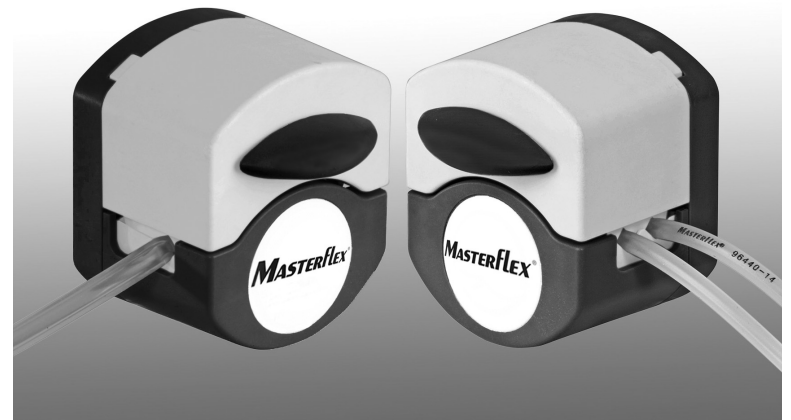


OPERATING MANUAL

MASTERFLEX[®]

Miniflex[™]

PUMP HEADS



A-1299-7283
Edition 05

MASTERFLEX[®]

(US & Canada only) Toll Free 1-800-MASTERFLEX • 1-800-637-3739
(Outside US & Canada) 1-847-381-7050
www.masterflex.com • techinfo@masterflex.com

PUMP FOR LIQUIDS ORIGINAL INSTRUCTIONS

WARRANTY

Use only MASTERFLEX precision tubing with MINIFLEX pumps to ensure optimum performance. Use of other tubing may void applicable warranties.

The Manufacturer warrants this product to be free from significant deviations from published specifications. If repair or adjustment is necessary within the warranty period, the problem will be corrected at no charge if it is not due to misuse or abuse on your part, as determined by the Manufacturer. Repair costs outside the warranty period, or those resulting from product misuse or abuse, may be invoiced to you.

The warranty period for this product is 1 year from the date of purchase.

PRODUCT RETURN

To limit charges and delays, contact the seller or Manufacturer for authorization and shipping instructions before returning the product, either within or outside of the warranty period. When returning the product, please state the reason for the return. For your protection, pack the product carefully and insure it against possible damage or loss. Any damages resulting from improper packaging are your responsibility.

TECHNICAL ASSISTANCE

If you have any questions about the use of this product, contact the Manufacturer or authorized seller.

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*EN809 manufactured by:
Masterflex LLC
28W092 Commercial Avenue
Barrington, IL 60010

MAINTENANCE

No lubrication is required for the MINIFLEX Pump Head, only sealed bearings are used. There are no customer serviceable parts. Contact dealer for further repair information.

CLEANING

Use a mild detergent solution to clean the Pump Head. Do not immerse, nor use excessive fluid.

Contact factory for the following options:

- Open Head Sensor
- Leak Detection
- Stainless steel rotor
- Tubing sets

SAFETY PRECAUTIONS



CAUTION: Do not overtighten screws.

WARNINGS: Turn drive off before removing or installing tubing. Fingers or loose clothing could be caught in the rollers.

Stop the drive when changing the tubing or its position in the rotor mechanism (the rotor is partially exposed when the **LOADING LEVER** is in the open position).



NOTE: Use only MASTERFLEX precision tubing with MINIFLEX pumps to ensure optimum performance. Use of other tubing may void applicable warranties.



WARNING: PRODUCT USE LIMITATION

This product is not designed for, nor intended for use in patient connected applications; including, but not limited to, medical and dental use, and accordingly, has not been submitted for FDA approval.

EXPLANATION OF SYMBOLS



CAUTION: Risk of danger. Consult the Operator's Manual for nature of hazard and corrective actions.



CAUTION: Risk of crushing. Keep fingers away from rotor while pump is in operation. Stop pump before loading or unloading tubing.

IXEF 1022 — Reg TM Solvay S.A. Properties

ERTALYTE TX — Reg TM of the Quadrant Group

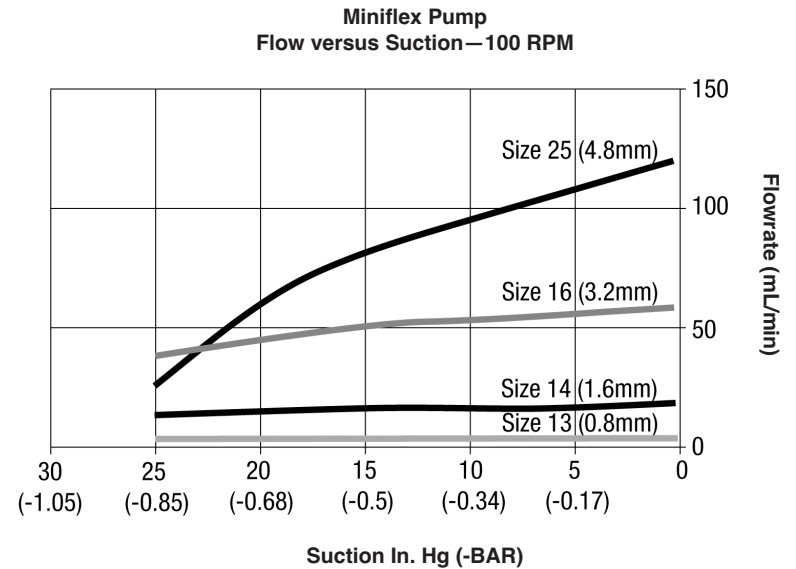
NORPRENE — Reg TM Saint-Gobain Performance Plastics Corp.

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GENERAL PUMP HEAD INFORMATION

Number of rollers:	3
Maximum pump speed (rpm):	300
Housing material:	IXEF® 1022
Roller material:	ERTALYTE® TX
Bearing material:	Sealed bearings
Rotor materials:	Anodized aluminum and Stainless steel
Operating temperature ‡:	32°F to 104°F (0°C to 40°C)
Storage temperature:	-49°F to 149°F (-45°C to 65°C)
Humidity:	0 to 90% (non-condensing)
Dimensions (W x H x D):	
Operating:	2.50" x 2.93" x 2.38" (63.5 mm x 74.625 mm x 60.452 mm)
Open:	2.50" x 3.40" x 2.38" (63.5 mm x 86.512 mm x 60.452 mm)
Weight:	0.5 lb (0.23 kg)
Noise level:	<70 dBA @ 1 meter
Compliance (for CE mark):	EN809 (EU Machinery Directive)
Occlusion type:	Fixed
Shaft drive type:	Tang or Spline
L/S tubing sizes	Size 13, 14, 16 & 25 I.D.—(mm) (0.8mm, 1.6mm, 3.2mm & 4.8mm)
Single-channel Pump	
Head model numbers:	
Tang:	77220-00
Spline:	77220-20
L/S tubing sizes	Size 13, 14, 16 I.D.—(mm) (0.8mm, 1.6mm, 3.2mm)
Dual-channel Pump	
Head model numbers:	
Tang:	77220-10
Spline:	77220-30

Typical Flow, Pressure and Vacuum Data: cont.

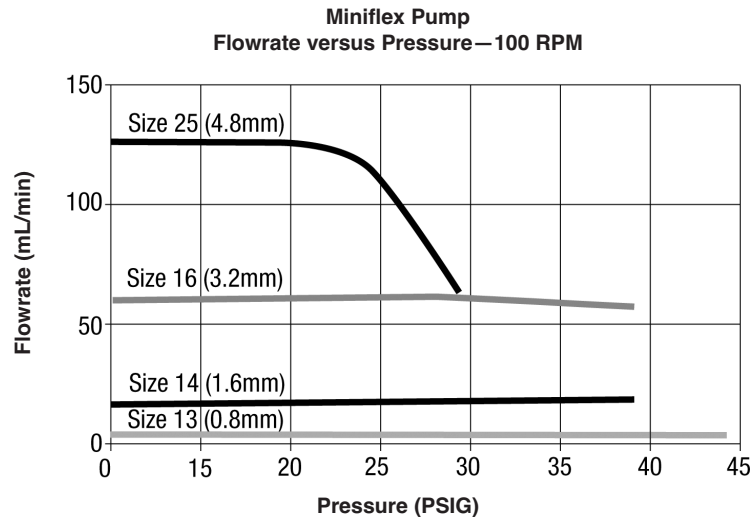
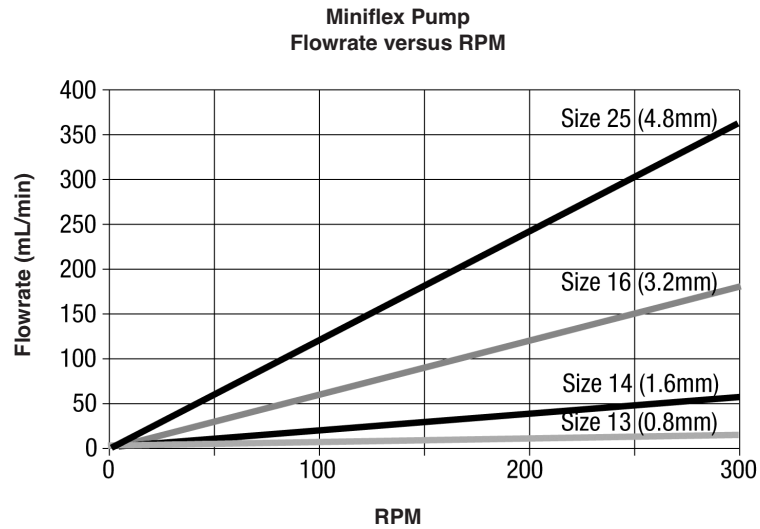


NOTES: Flows shown are per channel. Dual Channel Pump Head accepts sizes 13, 14 & 16 only. Size 25 tubing, single channel only.

Performance values based on NORPRENE® Food tubing, pumping water. Actual results may differ between tubing formulations and conditions.

‡ Use in this temperature range for continuous duty operation with no decrease in performance or product life. Pump Heads will work outside this range with some possible reductions in performance or product life.

Typical Flow, Pressure and Vacuum Data



NOTES: Flows shown are per channel. Dual Channel Pump Head accepts sizes 13, 14 & 16 only. Size 25 tubing, single channel only.

Performance values based on NORPRENE® Food tubing, pumping water. Actual results may differ between tubing formulations and conditions.

INTRODUCTION AND GENERAL DESCRIPTION

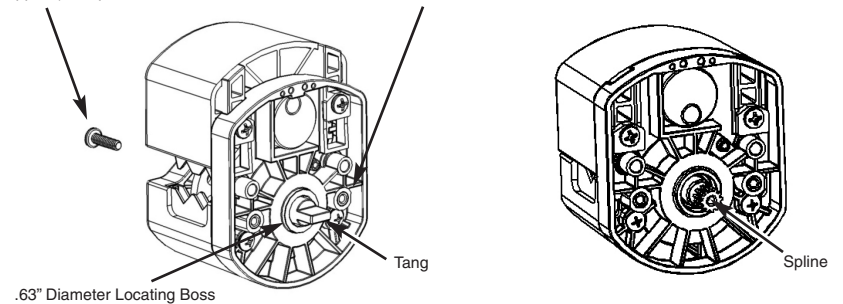
This MINIFLEX™ Pump Head is designed to provide a simple easy-to-use peristaltic pump. The Pump Head accepts several different tubing sizes for a wide range of flow rates. The unique over-center cam design and spring loaded tubing retention allows quick tubing changes and greatly reduced maintenance time.

Each pump is supplied complete with a mounting hardware package and this manual. A Phillips screwdriver is required to complete installation.

PUMP HEAD INSTALLATION AND REMOVAL

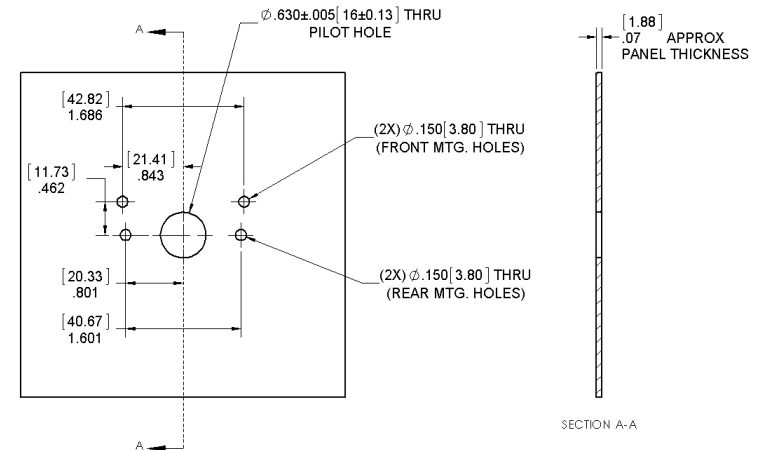
Pump Head mounting from the front. Install Pump Head with (2) #6-32 x 1/2" lg., pan head screws (supplied). Torque to 8 lb/in.

Optional rear mounting through panel. Install Pump Head with (2) #6-32 x 1/2" lg., pan head screws (supplied). Torque to 8 lb/in.

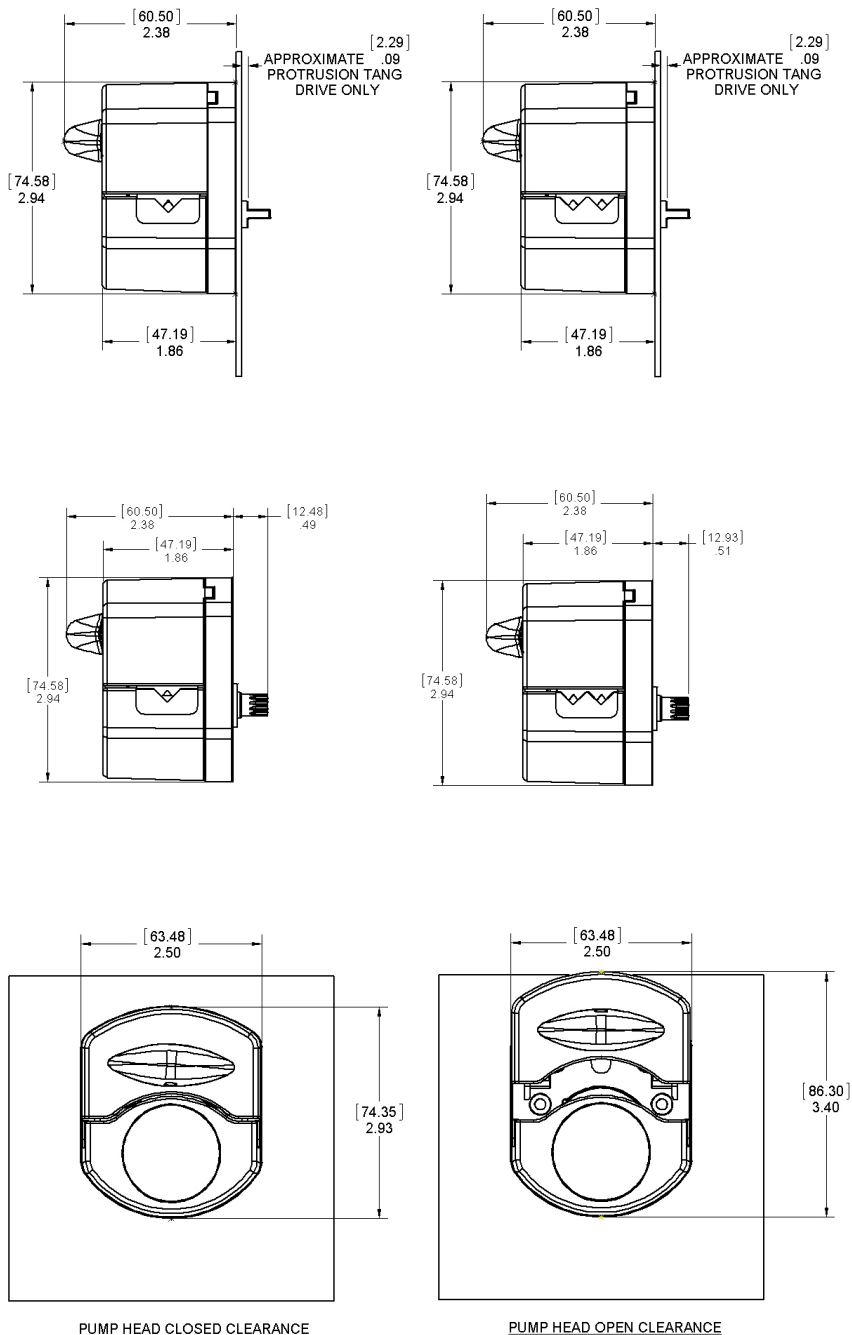


CAUTION: Do not overtighten screws.

TYPICAL PANEL MOUNT HOLE LAYOUT



TYPICAL PUMP HEAD OVERALL SIZE FOR INSTALLATION CLEARANCE



TUBE LOADING SINGLE & DUAL CHANNEL

1. Be sure pump drive is turned off.
2. Rotate the handle to the left (CCW) to open pump.
3. Load tubing of the correct size. Center tubing between retainers. (Figure #1)
4. With correct tubing loaded, check that tubing is between retainer notches, rotate handle to the right (CW) to close.
5. Pump Head will be fully closed when handle is at the horizontal position against the cam stop. (Figure #2)
6. Lightly pull tubing from both sides to remove any excess tubing in the Pump Head and seat tubing in retainers.

Figure #1 Open and Load



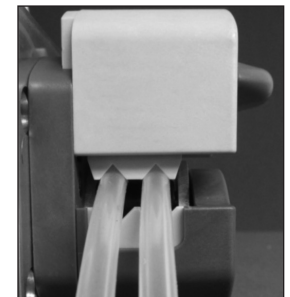
Figure #2 Close Pump



Figure #3 Dual Channel



Figure #4 Side View



TUBE LOADING DUAL CHANNEL (FIGURE #3)

1. See above steps 1-2.
2. Load tubing of the correct size starting with rear tube position. Center tubing between retainers. (Figure #3)
3. With correct tubing loaded, check that tubing is positioned with the retainer notches, rotate handle to the right (CW) to close.
4. Pump Head will be fully closed when handle is at the horizontal position against the cam stop. (Figure #2)
5. Lightly pull tubing from both sides to remove any excess tubing in the Pump Head and seat tubing in retainers.



WARNING: Stop the drive when changing the tubing or its position in the rotor mechanism (the rotor is partially exposed when the LOADING HANDLE is in the open position).

NOTE: For optimum tubing life, keep tubing straight where it enters and exits.

NOTE: Tubing retainers are spring loaded and do not need to be adjusted when changing tubing of the same type and size.