



MANUAL: V-FLOW Vibrating Flow Indicator

INSTRUCTIONS FOR SAFE OPERATION AND MAINTENANCE

⚠ WARNING

Understand manual before use. Operation of this device without understanding the manual and receiving proper training is a misuse of this equipment. Obtain safety information at www.tft.com/serial-number

⚠ WARNING

This equipment is intended for use by trained personnel for firefighting. Their use for other purposes may involve hazards not addressed by this manual. Seek appropriate guidance and training to reduce risk of injury.

⚠ WARNING

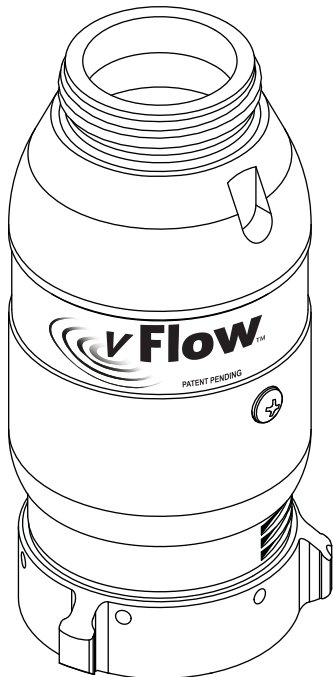
Nozzle must be properly connected. Mismatched or damaged threads may cause nozzle to leak or uncouple under pressure and could cause injury.

⚠ CAUTION

Do not couple aluminum to brass. Dissimilar metals coupled together can cause galvanic corrosion that can result in inability to unscrew threads or complete loss of thread engagement.

This instruction manual is intended to familiarize firefighters and maintenance personnel with the operation, servicing and safety procedures associated with the V-FLOW.

This manual should be kept available to all operating and maintenance personnel.



⚠ DANGER

PERSONAL RESPONSIBILITY CODE

The member companies of FEMSA that provide emergency response equipment and services want responders to know and understand the following:

1. Firefighting and Emergency Response are inherently dangerous activities requiring proper training in their hazards and the use of extreme caution at all times.
2. It is your responsibility to read and understand any user's instructions, including purpose and limitations, provided with any piece of equipment you may be called upon to use.
3. It is your responsibility to know that you have been properly trained in Firefighting and /or Emergency Response and in the use, precautions, and care of any equipment you may be called upon to use.
4. It is your responsibility to be in proper physical condition and to maintain the personal skill level required to operate any equipment you may be called upon to use.
5. It is your responsibility to know that your equipment is in operable condition and has been maintained in accordance with the manufacturer's instructions.
6. Failure to follow these guidelines may result in death, burns or other severe injury.



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1.0 MEANING OF SAFETY SIGNAL WORDS

A safety related message is identified by a safety alert symbol and a signal word to indicate the level of risk involved with a particular hazard. Per ANSI standard Z535.6-2006, the definitions of the four signal words are as follows:



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



NOTICE is used to address practices not related to personal injury.

2.0 GENERAL INFORMATION

The V-Flow Vibrating Flow Indicator makes a distinct vibration that can be felt by the hose crew. It indicates whenever they operate above a minimum target fire flow, but it won't vibrate if the flow through the hose is less. The field adjustable set point can match your standard operating procedure. The V-Flow can be used with all handheld nozzle types; automatic, selectable flow, fixed orifice, or smooth bore nozzles. It can be installed directly behind the nozzle, or behind a two foot length of hose when used with smooth bore and low pressure nozzles. The hose line feeding the indicator must be at least 1.5" diameter (38mm) to give accurate indications.



The V-Flow is intended for handheld use in a hose line with water or solutions of water and foam concentrate. It is not intended for use with pure foam concentrate, compressed air foam, hydrocarbons or other liquids.

3.0 SPECIFICATIONS

Models: VFI200E, VFI200M

Flow Settings: 95, 125, 150 and 175 gpm (360, 470, 570 and 660 l/min)

Standard Inlets: Female: 1.5"-9 NH, 1.5"-11 NPSH, 1.5"-11 BSP

Standard Outlets: Male: 1.5"-9 NH, 1.5"-11.5 NPSH, 1.5"-11 BSP

Weight: 1.7 lbs (.8 kg)

Size: 3.0" diameter by 6.5" long (8 cm diameter by 17 cm long)

Max flow: 350 gpm (1300 l/min)

Operating temperature range of fluid: 33 to 120°F (1 to 50°C)

Storage temperature range: -40 to 135°F (-40 to 60°C)

Max operating pressure: 300 psi (21 bar)

Hydrostatic Test Pressure: 900 psi (63 bar)

4.0 OPERATION

4.1 SAFE OPERATION

Simply install the Vibrating Flow Indicator at a nozzle's inlet. Vibrations will begin when the flow reaches the set point. As the flow is increased beyond the set point, the vibrations will also increase.

Exercise judgement if lack of vibration indicates the crew is operating their hose line below the minimum flow. Retreat if flow is inadequate or unsafe.

The V-Flow is water powered and has no batteries or electronics. The self-cleaning turbine vanes shed debris. Installing the indicator directly onto turbulence causing devices like valves, elbows, wyes, or flat faced adapters may result in inaccurate indications.

4.2 ADJUSTING FLOW SETTINGS

The Vibrating Flow Indicator is factory calibrated at 150 gpm. See figure 4.2 to adjust to a different setting.

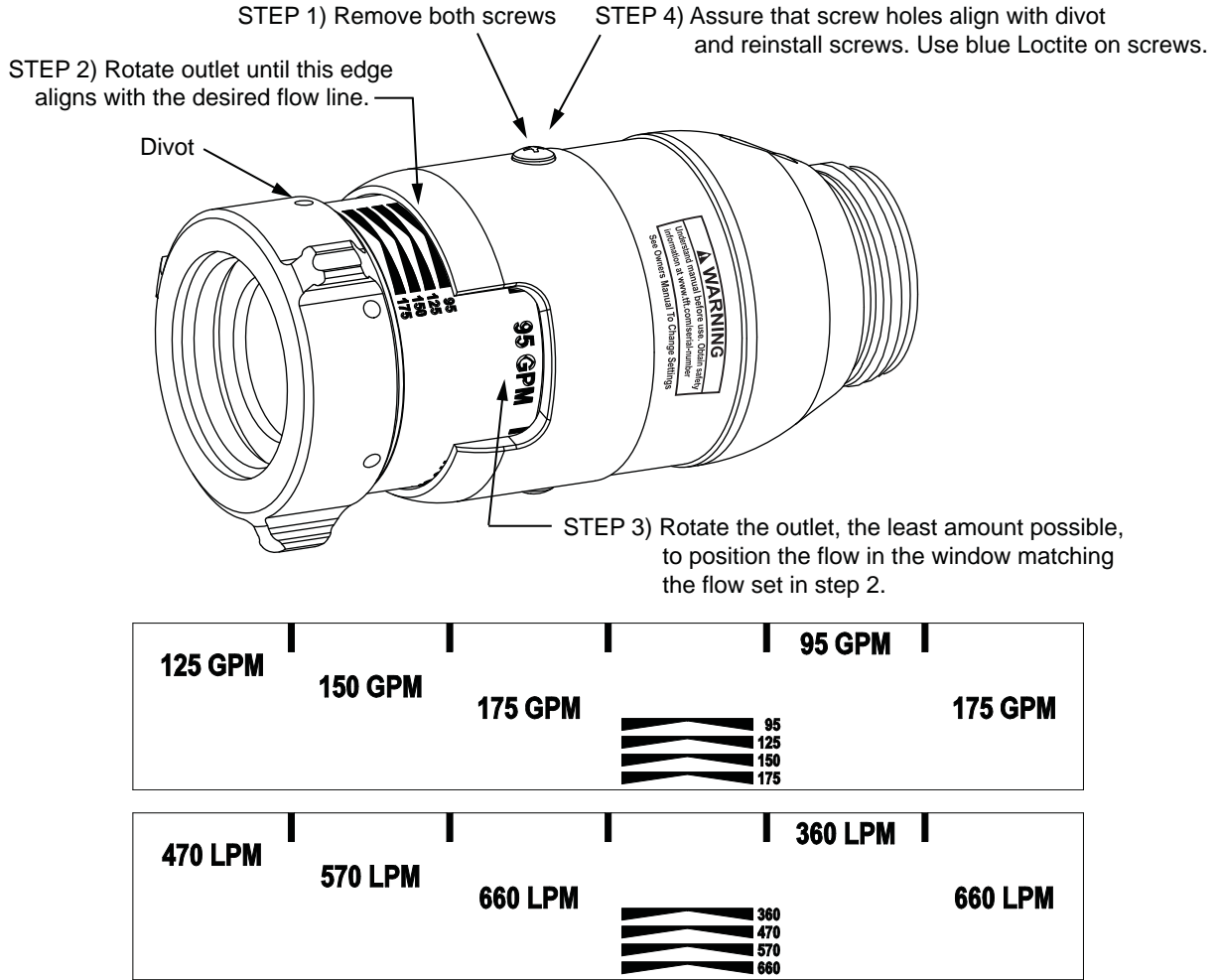


Figure 4.2 Adjusting Flow Setting

5.0 USE WITH SALT WATER

Use with salt water is permissible provided the Vibrating Flow Indicator is thoroughly cleaned with fresh water after each use. The service life of the Vibrating Flow Indicator may be shortened due to the effects of corrosion and is not covered under warranty.

5.1 CORROSION

The parts of the Vibrating Flow Indicator are aluminum hardcoat anodized, stainless steel, or plastic for corrosion protection.

6.0 MAINTENANCE

Generally no maintenance is required. If the Vibrating Flow Indicator exhibits erratic operation, its performance might be restored by cleaning. Refer to section 7.0 for an exploded view. Use silicone grease on the o-ring. Do not apply grease to any other areas.

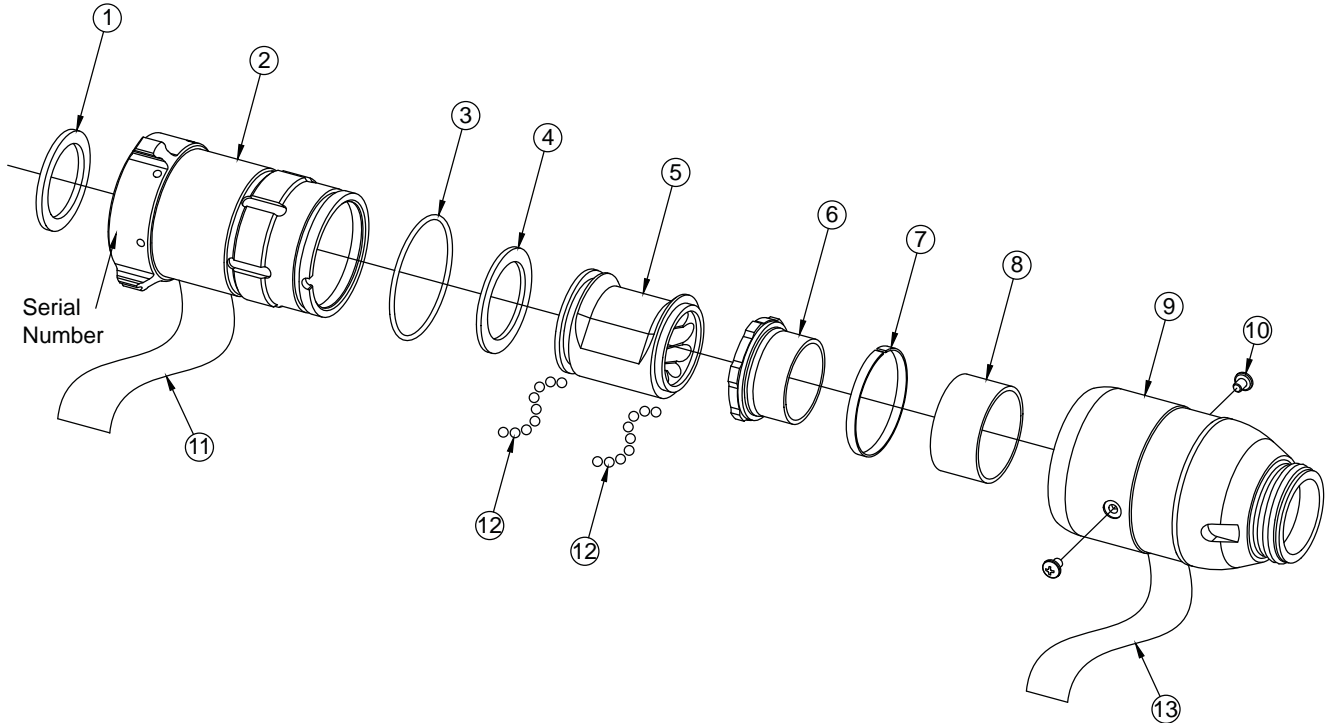
7.0 CALIBRATION

The vibrating flow indicator can be verified for operation by increasing flow and noting the flow that begins vibrations. The most direct method uses a flow meter. Alternatively a smooth bore nozzle and pitot gage can be used to determine flow. TFT offers a 3/4 inch (19 mm) smoothbore with built in pitot gage. Pitot gage reading for each flow is shown below.

(gpm)	(psi)
Flow	Pressure
95	32
125	56
150	81
175	110

(L/min)	(bar)
Flow	Pressure
360	2.2
470	3.6
570	5.6
660	7.6

8.0 EXPLODED VIEW



INDEX	DESCRIPTION	QTY	PART
1	GASKET - 1.5" HOSE COUPLING	1	V3130
2	INLET 1.5"	1	S4000*
3	O-RING-141	1	VO-141
4	WEAR RING	1	S4015
5	SPINNER	1	S4020
6	SLEEVE	1	S4030
7	RING	1	VR4355
8	RELEASE SPRING	1	S4040

INDEX	DESCRIPTION	QTY	PART
9	OUTLET 1.5"	1	S4050*
10	10-32 X 1/4 PHILLIPS PAN HEAD SCREW	2	VT10-32PH250
11	LABEL: FLOW SETTING	1	S4000L
	LABEL: FLOW SETTING METRIC	1	S4000LM
12	3/16" POLYPROPYLENE BALL	64	VB188PP
13	NAME LABEL: VIBRATING FLOW INDICATOR	1	S4050L

* - CONSULT FACTORY FOR SPECIAL THREADS

9.0 WARRANTY

Task Force Tips, Inc., 3701 Innovation Way, Valparaiso, IN 46383-9327 USA ("TFT") warrants to the original purchaser of its Vibrating Flow Indicator ("equipment"), and to anyone to whom it is transferred, that the equipment shall be free from defects in material and workmanship during the five (5) year period from the date of purchase.

TFT's obligation under this warranty is specifically limited to replacing or repairing the equipment (or its parts) which are shown by TFT's examination to be in a defective condition attributable to TFT. To qualify for this limited warranty, the claimant must return the equipment to TFT, at 3701 Innovation Way, Valparaiso, IN 46383-9327 USA, within a reasonable time after discovery of the defect. TFT will examine the equipment. If TFT determines that there is a defect attributable to it, TFT will correct the problem within a reasonable time. If the equipment is covered by this limited warranty, TFT will assume the expenses of repair.

If any defect attributable to TFT under this limited warranty cannot be reasonably cured by repair or replacement, TFT may elect to refund the purchase price of the equipment, less reasonable depreciation, in complete discharge of its obligations under this limited warranty. If TFT makes this election, claimant shall return the equipment to TFT free and clear of any liens and encumbrances.

This is a limited warranty. The original purchaser of the equipment, any person to whom it is transferred, and any person who is an intended or unintended beneficiary of the equipment, shall not be entitled to recover from TFT any consequential or incidental damages for injury to person and/or property resulting from any defective equipment manufactured or assembled by TFT. It is agreed and understood that the price stated for the equipment is in part consideration for limiting TFT's liability. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above may not apply to you.

TFT shall have no obligation under this limited warranty if the equipment is, or has been, misused or neglected (including failure to provide reasonable maintenance) or if there have been accidents to the equipment or if it has been repaired or altered by someone else.

THIS IS A LIMITED EXPRESS WARRANTY ONLY. TFT EXPRESSLY DISCLAIMS WITH RESPECT TO THE EQUIPMENT ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND ALL IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE. THERE IS NO WARRANTY OF ANY NATURE MADE BY TFT BEYOND THAT STATED IN THIS DOCUMENT.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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