Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Series 800M4FR

Freeze-Resistant Pressure Vacuum Breakers

Sizes: ½" – 2"

Series 800M4FR is designed to prevent back-siphonage of contaminated water under continuous pressure into the potable water supply. Its superior design protects the valve body and internal components during sudden freeze conditions. Water inside the PVB freezes from the outside-inward.

As the ice forms and expands, causing a buildup of pressure, the 800M4FR relieves the pressure through a unique relief valve built into the plastic float.

Test cocks are positioned at the lowest point of the valve for winterization draining. The 800M4FR is reusable with the relief valve designed to automatically re-seat. It will not discharge through the relief valve during normal operation. (The built-in relief valve is not designed to provide freeze protection for the entire irrigation system.)

Features

- Unique built-in relief valve relieves pressure caused by ice formation
- Replaceable plastic seat
- Easy maintenance of internal parts
- O-ring bonnet seal for less possibility of fouling
- Silicone seat disc for durability
- Test cocks positioned for easy testing and winterization
- Compact space saving design
- Standardly equipped with tee handle quarter turn ball valve shutoffs ½" – 1". The 1¼" – 2" feature lever handles
- No special tools required for servicing
- Bronze body for durability

Available Models

Prefix:

U Union connections (¾" - 1" only)

Suffix:

QC Quick-Connect Adapters

SH Stainless Steel Ball Valve Handles

800M4FR
Patent #5551473

Specifications

A pressure anti-siphon vacuum breaker shall be installed where indicated on the plans to prevent the back-siphonage of contaminated water. This assembly is not to be used where there is a possibility that a back pressure condition may develop. The assembly will incorporate an acetal bonnet with silicone rubber O-ring seal and silicone rubber seat disc. The valve shall have replaceable seats. Check assembly shall be guided over its full stroke by 'V' notch guides.

The assembly shall include an internal, built-in relief valve designed to protect the internal components and the backflow body from freezing. The relief valve shall be repeatable, automatically re-seating when the pressure within the valve is below the set point of the freeze relief valve.

The assembly shall meet the requirements of ANSI/ASSE Standard 1020.

The valve shall be a Watts Series 800M4FR.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

NOTICE

Inquire with governing authorities for local installation requirements

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Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

Materials

Springs:	Stainless Steel
Bonnet:	Celcon
Vent Disc:	Silicone Rubber
Disc Holder Float:	Polypropylene
Check Valve Disc:	Silicone Rubber
Check Valve Seat:	Noryl Plastic
Body:	Bronze

Installations

This valve is designed for installation in a continuous pressure potable water supply system 12" above the highest point of the downstream piping. The valve must be installed with the supply connected to the bottom and in a vertical position. Allow adequate space for periodic inspection, servicing or testing. The valve should not be installed in an area where freezing or spillage will cause damage. Adequate drainage/freeze protection must be provided in cold weather applications. 1.5psi (.10 bar) must be exerted against the float spring to seal the float and air inlet. Do not under-size supply and discharge piping.

NOTICE

Vacuum breakers are not desiged, tested or approved to protect against backpressure backflow or water hammer shock. For protection against backpressure backflow, install Watts 909/009 Reduced Pressure Zone Backflow Preventer. For Protection against water hammer shock install a Watts Series 15 Water Hammer Arrestor utilizing good plumbing practice.

Pressure - Temperature

Temperature Range: 33°F to 140°F (1°C to 60°C)

Maximum Working Pressure: 150psi (10.3 bar)

Standards

ANSI, IAPMO, USC Manual Section 10

Approvals

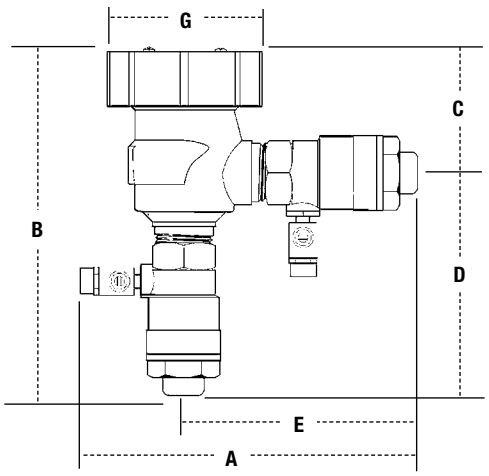
IAPMO

1020 B64.12

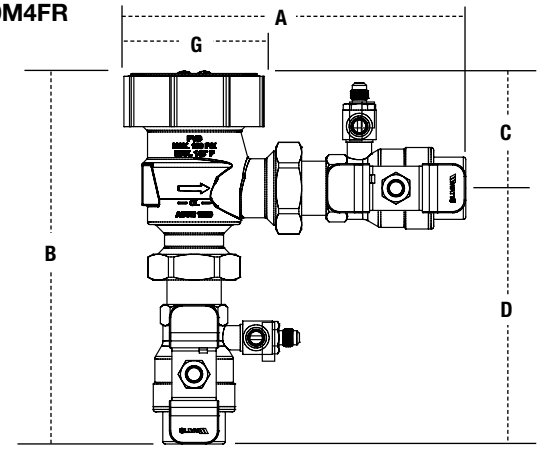
Approved by the foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California, Manual Section 10. QC models are not ASSE 1020 approved.

Dimensions – Weights

800M4FR



U800M4FR



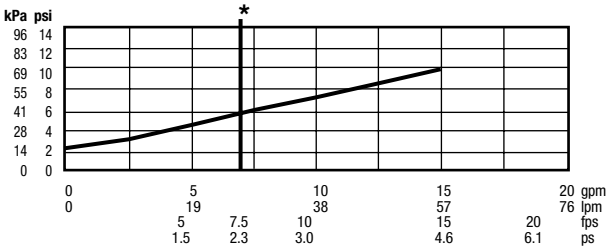
MODEL	SIZE	DIMENSIONS												WEIGHT	
		A		B		C		D		E		G			
	in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kg.*
800M4FR	½	6⅛	156	6¼	159	2⁹⁄₁₆	65	3¹¹⁄₁₆	94	3⅞	98	2¼	57	4	1.8
800M4FR	¾	6½	165	6½	165	2⁹⁄₁₆	65	3¹⁵⁄₁₆	100	4⅛	105	2¼	57	4	1.8
800M4FR	1	7½	191	7½	191	2¾	70	4¾	121	4⅞	124	3⅜	87	6	2.7
800M4FR	1¼	8⅞	225	9	229	3¼	83	5¾	146	6⅛	156	5	127	11	5.0
800M4FR	1½	9¼	235	9½	241	3¼	83	6¼	159	6⅜	162	5	127	14	6.3
800M4FR	2	10⅝	270	9⅝	245	3¼	83	6⅜	162	7	178	5	127	19	8.6
U800M4FR	¾	6⅜	163	7⁹⁄₁₆	192	2⅛	55	5⁷⁄₁₆	138	–	–	2¼	57	4	1.8
U800M4FR	1	8⁵⁄₁₆	211	9	229	2¹³⁄₁₆	71	6³⁄₁₆	158	–	–	3⅜	87	6	2.7
800M4FRQC	½	7⅞	199	8	203	2¹³⁄₁₆	71	5⁷⁄₁₆	138	5⅝	144	3⅜	87	4.5	2.0
800M4FRQC	¾	8½	216	8½	216	2¹³⁄₁₆	71	5¹¹⁄₁₆	144	6⅛	156	3⅜	87	4.7	2.1
800M4FRQC	1	9½	241	9½	241	2¹³⁄₁₆	71	6¾	171	6⅞	175	3⅜	87	6.6	3.0

Capacity

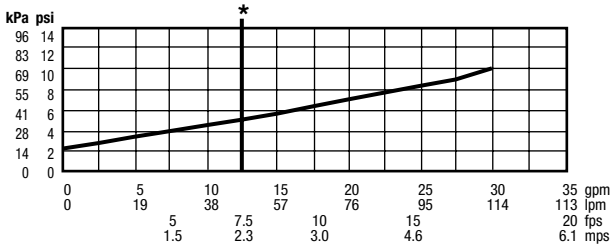
As compiled from documented Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California lab tests.

*Typical maximum flow rate (7.5 feet/sec.)

½"



¾"



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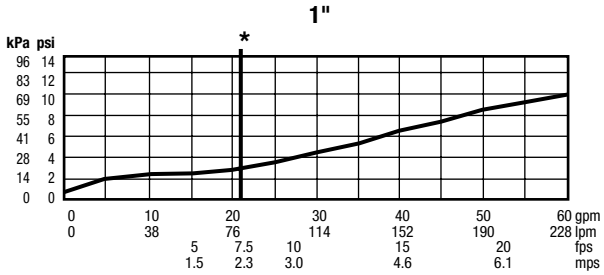
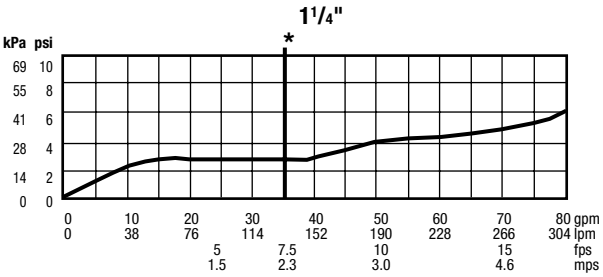
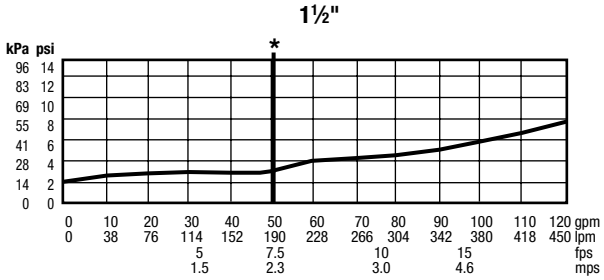


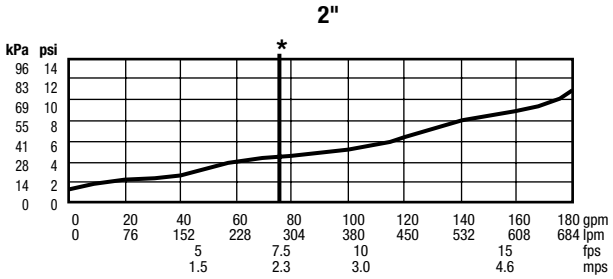
1¼"



1½"



2"



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