

### **Pco control unit**



This microprocessor controlled unit features an 80 character display and 14 buttons with LED's. The unit controls the temperature of the water, the fans and the pressure of the cooling circuit, etc. It can handle up to 22 different alarm conditions. Various remote control solutions are available, ranging from a simple ON-OFF switch to the more complete BMS systems. If the ambient temperature exceeds the limit, an "unloading" system will trip and step down the chiller capacity in order to prevent the machine from blocking.

### **Fans**

With an external impeller and crescent-shaped aluminium blades. The fans are "step" controlled and therefore only some of them are stopped when the ambient temperature decreases. on request the fans can also be fitted with a continuous control system a device that continuously varies the speed of rotation of all the fans.

### **Condensers**

These feature a characteristic upside-down "M" shape and comprise four finned coils with copper tubes and aluminium fins. They are generously sized in order to work at elevated temperatures.



### **Casing**

This is made with galvanised carbon steel panels, subjected to phosphodegreasing treatment and painted with polyester powders.



### **Compressors**

The semi-hermetic compressors are cooled by the intake coolant and protected by an electronic unit that controls the temperature of the windings and by a lubricating oil pressure switch. Suction and discharge pressures are also controlled. Circuit breakers are also available on request. Each chiller has two compressors fitted with one capacity control step.

### **Cooling circuit**

- Two independent cooling circuit.
- Thermostatic expansion valves with external compensation.
- High and low pressure transducers.
- Inspectable dehydrator filter.
- Etc.

### **Metal filters for condenser**

Aluminium filters with galvanised sheet metal frames to protect the surface of the condenser can be supplied on request. They are easy to remove and clean and feature an extremely high empty/full ratio. Available on request.



### **Evaporator**

The shell and tube evaporator features copper tubes and carbon steel shell. The tubes are internally finned to improve evaporator performance. The tubes are "U" bent to reduce size to a minimum. It is protected by a differential water pressure switch and an antifreeze probe. It may be protected by an ambient thermostat and heating elements on request. ISPESL, TUV, SDM, etc. testing is available.



## **Easy user friendly**

The CENTAURUS chillers are controlled by a microprocessor-controlled control unit programmed to optimise compressor and fan operation and to ensure both the cooling and hydraulic circuits work efficiently. The digital display allows monitoring of the chilled water temperature at a glance and provides information on all operating parameters. The chiller can also be remote-controlled or connected to BMS systems on request.

## **Simple to install and service**

To install the CENTAURUS chiller, simply connect it to the mains power and the water supplies. No other operations on the machine are required. The components have been specially arranged for ease of access in order to simplify both routine and extraordinary maintenance operations.

## **Ecological R407c ISO 14001**

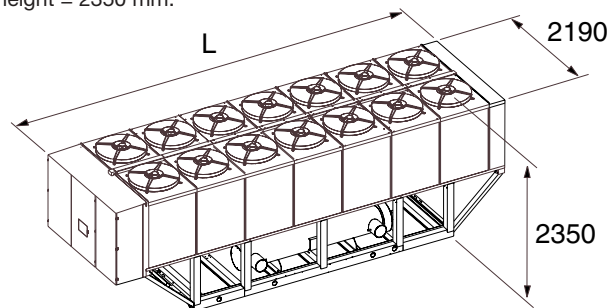
Because it is possible to choose the HFC R407c as its primary refrigerant that doesn't damage the ozone layer. Because it saves energy thanks to the highly efficient compressors. Because it has been designed and produced in accordance with the MTA Environmental Management System which complies with ISO 14001 standards.

R407C 50 Hz / 60 Hz	Centaurus model CE			241	286	326	372	430	477	534	563	616	669	711	749	794	839
	Version C	cooling capacity (1)	kW	241	286	326	372	430	477	534	563	616	668	710	749	794	839
		absorbed power (2)	kW	78.6	93.2	113	133	146	160	173	188	205	225	233	256	269	282
		max. ambient temp. (3)	°C	45	44	43	43	44	44	43	43	45	44	43	43	43	43
		noise level (4)	dB(A)	67.6	68.4	66.6	67.3	68.3	67.7	67.2	66.7	67.7	67	67.8	68.5	68	67.3
		depth (5)	L mm	3295	3295	3295	3295	4260	4260	4260	4260	5165	5165	6100	6100	6100	6100
	weight	kg	2126	2360	2688	2902	3341	3519	3681	3881	4521	4999	4599	5358	5542	5737	
	Version SC	cooling capacity (1)	kW	233	276	312	354	411	457	496	540	591	639	683	714	759	803
		absorbed power (2)	kW	80.5	95.3	115	135	149	163	177	192	209	230	238	261	275	289
		max. ambient temp. (3)	°C	41	41	39	39	40	40	40	40	41	41	40	39	39	39
		rumorosità (4)	dB(A)	59.8	60.6	59.4	60	61	60.5	60	59.7	60.7	60	60.8	61	60.7	60.3
		depth (5)	L mm	3295	3295	3295	3295	4260	4260	4260	4260	5165	5165	6100	6100	6100	6100
	weight	kg	2126	2360	2688	2902	3341	3519	3681	3881	4521	4999	4599	5358	5542	5737	
	Version SF	cooling capacity (1)	kW	247	296	343	396	451	497	544	589	639	694	714	770	792	837
		absorbed power (2)	kW	77	90.6	109	128	141	155	167	181	200	219	231	251	269	283
		max. ambient temp. (3)	°C	47	47	46	47	46	46	47	46	47	46	43	45	42	43
		rumorosità (4)	dB(A)	59	59.2	60.7	59.7	60.7	60.1	60.7	60.3	61	60.5	61	60.5	61	60.5
		depth (5)	L mm	3295	3295	4260	4260	5165	5165	6100	6100	7035	7035	7035	7035	7035	7035
	weight	kg	2323	2581	3048	3381	3817	4015	4468	4696	5270	5767	5588	5987	5936	6150	
	Version SSF	cooling capacity (1)	kW	234	280	324	371	427	469	517	560	604	654	672	721	736	778
absorbed power (2)		kW	80.2	94.4	113	133	146	161	174	188	207	228	240	260	279	293	
max. ambient temp. (3)		°C	43	43	43	43	43	42	43	43	43	43	37	41	37	38	
rumorosità (4)		dB(A)	52.8	53	54.7	53.5	53.7	53.9	54.7	54	55	54.3	55	54.3	55	54.3	
depth (5)		L mm	3295	3295	4260	4260	5165	5165	6100	6100	7035	7035	7035	7035	7035	7035	
weight	kg	2323	2581	3048	3381	3817	4015	4468	4696	5270	5767	5588	5987	5936	6150		

R22 50 Hz / 60 Hz	Centaurus model CE			241	286	326	372	430	477	534	563	616	669	711	749	794	839
	Version C	cooling capacity (1)	kW	258	305	350	401	460	511	555	603	659	715	757	803	851	899
		absorbed power (2)	kW	78.3	93	114	135	146	160	174	188	205	226	232	257	269	282
		max. ambient temp. (3)	°C	47	47	45	45	46	46	46	45	47	46	45	45	45	45
		noise level (4)	dB(A)	67.6	68.4	66.6	67.3	68.3	67.7	67.2	66.7	67.7	67	67.8	68.5	68	67.3
		depth (5)	L mm	3295	3295	3295	3295	4260	4260	4260	4260	5165	5165	6100	6100	6100	6100
	weight	kg	2126	2360	2688	2902	3341	3519	3681	3881	4521	4999	4599	5358	5542	5737	
	Version SC	cooling capacity (1)	kW	244	295	337	384	443	492	536	583	637	690	735	772	820	868
		absorbed power (2)	kW	82	96	118	139	151	165	180	195	212	234	240	267	280	293
		max. ambient temp. (3)	°C	43	43	41	41	42	42	42	41	43	43	42	41	40	41
		noise level(4)	dB(A)	59.8	60.6	59.4	60	61	60.5	60	59.7	60.7	60	60.8	61	60.7	60.3
		depth (5)	L mm	3295	3295	3295	3295	4260	4260	4260	4260	5165	5165	6100	6100	6100	6100
	weight	kg	2126	2360	2688	2902	3341	3519	3681	3881	4521	4999	4599	5358	5542	5737	
	Version SF	cooling capacity (1)	kW	263	314	364	422	487	528	577	626	679	739	762	822	849	897
		absorbed power (2)	kW	76	89	109	127	139	154	166	180	198	218	231	250	270	283
		max. ambient temp. (3)	°C	49	49	48	49	49	49	49	49	49	49	45	47	44	45
		noise level(4)	dB(A)	59	59.2	60.7	59.7	60.7	60.1	60.7	60.3	61	60.5	61	60.5	61	60.5
		depth (5)	L mm	3295	3295	4260	4260	5165	5165	6100	6100	7035	7035	7035	7035	7035	7035
	weight	kg	2323	2581	3048	3381	3817	4015	4468	4696	5270	5767	5588	5987	5936	6150	
	Version SSF	cooling capacity (1)	kW	251	301	347	400	458	503	554	599	651	703	725	777	801	847
absorbed power (2)		kW	80	94	114	135	147	162	174	189	208	230	243	265	286	301	
max. ambient temp. (3)		°C	45	45	45	45	45	45	45	45	45	45	39	42	39	39	
noise level(4)		dB(A)	52.8	53	54.7	53.5	53.7	53.9	54.7	54	55	54.3	55	54.3	55	54.3	
depth (5)		L mm	3295	3295	4260	4260	5165	5165	6100	6100	7035	7035	7035	7035	7035	7035	
weight	kg	2323	2581	3048	3381	3817	4015	4468	4696	5270	5767	5588	5987	5936	6150		

electric supply: 400V / 3Ph / 50Hz or 460V / 3Ph / 60 Hz

- (1) Referred to: water outlet temperature = 7°C; delta t = 5 °C; ambient temperature = 35 °C.  
(2) Power absorbed by the compressors in the conditions (1).  
(3) Maximum ambient temperature refers to water outlet temperature at 7 °C.  
(4) Sound pressure level in open field (hemispherical irradiation) on condenser side at distance of 10 m and height of 1.2 m.  
(5) The other dimensions for all the machines are: width = 2190 mm; height = 2350 mm.



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# ***Centaurus***

air cooled **water chillers**  
for  
**air-conditioning**

nominal cooling capacity  
**from 233 to 900 kW**  
semi-hermetic compressors

**R407c R22**  
**50 Hz 60 Hz**





## Perfect

*For commercial and domestic air-conditioning systems*

Constant research, experienced designers and the increasingly more qualified and diversified requirements of its customers has led MTA to produce the CENTAURUS range of air-cooled chilling units, the perfect solution for commercial and domestic air-conditioning systems. These can be used to air-condition both homes and public buildings such as shopping centres, conference halls and hotels, etc.



## Innovative shape

The MTA designers put a lot of work into devising a structure for improving the performance of the chiller.

The result was the innovative "trapezium" structure of the base which both reduces floor area and considerably improves the cooling air flow to the condenser.



## Four versions

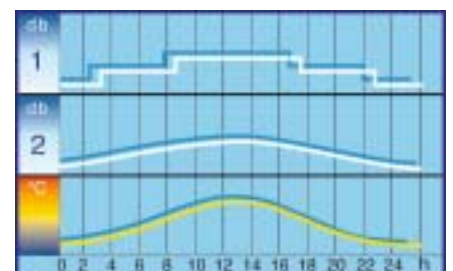
*catering for all requirements*

as well as being able to choose between R407c and R22 and between 50 and 60 Hz, each model is available in 4 different versions:

- "C" basic version for normal applications
- "SC" basic version but soundproofed for reduced noise in not excessively high ambient temperatures
- "SF" soundproofed version for elevated ambient temperatures
- "SSF" extra soundproofed version for normal ambient temperatures.

## Silent

The CENTAURUS water chillers use fans with crescent-shaped blades, specifically designed to reduce noise to a minimum. To cater for all requirements, "step" (1) or continuously (2) controlled fans can be chosen. The noise level of the machine therefore lowers when it is most important. In the evening, the morning, and especially, at night, the ambient temperature decreases along with the noise level.





## **Reliability**

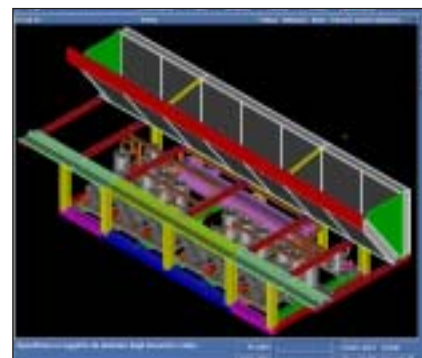
*the result of MTA  
technology, research  
and experience*

Leading edge technology has been used in every aspect of the development of the CENTAURUS chiller. MTA research and development has utilised in-house design and simulation software, combined with quality components (enhanced by the choice of high efficiency semi-hermetic compressors) and modern production techniques ensuring total reliability.

## **Tested**

*just like every  
MTA product or  
component*

The CENTAURUS water chillers are individually tested in fully computerised state of the art cells fitted with a complete set of high precision instruments that test the machine under all working conditions, even the most extreme. The machines are all tested under rated operating conditions and temperatures, pressures, loads and electrical values are measured. All the results are documented to ensure reliable and rapid traceability.





**Guaranteed  
and serviced**

MTA products are designed, built, tested and serviced following the procedures contained in the MTA Quality System. MTA obtained Quality System certification in compliance with ISO9001 standards from the ICIM Certification Institute in July 1996. Particulars attention is dedicated to the servicing network, the training of technicians, territorial coverage and servicing speed and efficiency.



**Cooling, drying and caring.**