Refra®

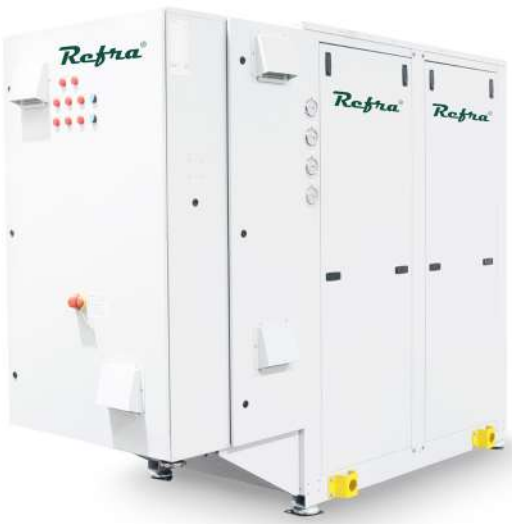
OASIS

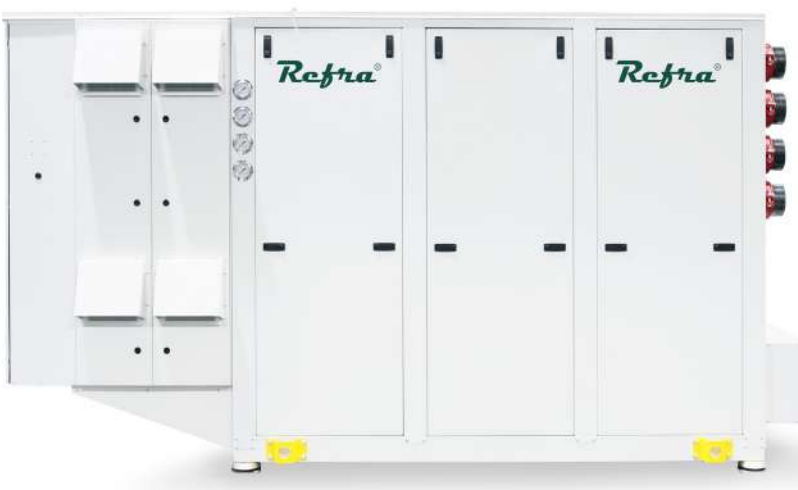
WATER TO WATER CHILLERS & HEAT PUMPS

R290

Technical Parameters
Additional Options

Version 1.2





ESTABLISHED IN 1994
44+ M TURNOVER
30 YEARS OF EXPERIENCE
PARTNERS IN
30+ COUNTRIES

2 FACTORIES
300+ EMPLOYEES
22 000 SQUARE METERS
OF PRODUCTION AREA

WE CAN MAKE IT SIMPLE

It is our promise to simplify the complex industry of refrigeration for our clients. Our expertise and dedication mean that you can rely on us to provide straightforward, efficient, and user-friendly cooling solutions. We are your partners in making the complex simple.

About us

Refra is an experienced European manufacturer of sustainable refrigeration and HVACR systems, specializing in advanced cooling and heating solutions with natural refrigerants. Founded in 1994, the company has over 30 years of engineering and manufacturing expertise.

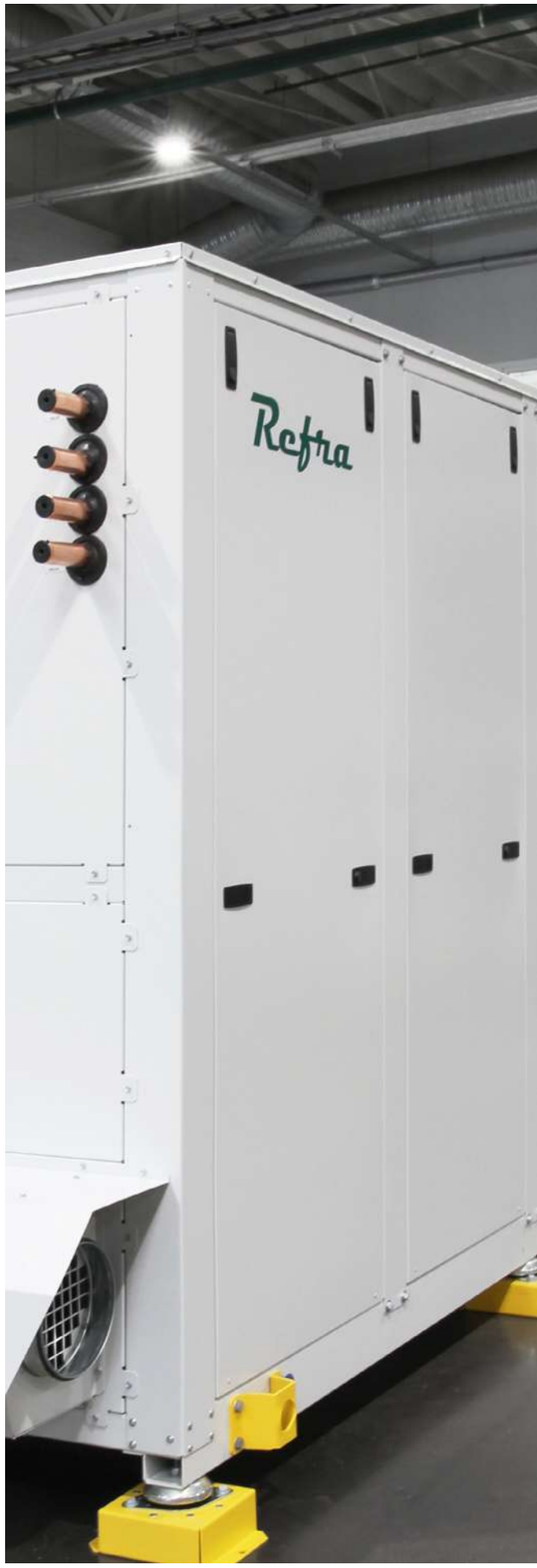
Refra designs and manufactures high-quality, safe and energy-efficient refrigeration, air conditioning and heating systems for industrial and commercial applications. The company is known for its ability to deliver both standard and fully customized solutions, engineered to meet complex technical requirements and specific customer needs.

Green by choice, safe by design

Green by choice reflects our deliberate decision to choose natural refrigerants since 2011 — long before environmental regulations made it mandatory. With a strong focus on low-GWP refrigerants, Refra cooling systems offer significantly lower global warming potential and comply with EU F-Gas regulations.

Safe by design represents our approach to quality and reliability. Every system is developed using certified components and designed in accordance with EN378 safety standards, performance and efficiency in mind. Our commitment to a better tomorrow drives us to engineer cutting-edge refrigeration systems that provide our customers with the tools to make a positive impact on the planet.

Visit our website and browse 80+ product catalogue



Best quality parts

Refra units are manufactured using world-renowned, high-quality components, ensuring exceptional reliability, performance, and durability in every product we deliver. Using high-quality components is essential because it guarantees the reliability and longevity of our units, reducing the risk of malfunctions and minimizing maintenance costs. These toptier parts contribute to the overall performance, energy efficiency, and safety of the equipment, ensuring that our customers receive solutions that meet the highest industry standards.

SIEMENS

Bitzer

Danfoss

ABB

Castel Italian technology

ALFA LAVAL

LAPP

SAMON safe monitoring

PHOENIX CONTACT

wieland

armacell

OLAB

ATMO Approved

At Refra, sustainability is at the core of everything we do. Leveraging natural refrigerants like CO2 has been a driving force behind our efforts to minimize carbon emissions and enhance energy efficiency. Receiving the ATMO Approved Label was an honor and a testament to our unwavering commitment to environmental innovation and climate-friendly solutions.

Getting this certification is not just about recognition; it's about holding ourselves accountable to the highest standards in sustainability. As a 'Best in Class' natural refrigerants company, we continually refine our technologies, enhance efficiency, and deliver innovative solutions, all with the goal of creating a greener future for our customers, industry, and planet.

Leaders in sustainable cooling and heating

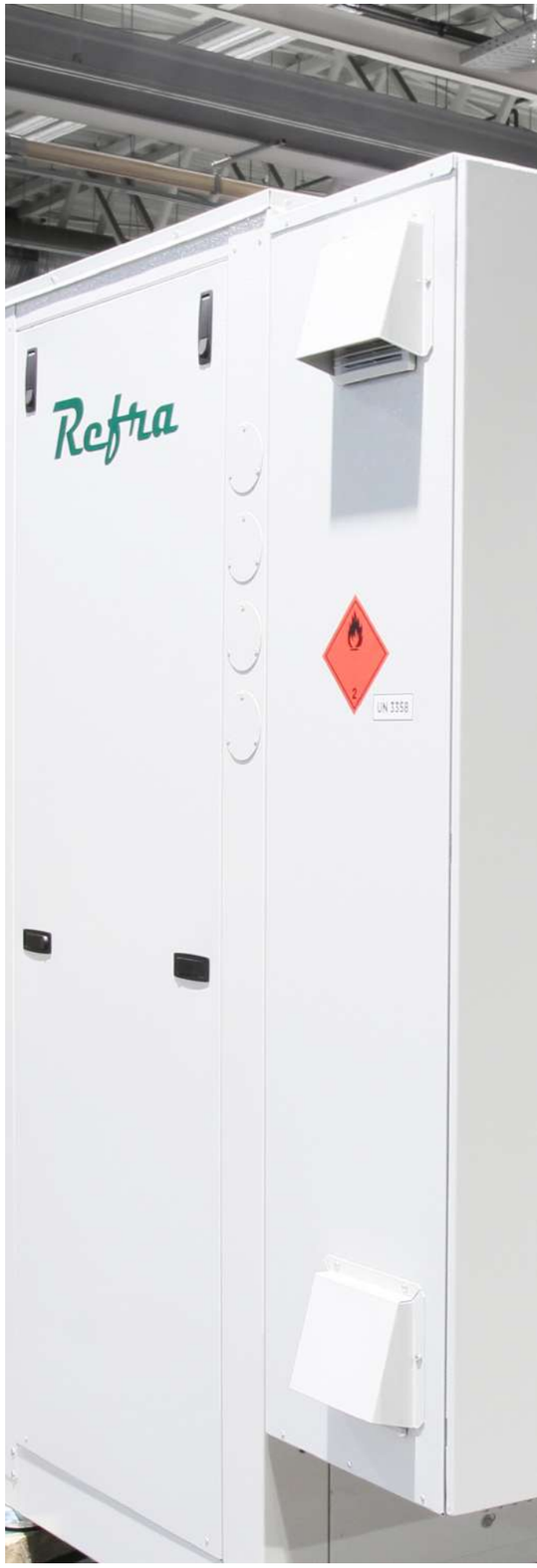
ATMO Approved is the world's leading industry label measuring and recognizing impact with natural refrigerants that power millions of refrigeration, chiller and heatpump systems worldwide. Each year 'Best in Class' manufacturers and contractors must meet strict criteria and demonstrate impact in order to 'become' ATMO Approved. Since 2022 over 80 companies have applied. To date only 18 have been (Re) Approved.

Cumulative avoided CO2e emissions over the years

2 287 000
metric tons of CO2e
(GWP_20 Years)

1 860 000
metric tons of CO2e
(GWP_100 Years)

TFA FREE - CLIMATE FRIENDLY - OZONE FRIENDLY
2026
NATURAL REFRIGERANTS
ATMO Approved



STANDARD PRODUCT LINE

OASIS HEAT PUMPS & CHILLERS

Oasis standard water-to-water product line is a versatile hydronic solution for high-efficiency heating and cooling in commercial and industrial buildings. Built on a unified platform concept, the range includes water-to-water heat pumps and liquid cooled chillers that share the same robust construction, advanced refrigeration technology and compact design philosophy.

Depending on project requirements, Oasis units can operate as dedicated heating or cooling systems, or be configured to deliver both heating and cooling capacities within the same installation, with the Siemens Climatix controller defining which output is prioritized. Oasis units feature a corrosion-resistant, acoustically insulated frame for indoor or outdoor installation. Reciprocating compressors, BPHE heat exchangers and independent circuits ensure reliable operation.

By utilizing water as a stable energy source or heat rejection medium, Oasis ensures consistent thermodynamic performance, optimized compressor operation, and high seasonal efficiency. Operating with natural refrigerant propane (R290), the Oasis line offers low GWP and compliance with the latest F-Gas regulations and EN378 safety standards.

- Low GWP
- Natural refrigerants
- F-gas compliance
- High seasonal efficiency
- Two applications in one
- Multi-circuit configuration
- Operational stability
- Reduced footprint
- Plug and play solution
- Lower investment costs

Ventilated Enclosure

Oasis units are designed according to the Class IV ventilated enclosure concept defined in EN378. All refrigerant containing components are located inside a dedicated enclosure, equipped with monitored ventilation and a refrigerant leak detector. The enclosure operates under slight negative pressure to prevent refrigerant from escaping into the surrounding space. If a leak is detected, the system automatically shuts down all non-ATEX components while the ventilation safely extracts refrigerant from the enclosure.

- Ventilated enclosure
- EN378 compliance
- Leak detection system
- Automatic safety shutdown
- Negative pressure control
- Refrigerant containment

OASIS WATER TO WATER LINE

OASIS CHILLERS

Propane (R290)

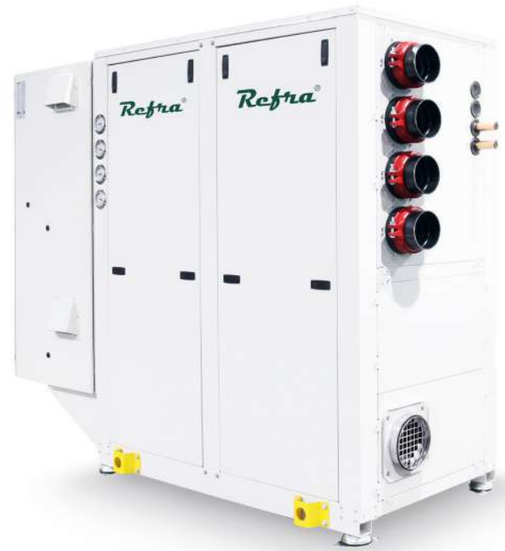
Cooling capacity: 26–410 kW

1–4 independent circuits

Indoor/Outdoor installation

Commercial & public buildings

Data centers & process cooling



OASIS HEAT PUMPS

Propane (R290)

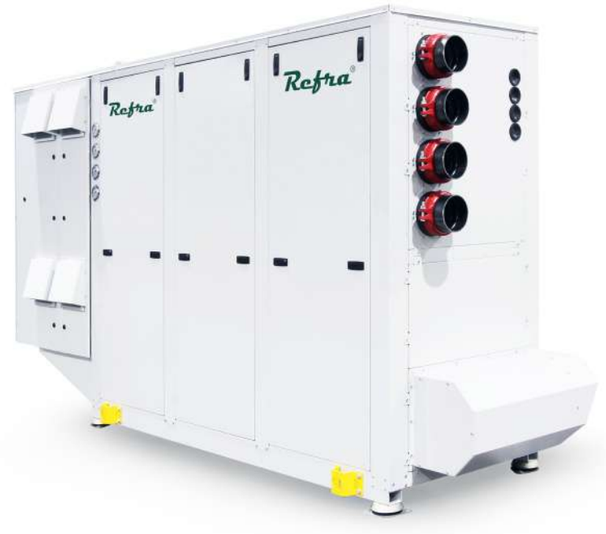
Heating capacity: 34–516 kW

1–4 independent circuits

Indoor/Outdoor installation

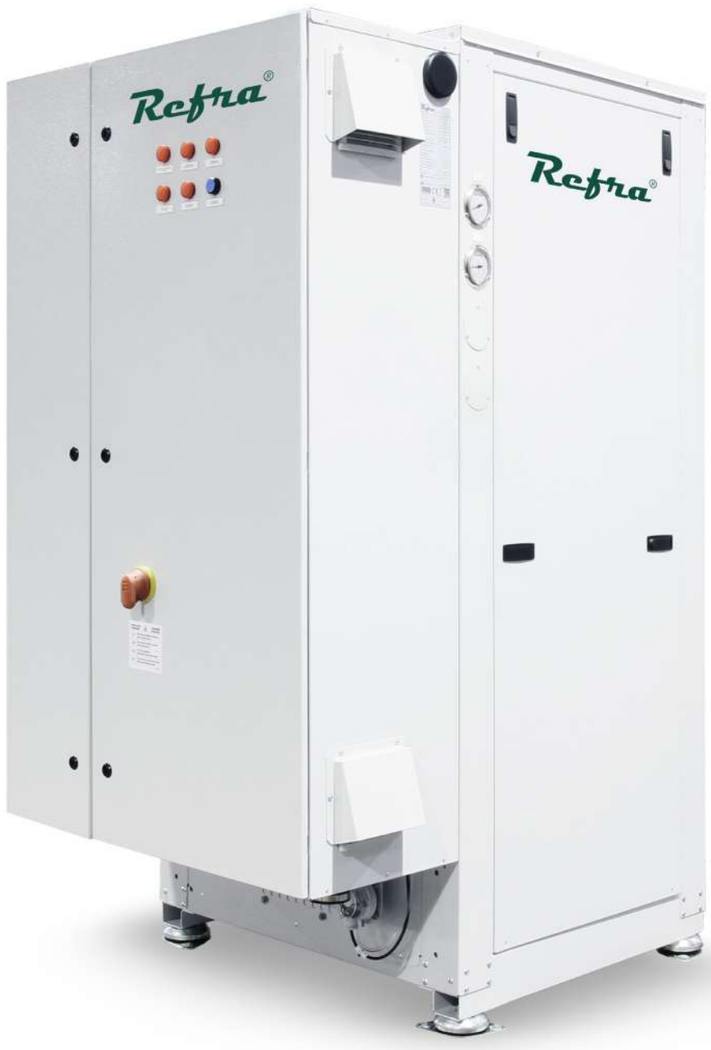
Groundwater & closed-loop systems

Commercial & industrial heating



HEAT PUMPS & CHILLERS

OASIS SOLO



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R290 HEAT PUMPS & CHILLERS

OASIS SOLO

Natural refrigerants available! #R290

Choose propane and contribute to the environment!

DESCRIPTION

Oasis Solo is a compact water-to-water heat pump and chiller designed for small to medium commercial and residential applications. With heating capacities from 34 kW to 151 kW and cooling capacities from 26 kW to 119 kW, the unit is well suited for office buildings, apartment blocks, retail spaces, hotels, and light industrial facilities requiring reliable hydronic heating and cooling from a space-efficient system.

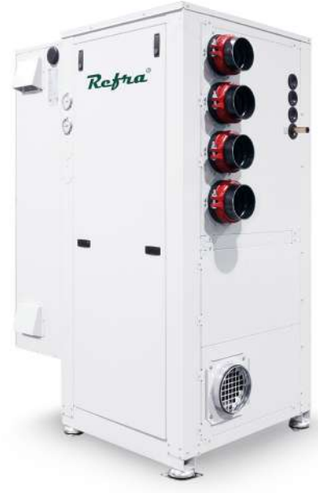
The unit features a single independent thermodynamic circuit, providing a simple and robust configuration. This design ensures straightforward control, easier maintenance, and efficient operation in projects with clearly defined and stable load profiles.

Oasis Solo is equipped with high-quality compressors and brazed plate heat exchangers (BPHE) to ensure efficient heat transfer and long-term durability. All components are integrated within a fully enclosed, factory-assembled galvanized steel frame with powder coating for enhanced corrosion resistance. Acoustic insulation is incorporated into the casing to reduce operational noise

The unit operates with natural refrigerant propane (R290), combining strong thermodynamic performance with a compact footprint and environmentally responsible design.

PARTS INCLUDED

Bitzer reciprocating compressors (Ex II-3G) with oil charge and oil level monitoring/differential pressure switch;
Polymer powder painted RAL7035 frame;
HP/LP pressure switch per circuit;
HP/LP pressure gauges per circuit;
Necessary pressure and temperature probes;
BPHE evaporator;
BPHE condenser;
Double safety valves per circuit;
Filter drier on liquid line per circuit;
Sight glass on liquid line per circuit;
Magnetic expansion valve per circuit;
Control board with Siemens Climatix controller;
R290 leak detector;
Δ P for fan monitoring.



Technical Parameters | Oasis Solo

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		OAS102	OAS103	OAS104	OAS105	OAS106
Standard version						
Heating capacity [1]	kW	34,1	41,3	48,3	56,2	75,3
Power consumption [1]	kW	7,3	8,1	9,5	11,0	15,1
COP		4,68	5,10	5,08	5,10	5,00
SCOP		4,41	4,58	4,69	4,80	4,96
SSHEE	%	173,48	180,24	184,64	188,96	195,44
Refrigeration capacity [1]	kW	26,8	33,2	38,8	45,2	60,2
EER		3,67	4,10	4,08	4,11	4,00
SEER		5,92	6,60	6,82	7,00	7,18
SEPR		7,60	8,58	8,55	8,57	8,41
System data						
Refrigerant	Type	R290				
Number of compressors	n	1	1	1	1	1
Refrigerant quantity per circuit	kg	2,4	3,7	3,8	3,8	3,8
Inlet/Outlet connection	DN	40	50	50	50	50
Sound pressure level in 10m [2]	dB(A)	42	42	44	47	47
Sound power level	dB(A)	73	73	75	78	78
Plate heat exchanger						
Number of plate heat exchangers	n	2	2	2	2	2
Flow rate heating	m³/h	6,4	7,7	9,1	10,5	14,1
Pressure drop heating (Cond.)	kPa	16,9	5,5	7,1	9,2	15,7
Flow rate cooling	m³/h	5,1	6,3	7,4	8,6	11,5
Pressure drop cooling (Evap.)	kPa	16,4	5,0	6,5	8,4	13,7
Power supply						
Voltage		400V 3N~50Hz				
Max. operating current	A	33,2	35,3	39,2	42,7	54,1
Starting current	A	95,4	126,0	145,0	171,0	224,0
Dimensions and weight						
Length	mm	1360	1360	1360	1360	1360
Width	mm	915	915	915	915	915
Height	mm	1885	1885	1885	1885	1885
Operating weight	kg	470	575	585	590	650

[1] Watercooled chillers and heat pumps capacities. User EG35% 12/7°C, condenser EG35% 40/45°C
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

Technical Parameters | Oasis Solo

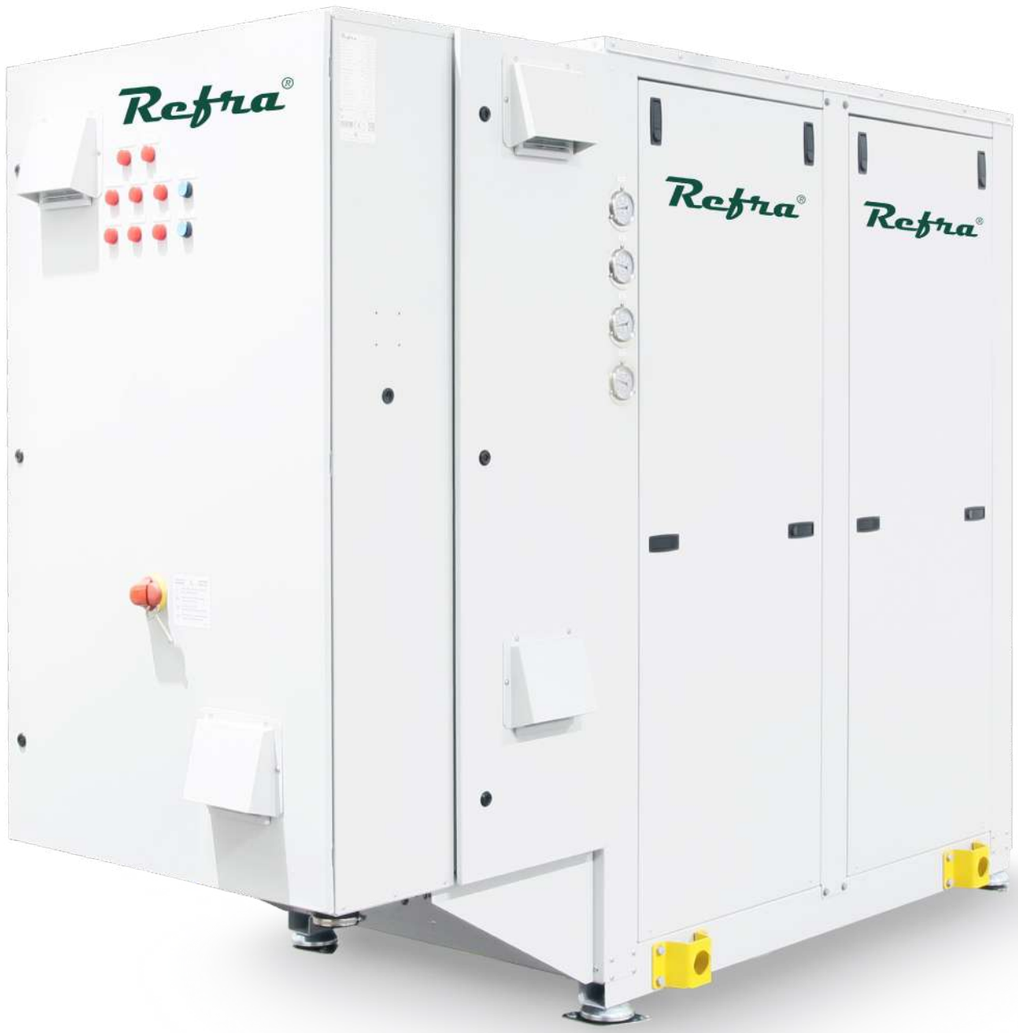
CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		OAS107	OAS108	OAS109	OAS110	OAS111
Standard version						
Heating capacity [1]	kW	87,3	104,9	110,4	129,1	151,5
Power consumption [1]	kW	17,3	21,3	22,5	26,6	32,45
COP		5,05	4,92	4,90	4,85	4,67
SCOP		5,05	5,05	5,01	4,87	4,90
SSHEE	%	199,08	198,84	197,36	191,88	192,80
Refrigeration capacity [1]	kW	70,1	83,6	87,9	102,5	119,2
EER		4,05	3,92	3,90	3,85	3,67
SEER		7,26	7,06	7,24	7,21	7,02
SEPR		8,38	7,87	8,19	8,03	7,78
System data						
Refrigerant	Type	R290				
Number of compressors	n	1	1	1	1	1
Refrigerant quantity per circuit	kg	3,9	4,4	4,7	4,8	4,8
Inlet/Outlet connection	DN	65	65	65	65	80
Sound pressure level in 10m [2]	dB(A)	51	51	50	53	53
Sound power level	dB(A)	82	82	81	84	84
Plate heat exchanger						
Number of plate heat exchangers	n	2	2	2	2	2
Flow rate heating	m³/h	16,1	19,4	20,4	24,1	28,3
Pressure drop heating (Cond.)	kPa	11,3	15,6	17,1	16,1	21,5
Flow rate cooling	m³/h	13,3	15,9	16,7	19,5	22,7
Pressure drop cooling (Evap.)	kPa	17,7	13,5	14,7	14,2	17,5
Power supply						
Voltage		400V 3N~50Hz				
Max. operating current	A	61,4	71,4	75,1	86,8	107,07
Starting current	A	246,0	246,0	288,0	375,0	416,97
Dimensions and weight						
Length	mm	1360	1360	1360	1360	1360
Width	mm	915	915	915	915	915
Height	mm	1885	1885	1885	1885	1885
Operating weight	kg	650	650	680	680	685

[1] Watercooled chillers and heat pumps capacities. User EG35% 12/7°C, condenser EG35% 40/45°C
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

HEAT PUMPS & CHILLERS

OASIS TWIN



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R290 HEAT PUMPS & CHILLERS

OASIS TWIN

Natural refrigerants available! #R290

Choose propane and contribute to the environment!

DESCRIPTION

Oasis Twin is a water-to-water heat pump and chiller designed for medium-capacity commercial and industrial applications requiring enhanced reliability and operational flexibility. With heating capacities from 112 kW to 303 kW and cooling capacities from 90 kW to 238 kW, the unit is ideally suited for office buildings, hotels, hospitals, larger residential complexes, and industrial facilities with variable or continuous thermal demand.

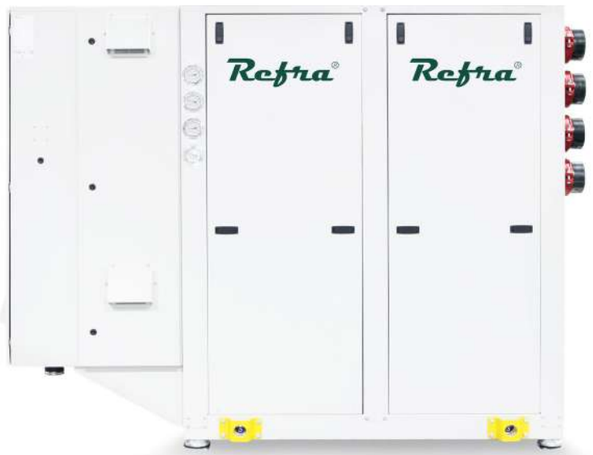
The unit is equipped with two independent thermodynamic circuits, allowing staged capacity control and improved part-load performance. This configuration enhances operational stability and provides increased security, as partial heating or cooling capacity can be maintained if one circuit is temporarily out of service. The dual-circuit design makes Oasis Twin particularly suitable for mission-critical applications where uninterrupted operation is essential.

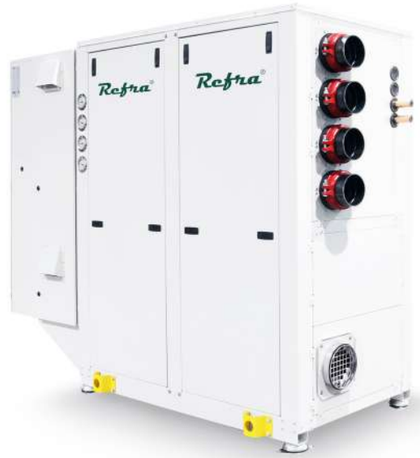
Oasis Twin integrates high-quality compressors and brazed plate heat exchangers (BPHE) to ensure efficient heat transfer and long-term durability. All components are housed within a fully enclosed, factory-assembled galvanized steel frame with powder coating for corrosion protection. Integrated acoustic insulation reduces operational noise

The unit operates with natural refrigerant propane (R290), combining strong thermodynamic performance with a compact footprint and environmentally responsible design.

PARTS INCLUDED

Bitzer reciprocating compressors (Ex II-3G) with oil charge and oil level monitoring/differential pressure switch;
Polymer powder painted RAL7035 frame;
HP/LP pressure switch per circuit;
HP/LP pressure gauges per circuit;
BPHE evaporator;
BPHE condenser;
Necessary pressure and temperature probes;
Double safety valves per circuit;
Filter drier on liquid line per circuit;
Sight glass on liquid line per circuit;
Magnetic expansion valve per circuit;
Control board with Siemens Climatix controller;
R290 leak detector;
Δ P for fan monitoring.





Technical Parameters | Oasis Twin

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		OAS210	OAS212	OAS214
Standard version				
Heating capacity [1]	kW	112,4	150,6	174,6
Power consumption [1]	kW	22,0	30,1	34,6
COP		5,10	5,00	5,05
SCOP		4,86	5,04	5,13
SSHEE	%	191,52	198,52	202,24
Refrigeration capacity [1]	kW	90,4	120,4	140,2
EER		4,11	4,00	4,05
SEER		6,71	6,88	6,98
SEPR		8,58	8,41	8,37
System data				
Refrigerant	Type	R290		
Number of compressors	n	2	2	2
Refrigerant quantity per circuit	kg	3,8	3,8	3,9
Inlet/Outlet connection	DN	65	65	80
Sound pressure level in 10m [2]	dB(A)	50	50	54
Sound power level	dB(A)	81	81	85
Plate heat exchanger				
Number of plate heat exchangers	n	4	4	4
Flow rate heating	m³/h	21,0	28,2	32,2
Pressure drop heating (Cond.)	kPa	9,2	15,7	11,3
Flow rate cooling	m³/h	17,2	23,0	26,6
Pressure drop cooling (Evap.)	kPa	8,4	13,7	17,7
Power supply				
Voltage		400V 3N~50Hz		
Max. operating current	A	72,5	95,3	109,9
Starting current	A	200,8	265,2	294,5
Dimensions and weight				
Length	mm	1980	1980	1980
Width	mm	930	930	930
Height	mm	1900	1900	1900
Operating weight	kg	1000	1200	1200

[1] Watercooled chillers and heat pumps capacities. User EG35% 12/7°C, condenser EG35% 40/45°C
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

REFRIGERATION

Technical Parameters | Oasis Twin

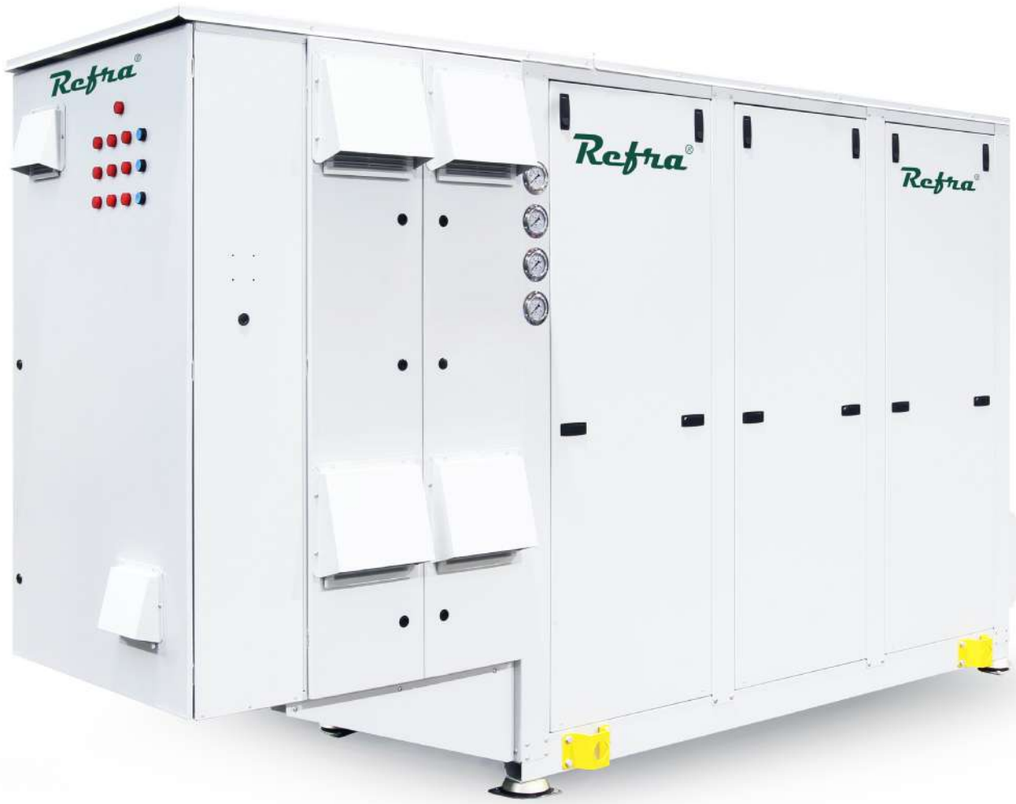
CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		OAS216	OAS218	OAS220	OAS222
Standard version					
Heating capacity [1]	kW	209,8	220,8	258,2	303,0
Power consumption [1]	kW	42,6	45,1	53,2	64,9
COP		4,92	4,90	4,85	4,67
SCOP		5,12	5,10	5,06	4,97
SSHEE	%	201,96	200,92	199,44	195,84
Refrigeration capacity [1]	kW	167,2	175,8	205,0	238,4
EER		3,92	3,90	3,85	3,67
SEER		6,75	6,93	6,90	6,57
SEPR		7,87	8,19	8,02	7,76
System data					
Refrigerant	Type	R290			
Number of compressors	n	2	2	2	2
Refrigerant quantity per circuit	kg	4,4	4,7	4,8	4,8
Inlet/Outlet connection	DN	80	80	100	100
Sound pressure level in 10m [2]	dB(A)	54	53	56	56
Sound power level	dB(A)	85	84	87	87
Plate heat exchanger					
Number of plate heat exchangers	n	4	4	4	4
Flow rate heating	m³/h	38,8	40,8	48,2	56,6
Pressure drop heating (Cond.)	kPa	15,6	17,1	16,1	21,5
Flow rate cooling	m³/h	31,8	33,4	39,0	45,4
Pressure drop cooling (Evap.)	kPa	13,5	14,7	14,2	17,5
Power supply					
Voltage		400V 3N~50Hz			
Max. operating current	A	129,9	137,3	160,7	201,25
Starting current	A	304,5	350,2	448,9	511,15
Dimensions and weight					
Length	mm	1980	1980	1980	1980
Width	mm	930	930	930	930
Height	mm	1900	1900	1900	1900
Operating weight	kg	1240	1280	1280	1290

[1] Watercooled chillers and heat pumps capacities. User EG35% 12/7°C, condenser EG35% 40/45°C
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

HEAT PUMPS & CHILLERS

OASIS TRIBUS



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R290 HEAT PUMPS & CHILLERS

OASIS TRIBUS

Natural refrigerants available! #R290

Choose propane and contribute to the environment!

DESCRIPTION

Oasis Tribus is a high-capacity water-to-water heat pump and chiller designed for commercial and industrial facilities with substantial and variable thermal demand. Delivering heating capacities from 168 kW to 454 kW and cooling capacities from 135 kW to 357 kW, the unit is ideally suited for large office buildings, hospitals, hotels, residential complexes, industrial processes, and infrastructure projects requiring dependable hydronic performance.

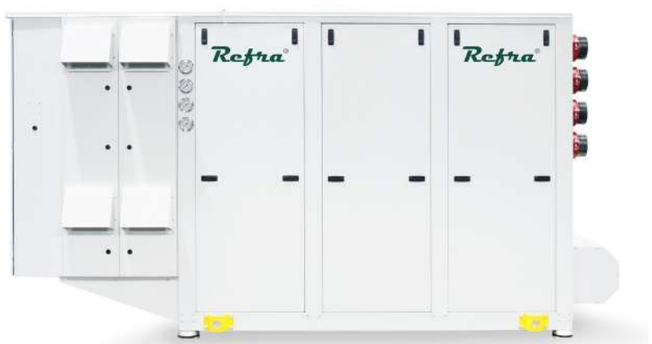
The unit is equipped with three independent thermodynamic circuits, providing advanced capacity staging and enhanced operational security. This multi-circuit configuration allows the system to closely match load fluctuations, improving part-load efficiency and ensuring stable operation. In the event of maintenance or temporary circuit shutdown, partial heating or cooling capacity remains available, making Oasis Tribus particularly suitable for applications where continuity of service is critical.

Oasis Tribus incorporates high-quality compressors and brazed plate heat exchangers (BPHE) to ensure efficient heat transfer and long-term durability under demanding operating conditions. All components are integrated within a fully enclosed, factory-assembled galvanized steel frame with powder coating for corrosion resistance. Acoustic insulation is built into the casing to maintain low noise levels despite the higher capacity output.

Operating with natural refrigerant propane (R290), Oasis Tribus combines high output performance, operational flexibility, and environmental responsibility within the Oasis water-to-water platform.

PARTS INCLUDED

Bitzer reciprocating compressors (Ex II-3G) with oil charge and oil level monitoring/differential pressure switch;
Polymer powder painted RAL7035 frame;
HP/LP pressure switch per circuit;
HP/LP pressure gauges per circuit;
Necessary pressure and temperature probes;
BPHE evaporator;
BPHE condenser;
Double safety valves per circuit;
Filter drier on liquid line per circuit;
Sight glass on liquid line per circuit;
Magnetic expansion valve per circuit;
Control board with Siemens Climatix controller;
R290 leak detector;
Δ P for fan monitoring.



Technical Parameters | Oasis Tribus

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		OAS315	OAS318	OAS321
Standard version				
Heating capacity [1]	kW	168,6	225,9	261,9
Power consumption [1]	kW	33,0	45,2	51,9
COP		5,10	5,00	5,05
SCOP		4,97	5,14	5,23
SSHEE	%	195,60	202,52	206,32
Refrigeration capacity [1]	kW	135,6	180,6	210,3
EER		4,11	4,00	4,05
SEER		6,58	6,75	6,82
SEPR		8,58	8,40	8,38
System data				
Refrigerant	Type	R290		
Number of compressors	n	3	3	3
Refrigerant quantity per circuit	kg	3,8	3,8	3,9
Inlet/Outlet connection	DN	65	80	100
Sound pressure level in 10m [2]	dB(A)	51	51	55
Sound power level	dB(A)	82	82	86
Plate heat exchanger				
Number of plate heat exchangers	n	6	6	6
Flow rate heating	m³/h	31,5	42,3	48,3
Pressure drop heating (Cond.)	kPa	9,2	15,7	11,3
Flow rate cooling	m³/h	25,8	34,5	39,9
Pressure drop cooling (Evap.)	kPa	8,4	13,7	17,7
Power supply				
Voltage		400V 3N~50Hz		
Max. operating current	A	102,2	136,3	158,2
Starting current	A	230,4	306,2	342,8
Dimensions and weight				
Length	mm	2700	2700	2700
Width	mm	930	930	930
Height	mm	1900	1900	1900
Operating weight	kg	1900	2060	2060

[1] Watercooled chillers and heat pumps capacities. User EG35% 12/7°C, condenser EG35% 40/45°C
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

Technical Parameters | Oasis Tribus

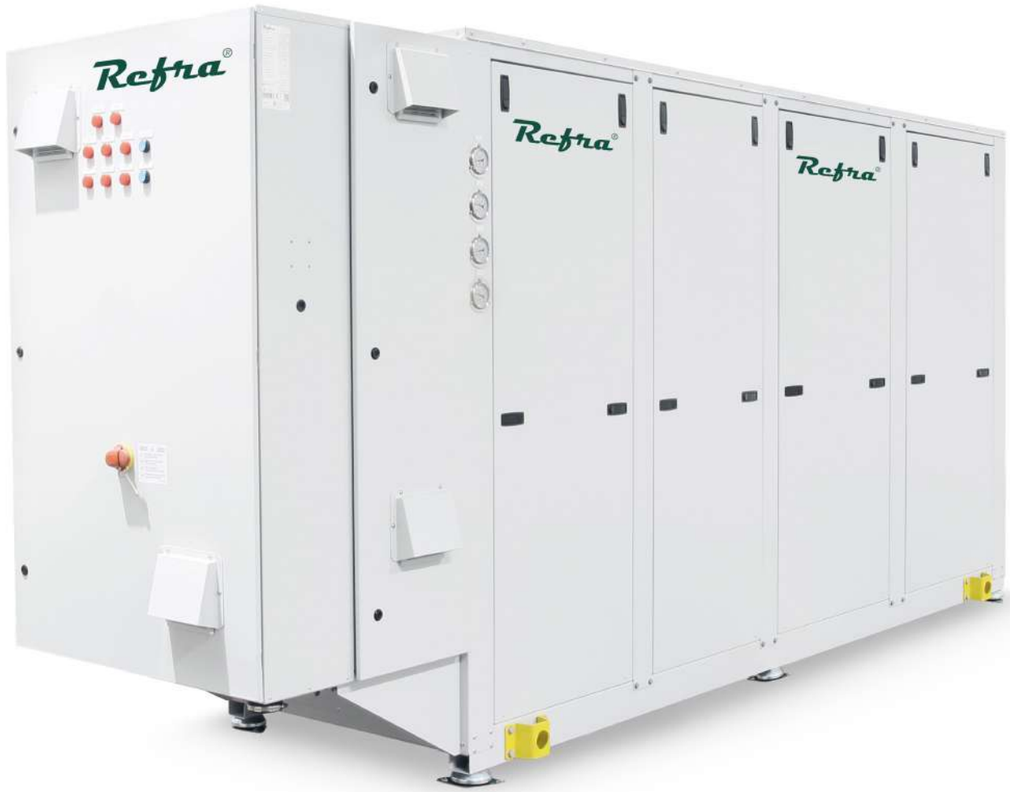
CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		OAS324	OAS327	OAS330	OAS333
Standard version					
Heating capacity [1]	kW	314,7	331,2	387,4	454,5
Power consumption [1]	kW	63,9	67,6	79,8	97,4
COP		4,92	4,90	4,85	4,67
SCOP		5,23	5,20	5,16	5,07
SSHEE	%	206,16	205,04	203,28	199,88
Refrigeration capacity [1]	kW	250,8	263,7	307,6	357,6
EER		3,92	3,90	3,85	3,67
SEER		6,63	6,80	6,75	6,56
SEPR		7,87	8,19	8,03	7,78
System data					
Refrigerant	Type	R290			
Number of compressors	n	3	3	3	3
Refrigerant quantity per circuit	kg	4,4	4,7	4,8	4,8
Inlet/Outlet connection	DN	100	100	100	125
Sound pressure level in 10m [2]	dB(A)	55	55	58	58
Sound power level	dB(A)	86	86	89	89
Plate heat exchanger					
Number of plate heat exchangers	n	6	6	6	6
Flow rate heating	m³/h	58,2	61,2	72,2	84,9
Pressure drop heating (Cond.)	kPa	15,6	17,1	16,1	21,5
Flow rate cooling	m³/h	47,7	50,1	58,6	68,1
Pressure drop cooling (Evap.)	kPa	13,5	14,7	14,2	17,5
Power supply					
Voltage		400V 3N~50Hz			
Max. operating current	A	188,2	199,3	234,4	295,32
Starting current	A	362,8	412,2	522,6	605,22
Dimensions and weight					
Length	mm	2700	2700	2700	2700
Width	mm	930	930	930	930
Height	mm	1900	1900	1900	1900
Operating weight	kg	2070	2175	2175	2230

[1] Watercooled chillers and heat pumps capacities. User EG35% 12/7°C, condenser EG35% 40/45°C
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

HEAT PUMPS & CHILLERS

OASIS QUAD



* The photos in this brochure are for illustrative purposes only. The appearance of the final product may vary depending on your selections, additional options and other order details.

R290 HEAT PUMPS & CHILLERS

OASIS QUAD

Natural refrigerants available! #R290

Choose propane and contribute to the environment!

DESCRIPTION

Oasis Quad is the highest-capacity unit within the Oasis water-to-water range, engineered for large commercial and industrial facilities with demanding and continuous thermal loads. Delivering heating capacities from 224 kW to 516 kW and cooling capacities from 180 kW to 410 kW, the unit is ideally suited for hospitals, large office complexes, hotels, district energy systems, industrial plants, and other mission-critical applications requiring reliable hydronic heating and cooling.

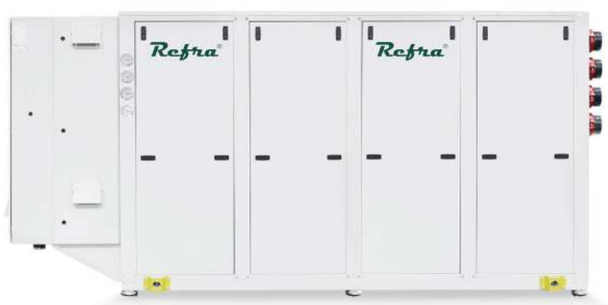
The unit is equipped with four independent thermodynamic circuits, providing maximum operational flexibility and redundancy. This configuration enables precise capacity staging across a wide load range, ensuring stable performance under fluctuating demand. In the event of maintenance or temporary circuit shutdown, a significant portion of the total capacity remains available, ensuring uninterrupted operation in critical environments.

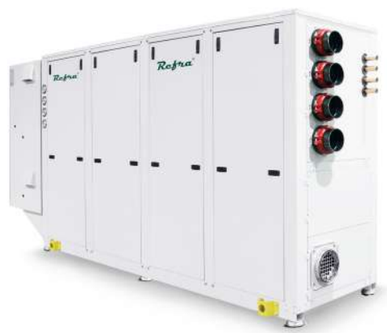
Oasis Quad integrates high-performance compressors and brazed plate heat exchangers (BPHE) to ensure efficient heat transfer and long-term durability under high-load conditions. All components are housed within a fully enclosed, factory-assembled galvanized steel frame with powder coating for corrosion protection. Integrated acoustic insulation helps maintain controlled noise levels despite the unit's high output capacity.

Operating with natural refrigerant propane (R290), Oasis Quad combines maximum output, advanced operational reliability, and environmental responsibility within the Oasis water-to-water platform.

PARTS INCLUDED

Bitzer reciprocating compressors (Ex II-3G) with oil charge and oil level monitoring/differential pressure switch;
Polymer powder painted RAL7035 frame;
HP/LP pressure switch per circuit;
HP/LP pressure gauges per circuit;
Necessary pressure and temperature probes;
BPHE evaporator;
BPHE condenser;
Double safety valves per circuit;
Filter drier on liquid line per circuit;
Sight glass on liquid line per circuit;
Magnetic expansion valve per circuit;
Control board with Siemens Climatix controller;
R290 leak detector;
Δ P for fan monitoring.





Technical Parameters | Oasis Quad

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		OAS420	OAS424	OAS428
Standard version				
Heating capacity [1]	kW	224,8	301,2	349,2
Power consumption [1]	kW	44,0	60,2	69,2
COP		5,10	5,00	5,05
SCOP		4,84	5,01	5,10
SSHEE	%	190,68	197,36	201,04
Refrigeration capacity [1]	kW	180,8	240,8	280,4
EER		4,11	4,00	4,05
SEER		6,64	6,80	6,89
SEPR		8,57	8,41	8,37
System data				
Refrigerant	Type	R290		
Number of compressors	n	4	4	4
Refrigerant quantity per circuit	kg	3,8	3,8	3,9
Inlet/Outlet connection	DN	80	100	100
Sound pressure level in 10m [2]	dB(A)	53	53	57
Sound power level	dB(A)	84	84	88
Plate heat exchanger				
Number of plate heat exchangers	n	8	8	8
Flow rate heating	m³/h	42,0	56,4	64,4
Pressure drop heating (Cond.)	kPa	9,2	15,7	11,3
Flow rate cooling	m³/h	34,4	46,0	53,2
Pressure drop cooling (Evap.)	kPa	8,4	13,7	17,7
Power supply				
Voltage		400V 3N~50Hz		
Max. operating current	A	131,8	177,4	206,6
Starting current	A	260,1	347,3	391,2
Dimensions and weight				
Length	mm	3420	3420	3420
Width	mm	930	930	930
Height	mm	1900	1900	1900
Operating weight	kg	2365	2570	2570

[1] Watercooled chillers and heat pumps capacities. User EG35% 12/7°C, condenser EG35% 40/45°C
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

Technical Parameters | Oasis Quad

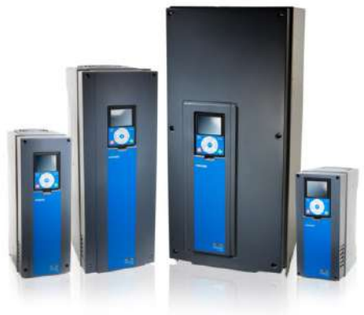
CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		OAS432	OAS436	OAS440
Standard version				
Heating capacity [1]	kW	419,6	441,6	516,5
Power consumption [1]	kW	85,2	90,2	106,4
COP		4,92	4,90	4,85
SCOP		5,10	5,06	5,03
SSHEE	%	200,80	199,32	198,12
Refrigeration capacity [1]	kW	334,4	351,6	410,1
EER		3,92	3,90	3,85
SEER		6,70	6,85	6,81
SEPR		7,87	8,19	8,03
System data				
Refrigerant	Type	R290		
Number of compressors	n	4	4	4
Refrigerant quantity per circuit	kg	4,4	4,7	4,8
Inlet/Outlet connection	DN	100	100	125
Sound pressure level in 10m [2]	dB(A)	57	56	59
Sound power level	dB(A)	88	87	90
Plate heat exchanger				
Number of plate heat exchangers	n	8	8	8
Flow rate heating	m³/h	77,6	81,6	96,3
Pressure drop heating (Cond.)	kPa	15,6	17,1	16,1
Flow rate cooling	m³/h	63,6	66,8	78,1
Pressure drop cooling (Evap.)	kPa	13,5	14,7	14,2
Power supply				
Voltage		400V 3N~50Hz		
Max. operating current	A	246,6	261,4	308,2
Starting current	A	421,2	474,3	596,4
Dimensions and weight				
Length	mm	3420	3420	3420
Width	mm	930	930	930
Height	mm	1900	1900	1900
Operating weight	kg	2600	2730	2730

[1] Watercooled chillers and heat pumps capacities. User EG35% 12/7°C, condenser EG35% 40/45°C
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

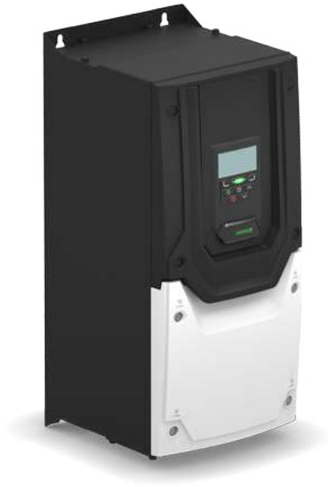
Additional options | Inverters

Inverters, also known as variable frequency drives (VFDs), are electronic devices used to control the rotational speed of electric motors by adjusting the frequency and voltage of the power supply. In water-to-water heat pumps and chillers, inverters are primarily applied to compressor motors, enabling variable-speed operation instead of fixed on/off control. This allows the unit to continuously adapt its output to the actual heating or cooling demand of the building.



HOW IT WORKS

In conventional fixed-speed systems, compressors operate at full capacity and cycle on and off to maintain the required water temperature. With inverter technology, compressor speed is modulated in real time according to load conditions. By precisely adjusting motor frequency, the refrigeration cycle output is continuously matched to system demand rather than operating in stepped stages.



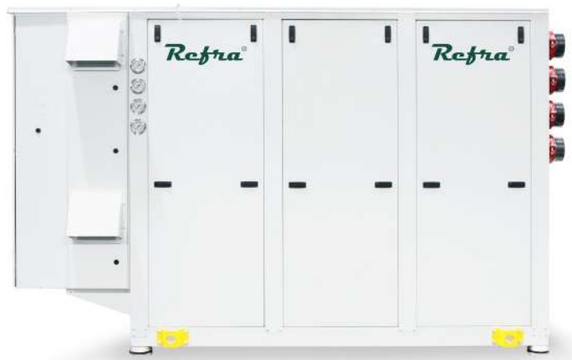
This variable-speed operation significantly improves part-load efficiency, reduces start-stop cycles, lowers inrush current, and minimizes mechanical stress on components. It also enhances temperature stability within the hydronic circuit and contributes to quieter operation. In applications with fluctuating demand, inverter-driven units provide smoother control and more stable overall system performance. Thanks to variable-speed inverter technology, the compressors can increase output beyond standard fixed-speed limits, delivering higher kW capacity on demand while maintaining efficient part-load performance.

- Variable-speed compressor control
- Continuous capacity modulation
- Improved part-load operation
- Reduced electrical and mechanical stress
- Enhanced operational stability
- Lead or full inverter configuration

REFRIGERATION

Additional options | Inverters

TWO MAIN CONFIGURATIONS ARE AVAILABLE: **LEAD INVERTER** OR **FULL INVERTER**.

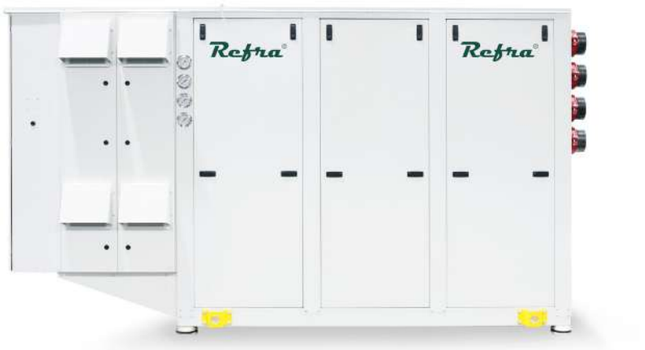


Lead inverter

A lead inverter configuration means that one compressor (or one thermodynamic circuit) is inverter-driven, while the remaining circuits operate at fixed speed. The inverter-controlled circuit provides fine capacity modulation, while the fixed-speed compressors deliver staged capacity as load increases. This solution offers an effective balance between investment cost and improved part-load efficiency, making it suitable for projects with moderate load variation.

Full inverter

A full inverter configuration means that all compressors within the unit are inverter-driven. This enables maximum modulation range, precise load matching, and optimized performance across all operating conditions. Full inverter systems are particularly recommended for buildings with highly variable thermal demand, strict energy performance targets, or applications where efficiency, noise reduction, and smooth operation are critical.



The number of available inverters corresponds directly to the number of circuits in each Oasis model. Solo allows one inverter, Twin up to two, Tribus up to three, and Quad up to four.

Units can be specified either with a single lead inverter or as a full inverter configuration, where all circuits operate with variable-speed control. **Intermediate combinations are not applied.**

Additional options | Inverters

OASIS SOLO SIZING INFORMATION WITH INVERTERS

Model		OAS102	OAS103	OAS104	OAS105	OAS106
Dimensions and weight						
Length with lead inverter	mm	1360	1360	1360	1360	1360
Length with all inverters	mm	1360	1360	1360	1360	1360
Width	mm	915	915	915	915	915
Height	mm	1885	1885	1885	1885	1885
Weight with lead inverter	kg	495	600	610	625	685
Weight with all inverters	kg	495	600	610	625	685

OASIS TWIN SIZING INFORMATION WITH INVERTERS

Model		OAS210	OAS212	OAS214	OAS216	OAS218
Dimensions and weight						
Length with lead inverter	mm	2305	2305	2305	2305	2305
Length with all inverters	mm	2305	2305	2305	2305	2305
Width	mm	930	930	930	930	930
Height	mm	1900	1900	1900	1900	1900
Weight with lead inverter	kg	1035	1235	1238	1293	1333
Weight with all inverters	kg	1115	1315	1321	1391	1431

OASIS TRIBUS SIZING INFORMATION WITH INVERTERS

Model		OAS315	OAS318	OAS321	OAS324	OAS327
Dimensions and weight						
Length with lead inverter	mm	3025	3025	3025	3025	3025
Length with all inverters	mm	3355	3355	3355	3355	3355
Width	mm	930	930	930	930	930
Height	mm	1900	1900	1900	1900	1900
Weight with lead inverter	kg	1935	2095	2098	2123	2228
Weight with all inverters	kg	2090	2250	2259	2314	2419

OASIS QUAD SIZING INFORMATION WITH INVERTERS

Model		OAS420	OAS424	OAS428	OAS432	OAS436
Dimensions and weight						
Length with lead inverter	mm	3745	3745	3745	3745	3745
Length with all inverters	mm	4075	4075	4075	4075	4075
Width	mm	930	930	930	930	930
Height	mm	1900	1900	1900	1900	1900
Weight with lead inverter	kg	2400	2605	2608	2653	2783
Weight with all inverters	kg	2575	2780	2792	2882	3012

Additional options | Inverters

OASIS SOLO SIZING INFORMATION WITH INVERTERS

Model		OAS107	OAS108	OAS109	OAS110	OAS111
Dimensions and weight						
Length with lead inverter	mm	1360	1360	1360	1360	1360
Length with all inverters	mm	1360	1360	1360	1360	1360
Width	mm	915	915	915	915	915
Height	mm	1885	1885	1885	1885	1885
Weight with lead inverter	kg	688	703	733	733	738
Weight with all inverters	kg	688	703	733	733	738

OASIS TWIN SIZING INFORMATION WITH INVERTERS

Model		OAS220	OAS222
Dimensions and weight			
Length with lead inverter	mm	2305	2305
Length with all inverters	mm	2305	2305
Width	mm	930	930
Height	mm	1900	1900
Weight with lead inverter	kg	1333	1343
Weight with all inverters	kg	1431	1441

OASIS TRIBUS SIZING INFORMATION WITH INVERTERS

Model		OAS330	OAS333
Dimensions and weight			
Length with lead inverter	mm	3025	3025
Length with all inverters	mm	3355	3355
Width	mm	930	930
Height	mm	1900	1900
Weight with lead inverter	kg	2228	2283
Weight with all inverters	kg	2419	2474

OASIS QUAD SIZING INFORMATION WITH INVERTERS

Model		OAS440
Dimensions and weight		
Length with lead inverter	mm	3745
Length with all inverters	mm	4075
Width	mm	930
Height	mm	1900
Weight with lead inverter	kg	2783
Weight with all inverters	kg	3012

Additional options

Flow switch

Detects the flow of liquid medium in HVAC systems. Used as a safety device to ensure there is an adequate flow of the fluid, and to trigger an alarm or shut down the system in case of low flow. **The flow switch is supplied as a separate component and must be installed on site by the customer.**

Flow meter

Utilises ultrasonic transit-time technology to provide accurate and repeatable water-flow measurement and insures the correct measured flow. Monitors the performance and efficiency of the system, ensures the adequate flow of fluid. **The flow meter is supplied as a separate component and must be installed on site by the customer.**

Check valve

Allows fluid to flow in one direction only, and prevents backflow in the opposite direction. Recommended for systems with more than one heat pump, to prevent backflow and ensure proper fluid flow. **The check valve is supplied as a separate component and must be installed on site by the customer.**

Emergency EX fan

ATEX-certified emergency ventilation fan designed for operation in potentially explosive environments. In the event of refrigerant leakage, the fan activates to ventilate the enclosure and support safe operation. **For indoor installations, the fan may be supplied separately and must be installed by the customer in accordance with EN378 standards.**

Outside installation

Designed for outdoor installation, this option includes a pre-mounted ventilation fan to ensure proper airflow within the unit enclosure. **The integrated fan increases the overall unit length by 200 mm.**

Trace heating

Maintains or raises the temperature of pipes and vessels through specially engineered cables to protect it from freezing at sub-zero temperatures.

Thick insulation frame

Additional 30 mm rock wool material for a super silent unit operation with double insulation reduces the sound level and strengthens the frame construction.

Antivibration mounts

Reduces and isolates the transmission of vibrations from the unit by using a rubber element with a metal casing.

Additional options

Electric energy meter

Monitors and records active, reactive, and apparent energy consumption, displaying the data with real-time visualization. Integrates seamlessly with power monitoring systems via Modbus and calculates average consumption over time.

Thermal energy meter

Measures heat energy in heating and cooling systems by combining an electric energy meter and an ultrasonic flow meter. Utilizes transit-time technology for accurate, repeatable water flow measurement, ensuring precise energy monitoring, optimal system performance, and efficiency.

Siemens cloud + modem GSM

This kit provides remote access to the unit controller. The cloud provides all relevant equipment data and allows to evaluate and control it efficiently using leading IoT analytics tools. **Customers who purchase Siemens Cloud option receive 2-year free cloud connection and a full 2-year warranty on Refra unit.**

Smart Grid (SG) Ready

Allows the controller to communicate with smart grid infrastructure, responding to signals from the grid to optimize energy usage. It supports demand response, energy management, and grid stabilization by enabling real-time monitoring, automated load adjustments, and integration with energy systems.

Keypad

Offers data point access and system configuration for Climatix controllers, featuring 240x128 dpi resolution display and 6 easy-to-use keys. Equipped with Alarm, Info, and Cancel functions, it supports multiple languages and local HMI settings.

Touch screen

High-resolution, 7-inch touch display offers an intuitive operator interface, quick connection to controllers via Ethernet or RS485/422. It minimizes engineering, lifecycle costs and commissioning, ensuring local control in production, process, and building automation.

Vacon inverter

Intelligent frequency inverter that controls AC motors efficiently and intelligently, allowing for precise speed regulation.

Varipack

Intelligent frequency inverter that controls AC motors efficiently and intelligently, allowing for precise speed regulation.

Register the Varipack product code along with the Bitzer compressor code and get a 2-year compressor warranty! https://bit.ly/BitzerWarranty

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Go Green

With a strong emphasis on environmental responsibility and sustainable practices Refra is leading the way in reducing global warming and embracing natural cooling technology. **We are on a mission to make a positive impact in the refrigeration industry since 2011 – that's when Refra became a pioneering company with an unwavering commitment to environmental sustainability and started producing refrigeration equipment with natural refrigerants.**

Our commitment to a better tomorrow drives us to engineer cutting-edge systems that provide our customers with the tools to make a positive impact on the planet. **At Refra, we envision a future where all of our products are powered by natural refrigerants, contributing to a world that's not just cooler, but also greener.**

R290

As we witness the growing demand for Hydrocarbon refrigeration systems, we are inspired to push the boundaries of innovation and develop technologically advanced refrigeration solutions.

Green by choice, safe by design