RHOSS

NIBE GROUP MEMBER

BOOSTER

Very high temperature hydronic solutions

| SPECIFIC SYSTEM SOLUTIONS |

NIBE

A global organisation with companies and a presence worldwide

NIBE Group is a global organisation that contributes to a smaller carbon footprint and better utilisation of energy. In its three business areas – Climate Solutions, Element and Stoves – we develop, manufacture and market a wide range of eco-friendly, energy-efficient solutions for indoor climate comfort in all types of property, plus components and solutions for intelligent heating and control in industry and infrastructure.

From its beginning in Markaryd, in the province Småland ***more than 60 years ago, NIBE has grown into an international company with more than 15,000 employees and a presence worldwide.*** From the very start, the company was driven by a strong culture of entrepreneurship and a passion for responsible business operation. Its success factors are long-term investments in sustainable product development and strategic acquisitions. Combined, these factors have brought about strong, targeted growth, which generated sales of just over SEK 20 billion (EUR 2 billion).


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Be the change
you want to see
in the world
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Our focus on world-class solutions in sustainable energy contributes to the global goal to reduce emissions of greenhouse gases into the atmosphere.

Our entire value chain, from vision to end customers, must be based on the principles of sustainability in our business principles.

We are responsible not only for the financial results of our operations but also for their social and environmental impact.

NIBE's responsibility forms the Group's framework for sustainability efforts in four different areas:

IN BUSINESS

FOR THE ENVIRONMENT

RESPONSIBILITY FOR EMPLOYEES

LOCAL SOCIAL RESPONSIBILITY

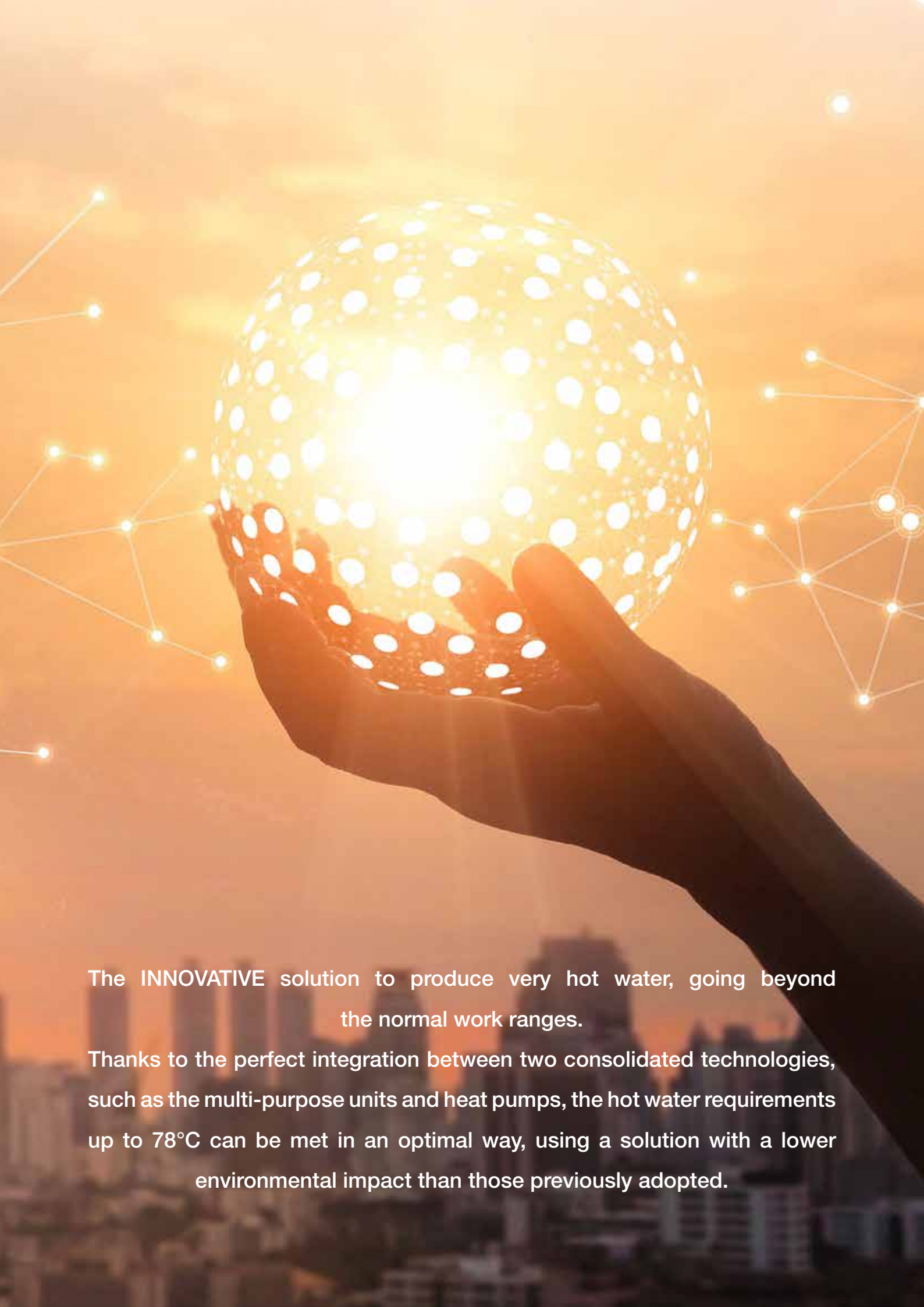

Change
your perspective!
Solutions
that look
to the future.

THE BEST SOLUTION TO REACH VERY HIGH TEMPERATURES

- Water up to 78°C
- Maximum efficiency
- Compact size
- Minimum noise emissions
- Eco-friendly solution compared to traditional systems
- Maximum reliability with the twin-circuit solution
- 10 sizes for a customised offer
- Concrete solution in many applications

COMPACT & GREEN COMFORT

Maximum flexibility and efficiency, minimum noise.



The INNOVATIVE solution to produce very hot water, going beyond the normal work ranges.

Thanks to the perfect integration between two consolidated technologies, such as the multi-purpose units and heat pumps, the hot water requirements up to 78°C can be met in an optimal way, using a solution with a lower environmental impact than those previously adopted.

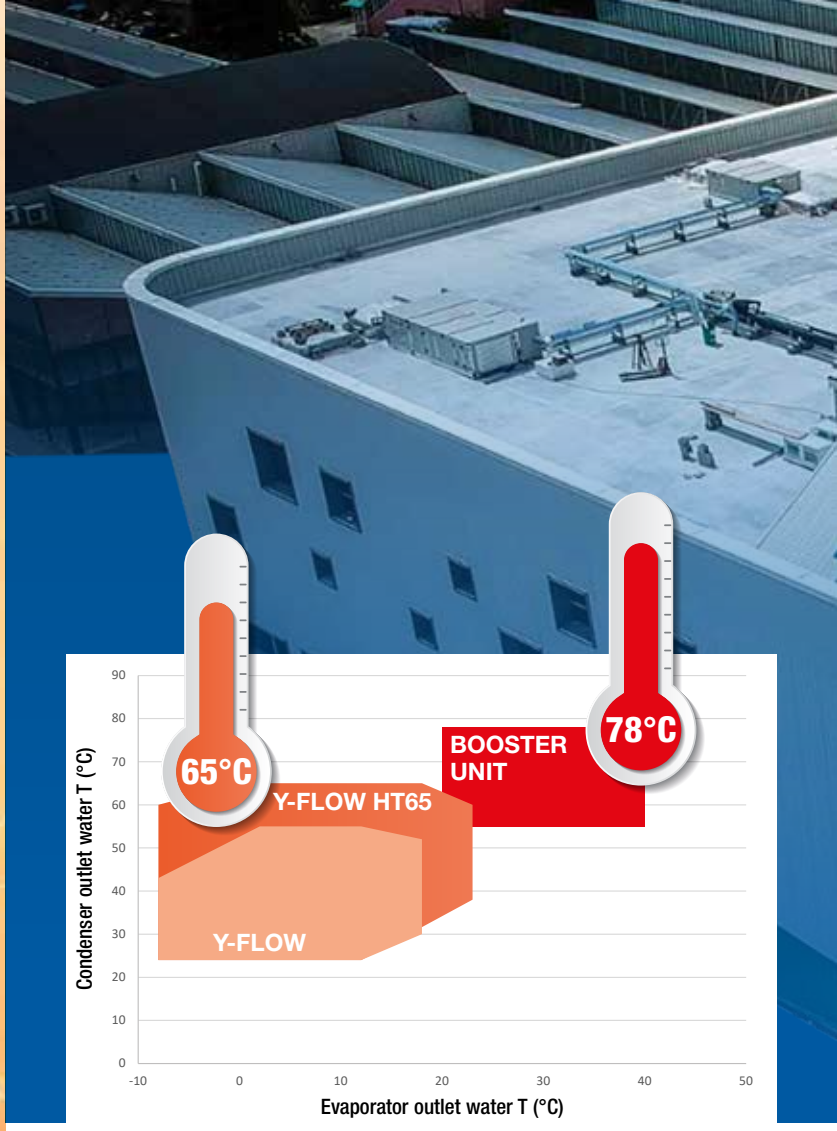
Very high temperature hydronic solutions

BOOSTER
The best solution to reach very high temperatures

BOOSTER units are the solution to produce very hot water, going beyond the normal work ranges of a traditional heat pump.

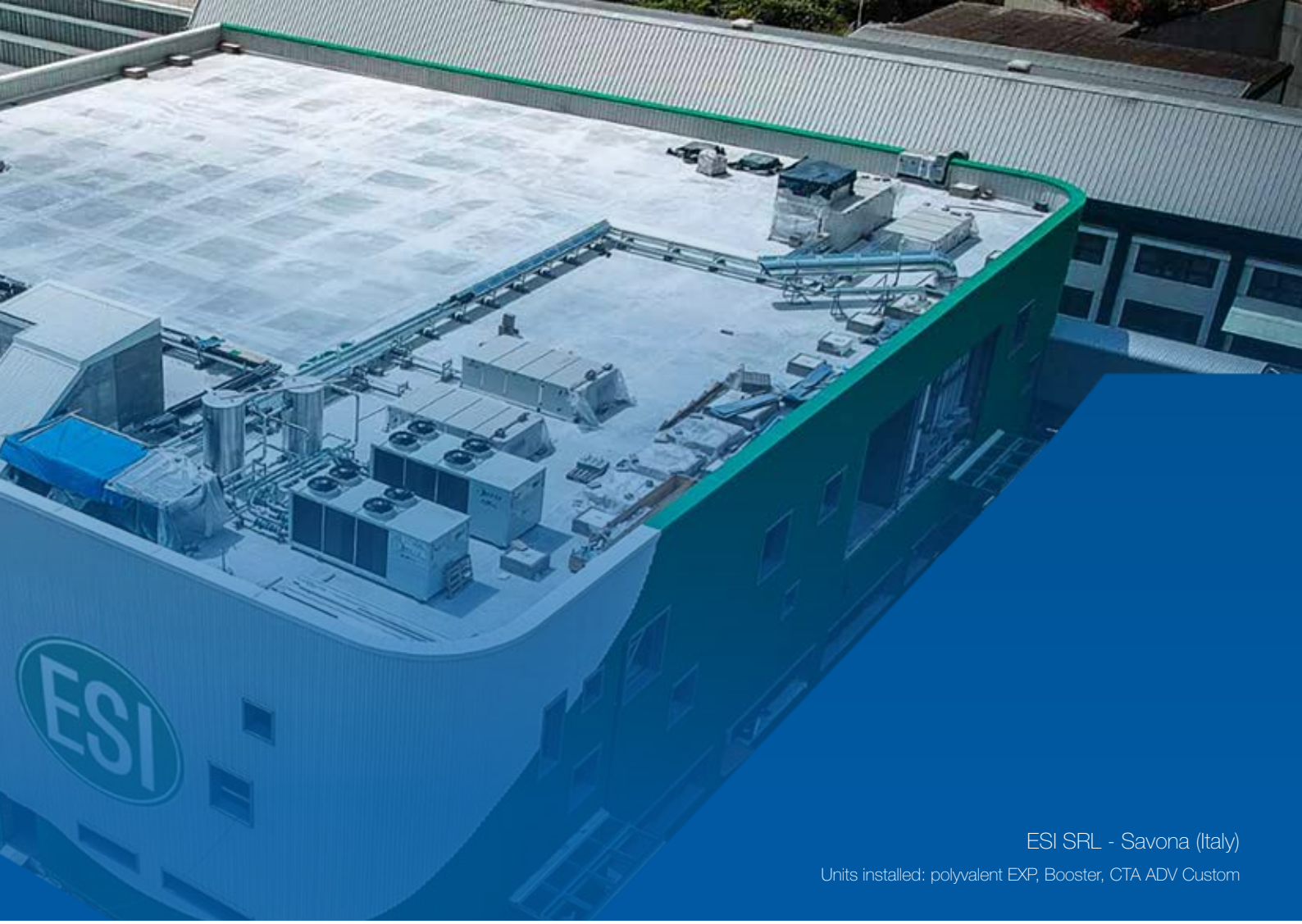
BOOSTER is the ideal technology together with polyvalent units to raise the temperature produced by the total recovery or in conjunction with other units that produce medium-hot water.

- Compact size, maximum efficiency and minimum noise emissions
- Twin-circuit unit to ensure maximum reliability
- 10 sizes available up to 280 kW



BOOSTER - THE OFFER

- BOOSTER heat pump units, water-cooled with specific scroll compressors and R134a gas, available in 10 thermal sizes from 70 to 280 kW
- Wide working range to allow flexible production of hot water up to 78°C
- Minimum noise emissions thanks to the internal insulation of the unit with sound-absorbing material
- To ensure maximum redundancy and reliability of the solution, the double cooling circuit is combined with the use of the electronic valve to ensure maximum performance in all operating conditions



ESI SRL - Savona (Italy)

Units installed: polyvalent EXP, Booster, CTA ADV Custom

BOOSTER units fulfil the demand for very high hot water in an efficient and sustainable way because they are electric heat pumps.

In modern systems, when hot water production is required, BOOSTER units are the best solution environmentally, compared to traditional generators, such as standard and electric boilers.

BOOSTER units are generally used with multi-purpose units, which Rhoss is the market leader of, when the temperature of the water leaving the recovery unit is not sufficient.

	MODEL TCHETZ HT EEV HPH		**270**	**275**	**290**	**2115**	**2140**	**2180**	**2220**	**2280**
❶	Heating capacity	kW	70.5	79.1	92.2	113.5	138.8	182.3	224	278.7
❶	Total absorbed power	kW	17.3	19.1	22.1	27.6	34.5	43.9	56	65.9
❶	COP		4.08	4.14	4.17	4.11	4.02	4.15	4	4.23
❸	SCOP (EN14825)		3.27	3.39	3.45	3.2	3.3	3.25	3.27	3.3
❶	Water flow rate (evaporator)	m^3/h	9.2	10.4	12.2	14.9	18.1	24	29.2	36.9
❶	Pressure drops (evaporator)	kPa	10	13	9	12	12	17	18	23
❶	Water flow rate (condenser)	m^3/h	7.6	8.5	9.9	12.2	14.9	19.6	24.1	30
❶	Pressure drops (condenser)	kPa	7	9	6	9	8	12	13	16
	GENERAL FEATURES		**270**	**275**	**290**	**2115**	**2140**	**2180**	**2220**	**2280**
❷	Sound power	dB(A)	72	72	72	74	74	76	76	78
	Scroll/step compressor	no.	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
	Circuits	no.	2	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Electrical supply	V-ph-Hz	400-3+N-50	400-3+N-50	400-3+N-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
	Maximum absorbed current		33	35	41	54	69	86	106	126
	Inrush current		111	129	139	167	208	268	325	373
	DIMENSIONS AND WEIGHTS		**270**	**275**	**290**	**2115**	**2140**	**2180**	**2220**	**2280**
	L - Width	mm	1020	1020	1020	1270	1270	1270	1270	1270
	H - Height	mm	1470	1470	1470	1620	1620	1620	1620	1620
	P - Depth	mm	870	870	870	870	870	870	870	870

Data at the following conditions:

❶ Evaporator water 45/40°C and condenser water 70/78°C.

❷ Total sound power level in dB(A) based on measurements carried out in accordance with regulation UNI EN-ISO 9614.

❸ In Average climatic conditions, medium temperature application (55°C).

Very high temperature hydronic solutions

BOOSTER
The efficiency of a flexible solution

- Ideal unit in various applications:
  - hotels
  - nursing homes, hospitals and clinics
  - spas, wellness centres
  - shopping centres
  - offices
  - residential buildings with a centralised system
  - schools
  - process companies
- Perfect in case of upgrades and replacement of old systems with boilers
- Designed to be combined with multi-purpose units and medium temperature heat pumps
- Specific use for anti-legionella cycles

FLEXIBLE TECHNOLOGY IN APPLICATIONS

- BOOSTER units are hydronic heat pumps designed to fulfil hot water production requirements at a very high temperature and are used in the most diverse applications.
- BOOSTER units are water-cooled units and therefore, receive medium temperature water and increase it up to 78°C. If the application is for commercial, tertiary or centralised residential purposes, the input water is supplied by a heat pump or from the recovery unit of a multi-purpose unit but it could also arrive from a heat recovery unit of a company's industrial process.

Residential, commercial and tertiary applications

The hydronic heat pumps used so far in the residential, commercial and tertiary sectors allow medium/high temperature water production and Rhoss offers a range of solutions with different technologies, refrigerant gases and also the brand new ECO heat pumps with scroll compressors and R32 and R454B ecological gas.

However, there are applications that require very hot water for domestic hot water production, for integration with existing radiator systems, for use in industrial laundries or kitchens serving hotels, for centralised heating in residential and commercial buildings, schools, offices, nursing homes, etc. and Booster units are the solution designed to fulfil this requirement.

The perfect integration of the BOOSTER units with EXP multi-purpose units guarantees the right comfort in cooling, heating and domestic hot water production.

Industrial applications

In the industrial sector, the possibility of using very hot water is represented by heating areas/warehouses as an alternative to traditional systems that involve using boilers or in the various processes to treat/dry plastics, or in some stages of food drying, or to maintain certain fluids warm without using electric heaters.

Sometimes, it is possible to recover heat in the industrial sector from production processes with different thermal levels, but often the temperatures are too low for an actual application. If the heat is not recovered and used, it becomes a waste, whereas it could become the thermal source for the production of hot/very hot water in the BOOSTER units.

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K15565EN ed.1 - 04.21