Kroll®

MOBILE
Heat Pumps

Air-to-Air Heat Pumps MWK, MW

From
Development Phase
to Final Product

60 Years Kroll
MADE IN GERMANY

MOBILE Heat Pumps **MWK, MW**

Environmentally friendly heating and cooling for all demands

Environmentally friendly

Economical

Fossil-free

Mobile

Compact

The transformation in heat supply from fossil fuels to regenerative concepts faces challenges, especially in temporary operating conditions, as the complex solutions often cannot be combined with the necessary flexibility. The unstable price development of fossil fuels and increasing CO_2 taxation make heat pumps an uncomplicated and sustainable yet cost-effective heating solution. Depending on the version, our robust and easily transportable air-to-air heat pumps enable heating as well as heating and cooling completely without fossil fuels. Heating oil and gas are no longer required – an electricity connection is all that is needed.

Our **MWK40** enables year-round temperature control with just one unit – mobile heating at up to –10°C and cooling at up to +40°C. Our **MW40** and **MW80** heat pumps are designed for extreme temperature ranges of down to –20°C – but without a cooling function. Thanks to their air-to-air functionality, there is generally no need for complex room installations. This eliminates the need for heating boilers, cooling units and radiators as well as their pipework distributions with pumps, fittings and control technology.

Even in summer, you can always keep a cool head:
Our mobile heating/cooling combination **MWK40** defies outside temperatures of up to +40°C and cools your properties without any problems.

MWK40/
MW40

Area of Application

- (Large) construction sites
- Warehouses and production halls
- Hangars
- Events and large-scale events
- (Festival) tents
- Agriculture
- Commercial, municipal and private requirements as temporary heating, replacement heating in the event of stationary heating systems or for temperature control/ air conditioning.

MWK40	MW40	MW80
300686	301531	301532
Heating and cooling with just one unit. Temperature ranges from –10°C to +40°C	Heating at extreme temperatures of up to –20°C	Heating at up to –20°C with up to 100 kW and 16.000 m³ air volume flow

Heat pumps installed outdoors heat the room air directly to your desired target temperature via a circulating air flow. Mobile air-to-air heat pumps have been developed for quick connection and easy installation. This means that the temperature control solution is ready for use within a very short time. No tank systems, no storage of fuel and considerably less maintenance – thanks to air-to-air operation, you don't have to worry about chillers as with air-to-water heat pumps. Intake and exhaust nozzles are recessed in the housing and there are no protruding components. Safe loading is guaranteed by the forklift truck mountings.

The high available air pressure enables long hose connections. Air-to-air heat pumps can also be used for stationary applications with a permanently installed air duct system.

All device types can be clearly managed, monitored and billed using a web application and a mobile internet connection.

Features of the MWK40

- Scroll compressor
- Refrigerant R410A
- Axial fan with sickle blades
- Centrifugal blower
- Speed-controlled fan via frequency inverter for optimum air volume
- 200 Pa max. available air pressure
- Purely electrical operation with 400 V/3N~/50 Hz /31 A
- Pressure transmitter for low- and high-pressure side
- Dimensions: 2.400 x 1.200 x 2.200 mm (L x W x H)
- Nominal heat output 42,9 kW
- Nominal cooling output 33,5 kW
- Operating range outside temperature –10°C to +40°C
- Volume flow 8.000 m³/h
- Protection IP44
- Sound pressure level 69 db(A)
- Refrigerant: Filling capacity 17 kg

Info

Even under extreme conditions of down to –10°C or –20°C outside temperature, our mobile heat pumps heat your properties 100 percent fossil-free – for a 100 percent comfortable room temperature.

Europe-wide remote control via web browser.

Special colours available on request.

MW80

Kroll Energy

MWK40, MW40 and MW80 Web App Features and Available Extras

Many operational areas – one portal to keep an eye on everything.
Whether your MWK40, MW40 or MW80 is used on a construction site, for an event tent or as a temporary heating solution, you can access all key parameters via web app and manage your devices remotely.

Our Web App for the Kroll Energy MWK40, MW40 and MW80

Monitor and operate your devices conveniently from afar!

The mobile heat pumps from Kroll Energy are suitable for many different application areas thanks to their flexible operating temperatures of –20°C to +40°C and their robust design.

We have developed the web app for the MWK40, MW40 and MW80 to help you manage all your devices at one glance.

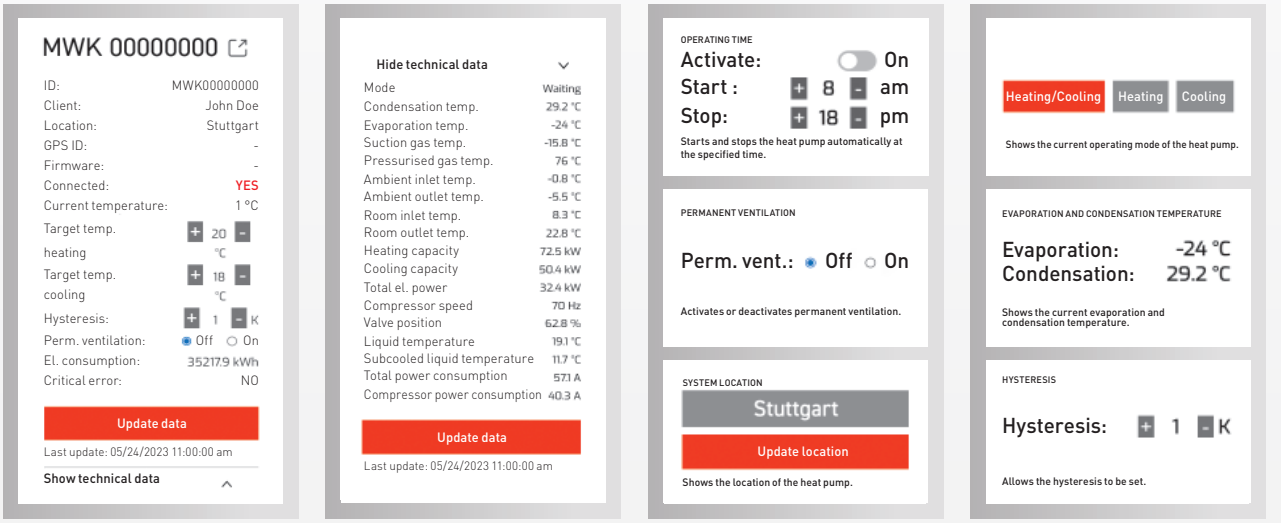
In the basic version, you can manage the location, set the target temperature and call up error messages at a glance. Our optional add-ons allow you to customize the web app to suit your individual needs.

Whether you want to stop and restart remotely, set daily timers, adjust the operating mode or display historical data for the process parameters – **no problem with our web app!**

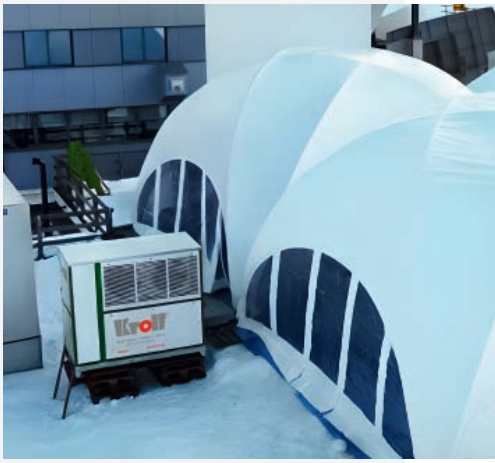
Advantages:

- Keep an eye on all devices via a portal
- Detect problems proactively and help your customers faster
- Flexibly book the functions you need for your particular case

Here are a few examples



Examples of Application



Technical data

Power range 14 to 81 kW				MWK40	MW40	MW80
			Item no.	300686	301531	301532
Function				Heating and cooling	Heating	Heating
Performance data						
Nominal heat output		(A7/L35)	kW	42,9	42,4	96,7
Heat output		(A2/L35)	kW	37,2	38,2	88,3
Heat output		(A-7/L35)	kW	29,0	25,8	63,8
Nominal cooling output		(A30/L12)	kW	33,5	–	–
COP_h	without utilizable medium	(A7/L35)	kW	3,31	3,07	3,06
COP_h	without utilizable medium	(A2/L35)	kW	2,88	2,76	2,77
COP_h	without utilizable medium	(A-7/L35)	kW	2,24	2,30	2,34
COP_h	without utilizable medium	$SCOP_h$	kW	2,88	2,72	2,73
COP_h	with utilizable medium	(A7/L35)	kW	2,88	2,69	2,71
COP_h	with utilizable medium	(A2/L35)	kW	2,50	2,42	2,46
COP_h	with utilizable medium	(A-7/L35)	kW	1,95	1,96	2,04
COP_h	with utilizable medium	$SCOP_h$	kW	2,45	2,34	2,38
Operating and connection data						
Operating range outside temperature			°C	–10 to +40	–20 to +25	–20 to +25
Electrical input			V/Ph/Hz	400/3N~/50	400/3N~/50	400/3N~/50
Connector plug				32 A CEE	32 A CEE	63 A CEE
Max. rated current			A	31	31	62
Protection			IP	44	44	44
Max. available air pressure			Pa	200	200	250
Nominal volume flow			m^3/h	8.000	8.000	16.000
Sound pressure level			dB(A)	69	69	70
Max. amount of condensate (outside air)			l/h	10	10	20
Refrigeration circuit: Refrigerant and compressor						
Refrigerant				R410A	R454C	R454C
Fill capacity			kg	17	15	26
GWP				2088	148	148
Classification				A1 non-combustible	A2L flame retardant	A2L flame retardant
Compressor type				Scroll	Reciprocating piston	Reciprocating piston
Max. power consumption			kW	13,9	17,0	40,0
Dimensions and weight						
Weight			kg	1.020	1.080	2.750
Length			mm	2.400	2.400	3.000
Width			mm	1.200	1.200	2.300
Height			mm	2.200	2.200	2.350
Connection air hoses			mm	525	525	525

A – ambient temperature (°C) | **L** – room air temperature (°C) | **COP** – coeffcient of performance (h – heating/c – cooling) | **SCOP** – annual performance

Accessories

Heated condensate hose			Item no.	301701
Hot air hose	7,6 m, form-stable	Ø 525 mm	Item no.	301622
Hot air hose with fastening strap and carrying bag	7,6 m	Ø 525 mm	Item no.	005597

Key Benefits of our Heat Pumps MWK and MW

01

What advantages do air-to-air heat pumps offer compared to other heating systems?

Our MWK/MW series has significant advantages over other heating systems:

Fossil-free and sustainable

Fuel savings

Cost and energy efficient, thanks to the absence of classic resistance heaters

Low maintenance effort

Ready for use within a very short time

No tank systems or chillers

02

What factors make our air-to-air heat pumps mobile?

While designing our heat pumps, special emphasis was placed on:

Compact in one unit

100% electrical operation

Robust design and high-quality materials

Easy transportation with a forklift truck

Space-saving installation, even in confined spaces

Quick connection and uncomplicated commissioning

03

What aspects ensure that our air-to-air heat pumps are user-friendly?

During development, we placed particular emphasis on the following user-friendly points:

Plug and play – Easy installation and handling

Optional services such as **remote query and remote maintenance**

Control via **web app** and helpful additional functions

Intuitive user interface

04

What temperature ranges can be covered with the air-to-air heat pumps?

Our devices are designed to cope with harsh temperature ranges and withstand even extreme hot and cold environments:

MWK40
–10°C to +40°C
for heating and cooling

MW40 and MW80
–20°C to +25°C
for heating

Heat with our heat pump technology even at –20°C – without any resistance heaters.

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