

Assembly Instructions M8099-EN

Spare part Sonic transducer (O/ID T25604, T25604-1, T26260-2, T26327-2)

Purpose

Replacement of Sonic transducer (BB 1.x, BB 2.x)

Precondition



WARNING!

Danger for unauthorized persons!

Conversion work may only be carried out by specialist staff who have been trained accordingly.

Therefore:

- Keep unauthorized persons away from the work area.



NOTE!

Knowledge of the Instruction Manual is a precondition for carrying out conversion work on the unit.

Procedure



DANGER!

Danger to life caused by electric current!

Touching conductive parts causes a direct danger to life.

Therefore:

- For all work on the electrical system, for maintenance, cleaning or repair work, disconnect from the mains or disconnect all phases of the external power supply and secure them against being switched on again. Check unit is isolated from power supply.



WARNING!

Danger of crushing due to rolling away or tipping

With an uneven floor or when the castors are not locked, there is a danger that the unit tips over or rolls away causing crushing.

Therefore:

- Only install the unit on an even floor.
- Ensure that the castors are locked.

1. Proceed as follows in order to cool down the unit and empty the mould (mould evacuation)
 - Display menu page **Functions**.
 - Select the function **Cooling** and activate with the **OK** key.
 - Select the function **Mould evacuation** and activate with the **OK** key.

→ The activated function is indicated with the **✓** symbol.

2. Main switch off, remove the plug from the mains and empty the unit.
3. Remove control cable to ext. flow rate meter Flow-5.
4. Detach the hexagon screw and remove ext. flow rate meter Flow-5.
5. Proceed as follows in order to remove the cover of the evaluation unit:

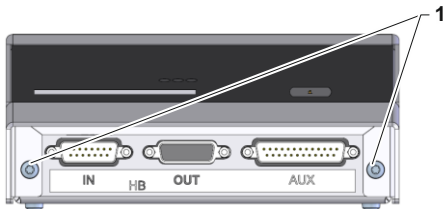


Fig. 1: Front side of the evaluation unit

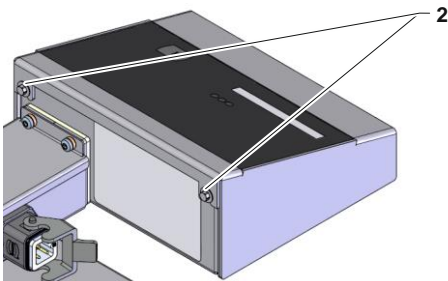


Fig. 2: Rear side of the evaluation unit

- Remove screws (Label 1 → Fig. 1).
- Detach screws (Label 2 → Fig. 2).
- Lift the cover with the keyboard and pull out the ribbon cable.
- Remove the cover with the keyboard.

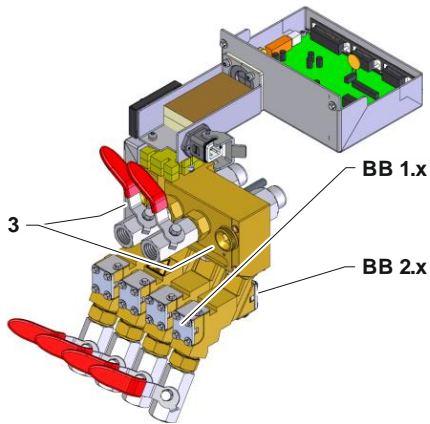


Fig. 3: Flow-5 with ball valve

6. Proceed as follows in order to remove the covers:

- If present disassemble the shut-off valve OUT 1 and 4 (Label 3 → Fig. 3).
- Remove all screws securing the covers.
- Remove covers and insulations.

7. Proceed as follows in order to remove the sound transducer (BB 1.x, BB 2.x):

- Remove the screws and mounting plate of the sound transducer.
- Remove sound transducer.
- Remove O-ring.
- Unplug cable of the sound transducer (BB 1.x, BB 2.x) on slot X 301.x or X 302.x.

8. Proceed as follows to assemble the new sound transducer (BB 1.x, BB 2.x)

- Clean installation space of sound transducer, especially groove for O-ring.
- Insert the new O-ring in the groove.
- Fit the sound transducer with the mounting plate and screws carefully.
- Transfer the cable labelling of the old sound transducer to the new sound transducer.
- Insert the sound transducer into the corresponding slot at the X 301.x or X 302.x.



NOTICE!

The 2nd sound transducer should be cleaned, if the demounted sound transducer is showing dirt on the side touching the medium.

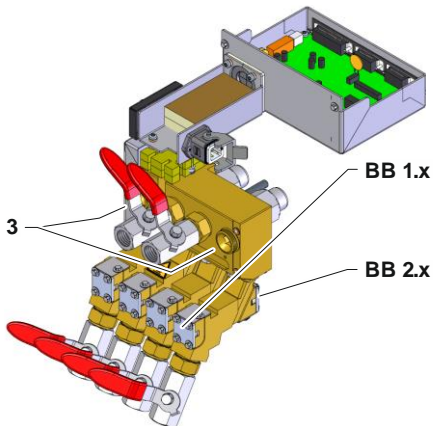


Fig. 4: Flow-5 with ball valve

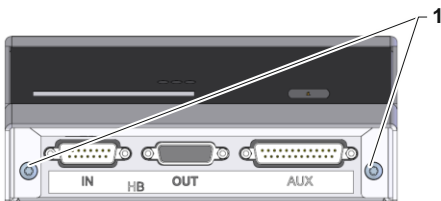


Fig. 5: Front side of the evaluation unit

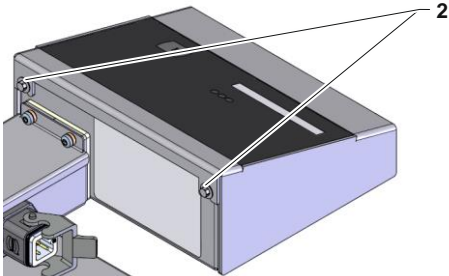


Fig. 6: Rear side of the evaluation unit

9. Proceed as follows in order to attach the covers:

- Attach all insulations and covers.
- Mount all screws securing the covers.
- If present install shut-off valve OUT 1 and 4 (Label 3 → Fig. 4).


10. Proceed as follows in order to attach the cover of the evaluation unit:

- Connect the ribbon cable to the keyboard and attach the cover.
- Attach screws (Label 1 → Fig. 5).
- Tighten screws (Label 2 → Fig. 6).

11. Connect ext. flow meter to temperature control unit and secure with hexagon head screw.

12. Connect control cable to ext. flow rate meter Flow-5.

13. Reconnect mains plug and switch on main switch.

14. Press the  key to switch on the unit and check it for leaks.



15. Proceed as follows to calibrate the flow rate metre:

- When setting parameters set **DFM recognition** to the "integrated" value (in **Settings / Miscellaneous**), continue with Step 16..
- When setting parameters set **DFM recognition** to the "modular" value (in **Settings / Miscellaneous**), continue with Step 17..

Integrated operation

16. Proceed as follows to calibrate the corresponding flow rate metre:

(from software version SW51-1 0849B)

- In normal operation operate the device at 40 °C for at least 10 minutes.
- **Only in the case of water units:**
If present set the parameter **Pressure relief with unit OFF** at **Setting / Miscellaneous** to "OFF".
- Switch the unit off using button  and wait at least 10 seconds.
- Set corresponding parameter **Flow rate ext. 1..4 Calibration** at **Service / Calibration / Flow rate external 1 to 4** or **Service / Calibration / Flow rate external 5 to 8** to "ON".
- The flow rate is calibrated automatically.
- **Only in the case of water devices:**
If present set the parameter **Pressure relief with unit OFF** at **Setting / Miscellaneous** to "ON".
- Switch the unit on with the  key.

(up to software version SW51-1 0849B)

- In normal operation operate the device at 40 °C for at least 10 minutes.
- Set corresponding parameter **Flow rate ext. ... offset** at **Service / Calibration / Flow rate external 1 to 4** or **Service / Calibration / Flow rate external 1 to 4** to "5 L/min".
- Close the corresponding shut-off valve between the feed and return line and wait for 1 minute.
- Read current **Flow rate**.
- Set the parameter **Flow rate ext. ... offset** according to the following calculation:
→ **Flow rate ext. ... offset** new = 5 – **flow rate** as it currently stands
- Opening the shut-off valve

... ▶ Calibrating ▶ Flow rate external 1 to 4			
Flow rate ext. filter		10 s	
Flow rate ext. 1..4 Calibration		ON	
Flow rate ext. 1 offset		0.0 L/min	
Flow rate ext. 1 ascent corr.		0.0 %	
Flow rate ext. 1 Calibration		OFF	
Flow rate ext. 2 offset		0.0 L/min	
Flow rate ext. 2 ascent corr.		0.0 %	
Flow rate ext. 2 Calibration		OFF	
1	Main line	40.0 °C	Ready to operate
	Pressure	0.8 bar	

Fig. 7: Calibrate flow rate during integrated operation

... ▶ Calibrating ▶ Flow rate external 1 to 4			
Flow rate ext. filter		10 s	
Flow rate ext. 1..4 Calibration		OFF	
Flow rate ext. 1 offset		0.0 L/min	
Flow rate ext. 1 ascent corr.		0.0 %	
Flow rate ext. 1 Calibration		OFF	
Flow rate ext. 2 offset		0.0 L/min	
Flow rate ext. 2 ascent corr.		0.0 %	
Flow rate ext. 2 Calibration		OFF	
1	Main line	40.0 °C	Normal operation
	Flow rate	5.0 L/min	





Fig. 8: Calibrate flow rate during integrated operation (<SW51-1 0849B)

Service ▶ Calibrating ▶ Flow rate			
No.	1	A..Z A	A1 A2 A3 A4 A5 ...
Flow rate filter			10 s
Durchfluss Offset			0.0 l/min
Flow rate ascent corr.			0.0 %
Flow rate calibration			ON
A	Return line	33.6 °C	Ready to operate
1	Flow rate	2.9 l/min	

Fig. 9: Calibrate flow rate during modular operation


Operation Modular

17. Proceed as follows to calibrate the corresponding flow rate metre:

- In normal operation operate the device at 40 °C for at least 10 minutes.
- **Only in the case of water devices:**
If present set the parameter **Pressure relief with unit OFF** at **Setting / Miscellaneous** to "OFF".
- Switch the unit off using button  and wait at least 10 seconds.
- Select the module affected e.g. "A1" with the  or  buttons.
- Set parameter **Flow rate calibration** at **Service / Calibration / Flow rate** to "ON".
- The flow rate is calibrated automatically.
- **Only in the case of water devices:**
If present set the parameter **Pressure relief at unit OFF** at **Setting / Miscellaneous** to "ON".
- Switch the unit on with the  key.

18. Inspection of calibration of Flow rate meter

- In normal operation operate the unit at 40 °C for at least 5 minutes following calibration.
- Close the corresponding shut-off valve between main and return lines.
- Flow rate returns to 0 L/min.
- If this is not the case repeat the Flow rate meter point.
- Punkt Durchflussmessung kalibrieren für jeden ersetzten Schallwandler wiederholen.

19. Switch the unit off by press the  key.

20. Main switch off.

Parts list

Pos	Description	O/ID	O/ID			
			T26327-2	T26260-2	T25604-1	T25604
			Pcs	Pcs	Pcs	Pcs
01	Sonic transducer water up to 160 °C, 0,58 m	T27045-2	-	-	-	1
02	Sonic transducer oil up to 200 °C, 0,58 m	T25065-2	-	-	1	-
03	Sonic transducer oil up to 200 °C, 0,58 m	T26082-2	-	1	-	-
04	Sonic transducer water up to 180 °C, 0,58 m	T26310-2	1	-	-	-
05	O-ring FFKM 17x2	T25429	1	-	-	1
06	O-ring FPM 17x2	T23523	-	1	1	-
07	Socket 27x14x9	T26109	-	1	-	-
08	Assembly instructions German	M8099-DE	1	1	1	1
09	Assembly instructions English	M8099-EN	1	1	1	1
10	Assembly instructions French	M8099-FR	1	1	1	1