

Compu-Spread PWS 14.3 Pre-Wetting Module Variable Liquid Application Rate

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- **Closed loop variable rate pre-wetting module uses dedicated proportional hydraulic valve to control liquid application rates for direct liquid application or application on to 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 ensure quick integration into the complete snow and ice control package.

The PWS 14.3 requires a dedicated proportional hydraulic valve to vary the flow rate to the hydraulic motor, which in turn varies the flow rate of the pre-wet liquid. This valve can be a dedicated section of a Rexroth M4 bankable valve assembly, or a proportional cartridge valve in our compact SCB manifold series.

When connected to the appropriate Rexroth closed loop controller, 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. The enclosure design guarantees quick access for any service requirements. 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	15 to 400 cSt (20 to 43 preferred)	70 to 2000 SUS (100 to 200 preferred)
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
	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
Connections			
Fluid	Hydraulic	Motor Feed (P) and Exhaust (T) Ports	#6 JIC 37° flare
	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	Pre-Wet Liquid Flow Meter (at Enclosure)		M12, 4 pin connector
Dimensions			
Overall (H x W x D), Including Mounting		369 x 325 x 205 mm	14.5 x 12.8 x 8 inches
Weight (Assembly)		12 kg	26.6 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. 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.