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Goulds GT15

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Model: GT15 | Brand: Goulds

1. PRODUCT OVERVIEW

The Goulds GT15 IRRI-Gator is a self-priming single-phase centrifugal pump designed for various water transfer applications. Its robust construction and efficient design make it suitable for lawn sprinkling, irrigation, air conditioning systems, heat pumps, and dewatering tasks.



Figure 1: Goulds GT15 IRRI-Gator Self-Priming Centrifugal Pump. This image displays the blue centrifugal pump with its motor and pump housing, featuring the 'GOULDS WATER TECHNOLOGY IRRI-GATOR' label.

Key Features:

- **Self-Priming Design:** Once initially primed with water, the pump will re-prime automatically when the water level rises above the end of the suction pipe.
- **Back Pullout Design:** Facilitates disassembly for service without disturbing existing piping connections.
- **Two-Compartment Motor:** Provides easy access for motor wiring and replacement of components.
- **Bolt-Down Diffuser:** Ensures positive alignment with the impeller and includes a stainless wear ring for extended performance in abrasive conditions.
- **FDA Compliant Impeller:** Made from glass-filled Noryl, offering corrosion and abrasion resistance.
- **Corrosion Resistant Casing:** Cast iron construction with an electro-coat paint process applied inside and out, then baked on for enhanced durability.
- **Continuous Operation:** Designed to operate continuously within the motor manufacturer's recommended working limits without damage.

2. SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of your GT15 pump. Ensure all connections are secure and leak-free.

2.1 Unpacking and Inspection

Carefully remove the pump from its packaging. Inspect for any signs of shipping damage. Report any damage to your supplier immediately.

2.2 Mounting the Pump

Mount the pump on a solid, level surface to minimize vibration. Ensure adequate ventilation around the motor.

2.3 Piping Connections

- **Suction Connection:** 1½" NPT
- **Discharge Connection:** 1½" NPT

Use appropriate pipe fittings and sealants to ensure watertight connections. Avoid putting strain on the pump casing with misaligned piping.

2.4 Electrical Connections

The GT15 pump operates on a single phase motor. Refer to the motor's nameplate for specific voltage requirements. For 1.5 HP models, the voltage is 230V. Ensure the electrical supply matches the pump's requirements and that all wiring is performed by a qualified electrician in accordance with local electrical codes.

- **Voltage:** 230 Volts
- The motor includes a built-in overload protector with automatic reset.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Always follow safety guidelines during installation and operation.

3. OPERATING INSTRUCTIONS

Follow these steps for safe and effective operation of your GT15 pump.

3.1 Initial Priming

1. Before initial startup, remove the priming plug (if applicable) and fill the pump casing completely with water.
2. Replace the priming plug securely.
3. Ensure all valves in the suction and discharge lines are open.

3.2 Starting the Pump

Once primed, turn on the electrical power to the pump. The self-priming feature will allow the pump to re-prime itself if the water level rises above the suction pipe end after initial priming.

3.3 Continuous Operation

The GT15 pump is designed for continuous operation within its specified limits. Monitor the pump during initial operation to ensure proper function and absence of unusual noises or vibrations.

3.4 Operating Limits

- **Maximum Working Pressure:** 125 PSIG
- **Maximum Water Temperature:** 140° F (60° C)
- **Reprime Capabilities:** Up to 25 feet suction lift

4. MAINTENANCE

Regular maintenance ensures the longevity and efficiency of your pump.

4.1 General Inspection

Periodically inspect the pump for leaks, unusual noises, or excessive vibration. Check electrical connections for tightness and signs of corrosion.

4.2 Mechanical Seal

The pump features a mechanical seal with carbon/ceramic faces and BUNA elastomers, designed to prevent dry running. If leaks occur around the shaft, the mechanical seal may require inspection or replacement. This is a specialized task and may require professional service.

4.3 Disassembly for Service

The back pullout design allows for pump disassembly without disturbing the piping. This facilitates access to the impeller, diffuser, and mechanical seal for inspection or replacement. Always disconnect power before attempting any service.

4.4 Winterization (if applicable)

In climates where freezing temperatures occur, drain the pump completely to prevent damage from ice expansion. Refer to specific local guidelines for winterizing water systems.

5. TROUBLESHOOTING

This section provides guidance for common issues. For complex problems, consult a qualified technician.

5.1 Pump Fails to Prime or Loses Prime

- **Check water level:** Ensure the suction pipe end is submerged and the water level is sufficient for re-priming.
- **Inspect for air leaks:** Check all suction line connections, fittings, and the pump casing for air leaks. Even small leaks can prevent priming.
- **Verify initial priming:** Ensure the pump casing was completely filled with water during initial setup.

5.2 Reduced Flow or Pressure

- **Check for blockages:** Inspect the suction line, impeller, and discharge line for any obstructions.
- **Verify voltage:** Ensure the pump is receiving the correct voltage (230V). Low voltage can reduce performance.
- **Inspect impeller/diffuser:** Wear or damage to the impeller or diffuser can reduce efficiency.

5.3 Pump Leaks

- **Check pipe connections:** Tighten any loose fittings on the suction and discharge sides.
- **Inspect mechanical seal:** Leaks from the shaft area typically indicate a worn or damaged mechanical seal. This requires replacement.
- **Casing gasket:** Ensure the casing gasket is properly seated and not damaged. One user reported a misaligned rubber gasket causing a leak, which was resolved by correctly seating it.

5.4 Motor Overheating or Tripping Breaker

- **Check ventilation:** Ensure the motor has adequate airflow for cooling.
- **Verify voltage and amperage:** Incorrect voltage or excessive current draw can cause overheating.
- **Internal motor issue:** If the problem persists, the motor may require professional inspection.

6. SPECIFICATIONS

Attribute	Detail
Brand	Goulds
Model Number	GT15
Style	Above Ground
Horsepower	1.50 hp
Voltage	230 Volts
Power Source	AC
Pipe Connections (Suction/Discharge)	1½" NPT
Maximum Flow Rate	64 Gallons Per Minute (GPM)
Maximum Lifting Height	25 Feet (Reprime Capabilities)
Maximum Working Pressure	125 PSIG
Maximum Water Temperature	140° F (60° C)
Material	BUNA Elastomers, Cast Iron, Stainless Steel, Carbon, Ceramic
Product Dimensions (L x W x H)	22" x 9" x 10"
Item Weight	60 Pounds
Rotation	Clockwise when viewed from motor end

7. WARRANTY AND SUPPORT

For warranty information, technical support, or to purchase replacement parts, please contact Goulds Pumps customer service or visit their official website. Keep your purchase receipt and model number (GT15) readily available when contacting support.