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- Floor Drain Selection Factors
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PICTORIAL INDEX



FD-100-A
Round Strainer



FD-100-EF
Round Funnel



FD-100-FT6
Recessed Tile Flange



FD-100-RS
Rectangular Strainer



FD-100-AS
Angle Strainer



FD-100-EG
Oval Funnel



FD-100-K
Dome Strainer



FD-100-SO
Side Outlet



FD-100-B
HD Round Strainer



FD-100-ER
Extended Rim Strainer



FD-100-L
HD Square Strainer



FD-100-VD
Solid Hinged Cover



FD-100-DD
Hub Funnel



FD-100-FC
Surface Membrane Clamp



FD-100-M
Square Strainer



FD-100-VS
Square Hinged Solid Cover

PICTORIAL INDEX



FD-100-WD
Domed Standpipe



FD-200-DD
Hub Funnel



FD-200-FC
Surface Membrane Clamp



FD-200-M
Square Strainer



FD-200-A
Round Strainer



FD-200-EF
Round Funnel



FD-200-FT6
Recessed Tile Flange



FD-200-RS
Rectangular Strainer



FD-200-AS
Angle Strainer



FD-200-EG
Oval Funnel



FD-200-K
Dome Strainer



FD-200-VD
Solid Hinged Cover



FD-200-B
HD Round Strainer



FD-200-ER
Extended Rim Strainer



FD-200-L
HD Square Strainer



FD-200-VS
Square Hinged Solid Cover

PICTORIAL INDEX



FD-200-WD
Domed Standpipe



FD-310
6-1/2" Fixed Top



FD-320-Y-SET
8" Fixed Top



FD-340-SET
12" Adj. Top



FD-230-A
Combination



FD-320
8" Adj. Top



FD-330
8x8" Adj. Top



FD-340-Y
12" Fixed Top



FD-240
Prison Cell



FD-320-SET
8" Adj. Top



FD-330-Y
8x8" Fixed Top



FD-340-Y-SET
12" Fixed Top



FD-300
6-1/2" Adj. Top



FD-320-Y
8" Fixed Top



FD-340
12" Adj. Top



FD-360
15" Adj. Top

PICTORIAL INDEX



FD-360-Y
Area Drain with 15" Round
Fixed Top



FD-410
Catch Basin



FD-460
12x12" Adj. Top



FD-490-F-80
Parking Structure (Aluminum)



FD-380
Adjustable Wood Floor Drain



FD-430
Side Outlet



FD-460-F
12x12" Fixed Top



FD-520
Side Outlet Parking Area



FD-390-E
General Purpose



FD-450
15x15" Adj. Top



FD-470-F-1
Area Drain with Shallow
Body Promenade Drain



FD-530
Offset Parking Area



FD-390-E-63
Wooden Floors



FD-450-F
15x15" Square Fixed Top



FD-490-F-4
Parking Structure



FD-540
Parking Area

PICTORIAL INDEX



FD-600
Unfinished Isolation



FD-810
Iowa Garage Drain



FD-870
12" Planting Area



FD-920
Parking Deck Drain for
Precast Slabs



FD-620
Finished Isolation



FD-820
Flushing Rim



FD-900
12" Precast Parking Area



FD-1100-A
Round SS Strainer



FD-660
PVC Area Drain



FD-830
Hopper Drain



FD-910
15" Precast Parking Area



FD-1100-B
HD Round SS Strainer



FD-670
PVC Area Drain



FD-860
8" Planting Area



FD-920
Parking Deck Drain
for Precast Slabs



FD-1100-L
HD Square SS Strainer

PICTORIAL INDEX



FD-1100-M
Square SS Strainer



FD-1200-L
HD Square SS Strainer



FD-1160
Chemical Resistant



FD-1200-M
Square SS Strainer



FD-1200-A
Round SS Strainer



FD-1200-B
HD Round SS Strainer



PRODUCT RECOMMENDATIONS

Application	Product
Basement Areas	FD-300, FD-310-Y, FD-320(-Y), FD-320(-Y)-SET
Carwash & Sediment Collection Areas	FD-410
Clinical & Surgical Areas	FD-820
Condensate & Drip Lines (Indirect Waste).....	FD-100-DD, FD-200-DD, FD-100-EF, FD-100-EG, FD-200-EF, FD-200-EG
Elastomeric & Rubberized Floors	FD-100-FC, FD-100-FT6
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 Trench Drains
Industrial & Warehouse Areas	FD-320(-Y), FD-330(-Y), FD-340(-Y), FD-460(-F)
Interior Finished Areas	FD-100 Series, FD-200 Series
Maintenance & Boiler Rooms.....	FD-320(-Y), FD-340(-Y), FD-360(-Y)
Outdoor Parking Areas.....	FD-520, FD-530, FD-540, see also Trench Drains
Outdoor Walkways	FD-340-1, FD-360-1, FD-450-1, FD-460-1
Planting Areas	FD-860, FD-870, FD-880
Poured Parking Decks	FD-490-F-4, FD-490-F-80
Precast Parking Decks.....	FD-900, FD-910, FD-920
Prison Cells	FD-240
Sanitary Manufacturing Areas	FD-1100 Series, FD-1200 Series
Shower Areas.....	FD-100 Series, FD-1100 Series
Stairwells	FD-100 Series, FD-200 Series
Wood Floors	FD-380, FD-390

FLOOR DRAIN SELECTION FACTORS

Load Rating

Load ratings are based upon maximum anticipated traffic, in accordance with American National Standards ASME 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 Between 7500 and 10,000 lbs.

Special Duty (SD) - 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 most 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 Areas

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

Material & Characteristics

Bodies - Industrial grade cast iron, finished with Watts standard gray acid resistant epoxy coating. Most Watts floor and area drains can be specified with PVC (-60) or ABS (-61) bodies, for direct solvent weld connection.

Unfinished Areas - Watts standard epoxy coated ductile iron grates provide superior chemical and shock resistance compared to competitive enameled cast iron grates.

Finished Areas - Nickel bronze (-1) has a silvery appearance which compliments most interior finishes. Watts nickel bronze alloy is homogenous, highly resistant to wear, and will not be discolored by weather or traffic.

Adjustable Tops - Commonly specified, provide vertical adjustment of strainer head or top assembly to the level of the finished floor.

Fixed Tops - Generally suitable for unfinished areas, or where floor is pitched to drain.

Membrane Clamps - Most Watts floor and area drains have built-in clamping collars, used to attach and secure waterproofing membranes or liners, generally in above grade applications.

Weep Holes / Double Drainage - Standard on all floor and area drains, weep holes direct water seeping around the drain top back into the sump. The 'Double Drainage' feature protects against deterioration of the area immediately surrounding the drain.

Grate Openings - Floor and area drains supplied standard with 5/16" maximum openings. Grates are ADA compliant, and meet standard specifications for "heel proof". Consult product specifications for parking area applications.

FLOOR DRAIN SELECTION FACTORS**Pipe Connection**

No Hub (Standard) - Butt connection using no hub or neoprene coupling, suitable for cast iron, plastic, and most other piping applications.

Push-On (P) - Gasket connection ASTM C-564, with pipe stop. Suitable for no hub or service weight cast iron, Sch. 40 plastic, and steel pipe. Recommended for below grade only.

Threaded (T) - Female IPS thread in drain outlet.

Inside Caulk (X) - Caulk ring on drain outlet, pipe is inserted, and joint sealed with lead & oakum.

PVC Socket (-60) - Sch. 40 PVC solvent weld female socket.

ABS Socket (-61) - Sch. 40 ABS solvent weld female socket.

Side Outlet (-SO) - No Hub (see above) side outlet.

Commonly Specified Options

Sediment Bucket (-5) - Catches debris, and prevents it from collecting in or blocking the drain trap.

Vandal Proof (-6) - Allen head screws regularly furnished, torx & pin may be specified for high security applications.

Trap Primer Tapping (-7) - 1/2" tapping on drain body, connects to trap primer valve (see Watts #A-200).

Backwater Valve (-8) - For 2,3,4" drains only, neoprene float seal prevents back-up damage to finished areas. Serviceable through top of drain. Not for pressure applications.

Hinged Grate (-9) - Available with select square tops, provides convenient access to drain buckets, or lines requiring regular maintenance.

Galvanized (-13) - Cold zinc galvanizing, commonly specified in highly corrosive environments, such as coastal or industrial areas. Watts standard acid resistant epoxy coating eliminates the need for galvanizing in many applications.

Strainer Extension (-15) - For FD-100 & FD-200 Series floor drains, extends strainer to accommodate thick fills or special applications.

Secondary Strainer (-21) - Fits in base of drain sump, secondary protection against debris that bypasses sediment bucket.

Closure Plug (-34) - Seals drain line, generally specified in areas where spillage of substances unsuitable for drainage may occur.

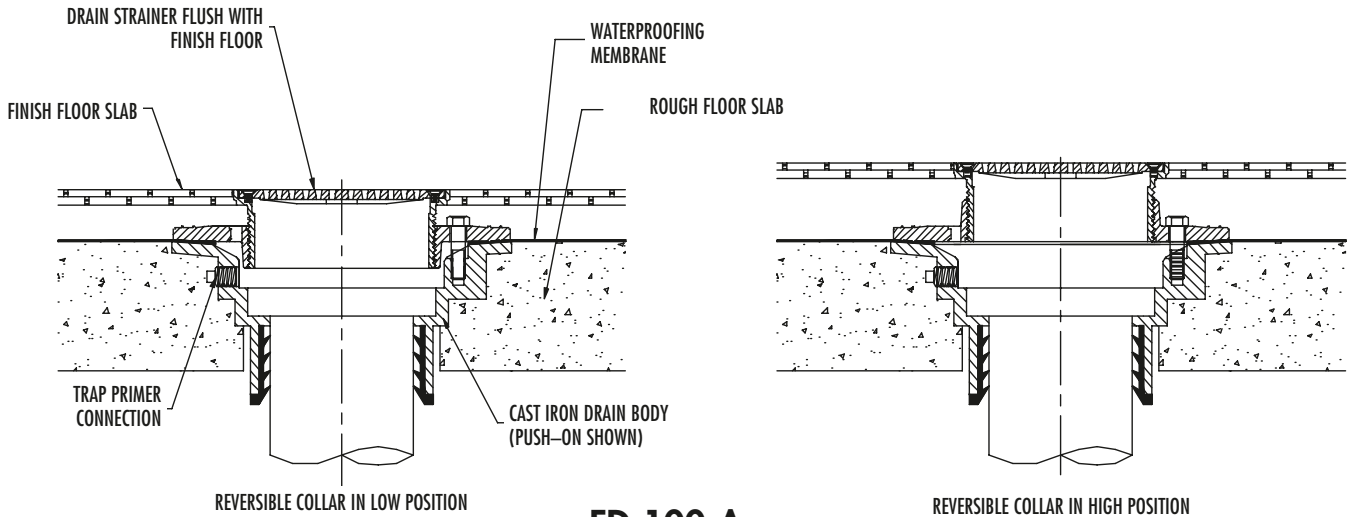
Membrane Clamp (-C) - Specified in floors with a waterproofing membrane. Membrane clamps or clamping mechanisms are built in to most Watts floor drains.

Round Funnel - 4" round cast iron (-F4-50) or nickel bronze (-F4-1) accepts single condensate lines. Specify 6" round nickel bronze (-F6-1) for large condensate lines. Bolt attaches funnel through underside of grate.

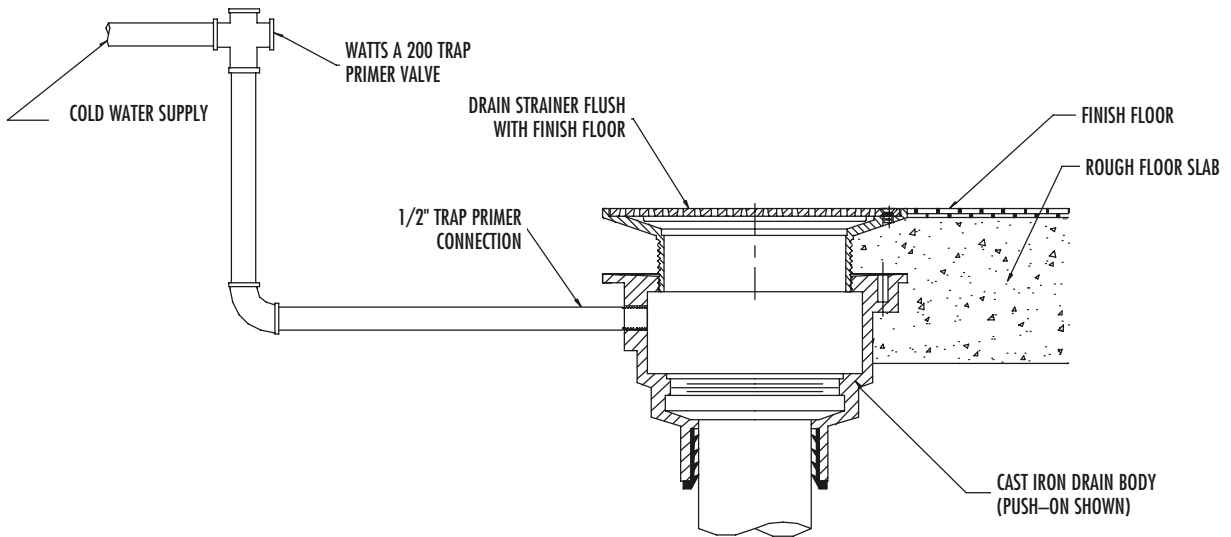
Oval Funnel - 4x9" oval cast iron (-G-50) or nickel bronze (-G-1) accepts multiple condensate lines. Bolt attaches funnel through underside of grate.

Elastomeric Flange (-Z) - Generally specified with poured or troweled elastomeric or rubberized floors. See FD-100-FC or FD-200-FC for elastomeric or rubberized sheet flooring.

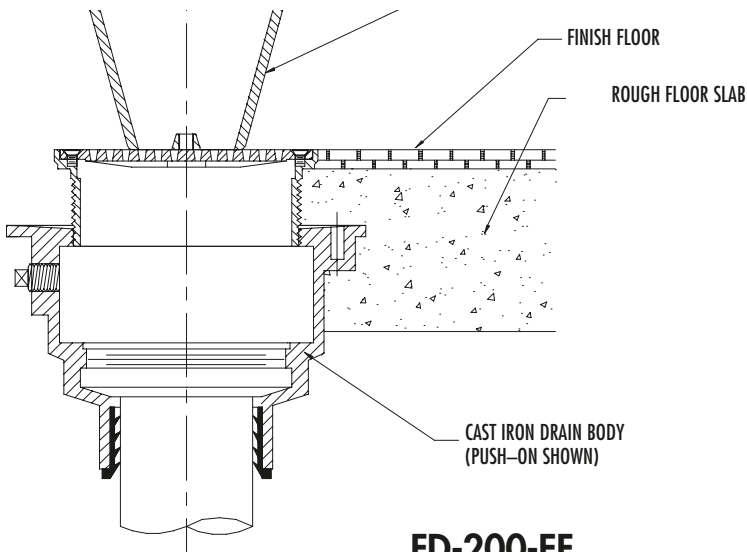
TYPICAL INSTALLATIONS



FD-100-A



FD-200-A-7



FD-200-EF

TYPICAL INSTALLATIONS

