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Date: 07/09/2026
Return Request: 07/30/2026
Project: Highlands Building at Pinnacle Hills
Supplier: Comfort Systems USA
Manufacturer: Various
Submittal: Plumbing Piping Specialties
Submittal Number: 22 10 06-01
Drawing # and Installation: Plumbing

ARCHITECT

Crafton Tull
Fayetteville, Ar.

ENGINEER

IMEG

GENERAL CONTRACTOR

Clark Contractors
Rogers, Ar.

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
116 Commercial Ave.
Lowell, AR 72745
(479) 770.8992

NOTES:

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CSUSA PROJECT NO.
26-5034

jzuber@comfortar.com



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

SUB METER



Recordall® Disc Meters

Lead-Free Bronze Alloy 120 & 170, Sizes 1-1/2 in. (40 mm) & 2 in. (50 mm), NSF/ANSI/CAN Standards 61 and 372 Certified

DESCRIPTION

Recordall Models 120 and 170 Disc Series meters meet or exceed the most recent revision of AWWA Standard C700 and are available in a lead-free bronze alloy. Both meters comply with the lead-free provisions of the Safe Drinking Water Act, are certified to NSF/ANSI/CAN Standards 61 and 372 (Trade Designations: M120-LL and M170LL) and carry the NSF-61 mark on the housing. All components of the lead-free bronze alloy meter (housing, measuring element, seals, and so on) comprise the certified system.

Applications: For use in measurement of potable cold water in residential, commercial and industrial services where flow is in one direction only.

Operation: Water flows through the meter’s strainer and into the measuring chamber where it causes the disc to nutate. The disc, which moves freely, nutates on its own ball, guided by a thrust roller. A drive magnet transmits the motion of the disc to a follower magnet located within the permanently sealed register. The follower magnet is connected to the register gear train. The gear train reduces the disc nutations into volume totalization units displayed on the register or encoder face.

Operating Performance: The Recordall Disc Series meters meet or exceed registration accuracy for the low flow rates (95%), normal operating flow rates (100 ± 1.5%), and maximum continuous operation flow rates as specifically stated in AWWA Standard C700.

Construction: Recordall Disc meter construction, which complies with ANSI/AWWA standard C700, consists of three basic components: meter housing, measuring chamber, and permanently sealed register or encoder. The water meter is available in a lead-free bronze alloy. A corrosion-resistant engineered polymer material is used for the measuring chamber.

Magnetic Drive: Direct magnetic drive, through the use of high-strength magnets, provides positive, reliable and dependable register coupling for straight-reading or AMR/AMI meter reading options.

Tamper-Proof Features: Unauthorized removal of the register or encoder is inhibited by the option of a tamper detection seal wire screw, TORX® tamper-resistant seal screw or the proprietary tamper-resistant keyed seal screw. Each can be installed at the meter site or at the factory.

Maintenance: Badger Meter Recordall Disc Series meters are designed and manufactured to provide long-term service with minimal maintenance. When maintenance is required, it can be performed easily either at the meter installation or at any other convenient location.

To simplify maintenance, the register, measuring chamber, and strainer can be replaced without removing the meter housing from the installation. No change gears are required for accuracy calibration. Interchangeability of parts among like-sized meters minimizes spare parts inventory investment. The built-in strainer has an effective straining area of twice the inlet size.

Connections: Companion flanges in cast iron or NL bronze are available as options. Straight connection sets are available in NL bronze.



M120



M170

SPECIFICATIONS

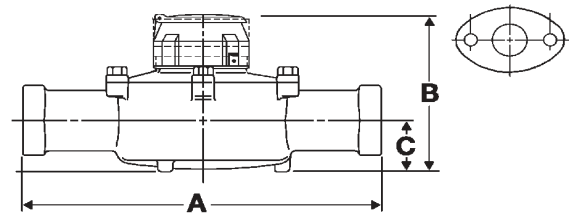
Meter Model	M120	M170
Typical Operating Range (100% ± 1.5%)	2.5...120 gpm (0.57...27 m³/hr)	2.5...170 gpm (0.57...39 m³/hr)
Low Flow (Min. 95%)	1.25 gpm (0.28 m³/hr)	1.5 gpm (0.34 m³/hr)
Maximum Continuous Operation	80 gpm (18 m³/hr)	100 gpm (23 m³/hr)
Pressure Loss at Maximum Continuous Operation	4.8 psi at 80 gpm (0.33 bar at 18 m³/hr)	3.3 psi at 100 gpm (0.23 bar at 23 m³/hr)
Maximum Operating Temperature	80° F (26° C)	80° F (26° C)
Maximum Operating Pressure	150 psi (10 bar)	150 psi (10 bar)
Measuring Element	Nutating disc, positive displacement	Nutating disc, positive displacement
Meter Connections	1-1/2 in. AWWA two-bolt elliptical flange, drilled or 1-1/2...11-1/2 NPT internal pipe threads	2 in. AWWA two-bolt elliptical flange, drilled or 2...11-1/2 NPT internal pipe threads
Test Plugs	Optional 1 in. NPT test plug (TP)	Optional 1 in. NPT test plug (TP)

Materials

Meter Housing	Lead-free bronze alloy
Housing Top Plates	Lead-free bronze alloy
Measuring Chamber	Engineered polymer
Disc	Engineered polymer
Trim	Stainless steel
Strainer	Engineered polymer
Disc Spindle	Stainless steel
Magnet	Ceramic
Magnet Spindle	Stainless steel
Register Lid and Shroud	Engineered polymer, bronze

Recordall® Disc Meters Lead-Free Bronze Alloy 120 & 170, Sizes 1-1/2 in. (40 mm) & 2 in. (50 mm), NSF/ANSI/CAN Standards 61 and 372 Certified

DIMENSIONS



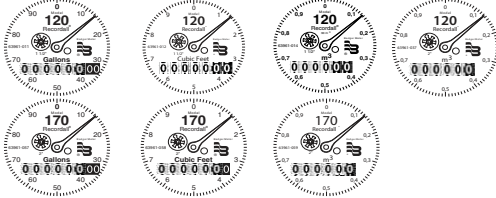
Meter Size	Meter Model	A Laying Length	B Height Reg./RTR	C Centerline Base	Width	Approx. Shipping Weight
1-1/2 in. (40 mm)	120 EL, Hex 120 EL, TP	12-5/8 in. (321 mm)	7 in. (178 mm)	2-3/8 in. (60 mm)	8-3/4 in. (222 mm)	19 lb (8.6 kg)
1-1/2 in. (40 mm)	120 ELL 120 ELL, TP	13 in. (330 mm)	7 in. (178 mm)	2-3/8 in. (60 mm)	8-3/4 in. (222 mm)	19 lb (8.6 kg)
2 in. (50 mm)	170 EL, Hex 170 EL, TP	15-1/4 in. (387 mm)	8 in. (203 mm)	2-7/8 in. (73 mm)	9-1/2 in. (241 mm)	30 lb (13.6 kg)
2 in. (50 mm)	170 ELL 170 ELL, TP	17 in. (432 mm)	8 in. (203 mm)	2-7/8 in. (73 mm)	9-1/2 in. (241 mm)	30 lb (13.6 kg)

EL = Elliptical
ELL = Elliptical Long
Hex = Hexagon, 1-1/2...11-1/2 in. NPT
TP=Test Plug 1 in.

REGISTERS / ENCODERS

Standard—Sweep-Hand Registration

The standard register is a straight-reading, permanently sealed magnetic drive register. Dirt, moisture, tampering and lens fogging problems are eliminated. The register has a six-odometer wheel totalization display, 360° test circle with center sweep hand, and flow finder to detect leaks. Register gearing is made of self-lubricating engineered polymer, which minimizes friction and provides long life. The multi-position register simplifies meter installation and reading. The register capacity is 100,000,000 gallons (10,000,000 ft³, 1,000,000 m³).



Meter Model	Gallon	Cubic Feet	Cubic Meter
120	100	10	1/0.1
170	100	10	1

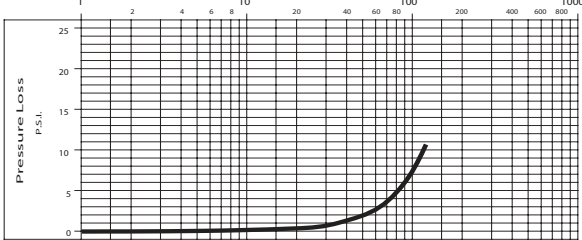
Optional—Encoders for AMR/AMI Reading Solutions

AMR/AMI solutions are available for all Recordall Disc Series meters. All reading options can be removed from the meter without disrupting water service. Badger Meter encoders provide years of reliable, accurate readings for a variety of applications and are also available pre-wired to Badger Meter approved AMR/AMI solutions. See details at badgermeter.com.

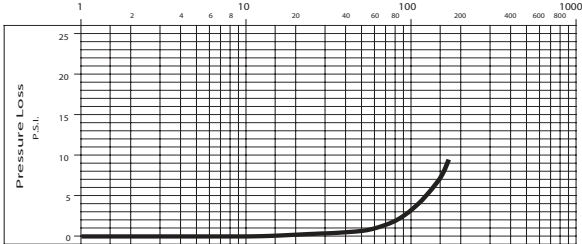
PRESSURE LOSS CHARTS

1-1/2 in. Meter

Rate of Flow in Gallons per Minute



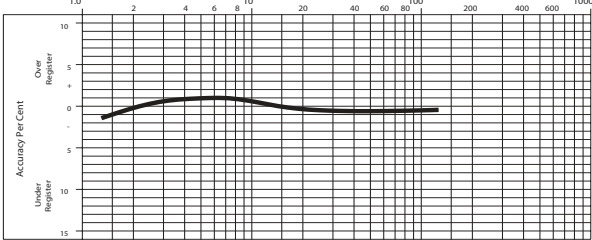
2 in. Meter



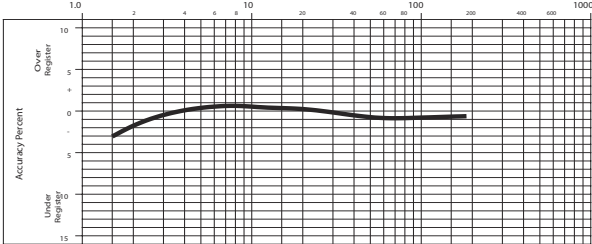
ACCURACY CHARTS

1-1/2 in. Meter

Rate of Flow in Gallons per Minute



2 in. Meter



SMART WATER IS BADGER METER

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www.badgermeter.com

Legacy Document Numbers: RDM-DS-00071-EN and RDM-DS-00072-EN



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Datasheets

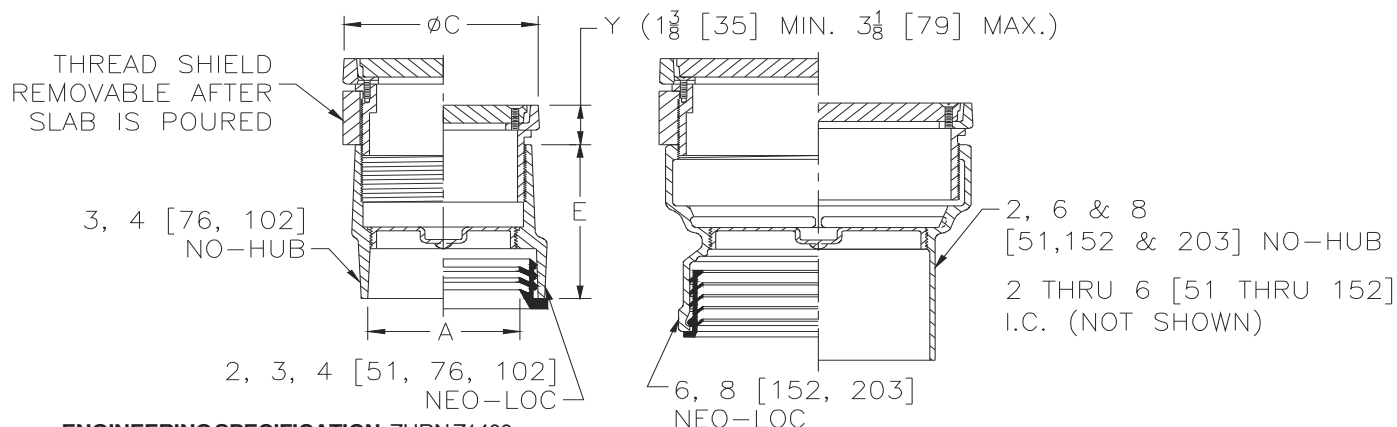
TWCO-1

**Z1400****EXTRA-HEAVY-DUTY "LEVEL-TROL"
ADJUSTABLE FLOOR CLEANOUT**

SPECIFICATION SHEET

TAG _____

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

**ENGINEERING SPECIFICATION: ZURN Z1400**

"Level-Trol" Adjustable floor cleanout, Dura-Coated cast iron body with gas and watertight ABS tapered thread plug and round scoriated cast iron extra-heavy-duty secured top (Specify finish Z, ZB, ZN, ZS) adjustable to finished floor.

Dimension In Inches[mm]			Approx. Wt. Lbs. [kg.]
A-Pipe Size	C	E	
Inside Caulk			
2 [51]	6-1/8 [156]	6-7/8 [175]	13.8 [6.3]
3 [76]	6-1/8 [156]	6-7/8 [175]	14 [6.4]
4 [102]	7-1/4 [184]	6-7/8 [175]	18.3 [8.3]
6 [152]	9-1/4 [235]	6-7/8 [175]	32.2 [14.6]
No-Hub			
2 [51]	4-1/8 [105]	4-5/8 [117]	7 [3]
3 [76]	4-1/8 [105]	4-3/4 [121]	7.7 [3.5]
4 [102]	5-1/8 [130]	4-3/4 [121]	10.3 [4.7]
6 [152]	8-1/4 [210]	4-3/4 [121]	22.2 [10.1]
8 [203]	9-1/4 [235]	7-1/2 [191]	29.9 [13.6]
Neo-Loc			
2 [51]	4-1/8 [105]	4-3/4 [121]	7.9 [3.6]
3 [76]	5-1/8 [130]	4-3/4 [121]	10.6 [4.8]
4 [102]	5-1/8 [130]	4-3/4 [121]	11.9 [5.4]
6 [152]	8-1/4 [210]	5-7/8 [149]	21.9 [9.9]
8 [203]	9-1/4 [235]	6-1/2 [165]	23.5 [10.7]

OPTIONS (Check/specify appropriate options)**PREFIXES**

- ☒ Z Dura Coated Cast Iron*
- ☐ ZB D.C.C.I. w/ Polished Bronze Light-Duty Top (Deduct 1/2 [13] from 'Y' Dim.)
- ☐ ZN D.C.C.I. w/ Polished Nickel Bronze Light-Duty Top (Deduct 1/2 [13] from 'Y' Dim.)
- ☐ ZS D.C.C.I. w/ Polished Stainless Steel Extra Heavy-Duty Top (Add 3/16 [5] to 'Y' Dim.)

SUFFIXES

- ☐ -AR Acid Resisting Epoxy Coated Finish
- ☐ -BP Bronze Plug
- ☐ -CF Carpet Flange Cover (ZB and ZN only)
- ☐ -CM Carpet Marker
- ☐ -DC Duresist Cover
- ☐ -DX Round ZB or ZN Top with Dex-o-tex Flange (2, 3, 4 [51, 76, 102] Sizes only)
- ☐ -G Galvanized Cast Iron
- ☐ -HD Extra-Heavy-Duty Veneer Top (Add 1/8 [3] to 'Y' Dim.) (ZB and ZN only)
- ☐ -K Anchor Flange
- ☐ -KC Anchor Flange w/ Clamping Collar
- ☐ -PC Protective Cover
- ☐ -SG Solid Gasketed Cover
- ☐ -SM Special Marking Stamped on Top
- ☐ -T Square Top
- ☐ -TC Neo-Loc Test Cap Gasket (2, 3, 4 [51, 76, 102] NL Bottom Outlet Only)
- ☐ -TX Square Top Recessed for 1/8 [3] Tile (ZB and ZN only)
- ☐ -VP Vandal-Proof Screws
- ☐ -X Round Top Recessed for 1/8 [3] Tile (ZB or ZN only)
- ☐ -Z Round Top Recessed for 1-1/4 [32] Terrazzo (ZB or ZN only)

PIPE SIZE

2,3,4,6 [51,76,102,152]
 2,3,4,6,8 [51,76,102,152,203]
☒ 2,3,4,6,8 [51,76,102,152,203]

(Specify size/type) OUTLET

☐ IC Inside Caulk

☐ NH No-Hub

☒ NL Neo-Loc

'E' BODY HT. DIM.

See Chart
 See Chart
 See Chart

* Regularly furnished unless otherwise specified.

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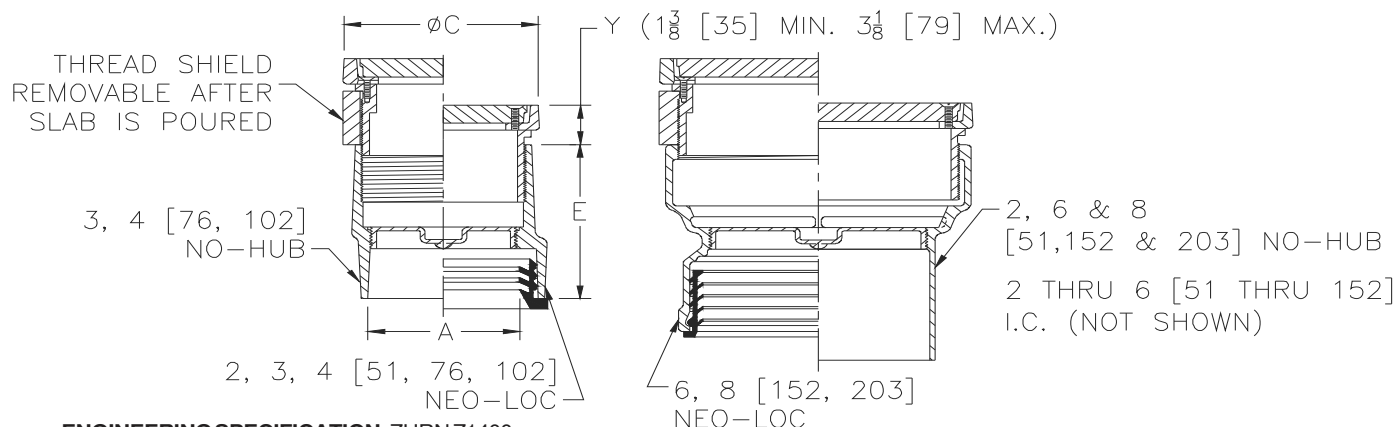
Rev. T
 Date: 09/28/2017
 C.N. No. 138018
 Prod. | Dwg. No. Z1400

**Z1400****EXTRA-HEAVY-DUTY "LEVEL-TROL"
ADJUSTABLE FLOOR CLEANOUT**

SPECIFICATION SHEET

TAG _____

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

**ENGINEERING SPECIFICATION: ZURN Z1400**

"Level-Trol" Adjustable floor cleanout, Dura-Coated cast iron body with gas and watertight ABS tapered thread plug and round scoriated cast iron extra-heavy-duty secured top (Specify finish Z, ZB, ZN, ZS) adjustable to finished floor.

Dimension In Inches[mm]			Approx. Wt. Lbs. [kg.]
A-Pipe Size	C	E	
Inside Caulk			
2 [51]	6-1/8 [156]	6-7/8 [175]	13.8 [6.3]
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4 [102]	7-1/4 [184]	6-7/8 [175]	18.3 [8.3]
6 [152]	9-1/4 [235]	6-7/8 [175]	32.2 [14.6]
No-Hub			
2 [51]	4-1/8 [105]	4-5/8 [117]	7 [3]
3 [76]	4-1/8 [105]	4-3/4 [121]	7.7 [3.5]
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6 [152]	8-1/4 [210]	4-3/4 [121]	22.2 [10.1]
8 [203]	9-1/4 [235]	7-1/2 [191]	29.9 [13.6]
Neo-Loc			
2 [51]	4-1/8 [105]	4-3/4 [121]	7.9 [3.6]
3 [76]	5-1/8 [130]	4-3/4 [121]	10.6 [4.8]
4 [102]	5-1/8 [130]	4-3/4 [121]	11.9 [5.4]
6 [152]	8-1/4 [210]	5-7/8 [149]	21.9 [9.9]
8 [203]	9-1/4 [235]	6-1/2 [165]	23.5 [10.7]

OPTIONS (Check/specify appropriate options)**PREFIXES**

- ☒ Z Dura Coated Cast Iron*
- ☐ ZB D.C.C.I. w/ Polished Bronze Light-Duty Top (Deduct 1/2 [13] from 'Y' Dim.)
- ☐ ZN D.C.C.I. w/ Polished Nickel Bronze Light-Duty Top (Deduct 1/2 [13] from 'Y' Dim.)
- ☐ ZS D.C.C.I. w/ Polished Stainless Steel Extra Heavy-Duty Top (Add 3/16 [5] to 'Y' Dim.)

SUFFIXES

- ☐ -AR Acid Resisting Epoxy Coated Finish
- ☐ -BP Bronze Plug
- ☐ -CF Carpet Flange Cover (ZB and ZN only)
- ☐ -CM Carpet Marker
- ☐ -DC Duresist Cover
- ☐ -DX Round ZB or ZN Top with Dex-o-tex Flange (2, 3, 4 [51, 76, 102] Sizes only)
- ☐ -G Galvanized Cast Iron
- ☐ -HD Extra-Heavy-Duty Veneer Top (Add 1/8 [3] to 'Y' Dim.) (ZB and ZN only)
- ☐ -K Anchor Flange
- ☐ -KC Anchor Flange w/ Clamping Collar
- ☐ -PC Protective Cover
- ☐ -SG Solid Gasketed Cover
- ☐ -SM Special Marking Stamped on Top
- ☐ -T Square Top
- ☐ -TC Neo-Loc Test Cap Gasket (2, 3, 4 [51, 76, 102] NL Bottom Outlet Only)
- ☐ -TX Square Top Recessed for 1/8 [3] Tile (ZB and ZN only)
- ☐ -VP Vandal-Proof Screws
- ☐ -X Round Top Recessed for 1/8 [3] Tile (ZB or ZN only)
- ☐ -Z Round Top Recessed for 1-1/4 [32] Terrazzo (ZB or ZN only)

PIPE SIZE

2,3,4,6 [51,76,102,152]
 2,3,4,6,8 [51,76,102,152,203]
 2,3,4,6,8 [51,76,102,152,203]

(Specify size/type) OUTLET

☐ IC Inside Caulk
☐ NH No-Hub
☒ NL Neo-Loc

'E' BODY HT. DIM.

See Chart
 See Chart
 See Chart

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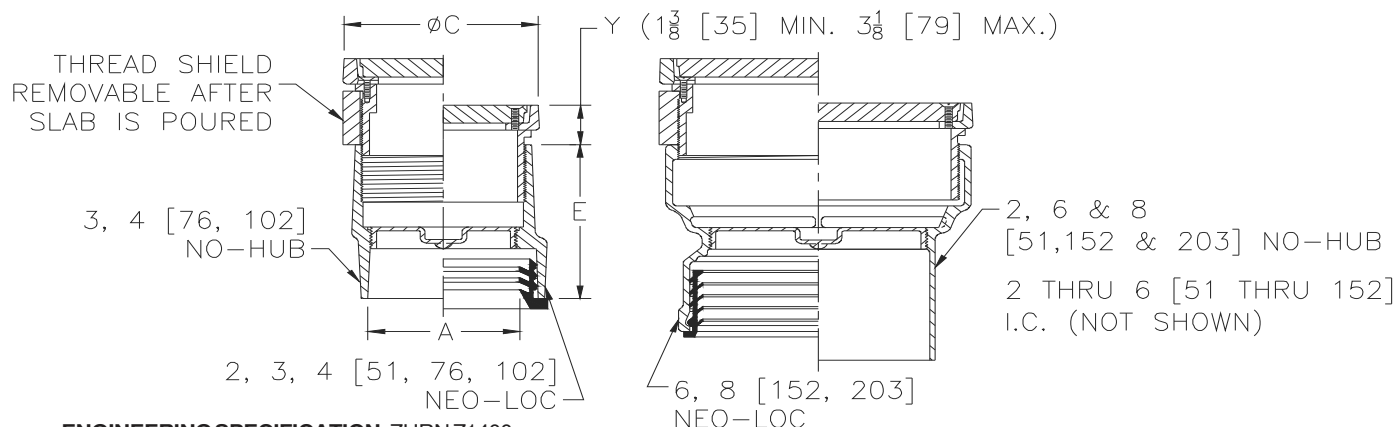
Rev. T
 Date: 09/28/2017
 C.N. No. 138018
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**Z1400****EXTRA-HEAVY-DUTY "LEVEL-TROL"
ADJUSTABLE FLOOR CLEANOUT**

SPECIFICATION SHEET

TAG _____

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

**ENGINEERING SPECIFICATION: ZURN Z1400**

"Level-Trol" Adjustable floor cleanout, Dura-Coated cast iron body with gas and watertight ABS tapered thread plug and round scoriated cast iron extra-heavy-duty secured top (Specify finish Z, ZB, ZN, ZS) adjustable to finished floor.

Dimension In Inches[mm]			Approx. Wt. Lbs. [kg.]
A-Pipe Size	C	E	
Inside Caulk			
2 [51]	6-1/8 [156]	6-7/8 [175]	13.8 [6.3]
3 [76]	6-1/8 [156]	6-7/8 [175]	14 [6.4]
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6 [152]	9-1/4 [235]	6-7/8 [175]	32.2 [14.6]
No-Hub			
2 [51]	4-1/8 [105]	4-5/8 [117]	7 [3]
3 [76]	4-1/8 [105]	4-3/4 [121]	7.7 [3.5]
4 [102]	5-1/8 [130]	4-3/4 [121]	10.3 [4.7]
6 [152]	8-1/4 [210]	4-3/4 [121]	22.2 [10.1]
8 [203]	9-1/4 [235]	7-1/2 [191]	29.9 [13.6]
Neo-Loc			
2 [51]	4-1/8 [105]	4-3/4 [121]	7.9 [3.6]
3 [76]	5-1/8 [130]	4-3/4 [121]	10.6 [4.8]
4 [102]	5-1/8 [130]	4-3/4 [121]	11.9 [5.4]
6 [152]	8-1/4 [210]	5-7/8 [149]	21.9 [9.9]
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OPTIONS (Check/specify appropriate options)**PREFIXES**

- ☐ **Z** Dura Coated Cast Iron*
- ☐ **ZB** D.C.C.I. w/ Polished Bronze Light-Duty Top (Deduct 1/2 [13] from 'Y' Dim.)
- ☐ **ZN** D.C.C.I. w/ Polished Nickel Bronze Light-Duty Top (Deduct 1/2 [13] from 'Y' Dim.)
- ☐ **ZS** D.C.C.I. w/ Polished Stainless Steel Extra Heavy-Duty Top (Add 3/16 [5] to 'Y' Dim.)

SUFFIXES

- ☐ **-AR** Acid Resisting Epoxy Coated Finish
- ☐ **-BP** Bronze Plug
- ☐ **-CF** Carpet Flange Cover (ZB and ZN only)
- ☐ **-CM** Carpet Marker
- ☐ **-DC** Duresist Cover
- ☐ **-DX** Round ZB or ZN Top with Dex-o-tex Flange (2, 3, 4 [51, 76, 102] Sizes only)
- ☐ **-G** Galvanized Cast Iron
- ☐ **-HD** Extra-Heavy-Duty Veneer Top (Add 1/8 [3] to 'Y' Dim.) (ZB and ZN only)
- ☐ **-K** Anchor Flange
- ☐ **-KC** Anchor Flange w/ Clamping Collar
- ☐ **-PC** Protective Cover
- ☐ **-SG** Solid Gasketed Cover
- ☐ **-SM** Special Marking Stamped on Top
- ☐ **-T** Square Top
- ☐ **-TC** Neo-Loc Test Cap Gasket (2, 3, 4 [51, 76, 102] NL Bottom Outlet Only)
- ☐ **-TX** Square Top Recessed for 1/8 [3] Tile (ZB and ZN only)
- ☐ **-VP** Vandal-Proof Screws
- ☐ **-X** Round Top Recessed for 1/8 [3] Tile (ZB or ZN only)
- ☐ **-Z** Round Top Recessed for 1-1/4 [32] Terrazzo (ZB or ZN only)

PIPE SIZE

2,3,4,6 [51,76,102,152]
 2,3,4,6,8 [51,76,102,152,203]
 2,3,4,6,8 [51,76,102,152,203]

(Specify size/type) OUTLET

☐ **IC** Inside Caulk

☐ **NH** No-Hub

☐ **NL** Neo-Loc

'E' BODY HT. DIM.

See Chart
 See Chart
 See Chart

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Rev. T
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2.16 HIGHLANDS BUILDING ROGERS

Datasheets

WCO-1

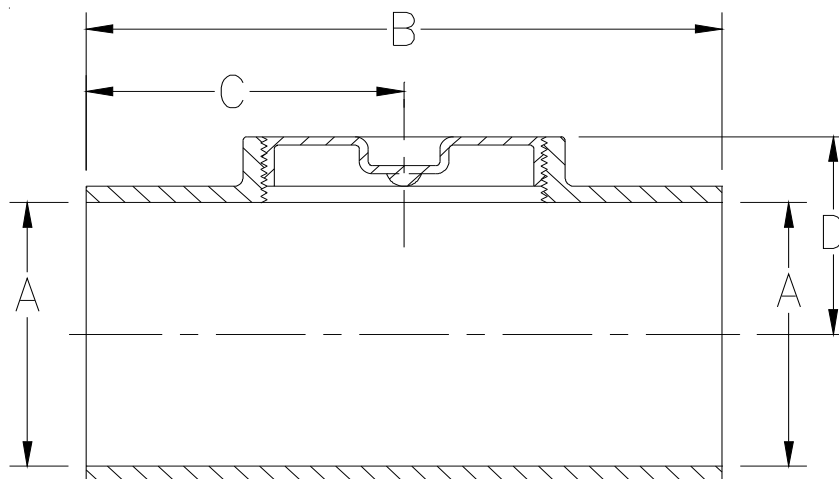


Z1445 CLEANOUT TEE

SPECIFICATION SHEET

TAG _____

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



A- Pipe Size	Dimensions in In [mm]			Approx. Wt. Lbs. [kg]
	B	C	D	
2 [51]	6-3/8 [162]	3-3/16 [81]	1-3/4 [44]	8 [4]
3 [76]	7-3/4 [197]	3-7/8 [98]	2-1/2 [64]	15 [7]
4 [102]	8-7/8 [225]	4-7/16 [113]	3 [76]	16 [7]
6 [152]	12-1/2 [318]	6-1/4 [159]	4-5/16 [110]	35 [16]
8 [203]	17 [432]	8-1/2 [216]	6-3/8 [162]	49 [22]

ENGINEERING SPECIFICATION: ZURN Z1445
Cleanout Tee. Dura-Coated cast iron body with gas and watertight ABS tapered thread plug.

OPTIONS (Check/specify appropriate options)

PIPE SIZE

☒ 2, 3, 4, 6, 8 [51, 76, 102, 152, 203]

(Specify size/type) OUTLET

☐ NH ☐ No-Hub

PREFIXES

☒ Z Dura-Coated Cast Iron*

SUFFIXES

☐ -BP Bronze Plug
☐ -G Galvanized Cast Iron

* Regularly furnished unless otherwise specified.

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
www.zurn.com

Rev. E
 Date: 09/28/2017
 C.N. No. 138042
 Prod. | Dwg. No. Z1445

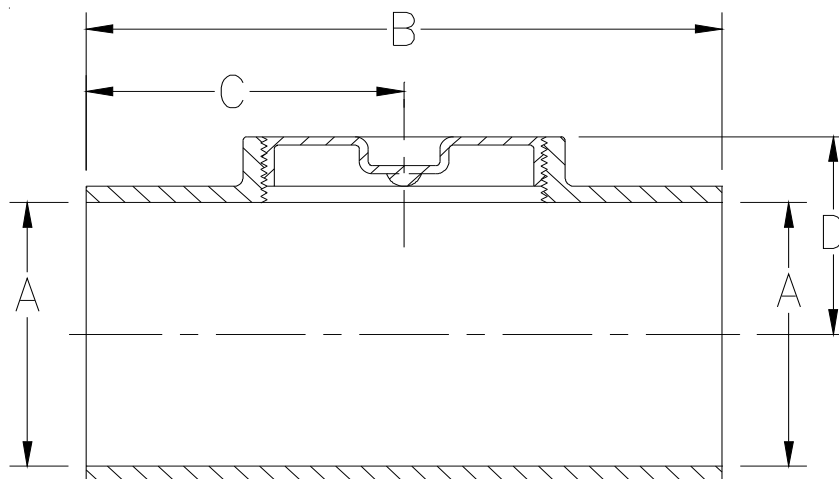


Z1445 CLEANOUT TEE

SPECIFICATION SHEET

TAG _____

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



A- Pipe Size	Dimensions in In [mm]			Approx. Wt. Lbs. [kg]
	B	C	D	
2 [51]	6-3/8 [162]	3-3/16 [81]	1-3/4 [44]	8 [4]
3 [76]	7-3/4 [197]	3-7/8 [98]	2-1/2 [64]	15 [7]
4 [102]	8-7/8 [225]	4-7/16 [113]	3 [76]	16 [7]
6 [152]	12-1/2 [318]	6-1/4 [159]	4-5/16 [110]	35 [16]
8 [203]	17 [432]	8-1/2 [216]	6-3/8 [162]	49 [22]

ENGINEERING SPECIFICATION: ZURN Z1445
Cleanout Tee. Dura-Coated cast iron body with gas and watertight ABS tapered thread plug.

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

4, 3, 4, 6, 8 [51, 76, 102, 152, 203]

(Specify size/type) **OUTLET**
☐ NH ☒ No-Hub
PREFIXES
☒ Z Dura-Coated Cast Iron*
SUFFIXES
☐ -BP Bronze Plug
☐ -G Galvanized Cast Iron

* Regularly furnished unless otherwise specified.

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Rev. E
 Date: 09/28/2017
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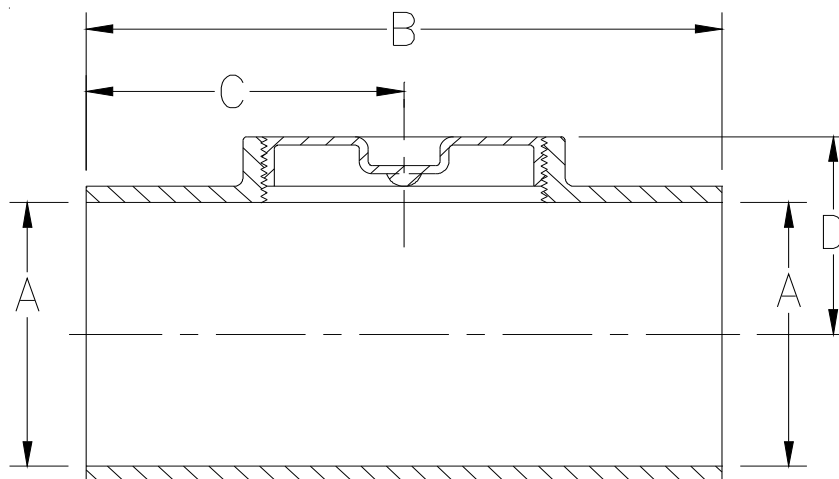


Z1445 CLEANOUT TEE

SPECIFICATION SHEET

TAG _____

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



Dimensions in In [mm]				Approx. Wt. Lbs. [kg]
A- Pipe Size	NH			
	B	C	D	
2 [51]	6-3/8 [162]	3-3/16 [81]	1-3/4 [44]	8 [4]
3 [76]	7-3/4 [197]	3-7/8 [98]	2-1/2 [64]	15 [7]
4 [102]	8-7/8 [225]	4-7/16 [113]	3 [76]	16 [7]
6 [152]	12-1/2[318]	6-1/4 [159]	4-5/16 [110]	35 [16]
8 [203]	17 [432]	8-1/2 [216]	6-3/8 [162]	49 [22]

ENGINEERING SPECIFICATION: ZURN Z1445
Cleanout Tee. Dura-Coated cast iron body with gas and watertight ABS tapered thread plug.

OPTIONS (Check/specify appropriate options)

PIPE SIZE

2,3,4,6,8 [51,76,102,152,203]

(Specify size/type) OUTLET

☐ NH ☐ No-Hub

PREFIXES

☐ Z Dura-Coated Cast Iron*

SUFFIXES

☐ -BP Bronze Plug
☐ -G Galvanized Cast Iron

* Regularly furnished unless otherwise specified.

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www.zurn.com

Rev. E
 Date: 09/28/2017
 C.N. No. 138042
 Prod. | Dwg. No. Z1445

Job Name : 2.16 HIGHLANDS BUILDING ROGERS

Manufacturer : ZURN

Model Number : ZS1469-4

Type :



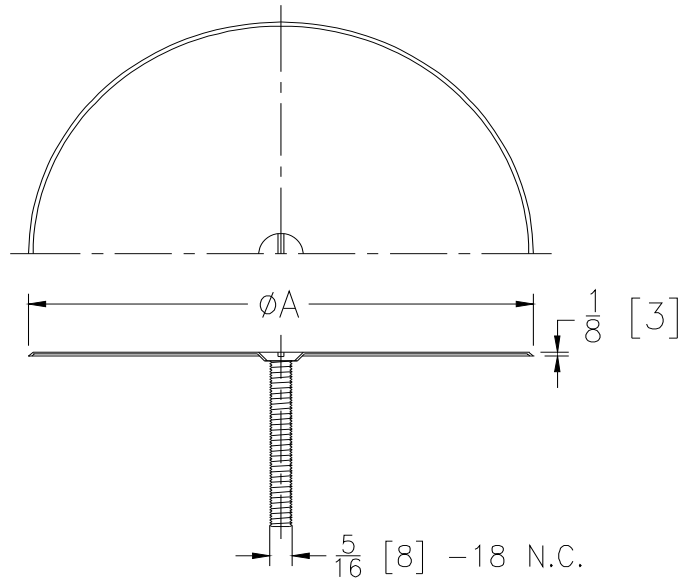
Z1469

ROUND ACCESS COVER

SPECIFICATION SHEET

TAG _____

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



Product Designation	A Cover Dia. IN [mm]	Nominal Pipe Size	Approx. Wt. Lbs. [kg]
-4	4 [102]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-5	5 [127]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-7	7 [178]	4, 5 [102, 127]	2 [1]
-9	9 [229]	6 [152]	3 [1.5]
-11	11 [279]	8 [203]	4 [2]

ENGINEERING SPECIFICATION: ZURN ZS1469 Round stainless steel access cover complete with securing screw.

OPTIONS (Check/specify appropriate options)

PREFIXES

____ ZAB Bronze Polished Cover
 ____ ZS Stainless Steel Polished Cover*

SUFFIXES

____ -SL Screw Longer Than 3-1/2 [89]
 ____ -VP Vandal-Proof Screw

* Regularly furnished unless otherwise specified.

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www.zurn.com

Rev. F
 Date: 07/26/16
 C.N. No. 134852
 Prod. | Dwg. No. Z1469



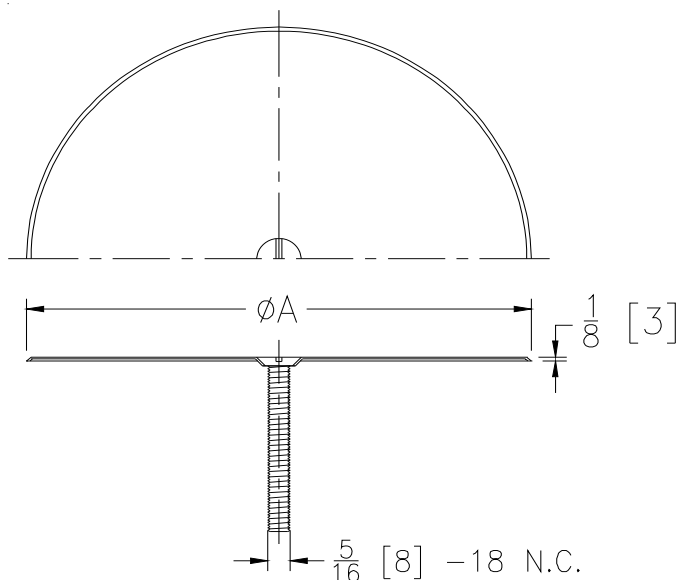
Z1469

ROUND ACCESS COVER

SPECIFICATION SHEET

TAG _____

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



Product Designation	A Cover Dia. IN [mm]	Nominal Pipe Size	Approx. Wt. Lbs. [kg]
-4	4 [102]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-5	5 [127]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-7	7 [178]	4, 5 [102, 127]	2 [1]
-9	9 [229]	6 [152]	3 [1.5]
-11	11 [279]	8 [203]	4 [2]

ENGINEERING SPECIFICATION: ZURN ZS1469
Round stainless steel access cover complete with
securing screw.

OPTIONS (Check/specify appropriate options)

PREFIXES

_____ ZAB	Bronze Polished Cover
_____ ZS	Stainless Steel Polished Cover*

SUFFIXES

_____ -SL	Screw Longer Than 3-1/2 [89]
_____ -VP	Vandal-Proof Screw

* Regularly furnished unless otherwise specified.

Zurn Industries, LLC | Specification Drainage Operation
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www.zurn.com

Rev. F
Date: 07/26/16
C.N. No. 134852
Prod. | Dwg. No. Z1469

Job Name : 2.16 HIGHLANDS BUILDING ROGERS

Manufacturer : ZURN

Model Number : ZS1469-7

Type :

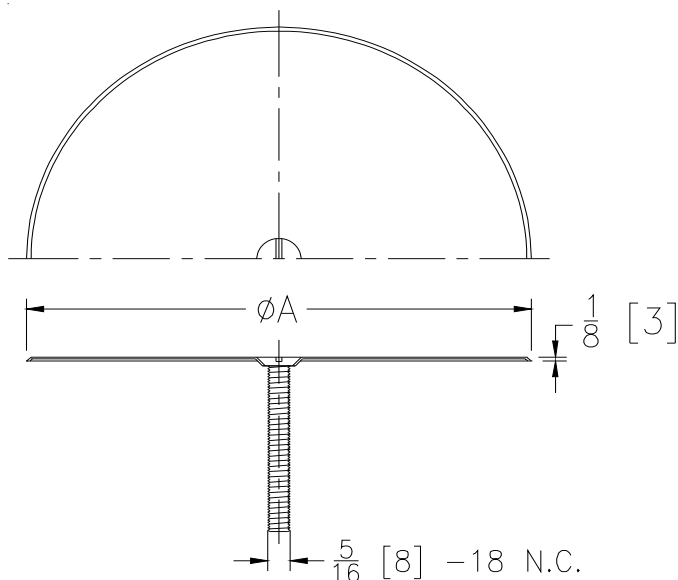
**Z1469**

ROUND ACCESS COVER

SPECIFICATION SHEET

TAG _____

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



Product Designation	A Cover Dia. IN [mm]	Nominal Pipe Size	Approx. Wt. Lbs. [kg]
-4	4 [102]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-5	5 [127]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-7	7 [178]	4, 5 [102, 127]	2 [1]
-9	9 [229]	6 [152]	3 [1.5]
-11	11 [279]	8 [203]	4 [2]

ENGINEERING SPECIFICATION: ZURN ZS1469
Round stainless steel access cover complete with securing screw.

OPTIONS (Check/specify appropriate options)**PREFIXES**

____ ZAB Bronze Polished Cover
 ____ ZS Stainless Steel Polished Cover*

SUFFIXES

____ -SL Screw Longer Than 3-1/2 [89]
 ____ -VP Vandal-Proof Screw

* Regularly furnished unless otherwise specified.

Zurn Industries, LLC | Specification Drainage Operation
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www.zurn.com

Rev. F
 Date: 07/26/16
 C.N. No. 134852
 Prod. | Dwg. No. Z1469



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

WHA-1

WATER HAMMER ARRESTERS

650 SERIES

HydraRester™

SPECIFICATION

Sioux Chief 650 Series piston-type water hammer arresters shall be required in piping systems. Water hammer arresters shall have sufficient volume of air to dissipate the calculated kinetic energy generated in the piping system. Arresters shall be effective when installed at any angle. Arresters shall be approved for installation with no access panel required. Water hammer arresters shall be ANSI/ASSE 1010 2004 certified. Arresters shall be sized and placed per manufacturer's instructions.

INSTALLATION

May be installed at any angle. No access panels required. Compatible with Press Fittings or Push Fittings. Refer to instructions on product package, catalog or website.

MATERIALS

Arrester body: type L copper tube

Piston: poly piston with two EPDM o-rings

Male thread fitting: copper MIP thread

Piston lubrication: Dow-Corning, 111 FDA approved silicone compound

PEX F1960 fitting: No Lead EcoBrass 69300

CERTIFICATIONS/APPROVALS

Certified by ASSE to the ANSI/ASSE 1010-2004 standard

WORKING LIMITS*

Max working temperature: 250°

Max working pressure: 350 PSIG

Burst tested: to 2,900 PSIG

*PEX and CPVC connection specifications are limited to those called out in their respective ASTM Standards for Fittings (CPVC D2846, PEX F1807, PEX 1960).

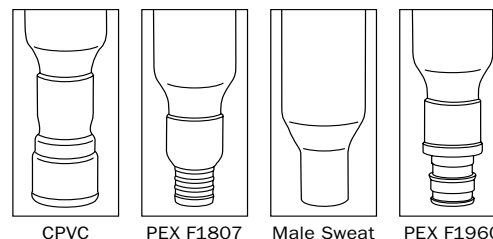
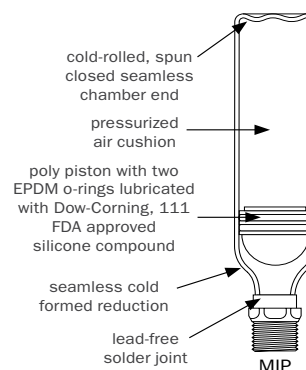
DIMENSIONS

Arrester size	A	B	C	D	E	F
Overall height						
Male thread	6½"	8¾"	11"	10⅞"	12⅝"	15⅞"
Male sweat	8¼"	10"	12½"	11"	13½"	16"
CPVC	7½"	9½"	12"	—	—	—
PEX F1807	6½"	8¾"	11"	—	—	—
PEX F1960	6½"	8¾"	11"	—	—	—
Chamber width	1⅜"	1⅜"	1⅜"	2⅛"	2⅛"	2⅛"
Connection size	½"	¾"	1"	1"	1"	1"
Volume (cu. in.)	5	7	11	20	29	36
Fixture units	1-11	12-32	33-60	61-113	114-154	155-330

ITEM # SUBMITTED	_____
JOB NAME	_____
LOCATION	_____
ENGINEER	_____
CONTRACTOR	_____
PO#	_____ TAG _____



652-A



Choose Item Number

- | | | | |
|---|--|--|--|
| ☐ 652-A = A size, MIP | ☐ 652-AS = Sweat/Press-Fit | ☐ 652-AX = A size, PEX 1807 | ☐ 652-AC = A size, CPVC socket |
| ☐ 653-B = B size, MIP | ☐ 653-BS = Sweat/Press-Fit | ☐ 653-BX = B size, PEX 1807 | ☐ 653-BC = B size, CPVC socket |
| ☐ 654-C = C size, MIP | ☐ 654-CS = Sweat/Press-Fit | ☐ 654-CX = C size, PEX 1807 | ☐ 654-CC = C size, CPVC socket |
| ☐ 655-D = D size, MIP | ☐ 655-DS = Sweat/Press-Fit | ☐ 652-AWG = A size, PEX 1960 | |
| ☐ 656-E = E size, MIP | ☐ 656-ES = Sweat/Press-Fit | ☐ 653-BWG = B size, PEX 1960 | |
| ☐ 657-F = F size, MIP | ☐ 657-FS = Sweat/Press-Fit | ☐ 654-CWG = C size, PEX 1960 | |

Sioux Chief

Sioux Chief Manufacturing Company | P: 1.800.821.3944 | F: 1.800.758.5950 | www.siouxchief.com

8-19

WATER HAMMER ARRESTERS

650 SERIES

HydraRester™

SPECIFICATION

Sioux Chief 650 Series piston-type water hammer arresters shall be required in piping systems. Water hammer arresters shall have sufficient volume of air to dissipate the calculated kinetic energy generated in the piping system. Arresters shall be effective when installed at any angle. Arresters shall be approved for installation with no access panel required. Water hammer arresters shall be ANSI/ASSE 1010 2004 certified. Arresters shall be sized and placed per manufacturer's instructions.

INSTALLATION

May be installed at any angle. No access panels required. Compatible with Press Fittings or Push Fittings. Refer to instructions on product package, catalog or website.

MATERIALS

Arrester body: type L copper tube

Piston: poly piston with two EPDM o-rings

Male thread fitting: copper MIP thread

Piston lubrication: Dow-Corning, 111 FDA approved silicone compound

PEX F1960 fitting: No Lead EcoBrass 69300

CERTIFICATIONS/APPROVALS

Certified by ASSE to the ANSI/ASSE 1010-2004 standard

WORKING LIMITS*

Max working temperature: 250°

Max working pressure: 350 PSIG

Burst tested: to 2,900 PSIG

*PEX and CPVC connection specifications are limited to those called out in their respective ASTM Standards for Fittings (CPVC D2846, PEX F1807, PEX 1960).

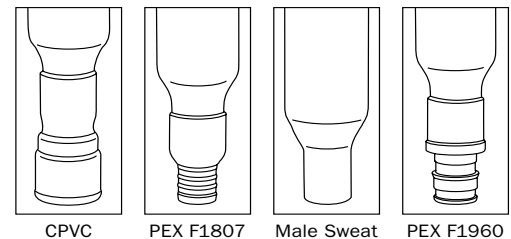
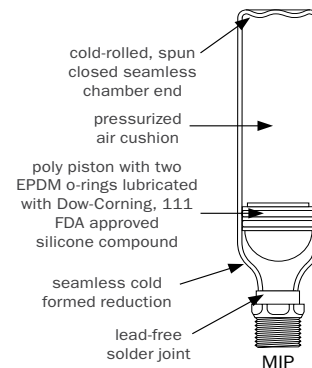
DIMENSIONS

Arrester size	A	B	C	D	E	F
Overall height						
Male thread	6½"	8¾"	11"	10⅞"	12⅝"	15⅞"
Male sweat	8¼"	10"	12½"	11"	13½"	16"
CPVC	7½"	9½"	12"	—	—	—
PEX F1807	6½"	8¾"	11"	—	—	—
PEX F1960	6½"	8¾"	11"	—	—	—
Chamber width	1⅜"	1⅜"	1⅜"	2⅛"	2⅛"	2⅛"
Connection size	½"	¾"	1"	1"	1"	1"
Volume (cu. in.)	5	7	11	20	29	36
Fixture units	1-11	12-32	33-60	61-113	114-154	155-330

ITEM # SUBMITTED	_____
JOB NAME	_____
LOCATION	_____
ENGINEER	_____
CONTRACTOR	_____
PO#	_____ TAG _____



652-A



Choose Item Number

- | | | | |
|---|--|--|--|
| ☐ 652-A = A size, MIP | ☐ 652-AS = Sweat/Press-Fit | ☐ 652-AX = A size, PEX 1807 | ☐ 652-AC = A size, CPVC socket |
| ☐ 653-B = B size, MIP | ☐ 653-BS = Sweat/Press-Fit | ☐ 653-BX = B size, PEX 1807 | ☐ 653-BC = B size, CPVC socket |
| ☐ 654-C = C size, MIP | ☐ 654-CS = Sweat/Press-Fit | ☐ 654-CX = C size, PEX 1807 | ☐ 654-CC = C size, CPVC socket |
| ☐ 655-D = D size, MIP | ☐ 655-DS = Sweat/Press-Fit | ☐ 652-AWG = A size, PEX 1960 | |
| ☐ 656-E = E size, MIP | ☐ 656-ES = Sweat/Press-Fit | ☐ 653-BWG = B size, PEX 1960 | |
| ☐ 657-F = F size, MIP | ☐ 657-FS = Sweat/Press-Fit | ☐ 654-CWG = C size, PEX 1960 | |

Sioux Chief

Sioux Chief Manufacturing Company

P: 1.800.821.3944

F: 1.800.758.5950

www.siouxchief.com

8-19

WATER HAMMER ARRESTERS

650 SERIES

HydraRester™

SPECIFICATION

Sioux Chief 650 Series piston-type water hammer arresters shall be required in piping systems. Water hammer arresters shall have sufficient volume of air to dissipate the calculated kinetic energy generated in the piping system. Arresters shall be effective when installed at any angle. Arresters shall be approved for installation with no access panel required. Water hammer arresters shall be ANSI/ASSE 1010 2004 certified. Arresters shall be sized and placed per manufacturer's instructions.

INSTALLATION

May be installed at any angle. No access panels required. Compatible with Press Fittings or Push Fittings. Refer to instructions on product package, catalog or website.

MATERIALS

Arrester body: type L copper tube

Piston: poly piston with two EPDM o-rings

Male thread fitting: copper MIP thread

Piston lubrication: Dow-Corning, 111 FDA approved silicone compound

PEX F1960 fitting: No Lead EcoBrass 69300

CERTIFICATIONS/APPROVALS

Certified by ASSE to the ANSI/ASSE 1010-2004 standard

WORKING LIMITS*

Max working temperature: 250°

Max working pressure: 350 PSIG

Burst tested: to 2,900 PSIG

*PEX and CPVC connection specifications are limited to those called out in their respective ASTM Standards for Fittings (CPVC D2846, PEX F1807, PEX 1960).

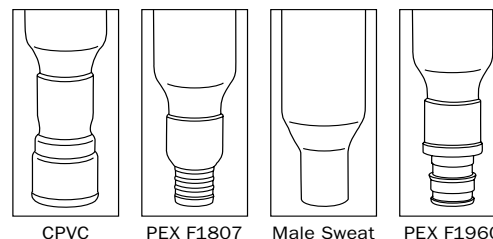
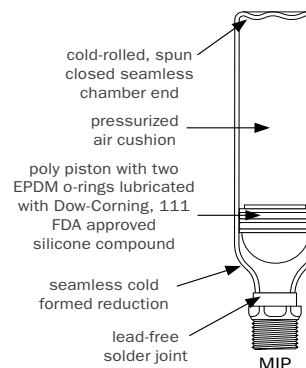
DIMENSIONS

Arrester size	A	B	C	D	E	F
Overall height						
Male thread	6½"	8¾"	11"	10⅞"	12⅝"	15⅞"
Male sweat	8¼"	10"	12½"	11"	13½"	16"
CPVC	7½"	9½"	12"	—	—	—
PEX F1807	6½"	8¾"	11"	—	—	—
PEX F1960	6½"	8¾"	11"	—	—	—
Chamber width	1⅜"	1⅜"	1⅜"	2⅛"	2⅛"	2⅛"
Connection size	½"	¾"	1"	1"	1"	1"
Volume (cu. in.)	5	7	11	20	29	36
Fixture units	1-11	12-32	33-60	61-113	114-154	155-330

ITEM # SUBMITTED	_____
JOB NAME	_____
LOCATION	_____
ENGINEER	_____
CONTRACTOR	_____
PO#	_____ TAG _____



652-A



Choose Item Number

- | | | | |
|---|--|--|--|
| ☐ 652-A = A size, MIP | ☐ 652-AS = Sweat/Press-Fit | ☐ 652-AX = A size, PEX 1807 | ☐ 652-AC = A size, CPVC socket |
| ☐ 653-B = B size, MIP | ☐ 653-BS = Sweat/Press-Fit | ☐ 653-BX = B size, PEX 1807 | ☐ 653-BC = B size, CPVC socket |
| ☐ 654-C = C size, MIP | ☐ 654-CS = Sweat/Press-Fit | ☐ 654-CX = C size, PEX 1807 | ☐ 654-CC = C size, CPVC socket |
| ☐ 655-D = D size, MIP | ☐ 655-DS = Sweat/Press-Fit | ☐ 652-AWG = A size, PEX 1960 | |
| ☐ 656-E = E size, MIP | ☐ 656-ES = Sweat/Press-Fit | ☐ 653-BWG = B size, PEX 1960 | |
| ☐ 657-F = F size, MIP | ☐ 657-FS = Sweat/Press-Fit | ☐ 654-CWG = C size, PEX 1960 | |

Sioux Chief

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8-19

WATER HAMMER ARRESTERS

650 SERIES

HydraRester™

SPECIFICATION

Sioux Chief 650 Series piston-type water hammer arresters shall be required in piping systems. Water hammer arresters shall have sufficient volume of air to dissipate the calculated kinetic energy generated in the piping system. Arresters shall be effective when installed at any angle. Arresters shall be approved for installation with no access panel required. Water hammer arresters shall be ANSI/ASSE 1010 2004 certified. Arresters shall be sized and placed per manufacturer's instructions.

INSTALLATION

May be installed at any angle. No access panels required. Compatible with Press Fittings or Push Fittings. Refer to instructions on product package, catalog or website.

MATERIALS

Arrester body: type L copper tube

Piston: poly piston with two EPDM o-rings

Male thread fitting: copper MIP thread

Piston lubrication: Dow-Corning, 111 FDA approved silicone compound

PEX F1960 fitting: No Lead EcoBrass 69300

CERTIFICATIONS/APPROVALS

Certified by ASSE to the ANSI/ASSE 1010-2004 standard

WORKING LIMITS*

Max working temperature: 250°

Max working pressure: 350 PSIG

Burst tested: to 2,900 PSIG

*PEX and CPVC connection specifications are limited to those called out in their respective ASTM Standards for Fittings (CPVC D2846, PEX F1807, PEX 1960).

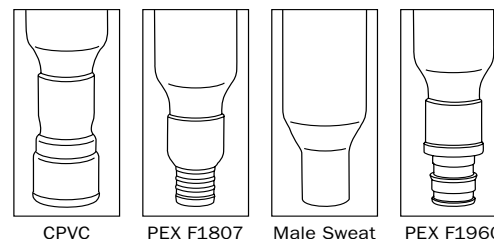
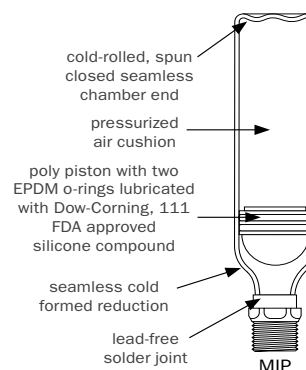
DIMENSIONS

Arrester size	A	B	C	D	E	F
Overall height						
Male thread	6½"	8¾"	11"	10⅞"	12⅝"	15⅞"
Male sweat	8¼"	10"	12½"	11"	13½"	16"
CPVC	7½"	9½"	12"	—	—	—
PEX F1807	6½"	8¾"	11"	—	—	—
PEX F1960	6½"	8¾"	11"	—	—	—
Chamber width	1⅜"	1⅜"	1⅜"	2⅛"	2⅛"	2⅛"
Connection size	½"	¾"	1"	1"	1"	1"
Volume (cu. in.)	5	7	11	20	29	36
Fixture units	1-11	12-32	33-60	61-113	114-154	155-330

ITEM # SUBMITTED	_____
JOB NAME	_____
LOCATION	_____
ENGINEER	_____
CONTRACTOR	_____
PO#	_____ TAG _____



652-A



Choose Item Number

- | | | | |
|---|--|--|--|
| ☐ 652-A = A size, MIP | ☐ 652-AS = Sweat/Press-Fit | ☐ 652-AX = A size, PEX 1807 | ☐ 652-AC = A size, CPVC socket |
| ☐ 653-B = B size, MIP | ☐ 653-BS = Sweat/Press-Fit | ☐ 653-BX = B size, PEX 1807 | ☐ 653-BC = B size, CPVC socket |
| ☐ 654-C = C size, MIP | ☐ 654-CS = Sweat/Press-Fit | ☐ 654-CX = C size, PEX 1807 | ☐ 654-CC = C size, CPVC socket |
| ☐ 655-D = D size, MIP | ☐ 655-DS = Sweat/Press-Fit | ☐ 652-AWG = A size, PEX 1960 | |
| ☐ 656-E = E size, MIP | ☐ 656-ES = Sweat/Press-Fit | ☐ 653-BWG = B size, PEX 1960 | |
| ☐ 657-F = F size, MIP | ☐ 657-FS = Sweat/Press-Fit | ☐ 654-CWG = C size, PEX 1960 | |

Sioux Chief

Sioux Chief Manufacturing Company | P: 1.800.821.3944 | F: 1.800.758.5950 | www.siouxchief.com

8-19

WATER HAMMER ARRESTERS

650 SERIES

HydraRester™

SPECIFICATION

Sioux Chief 650 Series piston-type water hammer arresters shall be required in piping systems. Water hammer arresters shall have sufficient volume of air to dissipate the calculated kinetic energy generated in the piping system. Arresters shall be effective when installed at any angle. Arresters shall be approved for installation with no access panel required. Water hammer arresters shall be ANSI/ASSE 1010 2004 certified. Arresters shall be sized and placed per manufacturer's instructions.

INSTALLATION

May be installed at any angle. No access panels required. Compatible with Press Fittings or Push Fittings. Refer to instructions on product package, catalog or website.

MATERIALS

Arrester body: type L copper tube

Piston: poly piston with two EPDM o-rings

Male thread fitting: copper MIP thread

Piston lubrication: Dow-Corning, 111 FDA approved silicone compound

PEX F1960 fitting: No Lead EcoBrass 69300

CERTIFICATIONS/APPROVALS

Certified by ASSE to the ANSI/ASSE 1010-2004 standard

WORKING LIMITS*

Max working temperature: 250°

Max working pressure: 350 PSIG

Burst tested: to 2,900 PSIG

*PEX and CPVC connection specifications are limited to those called out in their respective ASTM Standards for Fittings (CPVC D2846, PEX F1807, PEX 1960).

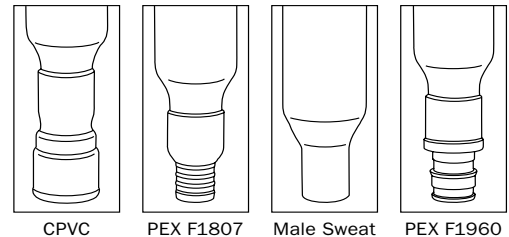
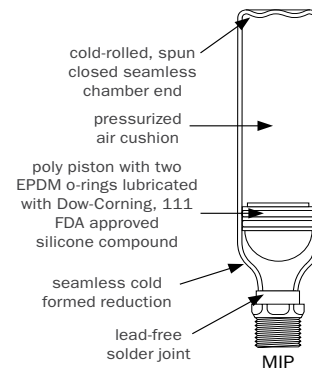
DIMENSIONS

Arrester size	A	B	C	D	E	F
Overall height						
Male thread	6½"	8¾"	11"	10⅞"	12⅝"	15⅞"
Male sweat	8¼"	10"	12½"	11"	13½"	16"
CPVC	7½"	9½"	12"	—	—	—
PEX F1807	6½"	8¾"	11"	—	—	—
PEX F1960	6½"	8¾"	11"	—	—	—
Chamber width	1⅜"	1⅜"	1⅜"	2⅛"	2⅛"	2⅛"
Connection size	½"	¾"	1"	1"	1"	1"
Volume (cu. in.)	5	7	11	20	29	36
Fixture units	1-11	12-32	33-60	61-113	114-154	155-330

ITEM # SUBMITTED	_____
JOB NAME	_____
LOCATION	_____
ENGINEER	_____
CONTRACTOR	_____
PO#	_____ TAG _____



652-A



Choose Item Number

- | | | | |
|---|--|--|--|
| ☐ 652-A = A size, MIP | ☐ 652-AS = Sweat/Press-Fit | ☐ 652-AX = A size, PEX 1807 | ☐ 652-AC = A size, CPVC socket |
| ☐ 653-B = B size, MIP | ☐ 653-BS = Sweat/Press-Fit | ☐ 653-BX = B size, PEX 1807 | ☐ 653-BC = B size, CPVC socket |
| ☐ 654-C = C size, MIP | ☐ 654-CS = Sweat/Press-Fit | ☐ 654-CX = C size, PEX 1807 | ☐ 654-CC = C size, CPVC socket |
| ☐ 655-D = D size, MIP | ☐ 655-DS = Sweat/Press-Fit | ☐ 652-AWG = A size, PEX 1960 | |
| ☐ 656-E = E size, MIP | ☐ 656-ES = Sweat/Press-Fit | ☐ 653-BWG = B size, PEX 1960 | |
| ☐ 657-F = F size, MIP | ☐ 657-FS = Sweat/Press-Fit | ☐ 654-CWG = C size, PEX 1960 | |

VACUUM BREAKER ARRESTER

652-AD & 657-FD series

VacuRester™

SPECIFICATION

Sioux Chief 652-AD or 657-FD piston-type closed-atmosphere vacuum breaker arrester shall be required where the piping system is subject to cavitation on the non-pressure side of a quick closing valve. Vacuum breaker arrester shall be effective when installed at any angle, and with no access panel required. Vacuum breaker arrester shall be sized and placed per manufacturer's instructions.

MATERIALS

arrester body: type L copper tube
piston: poly piston with two EPDM o-rings
male thread fitting: copper MIP thread
piston lubrication: Dow-Corning, 111 FDA approved silicone compound

WORKING LIMITS*

max working temperature: 250°F
max working pressure: 350 PSIG
burst tested: to 2,900 PSIG

INSTALLATION

angle: May be installed at any angle
access panels: No access panels required

SIZING & PLACEMENT

For high flow tub valves with long spout tubes, install 652-AD VacuRester on spout tube, in between tub valve and spout, within one foot of the tub valve.

For high flow shower valves, install 652-AD VacuRester on shower riser, in between shower valve and shower head, within one foot of the shower valve.

For high flow lines with shut-off valve in the middle of pipe run, install Vacu-Rester on non-pressure side, within one foot of shut-off valve. Pipe sizes ½" thru 1", install 652-AD. Pipe sizes 1¼" thru 3", install 657-FD.

DIMENSIONS

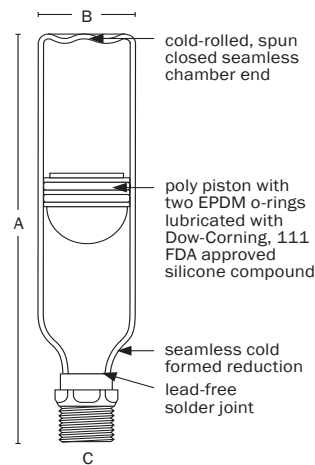
A: Length
 B: Width
 C: Connection size

652-AD	657-FD
6½"	15½"
1⅜"	2⅜"
½"	1"

Item # Submitted	_____
Job Name	_____
Location	_____
Engineer	_____
Contractor	_____
PO#	_____ TAG _____



652-AD



- ☐ 652-AD ½" MIP thread
- ☐ 657-FD 1" MIP thread

Sioux Chief

Sioux Chief Manufacturing Company • tel: 1-800-821-3944 • www.siouxchief.com • fax: 1-800-758-5950

2-10

Arresters & Primers 13



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

BP-1



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

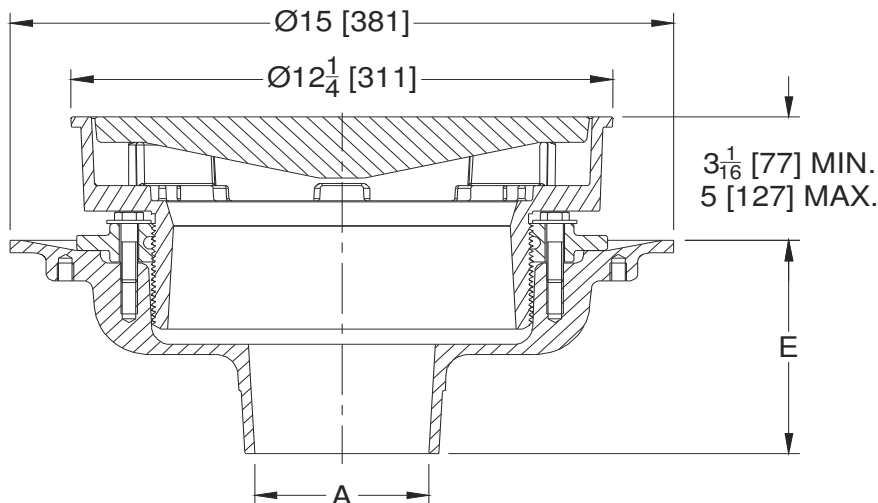
AD-1

**Z526**12-1/4 [311] DIAMETER TOP ADJUSTABLE
HEAVY-DUTY DRAIN

SPECIFICATION SHEET

TAG _____

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



A Pipe Size In. [mm]	Approx. Wt. Lbs. [kg]	Grate Open Area Sq. In. [cm ²]
2,3,4 [51,76,102]	60 [27]	33 [213]
6 [152]	57 [26]	
8 [203]	58 [26]	

ENGINEERING SPECIFICATION: ZURN Z526

12-1/4" [311 mm] Diameter top drain, Dura-Coated cast iron body with bottom outlet, seepage pan, membrane flashing clamp and adjustable extension frame with heavy-duty tractor grate.

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

3,4,6 [76,102,152]
 3,4,6 [76,102,152]
 2,3,4,6 [51,76,102,152,203]
 2,3,4 [51,76,102]

(Specify size/type) **OUTLET**

___ IC Inside Caulk
 ___ IG Inside Gasket
 ___ **NH No-Hub**
 ___ NL Neo-Loc

'E' DIM.

5-1/4 [133]
 5-1/4 [133]
 5-1/4 [133]
 4-5/8 [117]

PREFIXES

___ **Z** D.C.C.I. Body and Top*
 ___ **ZN** D.C.C.I. Body with Polished Nickel Bronze Top (Add 11/16 [17] to 12-1/4 [311] & 3/16 [5] to 3-1/16 [77] to 5 [127] Dim.)

SUFFIXES

___ -DG Duresist Grate
 ___ -G Galvanized Cast Iron
 ___ -S Secondary Strainer
 ___ **-T Square Top**
 ___ -IC Neo-Loc Test Cap Gasket (2, 3, 4 [51, 76, 102] NL Bottom Outlet Only)
 ___ -TS Top Secured with Slotted Screws
 ___ -V Backwater Valve (See Z1099)
 ___ **-VP Vandal-Proof Secured Top**
 ___ -Y Sediment Bucket

* Regularly furnished unless otherwise specified.

Zurn Industries, LLC | Specification Drainage Operation
 1801 Pittsburgh Avenue, Erie, PA 16502, Ph. 855-663-9876, Fax 814-454-7929
 In Canada | **Zurn Industries Limited**
 7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, Ph. 877-892-5216
www.zurn.com

Rev. G
 Date: 10/16/2019
 C.N. No. 141246
 Prod. | Dwg. No. Z526



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

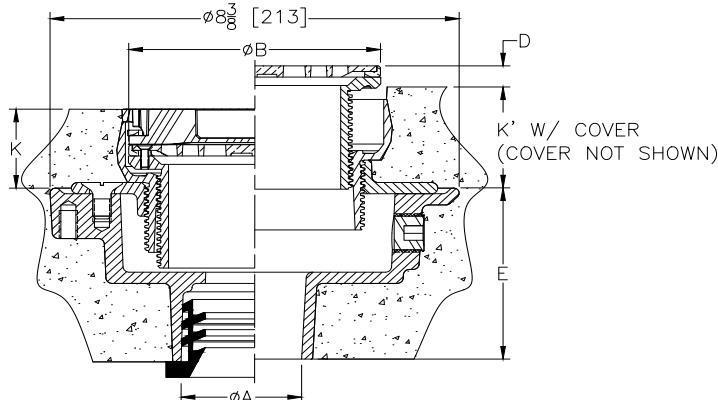
AD-2

**Z415-BZ1**BODY ASSEMBLY W/"TYPE B" STRAINER
and EZ1™ TECHNOLOGY

SPECIFICATION SHEET

TAG _____

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



Note:
Minimum K Dimension is only
possible with -LR Option when
using 6" [152] or 8" [203] Strainer

Dimensions In Inches								Approx. Wt. Lbs. [kg]	Strainer Open Area Sq. In [cm2]
A Pipe Size	B Strainer Dia	D		K		K'			
		Min	Max.	Min.	Max	Min.	Max		
2, 3 [51, 76]	5 [127]	0	1 [25]	1-25/32 [45]	2-31/32 [75]	2-9/32 [58]	3-15/32 [88]	16 [7]	6-1/4 [40]
2, 3, 4 [51, 76, 102]	6 [152]	0	1 [25]	1-13/16 [46]	3 [76]	2-5/16 [59]	3-1/2 [89]	19 [9]	9 [58]
3, 4 [76, 102]	8 [203]	0	31/32 [25]	2-5/32 [55]	3-11/32 [85]	2-21/32 [67]	3-27/32 [98]	24 [11]	20 [129]
6 [152]	8 [203]	0	31/32 [25]	2-5/32 [55]	3-11/32 [85]	2-21/32 [67]	3-27/32 [98]	26 [12]	20 [129]

ENGINEERING SPECIFICATION:

Zurn Z415-BZ1 floor and shower drain, Dura-coated cast iron body with bottom outlet, combination invertible membrane clamp and adjustable collar with seepage slots and top assembly. EZ1™ drainage series is engineered to simplify product installation, comprised of concrete shield, up to 1" [25] of vertical post pour adjustment, pre-packaged shims for tilt correction and integrated, self-contained "Type B" light duty, heel proof strainer with rough-in cover for protection during concrete pour.

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

2, 3, 4 [51, 76, 102]
2 [51]
3 [76]
4 [102]
6 [152]
2, 3, 4 [51, 76, 102]
2, 3, 4 [51, 76, 102]

(Specify size/type) **OUTLET**

____ -IC Inside Caulk
____ -IP Threaded
____ -IP Threaded
____ -IP Threaded
____ -IP Threaded
____ -IP Threaded
____ -NH No-Hub
____ -NL Neo-Loc

'E' BODY HT.DIM.

4-3/16 [106]
2-7/16 [62]
2-3/4 [70]
2-13/16 [71]
2-7/8 [73]
3-13/16 [97]
3-7/8 [98]

PREFIXES

____ ZB D.C.C.I. Body Assembly w/ Polished Bronze Top
____ ZN D.C.C.I. Body Assembly w/ Polished Nickel Bronze Top*
____ ZS D.C.C.I. Body Assembly w/ Polished Stainless Steel Top

SUFFIXES

____ -AR Acid Resisting Epoxy Coated Cast Iron
____ -EF 3/4 [19] Extension Frame
____ -G Galvanized Cast Iron
____ -LR Low Rough-In (For 6 [152] and 8 [203] Strainers Only)
____ -P Trap Primer Connection (Specify 1/2" [13] or 3/4 [19])
____ -SA Stabilizer Assembly for Sub-Floor Install (See Z1035)
____ -SQ Stabilizer Assembly for Steel Decking Install (See Z1035-Q)

____ -SR Stabilizer Ring Assembly for On-Grade Install
____ -TC Neo-Loc Test Cap Gasket (2-3-4 [51-76-102] NL Outlet Only)
____ -TSP Trap Seal Protection Device (Size Matches Drain Outlet Selected) (See Z1072)
____ -U 2 - 3-1/4 [51-83] High Post-Pour Extension Adapter
____ -UP 1-3/4 [44] Pre-Pour Adjustment Extension Adapter
____ -VP Vandal-Proof Secured Top
____ -Y Sediment Bucket

* Regularly furnished unless otherwise specified

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - www.P65Warnings.ca.gov⚠ **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

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www.zurn.com

Rev. G
Date: 01/02/23
C.N. No. 144898
Patent zurn.com/patents
Prod. | Dwg. No. Z415-BZ1

Location: _____



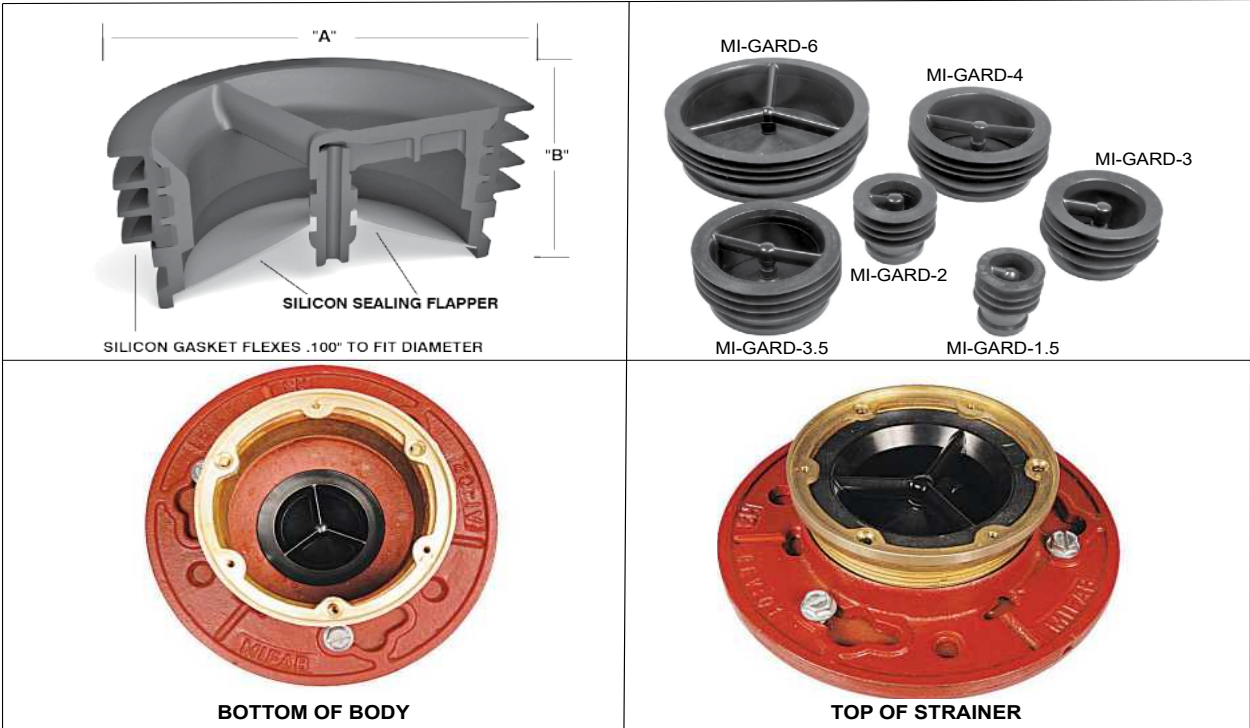
MI-GARD®

FLOOR DRAIN TRAP SEAL

Specification: MIFAB® MI-GARD® Series inline floor drain trap seal with UV resistant ABS plastic frame, silicon rubber sealing flapper and four flexible sealing ribs. Tested and certified to the ASSE 1072 Standard and listed with IAPMO and I.P.C. Specify connection size (1 1/2", 2", 3", 3 1/2", 4" or 6"). 10 year warranty is included.



Function: Used in the outlet connections of floor drain bodies, or the inside of floor drain strainers to seal the opening to prevent odors, sewer gases, and insects from entering up through the floor drain grate. The MI-GARD®'s four flexible silicone sealing ribs ensure easy installation into openings that have variations in size. The MI-GARD® will open to allow drainage and close when there is no water flow. MI-GARD can be used independent or in conjunction with trap seal primers for added protection against sewer gases and insects entering up through the floor drain grate. MI-GARD is not designed to substitute the trap seal primers.



MODEL NO.	"A" (PIPE SIZE)	"B" (HEIGHT)
MI-GARD-1.5	1-1/2" (38)	2" (51)
MI-GARD-2	2" (51)	2" (51)
MI-GARD-3	3" (76)	2" (51)
MI-GARD-3.5	3 1/2" (89)	2" (51)
MI-GARD-4	4" (102)	2" (51)
MI-GARD-6	6" (152)	2" (51)

Not intended to be used in lieu of a trap seal primer. 6" MI-GARD not IAPMO certified.

Note: The MI-GARD-6 is designed in accordance with industry standards but is not listed. MI-GARD Floor Drain Trap Seals are in compliance with International Plumbing Code (I.P.C.)



MI-GARD-3,4 and 6 are I.C.C. approved.

MI-GARD-1.5

MI-GARD® prevents the following from entering through the top of floor drains:

- Odors and sewer gases
- Insects

CALIFORNIA PROPOSITION 65 WARNING. This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Job Name: _____ Page No: _____
Section No: _____ Contractor: _____
Schedule No: _____ Purchase Order No: _____

MIFAB® reserves the right to make changes in material and design without formal notice and obligation.

USA: 1-800-465-2736 www.mifab.com CAN: 1-800-387-3880

2024-05-03



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

FD-1

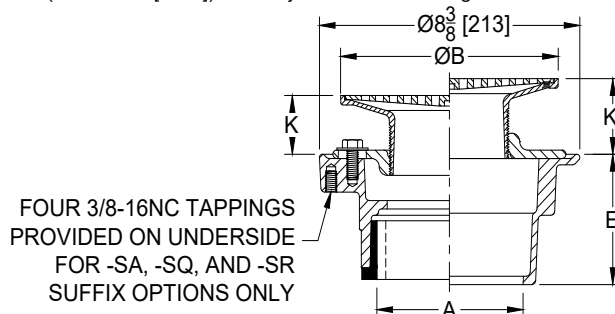
**Z415B**

BODY ASSEMBLY W/ "TYPE B" STRAINER

SPECIFICATION SHEET

TAG _____

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



Dimensions in Inches [mm]						Approx. Wt. Lbs. [kg]	Strainer Open Area Sq. In. [cm²]
A - Pipe Size	B Strainer Dia.	K		K'			
		Min.	Max.	Min.	Max.		
2,3 [51,76]	5 [127]	1 [25]	1-1/2 [38]	1-3/32 [28]	2-1/4 [57]	11 [5]	6-1/4 [40]
2,3,4 [51,76,102]	6 [152]	1 [25]	1-25/32 [45]	1-13/32 [36]	2-17/32 [64]	13 [6]	9 [58]
2,3,4 [51,76,102]	7 [178]	1 [25]	2-1/8 [54]	1-23/32 [44]	2-7/8 [73]	14 [6]	12 [77]
3,4 [76,102]	8 [203]	1-5/32 [30]	2-1/8 [54]	1-3/4 [44]	2-7/8 [73]	16 [7]	19 [123]
6 [152]	8 [203]	1-5/32 [30]	2-1/8 [54]	1-3/4 [44]	2-7/8 [73]	18 [8]	19 [123]
6 [152]	10 [254]	1-7/16 [37]	2-1/2 [64]	2 [51]	3-1/4 [83]	22 [10]	23 [148]

ENGINEERING SPECIFICATION: ZURN ZN415B

Floor and shower drain, Dura-Coated cast iron body with bottom outlet, combination invertible membrane clamp and adjustable collar with seepage slots and "TYPE B" polished nickel bronze, light-duty heel-proof strainer.

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

2,3,4 [51,76,102]

2 [51]

3 [76]

4 [102]

6 [152]

2,3,4 [51,76,102]

2,3,4 [51,76,102]

(Specify size/type) **OUTLET**

___ IC Inside Caulk

___ IP Threaded

___ IP Threaded

___ IP Threaded

___ IP Threaded

___ NH No-Hub

___ NL Neo-Loc

'E' BODY HT. DIM.

4-3/16 [106]

2-7/16 [62]

2-3/4 [70]

2-13/16 [71]

2-7/8 [73]

3-13/16 [97]

3-7/8 [98]

PREFIXES

___ ZB D.C.C.I. Body Assembly w/ Polished Bronze Top

___ ZN D.C.C.I. Body Assembly w/ Polished Nickel Bronze Top*

SUFFIXES

___ -AR Acid Resisting Epoxy Coated Cast Iron

___ -CP Chrome-Plated BronzeTop

___ -G Galvanized Cast Iron

___ -HD Heavy-Duty Slotted Grate (ZN 5,6[127,152]Sizes Only)

___ -OF Oval Funnel (See Z329-7)

(7,8,10[178,203,254] Strainers only)

___ -P Trap Primer Connection (Specify 1/2 [13] or 3/4 [19])

___ -PC Protective Cover

___ -SA Stabilizer Assembly (See Z1035)

___ -SR Stabilizer Ring

___ -SQ Stabilizer Q-Deck (See Z1035-Q)

___ -TC Neo-loc Test Cap Gasket

(2,3,4 [51,76,102] NL Outlet Only)

___ -U 1-3 [25-76] High Extension Adapter

___ -V Backwater Valve

___ -VP Vandal-Proof Secured Top

___ -Y Sediment Bucket

___ -4 4[102] Diameter Funnel (Z328)

___ -90 90° Threaded Side Outlet Body

Assembly (2,3 [51,76] Only)

* Regularly furnished unless otherwise specified.

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - www.P65Warnings.ca.gov⚠ **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

Zurn Industries, LLC | Specification Drainage Operation
1801 Pittsburgh Avenue, Erie, PA USA 16502, Ph. 855.663.9876

In Canada | Zurn Industries Limited
7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, Ph. 877.892.5216

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Rev. X
Date: 01/05/23
C.N. No. 144898
Patent zurn.com/patents
Prod. | Dwg. No. Z415B

Location: _____



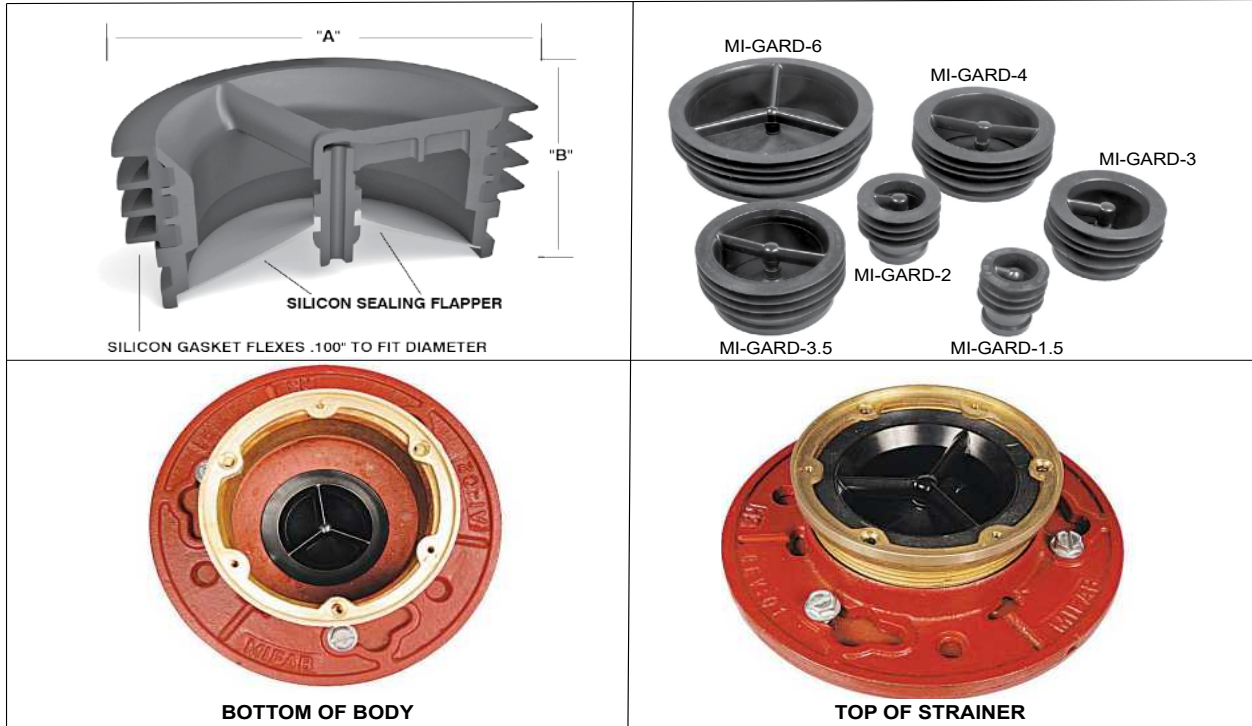
MI-GARD®

FLOOR DRAIN TRAP SEAL

Specification: MIFAB® MI-GARD® Series inline floor drain trap seal with UV resistant ABS plastic frame, silicon rubber sealing flapper and four flexible sealing ribs. Tested and certified to the ASSE 1072 Standard and listed with IAPMO and I.P.C. Specify connection size (1 1/2", 2", 3", 3 1/2", 4" or 6"). 10 year warranty is included.



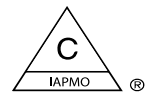
Function: Used in the outlet connections of floor drain bodies, or the inside of floor drain strainers to seal the opening to prevent odors, sewer gases, and insects from entering up through the floor drain grate. The MI-GARD®'s four flexible silicone sealing ribs ensure easy installation into openings that have variations in size. The MI-GARD® will open to allow drainage and close when there is no water flow. MI-GARD can be used independent or in conjunction with trap seal primers for added protection against sewer gases and insects entering up through the floor drain grate. MI-GARD is not designed to substitute the trap seal primers.



MODEL NO.	"A" (PIPE SIZE)	"B" (HEIGHT)
MI-GARD-1.5	1-1/2" (38)	2" (51)
MI-GARD-2	2" (51)	2" (51)
MI-GARD-3	3" (76)	2" (51)
MI-GARD-3.5	3 1/2" (89)	2" (51)
MI-GARD-4	4" (102)	2" (51)
MI-GARD-6	6" (152)	2" (51)

Not intended to be used in lieu of a trap seal primer. 6" MI-GARD not IAPMO certified.

Note: The MI-GARD-6 is designed in accordance with industry standards but is not listed. MI-GARD Floor Drain Trap Seals are in compliance with International Plumbing Code (I.P.C.)



MI-GARD-3,4 and 6 are I.C.C. approved.

MI-GARD-1.5

MI-GARD® prevents the following from entering through the top of floor drains:

- Odors and sewer gases
- Insects

CALIFORNIA PROPOSITION 65 WARNING. This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Job Name: _____ Page No: _____
 Section No: _____ Contractor: _____
 Schedule No: _____ Purchase Order No: _____

MIFAB® reserves the right to make changes in material and design without formal notice and obligation.

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2024-05-03



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

FS-1

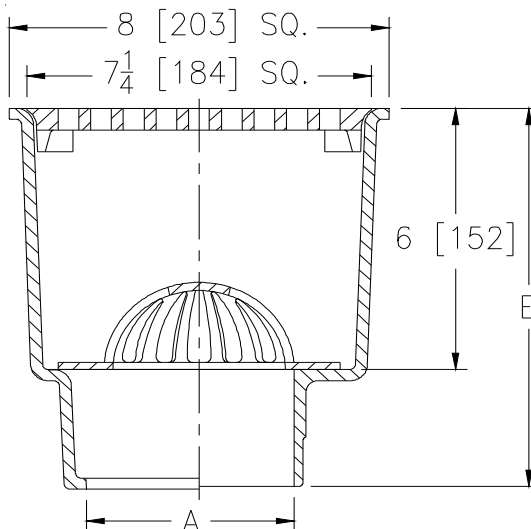
**Z1910**

8 X 8 [203 X 203] A.R.E. SANI-FLORECEPTOR
6 [152] SUMP DEPTH

SPECIFICATION SHEET

TAG _____

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



A - Pipe Size in [mm]	Approx Wt lbs. [kg]	Grate Open Area in ² [cm ²]
2, 3, 4 [51, 76, 102]	25 [11]	19 [123]

ENGINEERING SPECIFICATION: ZURN Z1910

Sani-Flor Receptor 8" x 8" x 6" [203mm x 203mm x 152mm] deep cast iron body and square, medium-duty grate with 7/16" [11mm] slotted openings, white acid resisting porcelain enamel interior and top, complete with white ABS anti-splash interior bottom dome strainer.

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

3, 4 [76, 102]
2, 3, 4 [51, 76, 102]
2, 3, 4 [51, 76, 102]

(Specify size/type) **OUTLET**

___ IC Inside Caulk
___ NH No-Hub
___ NL Neo-Loc

'E' BODY HT. DIMENSION

Z	ZN
8-3/4 [222]	9-1/4 [235]
8-5/8 [219]	9-1/8 [232]
8 [203]	8-1/2 [216]

PREFIXES

<u>Z</u>	Cast Iron Body with White A.R.E. Interior*
<u>ZN</u>	Cast Iron Body with White A.R.E. Interior, 8-9/16 [217] Square N.B. Frame and Full Grate with 5/16 [8] Square Openings (Add 1/2 [13] to 8 [203] Dim.)

SUFFIXES

___ -DX	Dex-O-Tex Flange (ZN Only)	___ -8	Grate w/ 8-7/8 x 3-5/8 x 3-3/4 [225 x 92 x 95] High Oval Funnel
___ -K	Anchor Flange	___ -11	Vandal-Proof Secured Grate (ZN Only)
___ <u>-KC</u>	<u>Anchor Flange with Seepage Holes and Clamp Collar</u>	___ -15	Solid Loose Set Cover
___ -LD	Less Bottom Dome Strainer	___ -19	Full Hinged Grate (ZN Only)
___ -P	1/2 [13] Trap Primer Connection (See Z1023)	___ <u>-23</u>	<u>Aluminum Bucket</u>
___ -TC	Neo-Loc Test Cap Gasket (2, 3, 4 [51, 76, 102] NL Bottom Outlet Only)	___ -25	White A.R.C. Bucket
___ -1	Less Grate	___ -31	Stainless Steel Mesh Liner for Bucket
___ -2	1/2 Grate	___ -32	Aluminum Dome Strainer
___ -3	3/4 Grate	___ -33	White A.R.C. Anti-Splash Bottom Dome Strainer
___ -4	Full Grate with Square Center Opening		
___ -6	Grate w/ 6 [152] Dia. x 6 [152] High Funnel		

* Regularly furnished unless otherwise specified.

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
www.zurn.com

Rev. J
Date: 09/28/2017
C.N. No. 138077
Prod. | Dwg. No. Z1910

Location: _____



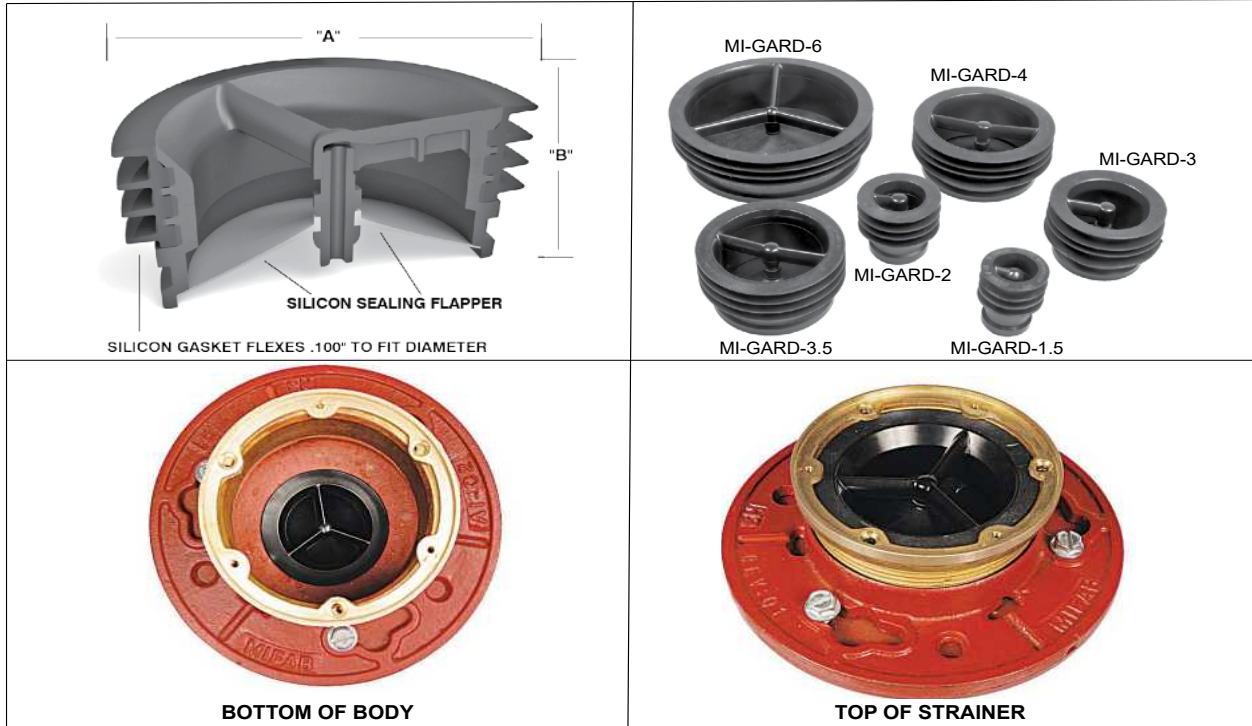
MI-GARD®

FLOOR DRAIN TRAP SEAL

Specification: MIFAB® MI-GARD® Series inline floor drain trap seal with UV resistant ABS plastic frame, silicon rubber sealing flapper and four flexible sealing ribs. Tested and certified to the ASSE 1072 Standard and listed with IAPMO and I.P.C. Specify connection size (1 1/2", 2", 3", 3 1/2", 4" or 6"). 10 year warranty is included.



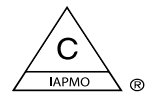
Function: Used in the outlet connections of floor drain bodies, or the inside of floor drain strainers to seal the opening to prevent odors, sewer gases, and insects from entering up through the floor drain grate. The MI-GARD®'s four flexible silicone sealing ribs ensure easy installation into openings that have variations in size. The MI-GARD® will open to allow drainage and close when there is no water flow. MI-GARD can be used independent or in conjunction with trap seal primers for added protection against sewer gases and insects entering up through the floor drain grate. MI-GARD is not designed to substitute the trap seal primers.



MODEL NO.	"A" (PIPE SIZE)	"B" (HEIGHT)
MI-GARD-1.5	1-1/2" (38)	2" (51)
MI-GARD-2	2" (51)	2" (51)
MI-GARD-3	3" (76)	2" (51)
MI-GARD-3.5	3 1/2" (89)	2" (51)
MI-GARD-4	4" (102)	2" (51)
MI-GARD-6	6" (152)	2" (51)

Not intended to be used in lieu of a trap seal primer. 6" MI-GARD not IAPMO certified.

Note: The MI-GARD-6 is designed in accordance with industry standards but is not listed. MI-GARD Floor Drain Trap Seals are in compliance with International Plumbing Code (I.P.C.)



MI-GARD-3,4 and 6 are I.C.C. approved.

MI-GARD-1.5

MI-GARD® prevents the following from entering through the top of floor drains:

- Odors and sewer gases
- Insects

CALIFORNIA PROPOSITION 65 WARNING. This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Job Name: _____ Page No: _____
 Section No: _____ Contractor: _____
 Schedule No: _____ Purchase Order No: _____

MIFAB® reserves the right to make changes in material and design without formal notice and obligation.

USA: 1-800-465-2736 www.mifab.com CAN: 1-800-387-3880

2024-05-03



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

FS-2

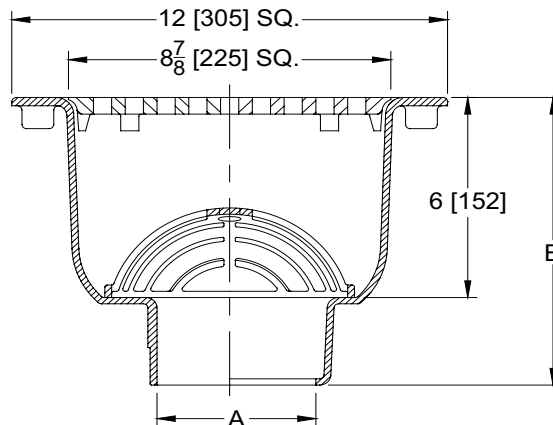
**Z1900**

12 x 12 [305 x 305] A.R.E. SANI-FLOR RECEPTOR
6 [152] SUMP DEPTH

SPECIFICATION SHEET

TAG _____

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



A Pipe size in [mm]	Approx. Weight lbs [kg]	Grate Open Area in ² [cm ²]
2, 3, 4 [51, 76, 102]	32 [15]	31 [200]

ENGINEERING SPECIFICATION: ZURN Z1900

Sani-Flor Receptor 12" x 12" x 6" [305mm x 305mm x 152mm] deep cast iron body and square, light-duty grate with 1/2" [13mm] slotted openings, white acid resisting porcelain enamel interior and top, complete with white ABS anti-splash interior bottom dome strainer.

Options (Check/specify appropriate options)

PIPE SIZE

3, 4 [76, 102]
2, 3, 4 [51, 76, 102]
2, 3, 4 [51, 76, 102]

(Specify Size/Type) **OUTLET**

___ IC Inside Caulk
___ NH No-Hub
___ NL Neo-Loc

'E' BODY HEIGHT DIMENSION

Z	ZN/ZS
8-5/8 [219]	9-1/8 [232]
8-5/8 [219]	9-1/8 [232]
8 [203]	8-1/2 [216]

PREFIXES

___ Z Cast Iron Body with White A.R.E. Interior*
___ ZN Cast Iron Body with White A.R.E. Interior, 12-1/2 [317] Square N.B. Frame and Full Grate with 1/2 [13] Openings (Add 1/2 [13] to 12 [305] Dim.)
___ ZS Cast Iron Body with White A.R.E. Interior, 12-1/2 [317] Square Stainless Steel Frame and Full Grate with 1/2 [13] Openings (Add 1/2 [13] to 12 [305] Dim.)

SUFFIXES

___ -DX Dex-O-Tex Flange (ZN Only)	___ -4 Full Grate w/ Center Opening (2 [51] Dia. for Z) and (3-1/32 [77] Square for ZN & ZS)
___ -HD Stainless Steel Frame w/ X-Heavy Duty Stainless Steel Grate (ZS Only)	___ -6 Grate w/ 6 [152] Dia. x 6 [152] High Funnel
___ -HP Heel-Proof Grate (ZN Only)	___ -8 Grate w/ 8-7/8 x 3-5/8 x 3-3/4 [225 x 92 x 95] High Oval Funnel
___ -K Anchor Flange with Seepage Holes	___ -11 Vandal-Proof Secured Top (ZN & ZS Only)
___ -KC Anchor Flange with Seepage Holes and Clamp Collar	___ -15 Solid Loose Set Cover (Z & ZN Only)
___ -LD (Less) Bottom Dome Strainer	___ -19 Full Hinged Grate (ZN Only)
___ -P 1/2 [13] Trap Primer Connection (See Z1023)	___ -23 Aluminum Bucket
___ -SA Stabilizer Assembly (See Z1903)	___ -25 White A.R.C. Bucket
___ -TC Neo-Loc Test Cap Gasket	___ -31 Stainless Steel Mesh Liner for Bucket
___ -VPS Vandal-Proof Strainer	___ <u>-32 Aluminum Dome Strainer</u>
___ -1 (Less) Grate	___ -33 White A.R.C. Anti-Splash Bottom Dome Strainer
___ -2 1/2 Grate	
___ -3 3/4 Grate	

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - www.P65Warnings.ca.gov⚠ **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

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www.zurn.com

Rev. N
Date: 01/11/23
C.N. No. 144899
Patent zurn.com/patents
Prod. | Dwg. No. Z1900

Location: _____



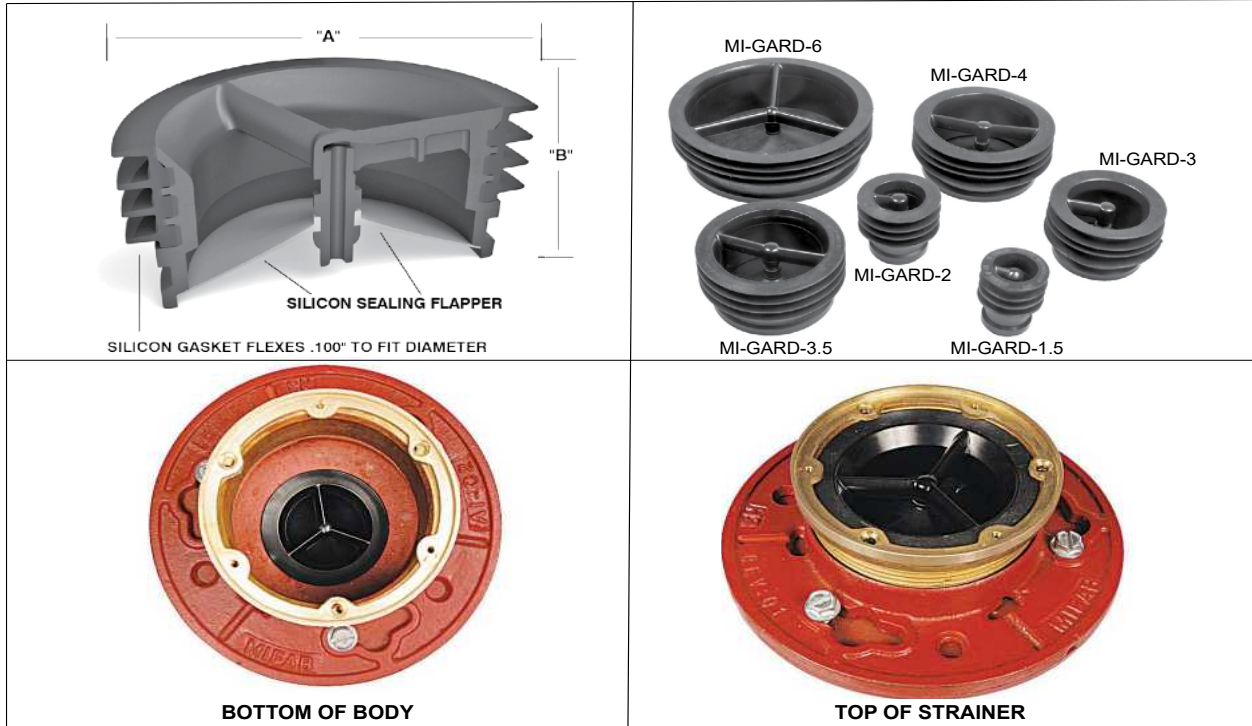
MI-GARD®

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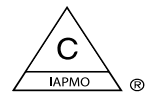
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MI-GARD-6	6" (152)	2" (51)

Not intended to be used in lieu of a trap seal primer. 6" MI-GARD not IAPMO certified.

Note: The MI-GARD-6 is designed in accordance with industry standards but is not listed. MI-GARD Floor Drain Trap Seals are in compliance with International Plumbing Code (I.P.C.)



MI-GARD-3,4 and 6 are I.C.C. approved.

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2024-05-03



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

FS-2

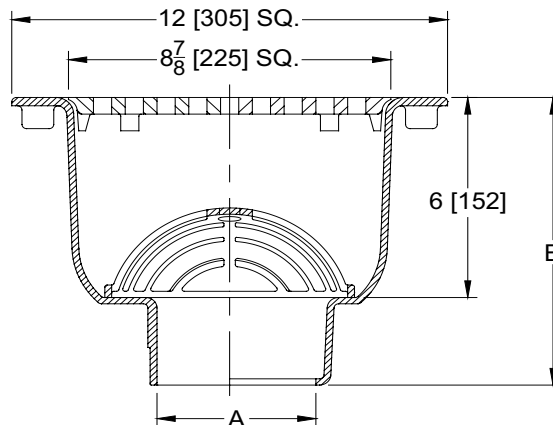
**Z1900**

12 x 12 [305 x 305] A.R.E. SANI-FLOR RECEPTOR
6 [152] SUMP DEPTH

SPECIFICATION SHEET

TAG _____

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Options (Check/specify appropriate options)

PIPE SIZE

3, 4 [76, 102]
2, 3, **4** [51, 76, 102]
2, 3, 4 [51, 76, 102]

(Specify Size/Type) **OUTLET**

___ IC Inside Caulk
___ **NH No-Hub**
___ NL Neo-Loc

'E' BODY HEIGHT DIMENSION

Z	ZN/ZS
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Rev. N
Date: 01/11/23
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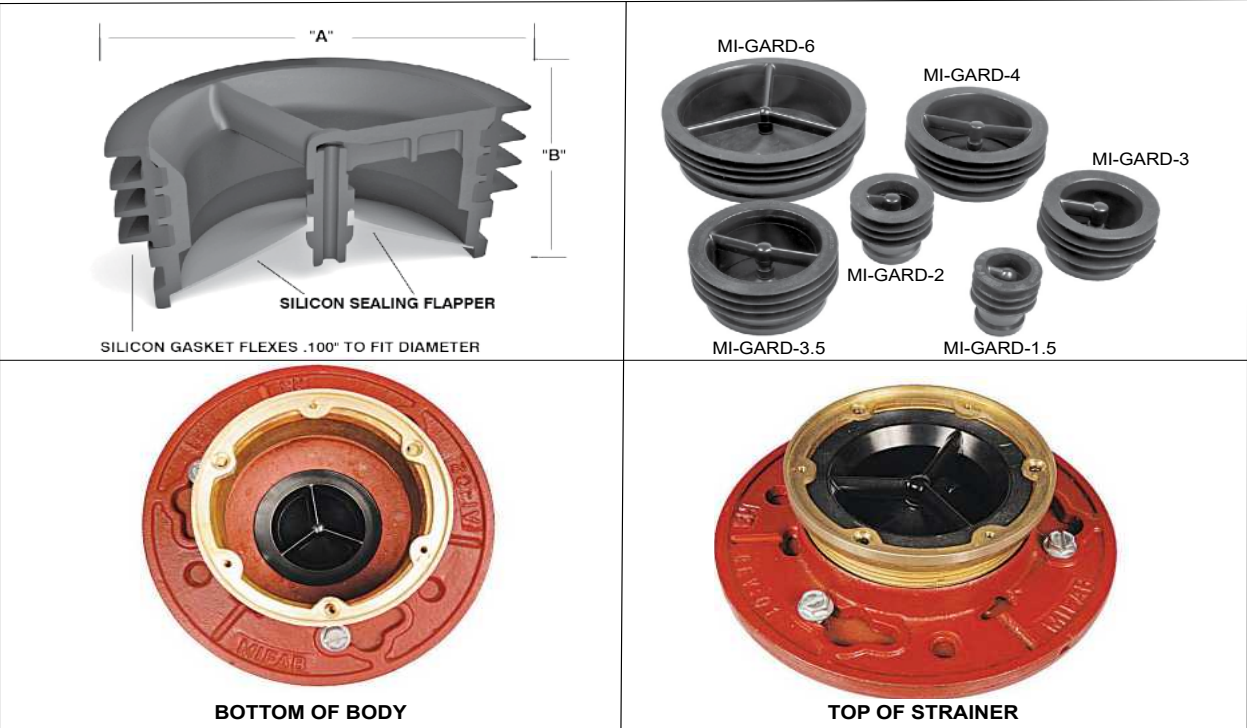
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2024-05-03



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

HYD-1

The patented Woodford RHY2-1-MS is intended for irrigation purposes and to provide water availability on commercial building roofs. Applications include window washing, cleaning of condenser coils, cooling towers and other types of roof equipment. The RHY2 is backflow protected with an ASSE 1052 double check backflow preventer that is field testable. The backflow device does not require removal for drain down. The RHY2 has a built in vent that allows drainage. Valve body of hydrant is drilled and tapped with 1/8" drain hole which must be piped to a drain location.

The RHY2-1-MS allows for installation flexibility since it is not necessary to install hydrant when the patented Mounting System is bolted to the roof. The Mounting System utilizes a 3" opening that allows the hydrant to be installed later if desired. All necessary mounting hardware for proper installation on a commercial roof is supplied,

Hydrant Features:

- Rod guide eliminates side pull on rod, reduces wear on packing, packing nut & stem.
- Adjustable link for easy adjustment and positive lever lock tension.
- One piece variable flow plunger with large cushion type seal for longer life is not easily damaged and assures shut-off even when foreign particles are present.
- Hydrant automatically drains when shut off even with hose attached.
- All hydrant repairs can be made from top of unit without removing hydrant. Parts are readily available.

Specifications:

- Hose Connection Backflow Preventer:
 - Model 50HF with 3/4" hose connection
 - ASSE 1052 Listed
 - Field Testable Dual Check holds against 125 psi backflow pressure
- 1" NPT female inlet connection
- 1 1/4" U.S. made galvanized pipe casing
- **Maximum Working Pressure:** 100 p.s.i.
- **Maximum Temperature:** 120° F
- 1/8" NPT Drain hole (Must be piped to a drain location)

Mounting System: (Can be ordered Separately)

- Cast iron Hydrant Support
- Cast iron Under Deck Flange
 - 4 bolts draw tight against the roof decking and the hydrant support.
 - 3 clamp screws tighten against the hydrant pipe to secure the hydrant's vertical position through the roof.
- Well Seal seals tight between the hydrant support and hydrant pipe.
- EPDM Boot covers well seal and top of hydrant support.
- 2° Shim is supplied, if needed, for installation on pitched roofs.

Patent information:

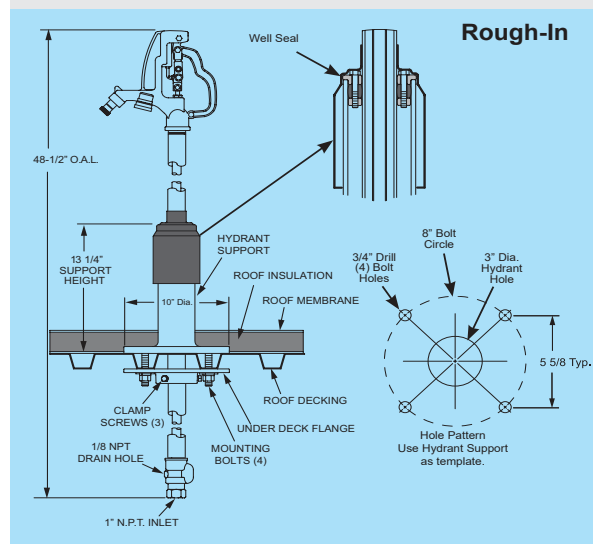
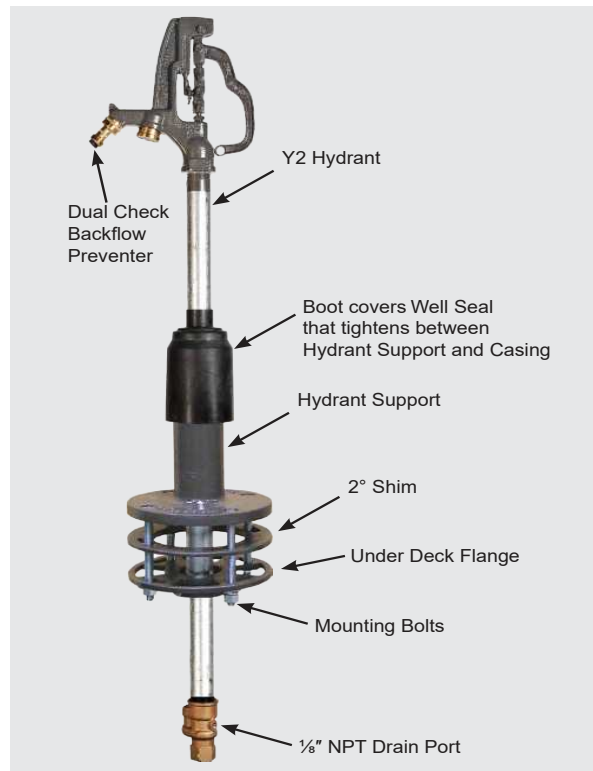
<http://woodfordmfg.com/patents/>

For Installation / Troubleshooting Instructions go to www.woodfordmfg.com or call 1-800-621-6032

Freezeless Roof Hydrant

Model RHY2-1-MS

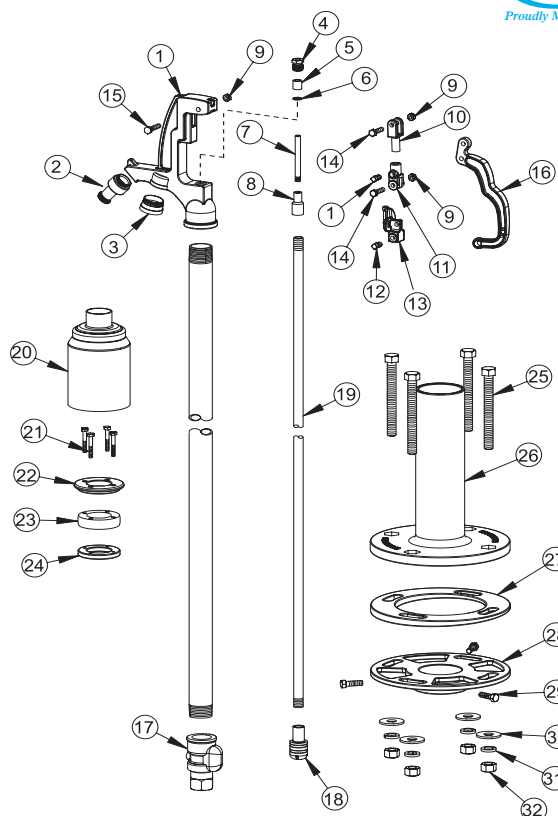
Can be ordered separately from Mounting System RH-MS





MODEL RHY2-1-MS PARTS LIST

ITEM	PART#	DESCRIPTION
	15245	RHY2 Head Assembly (Includes Items 1-16)
1	10612	RHY2 Head
2	50HF-BR	50HF Backflow Preventer - Brass
3	15238	Diverter Assembly
4	10100	Packing Nut
5	10101	Packing
6	10102	Packing Support Washer
7	10104	Brass Rod Stem
8	10011	Reducing Coupling
9	10206	Hex Nut (3)
10	10614	RH Upper Link
11	15242	RH Lower Link (Includes Item 12)
12	10019	Set Screw (2)
13	15243	RH Cam & Clevis Assembly
14	10020	Link Bolt (2)
15	10021	Lever Bolt
16	10613	RH Lever
17	10017	Valve Body (1" NPT Inlet)
18	10106	Plunger
19	10023	Operating Pipe (35-1/2" Long)
20	10608	Boot, EPDM 1 1/4" Pipe
21	10606	Bolt, Hex Head 1/4-20 X 1 3/4" (4)
22	10582	Well Seal, Top
23	10609	Well Seal, EPDM
24	10583	Well Seal, Bottom
25	10584	Bolt, Hex Head 5/8-11 X 6" (4)
26	10579	Hydrant Support, Casting
27	10581	2" Shim, Casting
28	10580	Under Deck Flange
29	10607	Screw, Clamp 3/8-16 Hex Head X 1 3/4" (3)
30	10604	Washer, Plain 5/8 (4)
31	10605	Washer, Lock 5/8 (4)
32	10585	Nut, Hex 5/8-11 UNC (4)
	RK-Y1	Repair Kit (Includes items 4-7 & 18)
	RK-RHL	Repair Kit (Includes items 9-15)



When ordering, specify RH part number option listed below.

Part# RHY2-1-MS

Consists of the complete
Roof Hydrant system:

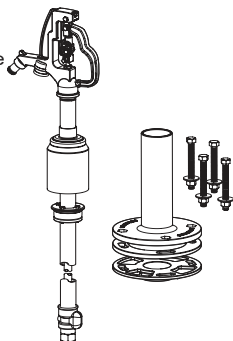
Qty. 1 RHY2-1

Y2 Hydrant shipped in 1
carton.

Qty. 1 RH-MS

Mounting System
shipped in 1 carton.

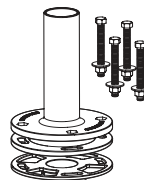
Total Shipping Wt.
2 cartons: 50 lbs

**Part# RH-MS**

Carton contents
consists of:
Mounting System/
Rough-In Components
(Parts 25-32 above)

- Hydrant Support
- 2" Shim,
- Under Deck Flange
- Mounting Bolts, Nuts,
Washers.

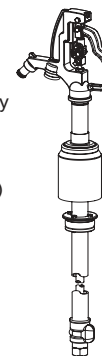
Shipped in 1 Carton.
Shipping Wt. - 30 lbs

**Part# RHY2-1**

Carton contents
consists of:

- Y2 Hydrant Assembly
(Parts 1-19 above)
- Well Seal
(Parts 21-24 above)
- Boot (Part 20 above)

Shipped in 1 Carton.
Shipping Wt. - 20 lbs



For more information contact...

WOODFORD MANUFACTURING COMPANY, LLC

2121 Waynoka Road, Colorado Springs, Colorado 80915 • Phone: (800) 621-6032 • Fax: (800) 765-4115

To view our complete product line visit: www.woodfordmfg.com or email: sales@woodfordmfg.com



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

OD-3

Job Name : 2.16 HIGHLANDS BUILDING ROGERS

Manufacturer : MIFAB

Model Number : MH-301

Type :

Location: _____



**MH-301,
401, 601**

**SIPHONIC ROOF DRAIN
WITH 2" OVERFLOW**

Specification: MIFAB® / Hydromax Series MH-301, 401, 601 (specify outlet connection size) lacquered cast iron siphonic roof drain with wide anchor flange, cast iron waterproofing membrane clamp ring with integral 2" water dam and ductile iron air baffle / inducer with Type 304 stainless steel allen key hardware.

Function: Used in any type of roofs as a siphonic roof drain overflow system. The siphonic overflow roof drain is designed to accept water once the main siphonic roof drain is clogged or overwhelmed.

Type 304 Stainless Steel
Allen Key hardware

Lacquered cast iron
membrane clamp with
integral 2" water dam

Lacquered cast
iron body (See "B"
dimension in chart
below)

Lacquered ductile
iron air baffle /
inducer (See "A"
dimension in chart
below)

Tapped connection
to receive debris
guard (if required)

MH-301, 401, 601 meets ANSI / ASME A112.6.9 Siphonic Roof Drain Standard.

MODEL NUMBER	PIPE SIZE	BODY HEIGHT NO HUB (STANDARD)	PERFORMANCE AND DIMENSION INFORMATION				
			Resistance Value (K)	Minimum Flow Rate (GPM)	Maximum Flow Rate (GPM)	"A" Air Baffle / Inducer Diameter	"B" Body Diameter
☒ MH-301	3" (76)	3 1/8" (79)	0.12	23.00	415.00	8.86" (225.11)	13" (330)
☐ MH-401	4" (102)	3 1/2" (90)	0.08	75.00	750.00	12.19" (309.73)	19 3/8" (492)
☐ MH-601	6" (152)	4 3/4" (120)	0.04	160.00	1,800.00	17.87" (454)	25 1/4" (640)

SUFFIX **OPTIONAL VARIATIONS:**

☐ -11 Acid resistant epoxy coated body

☐ -12A Galvanized body and membrane clamp

☐ -13 Galvanized body, membrane clamp and dome

☐ -B Sump receiver

☐ -BA Minimum 51% material cost made in the USA

SUFFIX **OPTIONAL VARIATIONS:**

☐ -G Stainless steel ballast guard

☐ -M Debris Guard

☐ -PA Pennsylvania Steel Act compliant product

☐ -UDC Underdeck clamp

CALIFORNIA PROPOSITION 65 WARNING. This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Job Name: _____
Section No: _____
Schedule No: _____

Page No: _____
Contract: _____
Purchase Order No: _____

MIFAB® reserves the right to make changes in material and design without formal notice or obligation.

USA: 1-800-465-2736 www.mifab.com CAN: 1-800-387-3880

2024-06-12



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

OD-1

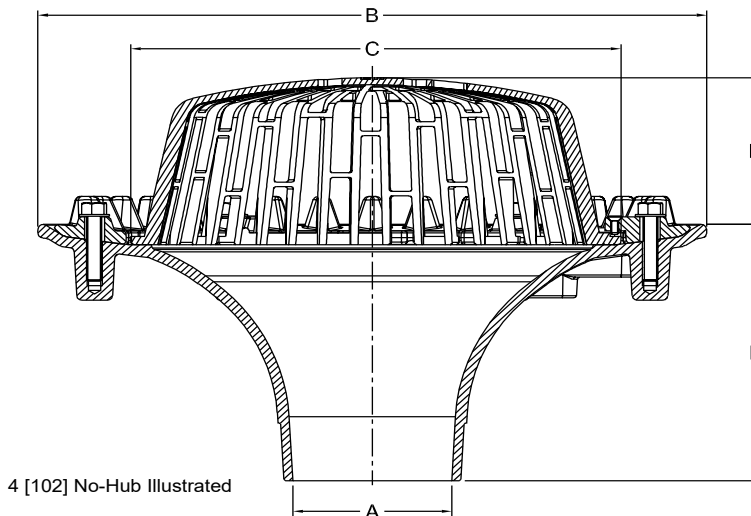
**Z100F**

FLOFORCE® HIGH PERFORMANCE ROOF DRAIN
DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

SPECIFICATION SHEET

TAG _____

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



4 [102] No-Hub Illustrated

A Outlet Size In. [mm]	B Body Diameter In [mm]	C Dome Diameter In [mm]	D Height, Roof to Dome Top In [mm]	Weight lbs [kg]	Dome Open Area Sq. In. [cm2]
2,3,4 [51,76,102]	16-9/16 [421]	12-5/16 [313]	4 [102]	31 [14]	121 [780]
6,8 [152, 203]	20-3/32 [510]	15-7/8 [403]	6 [152]	43 [19]	214 [1380]

ENGINEERING SPECIFICATION: ZURN Z100F

FLOFORCE® High efficient flow performing roof drain. Roof drain engineered to evacuate water off of roof structure by incorporating a smooth funnel-shaped interior surface, providing a seamless transition to outlet connection, and eliminating internal obstructions. Complete with Dura-Coated cast iron body with combination membrane flashing clamp/gravel guard and low silhouette Poly-Dome. Flashing clamp/gravel guard provided to prevent debris from entering the drain while allowing water to immediately pass through at zero head level. Poly-dome designed to maximize effective open area and promote efficient flow. (Refer to pages 2-6 for flow curves.)

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

2 3, 4 [51, 76, 102]
6, 8 [152, 203]
2, 3, 4 [51, 76, 102]
6 [152]
2, 3, 4 [51, 76, 102]
6, 8 [152, 203]
3, 4 [76, 102]
6 [152]

(Specify size/type) OUTLET

____ NH No-Hub
____ NH No-Hub
____ NL Neo-Loc
____ NL Neo-Loc
____ IP Threaded
____ IP Threaded
____ IC Inside Caulk
____ IC Inside Caulk

E BODY HT. DIM.

6-15/16 [176]
7-7/16 [189]
7-3/8 [187]
8-1/32 [204]
5-15/16, 6-3/16, 6-5/16 [151, 157, 160]
6-11/16, 6-3/4 [170, 171]
5-13/16 [148]
6-1/16 [154]

PREFIXES

____ Z D.C.C.I. Body with Poly-Dome* ____ ZA D.C.C.I. Body with Aluminum Dome ____ ZC D.C.C.I. Body with Cast Iron Dome

SUFFIXES

____ -AR Acid Resistant Epoxy Coated	____ -SC Secondary Clamp Collar
____ -C Underdeck Clamp	____ -TC Neo-Loc Test Cap Gasket
____ -DP Top-Set® Deck Plate (Replaces both the -C and -R)	____ (2, 3, 4 [51, 76, 102] NL Bottom Outlet Only)
____ -DR Top-Set® Drain Riser	____ -VP Vandal-Proof Secured Top
____ -E Static Extension 1 [25] thru 4 [102] (Specify Ht.)	____ -84 Stainless Steel Perforated Gravel Guard
____ -EA Adjustable Extension Assembly	____ -85 Stainless Steel Perforated Extension
____ 2-1/8 [54] thru 3-1/2 [89]	____ <u>-89</u> 2 [51] High Overflow Dam
____ -G Galvanized Cast Iron	____ -89-3 3 [76] High Overflow Dam
____ <u>-R</u> Roof Sump Receiver	____ -89-4 4 [102] High Overflow Dam

* Regularly furnished unless otherwise specified

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**Z100F**

FLOFORCE® HIGH PERFORMANCE ROOF DRAIN

DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

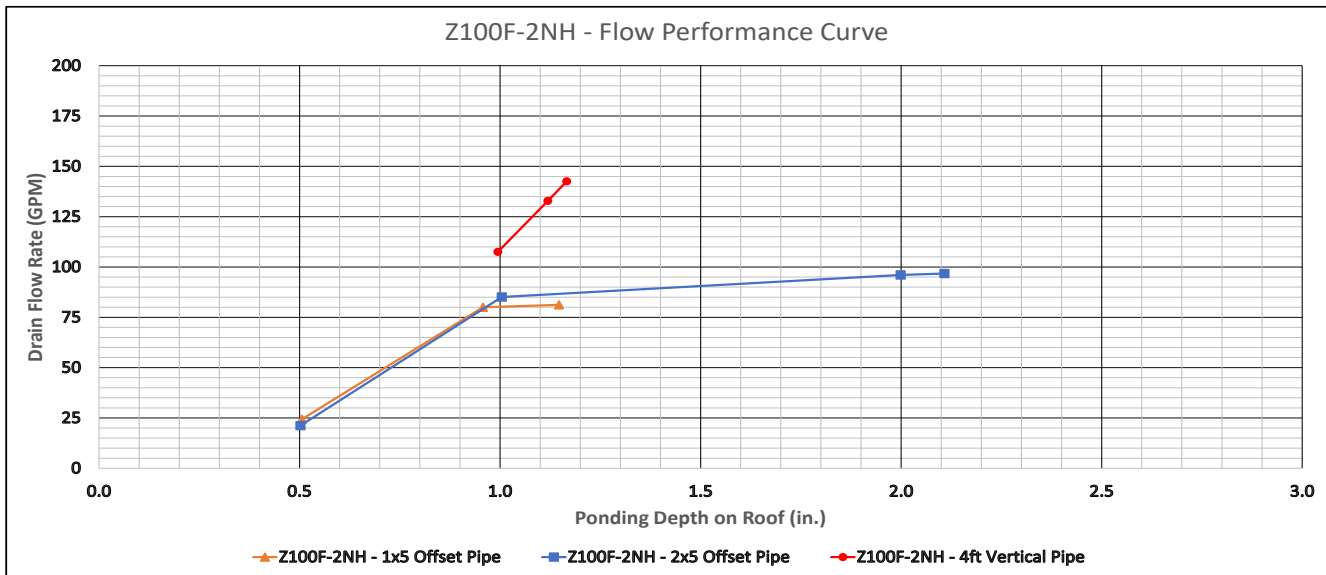
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Note: Results obtained from the application of flow measurement procedures specified in ASME A112.6.4/CSA B79.4 indicate a flow rate achieved under laboratory conditions using a 1219 mm (48 in) vertical discharge pipe; all added elements of drainage design may increase or decrease the flow rates reported. Variables such as wind, vortices, debris, roof design, roof obstructions, and slope, can significantly change the roof drain flow rate. Designers are advised to consider these and other possible variables in roof drainage design.

1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
0.51	24.38	0.50	21.20	0.99	107.51
0.96	79.97	1.00	85.12	1.12	132.80
1.15	81.16	2.00	96.00	1.17	142.59
-	-	2.11	96.76	-	-



Z100F-2NH



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Z100F FLOFORCE® HIGH PERFORMANCE ROOF DRAIN DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

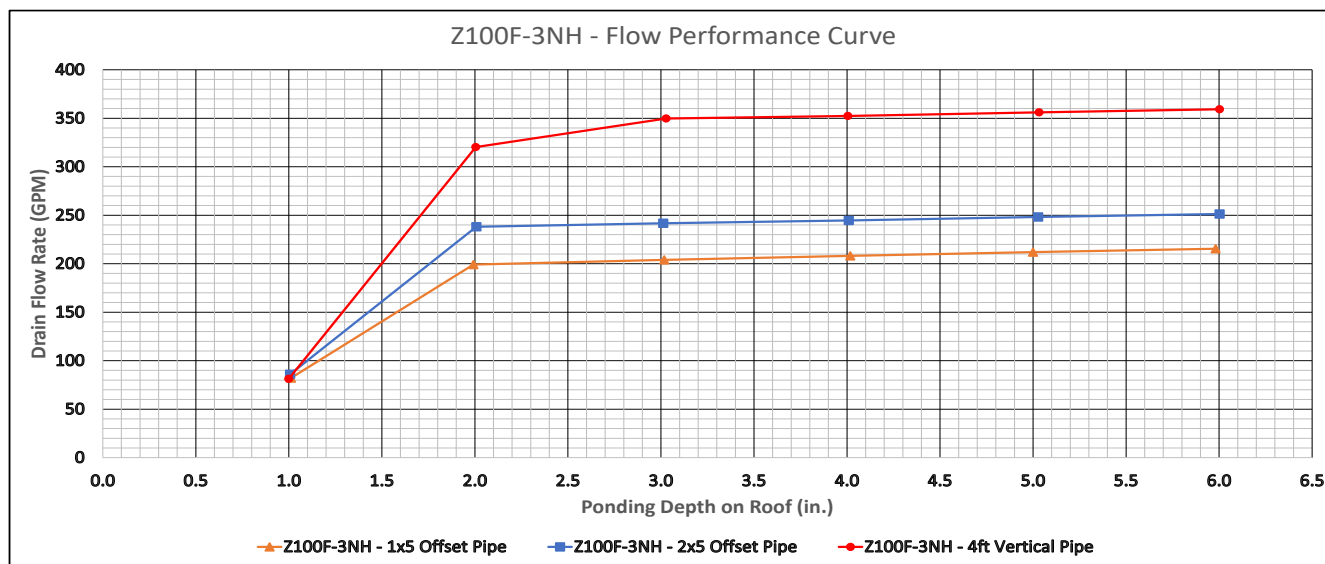
Design and Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice

Note: Results obtained from the application of flow measurement procedures specified in ASME A112.6.4/CSA B79.4 indicate a flow rate achieved under laboratory conditions using a 1219 mm (48 in) vertical discharge pipe; all added elements of drainage design may increase or decrease the flow rates reported. Variables such as wind, vortices, debris, roof design, roof obstructions, and slope, can significantly change the roof drain flow rate. Designers are advised to consider these and other possible variables in roof drainage design.

1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.01	82.11	1.01	86.03	1.00	81.33
1.99	199.19	2.01	238.08	2.00	320.28
3.02	203.94	3.01	241.77	3.03	349.76
4.02	208.12	4.01	244.59	4.00	352.40
5.00	211.92	5.03	248.20	5.03	356.12
5.98	215.47	6.00	251.24	6.00	359.25



Z100F-3NH



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Z100F FLOFORCE® HIGH PERFORMANCE ROOF DRAIN DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

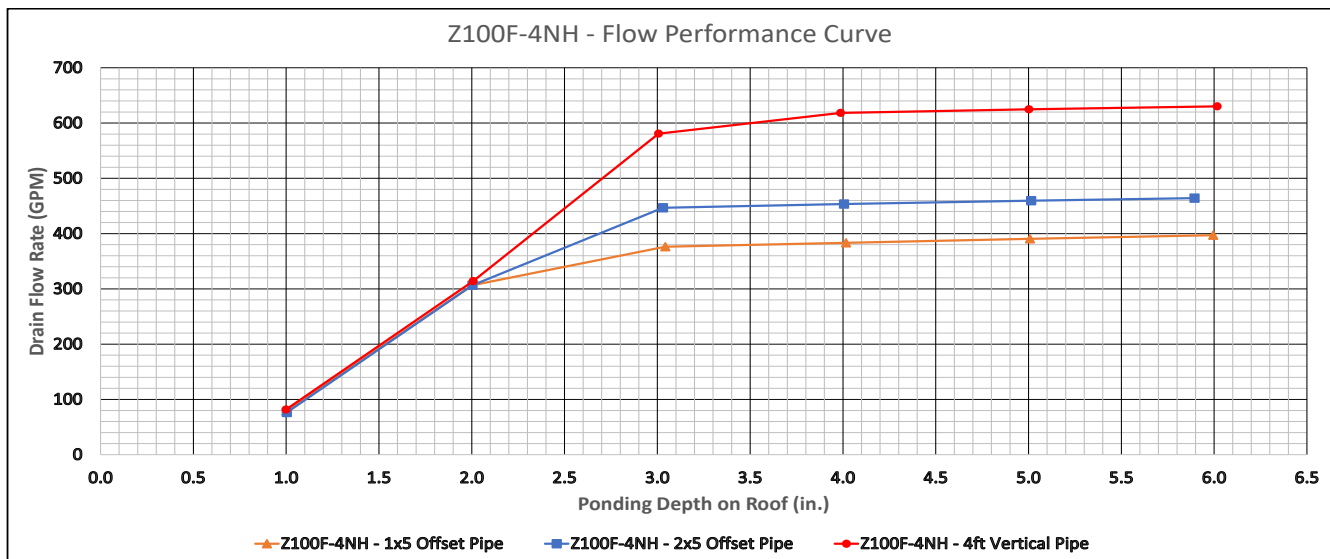
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1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.00	79.31	1.00	76.30	1.00	81.68
2.00	306.65	2.00	306.58	2.01	314.14
3.04	376.36	3.03	446.73	3.01	580.74
4.02	383.20	4.01	453.45	3.99	618.29
5.01	390.66	5.01	459.53	5.00	624.89
5.99	397.10	5.89	464.23	6.02	630.21



Z100F-4NH



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Z100F FLOFORCE® HIGH PERFORMANCE ROOF DRAIN DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

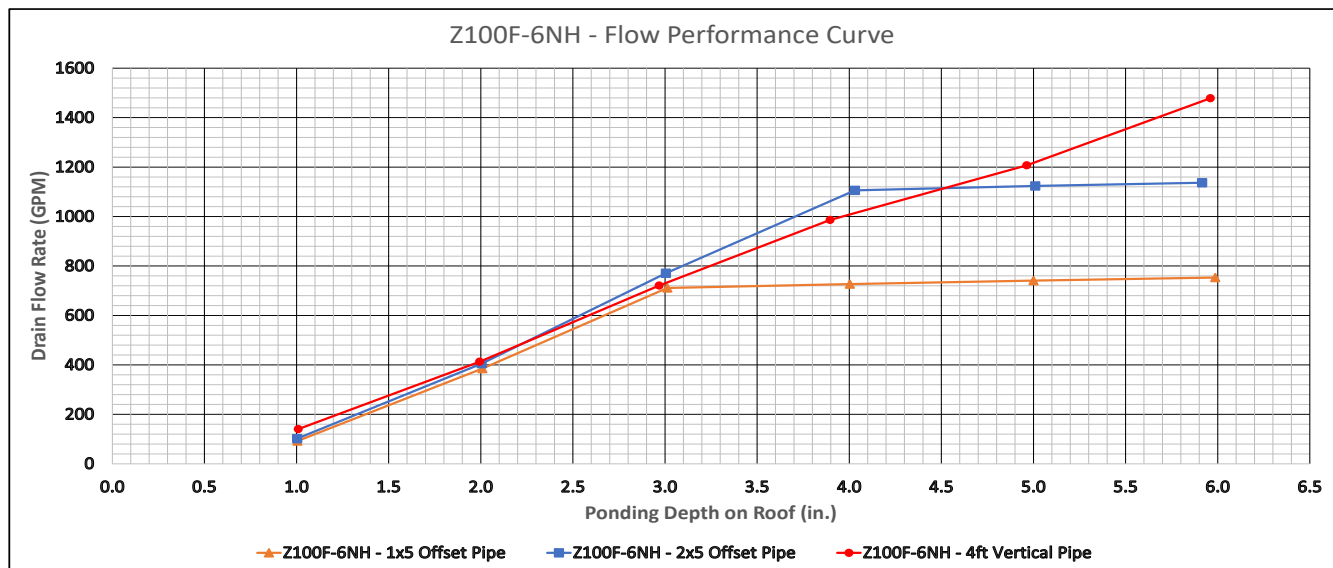
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1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.00	92.08	1.00	102.10	1.01	140.49
2.01	384.97	2.00	405.17	1.99	412.62
3.01	710.94	3.01	770.96	2.97	720.61
4.00	726.79	4.03	1106.19	3.90	986.09
5.00	741.10	5.01	1123.76	4.96	1206.99
5.99	753.63	5.91	1136.69	5.96	1478.29



Z100F-6NH



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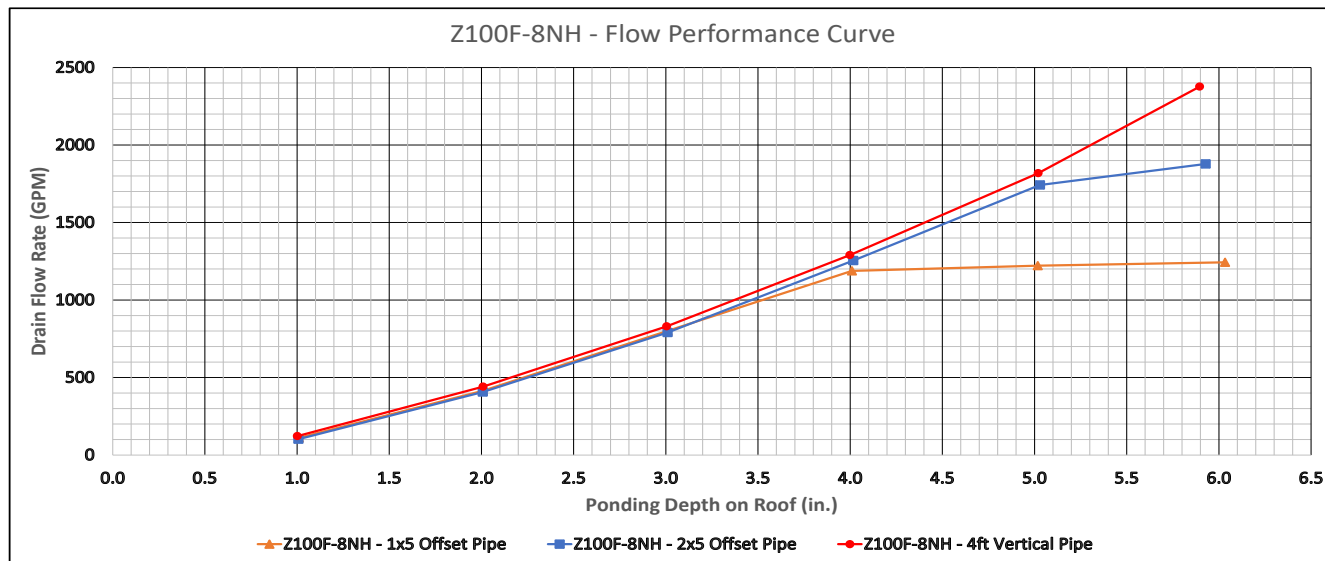
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1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.01	110.90	1.01	102.17	1.00	122.23
2.01	414.12	2.01	406.68	2.01	440.68
3.01	800.68	3.01	790.24	3.00	829.67
4.01	1188.29	4.02	1254.48	4.00	1289.54
5.02	1221.28	5.03	1742.09	5.02	1818.32
6.03	1242.80	5.93	1878.10	5.90	2376.50



Z100F-8NH



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2.16 HIGHLANDS BUILDING ROGERS

Datasheets

OD-2

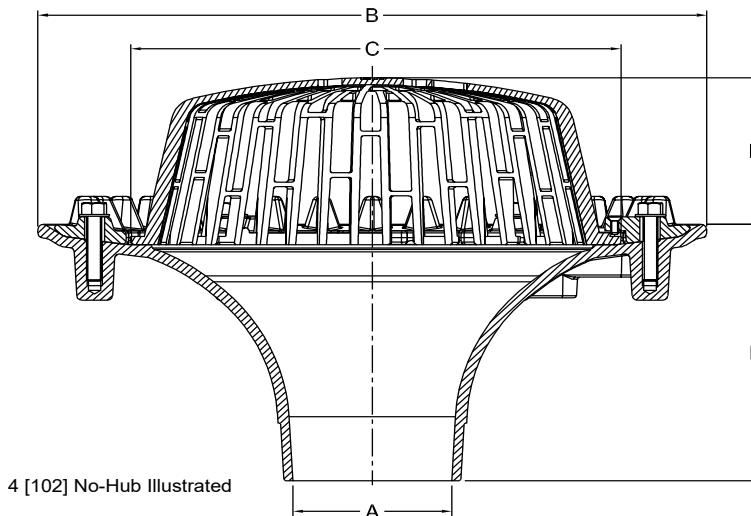
**Z100F**

FLOFORCE® HIGH PERFORMANCE ROOF DRAIN
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SPECIFICATION SHEET

TAG _____

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



4 [102] No-Hub Illustrated

A Outlet Size In. [mm]	B Body Diameter In [mm]	C Dome Diameter In [mm]	D Height, Roof to Dome Top In [mm]	Weight lbs [kg]	Dome Open Area Sq. In. [cm2]
2, 3, 4 [51, 76, 102]	16-9/16 [421]	12-5/16 [313]	4 [102]	31 [14]	121 [780]
6, 8 [152, 203]	20-3/32 [510]	15-7/8 [403]	6 [152]	43 [19]	214 [1380]

ENGINEERING SPECIFICATION: ZURN Z100F

FLOFORCE® High efficient flow performing roof drain. Roof drain engineered to evacuate water off of roof structure by incorporating a smooth funnel-shaped interior surface, providing a seamless transition to outlet connection, and eliminating internal obstructions. Complete with Dura-Coated cast iron body with combination membrane flashing clamp/gravel guard and low silhouette Poly-Dome. Flashing clamp/gravel guard provided to prevent debris from entering the drain while allowing water to immediately pass through at zero head level. Poly-dome designed to maximize effective open area and promote efficient flow. (Refer to pages 2-6 for flow curves.)

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

2, 3, 4 [51, 76, 102]
6, 8 [152, 203]
2, 3, 4 [51, 76, 102]
6 [152]
2, 3, 4 [51, 76, 102]
6, 8 [152, 203]
3, 4 [76, 102]
6 [152]

(Specify size/type) **OUTLET**

____ NH No-Hub
____ NH Neo-Loc
____ NL Neo-Loc
____ IP Threaded
____ IP Threaded
____ IC Inside Caulk
____ IC Inside Caulk

E BODY HT. DIM.

6-15/16 [176]
7-7/16 [189]
7-3/8 [187]
8-1/32 [204]
5-15/16, 6-3/16, 6-5/16 [151, 157, 160]
6-11/16, 6-3/4 [170, 171]
5-13/16 [148]
6-1/16 [154]

PREFIXES

____ **Z** D.C.C.I. Body with Poly-Dome* ____ **ZA** D.C.C.I. Body with Aluminum Dome ____ **ZC** D.C.C.I. Body with Cast Iron Dome

SUFFIXES

____ -AR Acid Resistant Epoxy Coated	____ -SC Secondary Clamp Collar
____ -C Underdeck Clamp	____ -TC Neo-Loc Test Cap Gasket
____ -DP Top-Set® Deck Plate (Replaces both the -C and -R)	____ (2, 3, 4 [51, 76, 102] NL Bottom Outlet Only)
____ -DR Top-Set® Drain Riser	____ -VP Vandal-Proof Secured Top
____ -E Static Extension 1 [25] thru 4 [102] (Specify Ht.)	____ -84 Stainless Steel Perforated Gravel Guard
____ -EA Adjustable Extension Assembly	____ -85 Stainless Steel Perforated Extension
2-1/8 [54] thru 3-1/2 [89]	____ -89 2 [51] High Overflow Dam
____ -G Galvanized Cast Iron	____ -89-3 3 [76] High Overflow Dam
____ -R Roof Sump Receiver	____ -89-4 4 [102] High Overflow Dam

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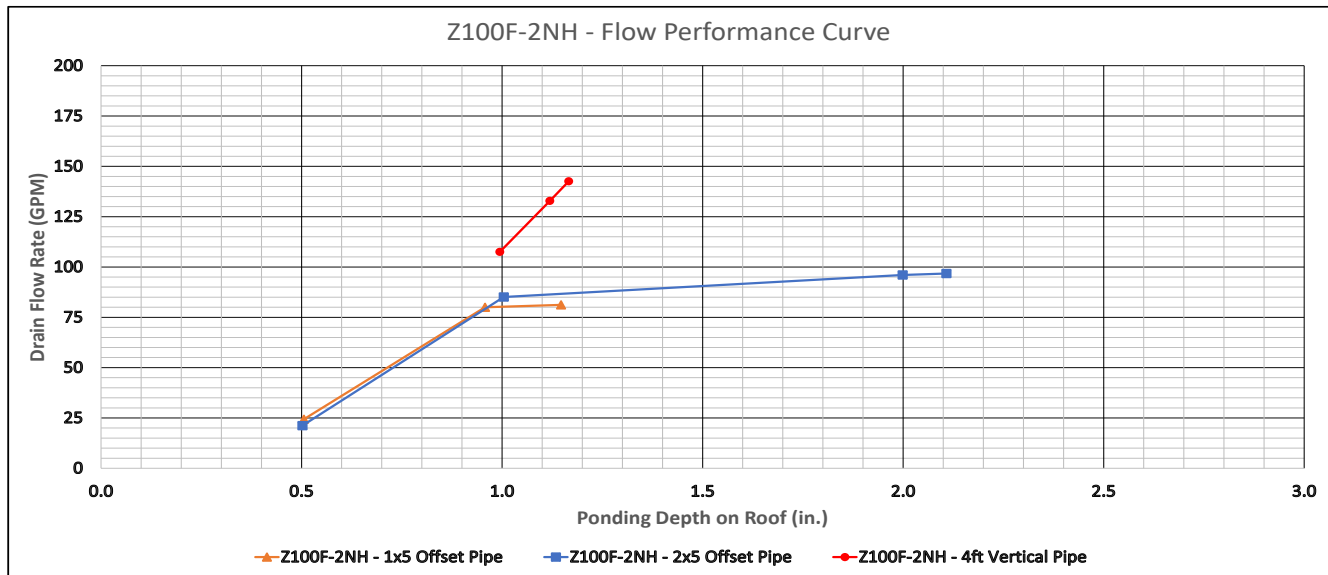
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1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
0.51	24.38	0.50	21.20	0.99	107.51
0.96	79.97	1.00	85.12	1.12	132.80
1.15	81.16	2.00	96.00	1.17	142.59
-	-	2.11	96.76	-	-



Z100F-2NH



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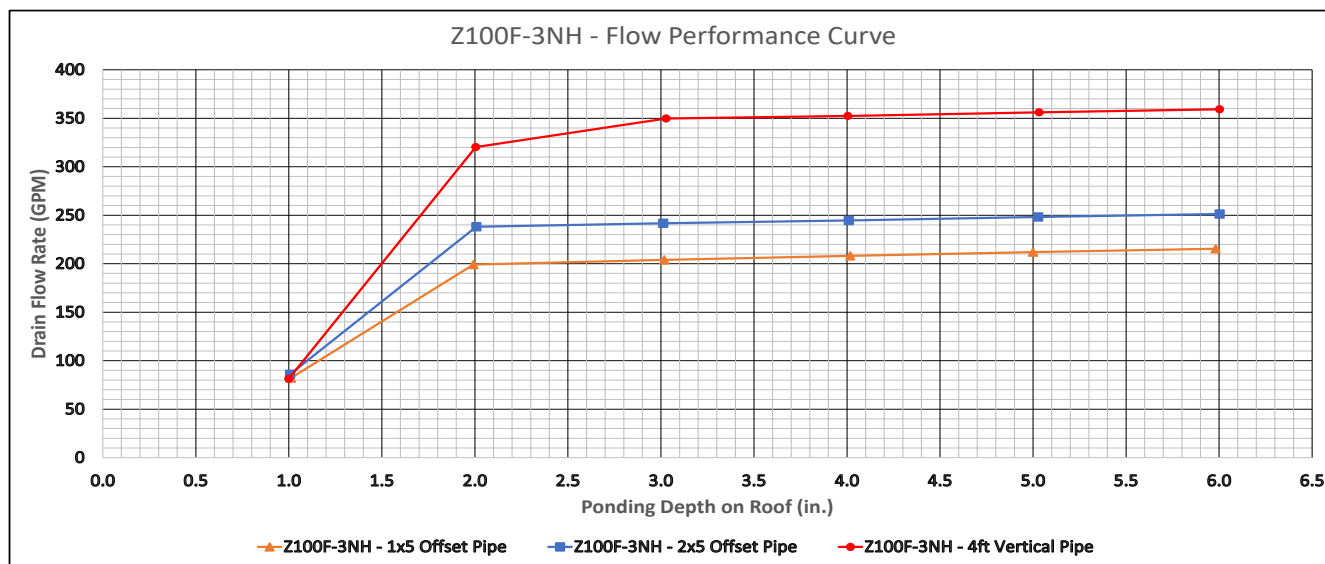
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1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.01	82.11	1.01	86.03	1.00	81.33
1.99	199.19	2.01	238.08	2.00	320.28
3.02	203.94	3.01	241.77	3.03	349.76
4.02	208.12	4.01	244.59	4.00	352.40
5.00	211.92	5.03	248.20	5.03	356.12
5.98	215.47	6.00	251.24	6.00	359.25



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Z100F FLOFORCE® HIGH PERFORMANCE ROOF DRAIN DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

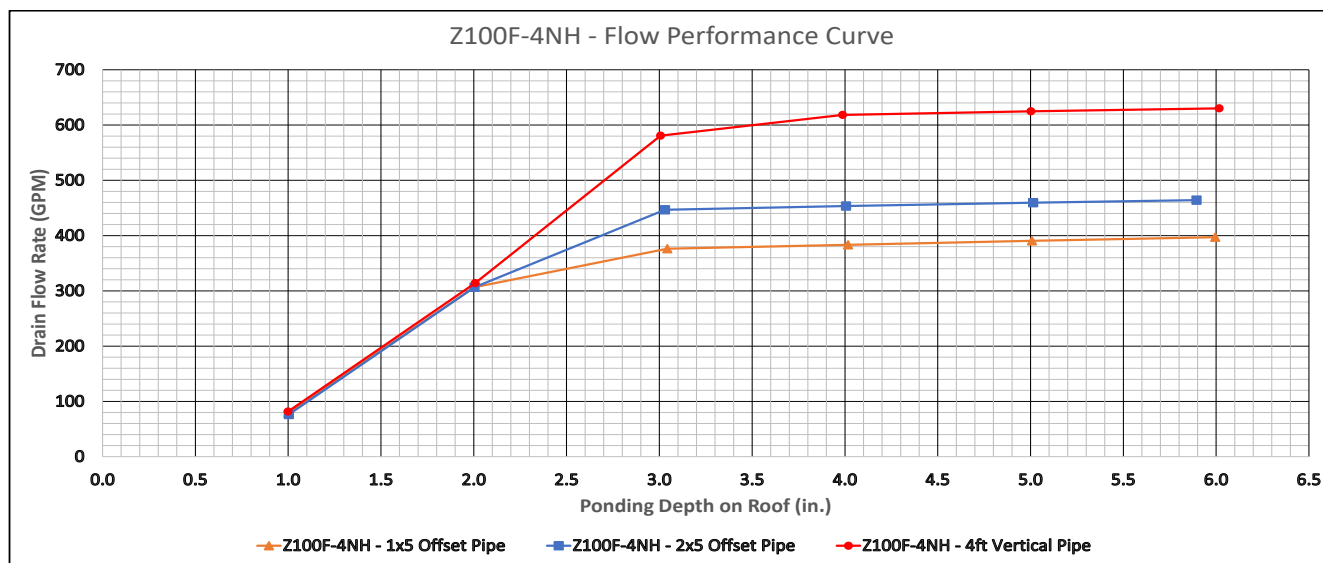
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Note: Results obtained from the application of flow measurement procedures specified in ASME A112.6.4/CSA B79.4 indicate a flow rate achieved under laboratory conditions using a 1219 mm (48 in) vertical discharge pipe; all added elements of drainage design may increase or decrease the flow rates reported. Variables such as wind, vortices, debris, roof design, roof obstructions, and slope, can significantly change the roof drain flow rate. Designers are advised to consider these and other possible variables in roof drainage design.

1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.00	79.31	1.00	76.30	1.00	81.68
2.00	306.65	2.00	306.58	2.01	314.14
3.04	376.36	3.03	446.73	3.01	580.74
4.02	383.20	4.01	453.45	3.99	618.29
5.01	390.66	5.01	459.53	5.00	624.89
5.99	397.10	5.89	464.23	6.02	630.21



Z100F-4NH



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⚠ AVERTISSEMENT: Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

Zurn Industries, LLC | Specification Drainage Operation
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Z100F FLOFORCE® HIGH PERFORMANCE ROOF DRAIN DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

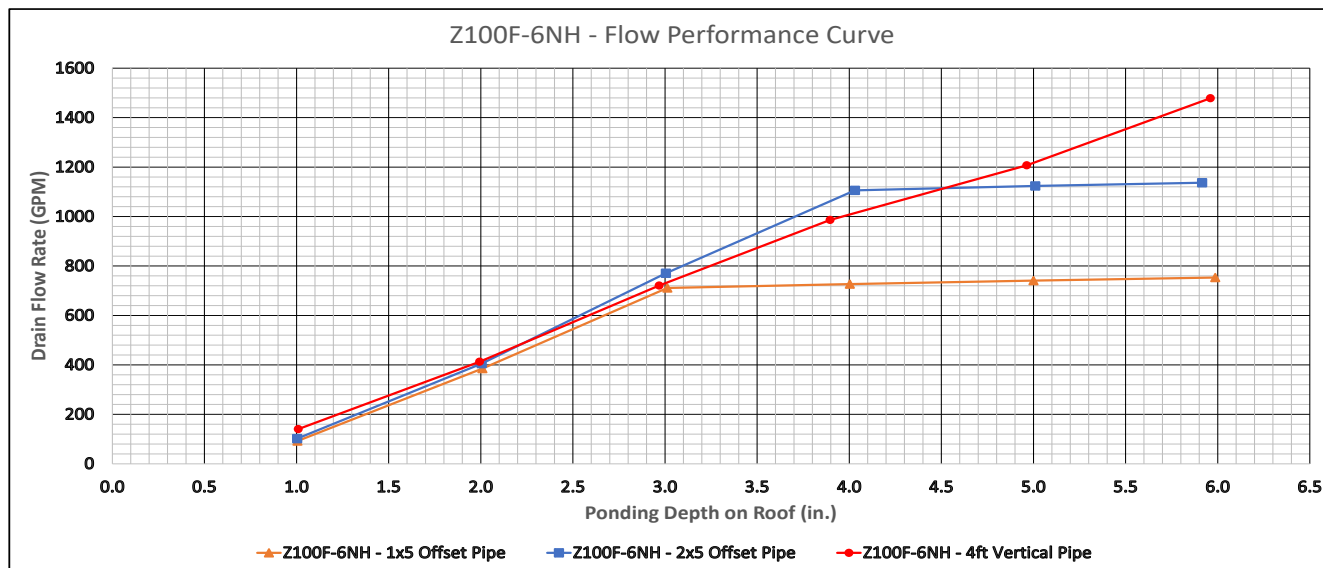
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1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.00	92.08	1.00	102.10	1.01	140.49
2.01	384.97	2.00	405.17	1.99	412.62
3.01	710.94	3.01	770.96	2.97	720.61
4.00	726.79	4.03	1106.19	3.90	986.09
5.00	741.10	5.01	1123.76	4.96	1206.99
5.99	753.63	5.91	1136.69	5.96	1478.29



Z100F-6NH



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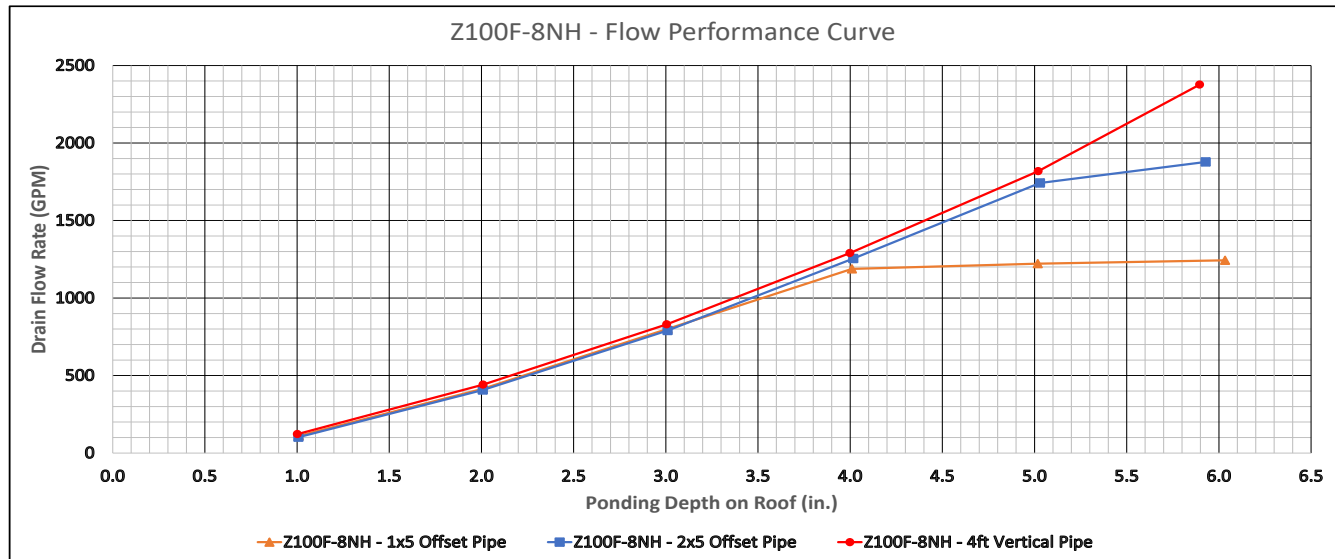
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1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.01	110.90	1.01	102.17	1.00	122.23
2.01	414.12	2.01	406.68	2.01	440.68
3.01	800.68	3.01	790.24	3.00	829.67
4.01	1188.29	4.02	1254.48	4.00	1289.54
5.02	1221.28	5.03	1742.09	5.02	1818.32
6.03	1242.80	5.93	1878.10	5.90	2376.50



Z100F-8NH



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2.16 HIGHLANDS BUILDING ROGERS

Datasheets

RD-3

Job Name : 2.16 HIGHLANDS BUILDING ROGERS

Manufacturer : MIFAB

Model Number : MH-300

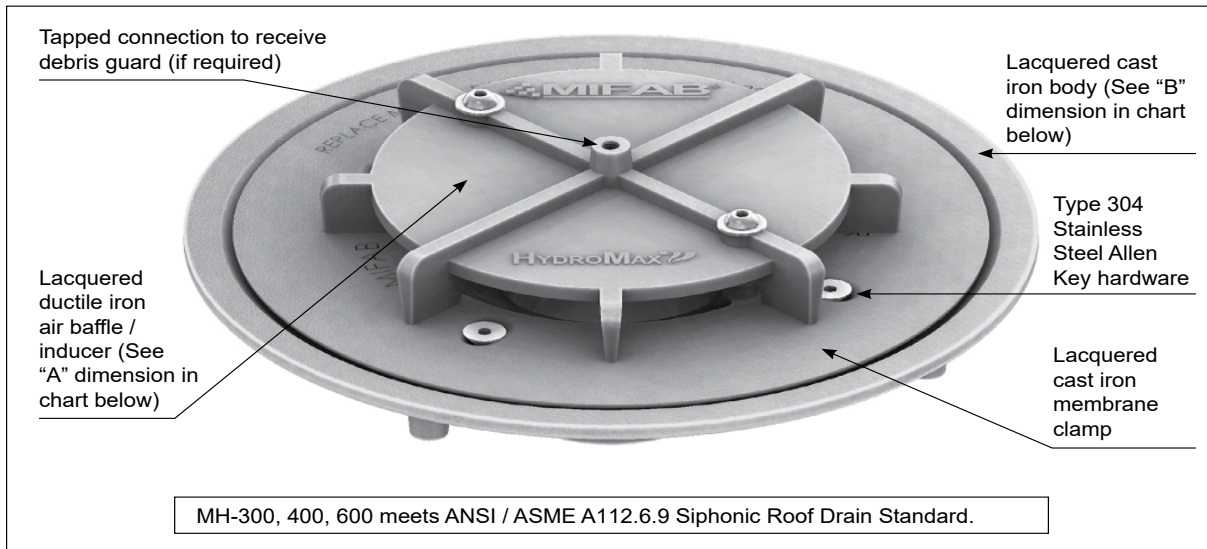
Type :

Location: _____

**MH-300, 400, 600****SIPHONIC
ROOF DRAIN**

Specification: MIFAB® / Hydromax Series MH-300, 400, 600 (specify outlet connection size) lacquered cast iron siphonic roof drain with wide anchor flange, cast iron waterproofing membrane clamp ring, ductile iron air baffle / inducer with Type 304 stainless steel allen key hardware.

Function: Used in any type of roofs as a siphonic roof drain system.



MODEL NUMBER	PIPE SIZE	BODY HEIGHT NO HUB (STANDARD)	PERFORMANCE AND DIMENSION INFORMATION				
			Resistance Value (K)	Minimum Flow Rate (GPM)	Maximum Flow Rate (GPM)	"A" Air Baffle / Inducer Diameter	"B" Body Diameter
☐ MH-300	3" (76)	3" 1/8" (79)	0.12	23.00	350.00	8.86" (225.11)	13" (330)
☐ MH-400	4" (102)	3" 1/2" (90)	0.08	75.00	750.00	12.19" (309.73)	19 3/8" (492)
☐ MH-600	6" (152)	4" 3/4" (120)	0.04	160.00	1,800.00	17.87" (454)	25 1/4" (640)

SUFFIX**OPTIONAL VARIATIONS:**

- ☐ -11 Acid resistant epoxy coated body
- ☐ -12A Galvanized body and membrane clamp
- ☐ -13 Galvanized body, membrane clamp and dome
- ☐ -BP Sump receiver
- ☐ -BA Minimum 51% material cost made in the USA

SUFFIX**OPTIONAL VARIATIONS:**

- ☐ -G Stainless steel ballast guard
- ☐ -M Debris Guard
- ☐ -PA Pennsylvania Steel Act compliant product
- ☐ -UDC Underdeck clamp

CALIFORNIA PROPOSITION 65 WARNING. This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Job Name: _____ Page No: _____

Section No: _____ Contract: _____

Schedule No: _____ Purchase Order No: _____

MIFAB® reserves the right to make changes in material and design without formal notice or obligation.

USA: 1-800-465-2736 www.mifab.com CAN: 1-800-387-3880

Page R31

2024-02-22



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

RD-1

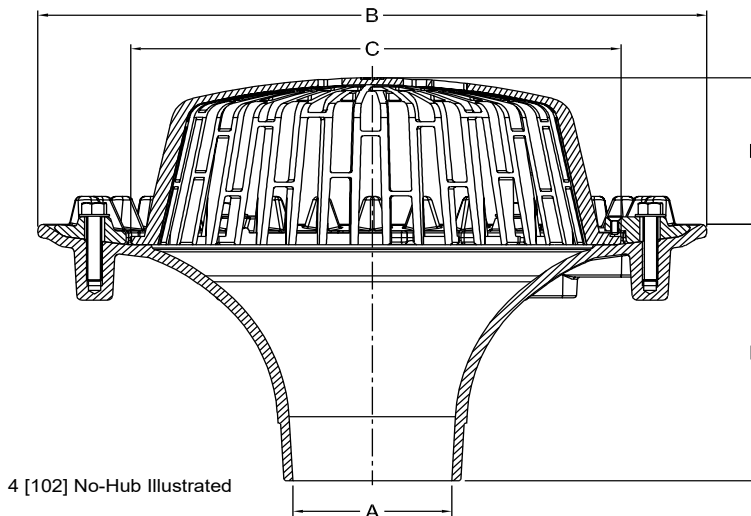
**Z100F**

FLOFORCE® HIGH PERFORMANCE ROOF DRAIN
DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

SPECIFICATION SHEET

TAG _____

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



4 [102] No-Hub Illustrated

A Outlet Size In. [mm]	B Body Diameter In [mm]	C Dome Diameter In [mm]	D Height, Roof to Dome Top In [mm]	Weight lbs [kg]	Dome Open Area Sq. In. [cm2]
2,3,4 [51,76,102]	16-9/16 [421]	12-5/16 [313]	4 [102]	31 [14]	121 [780]
6,8 [152, 203]	20-3/32 [510]	15-7/8 [403]	6 [152]	43 [19]	214 [1380]

ENGINEERING SPECIFICATION: ZURN Z100F

FLOFORCE® High efficient flow performing roof drain. Roof drain engineered to evacuate water off of roof structure by incorporating a smooth funnel-shaped interior surface, providing a seamless transition to outlet connection, and eliminating internal obstructions. Complete with Dura-Coated cast iron body with combination membrane flashing clamp/gravel guard and low silhouette Poly-Dome. Flashing clamp/gravel guard provided to prevent debris from entering the drain while allowing water to immediately pass through at zero head level. Poly-dome designed to maximize effective open area and promote efficient flow. (Refer to pages 2-6 for flow curves.)

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

2 3 4 [51, 76, 102]
6, 8 [152, 203]
2, 3, 4 [51, 76, 102]
6 [152]
2, 3, 4 [51, 76, 102]
6, 8 [152, 203]
3, 4 [76, 102]
6 [152]

(Specify size/type) OUTLET

____ NH No-Hub
____ NH No-Hub
____ NL Neo-Loc
____ NL Neo-Loc
____ IP Threaded
____ IP Threaded
____ IC Inside Caulk
____ IC Inside Caulk

E BODY HT. DIM.

6-15/16 [176]
7-7/16 [189]
7-3/8 [187]
8-1/32 [204]
5-15/16, 6-3/16, 6-5/16 [151, 157, 160]
6-11/16, 6-3/4 [170, 171]
5-13/16 [148]
6-1/16 [154]

PREFIXES

____ Z D.C.C.I. Body with Poly-Dome* ____ ZA D.C.C.I. Body with Aluminum Dome ____ ZC D.C.C.I. Body with Cast Iron Dome

SUFFIXES

____ -AR Acid Resistant Epoxy Coated	____ -SC Secondary Clamp Collar
____ -C Underdeck Clamp	____ -TC Neo-Loc Test Cap Gasket
____ -DP Top-Set® Deck Plate (Replaces both the -C and -R)	____ (2, 3, 4 [51, 76, 102] NL Bottom Outlet Only)
____ -DR Top-Set® Drain Riser	____ -VP Vandal-Proof Secured Top
____ -E Static Extension 1 [25] thru 4 [102] (Specify Ht.)	____ -84 Stainless Steel Perforated Gravel Guard
____ -EA Adjustable Extension Assembly	____ -85 Stainless Steel Perforated Extension
____ 2-1/8 [54] thru 3-1/2 [89]	____ -89 2 [51] High Overflow Dam
____ -G Galvanized Cast Iron	____ -89-3 3 [76] High Overflow Dam
____ <u>-R</u> Roof Sump Receiver	____ -89-4 4 [102] High Overflow Dam

* Regularly furnished unless otherwise specified

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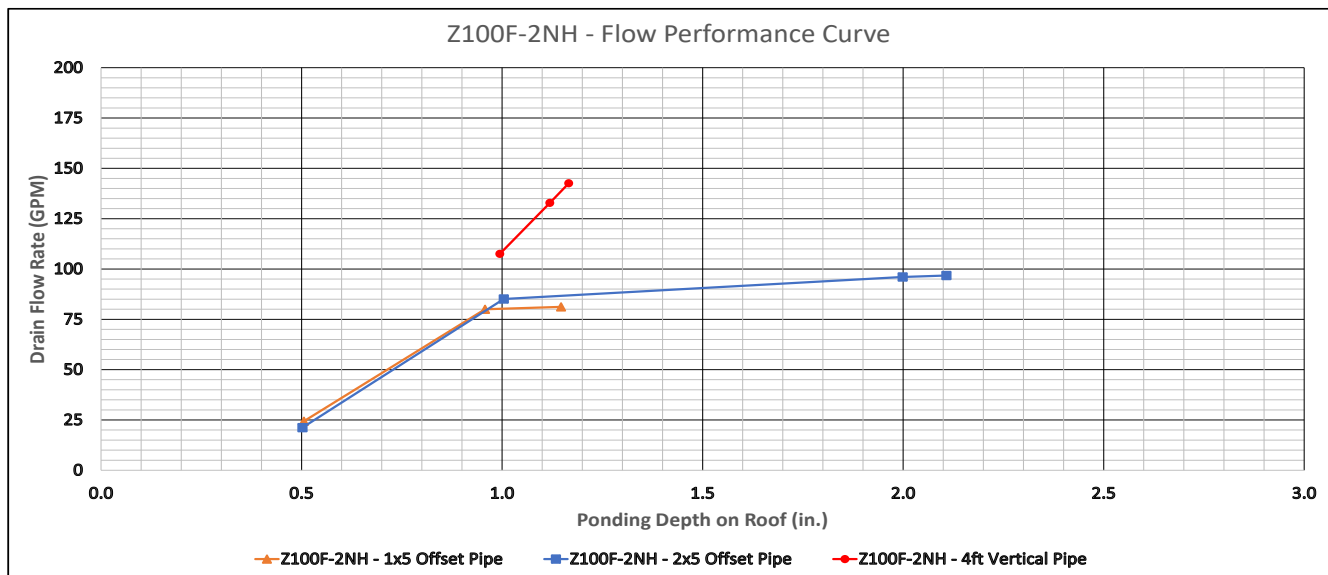
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1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
0.51	24.38	0.50	21.20	0.99	107.51
0.96	79.97	1.00	85.12	1.12	132.80
1.15	81.16	2.00	96.00	1.17	142.59
-	-	2.11	96.76	-	-



Z100F-2NH



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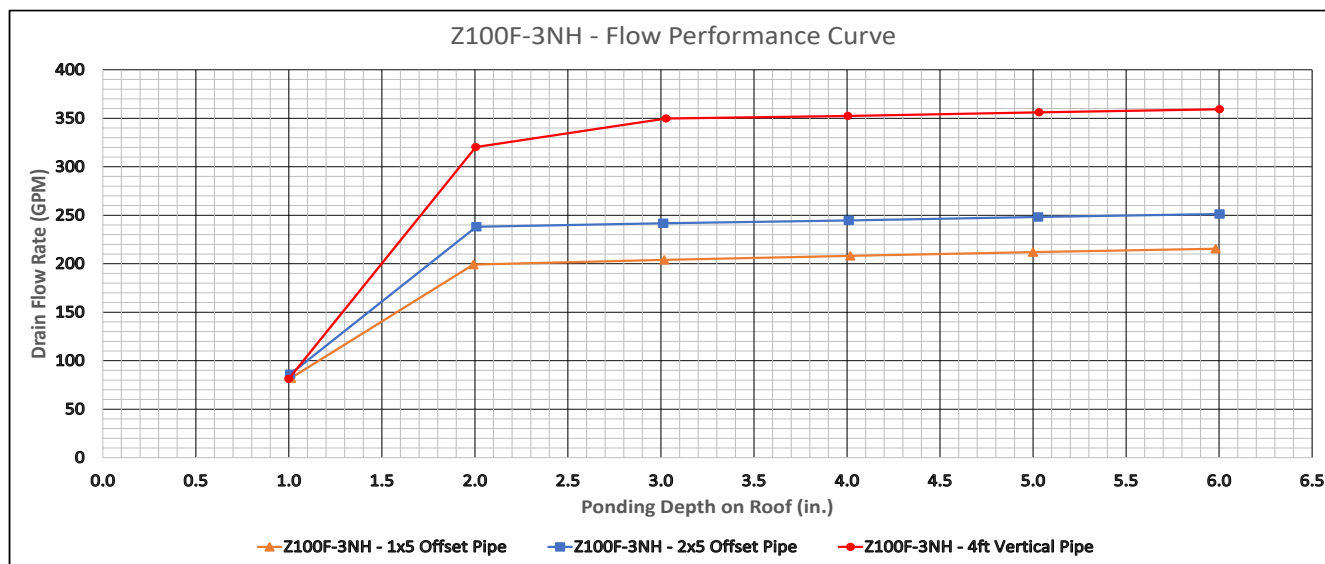
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1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.01	82.11	1.01	86.03	1.00	81.33
1.99	199.19	2.01	238.08	2.00	320.28
3.02	203.94	3.01	241.77	3.03	349.76
4.02	208.12	4.01	244.59	4.00	352.40
5.00	211.92	5.03	248.20	5.03	356.12
5.98	215.47	6.00	251.24	6.00	359.25



Z100F-3NH



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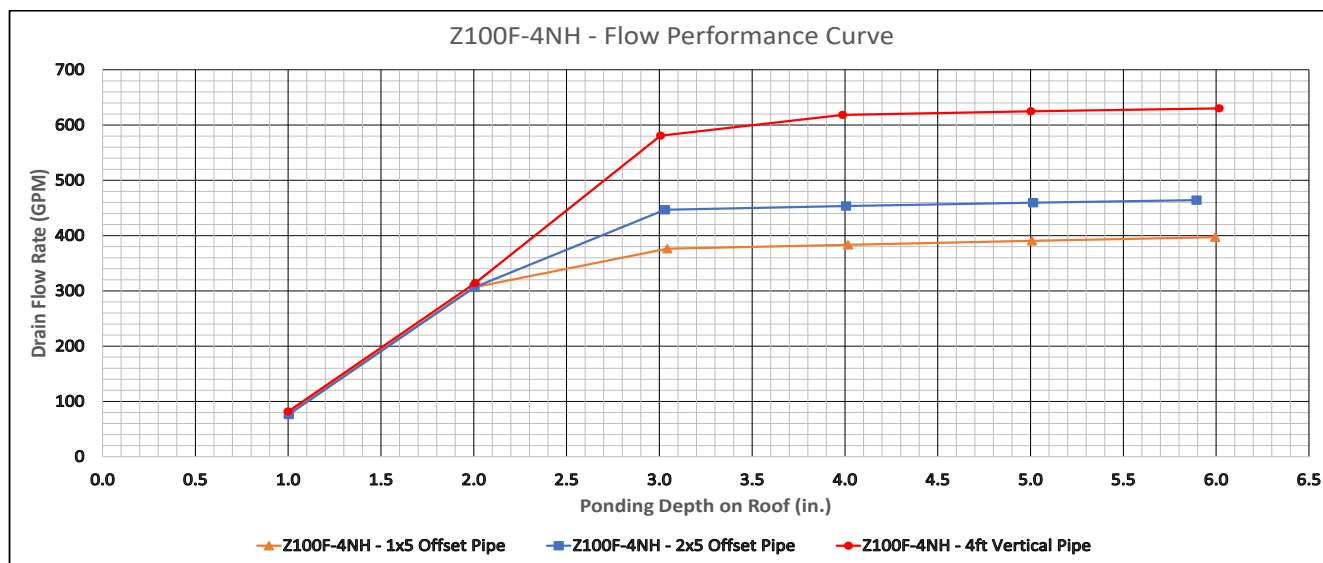
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1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.00	79.31	1.00	76.30	1.00	81.68
2.00	306.65	2.00	306.58	2.01	314.14
3.04	376.36	3.03	446.73	3.01	580.74
4.02	383.20	4.01	453.45	3.99	618.29
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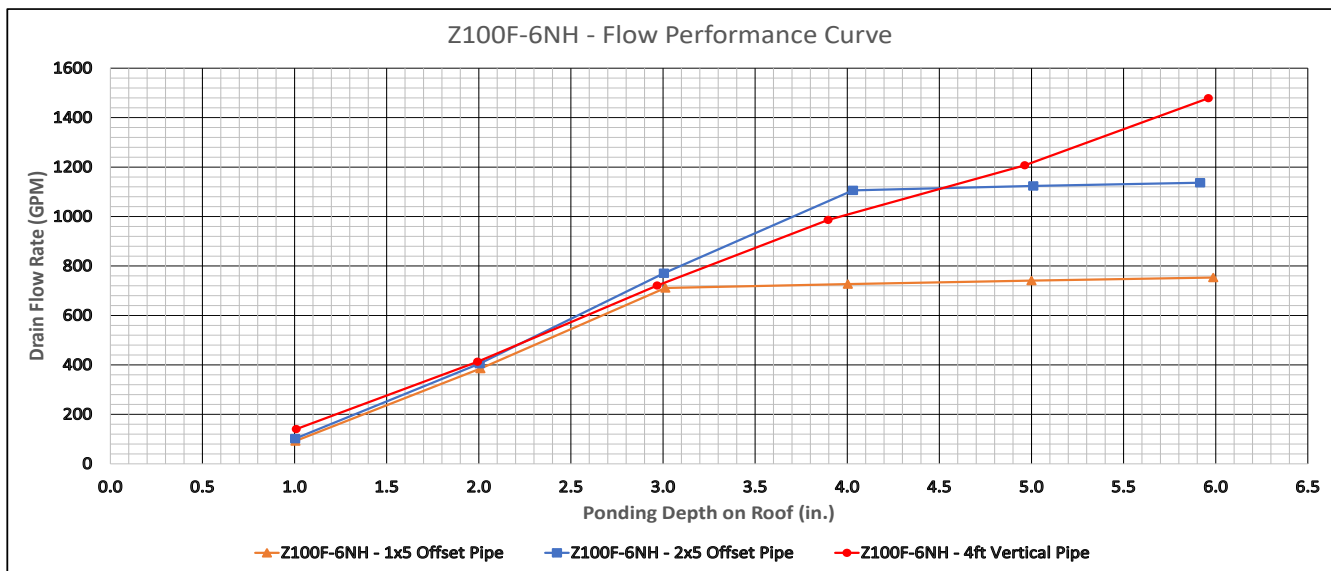
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1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.00	92.08	1.00	102.10	1.01	140.49
2.01	384.97	2.00	405.17	1.99	412.62
3.01	710.94	3.01	770.96	2.97	720.61
4.00	726.79	4.03	1106.19	3.90	986.09
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5.99	753.63	5.91	1136.69	5.96	1478.29



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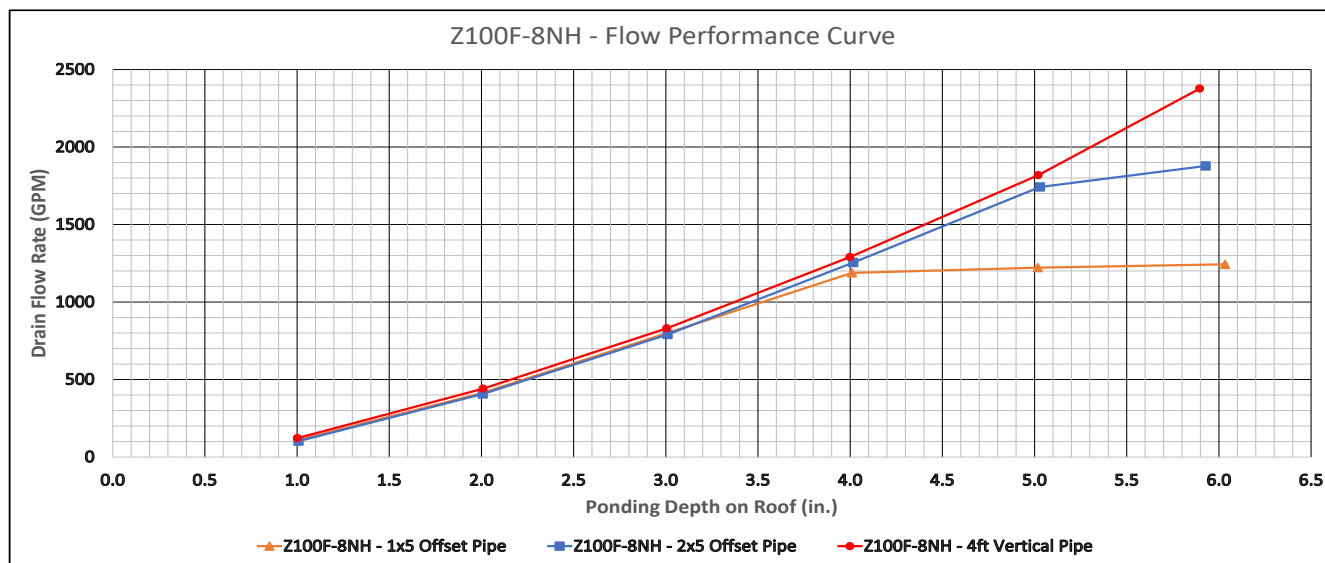
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1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.01	110.90	1.01	102.17	1.00	122.23
2.01	414.12	2.01	406.68	2.01	440.68
3.01	800.68	3.01	790.24	3.00	829.67
4.01	1188.29	4.02	1254.48	4.00	1289.54
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6.03	1242.80	5.93	1878.10	5.90	2376.50



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2.16 HIGHLANDS BUILDING ROGERS

Datasheets

RD-2

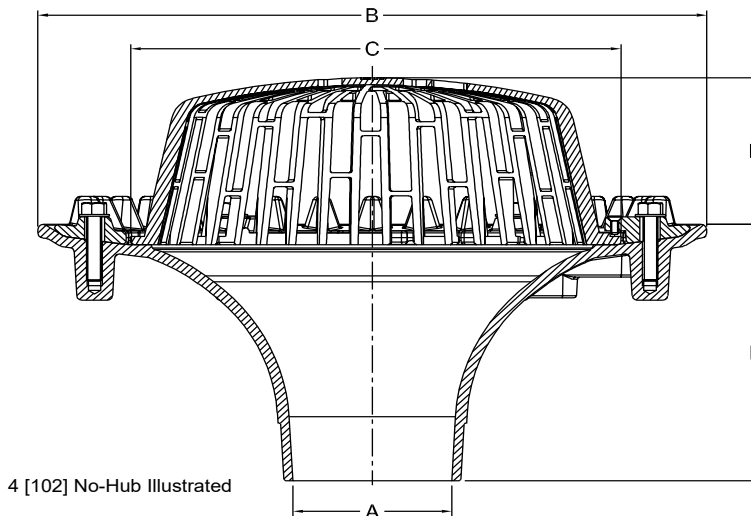
**Z100F**

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SPECIFICATION SHEET

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



4 [102] No-Hub Illustrated

A Outlet Size In. [mm]	B Body Diameter In [mm]	C Dome Diameter In [mm]	D Height, Roof to Dome Top In [mm]	Weight lbs [kg]	Dome Open Area Sq. In. [cm2]
2,3,4 [51,76,102]	16-9/16 [421]	12-5/16 [313]	4 [102]	31 [14]	121 [780]
6,8 [152, 203]	20-3/32 [510]	15-7/8 [403]	6 [152]	43 [19]	214 [1380]

ENGINEERING SPECIFICATION: ZURN Z100F

FLOFORCE® High efficient flow performing roof drain. Roof drain engineered to evacuate water off of roof structure by incorporating a smooth funnel-shaped interior surface, providing a seamless transition to outlet connection, and eliminating internal obstructions. Complete with Dura-Coated cast iron body with combination membrane flashing clamp/gravel guard and low silhouette Poly-Dome. Flashing clamp/gravel guard provided to prevent debris from entering the drain while allowing water to immediately pass through at zero head level. Poly-dome designed to maximize effective open area and promote efficient flow. (Refer to pages 2-6 for flow curves.)

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

2, 3, 4 [51, 76, 102]
6, 8 [152, 203]
2, 3, 4 [51, 76, 102]
6 [152]
2, 3, 4 [51, 76, 102]
6, 8 [152, 203]
3, 4 [76, 102]
6 [152]

(Specify size/type) **OUTLET**

____ NH No-Hub
____ NH Neo-Loc
____ NL Neo-Loc
____ IP Threaded
____ IP Threaded
____ IC Inside Caulk
____ IC Inside Caulk

E BODY HT. DIM.

6-15/16 [176]
7-7/16 [189]
7-3/8 [187]
8-1/32 [204]
5-15/16, 6-3/16, 6-5/16 [151, 157, 160]
6-11/16, 6-3/4 [170, 171]
5-13/16 [148]
6-1/16 [154]

PREFIXES

____ Z D.C.C.I. Body with Poly-Dome* ____ ZA D.C.C.I. Body with Aluminum Dome ____ ZC D.C.C.I. Body with Cast Iron Dome

SUFFIXES

____ -AR Acid Resistant Epoxy Coated	____ -SC Secondary Clamp Collar
____ -C Underdeck Clamp	____ -TC Neo-Loc Test Cap Gasket
____ -DP Top-Set® Deck Plate (Replaces both the -C and -R)	____ (2, 3, 4 [51, 76, 102] NL Bottom Outlet Only)
____ -DR Top-Set® Drain Riser	____ -VP Vandal-Proof Secured Top
____ -E Static Extension 1 [25] thru 4 [102] (Specify Ht.)	____ -84 Stainless Steel Perforated Gravel Guard
____ -EA Adjustable Extension Assembly	____ -85 Stainless Steel Perforated Extension
____ 2-1/8 [54] thru 3-1/2 [89]	____ -89 2 [51] High Overflow Dam
____ -G Galvanized Cast Iron	____ -89-3 3 [76] High Overflow Dam
____ -R Roof Sump Receiver	____ -89-4 4 [102] High Overflow Dam

* Regularly furnished unless otherwise specified

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - www.P65Warnings.ca.gov⚠ **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

Zurn Industries, LLC | Specification Drainage Operation
1801 Pittsburgh Avenue, Erie, PA 16502, Ph. 855.663.9876

In Canada | Zurn Industries Limited
7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, Ph. 877.892.5216

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Rev. F
Date: 08/08/2023
C.N. No. 145453
Patent zurn.com/patents
Prod. | Dwg. No. Z100F FLOFORCE® Page 1 of 6

**Z100F**

FLOFORCE® HIGH PERFORMANCE ROOF DRAIN

DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

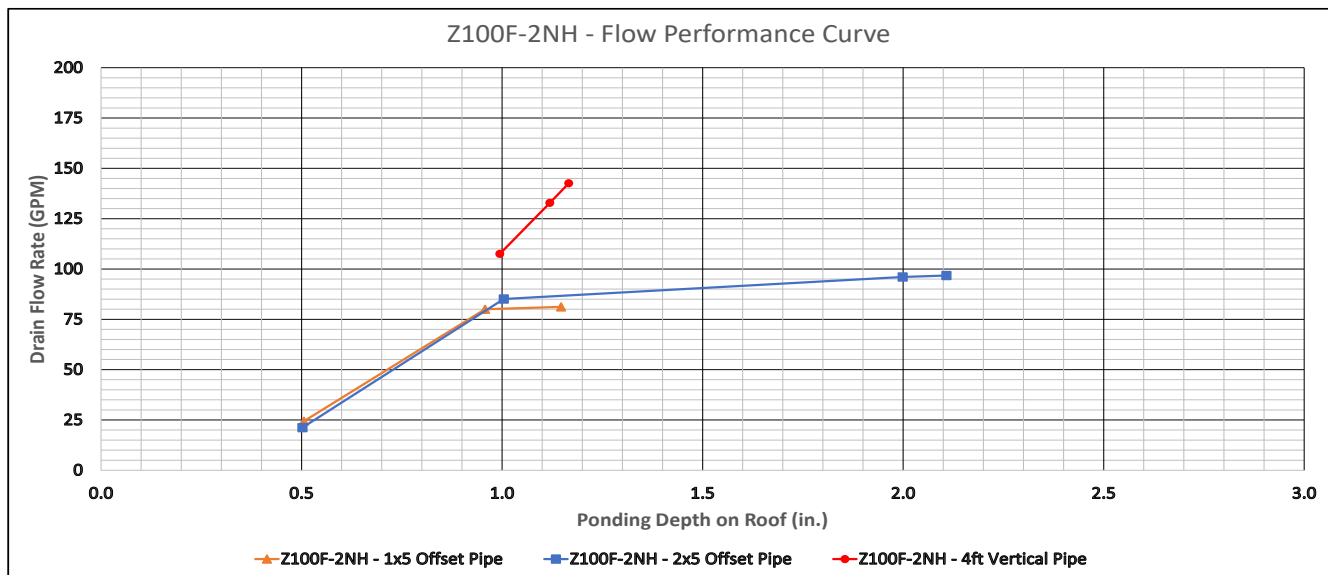
Design and Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice

Note: Results obtained from the application of flow measurement procedures specified in ASME A112.6.4/CSA B79.4 indicate a flow rate achieved under laboratory conditions using a 1219 mm (48 in) vertical discharge pipe; all added elements of drainage design may increase or decrease the flow rates reported. Variables such as wind, vortices, debris, roof design, roof obstructions, and slope, can significantly change the roof drain flow rate. Designers are advised to consider these and other possible variables in roof drainage design.

1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
0.51	24.38	0.50	21.20	0.99	107.51
0.96	79.97	1.00	85.12	1.12	132.80
1.15	81.16	2.00	96.00	1.17	142.59
-	-	2.11	96.76	-	-



Z100F-2NH



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Prod. | Dwg. No. Z100F FLOFORCE® Page 2 of 6

Z100F FLOFORCE® HIGH PERFORMANCE ROOF DRAIN DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

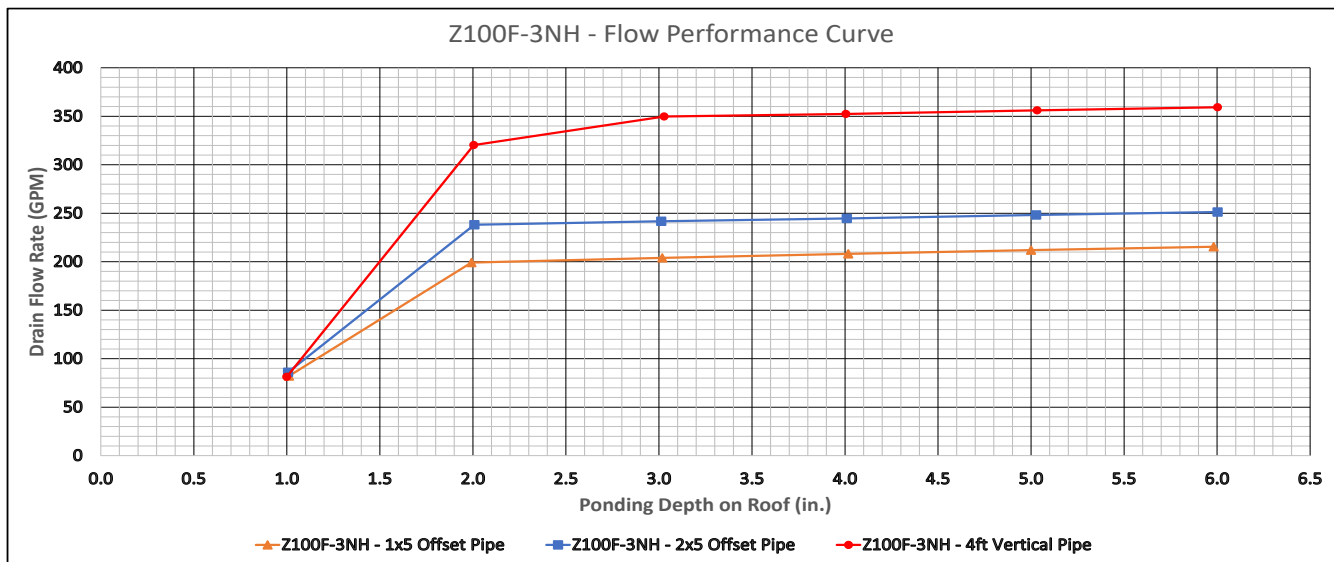
Design and Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice

Note: Results obtained from the application of flow measurement procedures specified in ASME A112.6.4/CSA B79.4 indicate a flow rate achieved under laboratory conditions using a 1219 mm (48 in) vertical discharge pipe; all added elements of drainage design may increase or decrease the flow rates reported. Variables such as wind, vortices, debris, roof design, roof obstructions, and slope, can significantly change the roof drain flow rate. Designers are advised to consider these and other possible variables in roof drainage design.

1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.01	82.11	1.01	86.03	1.00	81.33
1.99	199.19	2.01	238.08	2.00	320.28
3.02	203.94	3.01	241.77	3.03	349.76
4.02	208.12	4.01	244.59	4.00	352.40
5.00	211.92	5.03	248.20	5.03	356.12
5.98	215.47	6.00	251.24	6.00	359.25



Z100F-3NH



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ZURN **Z100F**

FLOFORCE® HIGH PERFORMANCE ROOF DRAIN
DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

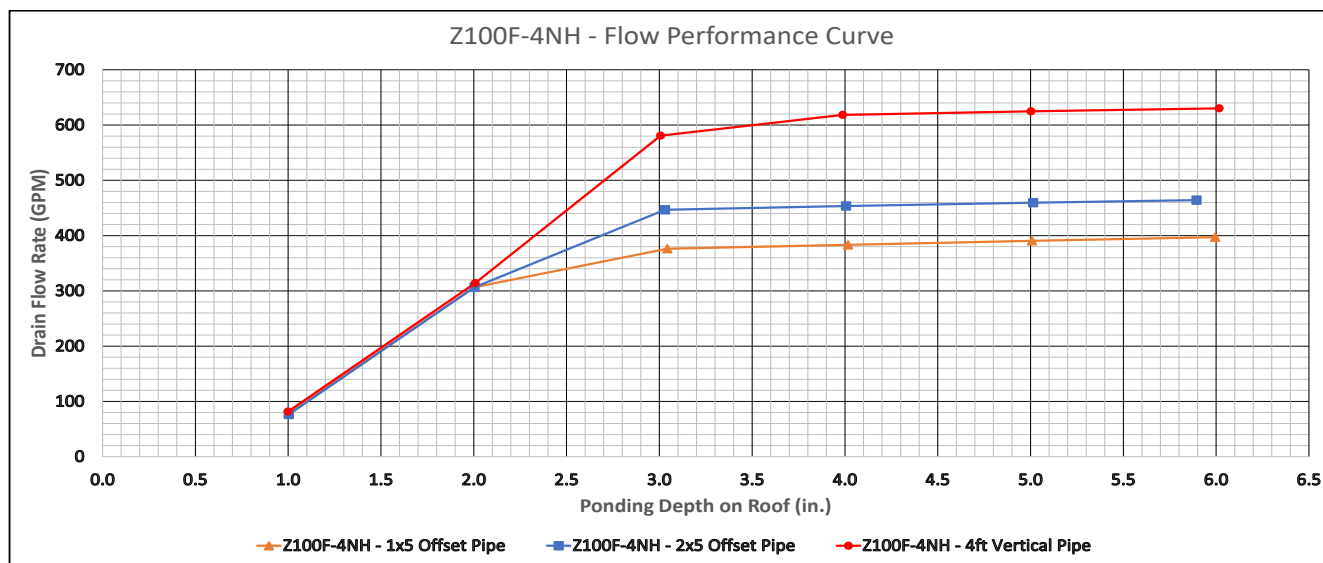
Design and Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice

Note: Results obtained from the application of flow measurement procedures specified in ASME A112.6.4/CSA B79.4 indicate a flow rate achieved under laboratory conditions using a 1219 mm (48 in) vertical discharge pipe; all added elements of drainage design may increase or decrease the flow rates reported. Variables such as wind, vortices, debris, roof design, roof obstructions, and slope, can significantly change the roof drain flow rate. Designers are advised to consider these and other possible variables in roof drainage design.

1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.00	79.31	1.00	76.30	1.00	81.68
2.00	306.65	2.00	306.58	2.01	314.14
3.04	376.36	3.03	446.73	3.01	580.74
4.02	383.20	4.01	453.45	3.99	618.29
5.01	390.66	5.01	459.53	5.00	624.89
5.99	397.10	5.89	464.23	6.02	630.21



Z100F-4NH



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Z100F FLOFORCE® HIGH PERFORMANCE ROOF DRAIN DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

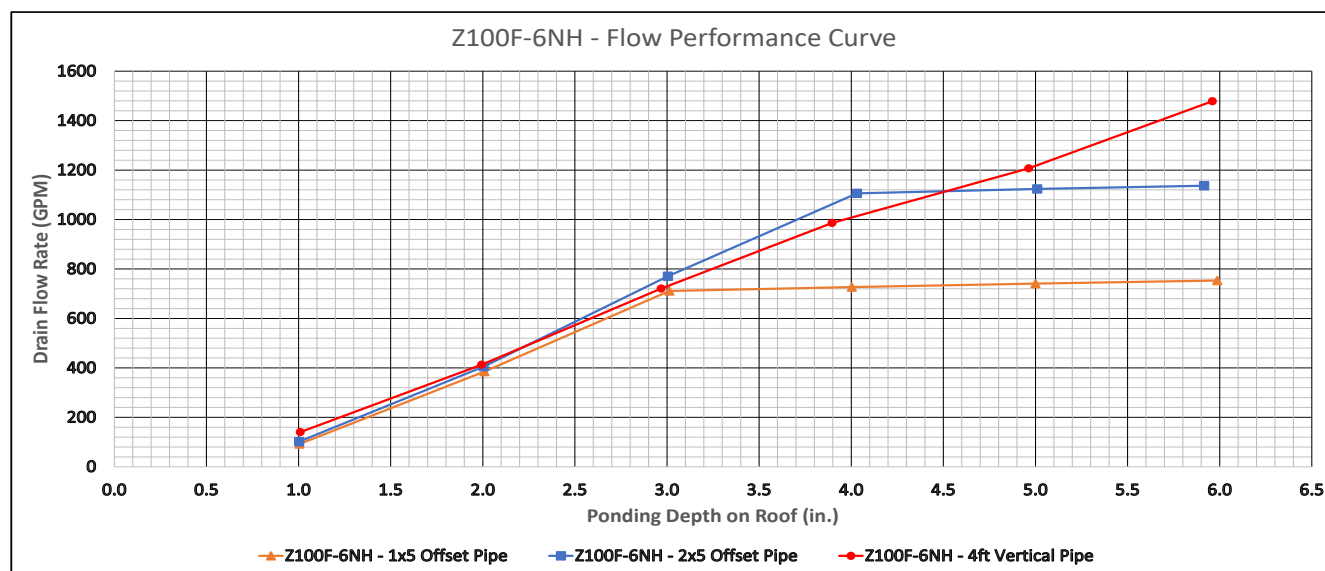
Design and Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice

Note: Results obtained from the application of flow measurement procedures specified in ASME A112.6.4/CSA B79.4 indicate a flow rate achieved under laboratory conditions using a 1219 mm (48 in) vertical discharge pipe; all added elements of drainage design may increase or decrease the flow rates reported. Variables such as wind, vortices, debris, roof design, roof obstructions, and slope, can significantly change the roof drain flow rate. Designers are advised to consider these and other possible variables in roof drainage design.

1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.00	92.08	1.00	102.10	1.01	140.49
2.01	384.97	2.00	405.17	1.99	412.62
3.01	710.94	3.01	770.96	2.97	720.61
4.00	726.79	4.03	1106.19	3.90	986.09
5.00	741.10	5.01	1123.76	4.96	1206.99
5.99	753.63	5.91	1136.69	5.96	1478.29



Z100F-6NH



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Date: 08/08/2023
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Z100F FLOFORCE® HIGH PERFORMANCE ROOF DRAIN DESIGNED TO DRIVE EFFICIENT FLOW PERFORMANCE

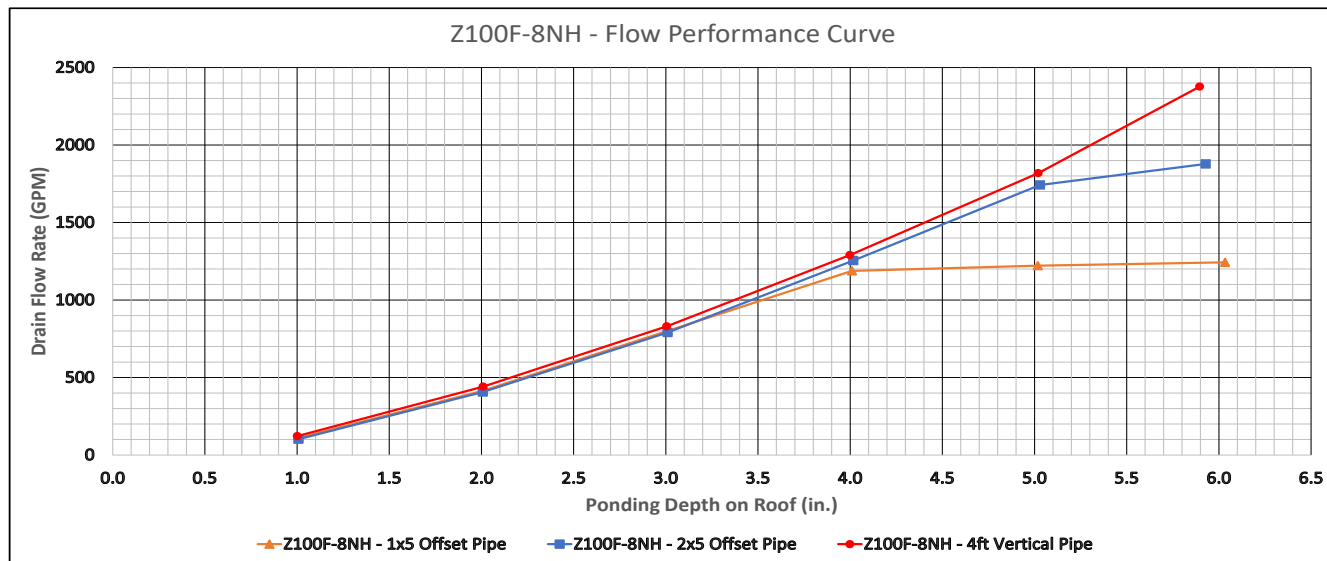
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Note: Results obtained from the application of flow measurement procedures specified in ASME A112.6.4/CSA B79.4 indicate a flow rate achieved under laboratory conditions using a 1219 mm (48 in) vertical discharge pipe; all added elements of drainage design may increase or decrease the flow rates reported. Variables such as wind, vortices, debris, roof design, roof obstructions, and slope, can significantly change the roof drain flow rate. Designers are advised to consider these and other possible variables in roof drainage design.

1x5 Offset Pipe Outlet		2x5 Offset Pipe Outlet		4ft Vertical Pipe Outlet	
Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)	Roof Ponding Depth (in.)	Flow Rate (GPM)
1.01	110.90	1.01	102.17	1.00	122.23
2.01	414.12	2.01	406.68	2.01	440.68
3.01	800.68	3.01	790.24	3.00	829.67
4.01	1188.29	4.02	1254.48	4.00	1289.54
5.02	1221.28	5.03	1742.09	5.02	1818.32
6.03	1242.80	5.93	1878.10	5.90	2376.50



Z100F-8NH



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Patent	zurn.com/patents
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2.16 HIGHLANDS BUILDING ROGERS

Datasheets

DN-1

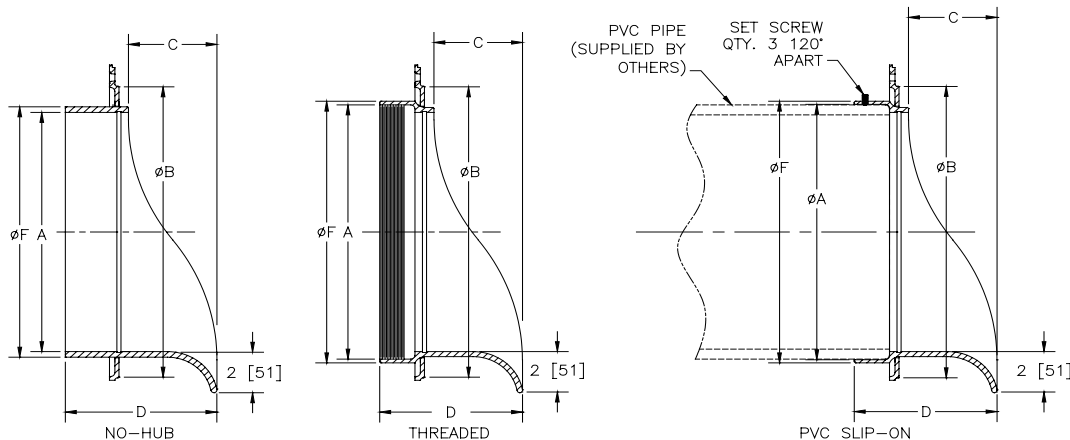
ZURN® Z199

DOWNSPOUT NOZZLE

SPECIFICATION SHEET

TAG _____

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



Dimension in Inches [mm]							Approx. Wt. Lbs. [kg]
A - Pipe Size	B	C	D		F		
			IP / PVC	NH	IP / PVC	NH	
2 [51]	4-1/2 [114]	2-5/8 [67]	4-1/2 [114]	4-1/2 [114]	2-13/16 [71]	2-3/8 [60]	5 [2]
3 [76]	5-1/2 [140]	2-5/8 [67]	4-1/2 [114]	4-1/2 [114]	3-15/16 [100]	3-3/8 [86]	6 [3]
4 [102]	6-5/8 [168]	2-43/64 [69]	4-1/2 [114]	4-1/2 [114]	4-15/16 [125]	4-3/8 [121]	7 [3]
5 [127]	7-5/8 [194]	3-1/16 [78]	4-59/64 [125]	5-15/32 [139]	6-1/16 [154]	5-5/16 [135]	12 [5]
6 [152]	8-5/8 [219]	3-3/32 [79]	4-59/64 [125]	5-15/32 [139]	7-1/8 [181]	6-5/16 [160]	13 [6]
8 [203]	10-5/8 [270]	2-31/32 [75]	4-59/64 [125]	5-25/32 [147]	9-1/8 [232]	8-3/8 [213]	14 [6]
10 [254]	12-5/8 [321]	3-1/2 [89]	5-53/64 [148]	6-5/16 [160]	11-5/32 [283]	10-9/16 [268]	15 [7]
12 [305]	14-5/8 [371]	4-5/64 [104]	6-13/32 [163]	6-57/64 [175]	13-5/32 [334]	12-1/2 [318]	18 [8]

ENGINEERING SPECIFICATION: ZURN ZANB199

Downspout Nozzle, All nickel bronze body, optional threaded, PVC slip-on, or No-Hub inlet and decorative face of wall flange and outlet nozzle.

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

2, 3, 4, 5, 6, 8, 10, 12 [51,76,102,127,152, 203, 254,305]

2, 3, 4, 5, 6, 8, 10, 12 [51,76,102,127,152, 203, 254,305]

2, 3, 4, 5, 6, 8, 10, 12 [51,76,102,127,152, 203, 254,305]

(Specify size/type) **OUTLET**

☐ IP Threaded
☒ **NH** No-Hub
☐ PVC PVC Connection

PREFIXES

_____ ZANB All Nickel Bronze Body*
 _____ ZARB All Plain Bronze Body

SUFFIXES

_____ **SS** Removable Stainless Screen

* Regularly furnished unless otherwise specified.

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⚠ **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

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www.zurn.com

Rev. L
 Date: 04/13/23
 C.N. No. 145251
 Prod. | Dwg. No. Z199

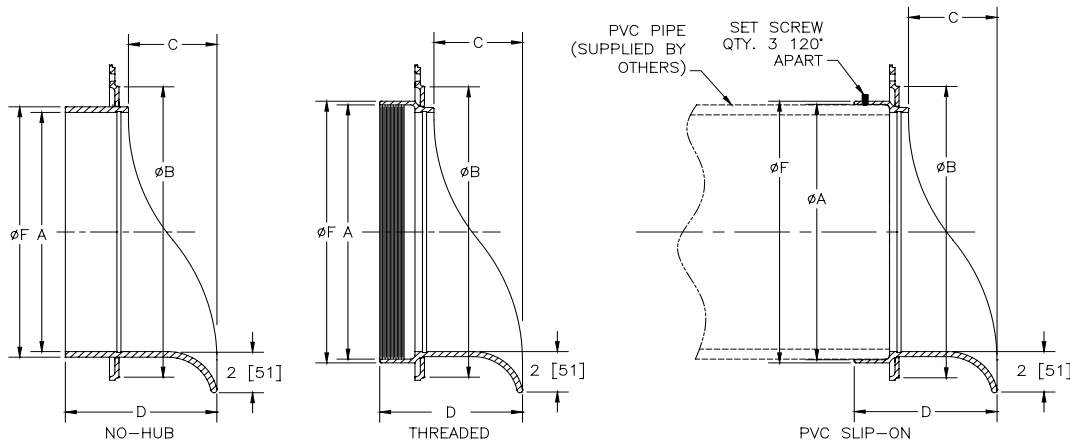
ZURN® Z199

DOWNSPOUT NOZZLE

SPECIFICATION SHEET

TAG _____

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



Dimension in Inches [mm]							Approx. Wt. Lbs. [kg]
A - Pipe Size	B	C	D		F		
			IP / PVC	NH	IP / PVC	NH	
2 [51]	4-1/2 [114]	2-5/8 [67]	4-1/2 [114]	4-1/2 [114]	2-13/16 [71]	2-3/8 [60]	5 [2]
3 [76]	5-1/2 [140]	2-5/8 [67]	4-1/2 [114]	4-1/2 [114]	3-15/16 [100]	3-3/8 [86]	6 [3]
4 [102]	6-5/8 [168]	2-43/64 [69]	4-1/2 [114]	4-1/2 [114]	4-15/16 [125]	4-3/8 [121]	7 [3]
5 [127]	7-5/8 [194]	3-1/16 [78]	4-59/64 [125]	5-15/32 [139]	6-1/16 [154]	5-5/16 [135]	12 [5]
6 [152]	8-5/8 [219]	3-3/32 [79]	4-59/64 [125]	5-15/32 [139]	7-1/8 [181]	6-5/16 [160]	13 [6]
8 [203]	10-5/8 [270]	2-31/32 [75]	4-59/64 [125]	5-25/32 [147]	9-1/8 [232]	8-3/8 [213]	14 [6]
10 [254]	12-5/8 [321]	3-1/2 [89]	5-53/64 [148]	6-5/16 [160]	11-5/32 [283]	10-9/16 [268]	15 [7]
12 [305]	14-5/8 [371]	4-5/64 [104]	6-13/32 [163]	6-57/64 [175]	13-5/32 [334]	12-1/2 [318]	18 [8]

ENGINEERING SPECIFICATION: ZURN ZANB199

Downspout Nozzle, All nickel bronze body, optional threaded, PVC slip-on, or No-Hub inlet and decorative face of wall flange and outlet nozzle.

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

2, 3, 4, 5, 6, 8, 10, 12 [51,76,102,127,152, 203, 254,305]
 2, 3, 4, 5, 6, 8, 10, 12 [51,76,102,127,152, 203, 254,305]
 2, 3, 4, 5, 6, 8, 10, 12 [51,76,102,127,152, 203, 254,305]

(Specify size/type) **OUTLET**

____ IP Threated
 ____ NH No-Hub
 ____ PVC PVC Connection

PREFIXES

____ ZANB All Nickel Bronze Body*
 ____ ZARB All Plain Bronze Body

SUFFIXES

____ **SS** Removable Stainless Screen

* Regularly furnished unless otherwise specified.

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 Date: 04/13/23
 C.N. No. 145251
 Prod. | Dwg. No. Z199



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

OHD-1

Location: _____



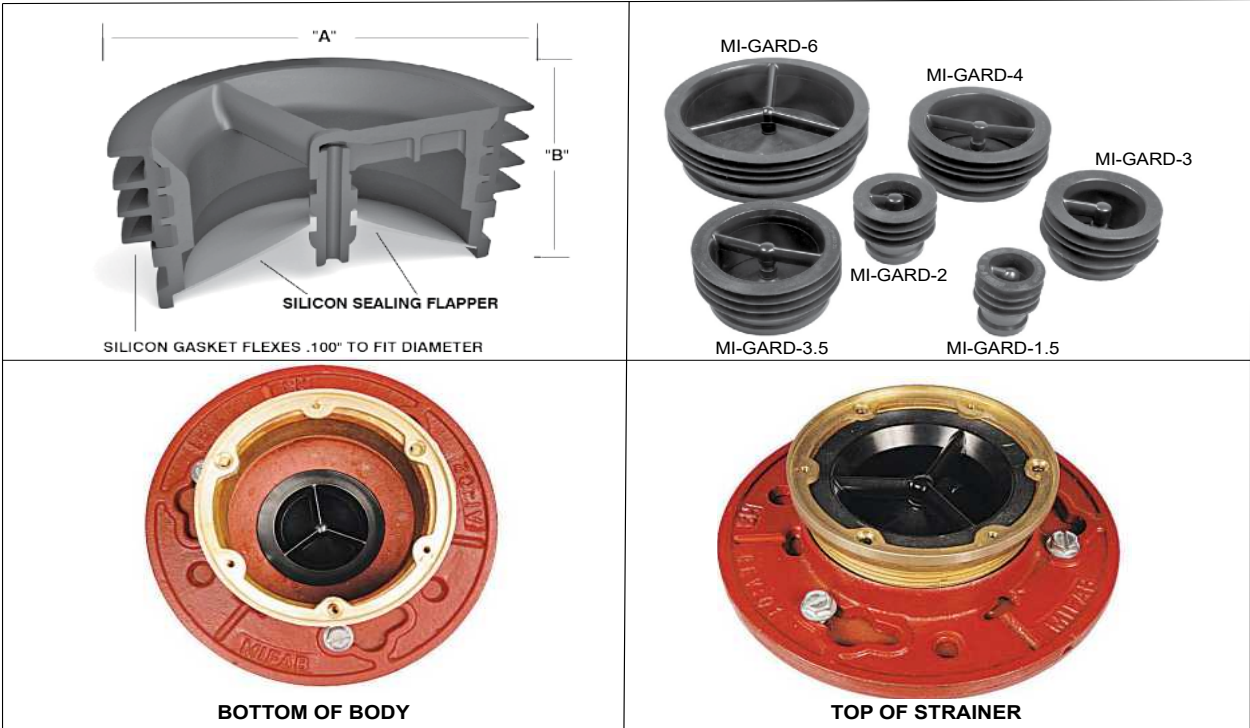
MI-GARD®

FLOOR DRAIN TRAP SEAL

Specification: MIFAB® MI-GARD® Series inline floor drain trap seal with UV resistant ABS plastic frame, silicon rubber sealing flapper and four flexible sealing ribs. Tested and certified to the ASSE 1072 Standard and listed with IAPMO and I.P.C. Specify connection size (1 1/2", 2", 3", 3 1/2", 4" or 6"). 10 year warranty is included.



Function: Used in the outlet connections of floor drain bodies, or the inside of floor drain strainers to seal the opening to prevent odors, sewer gases, and insects from entering up through the floor drain grate. The MI-GARD®'s four flexible silicone sealing ribs ensure easy installation into openings that have variations in size. The MI-GARD® will open to allow drainage and close when there is no water flow. MI-GARD can be used independent or in conjunction with trap seal primers for added protection against sewer gases and insects entering up through the floor drain grate. MI-GARD is not designed to substitute the trap seal primers.



MODEL NO.	"A" (PIPE SIZE)	"B" (HEIGHT)
MI-GARD-1.5	1-1/2" (38)	2" (51)
MI-GARD-2	2" (51)	2" (51)
MI-GARD-3	3" (76)	2" (51)
MI-GARD-3.5	3 1/2" (89)	2" (51)
MI-GARD-4	4" (102)	2" (51)
MI-GARD-6	6" (152)	2" (51)

MI-GARD® prevents the following from entering through the top of floor drains:

- Odors and sewer gases
- Insects

Not intended to be used in lieu of a trap seal primer. 6" MI-GARD not IAPMO certified.

Note: The MI-GARD-6 is designed in accordance with industry standards but is not listed. MI-GARD Floor Drain Trap Seals are in compliance with International Plumbing Code (I.P.C.)



MI-GARD-3,4 and 6 are I.C.C. approved.



CALIFORNIA PROPOSITION 65 WARNING. This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Job Name: _____ Page No: _____
Section No: _____ Contractor: _____
Schedule No: _____ Purchase Order No: _____

MIFAB® reserves the right to make changes in material and design without formal notice and obligation.

USA: 1-800-465-2736 www.mifab.com CAN: 1-800-387-3880

2024-05-03



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

PRV-1



Model 600XL

Water Pressure Reducing Valve with Integral By-pass Check Valve and Strainer

Application

Zurn Wilkins model 600XL is designed for installation on potable water lines to reduce high inlet pressure to a lower outlet pressure. The integral strainer makes this device most suitable for residential and commercial water systems requiring frequent cleaning because of sediment and debris. The direct acting integral by-pass design prevents buildup of excessive system pressure caused by thermal expansion. The balanced piston design enables the regulator to react in a smooth and responsive manner to changes in system flow demand, while at the same time, providing protection from inlet pressure changes.

Standards Compliance

- ASSE® Listed 1003
- IAPMO® Listed
- CSA® Certified
- City of Los Angeles Approved
- Meets the requirements of NSF/ANSI/CAN 61

Materials

Main valve body	Low Lead Cast Bronze	ASTM B 584
Access covers	Low Lead Cast Bronze	ASTM B 584
	Low Lead Brass	
Fasteners	Stainless Steel, 300 Series	
Stem & plunger	Low Lead Cast Bronze	ASTM B 584
	Low Lead Brass	
Elastomers	Buna Nitrile, (FDA Approved)	
	EPDM, (FDA Approved)	
Cap gaskets	Natural Vulcanized Fibre	
	Acetal (Delrin™)	
Strainer screen	Stainless Steel, 300 Series	Strainer
Seat	Stainless Steel, 300 Series	

Features

Sizes:	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
Maximum working water pressure	300 psi
Maximum working water temperature	140°F
Reduced pressure range (standard)	25 psi to 75 psi
Factory preset	50 psi
Hydrostatic test pressure	300 psi
CPVC tailpiece: Max. hot water temp.	140°F @ 100 psi
	Cold water rated temp. 73.4°F @ 400 psi

Dimensions & Weights (do not include pkg.)

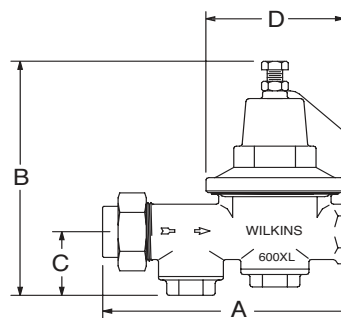
SIZE		CONNECTIONS	DIMENSIONS (approximate)								WEIGHT	
in.	mm		A		B		C		D			
1/2	15	SINGLE UNION	5 1/2	133	6 1/4	159	1 1/4	32	2 3/4	70	3	1.5
1/2	15	LESS UNION	4 1/2	114	6 1/4	159	1 1/4	32	2 3/4	70	3	1.5
3/4	20	SINGLE UNION	5 5/16	135	5 1/2	140	1 1/4	32	2 3/4	70	3	1.5
3/4	20	LESS UNION	4 7/8	121	5 1/2	140	1 1/4	32	2 3/4	70	3	1.5
1	25	SINGLE UNION	6 1/8	156	7 1/4	184	2	51	3 3/8	86	5	2.5
1	25	LESS UNION	5 3/4	146	7 1/4	184	2	51	3 3/8	86	5	2.5
1 1/4	32	SINGLE UNION	7 1/8	181	8	203	2	51	3 7/8	100	7	3.0
1 1/2	40	SINGLE UNION	9 1/8	232	10	254	2 1/2	64	5	127	13	6.0
2	50	SINGLE UNION	10 1/4	260	12	305	3	76	6 1/2	165	21	9.5



Options

(Suffixes can be combined)

- ☐ - standard with 20 mesh strainer screen, SU, FNPT
- ☐ HR - 75 psi to 125 psi spring range, factory set at 85 psi
- ☐ HLR - 10 psi to 125 psi spring range, factory set at 50 psi
- ☐ HTSTSC - 180°F maximum temp, stainless steel trim, spring, sealed cage
- ☐ C - copper sweat connection
- ☐ L - less integral by-pass check valve
- ☐ LU - less union assembly, female x female (3/4" & 1" only)
- ☐ LPV - 180°F maximum temp with 10 psi to 35 psi spring range, factory set at 20 psi
- ☐ SC - sealed cage bell housing and stainless steel adjustment screw
- ☐ 610XL - 400 psi inlet rating and 75 psi to 125 psi spring range, factory set at 85 psi
- ☐ CPVC - CPVC tailpiece connection (1/2" - 1")
- ☐ CH - Chrome stem & plunger
- ☐ P - tapped and plugged for gauge
- ☐ G - tapped and plugged with gauge



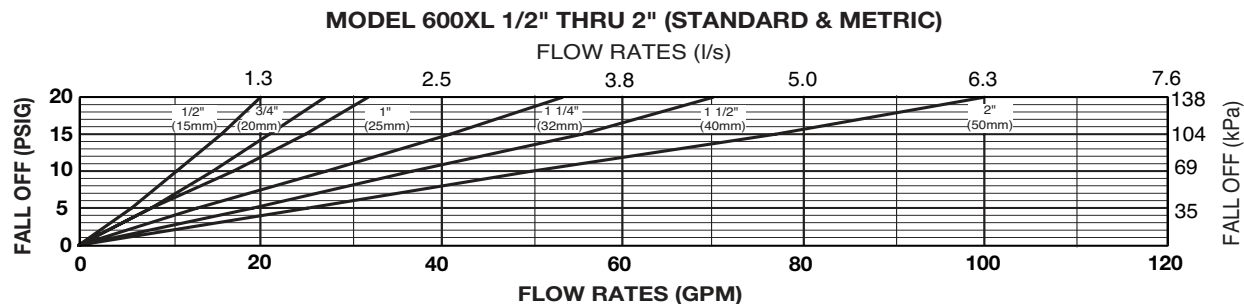
Zurn Industries, LLC | Wilkins
1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-5766
In Canada | Zurn Industries Limited
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Rev. J
Date: 05/22
Document No. REG-600XL
Product No. Model 600XL
Patent zurn.com/patents

Page 1 of 2

Flow Characteristics

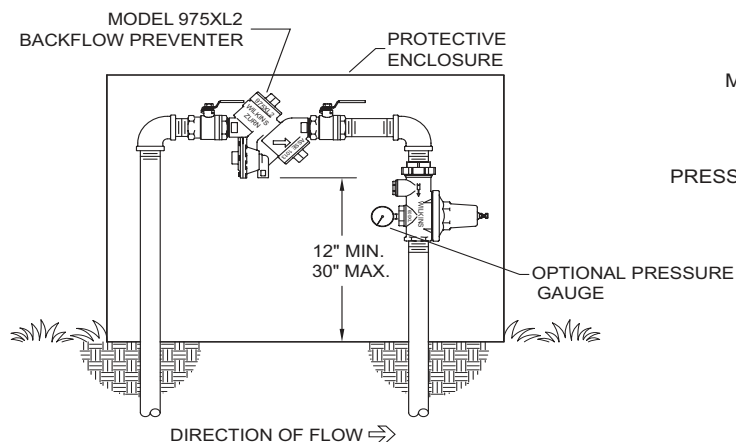
◇ Rated Flow (established by approval agencies)



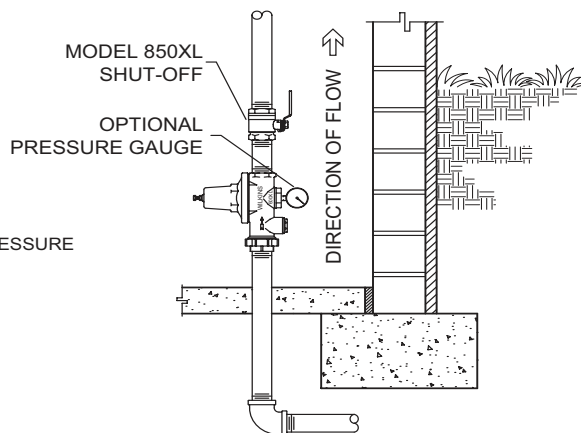
"Flow curves are based on a 50 psi pressure differential"

Typical Installation

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted in accordance with the latest edition of the Uniform Plumbing Code. The Model 600XL may be installed in any position. If installed in a pit, vault or inside application, specify the "SC" sealed cage option. Multiple installations are recommend for wide demand variations or where the desired pressure reduction is more than 4 to 1 (i.e.: 200 psi inlet reduced to 50 psi outlet). **CAUTION:** Anytime a reducing valve is adjusted, a pressure gauge must be used downstream to verify correct pressure setting. Do not bottom adjustment bolt on bell housing.



OUTDOOR INSTALLATION



VERTICAL INSTALLATION

Specifications

The Pressure Reducing Valve shall be certified to NSF/ANSI/CAN 61, consist of a low lead bronze body and bronze bell housing, shall have separate access covers for the plunger and strainer screen and shall have a bolt to adjust the downstream pressure. The Pressure Reducing Valve shall be of the balanced piston design and shall reduce pressure in both flow and no-flow conditions. The bronze bell housing and access caps shall be threaded to the body and shall not require the use of ferrous screws. The Pressure Reducing Valve shall be a ZURN WILKINS Model 600XL.



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

RH-1

The patented Woodford RHY2-1-MS is intended for irrigation purposes and to provide water availability on commercial building roofs. Applications include window washing, cleaning of condenser coils, cooling towers and other types of roof equipment. The RHY2 is backflow protected with an ASSE 1052 double check backflow preventer that is field testable. The backflow device does not require removal for drain down. The RHY2 has a built in vent that allows drainage. Valve body of hydrant is drilled and tapped with 1/8" drain hole which must be piped to a drain location.

The RHY2-1-MS allows for installation flexibility since it is not necessary to install hydrant when the patented Mounting System is bolted to the roof. The Mounting System utilizes a 3" opening that allows the hydrant to be installed later if desired. All necessary mounting hardware for proper installation on a commercial roof is supplied,

Hydrant Features:

- Rod guide eliminates side pull on rod, reduces wear on packing, packing nut & stem.
- Adjustable link for easy adjustment and positive lever lock tension.
- One piece variable flow plunger with large cushion type seal for longer life is not easily damaged and assures shut-off even when foreign particles are present.
- Hydrant automatically drains when shut off even with hose attached.
- All hydrant repairs can be made from top of unit without removing hydrant. Parts are readily available.

Specifications:

- Hose Connection Backflow Preventer:
 - Model 50HF with 3/4" hose connection
 - ASSE 1052 Listed
 - Field Testable Dual Check holds against 125 psi backflow pressure
- 1" NPT female inlet connection
- 1 1/4" U.S. made galvanized pipe casing
- **Maximum Working Pressure:** 100 p.s.i.
- **Maximum Temperature:** 120° F
- 1/8" NPT Drain hole (Must be piped to a drain location)

Mounting System: (Can be ordered Separately)

- Cast iron Hydrant Support
- Cast iron Under Deck Flange
 - 4 bolts draw tight against the roof decking and the hydrant support.
 - 3 clamp screws tighten against the hydrant pipe to secure the hydrant's vertical position through the roof.
- Well Seal seals tight between the hydrant support and hydrant pipe.
- EPDM Boot covers well seal and top of hydrant support.
- 2° Shim is supplied, if needed, for installation on pitched roofs.

Patent information:

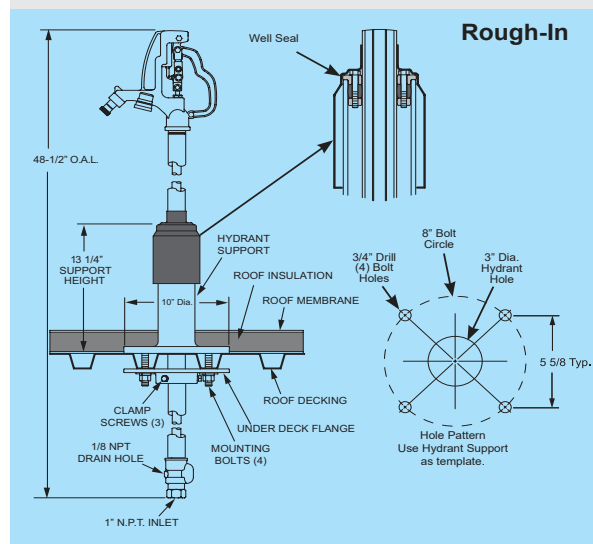
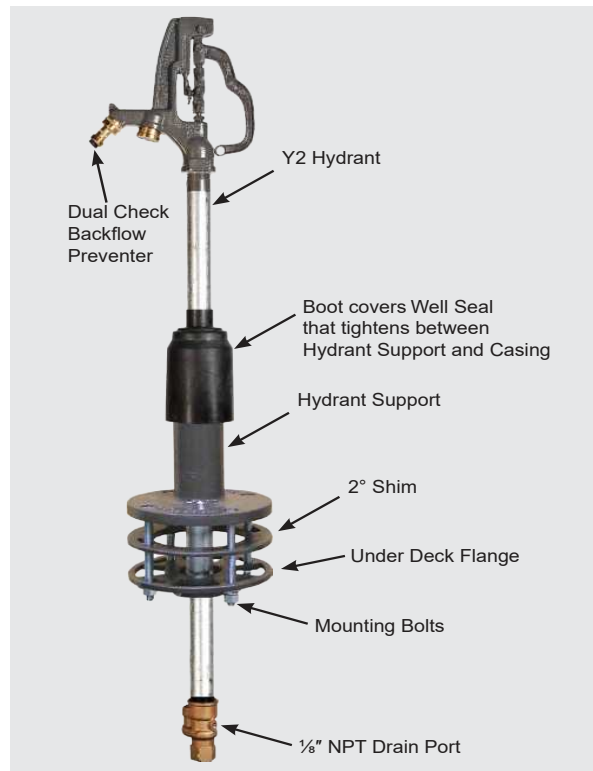
<http://woodfordmfg.com/patents/>

For Installation / Troubleshooting Instructions go to www.woodfordmfg.com or call 1-800-621-6032

Freezeless Roof Hydrant Model RHY2-1-MS



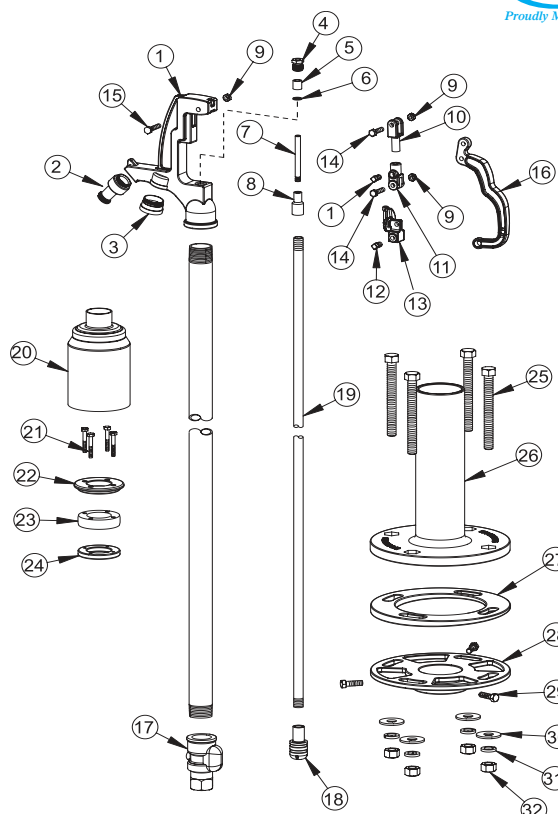
Can be ordered separately from Mounting System RH-MS





MODEL RHY2-1-MS PARTS LIST

ITEM	PART#	DESCRIPTION
	15245	RHY2 Head Assembly (Includes Items 1-16)
1	10612	RHY2 Head
2	50HF-BR	50HF Backflow Preventer - Brass
3	15238	Diverter Assembly
4	10100	Packing Nut
5	10101	Packing
6	10102	Packing Support Washer
7	10104	Brass Rod Stem
8	10011	Reducing Coupling
9	10206	Hex Nut (3)
10	10614	RH Upper Link
11	15242	RH Lower Link (Includes Item 12)
12	10019	Set Screw (2)
13	15243	RH Cam & Clevis Assembly
14	10020	Link Bolt (2)
15	10021	Lever Bolt
16	10613	RH Lever
17	10017	Valve Body (1" NPT Inlet)
18	10106	Plunger
19	10023	Operating Pipe (35-1/2" Long)
20	10608	Boot, EPDM 1 1/4" Pipe
21	10606	Bolt, Hex Head 1/4-20 X 1 3/4" (4)
22	10582	Well Seal, Top
23	10609	Well Seal, EPDM
24	10583	Well Seal, Bottom
25	10584	Bolt, Hex Head 5/8-11 X 6" (4)
26	10579	Hydrant Support, Casting
27	10581	2" Shim, Casting
28	10580	Under Deck Flange
29	10607	Screw, Clamp 3/8-16 Hex Head X 1 3/4" (3)
30	10604	Washer, Plain 5/8 (4)
31	10605	Washer, Lock 5/8 (4)
32	10585	Nut, Hex 5/8-11 UNC (4)
	RK-Y1	Repair Kit (Includes items 4-7 & 18)
	RK-RHL	Repair Kit (Includes items 9-15)



When ordering, specify RH part number option listed below.

Part# RHY2-1-MS

Consists of the complete Roof Hydrant system:

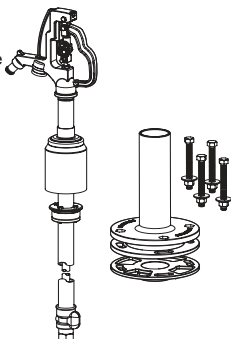
Qty. 1 RHY2-1

Y2 Hydrant shipped in 1 carton.

Qty. 1 RH-MS

Mounting System shipped in 1 carton.

Total Shipping Wt.
2 cartons: 50 lbs

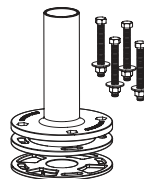


Part# RH-MS

Carton contents consists of:
Mounting System/
Rough-In Components
(Parts 25-32 above)

- Hydrant Support
- 2" Shim,
- Under Deck Flange
- Mounting Bolts, Nuts, Washers.

Shipped in 1 Carton.
Shipping Wt. - 30 lbs

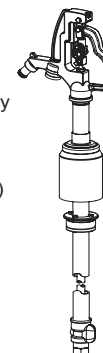


Part# RHY2-1

Carton contents consists of:

- Y2 Hydrant Assembly (Parts 1-19 above)
- Well Seal (Parts 21-24 above)
- Boot (Part 20 above)

Shipped in 1 Carton.
Shipping Wt. - 20 lbs



For more information contact...

WOODFORD MANUFACTURING COMPANY, LLC

2121 Waynoka Road, Colorado Springs, Colorado 80915 • Phone: (800) 621-6032 • Fax: (800) 765-4115

To view our complete product line visit: www.woodfordmfg.com or email: sales@woodfordmfg.com



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

RPZ-1

WILKINS Model 375AST

Reduced Pressure Principle Assembly

Application

Designed for installation on potable water lines to protect against both backsiphonage and backpressure of contaminated water into the potable water supply. The Model 375AST provides protection where a potential health hazard exists. Ideal for use where lead-free* valves are required.

Standards Compliance

- ASSE® Listed 1013
- AWWA Compliant C511 (with gates only), and C550
- FM® Approved
- UL® Classified
- C-UL® Classified
- CSA® Certified B64.4
- cUPC® Listed
- Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California
- Meets the requirements of NSF/ANSI/CAN 61 and 372*

Materials

Main Valve Body	304L Stainless steel
Access covers	304L Stainless steel
Coatings	FDA Approved electrostatic epoxy finish
Internals	Stainless steel, 300 Series NORLYL™
Fasteners & Springs	Stainless Steel, 300 Series
Seal rings	EPDM (FDA approved)
O-rings	Buna Nitrile (FDA approved)
Sensing line	Stainless Steel, braided hose

Features

Sizes:	2 1/2", 3", 4", 6", 8", 10"
Maximum working water pressure	175 PSI
Maximum working water temperature	140°F
Hydrostatic test pressure	350 PSI
End connections	

(Grooved for steel pipe)	AWWA C606
(Flanged bolt pattern)	ASME B16.42 Class 150

Dimensions & Weights (do not include pkg.)

MODEL 375AST SIZE	WEIGHT															
	WITHOUT GATES		WITH NRS GATES (GXF)		WITH OS&Y GATES (GXF)		WITH NRS GATES (GXG)		WITH OS&Y GATES (GXG)		WITH BUTTERFLY VALVES (GXG)		WITH BUTTERFLY VALVES (GXF)			
	in.	mm	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg
2 1/2	65	41	19	102	46	120	54	92	42	110	50	87	39	97	44	
3	80	42	19	119	54	137	62	107	49	125	57	91	41	104	47	
4	100	43	20	176	80	212	96	156	71	192	87	95	43	117	53	
6	150	71	32	288	130	346	157	258	117	316	143	158	71	188	85	
8	200	177	80	579	263	661	300	539	244	607	275	361	164	407	185	
10	250	177	80	784	356	880	399	732	332	822	373	458	208	516	234	

MODEL 375AST SIZE		DIMENSION (approximate)																							
		A		A WITH BUTTERFLY VALVES		B LESS GATE VALVES		C		D		E NRS GATE		E OS&Y OPEN		E OS&Y CLOSED		E WITH BUTTERFLY VALVES		F		G		H	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
2 1/2	65	31 7/8	810	28 3/4	730	16 5/8	422	4 1/2	114	7 1/4	184	11 1/2	292	17 3/4	451	15 3/8	391	8 1/4	210	9 3/4	248	8 5/8	219	42	1067
3	80	32 7/8	835	29 3/8	746	16 5/8	422	4 1/2	114	7 1/4	184	12 3/4	324	20 1/4	514	17	432	8 1/4	210	9 3/4	248	8 5/8	219	43 1/2	1105
4	100	34 7/8	886	30 1/4	768	16 5/8	422	4 1/2	114	8	203	14 1/2	368	22 1/2	572	18 1/4	464	9	229	9 3/4	248	8 5/8	219	50	1270
6	150	43 1/2	1105	36 1/2	927	22 1/4	565	5 1/2	140	10	254	18	457	30 1/2	775	24 1/4	616	10 1/4	260	10 3/4	273	11 1/4	286	61 5/8	1565
8	200	52 3/4	1340	45 3/4	1162	29 1/2	749	9 1/4	235	11	279	21 1/8	537	37	940	28 1/2	724	18 1/2	470	15 5/8	397	13 1/4	337	77 1/8	1959
10	250	55 3/4	1416	49 3/4	1264	29 1/2	749	9 1/4	235	12	305	24 3/4	629	45 5/8	1159	34 3/4	883	18 1/2	470	15 5/8	397	13 1/2	343	85 3/8	2169

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www.zurn.com

Rev. S
Date: 12/25
Document No. BF-375AST
Product No. Model 375AST
Patent zurn.com/patents

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NSF/ANSI/CAN 61 & 372

MODEL 375AST

Options

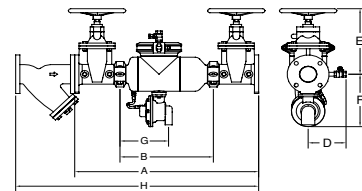
(Suffixes can be combined)

- ☐ - with flanged end NRS gate valves (standard)
- ☐ FSC - with epoxy coated wye type strainer (flanged only)
- ☐ G - with grooved end NRS gate valves
- ☐ GF - with grooved inlet gate connection and flanged outlet gate connection
- ☐ FG - with flanged inlet gate connection and grooved outlet gate connection
- ☐ OSY - with flanged end OS&Y gate valves
- ☐ OSYG - with grooved end OS&Y gate valves
- ☐ BG - with grooved end butterfly valves with integral supervisory switches
- ☐ BF - with flanged end butterfly valves with integral supervisory switches

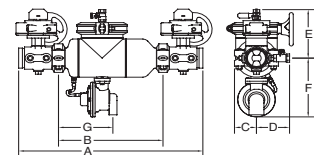
Accessories

- ☐ Connected Pressure Monitor ([Model ZCSM-PF - Spec Sheet](#))
- ☐ [Repair kit](#)
- ☐ Thermal expansion tank ([Model XT - Spec Sheet](#))
- ☐ OS & Y Gate valve tamper switch ([OSY-40](#))
- ☐ Air gap ([Model AG - Spec Sheet](#))
- ☐ Quick Test Fitting Set ([QT-SET - Spec sheet](#))
- ☐ [Wireless Monitor Retrofit Kit](#) for conversion of existing model 375 (212-6-RFK-375W1, 8-10-RFK-375W1) ([Spec sheet](#))

MODEL 375AST with NRS & FSC option



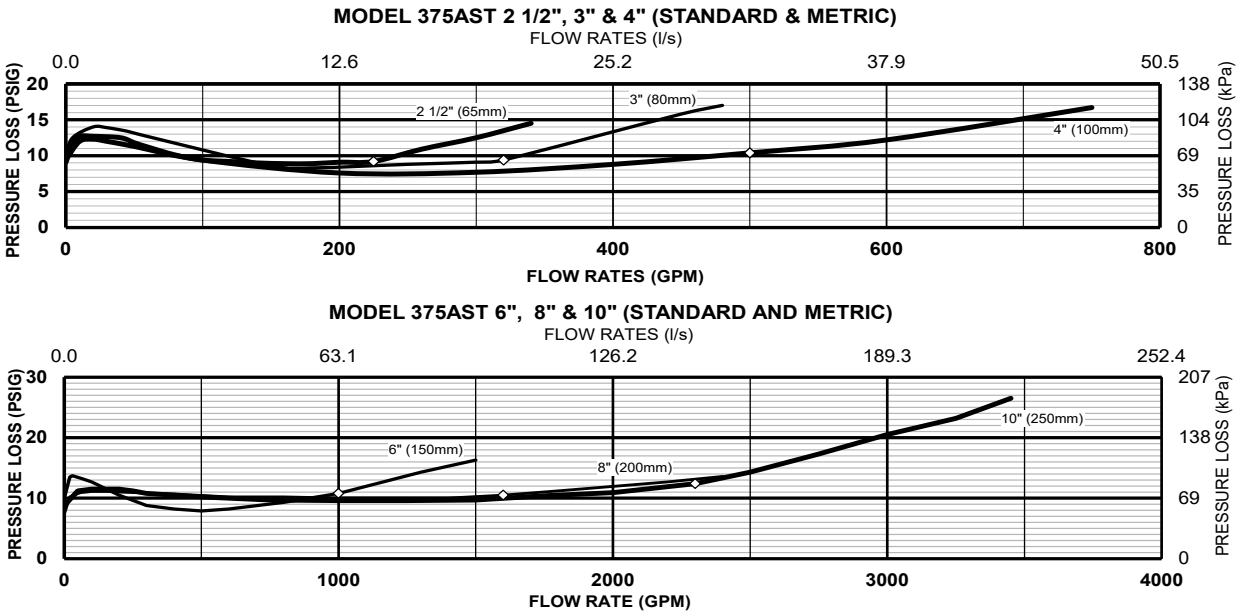
MODEL 375AST with BG option



Relief Valve discharge port:
2 1/2" - 6" - 2.75 sq. in.
8" - 10" - 3.69 sq. in.

Flow Characteristics

◇ Rated Flow (established by approval agencies)



Suggested PRV Pairing:

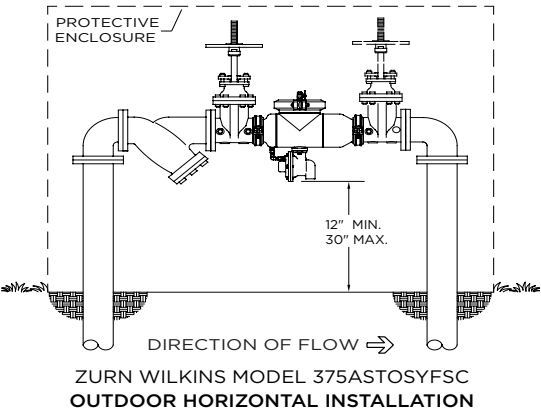
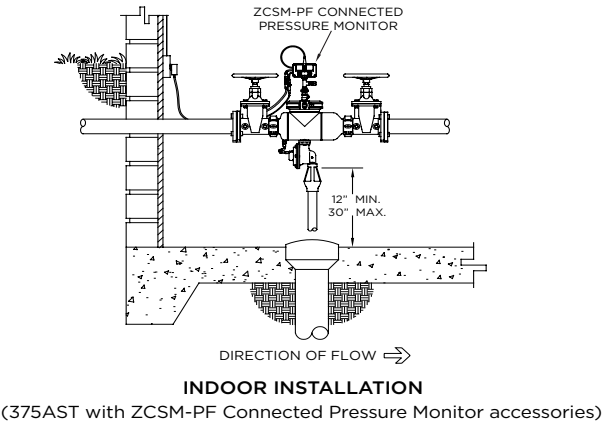
[Model 500XL3 \(Spec Sheet\)](#), Flanged 500XL3F ([Spec Sheet](#))
[Model ZW209](#) Pressure Reducing Valve (6" - 10") ([Spec Sheet](#))

Typical Installation

([Installation & Maintenance Instruction Sheet](#)) 2 1/2" - 6"
([Installation & Maintenance Instruction Sheet](#)) 8" - 10"

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.

Capacity thru Schedule 40 Pipe (GPM)				
Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
2 1/2"	75	112	149	224
3"	115	173	230	346
4"	198	298	397	595
6"	450	675	900	1351
8"	780	1169	1559	2339
10"	1229	1843	2458	3687
12"	1763	2644	3525	5288



Specifications

The Reduced Pressure Principle Backflow Prevention Assembly shall be certified to NSF/ANSI/CAN 61 and 372, ASSE® Listed 1013, and supplied with full port gate valves. The main body and access cover shall be 304L Stainless Steel, the seat ring and check valve shall be NORYL™, the stem shall be stainless steel (ASTM A 276) and the seat disc elastomers shall be EPDM. The checks and the relief valve shall be accessible for maintenance without removing the device from the line. The Reduced Pressure Principle Backflow Prevention Assembly shall be a ZURN WILKINS Model 375AST.

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7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, 877-892-5216
www.zurn.com

WILKINS Model FSC

Ductile Iron "Y" Type Strainer

Application

Wilkins Model FSC is designed for installation on water lines to protect downstream equipment from malfunction or premature failure due to build-up of sediment or debris.

Standards Compliance

- MIL-S 16293F Type 2
- Meets the requirements of NSF/ANSI/CAN 372

Materials

Main valve body Ductile Iron ASTM A536
 Access cover Ductile Iron ASTM A536
 Coatings Fusion Epoxy Finish
 (Meets requirements of NSF/ANSI/CAN 61)
 Screens Perforated Stainless Steel, 300 Series

Features

Sizes: 2 1/2", 3", 4", 6", 8", 10", 12"

Pressure/temperature: 200 psi @ 150°F WOG
 125 psi @ 450°F Steam

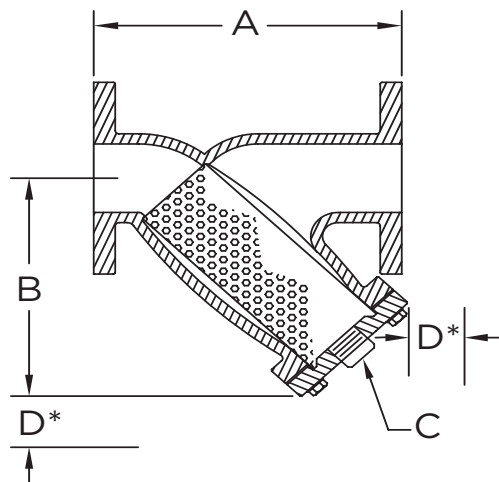
End connections: ASME B16.42 Class 150

Screen

SIZE inch	OPENINGS (dia.)	MATERIAL THICKNESS	HOLES PER sq(in)	OPEN AREA
2 1/2	0.045	0.020 (26 Ga.)	225	36%
3	0.045	0.020 (26 Ga.)	225	36%
4	1/16	0.020 (26 Ga.)	98	30%
6	1/16	0.020 (26 Ga.)	98	30%
8	1/8	0.020 (26 Ga.)	29	36%
10	1/8	0.032 (22 Ga.)	29	36%
12	1/8	0.025 (24 Ga.)	35	43%



LEAD FREE



SIZE		DIMENSIONS (approximate)							WEIGHT	
		A		B		C	D*			
in	mm	in	mm	in	mm		in	mm	lbs.	kg.
2 1/2	65	10	254	8 1/4	210	1 1/4 NPT	6	152	35	16
3	80	10 1/2	267	9 1/4	235	1 1/4 NPT	6	152	45	20.5
4	100	15	381	12 1/2	318	2 NPT	9	229	61	27.5
6	150	18	457	14	356	2 NPT	10	254	165	75
8	200	24 1/4	616	17 3/4	451	2 NPT	11	279	239	108.5
10	250	29 1/2	749	21 1/4	540	2 NPT	14	356	394	178.5
12	300	29 7/8	759	21 5/16	541	2 NPT	17	432	489	222

*Clearance for screen removal

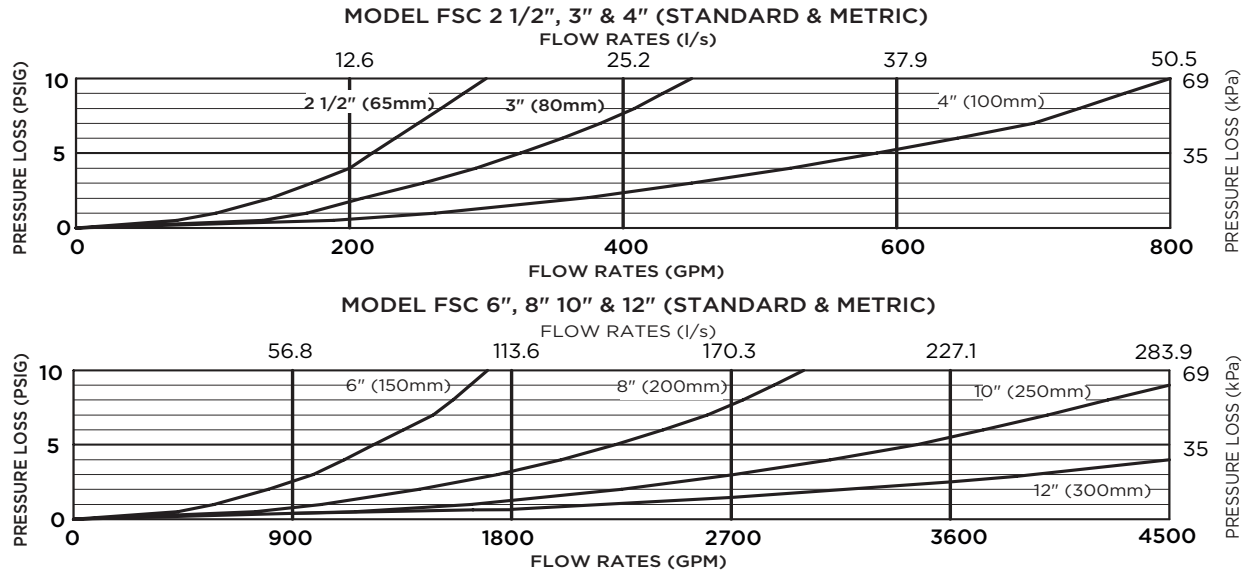
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Rev. E
 Date: 10/25
 Document No. STR-FSC
 Product No. Model FSC
 Patent zurn.com/patents

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Flow Characteristics

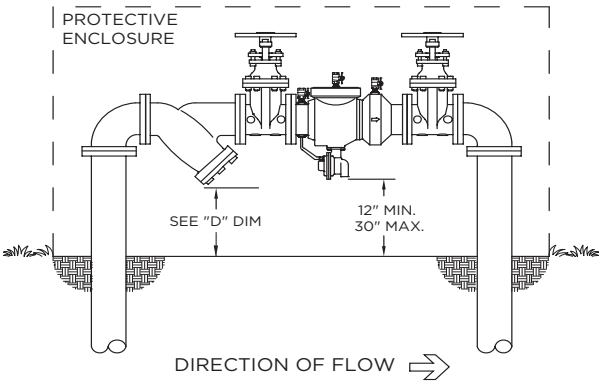
◇ Rated Flow (established by approval agencies)



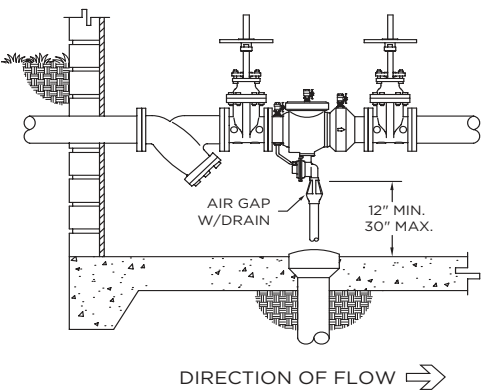
Typical Installation

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted with sufficient clearance for maintenance in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code. The installation shall be made so that no part of the unit can be submerged. Horizontal installation with the strainer cap facing downward is the preferred installation orientation; however the strainer will provide protection in any orientation.

Capacity thru Schedule 40 Pipe (GPM)				
Pipe Size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
2 1/2"	75	112	149	224
3"	115	173	230	346
4"	198	298	397	595
6"	450	675	900	1351
8"	780	1169	1559	2339
10"	1229	1843	2458	3687
12"	1744	2617	3489	5233



Outdoor Installation



Indoor Installation

Specifications

The Ductile Iron "Y" type strainer shall meet the requirements of NSF/ANSI/CAN 372, and MIL-S-16293F Type 2. The main body and access cover shall be ductile iron ASTM A536 with an NSF/ANSI/CAN 61 certified Fusion Epoxy Finish coating inside and out. The integral strainer screen shall be accessible for cleaning without removing the device from the line. The Ductile Iron "Y" type strainer shall be a ZURN WILKINS Model FSC.

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www.zurn.com



Model AG

Air Gap Adaptor Fitting

Application

Designed for use with ZURN WILKINS Reduced Pressure Principle Backflow Preventers on horizontal or vertical installations. Device is necessary when installing a drain line and can be mounted to the body. (Drain line can be any standard piping material.)

Approvals

ANSI/ASME A 112.1.2

Materials

Body Cast grey iron, epoxy painted
 Body (AG-11, 12) Nylon
 Elbow Cast grey iron, epoxy painted
 Bolts Steel, zinc plated



AG-4 thru AG-8 AG-9 & AG-10 AG-11 & AG-12 AG-13 & AG-14

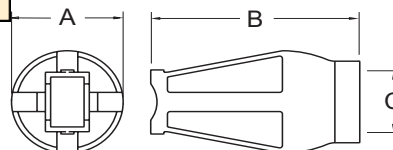
Sizes: 1/4" - 1/2", 3/4" - 1", 1-1/4" - 2", 2-1/2" - 6", 8" - 10"

Dimensions & Weights (do not include pkg.)

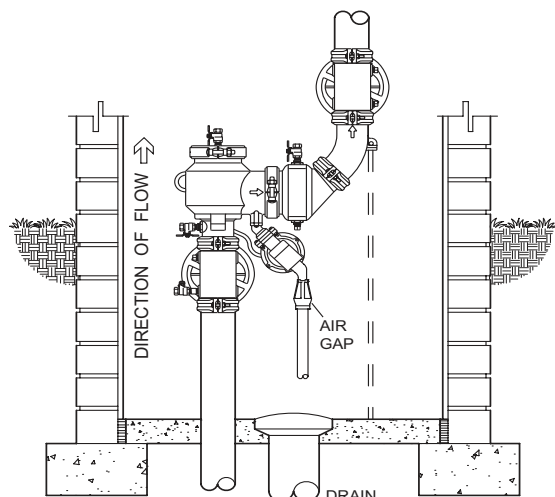
MODEL	DIMENSIONS (approximate)							WEIGHT	
	SIZES	FOR MODEL* SERIES	A		B		C OUTLET PIPE SIZE		
AG-8	1/4" - 1/2"	975XL, 975XL2	2 1/2	64	3 1/2	89	1" NPT	2	0.9
AG-8	1/2" - 1"	975XL3	2 1/2	64	3 1/2	89	1" NPT	2	0.9
AG-4	3/4" - 1"	975XL, 975XL2	3 1/4	83	5	127	1" NPT	2	0.9
AG-4	1 1/4" - 1 1/2"	975XL3	3 1/4	83	5	127	1" NPT	2	0.9
AG-5	1 1/4" - 2"	975XL, 975XL2	4 1/2	114	8	203	2" NPT	3	1.4
AG-5	2"	975XL3	4 1/2	114	8	203	2" NPT	3	1.4
AG-6	2 1/2" - 3"	475V	5 3/8	137	10	254	3" NPT	5	2.3
AG-6	2 1/2" - 6"	375, 475	5 3/8	137	10	254	3" NPT	5	2.3
AG-7	8" - 10"	375, 475	7	178	11	279	4" NPT	8	3.6
AG-9	4" - 6"	475V	5 3/8	137	14 1/2	368	3" NPT	9	4
AG-10	8" - 10"	475V	7	178	16 1/2	413	4" NPT	11	5
AG-11	1/2" - 1"	375, 375XL	3 3/4	95	5 1/2	140	2" IPS Slip	1	0.5
AG-12	1 1/4" - 2"	375, 375XL	6 1/2	165	8	200	3" IPS Slip	1	0.5
AG-13	4" - 6"	475ST, 475STV	5 3/8	137	14 1/2	368	3" NPT	9	4
AG-14	8" - 10"	475ST, 475STV	7	178	16 1/2	413	4" NPT	11	5

* Model:

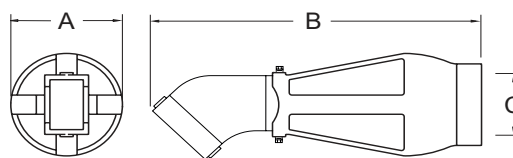
375, 375A, 375ADA, 375ADAR, 375AMS, 375AR, 375AST, 375ASTDA, 375ASTDAR, 375ASTDAST, 375ASTMS, 375ASTR, 375DA, 375MS, 375ST, 375XL, 475, 475DA, 475DAV, 475MS, 475VMS, 975XL, 975XL2, 975XL3, 475ST, 475STV, 475STDA, 475STDAV



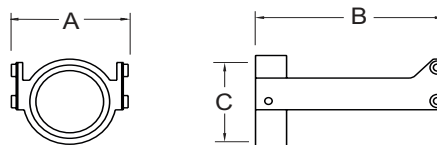
AG-4 THRU AG-8



Indoor Installation



AG-9 & AG-10



AG-11 & AG-12

Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code.

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Rev. G
 Date: 9/22
 Document No. BF-AG
 Product No. Model AG
 Patent zurn.com/patents



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

RPZ-2



Model 975XL3

Reduced Pressure Principle Assembly

Application

Ideal for use where Lead-Free* valves are required. Designed for installation on potable water lines to protect against both backsiphonage and backpressure of contaminated water into the potable water supply. Assembly shall provide protection where a potential health hazard exists.

Standards Compliance

- ASSE® Listed 1013
- cUPC® Listed
- CSA® Certified B64.4
- UL® Classified (less shut-off valves)
- C-UL® Classified
- AWWA Compliant C511
- Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California
- Meets the requirements of NSF/ANSI/CAN 61 and 372*

*(Less than 0.25% Weighted Average Lead Content)

Materials

Main valve body	Low Lead Cast Bronze ASTM B 584
Access covers	Low Lead Cast Bronze ASTM B 584
Fasteners	Stainless Steel, 300 Series
Elastomers	Silicone (FDA Approved)
	Buna Nitrile (FDA Approved)
Polymers	Noryl™
Springs	Stainless Steel, 300 Series
Ball valve handles	Stainless Steel

Features

Sizes:	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
Minimum working water pressure	25 PSI
Maximum working water pressure	175 PSI
Minimum working water temperature	33°F
Maximum working water temperature	180°F
Hydrostatic test pressure	350 PSI
Threaded end connections (FNPT)	ANSI B1.20.1

Relief Valve discharge port:

1/2" - 1"	-	0.29 sq. in.
1 1/4" - 1 1/2"	-	0.59 sq. in.
2"	-	0.93 sq. in.

Dimensions & Weights (do not include pkg.)

MODEL SIZE		DIMENSIONS (approximate)												WEIGHT	
		A		B		C		D		E		F		WITH BALL VALVES	
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg
1/2	15	9 5/16	237	1 3/8	35	1 1/2	38	3 7/32	82	3 3/8	86	13 1/16	332	4	1.8
3/4	20	10	254	1 3/8	35	1 11/16	43	3 7/32	82	3 3/8	86	14 1/8	359	4	1.8
1	25	11 13/16	300	1 9/16	40	1 15/16	49	3 7/16	87	3 1/2	89	16 3/16	412	6	2.7
1 1/4	32	15 9/16	396	1 9/16	40	2 1/2	64	4 1/16	104	5 3/16	133	21 1/8	537	15	6.8
1 1/2	40	15 11/16	399	1 9/16	40	3 1/8	79	4 1/16	104	5 3/16	133	22 3/8	569	16	7.3
2	50	17 7/8	454	1 15/16	49	3 1/2	89	4 15/16	126	6 5/8	169	25 7/8	657	22	10

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Rev. G

Date: 7/25
Document No. BF-975XL3
Product No. Model 975XL3
Patent zurn.com/patents



Model 975XL3



NSF/ANSI/CAN 61

Options

(Suffixes can be combined)

- ☐ - with full port QT ball valves (standard, 1/2" - 2"), and with integral male 45° flare SAE test fitting (standard, 1/2" - 1")
- ☐ FT - with integral male 45° flare SAE test fitting (1 1/4" - 2", contact factory for approvals)
- ☐ S - with Model SXL lead-free wye type strainer
- ☐ SE - with 90° elbows (1/2" - 1")
- ☐ U - with union ball valves (3/4" - 2")

Accessories

- ☐ Air gap ([Model AG-X](#) - [Spec Sheet](#))
- ☐ [Repair kits](#) (see repair kit guide for full list)
- ☐ Thermal expansion tank ([Model XT](#) - [Spec Sheet](#))
- ☐ Soft seated check valve ([Model 40XL2](#) - [Spec Sheet](#))
- ☐ Shock arrester ([Model 1260XL](#) - [Spec Sheet](#))
- ☐ Quick Test Fitting Set ([QT-SET](#) - [Spec Sheet](#))
- ☐ [Winterizing](#) (Blow - Out) Fitting Kit:

Winterizing Repair Kit Part Numbers

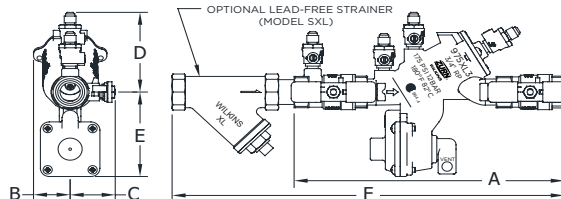
RK34-900XL3WF (1/2" & 3/4")
RK1-900XL3WF
RK114-112-900XL3WF
RK2-900XL3WF

Air Gap Part Numbers

AG-4 (1 1/4" - 1 1/2")
AG-5 (2")
AG-8 (1/2" - 1")

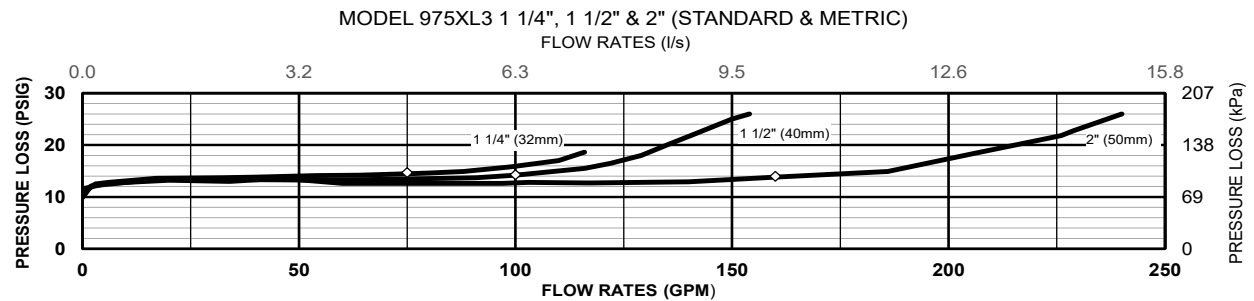
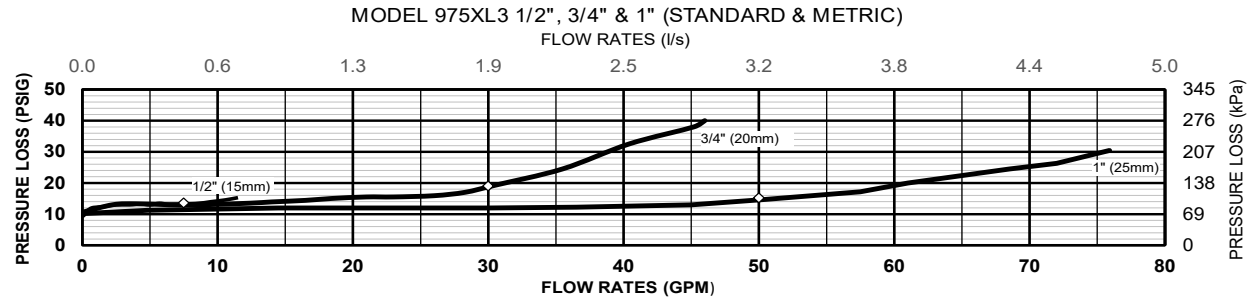
Repair Kit Part Numbers

RK34-975XL3 (1/2" & 3/4")
RK1-975XL3
RK114-975XL3 (1 1/4" & 1 1/2")
RK2-975XL3



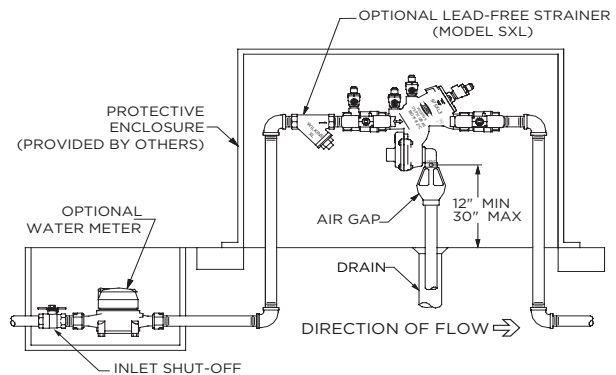
Flow Characteristics

◊ Rated Flow (established by approval agencies)

**Suggested PRV Pairing:**[Model 500XL3](#) Pressure Reducing Valve ([Spec Sheet](#))[Model 600XL3](#) Pressure Reducing Valve ([Spec Sheet](#))[Model 625XL3](#) Pressure Reducing Valve ([Spec Sheet](#))**Typical Installation**[\(Installation & Maintenance Instruction Sheet\)](#)

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.

Capacity thru Schedule 40 Pipe				
Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
1/8"	1	1	2	3
1/4"	2	2	3	5
3/8"	3	4	6	9
1/2"	5	7	9	14
3/4"	8	12	17	25
1"	13	20	27	40
1 1/4"	23	35	47	70
1 1/2"	32	48	63	95
2"	52	78	105	167

**OUTDOOR INSTALLATION**[Plumbing-Schedule](#)**Specifications** ([Written Specification](#))

The Reduced Pressure Principle Backflow Preventer shall be certified to NSF/ANSI/CAN 61 and 372, shall be ASSE® Listed 1013, rated to 180°F, and supplied with full port ball valves. The main body and access covers shall be low lead bronze (ASTM B 584), the seat ring and all internal polymers shall be Noryl™ and the seat disc elastomers shall be silicone. The first and second checks shall be at an angle and be accessible for maintenance without removing the relief valve or the entire device from the line. The checks shall share a single access cover and test cocks shall be accessible from the top of the device. If installed indoors, the installation shall be supplied with an air gap adapter. The Reduced Pressure Principle Backflow Preventer shall be a ZURN WILKINS Model 975XL3.

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www.zurn.com



Model SXL

Cast Bronze "Y" Type Strainer

Application

Zurn Wilkins model SXL is recommended for a variety of potable water service lines including residential and commercial domestic water or irrigation. They are also designed to protect delicate equipment such as regulators and backflow preventers by filtering sediment which could cause premature failure.

Standards Compliance

- Meets the requirements of NSF/ANSI/CAN 61

Materials

Main valve body	Cast Bronze ASTM B 806
Access cover and plug	Cast Bronze ASTM B 806
Screens	20 Mesh Stainless Steel, 300 Series
O-ring	Buna Nitrile

Features

Sizes: 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
2 1/2", 3"

Temperature/pressure rating	180°F 300 psi WOG
Threaded connections (FNPT) (Supplied with brass closure plug)	ANSI B1.20.1



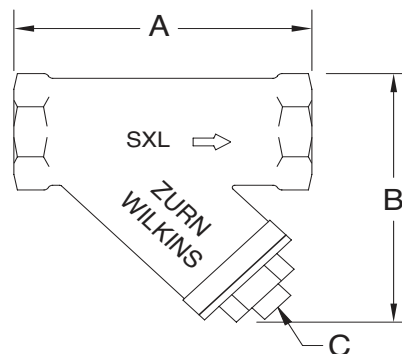
LEAD FREE



NSF/ANSI/CAN 61

Options

- ☐ C - with copper sweat connections (3/4" & 1")



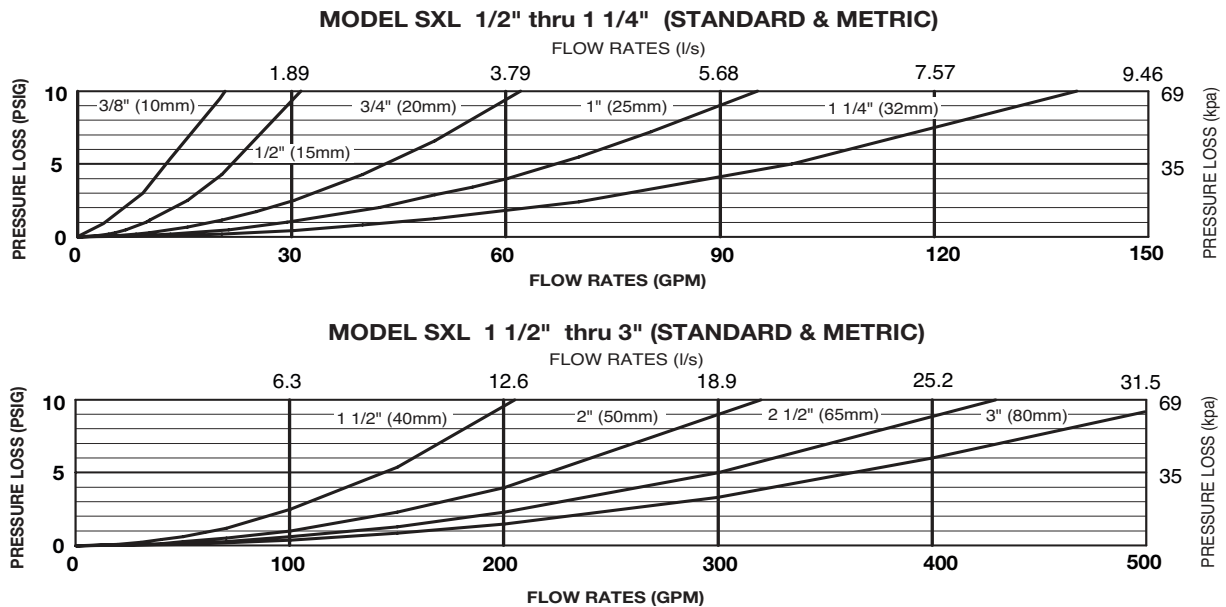
Dimensions & Weights (do not include pkg.)

MODEL SXL (NPT CONNECTION)								
SIZE		DIMENSIONS (approximate)					WEIGHT	
		A		B		C		
in.	mm	in.	mm	in.	mm	in.	lbs.	kg
3/8	10	3 1/4	83	3	76	3/8 NPT	1	0.5
1/2	15	3 1/4	83	3	76	3/8 NPT	1	0.5
3/4	20	3 7/8	98	3 1/2	89	3/8 NPT	1 1/4	0.6
1	25	4 1/2	114	4	102	1/2 NPT	1 3/4	0.8
1 1/4	32	5 5/16	135	4 3/4	121	1/2 NPT	2 3/4	1.2
1 1/2	40	6 5/16	160	5	127	1/2 NPT	3 1/2	1.6
2	50	7 1/2	191	6	152	1/2 NPT	6	2.7
2 1/2	65	9	229	7 1/2	191	1/2 NPT	9 1/4	4.2
3	80	10	254	8 1/2	216	1/2 NPT	14	6.4
MODEL SXLC (COPPER SWEAT CONNECTION)								
SIZE		DIMENSIONS (approximate)					WEIGHT	
		A		B		C		
in.	mm	in.	mm	in.	mm	in.	lbs.	kg
3/4	20	3 15/16	100	3 5/16	84	3/8 NPT	1	0.5
1	25	5	127	3 15/16	100	1/2 NPT	1.5	0.7

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www.zurn.com

Rev. F
Date: 03/21
Document No. STR-SXL
Product No. Model SXL
Patent zurn.com/patents

Flow Characteristics

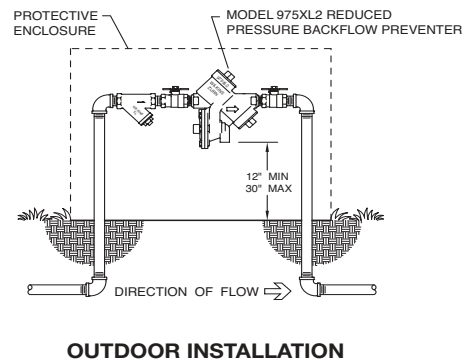
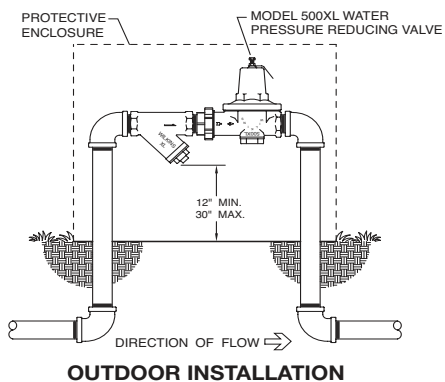


Typical Installation

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted in accordance with the latest edition of the Uniform Plumbing Code. If installed below grade, be certain adequate drainage is provided to prevent the device from being submerged. Horizontal installation with the strainer cap facing downward is the preferred installation orientation; however the strainer will provide protection in any orientation.

Capacity thru Schedule 40 Pipe

Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
1/8"	1	1	2	3
1/4"	2	2	3	5
3/8"	3	4	6	9
1/2"	5	7	9	14
3/4"	8	12	17	25
1"	13	20	27	40
1 1/4"	23	35	47	70
1 1/2"	32	48	63	95
2"	52	78	105	167



Specifications

The "Y" type strainer shall be a manufactured import certified to NSF/ANSI/CAN 61. The main body and cover shall be low lead cast bronze (ASTM B 806), the strainer screen shall be 20 mesh 300 series stainless steel and accessible for maintenance without removing the device from the line. The "Y" type strainer shall be a ZURN WILKINS Model SXL.



Model AG

Air Gap Adaptor Fitting

Application

Designed for use with ZURN WILKINS Reduced Pressure Principle Backflow Preventers on horizontal or vertical installations. Device is necessary when installing a drain line and can be mounted to the body. (Drain line can be any standard piping material.)

Approvals

ANSI/ASME A 112.1.2

Materials

Body Cast grey iron, epoxy painted
 Body (AG-11, 12) Nylon
 Elbow Cast grey iron, epoxy painted
 Bolts Steel, zinc plated



AG-4 thru AG-8 AG-9 & AG-10 AG-11 & AG-12 AG-13 & AG-14

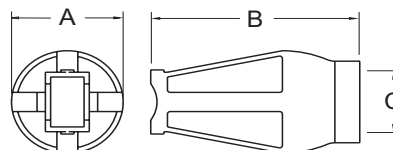
Sizes: 1/4" - 1/2", 3/4" - 1", 1-1/4" - 2", 2-1/2" - 6", 8" - 10"

Dimensions & Weights (do not include pkg.)

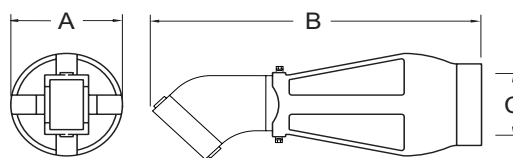
MODEL	DIMENSIONS (approximate)							WEIGHT	
	SIZES	FOR MODEL* SERIES	A		B		C OUTLET PIPE SIZE		
			in.	mm	in.	mm		lbs.	kg
AG-8	1/4" - 1/2"	975XL, 975XL2	2 1/2	64	3 1/2	89	1" NPT	2	0.9
AG-8	1/2" - 1"	975XL3	2 1/2	64	3 1/2	89	1" NPT	2	0.9
AG-4	3/4" - 1"	975XL, 975XL2	3 1/4	83	5	127	1" NPT	2	0.9
AG-4	1 1/4" - 1 1/2"	975XL3	3 1/4	83	5	127	1" NPT	2	0.9
AG-5	1 1/4" - 2"	975XL, 975XL2	4 1/2	114	8	203	2" NPT	3	1.4
AG-5	2"	975XL3	4 1/2	114	8	203	2" NPT	3	1.4
AG-6	2 1/2" - 3"	475V	5 3/8	137	10	254	3" NPT	5	2.3
AG-6	2 1/2" - 6"	375, 475	5 3/8	137	10	254	3" NPT	5	2.3
AG-7	8" - 10"	375, 475	7	178	11	279	4" NPT	8	3.6
AG-9	4" - 6"	475V	5 3/8	137	14 1/2	368	3" NPT	9	4
AG-10	8" - 10"	475V	7	178	16 1/2	413	4" NPT	11	5
AG-11	1/2" - 1"	375, 375XL	3 3/4	95	5 1/2	140	2" IPS Slip	1	0.5
AG-12	1 1/4" - 2"	375, 375XL	6 1/2	165	8	200	3" IPS Slip	1	0.5
AG-13	4" - 6"	475ST, 475STV	5 3/8	137	14 1/2	368	3" NPT	9	4
AG-14	8" - 10"	475ST, 475STV	7	178	16 1/2	413	4" NPT	11	5

* Model:

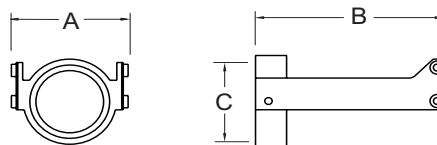
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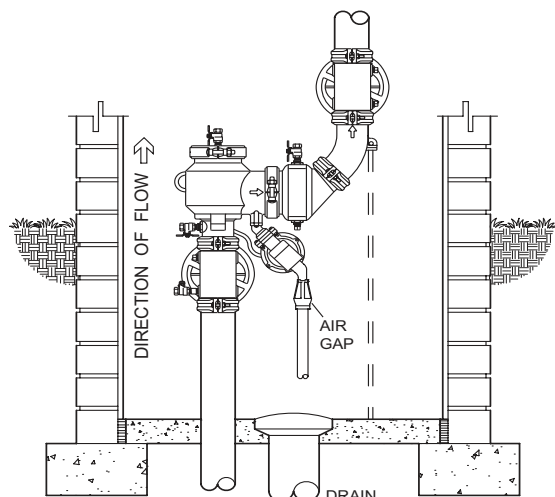
AG-4 THRU AG-8



AG-9 & AG-10



AG-11 & AG-12



Indoor Installation

Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code.

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 Patent zurn.com/patents

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2.16 HIGHLANDS BUILDING ROGERS

Datasheets

RPZ-3



Model 975XL3

Reduced Pressure Principle Assembly

Application

Ideal for use where Lead-Free* valves are required. Designed for installation on potable water lines to protect against both backsiphonage and backpressure of contaminated water into the potable water supply. Assembly shall provide protection where a potential health hazard exists.

Standards Compliance

- ASSE® Listed 1013
- cUPC® Listed
- CSA® Certified B64.4
- UL® Classified (less shut-off valves)
- C-UL® Classified
- AWWA Compliant C511
- Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California
- Meets the requirements of NSF/ANSI/CAN 61 and 372*

*(Less than 0.25% Weighted Average Lead Content)

Materials

Main valve body	Low Lead Cast Bronze ASTM B 584
Access covers	Low Lead Cast Bronze ASTM B 584
Fasteners	Stainless Steel, 300 Series
Elastomers	Silicone (FDA Approved)
	Buna Nitrile (FDA Approved)
Polymers	Noryl™
Springs	Stainless Steel, 300 Series
Ball valve handles	Stainless Steel

Features

Sizes:	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
Minimum working water pressure	25 PSI
Maximum working water pressure	175 PSI
Minimum working water temperature	33°F
Maximum working water temperature	180°F
Hydrostatic test pressure	350 PSI
Threaded end connections (FNPT)	ANSI B1.20.1

Relief Valve discharge port:

1/2" - 1"	-	0.29 sq. in.
1 1/4" - 1 1/2"	-	0.59 sq. in.
2"	-	0.93 sq. in.

Dimensions & Weights (do not include pkg.)

MODEL SIZE		DIMENSIONS (approximate)												WEIGHT	
		A		B		C		D		E		F		WITH BALL VALVES	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg
1/2	15	9 5/16	237	1 3/8	35	1 1/2	38	3 7/32	82	3 3/8	86	13 1/16	332	4	1.8
3/4	20	10	254	1 3/8	35	1 11/16	43	3 7/32	82	3 3/8	86	14 1/8	359	4	1.8
1	25	11 13/16	300	1 9/16	40	1 15/16	49	3 7/16	87	3 1/2	89	16 3/16	412	6	2.7
1 1/4	32	15 9/16	396	1 9/16	40	2 1/2	64	4 1/16	104	5 3/16	133	21 1/8	537	15	6.8
1 1/2	40	15 11/16	399	1 9/16	40	3 1/8	79	4 1/16	104	5 3/16	133	22 3/8	569	16	7.3
2	50	17 7/8	454	1 15/16	49	3 1/2	89	4 15/16	126	6 5/8	169	25 7/8	657	22	10

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www.zurn.com

Rev. G

Date: 7/25
Document No. BF-975XL3
Product No. Model 975XL3
Patent zurn.com/patents



Model 975XL3



NSF/ANSI/CAN 61

Options

(Suffixes can be combined)

- ☐ - with full port QT ball valves (standard, 1/2" - 2"), and with integral male 45° flare SAE test fitting (standard, 1/2" - 1")
- ☐ FT - with integral male 45° flare SAE test fitting (1 1/4" - 2", contact factory for approvals)
- ☐ S - with Model SXL lead-free wye type strainer
- ☐ SE - with 90° elbows (1/2" - 1")
- ☐ U - with union ball valves (3/4" - 2")

Accessories

- ☐ Air gap ([Model AG-X](#) - [Spec Sheet](#))
- ☐ [Repair kits](#) (see repair kit guide for full list)
- ☐ Thermal expansion tank ([Model XT](#) - [Spec Sheet](#))
- ☐ Soft seated check valve ([Model 40XL2](#) - [Spec Sheet](#))
- ☐ Shock arrester ([Model 1260XL](#) - [Spec Sheet](#))
- ☐ Quick Test Fitting Set ([QT-SET](#) - [Spec Sheet](#))
- ☐ [Winterizing](#) (Blow - Out) Fitting Kit:

Winterizing Repair Kit Part Numbers

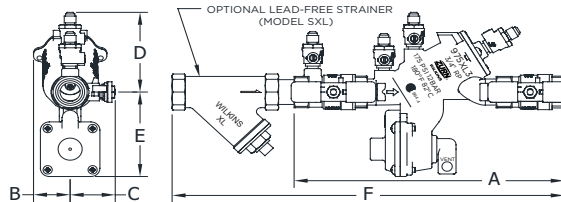
RK34-900XL3WF (1/2" & 3/4")
RK1-900XL3WF
RK114-112-900XL3WF
RK2-900XL3WF

Air Gap Part Numbers

AG-4 (1 1/4" - 1 1/2")
AG-5 (2")
AG-8 (1/2" - 1")

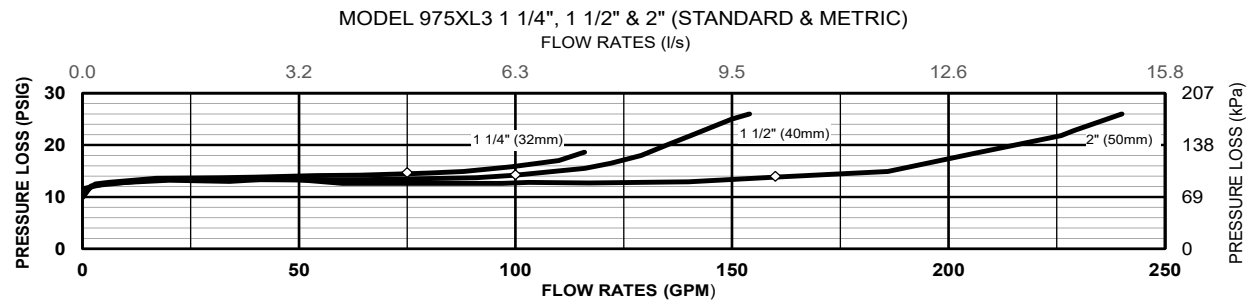
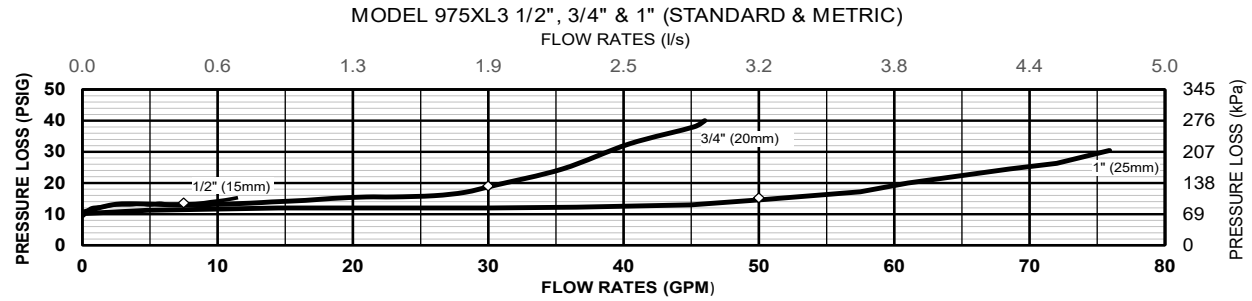
Repair Kit Part Numbers

RK34-975XL3 (1/2" & 3/4")
RK1-975XL3
RK114-975XL3 (1 1/4" & 1 1/2")
RK2-975XL3



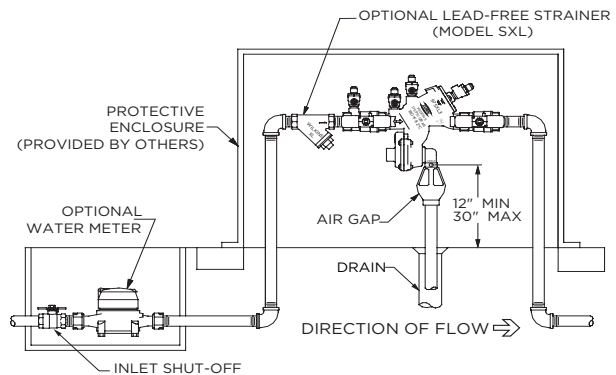
Flow Characteristics

◊ Rated Flow (established by approval agencies)

**Suggested PRV Pairing:**[Model 500XL3](#) Pressure Reducing Valve ([Spec Sheet](#))[Model 600XL3](#) Pressure Reducing Valve ([Spec Sheet](#))[Model 625XL3](#) Pressure Reducing Valve ([Spec Sheet](#))**Typical Installation**[\(Installation & Maintenance Instruction Sheet\)](#)

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.

Capacity thru Schedule 40 Pipe				
Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
1/8"	1	1	2	3
1/4"	2	2	3	5
3/8"	3	4	6	9
1/2"	5	7	9	14
3/4"	8	12	17	25
1"	13	20	27	40
1 1/4"	23	35	47	70
1 1/2"	32	48	63	95
2"	52	78	105	167

**OUTDOOR INSTALLATION**[Plumbing-Schedule](#)**Specifications** ([Written Specification](#))

The Reduced Pressure Principle Backflow Preventer shall be certified to NSF/ANSI/CAN 61 and 372, shall be ASSE® Listed 1013, rated to 180°F, and supplied with full port ball valves. The main body and access covers shall be low lead bronze (ASTM B 584), the seat ring and all internal polymers shall be Noryl™ and the seat disc elastomers shall be silicone. The first and second checks shall be at an angle and be accessible for maintenance without removing the relief valve or the entire device from the line. The checks shall share a single access cover and test cocks shall be accessible from the top of the device. If installed indoors, the installation shall be supplied with an air gap adapter. The Reduced Pressure Principle Backflow Preventer shall be a ZURN WILKINS Model 975XL3.

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www.zurn.com



Model SXL

Cast Bronze "Y" Type Strainer

Application

Zurn Wilkins model SXL is recommended for a variety of potable water service lines including residential and commercial domestic water or irrigation. They are also designed to protect delicate equipment such as regulators and backflow preventers by filtering sediment which could cause premature failure.

Standards Compliance

- Meets the requirements of NSF/ANSI/CAN 61

Materials

Main valve body	Cast Bronze ASTM B 806
Access cover and plug	Cast Bronze ASTM B 806
Screens	20 Mesh Stainless Steel, 300 Series
O-ring	Buna Nitrile

Features

Sizes: 3/8", 1/2", **3/4"**, 1", 1 1/4", 1 1/2", 2"
2 1/2", 3"

Temperature/pressure rating	180°F 300 psi WOG
Threaded connections (FNPT) (Supplied with brass closure plug)	ANSI B1.20.1



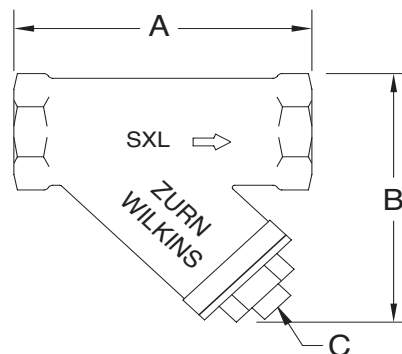
LEAD FREE



NSF/ANSI/CAN 61

Options

- ☐ C - with copper sweat connections (3/4" & 1")



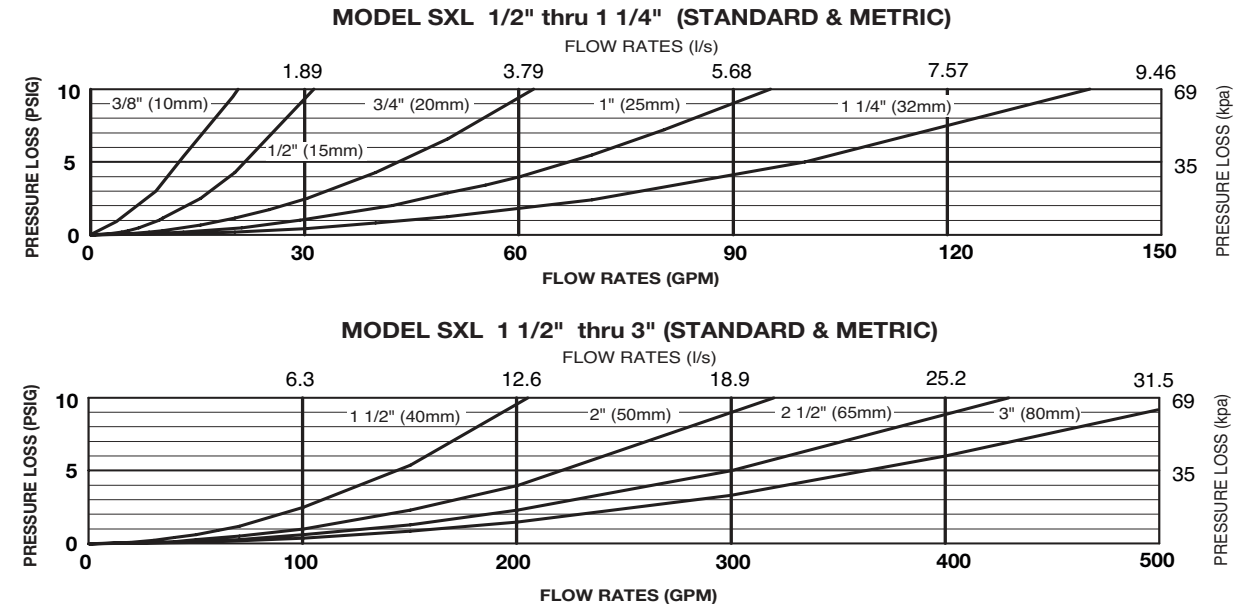
Dimensions & Weights (do not include pkg.)

MODEL SXL (NPT CONNECTION)								
SIZE		DIMENSIONS (approximate)					WEIGHT	
		A		B		C		
in.	mm	in.	mm	in.	mm	in.	lbs.	kg
3/8	10	3 1/4	83	3	76	3/8 NPT	1	0.5
1/2	15	3 1/4	83	3	76	3/8 NPT	1	0.5
3/4	20	3 7/8	98	3 1/2	89	3/8 NPT	1 1/4	0.6
1	25	4 1/2	114	4	102	1/2 NPT	1 3/4	0.8
1 1/4	32	5 5/16	135	4 3/4	121	1/2 NPT	2 3/4	1.2
1 1/2	40	6 5/16	160	5	127	1/2 NPT	3 1/2	1.6
2	50	7 1/2	191	6	152	1/2 NPT	6	2.7
2 1/2	65	9	229	7 1/2	191	1/2 NPT	9 1/4	4.2
3	80	10	254	8 1/2	216	1/2 NPT	14	6.4
MODEL SXLC (COPPER SWEAT CONNECTION)								
SIZE		DIMENSIONS (approximate)					WEIGHT	
		A		B		C		
in.	mm	in.	mm	in.	mm	in.	lbs.	kg
3/4	20	3 15/16	100	3 5/16	84	3/8 NPT	1	0.5
1	25	5	127	3 15/16	100	1/2 NPT	1.5	0.7

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www.zurn.com

Rev. F
Date: 03/21
Document No. STR-SXL
Product No. Model SXL
Patent zurn.com/patents

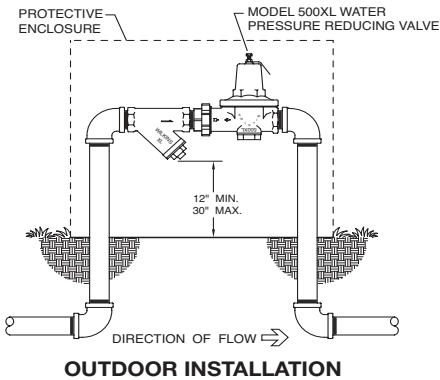
Flow Characteristics



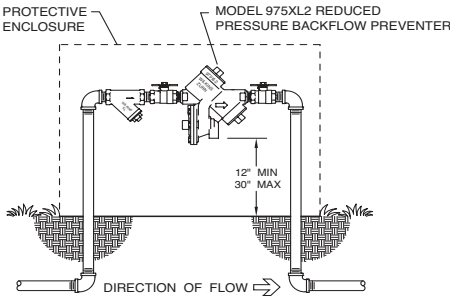
Typical Installation

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted in accordance with the latest edition of the Uniform Plumbing Code. If installed below grade, be certain adequate drainage is provided to prevent the device from being submerged. Horizontal installation with the strainer cap facing downward is the preferred installation orientation; however the strainer will provide protection in any orientation.

Capacity thru Schedule 40 Pipe				
Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
1/8"	1	1	2	3
1/4"	2	2	3	5
3/8"	3	4	6	9
1/2"	5	7	9	14
3/4"	8	12	17	25
1"	13	20	27	40
1 1/4"	23	35	47	70
1 1/2"	32	48	63	95
2"	52	78	105	167



OUTDOOR INSTALLATION



OUTDOOR INSTALLATION

Specifications

The "Y" type strainer shall be a manufactured import certified to NSF/ANSI/CAN 61. The main body and cover shall be low lead cast bronze (ASTM B 806), the strainer screen shall be 20 mesh 300 series stainless steel and accessible for maintenance without removing the device from the line. The "Y" type strainer shall be a ZURN WILKINS Model SXL.



Model AG

Air Gap Adaptor Fitting

Application

Designed for use with ZURN WILKINS Reduced Pressure Principle Backflow Preventers on horizontal or vertical installations. Device is necessary when installing a drain line and can be mounted to the body. (Drain line can be any standard piping material.)

Approvals

ANSI/ASME A 112.1.2

Materials

Body Cast grey iron, epoxy painted
 Body (AG-11, 12) Nylon
 Elbow Cast grey iron, epoxy painted
 Bolts Steel, zinc plated



AG-4 thru AG-8 AG-9 & AG-10 AG-11 & AG-12 AG-13 & AG-14

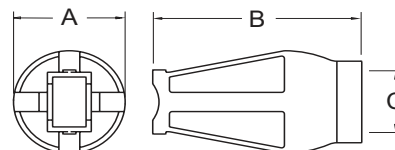
Sizes: 1/4" - 1/2", 3/4" - 1", 1-1/4" - 2", 2-1/2" - 6", 8" - 10"

Dimensions & Weights (do not include pkg.)

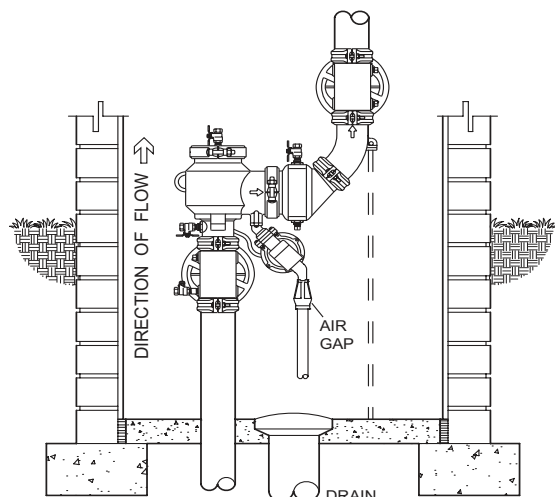
MODEL	DIMENSIONS (approximate)							WEIGHT	
	SIZES	FOR MODEL* SERIES	A		B		C OUTLET PIPE SIZE		
			in.	mm	in.	mm		lbs.	kg
AG-8	1/4" - 1/2"	975XL, 975XL2	2 1/2	64	3 1/2	89	1" NPT	2	0.9
AG-8	1/2" - 1"	975XL3	2 1/2	64	3 1/2	89	1" NPT	2	0.9
AG-4	3/4" - 1"	975XL, 975XL2	3 1/4	83	5	127	1" NPT	2	0.9
AG-4	1 1/4" - 1 1/2"	975XL3	3 1/4	83	5	127	1" NPT	2	0.9
AG-5	1 1/4" - 2"	975XL, 975XL2	4 1/2	114	8	203	2" NPT	3	1.4
AG-5	2"	975XL3	4 1/2	114	8	203	2" NPT	3	1.4
AG-6	2 1/2" - 3"	475V	5 3/8	137	10	254	3" NPT	5	2.3
AG-6	2 1/2" - 6"	375, 475	5 3/8	137	10	254	3" NPT	5	2.3
AG-7	8" - 10"	375, 475	7	178	11	279	4" NPT	8	3.6
AG-9	4" - 6"	475V	5 3/8	137	14 1/2	368	3" NPT	9	4
AG-10	8" - 10"	475V	7	178	16 1/2	413	4" NPT	11	5
AG-11	1/2" - 1"	375, 375XL	3 3/4	95	5 1/2	140	2" IPS Slip	1	0.5
AG-12	1 1/4" - 2"	375, 375XL	6 1/2	165	8	200	3" IPS Slip	1	0.5
AG-13	4" - 6"	475ST, 475STV	5 3/8	137	14 1/2	368	3" NPT	9	4
AG-14	8" - 10"	475ST, 475STV	7	178	16 1/2	413	4" NPT	11	5

* Model:

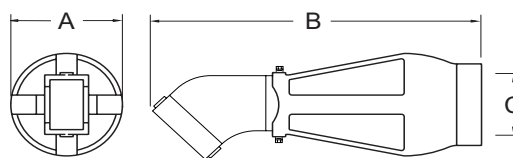
375, 375A, 375ADA, 375ADAR, 375AMS, 375AR, 375AST, 375ASTDA, 375ASTDAR, 375ASTDAST, 375ASTMS, 375ASTR, 375DA, 375MS, 375ST, 375XL, 475, 475DA, 475DAV, 475MS, 475VMS, 975XL, 975XL2, 975XL3, 475ST, 475STV, 475STDA, 475STDAV



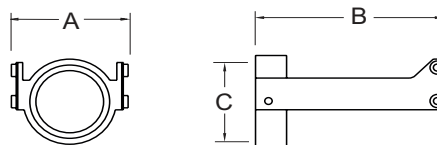
AG-4 THRU AG-8



Indoor Installation



AG-9 & AG-10



AG-11 & AG-12

Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code.

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Rev. G
 Date: 9/22
 Document No. BF-AG
 Product No. Model AG
 Patent zurn.com/patents

Page 1 of 1



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

SCO-1

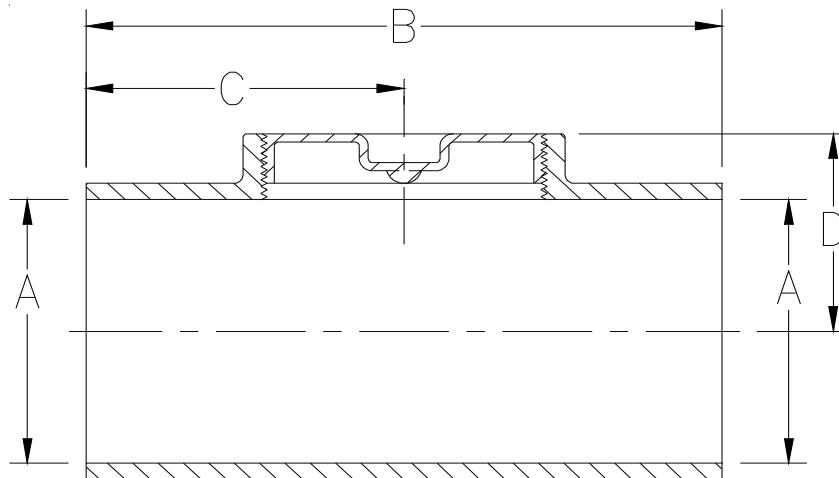


Z1445 **CLEANOUT TEE**

SPECIFICATION SHEET

TAG _____

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



A- Pipe Size	Dimensions in In [mm]			Approx. Wt. Lbs. [kg]
	B	C	D	
2 [51]	6-3/8 [162]	3-3/16 [81]	1-3/4 [44]	8 [4]
3 [76]	7-3/4 [197]	3-7/8 [98]	2-1/2 [64]	15 [7]
4 [102]	8-7/8 [225]	4-7/16 [113]	3 [76]	16 [7]
6 [152]	12-1/2 [318]	6-1/4 [159]	4-5/16 [110]	35 [16]
8 [203]	17 [432]	8-1/2 [216]	6-3/8 [162]	49 [22]

ENGINEERING SPECIFICATION: ZURN Z1445
Cleanout Tee. Dura-Coated cast iron body with gas and watertight ABS tapered thread plug.

OPTIONS (Check/specify appropriate options)

PIPE SIZE

☒ 2, 3, 4, 6, 8 [51, 76, 102, 152, 203]

(Specify size/type) OUTLET

☐ NH ☐ No-Hub

PREFIXES

☐ Z Dura-Coated Cast Iron*

SUFFIXES

☐ -BP Bronze Plug
☐ -G Galvanized Cast Iron

* Regularly furnished unless otherwise specified.

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
www.zurn.com

Rev. E
 Date: 09/28/2017
 C.N. No. 138042
 Prod. | Dwg. No. Z1445

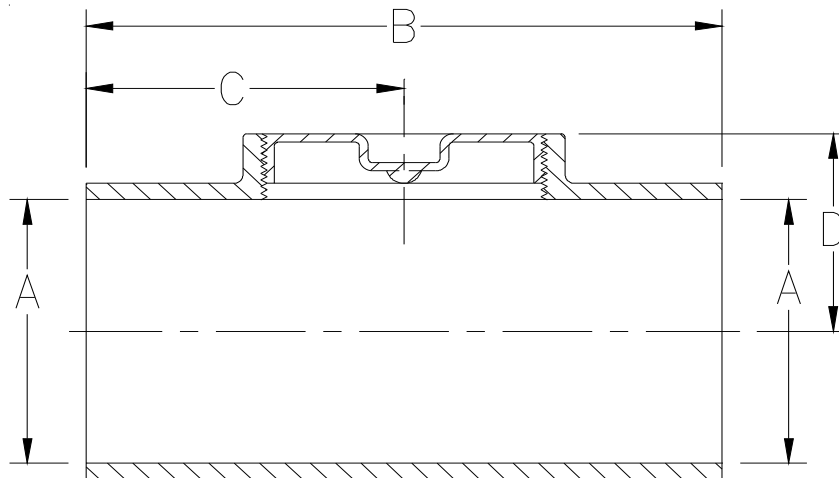


Z1445 CLEANOUT TEE

SPECIFICATION SHEET

TAG _____

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



A- Pipe Size	Dimensions in In [mm]			Approx. Wt. Lbs. [kg]
	B	C	D	
2 [51]	6-3/8 [162]	3-3/16 [81]	1-3/4 [44]	8 [4]
3 [76]	7-3/4 [197]	3-7/8 [98]	2-1/2 [64]	15 [7]
4 [102]	8-7/8 [225]	4-7/16 [113]	3 [76]	16 [7]
6 [152]	12-1/2 [318]	6-1/4 [159]	4-5/16 [110]	35 [16]
8 [203]	17 [432]	8-1/2 [216]	6-3/8 [162]	49 [22]

ENGINEERING SPECIFICATION: ZURN Z1445
Cleanout Tee. Dura-Coated cast iron body with gas and watertight ABS tapered thread plug.

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

4, 3, 4, 6, 8 [51, 76, 102, 152, 203]

(Specify size/type) **OUTLET**
☒ NH ☐ No-Hub
PREFIXES
☒ Z Dura-Coated Cast Iron*
SUFFIXES
☐ -BP Bronze Plug
☐ -G Galvanized Cast Iron

* Regularly furnished unless otherwise specified.

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Rev. E
 Date: 09/28/2017
 C.N. No. 138042
 Prod. | Dwg. No. Z1445

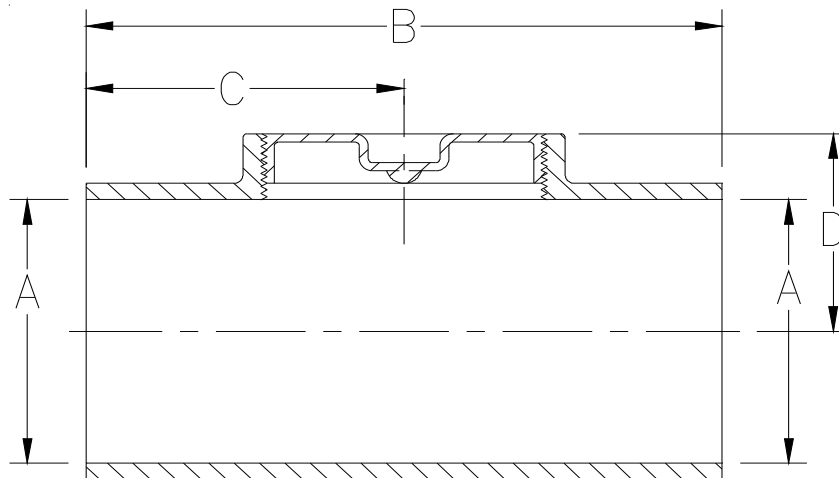


Z1445 **CLEANOUT TEE**

SPECIFICATION SHEET

TAG _____

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



A- Pipe Size	Dimensions in In [mm]			Approx. Wt. Lbs. [kg]
	B	C	D	
2 [51]	6-3/8 [162]	3-3/16 [81]	1-3/4 [44]	8 [4]
3 [76]	7-3/4 [197]	3-7/8 [98]	2-1/2 [64]	15 [7]
4 [102]	8-7/8 [225]	4-7/16 [113]	3 [76]	16 [7]
6 [152]	12-1/2 [318]	6-1/4 [159]	4-5/16 [110]	35 [16]
8 [203]	17 [432]	8-1/2 [216]	6-3/8 [162]	49 [22]

ENGINEERING SPECIFICATION: ZURN Z1445
 Cleanout Tee. Dura-Coated cast iron body with gas and watertight ABS tapered thread plug.

OPTIONS (Check/specify appropriate options)

PIPE SIZE

2,3,4,6,8 [51,76,102,152,203]

(Specify size/type) OUTLET

☐ NH ☒ No-Hub

PREFIXES

☒ Z Dura-Coated Cast Iron*

SUFFIXES

☐ -BP Bronze Plug
☐ -G Galvanized Cast Iron

* Regularly furnished unless otherwise specified.

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www.zurn.com

Rev. E
 Date: 09/28/2017
 C.N. No. 138042
 Prod. | Dwg. No. Z1445

Job Name : 2.16 HIGHLANDS BUILDING ROGERS

Manufacturer : ZURN

Model Number : ZS1469-4

Type :

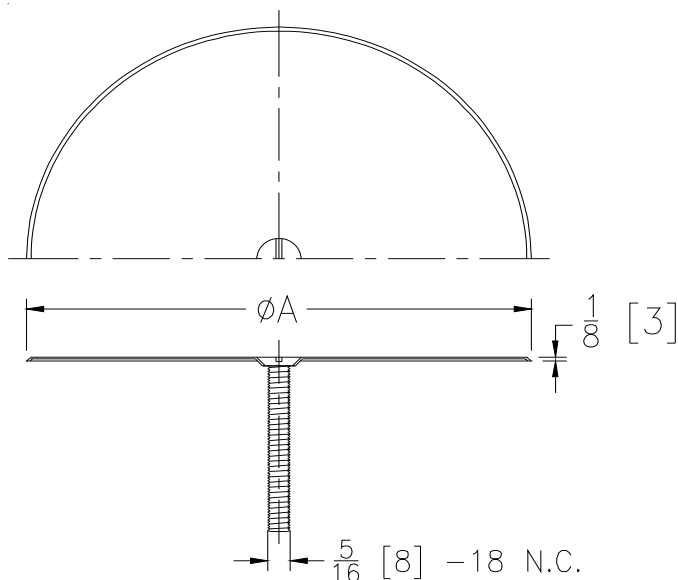


Z1469 ROUND ACCESS COVER

SPECIFICATION SHEET

TAG _____

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



Product Designation	A Cover Dia. IN [mm]	Nominal Pipe Size	Approx. Wt. Lbs. [kg]
-4	4 [102]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-5	5 [127]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-7	7 [178]	4, 5 [102, 127]	2 [1]
-9	9 [229]	6 [152]	3 [1.5]
-11	11 [279]	8 [203]	4 [2]

ENGINEERING SPECIFICATION: ZURN ZS1469
Round stainless steel access cover complete with
securing screw.

OPTIONS (Check/specify appropriate options)

PREFIXES

____ ZAB Bronze Polished Cover
____ ZS Stainless Steel Polished Cover*

SUFFIXES

____ -SL Screw Longer Than 3-1/2 [89]
____ -VP Vandal-Proof Screw

* Regularly furnished unless otherwise specified.

Zurn Industries, LLC | Specification Drainage Operation
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In Canada | **Zurn Industries Limited**
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www.zurn.com

Rev. F
Date: 07/26/16
C.N. No. 134852
Prod. | Dwg. No. Z1469

Job Name : 2.16 HIGHLANDS BUILDING ROGERS

Manufacturer : ZURN

Model Number : ZS1469-5

Type :

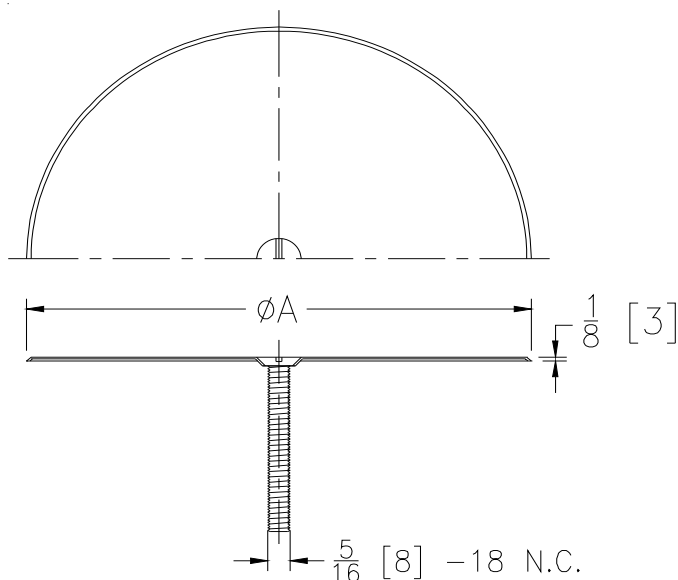
**Z1469**

ROUND ACCESS COVER

SPECIFICATION SHEET

TAG _____

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



Product Designation	A Cover Dia. IN [mm]	Nominal Pipe Size	Approx. Wt. Lbs. [kg]
-4	4 [102]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-5	5 [127]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-7	7 [178]	4, 5 [102, 127]	2 [1]
-9	9 [229]	6 [152]	3 [1.5]
-11	11 [279]	8 [203]	4 [2]

ENGINEERING SPECIFICATION: ZURN ZS1469
Round stainless steel access cover complete with
securing screw.

OPTIONS (Check/specify appropriate options)**PREFIXES**

____ ZAB Bronze Polished Cover

____ ZS Stainless Steel Polished Cover*

SUFFIXES

____ -SL Screw Longer Than 3-1/2 [89]

____ -VP Vandal-Proof Screw

* Regularly furnished unless otherwise specified.

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
www.zurn.com

Rev. F
Date: 07/26/16
C.N. No. 134852
Prod. | Dwg. No. Z1469

Job Name : 2.16 HIGHLANDS BUILDING ROGERS

Manufacturer : ZURN

Model Number : ZS1469-7

Type :

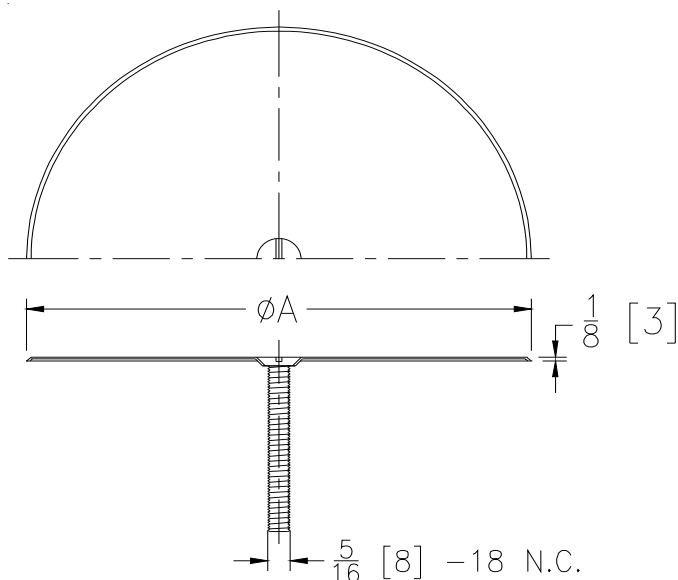
**Z1469**

ROUND ACCESS COVER

SPECIFICATION SHEET

TAG _____

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



Product Designation	A Cover Dia. IN [mm]	Nominal Pipe Size	Approx. Wt. Lbs. [kg]
-4	4 [102]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-5	5 [127]	2, 3, 3-1/2 [51, 76, 89]	1 [.5]
-7	7 [178]	4, 5 [102, 127]	2 [1]
-9	9 [229]	6 [152]	3 [1.5]
-11	11 [279]	8 [203]	4 [2]

ENGINEERING SPECIFICATION: ZURN ZS1469
Round stainless steel access cover complete with
securing screw.

OPTIONS (Check/specify appropriate options)**PREFIXES**

____ ZAB Bronze Polished Cover
____ ZS Stainless Steel Polished Cover*

SUFFIXES

____ -SL Screw Longer Than 3-1/2 [89]
____ -VP Vandal-Proof Screw

* Regularly furnished unless otherwise specified.

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Rev. F
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Prod. | Dwg. No. Z1469



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

SI-1

Manufacturer : STRIEM

Model Number : AA-4

SPECIFICATIONS

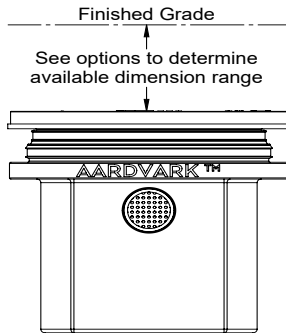
1. 4" Plain End inlet/outlets, C24-M cover standard.
2. Max flow rate: 75 GPM.
3. Filter Basket solids capacity: 7 gallons.
4. Screen perforations: ϕ 1/4" openings.
5. Unit weight w/ standard cover: 65 lbs.
6. Maximum operating temperature 140°F continuous.

NOTES

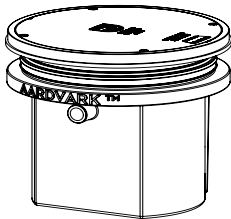
1. Cover placement allows full access to tank for proper maintenance.
2. Basket inserts in one orientation.
3. Basket allows for sufficient flow in the presence of solids, limiting the chance for a backup.
4. The optional low outlet allows for static water level to remain below the basket. This keeps the basket dry during maintenance and also creates a reservoir to handle temporary flow surge.
5. Handle may be extended using 1-1/2" PVC to ensure ease of basket removal when risers are in use.
6. Maximum burial depth: 39" from standard cover height.

ENGINEER SPECIFICATION GUIDE

Striem AA-4 solids interceptor shall be lifetime guaranteed and made in the USA. Interceptor shall be constructed of polyethylene. Interceptor shall be certified to IAPMO/ANSI/CAN Z1167 and carry a UPC listing. Interceptor shall be furnished for above- or below-grade installation. Field-adjustable riser system is available as an option to bring manhole cover to grade. Interceptor shall have removable, corrosion-resistant filter basket. Interceptor shall be equipped with high and low outlet options. Filter basket solids capacity shall be 7 gallons. Cover shall be water/gas-tight with a minimum 2,000 lbs. load capacity.



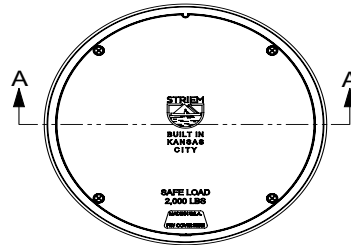
END VIEW



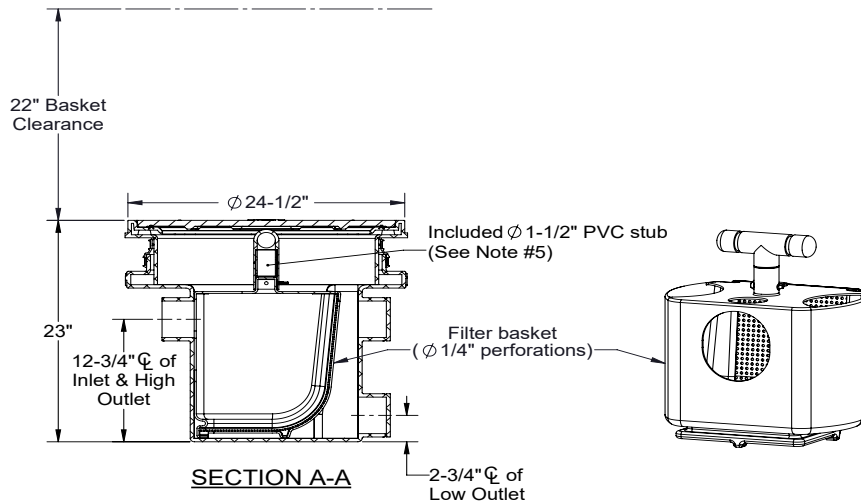
US Patent No.
US10786761B2



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TOP VIEW



SECTION A-A

OPTIONS

Riser Options

From Factory: Up to 5"

- ☐ Up to 24": **SR-24**
- ☐ Up to 39": **LR-24**

Additional Options

- ☐ **C24-HP:** H20 Traffic Rated Pickable Cast Iron Cover
- ☐ **Anchor Flange:** High Water Table Anchor Flange*

*Anchor flange will raise overall height by 3/4"

MODEL NUMBER:

AA-4

DESCRIPTION:

AARDVARK™
BASKET STYLE SOLIDS INTERCEPTOR

DWG BY: ENG

DATE: 3/2/2026

REV: 2

SPECIFICATION SHEET

Striem
Kansas City, KS
Tel: 913-222-1500
orders@striemco.com
www.striemco.com

Made in the U.S.A



Job Name : 2.16 HIGHLANDS BUILDING ROGERS

Manufacturer : STRIEM

Model Number : SR-24

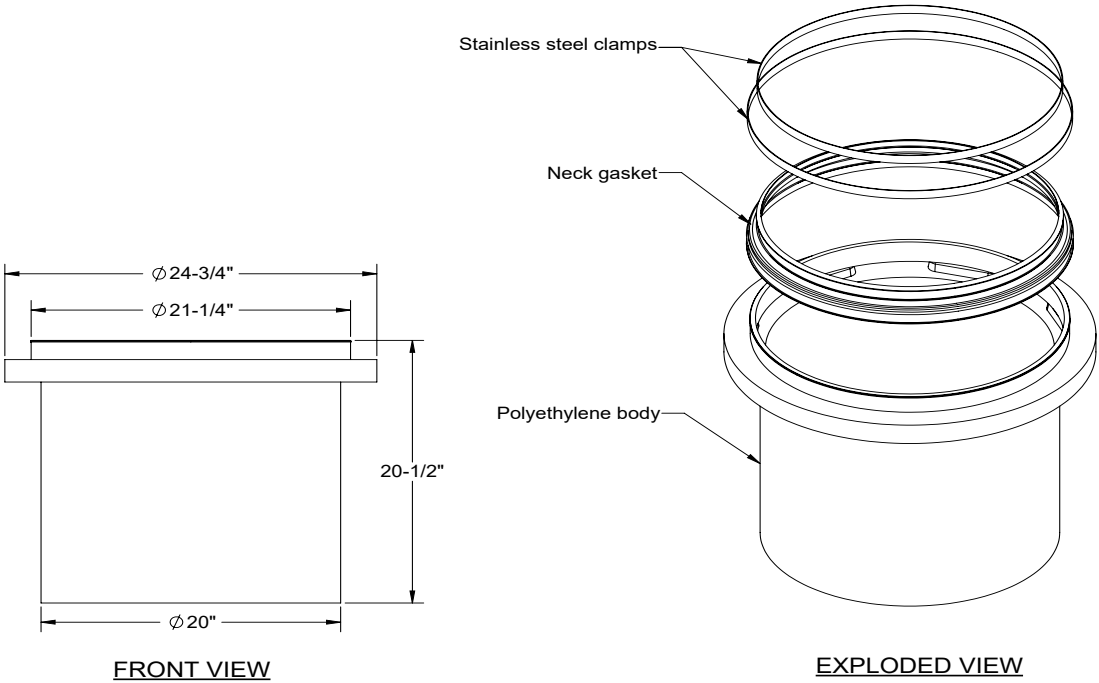
Type :

SPECIFICATIONS

- 1. Molded polyethylene body.
- 2. PP blend neck gasket.
- 3. Stainless steel clamps.
- 4. Unit weight: 23 lbs.

ENGINEER SPECIFICATION GUIDE

TeleGlide field adjustable riser system to consist of rotationally molded polyethylene body, PP blend gasket and stainless steel clamps. Risers shall allow onsite adjustability of cover to grade.



MODEL NUMBER: SR-24

DESCRIPTION:

TELEGLIDE™ RISER EXTENSION SYSTEM

SPECIFICATION SHEET

Striem
Kansas City, KS
Tel: 913-222-1500
orders@striemco.com
www.striemco.com

Made in the U.S.A



DWG BY: ENG DATE: 5/9/2023 REV: 0

Job Name : 2.16 HIGHLANDS BUILDING ROGERS

Manufacturer : STRIEM

Model Number : LR-24

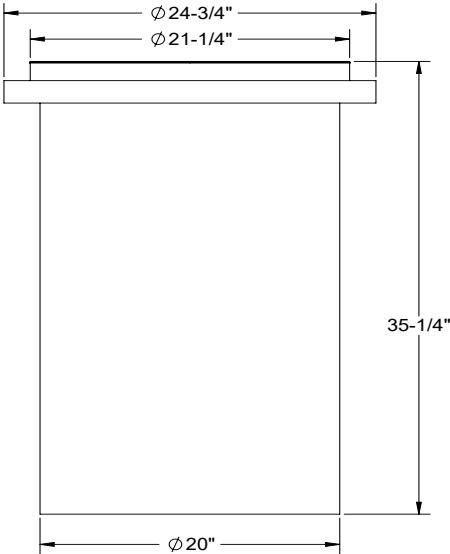
Type :

SPECIFICATIONS

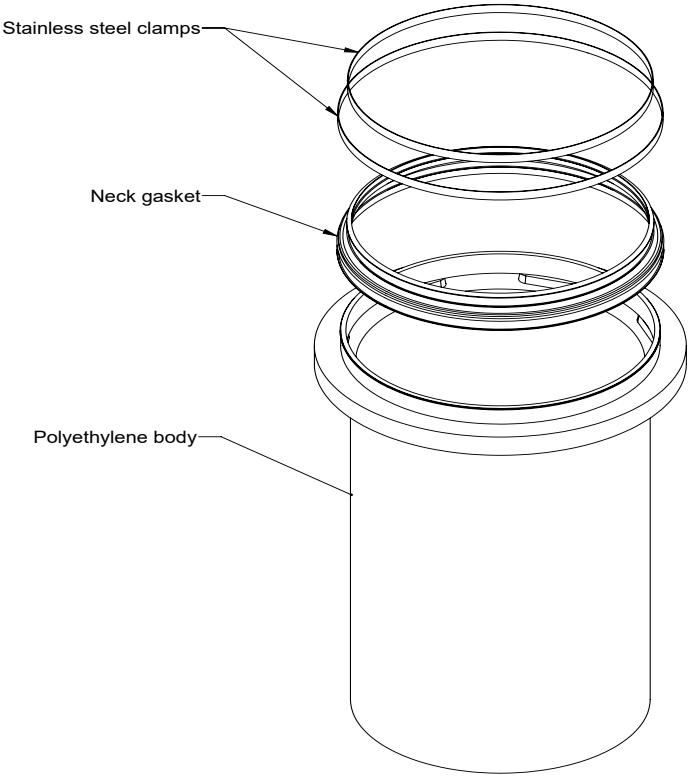
- 1. Molded polyethylene body.
- 2. PP blend neck gasket.
- 3. Stainless steel clamps.
- 4. Unit weight: 36 lbs.

ENGINEER SPECIFICATION GUIDE

TeleGlide field adjustable riser system to consist of rotationally molded polyethylene body, PP blend gasket and stainless steel clamps. Risers shall allow onsite adjustability of cover to grade.



FRONT VIEW



EXPLODED VIEW

MODEL NUMBER:		LR-24	
DESCRIPTION:			
TELEGLIDE™ RISER EXTENSION SYSTEM			
DWG BY: ENG		DATE: 5/10/2023	REV: 0

SPECIFICATION SHEET

Striem
Kansas City, KS
Tel: 913-222-1500
orders@striemco.com
www.striemco.com
Made in the U.S.A



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2.16 HIGHLANDS BUILDING ROGERS

Datasheets

FCO-1

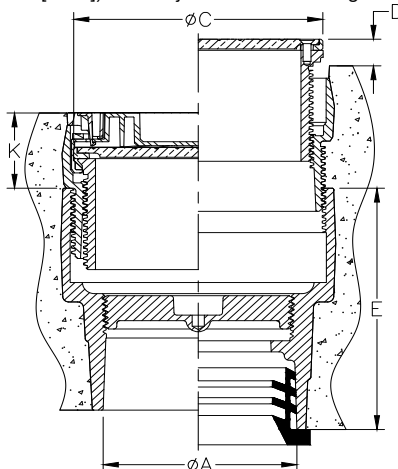
**Z1400-BZ1**

FLOOR CLEANOUT WITH "TYPE B" COVER AND EZ1™ TECHNOLOGY

SPECIFICATION SHEET

TAG _____

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



Dimensions In Inches [mm]							Approx.
A	Cover	C	D		K		Wt. Lbs.
Pipe Size	Designation		Min.	Max	Min.	Max	[kg]
2 [51]	-5B	5-5/32 [131]	0	1 [25]	1-23/32 [44]	2-15/16 [75]	10 [5]
3-4 [76-102]		5-5/32 [131]	0	1 [25]	1-23/32 [44]	2-15/16 [75]	12 [5]
2 [51]	-6B	6-8/32 [156]	0	31/32 [25]	1-11/16 [43]	2-27/32 [72]	11 [5]
3-4 [76-102]		6-8/32 [156]	0	31/32 [25]	1-11/16 [43]	2-27/32 [72]	13 [6]
6 [152]	-8B	7-7/8 [200]	0	1 [25]	1-7/8 [48]	3-1/32 [77]	19 [9]

ENGINEERING SPECIFICATION: ZURN Z1400-BZ1 cleanout, Dura-Coated cast iron body with bottom outlet, with gas and water tight threaded ABS tapered plug, and top assembly. EZ1™ drainage series is engineered to simplify product installation and comprised of concrete shield to provide up to 1" [25] of vertical post pour adjustment, pre-packaged shims for tilt correction, and integrated, self contained "Type B" light duty scoriated cover with rough-in cover for protection during concrete pour. Cleanout is designed in accordance with ASME A112.36.2M.

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

2-3 [51-76]
4 [102]
6 [152]
2-4 [51-102]
3 [76]
6 [152]

(Specify size/type) **OUTLET**

____ -NH No-Hub
____ -NH No-Hub
____ -NH No-Hub
____ -NL Neo-Loc
____ -NL Neo-Loc
____ -NL Neo-Loc

'E' BODY HT.DIM.

4-3/4 [121]
5 [127]
5-1/2 [140]
4-3/4 [121]
5-7/16 [138]
5-1/2 [140]

PREFIXES

____ ZB D.C.C.I. w/ Polished Bronze Top
____ ZN D.C.C.I. w/ Polished Nickel Bronze Top*
____ ZS D.C.C.I. w/ Polished Stainless Steel Top

SUFFIXES

____ -AR Acid Resisting Epoxy Coated Finish
____ -BP Bronze Plug (Not Available for 3 [76] Neo-Loc Outlet)
____ -G Galvanized Cast Iron
____ -TC Neo-Loc Test Cap Gasket (2-3-4 [51-76-102] NL Bottom Outlet Only)
____ -UP 1-3/4 [44] Pre-Pour Adjustment Extension Adapter
____ -VP Vandal-Proof Screws

* Regularly furnished unless otherwise specified

⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - www.P65Warnings.ca.gov⚠ **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

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In Canada | Zurn Industries Limited
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www.zurn.com

Rev. D
Date: 01/02/23
C.N. No. 144898
Patent zurn.com/patents
Prod. | Dwg. No. Z1400-BZ1

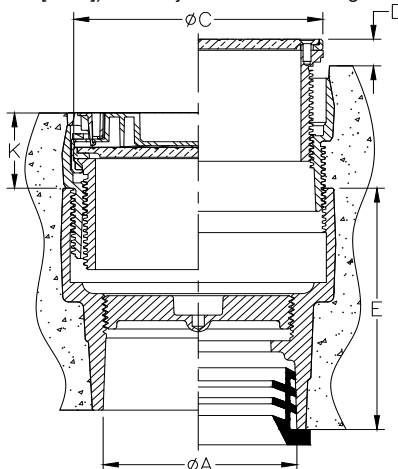
**Z1400-BZ1**

FLOOR CLEANOUT WITH "TYPE B" COVER AND EZ1™ TECHNOLOGY

SPECIFICATION SHEET

TAG _____

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



Dimensions In Inches [mm]							Approx. Wt. Lbs. [kg]
A Pipe Size	Cover Designation	C	D		K		
			Min.	Max	Min.	Max	
2 [51]	-5B	5-5/32 [131]	0	1 [25]	1-23/32 [44]	2-15/16 [75]	10 [5]
3-4 [76-102]		5-5/32 [131]	0	1 [25]	1-23/32 [44]	2-15/16 [75]	12 [5]
2 [51]	-6B	6-8/32 [156]	0	31/32 [25]	1-11/16 [43]	2-27/32 [72]	11 [5]
3-4 [76-102]		6-8/32 [156]	0	31/32 [25]	1-11/16 [43]	2-27/32 [72]	13 [6]
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OPTIONS (Check/specify appropriate options)**PIPE SIZE**

2-3 [51-76]
4 [102]
6 [152]
2-4 [51-102]
3 [76]
6 [152]

(Specify size/type) **OUTLET**

___ -NH No-Hub
___ -NH No-Hub
___ -NH No-Hub
___ -NL Neo-Loc
___ -NL Neo-Loc
___ -NL Neo-Loc

'E' BODY HT.DIM.

4-3/4 [121]
5 [127]
5-1/2 [140]
4-3/4 [121]
5-7/16 [138]
5-1/2 [140]

PREFIXES

___ ZB D.C.C.I. w/ Polished Bronze Top
___ ZN D.C.C.I. w/ Polished Nickel Bronze Top*
___ ZS D.C.C.I. w/ Polished Stainless Steel Top

SUFFIXES

___ -AR Acid Resisting Epoxy Coated Finish
___ -BP Bronze Plug (Not Available for 3 [76] Neo-Loc Outlet)
___ -G Galvanized Cast Iron
___ -TC Neo-Loc Test Cap Gasket (2-3-4 [51-76-102] NL Bottom Outlet Only)
___ -UP 1-3/4 [44] Pre-Pour Adjustment Extension Adapter
___ -VP Vandal-Proof Screws

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Rev. D
Date: 01/02/23
C.N. No. 144898
Patent zurn.com/patents
Prod. | Dwg. No. Z1400-BZ1

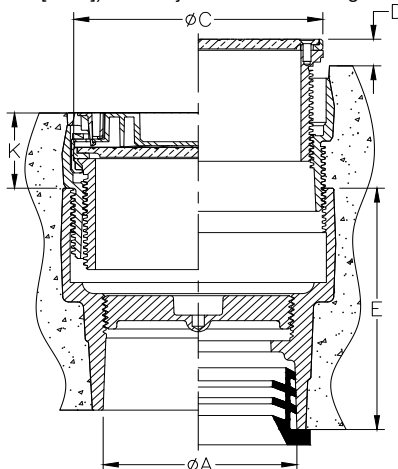
**Z1400-BZ1**

FLOOR CLEANOUT WITH "TYPE B" COVER AND EZ1™ TECHNOLOGY

SPECIFICATION SHEET

TAG _____

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



Dimensions In Inches [mm]							Approx.
A	Cover	C	D		K		Wt. Lbs.
Pipe Size	Designation		Min.	Max	Min.	Max	[kg]
2 [51]	-5B	5-5/32 [131]	0	1 [25]	1-23/32 [44]	2-15/16 [75]	10 [5]
3-4 [76-102]		5-5/32 [131]	0	1 [25]	1-23/32 [44]	2-15/16 [75]	12 [5]
2 [51]	-6B	6-8/32 [156]	0	31/32 [25]	1-11/16 [43]	2-27/32 [72]	11 [5]
3-4 [76-102]		6-8/32 [156]	0	31/32 [25]	1-11/16 [43]	2-27/32 [72]	13 [6]
6 [152]	-8B	7-7/8 [200]	0	1 [25]	1-7/8 [48]	3-1/32 [77]	19 [9]

ENGINEERING SPECIFICATION: ZURN Z1400-BZ1 cleanout, Dura-Coated cast iron body with bottom outlet, with gas and water tight threaded ABS tapered plug, and top assembly. EZ1™ drainage series is engineered to simplify product installation and comprised of concrete shield to provide up to 1" [25] of vertical post pour adjustment, pre-packaged shims for tilt correction, and integrated, self contained "Type B" light duty scoriated cover with rough-in cover for protection during concrete pour. Cleanout is designed in accordance with ASME A112.36.2M.

OPTIONS (Check/specify appropriate options)**PIPE SIZE**

2-3 [51-76]
4 [102]
6 [152]
2-4 [51-102]
3 [76]
6 [152]

(Specify size/type) **OUTLET**

___ -NH No-Hub
___ -NH No-Hub
___ -NH No-Hub
___ -NL Neo-Loc
___ -NL Neo-Loc
___ -NL Neo-Loc

'E' BODY HT.DIM.

4-3/4 [121]
5 [127]
5-1/2 [140]
4-3/4 [121]
5-7/16 [138]
5-1/2 [140]

PREFIXES

___ ZB D.C.C.I. w/ Polished Bronze Top
___ **ZN D.C.C.I. w/ Polished Nickel Bronze Top***
___ ZS D.C.C.I. w/ Polished Stainless Steel Top

SUFFIXES

___ -AR Acid Resisting Epoxy Coated Finish
___ **-BP Bronze Plug (Not Available for 3 [76] Neo-Loc Outlet)**
___ -G Galvanized Cast Iron
___ -TC Neo-Loc Test Cap Gasket (2-3-4 [51-76-102] NL Bottom Outlet Only)
___ -UP 1-3/4 [44] Pre-Pour Adjustment Extension Adapter
___ -VP Vandal-Proof Screws

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Patent zurn.com/patents
Prod. | Dwg. No. Z1400-BZ1



2.16 HIGHLANDS BUILDING ROGERS

Datasheets

GI-1

SPECIFICATION NOTES

- (1) 4" FPT inlet/outlet with 4" plain end fittings
- (2) Unit weight: 236 lbs. For wet weight, add 2,310 lbs. For traffic-rated cover(s), add 90 lbs per cover. For pedestrian cover(s), add 7 lbs per cover.
- (3) Maximum operating temperature: 150° F continuous
- (4) Liquid Capacity: 277 gal
Grease Capacity (100 GPM): 1,895 lbs (260 gal)
Grease Capacity (150 GPM): 1,848 lbs (253 gal)
Solids Capacity: 69 gal
- (5) Factory Rating:
Grease Capacity (250 GPM): 500 lbs (68 gal)
- (6) For gravity drainage applications only
- (7) Do not use for pressure applications
- (8) Cover placement allows full access to tank for proper maintenance
- (9) Vent not required unless per local code
- (10) Engineered inlet and outlet diffusers with inspection ports are removable to inspect / clean piping
- (11) Integral air relief / Anti-siphon / Sampling access
- (12) Cover adapters provide an adjustable height range of 5"
- (13) Designed for below-grade, above-grade, indoor or outdoor installations
- (14) Safety Star® (450 lbs load capacity) is an access restrictor built into each cover adapter to prevent accidental entry into tanks

CERTIFIED PERFORMANCE

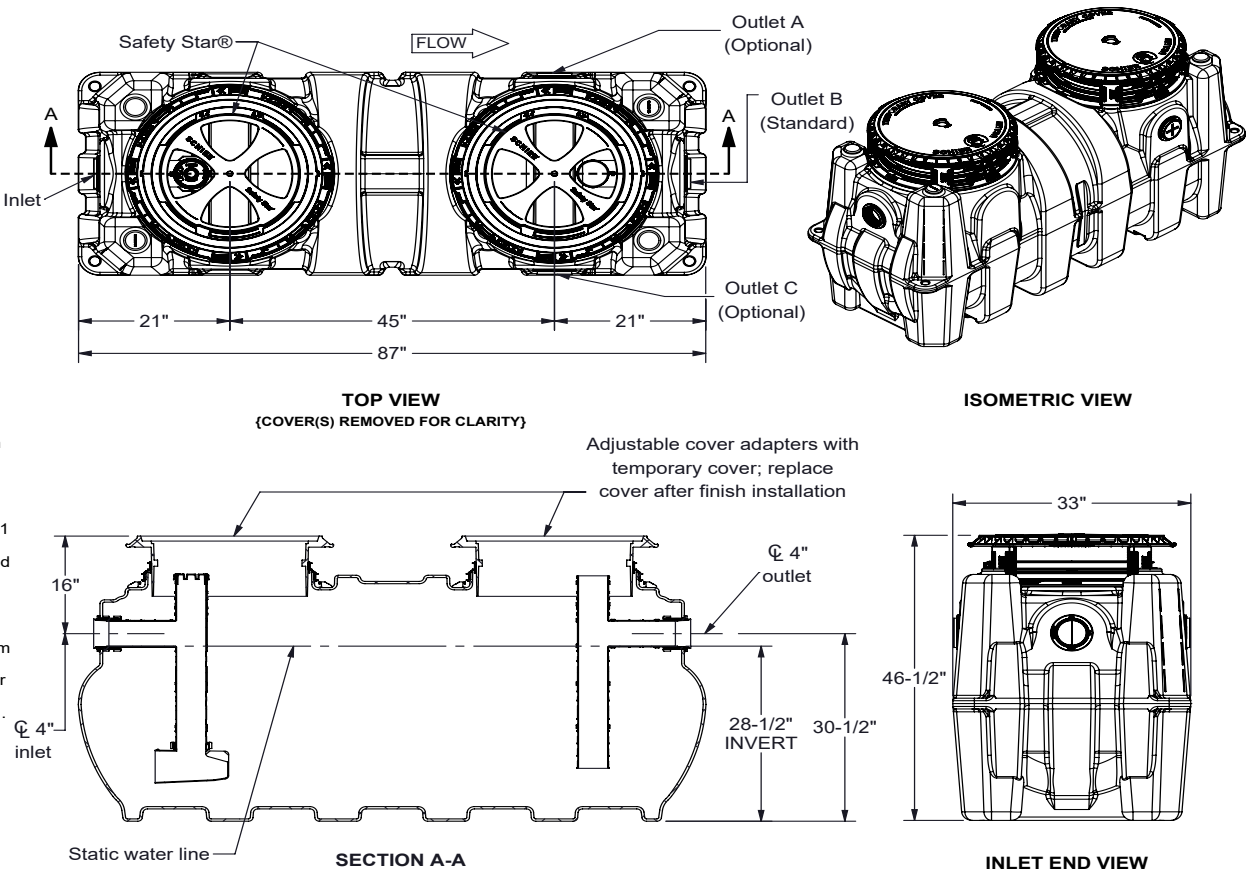
Great Basin® hydromechanical grease interceptors are third party performance-tested and listed by IAPMO to ASME A112.14.3 and CSA B481.1 grease interceptor standards and greatly exceed requirements for grease separation and storage. They are compliant to the Uniform Plumbing Code and the International Plumbing Code.

ENGINEER SPECIFICATION GUIDE

Schier Great Basin® grease interceptor model GB-250 shall be lifetime guaranteed and made in USA of seamless, molded polyethylene with minimum 3/8" uniform wall thickness. Interceptor shall be furnished for above or below-grade installation with adjustable cover adapter, Safety Star® access restrictor built into each cover adapter, and three outlet options. This unit is certified for hydromechanical performance to ASME A112.14.3 (Type D) and CSA B481.1. Interceptor flow rate shall be 100 GPM or 150 GPM. Interceptor grease capacity shall be 1,895 lbs @100 GPM or 1,848 lbs @150 GPM.

COVERS SOLD SEPARATELY

- This unit is provided with temporary cover(s) intended for the duration of jobsite installation. Purchase one of the following finish covers.
- T24-GI (8044-000-01): Traffic-rated (AASHTO H-20) cast iron cover shall provide water/gas-tight seal and have a minimum of 16,000 lbs load capacity. For outdoor installation.
 - P24-GI (8045-000-01): Pedestrian-rated poly cover shall provide water/gas-tight seal and have a minimum of 2,000 lbs load capacity. For indoor installation.



SPECIFICATION SHEET

SCHIER® 6455 Woodland Dr Shawnee, KS 66218 tel: 913-951-3300 fax: 913-951-3399 schierproducts.com Made in the U.S.A.	MODEL NUMBER		GB-250				 	
	PART NUMBER		4055-300-02					
	DESCRIPTION		GB-250 GREASE INTERCEPTOR 100 GPM / 150 GPM, 4" PLAIN/FPT CONNECTIONS					
	DRAWN BY		G.HEIDE				PROPRIETARY AND CONFIDENTIAL: THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SCHIER PRODUCTS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SCHIER PRODUCTS IS PROHIBITED.	
	DATE		2/25/2026	REV	A	ECO		

SPECIFICATION AND INSTALLATION GUIDE

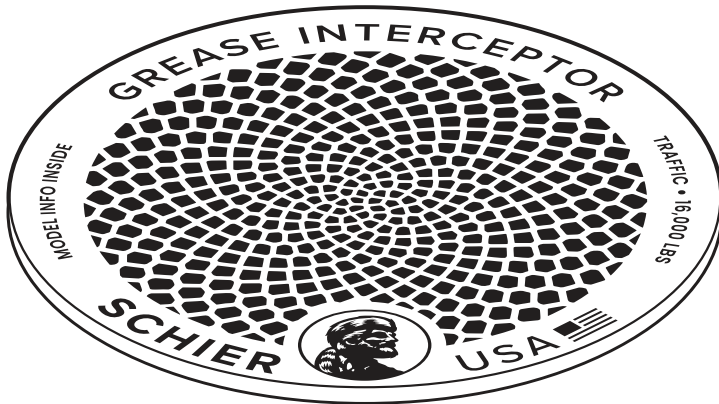


Failure to follow
this guidance will
void your warranty

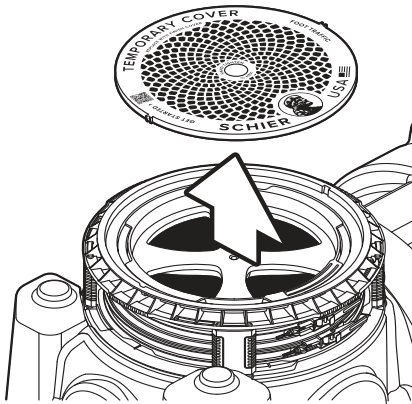
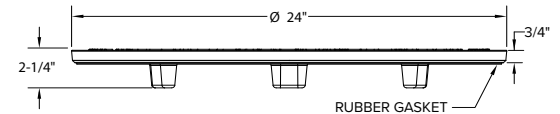
T24-GI Traffic rated 24" cast iron cover

For use with grease interceptors models GB-50, GB-75, GB-250, GB-500, GB-1000 and GB-1500; solids interceptors models SI-50, SI-75, SI-250 and SI-500; inspection port models SV24 and SV24-O.

Unit weight: 91 lbs.

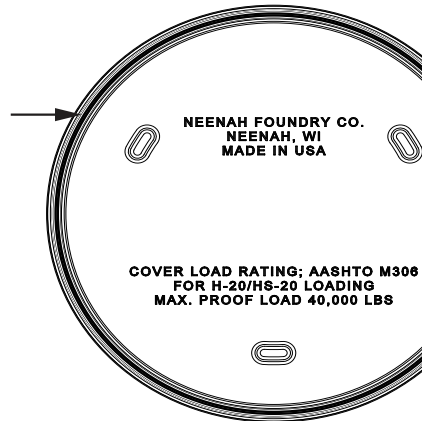


SECTION VIEW



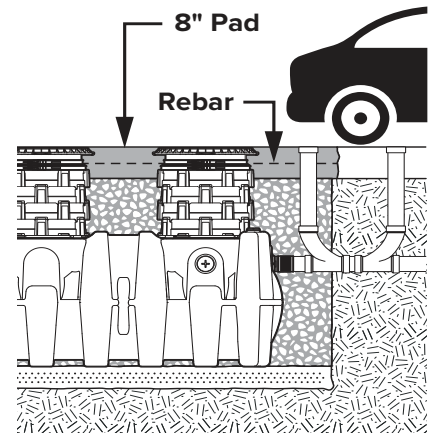
Replace temporary cover

Base tank models ship from the factory with temporary (jobsite only) cover(s) effective July 14, 2025. The T24-GI cover is sold separately from the base model (grease interceptor, solids interceptor or inspection port) and shall be applied by contractor during finish installation.



Gasket

The T24-GI includes a gasket on the bottom side that ensures a gas/water tight seal.



Buried installation

Choose T24-GI for buried installations where H-20 loads are required. H-20 rated to 16,000 lbs. per AASHTO M306.



LIFETIME GUARANTEED GREASE INTERCEPTORS

MODEL NUMBER:
T24-GI

PART #: 8044-000-01

DESCRIPTION: Cover, 24in traffic rated, grease interceptor system

DATE: 07/07/2025

REV:

ECO:

6455 Woodland Dr. | Shawnee, KS 66218 | 913-951-3300 | schierproducts.com

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SPECIFICATION AND INSTALLATION GUIDE

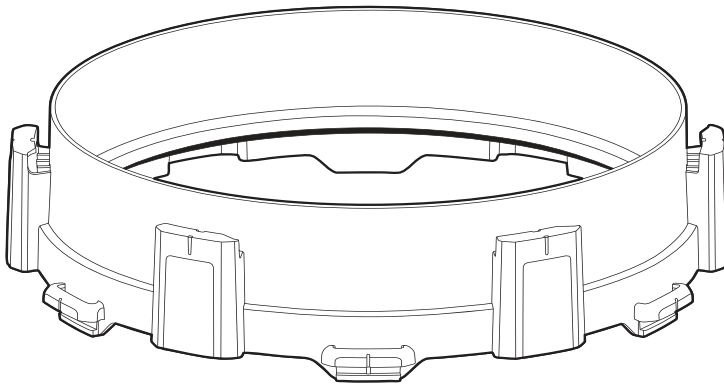


Failure to follow
this guidance will
void your warranty

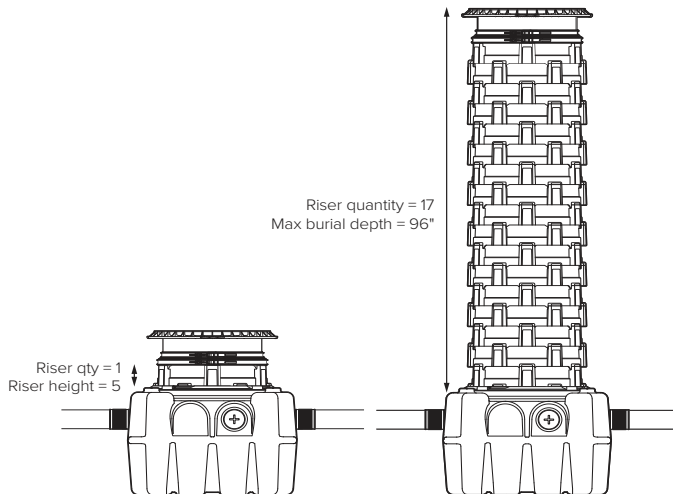
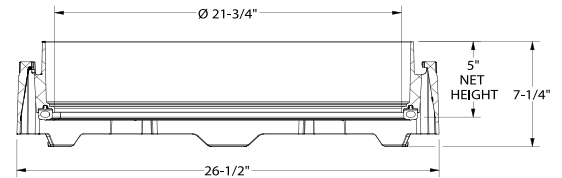
FP24 Fast Pitch® riser

For use with grease interceptors models GB-50, GB-75, GB-250, GB-500, GB-1000 and GB-1500; solids interceptors models SI-50, SI-75, SI-250 and SI-500; inspection port models SV24 and SV24-O.

Unit weight: 8 lbs.



SECTION VIEW

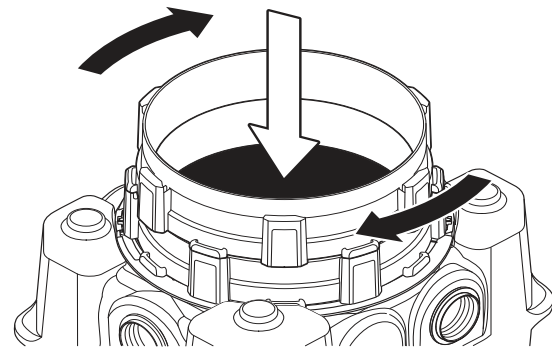


Min/Max riser levels

The FP24 risers are 5" tall and can be stacked from a minimum of 1 to a maximum of 17.



Calculate
FP24 riser
quantity
needed



FP24 riser install

To assemble, each riser section twists and locks into place. For more information, installation instructions are included with the base unit as well as the QR code.



See Fast
Pitch
installation
steps



LIFETIME GUARANTEED GREASE INTERCEPTORS

MODEL NUMBER:
FP24

PART #: 8010-012-01

DESCRIPTION: 5" tall Fast Pitch® riser for grease interceptors with 24" covers installed below grade.

DATE: 07/07/2025

REV:

ECO:

6455 Woodland Dr. | Shawnee, KS 66218 | 913-951-3300 | schierproducts.com

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2.16 HIGHLANDS BUILDING ROGERS

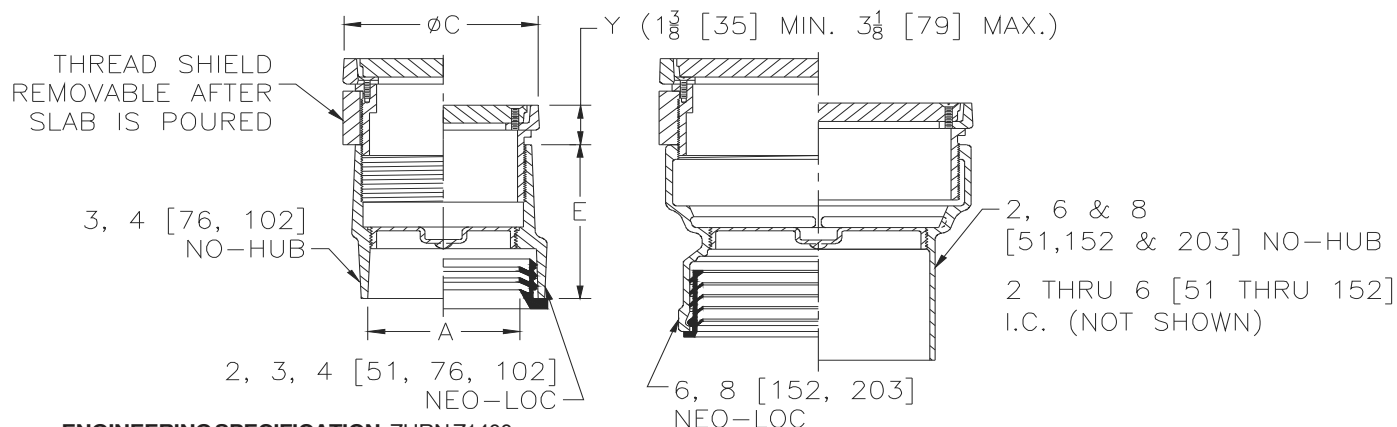
Datasheets

COTG-1

**Z1400****EXTRA-HEAVY-DUTY "LEVEL-TROL"
ADJUSTABLE FLOOR CLEANOUT****SPECIFICATION SHEET**

TAG _____

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

**ENGINEERING SPECIFICATION: ZURN Z1400**

"Level-Trol" Adjustable floor cleanout, Dura-Coated cast iron body with gas and watertight ABS tapered thread plug and round scoriated cast iron extra-heavy-duty secured top (Specify finish Z, ZB, ZN, ZS) adjustable to finished floor.

Dimension In Inches[mm]			Approx. Wt. Lbs. [kg.]
A-Pipe Size	C	E	
Inside Caulk			
2 [51]	6-1/8 [156]	6-7/8 [175]	13.8 [6.3]
3 [76]	6-1/8 [156]	6-7/8 [175]	14 [6.4]
4 [102]	7-1/4 [184]	6-7/8 [175]	18.3 [8.3]
6 [152]	9-1/4 [235]	6-7/8 [175]	32.2 [14.6]
No-Hub			
2 [51]	4-1/8 [105]	4-5/8 [117]	7 [3]
3 [76]	4-1/8 [105]	4-3/4 [121]	7.7 [3.5]
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6 [152]	8-1/4 [210]	4-3/4 [121]	22.2 [10.1]
8 [203]	9-1/4 [235]	7-1/2 [191]	29.9 [13.6]
Neo-Loc			
2 [51]	4-1/8 [105]	4-3/4 [121]	7.9 [3.6]
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8 [203]	9-1/4 [235]	6-1/2 [165]	23.5 [10.7]

OPTIONS (Check/specify appropriate options)**PREFIXES**

- ☒ **Z** Dura Coated Cast Iron*
- ☐ **ZB** D.C.C.I. w/ Polished Bronze Light-Duty Top
(Deduct 1/2 [13] from 'Y' Dim.)
- ☐ **ZN** D.C.C.I. w/ Polished Nickel Bronze Light-Duty Top
(Deduct 1/2 [13] from 'Y' Dim.)
- ☐ **ZS** D.C.C.I. w/ Polished Stainless Steel Extra Heavy-Duty Top
(Add 3/16 [5] to 'Y' Dim.)

SUFFIXES

- ☐ **-AR** Acid Resisting Epoxy Coated Finish
- ☒ **BP** Bronze Plug
- ☐ **-CF** Carpet Flange Cover (ZB and ZN only)
- ☐ **-CM** Carpet Marker
- ☐ **-DC** Duresist Cover
- ☐ **-DX** Round ZB or ZN Top with Dex-o-tex Flange
(2, 3, 4 [51, 76, 102] Sizes only)
- ☐ **-G** Galvanized Cast Iron
- ☐ **-HD** Extra-Heavy-Duty Veneer Top (Add 1/8 [3] to 'Y' Dim.)
(ZB and ZN only)
- ☐ **-K** Anchor Flange
- ☐ **-KC** Anchor Flange w/ Clamping Collar
- ☐ **-PC** Protective Cover
- ☐ **-SG** Solid Gasketed Cover
- ☐ **-SM** Special Marking Stamped on Top
- ☐ **-T** Square Top
- ☐ **-TC** Neo-Loc Test Cap Gasket
(2, 3, 4 [51, 76, 102] NL Bottom Outlet Only)
- ☐ **-TX** Square Top Recessed for 1/8 [3] Tile
(ZB and ZN only)
- ☐ **-VP** Vandal-Proof Screws
- ☐ **-X** Round Top Recessed for 1/8 [3] Tile
(ZB or ZN only)
- ☐ **-Z** Round Top Recessed for 1-1/4 [32] Terrazzo
(ZB or ZN only)

PIPE SIZE

2,3,4,6 [51,76,102,152]
2,3,4,6,8 [51,76,102,152,203]
2,3,4,6,8 [51,76,102,152,203]

(Specify size/type) OUTLET

☐ **IC** Inside Caulk

☐ **NH** No-Hub

☒ **NL** Neo-Loc

'E' BODY HT. DIM.

See Chart
See Chart
See Chart

* Regularly furnished unless otherwise specified.

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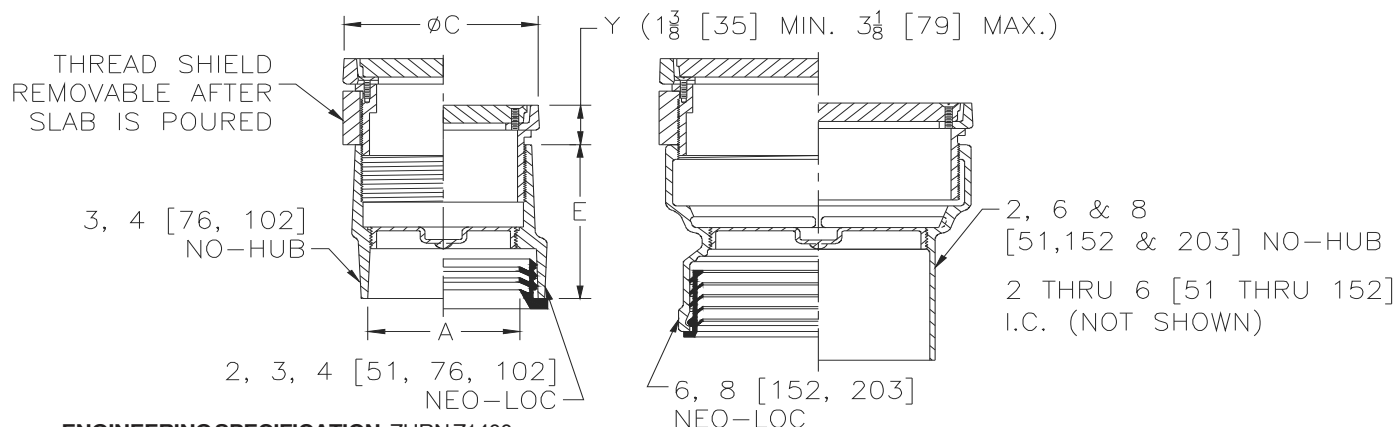
In Canada | **Zurn Industries Limited**
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www.zurn.com

Rev. T
Date: 09/28/2017
C.N. No. 138018
Prod. | Dwg. No. Z1400

**Z1400****EXTRA-HEAVY-DUTY "LEVEL-TROL"
ADJUSTABLE FLOOR CLEANOUT****SPECIFICATION SHEET**

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- ☐ **ZS** D.C.C.I. w/ Polished Stainless Steel Extra Heavy-Duty Top (Add 3/16 [5] to 'Y' Dim.)

SUFFIXES

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- ☒ **-BP** Bronze Plug
- ☐ **-CF** Carpet Flange Cover (ZB and ZN only)
- ☐ **-CM** Carpet Marker
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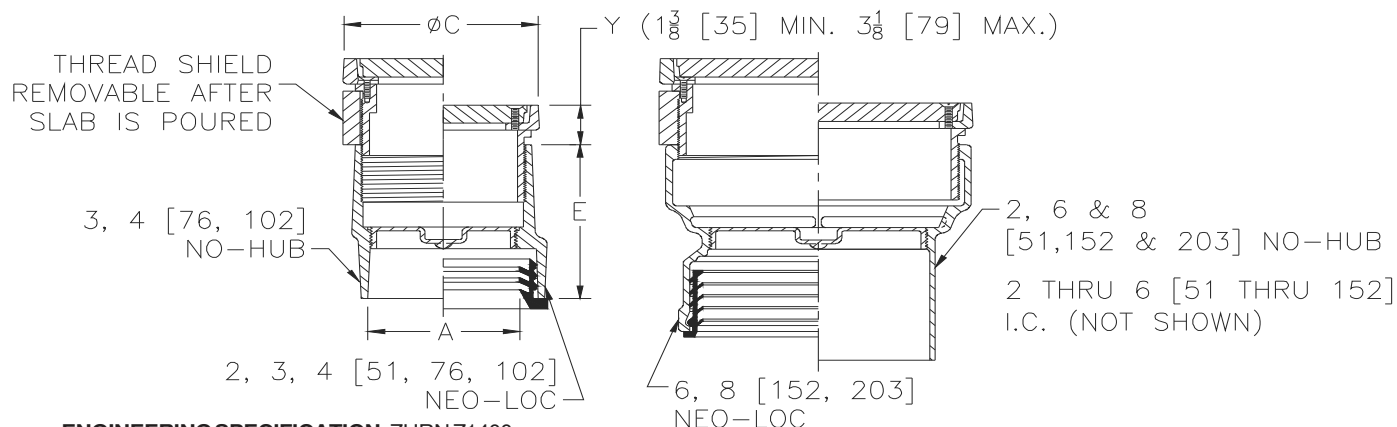
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