

DELAVAN

RollerPRO

Roller Pumps

6900 Series Roller Pump



Installation • Operation • Repair • Parts

Delavan Fluid Power RollerPRO pumps are the #1 field proven sprayer pumps in the industry capable of accepting a variety of liquids for different applications. Delavan designs, engineers and manufactures a wide variety of roller pumps to meet the widest range of needs our customers demand. To ensure the best performance for your investment, we incorporate such features as "Ultra" rollers, heavy-duty sealed bearings, Viton seal rings, stainless steel shafts and rotors, and close tolerance machining. All standard. All Delavan RollerPRO pumps are 100% field serviceable saving you precious time and money when needing to replace rollers.

6900 Series Specifications

6900C - 6 ROLLERS, 22.8 GPM, CAST IRON, 5/8" SOLID SHAFT, 3/4" NPT, CLOCKWISE ROTATION, 150PSI

6900C-R - 6 ROLLERS, 22.8 GPM, CAST IRON, 5/8" SOLID SHAFT, 3/4" NPT, COUNTER CLOCKWISE ROTATION, 150PSI

6901C - 6 ROLLERS, 22.8 GPM, CAST IRON, 5/8" HOLLOW SHAFT, 3/4" NPT, CLOCKWISE ROTATION, 150PSI

6900DSS - 6 ROLLERS, 22.8 GPM, DIAMOND STAINLESS STEEL, 5/8" SOLID SHAFT, 3/4" NPT, CLOCKWISE ROTATION, 150PSI

6900DSS-R - 6 ROLLERS, 22.8 GPM, DIAMOND STAINLESS STEEL, 5/8" SOLID SHAFT, 3/4" NPT, COUNTER CLOCKWISE ROTATION, 150PSI

DPK-6900C - ROLLER PRO 6900C PUMP WITH QUICK COUPLER (90200) & TORQUE BAR AND CHAIN

DPK-6900DSS - ROLLER PRO 6900DSS PUMP WITH QUICK COUPLER (90200) & TORQUE BAR AND CHAIN

Materials of Construction

Housing: Cast Iron with Blue Epoxy Corrosion Resistant Paint or Diamond Stainless Steel

Rollers: Six 3/4" Ultra Rollers

Shaft Seals: Viton Cartridge type lip seals

Fasteners: Stainless Steel

Weight: 9 lbs

Dimensions (W x D x H): 6.5" x 5.5" x 4.5"

Shaft: 6900C, 6900C-R & 6901C, 5/8" extra fine finish 404 SST

6900DSS & 6900DSS-R, 5/8" extra fine finish 416 SST

Bearings: Permanently-lubricated, heavy duty sealed bearings.

6900 Series Performance Chart

Note that the numbers in table are approximates. Pumps may be ran at different RPM's than specified in table, but doing so will change performance of pump. All values in chart are Gallons Per Minute (GPM).

PSI	540 RPM	1000 RPM	1200 RPM
0	10.5	19.6	22.8
20	9.7	19	22
40	8.6	18.4	21.3
80	8.1	17.5	20.5
100	6.9	16.3	19.7
150	5.5	15	18.9

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If you are having any issues with your Delavan Fluid Power Product please call 1-866-DELAVAN and speak to our technical support team before returning to store. We are happy to help with any troubleshooting or product issues.

TRACTOR PTO INSTALLATION:

Secure the PTO coupling to the pump shaft by sliding the coupling as far forward as possible without touching the bearing shield and tightening the set screws down on the key of the pump shaft. Slide coupling onto the PTO shaft and secure by pulling collar back on PTO quick coupler, sliding onto PTO shaft and locking into place.

Check pump rotation. An arrow on the pump indicates proper rotation direction.

To keep the pump from rotating with the shaft, set a torque arm and short length of chain. Bolt one end of the chain to the torque arm and secure the other to a stationary part of the tractor. Be sure the chain is at a point directly above or below the torque arm. Fastening the torque chain to point forward or backward from pump center will create a bending force on the pump causing shaft to break. Do not fasten rigidly to the tractor.

With the pump in position, connect the inlet hose to the "IN" port and the discharge hose to the "OUT" port. Make sure both hose connections are tight. A loose connection will permit air to be drawn in and the pump will not prime. Use at least a 3/4" diameter hose on the inlet line.

The 4900 Series RollerPRO is the only pump that can not be directly connected to a tractor PTO shaft. If you wish to use it on a PTO, a gearbox is required to increase the speed to 1800-2600RPM.

ENGINE INSTALLATION:

The pump base can be mounted on a frame and aligned for either direct-drive or belt and pulley drive. When mounting for direct-drive, be sure pump and engine shafts are in alignment. A flexible drive coupling will compensate for fractional misalignment. When mounting for pulley drive, be sure the engine and pump shaft are parallel. Align pulleys and keep them as close to shaft bearing as possible. Please review pump maximum RPM Specification.

SPRAYER SET-UP:

Selecting the correct size and category of hose is vital you running your system at optimal performance. Ensure all hoses and accessories are air tight. Delavan recommends using a thread sealant to ensure a water tight connection. Failure to have a watertight system could result in pressure and flow loss.

Inspect all hoses, fittings, valves and accessories for pressure ratings to ensure parts are rated for maximum pressure of the pump. Roller Pumps will not work if direction of flow is in wrong direction. Roller pump castings will have "IN" and "OUT" stamped on the inlet and outlet.

To prevent damage to pump a strainer must be installed in the suction line of system. Sediment or granular can get lodged in the pump, sprayer hoses or nozzle tips causing damage. Clean strainer often to avoid clogging.

Ensure a bypass line is installed and operational before starting and adjust accordingly.

Keeping all hoses to a minimum length will ensure your system works at optimal performance. Avoid any looped sections of hose to prevent trapping air.

Before starting for first time and after extended periods without use, a few squirts of light oil in the pumps inlet and outlet ports will help lubricate and start the Roller Pump.

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WARNING: Pumping corrosive or abrasive liquids will lead to deterioration of parts including rollers, rotors, seals, shaft and other essential components. Ensure the pump is only used with compatible liquids. Never run pump dry. Running pump dry can overheat the pump causing the seal failure and in extreme cases melting rollers and damaging other internal parts. Never close the discharge side of pump while pump is running unless a bypass/return to tank is installed. Failure to follow these warnings could result in voiding the product warranty.

MAXIMUM RECOMMENDED OPERATING TEMPERATURE: 140°F (60°C)

PRIMING YOUR PUMP:

Delavan RollerPRO pumps must be gravity fed for priming. Failure to do so will cause the pump to run dry. Keep the inlet/suction hose as short as possible and avoid any kinks, bends, elbows or any other orientation that would restrict the flow into the pump.

MAINTENANCE:

Delavan RollerPRO pumps are equipped with permanently lubricated bearings. They do not require further lubrication.

WINTERIZING OR EXTENDED STORAGE:

Thoroughly flush the pump of all chemical residue. A solution of approximately one cup of ammonia will in 10 gallons of water will dissolve most residue remaining in pump. Drain all remaining fluid from pump. Pour RV Antifreeze into the pump and rotate by hand. Squirt light oil in the pump and rotate to cover the inner surfaces with a protective film.

SERVICING AND REPAIR:

Exclusive, patent pending Delavan RollerPRO pumps are the only field serviceable pump on the market. The only tool required to service a RollerPRO pump is a wrench. The pump remains mounted on drive shaft - no plumbing disassembly is required. Pump servicing takes about 3 minutes.

1. Loosen and remove four bolts on the end plate of pump and slide off.
2. Replace rollers (or other parts from the RollerPRO repair kit as necessary)
3. Slide on end plate, tighten bolts and go!

TROUBLESHOOTING AND FAQ'S:

Why does my pump have low pressure?

- Check inlet line is fully immersed in water
- Pump was not primed properly, disconnect inlet hose and re-attach ensuring there is liquid in your pump before starting.
- Check and clean inlet strainer.
- Inlet line air leaks. Check all connections for leaks, reseal with sealant of Teflon Tape.
- Check all hoses for blockage, kinks, trapped air or hose collapse.
- Check pump is turning in correct direction.(A reverse rotation pump will not work on PTO.)
- Check if fittings are partially blocked or too small.
- Check rollers for wear. Replace if needed.

How do you prime a roller pump?

- All roller pumps must be gravity fed during priming. Roller pumps need liquid in the pump while priming or the heat due to friction can cause rollers and seals to melt. Never run a roller pump dry.

