

Příloha č. 1 kupní smlouvy

Technická specifikace předmětu plnění

<p>Minimální kupujícím (zadavatelem) požadované technické parametry - popis předmětu plnění</p>	<p>Popis předmětu plnění dodávaného prodávajícím (dodavatelem) Dodavatel jako prodávající doplní ve všech řádcích informaci o tom, jestli splňuje požadované plnění (např. slovem „splňuji“ nebo „ano“), a tam, kde jsou požadovány parametry, uvede bližší popis, konkrétní údaje či hodnotu parametru či odkaz na stránku nabídky, kde jsou parametr či funkce uvedeny.</p>
<p>Chladicí stroj č. 1 (náhrada za stávající chladicí stroj RHOSS TCAE 21T):</p>	<p>UNTES TCAEY 122 ASP1</p>
<p>Počet ks:</p>	<p>1</p>
<p>Technické parametry, funkce</p>	
<p>1. Minimální chladicí výkon: 22 kW</p>	<p>22,7 kW</p>
<p>2. Min. ESEER (Evropský sezónní energetický faktor UNI EN 14511/2013): 3,8</p>	<p>3,82</p>
<p>3. Doporučené rozměry (V x Š x H): 1290 x 1522 x 600 (mm)</p>	<p>1290x1522x600</p>
<p>4. Typ kompresoru: hermetický rotační spirálový</p>	<p>ANO</p>
<p>5. Min. objem akumulární nádrže: 40 l</p>	<p>45 l</p>
<p>6. Oběhové čerpadlo</p>	<p>ANO</p>
<p>7. Provoz při venkovních teplotách v rozmezí: -10 °C až 35 °C (při 50 % vlhkosti)</p>	<p>ANO</p>
<p>8. Teplotní spád média: 7/12 °C</p>	<p>ANO</p>
<p>9. Médium (nemrzoucí chladicí směs): 40 % glykolu</p>	<p>ANO</p>

10. Maximální elektrický příkon (celkový): 9 kW	8,7 kW
Umístění chladicího stroje č. 1, přibližný objem vyměňované nemrznoucí chladicí směsi v systému chlazení:	
Budova	Studničkova 7, Praha 2
Místo:	Terasa na střeše v úrovni půdy
Základ pod chladicím strojem (stávající) *:	Dva U profily na výšku 55 x 120 (š x v) v délce 270 cm usazené rovnoběžně 570 cm od sebe (vnější rozměr)
Doporučená transportní cesta **: 	Jeřábem přes budovu o výšce cca 25 m; v případě transportu budovou je min. světlost dveří 64 cm a rozměr průchodu mezi trámy ve střešní konstrukci ve tvaru rovnoramenného pravoúhlého trojúhelníku se svislým rozměrem 180 cm a vodorovným 180 cm
Objem vyměňované nemrznoucí chladicí směsi v systému chlazení ***:	cca 140 l

Chladicí stroj č. 2 (náhrada za stávající chladicí stroj RHOSS TCAEBY 130):	UNTES TCAEY 115 ASP1
Počet ks:	1
Technické parametry, funkce	
1. Minimální chladicí výkon: 14 kW	14,9 kW
2. Min. ESEER ((Evropský sezónní energetický faktor UNI EN 14511/2013): 3,4	3,49
3. Doporučené rozměry (V x Š x H): 1090 x 1522 x 580 (mm)	1090x1522x580
4. Typ kompresoru: hermetický rotační spirálový	ANO
5. Oběhové čerpadlo	ANO

6. Provoz při venkovní teplotě v rozmezí: -10 °C až 35 °C (při 50 % vlhkosti)	ANO
7. Teplotní spád média: 7/12 °C	ANO
8. Médium (nemrznoucí chladicí směs): 40 % glykolu	ANO
9. Maximální elektrický příkon (celkový): 6 kW	5,9 kW
Umístění chladicího stroje č. 2, přibližný objem vyměňované nemrznoucí chladicí směsi v rozvodu chlazení:	
Budova:	Studničkova 7, Praha 2
Místo:	Dvorní trakt
Základ pod chladicím strojem (stávající) *:	Betonový základ 100 cm x 320 cm (šířka x délka)
Doporučená transportní cesta **::	Příjezd do dvora z ulice Studničkova
Objem vyměňované nemrznoucí chladicí směsi v systému chlazení ***:	cca 560 l

Chladicí stroj č. 3 (náhrada za stávající chladicí stroj RHOSS TCAE 470):	UNTES TCAEBY 269 ASP1
Počet ks:	1
Technické parametry, funkce	
1. Minimální chladicí výkon: 64 kW	64,1 kW
2. Min. ESEER (Evropský sezónní energetický faktor UNI EN 14511/2013): 4,5	4,64
3. Doporučené rozměry (V x Š x H): 1700 x 2650 x 1210 (mm)	1700x2650x1210
4. Typ kompresoru: hermetický rotační spirálový – 2 ks	ANO
5. Oběhové čerpadlo	ANO + akumulární nádrž 230 l
6. Provoz při venkovní teplotě v rozmezí: -10 °C až 35 °C (při 50 % vlhkosti)	ANO

7. Teplotní spád média 7/12 °C	ANO
8. Médium (nemrznoucí chladicí směs): 40 % glykolu	ANO
9. Maximální elektrický příkon (celkový): 25 kW	24,4 kW
Umístění chladicího stroje č. 3, přibližný objem vyměňované nemrznoucí chladicí směsi v rozvodu chlazení:	
Budova	Studničkova 2, Praha 2
Místo:	Rovná střecha budovy
Základ pod chladicím strojem:	Bude zajištěn objednatelem po stanovení hmotnosti a rozměrů nabídnutého chladicího stroje
Doporučená transportní cesta **::	Jeřábem, na střechu budovy ve výšce cca 23 m (ze dvora), z ulice cca 27 m
Objem vyměňované nemrznoucí chladicí směsi v rozvodu chlazení ***:	cca 650 l

* Pokud dodavatel nevyužije pro ustavení strojů č. 1 a č. 2 stávající základ a dodá se strojem jinou konstrukci, pak je cena stroje včetně konstrukce základu, příp. včetně úpravy stávajícího základu.

** Dodavatel může zvolit dle svého uvážení i jinou transportní cestu.

*** Pokud se skutečné množství doplňované nemrznoucí chladicí směsi bude o více než 10 % lišit od uvedeného objemu, je dodavatel oprávněn vystavit samostatný daňový doklad, ve kterém vyúčtuje kupujícímu (zadavateli) cenu za množství nemrznoucí chladicí směsi přesahující uvedenou hodnotu objemu zvýšenou o 10 % (účtována bude cena obvyklá na trhu).

V Praze	
dne 10.10.2017	Ing. Radek Hnilica – jednatel společnosti Air Tech Servis s.r.o.

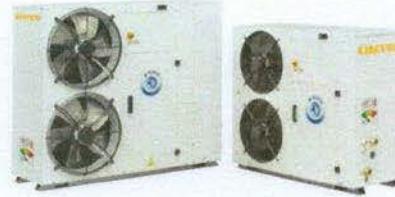
Technická dokumentace chladicích strojů:

Technické listy výrobce UNTES

Date 07.06.2017

SELECTION

Family	Compact-Y SM
	TCAEY 115-130
Model	TCAEY 122 ASP1
Webcode	CY001



The images are for reference purposes only and may not represent exactly the models or the equipment subject of this document.

CONSTRUCTION FEATURES

Packaged air-cooled water chiller with axial fans. Range with hermetic Scroll compressors and R410A refrigerant gas.
ASP1 - Installation with pump and storage tank. (45 l)

POWER SUPPLY: 400V/3PH+N/50HZ
TYPE OF COIL: BRA-COPPER/ALLUMINIUM COIL
COIL PROTECTION: RPB-COIL PROTECTION GRILLES
TYPE OF PACKAGE: PROTECTIVE PACKAGING

- Load-bearing structure and panels in galvanised and painted sheet steel (RAL 9018); base in galvanised sheet steel.
- Hermetic, Scroll-type rotary compressors, complete with internal thermal protection.
- Water side, braze welded plate heat exchanger in stainless steel, complete with antifreeze electric heater and suitably insulated.
- Air side heat exchanger comprised of a coil of copper pipes and aluminium fins.
- Double electric axial fan with external rotor, equipped with internal thermal protection and complete with protection grille.
- Male threaded water connections.
- Differential pressure switch that protects the unit from any interruptions to the water flow.
- Refrigerant circuit made from annealed copper piping (EN 12735-1-2) complete with: drier filter, charge connections, safety pressure switch on the high pressure side, pressure switch on the low pressure side, thermostatic expansion valve and check valves.
- Unit with IP24 level of protection.
- Possibility to select two controls:
 - STANDARD, with Adaptive Function;
 - compatible with Adaptive Function Plus.
- The unit is complete with the R410A refrigerant charge.

ELECTRICAL PANEL

- Electrical board accessible by opening the front panel, conforming with current IEC standards, and which can be opened and closed with a suitable tool.
- Complete with:
 - electrical wiring arranged for power supply 400-3ph+N-50Hz;
 - auxiliary power supply 230V-1ph-50Hz drawn from the main power supply;
 - general isolator, complete with door interlocking isolator;
 - automatic compressor protection switch;
 - protection fuse for auxiliary circuit;
 - compressor power contactor;
 - anti-disturbance network filter;
 - compressor protection phase sequence monitor;
 - unit protection against lack of a power supply phase;
 - transformer for electronic control;
 - user interface terminal board;
 - remote unit control.
- Programmable electronic board with microprocessor, controlled by the keypad inserted in the machine.
- This electronic board performs the following functions:
 - Regulation and management of the inlet water temperature set points; of the safety timer delays; of the circulating pump; of the compressor and system pump hour-run meter; of the electronic anti-freeze protection which cuts in automatically when the machine is switched off; and of the functions which control the operation of the individual parts making up the machine;

CHILLER SELECTION

- complete protection of the unit, automatic emergency shutdown and display of the alarms which have been activated;
- visual indication of the programmed set points via the display; of the in/out water temperature via the display; of the alarms via the display; and of cooling operating mode via led;
- self-diagnosis with continuous monitoring of the functioning of the unit;
- user interface menu;
- alarm code and description;
- Advanced functions:
 - set up for serial connection (KIS and KCH accessory);
 - check-up and monitoring of scheduled maintenance status;
 - testing of the units assisted by computer;
 - self-diagnosis with continuous monitoring of the functioning of the unit;
 - with Adaptive Function.

Option with compatible control

○ Electrical board accessible by opening the front panel, conforming with current IEC standards, and which can be opened and closed with a suitable tool.

○ Complete with:

- electrical wiring arranged for power supply 400-3ph+N-50Hz;
- auxiliary power supply 230V-1ph-50Hz drawn from the main power supply;
- general isolator, complete with door interlocking isolator;
- automatic compressor protection switch;
- protection fuse for auxiliary circuit;
- compressor power contactor;
- remote unit control.

○ Programmable electronic board with microprocessor, controlled by the keypad inserted in the machine.

○ This electronic board performs the following functions:

- Regulation and management of the outlet water temperature set points; of the safety timer delays; of the circulating pump; of the compressor and system pump hour-run meter; of the electronic antifreeze protection which cuts in automatically when the machine is switched off; and of the functions which control the operation of the individual parts making up the machine;
- complete protection of the unit, automatic emergency shutdown and display of the alarms which have been activated;
- compressor protection phase sequence monitor;
- unit protection against low or high phase power supply voltage;
- visual indication of the programmed set points on the display; of the inlet/outlet water temperature via the display; of the alarms via the display; and of cooling operating mode via LED;
- self-diagnosis with continuous monitoring of the functioning of the unit;
- user interface menu;
- alarm code and description;
- alarm history management (menu protected by manufacturer password).

○ The following is memorised for each alarm:

- date and time of intervention (if the KSC accessory is present);
- alarm code and description;
- inlet/outlet water temperatures when the alarm intervened;
- alarm delay time from the switch-on of the connected device;
- compressor status at moment of alarm;

○ Advanced functions:

- configured for serial connection (KRS485, KFTT10, KRS232 and KUSB accessory);
- possibility to have a digital input for remote management of the double set point).
- possibility to have an analogue input for the scrolling set-point via a 4-20mA remote signal
- configured for management of time bands and operation parameters with the possibility of daily/weekly operating programs (KSC accessory);
- check-up and monitoring of scheduled maintenance status;
- testing of the units assisted by computer;
- self-diagnosis with continuous monitoring of the functioning of the unit.

○ Set-point regulation via the AdaptiveFunction Plus with two options:

- fixed set-point (Precision options);
- scrolling set-point (Economy option).

CHILLER SELECTION

TECHNICAL DATA - TCAEY 122 ASP1

Design parameters

		Cooling
External air temperature	[°C]	35
External air humidity	[%]	50
Evaporator Inlet fluid temperature	[°C]	12
Evaporator Outlet fluid temperature	[°C]	7
Altitude	[m]	0
Main exchanger fluid		Ethylen glycole 40 %
Fouling factor	[m ² C/kW]	0,035

Performances

At design conditions:

		Cooling
Capacity (gross)	[kW]	22,7
Absorbed power (gross)	[kW]	8,1
EER (gross)		2,81

Capacity (UNI EN 14511/2013)	[kW]	23,0
EER (UNI EN 14511/2013)		2,76

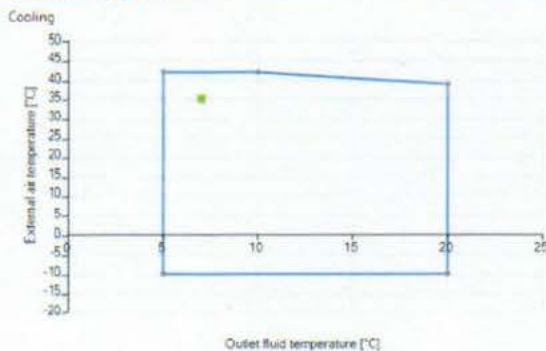
At Eurovent conditions:

ESEER (UNI EN 14511/2013)		3,33
EER 100% (UNI EN 14511/2013)		2,80
EER 75% (UNI EN 14511/2013)		3,28
EER 50% (UNI EN 14511/2013)		3,43
EER 25% (UNI EN 14511/2013)		3,29

Adaptive Function Plus:

ESEER+		3,82
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Functioning limits

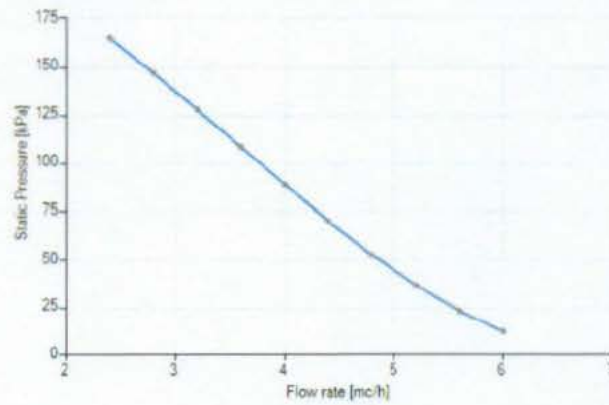


Main exchanger

Flow rate	[m ³ /h]	3,9
Static Pressure	[kPa]	93

CHILLER SELECTION

Static Pressure



Fans

Type:		Axial
Fan number		2
Consumption for each	[kW]	0,24
Air flow rate	[m³/h]	8800

Technical features

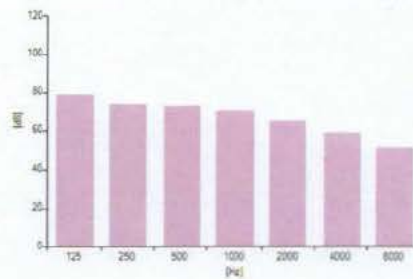
Refrigerant:	R410A
Compressors	Scroll
Number of compressors	1
Number of independent circuits	1
Number of compressor steps	1

Noise

Sound Power level (1)	[dBA]	75
Sound Pressure level (5m) (2)	[dBA]	52

(Performance given without pump)

[Hz]	[dB]
125	79
250	74
500	73
1000	71
2000	65
4000	59
8000	52



Electrical data

Total electrical power (3)	[kW]	8,7
Pump electrical power	[kW]	0,6
Electrical power supply	[V-ph-Hz]	400-3+N-50
Auxiliary power supply	[V-ph-Hz]	230-1+N-50
Nominal current (4)	[A]	18,8
Maximum current	[A]	21
Starting current	[A]	116

CHILLER SELECTION

Size and weight

Length	[mm]	1522
Height	[mm]	1290
Depth	[mm]	600
Weight (5)	[kg]	270
Amount of refrigerant	[kg]	4

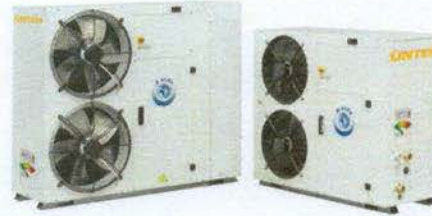
Note

- (1) Standard reference UNI EN-ISO 9614
- (2) Standard reference UNI EN-ISO 3744
- (3) Total absorbed power (compressors, fans if present and pumps if selected)
- (4) Referred to nominal conditions: Ta: 35°C Tw:12/7°C
- (5) The value is indicative and may be subject to change based on the selected accessories

Date 28.06.2017

SELECTION

Family	Compact-Y SM
	TCAEY 115-130
Model	TCAEY 115 ASP1
Webcode	CY001



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CONSTRUCTION FEATURES

Packaged air-cooled water chiller with axial fans. Range with hermetic Scroll compressors and R410A refrigerant gas. ASP1 - Installation with pump

POWER SUPPLY: 400V/3PH+N/50HZ
TYPE OF COIL: BRA-COPPER/ALLUMINIUM COIL
COIL PROTECTION: RPB-COIL PROTECTION GRILLES
TYPE OF PACKAGE: PROTECTIVE PACKAGING

- Load-bearing structure and panels in galvanised and painted sheet steel (RAL 9018); base in galvanised sheet steel.
- Hermetic, Scroll-type rotary compressors, complete with internal thermal protection.
- Water side, braze welded plate heat exchanger in stainless steel, complete with antifreeze electric heater and suitably insulated.
- Air side heat exchanger comprised of a coil of copper pipes and aluminium fins.
- Double electric axial fan with external rotor, equipped with internal thermal protection and complete with protection grille.
- Male threaded water connections.
- Differential pressure switch that protects the unit from any interruptions to the water flow.
- Refrigerant circuit made from annealed copper piping (EN 12735-1-2) complete with: drier filter, charge connections, safety pressure switch on the high pressure side, pressure switch on the low pressure side, thermostatic expansion valve and check valves.
- Unit with IP24 level of protection.
- Possibility to select two controls:
 - STANDARD, with Adaptive Function;
 - compatible with Adaptive Function Plus.
- The unit is complete with the R410A refrigerant charge.

ELECTRICAL PANEL

- Electrical board accessible by opening the front panel, conforming with current IEC standards, and which can be opened and closed with a suitable tool.
- Complete with:
 - electrical wiring arranged for power supply 400-3ph+N-50Hz;
 - auxiliary power supply 230V-1ph-50Hz drawn from the main power supply;
 - general isolator, complete with door interlocking isolator;
 - automatic compressor protection switch;
 - protection fuse for auxiliary circuit;
 - compressor power contactor;
 - anti-disturbance network filter;
 - compressor protection phase sequence monitor;
 - unit protection against lack of a power supply phase;
 - transformer for electronic control;
 - user interface terminal board;
 - remote unit control.
- Programmable electronic board with microprocessor, controlled by the keypad inserted in the machine.
- This electronic board performs the following functions:
 - Regulation and management of the inlet water temperature set points; of the safety timer delays; of the circulating pump; of the compressor and system pump hour-run meter; of the electronic anti-freeze protection which cuts in automatically when the machine is switched off; and of the functions which control the operation of the individual parts making up the machine;

CHILLER SELECTION

- complete protection of the unit, automatic emergency shutdown and display of the alarms which have been activated;
- visual indication of the programmed set points via the display; of the in/out water temperature via the display; of the alarms via the display; and of cooling operating mode via led;
- self-diagnosis with continuous monitoring of the functioning of the unit;
- user interface menu;
- alarm code and description;
- Advanced functions:
 - set up for serial connection (KIS and KCH accessory);
 - check-up and monitoring of scheduled maintenance status;
 - testing of the units assisted by computer;
 - self-diagnosis with continuous monitoring of the functioning of the unit;
 - with Adaptive Function.

Option with compatible control

- Electrical board accessible by opening the front panel, conforming with current IEC standards, and which can be opened and closed with a suitable tool.
- Complete with:
 - electrical wiring arranged for power supply 400-3ph+N-50Hz;
 - auxiliary power supply 230V-1ph-50Hz drawn from the main power supply;
 - general isolator, complete with door interlocking isolator;
 - automatic compressor protection switch;
 - protection fuse for auxiliary circuit;
 - compressor power contactor;
 - remote unit control.
- Programmable electronic board with microprocessor, controlled by the keypad inserted in the machine.
- This electronic board performs the following functions:
 - Regulation and management of the outlet water temperature set points; of the safety timer delays; of the circulating pump; of the compressor and system pump hour-run meter; of the electronic antifreeze protection which cuts in automatically when the machine is switched off; and of the functions which control the operation of the individual parts making up the machine;
 - complete protection of the unit, automatic emergency shutdown and display of the alarms which have been activated;
 - compressor protection phase sequence monitor;
 - unit protection against low or high phase power supply voltage;
 - visual indication of the programmed set points on the display; of the inlet/outlet water temperature via the display; of the alarms via the display; and of cooling operating mode via LED;
 - self-diagnosis with continuous monitoring of the functioning of the unit;
 - user interface menu;
 - alarm code and description;
 - alarm history management (menu protected by manufacturer password).
- The following is memorised for each alarm:
 - date and time of intervention (if the KSC accessory is present);
 - alarm code and description;
 - inlet/outlet water temperatures when the alarm intervened;
 - alarm delay time from the switch-on of the connected device;
 - compressor status at moment of alarm;
- Advanced functions:
 - configured for serial connection (KRS485, KFTT10, KRS232 and KUSB accessory);
 - possibility to have a digital input for remote management of the double set point
 - possibility to have an analogue input for the scrolling set-point via a 4-20mA remote signal
 - configured for management of time bands and operation parameters with the possibility of daily/weekly operating programs (KSC accessory);
 - check-up and monitoring of scheduled maintenance status;
 - testing of the units assisted by computer;
 - self-diagnosis with continuous monitoring of the functioning of the unit.
- Set-point regulation via the AdaptiveFunction Plus with two options:
 - fixed set-point (Precision options);
 - scrolling set-point (Economy option).

TECHNICAL DATA - TCAEY 115 ASP1

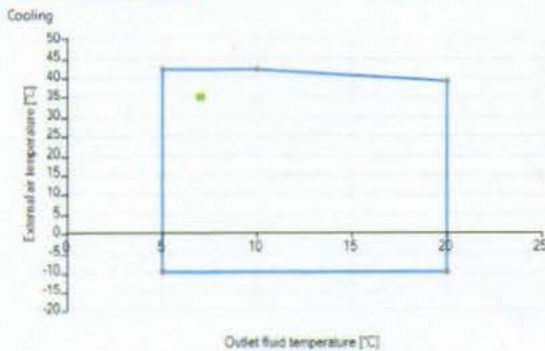
Design parameters

		Cooling
External air temperature	[°C]	35
External air humidity	[%]	50
Evaporator Inlet fluid temperature	[°C]	12
Evaporator Outlet fluid temperature	[°C]	7
Altitude	[m]	0
Main exchanger fluid		Ethylen glycole
		40%
Fouling factor	[m ² °C/kW]	0,035

Performances

<i>At design conditions:</i>		Cooling
Capacity (gross)	[kW]	14,9
Absorbed power (gross)	[kW]	5,4
EER (gross)		2,78
Capacity (UNI EN 14511/2013)	[kW]	15,2
EER (UNI EN 14511/2013)		2,7
<i>At Eurovent conditions:</i>		
ESEER (UNI EN 14511/2013)		3,05
EER 100% (UNI EN 14511/2013)		2,76
EER 75% (UNI EN 14511/2013)		3,00
EER 50% (UNI EN 14511/2013)		3,13
EER 25% (UNI EN 14511/2013)		3,01
<i>Adaptive Function Plus:</i>		
ESEER+		3,49

Functioning limits

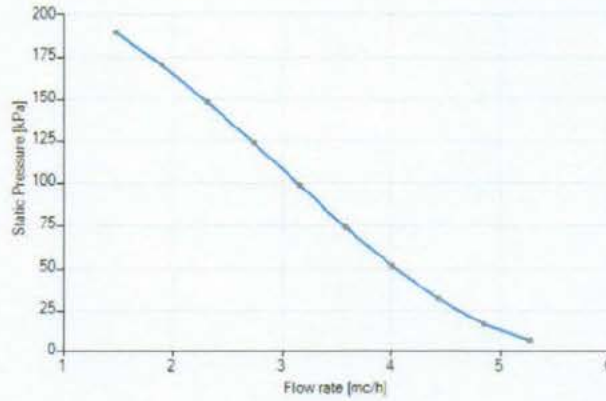


Main exchanger

Flow rate	[m ³ /h]	2,8
Static Pressure	[kPa]	121

CHILLER SELECTION

Static Pressure



Fans

Type:		Axial
Fan number		2
Consumption for each	[kW]	0,14
Air flow rate	[m³/h]	6740

Technical features

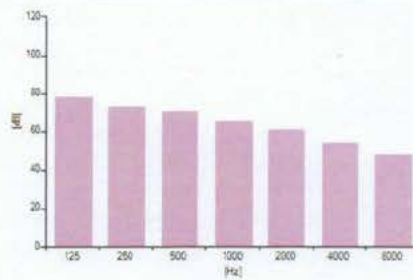
Refrigerant:		R410A
Compressors		Scroll
Number of compressors		1
Number of independent circuits		1
Number of compressor steps		1

Noise

Sound Power level (1)	[dBA]	72
Sound Pressure level (5m) (2)	[dBA]	50

(Performance given without pump)

[Hz]	[dB]
125	78
250	73
500	71
1000	66
2000	61
4000	54
8000	48



Electrical data

Total electrical power (3)	[kW]	5,9
Pump electrical power	[kW]	0,6
Electrical power supply	[V-ph-Hz]	400-3+N-50
Auxiliary power supply	[V-ph-Hz]	230-1+N-50
Nominal current (4)	[A]	13,1
Maximum current	[A]	16
Starting current	[A]	79

CHILLER SELECTION**Size and weight**

Length	[mm]	1522
Height	[mm]	1090
Depth	[mm]	580
Weight (5)	[kg]	210
Amount of refrigerant	[kg]	2

Note

- (1) Standard reference UNI EN-ISO 9614
- (2) Standard reference UNI EN-ISO 3744
- (3) Total absorbed power (compressors, fans if present and pumps if selected)
- (4) Referred to nominal conditions: Ta: 35°C Tw:12/7°C
- (5) The value is indicative and may be subject to change based on the selected accessories

Date 02.08.2017

SELECTION

Family	EasyPack
	TCAEBY 269-2112
Model	TCAEBY 269 ASP1
Webcode	EAS01



The images are for reference purposes only and may not represent exactly the models or the equipment subject of this document.

CONSTRUCTION FEATURES

Packaged air-cooled water chillers and R410A ecological refrigerant. Series with hermetic Scroll compressors.

B - Standard version

ASP1 - Installation with pump and storage tank. (230 l)

POWER SUPPLY: 400V/3PH+N/50HZ

TYPE OF COIL: BRA-COPPER/ALUMINIUM COIL

EXCHANGER: PA-PLATE EXCHANGER

PRESSURE VISUALISATION DISPLAY: SPS -HIGH-LOW PRESSURE DISPLAY

- Load-bearing structure and panels in galvanised and RAL 9018 painted sheet metal; galvanised steel sheet metal base.
- The structure consists of two sections:
 - technical compartment that houses the compressors, electrical panel and main components of the cooling circuit;
 - aeraulic circuit to house the heat exchange coils and motor-driven fans
- Scroll rotary hermetic compressors complete with internal thermal protection and resistance in the crankcase that is automatically activated when the unit stops (as long as the unit is electrically powered).
- Duly insulated stainless steel brazed plate heat exchanger on the water circuit side (tube and shell heat exchanger - STE option).
- Heat exchanger on air circuit side comprised of copper tubes and aluminium fins.
- Axial electric fans with external rotor, equipped with internal thermal protection and complete with protection nets set up in single row or double row depending on the models.
- Victaulic-type hydraulic connections.
- Differential pressure switch to protect the unit from any interruptions in the water flow.
- Cooling circuit built with annealed copper tube (EN 12735-1-2) complete with: cartridge dryer filter, load connections, safety pressure switch on the high pressure side with manual reset, LP and HP pressure transducer, safety valve/s, valve upstream of the filter, liquid indicator, insulation of the inlet line, thermostatic expansion valve or electronic expansion valve (accessory), cycle inversion valve and liquid receiver, non-return valve, gas separator on intake to the compressors.
- Unit with protection rating IP24.
- Control with AdaptiveFunction Plus function.
- The unit is supplied filled with refrigerant fluid R410A.

ELECTRICAL PANEL

- Electrical panel can be accessed by opening the front panel, in compliance with IEC Standards in force, fitted with opening and closing via specific tool.
- Complete with:
 - electrical cables prepared for 400-3ph-50Hz power supply voltage;
 - auxiliary circuit power supply 230V-1ph-50Hz drawn from the main power supply;
 - 12V-1ph-50Hz control power supply drawn from the main power supply;
 - power supply isolator master switch, complete with safety door locking device;
 - automatic circuit breaker protection for compressors and motordriven fans;
 - auxiliary circuit protection fuse;
 - compressor power contactor;
 - machine remote controls: ON/OFF summer-winter switch;
 - machine remote controls: compressor operation light and main lock light.
- Programmable microprocessor electronic board handled by the keyboard inserted in the machine.
- This electronic board performs the following functions:
 - regulation and control of the unit outlet water temperature settings; of the safety timers; of the circulation pump; of the system compressor and

pump hour-run meter; dei cicli di sbrinamento; of the pressurised defrost cycles; electronic anti-freeze protection that is automatically activated when the unit is off; and of the functions that control the operations of the individual parts making up the unit;

- complete protection of the unit, possible shutdown and display of all the triggered alarms;
- compressor protection phase sequence monitor;
- unit protection against low or high phase power supply voltage;
- display of the programmed set points on the display; of the water in/out temperatures on the display; of the condensation and evaporation pressures; of the electrical voltage values in the three phases of the electrical circuit that powers the unit; of the alarms on the display; of the chiller;
- user interface menu;
- alarm code and description;
- alarms log management (menu protected by manufacturer password).
- In particular, for every alarm, the following are memorised:
 - date and time of intervention;
 - in/out water temperature values as soon as the alarm was triggered;
 - the evaporation and condensation pressure values at the time of the alarm.
 - alarm delay time from the switch-on of the connected device;
 - compressor status at the time of the alarm;
- Advanced functions:
 - Hi-Pressure Prevent function with forced cooling capacity partialisation for a high outdoor temperature (in summer mode);
 - set up for serial connection (SS, FTT10, KBE, KBM, KUSB accessory);
 - possibility of having a discrete input for double set-point remote management (DSP);
 - possibility of having a discrete input for total recovery management (RC100), the desuperheater (DS) or for the production of domestic hot water by means of a 3-way diverter valve (VDEV). In this case, there is the possibility of using a temperature probe instead of the discrete input. (see specific section for more information);
 - possibility of having an analogue input for the shifting set-point via a 4-20mA remote signal (CS);
 - management of time bands and operating parameters with the possibility of daily/weekly operating programs;
 - check-up and verification of the scheduled maintenance status;
 - computer-assisted machine testing;
 - self-diagnosis with continuous monitoring of the machine operating status.
- MASTER/SLAVE management logic integrated into the single units - See specific section for Explanation
- Set-point regulation via the AdaptiveFunction Plus with two options:
 - fixed set-point (Precision option);
 - set-point sliding (Economy options).

CHILLER SELECTION

TECHNICAL DATA - TCAEBY 269 ASP1

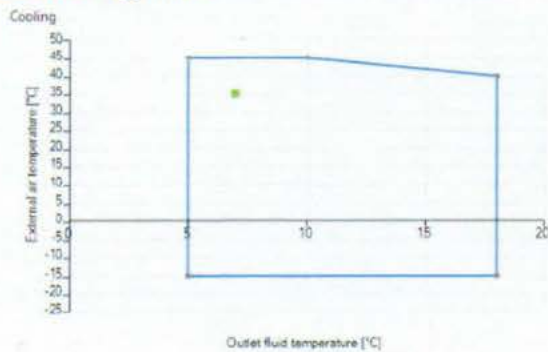
Design parameters

		Cooling
External air temperature	[°C]	35
External air humidity	[%]	50
Evaporator Inlet fluid temperature	[°C]	12
Evaporator Outlet fluid temperature	[°C]	7
Altitude	[m]	0
Main exchanger fluid		Ethylen glycole 40%
Fouling factor	[m²°C/kW]	0,035

Performances

<i>At design conditions:</i>		Cooling
Capacity (gross)	[kW]	64,1
Absorbed power (gross)	[kW]	23,3
EER (gross)		2,75
<i>At Eurovent conditions:</i>		
Capacity (UNI EN 14511/2013)	[kW]	64,9
EER (UNI EN 14511/2013)		2,76
<i>At Eurovent conditions:</i>		
ESEER (UNI EN 14511/2013)		4,11
EER 100% (UNI EN 14511/2013)		2,81
EER 75% (UNI EN 14511/2013)		3,66
EER 50% (UNI EN 14511/2013)		4,38
EER 25% (UNI EN 14511/2013)		4,45
<i>Adaptive Function Plus:</i>		
ESEER+		4,64

Functioning limits

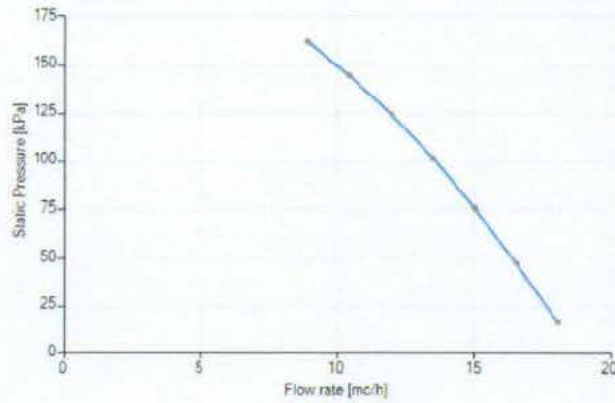


Main exchanger

Flow rate	[m³/h]	12
Static Pressure	[kPa]	124

CHILLER SELECTION

Static Pressure



Fans

Type:		Axial
Fan number		2
Consumption for each	[kW]	0,69
Air flow rate	[m³/h]	20800

Technical features

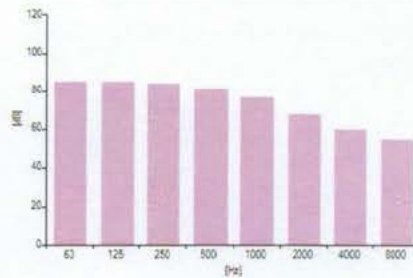
Refrigerant:		R410A
Compressors		Scroll
Number of compressors		2
Number of independent circuits		1
Number of compressor steps		3

Noise

Sound Power level (1)	[dBA]	82
Sound Pressure level (10m) (2)	[dBA]	50
Sound Pressure level (1m) (2)	[dBA]	64

(Performance given without pump)

[Hz]	[dB]
63	85
125	85
250	84
500	81
1000	77
2000	68
4000	60
8000	55



CHILLER SELECTION

Electrical data

Total electrical power (3)	[kW]	24,4
Pump electrical power	[kW]	1,1
Electrical power supply	[V-ph-Hz]	400-3+N-50
Auxiliary power supply	[V-ph-Hz]	230-1+N-50
Nominal current (4)	[A]	41,6
Maximum current	[A]	50,7
Starting current	[A]	199,7
Starting current SFS	[A]	129,3

Size and weight

Length	[mm]	2650
Height	[mm]	1700
Depth	[mm]	1210
Weight (5)	[kg]	930
Oil charge	[kg]	5
Amount of refrigerant	[kg]	12

Partial loads

Cooling

Load	%	100	90	80	70	60	50	40	30	20	10
Outlet fluid temperature	°C	7	7	7	7	7	7	7	7	7	7
External air temperature	°C	35	35	35	35	35	35	35	35	35	35
Capacity (GROSS VALUE)	kW	64,1	57,7	51,3	44,8	38,4	32	25,6	19,2	12,8	6,4
EER (GROSS VALUE)		2,75	2,69	2,76	2,87	2,92	2,91	2,87	2,76	2,58	2,14
EER (UNI EN 14511:2013)		2,76	2,8	2,91	3,06	3,15	3,2	3,22	3,1	2,89	2,4

Flow rate determined at full load condition

Note

- (1) Standard reference UNI EN-ISO 9614
- (2) Standard reference UNI EN-ISO 3744
- (3) Total absorbed power (compressors, fans if present and pumps if selected)
- (4) Referred to nominal conditions: Ta: 35°C Tw:12/7°C
- (5) The value is indicative and may be subject to change based on the selected accessories