System Solutions for Small and Mid-Range Salt/Grit Spreaders

System overview
Flow Control Valve for Municipal Equipment

Flow control valve, series SRCA
- Optimum flow control range 0 … 50 l/min
- Flow rates unaffected by temperature changes or alternating loads
- Minimum pressure drop
- Satisfies exacting demands on corrosion protection thanks to zinc-nickel coating
- The slip-on coil can be rotated, and it can be replaced without opening the hydraulic envelope

Technical Data

<table>
<thead>
<tr>
<th>Hydraulic characteristics</th>
<th>Description, value</th>
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<tbody>
<tr>
<td>Constant flow range</td>
<td>10, 16, 25, 32, 40, 50 l/min</td>
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<tr>
<td>Maximum flow rate</td>
<td>60 l/min</td>
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<tr>
<td>Maximum operating pressure</td>
<td>250 bar</td>
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<tr>
<td>Maximum leakage flow</td>
<td>60 cm³/min at 100 bar (or virtually zero if the priority flow discharges to tank)</td>
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<tr>
<td>Min. pressure difference (pressure compensator)</td>
<td>4 ... 7 bar</td>
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<td>Control accuracy (as a % of the nominal flow):</td>
<td>± 2.5 %</td>
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<tr>
<td>Load-dependency when under pressure</td>
<td>± 3.5 %</td>
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<tr>
<td>Hysteresis when operated</td>
<td></td>
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<tr>
<td>Hydraulic fluid</td>
<td></td>
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<tr>
<td>Hydraulic fluid temperature range</td>
<td>-20 °C ... +80 °C</td>
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<tr>
<td>Viscosity range</td>
<td>10 ... 300 mm²/s (cSt)</td>
</tr>
<tr>
<td>Minimum fluid cleanliness:</td>
<td></td>
</tr>
<tr>
<td>Cleanliness class to ISO 4406:1999</td>
<td>Class 20/18/15</td>
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</table>

Further information see data sheet 100-P-000144
Adaptable hydraulic combinations for controlling a wide variety of salt/grit spreaders.

Valve Block Solutions

Valve block for spinner/screw

Valve block for spinner/screws/brine pump
System Components for Operation

Freely combinable electronic components for controlling a wide variety of salt/grit spreaders

Display controller JetViewMobile 104
- Control unit with integrated PLC functionality
- Flexibly configurable JetSpread application software for hydraulically driven spreaders
- 3.5” color TFT screen with backlighting
- Encoder with push-button function and 8 illuminated keys
- 2 CAN interfaces for the internal system functions
- RS232 interface for data logging
- USB interface for software updates and for easy system parametrization via USB stick
- Connection via Deutsch plug
- RAM-mount adaption prepared

Additional control unit JXM-HMI
- 3 encoders with push-button function (start/stop) for screws and spinner plate
- Designed for use at night
- CANopen interface for connection to the JVM 104
- Fitted with the JVM 104 on a common mounting plate, or separately

CANopen®-Slave JXM-IO-E30
- 14 outputs for hydraulic valves, actuators and lighting
- 12 inputs for sensors, including ground-switching speed signals
- 3 short-circuit-protected sensor supplies
- Outputs are short-circuit-protected and diagnosable
Advantages:
- Intuitive and safe operation of all relevant functions with 4 rotary encoders
- Clear display with large graphic elements
- Standard and custom software with all typical functions
- Integrated diagnostic function including fault memory
- Customized front-foil design can be supplied
- USB interface for easy upload of software and parameters

Control functions:
- Operation of the spinner plate (current-regulated or speed-controlled)
- Operation of max. 2 screw conveyors (current-regulated or speed-controlled)
- Operation of max. 2 brine pumps (one of which is current-regulated or speed-controlled)
- Control of the spreading rate is travel-speed dependent
- Spread-pattern adjustment with position feedback
- Monitoring of spread control, spinner-plate folding, and fill levels
- Operation of beacons and work lights
- Control of devices with spray bars and feed rollers
Available Models

Coordinated, ergonomic control solutions for small and mid-range salt/grit spreaders

**Economy**
- Inputs and outputs integrated in the display controller
- Proportional duty-cycle control for 2 screw conveyors and 1 spinner plate (without current control)
- Travel signal/speed control

**Professional**
- Full range of functions for all inputs/outputs
- USB/RS232 interfaces (included)
- Integral real-time clock (battery buffered)
- Data logging to DIN EN15430-1

**System parametrization**
- Flexible adjustment of all valve currents
- Simple sensor setup/adjustment
- Selection of the various spreading media and adjustment of the screw conveyors
- Simple weighing
- All hoppers can be emptied separately when the gritter is stationary
- Test mode with travel-speed simulation
- Diagnostic function with fault memory
System Solution at a Glance

Coordinated system solutions with components from Bucher Hydraulics and Jetter for small and mid-range salt/grit spreaders