

SERIES 5800 PURGE FLOW CONTROLLER

INTRODUCTION

The USFilter's Wallace & Tiernan (USF/W&T) Series 5800 Purge Flow Controller described in this Instruction Sheet maintains a constant flow through a Series 5125M® Arma-View armored purge meter, a glass-tube purge meter or low-flow meter. Constant flow is maintained regardless of pressure variations within the limits stated. Eight configurations are available in high or low capacity, inlet or outlet as listed in Technical Data. These controllers are suitable for use with USF/W&T Arma-View armored purge meter, SS frame glass-tube purge meter and low-flow meters. Inlet flow controllers are best suited for applications with varying supply or inlet pressures. Outlet flow controllers are best suited for applications with varying backpressure or outlet pressures.



WARNING: TO AVOID POSSIBLE SEVERE PERSONAL INJURY OR DAMAGE TO THE EQUIPMENT THIS EQUIPMENT SHOULD BE INSTALLED, OPERATED AND SERVICED ONLY BY TRAINED, QUALIFIED PERSONNEL WHO ARE THOROUGHLY FAMILIAR WITH THE ENTIRE CONTENTS OF THIS INSTRUCTION BOOK.

TECHNICAL DATA

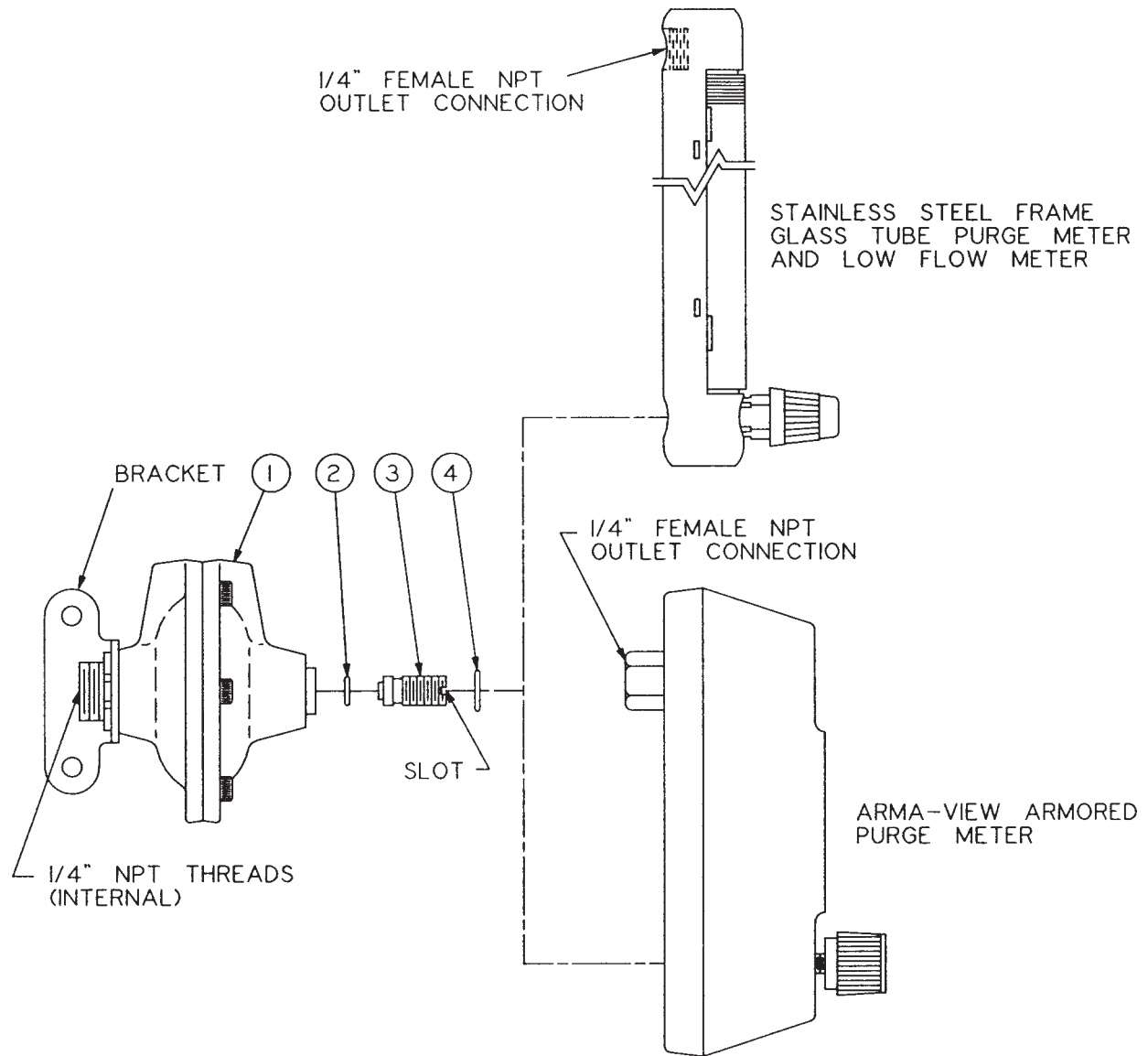
CAP	MODEL NUMBER		MAX. CAP.		MAX. TEMP. (°F)	MAX. INLET PRESS. PSI	MIN. PRESS. DROP PSI	MATERIALS OF CONSTRUCTION			SEAT ADAPTER PART NO.
	INLET	OUTLET	AIR FLOW SCFM	H ₂ O FLOW GPM				HOUSING	DIAPH.	STEM	
LOW	5830	5840	30	5	200	250	6	BRASS	BUNA-N	316SS	NP2496
	5810	5820	30	5	250	250	6	316SS	TEFLON	316SS	NP2496
HIGH	5870	5880	193	40	200	250	8	BRASS	BUNA-N	316SS	NP2497
	5850	5860	193	40	250	250	8	316SS	TEFLON	316SS	NP2497



WARNING: TO AVOID POSSIBLE SEVERE INJURY TO PERSONNEL, OR DAMAGE TO EQUIPMENT, OBSERVE THE FOLLOWING SAFETY RELATED PRECAUTIONS:

- 1. DO NOT EXCEED OPERATING PRESSURE AND TEMPERATURE LIMITS PRESENTED IN THIS INSTRUCTION BOOK.**
- 2. RELIEVE PRESSURE AND DRAIN SYSTEM BEFORE SERVICING.**

FLOW CONTROLLER



NOTE: ARRANGEMENTS SHOWN ABOVE ARE FOR INLET FLOW CONTROLLERS.

ITEM	DESCRIPTION	MATERIAL	PART NO.	USED IN
1	FLOW CONTROLLER	SEE TECHNICAL DATA	---	---
2	O-RING 1/4" ID x 3/8" OD	BUNA-N	P 25900	5830, 5840 5870, 5880
		VITON	PXA 25900	5810, 5820 5850, 5860
3	SEAT ADAPTER	316SS	SEE TECHNICAL DATA	---
4	O-RING 7/16" ID x 9/16" OD	BUNA-N	P 38437	5830, 5840 5870, 5880
		VITON	PXA 38437	5810, 5820 5850, 5860

FIGURE 1

FLOW CONTROLLER

INSTALLATION

The purge flow controller is supplied with an adapter and one O-ring (see Figure 1). Inlet flow controllers are bottom-mounted on a flow meter with the valve mounted on bottom. The fluid enters the controller and exits up through the flow meter. Outlet flow controllers are top-mounted on a purge meter with the valve mounted on top. The fluid enters the purge meter and exits out through the flow controller. Use pipe thread sealant that is compatible with the fluid being controlled.

SERVICE

If flow controllers malfunction, refer to Troubleshooting Guide for the probable cause, and the following section for disassembly and assembly procedures.

SEAT ADAPTER ASSEMBLY (SEE FIGURE 1)

To replace worn or cracked O-rings disassemble as follows:



WARNING: TO AVOID POSSIBLE SEVERE PERSONAL INJURY, WHEN USING HAZARDOUS MATERIAL, OBSERVE ALL SAFETY PRECAUTIONS RECOMMENDED BY THE MATERIAL MANUFACTURER/SUPPLIER. RELIEVE ALL PRESSURE AND DRAIN SYSTEM BEFORE SERVICING.

- a. Remove flow controller from line.
- b. Unscrew seat adapter assembly from flow controller.
- c. Remove existing O-rings (2 and 4). Push new O-ring (2) on end of seat adapter (3) and screw assembly into flow controller. Place new O-ring (4) over exposed threaded end of seat adapter and screw the assembly into the back of the flow meter.

NOTE: The purge flow controller must be removed from the line for servicing.

MAINTENANCE

The flow controllers require no routine maintenance. As the internal flow area is extremely small and close tolerances are required, clean room assembly procedures are used at the factory to ensure trouble-free operation. Should a purge of the internal passages become necessary, clean dry gas may be used in both forward and reverse flow directions. The controller should be returned to USF/W&T for repair or exchange in the event of dissatisfactory function. If the controller is disassembled by the customer, the warranty is voided and no credit will be issued.

FLOW CONTROLLER

TROUBLESHOOTING GUIDE

PROBLEM	PROBABLE CAUSE
Controller fails to regulate.	1, 2, 6, 7, 14
Controller fails to attain low enough flow rate.	3, 4, 5
Controller fails to pass sufficient flow.	10, 11, 12, 13
Controller Leaks.	8, 9
PROBABLE CAUSES <ol style="list-style-type: none"> 1. Dirty or damaged stem and/or stem seat. 2. Damaged diaphragm. 3. Seat adapter not fully inserted into controller. 4. Inside O-ring on seat adapter leaking (small O-ring). 5. O-ring between controller and purge meter leaking. 6. Obstruction in control valve seat/stem or static pressure passageway. 7. Inlet controller installed on meter outlet or vice-versa. 8. Screws connecting controller halves loose. 9. Pipe plug leaking. 10. Foreign material trapped between Teflon guide and housing. 11. Pressure differential across controller too low. 12. Inlet blocked. 13. Damaged diaphragm springs. 14. Orifice unit O-ring leaking. 	

WARNING LABELS AND TAGS

The following warning labels and tags are attached to the equipment:

L2251: TO AVOID INJURY DO NOT EXCEED TEMP. & PRESS. LIMITS OF 200°F & 250 P.S.I. MAXIMUM. INLET PURGE METER FLOW CONTROLLER.

L2314: TO AVOID INJURY DO NOT EXCEED TEMP. & PRESS. LIMITS OF 250°F & 250 P.S.I. MAXIMUM. INLET PURGE METER FLOW CONTROLLER.

L2252: TO AVOID INJURY DO NOT EXCEED TEMP. & PRESS. LIMITS OF 200°F. & 250 P.S.I. MAXIMUM. OUTLET PURGE METER FLOW CONTROLLER.

L2315: TO AVOID INJURY DO NOT EXCEED TEMP. & PRESS. LIMITS OF 250°F & 250 P.S.I. MAXIMUM. OUTLET PURGE METER FLOW CONTROLLER.

FLOW CONTROLLER

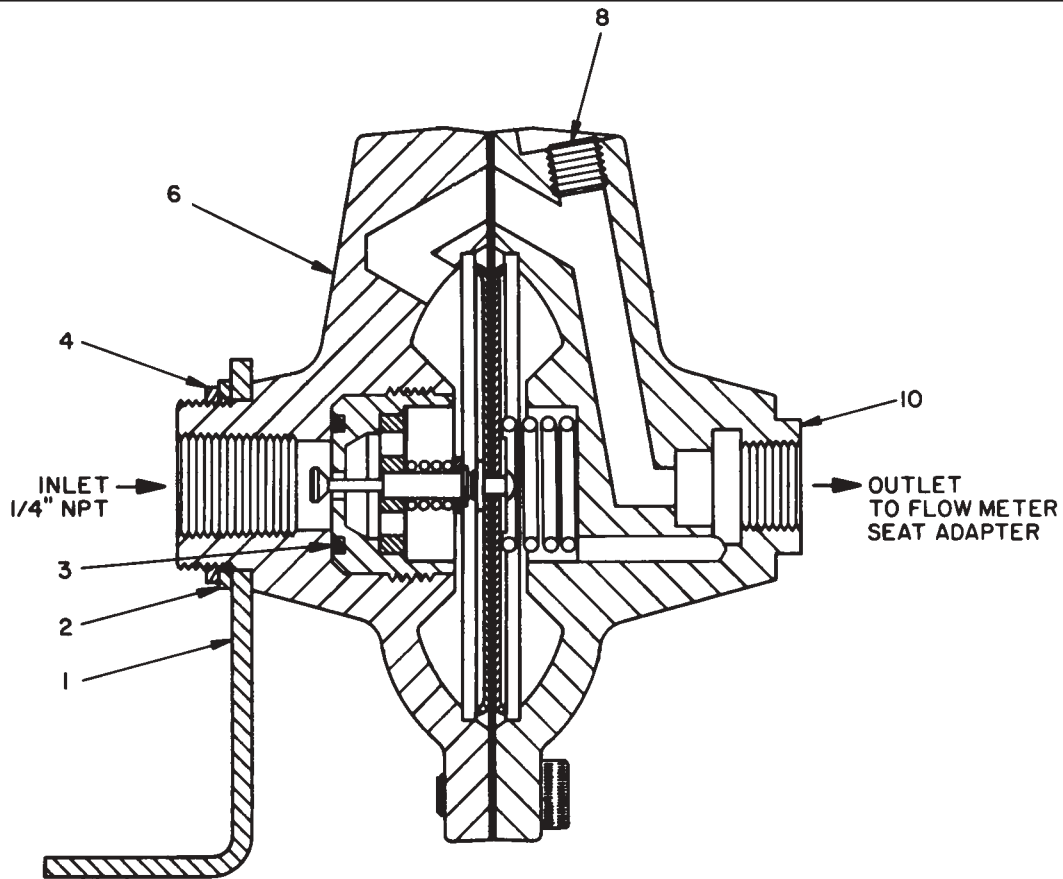
SPARE PARTS

<u>QTY.</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>
1	Silicone Grease	U 10242
1	O-ring (015) 9/16" ID x 11/16" OD	PXB 47041



WARNING: TO ENSURE PROPER AND SAFE OPERATION OF THE EQUIPMENT USE ONLY USF/W&T LISTED PARTS EXCEPT COMMERCIALY AVAILABLE PARTS AS IDENTIFIED BY COMPLETE DESCRIPTION ON PARTS LIST. THE USE OF UNLISTED PARTS CAN RESULT IN EQUIPMENT MALFUNCTIONS CAUSING POSSIBLE SEVERE PERSONAL INJURY.

FLOW CONTROLLER



KEY NO.	PART NO.	QTY.	DESCRIPTION
1	NP 2499	1	BRACKET
2	P 58632	1	13/16" INTERNAL LOCKWASHER (NICKEL PLATED)
3	PXB47041	1	O-RING (015) 9/16"ID x 11/16"OD
4	NP 2855	1	NUT
6	NP 2889 OR NP 2898	1	HOUSING (SS) HOUSING (BRASS)
8	P 52211	1	PIPE PLUG (1/16 NPT)
10	NP 2703 OR NP 2702	1	HOUSING (SS) HOUSING (BRASS)
---	L 2314 OR L 2251	1	WARNING LABEL (USED WITH SS MODEL, NOT SHOWN - AFFIXED TO KEY NO. 10) WARNING LABEL (USED WITH BRASS MODEL, NOT SHOWN - AFFIXED TO KEY NO. 10)

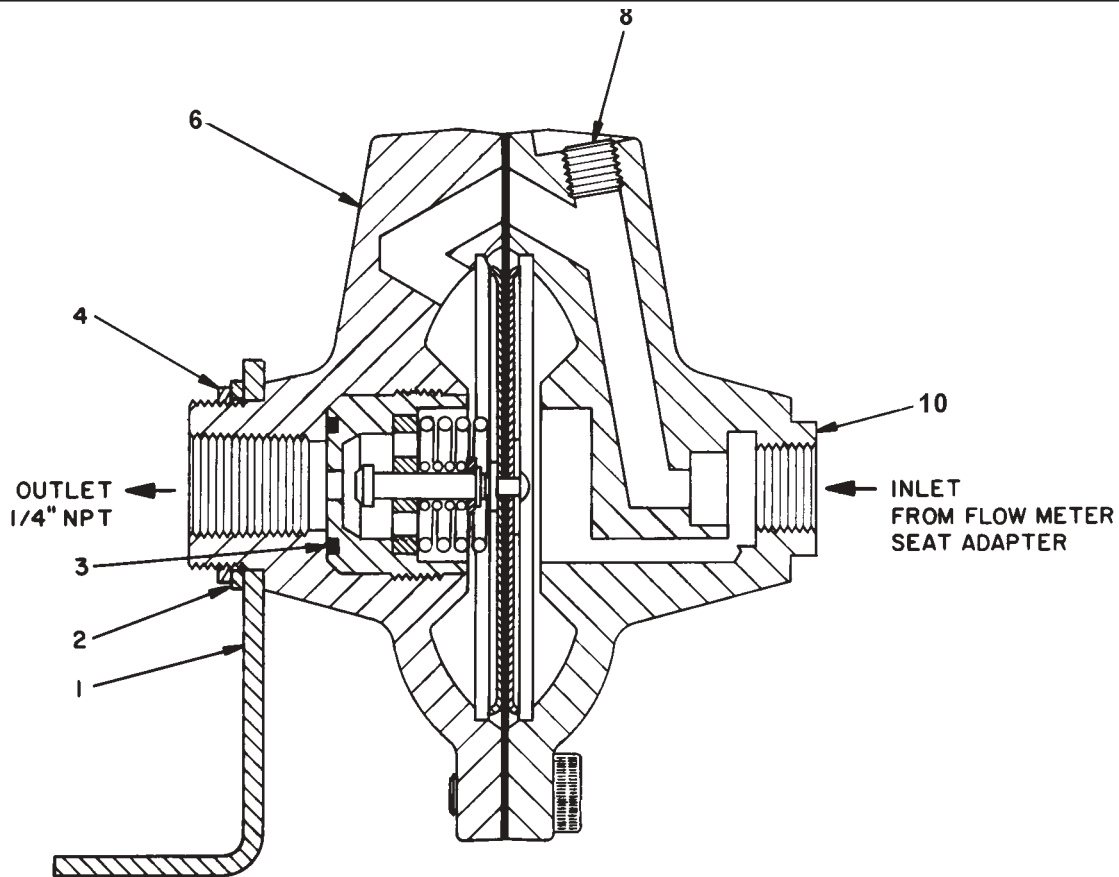
WHEN ORDERING MATERIAL ALWAYS SPECIFY MODEL AND SERIAL NUMBER OF APPARATUS.

INLET FLOW CONTROLLER - PARTS
Models 5810, 5830, 5850 & 5870

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ISSUE 3 5-03

FLOW CONTROLLER



KEY NO.	PART NO.	QTY.	DESCRIPTION
1	NP 2499	1	BRACKET
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WHEN ORDERING MATERIAL ALWAYS SPECIFY MODEL AND SERIAL NUMBER OF APPARATUS.

OUTLET FLOW CONTROLLER - PARTS
Models 5820, 5840, 5860 & 5880

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ISSUE 4 5-03

FLOW CONTROLLER

WARRANTY

Seller warrants for a period of one year after shipment that the equipment or material of its manufacture is free from defects in workmanship and materials. Corrosion or other decomposition by chemical action is specifically excluded as a defect covered hereunder, except this exclusion shall not apply to chlorination equipment. Seller does not warrant (a) damage caused by use of the items for purposes other than those for which they were designed, (b) damage caused by unauthorized attachments or modifications, (c) products subject to any abuse, misuse, negligence or accident, (d) products where parts not made, supplied, or approved by Seller are used and in the sole judgement of the Seller such use affects the products' performance, stability or reliability, and (e) products that have been altered or repaired in a manner in which, in the sole judgement of Seller, affects the products' performance, stability or reliability. **SELLER MAKES NO OTHER WARRANTY OF ANY KIND, AND THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR OF FITNESS OF THE MATERIAL OR EQUIPMENT FOR ANY PARTICULAR PURPOSE EVEN IF THAT PURPOSE IS KNOWN TO SELLER.** If Buyer discovers a defect in material or workmanship, it must promptly notify Seller in writing; Seller reserves the right to require the return of such defective parts to Seller, transportation charges prepaid, to verify such defect before this warranty is applicable. In no event shall such notification be received by Seller later than 13 months after the date of shipment. No action for breach of warranty shall be brought more than 15 months after the date of shipment of the equipment or material.

LIMITATION OF BUYER'S REMEDIES. The **EXCLUSIVE REMEDY** for any breach of warranty is the replacement f.o.b. shipping point of the defective part or parts of the material or equipment. Any equipment or material repaired or replaced under warranty shall carry the balance of the original warranty period, or a minimum of three months. Seller shall not be liable for any liquidated, special, incidental or consequential damages, including without limitation, loss of profits, loss of savings or revenue, loss of use of the material or equipment or any associated material or equipment, the cost of substitute material or equipment, claims of third parties, damage to property, or goodwill, whether based upon breach of warranty, breach of contract, negligence, strict tort, or any other legal theory; provided, however, that such limitation shall not apply to claims for personal injury.

Statements and instructions set forth herein are based upon the best information and practices known to U.S. Filter/Wallace & Tiernan, Inc., but it should not be assumed that every acceptable safety procedure is contained herein. Of necessity this company cannot guarantee that actions in accordance with such statements and instructions will result in the complete elimination of hazards and it assumes no liability for accidents that may occur.