

Service Information Letter 4_2011

1 MAS-100 NT Upgrade (HW, FW V1.4 and C&C V1.5)

Instruments affected: All new MAS-100 NT and all new MAS-100 NT Ex.

2 Reason

Due to the additional pneumatic resistance of the 300x0.6mm head the blower lifetime of the MAS-100 NT was not on par with the old MAS-100 and had to be changed.

This upgraded MAS-100 NT unit comes with a stronger blower motor and a drive board with a safety circuit to prevent a motor overload.

Protection circuits have also been added to the charging board to improve the overall sturdiness of the MAS-100 NT.

3 What is new?

The instrument comes with a stronger blower motor, a drive board, an improved connector board, a new instrument software (FW, V 1.4) and the matching PC software (C&C, V1.5).

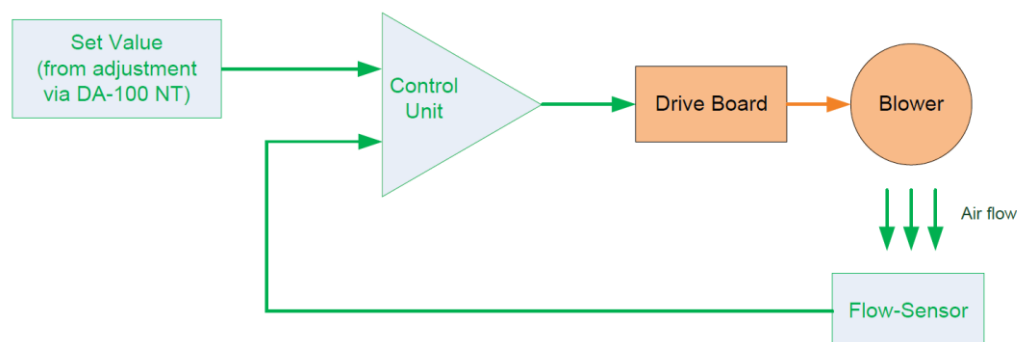
The language support of the instrument software has been extended to Polish, Czech, Italian, Portuguese and Spanish next to the existing support of English, German and French.

The PC software now supports Polish, Czech, and Spanish next to the existing support of English, German and French.

During an automated calibration or adjustment cycle the instrument software now takes 3x3 readings (previously 3x1) for a more stable result.

4 What didn't change?

There are no mechanical changes on the instrument. Also the internal main electronics (= "computer") and the flow sensor remains unchanged: The air path and sensing / feedback part of the blower control loop stays the same.



Once the system is adjusted to the external reference (DA-100 NT) the control unit drives the blower until it reaches the same read-out value from the flow sensor as set during the adjustment procedure.

5 Result comparison to MAS-100 NT with old motor

Due to the self-compensating design of the blower control loop the results from the old and the new blower are comparable without correction factor.

A comparison of the instrument performance before and after the upgrade is available on:
<http://www.mbv.ch/documents/expertisemas100ntupgrade.pdf>

6 Testing

All these changes have been designed and tested to the best of our knowledge.

The tests include development tests according the processes from MBV AG and its development partners, functional tests of FW, SW and HW and life time testing of the HW (ongoing).

EMI / EMC tests were repeated by Intratest (STS 035) and are passed. See user manual for updated CE certificate.

MBV AG considers the issue solved and has resumed production.

7 Compatibility

The new instrument software is tailored to the new motor. Do not upgrade to FW 1.4 without upgrading the hardware too.

The new PC SW is backward compatible: C&C V1.5 works with either FW 1.3 or FW 1.4.

Overview:

	FW 1.3 (FW)	FW 1.4 (FW)
C&C 1.4 (PC SW)	Yes	No
C&C 1.5 (PC SW)	Yes	Yes
Blower motor	Old motor only	New motor only

Stäfa, April 20th 2011

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