ACCESSORIES
BOILERS

SOLAR PANELS, ACCUMULATOR SYSTEMS,
HYDRAULIC COMPONENTS, STAINLESS STEEL FLUE PIPES

HARGASSNER
BIOMASS HEATING TECHNOLOGY

hargassner.com

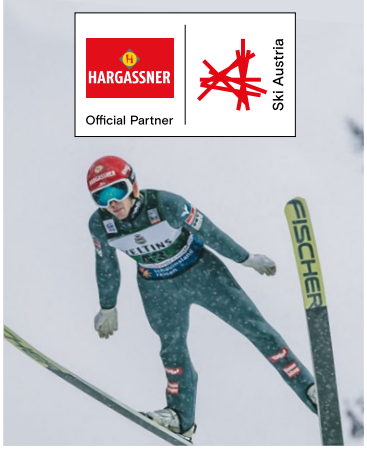
Table of contents

Left to right: Philipp Aschenwald, Jonas Gerner, Daniela Iraschko-Stolz

Winter sports
are our passion!

The fire burns in our eyes. Not just because we build sustainable biomass heating systems, but also because we are passionate sports fans. While it was once Anton Hargassner sr. himself who daringly pushed himself off the ski jump beam at a young age, he later kindled this fire for sport in Markus and Anton jr. Hargassner as well.
This passion still burns in the Hargassner family today and the values of sport therefore also actively shape Hargassner's corporate culture. The "Hargassner Sport Family" unites this enthusiasm for sports, from youngsters to professionals, and shares it with the international fan community.

If you would like to be kept informed and experience first-hand everything that is going on in the world of the "Hargassner Sport Family", please follow them on their Facebook & Instagram social media channels. **#hargassnerfamily**



Our corporate values are characterised **by harmony between nature and satisfied customers**

Hargassner. Since 1984, as a pioneer in automated biomass heating systems, we have endeavoured to stand by our customers as a reliable partner – with trustworthiness from Innviertel. We have now grown into an internationally successful company with a pronounced spirit of innovation.

- Over **39 years of experience**
- **170,000 customers** worldwide
- **75,000 m² company floor space**
- More than **1,200 employees** at several locations
- **Export to 43 countries**
- **International awards**

Managing directors (left to right)
Markus & Anton jr. Hargassner

The variety of **heating accessories**

Solar panels

- TS 300
- TS 330 M
- TS 400

For details, see p. 6

Accumulator systems

- SP 500 – 5,000 / HSP 500 – 1,500
- SP / HSP 500 – 1,500 SW 1 + 2
- HWS 320 / FWS / FWS - Z

For details, see p. 14

Hot water tank

- Nano-WS 210

For details, see p. 24

Biomass heating technology at its best:
Products from Hargassner combine the highest quality, expertise and decades of proven technology. As a biomass pioneer, Hargassner researches and develops the future of heating with a keen sense of the environment. These innovations make the boilers some of the best biomass heating solutions available in the world today. Lowest emissions at the highest efficiencies, maximum convenience and long lifetime characterise the "Hargassner" brand. Research, quality control and the focus on customer satisfaction therefore characterise the daily tasks to a high degree. Many customers are already benefiting from this success story. A capacity of more than 30,000 boilers produced per year and over 170,000 satisfied buyers worldwide are proof of the top level of Hargassner heating technology.

Discover the wide world of Hargassner heating accessories on the following pages.

HARGASSNER
BIOMASS HEATING TECHNOLOGY

Fresh-water station

- FWS 35 / 50
- FWS 35 / 50-Z

For details, see p. 26

Substations

- ÜGS 15 / 30 / 50 / 75 / 100 kW
- ÜGS 150 / 200 / 250 kW

For details, see p. 28

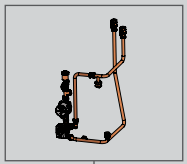
Heat circuit groups

- HKG 25 / 32
- HKGM 25 / 32

For details, see p. 32

For heat meters
see page 30

Back-end protection
devices
See pages 34



Hydraulic modules
See pages 36

Stainless steel flue pipes
see page 38

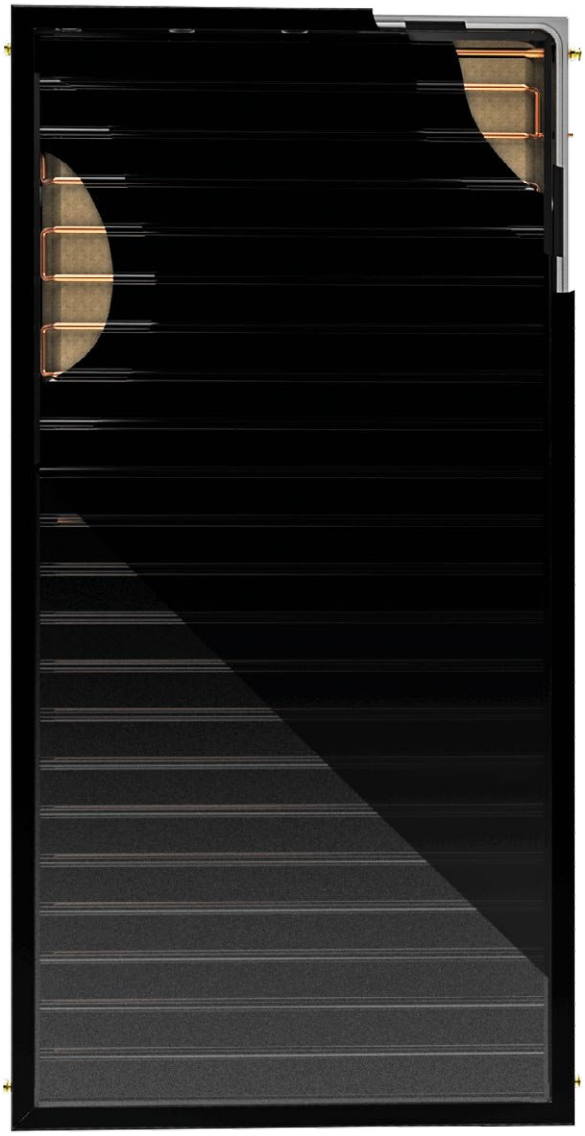
Valves and
safety groups
See pages 39

SP = layered accumulator; HSP = layered hygienic accumulator; SW = solar coil; HWS = hybrid accumulator tank; FWS = freshwater station; FWS-Z = freshwater station with circulation; ÜGS = substation; HKG = heat circuit group; HKGM = heat circuit group with mixer

Harnessing the energy of the **sun**

Premium solar panels

As an ideal complement to biomass heating systems, Hargassner offers high-quality solar panels for the preparation of heating and hot water. They are available as flat-plate collectors with above-average performance and a long lifetime, and they are available in reinforced versions for regions with high snow loads. The Hargassner Group is the only company worldwide to market vacuum flat-plate collectors. They are the only collectors that work 100% free of condensate.



- Collector trough made from a **seawater-proof alloy of aluminium and magnesium**
- **High thermal conductivity & short response time** by means of copper tube meandering pipe
- **Mechanical connection** between meandering pipe and absorber ensures **consistent long-term performance**
- 4 mm thick **specially hardened solar safety glass** (hailstorm tested)
- **Quick, easy and safe installation** thanks to solderless connections
- **Solar funding** – all panel models are certified in line with KEYMARK and Austria-Solar and fully eligible for funding (BAFA, KfW, etc.).

Suitable for

- Roof mounting
- Flat-roof mounting/free-standing installation
- Façade mounting

Tested and awarded many times

10 JAHRE auf Kollektorfunktion und Haltbarkeit der Werkstoffe* GARANTIE *gemäß den Garantiebestimmungen

TSU ISO 9001 ELBACERT

GEPRÜFTE QUALITÄT austria solar WÄRME FÜR GENERATIONEN HARGASSNER 2024 VERLÄNGERTE GARANTIE

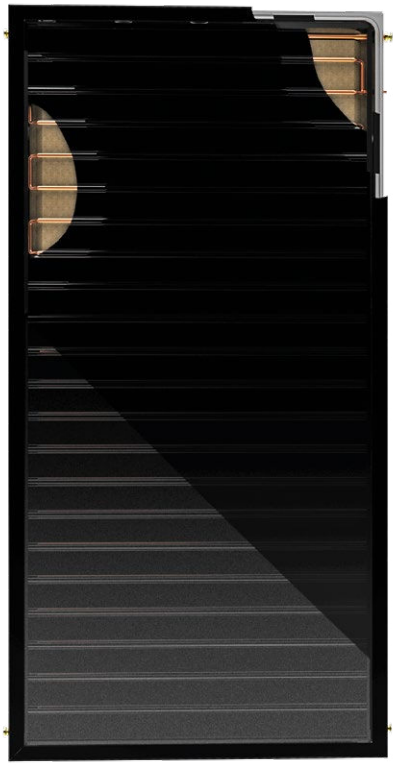
BAFA = Deutsches Bundesamt für Wirtschaft und Ausfuhrkontrolle (German Federal Office for Economic Affairs and Export Control); KFW = Kreditanstalt für Wiederaufbau (German Reconstruction Loan Corporation)

High-performance flat-plate collector
TS 300

Collector for vertical installation
Usage: The TS 300 is the most cost-effective solution in cases where high performance standards are required. Excellent manufacturing combined with the latest solar technology makes this collector unique. Thanks to its outstanding performance, this collector is particularly suitable for heating domestic water and supporting heating systems.

Structure: The collector consists of a compact deep-drawn trough made from an aluminium-magnesium alloy that is 0.8 mm thick and attached to a sheet of safety glass by a frame of anodised aluminium. The full-surface absorber is coated with a highly selective aluminium oxide alloy and connected to the internal meandering pipe using a special forming technology. The solderless flange connections ensure the absorber is able to link up to the solar circuit quickly and safely. Up to ten of these collectors can be connected together consecutively.

Optional in case of increased snow load: This collector is also available as the TS 300-H, which has a highly selective PVD absorber coating and structured safety glass.



High-performance horizontal collector
TS 330 M

Collector for horizontal installation
Usage: Horizontal installation allows for optimum use of existing roof surfaces.

Structure: The collector consists of a compact deep-drawn trough made from an aluminium-magnesium alloy that is 0.8 mm thick and attached to a sheet of safety glass by a frame of anodised aluminium. The full-surface absorber is coated with a highly selective aluminium oxide alloy and connected to the internal meandering pipe using a special forming technology. The solderless flange connections along the short sides ensure the absorber is able to link up to the solar circuit quickly and safely. Up to eight of these collectors can be connected together consecutively. Compensators are only necessary for six collectors or more

Vacuum flat-plate collector
TS 400

Collector for vertical installation

Usage: Thanks to its impressive performance, this collector is particularly suitable for process heat, special heat pump systems and supporting heating systems. The vacuum insulation technology means that condensate does not appear in the collector even at low temperatures.

Structure: The collector consists of a compact deep-drawn trough made from an aluminium-magnesium alloy that is 1.3 mm thick and attached to a sheet of safety glass by a frame of anodised aluminium. The full-surface absorber is coated with a highly selective aluminium oxide alloy and connected to the internal meandering pipe using a special forming technology. The solderless flange connections ensure the absorber is able to link up to the solar circuit and the vacuum line quickly and safely. By filling the evacuated collector with krypton, performance is increased by 10%. As it is completely hermetically sealed, it is well-suited to areas with high levels of air pollution and a maritime climate. Up to ten of these collectors can be connected together consecutively.

Vacuum insulation

Technical data

	TS 300	TS 330 M	TS 400
Dimensions (L x B x H):	2009 x 1009 x 75 mm	1009 x 2009 x 75 mm	2009 x 1009 x 75 mm
Gross collector area:	2.031 m²	2.031 m²	2.031 m²
Absorber area:	1.78 m²	1.78 m²	1.70 m²
Aperture area:	1.78 m²	1.78 m²	1.84 m²
Total weight:	36.1 kg	36.5 kg	45.3 kg
Glass covering / housing	Toughened solar safety glass t = 4 mm / deep-drawn trough made from an AlMg alloy		
Glass strips / connection points:	dark brown or anodised aluminium /Tension clip connections (solderless)		
thermal insulation:	40 mm mineral wool	40 mm mineral wool	Vacuum
Meandering pipe liquid content:	1.57 l	1.50 l	1.57 l
Absorber technology:	Thin-sheet, full-surface absorber coated with a carefully selected aluminium oxide alloy		
Stagnation temperature:	190°C	189°C	224°C
recommended flow rate:	1 l/min per collector	1 l/min per collector	1 l/min per collector
Module peak performance:*	1445 W	1435 W	1464 W
Angle-of-incidence correction factor:	0.95	0.95	0.95
effective heat capacity:	6.32 kJ/(km²)	6.32 kJ/(km²)	5.12 kJ/(km²)
Keymark:	TSU 010-12	TSU 004-12	TSU 005-12
* Gb = 850 W/m²; Gd = 150 W/m²			

Guide values for solar-system layouts - collector layout areas and tank volumes

Tank model	WS 300	WS 500 Solar	HSP 500 SW1	HSP 650 SW1	HSP 825 SW2	HSP 1000 SW2	HSP 1500 SW2
Recommended gross layout area m²	6 m²	8 - 10 m²	8 - 10 m²	8 - 12 m²	10 - 14 m²	12 - 16 m²	14 - 18 m²
Number of collectors	3 pieces	4 - 5 pieces	4 - 5 pieces	4 - 6 pieces	5 - 7 pieces	6 - 8 pieces	7 - 9 pieces
Hot water supplied for approx.	4 people	6 people	4 people	5 people	6 people	6+ people	6+ people
Heating support	---	---					

Accumulator used by multiple heat sources; pay attention to the position of the accumulator sensors and the required delivery rate for the HSP. Bear the minimum sizes required for funding in mind! Subject to technical changes.

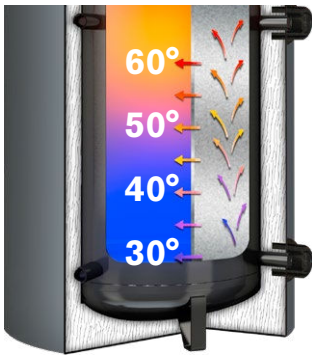
AlOx = aluminium oxide; PVD = Physical Vapour Deposition; WS-Solar = hot-water storage tank with solar;
HSP SW1 or 2 = layered hygienic accumulator with one or two solar coils, respectively

What do I have to consider?

Accumulator tank for storing heat

Storing heat with the help of a layered accumulator makes sense for many areas of application. Especially if the energy is generated at a different time than it is consumed – such as with solar. With biomass, too, the use of an accumulator optimises heat utilisation and reduces emissions.

There are suitable accumulator systems and sizes depending on the heating system, fuel and individual needs. The special Hargassner layered accumulators with integrated "spread sheet" guarantee optimum temperature stratification and ensure particularly efficient energy utilisation. This saves heating costs in the long run.



With a wood log boiler

After ignition, the combustion can be regulated well but not stopped as required. In order to be able to use the surplus heat later, an accumulator tank is used. It absorbs it and releases it to the boiler or hot water system as needed. As a result, the boiler is always running in the ideal output range. This also reduces emissions. In addition, the right accumulator volume increases comfort, as there is less need to top up during the transitional period or in winter.

With a wood chip boiler

Here, the accumulator tank brings several advantages and is therefore popular: on the one hand, it stores heat at very low power consumption and thus prevents the boiler from being switched on and off frequently; on the other hand, it can keep the stored energy ready for peak load coverage when heat is required at short notice.

With a pellet system (up to 60 kW)

Due to changes in heating habits, better building insulation and modern heating systems in new buildings (low temperature, individual room control, living room ventilation), accumulator tanks also bring advantages for pellet systems up to 60 kW. They are therefore increasingly used.

Recommendation from experts

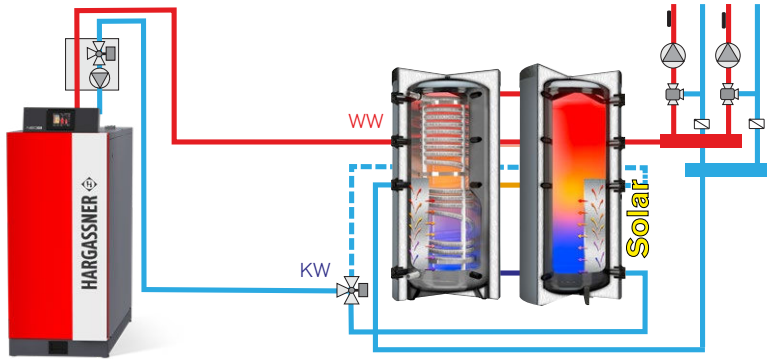
We recommend dimensioning the boiler output precisely to the heating requirement – with the appropriate accumulator size depending on the fuel and system design, as well as using the Hargassner hydraulic diagrams. Also pay attention to the regulations and funding guidelines of your country, as sometimes corresponding accumulators are prescribed from the outset. (e.g. in Germany: accumulator volume for pellet & wood chip boilers 30 l/kW and for wood logs 55 l/kW)

For Germany: In accordance with GEG2020, undersize the boiler by 5 - 10 % of the standard heat requirement.

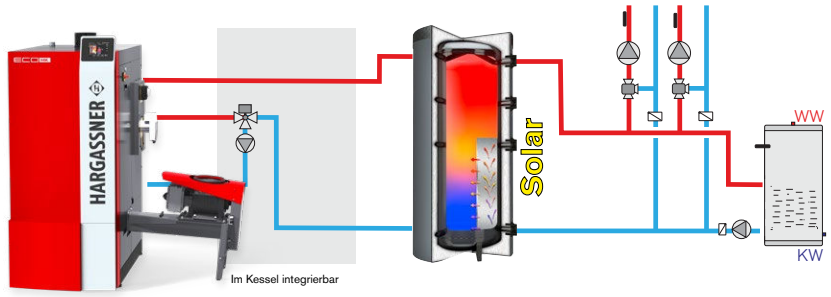
EXAMPLES

Accumulator mounting options

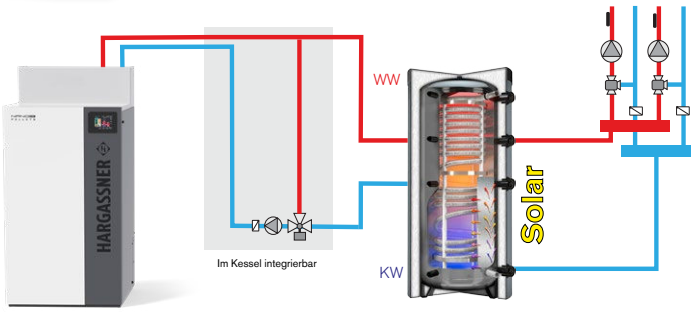
Wood log boiler Neo-HV
with layered hygienic accumulator HSP and layered accumulator SP



Wood chip boiler ECO-HK
with layered accumulator SP and hot water tank



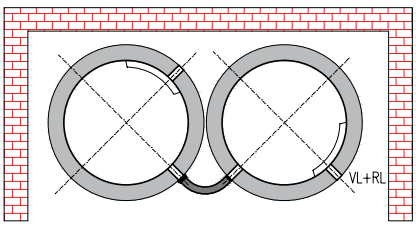
Pellet boiler Nano-PK
with solar layered hygienic accumulator HSP-SW



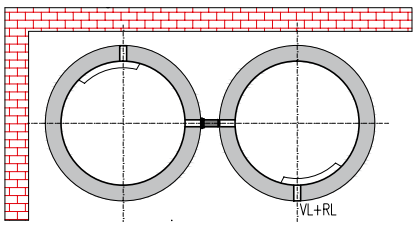
Accumulator installation possibilities

Hargassner accumulators can be installed side by side thanks to the special position of their couplers. As a result the largest possible tank can fit into the smallest available space. Accumulator connection sets with components of 120 mm or 420 mm in length are available to make installation easy.

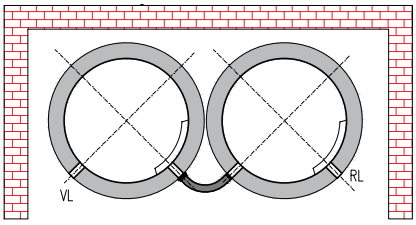
Alcove installation
Accumulator connection set: 4 stainless steel corrugated hoses (6/4", 420mm)



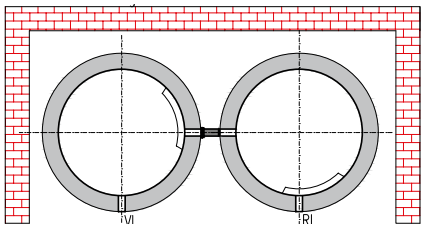
Corner installation
Accumulator connection set: 4 stainless steel corrugated hoses (6/4", 120mm)



Alcove installation
Accumulator connection set: 4 stainless steel corrugated hoses (6/4", 420mm)

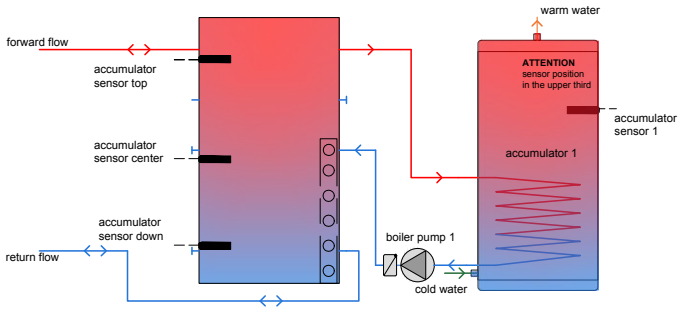


Alcove installation
Accumulator connection set: 4 stainless steel corrugated hoses (6/4", 120mm)

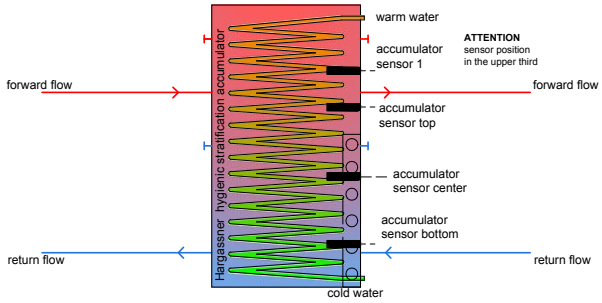


ACCUMULATOR SCHEMES

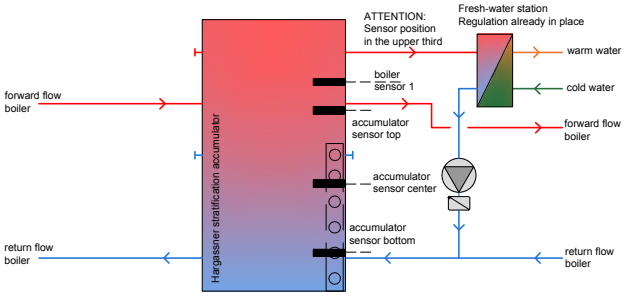
Layered accumulator with external hot water tank

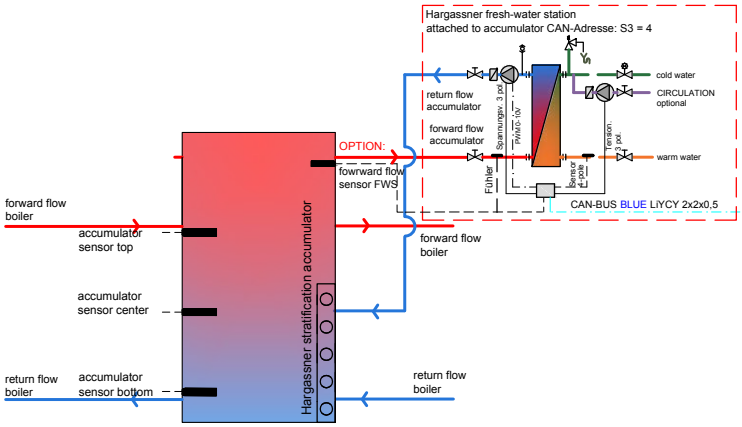


Hygienic accumulator with integrated stainless steel corrugated pipe/hot water tank



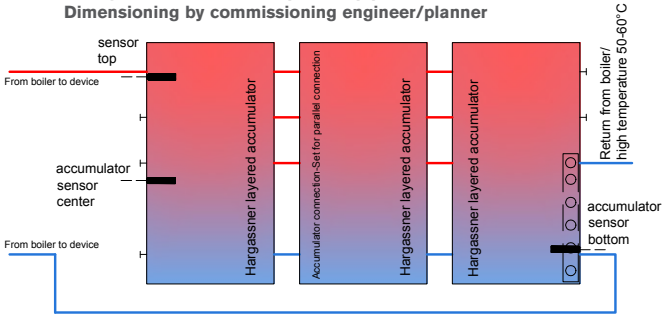
Layered accumulator with a fresh-water station



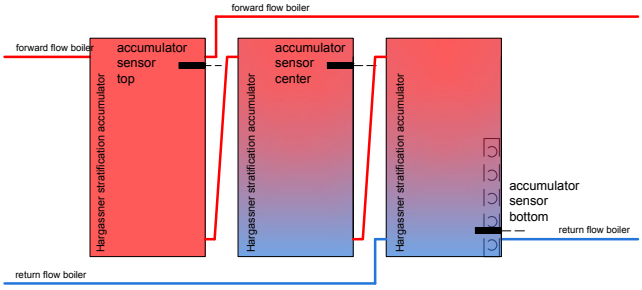


Accumulator combinations

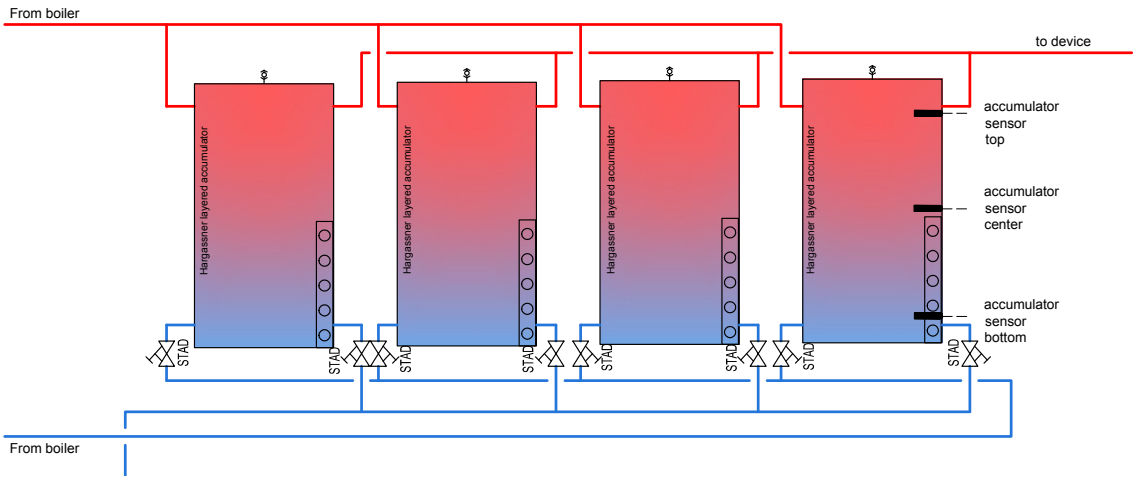
3 x Layered accumulator – parallel pipes
Dimensioning by commissioning engineer/planner



3 x Layered accumulator – serial pipes
Dimensioning by commissioning engineer/planner



4 x Layered accumulator – pipes according to Tichelmann – generator & consumer circuit separate!
Dimensioning by commissioning engineer/planner! Sensor package optionally possible in each accumulator.



SP = layered accumulator; HSP = layered hygienic accumulator; SW = solar coil; FWS = freshwater station

Layered accumulator
SP 500 – 5,000

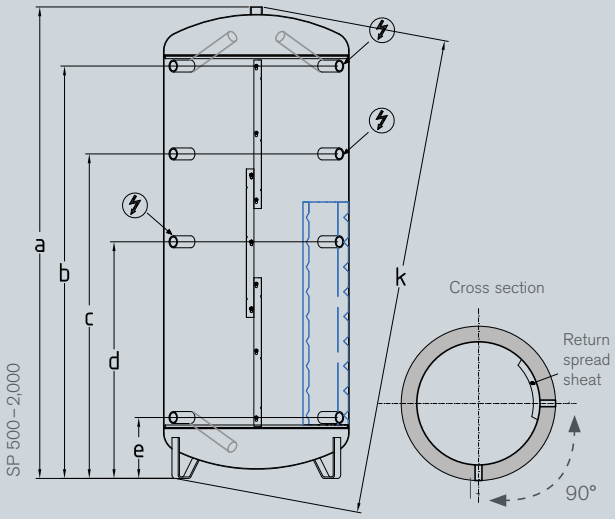
The details of this layered accumulator's design are tailored perfectly to Hargassner control and hydraulic systems. The integrated return spread sheet has one major advantage: precise temperature stratification during loading and unloading. The integrated sensor strips enable precise, system-specific sensor positioning and thus optimise control processes.

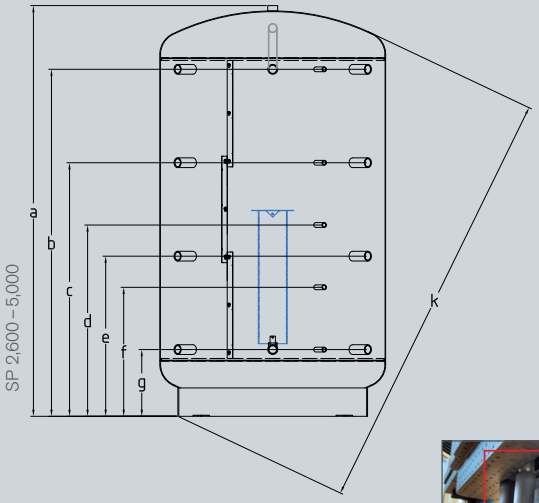
Additionally, all Hargassner accumulator tanks come with two staggered sets of 90° connectors (each set has four connecting couplers and coupler insulation of up to 2" - DN50) and are therefore ideal for parallel connection.
The space-saving 45° installation position is another bonus; the accumulators can be installed adjacently – meaning they take up as little space as possible. The installation is completed by highly effective non-woven fabric insulation, which has a thickness of 120 mm, and an attractive-looking grey hard cover with an aluminium hook rack.

- **Return spread sheet**
  for optimal accumulator utilisation
- **Easy and flexible installation**
  using sensor terminal strip
- **Non-woven fabric insulation, hard cover and coupler insulation**

- Energy efficiency class C
- Energy efficiency class B with additional accumulator insulation (only for SP1000 & SP1500)
- Specialised accumulators of up to 150,000 litres and accumulators without insulation are available on request.

The ideal heat storage tank
SP 500 – 5,000



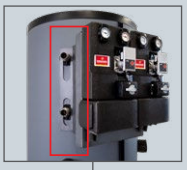


Pipe set for
layered accumulator SP with
FWS freshwater station

Technical data SP

	Unit	SP 500	SP 650	SP 825	SP 1000	SP 1500	SP 2000	SP 2600	SP 3000	SP 4000	SP 5000
Accumulator Volume	Litre	476	647	796	892	1445	1904	2506	2871	3887	4885
Diameter ø without insulation	mm	650	750	750	790	990	1100	1250	1250	1600	1600
Diameter ø with insulation for energy efficiency class C	mm	850	950	950	990	1230	1340	1490	1490	1840	1840
Diameter ø with insulation for energy efficiency class B	mm	-	-	-	1070	1310	-	-	-	-	-
Height without insulation	mm	1630	1660	1910	2020	2090	2250	2320	2620	2250	2760
Height with insulation for energy efficiency class C	mm	1720	1750	2000	2110	2180	2340	2410	2730	2340	2895
Height with insulation for energy efficiency class B	mm	-	-	-	2150	2220	-	-	-	-	-
Tilt dimension without insulation	mm	1650	1670	1920	2030	2104	2268	2411	2690	2460	2900
Connectors 8 pcs IT	inches	6/4	6/4	6/4	6/4	6/4 (2)	6/4 (2)	10 x 2	10 x 2	10 x 2	10 x 2
Weight SP (without insulation)	kg	78	92	105	116	164	216	288	325	437	576

Max. operating pressure 3 bar, max. operating temperature 95 °C, fire protective class B2. Other sizes available on request.



Accumulator mounting plate
for FWS freshwater station or
HKG heat circuit group

Connections

			SP 500	SP 650	SP 825	SP 1,000	SP 1,500	SP 2,000	SP 2,600	SP 3,000	SP 4,000	SP 5,000
Connection / ventilation 6/4"	a	mm	1,630	1,655	1,910	2,020	2,090	2,250	2,320	2,620	2,260	2,760
Connection	b	mm	1,408	1,416	1,666	1,769	1,796	1,926	1,956	2,256	1,824	2,324
Connection	c	mm	1,116	1,123	1,311	1,389	1,416	1,521	1,429	1,629	1,364	1,697
Connection 1/2"	d	mm	823	831	956	1,009	1,036	1,116	1,078	1,212	1,057	1,280
Connection	e	mm	238	286	246	249	276	306	903	1003	904	1,071
Connection 1/2"	f	mm	-	-	-	-	-	-	727	794	751	862
Connection	g	mm	-	-	-	-	-	-	376	376	444	444

Additional connection points for SP 2,600 - 5,000: five 1/2" sensor couplers, one DN150 stratified pipe with two 2" connection points, 6/4" venting;

Accumulator connection set 6/4"
Length: 120 and 420 mm

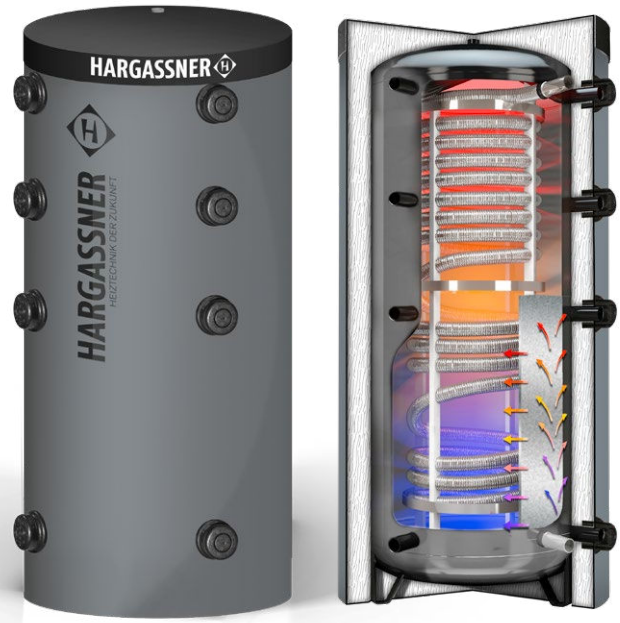
Threaded electric immersion
heater ET 6/4" 3 kW or 6 kW

Connection for threaded electric immersion heater (optional)

SP = layered accumulator

Layered hygienic accumulator
HSP 500 – 1,500

Through the integrated return spread sheet, its variable sensor positioning and hygienic drinking water heating process, this accumulator guarantees efficient usage. The generously dimensioned corrugated stainless steel pipe guarantees Legionella-proof drinking water heating using a continuous flow principle for high hot water output.
A constant movement of the flexible stainless steel corrugated pipe guarantees a perfect calcification protection. Thanks to the two staggered sets of 90° connectors (with insulated couplers), these tanks are also ideal for connecting in parallel with an SP accumulator tank. The space-saving 45° installation position is another bonus; the accumulators can be installed adjacently. The installation is completed by highly effective non-woven fabric insulation and an attractive-looking grey hard cover with an aluminium hook rack.

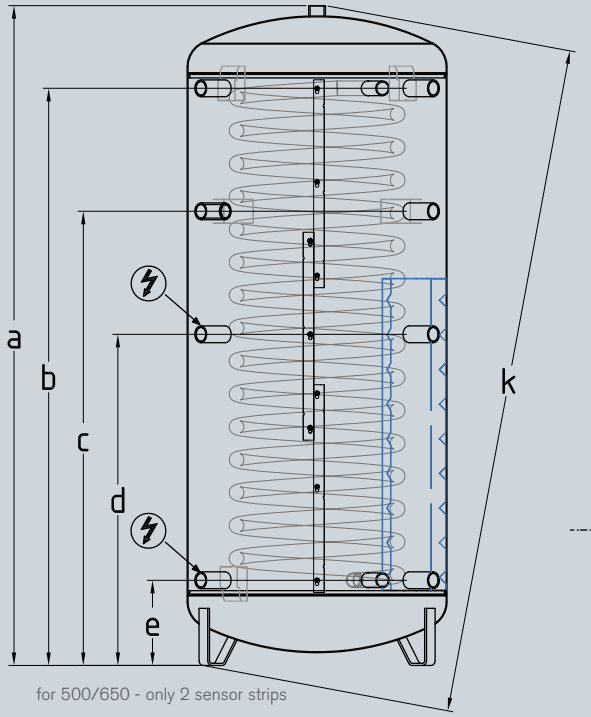


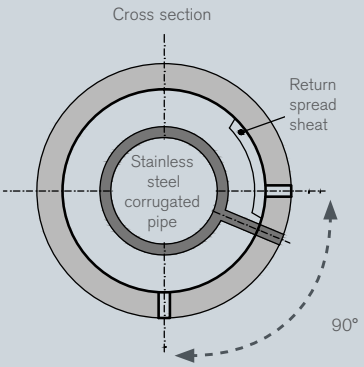
- **Return spread sheet**
  for optimal accumulator utilisation
- **Easy and flexible installation**
  using sensor terminal strip
- **Non-woven fabric insulation, hard cover and coupler insulation**
- **Calcification protection through flexible stainless steel corrugated pipe**

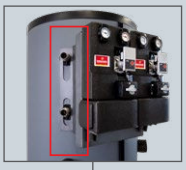
Energy efficiency class C

Energy efficiency class B
with additional accumulator insulation
(only for HSP 1000 & 1500)

The convenient hygienic tank
HSP 500 – 1,500

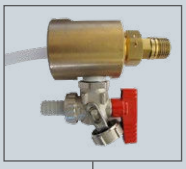






Accumulator mounting plate for FWS freshwater station or HKG heat circuit group

Accumulator connection set 6/4" Length: 120 and 420 mm



Circulation lance 5/4" for layered hygienic accumulators incl. flush tap

Circulation set

Threaded electric immersion heater ET 6/4" 3 kW or 6 kW

Technical data HSP

	Unit	HSP 500	HSP 650	HSP 825	HSP 1000	HSP 1500
Accumulator Volume	Litre	476	647	796	892	1445
Diameter ø without insulation	mm	650	750	750	790	990
Diameter ø with insulation for energy efficiency class C	mm	850	950	950	990	1230
Diameter ø with insulation for energy efficiency class B	mm	930	1030	1030	1070	1310
Height without insulation	mm	1630	1660	1910	2020	2090
Height with insulation for energy efficiency class C	mm	1720	1750	2000	2110	2180
Height with insulation for energy efficiency class B	mm	1760	1790	2040	2150	2220
Tilt dimension without insulation	mm	1650	1670	1920	2030	2110
Port 8 pcs IT	inches	6/4	6/4	6/4	6/4	6/4
Stainless steel pipe - water volume	Litre	23	23	37	37	45
Stainless steel pipe 5/4" ET square	m^2	4.1	4.1	6.7	6.7	8.2
Weight HSP (without insulation)	kg	103	117	133	144	195

Max. operating pressure 3 bar, max. operating temperature 95 °C, fire protective class B2. Other sizes available on request

Connections

			HSP 500	HSP 650	HSP 825	HSP 1,000	HSP 1,500
Tilt dimension without insulation	k	mm	1,650	1,680	1,918	2,030	2,106
Connection / ventilation 5/4"	a	mm	1,630	1,660	1,910	2,020	2,070
Connection	b	mm	1,408	1,416	1,666	1,769	1,796
Connection	c	mm	1,116	11.23	1,311	1,389	1,416
Connection	d	mm	823	830	956	1,009	1,036
Connection	e	mm	230	246	246	249	276

Connection for threaded electric immersion heater (optional)

HSP = layered hygienic accumulator

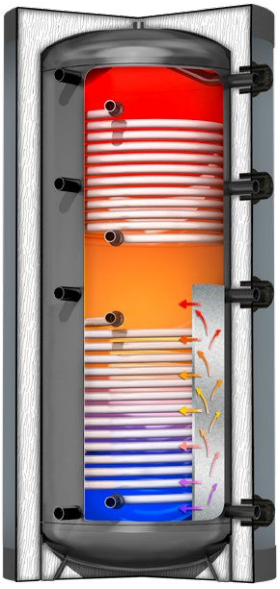
Solar layered accumulator
SP 500 – 1,500 SW 1 + 2

The details of this solar layered accumulator's design are tailored perfectly to Hargassner control and hydraulic systems. Besides an integrated return spread sheet and variable sensor positioning, this accumulator convinces through a highly efficient solar heat exchanger.

It is available with a bottom solar heat exchanger or solar heat exchangers at the top and bottom. With the bottom-positioned smooth-pipe heat exchanger, a perfect solar integration is possible. In the twin solar heat exchanger version, the top heat exchanger is used to heat the top layer of the accumulator tank quickly. The lower heat exchanger is for complete loading of the accumulator tank and for pre-heating of the water at low solar heat generation.

- **Perfect solar integration**
  through bottom or bottom & top positioned heat exchanger
- **Return spread sheet**
  for optimal accumulator utilisation
- **Easy and flexible installation**
  using sensor terminal strip
- **Non-woven fabric insulation, hard cover and coupler insulation**

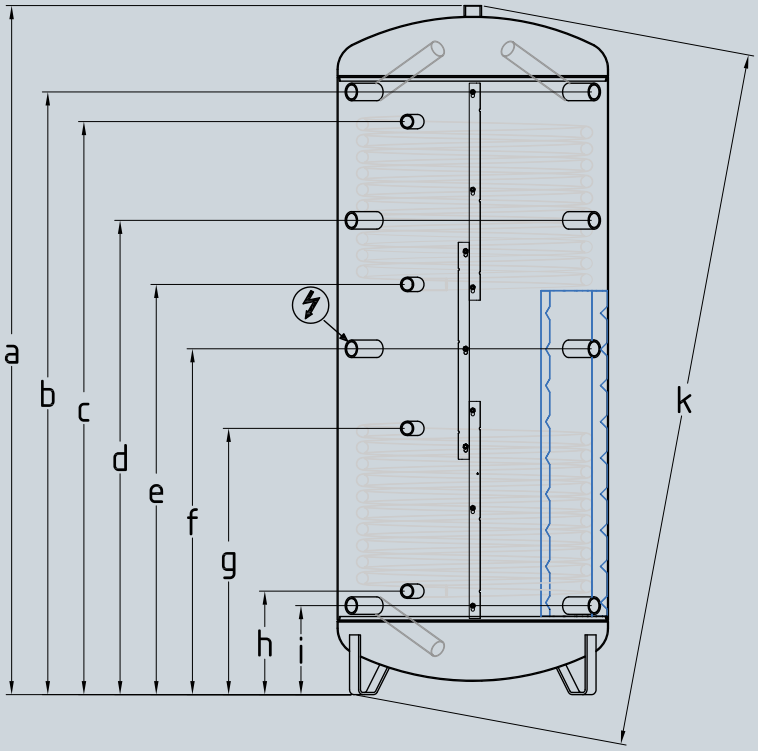

SP SW 1


SP SW 2

Energy efficiency class C

Energy efficiency class B
with additional accumulator insulation
(only for SP 1,500 SW2)

The solar heat storage tank
SP 500 – 1,500 SW 1 + 2



Technical data SP SW 1+2

	Unit	SP SW 500	SP SW 650	SP SW 825	SP SW 1000	SP SW 1500
Accumulator Volume	Litre	476	647	796	892	1445
Diameter ø without insulation	mm	650	750	750	790	990
Diameter ø with insulation for energy efficiency class C	mm	850	950	950	990	1230
Diameter ø with insulation for energy efficiency class B	mm	-	-	-	1070	1310
Height without insulation	mm	1630	1660	1910	2020	2090
Height with insulation for energy efficiency class C	mm	1720	1750	2000	2110	2180
Height with insulation for energy efficiency class B	mm	-	-	-	2150	2220
Tilt dimension without insulation	mm	1650	1670	1920	2030	2104
Connectors 8 pcs IT	inches	6/4	6/4	6/4	6/4	6/4 (2)
Weight SP (without insulation)	kg	78	92	105	116	164
Weight SW1 (without insulation)	kg	102	107	130	160	-
Solar heat exchanger bottom SW1 1" IT	m^2	2	2	2	3	-
Weight SW2 (without insulation)	kg	-	-	154	185	252
Solar heat exchanger top/bottom SW2 1" IT	m^2	-	-	2/2	2/3	3/3

Max. operating pressure 3 bar, max. operating temperature 95 °C, fire protective class B2

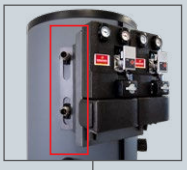
Connections

			SP SW 500 (SW1 only)	SP SW 650 (SW1 only)	SP SW 825	SP SW 1,000	SP SW 1,500 (SW2 only)
Tilt dimension without insulation	k	mm	1,650	1,670	1,918	2,030	2,106
Connection / ventilation	a	mm	1,628	1,645	1,910	2,020	2,090
Connection	b	mm	1,408	1,406	1,666	1,769	1,796
Connection FL Solar WT top	c	mm	-	-	1,584	1,649	1,796
Connection	d	mm	1,116	1,114	1,311	1,389	1,416
Connection RL Solar WT top	e	mm	-	-	1,134	1,199	1,166
Connection	f	mm	823	821	956	1,009	1,036
Connection FL Solar WT bottom	g	mm	728	726	736	919	946
Connection RL Solar WT bottom	h	mm	278	276	286	289	316
Connection	i	mm	238	236	246	249	276

Connection for threaded electric immersion heater (optional)

SP = layered accumulator; SW = solar coil; WT = heat exchanger; VL = flow; RL = return

Pipe set for layered accumulator SP with FWS freshwater station



Accumulator mounting plate for FWS freshwater station or HKG heat circuit group

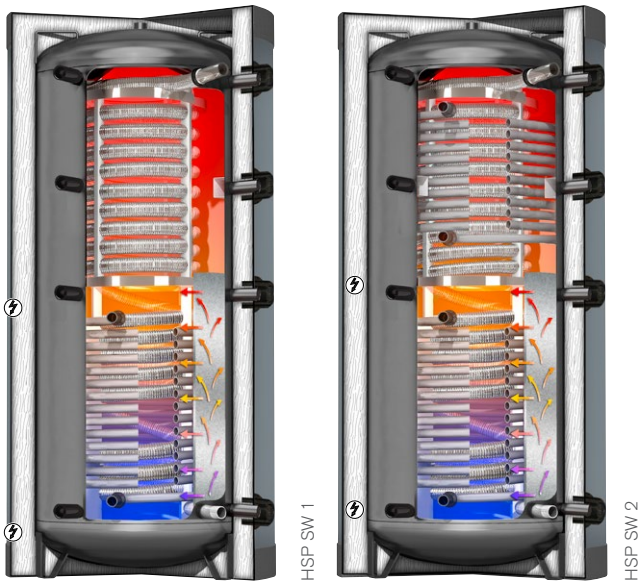
Accumulator connection set 6/4" Length: 120 and 420 mm

Threaded electric immersion heater ET 6/4" 3 kW or 6 kW

Solar layered hygienic accumulator
HSP 500 – 1,500 SW 1 + 2

Besides an integrated return spread sheet, variable sensor positioning and hygienic production of domestic hot water, the solar layered hygienic accumulator impresses with the large surface area of its solar heat exchanger. The heat exchanger can be positioned at the bottom or at the bottom and top.

With the bottom-positioned smooth-pipe heat exchanger, a perfect solar integration is possible. In the twin solar heat exchanger version, the top heat exchanger is used to heat the hot water area of the accumulator tank quickly. The lower solar heat exchanger is for complete loading of the accumulator tank and for pre-heating of the water at low solar heat generation.

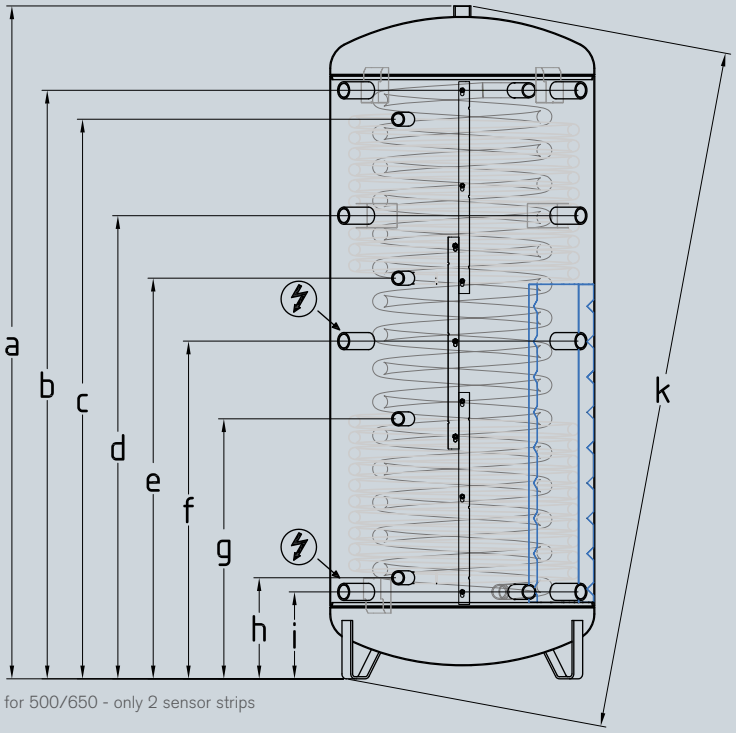


- ✓ **Optimal solar integration** through bottom or bottom & top positioned heat exchanger
- ✓ **Return spread sheet** for opt. accumulator utilisation
- ✓ **Easy and flexible installation** using sensor terminal strip
- ✓ **Legionella-proof drinking water heating**
- ✓ **Non-woven fabric insulation, hard cover and coupler insulation**

Energy efficiency class C

Energy efficiency class B
with additional accumulator insulation
(only for HSP 1,500 SW2)

The solar hygienic tank
HSP 500 – 1,500 SW 1 + 2



for 500/650 - only 2 sensor strips

Technical data HSP SW 1+2

	Unit	HSP SW 500	HSP SW 650	HSP SW 825	HSP SW 1000	HSP SW 1500
Accumulator Volume	Litre	476	647	796	892	1445
Diameter ø without insulation	mm	650	750	750	790	990
Diameter ø with insulation for energy efficiency class C	mm	850	950	950	990	1230
Diameter ø with insulation for energy efficiency class B	mm	930	1030	1030	1070	1310
Height without insulation	mm	1630	1660	1910	2020	2090
Height with insulation for energy efficiency class C	mm	1720	1750	2000	2110	2180
Height with insulation for energy efficiency class B	mm	1760	1790	2040	2150	2220
Tilt dimension without insulation	mm	1650	1670	1920	2030	2110
Port 8 pcs IT	inches	6/4	6/4	6/4	6/4	6/4
Stainless steel pipe - water volume	Litre	23	23	37	37	45
Stainless steel pipe 5/4" ET square	m^2	4.1	4.1	6.7	6.7	8.2
Weight HSP (without insulation)	kg	103	117	133	144	195
Weight SW1 (without insulation)	kg	119	141	157	188	-
Solar heat exchanger bottom SW1 1" IT	m^2	2	2	2	3	-
Weight SW2 (without insulation)	kg	-	-	182	213	284
Solar heat exchanger top/bottom SW2 1" IT	m^2	-	-	2/2	2/3	3/3

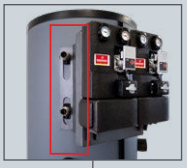
Max. operating pressure 3 bar, max. operating temp. 95 °C, max. drinking water operating pressure 6 bar, fire protective class B2

Connections

			HSP SW 500 (SW1 only)	HSP SW 650 (SW1 only)	HSP SW 825	HSP SW 1,000	HSP SW 1,500 (SW2 only)
Tilt dimension without insulation	k	mm	1,650	1,680	1,918	2,030	2,106
Connection / ventilation 5/4"	a	mm	1,630	1,660	1,910	2,020	2,090
Connection	b	mm	1,408	1,416	1,666	1,769	1,796
Connection FL Solar WT top	c	mm	-	-	1,584	1,649	1,796
Connection	d	mm	1,116	1,123	1,311	1,389	1,416
Connection RL Solar WT top	e	mm	-	-	1,134	1,199	1,166
Connection	f	mm	823	830	956	1,009	1,036
Connection FL Solar WT bottom	g	mm	728	735	736	919	946
Connection RL Solar WT bottom	h	mm	278	285	286	289	316
Connection	i	mm	238	246	246	249	276

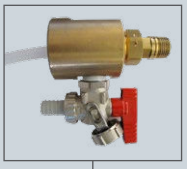
Connection for threaded electric immersion heater (optional)

HSP = layered hygienic accumulator; SW = solar coil; WT = heat exchanger; VL = flow; RL = return



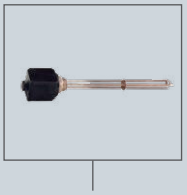
Accumulator mounting plate for FWS freshwater station or HKG heat circuit group

Accumulator connection set 6/4" Length: 120 and 420 mm



Circulation lance 5/4" for layered hygienic accumulators incl. flush tap

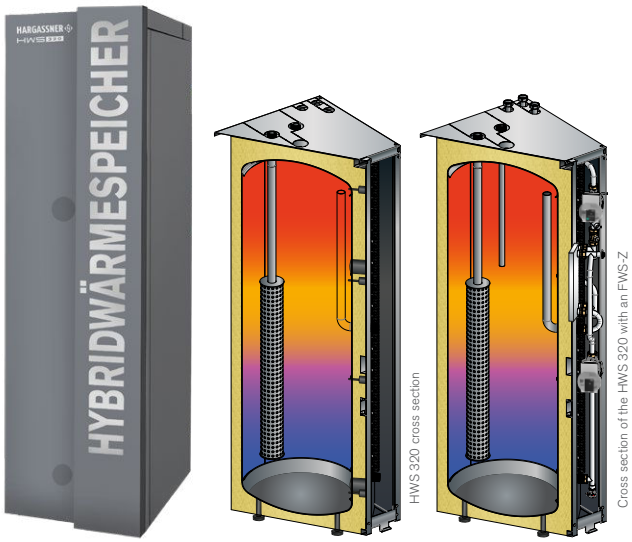
Circulation set



Threaded electric immersion heater ET 6/4" 3 kW or 6 kW

Hybrid accumulator tank
HWS 320 / FWS / FWS-Z

This Hargassner hybrid accumulator tank is distinguished by its perfect size. It was specifically designed for use in combination with the Nano-PK pellet boiler. It impresses with its perfectly tailored appearance, the small amount of space it occupies and its short installation time. Thanks to the hydraulic connection set, it can be installed and commissioned very quickly. It is available both as a simple expansion tank and as a heat storage tank with a freshwater station with or without a hot water circulation pump.



Expansion tank HWS 320

- ✓ **Heat storage tank with 315 l volume**
- ✓ **Optimal accumulator volume**

Optional with freshwater module HWS 320 FWS/Z

- ✓ **Hygienic freshwater treatment**
- ✓ **Integrated (FWS) components**
- ✓ **Fully wired and ready to connect**

Energy efficiency class C

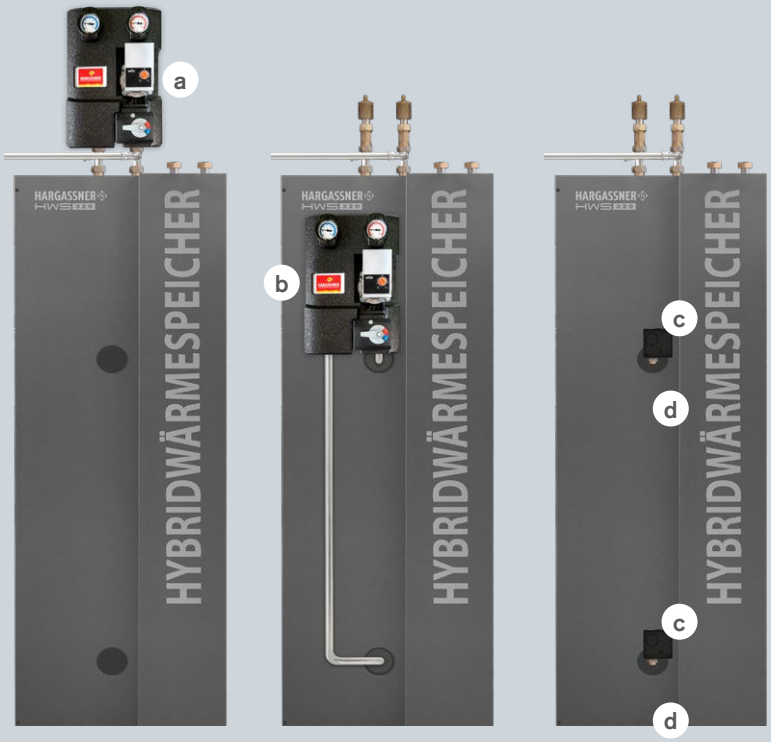
Household
People: 4*

Baths
Evening: 1*

Showers
Morning: 3* & Evening: 2*

*The values given are guide values that depend on user behaviour and the actual temperature settings.

The compact Nano-PK hybrid tank
HWS 320 / FWS / FWS-Z



possibilities of extension

a Heat circuit group HKG/M on the top of the storage tank (instead of a bleed valve)

Options:

b Heat circuit group HKG/M with a pipe set on the front of the storage tank

c Two installation positions for electric heating elements (can be used to connect a photovoltaic system, for example)

d Connection point for a thermal solar system

Standard version with copper-brazed plate heat exchanger, special version with stainless steel-brazed plate heat exchanger also available!

Versatile accessories and uses

Hydraulic module

If the HWS storage tank is installed to the right of a Nano-PK, there is a fully assembled hydraulic module that enables it to be connected to the boiler very easily. This module consists of two connecting pipes with screw fittings and the required bleed valves, and enables the storage tank to be installed very quickly. The storage tank can of course be installed to the left of the boiler as well, but the customer will have to provide the connecting pipes themselves in this case.

Nano-PK 20-32 + HWS 320 connection example

Technical data		
	Unit	
Accumulator Volume	Litre	315 l
Width x Depth (incl. trim) x Height	mm	595 x 580 (658) x 1,755 mm
Installation footprint	m²	0.36 m²
Tilt dimension	mm	1,870 mm
Required installation height	mm	1,955 mm – 1,980 mm
Weight (incl./excl. FWS)	kg	84 / 80 kg
Electric immersion heater connection points	inches	6/4" IT
Connection point for drinking-water ball valves	inches	1" IT
Heating connection points	inches	1" ET
Fresh-water station: delivery rate	**Delivery rate:**	
Accumulator tank temperature 60 °C when loaded, HW withdrawal temperature 45 ° (without reloading)	22 l/min, 345 litres	
Accumulator tank temperature 70 °C when loaded, HW withdrawal temperature 60 ° (without reloading)	16 l/min, 266 litres	
Accumulator tank temperature 78 °C when loaded, HW withdrawal temperature 40 ° (without reloading)	26.37 l/min, 667 litres	
The hot-water output is sufficient for an average household of four people. If you are supplying more people or require more hot water, you will need to choose another Hargassner accumulator, such as an HSP 500, 650, 825, 1,000 or SP 825-1,000 FWS model.		
Water quality:		
Heating water: VDI 2035; SWKI BT 102-01; ÖNORM H 5195–1, cold water: 6 – 15° dH		

Max. operating pressure 3 bar, max. operating temperature 95 °C, max. drinking-water operating pressure 10 bar
Delivery contents: Three accumulator sensors are included with the HWS, while an FL-FWS sensor and an FWS board are included in addition with the HWS-FWS.

HWS = hybrid accumulator tank; FWS = freshwater station; FWS-Z = freshwater station with circulation; HKG = heat circuit group; HKGM = heat circuit group with mixer

Hot-water storage tank for Nano-PK
Nano-WS 210

This Hargassner hot-water storage tank is distinguished by its perfectly dimensioned heating surfaces and was specifically designed for use in combination with the Nano-PK 6-15 pellet boilers. The suitable design and the short assembly time makes it unique on the market. Thanks to the hydraulic connection set available as an accessory, it can be installed and commissioned very quickly. It's short heat up time and continuously high output are also impressive.

- **Enamelled inner boiler**
- **Energy-saving CFC-free PUR insulation** (directly-foamed)

Energy efficiency class B

Household
People: 4*

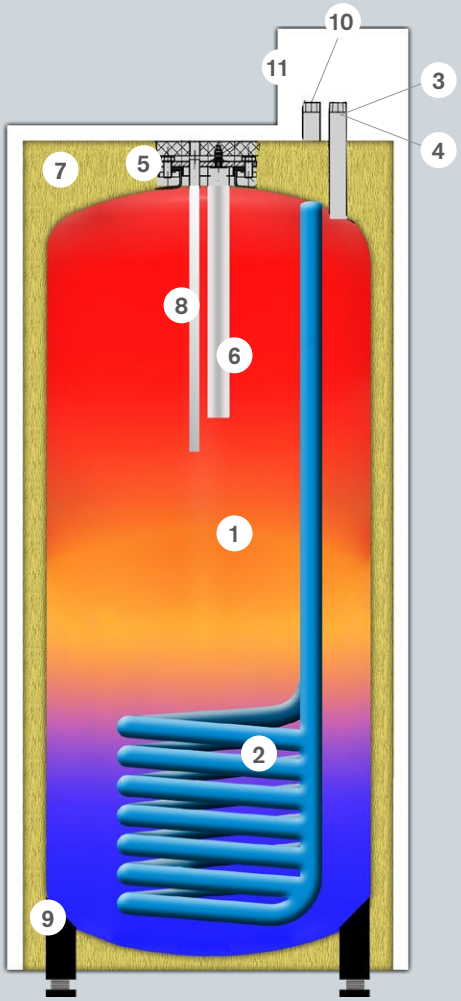
Baths
Evening: 1*

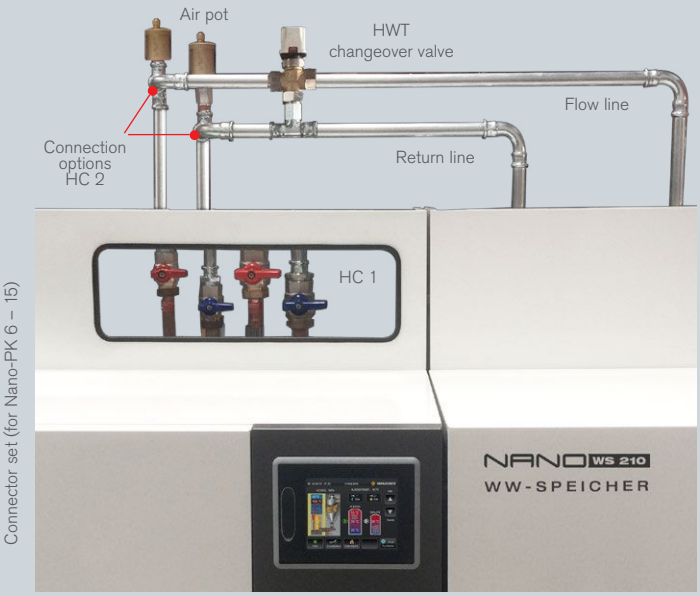
Showers
Morning: 3* & Evening: 2*

*The values given are guide values that depend on user behaviour and the actual temperature settings.

The Nano-PK hot-water storage tank

Nano-WS 210





1 Contents
2 Smooth-pipe heat exchanger with large heating surfaces
3 All top connectors have an optional connection set
4 All top connectors have an optional connection set
5 Blind flange
6 Magnesium sacrificial anode
7 Energy-saving CFC-free PUR insulation (directly-foamed)
8 Variable sensor positioning (sensor pipe)
9 Adjustable levelling feet
10 No HWT pump needed (HWT changeover valve)
11 Powder-coated sheet metal outer sleeve

Technical data

		Nano-WS 210
Contents	Litre	210
Heat surface	m²	0.71
Dimensions WxDxH (Height panel)	mm	580 x 580 x 1,350 (1,600)
Installation space Nano-PK + Nano WS-210	m²	0.79
Weight	kg	76
Hot water, cold water and circulation connections	inches	3/4 "
Boiler FL, RL	inches	3/4 "
Blind flange	mm	150/i85
Continuous output TKW=10 °C, THW=45 °C, THV=80 °C/15 kW	l/h	360
Power output NL	l/h	3.2

Operating pressure: max. 10 bar, operating temperature: max. 95 °C

WS = hot-water storage tank; FCKW = chlorofluorocarbons, PUR = polyurethane, FL = flow, RL = return, NO = nominal load

Fresh-water station
FWS 35 / 50 | FWS 35 / 50-Z

The Hargassner freshwater station is used for demand-driven drinking water heating using the flow-through principle in conjunction with a accumulator tank. The station replaces the storage of hot drinking water in an additional accumulator and thus offers a high level of protection against Legionella by avoiding stagnation water.

- **Copper or stainless steel brazed**
- Use **of the latest pump technologies**
- **High transfer performance** with low pressure loss thanks to optimised pipe routing.
- **Innovative pump and control technology** for easy and quick commissioning
- **Circulation can also be retrofitted**
- **Pipe set for layered accumulator tank** SP825 & SP1000 with freshwater station

Symbol image with optional circulation unit

H x W x D = 685 x 470 x 190 mm

Model available with/without circulation pump

The hygienic hot water generator
FWS 35 / 50 | FWS 35 / 50-Z

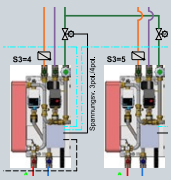
Operation
The drinking water is heated to the specified tapping temperature using the through-flow principle. The integrated heat exchanger is always supplied with as little heating water from the accumulator tank as is required to maintain a constant tapping temperature.
The latest PWM pump technology is used. Target value for hot drinking water and circulation are configured using simple menu navigation directly on the Hargassner boiler control panel. The station is available in two output capacities, with or without a circulation pump and with a copper or stainless steel brazed plate heat exchanger.

Calcification protection
- ✓ Heat input (accumulator flow) from underside – no circulation possible
- ✓ Vertical installation position – fast cooling process
- ✓ Controlled primary pump – overheating of the heat exchanger is avoided

Corrosion protection
- ✓ A stainless steel heat exchanger with copper brazing is used as standard for water
- ✓ A stainless steel heat exchanger with stainless steel brazing is also available as an option for very aggressive water with high conductivity

Installation position
Vertically on the wall near the accumulator tank, on a layered accumulator SP 825/1000 FWS or on one of our other layered accumulators using the accumulator mounting plate.

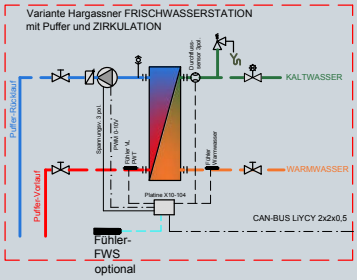
Accumulator mounting plate (univ. for all 6/4" connections)
This accumulator mounting plate can be used on any Hargassner accumulator tank from 500 to 2,000 l. It can be mounted on the left or right side of all upper or middle coupler pairs.

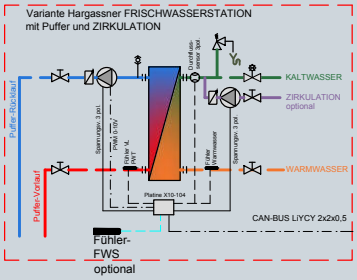


Freshwater station in cascade connection
For larger buildings or higher hot-water requirements (hotels/industry)
Up to four fresh water stations can be connected in cascade to achieve higher bulk capacities. The scope of delivery includes two, three or four cascade valves and one, two or three bus cables. See the installation manual for instructions on how to connect fresh-water stations.

Pipe set
It serves as a connection between the accumulator tank and the freshwater station and enables simple and quick installation.

Heat circuit schematic





1 Soft-closing valve 2 Shut-off, DN25, 1" 3 Plate heat exchanger 4 Heating primary pump HZG: Wilo Yonos Para PWM 15/1-7 5 Non-return valve 6 Board box
7 Temperature sensor 8 Safety valve, DN15, 1/2", 10 bar 9 Circulation pump: Wilo Nova Z 10 Volume flow sensor; stainless steel pipes, 22 Ø; all components flat-sealing;

Complies with DIN DVGW or ÖNORM B5014-3
Heating water (VDI 2035; SWKI BT 102-01; ÖNORM H 5195–1), Cold water from 6 – 15°C dH weight without water content: 16.5 – 19 kg, overall dimensions (incl. hood): W 470 mm × H 685 mm × D 190 mm
Material: Pipes: DN 20, stainless steel 1.4404, plate heat exchanger: plates and nozzles: stainless steel 1.4401, copper brazing or stainless steel brazing
Seals: Flat-sealing AFM, primary pump: Wilo Yonos Para PWM 15/1-7.5, circulation pump: Wilo Yonos Para, safety valve: 10 bar, with a 2 m drain hose
Performance data for FWS 35: 38 litres/min at accumulator temperature of 60 °C and hot-water temperature of 45 °C, 25 litres/min at accumulator temperature of 70 °C and hot-water temperature of 60 °C.
Performance data for FWS 50: 53 litres/min at accumulator temperature of 60 °C and hot-water temperature of 45 °C, 35 litres/min at accumulator temperature of 70 °C and hot-water temperature of 60 °C.
Control: via touch control of the boiler, stand-alone operation possible, parameter adjustment only possible in connection with a boiler or HKR

FWS = freshwater station; FWS-Z = freshwater station with circulation; HKR = heat circuit controller

Substations
ÜGS 15 – 250

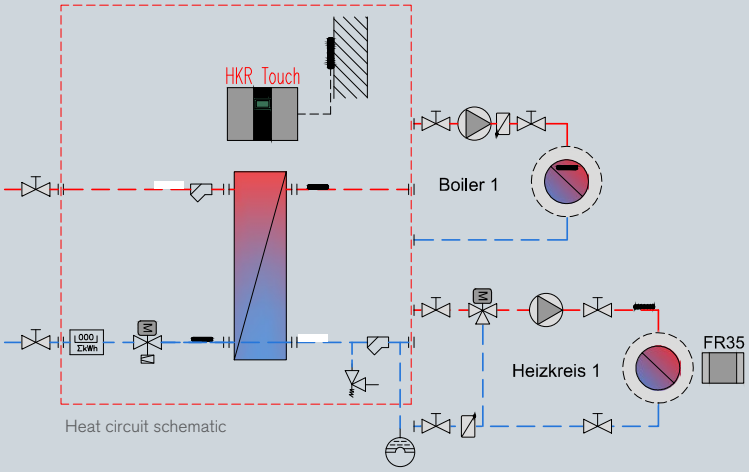
The Hargassner district heating substation 15 – 250 kW is a compact device for indirect heating of buildings. The operator has the advantage of being able to read any necessary data, such as heat consumption, etc., on the boiler control unit or in the Hargassner web portal.
The clients installation is hydraulically separated from the district heating network. A copper-brazed stainless steel plate heat exchanger transfers the required heat to the clients installation. The **ÜGS 15 - 100 is wall-mounted**, the **ÜGS 150 - 250 is floor-mounted.**

- **Components are fully assembled** and **electrically wired with the controller**
- **Integrated outdoor temperature controller** combinable with various remote controls
- **Touch controller** for simple operation and optimal integration into the Hargassner control system
- **Innovative thermal insulation,** temperature sensor directly in the water flow or on the pipe
- Low space requirements

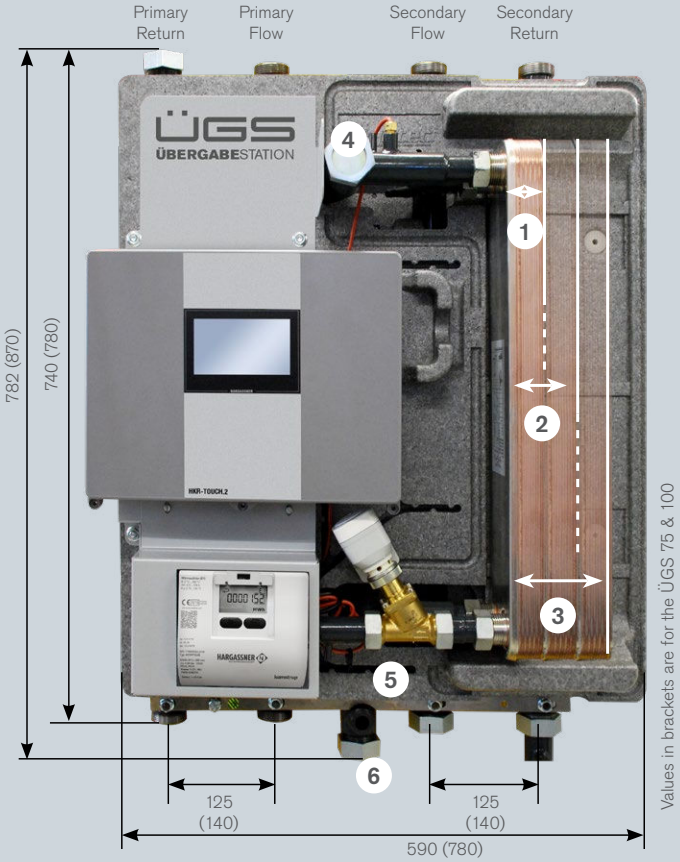
- H x W x D = 780 x 590 x 285 mm (ÜGS 15/30/50 kW)
- H x W x D = 870 x 780 x 300 mm (ÜGS 75/100kW)
- Heat meter optional for output limitation, heat recording and transmission to the Hargassner controller

The compact external heat supply
ÜGS 15 – 250

- Heat exchanger with large thermal length
- Minimal on-site installation work needed
- Centre-to-centre distances between pipe connections for standard heat circuit groups 125/140 mm
- Connections for primary (PM) and secondary (SD) media can be selected freely (top and/or bottom)



Heat circuit schematic



1 Demand-orientated output grading: 15 kW
2 Demand-orientated output grading: 30 kW
3 Demand-orientated output grading: 50 kW
4 Primary dirt trap
5 Secondary expansion vessel
6 Secondary dirt trap, safety valve 3 bar, pressure gauge 0 – 4 bar

Scope of delivery - primary connection:

1x dirt trap
1x volume flow controller
+ DV valve Siemens VPP46
1x Actuator Siemens SSA33
without emergency position function
1x HM adapter 130 mm 1" ET
1x M10 sensor coupler for heat meter
1x plate heat exchanger
1x immersion sleeve for RL temperature sensor
2x drain 90° in thread connection
2x blind covers

Scope of delivery - secondary connection:

1x dirt trap
1x immersion sleeve for RL temperature sensor
1x immersion sleeve for FL temperature sensor
1x safety valve membrane 3 bar
2x blind covers
2x threaded nozzles

Wall installation set and drains are included.
Outdoor sensor included in scope of delivery.

Technical data		ÜGS 15 / 30 / 50 kW		ÜGS 75 / 100 kW	
		Primary	Secondary	Primary	Secondary
Max. flow temperature	°C	110	95	110	95
Pressure PN	bar	16 / 25	10	16 / 25	10
Max. flow rate	m³/h	1.5	2.5	3.2	4.3
Power	kW	15 / 30 / 50		75	100
based on	°C	80 / 53	70 / 50	80 / 53	70 / 50
Pressure loss dp max.		20 kPa / 2 mWs		55 kPa / 5.5 mWs	20 kPa / 2.0 mWs
Pipe nominal diameter	inches	1" / DN 25		5/4" / DN 32	6/4" / DN 40
Flat sealing connections	inches	5/4 " ET		6/4" ET	2" ET
Medium		Water		Water	
Electrical supply		230 V, 50 Hz		230 V, 50 Hz	
Dimensions (W x H x D)	mm	590 x 780 x 285		780 x 870 x 300	
Weight	kg	approx. 40		approx. 70	
Dirt trap mesh size	mm	0.5		0.5	
Heat meters	mm	130		130	
Approval in accordance with Pressure Equipment Directive (PED) 97/23/EC					

ÜGS 150 – 250 available on request

ÜGS = substation

Heat meters
HM 1.5 – 15

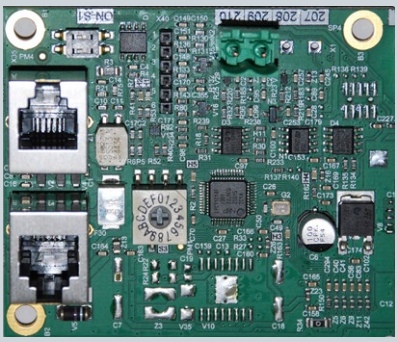
Multical® 403 with integrated Kamstrup M-Bus module is a robust, static heat meter based on ultrasound. The meter is intended for energy measurement of almost all types of thermal installations with water as the energy carrier. It consists of a calculator, a flow sensor and two temperature sensors and is designed to measure energy consumption in flats, detached houses and multiple-dwelling residences, housing associations, multi-storey buildings and small industries.

- **Temperature range of 2 – 180 °C**
- Meter program with **nominal flow from 1.5 m³/h to 15 m³/h**
- **Easy to install**
- **Calibrated flow meter**
- **Minimal measurement deviations**
  even under unfavourable installation conditions: +/- 0.5%
- **Low pressure loss**

HM MULTICAL MC 603
with frost protection available on request
(only for HM 6 m³/h & 10 m³/h)

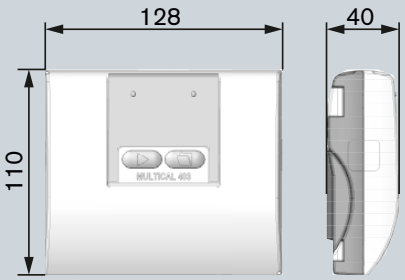
Reliably measures energy consumption

HM 1.5 – 15

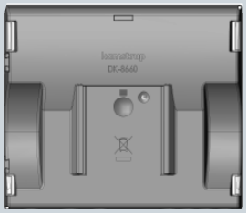


Hargassner M-Bus converter
must be ordered in addition!

The 1.5 and 2.5 m³/h heat meters can be integrated into a Hargassner substation and of course connected directly to the Hargassner controller (M-Bus converter optional). All our heat meters from 1.5 to 15m³/h can be used with any Hargassner systems.
The data is automatically transferred to the Hargassner controller by the additional "M-Bus converter" module and can therefore be read on the boiler display and on the web.



Mechanical metering calculator; dimensions in mm



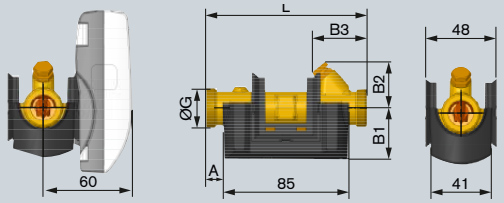
Display:

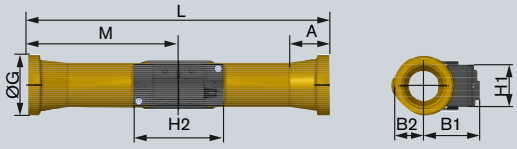
- Total heat output in kWh, MWh and GJ
- Current output in kW
- Flow rate in l/h
- FL+RL temperatures in °C
- Operating hours in h
- Annual consumption with due date

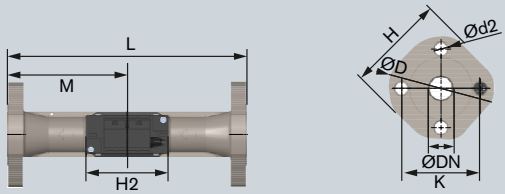
Technical data

Type	HM 1.5	HM 2.5	HM 6	HM 10	HM 15
Flow rate qp	up to 1.5 m³/h	up to 2.5 m³/h	up to 6 m³/h	up to 10 m³/h	up to 15 m³/h
Size DN	130 mm x 3/4"		260 mm x 1"	300 mm x 1 ½"	270 mm x DL DN50
HM installation kit	The installation kit consists of: 2x ball valves with union nut 1x ball valve with immersion sensor connector 1x pipe nipple			The installation kit consists of: 2x ball valves with union nut, 1x ball valve with internal thread, 1x pipe nipple; customer has to provide T-pieces and immersion sleeves for cable sensors	The installation kit consists of: 2x ball valves with external threads, 4x DN50 flanges, 2x DN50 flange seals, 1x ball valve with internal thread, 1x pipe nipple; customer has to provide T-pieces and immersion sleeves for cable sensors

Included: Battery supply, lifetime approx. 16 years; 1.5 m PT500 direct sensor with M10; from WMZ10: 3 m cable sensor without an immersion sleeve







Flow sensor with T 1" threaded connector

Nominal flow rate q_p (m³/h)	Thread T	L	A	B1	B2	B3
HM 1.5	G1B	130	22	38	32	48
HM 2.5	G1B	130	22	38	38	48

Flow sensor with T 5/4" & T 2" threaded connector

Nominal flow rate q_p (m³/h)	Thread T	L	M	H2	A	B1	B2	H1	Weight approx. (kg)*
HM 6	G5/4B	260	130	88	16	53	20	41	2.1
HM 10	G2B	300	150	88	40.2	55	29	41	3.0

Flow sensor with DN50 flange connector

Nominal flow rate q_p (m³/h)	Nominal diameter DN	L	M	H2	D	H	K	Bolts			Weight approx. (kg)*
								Quantity	Thread	d2	
HM 15	DN50	270	155	88	165	145	125	4	M16	18	8.6

*Weight of calculator, flow sensor and 3m sensor kit excl. packaging
HM = heat meter; FL = flow, RL = return

Heat circuit groups
HKG & HKGM 25 / 32

The heat circuit groups take over the heat distribution for the house. There are pure pump groups HKG or "hot" groups for boiler loading or fans. The HKGM or heat circuit group mixers (mixed groups) are suitable for floor heating or radiators. They are available in sizes DN25 and DN32 and in versions with and without mixer with servomotor. Furthermore, there are two different distributors available for each dimension (DN25 / 32) for two, three and four heat circuit groups. Installation is on the wall or directly on the accumulator using the accumulator mounting plate.

- **Installation on the wall or on a Hargassner accumulator**
- **Adjusted components**
- **Mixer motor** similar to the back-end protection devices

H x W x D = 340 x 250 x 180 mm (HKG 25 / HKGM 25)

H x W x D = 400 x 250 x 190 mm (HKG 32 / HKGM 32)

The compact heat circuit groups
HKG & HKGM 25 / 32

Heat circuit group HKG 25 / 32

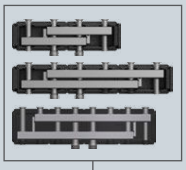
Flat-sealing connectors with a union nut for installation on Hargassner distributors. Large ball valve handles, easy operation, clear closing position, all thermometers removable, with immersion sleeve integrated in the ball valve, Wilo heating circulation pumps with high-efficiency technology (ECM technology) preassembled with 2 m cable, completely preassembled, integrated in the insulation, pressure-tested, perfectly tailored system, design diagram, EuP/ErP READY pump can be fully shut off, no need to drain for service work.

Heat circuit group with mixer HKGM 25 / 32

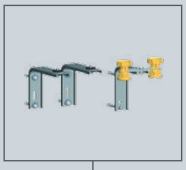
Hargassner mixer motor with connector, 1.6 m cable and attachment kit for screw mounting on the T-mixer with bypass for FLH 0-50 %, suitable for right-hand flow, changeover switch for manual/automatic operation, electrical connection 230 V/50 Hz, torque 10 Nm. EnEV-compliant functional insulation made of permanently elastic EPP, complete insulation of the fittings, ventilation duct for cooling the pump. Free access to the pump head by simply pulling off the cover. Gravity brake can be installed in return pipe, 200 mm water column, spring-loaded, therefore also suitable for horizontal or overhead installation.

The installation accessories can be used for individual installation on the wall or on the Hargassner accumulator tank. With the appropriate distribution groups, a dual, triple or quadruple version is possible.

Accumulator mounting plate, for details see p. 31



Distributors
Available in DN25 & DN32 fully galvanised, thermally separated and fully insulated.



Wall bracket + adapter pieces DN25 & DN32 for installing the HKG on walls

Reduction piece set

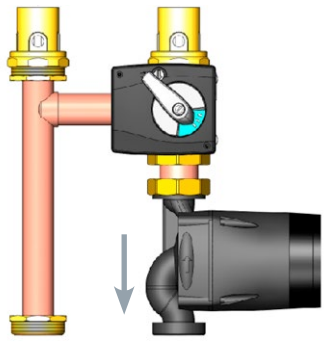
Technical data			
		HKG 25 / HKGM 25	HKG 32 / HKGM 32
Generator connection	inches	1 ½" ET flat-sealing	1 ½" ET flat-sealing
Consumer connection	inches	1" IT	2" IT
Nominal width	inches	DN 25 (1")	DN 32 (1 1/4")
Centre-to-centre distance	mm	125	125
Installation length	mm	340	340
Width	mm	250	250
Height	mm	340	400
Depth	mm	180	190
Pump		Wilo Para SC25/6	Wilo Para SC30/6
Flow coefficient	m3/h	6.3 / 5.0	15.1 / 7.5
Output kW at Δt = 20 K	kW	40 / 35	65 / 50
Fittings: brass, seals: EPDM, insulation: EPP			
Max. operating temperature: 95 °C, max. pressure: 6 bar, gravity brakes: 1 x 200 mm water column			

HKG = heat circuit group; HKGM = heat circuit group with mixer

Back-end protection type RAG

Neo-HV / Smart-HV wood log boiler, Classic pellet boiler

Provides automatic back-end protection for Hargassner wood log and pellet boilers while simultaneously loading an accumulator tank.
Scope of delivery: Preassembled and fully insulated back-end protection group, return temperature mixing valve with motor, acc. loading pump high-efficient, flow & return barrier, fully wired and ready to connect.



RAG30U.1 for Neo-HV 20 – 30, Smart-HV 17 – 23 & Classic 40 – 60

- Mixer LK 840.2, 3-way ET 1½", kVs=15
- Pump ALPHA 1 25/60, 130 mm ~230V, 50Hz
- Centre-to-centre distance 125 mm
- Length 290 mm (240 mm without ball valve 1")
- Actuator LK950, 140s/90°, actuating force 10 Nm, ~ 230V, 50Hz
- 2x ball valves with a 1" internal thread x 6/4" union nut
- Preassembled with insulation, incl. seals, Cu pipes

RAG60U.1 for Neo-HV 40 – 60

- Mixer LK 840.2, 3-way T6/4", kVs=15
- Pump: Wilo Yonos Para HF 25/7 - 180 mm ~230V, 50Hz
- Centre-to-centre distance 125 mm
- Length 340 mm (290 mm without ball valve 5/4")
- Actuator LK950, 140s/90°, actuating force 10 Nm, ~ 230V, 50Hz
- 2x ball valves with a 5/4" internal thread x 6/4" union nut
- Preassembled with insulation, incl. seals, Cu pipes

Eco-HK/PK wood-chip pellet boilers, Neo-MHV wood log boiler

Integrable back-end protection group for wood-chip pellet boilers for loading an accumulator tank, a hydraulic separator or a district line.

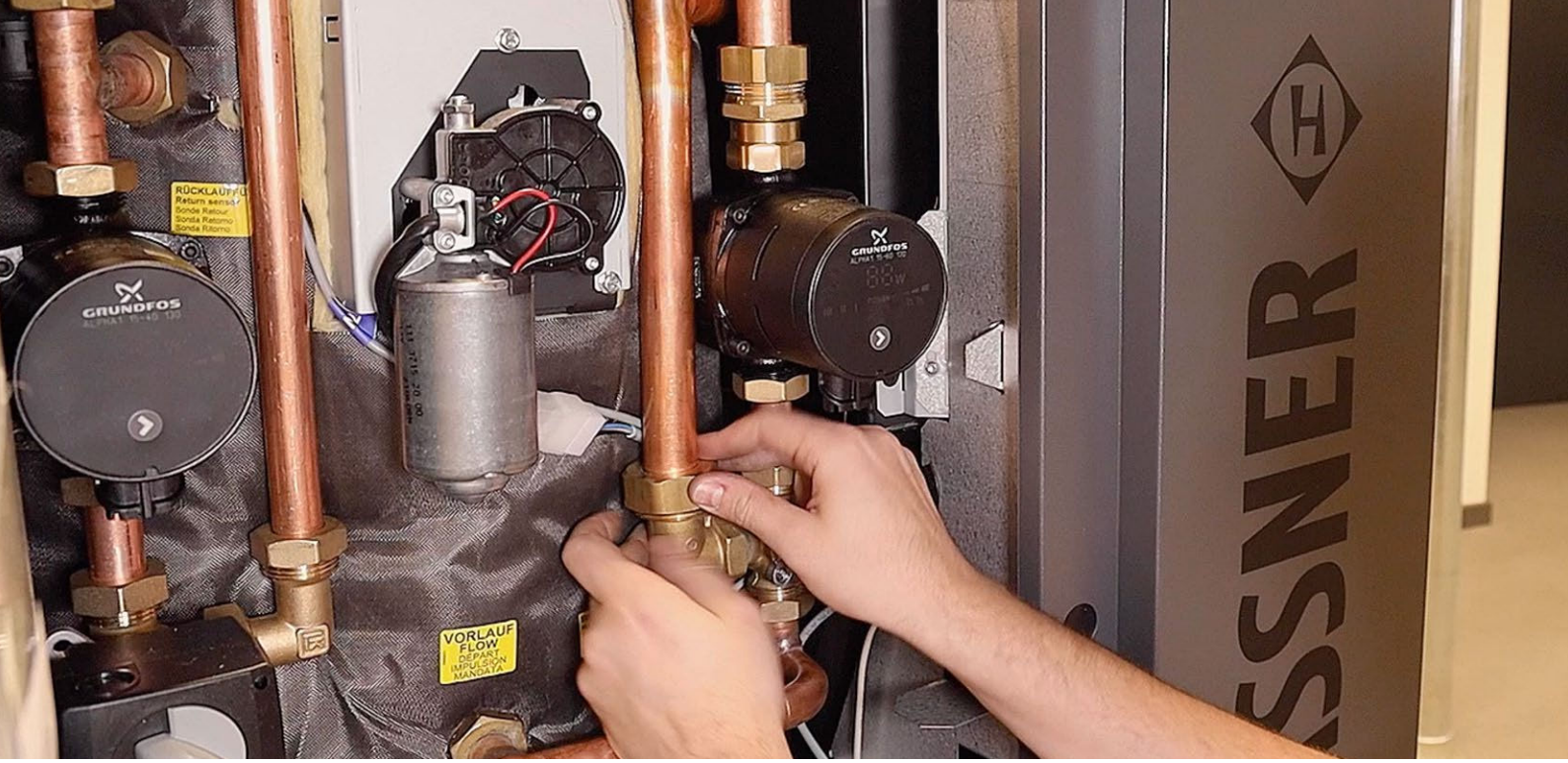
RAG-ECO-A.2 for Eco-HK 20 – 60 & Neo-MHV 30 – 40
- Mixer LK 840.2, 3-way ET 1½", kVs = 15
- High-efficiency pump ALPHA 1 25/60 180 mm ~ 230 V, 50 Hz
- Actuator 140s/90°, 10 Nm ~230V, 50Hz

RAG-ECO-25.2 for Eco-HK 20 – 60 & Neo-MHV 45
- Mixer LK 840.2, 3-way ET 1½", kVs = 15
- High-efficiency pump Wilo Yonos Para HF 25/0.5-7 W180 mm ~ 230V, 50Hz
- Actuator 140s/90°, 10 Nm ~230V, 50Hz

RAG-ECO-32.2 for Eco-HK / Eco-PK 70 – 120
- Mixer LK 840.2, 3-way ET 2", kVs = 24
- High-efficiency pump Wilo Yonos Para HF 30/0.5-7 W180 mm ~ 230V, 50Hz
- Actuator 140s/90°, 10 Nm ~230V, 50Hz
- Compensating element IT 2", 100 mm
- Incl. ball valves

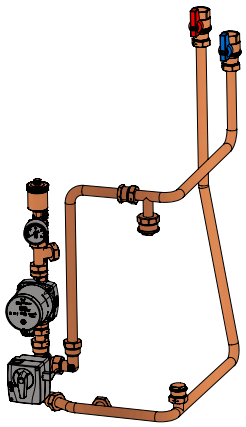
RAG-ECO-30-12.2 for Eco-HK / Eco-PK 130 – 230
RAG-ECO-330.2 for Eco-HK / Eco-PK 250 – 330 (2 x RAG-ECO-30-12.2)
- Mixer LK 840.2, 3-way ET 2", kVs = 45
- High-efficiency pump Yonos Para HF 30/0.5-12 180mm ~230V, 50Hz
- Actuator 140s/90°, 10 Nm ~230V, 50Hz

REG = back-end protection group; FL = flow; RL = return



Hydraulic modules integrated
for Nano-PK / Smart-PK pellet boilers

Hargassner offers a basic hydraulic module integrated in the boiler for its Nano-PK/Smart-PK pellet boilers. If required, they can be supplemented with the corresponding extension modules. The heat circuit/HWT pump, the accumulator loading/circulation pump and all the mixers and pipes are easy to access. All hydraulic connecting components run upwards and away from the boiler. You can choose from different extension modules:



1. Basic module IHM

This basic module IHM is the basis of all hydraulics. For customers where the heat circuits are mounted on the accumulator or on the wall, no extension is required. For systems with one heat circuit, the IHM1 extension is required. For systems without an accumulator tank, an IHM2 extension is required. The basic module is already prepared for the connection of a condensation heat exchanger.

Scope of delivery for Nano-PK 6 – 15

- Return pump (left-hand) Alpha 1 15/40 – 130 mm installation length, ~ 230 V, 50 Hz
- 3-way return mixer (left-hand) LK 840, ET 1", kVs = 4.0
- Mixer actuator 140s/90°, 10 Nm ~ 230V 50 Hz
- Safety group consisting of: 1/2“ 3 bar safety valve, bleed valve and 0-4 bar pressure gauge
- 2 ball valves IT 1" for back-end protection
- Cu pipe 22 mm for back-end protection

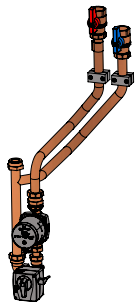
Scope of delivery for Nano-PK 20 – 32 / Smart-PK 17 – 32

- Return pump (left-hand) Para SC 15/1-6 130 mm installation length, ~230 V, 50 Hz
- 3-way return mixer (left-hand) LK 840, ET 1", kVs = 6.3
- Mixer actuator 140s/90°, 10 Nm ~ 230V 50 Hz
- Safety group consisting of: 1/2“ 3 bar safety valve, bleed valve and 0-4 bar pressure gauge
- 2 ball valves IT 5/4" for back-end protection
- Cu pipe 28 mm for back-end protection

EXTENSION FOR HYDRAULIC MODULES

2. Extension IHM1

The IHM basic module can be supplemented by an integrated, mixer-controlled heat circuit group with extension IHM1. This variant is mainly used for customers with only one heat circuit and HWT or accumulator tank with hot water preparation. Thus, the entire hydraulic system is integrated in the boiler and no additional space is required.
CAUTION: This extension is supplied loose and has to be installed on-site.

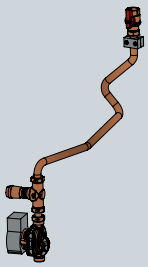


Scope of delivery for Nano-PK 6 – 15

- See IHM basic module
- Heat circuit pump (right-hand) Alpha 1-15/60 130 mm installed length, ~ 230 V 50 Hz
- 3-way heat circuit mixer (right-hand) LK 840, ET 1", kVs = 6.3
- Mixer actuator 140s/90°, 10 Nm ~ 230V 50 Hz
- 1 gravity brake IT 1" downstream of heat circuit group
- 2 ball valves IT 5/4" for the heat circuit
- Cu pipes 28 mm as heat circuit pipes

Scope of delivery for Nano-PK 20 – 32

- See IHM basic module
- Heat circuit pump (right-hand) Para 25/1-8 130 mm installation length, ~230 V, 50 Hz
- 3-way heat circuit mixer (right-hand) LK 840, ET 6/4", kVs = 15
- Mixer actuator 140s/90°, 10 Nm ~ 230V 50 Hz
- 1 gravity brake IT 6/4 downstream of heat circuit group
- 2 ball valves IT 6/4" for the heat circuit
- Cu pipes 35 mm as heat circuit pipes



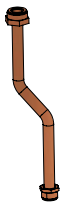
Internal modulating second heat circuit for Nano-PK 20 – 32 with basic module & extension IHM1

- Heat circuit pump Para SC 15/1-6 130 mm installation length, 230 V, 50 Hz
- 2-way zone valve, ET 1"
- Actuator for zone valve, 230 V 50 Hz
- 1 ball valve IT 1"
- Cu pipes for 2nd heat circuit 22 mm

---

3. Extension IHM2

The IHM basic module receives a bypass line through the IHM2 extension, which acts as a hydraulic separator. This extension is only required for systems with a manifold and corresponding heat circuits and must not be connected to the accumulator tank.
CAUTION: This extension is supplied loose and has to be installed in the boiler on-site.



Scope of delivery for Nano-PK 6 – 15

- Cu pipe 22 mm as internal hydraulic separator

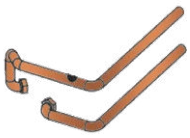
Scope of delivery for Nano-PK 20 – 32 / Smart-PK 17 – 32

- Cu pipe 28 mm as internal hydraulic separator

---

4. Integrated piping IV

This pipe set includes an FL pipe and an RL pipe, which run from the boiler's interior out through the rear wall. The piping can be extended upwards using a 90° bend on-site or be attached to the hydraulics directly. All the heating installation work on-site takes place outside the boiler.



Scope of delivery for Nano-PK 6 – 15

- Two Cu pipes 22 mm with FL and RL screw fittings

Scope of delivery for Nano-PK 20 – 32 / Smart-PK 17 – 32

- Two Cu pipes 28 mm with FL and RL screw fittings

IHM = integrated hydraulic module; IV = integrated pipes; FL = flow; RL = return; Cu pipe = copper pipe

Flue pipe sets

Stainless steel flue pipe connection set Ø 100/130 AIO / ADO or Ø 150 mm

Hargassner offers special stainless steel flue pipe sets for its pellet boilers. The Ø 100 mm or 130 mm connection sets include all the necessary components such as bows, pipes, boiler collars and seals. There are two versions of these sets, an ADO one with an integrated chimney draught stabiliser (explosive protection), and an AIO one without a draught stabiliser. The Ø 150 mm connection set includes all bows, pipes, boiler collars and clamp rings. There are two versions of this set as well, one with an integrated chimney draught stabiliser (explosive protection) and one where the draught stabiliser for the chimney has to be provided by the customer.

A selection of our accessories for our stainless steel flue pipes, Ø 100/130/150

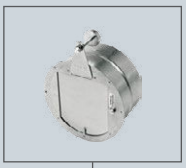
See our current price list for the complete range

Pipe length elements (940/440/190 mm)

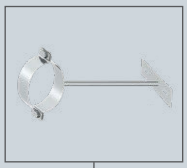
Bends 0 - 90° (adjustable and opt. with inspection opening)

Wall rose

Inspection T-piece



Draught stabiliser



Fixing bracket

Micro-dust filter in the flue pipe

The OekoTube-Inside is an electrostatic micro-dust separator and is integrated into the connecting pipe between the boiler and the chimney. The filter is compatible with all systems up to 60 kW. The set includes a ø 130 or ø 150 x 500 mm flue pipe, with an integrated micro-dust filter and the electronics that generate the high voltage.

Fulfils the requirements for innovation funding in Germany

OekoTube-Inside micro-dust filter Set consists of a control unit and the micro-dust filter Ø 130 or Ø 150 mm	
	**Control unit for the OekoTube-Inside micro-dust filter** Control unit with the electronics that generate the high voltage for the OekoTube-Inside electrostatic micro-dust filter.
	**OekoTube micro-dust filter with a DN of 130 mm x 500 mm flue pipe** OekoTube-Inside, an electrostatic micro-dust filter recognised by BAFA (Germany's Federal Office for Economic Affairs and Export Control) as an approved measure for reducing micro-dust levels. The filter is compatible with Hargassner wood chip, pellet and wood log boilers of up to 100 kW. It is installed between the boiler and the chimney.
	OekoTube micro-dust filter with a DN of 150 mm x 500 mm flue pipe OekoTube-Inside, an electrostatic micro-dust filter recognised by BAFA (Germany's Federal Office for Economic Affairs and Export Control) as an approved measure for reducing micro-dust levels. The filter is compatible with Hargassner wood chip, pellet and wood log boilers of up to 100 kW. It is installed between the boiler and the chimney.
	**Dust box with adapter** for horizontal installation of the OekoTube-Inside DM130/150

Technical data		OekoTube-Inside 130	OekoTube-Inside 150
Filtration efficiency	%	> 50	> 50
DIBt approval		Z-7.4-3451	Z-7.4-3451
Measuring point		Distance of at least twice the chimney diameter	Distance of at least twice the chimney diameter
Diameter	mm	130	150
Total/nominal length	mm	500 / 440	500 / 440
Maximum flue gas temperature:	°C	250	250
Material		1.4404 (V4A)	1.4404 (V4A)
Weight	kg	4.5	4.5

Technical data		Micro-dust filter control unit
High voltage	kV	Max. 30 kV, 1 mA modulating
Power consumption	W	Max. 30 W, standby < 1 W
Supply voltage	VAC	230
Dimensions	mm	283x112x115
Weight	kg	3.5

Zone valves – 2-way valves

All zone valves are with continuous & switched phase
Depending on the output capacity, these zone valves are used for a wide range of applications. They prevent incorrect circulation of heat or hot water tank circuits and are used as a switching function for accumulator loading in district lines with several houses.

Zone valve
with continuous &
switched phase 5/4" ET

Zone valve
with continuous & switched
phase 6/4" IT

Heat circuit valves – 3-way valves (quick charging & changeover valves)

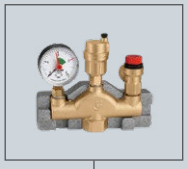
HCV 1" with spring return
HCV 5/4", 2" with continuous & switched phase
Depending on the output capacity, these changeover valves are used for a wide range of applications, such as quick charging, accumulator switching, external heat boilers and solar circuit switching.

Heat circuit valve
with spring return
1" IT

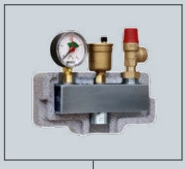
Heat circuit valve
with continuous &
switched phase 5/4" ET

Safety group

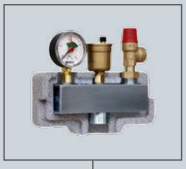
Compact boiler safety group with insulation for closed heating systems according to EN 12828 up to the respective output range. The response pressure of the safety valve is 3 bar. In addition, a pressure gauge and a quick bleed valve are installed in the group.



Solid cast brass, connection 1" IT
Safety valve 1/2" x 3/4"
up to 50 kW



Galvanised steel bracket,
Connection 1" IT
Safety valve 3/4" x 1"
up to 100 kW



Galvanised steel bracket,
Connection 1" IT
Safety valve 1" x 5/4"
up to 200 kW

AIO = air-independent operation, ADO = air-dependent operation; HCV = heat circuit valve

HARGASSNER

BIOMASS HEATING TECHNOLOGY

Your expert for **PELLET** | **WOOD LOG** | **WOOD CHIP** BOILERS

Complete Hargassner range: pellet boilers, wood chip boilers, wood log boilers, accumulator tank, industrial boilers up to 2.5 MW, heating modules, filling augers, combined heat power CHP, Power-Box warm-air module, solar panels and hydraulic accessories

Your specialist retailer

AUSTRIA

HARGASSNER Ges mbH
Anton Hargassner Strasse 1
A-4952 Weng
+4377 23527 4 - 0
office@hargassner.at
hargassner.com

GERMANY

HARGASSNER DE GmbH
Heraklithstraße 10a
D-84359 Simbach/Inn
+49 85 71 93997 - 0
office@hargassner.com