Refra®

GALAXY

PROPANE CHILLERS

R290

Technical Parameters
Additional Options

Version 4.2

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
wilo
Castel Italian technology
ALFA LAVAL
ebmpapst
armacell
OLAB
BELIMO
SAMON safe monitoring
ABB
GVN REFRIGERATION COMPONENTS
wieland
LAPP
brandoni VALVES
AQUA AERO HVAC&R COATINGS
ZIEHL-ABEGG

ATMO Approved

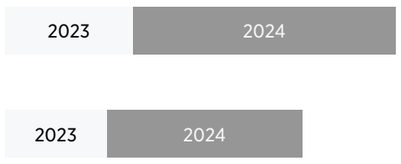
At Refra, sustainability is at the core of everything we do. Leveraging natural refrigerants like CO2 has been a driving force behind our efforts to minimize carbon emissions and enhance energy efficiency. Receiving the ATMO Approved Label was an honor and a testament to our unwavering commitment to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

Galaxy Chillers

Natural refrigerants available! #R290

Choose propane or propylene and contribute to the environment!

GALAXY MINI

DESCRIPTION

Galaxy Mini air-cooled chiller has the cooling capacity of 28 kW to 38 kW and is designed for commercial refrigeration and air conditioning applications with small power demand. Such systems are widely used in various factory cooling processes, supermarkets, gas stations and many other applications. **Galaxy Mini chiller is made with one circuit to service the end user.**

Galaxy Mini can be integrated with a built-in hydraulic module, winter kit or a heat recovery system and other useful additional options. Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

Comprehensive frame is assembled with high-quality EC fan motor technology, microchannel heat exchangers, reciprocating compressors. The galvanized steel and powder coated frame with a reliable 20 mm non-flammable acoustical PU foam insulation material ensures proper unit protection as well as noise reduction. An additional 30 mm rock wool material can be supplemented for a super silent unit operation.

ErP 2026

Unit meets EU Energy-related Products Directive for energy efficiency and environmental performance.

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;
Air cooled microchannel 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;
BPHE evaporator;
R290 leak detector;
Emergency EX fan;
EC Fans.

Technical Parameters | Galaxy Mini

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		GAL101	GAL102	GAL103
Standard version				
Refrigeration capacity [1]	kW	28	33,2	38,3
Power consumption	kW	7,90	8,8	10,3
EER		3,5	3,8	3,7
SEPR		6,08	6,66	6,61
SEER		4,78	5,15	5,22
System data				
Refrigerant	Type	R290		
Number of compressors	n	1	1	1
Refrigerant quantity per circuit	kg	2,8	2,8	2,8
Inlet/Outlet connections	DN	40	40	40
Sound pressure level in 10m [2]	dB(A)	47	47	48
Sound power level	dB(A)	78	78	79
Fan				
Type		EC		
Number of fans	n	3	3	3
Air flow	m³/h	17721	17721	17721
Plate heat exchanger				
Number of plate heat exchangers	n	1	1	1
Flow rate cooling [1]	m³/h	5,3	6,3	7,2
Pressure drop cooling	kPa	17,6	22,1	27,1
Power supply				
Voltage		400V 3N~50Hz		
Max. operating current	A	40,7	42,8	46,7
Starting current	A	102,9	133,5	152,5
Dimensions and weight				
Length	mm	2652	2652	2652
Width	mm	1000	1000	1000
Height	mm	1780	1780	1780
Operating weight	kg	690	720	730

[1] Outside air temperature 35°C, medium temperature 12/7°C, medium EG 35%.
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

Galaxy Chillers

GALAXY SOLO

* 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 Chillers

Natural refrigerants available! #R290

Choose propane or propylene and contribute to the environment!

GALAXY SOLO

DESCRIPTION

Galaxy Solo air-cooled chiller has the cooling capacity of 48 kW to 124 kW and is designed for industrial or commercial buildings with smaller power demand. Such systems are widely used in various factories, supermarkets and office buildings. **Galaxy Solo chiller is made with one circuit to service the end user.**

Special modular assembly system provides the ability to integrate Galaxy Solo with useful additional options, such as a built-in hydraulic module, winter kit or heat recovery system. With extensive power selection options and many possible extra features, Galaxy chillers stand out as one of the most versatile products that Refra can offer.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

Comprehensive modular frame construction is assembled with high-quality EC fan motor technology, microchannel heat exchangers, reciprocating compressors. The galvanized steel and powder coated frame with a reliable 20 mm non-flammable acoustical PU foam insulation material ensures proper unit protection as well as noise reduction. An additional 30 mm rock wool material can be supplemented for a super silent unit operation.

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;
Air cooled microchannel 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;
BPHE evaporator;
R290 leak detector;
Emergency EX fan;
EC Fans.

ErP 2026

Unit meets EU Energy-related Products Directive for energy efficiency and environmental performance.

Technical Parameters | Galaxy Solo

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		GAL106	GAL108	GAL109	GAL110
Standard version					
Refrigeration capacity [1]	kW	47,9	63,2	72,5	86,3
Power consumption	kW	11,2	15,7	18,8	23,8
EER		4,3	4	3,9	3,6
SEPR		7,01	6,88	6,83	6,46
SEER		5,70	5,90	5,84	5,64
System data					
Refrigerant	Type	R290			
Number of compressors	n	1	1	1	1
Refrigerant quantity per circuit	kg	4,4	4,4	4,4	6,2
Inlet/Outlet connections	DN	50	50	50	65
Sound pressure level in 10m [2]	dB(A)	52	52	53	53
Sound power level	dB(A)	83	83	84	84
Fan					
Type		EC			
Number of fans	n	2	2	2	2
Air flow	m³/h	49298	49298	49298	49298
Plate heat exchanger					
Number of plate heat exchangers	n	1	1	1	1
Flow rate cooling [1]	m³/h	9,1	12,0	13,7	16,3
Pressure drop cooling	kPa	9,2	14,9	18,8	14,2
Power supply					
Voltage		400V 3N~50Hz			
Max. operating current	A	50,3	61,7	69,0	79,0
Starting current	A	178,6	231,6	253,6	253,6
Dimensions and weight					
Length	mm	2607	2607	2607	2607
Width	mm	1275	1275	1275	1275
Height	mm	2550	2550	2550	2550
Operating weight	kg	980	1030	1030	1050
Dimewnsions and weight with additional buffer tank					
Length	mm	2916	2916	2916	2916
Width	mm	2321	2321	2321	2321
Height	mm	2550	2550	2550	2550
Net weight	kg	+430 kg (500 L) or +570 kg (800 L)			

[1] Outside air temperature 35°C, medium temperature 12/7°C, medium EG 35%.
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

Technical Parameters | Galaxy Solo

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		GAL112	GAL113	GAL114
Standard version				
Refrigeration capacity [1]	kW	93,3	108,3	124,1
Power consumption	kW	22,7	27,7	33,5
EER		4,1	3,9	3,7
SEPR		6,73	6,55	6,27
SEER		5,92	5,87	5,65
System data				
Refrigerant	Type	R290		
Number of compressors	n	1	1	1
Refrigerant quantity per circuit	kg	7,0	7,7	7,7
Inlet/Outlet connections	DN	65	65	80
Sound pressure level in 10m [2]	dB(A)	55	56	56
Sound power level	dB(A)	86	87	87
Fan				
Type		EC		
Number of fans	n	4	4	4
Air flow	m³/h	98596	98596	98596
Plate heat exchanger				
Number of plate heat exchangers	n	1	1	1
Flow rate cooling [1]	m³/h	17,7	20,5	23,5
Pressure drop cooling	kPa	16,2	14,8	18,8
Power supply				
Voltage		400V 3N~50Hz		
Max. operating current	A	90,3	102,0	122,3
Starting current	A	303,2	390,2	432,2
Dimensions and weight				
Length	mm	2916	2916	2916
Width	mm	2321	2321	2321
Height	mm	2550	2550	2550
Operating weight	kg	1240	1240	1270
Dimensions and weight with additional buffer tank				
Length	mm	4120	4120	4120
Width	mm	2321	2321	2321
Height	mm	2550	2550	2550
Net weight	kg	+290 kg (500 L) or +430 kg (800 L)		

[1] Outside air temperature 35°C, medium temperature 12/7°C, medium EG 35%.
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

Galaxy Chillers

GALAXY TWIN

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R290 Chillers

Natural refrigerants available! #R290

Choose propane or propylene and contribute to the environment!

GALAXY TWIN

DESCRIPTION

Galaxy Twin air-cooled chiller has the cooling capacity of 96 kW to 245 kW and is designed for industrial or commercial buildings with small to medium power demand. Such systems are widely used in various factories, supermarkets and warehouses. **Galaxy Twin chiller is made with two circuits to ensure continuous system operation in case of emergency – if one circuit is damaged, the other can still use the remaining unit capacity to service the end user.**

Special modular assembly system provides the ability to integrate Galaxy Twin with useful additional options, such as a built-in hydraulic module, winter kit and heat recovery system. With extensive power selection options and many possible extra features, Galaxy chillers stand out as one of the most versatile products that Refra can offer.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

Comprehensive modular frame construction is assembled with high-quality EC fan motor technology, microchannel heat exchangers, reciprocating compressors. The galvanized steel and powder coated frame with a reliable 20 mm non-flammable acoustical PU foam insulation material ensures proper unit protection as well as noise reduction. An additional 30 mm rock wool material can be supplemented for a super silent unit operation.

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;
Air cooled microchannel 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;
BPHE evaporator;
R290 leak detector;
Emergency EX fan;
EC Fans.

ErP 2026

Unit meets EU Energy-related Products Directive for energy efficiency and environmental performance.

Technical Parameters | Galaxy Twin

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		GAL212	GAL215	GAL217
Standard version				
Refrigeration capacity [1]	kW	95,8	126,4	145,0
Power consumption	kW	22,4	31,4	37,6
EER		4,3	4,0	3,9
SEPR		7,01	6,88	6,83
SEER		5,45	5,58	5,61
System data				
Refrigerant	Type	R290		
Number of compressors	n	2	2	2
Refrigerant quantity per circuit	kg	4,6	4,6	4,6
Inlet/Outlet connections	DN	65	80	80
Sound pressure level in 10m [2]	dB(A)	55	55	56
Sound power level	dB(A)	56	56	87
Fan				
Type		EC		
Number of fans	n	4	4	4
Air flow	m³/h	98596	98596	98596
Plate heat exchanger				
Number of plate heat exchangers	n	2	2	2
Flow rate cooling [1]	m³/h	18,2	24,0	27,4
Pressure drop cooling	kPa	9,2	14,9	18,8
Power supply				
Voltage		400V 3N~50Hz		
Max. operating current	A	87,6	110,4	125,0
Starting current	A	215,9	280,3	309,6
Dimensions and weight				
Length	mm	2916	2916	2916
Width	mm	2321	2321	2321
Height	mm	2550	2550	2550
Operating weight	kg	1870	1870	1870
Dimensions and weight with additional buffer tank				
Length	mm	4120	4120	4120
Width	mm	2321	2321	2321
Height	mm	2550	2550	2550
Net weight	kg	+290 kg (500 L) or +430 kg (800 L)		

[1] Outside air temperature 35°C, medium temperature 12/7°C, medium EG 35%.
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

Technical Parameters | Galaxy Twin

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		GAL219	GAL222	GAL224	GAL227
Standard version					
Refrigeration capacity [1]	kW	172,6	184,7	212,4	245,2
Power consumption	kW	47,6	47	56,4	70,3
EER		3,6	3,9	3,8	3,5
SEPR		6,46	6,68	6,52	6,19
SEER		5,40	5,59	5,51	5,27
System data					
Refrigerant	Type	R290			
Number of compressors	n	2	2	2	2
Refrigerant quantity per circuit	kg	6,4	6,8	7,4	7,4
Inlet/Outlet connections	DN	80	100	100	100
Sound pressure level in 10m [2]	dB(A)	56	57	58	58
Sound power level	dB(A)	87	88	89	89
Fan					
Type		EC			
Number of fans	n	4	6	6	6
Air flow	m³/h	98596	147894	147894	147894
Plate heat exchanger					
Number of plate heat exchangers	n	2	2	2	2
Flow rate cooling [1]	m³/h	32,6	35,1	40,2	46,4
Pressure drop cooling	kPa	14,2	16,1	14,3	18,4
Power supply					
Voltage		400V 3N~50Hz			
Max. operating current	A	145,0	160,0	183,4	224,0
Starting current	A	319,6	372,9	471,6	533,9
Dimensions and weight					
Length	mm	2916	4120	4120	4120
Width	mm	2321	2321	2321	2321
Height	mm	2550	2550	2550	2550
Operating weight	kg	1940	2440	2440	2510
Dimewnsions and weight with additional buffer tank					
Length	mm	4120	5324	5324	5324
Width	mm	2321	2321	2321	2321
Height	mm	2550	2550	2550	2550
Net weight	kg	+290 kg (500 L) or +430 kg (800 L)			

[1] Outside air temperature 35°C, medium temperature 12/7°C, medium EG 35%.
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

Galaxy Chillers

GALAXY TRIBUS

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R290 Chillers

Natural refrigerants available! #R290

Choose propane or propylene and contribute to the environment!

GALAXY TRIBUS

DESCRIPTION

Galaxy Tribus air-cooled chiller has the cooling capacity of 190 kW to 372 kW and is designed for industrial or commercial buildings with medium to large power demand. Such systems are widely used in various factories, supermarkets, warehouses and office buildings. **Galaxy Tribus chiller is made with three circuits to ensure continuous system operation in case of emergency – if one circuit is damaged, the others can still use the remaining unit capacity to service the end user.**

Special modular assembly system provides the ability to integrate Galaxy Tribus with useful additional options, such as a built-in hydraulic module, winter kit and heat recovery system. With extensive power selection options and many possible extra features, Galaxy chillers stand out as one of the most versatile products that Refra can offer.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

Comprehensive modular frame construction is assembled with high-quality EC fan motor technology, microchannel heat exchangers, reciprocating compressors. The galvanized steel and powder coated frame with a reliable 20 mm non-flammable acoustical PU foam insulation material ensures proper unit protection as well as noise reduction. An additional 30 mm rock wool material can be supplemented for a super silent unit operation.

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;
Air cooled microchannel 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;
BPHE evaporator;
R290 leak detector;
Emergency EX fan;
EC Fans.

ErP 2026

Unit meets EU Energy-related Products Directive for energy efficiency and environmental performance.

Technical Parameters | Galaxy Tribus

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		GAL323	GAL326	GAL331
Standard version				
Refrigeration capacity [1]	kW	189,6	217,5	258,9
Power consumption	kW	47,1	56,4	71,4
EER		4	3,9	3,6
SEPR		6,88	6,82	6,45
SEER		5,34	5,37	5,26
System data				
Refrigerant	Type	R290		
Number of compressors	n	3	3	3
Refrigerant quantity per circuit	kg	4,5	4,5	6,2
Inlet/Outlet connections	DN	100	100	100
Sound pressure level in 10m [2]	dB(A)	56	58	58
Sound power level	dB(A)	87	89	89
Fan				
Type		EC		
Number of fans	n	6	6	6
Air flow	m³/h	147894	147894	147894
Plate heat exchanger				
Number of plate heat exchangers	n	3	3	3
Flow rate cooling [1]	m³/h	36	41,1	48,9
Pressure drop cooling	kPa	14,9	18,8	14,2
Power supply				
Voltage		400V 3N~50Hz		
Max. operating current	A	159,1	181,0	211,0
Starting current	A	329,0	365,6	385,6
Dimensions and weight				
Length	mm	4120	4120	4120
Width	mm	2321	2321	2321
Height	mm	2550	2550	2550
Operating weight	kg	2990	2990	2990
Dimensions and weight with additional buffer tank				
Length	mm	5324	5324	5324
Width	mm	2321	2321	2321
Height	mm	2550	2550	2550
Net weight	kg	+290 kg (500 L) or +430 kg (800 L)		

[1] Outside air temperature 35°C, medium temperature 12/7°C, medium EG 35%.
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

REFRIGERATION

Technical Parameters | Galaxy Tribus

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		GAL335	GAL339	GAL343
Standard version				
Refrigeration capacity [1]	kW	279,9	324,9	372,3
Power consumption	kW	68,1	83,1	100,5
EER		4	3,9	3,7
SEPR		6,70	6,58	6,26
SEER		5,41	5,35	5,15
System data				
Refrigerant	Type	R290		
Number of compressors	n	3	3	3
Refrigerant quantity per circuit	kg	7,1	7,7	7,7
Inlet/Outlet connections	DN	125	125	125
Sound pressure level in 10m [2]	dB(A)	60	61	61
Sound power level	dB(A)	91	92	92
Fan				
Type		EC		
Number of fans	n	12	12	12
Air flow	m³/h	295788	295788	295788
Plate heat exchanger				
Number of plate heat exchangers	n	3	3	3
Flow rate cooling [1]	m³/h	53,1	61,5	70,5
Pressure drop cooling	kPa	16,2	14,8	18,8
Power supply				
Voltage		400V 3N~50Hz		
Max. operating current	A	244,9	280,0	340,9
Starting current	A	457,8	568,2	650,8
Dimensions and weight				
Length	mm	7732	7732	7732
Width	mm	2321	2321	2321
Height	mm	2550	2550	2550
Operating weight	kg	5050	5050	5050
Dimensions and weight with additional buffer tank				
Length	mm	8936	8936	8936
Width	mm	2321	2321	2321
Height	mm	2550	2550	2550
Net weight	kg	+290 kg (500 L) or +430 kg (800 L)		

[1] Outside air temperature 35°C, medium temperature 12/7°C, medium EG 35%.
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

Galaxy Chillers

GALAXY QUAD

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R290 Chillers

Natural refrigerants available! #R290

Choose propane or propylene and contribute to the environment!

GALAXY QUAD

DESCRIPTION

Galaxy Quad air-cooled chiller has the cooling capacity of 253 kW to 490 kW and is designed for industrial or commercial buildings with high power demand. Such systems are widely used in various factories, supermarkets, warehouses and office buildings. **Galaxy Quad chiller is made with four circuits to ensure continuous system operation in case of emergency – if one circuit is damaged, the others can still use the remaining unit capacity to service the end user.**

Special modular assembly system provides the ability to integrate Galaxy Quad with useful additional options, such as a built-in hydraulic module, winter kit and heat recovery system. With extensive power selection options and many possible extra features, Galaxy chillers stand out as one of the most versatile products that Refra can offer.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

Comprehensive modular frame construction is assembled with high-quality EC fan motor technology, microchannel heat exchangers, reciprocating compressors. The galvanized steel and powder coated frame with a reliable 20 mm non-flammable acoustical PU foam insulation material ensures proper unit protection as well as noise reduction. An additional 30 mm rock wool material can be supplemented for a super silent unit operation.

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;
Air cooled microchannel 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;
BPHE evaporator;
R290 leak detector;
Emergency EX fan;
EC Fans.

ErP 2026

Unit meets EU Energy-related Products Directive for energy efficiency and environmental performance.

Technical Parameters | Galaxy Quad

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		GAL430	GAL434	GAL439
Standard version				
Refrigeration capacity [1]	kW	252,8	290	345,2
Power consumption	kW	62,8	75,2	95,2
EER		4	3,9	3,6
SEPR		6,88	6,82	6,46
SEER		5,51	5,55	5,32
System data				
Refrigerant	Type	R290		
Number of compressors	n	4	4	4
Refrigerant quantity per circuit	kg	4,5	4,5	6,2
Inlet/Outlet connections	DN	100	125	125
Sound pressure level in 10m [2]	dB(A)	58	59	59
Sound power level	dB(A)	89	90	90
Fan				
Type		EC		
Number of fans	n	8	8	8
Air flow	m³/h	197192	197192	197192
Plate heat exchanger				
Number of plate heat exchangers	n	4	4	4
Flow rate cooling [1]	m³/h	48,0	54,8	65,2
Pressure drop cooling	kPa	14,9	18,8	14,2
Power supply				
Voltage		400V 3N~50Hz		
Max. operating current	A	207,8	237,0	277,0
Starting current	A	377,7	421,6	451,6
Dimensions and weight				
Length	mm	5324	5324	5324
Width	mm	2321	2321	2321
Height	mm	2550	2550	2550
Operating weight	kg	3980	3980	3980
Dimensions and weight with additional buffer tank				
Length	mm	6528	6528	6528
Width	mm	2321	2321	2321
Height	mm	2550	2550	2550
Net weight	kg	+290 kg (500 L) or +430 kg (800 L)		

[1] Outside air temperature 35°C, medium temperature 12/7°C, medium EG 35%.
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

Technical Parameters | Galaxy Quad

CALCULATIONS ARE MADE FOR BASIC UNITS WITHOUT ADDITIONAL OPTIONS

Model		GAL444	GAL448	GAL454
Standard version				
Refrigeration capacity [1]	kW	369,4	424,8	490,4
Power consumption	kW	94	112,8	140,6
EER		3,9	3,8	3,5
SEPR		6,68	6,51	6,21
SEER		5,52	5,49	5,56
System data				
Refrigerant	Type	R290		
Number of compressors	n	4	4	4
Refrigerant quantity per circuit	kg	6,6	7,3	7,3
Inlet/Outlet connections	DN	125	125	125
Sound pressure level in 10m [2]	dB(A)	60	61	61
Sound power level	dB(A)	91	92	92
Fan				
Type		EC		
Number of fans	n	12	12	12
Air flow	m³/h	295788	295788	295788
Plate heat exchanger				
Number of plate heat exchangers	n	4	4	4
Flow rate cooling [1]	m³/h	70,2	80,4	92,8
Pressure drop cooling	kPa	16,1	14,3	18,4
Power supply				
Voltage		400V 3N~50Hz		
Max. operating current	A	307,0	353,8	435,0
Starting current	A	517,9	642,0	744,9
Dimensions and weight				
Length	mm	7732	7732	7732
Width	mm	2321	2321	2321
Height	mm	2550	2550	2550
Operating weight	kg	5270	5270	5270
Dimensions and weight with additional buffer tank				
Length	mm	8936	8936	8936
Width	mm	2321	2321	2321
Height	mm	2550	2550	2550
Net weight	kg	+290 kg (500 L) or +430 kg (800 L)		

[1] Outside air temperature 35°C, medium temperature 12/7°C, medium EG 35%.
[2] Sound pressure level at a distance of 10m in the free field and at the extended point, tolerance +/-2dB(A).

Additional Options | Buffer tanks

Buffer tank

DESCRIPTION

Refra Galaxy Chillers can be integrated with an additional buffer tank to enhance system performance. **Additional Refra buffer tank is installed within the same frame as the chiller, creating a single, unified machine for easier installation and operation.**

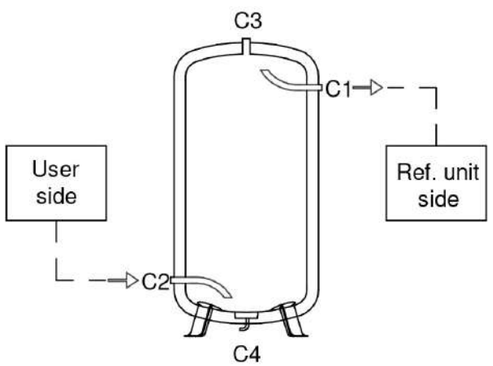
Refra offers buffer tanks with glycol, which provide enhanced freeze protection and greater temperature stability. Glycol buffer tanks ensure reliable system operation in cold environments by preventing freezing and downtime. With an operating pressure of 6 to 10 bar, these buffer tanks increase the liquid capacity within the system and ensure stable operation.

Designed to optimize refrigeration systems, these additional buffer tanks are available in 500 or 800 liter capacities to help maintain a constant cooling cycle, thus stabilizing chiller performance and preventing fluctuations in water temperature. Made from a durable S235JR carbon steel and externally insulated with ArmaFlex insulation, the tank provides superior thermal protection and efficiency, contributing to a consistent and reliable refrigeration cycle.

The additional buffer tank is housed in a closed-type protective frame, integrating seamlessly with the chiller to create a unified system in a single machine. **Note that when selecting an integrated buffer tank, additional rock wool insulation for ultra-quiet operation (30 mm) cannot be applied.**

MAIN CHARACTERISTICS

Sizes available for 500 liters or 800 liters
Housed in a Half Box or a Full Box
Designed for glycol
Made from S235JR carbon steel
32 mm of ArmaFlex insulation



Additional Options | Buffer tanks

Half Box | 500 L

The Half Box is a closed-type protective frame, designed to house a 500-liter buffer tank, integrating seamlessly with the chiller to create a unified system. The additional frame is constructed from galvanized steel, powder-coated for durability, and features standard insulation that ensures effective protection and noise reduction.

DIMENSIONS:

Length: 1205mm
Height: 1070mm
Width: 2203mm

When selecting a buffer tank as an additional feature, each chiller is fitted with an extra frame box. Note that this added length extends the overall size of the unit, which should be carefully considered during installation, especially in spaces where length is a key factor. **For more specific sizing details, please refer to the Technical Parameters of the selected chiller model.**

Full Box | 800 L

The Full Box is a closed-type protective frame designed to house an 800-liter buffer tank, integrating seamlessly with the chiller to create a unified system. The additional frame is constructed from galvanized steel, powder-coated for durability, and features standard insulation that ensures effective protection and noise reduction.

DIMENSIONS:

Length: 1205mm
Height: 2355mm
Width: 2203mm

When selecting a buffer tank as an additional feature, each chiller is fitted with an extra frame box. Note that this added length extends the overall size of the unit, which should be carefully considered during installation, especially in spaces where length is a key factor. **For more specific sizing details, please refer to the Technical Parameters of the selected chiller model.**

Additional Options | Winter kit

Winter kit

The winter kit includes a liquid receiver, a Danfoss ICS valve installed on the compressor discharge line and a differential pressure (hot gas bypass) valve. Together, these components ensure suitable system pressure and stable refrigerant flow during low ambient operation.

- Stable condensing pressure
- Reliable start-up at low temperatures
- Prevents flash gas formation

OPERATING PRINCIPLE

In low outdoor temperatures, the condenser capacity increases, which can cause condensing pressure to drop below acceptable levels. The ICS valve compensates by modulating discharge gas flow and maintaining the required minimum pressure. Excess refrigerant is stored in the receiver, while the differential valve uses the available pressure difference to inject hot gas into the liquid line, stabilizing receiver pressure. This prevents refrigerant flashing before the expansion valve and ensures consistent system operation.

KEY BENEFITS

Delivers reliable and uninterrupted chiller operation in low ambient conditions, ensuring stable and consistent performance throughout the winter season. By maintaining suitable operating conditions, the winter kit reduces mechanical stress on key components and extends equipment lifetime working at low ambient temperatures. It enables smooth start-up, consistent performance and a wider operating range, making the system more robust, energy-efficient and dependable in demanding environments.

Additional Options

Pump on/off 10m head

Designed for pumping of water or glycol mixtures without abrasive substances. “On/Off” function is used in applications where the pump only needs to operate when there is a demand for fluid flow.

Pump on/off 20m head

Designed for pumping of water or glycol mixtures without abrasive substances. “On/Off” function is used in applications where the pump only needs to operate when there is a demand for fluid flow.

Pump inverter 10m head

Designed for pumping of water or glycol mixtures without abrasive substances. Integrated inverter provides precise control over the flow rate of the fluid and ensures energy-efficient operation.

Pump inverter 20m head

Designed for pumping of water or glycol mixtures without abrasive substances. Integrated inverter provides precise control over the flow rate of the fluid and ensures energy-efficient operation.

Twin Pump on/off 20m head

Double pump setup, designed for pumping of water or glycol mixtures without abrasive substances. One pump serves as the base-load pump, while the second pump can serve as a reserve in the event of a fault.

Twin Pump inverter 20m head

Double pump setup, designed for pumping of water or glycol mixtures without abrasive substances, ensures reliable operation in case of an emergency and precise control over the fluid flow rate.

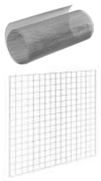
Flow switch

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.

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.

Additional Options



Coil guard

Shields coils from physical damage, environmental debris and dust build-up, preserving heat exchange efficiency and extending equipment lifespan. Woven aluminum mesh and grid frame provide robust protection, reduce maintenance efforts and minimize the risk of system malfunctions.

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.

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. **Not possible with additional buffer tank.**

Trace heating

Maintains or raises the temperature of pipes and vessels through specially engineered cables to protect it from freezing at sub-zero temperatures. **Not possible with additional buffer tank.**

Aqua Aero

Helps to lower energy consumption by reducing airside fouling in cooling coils, thus improving the overall energy efficiency of the system. The hydrophobic coating acts as a barrier which prevents corrosive agents from infiltrating the underlying metal surface.

Desuperheater

Utilizes the high-temperature energy of the superheated refrigerant gas to heat water. By using the waste heat generated during the cooling process, desuperheater can improve the overall energy efficiency of the system.

Fin & tube heat exchangers

Offer mechanical strength and maintain stable operation even in harsh environments. The open coil design allows easier cleaning and maintenance, while aluminum or epoxy-coated fins with optional anti-corrosion protection ensure long service life.

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.

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.**

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.

Vacon inverter

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

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.

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.

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.

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