

DM 402/403

2- / multi-component low pressure dosing and mixing system



AUTOMATED SEALING SOLUTIONS

DM 402/403

2- / multi- component dosing
and mixing system



DM 402/403

Technical data

CONTROL CONCEPT

- Self-explaining operator guide with interactive menu-based programming using soft keys, function keys and touchbuttons; multifunctional Mobile Panel with integrated 6,5" touchscreen; optionally available: stand-alone operator panel with display elements and operating keys, visualization on a 15" touchscreen
- Modular "IPC" control fitted in the electrical switch cabinet and Power-Link
- EMERGENCY STOP deactivation; real-time bus system
- Pluggable switch cabinet
- Preselection of set-up / manual / standby / automatic modes
- Recipe management
- Operator password protection with four selectable levels
- Data backup via USB stick, serial interface or LAN
- Programmable potlife monitoring, dosing quantity preselection, automatic rinsing and material conditioning
- Automatic and spontaneously available material feed adjustment by pressure control
- Timer with automatic switch-on function
- Monitoring of the component pressure using the digital display
- Open periphery interface
- Deactivation through safety door with interlocking (optional when order contains a safety fence)
- Central control of additional periphery / automation possible
- Data for operating system and system programs stored on Compact Flash

DRIVE TECHNOLOGY

- Speed-controlled servo gear motor with speed display and adjustment through the display
- Drive performance: Pumps: 0.94 kW Mixing head: 0,94 (alternative 1,13) kW
- Rotation Speed: Pumps: 1 – 250 rpm Mixing head: 1-4.500 (alternative 1-6.000) rpm

PRECISION GEAR PUMPS (OPTIONAL)

- Size: 0,05 / 0,10 / 0,20 / 0,3 / 0,6 / 1,2 / 3,0 / 6,0 / 12,0 / 20,0 ccm/R
- Special pumps are available on request

HOSE PACKAGE

- Length according to customer requirements with all electrical and pneumatic connections enfolded
- A-Components: textile-reinforced polyamide high-pressure hose
- B-Components: steel-reinforced teflon high-pressure hose

PNEUMATIC SYSTEM

- Pneumatic system with filter-pressure reducer, maintenance unit including pressure monitoring and valve connection plate to control the pneumatic loads

CONNECTION RATINGS

- Electricity: according to EN 60 204-1
- Electrical power supply: 3 x 400 V, 50 Hz or 60 Hz, or according to country specification
- Rated power: approx. 10 kVA
- Average consumption: approx. 4 kVA
- Compressed air: 6 – 7 bar connection value for 150 l/min
- Water connection value: approx. 13 l/min at min. 4 bar

DIMENSIONS

- Container platform: W/H/D 625 x 1.500 x 860 mm (including container), approx. 85 kg per component
- Pump chassis: W/H/D 1.500 x 1.450 x 420 mm, approx. 300 kg
- Switch cabinet: W/H/D 1.200 x 2.625 x 500 mm, approx. 350-450 kg

GENERAL

- Chassis: modular hybrid construction, painted RAL 7035
- Platform cover: grid cover with adjustable levelling feet and drip pan
- Mixing ratio: from 100 : 1 to 1 : 100, infinitely variable
- Output quantity: from 0.05 to 100.0 g/s (*)
- Viscosity processing range: from 1 mPas to 2.000.000 mPas (*)
(*) other output quantities / viscosities are available on request

DM 402/403

Options

CONTROL

- Display languages are available in German, English, French, Spanish, Italian and Chinese
- Other country-specific languages on request
- Strand identification, switch-cabinet lighting
- Operating hours counter, remote maintenance via modem or TCP/IP
- Adaptable to different power-supply ratings (60 Hz version)
- Air-conditioning for electrical enclosure

QUALITY ASSURANCE

- Nucleation air measuring and control device „LBM-3“
- Set-up and alarm logging, process data logging
- Additional quality assurance devices are adaptable according to customer requirements

MATERIAL PREPARATION

- Pressure container with capacitive minimum fill-level sensors and shut-off valve, with compressed air fittings and compressed air reducer valves for controlling the container pressure
- Safety pressure valve, TÜV type-approved
- 24 l pressure container, single-walled, galvanized
- 24 l pressure container, single-walled, chrome nickel steel
- 24 l pressure container, double-walled, chrome nickel steel
- 44 l pressure container, single-walled, galvanised steel
- 44 l pressure container, single-walled, chrome nickel steel
- 44 l pressure container, double-walled, chrome nickel steel
- 90 l pressure container, double-walled, chrome nickel steel
- Wire mesh filter cartridges and plate disc filter
- Three-phase motor stirring device with 22 rpm
- Three-phase motor stirring device with 99 rpm
- Electric heating for single-walled containers
- Temperature control for double-walled containers
- Automatic air nucleation system
- Manual vacuum degassing
- Prepared to control an automatic refilling device
- Material supply for 20 to 1.000 l containers

HOSE PACKAGE

- Recirculation hose package
- Electric heating hoses with steel-reinforced teflon high-pressure hose core
- Double-walled medium heating hose with teflon high-pressure hose core

MIXING HEAD TYPES

- MK 20 with feed lines and static mixing
- MK 400 with feed lines, high-pressure water or component rinsing
- MK 400 with recirculation and high-pressure water or component rinsing
- MK 600 with recirculation and high-pressure water or component rinsing

GENERAL

- Material supply monitoring for component pumps
- MDK 6 compressed air dryer
- Rinsing and filling shot container
- Spare-parts packages
- Protective fence after clarification of agreed scope of delivery and statutory provisions
- Transport, set-up and instruction

The individual mixture. Tailor-made with modular design for your seals.

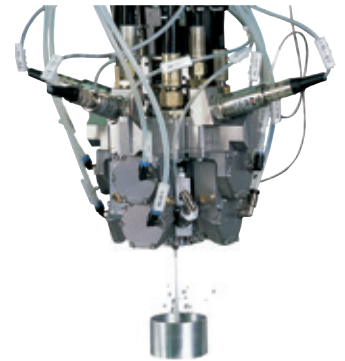
The DM 402/403 is a 2- or multi-component high-performance low pressure semi- or fully-automatic mixing and dosing system for gasket, gluing and potting applications of different types of parts. The DM 402/403 precisely processes liquid, medium to high viscose media such as polyurethane, silicones, epoxy resins and other polymer reaction substances.



Basis equipment: MK 400 with high-pressure water rinsing system

Processing with maximum comfort

The new design of the Sonderhoff DM 402/403 will allow easy and safe operations, even at various and different jobs. The standard handling is simplified by the multifunctional "MOBILE PANEL" with a 6,5" touch screen. Optionally a more convenient way is to use the user interface "Sonderhoff-CONTROL II", operated by a 15" touch screen surface, which is additionally available. The fact that all system and process parameters can be preset and controlled has the consequence that the system is able to handle full automatic production sequences. The use of the multifunctional „MOBILE PANEL“ simplifies the contour programming for the processed parts. The modular construction facilitates the access to the machine and thus the cleaning and maintenance work.



Optionally available: MK 600 with high-pressure water rinsing system

Quality at highest level

The Sonderhoff DM 402/403 processes the used materials on a constantly high quality level with regards to size and consistency of the product resulting. The state of the art sensors and actuators ensure the effective control of any system and process. The automatic logging of all set-up, material and process data enables to track any preceding production sequence. The "Sonderhoff-SAFETY" package – based on the principle of preventive maintenance – will help to gain continuously high machine availability.

Flexible today and tomorrow

Sonderhoff system owners are already prepared for tomorrow's tasks as Sonderhoff systems are able to handle different parts with new geometries and material even under changing circumstances. The 3 component version DM 403 makes it possible to process different materials simultaneously. This futureoriented technology is adaptable to all Sonderhoff precision mixing heads. Whatever the use is – either as a module in a fully automated production line or as a stand-alone system – the DM 402/403 can be integrated into any production concept.



Basis equipment: Multifunctional Mobile Panel (6,5")

High-tech – always taking the lead


The precision mixing head MK 400 is part of the basis equipment, optionally the further developed precision mixing head MK 600 can be used. Both mixing heads use the high-pressure water rinsing system, the cleaning technology for mixing chambers patented by Sonderhoff, which results in a series of additional benefits, mainly with regard to quality and efficiency. The nucleation air measuring and control device „LBM-3“ is responsible for keeping the material component's quality constant. In combination with the pressure-controlled recirculation-valve technology a precise material output will be effected. The "Stop-Drop-DVS-3" mixing chamber shut-off device allows an accurate dimension of gasket particularly in the coupling areas. The control system of the DM 403 uses a future-oriented industry PC technology with a real-time operating and bus system. Due to this system, no mechanical parts like hard discs or fans are required anymore. All system and program data are stored on "compact flash" cards. The networking and connection of external equipment can be carried out without previous parameterisation (plug & play). Onboard and remote diagnosis by modem or TCP/IP makes our service available all over the world. Modular design, innovative technology and process-reliable sequences will promote the efficiency of your investment.



Optionally available: operator panel „Sonderhoff-CONTROL II“ (15")



We supply worldwide to more than 50 countries and our customers produce annually more than 300.000.000 seals with our products.

* SONDERHOFF and  are trademarks and/or registered trademarks of Sonderhoff and/or its affiliates in the U.S. and/or elsewhere. Other trademarks are trademarks of their respective owners.
Technical modifications reserved GB 02/18