

Catalog and Price List

Specification Drainage Products



Effective October 8, 2018

All prices supersede previous issues, are temporary and subject to change without notice.

Drainage Products Standards



American National Standards Institute (ANSI)
American Society of Sanitary Engineering (ASSE)
Plumbing & Drainage Institute (PDI)
International Association of Plumbing and Mechanical Officials (IAPMO)

Product Group	ANSI	ASSE	PDI	IAPMO
Fixture Carriers	A112.6.1M-97			A112.6.1M-97
Floor Drains	A112.6.3-01			A112.6.3-01
Floor Sinks	A112.6.7-2001			A112.6.7-2001
Roof Drains	A112.6.4-2003			A112.6.4-2003
Wall Hydrants		1019-2004		1019-2004
Water Hammer Arrestors		1010-04	WH-201	1010-04
Cleanouts	A112-36.2M-91			A112-36.2M-91
Trap Seal Primers		1018-2001		1018-2001
Grease Interceptors	A112.14.3-2000		G-101	A112.14.3-2000
Solids Interceptors				IGC167-2011

Drainage Products Division
A Watts Water Technologies Company
 100 Watts Road
 Spindale, NC. 28160
 Fax: 828-248-3929

Call Toll-Free:
1-800-338-2581

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Common Suffixes

Numeric Suffixes		Alpha Suffixes	
Code	Description	Code	Description
-1	Nickel Bronze	-21	Secondary Strainer
-3	Stainless Steel	-28	All Type 304 Stainless Steel
-4	Ductile Iron	-33	Less Grate
-5	Sediment Bucket	-34	Closure Plug
-6	Vandal Proof	-38	Solids Retaining Baffle
-7	Trap Primer Tapping	-81	Bronze Dome
-8	Ball Float Backwater Valve	-83	SS Screen
-9	Hinged Grate	-88	Wall Clamp
-13	Galvanized	-128	Grate w/Center Opening
-14	Flat Grate	-150	Half Grate
-15	Strainer Extension	-175	3/4 Grate

Outlet Description	
Code	Description
-P	Push-On
-T or -THD	IPS Threaded
-X	Inside Caulk
-60	PVC Socket
-61	ABS Socket

Code	Description	Code	Description
-A	45 Degree Outlet	-K80	Aluminum Dome
-A	Accutrol Flow Restrictor	-K81	Bronze Dome
-AL	Aluminum Cover	-K83	SS Screen Dome
-B	Sump Receiver	-L	Vandal Proof
-C	Membrane Clamp	-M1	Extended Nipple
-CF	Carpet Clamping Flange	-M11	Tiling Frame
-D	Deck Clamp	-M20	Flush Valve Support
-DS	Dome Strainer	-M23	Right Side Inlet
-E	Extension	-M24	Left Side Inlet
-F	Deck Flange	-M54	2" Escutcheons
-F4-1	4" Round NB Funnel	-M55	4" Escutcheons
-F4-50	4" Round Cast Iron Funnel	-M60	Flush Valve Support
-F6-1	6" Round NB Funnel	-O	Non-Standard Inlet/Outlet
-FC	Flange & Clamp	-Q	Special
-G-1	4" x 9" Oval NB Funnel	-R	External Water Dam
-G-50	4" x 9" Oval C.I. Funnel	-S0	Side Outlet
-GSS	SS Ballast Guard	-SS	Stainless Steel
-HD	Heavy Duty	-TG	Top Grate
-HS	Hub & Spigot	-US	Buy American Compliant
-K	Cylinder Lock	-VB	Vacuum Breaker
-K	Ductile Iron Dome	-W	4" Internal Water Dam
-K13	Galvanized Dome	-W2	2" Internal Water Dam
-K40	Ductile Iron Low Dome	-Y	Fixed Top

Note: All Drainage products are supplied with NH (No Hub) connections standard unless otherwise indicated.

NOTICE

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



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Terms & Conditions

FREIGHT TERMS:

Shipments from the factory of less than \$3,500.00 net are F.O.B. factory. Factory shipments over \$3,500.00 net will be prepaid and allowed within the continental United States when made at the lowest motor carrier transportation rate.

TERMS OF SALE:

All sales are F.O.B. shipping point.

PAYMENT TERMS:

Invoices are due and payable 30 days from the date of invoice.

STOCKING WHOLESALE MINIMUM CHARGE:

A minimum billing charge of \$75.00 applies to shipments F.O.B. factory. Stocking Wholesaler Customers are encouraged to order sufficient material to avoid this charge which is necessitated by increased costs of processing small orders.

SPECIAL PRODUCTS:

Orders for special or modified products are non-cancelable and non-returnable. In the event that the customer cancels an order for such products, Watts shall charge the customer an amount equal to Watts' costs and expenses incurred in performing the purchase order prior to receipt of notice of cancellation.

LIMITED WARRANTY:

Watts Regulator Co. (the "Company") warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge.

THE WARRANTY SET FORTH HEREIN IS GIVEN EXPRESSLY AND IS THE ONLY WARRANTY GIVEN BY THE COMPANY WITH RESPECT TO THE PRODUCT. THE COMPANY MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. THE COMPANY HEREBY SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The remedy described in the first paragraph of this warranty shall constitute the sole and exclusive remedy for breach of warranty, and the Company shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, or any other circumstances over which the Company has no control. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation or improper maintenance or alteration of the product.

Some States do not allow limitations on how long an implied warranty lasts, and some States do not allow the exclusion or limitation of incidental or consequential damages. Therefore the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from State to State. You should consult applicable state laws to determine your rights. SO FAR AS IS CONSISTENT WITH APPLICABLE STATE LAW, ANY IMPLIED WARRANTIES THAT MAY NOT BE DISCLAIMED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF ORIGINAL SHIPMENT.

RETURNED GOODS RESTOCKING CHARGE:

No material shall be returned without authorization. When credit is issued it will be at the price charged, or prevailing price if lower, less handling charges based on costs of reconditioning, boxing, etc. However, a minimum 25% handling charge will apply. A minimum handling charge of \$35.00 is applied whenever the 25% handling deduction does not total \$35.00. Products which are obsolete or made to special order are not returnable.

NOTE:

Prices and terms are subject to change without notice and supersede all previous quotations. The right is reserved to change or modify product design or construction without prior notice and without incurring any obligation to make such changes and modifications on products previously or subsequently sold. All dimensions shown in this catalog are subject to manufacturing tolerances.

WATTS Drainage reserves the right to modify or change product design or construction without prior notice and without incurring any obligation to make similar changes and modifications to products previously or subsequently sold.

See your **WATTS Drainage** representative for any clarification.

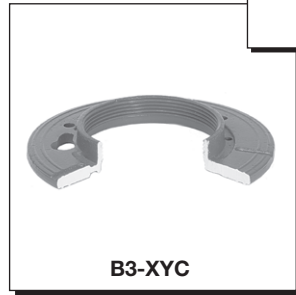
Examples of WATTS Drainage Alpha/Numeric Suffix System

Floor Drains With Adjustable Strainers

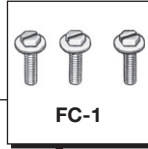
Components:



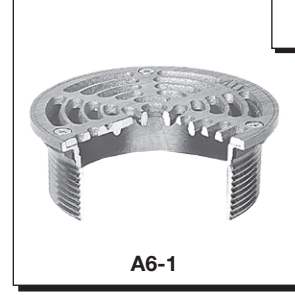
B3 Body, 3" Push-on connection standard with trap primer tapping.



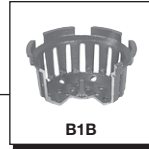
Reversible clamp collar, attached with FC-1 hardware.



FC-1

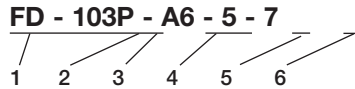


6" diameter nickel bronze strainer standard with vandal proof screws.



B1B

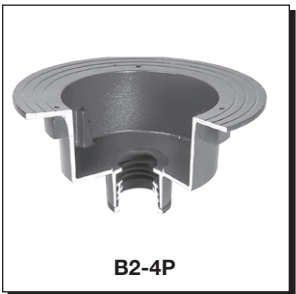
Alpha/Numeric Description



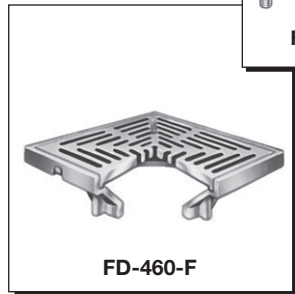
- 1. Series Number - FD-100
- 2. Outlet Size..... - 3" Outlet
- 3. Outlet Type..... - Push-On Outlet - Suffix "P"
- 4. Strainer - Type "A6" Strainer.
- 5. Option - Sediment Bucket - Suffix "-5"
- 6. Option - Trap Primer Tapping - Suffix "-7"

Area Drains

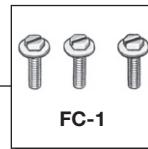
Components:



B2 Body, 4" Push-on Connection

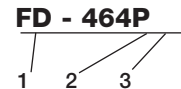


Fixed top assembly with ductile iron grate, attached with FC-1 hardware.



FC-1

Alpha/Numeric Description

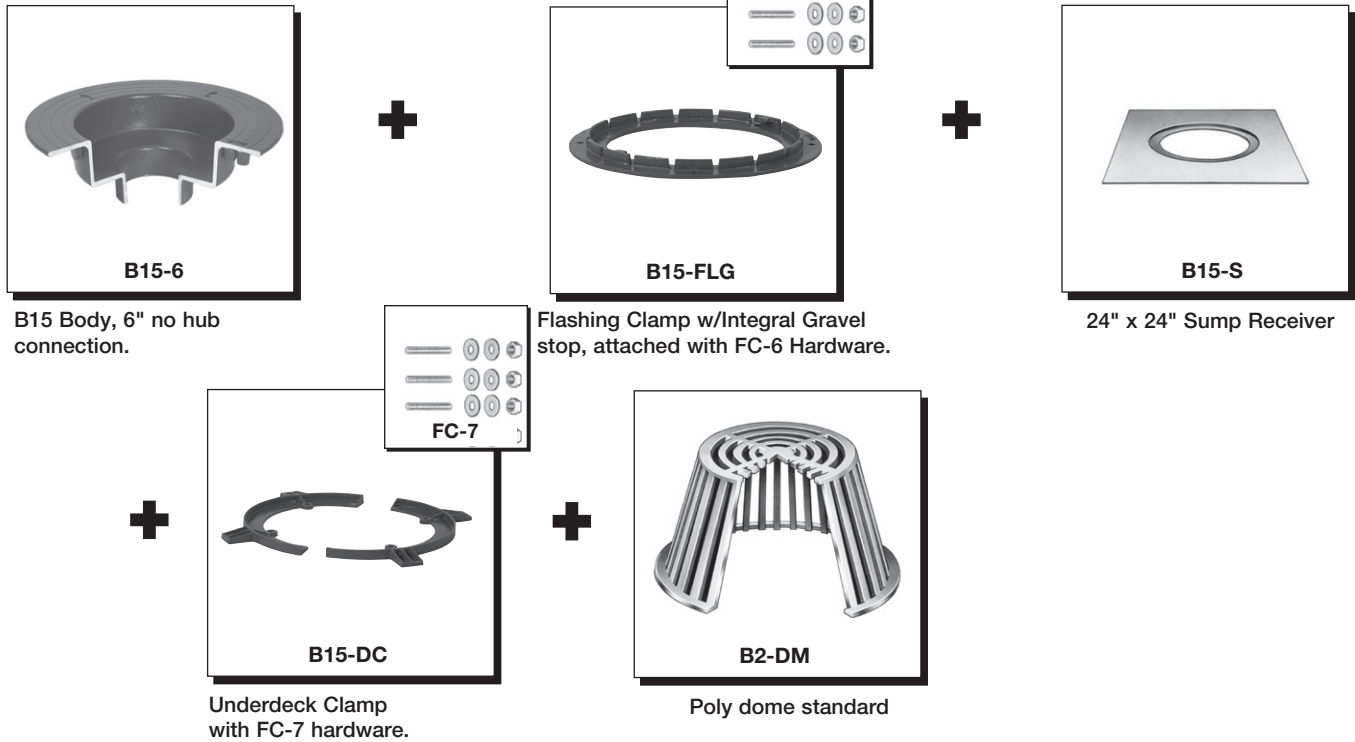


- 1. Series Number - FD-460-F
- 2. Outlet Size - 4" outlet
- 3. Outlet Type..... - Push-on

Examples of WATTS Drainage Alpha/Numeric Suffix System

Roof Drains

Components:



Alpha/Numeric Description:

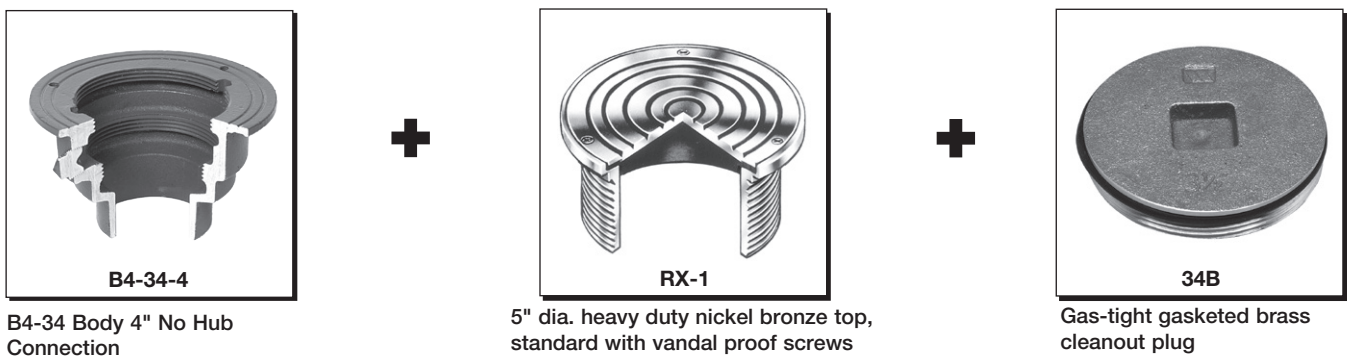
RD - 306 - B-D

1 2 3 4 5

- 1. Series Number - RD-300
- 2. Outlet Size..... - 6" Outlet
- 3. Outlet type - (Standard) No Hub
- 4. Option - B Sump Receiver
- 5. Option - D Underdeck Clamp

Cleanout With Adjustable Top

Components:



Alpha/Numeric Description

CO - 204 - RX

1 2 3 4

- 1. Series Number - CO-200
- 2. Outlet Size..... - 4" Outlet
- 3. Outlet Type - (Standard) No Hub
- 4. Top - Type RX strainer

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Floor And Area Drains

Table Of Contents

- Pictorial Index
- Recommendations
- Floor Drain Selection Factors
 - Materials
 - Pipe Connections
 - Load Ratings
 - Grate Free Area
 - Design Considerations
 - Commonly Specified Options
- Typical Installations



Floor And Area Drains

Pictorial Index



FD-100-A
Round Strainer



FD-100-B
HD Round Strainer



FD-100-AS
Angle Strainer



FD-100-DD
Hub Funnel



FD-100-EF
Round Funnel



FD-100-EG
Oval Funnel



FD-100-ER
Extended Rim Strainer



FD-100-FC
Surface Membrane Clamp



FD-100-H
Elastomeric Flange



FD-100-K
Dome Strainer



FD-100-L
HD Square Strainer



FD-100-M
Square Strainer



FD-100-RS
Rectangular Strainer



FD-100-VD
Solid Hinged Cover



FD-100-VS
Square Hinged Solid Cover



FD-100-WD
Domed Standpipe

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WATTS®

Floor And Area Drains

Pictorial Index



FD-200-A
Round Strainer



FD-200-B
HD Round Strainer



FD-200-AS
Angle Strainer



FD-200-DD
Hub Funnel



FD-200-EF
Round Funnel



FD-200-EG
Oval Funnel



FD-200-ER
Extended Rim Strainer



FD-200-FC
Surface Membrane Clamp



FD-200-H
Elastomeric Tile Flange



FD-200-K
Dome Strainer



FD-200-L
HD Square Strainer



FD-200-M
Square Strainer



FD-200-RS
Rectangular Strainer



FD-200-VD
Solid Hinged Cover



FD-200-VS
Square Hinged Solid Cover



FD-200-WD
Domed Standpipe

Floor And Area Drains

Pictorial Index



FD-230-A
Combination



FD-240
Prison Cell



FD-300
6-1/2" Adjustable Top



FD-310
6-1/2" Fixed Top



FD-320
8" Adjustable Top



FD-320-SET
8" Adjustable Top



FD-320-Y
8" Fixed Top



FD-320-Y-SET
8" Fixed Top



FD-330
8x8" Adjustable Top



FD-330-Y
8x8" Fixed Top



FD-340
12" Adjustable Top



FD-340-SET
12" Adjustable Top



FD-340-Y
12" Fixed Top



FD-340-Y-SET
12" Fixed Top



FD-360
15" Adjustable Top



FD-360-Y
15" Fixed Top

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WATTS®

Floor And Area Drains

Pictorial Index



FD-370
Wood Deck Drain



FD-380
Adjustable Wood Floors



FD-390-E
General Purpose



FD-390-E-63
Fixed Wood Floors



FD-410
Parking Area
Catch Basin



FD-430
Side Outlet



FD-450
15x15" Adjustable Top



FD-450-F
15x15" Fixed Top



FD-460
12x12" Adjustable Top



FD-460-F
12x12" Fixed Top



FD-490-F-4
Parking Structure



FD-490-F-80
Aluminum Parking
Structure Heavy Duty



FD-530
Parking Area Drain



FD-600
Unfinished Area Isolation



FD-620
Finished Area Isolation



FD-660
PVC 7" Fixed Top

Floor And Area Drains

Pictorial Index



FD-670
PVC 10" Fixed Top



FD-810
Iowa Garage Drain



FD-820
Flushing Rim



FD-830
Hopper Drain



FD-850
Planting Area Drain with
Dome Cap



FD-860
8" Planting Area



FD-870
12" Planting Area



FD-880
Ground Water
Containment Drain



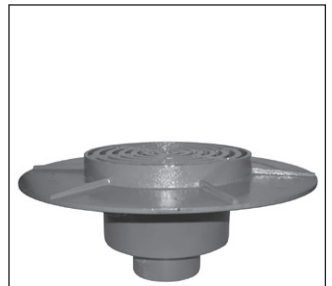
FD-890
Planter Drain with
Removable Cover



FD-900
12" Precast Parking Deck



FD-910
15" Precast Parking Deck



FD-920
8" Precast Parking Deck



FD-930
Sq. Precast Parking Deck



FD-1100-A
Round SS Strainer



FD-1100-B
HD Round SS Strainer



FD-1100-ER
SS Extended Rim Strainer

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Floor And Area Drains

Pictorial Index



FD-1100-L
HD Square SS Strainer



FD-1100-M
Square SS Strainer



FD-1160
Chemical Resistant



FD-1200-A
Round SS Strainer



FD-1200-B
HD Round SS Strainer



FD-1200-ER
SS Extended Rim Strainer



FD-1200-L
HD Square SS Strainer



FD-1200-M
Square SS Strainer



Note: October 2018 Launch

TD-300
Elevator Trench Drain



FD-Funnels
Bolt-On Funnels

Floor And Area Drains

Recommendations

Application	Product
Basement Areas.....	FD-300, FD-310-Y, FD-320(-Y), FD-320(-Y)-SET
Carwash & Sediment Collection Areas.....	FD-410, also see Dead Level® Catch Basins
Clinical & Surgical Areas.....	FD-1100(-28) Series, FD-820, also see BLÜCHER
Condensate & Drip Lines (indirect waste).....	FD-100-DD, FD-100-EF, FD-100-EG, FD-200-DD, FD-200-EF, FD-200-EG
Rubberized Sheet Flooring.....	FD-100-FC, FD-200-FC
Rubberized Poured Flooring.....	FD-100-H, FD-200-H
Floating Slabs.....	FD-600, FD-620
Food Preparation Areas.....	FD-1100 Series, also see Sanitary Floor Sinks
Garage & Service Bays.....	FD-430, FD-450(-F), FD-460(-F), also see Dead Level® Trench Drains
Industrial & Warehouse Areas.....	FD-320(-Y), FD-330(-Y), FD-340(-Y), FD-460(-F)
Outdoor Parking Areas.....	FD-530, also see Dead Level® Trench Drains
Planting Areas.....	FD-850, FD-860, FD-870, FD-880, see also Green Roof Drains
Parking Decks Poured.....	FD-490-F-4
Parking Decks Precast.....	FD-900, FD-910, FD-920, FD-930
Prison Cells.....	FD-240
Sanitary Manufacturing Areas.....	FD-1100, FD-1200 Series, also see BLÜCHER
Shower Areas.....	FD-100, FD-1100 Series
Stairwells.....	FD-100, FD-200 Series
Wood Floors.....	FD-380, FD-390-E-63

Floor Drain Selection Factors

Materials

Cast Iron Epoxy Coated*

Industrial grade cast iron, finished with Watts gray acid resistant coating.

*Note: *Watts Drainage standard epoxy coating is designed for interim protection of iron components during processing, shipping, and construction. It is not intended to protect surfaces subject to traffic, or environmental conditions. Exposed iron surfaces should be expected to show surface oxidation (rusting) after a short period of time.*

Nickel Bronze

Nickel Bronze alloy is homogenous, highly resistant to wear, and will not be discolored by weather or traffic. Appearance is silvery, and compliments most interior and exterior finishes.

Stainless Steel

In accordance with ASTM A-351-Grade CF8 (Type 304) standard specification. Highly durable and resistant to corrosion.

Ductile Iron Epoxy Coated*

Superior impact resistance and durability compared to standard cast iron. Watts supplies ductile iron drain grates standard, finished with gray acid resistant epoxy coating.

PVC or ABS

Most floor and area drains can be specified with optional PVC (-60) or ABS (-61) plastic bodies for direct sch. 40 solvent weld connection.

Pipe Connections

No Hub (Standard)

Butt connection using a no hub or neoprene coupling. Suitable for cast iron, plastic, and most other piping applications.

Push-on

ASTM C-564 gasket connection, with pipe stop. Suitable for no hub or service weight cast iron, sch. 40 plastic, and steel pipe. Not recommended for above grade.

Inside Caulk (-X)

Used for lead and oakum joints, pipe is inserted through a caulk ring on the drain outlet.

PVC (-60) or ABS (-61) Socket

For direct solvent weld connection to sch. 40 plastic pipe.

Threaded (THD)

Female threaded outlet for connection to IPS threaded pipe.

Floor And Area Drains

Floor Drain Selection Factors

Load Ratings

Load ratings are based upon maximum anticipated traffic, in accordance with American National Standards AMSE A112.21.1M. See specification pages for specific load rating data.

Light Duty (LD) - safe live load under 2000 lbs.

Medium Duty (MD) - safe live load 2000-4999 lbs.

Heavy Duty (HD) - safe live load 5000-7499 lbs.

Extra Heavy Duty (XHD) - safe live load 7500-10,000 lbs.

Special Duty - safe live load over 10,000 lbs.

Grate Free Area

Drains should be specified with sufficient grate free area and outlet size to pass anticipated flow. For standard indoor applications, the grate free area should equal 1-1/2 times the transverse area of the connecting pipe. In exterior areas, the grate free area should be twice the transverse area of the connecting pipe.

Recommended Free Area

Pipe Size	Transverse Sq. In.	Interior Free Area Sq. In.	Exterior Free Area Sq. In.
2"	3.14	4.71	6.28
3"	7.06	10.59	14.12
4"	12.50	18.75	25.00
5"	19.60	29.40	39.20
6"	28.30	42.45	56.60
8"	50.25	75.38	100.50

Design Considerations

Finished / Unfinished Areas

Finished area top specifications should be nickel bronze, or optional stainless steel. Ductile iron is typically used in unfinished areas, where appearance is not a primary concern.

Fixed / Adjustable Tops

Adjustable top drains enable vertical adjustment of the strainer or top assembly, to more easily match the finished floor level.

Heel Proof / ADA Grate Openings

All standard floor and area drains are supplied with heel proof, ADA compliant 5/16" grate openings. Consult product specifications for parking area drain applications.

Weep Holes / Double Drainage

All standard floor and area drains are designed with weep holes for "double drainage". Water seeping around the outside of the drain filters through the weepholes, and back into the drain sump. This protects the immediate area surrounding the drain from deterioration.

Commonly Specified Options

-5 Sediment Bucket

Catches large debris at the drain, protects the p-trap from becoming clogged with accumulated debris.

-6 Vandal Proof

Grate secured with Allen Head screws. Security screws (Torx & Pin) may be specified for high security applications.

-7 Trap Primer Tapping

Plugged 1/2" threaded inlet on drain body, for connection to trap primer valve (see Watts #LFTP300-DR).

-8 Backwater Valve (2", 3", 4" Only)

Ball float backwater valve with no hub connections, attaches to drain outlet to prevent back-up damage in low pressure applications.

-9 Hinged Grate

Available on select square top drains, provides easy access to sediment buckets or drain lines requiring regular maintenance.

-13 Galvanized

Standard zinc galvanizing, commonly specified above grade in highly corrosive coastal environments or industrial areas.

-15 Strainer Extension

For FD-100 & FD-200 Series floor drains, extends strainer to accommodate thick slabs and special applications.

-21 Secondary Strainer

Fits in bottom of drain body, secondary protection against debris that bypasses sediment bucket.

-C Membrane Clamp

Specified in floors with a waterproofing membrane. On most Watts floor and area drains, the waterproofing membrane is clamped between the drain body and bolt-on collar, so a separate membrane clamp is not required.

-F4-50, -F4-1, -F6-1 Round Funnels

4" dia. cast iron or nickel bronze, 6" dia. nickel bronze round funnels to accept single condensate lines. Bolt supplied to attach funnel through underside of the grate.

-G-50, -G-1 Oval Funnels

4"x9" cast iron or nickel bronze oval funnel, to accept multiple condensate lines. Bolt supplied to attach funnel through underside of the grate

-US Buy American Compliant

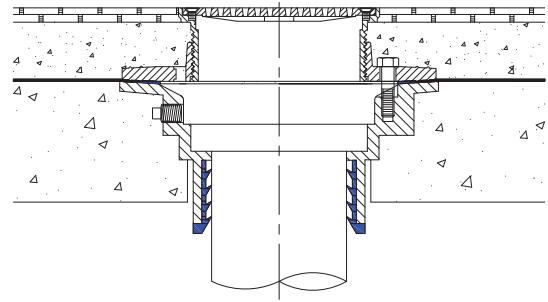
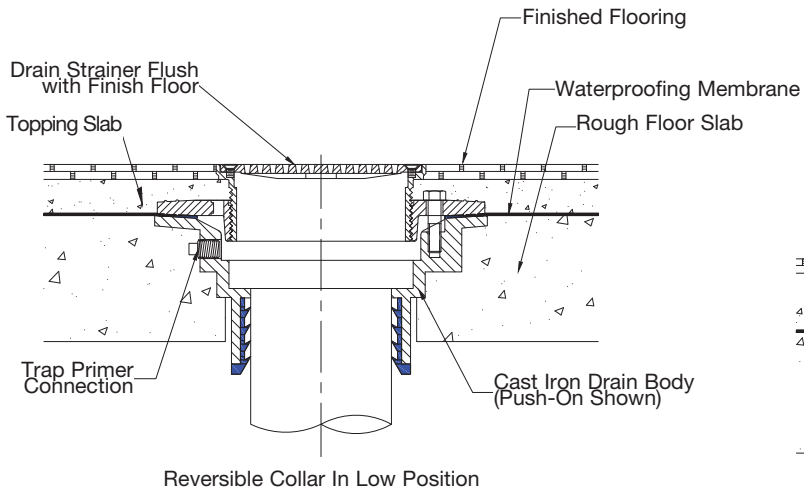
Product will be supplied with minimum 51% domestic content, in compliance with FAR 52.225-9 Buy American Act



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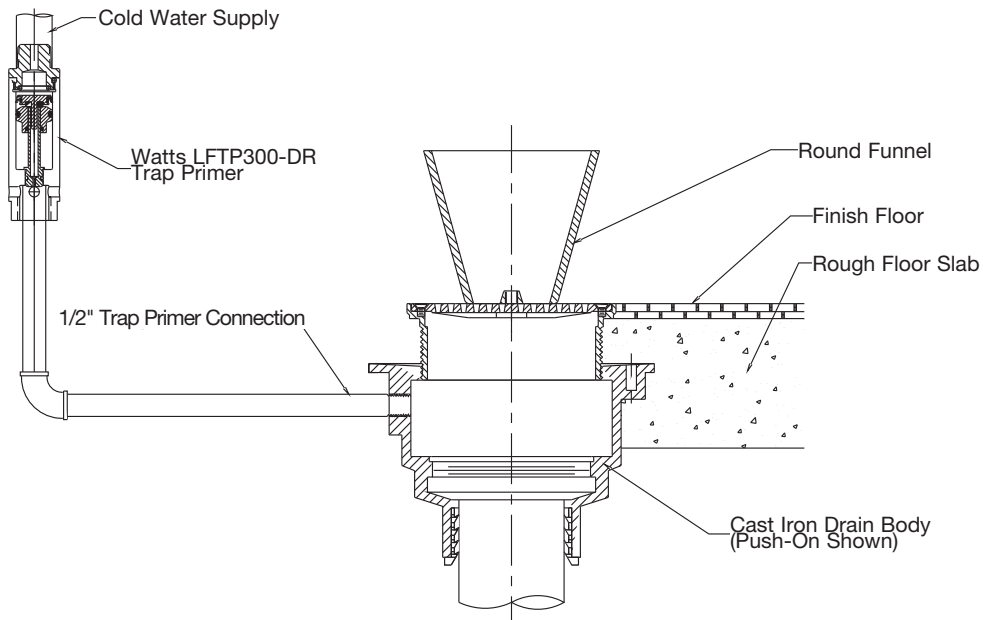
Floor And Area Drains

Typical Installations



FD-100 SERIES
ADJUSTABLE FLOOR DRAIN ABOVE GRADE

Reversible Collar In High Position

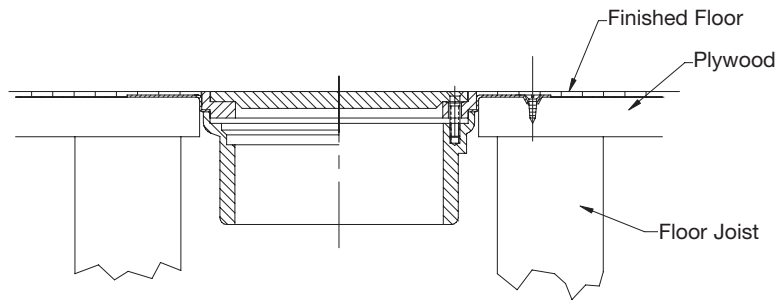
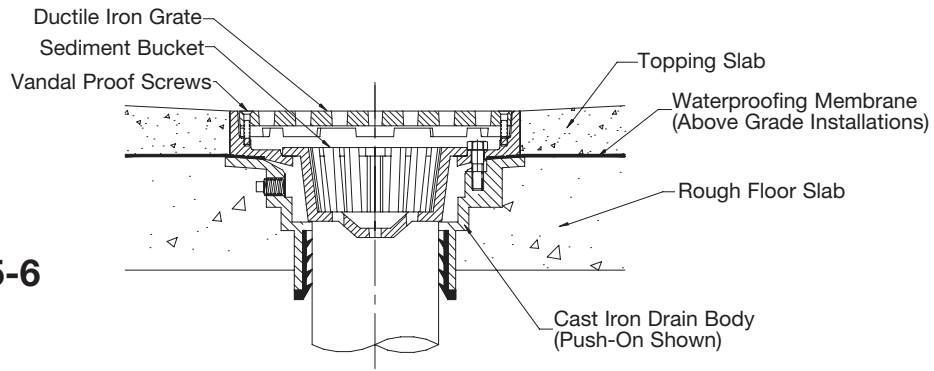


FD-200 SERIES
ADJUSTABLE FLOOR DRAIN ON GRADE W/TRAP PRIMER

Floor And Area Drains

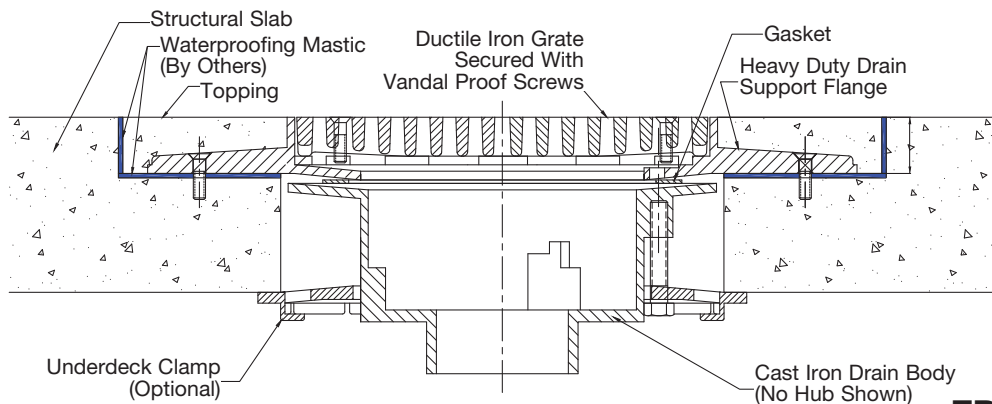
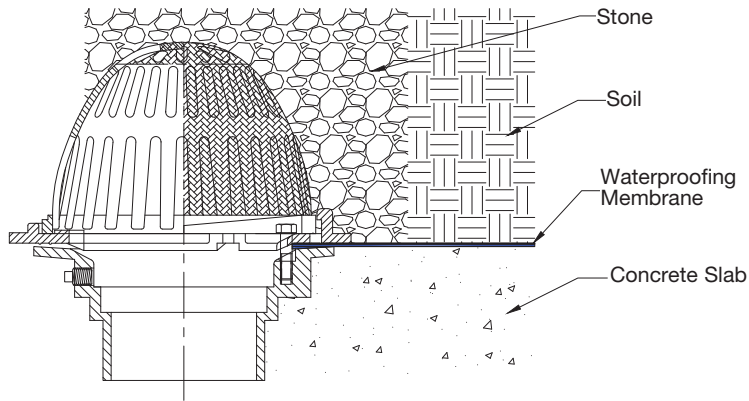
Typical Installations

FD-320-Y-5-6
AREA DRAIN



FD-390-E-63
WOODEN FLOORS

FD-860
PLANTER AREA



FD-900
PRECAST PARKING DECK



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Finished Area Floor Drains

FD-100-A

Floor Drain with Round Strainer



Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-102, 3, 4-A5	11	5"	2,3,4"	nickel bronze	\$481.00
FD-102, 3, 4-A6	12.5	6"	2,3,4"	nickel bronze	589.00
FD-102, 3, 4-A7	14	7"	2,3,4"	nickel bronze	680.00
FD-102, 3, 4-A8	16	8"	2,3,4"	nickel bronze	851.50
FD-102, 3, 4-A10	21	10"	2,3,4"	nickel bronze	1,162.00

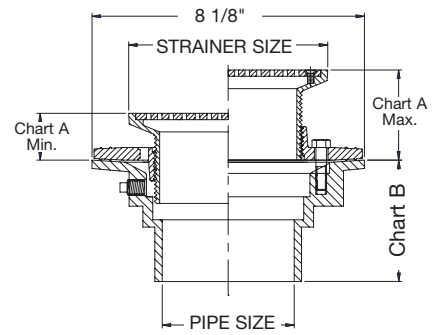


Chart A		
Strainer	Min.	Max.
5"	13/16"	3 1/4"
6"	7/8"	3 3/8"
7"	11/16"	3 1/4"
8"	7/8"	3 1/4"
10"	1 1/4"	3 1/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

FD-100-B

Floor Drain with Round Heavy Duty Strainer



Model Number	Wt., Lbs.	Str. Size	Pipe Size	Strainer	List Price
FD-102, 3, 4-B5-4	13	5"	2,3,4"	ductile iron	\$476.00
FD-102, 3, 4-B5	11	5"	2,3,4"	nickel bronze	690.00
FD-102, 3, 4-B6	12.5	6"	2,3,4"	nickel bronze	795.00
FD-102, 3, 4-B8	16	8"	2,3,4"	nickel bronze	1,055.50
FD-102, 3, 4-B10	21	10"	2,3,4"	nickel bronze	1,366.50

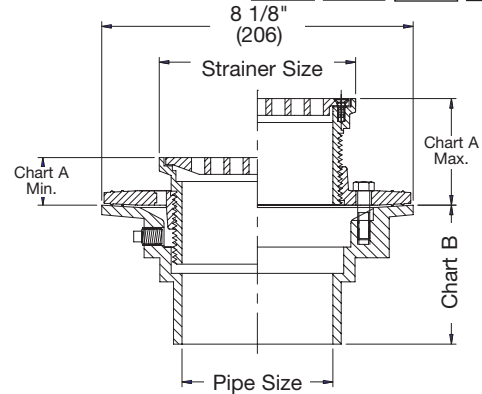


Chart A		
Strainer	Min.	Max.
5"	13/16"	3 1/4"
6"	7/8"	3 3/8"
8"	7/8"	3 1/4"
10"	1 1/4"	3 1/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-100 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-15	Strainer Extension (DD-50)	\$141.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet (2,3,4" Only)	No Add
T	Threaded Outlet	\$80.00	-61	ABS Body w/Socket Outlet (2,3,4" Only)	No Add
X	Inside Caulk	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
None	6" Outlet No Hub Only	120.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-5	Sediment Bucket	108.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof	54.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-7	Trap Primer Tapping	No Add	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-S0	Side Outlet (2,3,4" Only)	218.00
-13	Galvanized Body	195.50			

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



Finished Area Floor Drains

FD-100-AS Floor Drain with Angle Strainer



Model Number	Wt., Lbs.	Str. Size	Outlet Size	Strainer	List Price
FD-102, 3, 4-AS	15	5"x4"	2,3,4"	nickel bronze	\$1,955.00

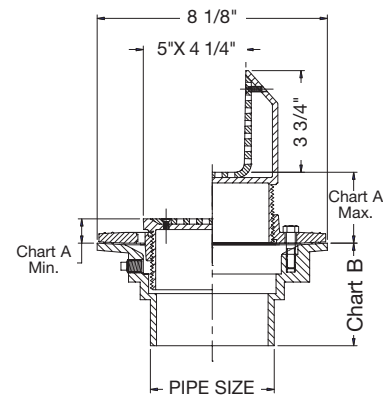


Chart A	
Min.	Max.
13/16"	3 1/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

FD-100-DD Floor Drain with Hub Funnel



Model Number	Weight (Lbs.)	Outlet Size	Strainer	List Price
FD-102, 3, 4-DD-50	7	2,3,4"	cast iron	\$452.50
FD-102, 3,4-DD-1	7	2,3,4"	nickel bronze	744.50

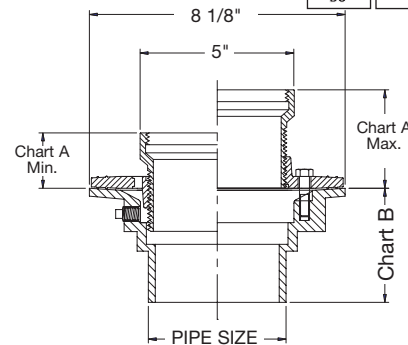


Chart A	
Min.	Max.
1"	2 3/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-100 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-15	Strainer Extension (DD-50)	\$141.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet (2,3,4" Only)	No Add
T	Threaded Outlet	\$80.00	-61	ABS Body w/Socket Outlet (2,3,4" Only)	No Add
X	Inside Caulk	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
None	6" Outlet No Hub Only	120.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-5	Sediment Bucket	108.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof	54.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-7	Trap Primer Tapping	No Add	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-S0	Side Outlet (2,3,4" Only)	218.00
-13	Galvanized Body	195.50			



Consult factory for all applications outside of listed parameters. Prices do not include applicable taxes.

Finished Area Floor Drains

FD-100-EF

Floor Drain with Round Funnel



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Funnel	List Price
FD-102, 3, 4-EF-1	9	5"	2,3,4"	nickel bronze	\$909.00
FD-102, 3, 4-EF-50	10	5"	2,3,4"	cast iron	659.50

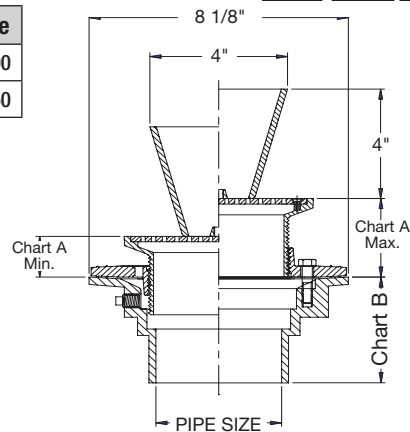


Chart A		
Strainer Dia.	Min.	Max.
5"	7/8"	3 1/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

FD-100-EG

Floor Drain with Oval Funnel



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Funnel	List Price
FD-102, 3, 4-EG-1	10	5"	2,3,4"	nickel bronze	\$1,353.00
FD-102, 3, 4-EG-50	10	5"	2,3,4"	cast iron	904.00

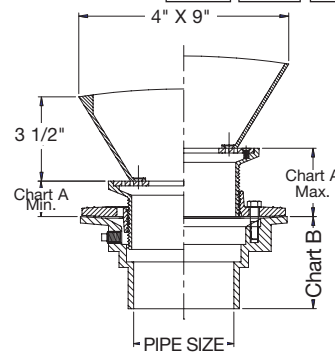


Chart A		
Strainer Dia.	Min.	Max.
5"	7/8"	3 1/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-100 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-13	Galvanized Body	\$195.50
P	Push-On Outlet	No Add	-15	Strainer Extension (DD-50)	141.00
T	Threaded Outlet	\$80.00	-60	PVC Body w/Socket Outlet (2, 3, 4" Only)	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet (2, 3, 4" Only)	No Add
None	6" Outlet No Hub Only	120.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-5	Sediment Bucket	108.00	-S0	Side Outlet (2, 3, 4" Only)	218.00
-6	Vandal Proof	54.50			
-7	Trap Primer Tapping	No Add			
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50			

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



Finished Area Floor Drains

FD-100-ER Floor Drain with Extended Rim Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-102, 3, 4-ER5	11	5"	2,3,4"	nickel bronze	\$1,036.50
FD-102, 3, 4-ER7	12	7"	2,3,4"	nickel bronze	1,115.50
FD-102, 3, 4-ER9	13	9"	2,3,4"	nickel bronze	1,565.50

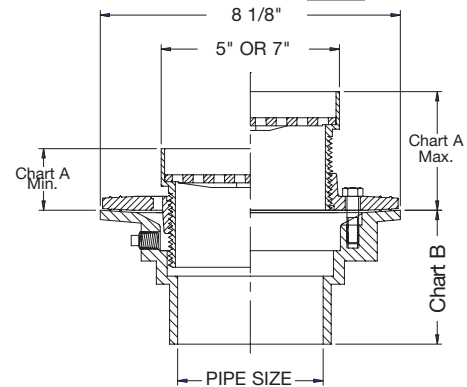


Chart A		
Strainer Dia.	Min.	Max.
5"	1 1/2"	4"
7"	2 1/2"	4"
9"	2 1/2"	4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

FD-100-FC Floor Drain with Surface Membrane Clamp



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-102, 3, 4-FC7	15	7"	2,3,4"	nickel bronze	\$1,480.00
FD-102, 3, 4-FC9	18	9"	2,3,4"	nickel bronze	2,026.50

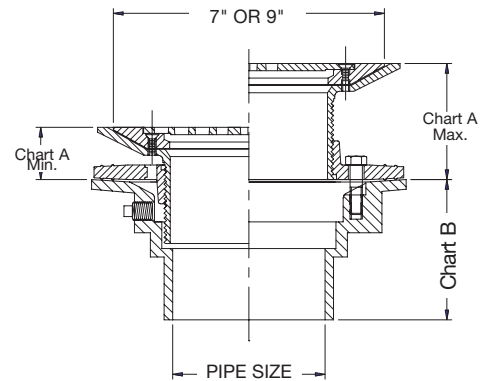


Chart A		
Strainer Dia.	Min.	Max.
7"	2 1/4"	3 3/4"
9"	2 1/4"	3 3/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-100 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-13	Galvanized Body	\$195.50
P	Push-On Outlet	No Add	-15	Strainer Extension (DD-50)	141.00
T	Threaded Outlet	\$80.00	-60	PVC Body w/Socket Outlet (2, 3, 4" Only)	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet (2, 3, 4" Only)	No Add
None	6" Outlet No Hub Only	120.00	-F4-50	4" Round Cast Iron Funnel	179.00
-5	Sediment Bucket	108.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-6	Vandal Proof	54.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-7	Trap Primer Tapping	No Add	-G-50	4x9" Oval Cast Iron Funnel	423.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
			-S0	Side Outlet (2, 3, 4" Only)	218.00



Consult factory for all applications outside of listed parameters. Prices do not include applicable taxes.

Finished Area Floor Drains

FD-100-H Floor Drain with Elastomeric Flange



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-102, 3, 4-H	15	6"	2,3,4"	nickel bronze	\$1,389.50

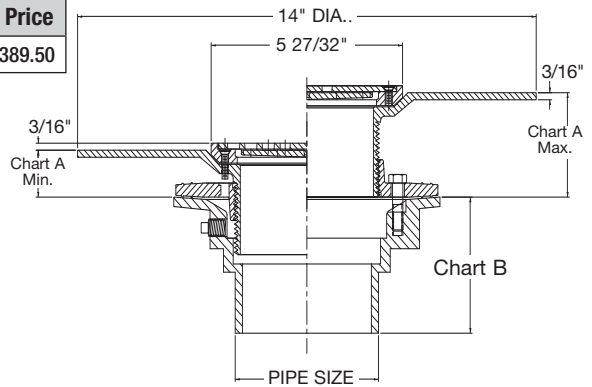


Chart A		
Strainer Dia.	Min.	Max.
6"	7/8"	3 1/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

FD-100-K Floor Drain with Dome Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-102, 3, 4-K	11	5" dome	2,3,4"	nickel bronze	\$680.00

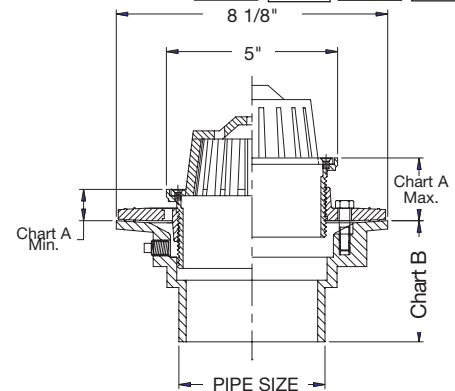


Chart A		
Strainer Dia.	Min.	Max.
5"	13/16"	3 1/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-100 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-13	Galvanized Body	\$195.50
P	Push-On Outlet	No Add	-15	Strainer Extension (DD-50)	141.00
T	Threaded Outlet	\$80.00	-60	PVC Body w/Socket Outlet (2, 3, 4" Only)	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet (2, 3, 4" Only)	No Add
None	6" Outlet No Hub Only	120.00	-F4-50	4" Round Cast Iron Funnel	179.00
-5	Sediment Bucket	108.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-6	Vandal Proof	54.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-7	Trap Primer Tapping	No Add	-G-50	4x9" Oval Cast Iron Funnel	423.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
			-S0	Side Outlet (2, 3, 4" Only)	218.00

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



Finished Area Floor Drains

FD-100-L

Floor Drain with Square Heavy Duty Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-102, 3, 4-L5	10	5"x5"	2, 3, 4"	nickel bronze	\$749.50
FD-102, 3, 4-L5-4	11	5"x5"	2, 3, 4"	ductile iron	505.00
FD-102, 3, 4-L6	14	6"x6"	2, 3, 4"	nickel bronze	879.50
FD-102, 3, 4-L6-9	14	6"x6"	2, 3, 4"	NB hinged	1,155.00
FD-102, 3, 4-L8	16	8"x8"	2, 3, 4"	nickel bronze	1,239.00
FD-102, 3, 4-L8-9	16	8"x8"	2, 3, 4"	NB hinged	1,515.00

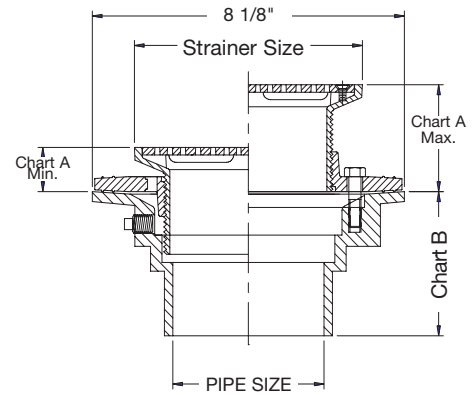


Chart A		
Strainer	Min.	Max.
5"x5"	7/8"	3 1/4"
6"x6"	1"	3 1/4"
8"x8"	1 3/8"	3 5/8"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

FD-100-M

Floor Drain with Square Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-102, 3, 4-M5	10	5"x5"	2, 3, 4"	nickel bronze	\$643.00
FD-102, 3, 4-M6	14	6"x6"	2, 3, 4"	nickel bronze	716.50
FD-102, 3, 4-M6-9	14	6"x6"	2, 3, 4"	NB hinged	992.50
FD-102, 3, 4-M8	16	8"x8"	2, 3, 4"	nickel bronze	1,040.50
FD-102, 3, 4-M8-9	16	8"x8"	2, 3, 4"	NB hinged	1,316.00

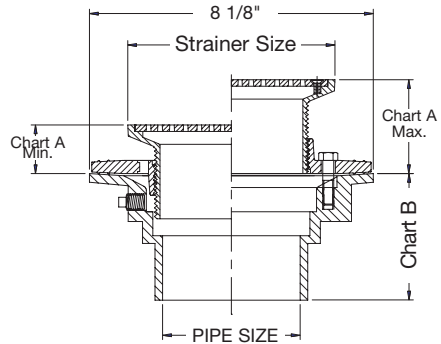


Chart A		
Strainer	Min.	Max.
5"x5"	7/8"	3 1/4"
6"x6"	1"	3 1/4"
8"x8"	1 3/8"	3 5/8"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-100 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-13	Galvanized Body	\$195.50
P	Push-On Outlet	No Add	-15	Strainer Extension (DD-50)	141.00
T	Threaded Outlet	\$80.00	-60	PVC Body w/Socket Outlet (2, 3, 4" Only)	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet (2, 3, 4" Only)	No Add
None	6" Outlet No Hub Only	120.00	-F4-50	4" Round Cast Iron Funnel	179.00
-5	Sediment Bucket	108.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-6	Vandal Proof	54.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-7	Trap Primer Tapping	No Add	-G-50	4x9" Oval Cast Iron Funnel	423.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
			-S0	Side Outlet (2, 3, 4" Only)	218.00



Consult factory for all applications outside of listed parameters. Prices do not include applicable taxes.

Finished Area Floor Drains

FD-100-RS

Floor Drain with Rectangular Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-102, 3, 4-RS48	12	4"x8"	2, 3, 4"	nickel bronze	1,055.50
FD-102, 3, 4-RS412	14	4"x12"	2, 3, 4"	nickel bronze	1,275.00
FD-102, 3, 4-RS517	24	5"x17"	2, 3, 4"	nickel bronze	1,524.00

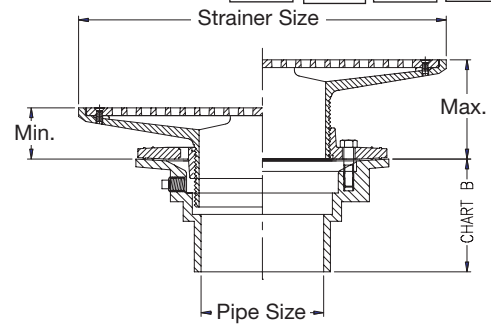


Chart A		
Strainer	Min.	Max.
4"x8"	1 1/2"	3 3/4"
4"x12"	1 1/2"	3 3/4"
5"x17"	2"	4 3/8"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

FD-100-VD

Floor Drain with Round Hinged Solid Cover



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-102, 3, 4-VD	15	6"	2,3,4"	nickel bronze	\$868.00

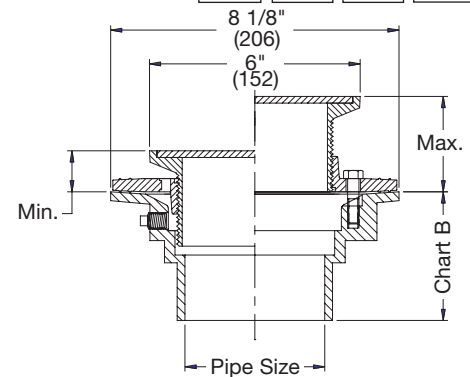


Chart A		
Strainer	Min.	Max.
6"	13/16"	3 1/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-100 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-13	Galvanized Body	\$195.50
P	Push-On Outlet	No Add	-15	Strainer Extension (DD-50)	141.00
T	Threaded Outlet	\$80.00	-60	PVC Body w/Socket Outlet (2, 3, 4" Only)	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet (2, 3, 4" Only)	No Add
None	6" Outlet No Hub Only	120.00	-F4-50	4" Round Cast Iron Funnel	179.00
-5	Sediment Bucket	108.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-6	Vandal Proof	54.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-7	Trap Primer Tapping	No Add	-G-50	4x9" Oval Cast Iron Funnel	423.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
			-S0	Side Outlet (2, 3, 4" Only)	218.00

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



Finished Area Floor Drains

FD-100-VS Floor Drain with Square Hinged Solid Cover



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-102, 3, 4-VS	15	6"x6 Cover"	2, 3, 4"	nickel bronze	\$1,239.00

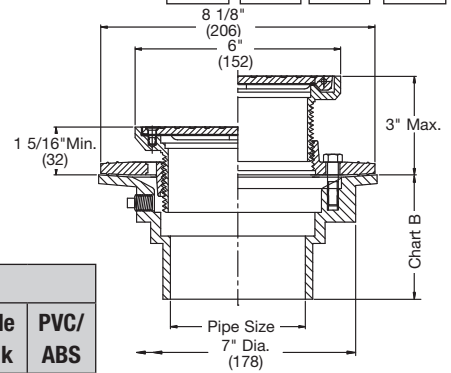


Chart B						
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS	
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"	
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"	
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"	
6"	3 1/2"	-	-	-	-	

FD-100-WD Floor Drain with Domed Standpipe



Model Number	Weight (lbs.)	Str. Size	Outlet Size	List Price
FD-102, 3, 4-WD	11	Domed Standpipe	2, 3, 4"	\$930.50

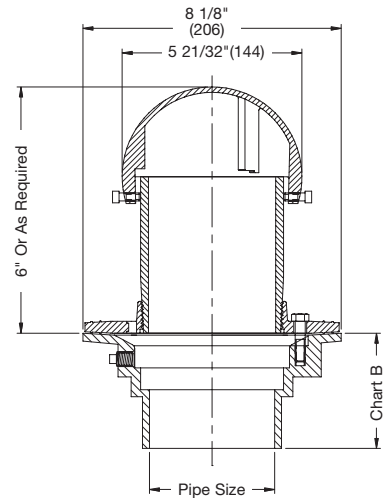


Chart B						
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS	
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"	
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"	
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"	
6"	3 1/2"	-	-	-	-	

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-100 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-13	Galvanized Body	\$195.50
P	Push-On Outlet	No Add	-15	Strainer Extension (DD-50)	141.00
T	Threaded Outlet	\$80.00	-60	PVC Body w/Socket Outlet (2, 3, 4" Only)	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet (2, 3, 4" Only)	No Add
None	6" Outlet No Hub Only	120.00	-F4-50	4" Round Cast Iron Funnel	179.00
-5	Sediment Bucket	108.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-6	Vandal Proof	54.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-7	Trap Primer Tapping	No Add	-G-50	4x9" Oval Cast Iron Funnel	423.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
			-S0	Side Outlet (2, 3, 4" Only)	218.00



Consult factory for all applications outside of listed parameters. Prices do not include applicable taxes.

On-Grade Finished Area Floor Drains

FD-200-A

Floor Drain with Round Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-A5	8	5"	2, 3, 4"	nickel bronze	\$419.50
FD-202, 3, 4-A6	9.5	6"	2, 3, 4"	nickel bronze	526.50
FD-202, 3, 4-A7	12	7"	2, 3, 4"	nickel bronze	617.00
FD-202, 3, 4-A8	16	8"	2, 3, 4"	nickel bronze	790.00
FD-202, 3, 4-A10	20	10"	2, 3, 4"	nickel bronze	1098.50

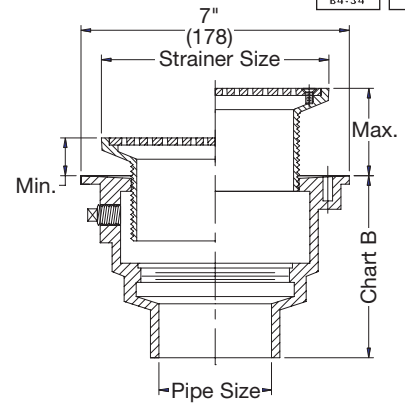


Chart A		
Strainer	Min.	Max.
5"	7/16"	2 1/4"
6"	5/8"	2 1/4"
7"	11/16"	2 1/4"
8"	3/4"	2 3/4"
10"	1"	2 1/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-200-B

Floor Drain with Round Heavy Duty Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-B5-4	13	5"	2, 3, 4"	ductile iron	\$414.50
FD-202, 3, 4-B5	8	5"	2, 3, 4"	nickel bronze	530.50
FD-202, 3, 4-B6	9.5	6"	2, 3, 4"	nickel bronze	733.00
FD-202, 3, 4-B8	16	8"	2, 3, 4"	nickel bronze	992.50
FD-202, 3, 4-B10	20	10"	2, 3, 4"	nickel bronze	1,305.00

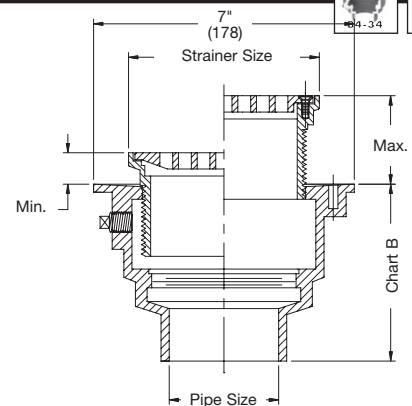


Chart A		
Strainer	Min.	Max.
5"	1"	2 1/4"
6"	1"	2 1/4"
8"	1 7/16"	2 3/4"
10"	1"	2 1/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

Note: Funnels are ordered separately.
See page 41 for details.

Options for FD-200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-15	Strainer Extension (DD-50)	\$141.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet	No Add
-5	Sediment Bucket	\$108.00	-F4-50	4" Round Cast Iron Funnel	179.00
-6	Vandal Proof	54.50	-F4-1	4" Round Nickel Bronze Funnel	428.00
-7	Trap Primer Tapping	No Add	-F6-1	6" Round Nickel Bronze Funnel	625.50
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-13	Galvanized Body	195.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



On-Grade Finished Area Floor Drains

FD-200-AS

Floor Drain with Angle Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-AS	8	5"x4"	2, 3, 4"	nickel bronze	\$1,892.00

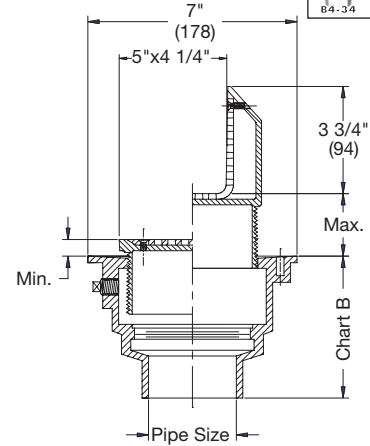


Chart A	
Min.	Max..
13/16"	3 1/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-200-DD

Floor Drain with Hub Funnel



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-DD-50	7	N/A	2, 3, 4"	cast iron	\$390.00
FD-202, 3, 4-DD-1	7	N/A	2, 3, 4"	nickel bronze	682.00

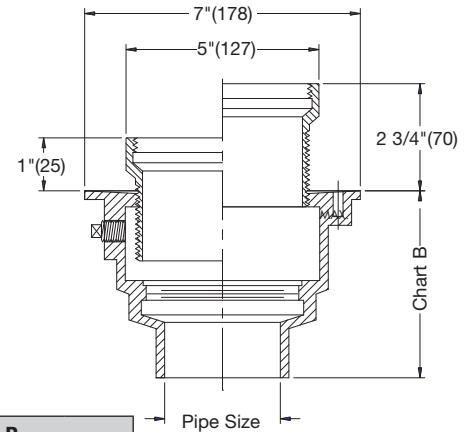


Chart A	
Min.	Max..
13/16"	3 1/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

Note: Funnel are ordered separately. See page 41 for details.

Options for FD-200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-15	Strainer Extension (DD-50)	\$141.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet	No Add
-5	Sediment Bucket	\$108.00	-F4-50	4" Round Cast Iron Funnel	179.00
-6	Vandal Proof	54.50	-F4-1	4" Round Nickel Bronze Funnel	428.00
-7	Trap Primer Tapping	No Add	-F6-1	6" Round Nickel Bronze Funnel	625.50
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-13	Galvanized Body	195.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00



Consult factory for all applications outside of listed parameters. Prices do not include applicable taxes.

On-Grade Finished Area Floor Drains

FD-200-EF Floor Drain with Round Funnel



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Funnel	List Price
FD-202, 3, 4-EF1	9	5"	2, 3, 4"	nickel bronze	\$846.50
FD-202, 3, 4-EF-50	10	5"	2, 3, 4"	nickel bronze	596.50

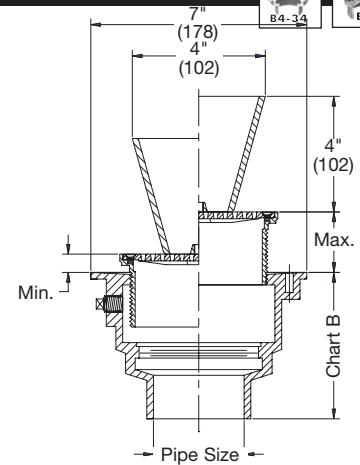


Chart A		
Strainer Dia.	Min.	Max.
5"	7/16"	1 5/8"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-200-EG Floor Drain with Oval Funnel



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Funnel	List Price
FD-202, 3, 4-EG-1	10	5"	2, 3, 4"	nickel bronze	\$1,290.50
FD-202, 3, 4-EG-50	10	5"	2, 3, 4"	cast iron	842.00

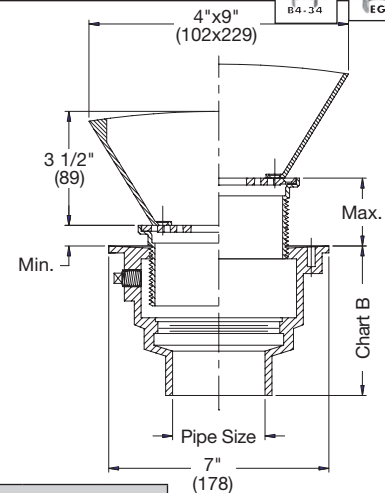


Chart A		
Strainer Dia.	Min.	Max.
5"	7/16"	1 5/8"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-15	Strainer Extension (DD-50)	\$141.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet	No Add
-5	Sediment Bucket	\$108.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof	54.50			
-7	Trap Primer Tapping	No Add			
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50			
-13	Galvanized Body	195.50			

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



On-Grade Finished Area Floor Drains

FD-200-ER Floor Drain with Extended Rim Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-ER5	11	5"	2, 3, 4"	nickel bronze	\$974.50
FD-202, 3, 4-EF7	12	7"	2, 3, 4"	nickel bronze	1,053.00
FD-202, 3, 4, ER9	13	9"	2, 3, 4"	nickel bronze	1,504.00

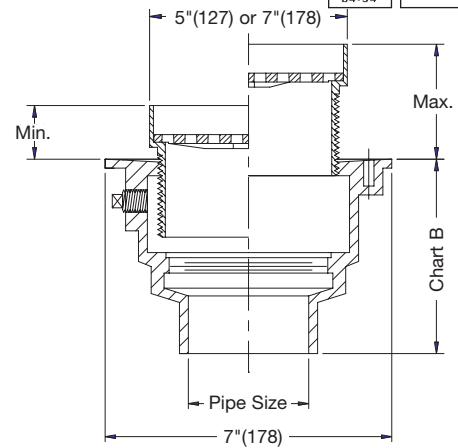


Chart A		
Strainer Dia.	Min.	Max.
5"	1 3/4"	3"
7"	1 3/4"	3"
9"	1 3/4"	3"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-200-FC Floor Drain with Surface Membrane Clamp



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-FC7	15	7"	2, 3, 4"	nickel bronze	\$1,416.00
FD-202, 3, 4-FC9	16	9"	2, 3, 4"	nickel bronze	1,964.00

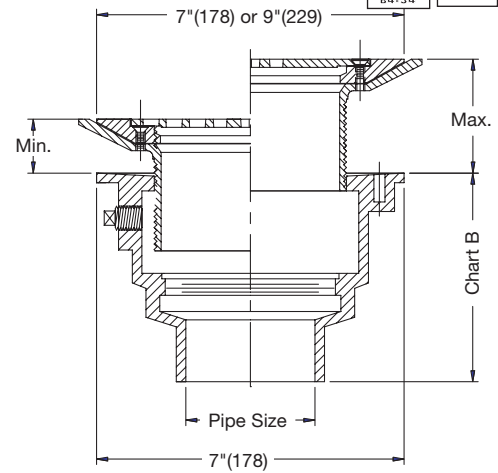


Chart A		
Strainer Dia.	Min.	Max.
7"	1 1/2"	2 3/4"
9"	1 1/2"	2 3/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-15	Strainer Extension (DD-50)	\$141.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet	No Add
-5	Sediment Bucket	\$108.00	-F4-50	4" Round Cast Iron Funnel	179.00
-6	Vandal Proof	54.50	-F4-1	4" Round Nickel Bronze Funnel	428.00
-7	Trap Primer Tapping	No Add	-F6-1	6" Round Nickel Bronze Funnel	625.50
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-13	Galvanized Body	195.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00



Consult factory for all applications outside of listed parameters. Prices do not include applicable taxes.

On-Grade Finished Area Floor Drains

FD-200-H Floor Drain with Elastomeric Flange



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-H	15	6"	2, 3, 4"	nickel bronze	\$1,328.00

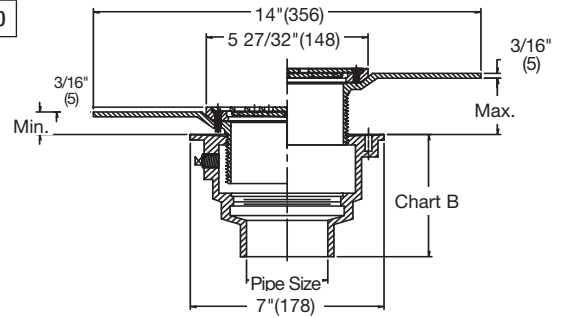


Chart A		
Strainer Dia.	Min.	Max.
6"	1"	2 1/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-200-K Floor Drain with Dome Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-K	11	5" dome	2, 3, 4"	nickel bronze	\$617.00

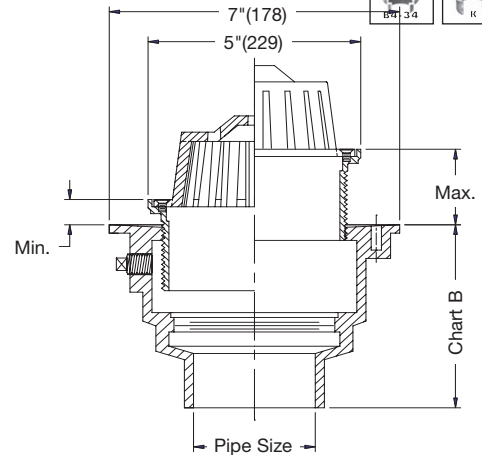


Chart A		
Strainer Dia.	Min.	Max.
5"	1"	2 1/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

Note: Funnel are ordered separately. See page 41 for details.

Options for FD-200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-15	Strainer Extension (DD-50)	\$141.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet	No Add
-5	Sediment Bucket	\$108.00	-F4-50	4" Round Cast Iron Funnel	179.00
-6	Vandal Proof	54.50	-F4-1	4" Round Nickel Bronze Funnel	428.00
-7	Trap Primer Tapping	No Add	-F6-1	6" Round Nickel Bronze Funnel	625.50
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-13	Galvanized Body	195.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



On-Grade Finished Area Floor Drains

FD-200-L

Floor Drain with Square Heavy Duty Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-L5	10	5" Sq.	2, 3, 4"	nickel bronze	\$687.00
FD-202, 3, 4-L5-4	11	5" Sq.	2, 3, 4"	ductile iron	443.00
FD-202, 3, 4-L6	14	6" Sq.	2, 3, 4"	nickel bronze	817.50
FD-202, 3, 4-L6-9	14	6" Sq.	2, 3, 4"	NB hinged	1,093.00
FD-202, 3, 4-L8	16	8" Sq.	2, 3, 4"	nickel bronze	1,176.00
FD-202, 3, 4-L8-9	16	8" Sq.	2, 3, 4"	NB hinged	1,452.00

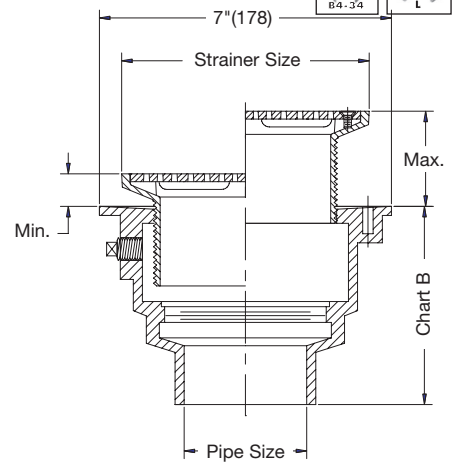


Chart A		
Strainer Dia.	Min.	Max.
5"x5"	1 1/2"	2 5/16"
6"x6"	1 1/2"	2 5/16"
8"x8"	1 1/2"	2 3/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-200-M

Floor Drain with Square Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-M5	10	5" Sq.	2, 3, 4"	nickel bronze	\$581.00
FD-202, 3, 4-M6	14	6" Sq.	2, 3, 4"	nickel bronze	655.00
FD-202, 3, 4-M6-9	14	6" Sq.	2, 3, 4"	NB hinged	809.00
FD-202, 3, 4-M8	16	8" Sq.	2, 3, 4"	nickel bronze	978.00
FD-202, 3, 4-M8-9	16	8" Sq.	2, 3, 4"	NB hinged	1,316.00

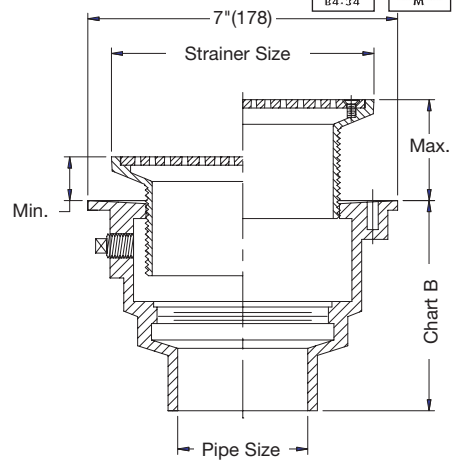


Chart A		
Strainer Dia.	Min.	Max.
5"x5"	1 1/2"	2 5/16"
6"x6"	1 1/2"	2 5/16"
8"x8"	1 1/2"	2 3/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-15	Strainer Extension (DD-50)	\$141.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet	No Add
-5	Sediment Bucket	\$108.00	-F4-50	4" Round Cast Iron Funnel	179.00
-6	Vandal Proof	54.50	-F4-1	4" Round Nickel Bronze Funnel	428.00
-7	Trap Primer Tapping	No Add	-F6-1	6" Round Nickel Bronze Funnel	625.50
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-13	Galvanized Body	195.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

On-Grade Finished Area Floor Drains

FD-200-RS

Floor Drain with Rectangular Strainer



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-RS48	12	4"x8"	2, 3, 4"	nickel bronze	\$992.00
FD-202, 3, 4-RS412	14	4"x12"	2, 3, 4"	nickel bronze	1,212.50
FD-202, 3, 4-RS517	24	5"x17"	2, 3, 4"	nickel bronze	1,462.00

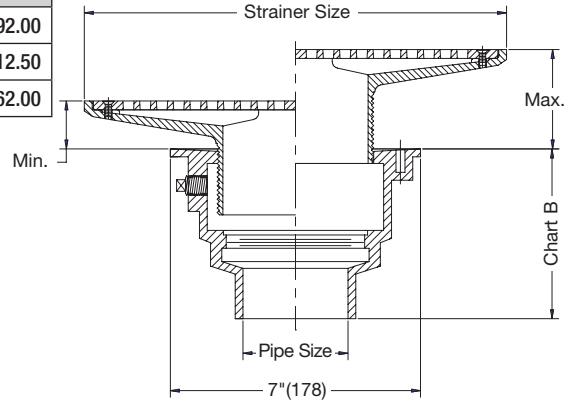


Chart A		
Strainer	Min.	Max.
4"x8"	1 1/2"	2 3/4"
4"x12"	1 1/2"	3"
5"x17"	1 1/2"	3 1/2"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-200-VD

Floor Drain with Round Hinged Solid Cover



Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-VD	15	6" cover	2, 3, 4"	nickel bronze	\$805.00

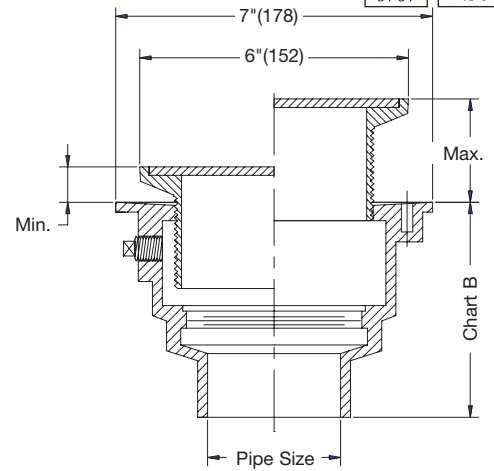


Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

Note: Funnels are ordered separately.
See page 41 for details.

Options for FD-200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-15	Strainer Extension (DD-50)	\$141.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet	No Add
-5	Sediment Bucket	\$108.00	-F4-50	4" Round Cast Iron Funnel	179.00
-6	Vandal Proof	54.50	-F4-1	4" Round Nickel Bronze Funnel	428.00
-7	Trap Primer Tapping	No Add	-F6-1	6" Round Nickel Bronze Funnel	625.50
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-13	Galvanized Body	195.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



On-Grade Finished Area Floor Drains

FD-200-VS Floor Drain with Square Hinged Solid Cover

Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-202, 3, 4-VS	15	6"x6"	2, 3, 4"	nickel bronze	\$1,176.00

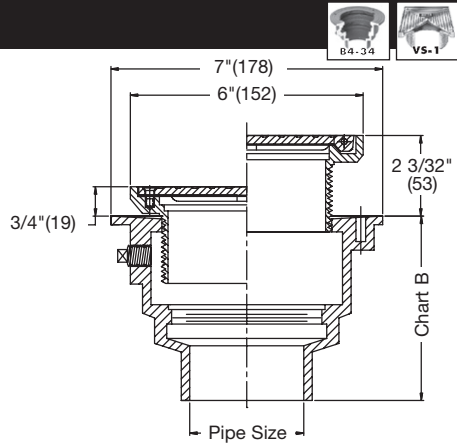


Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-200-WD Floor Drain with Domed Standpipe

Model Number	Weight (lbs.)	Strainer Type	Outlet Size	List Price
FD-202, 3, 4-WD	11	domed standpipe	2, 3, 4"	\$868.00

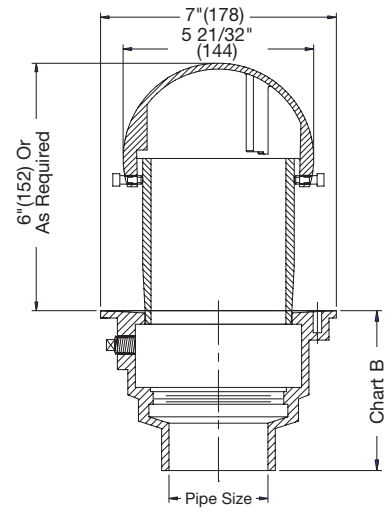


Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-15	Strainer Extension (DD-50)	\$141.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet	No Add
-5	Sediment Bucket	\$108.00	-F4-50	4" Round Cast Iron Funnel	179.00
-6	Vandal Proof	54.50	-F4-1	4" Round Nickel Bronze Funnel	428.00
-7	Trap Primer Tapping	No Add	-F6-1	6" Round Nickel Bronze Funnel	625.50
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-13	Galvanized Body	195.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00

On-Grade Finished Area Floor Drains

FD-230-A

Combined Floor Drain/Cleanout with Integral Trap

Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-232, 3, 4-A5	57	5"	2, 3, 4"	nickel bronze	\$1,416.00
FD-232, 3, 4-A6	58	6"	2, 3, 4"	nickel bronze	1,524.00
FD-232, 3, 4-A7	60	7"	2, 3, 4"	nickel bronze	1,615.00
FD-232, 3, 4-M5	60	5"	2, 3, 4"	nickel bronze	1,579.00
FD-232, 3, 4-M6	60	6"	2, 3, 4"	nickel bronze	1,651.50

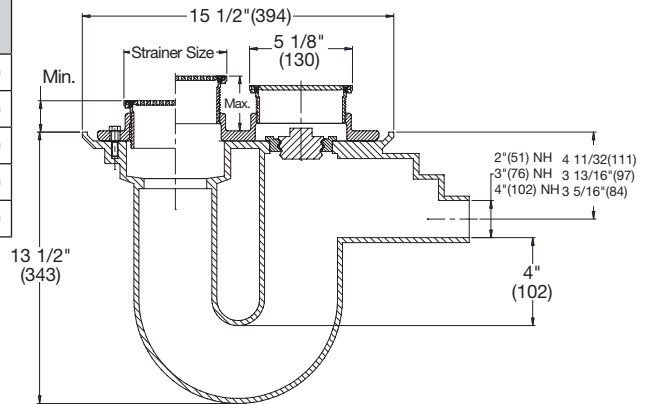


Chart A		
Str. Size	Min.	Max.
5" Dia.	1 7/16"	2 1/4"
6" Dia.	1 9/16"	2 3/8"
7" Dia.	1 11/16"	3 1/4"
5" Sq.	7/8"	3 1/4"
6" Sq.	1"	3 1/4"

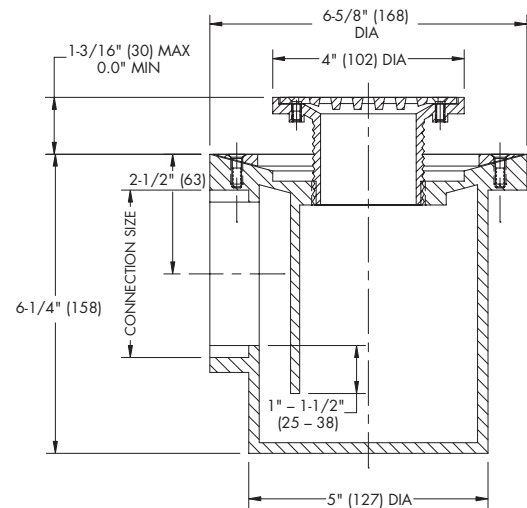
Options for FD-230 Series:

Suffix	Description	List Price	Suffix	Description	List Price
-7	Trap Primer Tapping	\$150.00	-F6-1	6" Round Nickel Bronze Funnel	\$625.50
-15	Strainer Extension (DD-50)	141.00	-G-50	4x9" Oval Cast Iron Funnel	423.00
-F4-50	4" Round Cast Iron Funnel	179.00	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-F4-1	4" Round Nickel Bronze Funnel	428.00			

FD-240

Prison Cell Floor Drain

Model Number	Weight (lbs.)	Str. Size	Outlet Size	Strainer	List Price
FD-242,	15	4"	2"	nickel bronze	\$1,005.00
FD-243	14	4"	3"	nickel bronze	1,121.00



Options for FD-240 Series

Suffix	Description	List Price
-7	Trap Primer Tapping	\$150.00
-CP	Chrome Plated Top	259.00

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



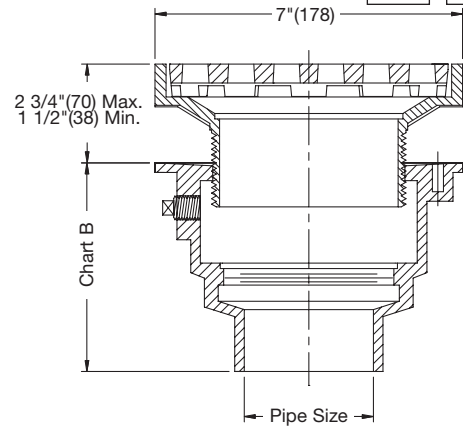
Area Drains

FD-300

Area Drain with 7" Adjustable Top



Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-302, 3, 4	13	7"	2,3,4"	ductile iron	\$471.00
FD-302, 3, 4-1	18	7"	2,3,4"	nickel bronze	774.50



Options for FD-300 Series

Suffix	Description	List Price
-C	Membrane Clamp	\$136.00

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-310

Area Drain with 7" Fixed Top



Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-312, 3, 4	13	7"	2,3,4"	ductile iron	\$437.00
FD-312, 3, 4-1	18	7"	2,3,4"	nickel bronze	741.50

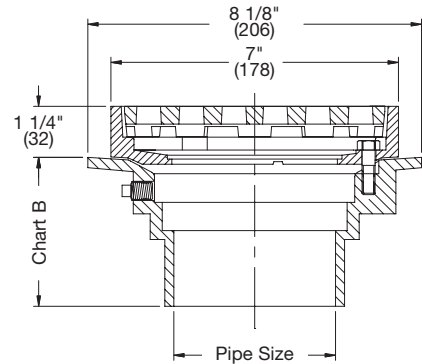


Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	3 5/8"	4 1/4"	4 1/4"	2 3/4"
3"	3 5/8"	4"	4 1/4"	4 1/4"	3 5/8"
4"	3 5/8"	4"	4 1/4"	4 1/4"	3 7/8"
6"	3 1/2"	-	-	-	-

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-300, 310, 320, 330 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-34	Closure Plug	\$120.50
P	Push-On	No Add	-60	PVC Body w/Socket Outlet (2,3,4" only)	No Add
T	Threaded Outlet	\$80.00	-61	ABS Body w/Socket Outlet (2,3,4" only)	No Add
X	Inside Caulk Outlet	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
None	6" Outlet - No Hub Only	120.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-5	Sediment Bucket	138.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof	147.00	-G-50	4x9" Oval Cast Iron Funnel	423.00
-7	Trap Primer Tapping	No Add	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-S0	Side Outlet (2, 3, 4" only)	218.00
-13	All Galvanized	425.50			
-21	Secondary Strainer	67.50			



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Area Drains

FD-320

Area Drain with 8" Adjustable Top



Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-322, 3, 4	19	8"	2, 3, 4"	ductile iron	\$711.50
FD-322, 3, 4-1	20	8"	2, 3, 4"	nickel bronze	1,252.00

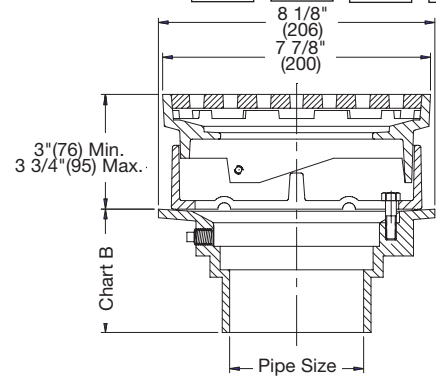


Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	3 5/8"	4 1/4"	4 1/4"	2 3/4"
3"	3 5/8"	4"	4 1/4"	4 1/4"	3 5/8"
4"	3 5/8"	4"	4 1/4"	4 1/4"	3 7/8"
6"	3 1/2"	-	-	-	-

FD-320-SET

Area Drain with 8" Adjustable Top, Grate Supported by Bucket

Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-322, 3, 4-Set	19	8"	2, 3, 4"	ductile iron	\$828.00
FD-322, 3, 4-Set-1	19	8"	2, 3, 4"	nickel bronze	1,370.0

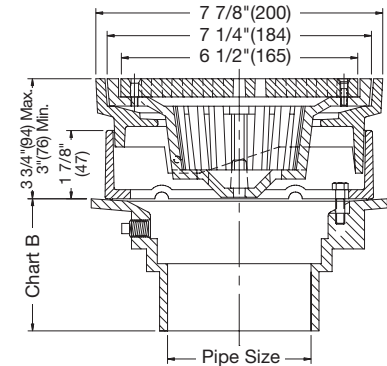


Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	3 5/8"	4 1/4"	4 1/4"	2 3/4"
3"	3 5/8"	4"	4 1/4"	4 1/4"	3 5/8"
4"	3 5/8"	4"	4 1/4"	4 1/4"	3 7/8"
6"	3 1/2"	-	-	-	-

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-300, 310, 320, 330 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-34	Closure Plug	\$120.50
P	Push-On	No Add	-60	PVC Body w/Socket Outlet (2,3,4" only)	No Add
T	Threaded Outlet	\$80.00	-61	ABS Body w/Socket Outlet (2,3,4" only)	No Add
X	Inside Caulk Outlet	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
None	6" Outlet - No Hub Only	120.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-5	Sediment Bucket	138.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof	147.00	-G-50	4x9" Oval Cast Iron Funnel	423.00
-7	Trap Primer Tapping	No Add	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-S0	Side Outlet (2, 3, 4" only)	218.00
-13	All Galvanized	425.50			
-21	Secondary Strainer	67.50			

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Area Drains

FD-320-Y

Area Drain with 8" Fixed Top



Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-322, 3, 4-Y	19	8"	2, 3, 4"	ductile iron	\$508.00
FD-322, 3, 4-Y-1	20	8"	2, 3, 4"	nickel bronze	1,048.00

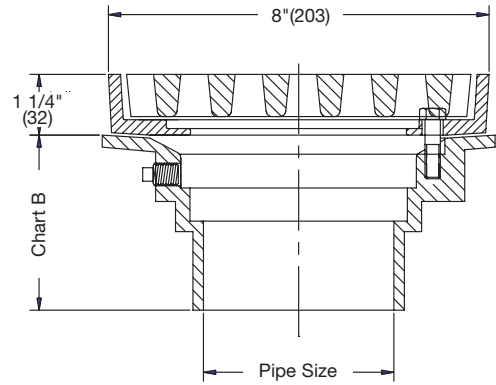


Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	3 5/8"	4 1/4"	4 1/4"	2 3/4"
3"	3 5/8"	4"	4 1/4"	4 1/4"	3 5/8"
4"	3 5/8"	4"	4 1/4"	4 1/4"	3 7/8"
6"	3 1/2"	-	-	-	-

Options for FD-320-Y Series

Suffix	Description	List Price
-5SS	Type 304 Stainless Steel Sediment Bucket	\$343.50
-28	All Type 304 Stainless Steel	978.00

FD-320-Y-SET

Area Drain with 8" Fixed Top, Grate Supported by Bucket

Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-322, 3, 4-Y-SET	19	8"	2, 3, 4"	ductile iron	\$598.50
FD-322, 3, 4-Y-SET-1	19	8"	2, 3, 4"	nickel bronze	1,139.00

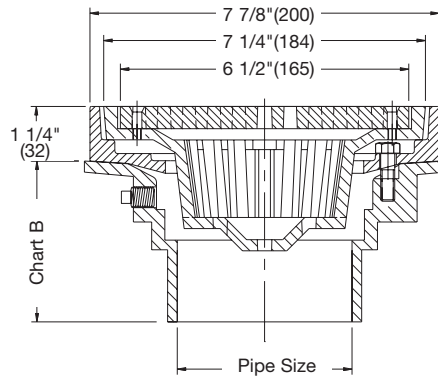


Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	3 5/8"	4 1/4"	4 1/4"	2 3/4"
3"	3 5/8"	4"	4 1/4"	4 1/4"	3 5/8"
4"	3 5/8"	4"	4 1/4"	4 1/4"	3 7/8"
6"	3 1/2"	-	-	-	-

Note: Funnels are ordered separately. See page 41 for details.

Options for FD-300, 310, 320, 330 Series:

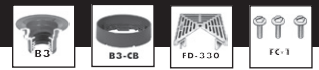
Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-34	Closure Plug	\$120.50
P	Push-On	No Add	-60	PVC Body w/Socket Outlet (2,3,4" only)	No Add
T	Threaded Outlet	\$80.00	-61	ABS Body w/Socket Outlet (2,3,4" only)	No Add
X	Inside Caulk Outlet	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
None	6" Outlet - No Hub Only	120.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-5	Sediment Bucket	138.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof	147.00	-G-50	4x9" Oval Cast Iron Funnel	423.00
-7	Trap Primer Tapping	No Add	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-S0	Side Outlet (2, 3, 4" only)	218.00
-13	All Galvanized	425.50			
-21	Secondary Strainer	67.50			



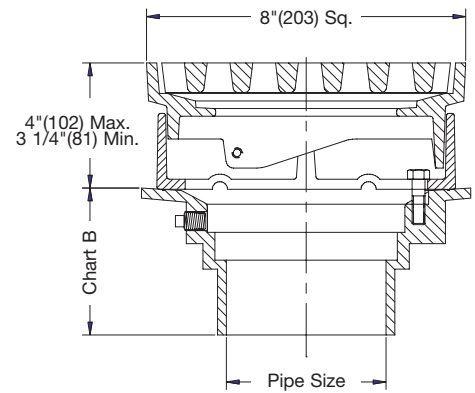
Consult factory for all applications outside of listed parameters. Prices do not include applicable taxes.

Area Drains

FD-330 Area Drain with 8" x 8" Adjustable Top



Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-332, 3, 4	22	8" Sq.	2, 3, 4"	ductile iron	\$987.00
FD-332, 3, 4-1	23	8" Sq.	2, 3, 4"	nickel bronze	1,572.00



Options for FD-330 Series

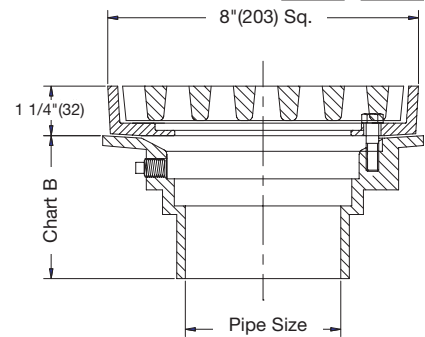
Suffix	Description	List Price
-9	Hinged Grate	\$259.00

Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	3 5/8"	4 1/4"	4 1/4"	2 3/4"
3"	3 5/8"	4"	4 1/4"	4 1/4"	3 5/8"
4"	3 5/8"	4"	4 1/4"	4 1/4"	3 7/8"
6"	3 1/2"	-	-	-	-

FD-330-Y Area Drain with 8" x 8" Fixed Top



Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-332, 3, 4-Y	22	8" Sq.	2, 3, 4"	ductile iron	\$829.00
FD-332, 3, 4-Y-1	23	8" Sq.	2, 3, 4"	nickel bronze	1,442.50



Options for FD-330-Y Series

Suffix	Description	List Price
-9	Hinged Grate	\$259.00

Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	3 5/8"	4 1/4"	4 1/4"	2 3/4"
3"	3 5/8"	4"	4 1/4"	4 1/4"	3 5/8"
4"	3 5/8"	4"	4 1/4"	4 1/4"	3 7/8"
6"	3 1/2"	-	-	-	-

Options for FD-300, 310, 320, 330 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-34	Closure Plug	\$120.50
P	Push-On	No Add	-60	PVC Body w/Socket Outlet (2,3,4" only)	No Add
T	Threaded Outlet	\$80.00	-61	ABS Body w/Socket Outlet (2,3,4" only)	No Add
X	Inside Caulk Outlet	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
None	6" Outlet - No Hub Only	120.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-5	Sediment Bucket	141.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof	147.00	-G-50	4x9" Oval Cast Iron Funnel	423.00
-7	Trap Primer Tapping	No Add	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-S0	Side Outlet (2, 3, 4" only)	218.00
-13	All Galvanized	428.00			
-21	Secondary Strainer	67.50			

Note: Funnels are ordered separately. See page 41 for details.

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



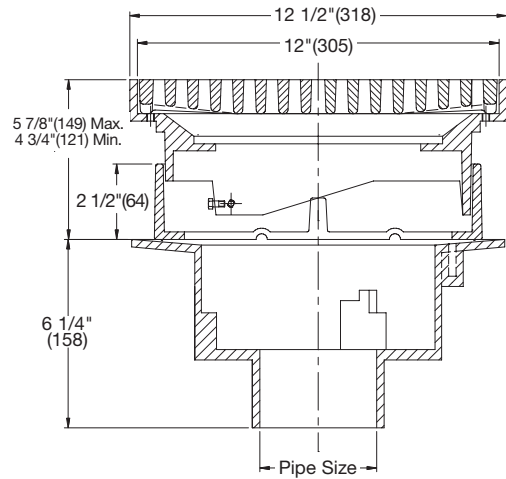
Area Drains

FD-340

Area Drain with 12" Round Adjustable Top



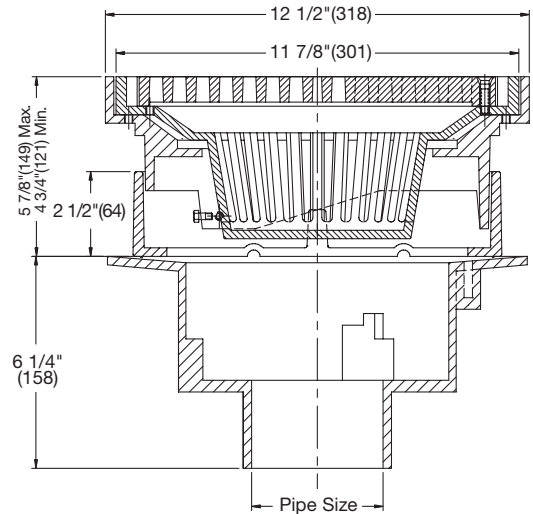
Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-342,3,4,5,6,8	62	12"	2,3,4,5,6,8"	ductile iron	\$1,472.00
FD-342,3,4,5,6,8-1	62	12"	2,3,4,5,6,8"	nickel bronze	2,224.50



FD-340-SET

Area Drain with 12" Round Adjustable Top, Grate Supported By Bucket

Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-342,3,4,5,6,8	62	12"	2,3,4,5,6,8"	ductile iron	\$1,781.00
FD-342,3,4,5,6,8-1	62	12"	2,3,4,5,6,8"	nickel bronze	2,532.50



Note: Funnels are ordered separately.
See page 41 for details.

Options for FD-340, FD-340-Y Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-34	Closure Plug	\$120.50
P	Push-On Outlet (2,3,4,6" only)	No Add	-60	PVC Body w/Socket Outlet (2,3,4" only)	No Add
T	Threaded Outlet (2,3,4,6" only)	\$80.00	-61	ABS Body w/Socket Outlet (2,3,4" only)	No Add
X	Inside Caulk Outlet (2,3,4,6" only)	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
-5	Sediment Bucket	256.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-6	Vandal Proof	147.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-7	Trap Primer Tapping	150.00	-G-50	4x9" Oval Cast Iron Funnel	423.00
-8	Ball Float Backwater Valve (2,3,4" only)	377.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-13	All Galvanized	807.50	-S0	Side Outlet (2, 3, 4" only)	336.00
-21	Secondary Strainer	67.50			



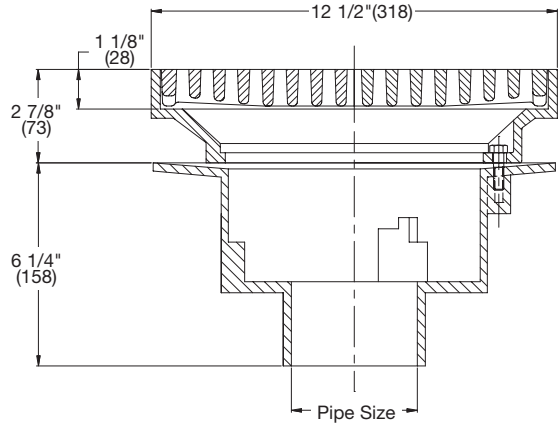
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Area Drains

FD-340-Y Area Drain with 12" Round Fixed Top

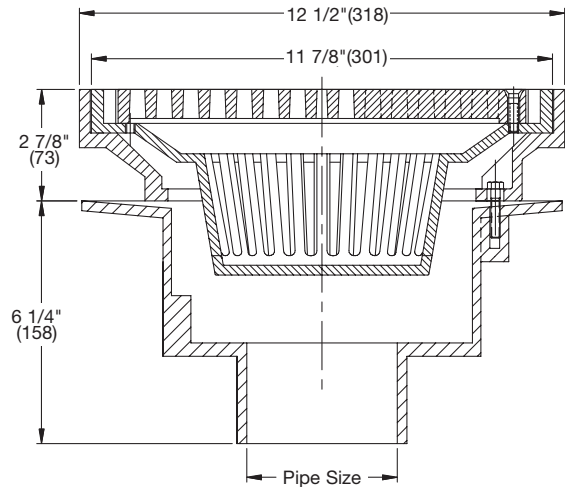


Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-342,3,4,5,6,8-Y	60	12"	2,3,4,5,6,8"	ductile iron	\$1,044.00
FD-342,3,4,5,6,8-Y-1	60	12"	2,3,4,5,6,8"	nickel bronze	1,796.50



FD-340-Y-SET Area Drain with 12" Round Fixed Top Grate Supported By Bucket

Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-342,3,4,5,6,8-Y-SET	60	12"	2,3,4,5,6,8"	ductile iron	\$1,505.00
FD-342,3,4,5,6,8-Y-1-SET	60	12"	2,3,4,5,6,8"	nickel bronze	2,256.50



Note: Funnels are ordered separately.
See page 41 for details.

Options for FD-340, FD-340-Y Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-34	Closure Plug	\$120.50
P	Push-On (2,3,4,6" Only)	No Add	-60	PVC Body w/Socket Outlet (2,3,4,6" Only)	No Add
T	Threaded Outlet (2,3,4,6" Only)	\$80.00	-61	ABS Body w/Socket Outlet (2,3,4" Only)	No Add
X	Inside Caulk Outlet (2,3,4,6" Only)	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
-5	Sediment Bucket	256.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-6	Vandal Proof	147.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-7	Trap Primer Tapping	150.00	-G-50	4x9" Oval Cast Iron Funnel	423.00
-8	Ball Float Backwater Valve (2,3,4" only)	377.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-13	All Galvanized	807.50	-S0	Side Outlet (2, 3, 4" Only)	336.00
-21	Secondary Strainer	67.50			

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



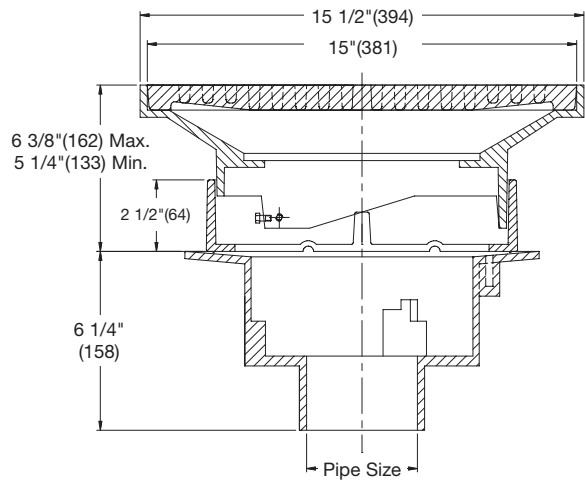
Area Drains

FD-360

Area Drain with 15" Round Adjustable Top



Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-362,3,4,5,6,8	110	15"	2,3,4,5,6,8"	ductile iron	\$3,311.00
FD-362,3,4,5,6,8-1	110	15"	2,3,4,5,6,8"	nickel bronze	4,690.50

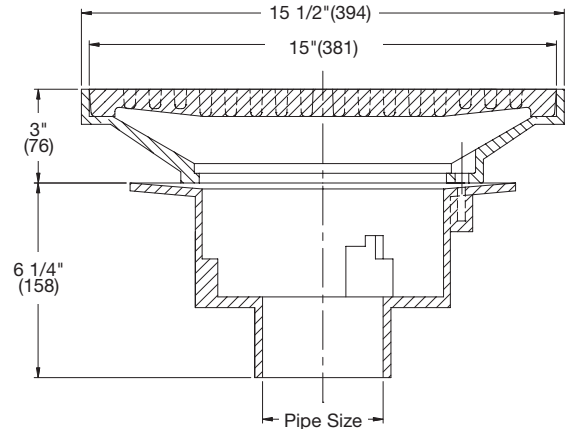


FD-360-Y

Area Drain with 15" Round Fixed Top



Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-362,3,4,5,6,8	110	15"	2,3,4,5,6,8"	ductile iron	\$2,867.00
FD-362,3,4,5,6,8-1	110	15"	2,3,4,5,6,8"	nickel bronze	4,246.00



Note: Funnels are ordered separately.
See page 41 for details.

Options for FD-360, FD-360-Y Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-34	Closure Plug	\$120.50
P	Push-On (2,3,4,6" Only)	No Add	-60	PVC Body w/Socket Outlet (2,3,4,6" Only)	No Add
T	Threaded Outlet (2,3,4,6" Only)	\$80.00	-61	ABS Body w/Socket Outlet (2,3,4" Only)	No Add
X	Inside Caulk Outlet (2,3,4,6" Only)	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
-5	Sediment Bucket	256.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-6	Vandal Proof	147.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-7	Trap Primer Tapping	150.00	-G-50	4x9" Oval Cast Iron Funnel	423.00
-8	Ball Float Backwater Valve (2,3,4" only)	377.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-13	All Galvanized	1,964.00	-S0	Side Outlet (2, 3, 4" Only)	336.00
-21	Secondary Strainer	67.50			



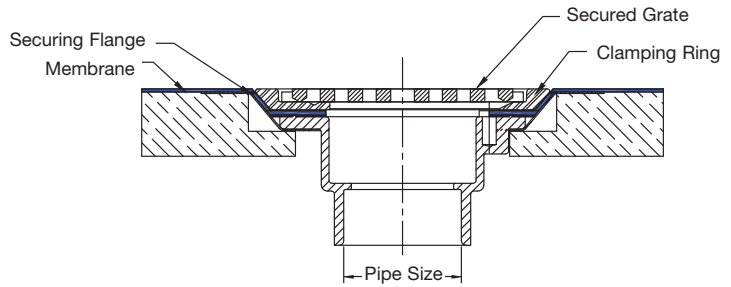
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Specialty Drains

FD-370

Wood Deck Drain w/Surface Membrane Clamp

Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-372	4	5"	2" ABS	aluminum	\$409.00



Typical Installation

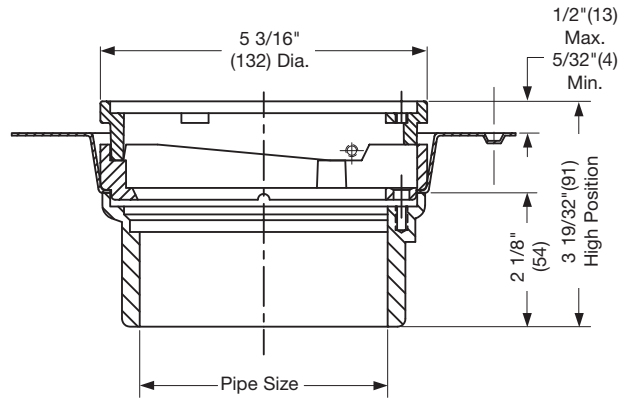
Options for FD-370 Series:

Suffix	Description	List Price
-6	Vandal Proof	\$54.00

FD-380

Adjustable Wood Floor Drain

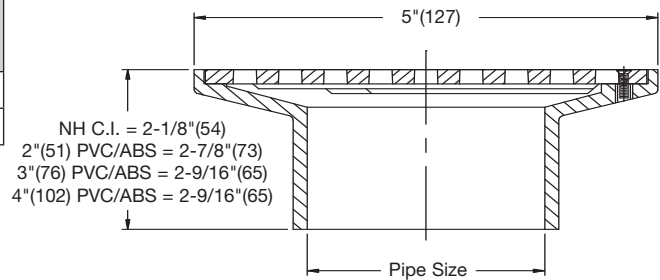
Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-382,3,4	7	5"	2,3,4"	nickel bronze	\$601.50



FD-390-E

General Purpose Floor Drain

Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-392,3,4-E	5	5"	2,3,4"	ductile iron	\$170.00
FD-392,3,4-E-1	5	5"	2,3,4"	nickel bronze	232.00



Options for FD-380 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-F4-1	4" Round Bronze Funnel	\$428.00
-6	Vandal Proof	\$54.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-60	PVC Body w/Socket Outlet (2,3,4,6" Only)	No Add	G-50	4x9" Oval Cast Iron Funnel	423.00
-61	ABS Body w/Socket Outlet	No Add	G-1	4x9" Oval Nickel Bronze Funnel	872.00
-E	5/16 Stackable Strainer Extension	81.50			
-F4-50	4" Round Cast Iron Funnel	179.00			

Note: Funnels are ordered separately. See page 41 for details.

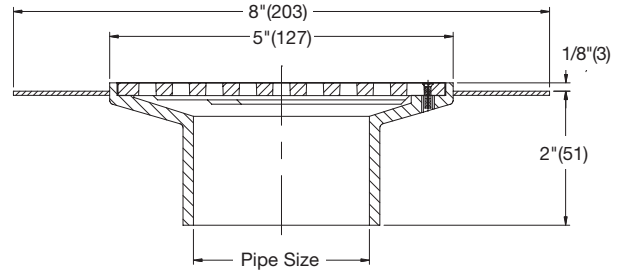
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Specialty Drains

FD-390-E-63 Floor Drain for Wooden Floors

Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-392,3,4-E-63	7	5"	2,3,4"	nickel bronze	\$444.50



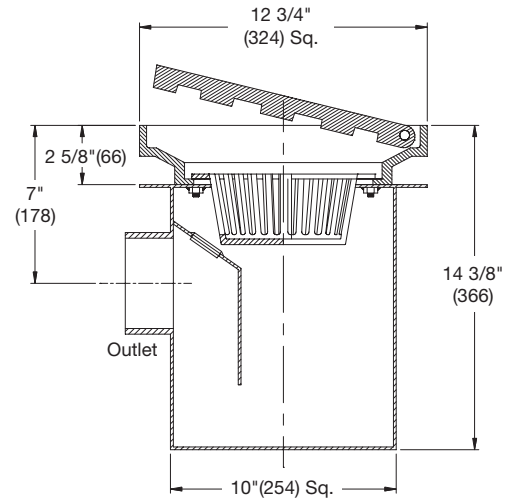
Options for FD-390-E, FD-390-E-63 Series

Suffix	Description	List Price	Suffix	Description	List Price
-None	No Hub	No Add	-F4-1	4" Round Nickel Bronze Funnel	\$428.00
-6	Vandal Proof	\$54.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-60	PVC Body w/Socket Outlet	No Add	-G-50	4x9" Oval Cast Iron Funnel	423.00
-61	ABS Body w/Socket Outlet	No Add	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-F4-50	4" Round Cast Iron Funnel	179.00			

Note: Funnels ordered separately.

FD-430 Side Outlet Area Drain with Hinged Grate

Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-432,3,4	63	12 1/2" Sq.	2,3,4"	ductile iron	\$2,189.00
FD-432,3,4-1	63	12 1/2" Sq.	2,3,4"	nickel bronze	3,278.00

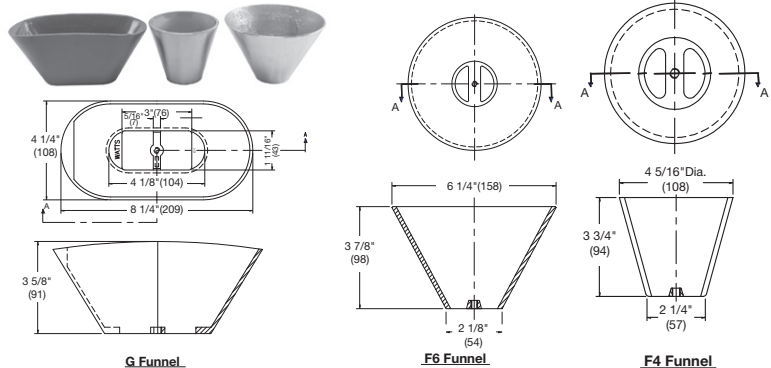


Options for FD-430 Series

Suffix	Description	List Price
-6	Vandal Proof	\$147.00
-T	Threaded Outlet	266.00

FD-Funnels Bolt-On Funnels

Model Number	EDP #	Size	Material
F4-50	8135668	4"(102) Round	cast iron
F4-1	8135666	4"(102) Round	nickel bronze
F4-3	8187293	4"(102) Round	stainless steel
F6-1	8135671	6"(152) Round	nickel bronze
G-50	8141444	4"x9"(102x229) Oval	cast iron
G-1	8141441	4"x9"(102x229) Oval	nickel bronze
G-3	8141443	4"x9"(102x229) Oval	stainless steel



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

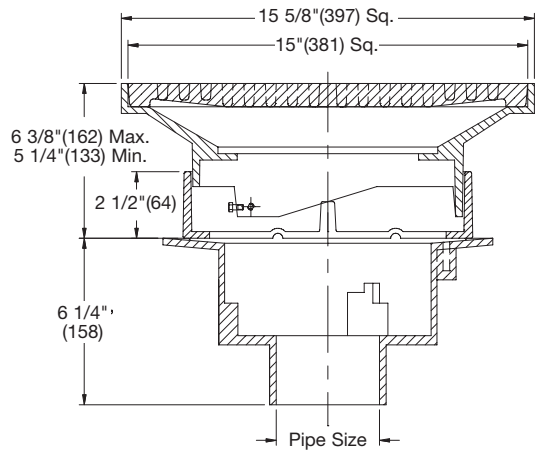
Area Drains

FD-450

Area Drain with 15" x 15" Adjustable Top



Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-452,3,4,5,6,8	120	15"(381) Sq.	2,3,4,5,6,8"	ductile iron	\$2,886.50
FD-452,3,4,5,6,8-1	120	15 1/2"(394) Sq.	2,3,4,5,6,8"	nickel bronze	3,978.00

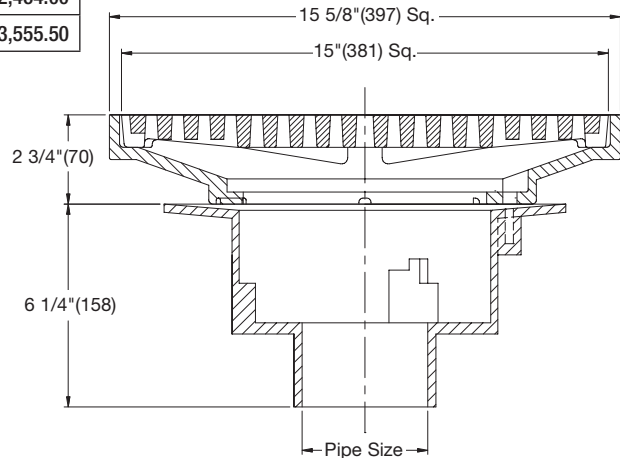


FD-450-F

Area Drain with 15" x 15" Fixed Top



Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-452,3,4,5,6,8	120	15"(381) Sq.	2,3,4,5,6,8"	ductile iron	\$2,464.00
FD-452,3,4,5,6,8-1	120	15 1/2"(394) Sq.	2,3,4,5,6,8"	nickel bronze	3,555.50



Note: Funnels are ordered separately.
See page 41 for details.

Options for FD-450, FD-450-F Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-34	Closure Plug	\$120.50
P	Push-On (2,3,4,6" Only)	No Add	-60	PVC Body w/Socket Outlet (2,3,4,6" Only)	No Add
T	Threaded Outlet (2,3,4,6" Only)	\$80.00	-61	ABS Body w/Socket Outlet (2,3,4" Only)	No Add
X	Inside Caulk Outlet (2,3,4,6" Only)	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
-5	Sediment Bucket	256.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-6	Vandal Proof	147.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-7	Trap Primer Tapping	150.00	-G-50	4x9" Oval Cast Iron Funnel	423.00
-8	Ball Float Backwater Valve (2,3,4" only)	377.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-9	Hinged Grate	273.50	-S0	Side Outlet	336.00
-13	All Galvanized	1,964.00			
-21	Secondary Strainer	67.50			

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



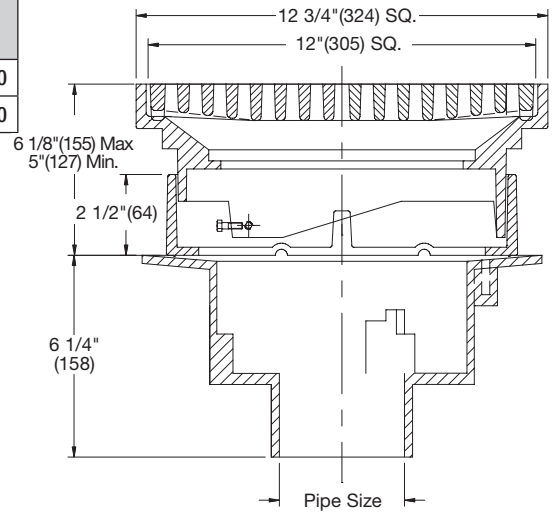
Area Drains

FD-460

Area Drain with 12" Square Adjustable Top



Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-462,3,4,5,6,8	70	12"(305)	2,3,4,5,6,8"	ductile iron	\$1,911.00
FD-462,3,4,5,6,8-1	70	12 1/2"(318)	2,3,4,5,6,8"	nickel bronze	3,000.00

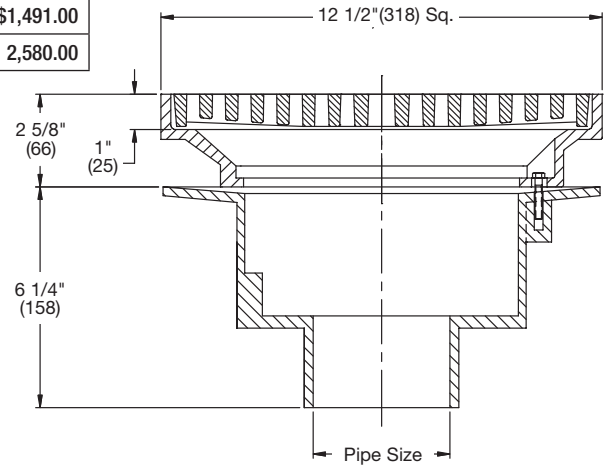


FD-460-F

Area Drain with 12" Square Fixed Top



Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-462,3,4,5,6,8-F	85	12"(305) Sq.	2,3,4,5,6,8"	ductile iron	\$1,491.00
FD-462,3,4,5,6,8-F-1	85	12 1/2"(318) Sq.	2,3,4,5,6,8"	nickel bronze	2,580.00



Note: Funnels are ordered separately.
See page 41 for details.

Options for FD-460, 460-F Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-34	Closure Plug	\$120.50
P	Push-On (2,3,4,6" Only)	No Add	-60	PVC Body w/Socket Outlet (2,3,4,6" Only)	No Add
T	Threaded Outlet (2,3,4,6" Only)	\$80.00	-61	ABS Body w/Socket Outlet (2,3,4" Only)	No Add
X	Inside Caulk Outlet (2,3,4,6" Only)	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
-5	Sediment Bucket	256.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-6	Vandal Proof	147.00	-F6-1	6" Round Nickel Bronze Funnel	625.05
-7	Trap Primer Tapping	150.00	-G-50	4x9" Oval Cast Iron Funnel	423.00
-8	Ball Float Backwater Valve (2,3,4" only)	377.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-9	Hinged Grate	273.50	-S0	Side Outlet (2,3,4" Only)	336.00
-13	All Galvanized	887.50			
-21	Secondary Strainer	67.50			



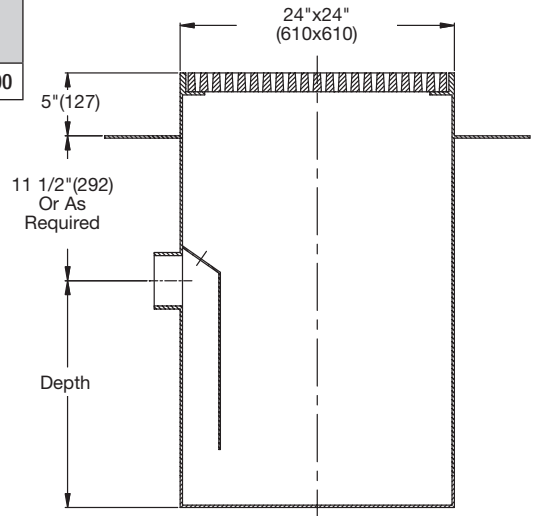
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Parking Area Drains

FD-410

Parking Area Catch Basin with Heavy Duty Grate

Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-413,4,6 (A,B,C,D,E)	800	20x20 1/2"	3,4,6"	cast iron	\$9,943.00



Options for FD-410 Series

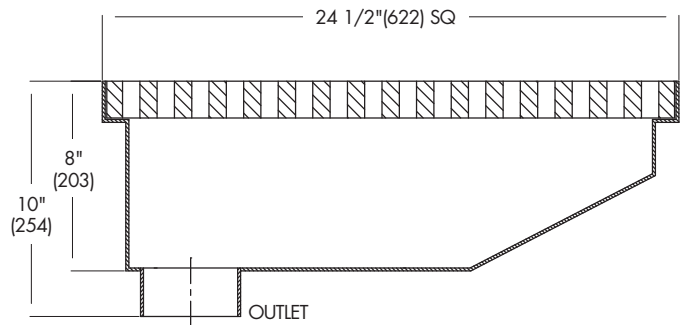
Suffix	Description	List Price
-6	Vandal Proof	\$186.50
-Q	Special Dimension	P.O.A.
-SI	Side Inlet Connection	619.00
-ST	Solid Top	No Add
-T	Threaded Outlet	266.00

Model Number	Pipe Size	Depth				
		(A)	(B)	(C)	(D)	(E)
FD-410-(A,B,C,D, or E)	3,4,6"	18"	24"	30"	36"	Special

FD-530

Large Capacity Bottom Outlet Offset Parking Area Drain

Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-533,4,6,8	400	24" Sq.	3,4,6,8" NH	ductile iron	\$11,278.50



Options for FD-530 Series

Suffix	Description	List Price
-5	Sediment Bucket	\$853.50
-6	Vandal Proof Grate	457.50
-38	Solids Retaining Baffle	580.00
-C	Membrane Clamp	1,095.00
-T	Threaded Outlet	266.00

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Isolation Drains

FD-600

Isolation Floor Drain

Model Number	Weight (lbs.)	Strainer Size	Pipe Size	Strainer	List Price
FD-602, 3, 4-A5	17	5"	2,3,4"	nickel bronze	\$1,323.50
FD-602, 3, 4-A6	17.5	6"	2,3,4"	nickel bronze	1,431.50
FD-602, 3, 4-A8	23	8"	2,3,4"	nickel bronze	1,694.00

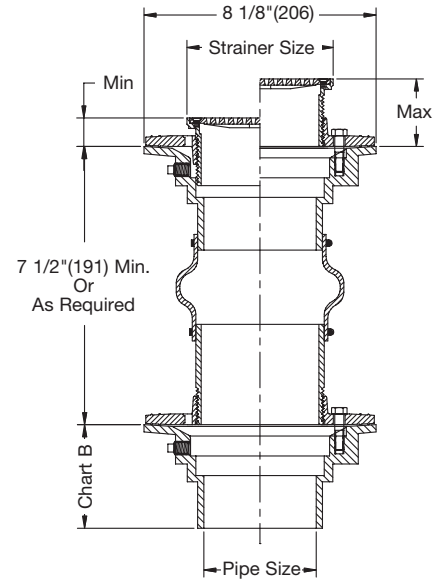


Chart A		
Str. Dia.	Min.	Max.
5"	13/16"	3 1/4"
6"	7/8"	3 3/8"
8"	7/8"	3 3/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	3 5/8"	4 1/4"	4 1/4"	3 3/4"
3"	3 5/8"	4"	4 1/4"	4 1/4"	3 5/8"
4"	3 5/8"	4"	4 1/4"	4 1/4"	3 7/8"

See FD-100 Options on page 16.

FD-620

Isolation Area Drain

Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-622, 3, 4	25	8"	2, 3, 4"	ductile iron	\$1,684.50
FD-622, 3, 4-1	25	8"	2, 3, 4"	nickel bronze	2,225.50

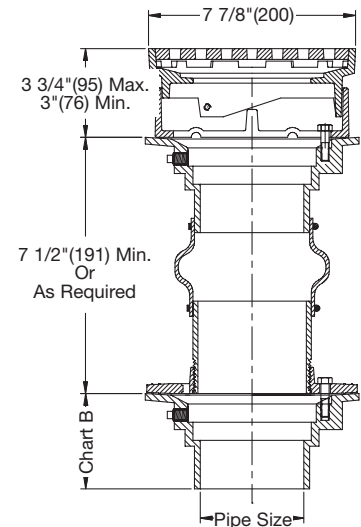


Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	3 5/8"	4 1/4"	4 1/4"	3 3/4"
3"	3 5/8"	4"	4 1/4"	4 1/4"	3 5/8"
4"	3 5/8"	4"	4 1/4"	4 1/4"	3 7/8"

See FD-320 Options on page 33.



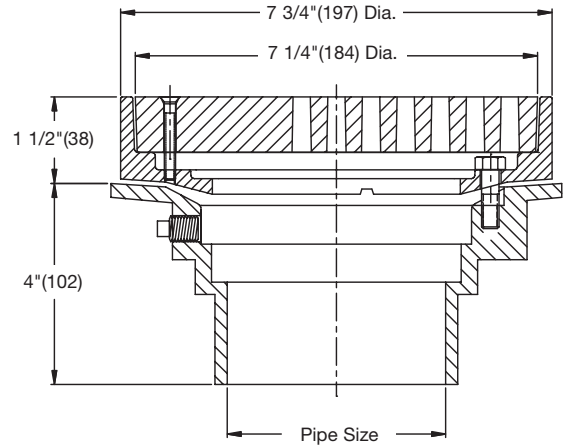
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Area Drains

FD-660

PVC Area Drain with 7" Fixed Top

Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-662, 3, 4	7	7"	2,3,4"	PVC	\$510.00



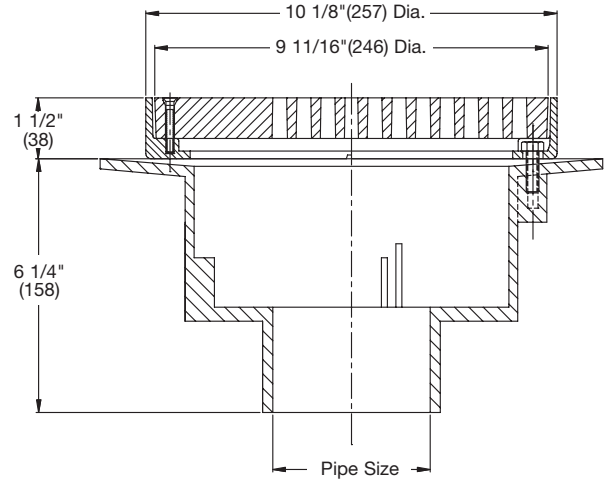
Options for FD- 660 Series:

Suffix	Description	List Price	Suffix	Description	List Price
-5	Sediment Bucket	\$138.50	-F4-50	4" Round CI Funnel	\$179.00
-6	Vandal Proof	No Add	-F4-1	4" Round NB Funnel	428.00
-7	Trap Primer Tapping	No Add	-F6-1	6" Round NB Funnel	625.50
-34	Closure Plug	120.50	-G-50	4x9" Oval CI Funnel	423.00
-61	ABS Body w/Socket Outlet (2, 3, 4" only)	No Add	-G-1	4x9" Oval NB Funnel	872.00
-150	1/2 Grate	No Add			

FD-670

PVC Area Drain with 10" Fixed Top

Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-672, 3, 4	8	10"	2,3,4"	PVC	\$850.50



Note: Funnels are ordered separately.
See page 41 for details.

Options for FD- 670 Series:

Suffix	Description	List Price	Suffix	Description	List Price
-5	Sediment Bucket	\$205.50	-150	1/2 Grate	No Add
-6	Vandal Proof	No Add	-F4-50	4" Round CI Funnel	\$179.00
-7	Trap Primer Tapping	No Add	-F4-1	4" Round NB Funnel	428.00
-26	Sand Bucket	205.50	-F6-1	6" Round NB Funnel	625.50
-34	Closure Plug	120.50	-G-50	4x9" Oval CI Funnel	423.00
-61	ABS Body w/Socket Outlet (2, 3, 4" only)	No Add	G-1	4x9" Oval NB Funnel	872.00

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.

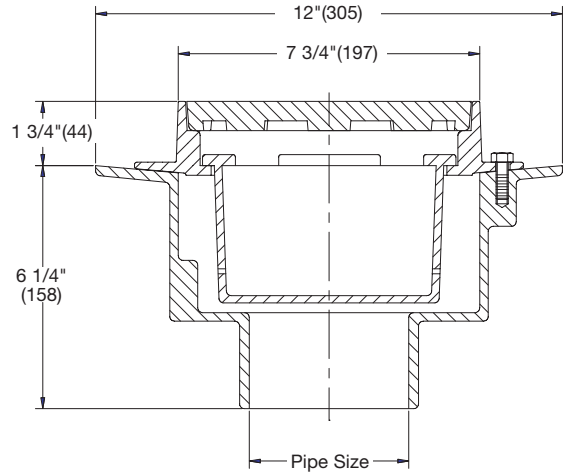


Specialty Floor Drains

FD-810

Iowa Garage Drain

Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-812, 3, 4, 5, 6, 8	14	8"	2, 3, 4, 5, 6, 8"	ductile iron	\$1,214.50
FD-812, 3, 4, 5, 6, 8-1	15	8"	2, 3, 4, 5, 6, 8"	nickel bronze	1,756.00



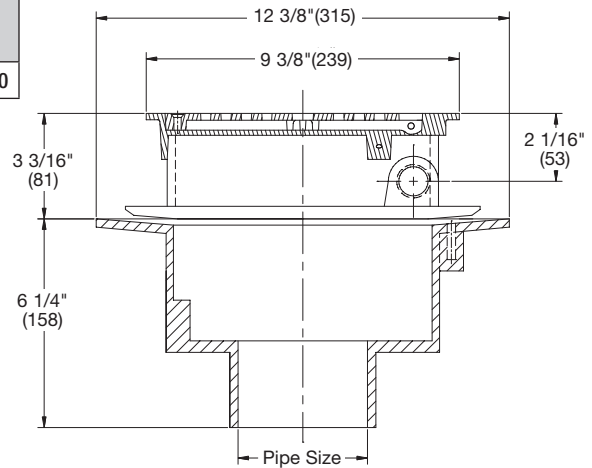
Options for FD-810 Series

Suffix	Description	List Price
None	No Hub	No Add
P	Push-On Outlet (2,3,4,6" only)	No Add.
T	Threaded Outlet (2,3,4,6" only)	\$80.00
X	Inside Caulk Outlet (2,3,4,6" only)X	No Add
-6	Vandal Proof	147.00
-7	Trap Primer Tapping	150.00
-60	PVC Body w/Socket Outlet (2,3,4,6" only)	No Add
-61	ABS Body w/Socket Outlet (2,3,4" only)	No Add

FD-820

Flushing Rim Floor Drain

Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-822, 3, 4	30	9 1/2"	2, 3, 4"	nickel bronze	\$2,561.00



Note: Funnels are ordered separately.
See page 41 for details.

Options for FD-820 Series

Suffix	Description	List Price
None	No Hub	No Add
P	Push-On Outlet (2,3,4,6" only)	No Add.
T	Threaded Outlet (2,3,4,6" only)	\$80.00
X	Inside Caulk Outlet (2,3,4,6" only)	No Add
-5	Sediment Bucket	256.00
-6	Vandal Proof	147.00



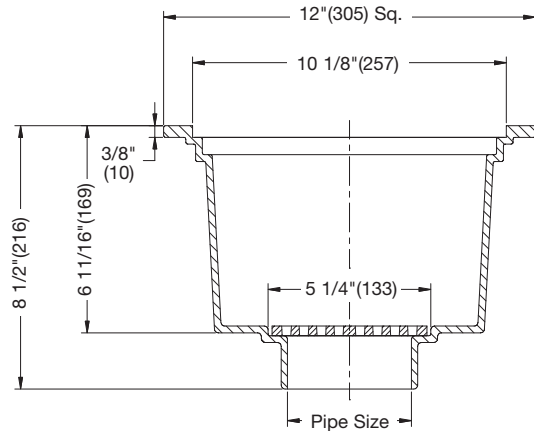
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Specialty Floor Drains

FD-830

Hopper Drain

Model Number	Weight (lbs.)	Str. Size	Pipe Size	Material	List Price
FD-832, 3, 4	27	5 1/4"	2,3,4"	cast iron	\$802.50



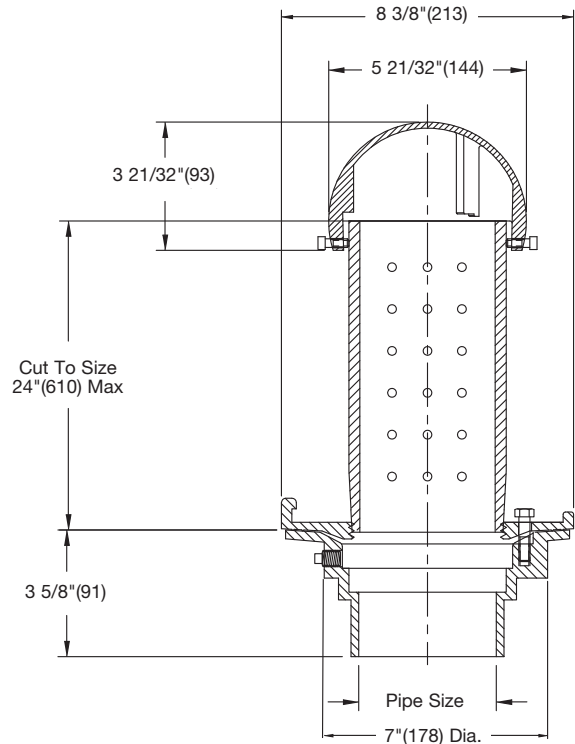
Options for FD-830 Series

Suffix	Description	List Price
-1	Nickel Bronze Top	\$399.00
-5	Sediment Bucket	239.50
-7	Trap Primer Tapping	150.00
-TG	Top Grate - Ductile Iron	194.00

FD-850

Planting Area Drain With Dome Cap

Model Number	Weight (lbs.)	Str. Type	Pipe Size	List Price
FD-852, 3, 4	11	Domed Standpipe	2,3,4"	\$930.50



Options for FD-850 Series

Suffix	Description	List Price
P	Push On	No Add
-13	All Galvanized	\$391.50
-60	PVC Body w/Socket Outlet	No Add
-61	ABS Body w/Socket Outlet	No Add
-B	Sump Receiver	256.00
-D	Underdeck Clamp	149.00
-F	Deck Flange/Adj. Extension	500.00
-SO	Side Outlet	218.00
-T	Threaded Outlet	80.00

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



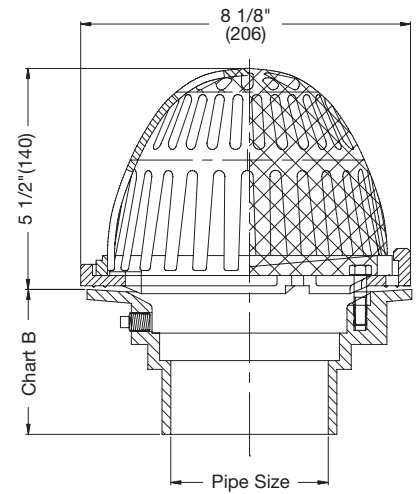
Specialty Floor Drains

FD-860

Planting Area Drain with Screened Dome



Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-862, 3, 4	25	8 1/2" Dome	2,3,4"	alum. w/SS mesh	\$930.50



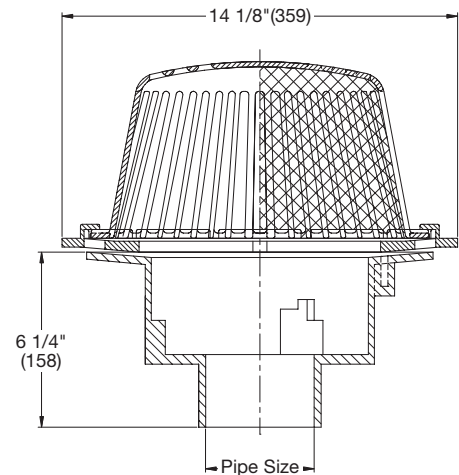
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	3 5/8"	4 1/4"	4 1/4"	2 3/4"
3"	3 5/8"	4"	4 1/4"	4 1/4"	3 5/8"
4"	3 5/8"	4"	4 1/4"	4 1/4"	3 7/8"
6"	3 1/2"	-	-	-	-

FD-870

Large Planting Area Drain with Screened Dome



Model Number	Weight (lbs.)	Str. Size	Pipe Size	Dome	List Price
FD-872, 3, 4, 6	50	8 1/2" Dome	2,3,4"	alum. w/SS mesh	\$1,090.00



Options for FD-860/870 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-13	Galvanized Body and Clamp	\$391.50
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet (2,3,4,6" only)	No Add
T	Threaded Outlet	\$80.00	-61	ABS Body w/Socket Outlet (2,3,4" only)	No Add
X	Inside Caulk Outlet	No Add	-81	Bronze Dome	732.00
-6	Vandal Proof Dome	114.00	-S0	Side Outlet	336.00



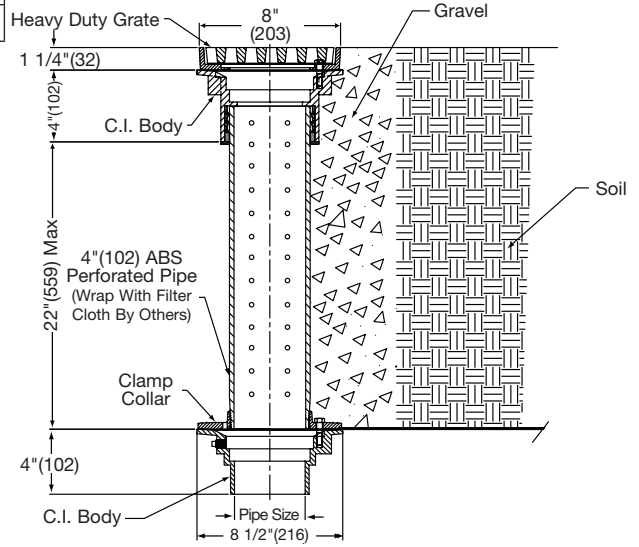
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Specialty Floor Drains

FD-880

Ground Water Containment Drain

Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-882, 3, 4,	34	8"	2,3,4"	ductile iron	\$1,505.00
FD-882, 3, 4-1	34	8"	2, 3, 4"	nickel bronze	2,045.00



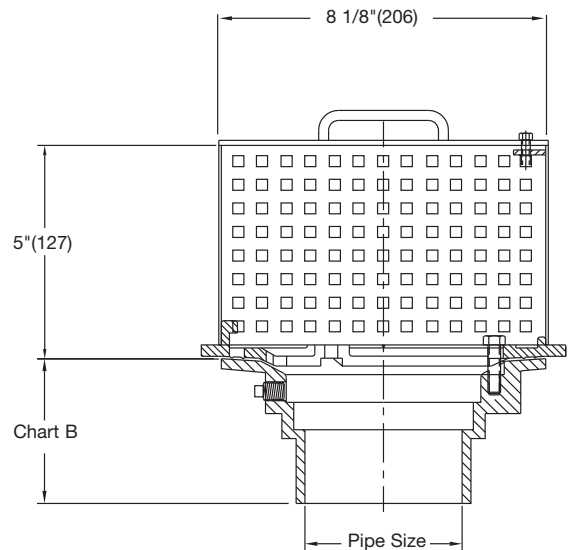
Options for FD-880 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-6	Vandal Proof	\$147.00
P	Push-On Outlet	No Add	-7	Trap Primer Tapping	No Add
T	Threaded Outlet	\$80.00	-21	Secondary Strainer	67.50
X	Inside Caulk Outlet	No Add	-S0	Side Outlet (2,3,4" only)	218.00
-5	Sediment Bucket	138.50			

FD-890

Planter Drain with Removable Cover

Model Number	Weight (lbs.)	Pipe Size	Cover	List Price
FD-882, 3, 4,	14	2,3,4"	Stainless Steel	\$1,401.50



Options for FD-890 Series

Suffix	Description	List Price
None	No Hub Outlet	No Add
P	Push-On Outlet	No Add
T	Threaded Outlet	\$80.00
X	Inside Caulk	No Add
-13	Galvanized Body and Clamp	196.50
-S0	Side Outlet	218.00

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



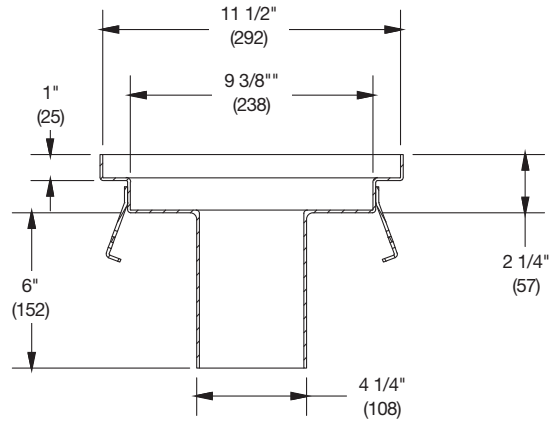
Specialty Floor Drains

TD-300

Elevator Trench Drain

Model Number	Size	EDP Number	Grate	List Price
TD-324	24"	8189398	stainless steel	\$5,072.00
TD-336	36"	8189211	stainless steel	7,608.00
TD-342	42"	8189377	stainless steel	8,873.00
TD-348	48"	8189779	stainless steel	10,013.00
TD-360	60"	8189780	stainless steel	11,025.00
Special Order: Add Per Ft.				\$2,536.00

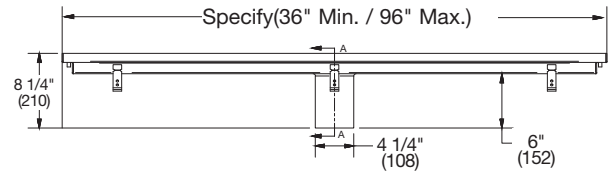
Note: October 2018 Launch



Note: TD-300 is ANSI and ASME certified.

Options for TD-300:

Suffix	Description	List Price
-06	6"(152) No Hub Outlet	\$400.00
-XO	Specify Outlet Position	400.00



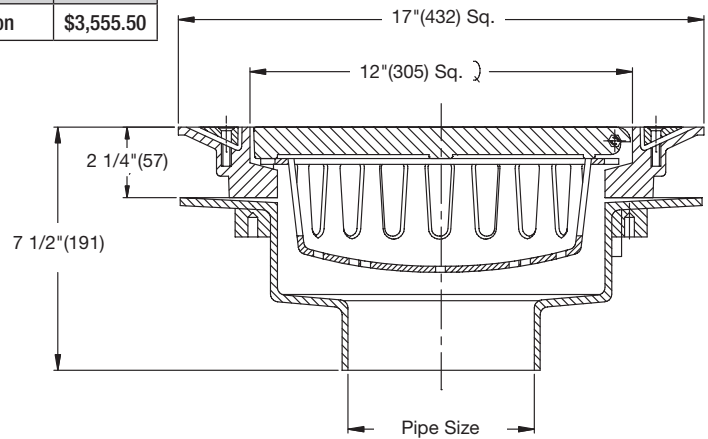
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Parking Deck Drains

FD-490-F-4

Parking Structure Drain With Heavy Duty Grate and Bucket

Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-493,4,5,6,8,10-F-4	112	12" Sq.	3,4,5,6,8,10"	ductile iron	\$3,555.50



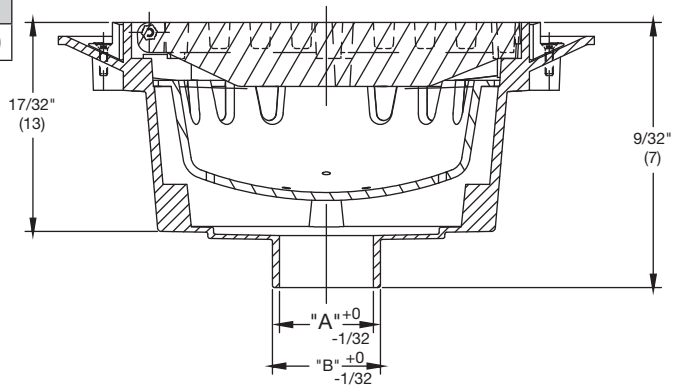
Option for FD-490 Series:

Suffix	Description	List Price
-6	Vandal Proof	\$147.00
-13	Galvanized	1010.00

FD-490-F-80

Aluminum Parking Structure Drain With Heavy Duty Grate and Bucket

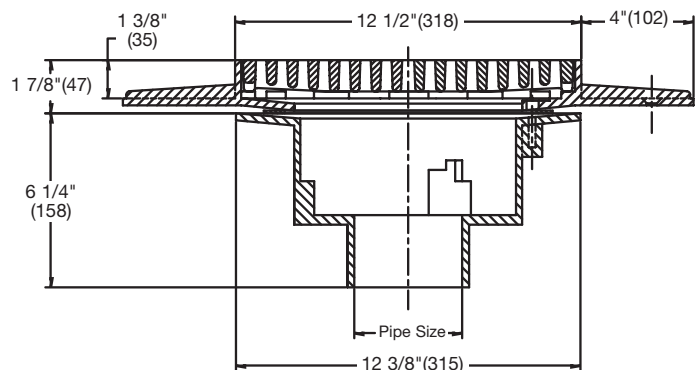
Model Number	Weight (lbs.)	Grate Size	Outlet Size	Grate	List Price
FD-493, 4, 6,8,-F-80	112	12" Sq.	3,4,6,8,"	aluminum	\$3,628.00



FD-900

Parking Deck Drain For Precast Slabs

Model Number	Weight (lbs.)	Cover Size	Pipe Size	Grate	List Price
FD-910, 3, 4, 5, 6, 8	62	12"	2, 3, 4, 5, 6, 8, 10"	ductile iron	\$2,333.50



Options for FD-900/910 Series:

Suffix	Description	List Price
None	No Hub	No Add
P	Push-On Outlet (2, 3, 4, 6" only)	No Add
T	Threaded Outlet (2, 3, 4, 6" only)	\$80.00
X	Inside Caulk Outlet (2, 3, 4, 6" only)	No Add
-5	Sediment Bucket	189.00
-6	Vandal Proof	147.00
-13	Galvanized	1,010.00
D	Underdeck Clamp	240.50

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.

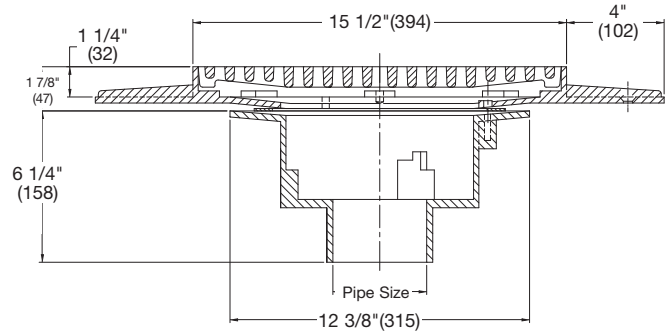
WATTS®

Parking Deck Drains

FD-910

Parking Deck Drain For Precast Slabs

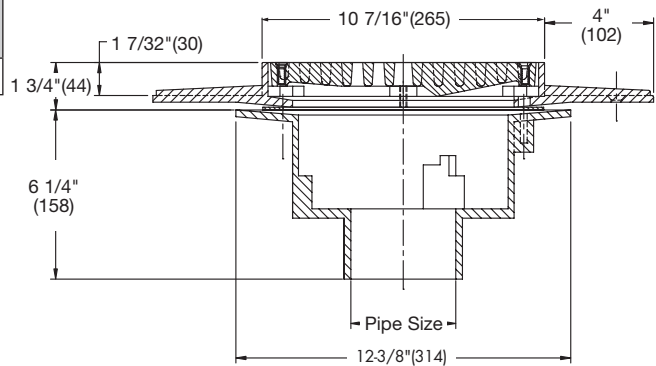
Model Number	Weight (lbs.)	Cover Size	Pipe Size	Grate	List Price
FD-912, 3, 4, 5, 6, 8	76	15"	2, 3, 4, 5, 6, 8,"	ductile iron	\$2,913.00



FD-920

Parking Deck Drain For Precast Slabs

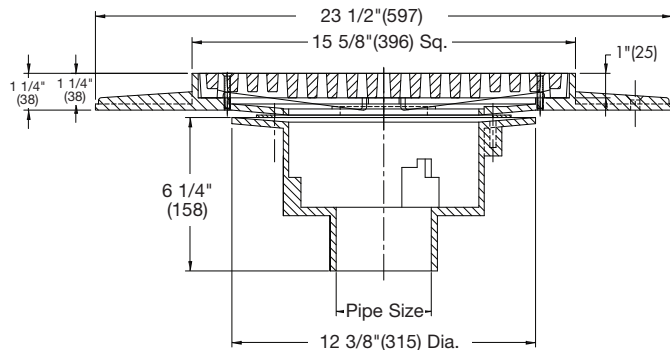
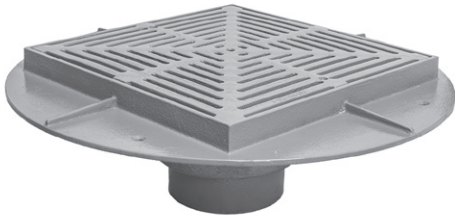
Model Number	Weight (lbs.)	Cover Size	Pipe Size	Grate	List Price
FD-922, 3, 4, 5, 6, 8	48	10"	2, 3, 4, 5, 6, 8,"	ductile iron	\$1,121.00



FD-930

Parking Deck Drain For Precast Slabs

Model Number	Weight (lbs.)	Cover Size	Pipe Size	Grate	List Price
FD-932, 3, 4, 5, 6, 8	85	15" Sq.	2, 3, 4, 5, 6, 8,"	ductile iron	\$3,060.50



Options for FD-930 Series:

Suffix	Description	List Price
None	No Hub	No Add
P	Push-On Outlet (2, 3, 4, 6" only)	No Add
T	Threaded Outlet (2, 3, 4, 6" only)	\$80.00
X	Inside Caulk Outlet (2, 3, 4, 6" only)	No Add
-5	Sediment Bucket	189.00
-6	Vandal Proof	147.00
-13	Galvanized	1,010.00
D	Underdeck Clamp	240.50



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Floor Drains with Stainless Steel Strainers

FD-1100-A Floor Drain with Round Stainless Steel Strainer



Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-1102,3,4-A5	11	5"	2,3,4"	stainless steel	\$601.50
FD-1102,3,4-A6	12.5	6"	2,3,4"	stainless steel	712.50
FD-1102,3,4-A8	16	8"	2,3,4"	stainless steel	973.00

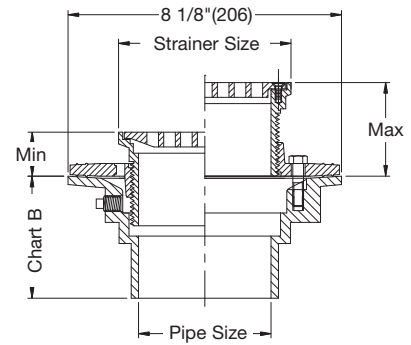


Chart A		
Strainer	Min.	Max.
5"	13/16"	3 1/4"
6"	7/8"	3 3/8"
8"	7/8"	3 1/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

FD-1100-B Floor Drain with Heavy Duty Round Stainless Steel Strainer



Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-1102,3,4-B5	11	5"	2,3,4"	stainless steel	\$811.50
FD-1102,3,4-B6	12.5	6"	2,3,4"	stainless steel	917.50
FD-1102,3,4-B8	16	8"	2,3,4"	stainless steel	1,175.00

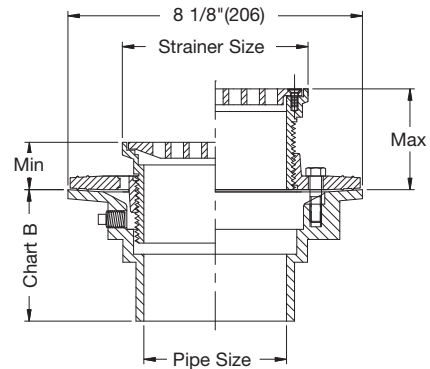


Chart A		
Strainer	Min.	Max.
5"	13/16"	2 1/2"
6"	7/8"	2 3/4"
8"	7/8"	3 1/4"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	3 5/8"	4 1/4"	4 1/4"	2 3/4"
3"	3 5/8"	4"	4 1/4"	4 1/4"	3 5/8"
4"	3 5/8"	4"	4 1/4"	4 1/4"	3 7/8"
6"	3 1/2"	-	-	-	-

Options for FD-1100 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-60	PVC Body w/Socket Outlet (2,3,4" only)	No Add
P	Push-On Outlet	No Add	-61	ABS Body w/Socket Outlet (2,3,4" only)	No Add
T	Threaded Outlet	\$80.00	-F4-3	4" Round SS Funnel	\$548.00
X	Inside Caulk	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
None	6" Outlet No Hub Only	120.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-5	Sediment Bucket	108.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof	54.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-7	Trap Primer Tapping	No Add	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-8	Ball Float Backwater Valve (2,3,4" only)	377.50	-S0	Side Outlet (2,3,4" only)	218.00
-13	Galvanized Body	195.50			
-15	Strainer Extension (DD-50)	141.00			
-28	304 SS Body and Collar (No Hub Only)	911.00			

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



Floor Drains with Stainless Steel Strainers

FD-1100-ER

Floor Drain with Stainless Steel Extended Rim Strainer

Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-1102,3,4-ER7	11	7"	2,3,4"	stainless steel	\$1,280.50

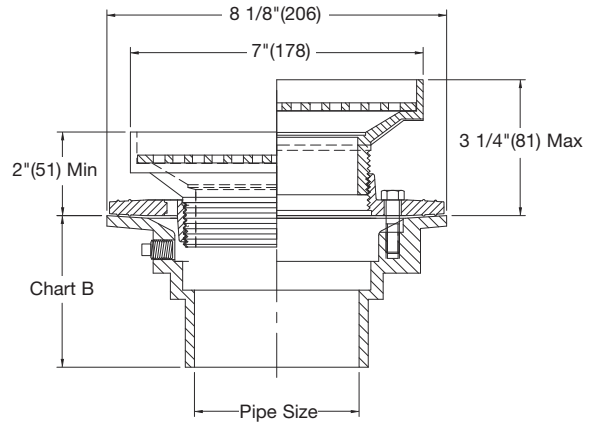


Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-1100-L

Floor Drain with Heavy Duty Square Stainless Steel Strainer

Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-1102,3,4-L5	10	5"x5"	2,3,4"	stainless steel	\$872.00
FD-1102,3,4-L6	14	6"x6"	2,3,4"	stainless steel	1,002.50
FD-1102,3,4-L8	16	8"x8"	2,3,4"	stainless steel	1,353.00

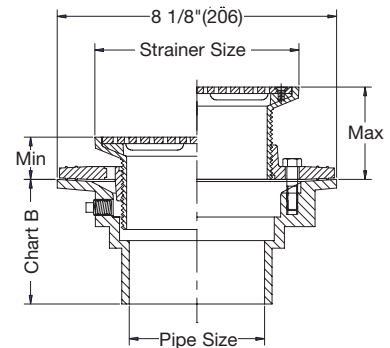


Chart A		
Strainer	Min.	Max.
5"x5"	7/8"	3 1/4"
6"x6"	1"	3 1/4"
8"x8"	1 3/8"	3 5/8"

Chart B					
Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	3 5/8"	4 1/4"	4 1/4"	2 3/4"
3"	3 5/8"	4"	4 1/4"	4 1/4"	3 5/8"
4"	3 5/8"	4"	4 1/4"	4 1/4"	3 7/8"
6"	3 1/2"	-	-	-	-

Options for FD-1100 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-60	PVC Body w/Socket Outlet (2,3,4" only)	No Add
P	Push-On Outlet	No Add	-61	ABS Body w/Socket Outlet (2,3,4" only)	No Add
T	Threaded Outlet	\$80.00	-F4-3	4" Round SS Funnel	\$548.00
X	Inside Caulk	No Add	-F4-50	4" Round Cast Iron Funnel	179.00
None	6" Outlet No Hub Only	120.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-5	Sediment Bucket	108.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof	54.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-7	Trap Primer Tapping	No Add	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-8	Ball Float Backwater Valve (2,3,4" only)	377.50	-S0	Side Outlet (2,3,4" only)	218.00
-13	Galvanized Body	195.50			
-15	Strainer Extension (DD-50)	141.00			
-28	304 SS Body and Collar	911.00			



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

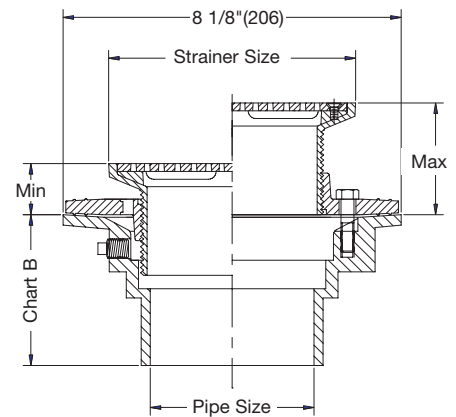
Floor Drains With Stainless Steel Strainers

FD-1100-M

Floor Drain with Square Stainless Steel Strainers



Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-1102,3,4-M5	11	5"x5"	2,3,4"	stainless steel	\$766.00
FD-1102,3,4-M6	12.5	6"x6"	2,3,4"	stainless steel	834.00
FD-1102,3,4-M8	16	8"x8"	2,3,4"	stainless steel	1,162.00



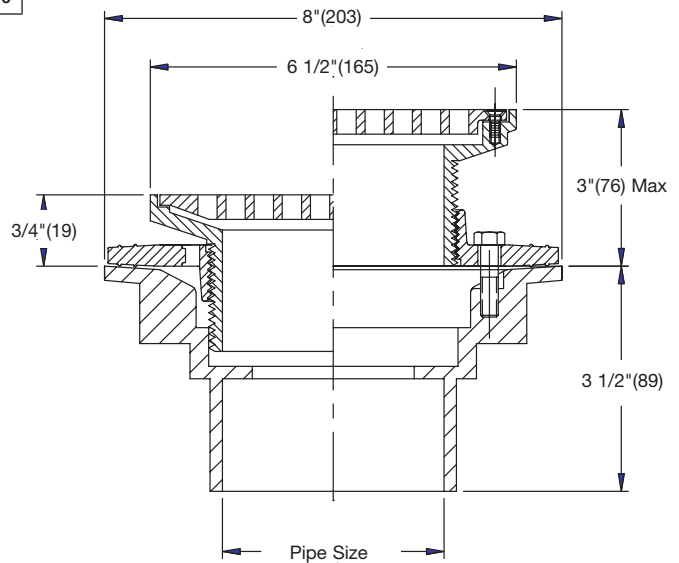
Strainer	Min.	Max.
5"x5"	7/8"	3 1/4"
6"x6"	1"	3 1/4"
8"x8"	1 3/8"	3 5/8"

Pipe Size	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
3"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
4"	3 5/8"	4 1/4"	4 1/4"	4 1/2"	4"
6"	3 1/2"	-	-	-	-

FD-1160

Chemical Resistant Floor Drain

Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-1162,3,4	6	6 1/2"	2,3,4"	PVC	\$444.50



Options for FD-1160 Series:

Suffix	Description	List Price
-5	Sediment Bucket	\$108.00
-6	Vandal Proof	54.50
-7	Trap Primer Tapping	No Add
-F4-1	4" Round Nickel Bronze Funnel	428.00
-F6-1	6" Round Nickel Bronze Funnel	625.50
-G-1	4x9" Oval Nickel Bronze Funnel	872.00

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



On-Grade Floor Drains with Stainless Steel Strainers

FD-1200-A

Floor Drain with Heavy Duty Round Stainless Steel Strainer



Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-1202,3,4-A5	8	5"	2,3,4"	stainless steel	\$538.00
FD-1202,3,4-A6	9.5	6"	2,3,4"	stainless steel	649.00
FD-1202,3,4-A8	16	8"	2,3,4"	stainless steel	910.00

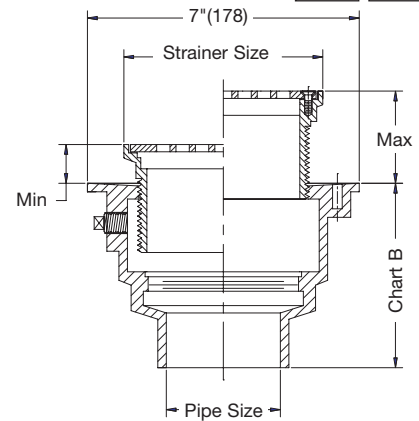


Chart A		
Str. Dia.	Min.	Max.
5"	7/16"	2 1/4"
6"	5/8"	2 1/4"
8"	3/4"	2 3/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-1200-B

Floor Drain with Heavy Duty Round Stainless Steel Strainer



Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-1202,3,4-B5	11	5"	2,3,4"	stainless steel	\$748.00
FD-1202,3,4-B6	12.5	6"	2,3,4"	stainless steel	854.00
FD-1202,3,4-B8	16	8"	2,3,4"	stainless steel	1,112.00

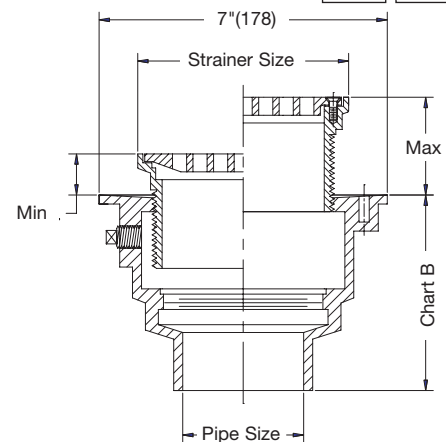


Chart A		
Str. Dia.	Min.	Max.
5"	7/16"	2 1/4"
6"	5/8"	2 1/4"
8"	3/4"	2 3/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

Options for FD-1200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-28	304SS Body & Collar w/BW Connection	\$911.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet	No Add
-5	Sediment Bucket	\$108.00	-F4-3	4" Round SS Funnel	548.00
-6	Vandal Proof	54.50	-F4-50	4" Round Cast Iron Funnel	179.00
-7	Trap Primer Tapping	No Add	-F4-1	4" Round Nickel Bronze Funnel	428.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-13	Galvanized Body	195.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-15	Strainer Extension (DD-50)	141.00	-G-1	4x9" Oval Nickel Bronze Funnel	872.00



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

On-Grade Floor Drains with Stainless Steel Strainers

FD-1200-ER

Floor Drain with Stainless Steel Extended Rim Strainer

Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-1202,3,4-ER7	11	7"	2,3,4"	stainless steel	\$1,219.00

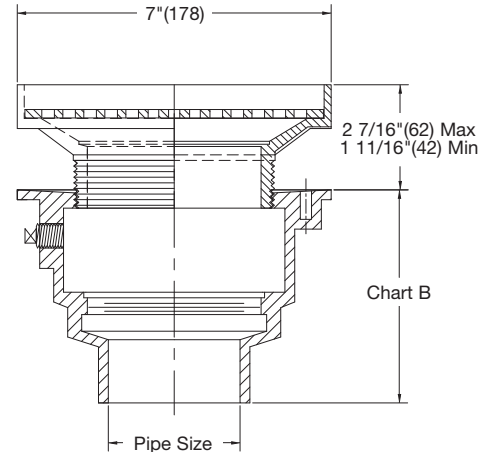


Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-1200-L

Floor Drain with Heavy Duty Square Stainless Steel Strainer



Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-1202,3,4-L5	10	5x5"	2,3,4"	stainless steel	\$809.00
FD-1202,3,4-L6	14	6x6"	2,3,4"	stainless steel	939.00
FD-1202,3,4-L8	16	8x8"	2,3,4"	stainless steel	1,290.50

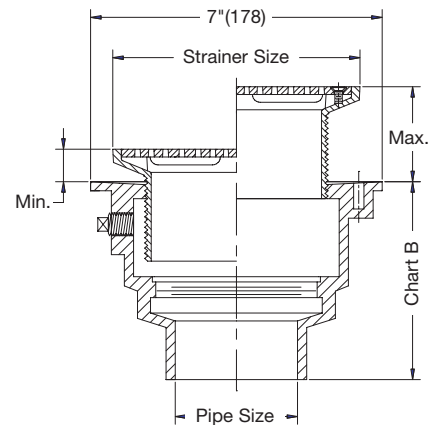


Chart A		
Strainer	Min.	Max.
5"x5"	1 1/2"	2 5/16"
6"x6"	1 1/2"	2 5/16"
8"x8"	3/4"	2 3/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

Options for FD-1200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-28	304SS Body & Collar w/BW Connection (No Hub only)	\$911.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet	No Add
-5	Sediment Bucket	\$108.00	-F4-3	4" Round SS Funnel	548.00
-6	Vandal Proof	54.50	-F4-50	4" Round Cast Iron Funnel	179.00
-7	Trap Primer Tapping	No Add	-F4-1	4" Round Nickel Bronze Funnel	428.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-13	Galvanized Body	195.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-15	Strainer Extension (DD-50)	141.00	-G-1	4x9" Oval Nickel Bronze Funnel	872.00

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



On-Grade Floor Drains with Stainless Steel Strainers

FD-1200-M

Floor Drain with Square Stainless Steel Strainer



Model Number	Weight (lbs.)	Str. Size	Pipe Size	Strainer	List Price
FD-1202,3,4-M5	10	5"x5"	2,3,4"	stainless steel	\$702.50
FD-1202,3,4-M6	12.5	6"x6"	2,3,4"	stainless steel	772.00
FD-1202,3,4-M8	16	8"x8"	2,3,4"	stainless steel	1,098.50

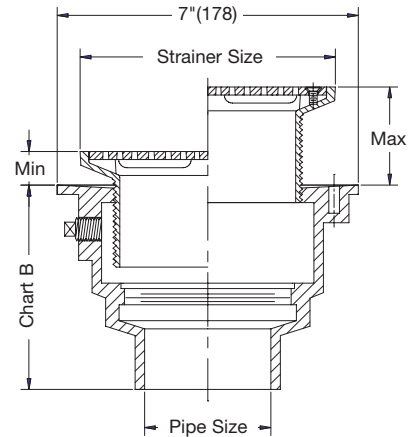


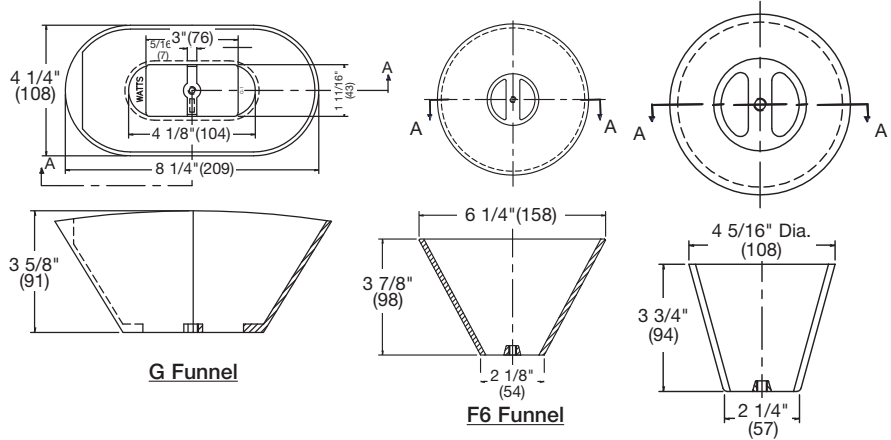
Chart A		
Strainer	Min.	Max.
5"x5"	1 1/2"	2 5/16"
6"x6"	1 1/2"	2 5/16"
8"x8"	1 1/2"	2 3/4"

Chart B			
Pipe Size	No Hub	Push On	PVC/ABS
2"	4 3/4"	5 1/2"	4"
3"	4 3/4"	5 1/2"	4"
4"	4 3/4"	5 1/2"	4"

FD-Funnels

Bolt-On Funnels

Model Number	Size	Material	List Price
F4-50	4" Round	cast iron	\$179.00
F4-1	4" Round	nickel bronze	428.00
F4-3	4" Round	stainless steel	548.00
F6-1	6" Round	nickel bronze	625.00
G-50	4x9" Oval	cast iron	423.00
G-1	4x9" Oval	nickel bronze	872.00
G-3	4x9" Oval	stainless steel	1,089.00



Options for FD-1200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-28	304SS Body & Collar w/BW Connection (No Hub only)	\$911.00
P	Push-On Outlet	No Add	-60	PVC Body w/Socket Outlet	No Add
X	Inside Caulk	No Add	-61	ABS Body w/Socket Outlet	No Add
-5	Sediment Bucket	\$108.00	-F4-3	4" Round SS Funnel	548.00
-6	Vandal Proof	54.50	-F4-50	4" Round Cast Iron Funnel	179.00
-7	Trap Primer Tapping	No Add	-F4-1	4" Round Nickel Bronze Funnel	428.00
-8	Ball Float Backwater Valve (2,3,4" Only)	377.50	-F6-1	6" Round Nickel Bronze Funnel	625.50
-13	Galvanized Body	195.50	-G-50	4x9" Oval Cast Iron Funnel	423.00
-15	Strainer Extension (DD-50)	141.00	-G-1	4x9" Oval Nickel Bronze Funnel	872.00



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Sanitary Floor Sinks

Table Of Contents

- Pictorial Index
- Recommendations
- Floor Sink Selection Factors
 - Materials
 - Pipe Connections
 - Load Ratings
 - Design Considerations
 - Commonly Specified Options
 - Option Configurations
- Typical Installations



Sanitary Floor Sinks

Pictorial Index



FS-500
PVC 12" Square x 6" Deep



FS-700
8" Round x 3" Deep



FS-710
8" Square x 6" Deep



FS-720
8" Round x 6" Deep



FS-730
12" Square x 6" Deep



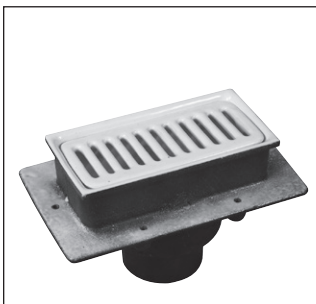
FS-740
12" Square x 8" Deep



FS-750
12" Square x 10" Deep



FS-760
12" Round x 8" Deep



FS-770
4"X8" Rectangular X 4"
Deep



FS-780
Stainless Steel
12" Square x 6" Deep



FS-790
Stainless Steel
12" Square x 8" Deep



FS-850
16" Square x 12" Deep



FS-800
Can Wash Sink



FS-900
12"x 24"x17" Deep

Sanitary Floor Sinks

Recommendations

Watts Sanitary Floor Sinks are recommended for indirect waste reception, generally in food handling or preparation areas. Sanitary floor sinks are constructed of porcelain enamel coated cast iron, or type 304 stainless steel. The smooth interior and rounded corners eliminate areas where pockets of waste and bacteria might otherwise accumulate.

Floor Sink Selection Factors

Materials

Porcelain enamel coated cast iron

White, glasslike inorganic coating common in sanitary plumbing applications. Corrosion proof and easy to clean, in compliance with strict sanitation standards.

Stainless steel

14 ga. in accordance with ASTM-351-Grade CF8 (Type 304) standard specification. Highly durable and resistant to corrosion.

PVC

Standard sch. 40 PVC, corrosion resistant, for direct solvent weld connection.

Pipe Connections

No hub (standard)

Butt connection using a no hub or neoprene coupling. Suitable for cast iron, plastic, and most other piping applications.

Push-on (-P)

ASTM C-564 gasket connection, with pipe stop. Suitable for no hub or service weight cast iron, sch. 40 plastic, and steel pipe. Not recommended for above grade.

Inside caulk

Used for lead and oakum joints, pipe is inserted through a caulk ring on the drain outlet.

Load Ratings

Floor sinks are not designed for traffic, and generally should not be specified in areas where traffic may occur. Please consult Watts technical support before specifying Sanitary Floor Sinks in an area subject to foot or other traffic.

Design Considerations

Porcelain grating

Porcelain floor sink grates are specifically designed to maximize flow through the grate.

Note: Porcelain grating is slippery and unstable, and cannot accept any foot or other traffic.

Above grade installation

Above grade floor sinks must be specified with a flange (option -F) to prevent water from seeping around the sink, and leaking through the floor. If the floor is properly waterproofed with a membrane, option -FC (flange and clamp) should be specified.

Sanitary Floor Sinks

Floor Sink Selection Factors

Commonly Specified Options

-F Flange with Weepholes

Anchors the sink in above grade applications. Water seeping around the outside of the sink will stop at the flange, and return to the sink through the weepholes.

-FC Flange with Weepholes and Flashing Clamp

Flange and flashing clamp secure a waterproofing membrane in above grade applications.

-1 Nickel Bronze Rim & Grate

Finished area top assembly for porcelain enamel coated sinks.

-3 Stainless Steel Rim & Grate

Finished area top assembly for porcelain enamel coated sinks.

-5 Sediment Bucket

Catches debris at the drain to prevent it from collecting and blocking the p-trap.

-6 Vandal Proof

Grate secured with Allen Head screws. Security screws (Torx and Pin, Allen and Pin) may be specified for high security applications.

-7 Trap Primer Tapping

Plugged 1/2" threaded inlet on drain body, for connection to trap primer valve (see Watts #LFTP300-DR).

-9 Hinged Grate

Available on square top floor sinks with optional nickel bronze (-1) or stainless steel (-3) top assemblies. Provides easy access to sediment buckets and drain lines requiring regular maintenance.

-21 Secondary Strainer

Fits in bottom of drain body, secondary protection against debris that bypasses sediment bucket.

-33 Less Grate

Grate removed for indirect waste reception.

-128 Grate with 2-1/2" Center Opening

For indirect waste line.

-150 1/2 Grate

Commonly specified under refrigeration cases. Receives indirect waste from back side, while grate covers exposed area.

-175 3/4 Grate

For indirect waste line.

-F4-1, -F6-1 Round Funnels

4" or 6" dia. nickel bronze round funnels to accept single condensate lines. Bolt supplied to attach funnel through underside of grate.

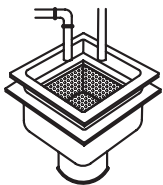
-G-1 Oval Funnel

4"x9" nickel bronze oval funnel, to accept multiple condensate lines. Bolt supplied to attach funnel through underside of grate.

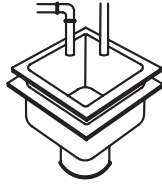
-US Buy American Compliant

Product will be supplied with minimum 51% domestic content, in compliance with FAR 52.225-9 Buy American Act.

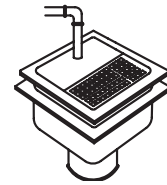
Option Configurations



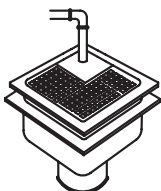
-5 Sediment Bucket



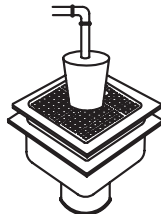
-33 Less Grate



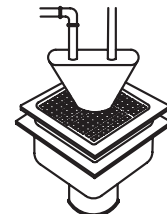
-150 1/2 Grate



-175 3/4 Grate



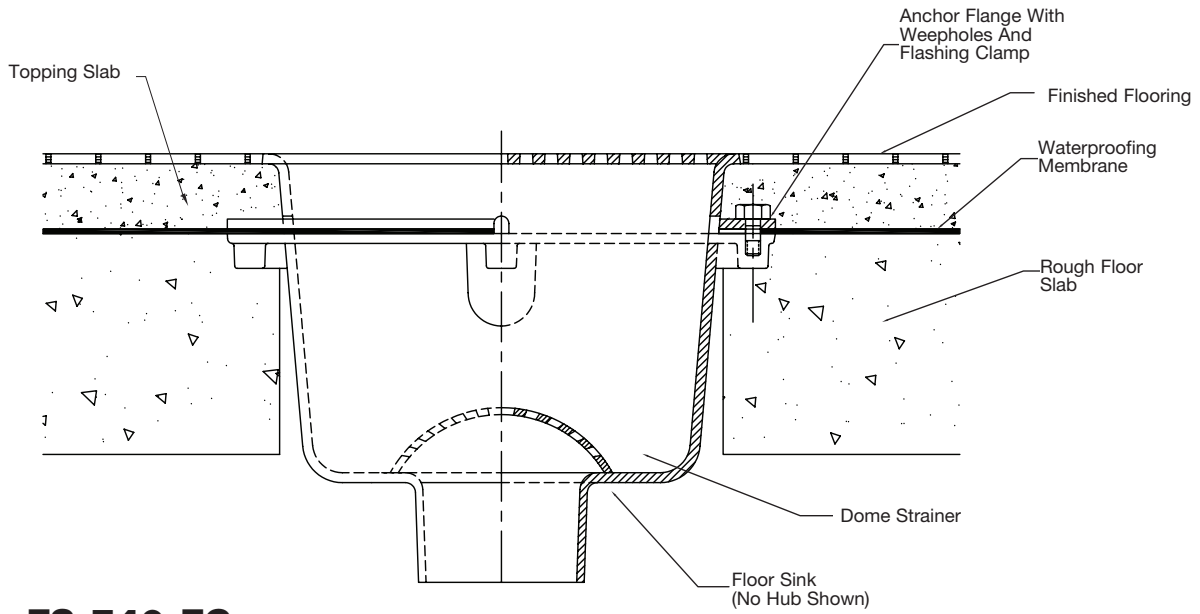
-F4-1 NB Round Funnel



-G-1 NB Oval Funnel

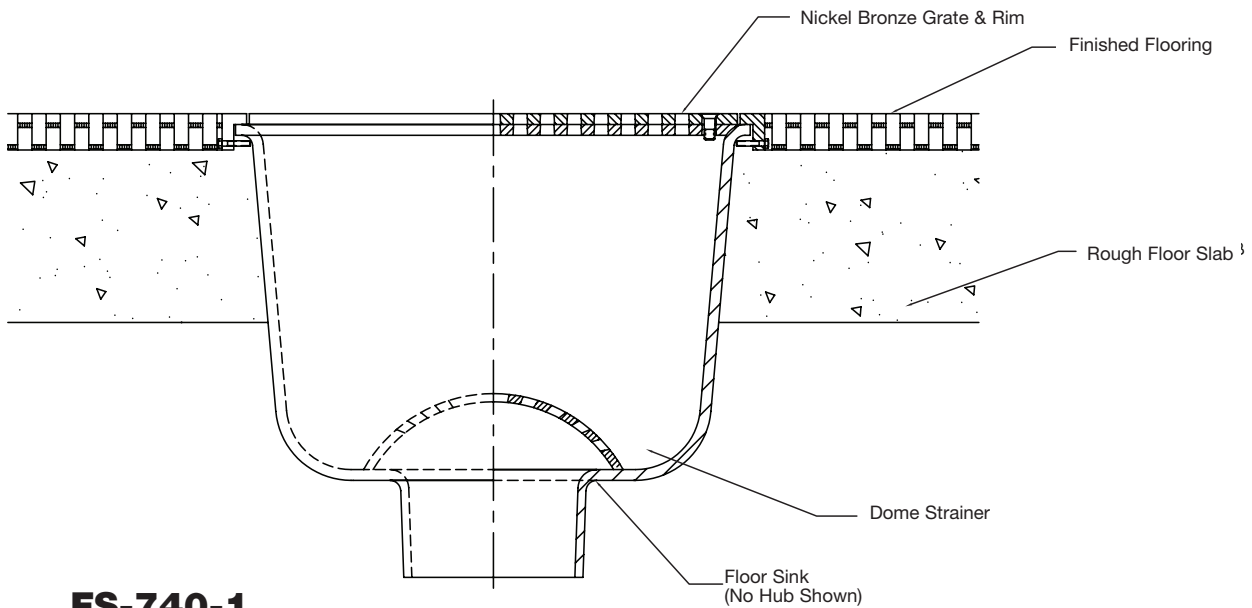
Sanitary Floor Sinks

Typical Installations



FS-740-FC

ABOVE GRADE INSTALLATION



FS-740-1

ON GRADE INSTALLATION

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.

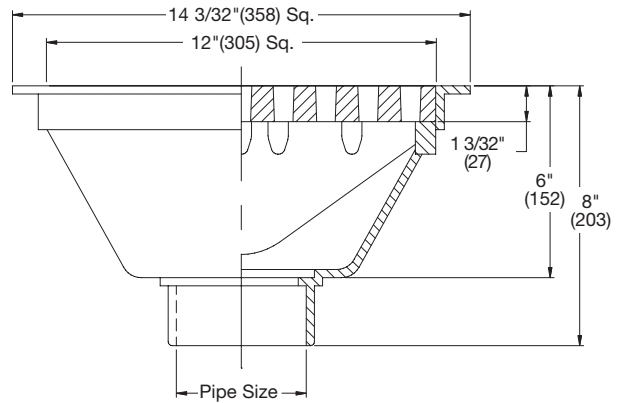


Sanitary Floor Sinks

FS-500

12" Square x 6" Deep PVC Floor Sink

Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FD-502, 3, 4	9	12" Sq.	2,3,4"	PVC	\$973.00



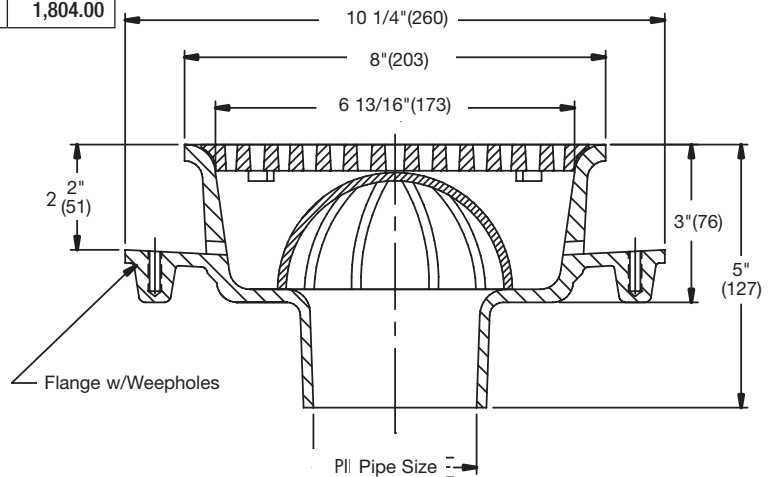
Options for FD-500 Series:

Suffix	Description	List Price
-5	Sediment Bucket	\$179.00
-6	Vandal Proof	76.00
-150	1/2 Grate	No Add
-175	3/4 Grate	No Add
-DS	Dome Strainer	112.00

FS-700

8" Round x 3" Deep Sanitary Floor Sink

Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-702, 3, 4	14	8" Round	2,3,4"	porcelain	\$1,374.00
FS-702, 3, 4-1	20	8" Round	2,3,4"	nickel bronze	1,804.00



Options for FS-700 Series

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-150	1/2 Grate	No Add
P	Push-On Outlet	No Add	-175	3/4 Grate	No Add
FC	Flange w/Weepholes & Flashing Clamp	\$186.50	-F4-1	4" Round Nickel Bronze Funnel	\$428.00
-5	Sediment Bucket	223.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof (-1 Ony)	76.00	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-7	Trap Primer Tapping	191.50			
-9	Hinged Grate (FS-710-1, -3 Only)	351.00			
-21	Secondary Strainer	67.50			
-33	Less Grate	-259.00			



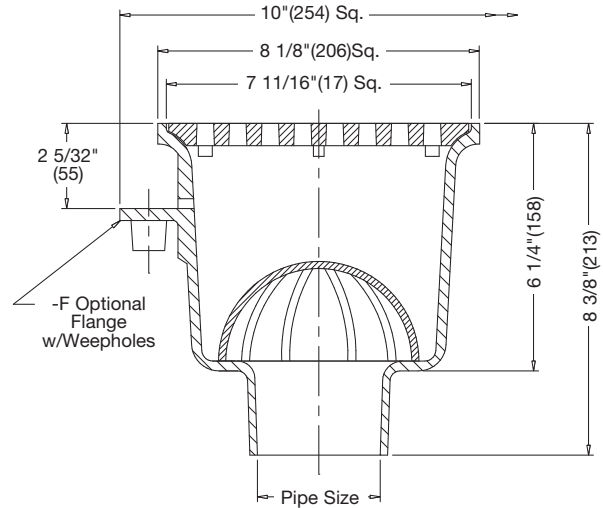
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Sanitary Floor Sinks

FS-710

8" Square x 6" Deep Sanitary Floor Sink

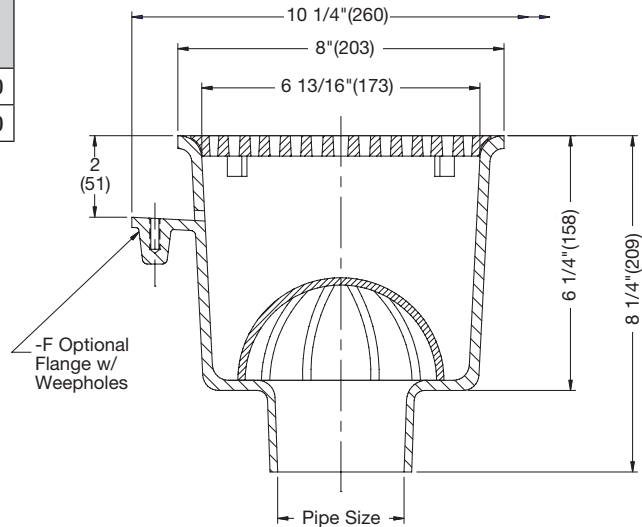
Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-712, 3, 4	20	8" Sq.	2,3,4"	porcelain	\$1,573.00
FS-712, 3, 4-1	20	8" Sq.	2,3,4"	nickel bronze	2,003.50



FS-720

8" Round x 6" Deep Sanitary Floor Sink

Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-722, 3, 4	16	8" Round	2,3,4"	porcelain	\$1,442.00
FS-722, 3, 4-1	16	8" Round	2,3,4"	nickel bronze	1,874.00



Options for FS-710/720 Series

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-21	Secondary Strainer	\$67.50
P	Push-On Outlet	No Add	-33	Less Grate	-259.00
X	Inside Caulk Outlet	No Add	-150	1/2 Grate	No Add
-F	Flange w/Weepholes	\$185.00	-175	3/4 Grate	No Add
-FC	Flange w/Weepholes & Flashing Clamp	371.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-3	Stainless Steel (Rim & Grate) (FS-710 Only)	590.00	-F6-1	6" Round Nickel Bronze Funnel	625.00
-5	Sediment Bucket	222.00	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-6	Vandal Proof (-1,-3 Only)	76.00			
-7	Trap Primer Tapping	191.50			
-9	Hinged Grate (FS-710-1, -3 Only)	351.00			

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.

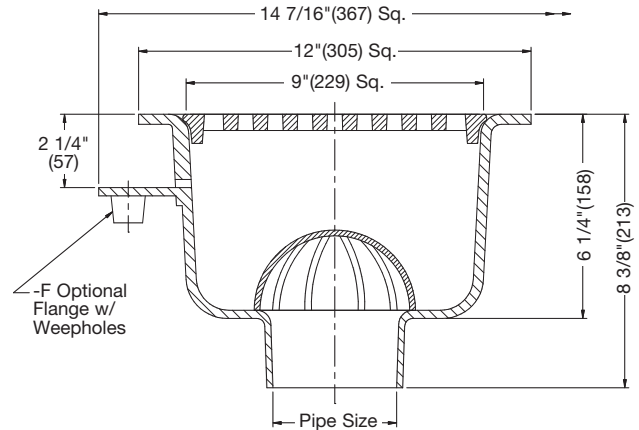


Sanitary Floor Sinks

FS-730

12" Square x 6" Deep Sanitary Floor Sink

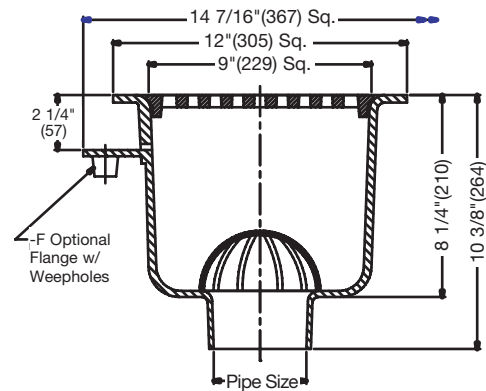
Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-732, 3, 4	32	12" Sq.	2,3,4"	porcelain	\$2,115.50
FS-732, 3, 4-1	32	12" Sq.	2,3,4"	nickel bronze	2,867.00



FS-740

12" Square x 8" Deep Sanitary Floor Sink

Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-742, 3, 4	34	12" Sq.	2,3,4"	porcelain	\$2,226.50
FS-742, 3, 4-1	34	12" Sq.	2,3,4"	nickel bronze	2,979.00



Options for FS-730 / FS-740 / FS-750 Series

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-9	Hinged Grate (-1, -3 Only)	\$351.00
P	Push-On Outlet	No Add	-21	Secondary Strainer	67.50
X	Inside Caulk Outlet	No Add	-33	Less Grate	-259.00
-F	Flange w/Weepholes	\$386.50	-128	Grate with 2 1/2" Center Opening	179.00
-FC	Flange w/Weepholes & Flashing Clamp	580.00	-150	1/2 Grate	No Add
-3	Stainless Steel (Rim & Grate)	898.50	-175	3/4 Grate	No Add
-5	Sediment Bucket	319.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-6	Vandal Proof (-1,-3 Only)	76.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-7	Trap Primer Tapping	191.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00



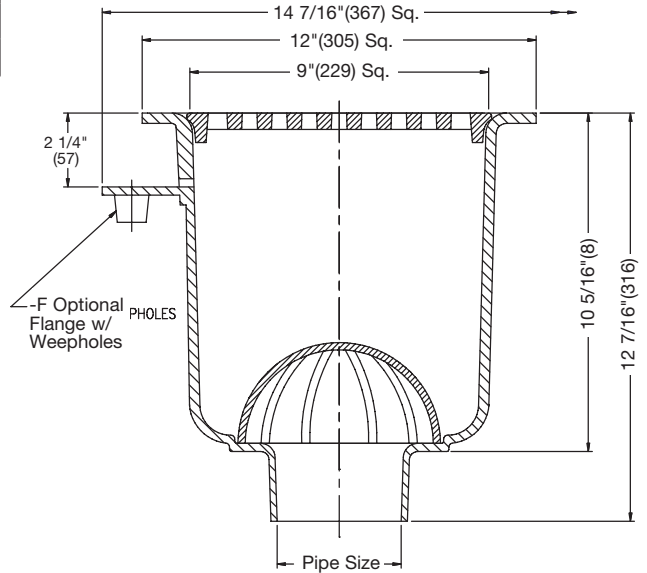
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Sanitary Floor Sinks

FS-750

12" Square x 10" Deep Sanitary Floor Sink

Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-752, 3, 4	36	12" Sq.	2,3,4"	porcelain	\$2,343.00
FS-752, 3, 4-1	36	12" Sq.	2,3,4"	nickel bronze	3,097.00

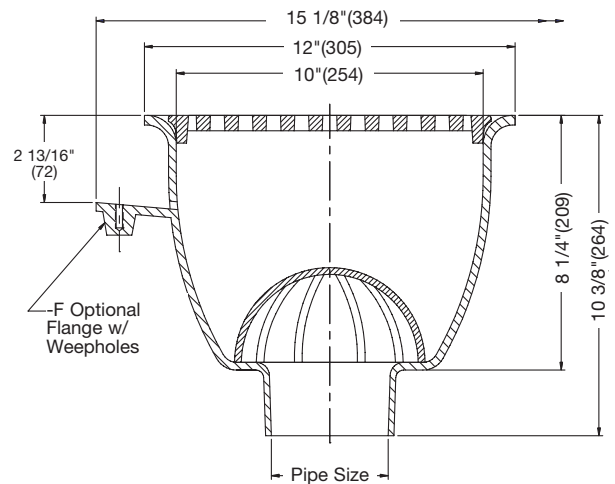


Options See Pg. 67

FS-760

12" Round x 8" Deep Sanitary Floor Sink

Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-762, 3, 4	32	12" Round	2,3,4"	porcelain	\$1,541.50
FS-762, 3, 4-1	32	12" Round	2,3,4"	nickel bronze	2,268.50



Options for FS-760 Series

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-21	Secondary Strainer	\$67.50
P	Push-On Outlet	No Add	-33	Less Grate	-259.00
-F	Flange w/Weepholes	\$386.50	-150	1/2 Grate	No Add
-FC	Flange w/Weepholes & Flashing Clamp	580.00	-175	3/4 Grate	No Add
-5	Sediment Bucket	319.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-6	Vandal Proof (-1,-3 Only)	76.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-7	Trap Primer Tapping	191.50	-G-1	4x9" Oval Nickel Bronze Funnel	872.00

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

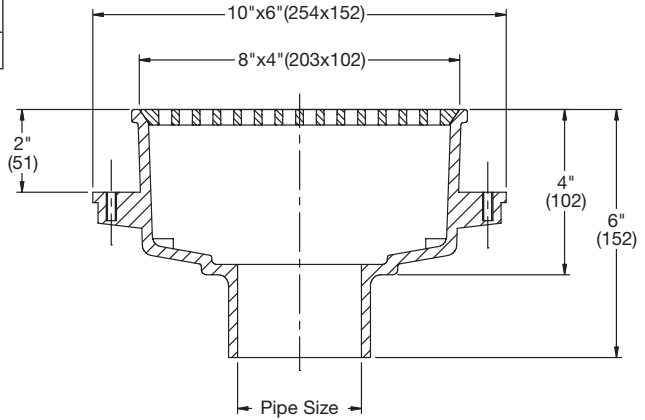


Sanitary Floor Sinks

FS-770

8" x 4" x 4" Deep Sanitary Floor Sink

Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-772, 3,	16	4"x8"	2,3"	porcelain	\$1,573.00
FS-772, 3-1	16	4"x8"	2,3"	nickel bronze	1,950.50



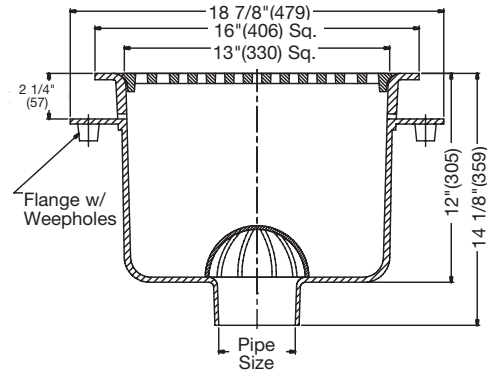
Options for FS-770 Series

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-33	Less Grate	\$-259.00
P	Push-On Outlet	No Add	-150	1/2 Grate	No Add
-FC	Flashing Clamp	\$186.50	F4-1	4" Round Nickel Bronze Funnel	428.00
-5	Sediment Bucket	223.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof (-1, Only)	76.00	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-7	Trap Primer Tapping	191.50			

FS-850

16" Square x 12" Deep Sanitary Floor Sink

Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-854,6	150	16" Sq.	4,6"	porcelain	\$4,686.00
FS-854,6-1	150	16" Sq.	4,6"	nickel bronze	5,903.00



Options for FS-850 Series

Suffix	Description	List Price	Suffix	Description	List Price
-FC	Flashing Clamp	\$563.50	-150	1/2 Grate	No Add
-5	Sediment Bucket	826.50	-175	3/4 Grate	No Add
-6	Vandal Proof (-1 Only)	76.00	-F4-1	4" Round NB Funnel	\$428.00
-7	Trap Primer Tapping	191.00	-F6-1	6" Round NB Funnel	625.50
-9	Hinged Grate	351.00	-G-1	4x9" Oval NB Funnel	872.00
-33	Less Grate	-821.50			



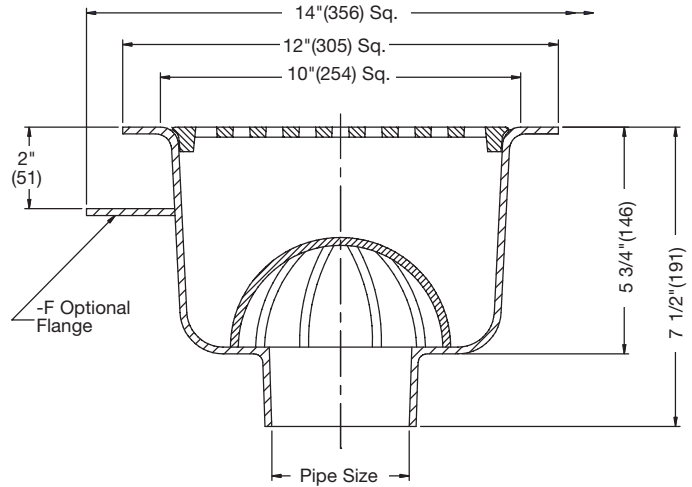
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Sanitary Floor Sinks

FS-780

12" Square x 6" Deep Stainless Steel Sanitary Floor Sink

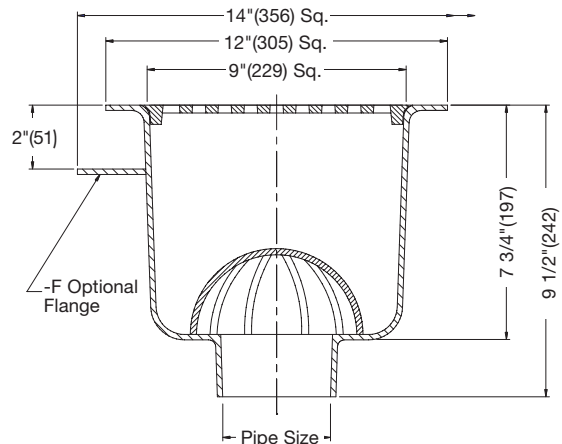
Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-782, 3, 4	16	12" Sq.	2,3,4"	stainless steel	\$3,725.00



FS-790

12" Square x 8" Deep Stainless Steel Sanitary Floor Sink

Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-792, 3, 4	18	12" Sq.	2,3,4"	stainless steel	\$3,895.50



For Options, See page 51.

Options for FS-780 and FS-790 Series

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-33	Less Grate	\$-1,126.50
P	Push-On Outlet	No Add	-150	1/2 Grate	No Add
-F	Flange w/Weepholes	\$548.00	-175	3/4 Grate	No Add
-FC	Flange w/Weepholes & Flashing Clamp	1,029.00	-F4-1	4" Round Nickel Bronze Funnel	428.00
-5	Sediment Bucket	413.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof	638.00	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-21	Secondary Strainer	67.50			

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

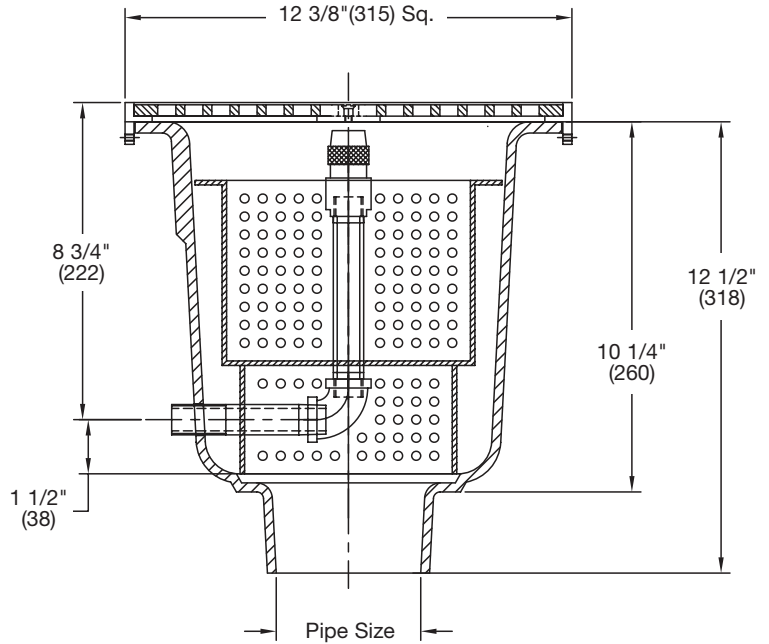


Can Wash Drains

FS-800

Sanitary Can Wash Drain

Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-804	39	12" Sq.	4"	nickel bronze	\$4,248.50



Options for FS-800 Series

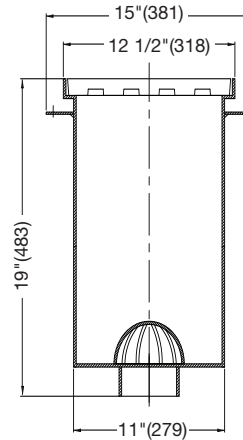
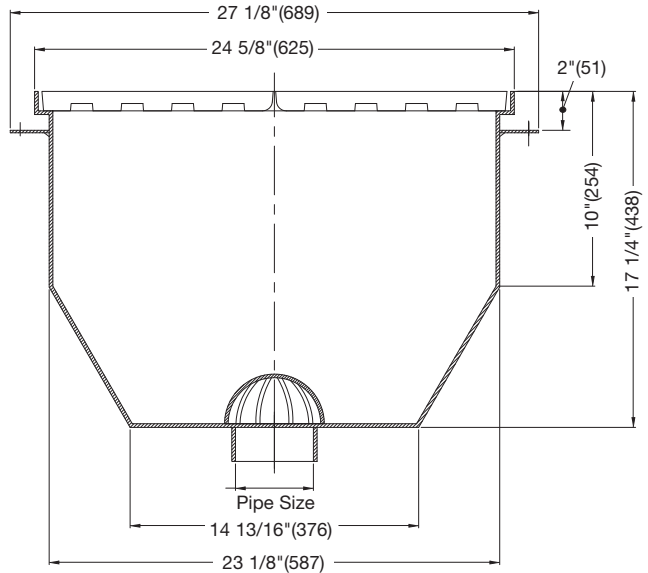
Suffix	Description	List Price
-6	Vandal Proof	\$76.00

Sanitary Floor Receptor

FS-900

12" x 24" x 17" Deep Floor Receptor

Model Number	Weight (lbs.)	Top Size	Outlet Size	Top	List Price
FS-902,3,4,6	82	12"x24"	2,3,4,6"	ductile iron	\$9,492.00
FS-902,3,4,6-1	82	12"x24"	2,3,4,6"	nickel bronze	12,147.50



Options for FS-900 Series

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-150	1/2 Grate	No Add
P	Push-On Outlet	No Add	-175	3/4 Grate	No Add
-FC	Flashing Clamp	\$563.50	-F4-1	4" Round Nickel Bronze Funnel	\$428.00
-5	SS Sediment Bucket	1,879.00	-F6-1	6" Round Nickel Bronze Funnel	625.50
-6	Vandal Proof	76.00	-G-1	4x9" Oval Nickel Bronze Funnel	872.00
-33	Less Grate	-2,113.50			

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



Dead Level® Trench Drains

Table Of Contents

- Pictorial Index
- Dead Level® Features
- Design Considerations
- Gratings
- Load Classifications
- Configure & Order Dead Level
- Typical Configurations



Dead Level® Trench Drains

Pictorial Index



Dead Level® BK
6" Wide SS Grating w/
Ductile Iron Frame



Dead Level® D
6" Wide Pre-Sloped
w/Ductile Iron Frame



Dead Level® P
6" Wide Pre-Sloped
w/Polypropylene Frame



Dead Level® DX
12" Wide Pre-Sloped
w/Ductile Iron Frame



Dead Level® S
6" Wide Deck Channel For
Cast in Place



Dead Level® Z
6" Wide Flanged Deck
Channel For Precast



Dead Level® DL-GF
6" Wide Grating
w/Ductile Iron Frame



Dead Level® DLP-GF
6" Wide Grating
w/Polypropylene Frame



Dead Level® DX-GF
12" Wide Grating
w/Ductile Iron Frame



Dead Level® Catch Basin
6"x24"x24" & 24"x24"x24"
Catch Basins

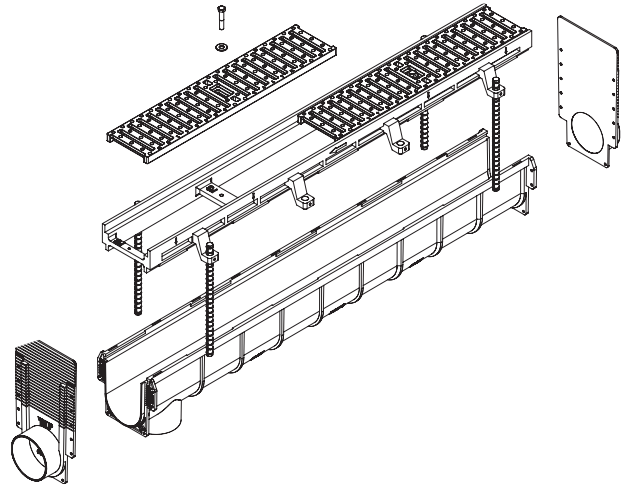
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

WATTS®

Dead Level® Trench Drains

Dead Level® Features

Uniquely engineered,
Dead Level® installs and
performs like no other
trench drain system



Applications

Recommended for surface drainage in indoor or outdoor applications.

Superior materials

Chemical resistant, UV stabilized injection molded polypropylene channels. Standard ductile iron frames for heavy traffic, or durable polypropylene frames for moderate traffic.

Stability & structural strength

Channels lock longitudinally outside of the structural frame, and cannot pinch or fold in with the concrete pour. Concentrated and dynamic loads transfer directly from the frame to the slab, protecting channels from stress and loading failure.

Frame anchored design

Support anchors tie directly to the structural frame, not the channels. Straight, level installations are easily accomplished, with less risk of channel floating.

Solid connections

Flanged channel, end cap, and frame connections create proper joints and alignment. Pre-molded no hub outlets guarantee a solid connection to discharge piping.

Short & corner/tee sections

1' straight and combination corner/tee sections add flexibility on uneven runs, while eliminating difficult field cutting operations.

Maximum flow

.7% sloped channels, with radiused bottom and smooth interior generate maximum hydraulic flow.

Gratings for diverse commercial applications

Ductile iron, stainless steel, galvanized, polypropylene, fiberglass, and bronze gratings available to meet DIN 19580 Load Classifications A through F. Check product specifications for heel proof and ADA requirements.

Shipped with construction covers

Time-saving construction covers protect the grating, and keep channels free of debris during construction.

Design Considerations

Traffic

Vehicular or equipment traffic requires higher load classifications, depending upon the specific type of loading. In general, non-pneumatic wheels and high velocity traffic create the heaviest loads. Trench drains subject to pedestrian traffic may require heel proof or ADA compliant grating. Polypropylene grating should be specified in areas with barefoot traffic, particularly around swimming pools, where chlorine can attack stainless steel grating.

Flow & Outlets

Specific flow calculations are typically used for outdoor trench drain. Indoors, flushing is usually of primary concern, particularly in sanitary environments. Pre-sloped trench drain is designed to be self-flushing, although minimal flows or long travel to an outlet will reduce flushing action. A general recommendation is minimum one outlet every 80' outdoors, every 100' indoors.

Catch Basins

Catch basins should be used as a point to trap debris, transition flow from the trench drain to discharge piping, or as a junction box receiving multiple runs.

Cosmetics

Any cast iron or ductile iron surface should be expected to show rust, even with an applied coating. Metal grating specified in a high visibility area should be galvanized or stainless steel. Optional galvanized or stainless steel frame guards are specified to match the frame to the grating, and maintain a uniform appearance.

* See Watts Dead Level® Trench Drains catalogue for complete information.



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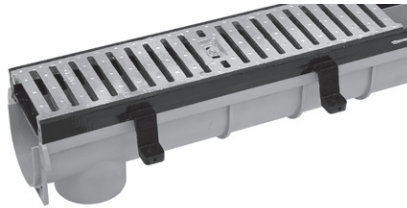
Dead Level® Trench Drains

Grating



Ductile Iron

8187063 DLG-DI12 12"
8187307 DLG-DI 24"



Galvanized Steel Slotted

8187346 DLG-GS12 12" 8187309 DLG-GS 48"
8187366 DLG-GS24 24"
8188706 DLG-GS36 36"



Galvanized Steel Perforated

8187347 DLG-GP12 12" 8187312 DLG-GP 48"
8187358 DLG-GP24 24"
8188705 DLG-GP36 36"



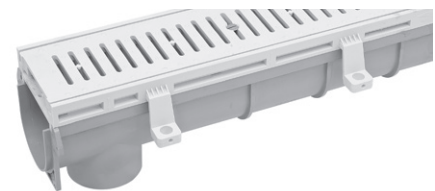
Stainless Steel Slotted

8187348 DLG-SS12 12" 8187308 DLG-SS 48"
8187368 DLG-SS24 24"
8188708 DLG-SS36 36"



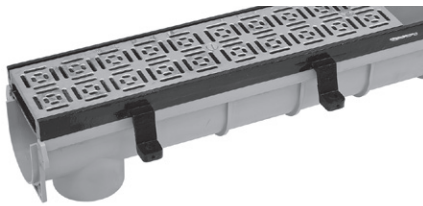
Stainless Steel Perforated

8187349 DLG-SP12 12" 8189435 DLG-SP40 40"
8187369 DLG-SP24 24"
8188707 DLG-SP36 36"



Polypropylene Composite

8187370 DLG-PP12 12"
8187030 DLG-PP 24"



Decorative Bronze

8187425 DLG-BR 24"



Galvanized Ductile Iron

8187989 DLG-GDI12 12"



Ductile Iron ADA

8187611 DLG-DI12-ADA 12"
8187430 DLG-DI-ADA 24"



Solid Cast Iron

8185967 DLG-SCI 24"

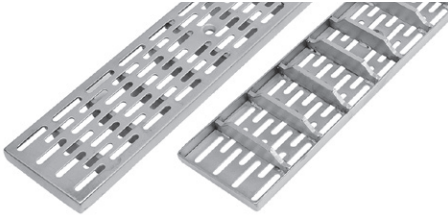


Stainless Steel Brickslot

8189419 DLG-BK12 12"
8189003 DLG-BK24 24"
8189004 DLG-BK 48"

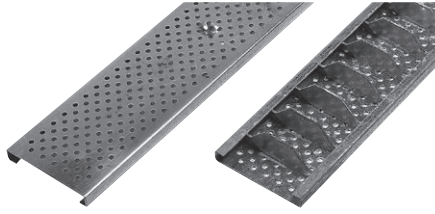
Dead Level® Trench Drains

Grating



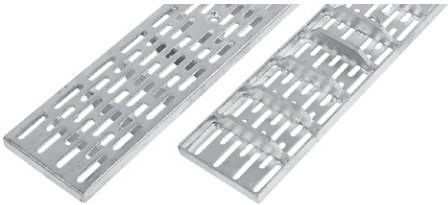
**Reinforced Galvanized
Steel Slotted**

8187350 DLG-RGS12 12" 8188720 DLG-RGS36 36"
8187367 DLG-RGS24 24" 8187314 DLG-RGS 48"



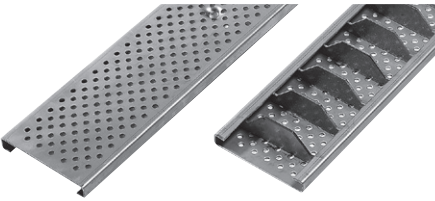
**Reinforced Galvanized
Steel Perforated**

8187351 DLG-RGP12 12" 8188722 DLG-RGP36 36"
8187406 DLG-RGP24 24" 8187316 DLG-RGP 48"



**Reinforced Stainless
Steel Slotted**

8187352 DLG-RSS12 12" 8188721 DLG-RSS36 36"
8187377 DLG-RSS24 24" 8187315 DLG-RSS 48"



**Reinforced Stainless
Steel Perforated**

8187353 DLG-RSP12 12" 8188723 DLG-RSP36 36"
8187382 DLG-RSP24 24" 8187317 DLG-RSP 48"

Dead Level® Trench Drains

Load Classifications

DIN 19580 / EN 1433 Load Classifications

Load Class Description



A Pedestrian areas, pavements, bicycle lanes, square, yard improvements, individual construction.



B Individual construction, private garages, gardens and parks, artificial landscape, private car parks.



C Pedestrian areas, waysides, parking areas, garages, car service stations, territory improvements.

Load Class Description



D Fuel filling stations, car washes, industrial areas, transport terminals, roads and automobile enterprises.



E Airports, highways, industrial companies, ports, fuel filling stations, transport terminals and storage terminals.



F Airport runways, industrial areas, transport terminals, structures with extreme loads on the road surface.

Dead Level P - Polypropylene Frame 6"

Grating Suffix	Grating Desc.	Std. Length	DIN Class	ANSI Class	H-20 Compliant	ADA Compliant	Heel Proof	Open Area
BR	Decorative Bronze	24"	B	MD	N	Y	Y	30%
DI	Ductile Iron	24"	C*	HD*	N	N	N	30%
DI-ADA	Ductile Iron ADA	24"	C*	HD*	N	Y	Y	25%
GDI	Galvanized Ductile Iron	24"	C*	HD*	N	N	N	30%
PP	Polypropylene	24"	C	MD	N	Y	Y	15%
GP	Galvanized Perforated	48"	A	LD	N	Y	Y	15%
GS	Galvanized Slotted	48"	A	LD	N	Y	N	12%
RGP	Reinforced Galvanized Perforated	48"	C*	HD*	N	Y	Y	15%
RGS	Reinforced Galvanized Slotted	48"	C*	HD*	N	Y	Y	30%
SP	Stainless Steel Perforated	48"	A	LD	N	Y	Y	15%
SS	Stainless Steel Slotted	48"	A	LD	N	Y	Y	12%
RSP	Reinforced Stainless Steel Perforated	48"	C*	HD*	N	Y	Y	15%
RSS	Reinforced Stainless Steel Slotted	48"	C*	HD*	N	Y	Y	30%
SCI	Solid Cast Iron	24"	C*	HD*	N	Y	Y	0%

*Load Class E / ANSI Class XHD with Frame Guards

Dead Level D, S, Z - Ductile Iron Frame 6" Wide

BR	Decorative Bronze	24"	B	MD	N	Y	Y	30%
DI	Ductile Iron	24"	F	SD	Y	N	N	30%
DI-ADA	Ductile Iron ADA	24"	F	SD	Y	Y	Y	25%
GDI	Galvanized Ductile Iron	24"	F	SD	Y	N	N	30%
PP	Polypropylene	24"	C	MD	N	Y	Y	15%
GP	Galvanized Perforated	48"	A	LD	N	Y	Y	15%
GS	Galvanized Slotted	48"	A	LD	N	Y	N	12%
RGP	Reinforced Galvanized Perforated	48"	E	XHD	Y	Y	Y	15%
RGS	Reinforced Galvanized Slotted	48"	E	XHD	Y	Y	Y	30%
SP	Stainless Steel Perforated	48"	A	LD	N	Y	Y	15%
SS	Stainless Steel Slotted	48"	A	LD	N	Y	N	12%
RSP	Reinforced Stainless Steel Perforated	48"	E	SD	Y	Y	Y	15%
RSS	Reinforced Stainless Steel Slotted	48"	E	SD	Y	Y	Y	30%
SCI	Solid Cast Iron	24"	F	SD	Y	Y	Y	0%

Consult factory for all applications outside of listed parameters.

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WATTS®

Dead Level® Trench Drains

Load Classifications

DIN 19580 / EN 1433 Load Classifications

Load Class Description



A Pedestrian areas, pavements, bicycle lanes, square, yard improvements, individual construction.



B Individual construction, private garages, gardens and parks, artificial landscape, private car parks.



C Pedestrian areas, waysides, parking areas, garages, car service stations, territory improvements.

Load Class Description



D Fuel filling stations, car washes, industrial areas, transport terminals, roads and automobile enterprises.



E Airports, highways, industrial companies, ports, fuel filling stations, transport terminals and storage terminals.



F Airport runways, industrial areas, transport terminals, structures with extreme loads on the road surface.

Dead Level DX - Ductile Iron Frame 12" Wide

Grating	Grating	Std.	DIN	ANSI	H-20	ADA	Heel	Open
Suffix	Desc.	Length	Class	Class	Compliant	Compliant	Proof	Area
DI	Ductile Iron	24"	F	SD	Y	N	N	40%
DI-ADA	Ductile Iron ADA	24"	F	SD	Y	Y	Y	30%
GDI	Galvanized Ductile Iron	24"	F	SD	Y	N	N	40%
RGP	Reinforced Galvanized Perforated	24"	E	XHD	Y	Y	Y	15%
RGS	Reinforced Galvanized Slotted	24"	E	XHD	Y	Y	Y	30%
RSP	Reinforced Stainless Steel Perforated	24"	E	SD	Y	Y	Y	15%
RSS	Reinforced Stainless Steel Slotted	24"	E	SD	Y	Y	Y	30%
SDI	Solid Ductile Iron	24"	F	SD	Y	Y	Y	0%

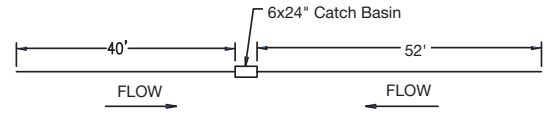
Catch Basins

Grating	Grating	Std.	DIN	ANSI	H-20	ADA	Heel	Open
Suffix	Desc.	Length	Class	Class	Compliant	Compliant	Proof	Area
6x24x24	See Dead Level P or Dead Level D - Same as Trench Drain Grating							
24x24x24	Ductile Iron	24"	F	SD	Y	Y	Y	40%
24x24x24	Stainless Steel	24"	F	SD	Y	Y	Y	30%

How to Configure & Order Dead Level® Trench System

1. Sketch General Layout

For each separate trench configuration show length(s), position of outlet(s), direction of flow(s), and position of catch basins (if required).



2. Specify Frame

Ductile Iron
Polypropylene

Ordering Code

D or DX
P

3. Specify Length in Feet

(Do not Include Catch Basins)

Numeric

4. Specify Outlet

Straight Run End Outlet
Straight Run Center Outlet
Other Configuration

EO
CO
XO

5. Specify Grating

Ductile Iron
ADA Ductile Iron
Galvanized Ductile Iron
Galvanized Steel Slotted
Galvanized Steel Perforated
Stainless Steel Slotted
Stainless Steel Perforated
Reinforced Galvanized Steel Slotted
Reinforced Galvanized Steel Perforated
Reinforced Stainless Steel Slotted
Reinforced Stainless Steel Perforated
Polypropylene

DI
DI-ADA
GDI
GS
GP
SS
SP
RGS
RGP
RSS
RSP
PP

6. Specify Catch Basin

(If Required)

6x6x24" Catch Basin
24x24x24" Catch Basin

B6
B24

7. Specify Frame Guards

(If Required)

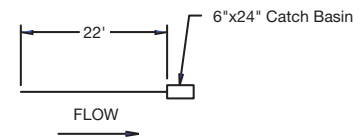
Galvanized Steel
Stainless Steel

FG
FS

8a. Configure Straight Run (EO or CO)

EX.

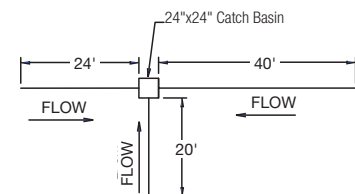
P22-EO-RSS-B6-FS
P = Polypropylene Frame
22 = Trench Length in Feet
EO = End Outlet
RSS = Reinforced Stainless Steel Slotted Grates
B6 = 6x24x24" Catch Basin
FS = Stainless Steel Frame Guard



8b. Configure Special Run (XO)

EX.

D84-XO-DI-B24
D = Ductile Iron Frame
84 = Trench Length in Feet
XO = Other Configuration (Provide Sketch or Describe)
DI = Ductile Iron Grates
B24 = 24x24x24" Catch Basin



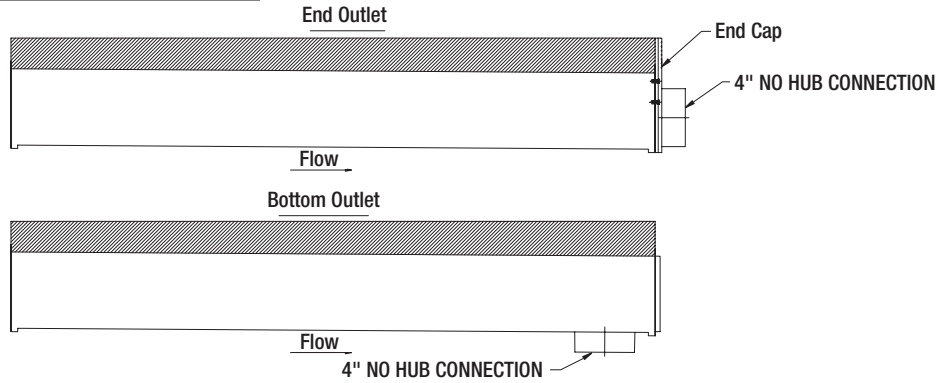
Consult factory for all applications outside of listed parameters.
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WATTS®

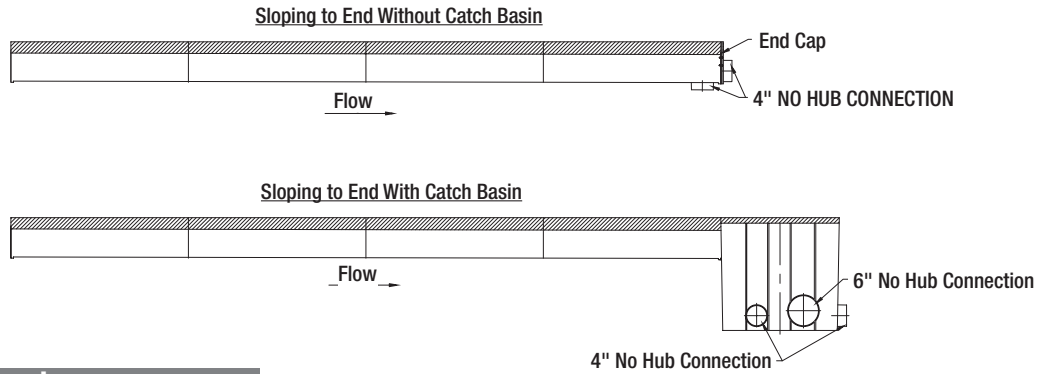
Dead Level® Trench Drains

Standard Configurations

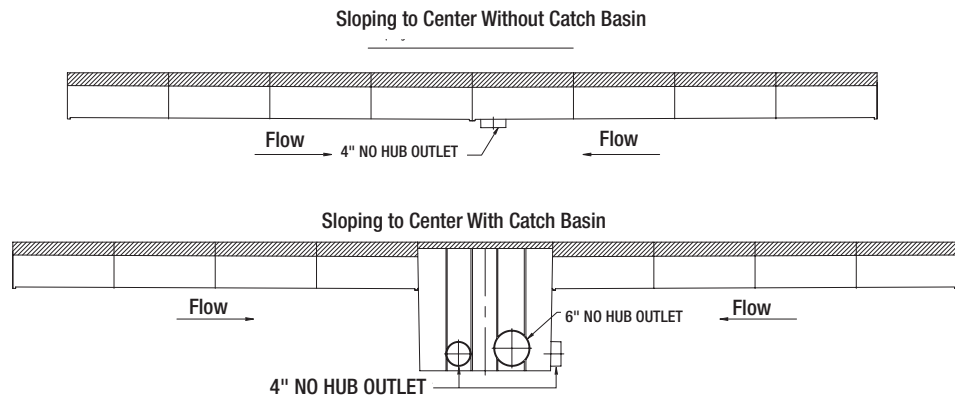
Outlet Variations



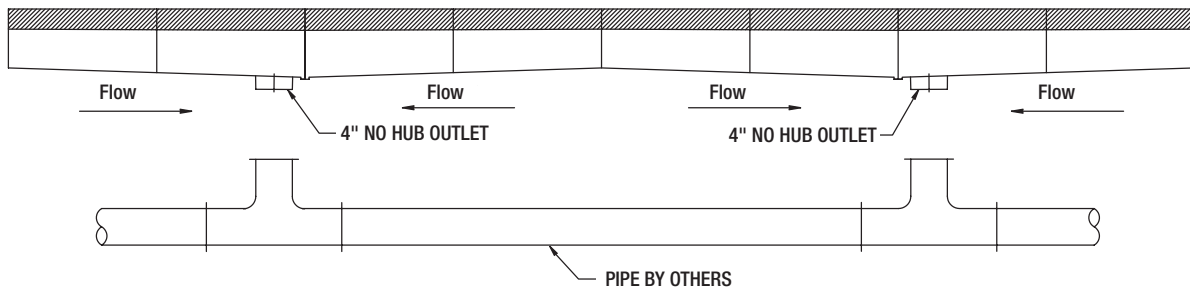
Sloping to End



Sloping to Center



Multiple Outlets

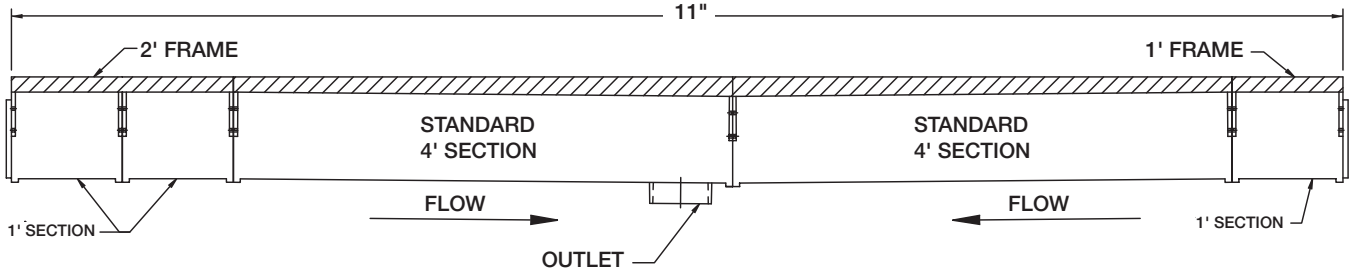


Dead Level® Trench Drains

Special Configurations

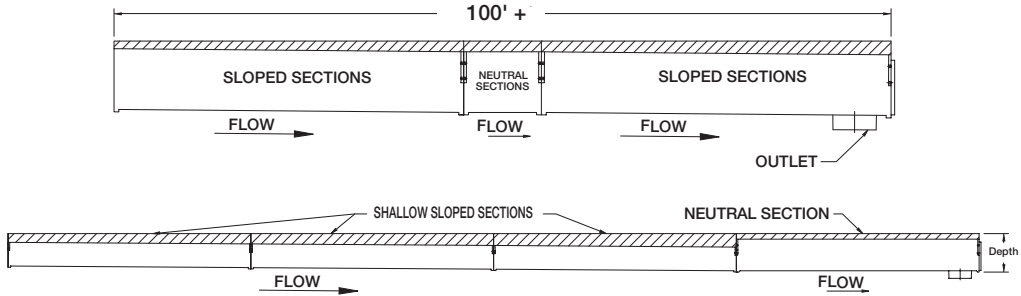
Use of Short Section

USE OF SHORT SECTIONS



Use of Neutral Channels

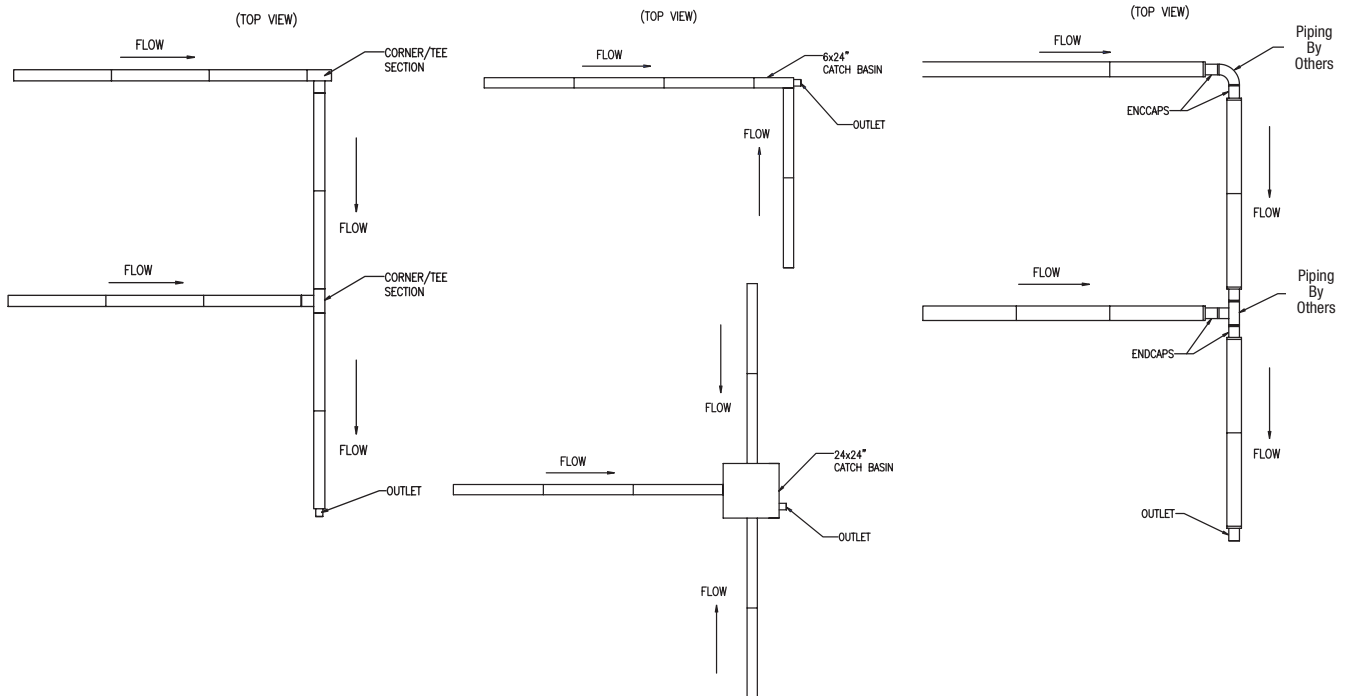
USE OF NEUTRAL CHANNELS
EXTEND RUN BEYOND 100'



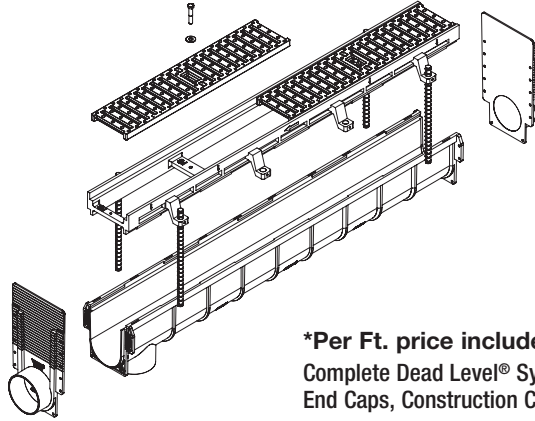
Use of Corner & Tee Section

Corner or Tee w/Catch Basin

Piped Corners and Tees



Dead Level® 6" Wide Pre-Sloped Trench Drain



***Per Ft. price includes:**
Complete Dead Level® System with Channels, Frames, Grates, Lockdowns, Frame Connectors, End Caps, Construction Covers, and Hardware as Required.

System Pricing	
Dead Level D w/Ductile Iron Frame Grating Type	List Price Per Ft.*
BK - Brickslot	\$712.00
BR - Decorative Bronze	713.00
DI - Ductile Iron	522.50
DI-ADA - ADA Ductile Iron	558.00
GDI - Galvanized Ductile Iron	619.00
GS - Galvanized Slotted	454.50
GP - Galvanized Perforated	454.50
FG - Fiberglass Grate	522.50
SS - Stainless Slotted	672.00
SP - Stainless Perforated	672.00
RGS - HD Galvanized Slotted	534.00
RGP - HD Galvanized Perforated	534.00
RSS - HD Stainless Slotted	749.00
RSP - HD Stainless Perforated	749.00
PP - Polypropylene	454.50
SCI - Solid Cast Iron	575.00
LG - Less Grate	379.50

System Pricing	
Dead Level P w/Polypropylene Frame Grating Type	List Price Per Ft.*
BK - Brickslot	\$638.00
BR - Decorative Bronze	623.50
DI - Ductile Iron	432.50
DI-ADA - ADA Ductile Iron	468.50
GDI - Galvanized Ductile Iron	529.00
GS - Galvanized Slotted	365.00
GP - Galvanized Perforated	365.00
FG - Fiberglass Grate	432.50
SS - Stainless Slotted	582.00
SP - Stainless Perforated	582.00
RGS - HD Galvanized Slotted	444.00
RGP - HD Galvanized Perforated	444.00
RSS - HD Stainless Slotted	659.00
RSP - HD Stainless Perforated	659.00
PP - Polypropylene	365.00
SCI - Solid Cast Iron	485.50
LG - Less Grate	290.00

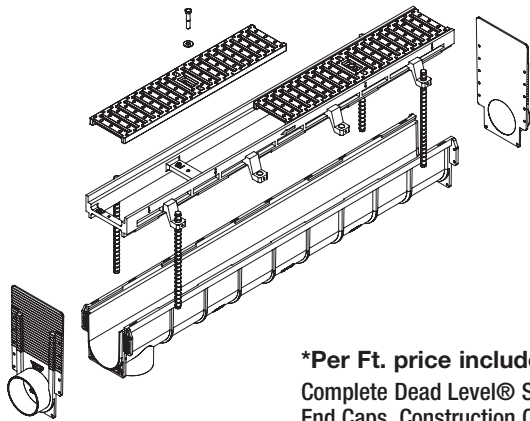
Catch Basins	Description	List Price Per Basin
CB-624D	6x24x24 Catch Basin w/DI Frame	\$1,344.00
CB-624P	6x24x24 Catch Basin w/PP Frame	1,344.00
CB-624D-T	6x24x24 Catch Basin w/DI Frame, Trash Basket	1,535.00
CB-624P-T	6x24x24 Catch Basin w/PP Frame, Trash Basket	1,535.00
CB-2424	24x24x24 Catch Basin w/DI Grate	3,695.00
CB-2424T	24x24x24 Catch Basin w/DI Grate, Trash Basket	4,435.00
CB-2424-RGS	24x24x24 Catch Basin w/Galv. Grate	7,325.00
CB-2424T-RGS	24x24x24 Catch Basin w/Galv. Grate, Trash Basket	8,064.00
CB-2424-SS	24x24x24 Catch Basin w/SS Grate	8,264.00
CB-2424T-SS	24x24x24 Catch Basin w/SS Grate, Trash Basket	9,004.00

Frame Guards	Description	List Price Per Basin
FG-BR	Decorative Bronze	\$241.50
FG-GV	Galvanized Steel	65.75
FG-SS	Stainless Steel	195.50



WATTS® Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Dead Level® DX 12" Wide Pre-Sloped Trench Drain



***Per Ft. price includes:**

Complete Dead Level® System with Channels, Frames, Grates, Lockdowns, Frame Connectors, End Caps, Construction Covers, and Hardware as Required.

System Pricing

Dead Level DX w/Ductile Iron Frame Grating Type	List Price Per Ft.*
DI - Ductile Iron	\$1,133.00
DI-ADA - ADA Ductile Iron	1,208.00
GDI - Galvanized Ductile Iron	1,344.00
RGP - HD Galvanized Perforated	1,182.00
RGS - HD Galvanized Slotted	1,182.00
RSP - HD Stainless Perforated	1,628.00
RSS - HD Stainless Slotted	1,628.00
SDI - Solid Ductile Iron	1,263.00
LG - Less Grate	780.00



Catch Basins	Description	List Price Per Basin
CB-2424	24x24x24 Catch Basin w/DI Grate	\$3,695.00
CB-2424T	24x24x24 Catch Basin w/DI Grate, Trash Basket	4,435.00
CB-2424-RGS	24x24x24 Catch Basin w/Galvanized Grate	7,325.00
CB-2424T-RGS	24x24x24 Catch Basin w/Galvanized Grate, Trash Basket	8,064.00
CB-2424-SS	24x24x24 Catch Basin w/SS Grate	8,264.00
CB-2424T-SS	24x24x24 Catch Basin w/SS Grate, Trash Basket	9,004.00

Frame Guards	Description	List Price Per Basin
-FG-GV	Galvanized Steel	\$65.75
-FG-SS	Stainless Steel	195.50



Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



Dead Level® Deck Channels

Dead Level® S 6" Wide Deck Channel For Cast in Place

System Pricing	
Grating Type	List Price Per Ft.*
BR - Decorative Bronze	\$713.00
DI - Ductile Iron	522.50
DI-ADA Ductile Iron ADA	559.00
GDI Galvanized Ductile Iron	619.00
GP Galvanized Perforated	454.50
GS Galvanized Slotted	454.50
FG Fiberglass Grate	522.50
SP Stainless Steel Perforated	672.00
SS Stainless Steel Slotted	672.00
RGP Reinforced Galvanized Perforated	535.00
RGS Reinforced Galvanized Slotted	535.00
RSP Reinforced Stainless Steel Perforated	749.00
RSS Reinforced Stainless Steel Slotted	749.00
PP Polypropylene	454.50
SCI Solid Cast Iron	575.00
LG Less Grate	379.50

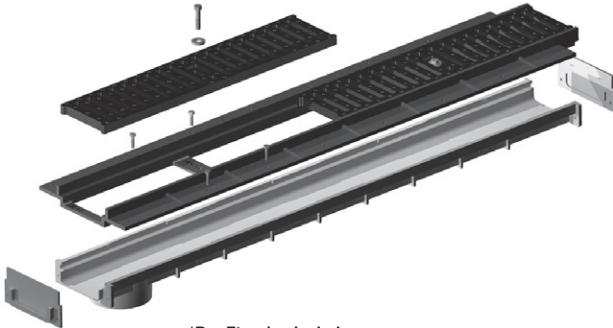


*Per Ft. price includes:
Complete Dead Level® System with Channels, Frames,
Grates, Lockdowns, Frame Connectors, End Caps, Construction
Covers, and Hardware as Required.

Frame Guards	Description	List Price Per Basin
FG-BR	Decorative Bronze	\$241.50
FG-GV	Galvanized Steel	65.75
FG-SS	Stainless Steel	197.00

Dead Level® Z 6" Wide Flanged Deck Channel For Precast

System Pricing	
Grating Type	List Price Per Ft.*
DI - Ductile Iron	\$522.50
DI-ADA Ductile Iron ADA	559.00
GDI Galvanized Ductile Iron	619.00
RGP HD Galvanized Perforated	535.00
RGS HD Galvanized Slotted	535.00
RSP HD Stainless Perforated	749.00
RSS HD Stainless Slotted	749.00



*Per Ft. price includes:
Complete Dead Level® System with Channels, Frames,
Grates, Lockdowns, Frame Connectors, End Caps, Construction
Covers, and Hardware as Required.

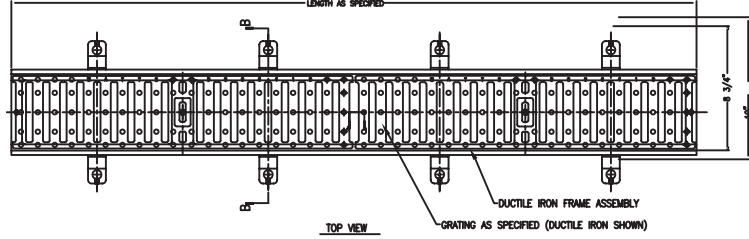
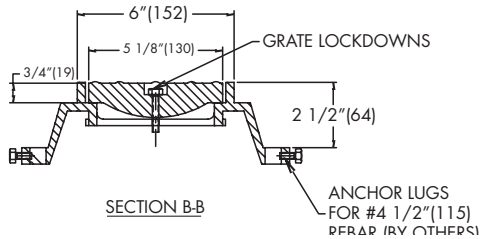
Frame Guards	Description	List Price Per Basin
FG-BR	Decorative Bronze	\$241.50
FG-GV	Galvanized Steel	65.75
FG-SS	Stainless Steel	197.00

Dead Level® 6" Wide Grate & Frame

DL-GF

6" Wide Ductile Iron Trench Frame & Grating

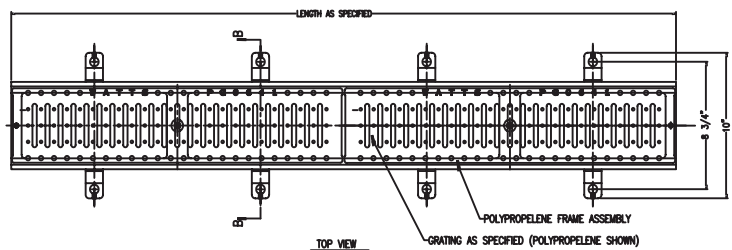
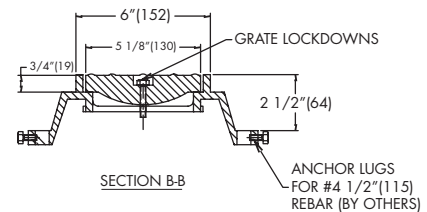
Model Number	Weight (lbs.)	Frame	Grating	List Price Per Ft.
DL-GF-BR	14 lbs./ft.	ductile iron	decorative bronze	\$560.50
DL-GF-DI	16 lbs./ft.	ductile iron	ductile iron	369.50
DL-GF-DI-ADA	16 lbs./ft.	ductile iron	ductile iron ADA	406.00
DL-GF-GDI	16 lbs./ft.	ductile iron	galvanized ductile iron	466.00
DL-GF-GP	11 lbs./ft.	ductile iron	galvanized perforated	302.50
DL-GF-GS	11 lbs./ft.	ductile iron	galvanized slotted	302.50
DL-GF-RGP	12 lbs./ft.	ductile iron	reinforced galvanized perforated	382.00
DL-GF-RGS	12 lbs./ft.	ductile iron	reinforced galvanized slotted	382.00
DL-GF-SP	11 lbs./ft.	ductile iron	stainless steel perforated	520.00
DL-GF-SS	11 lbs./ft.	ductile iron	stainless steel slotted	520.00
DL-GF-RSP	12 lbs./ft.	ductile iron	reinforced stainless steel perforated	597.00
DL-GF-RSS	12 lbs./ft.	ductile iron	reinforced stainless steel slotted	597.00
DL-GF-SCI	17 lbs./ft.	ductile iron	solid cast iron	423.50



DLP-GF

6" Wide Polypropylene Trench Frame & Grating

Model Number	Weight (lbs.)	Frame	Grating	List Price Per Ft.
DLP-GF-BR	6 lbs./ft.	polypropylene	decorative bronze	\$471.50
DLP-GF-DI	8 lbs./ft.	polypropylene	ductile iron	281.00
DLP-GF-DI-ADA	8 lbs./ft.	polypropylene	ductile iron ADA	316.50
DLP-GF-GDI	8 lbs./ft.	polypropylene	galvanized ductile iron	377.00
DLP-GF-GP	3 lbs./ft.	polypropylene	galvanized perforated	213.00
DLP-GF-GS	3 lbs./ft.	polypropylene	galvanized slotted	213.00
DLP-GF-PP	3 lbs./ft.	polypropylene	polypropylene	213.00
DLP-GF-RGP	4 lbs./ft.	polypropylene	reinforced galvanized perforated	292.50
DLP-GF-RGS	4 lbs./ft.	polypropylene	reinforced galvanized slotted	292.50
DLP-GF-SP	3 lbs./ft.	polypropylene	stainless steel perforated	430.50
DLP-GF-SS	3 lbs./ft.	polypropylene	stainless steel slotted	430.50
DLP-GF-RSP	4 lbs./ft.	polypropylene	reinforced stainless steel perforated	507.50
DLP-GF-RSS	4 lbs./ft.	polypropylene	reinforced stainless steel slotted	507.50
DLP-GF-SCI	9 lbs./ft.	polypropylene	solid cast iron	333.50



Frame Guards

Add List Per Ft.

FG-BR	Decorative Bronze	241.50
FG-GV	Galvanized Steel	65.75
FG-SS	Stainless Steel	195.50

Consult factory for all applications outside of listed parameters.

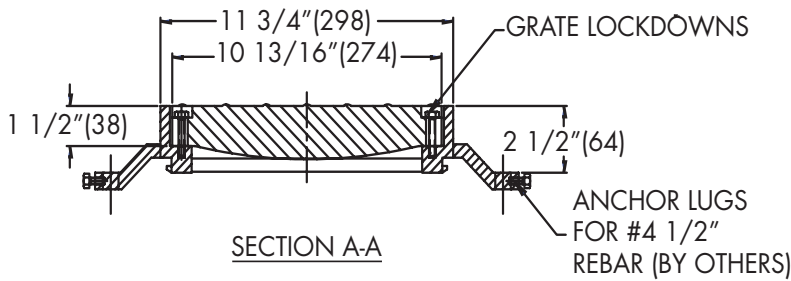
Prices do not include applicable taxes.



Dead Level® 12" Wide Grate & Frame

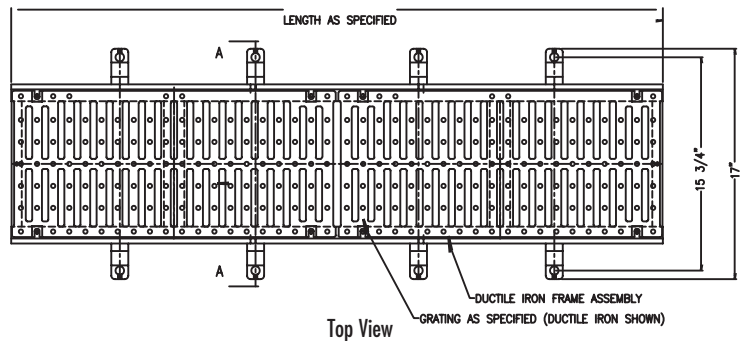
DX-GF 12" Wide Ductile Iron Trench Frame & Grating

Model Number	Weight (lbs./ft.)	Frame	Grating	List Price Per Ft.
DX-GF-DI	32 lbs./ft.	ductile iron	ductile iron	\$722.50
DX-GF-DI-ADA	32 lbs./ft.	ductile iron	ductile iron ADA	797.00
DX-GF-GDI	32 lbs./ft.	ductile iron	galvanized ductile iron	933.00
DX-GF-RGP	22 lbs./ft.	ductile iron	reinforced galvanized perforated	770.50
DX-GF-RGS	22 lbs./ft.	ductile iron	reinforced galvanized slotted	770.50
DX-GF-RSP	22 lbs./ft.	ductile iron	reinforced stainless steel perforated	1,217.00
DX-GF-RSS	22 lbs./ft.	ductile iron	reinforced stainless steel slotted	1,217.00
DX-GF-SCI	33 lbs./ft.	ductile iron	solid ductile iron	852.50



Frame Guards

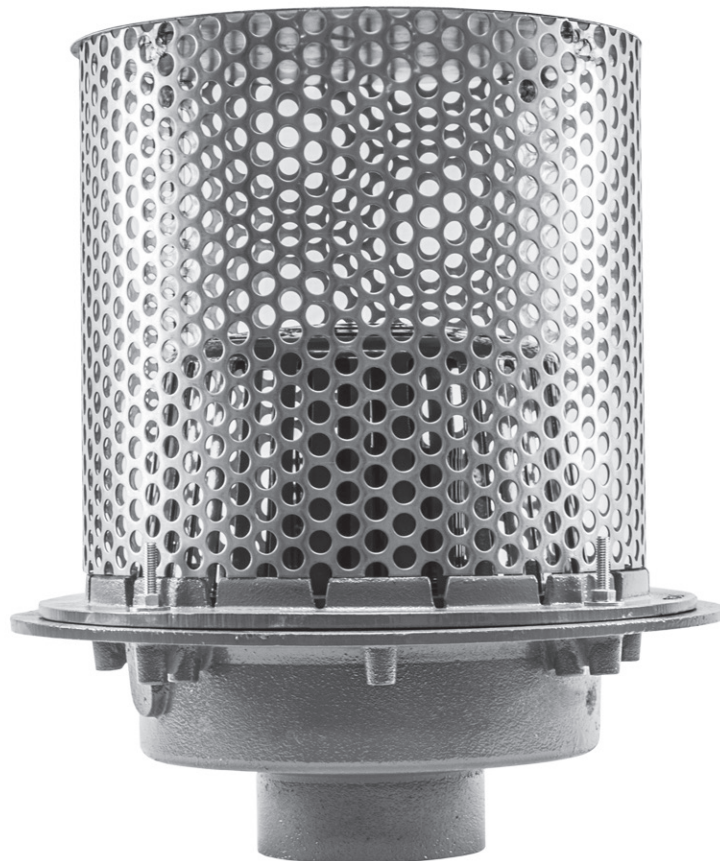
		Add List Per Ft.
FG	Galvanized	\$65.75
FS	Stainless Steel	195.50



Green Roof Drains

Table Of Contents

- Pictorial Index
- Recommendations
- Green Roof Drainage
 - Placement & Sizing
 - Materials
 - Pipe Connections
 - Commonly Specified Options
 - Typical Installations



Green Roof Drains

Pictorial Index



GRD-610
Green Roof Large
Planter Drain



GRD-610-W
Green Roof Large
Planter Overflow Drain



GRD-620
Green Roof Plaza Area
Drain



GRD-630
Green Roof Intensive
Area Drain



GRD-640
Green Roof Metered
Overflow Drain



GRD-650
Green Roof Multi-Level
Planter Drain



GRD-670
Green Roof Drain
w/Auxiliary Inlet



GRD-680
Green Roof Planter Drain
with Traffic Grate



GRD-690
Green Roof Shallow
Planter Drain



GRD-730
Green Roof Large Multi-
Level Planter Drain

Green Roof Drains

Recommendations

Application

Extensive Area Primary.....	GRD-650, GRD-610
Intensive Area Primary.....	GRD-630
Maintenance Walkway.....	GRD-680
Multi-Level.....	GRD-650, GRD-730
Overflow.....	GRD-610-W, GRD-640
Planting Area Primary.....	GRD-610, GRD-670
Plaza Area.....	GRD-620

Product

Green Roof Drainage

Drainage is a critical aspect of green roof design and construction. Excessive accumulation of water in planting mediums can add considerable weight to a roof structure, creating a potentially hazardous condition.

Extensive green roof systems are comprised of grasses and vegetation requiring minimum or no maintenance. These systems typically have a soil depth of approx. 6", and an overall build-up of 12" or less above the structural roof.

Intensive green roof systems generally have a much deeper soil depth, and can incorporate bushes, trees, shrubs, and other decorative plants. Extensive green roof systems are designed to be regularly visited and maintained. Properly designed drainage is critical to ensure efficient water removal, and keep vegetation from interfering with drains.

Placement & Sizing

Refer to standard Roof Drain Placement & Sizing on p.100.

Materials

Cast iron epoxy coated*

Industrial grade cast iron, finished with Watts gray acid resistant epoxy coating.

*Note: * Watts Drainage standard epoxy coating is designed for interim protection of iron components during processing, shipping, and construction. It is not intended to protect surfaces subject to traffic, or environmental conditions. Exposed iron surfaces should be expected to show surface oxidation (rusting) after a short period of time.*

Domes

Standard non-rusting aluminum, covered with type 304 stainless steel mesh.

Perforated ABS

Standard 4" sch. 40 pipe size with 1/2" dia. perforations.

Perforated stainless steel

20 gauge, 3/8" dia. perforations, in accordance with ASTM-351-Grade CF8 (Type 304) standard specification.

Pipe Connections

No hub (standard)

Butt connection using a no hub or neoprene coupling. Suitable for cast iron, plastic, and most other piping applications.

Push-on (-P)

ASTM C-564 gasket connection, with pipe stop. Suitable for no hub service weight cast iron, sch. 40 plastic, and steel pipe. Not recommended for above grade.

Inside caulk (-X)

Used for lead and oakum joints, pipe is inserted through a caulk ring on the drain outlet.

PVC (-60) or ABS (-61) socket

For direct solvent weld connection to sch. 40 plastic pipe.

Threaded (-THD)

Female threaded outlet for connection to IPS threaded pipe.

Green Roof Drains

Green Roof Drainage

Commonly Specified Options

-13 Galvanized body and flashing clamp

Standard zinc galvanizing, typically specified in coastal environments.

-B Sump Receiver

Receives roof drain flange for installation flush with the roof deck, eliminating stress on the roofing membrane, and potential puddling around the drain.

-D Underdeck Clamp

Install on the underside of the roof deck, securely fastens the roof drain to the deck.

-F Deck Flange / Adjustable Extension

10 ga. zinc plated steel flange creates a structurally sound mounting surface over the roof penetration, and enables the drain to be elevated to the insulation height. *Note: a separate sump receiver is not required when a drain is specified with -F Deck Flange / Adjustable Extension.*

-L Vandal Proof Dome

Dome secured with Allen head bolts.

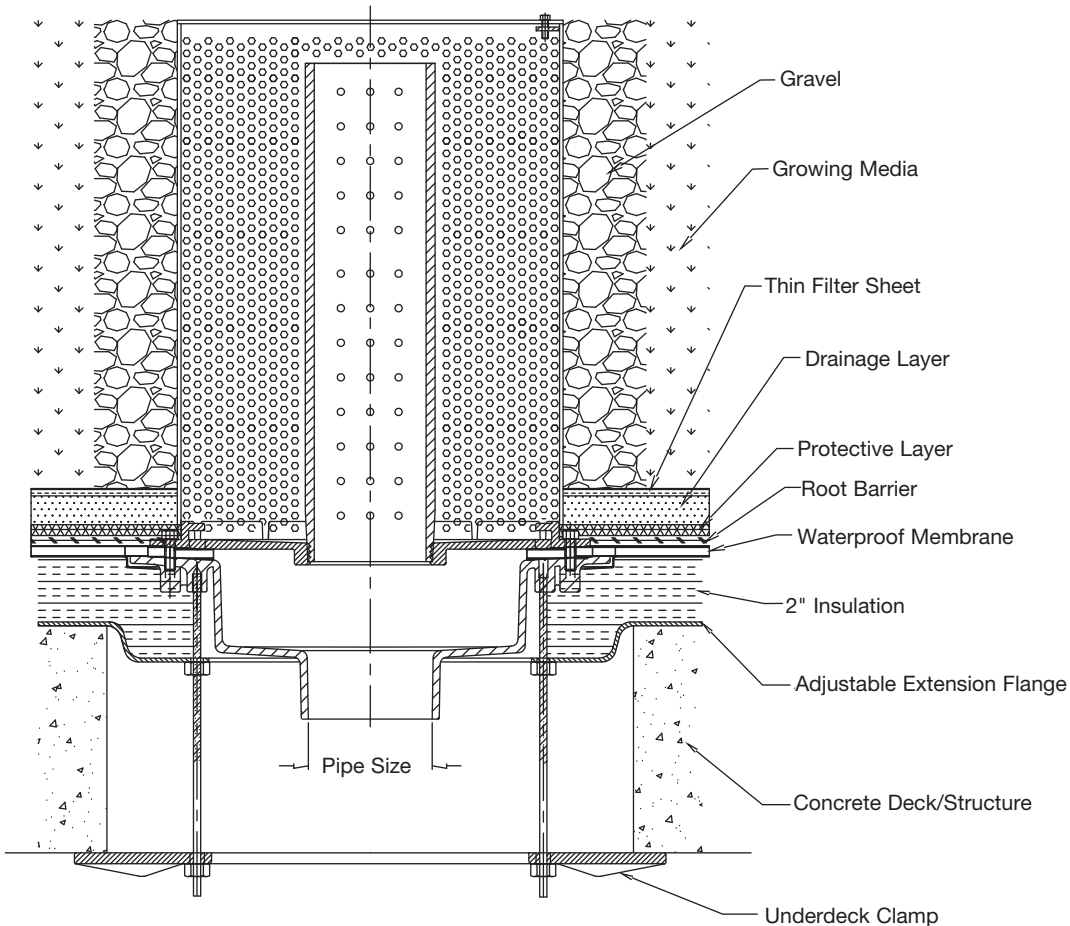
-US Buy American Compliant

Product will be supplied with minimum 51% domestic content, in compliance with FAR 52.225-9 Buy American Act.

Typical Installations

GRD-630

INTENSIVE AREA



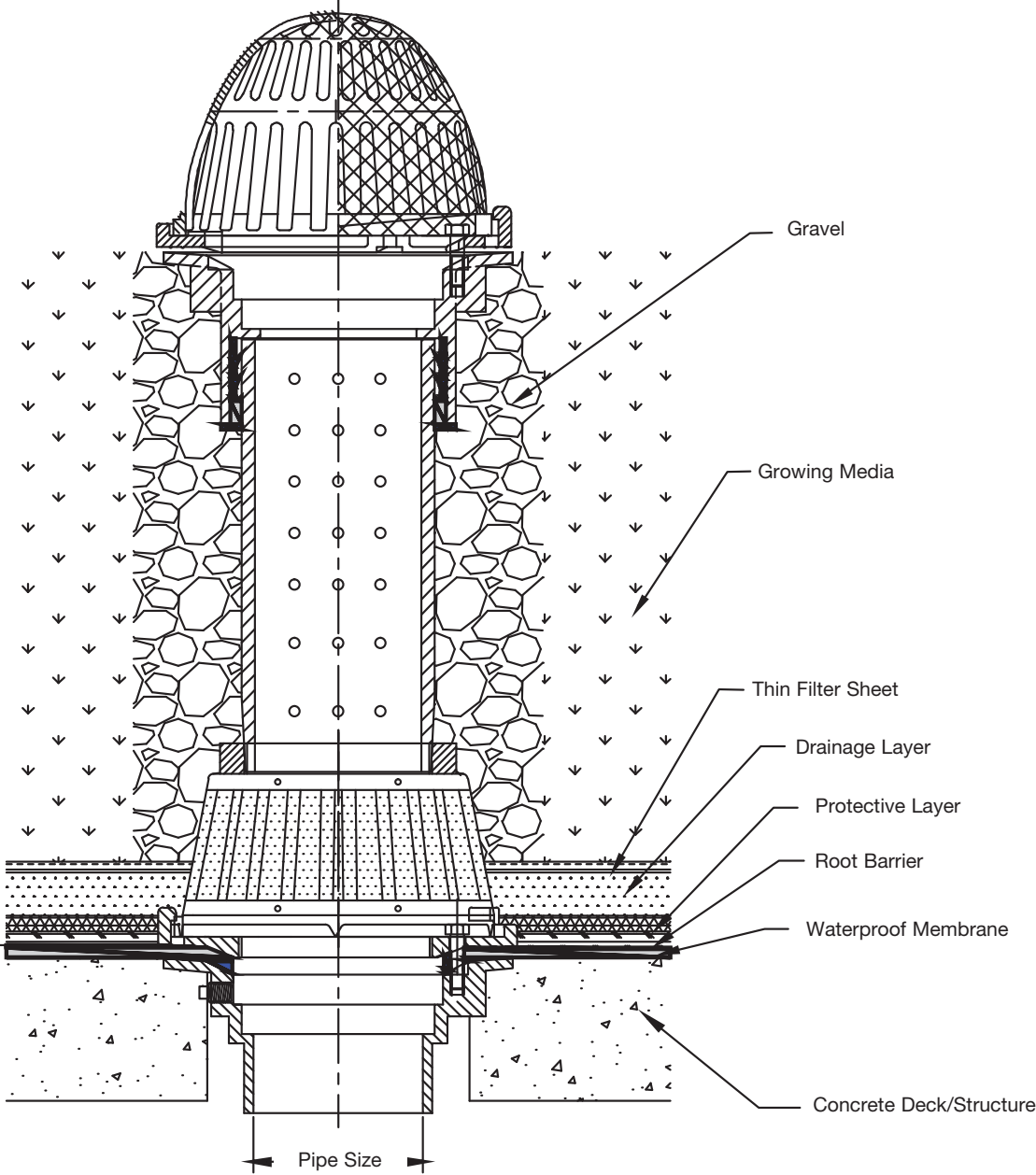
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Green Roof Drains

Typical Installations

GRD-650

MULTI-LEVEL PLANTING AREA



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

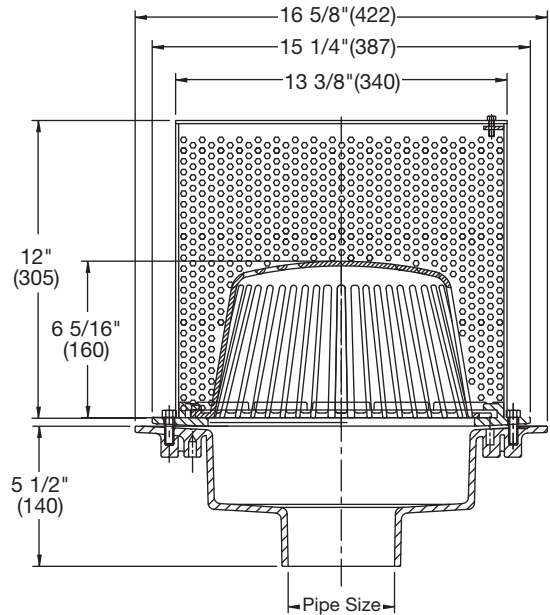
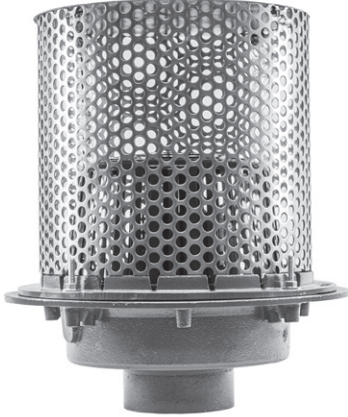


Green Roof Drains

GRD-610

Green Roof Large Planter Drain

Model Number	Outlet Size	WT., lbs.	List Price
GRD-612, 3, 4, 5, 6, 8, 10"	2,3,4,5,6,8,10"	32	\$2,527.00



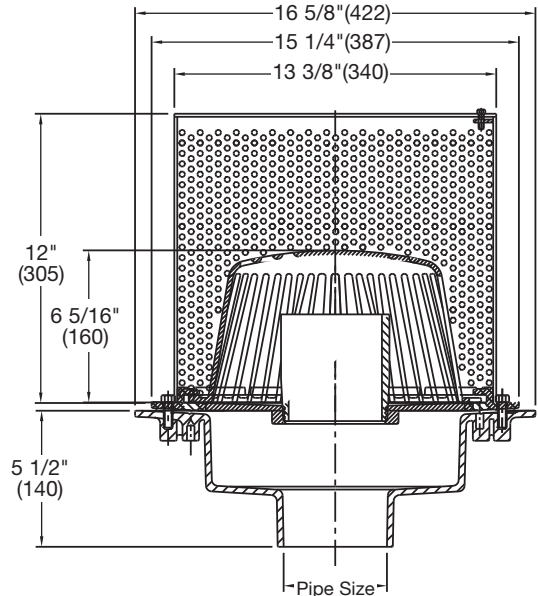
Options for GRD-610

Suffix	Description	List Price
-13	Galvanized Body & Clamp	\$956.50
-B	Sump Receiver	268.50
-D	Underdeck Clamp	240.50
-F	Deck Flange/Adj. Extension	659.50

GRD-610-W

Green Roof Large Planter Overflow Drain

Model Number	Outlet Size	WT., lbs.	List Price
GRD-612, 3, 4, 5, 6, 8, 10-W	2,3,4,5,6,8,10"	37	\$2,949.50



Options for GRD-610-W

Suffix	Description	List Price
-13	Galvanized Body & Clamp	\$956.50
-B	Sump Receiver	268.50
-D	Underdeck Clamp	240.50
-F	Deck Flange/Adj. Extension	659.50
-W2	2" Internal Standpipe	No Add



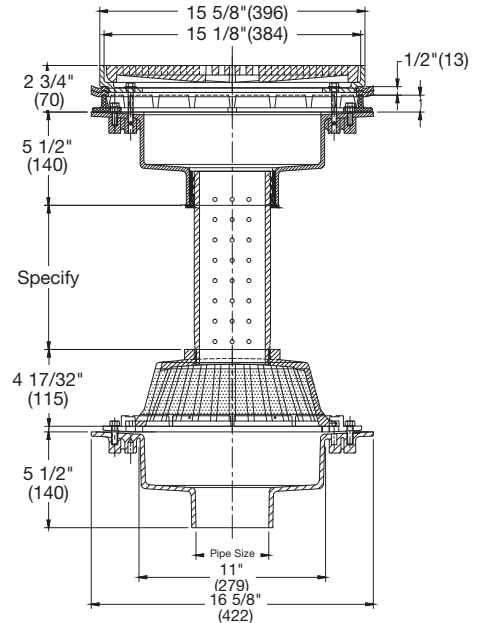
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Green Roof Drains

GRD-620

Green Roof Plaza Area Drain

Model Number	Outlet Size	Grate	WT., lbs.	List Price
GRD-622, 3, 4, 5, 6, 8, 10	2,3,4,5,6,8,10"	nickel bronze	130	\$3,983.50



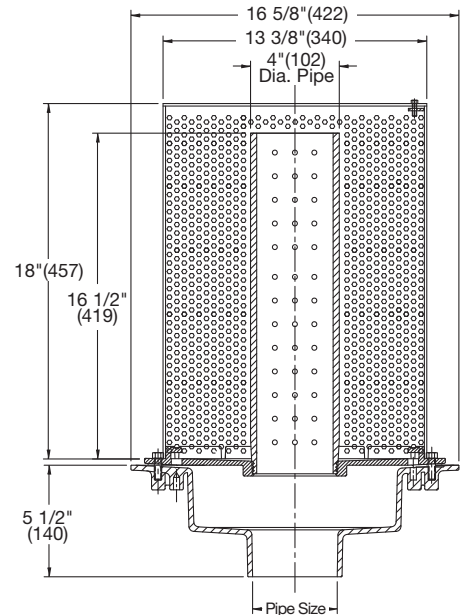
Options for GRD-620

Suffix	Description	List Price	Suffix	Description	List Price
-5	Sediment Bucket	\$256.00	-B	Sump Receiver	\$268.50
-6	Vandal Proof	147.00	-D	Underdeck Clamp	240.50
-13	Galvanized Body & Clamp	1,913.00	-F	Deck Flange/Adj. Extension	659.50

GRD-630

Green Roof Intensive Area Drain

Model Number	Outlet Size	WT., lbs.	List Price
GRD-632, 3, 4, 5, 6, 8, 10	2,3,4,5,6,8,10"	34	\$2,906.50



Options for GRD-630

Suffix	Description	List Price
-13	Galvanized Body & Clamp	\$956.50
-B	Sump Receiver	268.50
-D	Underdeck Clamp	240.50
-F	Deck Flange/Adj. Extension	659.50

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

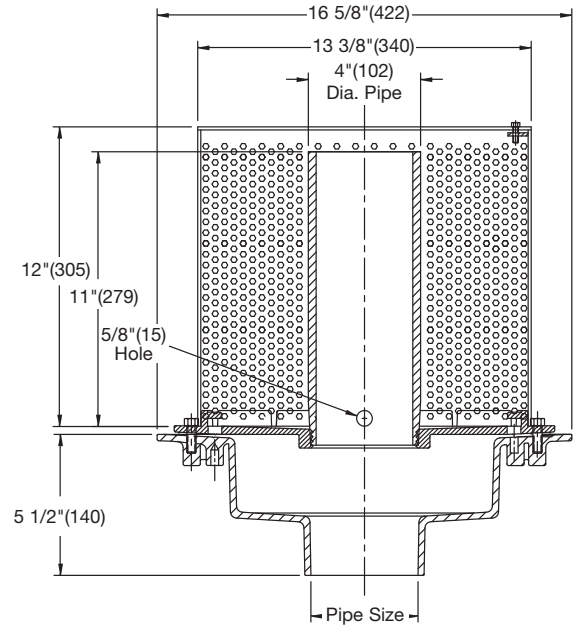


Green Roof Drains

GRD-640

Green Roof Metered Overflow Drain

Model Number	Outlet Size	WT., lbs.	List Price
GRD-642, 3, 4, 5, 6, 8, 10	2,3,4,5,6,8,10"	37	\$2,375.00



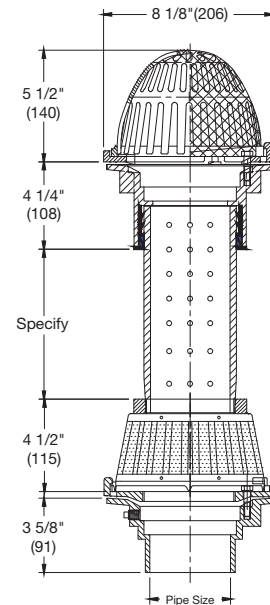
Options for GRD-640

Suffix	Description	List Price
-13	Galvanized Body & Clamp	\$956.50
-B	Sump Receiver	268.50
-D	Underdeck Clamp	240.50
-F	Deck Flange/Adj. Extension	659.50

GRD-650

Green Roof Multi-Level Planter Drain

Model Number	Outlet Size	WT., lbs.	List Price
GRD-652, 3, 4,	2,3,4,\"	29	\$2,268.50



Options for GRD-650

Suffix	Description	List Price	Suffix	Description	List Price
-5	Sediment Bucket	\$138.50	-D	Underdeck Clamp	\$149.00
-6	Vandal Proof	147.00	-F	Deck Flange/Adj. Extension	500.00
-13	Galvanized Body & Clamp	394.00	-S0	Side Outlet	218.00
-B	Sump Receiver	256.00			



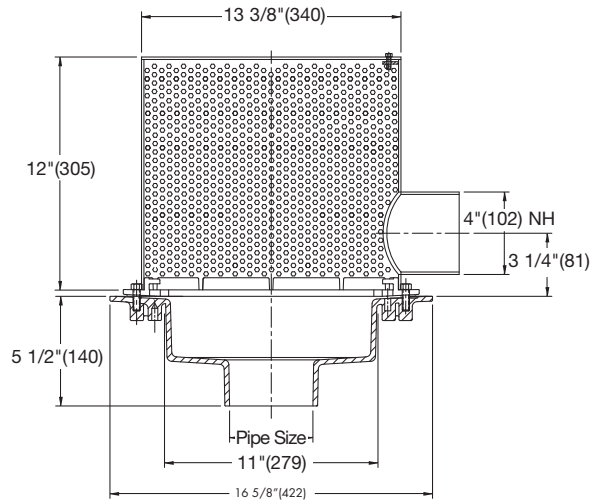
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Green Roof Drains

GRD-670

Green Roof Drain w/Auxiliary Inlet

Model Number	Outlet Size	WT., lbs.	List Price
GRD-672, 3, 4, 5, 6, 8, 10	2,3,4,5,6,8,10"	38	\$3,895.50



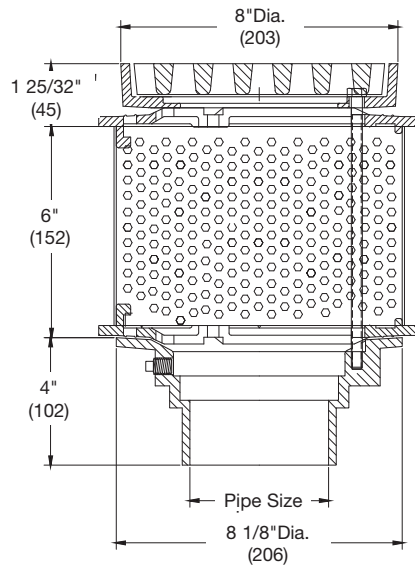
Options for GRD-670

Suffix	Description	List Price
-13	Galvanized Body & Clamp	\$956.50
-B	Sump Receiver	268.50
-D	Underdeck Clamp	240.50
-F	Deck Flange/Adj. Extension	659.50
-Q	Additional Inlet(s)	256.00 ea.

GRD-680

Green Roof Planter Drain w/ Traffic Grate

Model Number	Outlet Size	Grate	WT., lbs.	List Price
GRD-682, 3, 4,	2,3,4,"	ductile iron	22	\$2,160.50



Options for GRD-680

Suffix	Description	List Price	Suffix	Description	List Price
-1	All Nickel Bronze Top	\$614.00	-D	Underdeck Clamp	\$149.00
-6	Vandal Proof	147.00	-F	Deck Flange/Adj. Extension	500.00
-13	Galvanized Body & Clamp	394.00	-S0	Side Outlet	218.00
-B	Sump Receiver	256.00			

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

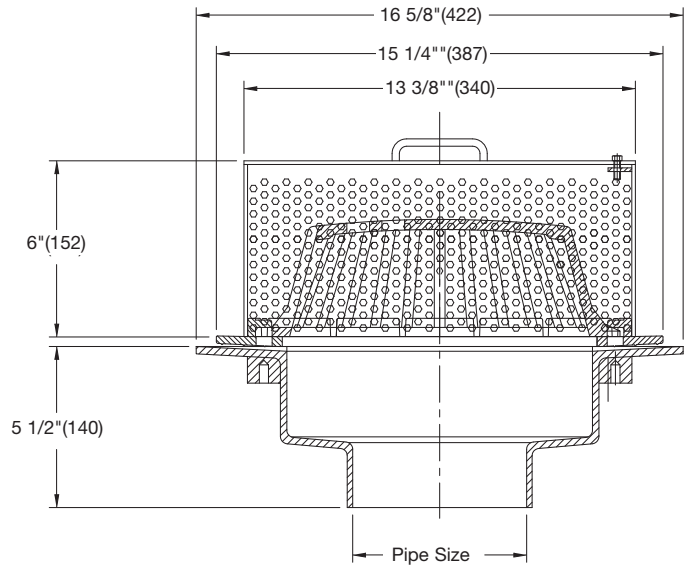


Green Roof Drains

GRD-690

Green Roof Shallow Planter Drain

Model Number	Outlet Size	WT., lbs.	List Price
GRD-692, 3, 4, 5, 6, 8, 10	2,3,4,5,6,8,10"	34	\$2,585.00



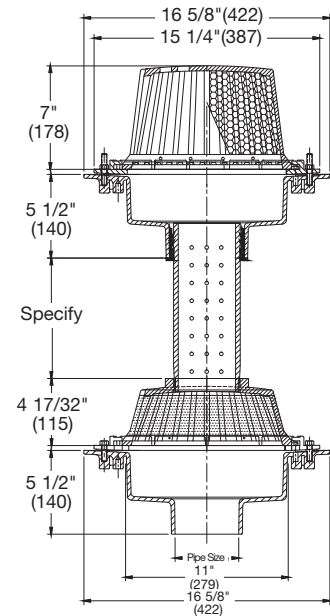
Options for GRD-690

Suffix	Description	List Price
-13	Galvanized Body & Clamp	\$956.50
-B	Sump Receiver	268.50
-D	Underdeck Clamp	240.50
-F	Deck Flange/Adj. Extension	659.50

GRD-730

Green Roof Large Multi-Level Planter Drain

Model Number	Outlet Size	WT., lbs.	List Price
GRD-732, 3, 4, 5, 6, 8, 10	2,3,4,5,6,8,10"	74	\$2,787.50



Options for GRD-730

Suffix	Description	List Price
-5	Sediment Bucket	\$256.00
-6	Vandal Proof	147.00
-13	Galvanized Body & Clamp	1,913.00
-B	Sump Receiver	268.50
-D	Underdeck Clamp	240.50
-F	Deck Flange/Adj. Extension	659.50



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Roof Drains

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- Pictorial Index
- Product Recommendations
- Roof Drain Selection Factors
 - Placement
 - Sizing
 - Materials
 - Pipe Connections
 - Commonly Specified Options
- Typical Installations



Roof Drains

Pictorial Index



RD-100
Roof Drain



RD-100-85
IRMA
Roof Drain



RD-100-CP
Roof Drain with
12" x 12" Promenade Top



RD-100-CP-85
IRMA Roof Drain
w/12"x12" Promenade Top



RD-100-F
Roof Drain w/Deck
Flange/Adj. Extension



RD-100-R
Roof Drain with
2 in. External Water Dam



RD-100-SO
Roof Drain with Side Outlet



RD-100-W
Roof Drain with 4"
Internal Standpipe



RD-200
Small Area Roof Drain



RD-200-CP
Small Area Roof Drain with
Promenade Top



RD-200-CP-85
IRMA Roof Drain with 8 in.
Promenade Top



RD-200-R
Small Area Roof Drain with
2 in. External Water Dam



RD-200-SO
Side Outlet Roof Drain



RD-200-W
Small Area Roof Drain with
4" Internal Standpipe



RD-230
Side Outlet Balcony Drain



RD-240
Bottom Outlet Balcony
Drain

Roof Drains

Pictorial Index



RD-250
One-Piece Combination
Roof Drain



RD-260
Combination Roof Drain &
Secondary Overflow



RD-270
Scupper Drain with Angle
Grate



RD-280
Flanged Cast Iron
Roof Drain



RD-280-SO
Flanged Cast Iron Roof
Drain with Side Outlet



RD-290
Scupper Drain
w/Flat Grate



RD-300
High Volume Roof Drain



Note: December 2018 Launch

RD-300-AC
Adj. Ext. Compression
Seal Roof Drain



RD-300-85
High Volume
IRMA Roof Drain



RD-300-CP15
Roof Drain with 15 x15 in.
Promenade Top



RD-300-CP15-85
IRMA Roof Drain
w/15"x15" Promenade Top



RD-300-F
High Volume Roof Drain w/
Deck Flange/Adj. Extension



RD-300-R
High Volume Roof Drain w/
2 in. External Water Dam



RD-300-W
High Volume Roof Drain
w/4 in. Internal Standpipe



RD-400
12 in. Dia.
Deck Receptor Drain



RD-410
8 in. Dia.
Deck Receptor Drain

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

WATTS®

Roof Drains

Pictorial Index

			
RD-500 Super Flow Roof Drain	RD-680-VC Cast Iron Vent Cap	RD-700 Dual Outlet Roof Drain/ Overflow	RD-700-CT Dual Outlet Roof Drain/ Overflow
			
<i>Note: October 2018 Launch</i> RD-800 Dual Outlet Large Capacity Roof Drain/Overflow	<i>Note: October 2018 Launch</i> RD-800-CT Dual Outlet Large Capacity Roof Drain/Overflow	RD-900 Neoprene Expansion Coupling	RD-940 Downspout Nozzle
			
RD-950 Stainless Steel Downspout Cover	RD-970/RD-980 Downspout Boots		

Recommendations

Application

Balcony or Canopy
Combination Primary/Overflow
Deck Receptor
Downspout Nozzle/Cover
Downspout Boot
IRMA
Primary Roof Drain
Primary Roof Overflow
Promenade Area
Promenade Area IRMA
Scupper or Parapet

Product

RD-230, RD-240
RD-700
RD-400, RD-410
RD-940, RD-950
RD-970 / RD-980
RD-300-85
RD-300, RD-300-F
RD-300-R, RD-300-W
RD-100-CP, RD-300-CP15
RD-100-CP-85, RD-300-CP15-85
RD-270, RD-290



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Roof Drains

Roof Drain Selection Factors

Sizing

- 1.) Calculate roof area (sq. ft.) to be drained.
- 2.) Determine the maximum hourly rainfall rate for your area. This information is available from your local weather bureau or code authority.
- 3.) Select leader (drain pipe) size. In general, increasing leader size will decrease the number of drains required.
- 4.) Reference leader size with hourly rainfall rate, to determine the roof area drained by each leader (Chart B).
- 5.) Divide roof area (1.) by area per leader (4.) to determine the number of drains required

Chart A

Leader Pipe Size Inches	Maximum Allowable Horizontal Projected Roof Areas Square Feet at Various Rainfall Rates					
	1 in./hr.	2 in./hr.	3 in./hr.	4 in./hr.	5 in./hr.	6 in./hr.
2	2176	1088	725	544	435	363
3	6440	3220	2147	1610	1288	1073
4	13840	6920	4613	3460	2768	2307
5	25120	12560	8373	6280	5024	4187
6	40800	20400	13600	10200	8160	6800
8	88000	44000	29333	22000	17600	14667

Chart A is based on Table 11-1 from the Uniform Plumbing Code (UPC) - 2006 Edition

1

Chart B

Allowable Flow (GPM) for Vertical Leaders and Horizontal Storm Drains ²				
Pipe Size Inches	Vertical Leader	Horizontal Storm Drain / Slope		
		1/8"/ft.	1/4"/ft.	1/2"/ft.
2	23	10	15	20
3	67	34	48	68
4	144	78	110	156
5	261	139	196	278
6	424	222	314	445
8	913	478	677	956
10	-	860	1214	1721
12	-	1384	1953	2768
15	-	2473	3491	4946

Chart B is based on Table 11-2 from the Uniform Plumbing Code (UPC) - 2006 Edition

2

Roof Drains

Roof Drain Selection Factors

Materials

Cast iron epoxy coated*

Industrial grade cast iron, finished with Watts gray acid resistant epoxy coating.

NOTE: Watts drainage standard epoxy coating is designed for interim protection of iron components during processing, shipping, and construction. It is not intended to protect surfaces subject to traffic, or environmental conditions. Exposed iron surfaces should be expected to show surface oxidation (rusting) after a short period of time.

PVC or ABS

Select roof drains can be specified with optional PVC (-60) or ABS (-61) plastic bodies for direct sch. 40 solvent weld connection.

Poly domes

UV stabilized high density polyethylene, high resistance to breakage and weathering.

Pipe Connections

No Hub (standard)

Butt connection using a no hub or neoprene coupling. Suitable for cast iron, plastic, and most other piping applications.

Push-on (-P)

ASTM C-564 gasket connection, with pipe stop. Suitable for no hub or service weight cast iron, sch. 40 plastic, and steel pipe. Not recommended for above grade.

Inside Caulk (-X)

Used for lead and oakum joints, pipe is inserted through a caulk ring on the drain outlet.

PVC (-60) or ABS (-61) socket

For direct solvent weld connection to sch. 40 plastic pipe.

Threaded (-THD)

Female threaded outlet for connection to IPS threaded pipe.

Commonly Specified Options

-13 Galvanized body and flashing clamp

Standard zinc galvanizing, typically specified in coastal environments.

-85 4" High Perforated SS Extension

For IRMA roof applications, allows drainage through insulation area.

-B Sump Receiver

Receives roof drain flange for installation flush with the roof deck, eliminating stress on the roofing membrane, and potential puddling around the drain.

-D Underdeck Clamp

Install on the underside of the roof deck, securely fastens the roof drain to the deck.

-F Deck Flange / Adjustable Extension

10 ga. zinc plated steel flange creates a structurally sound mounting surface over the roof penetration, and enables drain to be elevated to insulation height.

Note: a separate sump receiver is not required when the drain is specified with a -F Deck Flange / Adjustable Extension.

-GSS Stainless Steel Ballast Guard

4" high perforated stainless steel, protects drain area and dome in ballasted roof areas.

-K Ductile Iron Dome

Superior impact resistance compared to standard cast iron. Finished with standard grey epoxy coating.

-K13 Galvanized Ductile Iron Dome

Hot-dipped galvanized, superior impact resistance. Typically specified in coastal environments.

-K40 Ductile Iron Low Dome

Low profile, superior impact resistance compared to standard cast iron. Finished with standard grey epoxy coating.

-K80 Aluminum Dome

Corrosion resistant, finished with standard grey epoxy coating.

-K83 Stainless Steel Mesh Covered Aluminum Dome

Corrosion resistant, mesh prevents small debris from entering the drain.

-L Vandal Proof Dome

Dome secured with Allen head bolts.

-R 2" High External Water Dam

For emergency roof overflow drains, restricts drainage on roof surface below 2".

-US Buy American Compliant

Product will be supplied with minimum 51% domestic content, in compliance with FAR 52.225-9 Buy American Act.

-W 4" High Internal Water Dam

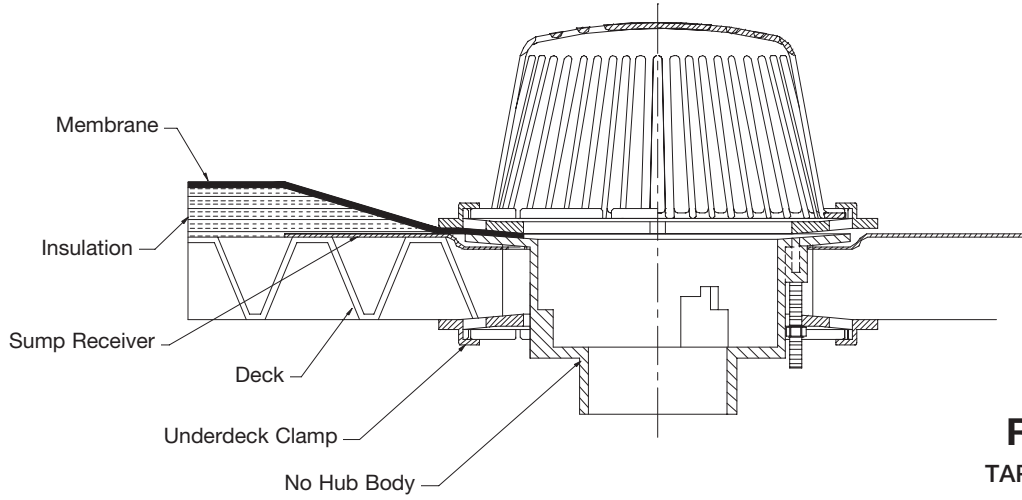
For emergency roof overflow drains, restricts drainage on roof surface below 4".



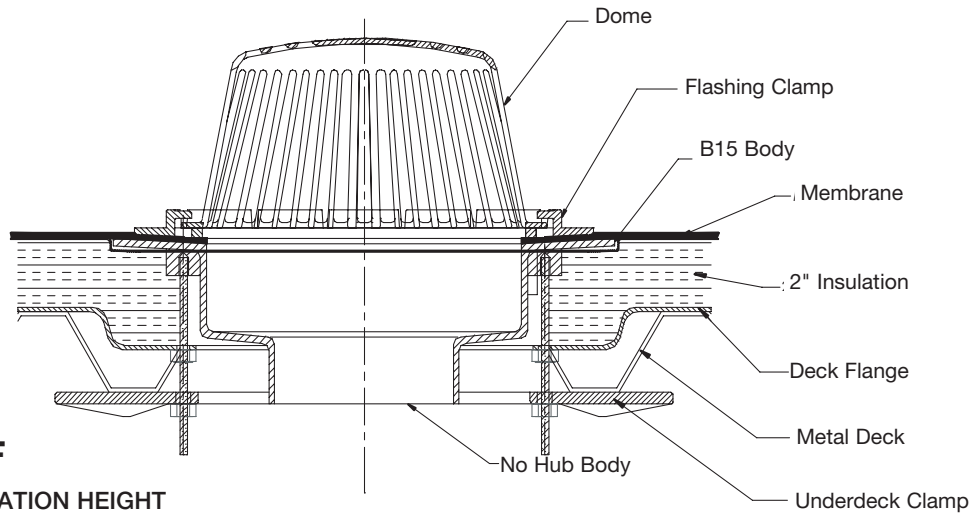
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Roof Drains

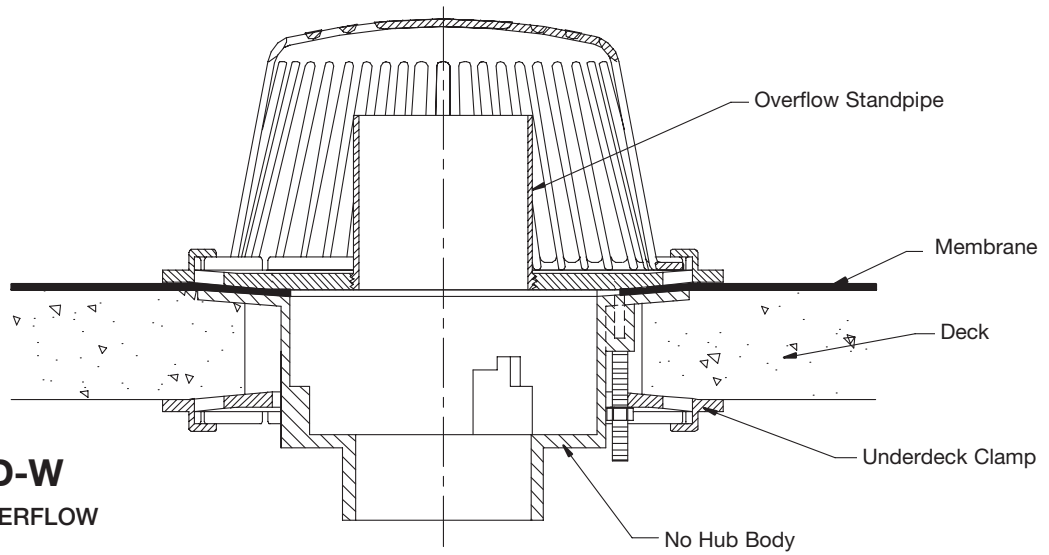
Typical Installations



RD-100-B-D
TAPERED INSULATION



RD-300-D-F
DRAIN ELEVATED TO INSULATION HEIGHT



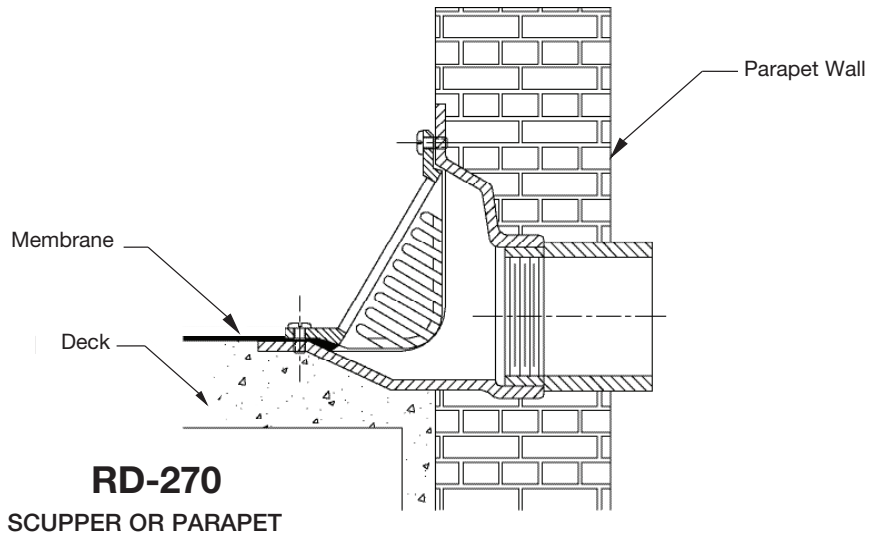
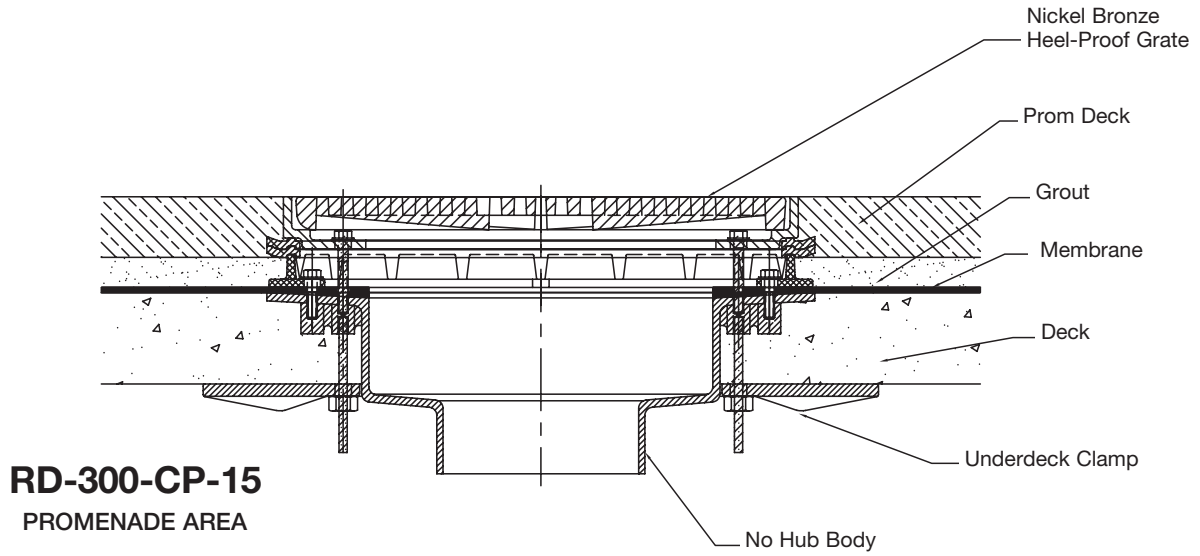
RD-100-D-W
INTERNAL OVERFLOW

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Roof Drains

Typical Installations



Roof Drains

RD-100

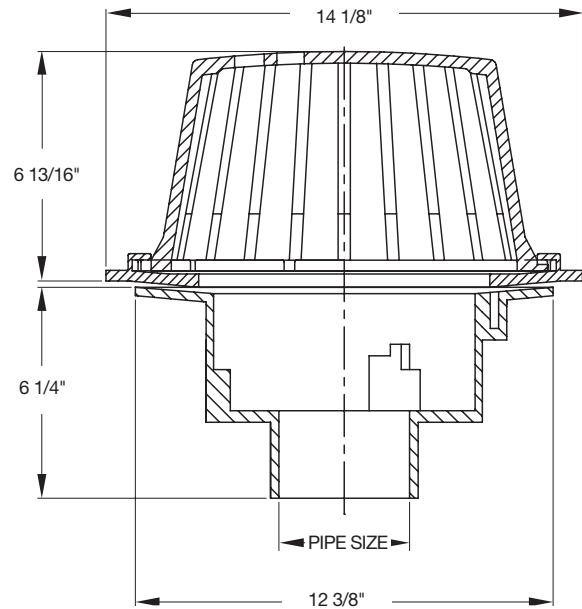
Roof Drain



Model Number	Outlet Size	WT., lbs.	List Price
RD-102, 3, 4	2,3,4,"	26	\$707.50
RD-105, 6	5, 6	26	1,010.00



Note: Poly Dome Standard



RD-100-F

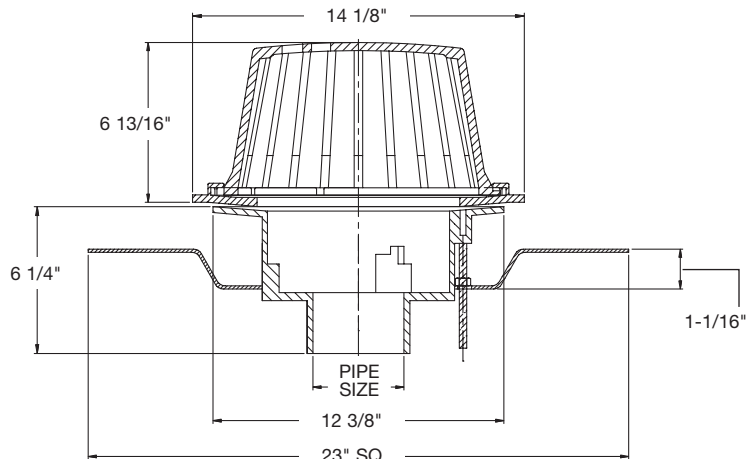
Roof Drain with Adjustable Extension Flange



Model Number	Outlet Size	WT., lbs.	List Price
RD-102, 3, 4-F	2,3,4,"	40	\$1,366.50
RD-105, 6-F	5, 6	40	1,669.00



Note: Poly Dome Standard



Options for RD-100 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-GSS	Stainless Steel Ballast Guard	\$625.50
P	Push-On Outlet	No Add	-K	Ductile Iron Dome	210.50
T	Threaded Outlet	\$80.00	-K13	Galvanized Dome	568.50
X	Inside Caulk Outlet	No Add	-K40	Ductile Iron Low Dome (4" high)	210.50
-60	PVC Body w/Socket Outlet (2,3,4,6" only)	No Add	-K80	Aluminum Dome	244.50
-61	ABS Body w/Socket Outlet (2,3,4" only)	No Add	-K81	Rough Bronze Dome	828.00
-13	Galvanized Body & Flashing Clamp	956.50	-K83	SS Mesh Covered Aluminum Dome	744.50
-85	4" SS Perforated Extension	625.50	-L	Vandal Proof Dome	123.50
-A	Accutrol Flow Restrictor	1,176.00	-R	2" External Water Dam	230.50
-B	Sump Receiver	268.50	-SO	Side Outlet (2,3,4" only)	336.00
-D	Underdeck Clamp	240.50	-V	Fixed Extension	659.50
-F	Deck Flange/Adj. Extension	659.50	-W	Adjustable Internal Water Dam	423.00

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.



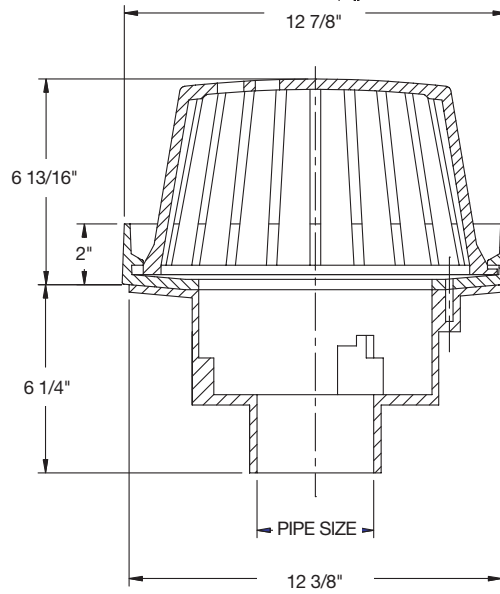
Roof Drains

RD-100-R

Overflow Roof Drain with 2" External Water Dam



Model Number	Outlet Size	WT., lbs.	List Price
RD-102, 3, 4-R	2,3,4,"	27	\$938.00
RD-105, 6-R	5, 6	27	1,240.00



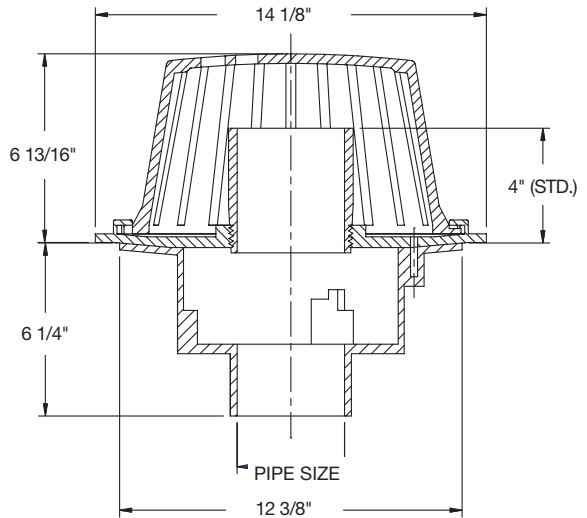
Note: Poly-Dome Standard

RD-100-W

Overflow Roof Drain with Internal Standpipe



Outlet Size	Outlet Size	WT., lbs.	List Price
2,3,4,"	2,3,4"	32	\$1,130.00
W5, 6	5,6"	32	1,432.50



Note: Poly-Dome Standard

Options for RD-100 Series

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-GSS	Stainless Steel Ballast Guard	\$625.50
P	Push-On Outlet	No Add	-K	Ductile Iron Dome	210.50
T	Threaded Outlet	\$80.00	-K13	Galvanized Dome	568.50
X	Inside Caulk Outlet	No Add	-K40	Ductile Iron Low Dome (4" high)	210.50
-60	PVC Body w/Socket Outlet (2,3,4,6" only)	No Add	-K80	Aluminum Dome	244.50
-61	ABS Body w/Socket Outlet (2,3,4" only)	No Add	-K81	Rough Bronze Dome	828.00
-13	Galvanized Body & Flashing Clamp	956.50	-K83	SS Mesh Covered Aluminum Dome	744.50
-85	4" SS Perforated Extension	625.50	-L	Vandal Proof Dome	123.50
-A	Accutrol Flow Restrictor	1,176.00	-R	2" External Water Dam	230.50
-B	Sump Receiver	268.50	-SO	Side Outlet (2,3,4" only)	336.00
-D	Underdeck Clamp	240.50			



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

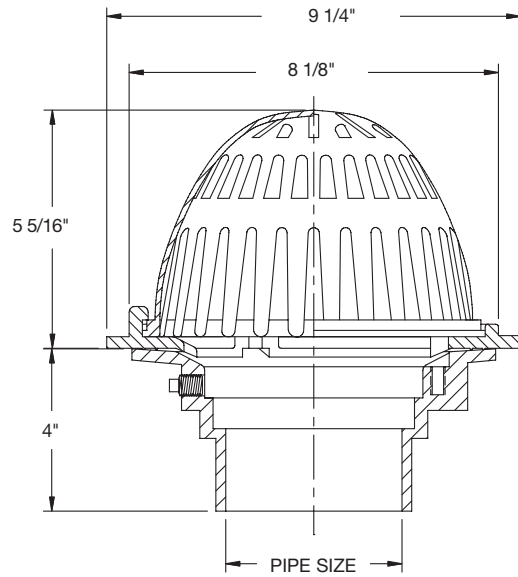
Roof Drains

RD-200

Small Area Roof Drain



Model Number	Outlet Size	WT., lbs.	List Price
RD-202, 3, 4	2,3,4, "	15	\$490.50

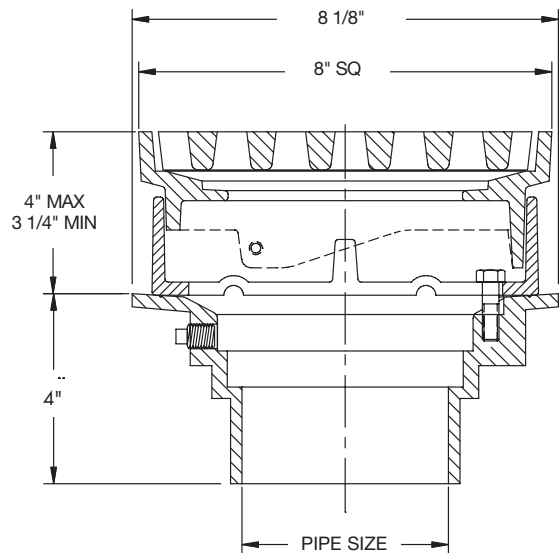


RD-200-CP

Roof Drain with 8" x 8" Promenade Top



Model Number	Outlet Size	WT., lbs.	Grate	List Price
RD-202, 3, 4-CP	2,3,4, "	22	ductile iron	\$820.50
RD-202, 3, 4-CP-1	2,3,4, "	22	nickel bronze	1,250.00



Options for RD-200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-GSS	Stainless Steel Ballast Guard	\$461.00
P	Push-On Outlet	No Add	-K	Ductile Iron Dome	86.50
T	Threaded Outlet	\$80.00	-K13	Galvanized Dome	238.50
X	Inside Caulk Outlet	No Add	-K80	Aluminum Dome	180.00
-60	PVC Body w/Socket Outlet (2,3,4,6" only)	No Add	-K81	Rough Bronze Dome	338.50
-61	ABS Body w/Socket Outlet (2,3,4" only)	No Add	-K83	SS Mesh Covered Aluminum Dome	444.50
-6	Vandal Proof Top (RD-200-CP)	147.00	-L	Vandal Proof Dome	114.00
-13	Galvanized	196.50	-R	2" External Water Dam	191.50
-85	6" SS Perforated Extension	436.00	-SO	Side Outlet	218.00
-B	Sump Receiver	256.00	-W	Adjustable Internal Water Dam	370.00
-D	Underdeck Clamp	149.00			
-F	Deck Flange/Adj. Extension	500.00			

Consult factory for all applications outside of listed parameters.

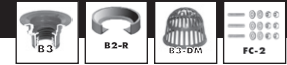
Prices do not include applicable taxes.



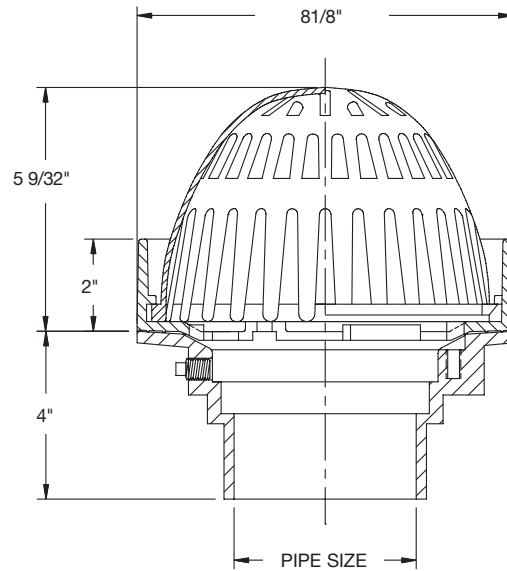
Roof Drains

RD-200-R

Overflow Roof Drain with 2" External Water Dam

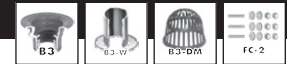


Model Number	Outlet Size	WT., lbs.	List Price
RD-202, 3, 4-R	2,3,4,"	25	\$681.00

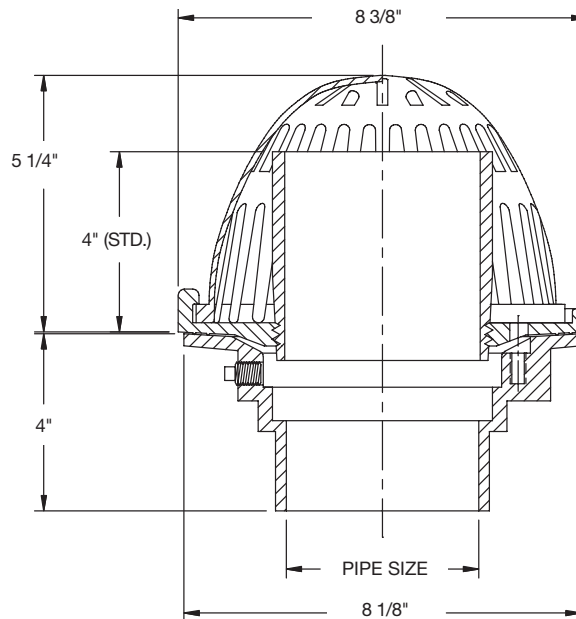


RD-200-W

Overflow Roof Drain with Internal Standpipe



Model Number	Outlet Size	WT., lbs.	List Price
RD-202, 3, 4-W	2,3,4,"	25	\$859.50



Options for RD-200 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-GSS	Stainless Steel Ballast Guard	\$461.00
P	Push-On Outlet	No Add	-K	Ductile Iron Dome	86.50
T	Threaded Outlet	\$80.00	-K13	Galvanized Dome	238.50
X	Inside Caulk Outlet	No Add	-K80	Aluminum Dome	180.00
-60	PVC Body w/Socket Outlet	No Add	-K81	Rough Bronze Dome	338.00
-61	ABS Body w/Socket Outlet	No Add	-K83	SS Mesh Covered Aluminum Dome	444.50
-6	Vandal Proof Top (RD-200-CP)	147.00	-L	Vandal Proof Dome	114.00
-13	Galvanized	196.50	-R	2" External Water Dam	191.50
-85	6" SS Perforated Extension	461.00	-SO	Side Outlet	218.00
-B	Sump Receiver	256.00	-W	Adjustable Internal Water Dam	370.00
-D	Underdeck Clamp	149.00			
-F	Deck Flange/Adj. Extension	500.00			



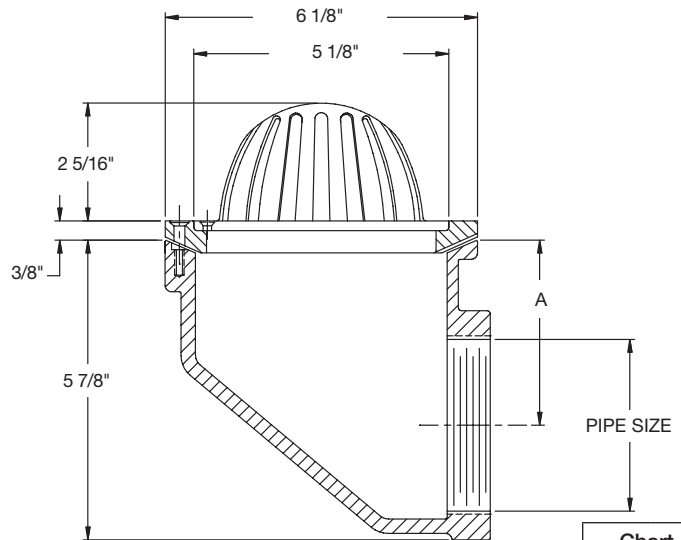
Consult factory for all applications outside of listed parameters. Prices do not include applicable taxes.

Balcony Drains

RD-230

Side Outlet Balcony Drain

Model Number	Outlet Size	WT., lbs.	List Price
RD-232, 3, 4	2,3,4,"	10	\$739.50

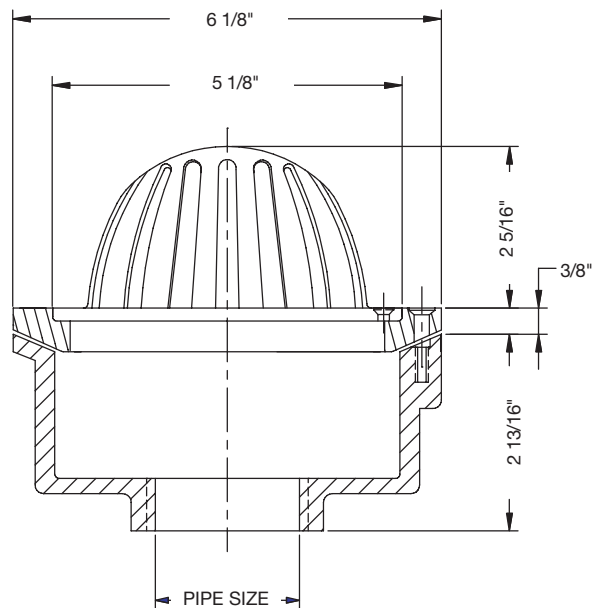


Size	A
2"	4 5/16"
3"	3 5/8"
4"	3 1/8"

RD-240

Bottom Outlet Balcony Drain

Model Number	Outlet Size	WT., lbs.	List Price
RD-242, 3, 4	2,3,4,"	7	\$619.00



Options for RD-230/240 Series:

Suffix	Description	List Price
-6	Vandal Proof	\$56.00
-13	Galvanized Body & Flashing Clamp	157.50
-14	Flat Grate	No Add
-83	SS Mesh Covered Dome	234.50

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

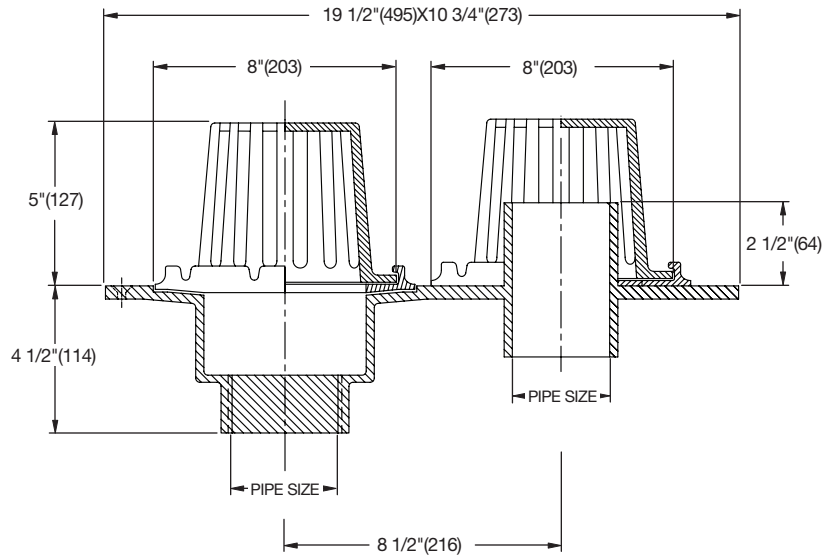
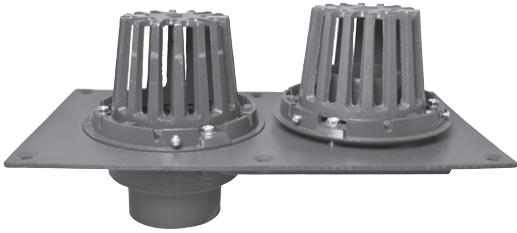
WATTS[®]

Combination Roof Drains

RD-250

Flanged Cast Iron Roof Drain/Overflow System

Model Number	Outlet Size	WT., lbs.	List Price
RD-252, 3, 4	2,3,4,"	28	\$845.50



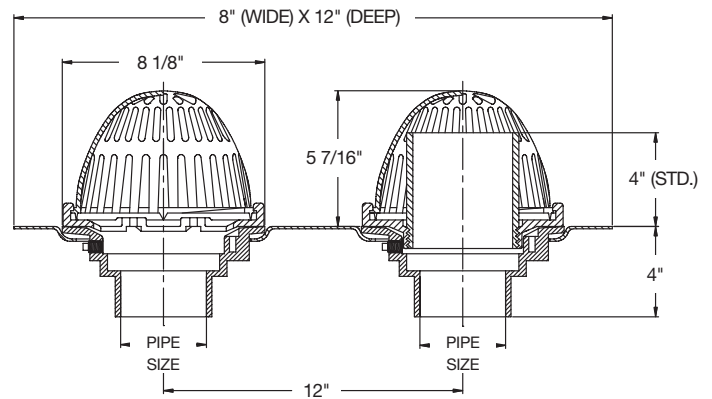
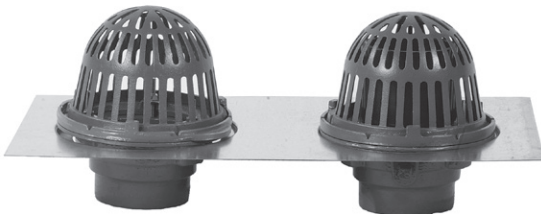
Options for RD-250 Series:

Suffix	Description	List Price
-L	Vandal Proof	No Add

RD-260

Roof Drain/Overflow System

Model Number	Outlet Size	WT., lbs.	List Price
RD-262, 3, 4	2,3,4,"	36	\$1,148.50



Options for RD-260 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-GSS	Stainless Steel Ballast Guard	\$922.50
P	Push-On Outlet	No Add	-K	Ductile Iron Dome	174.00
T	Threaded Outlet	\$160.00	-K13	Galvanized Dome	476.00
X	Inside Caulk Outlet	No Add	-K80	Aluminum Dome	360.00
-60	PVC Body w/Socket Outlet	No Add	-K83	SS Mesh Covered Dome	887.50
-61	ABS Body w/Socket Outlet	No Add	-L	Vandal Proof Dome	229.50
-13	Galvanized Body & Flashing Clamp	394.00	-R	2" External Water Dam	No Add
-D	Underdeck Clamp	295.00			



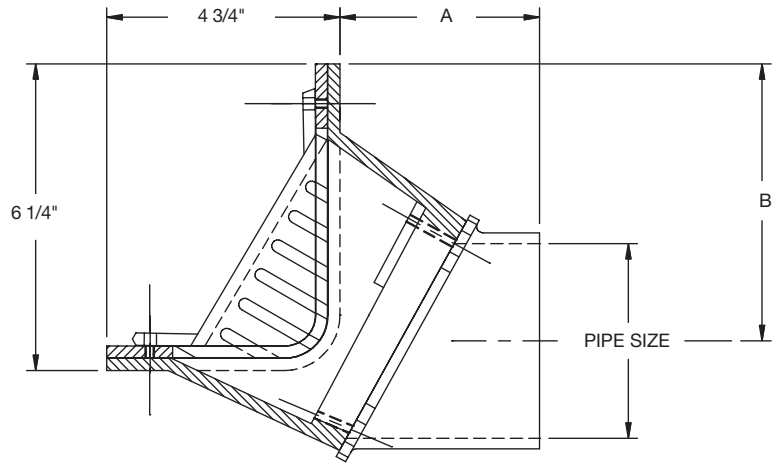
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Scupper Drains

RD-270

Scupper Drain with Angle Grate

Model Number	Outlet Size	WT., lbs.	List Price
RD-272, 3, 4	2,3,4,"	20	\$619.00
RD-276	6"	22	1,199.00

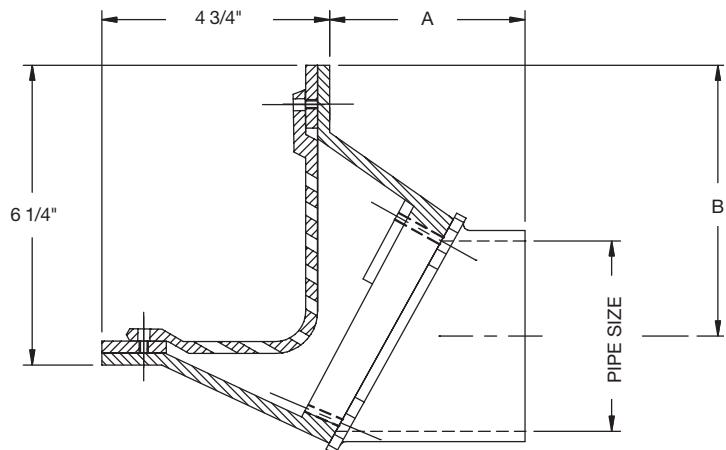


RD-270	NH		THD	
	A	B	A	B
2"	5-1/8"	6-1/2"	2-3/4"	6"
3"	4-1/2"	5-3/4"	2-3/4"	5-3/8"
4"	4"	5-1/8"	2-3/4"	4-7/8"

RD-290

Scupper Drain with Flat Grate

Model Number	Outlet Size	WT., lbs.	List Price
RD-292, 3, 4	2,3,4,"	24	\$669.50
RD-296	6"	26	1,258.50



Options for RD-270 /290 Series:

Suffix	Description	List Price
-A	45 Degree Outlet (NH Only)	No Add
-T	Threaded Outlet (2,3,4" Only)	No Add
-1	Nickel Bronze Grate & Frame	\$1,010.00
-6	Vandal Proof Grate	56.00
-13	Galvanized	239.50

RD-290	NH		THD	
	A	B	A	B
2"	5-1/8"	6-1/2"	2-3/4"	6"
3"	4-1/2"	5-3/4"	2-3/4"	5-3/8"
4"	4"	5-1/8"	2-3/4"	4-7/8"

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.

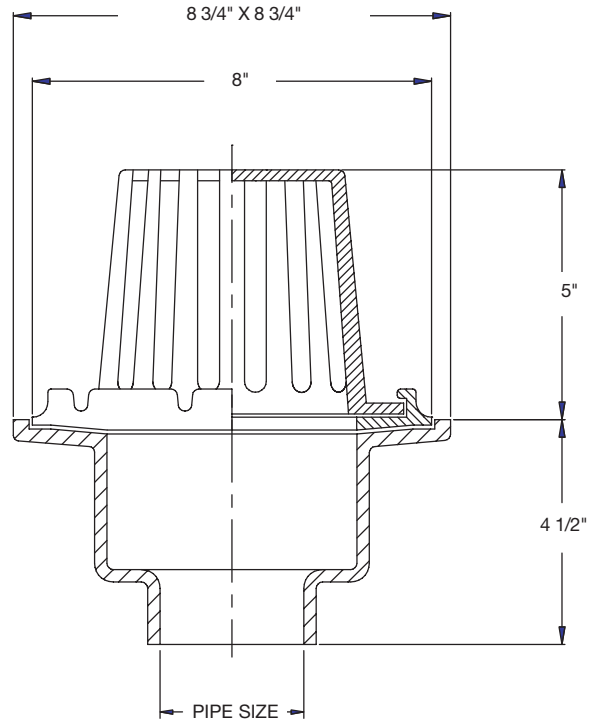


Small Area Roof Drains

RD-280

Flanged Cast Iron Roof Drain

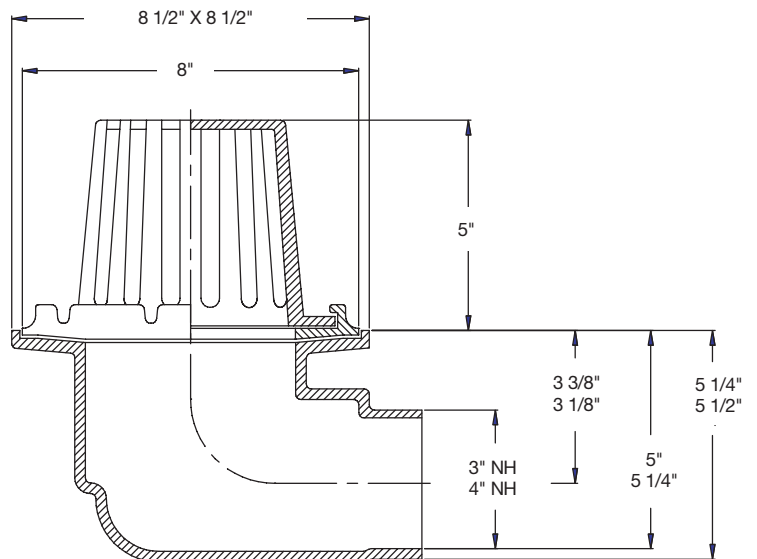
Model Number	Outlet Size	WT., lbs.	List Price
RD-283, 4	3,4,"	16	\$490.50



RD-280-SO

Flanged Cast Iron Roof Drain with Side Outlet

Model Number	Outlet Size	WT., lbs.	List Price
RD-283, 4-SO	3,4,"	17	\$580.00



Options for RD-280 /280-SO Series:

Suffix	Description	List Price
-L	Vandal Proof Dome	No Add
-R	2" External Water Dam	\$174.00



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

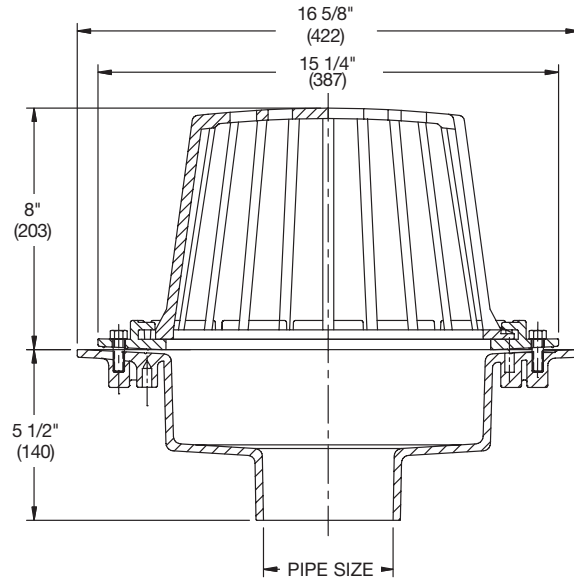
High Volume Roof Drains

RD-300

High Volume Roof Drain



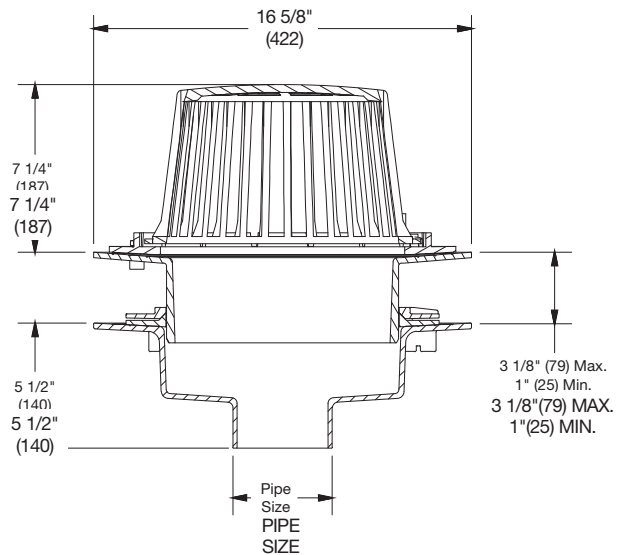
Model Number	Outlet Size	WT., lbs.	List Price
RD-302, 3, 4	2,3,4,"	30	\$707.50
RD-305, 6	5, 6,"	30	1,010.00
RD-308, 10	8, 10"	30	1,312.50



RD-300-AC

Adjustable Extension Compression Seal Roof Drain

Model Number	Outlet Size	WT., lbs.	List Price
RD-302, 3, 4-AC	2, 3, 4"	63	\$1,366.00
RD-305, 6-AC	5, 6,"	63	1,669.00
RD-308, 10-AC	8, 10"	63	1,971.00



Note: December 2018 Launch

Options for RD-300 Series:

Suffix	Description	List Price	Suffix	Description	List Price
-P	Push On Available on 3,4, & 6" Outlets Only	No Add	-K13	Galvanized Dome	\$568.50
-X	Inside Caulk	No Add	-K40	Ductile Iron Low Dome (4" High)	210.50
-13	Galvanized Body & Clamp	\$956.50	-K80	Aluminum Dome	244.50
-85	4" SS Perforated Extension	625.50	-K81	Rough Bronze Dome	828.00
-B	Sump Receiver	268.50	-K83	SS Mesh Covered Aluminum Dome	744.50
-D	Underdeck Clamp	240.50	-L	Vandal Proof Dome	123.50
-F	Deck Flange/Adj. Extension	659.50	-R	2" External Water Dam	230.50
-GSS	Stainless Steel Ballast Guard	625.50	-W	4" Internal Water Dam	423.00
-K	Ductile Iron Dome	210.50			

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.

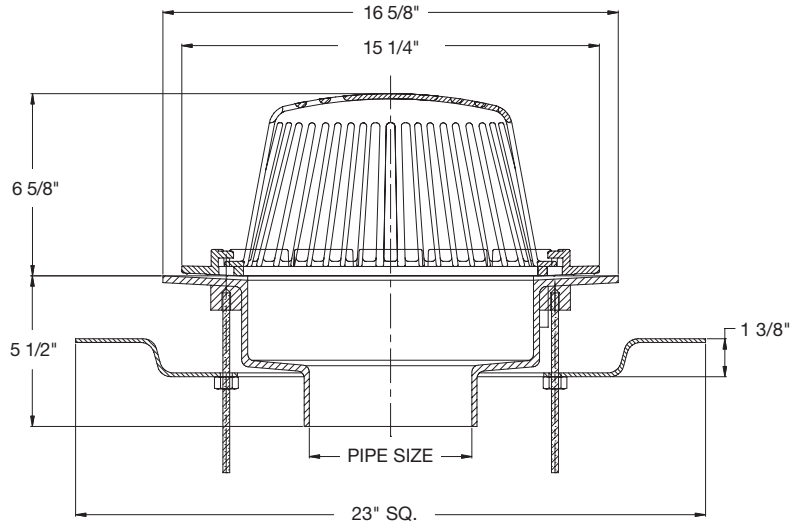


High Volume Roof Drains

RD-300-F

Roof Drain with Adjustable Extension Flange

Model Number	Outlet Size	WT., lbs.	List Price
RD-302, 3, 4-F	2,3,4,"	45	\$1,366.50
RD-305, 6-F	5, 6"	45	1,669.00
RD-308, 10-F	8, 10"	45	1,971.50

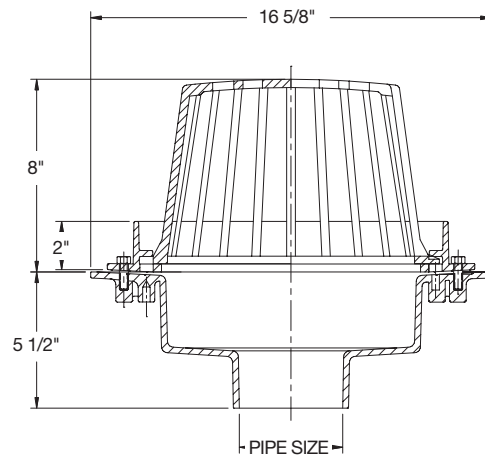


RD-300-R

Overflow Roof Drain with 2" External Water Dam



Model Number	Outlet Size	WT., lbs.	List Price
RD-302, 3, 4-R	2,3,4,"	32	\$938.00
RD-305, 6-R	5, 6"	32	1,240.00
RD-308, 10-R	8, 10"	32	1,542.50

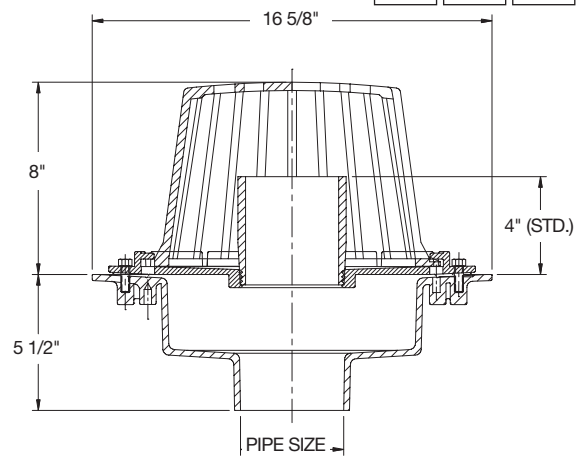


RD-300-W

Overflow Roof Drain with 2" Internal Standpipe



Model Number	Outlet Size	WT., lbs.	List Price
RD-302, 3, 4-W	2,3,4,"	37	\$1,130.00
RD-305, 6-W	5, 6"	37	1,432.50
RD-308, 10-W	8, 10"	37	1,735.00



Options for RD-300 Series:

(For Options see page 114.)



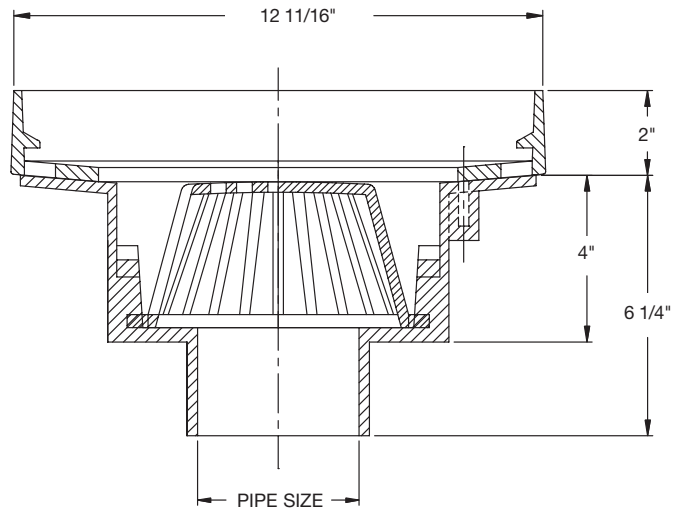
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Deck Receptor Drain

RD-400

12" Diameter Deck Receptor Drain

Model Number	Outlet Size	WT., lbs.	List Price
RD-402, 3, 4, 5, 6"	2,3,4,5,6"	28	\$720.00



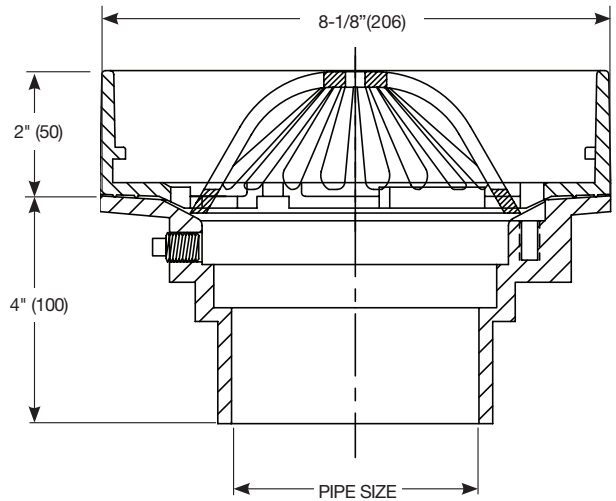
Options for RD-400 Series:

Suffix	Description	List Price
-None	No Hub	No Add
-P	Push-On Outlet	No Add
-T	Threaded Outlet	\$80.00
-X	Inside Caulk Outlet	No Add
-13	Galvanized	392.50
-B	Sump Receiver	268.50
-D	Underdeck Clamp	240.50
-F	Deck Flange/Adj. Extension	659.50
-L	Vandal Proof Dome	123.50

RD-410

8" Diameter Deck Receptor Drain

Model Number	Outlet Size	WT., lbs.	List Price
RD-412,3,4	2,3,4"	15	\$591.50



Options for RD-410 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-B	Sump Receiver	\$256.00
P	Push-On Outlet	No Add	--D	Underdeck Clamp	149.00
T	Threaded Outlet	\$80.00	-F	Deck Flange/Adj. Extension	500.00
X	Inside Caulk Outlet	No Add	-L	Vandal Proof	114.00
-13	Galvanized Body & Flashing Clamp	196.50	-SO	Side Outlet	218.00

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

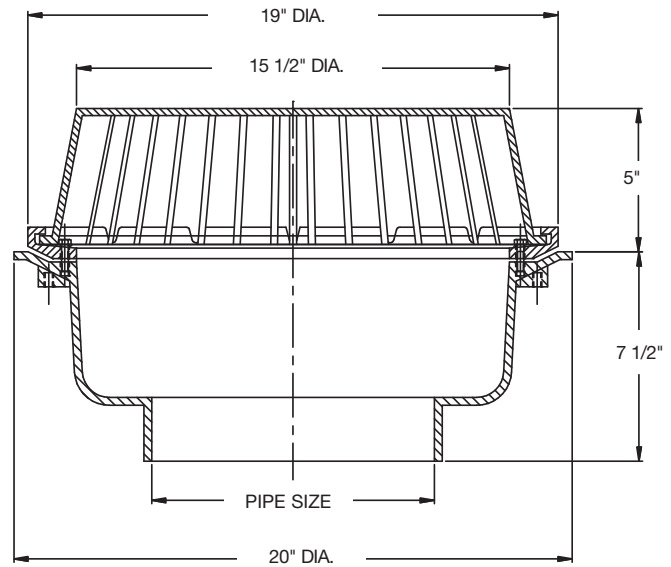


Specialty Roof Drains

RD-500

Super Flow Roof Drain

Model Number	Outlet Size	WT., lbs.	List Price
RD-510, 12	10", 12"	52	\$2,149.50



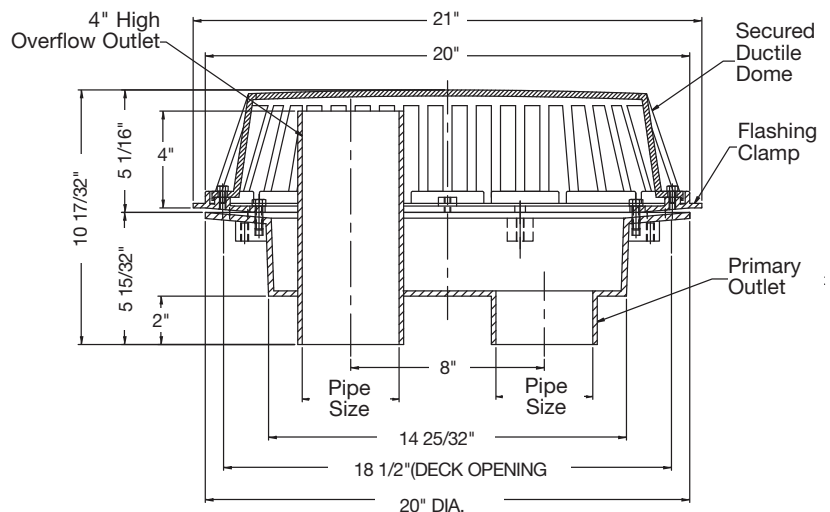
Options for RD-500 Series:

Suffix	Description	List Price
-D	Underdeck Clamp	\$240.50
-F	Deck Flange/Adj. Extension	659.50
-L	Vandal Proof Dome	123.50
-R	2" External Water Dam	230.50
-W	2" Internal Water Dam	423.00

RD-700

Dual Outlet Roof Drain/Overflow

Model Number	Outlet Size	WT., lbs.	List Price
RD-703, 4	3,4"	49	\$2,169.50
RD-705, 6	5,6"	49	2,602.50



Options for RD-700 Series:

Suffix	Description	List Price
-CT	Overflow Through Dome	No Add
-D	Underdeck Clamp	\$247.00
-F	Deck Flange/Adj. Extension	442.00
-GSS	4" High SS Gravel Guard	882.50
-K80	Aluminum Dome	No Add
-K83	SS Mesh Covered Dome	519.00
-L	Vandal Proof Dome	117.00
-W2	2" High Overflow	No Add

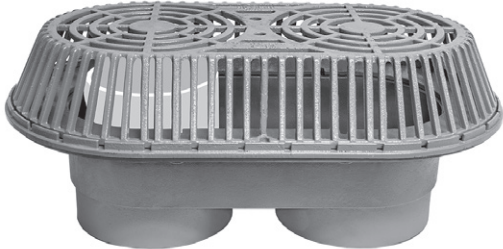


Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Roof Drains

RD-800 Dual Outlet Large Capacity Roof Drain/Overflow

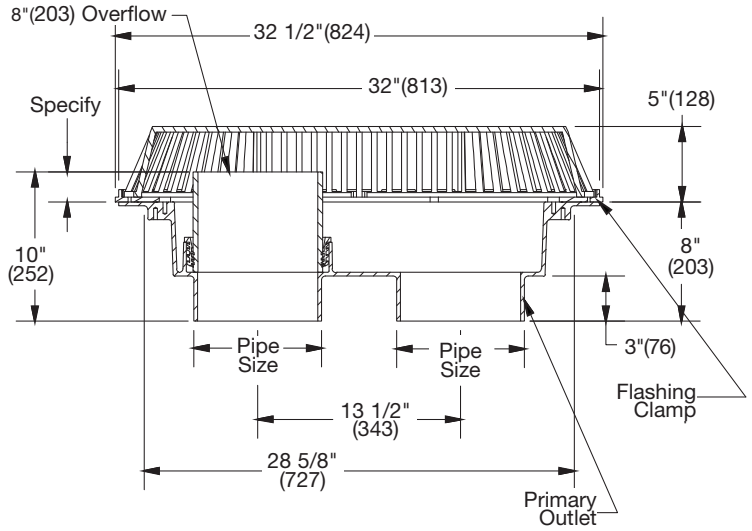
Model Number	Outlet Size	WT., lbs.	List Price
RD-808	8"	115	\$2844.00
RD-810	10"	115	3,220.00



Note: December 2018 Launch

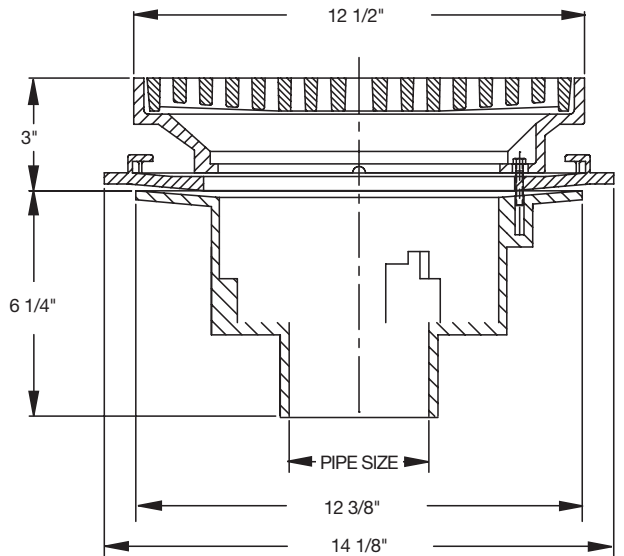
Options for RD-800 Series:

Suffix	Description	List Price
-CT	Overflow Through Dome	No Add
-D	Underdeck Clamp	\$247.00
-F	Deck Flange/Adj. Extension	442.00
-GSS	4" High SS Gravel Guard	882.00
-R	2" External Water Dam	230.00
-W	SS Mesh Covered Dome	519.00
-L	Vandal Proof Dome	117.00
-W2	2" High Overflow	No Add



RD-100-CP Roof Drain with 12"x12" Promenade Top

Model Number	Outlet Size	WT., lbs.	Grate	List Price
RD-102, 3, 4-CP,	2, 3, 4"	80	ductile iron	\$1,083.00
RD-102, 3, 4-CP-1	2, 3, 4"	80	nickel bronze	1,825.00
RD-105, 6-CP	5, 6"	80	ductile iron	1,083.00
RD-105, 6-CP-1	5, 6"	80	nickel bronze	1,825.00



Options for RD-100-CP/RD-300-CP15 Series:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub	No Add	-85	4" SS Perforated Extension	\$625.50
P	Push-On Available on 3, 4 & 6" Only	No Add	-B	Sump Receiver	268.00
T	Threaded Outlet (RD-100-CP only)	\$80.00	-D	Underdeck Clamp	240.00
X	Inside Caulk Outlet (RD-100-CP only)	No Add	-E	1" Stackable Clamp	80.00
-6	Vandal Proof	147.00	-F	Deck Flange/Adj. Extension	659.00
-9	Hinged Grate	227.00	-SO	Side Outlet (RD-100-CP 2, 3, 4" only)	336.00
-13	Galvanized	956.50			

Consult factory for all applications outside of listed parameters.

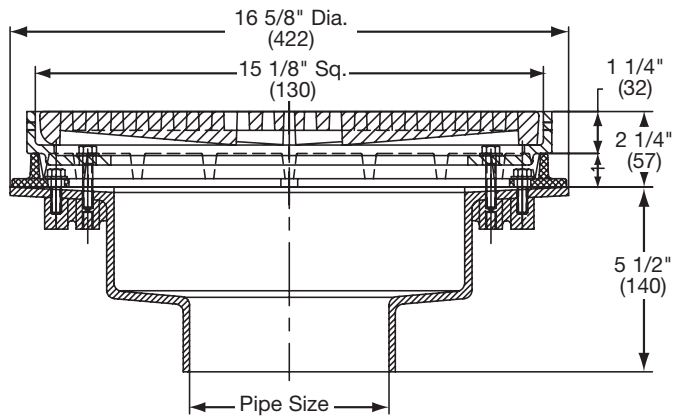
Prices do not include applicable taxes.



Vent Cap/Expansion Coupling

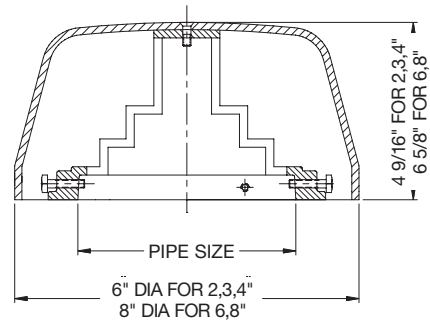
RD-300-CP15 Roof Drain with 15"x15" Promenade Top

Model Number	Outlet Size	WT., lbs.	Grate	List Price
RD-302, 3, 4-CP15,	2, 3, 4"	110	ductile iron	\$1,199.00
RD-302, 3, 4-CP15-1	2, 3, 4"	110	nickel bronze	2,203.50
RD-305, 6,8-CP15	5, 6, 8"	110	ductile iron	1,488.50
RD-305, 6,8-CP15-1	5, 6, 8"	110	nickel bronze	2,485.00



RD-680-VC Vent Cap

Model Number	Outlet Size	WT., lbs.	List Price
RD-68234-VC	2, 3, 4"	7	\$471.00
RD-686-VC	6"	15	670.50
RD-688-VC	8"	15	768.50



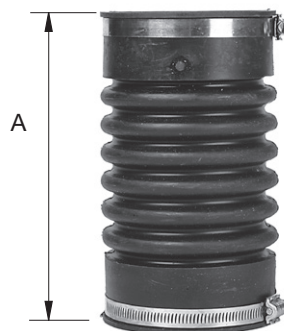
Options for RD-680-VC Series:

Suffix	Description	List Price
-13	Galvanized	\$167.50

RD-900 Neoprene Expansion Coupling

Model Number	Outlet Size	WT., lbs.	List Price
RD-902	2"	1	\$298.00
RD-903	3"	1	345.50
RD-904	4"	2	404.00

Chart A	
Pipe Size	Height
2"	7-1/8"
3"	8-1/8"
4"	8-5/8"



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Downspout Nozzles

RD-940

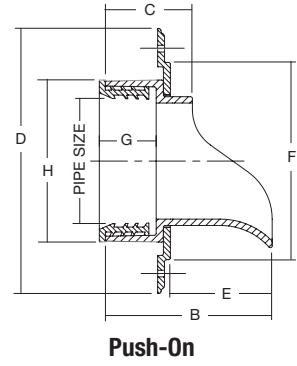
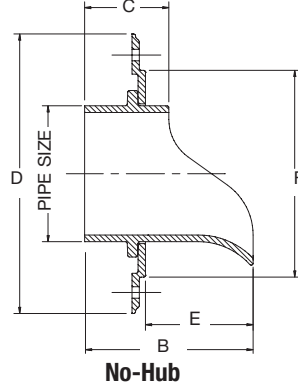
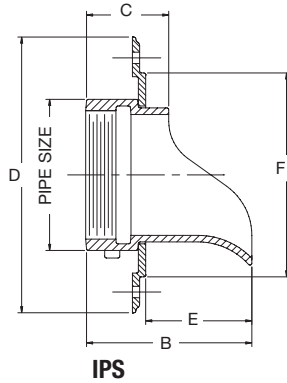
Downspout Nozzle

Model Number	Outlet Size	WT., lbs.	List Price
RD-942, 3, 4"	2, 3, 4"	12	\$1,083.00
RD-945, 6	5, 6"	18	1,942.00
RD-948	8"	22	2,654.50
RD-9410-NH	10"	25	3,464.00
RD-9412-NH	12"	29	4,289.00



Options for RD-940 Series:

Suffix	Description	List Price
-83	Stainless Steel Bird Screen	\$549.50
-NH	No Hub	No Add
-P	Push-On Connection (3,4,6,8" Only)	No Add



IPS Threaded Connection						
Model	Pipe Size	B	C	D	E	F
RD-942	2"(51)	5-1/4"(133)	2-1/4"(57)	6-3/4"	3-1/2"(89)	4-3/4"(121)
RD-943	3"(76)	5-1/4"(133)	2-1/2"(63)	8-1/4"(210)	3-1/2"(89)	6-3/8"(162)
RD-944	4"(102)	5-1/4"(133)	2-3/4"(70)	9-1/8"(232)	3-1/2"(89)	7"(178)
RD-946	6"(152)	5-1/4"(133)	2-3/4"(70)	11-3/8"(289)	3-1/2"(89)	9"(229)
RD-948	8"(200)	6"(152)	3"(76)	13-3/8"(340)	4"(102)	10-3/4"(273)

No Hub Connection						
Model	Pipe Size	B	C	D	E	F
RD-942-NH	2"(51)	5-1/4"(133)	2-1/4"(57)	6-3/4"(171)	3-1/2"(89)	4-3/4"(121)
RD-943-NH	3"(76)	5-1/4"(133)	2-1/2"(63)	8-1/4"(210)	3-1/2"(89)	6-3/8"(162)
RD-944-NH	4"(102)	5-1/4"(133)	2-3/4"(70)	9-1/8"(232)	3-1/2"(89)	7"(178)
RD-945-NH	5"(130)	5-1/4"(133)	3"(76)	9-1/4"(235)	3-3/8"(86)	7-1/4"(184)
RD-946-NH	6"(152)	5-1/4"(133)	2-3/4"(70)	11-3/8"(289)	3-1/2"(89)	9"(229)
RD-948-NH	8"(200)	6"(152)	3"(76)	13-3/8"(340)	4"(102)	10-3/4"(273)
RD-9410-NH	10"(250)	5-3/4"(146)	3"(76)	15-1/4"(387)	3-3/4"(95)	13-1/16"(332)
RD-9412-NH	12"(305)	6"(152)	3-1/4"(83)	17-1/4"(438)	3-3/4"(95)	15-1/16"(383)

Push-On Connection								
Model	Pipe Size	B	C	D	E	F	G	H
RD-943P	3"(76)	5-3/4"(146)	3"(76)	8-1/4"(210)	3-1/2"(89)	6"(152)	1-3/4"(44)	4-3/4"(121)
RD-944P	4"(102)	5-3/4"(146)	3"(76)	9-1/8"(232)	3-1/2"(89)	6-3/4"(171)	1-3/4"(44)	5-1/2"(140)
RD-946P	6"(152)	6"(152)	3-3/4"(95)	11-3/8"(289)	3-1/2"(89)	8-3/4"(222)	2"(51)	7-3/4"(197)
RD-948P	8"(200)	7"(178)	4"(102)	13-3/8"(340)	4"(102)	10-3/4"(273)	2-1/2"(63)	10"(254)

Consult factory for all applications outside of listed parameters.
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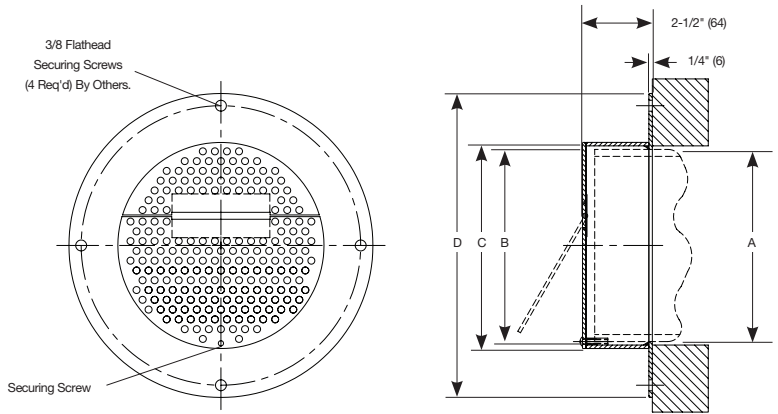


Downspout Nozzles

RD-950

Stainless Steel Downspout Cover

Model Number	Outlet Size	WT., lbs.	List Price
RD-953,4	3, 4"	8	\$2,910.00
RD-956	6"	9	3,073.50
RD-958	8"	10	3,220.00
RD-9510	10"	12	3,407.00
RD-9512	12"	14	3,615.00



Options for RD-950 Series:

Suffix	Description	List Price
-6	Vandal Proof	\$152.00

RD-970/980

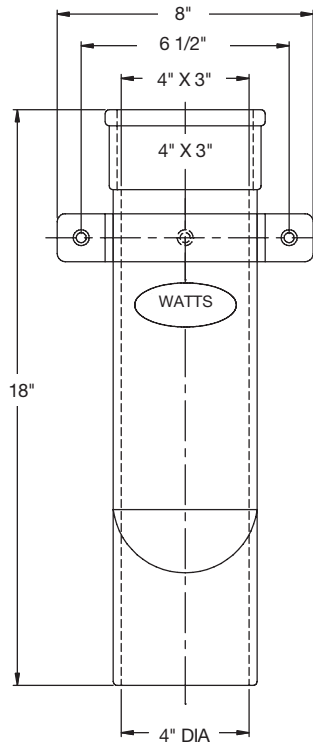
Downspout Boot

Model Number	Outlet Size	WT., lbs.	List Price
RD-970	4" x 3"	20	\$824.00
RD-980	5" x 4"	30	1,313.50

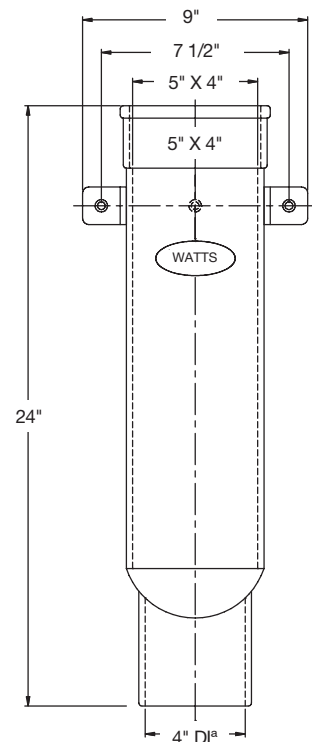


RD-970

RD-980



RD-970



RD-980



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Interceptors

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Interceptors

Pictorial Index



WD SERIES
PDI Certified Grease Interceptor



WD-L SERIES
PDI Certified Low Rough-in Grease Interceptor



GI-K SERIES
Large Capacity Grease Interceptor



WD-A SERIES
Semi-Automatic Draw-Off Grease Interceptor



WD-LA SERIES
Low Rough-in Semi-Automatic Grease Interceptor



WD-H SERIES
Grease Interceptor with Access Housing



WD-AH SERIES
Semi-Automatic Grease Interceptor w/Housing



OI SERIES
Oil Interceptor



OI-K SERIES
Large Capacity Oil Interceptor



OI-ST SERIES
Oil Interceptor with Integral Storage Tank



SI-742
Hair, Plaster & Sediment Interceptor



SI-742-L
Sediment & Hair Interceptor



SI-742-X
Hair, Plaster & Sediment Interceptor w/Flush Cover



SI-750
Cast Iron Hair Interceptor



SI-750-TO
Chrome Plated Hair Interceptor



SI-762
Bottom Access Hair, Plaster & Sediment Interceptor

Interceptors

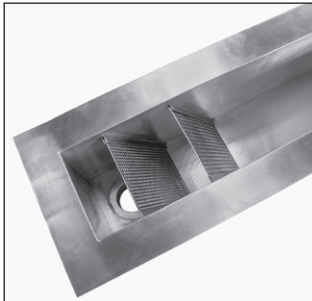
Pictorial Index



SI-770
Solids Interceptor



LI-800-SERIES
Lint Interceptor



LI-LT Series
Stainless Steel
Lint Trough



SA-SERIES
Heavy Duty Sand &
Sediment Interceptor



ST-SERIES
Sand Trap

Interceptors

Recommendations

Application	Product
Art rooms, dental labs, metal recovery	SI-742, SI-742-I, SI-762
Cooking, food prep	WD Series, GI-K Series,
Commercial laundry, washing machines	LI-800 Series
Dish cleaning sinks, dishwashers	WD Series, GI-K Series
Elevator pits, oil spill areas	OI Series, OI-K Series
Hair wash sinks	SI-750, SI-750-TO
Sand & sediment run-off	SA Series, ST Series
Vehicle maintenance areas	OI Series, OI-K Series

Grease Interceptors

Design & Operation

Watts hydro-mechanical grease interceptors are designed to remove fats, oils, and grease from waste water. Grease interceptors prevent greasy substances from entering plumbing systems, septic fields, and waste water treatment facilities, where they are difficult to process, and create environmental problems. Commonly specified in commercial kitchen and food processing areas, properly specified and maintained interceptors keep drainage systems free of problematic grease accumulations.

Grease interceptors will separate all lighter-than-water substances, collecting them inside the interceptor, above the static water line. Design criteria is regulated by plumbing code, and generally follows or references criteria set forth by The Plumbing & Drainage Institute (PDI), which tests and certifies standard capacity interceptors. The accepted industry and PDI Standard (PDI-G101) is for interceptors to maintain 90% separation efficiency, up to their rated grease retention capacity (in. lbs.).

The interception process is accomplished by slowing incoming effluent with a flow restrictor (supplied with the interceptor), and directing it through baffling. The slowing and baffling processes enable greasy substances to accumulate on top of the static water line, and treated water to exit into the drainage system, through a trap leg on the outlet side of the interceptor.

Materials

Acid Resistant Epoxy Coated Steel (standard)

Interceptor bodies are 11 ga. cold rolled steel, with an oven cured, acid resistant baked grey epoxy coating, inside and out. Standard cover is epoxy coated 1/4" skid-proof checker plate steel, gasketed, and secured with hex head center bolt(s).

Stainless Steel (-SS)

11 gauge, in accordance with ASTM-351-Grade CF8 (Type 304) standard specification. Highly durable and resistant to corrosion.

Interceptors

Grease Interceptors

Pipe Connections

No hub (standard)

Butt connection using a no hub or neoprene coupling. Suitable for cast iron, plastic, and most other piping applications.

Threaded (-THD)

Female threaded outlet for connection to IPS threaded pipe.

Standard Configurations



Sizing

Grease interceptors are sized according to the rate of incoming flow, in gallons per minute (GPM). Associated with the incoming flow rate is an interceptor's capacity. The rated capacity, in lbs., is listed at twice the flow rate, in GPM. For example, a 10 GPM interceptor has a rated capacity of 20 lbs.

General Procedure:

To Determine the Flow Rate of Each Sink:

1. Calculate the capacity of the sink in cubic inches:
 $\text{____ (LENGTH) x ____ (WIDTH) x ____ (DEPTH) = ____ CU. IN.}$
2. Convert the capacity from cubic inches to gallons per minute (GPM): $\text{____ CU.IN} \div 231 = \text{____ GPM.}$
3. Adjust for displacement: $\text{____ GPM x 0.75 = ____ GPM.}$
4. **Result is the flow rate required to drain the sink in one minute.***

**Note: If drain down time is not critical, an interceptor with a lesser flow rate, up to half the calculated flow rate may be specified.*

Example:

Three compartment pot sink, each compartment 12" x 12" x 15"

1. $12" \times 12" \times 15" = 2160 \text{ cu. in.} \times 3 \text{ comp.} = 6480 \text{ cu. in.}$
2. $6480 \text{ cu. in.} \div 231 = 28 \text{ GPM.}$
3. $28 \text{ GPM} \times 0.75 = 21 \text{ GPM.}$

A 20 GPM interceptor would permit the sink to drain in slightly more than one minute.

*Discharge from spray hoods is determined by the flow rate of the hood.

Sizing For Multiple Fixtures:

1. Determine the flow rate for each fixture to be serviced by the interceptor.
2. Add together 100% of the largest flow rate, 50% of the second largest, and 25% of all others.
3. **Result is the recommended flow rate of the interceptor.**

Example:

1. Fixture A: 35 GPM Flow Rate
Fixture B: 26 GPM Flow Rate
Fixture C: 18 GPM Flow Rate
Fixture D: 12 GPM Flow Rate
2. $35 \text{ GPM (A) x 100\%} = 35 \text{ GPM}$
 $26 \text{ GPM (B) x 50\%} = 13 \text{ GPM}$
 $30 \text{ GPM (C + D) x 25\%} = 7.5 \text{ GPM}$

Total Flow Rate = 55.5 GPM

A 50 GPM interceptor is recommended for this installation.

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.

WATTS®

Interceptors

Grease Interceptors

Commonly Specified Options

-B Sediment Bucket

Epoxy coated steel, located inside the interceptor on the inlet side. Collects large food or other particles.

Note: To the extent possible, solids should be collected prior to the interceptor, or at the fixture. Large particles approaching the interceptor can clog the flow restrictor, slowing drainage, and causing back-up difficulties. See Watts SI-770 Solids Interceptor.

-E Extension

Bolt-on extension, increases the invert dimension to accommodate below grade piping. Extensions can be installed after an interceptor is piped in.

-FC Flange & Clamp Device

Specified for above grade installations to secure a waterproofing membrane.

-HD Heavy Duty Traffic Cover

Rated 10,000 lbs. maximum safe live load.

Note: A minimum 3" extension is required with the -HD option.

-O Inlet and Outlet other than Standard Size

Flow is regulated by the flow restrictor, so mis-matched piping/interceptor connection sizes generally do not affect performance. Piping that does not match the interceptor connection size is typically accommodated with transition couplings or bushings.

-US Buy American Compliant

Product will be supplied with minimum 51% domestic content, in compliance with FAR 52.225-9 Buy American Act.

Installation Considerations

- a) Grease interceptors should be located as near as possible to the fixture(s) being served. Long piping runs between a fixture and the interceptor will accumulate grease, causing drainage and clogging problems.
- b) Grease interceptors may be floor mounted, under or beside the sink, or recessed in the floor to allow passage of foot traffic, or connect to below grade piping.
- c) Grease interceptors may be installed outside, making sure all piping is below the frost line (see Options - Extension).
- d) WD Series PDI Certified interceptors are supplied with an external flow restrictor, which must be installed between the last fixture serviced and the interceptor inlet. Other models may be supplied with internal flow control plates, located just inside the interceptor inlet. Check local plumbing codes for specific flow control requirements.
- e) Venting is recommended on both the inlet and outlet side of the interceptor, or as governed by local code. Units supplied with external flow controls are vented from the connection on the top of the flow control tee. Interceptor lids are gasketed, but venting is necessary to prevent odors from escaping through the lid.
- f) Grease interceptors do not replace fixture "traps". Fixtures must be trapped separately to prevent odors from the interceptor returning through the fixture drain.

Maintenance & Cleaning

The capacity of the interceptor (lbs.), and the amount of incoming grease determine cleaning frequency. The amount of accumulated grease must be kept below the rated capacity of the interceptor to maintain proper separation efficiency.

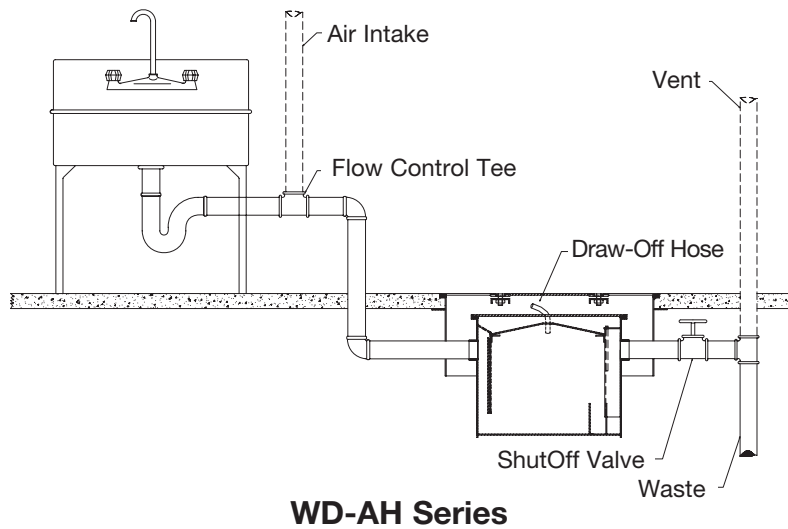
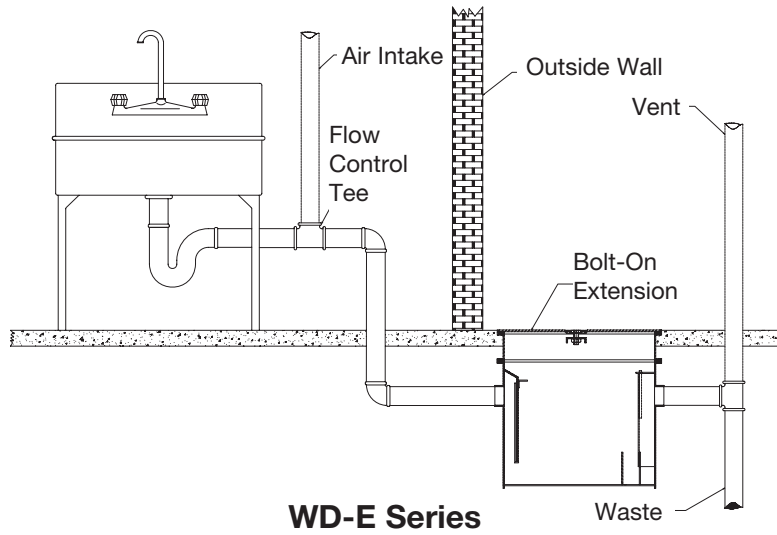
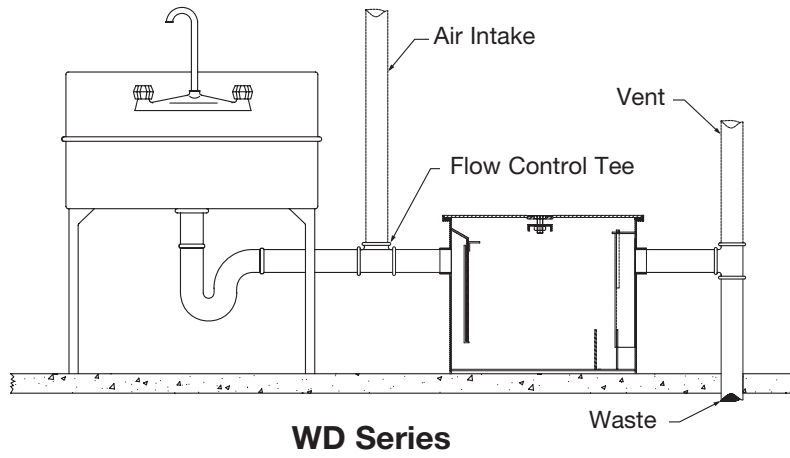
Manual operation grease interceptors are cleaned by removing the cover (secured with hex bolts), and scooping out grease accumulated at the top of the interceptor. Grease can be removed manually, or pumped by outside service. Check local ordinances for proper grease disposal.

Semi-automatic interceptors are cleaned as follows:

- 1) With the outlet valve open, run a full stream of hot water (140 degrees min.) through the interceptor for at least 2 minutes.
- 2) Allow unit to cool for approx. 3 minutes.
- 3) Close the valve on the outlet side of the interceptor.
- 4) Remove cap from top of interceptor and attach draw-off hose. Position hose to drain into waste receptacle.
- 5) Run hot water through the interceptor at a rate of 1.5-2.5 GPM.
- 6) The interceptor will fill, then force liquefied grease out through the top draw-off hose.
- 7) When clear water begins to discharge, the interceptor is clean.
- 8) Disconnect draw-off hose, and replace pipe cap.
- 9) Reopen valve on outlet. Interceptor is now ready for normal use.

Interceptors

Typical Grease Interceptor Installations



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Interceptors

Oil Interceptors

Design & Operation

Watts oil interceptors are designed to separate oily waste from interior drainage systems, or exterior run-off areas. Commonly specified in service stations, vehicle maintenance facilities, and parking areas, oil interceptors prevent environmentally damaging and potentially dangerous oily substances from entering septic fields, run-off areas, and waste water treatment facilities.

Similar to grease interceptors in operation, oil interceptors accumulate lighter-than-water oily waste inside the interceptor, above the static water line. Typically oil is drained automatically from the interceptor through a draw-off valve, and gravity fed to an approved underground oil storage tank (by others), for storage and eventual removal.

Materials

Acid Resistant Epoxy Coated Steel (standard)

Interceptor bodies are 11 ga. cold rolled steel, with an oven cured, acid resistant baked grey epoxy coating, inside and out. Standard cover is epoxy coated 1/4" skid-proof checker plate steel, gasketed, and secured with hex head center bolt(s).

Stainless Steel (-SS)

11 gauge, in accordance with ASTM-351-Grade CF8 (Type 304) standard specification. Highly durable and resistant to corrosion.

Pipe Connections

No Hub (standard)

Butt connection using a no hub or neoprene coupling. Suitable for cast iron, plastic, and most other piping applications.

Threaded (-THD)

Female threaded outlet for connection to IPS threaded pipe.

Sizing

Oil interceptors are sized according to the incoming rate of flow, in gallons per minute (GPM).

For most indoor applications, the flow rate can be calculated by adding maximum discharge rates of all potential water sources. For example, a standard 3/4" hose connection will discharge approx. 10 GPM. A service garage with three hose connections would have a maximum potential flow rate of $10 \text{ GPM} \times 3 = 30 \text{ GPM}$.

For outdoor applications involving rainwater run-off, flow rate should be derived from local rainfall tables, and the slope characteristics of the area to be drained.

Commonly Specified Options

-B Sediment Bucket

Epoxy coated steel, located inside the interceptor on the inlet side. Collects large food or other particles.

Note: To the extent possible, solids should be collected prior to the interceptor, or at the fixture. Large particles approaching the interceptor can clog the flow restrictor, slowing drainage, and causing back-up difficulties. See Watts SI-770 Solids Interceptor.

-E Extension

Bolt-on extension, increases the invert dimension to accommodate below grade piping. Extensions can be installed after an interceptor is piped in.

-FC Flange & Clamp Device

Specified for above grade installations to secure a waterproofing membrane.

-HD Heavy Duty Traffic Cover

Rated 10,000 lbs. maximum safe live load.

Note: A minimum 3" extension is required with -HD option.

-O Inlet and Outlet other than Standard Size

Flow is regulated by the flow restrictor, so mismatched piping/interceptor connection sizes generally do not affect performance. Piping that does not match the interceptor connection size is typically accommodated with transition couplings or bushings.

-US Buy American Compliant

Product will be supplied with minimum 51% domestic content, in compliance with FAR 52.225-9 Buy American Act.

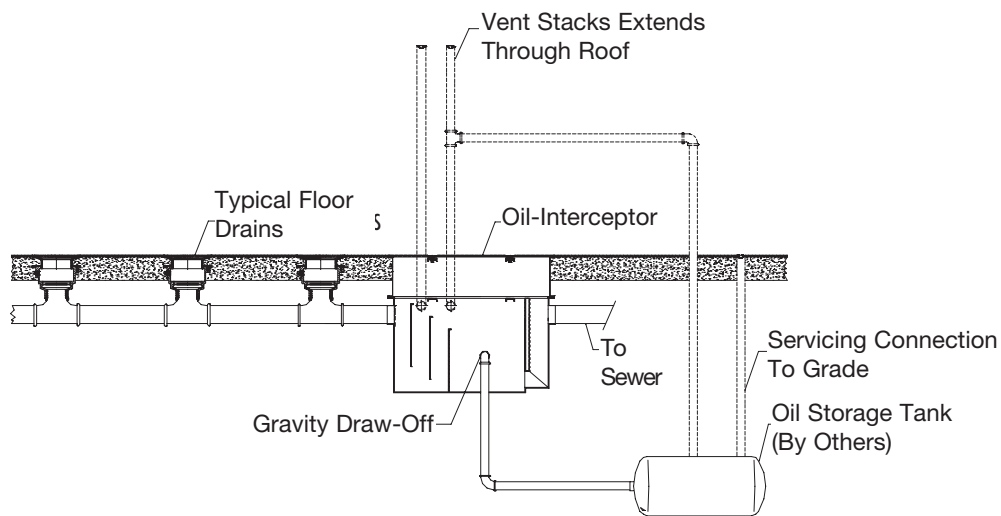


Interceptors

Oil Interceptors

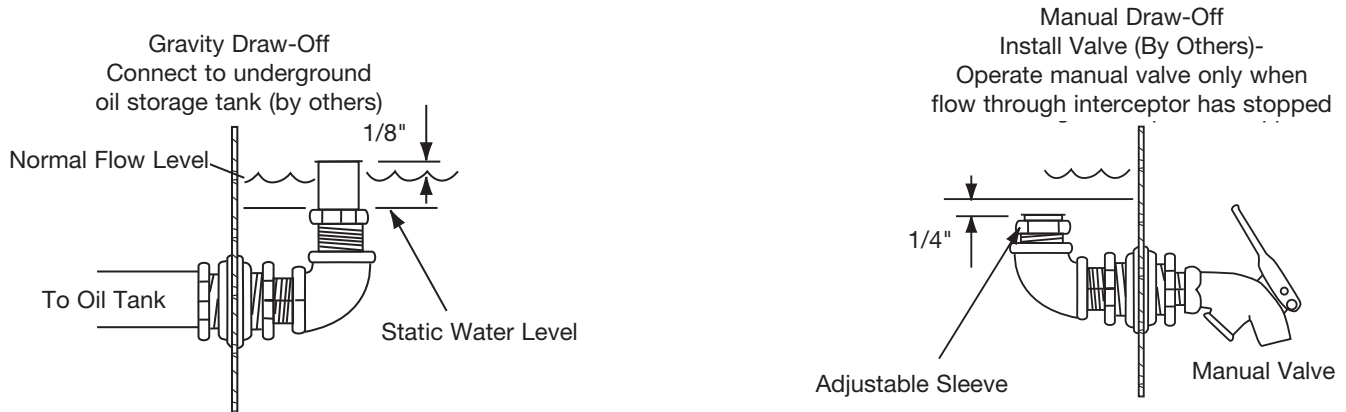
Installation Considerations

- Oil interceptors may be floor mounted, but are typically recessed to connect to below grade piping from floor drains or trench drains.
- Check local ordinances for proper storage of accumulated oil. Typically provisions must be made to connect the oil interceptor to an approved underground oil storage tank (by others). Where conditions and codes permit, the oil interceptor may be housed inside a pit, and drained with a manual valve (by others) attached to the draw-off connection.
- Oil interceptors may be installed outside, making sure all piping is below the frost line (see Options - Extension).
- Vent lines must be attached to the dual no hub vent connections on the side of the interceptor. The lines should be terminated outside the building, 12" apart in elevation, to allow circulation and venting of heavier-than-air fumes. Inlet piping should also be vented through the roof, or as governed by local code.



Maintenance & Cleaning

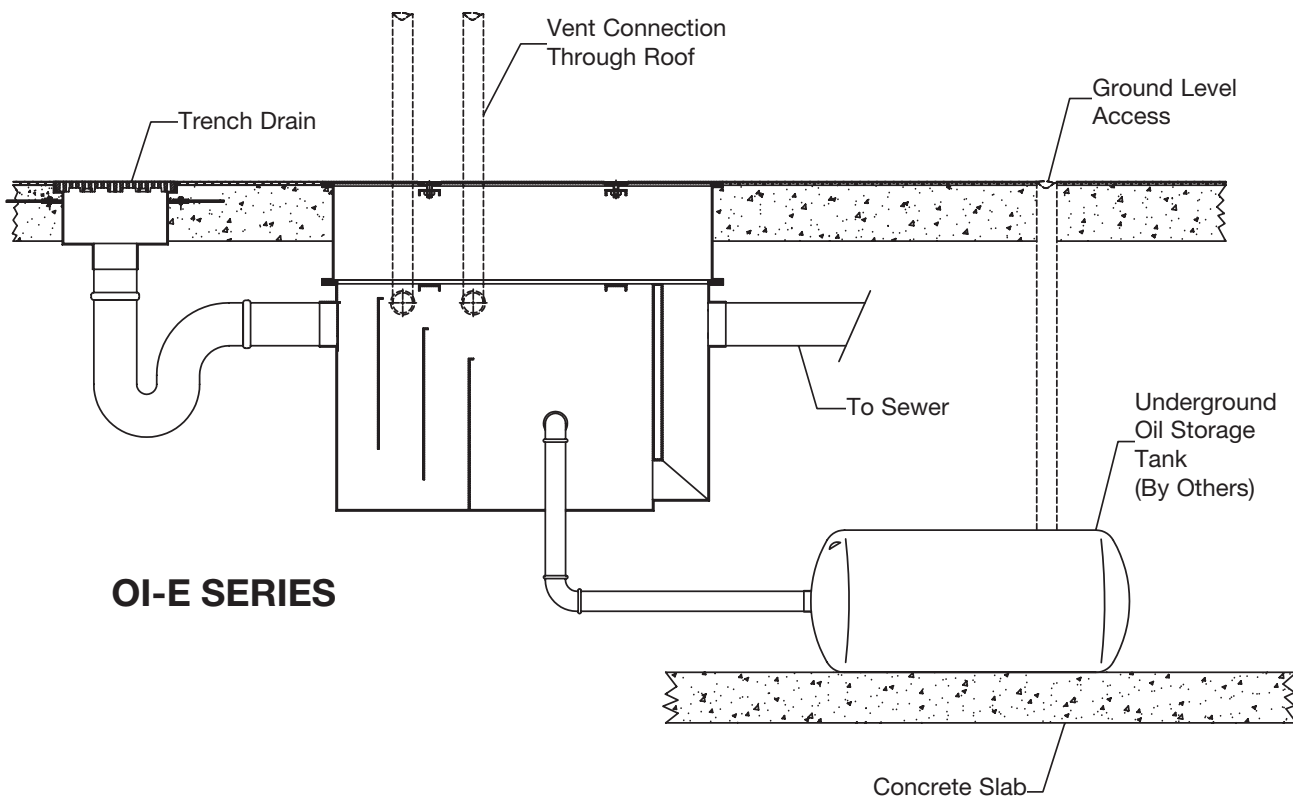
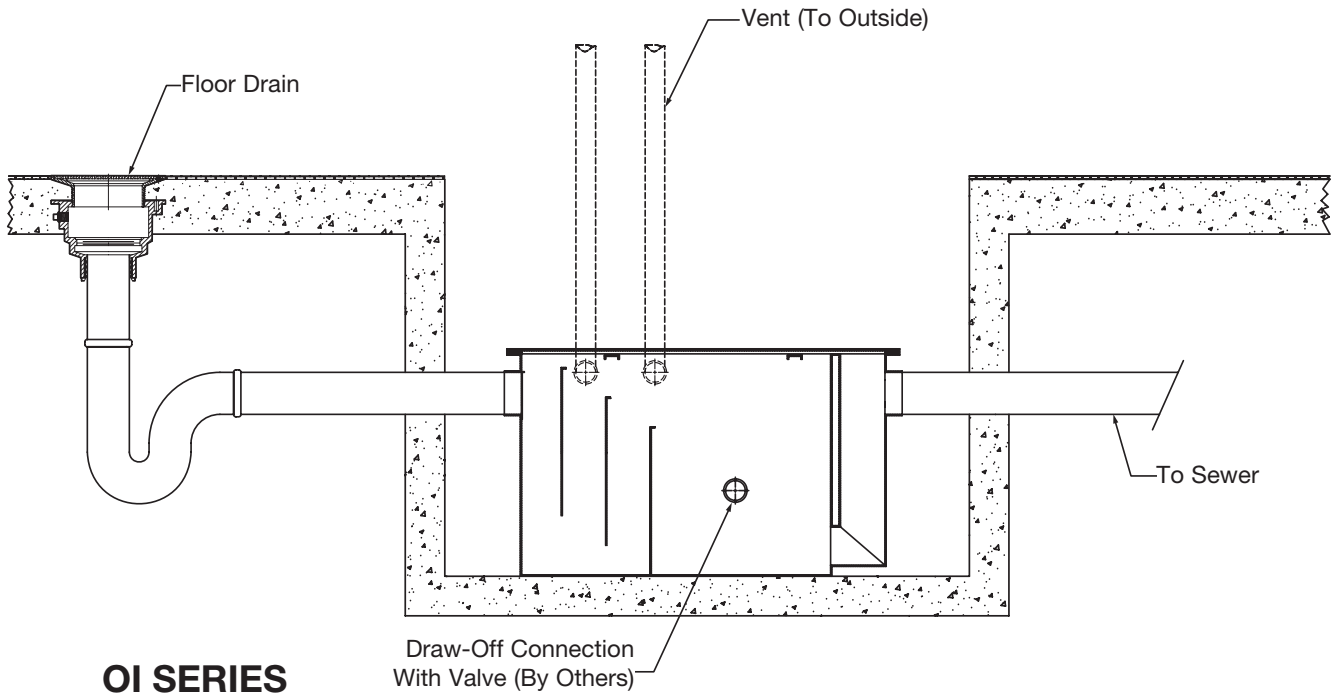
Oil interceptors are not designed to store oil for an extended period of time. Oil should be drawn off or drained into an approved oil storage tank, which would be serviced as required. If a manual valve is used, accumulated oil should be drained on a regular basis, depending upon the amount of incoming effluent. The oil interceptor lid should be removed periodically, and a visual inspection made, for sludge or other accumulations.



****Note:** Watts Oil Interceptors supplied standard with draw-off connection on right side and vent connections on left (when facing inlet).

Interceptors

Typical Oil Interceptor Installations



Interceptors

Sediment Interceptors

Design & Operation

Watts sediment interceptors are designed to separate heavier-than water sediment, or floating debris, such as hair or lint, from plumbing waste systems. Sediment interceptors trap debris with a combination of screening, and gravity separation for heavier solids and sediments. Debris accumulates inside the interceptor, and is periodically removed.

Materials

Acid Resistant Epoxy Coated Steel (standard)

Interceptor bodies are 11 ga. cold rolled steel, with an oven cured, acid resistant baked grey epoxy coating, inside and out. Standard cover is epoxy coated 1/4" skid-proof checker plate steel, gasketed, and secured with hex head center bolt(s).

Stainless Steel (-SS)

11 gauge, in accordance with ASTM-351-Grade CF8 (Type 304) standard specification. Highly durable and resistant to corrosion.

Pipe Connections

No Hub (standard)

Butt connection using a no hub or neoprene coupling. Suitable for cast iron, plastic, and most other piping applications.

Threaded (-THD)

Female threaded outlet for connection to IPS threaded pipe.

Sizing

Sediment interceptors are sized either by rate of flow, or anticipated amount of debris. See specification pages for specific flow rates and sizing.

Commonly Specified Options

-E Extension

Bolt-on extension, increases the invert dimension to accommodate below grade piping. Extensions can be installed after an interceptor is piped in.

-FC Flange & Clamp Device

Specified for above grade installations to secure a waterproofing membrane.

-HD Heavy Duty Traffic Cover

Rated 10,000 lbs. maximum safe live load.

Note: A minimum 3" extension is required with -HD option.

-O Inlet and Outlet other than Standard Size

Flow is regulated by the flow restrictor, so mismatched piping/interceptor connection sizes generally do not affect performance. Piping that does not match the interceptor connection size is typically accommodated with transition couplings or bushings.

-US Buy American Compliant

Product will be supplied with minimum 51% domestic content, in compliance with FAR 52.225-9 Buy American Act.

-X Cover for Recessed Installation

Allows smaller floor mounted interceptors to be recessed in the floor.

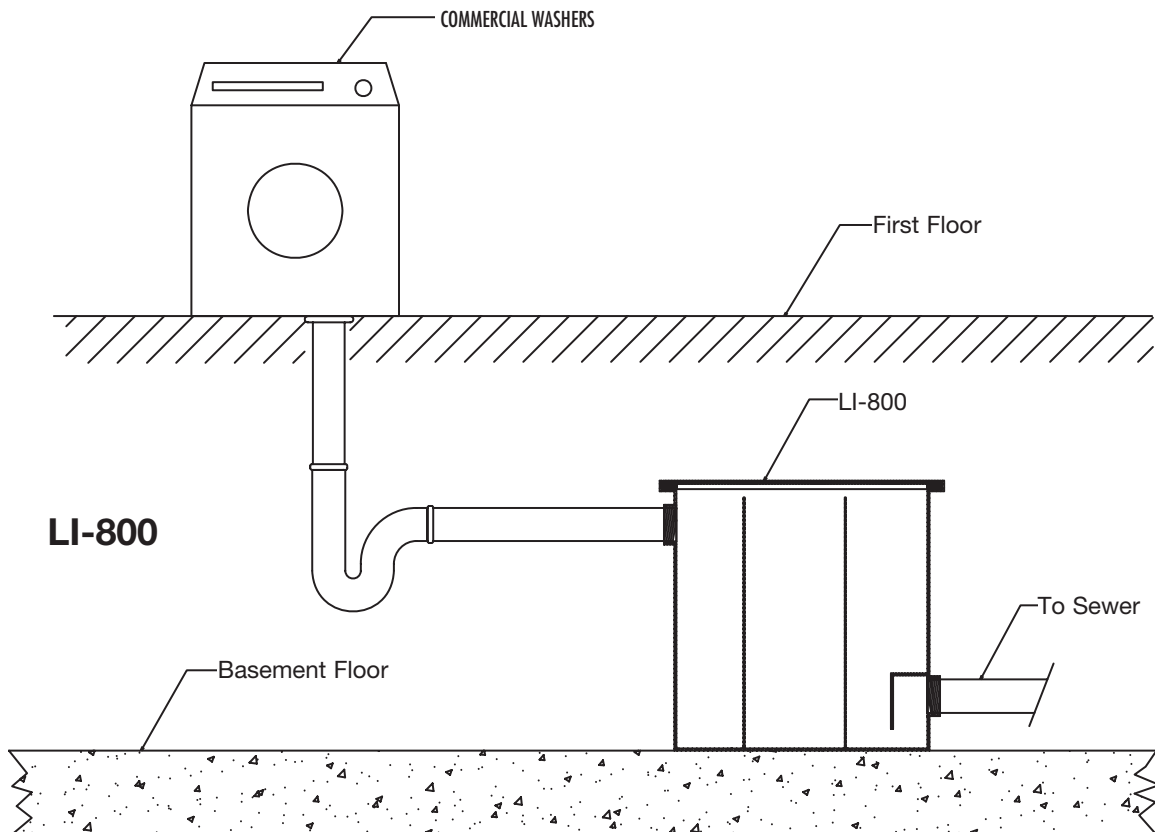
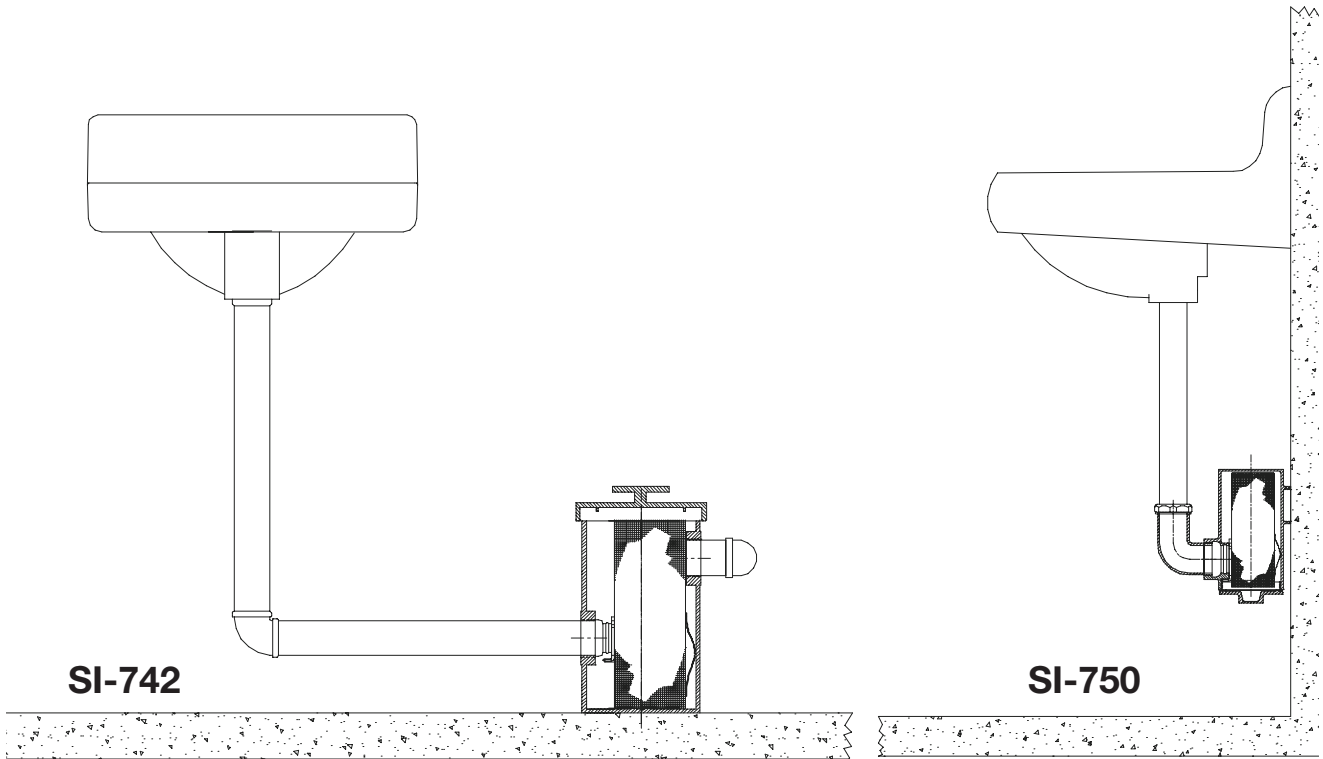
Installation Considerations

Maintenance & Cleaning

Sediment interceptors must be routinely inspected and cleaned, in order to prevent clogging, and maintain operating efficiency. Maintenance frequency is dependent upon the specific application, and amount of incoming debris.

Interceptors

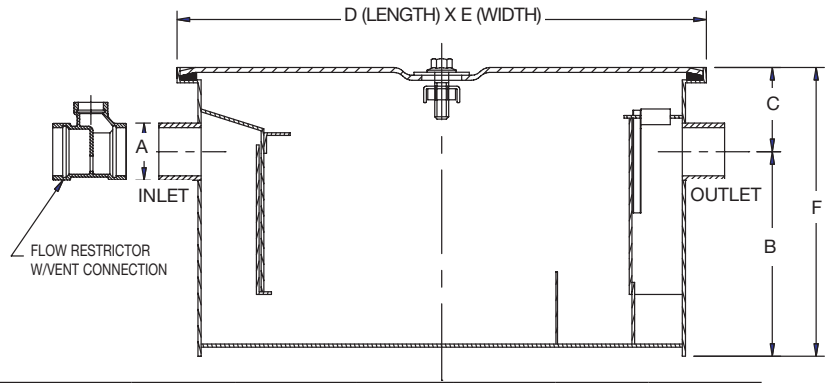
Typical Sediment Interceptor Installations



Grease Interceptors

WD Series

PDI Certified Grease Interceptor



ISO 9001-2008
CERTIFIED

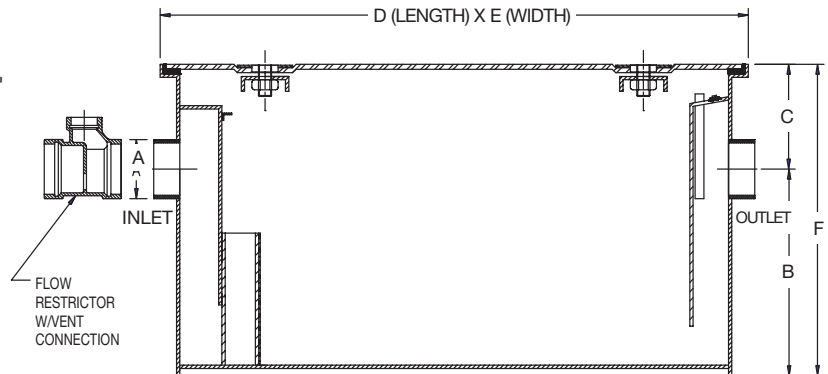


Interceptor Model Number	List Price A.R.E.	-HD 10,000 Lbs. (Traffic Cover) Add	Flow Rate GPM	Grease Capacity Lbs.	A Inlet & Outlet	B Base to Center	C Top to Center	D Length	E Width	F Height	Weight Lbs.
WD-4	\$2,187.00	\$5,294.50	04	08	2"	7-3/4"	3-1/4"	16"	10"	11"	37.48
WD-7	3,039.50	5,599.00	07	14	2"	8-1/2"	3-1/2"	18"	13"	12"	54.01
WD-10	3,571.00	6,223.00	10	20	2"	8-1/2"	3-1/2"	21-3/4"	14"	12"	63.93
WD-15	5,292.50	6,877.50	15	30	2"	10-1/2"	3-1/2"	22"	15"	14"	74.07
WD-20	6,474.00	7,203.00	20	40	3"	11-1/2"	3-1/2"	24"	15-3/4"	15"	83.77
WD-25	7,275.50	7,604.50	25	50	3"	12"	4-1/2"	26"	16-1/2"	16-1/2"	95.90
WD-35	8,990.50	10,467.00	35	70	3"	14"	5"	30"	18"	19"	123.46
WD-50	11,904.50	11,483.00	50	100	4"	16"	5-1/2"	32"	22"	21-1/2"	160.94

*-HD Option Requires Minimum 3" Extension

WD-L Series

PDI Certified Low-Rough-In Grease Interceptor



Interceptor Model Number	List Price A.R.E.	Flow Rate GPM	Grease Capacity Lbs.	A Inlet & Outlet	B Base to Center	C Top to Center	D Length	E Width	F Height	Weight Lbs.
WD-20-L	\$8,729.00	20	40	3"	7-3/4"	4"	35"	23"	12"	62.10
WD-35-L	11,240.00	35	70	4"	7"	4-1/2"	41"	33"	12"	93.70
WD-50-L	19,041.00	50	100	4"	8-1/2"	5-1/2"	55"	33"	14"	130.70

*Note: WD-50-L Not PDI Certified

Options for WD & WD-L Series:

Suffix	Description	List Price	Suffix	Description	List Price
-AL	Aluminum Cover	\$1,585.50	-O	Inlet & Outlet other than Standard Size	\$609.50
-B	Sediment Bucket	1,829.50	-SS	All Stainless Steel	P.O.A.
-E	Extension Up to 12"	3,967.00	-THD	Threaded Connection	No Add
	Extension over 12" add per inch	279.50			
-FC	Flange & Clamp Device	1,493.00			

Consult factory for all applications outside of listed parameters.

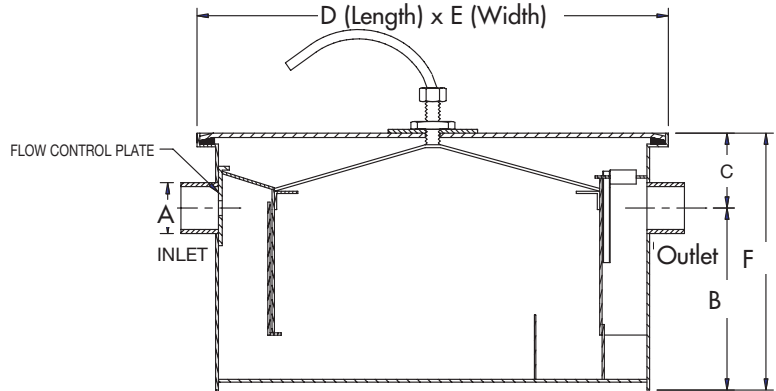
Prices do not include applicable taxes.



Grease Interceptors

WD-A Series

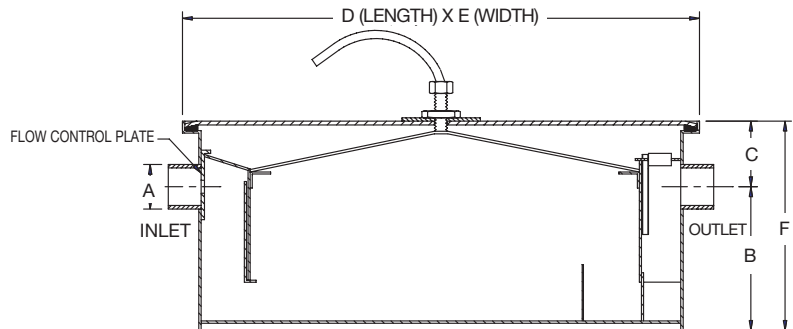
Semi-Automatic Draw-Off Grease Interceptor



Interceptor Model Number	List Price A.R.E.	Flow Rate GPM	Grease Capacity	A Inlet & Outlet	B Base to Center	C Top to Center	D Length	E Width	F Height	Weight Lbs.
WD-7-A	\$7,772.00	7	14	2"	8-1/2"	3-1/2"	18"	13"	12"	59.01
WD-10-A	9,192.00	10	20	2"	8-1/2"	3-1/2"	21-3/4"	14"	12"	68.93
WD-15-A	9,792.50	15	30	2"	10-1/2"	3-1/2"	22"	15"	14"	79.07
WD-20-A	12,590.00	20	40	3"	11-1/2"	3-1/2"	24"	15-3/4"	15"	88.77
WD-25-A	14,605.00	25	50	3"	12"	4-1/2"	26"	16-1/2"	16-1/2"	100.90
WD-35-A	14,982.00	35	70	3"	14"	5"	30"	18"	19"	128.46
WD-50-A	17,104.00	50	100	4"	16"	5-1/2"	32"	22"	21-1/2"	165.94
WD-75-A	20,348.00	75	150	4"	18-1/2"	5-1/2"	36"	24"	24"	N/A

WD-LA Series

Low Rough-In Semi-Automatic Draw-Off Grease Interceptor



Interceptor Model Number	List Price A.R.E.	Flow Rate GPM	Grease Capacity Lbs.	A Inlet & Outlet	B Base to Center	C Top to Center	D Length	E Width	F Height	Weight Lbs.
WD-20-LA	\$14,523.00	20	40	3"	7-3/4"	4"	35"	23"	12"	67.10
WD-25-LA	15,550.00	25	50	3"	7-1/2"	4-1/2"	38"	28"	12"	N/A
WD-35-LA	20,472.50	35	70	4"	7"	4-1/2"	41"	33"	12"	98.70

Options for WD-A, WD-LA, WD-AH, WD-H Series:

Suffix	Description	List Price
-0	Inlet & Outlet other than Standard	\$609.50
-SS	All Stainless Steel	P.O.A.

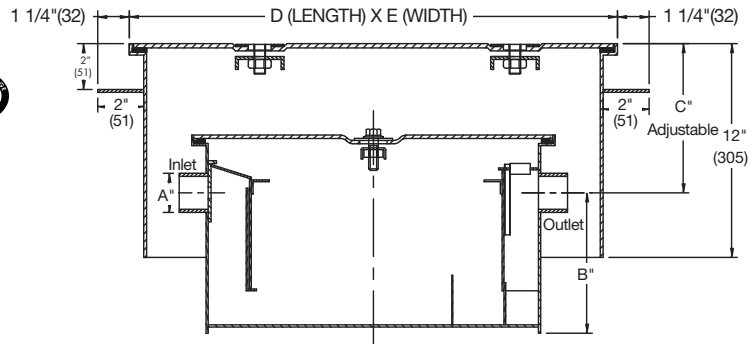


Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Grease Interceptors

WD-H

Grease Interceptor with Access Housing

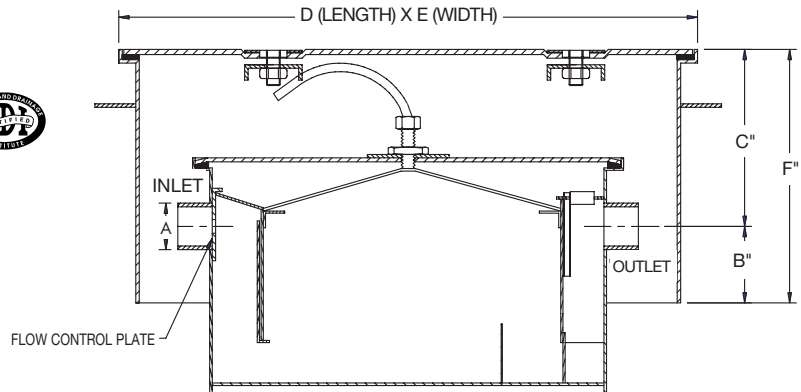
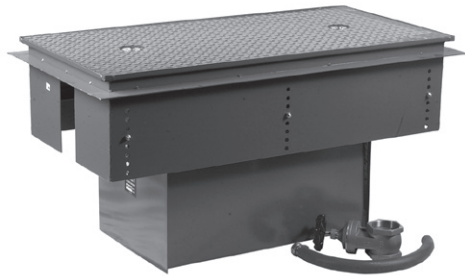


Interceptor Model Number	List Price A.R.E.	Flow Rate GPM	Grease Capacity	A Inlet & Outlet	B Base to Center Min. Max.	C Top to Center Min. Max.	D Length	E Width	F Height
WD-7-H	\$8,798.00	7	14	2"	V 5-1/2"	5-1/4" 13-1/4"	35"	18-1/2"	12"
WD-10-H	9,569.00	10	20	2"	A 5-1/2"	5-1/4" 13-1/4"	39"	19-1/2"	12"
WD-15-H	11,717.50	15	30	2"	R 5-1/2"	5-1/4" 13-1/4"	39"	20-1/2"	12"
WD-20-H	13,314.50	20	40	3"	I 5-1/2"	5-1/4" 13-1/4"	41"	21-1/2"	12"
WD-25-H	14,290.50	25	50	3"	A 4-1/2"	6-1/4" 14-1/4"	43"	22"	12"
WD-35-H	16,317.50	35	70	3"	B 4"	6-3/4" 14-3/4"	47"	23-1/2"	12"
WD-50-H	19,643.00	50	100	4"	L 3-1/2"	7-1/4" 15-1/4"	49"	27-1/2"	12"
WD-75-H	29,077.50	75	150	4"	E 3-1/2"	7-3/4" 15-3/4"	53"	29-1/2"	12"

(Housing dimensions only; for Interceptor only dimensions, see WD-A Series)

WD-AH Series

Semi-Automatic Draw-Off Grease Interceptor with Access Housing



Interceptor Model Number	List Price A.R.E.	Flow Rate GPM	Grease Capacity Lbs.	A Inlet & Outlet	B Base to Center Min. Max.	C Top to Center Min. Max.	D Length	E Width	F Height
WD-7-AH	\$14,022.00	7	14	2"	V 5-1/2"	5-1/4" 13-1/4"	35"	18-1/2"	12"
WD-10-AH	16,447.50	10	20	2"	A 5-1/2"	5-1/4" 13-1/4"	39"	19-1/2"	12"
WD-15-AH	17,860.00	15	30	2"	R 5-1/2"	5-1/4" 13-1/4"	39"	20-1/2"	12"
WD-20-AH	20,789.00	20	40	3"	I 5-1/2"	5-1/4" 13-1/4"	41"	21-1/2"	12"
WD-25-AH	22,953.00	25	50	3"	A 4-1/2"	6-1/4" 14-1/4"	43"	22"	12"
WD-35-AH	23,907.50	35	70	3"	B 4"	6-3/4" 14-3/4"	47"	23-1/2"	12"
WD-50-AH	26,112.00	50	100	4"	L 3-1/2"	7-1/4" 15-1/4"	49"	27-1/2"	12"
WD-75-AH	31,293.00	75	150	4"	E 3-1/2"	7-3/4" 15-3/4"	53"	29-1/2"	12"

(Housing dimensions only; for Interceptor only dimensions, see WD-A Series)

Consult factory for all applications outside of listed parameters.

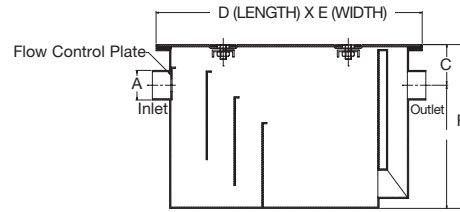
Prices do not include applicable taxes.



Grease Interceptors

GI-K SERIES

Large Capacity Grease Interceptor



Interceptor Model Number	List Price	-HD 10,000 lbs. (Traffic Cover)* Add	Flow Rate GPM	Grease Capacity Lbs.	A Inlet & Outlet	B Base to Center	C Top to Center	D Length	E Width	F Height	Weight Lbs.
GI-75-K	\$23,992.50	\$7,622.00	75	150	4"	18-1/2"	4-1/2"	39-3/4"	30-3/4"	23"	264.55
GI-100-K	26,996.50	10,490.00	100	200	4"	28-1/2"	4-1/2"	39-3/4"	30-3/4"	33"	317.46
GI-150-K	29,987.50	13,467.50	150	300	4"	38-1/2"	4-1/2"	39-3/4"	30-3/4"	43"	401.24
GI-200-K	43,486.50	15,360.50	200	400	4"	36-1/2"	6-1/2"	52"	34"	43"	493.83
GI-250-K	50,631.00	21,205.00	250	500	4"	39-1/2"	6-1/2"	52"	34"	46"	639.33
GI-300-K	59,545.50	27,162.50	300	600	6"	38"	10"	76"	48"	48"	848.77
GI-400-K	72,860.00	36,885.50	400	800	6"	42"	10"	83"	55"	52"	959.00
GI-500-K	86,435.00	45,168.50	500	1000	6"	53"	10"	91"	60"	63"	1289.69

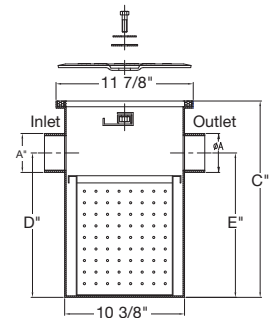
*-HD Option Requires Minimum 3" Extension

Options for GI-K Series:

Suffix	Description	List Price	Suffix	Description	List Price
AL	Aluminum Cover	\$7,854.00	-O	Inlet & Outlet Other Than Standard Size	\$609.50
B	Sediment Bucket	3,326.50	-SS	All Stainless Steel	P.O.A.
E	Extension Up to 12"	5,290.00	-THD	Threaded Connections	No Add
	Extension Over 12", add per inch	451.00			
-FC	Flange & Clamp Device (on extension only)	4,232.00			

SI-770

Solids Interceptor



Interceptor Model Number	List Price	Inlet/Outlet Size	Flow Rate GPM	Solids Cap. Cubic Ft.	C	D/E	G	Weight Lbs.
SI-770-100	\$2,434.50	2	4	0.20	10"	7-1/4"	11-3/4"	13.87
SI-770-200	2,476.50	2	7	0.29	11-1/8"	8-1/8"	13-3/4"	16.75
SI-770-300	2,564.50	2	10	0.33	11-3/4"	8-1/4"	15-7/8"	18.98
SI-770-400	2,745.00	3	15	0.38	13-3/8"	9-3/8"	18-5/8"	23.89
SI-770-500	2,906.50	3	20	0.66	15"	11-3/4"	19-1/8"	26.34
SI-770-600	3,137.50	3	25	0.79	17"	12-1/2"	21-3/4"	32.19
SI-770-700	3,329.00	3	35	1.17	18-3/4"	14-1/4"	24-3/8"	36.59
SI-770-800	3,570.00	4	50	1.35	21-1/8"	16"	24-3/8"	39.89
SI-770-900	3,860.00	4	75	1.61	22-3/4"	18-1/2"	24-3/8"	39.00
SI-770-1000	3,959.00	4	100	1.80	27"	23"	24-3/8"	42.00

Options for SI-770

Suffix	Description	List Price
-E	Extension Up to 12"	\$3,967.00
	Extension Over 12", add per inch	279.50
-O	Inlet & Outlet Other Than Standard Size	609.50
-SS	All Stainless Steel	P.O.A.
-THD	Threaded Connections	No Add



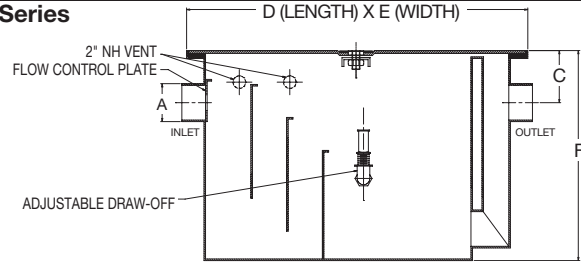
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Oil Interceptors

OI & OI-K Series Oil Interceptors

Interceptor Model Number	Flow Rate GPM	List Price	-HD 10,000 (Traffic Cover)* Add
OI-10	10	\$4,870.00	\$5,174.50
OI-15	15	6,680.50	5,565.00
OI-20	20	8,074.00	5,891.00
OI-25	25	8,769.50	6,221.00
OI-35	35	10,663.50	6,877.50
OI-50	50	14,343.00	7,203.00

OI Series



OI Series Dimensional Data

Interceptor Model Number	Flow Rate GPM	A	C	D Length	E Width	F Height	G	H	J	K
OI-10	10	3"	4"	22-1/4"	16-3/4"	11-1/2"	3-1/2"	11-1/2"	5"	4"
OI-15	15	3"	4"	22-1/4"	16-3/4"	14-1/2"	5-1/2"	11-1/2"	5"	4"
OI-20	20	3"	4"	27-1/4"	19-1/4"	16-1/2"	6-1/2"	14-1/4"	6"	5"
OI-25	25	3"	4"	27-1/4"	19-1/4"	18-1/4"	9-1/2"	14-1/4"	6"	5"
OI-35	35	4"	4"	33-3/4"	20-3/4"	18"	9-1/2"	18-1/2"	7"	6"
OI-50	50	4"	4"	33-3/4"	20-3/4"	21-1/2"	13"	18-1/2"	7"	6"

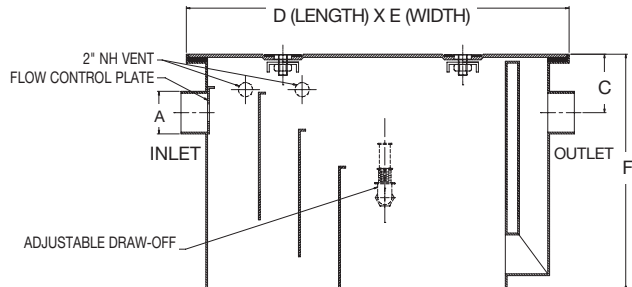
Options for OI Series:

Suffix	Description	List Price	Suffix	Description	List Price
B	Sediment Bucket	\$1,829.50	-O	Inlet & Outlet Other Than Standard Size	\$609.50
E	Extension Up to 12"	3,967.00	-SS	All Stainless Steel	P.O.A.
-FC	Extension Over 12", add per inch Flange & Clamp Device	279.50 1,493.00	-THD	Threaded Connections	No Add

OI-K Series Dimensional Data

Interceptor Model Number	Flow Rate GPM	List Price	-HD 10,000 (Traffic Cover)* Add
OI-75-K	75	\$24,841.50	\$7,604.50
OI-100-K	100	26,935.00	10,464.50
OI-150-K	150	33,359.00	13,440.00
OI-200-K	200	47,124.00	15,327.50
OI-250-K	250	54,574.50	21,157.50
OI-300-K	300	61,793.00	27,161.50
OI-400-K	400	81,714.00	36,884.50
OI-500-K	500	103,068.00	45,066.00

OI-K Series



Interceptor Model Number	Flow Rate GPM	A	C	D Length	E Width	F Height	G	H	J	K
OI-75-K	75	4"	4-1/2"	39-3/4"	30-3/4"	23"	9 1/2"(241)	21-3/4"	8"	7"
OI-100-K	100	4"	4-1/2"	39-3/4"	30-3/4"	33"	19 1/2"(495)	21-3/4"	8"	7"
OI-150-K	150	4"	4-1/2"	39-3/4"	30-3/4"	43"	29 1/2"(749)	21-3/4"	8"	7"
OI-200-K	200	4"	6-1/2"	52"	34"	43"	18 1/2"(470)	41"	8"	7"
OI-250-K	250	4"	6-1/2"	52"	34"	46"	30 1/2"(775)	45"	8"	7"
OI-300-K	300	6"	10"	76"	48"	48"	28"(711)	48"	12"	10"
OI-400-K	400	6"	10"	83"	55"	52"	32"(813)	52"	12"	10"
OI-500-K	500	6"	10"	91"	60"	63"	43"(1092)	63"	12"	10"

*-HD Option Requires Minimum 3" Extension

Options for OI-K Series:

Suffix	Description	List Price	Suffix	Description	List Price
B	Sediment Bucket	\$3,326.50	-O	Inlet & Outlet Other Than Standard Size	\$609.50
E	Extension Up to 12"	5,290.00	-SS	All Stainless Steel	P.O.A.
FC	Extension Over 12", add per inch Flange & Clamp Device	451.00 4,232.00	-THD	Threaded Connections	No Add

Consult factory for all applications outside of listed parameters.

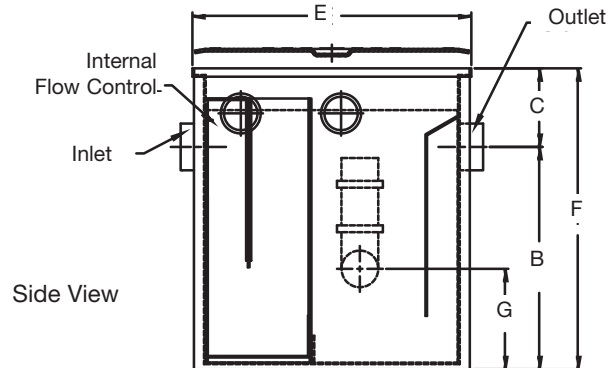
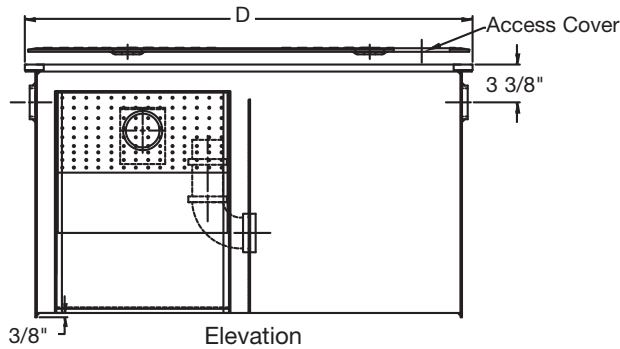
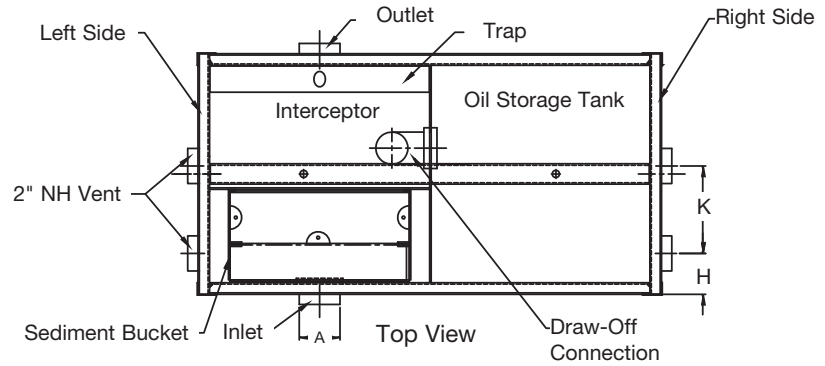
Prices do not include applicable taxes.



Oil Interceptors

OI-ST Series

Oil Interceptor w/Integral Storage Tank



Inter-ceptor Model Number	List Price	-HD 10,000 Lbs. (Traffic Cover)* Add	Flow Rate GPM	Combined Volume Gal.	A Inlet & Outlet	B Base To Center	C Top To Center	D Length	E Width	F Height	G	H	K	J
OI-10-ST	\$7,300.00	\$8,251.50	10	15	2"	8-1/2"	6"	24"	18"	14-1/2"	3"	4-1/2"	5-1/2"	6"
OI-15-ST	10,019.00	8,764.00	15	22	2"	12-1/2"	6"	33-3/4"	20-7/8"	18-1/2"	5	4-1/2"	7-1/2"	9"
OI-20-ST	12,111.00	9,282.00	20	32	3"	14-1/2"	6"	39-3/4"	20-7/8"	20-1/2"	6"	4-1/2"	7-1/2"	10-1/2"
OI-25-ST	13,151.00	9,318.00	25	35	3"	16-1/2"	6"	39-3/4"	20-7/8"	22-1/2"	7"	4-1/2"	7-1/2"	10-1/2"
OI-35-ST	15,979.00	10,311.50	35	65	4"	14-1/2"	6"	49-3/4"	32-7/8"	20-1/2"	6"	12"	6"	13"
OI-50-ST	16,218.50	10,838.50	50	78	4"	18-1/2"	6"	49-3/4"	32-7/8"	24-1/2"	8"	12"	6"	13"
OI-75-ST	37,265.00	11,395.00	75	214	4"	26-1/2"	6"	49-3/4"	40-7/8"	32-1/2"	16"	12"	12"	13"
OI-100-ST	40,425.00	15,708.00	100	303	4"	26-1/2"	9-1/2"	90"	58"	36"	20-1/2"	15"	20-1/2"	22-1/2"
OI-150-ST	50,026.00	20,164.50	150	358	4"	30"	14"	76"	66"	44"	24"	17"	24"	19"
OI-200-ST	70,665.50	23,001.00	200	453	4"	30-1/2"	17-1/2"	90"	73-1/4"	48"	24-1/2"	18"	25"	22-1/2"
OI-250-ST	81,862.00	31,719.00	250	590	6"	35-1/2"	15-1/2"	90"	73-1/4"	51"	29-1/2"	18"	25"	22-1/2"
OI-300-ST	92,753.50	40,742.00	300	816	6"	36-1/2"	15-1/2"	86"	94-7/8"	52"	29-1/2"	23-1/2"	33"	21-1/2"
OI-350-ST	108,688.00	46,939.50	350	1068	6"	43-1/2"	16-1/2"	94"	100-7/8"	60"	36-1/2"	24"	35"	23-1/2"
OI-400-ST	127,327.50	56,563.50	400	1111	6"	43"	17"	91"	107-7/8"	60"	36"	26"	38"	22-3/4"
OI-500-ST	137,122.00	67,337.00	500	1242	6"	46"	20"	83"	118-7/8"	66"	39"	30"	42"	20-3/4"

*-HD Option Requires Minimum 3" Extension

Options for OI-ST Series:

Suffix	Description	List Price	Suffix	Description	List Price
E	Extension Up to 12"	\$6,584.00	-O	Inlet & Outlet Other Than Standard Size	\$609.50
E	Extension over 12", add per inch	451.00	-SS	All Stainless Steel	P.O.A.
FC	Flange & Clamp Device	4,232.00	-THD	Threaded Connections	No Add



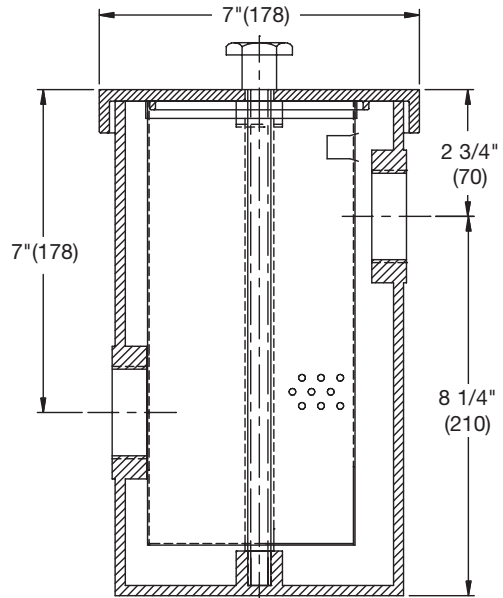
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Hair, Sediment & Solids Interceptors

SI-742

Hair, Plaster, & Sediment Interceptor

Model Number	Description	List Price
SI-742	cast aluminum	\$1,233.50
SI-742-SS	stainless steel	2,715.00



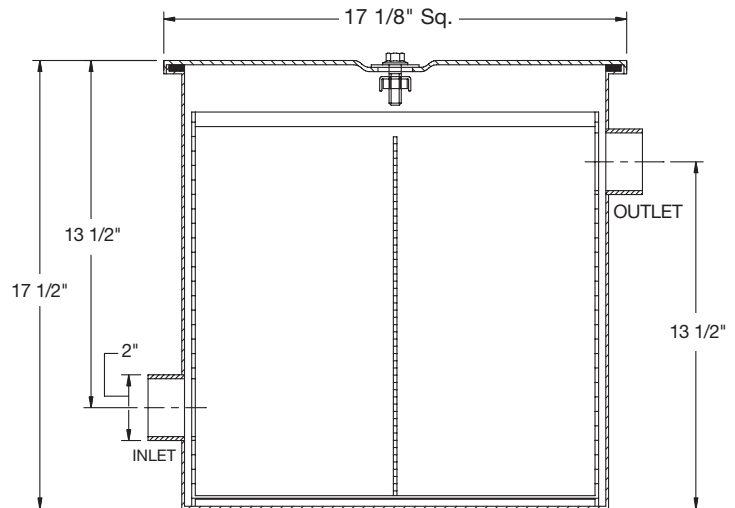
Options for SI-742 Series:

Suffix	Description	List Price
-X	Cover for Recessed Installation	\$476.05

SI-742-L

Large Capacity Sediment Interceptor

Model Number	Outlet	Description	List Price
SI-742-L	2"	Epoxy Coated Steel	\$4,320.00
SI-743-L	3"	Epoxy Coated Steel	4,929.00
SI-744-L	4"	Epoxy Coated Steel	4,929.00
SI-742-L-SS	2"	Stainless Steel	7,921.00
SI-743-L-SS	3"	Stainless Steel	8,531.00
SI-744-L-SS	4"	Stainless Steel	8,531.00



Options for SI-742-L:

Suffix	Description	List Price
-E	Extension Up To 12" Each Additional Inch	\$3,967.00 279.50

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Hair, Sediment & Solids Interceptors

SI-750 & SI-750-TO Hair Interceptor

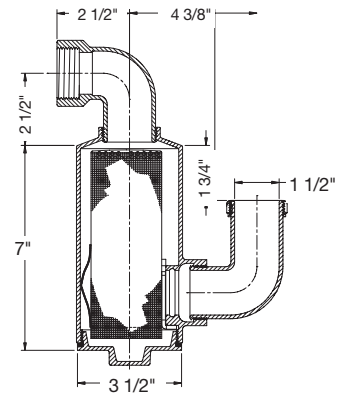
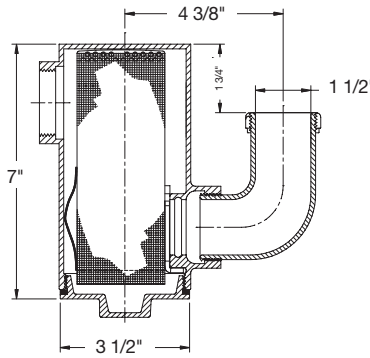
Model Number	Description	List Price
SI-750	Cast Iron, Side Outlet	\$821.00
SI-750-TO	Chrome Plated, Top Outlet	1,363.00



Cast Iron

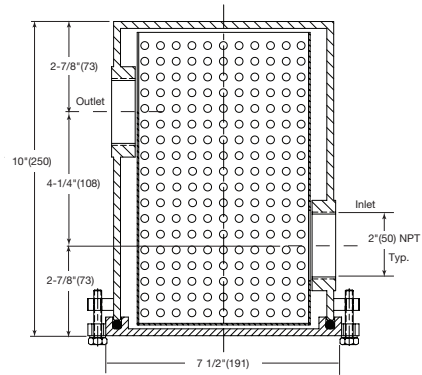


Chrome Plated



SI-762 Bottom Access Hair, Plaster, & Sediment Interceptor

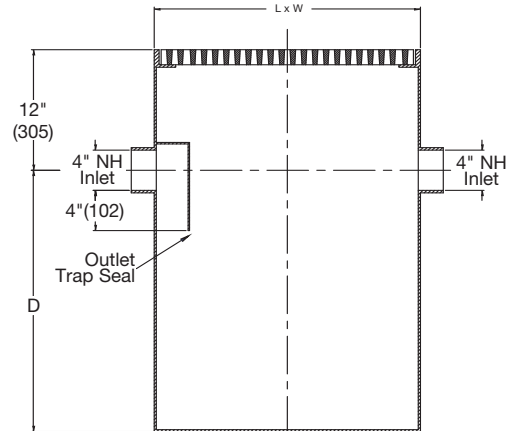
Model Number	Description	Weight Lbs.	List Price
SI-762	Epoxy Coated Steel	22	\$1,233.50



ST Series Sand Trap



Interceptor Model Number	List Price	Flow Rate	Inlet & Outlet	L Length	W Width	D	Capacity Gal.	No. of Grates
ST-20	\$12,012.00	20	4"	24"	24"	26"	60	1
ST-50	20,374.50	50	4"	48"	24"	26"	120	2
ST-150	61,574.00	150	4"	48"	48"	38"	360	4
ST-250	64,079.50	250	4"	72"	48"	39"	540	6
ST-500	78,840.50	500	4"	120"	48"	51"	1200	10



Options for ST Series:

Suffix	Description	List Price	Suffix	Description	List Price
-E	Extension Up to 12" Each Additional Inch	\$6,611.00 451.00	-THD	Threaded Connections	No Add
-O	Inlet & Outlet Non-Standard	609.50	-Q	Special (Describe)	P.O.A.
-ST	Solid Checker Plate Cover	1,470.00			

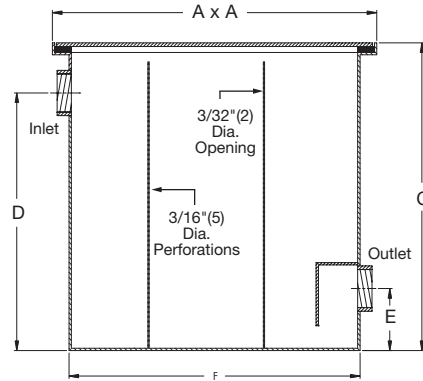


Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Lint & Sand Interceptors

LI-800

Lint Interceptor



Model Number	List Price	Size/No. of Machines	Inlet / Outlet Size	Flow Rate GPM	Approx. Weight/ Lbs.	A	C	D	E	F
LI-803	\$9,610.00	3	2"	30	93	17"	16-1/2"	13-1/2"	3-1/4"	15-1/4"
LI-807	11,180.50	7	3"	70	155	25"	20"	16-1/2"	3-1/4"	23-1/4"
LI-810	13,156.00	10	4"	100	271	33"	28"	20-1/8"	4"	31-1/4"
LI-820	15,974.50	20	4"	200	404	40	35"	27-1/8"	4"	38-1/4"
LI-830	18,503.50	30	6"	300	654	45"	40"	28-1/8"	5"	43-1/4"
LI-840	21,102.50	40	6"	400	723	48"	43"	31-1/8"	5"	46-1/4"
LI-850	23,690.00	50	6"	500	911	52"	47"	35-1/8"	5"	50-1/4"

Options for LI-800

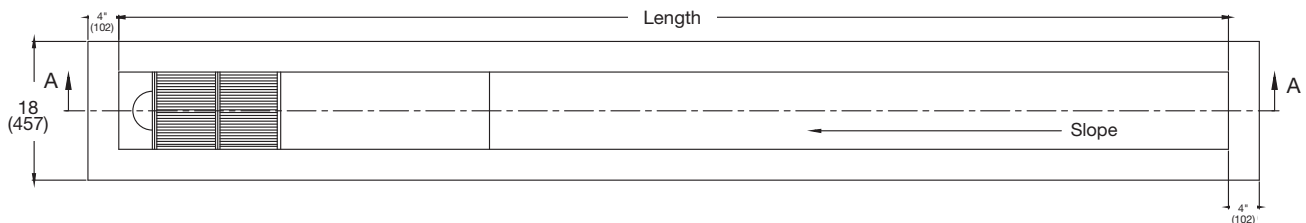
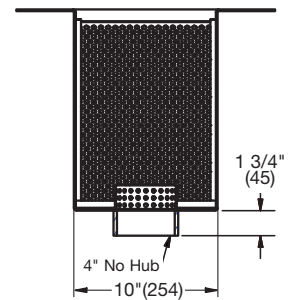
Suffix	Description	List Price
-E	Extension Up to 12" Each Additional Inch	\$2,253.00 279.50
-HD	10,000 Traffic Cover*	P.O.A.
-O	Inlet & Outlet other than Standard	609.50
-SS	All Stainless Steel	P.O.A.

LI-LT Series

Stainless Steel Lint Trough

Model Number	EDP #	Length	List Price
LI-12-LT	8189161	12'	\$27,027
LI-8-LT	8189776	8'	\$21,873
LI-4-LT	8189401	4'	\$16,720

Note: Custom lengths available at \$4,180 per foot.
(Call for Availability)



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Lint & Sand Interceptors

SA-Series

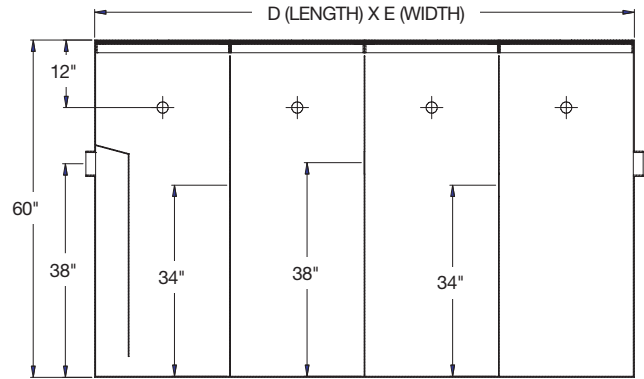
Heavy Duty Sand & Sediment Interceptor

Model Number	GPM	Wt. Lbs.	Cu. Ft.	Length	Width	Height	List Price	-HD 10,000 (Add) (Traffic Cover)
SA-310	300	1600	43	60"	36"	60"	\$35,702.00	\$7,161.00
SA-410	400	1750	54	72"	36"	60"	53,945.50	9,414.00
SA-510	500	2100	72	96"	36"	60"	73,643.00	13,710.50
SA-610	600	2500	81	108"	36"	60"	75,364.50	15,489.50
SA-710	700	2700	90	120"	36"	60"	82,243.00	17,083.00
SA-810	800	3000	108	144"	36"	60"	84,754.00	17,707.00
SA-1010	1000	3640	135	180"	36"	60"	100,887.00	18,942.00

*-HD Option Requires Minimum 4" Extension

Options for SA-Series

Suffix	Description	List Price
-E	Extension Up to 12" Each Additiona Inch	\$6,584.00 451.00
-FC	Flange & Clamp Device	4,232.00
-O	Inlet & Outlet other than Standard	609.50



Cleanouts

Table Of Contents

- Pictorial Index
- Product Recommendations
- Cleanout Selection Factors
 - Materials
 - Pipe Connections
 - Load Ratings
 - Design Considerations
 - Commonly Specified Options
 - Typical Installations



Cleanouts

Pictorial Index



CO-200-H
Elastomeric Flange



CO-200-R
Round NB Top



CO-200-RC
Carpet Marker



CO-200-RFC7
Surface Membrane Clamp



CO-200-RX
HD Round NB Top



CO-200-RX-4
HD Round DI Top



CO-200-S
Square NB Top



CO-200-SX
HD Square NB Top



CO-200-SX-4
HD Square DI Top



CO-200-T
Round w/Tile Recess



CO-200-TS
Square w/Tile Recess



CO-200-U
Round w/Terrazzo Recess



CO-200-US
Square w/Terrazzo Recess



CO-260
8" dia. HD Top



CO-270
7" Dia.
Non-Adjustable Top



CO-300-MF
HD Access Housing

Cleanouts

Pictorial Index

			
<p>CO-300-R Round Access Cover</p>	<p>CO-300-S Square Access Cover</p>	<p>CO-380 Cleanout Ferrule</p>	<p>CO-380-RD Wall Cleanout Ferrule with Stainless Steel Cover</p>
			
<p>CO-390-E General Purpose</p>	<p>CO-410 Floor Access Housing</p>	<p>CO-440-RD Wall Cleanout w/Poly Plug</p>	<p>CO-450-RD CI Wall Cleanout</p>
			
<p>CO-460 Stack Cleanout</p>	<p>CO-460-RD Stack Cleanout w/SS cover</p>	<p>CO-480-RD SS Cover & Screw</p>	<p>CO-590 Brass Plug</p>
			
<p>CO-590-RD Wall Cleanout with Brass Plug</p>	<p>CO-600-R Isolation Cleanout</p>	<p>CO-1200-R HD Round SS Top</p>	<p>CO-1200-RX XHD Round SS Top</p>

Consult factory for all applications outside of listed parameters.
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WATTS®

Cleanouts

Pictorial Index



CO-1200-S
HD Square SS Top



CO-1200-SX
XHD Square SS Top

Recommendations

Application	Product
Basement areas	CO-200-RX-4, CO-390-E
Clinical & surgical areas	CO-1200-R-28, CO-1200-S-28
Floor access covers	CO-300-R, CO-300-S, CO-410
Food preparation areas	CO-1200-R, CO-1200-S
Garage and service bays	CO-260, CO-270
Industrial and warehouse areas	CO-200-RX, CO-200-RX-4, CO-200-SX, CO-200-SX-4
Interior carpeted areas	CO-200-RC, CO-200-CF
Interior finished areas	CO-200-R, CO-200-S
Maintenance & boiler rooms	CO-200-RX-4, CO-380
Outdoor parking areas	CO-300-MF
Outdoor walkways	CO-200-RX, CO-200-SX
Rubberized poured flooring	CO-200-H
Rubberized sheet flooring	CO-200-RFC7
Sanitary manufacturing areas	CO-1200-RX-28, CO-1200-SX-28
Stack bases	CO-460, CO-460-RD
Stairwells	CO-200-RX-4, CO-390-E
Terrazzo floors (recessed cover)	CO-200-U, CO-200-US
Tile floors (recessed cover)	CO-200-T, CO-200-TS
Wall access covers	CO-480-RD
Wall stubouts	CO-440-RD, CO-450-RD, CO-590-RD

Cleanout Selection Factors

Materials

Cast iron epoxy coated*

Industrial grade cast iron, finished with Watts gray acid resistant epoxy coating.

***NOTE:** Watts Drainage standard epoxy coating is designed for interim protection of iron components during processing, shipping, and construction. It is not intended to protect surfaces subject to traffic, or environmental conditions. Exposed iron surfaces should be expected to show surface oxidation (rusting) after a short period of time.*

Nickel bronze

Nickel bronze alloy is homogenous, highly resistant to wear, and will not be discolored by weather or traffic. Appearance is silvery, and compliments most interior and exterior finishes.

Stainless steel

In accordance with ASTM A-351 -Grade CF8 (Type 304) standard specification. Highly durable and resistant to corrosion.

Ductile iron epoxy coated*

Superior impact resistance and durability compared to standard cast iron. Watts supplies ductile iron drain grates standard, finished with gray acid resistant epoxy coating.

PVC or ABS

Most floor and area drains can be specified with optional PVC (-60) or ABS (-61) plastic bodies for direct sch. 40 solvent weld connection.



Consult factory for all applications outside of listed parameters.
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Cleanouts

Cleanout Selection Factors

Pipe Connections

No hub (standard)

Butt connection using a no hub or neoprene coupling. Suitable for cast iron, plastic, and most other piping applications.

Push-on (-P)

ASTM C-564 gasket connection, with pipe stop. Suitable for no hub or service weight cast iron, sch. 40 plastic, and steel pipe. Not recommended for above grade.

Inside caulk (-X)

Used for lead and oakum joints, pipe is inserted through a caulk ring on the drain outlet.

PVC (-60) or ABS (-61) socket

For direct solvent weld connection to sch. 40 plastic pipe.

Threaded (-THD)

Female threaded outlet for connection to IPS threaded pipe.

Load Ratings

Load ratings are based upon maximum anticipated traffic, in accordance with American National Standards AMSE A112.21.1M. See specification pages for specific load rating data.

Light Duty (LD) - Safe live load under 2000 lbs.

Medium Duty (MD) - Safe live load 2000-4999 lbs.

Heavy Duty (HD) - Safe live load 5000-7499 lbs.

Extra Heavy Duty (XHD) - Safe live load 7500-10,000 lbs.

Special Duty (SD) - Safe live load over 10,000 lbs.

Design Considerations

Cleanout Plugs

Straight thread ANSI gasketed brass plugs are standard in all metal cleanouts. PVC/ABS cleanouts are supplied with a two-piece gasket seal poly plug. All Watts cleanout plugs are gastight, water tight, removable, and hold test.

Finished/Unfinished Areas

Finished area top specifications should be nickel bronze, or optional stainless steel. Ductile iron is typically used in unfinished areas, where appearance is not a primary concern.

Fixed/Adjustable Tops

Adjustable top drains enable vertical adjustment of the top assembly, to more easily match the finished floor level.

Commonly Specified Options

-6 Vandal Proof

Grate secured with Allen Head screws. Security screws (Torx & Pin, Allen and Pin) may be specified for high security applications.

-13 Galvanized

Standard zinc galvanizing, commonly specified above grade in highly corrosive coastal environments or industrial areas.

-C Membrane Clamp

Specified in floors with a waterproofing membrane, generally in above grade applications.

-CF Carpet Clamping Flange

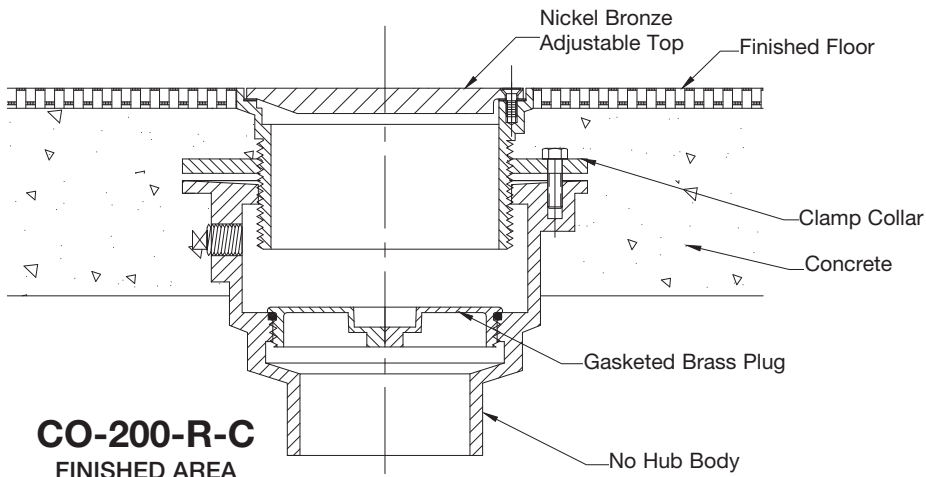
For CO-200-R, securely clamps carpeting to the cleanout cover.

-US Buy American Compliant

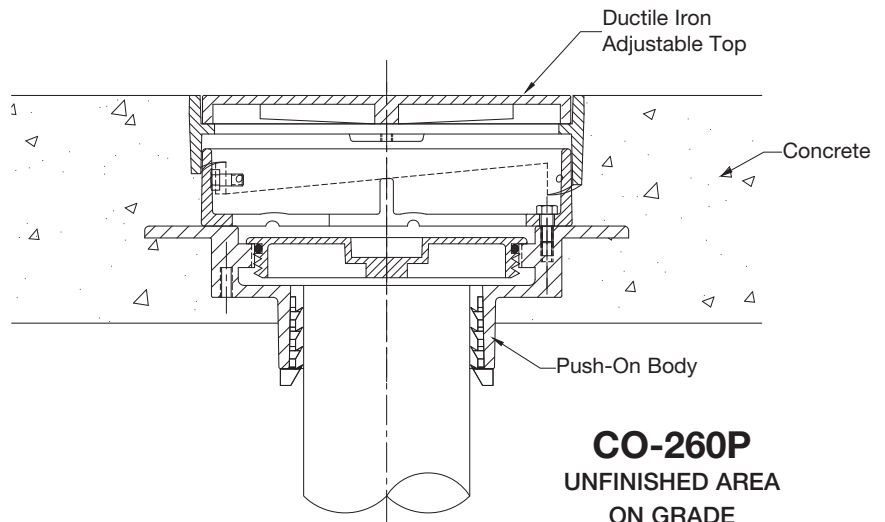
Product will be supplied with minimum 51% domestic content, in compliance with FAR 52.225-9 Buy American Act.

Cleanouts

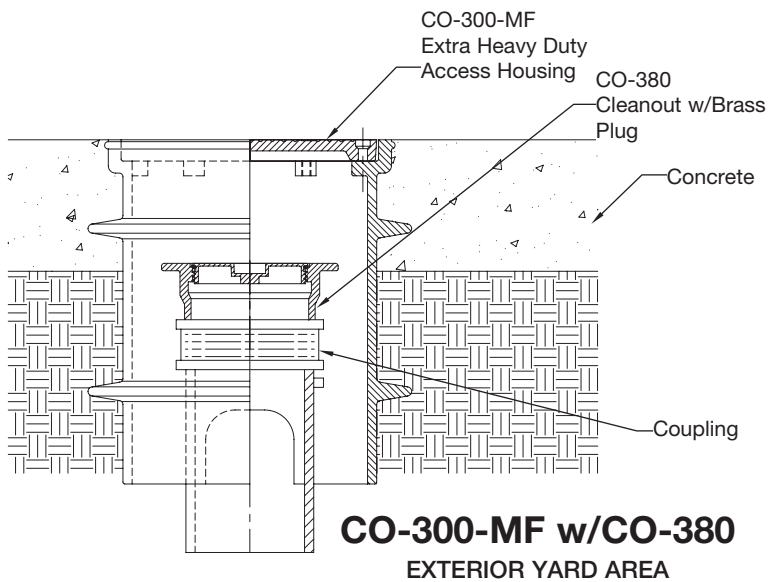
Typical Installations



CO-200-R-C
FINISHED AREA
ABOVE GRADE



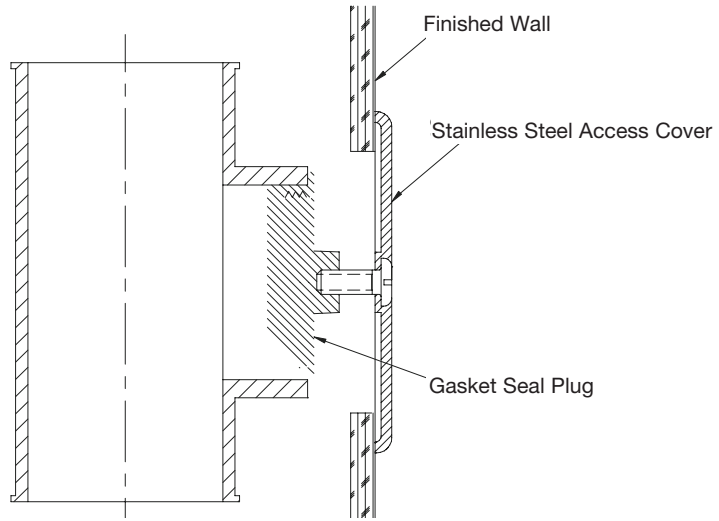
CO-260P
UNFINISHED AREA
ON GRADE



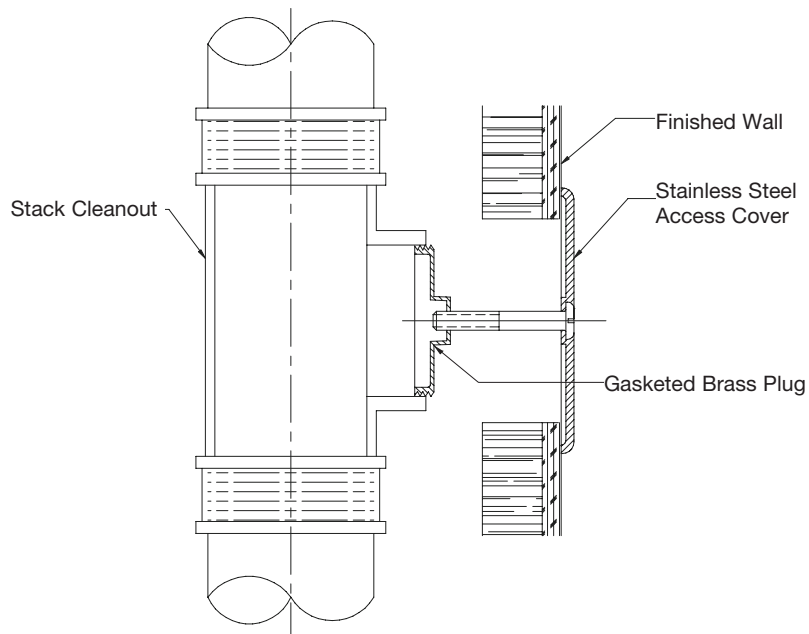
CO-300-MF w/CO-380
EXTERIOR YARD AREA

Cleanouts

Typical Installations



CO-440-RD
WALL STUB-OUT



CO-460-RD
VERTICAL STACK

Adjustable Floor Cleanouts

CO-200-R

Floor Cleanout with Round Top



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-202-R	11	2"	nickel bronze	\$625.50
CO-203-R	11	3"	nickel bronze	661.00
CO-204-R	11	4"	nickel bronze	881.00

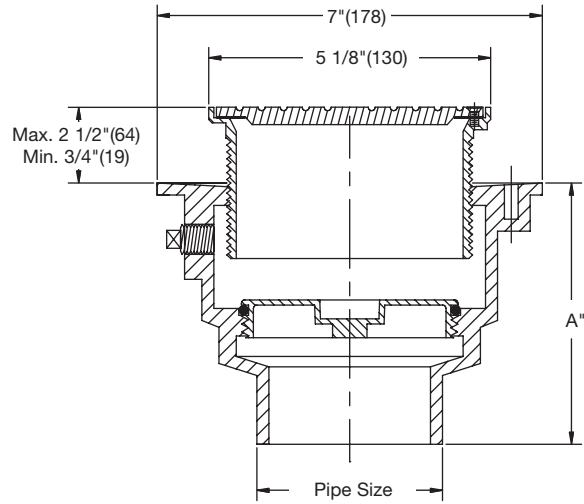


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

CO-200-RC

Floor Cleanout with Round Top, Carpet Marker



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-202-RC	11	2"	nickel bronze	\$701.50
CO-203-RC	11	3"	nickel bronze	738.00
CO-204-RC	11	4"	nickel bronze	958.50

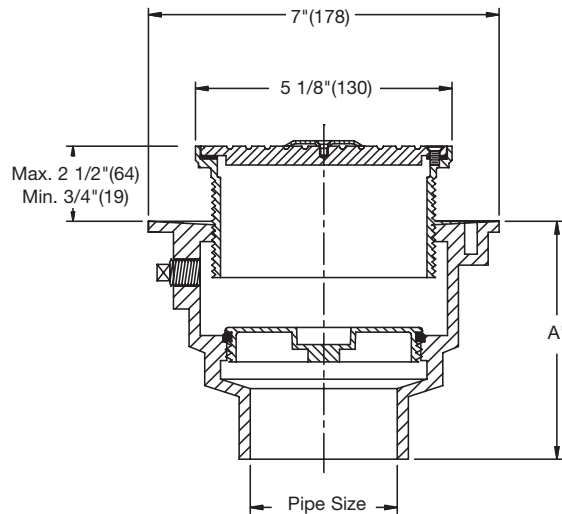


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

Options for CO-200:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-6	Vandal Proof	\$96.50
P	Push-On Outlet	No Add	-13	Galvanized Body	219.00
-X	Inside Caulk	No Add	-60	PVC Body w/Poly Plug	No Add
-C	Membrane Clamp	\$106.50	-61	ABS Body w/Poly Plug	No Add
-CF	Carpet Clamping Flange	285.00			



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Adjustable Floor Cleanouts

CO-200-RFC7

Floor Cleanout with Surface Membrane Clamp



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-202-RFC7	13	2"	nickel bronze	\$1,684.50
CO-203-RFC7	13	3"	nickel bronze	1,720.50
CO-204-RFC7	13	4"	nickel bronze	1,942.00

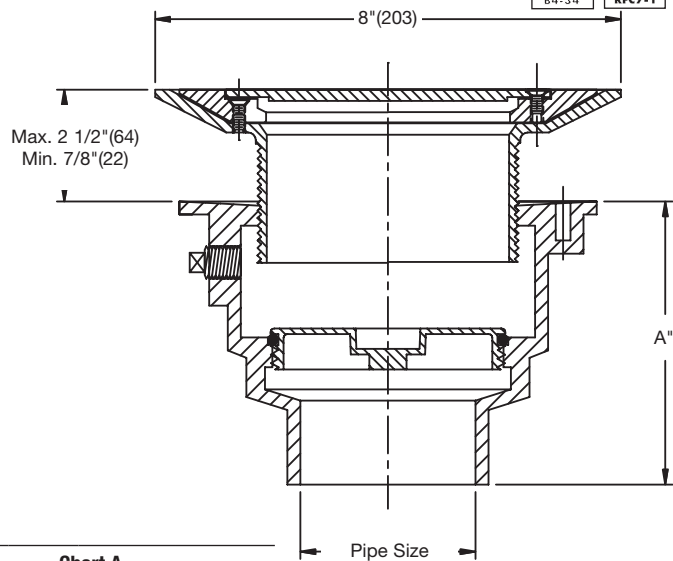


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

CO-200-RX

Floor Cleanout with Heavy Duty Round Top



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-202-RX	12	2"	nickel bronze	\$778.05
CO-203-RX	12	3"	nickel bronze	815.50
CO-204-RX	12	4"	nickel bronze	1,035.50

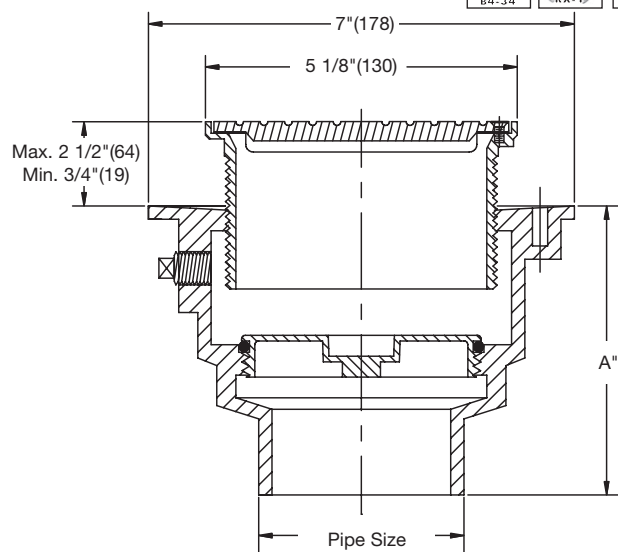


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

Options for CO-200:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-6	Vandal Proof	\$106.00
P	Push-On Outlet	No Add	-13	Galvanized Body	219.00
-X	Inside Caulk	No Add	-60	PVC Body w/Poly Plug	No Add
-C	Membrane Clamp	\$117.50	-61	ABS Body w/Poly Plug	No Add

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Prices do not include applicable taxes.

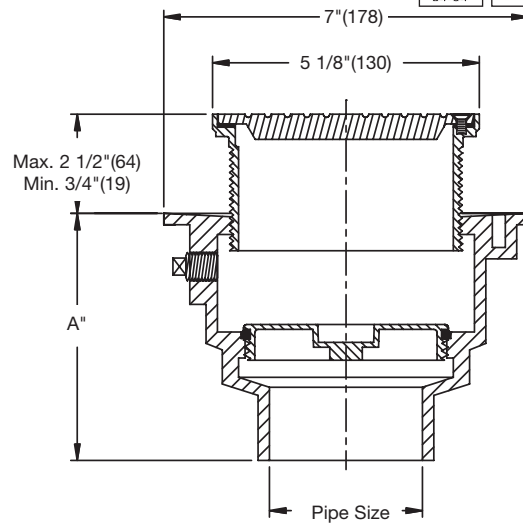


Adjustable Floor Cleanouts

CO-200-RX-4 Floor Cleanout with Ductile Iron Top



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-202-RX-4	12	2"	ductile iron	\$420.50
CO-203-RX-4	12	3"	ductile iron	487.50
CO-204-RX-4	12	4"	ductile iron	596.50



Options for CO-200-RX-4:

Suffix	Description	List Price
-13	All Galvanized	\$268.50

Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

CO-200-S Floor Cleanout with Square Top



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-202-S	11	2"	nickel bronze	\$625.50
CO-203-S	11	3"	nickel bronze	661.00
CO-204-S	11	4"	nickel bronze	881.00

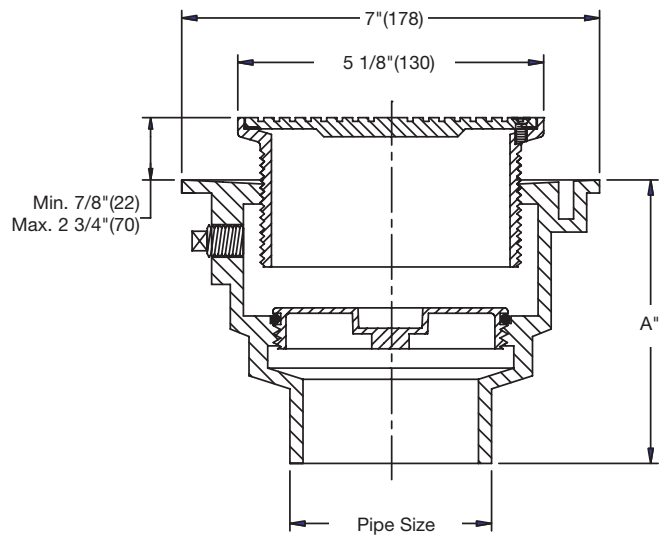


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

Options for CO-200:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-6	Vandal Proof	\$96.50
P	Push-On Outlet	No Add	-13	Galvanized Body	219.00
-X	Inside Caulk	No Add	-60	PVC Body w/Poly Plug	No Add
-C	Membrane Clamp	\$106.50	-61	ABS Body w/Poly Plug	No Add



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

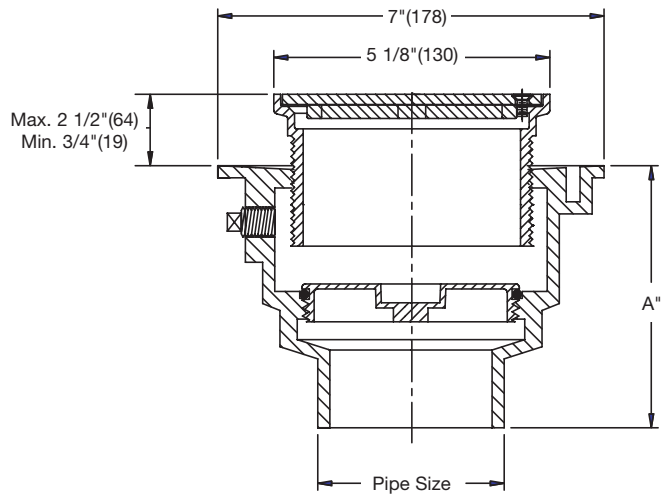
Adjustable Floor Cleanouts

CO-200-SX

Floor Cleanout with Heavy Duty Square Top



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-202-SX	12	2"	nickel bronze	\$778.50
CO-203-SX	12	3"	nickel bronze	815.50
CO-204-SX	12	4"	nickel bronze	1,035.50



Options for CO-200-SX

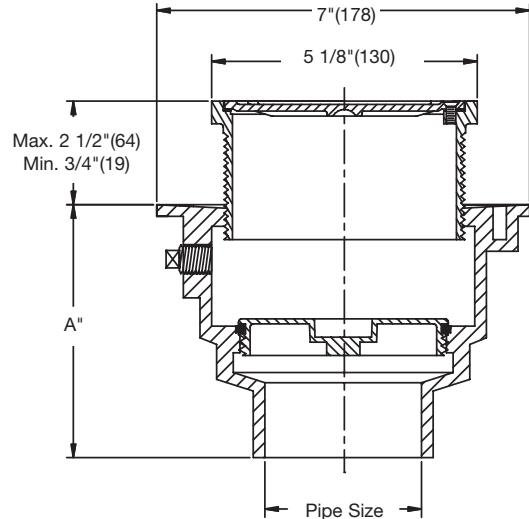
Suffix	Description	List Price
-4	Ductile Iron Top	\$-242.00

CO-200-T

Floor Cleanout with Round Top, Tile Recess



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-202-T	11	2"	nickel bronze	\$625.50
CO-203-T	11	3"	nickel bronze	661.00
CO-204-T	11	4"	nickel bronze	881.00



Options for CO-200:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-6	Vandal Proof	\$96.50
P	Push-On Outlet	No Add	-13	Galvanized Body	219.00
-X	Inside Caulk	No Add	-60	PVC Body w/Poly Plug	No Add
-C	Membrane Clamp	\$106.50	-61	ABS Body w/Poly Plug	No Add

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Adjustable Floor Cleanouts

CO-200-TS

Floor Cleanout with Square Top, Tile Recess



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-202-TS	11	2"	nickel bronze	\$625.50
CO-203-TS	11	3"	nickel bronze	661.00
CO-204-TS	11	4"	nickel bronze	881.00

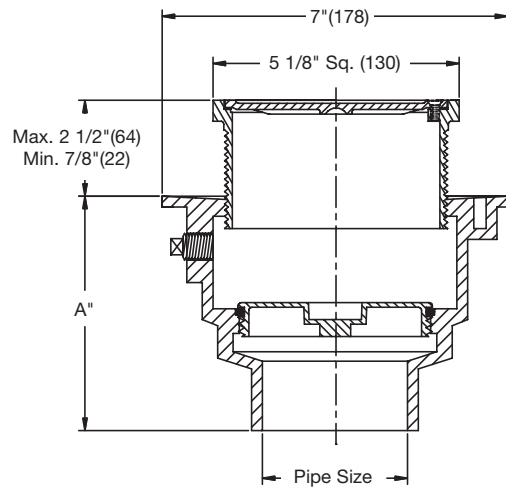


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

CO-200-U

Floor Cleanout with Round Top, Terrazzo Recess



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-202-U	12	2"	nickel bronze	\$978.00
CO-203-U	12	3"	nickel bronze	1,014.00
CO-204-U	12	4"	nickel bronze	1,234.50

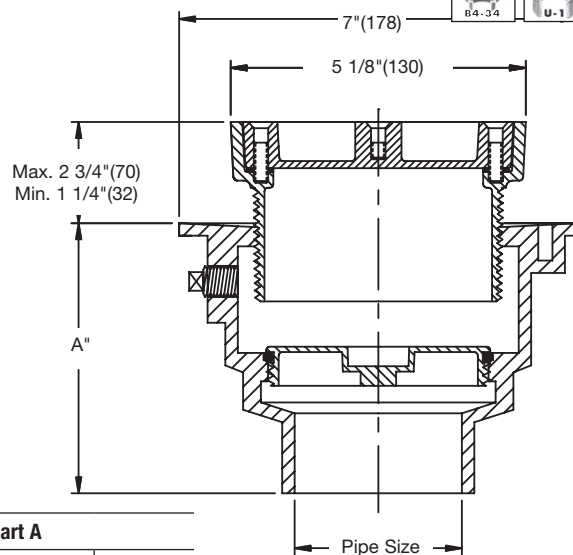


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

Options for CO-200:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-6	Vandal Proof	\$96.50
P	Push-On Outlet	No Add	-13	Galvanized Body	219.00
-X	Inside Caulk	No Add	-60	PVC Body w/Poly Plug	No Add
-C	Membrane Clamp	\$106.50	-61	ABS Body w/Poly Plug	No Add



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Adjustable Floor Cleanouts

CO-200-US

Floor Cleanout with Square Top, Terrazzo Recess



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-202-US	12	2"	nickel bronze	\$978.00
CO-203-US	12	3"	nickel bronze	1,014.00
CO-204-US	12	4"	nickel bronze	1,234.50

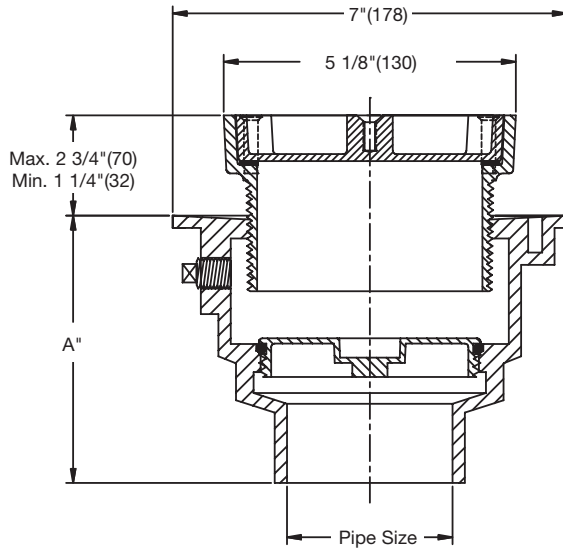


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

CO-200-H

Floor Cleanout with Elastomeric Flange

Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-202-H	11	2"	nickel bronze	\$1,377.50
CO-203-H	11	3"	nickel bronze	1,412.50
CO-204-H	11	4"	nickel bronze	1,632.50

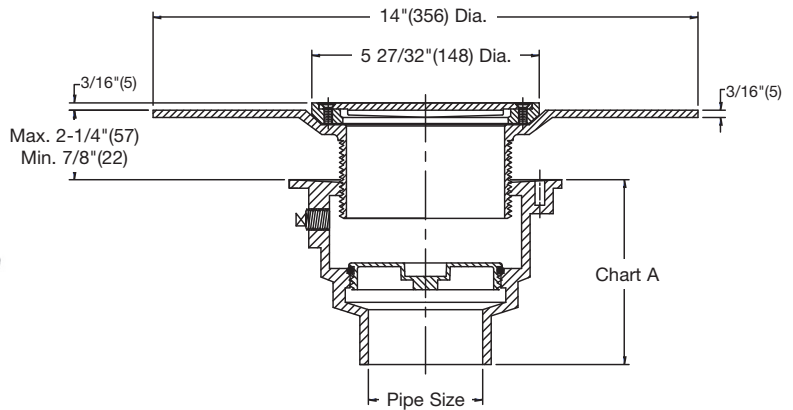


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

Options for CO-200

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-6	Vandal Proof	\$96.50
P	Push-On Outlet	No Add	-13	Galvanized Body	219.00
-X	Inside Caulk	No Add	-60	PVC Body w/Poly Plug	No Add
-C	Membrane Clamp	\$106.50	-61	ABS Body w/Poly Plug	No Add

Consult factory for all applications outside of listed parameters.

Prices do not include applicable taxes.

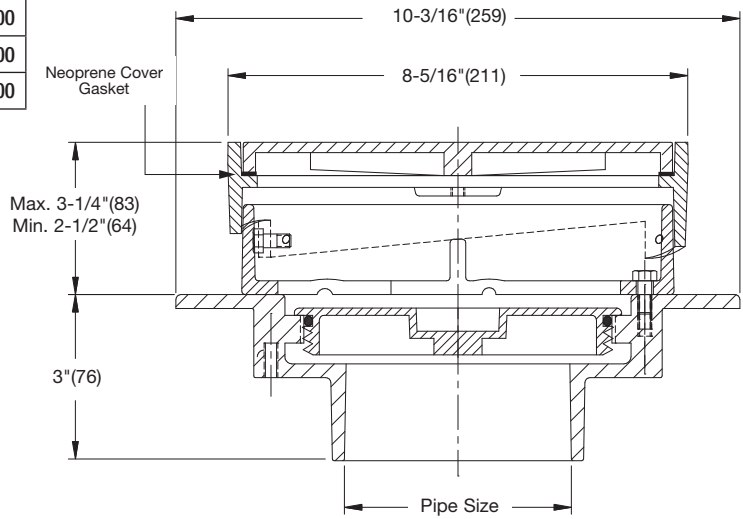


Adjustable Floor Cleanouts

CO-260

Floor Cleanout with 8" Round Adjustable Top

Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-263, 4, 6, 8	20	3, 4, 6, 8"	ductile iron	\$1,210.00
CO-263, 4, 6, 8-1	20	3, 4, 6, 8"	nickel bronze	1,436.00
CO-263, 4, 6, 8-S-1	20	3, 4, 6, 8"	sq. nickel bronze	1,436.00



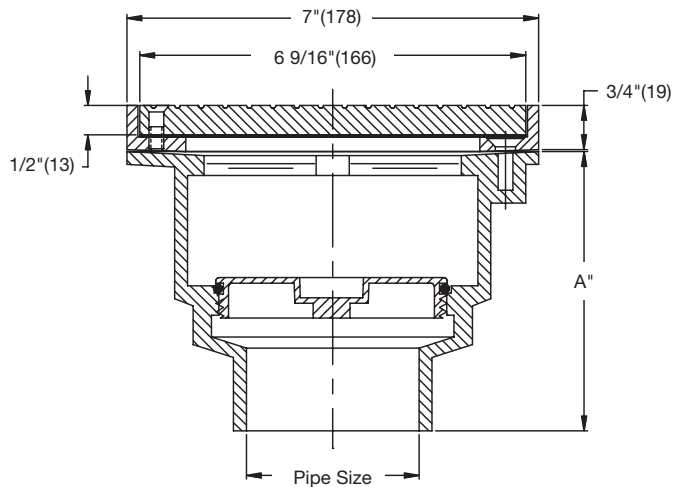
Options for CO-260

Suffix	Description	List Price
-None	No Hub Outlet	No Add
P	Push-On Outlet	No Add
-X	Inside Caulik (6" only)	No Add
-3	Round Stainless Steel	\$590.00
-6	Vandal Proof	96.50
-13	All Galvanized	492.50

CO-270

Floor Cleanout with Fixed Top

Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-272, 3, 4	12	2, 3, 4"	ductile iron	\$452.50
CO-272, 3, 4-1	12	2, 3, 4"	nickel bronze	643.00



Options for CO-270

Suffix	Description	List Price
-None	No Hub Outlet	No Add
P	Push-On Outlet	No Add
-X	Inside Caulik (6" only)	No Add
-6	Vandal Proof	\$96.50
-13	All Galvanized	268.50

Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"



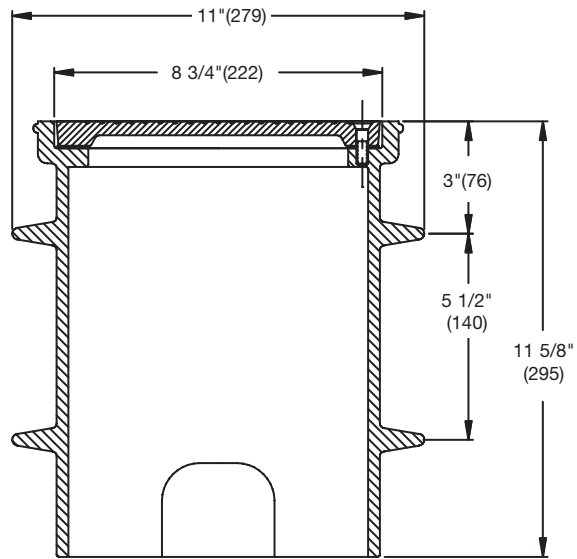
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Access Housings

CO-300-MF Extra Heavy Duty Access Housing

Model Number	Wt., Lbs.	Cover	List Price
CO-300-MF	35	ductile iron	\$1,390.50

Note: Use CO-380 cleanout if required.

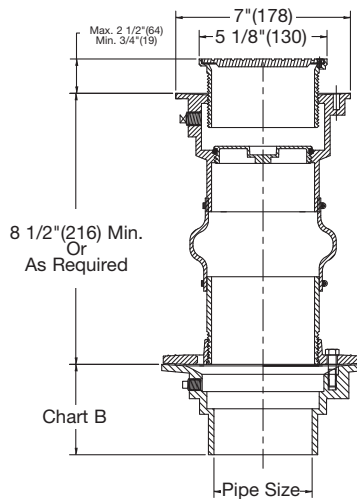


Options for CO-300-MF

Suffix	Description	List Price
-6	Vandal Proof	\$96.50
-13	All Galvanized	774.50

CO-600-R Isolation Cleanout

Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-602-R	24	2"	nickel bronze	\$1,323.50
CO-603-R	24	3"	nickel bronze	1,374.00
CO-604-R	24	4"	nickel bronze	1,438.00



Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

Options for CO-600

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-6	Vandal Proof	\$96.50
P	Push-On Outlet	No Add	-13	Galvanized Body	439.50
-X	Inside Caulk	No Add	-60	PVC Body w/Poly Plug	No Add
-C	Membrane Clamp	\$106.50	-61	ABS Body w/Poly Plug	No Add
-CF	Carpet Clamping Flange	285.00			

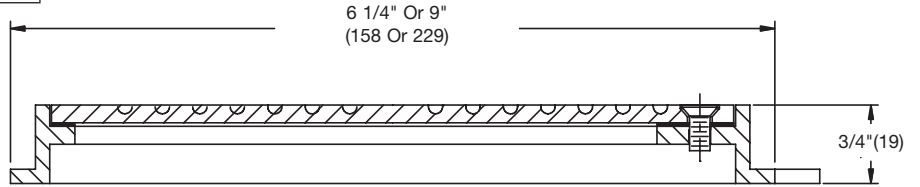
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Access Covers

CO-300-R Round Serrated Access Cover

Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-300-R6	5	6-1/4"	nickel bronze	\$349.50
CO-300-R9	10	9"	nickel bronze	883.50

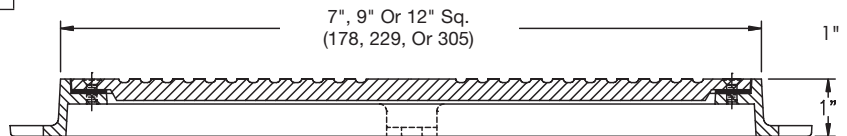


Options for CO-300-R Series:

Suffix	Description	List Price
-6	Vandal Proof	\$96.50

CO-300-S Square Serrated Access Cover

Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-300-S7	5	7"x7"	nickel bronze	\$604.00
CO-300-S8-9	9	8"x8"	nickel bronze	829.00
CO-300-S9	10	9"x9"	nickel bronze	887.00
CO-300-S12	13	12"x12"	nickel bronze	956.50



Options for CO-300-S Series:

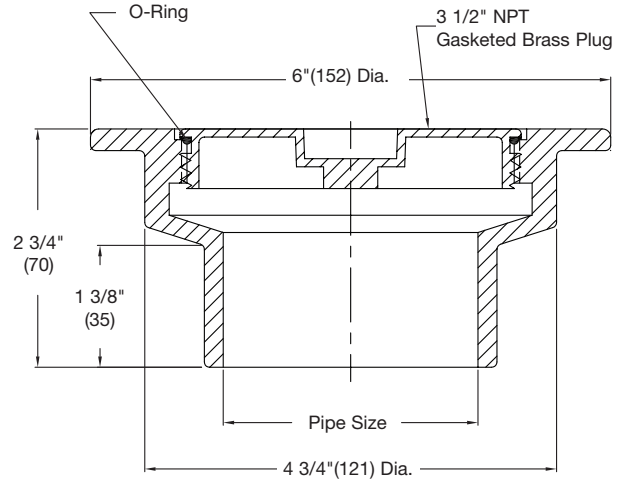
Suffix	Description	List Price
-6	Vandal Proof	\$96.50

General Purpose Floor Cleanouts

CO-380

Cleanout Ferrule with Brass Plug

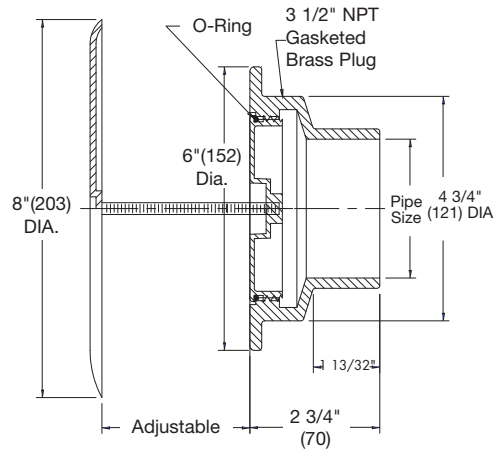
Model Number	Wt., Lbs.	Pipe Size	List Price
CO-382	2	2"	\$96.50
CO-383	4	3"	149.00
CO-384	5	4"	205.50
CO-386	8	6"	420.50



CO-380-RD

Wall Cleanout Ferrule with Stainless Steel Cover

Model Number	Wt., Lbs.	Pipe Size	Cover Size	List Price
CO-382-RD	3	2"	8"	\$232.00
CO-383-RD	5	3"	8"	286.00
CO-384-RD	6	4"	8"	343.50
CO-386-RD	9	6"	8"	727.00

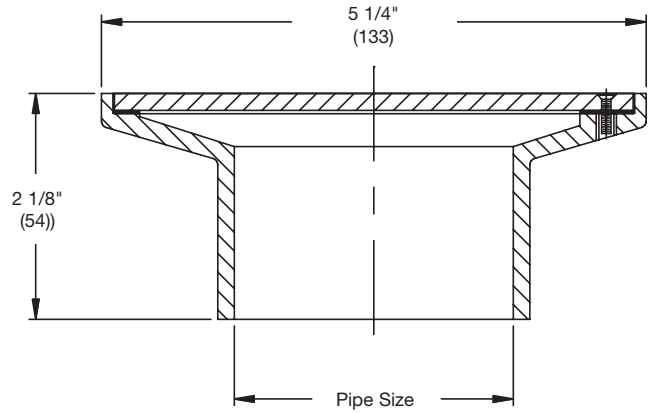


General Purpose Floor Cleanouts

CO-390-E

General Purpose Floor Cleanout

Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-392, 3, 4-E	4	2, 3, 4"	ductile iron	\$213.00
CO-392, 3, 4-E-1	4	2, 3, 4"	nickel bronze	282.50



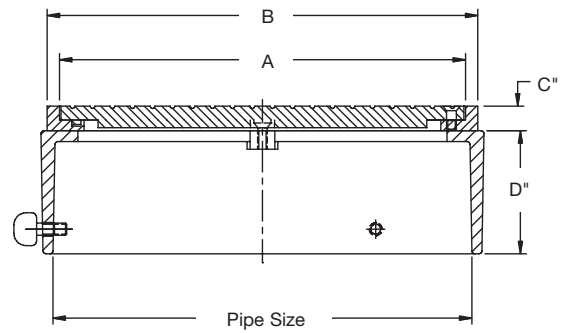
Options for CO-390-E:

Suffix	Description	List Price
-6	Vandal Proof	\$96.50
-60	PVC Body w/Socket Outlet	No Add
-61	ABS Body w/Socket Outlet	No Add

CO-410

Floor Access Housing

Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-413, 4	5	3, 4"	ductile iron	\$423.00
CO-413, 4-1	5	3, 4"	nickel bronze	558.50
CO-416	9	6"	ductile iron	582.00
CO-416-1	9	6"	nickel bronze	744.50



Dimensions in Inches

Model Number	Pipe Size	A	B	C	D
CO-413	3	5	5-1/4	3/8	2-5/8
CO-414	4	7	7-1/4	1/2	2-3/4
CO-416	6	8-3/4	9	1/2	3

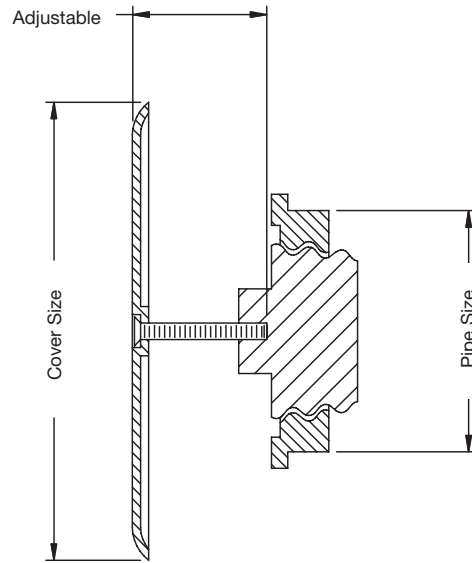
Options for CO-410:

Suffix	Description	List Price
-6	Vandal Proof	\$96.50

Wall Cleanouts

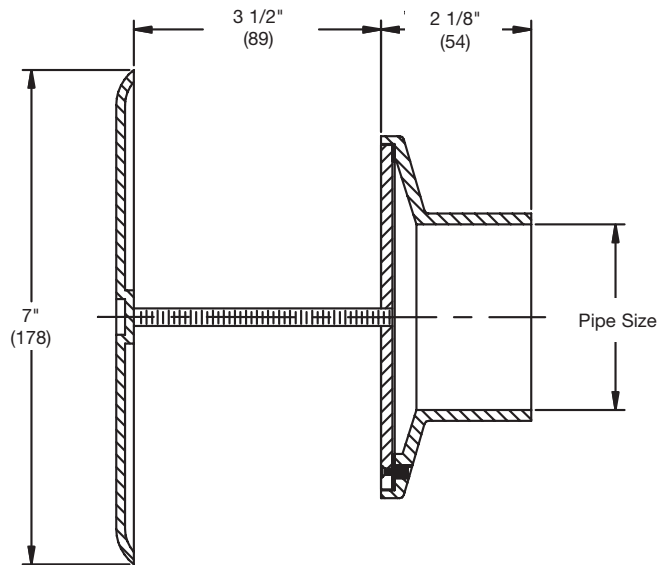
CO-440-RD Series Poly Wall Cleanout with Stainless Steel Cover

Model Number	Wt., Lbs.	Pipe Size	Cover Size	List Price
CO-441-5-RD	2	1-1/2"	5"	\$184.00
CO-442-RD	2	2"	5"	194.00
CO-443-RD	2	3"	7"	237.50
CO-444-RD	2	4"	7"	314.50



CO-450-RD Line Cleanout with Stainless Steel Cover

Model Number	Wt., Lbs.	Pipe Size	List Price
CO-452-RD	5	2"	\$237.50
CO-453-RD	5	3"	293.00
CO-454-RD	5	4"	345.50



Options for CO-450-RD

Suffix	Description	List Price
-60	PVC Body w/Socket Outlet	No Add
-61	ABS Body w/Socket Outlet	No Add

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Wall Cleanouts

CO-460

Stack Cleanout with Brass Plug

Model Number	Wt., Lbs.	Pipe Size	List Price
CO-462	8	2"	\$228.00
CO-463	15	3"	284.00
CO-464	17	4"	441.00

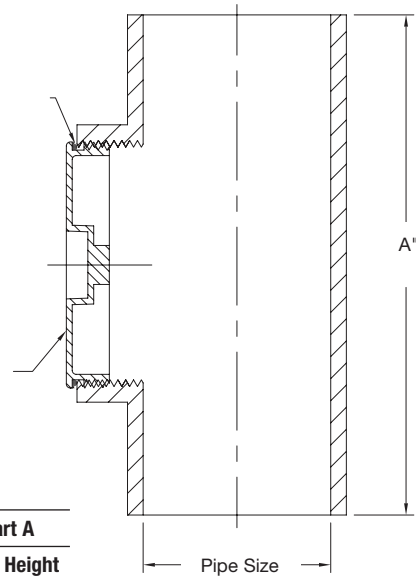


Chart A	
Size	Height
2"	6-1/4"
3"	7-3/4"
4"	9"

CO-460-RD

Stack Cleanout with Brass Plug & Stainless Steel Cover

Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-462-RD	9	2"	stainless steel	\$364.00
CO-463-RD	16	3"	stainless steel	417.50
CO-464-RD	18	4"	stainless steel	611.50

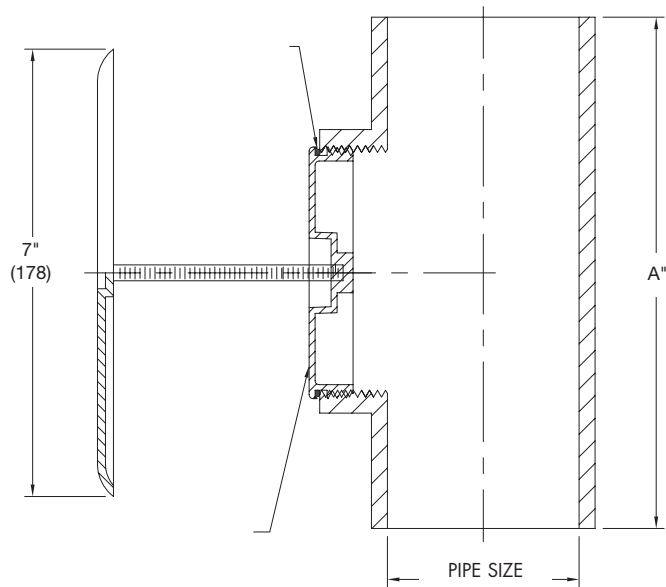


Chart A	
Size	Height
2"	6-1/4"
3"	7-3/4"
4"	9"

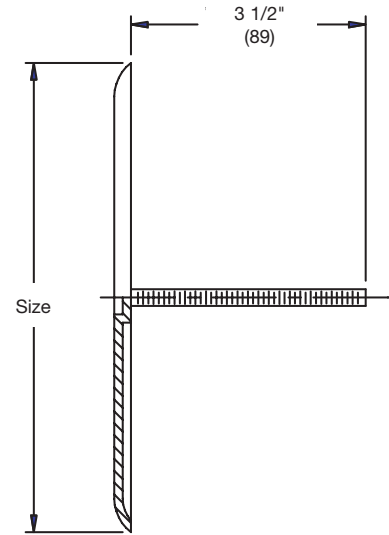


Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Wall Cleanouts

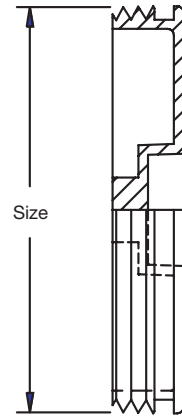
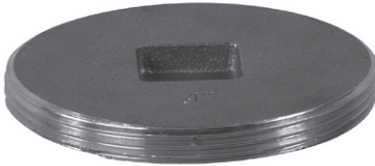
CO-480-RD Stainless Steel Access Cover with Screw

Model Number	Wt., Lbs.	Pipe Size	List Price
CO-480-RD5	1	5"	\$133.50
CO-480-RD6	1	6"	133.50
CO-480-RD7	1	7"	170.00
CO-480-RD8	1	8"	300.50
CO-480-RD10	1	10"	475.00



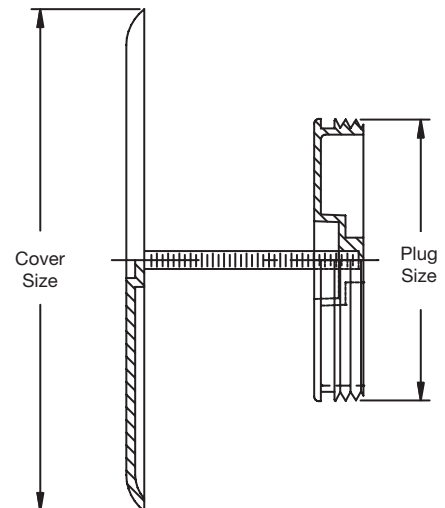
CO-590 Brass Cleanout Plug

Model Number	Wt., Lbs.	Size	List Price
CO-591.5	1/2	1-1/2"	\$46.00
CO-592	3/4	2"	54.50
CO-593	1	3"	96.50
CO-594	1-1/2	4"	167.50
CO-595	1-1/2	5"	260.00
CO-596	3	6"	349.50



CO-590-RD Wall Cleanout with Brass Plug, Stainless Steel Cover

Model Number	Wt., Lbs.	Pipe Size	Cover Size	List Price
CO-591.5-RD	1	1-1/2"	5"	\$184.00
CO-592-RD	1-1/4	2"	5"	188.00
CO-593-RD	1-1/2	3"	7"	232.00
CO-594-RD	2	4"	7"	307.50
CO-595-RD	2	5"	8"	429.00
CO-596-Rd	3-1/2	6"	8"	661.00



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Stainless Steel Top Floor Cleanouts

CO-1200-R

Floor Cleanout with Round Stainless Steel Top



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-1202-R	11	2"	stainless steel	\$838.00
CO-1203-R	11	3"	stainless steel	873.00
CO-1204-R	11	4"	stainless steel	1,093.50

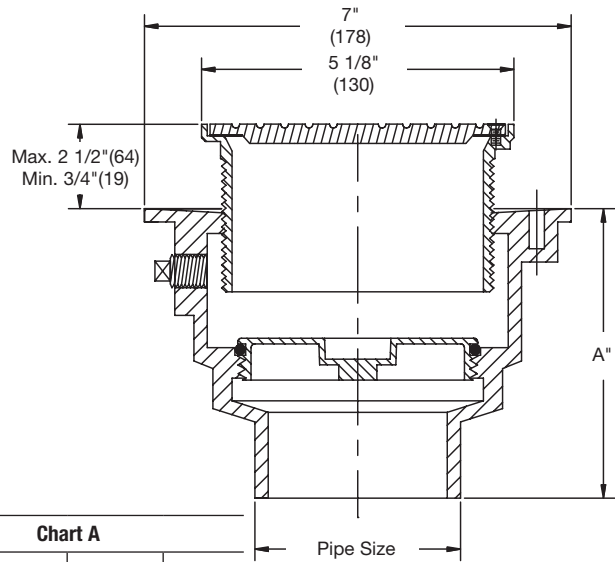


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

CO-1200-RX

Floor Cleanout with Heavy Duty Round Stainless Steel Top



Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-1202-RX	12	2"	stainless steel	\$991.00
CO-1203-RX	12	3"	stainless steel	1,027.50
CO-1204-RX	12	4"	stainless steel	1,247.50

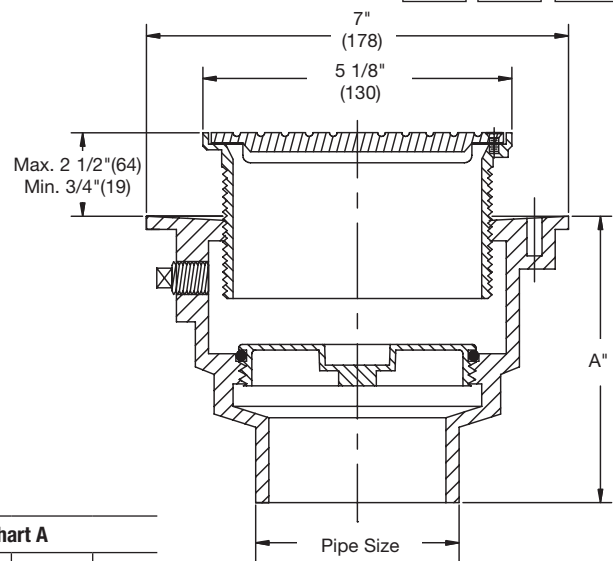


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

Options for CO-1200:

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-6	Vandal Proof	\$96.50
P	Push-On Outlet	No Add	-13	Galvanized Body	219.00
-X	Inside Caulk	No Add	-28	304 SS Body & Plug	914.00
-C	Membrane Clamp	\$106.50	-60	PVC Body w/Poly Plug	No Add
			-61	ABS Body & Poly Plug	No Add



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Stainless Steel Top Floor Cleanouts

CO-1200-S

Floor Cleanout with Square Stainless Steel Top

Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-1202-S	11	2"	stainless steel	\$838.00
CO-1203-S	11	3"	stainless steel	873.00
CO-1204-S	11	4"	stainless steel	1,093.50

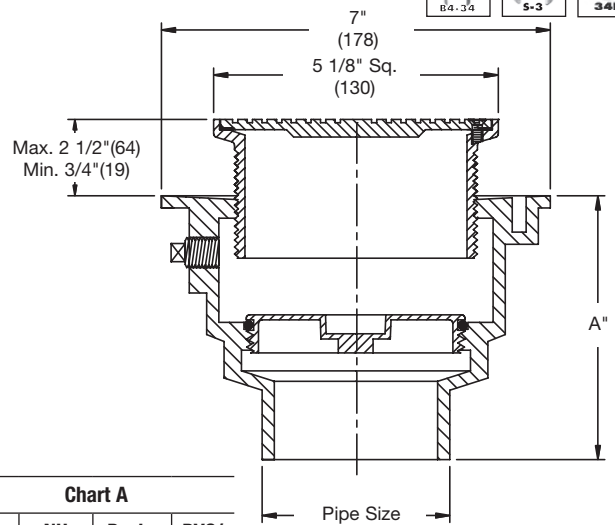


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

CO-1200-SX

Floor Cleanout with Heavy Duty Square Stainless Steel Top

Model Number	Wt., Lbs.	Pipe Size	Cover	List Price
CO-1202-SX	12	2"	stainless steel	\$991.00
CO-1203-SX	12	3"	stainless steel	1,027.50
CO-1204-SX	12	4"	stainless steel	1,247.50

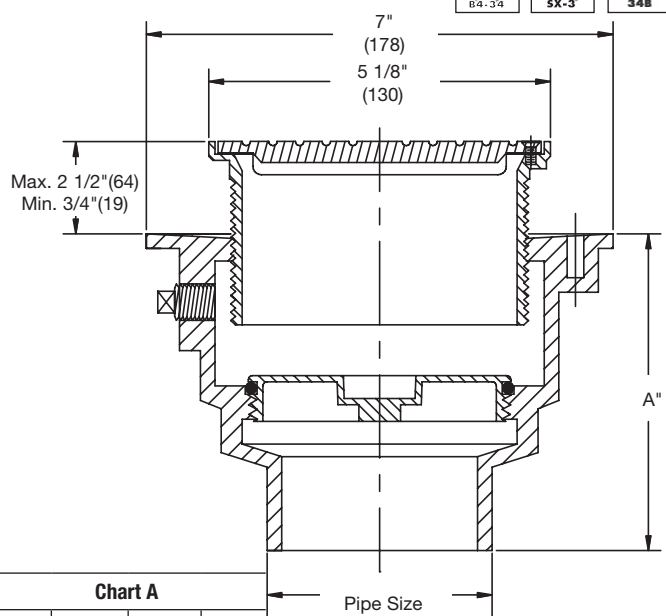


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"	4-3/4"	5-1/2"	4"
3"	4-3/4"	5-1/2"	4"
4"	4-3/4"	5-1/2"	4"

Options for CO-1200

Suffix	Description	List Price	Suffix	Description	List Price
None	No Hub Outlet	No Add	-6	Vandal Proof	\$96.50
P	Push-On Outlet	No Add	-13	Galvanized Body	219.00
-X	Inside Caulk	No Add	-28	304 SS Body & Plug	914.00
-C	Membrane Clamp	\$106.50	-60	PVC Body w/Poly Plug	No Add
			-61	ABS Body & Poly Plug	No Add

Consult factory for all applications outside of listed parameters.

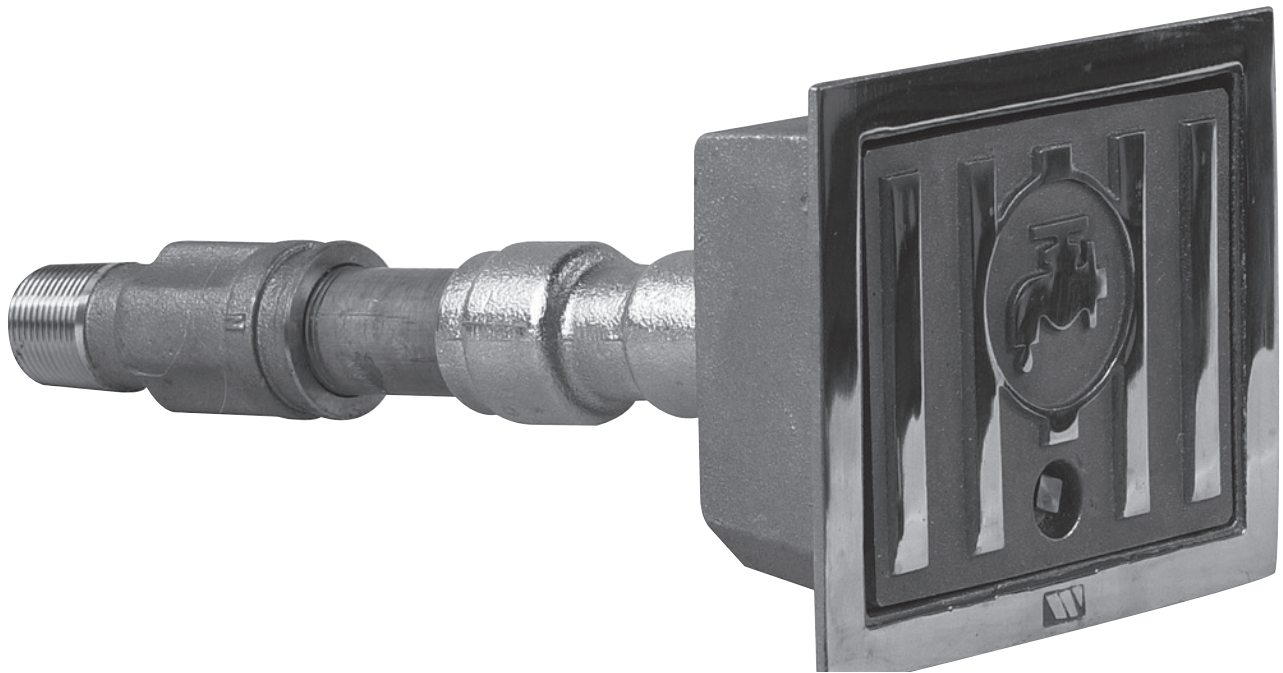
Prices do not include applicable taxes.



Hydrants

Table Of Contents

- Pictorial Index
- Product Recommendations
- Standard Specifications
- Hydrant Selection Factors
- Typical Installations

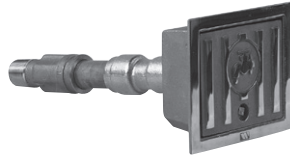


Hydrants

Pictorial Index



HY-420
Non-Freeze



HY-725
Non-Freeze Wall Hydrant w/NB
Box, Integral Vacuum Breaker



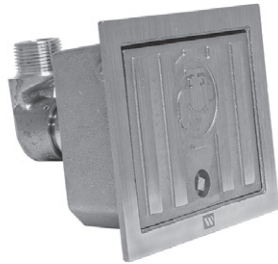
HY-430
Moderate Climate



HY-330
Moderate Climate w/Box



HY-440
Moderate Climate Narrow
Wall Hydrant



HY-450
Moderate Climate Narrow
Wall Hydrant w/ NB Box



HY-500
Deck Hydrant w/Box



HY-600
Post Hydrant



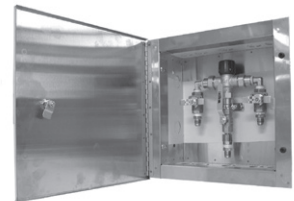
HY-700
Dual-Temp



HY-800
Non-Freeze Yard Hydrant



HY-900
Non-Freeze Roof Hydrant



FS-890
Water Supply Control Box

Hydrants

Recommendations

Application	Product
Exterior Wall Non-Freeze	HY-420, HY-725
Exterior Wall Moderate Climate	HY-430, HY-330
Hot & Cold	HY-700
Interior Wall	HY-440, HY-450
Outdoor Deck	HY-500
Outdoor Post	HY-600, HY-800
Roof	HY-900

Standard Specifications

Watts standard hydrants are key operated, with a 3/4" hose connection, chrome plated face, and all bronze head, wall casing, seat casting, and internal working parts. The piping connection is dual threaded 3/4" male, 1" female. Non-freeze and moderate climate wall hydrants are furnished with a built-in vacuum breaker, which relieves negative pressure in the water supply piping, preventing back siphonage.

Hydrant Selection Factors

Flow rate

Standard 3/4" hydrants discharge approximately 10 GPM under normal operating conditions. Actual flow rates are dependent upon connection sizes and operating pressures.

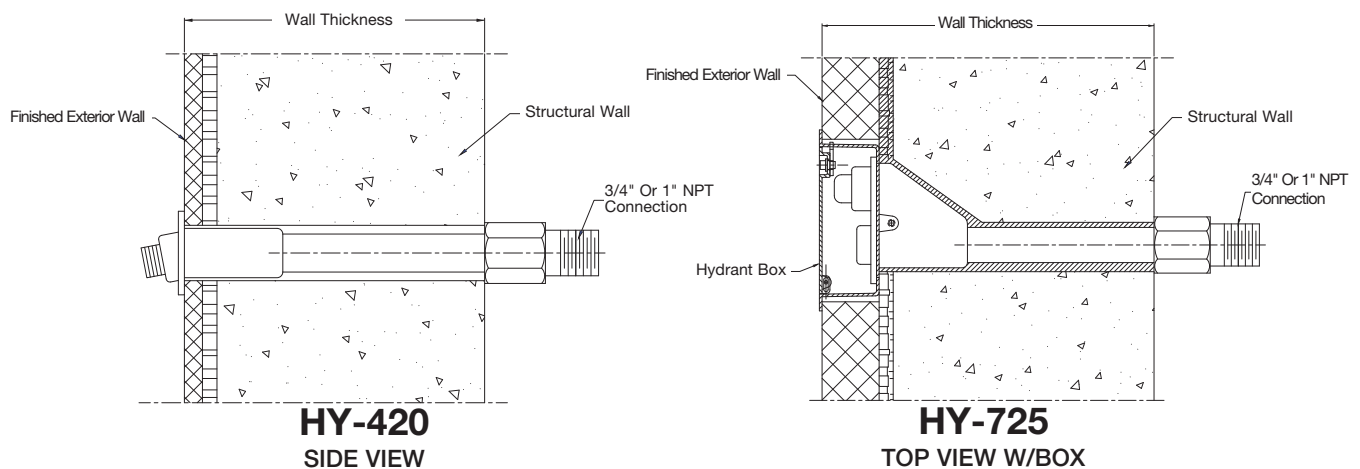
Non-freeze (frost-proof)

Non-freeze hydrants drain automatically when the water is turned off, preventing freezing, and potential damage to the hydrant or piping system.

Operating range

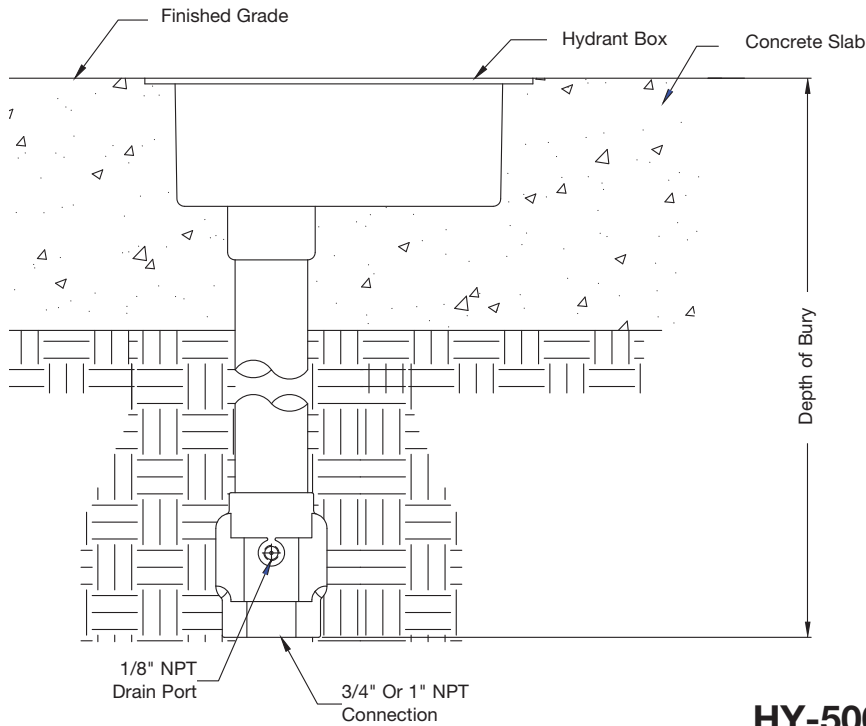
Watts hydrants are designed to operate within a pressure range of 8 PSI to 125 PSI, and a temperature range of 33°F to 130°F.

Typical Installations

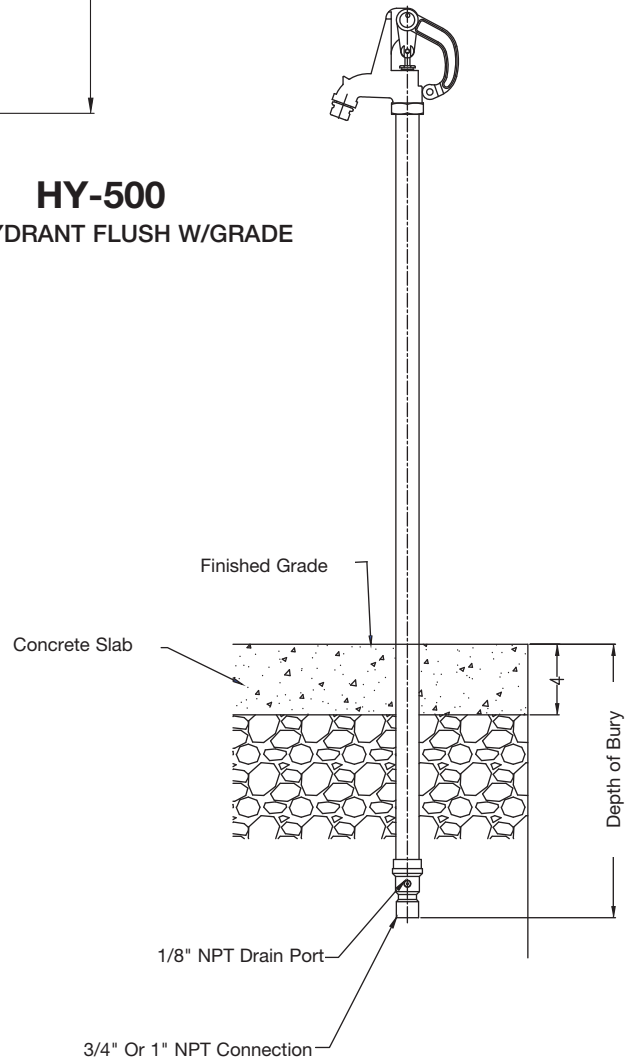


Hydrants

Typical Installations



HY-500
BOX HYDRANT FLUSH W/GRADE



HY-800
POST HYDRANT

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

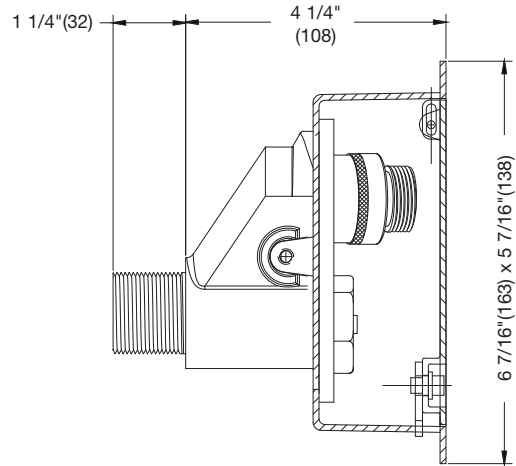


Wall Hydrants

HY-330

Moderate Climate Wall Hydrant with NB Box, Integral Vacuum Breaker

Model Number	Hose Conn.	List Price
HY-330	3/4"	\$1,349.00



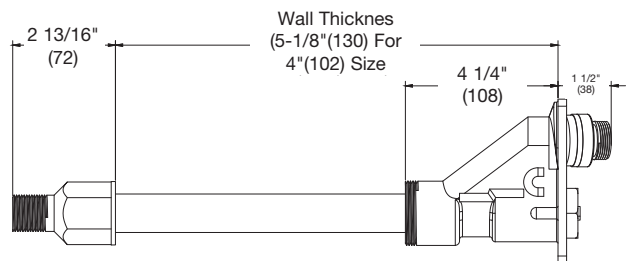
Options for HY-330

Suffix	Description	List Price
-K	Cylinder Lock	\$188.00
-3	Stainless Steel Box	No Add

HY-420

Non-Freeze Wall Hydrant with Chrome Face, Integral Vacuum Breaker

Model Number	Wt. Lbs.	Wall Thickness	List Price
HY-420-4, 6, 8	5	4, 6, 8"	\$864.50
HY-420-10, 12, 14	6	10, 12, 14"	1,006.00
HY-420-16, 18	7	16, 18"	1,146.50
HY-420-20, 22, 24	8	20, 22, 24"	1,188.00



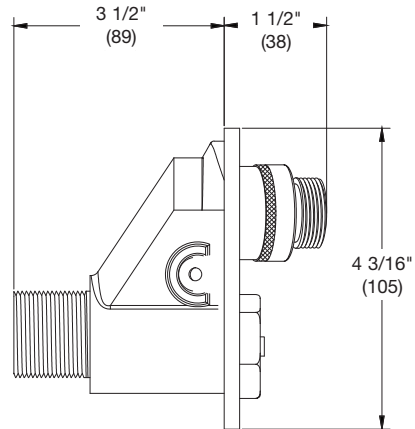
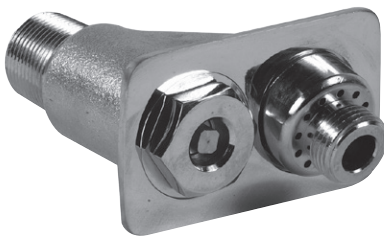
Options for HY-420

Suffix	Description	List Price
-88	Wall Clamp	No Add

HY-430

Moderate Climate Wall Hydrant with Chrome Face, Integral Vacuum Breaker

Model Number	Hose Conn.	List Price
HY-430	3/4"	\$666.00



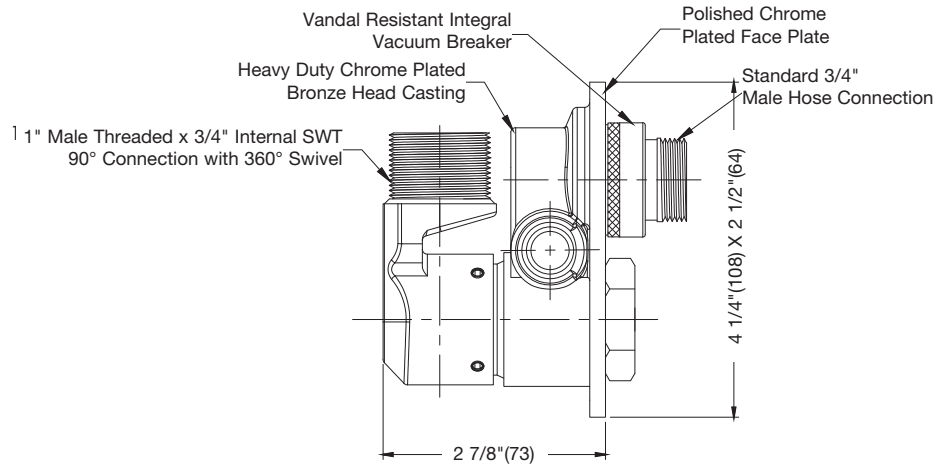
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Wall Hydrants

HY-440

Moderate Climate Narrow Wall Hydrant

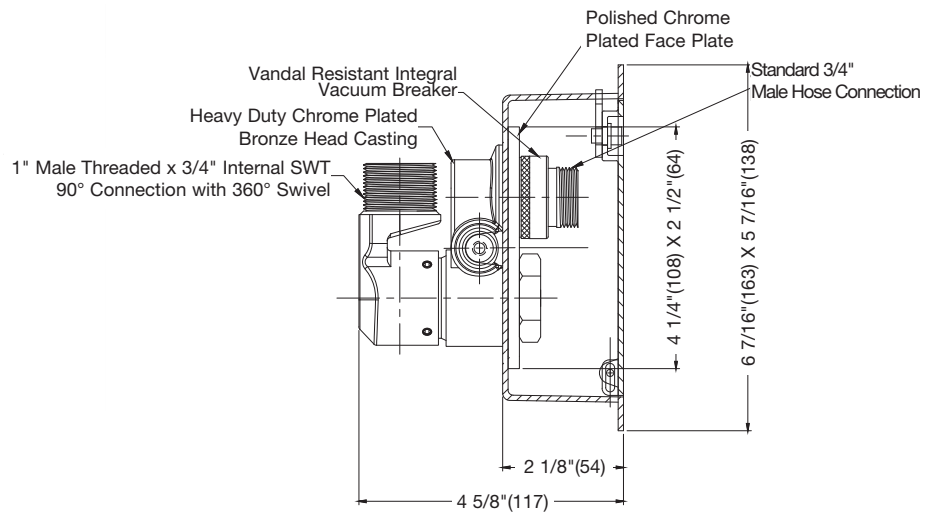
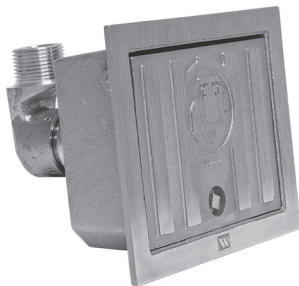
Model Number	Hose Conn.	List Price
HY-440	3/4"	\$666.00



HY-450

Moderate Climate Narrow Wall Hydrant w/NB Box

Model Number	Hose Conn.	List Price
HY-450	3/4"	\$1,349.00



Options for HY-450

Suffix	Description	List Price
-K	Cylinder Lock	\$188.00
-R	Round Box For Tilt-Up Construction (Stainless Steel Only)	No Add
-3	Stainless Steel Box	No Add

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



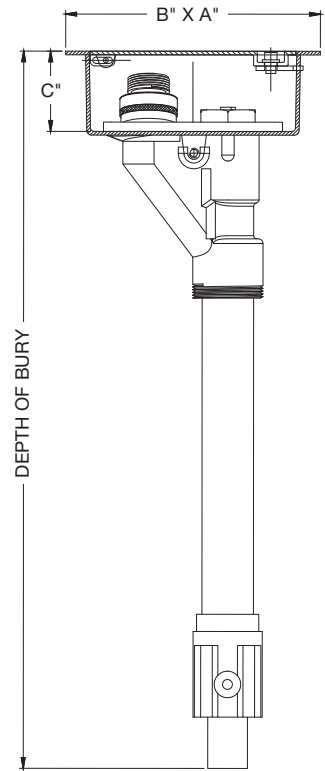
Ground Hydrants

HY-500

Non-Freeze Deck Hydrant with NB Box

Model Number	Depth	Wt. Lbs.	3/4" Conn.	1" Conn.	1-1/4" Conn.	1-1/2" Conn.	2" Conn.
HY-502	2'	10	\$2,014.50	\$2,429.00	\$8,566.00	\$9,404.00	\$10,978.00
HY-503	3'	14	2,173.00	2,586.50	8,850.00	9,760.50	11,443.50
HY-504	4'	18	2,331.00	2,743.50	9,137.00	10,119.00	11,913.00
HY-505	5'	22	2,489.50	2,903.00	9,423.00	10,475.50	12,385.00
HY-506	6'	26	2,648.00	3,059.50	9,706.50	10,836.50	12,855.00
HY-508	8'	30	2,962.50	3,378.50	10,277.50	11,551.50	13,792.00

Conn. Size	A	B	C
3/4" & 1"	5-5/8"	6-7/8"	2-1/4"
1-1/4" to 2"	10-1/2"	10-1/2"	3-1/2"

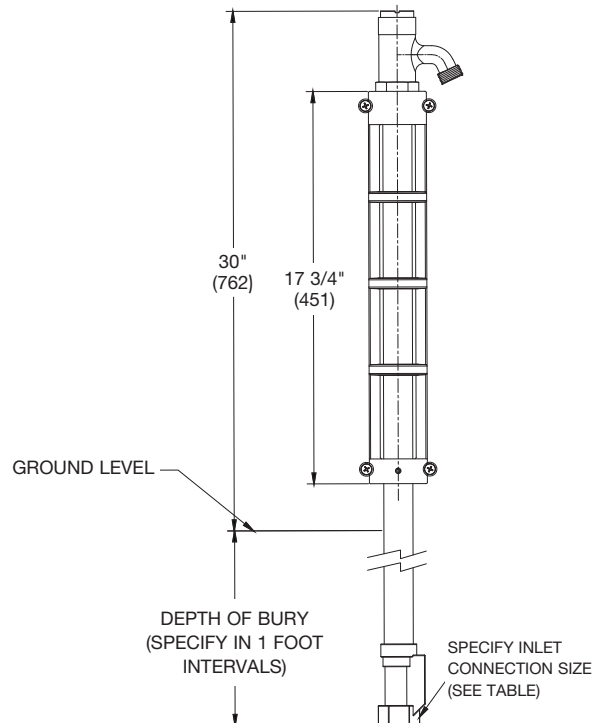


Note: Vacuum Breaker STD on 3/4"- 1"

HY-600

Non-Freeze Post Hydrant

Model Number	Depth	3/4" Conn.	1" Conn.	1-1/4" Conn.	1-1/2" Conn.	2" Conn.
HY-600-2	2'	\$2,016.50	\$2,730.50	\$4,847.00	\$6,757.50	\$8,397.50
HY-600-3	3'	2,185.00	2,903.00	5,345.00	7,162.50	8,814.50
HY-600-4	4'	2,356.50	3,075.00	5,843.50	7,571.50	9,228.00
HY-600-5	5'	2,530.00	3,245.00	6,347.00	7,979.50	9,643.00
HY-600-6	6'	2,701.00	3,418.00	6,845.50	8,385.50	10,058.50
HY-600-8	8'	3,039.50	3,758.00	7,846.50	9,199.50	10,888.00



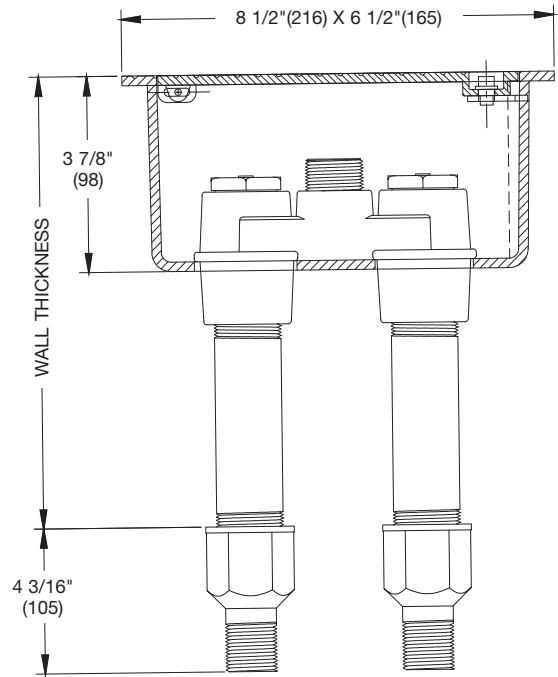
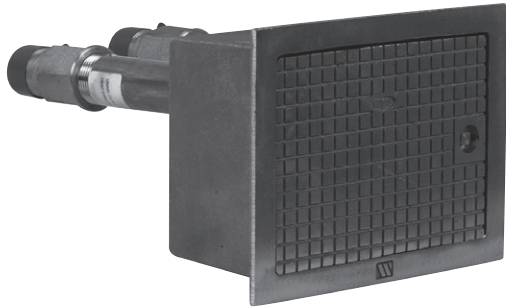
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Wall Hydrants

HY-700

Non-Freeze Dual-Temp Wall Hydrant with SS Box

Model Number	Wt. Lbs.	Wall Thickness	1" Conn.	List Price
HY-700-6, 8	15	6", 8"	3/4"	\$3,868.00
HY-700-10, 12, 14	17	10, 12, 14"	3/4"	4,093.50
HY-700-16, 18	19	16, 18"	3/4"	4,323.00



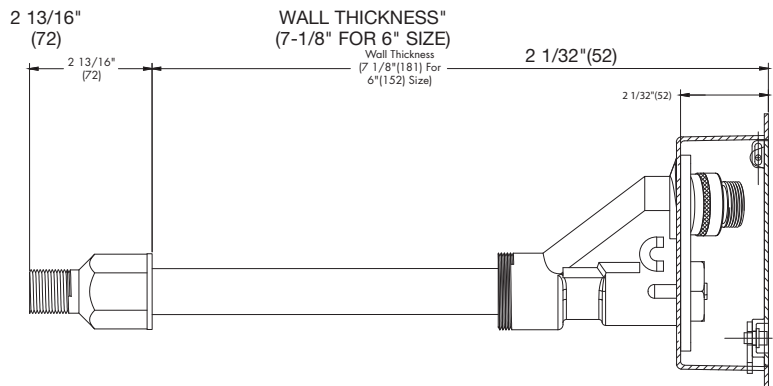
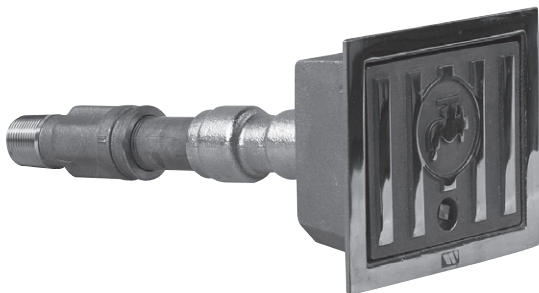
Options for HY-700

Suffix	Description	List Price
-K	Cylinder Lock	\$188.00
-LB	Less Box	-912.50
VB	Vacuum Breaker	138.50

HY-725

Non-Freeze Wall Hydrant with NB Box, Integral Vacuum Breaker

Model Number	Wt. Lbs.	Depth	Hose Conn.	List Price
HY-725-6, 8	7	6", 8"	3/4"	\$1,547.00
HY-725-10, 12, 14	8	10, 12, 14"	3/4"	1,690.00
HY-725-16, 18	9	16, 18"	3/4"	1,829.50
HY-725-20, 22, 24	10	20, 22, 24"	3/4"	1,870.00



Options for HY-725

Suffix	Description	List Price
-K	Cylinder Lock	\$188.00
-R	Round Box For Tilt-Up Construction (Stainless Steel Only)	No Add
-3	Stainless Steel Box	No Add
-88	Wall Clamp	No Add

STANDARD FINISH IS POLISHED NICKEL BRONZE

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

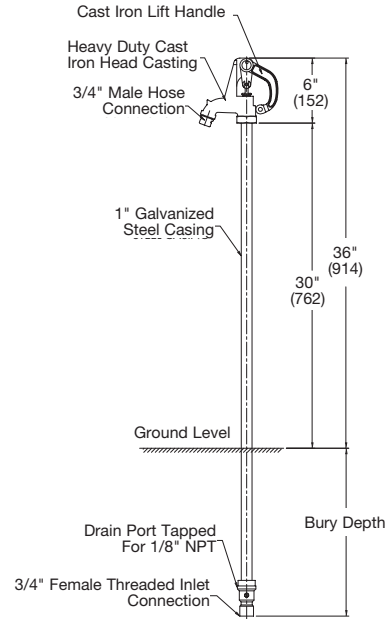
WATTS®

Yard Hydrants

HY-800

Non-Freeze Yard Hydrant

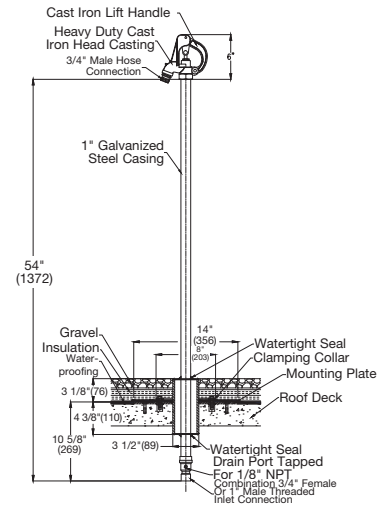
Model Number	Wt. Lbs.	Bury Depth	Hose Conn.	List Price
HY-800-1	13	1'	3/4"	\$1,100.00
HY-800-2	15	2'	3/4"	1,161.00
HY-800-3	19	3'	3/4"	1,222.50
HY-800-4	23	4'	3/4"	1,289.50
HY-800-5	27	5'	3/4"	1,349.00
HY-800-6	31	6'	3/4"	1,410.50



HY-900

Non-Freeze Roof Hydrant

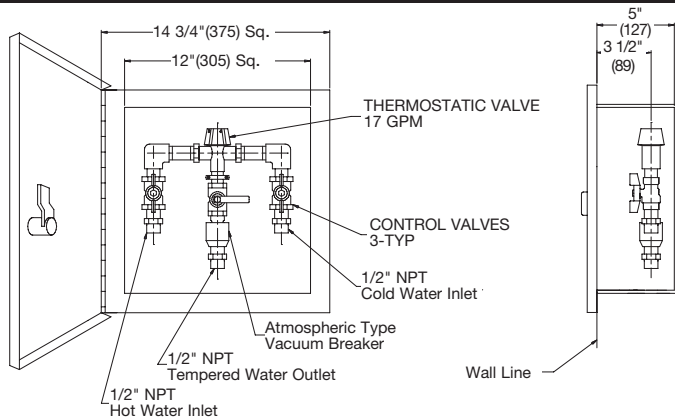
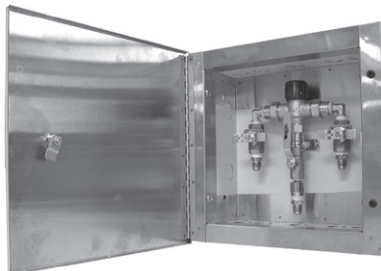
Model Number	Wt. Lbs.	Hose Conn.	List Price
HY-900	28	3/4"	\$3,159.50



FS-890

Water Supply Control Box

Model Number	Weight (lbs.)	Material	List Price
FS-890	15	stainless steel	\$5,337.50



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Specialties

Table Of Contents

- Pictorial Index
- Water Hammer Arrestors
 - Recommendations
 - Certification
 - Sizing & Placement
- Backwater Valves
 - Typical Installations
- Trap Primers
 - Compliance
 - Pressure & flow characteristics
 - Distribution unit
 - Typical installations
- Misc. Specialties



Specialties

Pictorial Index



LF15M2-DR Series
Copper
Water Hammer Arrestor



SS Series
Stainless Steel
Water Hammer Arrestor



BV-200
Cast Iron In-Line
Backwater Valve



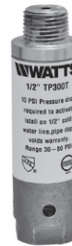
BV-240
In-Line Backwater Valve
With Access Housing



BV-300
Ball Float Backwater
Valve



BV-600
Pit Drain With Backwater
Valve



LFFTP300-DR
Trap Primer & Distribution
Unit



MS-930
Trap Primer Adaptor



MS-940-SS
Stainless Steel Trap
Primer Adaptor



MS-950
Funnel Trap Adaptor



MS-8000
Fresh Air Inlet



PS-Series
Plastic Pipe Sleeves

Specialties

Water Hammer Arrestors

Watts water hammer arrestors prevent water hammer in piping systems, which is usually caused by sudden changes in flow velocity. Solenoid actuated and other types of quick closing valves create shock pressure in the line, which leads to water hammer (banging pipes). Properly installed arrestors will absorb the shock, eliminating noise and potential damage to the piping system.

Certification

All Watts arrestors are Certified by the Plumbing & Drainage Institute (PDI), in accordance with Standard PDI-WH201.

Sizing & Placement

The PDI fixture unit methodology takes into consideration probabilities for coincidental valve closings, in addition to pipe size and length, flow pressure, and velocity.

- 1) Calculate the number of fixture units (Table 1) on each hot and cold water line separately. Determine the total number of fixture units on a line by adding the unit values.
- 2) From Table 2, select the Watts arrestor with a fixture unit value rating equal to, or greater than, the total number of fixture units on the line.
- 3) For multiple fixture branch lines over 20' in length, the arrestor should be placed between the last two fixtures (Fig. A).
- 4) For multiple fixture branch lines over 20' in length, two arrestors should be used, with the second unit placed at the approximate midpoint of the line. The sum of the unit ratings for the two arrestors should be equal to, or greater than, the total fixture units for the line (Fig. B).

For long runs of piping terminating at a piece of equipment, the arrestor size should be determined from Table 3. The arrestor(s) should be located as near as possible to the closure valve (Fig. C).

Note: Sizing recommendations are based on an average flow velocity between 5 and 10 feet per second, and an operating pressure less than 65 PSI. For operating pressures over 65 PSI, use the next larger arrestor size. A pressure reducing valve is recommended for line pressures exceeding 85 PSI.

Calculation Example:

Cold water branch (less than 20')

2 water closets @ 10 fixture units ea. = 20 fixture units

2 lavatories @ 1-1/2 fixture units ea. = 3 fixture units

Total fixture units = 23

Select PDI Size B Water Hammer Arrestor

Sizing & Placement

Fixture	Type Of Supply Control	Fixture Unit Weight			
		Public		Private	
		Cold	Hot	Cold	Hot
Water Closet	Flush Valve	10	-	6	-
Water Closet	Flush Tank	5	-	3	-
Pedestal Urinal	Flush Valve	10	-	-	-
Stall or Wall Urinal	Flush Valve	5	-	-	-
Stall or Wall Urinal	Flush Tank	3	-	-	-
Lavatory		1-1/2	1 1/2	1	1
Bathtub		2	3	1 1/2	1 1/2
Shower Head		2	-	1	2
Bathroom Group		-	-	8	3
Bathroom Group		-	-	6	3
Separate Shower		-	-	1	2
Service Sink		3	3	-	-
Laundry Tubs (1-3)		-	-	3	3
Combination Fixture		-	-	3	3

Specialties

Water Hammer Arrestors

Sizing & Placement

Table 2

Fixture Unit Weight	1-11	12-32	33-60	61-113	114-154	155-330
PDI Symbol	A	B	C	D	E	F
Watts LF15M2-DR Series	LF15M2-A-DR	LF15M2-B-DR	LF15M2-D-DR	LF15M2-D-DR	LF15M2-E-DR	LF15M2-F-DR
Watts SS Series	SS-A	SS-B	SS-C	SS-D	SS-E	SS-F

Table 3

Length of Pipe	Nominal Pipe Size					
	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
25'	A	A	B	C	D	E
50'	A	C	C	D	E	F
75'	B	C	D	A + E	F	E + F
100'	C	D	E	F	C + F	2-F
125'	C	D	F	A + F	E + F	E + 2-F
150'	D	E	F	D + F	2-F	3-F

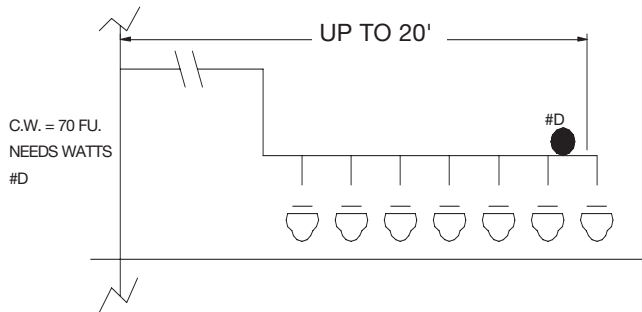


Figure A

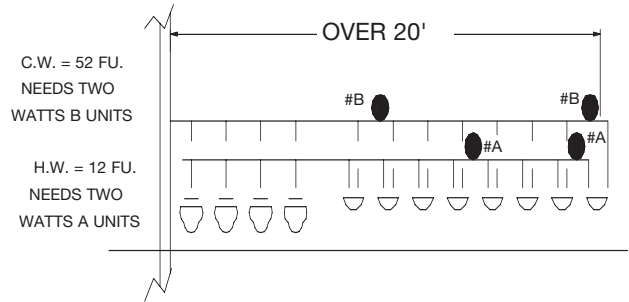


Figure B

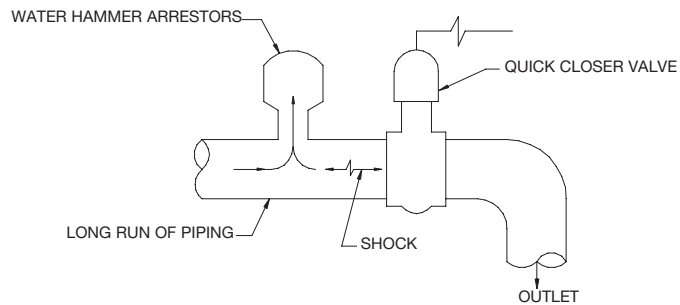


Figure C

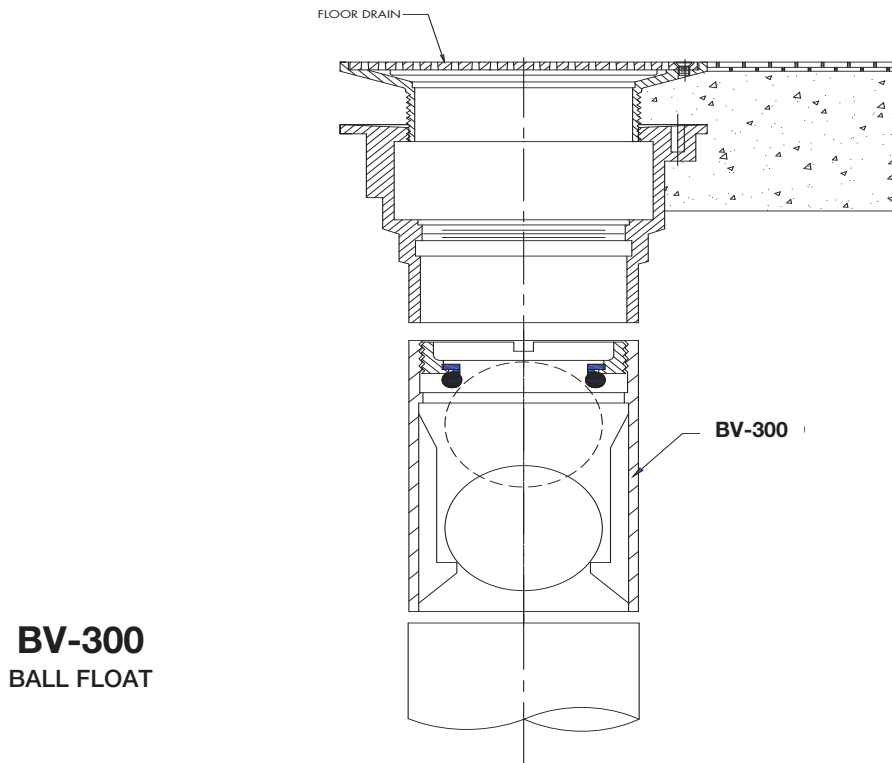
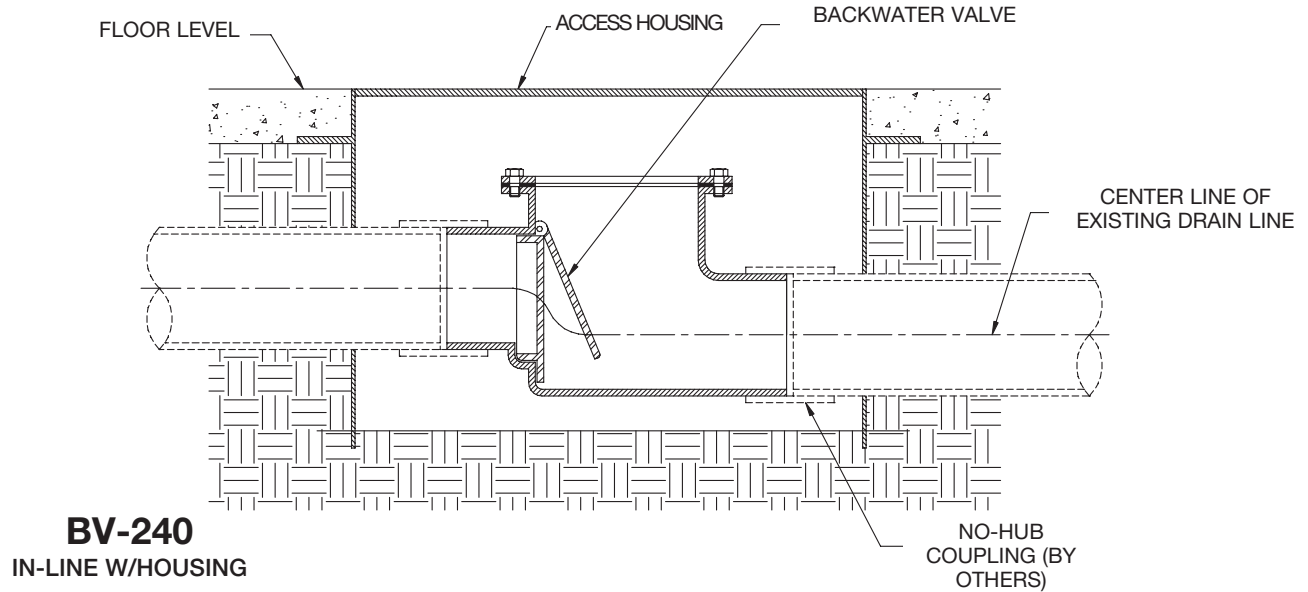
Specialties

Backwater Valves

Watts backwater valves should be specified for gravity flow only, and not used in pressurized applications.

Flapper type backwater valves are specified in gravity flow (non-pressure) applications to restrict backflow from excessive rainfall, tidewater, or other drainage conditions. The bronze flapper valve should be periodically inspected and kept free of debris or other obstruction to assure proper functioning.

Typical Installations



Specialties

Trap Primers

Compliance

Watts LFTP300-DR trap primers are tested and approved in conformance with ASSE Standard 1018.

Pressure & Flow Characteristics

Minimum supply pressure: 25 PSI

Maximum supply pressure: 125 PSI

FLOW CHART

INLET PRESSURE	25	50	75	100	125
*GPM	1.1	1.6	2.0	2.3	2.4
*LPM	4.2	6.1	7.6	8.7	9.1

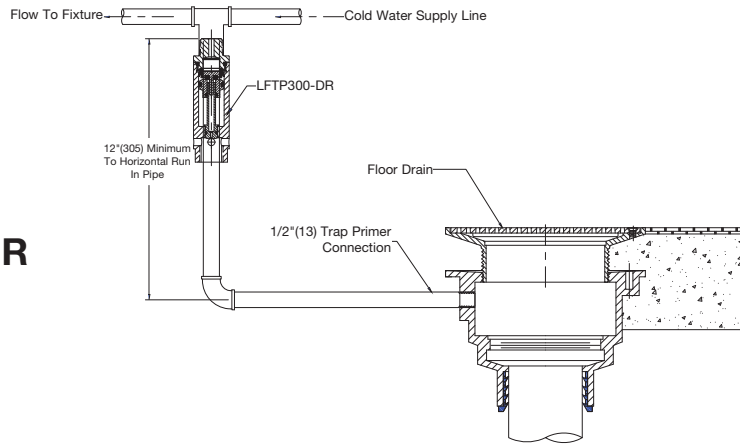
* Minimum cold flow required for proper trap priming.

Distribution Unit

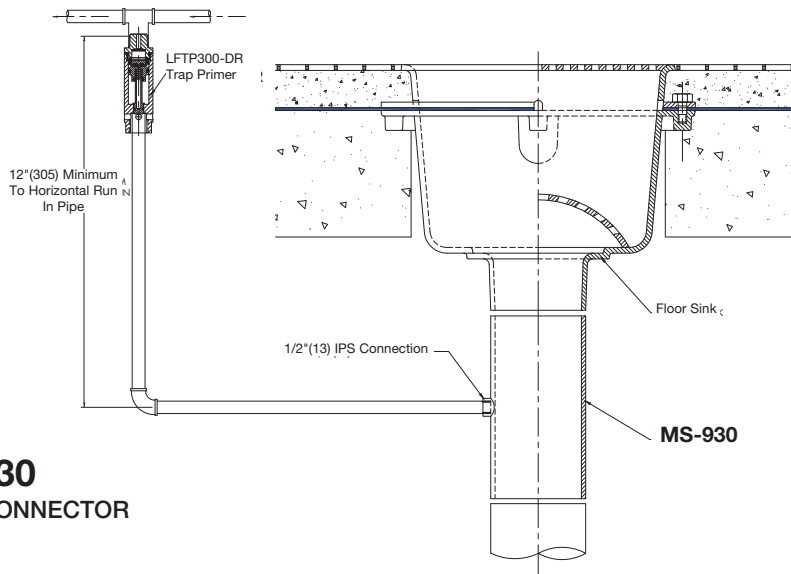
Watts model LFTP300-DU-DR Distribution Unit enables connection to up to four traps with a single trap primer.

Typical Installations

LFTP300-DR
TRAP PRIMER



MS-930
TRAP PRIMER CONNECTOR



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Water Hammer Arrestors

LF15M2-DR Series Copper Water Hammer Arrestors

Model Number	PDI Size	List Price
LF15M2-A-DR	A	\$175.00
LF15M2-B-DR	B	336.00
LF15M2-C-DR	C	529.50
LF15M2-D-DR	D	1,118.00
LF15M2-E-DR	E	1,390.50
LF15M2-F-DR	F	1,656.00

Technical Data							
Model No.	Connection Threaded	Dimensions				PDI Size	Fixture Units
		A		B			
		In.	MM	In.	MM		
LF15M2-A-DR	1/2"	1 1/8"	28.5	5 15/16"	150.9	A	1-11
LF15M2-B-DR	3/4"	1 3/8"	34.9	8 9/16"	218.0	B	12-32
LF15M2-C-DR	1"	1 5/8"	41.3	8 13/16"	223.5	C	33-60
LF15M2-D-DR	1"	2 1/8"	54.0	9 15/16"	252.5	D	61-113
LF15M2-E-DR	1"	2 1/8"	54.0	12 11/16"	322.5	E	114-154
LF15M2-F-DR	1"	2 5/8"	66.7	11 5/32"	283.5	F	155-330

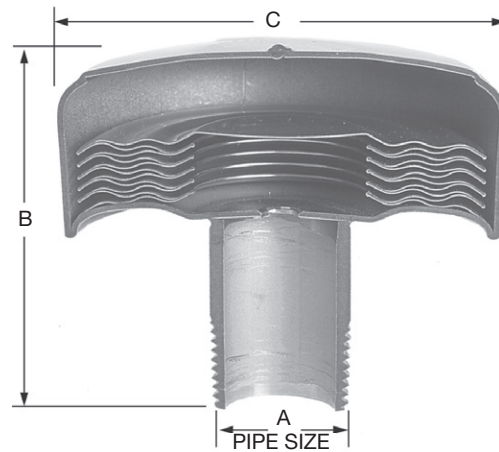


SS Series Stainless Steel Shock Arrestors

Model Number	PDI SIZE.	Conn. Size	Height	List Price
SS-A	A	3/4"	3 1/4"	\$549.50
SS-B	B	1"	4 1/4"	1,119.00
SS-C	C	1"	5 3/4"	1,672.00
SS-D	D	1"	6 1/2"	4,191.00
SS-E	E	1"	6 3/4"	4,731.50
SS-F	F	1"	7 1/4"	5,815.00



Stainless Steel Series



Technical Data						
	SS-A	SS-B	SS-C	SS-D	SS-E	SS-F
Fixture Unit	1-11	12-32	33-60	61-113	114-154	155-330
"A" Connection	3/4"(19)	1"(25)	1"(25)	1"(25)	1"(25)	1"(25)
"B" Height	3-3/16"(81)	4"(102)	4-5/16"(110)	5-1/4"(133)	7"(178)	7"(178)
"C" Diameter	3-1/4"(83)	3-1/4"(83)	3-1/4"(83)	3-1/4"(83)	3-1/4"(83)	3-1/4"(83)
PDI Size	A	B	C	D	E	F

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

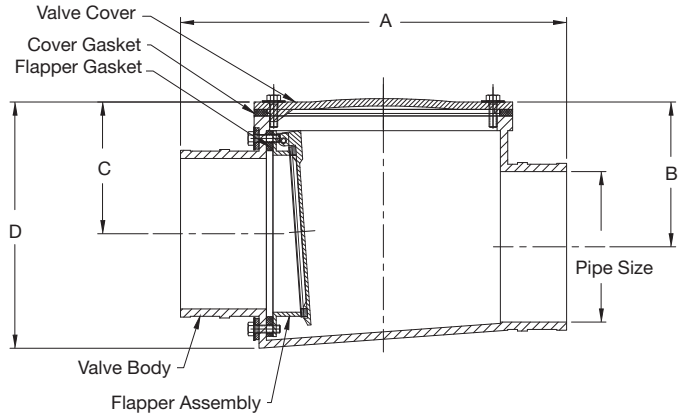


Backwater Valves

BV-200

Cast Iron In-Line Backwater Valve

Model Number	Wt. Lbs.	Size	List Price
BV-203	16	3"	\$2,036.50
BV-204	22	4"	2,505.00
BV-206	30	6"	3,597.00



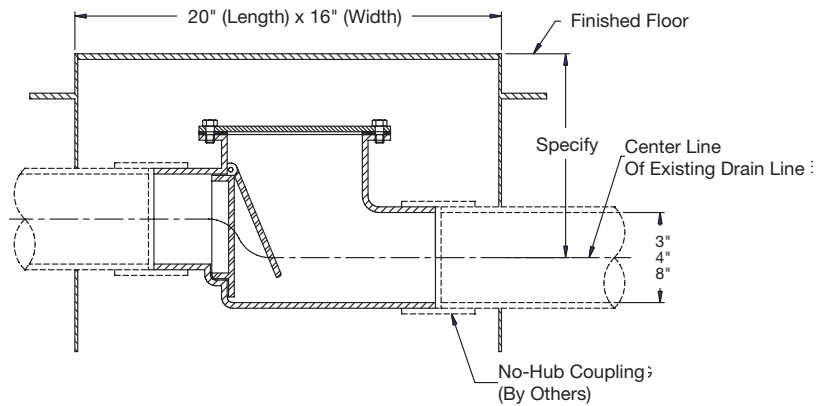
Pipe Size	A	B	C	D
3"(76)	11-5/8"(294)	4-3/16"(107)	3-3/4"(94)	6-1/2"(165)
4"(102)	12"(305)	4-3/8"(110)	3-7/8"	7-1/4"(184)
6"(152)	14-3/4"(375)	5-1/2"(140)	5"(127)	9-3/8"(238)

BV-240

In-Line Backwater Valve with Access Housing

Model Number	Wt. Lbs.	Size	List Price
BV-243	16	3"	\$4,384.00
BV-244	22	4"	4,854.50
BV-246	30	6"	5,946.00

Note: Epoxy-coated Steel Access Housing



Options for BV-240

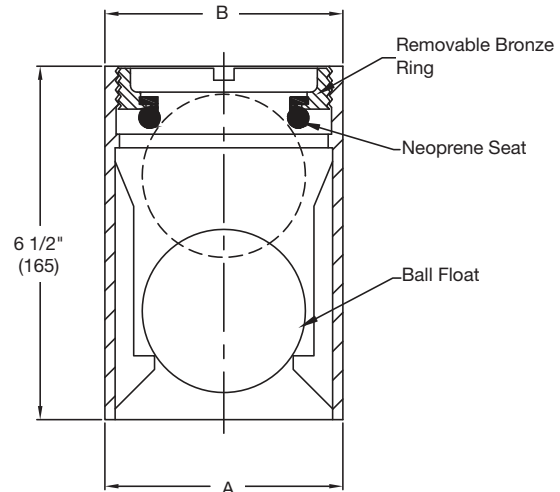
Suffix	Description	List Price
-HD	Heavy Duty Traffic Cover	\$5,171.50

BV-300

Ball Float Backwater Valve

Model Number	Wt. Lbs.	Size	List Price
BV-302	5	3"x2"	\$ 377.50
BV-303	5	3"	377.50
BV-304	5	4"	377.50

Size	A	B
2"(51)	2 11/32"(59)	3 3/8"(86)
3"(76)	3 3/8"(86)	3 3/8"(86)
4"(102)	4 3/8"(111)	4 3/8"(111)



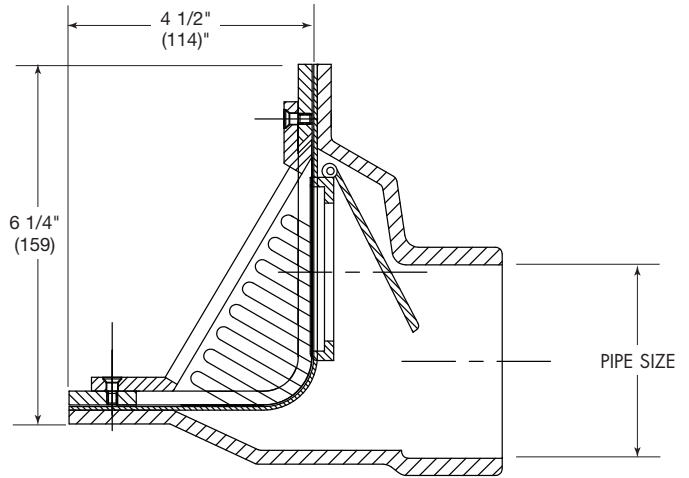
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Backwater Valves/Trap Primers

BV-600

Pit Drain with Backwater Valve

Model Number	Wt. Lbs.	Size	List Price
BV-602,3,4	40	2,3,4"	\$1,833.00



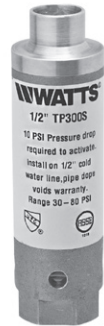
Options for BV-600

Suffix	Description	List Price
-1	Nickel Bronze Grate & Frame	\$864.50
-6	Vandal Proof Grate	147.00

LFTP300-DR

Trap Primer & Distribution Unit

Model Number	Wt. Lbs.	Size	List Price
LFTP300T-DR	1	1/2"	\$270.00
LFTP300S-DR	1	1/2"	270.00
LFTP300-DU-DR	1	1/2"	189.00



Model LFTP300S-DR



Model LFTP300T-DR



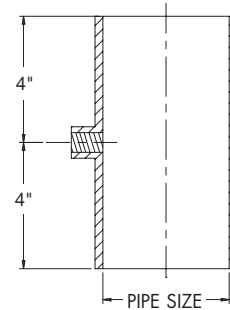
Model LFTP300-DU-DR

Miscellaneous Specialties

MS-930

Trap Primer Adaptor

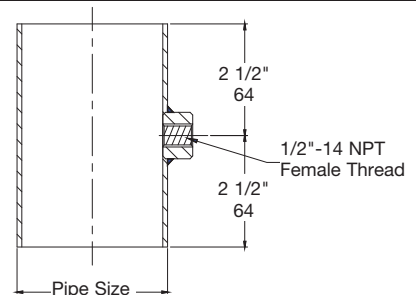
Model Number	Size	Material	List Price
MS-932, 3, 4	2, 3, 4"	cast iron	\$191.50



MS-940-SS

Stainless Steel Trap Primer Adaptor

Model Number	Size	Material	List Price
MS-942, 3, 4	2, 3, 4"	stainless steel	\$362.00



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

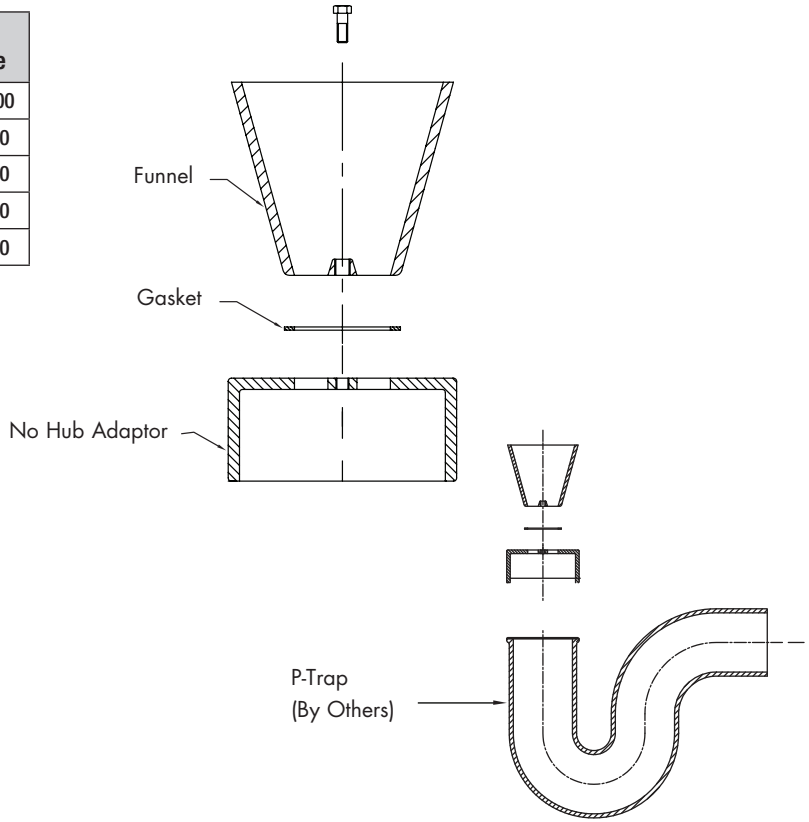


Miscellaneous Specialties

MS-950

Funnel /Trap Adaptor

Model Number	Size	Funnel	List Price
MS-952,3-F4-50	2, 3,"	4" Cast Iron	\$293.00
MS-952,3-F4-1	2, 3"	4" Nickel Bronze	542.00
MS-952,3-F6-1	2, 3"	6" Nickel Bronze	739.50
MS-952,3-G-50	2, 3"	4x9" Cast Iron	537.00
MS-952,3-G-1	2, 3"	4x9" Nickel Bronze	986.00



Typical Installation

Options for MS-950:

Suffix	Description	List Price
-8	Ball Flat Backwater Valve	\$377.50

MS-8000

Fresh Air Inlet

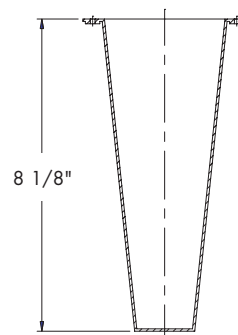
Model Number	Size	Material	Wt., Lbs.	List Price
MS-8034	3, 4"	Nickel Bronze	3	\$604.00
MS-8056	5, 6"	Nickel Bronze	4	1,036.50



PS Series

Plastic Pipe Sleeves

Model Number	Size	Taper Degree	Carton Qty.	List Price
PS-0151	1-1/2"	3	336	\$10.50
PS-021	2"	3	280	13.00
PS-033	3"	3	168	15.50
PS-043	4"	3	96	22.00
PS-053	5"	3	72	23.00
PS-063	6"	3	40	28.50
PS-083	8"	3	n/a	46.00
PS-101	10"	3	n/a	61.00
PS-121	12"	3	n/a	99.00

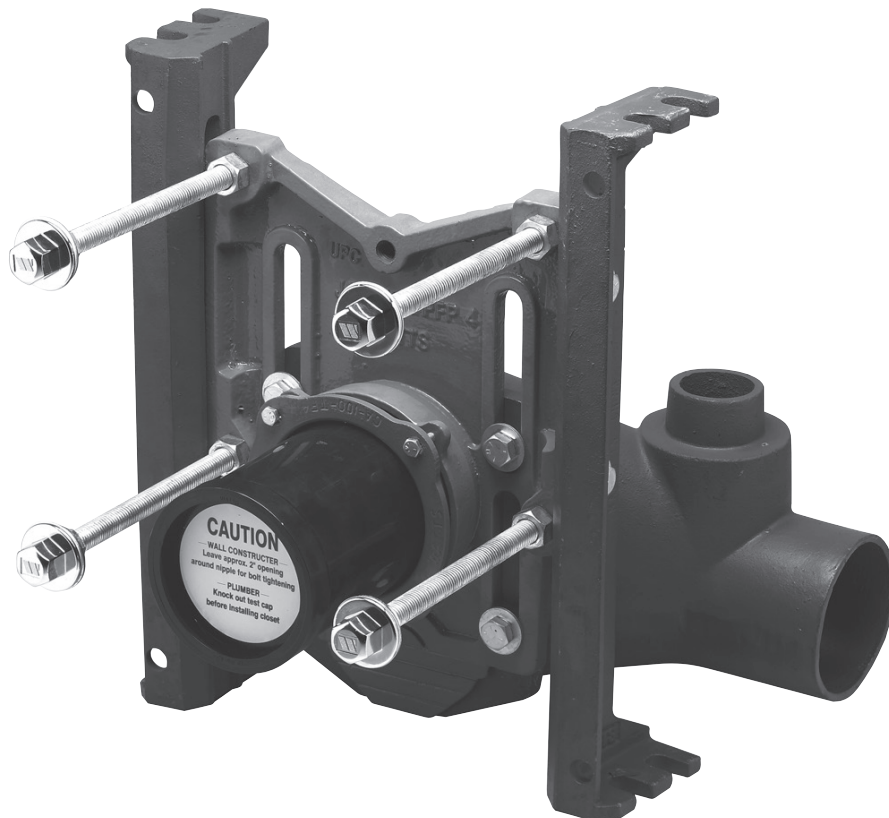


Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Fixture Carriers

Table Of Contents

- Pictorial Index
- Recommendations
- *Industry Standard Water Closet Carriers*
 - Matching Water Closet & Carrier
 - Carrier Selection & Battery Set-Up
 - Stud & Nipple Adjustment
 - Floor Anchoring
 - Thin Wall Vertical Carriers
 - Commonly Specified Options
- Wall Hung Fixture Carriers
 - Lavatory Carriers
 - Urinal & Water Cooler Carriers
 - Service Sink Carriers



Fixture Carriers

Pictorial Index



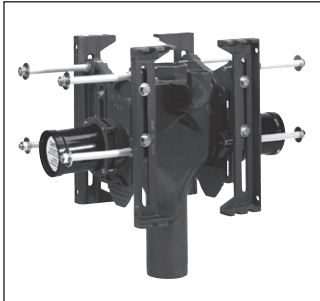
ISCA-101-L/R
Horizontal Water Closet



ISCA-101-D
Back To Back
Horizontal Water Closet



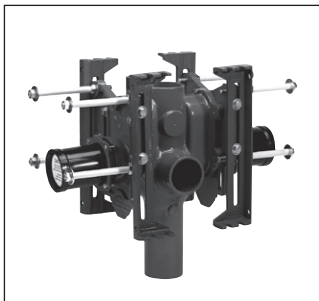
ISCA-121
Vertical Water Closet



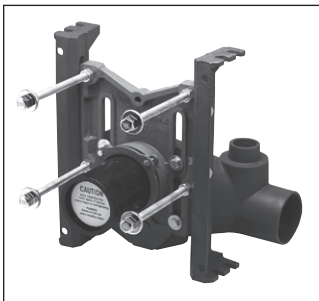
ISCA-121-D
Back-To-Back Vertical
Water Closet



ISCA-131-L/R/2
Vertical Water Closet
w/Side Inlet(s)



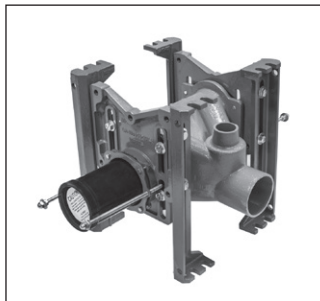
ISCA-131-D
Back-To-Back Vertical
w/Side Inlet(s)



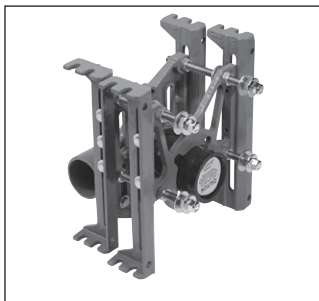
ISCA-101-L/R-AUX
Horizontal Water Closet
w/Auxiliary Inlet



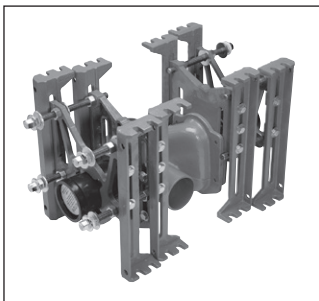
ISCA-101-L/R-BF
Horizontal Back Outlet
Water Closet



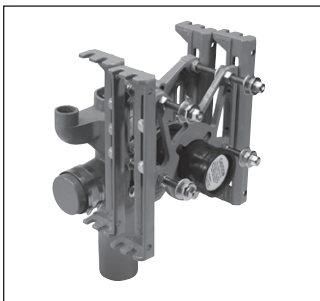
ISCA-101-D-BF
Back-To-Back Horizontal
Back Outlet



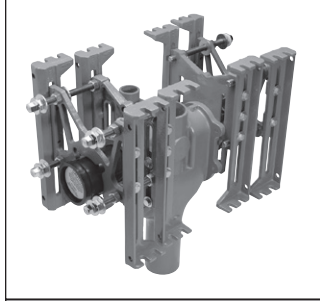
ISCA-102-L/R
1000# Horizontal
Water Closet



ISCA-102-D
1000# Back-To-Back
Horizontal



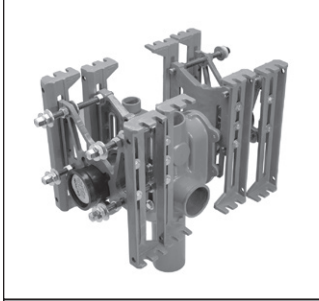
ISCA-122
1000# Vertical
Water Closet



ISCA-122-D
1000# Back-To-Back
Vertical



ISCA-132
1000# Vertical Water
Closet w/Side Inlet(s)



ISCA-132-D
1000# Back-To-Back
Vertical w/Side Inlet(s)



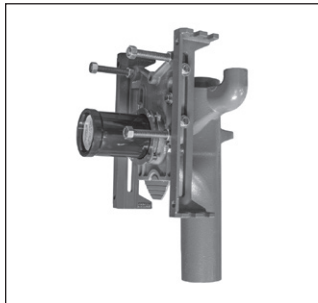
ISCA-103-L/R
750# Horizontal
Water Closet

Fixture Carriers

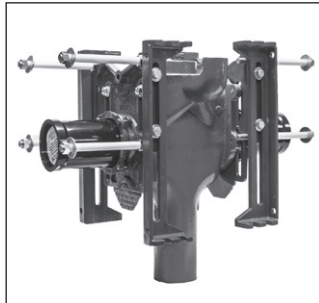
Pictorial Index



ISCA-103-D
750# Back-To-Back
Horizontal



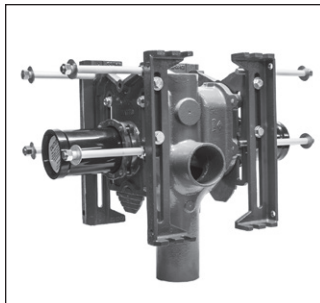
ISCA-123
750# Vertical
Water Closet



ISCA-123-D
750# Back-To-Back
Vertical



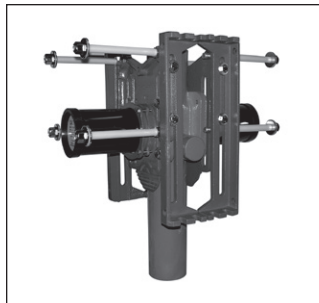
ISCA-133-L/R/2
750# Vertical Water Closet
w/Side Inlet(s)



ISCA-133-D
750# Back-To-Back
Vertical w/Side Inlet(s)



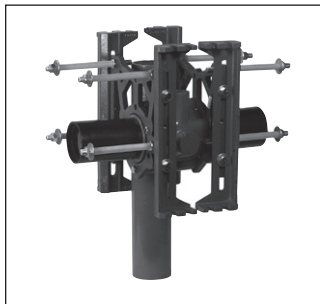
ISCA-141
Thin Wall Vertical
Water Closet



ISCA-141-D
Back-To-Back Thin Wall
Vertical



ISCA-151-L/R
Offset Thin Wall Vertical
Water Closet



ISCA-151-D
Back-To-Back Offset Thin
Wall Vertical



CA-100-EXT
Water Closet
Auxiliary Support



TCA-411
"Track" Concealed
Arm Lavatory



TCA-411-WC
"Track" 27x20 Concealed
Arm Lavatory



TCA-411-D
"Track" Back-To-Back
Concealed Arm



TCA-411-D-WC
"Track" 27x20 Back-To-
Back Concealed Arm



WCA-411/WCA-411-WC
Concealed Arm Lavatory



**WCA-411-D/
WCA-411-D-WC**
Back-To-Back Concealed Arm

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

WATTS®

Fixture Carriers

Pictorial Index



CA-311
Urinal



CA-321
Urinal w/Bearing Plate



CA-401
Exposed Arm Lavatory



CA-421
Water Cooler



CA-431-1
Bi-Level Water Cooler



TCA-440
"Track" Wall Mounted
Concealed Arm Lavatory



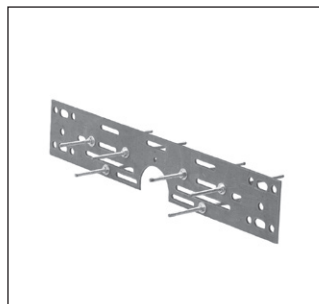
TCA-450
"Track" 27x27 Wall
Mounted Concealed Arm



CA-461
Wall Mounted
Concealed Arm



CA-462
Wall Mounted
Concealed Arm



CA-481
Wall Plate



ISCA-550
3-Bolt Service Sink



ISCA-560
4-Bolt Service Sink

Fixture Carriers

Recommendations

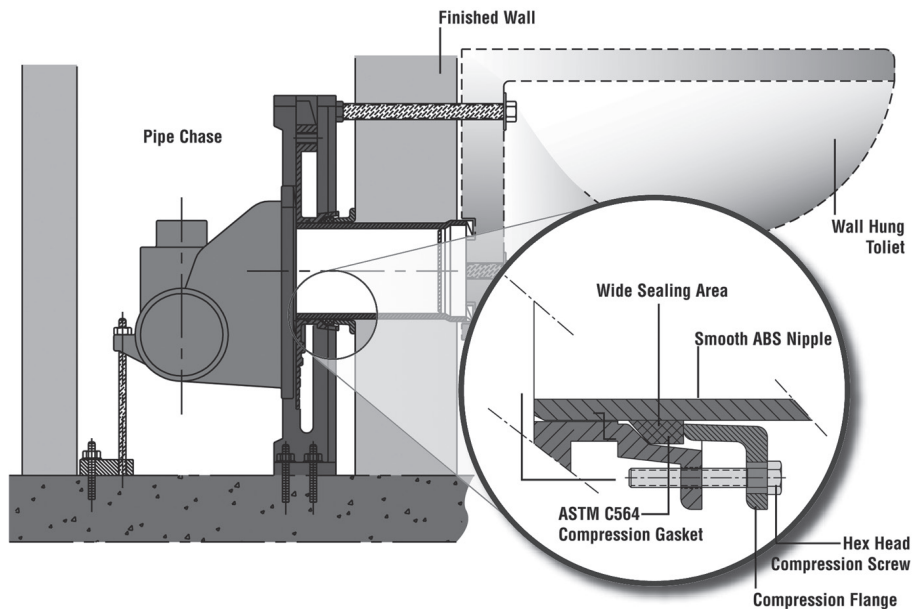
Application	Product
Water closet standard commercial 500 lb.....	ISCA-101, ISCA-121, ISCA-131 Series
Water closet 750 lb.....	ISCA-103, ISCA-123, ISCA-133 Series
Water closet bariatric 1000 lb.....	ISCA-102, ISCA-122, ISCA-132 Series
Water closet/urinal back-to-back.....	ISCA-101-L/R-AUX
Water closet thin wall vertical.....	ISCA-141, ISCA-151 Series
Lavatory concealed arm - block wall.....	TCA-411, TCA-411-WC
Lavatory concealed arm - stud wall.....	WCA-411, WCA-411-WC
Lavatory exposed arm.....	CA-401
Urinals.....	CA-311, CA-321
Water coolers, drinking fountains.....	CA-421, CA-431-1
Service sinks.....	ISCA-550, ISCA-560

Industry Standard Water Closet Carriers

Industry Standard Water Closet Carriers support wall hung "off the floor" water closets. Water closet carriers anchor to the structural floor behind the finished wall, and support the fixture independent of the wall structure.

Water closet carriers incorporate a patented compression seal nipple, which positively holds test, and eliminates behind the wall leaks. Traditional threaded nipples require an additional sealant and can be susceptible to failure. Behind the wall carrier leaks can create an environment for mold formation, and cause extensive damage.

"Industry Standard" Carrier Assembly



Fixture Carriers

Recommendations

Matching Closet & Carrier

Watts ISCA carriers can be installed with any commercial 4-bolt (siphon jet) water closet. The ISCA faceplate can be inverted to accommodate 3-bolt (blow-out) fixtures.

Standard ISCA 101/121/131 carriers are tested to in accordance with AMSE Standard A112.6.1M. For bariatric or other special applications, specify ISCA-103/123/133 750 lb., or ISCA-102/122/132 1000 lb. carriers. Note 750 lb. and 1000 lb. carriers require special floor anchoring, and have a smaller range of adjustment than standard carriers. Special wall construction design and accommodations may be required.

Carrier Selection & Battery Set-Up

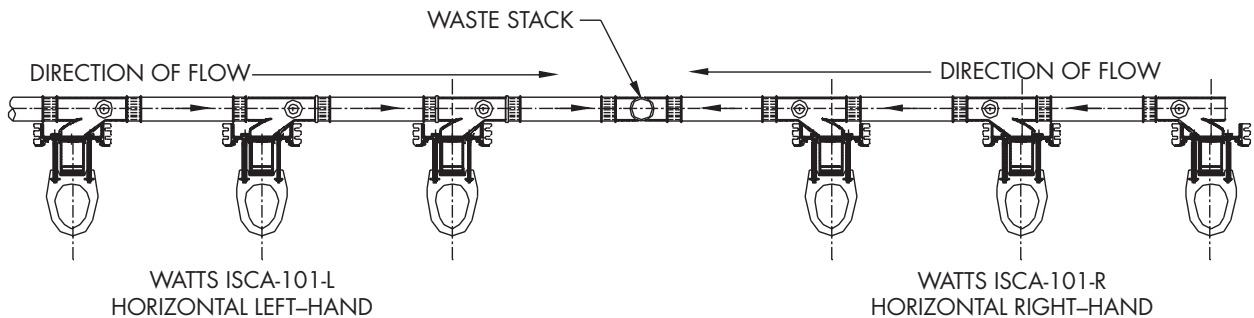
Closet carriers are often installed in groups (batteries) to accommodate multiple fixture and back-to-back bathroom groups. These factors should be considered in the specification of ISCA Series batteries:

1. Location of the waste stack

A waste stack may be located directly behind a water closet, at a midpoint, or at the end of a carrier battery. The position of the stack determines which specific carriers are required, as all waste flows towards the stack.

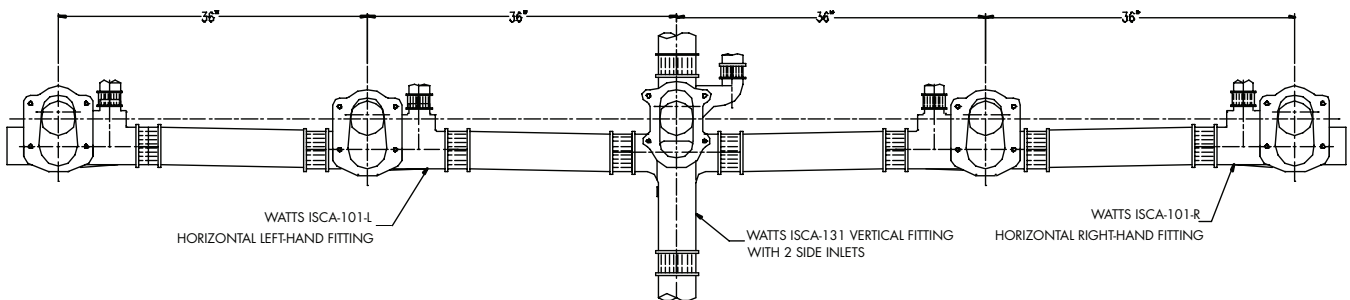
2. Horizontal carrier direction

Single horizontal carriers are specified either left hand or right hand (L or R), depending on the direction of flow. To determine L or R, with your back to the wall, point in the direction of flow. If the flow is to the left, a left hand carrier is required. Back-to-back horizontal carriers are reversible, and do not require a flow direction specification.



3.) Vertical carriers with side inlets (stack fittings)

ISCA-131/132/133 Series carriers are specified in batteries with a waste stack located directly behind one of the bowls. The side inlet direction (L or R) is determined by facing the wall, and pointing in the direction of flow. If the flow comes in from the right, a right hand side inlet is required. For stack carriers receiving flow from both directions, specify dual side inlets (-2). Back-to-back carriers are reversible, and do not require a flow direction specification.



Fixture Carriers

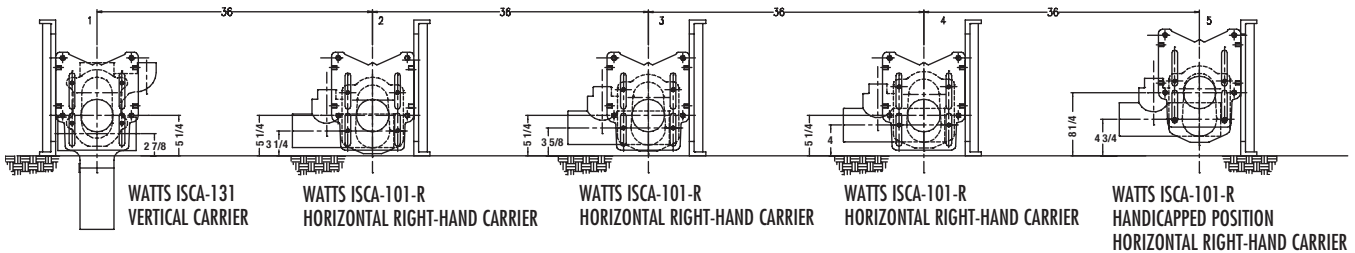
Recommendations

Carrier Selection & Battery Set-Up

4.) Battery pitch & rough-in requirements

Standard bowl installations are typically 15" from the floor to the rim of the bowl, and "Physically Handicapped" (ANSI A112.19.2) installations 18" to the rim of the bowl. Assuming standard rough-in specifications of 1/8" pitch on the horizontal waste line, and 36" between fixtures, batteries can typically be constructed with up to 9 fixtures, provided a stack fitting (ISCA-131, ISCA-132, ISCA-133) is used in the center position. Handicapped fixtures can be incorporated into the batteries, and should be placed at the high end of the fixture run. The table below indicates minimum and maximum horizontal waste line positions, dependent upon the specified rough-in height of the bowl outlet.

C/Bowl Outlet From Floor	Min. C/L Horiz. Waste from Floor	Min. C/L Horiz. Waste from Floor
4-1/2"	3"	4-1/2"
5"	3"	5"
5-1/2"	3"	5-1/2"
6"	3"	6"
6-1/2"	3-1/4"	6-1/2"
7"	3-5/8"	7"
7-1/2"	4-1/8"	7-1/2"
8"	4-5/8"	8"
8-1/2"	5"	8-1/2"
9"	5-3/8"	9"
9-3/8"	5-3/4"	9-3/8"



Stud & Nipple Adjustment

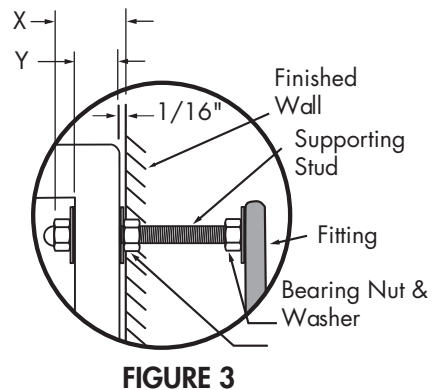
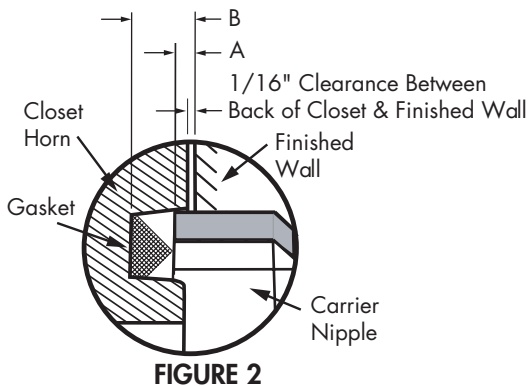
Closet horn depths and flange thicknesses from different fixture manufacturers may vary slightly. The closet nipple is usually set 5/16" beyond the face of the finished wall to allow for sufficient closet gasket compression, and ensure a gas and water tight seal (Fig. 2). Carrier studs generally extend 2-1/4" beyond the finished wall, with the back-up nut set flush with the finished wall, and 1/16" back-up washer between the wall and the fixture. Three cap nuts must tighten fully to properly load the carrier (Fig. 3). The fourth cap nut is typically left hand-tight, to avoid stress on the bowl.

Note: *Watts neoprene closet gaskets do not require an additional sealant to form a proper seal.*

These formulas can be used to calculate exact nipple and stud positions:

Nipple Position: Where:
 $A = B - 7/16"$
 A = distance nipple should extend beyond finished wall
 B = depth of closet horn

Stud Position: Where:
 $X = Y + 5/8"$
 x = distance stud should extend beyond finished wall
 Y = thickness of fixture flange



Fixture Carriers

Recommendations

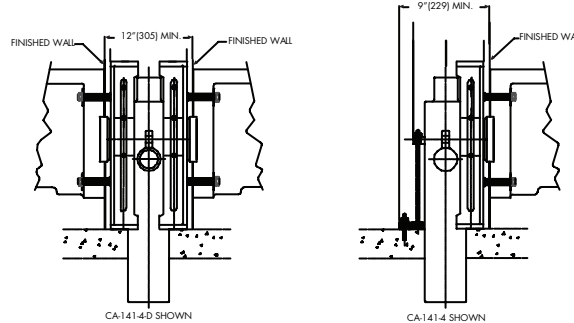
Floor Anchoring

Closet carriers must be securely anchored to the structural floor with min. 1/2" dia. anchor bolts (by others). Particular attention should be paid to the rear anchor support on single horizontal carriers, as unsecure rear anchors are the primary cause of rocking or excessive deflection at the bowl.

Watts closet carrier legs have a dual slotted foot design, which eliminates the problem of single anchors conflicting with concrete support bars (rebar). Only one anchor bolt is required to secure each leg to the floor.

Thin Wall Vertical Carriers

ISCA-141 & ISCA-151 Series vertical carriers are specified in single or multiple story buildings with thin pipe chases. ISCA-141 carriers vent directly off the top of the waste stack, and are generally used in single story installations. ISCA-151 carriers have an offset fitting, and are commonly specified in multi-story and retrofit applications.



Commonly Specified Options

-BF Assembly for Back Outlet Bowl

Yoke assembly enables connection of carrier to a floor mounted back outlet bowl.

-CA-100-EXT (Auxiliary Support System)

Additional support at the finished wall for wide pipe chases, recommended when the 'X' dimension exceeds 16". Supplied standard with a 24" nipple (cut to size). Extended 5/8" support rods are supplied by others.

-HS Hub & Spigot Connections

Hub & spigot fitting and vent connections.

-M1 Extended Nipple

24" ABS nipple with integral test cap for installations in wide pipe chases. Can be cut to size.

-M11 Tiling Frame

Creates flat even surface at the finished wall for tile application.

-M16 Vandal Proof Cap Nuts

Cap nuts secured with Allen Head set screws to prevent hand removal.

-M20 Flush Valve Support

Copper support secures and aligns exposed flush valve supply pipe.

-TAS Faceplate for Reduced Bowl Height

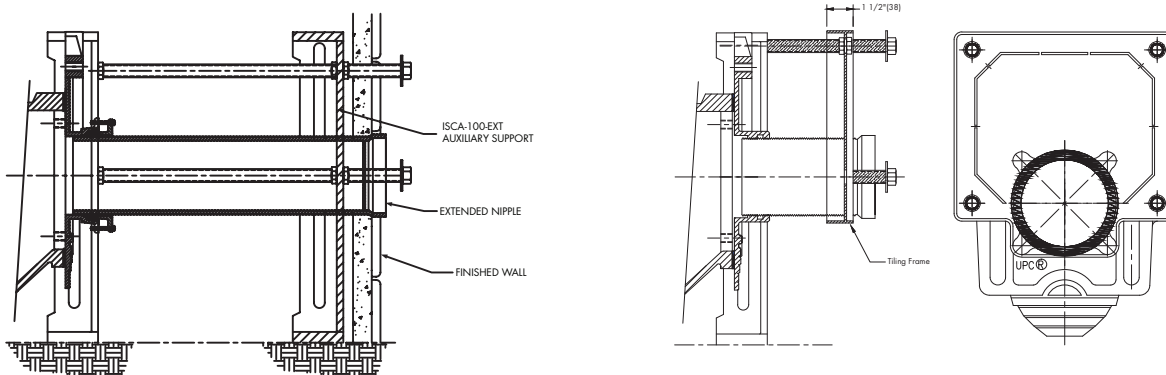
Enables bowl waste rough-in height 4" above finished floor. Specified in elementary schools, day-care centers, and other facilities serving young children.

-T Threaded Faceplate & Tapered Nipple

Threaded alternative to our standard compression carrier.

-36 Long Barrel Horizontal Fitting

36" long fitting enables standard battery set-ups, without additional piping between carriers.



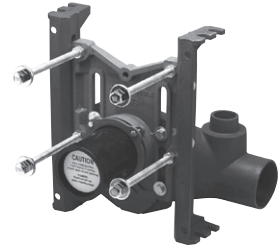
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Industry Standard Water Closet Carriers

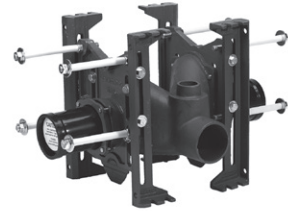
ISCA-101 Horizontal Adjustable Closet Carrier

Model Number	Wt. Lbs.	Description	List Price
ISCA-101-L	77	Single Horizontal - Left Hand	\$1,587.50
ISCA-101-R	77	Single Horizontal - Right Hand	1,587.50
ISCA-101-L-AUX	77	Single Horizontal - LH - 2" Aux Conn.	2,011.00
ISCA-101-R-AUX	77	Single Horizontal - RH - 2" Aux Conn.	2,011.00
ISCA-101-D	135	Back-to-Back Horizontal	2,967.00
ISCA-101-L-T	77	Single Horizontal - Left Hand, Tapered Thread FP	1,587.50
ISCA-101-R-T	77	Single Horizontal - Right Hand, Tapered Thread FP	1,587.50
ISCA-101-L-AUX-T	77	Single Horizontal - LH - 2" Aux Conn., Tapered Thread FP	2,011.00
ISCA-101-R-AUX-T	77	Single Horizontal - RH - 2" Aux Conn., Tapered Thread FP	2,011.00
ISCA-101-D-T	135	Single Horizontal, Tapered Thread FP	2,967.00

*FP=Faceplate



ISCA-101-L



ISCA-101-D

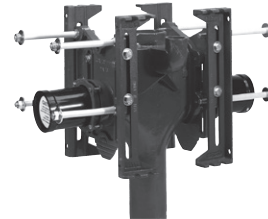
ISCA-121 Vertical Adjustable Closet Carrier

Model Number	Wt. Lbs.	Description	List Price
ISCA-121	97	Single Vertical	\$1,801.00
ISCA-121-D	160	Back-to-Back Vertical	3,181.50
ISCA-121-T	97	Single Vertical, Tapered Thread FP	1,801.00
ISCA-121-D-T	160	Back-to-Back Vertical, Tapered Thread FP	3,181.50

*FP=Faceplate



ISCA-121



ISCA-121-D

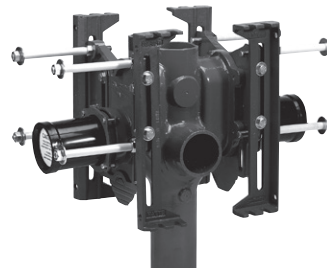
ISCA-131 Vertical Adjustable Closet Carrier with Side Inlet(s)

Model Number	Wt. Lbs.	Description	List Price
ISCA-131	97	Single Vertical - w/Side Inlet(s)	\$2,105.50
ISCA-131-D	160	Back to Back Vertical - w/Side Inlet(s)	3,479.50
ISCA-131-T	97	Single Vertical - w/ Side Inlet(s) Tapered Thread FP	2,105.50
ISCA-131-D-T	160	Back-to-Back Vertical - w/Side Inlet(s) Tapered Thread FP	3,479.50

*FP=Faceplate



ISCA-131



ISCA-131-D

See Pg. 194 for options & parts for all ISCA models.

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

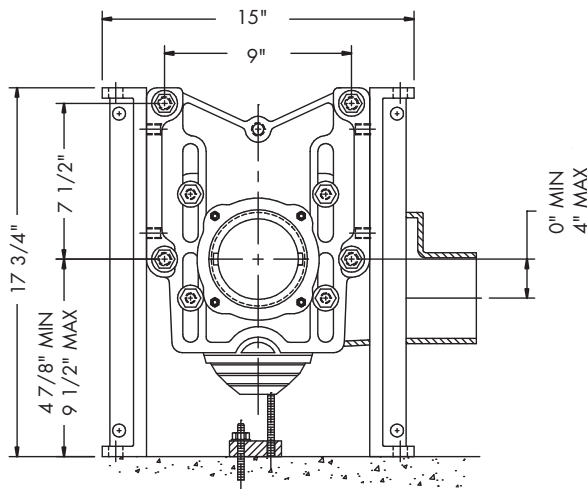
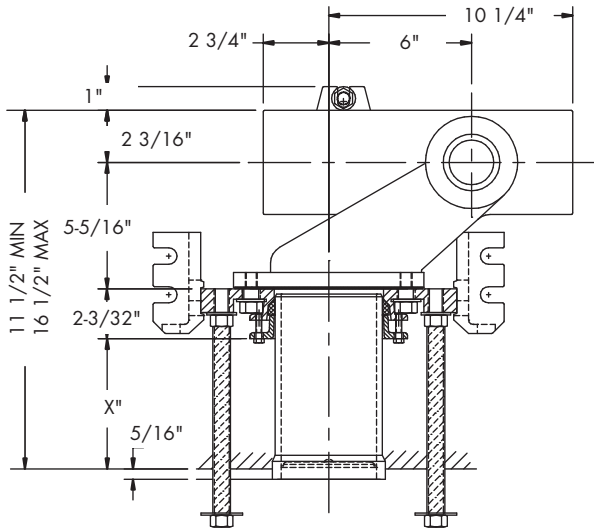
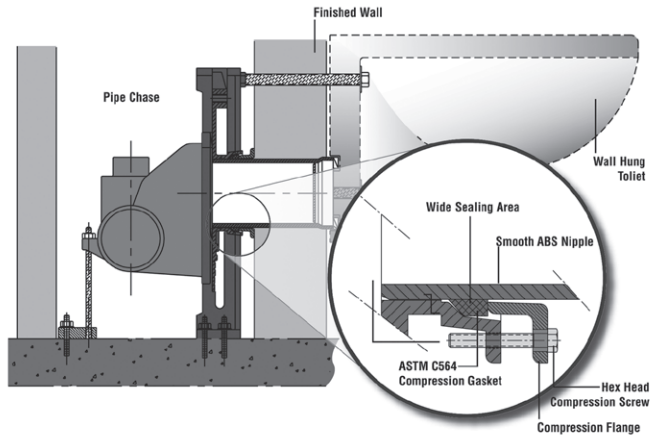


Industry Standard Water Closet Carriers

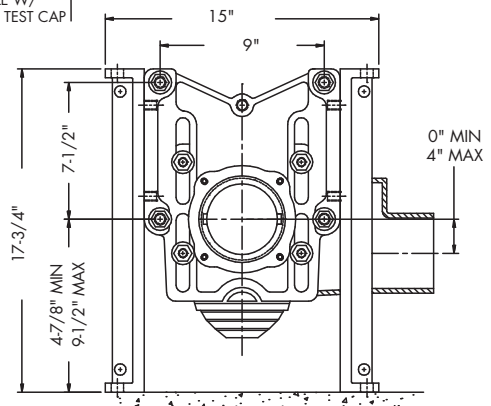
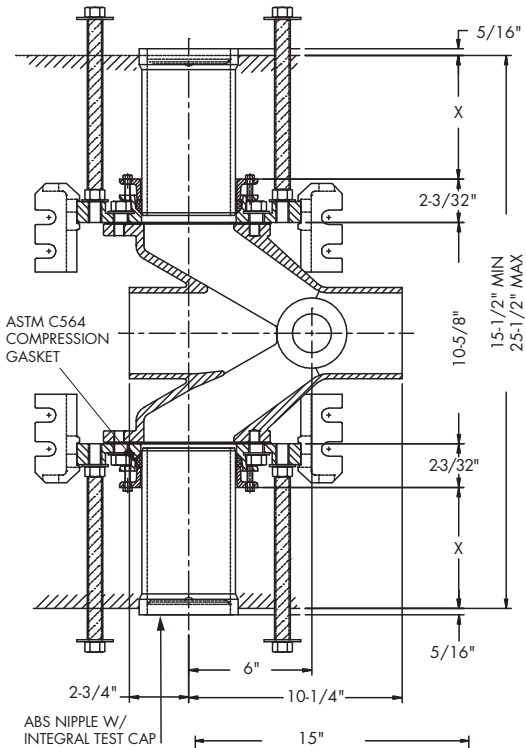
Industry Standard Carrier Options & Parts

Suffix	Description	List Price
-3	3" Horizontal Fitting	-\$167.50
-36	Horizontal Long Barrel (36")	524.50
-BF	Assy. For Back Outlet Bowl	No Add
-CA-100-EXT	Auxiliary Support Single	601.50
	Double	1,201.50
-CI	8" Cast Iron Nipple	No Add
-CW	Carrier Wrench	212.00
-HS	Hub & Spigot Connections ISCA-101 Horizontal	No Add
	ISCA-121/131 Vertical Extended Barrel	524.50
-M1	24" Nipple Single	242.00
	Double	483.50
-M11	Tiling Frame Single	81.50
	Double	162.50
-M16	Vandal Proof Cap Nuts Single	130.50
	Double	261.00
-M20	Flush Valve Support Single	87.50
	Double	176.00
-TAS	Faceplate for 4" Rough-In Tapered Thread	No Add
-T		No Add

"Industry Standard" Carrier Assembly



ISCA-101-L/R

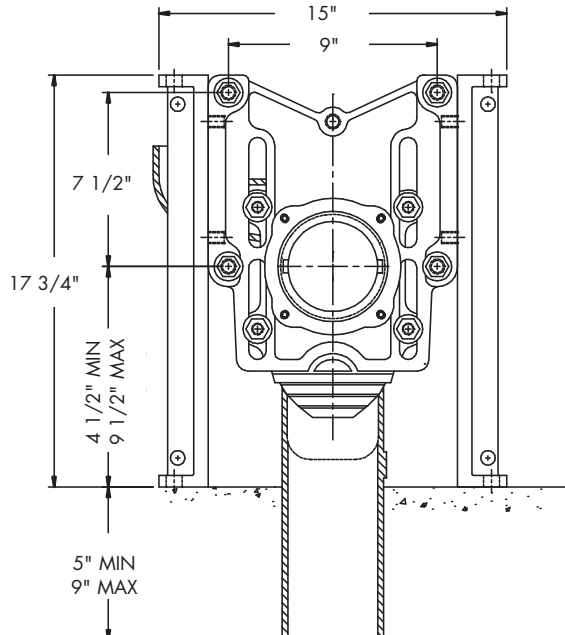
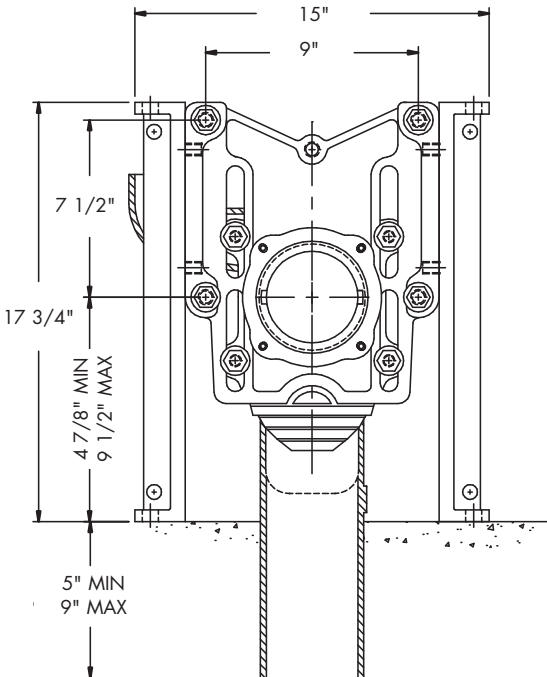
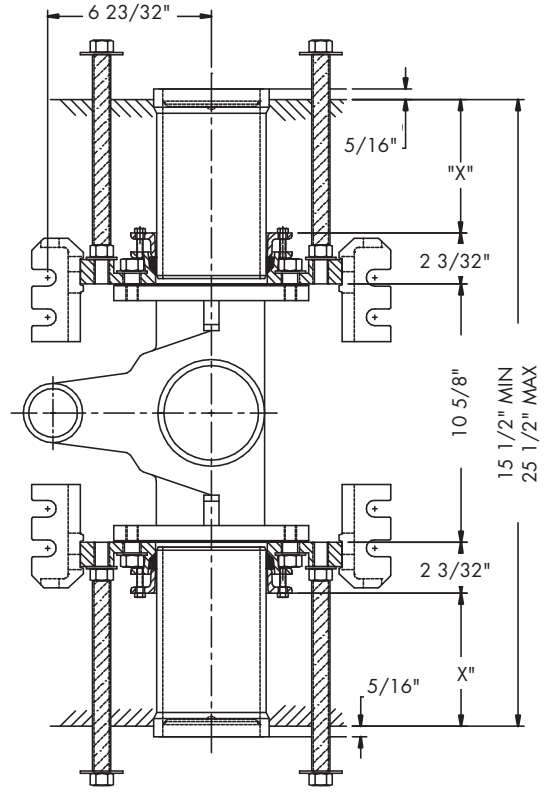
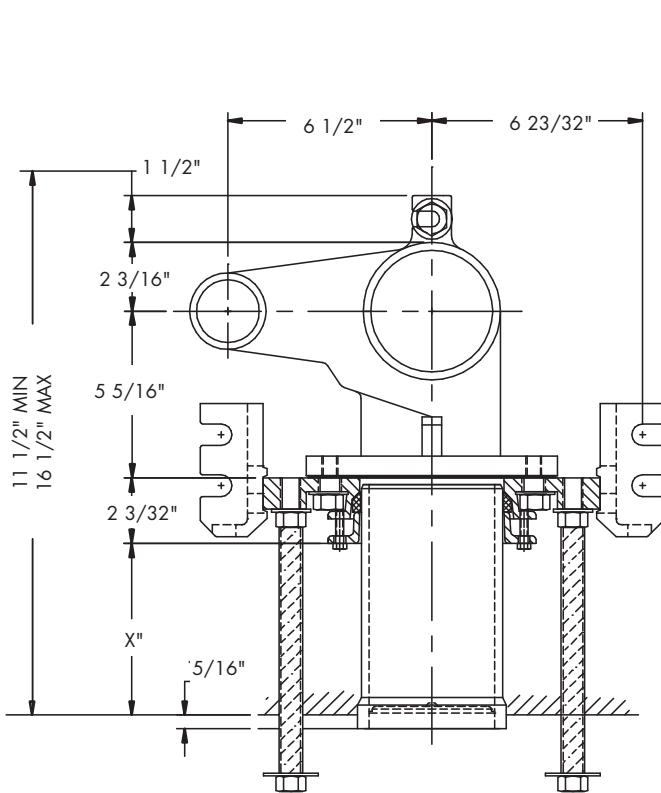


ISCA-101-D



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Industry Standard Water Closet Carriers

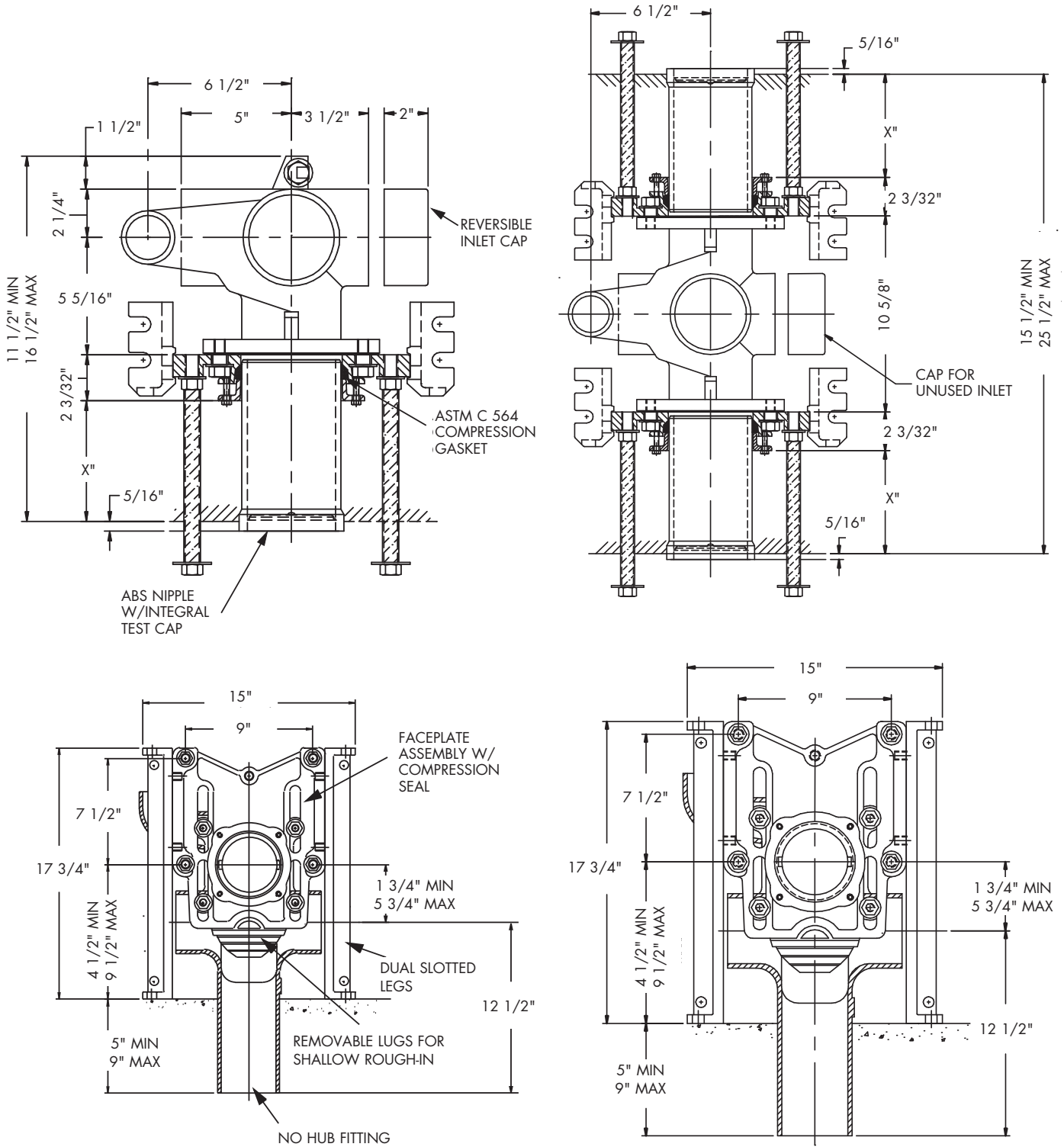


ISCA-121

ISCA-121-D

Consult factory for all applications outside of listed parameters. Prices do not include applicable taxes. **WATTS®**

Industry Standard Water Closet Carriers



ISCA-131

ISCA-131-D

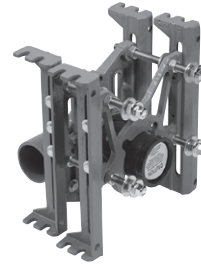


Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

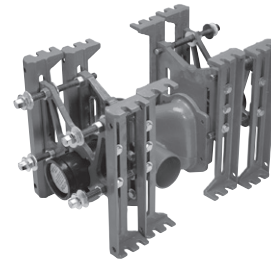
Industry Standard Water Closet Carriers

ISCA-102 Horizontal 1000 lb. Bariatric Closet Carrier

Model Number	Wt. Lbs.	Description	List Price
ISCA-102-L	108	Single Horizontal - Left Hand	\$4,641.00
ISCA-102-R	108	Single Horizontal - Right Hand	4,641.00
ISCA-102-D	186	Back-to-Back Horizontal	8,950.00
ISCA-102-L-T	108	Single Horizontal - LH, Tapered Thread	4,641.00
ISCA-102-R-T	108	Single Horizontal - RH, Tapered Thread	4,641.00
ISCA-102-D-T	186	Back-to-Back Horizontal, Tapered Thread	8,950.00



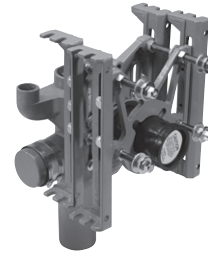
ISCA-102-L/R



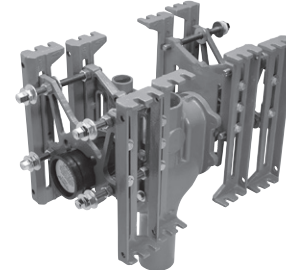
ISCA-102-D

ISCA-122 Vertical 1000 lb. Bariatric Closet Carrier

Model Number	Wt. Lbs.	Description	List Price
ISCA-122	117	Single Vertical	\$5,107.50
ISCA-122-D	195	Back to Back Vertical	9,846.05
ISCA-122-T	117	Single Vertical, Tapered Thread	5,107.50
ISCA-122-D-T	195	Back-to-Back Vertical, Tapered Thread	9,846.50



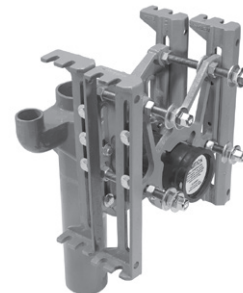
ISCA-122



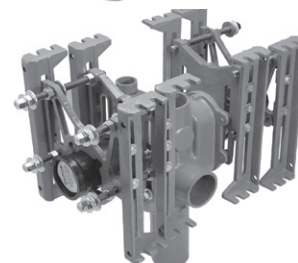
ISCA-122-D

ISCA-132 Vertical 1000 lb. Bariatric Closet Carrier With Side Inlet(s)

Model Number	Wt. Lbs.	Description	List Price
ISCA-132	121	Single Vertical w/Side Inlet(s)	\$5,413.50
ISCA-132-D	199	Back to Back Vertical w/Side Inlet(s)	10,145.50
ISCA-132-T	121	Single Vertical w/Side Inlet(s), Tapered Thread	5,413.50
ISCA-132-D-T	199	Back-to-Back Vertical w/Side Inlet(s), Tapered Thread	10,145.50



ISCA-132



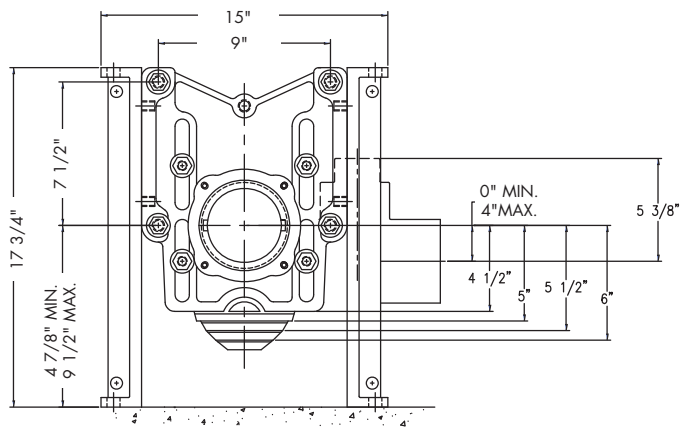
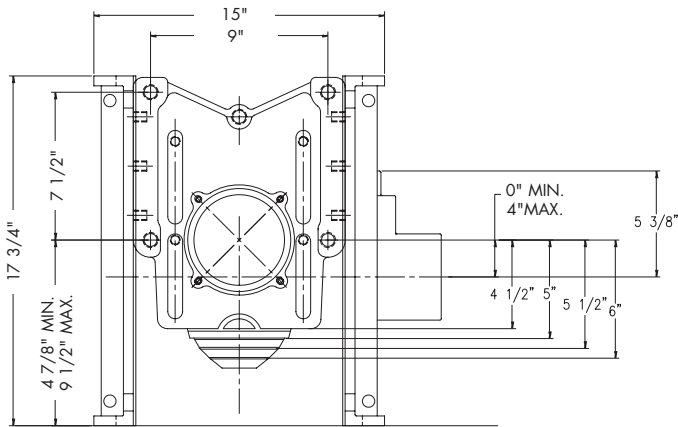
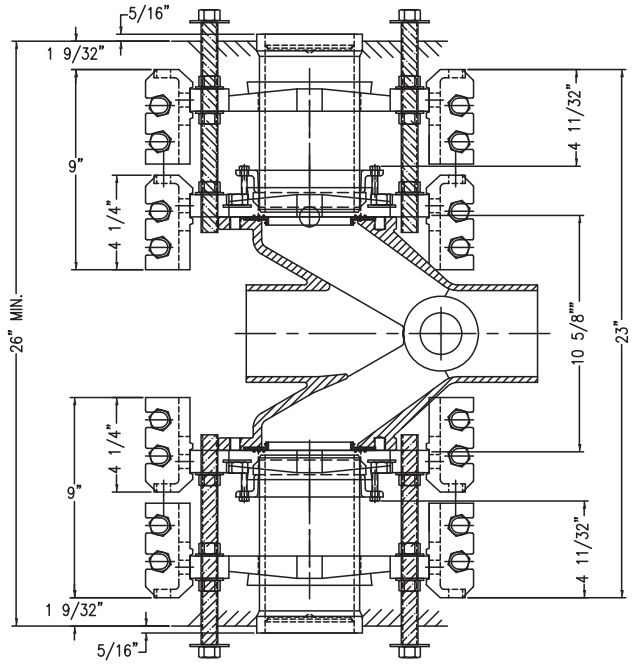
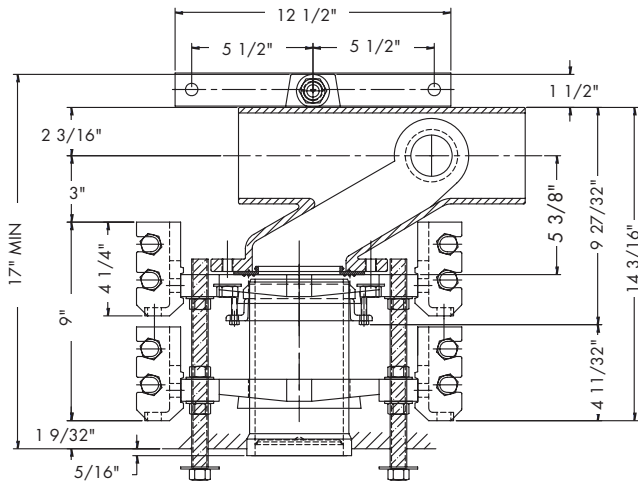
ISCA-132-D

See Pg. 194 for options & parts for all ISCA models.

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Industry Standard Water Closet Carriers



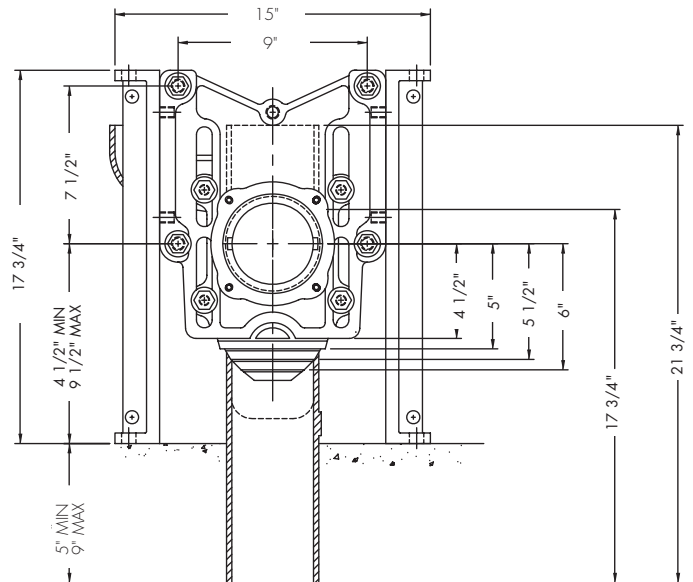
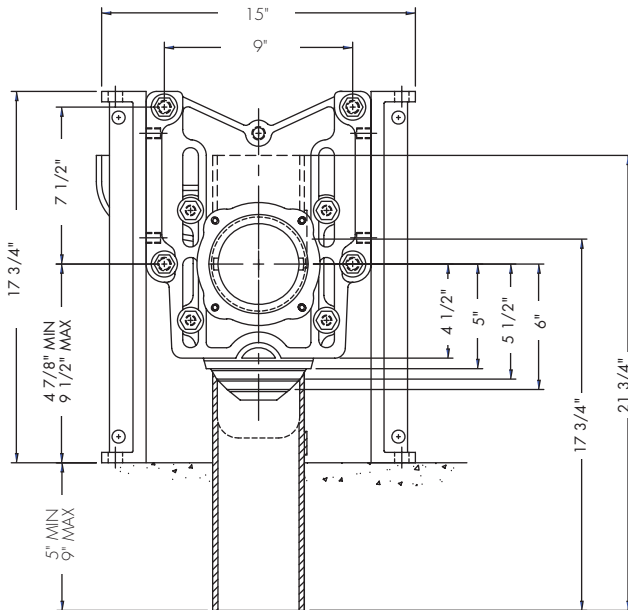
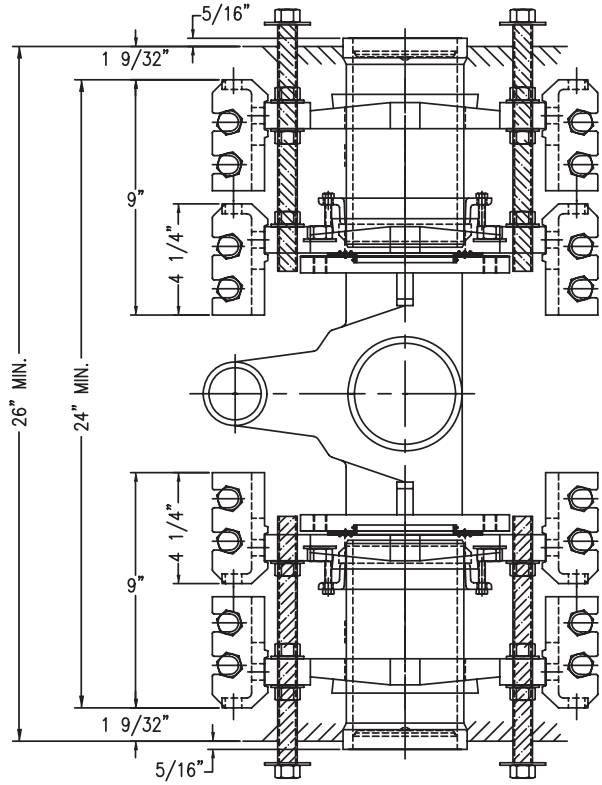
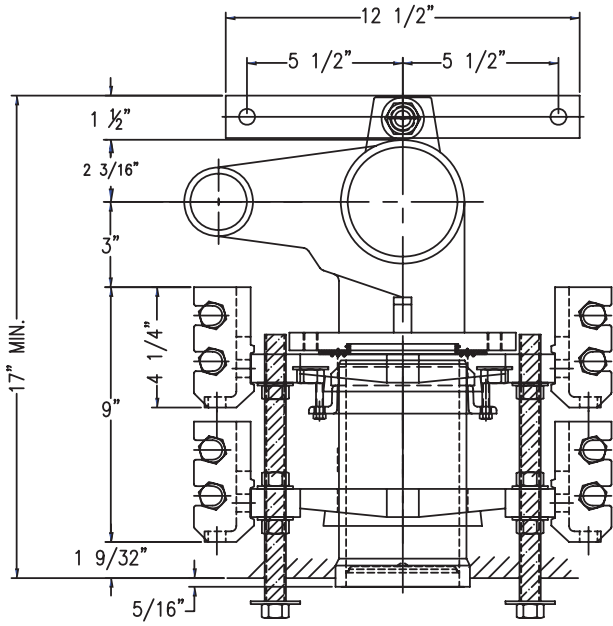
ISCA-102-L/R

ISCA-102-D



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Industry Standard Water Closet Carriers



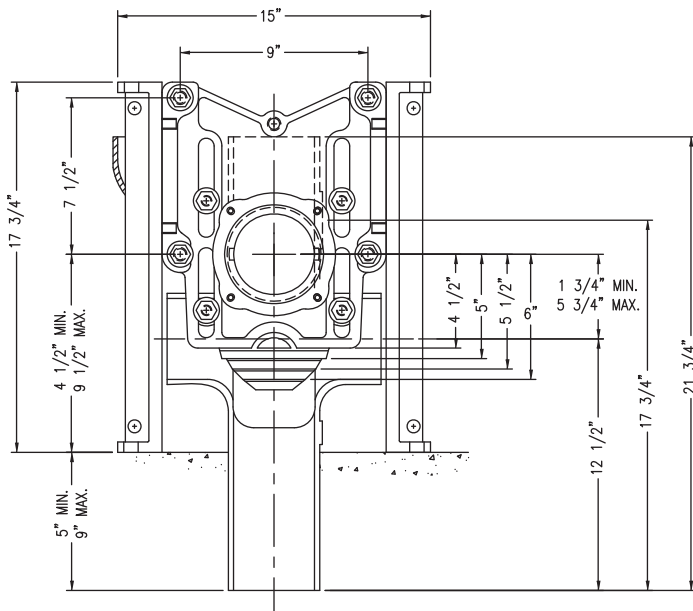
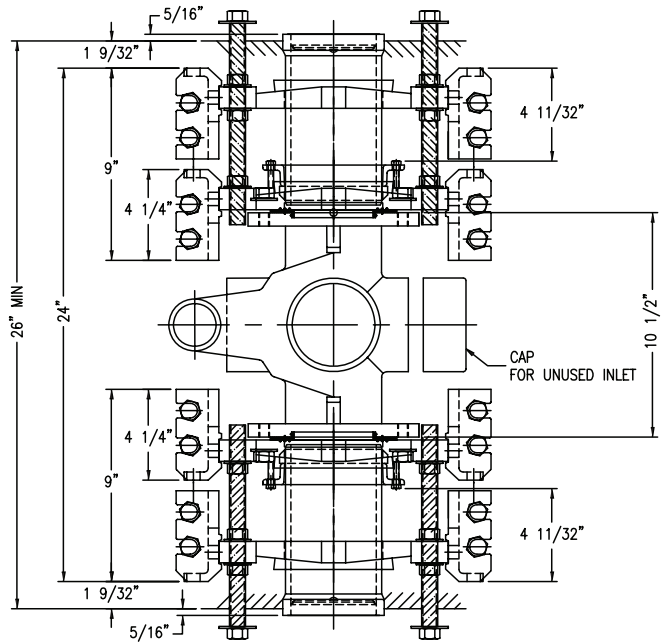
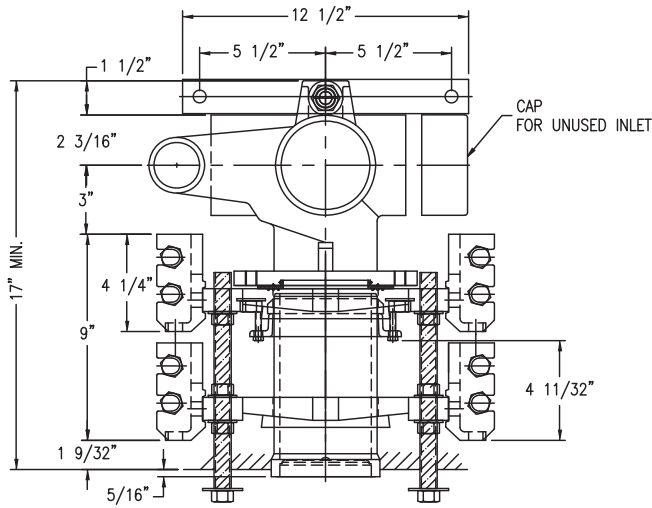
ISCA-122

ISCA-122-D

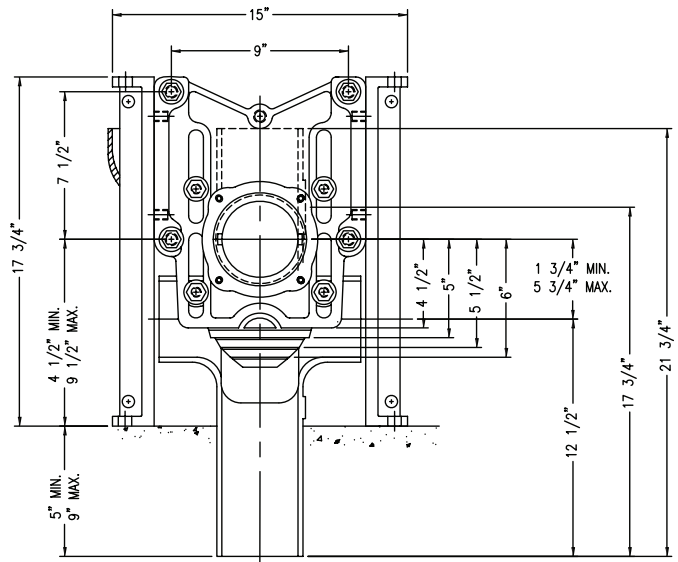
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Industry Standard Water Closet Carriers



ISCA-132



ISCA-132-D



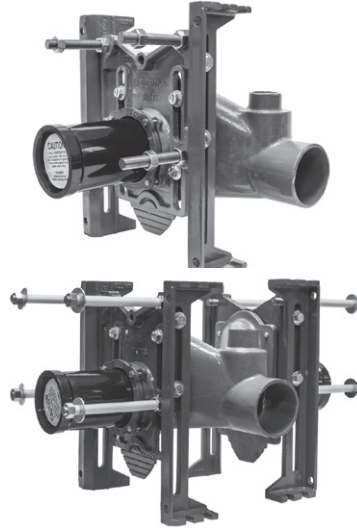
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Industry Standard Water Closet Carriers

ISCA-103 Horizontal 750 lb. Closet Carrier

Model Number	Wt. Lbs.	Description	List Price
ISCA-103-L	77	Single Horizontal - Left Hand	\$3,284.00
ISCA-103-R	77	Single Horizontal - Right Hand	3,284.00
ISCA-103-D	135	Back-to-Back Horizontal	6,327.50
ISCA-103-L-T	77	Single Horizontal - Left Hand, Tapered Thread FP	3,284.00
ISCA-103-R-T	77	Single Horizontal Right Hand, Tapered Thread FP	3,284.00
ISCA-103-D-T	135	Back-to-Back Horizontal, Tapered Thread FP	6,327.50

*FP=Faceplate



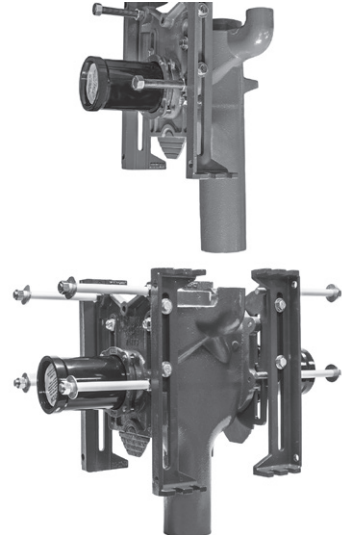
ISCA-103-L/R

ISCA-103-D

ISCA-123 Vertical 750 lb. Bariatric Carrier

Model Number	Wt. Lbs.	Description	List Price
ISCA-123	97	Single Vertical	\$3,713.00
ISCA-123-D	160	Back-to-Back Vertical	7,153.50
ISCA-123-T	97	Single Vertical, Tapered Thread FP	3,713.00
ISCA-123-D-T	160	Back-to-Back Vertical, Tapered Thread FP	7,153.50

*FP=Faceplate



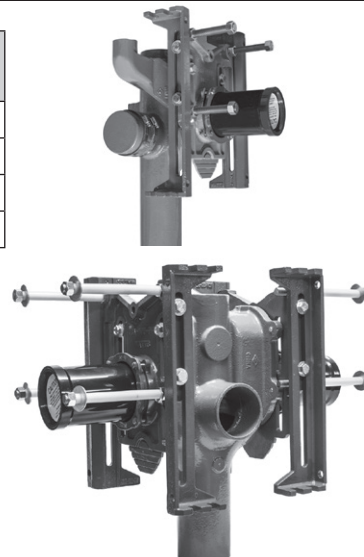
ISCA-123

ISCA-123-D

ISCA-133 Vertical 750 lb. Closet Carrier With Side Inlet(s)

Model Number	Wt. Lbs.	Description	List Price
ISCA-133	97	Single Vertical w/Side Inlet(s)	\$4,017.50
ISCA-133-D	160	Back-to-Back Vertical w/Side Inlet(s)	7,454.00
ISCA-133-T	97	Single Vertical w/Side Inlet(s), Tapered Thread FP	4,017.50
ISCA-133-D-T	160	Back-to-Back Vertical w/Side Inlet(s), Tapered Thread FP	7,454.00

*FP=Faceplate



ISCA-133

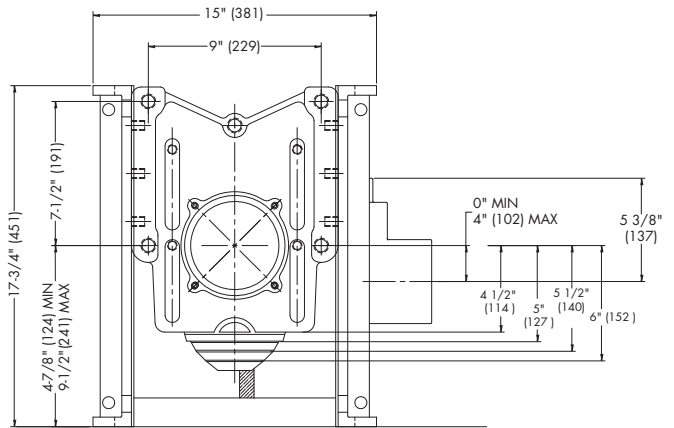
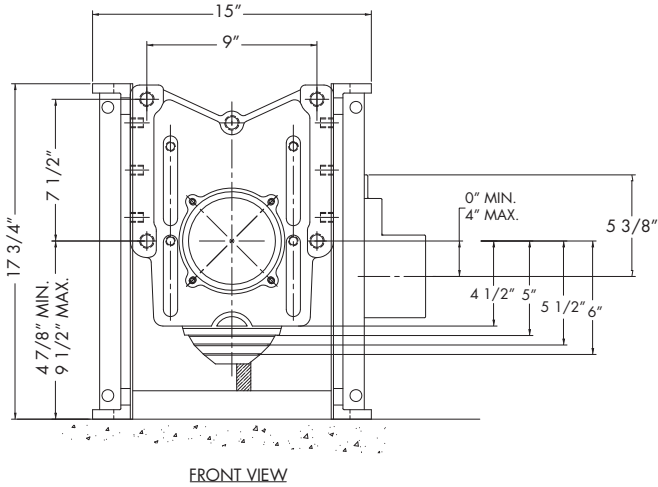
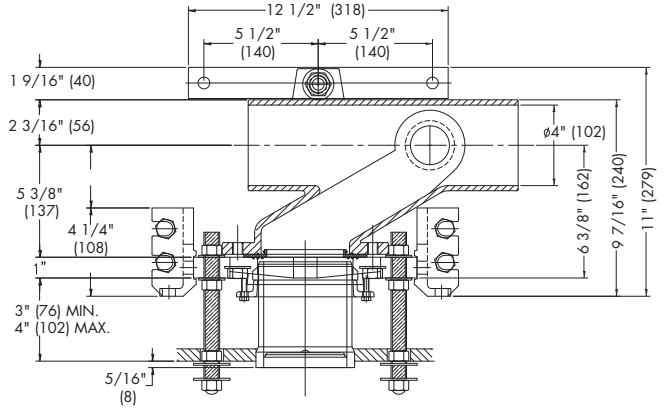
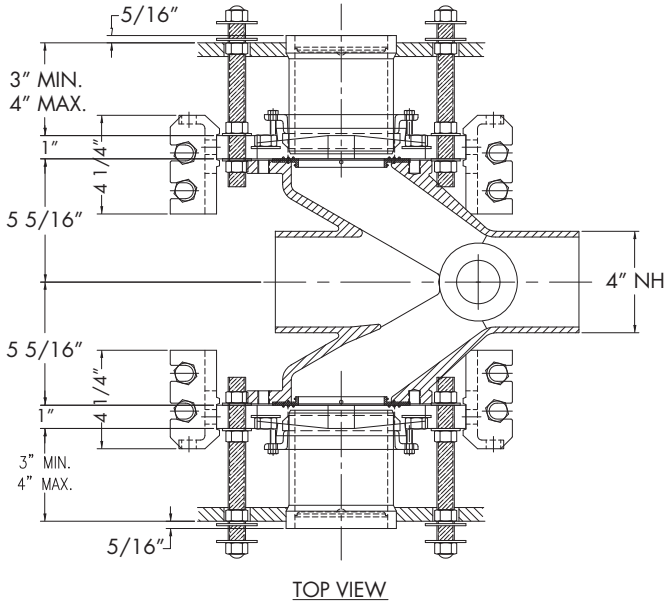
ISCA-133-D

See Pg. 194 for options & parts for all ISCA models.

Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Industry Standard Water Closet Carriers



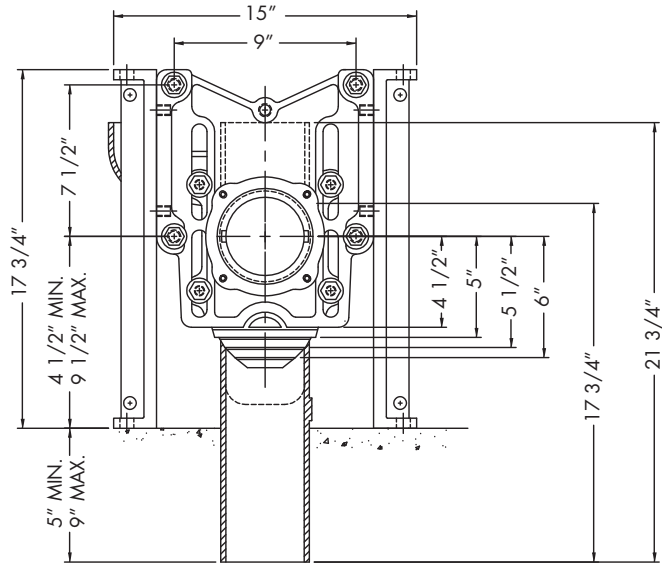
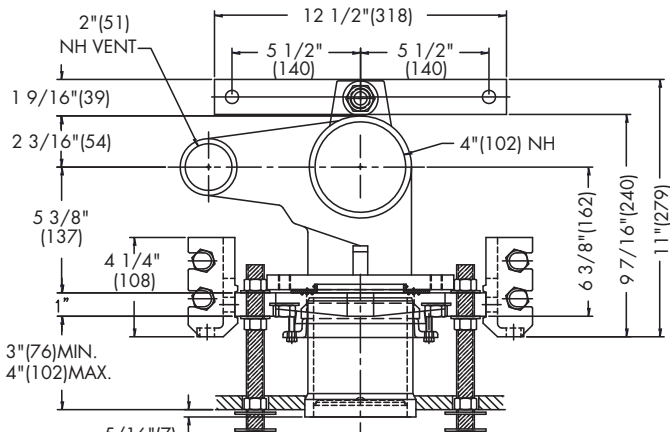
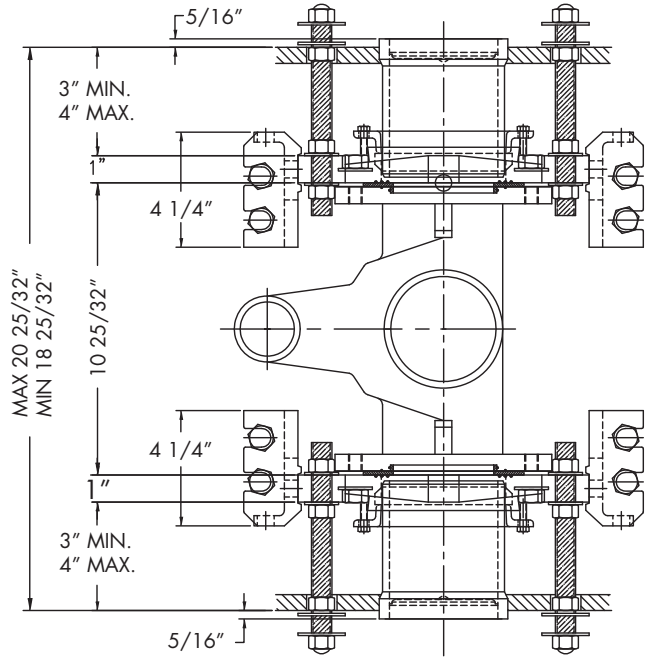
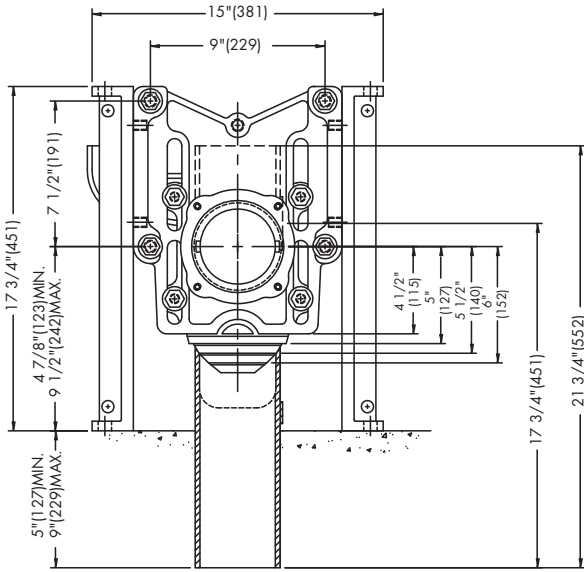
ISCA-103-D

ISCA-103-L/R



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Industry Standard Water Closet Carriers



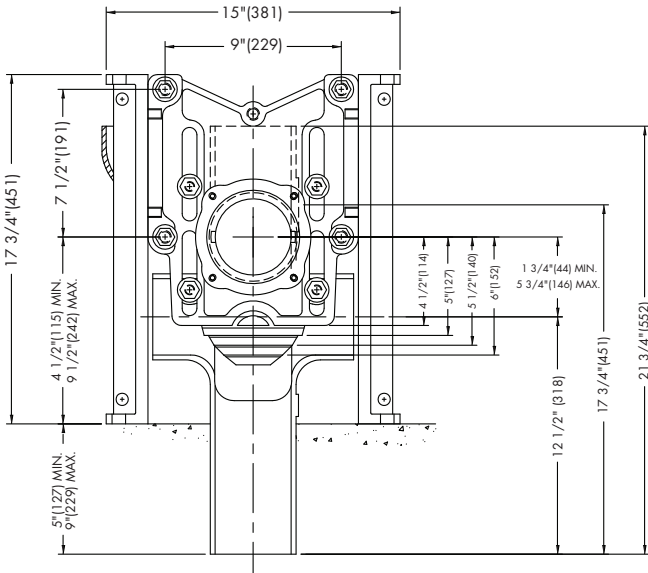
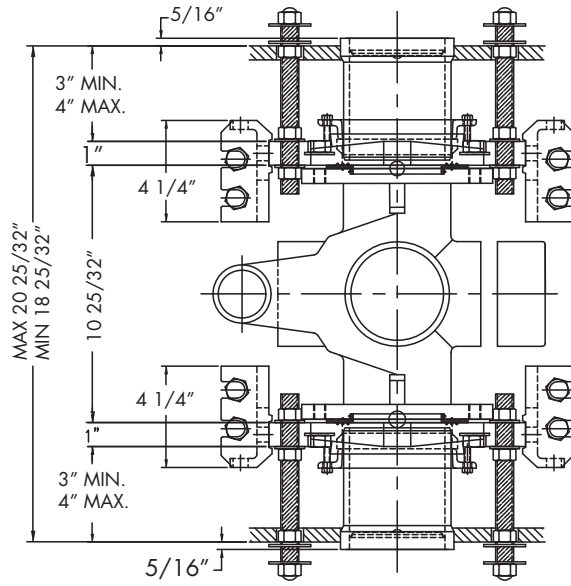
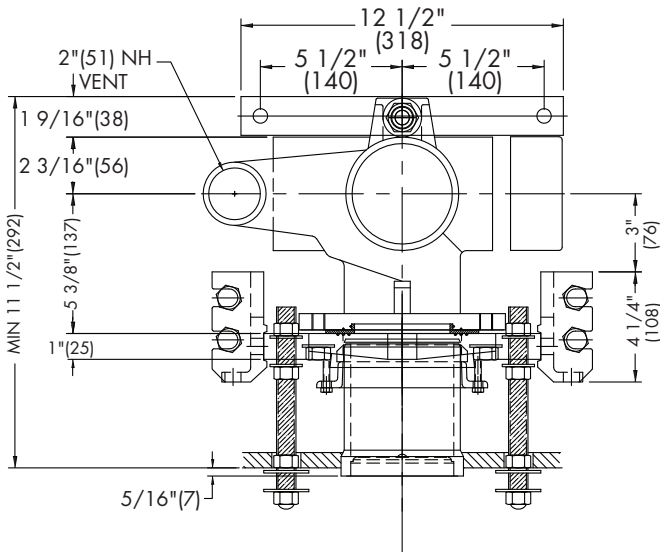
ISCA-123

ISCA-123-D

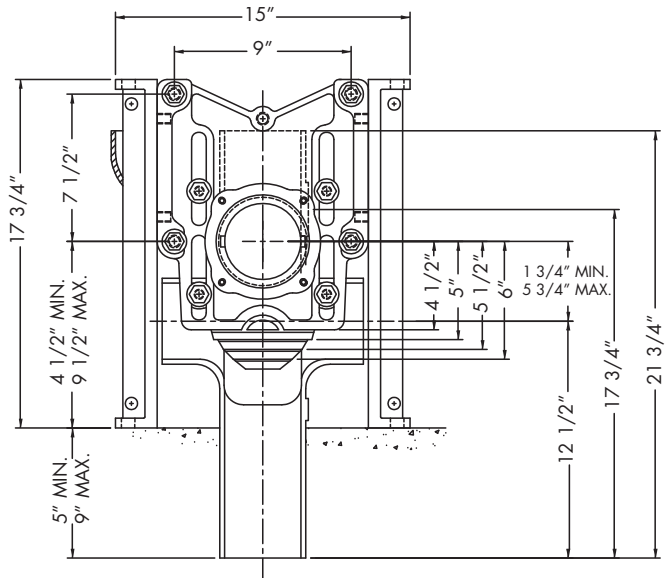
Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.



Industry Standard Water Closet Carriers



ISCA-133-L/R



ISCA-133-D



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Industry Standard Thin Wall Water Closet Carriers

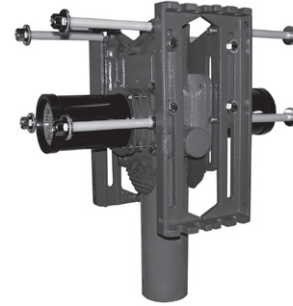
ISCA-141 Thin Wall Closet Carrier

Model Number	Wt. Lbs.	Description	List Price
ISCA-141-3	52	3" Waste, 2" Vent	\$1,428.00
ISCA-141-4-V2	62	4" Waste, 2" Vent	1,428.00
ISCA-141-4-V4	62	4" Waste, 4" Vent	1,428.00
ISCA-141-4-D-V2	94	Back-to-Back, 4" Waste, 2" Vent	2,444.50
ISCA-141-4-D-V4	94	Back-to-Back, 4" Waste, 4" Vent	2,444.50
ISCA-141-3-T	52	3" Waste, 2" Vent, Tapered Thread FP	1,428.00
ISCA-141-4-V2-T	62	4" Waste, 2" Vent, Tapered Thread FP	1,428.00
ISCA-141-4-V4-T	62	4" Waste, 4" Vent, Tapered Thread FP	1,428.00
ISCA-141-4-D-V2-T	94	Back-to-Back, 4" Waste, 2" Vent, Tapered Thread FP	2,444.50
ISCA-141-4-D-V4-T	94	Back-to-Back, 4" Waste, 4" Vent, Tapered Thread FP	2,444.50

*FP=Faceplate



ISCA-141

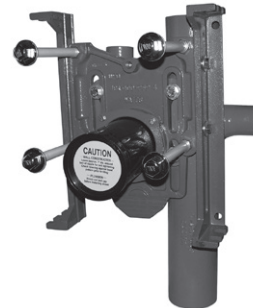


ISCA-141-D

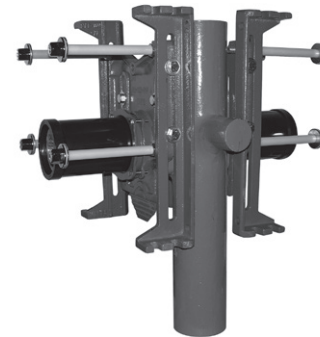
ISCA-151 Thin Wall Offset Closet Carrier

Model Number	Wt. Lbs.	Description	List Price
ISCA-151-L	72	Single - Left Hand	\$1,428.00
ISCA-151-R	72	Single - Right Hand	1,428.00
ISCA-151-D	107	Back to Back	2,444.50
ISCA-151-L-T	72	Single - Left Hand, Tapered Thread FP	1,428.00
ISCA-151-R-T	72	Single - Right Hand, Tapered Threaed FP	1,428.00
ISCA-151-D-T	107	Back-to-Back, Tapered Thread FP	2,444.50

*FP=Faceplate



ISCA-151



ISCA-151-D

ISCA-141, ISCA-151 Options

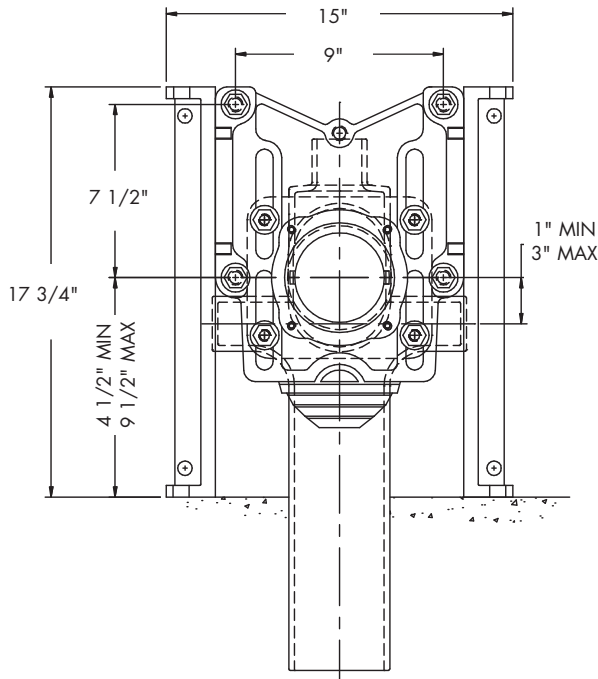
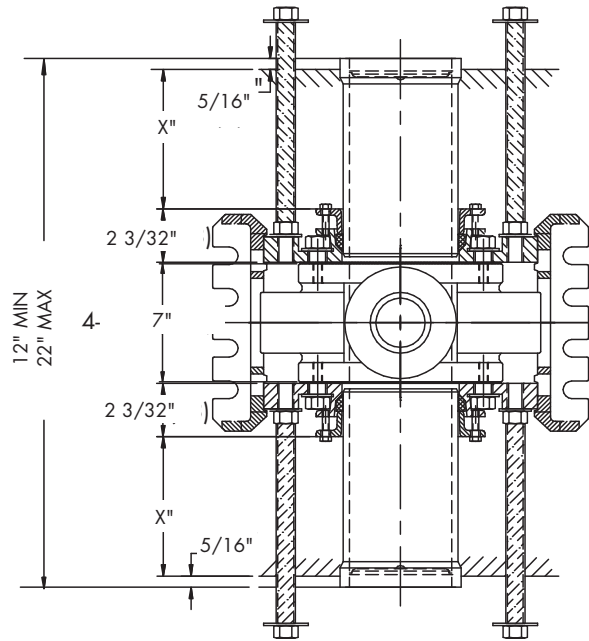
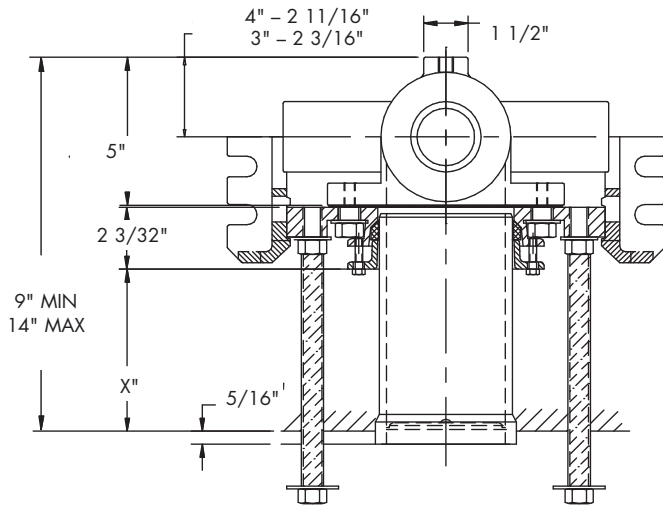
Suffix	Description	List Price
-BF	Assy. For Back Outlet Bowl	No Add
-CI	8" Cast Iron Nipple	No Add
-CW	Carrier Wrench	\$242.00
-M1	24" Nipple Single	242.00
	Double	483.50
-M11	Tiling Frame Single	81.50
	Double	162.50
-M16	Vandal Proof Cap Nuts Single	130.50
	Double	261.00
-M20	Flush Valve Support Single	87.50
	Double	176.00
-M23	RH Side Inlet	364.00
-M24	LH Side Inlet	364.00
-TAS	Faceplate for 4" Rough-In	No Add
-T	Tapered Thread Faceplate	No Add

Consult factory for all applications outside of listed parameters.

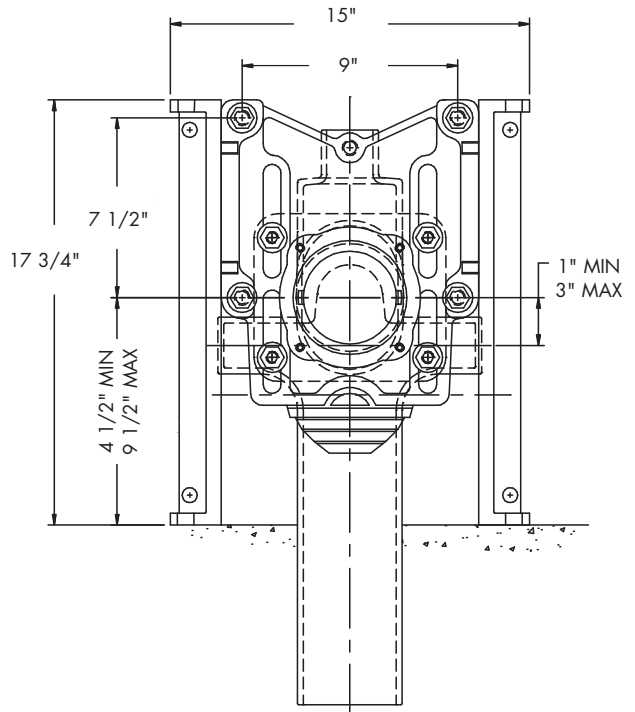
Prices do not include applicable taxes.



Industry Standard Thin Wall Water Closet Carriers



ISCA-141

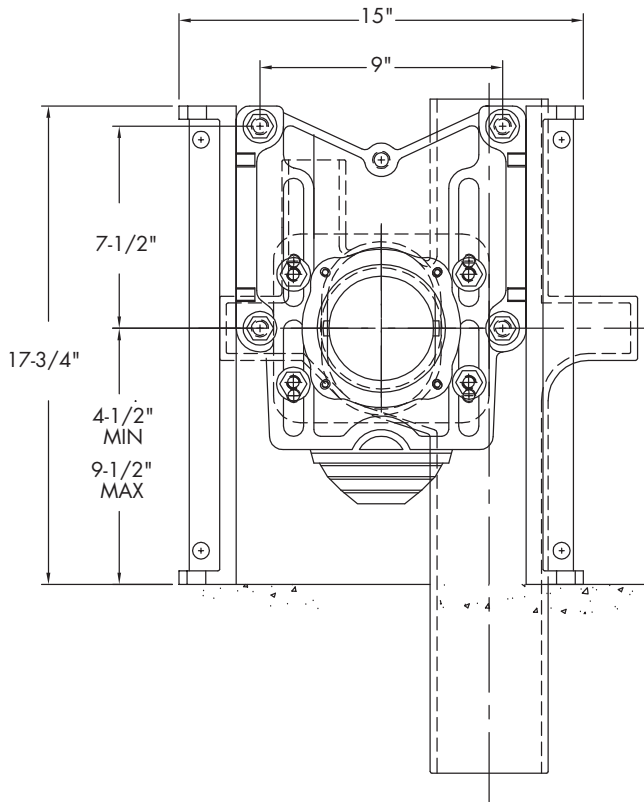
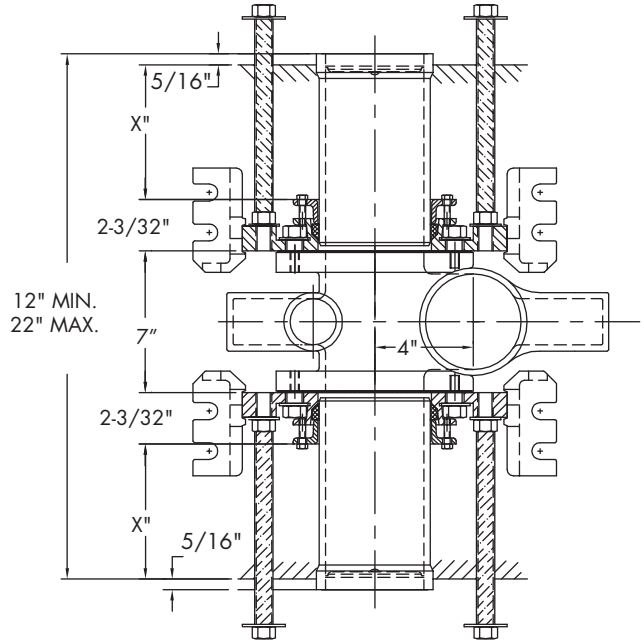
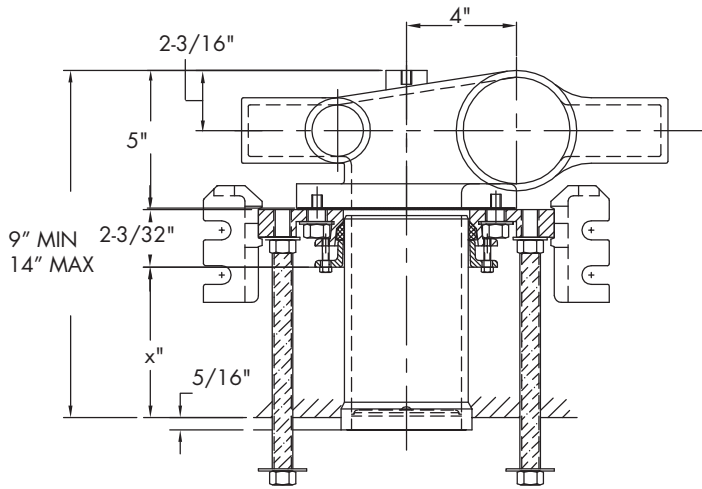


ISCA-141-D

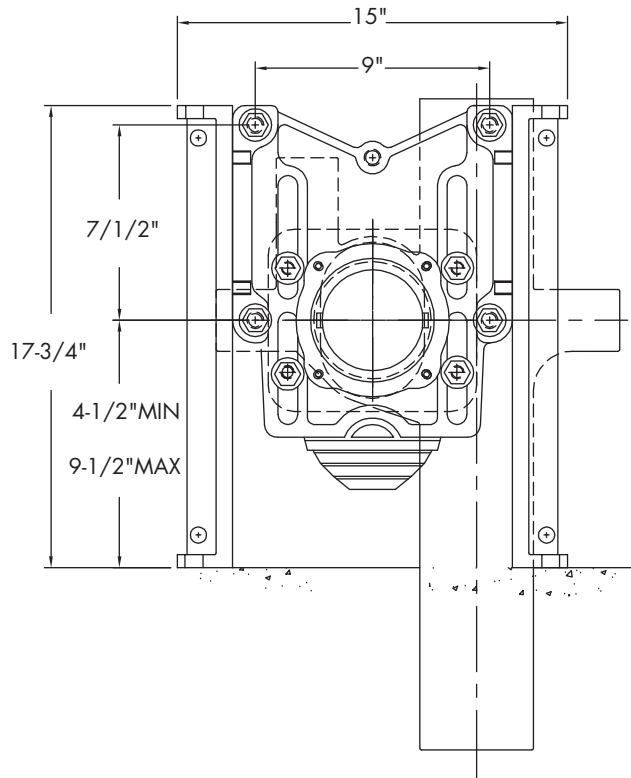


Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Industry Standard Thin Wall Water Closet Carriers



ISCA-151



ISCA-151-D

Fixture Carriers

Wall Hung Fixture Carriers

Wall hung fixture carriers provide structural support for off-the-floor lavatories, urinals, water coolers, and service sinks. Floor mounted carriers are anchored to the structural floor, and work independently of the wall structure. Wall mounted carriers may be suitable in some light commercial or residential applications, provided they are securely fastened to a suitable structural wall.

Lavatory Carriers

Floor mounted lavatory carriers are recommended for installation of all wall hung lavatories. Lavatories attached to a wall with only a fixture mounting bracket will eventually become unstable, causing damage to the wall, and creating a hazardous condition.

Lavatories are most commonly designed for installation with a concealed arm carrier. Concealed arm carriers have supporting arms that extend through cavities in the back of the fixture, and are entirely hidden by the lavatory and the wall. For aesthetic reasons, concealed arm carriers are preferred in commercial construction.

Watts patented TCA-411 "Track" Lavatory Concealed Arm Carriers are specifically designed for block wall construction. In commercial construction, floor mounted lavatory carriers are typically mounted behind a block wall. Standard TCA-411 nipples extend through the wall, and arms adjust horizontally, with the carrier anchored to the floor. These unique features greatly reduce installation time and labor in block wall construction.

Less common plate type or exposed arm carriers may be required for specific lavatories. Plate type carriers bolt directly to the fixture mounting bracket. Exposed arm carriers are designed with L-shaped support brackets, which extend from the carrier, and bolt to the underside of the fixture.

Urinal & Water Cooler Carriers

Urinal and water coolers are floor mounted plate type carriers, recommended for all commercial construction. These carriers bolt directly to the fixture mounting bracket(s), and are entirely concealed by the fixture and the wall.

Service Sink Carriers

Service sink carriers are specified in clinical applications, to support flushing rim, or surgical scrub sinks. Similar in function to water closet carriers, service sink carriers provide structural support, and facilitate a connection to the waste line.

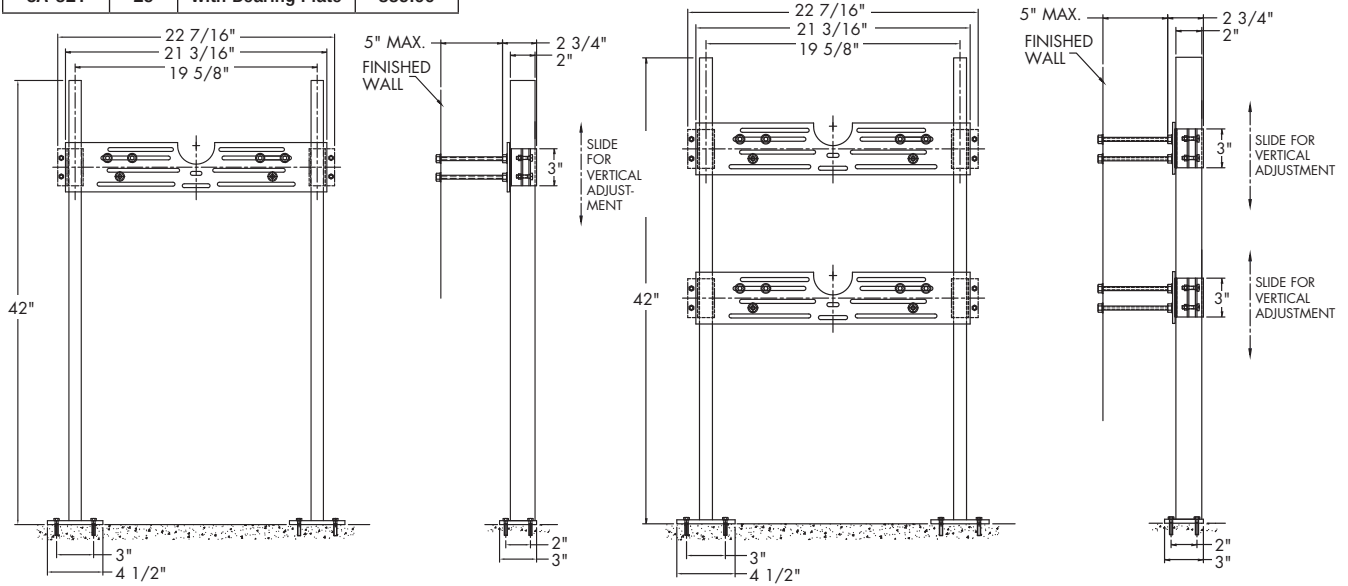


Lavatory/Urinal Carriers

CA-311, 321

Urinal Carriers

Model Number	Wt. Lbs.	Description	List Price
CA-311	26	Single Plate	\$752.00
CA-321	26	with Bearing Plate	839.00



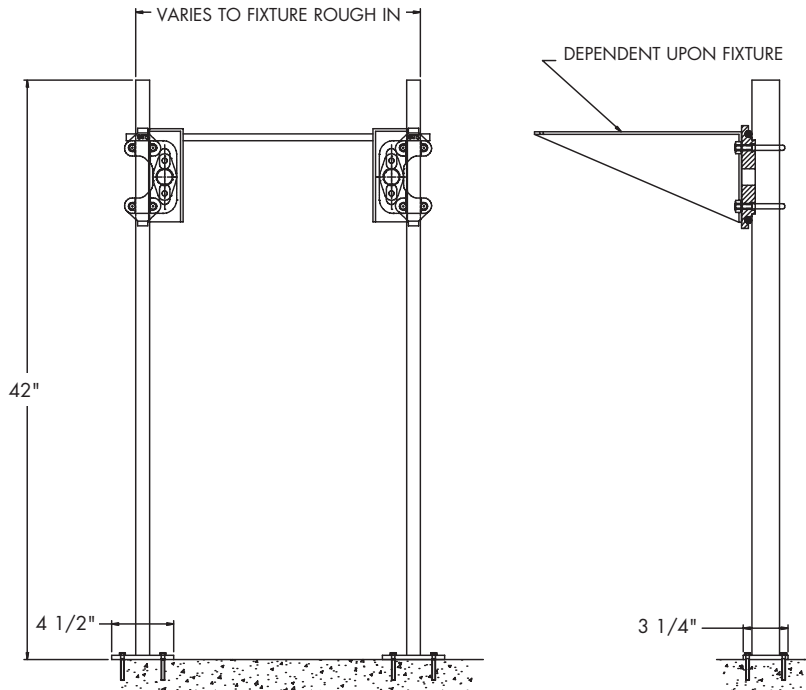
CA-311

CA-321

CA-401

Floor Mounted Lavatory Carrier with Exposed Arms

Model Number	Description	List Price
CA-401	Single, Exposed Arms	\$1,410.50



Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

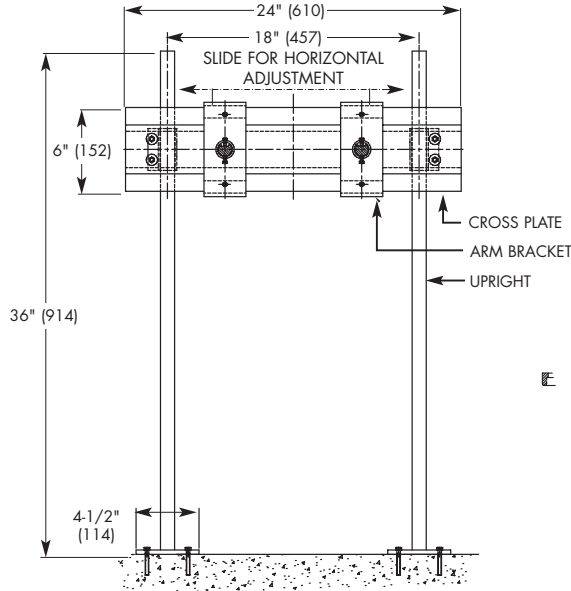


Lavatory Carriers

TCA-411

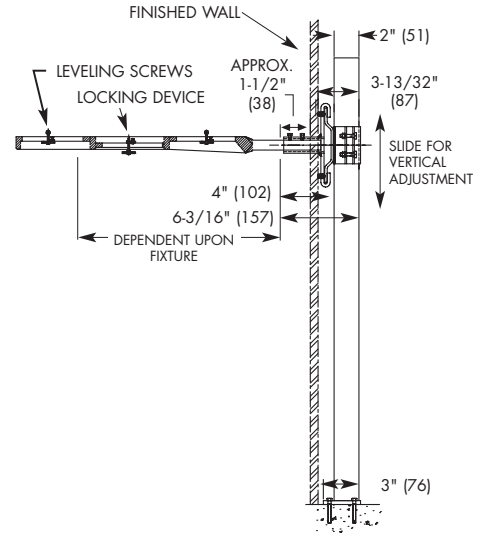
Floor Mounted "Track" Lavatory Carrier w/Concealed Arms

Model Number	Wt., Lbs.	Description	List Price
TCA-411	35	Single, Concealed Arms	\$989.50
TCA-411-D	60	Back to Back, Concealed Arms	1,410.50
TCA-411-WC	37	Single, Concealed Arms, 27 x 20 Lavatory	1,057.00
TCA-411-D-WC	64	Double, Concealed Arms, 27x20 Lavatory	1,542.50



Options for TCA-411

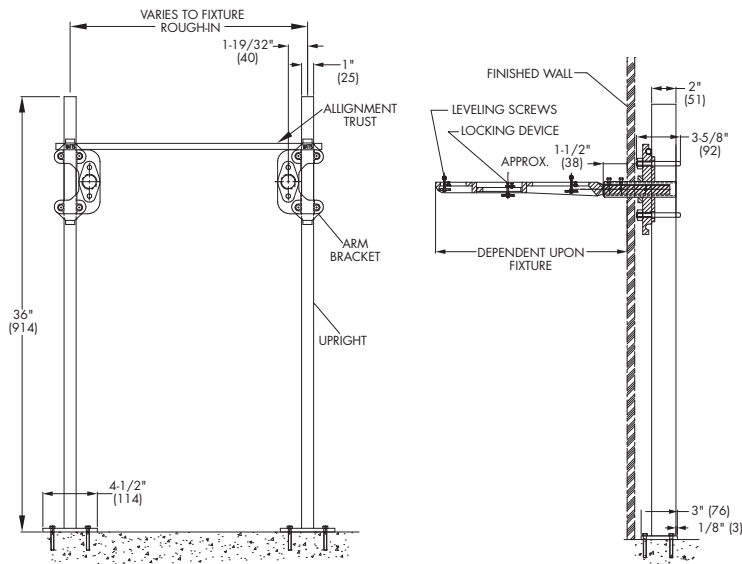
Suffix	Description	List Price
-CI	Arms for Cast Iron Lavatory	No Add
-M54	2" Chrome Plated Escutcheons, Single	\$164.50
	2" Chrome Plated Escutcheons, Double	329.00
-M55	4" Chrome Plated Escutcheons, Single	299.00
	4" Chrome Plated Escutcheons, Double	598.50
-M60	Valve Support Plate, Single	150.00
	Valve Support Plate Double	298.00



WCA-411

Floor Mounted Lavatory Carrier with Concealed Arms

Model Number	Wt., Lbs.	Description	List Price
WCA-411	35	Single, Concealed Arms	\$989.00
WCA-411-D	60	Back to Back, Concealed Arms	1,410.50
WCA-411-WC	37	Single, Concealed Arms, 27 x 20 Lavatory	1,057.00
WCA-411-D-WC	64	Double, Concealed Arms, 27x20 Lavatory	1,542.50



Options for WCA-411

Suffix	Description	List Price
-CI	Arms for Cast Iron Lavatory	No Add
-M54	2" Chrome Plated Escutcheons, Single	\$164.50
	2" Chrome Plated Escutcheons, Double	329.00
-M55	4" Chrome Plated Escutcheons, Single	299.00
	4" Chrome Plated Escutcheons, Double	598.50
-M60	Valve Support Plate, Single	150.00
	Valve Support Plate Double	298.00

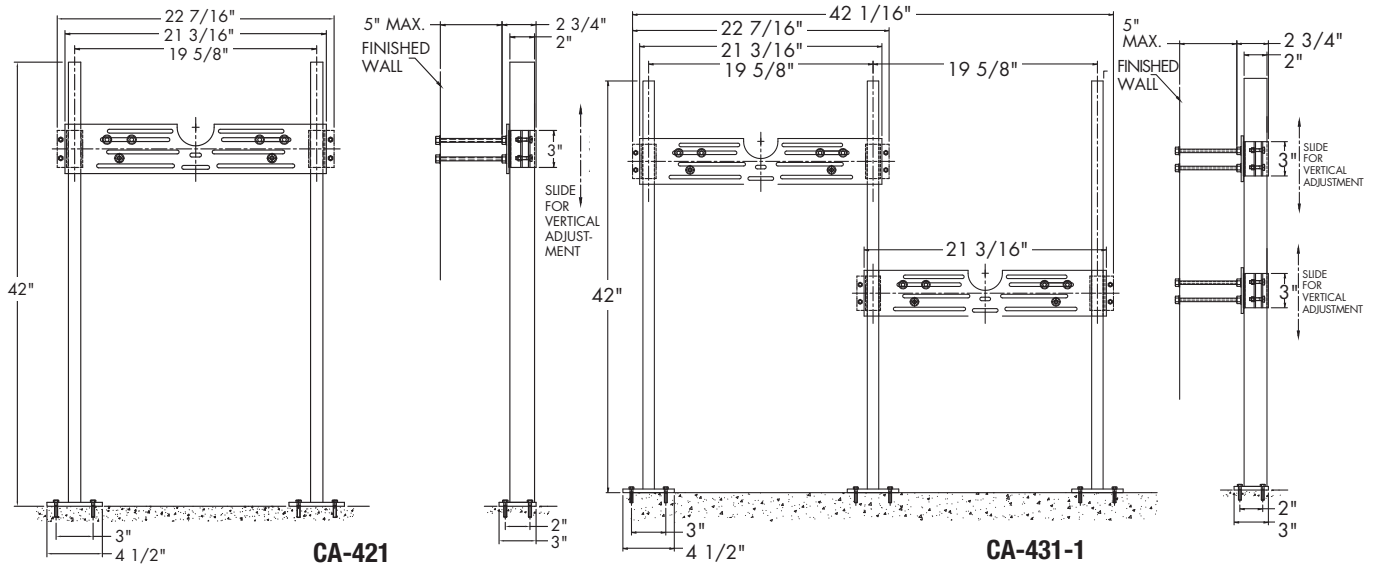


Consult factory for all applications outside of listed parameters.
Prices do not include applicable taxes.

Lavatory/Water Cooler Carriers

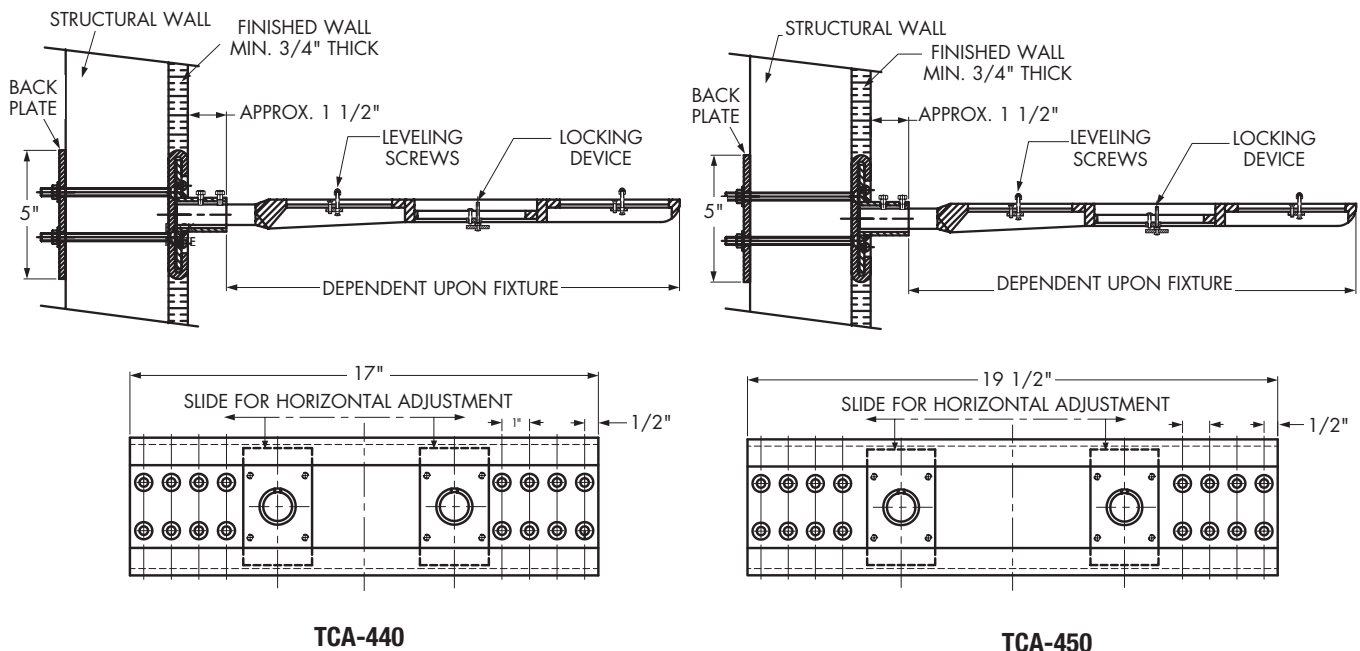
CA-421 Floor Mounted Plate Type Lavatory/
CA-431-1 Water Cooler Carrier

Model Number	Wt., Lbs.	Description	List Price
CA-421	28	Plate Type for Lavatory/Water Cooler	\$752.00
CA-431-1	50	Plate Type for Hi-Low Water Cooler	1,214.50



TCA-440 Wall Mounted "Track" Lavatory Carrier
TCA-450 with Concealed Arms

Model Number	Wt., Lbs.	Description	List Price
TCA-440	28	Concealed Arms, Standard Lavatory	\$728.00
TCA-450	30	Concealed Arms, 27x20 Lavatory	766.00



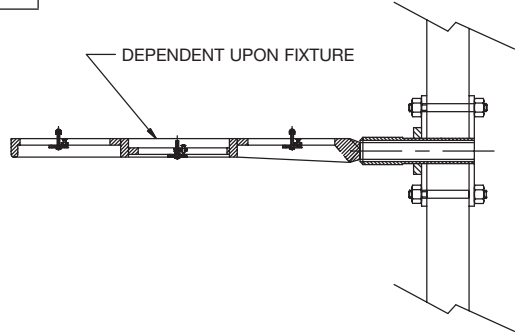
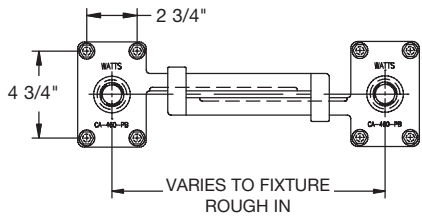
Consult factory for all applications outside of listed parameters.
 Prices do not include applicable taxes.



Lavatory/Service Sink Carriers

CA-461 CA-462 Wall Mounted Concealed Arm Lavatory Carriers

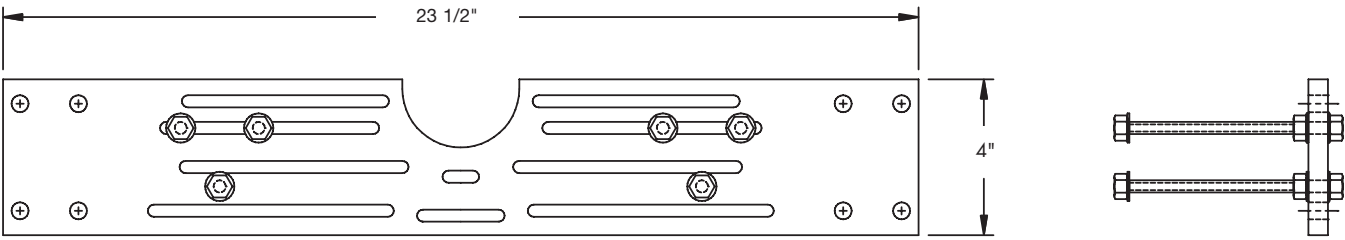
Model Number	Wt., Lbs.	Description	List Price
CA-461	30	Concealed Arms with Back Plate	\$748.00
CA-462	24	Concealed Arms	623.00



Note: See CA-411 Options page 208.

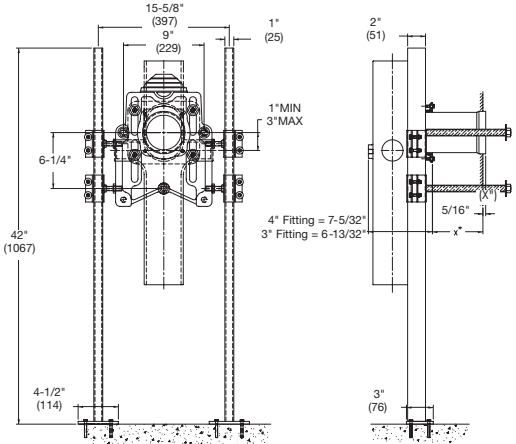
CA-481 Wall Plate

Model Number	Description	List Price
CA-481	Wall Plate with Studs	\$208.00

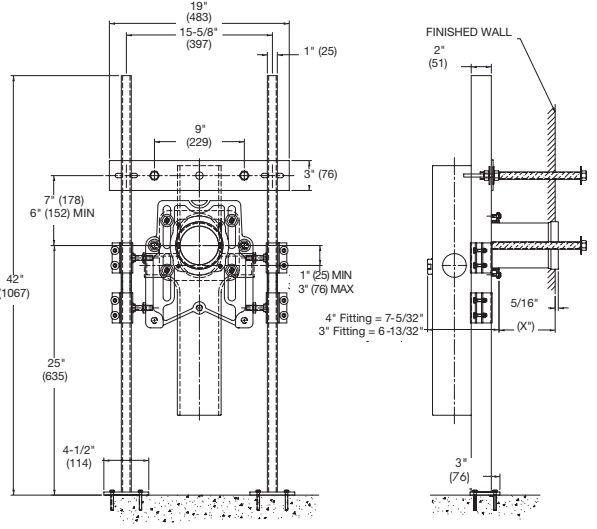


ISCA-550, ISCA-560 Service Sink Carriers

Model Number	Wt., Lbs.	Description	List Price
ISCA-550-3	60	3" Waste, 2" Vent	\$1,430.00
ISCA-550-4-V2	60	4" Waste, 2" Vent	1,430.00
ISCA-550-4-V4	60	4" Waste, 4" Vent	1,430.00
ISCA-560-3	60	3" Waste, 2" Vent	1,430.00
ISCA-560-4-V2	60	4" Waste, 2" Vent	1,430.00
ISCA-560-4-V4	60	4" Waste, 4" Vent	1,430.00



ISCA-550



ISCA-560

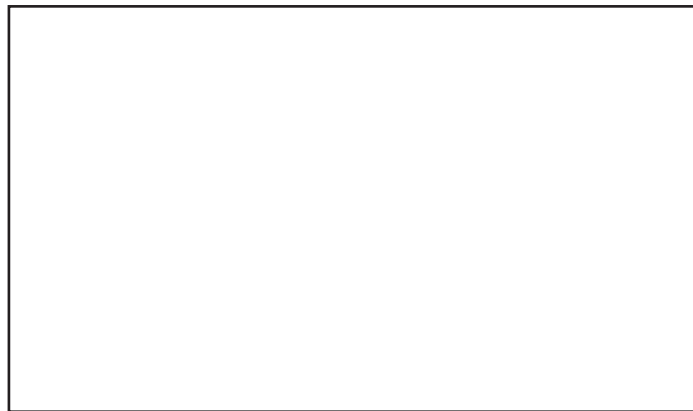
Notes

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