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PICTORIAL INDEX



RD-100
Large Area



RD-100-SO
Side Outlet



RD-200-R
External Overflow



RD-240
Bottom Outlet Balcony



RD-100-CP
12" Promenade Top



RD-100-W
Internal Overflow



RD-200-SO
Side Outlet



RD-250
Overflow Combination



RD-100-F
Reversible Extension
Flange



RD-200
Small Area



RD-200-W
Internal Overflow



RD-260
Overflow Combination



RD-100-R
External Overflow



RD-200-CP
Promenade Top



RD-230
Side Outlet Balcony



RD-270
Scupper w/ Angle Grate

PICTORIAL INDEX



RD-280
General Purpose



RD-300-CP15
15"x15" Promenade Top



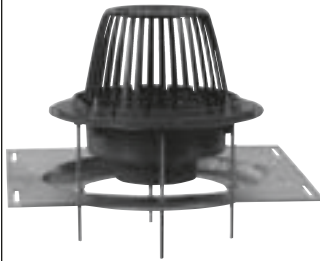
RD-400
Deck Receptor



RD-900
Expansion Coupling



RD-280-50
Side Outlet



RD-300-F
Reversible Extension Flange



RD-410
Deck Receptor



RD-940
Downspout Nozzle



RD-290
Scupper w/Flat Grate



RD-300-R
External Overflow



RD-500
Super Max 12" Roof Drain



RD-950
Downspout Cover



RD-300
High Volume



RD-300-W
Internal Overflow



RD-680-VC
Vent Cap



RD-970/RD-980
Downspout Boots

ROOF DRAINS

PRODUCT RECOMMENDATIONS

Application	Product
Balcony or Canopy	RD-230, RD-240
Deck Receptor	RD-400, RD-410
Downspout Nozzle / Cover	RD-940, RD-950
Downspout Boot	RD-970, RD-980
Primary Roof Area	RD-300, RD-300-F
Primary Roof Overflow	RD-300-R, RD-300-W
Promenade or Patio	RD-100-CP, RD-200-CP, RD-300-CP15
Scupper or Parapet	RD-270, RD-290
Secondary Roof Area	RD-100, RD-100-F, RD-200, RD-200-F
Secondary Roof Overflow	RD-100-R, RD-100-W, RD-200-R, RD-200-W

ROOF DRAIN SELECTION FACTORS

Sizing

1. Calculate roof area (sq. ft.) to be drained.
2. Determine average hourly rainfall rate at roof location (Chart A).
3. Approximate 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 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

ROOF DRAIN SELECTION FACTORS cont.

Rainfall Rate (inches/hour)	Vertical Leader Sizing in Inches					
	2	3	4	5	6	8
	Roof Area In Square Footage					
1	2,880	8,800	18,400	34,600	54,000	116,000
2	1,440	4,400	9,200	17,300	27,000	58,000
3	960	2,930	6,130	11,530	17,995	38,660
4	720	2,200	4,600	8,650	13,500	29,000
5	575	1,760	3,680	6,920	10,800	23,200
6	480	1,470	3,070	5,765	9,000	19,315
7	410	1,260	2,630	4,945	7,715	16,570
8	360	1,100	2,300	4,325	6,750	14,500

Maximum tributary areas which can be drained by Roof Drains, Vertical Rainwater Leaders, or Storm-Water Conductors for Various Rainfall Rates. Source: ASPE Practical Plumbing Engineering (c) 1998

Chart B

Placement

For most efficient drainage, roof drains, to the extent possible, should be equally spaced. A roof drain must also be located in any potential water collection area.

Material & Characteristics

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

Combination Flashing Clamp/Gravel Guard - Standard acid resistant coated cast iron. Watts securing stud design helps spot flashing clamp bolt holes, which might otherwise be covered or filled during membrane application.

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

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 use 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.

ROOF DRAIN SELECTION FACTORS cont.**Commonly Specified Options**

Galvanized Body & Flashing Clamp (-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.

Accutrol Flow Restrictor (-A) - Regulates flow during heavy rains, reducing load on storm sewer system. Available 1 to 3 weirs, max. flow 30GPM per weir. Specification detail upon request.

Sump Receiver (-B) - Drops roof drain flange flush with top of roof deck, eliminating strain on roofing membrane, and potential puddling around drain.

Underdeck Clamp (-D) - Securely fastens drain to roof deck.

Adjustable Extension (-E) - Raises roof drain from main deck, drain body and membrane clamp adjust level with top of insulation.

Reversible Extension Flange (-F) - Heavy gauge zinc plated steel, creates stable surface over deck opening for quick installation and adjustment of drain body to height of insulation. Replaces specification for cumbersome sump receiver/extension combination.

Stainless Steel Ballast Guard (-GSS) - 8" high perforated stainless steel, specified for high ballast, or in IRMA installations.

Ductile Iron Dome (-K) - Epoxy coated, durable and impact resistant.

Galvanized Ductile Iron Dome (-K13) - 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.

Ductile Iron Low Dome (-K) - Low profile, epoxy coated, durable and impact resistant.

Aluminum Dome (-K80) - Epoxy coated, corrosion resistant.

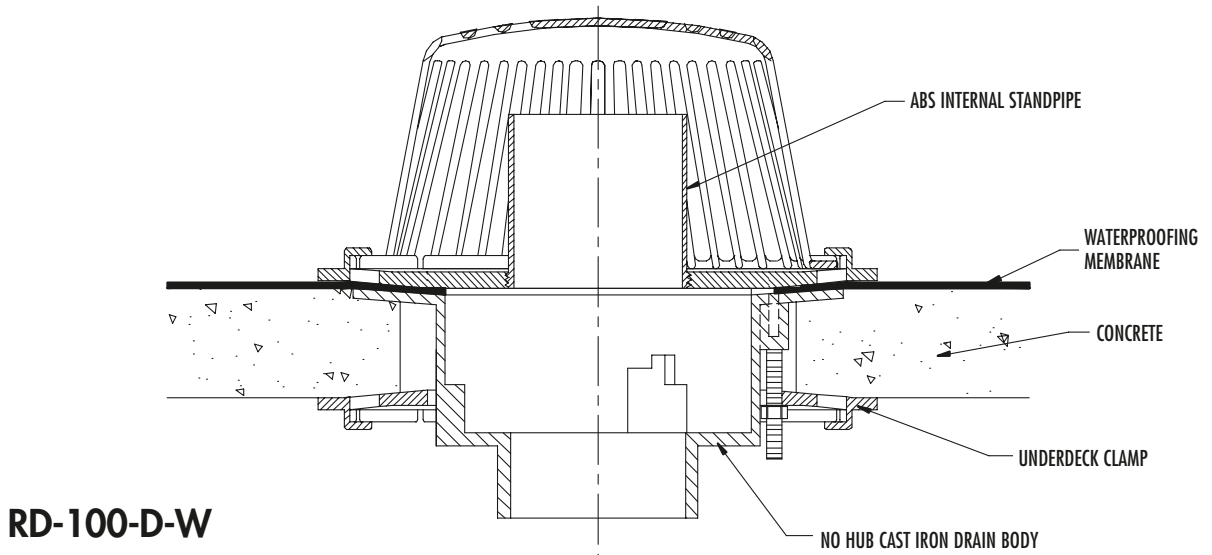
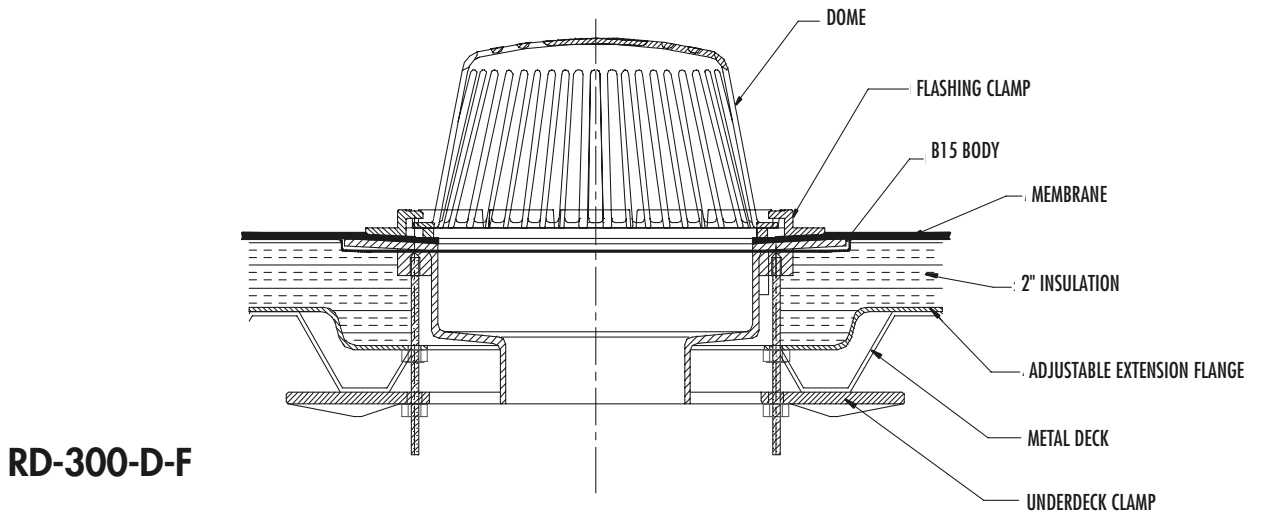
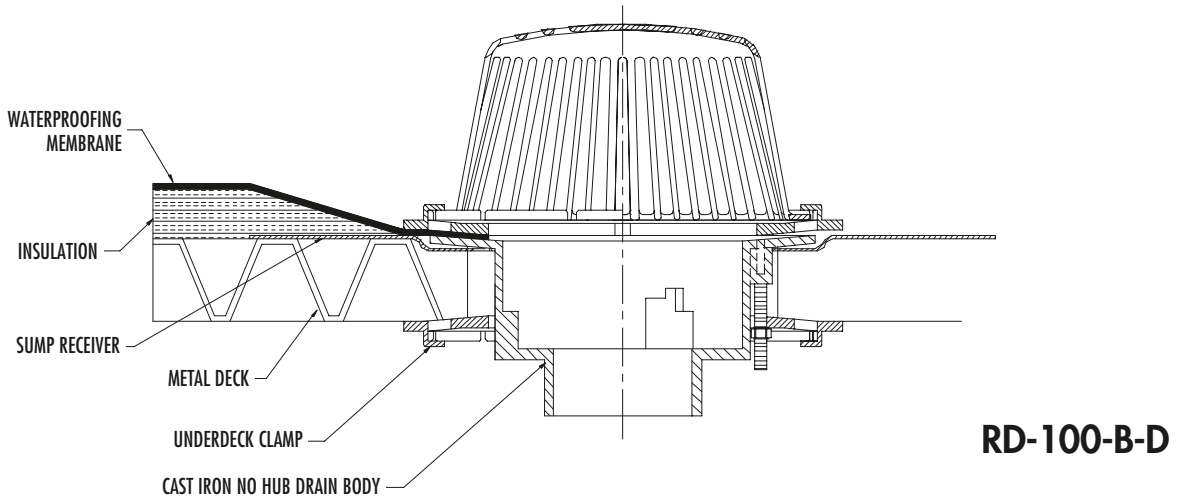
SS Mesh Covered Aluminum Dome (-K83) - Screen prevents small debris from entering drain.

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

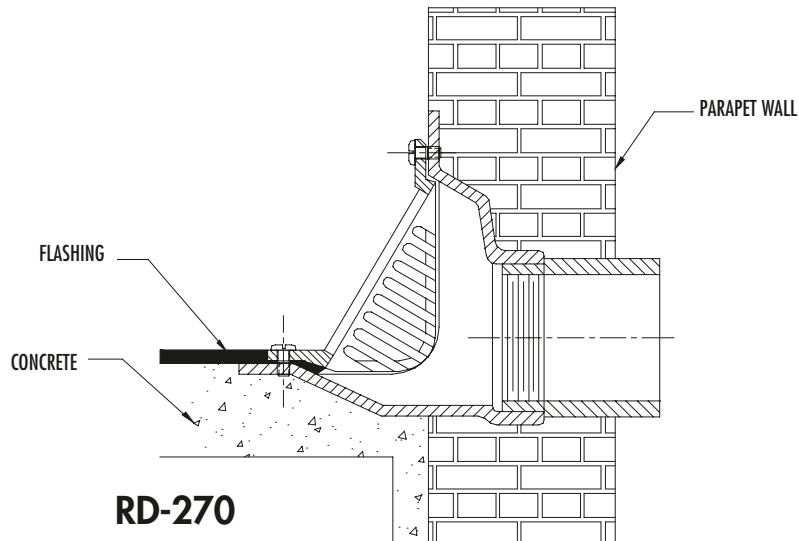
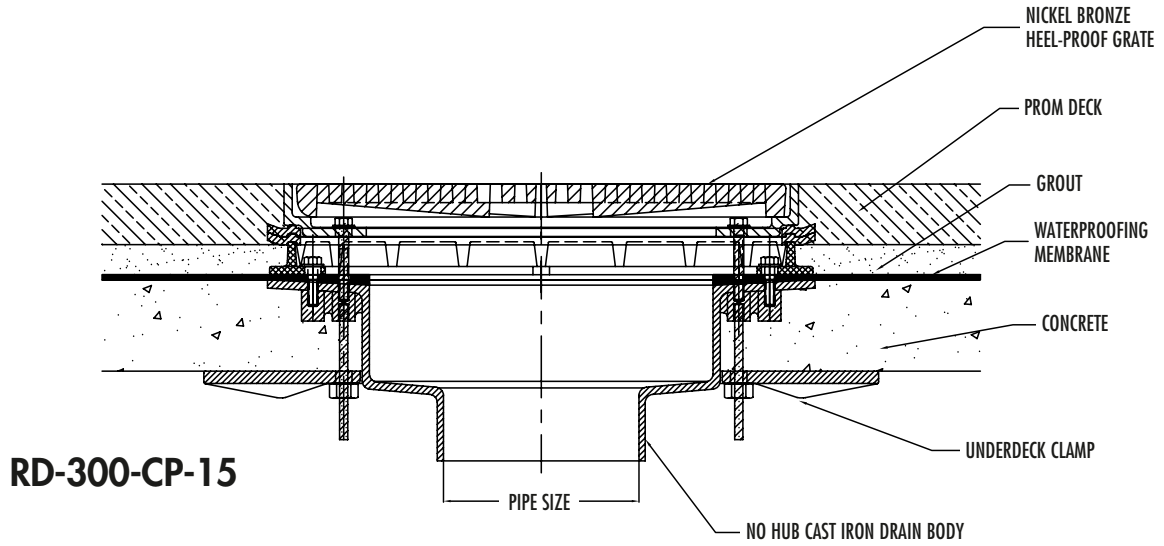
2" High External Water Dam (-R) - Fixed water dam specified for primary overflow roof drains.

Adjustable Internal Water Dam (-W) - Specified for primary overflow, standard 4" dia. X 4" high standpipe.

TYPICAL INSTALLATIONS



TYPICAL INSTALLATIONS



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