NEW!

engineering

Dosing Cell 3E

2-component low-pressure mixing and dosing system

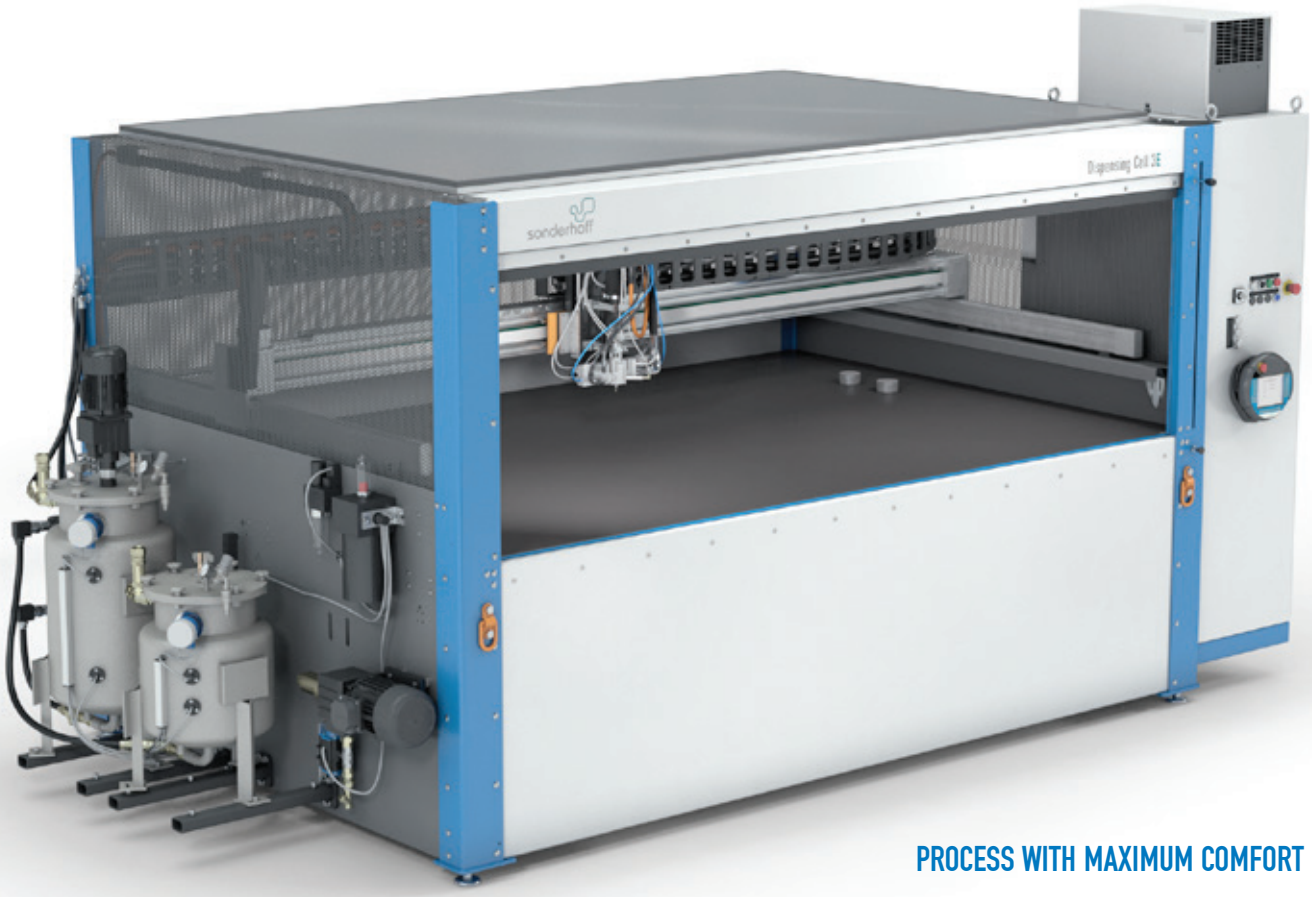
Henkel

sonderhoff

AUTOMATED SEALING SOLUTIONS

Dosing Cell 3E
2-component
mixing and dosing system

The new Dosing Cell 3E is a 2-component low-pressure, mixing and dosing system for use in semi-automatic operation for gasketing, gluing and potting of a wide variety of components. With this system liquid, medium to high viscose media, such as polyurethanes or other reactive polymer materials can be processed precisely.



PROCESS WITH MAXIMUM COMFORT

Sonderhoff has designed the Dosing Cell 3E to allow you as operator to easily and safely execute a wide variety of tasks. Standard operation is facilitated by the easy-to-handle, multi-functional MOBILE PANEL with integrated 6.5" touchscreen – an essential simplification for contour programming of components. The pre-adjustability and regulation of all system and process parameters ensure consistent production processing.

The Dosing Cell 3E: economic – efficient – ecological

Technical data

CONTROL CONCEPT

- Self-explanatory operator guidance via dialogue programming using menu technology with softkeys, touch buttons and function keys; multi-functional mobile panel with integrated 6.5" touchscreen
- Display languages available: German, English, French, Spanish, Italian, Chinese
- Modular "IPC controller" integrated into the control cabinet by means of Power-Link
- EMERGENCY STOP shutdown with proven "Sonderhoff-SAFETY" concept, real-time-capable bus system
- Control cabinet pre-installed
- Preselect for Set-up/Stand-by/Manual/Automatic operating modes
- Recipe management
- Operator password protection can be selected at 4 levels
- Data backup via USB stick or LAN
- Programmable pot-life monitoring and dosing quantity preselect, as well as automatic rinsing and material conditioning (air nucleation, stirring, etc.)
- Automatic delivery rate adjustment available whenever needed, through pressure regulation
- Preparation for automatic refill
- Timer with automatic start-up
- Pressure monitoring of components, digital component pressure display
- Safety shutdown from protective door
- Data storage for operating system and system programs on CFast storage media

MATERIAL PROCESSING

• Mixing ratio:	from 10 : 1 to 1 : 2, infinitely variable
• Application rate:	from 0.5 to 5.0 g/s (*)
• Viscosity processing range:	Component A: 1,000 mPas – 100,000 mPas (*) Component B: 200 mPas – 1.000 mPas (*) (*) depending on viscosity and mixing ratio / other application rates 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
• B-component:	Steel-reinforced Teflon high-pressure hose
• Recirculation hose package	

MIXING HEAD TYPE

- MK 425 with recirculation and high-pressure water flushing or component flushing

MATERIAL PREPARATION

- Pressure tanks with capacitive minimum fill level sensors and shut-off ball valve, with compressed air fittings and compressed air reducing valves for primary pressure regulation of tank pressures
- Safety pressure valve TÜV type-tested
- 44 l pressure tank, double wall, chrome nickel steel for component A
- 24 l pressure tank, double wall, chrome nickel steel for component B
- Wire mesh filter cartridges
- Three-phase current agitator running at 99 rpm for tank A
- Automatic air nucleation
- Preparation for control of an automatic refilling device

PNEUMATIC SYSTEM

- Pneumatic system with filter-pressure reducer, maintenance unit with pressure monitoring and valve cluster for control of pneumatic loads

The Dosing Cell 3E: economic – efficient – ecological

Technical data

LINEAR ROBOT

- Speed: 15 m/min
- Acceleration: 2 m/s²
- Traversing range x/y/z: 2,500 mm x 1,250 mm x 250 mm

DRIVE TECHNOLOGY

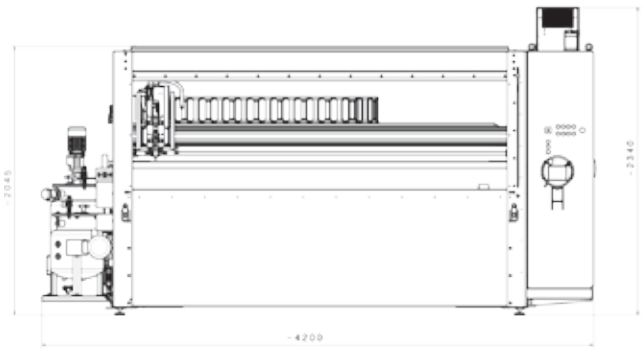
- Speed-regulated servo gear motor with speed display and adjustment through the display
- Drive performance: Pumps: 0.33 kW Mixing head: 0.33 kW
- Drive rotational speeds: Pumps: 1 – 250 rpm Mixing head: 1 – 6,000 rpm

CONNECTION RATINGS

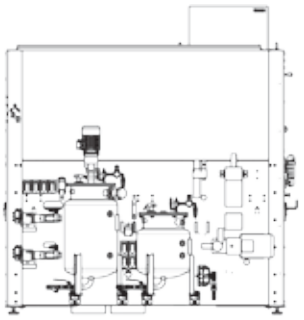
- Electrical system: Execution as per EN 60 204-1
- Mains connection: 3 x 400 V, 50 Hz
- Rated power: approx. 10 kVA
- Average consumption: approx. 4 kVA
- Compressed air connection value: approx. 150 l/min at 6 – 7 bar
- Water connection value: approx. 13 l/min at min. 4 bar

GENERAL EQUIPMENT

- Dimensions W/H/D approx. 4,200 x 2,220 x 2,050 mm
- Chassis compact design, powder-coated
- Weight approx. 1,500 kg
- Material supply monitoring for component pumps
- Compressed air dryer MDK 6
- Air conditioner for control cabinet temperature control
- Rinsing and filling shot container
- Spare parts packages
- Strand identification

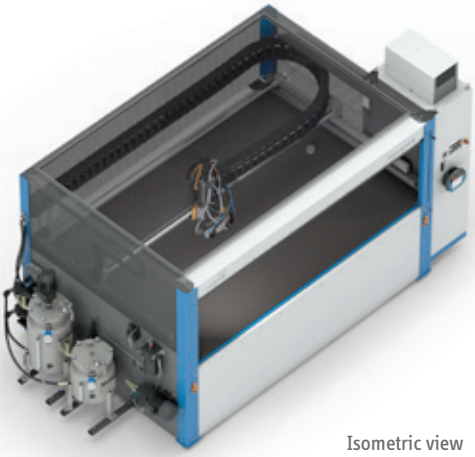


Front view



Side view

Top view



Isometric view

The Dosing Cell 3E

The entry level model for standard applications

Economic

With the 3E you can get started immediately. Place, plug-in & work!

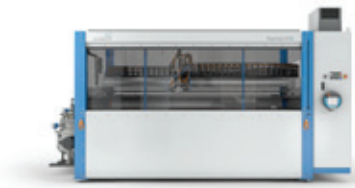
To achieve this, we concentrated on the most essential characteristics and have designed the system for the most frequently used application characteristics. This has created a system which, through a very attractive entry-level price, enables extremely short amortisation times, and which can also economically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

Basic configuration:
Multifunctional
mobile panel (6.5")

Efficient

Everything in the machine is targeted at efficiency. The application rate of the MK 425 mixing head is between 0.5 g and 5.0 g per second, depending on material and mixing ratio. Experience has shown that this is the bandwidth which covers 80% of the current applications. The pressure tanks, with a 44 litre capacity for the A-component and 24 litre capacity for the B-component, accommodate the typical, asymmetric mixing ratio.

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



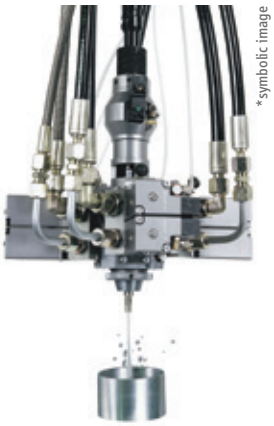
Manual lift-door

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

Moreover, due to the high degree of standardisation, delivery time is shortened. Customers who are already familiar with the FIP(F)G technology can set-up the system on their own. Naturally we would be pleased to support you on request!

Ecological – achieve a lot with minimal effort

The ecological high-pressure water rinsing system is the essential characteristic of environmentally-friendly processing of 2-components reaction materials. The use of solvents to clean the mixing head becomes superfluous. With this proven technology you make an active contribution to environmental protection – throughout the machine's service life.



*symbolic image

MK 425 with
high-pressure water rinsing system*

The Dosing Cell 3E – a genuine Sonderhoff

The Dosing Cell 3E can't do everything – but with comparably little effort, it can do a great deal! And it can continue to do so for many years, thanks to the proven Sonderhoff quality. In spite of all the cost efficiency: The 3E mixing and dosing system uses the proven Sonderhoff components for all essential parts. Starting from the MK 425 mixing head, the central IPC controller, the modern sensors and actuators, to the pressure-controlled recirculation-valve technology, including air nucleation, and extending to the high-pressure water rinsing system.

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

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