



RGS2012E1

S or E Retrofit Kit

SUBMERSIBLE GRINDER PUMP

INSTALLATION, OPERATION AND TROUBLESHOOTING MANUAL

SAFETY INSTRUCTIONS

TO AVOID SERIOUS OR FATAL PERSONAL INJURY OR MAJOR PROPERTY DAMAGE, READ AND FOLLOW ALL SAFETY INSTRUCTIONS IN MANUAL AND ON EQUIPMENT.

THIS MANUAL IS INTENDED TO ASSIST IN THE INSTALLATION AND OPERATION OF THIS UNIT AND MUST BE KEPT WITH THE UNIT.



This is a **SAFETY ALERT SYMBOL**. When you see this symbol on the pump, the controller or in the manual, look for one of the following signal words and be alert to the potential for personal injury or property damage.

⚠ DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTE: INDICATES SPECIAL INSTRUCTIONS WHICH ARE VERY IMPORTANT AND MUST BE FOLLOWED.

THOROUGHLY REVIEW ALL INSTRUCTIONS AND WARNINGS PRIOR TO PERFORMING ANY WORK ON THIS CONTROLLER.

MAINTAIN ALL SAFETY DECALS.

ALL OPERATING INSTRUCTIONS MUST BE READ, UNDERSTOOD, AND FOLLOWED BY THE OPERATING PERSONNEL. GOULDS WATER TECHNOLOGY ACCEPTS NO LIABILITY FOR DAMAGES OR OPERATING DISORDERS WHICH ARE THE RESULT OF NON-COMPLIANCE WITH THE OPERATING INSTRUCTIONS.

1. This manual is intended to assist in the installation, operation and repair of the system and must be kept with the system.
2. Installation and maintenance **MUST** be performed by properly trained and qualified personnel.
3. Review all instructions and warnings prior to performing any work on the system.
4. Any safety decals **MUST** be left on the pump.
5. The system **MUST** be disconnected from the main power supply before attempting any operation or maintenance on the electrical or mechanical part of the system. Failure to disconnect electrical power before attempting any operation or maintenance can result in electrical shock, burns or death.

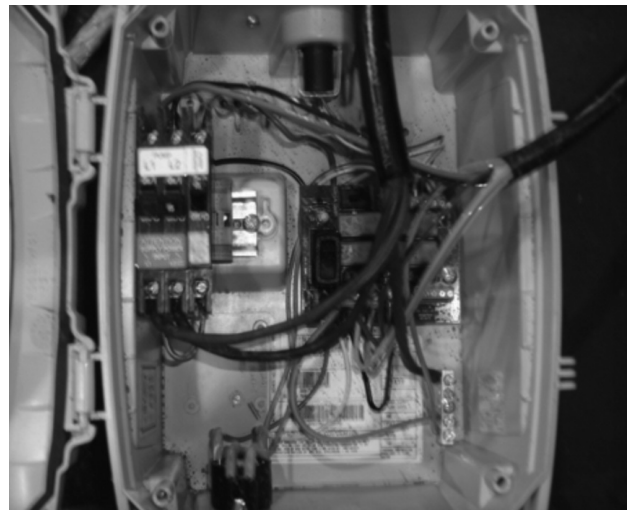
PUMP INSTALLATION

Grinder pumps should be installed in a basin that is vented per the local plumbing code in your area. The pump is not to be installed in locations that are hazardous in accordance with the NEC. All plumbing should be beneath the frost line for the region station is installed in to ensure that pipes do not freeze.

⚠ CAUTION Never lift the pump by the cord. Use the lifting rope provided with the retro-fit kit for lifting.

OLD PUMP REMOVAL

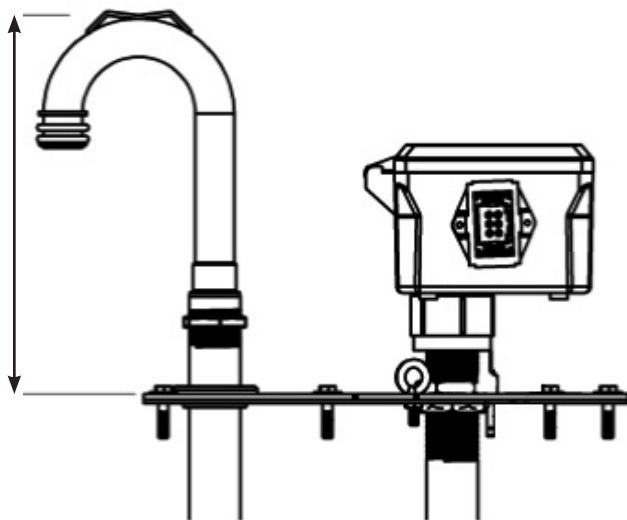
1. Supply power must be turned off
2. Goulds Water Technology recommendation is to use a 20 amp circuit breaker. Check the existing panel for breaker size and replace if necessary.



3. Remove the basin cover from the current station
4. If basin is full of water, pump water out with separate pump or vacuum truck. Discard waste in accordance with local, state and national codes.
5. Disconnect quick disconnect.

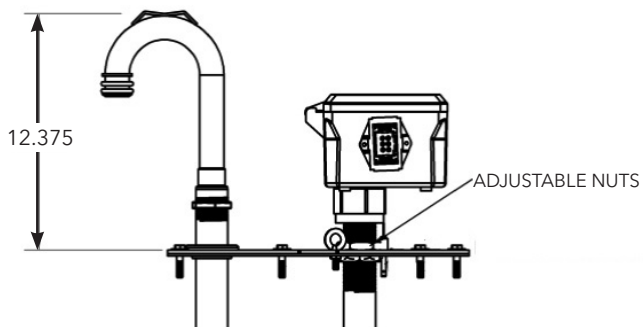


6. Check connections to make sure they are clean and dry.
7. Inspect connection, there are two styles round connectors- shown above and rectangular connectors. Ensure that the correct Retrofit Kit has been purchased for the style connection being replaced.
8. Remove bolts from cover plate of current unit
9. Close valve of current unit
10. Secure rope to hooks on cover. Lift Unit from basin.
11. Measure distance on Candy cane for setting up new retrofit - see below.



INSTALLING THE GOULDS WATER TECHNOLOGY RETROFIT KIT

1. Adjust the center nut until the candy cane elbow distance measured above matches the old unit. (This is pre-set at factory to 12.38".) Secure adjustable nuts with Loctite so that vibration does not loosen the nut.



2. Check floats so that they have an unobstructed free area in the tank. (These are pre-set at the factory.)

3. Retighten all connections, check hardware, and ensure that no wires or any other obstructions are in way of pump cutters.
4. Make sure all fittings are tight.
5. Apply gasket tape to the bottom of the cover perimeter, poke holes through the tape at the cover bolts entries.
6. Lubricate O-rings on the discharge elbow to ease installing into the receiver.
7. Using rope lower the grinder assembly in the basin. Align cover tabs to tank slots.
8. Align discharge elbow to Receiver. Unit will rest on the tank flange with the elbow fully inserted in receiver.
9. Open valve to latch with the discharge elbow. Adjustment to nut may need to be made to alter height at this point.
10. Once in place and latched install the 6 bolts back into the cover plate.
11. Reconnect the power adapter from the power to the new retrofit kit adapter.
12. Check electrical resistance to make sure that the panel is free of shorts and ground faults.
13. Check grounding connections is made properly

⚠ WARNING Licensed electricians should be present for panel or breaker energizing. If faults caused by damage or poor installation have not been detected, serious damage can result when power is applied.

14. Turn on power to breakers.
15. Fill tank to test if pump and floats operate properly. See troubleshooting chart for problems encountered.
16. Once tested and operating properly replace the basin cover.
18. Affix nameplate provided to the control panel so the new unit can be identified as a RGS2012E1S or E1E Retrofit Kit by Goulds Water Technology.

Pump specifics can be found under the standard Goulds Water Technology product RGS2012 on the website www.completewatersystems.com, Goulds Water Technology Wastewater tab.

TROUBLESHOOTING CHART



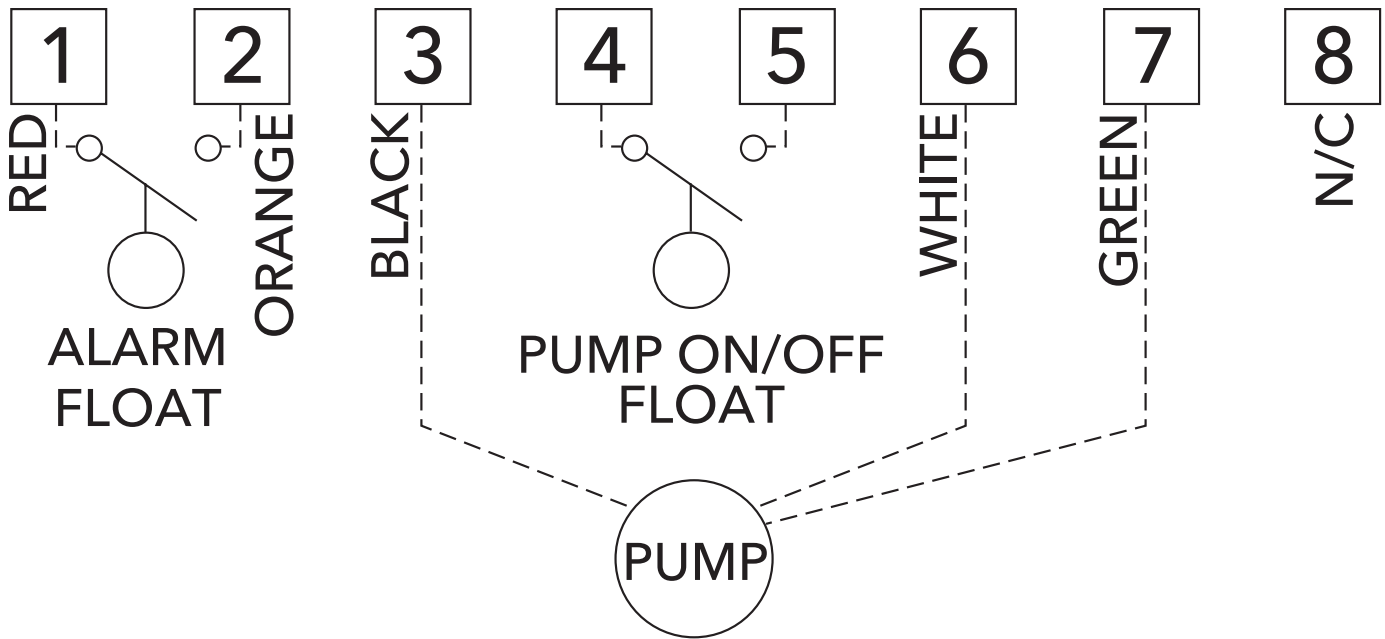
FAILURE TO DISCONNECT AND LOCKOUT ELECTRICAL POWER BEFORE ATTEMPTING ANY SERVICE CAN CAUSE SHOCK, BURNS OR DEATH.

| SYMPTOM | PROBABLE CAUSE | RECOMMENDED ACTION |
|---|--|--|
| MOTOR NOT RUNNING | Motor thermal protector tripped. | Allow motor to cool. Insure minimum pump submergence. Clear debris from casing and impeller. |
| | NOTE: If circuit breaker "OPENS" repeatedly, DO NOT reset. Call qualified electrician. | Determine cause, call a qualified electrician. |
| a) Manual operation | Pump impeller binding or jammed. | Check motor amp draw. If two or more times higher than listed on pump nameplate, impeller is locked, motor bearings or shaft is damaged. Clear Inadequate electrical connection debris from cutter, casing and impeller, consult with dealer. |
| | Power cable is damaged. | |
| b) Automatic operation | Inadequate electrical connection in control panel. | Resistance between power leads and ground should read infinity. If any reading is incorrect, call a qualified electrician. |
| | No neutral wire connected to control panel. | Inspect control panel wiring. Call a qualified electrician. |
| NOTE: Check the pump in manual mode first to confirm operation. If pump operates, the automatic control or wiring is at fault. If pump does not operate, see above. | Inadequate electrical connection in control panel. | With switch disconnected, check continuity while activating liquid level switch. Replace switch, as required. |
| | Defective liquid level switch. | Allow liquid level to rise 3" to 4" (76 mm - 101 mm) above turn-on level. |
| | Insufficient liquid level to activate controls. | Untangle cords and insure free operation. |
| PUMP WILL NOT TURN OFF | Liquid level cords tangled. | Untangle cords and insure free operation. |
| | Pump is air locked. | Shut off pump for approximately one minute, then restart. Repeat until air lock clears. If air locking persists in a system with a check valve, a $\frac{3}{16}$ " (4.8 mm) hole may be drilled in the discharge pipe approximately 2" (51 mm) above the discharge connection. |
| | Influent flow is matching pump's discharge capacity. | Larger pump may be required. |
| LITTLE OR NO LIQUID DELIVERED BY PUMP | Check valve installed backwards, plugged or stuck closed. | Check flow arrow on valve and check valve operation. |
| | Excessive system head. | Consult with dealer. |
| | Pump inlet plugged. | Inspect and clear as required. |
| | Improper voltage or wired incorrectly. | Check pump rotation, voltage and wiring. Consult with qualified electrician. |
| | Pump is air locked. | See recommended action, above. |
| | Impeller is worn or damaged. | Inspect impeller, replace as required. |
| Liquid level controls defective or improperly positioned. | Inspect, readjust or replace as required. | |

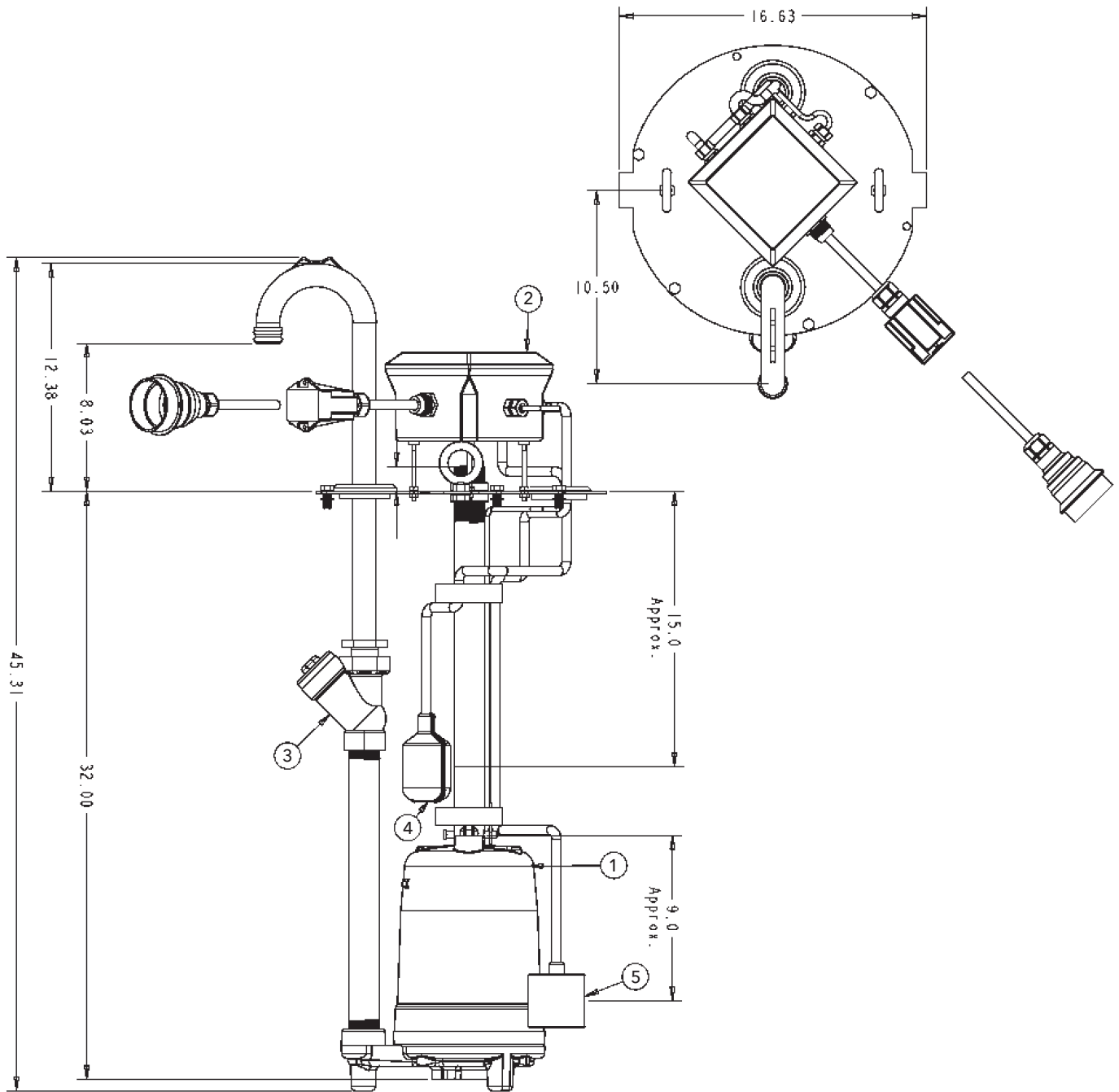
TROUBLESHOOTING CHART

| SYMPTOM | PROBABLE CAUSE | RECOMMENDED ACTION |
|------------------------|---|---|
| PUMP CYCLES CONSTANTLY | Discharge check valve inoperative. | Inspect, repair or replace as required. |
| | Sewage containment area too small. | Consult with dealer. |
| | Liquid level controls defective or improperly positioned. | Inspect, readjust or replace as required. |
| | Influent excessive for this size pump. | Consult with dealer. |

JUNCTION BOX WIRING DIAGRAM



REPAIR PARTS



| Item No. | Major Components | Standard | Extreme |
|----------|--------------------------------------|-----------|---------|
| 1 | RGS2010 Grinder E1 | RGS2012E1 | |
| 2 | Junction Box with Electrical Adaptor | 9K600 | 9K601 |
| 3 | Check / Anti-Siphon Valve | A9-12BAS | |
| 4 | Signal Master FS | A2N03 | |
| 5 | Pump Master Plus FS | A2E03 | |

All dimensions $\pm 1/8$ tolerance unless noted.

NOTES

LIMITED CONSUMER WARRANTY

For goods sold for personal, family or household purposes, Seller warrants the goods purchased hereunder (with the exception of membranes, seals, gaskets, elastomer materials, coatings and other "wear parts" or consumables all of which are not warranted except as otherwise provided in the quotation or sales form) will be free from defects in material and workmanship for a period of one (1) year from the date of installation or eighteen (18) months from the product date code, whichever shall occur first, unless a longer period is provided by law or is specified in the product documentation (the "Warranty").

Except as otherwise required by law, Seller shall, at its option and at no cost to Buyer, either repair or replace any product which fails to conform with the Warranty provided Buyer gives written notice to Seller of any defects in material or workmanship within ten (10) days of the date when any defects or non-conformance are first manifest. Under either repair or replacement option, Seller shall not be obligated to remove or pay for the removal of the defective product or install or pay for the installation of the replaced or repaired product and Buyer shall be responsible for all other costs, including, but not limited to, service costs, shipping fees and expenses. Seller shall have sole discretion as to the method or means of repair or replacement. Buyer's failure to comply with Seller's repair or replacement directions shall terminate Seller's obligations under this Warranty and render this Warranty void. Any parts repaired or replaced under the Warranty are warranted only for the balance of the warranty period on the parts that were repaired or replaced. The Warranty is conditioned on Buyer giving written notice to Seller of any defects in material or workmanship of warranted goods within ten (10) days of the date when any defects are first manifest.

Seller shall have no warranty obligations to Buyer with respect to any product or parts of a product that have been: (a) repaired by third parties other than Seller or without Seller's written approval; (b) subject to misuse, misapplication, neglect, alteration, accident, or physical damage; (c) used in a manner contrary to Seller's instructions for installation, operation and maintenance; (d) damaged from ordinary wear and tear, corrosion, or chemical attack; (e) damaged due to abnormal conditions, vibration, failure to properly prime, or operation without flow; (f) damaged due to a defective power supply or improper electrical protection; or (g) damaged resulting from the use of accessory equipment not sold or approved by Seller. In any case of products not manufactured by Seller, there is no warranty from Seller; however, Seller will extend to Buyer any warranty received from Seller's supplier of such products.

Goulds Water Technology Policy Concerning Online Sales to Consumers. Homeowners using the Internet to locate information regarding residential water systems, residential wastewater systems, controls and tanks may discover several sites offering a direct-to-consumer purchasing opportunity. Residential water and wastewater systems are mission critical applications and are designed to be installed by qualified professionals. Goulds Water Technology has an extensive nationwide network of distributors and dealers, including authorized resellers. For a complete view of Goulds Water Technology recognized distributors, dealers and authorized resellers, please refer to our locator at: <http://goulds.com/sales-service/>

No warranty is offered on Goulds Water Technology equipment purchased over the Internet, including web-based options from unauthorized retailers. This policy is necessary to ensure that Goulds Water Technology equipment is installed properly, in compliance with applicable laws, rules and codes, in a manner that addresses safety concerns and the proper performance of Goulds Water Technology equipment.

THE FOREGOING WARRANTY IS PROVIDED IN PLACE OF ALL OTHER EXPRESS WARRANTIES. ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE (1) YEAR FROM THE DATE OF INSTALLATION OR EIGHTEEN (18) MONTHS FROM THE PRODUCT DATE CODE, WHICHEVER SHALL OCCUR FIRST. EXCEPT AS OTHERWISE REQUIRED BY LAW, BUYER'S EXCLUSIVE REMEDY AND SELLER'S AGGREGATE LIABILITY FOR BREACH OF ANY OF THE FOREGOING WARRANTIES ARE LIMITED TO REPAIRING OR REPLACING THE PRODUCT AND SHALL IN ALL CASES BE LIMITED TO THE AMOUNT PAID BY THE BUYER FOR THE DEFECTIVE PRODUCT. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY OTHER FORM OF DAMAGES, WHETHER DIRECT, INDIRECT, LIQUIDATED, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, EXEMPLARY OR SPECIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF PROFIT, LOSS OF ANTICIPATED SAVINGS OR REVENUE, LOSS OF INCOME, LOSS OF BUSINESS, LOSS OF PRODUCTION, LOSS OF OPPORTUNITY OR LOSS OF REPUTATION.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

To make a warranty claim, check first with the dealer from whom you purchased the product or visit www.xylem.com for the name and location of the nearest dealer providing warranty service.



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