



Braukmann VM242A

BasicMes-2

Handheld flow measurement computer

APPLICATION

The BasicMes-2 is a handheld measuring computer for flow measurements in hydronic heating and cooling systems.

The BasicMes-2 measures the differential pressure over an orifice, for example a valve seat. Together with the k_v -value of the orifice the flow is calculated using the k_v formula. The k_v -value of all Resideo balancing valves as well as some common valves of other manufacturers are stored in an internal database. Manual input of the k_v -value is also possible.

Apart from differential pressure and flow measurement the BasicMes-2 has the following functions:

- Two temperature sensor inputs for simultaneous (using two sensors) or successive (using one sensor) temperature measurements
- Data logging function with programmable interval and duration
- Leakage test with programmable test pressure and duration
- Memory to save measured values
- PC connectivity to download measured data from the device onto a PC including PC user software
- Print function in combination with optional pocket printer (accessory)



SPECIAL FEATURES

- Easy to use device with compact dimensions
- Large backlit colour display
- Integrated valve database
- Bypass for venting of hoses and zero calibration
- PC connectivity with software included
- Robust case for device, accessories and optional pocket printer
- Magnet on back to attach to metal surfaces

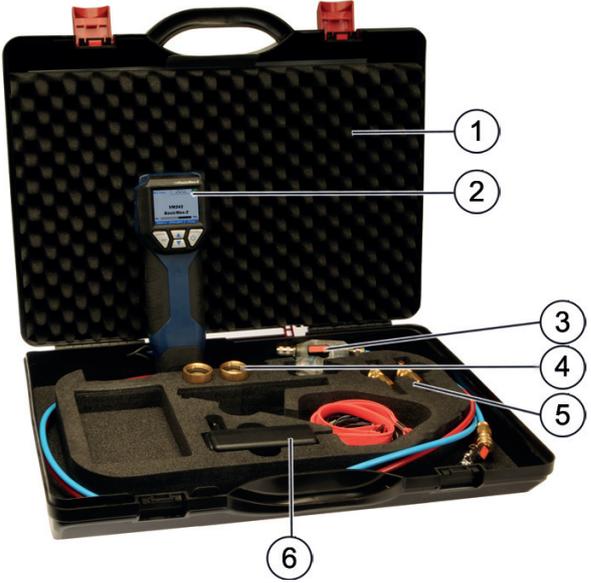
TECHNICAL DATA

Media	
Medium:	Water or water-glycol mixture, quality to VDI 2035 (up to 50 % Glycol)
Pressure values	
Static (burst) pressure:	max. 32 bar (464 psi)
Differential pressure:	min. 0.05 bar (0.73 psi) max. 17 bar (247 psi)
Differential pressure resolution:	up to 1 bar: 0.1 mbar above 1 bar: 1 mbar
Operating temperatures	
Max. operating temperature medium:	-20 - 120 °C (-4 - 248 °F)
Max. ambient temperature:	5 - 40 °C (41 - 104 °F)
Storage temperature:	-20 - 60 °C (-4 - 140 °F)*
Specifications	
Accuracy:	<3 % of measured value in range of ± 10 mbar better than ± 0.3 mbar at stable conditions in ambient temperature range
Scan rate:	Normal: 1Hz, average value of four scans (time slot four seconds) Fast: 4Hz, no averaging
To guarantee perfect functioning, a filter must be inserted ahead of the pressure reducing valve	USB, HP-IR for communication with pocket printer
Weight:	2.5 kg including accessories and carry case
Dimensions:	470 x 370 x 110 mm (length x width x height)
Units and Display	
Pressure units:	mbar, bar, hPa, kPa, mH ₂ O, inH ₂ O, psi
Temperature units:	°C, °F
Flow display:	up to 5 mbar: no display 0 - 1.000 l/h: resolution 1 l/h 1 - 100 m ³ /h: resolution 0.01 m ³ /h 100 - 1000 m ³ /h: resolution 0.1 m ³ /h 1000 - 10000 m ³ /h: resolution 1 m ³ /h
k _v -value input:	k _v < 1 in increments of 0.001 k _v 1...99.99 in increments of 0.01 k _v 100...999.9 in increments of 0.1 k _v 1000...10000 in increments of 1
Density correction factor:	0.10 - 5.00 kg/l in increments of 0.01 kg/l

Internal Temperature Measurement	
Measuring range:	-20 - 60 °C (-4 - 140 °F)
Accuracy:	< ± 1 K
Resolution:	0.1 °C
External Temperature Measurement	
Measuring range:	-20 - 300 °C (-4 - 572 °F)
Accuracy:	± 2 K from 0 °C to 133 °C otherwise 1.5 % of actual value, according to EN 50379-2
Resolution:	0.1 °C
Power	
Power supply:	Four rechargeable batteries type AA, mains charging adapter supplied with device
Power consumption:	Typically 70 mA with display brightness of 60 % (default) max. 120 mA with 100 % brightness 50 μ A for real time clock during power down and log mode
Languages	
Standard languages:	English, Dutch, French, German, Italian and Spanish For other countries a flash upgrade can be downloaded from the DocuServer.
Eastern Europe:	English, Czech, Hungarian, Polish and Slovakian
Northern/Southern Europe:	English, Czech, Hungarian, Polish and Slovakian

* Storage temperature below 2 °C (36 °F) only when device and pressure hose assembly are drained

CONSTRUCTION

Overview	Components
	1 Carry case with foam insert 2 VM242A BasicMes-2 handheld measuring computer with four rechargeable batteries and lanyard 3 Set of hoses with bypass assembly and Resideo SafeCon™ quick connections 4 Two adapters Rectus 21 onto 3/4" internal thread 5 Two adapters Resideo SafeCon™ onto Rectus 21 (for connection of BasicMes-2 to Resideo valves with old style PT valves) 6 Battery charger
	Not depicted components: USB cable User software on CD-ROM Instruction manual with pocket guide

TRANSPORTATION AND STORAGE

Keep parts in their original packaging and unpack them shortly before use.

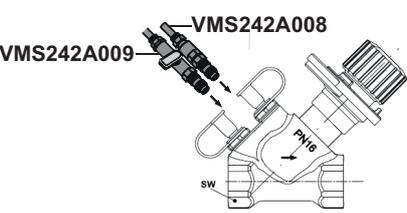
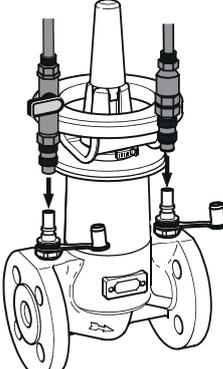
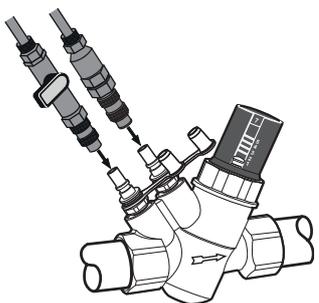
Parameter	Value
Environment:	clean, dry and dust free *

*non condensing

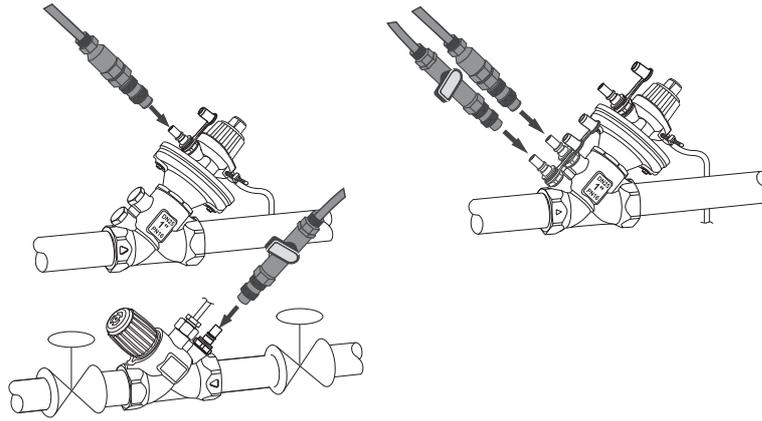
INSTALLATION GUIDELINES

Installation Example

Direct connection to Resideo valves

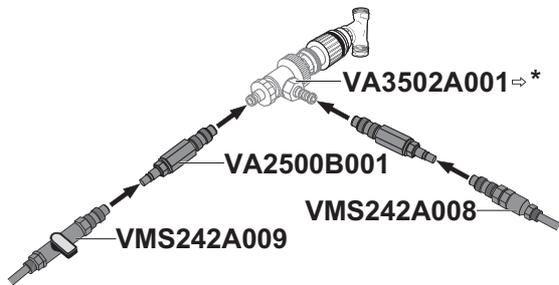
V5032...A - Kombi-2-plus	V6000...A - Kombi-F	V5003F - Kombi-VX
		

V5001 - Kombi Auto



Connection to valve with separate accessories

V5000 - Kombi-3-plus



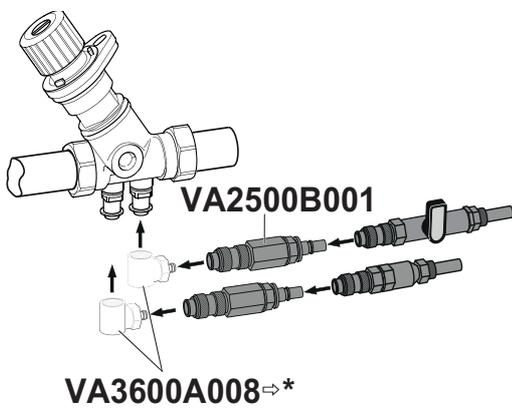
V9406 - Verafix-Cool



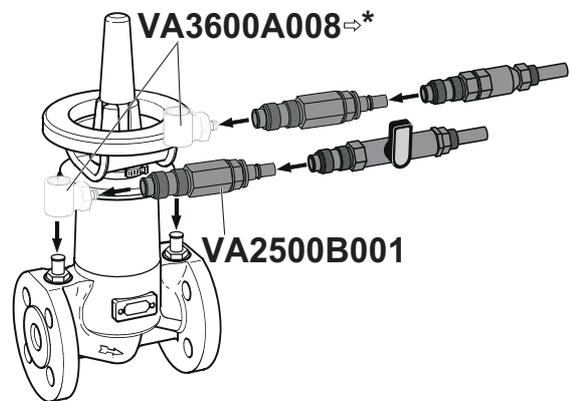
* Separate Accessories

Connection to Resideo valves with old measuring connections

V5032 - Kombi-2-plus



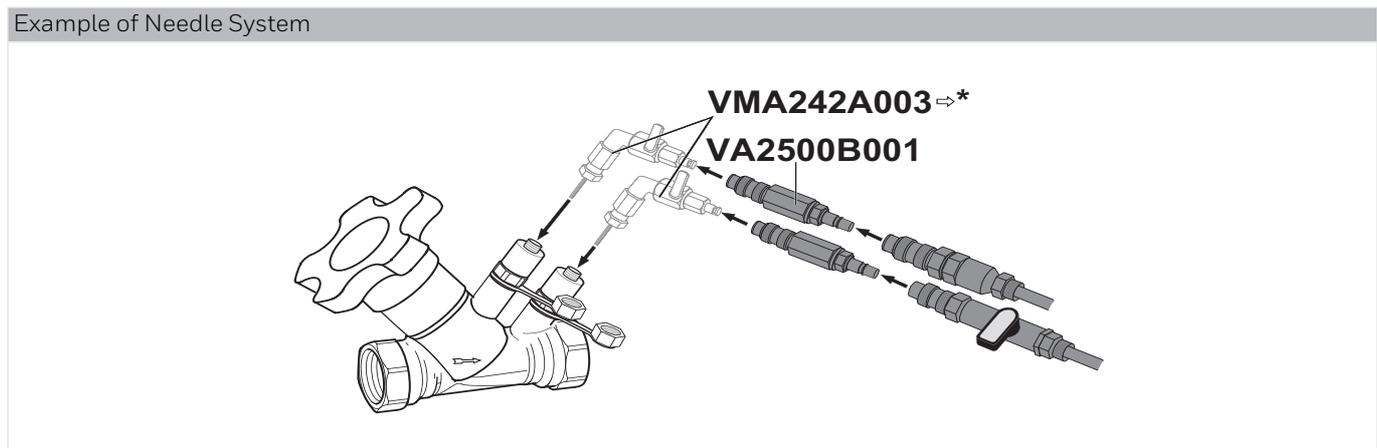
V6000 - Kombi-F



* Separate Accessories

Connection to non Resideo valves

BasicMes-2 can be connected to all valves with a needle type measuring system like Danfoss, Oventrop, TA, VIR and many others.



* Separate Accessories

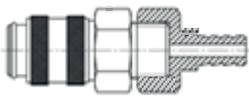
ORDERING INFORMATION

The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

Options

OS.-No.:	Description
VM242A0101	VM242A BasicMes-2 handheld flow measuring computer

Accessories

	Description	Dimension	Part No.
	VMA242 Needle adapter with Rectus 21 socket (1 piece) also suitable for VM241 and any other device with Rectus 21 plug	for all VM242	VMA242A003
	VA5032A Draining adapter for SafeCon™ connections Can be used to drain the water from a SafeCon connection provided on the balancing valve families as shown below	for all dimensions	VA5032A001
	VA3600 Measuring adapter (2 pcs.) For measuring computer VM241		VA3600C001
	VA3502 Pressure measuring set	for V5000 Kombi-3-plus RED	VA3502A001
	VA3600A Rectus 21 female connection to male 6 mm hose connection no ball valve		VA8000A008

Spare Parts

Overview	Description	Dimension	Part No.
	1 Adapter (1 piece) Rectus 21 socket onto ³ / ₄ " internal thread, with sealing		VMS242A004
	2 Adapter (1 piece) SafeCon™ socket onto Rectus 21 plug		VA2500B001
	3 Pressure hose assembly Pressure hose assembly for all VM242 including bypass assembly, red and blue pressure hose, fittings and ball valve	6mm x 1mm - ISO 7628-Cat2	VMS242A002
	4 Spare filters Spare filters (set of two)		VMS242A003
	5 Plug SafeCon™ plug (for blue hose)		VMS242A008
	6 Plug SafeCon™ plug with ball valve (for red hose)		VMS242A009



Manufactured for and on behalf of
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