



R440 SERIES MODELS

- R440C - Cast Iron Series (General AG Use)
- R440SS - Stainless Steel Series (For use with harsh chemicals like Roundup)
- R441C - Cast Iron Series ½" Hollow shaft (General Ag Use)
- R441SS - Stainless Steel ½" Hollow Shaft (For use with harsh chemicals like Roundup)

R440 SERIES SPECIFICATIONS

4 Roller Specifications	
Number of Rollers	4 Max Rollers
Roller Dimensions	1/2"
Port Size	3/4" FNPT
Shaft Diameter	5/8" Solid or 1/2" Hollow
Maximum Operational Speed	2600 RPM
Shaft Rotation	CCW (See Rotation Arrow)
Cap Bolt Size	5/16-18UNC Thread x 5/8"

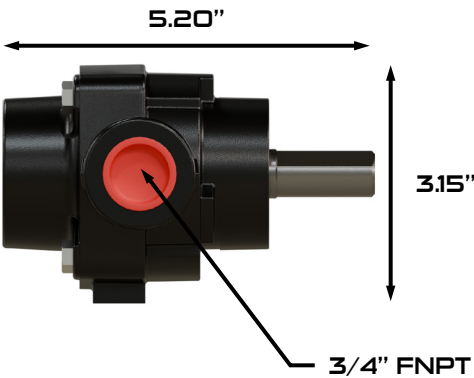
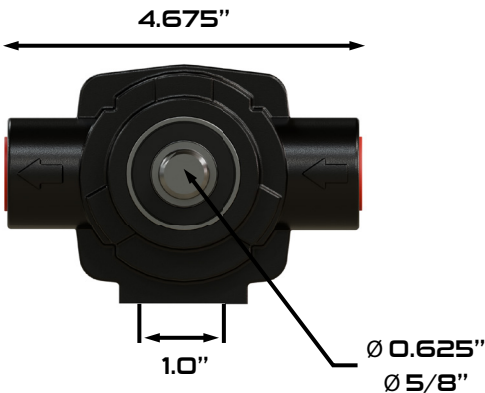
INTENDED USE

RollMax Roller pumps are intended for creating or boosting pressure and, based on the materials of construction, will work with a variety of fluids. RollMax pump will work in a variety of environments but should never be used to pump liquids above 140F (60C) or below 34F (1C), or when the ambient temperature is above 140F (60C). Any uses outside of those specified in the manual are considered misuses and are prohibited. Contact Remco for any questions regarding specific applications.

MATERIALS OF CONSTRUCTION

- Housing: Cast iron (Black epoxy paint) or Stainless Steel
- Shaft Seals: Viton
- O-Ring Seal: Viton
- Shaft: Steel over molded with hardened Nylon
- Roller & Rotors: Steel over molded with hardened nylon
- Bearings: Permanently lubricated, heavy-duty sealed ball bearing/needle bearing

4 Roller Specifications			
PSI	1800 RPM	2200 RPM	2600 RPM
0	6.5	8.0	9.4
20	5.8	7.0	8.5
40	5.1	6.2	8.0
100	4.5	5.6	7.5
150	4.0	5.5	7.3



PTO SHAFT INSTALLATION INSTRUCTIONS

1. Secure the PTO Coupling to the pump shaft by sliding the coupling forward and tightening the set screw(s) on to the pump's shaft. Do Not Allow coupling to touch pump's bearing.
2. Slide the Coupling onto the PTO Shaft and secure it by pulling the coupler collar back allowing it to lock onto the PTO Shaft.
3. Check pump's rotation arrow to ensure proper rotation.
4. To prevent the pump from rotating during operation, install a torque bar and chain (Remco PN: RMTBC).
 - a. Bolt one end of the chain to the torque bar.
 - b. Secure the other end to a stationary part of the tractor, be sure the chain is either directly above or below the torque bar.
 - c. Do not fasten pump rigidly to the tractor.
5. Once the pump is in position, install the inlet and outlet hoses according to the directional arrows located on the pump ports, $\frac{3}{4}$ " minimum hose size.

GAS ENGINE/DIRECT DRIVE INSTALLATION GUIDE

1. Make sure that the speed (RPM) of the gas engine or electric motor is within the maximum RPM rating of your RollMax pump.
2. Make sure that the shaft rotation is correct between the pump and gas engine or electric motor.
3. Mount the gas engine or electric motor into position on base. Do not pump abrasive liquids.
4. Line up the pump shaft using a straight edge, shim the pump if necessary to match the shaft height of the gas engine or electric motor.
 - Shaft ends should not be touching.
5. Mark the position of the pump and install the appropriate flexible coupler.
6. Tighten the pump mounting; then tighten the set screw of the couplers on each shaft.

ROLLER PUMP OPERATIONAL INSTRUCTIONS

1. Be sure the inlet hose is clear, and the outlet (discharge) hose is open).
2. Begin rotating the pump, fluid should begin moving liquid within 10-15 seconds (Tip: Add a small squirt of oil to the inlet before operation to improve priming).
3. Never run the pump dry, this will create excessive heat and damage the internal components.
4. Do not pump abrasive liquids.
5. Do not use rusty or sandy water supply.
6. Do not dead head the pump. Closing off the outlet side of the pump without a pressure control valve installed will cause damage to the internal components (Install a simple relief or bypass valve to outlet side of the pump).

RECOMMENDED ROLLER PUMP MAINTENANCE**AFTER SPRAYING AND STORAGE:**

1. Fully flush and neutralize with clear water. You can add 1 cup of ammonia to 10 gallons of water to help dissolve residue inside of the pump housings.
2. Squirt a lightweight oil into the pump's ports, then rotate the shaft 3-5 rotation to ensure oil covers all internal surfaces.
3. Skipping this step could result rust accumulation inside the pump hindering performance.
4. Antifreeze solution can also be used to prevent freezing.
5. Plug pump's ports and store in a warm dry location until the pump is going to be put back into service.

ROLLMAX IS REBUILD READY

Remco's RollMax series can easily be serviced and rebuilt in a matter of minutes, the only tool required is a wrench. All of this is possible while the pump remains attached to the drive shaft and the plumbing remains intact.

1. Loosen and remove the 4 cap bolts.
2. Easily slide the pumps endplate off the shaft.
 - Be careful not to damage the shaft seal, and lubricate before reinstalling.
3. Inspect and replace worn rollers as needed with our universal repair kits (Remco PN: R440RK).
4. Carefully reinstall pump endplate and cap bolts.
5. RollMax is rebuilt and ready to spray.

RollMax Part Breakout	Description	Qty
RP-EP4SSCW	RollMax 4 Roller End Plate, Stainless Steel, Machined for 5/8" Shaft	1
RP-EP4CICW	RollMax 4 Roller End Plate, Cast Iron Painted, Machined for 5/8" Shaft	1
RP-B4SSCW	RollMax 4 Roller Body, Stainless Steel, Machined for 5/8" Shaft	1
RP-B4CICW	RollMax 4 Roller Body, Cast Iron Painted, Machined for 5/8" Shaft	1
RP-OSEP468	RollMax End Plate and Body Shaft Seal	2
RP-RBB46	RollMax 4/6 Roller Body Ball Bearing, 40MM Sealed	1
RP-NBEP468	RollMax Needle Bearing	1
RP-ORING4	RollMax 4 Roller Body O-ring Seal	1
RP-PK4	RollMax 4 Roller Pill Key	1
RP-NEPI4	RollMax 4 Roller Nylon End Plate Insert	1
RP-S4	RollMax 4 Roller 5/8" Solid Shaft, Hardened	1
RP-HS4	RollMax 4 Roller 1/2" Hollow Shaft, Hardened	1
RP-CS4	RollMax 4 Roller Cap Bolt, 5/16-18 Thread x 5/8 Length, Grade 5 Hex head	4
RP-ROM4	RollMax 4 Roller Rotor, Overmold, Grilamid Hardened Nylon	1
RP-R4	RollMax 1/2" Roller, Grilamid Hardened Nylon	4
RP-SRS	Snap Ring, Small	2
RP-NP46-XX	RollMax 4 Roller Name Plate, - Contact Remco	1
R440KK: RollMax Universal Repair Kit for R440 Series		
RP-R4	RollMax 1/2" Roller, Grilamid Hardened Nylon	4
RP-OSEP468	RollMax End Plate and Body Shaft Seal	2
RP-NBEP468	RollMax Needle Bearing	1
RP-SR6	RollMax 6 Roller Body O-ring Seal	1
RP-PK4	RollMax 4 Roller Pill Key	1
RollMax Accessories		
RMTAC	Torque Bar and Chain - For PTO mounted pumps to prevent rotation	1
RMC585410	RollMax Multi-Speed Quick Coupler - 5/8" Pump shaft 1-3/8" PTO 540 or 1000 RPM	1



Symptom	Probable Cause(s)	Corrective Action
Pump Does Not Prime	Leak in the Line	Check hose/fittings for leaks, tighten as needed
	Obstruction in the inlet line	Inspect hose and remove any obstructions
	Inlet hose suctioned to bottom/side of tank	Cut or notch a "V" in the end of the inlet hose
	Rollers stuck in pump	Remove end plate and inspect/replace rollers
	Pump seals leaking air	Replace seals
	Pump turning in wrong direction	Correct the pump's rotation
Loss of Pressure	Clogged inlet strainer	Regularly check and clean strainer
	Kinked or blocked inlet hose	Inspect and repair inlet hose as needed
	Air leak on inlet side of pump	Check hose/connections for leaks, use pipe thread sealer and re-tighten as needed
	Low relief valve setting or weakened spring	Check relief valve and correct the setting or replace the spring
	Faulty gauge	Replace gauge
	Pump seals leaking air	Replace seals
	Worn out nozzle orifices	Replace nozzles
	Worn out pump	Repair pump using RollMax universal repair kit
Pump Will Not Turn	Corrosion (rust), scale, or residue inside pump	Clean if possible or replace pump
	Solid object lodged in pump	Disassemble pump and remove obstruction
Excessive Noise/Vibration	Loose or damaged coupler	Replace coupler
	Bent pump shaft	Replace pump
	Worn out rollers	Repair pump using RollMax universal repair kit
	Incorrect pump rotation	Correct the pump rotation
	Excessive speed over 1000RPM	Reduce shaft speed to 1000RPM or below

WARRANTY INFORMATION

REMCO warrants its products to be free from defects in material and workmanship on all products sold by REMCO for resale or for use in purchasers' own business or original equipment manufacturer. Under normal use, maintenance and service (rental use excluded) the following terms apply: For all REMCO products, the warranty will last for a period of one year from date of manufacture, or (1) year use with proof of purchase, not to exceed (2) years in any event. REMCO's obligation under this warranty shall be limited to replacing or repairing at REMCO's discretion, any such product or part which must be returned to REMCO's factory with a Return Material Authorization Number (RMA), transportation charges approved by REMCO or prepaid, and which upon examination, is found to REMCO's satisfaction to have been defective under the terms of this warranty. No credit will be allowed against future purchases for items returned as defective under the terms of REMCO's warranty. This warranty does not extend to any products, which have been altered or modified outside the REMCO factory, to any products that have not been properly maintained, nor does it apply to units that are returned in an unassembled condition. Furthermore, the warranty does not extend to pumps that are non-compliance with REMCO's Engineering Standards. This includes, but is not limited to, pumps ordered without an integral pressure control mechanism. The warranty guarantees that products will perform to REMCO's flow and pressure specifications throughout the life of the warranty. The warranty does not cover wear, appearance, misuse, abuse, misapplication or external water damage. If the returned product is found not to be defective under the conditions of this warranty, a charge will be made for repair or replacement.

Brush wear may be limited to 1000 hours or less.

This is a Limited Warranty. It covers the product only and the extent of the coverage is limited to the cost of the product. As the manufacturer has no control over shipping, handling and installation, the warranty cannot cover water damage, or any other damage, caused by a leak or other malfunction.

THIS WARRANTY IS IN LIEU OF ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING IMPLIED WARRANTIES OR WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE. NO PERSON IS AUTHORIZED TO GIVE ANY OTHER WARRANTY OR ASSUME OBLIGATION OR LIABILITY ON REMCO'S BEHALF. REMCO SHALL NOT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND INCURRED BY THE REASON OF THE USE OR SALE OF ANY DEFECTIVE PRODUCT AND PART. THIS WARRANTY SHALL BE GOVERNED BY THE LAWS OF THE STATE OF MINNESOTA, WITH ANY DISPUTE OR CLAIM VENUED OR HEARD IN THE STATE OF MINNESOTA.