WSA Techno

AIR COOLED CHILLER

A BRAND OF STULZ

COSMOTEC

INDUSTRIAL COOLING

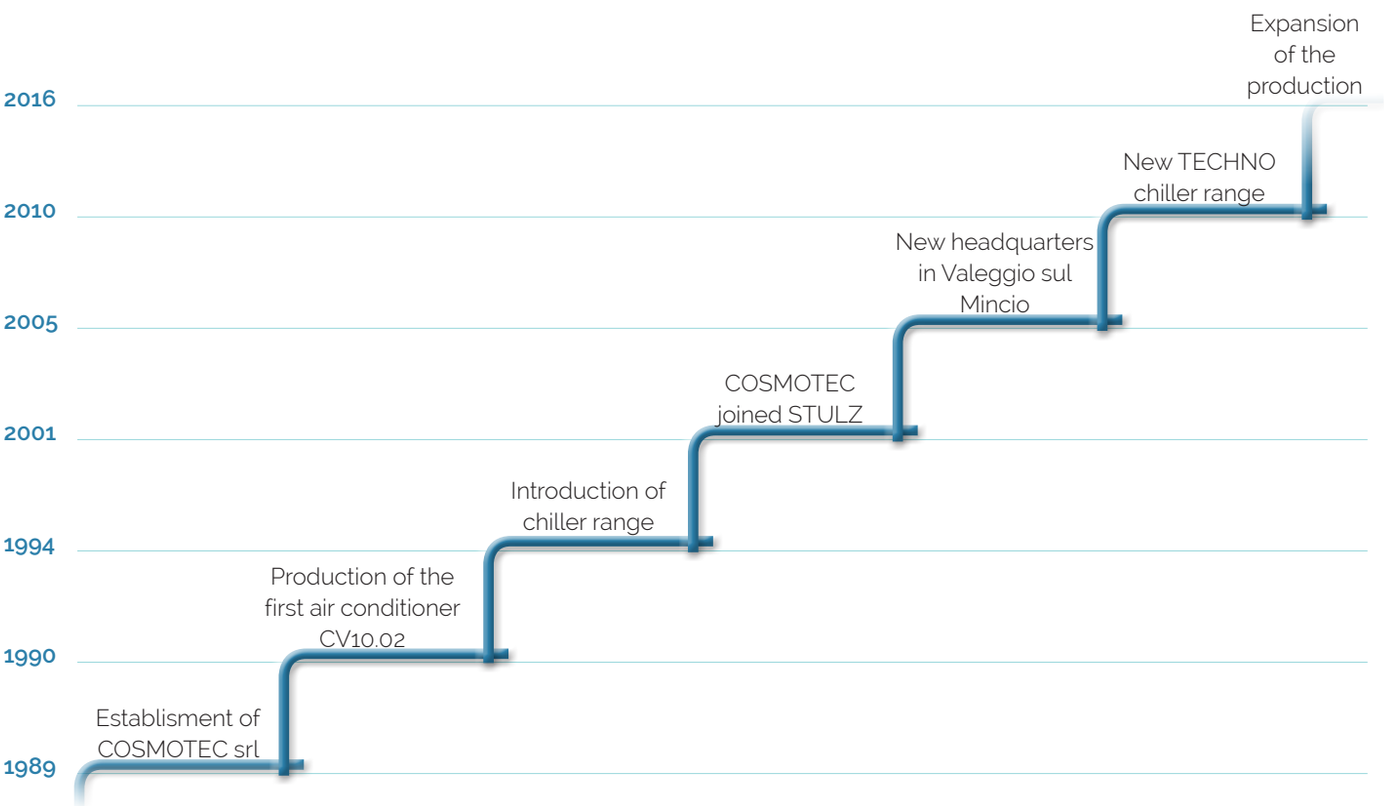
Company Profile

Founded in 1989, Cosmotec in 2001 joined the Stulz GmbH group with head offices in Hamburg. In 2004 Cosmotec SpA changed its name to Stulz SpA.
STULZ SpA immediately emerged as a major force in the air conditioning and refrigeration production field for the industrial and ICT market.
Innovation, flexibility and respect for the environment are the Stulz quality factors behind ISO9001 certification.

The Integrated Quality, Environment, and Safety System reaches the goal to ensure the achievement of the highest levels of quality, reliability, economic competitiveness of the product, with the maximum respect for the Environment, Health and Safety of workers and customers.

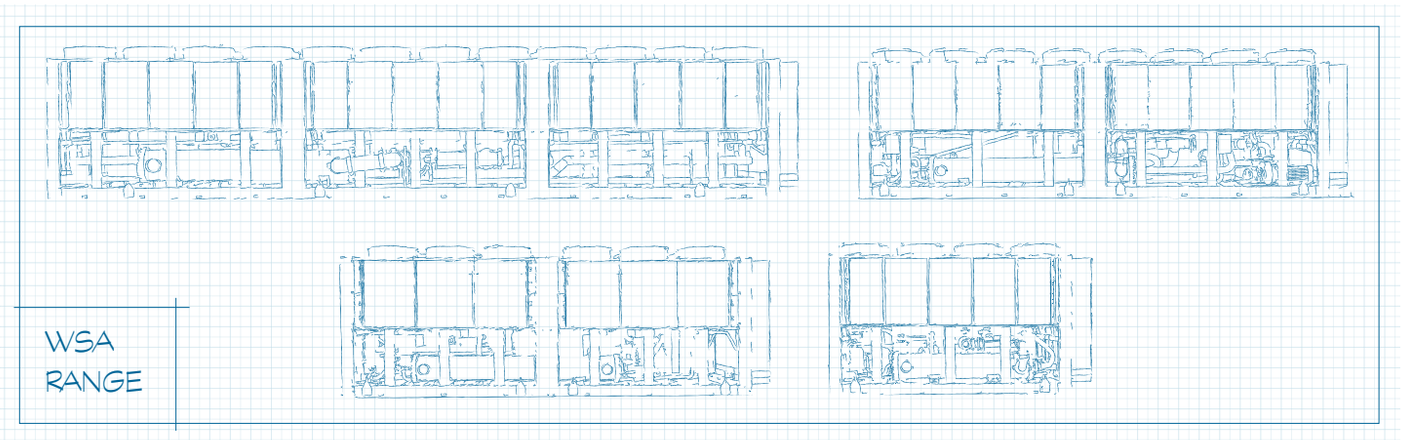
All the activities related to the Integrated System are aimed to the Continuous Improvement of the Quality, Environment and safety standards, with the cooperation of every company resource, suppliers and customers.

The Integrated Quality, Environment, and Safety System include the ISO14001 (Environmental Management System) and ISO50001 (Energy Management System) certifications.



Cosmotec has commercial partners and technical assistance centre worldwide; this allow us to ensure Timeliness and completeness of replies to the Customer. Thanks to the advice of technical experts and to installation and maintenance services, Cosmotec is by your side along the complete life cycle of the product.

WSA Techno Range



WSA Techno range expands the series of high efficiency chillers for industrial, IT and comfort applications.
WSA are chillers for outdoor installation, specifically designed to have high performance with small footprint.

Air cooled, available in Standard, Free Cooling, Low Noise and Free Cooling Low Noise versions.

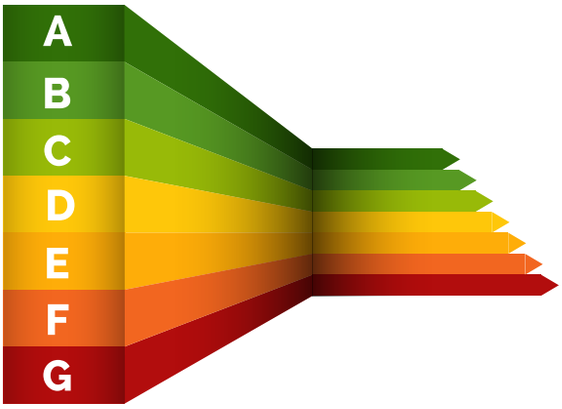
Gas R134a

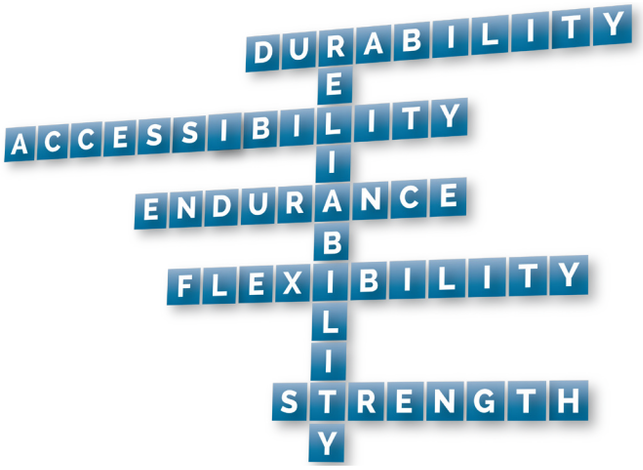
All units of the WSA Techno range use refrigerant gas R134a, which ensures a higher cooling capacity with low footprint of the machine.
The R134a assures a very low environmental impact, no impact on the ozone and a greenhouse gas coefficient lower than the usual refrigerants.

Energy Efficiency

The Techno units are designed for a high energy class (Class A or B) or to work in extreme environmental conditions. They also come in very precise configurations with temperature controls dedicated to the application.

WSA Techno units closely match all environmental and load conditions, achieving a high seasonal efficiency (ESEER), even higher than 5. High ESEER values lead to significant energy savings.





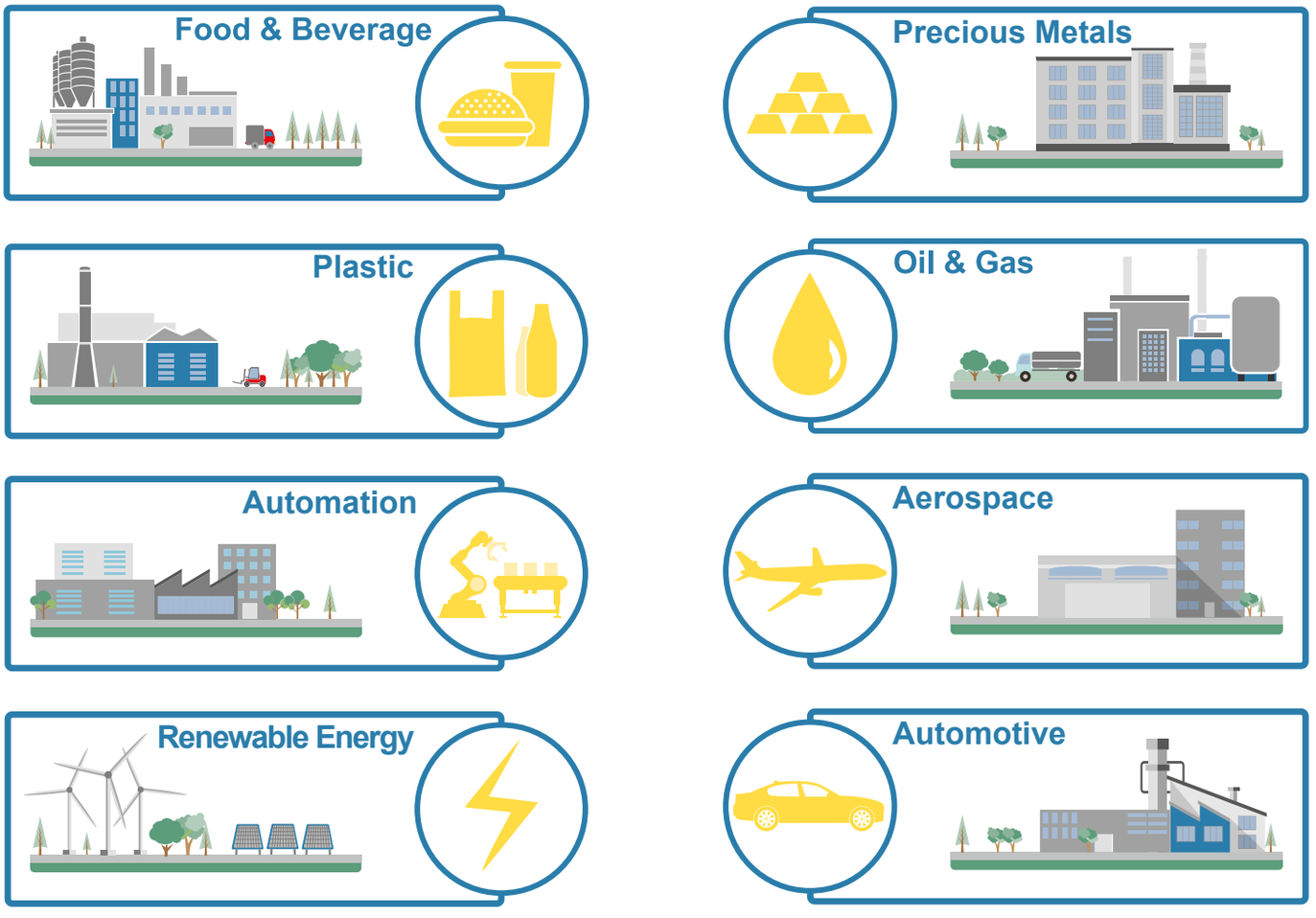
Maximum Reliability

The WSA Techno units are designed to guarantee the integrity during the transport both on road and in container, thanks to their sturdiness and flexibility.
The components assembly is realized to ensure the maximum reliability and accessibility during the maintenance.
The double refrigerant circuit with semi-hermetic screw compressors guarantees the best performance at different loads, paying particular attention to intensive uses (h24/365) and providing extra durability.

Applications

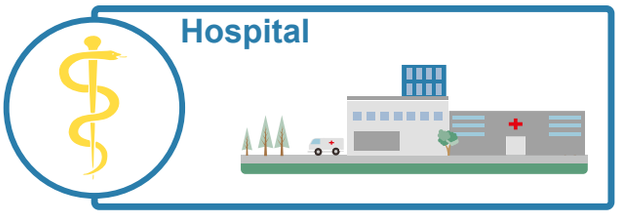
One technology, many uses

Process Cooling & Industrial applications



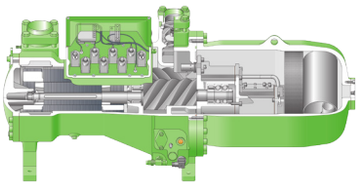
Air ambient temperature: -20°C / +45°C Water inlet temperature: +0°C / +30°C Water outlet temperature: -5°C / +25°C

Comfort



Air ambient temperature: -20°C / +45°C Water inlet temperature: +12°C / +22°C Water outlet temperature: +7°C / +18°C

Overview

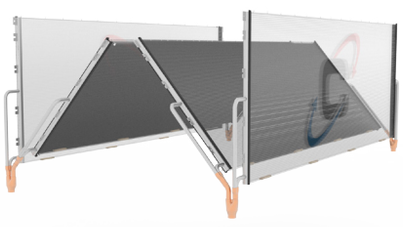


SCREW COMPRESSOR
The heart of WSA Techno

State of the art compressors, able to achieve high compression ratios with reduced consumption.
A range of compressors with part-winding (WSA160-320) or star-delta (WSA360-640) starts

ELECTRICAL PANEL
Protection & Accessibility

Large electric panel to allow installation of all options designed, installed in the front side of the chiller.
Triple door, ventilated, equipped with external power switch and display to manage the chiller operating.

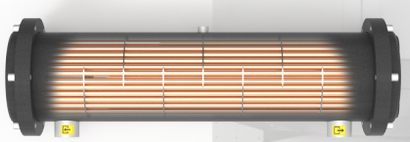


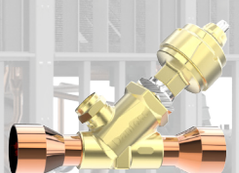
CONDENSER
Designed for the best performance

Full aluminium MicroChannel condenser coils, expressly designed to maximize the yield of the chillers, preserving reduced dimensions. The use of a W-shape geometry ensures an optimal air flow through the coils, allowing to reduce the noise of the refrigerator both in Chiller or Free Cooling mode

EVAPORATOR
Designed for the best performance

Shell&Tube evaporator with double cooling circuit and mono circuit water side, disposed in countercurrent flow to maximize the heat exchange between the refrigerant and the fluid, while keeping pressure losses very low on both circuits.



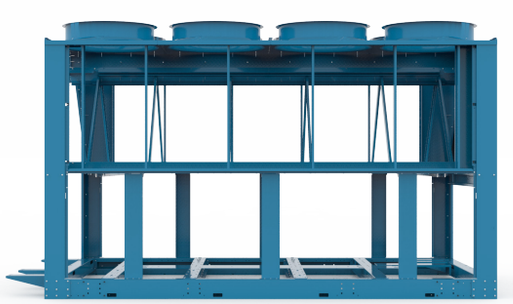


EXPANSION VALVE
Quality in every component

The valves optimize the thermal exchange into the evaporator, preserving the upstream and downstream components from high temperatures or icing.

DISPLAY TOUCH
Full control one touch away

The user interface to the electronic controller C2020 is a 7" colour touch screen display, with synoptic useful menus. All the chiller's data, warnings and alarms will be shown on the display. The menus are available in many languages: Italian, German, English, French, Russian, Spanish.



STRUCTURE
Made to be strong

Full metal structure to ensure the resistant of the structure also during the movement operations.
Corrosion resistant parts guarantee for all the fixing small parts.

Technical Data

Standard version

CODE	M.U.	WSA160	WSA220	WSA250	WSA280	WSA300
Cooling capacity (1)	**kW**	**376**	**482**	**568**	**631**	**673**
Absorbed power ca. (4)	kW	121	164	178	203	226
Refrigerant gas		R134a				
Refrigerant gas Charge	kg	67	86	101	112	119
No. Cooling circuits / No. Compressors		2 / 2				
Power supplies	V ~ Hz	400/3/50 - 460/3/60				
Height x Width x Depth	mm	2473x2278x4240	2473x2278x4240	2473x2278x6960		
Shipping weight (5)	Kg	4900	5000	6250		

CODE	M.U.	WSA320	WSA360	WSA380	WSA440	WSA480	WSA640
Cooling capacity (1)	**kW**	**739**	**845**	**912**	**1032**	**1122**	**1260**
Absorbed power ca. (4)	kW	237	271	294	354	351	431
Refrigerant gas		R134a					
Refrigerant gas Charge	kg	131	149	161	183	198	223
No. Cooling circuits / No. Compressors		2 / 2					
Power supplies	V ~ Hz	400/3/50 - 460/3/60					
Height x Width x Depth	mm	2473x2278x8080		2473x2278x8080		2473x2278x11920	
Shipping weight (5)	Kg	7640		9700		9800	

Free Cooling version

CODE	M.U.	WSA160 FC	WSA220 FC	WSA250 FC	WSA280 FC	WSA300 FC
Cooling capacity (2)	**kW**	**366**	**469**	**552**	**594**	**652**
Free Cooling Capacity (3)	kW	376	472	552	611	660
Absorbed power ca. (4)	kW	126	172	185	212	237
Refrigerant gas		R134a				
Refrigerant gas Charge	kg	67	86	101	112	119
No. Cooling circuits / No. Compressors		2 / 2				
Power supplies	V ~ Hz	400/3/50 - 460/3/60				
Height x Width x Depth	mm	2473x2278x4240	2473x2278x4240	2473x2278x6960		
Shipping weight (5)	Kg	5800	6400	8900		

CODE	M.U.	WSA320 FC	WSA360 FC	WSA380 FC	WSA440 FC	WSA480 FC	WSA640 FC
Cooling capacity (2)	**kW**	**721**	**822**	**888**	**1004**	**1088**	**1225**
Free Cooling Capacity (3)	kW	740	835	879	1004	1100	1237
Absorbed power ca. (4)	kW	247	283	306	370	366	451
Refrigerant gas		R134a					
Refrigerant gas Charge	kg	131	149	161	183	198	223
No. Cooling circuits / No. Compressors		2 / 2					
Power supplies	V ~ Hz	400/3/50 - 460/3/60					
Height x Width x Depth	mm	2473x2278x8080		2473x2278x8080		2473x2278x11920	
Shipping weight (5)	Kg	9700		11900		14050	

Technical Data

Low Noise version

CODE	M.U.	WSA160 SL	WSA220 SL	WSA250 SL	WSA280 SL	WSA300 SL
Cooling capacity (1)	**kW**	**360**	**442**	**534**	**589**	**627**
Absorbed power ca. (4)	kW	122	175	183	212	239
Refrigerant gas		R134a				
Refrigerant gas Charge	kg	67	86	101	112	119
No. Cooling circuits / No. Compressors		2 / 2				
Power supplies	V ~ Hz	400/3/50 - 460/3/60				
Height x Width x Depth	mm	2473x2278x4240	2473x2278x4240	2473x2278x6960		
Shipping weight (5)	Kg	4900	5000	6250		

CODE	M.U.	WSA320 SL	WSA360 SL	WSA380 SL	WSA440 SL	WSA480 SL	WSA640 SL
Cooling capacity (1)	**kW**	**689**	**780**	**851**	**958**	**1053**	**1167**
Absorbed power ca. (4)	kW	245	283	307	379	363	453
Refrigerant gas		R134a					
Refrigerant gas Charge	kg	131	149	161	183	198	223
No. Cooling circuits / No. Compressors		2 / 2					
Power supplies	V ~ Hz	400/3/50 - 460/3/60					
Height x Width x Depth	mm	2473x2278x8080		2473x2278x8080		2473x2278x11920	
Shipping weight (5)	Kg	7640		9700		9800	

(1) Evaporator water (in/out) 12/7 °C; Condenser air (in) 35 °C. Fluid: water

(2) Evaporator water (in/out) 15/10 °C; Condenser air (in) 30 °C. Fluid: water + 30% ethylenic glycol

(3) Free Cooling water (in/out) 15/10 °C; air (in) 0 °C. Fluid: water + 30% ethylenic glycol

(4) Unit at full capacity. According to ISO 3744. Pumps contribution is not considered.

(5) Unit without tank and pump

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