



METER · MIX · DISPENSE

LSR: INJECTION MOLDING

SOLUTIONS FOR THE PROCESSING
OF LIQUID SILICONE RUBBER



HILGER&KERNGROUP



We understand the challenge

Stability and reliability in continuous production

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A stable and reliable production process under high loads is the prerequisite for your business success. Based on robust technology, we contribute to making your production run smoothly and reliably - and with even shorter setup times.

The continuously increasing demand for silicone products is based on their special material properties: they can still be shaped even after the initial processing. Since a high elasticity is demanded for many products, this essential difference to many other materials becomes more and more important. Furthermore, the finished products are distinguished by their

high temperature stability. This brings about a continuously increasing use in many different industries: from automotive production to household appliances and lifestyle products. Since liquid silicone features only a minor reaction with other materials, it is also perfectly suited for being used in medical engineering.

DOPAG systems in action

In the field of LSR, DOPAG belongs to the world's leading providers of high-quality system technology. This success is also based on our long-term experience in the processing of liquid silicone rubber (LSR) for the requirements of various industries. The close cooperation with our

customers and project partners ensures that our systems can be precisely tailored to the individual applications which enables the production of first-class and high-quality products.

Features and benefits

- High energy-efficiency due to servo-electrically driven piston pumps
- Simultaneous drum drainage
- Material residues in drum < 1 %
- Processing from 20 or 200 l containers (on one chassis)
- Synchronous changeover of piston pumps "SWIPSYNC"
- Pressure-controlled metering
- Analog filling level monitoring
- Special sealing technology for processing abrasive media (for color injection)
- Highly comfortable system operation
- Compact, space-saving system design



silcomix

The silcomix is a compactly designed, electrically driven piston pump, metering and mixing system. It is used for continuously processing medium to

high-viscosity, silicone-based media with a mixing ratio of 100:100. Metering is carried out directly from the original containers with a size of 20 or 200 l.

Technical data

Outflow rate	up to 1.2 or 3.6 l/min (at max. 20 or 12 double strokes per minute and at MR 100:100, depending on viscosity)
Mixing ratio	100:100 (further ratios available on request)
Color injection metering	up to 4 colors with a ratio of 0.2 - 5 % each
Maximum working pressure	250 bar
Material supply	20 or 200 l
Viscosity	up to 1,000,000 mPa s (higher viscosity available on request)
Operating voltage	400/230 VAC 3/N/PE / 50/60 Hz
Dimensions (D x W x H), Lifter retracted	960 x 1,320 x 1,920 mm

Equipment

Standard

- Compact enclosed chassis, transportable by fork-lift truck
- Pneumatic pump lifter
- Follower plate for 200 l containers
- Static drum bottom support
- Servo-electrically driven piston pump with "SWIPSYNC"
- Material pressure monitoring via pressure sensors
- Metering computer DOPAG MR40
- System operation via 7" Color Touch Panel
- Analog level monitoring
- High-pressure material hose package
- Sensor for injection pressure
- Real-time display of remaining runtime

Optional

- Drum roll-in device
- Roller conveyor
- Active pneumatic drum bottom support
- Exchangeable follower plates for 20 l container
- Material sieve for follower plates
- Automatic drum and pump de-aeration
- Mixing ratio monitoring (volumetric flow meters)
- Color or additive injection – up to 4 colors/additives possible
- Empty warning for 10 l color supply
- Level probe and electric agitator for color cart
- Color/additive quantity measurement (volume flow, ratio)
- Additional mixing units
- Mixer cooling
- Metering pressure monitoring at mixer with digital display
- Special operating voltage
- Different machine interfaces (e.g. OPC-UA)

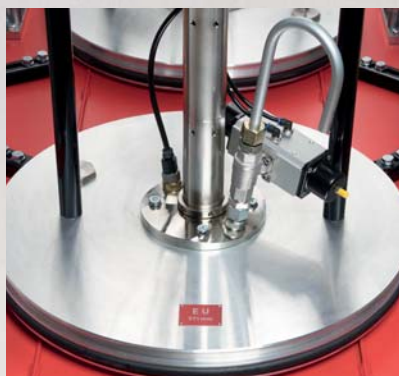
Components

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Reliable components for a stable production process



Drum bottom support



Follower plate de-aeration



Pump de-aeration



Color supply 1 l



Color supply with plastic container and piston pump



Color valve



Volume counter
Color injection metering



Mixing tube



Mixer cooling

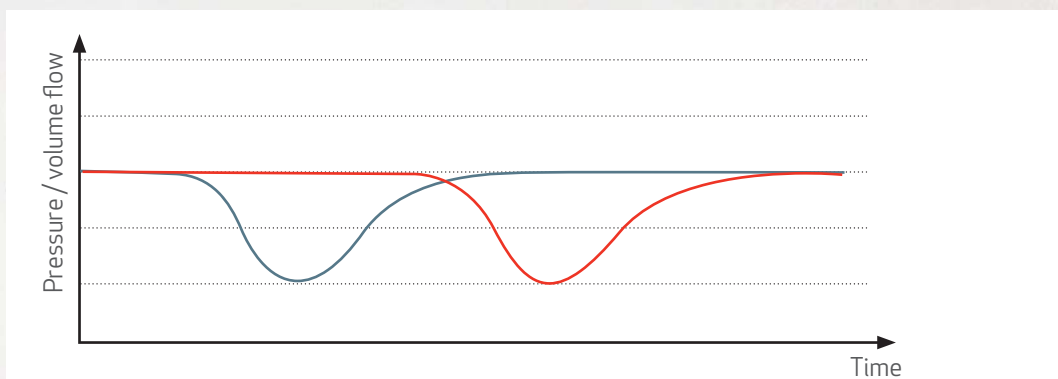
SWIPSYNC

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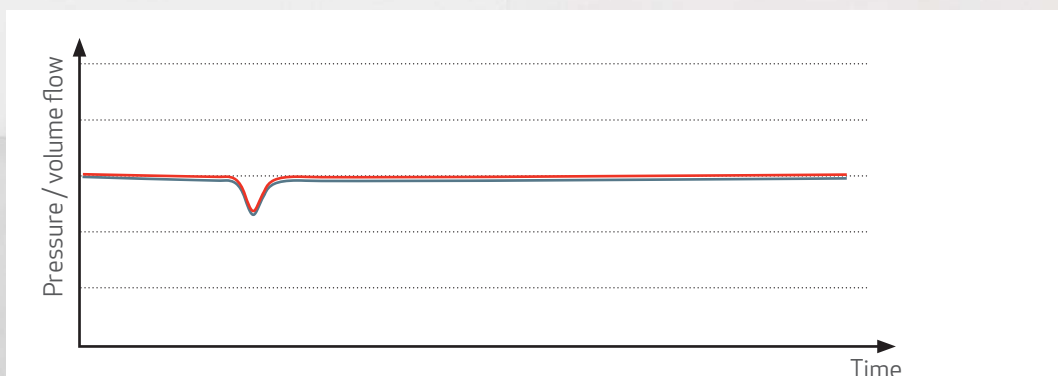
Synchronous changeover of the servo-electrically driven piston pumps, thus precise compliance with the mixing ratio

The servo-electrical drive allows for the synchronous changeover between the piston metering pumps, independently of the current position of the related pump piston. This prevents the mixing ratio from shifting due to different changeover positions. An even drum drainage of the A and B component is granted by the needs-oriented automatic adjustment of the volume flows of the single

components via the stroke speed of the piston metering pumps. At the same time, a special control of the servo drives significantly reduces the drop of the pressure and thus of the volume flow while also cutting down on the time required.



Without SWIPSYNC



With SWIPSYNC



DOPAG is one of the leading manufacturers of metering and mixing technology. In numerous industries, DOPAG systems and components are used for processing and application of multi-component polymers or 1-component media such as adhesives, greases and oils. The company employs more than 300 people and is represented in more than 30 countries by its subsidiaries and distributors.

DOPAG is a member of the HILGER & KERN GROUP that has been a reliable supplier and service partner for industrial enterprises across various market segments for more than 90 years.

Worldwide sales and service

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