

Model : **FAS051**



Mode	AIR
EcoDesign compliant	YES
Mode	Water chiller
Range	FLEXY
Size	FLEXY 2
Pump	P3 (3 bar)
Tank	Closed tank



The images of the product in this document is for illustrative purpose only and therefore do not have any contractual value.

Refrigerant gas R454B - ASHRAE Class A2L



Compact air-cooled water chillers for industrial applications. Flexy product range, are suitable for internal or external installation with dedicated "kit". Such units are suitable for cooling water, water mixtures with ethylene or propylene glycol, oil or emulsions for industrial processes. They are built with Scroll or multi-Scroll compressors, they allow for a high efficiency improvement at partial loads.

SCROLL COMPRESSOR/S

R410A (standard), or R32 (A2L), or R454B (A2L) cooling gas compressor(s), with built-in thermal protection and mounted on rubber anti-vibration. Direct start-up, engine cooled by the cold gas sucked, equipped with protective circuit breakers. Compressor loaded with polyester oil. On-off operation regulated by the microprocessor fitted on board the machine. Control of the gas temperature through a PTC probe on the head of the compressor.

COIL CONDENSER

Air finned copper tube exchanger, high efficiency, with aluminum air filter cleanable with metallic frame to protect against the fouling. High fins spacing for low maintenance. Micro-finned copper tubes, positioned in staggered rows and mechanically expanded into an aluminum finned pack.

AXIAL FAN

Axial fan directly coupled type, with wing-profile aluminum blades. It's designed not to create air turbulence. This ensures the max efficiency with the lowest sound level. Each fan is provided with a galvanized steel protection grid (dark), which is painted after construction. The IP54 fans motors are completely closed and provided with in-built overload protection thermostat, incorporated to the motor windings.

SHELL&TUBE EVAPORATOR

Shell & tube evaporator. Galvanized carbon steel tank and evaporator copper piping. High exchange area. High fluid passage. The elevated passage section allows the use for cooling fluids containing suspended impurities. Its specific shape allows to minimize the risk of ice formation. Complete with exhaust valve. Easily removable evaporator for maintenance.

P3 PUMP

Stainless centrifugal pump AISI304 with 3 bar available pressure. Silicon carbide/vidia mechanical seal with FPM (Viton) for water plus glycol emulsion. Easy pump access for friendly maintenance.

STRUCTURE

The frame is built from a robust base, galvanized carbon steel frame and dry-painted with polyester powders. Standard color RAL7035 texture finished. Internal machine access from the front and right panel for effective service and maintenance. The condensation airflow is sucked only on one side (left side) and ejected from the roof. Eye bolts for lifting with cranes.

FRIGORIFIC CIRCUIT

- Scroll compressor(s);
- High and low pressure to protect the circuit;
- High and low pressure gauges;
- Maintenance gauges;
- Dry-filter;
- Liquid flow sight glass;
- Electronic expansion valve;
- relief valve

"N" HYDRAULIC CIRCUIT TYPE

Hydraulic circuit "N" type, complete of galvanized steel "closed" tank, with Shell&Tube immersed evaporator, and standard stainless steel pressure pump. Stainless steel tank complete of drain valve, visual level and filling plug. No ferrous material. Rubber tubes. Flow switch safety device. 0-10 bar manometer with glycer. IN/OUT connection female thread.

ELECTRICAL CIRCUIT

Built in compliance with CE norm 60204-1/IEC 204-1 standards, inside of which are placed the control system and the components for motors starting, wired and tested in the factory. It is made by a cabinet suitable for indoor installation, containing power and control devices, RS30 microprocessor electronic board with LCD display multilanguage complete with keypad and display, for visualizing the several functions available. IP54 rating. Yellow/red main switch of lock-door type, isolation transformer for auxiliary circuits, automatic overload for compressors, fans, and pump. Free general alarm and remote ON/OFF contact with signal alarm on display. Terminal board, relays for phase sequencing and missing phase. Auxiliary circuit 24Vac.

CONTROLLER

RS30 parametric electronic microprocessor with LCD display, for unit management, with refrigerated water temperature regulation function. Control of operating parameters, easy diagnostic faults, historical storage alarms (up to 100 alarms). RS485 connection with standard Modbus communication.

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OPTIONAL INCLUDED

- [EC] - Electronic fans
- [FT] - Metallic air filter
- [AB] - Automatic by-pass
- [CP] - Plastic cover for digital controller
- [LW] - Low water temperature -10°C

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Process liquid chiller for industrial application

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Model **FAS051**
Range FLEXY
Code reference FAS051eNP3B3AGHL0-AZSM-XXX
Size FLEXY 2



COOLING CAPACITY		kW	35,33	(50Hz)
(Energy Efficiency Ratio) EER ⁽¹⁾			3,16	
(Seasonal Energy Performance Ratio) SEPR ⁽¹⁾	SEPR MT		3,39	
Electrical power absorbed	kW		11,17	
Referred at following conditions				
Leaving water temperature	°C		7,0	
Ambient temperature	°C		35,0	
Fluid			Water	
Altitude	Metres s.l.		0,0	
Accuracy fluid temperature	°C		+/- 2	
Ambient working limits	°C		-10+ 42,0	
Set-point water working limits	°C		-10,0 + 25,0	

REFRIGERANT GAS

Type / Safety class R454B
GWP / Refrigerant group / Safety class 467 / I / A2L

COMPRESSORS

Type Scroll
Quantity no. 1
Nr. Circuits 1
Part load % 0-100

CONDENSER

Fan type Axial
Quantity / Diameter no. / mm 2 / 450
Air flow m3/h 13.000

EVAPORATOR

Evaporator type SHELL&TUBE EVAPORATOR
Nominal flow rate l/min 100,94
Pressure drop bar 0,30

HYDRAULIC CIRCUIT

PUMP P3
Available pressure bar 2,83
TANK Closed tank
Storage tank capacity l 190

SOUND PRESSURE LEVEL

[Hz] - Octave bands								*d Distance 10 m	
63	125	250	500	1000	2000	4000	8000	Power dB(A)	Pressure dB(A)* ^d
47,1	64,2	75,5	77,2	76,7	73,8	66,5	56,6	82,2	54,2

DIMENSIONS

W Width mm 780,00
D Depth mm 1.860,00
H Height mm 1.635,00
Size FLEXY 2

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Weight	kg	500
Hydraulic connections IN/OUT	(inch)	1"1/2
POWER SUPPLY		400V(±10%) 3ph 50Hz
Auxiliary circuit	V	24Vac
IP protection class		IP54
Max power absorbed	kW	19,70
Max current absorbed	A	32,00
Starting current	A	140,00

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ECODESIGN DATA

Model	FAS051	Range	FLEXY
		Mode	AIR
		Refrigerant gas	R454B

Item	Symbol	Value	Unit
Operating temperature	t	-8	°C
Seasonal energy performance ratio	SEPR HT	3,39	[-]
Annual electricity consumption	Q	57.052	kWh/a

Parameters at full load and reference ambient temperature at rating point A ()**

Rated refrigeration capacity	P_A	21,41	kW
Rated power input	D_A	11,21	kW
Rated energy efficiency ratio	$EER_{DC,A}$	1,91	[-]

Parameters at rating point B

Rated refrigeration capacity	P_B	22,82	kW
Rated power input	D_B	9,07	kW
Rated energy efficiency ratio	$EER_{DC,B}$	2,52	[-]

Parameters at rating point C

Rated refrigeration capacity	P_C	24,10	kW
Rated power input	D_C	7,34	kW
Rated energy efficiency ratio	$EER_{DC,C}$	3,28	[-]

Parameters at rating point D

Rated refrigeration capacity	P_D	24,69	kW
Rated power input	D_D	7,34	kW
Rated energy efficiency ratio	$EER_{DC,D}$	3,36	[-]

Other items

Capacity control	Fixed		
Degradation co-efficient chillers (*)	$C_{dc,B} / C_{dc,C} / C_{dc,D}$	0,96 / 0,96 / 0,95	[-]
GWP of refrigerant	467		
Standard rating water limit conditions	High Temperature Process Chiller		$+2 \leq T_w \leq +12$

 Contact details **RPS COOLING S.r.l. - Via Veneto, 12/B - 46020 Suzzara (MN) - Italy**

 (*) If C_{dc} is not determined by measurement then the default degradation coefficient chillers shall be 0,9.

(**) For staged capacity units, two values divided by a slash ("/") will be declared in each box in the section referring to refrigeration capacity and EER.

Technical information in according of Commission Regulation (EU) 2009/125 on 21 October 2009, that implementing Directive 2009/125/CE on EcoDesign requirements.

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Annual electricity consumption	Q	57.052	kWh/a

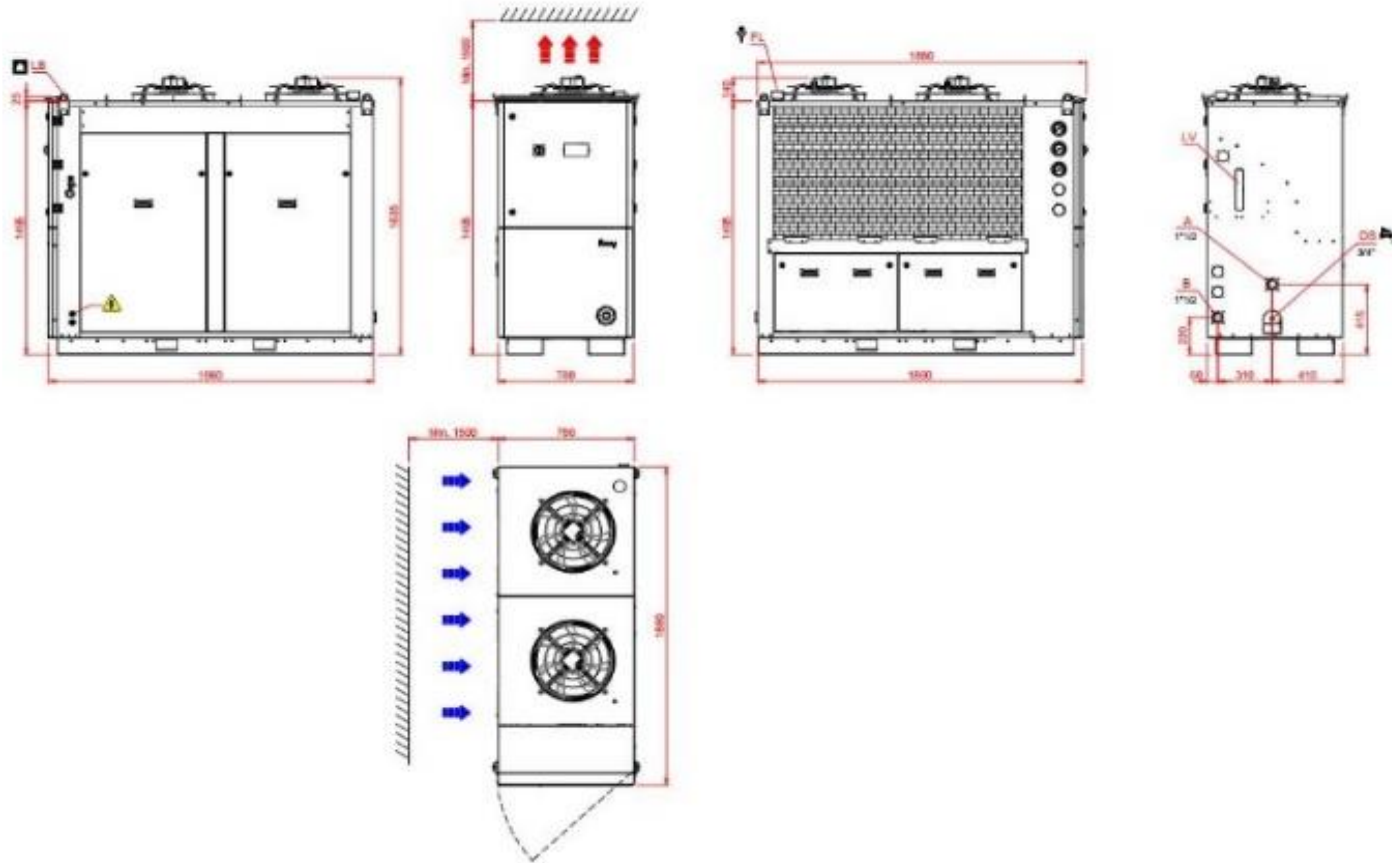
Parameters at full load and reference ambient temperature at rating point A ()**

Rated refrigeration capacity	P_A	21,41	kW
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The performance herewith refer to basic configuration unit without any accessory or option having electrical as power supply.

Software v.2023.02



DIMENSIONS					
W Width	mm	780	Range	FLEXY	
D Depth	mm	1.860	Size	FLEXY 2	
H Height	mm	1.635	Model	FAS051	
Weight	kg	500	Code reference	AS051eNP3B3AGHLO-AZSM-XX	

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DATE: 16/12/2023
 QUOTATION NO.:
 PROJECT REFERENCE: rental fleet 2024
 ATTENTION OF:
 CUSTOMER: AQUA COOLING - IKG

P3

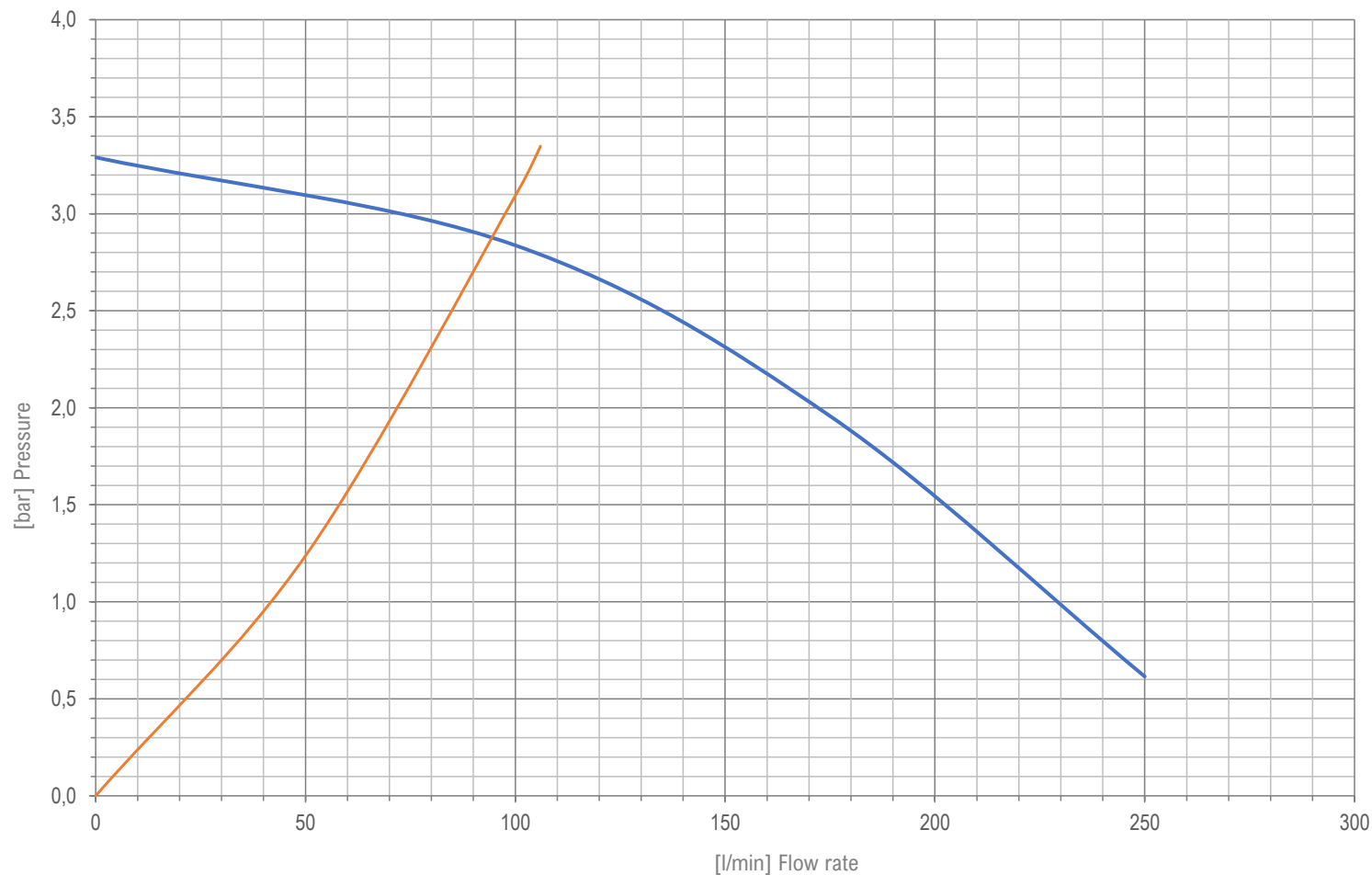
QUOTATION NO.:

PROJECT REFERENCE: rental fleet 2024

ATTENTION OF:

CUSTOMER: AQUA COOLING - IKG

Range	FLEXY	
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Size	FLEXY 2	
Pump	P3 (3 bar)	
Nominal flow rate	100,94	l/min
Available pressure*	2,83	bar



*Net pressure available at the hydraulic connections.



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