

PAR[®]

Models 29090-0000 29120-0000

FEATURES

- Easy to clean white ceramic bowl
- Sturdy wood seat with durable baked enamel finish
- Forward angled pump for easy operation
- Convenient top-mounted dry bowl selector
- Reversible pump mounting for right or left hand installation
- External seal housing/rod guide for easy replacement
- Smooth external surfaces with skirted base to maintain cleanliness
- Triadic full-flow joker valve to avoid accidental blockage
- Multi-angle discharge port for versatility of plumbing connection

Specifications: Inlet port – 3/4", Discharge port – 1-1/2"
Weight – compact bowl: 26 lb
 large bowl: 32 lb

OPERATION

Manual Marine toilets have traditionally been somewhat cumbersome and confusing to operate and maintain. The PAR toilet has been designed with user convenience in mind. The pump assembly is angled forward to provide a natural, smooth stroke action. It has a top mounted wet/dry bowl selector which can be operated with the same hand used for pumping without releasing the pump handle.

The PAR toilet is surprisingly easy to operate. Simply move the wet/dry bowl selector to the wet bowl position (left) and pump handle up and down a few times to add some water to the bowl prior to use. After using, flush by again pumping handle up and down (in wet bowl position) until bowl is thoroughly rinsed and evacuated. Then move the wet/dry bowl selector to the dry bowl position (right) and continue pumping until only about one cup of water remains in the bottom of bowl. Leave the wet/dry bowl selector in the dry bowl position when toilet is not use.

APPLICATION

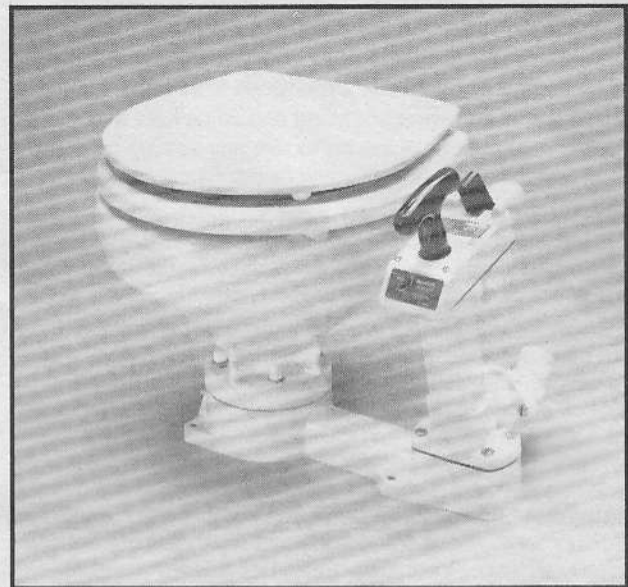
The PAR Manual toilet is designed to meet the requirements of onboard marine applications. It may be installed above or below the waterline (special plumbing requirements apply to below waterline installations). The toilet may be plumbed so waste is discharged to holding tank, directly overboard (where permitted by law) or into a certified waste treatment device. For installation versatility, the pump assembly may be positioned on the left or right hand side of the bowl. Its multi-angle discharge port will allow routing of discharge hose in almost any direction for ease of installation and neat appearance.

The toilet is available with either a compact china bowl to fit restrictive areas or a large bowl with household size seat assembly for maximum comfort. Its forward angled double action pump with convenient top mounted dry bowl selector is easy and natural to operate. It is self-priming with a dry suction lift of up to 3 feet (1 meter) and a discharge head to 9 feet (3 meters). A full-flow triadic joker valve resists blockage while providing positive back-flow prevention.



WARNING Hazard of flooding. If toilet is installed below the waterline, it must be installed with properly positioned vented loops. Failure to do so may result in flooding which can cause loss of property and life.

MANUAL MARINE TOILET



MODELS AVAILABLE

29090-0000 Compact Size Bowl & Seat
29120-0000 Household Size Bowl & Seat

Positioning and Mounting

The PAR Manual Toilet is assembled at the factory for operation with the right hand. If preferred, or required by available space, the pump and bowl may be rotated 180 degrees to provide left hand operation. To do this, remove hose from inlet elbow (back of bowl) and rotate elbow 180 degrees. It may be necessary to remove the elbow, loosen spud retaining nut and rotate the spud fitting so elbow will be tight when pointing in the opposite direction. Remove, rotate 180 degrees and reinstall both the bowl and pump assembly. Reconnect hose to inlet elbow and the toilet is ready for left hand operation.

The toilet must be installed on a well supported flat surface. Ideally, if underside of mounting surface is accessible, the toilet base should be through-bolted (using 5/16" bolts, washers and locknuts) to the mounting surface. If the underside of mounting surface is not accessible, the use of 5/16" lag bolts and washers is an acceptable alternative.

Before installing, position toilet in location to be installed. Ensure there is adequate space around toilet to easily operate pump and raise seat and lid to a fully opened position. Seat and lid should swing open at least 110 degrees and be supported when open to avoid strain on hinges. Ensure the base drain plug is accessible and inlet and discharge hoses can be attached to their respective ports without inducing significant lateral force. The discharge elbow may be rotated (by loosening two flange screws, rotating elbow and retightening screws) to accept the most convenient routing of the discharge hose.

When proper installation has been established mark the four base mounting holes on mounting surface and remove toilet. Ensure that no wiring or plumbing is positioned under the mounting surface which may be accidentally damaged when the surface is drilled. Drill appropriate size holes for fasteners being used. Mount toilet using flat washers between head of bolts and plastic toilet base. If desired a small bead of silicone or latex sealant may be applied around base where it contacts the mounting surface to prevent moisture from getting under the toilet base.

NOTICE: Do not use Polysulfide base sealants because they may chemically attack the plastic which can result in breakage.

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Plumbing

If installing a new inlet thru-hull/seacock, ensure that it is positioned on a part of the hull which is wetted at all angles of heel or trim and free of water turbulence at any hull speed. If discharging waste overboard (check legal restrictions for overboard discharge), ensure discharge thru-hull/seacock is both aft of and higher than the inlet thru-hull/seacock. All inlet plumbing should be a minimum of $\frac{3}{4}$ " ID and discharge plumbing a minimum of $1\frac{1}{2}$ " ID. All hose ends should be double clamped with stainless steel hose clamps.

If toilet is above waterline route hoses to seasocks, holding tank or treatment device via a route as direct as possible. However, for maximum sealing effect on the discharge joker valve, it is recommended that the discharge hose is looped upward about 8" above the discharge elbow before it descends to its termination point. All bends and elbows in plumbing should be kept to a minimum. It should not be necessary to use any sealing compound when attaching hoses to the inlet or discharge ports.



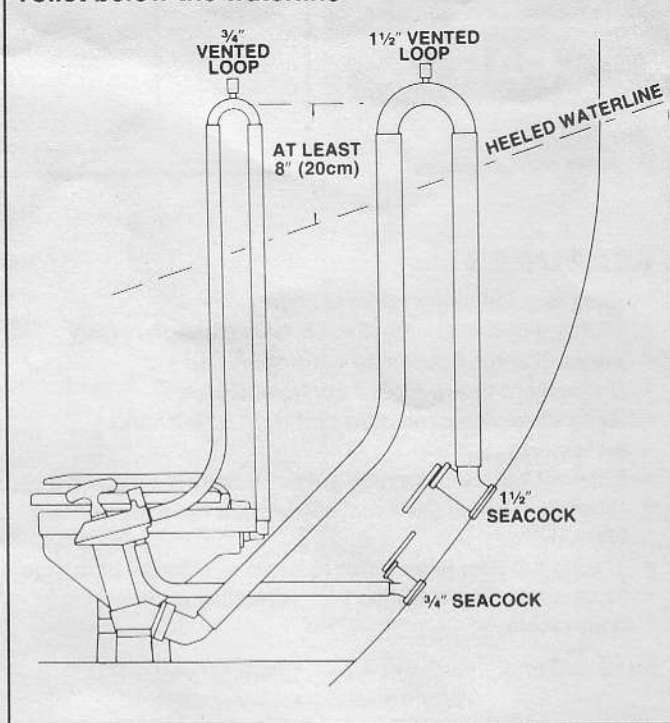
WARNING Hazard of flooding. If toilet is installed below the waterline, it must be installed with properly positioned vented loops. Failure to do so may result in flooding which can cause loss of property and life.

If toilet is below waterline, a $\frac{3}{4}$ " vented loop must be installed in a length of hose connecting the flushing pump to the rear of the bowl. The vented loop fitting must be positioned 8" above the waterline at all angles of heel or trim. To accomplish this remove the $\frac{3}{4}$ " hose supplied with toilet and replace with a new length of hose long enough to properly position the vented loop. If the toilet is plumbed for overboard discharge, a $1\frac{1}{2}$ " vented loop must be installed in the discharge hose. The waste vented loop fitting must also be positioned 8" above the waterline at all angles of heel or trim and ideally should be located as close to the toilet as practical.



WARNING HAZARD OF FLOODING. CLOSE INLET AND OUTLET SEACOCKS PRIOR TO DISASSEMBLING TOILET. FAILURE TO DO SO CAN CAUSE FLOODING WHICH MAY RESULT IN PROPERTY DAMAGE OR LOSS OF PROPERTY AND LIFE.

Toilet below the waterline



If unfamiliar with proper plumbing requirements for marine toilets, it is recommended that a qualified marine plumbing technician is contacted to do the installation.

MAINTENANCE/SERVICE INSTRUCTIONS

Maintenance

Periodic maintenance is generally not required; however, after long periods of non-use, the toilet may be easier to operate if lubricated.

To do this, fill bowl half-way with warm water and add a few drops of mineral oil or baby oil. With the wet/dry bowl selector in the dry bowl position, empty bowl using long complete strokes.

To winterize toilet, operate the pump in the dry bowl mode to evacuate as much water as possible. Drain the remaining water from the base by removing the base plug.

If charging the holding tank with anti-freeze by pumping it through the toilet, use only ethylene glycol based anti-freeze. To use petroleum based anti-freeze may cause damage to the internal rubber toilet parts.

Service

Before performing any service flush the toilet long enough to ensure all waste is flushed from the discharge hose. Close both inlet and discharge (if applicable) seacocks and put a "DO NOT OPEN" notice on each to guard against accidental opening and flooding while service is being performed.

SEAL REPLACEMENT – Lift handle and wrap rod with one turn of tape just under the handle. Gently grasp piston rod (on tape) with pliers and unscrew handle. **HOLD PISTON ROD AT ALL TIMES OR IT MAY DROP DOWN INTO PUMP.** Remove bumper washer and unscrew and remove seal/rod guide assembly. Wrap threads of piston rod with one turn of tape to protect new seal and install new seal/rod guide assembly. Remove tape from threads and reinstall bumper washer and handle. Tighten handle snugly (do not overtighten) and remove remaining tape.

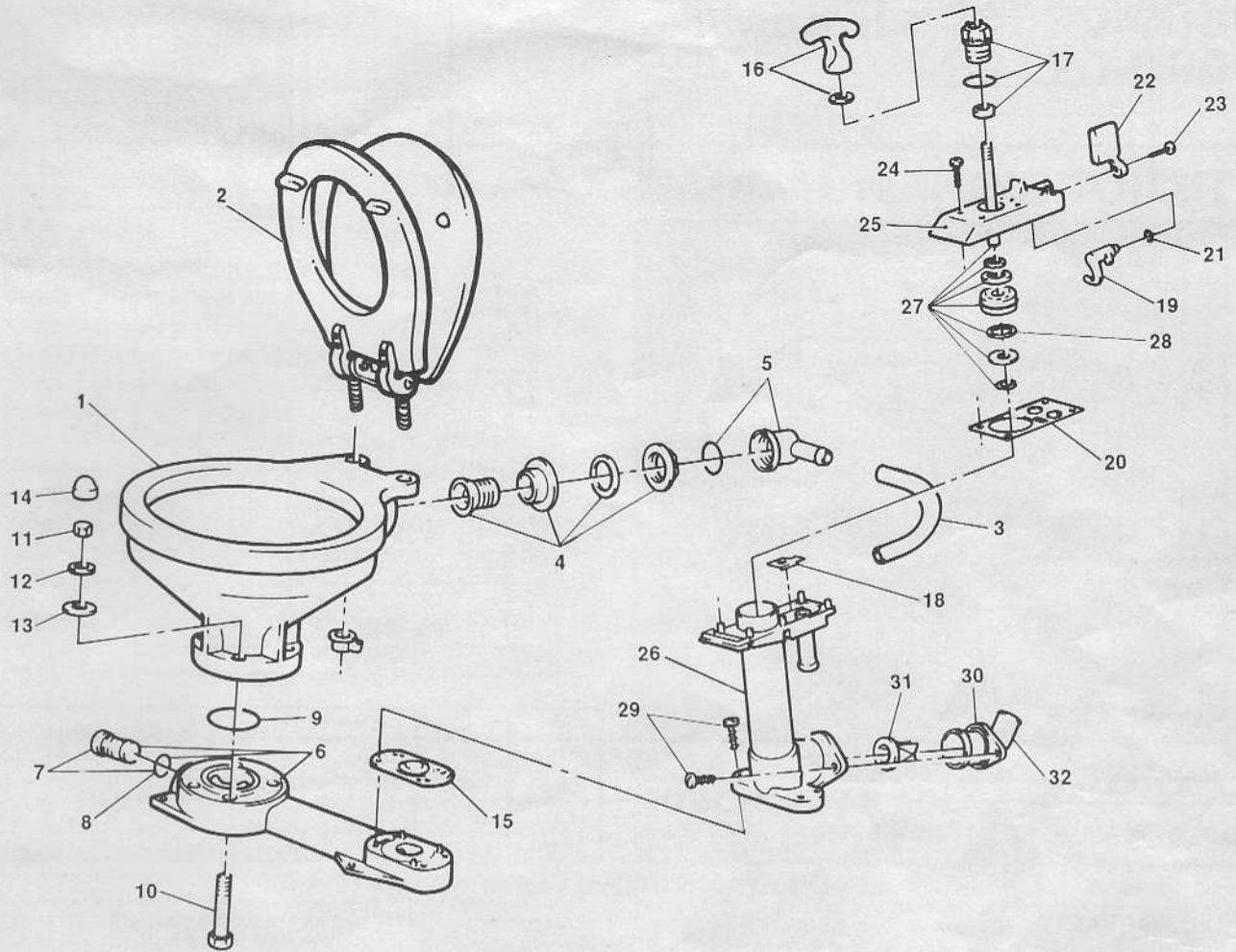
MAJOR OVERHAUL – Loosen hose clamps on inlet hose and remove it from the pump. Remove bowl link hose from rear of pump assembly. Remove the two screws that secure the discharge

flange and elbow. Remove the four screws that secure the pump to the base and remove pump assembly. The discharge joker valve and base valve/gasket can now be removed. Remove the six screws that secure the top valve cover, move the wet/dry bowl selector to the wet bowl position and remove valve cover and piston rod assembly from pump cylinder. Remove top valve/gasket assembly and valve seat. Remove piston O-Ring and seal/rod guide assembly (see Seal Replacement instructions). Clean all parts and inspect for damage. Ensure pump cylinder wall is not badly grooved or worn.

Install new seal/rod guide assembly (see Seal Replacement instructions). Install new piston O-Ring. Lubricate bore of pump cylinder with petroleum jelly. Position valve seat and top valve/gasket assembly on top of cylinder. With the wet/dry bowl selector in the wet bowl position, insert piston into cylinder bore and position valve cover on top of cylinder. Secure with six screws. Install joker valve in discharge elbow and base valve/gasket assembly on base. Position discharge flange and elbow on pump and secure with two screws. Position pump assembly on base and secure with four screws. Reattach bowl link hose to pump. Reattach inlet hose to pump and secure with clamps.

BOWL SEAL REPAACEMENT – To replace the bowl seal (base O-Ring) disconnect inlet and discharge hoses and remove toilet from its mounting surface. Pry nut caps from bowl fasteners. Invert toilet and hold bolts on underside of base while removing nuts and washers. Lift base from bowl and remove O-Ring. Install new O-Ring, position base on bowl and resecure with fasteners ensuring plastic washers are sandwiched between S.S. flat washers and ceramic bowl. Invert toilet and snap plastic nut caps onto nuts. Reinstall toilet on mounting surface, connect hoses and secure with hose clamps.

EXPLODED VIEW



REPAIR KITS AVAILABLE

KIT	PART NO.	DESCRIPTION
A	29045-0000	MAJOR SERVICE KIT, PUMP
B	29040-1000	PUMP ASSEMBLY
C	29094-0000	VALVE COVER ASSEMBLY
D	29051-0000	PUMP CYLINDER ASSEMBLY
E	29047-0000	BOWL INSTALLATION KIT

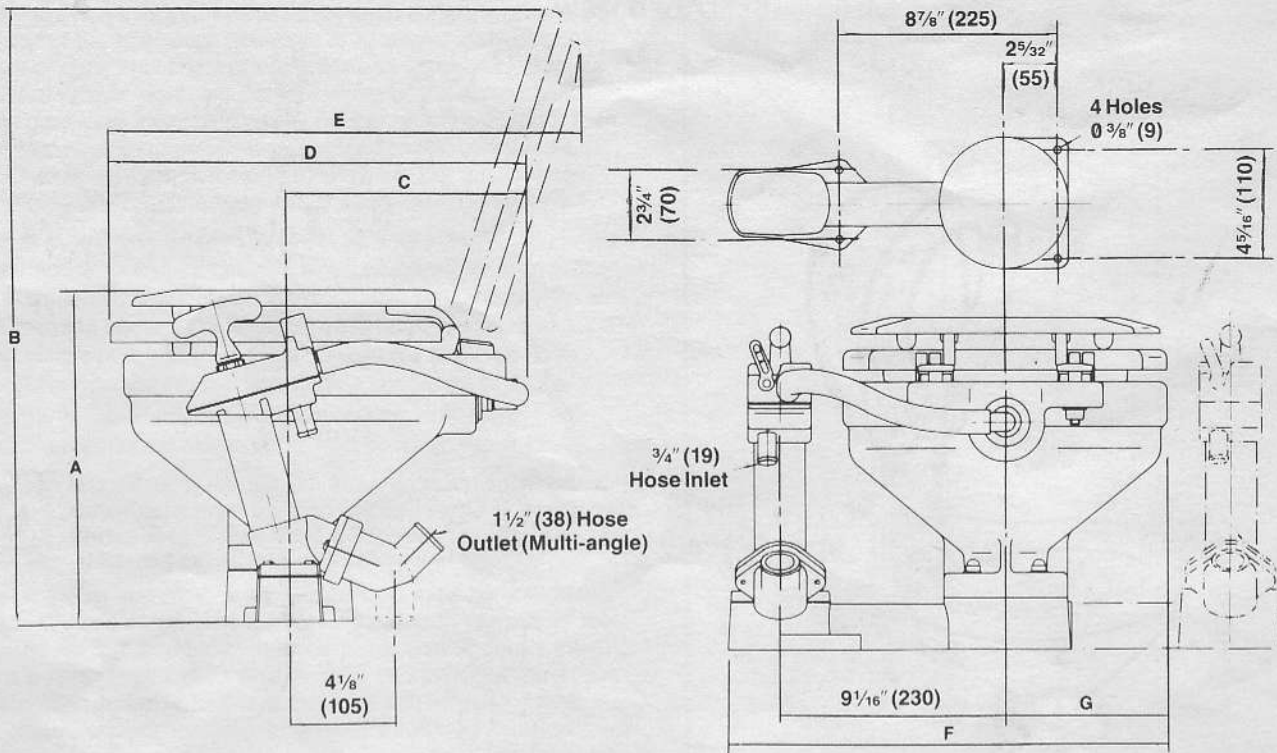
PARTS LIST

KEY	DESCRIPTION	QTY. PER TOILET	PART NO.	QTY. PER REPAIR KIT				
				A	B	C	D	E
13	WASHER (NYLON)	4						4
14	CAP	4		2				4
15	BASE VALVE GASKET	1	29043-0000	1	1			
16	HANDLE WITH BUMPER WASHER	1	29026-0000		1	1		
17	SEAL ASSEMBLY	1	29044-0000	1	1	1		
18	TOP VALVE SEAT	1		1	1		1	
19	CAM	1				1	1	
20	TOP VALVE GASKET	1	29042-0000	1	1			
21	O-RING (FLUSH LEVER)	1		1	1	1		
22	FLUSH CONTROL LEVER	1				1	1	
23	SCREW (FLUSH LEVER)	1				1	1	1
24	SCREW (VALVE COVER)	6		1	6	6		
25	VALVE COVER	1				1	1	
26	PUMP CYLINDER	1				1		1
27	PISTON, ROD & O-RING ASSY	1	29046-0000			1		
28	O-RING (PISTON)	1	29017-1000			1		
29	SCREW (PUMP CYLINDER)	6				1	2	2
30	DISCHARGE FLANGE	1	29091-0000			1		1
31	JOKER VALVE	1	29092-0000			1	1	1
32	DISCHARGE ELBOW	1	29029-0000			1		1

PARTS LIST

KEY	DESCRIPTION	QTY. PER TOILET	PART NO.	QTY. PER REPAIR KIT				
				A	B	C	D	E
1	BOWL	1	59127-7002					
	COMPACT	1	18753-0060					
	LARGE	1	18753-0437					
2	SEAT, LID & HINGE SET	1	18753-0438					
3	HOSE	1	29035-0000					
	COMPACT	1	29035-0001					
4	BOWL SPUD	1	29048-0000					
5	INTAKE ELBOW & O-RING	1						
6	BASE, PLUG & O-RING ASSY	1	29041-1000					
7	PLUG & O-RING ASSY	1	29028-1000					
8	O-RING (PLUG)	1		1				
9	O-RING (BOWL)	1				1		1
10	BOLT	4						4
11	NUT	4						4
12	WASHER (SS)	4						4

**DIMENSIONAL DRAWING
INCHES (mm)**



	A	B	C	D	E	F	G
29090-0000	13 ³ / ₁₆	24 ¹ / ₄	9 ³ / ₄	16 ³ / ₄	19 ¹ / ₈	17 ³ / ₄	6 ¹ / ₂
	(335)	(615)	(247)	(425)	(485)	(450)	(165)
29120-0000	13 ⁵ / ₈	27 ⁵ / ₈	11	19 ⁵ / ₁₆	22 ⁷ / ₈	18 ⁵ / ₁₆	7 ¹ / ₈
	(345)	(700)	(280)	(490)	(580)	(465)	(180)

One Year Limited Warranty

A. LIMITED WARRANTY: ITT warrants that at the time of shipment, the products manufactured by ITT and sold hereunder shall be in conformity with applicable written specifications and descriptions referred to or set forth herein, free from defects in material and workmanship, merchantable, and suitable for a particular purpose, provided such is implied by State law under the circumstances of this sale.

B. WARRANTY ADJUSTMENT:

- ITT agrees to repair or furnish a replacement for, but not to remove or install, any product or component thereof which, within one (1) year from date of purchase, shall upon test and examination by ITT prove defective within the above warranty. Receipt verifying purchase date is required to obtain adjustment.
- Buyer shall notify ITT of any defect within this warranty no later than ninety (90) days after the defect is discovered.
- No product will be accepted for return or replacement without the prior written authorization of ITT. Upon such authorization, and in accordance with instructions from ITT, the product will be returned to ITT, shipping charges prepaid by Buyer. Products returned to ITT will be addressed as follows:

ITT JABSCO
1485 Dale Way
Costa Mesa, California 92626-3998

Or to such alternate locations as may be designated on the product, its container, or this sheet.

Repair or replacement made under this warranty will be shipped prepaid to Buyer.

C. EXCLUSIONS FROM WARRANTY AND LIMITATION OF LIABILITY:

- The foregoing warranty is limited solely as set forth herein and applies only for the period designated above.

- ITT SHALL NOT BE LIABLE FOR ANY LOSS, DAMAGE, SPECIAL OR CONSEQUENTIAL DAMAGE OF ANY KIND, WHETHER BASED UPON WARRANTY, CONTRACT, NEGLIGENCE, OR STRICT LIABILITY ARISING IN CONNECTION WITH THE SALE, USE, OR REPAIR OF THE PRODUCT.
- THE MAXIMUM LIABILITY OF ITT IN CONNECTION WITH THIS WARRANTY SHALL NOT IN ANY CASE EXCEED THE CONTRACT PRICE FOR THE PRODUCT CLAIMED TO BE DEFECTIVE OR UNSUITABLE.
- This warranty does not extend to any product manufactured by ITT which has been subjected to misuse, neglect, accident, improper installation, or use in violation of instructions furnished by ITT.
- This warranty does not extend to or apply to any unit which has been repaired or altered at any place other than ITT's factory, or by persons not expressly approved by ITT, nor to any unit the serial number, model number, or identification of which has been removed, defaced or changed.
- Components manufactured by any supplier other than ITT shall bear only that warranty made by the manufacturer of that product.
- This warranty applies to products defined as "consumer products" by the Consumer Product Warranties Act as from time to time amended.

D. CONSUMER RIGHTS: This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow exclusion or limitation of damages.

STANDARD WARRANTY: If the products manufactured and sold hereunder are not Consumer Products, the warranty extended to Buyer shall be as set forth in subparagraphs (A), (B), and (C), EXCEPT THAT ALL EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY OR SUITABILITY FOR ANY PARTICULAR PURPOSE ARE EXCLUDED.

ITT Jabsco

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