

# Compu-Spread PWS 16.3

## Pre-Wetting Module

### Single Ratio/Fixed Liquid Application Rate

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- ▶ **Single ratio pre-wetting module uses return oil from the auger/conveyor motor to drive the pre-wet pump to vary liquid application rates on granular material. A control manifold limits the maximum application rate.**

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 16.3 uses hydraulic fluid from the auger/conveyor motor return to drive the pre-wet motor-pump set, so the pre-wet output flow varies directly with auger/conveyor speed. The maximum pre-wet flow rate can be adjusted by limiting the hydraulic motor speed using the integrated manual flow control valve. Once it is set the pre-wet flow rate will not exceed this limit when the

incoming flow rate is higher than this setting. A solenoid valve in the manifold is energized to enable the pre-wet mode, activated by an appropriate Rexroth spreader controller or with an on/off switch.

When connected to a Rexroth controller, the integral pressure switch fitted to the pre-wet circuit signals the operator when a low pressure condition exists, typically caused by no liquid at the pump inlet.

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	15 to 400 cSt (20 to 43 preferred)	70 to 2000 SUS (100 to 200 preferred)
Electric	Solenoid Valve	12 VDC, 7.2 ohm resistance, 20W nominal	1.7 A (cold coil), 1.2 A (hot coil)
	Pressure Switch	12 VDC, 5A, single pole double throw	Adjustable pressure range 5-30 psi
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 Pressure Switch	Adjustable from 0.4 to 2 bar	Adjustable from 5 to 30 psi
Connections			
Fluid	Hydraulic	Manifold Feed (P) and Exhaust (T) Ports	#12 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
	Pressure Switch (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)	16.2 kg	35.7 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.

Bosch Rexroth Canada  
490 Prince Charles Drive S  
Welland, ON L3B 5X7  
Phone: (905) 735-0510  
Toll Free: 1-877-COMPU-11  
info@boschrexroth.ca  
www.boschrexroth.ca/cs

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