Spraymec 8100 VC is an electro-hydraulic self-propelled mobile concrete sprayer which optimizes concrete spraying in tunnel projects with variable tunnel cross-sections. It provides efficient spraying from one set-up in tunnels of up to 10.3 m in height and 16 m in width. The maximum vertical spraying reach is 14 m. The compact design enables the mobile sprayer to perform spraying in tunnels with cross-sections from 15 - 140 m².

The Spraymec 8100 VC is designed for high performance sprayed concrete applications and the use of alkali-free accelerators. It features the latest state-of-the-art control system of the spraying process, the NorSmart2. The NorSmart2 concrete sprayer control system provides efficient, productive and high-quality concrete spraying with functions like:

- Low-pulsation concrete spraying and pumping
- Accurate and reliable accelerator dosing (accelerator dosing integrated into concrete output)
- Accurate and fast spray boom and nozzle movements and positioning
- Real-time control and diagnostics of the spraying process including optional kit for accelerator, concrete and ambient temperature control
- Logging of all spraying process-related data and USB data transfer
- Comprehensive vehicle fault diagnostics

The Normet concrete spraying pump NSP 40 has a theoretical maximum pumping capacity of 40 m³/h when the casting option is selected. The standard pumping capacity for spraying operations is 30 m³/h. The concrete pipe support arm at the forepart of the concrete pipeline makes cleaning of the concrete line easy and fast after each shift. The work can now be completely carried out by one operator as the strong mechanical arm makes the presence of an assistant unnecessary. The upper part of the concrete hopper can be turned away for easy service of the concrete cylinders.

Spraymec 8100 VC has an onboard compressor with a capacity of 12 m³/min for efficient and high quality sprayed concrete application. Four-wheel drive and four-wheel steering makes the Spraymec 8100 VC easy to manoeuvre in demanding driving conditions and limited tunnel spaces.

The innovative layout of the Spraymec 8100 VC features genuinely easy access to all service points on the machine. With the new layout 1 x 1000 litre accelerator tank, a 400 litre water tank and a large tool and storage box or alternatively 2 x 1000 litre accelerator tanks together with other options can easily be placed on the vehicle.
Technical specification

**SPRAYBOOM SB 508 D**

**Automatic functions:**
- Vertical and horizontal stabilization
- Nozzle rotation
- Telescopic stroke (upper boom)

Upper boom telescope protected with heavy duty wear resistant cover.

The speed of the movements can be adjusted from the cabin display.

All the movements are pressure compensated and have a proportional output.

**Boom coverage:**
- Lateral 16 m
- Vertical max 14.0 m
- Vertical normal 10.3 m

**CONCRETE PUMP**

Spray pump NSP 40

Low-wear and low-maintenance double piston pump:
- Pumping capacity theoretical: 3 - 30 m³/h
- Pumping cylinder diameter: 200 mm
- Cylinder stroke: 920 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.

Sophisticated control system (hydraulic and electric systems) provides low pulsation concrete flow.

Hydraulically driven agitator.

**ACCELERATOR SYSTEM**

Nordoser XI:

Hydraulically driven mono-style dosing pump with electric control.

Max pumping pressure: 12 bar

Dozing 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.

Possibility of using 2 x 1000 L intermediate bulk containers (IBC).

**CONCRETE LINE**

Concrete line diameter 76 mm

**CONTROL SYSTEM**

Integrated, seamless NorSmart2 control and diagnostic system.

NorSmart2 controls:
- Spray boom
- Concrete pump
- Accelerator dosing system
- Carrier functions
- Safety requirements
- Fault diagnostics
- Data logging

**DRIVER’S COMPARTMENT**

Open 1-man canopy. FOPS / ROPS approved.

Suspended driver’s seat.

Seat with retractable (75 mm wide) lap seat belt.

The driver’s compartment with driving controls and pedals, including multi-informational colour display.

**WATER REEL**

Manually operated reel:
- Hose length 30 m
- Hose size 3/4” (19 mm)

**HIGH PRESSURE WATER WASHER**

Hydraulically operated pressure washer with hose reel:
- Max. water pressure: 180 bar
- Max water flow: 30 L/min
- Hose length: 30 m

**ENGINE**

Liquid cooled turbo-charged Deutz TCD 2011 L4, 74.9 kW / 2600 rpm, TIER 3 approved.

**EXHAUST SYSTEM**

Catalytic exhaust gas purifier and muffler.
## Technical specification

### TRANSMISSION
Hydrostatic 4-wheel transmission  
- Pump 78 cm³  
- Motor 110 cm³  
- Separate oil tank 90 L stainless steel  
- Return oil filtration 10 μm  
- Oil level and return filter contamination indication

### AXLES
- Planetary type  
- Dana 602 / 212, 212 hy  
- Boom end axle fixed  
- Rear end axle oscillation +/− 10° with automatic oscillation lock

### TYRES
10.00 - 20 EM 23

### PERFORMANCE
- Max. tractive force 62 kN  
- Max. speed (horizontal tunnel) 15 km/h  
- Performance curve 100018270

### BRAKES
- Service brake: hydraulically powered two-circuit oil-immersed multi-disc brakes in both axles  
- Safety / Parking brake: spring-activated, hydraulically released, fail-safe-type brake. Brake test possibility in cabin

### STEERING
- Four-wheel steering as standard  
- Orbitrol type  
- Including crabwalk

### FUEL TANK
- Capacity 85 L. Stainless steel

### HYDRAULIC SYSTEM
- Electro-hydraulic power pack 55 kW /50 Hz / 3000 rpm  
- Variable displacement piston pump systems with following outputs:  
  - 115 L/min for concrete pump (piston type)  
  - 110 L/min for boom (piston type)  
  - 30 L/min for s-tube change (piston type)  
  - 24 L/min for agitator and dosing system (gear type)  
- Hydraulic oil tank capacity 220 L. Stainless steel  
- Oil cooler for concrete and boom circuit  
- Return oil filtration 10 μm  
- Oil level and return filter contamination indication

### 24 VDC ELECTRICAL SYSTEM
- Exposed components are min. IP 65 standard  
- Battery 2 x 115 Ah  
- Alternator 55 A  
- Wire harness (self extinguishing) with tinned wires and watertight conduits  
- LED driving lights:  
  - Engine end, 2 pcs  
  - Rear end, 2 pcs  
- Rotating beacon; amber  
- LED parking and brake lights

### HIGH VOLTAGE ELECTRICS
400 V, 50 Hz. Cable type 3 x 95 mm² + 3 x 16 mm²  
- Cable length 100 m  
- See options for other available systems  
- Soft start system for compressor

### CABLE REEL
- Power supply for the electrical functions  
- Max. cable diameter/length 3 x 95 mm² + ground/100 m  
- Hydraulically driven  
- Cable in/out reeling function from the canopy and near the reel

### WORKING LIGHTS
24 VDC LED lights:  
- 8 pcs in the SB 508 Boom  
- 2 pcs on canopy roof

### GREASING SYSTEM
- Centralized grease fittings for:  
  - Carrier  
  - Concrete pump  
  - Sprayboom

### OTHER
- 12 kg hand-held fire extinguisher  
- Standard symbol labels  
- Basic tool set:  
  - Cleaning plug  
  - Washing ball  
  - Hitting tool for nozzle  
  - Claw coupling  
  - Hose clamp  
  - Rubber hose 3/4" 4 m  
  - Carabiner  
  - Wrench for spraymec nozzles  
  - Sledgehammer 800g  
  - Nozzle tip d45mm plasttic  
  - Nozzle tip d45 boron steel  
  - cone for concrete piston assembly  
  - special bolt for concrete piston assembly

Normet reserves the right to change this specification without further notice.
Spraymec 8100 VC

Technical data sheet
100085094
06.06.2016

Optional equipment

**CONCRETE PUMP**
High volume concrete pumping:
Upgrade of max. theoretical concrete pumping capacity up to 40 m³/h
Comes with electro hydraulic power pack 55 kW / 50 Hz /1500 rpm with following outputs:
- 155 L/min for concrete pump (piston type)
- 85 L/min for boom (piston type)
- 30 L/min for s-tube change (piston type)
- 24 L/min for agitator and dosing system (gear type)

**REMOTE CONTROL SYSTEM**
Radio control with 2 joysticks with cable support
Radio control with 4 joysticks with cable support
Radio controls are equipped with the same features as the cable remote.
When choosing this option, standard cable remote control is replaced with radio control.

**HIGH VOLTAGE ELECTRICAL SYSTEM**
- **690 V, 50 Hz.** Cable type 3 x 50 mm² + 3 x 10 mm²
  - Cable length 150 m
- **1000 V, 50 Hz.** Cable type 3 x 35 mm² + 3 x 6 mm²
  - Cable length 150 m
With 690 V and 1000 V electrical systems, it is possible to use cables longer than 150 m. In these cases, cable length and size must be checked case by case.
- **440 V, 60 Hz.** Cable type 3 x 95 mm² + 3 x 16 mm²
  - Cable length 100 m
  - Soft start system for compressor
  - Electro-hydraulic power pack 55 kW / 60 Hz /1800 rpm with following outputs:
    - 115 L/min for concrete pump (piston type)
    - 85 L/min for boom (piston type)
    - 30 L/min for s-tube change (piston type)
    - 24 L/min for agitator and dosing system (gear type)

**ACCELERATOR SYSTEM**
Normet LPP-D Peristaltic additive dosing pump

**CONCRETE LINE**
Concrete line diameter 125 mm

**EXHAUST SYSTEM**
Particle filter (replaces catalytic exhaust gas purifier and muffler)

**OTHER**
- Hydraulically operated water reel:
  - Hose length 50 m
  - Hose size 1” (25 mm)
  - Must be used with the wall washing system
  - Warning lights, 1 unit:
    - Rotating beacon; red
    - Rotating beacon; blue

Additional equipment

**REMOTE CONTROL SYSTEM**
Radio control with 2 joysticks with cable support
Radio control with 4 joysticks with cable support
Radio controls are equipped with the same features as the cable remote.
Standard cable remote control included with additional radio remote control.

**HIGH VOLTAGE ELECTRICAL SYSTEM**
Soft start system for compressor, 690 V / 50 Hz

**FOR CONCRETE PUMP**
Emptying of concrete pump with diesel engine

**ACCELERATOR SYSTEM**
IBC container 1000 L, 1 or 2 pcs
Heating element kit for IBC container:
- Easily exchangeable jacket-type heating element
- 2 circuits each 1000 W, 240 VAC
- -5 ºC to 40 ºC capillary thermostat per circuit
- Includes separate insulator cover part for container (hole for the filling gap and mixer)
- Power supply is required for heating and mixing kits if used during operation
Accelerator mixing kit for IBC container:
- Electrically-driven mixing device
- Electric motor 0.37 kW 240 VAC
- Power supply is required for heating and mixing kits if used during operation
Power supply for heating and mixing kits:
- 6,3 kVA 230 V transformer capable of transforming voltages from 400 V to 690 V (covers voltages of 400, 440, 575, 660, 690 V)
- 6 pcs 230 V sockets
  - Allows heating and mixing kits be used during operation

**CONTROL SYSTEM**
Temperature and air pressure measuring kit:
- Concrete temperature
- Additive temperature
- Ambient temperature
- Nozzle air pressure
  - Temperature measuring and recording enables the concrete spraying conditions to be monitored

**FORM OIL SYSTEM**
Air pressure-driven system with hose reel:
- Tank capacity 40 L
- Hose length 30 m
- Working pressure 7 bar

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

FOR WALL AND MACHINE WASHING
Hydraulically operated pressure washer:
• Max. water pressure 180 bar
• Max. water flow 90 L/min
• 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 460 bar / 50 L/min

HOT CLIMATE KIT
Additional cooler for compressor internal oil system
Recommended for ambient temperatures from + 30 ºC up to max. + 45 ºC

OIL CONDITION MONITORING
Hydraulic oil diagnostic sensor
Boom and concrete pump hydraulic oil contamination monitoring and moisture % RH indicator
Gives alarm to NorSmart2 if the setting limits are exceed

OIL FILTRATION
Bypass filter kit
For concrete and boom oil circuit:
• 0,5 μm filtration, extremely clean oil
• Also absorbs the water from the oil
• Longer lifetime for the hydraulic components
• Reduces cost of ownership

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
Extra hand-held fire extinguisher (12 kg)
Toolbox and maintenance tools
2 wheel chocks with brackets
Reversing camera
400 L Stainless steel water tank
(When water tank is selected, only one 1000 L accelerator container can be used)
Large tool and storage box
Place for tools and some spare parts
(Only one 1000 L accelerator can be used when this extra equipment is selected)
Spare wheel
Text labels in: Fin / Por / GB / Swe / Rus / Nor / Ger / Fra / Spa / Ita
WLAN connection

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

RECOMMENDED SPARE PARTS FOR EARLY LIFE

Spare parts package: A complete package to make sure your machine runs with optimal uptime up to 1000 operation hours*.

Includes periodical maintenance parts and most critical spare parts related to e.g.:
- Engine (e.g. filters, belts)
- Chassis (e.g. wiper blades, throttle pedal connector)
- Hydraulics (e.g. filters)
- Electrics (e.g. sensors, work lights, solenoids, contacts)
- Boom (e.g. sliding parts, bearings, cylinders, seals, pins)
- Concrete pump (e.g. cutting ring, housing lining, kidney seal)
- Accelerator dosing system (e.g. display, I/O-modules, sensors)
- Spraying equipment (e.g. nozzle tip, washing ball, concrete hoses)
- Compressor, if applicable (e.g. filters)

*) In challenging operating environment 1000h of usage may not be reached with this spare parts package.

EXTENDED WARRANTY

Extended warranty extends the standard warranty period (12 months or 2000 usage hours) up to total 24 months or 3000 usage hours, whichever is reached first.

TRAINING AND EXPERTISE SERVICES

Available before and at the equipment delivery - and during the whole equipment life-time!

Product training:
- Operation and Maintenance
- Automation - NorSmart
- Foundation of electrics, hydraulics and mechanics
- Trouble-shooting

Process & operator improvement audit for:
- Concrete spraying
- Charging
- Scaling

Audit services to improve:
- Performance, availability, maintenance & repair efficiency, safety, quality, environmental aspects

SERVICE CONTRACTS FOR

- Spare parts supply
- Scheduled inspection
- Supervision
- Scheduled maintenance
- Preventive maintenance

ELECTRONIC MANUALS ON THE WEB

LinkOne electronic spare parts and instruction manuals

EQUIPMENT HAND-OVER SERVICES

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

SIDE VIEW 1
Basic machine. Transportation and driving dimensions, boom turned on the vehicle. Vehicle width 2500 mm

SIDE AND OVERVIEW 2
Basic machine. Transportation dimensions for container transport. Upper part of the cabin, concrete line, ladders and upper part of the boom must be removed
Spraymec 8100 VC

Dimensions

**DIMENSIONS**
- Length: 13150 mm
- Width: 2500 mm
- Height: 2830 mm
- Wheel base: 3800 mm
- Ground clearance: 340 mm

**TURNING RADIUS**
- Outer: 6750 mm
- Inner: 1850 mm

**WEIGHT**
- Operating: 14 500 kg

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

FRONT AND TOP VIEW
Basic machine. Required space to unfold boom from transport position to working position
Coverage Area of Spray Boom SB 508

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

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10/12
Spraymec 8100 VC

Max. reach

Min. section

COVERAGE AREA OF SPRAY BOOM SB 508

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

DEUTZ TCD 2011 L4 74,9 kW WITHOUT ACCELERATOR CONTAINER
Performance curve 100018270

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