computer rooms, data storage and transmission rooms.

The character within:  
precision and reliability, high energy efficiency, versatile configurations, energy saving, compact dimensions, intelligent heart, connectivity, outstanding performance, respect for the environment.

## Main characteristics

Air conditioning units characterized by high reliability and energy saving.

Possibility to control the temperature and relative humidity of the environment. Uniguard microprocessor control system for either local or remote control management.

Version equipped with tandem compressors for high energy efficiency at partial loads.

Selection of the fan speed according to the ESP required by the aeraulic system.

Total front access for unit maintenance.

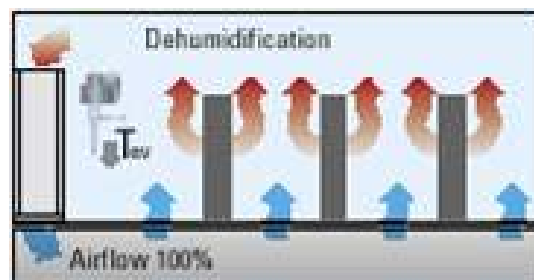
Downflow and upflow versions.

Electronic expansion valve integrated with the microprocessor and managed with exclusive Uniflair software.

Intelligent dehumidification control integrated with the electronic expansion valve.

Integrated ModBus on RS485 serial card Built-in LAN card.

Compact dimensions.



## Technical Data

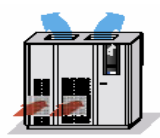
Air cooled direct expansion units with backward curved blades fans

Model TDAR-TUAR		511A	611A	721A	722A	921A	922A	1021A	1022A
Height	mm	1960	1960	1960	1960	1960	1960	1960	1960
Width	mm	1010	1010	1310	1310	1310	1310	1310	1310
Depth	mm	750	750	865	865	865	865	865	865
Weight	kg	280	310	430	447	430	447	430	447
Airflow	m <sup>3</sup> /h	5740	5740	8180	8180	8180	8180	8180	8180
External static pressure	Pa	20	20	20	20	20	20	20	20
Total cooling capacity	kW*	19.5	22.9	26.0	26.0	31.8	31.8	35.4	35.3
Sensible cooling capacity	kW*	19.5	21.5	26.0	26.0	30.2	30.4	32.0	32.2
N° refrigerant circuits		1	1	1	2	1	2	1	2
N° compressors		1	1	2	2	2	2	2	2
Electric supply voltage	V	400 V / 3 ph + N / 50 Hz							

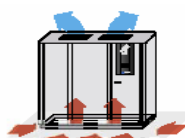
Model TDAR-TUAR		1121A	1122A	1321A	1322A	1422A	1622A	1822A	
Height	mm	1960	1960	1960	1960	1960	1960	1960	
Width	mm	1721	1721	1721	1721	2172	2172	2172	
Depth	mm	865	865	865	865	865	865	865	
Weight	kg	548	559	575	585	698	714	714	
Airflow	m <sup>3</sup> /h	11710	11710	11710	11710	15600	15600	15600	
External static pressure	Pa	20	20	20	20	20	20	20	
Total cooling capacity	kW*	38.7	38.7	42.4	42.4	51.6	58.8	65.8	
Sensible cooling capacity	kW*	38.7	38.7	42.4	42.4	51.6	57.6	60.5	
N° refrigerant circuits		1	2	1	2	2	2	2	
N° compressors		2	2	2	2	2	2	2	
Electric supply voltage	V	400 V / 3 ph + N / 50 Hz							

(\*) Based on 24°C @ 50%, ESP=20 Pa, condensing temperature = 48° C dewpoint with R407C

## Applications



Upflow unit with discharge on the top.  
Upflow unit with manifold air filter.



Upflow unit with discharge from the base.  
Upflow unit with manifold air filter.



Downflow unit with discharge from the front.  
Downflow unit with floor stand.



Upflow unit with discharge on the top.  
Upflow unit with manifold air filter.



Upflow unit with discharge from the base.  
Upflow unit with manifold air filter.



Downflow unit with discharge from the front.  
Downflow unit with floor stand.

## Versions

The direct expansion range is available for downflow and upflow versions with the following principal accessories:

- standard and enhanced electrical reheat
- hot water reheat
- hot gas reheat
- high ESP (external static pressure) available
- condensate drain pump
- immersed-electrode humidifier
- humidifier with cleanable electrodes
- air filter installed inside the unit up to EU5 efficiency
- air filter installed outside the unit with additional plenum or floor stand up to EU8 efficiency
- fresh air module
- microprocessor semi-graphic display control
- uniguard UG40
- upflow version available with air suction from the front, the rear or the base
- integration with low temperature air cooled condenser version available