

Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
P.O. Box 16620
Little Rock, AR 72231
Phone 501-834-3320
Fax 501-834-5416

Date: 7/12/2023
Return Request: 7/22/2023
Project: LRSD – Rockefeller Early Childhood
Supplier: Falk
Manufacturer: Various
Submittal: Plumbing Piping Specialties
Submittal Number: 22 10 06-01
Drawing # and Installation: Plumbing Drawings

ARCHITECT

WDD Architects
5050 Northshore Lane
N. Little Rock, AR 72118
501-376-6681

ENGINEER

Insight Engineering
201 S. Chester St.
Little Rock, AR 72201
501-237-3077

GENERAL CONTRACTOR


Kinco Constructors
12600 Lawson Rd. #2711
Little Rock, AR 72210
501-225-7606

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

chowell@comfortar.com

 KINCO CONSTRUCTORS
LITTLE ROCK, ARKANSAS

JOB NAME: LRSD ROCKEFELLER

JOB #: 23.1004

SUBMITTAL #: 22 10 06-1

VENDOR: COMFORT SYSTEMS

SPEC SECTION: 22 10 06

BY: ANDREW MCCARTY **DATE:** 7/17/23

COMMENTS: _____

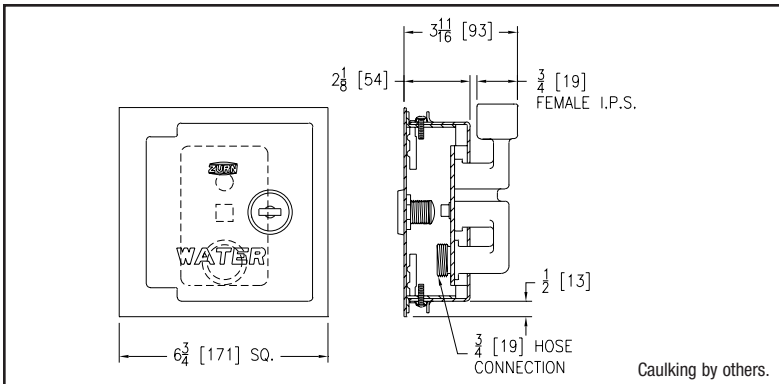
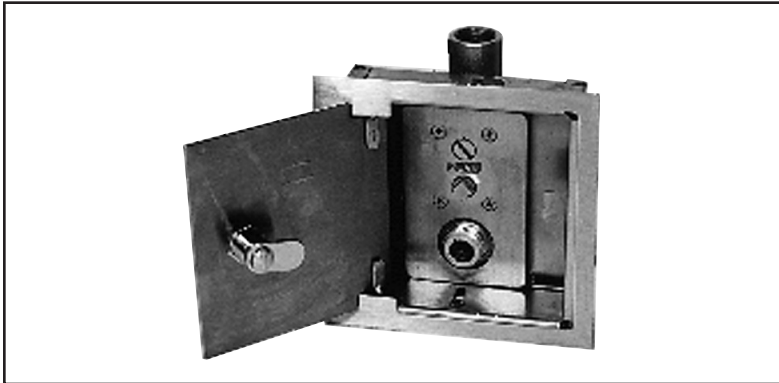
Kinco's review indicates that general conformity to the contract drawings, specifications and addenda to the best of our technical knowledge has been met by the vendor. This review does not in any way relieve the vendor of its obligation to perform or supply their product in strict accordance with the aforementioned contract documents. This submittal is certified to be in conformance with contract documents unless noted of herein.

**LRSD ROCKEFELLER
EARLY CHILDHOOD**

**PLUMBING OPERATION
& MAINTENANCE**

WALL HYDRANT

Z1350 NARROW WALL HYDRANT – Encased, Moderate Climate



ENGINEERING SPECIFICATION: ZURN Z1350 Encased moderate climate wall hydrant for narrow wall installation. Complete with bronze body, all bronze interior parts, replaceable seat washer, screwdriver operated stop valve in supply, key operated control valve, and 3/4" [19 mm] IP female inlet and 3/4" [19 mm] male hose connection standard. Stainless steel box and hinged cover with cylinder lock and "WATER" stamped on cover. **Note:** Caulking of inside joints by others.

Z1350 Narrow Wall Hydrant

The Z1350 is an encased moderate climate wall hydrant designed for narrow wall installation. This hydrant is ideal for commercial and multi-family apartments and thin wall construction.

Hydrant Features

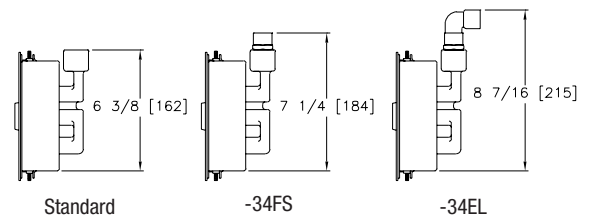
- **Certification** – IAPMO® listed.
- **Stop Valve** – Sealed, screwdriver-operated stop valve assembly with chrome-plated brass stem, O-Ring, and teflon washer provide positive shut-off to the hydrant operating valve with a maximum of one and one-quarter (1-1/4) turns.
- **Control Valve** – Key operated control valve assembly with chrome-plated brass stem, O-Ring, and teflon washer controls the water flow with a maximum of one and one-quarter (1-1/4) turns. No adjustments are necessary.
- **Faceplate** – Brass construction with polished finish.
- **Box and Cover** – Stainless steel box and hinged cover with "WATER" stamping.
- **Approximate Shipping Weight** – 4 lbs. [2 kg]
- **Operating Pressures** – Minimum running pressure 8 psi. Maximum static pressure 125 psi.
- **Water Temperature Range** – Minimum 33°F. Maximum 130°F.

OPTIONS

SUFFIXES

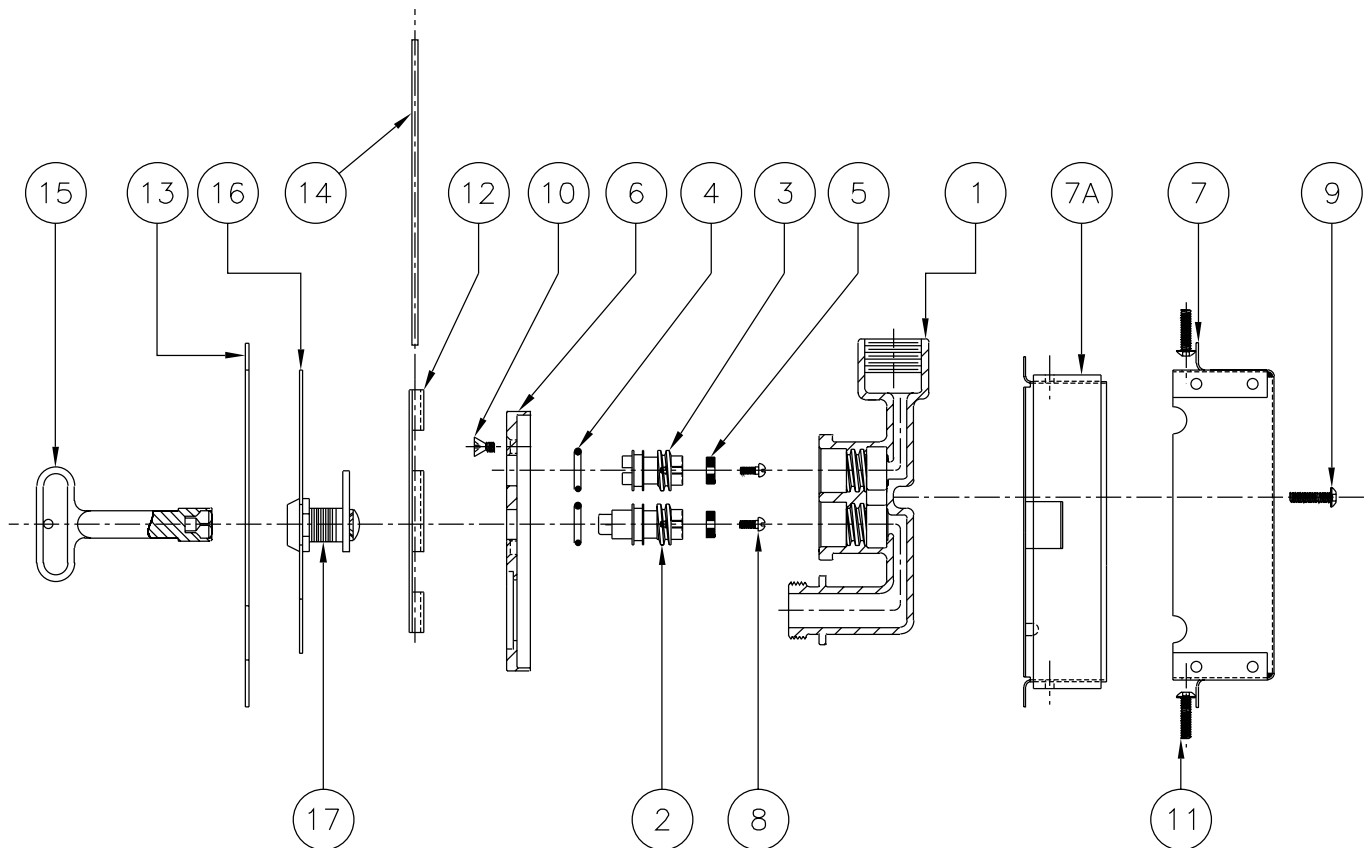
- RK Hydrant Parts Repair Kit
- VB 3/4" [19 mm] Adapter Vacuum Breaker
- 34EL 3/4" [19 mm] 90° Inlet Elbow Adapter
- 34FS 3/4" [19 mm] Solder Female Inlet Adapter

Inlet Descriptions



Z1350 NARROW WALL HYDRANT Parts Assembly and Parts List

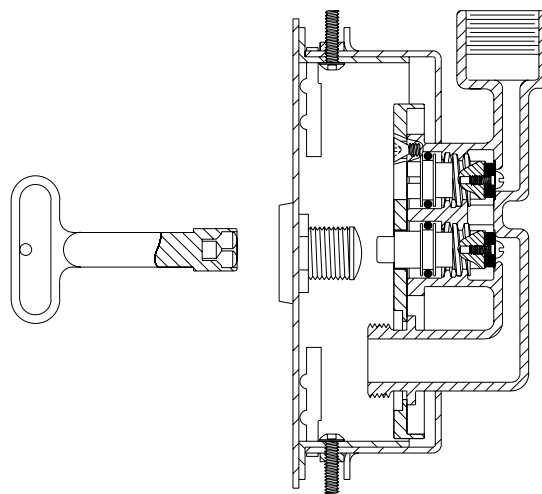
Z1350 Parts Assembly



Z1350 Parts List

Item	Description	Qty.	Part No.
1	Head	1	56488-001
*2	Operating Plunger	1	56512-001
*3	Stop Plunger	1	56512-002
*4	O-Ring	2	23750-313
*5	Teflon Washer	2	56513-001
6	Faceplate	1	56479-001
7	Body Bottom	1	56983-001
7A	Sleeve	1	56731-001
*8	Screw #6-32 NC	2	14853-016
9	Screw #10-24 NC	2	14853-041
10	Faceplate Screw	4	22698-047
11	Screw #10-24 NC	2	56988-002
12	Hinge Bracket	1	58482-001
13	Frame	1	56185-001
14	Hinge Pin	1	58483-001
*15	Key	1	59546-001
16	Cover	1	56187-006
17	Cylinder Lock Assembly	1	47153-001

*Items are available in -RK Repair Kit Option bag (#66955-208-9).



Z1350 NARROW WALL HYDRANT Troubleshooting Guide

Z1350 Troubleshooting Guide

PROBLEM	CAUSE	SOLUTION
Hydrant will not operate when turned on.	Water supply is shut off to the hydrant.	Turn on water supply.
	Water supply is shut off at the hydrant head.	Turn on water supply.
Cannot turn the hydrant on with key.	Hydrant hasn't been used for a long time – O-Ring has adhered to operating plunger and head.	Follow steps 1-6 of the Service Guide and lubricate O-Ring as in step 4.
Cannot shut the water off at the hydrant head shut off (shut off will not turn).	Hydrant hasn't been used for a long time – O-Ring has adhered to stop plunger and head.	Follow steps 7, 2, 8, 9, 5, and 10 of the Service Guide and lubricate O-Ring as in step 9.
Water does not shut off completely when hydrant is turned off with key.	Teflon washer is worn out.	Follow steps 1-6 of the Service Guide.
Water does not shut off completely when hydrant is turned off with key and the hydrant head is shut off.	Teflon washers are worn out.	Follow steps 7, 2-4, 8, 9, 5, and 10 of the Service Guide.
Hydrant exhibits low flow.	Water supply to hydrant is restricted.	Check water supply to ensure that all upstream valves are fully open.

Z1350 NARROW WALL HYDRANT Service Guide

Z1350 Service Guide

Step 1: Shutting Off the Water Supply at the Hydrant Head

Using a flat screwdriver, shut off the water supply by turning the stop plunger assembly (3) clockwise until the water supply is off.

Step 2: Removing the Faceplate and Adjacent Components

Using 1/8" Allen wrench, remove the four faceplate screws (10) from head (1) by turning counterclockwise. Remove the faceplate (6).

Step 3: Removing the Internal Operating Plunger Assembly

The internal operating plunger assembly (2, 4, 5, and 8) can be removed by using the key (15) on the square end of the operating plunger (2) and turning counterclockwise until the operating plunger assembly (2) is unscrewed from head (1). Discard the operating plunger assembly.

Step 4: Replacing the Operating Plunger Assembly

Insert the new operating plunger assembly (2) into the head (1), and using the key (15) turn clockwise until seated snug (by hand only). **(Note:** Lubricate the O-Ring (4) with Lubriplate FGL-2 if needed).

Step 5: Replacing the Faceplate

Place the faceplate (6) onto head (1), and using the 1/8" Allen wrench and the four screws (10) rotate the screws clockwise until screws are snugged tight (by hand only).

Step 6: Turning on the Water Supply at the Hydrant Head

Using a flat screwdriver, turn on the water supply by turning the stop plunger assembly (3) counterclockwise until the water supply is on.

Step 7: Shutting off the Water Supply to the Hydrant

Locate the supply shut off valve and rotate until water supply is shut off.

Step 8: Removing the Internal Stop Plunger Assembly

The internal stop plunger assembly (3, 4, 5, and 8) can be removed by using a flat screwdriver and turning counterclockwise until the stop plunger assembly (3) is unscrewed from head (1). Discard the stop plunger assembly.

Step 9: Replacing the Stop Plunger Assembly

Insert the new stop plunger assembly (3) into the head (1), and using the flat screwdriver, turn clockwise until seated snug (by hand only). **(Note:** Lubricate the O-Ring (4) with Lubriplate FGL-2 if needed.)

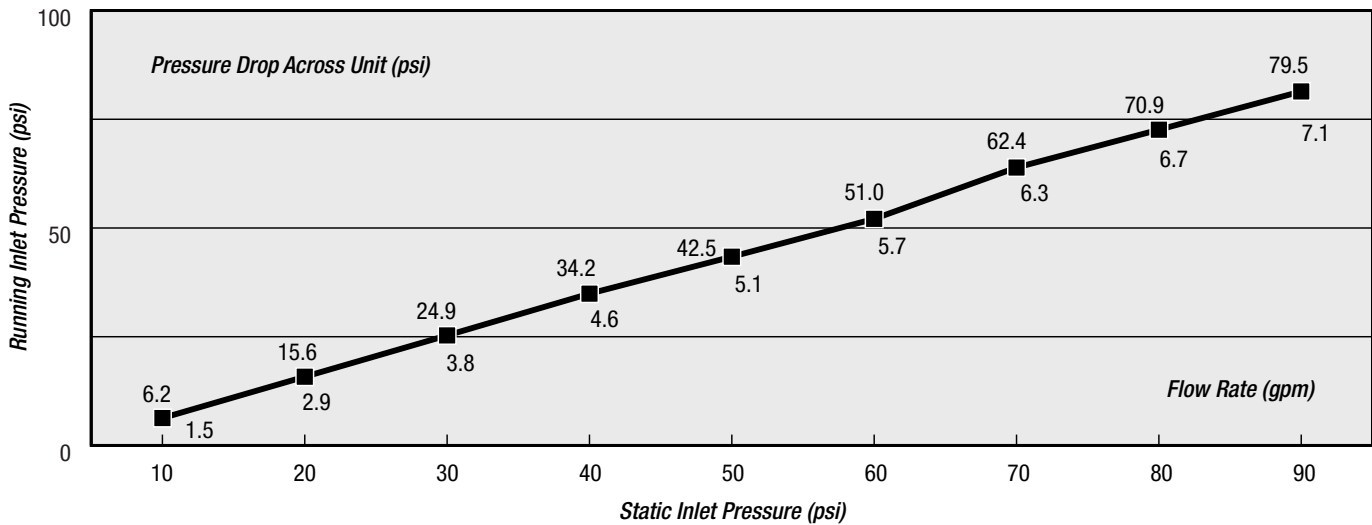
Step 10: Turning on the Water Supply to the Hydrant

Locate the water supply shut-off valve and rotate until water supply is on.

⚠ **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

Z1350 NARROW WALL HYDRANT 3/4" Hose Connection Chart and Graph

Z1350 Narrow Wall Hydrant – 3/4" Hose Connection				
Static Pressure (psi)	Running Inlet Pressure (psi)	Running Outlet Pressure (psi)	Flow Rate (gpm)	Pressure Drop Across Unit (psi)
10	6.3	0.1	1.5	6.2
20	15.8	0.2	2.9	15.6
30	25.3	0.4	3.8	24.9
40	34.9	0.6	4.6	34.2
50	43.4	0.9	5.1	42.5
60	52.1	1.2	5.7	51.0
70	63.9	1.5	6.3	62.4
80	72.6	1.7	6.7	70.9
90	81.4	1.9	7.1	79.5





LETTER OF TRANSMITTAL

TO: *Kinco Constructors*

DATE: September 13, 2023

RE: *LRSD Rockefeller EC Center*

JOB NO.: 22-046

ATTN: Mr. Casey Sowell/ Mr. Andrew McCarty

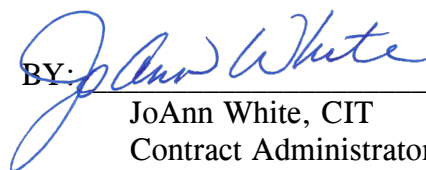
COPIES	DATE	NO.	DESCRIPTION
1 Emailed	07/28/23	22 10 06-1	Plumbing Piping Specialties

THESE ARE TRANSMITTED:

- For Approval As Requested Reviewed for General Compliance Resubmit ___ copies for approval
- For Your Use For Review and Comment Reviewed and Noted Submit ___ copies for distribution
- For Your Information Revise and Resubmit Comments Return ___ corrected prints

REMARKS:

COPY TO: Job File

BY: 

 JoAnn White, CIT
 Contract Administrator



201 S Chester
Little Rock, AR 72201
501.237.3077

Submittal Comment Sheet

Project Name: Rockefeller Pre-K Renovation

Project Number:22-050

Date Received: 07/28/2023

Date Returned:09/13/2023

Reviewed By: N. Santos

1. WB-1
 - a. Approved
2. SB-1
 - a. Approved
3. HB-1
 - a. Approved
4. TMV-1
 - a. Approved
5. FCO
 - a. Approved
6. WCO
 - a. Approved
7. FD-1
 - a. Approved
8. FS-1
 - a. Approved
9. TG
 - a. Approved
10. WHA
 - a. Approved
11. COTG
 - a. Approved as noted. Not part of scope.

End of Comments



THE CONSULTANTS OF RECORD FOR THIS PROJECT HAVE REVIEWED THESE SHOP DRAWINGS. THE CONSULTANTS' COMMENTS AND REVIEW STAMP ARE APPLICABLE FOR THEIR PORTION OF THE WORK. THE REVIEW AND CHECKING OF THE REFERENCED SUBMITTED DOCUMENTS IS FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. REVIEW IS NOT CONDUCTED FOR THE PURPOSE OF DETERMINING THE ACCURACY AND COMPLETENESS OF OTHER DETAILS, SUCH AS DIMENSIONS AND QUANTITIES, FOR SUBSTANTIATING INSTRUCTIONS FOR INSTALLATION OR PERFORMANCE OF EQUIPMENT OR SYSTEMS, OR FOR COORDINATION OF THE WORK OF ALL TRADES, ALL OF WHICH REMAIN THE RESPONSIBILITY OF THE CONTRACTOR AS REQUIRED BY THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR ALL QUANTITIES.





Submittal #22 10 06-1.0

22 10 06 - PLUMBING PIPING SPECIALTIES

Central Arkansas
12600 Lawson Road
Little Rock, Arkansas 72210
Phone: (501) 225-7606
Fax: (501) 225-1028

Project: 23.1004 - 23.1004 LRSD Rockefeller Early Childhood Center
(WDD #22-046)
700 East 17th Street
Little Rock, 72206

Plumbing Piping Specialies

SPEC SECTION:	22 10 06 - PLUMBING PIPING SPECIALTIES	SUBMITTAL MANAGER:	Andrew McCarty (Kinco Constructors, LLC)
STATUS:	Open	DATE CREATED:	07/17/2023
ISSUE DATE:	07/17/2023	REVISION:	0
RESPONSIBLE CONTRACTOR:	Comfort Systems USA Arkansas, Inc.	RECEIVED FROM:	Matt Aldridge
RECEIVED DATE:		SUBMIT BY:	
FINAL DUE DATE:	09/6/2023	LOCATION:	
TYPE:	Product Data	COST CODE:	
APPROVERS:	JoAnn White (Wittenberg, Delony & Davidson, Inc)		
BALL IN COURT:	JoAnn White (Wittenberg, Delony & Davidson, Inc)		
DISTRIBUTION:			
DESCRIPTION:			
ATTACHMENTS:	22 10 06-01 Plumbing Piping Specialties.pdf		

SUBMITTAL WORKFLOW

NAME	SUBMITTER/ APPROVER	SENT DATE	DUE DATE	RETURNED DATE	RESPONSE	ATTACHMENTS	COMMENTS
Andrew McCarty	Submitter		8/17/2023	7/28/2023	Submitted	22 10 06-01 Plumbing Piping Specialties.pdf	Kinco Reviewed
JoAnn White	Approver	7/28/2023	9/6/2023		Pending		

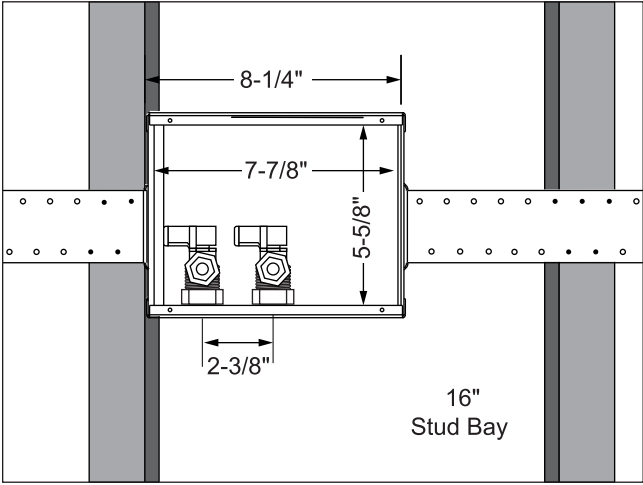
BY _____ DATE _____ COPIES TO _____

WB-1

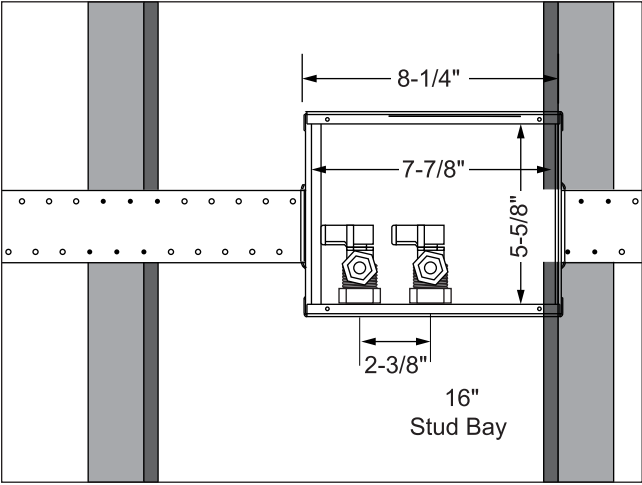


Reversible Drain White Powder Coated WMOB With Quarter Turn Valves

Left Hand Drain Option



Right Hand Drain Option



Specifications:

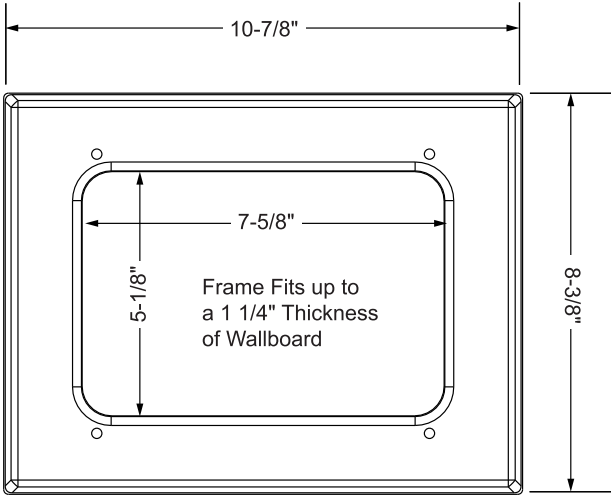
Furnish and install reversible drain white powder coated econo metal washing machine outlet box with quarter turn valves. Unit shall be Guy Gray product code checked below as manufactured by IPS Corporation.

Box Material:

White Powder Coat on Cold Rolled Steel Finish
20 gauge box with 20 gauge faceplate

Valve and Drain Options:

Qtr. Turn Valve with MIP/Sweat, CPVC, PEX or Wirsbo connection. 2" Slipnut, PVC or ABS drain. Valves comply with ASME A112.18.1.



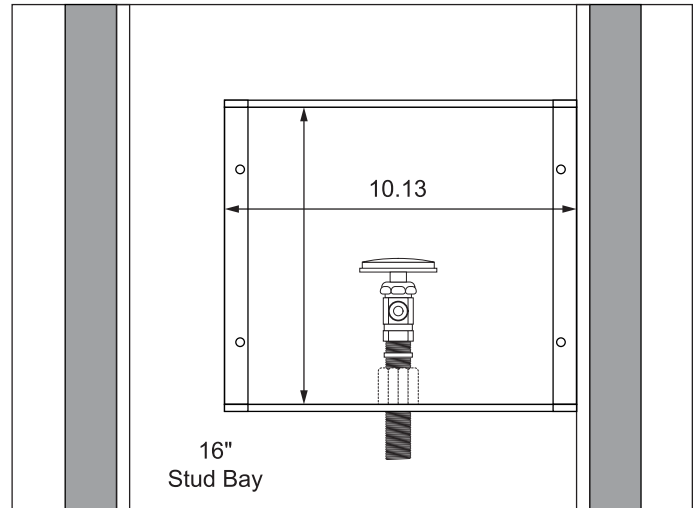
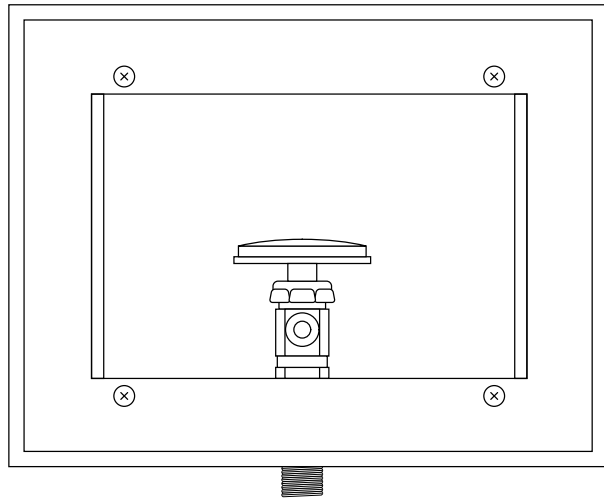
PRODUCT	DESCRIPTION	MODEL	UNITS/CASE
82112	Reversible Qtr Turn Valves – 1/2" Sweat Conx., Unassembled	MWB-3	5
82113	Reversible Qtr Turn Valves – 1/2" Sweat Conx. - Cont. Pack, Unassembled	MWB-4	5
82114	Reversible Qtr Turn Valves – 1/2" CPVC Conx., Unassembled	MWB-5	5
82115	Reversible Qtr Turn Valves – 1/2" CPVC Conx. - Cont. Pack, Unassembled	MWB-6	5
82116	Reversible Single-lever Valve – 1/2" Sweat Conx., Unassembled	MWB-7	5
82148	Reversible Qtr Turn Hammer Arrestor Valves – 1/2" Sweat Conx., Unassembled	MWB-16	5
82152	Reversible Qtr Turn Valves – 1/2" Sweat Conx./PVC Drain Conx., Unassembled	MWB-17	5
82153	Reversible Qtr Turn Valves 1/2" Sweat Conx./ABS Drain Conx., Unassembled	MWB-18	5
82165	1/2" Qtr Turn PEX Valve – 2" ABS Drain Conx., Unassembled	MWB25	5
82184	1/2" Qtr Turn Wirsbo® Valves – 2" Slipnut Drain Kit, Unassembled	MWB23	5
82314	Box w/o valves, Unassembled	MWBRLV	5



SB-1



Galvanized Ice Maker Box with Lead Free Domestic Valve



SPECIFICATIONS

Furnish and install Guy Gray recessed ice maker outlet box. Ice maker outlet box shall have an AB1953 compliant valve with a 1/2" copper sweat inlet and a 1/4" compression outlet. Unit shall be Guy Gray product code 88158 as manufactured by IPS Corporation in Collierville, TN.

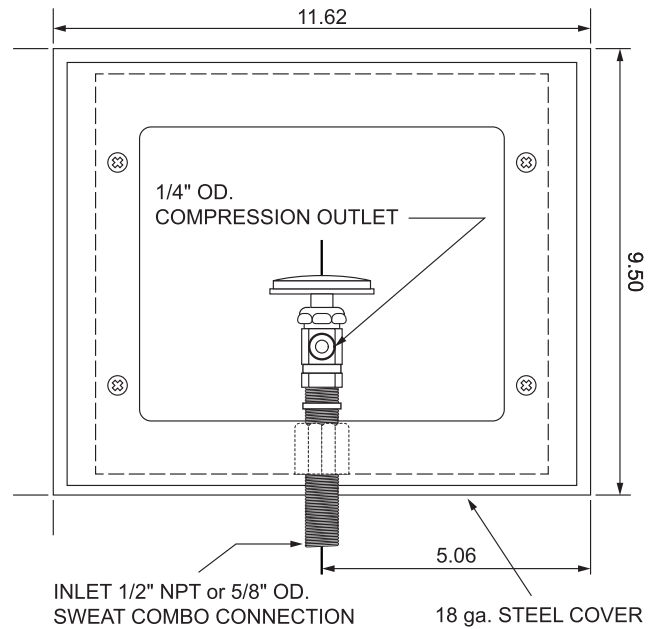
BOX MATERIAL:

G90 Hot Dipped Galvanized Steel (unpainted)
20 gauge box with 20 gauge faceplate

VALVE & DRAIN OPTIONS:

Lead free Domestic Valve with 1/2" MIP/Sweat, CPVC or PEX connection. Valves comply with ASME A112.18.1.

Valves comply with the requirements of NSF 61-G and the "Reduction of Lead in Drinking Water Act" (Federal Public Law 111-380)



Item #	Model #	Product Description	Quantity
88510	BIM875QTSAB	Qtr-turn Valve, 1/2" Sweat Connection	6
X 88158	BIM875AB	Domestic Valve, 1/2" Sweat Connection	6
88512	BIM876QTCAB	Qtr-turn Valve, 1/2" CPVC Connection	6
88514	BIM877QTPAB	Qtr-turn Valve, 1/2" F1807 Connection	6
88517	BIM878QTWAB	Qtr-turn Hammer Arrester Valve, 1/2" Wirsbo® Connection	6
96997	BTRC	Tamper resistant cover for Models B, BB, WB, FB, & BIM	6

*Frames packed separately from boxes and mounting flanges for protection and safe keeping until finishing stage.



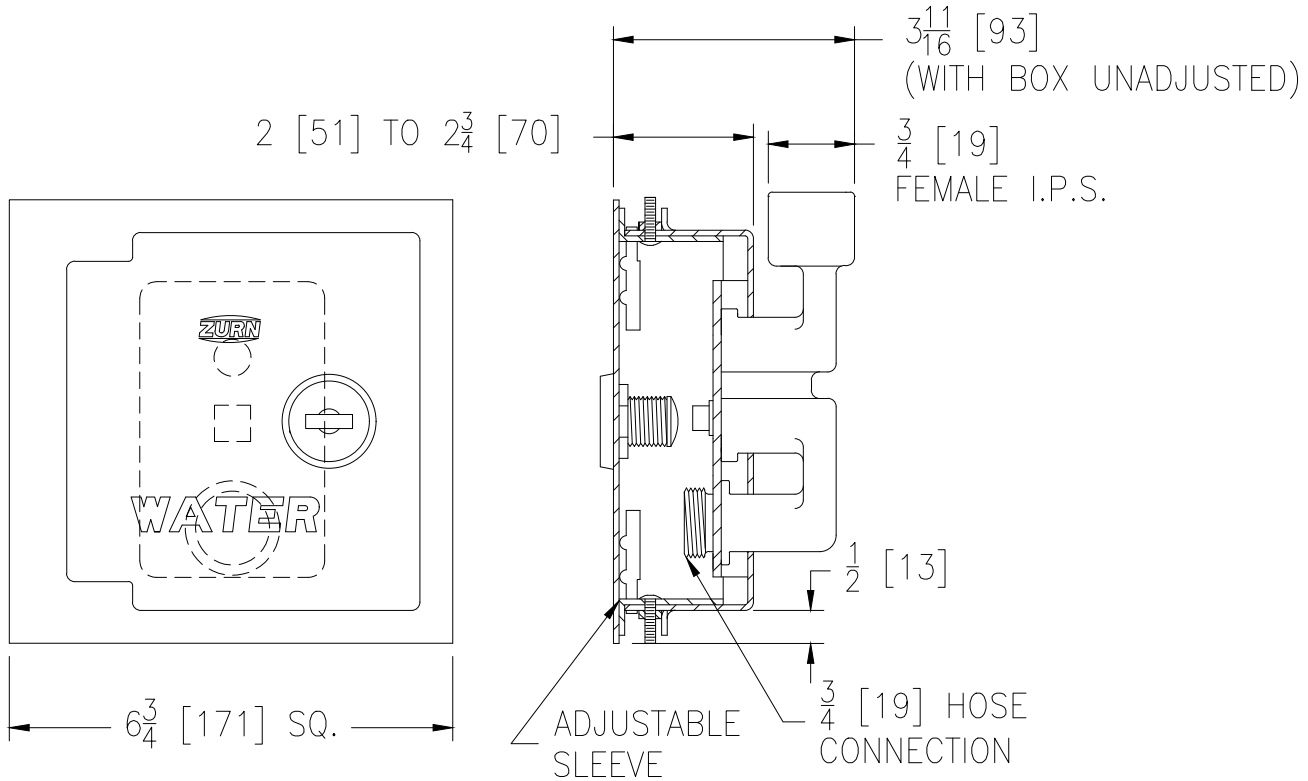
HB-1

**Z1350****NARROW WALL HYDRANT**
Encased, Moderate Climate

SPECIFICATION SHEET

TAG _____

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



Wall Thickness In. [mm]	Approx. Wt. Lbs. [kg]
4 [102]	4 [2]

ENGINEERING SPECIFICATION: Z1350 Encased moderate climate wall hydrant for narrow wall installation. Complete with bronze body, all bronze interior parts, replaceable seat washer, screwdriver operated stop valve in supply, key operated control valve, and 3/4 [19] IP female inlet and 3/4 [19] male hose connection standard. Adjustable stainless steel box furnished with hinged cover, cylinder lock and "WATER" stamped on cover.

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

___ -RK	Hydrant Parts Repair Kit
___ -VB	3/4 [19] Adapter Vacuum Breaker
___ -34EL	3/4 [19] IP 90° Inlet Elbow Adapter
___ -34FS	3/4 [19] Solder Female Inlet Adapter

****NOTE:** The adjustable sleeve on the stainless steel box is provided with a gasket as standard, but additional caulking of all inside joints is required (by others) after the hydrant box has been properly set. Caulking should be performed on all open seams, including the seams where the gasket is present.

⚠ 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

www.zurn.com

Rev. K
Date: 01/17/23
C.N. No. 144900
Patent zurn.com/patents
Prod. | Dwg. No. Z1350

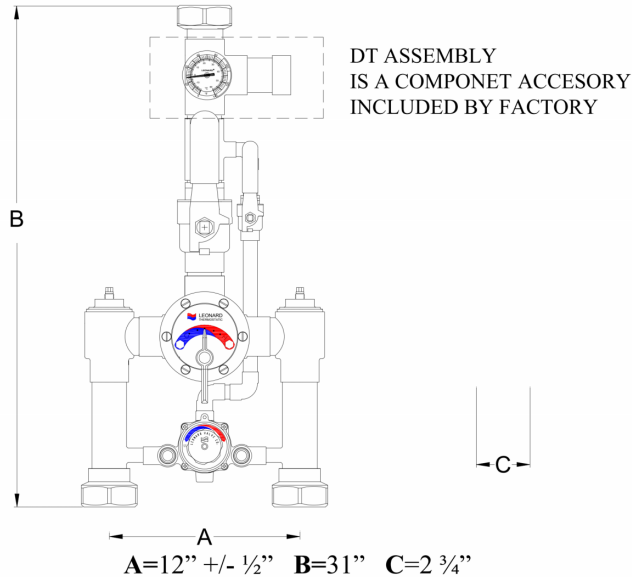
TMV-1

NEXT GENERATION HIGH LOW SYSTEM

ECO-MIX™

Submittal Data Sheet S-1232R-LF
August, 2018

TM-2020B-LF-DT




- Large Type TM Thermostatic water mixing valve, adjustable high temperature limit stop*, inlet checkstops, wall support, outlet ball valve
- Small Type TM Thermostatic water mixing valve, adjustable high temperature limit stop*, integral checkstops, outlet ball valve
- 2" inlets, 2" outlet (51mm X 51mm)
- Maximum operating pressure: 125 PSI (860 KPA)
- 1 GPM (3.7 l/min) minimum flow capacity
- Color-coded dial thermometer (0 to 140°F, -10 to 60°C)
- Inlet manifold piping
- Locking temperature regulator
- Factory assembled and tested

This product is certified to meet Low Lead requirements of wetted surface area containing less than 0.25% lead by weight. All other component accessories, the sum total of which comprise the wetted surface area of this product, contain less than one quarter of one percent lead by weight.

OPTIONS:

- ___ SUFFIX CP – Chrome plated (Material finish may vary)
- ___ SUFFIX IT – Inlet Thermometers (shipped loose)
- ___ SUFFIX TC – Test connection (shipped loose)
- ___ SUFFIX HT – High temperature thermometer (0 to 250°F, -18 to 121°C)

Valve assembly is ASSE 1017 Certified 

Valve assembly is CSA Certified 



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.Ca.gov

+NOTE: The valve will maintain temperature with 0.5GPM flow from the domestic hot water loop when properly installed near the hot water source with a continuously operating recirculation pump.

MINIMUM FLOW (GPM) (l/min)	PRESSURE DROP										
	5	10	15	20	25	30	35	40	45	50	PSI
	.3	.7	.97	1.4	1.7	2.1	2.4	2.8	3.1	3.4	BAR
1.0 (3.7)	78	113	129	145	163	172	188	197	214	226	GPM l/min
	295	428	488	549	617	651	712	746	810	856	

NOTE: Flow rates will vary depending on existing field conditions. Leonard Valve Company always recommends using CASPAK® sizing software for proper valve sizing and model number applications.

CAUTION! All thermostatic water mixing valves have limitations. They will NOT provide the desired accuracy outside of their flow capacity range. Consult the Flow Capacity Chart and DO NOT OVERSIZE. Minimum flow must be no less than as indicated.

Note: Leonard Valve Company reserves the right of product, or design modifications without notice or obligation.

***NOTE:** A limit stop, set for 120°F (49°C), is simply a mechanical setting to prevent excessive handle rotation. If incoming water is hotter than 150°F (65.5°C), the temperature of the factory test, the valve when turned to full HOT may deliver water in excess of 120°F and the limit stop MUST BE RESET BY THE INSTALLER

Engineer's Approval

Job # _____

Arch/Eng. _____

Contractor _____

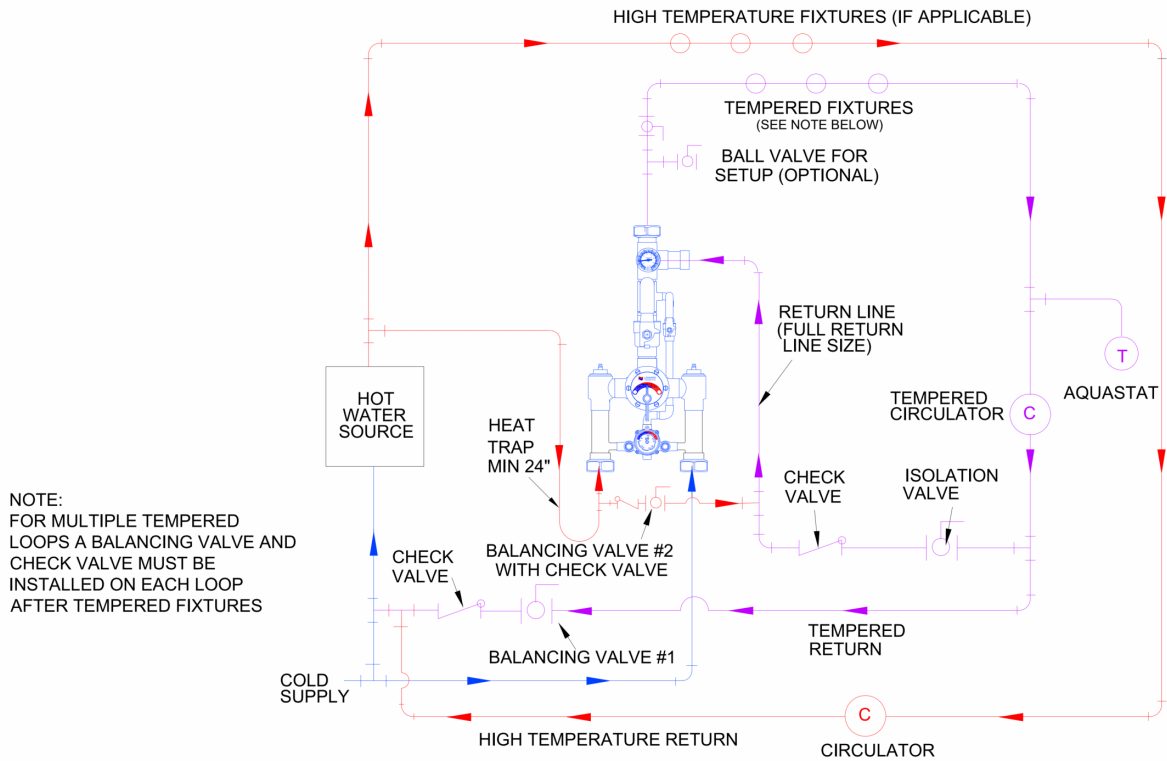
Note: The models shown represent Leonard Products which are believed to be equivalent in type and function to items specified. Leonard Valve Company is not responsible for errors or omissions due to differences in interpretations of information provided.



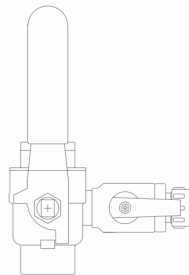
1360 Elmwood Avenue, Cranston, RI 02910 USA
Phone: 401.461.1200 Fax: 401.941.5310
Email: info@leonardvalve.com
Web Site: <http://www.leonardvalve.com>

PIPING METHOD

Method #5 Shown



(OPTIONAL) TEST CONNECTION



1360 Elmwood Avenue, Cranston, RI 02910 USA

Phone: 401.461.1200 Fax: 401.941.5310

Email: info@leonardvalve.com

Web Site: <http://www.leonardvalve.com>

FCO

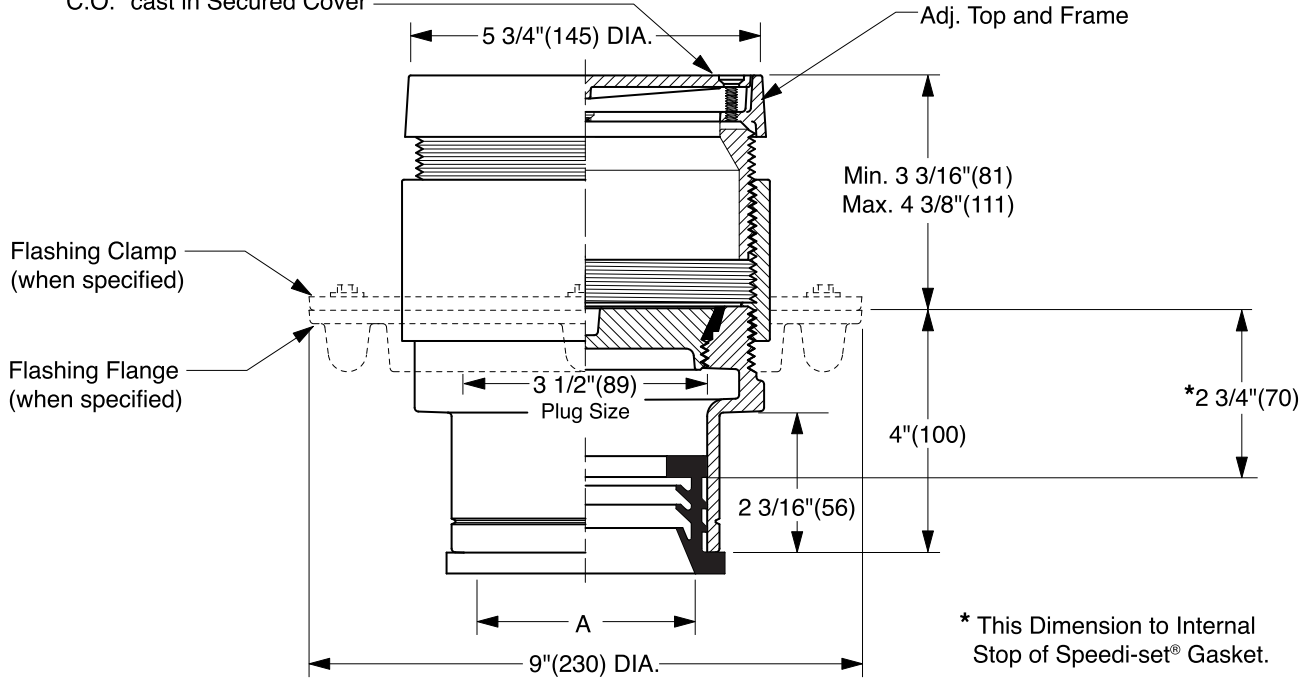
Q
DRAWING NUMBER S4031
SIZE A
SCALE: NONE
DATE: 2-16-70
APPROVED BY: JM
CHECKED BY: BH
DRAWN BY: RK
4031 SERIES
FIGURE NUMBER

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA
 DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE

FINISHED FLOOR CLEANOUTS WITH "TWIS-TO-FLOOR"® ADJUSTABLE TOPS

ROUND NICKEL BRONZE TOP

FUNCTION: For use in finished floors bearing foot and medium load wheeled traffic. Allows for easy floor level adjustment.
 "C.O." cast in Secured Cover



TWIS-TO-FLOOR® ADJUSTMENT

SPEEDI-SET® OUTLET▲

"A" (Pipe Size) = 02(50), 03(75) or 04(100)

* This Dimension to Internal Stop of Speedi-set® Gasket.

NOTE: For applications using core drilling, the largest diameter of the cleanout assembly is 6 5/16" (160).

- Fig. 4031L.....Gasket Seal - ABS Plug
- Fig. 4032L.....Gasket Seal - Bronze Plug
- Fig. 4033L.....Taper Thread - Bronze Plug
- Fig. 4034L.....Taper Thread - ABS Plug

(Twis-to-Floor® design shown with gasketed plug.)

NOTE: Dimensions shown in parentheses are in millimeters.

REGULARLY FURNISHED:
 Duco Cast Iron Cleanout with Round Adjustable Scoriated Secured Nickel Bronze Top. Closure Plug Type as Indicated By Figure Number Selected.

- VARIATIONS:**
- Flashing Flange -F
 - Flange with Flashing Clamp -F-C
 - Carpet Clamping Type -X
 - Carpet Marker Type -Y
 - Vandal Proof Top -U
 - Wide Flange (DX)

- OPTIONAL MATERIALS:**
- Galvanized Cast Iron -G
 - Polished Bronze Top -PB
 - Stainless Steel Top -NBSS

▲ Available in Extra Heavy, Service Weight or NO-HUB.

REV.	DATE	DESCRIPTION	BY	CKD. BY	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER
	3-10-23	Added ® to "Speedi-Set"	KK	CL			4031 SERIES
	7-21-21	Added SS Top Option	KK	CL			
	11-15-19	Revised Variations	TBW	CL			
	12-18-08	Revised Variations	RN	BW			

WCO

J



JAY R. SMITH MFG. CO.®
 MEMBER OF MORRIS GROUP INTERNATIONAL
 POST OFFICE BOX 3237
 MONTGOMERY, ALABAMA 36109-0237 (USA)
 TEL: 334-277-8520 FAX: 334-272-7396 www.jrsmith.com



LOCATION

DRAWING NUMBER
S4710

SIZE
A

SCALE:
NONE

DATE:
2-16-70

APPROVED BY:
JM

CHECKED BY:
BH

DRAWN BY:
RK

4710, 4715

FIGURE NUMBER

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

WALL ACCESS COVERS

ROUND FACE-OF-WALL COVER AND SCREW

FUNCTION: Used to conceal cleanout closures in walls. The round access cover is mounted on the surface of the finished wall and is directly secured by the screw to a tapping which must be provided in the cleanout plug. Shallow plates are preferred for all installations except where the cleanout plug protrudes beyond the finished wall surface, in which case the deep type cover must be used.

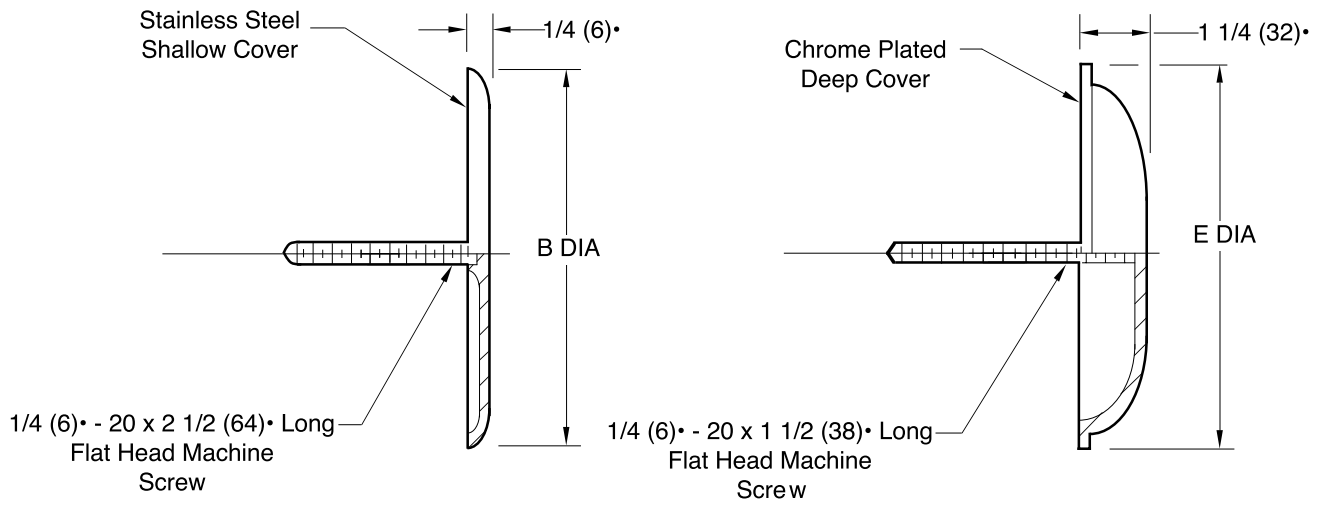


Fig. 4710
eg: 4710 (-04)**

Fig. 4715
eg: 4715 (-07)Δ

Plug Size•	Fig. 4710• B Dia.	Specify FIG.	Fig. 4715• E Dia.	Specify FIG.
1 1/2 (38), 2 (51), 2 1/2 (64)	4 1/4 (110)	4710 (-04)	*7 1/4 (185)	4715 (-07)
3 (76), 3 1/2 (89), 4 (100)	5 1/4 (135)	4710 (-05)	*7 1/4 (185)	4715 (-07)
5 (125)	7 (180)	4710 (-07)	*7 1/4 (185)	4715 (-07)
6 (150)	9 1/4 (235)	4710 (-09)	9 1/4 (235)	4715 (-09)
8 (205), 10 (255)	11 1/4 (285)	4710 (-11)	11 1/4 (285)	4715 (-11)

*= Die Formed SS Cover Only.

** Reflects "B" DIA.

Δ Reflects "E" DIA.

•NOTE: Dimensions shown in parenthesis are in millimeters.

REGULARLY FURNISHED:
Stainless Steel Shallow Cover or Chrome Plated Bronze Deep Cover with Center Screw as Indicated by Figure Number Selected.

VARIATIONS:
 Longer Center Screw (Specify Length)
 Vandal Proof Screw -U

OPTIONAL MATERIALS:
 Nickel Bronze -NB (Fig. 4715 only)
 Polished Bronze Cover -PB
 Prime Coated Steel Cover -PC (Fig. 4710 only)

REV.	DATE	DESCRIPTION	BY	CKD. BY
J	11-6-12	Revised table	TBW	CL
I	1-19-96	Revised table	CMD	BS
H	8-31-95	Chg Table	EMB	BS
G	3-31-95	Added millimeters	EMB	BS
F	7-27-94	Revised	EMB	BS

WEIGHT POUNDS
VOLUME CUBIC FEET

FIGURE NUMBER
4710, 4715

FD-1

X

SMITH® JAY R. SMITH MFG. CO.®
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 MONTGOMERY, ALABAMA 36109-0237 (USA)
 TEL: 334-277-8520 FAX: 888-377-7818 www.jrsmith.com

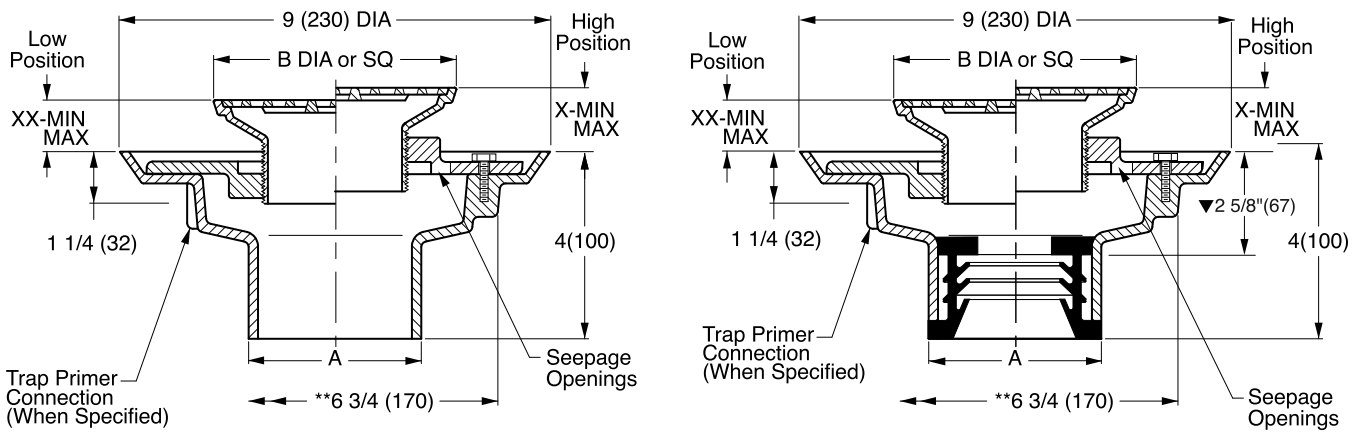
ASPE **PDPI** **ASSE**
 MEMBER OF: American Boiler Plate Institute

LOCATION

FLOOR OR SHOWER DRAINS WITH ADJUSTABLE STRAINER HEADS

General service floor drain for use in showers, toilets, kitchens and other finished areas where foot traffic is expected.

Load Rating: Light Duty having a Safe Live (Static) Load less than 2,000 lbs. (900 kg) per ASME A112.6.3 Floor Drain Standard. For the specific Safe Live Load rating of any grate, contact the Smith representative or factory direct.



A (Pipe Size) = 02(50), 03(75), 04(100), 05(125) or 06(150)

NO-HUB OUTLET

- Fig. 2005Y.....(A) ROUND TOP
- Fig. 2005Y.....(B) SQUARE TOP

Outlet Size	Nickel Bronze Strainer Head
▲ 02(50)	05(125) DIA or SQ
▲ 03(75)	06(150) DIA or SQ
▲ 04(100)	08(205) DIA or SQ

SPEEDI-SET® OUTLET

- Fig. 2005L.....(A) ROUND TOP
- Fig. 2005L.....(B) SQUARE TOP

Strainer Size B DIA or SQ	*Collar In High Position X		*Collar In Low Position XX		Free Area SQ IN (SQ CM)	
	MIN	MAX	MIN	MAX	ROUND	SQUARE
05 (125)	1 1/4(32)	2 1/4(57)	3/4(19)	1 5/8(41)	7(45)	6.5(42)
<input checked="" type="checkbox"/> 06 (150)	1 1/4(32)	2 1/4(57)	3/4(19)	1 5/8(41)	9(58)	12.5(81)
07 (180)	1 1/4(32)	2 1/4(57)	7/8(22)	1 7/8(48)	14(90)	11(71)
08 (205)	1 1/2(38)	2 1/2(64)	1(25)	1 7/8(48)	17(110)	14(90)
*09 (230)	1 1/2(38)	2 3/8(60)	1(25)	1 7/8(48)	18(116)	16(103)
*10 (255)	1 1/2(38)	2 3/8(60)	1(25)	1 7/8(48)	23(48)	16(103)

- ▼ This dimension to internal stop of speedi-set® gasket.
- Add 3/8"(10) to all min/max dimensions for round strainers.
- * Collar is reversible to obtain extreme high and low strainer positions.
- ** Not available for 5"(125) size strainer.
- ** MIN 6 3/4"(170) hole required for core drilled application.

REGULARLY FURNISHED:
 Duco Cast Iron Body with Flashing Collar and Adjustable Strainer Head as Indicated by Suffix Letter Selected.

- VARIATIONS:**
- Flapper Type Backwater Valve -V (NOTE 2)
 - ** Hinged Grate -H (NOTE 1)
 - L Speedi-Set® Service Weight 2(50), 3(75) & 4"(100) only
 - LXH Speedi-Set® Extra Heavy 2(50), 3(75) & 4"(100) only
 - Sediment Bucket -B
 - Trap Primer Connection -P050 1/2" (13) & -P075 3/4" (19)
 - Vandal Proof Screws -U
 - Wide Flanged Strainer (Specify Fig. DX2005)
 - T Threaded Outlet (Specify 2010T)
 - Heelproof Grate -HP -AHP (Round) or -BHP (Square)
 - Quad Close Trap Seal (Specify Fig. 2692)

- OPTIONAL MATERIALS:**
- Bronze Body -BB
 - Chrome Plated Strainer -CP
 - Galvanized Cast Iron Body -G
 - Nickel Bronze Strainer -NB
 - Polished Bronze Strainer -PB
 - All Stainless Steel (Specify Fig. 9700)
 - Stainless Steel Strainers -SS [Available in 05(125) & 06(150) sizes only]

NOTE 1: Sediment Bucket -B not provided for a Hinged Grate (-H)
NOTE 2: Sediment Bucket -B not provided for a Ball Float (-BFV) or a Flapper Type (-V)

NOTE: Dimensions shown in parentheses are in millimeters.
 ▲ Meets ASME Standard A112.6.3-2001 02(50), 03(75) or 04"(100) sizes only.

SEE PM 0457 FOR OPTIONAL STRAINER HEADS.

DRAWING NUMBER S2005

SIZE A

SCALE: NONE

DATE: 5-17-85

APPROVED BY: TD

CHECKED BY: TD

DRAWN BY: PJ

2005

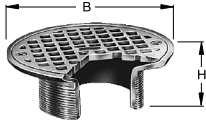
FIGURE NUMBER	X W V U	3-10-23 10-8-21 8-27-21 7-23-19	Added @ to "Speedi-Set" Added NOTE 1 & 2 Edited Variations Added Load Rating	KK KK KK MW	CL JM JM JM	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER
REV.	DATE	DESCRIPTION	BY	CKD. BY				2005

NOTE 1: Sediment Bucket -B not provided for a Hinged Grate (-H)

NOTE 2: Sediment Bucket -B not provided for a Ball Float (-BFV) or a Flapper Type (-V)

OPTIONAL STRAINER HEADS

ROUND STRAINER



MATERIALS:
 Chrome Plated -CP
 Polished Bronze -PB
 Nickel Bronze -NB
 Stainless Steel
 Strainers -SS [Available in 05(125) & 06(150) sizes only]

VARIATIONS:
 *Hinged Grate (Specify Suffix -AH) (NOTE 1)
 Sediment Bucket -B
 Vandal Proof Screws -U

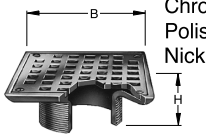
B DIA	05 (125)	06 (150)	07 (180)	08 (205)	09 (230)	10 (255)
H	2 (51)	2 (51)	2 1/4 (57)	2 1/2 (64)	2 1/2 (64)	2 3/4 (70)
X MIN	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)	1 1/2 (38)	1 1/2 (38)	1 1/2 (38)
X MAX	2 1/4 (57)	2 1/4 (57)	2 1/4 (57)	2 1/2 (64)	2 1/2 (64)	2 3/4 (70)

LIGHT DUTY

SUFFIX -A

Specify Type, Size & Finish eg: A05NB
 *Not available for 05" (125) size

SQUARE STRAINER



MATERIALS:
 Chrome Plated -CP
 Polished Bronze -PB
 Nickel Bronze -NB

VARIATIONS:
 Flapper Type Backwater Valve (Specify Suffix -BV) 05 (125), 06 (150), 07 (180) or 08" (205) sizes only (NOTE 2)
 *Hinged Grate (Specify Suffix -BH) (NOTE 1)
 Sediment Bucket -B
 Vandal Proof Screws -U

B SQ	05 (125)	06 (150)	07 (180)	08 (205)	09 (230)	10 (255)
H	2 (51)	2 (51)	2 1/4 (57)	2 1/2 (64)	2 1/4 (57)	2 1/4 (57)
X MIN	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)	1 1/2 (38)	1 1/2 (38)	1 1/2 (38)
X MAX	2 1/4 (57)	2 1/4 (57)	2 1/4 (57)	2 1/2 (64)	2 1/4 (57)	2 3/8 (60)

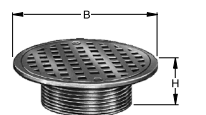
LIGHT DUTY

SUFFIX -B

Specify Type, Size & Finish eg: B05NB
 *Not available for 05" (125) size

REINFORCED ROUND STRAINER

FUNCTION: Used in finished floors where light wheeled loads are anticipated.



MATERIALS:
 Chrome Plated -CP
 Polished Bronze -PB
 Nickel Bronze -NB

VARIATIONS:
 Flapper Type Backwater Valve (Specify Suffix -CV) (NOTE 2)
 Sediment Bucket -B
 Vandal Proof Screws -U

B DIA	05 (125)	06 (150)	08 (205)	10 (255)
H	2 (51)	2 (51)	2 1/2 (64)	2 3/4 (70)
MIN	1 1/4 (32)	1 1/4 (32)	1 1/2 (38)	1 7/8 (48)
MAX	2 1/4 (57)	2 1/4 (57)	2 1/2 (64)	2 3/4 (70)

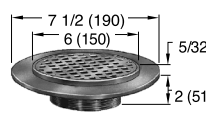
LIGHT DUTY

SUFFIX -C

Specify Type, Size & Finish eg: C06NB

TILE FLANGE

FUNCTION: Provides integral flange set 5/32"(4) below rim to receive floor covering. Flange may have option of tapped holes for securing pan and gasket.



MATERIALS:
 Chrome Plated -CP
 Polished Bronze -PB
 Nickel Bronze -NB

VARIATIONS:
 Flapper Type Backwater Valve (Specify Suffix -FV) (NOTE 2)
 Holes in Flange -SH
 Sediment Bucket -B
 Vandal Proof Screws -U

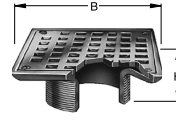
X	
MIN	MAX
1 1/4 (32)	2 1/8 (54)

LIGHT DUTY

SUFFIX -F

Specify Type, Size & Finish eg: F06NB

FLAPPER TYPE BACKWATER VALVE



FUNCTION: Provides backwater protection at point where protection is needed.

MATERIALS:
 Chrome Plated -CP
 Polished Bronze -PB
 Nickel Bronze -NB

VARIATIONS:
 *Hinged Grate (Specify Suffix -AH)
 Vandal Proof Screws -U

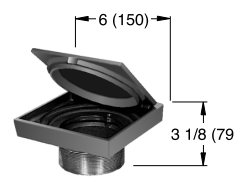
B SQ	05 (125)	06 (150)	07 (180)	08 (205)
H	2 (51)	2 (51)	2 1/4 (57)	2 1/2 (64)
X MIN	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)	1 1/2 (38)
X MAX	2 1/4 (57)	2 1/4 (57)	2 1/4 (57)	2 1/2 (64)

LIGHT DUTY

SUFFIX -AV

Specify Type, Size & Finish eg: AV05NB
 *Not available for 05" (125) size

STRAINER HEAD w/SQUARE HINGED COVER



MATERIALS:
 Chrome Plated -CP
 Polished Bronze -PB
 Nickel Bronze -NB

VARIATIONS:
 Gasketed Water Tight Cover -GC
 Secured Cover -SC
 Secondary Strainer Grate-SG

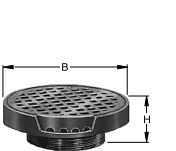
LIGHT DUTY

SUFFIX -BS

Specify Type, Size & Finish eg: BSNB

REINFORCED TRACTOR STRAINER

FUNCTION: Used in finished floors where light weight wheeled loads are anticipated and loose set non-tilt tractor grate is desired.



MATERIALS:
 Cast Iron -CI
 Chrome Plated -CP
 Polished Bronze -PB
 Nickel Bronze -NB

VARIATIONS:
 Flapper Type Backwater Valve (Specify Suffix -DV or -EV) (NOTE 2)
 Sediment Bucket -B
 Vandal Proof Screws -U

SUFFIX	B DIA	H	X	
			MIN	MAX
-D	07 (180)	3 1/4 (83)	2 5/8 (67)	3 1/2 (89)
-E	09 (230)	3 1/2 (89)	2 3/4 (70)	3 1/2 (89)

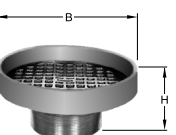
LIGHT DUTY

SUFFIX -D-E

Specify Type, Size & Finish eg: D07PB
 E09PB

ADJUSTABLE STRAINER HEAD

FUNCTION: Used in a non-traffic area when a funnel type strainer head is required and space does not allow use of the 3500 series funnel. The extended rim allows use as an anti-flood and anti-splash drip pan.



VARIATIONS:
 Flapper Type Backwater Valve (Specify Suffix -F37V or F38V)

MATERIALS:
 Cast Iron -CI
 Chrome Plated -CP
 Galvanized Cast Iron -G
 Polished Bronze -PB
 Nickel Bronze -NB

SUFFIX	-F37	-F38
B DIA	07 (180)	09 (230)
H	3 1/4 (83)	3 1/2 (89)
X MIN	2 5/8 (67)	2 3/4 (70)
X MAX	3 1/2 (89)	3 1/2 (89)

NON-TRAFFIC

SUFFIX -F37-F38

Specify Type, Size & Finish eg: F37NB F38CP

DRAWING NUMBER
PM0457 SH 1 of 2

SCALE
NONE

DATE:
5-17-85

APPROVED BY:
TD

CHECKED BY:
TD

DRAWN BY:
PJ

2010 SERIES OPTIONAL STRAINER HEADS

FIGURE NUMBER

M	10-8-21	Added NOTE 1 & 2 Rev. Finish (Tractor Stainer) Added Load Rating(s)	KK	JM	FIGURE NUMBER 2010 SERIES OPTIONAL STRAINER HEADS 1 of 2
L	10-26-20		MW	CL	
K	7-29-19		MW	JM	
REV.	DATE	DESCRIPTION	BY	CKD. BY	

NOTE: Dimensions shown in parentheses are in millimeters.



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

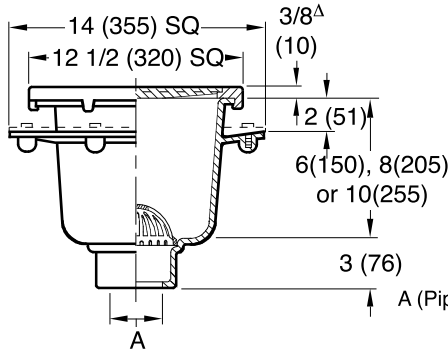
FS-1

SANI-CEPTOR® ACID RESISTANT COATED FLOOR & INDIRECT WASTE DRAINS

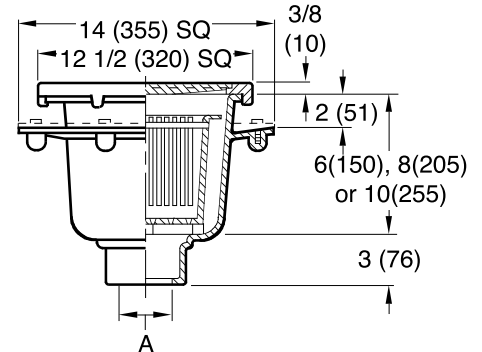
SQUARE NICKEL BRONZE TOP

12 1/2" (320) TOP - MEDIUM, DEEP & EXTRA DEEP RECEPTORS

FUNCTION: Used in kitchens, hospitals, food markets, restaurants, schools and all types of food handling areas where the ultimate in sanitation is desirable and a medium capacity receptor is required.



Free Area
42 SQ IN
(271) SQ CM



WITH DOME BOTTOM STRAINER

WITH SEDIMENT BUCKET

6"(150) deep	8"(205) deep	10"(255) deep	
Fig. ... <input type="checkbox"/> 3140C ... <input type="checkbox"/> 3150C ... <input type="checkbox"/> 3160C ...	CAULK OUTLET ...		
Fig. ... <input type="checkbox"/> 3140Y ... <input checked="" type="checkbox"/> 3150Y ... <input type="checkbox"/> 3160Y ...	NO-HUB OUTLET ...		
Fig. ... <input type="checkbox"/> 3141C ... <input type="checkbox"/> 3151C ... <input type="checkbox"/> 3161C	Fig. ... <input type="checkbox"/> 3141Y ...	<input type="checkbox"/> 3151Y ...	<input type="checkbox"/> 3161Y

FEATURES, OPTIONS & ORDERING INFORMATION

REGULARLY FURNISHED: Cast Iron Flanged Receptor with Seepage Holes, Acid Resistant Coated Interior, Nickel Bronze Rim and Secured ADA Grate. Aluminum Dome Bottom Strainer or White ABS Sediment Bucket as Indicated by Figure Number.

OPTIONAL MATERIALS:

- All Duco Cast Iron Receptor -CI
- All Galvanized Receptor -G

VARIATIONS:

- Aluminum Flat Bottom Strainer -FBS
- Flashing Clamp -C
- Less Flange (Fig. 3155, 3156 with caulk outlet only)
- Polished Aluminum Dome Bottom Strainer -PDBS
- Vandal Proof Screws -U
- L Speedi-Set® Service Weight
02(50), 03(75) & 04"(100) sizes only
- LXH Speedi-Set® Extra Heavy
02(50), 03(75) & 04"(100) sizes only
- S.S. Mesh Lined Bucket -BS

SUFFIX NUMBER

SQUARE RIM

SUFFIX NUMBER	DESCRIPTION
<input type="checkbox"/> -10	Less NB Rim and Grate
<input type="checkbox"/> -11	Less Grate w/NB Rim
<input checked="" type="checkbox"/> -12	With NB Rim and 1/2 Grate
<input type="checkbox"/> -13	With NB Rim and 3/4 Grate
<input type="checkbox"/> -14	With NB Rim and Grate with 2 1/2"(64) SQ Center Hole
<input type="checkbox"/> -15	With NB Rim and Aluminum Recessed Grate
<input type="checkbox"/> -19	With NB Rim and Hinged ADA Grate
<input type="checkbox"/> -21	With NB Rim and Grate with 4"(100) DIA NB Funnel
<input type="checkbox"/> -22	With NB Rim and Grate with 6"(150) DIA NB Funnel
<input type="checkbox"/> -25	With NB Rim and Grate with 8 1/4(210) x 3 1/4(83) x 4 1/2"(115) High Oval NB Funnel
<input type="checkbox"/> -26	With NB Rim and Grate with 6(150) x 2 1/2(64) x 1"(25) High Oval NB Funnel
<input type="checkbox"/> -41	With NB Rim and Solid Cover
<input type="checkbox"/> -42	With NB Rim and 1/2 Solid Cover
<input type="checkbox"/> -43	With NB Rim and 3/4 Solid Cover
<input type="checkbox"/> -44	With NB Rim and Solid Cover with 2 1/2"(64) DIA Center Hole
<input type="checkbox"/> -49	With NB Rim and Stainless Steel Grate
<input type="checkbox"/> -69	With NB Rim and XH Stainless Steel Secured ADA Grate [^3/8"(10) dimension becomes 1"(25)]

NOTE: Dimensions shown in parentheses are in millimeters.

DRAWING NUMBER S3140
SIZE A
SCALE: NONE
DATE: 9-19-85
APPROVED BY: SJM
CHECKED BY: JD
DRAWN BY: PJ
FIGURE NUMBER 3140-3161 Series

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE

REV.	DATE	DESCRIPTION	BY	CKD. BY	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER 3140-3161 Series
		Added ® to Speedi-Set Added "ADA" Revised Variations Revised Variations	KK KK KK MW	CL CL CL CL			

TG

Location: _____

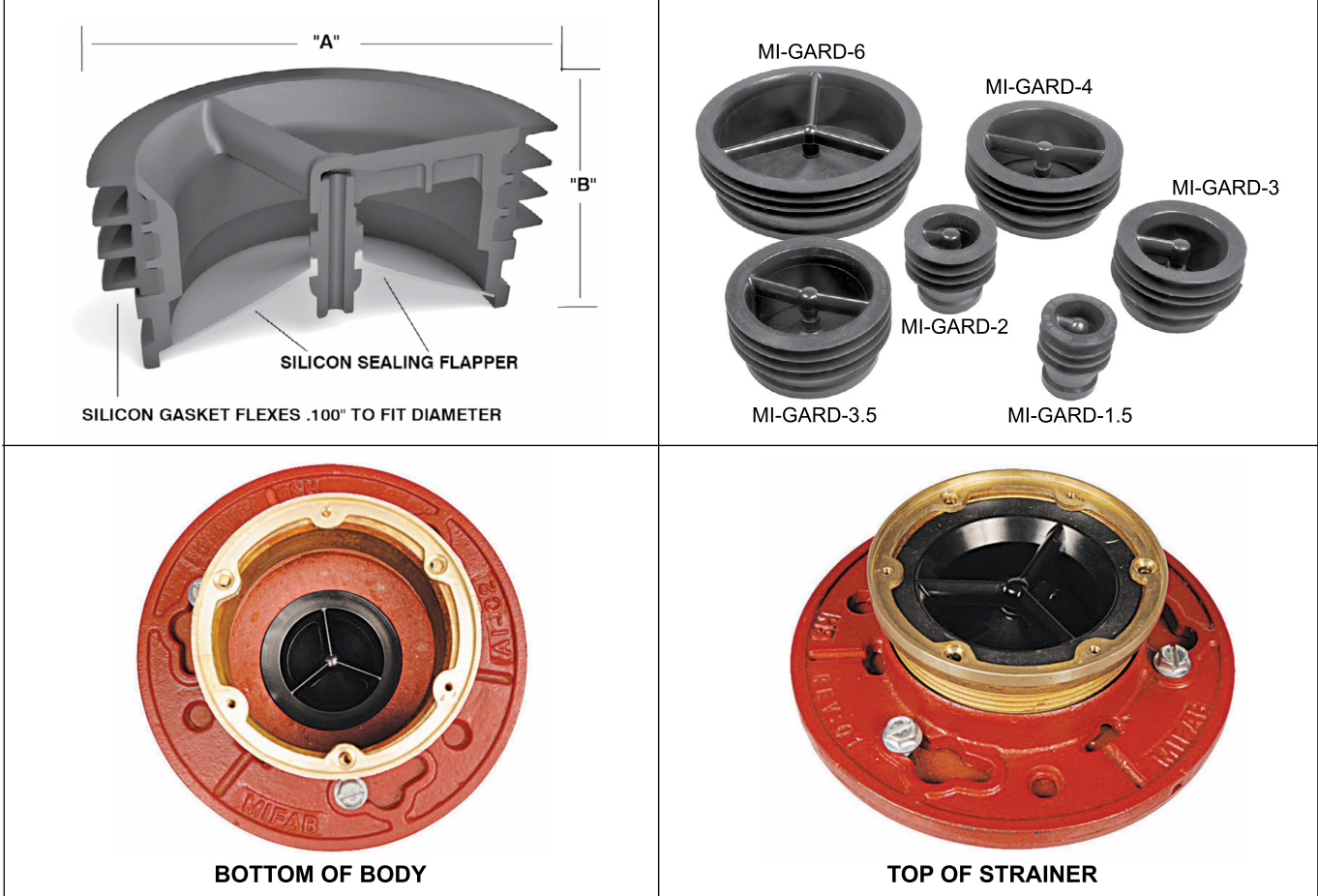


MI-GARD®

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").

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.



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

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-1.5

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

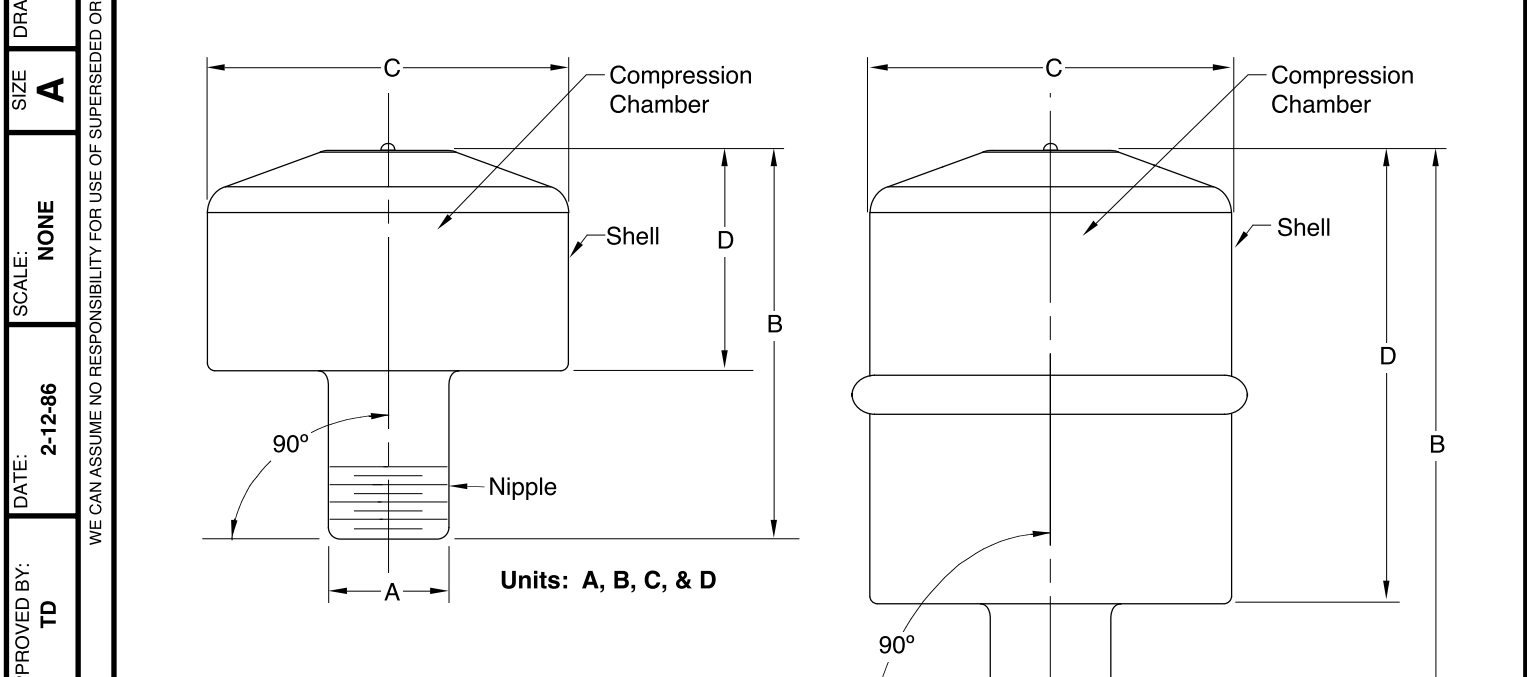
Job Name: _____ Page No: _____
 Section No: _____ Contractor: _____
 Schedule No: _____ Purchase Order No: _____

WHA

HYDROTROLS

ENGINEERED WATER HAMMER ARRESTERS

FUNCTION: Engineered water hammer arresters ("Hydrotrols") employ a permanently sealed cushion of air which absorbs the energy of water hammer and reduces pressure rise in the piping system to a safe level. Hydrotrol units correctly sized and placed at specific locations in the water piping system, will control the destructive shock of water hammer.



Hydrotrols are pre-charged and permanently sealed at the factory. All hydrotrols are constructed entirely of stainless steel.

PCN/ Fig. No.	P.D.I. Symbol	Fixture Unit Rating	A SIZE	B	C	D
5005	A	1-11	3/4 (19)	3.18 (81)	3.25 (83)	1.80 (46)
5010	B	12-32	1 (25)	3.93 (100)	3.25 (83)	2.13 (54)
5020	C	33-60	1 (25)	4.30 (109)	3.25 (83)	2.42 (61)
5030	D	61-113	1 (25)	5.25 (133)	3.25 (83)	3.38 (86)
5040	E	114-154	1 (25)	5.57 (141)	3.25 (83)	3.57 (91)
5050	F	155-330	1 (25)	6.53 (166)	3.25 (83)	4.50 (114)

RECOMMENDED SPECIFICATION FOR HYDROSTATIC SHOCK CONTROL
 Smith series 5000 "Hydrotrol" all stainless steel shock absorbers shall be installed at all solenoid, remote operated or quick closing valves and at each plumbing fixture or battery of plumbing fixtures. Install on both hot and cold water branch lines in an upright position as close as possible to the valve or valves being served. Sizes and locations as indicated on drawings.

NOTE: Sizing information on reverse side.

NOTE: Stainless steel units are lead-free.

NOTE: Dimensions shown in parentheses are in millimeters.

Q	6-2-23	Added Logo	HS	CL		
P	3-2-15	Revised Function, Added Note	TBW	TK	WEIGHT	VOLUME
N	10-15-13	Revised Function	TBW	CL	POUNDS	CUBIC FEET
M	11-2-11	Rev. "B" & "D" Dim., Drawing	TBW	JM		
FIGURE NUMBER	REV.	DATE	DESCRIPTION	BY	CKD. BY	FIGURE NUMBER
5005 To 5050						5005 To 5050



Hydrotrols Fig. 5005 to 5050 inclusive have been tested and certified in accordance with the Plumbing and Drainage Institute "Standard P.D.I. WH-201"
 Refer to www.pdionline.org



HYDROTROLS

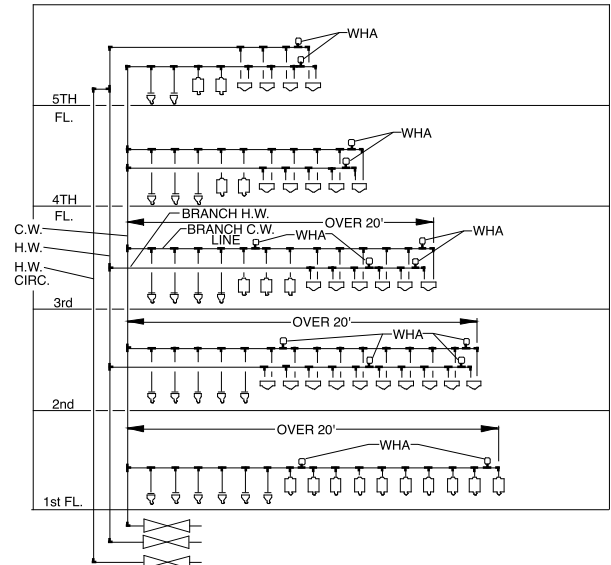
SIMPLIFIED SIZING METHOD

The selection and specification for the correct size Hydrotrol for each piping run may be easily accomplished by the following procedure which incorporates length of piping run, water pressure and other pertinent data into the Sizing Chart.
 The Hydrotrol Sizing Chart shows the number of fixture units that may be accommodated by each size Hydrotrol. The U.S. Bureau of Standards "Fixture Unit Rating Table" designates the fixture unit rating for each plumbing fixture when installed in public or private buildings. Referring to the "Fixture Unit Rating Table", determine the fixture unit rating of each plumbing fixture on the line. Add the total number of fixture units on the line, and use this figure to select and specify the size Hydrotrol required as indicated on the Hydrotrol Sizing Chart.

- EXAMPLE:**
- The drawing shows plumbing fixtures installed on a typical piping layout. The figures to the right of each fixture run are the total fixture units for the run based on the fixture unit rating table. The total number of fixture units for each plumbing fixture on the line has been added and is shown for both hot and cold water lines. The total number of fixture units for each run determines the size of Hydrotrol required. If the fixture unit total ends up in a 1/2 number, round up to the next larger whole number.
- The additional Hydrotrols shown on batteries of over 20'(6.096M) in length are the same size as those specified in the chart ... shown for each floor.
- The following general rules are applicable to proper placement of "Hydrotrols". The locations shown in the installation layout are recommended to give the maximum in water hammer arresting effectiveness:
1. Single fixtures or appliances -- Locate Hydrotrol just before fixture or valve.
 2. Battery of fixtures -- Length of battery 20'(6.096M) or less. Locate Hydrotrol between the last and next to last fixtures. (See 5th Floor Examples.)
 3. For a battery of fixtures having a branch line over 20' (6.096M) ft. in length, two Hydrotrols should be installed. The two Hydrotrols selected should have combined fixture unit rating equal to or greater than the total fixture unit demand of the plumbing fixtures on the entire branch line. Locate one Hydrotrol between the last and next-to-the-last fixture on the branch line. The other Hydrotrol to be located at a point equal to half the length of the branch line. (See first floor example.)
 4. On hot water branch lines over 20' (6.096M) ft. in length, where plumbing fixtures are installed on a portion of the line, the second Hydrotrol should be located at a point half the distance of the plumbing fixtures installed. (See second and third floor examples.)
 5. For special or unique battery arrangements or piping layouts, please consult the Smith Engineering Dept. for the proper specification on sizing and placement.

FIXTURE UNIT RATING TABLE GENERAL BUILDING AREAS

FIXTURE	TYPE OF SUPPLY CONTROL	WEIGHT IN FIXTURE - UNITS			
		PUBLIC		PRIVATE	
		C.W.	H.W.	C.W.	H.W.
Water Closet	Flush Valve - 1.6 GPF	8	-	5	-
Water Closet	Flush Tank - 1.6 GPF	5	-	3	-
Pedestal Urinal	Flush Valve - 1.06 GPF	4	-	-	-
Stall or Wall Urinal	Flush Valve - 1.06 GPF	4	-	-	-
Stall or Wall Urinal	Flush Tank	2	-	-	-
Lavatory	Faucet	1 1/2	1 1/2	1	1
Bathtub	Faucet	2	3	1 1/2	1 1/2
Shower head	Mixing Valve	2	3	1	2
Bathroom Group	Flush Valve Closet	-	-	8	3
Bathroom Group	Flush Tank Closet	-	-	6	3
Separate Shower	Mixing Valve	-	-	1	2
Service Sink	Faucet	3	3	-	-
Laundry Tubs (1-3)	Faucet	-	-	3	3
Combination Fixture	Faucet	-	-	3	3



ALTERNATE SIZING METHOD

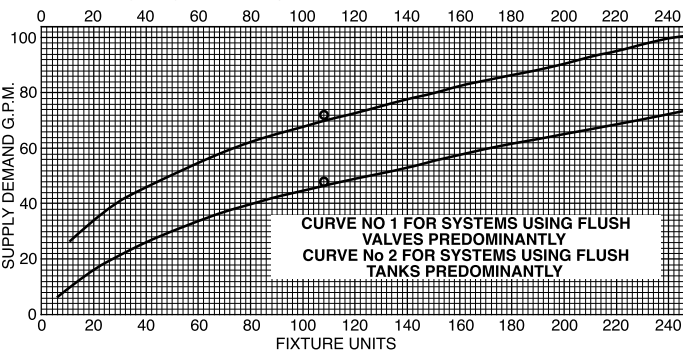
The simplified sizing method covers 90% of most applications encountered. Where fixture unit ratings are not available or where water is piped to remote items of equipment, the following method of Hydrotrol selection should be used:

- INFORMATION REQUIRED TO USE CHART:** Length of pipe run should be determined from the point of valve closure to a point of relief, such as a large pipe riser twice the size of the branch line, main line or water tank.
1. LENGTH OF PIPE RUN.
 2. PIPE SIZE.
 3. WATER PRESSURE.

HYDROTROL SELECTION CHART

LENGTH OF PIPE	NOMINAL PIPE SIZE					
	1/2"(13)	3/4"(19)	1"(25)	1 1/4"(32)	1 1/2"(38)	2"(51)
25	5005	5005	5010	5020	5030	5040
50	5005	5010	5020	5030	5040	5050
75	5010	5020	5030	1-5005 1-5040	5050	1-5040 1-5050
100	5020	5030	5040	5050	1-5020 1-5050	2-5050
125	5020	5030	5050	1-5005 1-5050	1-5040 1-5050	1-5040 2-5050
150	5030	5040	5050	1-5030 1-5050	2-5050	3-5050

FOR APPLICATIONS NOT COVERED BY THE FIXTURE UNIT RATING TABLE -



The Graph Chart is based on the U.S. Bureau of Standards Sizing Table and may be used to determine the fixture unit rating based on GPM supplied to the fixture in question.

HYDROTROL SIZING CHART

P.D.I. SYMBOLS	A	B	C	D	E	F
HYDROTROL	5005	5010	5020	5030	5040	5050
Fixture Unit Rating	1-11	12-32	33-60	61-113	114-154	155-330

NOTE: Systems exceeding 60 PSI(414 kPa) shall be installed with a pressure reducing valve upstream of the unit per ASSE Standard #1010.

DRAWING NUMBER
S5005BS

SIZE
A

SCALE:
NONE

DATE:
2-12-86

APPROVED BY:
TD

CHECKED BY:
KG

DRAWN BY:
CM

5005BS

FIGURE NUMBER

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE

REV.	DATE	DESCRIPTION	BY	CKD. BY
	8-5-22 3-2-15 01/20/11	Rev. Note Rev. Note, Tables, Example Updated Logo	KK TBW JJ	CL TK TW

WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER 5005BS
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COTG

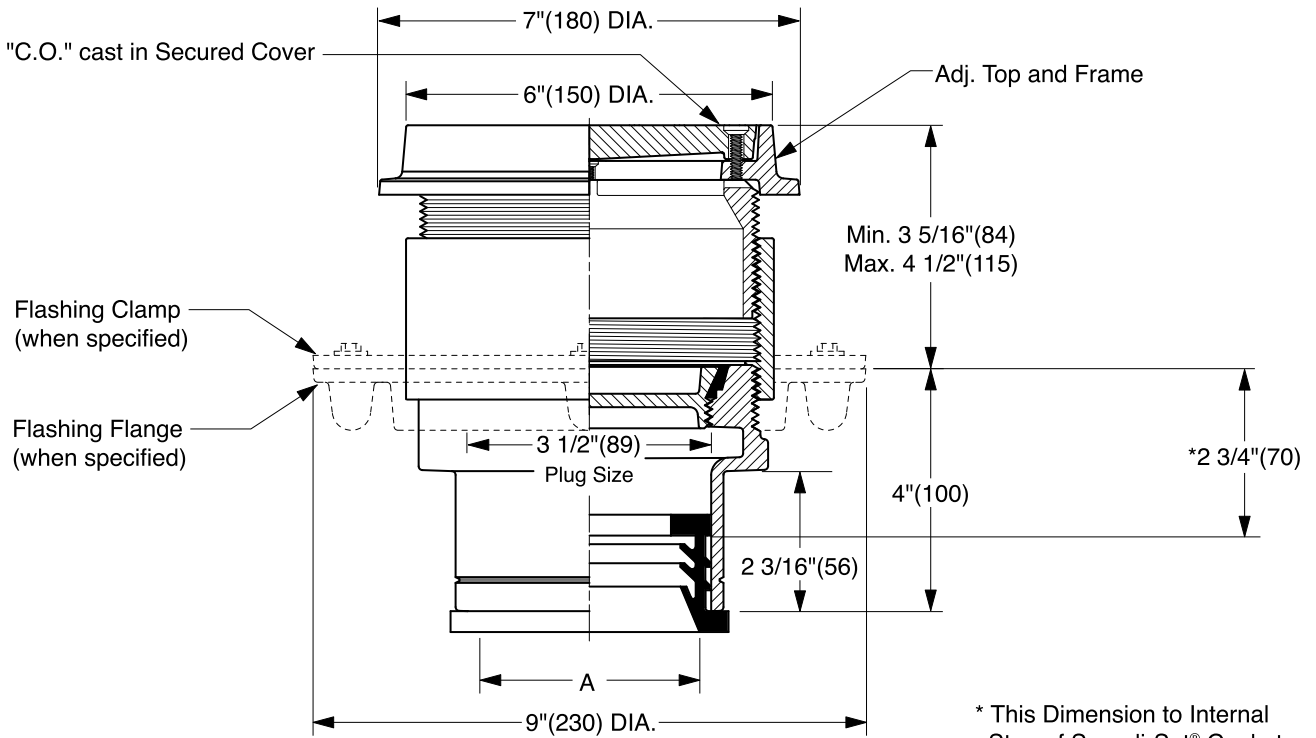
P
 DRAWING NUMBER S4231
 SIZE A
 SCALE: NONE
 DATE: 2-16-70
 APPROVED BY: JM
 CHECKED BY: BH
 DRAWN BY: RK
 4231 SERIES
 FIGURE NUMBER

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA
 DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE

FLOOR CLEANOUTS WITH "TWIS-TO-FLOOR®" ADJUSTABLE TOPS FOR UNFINISHED AREAS

ROUND EXTRA HEAVY DUTY CAST IRON TOP

FUNCTION: Used in hospitals, schools, institutional and industrial buildings where floors are subject to heavy load traffic.



TWIS-TO-FLOOR® ADJUSTMENT

SPEEDI-SET® OUTLET ▲

"A" (Pipe Size) = 02(50), 03(75) or 04(100)

- Fig. 4231L.....Gasket Seal - ABS Plug
 - Fig. 4232L.....Gasket Seal - Bronze Plug
 - Fig. 4233L.....Taper Thread - Bronze Plug
 - Fig. 4234L.....Taper Thread - ABS Plug
- (Twis-to-Floor® design shown with gasketed plug.)
NOTE: Dimensions shown in parentheses are in millimeters.

REGULARLY FURNISHED:

Duco Cast Iron Cleanout with Round Adjustable Scoriated Secured Cast Iron Top. Closure Plug Type as Indicated By Figure Number Selected.

VARIATIONS:

- Flashing Flange -F
- Flange with Flashing Clamp -F-C
- Vandal Proof Top -U

▲ Available in Extra Heavy, Service Weight or NO-HUB.

OPTIONAL MATERIALS:

- Galvanized Cast Iron -G
- Ductile Iron Cover -M

REV.	DATE	DESCRIPTION	BY	CKD. BY	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER
	3-14-23	Added ® to Speedi-Set	KK				4231 SERIES
	12/17/04	Added Width Dimension at Top	JJ	CL			
	07/29/02	Corrected Clamp & Flange view	JJ	CL			
	04/12/01	Added dimension and note	JJ	CL			