

REMKO HotHybrid INVERTER HEAT PUMPS

*Switch over to more efficiency,
even in old buildings*

Version 2011/2012

**React flexibly
on energy prices**

**REMKO HotHybrid-Inverters
make it possible**



THE HYBRID TREND TECHNOLOGY

Two technologies combined into one innovation



"Hybrid comes from the Latin word with Greek origin HYBRIDA"

Hybrid means a system which combined two technologies with one another.

REMKO HotHybrid INVERTER HEAT PUMPS

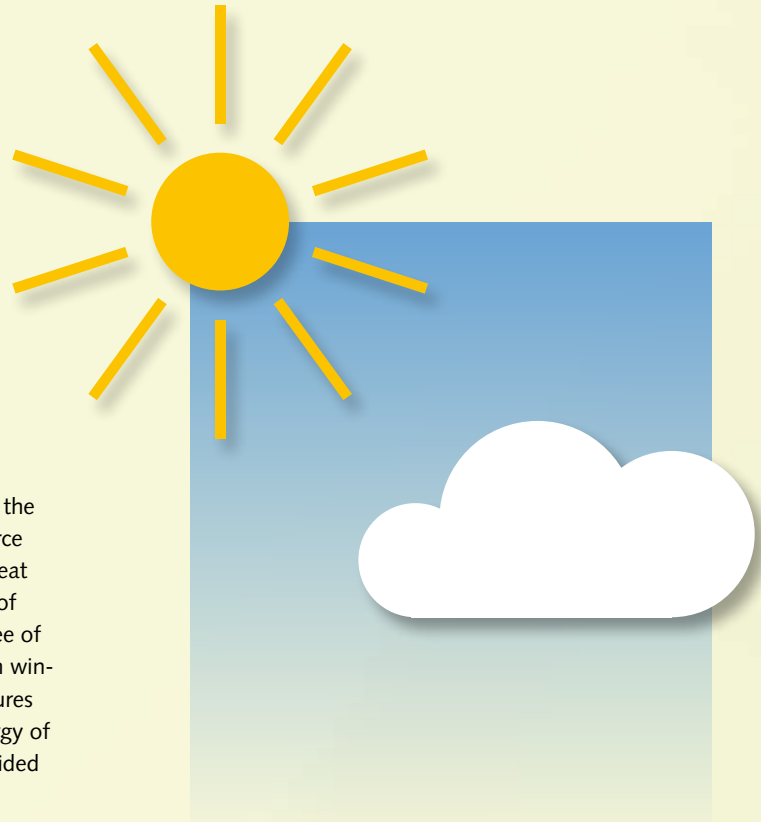
*Switch over to more efficiency,
even in old buildings*

The new efficiency dimension

The efficient REMKO inverter heat pump and an energy saving condensing boiler are installed in one compact unit.

The hybrid technology guarantees maximum energy saving as opposed to outdated heating equipment. Depending on the conditions, you can cover your heat and hot water requirements to a great extent with renewable energy from the ambient air.

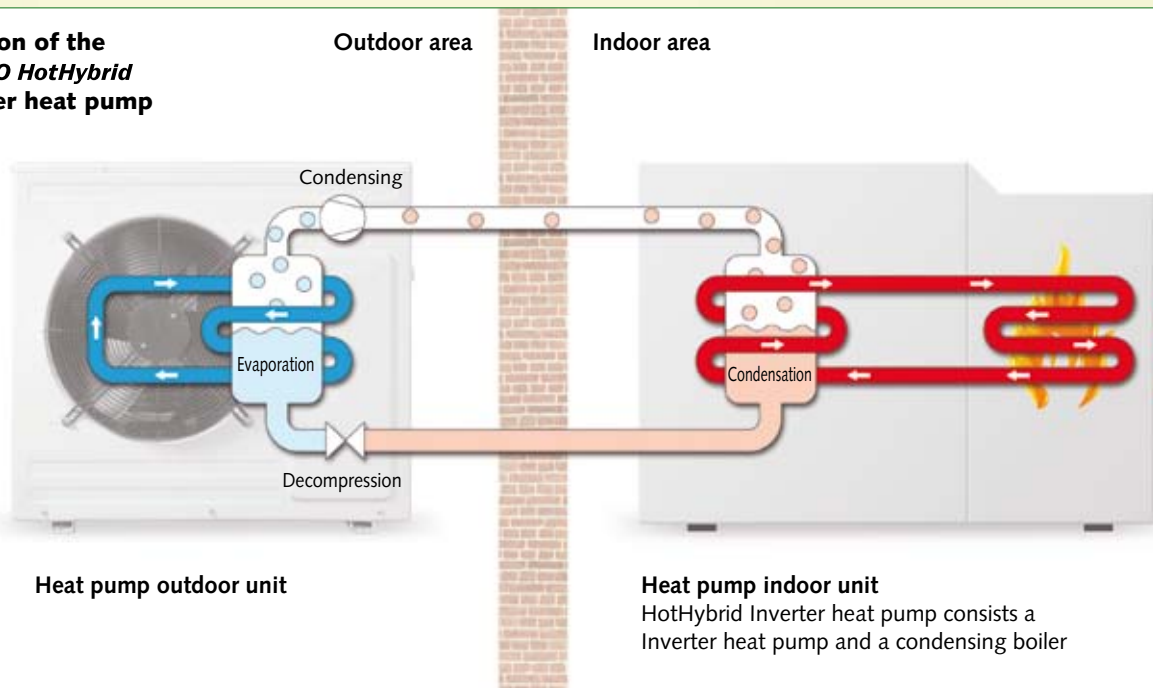
Combined with a thermal solar plant, the proportion of renewable energy must be further increased.



Inverter heat pumps Heat from the air

The solar energy stored in the air is an inexhaustible source of emission-free power. Heat pumps take up to $\approx 75\%$ of the energy from the air free of charge. This works even in winter with outside temperatures below zero. Only the energy of up to 25% has to be provided by electrical power.

Function of the REMKO HotHybrid Inverter heat pump



THE *REMKO HotHybrid*-TECHNOLOGY

Unbeatable as a duo



A particularly high proportion of renewable energies arises when the types of energy environmental heat, sun and oil/gas are combined into one system.

TWO ENERGY SOURCES IN ONE UNIT

Flexible response to energy prices



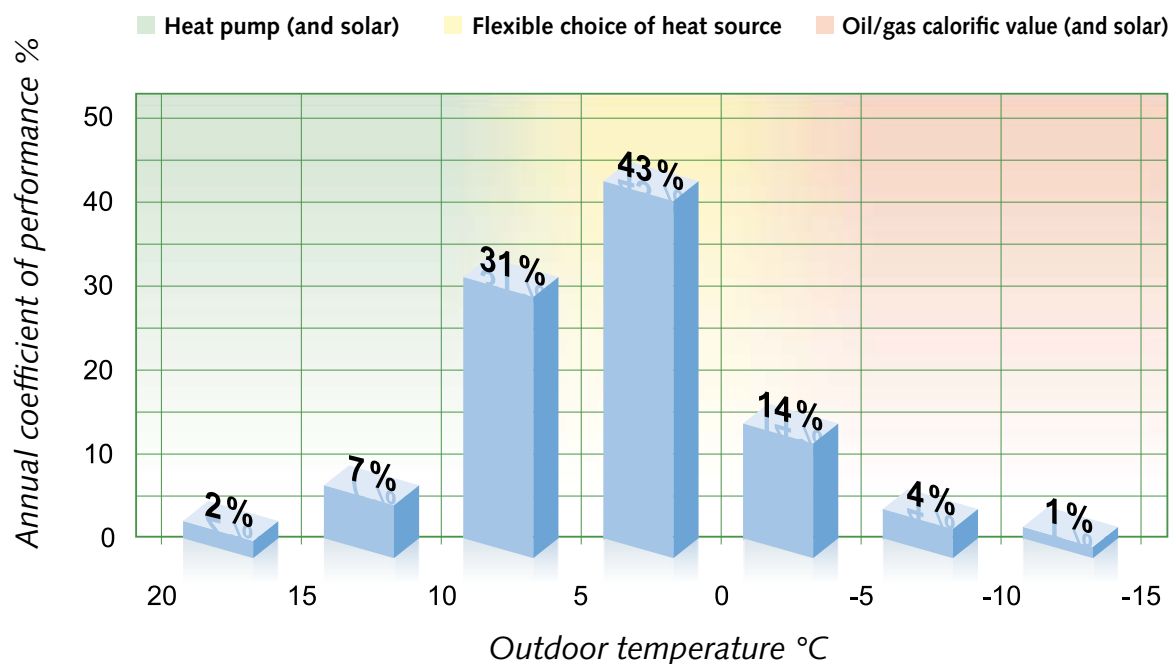
The ideal mix

In summer and in the transition period, the inverter heat pump and the optional solar plant generally take over the heat and water supply. If the specified temperature limit »the balance point« is fallen short of, the inverter heat pump switches off and the condensing boiler takes over the heat and water supply. You can react flexibly to energy prices at any time thanks to the HotHybrid technology.

At a glance - the benefits of the REMKO HotHybrid inverter heat pump

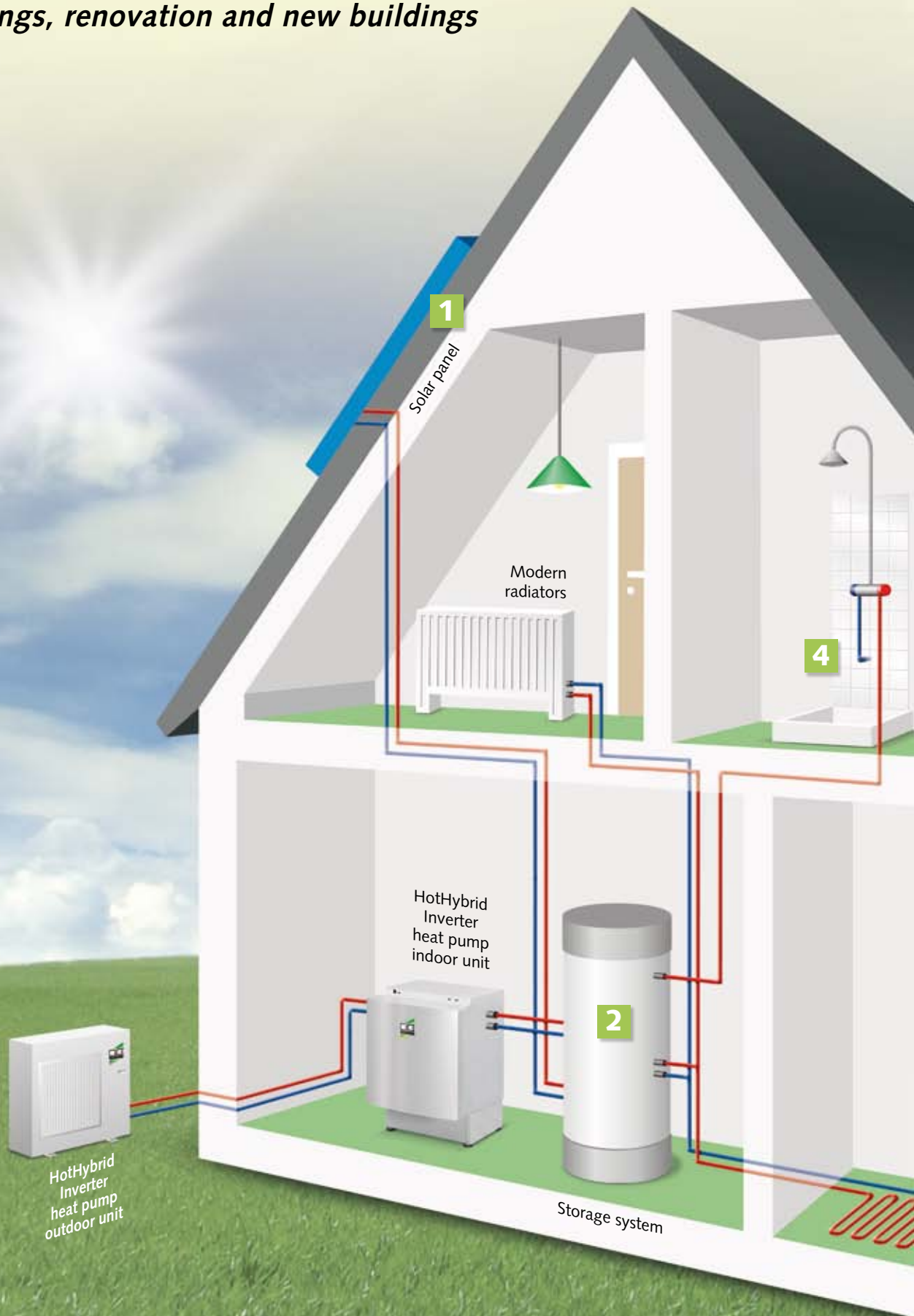
- Ready-to-connect and pre-assembled complete system.
- Hydraulic decoupling due to integrated water compensator. The possibly existing hydraulic system need not be changed
- Compact and space-saving construction
- Modular mode of operation of the heat pump due to modern inverter technology
- Oil/gas condensing boiler with high-performance special heat exchanger with the output levels 15, 18 and 22 kW

Distribution of the annual coefficient of performance



THE IDEAL SOLUTION FOR YOUR HOME

REMKO HotHybrid Inverter heat pumps
for old buildings, renovation and new buildings





1

In combination with a solar panel for economical water heating and heating assistance

An ideal combination for a maximum of economic efficiency and environmental protection. Direct solar energy delivers a high percentage of water heating requirements as an annual average.

2

In combination with storage systems The interface and collection point for various energy systems

Tanks are offered in various designs and capacities. With connection options for heat pump, solar plants and drinking water preparation, the storage system is the interface and collection point. In addition, the storage system enables the hydraulic decoupling of the volumetric flows in complete energy systems.

3

In combination with floor heating – modern radiators and wall-mounted heaters

Heat pumps reach their highest efficiency in conjunction with floor heating. With conventional modern radiators, the operating costs are lower than for oil or gas heating appliances. This means that cosy heating is guaranteed even at lower outside temperatures.

4

With effective water heating

If the inverter water pump is also to handle the drinking water preparation, you will require an external drinking water storage tank. See 2. Trouble-free and reliable drinking water preparation is guaranteed.

The scheme shows a simplified illustration of the HotHybrid Inverter heat pump functions.

THE HEAT PUMP MANAGER

The Multitalent of the REMKO HotHybrid Inverter heat pump

The complete energy management system

The heat pump manager handles the complete energy management of the inverter heatpump. The controller has everything perfectly under control. No matter whether it is dealing with the control of an individual unit, an entire system or the management of a complex plant. The REMKO heat pump manager is a multitalent.

- Solar control integrated
- Anti-legionella switching
- Modular design
- DHW control
- Dialogue guided
- Remote controller option
- Ready for power plant operator connection
- Load-dependent control according to demand



Remote control for heat pump manager "Multitalent"

For connection to the heat pump manager integrated inside the heat pump. The remote control contains a LCD display with menu guidance.



Remote control for heat pump manager "Multitalent"

For connection to the heat pump manager integrated inside the heat pump. The remote control contains a LCD display with menu guidance. 4 wire CAN-BUS connection.



REMKO HotHybrid INVERTER HEAT PUMPS

Innovation for all

Technical data

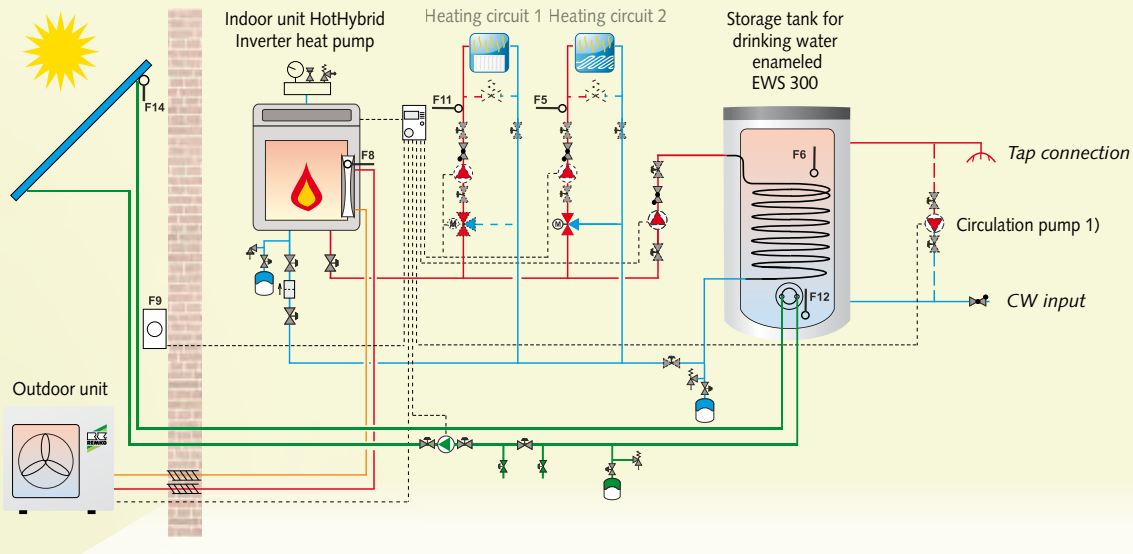
Unit type		HBW 150	HBW 180	HBW 220
Design		REMKO HotHybrid	REMKO HotHybrid	REMKO HotHybrid
Series		Heating	Heating	Heating
Nominal heat output oil/gas condensing boiler	kW	15	18	22
Standard efficiency factor condensing boiler	%	to 104	to 104	to 104
Max. permissible supply temperature	°C	90	90	90
Exhaust gas temperature at 50/30°	°C	42,5	42,5	43,5
Hydraulic compensator for the decoupling of volumetric flows		Serie	Serie	Serie
Heating capacity Inverter heat pump min. / max	kW	3,4 - 10,6	3,4 - 10,6	3,4 - 10,6
Rated heating capacity for A10/W35	kW	8,7 ¹⁾	8,7 ¹⁾	8,7 ¹⁾
Rated heating capacity for A7/W35	kW	8,1 ¹⁾	8,1 ¹⁾	8,1 ¹⁾
Rated heating capacity for A2/W35	kW	4,7 ¹⁾	4,7 ¹⁾	4,7 ¹⁾
Rated heating capacity for A2/W35	kW	6,3 ³⁾	6,3 ³⁾	6,3 ³⁾
Rated heating capacity for A-7/W35	kW	4,5 ¹⁾	4,5 ¹⁾	4,5 ¹⁾
COP for A10/W35 / Compressor frequency	COP / Hz	4,9 / 58 ¹⁾	4,9 / 58 ¹⁾	4,9 / 58 ¹⁾
COP for A7/W35 / Compressor frequency	COP / Hz	4,4 / 58 ¹⁾	4,4 / 58 ¹⁾	4,4 / 58 ¹⁾
COP for A2/W35 / Compressor frequency	COP / Hz	3,0 / 58 ¹⁾	3,0 / 58 ¹⁾	3,0 / 58 ¹⁾
COP for A2/W35 / Compressor frequency	COP / Hz	2,5 / 73 ³⁾	2,5 / 73 ³⁾	2,5 / 73 ³⁾
COP for A-7/W35 / Compressor frequency	COP / Hz	2,7 / 58 ¹⁾	2,7 / 58 ¹⁾	2,7 / 58 ¹⁾
Inverter technology		REMKO EcoTec	REMKO EcoTec	REMKO EcoTec
System Inverter heat pumps		Air/water	Air/water	Air/water
Operating limits heating with Inverter heat pump	°C	0 to + 35	0 to + 35	0 to + 35
Heating water supply temperature with inverter heat pump	°C	to + 50	to + 50	to + 50
Drinking water preparation with inverter heat pump	°C	to + 45	to + 45	to + 45
Refrigerant		R 410A	R 410A	R 410A
Refrigerant basic weight	kg	1,9	1,9	1,9
Refrigerant connection	Inches	1/4 / 5/8	1/4 / 5/8	1/4 / 5/8
Refrigerant pipework, lenght max.	m	50	50	50
Refrigerant pipework, height max.	m	30	30	30
Power supply	V/Hz	230/1~/50	230/1~/50	230/1~/50
Power consumption for A7/W35	kW	1,84	1,84	1,84
Customer's fuse protection (outdoor unit)	A Träge	20	20	20
Volumetric flow water at Δt 5 K	m ³ /h	1,2	1,2	1,2
Max. operating pressure water	bar	3,0	3,0	3,0
Hydraulic connection supply / return flow	Inches	G 1"	G 1"	G 1"
Noise capacity LpA 1m (outdoor unit)	dB(A)	54/40 ²⁾	54/40 ²⁾	54/40 ²⁾
Dimensions indoor unit Height / width / depth	mm	950/640/1.300	950/640/1.300	950/640/1.300
Dimensions outdoor unit Height / width / depth	mm	800/880/310	800/880/310	800/880/310
Weight indoor unit / outdoor unit	kg	154/57	154/57	154/57
HotHybrid Inverter heat pump		HBW 150	HBW 180	HBW 220
Including: outdoor and indoor unit with condensing boilers, safety assembly with SIV, bleeding unit and manometer, 2 x back pressure valve 1" with thermometer, dirt filter 1", feed valve and drain valve 1/2", immersion-, contact- and outdoor sensor, and heat pump manager.				
Ref. No.		750100	750110	750120
Oil-burner (rocket burner)				
Ref. No.		950050	950050	950050
Gas burner (natural gas / LPG)				
Ref. No.		950060	950060	950060

¹⁾ COP = coefficient of performance (heating capacity rate) according EN 14511, TÜV ²⁾ Distance 5 m

³⁾ COP = of capacity (heating capacity rate) according to EN 14511, at alternative compressor frequency of the inverter

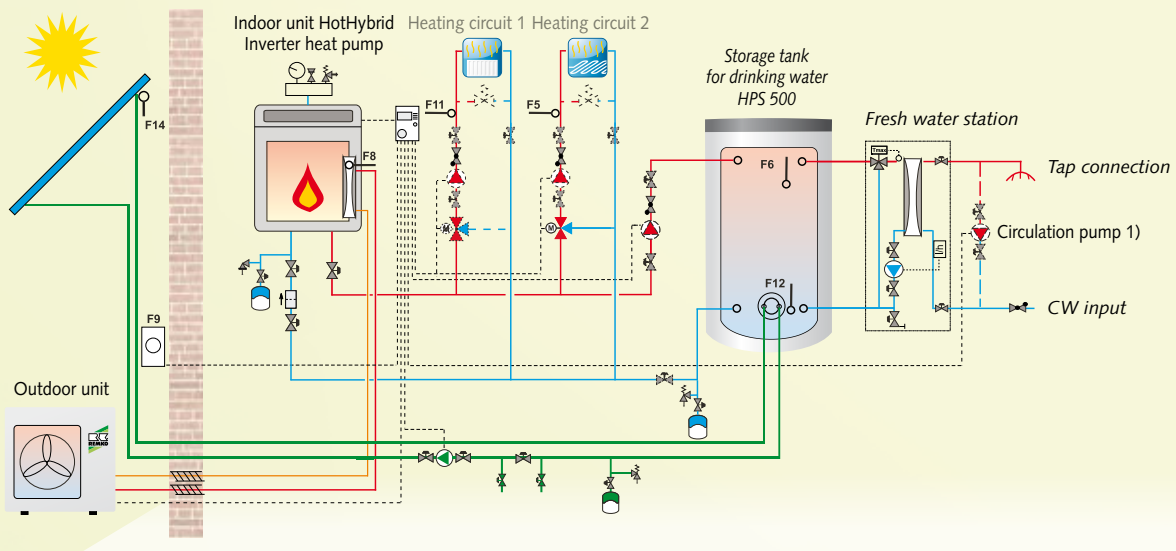
HYDRAULIC SYSTEM

Hydraulic system (Example of hybrid system with hot water using, solar-assisted)



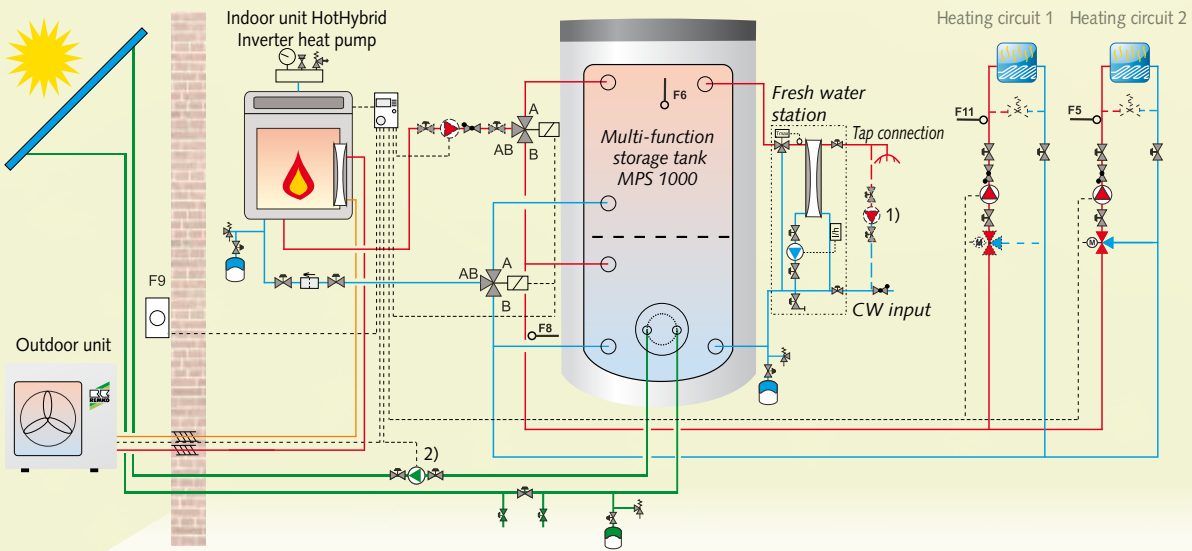
1) In solar operation the circulation pump must be controlled on site

Hydraulic system (Example of hybrid system with hot water using, solar-assisted)



1) In solar operation the circulation pump must be controlled on site

Hydraulic system (Example of hybrid integration with a solar system and space heating)



1) In solar operation the circulation pump must be controlled on site. 2) The integration of the solar system is only possible via an external regulation.

TANK SYSTEMS

Storage tanks for hot water

- Universally applicable as parallel storage (hydr. soft) or Series storage
- With blank flange cover D240 for retrofitting a fin-tube heat exchanger RWT 31
- Electric immersion heater screw connection 6/4"
- Max. operating temperature 95°C
- Operating pressure 3 bar:
- Test pressure 4.5 bar
- Anti-rust coating outside
- 9 connection threads (11 for MPS1000) 6/4" IG and inflow restrictors
- 4 socket screw threads 1/2" for sensor/thermometer - immersion sleeve
- Made of high-quality steel S235 in accordance with DIN EN 10 025/10 111
- Foam insulation 100mm, silver-grey

Unit type		HPS 500	MPS 1000
Height with insulation	mm	1725	2135
Diameter with insulation	mm	850	990
Diameter without insulation	mm	650	790
Tilt height without insulation	mm	1670	2090
Weight	kg	113	176
Ref. No.		270300	270400

NEW INSULATION
UP TO 21% ENERGY SAVINGS



Tank for process drinking water heating



- Enamelled with double-wound smooth pipe heat exchanger and especially large heat exchanger surface of 3.5 m²
- Inner tank with magnesium-false anodes in accordance with DIN 4753
- PUR insulation 50 mm (CFC, HCFC and HFC-free)
- Silver-grey lining is delivered separately for transport protection purposes
- Operating pressure: max 10 bar
- Max. operating temperature 95° C
- Connection options for circulation 3/4" AG
- Cold water supply and warm water outlet 1" IG
- With blank flange cover D180
- Flange heating cartridge (legionella protection) or fin-tube heat exchanger RWT 18 can be retrofitted

Unit type		EWS 300
Height	mm	1435
Diameter	mm	680
Tilt height	mm	1595
Weight	kg	170
Ref. No.		270100

STORAGE TANK SYSTEM - ACCESSORIES

Fin-tube heat exchanger

- For additional indirect heating, e.g. with a solar thermal system
- Manufactured from seamless, helically-wound SF-CU fin-tube
- RWT 31 also with immersion sleeve for sensor
- Complete with screw connection on enamelled flange plate
- Max. operating temperature 95°C
- Operating pressure: max 10 bar



Unit type		RWT 18	RWT 31
Suitable for storage tanks	Typ	EWS 300 KPS 300	HPS 500 MPS 1000
Heat exchanger surface	m ²	1,40	3,10
Installation length in	mm	440	530
Connection G	Zoll	3/4	1
Contents	l	1,50	2,50
Flange	Ø	180 / 8-hole	240 / 12-hole
Ref. No.		260200	260210

THE FINELY-MATCHED ACCESSORY RANGE FOR *REMKO HotHybrid* INVERTER HEAT PUMPS

Outdoor unit



Connection pipe

Connection from outdoor to indoor unit

For unit type	Ø	Ref. No.
HBW150-220	¼ / ⅝	260011



Floor bracket

Floor bracket with vibration dampers for outdoor unit, Lenght 1 m

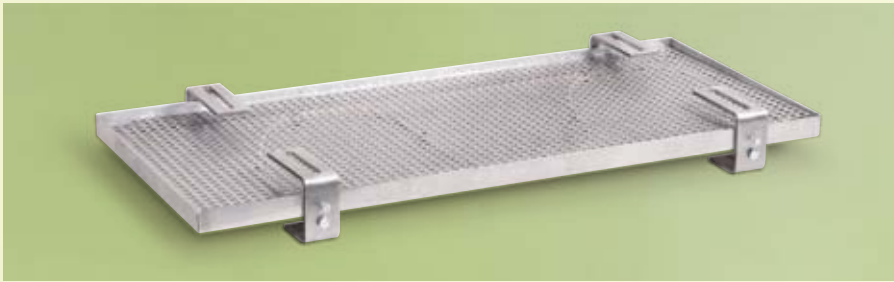
Ref. No. 260020



Wall-mounted brackets

for wall-mouning the outdoor unit

For unit type	Typ	Ref. No.
HBW 150-220	WKM560	260085
Noise decoupling set		1613900



Condenswater drip tray

Condenswater drip tray for outdoor unit incl. temperature-controlled electronic condenswater drainage heating and leaf guard grating. Stainless steel

Ref. No. 260050

Condenswater drip tray incl. oil separator

Condenswater drip tray for outdoor unit incl. temperature-controlled electronic condenswater drainage heating, leaf guard grating and oil separator. Stainless steel

Ref. No. 260120



Electrical condenswater drainage - heater

Electrical condensation drainage heating, temperature-regulated for the safe discharge of defrost water with outside temperatures below the freezing point.

Ref. No. 260040

Heat pump manager Multitalent



Remote controller for Heat pump manager Multitalent

For connection to the heat pump manager integrated into the heat pump. The remote controller contains an LCD display with identical menu guidance. 4 wire CAN-BUS connection. A heating circuit can be controlled with remote control operation.

Ref. No. 260105



Remote controller for Heat pump manager Multitalent

For connection to the heat pump manager integrated into the heat pump. The remote controller contains an LCD display with identical menu guidance. A heating circuit can be controlled with remote control operation. Not suitable for cooling function.

Ref. No. 260110



Analogue remote control with integrated room sensor

For connection to the heat pump manager integrated into the heat pump. The operating mode and the target temperature for Heating circuit 1 can be controlled with two easy-to-operate rotary knob. (direct heating circuit)

Ref. No. 260130

Fresh water station



Fresh water station

For hygienic water heating in combination with storage tanks. Complete with pump, thermostatic control valve for limiting the tap temperature, flow switch and plate heat exchanger. Heat exchanger for high flow rate of 25 l/min. Available in 2 installation sizes, ready for assembly with housing.

Ref. No. 260151 BG 500

Ref. No. 260152 BG 1000

Hydraulics



Duo heating circuit pump set - highly efficient -

Comprising:
1 x heating circuit pump group / mixed
1 x heating circuit pump group / non-mixed
1 x connecting terminal

Ref. No. 260300

Comprising:
2 x heating circuit pump group / mixed
1 x connecting terminal

Ref. No. 260310



Heating circuit pump set - highly efficient -

Comprising:
Heating circuit pump group / non-mixed

Ref. No. 260320

Comprising:
Heating circuit pump group / mixed

Ref. No. 260330



Overflow protection valve

Overflow valve 1" for protection of the minimum flow volume.

Ref. No. 260080



3-way valve, DN 25

Electrical valve / three-way valve 1" for water heating and separate cooling circuit (four tube system).

Ref. No. 260070



Contact sensor

Contact sensor for integration of additional system components, e.g. mixed heating circuit (heating circuit 2). By standard, a contact sensor is included in the scope of supply of the heat pump.

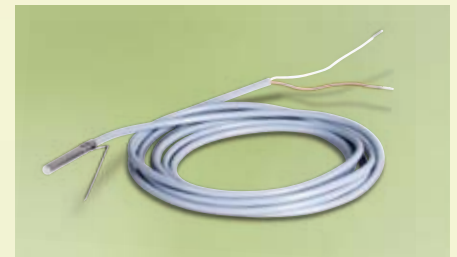
Ref. No. 260100



Solar sensor

Solar sensor for the collector supply for the integration of a solar thermal system (PT 1000), or used as a sensor for a solid fuel boiler

Ref. No. 260102



Immersion sensor

Immersion sensor for the integration of additional system components, e.g. as a reference sensor in the multi-function storage tank in combination with a solar thermal system. By standard, 1 immersion sensor is included in the scope of supply of the heat pump.

Ref. No. 260090

THE FINELY-MATCHED ACCESSORY RANGE FOR *REMKO HotHybrid* INVERTER HEAT PUMPS

Exhaust pipe, DN 80, rigid



Pipe, rigid, 255 mm, DN 80
Ref. No. 229200

Pipe, rigid, 500 mm, DN 80
Ref. No. 229205

Pipe, rigid, 955 mm, DN 80
Ref. No. 229210

Pipe, rigid, 1955 mm, DN 80
Ref. No. 229215



87°-Control elbow, DN 80
Ref. No. 229220



45° elbow, DN 80
Ref. No. 229225



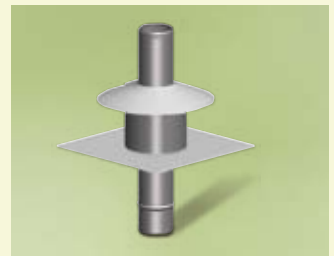
Control pipe, DN 80
Ref. No. 229230



87° elbow, DN 80
Ref. No. 229235



30° elbow, DN 80
Ref. No. 229240



Chimney head cover, rigid, stainless steel, DN 80, cover 330 x 330 mm, L = 470mm
Ref. No. 229245

Exhaust pipe, DN 80, flexible



Flexible pipe, with assembly set
10,0 m, DN 80
Ref. No. 229300

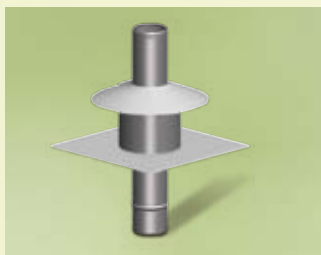
12,5 m, DN 80
Ref. No. 229305

15,0 m, DN 80
Ref. No. 229310

50,0 m, DN 80
Ref. No. 229315



Control pipe, flexible, incl. fastening, DN 80
Ref. No. 229320



Chimney head cover, flexible, stainless steel, DN 80, cover 330 x 330 mm, L = 470mm
Ref. No. 229325



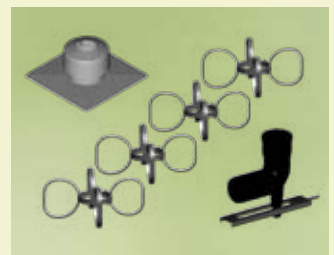
Coupling for flexible pipes, DN 80
Ref. No. 229330



Chimney end pipe, for flexible pipes, DN 80
Ref. No. 229335



Spacers (3 pc.), DN 80 - DN 100
Ref. No. 229340



Basic set, shaft, DN 80
Ref. No. 229345

REMKO GmbH & Co. KG
Air Conditioning and Heating Technology

Im Seelenkamp 12 · D-32791 Lage
PO Box 1827 · D-32777 Lage

Phone: +49 (0) 5232 606-0
Fax: +49 (0) 5232 606-260

E-mail: info@remko.de
Internet: www.remko.de

Managing Director

Hans-Dieter Remming
Telefon +49 (0) 5232 606-0
E-mail gl@remko.de

Organisation and Quality Management

Stephan Schlüter
Telefon +49 (0) 5232 606-0
E-mail orga@remko.de

Head of National Sales

Toni Kratzel
Phone +49 (0) 5232 606-0
E-mail info@remko.de

Head of International Sales

Sven Schröder
Phone +49 (0) 5232 606-130
E-mail export@remko.de

REMKO INTERNATIONAL

*... and somewhere near you!
Take advantage of our experience and
consulting services.*



Consulting

Through intensive training, we make sure the expert knowledge of our consultants is always up-to-date. This has given us the reputation of being more than just a good, reliable supplier: REMKO, a partner that helps solve problems.

Sales

REMKO not only provides an extensive sales network in Germany and abroad, but also unusually highly qualified sales experts. REMKO sales representatives are more than just salespeople: they must also be customer consultants in air conditioning and heating technology.

Customer care

Our devices function precisely and reliably. If a malfunction appears, however, REMKO Customer Care is on the job. Our extensive network of experienced dealers guarantees you constant, short-term, and reliable service.

REMKO GmbH & Co. KG
Air Conditioning and
Heating Technology

Im Seelenkamp 12 · D-32791 Lage
PO Box 1827 · D-32777 Lage
Phone: +49 5232 606-0
Fax: +49 5232 606-260
E-mail: info@remko.de
Internet: www.remko.de

Hotline

Germany
+49 5232 606-0

International
+49 5232 606-130

Your REMKO Dealer

