

Please read and save this Repair Parts Manual. Read this manual and the General Operating Instructions carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. The Safety Instructions are contained in the General Operating Instructions. Failure to comply with the safety instructions accompanying this product could result in personal injury and/or property damage! Retain instructions for future reference. AMT reserves the right to discontinue any model or change specifications at any time without incurring any obligation.

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Periodic maintenance and inspection is required on all pumps to ensure proper operation. Unit must be clear of debris and sediment. Inspect for leaks and loose bolts. Failure to do so voids warranty.

# Submersible Pumps

## Drainage/Sump Series



Refer to pump manual 1808-636-00 for General Operating and Safety Instructions.

### DESCRIPTION

These stainless steel Submersible Drainage / Sump Pumps are intended for use in residential, commercial, and industrial settings. Examples include: Basements, boats, tanks, and other general drainage applications involving clean liquids. Submersible design means low noise and no priming issues.

Each unit is completely assembled and features a self-cleaning semi-open impeller and a Viton mechanical shaft seal with carbon and ceramic wear faces. They also feature a secondary shaft seal and oil chamber.

Pumps have a 3450 RPM electric motor fitted with a finished 3-prong grounding type power cord. Motors are rated continuous duty and have automatic restart thermal overload protection. Handle liquids from 40° to 104° F (4° to 40° C). For use with clean, clear water and other non-flammable, non-abrasive liquids compatible with pump component materials.

### SPECIFICATIONS

Model	Discharge Outlet	HP	Power Supply @ 60 Hz	Max. Amps	Cord Length	Basic Construction	Impeller Material	Seals	Weight (lbs.)
5980-95	2" NPT	1/2	115 VAC, 1 Phase	8.0	32 ft.	Stainless Steel	Cast Iron	Carbon Ceramic	12
5981-95	2" NPT	1	115 VAC, 1 Phase	14	32 ft.	Stainless Steel	Cast Iron	Carbon Ceramic	23
5983-95	3" NPT	1	115 VAC, 1 Phase	14	32 ft.	Stainless Steel	Cast Iron	Carbon Ceramic	26
598A-95	2" NPT	1/2	115 VAC, 1 Phase	8.0	32 ft.	Stainless Steel	Cast Iron	Carbon Ceramic	13

**Note:** Data is subject to change without notice, see label on driver for actual specifications.

(SS) 304 Stainless Steel

(NPT) Standard NPT (female) Pipe Thread

(\*) With Stainless steel and cast iron components.

### MAINTENANCE

#### ▲ WARNING

**Make certain that unit is disconnected from power source before attempting to service or remove any component.**

#### POWER CORD REPLACEMENT

Periodically inspect power cord and replace whenever abrasion, cracking, softening, or other signs of deterioration are found.

Refer to Figures 1 and 2.

- Place unit on workbench in upright position. Clean dirt and rust from around wire cover (Ref. No. 4).
- Remove two fasteners (Ref. No. 2) which hold cord retainer (Ref. No. 1).
- Remove four fasteners (Ref. No. 8) which hold wire cover in place.
- Carefully pry cover from unit with screwdriver.

**IMPORTANT:** Be careful to keep rust and other debris from falling into motor housing during cover removal.

- Take note of proper wire configuration, and connect new power cord (Ref. No. 1) in identical fashion. If unsure about above information or wiring diagrams, consult an electrician familiar with motor wiring.
- Clean sealing flanges if necessary and reassemble pump in reverse order.

### IMPELLER INSPECTION / REPLACEMENT

If pump develops poor performance characteristics, impeller may be worn or clogged.

#### IMPELLER INSPECTION

Refer to Figure 2.

- Place unit on workbench in horizontal position and clean rust and buildup from around pump-to-motor flange.
- Remove three fasteners (Ref. No. 42) to free screen (Ref. No. 41).
- Remove three fasteners (Ref. No. 40) and use screwdriver to pry base (Ref. No. 39) from pump assembly.
- Inspect impeller (Ref. No. 37). If clog is found, remove debris and reassemble in reverse order. If damage to impeller is found, such as pitting, deep grooves, or breakage, proceed to next section.

#### IMPELLER REPLACEMENT

- Remove impeller fastener (Ref. No. 38) by unscrewing in counterclockwise direction.

**NOTE:** To prevent motor shaft from turning, wedge a screwdriver between impeller vane and impeller fastener (see Figure 1).

- Unthread the impeller from the motor shaft/rotor (Ref. No. 24).
- Install replacement impeller and reassemble in reverse order.

# Submersible Pumps

## MECHANICAL SEAL REPLACEMENT

Motor internals are protected from contact with liquid being pumped by a mechanical shaft seal and oil cavity. When seal wears out, potential motor life will be compromised. Therefore, periodic seal replacement is recommended. Time interval between replacements will depend on abrasiveness of liquid being pumped, temperature, total accumulated runtime, etc.

**IMPORTANT:** Always replace the mechanical seal (Ref. No. 30) at same time to insure proper mating of components.

Refer to Figure 2.

1. Disassemble pump by following directions in both "Power Cord Replacement" and "Impeller Inspection / Replacement" sections.
2. With unit on it's side and wire cover, pump assembly and impeller removed from shaft/rotor.
3. Clean rust and buildup from unit.
4. Drain oil from seal cavity by removing drain plug (Ref. No. 29). Then tip components overtop of a catch pan until oil is drained.
5. Remove four fasteners which attach casing (Ref. No. 29) to motor case and pry two components apart with screwdriver.
6. Press on end of motor shaft to separate from motor case. Then carefully guide upper end bell (Ref. No. 14) along with shaft/rotor and bearing assembly out of motor case. Shaft seal head will now be free.

**IMPORTANT:** Shaft seal head (with spring) may have unique ends, and two seal seats may be different from one another also. Be sure to note size and color of each before disassembly so that new parts are installed in proper orientation.

7. Remove upper seal seat (Ref. No. 30) from motor case by using a screwdriver or dowel to press on seal from rear. Do the same for lower seal seat in casing.
8. Clean seal seat cavities before inserting new seals.
9. Carefully wipe polished surface of new seal seats with a clean cloth.
10. Wet outside of rubber portion of seal seats with a light coating of soapy water.
11. Press each new seal seat squarely into cavity in both motor case and casing. If seal seat does not press squarely into cavity, it can be adjusted into place by pushing on it carefully with a piece of pipe or dowel. Always use a piece of cardboard between pipe and seal seat to avoid scratching seal seat. (This is a lapped surface and must be handled very carefully.)
12. After each seal seat is in place, insure that it is clean and has not been marred.
13. Using a clean cloth, wipe shaft and make certain that it is perfectly clean.
14. Carefully guide motor shaft through seal seat and use a press to seat bearing back into motor case.
15. Apply a light coating of soapy water to inside rubber portion of seal head and slide onto shaft (be sure to start correct end first).
16. Place casing back onto motor housing being careful to guide shaft and avoid damage to seal seat. Secure with fasteners.
17. Press lip seal back in place.
18. Refill cavity with oil through fill hole and reassemble in reverse order.

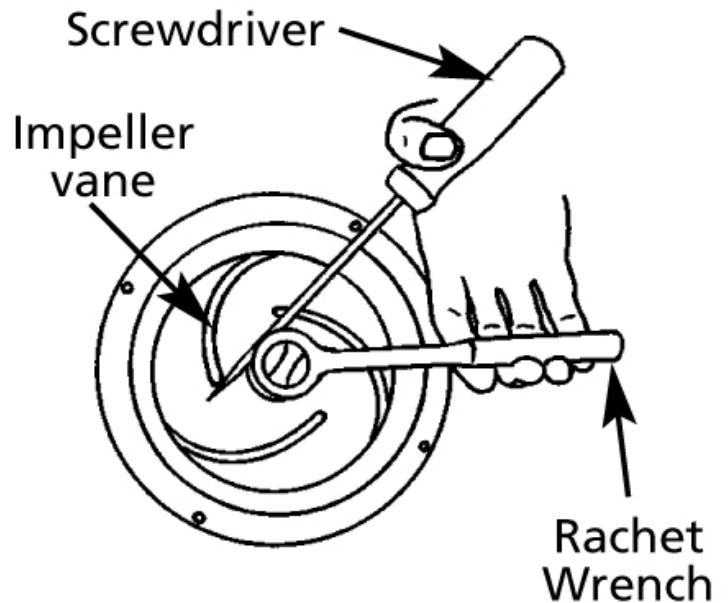


Figure 1 - Impeller Removal

# Submersible Pumps

**For Repair Parts contact dealer where pump was purchased.**

Please provide following information:

-Model Number

-Serial Number (if any)

Part description and number as shown in parts list

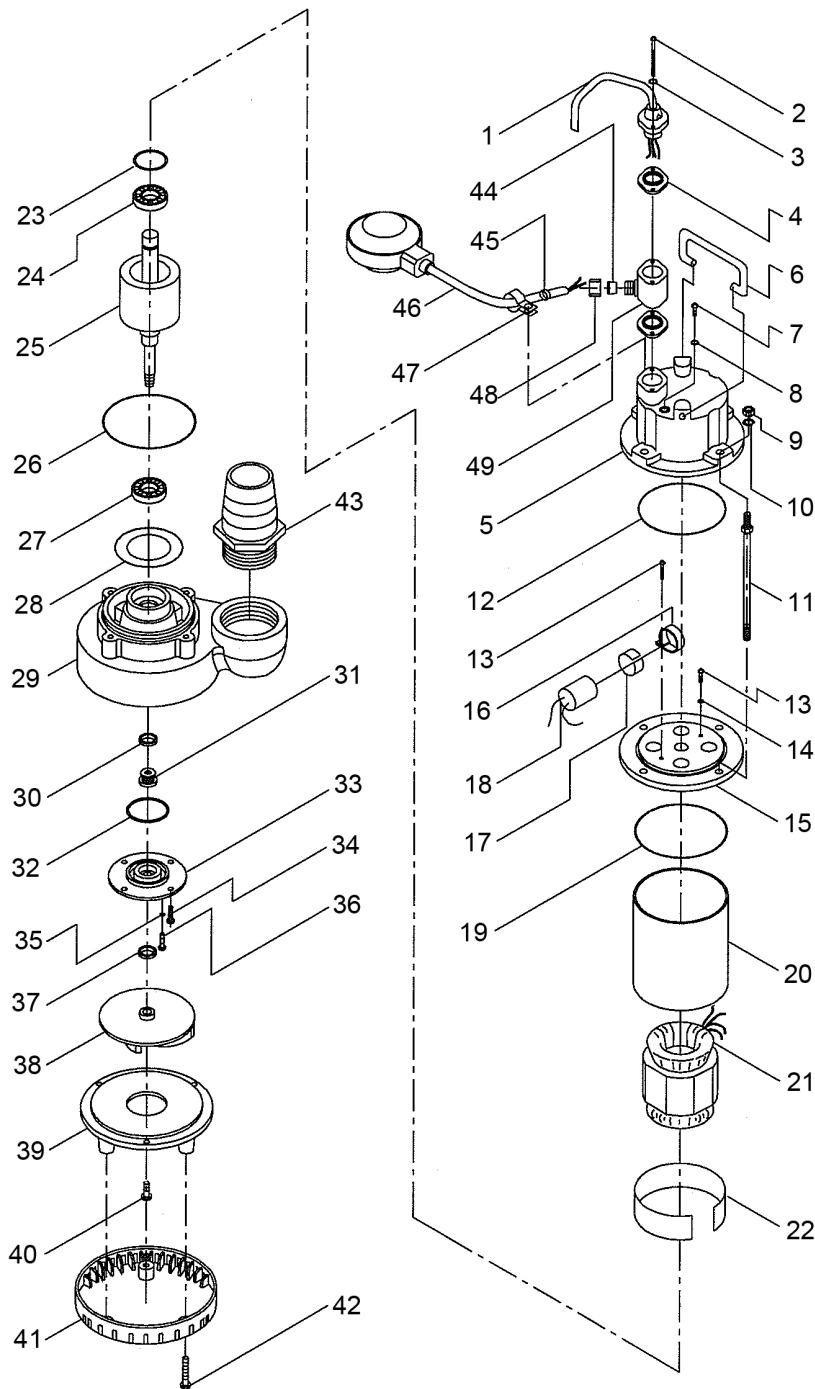


Figure 2 - Repair Parts Illustrations - 5980-95 & 598A-95

**Repair Parts List**

Ref No.	Description	Part Number for Models		Qty
		5980-95	598A-95	
1	Power Cord Kit (includes Ref. Nos. 1, 2, 3 and 4)	5980-350-90	598A-350-90	1
2	Fastener	Incl. w/Ref. 1	Incl. w/Ref. 1	1
3	O-Ring	Incl. w/Ref. 1	Incl. w/Ref. 1	1
4	O-Ring/Gasket	Incl. w/Ref. 1	Incl. w/Ref. 1	1
5	Wire Cover	Replace Pump	Replace Pump	1
6	Handle Kit	5980-100-90	598A-100-90	1
7	Fastener	*	*	1
8	Seal	Incl. w/Ref. 50	Incl. w/Ref. 50	1
9	Fastener	*	*	4
10	Seal	Incl. w/Ref. 50	Incl. w/Ref. 50	4
11	Fastener	-	-	4
12	O-Ring	Incl. w/Ref. 50	Incl. w/Ref. 50	1
13	Fastener	*	*	2
14	Seal	Incl. w/Ref. 50	Incl. w/Ref. 50	2
15	Upper Bracket	Replace Pump	Replace Pump	1
16	Retainer	N/A	N/A	1
17	Insulation Paper	N/A	N/A	1
18	Capacitor	N/A	N/A	1
19	O-Ring	Incl. w/Ref. 50	Incl. w/Ref. 50	1
20	Motor Casing	Replace Pump	Replace Pump	1
21	Coil & Stator	Replace Pump	Replace Pump	1
22	Spacer	N/A	N/A	1
23	Waved Washer	N/A	N/A	1
24	Bearing	Replace Pump	Replace Pump	1
25	Shaft & Rotor	Replace Pump	Replace Pump	1
26	O-Ring	Incl. w/Ref. 50	Incl. w/Ref. 50	1
27	Bearing	Replace Pump	Replace Pump	1
28	Insulation Paper	N/A	N/A	1
29	Pump Casing	5980-001-90	598A-001-95	1
30 & 31	Mechanical Seal	Incl. w/Ref. 50	Incl. w/Ref. 50	1
32	O-Ring	Incl. w/Ref. 50	Incl. w/Ref. 50	1
33	Seal Plate (includes Ref. Nos. 33 and 34)	5890-020-90	589A-020-90	1
34	Fastener	Incl. w/Ref. 33	Incl. w/Ref. 33	4
35	Seal	Incl. w/Ref. 50	Incl. w/Ref. 50	4
36	Fastener	*	*	4
37	Slinger Washer	*	*	1
38	Impeller	5980-010-90	598A-010-90	1
39	Suction Cover (includes Ref. Nos. 39 and 40)	5980-050-90	598A-050-90	1
40	Fastener	Incl. w/Ref. 39	Incl. w/Ref. 39	1
41	Suction Screen (includes Ref. Nos. 41 and 42)	5980-040-90	598A-040-90	1
42	Fastener	Incl. w/Ref. 41	Incl. w/Ref. 41	1

**Repair Parts List - CONTINUED**

Ref No.	Description	Part Number for Models		Qty
		5980-95	598A-95	
43	House Coupling	5980-170-90	598A-170-90	
44	Outlet Rubber	-	Incl. w/Ref. 46	1
45	Cable Protection	-	Incl. w/Ref. 46	1
46	Float Switch Kit	-		1
47	Wire Loom	-	Incl. w/Ref. 46	1
48	Gasket	-	Incl. w/Ref. 46	1
49	Float Junction	-	Incl. w/Ref. 46	1
50	Seal Kit (not shown)	5980-300-90	598A-300-90	1
	(includes Ref. Nos. 8, 10, 12, 14, 19, 26, 30, 31, 32 and 35)			

(-) Not Available

(\*) Standard hardware item, available locally.

# Submersible Pumps

**For Repair Parts contact dealer where pump was purchased.**

Please provide following information:

-Model Number

-Serial Number (if any)

Part description and number as shown in parts list

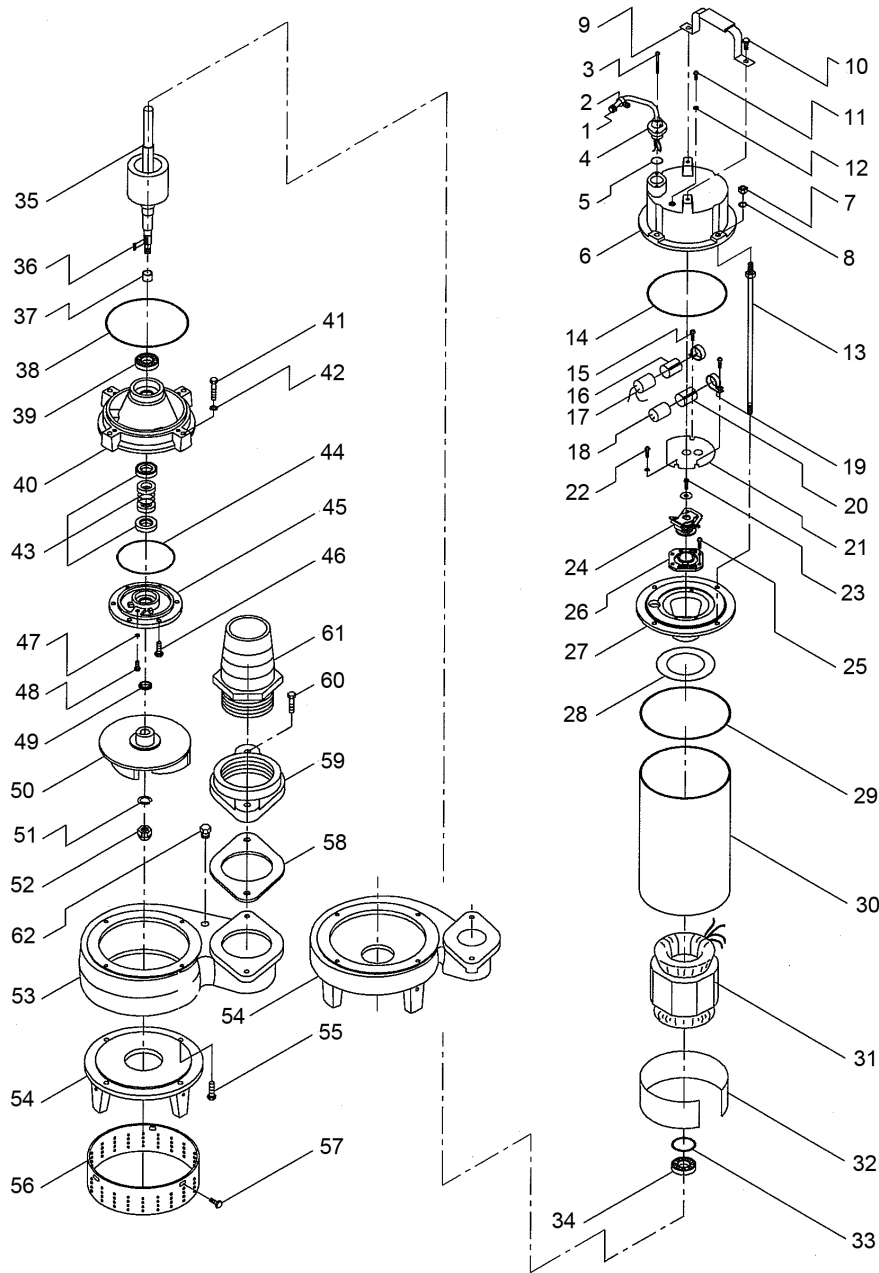


Figure 2 - Repair Parts Illustrations - 5981-95 & 5983-95

**Repair Parts List**

Ref No.	Description	Part Number for Models		Qty
		5981-95	5983-95	
1	Cable Protection	Incl. w/Ref. 4	Incl. w/Ref. 4	1
2	Retainer	Incl. w/Ref. 4	Incl. w/Ref. 4	1
3	Fastener	Incl. w/Ref. 4	Incl. w/Ref. 4	1
4	Power Cord Kit	5981-350-90	5983-350-90	1
	(includes Ref. Nos. 1, 2, 3 and 4)			1
5	O-ring	Incl. w/Ref. 4	Incl. w/Ref. 4	1
6	Wire Cover	Replace Pump	Replace Pump	1
7	Fastener	*	*	4
8	Seal	Incl. w/Ref. 63	Incl. w/Ref. 63	1
9	Fastener	*	*	2
10	Handle Kit	5981-100-90	5983-100-90	1
11	Fastener	*	*	1
12	Seal	Incl. w/Ref. 63	Incl. w/Ref. 63	1
13	Fastener	*	*	4
14	Seal	Incl. w/Ref. 63	Incl. w/Ref. 63	4
15	Retainer	N/A	N/A	1
16	Insulation Paper	N/A	N/A	1
17	Capacitor	N/A	N/A	1
18	Capacitor	N/A	N/A	1
19	Retainer	N/A	N/A	1
20	Insulation Paper	N/A	N/A	1
21	Capacitor Base	Replace Pump	Replace Pump	1
22	Fastener	*	*	1
23	Fastener	*	*	1
24	Switch	Replace Pump	Replace Pump	1
25	Fastener	*	*	4
26	Fixed Point	N/A	N/A	1
27	Upper Bracket	Replace Pump	Replace Pump	1
28	Insulation Paper	N/A	N/A	1
29	O-Ring	N/A	N/A	1
30	Motor Casing	Replace Pump	Replace Pump	1
31	Stator	Replace Pump	Replace Pump	1
32	Spacer	Replace Pump	Replace Pump	1
33	Waved Washer	N/A	N/A	1
34	Bearing	Replace Pump	Replace Pump	4
35	Shaft & Rotor	Replace Pump	Replace Pump	1
36	Key	Replace Pump	Replace Pump	1

**Repair Parts List - CONTINUED**

Ref No.	Description	Part Number for Models		Qty
		5981-95	5983-95	
37	Sleeve	N/A	N/A	1
38	O-Ring	Incl. w/Ref. 63	Incl. w/Ref. 63	1
39	Bearing	Replace Pump	Replace Pump	1
40	Motor Lower Cover	Replace Pump	Replace Pump	1
41	Fastener	*	*	4
42	Seal	Incl. w/Ref. 63	Incl. w/Ref. 63	4
43	Mechanical Seal	Incl. w/Ref. 63	Incl. w/Ref. 63	1
44	O-Ring	Incl. w/Ref. 63	Incl. w/Ref. 63	1
45	Seal Plate	5981-020-90	5981-020-90	1
	(includes Ref. Nos. 45 and 46)			
46	Fastener	Incl. w/Ref. 45	Incl. w/Ref. 45	4
47	Seal	Incl. w/Ref. 63	Incl. w/Ref. 63	1
48	Fastener	*	*	1
49	Protector	N/A	N/A	1
50	Impeller	5981-010-90	5983-010-90	1
	(includes Ref. Nos. 50 and 52)			
51	Impeller Seal	Incl. w/Ref. 63	Incl. w/Ref. 63	1
52	Impeller Nut	Incl. w/Ref. 50	Incl. w/Ref. 50	1
53	Pump Casing	5981-001-90	5983-001-90	1
54	Suction Cover	5981-050-90	5983-050-90	1
	(includes Ref. Nos. 54 and 55)			
55	Fastener	Incl. w/Ref. 54	Incl. w/Ref. 54	4
56	Strainer	5981-040-90	5983-040-90	1
	(includes Ref. Nos. 56 and 57)			
57	Fastener	Incl. w/Ref. 56	Incl. w/Ref. 56	3
58	Gasket	Incl. w/Ref. 63	Incl. w/Ref. 63	1
59	NPT Flange	5981-080-90	5983-080-90	1
	(includes Ref. Nos. 59 and 60)			
60	Fastener	Incl. w/Ref. 59	Incl. w/Ref. 59	2
61	House Coupling	5981-170-90	5983-170-90	1
62	Bolt	*	*	1
63	Seal Kit	5891-300-90	5983-300-90	1
	(includes Ref. Nos. 8, 12, 14, 38, 42, 43, 47, 51 and 58)			

(-) Not Available

(\*) Standard hardware item, available locally.

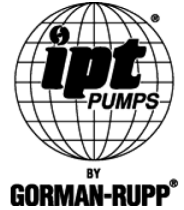








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## General Information

**SALES POLICY:** AMT products are sold through our established Distributors. We do not sell direct to the consumer or organization not entitled to trade recognition. Therefore, possession of our catalogs and/or price list(s) does not infer an offer to sell.

**MINIMUM ORDER:** We appreciate your order, however, all orders are subject to a minimum \$35.00 net invoice charge (excluding freight). This applies to all pump and parts purchase orders.

**PRICES:** Prices are subject to change without notice. All orders accepted are subject to prices in effect at time of shipment.

**PAYMENT TERMS:** Terms, upon establishment of credit, are Net 30 days. Past due accounts may be subject to a service charge of 1.5% per month. Domestic or assignable letter of credit is required for all export trade.

**PAST DUE ACCOUNTS:** AMT reserves the right to withhold open account shipments on any past due account. Invoices are considered past due after thirty (30) days. In the interest of sound business, all orders are subject to approval of the Credit Department.

**SHIPPING INSTRUCTIONS:** All shipments will be made F.O.B. the factory. Where instructions for shipment do not appear on the order, the shipment will be made according to our best judgment. Full risk of loss (including transportation delays and losses) shall pass to the customer upon delivery of the products to the carrier at the F.O.B. point. When loss or delay occurs, primary responsibility for tracing rests with the customer. When there is LOSS or APPARENT VISIBLE DAMAGE to a shipment, when tendered for delivery, *DO NOT* give the carrier a clear receipt. Note such damage on the carrier's delivery receipt and *HAVE THE DRIVER SIGN THE RECEIPT.*

**PRODUCT REVISIONS:** AMT reserves the right to discontinue, change or improve its products or any portions thereof without being obligated to provide such a change or improvement for units sold and/or shipped prior to such a change or improvement.

**LEAD TIME:** Products designated "Quick Ship Product", also referred to as "QSP" will normally be shipped within 24 hours of receipt of a non-cancellable purchase order. Only limited quantities of "QSP" pumps are available.

**STANDARD LEAD TIME:** Lead time is two weeks for all non "QSP" product. AMT reserves the right to revise lead times as required due to availability of materials and all other causes beyond our control.

**VIP SHIPMENT:** Select AMT and IPT branded pumps are available for next day shipment for non-QSP (Quick Ship Products) items and subjected to a specific model surcharge per unit noted in the respective price book. Requires calling for availability, confirmation and a non-cancellable purchase order or credit card payment prior to shipment. The expedited shipping charges are an additional cost added separately from the VIP charges per item. AMT reserves the right to revise lead times as required due to availability of materials and all other causes beyond our control. QSP quantities are limited as determined by AMT.

ALL purchase orders must be submitted via hard copy sent to AMT customer service department by fax, EDI or e-mail.

**RETURN GOODS POLICY:** Goods shall not be returned without a return goods authorization number (RGA) issued by AMT customer service. The RGA number must be listed on the packing list. Only current model and part numbers with a valid date code may be returned (within one year from date of purchase). **A 20% restocking and packaging charge will apply to all returns. All shipping charges must be pre-paid. No exceptions.**

**ORDER CHANGES BY CUSTOMER:** Orders in process may not be changed except with written consent and may be subject to special charges.

## 12 Month Limited Warranty

### EXTENT AND DURATION OF LIMITED WARRANTY

**Coverage:** American Machine & Tool Company (herein "AMT") or IPT Pumps by Gorman-Rupp (herein "IPT") or Gorman-Rupp Industries Division of The Gorman-Rupp Company, Patterson, or the Gorman-Rupp Company (herein referred to as "G-R Unit") each individually warrants that its products and parts shall be free from defects in material and workmanship for twelve (12) months from the date of purchase by the original end user when installation is made and maintenance is performed in accordance with G-R Unit's recommendations. Wear and tear resulting from use and items normally consumed in use are not covered.

### EXCEPTIONS

( A ) This Limited Warranty shall not apply to mechanical seals in AMT or IPT pumps and the following products and parts: engines, motors, trade accessories and all other products, components, parts and materials not manufactured by the G-R Units. These items may, however, be covered by the warranties of their respective manufacturers. ( B ) This warranty does not extend to or apply to any unit which has been repaired or altered at any place other than by a G-R Unit, or by persons not expressly approved by a G-R Unit to make repairs or alterations, nor to any unit the serial number, model number or identification of which has been removed, defaced or altered. ( C ) This warranty does not extend to any product manufactured by a G-R Unit, which has been subjected to mis-use, neglect, accident, improper installation, or use in violation of instructions furnished by a G-R Unit. ( D ) Pump Kits: This warranty does not extend to any product sold by a G-R Unit unassembled as a Pump Kit. Pump Kits are warranted against defects in material and workmanship for 60 days from the date of shipment from a G-R Unit. Any Pump Kit parts deemed defective by a G-R Unit will be replaced free of charge within 60 days of shipment. Pump Kits are not returnable for credit.

### LIMITATIONS

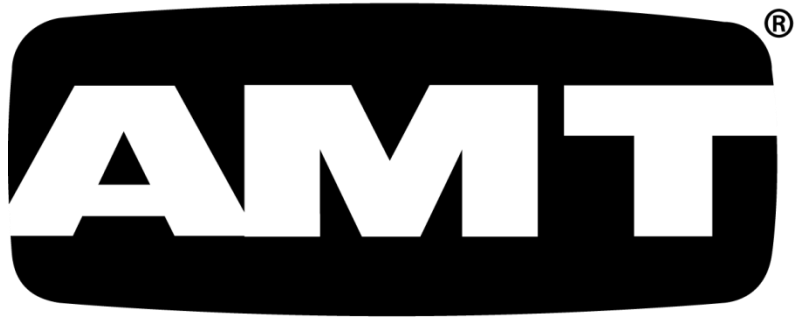
**THE G-R UNITS' SOLE AND EXCLUSIVE WARRANTY WITH RESPECT TO THEIR PRODUCTS AND PARTS IS THIS LIMITED WARRANTY. THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER EXPRESS AND/OR IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE.**

### EXCLUSIVE REMEDY AND DAMAGES

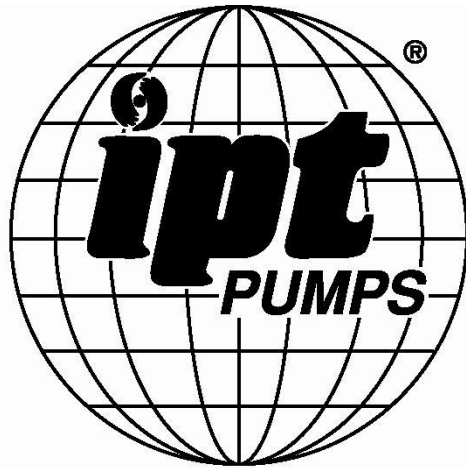
The sole and exclusive remedy for breach of this Warranty by a G-R Unit and the entire extent of its liability for such breach or for damages arising from the use of the products and parts covered under this Limited Warranty, shall be as follows:

- Repair or Replacement:** If inspection shows that any G-R Unit product or part covered under this Limited Warranty is defective in materials or workmanship, the G-R Unit shall repair or replace the defective or non-conforming product or part without charge, whichever the G-R Unit chooses. You must have properly maintained and used the product or part claimed to be defective in accordance with the maintenance schedule or manual, which comes with the product. No allowance will be made for labor, installation, removal, transportation or other charges incurred by you in connection with such repair or replacement.
- To obtain the above remedy:
  - Immediately notify the G-R Unit upon discovery of the claimed defect in materials or workmanship and provide the serial number or date code of the product and/or part(s) or provide the G-R Unit with the invoice or bill of sale referencing the product by no later than the expiration date of the warranty period.
  - The G-R Unit will advise whether inspection will be necessary and how whether repair or replacement will be made. If inspection by the G-R Unit is necessary, the pump or defective part must be sent freight pre-paid to the G-R Unit. Return shipment will be F.O.B. the G-R Unit's plant.
  - Return Goods Authorization Requirement:** No product will be accepted for return or replacement without the prior written authorization of the G-R Unit. Upon such authorization, and in accordance with instructions from the G-R Unit, the product will be returned to the G-R Unit, shipping charges prepaid by the Buyer.
- Damages:** The G-R Unit's liability for damages for breach of this Limited Warranty shall not exceed the amount of the purchase price of the product or part(s) in respect to which Such damages are claimed. **IN NO EVENT SHALL THE G-R UNITS BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES FOR BREACH OF THIS LIMITED WARRANTY.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.



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