

SONDERHOFF 3E

Dosing cell with optional shuttle table



SONDERHOFF 3E

Low-pressure mixing and dosing system in cell design for two components, which fits in every container

The SONDERHOFF 3E dosing cell is a low-pressure mixing and dosing system for two components for semi-automatic and fully automatic application of sealing foams, adhesives and potting compounds to a wide range of parts. This machine precisely processes liquid, medium and high viscosity compounds such as polyurethanes or other polymeric reactive materials.

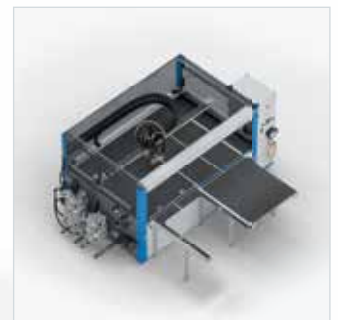
Process with maximum comfort

The dosing cell SONDERHOFF 3E is designed in such a way that you as an operator can easily and safely execute the most varied tasks. It is operated via the easy-to-handle, multifunctional mobile panel SONDERHOFF MP with integrated 6.5" touch screen – a significant simplification for contour programming of components. The pre-adjustability and regulation of all system and process parameters ensure consistent production processing of the dosing cell.

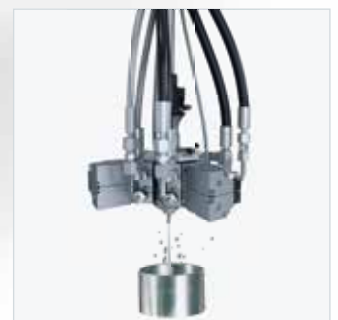
Basic equipment:
multifunctional mobile panel
SONDERHOFF MP (6.5")



Optional equipment:
SONDERHOFF WT-3E,
shuttle table in one level



SONDERHOFF MK 425
with high-pressure water rinsing



The starter model for standard applications

Place, plug & work!

Economic

With the dosing cell SONDERHOFF 3E, you can get started immediately: set up, connect and produce – place, plug & work!

To achieve this, we concentrated on the most essential features and have designed the system for the most frequently used application features. This has created a system which, through a very attractive entry-level price, enables extremely short amortization times, and which can also economically produce small and medium quantities.

Efficient

Everything about this machine is targeted at efficiency. Material viscosities from 200 to 100,000 mPas can be processed. Depending on the configuration, the output rate ranges from 0.5 to 5.0 g/s. Experience has shown that this is the bandwidth with which 80 % of current applications can be reproduced. In addition, the mixing head ensures an exactly dimensioned coupling range through the nozzle lock system SONDERHOFF STOP-DROP DVS-3. The material pressure tanks, with a capacity of 44 liters for the A-component and 24 liters for the B-component, accommodate the typical asymmetric mixing ratio, which can be infinitely adjusted from 10 : 1 to 1 : 2.

The machine concept itself is designed so that the machine can be delivered in one piece in a container, completely assembled. Moreover, it is also prepared in such a way that it just needs to be set up at the destination location. As soon as electricity, water and compressed air are connected and the material is prepared in the material pressure tank, production can begin – place, plug & work!

The machine is CE-compliant, and so an immediate, safe production start is possible. The manual lift door safely delimits the danger zone (traversing range of the linear robot), so that additional protective fences or light barriers are unnecessary – a further efficiency-increasing saving of space and costs.

Moreover, due to the high degree of standardization, delivery time is shortened. Customers who are already familiar with the Formed-in-Place Foam Gasket (FIPFG) technology can start up the system on their own. Naturally, we will be happy to support you on request!

Ecological – achieve a lot with minimal effort

The ecological high-pressure water rinsing is the essential feature of environmentally responsible processing of two-component reactive materials. The use of solvents to clean the mixing head becomes unnecessary. With this proven technology customers make an active contribution to environmental protection – throughout the machine's service life!

The dosing cell SONDERHOFF 3E

The dosing cell SONDERHOFF 3E is not an all-rounder – but with comparatively little effort it can do a great deal!

Despite its cost efficiency, the dosing cell SONDERHOFF 3E uses the proven machine components for all essential parts, starting from the mixing head SONDERHOFF MK 425, the central IPC controller, the modern sensors and actuators, to the pressure-controlled recirculation technology, including air loading, and extending to the high-pressure water rinsing system.

SONDERHOFF 3E:

Economic – Efficient – Ecological

Technical data

CONTROL CONCEPT

- › Multifunctional mobile panel SONDERHOFF MP with integrated 6.5" touch screen
- › Self-explaining operation with programmable buttons, function keys and touch keys
- › Display languages available: German, English, French, Spanish, Italian, Chinese
- › Modular IPC controller integrated into the switch cabinet with Powerlink
- › EMERGENCY STOP deactivation with approved safety concept, real-time bus system
- › Safety shutdown from protective door
- › Switch cabinet mounted on the dosing cell chassis
- › Preselection of set-up / standby / manual / automatic modes
- › Recipe management
- › Operator password protection with four selectable levels
- › Programmable pot life monitoring and dosing quantity preselect, as well as automatic rinsing and material conditioning (air loading, agitation, etc.)
- › Automatic and spontaneously available material feed quantity adjustment by pressure regulation
- › Preparation for automatic refilling
- › Monitoring of the component pressure using digital display
- › Timer with automatic switch-on function
- › Data backup via USB stick or LAN
- › Data storage for operating system and system programs

MATERIAL PROCESSING

- › Mixing ratio: from 10 : 1 to 1 : 2, infinitely variable
- › Output quantity: from 0.5 to 5.0 g/s (*)
- › Viscosity processing range: component A: 1,000 – 100,000 mPas (*); component B: 200 – 1,000 mPas (*)

(*) depending on viscosity and mixing ratio / other output quantities and viscosities on request

PRECISION GEAR PUMPS

- › Component A: 1.2 ccm/Rev.
- › Component B: 0.3 ccm/Rev.

HOSE PACKAGE

- › Component A: textile-reinforced, polyamide high-pressure hose
- › Component B: steel-reinforced, PTFE, high-pressure hose
- › Recirculation hose package

MIXING HEAD TYPE

- › SONDERHOFF MK 425 with recirculation and high-pressure water or component rinsing

MATERIAL PREPARATION

- › Material pressure tanks with level sensors, safety pressure valve (TÜV type tested), overfill protection (only when using a refill station) and shut-off ball valve, with compressed air fittings and compressed air reducing valves for primary pressure control of tank pressures
- › 44 liters material pressure tanks, double wall, chrome nickel steel for component A
- › 24 liters material pressure tanks, double wall, chrome nickel steel for component B
- › Wire mesh filter cartridges and plate disc filter
- › Three-phase agitator running at 99 rpm for tank A
- › Automatic air loading
- › Material supply through refill stations for containers from 20 to 1,000 liters

PNEUMATICS

- › Pneumatics with filter-pressure reducer, maintenance unit with pressure monitoring and valve connection plate to control the pneumatic loads

LINEAR ROBOT

- > Max. traversing speed: 15 m/min.
- > Max. acceleration: 2 m/s²
- > Repeating accuracy: approx. 0.5 mm
- > Traversing range x/y/z: 2,500 x 1,250 x 250 mm

DRIVE TECHNOLOGY

Speed-regulated servo gear motor with speed display and adjustment through the display

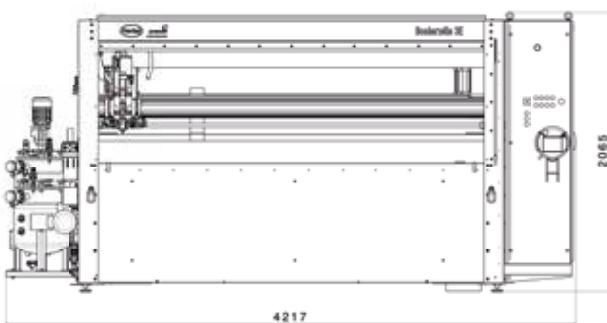
	Pumps	Mixing head
Drive performance	0.94 kW	0.94 (alternative 1.13) kW
Drive rotational speeds	1 – 250 rpm	1 – 4,500 (alternative 1 – 6,000) rpm

CONNECTIONS

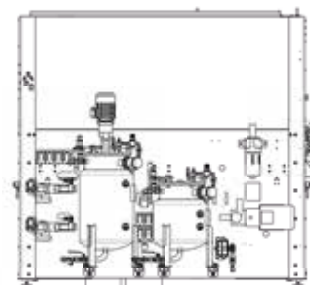
- > Electricity: according to EN 60 204-1
- > Electrical power supply: 3 x 400 V, 50 Hz (also available as 60 Hz version at extra charge)
- > Rated power: approx. 10 kVA
- > Ø consumption: approx. 4 kVA
- > Compressed air connection value: approx. 150 L/min. at 6 – 7 bar
- > Water connection value: approx. 13 L/min. at min. 4 bar

GENERAL EQUIPMENT

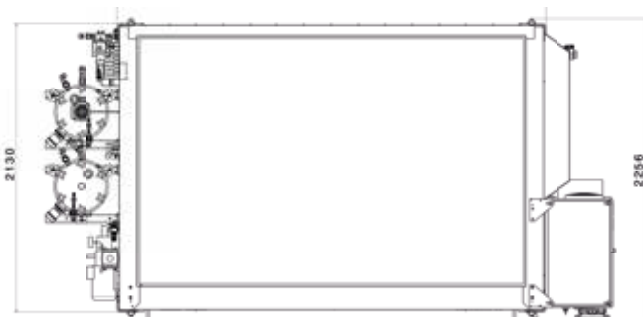
- > Dimensions W/H/D approx. 4,217 x 2,065 x 2,130 mm
- > Worktop in coated multiplex
- > Chassis compact design, powder-coated
- > Weight approx. 1,500 kg
- > Material supply monitoring for component pumps
- > Compressed air dryer MDK 6
- > Air conditioner for switch cabinet temperature control
- > Rinsing and fill shot container
- > Spare part packages
- > Strand identification



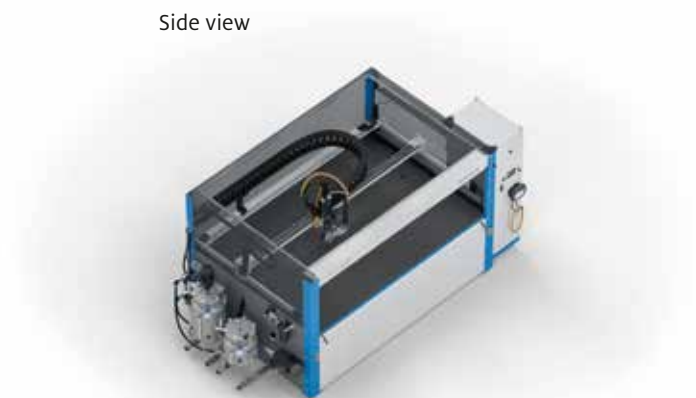
Front view



Side view



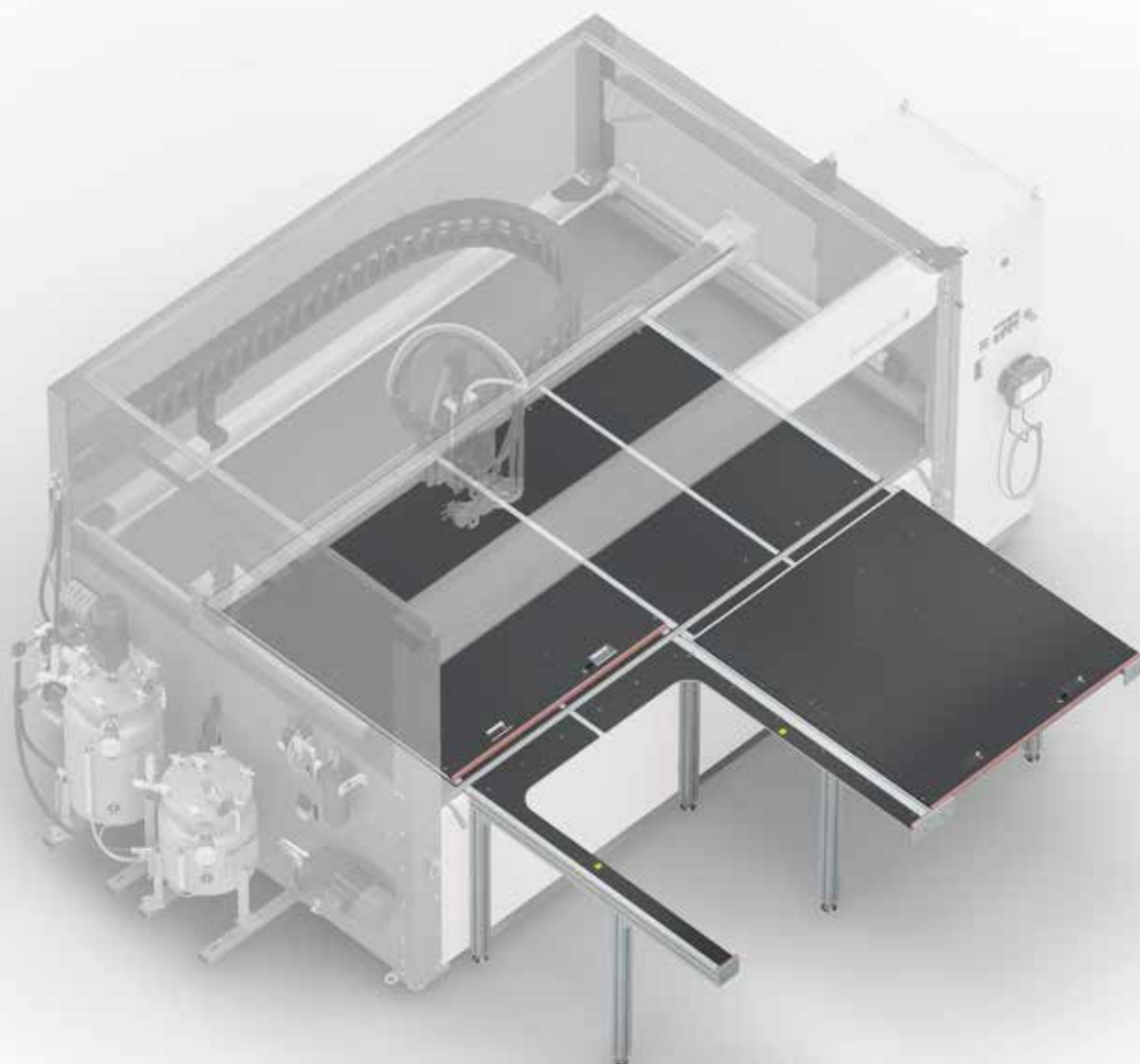
Top view



Isometric view

SONDERHOFF WT-3E

Optional shuttle table in one level

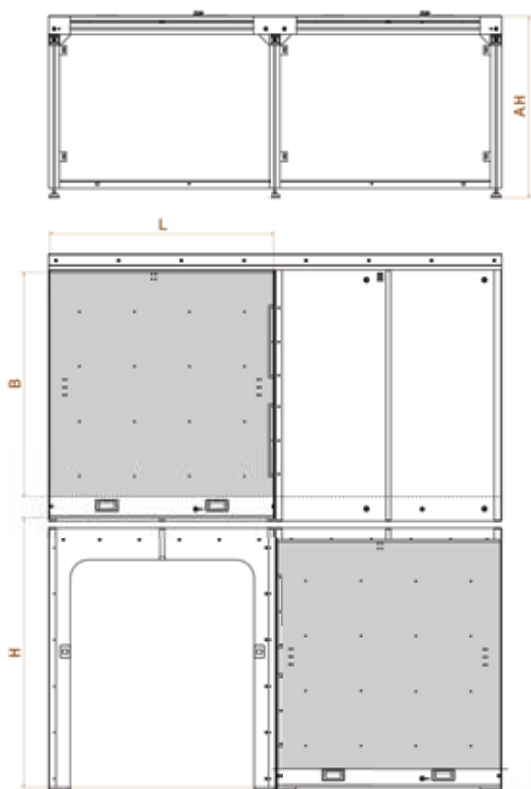


AREA OF APPLICATION

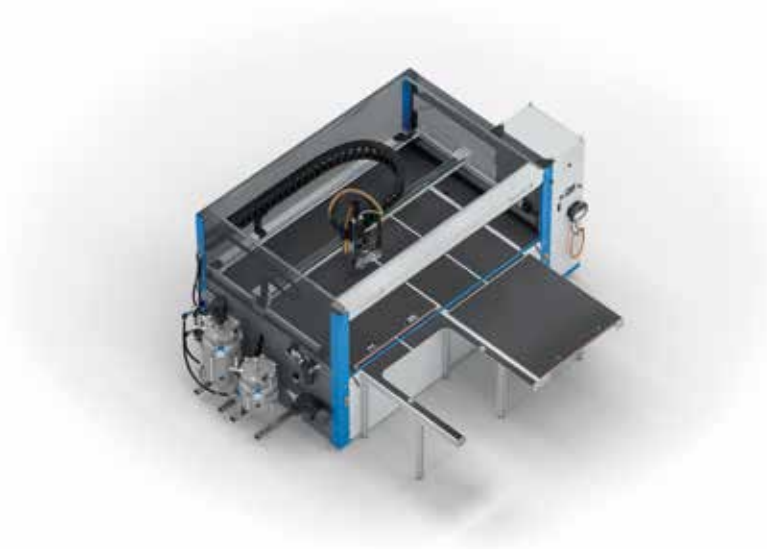
- › The shuttle table unit permits the single-level processing of parts on two support platforms, which move back and forth in a pendulum mode. This offers both continuous operation and short cycle times. For larger parts, the two shuttle tables can be connected to one large worktop. The shuttle table unit consists of a robust chassis section (fitted with adjustable leveling feet), with two movable worktops in coated multiplex and attachment holes for securing the workpiece support or the workpiece itself. The shuttle table is optional and can be supplied subsequently for self-assembly to the dosing cell.

TECHNICAL DATA

- › Manually operated shuttle tabletops (stroke)
- › Maximum load per tabletop 30 kg
- › The two shuttle tabletops are next to each other in one level and can be connected to one large worktop
- › Dimensions of the two worktops (length x width each):
length (L): 1,224 mm; width (B): 1,225 mm; stroke (H): 1,475 mm; working height (AH): 992 mm



Operator side



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