1 YEAR WARRANTY

MADE IN USA

User's Guide

Shop online at

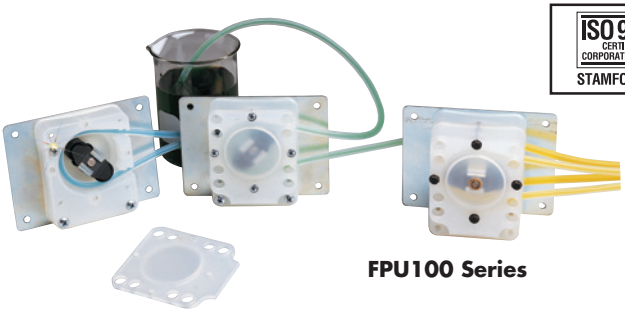
omega.com®

OMEGA®

omega.com
e-mail: info@omega.com
For latest product manuals:
omegamanual.info

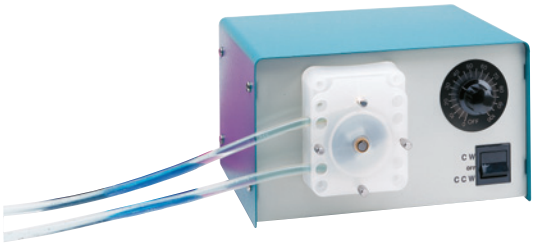
ISO 9001 CERTIFIED CORPORATE QUALITY STAMFORD, CT

ISO 9001 CERTIFIED CORPORATE QUALITY MANCHESTER, UK



FPU100 Series

FPU250 Series



FPU100 AND 250 SERIES OMEGAFLEX® PERISTALTIC PUMPS

INTRODUCTION

General Description

The OMEGA® peristaltic pump is self-priming and can handle a wide variety of viscosities (from air to heavy slurries) with positive displacement.

The OMEGA® peristaltic pump can be used to pump fluids or gases without contamination of the pump - the material contacts only the tubing. The positive displacement feature makes this pump ideal for metering applications. Each revolution of the roller assembly delivers a precise amount of fluid.

The easy changeability of the OMEGA® peristaltic pump tubing makes this the ideal pump for diverse quick change repetitive pumping jobs.

Flexible, reliable and cost efficient, the OMEGA® peristaltic pump can fill most all of your fluid movement requirements.

Specifications

1. Priming Unit is self-priming and will hold vacuum when turned off.
2. Operation: Pump can run dry without damage.
3. Weight: See model information chart.
4. Capacity: From 3mL/min to 987mL/min (see model information chart).
5. Construction: High strength plastics and long-lasting alloy metals.
6. Maximum Head Pressure: 57 feet of water.
7. Maximum Suction Lift: 28 feet of water.
8. Maximum System Pressure: 20 psi continuous, 25 psi intermittent.
9. Certification: All motors are UL listed.
10. Rating: All gearmotors are rated for 100% continuous duty.

OPERATIONAL INFORMATION

Installation Instructions

Power Requirements: Voltage and frequency of power supply must be the same as shown on unit.

Wiring Connections: All wiring and electrical connections must comply with national electrical codes and local electrical codes.

Mounting:

a) Mount OEM model mounting bracket to any flat, rigid surface, using four #10-32 screws.

b) Case enclosed model may be placed on any flat surface, assuring space is provided at the back of the case for air circulation through ventilation holes.

Mounting Location: Pump should be used in a dry location with an adequate supply of cooling air. The ambient temperature should not exceed 25°C.

WARNING

This unit should not be used outdoors or in hazardous locations.

Instructions for Optional Timer

1. Rotate the program disc in the direction of the arrows to align the correct time of day with the time mark.
2. Set the desired switching program by pushing the switch actuators toward the center of the time switch. Each actuator provides a 15 minute “ON” time. The now visible orange area(s) indicate the switch “ON” period

FPU SERIES
ROLLER & TUBING SELECTION

Use the following color coded rollers with the appropriate tubing ID:

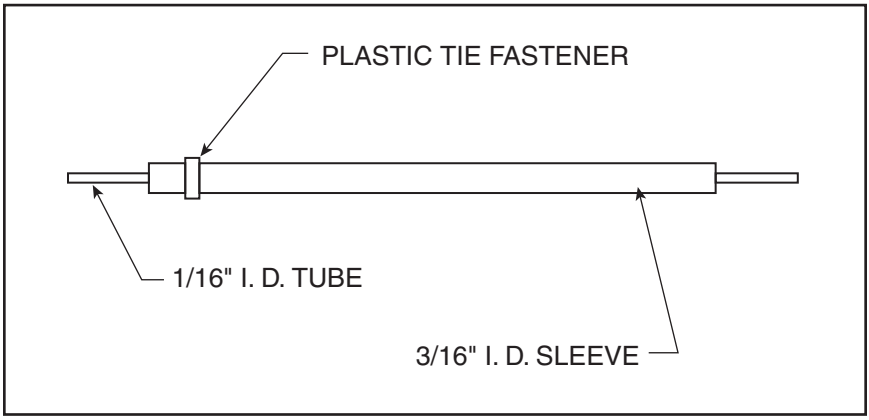
Roller Color	Tubing ID	mL Per Revolution
Black	¼"	3.5
Black	3⁄16"	2.1
Red	⅛"	0.84
Red	1⁄6"	0.21

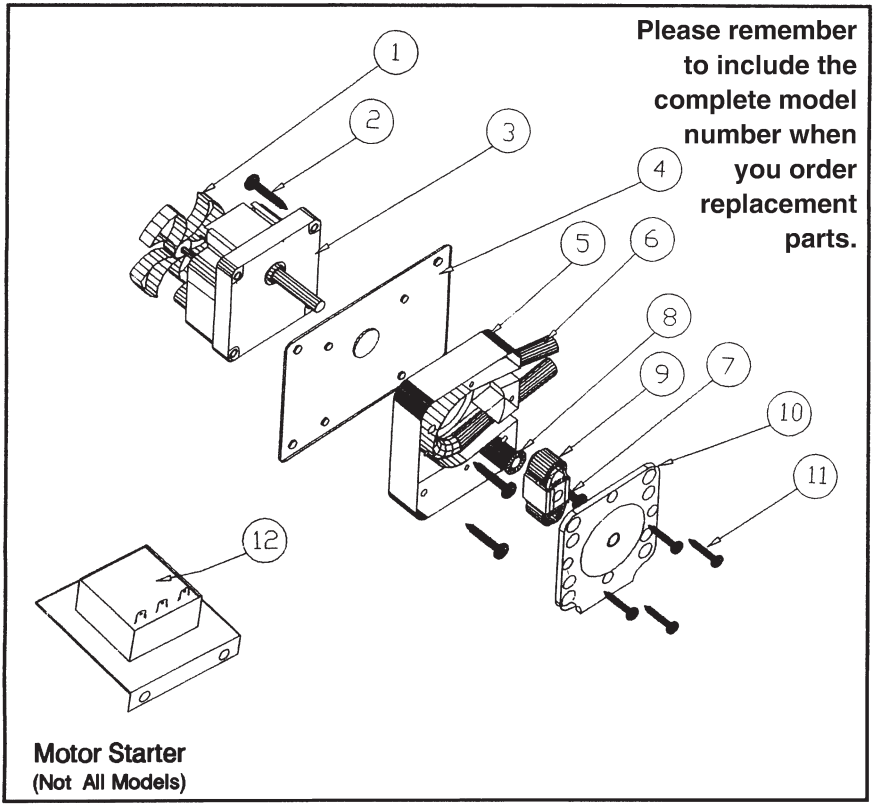
Instructions for 1/16" Tubing Assembly

Insert 1⁄16" tubing into the sleeve and pull out desired length of 1⁄16" tubing. Secure 1⁄16" tubing by placing the tie fastener approximately ¼" from one end of the sleeve and tighten fastener so that 1⁄16" tubing is not easily moved. Be careful not to collapse the inner tubing by over-tightening the tie fastener. Install the tubing with the tie fastener on the inlet side of the pump.

NOTE

Make sure the tie fastener is on the outside of the pump housing and is not interfering with the roller assembly.





ASSEMBLY INSTRUCTIONS

1. Assemble mounting plate (4) and pump housing (5) to gearmotor (3) with with three #10-32 x 1¼" long screws and one #8-32 x ⅞" long screw (2).
2. Slide white plastic washer (8) onto motor shaft. Press roller bracket assembly (9) onto the motor shaft with the four self-locking teeth toward the gearmotor. (As shown in the view above.)
3. Insert tubing (6) into pump. housing (5) inlet and work tube into roller race as you rotate the roller bracket assembly. See details on page 5.
4. Assemble pump cover (10) to pump housing. (5) with four #8-32 x ⅝" long screws (11).

TUBE INSPECTION AND REPLACEMENT

Tubing Inspection:

Inspect all tubing regularly and replace it if deterioration occurs. Use the following instructions to replace pump tubing.

Tubing Replacement

1. Disconnect the power to the pump.
2. Disconnect the suction and discharge tubing from the tubing.
3. Remove four screws and pump cover.
4. Remove old pump tubing and discard.
5. Clean roller race, removing any particles that could damage tubing.
6. Position the roller bracket assembly as shown in Fig. 1.
7. Push the new tubing into the inlet port anchoring the tubing in grippers (see Fig. 2) while rotating the roller bracket assembly.
8. Continue to rotate the roller bracket assembly, pushing the tubing into the roller race.
9. Finally, insert the tubing into the outer port (Fig. 4), and replace the cover and screws.

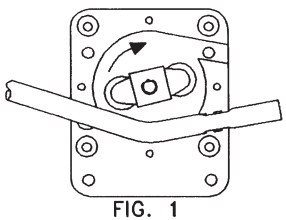


FIG. 1

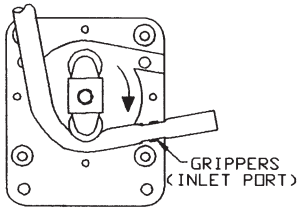


FIG. 2

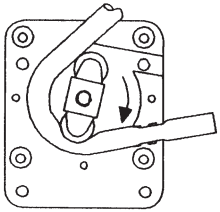


FIG. 3

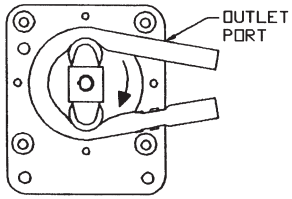


FIG. 4

OMEGA® VARIABLE SPEED DRIVES

SERIES FPU 250

OMEGA® variable speed drives are powered by a DC gearmotor. A specially designed electronic speed control system provides smooth acceleration control over the entire flow range. The three position on/off switch allows the user to maintain speed setting when unit is turned off or reversed. This unit is designed for continuous operation at any speed. All variable speed drives are rated for continuous duty at 25°C ambient.

Fuse: Replace with type AGC-1/2 Amp. Use AGC-1 Amp for dual head pump.

Alternate Tubing Replacement Method for Medium and High

Omega Model No.	Water Range (ml/min)	Tube (inner dia.) mm (in.)	Case Dimensions cm (in.)	RPM	Amps @ 60Hz	Weight kgs. (lbs)
FPU251	0.36-5.5	1.59 (1/16)	22.5 x 14.2 x 19.1 (8.85 x 5.6 x 7.5)	1.5 to 26	0.5	3.63 (8)
FPU252	3.0-50	4.76 (3/16)	22.5 x 14.2 x 19.1 (8.85 x 5.6 x 7.5)	1.5 to 26	0.5	3.63 (8)
FPU253	6.0-90	6.35 (1/4)	22.5 x 14.2 x 19.1 (8.85 x 5.6 x 7.5)	1.5 to 26	0.5	3.63 (8)
FPU254	0.9-24	1.59 (1/16)	22.5 x 14.2 x 19.1 (8.85 x 5.6 x 7.5)	4 to 114	0.5	3.63 (8)
FPU255	8.0-220	4.76 (3/16)	22.5 x 14.2 x 19.1 (8.85 x 5.6 x 7.5)	4 to 114	0.5	3.63 (8)
FPU256	14-400	6.35 (1/4)	22.5 x 14.2 x 19.1 (8.85 x 5.6 x 7.5)	4 to 114	0.5	3.63 (8)
FPU257	1.7-49	1.59 (1/16)	22.5 x 14.2 x 19.1 (8.85 x 5.6 x 7.5)	8 to 228	1	3.63 (8)
FPU258	15-440	4.76 (3/16)	22.5 x 14.2 x 19.1 (8.85 x 5.6 x 7.5)	8 to 228	1	3.63 (8)
FPU259	28-800	6.35 (1/4)	22.5 x 14.2 x 19.1 (8.85 x 5.6 x 7.5)	8 to 228	1	3.63 (8)

Variable Speed Units

With unit running at high RPM, pull old tubing out from outlet port of pump. Install new tube by inserting into inlet port; continue feeding tube ¼" in at a time, allowing the roller assembly to push tubing until tube extends out from outlet port. Pull tubing from outlet port until desired tubing extension is obtained. Run unit for about one minute to allow tube to seat properly.

CAUTION

Depending on pump model, tubing in use and fluid being pumped, roller assembly may stop rotating when speed/flow control is set at the low end range. Avoid prolonged operation in the stalled position for longer motor life.

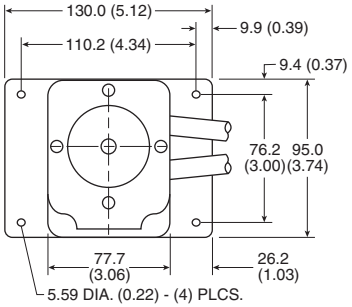
REPLACEMENT PARTS

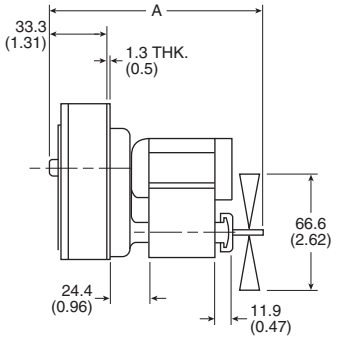
ITEM NUMBER	NUMBER REQUIRED	PART DESCRIPTION
1	1	Fan
2	1	Screw, Gearmotor
3	1	Gearmotor
4	1	Mounting Plate or Case (Enclosure)
5	1	Pump Housing
6	1	Tubing (See Tubing Replacement Chart)
7	3	Screws, Pump Housing
8	1	Washer
9	1	Roller Bracket Assembly
10	1	Pump Housing Cover
11	4	Screws, Pump Housing Cover
12	1	Motor Starter (Not all models)

TUBING REPLACEMENT CHART

MODEL NO.	DESCRIPTION (ID X OD)
FPU16-N	1/16" X 1/8" Norprene® Tubing
FPU16-S	1/16" X 1/8" Silicone Tubing
FPU18-N	1/8" X 3/8" Norprene® Tubing
FPU18-S	1/8" X 3/8" Silicone Tubing
FPU316-H	3/16" X 3/8" Norprene® Tubing
FPU316-S	3/16" X 3/8" Silicone Tubing
FPU14-N	1/4" X 7/16" Norprene® Tubing
FPU15-S	1/4" X 7/16" Silicone Tubing

FPU SERIES - AC MODELS, OEM Style, Fixed Speed



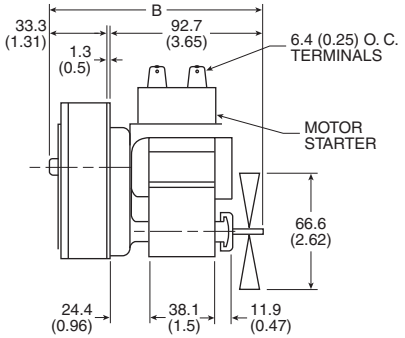


DIMENSIONS mm (in.)

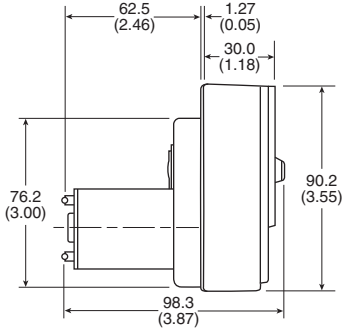
The following models require a motor starter as shown in the drawing at right.

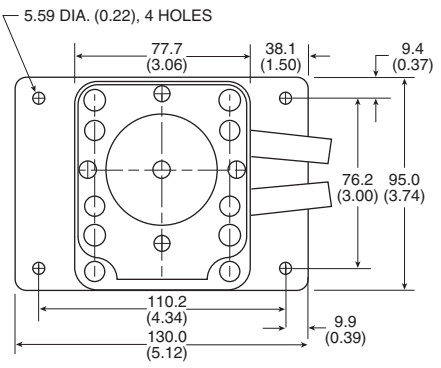
* FPU-123	Single Head
* FPU-124	Single Head
* FPU-125	Single Head
* FPU-122 DUAL	Dual Head
* FPU-123 DUAL	Dual Head
* FPU-124 DUAL	Dual Head

**These models are not UL listed.*



FPU SERIES - DC MODELS, OEM Style, Fixed Speed





DIMENSIONS mm (in.)

MODEL INFORMATION CHART

Omega® Model Number	Approximate Flow of H2O @ 60Hz mL/min	GPM	Tubing ID	Motor Speed RPM	Amps @ 60Hz	A Dim. mm	(in.)	B Dim mm	(in.)	Weight w/ Case Lbs/Kgs	Weight w/o Case Lbs/Kgs
FPU101	3	.0008	1/16"	14	.37	91.7	3.61			4.2/1.9	2.6/1.2
FPU102	5	.0013	1/16"	23	.42	105.9	4.17			4.3/1.9	2.7/1.2
FPU103	6	.0016	1/16"	28	.75	105.9	4.17			4.3/1.9	2.7/2.1
FPU104	12	.0032	1/8"	14	.37	91.7	3.61			4/2/1.9	2.6/1.2
FPU105	19	.0052	1/8"	23	.42	105.9	4.17			4.3/1.9	2.7/1.2
FPU106	24	.0065	1/8"	28	.75	105.9	4.17			4.3/1.9	2.7/1.2
FPU107	28	.008	3/16"	14	.37	80.3	3.16			4.2/1.9	2.6/1.2
FPU108	46	.012	3/16"	23	.42	105.9	4.17			4.3/1.9	2.7/1.2
FPU109	48	.013	1/4"	14	.37	80.3	3.16			4.2/1.9	2.6/1.2
FPU110	56	.015	3/16"	28	.75	105.9	4.17			4.3/1.9	2.7/1.2
FPU111	72	.018	3/16"	36	.90	105.9	4.17			4.3/1.9	2.7/1.2
FPU112	81	.022	1/4"	23	.42	105.9	4.17			4.3/1.9	2.7/1.2
FPU113	98	.026	3/16"	49	1.0	112.3	4.42			4.6/2.1	2.8/1.3
FPU114	98	.026	1/4"	28	.75	118.6	4.67			4.3/1.9	2.7/1.2
FPU115	116	.030	3/16"	58	1.2	112.3	4.42			4.6/2.1	2.8/1.3
FPU116	126	.034	1/4"	36	.90	105.9	4.17			4.3/1.9	2.7/1.2
FPU117	150	.040	3/16"	75	1.5	118.6	4.67			5.3/2.4	3.5/1.6
FPU118	172	.044	1/4"	49	1.0	112.3	4.42			4.6/2.1	2.8/1.3
FPU119	208	.052	1/4"	58	1.2	112.3	4.42			4.6/2.1	2.8/1.3
FPU120	263	.066	1/4"	75	1.5	118.6	4.67			5.1/2.3	3.5/1.6
FPU121	378	.095	1/4"	108	1.9	127.5	5.02			5.3/2.4	3.7/1.7
FPU122	452	.110	1/4"	129	2.2	127.5	5.02			5.3/2.4	3.7/1.7
FPU123	602	.168	1/4"	172	3.3/2.2			127.5	5.02	5.7/2.6	4.1/1.9
FPU124	711	.200	1/4"	203	3.3/2.2			127.5	5.02	5.7/2.6	4.1/1.9
FPU125	987	.265	1/4"	282	3.3/2.2			127.5	5.02	5.7/2.6	4.1/1.9

POWER SUPPLY
- ☐ 12VDC
- ☐ 24 VDC
- ☐ 24VAC
- ☐ 115VAC
- ☐ 220VAC

TUBING TYPE
- ☐ Norprene
- ☐ Silicone
- ☐ Other_____

ENCLOSURE
- ☐ OEM Panel Mount
- ☐ Case w/ Timer
- ☐ Case w/o Timer

PUMP CONFIGURATION
- ☐ Single Head
- ☐ Dual Head

NOTES:

omega.com®
OMEGA®

OMEGAnet® Online Service	Internet e-mail
omega.com	info@omega.com

Servicing North America:

U.S.A.: ISO 9001 Certified
One Omega Drive, Box 4047
Stamford, CT 06907-0047
Tel: (203) 359-1660 FAX: (203) 359-7700
e-mail: info@omega.com

Canada:
976 Bergar
Laval (Quebec) H7L 5A1, Canada
Tel: (514) 856-6928 FAX: (514) 856-6886
e-mail: info@omega.ca

For immediate technical or application assistance:

U.S.A. and Canada:
Sales Service: 1-800-826-6342/1-800-TC-OMEGA®
Customer Service: 1-800-622-2378/1-800-622-BEST®
Engineering Service: 1-800-872-9436/1-800-USA-WHEN®

Mexico:
En Español: (001) 203-359-7803 e-mail:espanol@omega.com
FAX: (001) 203-359-7807 info@omega.com.mx

Servicing Europe:

Czech Republic:
Frystatska 184, 733 01 Karviná, Czech Republic
TEL: +420 (0)59 6311899
FAX: +420 (0)59 6311114
Tol Free: 0800-1-66342
e-mail: info@omegashop.cz

Germany/ Austria:
Daimlerstrasse 26, D-75392 Deckenpfronn, Germany
Tel: +49 (0)7056 9398-0
FAX: +49 (0)7056 9398-29
Toll Free in Germany: 0800 639 7678
e-mail: info@omega.de

United Kingdom: ISO 9001 Certified
One Omega Drive, River Bend Technology Centre
Northbank, Irlam, Manchester
M44 5BD United Kingdom
Tel: +44 (0)161 777 6611
FAX: +44 (0)161 777 6622
Toll Free in United Kingdom: 0800-488-488
e-mail: sales@omega.co.uk

It is the policy of OMEGA Engineering, Inc. to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification.

The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.
WARNING: These products are not designed for use in, and should not be used for, human applications.

MADE IN USA

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

OMEGA is a registered trademark of OMEGA ENGINEERING, INC.

M1116-0404