



» AIR QUALITY FOR YOUR GUESTS

Swimming pool dehumidification by HANSA Klimasysteme



Die like Wai is die bääste*

* Sater Frisian for 'The straight path is the best'



What does HANSA stand for? As a medium-sized company with decades of experience in ventilation technology and products designed for a long service life, we understand that short-term success is not what our customers or our company need.

Therefore, we continuously strive to improve our products through optimised designs and components or demand-driven control systems such as our AI-based *etaSmart* system. At the same time, we continue to invest in our company and in what we consider our most valuable resource: our employees.

At the same time, we are committed to making our business increasingly sustainable. This includes measuring and reducing our carbon footprint, supporting local initiatives through our social commitment, and enhancing the recyclability of our products.

Only by taking these steps, we can continue to be a reliable partner for you, our customers – now and in the future – in line with our guiding principle: 'You can count on us!'

Jan Neumann
Managing Director



ABOUT US

HANSA Klimasysteme GmbH has been based in Strücklingen, in the municipality of Saterland, since 1961; Saterland is known for its Sater Frisian language, the smallest linguistic enclave in Germany. Our products speak for themselves.

For decades, we have been synonymous with technically sophisticated, high-quality air-conditioning systems. As a family-owned and managed company since 1971, we stand for continuity, stability, and long-term reliability.

The company

Ever since the company was founded, we have earned a reputation throughout Germany and far beyond for manufacturing ventilation units for schools, sports halls, swimming pools and hospitals, as well as for industrial and process engineering applications. Building on this expertise, we offer a comprehensive portfolio of air-handling units for a wide range of applications.

Our units are engineered to deliver high quality, functionality, reliability and energy-efficient operation. The actual energy performance depends on the specific unit configuration and the correspond-

ing technical documentation. Throughout our product development, we have secured numerous intellectual property rights through the European Patent Office, reflecting the innovative nature of our technologies.

As a member of the German AHU Manufacturers Association (RLT-Herstellerverband e.V.), we design and manufacture our units in strict accordance with the AHU guidelines, ensuring the highest standards of quality, operational safety, and regulatory compliance for both our customers and the operators of our equipment.

The team

We invest in the continuous development of our employees and train the next generation of skilled professionals. The HANSA team comprises experienced specialists in the field of ventilation unit manufacturing, with expertise spanning refrigeration technology, control engineering, and automation.

Our units are designed and manufactured in accordance with the quality management requirements of DIN EN ISO 9001:2015.

Our sales team consists of experienced experts who are committed to finding the right solution for you.

Our philosophy

Our goal is to meet our customers' climate control requirements as effectively as possible while helping to protect the environment. To achieve this, we offer systems that can be tailored to our customers' specific operating conditions using flexible manufacturing processes and state-of-the-art components while minimizing energy consumption. As the energy requirements of both the overall system and its individual modules can be reduced without compromising performance, both investment and energy costs are reduced.

been independently assessed. Product-related emissions have been calculated using market-based secondary emission factors. We have purchased carbon credits to offset the unavoidable greenhouse gas emissions resulting from our operational and product-related activities. This simultaneously achieves positive social and environmental effects. In accordance with the EmpCo EU Directive, the results of the sustainability assessment are presented transparently as a sustainability overview on our publicly accessible ImpactBoard web portal.

The carbonfootprint of our company, our production processes and the product-related emissions – from raw material extraction to the factory gate – has

Committed to climate protection – not just through our products



HANSA is a member of the AHU Manufacturers Association (Herstellerverband Raumlufttechnische Geräte e.V.).



EXPERTISE IN SWIMMING POOLS

Dehumidification and air-conditioning solutions

HANSA has been manufacturing swimming pool dehumidification systems for decades and develops intelligent climate control solutions for swimming pools. Benefit from the **long service life** of our equipment, even in corrosive environments. Thanks to flexible manufacturing processes and state-of-the-art compo-

nents, we can tailor each system to your specific operating conditions. Appropriate unit sizing, modern components and optimised control systems help reduce energy demand and improve the operating cost structure.





Building protection

At water temperatures of around 30 °C, approximately 0.4 litres of water evaporate from each square metre of water surface every hour. This high rate of evaporation results in corresponding-

ly high humidity levels within the building. Our systems prevent condensation from forming on walls and ceilings. This in turn helps prevent serious long-term structural damage.

HANSA Pool Line

HANSA swimming pool dehumidification systems are available in a range of models. The models differ in their air volume flow range and the design of the heat recovery system (plate heat exchanger).

All models are also available with an integrated heat pump.



The challenge

- Maximum energy efficiency
- High level of corrosion protection for the unit and all its components
- Adaptation to specific project requirements
- High system availability

Our solution

- Careful selection of suitable components
- Optimal unit configuration for the respective application
- AI-based, self-learning *etaSmart* control system
- High level of corrosion protection for all materials and components
- Exclusive use of components from reputable manufacturers



Further information on our Pool Line swimming pool dehumidification systems can be found from page 20 onwards.



Value proposition

- ✓ Prevention of dew point conditions
- ✓ Fresh air supply
- ✓ Compliance with humidity limits
- ✓ Optimised air temperature control
- ✓ Optimised energy management
- ✓ High level of corrosion protection
- ✓ Standards-compliant vapour diffusion
- ✓ Removal of odours and pollutants
- ✓ Prevention of fungal growth
- ✓ ErP-compliant heat recovery
- ✓ Reduced operating costs

REFERENCES

Schöneberg Municipal Swimming Pool

Pleasant and bathed in light: the swimming experience at the Schöneberg Municipal Swimming Pool. HANSA Pool Line units with an integrated heat pump ensure highly efficient climate control and reliable building protection.



Bio Seehotel Zeulenroda

HANSA air-handling units help ensure energy-efficient climate control throughout the hotel. The specific system design is tailored to the requirements of the building and the swimming pool's operational needs.



Les Thermes Water Park

A water park in Strassen, west of Luxembourg, featuring a large leisure pool and an adjoining sauna and wellness area. Five HANSA Pool Line dehumidifiers ensure a comfortable indoor climate at all times.



Ocean Wave

What makes this spa unique is that its pools are filled with seawater. Even the increased risk of corrosion associated with seawater is no challenge for the 10 HANSA ventilation units installed at the facility.



Center Parcs Park

With its vast tropical water park, Aqua Mundo, as well as a separate spa and country club, Center Parcs Park Allgäu is the perfect place to relax. More than 30 HANSA air-conditioning units ensure a comfortable indoor climate in every area of the resort.



Aquadrom Ruda

A water park in Ruda Śląska, in the Upper Silesian Metropolitan Area in Poland. We are proud to have supplied a total of 14 ventilation units for various applications, providing the complete air-conditioning solution for this facility.



Spreewaldtherme

The HANSA units are designed to provide energy-efficient and cost-effective climate control for the thermal spa's pool and wellness areas through carefully selected components and demand-based operation.



Hamilton College

Long before this became common practice in the USA, the college's facilities manager was committed to using not only cost-effective equipment but also systems with heat recovery. HANSA was – and continues to be – the ideal partner for this approach. One of the projects completed was the air conditioning of the college's Bristol Pool, where several Pool Line units were installed.



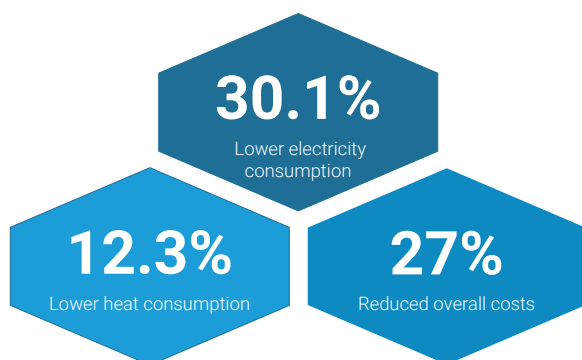
POOLS



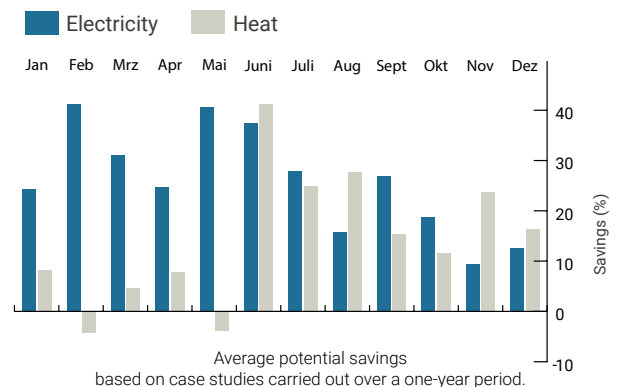
What is *etaSmart*?

etaSmart is the latest innovation in HANSA's *etaTECH* range and is designed to support the energy-efficient operation of swimming pool dehumidifiers.

Our artificial intelligence identifies the most energy-efficient operating mode and proactively controls the system.



The case studies, analysed over a one-year period, documented average potential savings in electricity, heating and overall operating costs. Actual results depend on the system and its usage.



Average potential savings based on case studies carried out over a one-year period.

What exactly does *etaSmart* stand for?

etaSmart is the umbrella term for the predictive, self-learning control system for swimming pool dehumidifiers developed by HANSA Klimasysteme GmbH.

Predictive » 'forward-looking'. Self-learning » the control system independently adapts its control concept while the unit is in operation.

can be used for
✓ **New system**
✓ **Old system**

depending on the installed control

Our innovation: *etaSmart*

ETA

As part of a project funded by the German Federal Environmental Foundation, HANSA Klimasysteme GmbH has developed the AI controller '*etaSmart*'. Ventilation and air-conditioning (VAC) systems are essential for maintaining the indoorclimate

and supplying fresh air in modern swimming pool facilities. The proportion of fresh air, humidity control and hygiene are all key factors. Alongside the technical design of the equipment, the quality of the control algorithms plays a particularly important role. Our newly developed AI control system *etaSmart* enables optimal control of your dehumidifiers.

etaSmart layers

Cloud layer 'In this secure, higher-level layer, data is backed up regardless of location.' This enables your system to learn from the experience of other systems and operate even more efficiently. Integrated security management, dashboards and an app store provide a range of additional features.

etaSmartlayer » This layer is deployed to your device. On these industrial PCs, the actual modelling is carried out using both neural networks and physics-based models. Depending on the existing con-

trol system and system configuration, etaSmart can also be retrofitted to existing installations.

Unit layer » This is where the ventilation units are actually controlled. Depending on the model, the individual components are controlled in the most energy-efficient way possible. Our Pool Line range offers a wide selection of configurable models to meet your exact requirements.





How does *etaSmartwork*?

⇒ Factors

- » Outside temperature
- » Outdoor humidity
- » Swimming pool occupancy
- » Solar radiation
- » Weather forecast

⚙ Adjustable parameters

- » Fresh air ratio
- » Heat pump output
- » Airflow
- » Recirculated air ratio
- » Hot water output

☑ Target values

- » Room temperature
- » Indoor humidity
- » Minimum energy consumption
- » Comfortable indoor environment

What costs are involved?

The scope of work depends on the requirements of your system.
In general, costs may arise from the following:

- Equipment modelling
- Building modelling
- Adaptation of the existing model
- Additional sensors: *etaWatch* lite
- Industrial PC
- Annual software costs for Siemens Live-Twin

CASE STUDIES

Ramsloh and Barßel Case Study

To demonstrate the potential savings for swimming pool operators under a range of operating conditions, HANSA has car-

ried out and documented several case studies in the region.

Swimming pool in Ramsloh

Unit 1: 12 000 m³/h with heat pump

Unit 2: 10 000 m³/h

Modelling approach: Modelling of both units and the building

Savings

The municipality of Saterland saves almost EUR 5 000 per year.

Electricity

up to
38%

Heat

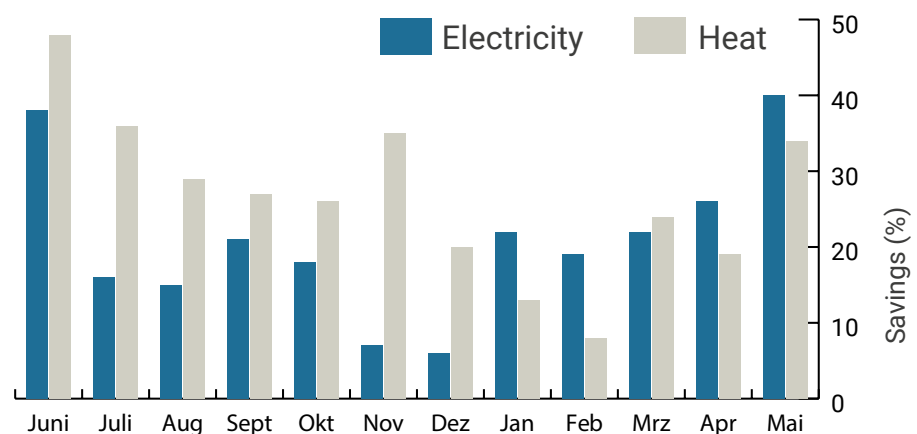
up to
48%

Total

up to
41%

Savings:

June	EUR 595
July	EUR 345
Aug	EUR 319
Sep	EUR 407
Oct	EUR 354
Nov	EUR 364
Dec	EUR 238
Jan	EUR 309
Feb	EUR 238
Mar	EUR 382
Apr	EUR 373
May	EUR 648



Swimming pool in Barßel

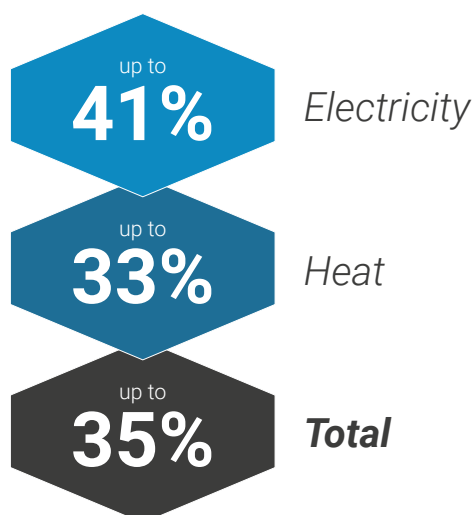
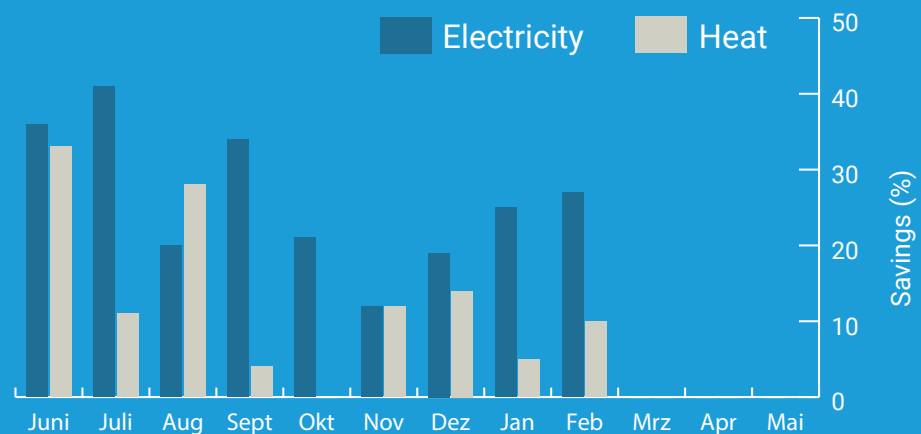
Unit 1: 12 000 m³/h with heat pump

Unit 2: 6 000 m³/h

Modelling approach: Modelling of both units and a standardised building model.

Savings:

June	EUR 583
July	EUR 778
Aug	EUR 397
Sep	EUR 492
Oct	EUR 126
Nov	EUR 204
Dec	EUR 283
Jan	EUR 236
Feb	EUR 331
Mar	-
Apr	-
May	-



Savings

Project-specific savings were achieved during the measurement period. Whether similar savings can be achieved at other swimming pools depends on the system configuration, usage and control concept.

Barßel saves more than one third of its costs.

OUR CLIMATE

Global climate

Climate change is one of the defining challenges of our time. HANSA records emissions, works to reduce them, and transparently documents its additional climate protection contributions on the publicly accessible ImpactBoard web portal.

The effects of global warming are becoming increasingly apparent, and we can counteract them only through consistent action. As the emission reduc-

tions pledged by countries are not sufficient on their own, a significant level of commitment is required to combat human-induced climate change. We believe it is our responsibility to play our part. That is why, since 2020, we have been measuring our carbon footprint and supporting certified climate protection projects.





Climate systems

Customised system solutions for ventilation and air-conditioning units across all areas of applications are what set HANSA apart. Since the foundation of our company, we have focused on innovation and development to continuously improve energy efficiency and reduce operating costs. We provide ideal solutions for swimming pools, IT cooling, hygiene, industry, laboratories, schools and

many more. Thanks to outstanding service and innovative technologies, such as our in-house *etaTECH* systems, air conditioning has never been easier. The adaptability of our products, combined with the expertise of our employees, enable us to guarantee optimum, highly efficient system solutions.

Working environment

At HANSA, the satisfaction of every employee is important to us. We believe that long-term success can only be achieved through a positive and fulfilling working environment. It is important to us that we follow this path together, to continuously develop ourselves as a team and as a company. To strengthen individual potential, we

support the further education and professional development of all our employees. This creates opportunities for everyone to shape their own career path. Whether you're a trainee, a student, a skilled worker, or looking for a career change, together we'll write our success story!

POOL LINE



What is the Pool Line?

HANSA swimming pool dehumidification systems are available in a range of models. The models differ in their air volume flow range and the design of the heat recovery system (plate heat exchanger). Each of these units is also optionally available with a continuously controllable dehumidification heat pump, as well as a pool water condenser and domestic hot water heating. Benefit from the exper-

tise of the leading supplier of swimming pool dehumidification systems. Draw on our extensive experience in the design of swimming pool dehumidification systems. Thanks to our expertise in control technology and energy-efficient components, operating costs can be reduced for the specific application.

POOL

Pool Line PL-P

The model features and design parameters shown here are examples and have been configured to comply with the applicable requirements of the Ecodesign Directive without an integrated heat pump, thereby achieving energy efficiency class A+ for air handling units. We would be pleased to provide you with the unit optimised for your specific application. Please get in touch.

- Compact units with double-plate heat exchangers
- Air volume flows from 1 500 m³/h to 3 400 m³/h
- Private swimming pools up to 105 m²
Indoor swimming pools up to 74 m²
Leisure pools up to 54 m²
Wave pools up to 44 m²
Therapy pools up to 25 m²
- Available with an optional, continuously controllable heat pump
- Enclosure construction:
Robust, thermally broken 30 mm frame profiles with matching casing panels, designed for indoor installation.
- Latest-generation EC fans
- Integrated unit controller, side-mounted, with an optimised control concept



	P-015	P-023	P-034
Width ¹	670	880	1080
Height ¹	2000	2000	2100
Length ¹	1860	1860	2070
Weight ²	565	720	855

¹ Dimensions in millimetres ² Weight in kilograms

Examples of different operating modes:



Operation with a high proportion of recirculated air



Operation with 100% outside air



Operation at high outside temperatures



Air recirculation only, e.g. standby mode



Erfüllt Verordnung (EU) 1253/2014 zur umweltgerechten Gestaltung von Lüftungsanlagen

<i>Applications ¹⁾</i>		P-015	P-023	P-034
Private pool	m ²	44	67	105
Indoor pool	m ²	33	51	74
Leisure pool	m ²	24	37	54
Wave pool	m ²	19	29	44
Therapy pool	m ²	11	16	25
Nominal airflow	m ³ /h	1 500	2 300	3 400
Dehumidification capacity ²⁾	kg/h	9.7	14.9	22
Energy recovery				
Capacity ³⁾	kW	18.2	28.1	41.5
Efficiency according to DIN EN 308 ⁴⁾	%	77.6	77.4	78.8
Ext. pressure drop				
Outdoor air – Supply air	Pa	400	400	400
Extract air - Exhaust air	Pa	400	400	400
Supply air fan				
Electrical power input	kW	0.54	0.87	1.45
Rated motor power	kW	0.75	1.05	1.8
Extract air fan				
Electrical power input	kW	0.51	0.83	1.38
Rated motor power	kW	0.75	1.05	1.8
Hot-water heating coil⁵⁾				
Capacity	kW	8	12	18
Heat pump (optional)				
Heating capacity	kW	7	10.3	15.2
Coefficient of performance	COP	4.6	4.5	4.6
Sound power level at the				
supply air connection	dB(A)	80	82	85
Extract air connection	dB(A)	68	69	73
Outdoor air connection	dB(A)	58	60	63
Exhaust air connection	dB(A)	71	73	76
Electrical data at 400 V / 50 Hz (with heat pump)				
Supply voltage	V	230/400	400	400
Connected load	kW	5	6.7	9.6
Current draw	A	9	12	18
Filter (minimum filter class)				
Extract air filter DIN ISO EN 16890	Class ePM1	50%	50%	50%
Outdoor air filter DIN ISO EN 16890	Class ePM1	50%	50%	50%

¹⁾ In accordance with VDI 2089 at T_{water} = 28 °C and T_{room} = 30 °C / 54% RH, based on the water surfacearea

²⁾ In accordance with VDI 2089 at the nominal airflow

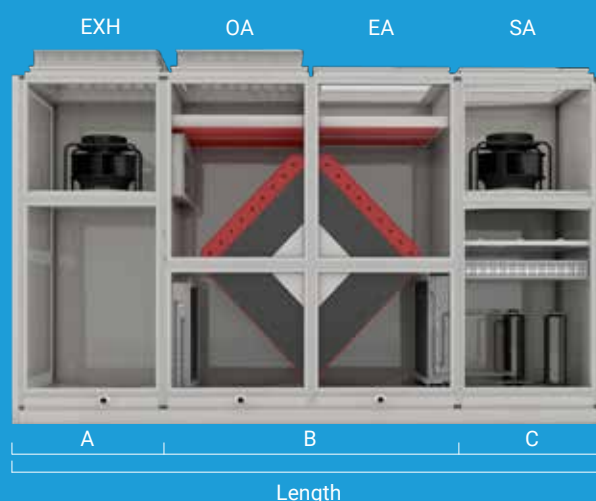
³⁾ At the nominal airflow for T_{outdoor air} = -12 °C / 90% RH; T_{extract air} = 30 °C / 54% RH.

⁴⁾ At the nominal airflow for T_{outdoor air} = 5 °C / 10% RH; T_{extract air} : 25 °C / 10% RH.

⁵⁾ Air inlet temperature: 18 °C; Water temperature: 60 °C / 40 °C

Pool Line PL-PGS

The model features and design parameters shown here are examples and have been configured to comply with the applicable requirements of the Ecodesign Directive without an integrated heat pump, thereby achieving energy efficiency class A+ for air handling units. We would be pleased to provide you with the unit optimised for your specific application. Please get in touch.



	PGS-040	PGS-048	PGS-065	PGS-080
Width	1080	1280	1280	1590
Height	1865	1865	2140	2140
Length	3210	3210	4060	4060
A	785	785	1030	1030
B	1640	1640	2000	2000
C	785	785	1030	1030

All dimensions are in mm

- Compact units with cross-flow plate heat exchangers and top-mounted connections
- Air volume flows from 4 000 m³/h to 8 000 m³/h
- Available with an optional, continuously controllable heat pump
- Enclosure construction: Robust, thermally broken 30 mm frame profiles with matching casing panels, designed for indoor installation.
- Latest-generation EC fans
- Integrated unit controller, side-mounted, with an optimised control concept

Examples of different operating modes:



Heat pump-assisted operation



Operation with 100% outside air



Operation at high outdoor temperatures



Air recirculation only, e.g. standby mode



Erfüllt Verordnung (EU) 1253/2014 zur umweltgerechten Gestaltung von Lüftungsanlagen

<i>Applications</i> ¹⁾		PGS-040	PGS-048	PGS-065	PGS-080
Private pool	m ²	117	140	191	216
Indoor pool	m ²	90	108	145	166
Leisure pool	m ²	64	77	105	118
Wave pool	m ²	51	62	83	95
Therapy pool	m ²	28	35	47	53
Nominal airflow	m ³ /h	4000	4800	6500	8000
Dehumidification capacity ²⁾	kg/h	25.9	31.1	42.1	51.8
Energy recovery					
Capacity ³⁾	kW	50	61	82	102
Efficiency according to DIN EN 308 ⁴⁾	%	76.5	76.5	77.5	77.5
Ext. pressure drop					
Outdoor air – Supply air	Pa	400	400	400	400
Extract air - Exhaust air	Pa	400	400	400	400
Supply air fan					
Electrical power input	kW	1.34	1.61	2.23	2.65
Rated motor power	kW	1.90	2.50	4.45	3.90
Extract air fan					
Electrical power input	kW	1.34	1.59	2.20	2.63
Rated motor power	kW	1.90	2.50	4.45	3.90
Hot-water heating coil⁵⁾					
Capacity	kW	23	30	41	50
Heat pump (optional)					
Heating capacity	kW	13.0	16.0	23.0	27.0
Coefficient of performance	COP	5.0	5.0	4.9	5.2
Sound power level at the					
supply air connection	dB(A)	84	84	85	85
Extract air connection	dB(A)	66	66	66	68
Outdoor air connection	dB(A)	65	65	65	67
Exhaust air connection	dB(A)	84	84	85	85
Electrical data at 400 V / 50 Hz (with heat pump)					
Supply voltage	V	400	400	400	400
Connected load	kW	8.5	11.5	15	15
Current draw	A	18	23	30	30
Filter (minimum filter class)					
Extract air filter DIN ISO EN 16890	Class ePM1	50%	50%	50%	50%
Outdoor air filter DIN ISO EN 16890	Class ePM1	50%	50%	50%	50%

¹⁾ In accordance with VDI 2089 at T_{water} = 28 °C and T_{room} = 30 °C / 54% RH, based on the water surfacearea

²⁾ In accordance with VDI 2089 at the nominal airflow

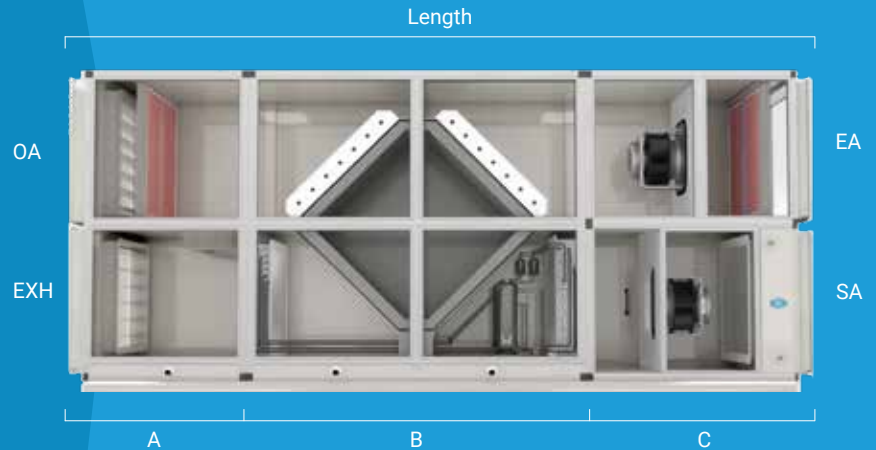
³⁾ At the nominal airflow for T_{outdoor air} = -12 °C / 90% RH; T_{extract air} = 30 °C / 54% RH.

⁴⁾ At the nominal airflow for T_{outdoor air} = 5 °C / 10% RH; T_{extract air} : 25 °C / 10% RH.

⁵⁾ Air inlet temperature: 18 °C; Water temperature: 60 °C / 40 °C

Pool Line HKG-GS

The model features and design parameters shown here are examples and have been configured to comply with the applicable requirements of the Ecodesign Directive without an integrated heat pump, thereby achieving energy efficiency class A+ for air handling units. We would be pleased to provide you with the unit optimised for your specific application. Please get in touch.



	GS-4	GS-6	GS-9	GS-12	GS-16	GS18	GS-23	GS-30	GS35
Width	1080	1080	1590	1890	2240	2540	2850	3150	3460
Height	1760	2060	2060	2460	2740	2740	2740	3360	3360
Length	3850	4510	4660	5410	5470	5620	6020	6260	6660
A	750	860	860	1050	1050	1050	1050	1190	1290
B	1700	2100	2100	2500	2540	2540	2940	3040	3340
C	1400	1550	1700	1860	1880	2030	2030	2030	2030

All dimensions are in mm

- Compact units with cross-flow plate heat exchangers, all connections on the side
- Air volume flows from 4 600 m³/h to 35 000 m³/h, without heat pump
- Available with an optional, continuously controllable heat pump
- Enclosure construction: Robust, thermally broken 30 / 50 mm frame profiles with matching casing panels, suitable for indoor and outdoor installation (weather-proof) A T2 / TB1 version is available with 50 mm casing panels
- AI-based unit control with etaSmart available
- Latest-generation fans

Examples of different operating modes:



Heat pump-assisted operation



Operation with 100% outside air



Operation at high outdoor temperatures



Air recirculation only, e.g. standby mode



Erfüllt Verordnung (EU) 1253/2014 zur umweltgerechten Gestaltung von Lüftungsanlagen

<i>Applications</i> ¹⁾		GS-4	GS-6	GS-9	GS-12	GS-16	GS-18	GS-23	GS-30	GS-35
Private pool	m ²	130	180	260	350	470	550	670	880	1020
Indoor pool	m ²	100	130	200	260	350	410	510	660	770
Leisure pool	m ²	73	98	142	190	253	297	365	476	555
Wave pool	m ²	55	75	110	150	200	235	290	375	440
Therapy pool	m ²	32	44	64	85	114	133	164	214	250
Nominal airflow	m ³ /h	4600	6200	9000	12000	16000	18500	23000	30000	35000
Dehumidification capacity ²⁾	kg/h	30	40	58	77	103	118	149	194	226
Energy recovery										
Capacity ³⁾	kW	58	78	113	150	198	231	295	381	438
Efficiency according to DIN EN 308 ⁴⁾	%	76.1	76.1	76.3	76.6	75.8	75.6	77.1	77.9	75.7
Ext. pressure drop										
Outdoor air – Supply air	Pa	400	400	400	400	400	400	400	400	400
Extract air - Exhaust air	Pa	400	400	400	400	400	400	400	400	400
Supply air fan										
Electrical power input	kW	1.67	2.21	3.12	3.78	5.40	6.32	7.71	10.25	12.33
Rated motor power	kW	1.9	2.9	5	5	6.9	10	10	15	15
Extract air fan										
Electrical power input	kW	1.65	2.15	3.1	3.67	5.32	6.24	7.58	9.97	12.03
Rated motor power	kW	1.9	2.9	5	5	6.9	10	10	15	15
Hot-water heating coil⁵⁾										
Capacity	kW	38	52	71	98	130	150	185	240	270
Heat pump (optional)										
Heating capacity	kW	7.5	10	12	17	24	27	33	43	49
Coefficient of performance	COP	6.0	5.9	6.0	6.0	6.0	6.0	6.2	6.2	6.3
Sound power level at the										
supply air connection	dB(A)	83.3	83.2	84.0	85.5	86.4	87.0	88.4	88.8	90.6
Extract air connection	dB(A)	72.2	72.0	71.7	74.0	76.2	74.9	76.7	76.7	78.8
Outdoor air connection	dB(A)	66.7	67.0	66.2	68.0	70.2	69.3	70.7	71.1	72.8
Exhaust air connection	dB(A)	78.7	78.4	79.0	80.9	81.8	82.7	84.1	84.5	86.3
Electrical data at 400 V / 50 Hz (with heat pump)										
Supply voltage	V	400	400	400	400	400	400	400	400	400
Connected load	kW	6	11	13	14	21	26	27	38	40
Current draw	A	11	20	24	27	39	48	50	68	72
Filter (minimum filter class)										
Extract air filter DIN ISO EN 16890	Class ePM1	50%	50%	50%	50%	50%	50%	50%	50%	50%
Outdoor air filter DIN ISO EN 16890	Class ePM1	50%	50%	50%	50%	50%	50%	50%	50%	50%

¹⁾ In accordance with VDI 2089 at T_{water} = 28 °C and T_{room} = 30 °C / 54% RH, based on the water surface area

²⁾ In accordance with VDI 2089 at the nominal airflow

³⁾ At the nominal airflow for T_{outdoor air} = -12 °C / 90% RH; T_{extract air} = 30 °C / 54% RH.

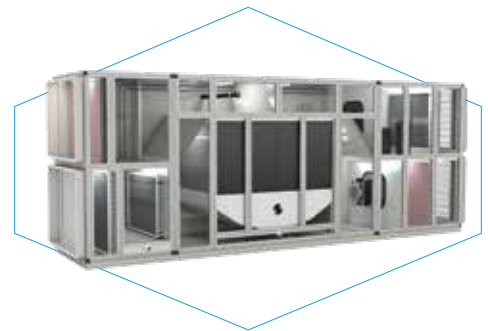
⁴⁾ At the nominal airflow for T_{outdoor air} = 5 °C / 10% RH; T_{extract air} : 25 °C / 10% RH.

⁵⁾ Air inlet temperature: 15 °C; Water temperature: 60 °C / 40 °C

MORE PRODUCTS

Blue Line

Highly customisable ventilation and full air-conditioning units with central heat recovery for maximum energy efficiency. All standard heat recovery systems can be integrated, including plate heat exchangers, rotary heat exchangers, run-around coil systems and Accublock.



Slim Line

Highly efficient, compact units manufactured in large quantities for cooling spaces with high thermal loads. Compared with recirculation or split-system units, these units can deliver significant energy savings in specific applications. Actual savings depend on the individual operating conditions.



Free Line

Our Free Line units are fully customisable air-conditioning units designed for the free cooling of server rooms and, more generally, for the dissipation of process heat. They can be perfectly adapted to a range of applications.



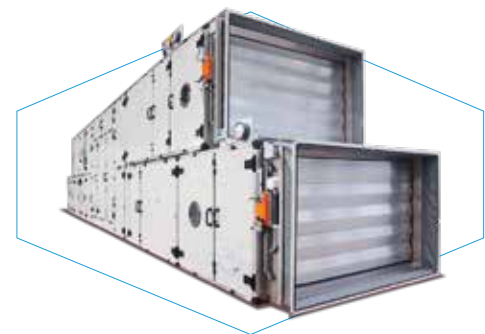
ReCool Line

Recirculating air cooling units for removing excess heat from spaces with high thermal loads – whatever the operating conditions. Put your trust in HANSA, the climate specialist, and choose the recirculating air cooling unit that best meets your requirements.



Blue Line Hy

Germ-free, clean air is an essential requirement in hygiene-sensitive environments. Our Blue Line Hy air-handling units condition the air to meet specific application requirements.



Compact Line

The modular design of this product range enables cost-effective manufacturing while providing maximum flexibility and versatility. High quality standards and cost-effective operation are guaranteed.



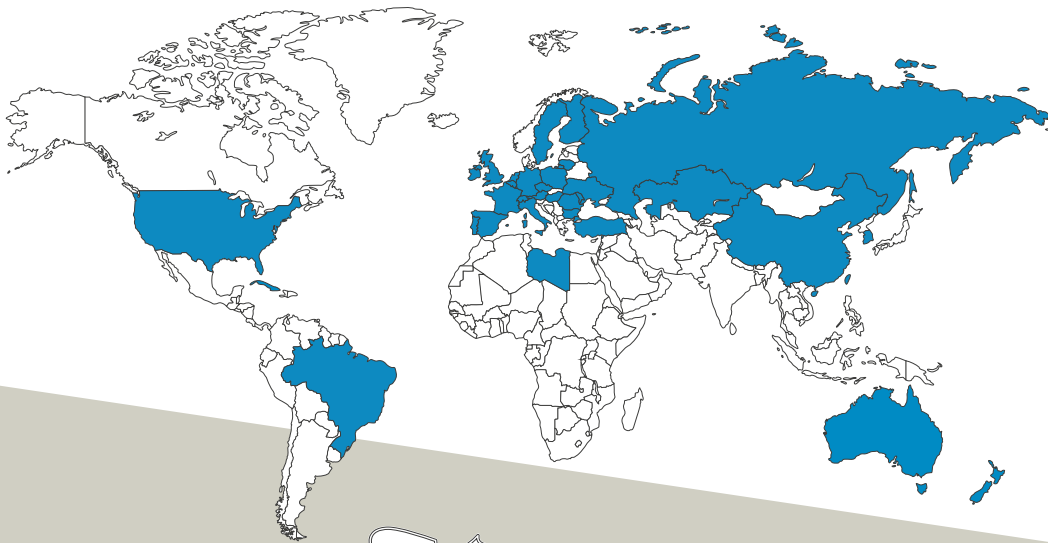
Specialised units

Our range of specialised units includes the LF-HY (food hygiene) and Hygro Line (recirculating air dehumidification) product series. More detailed information about all our products is available on our website.





Our units around the world



LOCATIONS



HANSA Klimasysteme GmbH

Stockweg 19
26683 Saterland / Strücklingen, Germany
Tel.: +49 (0)4498 89-0
Email: info@hansa-klima.de

Responsible for the content:
Dr.-Ing. Matthias Lamping
Managing Director:
Carsten Fenne, Jan Neumann

Tax ID No.: DE 117 377 203
Oldenburg Register Court
HRB 151863



baeder-klima.de

