



MasterTherm

HEAT PUMPS

Heat Pumps

Master premium series

2015/2016
www.mastertherm.eu



quality advantageous modern
reliable Czech ecological
traditional silent quality silent
economical reliable
modern Czech ecological practical
praised quality advantageous Czech
economical easy silent reliable practical
traditional practical Czech quality silent
economical reliable easy
modern Czech ecological praised practical
praised silent advantageous Czech
economical quality silent reliable practical
quality advantageous modern
reliable Czech ecological
reliable Czech ecological



BoxAir



MODERN COMPACT UNIT WITH ELECTRONICALLY CONTROLLED COOLANT INJECTION AND INTERNET CONTROL.



The BoxAir heat pump is a highly efficient and cost effective source of providing heating, cooling and domestic hot water. The compact construction and use of anti-corrosive materials are designed for outdoor installation saving space inside the property. The use of scroll compressors and low-noise fans allow complaint free installation in high density built-up areas. The entire power range is newly fitted with EC fans with variable speed control. The low cost of the installation ensures a quick return on investment even in low heat loss houses. Heat pump BoxAir is the holder of Grand Prix For Arch award and Aqua Therm Certificate of Merit.

| BoxAir – AIR – WATER | | | | | | | | |
|----------------------|---------------------|------------|---------|-----|-------------------------------|----------------|-------------------------------|-----------------|
| model | A7W35 ¹⁾ | | A2W35 | | 3 phase units | | 1 phase units | |
| | power | COP | power | COP | circuit breaker ²⁾ | order number | circuit breaker ²⁾ | order number |
| BA-22Z-2015 | 8,2 kW | 4,4 | 6,1 kW | 3,3 | 16A"C" | BA22Z-1 | 20A"C" | BA22Z1-1 |
| BA-26Z-2015 | 10,6 kW | 4,2 | 7,9 kW | 3,2 | 25A"B" | BA26Z-1 | 25A"C" | BA26Z1-1 |
| BA-30Z-2015 | 12,2 kW | 4,3 | 9,1 kW | 3,2 | 25A"B" | BA30Z-1 | 32A"C" | BA30Z1-1 |
| BA-37Z-2015 | 15,4 kW | 4,5 | 11,5 kW | 3,4 | 25A"C" | BA37Z-1 | 32A"C" | BA37Z1-1 |
| BA-45Z-2015 | 18,2 kW | 4,5 | 13,7 kW | 3,5 | 25A"C" | BA45Z-1 | - | - |

| Standard equipment - BoxAir |
|--|
| ✓ Graphic terminal PGD |
| ✓ Low-noise EC fan |
| ✓ Equitherm control system MaR Carel |
| ✓ Built-in immersion heater and circulation pump |
| ✓ Electronically controlled coolant injection |
| ✓ Control of three heating circuits (1x hot water +2x heating water) |

| Features - BoxAir |
|---|
| ▶ Use for heating and cooling |
| ▶ The temperature of heating water to 55 °C |
| ▶ Ecological refrigerant R407C |
| ▶ Temperatures range from +30 °C to -20 °C |
| ▶ Outdoor compact |
| ▶ Very easy installation, quiet operation |
| ▶ Control up to 6 heating circuits |

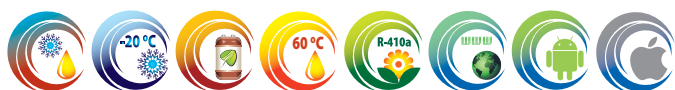
¹⁾ Performance data acc. to EN14511. A7W35 - air inlet 7°C, water outlet 35°C, defrost energy considered.

²⁾ The recommended value of el. protection 3x400 V, including an integrated auxiliary electric heater 1x230 V without auxiliary electric heater

| Options - BoxAir | order number |
|---------------------------------------|---------------|
| Internet HP control | 1OINT |
| Full Cooling reversing | 1OCH |
| Terminal pAD temperature compensation | 1OPAD |
| Terminal pADh floor cooling | 1OPADH |
| Three phase relay | 1OSF |
| Softstart | 1OSS |
| Expanded control module | 1OEK |
| RAL code colours on demand | 1OCO |
| Red, grey, green or silver colour | |

| BoxAir | compressor | dimensions (mm) | weight (kg) |
|------------------------|------------|-----------------|-------------|
| BoxAir-22Z-2015 | LG | 1040x1300x530 | 120 |
| BoxAir-26Z-2015 | Sanyo | 1650x1300x530 | 150 |
| BoxAir-30Z-2015 | Sanyo | 1650x1300x530 | 176 |
| BoxAir-37Z-2015 | Sanyo | 1650x1300x530 | 178 |
| BoxAir-45Z-2015 | Sanyo | 1650x1300x530 | 180 |

More information: www.mastertherm.eu



CUTTING EDGE TECHNOLOGY
IN A PROVEN COMPACT PACKAGE.

COMPACT INVERTER HEAT PUMPS AIR-WATER

BoxAir Inverter

The BoxAir Inverter won two major awards - the Grand Prix at Arch and the Gold Medal for the best exhibit at Aqua Therm. The proven and desirable compact design, electronic control of the expansion valve, inverter Brush Less DC compressor offers many advantages compared to standard compressors. The ability to modulate the compressor based on actual heat demand considerably impacts on consumption and life-span of the equipment reducing the operating costs by up to 20%. In most cases there is no need for a buffer tank, which saves space in the plantroom and reduces installation costs. The unit is fitted with variable speed control fans and circulation pumps. Built-in controller, electric backup immersion heater and equithermal regulation are standard with the option of internet control.



| BoxAir Inverter – AIR – WATER | | | | | | | | | | | | | |
|-------------------------------|-------------------|----------------|------------------|--------------------------|------------|------------|-----|-------------|------|--------------|-----|-------------------------------|-----------------|
| | model | A7W35 | | A7W35 60Hz ¹⁾ | | A2W35 60Hz | | A-7W35 80Hz | | A-15W35 90Hz | | circuit breaker ²⁾ | order number |
| | | power | Heat loss | power | COP | power | COP | power | COP | power | COP | | |
| 3 phase units | BoxAir 22I | 2-8 kW | to 6 kW | 4,9 kW | 4,7 | 3,6 kW | 3,5 | 3,6 kW | 2,8 | 3,2 kW | 2,6 | 16A"B" | 1BA22I-1 |
| | BoxAir 26I | 3-9 kW | to 8,5 kW | 8,1 kW | 4,8 | 5,8 kW | 3,5 | 5,5 kW | 2,8 | 5,1 kW | 2,5 | 20A"B" | 1BA26I-1 |
| | BoxAir 30I | 5-13 kW | to 10 kW | 8,65 kW | 5,2 | 6,25 kW | 3,8 | 6,0 kW | 2,9 | 5,3 kW | 2,4 | 25A"B" | 1BA30I-1 |
| | BoxAir 45I | 7-22 kW | to 16 kW | 15,3 kW | 4,7 | 10,6 kW | 3,5 | 11,1 kW | 2,75 | 9,8 kW | 2,2 | 32A"B" | 1BA45I-1 |
| 1 phase units | BoxAir 22I | 3-8 kW | to 6 kW | 4,9 kW | 4,7 | 3,6 kW | 3,5 | 3,6 kW | 2,8 | 3,2 kW | 2,6 | 20A"B" | 1BA22I-1 |
| | BoxAir 26I | 3-9 kW | to 8,5 kW | 8,1 kW | 4,8 | 5,8 kW | 3,5 | 5,5 kW | 2,8 | 5,1 kW | 2,5 | 20A"B" | 1BA26I-1 |
| | BoxAir 30I | 5-13 kW | to 10 kW | 8,65 kW | 5,2 | 6,25 kW | 3,8 | 6,0 kW | 2,9 | 5,3 kW | 2,4 | 25A"B" | 1BA30I-1 |
| | BoxAir 45I | 7-22 kW | to 16 kW | 15,3 kW | 4,7 | 10,6 kW | 3,5 | 11,1 kW | 2,75 | 9,8 kW | 2,2 | 32A"B" | 1BA45I-1 |

| Standard equipment - BoxAir Inverter |
|--|
| ✓ Graphic terminal PGD |
| ✓ Variable output Inverter Compressor |
| ✓ Low-noise EC fan |
| ✓ Equitherm control system MaR Carel |
| ✓ Built-in immersion heater and circulation pump |
| ✓ Electronically controlled coolant injection |
| ✓ Control of three heating circuits (1x hot water +2x heating water) |

| Features - BoxAir Inverter |
|---|
| ▶ Use for heating and cooling |
| ▶ The temperature of heating water to 60 °C |
| ▶ Ecological refrigerant R410a |
| ▶ Temperatures range from +30°C to -20°C |
| ▶ Outdoor compact |
| ▶ Very easy installation, quiet operation |
| ▶ No buffer tank required |
| ▶ Control up to 6 heating circuits |

| Options - BoxAir Inverter | order num. |
|---------------------------------------|---------------|
| Internet HP control | 1OINT |
| Full Cooling reversing | 1OCH |
| Terminal pAD temperature compensation | 1OPAD |
| Terminal pADh floor cooling | 1OPADH |
| Expanded control module | 1OEK |
| RAL code colours on demand | 1OCO |
| Red, grey, green or silver colour | |

| BoxAir Inverter | Energy efficiency, moderate climates, EN 14 825 | | compressor | dimensions (mm) | weight (kg) |
|-------------------|---|------------|------------|-----------------|-------------|
| | W35 | W55 | | | |
| BoxAir 22I | A++ | A++ | LG | 1036x1300x526 | 115 |
| BoxAir 26I | A++ | A++ | LG | 1036x1300x526 | 120 |
| BoxAir 30I | A+++ | A++ | LG | 1650x1300x530 | 155 |
| BoxAir 45I | A++ | A++ | LG | 1650x1300x530 | 165 |

¹⁾ Performance data acc. to EN14511, in accordance with the EHPA requirements to assign quality label Q. A7W35 - air inlet 7°C, water outlet 35°C, defrost energy considered. Compressor frequency 60 Hz

²⁾ The recommended value of el. protection 3x400 V, including an integrated auxiliary electric heater 1x230 V without auxiliary electric heater

More information: www.mastertherm.eu

EasyMaster



MODERN COMPACT UNIT WITH ELECTRONICALLY CONTROLLED COOLANT INJECTION AND INTERNET CONTROL.



The EasyMaster heat pump is an excellent choice for heating / cooling and DHW (Domestic Hot Water) supply as it is cost-effective and environment friendly with an excellent price-performance ratio. The split construction brings its traditional advantages in the form of ultra-quiet outdoor unit and the protection of the main parts of the heat pump inside the building. Although this is the most cost effective split type heat pump on the domestic market, is equipped with high quality, quiet and durable Sanyo compressor. It also includes technology for electronic control of the refrigerant injection, equithermal regulation and in the spirit of the tradition of the brand-name all components from reputable manufacturers in the world. A wide range of optional accessories allows retrofit according to the specific requirement, including the desuperheater for high efficiency DHW supply heating with internet connection.

Easy Master – AIR – WATER

| model | A7W35 ¹⁾ | | A2W35 | | 3 phase units | | 1 phase units | |
|----------------------|---------------------|------------|---------|-----|-------------------------------|-----------------|-------------------------------|------------------|
| | power | COP | power | COP | circuit breaker ²⁾ | order number | circuit breaker ²⁾ | order number |
| EM-26Z | 10,6 kW | 4,2 | 8,1 kW | 3,2 | 20 A"B" | 1EM26Z-1 | 25A"C" | 3EM26Z1-1 |
| EM-30Z | 12,2 kW | 4,3 | 9,4 kW | 3,3 | 20 A"B" | 1EM30Z-1 | 32A"C" | 3EM30Z1-1 |
| EM-37Z | 15,4 kW | 4,5 | 11,8 kW | 3,5 | 25 A"B" | 1EM37Z-1 | 32A"C" | 3EM37Z1-1 |
| EM-45Z | 18,0 kW | 4,4 | 13,9 kW | 3,5 | 25 A"B" | 1EM45Z-1 | - | - |
| External unit | | | | | | | | |
| EM-60Z | 24,6 kW | 4,1 | 18,8 | 3,2 | 25 A"C" | 1EM60Z-1 | - | - |
| EM-75Z | 30,8 kW | 4,0 | 23,2 | 3,2 | 25 A"C" | 1EM75Z-1 | - | - |
| External unit | | | | | | | | |

Standard equipment - EasyMaster

- ✓ Integrated graphic terminal PGD
- ✓ Electronically controlled coolant injection
- ✓ Equitherm control system MaR Carel
- ✓ Built-in immersion heater (models 1EM26Z-1 to 1EM45Z-1)
- ✓ Built-in circulation pump
- ✓ Control of three heating circuits (1x hot water +2x heating water)

Features - EasyMaster

- ▶ Use for heating and cooling
- ▶ The temperature of heating water to 55 °C
- ▶ Ecological refrigerant R407c
- ▶ Temperatures range from +30 °C to -20 °C
- ▶ Split design
- ▶ Quiet operation
- ▶ Control up to 6 heating circuits

Options - EasyMaster

| type | order num. |
|--|------------------|
| Internet HP control | 1OINT |
| Full Cooling reversing | 1OCH |
| Terminal pAD temperature compensation | 1OPAD |
| Terminal pADh floor cooling | 1OPADH |
| Desuperheater | 1ODESUP |
| Softstart | 1OSS |
| Three phase relay | 1OSF |
| Ext.electric heater 7,5+7,5kW (60-75Z) | 1OETA1M15 |
| Ext.electric heater 12+18kW (60-75Z) | 1OETA1M30 |
| Expanded control module | 1OEK |
| RAL code colours on demand (ext. unit) | 1OCO |
| External unit (grey, green or silver colour) | |
| External unit 4legs vertical, horizontal or console mod.26Z to 45Z | |
| Internal unit (red, grey colour) | |

| EasyMaster | compressor | dimensions (mm) | weight (kg) |
|-----------------------|------------|-----------------|-------------|
| EasyMaster-26Z | Sanyo | 1200x530x720 | 160 |
| EasyMaster-30Z | Sanyo | 1200x530x720 | 160 |
| EasyMaster-37Z | Sanyo | 1200x530x720 | 170 |
| EasyMaster-45Z | Sanyo | 1200x530x720 | 180 |
| external unit | | 1234x1246x460 | 70 |
| EasyMaster-60Z | Sanyo | 1200x530x720 | 200 |
| EasyMaster-75Z | Sanyo | 1200x530x720 | 200 |
| external unit | | 1646x1012x817 | 80 |

More information: www.mastertherm.eu

¹⁾ Performance data acc. to EN14511. A7W35 - air inlet 7 °C, water outlet 35 °C, defrost energy considered.

²⁾ The recommended value of el. protection 3x400 V, including an integrated auxiliary electric heater 1x230 V without auxiliary electric heater

Units 60Z and 75Z has no integrated auxiliary electric heater.



**EXTREMELY FLEXIBLE SOLUTION FOR INDOOR INSTALLATION
IN SELF-CONTAINED HOUSES AND BLOCKS OF FLATS**

SPLIT ON-OFF HEAT PUMPS AIR – WATER

**EasyMaster
Indoor Split**

Our latest offer represents a brand new concept of heat pumps for indoor installation. The split design of the unit allows easy handling and great flexibility of the plantroom's spatial layout. Unlike the competing mono-blocks the EasyMaster Indoor Split unit's spatial requirements are significantly lower while offering greater adaptability in terms of the plantroom layout. The evaporator can be mounted up to 15 meters from the main unit and the two parts can be for example installed in two separate premises. The Indoor Split concept is very suitable for a cascade connection of up to several hundred kW in residential and prefabricated buildings, where the outdoor installation is usually not possible and the limited size of the existing plantrooms has to be made use of. All the advantages of the Easy Master heat pump are retained: a robust design, top quality rated product, electronic refrigerant injection and state-of-the-art control are all in place.



| Easy Master Indoor Split – AIR – WATER | | | | | | | | |
|--|---------------------|------------|---------|-----|-------------------------------|---------------------|-------------------------------|--------------------|
| model | A7W35 ¹⁾ | | A2W35 | | 3 phase units | | 1 phase units | |
| | power | COP | power | COP | circuit breaker ²⁾ | order number | circuit breaker ²⁾ | order number |
| EM-26Z | 10,6 kW | 4,2 | 8,1 kW | 3,2 | 20 A"B" | 1EM26Z-1 | 25A"C" | 3EM26Z1-1 |
| EM-30Z | 12,2 kW | 4,3 | 9,4 kW | 3,3 | 20 A"B" | 1EM30Z-1 | 32A"C" | 3EM30Z1-1 |
| EM-37Z | 15,4 kW | 4,5 | 11,8 kW | 3,5 | 25 A"B" | 1EM37Z-1 | 32A"C" | 3EM37Z1-1 |
| EM-45Z | 18,0 kW | 4,4 | 13,9 kW | 3,5 | 25 A"B" | 1EM45Z-1 | - | - |
| Unit with evaporator - modification | | | | | | 1OEM26-45VK | | 1OEM26-45VK |
| EM-60Z | 24,6 kW | 4,1 | 18,8 | 3,2 | 25 A"C" | 1EM60Z-1 | - | - |
| EM-75Z | 30,8 kW | 4,0 | 23,2 | 3,2 | 25 A"C" | 1EM75Z-1 | - | - |
| Unit with evaporator - modification | | | | | | 1OEM607590VK | | - |

| Standard equipment - EasyMaster IndoorSplit |
|--|
| ✓ Integrated graphic terminal PGD |
| ✓ Electronically controlled coolant injection |
| ✓ Equitherm control system MaR Carel |
| ✓ Built-in immersion heater (models 1EM26Z-1 to 1EM45Z-1) |
| ✓ Built-in circulation pump |
| ✓ Control of three heating circuits (1x hot water +2x heating water) |

| Features - EasyMaster IndoorSplit |
|---|
| ▶ Use for heating and cooling |
| ▶ The temperature of heating water to 55 °C |
| ▶ Ecological refrigerant R407c |
| ▶ Temperatures range from +30 °C to -20 °C |
| ▶ Split design |
| ▶ Quiet operation |
| ▶ Control up to 6 heating circuits |

| EasyMaster IS | compressor | dimensions (mm) | weight (kg) |
|--|------------|-----------------|-------------|
| EasyMaster-26Z | Sanyo | 1200x530x720 | 160 |
| EasyMaster-30Z | Sanyo | 1200x530x720 | 160 |
| EasyMaster-37Z | Sanyo | 1200x530x720 | 170 |
| EasyMaster-45Z | Sanyo | 1200x530x720 | 180 |
| Unit with evaporator - modification | | 1394x1012x664 | 60 |
| EasyMaster-60Z | Sanyo | 1200x530x720 | 200 |
| EasyMaster-75Z | Sanyo | 1200x530x720 | 200 |
| Unit with evaporator - modification | | 1394x1012x1012 | 80 |

| Options - EasyMaster IndoorSplit0 | order num. |
|--|--------------------|
| Internet HP control | 1OINT |
| Full Cooling reversing | 1OCH |
| Terminal pAD temperature compensation | 1OPAD |
| Terminal pADh floor cooling | 1OPADH |
| Desuperheater | 1ODESUP |
| Softstart | 1OSS |
| Three phase relay | 1OSF |
| Ext.electric heater 7,5+7,5kW (60-75Z) | 1OETA1M15 |
| Ext.electric heater 12+18kW (60-75Z) | 1OETA1M30 |
| Expanded control module | 1OEK |
| Back draft louvre shutter (air discharge) | PER 400 W |
| External weather louvre (air intake) | PRG 400 W |
| Insulated flexible hose Sonoflex 406mm/10m | 1OEMVKFLEXI |
| External unit (grey, green or silver colour) | |
| External unit 4legs vertical | |
| Internal unit (red, grey colour) | |

More information: www.mastertherm.eu

¹⁾ Performance data acc. to EN14511. A7W35 - air inlet 7°C, water outlet 35°C, defrost energy considered.

²⁾ The recommended value of el. protection 3x400 V, including an integrated auxiliary electric heater 1x230 V without auxiliary electric heater

Units 60Z and 75Z has no integrated auxiliary electric heater.

AirMaster Mini



HIGH-QUALITY SPLIT TYPE HEAT PUMP
FOR THE MOST DEMANDING CONDITIONS



The AirMaster MINI unit is an extremely good source of heat or cooling featuring excellent efficiency and advanced technology. It is equipped with a special compressor Copeland ZH series developed for use in high-powered types of heat pumps running under extreme operating conditions. The result is a very high COP (Coefficient of Performance) value of the heat pump, which differs from the more common types by performing better at low outdoor air temperatures and by meeting better the demand for higher output temperature of the heating water. The AirMaster MINI unit is an excellent product intended for the widest possible use, with the latest model featuring a desuperheater for high efficiency of DHW as standard. A design incorporating two compressors covers heat loss of a building up to 36 kW.

AirMaster mini – AIR – WATER

| model | A7W35 ¹⁾ | | A2W35 | | 3 phase units | | 1 phase units | |
|----------------------|---------------------|------------|---------|-----|-------------------------------|---------------------|-------------------------------|----------------------|
| | power | COP | power | COP | circuit breaker ²⁾ | order number | circuit breaker ²⁾ | order number |
| AM_3015M | 6,8 kW | 4,4 | 5,1 kW | 3,4 | 16A"B" | 1AM3015M-1 | 16A"C" | 3AM3015M1-1 |
| AM_3021M | 8,7 kW | 4,5 | 6,5 kW | 3,5 | 16A"B" | 1AM3021M-1 | 20A"C" | 3AM3021M1-1 |
| AM_3030M | 12,3 kW | 4,5 | 9,2 kW | 3,5 | 20A"B" | 1AM3030M-1 | 32A"C" | 3AM3030M1-1 |
| AM_3038M | 15,0 kW | 4,5 | 10,9 kW | 3,5 | 25A"B" | 1AM3038M-1 | 32A"C" | 3AM3038M1-1 |
| AM_3045M | 17,9 kW | 4,6 | 12,7 kW | 3,5 | 25A"B" | 1AM3045M-1 | - | - |
| External unit | | | | | | | | |
| AM_3060.2M | 24,5 kW | 4,5 | 18,3 kW | 3,5 | 40A"B" | 1AM3060.2M-1 | 63A"C" | 3AM3060.2M1-1 |
| AM_3076.2M | 30,0 kW | 4,5 | 21,0 kW | 3,4 | 50A"B" | 1AM3076.2M-1 | - | - |
| AM_3090.2M | 35,7 kW | 4,6 | 25,3 kW | 3,5 | 50A"B" | 1AM3090.2M-1 | - | - |
| External unit | | | | | | | | |

Features- AirMaster Mini

- ▶ Use for heating and cooling
- ▶ The temperature of heating water to 60 °C
- ▶ Ecological refrigerant R407c
- ▶ Temperatures range from +30°C to -20°C
- ▶ Split design
- ▶ Quiet operation
- ▶ Spiral compressor Copeland ZH
- ▶ Control up to 6 heating circuits

| AirMaster mini | compressor | dimensions (mm) | weight (kg) |
|--------------------------|------------|-----------------|-------------|
| AirMaster_3015M | Copeland | 1200x526x716 | 160 |
| AirMaster_3021M | Copeland | 1200x526x716 | 160 |
| AirMaster_3030M | Copeland | 1200x526x716 | 165 |
| AirMaster_3038M | Copeland | 1200x526x716 | 170 |
| AirMaster_3045M | Copeland | 1200x526x716 | 175 |
| External unit | | 1234x1246x460 | 70 |
| AirMaster_3060.2M | Copeland | 1200x526x716 | 350 |
| AirMaster_3076.2M | Copeland | 1200x526x716 | 360 |
| AirMaster_3090.2M | Copeland | 1200x526x716 | 370 |
| 2x External unit | | 1234x1246x460 | 2x 70 |

More information: www.mastertherm.eu

Standard equipment - AirMaster Mini

- ✓ Integrated graphic terminal PGD
- ✓ Electronically controlled coolant injection
- ✓ Equitherm control system MaR Carel
- ✓ Built-in immersion heater and circulation pump
- ✓ Control of three heating circuits (1x hot water +2x heating water)

Options - AirMaster Mini

| type | order num. |
|---|----------------|
| Internet HP control | 1OINT |
| Desuperheater | 1ODESUP |
| Full Cooling reversing | 1OCH |
| Terminal pAD temperature compensation | 1OPAD |
| Terminal pADh floor cooling | 1OPADH |
| Three phase relay | 1OSF |
| Softstart | 1OSS |
| Expanded control module | 1OEK |
| RAL code colours on demand | 1OCO |
| External unit (grey, green or silver colour) | |
| External unit 4legs vertical, horizontal or console | |
| Internal unit (red, grey colour) | |

¹⁾ Performance data acc. to EN14511. A7W35 - air inlet 7°C, water outlet 35°C, defrost energy considered.

²⁾ The recommended value of el. protection 3x400 V, including an integrated auxiliary electric heater 1x230 V without auxiliary electric heater



EXCEPTIONAL TECHNOLOGY CONCEPT

WITH DIRECT EVAPORATION OF REFRIGERANT

HEAT PUMPS BRINE-WATER

DirectMaster

The DirectMaster heat pump brings the innovative concept of direct evaporation of the refrigerant in the ground collector, representing the most efficient way presently known in capturing and transferring ground heat to the heated building. In comparison to other systems the advantage is that it does not require the primary circuit circulation pump or ground collector heat exchanger. The reduction of heat loss and improved thermal conductivity of the ground loop results in the refrigerant temperature at the inlet to the compressor always 4-5 °C higher than that of conventional systems. This ground-water system achieves a very high COP factor. The conceptual simplicity is also a guarantee of exceptional reliability, maximum durability and low maintenance costs. The DirectMaster system received the Grand Prix For Arch main prize.



DirectMaster – BRINE – WATER

| model | B0W35 ¹⁾ | | E4W35 ¹⁾ | | 3 phase units | | 1 phase units | |
|----------------|---------------------|------------|---------------------|-----|-------------------------------|------------------|-------------------------------|-------------------|
| | power | COP | power | COP | circuit breaker ²⁾ | order number | circuit breaker ²⁾ | order number |
| DM-9ZD1 | 3,2 | 4,4 | 3,5 | 5 | 1x 10A°C" | 1AQ9ZD-1 | 10A°C" | 3AQ9ZD1-1 |
| DM-22ZD | 7,8 | 4,5 | 8,6 | 5,1 | 3x 9A°C" | 1AQ22ZD-1 | 20A°C" | 3AQ22ZD1-1 |
| DM-26ZD | 10,1 | 4,4 | 11,2 | 4,9 | 3x 13A°C" | 1AQ26ZD-1 | 25A°C" | 3AQ26ZD1-1 |
| DM-30ZD | 11,4 | 4,4 | 12,7 | 4,9 | 3x 13A°C" | 1AQ30ZD-1 | 32A°C" | 3AQ30ZD1-1 |
| DM-37ZD | 14,1 | 4,3 | 15,9 | 4,8 | 3x 16A°C" | 1AQ37ZD-1 | - | - |
| DM-45ZD | 17,2 | 4,4 | 19,5 | 5,0 | 3x 16A°C" | 1AQ45ZD-1 | - | - |
| DM-50ZD | 18,5 | 4,3 | 20,6 | 4,8 | 3x 20A°C" | 1AQ50ZD-1 | - | - |
| DM-60ZD | 23,1 | 4,2 | 26,1 | 4,7 | 3x 25A°C" | 1AQ60ZD-1 | - | - |

Standard equipment - DirectMaster

- ✓ Integrated graphic terminal PGD
- ✓ Special compressor
- ✓ Equitherm control system MaR Carel
- ✓ Electronically controlled coolant injection
- ✓ Built-in circulation pump
- ✓ Control of three heating circuits (1x hot water +2x heating water)

Features - DirectMaster

- ▶ The temperature of heating water to 60 °C
- ▶ Ecological refrigerant R407c
- ▶ Quiet operation
- ▶ Control up to 6 heating circuits

| DirectMaster | compressor | dimensions (mm) | weight (kg) |
|--------------------|------------|-----------------|-------------|
| Direct Master 9ZD1 | LG | 1200x526x526 | 130 |
| Direct Master 17ZD | LG | 1200x526x716 | 140 |
| Direct Master 22ZD | LG | 1200x526x716 | 140 |
| Direct Master 26ZD | Sanyo | 1200x526x716 | 160 |
| Direct Master 30ZD | Sanyo | 1200x526x716 | 165 |
| Direct Master 37ZD | Sanyo | 1200x526x716 | 180 |
| Direct Master 45ZD | Sanyo | 1200x526x716 | 190 |
| Direct Master 50ZD | Sanyo | 1200x526x716 | 200 |
| Direct Master 60ZD | Sanyo | 1200x526x716 | 245 |

Options - DirectMaster

| type | order num. |
|---------------------------------------|-----------------|
| Internet HP control | 1OINT |
| Terminal pAD temperature compensation | 1OPAD |
| Electric heater 4,5 kW | 1OEKOT45 |
| Electric heater 6,0 kW | 1OEKOT60 |
| Expanded control module | 1OEK |
| Desuperheater | 1ODESUP |
| Softstart | 1OSS |
| Distributor_4_circuits (17Z) | 1ODM04 |
| Distributor_8_circuits (30Z) | 1ODM06 |
| Distributor_10_circuits (37Z) | 1ODM08 |
| Distributor_10_circuits (37Z) | 1ODM10 |
| Distributor_12_circuits (45-60Z) | 1ODM12 |
| Internal unit (red, grey colour) | |

¹⁾ Performance data acc. to EN14511. B0W35 - brine inlet 0°C, water outlet 35°C. E4W35 - brine inlet 4°C, water outlet 35°C.

²⁾ The recommended value of el. protection as a standard equipment, without auxiliary electric heater.

More information: www.mastertherm.eu

HEAT PUMPS BRINE – WATER
WATER – WATER

AquaMaster



MODERN AND PROVEN SOLUTION FOLLOWED
THROUGH TO PERFECTION



Upgraded version of the very successful ground-water (water-water) system, particularly suitable for applications with the ground collector. The performance range is graded over a wide range from about 7 to 64 kW, which covers a wide spectrum of applications. The AquaMaster heat pump operates with high efficiency and extreme reliability. With the output water temperature up to 60°C it is also suitable for renovation of older residential houses. The unit can be retrofitted with a desuperheater to achieve high efficiency and higher temperature of the DHW supply system. Another advantage is the exceptionally low noise compressor, mounted on an anti-vibration frame, the unit can be safely placed anywhere without being bothered by noise. The AquaMaster unit is a proven product offering quality components, modern technology and controls, a wide basic and additional equipment and above all an excellent price-performance ratio.

| AquaMaster – BRINE – | | B0W35 ¹¹ | | W10W35 | | 3 phase units | | 1 phase units | |
|-----------------------------|----------------|---------------------|---------|--------|-------------------------------|--------------------|-------------------------------|------------------|--|
| model | power | COP | power | COP | circuit breaker ²⁾ | order number | circuit breaker ²⁾ | order number | |
| AQM_22Z | 7,8 kW | 4,4 | 8,8 kW | 5,9 | 3x 9A°C | 1AQ22Z-1 | 20A°C | 3AQ22Z1-1 | |
| AQM_26Z | 10,1 kW | 4,5 | 10,4 kW | 5,9 | 3x 9A°C | 1AQ26Z-1 | 25A°C | 3AQ26Z1-1 | |
| AQM_30Z | 11,4 kW | 4,4 | 13,3 kW | 5,7 | 3x 13A°C | 1AQ30Z-1 | 32A°C | 3AQ30Z1-1 | |
| AQM_37Z | 14,1 kW | 4,4 | 14,9 kW | 5,5 | 3x 13A°C | 1AQ37Z-1 | 32A°C | 3AQ37Z1-1 | |
| AQM_45Z | 17,2 kW | 4,3 | 18,4 kW | 5,4 | 3x 16A°C | 1AQ45Z-1 | - | - | |
| AQM_50Z | 18,5 kW | 4,4 | 22,5 kW | 5,5 | 3x 16A°C | 1AQ50Z-1 | - | - | |
| AQM_60Z | 23,1 kW | 4,3 | 24,1 kW | 5,4 | 3x 20A°C | 1AQ60Z-1 | - | - | |
| AQM_75Z | 28,2 kW | 4,2 | 31,2 kW | 5,4 | 3x 25A°C | 1AQ75Z-1 | - | - | |
| AQM_90Z | 33,2 kW | 4,1 | 37,7 kW | 5,2 | 3x 25A°C | 1AQ90Z-1 | - | - | |
| Two compressors unit | | | | | | | | | |
| AQM_120.2Z | 46,8 kW | 4,2 | 64,6 | 5,6 | 3x 50A°C | 1AQ120.2Z-1 | - | - | |
| AQM_150.2Z | 57,7 kW | 4,2 | 79,3 | 5,6 | 3x 50A°C | 1AQ150.2Z-1 | - | - | |
| AQM_180.2Z | 64,4 kW | 4,1 | 90,9 | 5,5 | 3x 64A°C | 1AQ180.2Z-1 | - | - | |

| Standard equipment - AquaMaster | |
|---------------------------------|--|
| ✓ | Integrated graphic terminal PGD |
| ✓ | Equitherm control system MaR Care |
| ✓ | Electronically controlled coolant injection |
| ✓ | Built-in circulation pump |
| ✓ | Control of three heating circuits (1x hot water +2x heating water) |

| AquaMaster | compressor | dimensions (mm) | weight (kg) |
|--------------------------|------------|-----------------|-------------|
| AquaMaster_22Z | LG | 1200x526x716 | 140 |
| AquaMaster_26Z | Sanyo | 1200x526x716 | 160 |
| AquaMaster_30Z | Sanyo | 1200x526x716 | 165 |
| AquaMaster_37Z | Sanyo | 1200x526x716 | 180 |
| AquaMaster_45Z | Sanyo | 1200x526x716 | 190 |
| AquaMaster_50Z | Sanyo | 1200x526x716 | 200 |
| AquaMaster_60Z | Sanyo | 1200x526x716 | 245 |
| AquaMaster_75Z | Sanyo | 1200x526x716 | 255 |
| AquaMaster_90Z | Sanyo | 1200x526x716 | 275 |
| AquaMaster_120.2Z | Sanyo | 1200x1012x716 | 420 |
| AquaMaster_150.2Z | Sanyo | 1200x1012x716 | 420 |
| AquaMaster_180.2Z | Sanyo | 1200x1012x716 | 420 |

More information: www.mastertherm.eu

| Options - AquaMaster | |
|--|-----------------|
| type | order num. |
| Internet HP control | 1OINT |
| Full Cooling reversin | 1AQZR |
| Passive Cooling module (from 17Z to 37Z) | 1OPC |
| Terminal pAD temperature compensation | 1OPAD |
| Terminal pADh floor cooling | 1OPADH |
| Desuperheater | 1ODESUP |
| Electric heater 4,5 kW | 1OEKOT45 |
| Electric heater 6,0 kW | 1OEKOT60 |
| Electric heater 7,5 kW | 1OEKOT75 |
| Softstart | 1OSS |
| Three phase relay | 1OSF |
| Refrigerant R134a | 1O134a |
| Type of water / water on demand | 1OAQWW |
| Expanded control module | 1OEK |
| Internal unit (red, grey colour) | |

| Features - AquaMaster | |
|-----------------------|---|
| ▶ | Use for heating and cooling |
| ▶ | The temperature of heating water to 60 °C |
| ▶ | Ecological refrigerant R407c |
| ▶ | Quiet operation |
| ▶ | Control up to 6 heating circuits |



ADVANCED TECHNOLOGY WITH EXCELLENT OPERATING PARAMETERS

The ground-water (water-water) heat pump of the inverter type with extremely high heating or cooling efficiency. The compressor with frequency converter adjusts its output to the current heat demand of the building and because of this the heating system does not require a storage tank. A combination of the inverter technology, electronic expansion valve and equithermal control system, newly supplemented with the possibility of on-line compensation of the heating curve temperature delivers exceptionally high COP (Coefficient of Performance) factors in all operational modes, significant savings in operating costs, reduced burden on the compressor, thus extending its service life while increasing its reliability. The top features of the AquaMaster Inverter heat pump have won the Grand Prix For Arch award. The product is the holder of a European quality label for heat pumps according to the methodology of the European Association of heat pumps - EHPA quality label.

HEAT PUMPS BRINE – WATER
WATER – WATER

AquaMaster Inverter



AquaMaster Inverter – BRINE – WATER, WATER – WATER

| model | B0W35 | | | W10W35, 60Hz | | 3 phase units | | 1 phase units | |
|-------------------------|----------------|-----------------------------|------------|-----------------------|-----|-------------------------------|-----------------|-------------------------------|------------------|
| | power | power | COP | power | COP | circuit breaker ²⁾ | order number | circuit breaker ²⁾ | order number |
| AQM Inverter-22l | 3–8 kW | 4,4 kW | 4,5 | 5,8 kW | 5,9 | 1x 20 A"B" | 1AQ22l-1 | 20A"B" | 3AQ22l1-1 |
| AQM Inverter-30l | 5–12 kW | 7,9 kW | 4,6 | 10,3 kW | 6,1 | 1x 25 A"B" | 1AQ30l-1 | 25A"B" | 3AQ30l1-1 |
| AQM Inverter-45l | 7–22 kW | 14,0 kW | 4,6 | 19,2 kW | 6,3 | 3x 20 A"B" | 1AQ45l-1 | 32A"B" | 3AQ45l1-1 |
| AQM Inverter-60l | 7–35 kW | 20,2 kW | 4,7 | 26,6 kW | 6,2 | 3x 32 A"B" | 1AQ60l-1 | - | - |
| AQM Inverter-90l | 7–48 kW | 32,2 kW³⁾ | 4,7 | 40,4 kW ³⁾ | 5,8 | 3x 40 A"B" | 1AQ90l-1 | - | - |

Standard equipment - AquaMaster Inverter

- ✓ Integrated graphic terminal PGD
- ✓ Variable output Inverter Compressor
- ✓ Equitherm control system MaR Carel
- ✓ Electronically controlled coolant injection¹
- ✓ Built-in circulation pump
- ✓ Control of three heating circuits (1x hot water +2x heating water)

Features - AquaMaster Inverter

- ▶ Continuous control of heating power
- ▶ Flow control by primary circuit
- ▶ Special compressor LG BLDC inverter
- ▶ Use for heating and cooling
- ▶ The temperature of heating water to 60 °C
- ▶ Ecological refrigerant R410A
- ▶ No buffer tank required
- ▶ Quiet operation
- ▶ Control up to 6 heating circuits

¹⁾ Performance data acc. to EN14511, in accordance with the EHPA requirements to assign quality label Q. B0W35 - brine inlet 0°C, water outlet 35°C. Compressor frequency 60 Hz.

²⁾ The recommended value of el. protection as a standard equipment, without auxiliary electric heater.

³⁾ Unit 90l, compressor frequency 90 Hz.

Options - AquaMaster AquaMaster Inverter

| type | order num. |
|--|-----------------|
| Internet HP control | 1OINT |
| Full Cooling reversin | 1AQZR |
| Passive Cooling module (from 17Z to 37Z) | 10PC |
| Terminal pAD temperature compensation | 1OPAD |
| Terminal pADh floor cooling | 1OPADH |
| Desuperheater | 1ODESUP |
| Electric heater 4,5 kW | 1OEKOT45 |
| Electric heater 6,0 kW | 1OEKOT60 |
| Electric heater 7,5 kW | 1OEKOT75 |
| Type of water / water on demand | 1OAQWW |
| Expanded control module | 1OEK |
| Internal unit (red, grey colour) | |

| AquaMaster Inverter | Energy efficiency, moderate climates, EN 14 825 | | compressor | dimensions (mm) | weight (kg) |
|-----------------------|---|-------------|------------|-----------------|-------------|
| | W35 | W55 | | | |
| AquaMaster-22l | A+++ | A++ | LG | 1200x526x716 | 160 |
| AquaMaster-30l | A+++ | A+++ | LG | 1200x526x716 | 160 |
| AquaMaster-45l | A+++ | A++ | LG | 1200x526x716 | 170 |
| AquaMaster-60l | A+++ | A++ | LG | 1200x526x716 | 180 |
| AquaMaster-90l | A+++ | A++ | LG | 1200x716x716 | 200 |

More information: www.mastertherm.eu

HEAT PUMPS BRINE – WATER
WATER – WATER

AquaMaster Inverter Combi



"ALL IN ONE" - HI-TECH HEATING SYSTEM
ON LESS THAN 0,5 m²



The ground-water (water-water) heat pump with integrated stainless steel DHW storage tank, solar heat exchanger and inverter compressor. Modulated heating power is optimally controlled for heating or cooling the building, and also for DHW supply for the entire household. The latest technology combined with modern BLDC compressor, variable speed of the primary and secondary circulation pump and a unique control system represent the highest attainable level of technology and guarantee highly efficient, quiet and reliable operation. Passive cooling module (optional) allows the direct use of the cooling effect of the ground (free cooling), without any energy consumption. Due to the construction of the "all in one" type unit the complexity of the wiring and mechanical installation is significantly reduced only to the basic connection of the unit.

AquaMaster Inverter Combi – BRINE – WATER, WATER – WATER

| model | BOW35 | | BOW35, 60Hz ¹⁾ | | W10W35, 60Hz | | 3 phase units | | 1 phase units | |
|-------------------------|----------------|--------|---------------------------|---------|--------------|-------------------------------|------------------|-------------------------------|------------------|--|
| | power | power | COP | power | COP | circuit breaker ²⁾ | order number | circuit breaker ²⁾ | order number | |
| AQM Inverter-22I | 3–8 kW | 4,4 kW | 4,5 | 5,8 kW | 5,9 | 20 A"B" | 1AQ22IC-1 | 20A"B" | 3AQ22I1-1 | |
| AQM Inverter-30I | 5–12 kW | 7,9 kW | 4,6 | 10,3 kW | 6,1 | 25 A"B" | 1AQ30IC-1 | 25A"B" | 3AQ30I1-1 | |
| AQM Inverter-45I | 7–22 kW | 14 kW | 4,6 | 19,2 kW | 6,3 | 25 A"B" | 1AQ45IC-1 | 32A"B" | 3AQ45I1-1 | |

Standard equipment - AquaMaster Inverter Combi

- ✓ Integrated DHW storage tank 180 l, solar heat exchanger
- ✓ Integrated graphic terminal PGD
- ✓ Variable output Inverter Compressor
- ✓ Equitherm control system MaR Carel
- ✓ Electronically controlled coolant injection
- ✓ Built-in circulation pump
- ✓ Electric heater
- ✓ Control of three heating circuits (1x hot water +2x heating water)

Features - AquaMaster Inverter Combi

- ▶ Continuous control of heating power
- ▶ No buffer tank required
- ▶ Use for heating and cooling
- ▶ The temperature of heating water to 60 °C
- ▶ Ecological refrigerant R410A
- ▶ Quiet operation
- ▶ Control up to 6 heating circuits

Options - AquaMaster Inverter Combi

| type | order num. |
|---------------------------------------|---------------|
| Internet HP control | 1OINT |
| Passive Cooling module | 10PC |
| Terminal pAD temperature compensation | 1OPAD |
| Terminal pADh floor cooling | 1OPADH |
| Expanded control module | 1OEK |
| Internal unit (red or grey colour) | |

| AquaMaster Inverter Combi | Energy efficiency, moderate climates, EN 14 825 | | compressor | dimensions (mm) | weight (kg) |
|---------------------------|---|-------------|------------|-----------------|-------------|
| | W35 | W55 | | | |
| AquaMaster-22IC | A+++ | A++ | LG | 1800x690x640 | 270 |
| AquaMaster-30IC | A+++ | A+++ | LG | 1800x690x640 | 275 |
| AquaMaster-45IC | A+++ | A++ | LG | 1800x690x640 | 295 |

¹⁾ Performance data acc. to EN14511, BOW35 - brine inlet 0 °C, water outlet 35 °C. Compressor frequency 60 Hz.

²⁾ The recommended value of el. protection 3x400 V, including an integrated auxiliary electric heater 1x230 V without auxiliary electric heater

More information: www.mastertherm.eu



Tradition (since 1994)



- traditional and largest Czech producer
- more than 7,000 heat pumps sold in more than 20 European countries
- in-house research, development and production

Innovation for future



- progressive electronic coolant injection technologies (EEV)
- inverter compressors, "desuperheater" for heating of hot water
- active and passive cooling
- control and monitoring via the internet
- application for iOS and Android



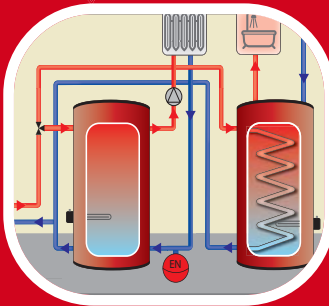
*Download app from the App Store or Google Play (Android Market).
Enter the following information in the Connection tab. Name: demo | Password: mt-demo*

Durability of design



- high reliability and long lifespan thanks to the robust and practical design
- components from renowned suppliers: Copeland, LG, Sanyo, Carel, SWEP, Lloyd, Ziehl-Abegg, EBM Papst, Halm etc.
- decreased operational stress: superior design of exchangers, high quality regulation and protection system

System solutions



- designed and equipped as a heating system, not merely as a heat source
- regulation allows for control of spatial heat in individual zones
- everything needed is included in the price of the equipment,
- simple and reliable installation

Seriousness



- truthful and complete information
- responsible approach to customers
- long-term company strategy based on quality of services





MasterTherm

HEAT PUMPS

Showroom, mailing address:

Master Therm tepelná čerpadla s.r.o.

Okrajová 187,253 01 Chýně, Prague West, Czech Republic

Tel.: +420 311 516 567

info@mastertherm.cz, www.mastertherm.cz

www.facebook.com/MasterThermCZ

VAT: CZ 288 922 75

