



AIR
SOURCE
HEAT PUMPS
4-31 KW

YOUR ENERGY OF TOMORROW WELL MANAGED



M-TEC INTERNATIONAL PRODUCTPORTFOLIO

An intelligent complete system of energy production, storage and consumption will reduce electricity costs in the long term. This brings more living comfort with more efficient use of energy. Other benefits of M-TEC Energy are:

- Can be combined with photovoltaic, solar or e.g. Energy Management (SmartI, Loxone)
- Maximum efficiency through intelligent
- power control
- High quality - product from Upper Austria
- Individual warranty packages
- Developed and produced in Austria

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M-TEC Technology

HEATING

COOLING



E-Smart
TECHNOLOGY INSIDE

100% SUSTAINABLE

M-TEC heat pumps are produced in Upper Austria with 100% renewable energy - 100% energy generated from our own photovoltaic system and our own hydropower plant.

Clean and affordable energy for everyone

Our mission is people's independence in the energy supply of their homes through Heat pump, photovoltaic, storage and E-mobility, controlled by our innovative Energy management system E-Smart.



M-TEC CONTROLLER AP440

M-TEC 's heat pumps are operating with innovative concepts that combine user-friendliness and energy efficiency. Each M-TEC heat pump comes as a standard with the latest control technology from KEBA, a leading manufacturer of control and control technology with the highest quality and safety standards.

KEENERGY - THE BEST CONTROLLER

KeEnergy's scheme of KEBA will help you get the most out of your M-TEC heat pump. In addition, PV systems can be integrated so that self-produced PV energy can be used for its own installation. The standardised Modbus interface makes it possible to connect to home automation-systems. That makes this scheme extremely versatile.

A CONTROLLER THAT OFFERS SIMPLICITY AND CONVENIENCE:



Whether touch operation, M-TEC control or control via smartphone - networked technology makes your heat pump versatile:



RELIABILITY AND SAFETY

As a manufacturer of innovative, high-quality products and solutions for industrial and banking automation, KEBA is used to the high standards and industry-standards. This quality, reliability and safety is also included in the M-TEC heat pump scheme. KEBA has been working with banking institutions for many years and is - among other things - responsible for the security of internet traffic from ATMs in Austria. That same protection is also used for your M-TEC heatpump. This prevents, with the highest security possible, unauthorized access to the heat pump and the underlying network. And that safety is of the utmost importance to you.

ENERGY EFFICIENCY

To achieve maximum efficiency, KEBA offers hardware and software modules that are perfectly coordinated and aligned – and that ultimately means lower energy consumption.

LEADING BY INNOVATION

A simple and reliable operation of the heat pump is possible via a touch screen, but also via smartphone, tablet or PC. The heat pump can be operated in the way you want.

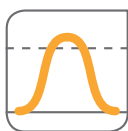
HOW AN M-TEC HEAT PUMP WORKS

In principle, the heat pump works like a refrigerator: the same technique, only reversed functionality. The heat pump receives energy from the heat source side (earth, water or air) at a low temperature and releases heat with a higher temperature on the heating side.

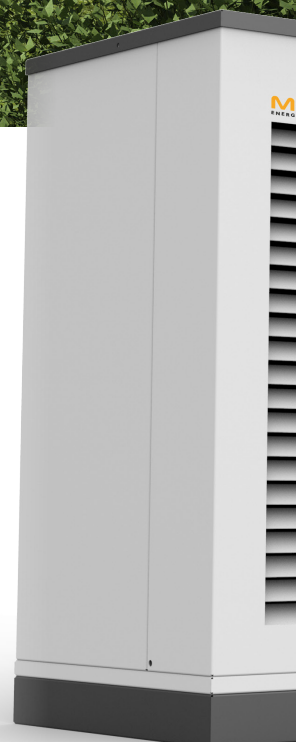
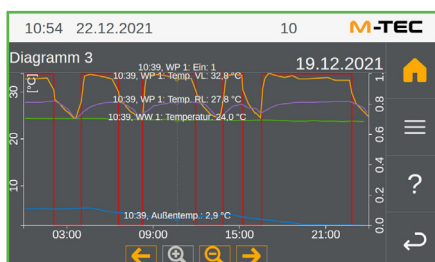


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INTELLIGENT POWER CONTROL



The M-TEC Power Inverter is a true innovation in the field of heat pump technology. The principle is very simple: The inverter adjusts the energy used to the actual needs of your home. The efficiency is thereby improved by approximately 20% and the life span of the compressor is prolonged due to significantly less switch-on cycles.



NATURAL SOURCES FOR ENERGY GENERATION

“The heat pump uses solar energy that is stored in the air.” This energy is available at any time, day or night, summer or winter. With air source heat pumps, on the one hand, it is important that they are designed for our cold climate in order to be able to ensure maximum efficiency and, on the other hand, attention must be paid to the lowest possible noise emissions. Our heat pumps have been optimised for these criteria.



M-TEC air heat pump from 4 to 124 kW.
Ideal for use in single-family houses, but also for residential complexes and businesses premises.



NEW INJECTION TECHNOLOGY

Due to the constantly changing parameters of an inverter heat pump, special attention must be paid to the overheating control. The new, model-based control is a product of years of experience. Proactive reactances are made to future speed changes and therefore the efficiency of the heat pump is maximised.

M-TEC Technology

HEATING

COOLING



The first heat pump with integrated energy management. With the E-Smart functions, you can turn your M-TEC heat pump into the energy concept of the future.

REFRIGERANT
R410A



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M-TEC Technology

HEATING

COOLING

AIR SOURCE HEAT PUMP FROM 4 TO 124 KW

All M-TEC heat pumps can be cascaded with up to four devices. In this way, a power range of 10 to 124 kW can be used for the largest heat pump.

TOP SYSTEM CONCEPT

The best heat pump is only as good as the designed system concept. M-TEC is always optimally oriented to this development!

This results in heating systems with maximum efficiency, which is permanently tested and confirmed by independent authorised testing institutes.

REFRIGERANT R452B



SMART GRID

M-TEC heat pumps are already "Smart Grid Ready" today.

With this function, you can use the cost savings of future electricity networks.

In times where generally less power is consumed, electricity is also cheaper.

Therefore the operating time of the heat pump should be shifted to this period. This is fully automated by M-TEC's intelligent control system.

ADVANTAGES

- Intelligent power control
- Maximum efficiency of heat pump systems
- High innovative power also in the field of control technology
 - Inverter technology
 - Latest overheating control
 - PV Self-consumption optimisation
 - Advanced "Smart Grid" functionality
 - External systems can be integrated
 - LAN interface in each heat pump
 - Easy to use touch screen technology
- **NEW!** Energy-Managementsystem **E-SMART** for best integration of photovoltaics, Battery storage, e-mobility, ...

CONNECT ALL THE DEVICES IN YOUR HOME EASILY AND EFFICIENTLY

Thanks to "Internet Inside", M-TEC heat pumps have been able to take advantage of current developments for years. The advantages of digital networking are obvious. Maintenance and fault diagnosis can be carried out quickly and easily via remote maintenance. Travel costs and time are eliminated. In addition, you can control your heating from anywhere: Whether smartphone or tablet - use the various options to manage your room temperatures.

INTERNET INSIDE



All M-TEC heat pumps are already equipped with the future technology of "Internet Inside". This allows you as a customer to control your heat pump from your mobile phone, tablet or PC. If the heat pump is no longer working optimally, the heat pump automatically signals the problem to your selected heat pump installer. Via "Internet Inside", these adjustments can be made to the control settings, without having to be on site. This saves your time and money.

INTEGRATION OF EXTERNAL SYSTEMS



The integration of a photovoltaic system, solar system or house management system are possible thanks to the intelligent control of the M-TEC heat pump.

Photovoltaic integration can use the self-generated electricity for space heating as well as hot water preparation, preferably for own consumption. Feeding your own PV electricity to the grid will only occur when the hot water storage tank is charged and the house is comfortably warm.

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THE PHOTOVOLTAIC AIR SOURCE HEAT PUMP

Outstanding features of M-TEC heat pumps are their efficiency and future-oriented control technology. Compared to conventional heating systems, this results in exceptionally low operating costs for heating and hot water. Solar Thermal and Solar Photovoltaic systems can easily be integrated with the heat pump both enhancing and complimenting the heat pump to attain even higher levels of efficiency, reducing energy consumption and cutting emissions.



Touch control
M-TEC Touch panel AP420

ADVANTAGES

- Maximum self-consumption of free photovoltaic power
- High degree of comfort
- Long-term security of supply at the lowest cost
- Low maintenance
- Easy-to-use

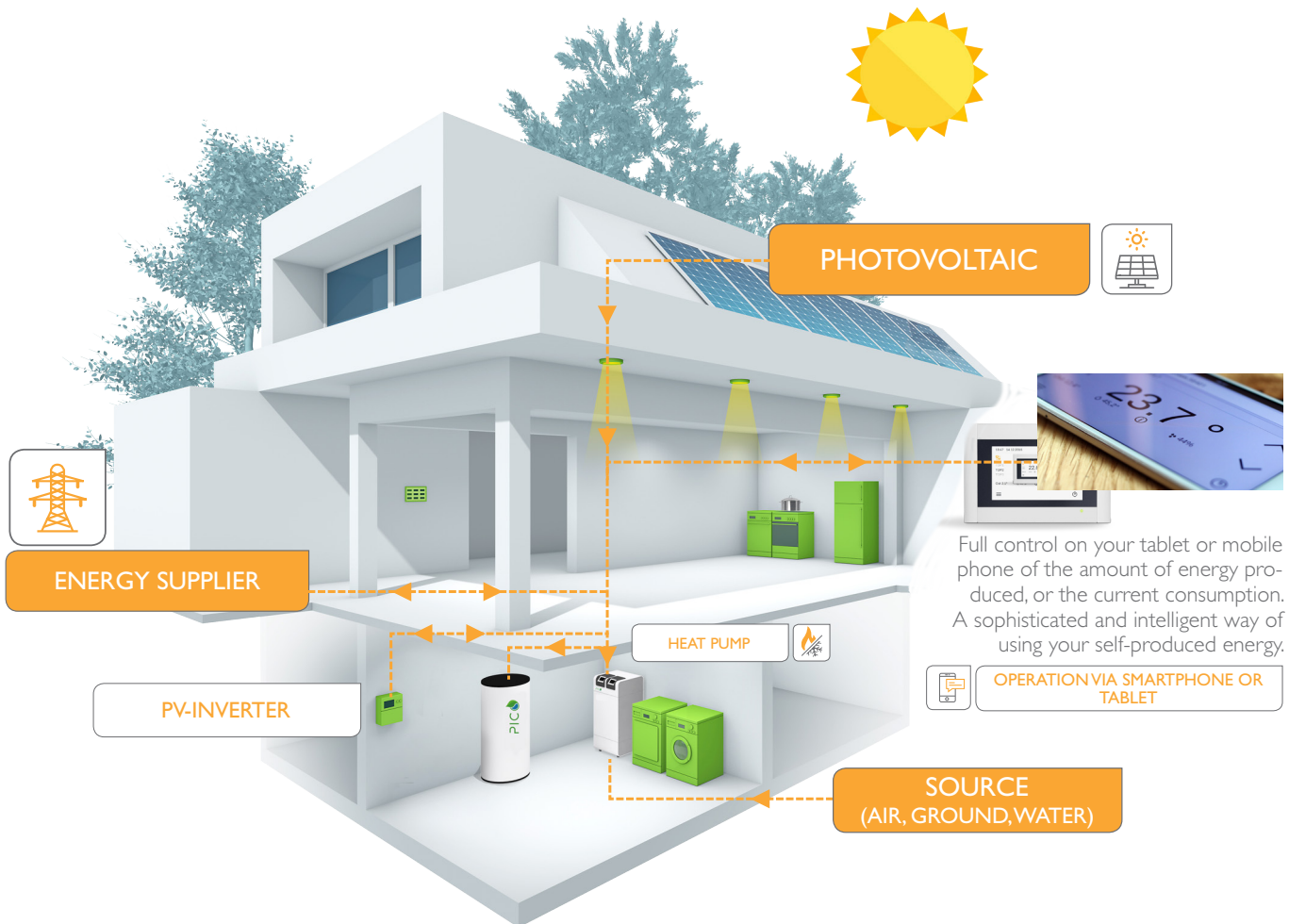
Thanks to the sophisticated M-TEC controller with Touch-Screen, self-generated electricity from the photovoltaic system can be used for heating and cooling of the house. The speed control of the heat pump adapts itself to the photovoltaic power independently. The free photovoltaic electricity can thus be used as best as possible to heat the house, hot water and swimming pool.

MAXIMIZE SELF-CONSUMPTION OF EXCESS PV-ENERGY

The Solar PV system delivers a certain amount of power throughout the day, depending on the solar radiation and the installation of the PV system. This power is partly consumed directly in the house and excess power is fed back into the grid. If this power (determined by the 400V PV meter for the PV integration) exceeds a value defined in the controller for a specified period of time, then the excess energy operation mode of the heat pump will be activated. In excess energy operation, the heat consumers request the parameterised setpoint temperatures, which can be set in the "Photovoltaic" menu of the M-TEC heat pump.

When used in conjunction with Solar PV the heat pump can be programmed to maximize self-consumption of energy virtually preventing excess solar electricity being exported to the grid, instead storing this free electricity as heat and hot water. As our heat pumps can achieve efficiency levels of more than 500%, each unit of solar electricity can be multiplied into 5 kilowatts of heat making it the very best use of Solar PV energy.

Tomorrows home is not only a living space for the family, but also a power plant producing and storing energy to minimise bills and reduce CO2 emissions.



A house with many new and innovative features. The home for tomorrow is not only a living space for the family, but also a power plant and energy storage. And that, without needing much energy from the outside. The self-consumption rate is maximized thanks to innovative M-TEC technology. The heat pump controls the PV production and the consumption of energy in the home and makes them visible.

ADVANTAGES

- Increase the lifetime
- Maintenance by certified specialists
- Flat rate per year

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INDIVIDUAL WARRANTY EXTENSIONS

Benefit from a specialist in geothermal energy with modern heat pump technology. M-TEC heat pumps are the product of over 35 years experience in heat pumps and a cooperation in the field of control technology with the global company KEBA.

Due to the high quality requirements, it is easy for us to offer extended warranties in addition to the guarantees.

It can be chosen between

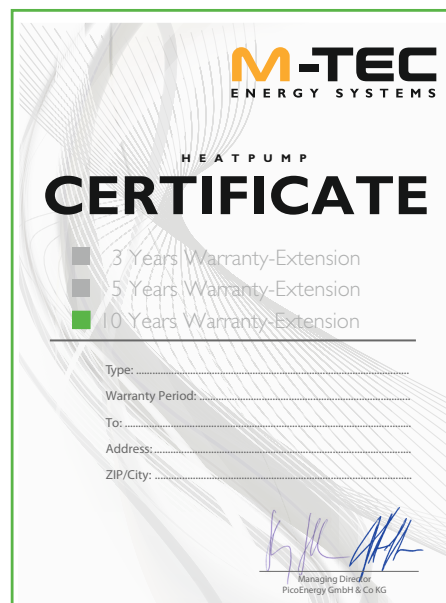
3 years,

5 years or

10 years

Warranty-Extension

on all materials.*



M-TEC
ENERGY SYSTEMS

HEAT PUMP
CERTIFICATE

3 Years Warranty-Extension
 5 Years Warranty-Extension
 10 Years Warranty-Extension


Type:

Warranty Period:

To:

Address:

ZIP/City:


Managing Director
PicoEnergy GmbH & Co KG

Technical Specifications

Air/Water-Heat Pumps							
Models		WPLK 412	WPLK 618	WPLK 722	WPLK 1030		
Power Range [kW]		2-12 kW	4-17 kW	4-22	8-31		
Energy Class 35 °C		A+++	A+++	A+++	A+++		
Energy Class 55 °C		A+++	A+++	A+++	A+++		
Dimensions H x W x D [mm]		1040 x 1560 x 560	1205 x 1750 x 625	1433 x 1965 x 755			
Weight [kg]		220	267	400	405		
Refrigerant		R452b		R410a			
Sound power level acc. EN12102:2018-1 [dB(A)]		45,0	49,9	52,6	53,3		
Sound level add. for low-frequency noise characteristics Lz		0 dB					
Fuse Main Current [A]		3 x C16		3 x C40			
Fuse Controller [A]		1 x C13		1 x B13			
Hydraulic Connection [Zoll]		1" External Thread		5/4" External Thread			
Max. Flow temperatur [°C]		up to 62					
PERFORMANCE DATA ACCORDING EN 14825							
Climate: average (ambient temperature: 2 °C)	SCOP 35°C		4,95	4,92	5,49	5,2	
	η _s 35°C [%]		195	194	214	204	
	SCOP 55°C		3,82	3,78	4,19	3,92	
	η _s 55°C [%]		150	148	163	152	
PERFORMANCE DATA ACCORDING EN 15879							
Heating Output/COP	A7/W35 acc. EN14511	Partial Load	kW/COP	4,80 / 5,18	7,20 / 4,99	13,80 / 5,58	20,40 / 5,11
	A7/W55 acc. EN14511	Partial Load	kW/COP	5,40 / 3,20	8,10 / 3,07	14,00 / 3,41	20,90 / 3,07
	A2/W35 acc. EN14511	Partial Load	kW/COP	6,60 / 4,56	9,00 / 4,31	10,50 / 4,93	15,90 / 4,54
	A2/W42 acc. EN14511	Partial Load	kW/COP	5,79 / 3,90	8,78 / 3,92	9,92 / 4,20	14,90 / 3,92
	A-7/W34 acc. EN14511	Full Load	kW/COP	9,10 / 3,22	13,75 / 3,21	17,2 / 3,25	23,90 / 3,14
	A-7/W52 acc. EN14511	Full Load	kW/COP	9,00 / 2,45	13,40 / 2,36	16,30 / 2,45	23,80 / 2,25
	A-10/W35 acc. EN14511	Full Load	kW/COP	8,23 / 3,12	12,45 / 3,13	15,90 / 3,06	22,10 / 2,89
	A-10/W55 acc. EN14511	Full Load	kW/COP	8,30 / 2,22	12,53 / 2,23	15,10 / 2,13	22,00 / 1,96
Heating Output	A7/W35	min. / max.	kW/kW	2,20 / 13,8	3,20 / 19,90	4,90 / 25,20	9,30 / 34,20
	A7/W55	min. / max.	kW/kW	4,40 / 12,70	6,00 / 20,00	4,30 / 24,10	8,60 / 33,80
	A2/W35	min. / max.	kW/kW	1,90 / 12,10	2,70 / 17,00	4,20 / 21,80	8,10 / 26,50
	A2/W35 Power*	min. / max.	kW/kW	-	-	-	8,10 / 31,00
	A2/W55	min. / max.	kW/kW	3,80 / 11,00	5,10 / 17,10	3,90 / 20,60	7,80 / 26,10
	A2/W55 Power*	min. / max.	kW/kW	-	-	-	7,80 / 30,50
	A-7/W35	min. / max.	kW/kW	2,80 / 9,10	4,10 / 13,80	3,70 / 16,80	7,50 / 22,80
	A-7/W35 Power*	min. / max.	kW/kW	-	-	-	7,50 / 27,60
	A-7/W55	min. / max.	kW/kW	3,60 / 8,70	5,20 / 13,40	3,70 / 16,50	7,50 / 22,40
	A-7/W55 Power*	min. / max.	kW/kW	-	-	-	7,50 / 27,30
A20/W35	min. / max.	kW/kW	6,00 / 21,10	9,00 / 32,40	6,10 / 30,30	13,20 / 42,10	
Cooling Capacity A35/W18	min. / max.	kW/kW	3,90 / 8,10	5,90 / 12,50	5,60 / 14,40	10,90 / 25,20	
Cooling Capacity A35/W7	min. / max.	kW/kW	2,90 / 5,60	4,40 / 8,60	3,80 / 10,90	8,10 / 20,40	
Sound Power (A-7/W55)	Night / max.	db(A)	54,10 / 59,70	56,40 / 62,10	57,20 / 67,10	58,90 / 68,00	
Sound Power acc. EN12102		db(A)	45	49,90	52,60	53,30	

All data include any defrosting that may be necessary.

* All power values with 100 rps (compressor speed) can be activated in the software, but these were not tested in the test center according to EN14511. Compressor-related power deviations of up to 10% are possible. All Rights Reserved. Technical data is subject to change without notice.

THE NEW GENERATION



Distribution Partner

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www.mtec-systems.co.uk

01237 751044
support@mtec-systems.co.uk

Please order or download our current brochures:



Brochure WPS26-V2
Heat pump, 2-6 kW



Brochure WPS
Heat pump, 3-52 kW



Brochure ENERGY BUTLER, 11.5-30.7kWh