Acknowledged globally



# REFMASTER-2-BASIC

## **Item Number** 4689700

**The intuitive digital manifold that guides you through every step**

REFMASTER intuitively guides refrigeration and air conditioning technicians through their work processes and provides a clear overview of relevant measurement data. The large 5" TFT touchscreen and additional control buttons make navigation straightforward. Thanks to its slim design, the digital manifold can be comfortably operated with one hand.

In combination with REFTUNE, REFMASTER enables fully automatic optimisation of thermostatic expansion valves. Based on measurement data from REFMASTER and the Danfoss SH Tuner™ algorithm, REFTUNE automatically adjusts the valve to its optimal position. This saves valuable working time by eliminating repeated manual readjustments and can increase the energy efficiency of a refrigeration system by up to 10%.

As the central hub of the REFMESH network, REFMASTER connects compatible measuring devices wirelessly and brings their measurement data together in one place. This gives you a clear view of important system data directly on the display. Live graphs visualise measurement trends and help you identify and assess changes in system operation.

With a pressure measurement range of −0.95 to +60 bar and support for more than 100 refrigerants, REFMASTER is designed for a wide range of service applications. The powerful 8500 mAh LiPo battery, BLE range of up to 300 m and IP54 ingress protection complete its features for professional everyday use.

- Intuitive menu navigation guides you through every step

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Certificate
ISO 9001 / ISO 14001

- Comfortable one-handed operation thanks to the slim design and additional control buttons
- Large 5" TFT touchscreen for a clear overview and easy operation
- Automatic energy optimisation in combination with REFTUNE
- Central hub of the REFMESH network – measurement data from compatible devices in one place
- Live graphs visualise measurement trends and simplify system analysis
- Supports more than 100 refrigerants with free updates
- Pressure measurement range from −0.95 to +60 bar
- BLE range of up to 300 m
- Powerful 8500 mAh LiPo battery
- Ingress protection IP54

# Technical Data

| | |
|---|---|
| **Material** | Aluminium \| Brass \| ABS \| TPE \| FR-4 |
| **Colour** | bare \| yellow (RAL 1023) \| green (RAL 6026) \| black (RAL 7021) |
| **Standards** | CE FCC IC RCM RoHS REACH |
| **RoHS Conformity** | Yes |
| **Accuracy Class** | 0.5 (+/-0.5%) |
| **Gas Connection** | 1/4" SAE |
| **Pressure Scale** | MPa \| bar \| kPa \| kg/cm2 \| psi |
| **Number of Ways** | 2-way |
| **Operating Temperature Range** | -20 - 50 °C |
| **Pressure Range** | -0.95 - 60 bar |
| **Ingression Protection** | IP54 |
| **Operating Hours** | >100 h at low operation |
| **Signal Range** | 300 m |
| **Functions** | ThermostaticExpansionValve-Optimizer (REFTUNE)<br>Recovery - Weight<br>Pressure Test<br>Evacuation<br>Charging<br>Charging with Target Superheat<br>Superheat / Subcooling<br>Digital / analogue display,<br>Slave pointer,<br>Pressure zeroing,<br>Data logging, |

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| | |
|---|---|
| | Tube error compensation,<br>Refrigerant favorites<br>Refrigerant update,<br>Firmware update,<br>Set pressure reference,<br>Unit and language settings,<br>Display brightness,<br>Wireless connections,<br>Commissioning date, |
| **Scope of Supply** | Case \| Quick Guide \| Calibration Certificate \| 2 wired temperature sensors |
| **Packaging** | Sturdy plastic case |
| **Sensor Type** | K-type \| Piezo Sensor |
| **Temperature measuring range** | -40 - +125 °C |
| **Temperature Units** | °F \| °C |
| **Temperature Accuracy** | +/- 1K |
| **Temperature Resolution** | 0.1 °C / 0.1 °F |
| **Capacity** | 8500 mAh |
| **Battery type** | Lithium-ion |

# Accessories

| | | |
|---|---|---|
| 4689546 | REFTUNE | Energy Optimizer for Thermostatic Expansion Valves increases energy efficiency by up to 10% using measurement data from REFMASTER, REFCLAMP and the Danfoss SH Tuner™ algorithm |
| 4688733 | REFCLAMP-SET | Wireless temperature clamp with humidity sensor |
| 4688291 | REFVAC-RC | Wireless digital vacuum gauge connection 1/4"SAE male, Units: Micron, mbar, Pa, Torr, mTorr, psi and inHg |
| 4688867 | REFSCALE-S | Electronic charging scale |
| 4689024 | REFVALVE | Switching Valve for REFSCALE-S/-C |
| 4689387 | REFNRG | Digital multimeter |

# Spare Parts

| | | |
|---|---|---|
| 4681394 | K-TYPE-SENSOR | External temperature sensor for digital manifolds |

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