

Proteus® Series Metering Pumps

Liquid End Sheet

LE-A74XXXXXX

When pumping solutions, make certain that all tubing is securely attached to the fittings. It is recommended that tubing or pipe lines be shielded to prevent possible injury in case of rupture or accidental damage. Always wear protective clothing and face shield when working on or near your metering pump.

Note: See parts list for materials of construction

A. INSTALLING INJECTION CHECK VALVE (FIGURE 1)

Note: Not all configurations have an injection valve

1. The Injection Check Valve prevents backflow from a treated line. Install the injection check valve at the location where chemical is being injected into the system.
2. Any size Female NPT fitting or pipe tee with a reducing bushing to 1/2" Female NPT will accept the injection check valve. PTFE tape should only be used on threads that are connected with pipes.
3. When installing the Injection Check Valve, be sure to position it so that the valve enters the bottom of your pipe in a vertical position. Variations 40° left and right are acceptable.

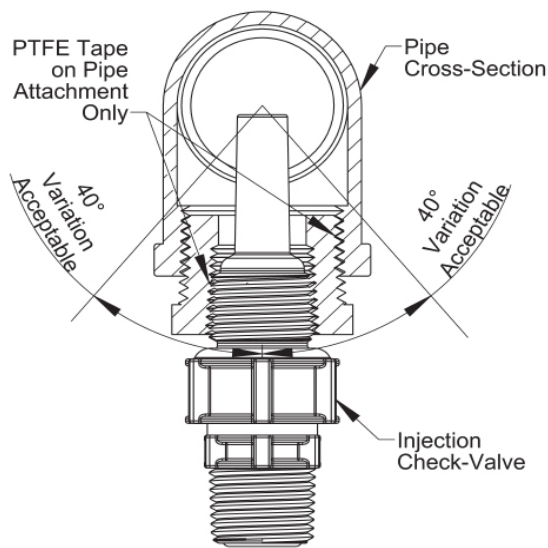


FIGURE 1

B. CONNECTING DISCHARGE TUBING (FIGURE 2)

Note: Cut tubing to length needed for discharge line.

1. Route tubing from the injection check valve to the metering pump, making sure it does not touch hot or sharp surfaces, or is bent so sharply that it kinks.
2. Put coupling nut over tubing.
3. Position female Ferrule about one inch (25 mm) from end of tubing.
4. For 1/4" or 6 mm OD tubing, cut tubing so that 1/4" to 3/8" (5-10 mm) protrudes from the female Ferrule. For all other tubing push the tube to the bottom of the groove in the

male Ferrule. Then slide the female Ferrule down into the male Ferrule.

5. Firmly hand tighten the coupling nut onto the fitting.

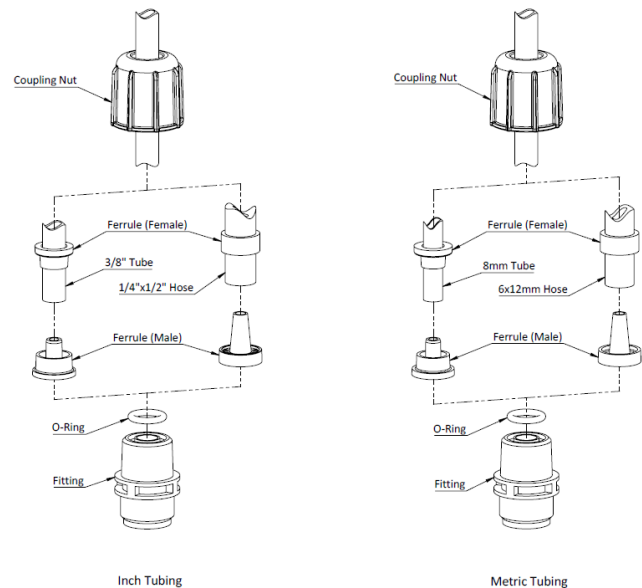


FIGURE 2

DO NOT USE CLEAR VINYL TUBING ON THE DISCHARGE SIDE OF THE PUMP.

DO NOT USE PLIERS OR PIPE WRENCH ON COUPLING NUTS OR FITTINGS.

C. CONNECTING SUCTION TUBING/FOOT VALVE

Note: High-viscosity liquid ends are not equipped with a foot valve. Flooded suction is recommended. 1/2" NPT connector is included for flooded suction installations.

1. The foot valve acts as a check valve to keep the pump primed in suction lift applications. Cut suction tubing to a length so that the foot valve hangs approximately 2 in (50 mm) above the bottom of the solution container. Please refer to Figures 3 and 4 for proper foot valve positioning. Maximum recommended vertical suction lift is 13.1 ft (4 m) for Output Codes 2 & 3 and 6.5 ft (2 m).



an Accudyne Industries brand

2. The ceramic weight, when installed, helps position foot valve in a vertical position. Attach the foot valve to one end of the suction tubing and slide the ceramic weight over the tubing end until it contacts the top of the foot valve coupling nut. Place foot valve and tubing into solution tank.

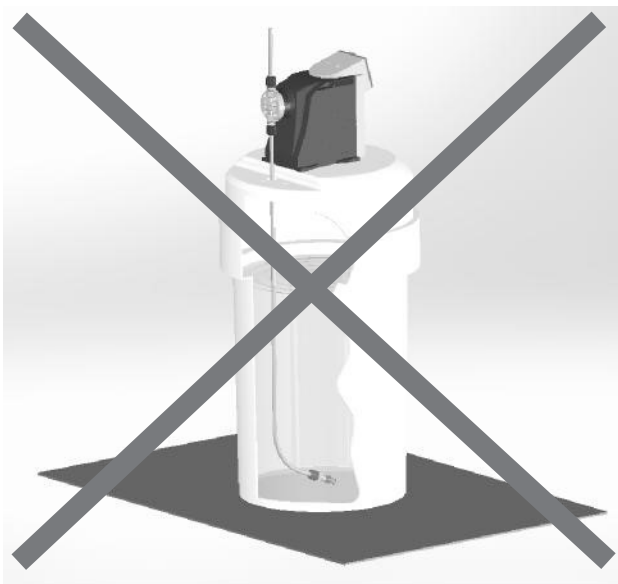


FIGURE 3 - Incorrect Foot Valve Installation

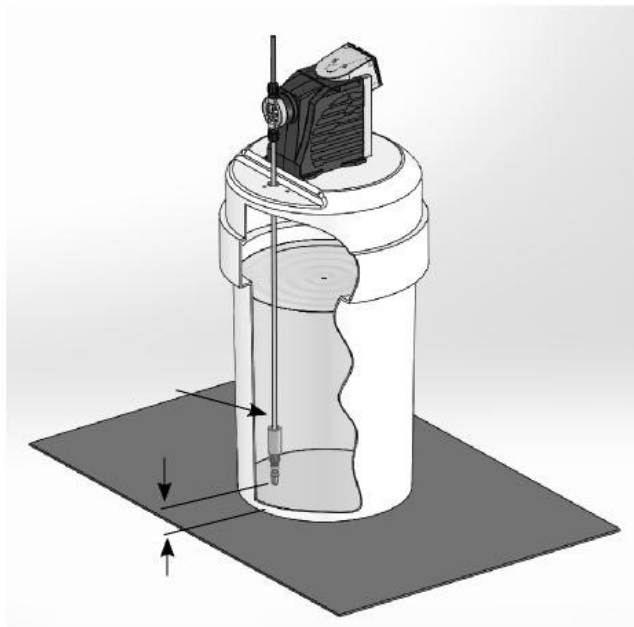



FIGURE 4 - Correct Foot Valve Installation

D. PRIMING

1. Prime the pump by pressing PRIME . The pump will operate at the flow rate and for the duration configured in the settings menu for the prime feature.
2. For more information on the prime feature, please refer to Section 4.5 the Proteus Operation Manual available by searching for "Proteus" on www.miltonroy.com and clicking the "Installation and Operation Manuals Tab" or scanning the QR code below.



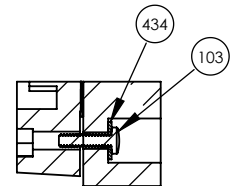
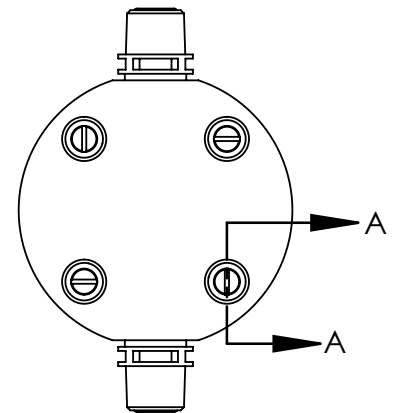
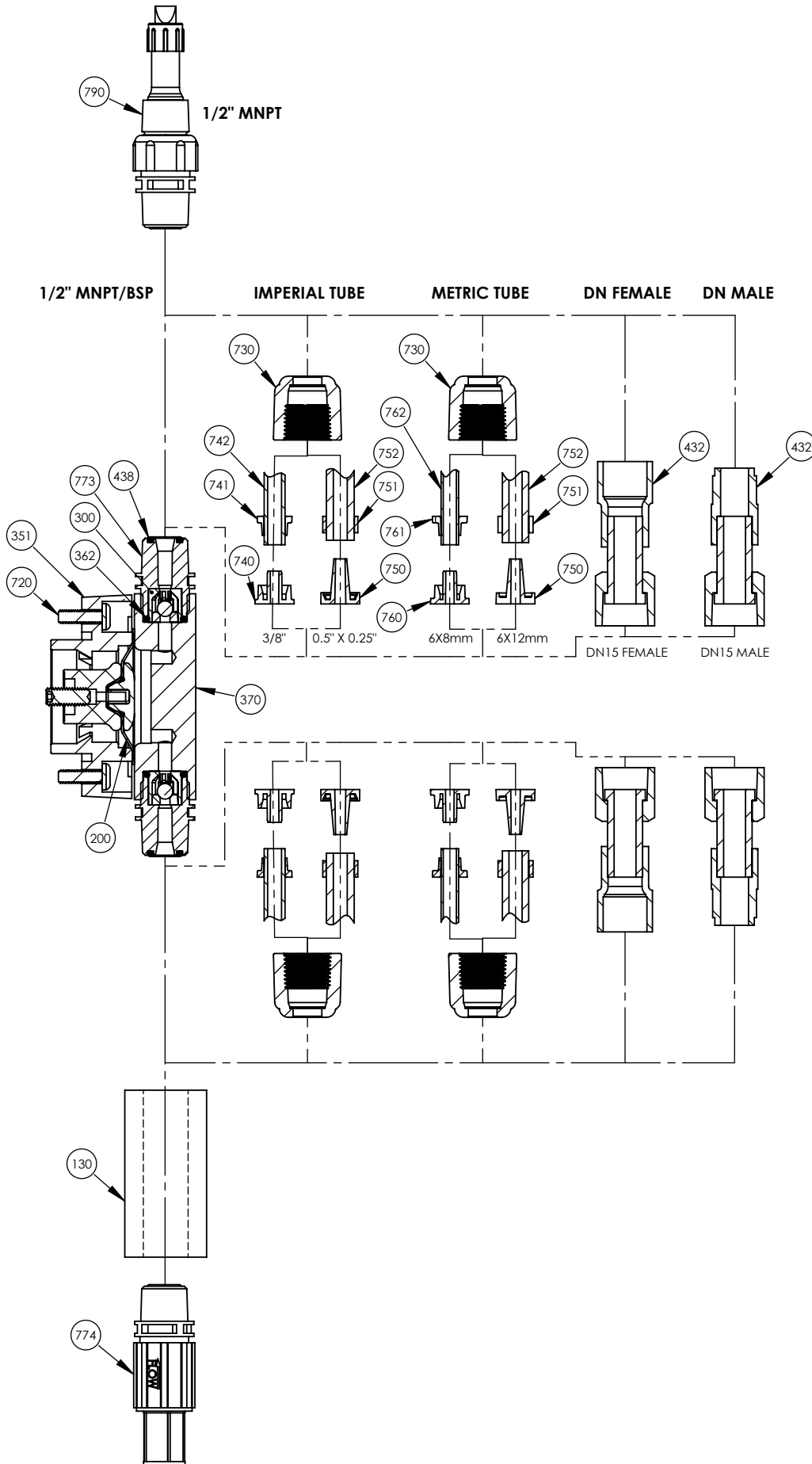
When tubing connections are loosened, chemical will drain from the line. Use appropriate safety precautions to avoid contact with chemical.

REFER TO THE PROTEUS INSTRUCTION MANUAL FOR ADDITIONAL INSTRUCTIONS AND PRECAUTIONS.

You may contact your local Milton Roy Distributor for additional information or visit Milton Roy on the web at www.miltonroy.com

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SECTION A-A

Key Number	Description	Part Number	Quantity									
			A74TCA7T1	A74ATA7T1	A74TCA7PN	A74ATA7PN	A74TCA7M2	A74ATA7M2	A74TCA2FN	A74ATA2FN	A74TCA7DN	A74ATA7DN
103	SCREW, HEAD	10340	4	4	4	4	4	4	4	4	4	4
130	WEIGHT, SUCTION TUBING	10322	1	1	-	-	1	1	-	-	-	-
200	DIAPHRAGM	77118	1	1	1	1	1	1	1	1	1	1
300	ASSY, CV CARTRIDGE	58994	2	-	2	-	2	-	2	-	2	-
		37859	-	2	-	2	-	2	-	2	-	2
		35116	1	1	1	1	1	1	1	1	1	1
351	SPACER, LIQUID END	35330	1	1	1	1	1	1	1	1	1	1
353	SECONDARY DIA-PHRAGM (BOOT)*	36103	2	2	2	2	2	2	2	2	2	2
362	O-RING, CV	70117	1	1	1	1	1	1	1	1	1	1
370	HEAD	77447	-	-	-	-	-	-	1	1	-	-
432	DN15 FEMALE ADAPTER	77448	-	-	-	-	-	-	-	-	1	1
434	WASHER, HEAD	55367	4	4	4	4	4	4	4	4	4	4
438	O-RING, CV	48349	2	2	2	2	2	2	2	2	2	2
720	FASTENER, SPACER, LIQUID END	70054	4	4	4	2	4	4	4	4	4	4
730	COUPLING NUT	48378	4	4	-	-	4	4	-	-	-	-
740	FERRULE, MALE, .375 OD	70192	4	4	-	-	-	-	-	-	-	-
741	FERRULE, FEMALE, .375 OD	70193	4	4	-	-	-	-	-	-	-	-
742	TUBING, 3/8", PE	10342-16	1	1	-	-	-	-	-	-	-	-
750	FERRULE, MALE, 1/4 X 1/2, HOSE	53441	4	4	-	-	-	-	-	-	-	-
	FERRULE METRIC, CONNECTOR 6X12	70185	-	-	-	-	4	4	-	-	-	-
751	FERRULE, FEMALE, 1/4 X 1/2, HOSE	53442	4	4	-	-	-	-	-	-	-	-
	FERRULE METRIC, CLAMP RING 6X12	70186	-	-	-	-	4	4	-	-	-	-
752	TUBING, 0.5" X 0.25", REINFORCED PVC	54342-20	1	1	-	-	-	-	-	-	-	-
	TUBING, 6X12MM, REINFORCED PVC	70121-6M	-	-	-	-	4	4	-	-	-	-
760	FERRULE, MALE 6X8MM	70187	-	-	-	-	4	4	-	-	-	-
761	FERRULE, FEMALE 6X8MM	70188	-	-	-	-	4	4	-	-	-	-
762	TUBING, 6X8MM, PE	36181-6M	-	-	-	-	4	4	-	-	-	-
773	FITTING, CV	70183	2	2	2	2	2	2	2	2	2	2
774	FOOT VALVE	58986	1	-	-	-	1	-	-	-	-	-
		56043	-	1	-	-	-	1	-	-	-	-
790	INJECTION VALVE	58982	1	-	-	-	1	-	-	-	-	-
		56045	-	1	-	-	-	1	-	-	-	-

CV = Check Valve

*Boot not shown in drawing