Installation Instructions
F-440N

F-440N

F-440NE
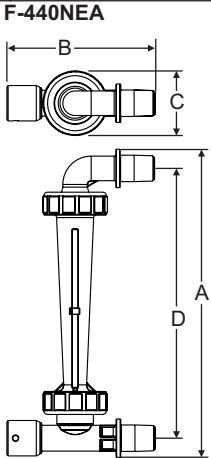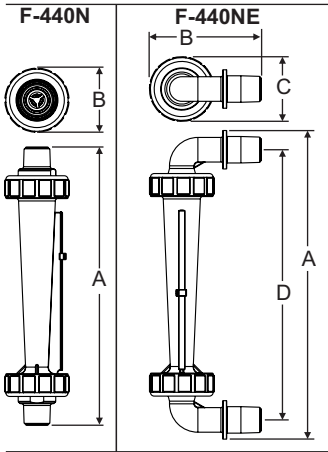
Model No.		Dim A	Dim B	Dim C	Dim D
Inline	F-44250 F-44375 F-44376 F-44500	6-3/16" 157mm	1-11/16" 43mm	N/A	N/A
	F-44750	7-1/2" 191mm	2" 51mm	N/A	N/A
Elbow	F-44250E F-44375E F-44376E F-44500E	7" 178mm	3 ½" 76mm	1-11/16" 43mm	5-15/16" 151mm
	F-44750E	8-1/8" 206mm	3 3/8" 76mm	2" 51mm	6-13/16" 173mm
Adjustable	F-44250EA F-44375EA F-44376EA F-44500EA	7" 178mm	5" 127mm	1-11/16" 43mm	6" 152mm
	F-44750EA	8 1/8" 203mm	5" 127mm	2" 51mm	6-13/16" 173mm

F-440NEA

Meter Body: Polysulfone
Float: 316SS, or PVDF (based on model)
Guide rod: # 316 Stainless
Adapters: Polysulfone
O-Rings: Viton (optional EP)
Scale: Permanent, dual scale silkscreen (black ink)
Max. PSIg: 175 PSIG / 12 BAR at 70°F/21°C
Max. Temp: 212°F / 100°C at 0 pressure
Accuracy: ± 4% of full scale reading

Your Blue-White® F-440 Series

- Your Blue-White® flowmeter was designed to be easy to install.
- Please read the Instruction Guideline on the next page before installing your flowmeter.
- This flowmeter is an instrument, special care should be taken when handling and installing.

Inspection of the Flowmeter and Compatibility

- Carefully inspect the meter for any damage that may have occurred during shipping.
- Remove the plastic tubing that has been inserted during packaging for shipping reasons.
- Make sure your pressure, temperature, fluid and other requirements are compatible with the meter before installation.
- The maximum temperature capability decreases as the pressure increases. The max PSI decreases as the temperature increases. See the chart on the following page.
- Although the meter may be suitable for other chemicals, Blue-White® cannot guarantee their suitability. It is the responsibility of the user to determine the suitability of the flowmeter in their application. Flowmeters are tested and calibrated for water only.
- **Blue-White® warranties the flowmeter for use with water only.**

Blue-White®

Installation Guideline

1. Misalignment will damage the meter!

Flowmeter must be installed in an exact vertical plane to ensure accuracy. Be certain of proper plumbing alignments. Misalignment may cause the o-ring seals to leak. The meterbody material can be damaged by UV rays. **Do not install in direct sunlight.**

2. Pipe dope and glue will damage the meter!

Use only PTFE tape on the threaded adapters. Polysulfone meter body and fittings cannot tolerate PVC Glue and/or pipe dope. Even fumes can cause severe damage. If you are installing your flowmeter to a glued pipe configuration, install the flowmeter *after* all glued fittings are dried and lines are purged of all fumes. **Never** hold the meter body with pliers or like tools. Union nuts should be hand tightened only. **DO NOT OVER-TIGHTEN!**

Ceiling

Floor

**3. Vibration and heavy loads will damage the meter!**

Wall, floor and ceiling mounts and supports must be carefully aligned with the meter body and sturdy enough to support the plumbing and prevent vibration. Never allow the flowmeter to support the weight of related piping.

4. Solenoid valves will damage the meter!

Avoid a system that will impose a sudden burst of flow to the meter. Such a burst will cause the float to impact the float stop with destructive force. Solenoid valves, or other quick opening valves cannot be used unless meter is protected against sudden bursts of flow.

5. High pressures and temperatures will damage the meter!

The maximum acceptable temperature and pressure is interdependent. The maximum acceptable working pressure is dependant on the actual fluid temperature. The maximum acceptable fluid temperature is dependant on the actual working pressure. (see Temperature Vs. Pressure chart).
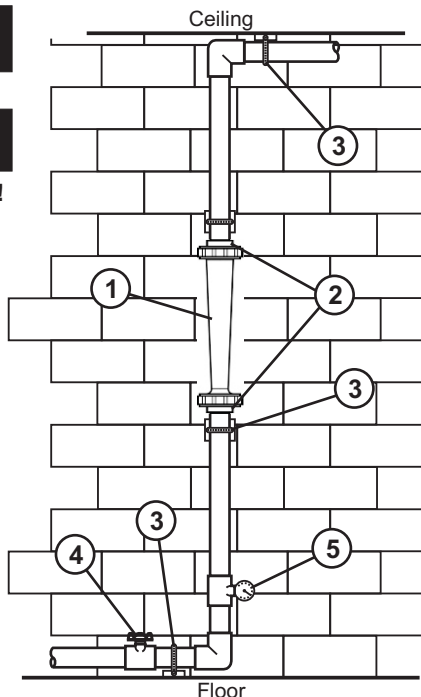
Temperature vs. Pressure

Temperature
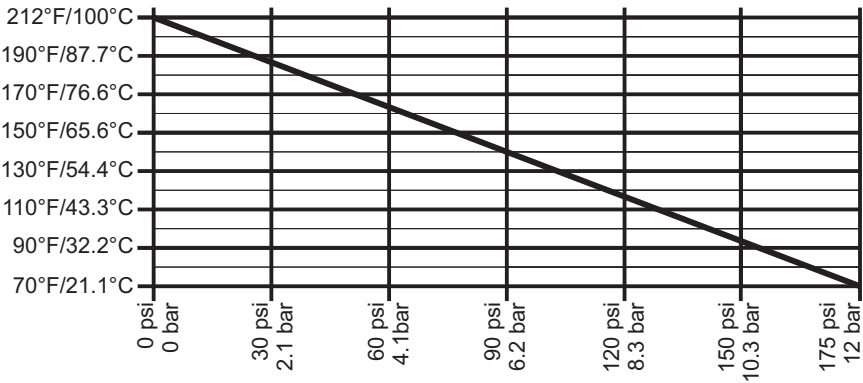
Pressure and Temperature

Pressure and temperature limits are inversely proportional. At the maximum suggested pressure the temperature should approach 70°F / 21.1°C; at the maximum suggested temperature the pressure should approach zero psi. We cannot guarantee our flowmeters will not be damaged either at or below the suggested limits simply because of many factors which influence meter integrity; stress resulting from meter misalignment, damage due to excessive vibration and/or deterioration caused by contact with certain chemicals as well as direct sunlight. These situations and others tend to reduce the strength of the materials from which the meters are manufactured.

Application Note

Flowmeters are tested and calibrated for water only.

Although meters may be suitable for other chemicals, Blue-White cannot guarantee their suitability. It is the responsibility of the user to determine the suitability of the flowmeter in their application.

Maintenance

The "Exploded View" drawing illustrates assembly of the F-440 series meter. If your flowmeter needs to be cleaned refer to this drawing when reassembling the unit. The tapered tube may be cleaned with a soft bottle brush. Use a MILD soap and water solution for cleaning purposes. Hard water deposits can be removed with a 5% acetic acid solution (vinegar). Note the floats "up" position.
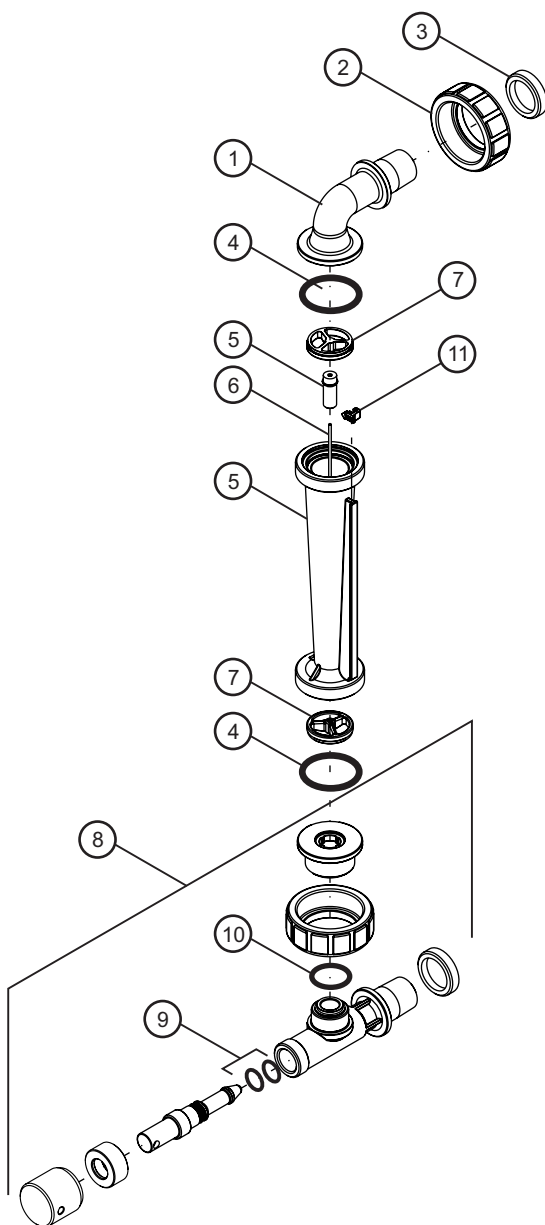
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F-440 - In-Line
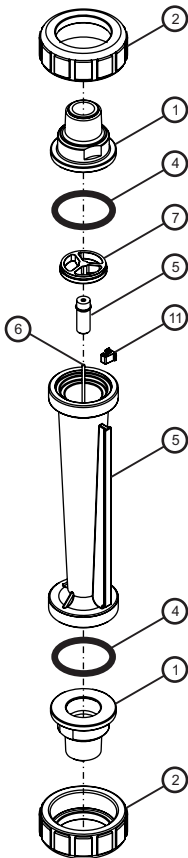
No.	Part No.	Desc.
1	F-44N07	3/8" Male NPT in-line adapter, Polysulfone
	F-44N08	1/2" Male NPT in-line, Polysulfone
	F-44N09	3/4" Male NPT in-line, Polysulfone
	F-45N013	½" Male NPT in-line, Polysulfone, large body
2	F-44N05	3/8" and 1/2" Half Union, Nylon
	F-44N06	3/4" Half Union, Nylon
4	90003-152	3/8" and 1/2" O-ring seal, Viton
	90003-627	3/8" and 1/2" O-ring seal, EP
	90003-082	3/4" O-ring seal, Viton
	90003-039	3/4" O-ring seal, EP
5	N/A	Meterbody and Float not sold separately
6	F-44N14	3/8" and 1/2" Guide Rod, 316 Stainless Steel
	F-44N15	3/4" Guide Rod, 316 Stainless Steel
7	F-45N007	3/8" and ½"Guide Rod holder, Polysulfone
7	F-45N019	3/4" Guide Rod holder, Polysulfone
11	F-45N043	Indicator, Red

F-440E - Elbow (Panel Mount)

No.	Part No.	Description
1	F-44N40	3/8" Male NPT 90° Elbow, Polysulfone
	F-44N20	1/2" Male NPT 90° Elbow, Polysulfone
	F-44N21	3/4" Male NPT 90° Elbow, Polysulfone
	F-44N42	1/2" Male NPT 90° Elbow, Polysulfone
2	F-44N05	3/8" and 1/2" Half Union, Nylon
	F-44N06	3/4" Half Union, Nylon
3	F-4427A	3/8" and 1/2" Panel mount lock nut
	F-4428A	3/4" Panel mount lock nut
4	90003-152	3/8" and 1/2" O-ring seal, FKM
	90003-627	3/8" and 1/2" O-ring seal, EP
	90003-082	3/4" O-ring seal, FKM
	90003-039	3/4" O-ring seal, EP
5	N/A	Meterbody / Float (not sold separately)
6	F-44N14	3/8" & 1/2" Guide Rod, 316 SS
	F-44N15	3/4" Guide, 316 SS
7	F-45N007	3/4" Guide Rod, Hastelloy C-276
	F-45N019	3/4" Guide Rod holder, Polysulfone
11	F-45N043	Indicator, Red
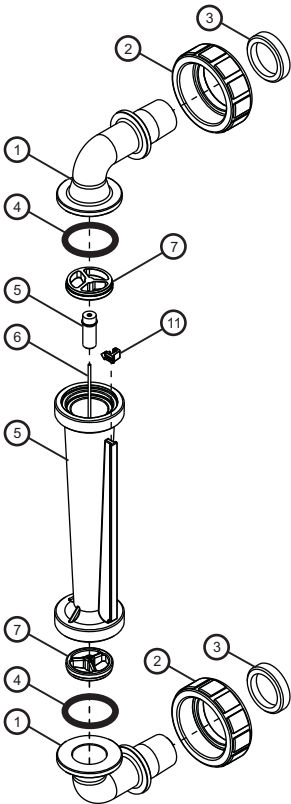
F-440A - Adjustable (Panel Mount)

F-440A - Adjustable (Panel Mount)

No.	Part No.	Description
1	F-44N40	3/8" Male NPT 90° Elbow, Polysulfone
	F-44N20	1/2" Male NPT 90° Elbow, Polysulfone
	F-44N21	3/4" Male NPT 90° Elbow, Polysulfone
	F-44N42	1/2" Male NPT 90° Elbow, Polysulfone
2	F-44N05	3/8" and 1/2" Half Union, Nylon
	F-44N06	3/4" Half Union, Nylon
3	F-4427A	3/8" and 1/2" Panel mount lock nut
	F-4428A	3/4" Panel mount lock nut
4	90003-152	3/8" and 1/2" O-ring seal, FKM
	90003-627	3/8" and 1/2" O-ring seal, EP
	90003-082	3/4" O-ring seal, FKM
	90003-039	3/4" O-ring seal, EP
5	N/A	Meterbody and Float (not sold separately)
6	F-44N14	3/8" & 1/2" Guide Rod, 316 SS
	F-44N15	3/4" Guide, 316 SS
7	F-45N007	1/2" Guide Rod holder, Polysulfone
	F-45N019	3/4" Guide Rod holder, Polysulfone
8	F-44N40-1	3/8" M/NPT Valve Assm. Sm, Poly, FKM seal
	F-44N40-2	1/2" M/NPT Valve Assm. Sm, Poly, FKM seal
	F-45N031-1	3/8" M/NPT Valve Assm. Lg, Poly, FKM seal
	F-45N031-2	1/2" M/NPT Valve Assm. Lg, Poly, FKM seal
	F-45N031-3	3/4"" M/NPT Valve Assm. Lg, Poly, FKM seal
9	90003-010	O-Ring, FKM
	90003-597	O-Ring, EP
10	90003-071	O-Ring, FKM
	90003-018	O-Ring, EP
11	F-45N043	Indicator, Red

BLUE-WHITE LIMITED WARRANTY

Your Blue-White product is a quality product and is warranted for a specific time from date of purchase (proof of purchase is required). The product will be repaired or replaced at our discretion. Failure must have occurred due to defect in material or workmanship and not as a result of operation of the product other than in normal operation as defined in the product manual. Warranty status is determined by the product's serial label and the sales invoice or receipt. The serial label must be on the product and legible. The warranty status of the product will be verified by Blue-White or a factory authorized service center.

Variable Area and Digital Flow meters are warranted for 1 year from date of purchase (proof of purchase is required). The flow meter will be repaired or replaced at our discretion. The S6A ultrasonic flow meter is warranted for 2 years from date of purchase (proof of purchase is required). The flow meter will be repaired or replaced at our discretion.

WHAT IS NOT COVERED

• Freight to the factory, or service center.

• Products that have been tampered with, or in pieces.

• Damage resulting from misuse, carelessness such as chemical spills on the enclosure, abuse, lack of maintenance, or alteration which is out of our control.

• Damage by faulty wiring, power surges or acts of nature.

• Damage that occurs as a result of: meter misalignment, improper installation, over tightening, use of non-recommended chemicals, use of non-reccomended adhesives or pipe dopes, excessive heat or pressure, or allowing the meter to support the weight of related piping.

BLUE-WHITE does not assume responsibility for any loss, damage, or expense directly or indirectly related to or arising out of the use of its products. Failure must have occurred due to defect in material or workmanship and not as a result of operation of the product other than in normal operation as defined in the manual.

Warranty status is determined by the product's serial label and the sales invoice or receipt. The serial label must be on the product and legible. The warranty status will be verified by Blue-White or a factory authorized service center.

PROCEDURE FOR IN WARRANTY REPAIR

Warranty service must be performed by the factory or an authorized service center. Contact the factory or local repair center to obtain a RMA (Return Material Authorization) number. It is recommended to include foot strainer and injection/check valve fitting since these devices may be clogged and part of the problem. Decontaminate, dry, and carefully pack the product to be repaired. Please enclose a brief description of the problem and proof of purchase. Prepay all shipping and insurance cost. COD shipments will not be accepted. Damage caused by improper packaging is the responsibility of the sender. When In-Warranty repair is completed, the factory pays for return shipping to the dealer or customer.

PRODUCT USE WARNING

Blue-White products are manufactured to meet the highest quality standards in the industry. Each product instruction manual includes a description of the associated product warranty and provides the user with important safety information. Purchasers, installers, and operators of Blue-White products should take the time to inform themselves about the safe operation of these products. In addition, Customers are expected to do their own due diligence regarding which products and materials are best suited for their intended applications. BLUE-WHITE is pleased to assist in this effort but does not guarantee the suitability of any particular product for any specific application as Blue-White does not have the same degree of familiarity with the application that the customer/end user has. While BLUE-WHITE will honor all of its product warranties according to their terms and conditions, Blue-White shall only be obligated to repair or replace its defective parts or products in accordance with the associated product warranties.

BLUE-WHITE SHALL NOT BE LIABLE EITHER IN TORT OR IN CONTRACT FOR ANY LOSS OR DAMAGE WHETHER DIRECT, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL, ARISING OUT OF OR RELATED TO THE FAILURE OF ANY OF ITS PARTS OR PRODUCTS OR OF THEIR NONSUITABILITY FOR A GIVEN PURPOSE OR APPLICATION.

CHEMICAL RESISTANCE WARNING

BLUE-WHITE offers a wide variety of wetted parts. Purchasers, installers, and operators of Blue-White products must be well informed and aware of the precautions to be taken when injecting or measuring various chemicals, especially those considered to be irritants, contaminants or hazardous. Customers are expected to do their own due diligence regarding which products and materials are best suited for their applications, particularly as it may relate to the potential effects of certain chemicals on Blue-White products and the potential for adverse chemical interactions. Blue-White tests its products with water only. The chemical resistance information included in this instruction manual was supplied to BLUE-WHITE by reputable sources, but Blue-White is not able to vouch for the accuracy or completeness thereof. While BLUE-WHITE will honor all of its product warranties according to their terms and conditions, Blue-White shall only be obligated to repair or replace its defective parts or products in accordance with the associated product warranties.

BLUE-WHITE SHALL NOT BE LIABLE EITHER IN TORT OR IN CONTRACT FOR ANY LOSS OR DAMAGE, WHETHER DIRECT, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL, ARISING OUT OF OR RELATED TO THE USE OF CHEMICALS IN CONNECTION WITH ANY BLUE-WHITE PRODUCTS.

Users of electrical and electronic equipment (EEE) with the WEEE marking per Annex IV of the WEEE Directive must not dispose of end of life EEE as unsorted municipal waste, but use the collection framework available to them for the return, recycle, recovery of WEEE and minimize any potential effects of EEE on the environment and human health due to the presence of hazardous substances. The WEEE marking applies only to countries within the European Union (EU) and Norway. Appliances are labeled in accordance with European Directive 2002/96/EC. Contact your local waste recovery agency for a Designated Collection Facility in your area.

Blue-White®

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