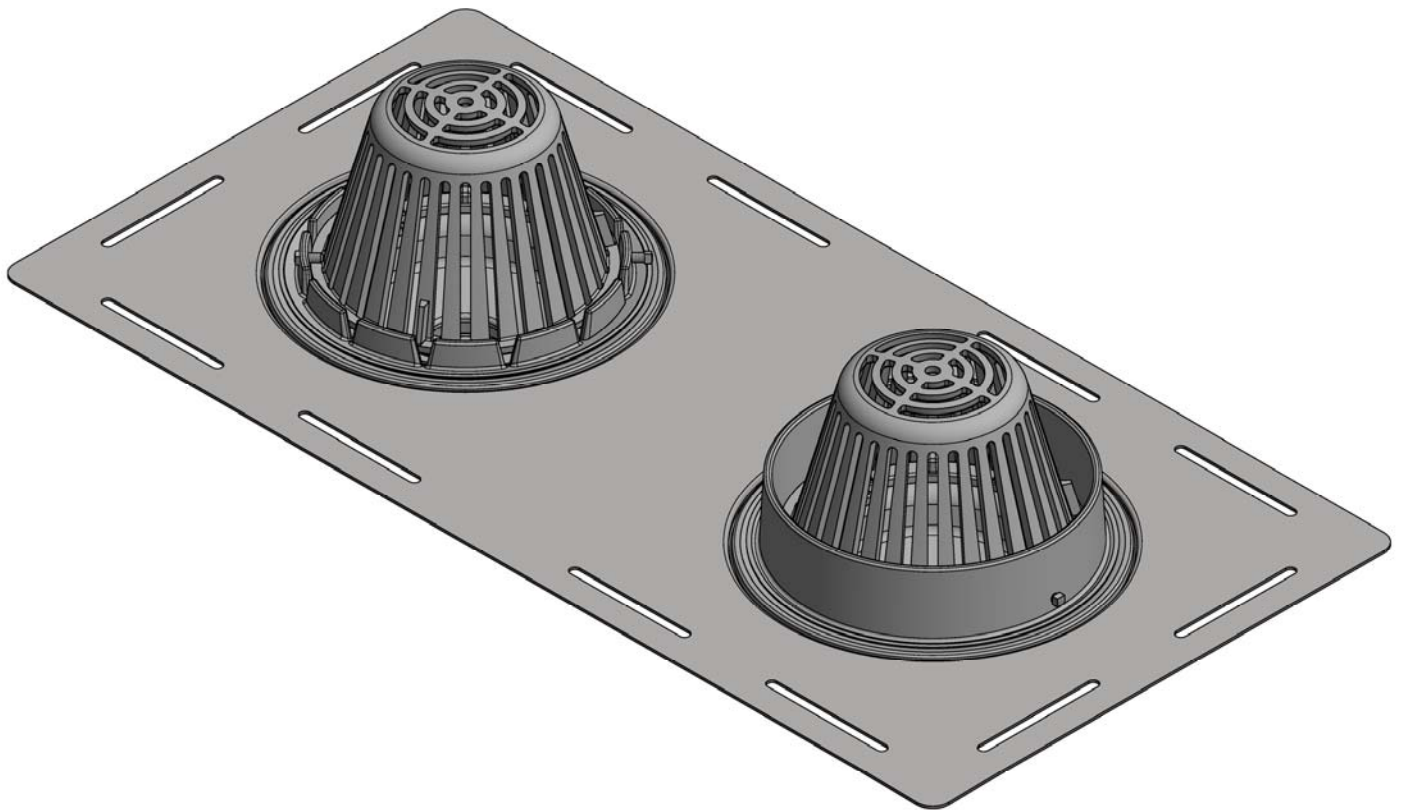


INSTALLATION, OPERATION & MAINTENANCE

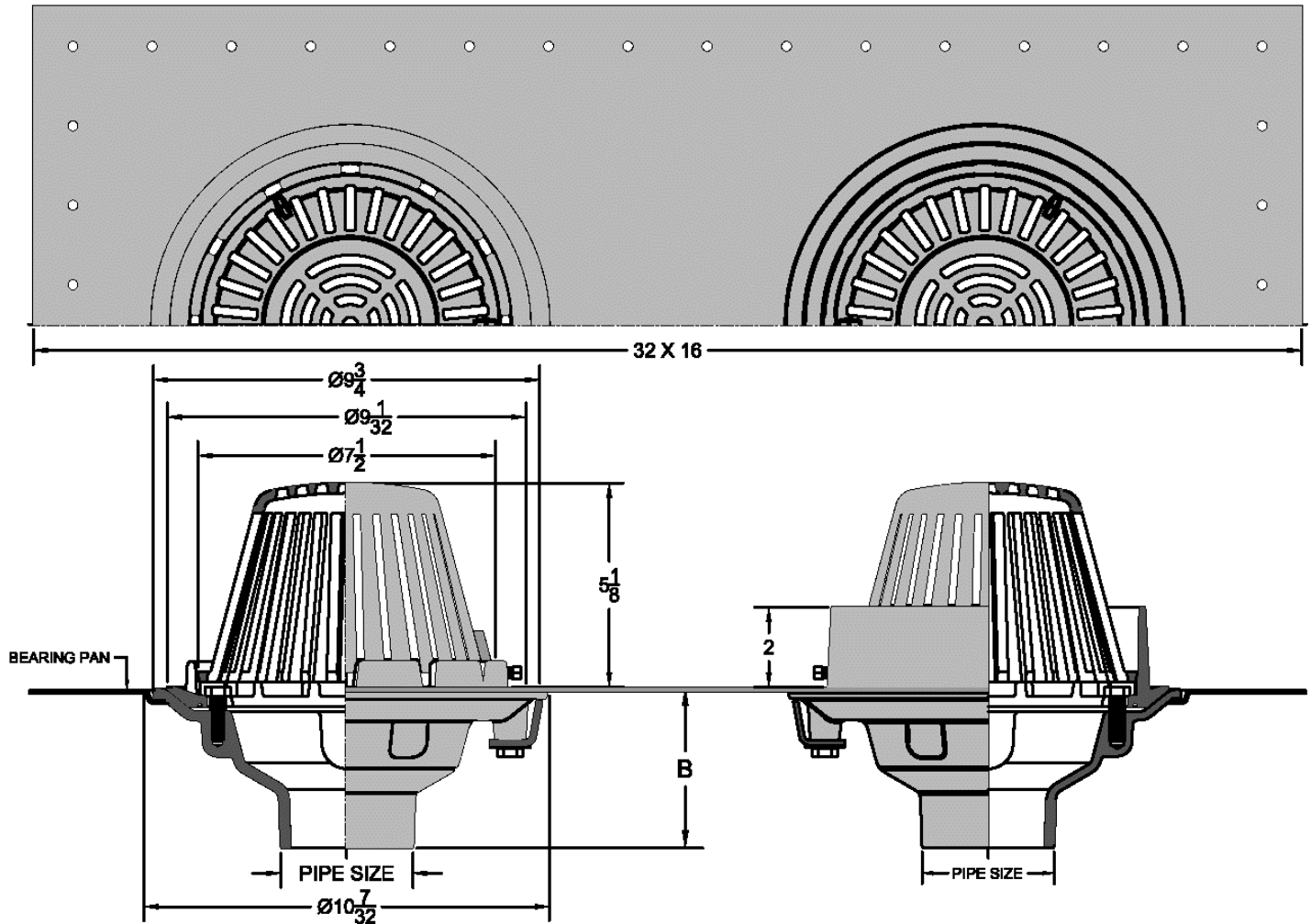
3043

Combination Primary & Overflow Roof Drain



3043 Combination Primary & Overflow Drain

Regularly Furnished: Cast iron primary and overflow roof drain with flange, flashing ring integral with gravel stop, external overflow dam bearing pan / sump receiver, securing hardware and bottom outlet.



3043	-3	-32	-42	-46
	Cast Iron Body with Rough Bronze Dome	Cast Iron Body with Poly Dome	Cast Iron Body with Cast Iron Dome	Cast Iron Body with Aluminum Dome
•				

Outlet	No-Hub	Push-On	Inside Caulk	Threaded
B	4	4-1/4	4-3/4	3-1/4

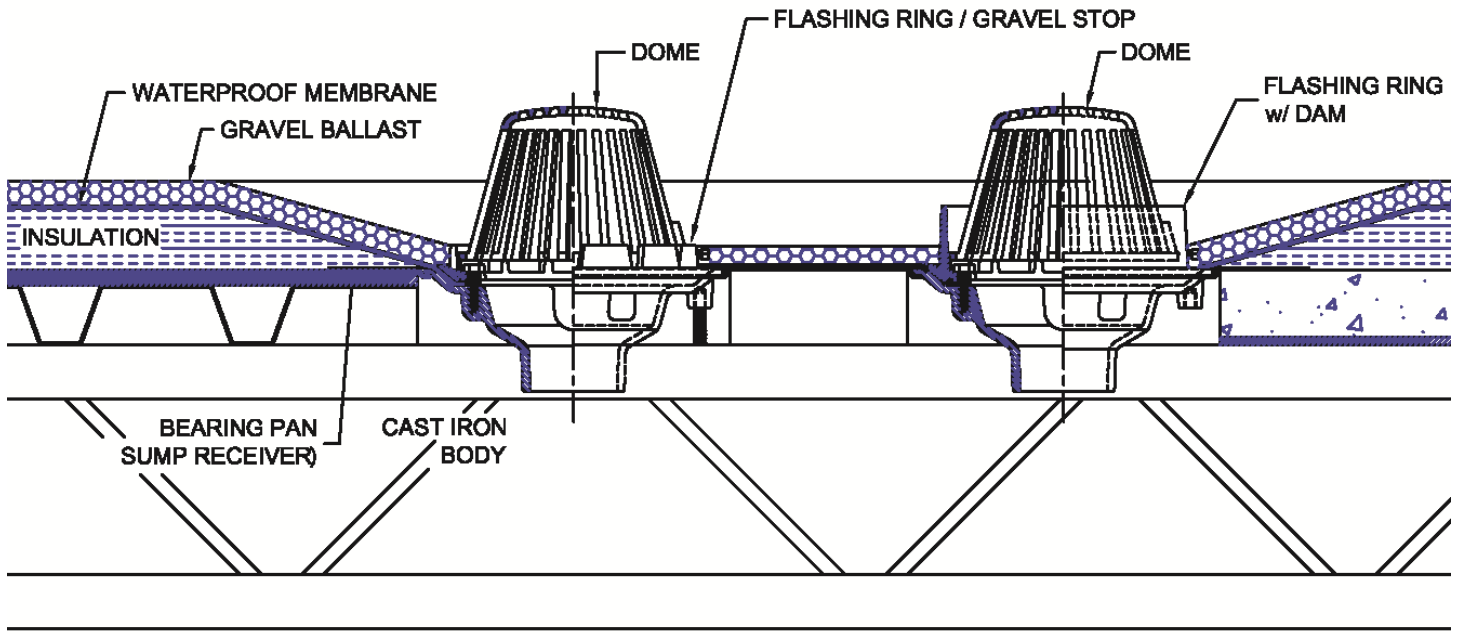
Dome Free Area
43.0 Sq. In.

Outlet Variations		
Type	Designation	•
No-Hub	2NH,3NH,4NH	
	6NH	
Push-On Gasket	2TY,3TY,4TY	
Inside Caulk	2IC,3IC,4IC	
Threaded	2IPS,3IPS,4IPS	

Optional Extensions		
Suffix	Description	•
-DF	Fixed Extension (2" High)*	Painted
		-39 Galv
	For Each Additional 1" (Add / In.)	Painted
		-39 Galv

Suffix Options		
Suffix	Description	•
-ARC	Acid Resistant Coating	
-DFS	Perforated Stainless Steel Extension*	
	For Each Additional 1" (Add / In.)	
-DP	Perforated Stainless Steel Gravel Stop (4") *	
-VP	Vandal Proof Top Assembly	
-39	Galvanized Cast Iron	-32
		-42
-49	Bronze Mesh Over Dome	
-50	Stainless Steel Mesh Over Dome	

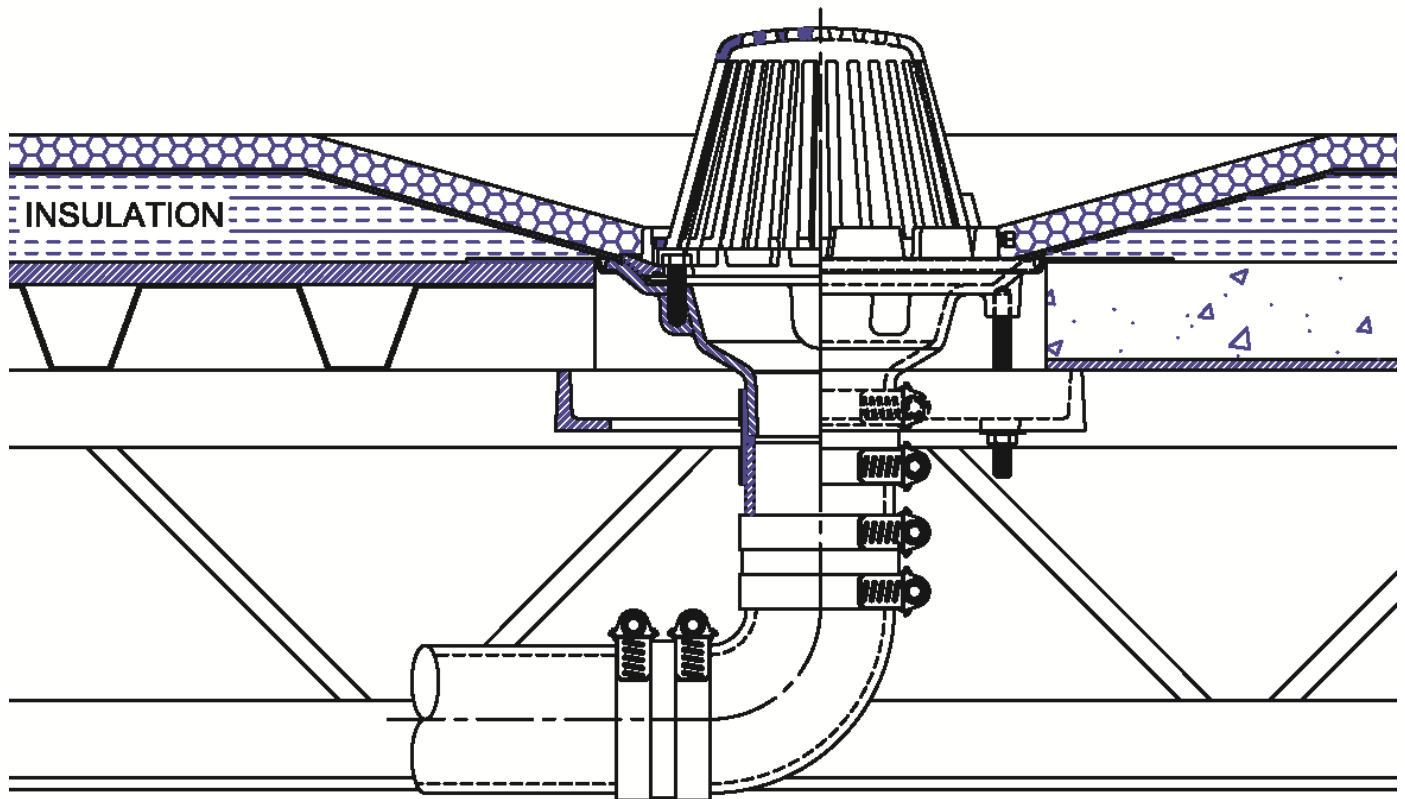
*Dimensions vary from illustration



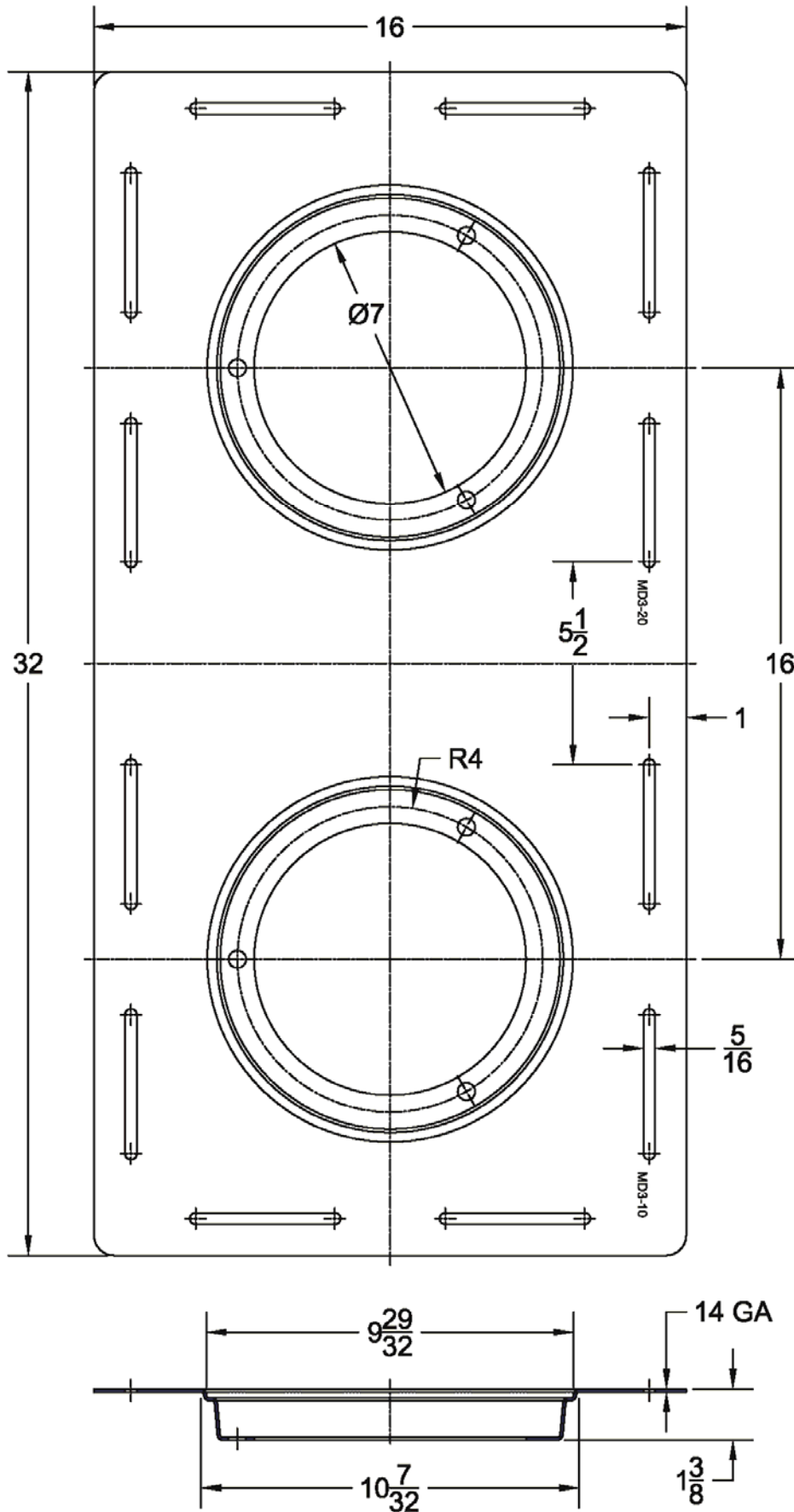
INSTALLATION

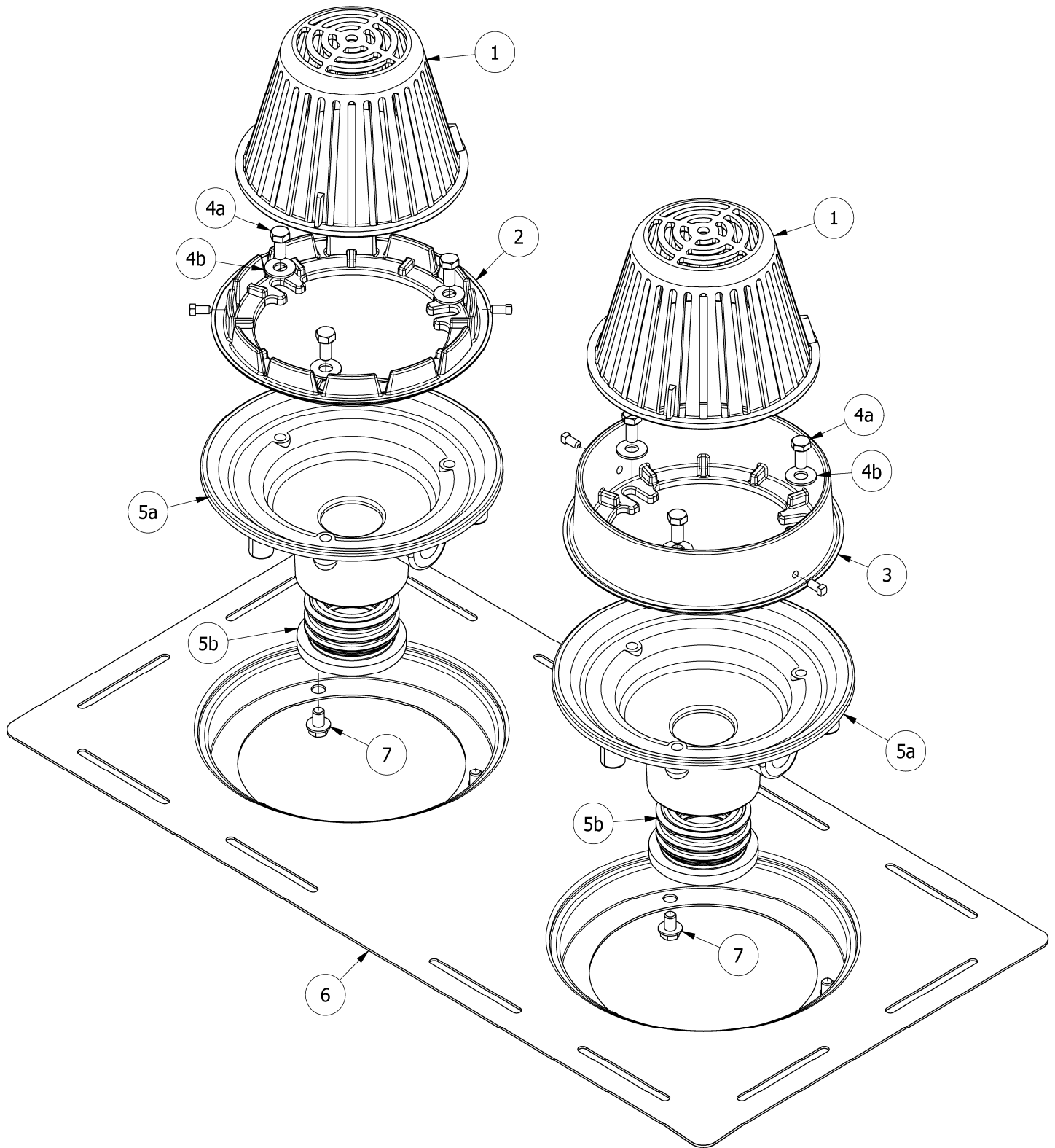
The Wade 3043 is used for conventional roof membrane insulated systems.

1. At the predetermined location, cut an opening into the deck to receive the bearing pan. The pan is recessed to allow the drain body to sit almost flush with the deck.
2. Install the drain bodies into the bearing pan and secure with the provided hardware from underneath.
3. Position Bearing Pan with drain bodies over the deck cut-out and secure with tek screws.
4. If insulation is to be applied - it should be tapered toward the drain. If insulation is thicker than can be accommodated with a standard assembly, use a fixed extension. Taper the insulation from a 24" diameter to the top surface of the flange. Apply the waterproof membrane per manufacturers recommendations.
5. Membrane must lay flat and contour the opening. Install the flashing ring and dam with the provided hardware, securely fastening the membrane between the body and the flashing ring and dam. Gravel ballast is evenly spread over the membrane up to the perimeter of the gravel stop and dam.
6. The domes are installed by a setting into the ring and securing with two set screws.

3043 Combination Primary and Overflow Roof Drain

The drain piping is first run to an elevation below the roof drain. The drain body is secured to the pipe with No-Hub couplings. No-Hub outlets should be installed with Tyler or Anaco/Husky couplings and secured with a torque wrench to the manufacturers recommendations. Once the body is connected to the pipe, the horizontal piping runs are sloped for gravity feed to the down pipe locations. The piping must be supported to recommended hanger spacings and insulated if required.

3043 Combination Primary & Overflow Drain—Bearing Pan Dimensions




Item	Product #	UPC	List Price	Qty
Domes				
1a	WP3012-3-Dome	426397	\$322.00	1
	WP3012-32-Dome	426405	\$74.00	1
	WP3012-39 Dome	407380	\$237.00	1
	WP3012-42-Dome	407379	\$145.00	1
	WP3012-46-Dome	426394	\$204.00	1
Flashing Rings				
1b	WP3012-FRG Ring	388210	\$104.00	1
	WP3012-FRG-39 Ring	388039	\$204.00	1
	WP3200-WD Dam	407720	\$134.00	1
	WP3200-WD-39 Dam	435310	\$169.00	1
4a-b	5R Hardware Bag	228395	\$14.00	1
Body Assemblies				
5a-b	WP3012-2IC	394059	\$207.00	2
	WP3012-2NH	393054	\$207.00	2
	WP3012-2TY	444978	\$207.00	2
	WP3012-3IC	394061	\$207.00	2
	WP3012-3NH	393061	\$207.00	2
	WP3012-3TY	444961	\$207.00	2
	WP3012-4IC	394064	\$207.00	2
	WP3012-4NH	393078	\$207.00	2
	WP3012-4TY	434559	\$207.00	2
	WP3012-6NH	444671	\$329.00	2
	WP3012-3NH-39	393092	\$307.00	2
	WP3012-4NH-39	393108	\$307.00	2
	WP3012-4NH-ARC	301211	\$454.00	2

Item	Product #	UPC	List Price	Qty
Side Outlet Body Assemblies				
†	WP1160-2T	213079	\$331.00	2
	WP1160-3T	213086	\$331.00	2
	WP1160-4T	213093	\$331.00	2
	WP1160-2T-39		\$438.00	2
	WP1160-3T-39	235729	\$438.00	2
	WP1160-4T-39		\$438.00	2
Replacement Gaskets				
5b	WP-2TY	396406	\$41.00	1
	WP-3TY	396413	\$71.00	1
	WP-4TY	396420	\$82.00	1
Bearing Pan Assembly				
6	WP3043-52	429006	\$227.00	1
7	64R Hardware Bag	428994	\$62.00	2
† Items not illustrated				

STEPS FOR SELECTING ROOF DRAIN LEADER SIZES AND QUANTITY REQUIRED FOR A GIVEN ROOF

STEP	Requirement	Example
1	Calculate Total Roof Area	Total Roof Area—500' by 270' equals 135,000 Sq.Ft.
2	Determine maximum hourly rainfall in inches	For this example—Use 4" per/hr
3	Select Leader Size	Assume that 6" leaders are desired for thios job
4	From Table 1, Determine the square feet that can be drained by one 6" roof leader at the maximum 4" hourly	From Table 1 0 One 6" Leader at 4" hourly rainfall rate will drain 13,500 square feet of roof area.
5	Divide the total roof area by the area that one 6" leader will accommodate. The result is the number of drains required for the building. If the result is fractional, use	135,000 Square Feet (Total Roof Area) divided by 13,500 Square Feet (Maximum Rate for 6" Drain at 4" per hour) 135,000 / 13,500 = 10 (10 Drains Required)

TABLE 1 ROOF DRAIN VERTICAL LEADER REQUIREMENTS FOR ROOF AREAS AT VARIOUS RAINFALL RATES

Leaders (Pipe Size)	Open Area (Sq.In.)	Hourly Rainfall in Inches									
		1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	7"	8"
2	3.14	2,880	1,920	1,440	1,150	960	720	575	480	410	360
3	7.06	8,880	5,860	4,400	3,520	2,930	2,200	1,720	1,470	1,260	1,100
4	12.56	18,400	12,700	9,200	7,360	6,130	4,600	3,680	3,070	2,630	2,300
6	28.30	54,000	36,000	27,000	21,600	18,000	13,500	10,800	9,000	7,715	6,750

STEPS FOR CALCULATING DRAINAGE REQUIREMENTS USING GALLONS PER MINUTE (G.P.M.)

- Use the following formula to determine G.P.M.

$$\text{G.P.M.} = 0.0104 \times R \times A$$

R = Rainfall intensity—inches/hour

A = Roof Area—Square Feet

0.0104 = Conversion Factor—G.P.M./Sq.Ft. for 1"/Hr Rainfall

- Example:

(a) 4" rainfall inches/hour

(b) 135,000 Square Feet Total Roof Area

$$\text{© G.P.M.} = 0.0104 \times 4" \times 135,000 \text{ Sq.Ft.} = 5,616 \text{ GPM}$$

- Refer to Table 2: A 4" Leader will handle 192 GPM.

$$5,616 \text{ GPM} \div 192\text{GPM} = 29.25 - 30 \text{ Roof Drains (4") Required}$$

If 6" Leaders are desired , a 6" Leader will handle 566 GPM—thus:

$$5,616 \text{ GPM} \div 566\text{GPM} = 9.9 - 10 \text{ Roof Drain (6") Required.}$$

TABLE 2
ALLOWABLE FLOW FOR VERTICAL LEADERS AND HORIZONTAL STORM DRAINS

Allowable Flow in G.P.M.				
Pipe Size	Vertical Leader	Horizontal Leader (Slope / Ft)		
		1/8"	1/4"	1/2"
2	30	12	17	24
3	90	36	51	72
4	192	78	111	157
5	348	142	201	284
6	566	231	327	462
8	1220	498	705	996
10	2200	902	1275	1804
12	-	1467	2076	2934
15	-	2666	3774	5332