#### For Health Hazard Applications

Job Name Contra	ractor
Job Location Appro	oval
	ractor's P.O. No.
	esentative

## Series 919

### Reduced Pressure Zone Assemblies

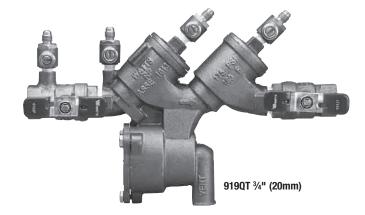
Sizes: 1/4" - 2" (5 - 50mm)

Series 919 Reduced Pressure Zone Backflow Assemblies are designed to protect potable water supplies in accordance with national plumbing codes and water authority requirements. This series can be used in a variety of installations, including the prevention of health hazard cross-connections or for containment at the service line entrance.

This series features two poppet style check valves, replaceable check seats, with an intermediate relief valve. Its compact modular design facilitates easy maintenance and assembly access. Sizes  $\frac{1}{4}$ " - 1" (5 – 25mm) shutoffs have tee handles.

#### **Features**

- Separate access covers for the check valves and relief valve for ease of maintenance
- Top entry-all check internals easily accessible
- All rubber elastomers of chloramine resistant material
- Check valve poppet assemblies are fully guided by innovative plastic seat guide
- Replaceable push-in check valve and relief valve seats eliminates threads from the water way
- EZ twist relief valve cover quarter-turn locking joint captures the spring load during repair to facilitate disassembly
- Innovative check valve plastic cover bushing provides trouble free guiding of the check valve poppet
- Bottom mounted relief valve provides reduced installation clearances
- Compact, space saving design
- No special tools required for servicing
- Top mounted test cocks for ease in testing and reduced installation clearances
- Standardly furnished with NPT body connections



#### **Specifications**

A Reduced Pressure Zone Assembly shall be installed at each potential health hazard location to prevent backflow due to backsiphonage and/or backpressure. The assembly shall consist of a pressure differential relief valve located in a zone between two positive seating check valves. Seats and seat discs shall be replaceable in both check valves and the relief valve without the use of special tools. Service of all internal check valve components shall be through top mounted access bronze covers threaded to the main valve body. The check valve poppet assembly shall be guided via the use of a corrosion resistant plastic guide. The check valve and relief valve seats shall be push-in type. The relief valve cover shall be bronze construction secured with stainless steel bolts and shall utilize a quarter-turn locking joint to capture the spring load of the relief valve. The relief valve shall have an internal sensing line to sense the inlet water supply. All rubber elastomers shall be of chloramine resistant material. The assembly shall also include two resilient seated isolation valves, four top-mounted resilient seated test cocks and an air gap drain fitting. The assembly shall be a Watts Series 919.

# Now Available WattsBox Insulated Enclosures.

For more information, send for literature ES-WB.

IMPORTANT: INQUIRE WITH GOVERNING AUTHORITIES FOR LOCAL INSTALLATION REQUIREMENTS



#### **Available Models**

Suffix:

QT - quarter-turn ball valves

S - bronze strainer

LF - without shutoff valves

AQT - elbow fitting for 360° rotation

ZQT - inlet & outlet flow up

FP - slow close ball valves

Prefix:

U - union connections

#### Materials

Body: Bronze

Discs: Silicone rubber

Check Seats: Replaceable polymer Cover Bolts: Stainless steel

#### **Approvals**





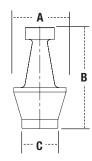


Approved by the Foundation for Cross-Connection Control and Research at The University of Southern California (for sizes  $\frac{3}{4}$ " -2")

#### Pressure - Temperature

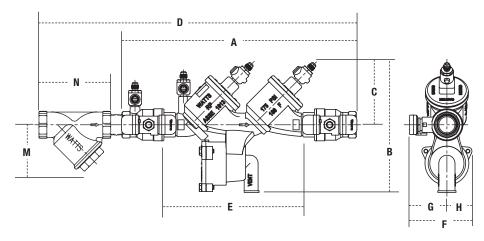
Temperature Range: 33°F – 180°F (0.5°C – 82°C) Maximum Working Pressure: 175psi (12.1 bar)

#### Air Gaps



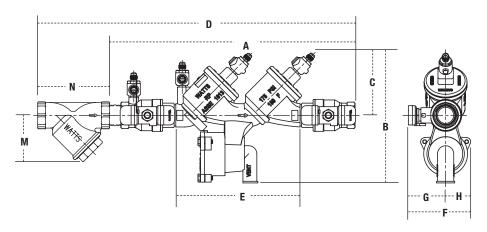
AIR GAP MODEL	SIZES			WEIGHT					
			A	Е	3	(	0		
		in.	mm	in.	mm	in.	mm	lbs.	kg.
919AGC	1/4" – 1"	23/8	60	31/8	79	1/2	13	.63	.28
919AGF	11/4" - 2"	43/8	111	87/16	214	3	76	4.26	1.93

#### Dimensions - Weights



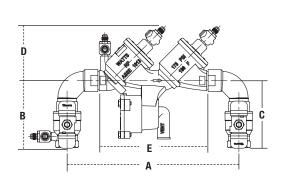
#### 919QT, 919QT-S

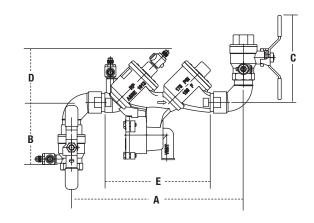
SIZ	E (DN)								DIMENSIONS									STRAINER DIMENSIONS				WEIGHT			
			Α		В		С		D	E (LF)		F		G		Н		М		N		919QT		9190	T-S
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
1/4	8	91/2	241	67/8	175	27/8	73	12 <sup>3</sup> /8	314	53/4	146	3	75	13/8	35	<b>1</b> <sup>9</sup> / <sub>16</sub>	40	23/8	60	21/2	64	5.8	2.6	6.3	2.9
3/8	10	91/2	241	67/8	175	27/8	73	12 <sup>3</sup> /8	314	53/4	146	31/3	84	13/4	44	<b>1</b> 9/16	40	23/8	60	21/2	64	5.8	2.6	6.3	2.9
1/2	15	91/2	241	67/8	175	27/8	73	123/4	324	53/4	146	33/8	86	<b>1</b> <sup>7</sup> /8	48	<b>1</b> <sup>9</sup> / <sub>16</sub>	40	23/4	70	21/4	57	5.8	2.6	6.3	2.9
$^{3}/_{4}$	20	12 <sup>1</sup> /8	307	77/16	188	31/2	88	15 <sup>1</sup> / <sub>2</sub>	393	711/16	195	35/8	92	21/16	52	<b>1</b> 9/ <sub>16</sub>	40	15/8	41	33/16	81	8.3	3.7	10.0	4.5
1	25	141/2	368	8	202	37/8	98	193/16	487	93/16	233	4	102	27/16	62	19/16	40	21/8	54	33/4	95	11.8	5.4	13.8	6.3
11/	4 32	18 <sup>1</sup> / <sub>8</sub>	461	11 <sup>7</sup> / <sub>16</sub>	290	51/8	129	231/4	591	1111/16	297	51/8	130	25/8	67	21/2	64	21/2	64	<b>4</b> <sup>7</sup> / <sub>16</sub>	113	22.3	10.1	26.3	11.9
11/	2 40	18 <sup>3</sup> / <sub>4</sub>	476	11 <sup>7</sup> / <sub>16</sub>	290	51/8	129	25 <sup>1</sup> / <sub>16</sub>	637	1111/16	297	55/8	143	31/8	79	21/2	64	3	76	47/8	124	28.3	12.8	32.0	14.5
2	50	<b>21</b> <sup>1</sup> / <sub>16</sub>	535	12 <sup>1</sup> / <sub>16</sub>	307	55/8	142	2813/16	732	133/8	340	5 <sup>15</sup> / <sub>16</sub>	151	37/16	87	21/2	64	39/16	90	5 <sup>15</sup> / <sub>16</sub>	151	37.3	16.9	45.0	20.4

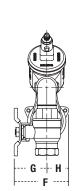


#### U919QT, U919QT-S

SIZE	(DN)			DIMEN	DIMENSIONS									STRAINER DIMENSIONS				WEIGHT							
		А		В		С		D		E (LF)		F		G	G		Н		M	N		U919QT		U919	9QT-S
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
3/4	20	<b>16</b> <sup>15</sup> / <sub>16</sub>	430	81/16	204	37/8	98	205/16	515	11 <sup>1</sup> / <sub>2</sub>	292	35/8	92	21/16	52	19/16	40	15/8	41	39/16	81	13.4	6.1	15.1	6.9
1	25	17 <sup>1</sup> /8	435	81/16	204	37/8	98	<b>21</b> <sup>13</sup> / <sub>16</sub>	554	113/4	297	4	102	<b>2</b> <sup>7</sup> / <sub>16</sub>	62	19/16	40	21/8	54	33/4	95	13.3	6.0	15.3	6.9
11/4	32	2015/16	532	11 <sup>7</sup> / <sub>16</sub>	290	5 <sup>1</sup> / <sub>8</sub>	129	26 <sup>1</sup> / <sub>16</sub>	662	15 <sup>3</sup> / <sub>8</sub>	390	5 <sup>1</sup> / <sub>8</sub>	130	2 <sup>5</sup> /8	67	2 <sup>1</sup> / <sub>2</sub>	64	21/2	64	4 <sup>7</sup> / <sub>16</sub>	113	25.9	11.8	29.9	13.6
11/2	40	21 <sup>9</sup> / <sub>16</sub>	547	11 <sup>7</sup> / <sub>16</sub>	290	51/8	129	277/8	708	15 <sup>3</sup> / <sub>8</sub>	390	<b>5</b> <sup>5</sup> / <sub>8</sub>	143	31/8	79	21/2	64	3	76	47/8	124	31.9	14.5	35.6	16.2
2	50	24 <sup>15</sup> / <sub>16</sub>	633	12 <sup>1</sup> / <sub>16</sub>	307	55/8	142	3211/16	830	163/4	425	5 <sup>15</sup> / <sub>16</sub>	151	37/16	87	21/2	64	39/16	90	5 <sup>15</sup> / <sub>16</sub>	151	41.6	18.9	49.3	22.4







#### 919AQT,919ZQT

SIZE	(DN)	(DN) DIMENSIONS															WEIGHT				
		А		А		В	В		С		D		E (LF)		F		G		Н		
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.		
3/4	20	10 <sup>3</sup> /8	263	315/16	100	315/16	100	31/2	88	711/16	195	35/8	92	21/16	52	1 <sup>9</sup> / <sub>16</sub>	40	9.3	4.2		
1	25	12 <sup>1</sup> / <sub>4</sub>	311	4 <sup>13</sup> / <sub>16</sub>	122	413/16	122	37/8	98	93/16	233	4	102	2 <sup>7</sup> / <sub>16</sub>	62	1 <sup>9</sup> / <sub>16</sub>	40	13.3	6.0		
11/4	32	16 <sup>1</sup> / <sub>16</sub>	407	57/8	149	57/8	149	51/8	129	<b>11</b> <sup>11</sup> / <sub>16</sub>	297	51/8	130	25/8	67	21/2	64	24.0	10.9		
11/2	40	16 <sup>5</sup> /8	421	61/2	164	61/2	164	51/8	129	<b>11</b> <sup>11</sup> / <sub>16</sub>	297	55/8	143	31/8	79	21/2	64	30.5	13.8		
2	50	17 <sup>5</sup> / <sub>16</sub>	440	65/8	168	69/16	166	5 <sup>1</sup> /8	142	133/8	340	5 <sup>15</sup> / <sub>16</sub>	151	37/16	87	2 <sup>1</sup> / <sub>2</sub>	64	40.6	18.4		

#### Capacities 919QT -U919QT ----919AQT - - 919ZQT 1/4" (5 mm) kPa psi 1" (25mm) kPa psi 172 25 138 20 **Bressure Loss**103 69 34 138 20 Pressure Loss 10 103 69 10 0 0 34 .25 .5 .75 1.25 1.5 gpm 0 .9 1.9 2.8 3.8 4.7 5.7 lpm 0 10 20 30 50 60 gpm 0 38 76 114 152 190 228 lpm Flow Rate Flow Rate 11/4" (32mm) kPa psi %" (8 mm) kPa psi 172 25 138 20 **Pressure Loss**103 69 34 138 20 103 15 69 10 15 10 0 .5 1.5 2 2.5 3 3.5 4.5 gpm 34 17.0 lpm 0 1.9 3.8 5.7 7.6 9.5 11.4 13.2 15.1 0 0 Flow Rate 10 20 30 40 50 60 70 80 gpm 114 152 190 266 304 lpm Flow Rate ½" (12 mm) 11/2" (40mm) kPa kPa psi psi 138 20 172 25 138 103 69 34 20 Pressure Loss 103 15 15 10 69 5 0 0 34 15 gpm 0 2.5 5 7.5 10 12.5 0 9.5 17.0 28.4 38 47 57 lpm 0 0 40 60 120 gpm 0 76 152 Flow Rate 304 380 456 lpm Flow Rate 2" (50mm) ¾" (20mm) kPa kPa psi psi 138 20 207 30 Pressure Loss 172 25 103 15 138 20 Pressure Loss 103 15 69 10 69 10 34 5 34 5



10

38

Flow Rate

114

40

152

50 gpm

190 lpm

0 0

0



150

570

200 gpm

760 lpm

50

190

100

380

Flow Rate

0 0

0