


Plumbing Fixtures  
 (FD1, RD1, Trap Seal Primer Type 2, DHWT-1,  
 DHW Expansion Tank, Water Safety Valve,  
 HWT Mixing Valve, L1, L1 Insulation Kit, S1,  
 JS1, WC1, WB1 & NFHB)

 <b>GOODKEY, WEEDMARK &amp; ASSOCIATES LIMITED</b> Consulting Engineers 1688 Woodward Dr., Ottawa, ON Canada K2C 3R8 Tel.: 613-727-5111, Fax: 613-727-5115, info@gwal.com	
<b>REVIEWED</b> <input type="checkbox"/> <b>REVIEWED AS NOTED</b> <input checked="" type="checkbox"/> For general conformance only. Contractor remains responsible for equipment & system details, performance, accuracy, dimensions and coordination.	<b>REVISE &amp; RESUBMIT</b> <input type="checkbox"/> <b>REJECTED</b> <input type="checkbox"/> Date: <u>July 16 2019</u> GWA #: <u>2019-148</u> SD #: <u>SM03</u> By: <u>EBANU/A. M. M. M. M.</u>

ELECT: AM

- COORDINATE QUANTITY & LOCATION WITH CONTRACTOR PRIOR TO ORDERING.
- EXPANSION TANK TO BE SUITABLE FOR POTABLE WATER SYSTEM.
- COORDINATE DHWT VENTING PRIOR TO ORDER PROVIDE NEUTRALIZATION KIT.

# SUBMITTAL

Job: Meridian Community Centre

Spec Section No: 0

Submittal No: 0

Revision No: 0

Sent Date: July 4, 2019

Spec Section Title: Plumbing

Submittal Title: Plumbing Fixtures

Contractor:

Optimum Mechanical  
Supplier: Boone

General Contractor:  
TAL-CO Building Innovations  
Reviewed by: Farah Bano - July 9th, 2019.

Contractor's Stamp

Project Name Meridian Community Centre	 <small>88 Sandway Avenue, Ottawa, Ontario K2E 6T9 Ph: 613-228-9200 Fax: 613-228-9218</small>
<input type="checkbox"/> APPROVED	<input type="checkbox"/> REJECTED
<input type="checkbox"/> REVISE	<input checked="" type="checkbox"/> REVIEWED
BY NDEWAR	DATE 7/4/2019
SUBMITTAL# 0	SPEC 0

Architect:

Architect's Stamp

SHOP DRAWING REVIEW

REVIEWED   
REVIEWED AS NOTED   
REVISE AND RESUBMIT



"This review is for the sole purpose of ascertaining conformance with the general design concept for architectural features only, and does not in any way constitute review of the design of engineering elements which form part of the Contract Documents prepared by others. This review shall not mean that the Architect approves the detail design inherent in the shop drawings. This responsibility shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of his responsibility for errors or omissions in the shop drawings or of his responsibility for meeting all requirements of the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes, or to techniques of construction and installation and for co-ordination for the work of all trades."

By: Bryan Bonell Date: July 19, 2019  
HOBIN ARCHITECTURE INCORPORATED

Engineer:

Engineer's Stamp

# FD1



**FD-200** ✓

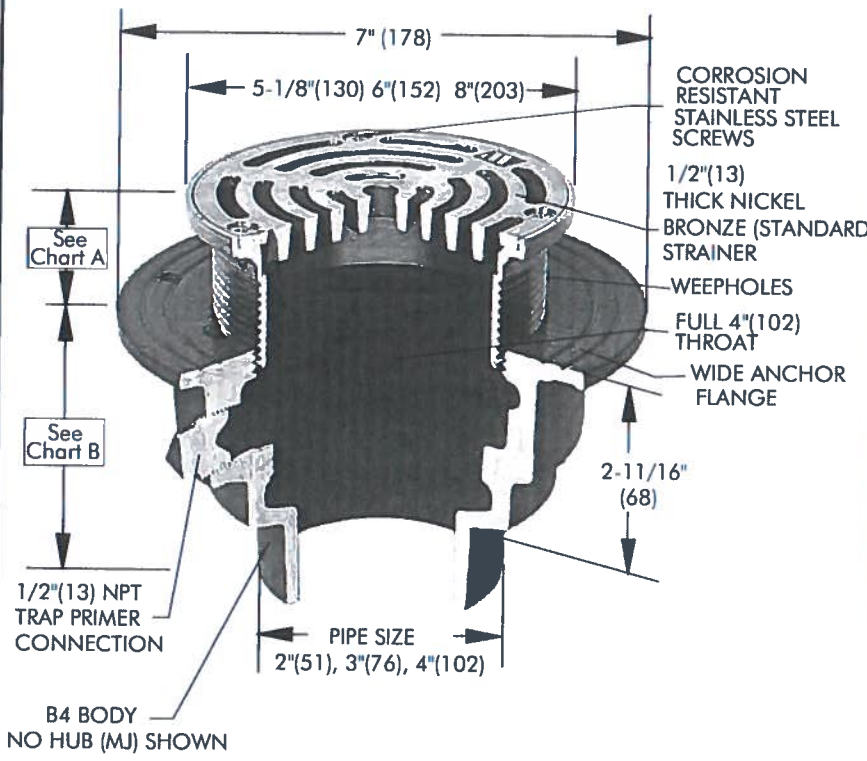
Tag: \_\_\_\_\_

**Floor Drain with Round Heavy Duty Strainer**

**Components:**



**SPECIFICATION:** Watts Drainage Products FD-200 epoxy coated cast iron floor drain with anchor flange, weepholes, 1/2" (13) thick (specify diameter) nickel bronze (standard) strainer, and no hub (MJ) (standard) outlet.



Order Code: **FD-20** [ ] [ ] - [ ] [ ] - [ ] [ ]

Ex. **FD-202P-5-1**

Pipe Sizing (Select One)	
Suffix	Description
2	2"(51) Pipe Size <input type="checkbox"/>
3	3"(76) Pipe Size <input checked="" type="checkbox"/>
4	4"(102) Pipe Size <input type="checkbox"/>

Outlet Type (Select One)	
Suffix	Description
NH	No Hub (MJ) <input checked="" type="checkbox"/>
P	Push On <input type="checkbox"/>

Strainer (Select One)	
Suffix	Description
5-1	5"(127) Diameter, Nickel Bronze <input checked="" type="checkbox"/>
5-3	5"(127) Diameter, Stainless Steel <input type="checkbox"/>
5-4	5"(127) Diameter, Ductile Iron <input type="checkbox"/>
6-1	6"(152) Diameter, Nickel Bronze <input type="checkbox"/>
6-3	6"(152) Diameter, Stainless Steel <input type="checkbox"/>
8-1	8"(203) Diameter, Nickel Bronze <input type="checkbox"/>

Options (Select One or More)	
Suffix	Description
-5	Sediment Bucket <input type="checkbox"/>
-6	Vandal Proof <input type="checkbox"/>
-8	Backwater Valve (3" / 4" Only) <input type="checkbox"/>
-12	Galvanized Top <input type="checkbox"/>
-13	All Galvanized <input type="checkbox"/>
-15	Strainer Extension (DD-50) <input type="checkbox"/>
-113M	Special Epoxy from 3M Range <input type="checkbox"/>
-F4-50	4" Round Cast Iron Funnel <input type="checkbox"/>
-F4-1	4" Round Nickel Bronze Funnel <input type="checkbox"/>
-F6-1	6" Round Nickel Bronze Funnel <input type="checkbox"/>
-G-50	4x9" Oval Cast Iron Funnel <input type="checkbox"/>
-G-1	4x9" Oval Nickel Bronze Funnel <input type="checkbox"/>
-Z	Elastomeric Flange <input type="checkbox"/>

Optional Body Material (NH Only)	
Suffix	Description
-60	PVC Body w/Socket Outlet <input type="checkbox"/>
-61	ABS Body w/Socket Outlet <input type="checkbox"/>

**Chart A**

Str. Dia.	Min.	Max.	Load Rating	Free Area Sq. In.
5"(127)	7/16"(11)	1-5/8"(41)	*XHD	7
6"(152)	5/8"(16)	5/8"(16)	*XHD	8
8"(203)	3/4"(19)	3/4"(19)	*HD	18

\* The load classifications are in accordance with the American National Standards ASME A12.21.1M ASME Ratings are as follows:  
 HD - Safe Live Load 5000-7499 lbs (2250-3375kg)  
 XHD - Safe Live Load 7500-10000 lbs (3375-4500kg)  
 The above categories are given as a guide only. Please consult factory.

**Chart B**

	Std.	P	60/61
Pipe Size	No Hub	Push On	PVC/ABS
2"(51)	3"(76)	4"(102)	4"(102)
3"(76)	3"(76)	4"(102)	3-3/4"(95)
4"(102)	3"(76)	4"(102)	3-3/4"(95)

Job Name \_\_\_\_\_ Contractor \_\_\_\_\_

Job Location \_\_\_\_\_ Contractor's P.O. No. \_\_\_\_\_

Engineer \_\_\_\_\_ Representative \_\_\_\_\_

WATTS Drainage reserves the right to modify or change product design or construction without prior notice and without incurring any obligation to make similar changes and modifications to products previously or subsequently sold. See your WATTS Drainage representative for any clarification. Dimensions are subject to manufacturing tolerances.



CANADA: 5435 North Service Road, Burlington, ON, L7L 5H7 TEL: 905-332-6718 TOLL-FREE: 1-888-208-8927 Website: www.wattsdrainage.ca



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# RD1

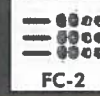


**RD-100** ✓

Tag: \_\_\_\_\_

**Large Capacity  
Roof Drain**

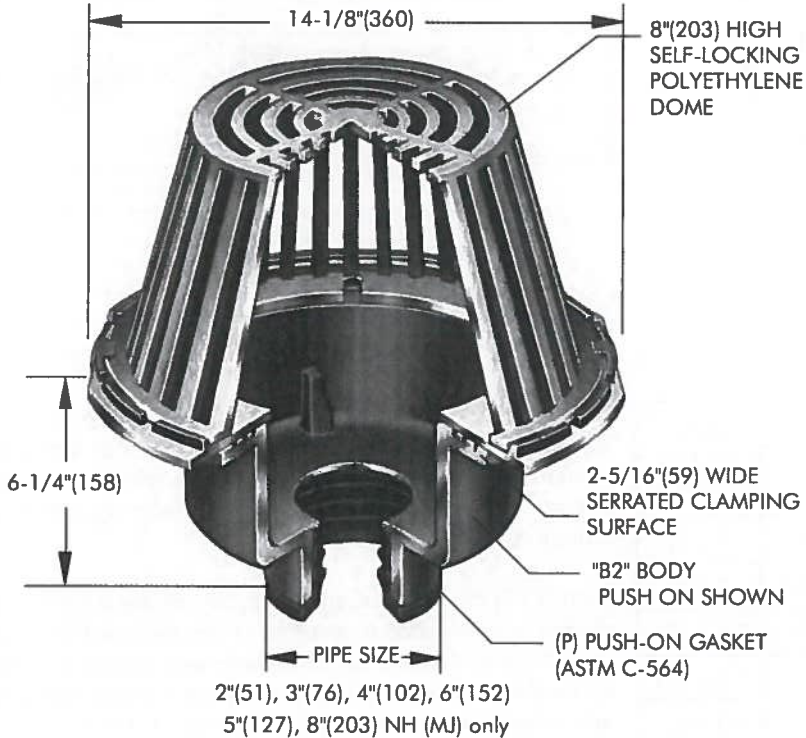
**Components:**



**SPECIFICATION:** Watts Drainage Products RD-100 epoxy coated cast iron roof drain with deep sump, wide serrated flashing flange, flashing clamp device with integral gravel stop and self-locking polyethylene (standard) dome strainer.

Order Code: RD-10 - - -

Ex. RD-102P-K



Free Area Sq. In.
137

Deck opening 10" (254)  
with sump receiver 13-1/4" (337)

Pipe Sizing (Select One)		
Suffix	Description	
2	2"(51) Pipe Size	<input type="checkbox"/>
3	3"(76) Pipe Size	<input type="checkbox"/>
4	4"(102) Pipe Size	<input checked="" type="checkbox"/>
5	5"(127) Pipe Size	<input type="checkbox"/>
6	6"(152) Pipe Size	<input type="checkbox"/>
8	8"(203) Pipe Size	<input type="checkbox"/>

Outlet Type (Select One)		
Suffix	Description	
NH	No Hub (MJ)	<input checked="" type="checkbox"/>
P	Push On	<input type="checkbox"/>
T	Threaded Outlet	<input type="checkbox"/>
X	Inside Caulk	<input type="checkbox"/>

Options (Select One or More)		
Suffix	Description	
-A	Accutrol weir (specify # 1-6 slots)	<input type="checkbox"/>
-B	Sump Receiver Flange	<input checked="" type="checkbox"/>
-BED	Sump Receiver, Adj Ext., Deck Clamp	<input type="checkbox"/>
-C	Secondary Membrane Clamp	<input checked="" type="checkbox"/>
-D	Underdeck Clamp	<input checked="" type="checkbox"/>
-E	Adjustable Extension	<input type="checkbox"/>
-GSS	Stainless Steel Ballast Guard	<input type="checkbox"/>
-H	Adj. to 6" IRMA Ballast Guard	<input checked="" type="checkbox"/>
-K	Ductile Iron Dome	<input checked="" type="checkbox"/>
-K80	Aluminum Dome	<input type="checkbox"/>
-L	Vandal Proof Dome	<input type="checkbox"/>
-R	2" High External Water Dam	<input type="checkbox"/>
-SO	Side Outlet**	<input type="checkbox"/>
-V	Fixed Extension (1-1/2", 2", 3", 4")	<input type="checkbox"/>
-W	Adj. Water Level Regulator	<input type="checkbox"/>
-W-1	Waterproofing Flange	<input type="checkbox"/>
-Z	Extended Integral Wide Flange	<input type="checkbox"/>
-5	Sediment Bucket	<input type="checkbox"/>
-12	Galvanized Dome	<input type="checkbox"/>
-13	All Galvanized	<input type="checkbox"/>
-83	Mesh Covered Dome	<input type="checkbox"/>
-113M	Special Epoxy from 3M Range	<input type="checkbox"/>

Optional Body Material (NH Only)		
Suffix	Description	
-60	PVC Body w/Socket Outlet	<input type="checkbox"/>
-61	ABS Body w/Socket Outlet	<input type="checkbox"/>

\*\* Side Outlet (-SO) option only available in 2"(51), 3"(76), 4"(102) pipe sizes.  
Underdeck Clamp (-BED and -D options) are not available when -SO is selected.

Job Name \_\_\_\_\_ Contractor \_\_\_\_\_

Job Location \_\_\_\_\_ Contractor's P.O. No. \_\_\_\_\_

Engineer \_\_\_\_\_ Representative \_\_\_\_\_

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ES-WD-RD-100 CANADA 0403

(Dimension) Denotes Millimeters

Contractor: Optimum Mech Solutions Inc.

Job: Meridian Retirement Community Fire Restoration



# TRAP SEAL PRIMER TYPE 2

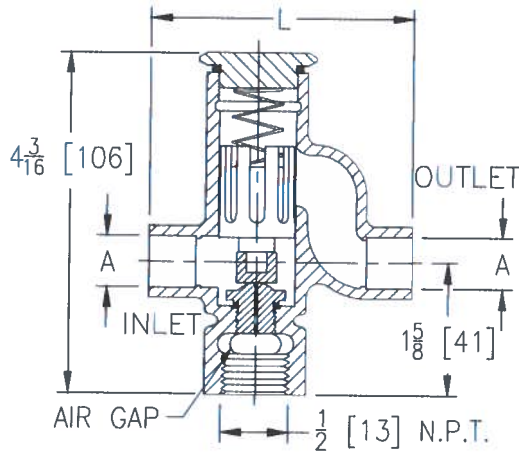
## Z1022-XL ✓

### SANI-GARD AUTOMATIC TRAP PRIMER

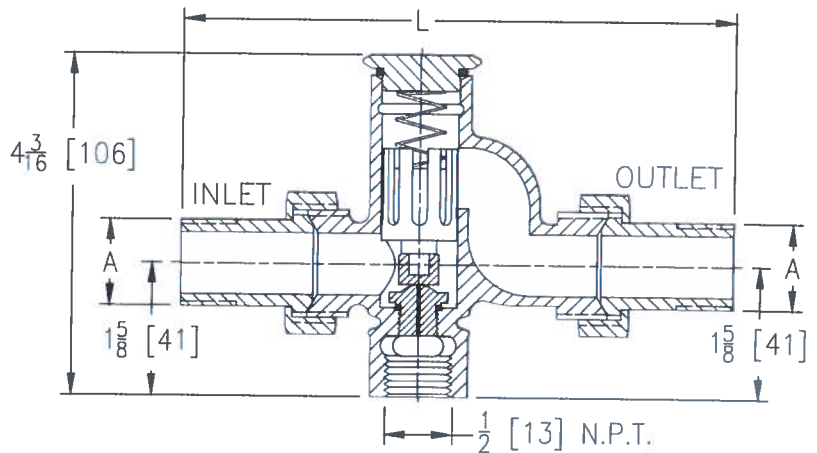
SPECIFICATION SHEET

TAG \_\_\_\_\_

Dimensional Data (inches and [ mm ]) are Subject to Manufacturing Tolerances and Change Without Notice



1/2 [13] PIPE SIZE



3/4 [19] PIPE SIZE

Dimensions In Inches		Approx. Wt. Lbs. [kg]
A Pipe Size/Connection	L	
1/2 [13] Solder Female ✓	3-7/32 [82]	1 [.5]
1/2 [13] IP Female	3-7/32 [82]	1 [.5]
1/2 [13] Solder Female Union	5-21/32 [144]	1.5 [.75]
1/2 [13] IP Female Union	5-11/32 [136]	1.5 [.75]
3/4 [19] IP Male Union	6-13/16 [173]	2.0 [.9]

#### ENGINEERING SPECIFICATION: ZURN Z1022-XL

Sani-Gard Automatic Trap Primer, all bronze body with integral vacuum breaker, non-liming internal operating piston, stainless steel spring, removable bronze seat with metering orifice, and sealed bronze cover.

Zurn "XL" Lead-Free compliant products are a line of durable plumbing products designed and manufactured to comply with state laws and local codes that mandate maximum allowable lead content levels. Zurn "XL" products are manufactured in accordance to the Federal SWDA section 1417.

#### PIPE SIZE / CONNECTIONS (Specify size/type)

- ✓ 1/2 [13] Solder Female
- \_\_\_ 1/2 [13] IP Female
- \_\_\_ 1/2 [13] Solder Female Union
- \_\_\_ 1/2 [13] IP Female Union
- \_\_\_ 3/4 [19] IP Male Union

#### PREFIXES

- \_\_\_ Z All Plain Bronze Body\*

#### SUFFIXES

- \_\_\_ -CP Chrome Plated Finish
- \_\_\_ -DU2 2-Outlet Distribution Unit
- \_\_\_ -DU3 3-Outlet Distribution Unit
- \_\_\_ -DU4 4-Outlet Distribution Unit
- \_\_\_ -RK Repair Kit

\* Regularly furnished unless otherwise specified.



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Zurn Industries, LLC | Specification Drainage Operation  
 1801 Pittsburgh Avenue, Erie, PA U.S.A. 16502 · Ph. 855-663-9876, Fax 814-454-7929  
 In Canada | Zurn Industries Limited  
 3544 Nashua Drive, Mississauga, Ontario L4V 1L2 · Ph. 905-405-8272, Fax 905-405-1292

Rev. B  
 Date: 7/22/15  
 C.N. No. 132924  
 Prod. | Dwg. No. Z1022-XL

### CYCLONE® Mxi MODULATING

#### MODULATING BURNER ADVANCES THE CYCLONE TO HIGHER LEVELS OF EFFICIENCY

The full line of A. O. Smith Cyclone Mxi condensing water heaters has been designed to provide years of dependable service and feature industry leading technology. Models are available from 120,000 to 500,000 Btu/h and all deliver thermal efficiencies of 95% and higher. The unique helical coil heat exchanger limits weld joints for optimal service life while maximizing heat transfer.

Cyclone is the industry leader in high efficiency commercial water heating with over a quarter million Cyclones sold since 1996. The current Mxi modulating models adjust firing rate to the specific demand further increasing efficiency and money savings.

#### INTELLIGENT CONTROL SYSTEM WITH LCD DISPLAY

- Exclusive A. O. Smith designed control system
- Provides detailed water heater status information
- Precise temperature control adjustable from 90 to 180 degrees
- Built-in diagnostics
- Run history information
- Cyclone® Mxi Modulating water heaters are compatible with the iCOMM™ remote monitoring system. Call 1.888.928.3702 for information.

#### SUBMERGED COMBUSTION CHAMBER, WITH HELICAL HEAT EXCHANGER COIL

- Positioned in center of tank, surrounded by water to virtually eliminate radiant heat loss from chamber
- Direct spark ignition
- Spiral heat exchanger keeps hot burner gases swirling, uses centrifugal force to maximize efficiency of heat transfer to water in tank
- Spiral heat exchanger reduces lime scale from forming on water-side surfaces, which maintains energy efficiency over time

#### POWERED ANODES STANDARD ON ALL MODELS

- Provides long-lasting tank protection in varying water conditions
- Powered anodes are non-sacrificial
- Automatically adjusts output needed to properly protect the tank

#### PERMAGLAS® ULTRA COAT™ GLASS LINING

- Glass coating is applied using a liquid slush coating technique to ensure uniform coating
- Heat exchanger coil is glassed both externally and internally for optimum protection

#### MECHANICAL VENTING VERSATILITY

- Conventional power venting or direct venting
- Vents vertically or through a sidewall
- Front located exhaust and condensate connections allow for easy install and access
- Vents with low cost PVC Schedule 40 intake and exhaust pipe. Approved for optional CPVC Schedule 40, Polypropylene and AL29-4C stainless steel vent materials
- Direct-vent intake and exhaust pipe can terminate separately outside building or through single opening, using concentric vent assembly
- Canadian installations require ULC S636 PVC/CPVC, ULC S636 Polypropylene and AL29-4C stainless steel pipe for intake and exhaust

#### HIGH EFFICIENCY MODULATING PRE-MIX POWERED BURNER

- Down-fired pre-mix burner provides optimum efficiency and quiet operation
- Top-mounted burner position prevents condensation from affecting burner operation

#### 3-YEAR LIMITED TANK / 1-YEAR LIMITED PARTS WARRANTY

- For complete warranty information, consult written warranty or go to [hotwater.com](http://hotwater.com).



BTH-120(A) THROUGH BTH-500(A)  
MODEL SHOWN:  
BTH-199(A)



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# DHWT-1 Commercial Gas Water Heaters

## OTHER FEATURES:

### SPACE-SAVING DESIGN FOR INSTALLATION FLEXIBILITY

- Easy-to-remove top cover for convenient access to serviceable parts
- 0" installation clearances on sides and rear, 1-1/2" installation clearance on top
- Handhole cleanout allows easy access to tank interior for cleaning
- 0" clearance to combustibles, approved for installation on combustible floors

## CODES AND STANDARDS

- CSA certified and ASME rated T&P relief valve
- Maximum hydrostatic working pressure: 160 psi
- All models are design certified by Underwriters Laboratories (UL), Inc., to ANSI Z21.10.3 - CSA 4.3 Standards
- Meets the thermal efficiency and standby loss requirements of the U.S. Department of Energy and current edition ASHRAE/IES 90.1
- Design Certified by Underwriters Laboratories to NSF standard 5 for 180°F (62°C) water
- Complies with SCAQMD Rule 1146.2 and other Air Quality Management Districts with similar requirements for low-NOx emissions
- ASME tank construction optional on 120-500 model sizes

### VENT REQUIREMENTS FOR BTH 120(A) - 250(A)

Number of 90° Elbows Installed	3 Inch Pipe	4 Inch Pipe
	Maximum Feet (Meters)	Maximum Feet (Meters)
One (1)	45 feet (13.7 meters)	115 feet (35 meters)
Two (2)	40 feet (12.2 meters)	110 feet (33.5 meters)
Three (3)	35 feet (10.7 meters)	105 feet (32 meters)
Four (4)	30 feet (9.1 meters)	100 feet (30.5 meters)
Five (5)	N/A	95 feet (29 meters)
Six (6)	N/A	90 feet (27.4 meters)

### VENT REQUIREMENTS FOR BTH 300(A) - 500(A)

Number of 90° Elbows Installed	4 Inch Pipe	6 Inch Pipe
	Maximum Feet (Meters)	Maximum Feet (Meters)
One (1)	65 feet (19.8 meters)	115 feet (35 meters)
Two (2)	60 feet (18.2 meters)	110 feet (33.5 meters)
Three (3)	55 feet (16.8 meters)	105 feet (32 meters)
Four (4)	50 feet (15.2 meters)	100 feet (30.5 meters)
Five (5)	45 feet (13.7 meters)	95 feet (29 meters)
Six (6)	40 feet (12.2 meters)	90 feet (27.4 meters)

## GAS PRESSURE REQUIREMENTS

Model Number	Manifold Pressure		Minimum Supply Pressure		Maximum Supply Pressure	
	Natural Gas	Propane Gas	Natural Gas	Propane Gas	Natural Gas	Propane Gas
BTH-120(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	4.4"W.C. (1.10 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)
BTH-150(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	4.4"W.C. (1.10 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)
BTH-199(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	4.4"W.C. (1.10 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)
BTH-250(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	4.4"W.C. (1.10 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)
BTH-300(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	4.8"W.C. (1.19 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)
BTH-400(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	4.8"W.C. (1.19 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)
BTH-500(A)	0"W.C. (0 kPa)	0"W.C. (0 kPa)	4.8"W.C. (1.19 kPa)	8.5"W.C. (2.12 kPa)	14"W.C. (3.49 kPa)	14"W.C. (3.49 kPa)

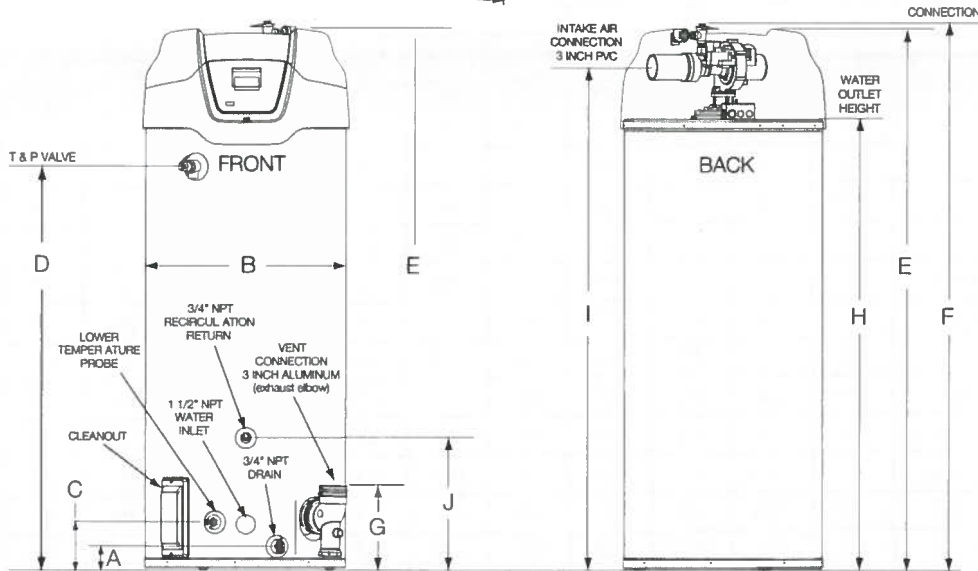
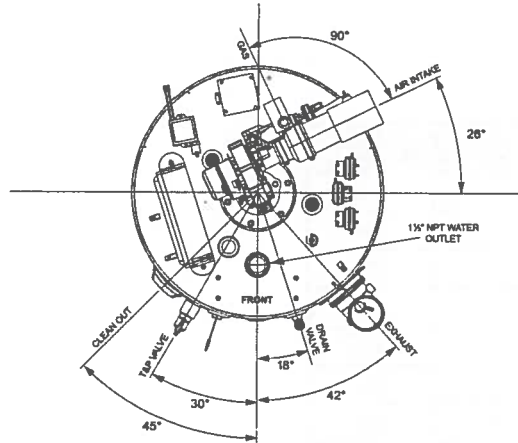
Depending on the installed equivalent length, and/or the number of appliances connected, the supply gas line size may need to be increased beyond the minimum required size.

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# DHWT-1 Commercial Gas Water Heaters

BTH 120 ✓ 250



Model Number	Approx. Capacity		Dimensions										lb/kg	Approx. Shipping Weight Std	Approx. Shipping Weight ASME
			A	B	C	D	E	F	G	H	I	J			
BTH-120(A) ✓	GPH	60	3	27 3/4	6 5/16	35	55 1/2	53 1/2	11 1/4	42 1/4	48 1/2	18 1/4	lb	460	490
	LPH	227	7.62	70.5	16	88.9	141	135.9	28.6	107.32	123.2	46.36	kg	208	220
BTH-150(A)	GPH	100	3	27 3/4	6 5/16	56 3/8	76 1/2	75 1/2	11 1/4	64	70	18 1/4	lb	523	553
	LPH	379	7.62	70.5	16	143.2	194.9	191.8	28.6	162.6	177.8	46.36	kg	237	251
BTH-199(A)	GPH	100	3	27 3/4	6 5/16	56 3/8	76 1/2	75 1/2	11 1/4	64	70	18 1/4	lb	523	553
	LPH	379	7.62	70.5	16	143.2	194.9	191.8	28.6	162.6	177.8	46.36	kg	237	251
BTH-250(A)	GPH	100	3	27 3/4	6 5/16	56 3/8	76 1/2	75 1/2	11 1/4	64	70	18 1/4	lb	523	553
	LPH	379	7.62	70.5	16	143.2	194.9	191.8	28.6	162.6	177.8	46.36	kg	237	251

Electrical characteristics-120V-60Hz A.C., 5.0 A

"A" in model represents ASME construction

Propane gas models available

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.

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# DHWT-1

## Commercial Gas Water Heaters

### RECOVERY CAPACITY

Model Number	Type of Gas	Input		Thermal Efficiency
		BTU/HR	kW	
BTH-120(A) ✓	Natural/Propane	120,000	35	95%
BTH-150(A)	Natural/Propane	150,000	44	98%
BTH-199(A)	Natural/Propane	199,900	58	97%
BTH-250(A)	Natural/Propane	250,000	73	96%
BTH-300(A)	Natural/Propane	300,000	88	96%
BTH-400(A)	Natural/Propane	399,900	117	95%
BTH-500(A)	Natural/Propane	499,900	146	95%

Model Number	Approx. Capacity	U.S. GALLONS/HR AND LITRES/HR AT TEMPERATURE RISE INDICATED													
		°F	30°F	40°F	50°F	60°F	70°F	80°F	90°F	100°F	110°F	120°F	130°F	140°F	
		°C	17°C	22°C	28°C	33°C	39°C	44°C	50°C	56°C	61°C	67°C	72°C	78°C	
BTH-120(A) ✓	60 U.S. Gals.	GPH	461	345	276	230	197	173	154	138	126	115	106	99	
	227 Litres	LPH	1743	1308	1046	872	747	654	581	523	475	436	402	374	
BTH-150(A)	100 U.S. Gals.	GPH	594	445	356	297	255	223	198	178	162	148	137	127	
	379 Litres	LPH	2248	1686	1349	1124	963	843	749	674	613	562	519	482	
BTH-199(A)	100 U.S. Gals.	GPH	783	588	470	392	336	294	261	235	214	196	181	168	
	379 Litres	LPH	2965	2224	1779	1483	1271	1112	988	890	809	741	684	635	
BTH-250(A)	100 U.S. Gals.	GPH	970	727	582	485	416	364	323	291	264	242	224	208	
	379 Litres	LPH	3670	2753	2202	1835	1573	1376	1223	1101	1001	918	847	786	
BTH-300(A)	119 U.S. Gals.	GPH	1164	873	698	582	499	436	388	349	317	291	269	249	
	450.96 Litres	LPH	4405	3304	2643	2202	1888	1652	1468	1321	1201	1101	1017	944	
BTH-400(A)	119 U.S. Gals.	GPH	1535	1151	921	767	658	576	512	460	419	384	354	329	
	450.96 Litres	LPH	5810	4358	3486	2905	2490	2179	1937	1743	1585	1453	1341	1245	
BTH-500(A)	119 U.S. Gals.	GPH	1919	1439	1151	959	822	720	640	576	523	480	443	411	
	450.96 Litres	LPH	7263	5448	4358	3632	3113	2724	2421	2179	1981	1816	1676	1556	

Recovery capacities are based on AHRI rated thermal efficiencies.  
For ASME Construction add an "A" to the end of the model number ex: BTH-120A.

### STORAGE CAPACITY

Model Number	U.S. Gallons	Liters
BTH 120 ✓	60	227
BTH 150	100	379
BTH 199	100	379
BTH 250	100	379
BTH 300	119	450.96
BTH 400	119	450.96
BTH 500	119	450.96

### GAS LINE CONNECTION SIZE

Model	Series	Natural Gas	Propane Gas
BTH 120 ✓	200/201	3/4" NPT	3/4" NPT
BTH 150	200/201	3/4" NPT	3/4" NPT
BTH 199	200/201	3/4" NPT	3/4" NPT
BTH 250	200/201	3/4" NPT	3/4" NPT
BTH 300	200/201	1-1/2" NPT	1-1/2" NPT
BTH 400	200/201	1-1/2" NPT	1-1/2" NPT
BTH 500	200/201	1-1/2" NPT	1-1/2" NPT

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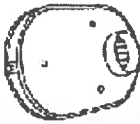
# DHWT-1 Commercial Gas Water Heaters

## OPTIONAL KITS



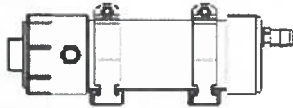
### OPTIONAL CONCENTRIC VENT KITS

- BTH-120 - 250 vent kit p/n 9006328005
- BTH-300 - 500 vent kit p/n 9008841005



### OPTIONAL LOW PROFILE TERMINATION VENT KITS

- 3" Flush Mount Vent Kit p/n 9008933005
- 4" Flush Mount Vent Kit p/n 9008934005
- 6" Flush Mount Vent Kit p/n 9008935005



### OPTIONAL CONDENSATE NEUTRALIZATION KITS

- BTH-120-199 kit p/n 9007959005
- BTH-250-500 kit p/n 9007960005

## SPECIFICATION

(Natural or Propane) gas water heater(s) shall be A. O. Smith Cyclone Mxi model # \_\_\_\_\_ or equal, minimum 95% thermal efficiency, a storage capacity of \_\_\_\_\_ gallons, an input rating of \_\_\_\_\_ BTUs per hour, a recovery rating of \_\_\_\_\_ gallons per hour (gph) at 100°F rise and a maximum hydrostatic working pressure of 160 psi. Water heater(s) shall: 1. Modulating gas burner that automatically adjusts the input based on demand. 2. Powered anodes that are non sacrificial and maintenance free. 3. Have seamless glass-lined steel tank construction, with glass lining applied to all water-side surfaces after the tank has been assembled and welded; 4. Meets the thermal efficiency and/or standby loss requirements of the U. S. Department of Energy and current edition of ASHRAE/IES 90.1; 5. Have foam insulation and a CSA Certified and ASME rated T&P relief valve; 6. Have a down-fired power burner designed for precise mixing of air and gas for optimum efficiency, requiring no special calibration on start-up; 7. Be approved for 0" clearance to combustibles.

The control shall be an integrated solid-state temperature and ignition control device with integral diagnostics, graphic user interface, fault history display, and shall have digital temperature readout. 1. All models are design certified by Underwriters Laboratories (UL), Inc., according to ANSI Z21.10.3 - CSA 4.3 standards governing storage type water heaters; 2. Meet the thermal efficiency and standby loss requirements of the U. S. Department of Energy and current edition ASHRAE/IES 90.1. Complies with SCAQMD Rule 1146.2 and other air quality management districts with similar requirements for low NOx emissions.

120K-250K BTU Input: For Standard Power Venting: Water heater(s) shall be suitable for power venting using a (3" or 4") \_\_\_\_\_ diameter PVC pipe for a total distance of (50 ft or 120 ft.) \_\_\_\_\_ equivalent feet of vent piping. For Power Direct Venting: Water heater(s) shall be suitable for power direct venting using a (3" or 4") \_\_\_\_\_ diameter PVC pipe for a total distance of (50 ft or 120 ft.) \_\_\_\_\_ equivalent feet of vent piping and (50 ft. or 120 ft.) \_\_\_\_\_ equivalent feet of intake air piping.

300K - 500K BTU Input: For Standard Power Venting: Water heater(s) shall be suitable for standard power venting using a (4" or 6") \_\_\_\_\_ diameter PVC pipe for a total distance of (70 ft. or 120 ft.) \_\_\_\_\_ equivalent feet of vent piping. For Power Direct Venting: Water heater(s) shall be suitable for power direct venting using a (4" or 6") \_\_\_\_\_ diameter PVC pipe for a total distance of (70 ft or 120 ft.) \_\_\_\_\_ equivalent feet of vent piping and (70 ft. or 120 ft.) \_\_\_\_\_ equivalent feet of intake air piping.

Operation of the water heater(s) in a closed system where thermal expansion has not been compensated for (with a properly sized thermal rise expansion tank) will void the warranty.

Water heater should incorporate the iCOMM™ system for remote monitoring, leak detection and fault alert.

## COMMON VENTING KITS FOR UP TO 2 WATER HEATERS (ONE KIT PER WATER HEATER REQUIRED)

Kit	Description
9009152005	PVC Common Vent Kit, 120 – 250 Models
9009227005	PVC Common Vent Kit, 300 – 500 Models
9009132005	Polypropylene Common Vent Kit, 120 -250 Models
9009226005	Polypropylene Common Vent Kit, 300 - 500 Models

Installations must comply with all national, state and local codes.  
See kit instructions and corresponding water heater manual for detailed installation instructions and additional information.  
50 Feet maximum equivalent length of straight pipe common vent and elbows  
NOTE: Order 2 kits for every 2 heater installation.  
See the Common Vent Kit manual or spec sheet for detailed information.

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For technical information, call 800-527-1953. A. O. Smith Corporation reserves the right to make product changes or improvements without prior notice.

# System 636<sup>®</sup> TERMINATION KITS

## PRODUCT INFORMATION BULLETIN

### System 636<sup>®</sup> Termination Kits

Three ULC S636 certified ways to terminate your System 636<sup>®</sup> Flue Gas Venting system

#### Concentric Kits (PVC & CPVC)

System 636 Concentric Kits, are available in a variety of lengths and come in 2", 3" and 4" diameters. These "pipe-in-pipe" kits allow for both exhaust and intake pipes to penetrate the roof or side wall through only one hole. The concentric vent kits are now certified with mechanically fastened rain caps.

When installed with the included stainless steel screw/nut the rain cap can be easily removed for cleaning or replacement. Vent screens and round face plates for side wall terminations are also available, see reverse.

#### FGV Concentric Vent Kits

Longer barrel length options allow for greater flexibility during installation. Required for steeper pitched roofs, and is ideal for high snow load areas.

PVC (white)		
Size	Product Code	mm
2 x 16	196005	50 x 400
2 x 28	196105	50 x 700
2 x 40	196125	50 x 1000
3 x 20	196006	75 x 500
3 x 32	196106 ✓	75 x 800
3 x 44	196116	75 x 1100
4 x 36	196021	100 x 900

CPVC (grey)		
Size	Product Code	mm
new 2 x 16	197040	50 x 400
new 2 x 28	197033	50 x 700
-	-	-
3 x 20	197009	75 x 500
3 x 32	197107	75 x 800
3 x 44	197117	75 x 1100
4 x 36	197021	100 x 900

Vent Screen not included



**IPEX**

Products manufactured by IPEX Inc.  
System 636<sup>®</sup> is a trademark of IPEX Branding Inc.

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Toll Free Canada: (866) 473-9462

[www.ipexinc.com/system636](http://www.ipexinc.com/system636)

PIMESTIP140304C

Contractor: Optimum Mech Solutions Inc.

Job: Meridian Retirement Community Fire Restoration



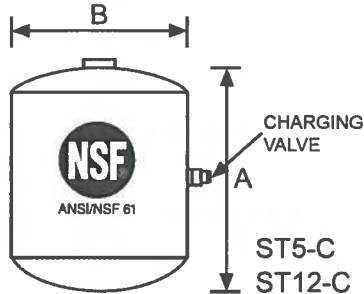
# DHW EXPANSION TANK

## THERM-X-TROL®

### Thermal Expansion Absorbers, ST-C Series (ASME)

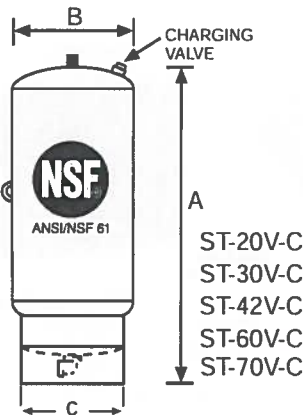
150 PSIG Working Pressure

#### In-Line Models



Model No.	Tank Vol.		Max. Recomm. Accept Vol.		A Height		B Diameter		Sys. Conn.	Ship Wt.	
	Lit.	Gal.	Lit.	Gal.	mm	ins.	mm	ins.	ins.	kg	lbs.
ST-5-C	8	4.0	3.44	.9	264	10 <sup>3</sup> / <sub>8</sub>	254	10	¾ NPT	9.5	21
ST-12-C	24	6.4	12.0	3.2	340	13 <sup>3</sup> / <sub>8</sub>	305	12	¾ NPT	12	26

#### Stand Models



Model No.	Tank Vol.		Max. Recomm. Accept. Vol.		A Height		B Diameter		C Dim.		Sys. Conn.	Ship Wt.	
	Lit.	Gal.	Lit.	Gal.	mm	ins.	mm	ins.	mm	ins.	ins.	kg	lbs.
ST-20V-C	30	8.0	12.0	3.2	510	20 <sup>1</sup> / <sub>16</sub>	305	12	273	10 <sup>3</sup> / <sub>4</sub>	¾ NPTF	19	41
ST-30V-C	53	14.0	33.9	8.96	491	19 <sup>5</sup> / <sub>16</sub>	419	16 <sup>1</sup> / <sub>4</sub>	324	12 <sup>3</sup> / <sub>4</sub>	¾ NPTF	38.1	84
ST-42V-C	66	17.5	42.9	11.4	640	25 <sup>3</sup> / <sub>16</sub>	419	16 <sup>1</sup> / <sub>4</sub>	324	12 <sup>3</sup> / <sub>4</sub>	¾ NPTF	41	90
ST-60V-C	95	25.0	42.9	11.4	864	34	419	16 <sup>1</sup> / <sub>4</sub>	324	12 <sup>3</sup> / <sub>4</sub>	¾ NPTF	44	96
ST-70V-C	129	34.0	42.9	11.4	1076	42 <sup>3</sup> / <sub>8</sub>	419	16 <sup>1</sup> / <sub>4</sub>	324	12 <sup>3</sup> / <sub>4</sub>	¾ NPTF	56	123
ST-80V-C	200	53.0	130	34	1029	40 <sup>1</sup> / <sub>2</sub>	610	24	406	16	1 <sup>1</sup> / <sub>4</sub> NPTF	104	229
ST-120V-C	250	66	130	34	1213	47 <sup>3</sup> / <sub>4</sub>	610	24	406	16	1 <sup>1</sup> / <sub>4</sub> NPTF	117	258
ST-180V-C	292	77.0	130	34	1337	52 <sup>5</sup> / <sub>8</sub>	610	24	406	16	1 <sup>1</sup> / <sub>4</sub> NPTF	131	288
ST-210V-C	341	90.0	130	34	1524	60	610	24	406	16	1 <sup>1</sup> / <sub>4</sub> NPTF	144	318

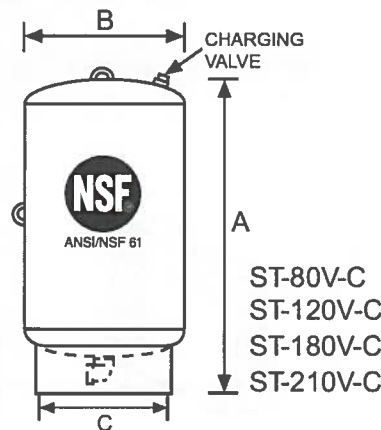
#### Maximum Operating Conditions

Operating Temperature	200°F (93°C)
Working Pressure	150 PSIG (10.5 bar)

#### Specifications

Description	Standard Construction
Standard Factory Pre-charge	55 PSIG (3.9 bar)
System Connection	Stainless Steel
Diaphragm	Heavy Duty Butyl/EPDM ANSI/NSF61
Liner Material	Polypropylene
Shell	Steel

Constructed per ASME Code Section VIII, Division 1.  
All dimensions and weights are approximate.



Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Location \_\_\_\_\_

Contractor P.O. No. \_\_\_\_\_

Sales Representative \_\_\_\_\_

Model No. Ordered \_\_\_\_\_

Engineer \_\_\_\_\_

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# WATER SAFETY VALVE



## Submittal Data Information

101-178

### LeakBreaker™

### Water Heater Shut Off

Effective: August 1, 2016

Supersedes: NEW

Job: \_\_\_\_\_ Engineer: \_\_\_\_\_ Contractor: \_\_\_\_\_ Rep: \_\_\_\_\_

ITEM NO.	MODEL NO.	

**Features**

- Re-Settable
- Testable
- Quick Connect Wiring
- Operates on Batteries or Power Supply
- 2 Color LED Status Light
- Audible Alarm
- Alarm Mute
- 2 N/O; N/C Dry Contacts
- Full Port Valve
- Easy Removable Actuator

**Product Specifications**

- Max. Operating Pressure ..... 140 PSI
- Max. Shut Off Pressure..... 125 PSI
- Max. Static Pressure ..... 300 PSI
- Maximum Ambient Temp ..... 135°F
- Water Temp..... 33°F to 220°F
- Service ..... Potable Water

**Materials**

**Control Panel** ..... High Performance Engineered Polymer

**Actuator**

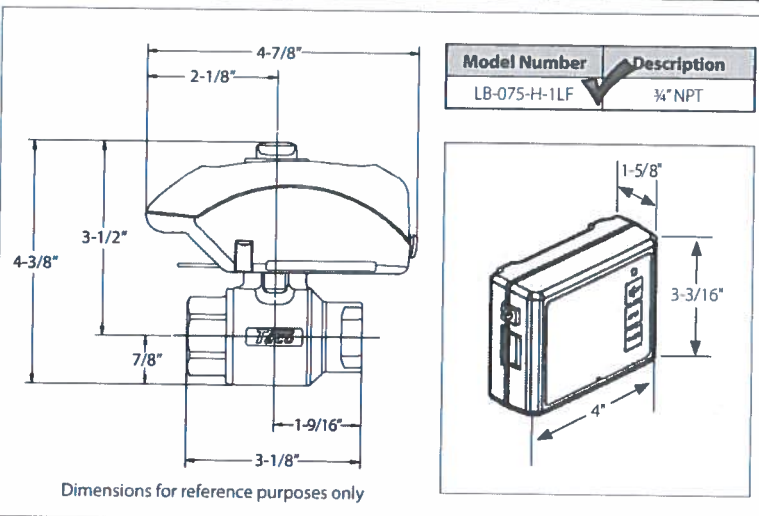
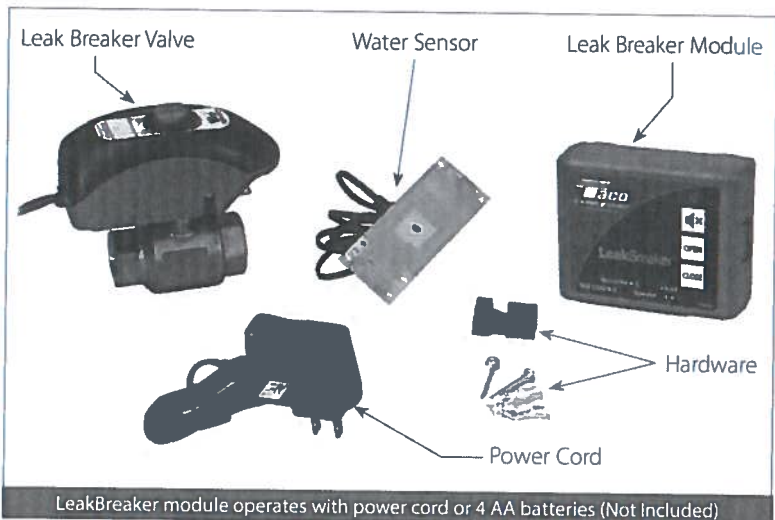
- Body ..... High Performance Engineered Polymer
- Gears ..... High Performance Internally Lubricated Engineered Polymer

**Valve**

- Body ..... Forged Brass
- Stem ..... Brass
- Press Ring ..... Brass
- Ball ..... Brass (Chrome Plated)
- Seats ..... Modified Teflon®
- O-Rings ..... Viton®

**Application**

The Taco LeakBreaker is installed on the incoming cold water supply to the water heater, shutting off the water to a leaking water heater. The plumb and plug design is specifically engineered for use on a new or retrofit installation. Components are pre-wired to simplify the installation process, just plug in the sensor, valve, power supply and/or batteries. LeakBreaker can be tested anytime and then be reset to guard against a future leak.



**Approvals**



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**Taco Comfort Solutions™** A Taco Family Company

Taco, Inc., 1160 Cranston Street, Cranston, RI 02920 | Tel: (401) 942-8000 | FAX: (401) 942-2360

Taco (Canada), Ltd., 8450 Lawson Road, Suite #3, Milton, Ontario L9T 0J8 | Tel: (905) 564-9422 | FAX: (905) 564-9436

Visit our web site: [www.TacoComfort.com](http://www.TacoComfort.com) | Printed in USA | ©2016 Taco, Inc.

Contractor: Optimum Mech Solutions Inc.

Job: Meridian Retirement Community Fire Restoration

# HWT MIXING VALVE

**POWERS™**

ES-P-LFLM490\_LFLM490-10

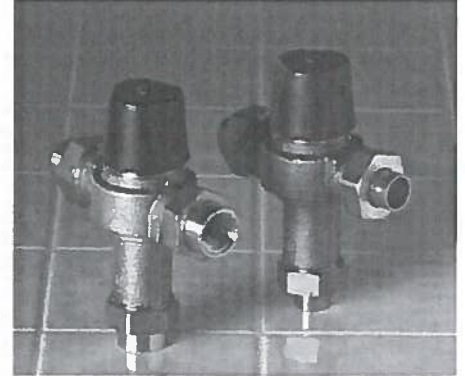
**HYDROGUARD® Series LFLM490 Thermostatic Tempering Valves for Hot Water Distribution**

## Product Specification

**LEAD FREE\***

### Features ■

- Lead Free\* Brass body construction for durability and to comply with Lead Free\* installation requirements
- Advanced thermal actuator improves performance at low flow
- Adjustable temperature selection with lock down
- Union connections for easy maintenance
- Integral checks and screen prevents cross-flow and contamination
- Available in 1/2", 3/4", 1" (15, 20, 25mm) with NPT, Sweat, PEX, Quick-Connect, and CPVC union connections



### Specifications ■

#### Temperature Adjustment:

**Series LFLM490** 90° - 160° F (32° C to 71° C)  
**Series LFLM490-10** 60° - 120° F (16° C to 49° C)

**Approach Temperature:** 5°F (3°C) above set point  
**Max. Operating Pressure:** 125 psi (861 kPa)  
**Max. Hot Water Temperature:** 200°F (93°C)  
**Max. Pressure Differential between Hot & Cold Water Supplies:** 25%  
**Minimum Flow:** 0.5 gpm (1.90 lpm) when tested in accordance with ASSE 1017-2003

**Check Valves:** Integral  
**Construction:** Lead Free\* Brass body  
**Approval:** CSA B125 Certified  
**Listing:** ASSE 1017, & IAPMO UPC

UNION CONNECTIONS														
Female NPT			Sweat			CPVC			PEX			Quick-Connect		
1/2" (15)	3/4" (20)	1" (25)	1/2" (15)	3/4" (20)	1" (25)	1/2" (15)	3/4" (20)	1" (25)	1/2" (15)	3/4" (20)	1" (25)	1/2" (15)	3/4" (20)	1" (25)
LFLM490-1	LFLM491-1	LFLM492-1	LFLM490-2	LFLM491-2	LFLM492-2	LFLM490-3	LFLM491-3	LFLM492-3	LFLM490-4	LFLM491-4	LFLM492-4	LFLM490-5	LFLM491-5	LFLM492-5
LFLM490-101	LFLM491-101	LFLM492-101	LFLM490-102	LFLM491-102	LFLM492-102	LFLM490-103	LFLM491-103	LFLM492-103	LFLM490-104	LFLM491-104	LFLM492-104	LFLM490-105	LFLM491-105	LFLM492-105

### Capacity ■

PRESSURE DROP ACROSS THE VALVE							
(C <sub>v</sub> ) 1 psi (7 kPa)	5psi (34 kPa)	10psi (69 kPa)	15psi (103 kPa)	20psi (138 kPa)	30psi (207 kPa)	45psi (310 kPa)	60psi (414 kPa)
3.42	7.6 gpm (29 lpm)	11.0 gpm (42 lpm)	13.0 gpm (49 lpm)	15.0 gpm (57 lpm)	19.0 gpm (72 lpm)	23.0 gpm (87 lpm)	27.0 gpm (102 lpm)

\* The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight.

**POWERS™**

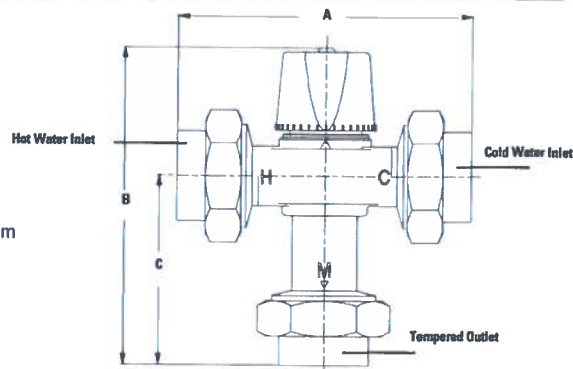
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# HWT MIXING VALVE

## Dimensions ■

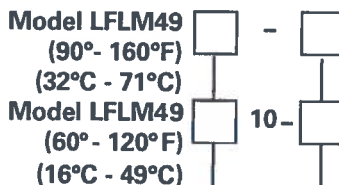
Model	LFLM490-1 LFLM490-101	LFLM491-1 LFLM491-101	LFLM492-1 LFLM492-101	LFLM490-2 LFLM490-102	LFLM491-2 LFLM491-102	LFLM492-2 LFLM492-102	LFLM490-3 LFLM490-103	LFLM491-3 LFLM491-103	LFLM492-3 LFLM492-103	LFLM490-4 LFLM490-104	LFLM491-4 LFLM491-104	LFLM492-4 LFLM492-104
Connections	1/2" NPT Female	3/4" NPT Female	1" NPT Female	1/2" Sweat	3/4" Sweat	1" Sweat	1/2" CPVC	3/4" CPVC	1" CPVC	1/2" PEX	3/4" PEX	1" PEX
"A"	4-7/8 (124mm)	4-7/8 (124mm)	5-5/16 (135mm)	4-13/16 (123mm)	5-5/16 (135mm)	5-13/16 (148mm)	4-3/4 (121mm)	5-1/4 (133mm)	5-11/16 (144mm)	5-1/4 (133mm)	5-1/2 (140mm)	5-7/8 (149mm)
"B"	5-7/16 (137mm)	5-7/16 (137mm)	5-5/8 (143mm)	5-3/8 (137mm)	5-5/8 (143mm)	5-7/8 (149mm)	5-5/16 (136mm)	5-9/16 (142mm)	5-13/16 (147mm)	5-9/16 (142mm)	5-11/16 (145mm)	5-7/8 (150mm)
"C"	3-3/16 (80mm)	3-3/16 (80mm)	3-3/8 (86mm)	3-1/8 (80mm)	3-3/8 (86mm)	3-5/8 (92mm)	3-1/16 (79mm)	3-5/16 (85mm)	3-9/16 (90mm)	3-5/16 (85mm)	3-7/16 (88mm)	3-5/8 (93mm)

Model	LFLM490-5 LFLM490-105	LFLM491-5 LFLM491-105	LFLM492-5 LFLM492-105
Connections	1/2" Quick-Connect	3/4" Quick-Connect	1" Quick-Connect
"A"	6-5/8 (168mm)	6-15/16 (177mm)	7-1/8 (181mm)
"B"	6-1/4 (159mm)	6-7/16 (163mm)	6-1/2 (165mm)
"C"	4 (102mm)	4-3/16 (106mm)	4-1/4 (108mm)



Note:  
Dimensions are shown ± 1/4"  
Dimensions in brackets are in mm

## Ordering Information ■



### Valve

1/2" .....	0
3/4" .....	1
1" .....	2

### Inlets

Union NPT Female .....	1
Union Sweat .....	2
Union CPVC .....	3
Union PEX .....	4
Quick-Connect .....	5

## Typical Specification ■

Thermostatic tempering valve shall be constructed using Lead Free\* brass material which shall comply with state codes and standards, where applicable, requiring reduced lead content. The valve shall feature advanced paraffin-based actuation technology and union connections for ease of maintenance. All internal components shall be corrosion-resistant. Valve shall feature integral checks to prevent cross-flow and inlet screens to filter out debris. The valve shall be CSA B125 certified and ASSE 1017 and IAPMO UPC listed. Capacity of the valve shall be 23.0 gpm (87.0 lpm) at 45psi (310 kPa) differential. Valve shall perform to a minimum flow of 0.5 gpm (2 lpm) to ASSE 1017-2003. Control temperature shall be adjustable between 90 - 160°F (32 - 71°C) for LFLM490 and 60 - 120°F (16 - 49°C) for LFLM490-10 Series. The valve shall feature a vandal-resistant lockable handle to prevent tampering. The valve shall be a Powers HydroGuard Model LFLM490 (1/2", 15mm), LFLM491 (3/4", 20mm), LFLM492 (1", 25mm), LFLM490-10 (1/2", 15mm), LFLM491-10 (3/4", 20mm) or LFLM492-10 (1", 25mm). Any alternate must have a written approval prior to bidding.

ENGINEERING APPROVAL	
Project:	_____
Contractor:	_____
Architect/Engineer:	_____

# POWERS™

A Watts Water Technologies Company



ISO 9001-2000  
CERTIFIED

USA: Phone: 1.800.669.5430 • Fax 1.847.229.0526 • www.powerscontrols.com

Canada: Phone: 1.888.208.8927 • Fax 1.888.479.2887 • www.powerscontrols.com

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## WHEELCHAIR USERS LAVATORY VITREOUS CHINA



### WHEELCHAIR USERS LAVATORY

- Vitreous china
- Wall mount sink
- Front overflow
- For concealed arms support (by others)
- Faucet ledge (faucet not included)

#### Faucet Holes on 102mm (4") centers

- 9141.011** Faucet holes on 102mm (4") centers (Illustrated)
- 9141.911** (Modification SKU) Faucet holes on 102mm (4") centers
  - Less overflow

#### Faucet Holes on 267mm (10-1/2") centers

- 9140.013** Faucet holes on 267mm (10-1/2") centers
- 9140.021** (Modification SKU) Faucet holes on 267mm (10-1/2") centers
  - Extra right-hand hole

#### Faucet Holes center hole only

- 9140.047** Center hole only

#### Nominal Dimensions:

508 x 686mm  
(20" x 27")

#### Bowl Sizes:

14" (356mm) wide  
14-3/4" (375mm) front to back  
4-3/4" (121mm) deep

#### Compliance Certifications -

#### Meets or Exceeds the Following Specifications:

- ASME A112.19.2 for Vitreous China Fixtures



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

#### To Be Specified:

- Color:  White
- Faucet\*
- Faucet Finish:
- Supplies with Stop:
- 1-1/4" Trap:
- Nipple:
- Concealed Arms Support (by others):
- Offset Grid Drain Assembly:

\* See faucet section for additional models available

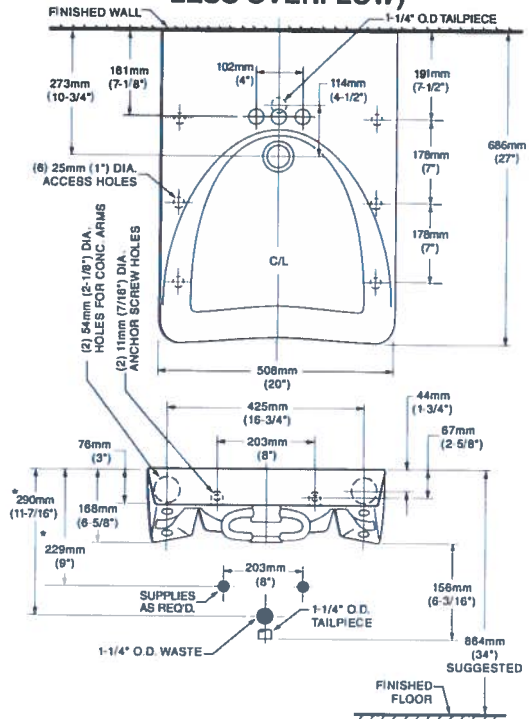


MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES - CHECK LOCAL CODES.  
Top of front rim mounted 864mm (34") from finished floor.

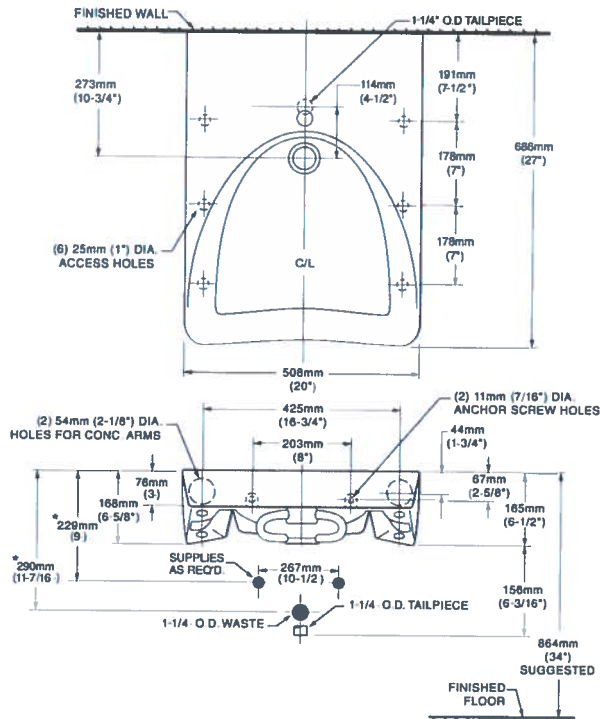
Page 16 of 35



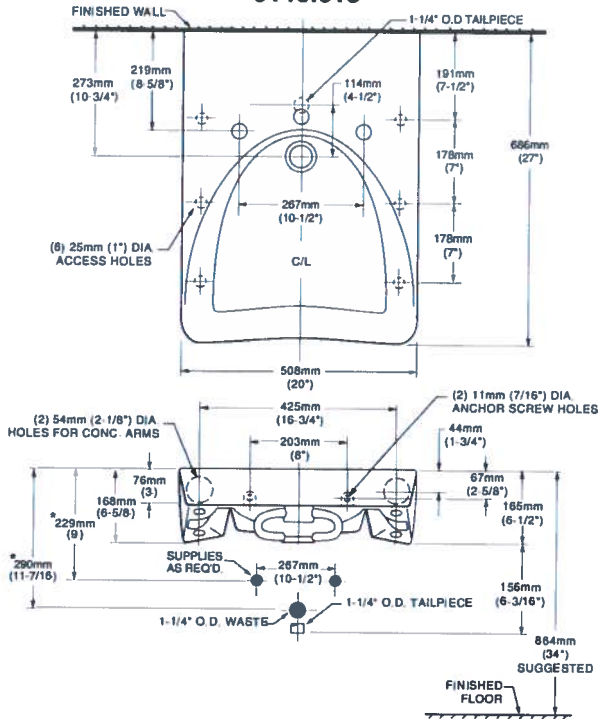
9141.011 AND 9141.911 (MODIFICATION LESS OVERFLOW)



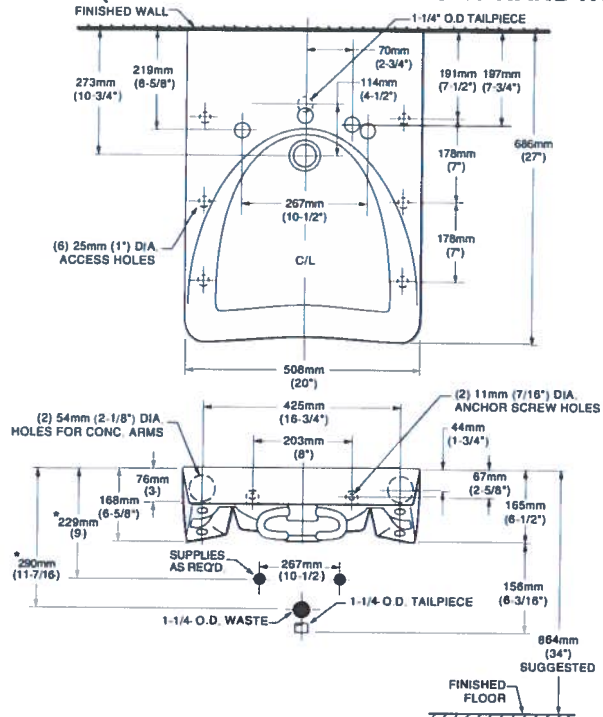
9140.047



9140.013



9140.021 (MODIFICATION EXTRA RIGHT HAND HOLE)

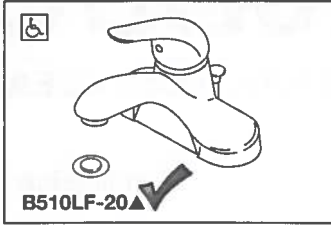


NOTES:  
\* DIMENSIONS SHOWN FOR LOCATION OF SUPPLIES AND "P" TRAP ARE SUGGESTED.  
CONCEALED ARM SUPPORT AS REQUIRED TO BE FURNISHED BY OTHERS.  
FITTINGS NOT INCLUDED AND MUST BE ORDERED SEPARATELY.  
PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORTS.

MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES - CHECK LOCAL CODES.  
Top of front rim mounted 884mm (34") from finished floor.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

Page 17 of 35



**CHROME FINISH**



# LAVATORY FAUCETS

- Single Handle Deck Mount
- 3 Hole Sink Applications
- 4" Centerset

Submitted Model No.: \_\_\_\_\_

Specific Features: \_\_\_\_\_

## STANDARD SPECIFICATIONS

- Solid brass fabricated body
- Single handle lavatory faucets for exposed mounting on 3 hole sinks with 4" centers.
- 4" (102 mm) centerset.
- 4 1/4" (108 mm) long spout.
- All operating parts shall be replaceable from the top.
- Lever handle. Control mechanism is the rotating stainless steel ball type with replaceable non-metallic seats.
- Control handle shall return to neutral position when valve is turned off.
- Models have 7/16" (11 mm) max. OD polymer braided hoses - 20" (508 mm) long with 9/16-24 UNEF adapters.
- Models include metal pop-up type fitting with plated metal flange and stopper cap.
- Maximum flow rate 1.6 gpm @ 90 psi.

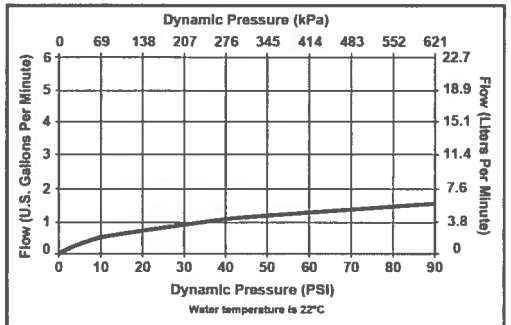
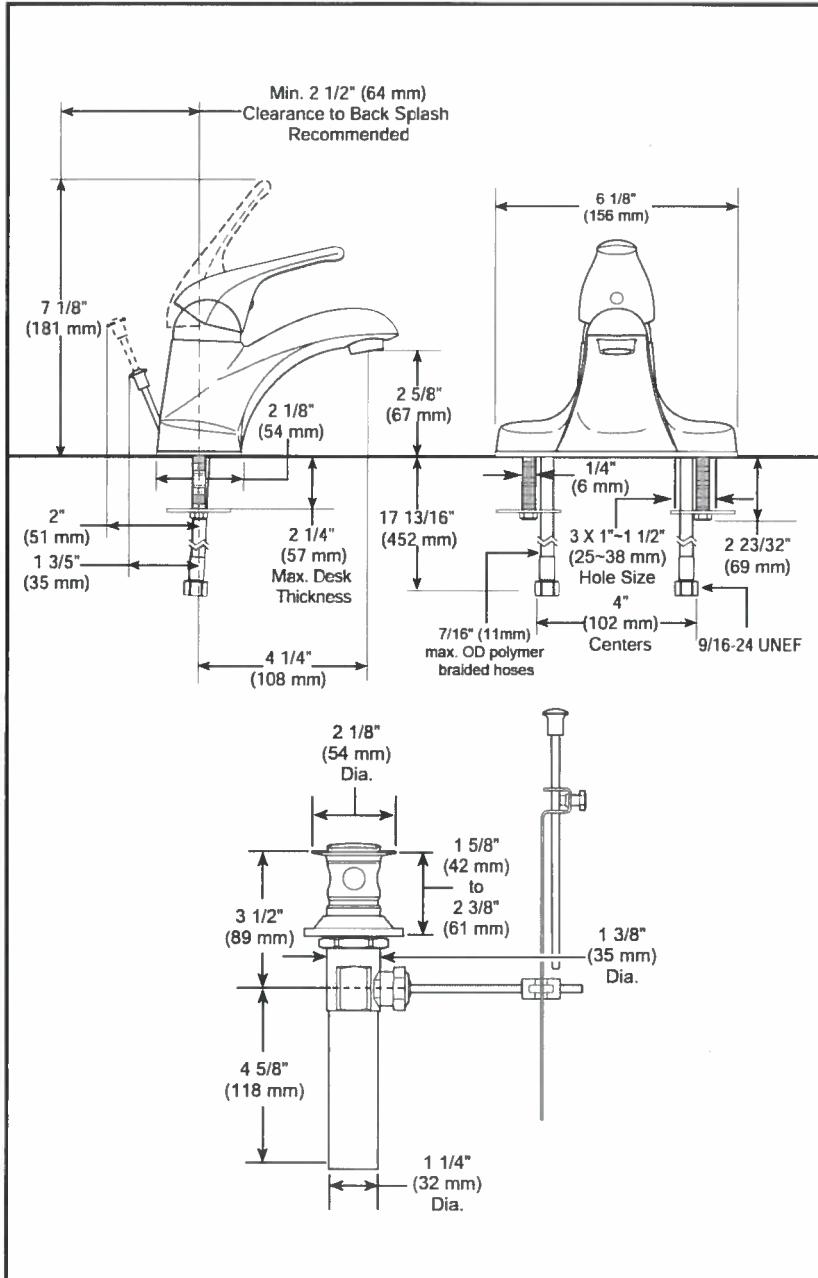
## WARRANTY

- Lifetime Faucet and Finish Limited Warranty to the original purchaser to be free from defects in material and workmanship.
- 5-year Limited Warranty for usage in all industrial and commercial and business applications.



## COMPLIES WITH:

- Complies to ASME A112.18.1/CSA B125.1
- Indicates compliance to ICC/ANSI A117.1
- Verified compliant with 0.25% weighted average Pb content regulations
- EPA WaterSense®



▲ Designate proper finish suffix

Delta reserves the right (1) to make changes in specifications and materials, and (2) to change or discontinue models, both without notice or obligation. Dimensions are for reference only. See current full-line price book or [www.specselect.com](http://www.specselect.com) for finish options and product availability.

Contractor: Optimum Mech Solutions Inc.

Job: Meridian Retirement Community Fire Restoration



55 E. 111th Street, Indianapolis, Indiana 46280  
395 Matheson Blvd. E., Mississauga, ON L4Z 2H2  
© 2014 Masco Corporation of Indiana

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L1

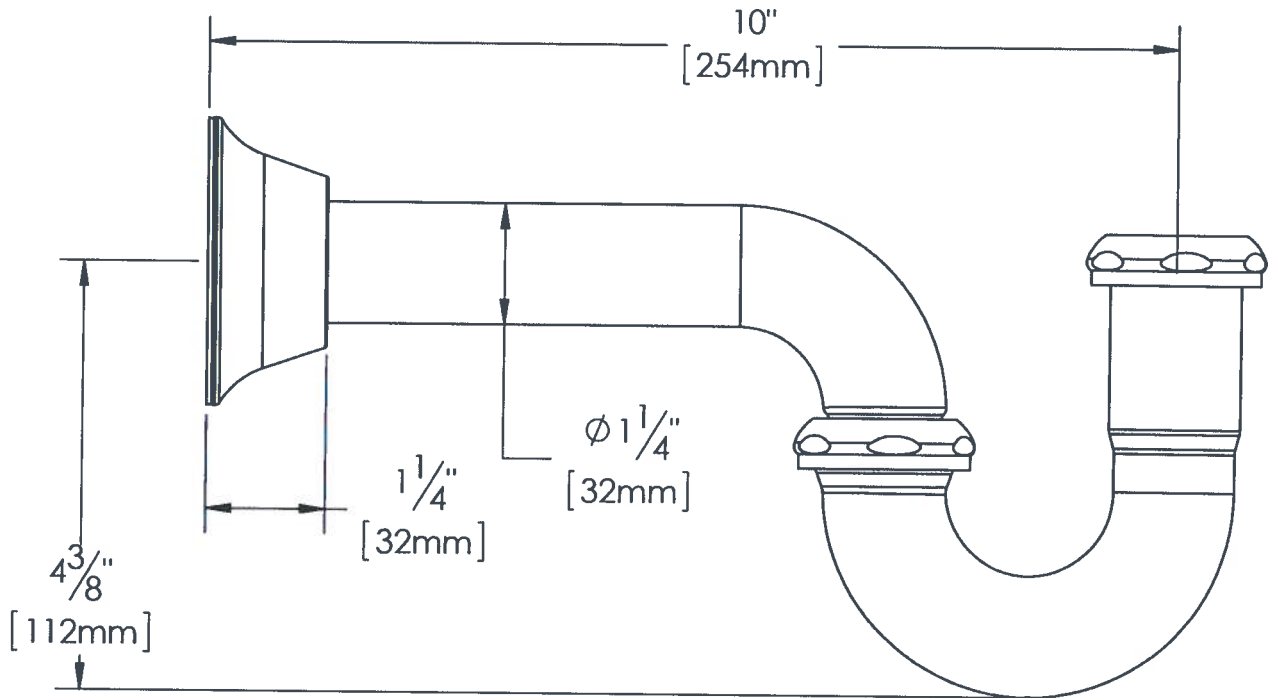
# 110BDCP

1-1/4" 20GA P-TRAP, LESS CLEANOUT

## Description:

P-TRAP SHALL BE 1-1/4" GROUND JOINT, 20 GAUGE TUBULAR BRASS, 7" BRASS WALLBEND, CHROME FINISH, BRASS NUTS, DEEP BELL FLANGE, LESS CLEANOUT, CERTIFIED BY CSA

Certification



Oakville Stamping and Bending Ltd.

2200 Speers Road, Oakville, ON, Canada, L6L 2X8.

T. 905.827.0320 or toll free 1.877.314.6040 F. 905.827.6375 or toll free 1.877.827.6040.

Page 19 of 35

All rights reserved OS&B™ reserves the right to change product specifications and material or discontinue models without notice.

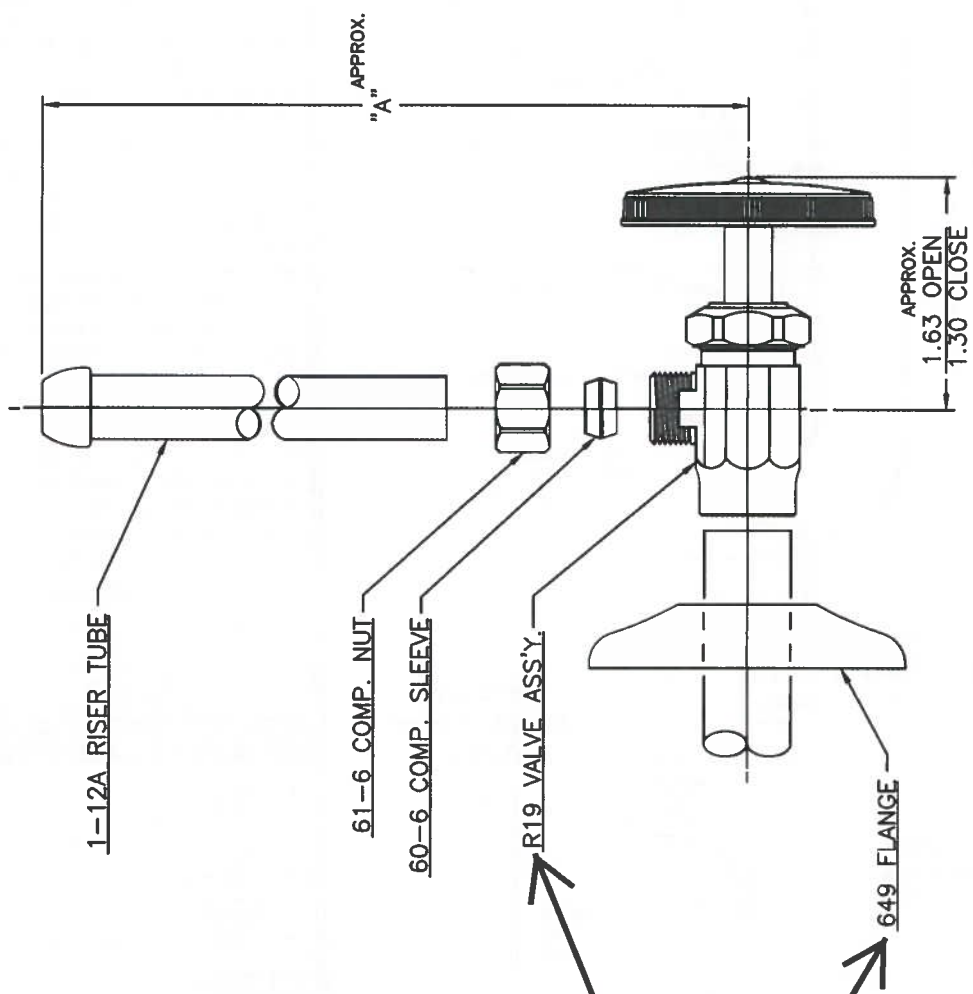
Contractor: Optimum Mech Solutions Inc.

www.osb.ca

Job: Meridian Retirement Community Fire Restoration

LET.	DATE	PER	BY	CHANGE
D	4/8/03	WFT	MAP	REVISED & UPDATED

L1



ITEM I.D.	ITEM DESC.	DIMENSION "A"
R1912A C	R1912A	12.00
R1912A R	R1912A	12.00
R1920A C	R1920A	20.00
R1920A R	R1920A	20.00

DESCRIPTION		DRAWING NO.	
1/2 NOM. SWT x 3/8 O.D. COMP. VALVE W/RISER (SUBMITTAL)		VPA0528D	
DRAWN	DATE	MATERIAL	ITEM DESCRIPTION
SCHUTTE	4/22/97		R1912A
CHK'D.	DATE	VOLUME	SEE CHART
Klimke	04/08/2003		R1912A C
APP'D.	DATE		SEE CHART
NOTE: UNLESS OTHERWISE SPECIFIED TWO PLACE DECIMALS THREE PLACE DECIMALS ANGULARITY		UNITS	SCALE (UNLESS NOTED)
		B	FULL
		INCH	D

**BrassCraft.**  
NOVI, MICHIGAN  
A Subsidiary of Masco Corporation

ALL GOVT PER USES STD Y14.1M CLASSIFICATION OF QUALITY LEVELS

IPC (KEY PRODUCT CHARACTERISTICS)  
MPC (SECONDARY PRODUCT CHARACTERISTICS)  
PRODUCT MARKINGS

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# L1 INSULATION KIT

## "PRO-EXTREME"™

A.D.A. COMPLIANT UNDER-LAV PROTECTORS



ADA Compliant for Americans with Disabilities Act



# PLUMBEREX

SPECIALTY PRODUCTS INC.

Engineering Smart Solutions

SUBMITTAL SHEET

PROJECT	
DWG #	
ITEM #	

SUBMITTAL SPEC SHEET

Insulate per ADA 4.19.4, (ADA/ABA 606.5 rev.) and IBC/ANSI A117.1, all drainage piping including all hot and cold water supplies under lavatories. Insulate with brand: Pro-Extreme™ Manufacturer: Plumberex, Inc.

Molded PVC Protectors containing antimicrobial/anti-fungal and UV inhibitors with Self-extinguishing flammability characteristics. Fastening system to consist of tamper-resistant, smooth, non-abrasive snap-locks. **P-Trap Protector:** One-Piece protector designed with full rotation option. Protector must have weep holes at the lowest point for proper leak drainage and for ventilation. **Valve and Supply Protectors:** One-Piece protectors designed with removable cap for access to water shut-off. Removable Cap can be reassembled and secured; no loose access parts are allowed to ensure long-term tamper-resistance. Protector must have weep holes at the lowest point for proper leak drainage and for ventilation. **Wheel Chair Offset Strainer Protector:** One-Piece protector designed with full rotation option. Protector also uses Velcro fasteners for easy installation.

### CODE COMPLIANCE

- ADA 4.19.4/ABA 606.5 (rev.)
- IBC/ANSI A117.1
- Uniform Building Code (UBC)
- Canadian Barrier Free Act
- California Title 24, Article P1504B

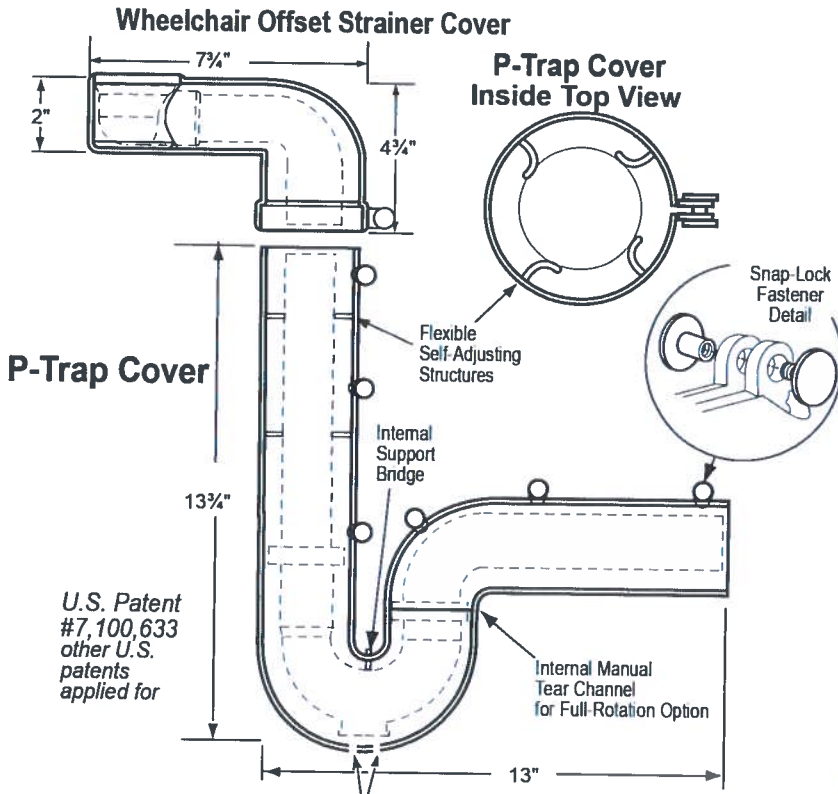
### PART NUMBER BY PRODUCT

- MODEL # X4111  
1 P-Trap Cover
- MODEL # X4112  
1 Valve & Supply Cover
- MODEL # X4114  
1 Wheelchair Offset Strainer
- MODEL # X4222  
1 P-Trap Cover,  
1 Valve & Supply Cover Cover
- MODEL # X4333  
1 P-Trap Cover,  
2 Valve & Supply Covers
- MODEL # X4444  
1 P-Trap Cover  
1 Wheelchair Offset Strainer Cover  
2 Valve & Supply Covers

PRO-EXTREME color options:

White	Gray

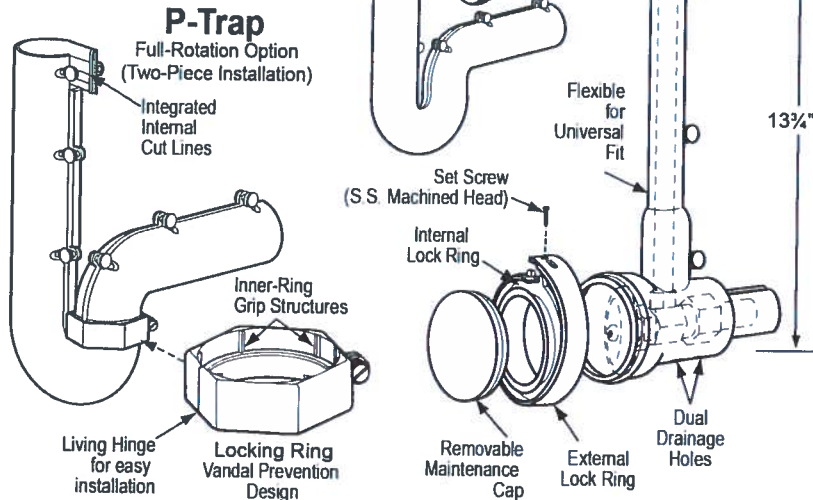
Page 21 of 35



U.S. Patent #7,100,633 other U.S. patents applied for

Dual Drainage Holes  
**P-Trap Cover, Valve and Supply Cover**  
(One-Piece Installation)

**Valve and Supply Cover Detail**



P.O. Box 1684 Palm Springs, CA 92263 (760) 343-7363 1-800-475-8629 FAX (760)343-7366  
Plumberex Specialty Products, Inc. Reserves the right to make changes or improvements at any time without notice.

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Contractor: Optimum Mech Solutions Inc.

Job: Meridian Retirement Community Fire Restoration

See Hole Drillings Below for Options

Fixture #

**SPECIFICATIONS:**

Double bowl drop-in sink with ledge, off the bowl clamp system, self rimming, SynkSeal™ foam in place gasket installed, exposed surfaces finished to a satin finish, sound deadening pads. Includes template and installation hardware.

**OVERALL DIMENSIONS:**

Left to Right: 31 1/8" (79cm)  
Front to Back: 20 5/8" (52cm)

**BOWL DIMENSIONS:**

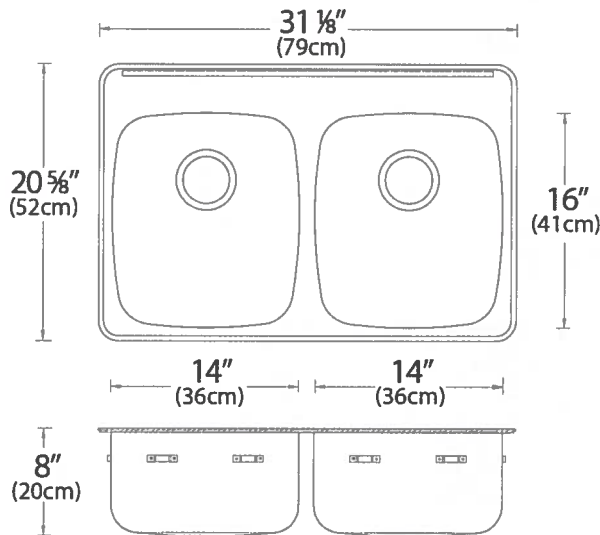
Left to Right: 14" (36cm)  
Front to Back: 16" (41cm)  
Bowl depth: 8" (20cm)

**MATERIAL:**

18 gauge, 18-10 stainless steel  
304 or 316 Series

**WASTE:**

3 1/2" basket strainer assembly with tailpiece included  
Location: Center Rear



**PROJECT INFORMATION:**

Item Location: \_\_\_\_\_  
Project Number: \_\_\_\_\_  
Project Name: \_\_\_\_\_  
Quote Number: \_\_\_\_\_  
Faucet Model: \_\_\_\_\_  
Notes: \_\_\_\_\_

HOLE DRILLINGS			1 0	2 4
Hole Configuration	# to enter above	Check hole selection		
1 hole	1 0	<input type="checkbox"/>		
3 hole, 8" (20cm) centre	3 8	<input type="checkbox"/>		
† 2 hole, 4" (10cm) centre	2 4	<input type="checkbox"/>		
† 3 hole, 4" (10cm) centre	3 4	<input type="checkbox"/>		
4 hole, 8" (20cm) centre	4 R	<input type="checkbox"/>		
† Special Holes (drawing must be included)	S H	<input type="checkbox"/>		

† Indicates custom product and is Non-returnable  
All holes are 1 1/2" diameter.

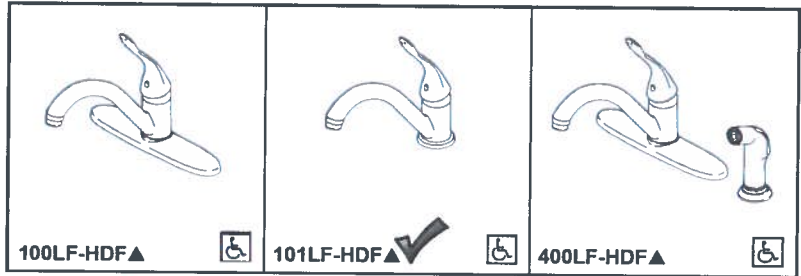
Engineer's Approval

Novanni has a policy of continuous improvement. All product specifications may change without notice.

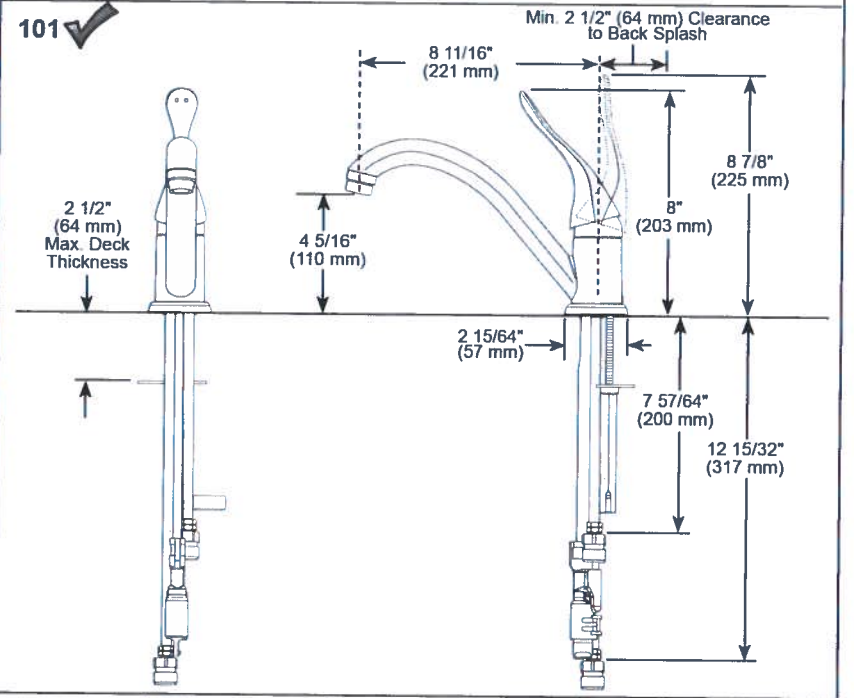
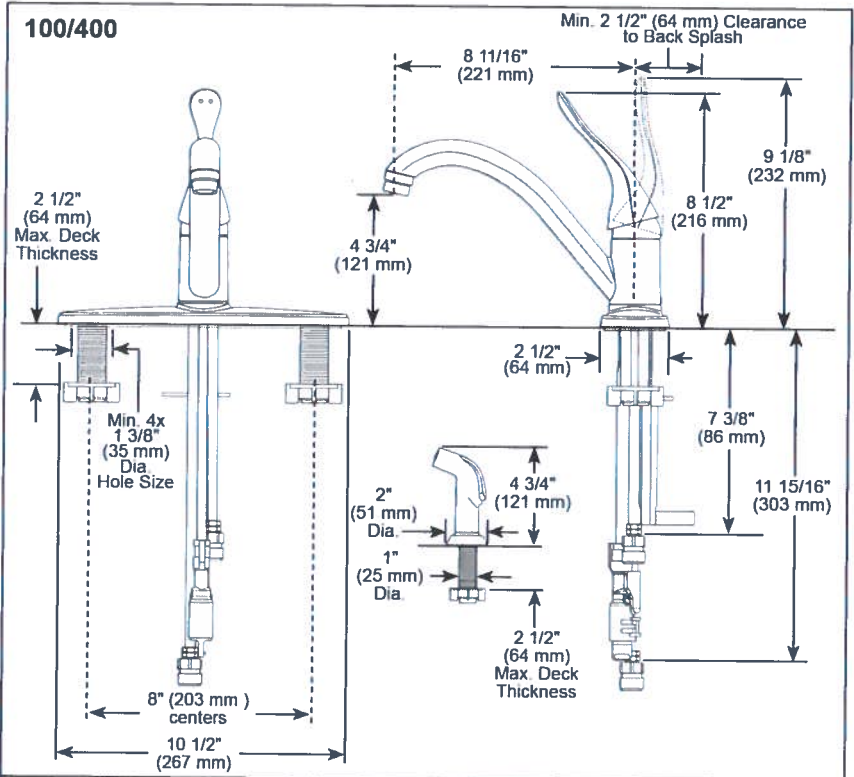
Page 22 of 35

**CHROME FINISH**

**S1**



Submitted Model No.: \_\_\_\_\_  
 Specific Features: \_\_\_\_\_



**KITCHEN FAUCETS**

- Single Handle
- Single, 3 and 4 Hole Sink Applications

- STANDARD SPECIFICATIONS:**
- Single handle kitchen deck faucets for exposed mounting on single, three or four hole sinks.
  - All metal fabricated body.
  - 8 11/16" (221 mm) long spout swings 180°.
  - 1.5 gpm (5.7L/min.) vandal resistant aerator.
  - Vandal resistant lever handle.
  - Lever handle shall return to neutral position when faucet is turned off.
  - Red and blue on handle to indicate hot/cold temperature.
  - Control mechanism shall be the diamond coated ceramic cartridge.
  - Adjustable handle limit stop.
  - 3/8" O.D. straight, staggered copper supply tubes with 3/8" fittings.
  - Model 400 series with 45" (1143 mm) hose and spray attachment has anti-siphon device as integral part of faucet.
  - Mounts on standard 1 3/8 (35 mm) diameter holes on 8" (203 mm) centers.

▲ Designate proper finish suffix

**WARRANTY**

- Lifetime limited warranty on parts (other than electronic parts and batteries) and finishes; or, for commercial users, for 5 years from date of purchase.
- 5 year limited warranty on electronic parts (other than batteries); or, for commercial users, for 1 year from the date of purchase. No warranty is provided on batteries.

**COMPLIES WITH:**

- ASME A112.18.1 / CSA B125.1
- Indicates compliance to ICC/ANSI A117.1
- Verified compliant with .25% weighted average Pb content regulations.

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55 E. 111th Street, Indianapolis, Indiana 46280  
 350 South Edgeware Road, St. Thomas, ON N5P 4L1  
 © 2014 Masco Corporation of Indiana

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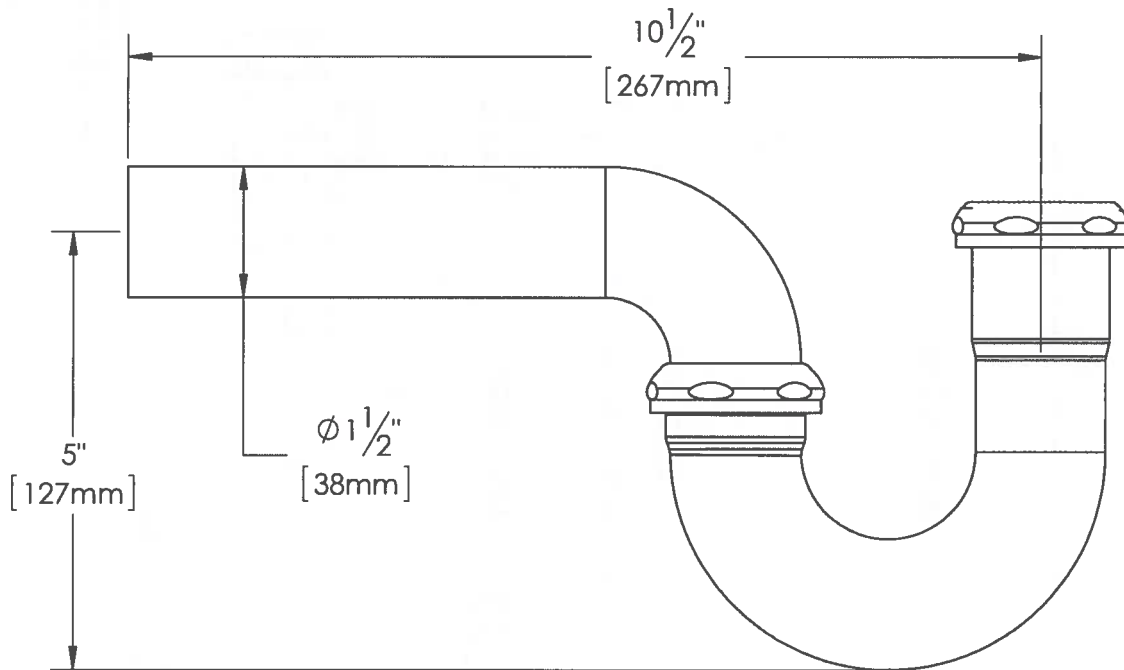
# S1 114BRBLE ✓

1-1/2" 20GA P-TRAP, LESS CLEANOUT

## Description:

P-TRAP SHALL BE 1-1/2" GROUND JOINT, 20 GAUGE TUBULAR BRASS, 20 GAUGE 7" WALLBEND, ROUGH BRASS FINISH, BRASS NUTS, LESS FLANGE, LESS CLEANOUT, CERTIFIED BY CSA

Certification



**Oakville Stamping and Bending Ltd.**

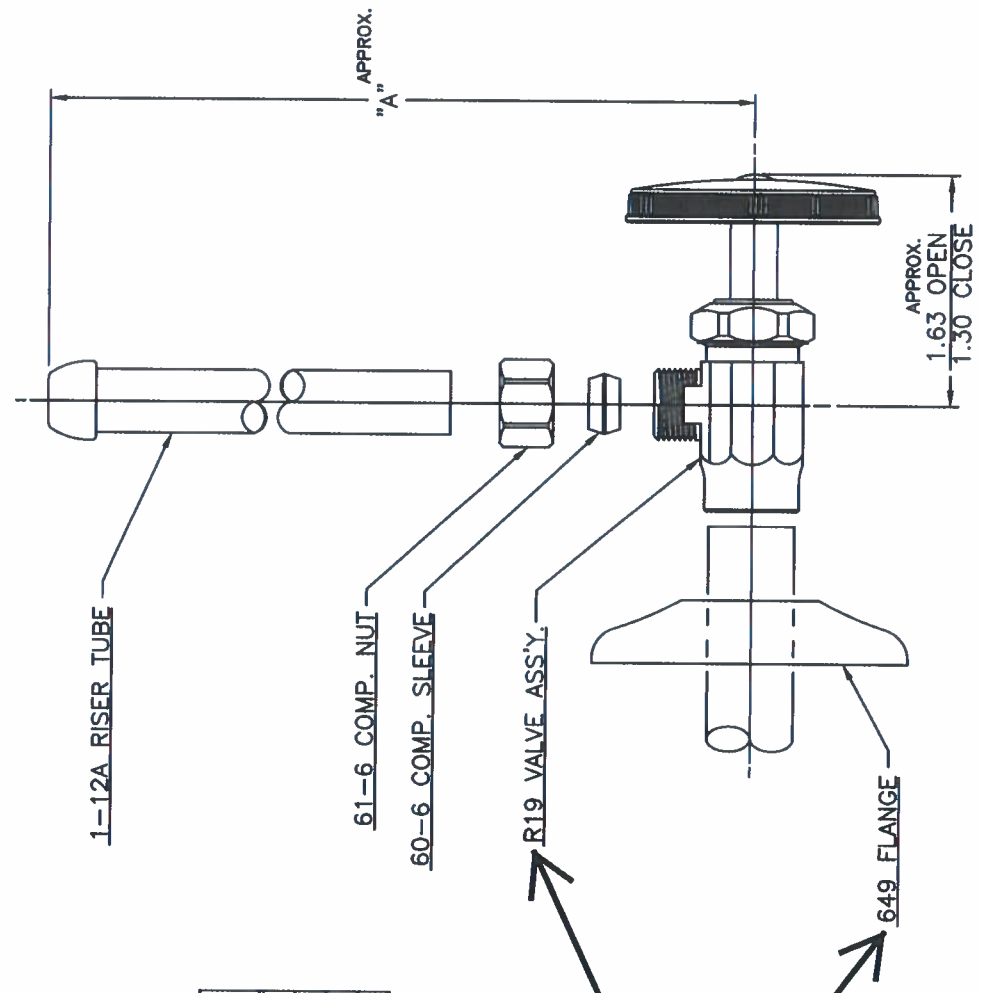
2200 Speers Road, Oakville, ON, Canada L6L 2X8.

T. 905.827.0320 or toll free 1.877.314.6040 F. 905.827.6375 or toll free 1.877.827.6040.

*Page 24 of 35*

LET	DATE	PER	BY	CHANGE
D	4/8/03	WFT	MAP	REVISED & UPDATED

S1



ITEM I.D.	ITEM DESC.	DIMENSION "A"
R1912A C	R1912A	12.00
R1912A R	R1912A	12.00
R1920A C	R1920A	20.00
R1920A R	R1920A	20.00

DESCRIPTION 1/2 NOM. SWT x 3/8 O.D. COMP. VALVE W/RISER (SUBMITTAL)		DRAWING NO. VPA0528D
DRAWN SCHUTTE	DATE 4/22/97	ITEM DESCRIPTION SEE CHART
CHK'D. Kilimkie	DATE 04/08/2003	ITEM ID R1912A C
APPR. Kilimkie	DATE 04/08/2003	SCALE SEE CHART
NOTE: UNLESS OTHERWISE SPECIFIED TWO PLACE DECIMALS +/- .010 +/- .005 +/- .1°		UNITS INCH
CLASSIFICATION OF QUALITY LEVELS		SIZE B
ALL GOVT PER ANSI STD. Y14.5M		ANGULARITY
CLASS		SIZE
SYMBOL		SIZE
IPC (KEY PRODUCT CHARACTERISTICS)		SIZE
SPC (STANDARD PRODUCT CHARACTERISTICS)		SIZE
PRODUCT MARKINGS		SIZE

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NOVI, MICHIGAN  
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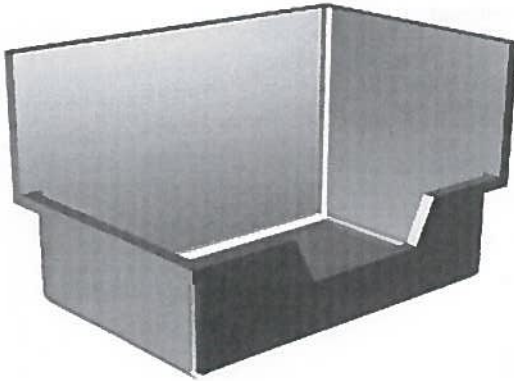
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COMMERCIAL

FSSOR223410/316-1✓



<b>Material:</b>	16 gauge, type 316 stainless steel
<b>Finish:</b>	Polished satin
<b>Compartment size:</b>	21 1/2" x 33 1/2" x 10" (55cm x 85cm x 25cm)
<b>Overall size:</b>	24" x 36" (61cm x 91cm)
<b>Waste size:</b>	3 1/2" (89mm) waste assembly with grid strainer
<b>Waste location:</b>	Center
<b>Backsplash:</b>	12" (31cm) high integral back and right splash
<b>Overall height:</b>	22" (56cm)
<b>Mounting Hardware:</b>	One piece wall hangers for installation into a right-side corner.
<b>Drop front feature:</b>	Ideal for easy drainage of power-driven floor maintenance equipment
<b># of bowls:</b>	1

Franke Kindred Canada Limited  
 1000 Kindred Road, Midland, Ontario Canada L4R 4K9  
 web <http://ca.franke-ws.com> email [ws.ca@franke.com](mailto:ws.ca@franke.com)  
**In Canada:** Telephone 1-866-687-7465 Fax 1-800-361-8408  
**In USA:** Telephone 1-866-266-9662 Fax 1-800-856-7729

JS1



### Sink Faucet Wallmount

Rough chrome plated cast brass wallmount service sink faucet  
colour indexed metal lever handles  
1/4 turn ceramic structures

Model No: 28C9LH ✓

#### COMPLIES WITH:

- CSA certified
- Complies to ASME A112.18.1/CSA B125.1 including integral back siphonage protection compliant with CSA B64.1.1 and ASSE 1001
- "LH" handles meet ADA compliant to ICC/ ANSI A117.1/ADA
- Not for potable water.
- (Contact Delta Representative for State and/or Local Approvals)



#### SPECIFICATION:

- CAST BRASS wallmount service sink faucet
- Two handle
- Integral stops
- Rough chrome plated finish
- Pail hook
- Inline vacuum breaker
- Hose-end spout
- Wall brace
- Color indexed metal lever handles - 102mm (4")
- 1/4 turn ceramic structures
- 203mm (8") centers

#### OPERATION:

- Not Available

*(Dimensional drawing on following page)*

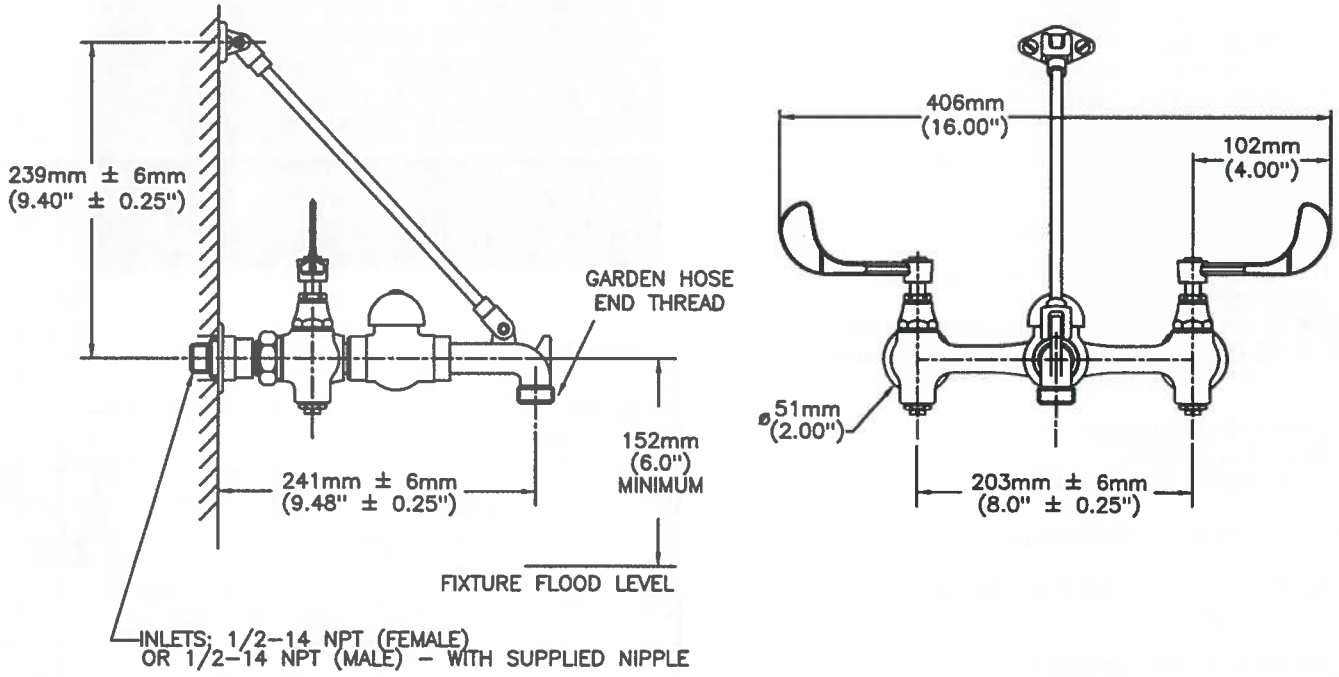
*Page 27 of 35*

Delta reserves the right (1) to make changes to specifications and materials, and (2) to change or discontinue models, both without notice or obligation. Dimensions are for reference. Measurement may vary plus or minus 6mm(0.25"). Mounting locations are suggested only. Check with local codes for requirements in your area. This spec was produced September 13, 2018.

Delta Faucet Company - 55 East 111th St. - Indianapolis, Indiana, USA 46280 - (317) 848-1812  
Delta Faucet Canada - 395 Matheson Blvd E - Mississauga, Ontario, Canada L4Z 2H2 - (905) 712-3030



Model No: 28C9LH ✓



28C9LH - Rev A

Delta reserves the right (1) to make changes to specifications and materials, and (2) to change or discontinue models, both without notice or obligation. Dimensions are for reference. Measurement may vary plus or minus 6mm(0.25"). Mounting locations are suggested only. Check with local codes for requirements in your area. This spec was produced September 13, 2018.

Delta Faucet Company - 55 East 111th St. - Indianapolis, Indiana, USA 46280 - (317) 848-1812  
 Delta Faucet Canada - 395 Matheson Blvd E - Mississauga, Ontario, Canada L4Z 2H2 - (905) 712-3030

Page 2 of 35

- 1.0.15644

**CONFIRM BACK-OUTLET WORKS AGAINST  
89mm STUD WALL**

*American  
Standard*

# WC1 YORKVILLE™ RIGHT HEIGHT® ELONGATED PRESSURE-ASSISTED TOILET 1.6 gpf / 6.0 Lpf

 BARRIER FREE

VITREOUS CHINA

## YORKVILLE™ RIGHT HEIGHT® ELONGATED PRESSURE-ASSISTED TOILET 1.6 gpf / 6.0 Lpf

- 2878.016**
  - Vitreous china
  - **Floor-mounted, back-outlet toilet**
  - Low-consumption (1.6 gpf/6.0 Lpf)
  - EverClean® surface inhibits the growth of stain- and odor-causing bacteria, mold, and mildew on the surface
  - Elongated 16-1/2" high bowl rim for accessible applications
  - Pressure-assisted siphon jet flush action
  - Fully-glazed 2-1/8" trapway
  - 10 x 12" water surface area
  - Close-coupled Flushometer tank\*
  - Metal chrome trip lever
  - Speed Connect® tank/bowl coupling system
  - Sanitary dam on bowl
  - 4 bolt caps
  - 100% factory flush tested
- 3703.016** Elongated 16-1/2" high bowl with 4 bolt caps
- 8703.001** Same as above, Universal Bowl
- 4142.016** Flushometer tank complete with coupling components

### Nominal Dimensions:

752 x 516 x 780mm  
(29-3/4" x 20-1/2" x 30-3/4")

Fixture only, seat and supply by others

Recommended working pressure range  
25 psi - 80 psi

### Alternate Configurations Available:

- 4142.600** Tank and tank cover only with tank cover locking device
- 4142.800** Tank and tank cover only with right hand trip lever
- 4142.900** Tank complete with right hand trip lever and tank cover locking device

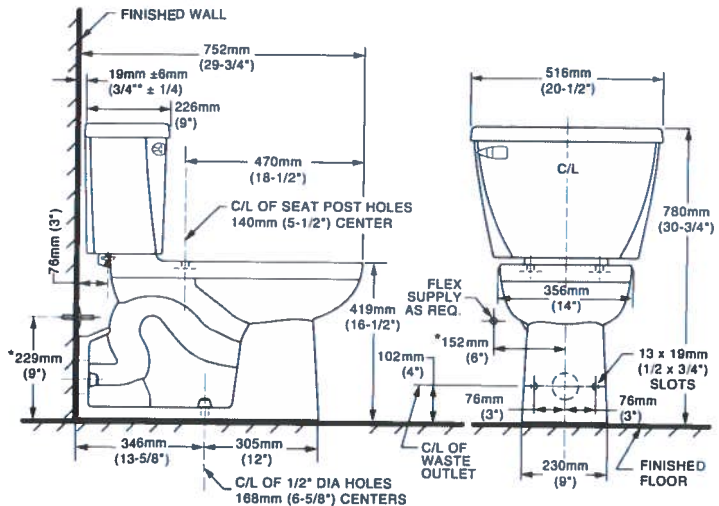
### Compliance Certifications -

#### Meets or Exceeds the Following Specifications:

- ASME A112.19.2-2008 / CSA B45.1-08 for Vitreous China Fixtures

#### To Be Specified:

- Color:  White  Bone  Linen
- Seat: American Standard #5901.100.020
- Supply with Stop:



#### NOTES:

WASTE OUTLET SEAL RING MUST BE NEOPRENE OR GRAPHITE-FELT (WAX RING NOT RECOMMENDED). SUPPLY NOT INCLUDED WITH FIXTURE AND MUST BE ORDERED SEPARATELY. DISTANCE FROM FLOOR TO CLOSET FLANGE CENTERLINE (ROUGH-IN) MUST BE 4" (102 MM) WITH FLANGE SURFACE FLUSH TO 1/16" (1.5MM) MAX. BEYOND FINISHED WALL. \* DIMENSION SHOWN FOR LOCATION OF SUPPLY IS SUGGESTED. FOR ADDITIONAL INFORMATION REFER TO INSTALLATION INSTRUCTIONS SUPPLIED.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ASME A112.19.2-2008 / CSH B45.1-08. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.



MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 REQUIREMENTS FOR ACCESSIBLE AND USABLE BUILDING FACILITIES - CHECK LOCAL CODES.

*Page 29 of 35*

PART OF LIXIL

M83

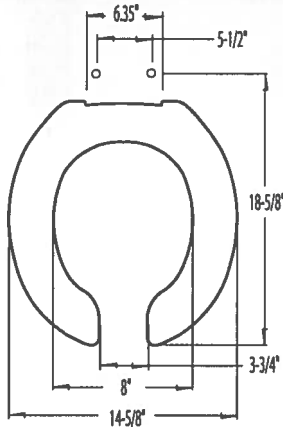
© 2017 AS America Inc.  
spec\_2878.016YorkvilleRHPressureAssist Rev. A 4/17



# Solid Plastic Seats

## Institutional Commercial

### 500 SERIES



### DETAILS

#### 500CC

Heavy Duty open front less cover for elongated bowl. Plated steel check hinge with PVC washers and plastic nuts.

#### 500CCSS

Heavy Duty open front less cover for elongated bowl. Plated steel self sustaining check hinge with PVC washers and plastic nuts.

#### 500STSCC ✓

Heavy Duty open front less cover for elongated bowl. Stainless steel check hinge with PVC washers, metal flat washers, lock washers and stainless steel nuts.

#### 500STSCSS

Heavy Duty open front less cover for elongated bowl. Self sustaining stainless steel check hinge with PVC washers, metal flat washers, lock washers, stainless steel nuts and self sustaining check hinge.

#### Standard Features:

- Corrosion free steel hinge posts
- Check hinge posts
- Extended back with concealed hinge
- Integrally molded permanent and sanitary color keyed bumpers
- Corrosion free hardware
- Withstands cleansers, strong chemicals
- Easy clean

### SPECIFICATIONS

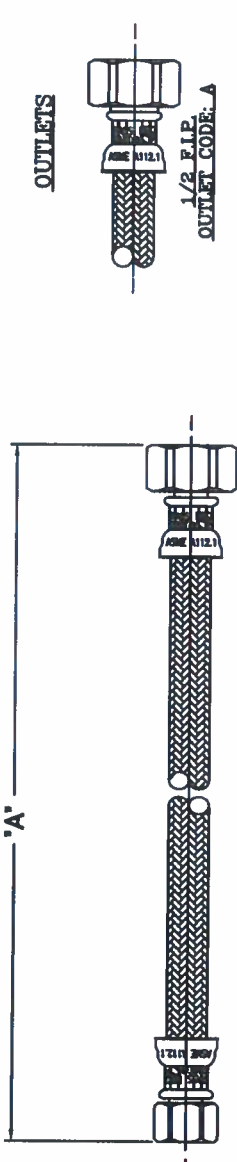
Seats shall be Centoco No. 500STSCC  
 Seat and cover shall be injection molded of high strength, impact resistant thermoplastic with integrally molded permanent bumpers and steel reinforced check hinges standard.

Color to be White

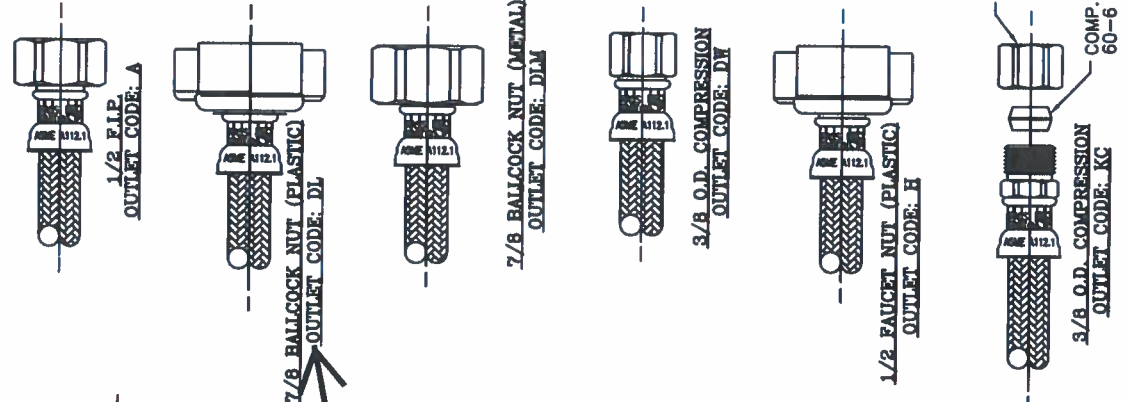
Page 30 of 35

# WC1

REV. DATE: 09/08/2002 BY: [blank] CHECKED: [blank]  
 (C) 11/19/99 UPS MAY REVERSE & UPDATE



## OUTLETS

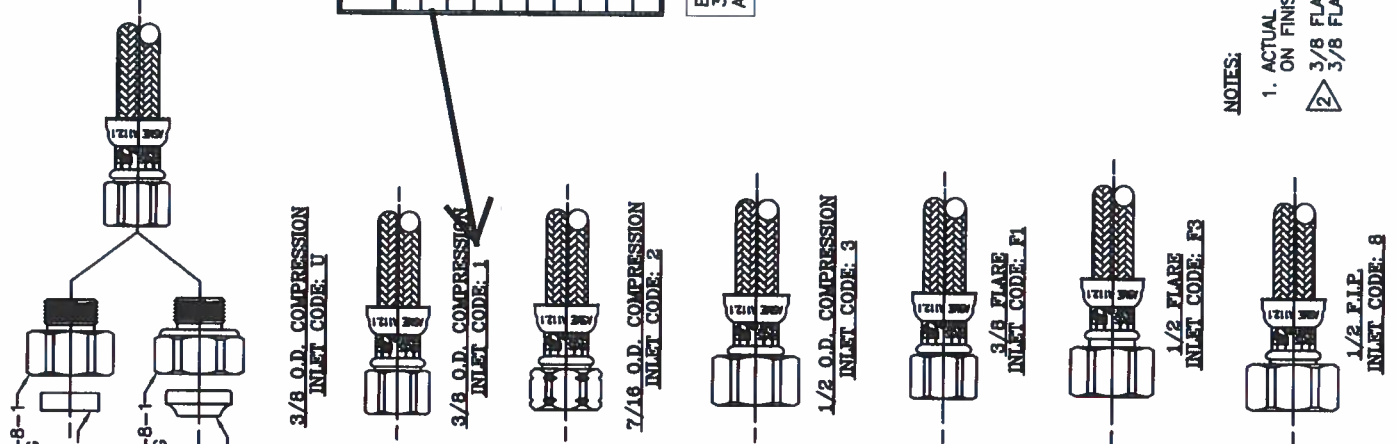


**PART NO. CODE KEY**  
 BX-XXU  
 UNIVERSAL-SEE INLET CODE "U"  
 OUTLET CODE  
 NOMINAL LENGTH  
 INLET CODE  
 POLYMER BRAID HOSE  
 NOT ALL COMBINATIONS ARE VALID. PART NUMBERS CHECK CATALOG FOR DETAILS

NOMINAL LENGTH	'A' (INCHES)
9	9.00/10.00
12	12.00/13.00
16	16.00/17.00
20	20.00/21.00
24	24.00/25.00
30	30.00/31.00
36	36.00/37.00
48	48.00/49.00
60	60.00/61.00
72	72.00/73.00

EXAMPLE: B1-12A  
 3/8 O.D. COMP. X 1/2 F.I.P.  
 ACTUAL LENGTH 12.00/13.00

## INLETS



### NOTES:

- ACTUAL FINISH GOOD ITEM I.D. IS DEPENDENT ON FINISH & FINAL PACKAGING.  
 3/8 FLARE ELBOW OUTLET USED WITH 3/8 FLARE INLET ONLY.

- 3/8 O.D. COMPRESSION WITH 3/8 O.D. COMPRESSION X 3/8 M.I.P. ELBOW OUTLET CODE: DWG
- 69-6-6-1 ELBOW
- FRC16-6 ELBOW
- 3/8 O.D. COMPRESSION WITH 3/8 FEMALE FLARE WITH 3/8 MALE FLARE X 3/8 M.I.P. ELBOW OUTLET CODE: DWB
- PS181-4 WASHER

**Brass & Craft**  
 A Mason Company  
 10011 MICHIGAN  
 ALL STATE WAREHOUSE  
 11/20/2005

REVISION: SPEED-FLAMB MEDIUM POLYMER Braid Assemblies (SUBMITTAL)  
 DATE: 09/08/2002  
 PART: 09/08/2002  
 VALUE: 11/20/2005

QUANTITY: 1  
 UNIT: EACH  
 INCH: 1/2  
 FULL: C



## For Residential Applications

Job Name \_\_\_\_\_

Job Location \_\_\_\_\_

Engineer \_\_\_\_\_

Approval \_\_\_\_\_

Contractor \_\_\_\_\_

Approval \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Representative \_\_\_\_\_

# IntelliFlow®

## Series A2C-M1 ✓

### Automatic Washing Machine Water Shutoff Valve with Leak Sensor

The Watts IntelliFlow® Automatic Washing Machine Shutoff Valve uses a state-of-the-art electronic control device that senses the washing machine current flow. When the washing machine is turned on, the controls detect the current flow to the washer, opening both hot and cold water inlet valves to allow water to flow to the washing machine. When the washing machine completes the full cycle the device senses the lack of current and closes the water inlet valves. These valves remain closed until the machine is used again. The IntelliFlow®'s automatic operation and floor mounted leak sensor protect against catastrophic water damage should a washing machine inlet hose burst while the machine is in use or unattended.

### Features

- Easy installation
- Silent reliable operation
- Replaceable internal strainer screen
- The new IntelliFlow® Models A2C-M1 and A2C-WB-M1 also include a leak sensor. The water sensor is placed on the floor behind the washing machine. Upon detection of water at the sensor, the IntelliFlow® automatically shuts off the water supply to the washing machine. This provides an additional level of security, should a hose burst while the washing machine is in operation.


The contractor shall install an electrically actuated washing machine shutoff valve on the hot and cold water supply as indicated on the drawings. The electrically actuated washing machine valve shall be normally closed. The electrically actuated washing machine valve shall contain an integral electrical outlet capable of receiving a standard three-prong 120 VAC washing machine power cable. The valve shall actuate both the hot and cold water valves simultaneously upon detection of current flow at the integral electrical outlet which shall remain actuated until the detection of the interruption of current flow at the integral electrical outlet.

The valve shall be equipped with a 5 foot 14 AWG power cable. The valve shall be rated for 120 VAC, 60 Hz with a maximum standby current draw of less than one (1) ampere and a maximum appliance current draw of 15 amperes. The valve shall have a maximum pressure rating of 150psi (10.3 bar) and a maximum temperature rating of 180°F (82°C). The valve shall be UL listed for appliance controls. The electrically operated washing machine shutoff valve shall be equipped with a leak sensor. Upon detection of water at the leak sensor, current flow to both the hot and cold water valves shall be immediately interrupted. The valve shall be a Watts Regulator Company IntelliFlow® Model A2C-M1 surface mount unit or Model A2C-WB-M1 wall box unit.



**Model A2C-M1**  
Patent # 6003536

### Approvals

 Model A2C-M1, A2C-WB-M1, A2T-M1, E164904 are ATNZ, ATNZ7 listed

### Specifications

#### Mechanical

Maximum Pressure: 150psi (10.3 bar)  
Maximum Temperature: 180°F (82°C)

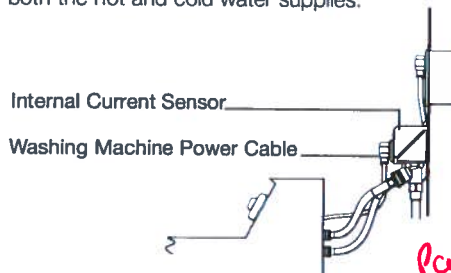
#### Electrical

120 VAC, 15A, 60Hz  
Cord: 5 ft.  
Current draw (with appliance off): 20mA  
Maximum appliance current rating: 15A  
Circuit breaker requirement: 20 amp. GFIT

**†Note:** It is suggested that the electrical power source be ground fault protected. In accordance with National Electric Code, NFPA 70, Section 210.11 Branch Circuits Required, at least one 20-ampere branch circuit shall be provided to supply the laundry receptacle outlets(s) required by Section 210.52(F). This circuit shall have no other outlets.

### How It Works

The Watts IntelliFlow® is equipped with a state-of-the-art electric current sensing device. When the washing machine is turned on, the IntelliFlow® senses the current flowing to the washing machine and opens the supply of water to washing machine. Upon completion of the full wash cycle, the washing machine shuts off cutting off the current. The IntelliFlow® senses this lack of current and closes both the hot and cold water supplies.



*Page 33 of 35*

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.



# WB1

## Leak Sensor

Used in conjunction with the A2C-M1 or A2C-WB-M1, the leak sensor provides the maximum level of protection. Should water be detected at the leak sensor at any time, the water flow to the washing machine hoses will be cut off immediately. This protects against catastrophic water damage regardless of the operating cycle of the washing machine.



Leak Sensor

## Optional Accessories

**A2-IntelliTimer:** A remote timer which allows the IntelliFlow® to be used with 240VAC powered appliances. Request literature ES/IS-A2-IntelliTimer.

## Construction

The Watts No. A2C-M1 is equipped with ½" (13mm) sweat inlet adapters for both hot water and cold water supply tubing. It is supplied with two mounting tabs used to secure the valve to the wall for surface mount applications. The valve is enclosed in an engineered polymer enclosure.

## Easy Installation

The Watts A2C-M1 IntelliFlow® comes equipped with ½" (13mm) sweat adapters to receive tubing. Either connection may be used for the hot or cold water supply because the A2C-M1 is equipped with long wearing Buna-N diaphragms for long life.

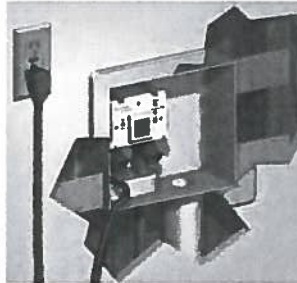
Water supply connections are 2½" (60mm) on centers.

No electrical wiring is required. Simply plug the washing machine power cord into the IntelliFlow® and plug it to the standard 15A, GFI†, 120 volt outlet.

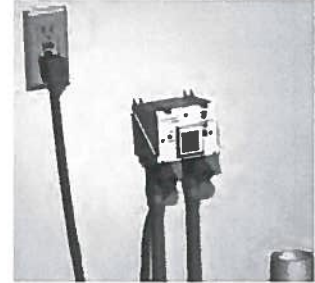
†Ground fault interrupter circuit

## Typical Installations

The Watts IntelliFlow® can be installed in new construction or as an upgrade to existing installations.



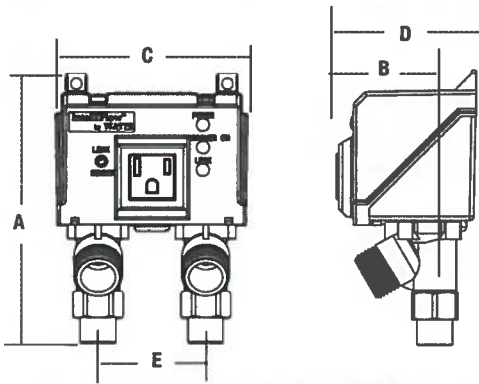
Model A2C-WB-M1  
For Recessed Wall Mounting



Model A2C-M1  
For surface mounting or retrofit installation  
(See S-ES-A2-K)

## Dimensions — Weights

Model A2C-M1



Model A2C-WB-M1



MODEL	SIZE (DN)		DIMENSIONS										WEIGHT	
	in.	mm	A		B		C		D		E		lbs.	kg
A2C-M1 ✓	½	15	6	152	2½	54	4¼	108	3½	77	2½	60	2.0	.9
A2C-M1-WB	½	15	8½	216	2½	54	4¼	108	3½	77	2½	60	3.5	1.6

**CAUTION:** Use of the Watts Automatic Washing Machine Valve outlet for appliances other than a washing machine is not recommended and voids the warranty.

**Note:** This valve cannot be used for 240 VAC, 3 phase appliances.

**IMPORTANT:** INQUIRE WITH GOVERNING AUTHORITIES FOR LOCAL INSTALLATION REQUIREMENTS



A Watts Water Technologies Company



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USA: 815 Chestnut St., No. Andover, MA 01845-6098; www.watts.com

Canada: 5435 North Service Rd., Burlington, ONT. L7L 5H7; www.wattscanada.ca

Contractor: Optimum Mech Solutions Inc.

Job: Meridian Retirement Community Fire Restoration

# NFHB



**HY-420** ✓

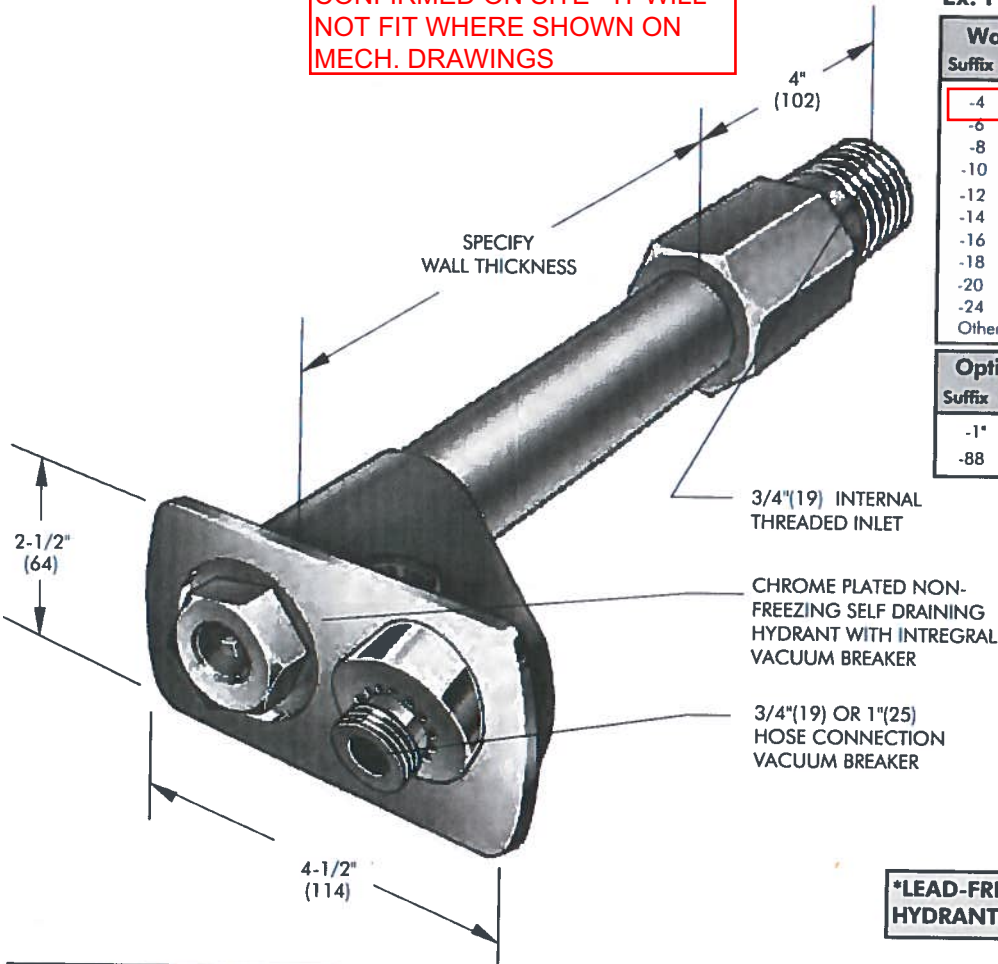
Tag: \_\_\_\_\_

**Non-Freeze Exposed Hydrant with Vacuum Breaker**

**SPECIFICATION:** Watts Drainage Products HY-420 non-freeze key operated wall hydrant with chrome plated face, integral vacuum breaker, 3/4"(19) hose connection, all bronze head, seat casting and internal working parts, galvanized wall casing and hydrant key.

**FUNCTION:** For installation in exterior walls that will be exposed to freezing temperatures, where a self draining hydrant with integral vacuum is required.

HOSE BIB LOCATION TO BE CONFIRMED ON SITE - IT WILL NOT FIT WHERE SHOWN ON MECH. DRAWINGS



Order Code: **HY-420-**  -

Ex. **HY-420-10-88**

Wall Thickness (Select One)	
Suffix	Description
-4	4" Thick <input checked="" type="checkbox"/>
-6	6" Thick <input type="checkbox"/>
-8	8" Thick <input type="checkbox"/>
-10	10" Thick <input type="checkbox"/>
-12	12" Thick <input checked="" type="checkbox"/>
-14	14" Thick <input type="checkbox"/>
-16	16" Thick <input type="checkbox"/>
-18	18" Thick <input type="checkbox"/>
-20	20" Thick <input type="checkbox"/>
-24	24" Thick <input type="checkbox"/>
Other	Specify _____

Options (Select One or More)	
Suffix	Description
-1"	1" Hose Connection <input type="checkbox"/>
-88	Wall Clamp <input type="checkbox"/>

**\*LEAD-FREE HYDRANTS**

**Recommended Wall Opening:**  
2" x 4" (51 x 102)

Job Name \_\_\_\_\_ Contractor \_\_\_\_\_

Job Location \_\_\_\_\_ Contractor's P.O. No. \_\_\_\_\_

Engineer \_\_\_\_\_ Representative \_\_\_\_\_

WATTS Drainage reserves the right to modify or change product design or construction without prior notice and without incurring any obligation to make similar changes and modifications to products previously or subsequently sold. See your WATTS Drainage representative for any clarification. Dimensions are subject to manufacturing tolerances.



CANADA: 5435 North Service Road, Burlington, ON, L7L 5H7 TEL: 905-332-6718 TOLL-FREE: 1-888-208-8927 Website: www.wattsdrainage.ca

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ES-WD-HY-420 CANADA 0403

(Dimension) Denotes Millimeters

Contractor: Optimum Mech Solutions Inc.

Job: Meridian Retirement Community Fire Restoration