

### Page 1 of 25

Summary of	WSAN-YMi 91-141	Reg. No.	041-K008-01	
Certificate Holder				
Name	Clivet s.p.a.	Clivet s.p.a.		
Address	Via camp lonc 25 c.ap.	Zip	I-32032	
City	z.i. Villapaiera - Feltre (BL)	Country	Italy	
Certification Body	BRE Global Limited			
Subtype title	WSAN-YMi 91-141			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R32			
Mass Of Refrigerant	5 kg			
Certification Date	18.12.2021			
Testing basis	Heat Pump Keymark Scheme Rules Rev 08			

# Model: WSAN-YMi 91

General Data	
Power supply	3x400V 50Hz

# Heating

EN 14511-4		
Shutting off the heat transfer medium flow		
Complete power supply failure		
Defrost test		
Starting and operating test		

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	18.32 kW	18.10 kW	
El input	3.96 kW	6.63 kW	
СОР	4.63	2.73	

## **Average Climate**

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	71.00 dB(A)	71.00 dB(A)	





### EN 14825

	Low temperature	Medium temperature
$\eta_{s}$	181.00 %	125.00 %
Prated	17.99 kW	17.67 kW
SCOP	4.60	3.21
Tbiv	-7.00 °C	-7.00 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	15.90 kW	15.61 kW
COP Tj = -7°C	2.85	1.72
Cdh	0.90	0.90
Pdh Tj = +2°C	9.66 kW	9.59 kW
COP Tj = +2°C	4.59	3.32
Cdh	0.90	0.90
Pdh Tj = +7°C	6.56 kW	6.37 kW
COP Tj = +7°C	5.99	4.48
Cdh	0.90	0.90
Pdh Tj = 12°C	3.76 kW	3.57 kW
COP Tj = 12°C	7.08	5.27
Cdh	0.90	0.90
Pdh Tj = Tbiv	15.90 kW	15.61 kW
COP Tj = Tbiv	2.85	1.72





Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.13 kW	15.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.49	1.17
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
РТО	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	0.00 kW	2.64 kW
Annual energy consumption Qhe	8086.00 kWh	11375.00 kWh

### Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	71.00 dB(A)	71.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	226.00 %	157.00 %
Prated	17.67 kW	18.07 kW
SCOP	5.74	4.00





This information was gener	ated by the HI KETMA	irk database on 5 Mar 2021
Tbiv	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
Pdh Tj = +2°C	17.84 kW	18.44 kW
COP Tj = +2°C	3.53	2.12
Cdh	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	11.36 kW	11.62 kW
$COPTj = +7^{\circ}C$	5.16	3.49
Cdh	0.90	0.90
Pdh Tj = 12°C	5.45 kW	5.35 kW
COP Tj = 12°C	7.01	5.09
Cdh	0.90	0.90
Pdh Tj = Tbiv	11.36 kW	11.62 kW
COP Tj = Tbiv	5.16	3.49
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.84 kW	18.44 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.53	2.12
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
РТО	96.00 W	96.00 W
PSB	18.00 W	18.00 W
РСК	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric





Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4116.00 kWh	6041.00 kWh

### Colder Climate

EN 12102-1		
Low temperature Medium temperature		
Sound power level outdoor	71.00 dB(A)	71.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	146.00 %	97.00 %
Prated	17.76 kW	18.38 kW
SCOP	3.73	2.50
Tbiv	-15.00 °C	-7.00 °C
TOL	-22.00 °C	-15.00 °C
Pdh Tj = -7°C	11.21 kW	11.13 kW
COP Tj = -7°C	3.09	1.98
Cdh	0.90	0.90
Pdh Tj = +2°C	6.64 kW	6.65 kW
COP Tj = +2°C	4.50	3.44
Cdh	0.90	0.90
	1	1





•	ink database on 5 Mai 202
4.77 kW	4.66 kW
5.85	4.35
0.90	0.90
3.95 kW	3.74 kW
7.18	5.68
0.90	0.90
14.49 kW	11.13 kW
2.42	1.98
13.14 kW	13.56 kW
1.67	1.21
60.00 °C	60.00 °C
20.00 W	20.00 W
96.00 W	96.00 W
18.00 W	18.00 W
0.00 W	0.00 W
electric	electric
4.62 kW	18.38 kW
11740.00 kWh	18156.00 kWh
14.49	13.56
2.42	1.21
0.90	0.90
	5.85  0.90  3.95 kW  7.18  0.90  14.49 kW  2.42  13.14 kW  1.67  60.00 °C  20.00 W  96.00 W  18.00 W  0.00 W  electric  4.62 kW  11740.00 kWh  14.49  2.42



# **Model: WSAN-YMi 101**

General Data	
Power supply 3x400V 50Hz	

# Heating

EN 14511-4	
Shutting off the heat transfer medium flow	
Complete power supply failure	
Defrost test	
Starting and operating test	

EN 14511-2		
	Low temperature	Medium temperature
Heat output	22.30 kW	22.10 kW
El input	5.13 kW	8.33 kW
СОР	4.35	2.65

## **Average Climate**

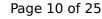
EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	73.00 dB(A)	73.00 dB(A)





#### EN 14825

	Low temperature	Medium temperature
$\eta_{s}$	178.00 %	126.00 %
Prated	22.31 kW	22.43 kW
SCOP	4.53	3.22
Tbiv	-7.00 °C	-7.00 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	19.72 kW	19.82 kW
COP Tj = -7°C	2.74	1.74
Cdh	0.90	0.90
Pdh Tj = +2°C	12.03 kW	11.89 kW
COP Tj = +2°C	4.41	3.32
Cdh	0.90	0.90
Pdh Tj = +7°C	8.00 kW	7.97 kW
COP Tj = +7°C	6.29	4.66
Cdh	0.90	0.90
Pdh Tj = 12°C	3.79 kW	3.60 kW
COP Tj = 12°C	7.14	5.32
Cdh	0.90	0.90
Pdh Tj = Tbiv	19.72 kW	19.82 kW
COP Tj = Tbiv	2.74	1.74





Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	20.33 kW	13.81 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.35	1.08
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
РТО	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	1.97 kW	8.60 kW
Annual energy consumption Qhe	10180.00 kWh	14390.00 kWh

### Warmer Climate

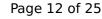
EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	73.00 dB(A)	73.00 dB(A)

EN 14825		
	Low tem	perature Medium temperature
$\eta_{S}$	234.00 %	161.00 %
Prated	21.90 kW	22.01 kW
SCOP	5.85	4.09
		·





The state of the s		The database off 5 Mai 2021
Tbiv	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
Pdh Tj = +2°C	21.81 kW	22.12 kW
COP Tj = +2°C	3.31	2.12
Cdh	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	14.08 kW	14.15 kW
$COP Tj = +7^{\circ}C$	5.20	3.50
Cdh	0.90	0.90
Pdh Tj = 12°C	6.44 kW	6.38 kW
COP Tj = 12°C	7.50	5.34
Cdh	0.90	0.90
Pdh Tj = Tbiv	14.08 kW	14.15 kW
COP Tj = Tbiv	5.20	3.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.81 kW	22.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.31	2.12
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
РТО	96.00 W	96.00 W
PSB	18.00 W	18.00 W
РСК	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric



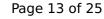


Supplementary Heater: PSUP	0.09 kW	0.00 kW
Annual energy consumption Qhe	4945.00 kWh	7180.00 kWh

## Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	73.00 dB(A)	73.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	146.00 %	102.00 %
Prated	21.40 kW	22.36 kW
SCOP	3.72	2.62
Tbiv	-15.00 °C	-7.00 °C
TOL	-22.00 °C	-15.00 °C
Pdh Tj = -7°C	13.30 kW	13.53 kW
COP Tj = -7°C	3.12	2.07
Cdh	0.90	0.90
Pdh Tj = +2°C	8.25 kW	8.61 kW
COP Tj = +2°C	4.42	3.70
Cdh	0.90	0.90
	1	1





	ated by the Hi KETMA	TIN Galabase on 5 Mai 2021
Pdh Tj = $+7^{\circ}$ C	5.45 kW	5.21 kW
$COP Tj = +7^{\circ}C$	5.87	4.49
Cdh	0.90	0.90
Pdh Tj = 12°C	3.98 kW	3.74 kW
COP Tj = 12°C	7.19	5.76
Cdh	0.90	0.90
Pdh Tj = Tbiv	17.46 kW	13.53 kW
COP Tj = Tbiv	2.36	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.27 kW	13.78 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.69	1.24
WTOL	60.00 °C	60.00 °C
Poff	20.00 W	20.00 W
РТО	96.00 W	96.00 W
PSB	18.00 W	18.00 W
РСК	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	8.13 kW	22.36 kW
Annual energy consumption Qhe	14179.00 kWh	21067.00 kWh
Pdh Tj = -15°C (if TOL<-20°C)	17.46	13.78
COP Tj = $-15$ °C (if TOL< $-20$ °C)	2.36	1.24
Cdh	0.90	0.90

# **Model: WSAN-YMi 121**

General Data	
Power supply 3x400V 50Hz	

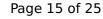
# Heating

EN 14511-4	
Shutting off the heat transfer medium flow	
Complete power supply failure	
Defrost test	
Starting and operating test	

EN 14511-2			
Low temperature Medium temperature			
Heat output	26.30 kW	26.06 kW	
El input	6.50 kW	10.72 kW	
СОР	4.05	2.43	

## **Average Climate**

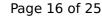
EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	75.00 dB(A)	75.00 dB(A)





#### EN 14825

	Low temperature	Medium temperature
$\eta_{s}$	177.00 %	123.00 %
Prated	25.04 kW	26.15 kW
SCOP	4.50	3.14
Tbiv	-7.00 °C	-6.00 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	22.12 kW	20.64 kW
COP Tj = -7°C	2.57	1.69
Cdh	0.90	0.90
Pdh Tj = +2°C	13.76 kW	14.26 kW
COP Tj = +2°C	4.44	3.12
Cdh	0.90	0.90
Pdh Tj = +7°C	9.36 kW	9.29 kW
COP Tj = +7°C	6.52	4.74
Cdh	0.90	0.90
Pdh Tj = 12°C	4.09 kW	3.89 kW
COP Tj = 12°C	7.35	5.48
Cdh	0.90	0.90
Pdh Tj = Tbiv	22.12 kW	22.11 kW
COP Tj = Tbiv	2.57	1.88



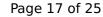


Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	20.33 kW	13.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.35	1.08
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
РТО	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	4.68 kW	12.28 kW
Annual energy consumption Qhe	11489.00 kWh	17204.00 kWh

### Warmer Climate

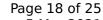
EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	75.00 dB(A)	75.00 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	231.00 %	168.00 %
Prated	26.08 kW	26.22 kW
SCOP	5.85	4.26





	T	The database off 5 Mai 202.
Tbiv	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
Pdh Tj = +2°C	25.50 kW	26.50 kW
COP Tj = +2°C	3.00	1.99
Cdh	0.90	0.90
Pdh Tj = +7°C	16.77 kW	16.86 kW
$COP Tj = +7^{\circ}C$	5.02	3.47
Cdh	0.90	0.90
Pdh Tj = 12°C	7.65 kW	7.58 kW
COP Tj = 12°C	7.78	5.94
Cdh	0.90	0.90
Pdh Tj = Tbiv	16.77 kW	16.86 kW
COP Tj = Tbiv	5.02	3.47
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	25.50 kW	26.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.00	1.99
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
РТО	96.00 W	96.00 W
PSB	18.00 W	18.00 W
РСК	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric



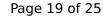


Supplementary Heater: PSUP	0.58 kW	0.00 kW
Annual energy consumption Qhe	5959.00 kWh	8218.00 kWh

## Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	75.00 dB(A)	75.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	143.00 %	101.00 %
Prated	25.75 kW	26.27 kW
SCOP	3.64	2.59
Tbiv	-12.00 °C	-7.00 °C
TOL	-22.00 °C	-15.00 °C
Pdh Tj = -7°C	15.91 kW	15.90 kW
COP Tj = -7°C	3.10	2.10
Cdh	0.90	0.90
Pdh Tj = +2°C	10.10 kW	10.17 kW
COP Tj = +2°C	4.45	3.58
Cdh	0.90	0.90
	-	<u>'</u>





This information was gener	deed by the Hi KETH	TINK database on 5 Mai 2021
Pdh Tj = $+7^{\circ}$ C	6.30 kW	6.52 kW
$COP Tj = +7^{\circ}C$	6.06	4.99
Cdh	0.90	0.90
Pdh Tj = 12°C	4.03 kW	3.63 kW
COP Tj = 12°C	7.13	5.68
Cdh	0.90	0.90
Pdh Tj = Tbiv	18.97 kW	15.90 kW
COP Tj = Tbiv	2.36	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.07 kW	13.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.67	1.20
WTOL	60.00 °C	60.00 °C
Poff	20.00 W	20.00 W
РТО	96.00 W	96.00 W
PSB	18.00 W	18.00 W
РСК	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	12.68 kW	26.27 kW
Annual energy consumption Qhe	17421.00 kWh	24967.00 kWh
Pdh Tj = -15°C (if TOL<-20°C)	18.95	13.37
COP Tj = $-15$ °C (if TOL< $-20$ °C)	2.27	1.20
Cdh	0.90	0.90

# **Model: WSAN-YMi 141**

General Data	
Power supply	3x400V 50Hz

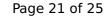
# Heating

EN 14511-4	
Shutting off the heat transfer medium flow	
Complete power supply failure	
Defrost test	
Starting and operating test	

EN 14511-2		
	Low temperature	Medium temperature
Heat output	29.93 kW	29.68 kW
El input	8.02 kW	12.97 kW
СОР	3.73	2.29

## **Average Climate**

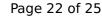
EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	77.00 dB(A)	77.00 dB(A)





#### EN 14825

	Low temperature	Medium temperature
$\eta_{s}$	165.00 %	123.00 %
Prated	29.18 kW	29.69 kW
SCOP	4.19	3.14
Tbiv	-5.00 °C	-5.00 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	21.90 kW	20.11 kW
COP Tj = -7°C	2.54	1.63
Cdh	0.90	0.90
Pdh Tj = +2°C	16.16 kW	16.49 kW
COP Tj = +2°C	4.16	3.09
Cdh	0.90	0.90
Pdh Tj = +7°C	10.64 kW	10.50 kW
COP Tj = +7°C	6.38	4.75
Cdh	0.90	0.90
Pdh Tj = 12°C	4.54 kW	4.64 kW
COP Tj = 12°C	7.72	5.91
Cdh	0.90	0.90
Pdh Tj = Tbiv	23.51 kW	23.97 kW
COP Tj = Tbiv	2.71	2.02



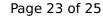


Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	20.37 kW	13.82 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.35	1.07
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
РТО	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	8.75 kW	15.86 kW
Annual energy consumption Qhe	14165.00 kWh	19316.17 kWh

## Warmer Climate

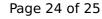
EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	77.00 dB(A)	77.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	213.00 %	163.00 %
Prated	30.44 kW	29.73 kW
SCOP	5.39	4.15





		The database off 5 Mai 202.
Tbiv	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
Pdh Tj = +2°C	26.29 kW	26.41 kW
COP Tj = +2°C	2.94	1.99
Cdh	0.90	0.90
Pdh Tj = +7°C	19.57 kW	19.11 kW
$COP Tj = +7^{\circ}C$	4.75	3.37
Cdh	0.90	0.90
Pdh Tj = 12°C	8.90 kW	8.92 kW
COP Tj = 12°C	7.53	6.09
Cdh	0.90	0.90
Pdh Tj = Tbiv	19.57 kW	19.11 kW
COP Tj = Tbiv	4.75	3.37
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	26.29 kW	26.41 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.94	1.99
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
РТО	96.00 W	96.00 W
PSB	18.00 W	18.00 W
РСК	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric





Supplementary Heater: PSUP	4.15 kW	3.32 kW
Annual energy consumption Qhe	7540.00 kWh	9580.00 kWh

## Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	77.00 dB(A)	77.00 dB(A)	

EN 14825			
	Low temperature	Medium temperature	
$\eta_{s}$	138.00 %	100.00 %	
Prated	29.13 kW	30.41 kW	
SCOP	3.52	2.56	
Tbiv	-10.00 °C	-7.00 °C	
TOL	-22.00 °C	-15.00 °C	
Pdh Tj = -7°C	18.49 kW	18.40 kW	
COP Tj = -7°C	3.07	2.10	
Cdh	0.90	0.90	
Pdh Tj = +2°C	11.88 kW	11.22 kW	
COP Tj = +2°C	4.42	3.51	
Cdh	0.90	0.90	





Pdh Tj = $+7^{\circ}$ C	7.53 kW	7.42 kW
COP Tj = +7°C	6.15	5.18
Cdh	0.90	0.90
Pdh Tj = 12°C	4.11 kW	3.64 kW
COP Tj = 12°C	6.87	5.73
Cdh	0.90	0.90
Pdh Tj = Tbiv	19.93 kW	18.40 kW
COP Tj = Tbiv	2.44	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.17 kW	13.06 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.67	1.18
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
РТО	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	15.96 kW	30.41 kW
Annual energy consumption Qhe	20390.00 kWh	29238.00 kWh
Pdh Tj = -15°C (if TOL<-20°C)	18.61	13.06
COP Tj = -15°C (if TOL $<$ -20°C)	2.24	1.18
Cdh	0.90	0.90