

ROOF DRAINS

LEVELEZE® Features

LEVELEZE® Roof Drains are just what the name implies – easy to level to the proper elevation. The adjustable integral top is mated to the body and support ring with a heavy machined thread which permits virtually unlimited top level adjustment to accommodate various insulation thicknesses. The line contact between the threads provides positive circumferential support of the top at any adjusted elevation. This versatile drain readily adapts to changes in finished roof elevation. With LEVELEZE® on the job, installation delays normally encountered, where fixed height extensions are specified, will not be experienced.

WEJLOC® CLAMP RING – GRAVEL STOP

Embodies the exclusive compression wedge lock principle to secure flashing with a positive non-puncturing bond to mating flange of collar. The gravel stop prevents roof surface aggregates from being washed into drain while permitting total drainage through "V" notch weirs.

ADJUSTABLE COLLAR

The LEVELEZE® machined thread permits raising or lowering of roof flange to meet the insulation thickness at the required elevation, even after leader is connected to drain and the roofing is applied.

SUPPORT RING & GASKET

Cast iron support ring mates with LEVELEZE® adjustable collar permitting smooth uninterrupted adjustment to accommodate various insulation thicknesses. Gasket prevents leakage between drain body and support ring.

DOME

Precision molded polypropylene plastic, low-silhouette dome with 124 sq. in. free open drainage flow area, narrow vertical slotted openings to prevent entrance of debris, and positive locking device.

DRAIN RECEIVER

Coated formed steel drain receiver incorporates recessed flange to support drain body and wide peripheral flange to distribute drain load over a broad area of the deck, also compensating for irregular and off-center deck openings.

DECK CLAMP

Heavy-duty deck clamp secures drain body to roof deck with the compression clamp principle forming a permanent bond between drain and roof, preventing any movement of drain and possible rupture of roofing materials.

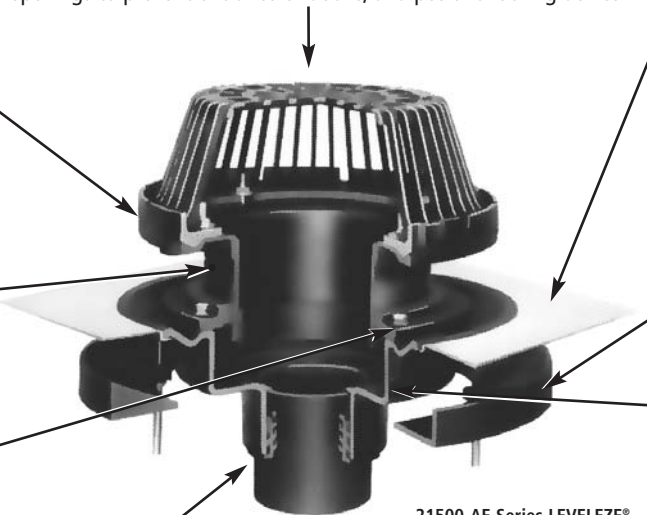
BODY

Heavy-duty coated cast iron body with wide support flange, large smooth sump and connection to suit leader piping. Without adjustable collar, the body can be installed in the deck and connected to the leader to receive drainage during construction. When roof is ready for insulation and topping, the collar can be installed and set to required elevation for completion of the installation.

JIFFEE-SET

JOSAM Roof Drains feature JIFFEE-SET connections with MULTI-TITE® service weight (SV) soil pipe gaskets, conforming to ASTM Standard C564 in 2, 3 and 4 inch sizes for labor-saving assembly to service weight pipe in cast iron, no-hub cast iron, PVC and ABS. Merely lubricate gasket and pipe, push (or insert) until it contacts built-in stop and the joint is complete.

21500-AE Series LEVELEZE® Large Dome Roof Drain



Conventional Features

WEJLOC® CLAMP RING – GRAVEL STOP

Embodies the exclusive compression wedge lock principle to secure flashing with a positive non-puncturing bond to mating flange of body. The gravel stop prevents roof surface aggregates from being washed into the drain while permitting total drainage through "V" notch weirs.

FIXED EXTENSION

On deck where applied insulation is involved, the extension, available in various heights, is used to bring drain top to roof surface elevation. The flange is equivalent in diameter to that on the drain body.

GASKET

Resilient Neoprene ring-type gasket provides a watertight joint between extension skirt and body flange.

DOME

Precision molded polypropylene plastic, low-silhouette dome with 124 sq. in. free open drainage flow area, narrow vertical slotted openings to prevent entrance of debris, and positive locking device.

DRAIN RECEIVER

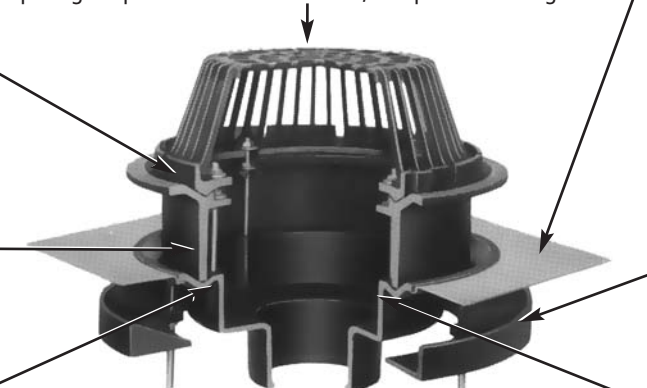
Coated formed steel drain receiver incorporates recessed flange to support drain body and wide peripheral flange to distribute drain load over a broad area of the deck, also compensating for irregular and off-center deck openings.

DECK CLAMP

Heavy-duty deck clamp secures drain body to roof deck with the compression clamp principle forming a permanent bond between drain and roof preventing any movement of drain and possible rupture of roofing materials.





BODY

Heavy-duty coated cast iron body with wide support flange, large smooth sump and connection to suit leader piping.








21500 Series Large Dome Roof Drain







LARGE SUMP

21500  Page 74	21500-AE Adjustable Extension  Page 75	21500-AER Adj. Extension with Threaded Rods  Page 75	21500-16 Overflow Drain Internal Waterguard  Page 76	21500-AE-16 Overflow Drain with Adjustable Extension  Pages 75, 76	21500-19 SS Perforated Gravel Guard  Page 76
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LARGE SUMP








21500-IRMA Inverted Membrane SS Perf. Extension  Page 77	21500-IRMA-6 IRMA, SS Perf. Extension Wide Flange  Page 77	FLO-SET®		29112 12" Outlet  Page 97
		28600 Calibrated Vanes  Page 96	28600-AE Calibrated Vanes Adjustable Extension  Page 96	




LARGE SUMP • Promenade







23500  Page 80	23500-AE Adjustable Extension  Page 81	23500-IRMA Inverted Membrane SS Perf. Extension  Page 82	23500-IRMA-6 IRMA, SS Perf. Extension Wide Flange  Page 82	23510 Parking Deck Drain Extra Heavy-Duty Grate  Page 83	24030 Composition Deck Medium Duty  Page 85
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LARGE SUMP • Promenade

24050 Composition Deck Special Duty, 2" Extension  Page 86	24060 Composition Deck Special Duty, 2" Extension  Page 87	24200 Plaza Drain, Slotted Grate, SS Filter  Page 87	EXTRA-DEEP 23500-18  Page 81	FLO-SEPTOR® DRAINS 25500 - Large Sump Water Dam  Page 92 25520 - Medium Sump Water Dam  Page 93 25540 - Small Sump Water Dam  Page 93
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MEDIUM SUMP				COMBINATION DRAIN/OVERFLOW	
22010 Mid-Size Roof Drain  Page 78	PROMENADE			22100 - Small Sump  Page 79	
23710 Round Grate, Square Frame  Page 83	24020 Composition Deck  Page 85	24040 Composition Deck 2" Extension  Page 86	22200 - Medium Sump  Page 79		
			22500 - Large Sump  Page 79		

SMALL SUMP			SHALLOW SUMP • SILL TYPE		
22080 Mid-Size Roof Drain  Page 78	PROMENADE		24500 Secured Dome  Page 88	24500-45 Secured Dome, 45° Outlet  Page 88	24500-90 Secured Dome, 90° Outlet  Page 88
	23730 Round Grate, Square Frame  Page 84	23740 Heavy-Duty Grate  Page 84			

PARAPET					
24700 Shallow Sump  Page 89	24700-45 Shallow Sump, 45° Outlet  Page 89	24720 Shallow Sump  Page 90	24720-45 Shallow Sump, 45° Outlet  Page 91	24900 Extra Large Angle Grate  Page 91	25000 Parapet Scupper Sleeve, Adjustable Wall Collar  Page 91

MISCELLANEOUS PRODUCTS					
25010 Downspout Nozzle  Page 92	26200 Expansion Joint  Page 94	26440 Stack Fitting  Page 94	26450 Flashing Sleeve, Counterflashing & Caulk Recesses  Page 95	26700 Vandal-Proof Vent Cap, Frost-Proof Openings  Page 95	29000 Isolation Deck Drain, Large Sump  Page 97

ROOF DRAINS

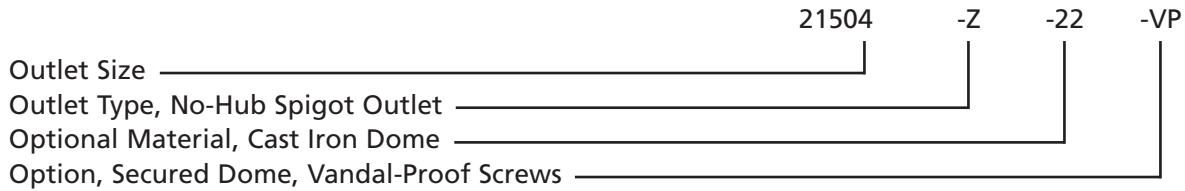
ROOF DRAINS

How To Order Roof Drains

Unless optional materials are specified, standard material shown in Specification will be provided. Last digit indicates outlet size.

EXAMPLE: Series No. 21500

Type No. 21504



Drain Receivers

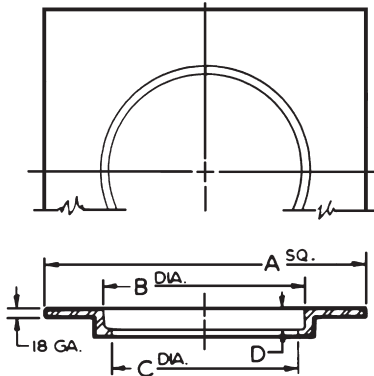
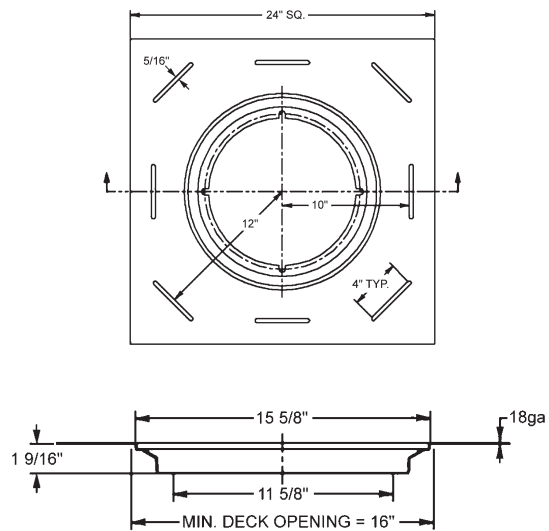


TABLE OF DIMENSIONS

SERIES NO.	A	B	C	D
21500	24	15-1/2	14-9/16	21/64
22010	20	12-1/4	11-1/2	21/64
22080	16	9-1/2	7-1/2	47/64

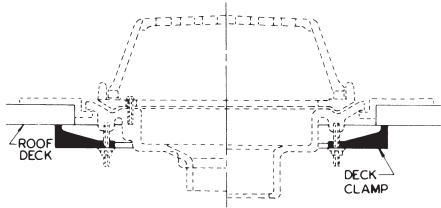


DRAIN SERIES	APPLICABLE DRAIN RECEIVER						
	OUTLET SIZE						
	2	3	4	5	6	8	10
21500	21500 21500-CR	21500 21500-CR	21500 21500-CR	21500 21500-CR	21500 21500-CR	21500 21500-CR	21500 21500-CR
22010	22010	22010	22010	22010	22010		
22080	22080	22080	22080				
23710	22010	22010	22010	22010	22010		
23730	22080	22080	22080				
23740	22080	22080	22080				
25500	21500 21500-CR	21500 21500-CR	21500 21500-CR	21500 21500-CR	21500 21500-CR	21500 21500-CR	
25520	22010	22010	22010	22010	22010		
25540	22080	22080	22080				
28600	21500 21500-CR	21500 21500-CR	21500 21500-CR	21500 21500-CR	21500 21500-CR	21500 21500-CR	

ROOF DRAINS

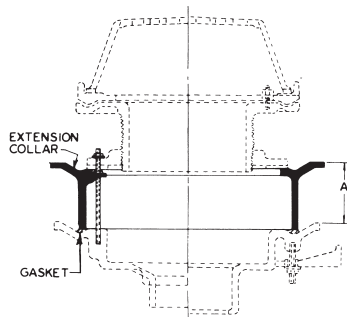
Options

The variations shown below illustrate and explain various roof drain components. These variations must be specified and installed when the type of roof construction dictates their use. See specific series for available options.



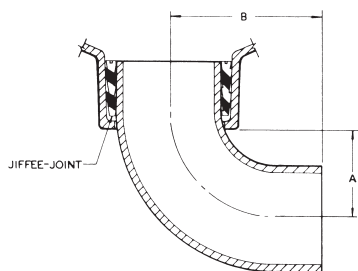
(-1) OPTION, DECK CLAMP

The deck clamp is the most dependable means by which the roof drain can be secured to the roof deck to insure a permanent bond that will prevent damage of flashing and membrane materials caused by movement and vibration. It is secured to the underside of the drain body with heavy-duty threaded rods, which provide adjustment to accommodate various slab or deck thicknesses, and is drawn tightly in place against the underside of the deck to form a positive union.



(-10) OPTION, FIXED EXTENSION COLLAR USED WITH LEVELEZE® DRAINS

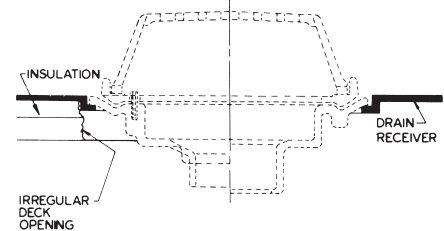
For roof or deck construction where base slab to surface height is greater than can be accommodated with the standard LEVELEZE® collar, the (-10) Fixed Extension Collar "A" is used along with the LEVELEZE® assembly. These collars can be used in multiples where extension requirements dictate. The Fixed Extension Collar can be cast in increments of 1, 2, 3 and 4 inches. Shorter or longer dimensions are available by cutting or stacking extensions



(-66) NO-HUB SIDE OUTLET

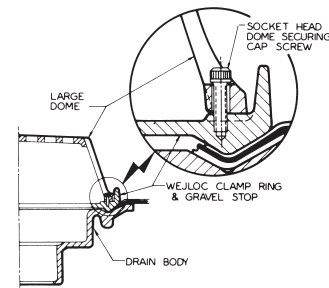
This option converts JOSAM bottom outlet inside caulk drains to no-hub side outlet drains using a 90° no-hub quarter bend and a JIFFEE-JOINT Gasket.

PIPE SIZE	A	B
2	2-1/2	4-1/2
3	2-13/16	5
4	3-1/2	5-1/2
5	4-5/16	6-1/2
6	4-13/16	7



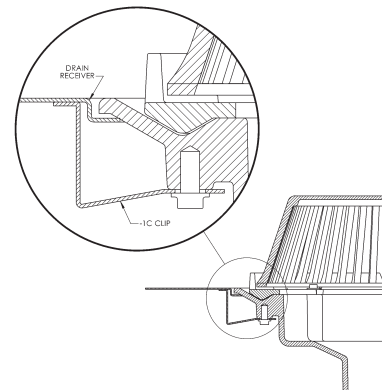
(-2) OPTION, DRAIN RECEIVER

The drain receiver is recommended for use in all roof drain installations regardless of deck construction and is of particular importance when used in conjunction with drains installed in decks where support is on insulation. The drain receiver is produced in heavy gauge steel, coated for protection, and embodies a recessed flange to carry the drain, and a wide flange to support the assembly on the roof. The drain receiver distributes the weight of the roof drain evenly over the deck and compensates for irregular and misaligned deck openings.



(-VP) OPTION, VANDAL-PROOF SECURED DOME

Where vandalism or mischievous activity is anticipated, it is advisable to specify vandal-proof domes on roof drains. All JOSAM precision-molded plastic large domes incorporate bayonet locking devices as standard equipment; however, when specified vandal-proof, they are further secured with screws to insure permanence of assembly. Other types of domes can also be vandal-proofed when specified.



(-3C) OPTION, DRAIN RECEIVER & DRAIN RECEIVER CLIPS

Includes (-2) Optional Drain Receiver and clips, to secure the roof drain body directly to the receiver. Simply position the drain outlet face up, position drain receiver over the drain body and attach the four receiver clips with the hardware provided. Invert body and install the assembly into the deck opening. If necessary, secure assembly to the metal deck with self-tapping screws (by others).

ROOF DRAINS

Conventional Roof Drainage Systems

SIZING WORKSHEET

The number of roof drains for a given project can be determined by the ratio method which indicates that roof drains be installed at the minimum of one roof drain for each 10,000 sq. ft. of roof area. The rainfall for a given locality is found in Figure 4, or in Figure 5 if the locality is not listed. Figure 7 converts the rainfall to G.P.M., and Figure 8 provides the system sizing data. The sizing worksheet shown in Figure 1 offers a quick sizing procedure to be followed by the engineer, and it also serves as a file record on the project. The conventional roof drainage requirements for a project have been determined on the example worksheet (Figure 1).

Note: A supply of worksheets can be obtained from your local JOSAM Representative.

PLUMBING CODE AUTHORITIES

Even though rainfall data in Figures 4 and 5 are composites of official recordings at the time of this publication, it is recommended that local code authorities be consulted for rainfall amounts they specify for design purposes. In those instances where local specified rainfall is different from that in Figures 4 and 5, use the local specifications in completing the worksheet.

LAYOUT OF DRAINS AND PIPING

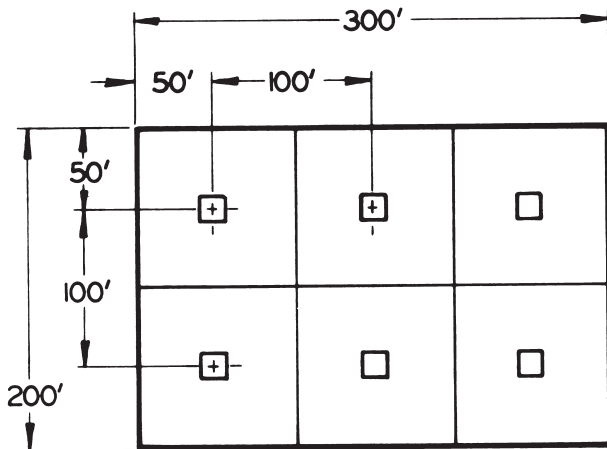
Using the conventional roof drainage requirements as determined in the worksheet (Figure 1), a suggested placement of roof drains is shown in Figure 2, and a typical drainage piping arrangement is shown in Figure 3. With reference to Figure 2, the drains should not be located more than 50 ft. from the roof perimeter nor more than 100 ft. apart. With reference to Figure 3, the horizontal piping is sized based on a slope of 1/4 inch per ft.

Note: Cleanouts should be provided in both the vertical and horizontal drainage piping systems. Local plumbing codes should be consulted relative to acceptable design and installation of the drainage piping system and its components.

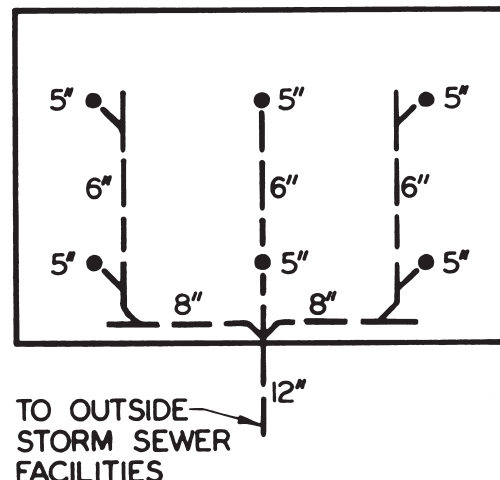
CONVENTIONAL ROOF DRAINAGE SYSTEM SIZING "WORKSHEET"		FORM # RDS-1 PAGE 1 OF 1						
PROJECT NAME: () INDUSTRIAL PLANT	DATE:							
LOCATION (CITY): CHICAGO	STATE: ILLINOIS							
NOTE: FOR MULTIPLE ROOF AREAS USE A SEPARATE SIZING "WORKSHEET" FOR EACH SPECIFIC ROOF AREA AND IDENTIFY EACH AREA AS ROOF "A," "B," "C" OR OTHER MEANS OF DESIGNATION. (ROOF AREA)								
TO FIND REQUIRED NUMBER OF ROOF DRAINS AND CONVERT RAINFALL TO G.P.M./SQ.FT.								
A. ROOF AREA (LENGTH) 300' x (WIDTH) 200' =	60,000	TOTAL SQ. FT.						
B. ROOF DRAINS (TOTAL SQ. FT.) 60,000 ÷ (10,000 SQ. FT. PER DRAIN) =	6	DRAINS						
C. * RAINFALL (GIVEN LOCATION - SEE FIG. 4) (IF NOT LISTED SEE FIG. 5) =	3	IN. PER HR.						
D. * CONVERT RAINFALL (IN. PER HR.) TO (G.P.M. PER ONE SQ. FT.) SEE FIG. 4 =	.0312	G.P.M./SQ. FT.						
TO FIND THE TOTAL G.P.M. ROOF DRAINAGE REQUIREMENTS								
E. (TOTAL SQ. FT. AREA) x (G.P.M. FACTOR) = (TOTAL G.P.M. DISCHARGE REQUIREMENT)								
FROM "A" ABOVE	FROM "D" ABOVE	(TOTAL G.P.M. DISCHARGE REQUIREMENT)						
60,000	x .0312	= 1872 G.P.M.						
TO FIND THE REQUIRED G.P.M. DISCHARGE PER ROOF DRAIN								
F. (TOTAL G.P.M. DISCHARGE) ÷ (NUMBER OF DRAINS) = (DISCHARGE IN G.P.M. PER DRAIN)								
FROM "E" ABOVE	FROM "B" ABOVE	(DISCHARGE IN G.P.M. PER DRAIN)						
1872 G.P.M.	÷ 6	= 312 G.P.M.						
TO FIND THE SIZE OF ROOF DRAINS AND VERTICAL LEADERS								
G. DISCHARGE IN G.P.M. PER DRAIN (FROM "F" ABOVE) =	312 G.P.M.							
H. * REFER TO FIG. 8 (ROOF DRAIN AND VERTICAL LEADER COLUMN) AND SELECT PIPE SIZE THAT IS EQUAL TO OR LARGER THAN G.P.M. SHOWN IN "G" =	5"	PIPE SIZE						
TO FIND THE SIZE OF HORIZONTAL DRAINAGE LINES								
I. * THE PEAK FLOW DISCHARGE IN G.P.M. PER DRAIN (FROM "F" ABOVE) CAN BE APPLIED TO THE 1/8" □, 1/4" □ OR 1/2" □ SLOPE COLUMNS IN FIG. 8 TO DETERMINE THE SIZES OF THE HORIZONTAL STORM DRAINAGE PIPING SYSTEM.								
* FOR SIZING DATA AND TECHNICAL INFORMATION SEE JOSAM PRODUCT CATALOG OR CONTACT YOUR JOSAM REPRESENTATIVE.								
NOTE: BE SURE TO PROVIDE OVERFLOW RELIEF PROTECTION MEASURES ON THE ROOF TO AVOID ANY POSSIBILITY OF ROOF STRUCTURE OVERLOAD IN THE EVENT OF A DRAINAGE SYSTEM BLOCKAGE.								
NOTE: WHEN SPECIFYING AND/OR ORDERING JOSAM CONVENTIONAL ROOF DRAINS, PLEASE INCLUDE THE FOLLOWING INFORMATION.								
<table border="1"> <tr> <td>JOSAM SERIES NO.</td> <td>21500 OR 21000</td> </tr> <tr> <td>QUANTITY OF DRAINS</td> <td>6</td> </tr> <tr> <td>SIZE & TYPE OF OUTLET</td> <td>5" THREADED</td> </tr> </table>			JOSAM SERIES NO.	21500 OR 21000	QUANTITY OF DRAINS	6	SIZE & TYPE OF OUTLET	5" THREADED
JOSAM SERIES NO.	21500 OR 21000							
QUANTITY OF DRAINS	6							
SIZE & TYPE OF OUTLET	5" THREADED							

FIGURE 1

ROOF PLAN
FIGURE 2



TYPICAL PIPING ARRANGEMENT
FIGURE 3



ROOF DRAINS

Conventional Roof Drainage Systems

PURPOSE

The roof drainage system is designed to receive rainwater as it falls on the roof and convey it to the street, sewer facilities or other means available for its disposal. This system should be sized to handle the maximum rainfall used as design criteria for a project. The following information covers the basic requirements for the sizing of conventional roof drainage systems and the placement of their components.

QUANTITY

To minimize water ponding and insure complete drainage, two roof drains should be installed for total roof areas of 10,000 sq. ft. or less. For larger roof areas, roof drains should be installed at the minimum of one drain for each 10,000 sq. ft. of roof area.

Roofs are of various shapes and dimensions, with sections which may be more or less than the 10,000 sq. ft. recommendation for each drain. Therefore, sometimes it will be necessary to depart from this recommendation as required for proper placement and uniform distribution of roof drains.

PLACEMENT

The placement of roof drains is influenced by roof structure support columns, expansion joints, dividers and other projections. Careful consideration of these elements during the placement-planning phase is essential to provide adequate drainage for each area. Figure 2 shows how the roof drains can be placed on a dimensional basis with a maximum limit from the edge of the roof and between drains.

OVERFLOW RELIEF

The perimeter edge of a roof structure is generally elevated by parapets, cants or other means. A blockage in the drainage piping could cause a water buildup which could overload the roof structure. To prevent this occurrence, it is recommended that overflow relief measures such as scupper or parapet drains be specified at the ratio of at least one for each 20,000 sq. ft. of roof area. The invert elevation of the scupper should not be more than a safe water depth as determined in conjunction with the architect and structural engineer, not more than 5 inches above roof level on flat roofs and 6 inches above low point on sloped roofs.

RAINFALL DATA

The rainfall that can be expected in a given locality can be obtained from the local code authorities or the nearest rainfall recording station. A study of the maximum rate of rainfall in inches per hour that has been recorded or estimated in U.S. Weather Bureau technical papers No. 2, No. 25, and No. 40 has enabled us to develop a composite average of maximum rainfall data for design purposes in various localities as shown in Figure 4. For localities that have not been listed, the approximate maximum rainfall data can be determined from the map shown in Figure 5. It is recommended that the local code authorities be consulted regarding the specific rainfall amount that they may anticipate for design purposes.

State & City	Rainfall in inches per hour	State & City	Rainfall in inches per hour	State & City	Rainfall in inches per hour	State & City	Rainfall in inches per hour	State & City	Rainfall in inches per hour	State & City	Rainfall in inches per hour	State & City	Rainfall in inches per hour
ALABAMA		DISTRICT OF COLUMBIA		IOWA		MINNESOTA		NEW YORK		Pittsburgh	2.7	UTAH	
Anniston	3.6	Washington	3.4	Burlington	3.3	Duluth	2.6	Albany	2.5	Reading	3.0	Salt Lake City	1.3
Birmingham	3.6	FLORIDA		Davenport	3.2	Minneapolis	3.0	Binghamton	2.5	Scranton	2.6	VERMONT	
Mobile	4.2	Apalachicola	4.3	Des Moines	3.3	St. Paul	3.0	Buffalo	2.4	PUERTO RICO		Burlington	2.0
Montgomery	3.8	Fort Meyers	4.3	Dubuque	3.1	SISSISSIPPI		New York	3.2	San Juan	4.0	VIRGINIA	
ALASKA		Jacksonville	4.0	Sioux City	3.3	Jackson	3.8	Rochester	2.4	RHODE ISLAND		Lynchburg	3.4
Anchorage	1.0	Key West	4.5	KANSAS		Meridan	3.8	Syracuse	2.3	Block Island	3.0	Norfolk	3.8
Fairbanks	1.2	Miami	4.6	Concordia	3.7	Vicksburg	3.7	NORTH CAROLINA		Providence	3.0	Richmond	3.6
Juneau	1.0	Pensacola	4.3	Dodge City	3.6	MISSOURI		Asheville	3.2	SOUTH CAROLINA		Roanoke	3.3
ARIZONA		Tampa	4.2	Topeka	3.7	Columbia	3.6	Charlotte	3.4	Charleston	4.1	WASHINGTON	
Phoenix	2.5	GEORGIA		Wichita	3.7	Hannibal	3.4	Greensboro	3.4	Columbia	3.6	Port Angeles	1.0
Tucson	3.0	Atlanta	3.5	KENTUCKY		Kansas City	3.7	Raleigh	3.7	Greenville	3.4	Seattle	1.0
ARKANSAS		Augusta	3.6	Lexington	2.8	St. Joseph	3.6	Wilmington	4.0	SOUTH DAKOTA		Spokane	1.0
Bentonville	3.8	Columbus	3.7	Louisville	2.9	St. Louis	3.4	NORTH DAKOTA		Pierre	2.9	Tacoma	1.1
Fort Smith	3.9	Macon	3.7	LOUISIANA		Springfield	3.7	Bismark	2.8	Rapid City	2.7	Walla Walla	1.0
Little Rock	3.7	Savannah	4.0	Lake Charles	4.4	MONTANA		Fargo	2.8	Sioux Falls	3.3	Yakima	1.0
CALIFORNIA		Thomasville	4.0	New Orleans	4.5	Billings	2.0	OHIO		TENNESSEE		WEST VIRGINIA	
Bakersfield	1.5	HAWAII		Shreveport	4.0	Havre	1.8	Cincinnati	2.7	Chattanooga	3.3	Charleston	2.8
Eureka	1.6	Hilo	3.0	MAINE		Helena	1.5	Cleveland	3.0	Knoxville	3.2	Huntington	2.8
Fresno	1.5	Honolulu	3.2	Portland	2.3	Missoula	1.3	Columbus	2.7	Memphis	3.6	Parkersburg	2.6
Los Angeles	2.0	IDAHO		MARYLAND		NEBRASKA		Dayton	2.6	Nashville	3.1	WISCONSIN	
Sacramento	1.4	Boise	1.1	Baltimore	3.4	Lincoln	3.6	Sandusky	3.0	TEXAS		Green Bay	2.6
San Diego	1.5	Lewiston	1.1	MASSACHUSETTS		North Platte	3.3	Toledo	3.0	Abilene	3.5	La Crosse	2.9
San Francisco	1.6	Pocatello	1.3	Boston	2.6	Omaha	3.5	Youngstown	2.6	Amarillo	3.4	Madison	3.0
San Jose	1.6	ILLINOIS		Nantucket	3.0	NEVADA		OKLAHOMA		Austin	4.0	Milwaukee	2.7
COLORADO		Cairo	3.4	MICHIGAN		Reno	1.2	Oklahoma City	3.9	Brownsville	4.5	WYOMING	
Denver	2.5	Chicago	3.0	Alpena	2.2	NEW HAMPSHIRE		Tulsa	3.9	Corpus Christi	4.5	Casper	2.1
Durango	1.7	Peoria	3.1	Detroit	3.0	Concord	2.4	OREGON		Dallas	4.0	Cheyenne	2.5
Grand Junction	1.6	Springfield	3.3	Escanaba	2.3	NEW JERSEY		Medford	1.4	Del Rio	4.5	Sheridan	2.1
Pueblo	2.6	INDIANA		Grand Rapids	2.6	Atlantic City	3.5	Pendleton	1.0	El Paso	2.4	Yellowstone Park	1.5
CONNECTICUT		Evansville	3.0	Marquette	2.2	Newark	3.0	Portland	1.4	Fort Worth	4.0		
Hartford	3.0	Fort Wayne	2.6	Port Huron	2.4	Trenton	3.2	PENNSYLVANIA		Galveston	4.6		
New Haven	3.0	Indianapolis	2.8	Saginaw	2.4	NEW MEXICO		Allentown	3.0	Houston	4.5		
DELAWARE		South Bend	2.8	Sault St. Marie	2.0	Albuquerque	2.1	Erie	3.0	Port Arthur	4.5		
Wilmington	3.5	Terre Haute	2.9			Roswell	2.6	Harrisburg	2.9	San Antonio	4.0		
						Santa Fe	2.2	Philadelphia	3.3	Wichita Falls	3.8		

FIGURE 4

ROOF DRAINS

Conventional Roof Drainage Systems

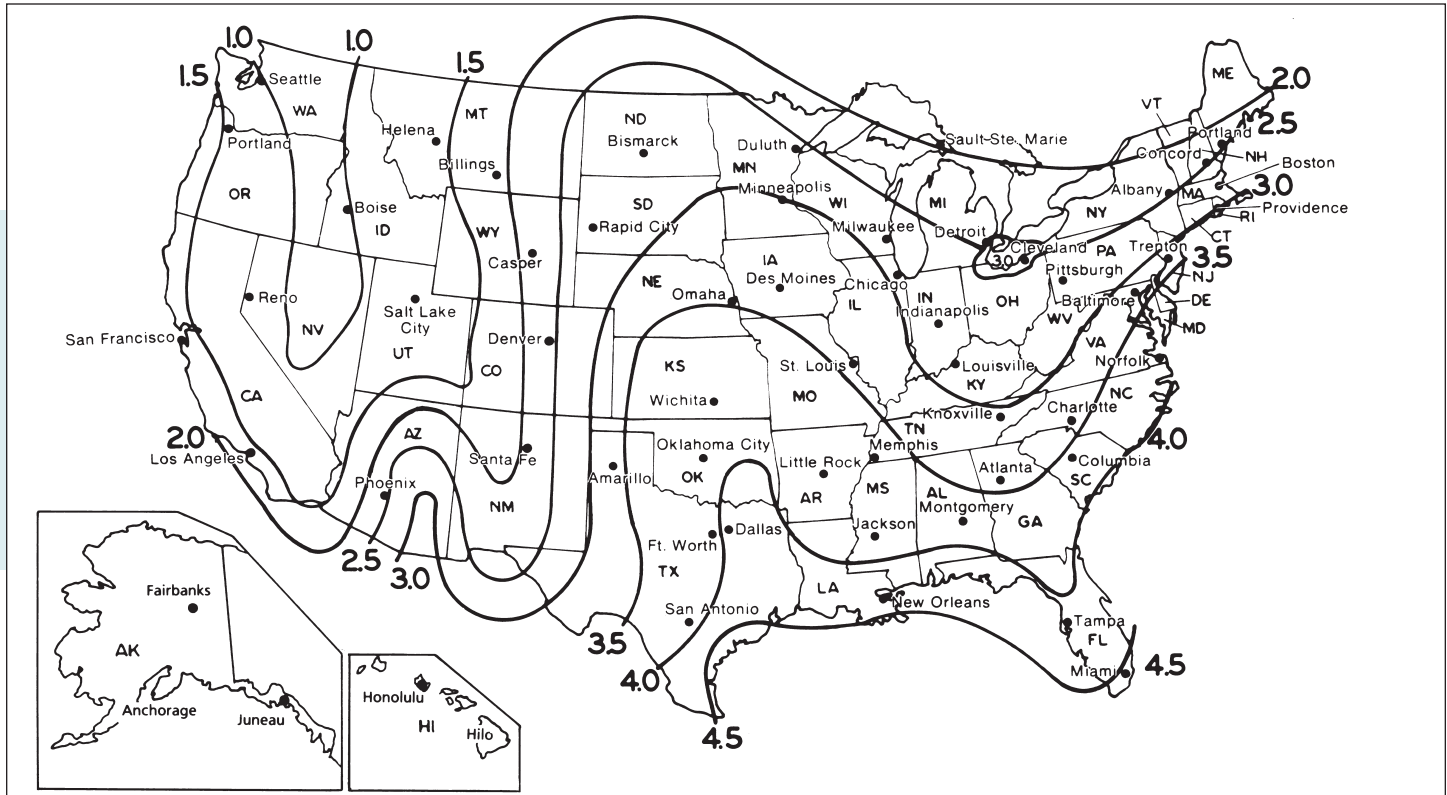


FIGURE 5

RAINFALL MAP

The maximum rate of rainfall for a number of localities is shown in Figure 4. For localities that are not listed, see the rainfall map (Figure 5). The maximum rainfall curves shown on this map have been compiled on the basis of a composite average of recorded rainfall data. The rainfall curves in Figure 5 represent maximum rainfall. These can be expressed as 100-year storm curves. To arrive at the rainfall for 50-, 25- and 10-year return period storms, a constant .3 inch reduction factor for each storm period is employed for each curve. (Use Figure 6) If the location desired falls between two curves, an estimate should be made as to how far away the location is and then adjust the rainfall accordingly. EXAMPLE: Salt Lake City is approximately 1/2 of the way between the curves of 1.0 and 1.5, therefore, the estimate of 1.3 would be used.

100 Yr. Max. Storm	50 Yr. Max. Storm	25 Yr. Max. Storm	10 Yr. Max. Storm
1.0	1.0	1.0	1.0
1.5	1.2	1.0	1.0
2.0	1.7	1.4	1.1
2.5	2.2	1.9	1.6
3.0	2.7	2.4	2.1
3.5	3.2	2.9	2.6
4.0	3.7	3.4	3.1
4.5	4.2	3.9	3.6

Note: 1 inch rainfall is considered minimum for design purposes. The data in Figure 6 is adjusted accordingly.

FIGURE 6

ROOF DRAINS

Conventional Roof Drainage Systems

RAINFALL CONVERSION DATA

Rainfall is expressed in inches of water per hour. For sizing purposes, it is necessary to convert "inches per hour" to "gallons per minute." The data in Figure 7 represents the conversion of rainfall in "inches per hour" to "gallons per hour per sq. ft." and "gallons per minute per sq. ft." For example, a 3 inch per hour rainfall will build up to a 3 inch depth on a flat roof in one hour, at the rate of 1.87 gallons per hour/sq. ft. or .0312 gallons per minute/sq. ft. (See Figure 7). Using a 10,000 sq. ft. roof area, the 3 inch rainfall will produce 18,700 gallons in one hour at the rate of 312 gallons per minute. See the following.

EXAMPLE:

Gallons Per Hour 10,000 x 1.87 = 18,700 G.P.H.

Gallons Per Minute 10,000 x .0312 = 312 G.P.M.

Rainfall In Inches Per Hr.	G.P.H. Per 1 Sq. Ft.	G.P.M. Per 1 Sq. Ft.	Rainfall In Inches Per Hr.	G.P.H. Per 1 Sq. Ft.	G.P.M. Per 1 Sq. Ft.	Rainfall In Inches Per Hr.	G.P.H. Per 1 Sq. Ft.	G.P.M. Per 1 Sq. Ft.
6.0	3.740	.0624	4.3	2.680	.0447	2.6	1.621	.0270
5.9	3.678	.0614	4.2	2.618	.0437	2.5	1.558	.0260
5.8	3.615	.0603	4.1	2.556	.0426	2.4	1.496	.0250
5.7	3.553	.0593	4.0	2.493	.0416	2.3	1.434	.0239
5.6	3.491	.0582	3.9	2.431	.0406	2.2	1.371	.0229
5.5	3.428	.0572	3.8	2.369	.0395	2.1	1.309	.0218
5.4	3.366	.0562	3.7	2.306	.0385	2.0	1.247	.0208
5.3	3.304	.0551	3.6	2.244	.0374	1.9	1.184	.0198
5.2	3.241	.0541	3.5	2.182	.0364	1.8	1.122	.0187
5.1	3.179	.0530	3.4	2.119	.0354	1.7	1.060	.0177
5.0	3.117	.0520	3.3	2.057	.0343	1.6	.997	.0166
4.9	3.054	.0510	3.2	1.995	.0332	1.5	.935	.0156
4.8	2.992	.0499	3.1	1.932	.0322	1.4	.873	.0146
4.7	2.930	.0489	3.0	1.870	.0312	1.3	.810	.0135
4.6	2.867	.0478	2.9	1.808	.0302	1.2	.748	.0125
4.5	2.805	.0468	2.8	1.745	.0291	1.1	.686	.0114
4.4	2.743	.0458	2.7	1.683	.0281	1.0	.623	.0104

FIGURE 7

SYSTEM SIZING DATA

Rainfall, when expressed in G.P.M. can be applied to the table in Figure 8 to determine the sizes of the various components of the conventional roof drainage system, including roof drains, vertical leaders and horizontal drainage piping. Using Figure 8, the 312 G.P.M. rate of rainfall would require a 5 inch roof drain and leader as well as a 6 inch horizontal drainage line if a slope of 1/4 inch per foot were selected.

FLOW CAPACITY FOR STORM DRAINAGE SYSTEMS IN GALLONS PER MINUTE				
Pipe Diameter (Inches)	Roof Drain and Vertical Leaders (G.P.M.)	Horiz. Storm Drainage Piping G.P.M.		
		Slope – Inches Per Ft.		
		1/8	1/4	1/2
2	30	-	-	-
2-1/2	54	-	-	-
3	92	34	48	69
4	192	78	110	157
5	360	139	197	278
6	563	223	315	446
8	1208	479	679	958
10	-	863	1217	1725
12	-	1388	1958	2775
15	-	2479	3500	4958

FIGURE 8

ROOF DRAINS

FLO-SET® Control Flow Features

The JOSAM FLO-SET® Roof Drain has four straight weirs incorporated in the vane collar assembly. The vane collar is 6" high to satisfy water storage up to a 6" maximum on a sloped roof. The weirs in the vane collar assembly are adjustable to permit a minimum peak flow of 15 G.P.M. to a maximum peak flow of 420 G.P.M. at the 6" elevation.

28600 FLO-SET® ROOF DRAIN

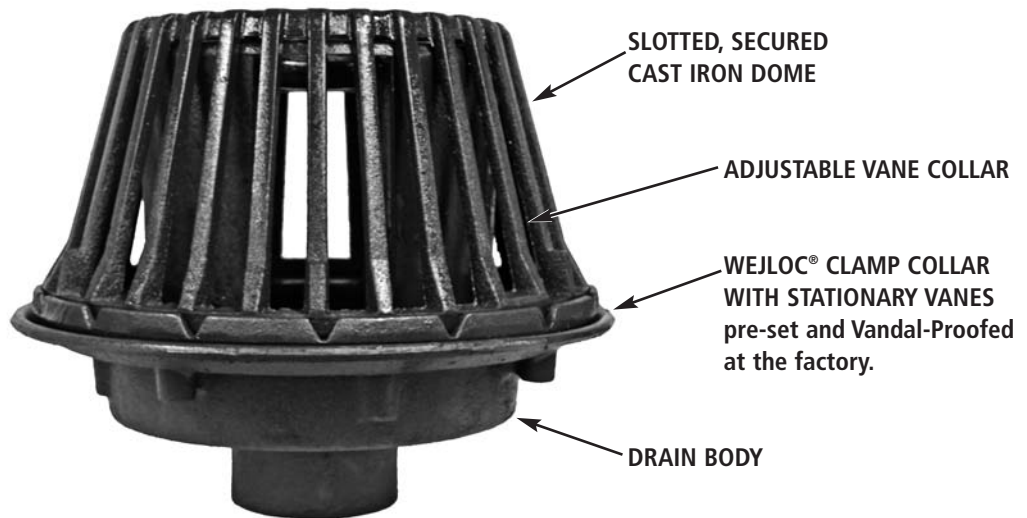
BENEFITS OF CONTROL FLOW DRAINAGE

REDUCED DRAINAGE COSTS

Controlled Flow can account for installation savings from reduction in the size of roof drains, leaders and horizontal drainage piping.

REDUCED STORM DAMAGE

Delaying rate of water flow from roof lessens occurrence of storm system overflows, especially in areas utilizing combined sewers.



The correct weir opening to fill any requirement is accomplished by means of a calibrated setting. From information received concerning the location of the project, the size and quantity of drains, maximum storage depth and peak flow rate, the proper adjustment is pre-set by JOSAM before shipping.



STATIONARY VANES AND ADJUSTABLE COLLAR

This combined weir arrangement permits water storage up to 6" maximum. The straight weir is the only weir able to produce the same basic type of flow pattern. It is the only type of weir, therefore, that is ideal or practical for adjustable purposes.

ADJUSTABLE VANE COLLAR

The adjustable vane collar is marked with 18 different weir openings thereby permitting controlled discharge flow rates to a maximum of 420 G.P.M. The correct weir opening can be provided to fulfill the exact needs of any given controlled flow application involving flat or sloped roofs.

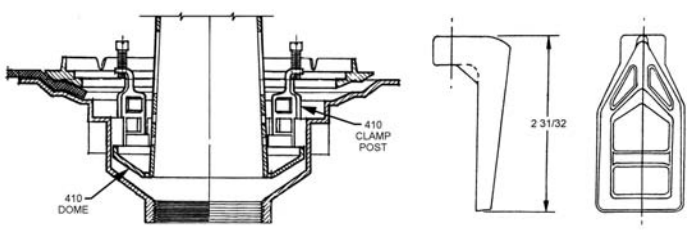
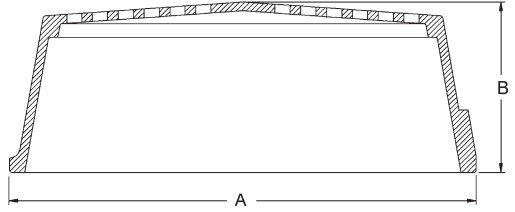
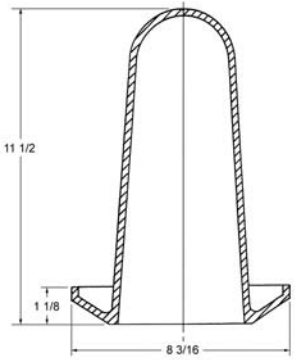
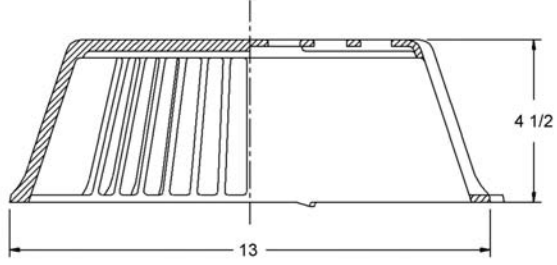
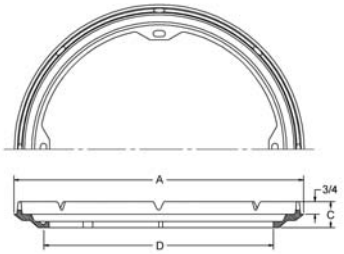
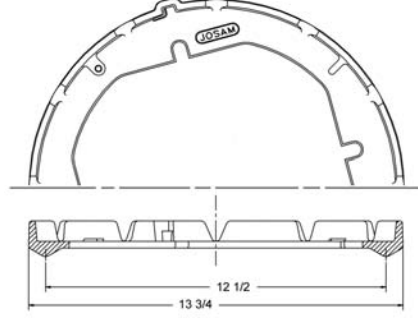
TOP VIEW OF COMPLETE ASSEMBLY

with Vandal-Proofed weirs and secured cast iron dome.

ROOF DRAINS

Replacement Parts

Josam introduced the first non-puncturing clamping device for roof drains in the 1920's. By casting lugs into the body and flat tabs onto the clamp ring, the membrane could be clamped between the drain body and clamp ring using the 410 Clamp Posts. The original design can be identified in the field by the use of these clamp posts to secure the body to the clamp ring. The 410 and 4110 Series replacement parts below are for use with these original drains. Please use these drawings to check dimensions carefully as replacement parts are not returnable.

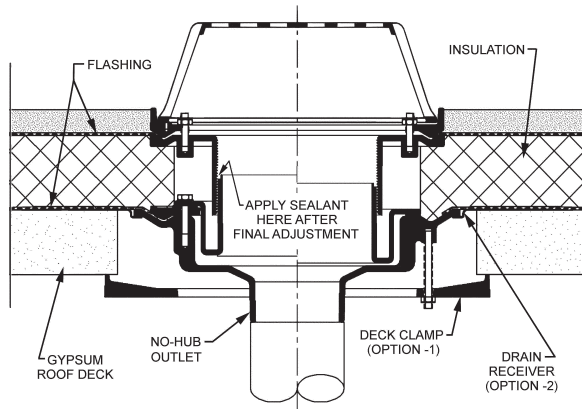
410 CLAMP POST PACK					4110 C.I. DOME		Use with 410 Clamp Ring																																					
																																												
<table border="1"> <thead> <tr> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>010245</td> <td>Clamp Post Pack (Four to a Pack)</td> </tr> </tbody> </table>					Part No.	Description	010245	Clamp Post Pack (Four to a Pack)	<table border="1"> <thead> <tr> <th>Type</th> <th>Part No.</th> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>4114 O.S.</td> <td>029240</td> <td>12-1/4</td> <td>5-3/8</td> </tr> <tr> <td>4116</td> <td>029350</td> <td>14-1/6</td> <td>5-3/8</td> </tr> <tr> <td>4118</td> <td>029420T</td> <td>16-3/8</td> <td>6-13/32</td> </tr> </tbody> </table>		Type	Part No.	A	B	4114 O.S.	029240	12-1/4	5-3/8	4116	029350	14-1/6	5-3/8	4118	029420T	16-3/8	6-13/32																		
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ROOF DRAINS

ROOF DRAINS

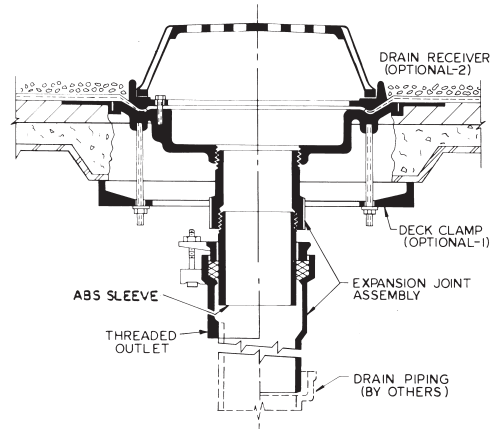
Typical Installations

GYPSUM ROOF DECK SYSTEM



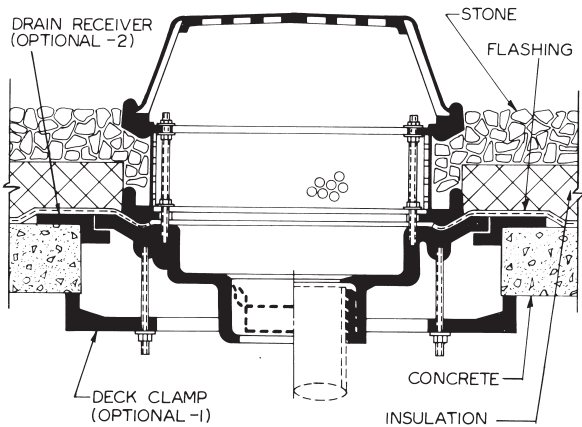
21500-AE Series

TYPICAL ROOF CONSTRUCTION



21500 Series with 26200 Series EXPANSION JOINT

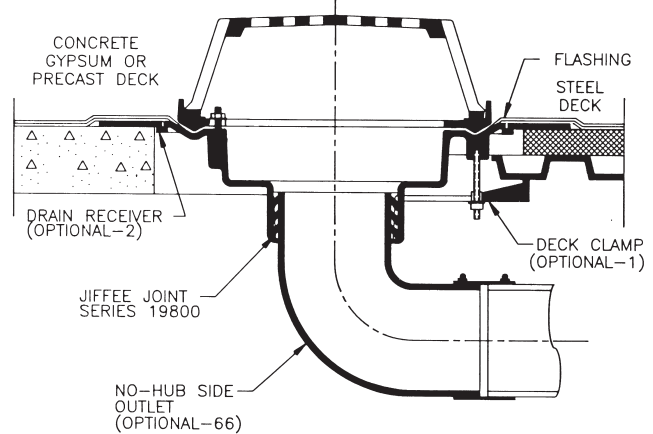
TYPICAL INSULATED ROOF MEMBRANE SYSTEM



21500-IRMA Series

PRECAST CONCRETE DECK

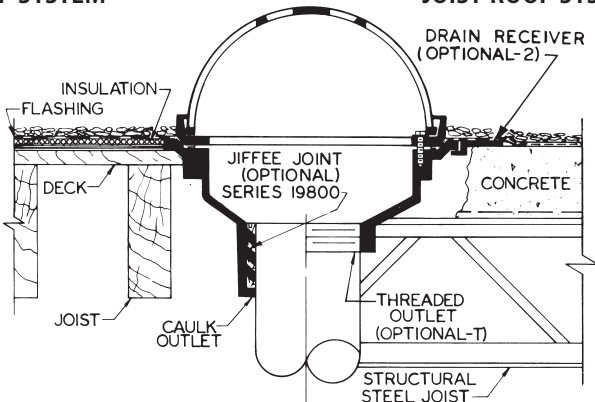
STEEL ROOF DECK



21500-66 Series

WOOD JOIST ROOF SYSTEM

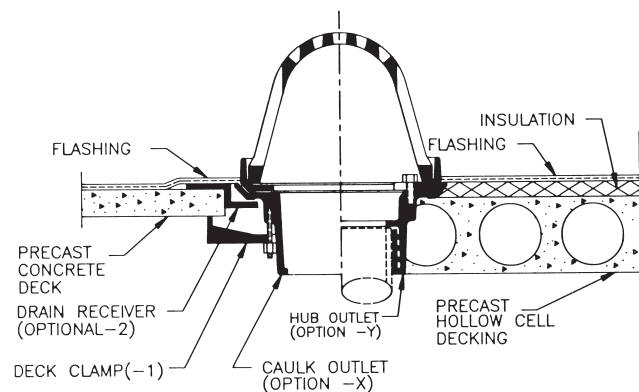
STRUCTURAL STEEL JOIST ROOF SYSTEM



22010 Series

PRECAST SOLID CONCRETE ROOF DECK SYSTEM

PRECAST HOLLOW CELL ROOF DECK SYSTEM



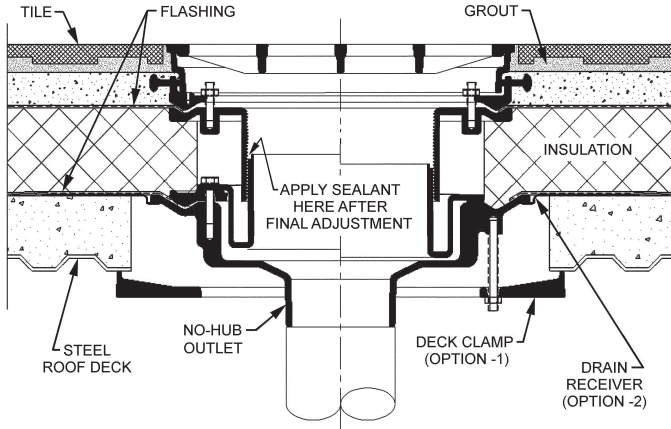
22080 Series

ROOF DRAINS

ROOF DRAINS

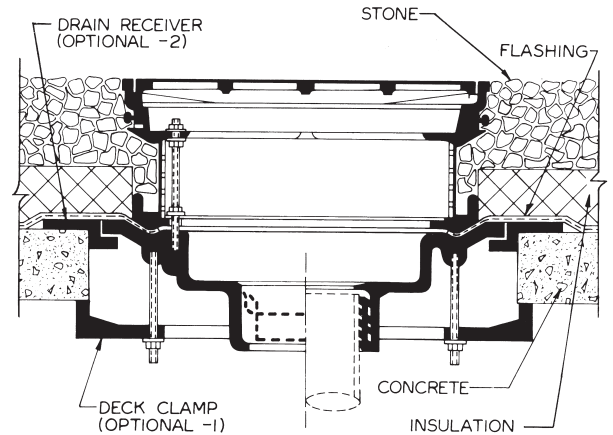
Typical Installations

STEEL-SUPPORTED BUILT-UP ROOF DECK SYSTEM



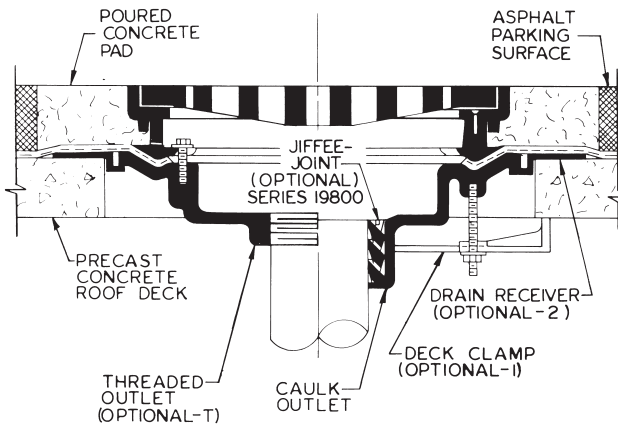
23500-AE Series Promenade Roof Drain

TYPICAL INSULATED ROOF MEMBRANE SYSTEM



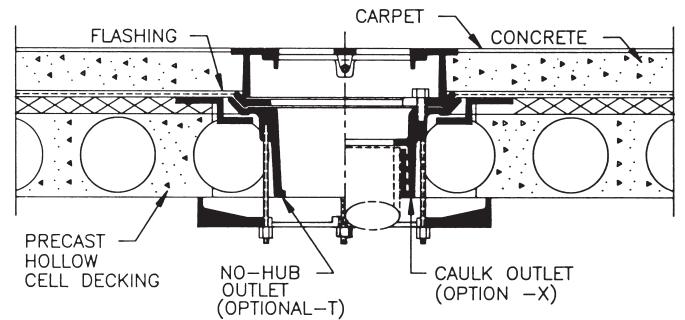
23500-IRMA Series

CONCRETE DECK WITH ASPHALT PARKING SURFACE



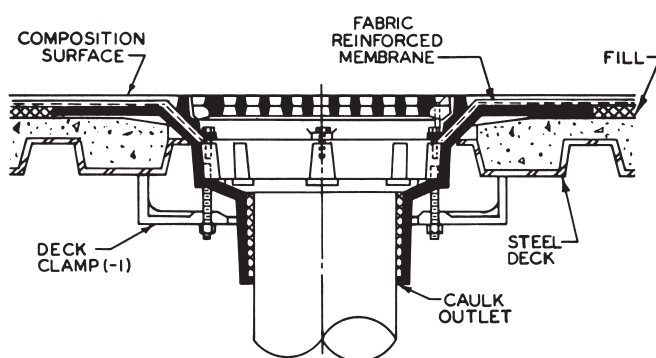
23510 Series Promenade Roof Drain

PRECAST HOLLOW CELL ROOF DECK



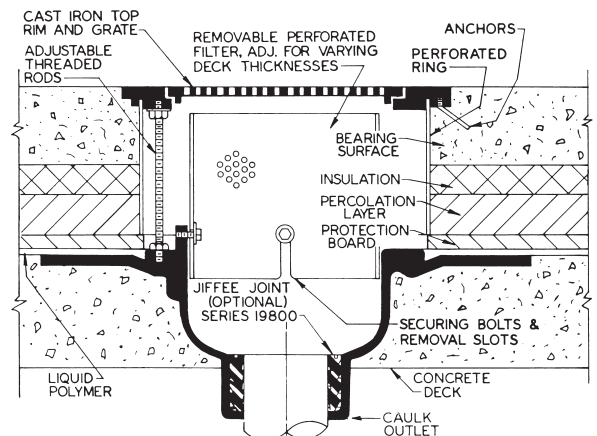
23730 Series Promenade Roof Drain

STEEL DECK CONCRETE SYSTEM WITH COMPOSITION MEMBRANE SURFACE



24020 Series SUPER-FLO® Composition Deck Drain

ALL-LEVEL DRAINAGE PROMENADE DECK



24200 Series ALL-LEVEL Drain

21500 SERIES

LARGE SUMP

APPLICATION

Used on roofs of any size, for any type of construction. Large slotted dome provides maximum free area for quick drainage of rainwater and protects the drain sump and connected piping from debris. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body.

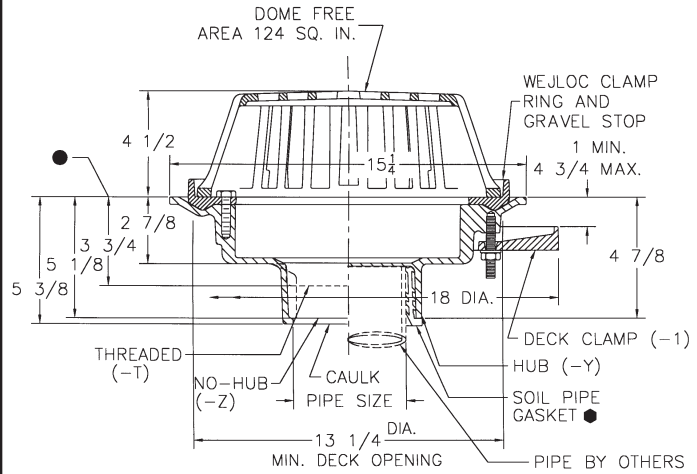
SPECIFICATION

JOSAM 21500 Series coated cast iron Roof Drain, large polypropylene locking dome, WEJLOC® non-puncturing clamp ring with integral gravel stop, large sump with wide roof flange and bottom outlet.

Available Options

▼ -AE	LEVELEZE® Adjustable Ext.	▼ -16	* Internal Waterguard
▼ -AER	Adjustable Extension Using Threaded Rods	-17	* 2" High Solid Clamping Collar
▼ -IRMA	Perforated Stainless Steel Extension	▼ -19	Clamp Collar w/Perforated SS Gravel Guard
-CR	Clamping Drain Receiver	-20	Galv. Cast Iron Parts
-1	Deck Clamp Assembly	-21	Galv. Cast Iron Dome Only
-1C	Drain Receiver Clips (Min. Deck Opening 16.5" Dia.)	-22	Cast Iron Dome
-2	Drain Receiver	-23	Rough Bronze Dome
-3	Deck Clamp Assembly and Drain Receiver	-26	Aluminum Dome
-3C	Drain Receiver and Drain Receiver Clips	-33	Stainless Mesh Screen-Covered Dome
-4	Secondary Flashing Clamp (use with -AE only)	-VP	Vandal-Proof Dome
▼ -6	Extra Wide Flange Drain Body, 2"- 6"-X only	OUTLETS:	
-10	Fixed Ext. Collar, C.I., (Specify Hgt.) 4" Std.	-66	No-Hub Side Outlet, 2"-6"
-10-20	Fixed Ext. Collar, Galv., (Specify Hgt.) 4" Std.	-T	Threaded Outlet
		-X	Inside Caulk Outlet
		-Y	Hub Outlet w/Gasket, 2"-4"
		-Z	No-Hub Spigot Outlet

* -16 and -17 cannot be furnished together.



- CONFORMS WITH ASTM-C564.
- THIS DIM. IS 5-3/4" FOR 21508-T.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
21502	2	36	21506	6	40
21503	3	37	21508	8	42
21504	4	38	21509-Z	10†	43
21505	5	39	†10" AVAILABLE IN NO-HUB ONLY.		

21500-6 SERIES

LARGE SUMP with -6 Extra Wide Flange Drain Body

APPLICATION

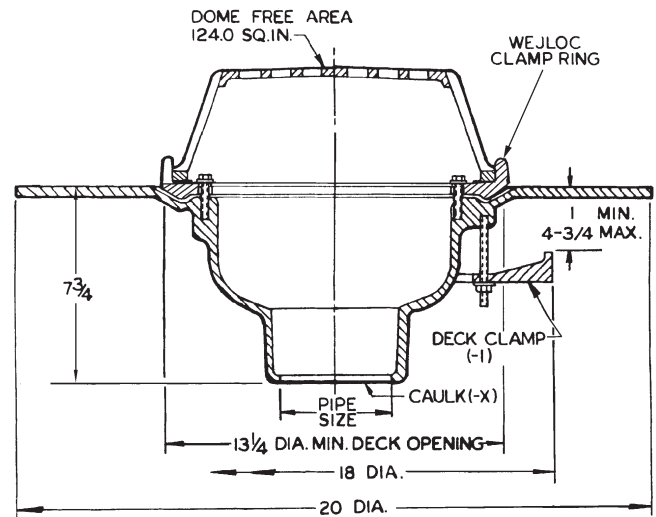
Used on roofs of any size, typically concrete decking, large slotted dome ensures maximum free area for quick drainage of rainwater and protects the drain sump and connected piping from debris. WEJLOC® compression-flashing clamp holds the membrane or flashing securely to the drain body. Extra wide flange provides positive support and large bonding surface for liquid applied membranes.

SPECIFICATION

JOSAM 21500-6 Series coated cast iron Roof Drain, large polypropylene locking dome. WEJLOC® non-puncturing clamp ring with integral gravel stop, large sump with extra-wide roof flange and bottom outlet inside caulk connection.

OPTIONS N/A:

-AER, -CR, -1C, -2, -3, -3C, -4



FOR OUTLET TYPE SPECIFY -X

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
21502-6	2	77	21505-6	5	80
21503-6	3	78	21506-6	6	81
21504-6	4	79			

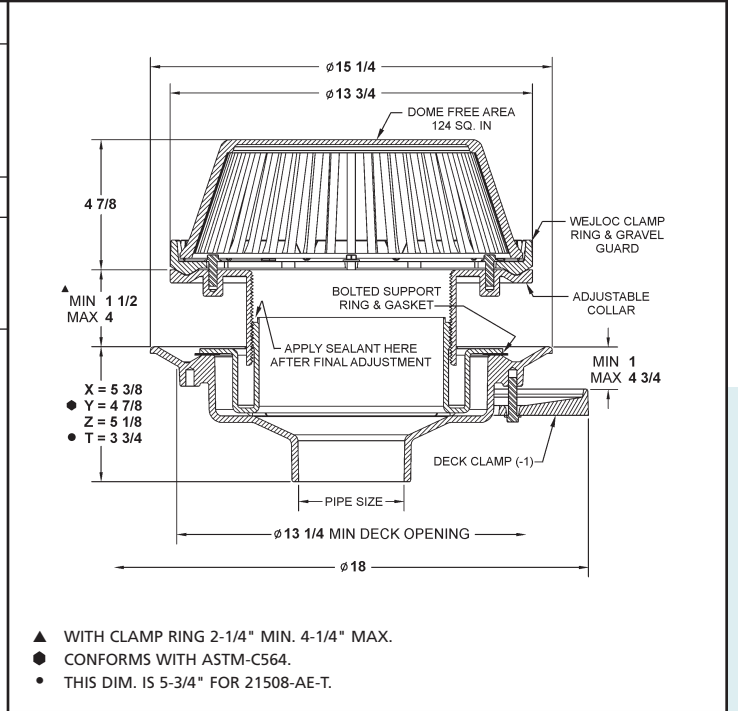
21500-AE SERIES LARGE SUMP with -AE Threaded Adjustable Extension

APPLICATION

Used on roofs of any size, for any type of construction. Large slotted dome provides maximum free area for quick drainage of rainwater and protects the drain sump and connected piping from debris. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body. LEVELEZE® adjustable extension accommodates insulation of variable thickness.

SPECIFICATION

JOSAM 21500-AE Series coated cast iron LEVELEZE® Roof Drain, large polypropylene locking dome, WEJLOC® non-puncturing clamp ring with integral gravel stop, bolted support ring, adjustable top with wide roof flange, large sump with anchor flange and bottom outlet.



- ▲ WITH CLAMP RING 2-1/4" MIN. 4-1/4" MAX.
- CONFORMS WITH ASTM-C564.
- THIS DIM. IS 5-3/4" FOR 21508-AE-T.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
21502-AE	2	60	21506-AE	6	58
21503-AE	3	59	21508-AE	8	61
21504-AE	4	59	21509-AE-Z	10†	62
21505-AE	5	58	†10" AVAILABLE IN NO-HUB ONLY.		

21500-AER SERIES LARGE SUMP with -AER Adjustable Ext. Using Threaded Rods

APPLICATION

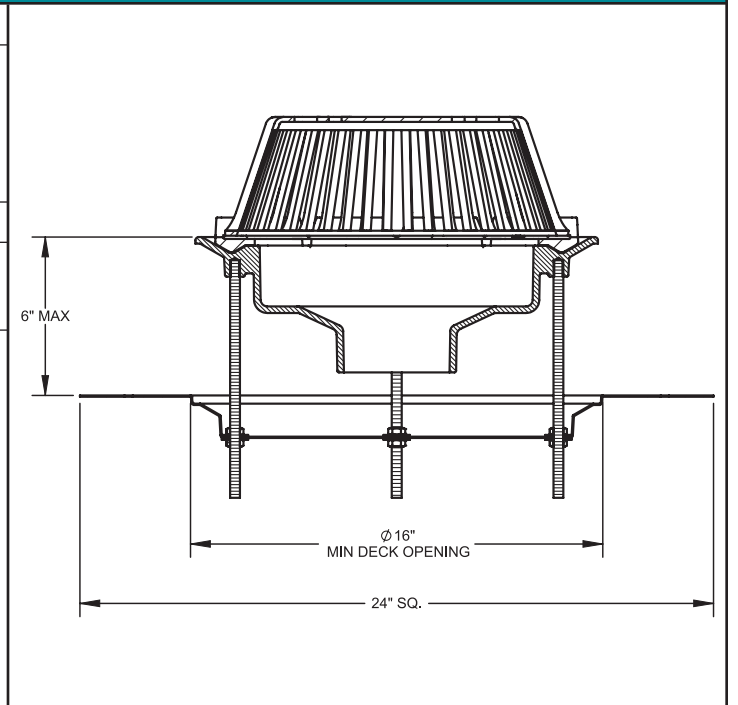
Used on roofs of any size, for any type of construction. Large slotted dome provides maximum free area for quick drainage of rainwater and protects the drain sump and connected piping from debris. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body. Threaded rods attached to drain body and receiver permit the raising and lowering of roof drain body to meet the insulation thickness at the required elevation.

SPECIFICATION

JOSAM 21500-AER Series coated cast iron roof drain, large polypropylene locking dome, WEJLOC® non-puncturing clamp ring, large sump with adjustable extension rods, drain receiver and bottom outlet.

OPTIONS N/A:

-AE, -1, -1C, -2, -3, -3C, -4, -10, -10-20



FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
21502-AER	2	44	21506-AER	6	48
21503-AER	3	45	21508-AER	8	50
21504-AER	4	46	21509-AER-Z	10†	51
21505-AER	5	47	†10" AVAILABLE IN NO-HUB ONLY.		

21500-16 SERIES

LARGE SUMP with -16 Internal Waterguard

APPLICATION

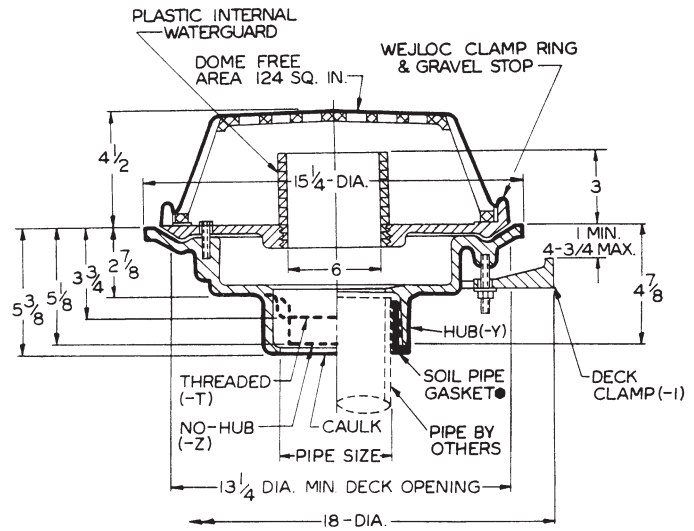
Used on roofs of any size, for any type of construction where constant flooding is required at a predetermined water depth. It may also be used on conventional roofs as a safety overflow, which receives water only when the build-up is greater than the height of the standpipe. Large slotted dome provides maximum free area for quick drainage of rainwater and protects the drain sump and connected piping from debris. WEJLOC® compression-flashing clamp holds the membrane or flashing securely to the drain body.

SPECIFICATION

JOSAM 21500-16 Series coated cast iron Roof Drain, internal waterguard type, and large polypropylene locking dome. WEJLOC® non-puncturing clamp ring with integral gravel stop, secured plastic internal waterguard for 3" water depth and large sump with wide roof flange and bottom outlet.

OPTIONS N/A:

-4, -17



● CONFORMS WITH ASTM-C564.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
21502-16	2	41	21505-16	5	44
21503-16	3	42	21506-16	6	45
21504-16	4	43			

21500-19 SERIES

LARGE SUMP with -19 Perforated Stainless Steel Gravelguard

APPLICATION

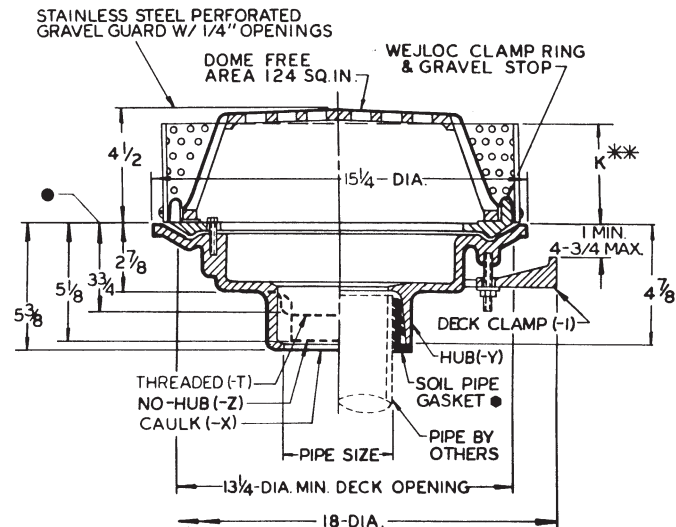
Used on flat roofs where gravel ballast is employed to anchor the membrane. Large slotted dome provides maximum free area for quick drainage of rainwater and protects the drain sump and connected piping from debris. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body. Perforated stainless steel gravel guard and restrains gravel ballast from dome and drain sump.

SPECIFICATION

JOSAM 21500-19 Series coated cast iron Roof Drain, large polypropylene locking dome, WEJLOC® non-puncturing clamp ring with integral gravel stop and stainless perforated gravel guard and large sump with wide roof flange and bottom outlet.

OPTION N/A:

-4



● CONFORMS WITH ASTM-C564.

• THIS DIM IS 5-3/4" FOR 21508-19-T.

** "K" DIM. SPECIFY ON ORDER, 4" MAX.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
21502-19	2	36	21506-19	6	40
21503-19	3	37	21508-19	8	42
21504-19	4	38	21509-19-Z	10†	43
21505-19	5	39			

†10" AVAILABLE IN NO-HUB ONLY.

21500-IRMA SERIES LARGE SUMP with Perforated Stainless Steel Extension

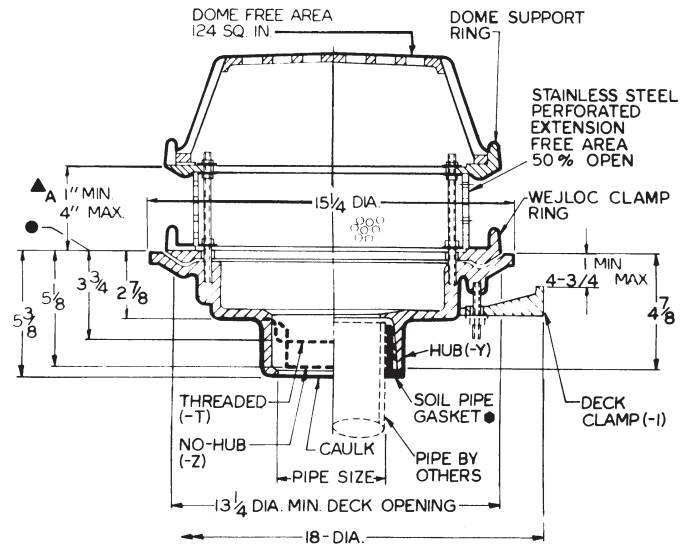
APPLICATION

Used on roof systems where the "Insulated Membrane Assembly," also known as, "Inverted Membrane Assembly" is specified. Insulation is installed on top of the waterproof membrane and gravel ballast is applied over the insulation. Drain is furnished with a perforated stainless steel extension, made to the specified height of the insulation combined with the depth of the ballast. Large slotted dome provides maximum free area for quick drainage of rainwater and protects the drain sump and connected piping from debris. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body.

SPECIFICATION

JOSAM 21500-IRMA Series coated cast iron Roof Drain, large polypropylene locking dome, dome support ring, perforated stainless steel extension filter, WEJLOC® non-puncturing clamp ring and large sump with wide roof flange and bottom outlet.

OPTION N/A:
-4



- CONFORMS WITH ASTM-C564.
- ▲ "A" DIM. SPECIFY ON ORDER.
- THIS DIM. IS 5-3/4" FOR 21508-IRMA-T.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
21502-IRMA	2	39	21506-IRMA	6	43
21503-IRMA	3	40	21508-IRMA	8	45
21504-IRMA	4	41	21509-IRMA-Z	10†	46
21505-IRMA	5	42	†10" AVAILABLE IN NO-HUB ONLY.		

21500-IRMA-6 SERIES LARGE SUMP with -6 Wide Flange & Perforated SS Extension

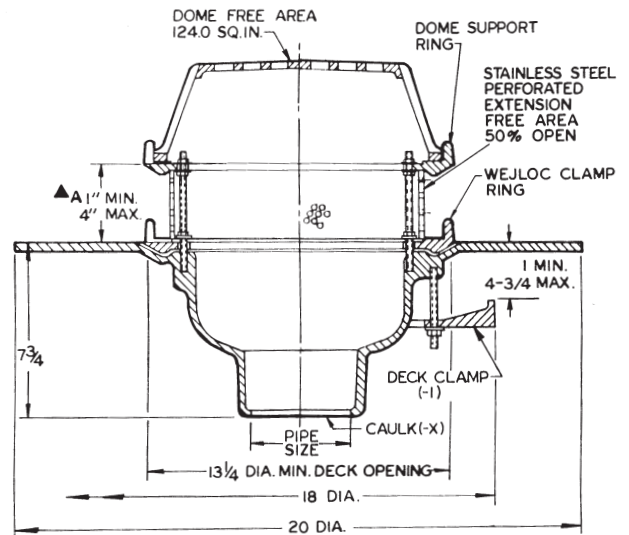
APPLICATION

Used on roof systems where the "Insulated Membrane Assembly," also known as, "Inverted Membrane Assembly" is specified. Insulation is installed on top of the waterproof membrane and gravel ballast is applied over the insulation. Drain is furnished with a perforated stainless steel extension, made to the specified height of the insulation combined with the depth of the ballast. Large slotted dome provides maximum free area for quick drainage of rainwater and protects the drain sump and connected piping from debris. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body. With extra wide deck flange for positive support and large bonding surface for liquid applied membranes.

SPECIFICATION

JOSAM 21500-IRMA-6 Series coated cast iron Roof Drain, large polypropylene locking dome, dome support ring, perforated stainless steel extension filter, WEJLOC® non-puncturing clamp ring and large sump with extra wide roof flange and bottom outlet inside caulk connection.

OPTION N/A:
-4



- ▲ "A" DIM. SPECIFY ON ORDER

FOR OUTLET TYPE SPECIFY -X

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
21502-IRMA-6	2	77	21505-IRMA-6	5	80
21503-IRMA-6	3	78	21506-IRMA-6	6	81
21504-IRMA-6	4	79			

22010 SERIES

MEDIUM SUMP, Beehive Dome

APPLICATION

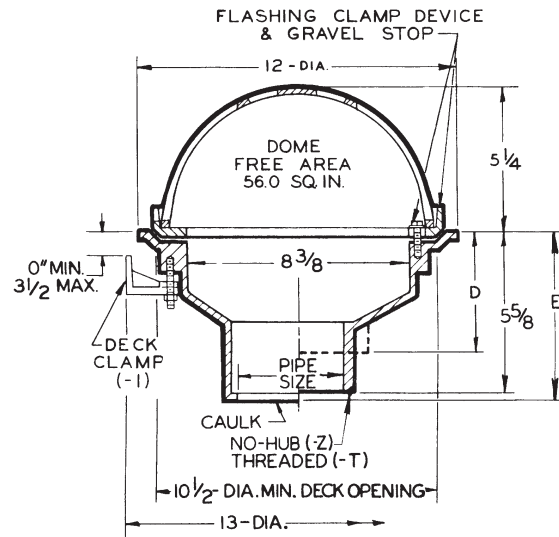
Used on mid-sized roofs of any construction where a medium-sized drain is required. Flashing clamp holds the membrane or flashing securely to the drain body. Medium-sized beehive dome provides ample drainage for smaller roof decks and intercepts debris.

SPECIFICATION

JOSAM 22010 Series coated cast iron Roof Drain, medium beehive dome, non-puncturing clamp ring with integral gravel stop and medium sump with roof flange and bottom outlet.

Available Options

- | | |
|-------------------------------------------------------------|-----------------------------------------------|
| -1 Deck Clamp Assembly | -19 Clamp Collar w/Perforated SS Gravel Guard |
| -1C Drain Receiver Clips (Min. Deck Opening 13.75" Dia.) | -20 Galvanized Cast Iron Parts |
| -2 Drain Receiver | -21 Galvanized Cast Iron Dome Only |
| -3 Deck Clamp Assembly and Drain Receiver | -23 Rough Bronze Dome |
| -3C Drain Receiver and Drain Receiver Clips | -VP Vandal-Proof Dome |
| -10 Fixed Ext. Collar, Cast Iron, (Specify Hgt) 1" Std. | OUTLETS: |
| -10-20 Fixed Ext. Collar, Galvanized, (Specify Hgt) 1" Std. | -66 No-Hub Side Outlet |
| -17 2" High Solid Clamping Collar | -T Threaded Outlet |
| | -X Inside Caulk Outlet |
| | -Z No-Hub Spigot Outlet |



FOR OUTLET TYPE SPECIFY -T, -X or -Z

TYPE NO.	PIPE SIZE	D	E	LBS.
22012	2	4-3/4	6-1/4	30
22013	3	4-3/4	6-1/4	30
22014	4	4-1/2	6-1/4	30
22015	5	4-3/8	6	30
22016	6	4	5-3/4	30

22080 SERIES

SMALL SUMP, High Dome

APPLICATION

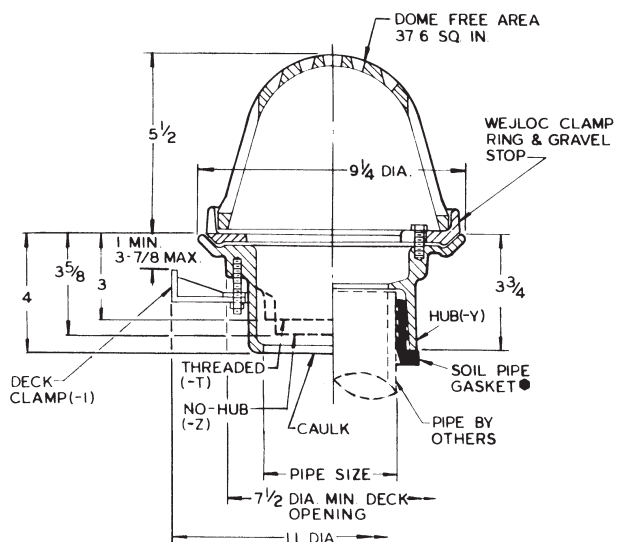
Used on smaller roofs, gutters or valleys of any construction. Small diameter pan is particularly adaptable to gutters and valleys where limited space is available. WEJLOC® compression flashing clamp holds the membrane or flashing to the drain body. Small beehive dome provides ample drainage for small roof decks, gutters and valleys, and intercepts debris.

SPECIFICATION

JOSAM 22080 Series coated cast iron Roof Drain with beehive dome, WEJLOC® non-puncturing clamp ring with integral gravel stop and small sump with roof flange and bottom outlet.

Available Options

- | | |
|--------------------------------------------------------------|------------------------------------|
| -1 Deck Clamp Assembly | -20 Galvanized Cast Iron Parts |
| -1C Drain Receiver Clips (Min. Deck Opening 10.75" Dia.) | -21 Galvanized Cast Iron Dome Only |
| -2 Drain Receiver | -23 Rough Bronze Dome |
| -3 Deck Clamp Assembly and Drain Receiver | -VP Vandal-Proof Dome |
| -3C Drain Receiver and Drain Receiver Clips | OUTLETS: |
| -10 Fixed Extension Collar, Cast Iron, (Specify Hgt) 1" Std. | * -TSO Threaded Side Outlet |
| -10 -20 Fixed Ext. Collar, Galv., (Specify Hgt) 1" Std. | -T Threaded Outlet |
| -17 2" High Solid Clamping Collar | -X Inside Caulk Outlet |
| | -Y Hub Outlet w/Gasket |
| | -Z No-Hub Spigot Outlet |



● CONFORMS WITH ASTM-C564.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.
22082	2	13
22083	3	13
22084	4	13

* Standard Drain Receiver cannot be used with -TSO option. Contact Factory.
Deck Clamp cannot be used with -TSO option in 4" size.

22100 SERIES SMALL SUMP, Combination Drain/Overflow

APPLICATION

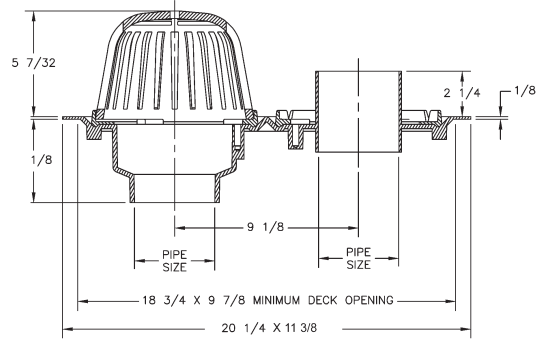
Used on small roofs, gutters or valleys of any construction. Integral outlets for roof and overflow drainage in one-piece body for limited space installation. WEJLOC® compression flashing clamps hold the membrane or flashing to the drain body. Small beehive domes provide ample drainage for small roof decks and intercept debris.

SPECIFICATION

JOSAM 22100 Series coated cast iron combination Roof Drain and Overflow Drain with cast iron domes, two WEJLOC® non-puncturing clamp rings with integral gravel stops, integral cast iron standpipe in cast iron deck flange and dual no-hub bottom outlets.

Available Options

- 10 Fixed Extension Collar, Cast Iron, (Specify Hgt) 1" Std.
 - 20 Galvanized Cast Iron Parts
 - 23 Rough Bronze Dome
 - 28 Cast Iron Dome for Overflow Drain
 - 33 Stainless Mesh Screen-Covered Dome
 - VP Vandal-Proof Dome
 - IRMA Perforated Stainless Steel Extension
- OUTLETS:**
- Z No-Hub Spigot Outlets



FOR OUTLET TYPE SPECIFY -Z

TYPE NO.	PIPE SIZE	LBS.
22102	2	37
22103	3	37
22104	4	38

22200 SERIES MEDIUM SUMP, Combination Drain/Overflow

APPLICATION

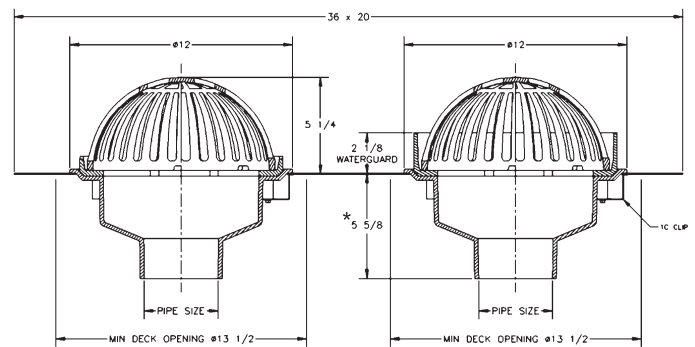
Combination Roof Drain/Overflow Drain. One-piece double drain receiver positions roof drain, overflow drain side by side, requiring single deck penetration. Medium sumps selected for anticipated flow. Combination non-puncturing clamp ring, gravel stop ensures watertight seal at the surface.

SPECIFICATION

JOSAM 22200 Series coated cast iron 12" diameter Combination Roof Drain and Overflow Drain, one WEJLOC® non-puncturing clamp ring with integral gravel stop and cast iron dome, one non-puncturing clamp ring with solid waterguard, double drain receiver and clips and cast iron beehive dome.

Available Options

- 10 Fixed Extension Collar, Cast Iron, (Specify Hgt) 1" Std.
 - 20 Galvanized Cast Iron Parts
 - 23 Rough Bronze Domes
 - 33 Stainless Mesh Screen-Covered Domes
 - VP Vandal-Proof Domes
 - IRMA Perforated Stainless Steel Extensions
- OUTLETS:**
- T Threaded Outlets
 - X Inside Caulk Outlets
 - Z No-Hub Spigot Outlets



* 5-5/8" DIM. (BODY HGT.) VARIES BY OUTLET SIZE WITH -T AND -X CONNECTIONS.

FOR OUTLET TYPE SPECIFY -T, -X or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
22202	2	55	22205	5	55
22203	3	55	22206	6	55
22204	4	55			

22500 SERIES LARGE SUMP, Combination Drain/Overflow

APPLICATION

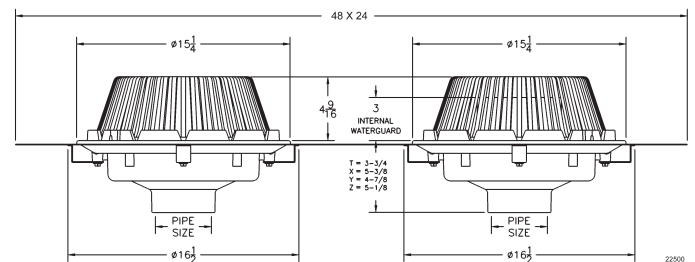
Combination Roof Drain/Overflow Drain. One-piece double drain receiver positions roof drain, overflow drain side by side, requiring single deck penetration. Large sumps selected for anticipated flow. Combination non-puncturing clamp ring, gravel stop ensure watertight seal at the surface.

SPECIFICATION

JOSAM 22500 Series coated cast iron 15" diameter Combination Roof Drain and Overflow Drain, one WEJLOC® non-puncturing clamp ring with integral gravel stop, one WEJLOC® non-puncturing clamp ring with internal waterguard, double drain receiver and clips and two large polypropylene locking domes.

Available Options

- 10 Fixed Extension Collar, Cast Iron, (Specify Hgt) 4" Std.
 - 20 Galvanized Cast Iron Parts
 - 23 Rough Bronze Domes
 - 28 Cast Iron Dome for Overflow Drains
 - 33 Stainless Mesh Screen-Covered Domes
 - VP Vandal-Proof Domes
 - IRMA Perforated Stainless Steel Extensions
- OUTLETS:**
- T Threaded Outlets
 - X Inside Caulk Outlets
 - Y Hub Outlets w/Gasket, 2"-4"
 - Z No-Hub Spigot Outlets



FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
22502	2	65	22506	6	65
22503	3	65	22508	8	65
22504	4	65	22509-Z	10†	65
22505	5	65			

† 10" AVAILABLE IN NO-HUB ONLY

23500 SERIES

LARGE SUMP, Promenade Top

APPLICATION

Used on promenade decks and roofs where foot traffic or light- to medium-weight vehicles will be present. Large square grate provides ample free area for proper drainage and has narrow slotted openings for pedestrian safety and for the interception of debris. WEJLOC® compression flashing clamp holds the membrane or flashing to the drain body.

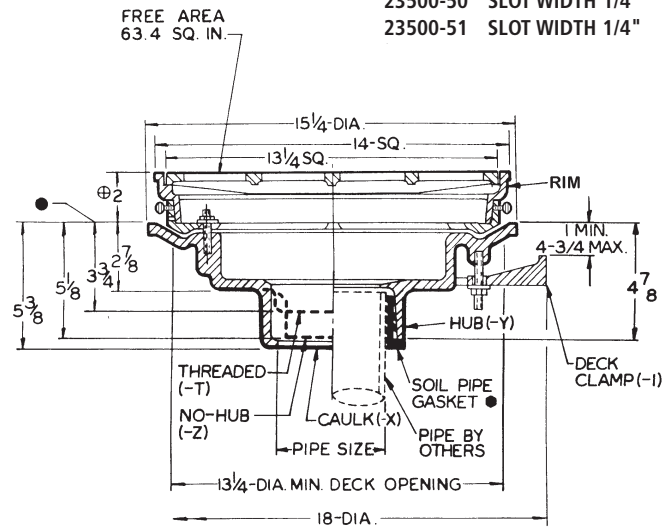
SPECIFICATION

JOSAM 23500 Series coated cast iron Roof Drain, square pedestrian grate set in square secured frame, WEJLOC® non-puncturing flashing collar with weepholes for 2" roof fill and large sump with wide roof flange and bottom outlet.

Available Options

- ▼ -AE LEVELEZE® Adjustable Extension
 - ▼ -IRMA Perforated Stainless Steel Ext.
 - CR Clamping Drain Receiver
 - PG Parking Grate, 110 Sq. In. Free Area
 - 1 Deck Clamp Assembly
 - 1C Drain Receiver Clips (Min. Deck Opening 16.5" Dia.)
 - 2 Drain Receiver
 - 3 Deck Clamp Assembly and Drain Receiver
 - 3C Drain Receiver and Drain Receiver Clips
 - 4 Secondary Flashing Clamp (use with -AE only)
 - ▼ -6 Extra Wide Flange Drain Body, (2" through 6", -X only)
 - 10 Fixed Ext. Collar, Cast Iron, (Specify Hgt) 4" Std.
 - 10-20 Fixed Ext. Collar, Galvanized, (Specify Hgt) 4" Std.
 - ▼ -18 Extra Deep Sump
 - 20 Galvanized Cast Iron Parts
 - 36 Ductile Iron Grate (Cast Iron Top Only)
 - 37-50 Heavy-Duty Ductile Iron Undergrate Laminated Top, Satin Finish Nikaloy
 - 37-51 Heavy-Duty Ductile Iron Undergrate Laminated Top, Satin Finish Bronze
 - 50 Cast Iron Undergrate Laminated Top, Satin Finish Nikaloy
 - 51 Cast Iron Undergrate Laminated Top, Satin Finish Bronze
 - VP Vandal-Proof Grate
- OUTLETS:**
- 66 No-Hub Side Outlet, 2" -6"
 - T Threaded Outlet
 - X Inside Caulk Outlet
 - Y Hub Outlet w/Gasket, 2" -4"
 - Z No-Hub Spigot Outlet

- 23500 SLOT WIDTH 5/16"
- 23500-50 SLOT WIDTH 1/4"
- 23500-51 SLOT WIDTH 1/4"



- CONFORMS WITH ASTM-C564.
- THIS DIM. IS 5-3/4" FOR 23508-T.
- ⊕ ADD 1/4" WHEN FURNISHED WITH NIKALOY OR BRONZE TOP.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
23502	2	57	23506	6	59
23503	3	57	23508	8	61
23504	4	58	23509-Z	10†	62
23505	5	58	†10" AVAILABLE IN NO-HUB ONLY.		

23500-6 SERIES

LARGE SUMP with -6 Extra Wide Flange Drain Body

APPLICATION

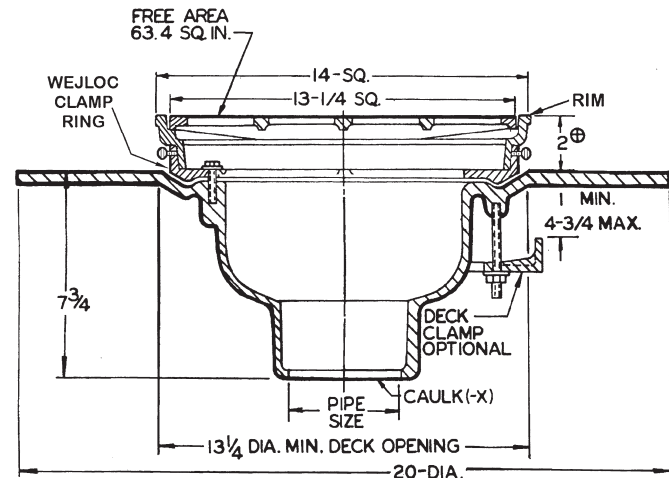
Used on promenade decks and roofs where foot traffic or light- to medium-weight vehicles will be present. Large square grate ensures ample free area for proper drainage and has narrow slot openings for pedestrian safety and the interception of debris. WEJLOC® compression flashing clamp holds the membrane or flashing to the drain body. Extra-wide deck flange provides positive support and large bonding surface for liquid applied membranes.

SPECIFICATION

JOSAM 23500-6 Series coated cast iron Roof Drain, square pedestrian grate set in a square secured frame, WEJLOC® non-puncturing flashing collar with weepholes for 2" roof fill and large sump with extra wide roof flange and bottom outlet, inside caulk connection.

- OPTIONS N/A:
-CR, -1C, -2, -3, -3C, -4

- 23500-6 SLOT WIDTH 5/16"
- 23500-6-50 SLOT WIDTH 1/4"
- 23500-6-51 SLOT WIDTH 1/4"



- ⊕ ADD 1/4" WHEN FURNISHED WITH NIKALOY OR BRONZE TOP.

FOR OUTLET TYPE SPECIFY -X

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
23502-6	2	80	23505-6	5	81
23503-6	3	80	23506-6	6	82
23504-6	4	81			

23500-AE SERIES LARGE SUMP with -AE Threaded Adjustable Extension

APPLICATION

Used on promenade decks and roofs where foot traffic or light- to medium-weight vehicles will be present. Large square grate provides ample free area for proper drainage and has narrow slotted openings for pedestrian safety and for the interception of debris. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body. Adjustable top accommodates insulation of roof fill depth and ensures proper grate elevation at the finished deck surface.

SPECIFICATION

JOSAM 23500-AE Series coated cast iron LEVELEZE® Roof Drain, square pedestrian grate set in square secured frame, WEJLOC® non-puncturing flashing collar with weep-holes for 2" roof fill, bolted support ring, adjustable top with wide roof flange and large sump with anchor flange and bottom outlet.

23500-AE SLOT WIDTH 5/16"
 23500-AE-50 SLOT WIDTH 1/4"
 23500-AE-51 SLOT WIDTH 1/4"

● CONFORMS WITH ASTM-C564.
 ● THIS DIM. IS 5-3/4" FOR 23508-AE-T.
 ▲ WITH CLAMP RING 2-1/4" MIN. 4-1/4" MAX.
 ⊕ ADD 1/4" WHEN FURNISHED WITH NIKALOY OR BRONZE TOP.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
23502-AE	2	82	23506-AE	6	80
23503-AE	3	82	23508-AE	8	80
23504-AE	4	81	23509-AE-Z	10†	81
23505-AE	5	81	† 10" AVAILABLE IN NO-HUB ONLY		

23500-18 SERIES with -18 EXTRA DEEP SUMP

APPLICATION

Used on promenade decks and roofs where foot traffic or light- to medium-weight vehicles will be present. Large square grate provides ample free area for proper drainage and has narrow slotted openings for pedestrian safety and for the interception of debris. Deep sump accommodates heavy flow. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body.

SPECIFICATION

JOSAM 23500-18 Series coated cast iron Roof Drain, square pedestrian grate set in square secured frame, WEJLOC® non-puncturing flashing collar with weep-holes, for 2" roof fill, deep sump with wide roof flange and bottom outlet.

23500-18 SLOT WIDTH 5/16"
 23500-18-50 SLOT WIDTH 1/4"
 23500-18-51 SLOT WIDTH 1/4"

⊕ ADD 1/4" WHEN FURNISHED WITH NIKALOY OR BRONZE TOP.

FOR OUTLET TYPE SPECIFY -X or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
23502-18	2	63	23505-18	5	65
23503-18	3	63	23506-18	6	66
23504-18	4	64			

23500-IRMA SERIES LARGE SUMP with Perforated Stainless Steel Extension

APPLICATION

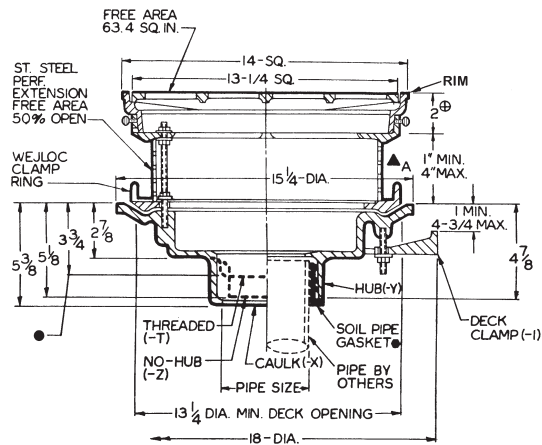
Used on promenade decks and roofs where pedestrian traffic will be present and where the "Insulated Membrane Assembly," also known as, "Inverted Membrane Assembly" is specified. Insulation is installed on top of the waterproof membrane and gravel ballast is applied over the insulation. Drain is furnished with a perforated stainless steel extension, made to the specified height of the insulation combined with the depth of the ballast. Large square grate provides ample free area for proper drainage and has narrow slotted openings for pedestrian safety and for interception of debris. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body.

SPECIFICATION

JOSAM 23500-IRMA Series coated cast iron Roof Drain, square pedestrian grate set in square secured frame, frame support collar, perforated stainless steel extension filter, WEJLOC® non-puncturing clamp ring and large sump with wide roof flange and bottom outlet.

OPTION N/A:
-4

23500-IRMA SLOT WIDTH 5/16"
23500-IRMA-50 SLOT WIDTH 1/4"
23500-IRMA-51 SLOT WIDTH 1/4"



- ▲ "A" DIM. SPECIFY ON ORDER.
- CONFORMS WITH ASTM-C564.
- THIS DIM. IS 5-3/4" FOR 23508-IRMA-T.
- ⊕ ADD 1/4" WHEN FURNISHED WITH NIKALOY OR BRONZE TOP.

FOR OUTLET TYPE SPECIFY -T, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
23502-IRMA	2	59	23506-IRMA	6	61
23503-IRMA	3	59	23508-IRMA	8	63
23504-IRMA	4	60	23509-IRMA-Z	10†	64
23505-IRMA	5	60	† 10" AVAILABLE IN NO-HUB ONLY		

23500-IRMA-6 SERIES LARGE SUMP with -6 Wide Flange & Perforated SS Extension

APPLICATION

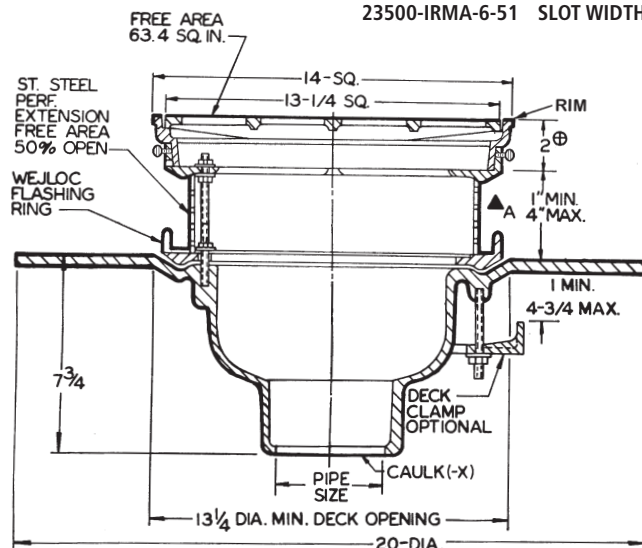
Used on promenade decks and roofs where pedestrian traffic will be present and where the "Insulated Membrane Assembly," also known as, "Inverted Membrane Assembly" is specified. Insulation is installed on top of the waterproof membrane and gravel ballast is applied over the insulation. Drain is furnished with a perforated stainless steel extension, made to the specified height of the insulation combined with the depth of the ballast. Large square grate provides ample free area for proper drainage and has narrow slotted openings for pedestrian safety and for interception of debris. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body. With extra-wide deck flange for positive support and large bonding surface for liquid applied membranes.

SPECIFICATION

JOSAM 23500-IRMA-6 Series coated cast iron Roof Drain, square pedestrian grate set in square secured frame, frame support collar, perforated stainless steel extension filter, WEJLOC® non-puncturing clamp ring and large sump with extra wide roof flange and bottom outlet inside caulk connection.

OPTION N/A:
-4

23500-IRMA-6 SLOT WIDTH 5/16"
23500-IRMA-6-50 SLOT WIDTH 1/4"
23500-IRMA-6-51 SLOT WIDTH 1/4"



- ▲ "A" DIM. SPECIFY ON ORDER.
- ⊕ ADD 1/4" WHEN FURNISHED WITH NIKALOY OR BRONZE TOP.

FOR OUTLET TYPE SPECIFY -X

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
23502-IRMA-6	2	80	23505-IRMA-6	5	81
23503-IRMA-6	3	80	23506-IRMA-6	6	82
23504-IRMA-6	4	81			

23510 SERIES LARGE SUMP with Extra Heavy-Duty Parking Grate

APPLICATION

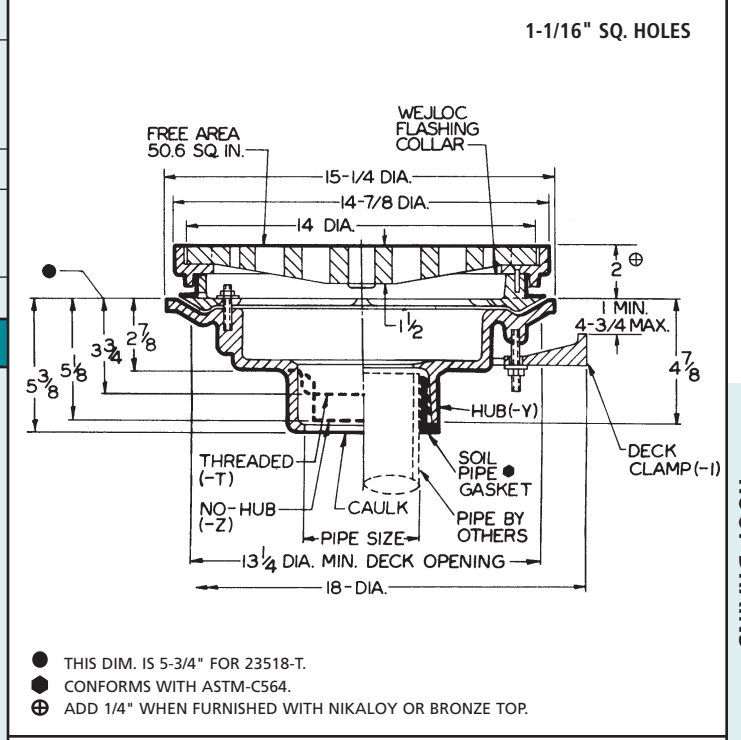
Used on roofs or decks designed for heavy traffic, such as parking decks and loading docks. Large round extra heavy-duty grate provides ample free area for proper drainage. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body.

SPECIFICATION

JOSAM 23510 Series coated cast iron Roof Drain, round extra heavy-duty grate set in round secured frame, WEJLOC® non-puncturing flashing collar with weepholes, for 2" roof fill and large sump with wide roof flange and bottom outlet.

Available Options

- | | |
|-------------------------------------------------------------|---------------------------------------------|
| -CR Clamping Drain Receiver | -20 Galvanized Cast Iron Parts |
| -1 Deck Clamp Assembly | -36 Ductile Iron Grate (Cast Iron Top Only) |
| -1C Drain Receiver Clips (Min. Deck Opening 16.5" Dia.) | -50 Satin Finish Nikaloy Top |
| -2 Drain Receiver | -51 Satin Finish Bronze Top |
| -3 Deck Clamp Assembly and Drain Receiver | -VP Vandal-Proof Grate |
| -3C Drain Receiver and Drain Receiver Clips | OUTLETS: |
| -10 Fixed Ext. Collar, Cast Iron, (Specify Hgt) 4" Std. | -T Threaded Outlet |
| -10-20 Fixed Ext. Collar, Galvanized, (Specify Hgt) 4" Std. | -X Inside Caulk Outlet |
| | -Y Hub Outlet w/Gasket 2" -4" |
| | -Z No-Hub Spigot Outlet |



FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
23512	2	72	23515	5	73
23513	3	72	23516	6	74
23514	4	73	23518	8	76

23710 SERIES MEDIUM SUMP, Promenade Top

APPLICATION

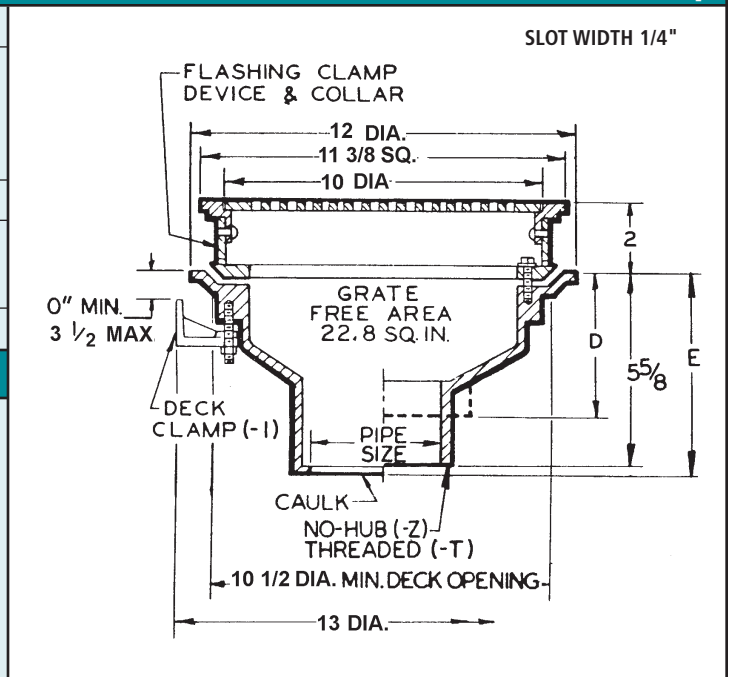
Used on small- and medium-sized promenade deck areas and roofs where foot traffic or light- to medium-weight vehicles will be present. Medium-sized round grate set in a square frame provides ample free area for proper drainage and has narrow slotted openings for pedestrian safety and for the interception of debris. Flashing clamp holds the membrane or flashing securely to the drain body.

SPECIFICATION

JOSAM 23710 Series coated cast iron Roof Drain, round pedestrian grate set in square secured frame, non-puncturing flashing collar with weepholes for 2" roof fill and medium sump with roof flange and bottom outlet.

Available Options

- | | |
|-------------------------------------------------------------------|---------------------------------|
| -1 Deck Clamp Assembly | -20 Galvanized Cast Iron Parts |
| -1C Drain Receiver Clips (Min. Deck Opening 13.75" Dia.) | -50 Satin Finish Nikaloy Top |
| -2 Drain Receiver | -51 Satin Finish Bronze Top |
| -3 Deck Clamp Assembly and Drain Receiver | -VP Vandal-Proof Grate |
| -3C Drain Receiver and Drain Receiver Clips | OUTLETS: |
| -12 Extended Flashing Collar, Cast Iron, (Specify Height) 1" Std. | -66 No-Hub Side Outlet, 2" - 6" |
| | -T Threaded Outlet |
| | -X Inside Caulk Outlet |
| | -Z No-Hub Spigot Outlet |



FOR OUTLET TYPE SPECIFY -T, -X or -Z

TYPE NO.	PIPE SIZE	D	E	LBS.
23712	2	4-3/4	6-1/4	32
23713	3	4-3/4	6-1/4	32
23714	4	4-1/2	6-1/4	32
23715	5	4-3/8	6	36
23716	6	4	5-3/4	36

23730 SERIES

SMALL SUMP, Promenade Top

APPLICATION

Used on smaller-sized promenade deck areas and roofs where foot traffic or light vehicles will be present. Smaller round grate set in a square frame provides ample free area for proper drainage and has narrow slotted openings for pedestrian safety and for the interception of debris. Flashing clamp holds the membrane or flashing securely to the drain body.

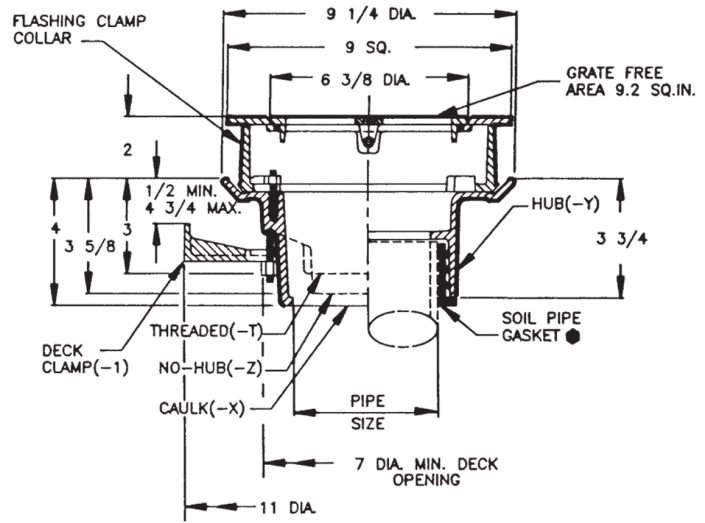
SPECIFICATION

JOSAM 23730 Series coated cast iron Roof Drain, round pedestrian grate set in square secured frame, non-puncturing flashing collar with weepholes for 2" roof fill and small sump with wide roof flange and bottom outlet

Available Options

- | | |
|-------------------------------------------------------------------|--------------------------------|
| -1 Deck Clamp Assembly | -20 Galvanized Cast Iron Parts |
| -1C Drain Receiver Clips (Min. Deck Opening 10.25" Dia.) | -50 Satin Finish Nikaloy Top |
| -2 Drain Receiver | -51 Satin Finish Bronze Top |
| -3 Deck Clamp Assembly and Drain Receiver | -VP Vandal-Proof Grate |
| -3C Drain Receiver and Drain Receiver Clips | |
| -12 Extended Flashing Collar, Cast Iron, (Specify Height) 1" Std. | |
| -12 -20 Extended Flashing Collar, Galv., (Specify Height) 1" Std. | |
- OUTLETS:**
- * -TSO Threaded Side Outlet
 - T Threaded Outlet
 - X Inside Caulk Outlet
 - Y Hub Outlet w/Gasket
 - Z No-Hub Spigot Outlet
- * *Cannot be used with Drain Receiver.*

SLOT WIDTH 3/16"



FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.
23732	2	18
23733	3	18
23734	4	18

23740 SERIES

SMALL SUMP, Heavy-Duty Promenade Top

APPLICATION

Used on smaller-sized promenade deck areas and roofs where foot traffic or vehicles will be present. Heavy-duty ductile iron undergrate with Nikaloy top accommodates pedestrian traffic and large vehicles. Square holes provide ample free area for proper drainage, pedestrian safety and the interception of debris. Flashing clamp holds the membrane or flashing securely to the drain body.

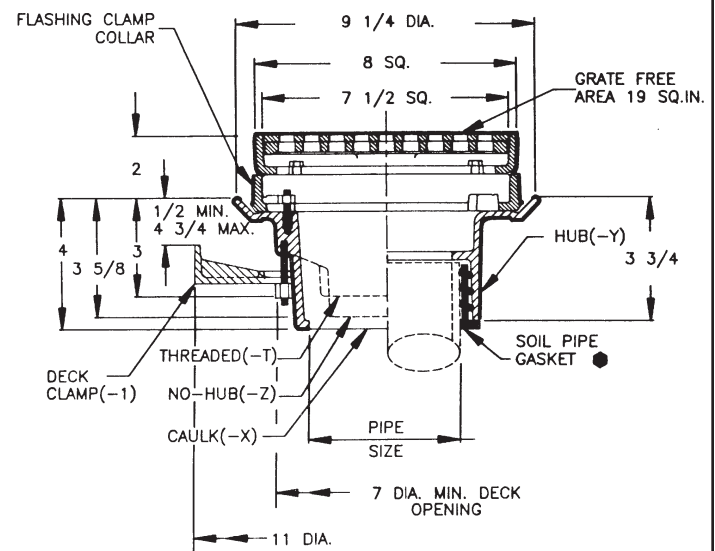
SPECIFICATION

JOSAM 23740 Series coated cast iron Roof Drain, square heavy-duty ductile iron undergrate with Nikaloy top grate set in square secured frame, non-puncturing flashing collar with weepholes, for 2" roof fill and small sump with roof flange and bottom outlet.

Available Options

- | | |
|-------------------------------------------------------------------|--------------------------------|
| -1 Deck Clamp Assembly | -20 Galvanized Cast Iron Parts |
| -1C Drain Receiver Clips (Min. Deck Opening 10.25" Dia.) | -51 Satin Finish Bronze Top |
| -2 Drain Receiver | -VP Vandal-Proof Grate |
| -3 Deck Clamp Assembly and Drain Receiver | |
| -3C Drain Receiver and Drain Receiver Clips | |
| -12 Extended Flashing Collar, Cast Iron, (Specify Height) 1" Std. | |
| -12 -20 Extended Flashing Collar, Galv., (Specify Height) 1" Std. | |
- OUTLETS:**
- * -TSO Threaded Side Outlet
 - T Threaded Outlet
 - X Inside Caulk Outlet
 - Y Hub Outlet w/Gasket
 - Z No-Hub Spigot Outlet
- * *Cannot be used with Drain Receiver.*

7/16" SQ. HOLES



FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.
23742	2	18
23743	3	18
23744	4	18

24020 SERIES MEDIUM SUMP, SUPER-FLO® Grate for Composition Deck

APPLICATION

Used on promenade roof decks where waterproof traffic-bearing elastomeric covering is to be applied. Wide deck flange provides proper area for bonding of composition roof deck covering and distributes the drain's weight over a broad area for positive support. Mid-sized, round medium-duty SUPER-FLO® grate assures rapid drainage and protects drain and connected piping from debris.

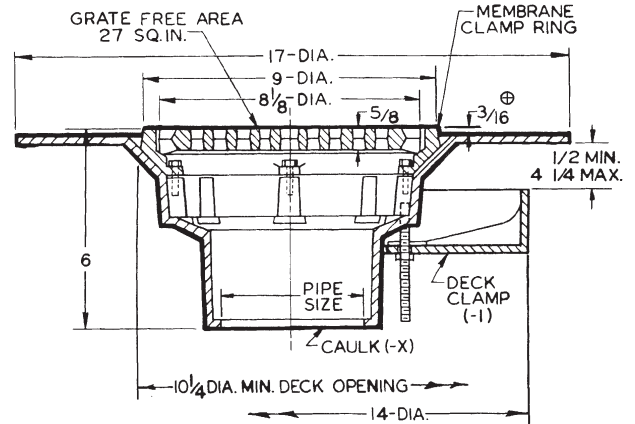
SPECIFICATION

JOSAM 24020 Series coated cast iron SUPER-FLO® Roof Drain, round medium-duty anti-tilting grate with perimeter drainage slots, set in round, non-puncturing membrane clamp ring and medium sump with 4" wide deck flange and bottom outlet, inside caulk connection.

Available Options

- | | |
|---------------------------------------------|------------------------------|
| -1 Deck Clamp Assembly | -38 Less Grate |
| -20 Galvanized Cast Iron Parts | -50 Satin Finish Nikaloy Top |
| -29 Sediment Bucket, Cast Iron | -51 Satin Finish Bronze Top |
| -29-20 Sediment Bucket, Galvanized | -VP Vandal-Proof Grate |
| -31 Chain Anchored Grate | OUTLET: |
| -36 Ductile Iron Grate (Cast Iron Top Only) | -X Inside Caulk Outlet |

- 24020 SLOT WIDTH 3/8"
 24020-50 SLOT WIDTH 3/16"
 24020-51 SLOT WIDTH 3/16"



⊕ ADD 1/4" WHEN FURNISHED WITH NIKALOY OR BRONZE TOP.

FOR OUTLET TYPE SPECIFY -X

TYPE NO.	PIPE SIZE	LBS.
24022	2	28
24023	3	28
24024	4	29

24030 SERIES LARGE SUMP, SUPER-FLO® Grate for Composition Deck

APPLICATION

Used on promenade roof decks where waterproof traffic-bearing elastomeric covering is to be applied. Wide deck flange provides proper area for bonding of composition roof deck covering and distributes the drain's weight over a broad area for positive support. Large diameter, round medium-duty SUPER-FLO® grate assures rapid drainage and protects drain and connected piping from debris. Non-puncturing membrane clamp ensures proper seal between the drain body and the membrane.

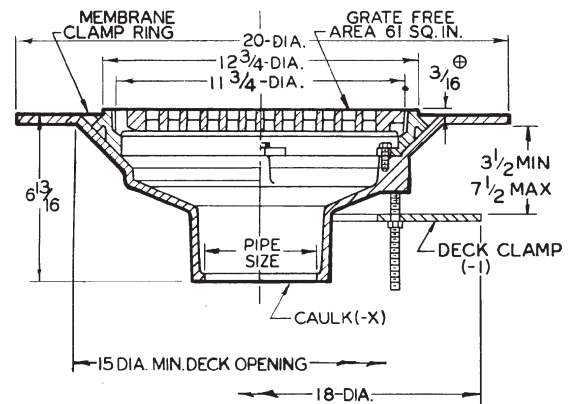
SPECIFICATION

JOSAM 24030 Series coated cast iron SUPER-FLO® Roof Drain, round medium-duty anti-tilting grate with perimeter drainage slots, set in round, non-puncturing membrane clamp ring and large sump with 4" wide deck flange and bottom outlet, inside caulk connection.

Available Options

- | | |
|---------------------------------------------|------------------------------|
| -1 Deck Clamp Assembly | -50 Satin Finish Nikaloy Top |
| -20 Galvanized Cast Iron Parts | -51 Satin Finish Bronze Top |
| -29 Sediment Bucket, Cast Iron | -VP Vandal-Proof Grate |
| -29 -20 Sediment Bucket, Galvanized | OUTLET: |
| -31 Chain Anchored Grate | -X Inside Caulk Outlet |
| -36 Ductile Iron Grate (Cast Iron Top Only) | |

- 24030 SLOT WIDTH 9/16"
 24030-50 SLOT WIDTH 7/16"
 24030-51 SLOT WIDTH 7/16"



⊕ ADD 1/4" WHEN FURNISHED WITH NIKALOY OR BRONZE TOP.

FOR OUTLET TYPE SPECIFY -X

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
24034	4	38	24036	6	42
24035	5	40	24038	8	45

24040 SERIES MEDIUM SUMP, SUPER-FLO® Grate for Composition Deck

APPLICATION

Used on promenade roof decks or anywhere that an elastomeric or liquid applied waterproofing is to be used beneath a 2" pour of concrete or asphalt. Wide deck flange provides proper area for bonding of waterproofing material and distributes the drain's weight over a broad area for positive support. Mid-sized, round medium-duty SUPER-FLO® Grate assures rapid drainage and protects drain and connected piping from debris. The 2" extension ensures that the grate and rim are flush with the finished deck covering.

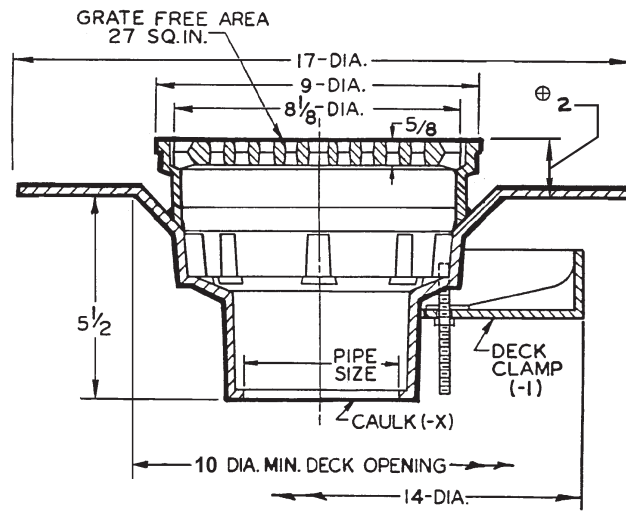
SPECIFICATION

JOSAM 24040 Series coated cast iron SUPER-FLO® Roof Drain, round medium-duty anti-tilting grate with perimeter drainage slots, extension, medium sump with 4" wide deck flange and bottom outlet inside caulk connection.

Available Options

- | | |
|---------------------------------------------|------------------------------|
| -1 Deck Clamp Assembly | -38 Less Grate |
| -20 Galvanized Cast Iron Parts | -50 Satin Finish Nikaloy Top |
| -29 Sediment Bucket, Cast Iron | -51 Satin Finish Bronze Top |
| -29-20 Sediment Bucket, Galvanized | -VP Vandal-Proof Grate |
| -31 Chain Anchored Grate | OUTLET: |
| -36 Ductile Iron Grate (Cast Iron Top Only) | -X Inside Caulk Outlet |

- 24040 SLOT WIDTH 3/8"
 24040-50 SLOT WIDTH 3/16"
 24040-51 SLOT WIDTH 3/16"



⊕ ADD 1/4" WHEN FURNISHED WITH NIKALOY OR BRONZE TOP.

FOR OUTLET TYPE SPECIFY -X

TYPE NO.	PIPE SIZE	LBS.
24042	2	30
24043	3	30
24044	4	30

24050 SERIES LARGE SUMP, Special Duty Garage Drain

APPLICATION

Used in parking garages or docks for heavy traffic, where an elastomeric or liquid applied waterproofing is to be applied beneath a 2" pour of concrete or asphalt. Wide deck flange provides proper area for bonding of composition roof deck covering and distributes the drain's weight over a broad area for positive support. Large diameter, round special-duty grate assures rapid drainage and protects drain and connected piping from debris. The 2" extension ensures that the grate and rim are flush with the finished deck covering.

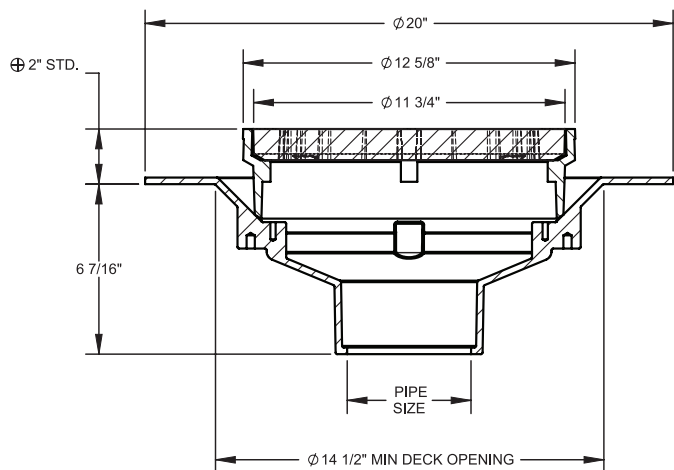
SPECIFICATION

JOSAM 24050 Series coated cast iron Garage Drain with wide support flange, weep-holes, round special-duty grate and bottom outlet inside caulk connection.

Available Options

- | | |
|-----------------------------------------------------------------|---------------------------------------------|
| -1 Deck Clamp Assembly | -36 Ductile Iron Grate (Cast Iron Top Only) |
| -12 Extended Flashing Collar, Cast Iron, (Specify Hgt.) 1" Std. | -50 Satin Finish Nikaloy Top |
| -20 Galvanized Cast Iron Parts | -51 Satin Finish Bronze Top |
| -29 Sediment Bucket, Cast Iron | -VP Vandal-Proof Grate |
| -29-20 Sediment Bucket, Galvanized | OUTLET: |
| -31 Chain Anchored Grate | -X Inside Caulk Outlet |

- 24050 SLOT WIDTH 1/2"
 24050-50 SLOT WIDTH 1/4"
 24050-51 SLOT WIDTH 1/4"



GRATE FREE AREA 61 SQ. IN.
 ⊕ ADD 1/4" WHEN FURNISHED WITH NIKALOY OR BRONZE TOP.

FOR OUTLET TYPE SPECIFY -X

TYPE NO.	PIPE SIZE	LBS.
24054	4	61
24056	6	61
24058	8	61

24060 SERIES LARGE SUMP, Special-Duty Grate for Composition Deck

APPLICATION

Used in parking garages or docks for heavy traffic, where an elastomeric or liquid applied waterproofing is to be applied beneath a 2" pour of concrete or asphalt. Wide deck flange provides proper area for bonding of composition roof deck covering and distributes the drain's weight over a broad area for positive support. Large diameter, round special-duty SUPER-FLO® Grate assures rapid drainage and sediment bucket protects drain sump and connected piping from debris.

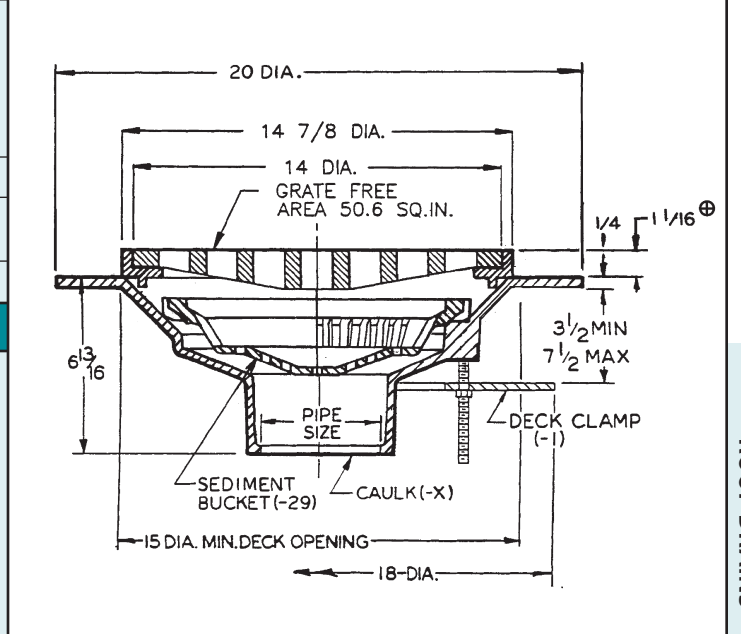
SPECIFICATION

JOSAM 24060 Series coated cast iron Roof Drain, round special-duty grate and large sump with 4" wide deck flange and bottom outlet, inside caulk connection.

Available Options

- 1 Deck Clamp Assembly
- 20 Galvanized Cast Iron Parts
- 29 Sediment Bucket, Cast Iron
- 29-20 Sediment Bucket, Galvanized
- 31 Chain Anchored Grate
- 50 Satin Finish Nikaloy Top
- 51 Satin Finish Bronze Top
- VP Vandal-Proof Grate
- OUTLET:**
- X Inside Caulk Outlet

1-1/16" SQ. HOLES



⊕ ADD 1/4" WHEN FURNISHED WITH NIKALOY OR BRONZE TOP.

FOR OUTLET TYPE SPECIFY -X

TYPE NO.	PIPE SIZE	LBS.
24064	4	62
24066	6	62
24068	8	63

24200 SERIES LARGE SUMP, Promenade Top & Bonding Flange

APPLICATION

Used on promenade decks, plazas and recreational roof decks where foot traffic or light-weight vehicles will be present and drainage is required from the deck surface and all layers of construction below to the waterproof membrane. Large slotted grate provides ample free area for proper drainage and has narrow openings for pedestrian safety and for the interception of debris. The perforated outer ring serves as a form or retainer to hold the decking concrete, percolation layer aggregates and insulation in place and can be made to the required height. It is perforated for all level drainage. The removable interior stainless steel filter prevents aggregates from entering the drain and can be made to accommodate the thickness of the deck. The body has a deep sump for heavy flow and an extra wide deck flange for positive support and large bonding surface for liquid applied membranes.

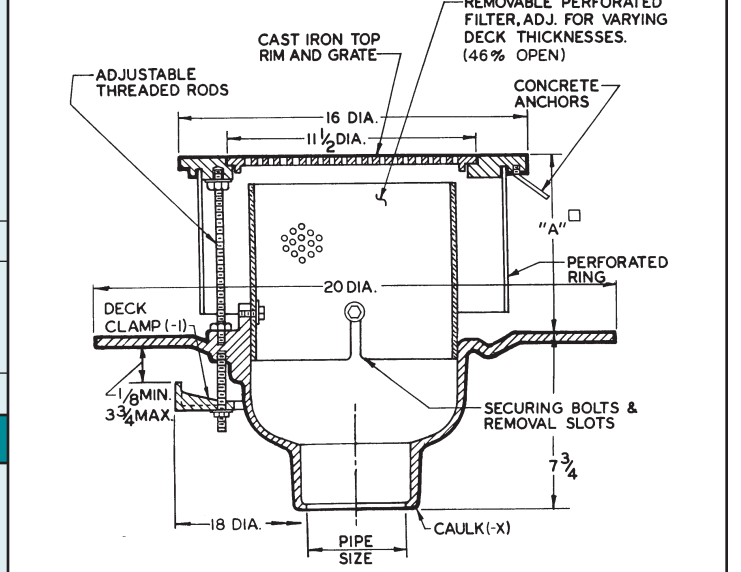
SPECIFICATION

JOSAM 24200 Series coated cast iron adjustable ALL-LEVEL Roof Drain, round pedestrian grate set in round anchored frame leveled on adjustable threaded rods, removable perforated stainless steel filter, concrete forming and retaining ring and large sump with wide flange and bottom outlet inside caulk connection.

Available Options

- 1 Deck Clamp Assembly
- 20 Galvanized Cast Iron Parts
- VP Vandal-Proof Grate
- 50 Satin Finish Nikaloy Top
- 51 Satin Finish Bronze Top
- 60 Square Top, Cast Iron
- 60-50 Square Top, Satin Finish Nikaloy
- 60-51 Square Top, Satin Finish Bronze
- OUTLET:**
- X Inside Caulk Outlet

- 24200 SLOT WIDTH 3/16"
- 24200-50 SLOT WIDTH 1/4"
- 24200-51 SLOT WIDTH 1/4"



□ "A" DIM. TO BE SPECIFIED ON ORDER. STD. 3" MAX. 12"
GRATE FREE AREA - 30.2 SQ. IN.

FOR OUTLET TYPE SPECIFY -X

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
24202	2	53	24205	5	56
24203	3	54	24206	6	57
24204	4	55			

ROOF DRAINS

24500 SERIES

SHALLOW SUMP, Sill Type, Bronze Dome

APPLICATION

Used in parapets, small balconies, sills, cornices, canopies, gutters and other small overhanging areas where drainage of rainwater is required. Flashing clamp design permits removal of dome strainer without disturbing flashing or waterproofing membranes.

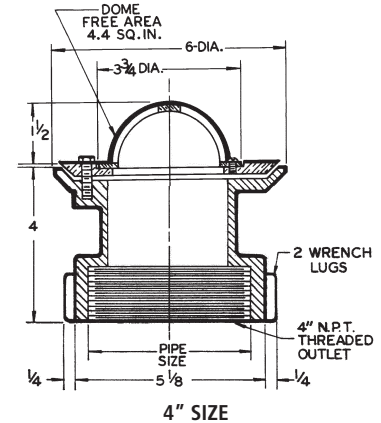
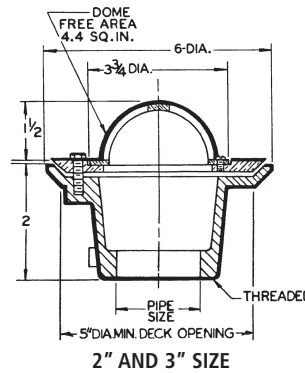
SPECIFICATION

JOSAM 24500 Series coated cast iron Sill Drain, secured low bronze dome, bronze clamp ring and shallow sump with flashing flange and bottom outlet threaded connection.

Available Options

- ▼ -45 Body with 45 Degree Threaded Outlet
 - ▼ -90 Body with 90 Degree Threaded Outlet
 - 20 Galvanized Cast Iron Parts
 - 24 Rough Nikaloy Dome
 - 27 High Dome
 - 33 Stainless Steel Mesh Screen Covered Dome
 - 35 Flat Grate
 - 50 Satin Finish Nikaloy Top
 - 51 Satin Finish Bronze Top
 - VP Vandal-Proof Dome
- OUTLET:**
- T Threaded Outlet

24500-35 SLOT WIDTH 1/8"



FOR OUTLET TYPE SPECIFY -T

TYPE NO.	PIPE SIZE	LBS.
24502	2	4
24503	3	4
24504	4	5

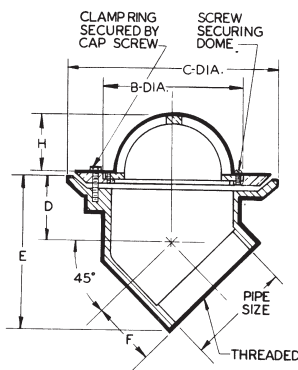
24500-45 SERIES 45° Outlet

APPLICATION

Used in parapets, small balconies, sills, cornices, canopies, gutters and other small overhanging areas where drainage of rainwater through a 45° outlet is required. Flashing clamp design permits removal of dome strainer without disturbing flashing or waterproofing membranes.

SPECIFICATION

JOSAM 24500-45 Series coated cast iron Sill Drain, secured low bronze dome, bronze clamp ring and shallow sump with flashing flange and 45° side outlet threaded connection.



FOR OUTLET TYPE, SPECIFY -T.

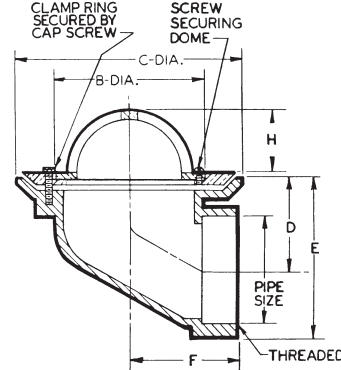
24500-90 SERIES 90° Outlet

APPLICATION

Used in parapets, small balconies, sills, cornices, canopies, gutters and other small overhanging areas where drainage of rainwater through a 90° side outlet is required. Flashing clamp design permits removal of dome strainer without disturbing flashing or waterproofing membranes.

SPECIFICATION

JOSAM 24500-90 Series coated cast iron Sill Drain, secured low bronze dome, bronze clamp ring and shallow sump with flashing flange and 90° side outlet threaded connection.



FOR OUTLET TYPE, SPECIFY -T.

TYPE NO.	PIPE SIZE	DOMES FREE AREA SQ. IN.	B	C	D	E	F	H	LBS.	TYPE NO.	PIPE SIZE	DOMES FREE AREA SQ. IN.	B	C	D	E	F	H	LBS.
24502-45	2	4.4	3-3/4	6	1-1/2	4-1/2	2-3/4	1-1/2	8	24502-90	2	4.4	3-3/4	6	2-1/2	4	2-3/4	1-1/2	8
24503-45	3	7.3	4-3/4	7-1/4	1-1/2	4-3/4	2-3/4	1-7/8	11	24503-90	3	7.3	4-3/4	7-1/4	3	5	3-1/2	1-7/8	11
24504-45	4	7.3	4-3/4	7-1/4	2-3/8	5-5/8	2-1/8	1-7/8	11	24504-90	4	7.3	4-3/4	7-1/4	3-1/2	6	3-1/2	1-7/8	11

24700 SERIES

PARAPET TYPE, Sloping Grate

APPLICATION

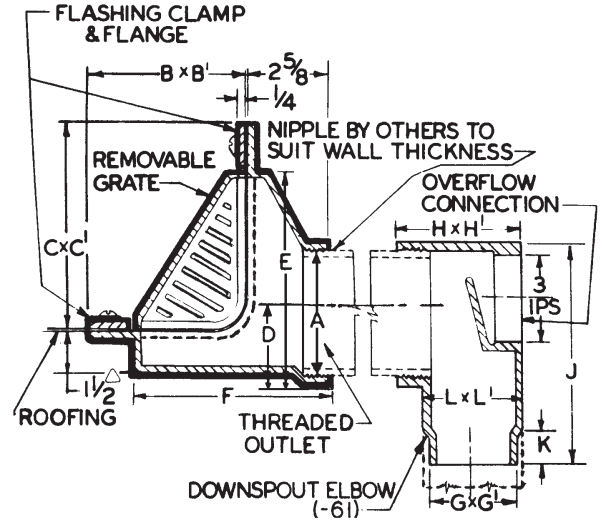
Used at the junction of the roof and the parapet where perimeter or emergency roof drainage through a threaded side outlet is required. Sloping grate provides ample drainage and is slotted to prevent entrance of debris. Flashing and membrane are positively secured to the drain body with a compression clamp.

SPECIFICATION

JOSAM 24700 Series coated cast iron Roof Drain, parapet type, removable sloping bronze grate, flashing clamp, shallow sump with flashing flange and side outlet threaded connection.

Available Options

- ▼-45 Body with 45 Degree Threaded Outlet
- 20 Galv. Cast Iron Parts
- 22 Cast Iron Grate
- 24 Rough Nikaloy Grate
- 50 Satin Finish Nikaloy Grate
- 51 Satin Finish Bronze Grate
- 61 Downspout Elbow, Cast Iron
- 61-20 Downspout Elbow, Galvanized



△ DIM. 7/8" ON 2"-4" SIZES

FOR OUTLET TYPE SPECIFY -T

TYPE NO.	A	GRATE FREE AREA SQ. IN.	BxB1	CxC1	D	E	F	GxG1	HxH1	J	K	LxL1	LBS.
24702	2	19.5	4-1/2x11	6-1/2x11	1-1/2	6-3/8	5-5/8	3x5-1/8	4-1/8x5-1/4	7-3/8	1-1/4	3-1/4x5-1/4	22
24703	3	19.5	4-1/2x11	6-1/2x11	2-1/8	6-3/8	5-5/8	3x5-1/8	4-1/8x5-1/4	7-3/8	1-1/4	3-1/4x5-1/4	22
24704	4	19.5	4-1/2x11	6-1/2x11	2-5/8	6-3/8	5-5/8	3x5-1/8	4-1/8x5-1/4	7-3/8	1-1/4	3-1/4x5-1/4	22
24705	5	34.3	5-1/2x13	7-1/2x13	3-1/2	8-1/8	6-5/8	4x6-1/8	5x7-1/2	10-3/4	1-3/4	4-1/4x7-1/2	28
24706	6	34.3	5-1/2x13	7-1/2x13	3-1/2	8-1/8	6-5/8	4x6-1/8	5x7-1/2	10-3/4	1-3/4	4-1/4x7-1/2	28

24700-45 SERIES

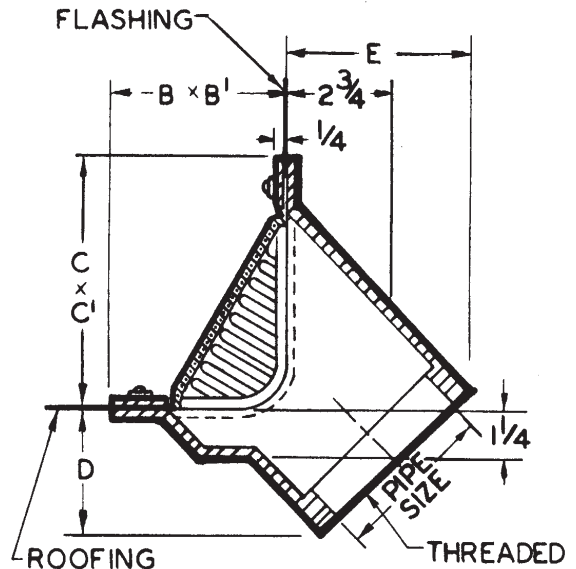
PARAPET TYPE, Sloping Grate, 45° Outlet

APPLICATION

Used at the junction of the roof and the parapet where perimeter or emergency roof drainage through a threaded 45° outlet is required. Sloping grate provides ample drainage and is slotted to prevent entrance of debris. Flashing and membrane are positively secured to the drain body with a compression clamp.

SPECIFICATION

JOSAM 24700-45 Series coated cast iron Roof Drain, parapet type, removable sloping bronze grate, flashing clamp and shallow sump with flashing flange and 45° side outlet threaded connection.



FOR OUTLET TYPE, SPECIFY -T.

TYPE NO.	PIPE SIZE	GRATE FREE AREA SQ. IN.	BxB1	CxC1	D	E	LBS.
24702-45	2	19.5	4-1/2X11	6-1/2X11	2-1/4	3-7/8	24
24703-45	3	19.5	4-1/2X11	6-1/2X11	2-5/8	4-1/4	25
24704-45	4	19.5	4-1/2X11	6-1/2X11	3	4-5/8	26
24705-45	5	34.3	5-1/2X13	7-1/2X13	3-1/2	5	30
24706-45	6	34.3	5-1/2X13	7-1/2X13	3-5/8	5-1/2	32

ROOF DRAINS

24720 SERIES

PARAPET TYPE, Angle Grate

APPLICATION

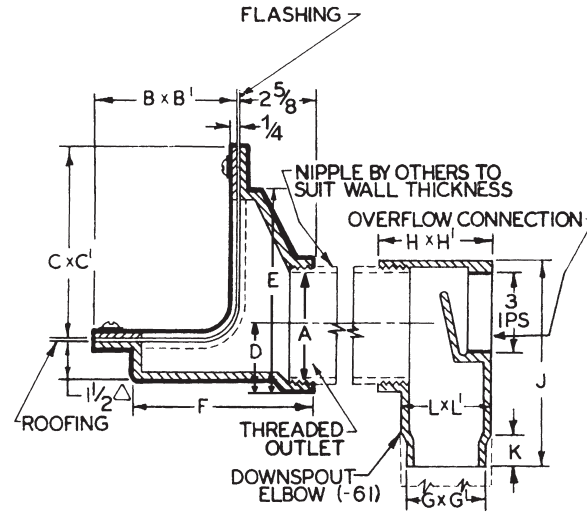
Used at the junction of the roof and the parapet where perimeter or emergency roof drainage through a threaded side outlet is required. Angle grate provides ample drainage and is slotted to prevent entrance of debris. Flashing and membrane are positively secured to the drain body with a compression clamp.

SPECIFICATION

JOSAM 24720 Series coated cast iron Roof Drain, parapet type, secured angle grate integral with flashing clamp, shallow sump with flashing flange and side outlet threaded connection.

Available Options

▼-45	Body with 45 Degree Threaded Outlet	-51	Satin Finish Bronze Grate
-20	Galv. Cast Iron Parts	-61	Downspout Elbow, Cast Iron
-23	Rough Bronze Grate	-61-20	Downspout Elbow, Galvanized
-24	Rough Nikaloy Grate	-VP	Vandal Proof Grate
-50	Satin Finish Nikaloy Grate		



△ DIM. 7/8" ON 2", 3" AND 4" SIZES.

FOR OUTLET TYPE SPECIFY -T

TYPE NO.	A	GRATE FREE AREA SQ. IN.	BxB1	CxC1	D	E	F	GxG1	HxH1	J	K	LxL1	LBS.
24722	2	25.9	4-1/2x11	6-1/2x11	1-1/2	6-3/8	5-5/8	3x5-1/8	4-1/8x5-1/4	7-3/8	1-1/4	3-1/4x5-1/4	26
24723	3	25.9	4-1/2x11	6-1/2x11	2-1/8	6-3/8	5-5/8	3x5-1/8	4-1/8x5-1/4	7-3/8	1-1/4	3-1/4x5-1/4	26
24724	4	25.9	4-1/2x11	6-1/2x11	2-5/8	6-3/8	5-5/8	3x5-1/8	4-1/8x5-1/4	7-3/8	1-1/4	3-1/4x5-1/4	26
24725	5	41.3	5-1/2x13	7-1/2x13	3-1/2	8-1/8	6-5/8	4x6-1/8	5x7-1/2	10-3/4	1-3/4	4-1/4x7-1/2	34
24726	6	41.3	5-1/2x13	7-1/2x13	3-1/2	8-1/8	6-5/8	4x6-1/8	5x7-1/2	10-3/4	1-3/4	4-1/4x7-1/2	34

24720-45 SERIES

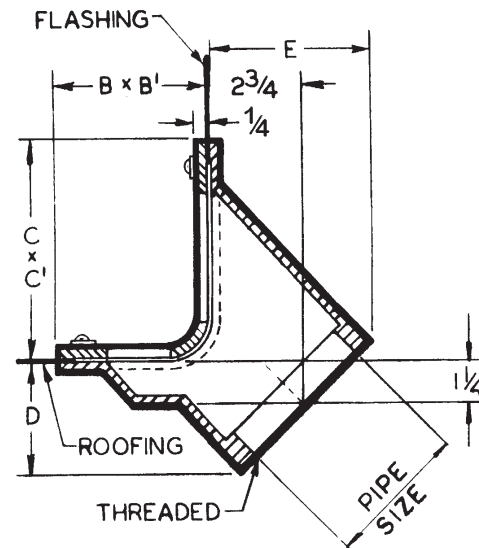
PARAPET TYPE, Angle Grate, 45° Outlet

APPLICATION

Used at the junction of the roof and the parapet to provide perimeter or emergency roof drainage where a threaded 45° outlet is required. Angle grate provides ample drainage and is slotted to prevent entrance of debris. Flashing and membrane are positively secured to the drain body with a compression clamp.

SPECIFICATION

JOSAM 24720-45 Series coated cast iron Roof Drain, parapet type, secured angle grate integral with flashing clamp and shallow sump with flashing flange and 45° side outlet threaded connection.



FOR OUTLET TYPE, SPECIFY -T.

TYPE NO.	PIPE SIZE	GRATE FREE AREA SQ. IN.	BxB1	CxC1	D	E	LBS.
24722-45	2	25.9	4-1/2X11	6-1/2X11	2-1/4	3-7/8	24
24723-45	3	25.9	4-1/2X11	6-1/2X11	2-5/8	4-1/4	25
24724-45	4	25.9	4-1/2X11	6-1/2X11	3	4-5/8	26
24725-45	5	41.3	5-1/2X13	7-1/2X13	3-1/2	5	30
24726-45	6	41.3	5-1/2X13	7-1/2X13	3-5/8	5-1/2	32

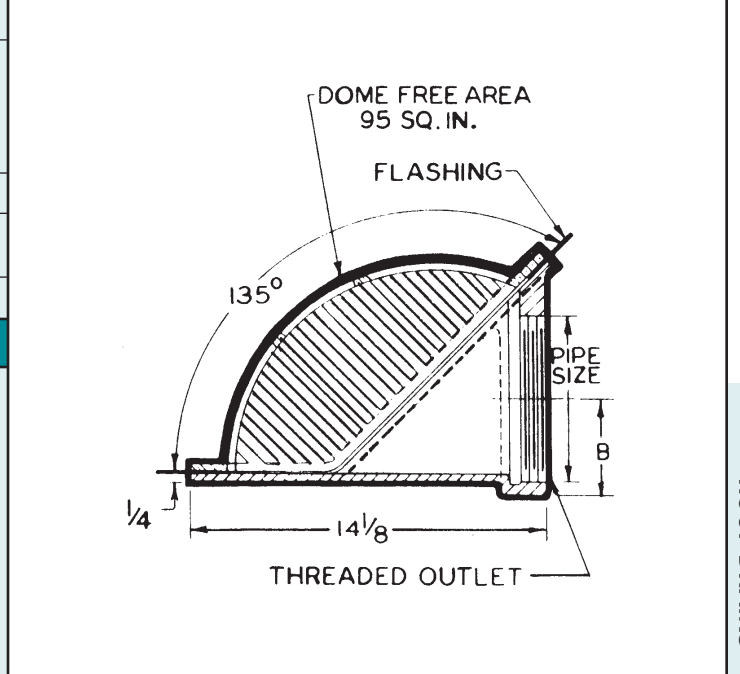
24900 SERIES PARAPET TYPE, Angle Dome

APPLICATION
 Used at the junction of the roof and the parapet where perimeter or emergency drainage of rainwater is required and a 135° cant is specified. Extra-large sloping grate provides ample drainage and is slotted to prevent entrance of debris. Flashing and membrane are positively secured to the drain body with a compression clamp, with threaded side outlet.

SPECIFICATION
 JOSAM 24900 Series coated cast iron Roof Drain, parapet type, secured bronze dome integral with flashing clamp, flashing flange and side outlet threaded connection.

Available Options

- 20 Galvanized Cast Iron Parts
- 24 Rough Nikaloy Dome
- 50 Satin Finish Nikaloy Dome
- 51 Satin Finish Bronze Dome
- 61 Downspout Elbow, Cast Iron
- 61-20 Downspout Elbow, Galvanized
- VP Vandal-Proof Dome



FOR OUTLET TYPE SPECIFY -T

TYPE NO	PIPE SIZE	B	LBS.
24902	2	1-5/8	58
24903	3	2-3/16	57
24904	4	2-11/16	55
24905	5	3-1/4	53
24906	6	3-3/4	50

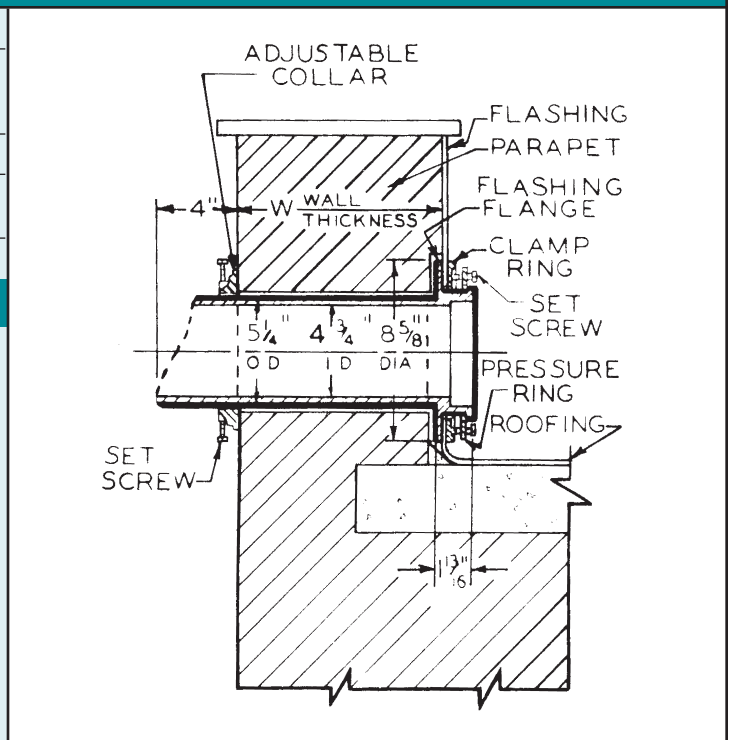
25000 SERIES PARAPET SCUPPER SLEEVE

APPLICATION
 Used at the parapet wall as scupper for perimeter drainage or as an overflow drain. Sleeve may be flashed at parapet wall and is held firmly in place by the adjustable wall collar.

SPECIFICATION
 JOSAM 25000 Series coated cast iron Roof Drain, parapet scupper-sleeve type, flashing clamp, tubular body with flashing flange and adjustable wall collar.

Available Options

- 20 Galvanized Cast Iron Parts
- 62 Ornamental Gargoyle, Cast Iron
- 62-20 Ornamental Gargoyle, Galvanized



TYPE NO.	W	LBS.
25001	9	26
25002	13	32
25003	17	38
25004	21	45

ROOF DRAINS

25010 SERIES

DOWNSPOUT NOZZLE

APPLICATION

Used as a parapet overflow or at the base of a wall where a concealed leader discharges rainwater to the ground. Nozzle design diverts water away from the building, eliminating wall stains. Wall flange covers rough opening and serves as an anchor.

SPECIFICATION

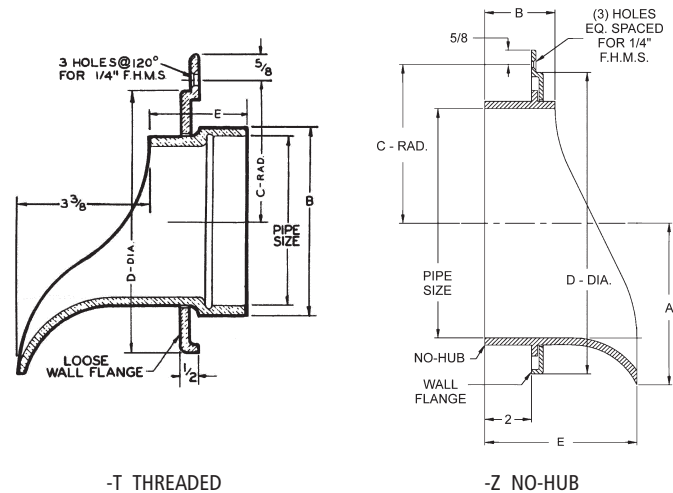
JOSAM 25010 Series cast bronze Downspout Nozzle, loose wall flange and inlet threaded connection.

Available Options

- 24 Rough Nikaloy
- 51 Satin Finish Bronze
- BS Bird Screen

OUTLET:

- T Threaded Outlet
- Z No-Hub Spigot Outlet (Bronze Only)



FOR OUTLET TYPE SPECIFY -T or -Z

TYPE NO.	PIPE SIZE	THREADED					NO-HUB					LBS.
		B	C	D	E	A	B	C	D	E		
25012	*2	4	3-3/8	6	2-5/8	2-3/8	3-5/8	3	5-7/16	5-3/8	6	
25013	3	4	3-3/8	6	2-5/8	3-3/8	3-5/8	3-1/2	6-7/16	5-3/8	6	
25014	4	5	3-7/8	7	2-5/8	3-3/4	3-5/8	4	7-7/16	5-1/2	8	
25015	*5	7-1/2	4-7/8	9	2-5/8	4-1/4	3-5/8	4-1/2	8-7/16	5-3/4	17	
25016	6	7-1/2	4-7/8	9	2-5/8	4-3/4	3-5/8	5	9-7/16	5-3/4	16	
25018	8	9-5/8	5-7/8	11	2-5/8	5-7/8	3-5/8	6	11-7/16	6-1/2	19	
25019	10	11-1/4	6-3/4	12-3/4	2-5/8	6-7/8	3	6-7/8	13-1/16	6-1/2	18	
25010-12	12	-	-	-	-	7-7/8	3	7-7/8	15-1/16	6-1/2	24	

* For 2" size, 3" is furnished with a 3" x 2" Cast Iron Bushing
For 5" size, 6" is furnished with a 6" x 5" Cast Iron Bushing

25500 SERIES

LARGE SUMP, FLO-SEPTOR®

APPLICATION

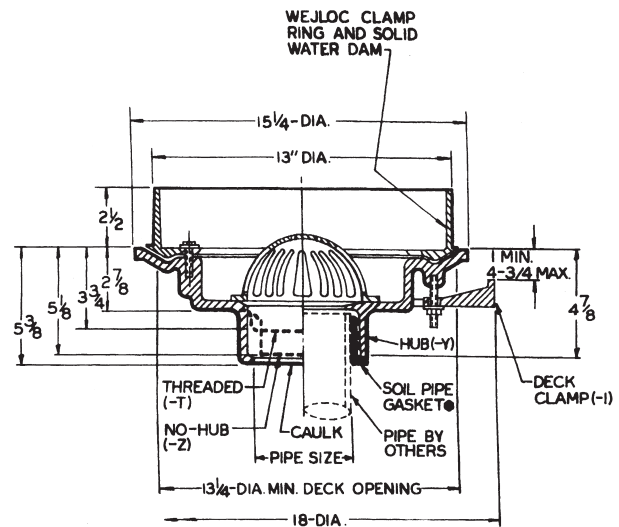
Used on roof areas to receive wastewater from air conditioning units, cooling towers and other mechanical equipment installed on the roof. The solid water dam prevents storm water from entering the waste line. The internal dome strainer provides ample drainage and prevents entry of debris into the large sump.

SPECIFICATION

JOSAM 25500 Series coated cast iron FLO-SEPTOR® Roof Drain, cast iron internal dome strainer, combined WEJLOC® non-puncturing clamp ring and solid water dam and large sump with wide roof flange and bottom outlet.

Available Options

- | | | |
|-------------------------------------------|-------------------------|------------------------|
| -CR Clamping Drain Receiver | OUTLETS: | -66 No-Hub Side Outlet |
| -1 Deck Clamp Assembly | -T Threaded Outlet | |
| -2 Drain Receiver | -X Inside Caulk Outlet | |
| -3 Deck Clamp Assembly and Drain Receiver | -Y Hub Outlet w/Gasket | |
| -20 Galvanized Cast Iron Parts | -Z No-Hub Spigot Outlet | |



● CONFORMS WITH ASTM-C564.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.
25502	2	49
25503	3	50
25504	4	51
25505	5	52
25506	6	53

25520 SERIES MEDIUM SUMP, FLO-SEPTOR®

APPLICATION

Used on roof areas to receive wastewater from air conditioning units, cooling towers and other mechanical equipment installed on the roof. The solid water dam prevents storm water from entering the waste line. The internal dome strainer provides ample drainage and prevents entry of debris into the medium sump.

SPECIFICATION

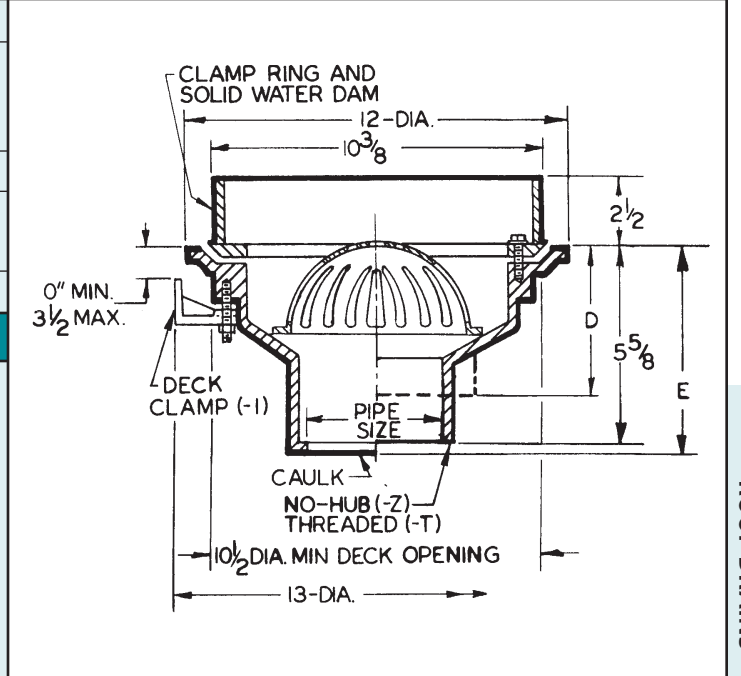
JOSAM 25520 Series coated cast iron FLO-SEPTOR® Roof Drain, cast iron internal dome strainer, combined non-puncturing clamp ring and solid water dam and medium sump with roof flange and bottom outlet.

Available Options

- 1 Deck Clamp Assembly
- 2 Drain Receiver
- 3 Deck Clamp Assembly and Drain Receiver
- 20 Galvanized Cast Iron Parts

OUTLETS:

- 66 No-Hub Side Outlet
- T Threaded Outlet
- X Inside Caulk Outlet
- Z No-Hub Spigot Outlet



FOR OUTLET TYPE SPECIFY -T, -X or -Z

TYPE NO.	PIPE SIZE	D	E	LBS.
25522	2	4-3/4	6-1/4	30
25523	3	4-3/4	6-1/4	30
25524	4	4-1/2	6-1/2	30
25525	5	4-3/8	6	30
25526	6	4	5-3/4	30

25540 SERIES SMALL SUMP, FLO-SEPTOR®

APPLICATION

Used on roof areas to receive wastewater from air conditioning units, cooling towers and other mechanical equipment installed on the roof. The solid water dam prevents storm water from entering the waste line. The internal dome strainer provides ample drainage and prevents entry of debris into the small sump.

SPECIFICATION

JOSAM 25540 Series coated cast iron FLO-SEPTOR® Roof Drain, bronze internal dome strainer, combined non-puncturing clamp ring and solid water dam and small sump with roof flange and bottom outlet.

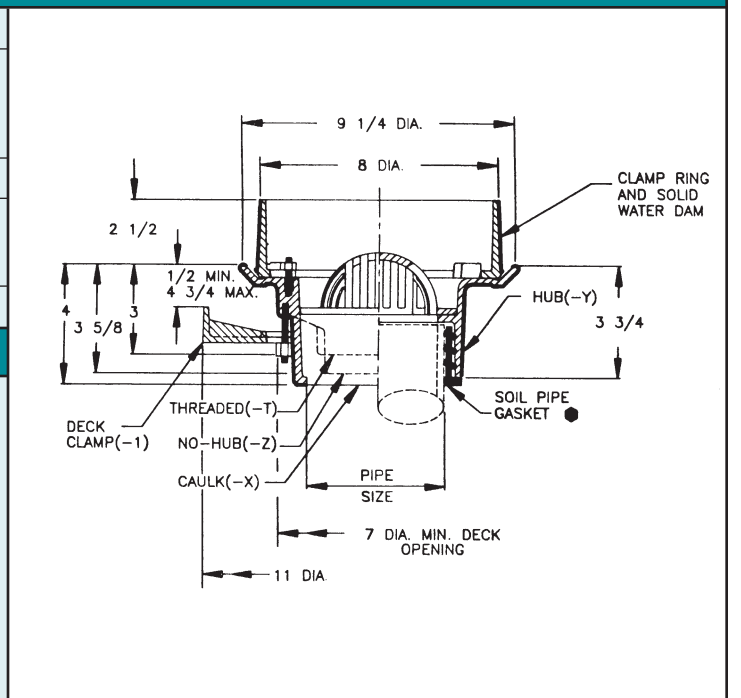
Available Options

- 1 Deck Clamp Assembly
- 2 Drain Receiver
- 3 Deck Clamp Assembly and Drain Receiver
- 20 Galvanized Cast Iron Parts

OUTLETS:

- *-TSO Threaded Side Outlet
- T Threaded Outlet
- X Inside Caulk Outlet
- Y Hub Outlet w/Gasket
- Z No-Hub Spigot Outlet

* Cannot be used with Drain Receiver.



● CONFORMS WITH ASTM-C564.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.
25542	2	16
25543	3	17
25544	4	17

26200 SERIES

EXPANSION JOINT

APPLICATION

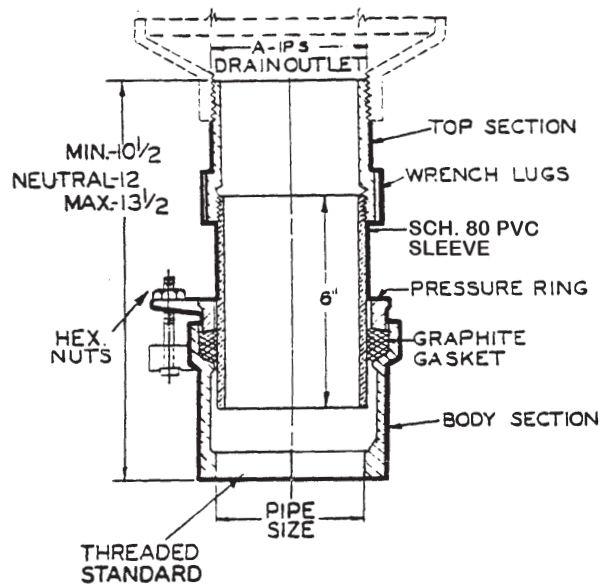
Used with all types of vertical drainage conductors, leaders, stacks, vent or soil lines, where contraction and expansion movements must be compensated for to prevent rupturing of lines and damage to the building construction.

SPECIFICATION

JOSAM 26200 Series coated cast iron Expansion Joint, schedule 80 PVC sleeve, packing gland with bolted pressure ring, male inlet and female outlet threaded connection.

Available Options

-20 Galvanized Cast Iron Parts



TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
26202	2	9	26206	6	20
26203	3	11	26208	8	37
26204	4	12	26209	10	70
26205	5	16			

26440 SERIES

STACK FLASHING FITTING

APPLICATION

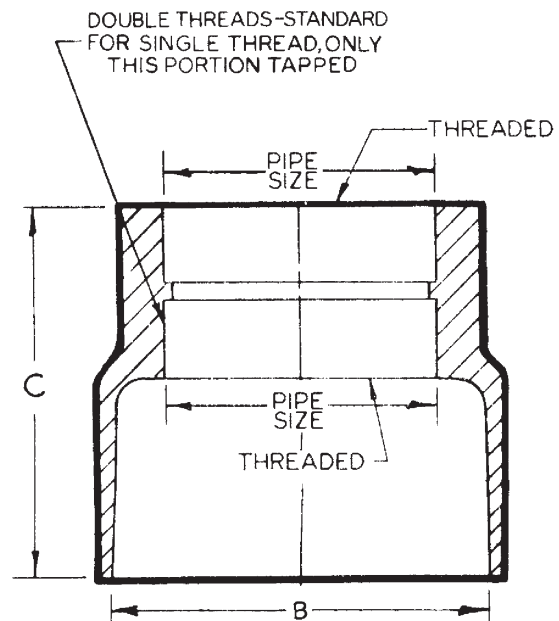
Used as a counterflashing sleeve where the roofing membranes are terminated at the stack, which passes through the roof. Sleeve is threaded so that the stack may be extended to the desired elevation.

SPECIFICATION

JOSAM 26440 Series coated cast iron Stack Fitting with counterflashing recess, threaded stack and extension connections.

Available Options

-20 Galvanized Cast Iron Parts
Single Thread Can Be Furnished When Specified on Order.



TYPE NO.	PIPE SIZE	B	C	LBS.
26441-1/2	1-1/2	3-1/4	5-3/8	4
26442	2	3-1/4	5-3/8	3
26443	3	4-1/4	5-3/8	4
26444	4	5-1/2	5-3/8	6
26445	5	6-1/2	5-3/8	10
26446	6	7-1/2	5-3/8	10

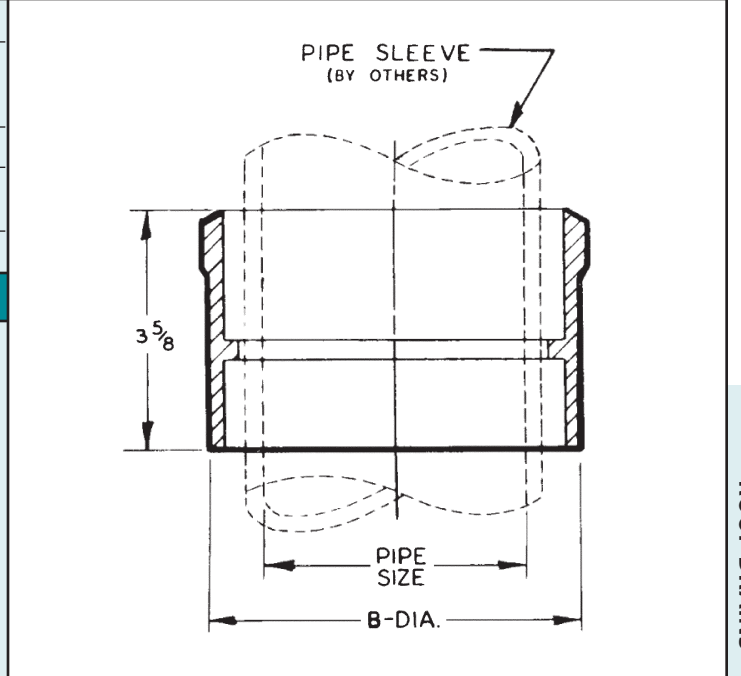
26450 SERIES VENT STACK FLASHING SLEEVE

APPLICATION
Used as a counterflashing sleeve where roofing membranes are terminated at the stack, which protrudes through the roof. A caulk joint is made between the upper hub of the sleeve and stack, effectively waterproofing the entire assembly.

SPECIFICATION
JOSAM 26450 Series coated cast iron Stack Sleeve, with counterflashing and caulking recesses.

Available Options

-20 Galvanized Cast Iron Parts



TYPE NO.	PIPE SIZE	B	LBS.
26451-1/2	1-1/2	3	3
26452	2	3-1/2	3
26453	3	4-3/4	5
26454	4	5-5/8	6
26455	5	6-3/4	8
26456	6	7-3/4	9

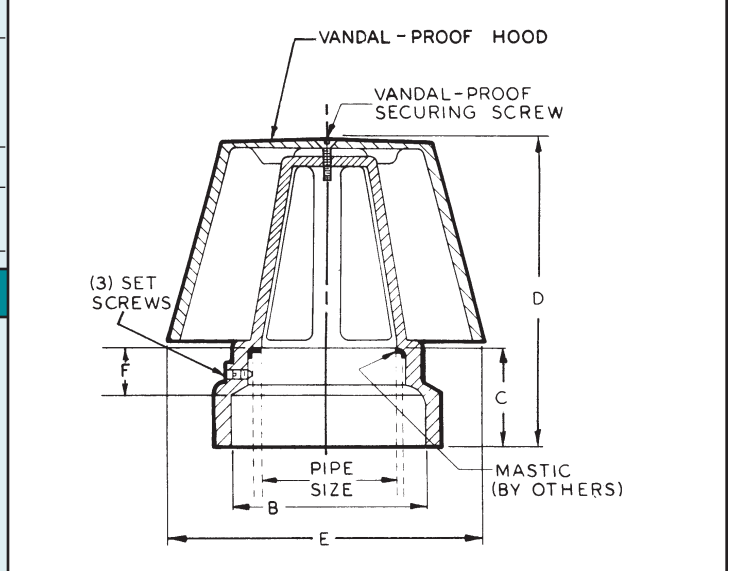
26700 SERIES VANDAL-PROOF VENT CAP

APPLICATION
Used for vandal-proofing plumbing vents, which terminate at the roof level. Unique design eliminates the possibility of sticks or other materials being either carelessly or maliciously placed in the vent openings, thus causing stoppage of the drainage and vent system.

SPECIFICATION
JOSAM 26700 Series coated cast iron Vandal-Proof hooded Vent Cap, with large frost-proof openings, counterflashing collar, deep protective hood and recessed securing screws.

Available Options

-20 Galvanized Cast Iron Parts
-63 All Rough Bronze
-65 All Rough Nikaloy



TYPE NO.	PIPE SIZE	DOME FREE AREA SQ. IN.	B	C	D	E	F	LBS.
26701-1/2	1-1/2	3.7	2-5/8	2	4-1/2	5-3/4	1	4
26702	2	6.8	3-1/4	2	5-1/4	5-3/4	1	5
26702-1/2	2-1/2	15.3	4-3/8	2-1/2	6-7/8	8-1/4	3/4	12
26703	3	15.3	4-3/8	2-1/2	6-7/8	8-1/4	1-1/8	12
26704	4	27.4	5-1/2	2-1/2	8	8-1/4	1-1/8	13
26705	5	41.6	6-1/2	2-1/2	10-1/8	11-3/4	1-1/8	22
26706	6	58.0	7-1/2	2-3/4	11-3/4	11-3/4	1-1/8	23

28600 SERIES

LARGE SUMP, FLO-SET®

APPLICATION

Used on roofs of any size, for any type of construction where a predetermined rate of flow has been specified to limit pipe sizing or flooding of undersized pre-existing storm drainage systems. Adjustable calibrated vanes can be factory set to prescribed G.P.M. flow rates as required. Large slotted dome provides maximum free area for quick drainage of rainwater and protects the drain sump and connected piping from debris. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body.

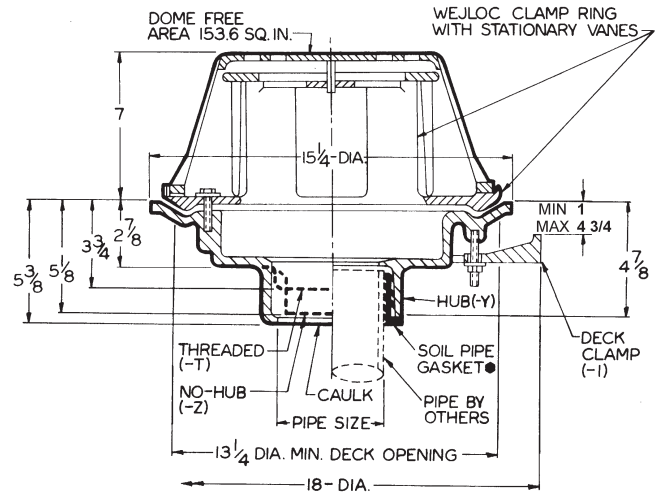
SPECIFICATION

JOSAM 28600 Series coated cast iron FLO-SET® Roof Drain with large secured dome, adjusted calibrated Vandal-Proof vane collar, WEJLOC® non-puncturing clamp ring with stationary vanes and integral gravel stop, large sump with wide roof flange, and bottom outlet.

Available Options

▼ -AE	LEVELEZE® Adjustable Extension	-10	Fixed Ext. Collar, Cast Iron, (Specify Hgt) 4" Std.
-CR	Clamping Drain Receiver	-10-20	Fixed Ext. Collar, Galvanized, (Specify Hgt) 4" Std.
-1	Deck Clamp Assembly	-20	Galvanized Cast Iron Parts
-1C	Drain Receiver Clips (Min. Deck Opening 16.5" Dia.)	-23	Rough Bronze Dome
-2	Drain Receiver	-VP	Vandal-Proof Dome
-3	Deck Clamp Assembly and Drain Receiver	-66	No-Hub Side Outlet
-3C	Drain Receiver and Drain Receiver Clips	-T	Threaded Outlet
-4	Secondary Flashing Clamp (use with -AE only)	-X	Inside Caulk Outlet
		-Y	Hub Outlet w/Gasket, 2"-4"
		-Z	No-Hub Spigot Outlet

OUTLETS:



DRAIN FURNISHED PRE-SET AND VANDAL-PROOFED. WHEN ORDERING, SPECIFY FLOW RATE AND HEAD

● CONFORMS WITH ASTM-C564.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
28602	2	56	28605	5	58
28603	3	56	28606	6	60
28604	4	56			

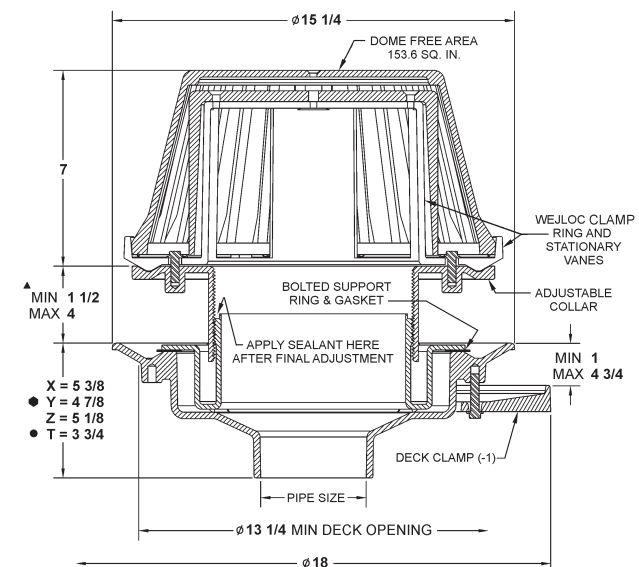
28600-AE SERIES LARGE SUMP, FLO-SET® with -AE Threaded Adjustable Ext.

APPLICATION

Used on roofs of any size, for any type of construction where a predetermined rate of flow has been specified to limit pipe sizing or flooding of undersized pre-existing storm drainage systems. Adjustable calibrated vanes can be factory set to prescribed G.P.M. flow rates as required. Large slotted dome provides maximum free area for quick drainage of rainwater and protects the drain sump and connected piping from debris. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body. LEVELEZE® adjustable extension accommodates insulation of variable thickness.

SPECIFICATION

JOSAM 28600-AE Series coated cast iron LEVELEZE® FLO-SET® Roof Drain, with large secured dome, adjusted calibrated Vandal-Proof vane collar, WEJLOC® non-puncturing clamp ring with stationary vanes and integral gravel stop, bolted support ring, adjustable top with wide roof flange, large sump with anchor flange, and bottom outlet.



DRAIN FURNISHED PRE-SET AND VANDAL-PROOFED. WHEN ORDERING, SPECIFY FLOW RATE AND HEAD

● CONFORMS WITH ASTM-C564.

▲ WITH CLAMP RING 2-1/4" MIN., 4-1/4" MAX.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
28602-AE	2	94	28605-AE	5	93
28603-AE	3	94	28606-AE	6	92
28604-AE	4	93			

29000 SERIES ISOLATION DECK DRAIN

APPLICATION

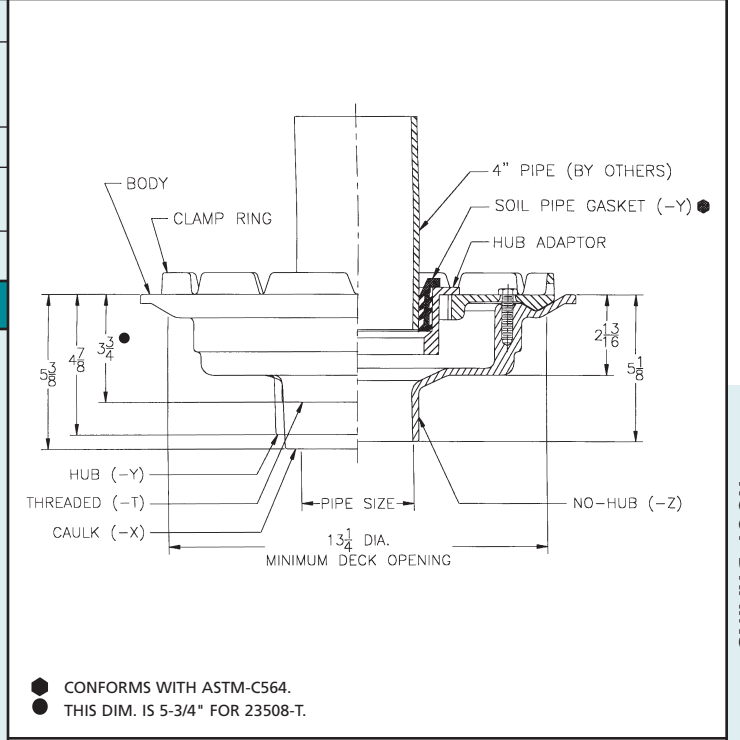
Used on decks where vibration or noise occur. The neoprene gasket isolates vibration and sound from mechanical equipment rooms, studios, music rooms or heavy manufacturing areas and prevents transmission through the plumbing system.

SPECIFICATION

JOSAM 29000 Series coated cast iron Isolation Deck Drain with non-puncturing clamp ring for standpipe, with bottom outlet connection.

Available Options

- | | | | |
|-----|--------------------------------------------------------|-----------------|-------------------------------|
| -CR | Clamping Drain Receiver | -17 | 2" High Solid Clamping Collar |
| -1 | Deck Clamp Assembly | -20 | Galvanized Cast Iron Parts |
| -1C | Drain Receiver Clips
(Min. Deck Opening 16.5" Dia.) | OUTLETS: | |
| -2 | Drain Receiver | -66 | No-Hub Side Outlet, 2"-6" |
| -3 | Deck Clamp Assembly
and Drain Receiver | -T | Threaded Outlet |
| -3C | Drain Receiver and Drain
Receiver Clips | -X | Inside Caulk Outlet |
| | | -Y | Hub Outlet w/Gasket, 2"-4" |
| | | -Z | No-Hub Spigot Outlet |



● CONFORMS WITH ASTM-C564.
● THIS DIM. IS 5-3/4" FOR 23508-T.

FOR OUTLET TYPE SPECIFY -T, -X, -Y or -Z

TYPE NO.	PIPE SIZE	LBS.	TYPE NO.	PIPE SIZE	LBS.
29002	2	39	29005	5	39
29003	3	39	29006	6	39
29004	4	39	29008	8	39

29112 SERIES EXTRA-LARGE SUMP

APPLICATION

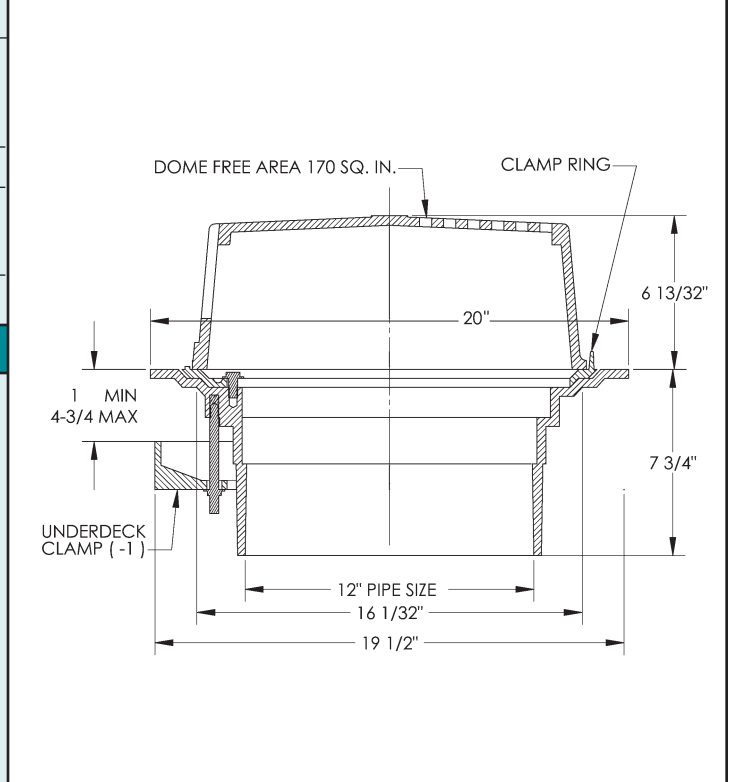
Used on roofs of any size, for any type of construction. Extra large slotted cast iron dome ensures maximum free area for quick drainage of rainwater and protects the drain sump and connected piping from debris. WEJLOC® compression flashing clamp holds the membrane or flashing securely to the drain body.

SPECIFICATION

JOSAM 29112 Series coated cast iron Roof Drain with large cast iron dome, non-puncturing clamp ring with integral gravel stop, large sump with wide roof flange and no-hub bottom outlet.

Available Options

- | | | | |
|--------|-----------------------------------------------------|----------------|-------------------------------|
| -1 | Deck Clamp Assembly | -17 | 2" High Solid Clamping Collar |
| -2 | Drain Receiver | -20 | Galvanized Cast Iron Parts |
| -3 | Deck Clamp Assembly
and Drain Receiver | -VP | Vandal-Proof Dome |
| -10 | Fixed Ext. Collar, C.I.,
(Specify Hgt.) 4" Std. | OUTLET: | |
| -10-20 | Fixed Ext. Collar, Galv.,
(Specify Hgt.) 4" Std. | -Z | No-Hub Spigot Outlet |



FOR OUTLET TYPE SPECIFY -Z

TYPE NO.	PIPE SIZE	LBS.
29112	12	77