

# Product Guide 2025



# **NATURAL COMFORT**

# **OUR NUMBERS**

### Over 35 years of expertise in heat pumps.

Clivet has been leading the way in heat pump innovation since 1989. We were among the first to recognize the technology's potential for efficient and sustainable comfort — and our dedication to innovation hasn't wavered since.

### Purpose-built solutions.

Clivet engineers its solutions from the ground up to offer specialized systems designed for a diverse range of applications and environments. Boasting the widest range of heat-pump solutions, our flexible, adaptable approach ensures a perfect fit for your specific requirements.

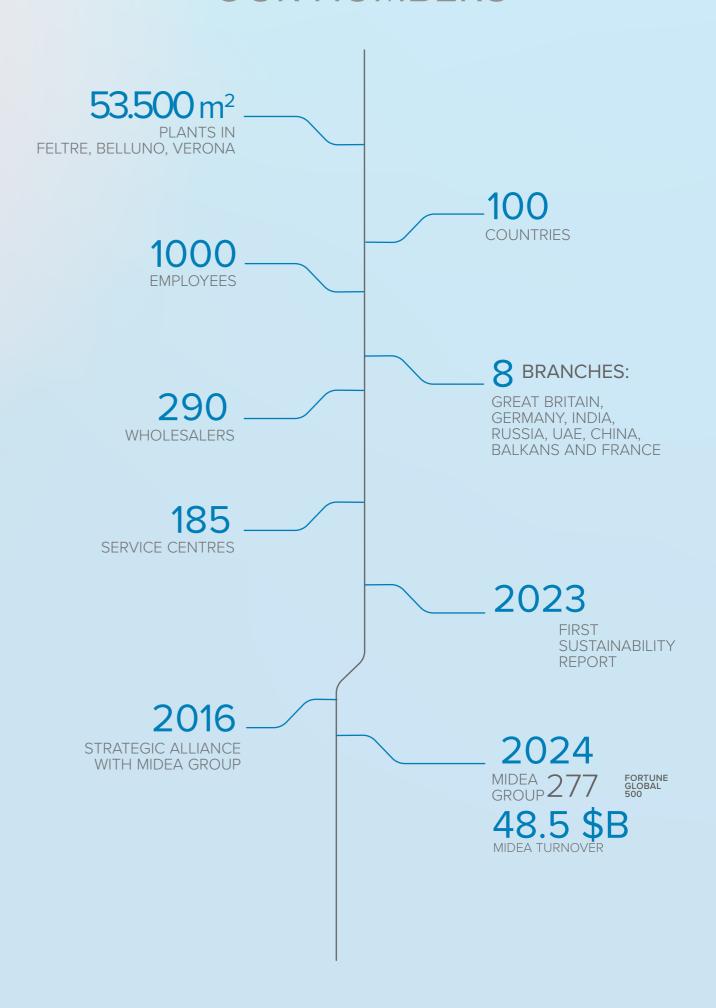
### Crafted in Europe, made for North America.

As a pioneer in heat pump technology in Europe, Clivet delivers innovative solutions tailored to diverse market needs worldwide. Our products are specifically designed to meet the comfort demands of the North American market, built on four key pillars: dedicated product development, industry-leading manufacturing and quality excellence, and the strength of our partners' premium pre and post-sales service network.

### A simplified product experience.

Clivet systems streamline every step, from simplified design and installation to effortless operation and control. Engineered for efficiency from the ground up, Clivet delivers unparalleled ease of use, lower operating costs, and a lasting commitment to sustainability.





## Residential



Offices



**Public Buildings** 



**Shopping Centers** 



Hotels



Cinemas



Hospitals



Industry



# SPECIALIZED SYSTEMS

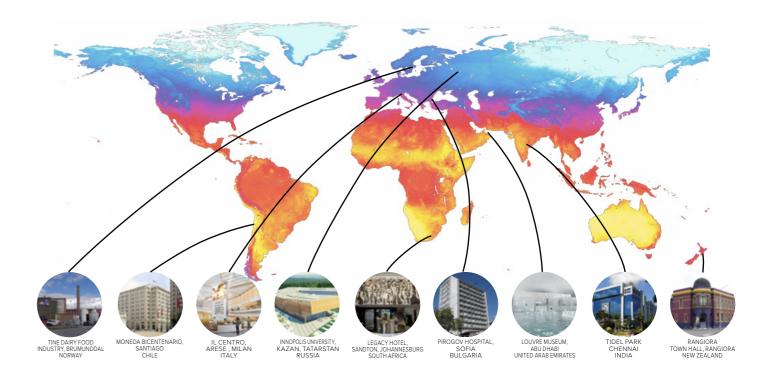
for any application and climate condition

Today, buildings have to deliver an elevated and constant standard of well-being, regardless of outdoor conditions.

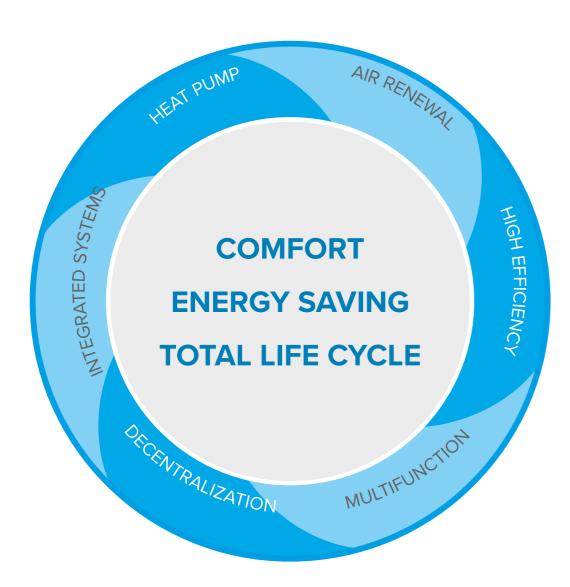
Not all buildings are alike; depending on their use, there are considerable differences in terms of load intensity, simultaneous requests for hot and chilled water, domestic hot water production and air renewal.

That is why Clivet has created a series of specialized system solutions for applications that meet the specific needs of different buildings by optimizing the overall efficiency in relation to traditional systems (boiler, chiller, AHU).

Clivet's specialized systems simplify the design and installation work, improve the control of the entire system, reduce the environmental impact and, at the same time, optimize the initial investment by reducing running costs and increasing the building's energy rating and therefore its value on the market.



# **Clivet Principles**



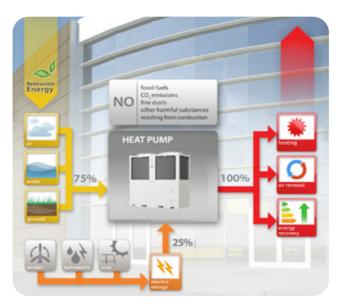
# **CLIVET PRINCIPLES**

All Clivet systems are based on six key principles that make Clivet's products and systems unique.

These principles are the basis for making application-specific systems, which have always been part of Clivet's DNA.

The six key principles are the foundation of Clivet's entire outlook, and they are the driving force behind Clivet's development of sustainable systems of the future.

# **Heat Pump Technology**



Heat pumps are the technology of the future because they are significantly more efficient than traditional combustion systems:

- √ Reductions of 50% in Primary Energy, CO₂ and Running Costs
- √ Extensive use of Renewable Energy

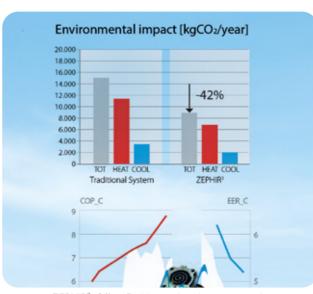
### Due to Clivet's heat pump technology, Clivet's systems guarantee:

- √ A single system for both heating and cooling.
- √ Controlled mechanical ventilation with innovative thermodynamic recovery
- √ Free production of domestic hot water in summer
- ✓ Simultaneous heating and cooling to fulfill simultaneous loads

# Importance of Air Renewal



# High Seasonal Efficiency



ZEPHIR<sup>3</sup>, Office Building in London, case study

The quality of air inside modern airtight buildings is undermined by a number of pollutants.

A controlled mechanical ventilation system is essential to creating a more liveable environment.

# Clivet's stand-alone system with thermodynamic energy recovery dedicated to ventilation has the following benefits:

- √ Recovers energy both in winter and in summer
- √ Reduces the load of outdoor air with a more efficient system and provides more energy for interior rooms
- √ Reduces the capacity of the main generators by limiting their operation to seasonal peaks
- ✓ Dehumidifies in summer

Every application has different needs which vary depending on multiple factors, including different indoor and outdoor climatic conditions, crowding and thermal loads.

Clivet systems are designed to meet the specific needs of every application, thereby optimizing the use of the system's resources to reach top seasonal efficiency levels thanks to:

- √ One systemic solution
- √ Use of the most favourable resources
- √ Full control over the system
- √ Continuous capacity modulation

# Polyvalent



Clivet's multifunction systems include all the elements to ensure year-round comfort. Clivet has developed complete dedicated systems that use the following functions to provide a tailored and specialized solution for each individual application:

- √ Heating
- √ Cooling
- √ Domestic hot water
- √ Air renewal and purification
- √ Dehumidification

# Decentralization



Example of floor-based decentralization

In developing Clivet products and systems, great attention was given to how to rationalize each choice in terms of design and construction, which could affect the system's running costs and environmental impact for its entire life cycle.

Many years ago, Clivet successfully developed the principle of generating energy as close as possible to where it needs to be used:

- $\checkmark$  Modular systems that are active only where and when required
- √ Reduction or complete elimination of auxiliary consumption (for instance, pumping energy)
- √ Stand-alone system
- √ Easy to maintain and handle
- √ Adapts to the needs of the system

# **Integrated Systems**



Clivet designs its systems by integrating all the services required for each application.

The system's elements, optimized and industrially processed to work together, guarantee the highest efficiency and reliability.

- √ Simplified design and installation
- √ Lower investment costs
- √ Quality of the systems
- √ Guaranteed performance

# **Digital Solutions**

In residential, commercial and industrial buildings, the air conditioning system is the main source of energy consumption, accounting for almost half of the building's total consumption. There is an increasing need for an energy transition as the effect of climate change is growing.

Clivet has decided to play a key role by designing and promoting new technological solutions to improve the efficiency of buildings and significantly reduce its carbon footprint for increasingly sustainable installations.



### Optimization system for the commercial and industrial sector

Optimizing the operation of HVAC systems allows the efficiency of commercial and industrial plants to be maximized in various working conditions, guaranteeing the reduction of energy consumption and ensuring continuity of operation in the production and distribution of thermo-cooling energy.

Clivet's **INTELLIPLANT** solution manages all the elements of medium and large hydronic systems, guaranteeing the best operating conditions for the lowest possible energy consumption.

Developed entirely by Clivet specialists, INTELLIPLANT makes it possible to achieve the maximum efficiency of the system and the units it interfaces with, thanks to algorithms derived from Clivet know-how that make better use of the machine control logics than the most common generalist solutions on the market.

# **SHEEN NA**



### Reversible heat pump

Air cooled Inverter Technology Outdoor installation Capacity 20 TON **WISAN-YSE1 NA** 

30.2

- ✓ **Reversible Heat Pump Technology.** Capable of producing hot or cold water based on the season.
- ✓ High Reliability Design. Inverter Scroll compressor ensure efficient and reliable operation. DC Inverter fans offer superior airflow and energy efficiency. Two independent circuits provide redundancy and enhanced reliability.
- ✓ High Sustainability Ecological Refrigerant. R32 with a Global Warming Potential of 675, reducing environmental impact.
- ✓ Industry-Leading Efficiency. Full inverter scroll technology guarantees performance at full and partial load to adapt to the needs of the plant. IPLV (Integrated Part Load Value) up to 20.1, maximizing seasonal performance.
- ✓ Ultra-Quiet Operation. Our super-silenced version reduces noise levels, ensuring a quieter environment. Configurable sound emissions reduce the fans speed.
- ✓ **Wide Operating Envelope.** Delivers outlet water temperatures up to 149°F and operates in outdoor temperatures
- ✓ Faster, More Efficient Defrosting. A special hydrophilic coil treatment shortens defrost cycles, ensuring uninterrupted performance and efficiency.
- ✓ System scalability up to 160 Tons. Modular operation up to 8 units in a cascade setup.

### **Functions and Features**



Heat



cooled





Outdoor

installation





R-32



Hermetic



valve

ECO

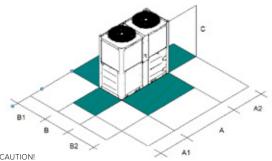
Electronic

**ECOBREEZE** expansion

Full

### **Dimensions and Clearances**

indicated by the green areas.



B B2
CAUTION!
For trouble-free operation of the unit it is essential to maintain the safety distances

**▶▶ SHEEN-NA** 30.2 B - Width 37.8 74.02 591 59.1 59.1 591 1,193 The above mentioned data are referred to standard units for the constructive configurations indicated.

### **Versions and Configurations**

### SUPPLY VOLTAGE:

- 208-230/3~/60 Supply voltage (Standard)

### **ENERGY VERSION:**

High efficiency

### EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

**VENDC** DC high efficiency fan (Standard)

### **Technical Data**

SIZE	▶► SH	EEN-NA	30.2
Cooling Capacity	(1)	ton	19.9
Total power input	(1)	kW	23.3
EER	(1)	BTU / (Wh)	10.2
IPLV	(1)	BTU / (Wh)	20.1
Heating Capacity	(2)	MBH	256
Total power input	(2)	kW	22.1
COP	(2)	kW / kW	3.40
Refrigeration circuits		Nr	2
N° of compressors		Nr	2
Type of compressors		-	INVERTER SCROLL
Refrigerant		-	R-32
Standard power supply		V	208-230/3~/60

(1) Data: User side heat exchanger water 54 °F / 44 °F; Outdoor Air 95 °F (2) Data: User side heat exchanger water 110 °F / 120 °F; Outdoor air 47 °F d.b. / 43 °F w.b.

PRELIMINARY DATA

### Accessories

**BCACF** Copper / aluminium condenser coil with anticorrosive treatment

CMSC13X Serial communication module for Modbus TCP/IP, BACnet IP, BACnet MSTP supervisor

**AVIBX** Antivibration mounts support

**HYGU1VI** User side hydronic group with 1 inverter pump TCDC Condensate collection pan with electric heater

Accessories whose code ends with "X" are supplied separately

# **SPINCHILLER4 NA**



### Reversible heat pump

Air cooled Outdoor installation

90.4÷175.4

Capacity from 67.7 to 126 TON **WSAN-YSC4 NA** 

SIZE	▶► WSA	N-YSC4 NA	90.4	100.4	110.4	120.4	130.4	145.4	160.4	175.4
Cooling Capacity	(1)	ton	67.7	73.4	79.1	84.1	92.1	103	115	126
Total power input	(1)	kW	77.3	87.1	95.8	104	114	125	139	157
EER	(1)	BTU / (Wh)	10.5	10.1	9.91	9.69	9.72	9.89	9.92	9.64
IPLV	(1)	BTU / (Wh)	17.4	17.2	16.9	16.6	16.7	17.1	17.0	16.6
Heating Capacity	(2)	MBH	813	881	949	1,052	1,154	1,314	1,451	1,588
Total power input	(2)	kW	81.3	88.0	96.3	104	112	128	142	160
COP	(2)	kW / kW	2.93	2.94	2.89	2.97	3.03	3.01	2.99	2.91
Refrigeration circuits		Nr	2							
N° of compressors		Nr					4			
Type of compressors		-				SCI	ROLL			
Refrigerant		-				R	-32			
Standard power supply		V				460/	3~/60			
Sound power level cooling (SC)	(3)	dB(A)	90	91	91	91	91	92	93	93
Sound power level cooling (EN)	(3)	dB(A)	87	87	87	87	88	89	89	90

- ✓ **Reversible Heat Pump Technology.** Capable of producing hot or cold water based on the season.
- ✓ High Reliability Design. Multiscroll technology optimizes performance with precise load adjustments, delivering consistent comfort and efficiency. EC axial fans offer superior airflow and energy efficiency. Two independent circuits provide redundancy and enhance reliability.
- √ High Sustainability Ecological Refrigerant. R32 with a Global Warming Potential of 675, reducing environmental impact.
- ✓ Industry-Leading Efficiency. High performance at full and partial load to adapt to the needs of the plant. IPLV (Integrated Part Load Value) up to 17.4, maximizing seasonal performance.
- ✓ Ultra-Quiet Operation. Our super-silenced version reduces noise levels, ensuring a quieter environment.
- ✓ Faster, More Efficient Defrosting. A special hydrophilic coil treatment shortens defrost cycles, ensuring uninterrupted performance and efficiency.
- ✓ **Optimized Modular Operation.** Cascade capability up to 7 units in a cascade setup.
- ✓ Full Range of Accessories. Comprehensive accessory options tailored for the North American market.

### **Functions and Features**



Heat

amua



















Air cooled installation

Outdoor R-32

Hermetic scroll

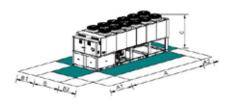
Electronic expansion

valve

ECOBREEZE HydroPack

Intelliplant

**Dimensions and Clearances** 



For trouble-free operation of the unit it is essential to maintain the safety distances indicated by the green areas.

SAN-YSC4 NA	90.4	100.4	110.4	120.4	130.4	145.4	160.4	175.4
in	162.5	162.5	162.5	162.5	162.5	201.0	201.0	201.0
in	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
in	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5
in	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1
in	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
in	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2
in	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2
lbs	6,206	6,303	6,380	6,700	6,936	7,805	8,131	8,405
	in in in in in in	in 162.5 in 87.7 in 99.5 in 59.1 in 27.6 in 47.2 in 47.2	in 162.5 162.5 in 87.7 87.7 in 99.5 99.5 in 59.1 59.1 in 27.6 27.6 in 47.2 47.2 in 47.2 47.2	in 162.5 162.5 162.5 in 87.7 87.7 87.7 in 99.5 99.5 99.5 in 59.1 59.1 in 27.6 27.6 27.6 in 47.2 47.2 47.2 in 47.2 47.2 47.2	in 162.5 162.5 162.5 162.5 162.5 in 87.7 87.7 87.7 87.7 in 99.5 99.5 99.5 99.5 in 59.1 59.1 in 27.6 27.6 27.6 27.6 in 47.2 47.2 47.2 47.2 in 47.2 47.2 47.2	in 162.5 162.5 162.5 162.5 162.5 162.5 162.5 16 162.5 16 162.5 16 162.5 16 162.5 16 162.5 16 162.5 16 162.5 16 162.5 16 162.5 16 162.5 16 162.5 16 162.5 16 162.5 16 162.5 16 162.5 162.5 16 162.5 162.5 16 162.5 162.5 16 162.5 162	in         162.5         162.5         162.5         162.5         162.5         201.0           in         87.7	in         162.5         162.5         162.5         162.5         162.5         201.0         201.0           in         87.7 <td< td=""></td<>

### The above mentioned data are referred to standard units for the constructive configurations indicated.

# **Versions and Configurations**

### SUPPLY VOLTAGE:

**4606H** 460/3/60 Supply voltage (Standard) **5756H** 573/3/60 Supply voltage

### EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

Device for fan consumption reduction of the external section, ECOBREEZE type (Standard)

### **Technical Data**

SIZE	▶▶ WS	AN-YSC4 NA	90.4	100.4	110.4	120.4	130.4	145.4	160.4	175.4
Cooling Capacity	(1)	ton	67.7	73.4	79.1	84.1	92.1	103	115	126
Total power input	(1)	kW	77.3	87.1	95.8	104	114	125	139	157
EER	(1)	BTU / (Wh)	10.5	10.1	9.91	9.69	9.72	9.89	9.92	9.64
IPLV	(1)	BTU / (Wh)	17.4	17.2	16.9	16.6	16.7	17.1	17.0	16.6
Heating Capacity	(2)	MBH	813	881	949	1,052	1,154	1,314	1,451	1,588
Total power input	(2)	kW	81.3	88.0	96.3	104	112	128	142	160
COP	(2)	kW / kW	2.93	2.94	2.89	2.97	3.03	3.01	2.99	2.91
Refrigeration circuits		Nr					2			
N° of compressors		Nr					4			
Type of compressors		-				SCF	ROLL			
Refrigerant						R-	32			
Standard power supply		V				460/	3~/60			
Sound power level cooling (SC)	(3)	dB(A)	90	91	91	91	91	92	93	93
Sound power level cooling (EN)	(3)	dB(A)	87	87	87	87	88	89	89	90

ACOUSTIC CONFIGURATION:

Super-silenced acoustic configuration

Acoustic configuration with compressor soundproofing (Standard)

(1) Data: User side heat exchanger water 54 °F / 44 °F; Outdoor Air 95 °F
(2) Data: User side heat exchanger water 110 °F / 120 °F; Outdoor air 47 °F d.b. / 43 °F w.b.
(3) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2

PRELIMINARY DATA

### Accessories

CCCA	Copper / aluminium condenser coil with acrylic lining	SPC1	Set-point compensation with 4-20 mA
CCCA1	Condenser coil with Aluminium Energy Guard DCC treatment	SCP4	Set-point compensation with 0-10 V
PFGP	Soundproofing paneling of the pumping unit	PSX	Mains power supply
IVFDT	Inverter driven variable flow-rate user side control depending on the	<b>AMMX</b>	Rubber antivibration mounts
	temperature differential	PGFC	Finned coil protection grill
CSVX	Couple of manually operated shut-off valves	<b>PGCCH</b>	Anti-hail protection grilles
IFWX	Steel mesh strainer on the water side	1PM	Hydropack user side with 1 on/off pump
CMSC9	Serial communication module for Modbus supervisor	1PMV	Hydropack user side with 1 inverter pump
CMSC11	Serial communication module for BACnet-IP supervisor	1PMH	Hydropack user side with 1 high static pressure on/off pump
CMSC12	Serial communication module for BACnet-MSTP supervisor	1PMVH	Hydropack user side with 1 high static pressure inverter pump
RCMRX	Remote control via microprocessor control	1P1SB	Hydropack user side with 1+1 on/off pump
RE-25	Electrical panel antifreeze protection for min. outdoor temperature down to -25°C	1P1SBV	Hydropack user side with 1+1 inverter pump
DML4-20	Demand limit with 4-20 mA	1PAPS	Hydropack user side with 1+1 high static pressure on/off pump
DML0-10	Demand limit with 0-10 V	1PAPSV	Hydropack user side with 1+1 high static pressure inverter pump
ECS	ECOSHARE function for the automatic management of a group of units		

Accessories whose code ends with "X" are supplied separately

# SPINCHILLER4 PL NA



### Polyvalent heat pump

Air cooled Outdoor installation

Capacity frome 67.7 to 126 TON

WSAN-YSC4 PL NA 90.4÷175.4

- ✓ Polyvalent Heat Pump Technology. Capable of producing hot and cold water at the same time.
- ✓ High Reliability Design. Multiscroll technology optimizes performance with precise load adjustments, delivering consistent comfort and efficiency. EC axial fans offer superior airflow and energy efficiency. Two independent circuits provide redundancy and enhance reliability
- ✓ High Sustainability Ecological Refrigerant. R32 with a Global Warming Potential of 675, reducing environmental impact.
- ✓ Industry-Leading Efficiency. High performance at full and partial load to adapt to the needs of the plant. Total Efficiency Ratio (TER) up to 7.1 for outstanding energy savings. IPLV (Integrated Part Load Value) up to 17.4, maximizing seasonal performance.
- ✓ **Ultra-Quiet Operation.** Our super-silenced version reduces noise levels, ensuring a quieter environment.
- √ Smart Defrost Technology. Our advanced defrost algorithm, reduces energy loss by 33% compared to traditional defrost. A special hydrophilic coil treatment shortens defrost cycles, ensuring performance and efficiency.
- ✓ **Optimized Modular Operation.** Cascade capability up to 7 units in a cascade setup.
- ✓ Full Range of Accessories. Comprehensive accessory options tailored for the North American market.

### **Functions and Features**



















Heat pump

Δir

cooled

Outdoor installation

R-32

Hermetic

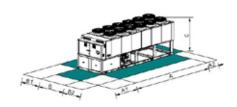
scroll

Electronic

ECOBREEZE HydroPack Intelliplant

expansion valve

### **Dimensions and Clearances**



CAUTION

For trouble-free operation of the unit it is essential to maintain the safety distances indicated by the green areas.

Size >> WSAN-Y	SC4 PL NA	90.4	100.4	110.4	120.4	130.4	145.4	160.4	175.4
A - Length	in	161.9	161.9	161.9	161.9	161.9	200.4	200.4	200.4
B - Width	in	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
C - Height	in	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5
A1	in	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1
A2	in	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
B1	in	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2
B2	in	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2
Operating weight	lbs	6,592	6,834	6,834	7,278	7,560	8,489	8,816	9,221

The above mentioned data refer to standard units. For all other configurations, please refer to the dedicated technical bulletin.

### **Versions and Configurations**

### SUPPLY VOLTAGE:

4606H 460/3/60 Supply voltage (Standard) **5756H** 573/3/60 Supply voltage

### EXTERNAL SECTION FAN CONSUMPTION REDUCTION:

Device for fan consumption reduction of the external section, ECOBREEZE type (Standard)

### **Technical Data**

SIZE	<b>▶▶</b> WSAN-YS	C4 PL NA	90.4	100.4	110.4	120.4	130.4	145.4	160.4	175.4
Cooling 100% - Heating 0%										
Cooling Capacity	(1)	ton	67.7	73.4	79.1	84.1	92.1	103	115	126
Total power input	(1)	kW	77.3	87.1	95.8	104	114	125	139	157
EER	(1)	BTU / (Wh)	10.5	10.1	9.91	9.69	9.72	9.89	9.92	9.64
IPLV	(1)	BTU / (Wh)	17.4	17.2	16.9	16.6	16.7	17.1	17.0	16.6
Cooling 0% - Heating 100%										
Heating Capacity	(2)	MBH	839	906	975	1,078	1,179	1,343	1,489	1,636
Total power input	(2)	kW	81.3	88.2	95.9	102	111	127	140	159
COP	(2)	kW / kW	3.02	3.01	2.98	3.08	3.12	3.11	3.11	3.02
Cooling 100% - Heating 1009	%									
Cooling Capacity	(3)	ton	65.9	71.5	77.1	82.0	90.1	101	112	123
Heating Capacity	(3)	MBH	1,025	1,116	1,209	1,292	1,415	1,593	1,766	1,935
Total power input	(3)	kW	75.1	82.4	90.5	98.0	106	120	134	146
TER	(3)	kW / kW	7.08	7.02	6.91	6.80	6.88	6.85	6.83	6.84
Refrigeration circuits		Nr					2			
N° of compressors		Nr					4			
Type of compressors		-				SCR	OLL			
Refrigerant		-				R-	32			
Standard power supply		V				460/	3~/60			
Sound power level cooling (SC)	(4)	dB(A)	90	91	91	91	91	92	93	93
Sound power level cooling (EN)	(4)	dB(A)	87	87	87	87	88	89	89	90

STRUCTURAL CONFIGURATION:

ACOUSTIC CONFIGURATION:

Configuration for 4-pipe system

Super-silenced acoustic configuration

Acoustic configuration with compressor soundproofing (Standard)

The above mentioned data refer to standard units. For all other configurations, please refer to the dedicated technical bulletin

### Accessories

CCCA	Copper / aluminium condenser coil with acrylic lining	SCP4	Set-point compensation with 0-10 V
CCCA1	Condenser coil with Aluminium Energy Guard DCC treatment	PSX	Mains power supply
PFGP	Soundproofing paneling of the pumping unit	<b>AMMX</b>	Spring antivibration mounts
IVFCDT	Variable flow rate control cooling side by inverter according to the	PGFC	Finned coil protection grill
	temperature differential	PGCCH	Anti-hail protection grilles
IVFHDT	Variable flow rate control heating side by inverter according to the	1PMHS	Hydropack for hot side with 1 on/off pump
	temperature differential	1PMHSH	Hydropack for hot side with 1 high static pressure on/off pump
CSVX	Couple of manually operated shut-off valves	1PMHSV	Hydropack for hot side with 1 inverter pump
IFWX	Steel mesh strainer on the water side	1PMHSVH	Hydropack for hot side with 1 high static pressure inverter pump
CMSC9	Serial communication module for Modbus supervisor	1+1PMHS	Hydropack for hot side with 1+1 on/off pump
CMSC11	Serial communication module for BACnet-IP supervisor	1+1PMHSH	Hydropack for hot side with 1+1 high static pressure on/off pump
CMSC12	Serial communication module for BACnet-MSTP supervisor	1+1PMHSV	Hydropack for hot side with 1+1 inverter pump
RCMRX	Remote control via microprocessor control	1+1PMHSV	H Hydropack for hot side with 1+1 high static pressure inverter pump
RE-25	Electrical panel antifreeze protection for min. outdoor temperature down	1PMCS	Hydropack for cold side with 1 on/off pump
	to -25 °C	1PMCSH	Hydropack for cold side with 1 high static pressure on/off pump
RE-39	Electrical panel antifreeze protection for min. outdoor temperature down	1PMCSV	Hydropack for cold side with 1 inverter pump
	to -39 °C	1PMCSVH	Hydropack for cold side with 1 high static pressure inverter pump
DML4-20	Demand limit with 4-20 mA	1+1PMCS	Hydropack for cold side with 1+1 on/off pump
DML0-10	Demand limit with 0-10 V	1+1PMCSH	Hydropack for cold side with 1+1 high static pressure on/off pump
CREFBH	High static pressure ecobreeze system	1+1PMCSV	Hydropack for cold side with 1+1 inverter pump
ECS	ECOSHARE function for the automatic management of a group of units	1+1PMCSV	H Hydropack for cold side with 1+1 high static pressure inverter pump
	0		

Set-point compensation with 4-20 mA Accessories whose code ends with "X" are supplied separately

<sup>(1)</sup> Data: User side heat exchanger water 54 °F / 44 °F; Outdoor Air 95 °F

<sup>(2)</sup> Data: User side heat exchanger water 110 °F / 120 °F; Outdoor air 47 °F d.b. / 43 °F w.b.

<sup>(3)</sup> Water hot side heat exchanger \*/120°F; Water to cold side heat exchanger \*/44 °F (4) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2

## **INTELLIPLANT**



Optimization system and modular heat pump supervisor

- ✓ Monitoring and control of hydronic chiller units, reversible heat pumps and multifunctional units.
- ✓ Workload distribution: the heating and cooling load is equally distributed between the various units, making the most of their operation in partial load mode.
- ✓ Centralized management: professional multi-site cloud platform for unified and simplified control allows the various systems to be monitored and managed from a single interface.

### **System Manager**

The INTELLIPLANT system allows you to efficiently and continuously manage the hydronic units on the local operator panel and on the remote interface on a computer, smartphone or tablet. Thanks to the values acquired in real time from the system, advanced control logics enable efficient management of thermal loads based on real system demand, constantly monitoring the system conditions and selecting unit activation, either based on the most performing activation sequence or by balancing the operating

- ✓ Monitoring and control of hydronic chiller units, reversible heat pumps and multifunctional units
- ✓ Primary circuit management of 2-pipe and 4-pipe systems
- ✓ Integration with BMS/BAS through open protocols

### **System Type Management**

SYSTEM TYPE	UNITS IN-BUILT CONTROL	INTELLIPLANT
2 PIPES (no DHW)	<b>✓</b>	
2 PIPES + DHW		<b>✓</b>
4 PIPES (no DHW)		<b>✓</b>
2 PIPES (no DHW)		<b>✓</b>
2 PIPES + DHW		<b>✓</b>
4 PIPES (no DHW)		<b>✓</b>

### **Graphic Interface**

### **Plant Schematic**



### **Plant Dashboard**



The main page of the system provides an overview with reports for all areas:

✓ percentage and mode of operation of individual units, broken down by areas;

 $\checkmark$  maintenance status resulting from the preventive analysis of each individual

The page offers a customized graphic representation where each area can be checked:

- ✓ operation status;
- ✓ real-time values of key operating parameters such as temperature and humidity;
- ✓ presence of alarms that must be promptly reported to the system supervisor/ manager.

current day's weather and forecast for the next 7 days.

✓ system operational status and quick action buttons;

The user can access detailed parameters specific to the area or individual units.

### Unit



The following basic information is displayed for each unit:

- ✓ graphical model of the unit with dynamic representation of the operating state;
- $\checkmark$  operating status of the unit and buttons for quick actions;
- √ details of component status (fans, compressors, etc.);
- ✓ list of parameters and their values in real time.

### **Predictive Maintenance**

✓ priority and second-level alarms;



INTELLIPLANT helps to develop the concept of maintenance from traditional "scheduled routine maintenance" to the more advanced idea of "condition based maintenance", i.e. maintenance customized per event according to its operational status, applicable to the most significant situations affecting refrigeration thermal unit components.

Notes		

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