

Compu-Spread PWS 17.3

Pre-Wetting Module

Variable Liquid Application Rate (Return Oil)

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- ▶ **Variable rate pre-wetting module can use return oil from the auger/conveyor motor to supply the manifold, which controls liquid application rates to the granular material.**

Applying liquid to a granular material before spreading is a commonly used process in modern snow and ice control. Rexroth PWS modules make use of the vehicle's hydraulic system to power a hydraulic motor, which in turn drives a gear pump that moves the pre-wetting liquid selected to the application spray bar or spray nozzles. Rexroth offers different methods to control the flow rate of the pre-wet fluid to be applied. Our spreader controllers are matched to these pre-wet modules to allow quick integration into the complete snow and ice control package.

The PWS 17.3 has a proportional flow control valve, which controls the flow rate to the hydraulic motor, which in turn varies the flow rate of the pre-wet liquid. Fluid supply can be from the auger/conveyor motor return or from a dedicated source. In the latter case the module can be configured for efficient load-sense functionality.

When connected to the appropriate Rexroth closed loop controller, the liquid application rate can be linked

proportionally to the auger/conveyor speed. The integral purpose-built flow meter ensures the user that the desired pre-wet flow rate is being applied regardless of system conditions, and provides system protection as well as an alarm in the case of 'no liquid' or external damage to the system. Process data logging is standard at Rexroth, allowing real-time or post event analysis and reporting of storm or season totals.

All PWS modules are integrated into a stainless steel enclosure for compactness, durability and protection against the elements. All fittings and hardware are selected or designed to resist the effects of corrosion and vibration.

Rexroth has a suite of products to complete your Pre-wet system, including reservoirs, spray bars, nozzles, plumbing kits and filler and flushing kits.

Technical Data

Specifications			
Hydraulic	Nominal Operating Pressure	100 bar	1450 psi
	Maximum Operating Pressure	140 bar	2000 psi
	Maximum Inlet Flow Rate	27 L/min	7 USGPM
	Fluid	Mineral Oil or ATF	
	Fluid Cleanliness Recommendation	per ISO 4406 (c): 19/17/14	
	Fluid Viscosity	5 to 400 cSt (10 to 100 preferred)	42 to 2000 SUS (60 to 500 preferred)
Electric	Solenoid Valve	12 VDC, 3.3 ohm resistance @ 20°C, 5.8 ohm (warm coil)	1.8 A max., PWM (dither) frequency 150 Hz
	Integral Pre-wet Liquid Flow Meter	Input voltage 4.5 to 24 VDC	Output signal 4.5 to 24 VDC pulsed, dependent on flow rate, specially configured for this application
Pre-Wet Circuit	Pump Design and Pressure Setting	Gear type, bronze housing with integral relief set at 2 bar	Gear type, bronze housing with integral relief set at 30 psi
	Pre-Wet Liquid Flow Rate	0 to 37 L/min	0 to 10 USGPM
Connections			
Fluid	Hydraulic	Manifold Feed (P) and Exhaust (T) Ports	#12 SAE "O" Boss
		Gauge port (LS) motor load pressure	#6 SAE "O" Boss
	Pre-Wet Circuit	Pump Inlet (C-IN) & Discharge (C-OUT)	3/4" male hose barb, PVC
		Air Bleed, With Shut-Off Valve	1/4" hose
Electrical	Solenoid Valve (at Enclosure)	AMP Junior Timer	
	Flow Meter (at Enclosure)	M12, 4 pin	
Dimensions			
Overall (H x W x D), Including Mounting		420 x 363 x 205 mm	16.5 x 14.3 x 8 inches
Weight (Assembly)		16.5 kg	36.4 pounds
Environmental			
Operating Temperature (Determined by Pre-Wet Gear Pump)		-30° to 80°C (-7° to 60° preferred)	-20° to 180° F (20° to 140° preferred)

Module enclosure is of stainless steel, suitably sealed and held closed with a rubber hood latch. Manifold is made of aluminum, anodized after machining. All cartridge valves are suitable for outdoor use. Maintaining the module in this enclosure will extend the life of all components and surfaces exposed to the harsh environment found in snow and ice control applications. This module is designed and built for use with pre-wet liquids commonly used in these applications. Please contact Bosch Rexroth Canada for any express compatibility approval requirement.

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All dimensions are approximate, intended for illustrative purposes only. Request a certified drawing before beginning construction or installation.