Features

Spraymec MF 050 VC is an electrohydraulic self-propelled mobile concrete sprayer for modern mining operations in small and medium size tunnels. It can be operated either with electric hydraulic power-pack or with diesel engine. It features a new Normet NSP 30 concrete spraying pump with maximum theoretical concrete output of 27 m³/h with electric operation.

Three different accelerator dosing system and concrete pumping control system configurations give possibilities to choose best feature for purpose in question.

Basic version is Nordoser XH with mono-style dosing pump and with manual adjustment for dosing and concrete pumping output volume. Optional dosing system Nordoser XE comes with mono-style pump with electronically adjusted concrete output volume control and accelerator dosing is synchronized automatically with concrete output volume. High-end model Nordoser XI includes low-pulsation concrete pumping feature and electronically adjusted concrete output volume control together with synchronized accelerator dosing.

All Nordoser models are available with optional low-pulsation Normet peristaltic dosing pump Normet LPP-D and additional process information display in cabin.

New improved cabin has more space for operator and ergonomic drivers place. New dashboard with new LCD multi information display (MID) replaces previous separate gauges.

Improved spraying boom SB 500 B includes strengthened steel structure, modified joints and has larger diameter hydraulic cylinders to give more power for smooth spraying operations.
Technical specification

**SPRAYBOOM SB 500 B**
- Boom rotation: 270°
- Boom lifting: -20°...+75°
- Boom folding: -60°...+165°
- Extension: 2200 mm
- Nozzle rotation: 420°
- Nozzle tilting: 105°

**CONCRETE PUMP**
Spraypump NSP 30
Low-wear and low-maintenance double piston pump:
- Pumping capacity theoretical with electro-hydraulic: 4 - 27 m³/h
- Pumping cylinder diameter: 200 mm
- Cylinder stroke: 600 mm
- Pumping pressure: max. 51 bar
- Hydraulic pressure: max. 250 bar

High pumping pressure enables the conveying of stiff concrete
The pump is able to pump up to max. aggregate size of 16 mm (including crushed) and all types of fibres (max. length 60 mm) in the mix

**ACCELERATOR SYSTEM**
Nordoser XH
Hydraulically driven accelerator mono pump
Max pumping pressure: 12 bar
Dozing rate: 0.6...16 L/min (36 - 960 L/h)
Manual dosing control, flow L/min and dosing % readable on the display
Manual concrete output control, readable on the display
Hydraulic pilot control system for concrete pump
Accelerator tank: 500 L

**COMPRESSOR**
Electric driven screw type compressor
- 10 m³/min / 7 bar FAD
- 55 kW electric motor

**REMOTE CONTROL**
10 m cable control with 2 joy sticks as a standard when open cabin

**CONCRETE LINE**
Left hand side assembly
Concrete line diameter: 65 mm

**WATER HOSE REEL**
Manual, 3/4" hose: 30 m

**ENGINE**
Liquid cooled turbo charged Deutz TCD 2013 L04 2V, 120 kW/2200 rpm, TIER 3 approved

**EXHAUST SYSTEM**
Catalytic exhaust gas purifier and muffler

**TRANSMISSION**
Dana 24 000 series power shift with pump drive group
3 speeds forward and reverse
4-wheel drive

**AXLES**
Planetary type
Dana 123
Load end axle fixed
Engine end axle oscillation: +/- 10°

**TYRES**
12.00 - 20 PR 20

**PERFORMANCE**
- 1st gear: max. 6 km/h
- 2nd gear: 12 km/h
- 3rd gear: 25 km/h
- Max. tractive effort: 133 kN
- Max speed in upward 1:7 inclined tunnel: 9 km/h
- Performance curve: 100018584

**HYDRAULIC SYSTEM**
Carrier hydraulics:
Variable displacement pump system for carrier and SB 500 B, pump unloaded at start
Pressure setting: 210 bar, 130 L/min/2200 rpm
Indication of level, filtration and temperature
Hydraulic oil tank capacity: 400 L
Return oil filtration: 10 μm

For spraying functions:
- Electro hydraulic power pack 55 kW / 50/60Hz /1500RPM
- Variable displacement piston pump systems unloaded at start:
  - 140 L/min for concrete pump (piston type)
  - 110 L/min for boom (piston type)
  - 24 L/min for agitator and dosing system (gear type)

Normet reserves the right to change this specification without further notice.
### Technical specification

<table>
<thead>
<tr>
<th><strong>24 VDC ELECTRICAL SYSTEM</strong></th>
<th><strong>OTHER</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAN Bus controlled spraying process control system with fault diagnostics</td>
<td>Hydraulically driven high pressure washer 180 bar / 30 L</td>
</tr>
<tr>
<td>Carrier electric functions NGE2</td>
<td>12 kg hand-held fire extinguisher</td>
</tr>
<tr>
<td>Exposed components are min IP 65 standard</td>
<td>Standard symbol labels</td>
</tr>
<tr>
<td>Battery 2 x 115 Ah</td>
<td>Basic tool set:</td>
</tr>
<tr>
<td>Alternator 100 A</td>
<td>- Cleaning plug</td>
</tr>
<tr>
<td>LED driving lights</td>
<td>- Washing ball</td>
</tr>
<tr>
<td>• Front (4 pcs) 18 W</td>
<td>- Hitting tool for nozzle</td>
</tr>
<tr>
<td>• Back (2 pcs) 18 W</td>
<td>- Claw coupling</td>
</tr>
<tr>
<td>• Side reversing (2 pcs) 43 W</td>
<td>- Hose clamp</td>
</tr>
<tr>
<td>LED working lights</td>
<td>- Rubber hose 3/4&quot; 4 m</td>
</tr>
<tr>
<td>• On cabin (4 pcs) 43 W</td>
<td>- Carabiner</td>
</tr>
<tr>
<td>• On boom (2 pcs) 43 W</td>
<td>- Wrench for spraymec nozzles</td>
</tr>
<tr>
<td>• On load end (2 pcs) 18 W</td>
<td>- Sledgehammer 800g</td>
</tr>
<tr>
<td>LED parking, brake and indicator lights</td>
<td>- Nozzle tip d45mm plastic</td>
</tr>
<tr>
<td>LED side lights; amber</td>
<td>- Nozzle tip d45 boron steel</td>
</tr>
<tr>
<td>Rotating beacon; amber</td>
<td>- cone for concrete piston assembly</td>
</tr>
<tr>
<td>Wire harness (self extinguishing) with tinned wires and water tight conduits</td>
<td>- special bolt for concrete piston assembly</td>
</tr>
</tbody>
</table>

### HIGH VOLTAGE ELECTRICAL SYSTEM

400 V / 50 Hz, 3 x 70 mm² + 3 x 16 mm²
Cable length 100 m

### CABLE REEL

Power supply of the electric functions
Max cable diameter/length 3 x 95 mm² + ground / 100 m
Hydraulically driven
Cable in/out reeling function from the cabin and near the reel

### DRIVER’S COMPARTMENT

Open 1-man cabin FOPS/ROPS approved
Suspended driver’s seat
Seat with retractable lap seat belt
The driver’s compartment with driving controls and two sets of pedals
3 different mounting heights
MID 070 S Multifunctional Display with:
• Meters; e.g. speed, RPM, operating hours
• Status indicators; e.g. fluid levels, temperatures, pressures, alarms, faults

### GREASING SYSTEM

Centralized grease fittings for the carrier

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Normet reserves the right to change this specification without further notice.
Optional equipment

**ACCELERATOR SYSTEM**

**Nordoser XE:**
Hydraulically driven mono-style dosing pump with electric control
Max pumping pressure 12 bar
Dosing rate 0.6-16 L/min (36 - 960 L/h)
Accelerator flow fully synchronized with the concrete output
Dosing % adjustable from the remote control unit and from the cabin
Hydraulic pilot control system for concrete pump
Concrete output adjustable from the remote control unit and from the cabin

**Nordoser XI:**
Hydraulically driven mono-style dosing pump with electric control
Max pumping pressure 12 bar
Dosing rate 0.6-16 L/min (36 - 960 L/h)
Accelerator flow fully synchronized with the concrete output
Dosing % adjustable from the remote control unit and from the cabin
Electrical control system for concrete pump with low pulsation pumping feature
Concrete output adjustable from the remote control unit and from the cabin

**Normet LPP-D Peristaltic accelerator pump**
Accelerator tank 850 L

**CONCRETE LINE**

Right hand side assembly
Concrete line diameter 50 mm

**HIGH VOLTAGE ELECTRICAL SYSTEM**

690 V / 50 Hz. Cable type 3 x 50 mm² + 3 x 10 mm²
Cable length 130 m

1000 V / 50 Hz. Cable type 3 x 35 mm² + 3 x 6 mm²
Cable length 150 m

With 1000 V and 690 V electrics it is possible to use longer cable length than 130 m and 150 m. In these cases cable length and size must be checked case by case

440 V, 60 Hz. Cable type 3 x 70 mm² + 3 x 16 mm²
Cable length 100 m

440 V, 60 Hz with 12 m³ compressor. Cable type 3 x 95 mm² + 3 x 16 mm²
Cable length 100 m

**COMPRRESSOR**

Electric driven screw type compressor
- 12 m³/min / 7 bar FAD
- 75 kW electric motor
Requires cable type 3 x 95 mm² + 3 x 16 mm²
Soft start with 400 V / 440 V

**DRIVER’S CABIN**

Enclosed cabin, FOPS/ROPS
Spraying process controls and boom controls

**ENGINE**

Liquid cooled turbo charged MB OM 904 LA, 110 kW/2200 rpm, TIER 3 approved:

<table>
<thead>
<tr>
<th>Gear</th>
<th>Max Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>6 km/h</td>
</tr>
<tr>
<td>2nd</td>
<td>13 km/h</td>
</tr>
<tr>
<td>3rd</td>
<td>25 km/h</td>
</tr>
</tbody>
</table>

Max. tractive effort 120 kN
Max speed in upward 1:7 inclined tunnel 7 km/h
Performance curve 100006272

**EXHAUST SYSTEM**

Particle filter for Deutz TCD 2013 120 kW

**OTHER**

Hydraulically operated water reel:
- Hose length max 120 m
- Hose size max 1 1/2”
Must be used with the wall washing system

Normet reserves the right to change this specification without further notice.
Additional equipment

Warning lights, 1 unit:
• Rotating beacon; red
• Rotating beacon; blue

REMOTE CONTROL
Radio control with cable support

HIGH VOLTAGE ELECTRICS
Soft start system for compressor:
• 690 V / 50 Hz

CONCRETE PUMP
Diesel operated concrete pumping with required hydraulics
• Pumping capacity theoretical with diesel 4 - 19 m³/h
NOTE: Spraying requires external air supply
Variable displacement pump system for concrete pump, pump unloaded at start
Pressure setting 250 bar, 135 L/min/2200 rpm
Gear pump system for agitator and Nordoser
Pressure relief valve setting 250 bar, 24 L/min/2200 rpm
Common hydraulic tank for all functions
Capacity 400 L
Return oil filtration 10 μm

ACCELERATOR SYSTEM
Extra display for Nordoser in cabin

FORM OIL SYSTEM
Electric driven pump with hose reel:
• Tank capacity 30 L
• Hose length 20 m
• Working pressure 7 bar

FOR MACHINE AND WALL WASHING
Rock wall washing system 180 bar / 90 L, hydraulic motor driven:
Can only be used when power pack is connected to the electrical mains
When using this equipment, the vehicle washing is also carried out by this washer. The washing power will automatically adjust to the correct level.
Hydraulically driven water reel must be selected
Wall washing system 180 bar / 90 L/min, piston to piston type hydraulic pump
Wall washing system 460 bar / 50 L/min

SUSPENSION
Front axle suspension system
• Hydraulic front support legs

FOR ENCLOSED CABIN

CD/Radio system
Cabin ventilation:
• Cabin heating
• Air conditioning

FIRE SUPPRESSION SYSTEM
Fogmaker: Manually actuated
Fogmaker: Automatically actuated
Ansul: Manually actuated
Ansul: Automatically actuated

GREASING SYSTEM
Automatic greasing system (Lincoln) for the concrete pump
Automatic greasing system (Lincoln) for the carrier and spray boom

OTHER
Fast fuel filling system: Wiggins
Oil evacuation kit with sample points
Extra hand held fire extinguisher (12 kg)
Hydraulic front support legs
Warning lights, 1 unit:
• Rotating beacon; amber
• Rotating beacon; red
• Rotating beacon; blue
• Strobe light; white
Text labels in: Fin / En / Por / Swe / Rus / Nor / Ger / Fra / Spa / Ita
Tools for maintenance
2 wheel chocks with brackets
Spare wheel with tyre
Spraymec MF 050 VC

LTC services

**SPARE PARTS**
Spare parts package A: Available for 1000 h of use*. Include periodical service, most common wearing parts and most critical safety parts.
Spare parts package B: Available for 3000 h of use*. Include periodical service, most common wearing parts and most critical safety parts.

* Recommendations are based on average hours - can vary a lot depending on work site conditions.

**TRAINING SERVICES**
Available before delivery, at start up and after delivery.
NOTE! after/during Start up / Commissioning as additional training days these are cheaper.
In general training reduces operation costs.

Product training:
Operation and Maintenance
NorSmart
Foundation of electrics, hydraulics
and mechanics
Audit

Process training:
Concrete spraying
Charging
Scaling
Process audit

**AUDIT SERVICES**
To improve machines performance
To improve your processes performance and quality

**SERVICE CONTRACTS**
Spare parts supply programmes
Scheduled inspection programmes
Supervision programmes
Periodic maintenance programmes
Machine usage programmes

**LINK ONE**
Link One electronic spare part manuals

**WARRANTY SERVICES**
Extended warranty

Normet reserves the right to change this specification without further notice.
### Dimensions

**Length:** 11,700 mm  
**Width as shown:** 2,000 mm  
**Height:** 2,550 (2,600) mm  
**Wheel base:** 3,650 mm  
**Track:** 1,650 mm  
**Ground clearance as shown:** 320 mm

### Turning Radius

<table>
<thead>
<tr>
<th>Type</th>
<th>Outer</th>
<th>Inner</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6,800 mm</td>
<td>3,900 mm</td>
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</tbody>
</table>

### Weight

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18,000 kg</td>
</tr>
</tbody>
</table>

Normet Oy  
Ahmolantie 6  
FI-74510 IISALMI, FINLAND  
Tel +358 (0) 17 83 241  
Fax +358 (0) 17 823 606  
info@normet.com www.normet.com

Normet reserves the right to change this specification without further notice.
Dimensions

TURNING RADIUS

SB500 B BOOM MOVEMENTS AND REACH AREA
Spraymec MF 050 VC

Dimensions

MINIMUM SPRAYING AREA

MAXIMUM SPRAYING AREA

OPTIMAL SPRAYING AREA

SPOT SPRAYING REACH

SPRAYING AREAS

Spraying area from one stand with:
- maximum tunnel size: 33 m²
- minimum tunnel size: 19.3 m²
- optimized tunnel size: 32.8 m²

Normet reserves the right to change this specification without further notice.
Spraymec MF 050 VC

Tractive efforts

DEUTZ TCD 2013 L4 120 kW
Performance curve 100018584

MERCEDES-BENZ OM 904 LA 110 kW
Performance curve 100006272

Normet reserves the right to change this specification without further notice.