

Crossover Transfer Pump Package

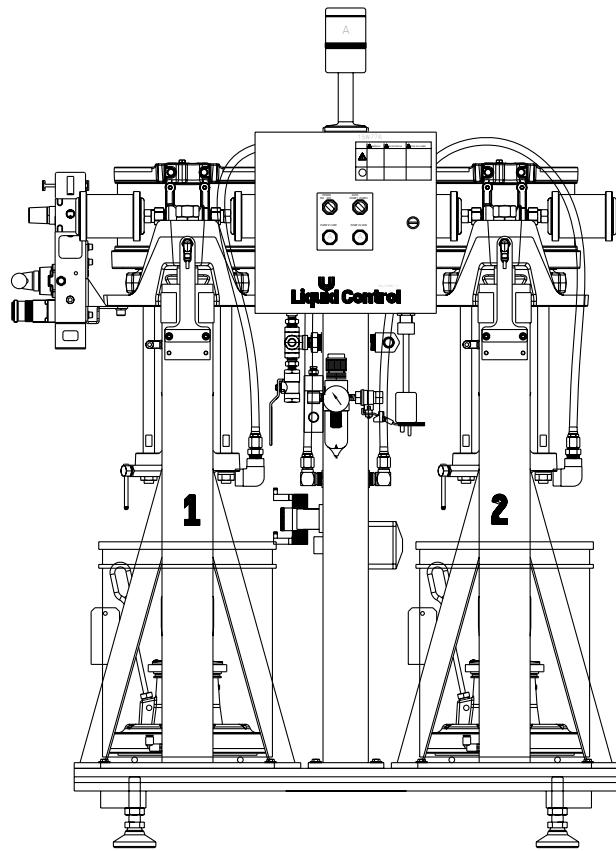
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For use with bulk supply of medium to high viscosity sealant and adhesive materials. Not for use in explosive atmospheres.



Important Safety Instructions

Read all warnings and instructions in this manual. Save these instructions.



Contents

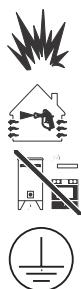
Related Manuals	2
Warnings	3
Component Identification	6
Grounding	7
Setup	8
Startup	9
Dual Transfer Pump Controller Operation	10
Dispensing Operation	11
Pressure Relief Procedure	12
Shutdown	12
Schematics	12
Optional Customer Outputs	12
Maintenance	12
Troubleshooting	12
Technical Data	13
Graco Ohio Standard Warranty	14
Graco Ohio Information	14

Related Manuals

Feed System Manuals	
312376	Check-Mate Pump Packages Instructions-Parts
313526	Check-Mate Ram Packages Operation
308167	Low Volume Air Regulators
307517	Mastic Fluid Regulators

Warnings

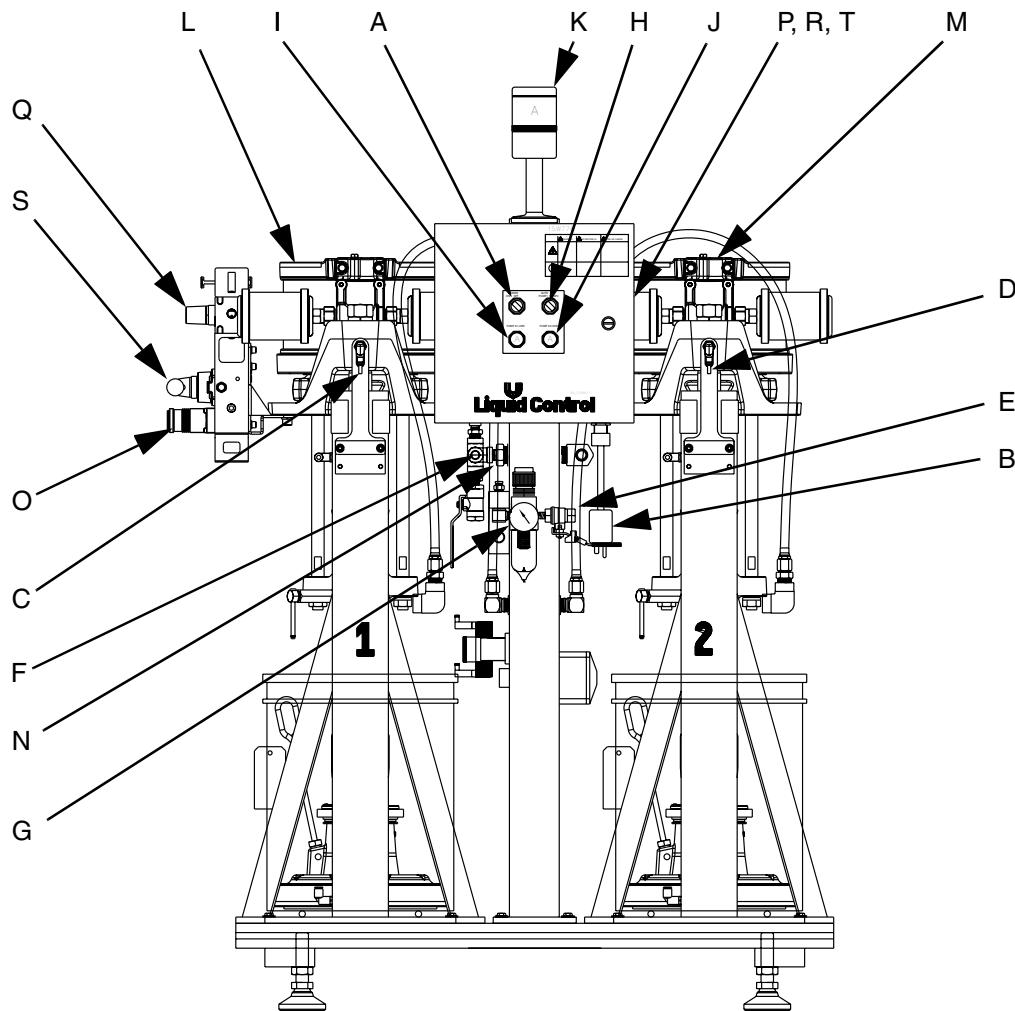
The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbol refers to procedure-specific risk. Refer back to these warnings. Additional, product-specific warnings may be found throughout the body of this manual where applicable.

 WARNING	
	TOXIC FLUID OR FUMES HAZARD Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed. <ul style="list-style-type: none"> • Read MSDS's to know the specific hazards of the fluids you are using. • Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines. • Always wear impervious gloves when spraying or cleaning equipment. • If this equipment is used with isocyanate material, see additional information on isocyanates in Iso-cyanate Conditions Section of this manual.
	PERSONAL PROTECTIVE EQUIPMENT You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to: <ul style="list-style-type: none"> • Protective eyewear • Clothing and respirator as recommended by the fluid and solvent manufacturer • Gloves • Hearing protection
	FIRE AND EXPLOSION HAZARD Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion: <ul style="list-style-type: none"> • Use equipment only in well ventilated area. • Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc). • Keep work area free of debris, including solvent, rags and gasoline. • Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present. • Ground all equipment in the work area. See Grounding instructions. • Use only grounded hoses. • Hold gun firmly to side of grounded pail when triggering into pail. • If there is static sparking or you feel a shock, stop operation immediately. Do not use equipment until you identify and correct the problem. • Keep a working fire extinguisher in the work area.
	ELECTRIC SHOCK HAZARD This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock. <ul style="list-style-type: none"> • Turn off and disconnect power cord before servicing equipment. • Use only grounded electrical outlets. • Use only 3-wire extension cords. • Ensure ground prongs are intact on power and extension cords. • Do not expose to rain. Store indoors.

 WARNING	
	PRESSURIZED EQUIPMENT HAZARD <p>Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> Follow Pressure Relief Procedure in this manual, when you stop spraying and before cleaning, checking, or servicing equipment. Tighten all fluid connections before operating the equipment. Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.
	EQUIPMENT MISUSE HAZARD <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> Do not operate the unit when fatigued or under the influence of drugs or alcohol. Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See Technical Data in all equipment manuals. Do not leave the work area while equipment is energized or under pressure. Turn off all equipment and follow the Pressure Relief Procedure in this manual when equipment is not in use. Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only. Do not alter or modify equipment. Use equipment only for its intended purpose. Call your distributor for information. Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not kink or over bend hoses or use hoses to pull equipment. Keep children and animals away from work area. Comply with all applicable safety regulations.
	PLASTIC PARTS CLEANING SOLVENT HAZARD <p>Use only compatible water-based solvents to clean plastic structural or pressure-containing parts. Many solvents can degrade plastic parts and cause them to fail, which could cause serious injury or property damage. See Technical Data in this and all other equipment instruction manuals. Read fluid and solvent manufacturer's warnings.</p>
	SKIN INJECTION HAZARD <p>High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. Get immediate surgical treatment.</p> <ul style="list-style-type: none"> Do not point gun at anyone or at any part of the body. Do not put your hand over the spray tip. Do not stop or deflect leaks with your hand, body, glove, or rag. Do not spray without tip guard and trigger guard installed. Engage trigger lock when not spraying. Follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing equipment.
	MOVING PARTS HAZARD <p>Moving parts can pinch, cut or amputate fingers and other body parts.</p> <ul style="list-style-type: none"> Keep clear of moving parts. Do not operate equipment with protective guards or covers removed. Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the Pressure Relief Procedure and disconnect all power sources.

 WARNING	
	SPLATTER HAZARD Hot or toxic fluid can cause serious injury if splashed in the eyes or on skin. During blow off of platen, splatter may occur. <ul style="list-style-type: none">• Use minimum air pressure when removing platen from drum.
	BURN HAZARD Equipment surfaces and fluid that's heated can become very hot during operation. To avoid severe burns: <ul style="list-style-type: none">• Do not touch hot fluid or equipment.

Component Identification

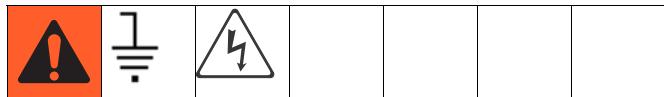


Key:

A	Control Power Switch	L	Ram/Pump #1
B	Power Input	M	Ram/Pump #2
C	Transfer Pump #1 Level Sensor	N	Material Regulator (behind stand)
D	Transfer Pump #2 Level Sensor	O	Ram #1 Reg/Gauge
E	Main Air Inlet	P	Ram #2 Reg/Gauge (Behind Control Box)
F	Material Outlet	Q	Pump #1 Reg/Gauge
G	System Pressure Regulator/Gauge	R	Pump #2 Reg/Gauge (Behind Control Box)
H	Pump #1/Auto/Pump #2 Control Switch	S	Ram #1 Director Valve
I	Pump #1 Low Light	T	Ram #2 (Behind Control Box)
J	Pump #2 Low Light		
K	Material Low Light		

FIG. 1: Micrometer and LRT PD44 Control Box

Grounding



This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current.

Grounding plug units: this product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

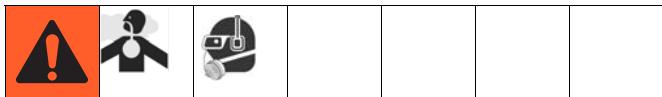
Hard-wired units: the grounding wire must be used. All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.

Air and fluid hoses: use only electrically conductive hoses.

Fluid supply container: follow local code.

Solvent pails used when flushing: follow local code. Use only conductive metal pails, placed on a grounded surface. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts grounding continuity.

Setup



1. Connect air supply to main air inlet. Air supply must include a shut-off/bleed valve that bleeds pressure past the shut-off/bleed valve and an air-water separator/filter.
2. Adjust each desired Ram regulator to the appropriate pressure.
3. Switch each desired Ram director valve to the UP position.
4. Place each desired material container under the pump.
5. Switch each desired Ram director valve to the DOWN position.
6. Adjust each desired pump regulator to the appropriate pressure.
7. Adjust material regulator to the appropriate pressure.
8. Plug in power input to a receptacle.

Startup

1. Energize the control logic box by turning the control power switch to the ON position.
2. Place the pump #1/Auto/Pump #2 switch to the desired location.

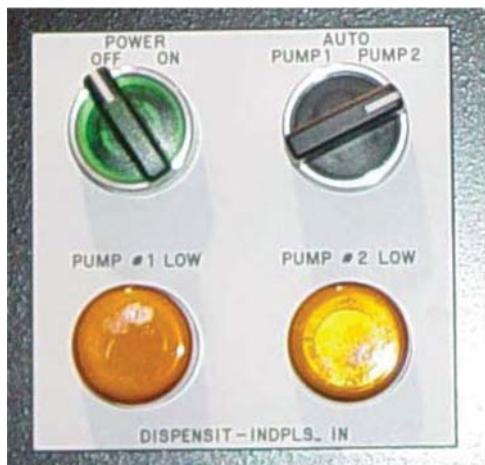
NOTE:

Pump #1 Switch Location (manual mode): When this position is selected the only material output will be from Station #1.

Auto Switch Location (auto mode): When this position is selected the material output will be from either Station #1 or #2 as long as neither is in a Low Level condition.

Pump #2 Switch Location (manual mode): When this position is selected the only material output will be from Station #2.

Dual Transfer Pump Controller Operation



Other Indicators

PUMP #1 indicator

When this indicator is activated, the material level of transfer pump #1 reached the low-level limit switch. When this indicator is illuminated, the transfer pump will be disabled.

PUMP #2 indicator

When this indicator is activated, the material level of transfer pump #2 reached the low-level limit switch. When this indicator is illuminated, the transfer pump will be disabled.

TOWER LIGHT indicator



POWER Switch

ON position

Enables power to the Transfer Pump Controller.

OFF position

Disables power to the Transfer Pump Controller.

PUMP CROSS OVER switch

PUMP 1 Switch position

When this position is selected, the dispense valve will feed from transfer PUMP #1 only. The material ball valve will stall out PUMP #2.

AUTO Switch position

When this position is selected the dispense valve will feed from transfer PUMP #1 until the transfer PUMP #1 material level reaches the LOW LEVEL proximity switch, at this time transfer PUMP #2 will feed the dispense valves.

Note: The material ball valve will stall out the opposite pump.

PUMP 2 Switch position

When this position is selected, the dispense valve will feed from transfer PUMP #2 only. The material ball valve will stall out PUMP #1.

When this light is illuminated and flashing, the material levels of transfer pump #1 and transfer pump #2 are both at the low level condition, both transfer pumps will be disabled and the PUMP #1 and the PUMP #2 indicators will be illuminated. If one of the transfer pumps were to be at the low level, the light will be illuminated.

NOTE: When setting the low level sensor on the material rams, the low level sensors should be activated when the material rams are a 1/2 inch above the bottom of the pail or a transfer pump motor can be running for a prolonged period when the pail is out of material.

Dispensing Operation

Dispense Continuously

To dispense continuously, place the Pump #1/Auto/Pump #2 switch to the Auto location.

NOTE:

As a result the material output will be from either Station #1 or #2 as long as neither is in a Low Level condition.

If Station #1 is in a Low Level condition the Material Low indicator will illuminate. Pump #1 indicator will illuminate and the Transfer Pump #1 will be disabled.

If Station #2 is in a Low Level condition the Material Low indicator will illuminate. Pump #2 indicator will illuminate and the Transfer Pump #2 will be disabled.

If both Station #1 and Station #2 are in a Low Level condition then Pump #1 and Pump #2 indicator will illuminate, the Material Low indicator will illuminate and flash, the customer signal on the PLC activates, and both transfer pumps will be disabled.

Dispense Pump #1 Only (manual mode)

To dispense pump #1 only, place the Pump #1/Auto/Pump #2 switch to the Pump #1 location.

NOTE:

As a result the material output will only be from Station #1. Once Station #1 is in a Low Level condition, the Pump #1 indicator and Material Low Light indicator will illuminate and the Transfer Pump #1 will be disabled.

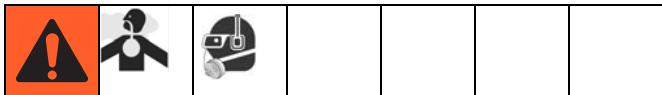
Dispense Pump #2 Only (manual mode)

To dispense pump #2 only, place the Pump #1/Auto/Pump #2 switch to the Pump #2 location.

NOTE:

As a result the material output will only be from Station #2. Once Station #2 is in a Low Level condition, the Pump #2 indicator and Material Low Light indicator will illuminate and the Transfer Pump #2 will be disabled.

Pressure Relief Procedure



1. Turn main air supply shut-off/bleed valve to the off position. This will bleed air from the system.
2. Perform feed system pressure relief procedure. See **Related Manuals** on page 2.

Shutdown



1. Perform **Pressure Relief Procedure**.
2. De-energize the control logic box by turning the control power switch to the OFF position.

Schematics

Schematics are included in the assembly drawings manual.

Optional Customer Outputs

Material Low Level Condition: If either or both Pump #1 and Pump #2 are in a Low Level condition, PLC O/O will be activated.

Maintenance

NOTE: If material is leaking, see **Troubleshooting** on page 12.

See **Related Manuals** on page 2 for dispense valve and feed system maintenance schedule and procedures.

Air-Water Separator/Filter

Drain water once a shift or as necessary.

Troubleshooting



Perform **Pressure Relief Procedure** before performing any troubleshooting procedure.

See **Related Manuals** on page 2

Technical Data

Maximum Ambient Temperature.....	110°F (43°C)
Maximum Operating Temp	150°F (65°C)
Maximum Air Working Pressure.....	100 psi (0.7 MPa, 7 bar)
Supplied Air Requirements.....	1 to 3 cfm at 80 psi to 100 psi
Electrical Requirements	120V, 60 Hz
Fuses Required	10 mm x 40 mm, Part Number 81/0033-2/11
Dimensions.....	Height: Total Open: 6 ft Total Closed: 4 ft 8 in. Length: 3 ft 8 in. Width: 2 ft 3 in.
Weight	550 lb (249.5 kg)

Graco Ohio Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

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In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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Toll Free: 1-800-746-1334 or Fax: 330-966-3006

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