7459901-01

09 - 2015

YUNA II

Ecoconception (813/2013)

MANUEL DES DONNEES TECHNIQUES
TECHNICAL DATA MANUAL

CIAT

SOMMAIRE

	PAGE
1 - INTRODUCTION / INTRODUCTION	**2**
2 - LEXIQUE	**3**
3 - YUNA II	**6**
3.1 - YUNA II 5HK_5-63D	6
3.2 - YUNA II 6HK_5-63D	6
3.3 - YUNA II 9HK_9-113D	7
3.4 - YUNA II 11HK_9-113D	7
4 - YUNA II HTK	**8**
4.1 - YUNA II 12HTK_12-156D	8
4.2 - YUNA II 15HTK_12-156D	8

Textes originaux : Version Française / Original text : French Version

1 - INTRODUCTION / INTRODUCTION

Ce manuel contient pour chaque pompe à chaleur les données Techniques définies selon les directives Ecodesign 813/2013 afin d' aider les consommateurs dans leur choix.

Ecodesign (Directive européenne 813/2013) et Energy Labelling Directive (Directive européenne 811/2013)

L'Ecodesign prend en compte l'impact d'un produit sur l'environnement dans tout son cycle de vie et joue un rôle essentiel dans l'atteinte des objectifs 2020. Au sein de l'Union européenne, la Directive Ecodesign met des exigences de rendement énergétique obligatoires pour tous les produits liés à l'énergie (ERPs), dont les produits de climatisation. Cette directive pénalise la mise sur le marché de produits de basse performance, imposant aux fabricants de développer des produits consommant moins d'énergie. De plus, la directive européenne sur l'étiquetage énergétique classifie selon leur efficacité les produits de A à G (pompes à chaleur de moins de70kw). Cela tire le marché vers des produits plus économes en énergie tout en améliorant l'information des consommateurs.
La conformité à l'Ecodesign et la directive européenne sur l'étiquetage énergétique est obligatoire pour les pompes à chaleur pour obtention de la certification CE.

Nouveau rendement énergétique
Le SCOP (Coefficient Saisonnier de Performance) est un nouveau paramètre européen évaluant le rendement énergétique de pompes à chaleur. Précédemment, le COP (Coefficient de Performance) a été utilisé pour mesurer le ratio puissance consommé sur la puissance produite en mode chauffage.
Le SCOP intègre la variation saisonnière dans l'évaluation de la performance.
Cela signifie que plusieurs points de mesure réalistes sont définis, déterminant la classe de rendement énergétique.
Les données de trois climats sont prises comme point de référence pour l'Europe :

- Strasbourg, France (climat moyen)
- Athènes, Grèce (climat chaud)
- Helsinki, Finlande (climat froid)

Ce manuel contient les données pour le climat moyen.

Les classes de rendement énergétique, selon la directive européenne sur l'étiquetage énergétique

Évaluation en énergie primaire
Pour comparer le rendement énergétique des produits utilisant des sources différentes d'énergie, comme des chaudières (gaz, fioul) et des pompes à chaleur électriques, la Directive d'Ecodesign présente une nouvelle mesure exprimée en énergie primaire: ŋs (eta s).
Énergie primaire : ŋs = SCOP/2.5* x 100 - i**
*2.5 est le coefficient de conversion pour des pompes à chaleur
Tel que : 2.5kW d'énergie primaire = 1kW
** i =-3 pour les pompes à chaleur aérothermiques ou i =-3-5 pour les pompes à chaleur géothermiques

This manual contains for each heat pump Technical data's as define by the Ecodesign directives 813/2013 in order to help the consumers in their choice.

Ecodesign (European Directive 813/2013) and Energy Labelling Directive (European Directive 811/2013)

Ecodesign takes into account a product's impact on the environment throughout its lifecycle and plays an essential role in meeting the 2020 targets. In the European Union, the Ecodesign Directive sets mandatory energy efficiency requirements for all energy-related products (ERPs), including air conditioning products. Therefore, this directive pushes the market away from low-performance products, requiring manufacturers to develop products that consume less energy. In addition, the European Energy Labelling Directive classifies products from G to A (on heat pump less than 70kw Prated), according to their efficiency. This pulls the market towards more energy-efficient products by improving consumer information.
Conformity to the Ecodesign and Energy Labelling Directives is mandatory for heat pump products to obtain the CE marking.

New energy efficiency metric
The SCOP (Seasonal Coefficient of Performance) is a new European parameter to evaluate the energy efficiency of heat pumps. Previously, COP (Coefficient of Performance) was used to measure the ratio of power consumed to power produced in the heating mode. As these values focused on a single operating point, they were not representative of operation during the heating season. SCOP addresses this by including seasonal variation in the performance rating.
This means that several realistic measurement points are defined, which together contributes to classification in the correct energy efficiency class.
Data from three climates are taken as a single reference point for Europe :

- Strasbourg, France (average climate)
- Athens, Greece (hot climate)
- Helsinki, Finland (cold climate)

This manual contains data's for the average climate.
Energy efficiency classes, according to the European Energy Labelling Directive

Primary energy evaluation
In order to compare the energy efficiency of products using different sources of energy, such as boilers (gas, fuel) and electric heat pumps, the Ecodesign Directive introduces a new measurement expressed in primary energy: ŋs (eta s).
Primary energy: ŋs = SCOP/2.5* x 100 - i**
*2.5 is the conversion coefficient for heat pumps as 2.5kW primary energy = 1kW
**i = -3 for air source heat pumps or i = -3-5 for water source heat pumps

2 - LEXIQUE

Model [1]	
Heat pump type [2]	Air to Water [3]
Equipped with supplementary heater [7]	Yes/No [8]
Heat pump combination heater [9]	Yes/No [8]

Rated heat output, kW [10]	Prated		
Annual energy consumption, kWh [11]	Qhe		
Seasonal space heating energy efficiency, % [12]	ns,heat		
Sound power level indoor/outdoor, dB(A) [13]	LwA		

Declared capacity and coefficient of performance for heating at indoor conditions 20°C and outdoor temperature Tj [14]

Climate: [15]		Average / Colder / Warmer [16]	
Bivalent temperature, °C [17]			
Operating limit temperature, °C [18]			
Heating water operation limit temperature, °C [19]			
Tj, °C	**Capacity, kW [20]**	**COPd**	**Degradation coef [21]**
Bivalent temperature [17]			
Operation limit temperature [18]			

Power consumption in modes other than active mode [22]

Off mode, kW [23]		
Thermostat-off mode, kW [24]		
Standby mode, kW [25]		
Crankcase heater mode, kW [26]		

Supplementary heater [27]

Rated heat ouput, kW [28]	Psup	
Type of energy input [29]		Electric [30]

Other items [31]

Capacity control [32]	
Outlet temperature capacity control [33]	Fixed / Variable [34]
Water flow rate capacity control [35]	Fixed / Variable [34]
For air-to-water heat pumps [36]	
Rated Air flow rate, outdoors, m3/h [38]	
For water-to-water or brine to water heat pumps [37]	
Rated water or brine flow rate, outdoors, m3/h [39]	

Contact details [40]	

Accessories and Installed Options

No Accessories or Installed Options selected

ENGLISH

[1] Model
[2] Heat pump type
[3] Air to Water
[4] Water-to-Water
[5] Outdoor water type
[6] Ground Water (10°C/-)/Brine to Water
[7] Equipped with supplementary heater
[8] Yes/No
[9] Heat pump combination heater
[10] Rated heat output, Kw
[11] Annual energy consumption, kWh
[12] Seasonal space heating energy efficiency, %
[13] Sound power level indoor/outdoor, dB(A)
[14] Declared capacity and coefficie of performance for heating at indoor conditions 20 °C and outdoor temperature TI
[15] Climate
[16] Average(Strasbourg)/Colder(Helsinki)/ Warmer (Athenes)
[17] Bivalent temperature
[18] Operating limit temperature
[19] Heating water operation limit temperature
[20] Capacity
[21] Degradation coef
[22] Power consumption in modes other than active mode
[23] Of mode
[24] Thermostat off-mod
[25] Standby mode
[26] Crankcase heater mode
[27] Supplementary heater
[28] Rated heat output
[29] Type of energy input
[30] Electric
[31] Capacity control
[32] Water flw rate capacity control
[33] For air-to-water heat pumps
[34] Rated air flw rate, outdoors
[35] Contact details
[36] For air-to-water heat pumps
[37] For Water / brine-to-Water heat pumps
[38] Rated Air flw rate, outdoors, m^3/h
[39] Rated Water flw rate outdoor exchanger, m3/h
[40] Contact details

FRANCAIS

[1] Modèle
[2] Type de pompe à chaleur
[3] Pompes à chaleur air-eau
[4] Pompes à chaleur eau-eau:
[5] Type d'eau échangeur extérieur
[6] Pompes à eau souterraines/ eau glycolée-eau
[7] Equipé d'un chauffag supplémentaire
[8] Oui/Non
[9] Dispositif de chauffage mixte par pompe à chaleur
[10] Puissance thermique nominale
[11] Consommation annuelle d'énergie
[12] L'efficaci énergétique saisonière
[13]Niveau de puissance acoustique à l'intérieur/à l'extérieur
[14] Puissances et coefficient de performances déclarés en chauffage pour une température intérieur de 20 °C et pour une température extérieure Tj.
[15] Climat :
[16] Moyennes/ plus froid/ plus chaud
[17] Température bivalente
[18] Température maximale (de service...)
[19]Température maximale de service de l'eau de chauffage
[20] Capacité
[21] Coefficient de dégradation
[22] Consommation d'électricité dans les modes autres que le mode actif
[23] Mode arrêt
[24] Mode arrêt par thermostat
[25] Mode veille
[26] Mode résistance de carter active
[27] Dispositif de chauffag d'appoint
[28] Puissance thermique nominale
[29] Type d'énergie utilisée
[30] Electrique
[31] Régulation de la puissance
[32] Régulation de la puissance du débit nominal d'eau
[33]Contrôle de capacité de température de sortie
[34] Débit d'air nominal, à l'extérieur
[35] Coordonnées de contact
[36] Pour les pompes à chaleur air-eau
[37] Pour pompe à chaleur eau/eau glycolée -eau
[38] Débit d'air nominal, à l'extérieur
[39] Débit d'eau nominal échangeur extérieur m3/h
[40] Coordonnées de contact

DEUTSCH

[1] Modell(e)
[2] Wärmepumpe Typ
[3] Luft-Wasser-Wärmepumpe
[4] Wasser-Wasser-Wärmepumpe
[5] Wassertyp externer Wärmetauscher
[6] Grundwasser /Sole-Wasser
[7] Mit Zusatzheizgerät:
[8] (Ja/Nein)
[9] Kombiheizgerät mit Wärmepumpe:
[10] Wärmenennleistung
[11] Jährliche Energieverbrauch
[12] Jahreszeitbedingte Raumheizungs-Energieeffizie
[13] Schallleistungspegel in Innenräumen und/oder im Freien
[14] Nennleistungen und -Leistungskoeffizienten im Heizbetrieb bei einer Innenraumtemperatur von 20 °C und einer Außentemperatur Tj.
[15] Klima
[16] Durchschnittliche Klimaverhältnisse/ kälter/ wärmer
[17] Bivalenztemperatur
[18] Grenzwert der Betriebstemperatur
[19] Grenzwert der Betriebstemperatur des Heizwasser
[20] Die Leistung
[21] Minderungsfaktor
[22] Stromverbrauch in anderen Betriebsarten als dem Betriedbszustand
[23] Aus-Zustand
[24] Thermostat-aus-Zustand
[25] Bereitschaftszustand
[26] Betriebszustand mit Kurbelgehäuseheizung
[27] Zusatzheizgerät
[28] Wärmenennleistung
[29] Art der Energiezufuhr
[30] Elektrik
[31] Sonstige Elemente
[32] Leistubgssteuerung
[33] Outlet temperature capacity control
[34] Fix / variabel
[35] Nutzbarer Wasserdurchsatz
[36] Für Luft-Wasser-Wärmepumpen
[37] Bei Wasser-Glykolwasser-/Wasser-Wasser-Wärmepumpe
[38] Nenn-Luftdurchsatz, außen
[39] Nenn-Wasservolumentstrom externer Wärmetauscher m3/h
[40] Kontakt

ITALIANO

[1] Modelli
[2] Pompa di calore/ Tipo
[3] Aria agua
[4] Acqua/acqua
[5] Tipo d'acqua scambiatore esterno
[6] Acque sotterranee/ salamoia-acqua
[7] Con riscaldatore supplementare
[8] [sì/no]
[9] Apparecchio misto a pompa di calore
[10] Potenza termica nominale
[11] Il consumo energetico annuo
[12] Effienza energetica stagionale del riscaldamento d'ambiente
[13] Il livello di potenza sonora ponderato A, all'interno e/o all'esterno, espresso in dB
[14] Potenze e coefficiente di prestazioni dichiarate in fase riscaldamento per una temperatura interna di 20 °C e per una temperatura esterna Tj.
[15] Clima
[16] Climatiche medie/ clima più freddo/ clima caldo
[17] Temperatura bivalente
[18] Temperatura limite di esercizio
[19] Temperatura limite di esercizio di riscaldamento dell'acqua
[20] Capacità
[21] Coefficien di degradazione
[22] Consumo energetico in modi diversi dal modo attivo
[23] Modo spento
[24] Modo termostato spento
[25] Modo stand-by
[26] Modo riscaldamento del carter
[27] Riscaldatore supplementare
[28] Potenza termica nominale
[29] Tipo di alimentazione energetica
[30] Specifiche elettriche
[31] Altri elementi
[32] Controllo della capacità
[33] Controllo della capacità della temperatura di uscita serbatoio
[34] Fisso/ variabile
[35] Flusso idrico utile
[36] Per le pompa di calore aria/ acqua
[37] Per PDC acqua/acqua glicolata
[38] Portata d'aria, all'esterno
[39] Portata d'acqua nominale scambiatore esterno m3/h
[40] Recapiti

SVENSKA

[1] Modell(er)
[2] Värmepump/ Typ
[3] Luft-till-vatten
[4] Vatten-till-vatten
[5] Utomhusvattentyp
[6] Ground Water (10 °C/-)/Brine to Water
[7] Ground water/ Saltllösning-till-vatten
[8] [ja/nej]
[9] Pannor med inbyggd tappvarmvattenberedning och med värmepump
[10] Nominell avgiven värmeeffek
[11]Den årliga energiförbrukningen
[12] Säsongsmedelverkningsgrad för rumsuppvärmning
[13] ljudeffektnivån inomhus och/eller utomhus, uttryckt i dB
[14] Deklareradkapacitetochvärmefaktorvidinomhusförhållanden 20 °C och utomhustemperatur Tj.
[15] Klimat
[16] Genomsnittliga klimatförhållanden/ kallare klimat/ varmare klimatetWarmer (Athenes)
[17] Bivalenttemperatur
[18] Gränstemperatur för drift
[19] Uppvärmningsvattnets gränstemperatur för drift
[20] Kapacitet
[21] Degraderingskoefficie
[22] Effektförbruking i andra lägen än aktivt lägeactive mode
[23] Frånläge
[24] Termostatfrånläge
[25] Standbyläge
[26] Vevhusvärmarläge
[27] Extra värmegenerator
[28] Nominell avgiven värmeeffek
[29] Typ av tillförd energi
[30] Elektrisk
[31] Övriga poster
[32] Kapacitetsreglering
[33] Kapacitetskontroll för utgående temperatur
[34] Fast/varierande
[35] Nyttiggjort vattenflöd
[36] For air-to-water heat pumps
[37] För värmepumpar med vatten/saltlösning till vatten
[38] Nominellt luftflöd, ute
[39] Klassificerat vattenflöde utomhusväxlare, m3/h
[40] Kontakt

ESPAÑOL

[1] Modelos
[2] Bomba de calor/ Tipo
[3] aire-agua
[4] agua-agua
[5] Tipo de agua del intercambiador exterior
[6] geotérmicas /salmuera-agua
[7] Equipado con un calefactor complementario
[8] [sí/no]
[9] Calefactor combinado con bomba de calor
[10] Potencia calorífic nominal
[11] El consumo anual de energía
[12] Eficienci energética estacional de calefacción
[13] nivel de potencia acústica ponderada A, en interiores o exteriores, expresado en dB
[14] Potencias y coeficiente de rendimiento declarados para una calefacción con una temperatura interior de 20 °C y una temperatura exterior Tj.
[15] Clima
[16] condiciones climáticas medias / clima más frios/clima más cálido
[17] Temperatura bivalente
[18] Temperatura límite
[19] Temperatura límite de calentamiento de agua
[20] Capacidad
[21] Coeficient de degradación
[22] Consumo de electricidad en modos distintos del activoactive mode
[23] Modo desactivado
[24] Modo desactivado por termostato
[25] Modo de espera
[26] Modo de calentador del cárter
[27] Calefactor complementario
[28] Potencia calorífic nominal
[29] Tipo de insumo de energía
[30] Electric
[31] Otros elementos
[32] Control de capacidad
[33] Outlet temperature capacity control
[34] Eléctrica
[35] caudal de agua útil
[36] Para bombas de calor aire- agua
[37] Para bomba de calor agua/agua glicolada - agua
[38] Caudal de aire nominal, exterior
[39] Caudal de agua nominal del intercambiador exterior (m3/h)
[40] Datos de contacto

NEDERLANDS

[1] Model(len)
[2] warmtepomp/ soort
[3] Lucht/water
[4] water/water
[5] Type externe waterwarmtewisselaar
[6] grondwater/ Pekel-water
[7] Uitgerust met aanvullend verwarmingstoestel
[8] [ja/neen]
[9] Combinatieverwarmingstoestel met warmtepomp
[10] Nominale warmteafgifte
[11] Het jaarlijkse energieverbruik
[12] Seizoensgebonden energie-efficiënt van ruimteverwarming
[13] geluidsvermogensniveau, binnen en/of buiten, uitgedrukt in dB
[14] Nominale vermogens en warmteprestatie bij verwarming voor een binnentemperatuur van 20 °C en een buitentemperatuur Tj.
[15] Klimaat
[16] *gemiddelde klimaatomstandigheden/ kouder(e) klimaat/ warmer klimaatWarmer (Athenes)
[17] bivalente temperatuur
[18] Uiterste bedrijfstemperatuur
[19] Uiterste bedrijfstemperatuur van sanitair water
[20] Vermogen
[21] Coeficient de degradación
[22] Elektriciteitsverbruik in andere standen dan de actieve modusactive mode
[23] Uit-stand
[24] Thermostaat-uit-stand
[25] Stand-by-stand
[26] Carterverwarming-stand
[27] Aanvullend verwarmingstoestel
[28] Nominale warmteafgifte
[29] Soort energie-input
[30] Elektrisch
[31] Andere kenmerken
[32] Vermogenscontrole
[33] Capaciteitscontrole uittredetemperatuurl
[34] Vast / variabel
[35] nuttige waterstroomsnelheid
[36] Voor lucht/water-warmtepompen
[37] Voor water/glycolwater warmtepomp -water
[38] nominaal luchtdebiet, buiten
[39] Nominaal waterdebiet externe warmtewisselaar m3/u
[40] Contactgegevens

POLSKI

[1] Model(-e)
[2] Pompa ciepla/ Rodzaj
[3] powietrze/woda
[4] woda/woda
[5] Rodzaj wody w wymienniku zewnętrznym
[6] solanka/woda
[7] Wyposażona w dodatkowy ogrzewacz
[8] [tak/nie]
[9] Wielofunkcyjny ogrzewacz z pompą ciepła
[10] Znamionowa moc cieplna
[11] Roczne zużycie energii
[12] Effienza energetica stagionale del riscaldamento d'ambiente
[13] poziom mocy akustycznej odniesionej do A, w pomieszczeniu lub na zewnątrz
[14] Deklarowana moc grzewcza i współczynnik wydajności grzewczej w przypadku temperatury poniżej 20 °C i dla temperatury zewnętrznej Tj.
[15] Klimatu
[16] warunki klimatu umiarkowanego/ Cieplejszy klimat/ chłodniejszy klimat
[17] temperatura dwuwartościowa
[18] Graniczna temperatura robocza
[19] Graniczna temperatura robocza dla podgrzewania wody
[20] Regulacja wydajności/ wydajności
[21] Współczynnik strat
[22] Pobór mocy w trybach innych niż aktywny
[23] Tryb wyłączenia
[24] Tryb wyłączonego termostatu
[25] Tryb czuwania
[26] Tryb włączonej grzałki karteru
[27] Ogrzewacz dodatkowy
[28] Znamionowa moc cieplna
[29] Rodzaj pobieranej energii
[30] Elektryczny/a
[31] Pozostałe parametry
[32] Regulacja wydajności
[33] Kontrola wydajności cieplnej na wyjściu
[34] Stała / zmienna
[35] natężenie przepływu wody użytkowej
[36] Pompy ciepła powietrze/ woda
[37] Dla pompy ciepła woda/woda glikol-woda
[38] znamionowy przepływ powietrza na zewnątrz
[39] Nominalny wydatek wody w wymienniku zewnętrznym m3/h
[40] Dane kontaktowe

3 - YUNA II

3.1 - YUNA II 5HK_5-63D

Model	Yuna2 5HK + YUNA2 5-63D
Heat pump type	Air to water
Equipped with supplementary heater	NO
Heat pump combination heater	NO

Rated heat output, kW	Prated	1,9	
Annual energy consumption, kWh	Qhe	1303	
Seasonal space heating energy efficiency, %	ns,heat	117	
Sound power level indoor/outdoor, dB(A)	LwA	40,9	64

Declared capacity and coefficient of performance for heating at indoor conditions 20°C and outdoor temperature Tj

Climate:		Average (Strasbourg)	
Bivalent temperature, °C		-7	
Operating limit temperature, °C		-20	
Heating water operation limit temperature, °C		60	
Tj, °C	**Capacity, kW**	**COPd**	**Degradation coef**
-7	1,68	2,05	0,96
2	1,05	2,84	0,96
7	1,29	4,45	0,96
12	1,49	4,26	0,96
Bivalent temperature	1,68	2,05	1
Operation limit temperature	1,43	1,66	1

Power consumption in modes other than active mode

Off mode, kW	Poff	0,0240
Thermostat-off mode, kW	Pto	0,0140
Standby mode, kW	Psb	0,0240
Crankcase heater mode, kW	Pck	0,0000

Supplementary heater

Rated heat ouput, kW	Psup	0,47
Type of energy input		Electric

Other items

Capacity control	Variable
Outlet temperature capacity control	Variable
Water flow rate capacity control	Fixed
For air-to-water heat pumps	
Rated Air flow rate, outdoors, m3/h	2620

Contact details	Compagine Industrielle d'Application Thermique– BP14 – 01350 Culoz - FRANCE

Accessories and Installed Options

No Accessories or Installed Options selected

3.2 - YUNA II 6HK_5-63D

Model	YUNA II 6HK+YUNA II 5-63D
Heat pump type	Air to water
Equipped with supplementary heater	No
Heat pump combination heater	No

Rated heat output, kW	Prated	2,16	
Annual energy consumption, kWh	Qhe	1494	
Seasonal space heating energy efficiency, %	ns,heat	116	
Sound power level indoor/outdoor, dB(A)	LwA	40,9	65

Declared capacity and coefficient of performance for heating at indoor conditions 20°C and outdoor temperature Tj

Climate:		Average (Strasbourg)	
Bivalent temperature, °C		-7	
Operating limit temperature, °C		-20	
Heating water operation limit temperature, °C		60	
Tj, °C	**Capacity, kW**	**COPd**	**Degradation coef**
-7	1,91	1,82	0,9548
2	1,37	2,85	0,9548
7	1,24	4,59	0,9548
12	1,44	4,65	0,9548
Bivalent temperature	1,91	1,82	1
Operation limit temperature	1,62	1,47	1

Power consumption in modes other than active mode

Off mode, kW	Poff	0,0240
Thermostat-off mode, kW	Pto	0,0140
Standby mode, kW	Psb	0,0240
Crankcase heater mode, kW	Pck	0,0000

Supplementary heater

Rated heat ouput, kW	Psup	0,54
Type of energy input		Electric

Other items

Capacity control	Variable
Outlet temperature capacity control	Variable
Water flow rate capacity control	Fixed
For air-to-water heat pumps	
Rated Air flow rate, outdoors, m3/h	2820

Contact details	Compagine Industrielle d'Application Thermique– BP14 – 01350 Culoz - FRANCE

Accessories and Installed Options

No Accessories or Installed Options selected

3.3 - YUNA II 9HK_9-113D

Model	YUNA II 9HK+YUNA II 9-113D
Heat pump type	Air to water
Equipped with supplementary heater	No
Heat pump combination heater	No

Rated heat output, kW	Prated	7,60	
Annual energy consumption, kWh	Qhe	5245	
Seasonal space heating energy efficiency, %	ns,heat	117	
Sound power level indoor/outdoor, dB(A)	LwA	40,9	69

Declared capacity and coefficient of performance for heating at indoor conditions 20°C and outdoor temperature Tj

Climate:	Average (Strasbourg)
Bivalent temperature, °C	-7
Operating limit temperature, °C	-20
Heating water operation limit temperature, °C	60

Tj, °C	**Capacity, kW**	**COPd**	**Degradation coef**
-7	6,72	1,96	0,9926
2	4,29	2,65	0,9926
7	3,57	4,46	0,9926
12	4,03	5,93	0,9926
Bivalent temperature	6,72	1,96	1
Operation limit temperature	5,71	1,59	1

Power consumption in modes other than active mode

Off mode, kW	Poff	0,0240
Thermostat-off mode, kW	Pto	0,0040
Standby mode, kW	Psb	0,0240
Crankcase heater mode, kW	Pck	0,0000

Supplementary heater

Rated heat ouput, kW	Psup	1,88
Type of energy input		Electric

Other items

Capacity control	Variable
Outlet temperature capacity control	Variable
Water flow rate capacity control	Fixed
For air-to-water heat pumps	
Rated Air flow rate, outdoors, m3/h	5970

Contact details	Compagine Industrielle d'Application Thermique– BP14 – 0 Culoz - FRANCE

Accessories and Installed Options

No Accessories or Installed Options selected

3.4 - YUNA II 11HK_9-113D

Model	YUNA II 11 HK+YUNA II 9-113D
Heat pump type	Air to water
Equipped with supplementary heater	No
Heat pump combination heater	No

Rated heat output, kW	Prated	8,75	
Annual energy consumption, kWh	Qhe	6143	
Seasonal space heating energy efficiency, %	ns,heat	115	
Sound power level indoor/outdoor, dB(A)	LwA	40,9	70

Declared capacity and coefficient of performance for heating at indoor conditions 20°C and outdoor temperature Tj

Climate:	Average (Strasbourg)
Bivalent temperature, °C	-7
Operating limit temperature, °C	-20
Heating water operation limit temperature, °C	60

Tj, °C	**Capacity, kW**	**COPd**	**Degradation coef**
-7	7,74	1,93	0,9899
2	4,88	2,62	0,9899
7	3,59	4,27	0,9899
12	4,13	5,99	0,9899
Bivalent temperature	7,74	1,93	1
Operation limit temperature	6,58	1,56	1

Power consumption in modes other than active mode

Off mode, kW	Poff	0,0240
Thermostat-off mode, kW	Pto	0,0070
Standby mode, kW	Psb	0,2400
Crankcase heater mode, kW	Pck	0,0000

Supplementary heater

Rated heat ouput, kW	Psup	2,17
Type of energy input		Electric

Other items

Capacity control	Variable
Outlet temperature capacity control	Variable
Water flow rate capacity control	Fixed
For air-to-water heat pumps	
Rated Air flow rate, outdoors, m3/h	6360

Contact details	Compagine Industrielle d'Application Thermique– BP14 – 01350 Culoz - FRANCE

Accessories and Installed Options

No Accessories or Installed Options selected

4.1 - YUNA II 12HTK_12-156D

Model	YUNA II 12HTK+YUNA II 12-156D
Heat pump type	Air to water
Equipped with supplementary heater	No
Heat pump combination heater	No

Rated heat output, kW	Prated	8,37	
Annual energy consumption, kWh	Qhe	5004	
Seasonal space heating energy efficiency, %	ns,heat	135	
Sound power level indoor/outdoor, dB(A)	LwA	40,9	68

Declared capacity and coefficient of performance for heating at indoor conditions 20°C and outdoor temperature Tj

Climate:	Average (Strasbourg)
Bivalent temperature, °C	-7
Operating limit temperature, °C	-20
Heating water operation limit temperature, °C	60

Tj, °C	Capacity, kW	COPd	Degradation coef
-7	7,4	1,95	0,9968
2	5,48	3,45	0,9968
7	3,48	4,58	0,9968
12	3,96	6,29	0,9968
Bivalent temperature	7,4	1,95	1
Operation limit temperature	6,29	1,58	1

Power consumption in modes other than active mode

Off mode, kW	Poff	0,0240
Thermostat-off mode, kW	Pto	0,0020
Standby mode, kW	Psb	0,0240
Crankcase heater mode, kW	Pck	0,0000

Supplementary heater

Rated heat ouput, kW	Psup	2,08
Type of energy input		Electric

Other items

Capacity control	Variable
Outlet temperature capacity control	Variable
Water flow rate capacity control	Fixed
For air-to-water heat pumps	
Rated Air flow rate, outdoors, m3/h	5770

Contact details	Compagine Industrielle d'Application Thermique– BP14 – 01350 Culoz - FRANCE

Accessories and Installed Options

No Accessories or Installed Options selected

4.2 - YUNA II 15HTK_12-156D

Model	YUNA II 15HTK+YUNA II 12-156D
Heat pump type	Air to water
Equipped with supplementary heater	No
Heat pump combination heater	No

Rated heat output, kW	Prated	9,38	
Annual energy consumption, kWh	Qhe	5897	
Seasonal space heating energy efficiency, %	ns,heat	128	
Sound power level indoor/outdoor, dB(A)	LwA	40,9	68

Declared capacity and coefficient of performance for heating at indoor conditions 20°C and outdoor temperature Tj

Climate:	Average (Strasbourg)
Bivalent temperature, °C	-7
Operating limit temperature, °C	-20
Heating water operation limit temperature, °C	60

Tj, °C	Capacity, kW	COPd	Degradation coef
-7	8,3	1,87	0,9938
2	5,35	3,28	0,9938
7	3,29	4,33	0,9938
12	2,82	5,88	0,9938
Bivalent temperature	8,3	1,87	1
Operation limit temperature	7,06	1,51	1

Power consumption in modes other than active mode

Off mode, kW	Poff	0,0240
Thermostat-off mode, kW	Pto	0,0030
Standby mode, kW	Psb	0,0240
Crankcase heater mode, kW	Pck	0,0000

Supplementary heater

Rated heat ouput, kW	Psup	2,33
Type of energy input		Electric

Other items

Capacity control	Variable
Outlet temperature capacity control	Variable
Water flow rate capacity control	Fixed
For air-to-water heat pumps	
Rated Air flow rate, outdoors, m3/h	5770

Contact details	Compagine Industrielle d'Application Thermique– BP14 – 01350 Culoz - FRANCE

Accessories and Installed Options

No Accessories or Installed Options selected

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