



PURPOSE

For nearly fifty years, Zurn oil interceptors have been used in plumbing waste systems to help protect property and the environment against explosion, fire, and pollution. Zurn oil interceptors are designed similar to the grease interceptors. Both work on the principle that oils are lighter than water and thus gravity causes the oil to rise to the surface of the water. Zurn oil interceptors come equipped with a removable combination pressure equalizing/flow diffusing baffle and sediment bucket on the inlet to trap stones, grit, and other substances. Their solid flow-diffusing baffle eliminates turbulence and allows for high efficiency of separation.

All Zurn Z1186 and Z1188 oil interceptors are supplied with an adjustable oil draw-off assembly and vent connection. The interceptors are constructed of 100% steel, coated with a blue acid resistant epoxy. All Zurn oil interceptors are listed by IAPMO. If you require an oil interceptor not listed call 814/455-0921, or fax 814/871-6141 your requirements to the Zurn Engineering Department for assistance.

HOW THE ZURN OIL INTERCEPTOR OPERATES

The solid baffle plate opposite the inlet to the oil interceptor diffuses the flow into the interceptor and lessens the turbulence of the oil-laden water as it enters the intercepting chamber. Solids and sludge carried in the water are stopped by the baffle and collected in the solids retaining bucket between the inlet and the flow-retarding baffle. Such accumulation can then be removed. The resulting quiet, even flow of water through the interceptor permits the oils and other light density substances to rise to the surface by the "flotation" principle of separation. Maximum separation and interception is affected in proportion to the elimination of turbulence of wastewater within the interceptor. The unique Zurn baffle/bucket design permits almost 90 percent of the interior of the interceptor to be used for the function of oil separation.

INSTALLATION CONSIDERATIONS

Install interceptor in the building sewer line. The interceptor may be set on the floor, partially recessed in the floor, top flush with the floor, or fully recessed below the floor to suit piping and structural conditions.

Anticipate sufficient clearance for removal of interceptor cover for cleaning. Also, take into consideration the placement of flow control fitting, vent requirements, and draw-off piping.

Recommended Installations

Commercial Uses

Filling and Service Stations
Maintenance Garages
Airport Hangars
Laundries and Cleaning Establishments
Parking Facilities

Industrial Uses

Machine Shops
Refineries
Fabrication and Welding Plants
Foundries

SIZING

The gallons-per-minute rate of flow through the drainage line into the interceptor is the main consideration in selecting the proper size oil interceptor. In addition, the viscosity characteristics and probable amounts of oils and other light density substances to be separated should be taken into consideration since the volume involved may influence the intercepting chamber size. The larger the interceptor, the higher the flow rate it will handle efficiently and the larger quantity of oil it will separate. If the oil interceptor is too small, an overload condition will develop and some of the oil will be carried through the oil interceptor in the wastewater and pass into the drainage system. Overload conditions may also cause water levels in the trap to rise, thus water will be drawn off through the oil draw off.

VENTING

All Zurn oil interceptors are furnished with 1-1/2" IPS vent and drawoff connections on both the right and left hand sides of the interceptor with plugs in one side. If necessary, the vent and drawoff connections can be changed from one side to the other at the time of installation, by switching the plugs.

The vent connections are located above the adjustable gravity oil draw-off standpipe in the intercepting chamber. Thus, the volatile gases rising from the intercepted substances are carried from the interceptor to the atmosphere.

FLOW CONTROL

The Zurn flow control fitting must be installed properly in every installation. An oil interceptor correctly designed to separate oil and light density substances from wastewater, will not by itself govern or regulate the flow of water through it at all times to sufficiently assure the flotation separation of the entrained substances which are to be intercepted at maximum efficiency.

The flow control fitting, designed with an integral orifice, gives a pre-determined optimum flow rate and thus assures the elimination of turbulence in the oil interceptor, which could otherwise occur from sudden surges through the drainage line.

The orifice openings are related to the size and gallons per minute rating of the oil interceptor. It should also be noted that standard orifice sizing is for gravity flow conditions where no pressure build-up is considered. If an interceptor is operating at maximum flow levels, a head may develop, in which case overload conditions may still exist.

ADJUSTABLE DRAW-OFF

The Zurn oil interceptor is furnished with a 1-1/2" IPS adjustable oil draw-off assembly. This draw-off can be furnished on either the right or left hand side of the interceptor. The oil draw-off consists of an adjustable pipe combination on the inside of the intercepting chamber, and a pipe connection from the internal adjustable standpipe on the side of the oil interceptor body to connect to an oil drain line from the oil interceptor to an oil storage tank. The adjustable standpipe can be raised or lowered inside the interceptor chamber to the proper height for draining off the separated oils and similar light density substances that have separated and floated to the surface of the interceptor chamber.

Thus, after the oils and other substances have been accumulated in the interceptor, they can be drained from the interceptor chamber by gravity flow through the internal standpipe. The standpipe is adjusted so that the opening is located at 1/8" above the top of the water flow level in the interceptor chamber. There is no need to manually skim or dip out the oil, since the oil will drain off by gravity flow through the adjustable draw-off standpipe after it has been properly adjusted and tightened.

HOW TO SET ADJUSTABLE DRAW-OFF

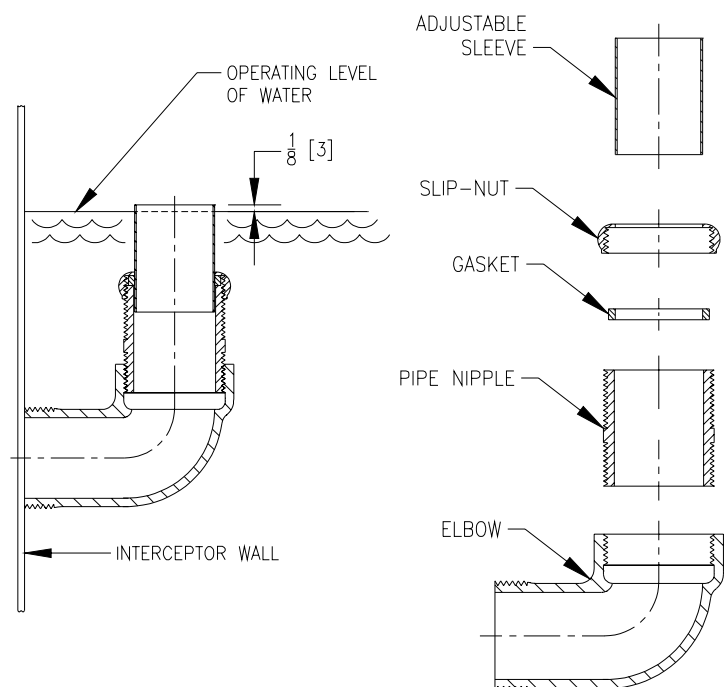
The Zurn oil interceptor should be completely installed and all connections made, including the adjustable draw-off.

Clean water is then run through the oil interceptor at the gallons per minute rate of flow of the size of the interceptor. This establishes the operating water level. This water level is marked on the inside of the intercepting chamber.

The marking of the operating water line must be done while the flow is going through the interceptor. If the mark is established at the static water line, excess amounts of water will enter the gravity draw-off sleeve when the flow rate through the interceptor increases to its rated capacity, in which case the draw-off sleeve would become submerged.

The adjustable sleeve in the draw-off standpipe should be set so that the top of the sleeve is 1/8" above the operating water level mark.

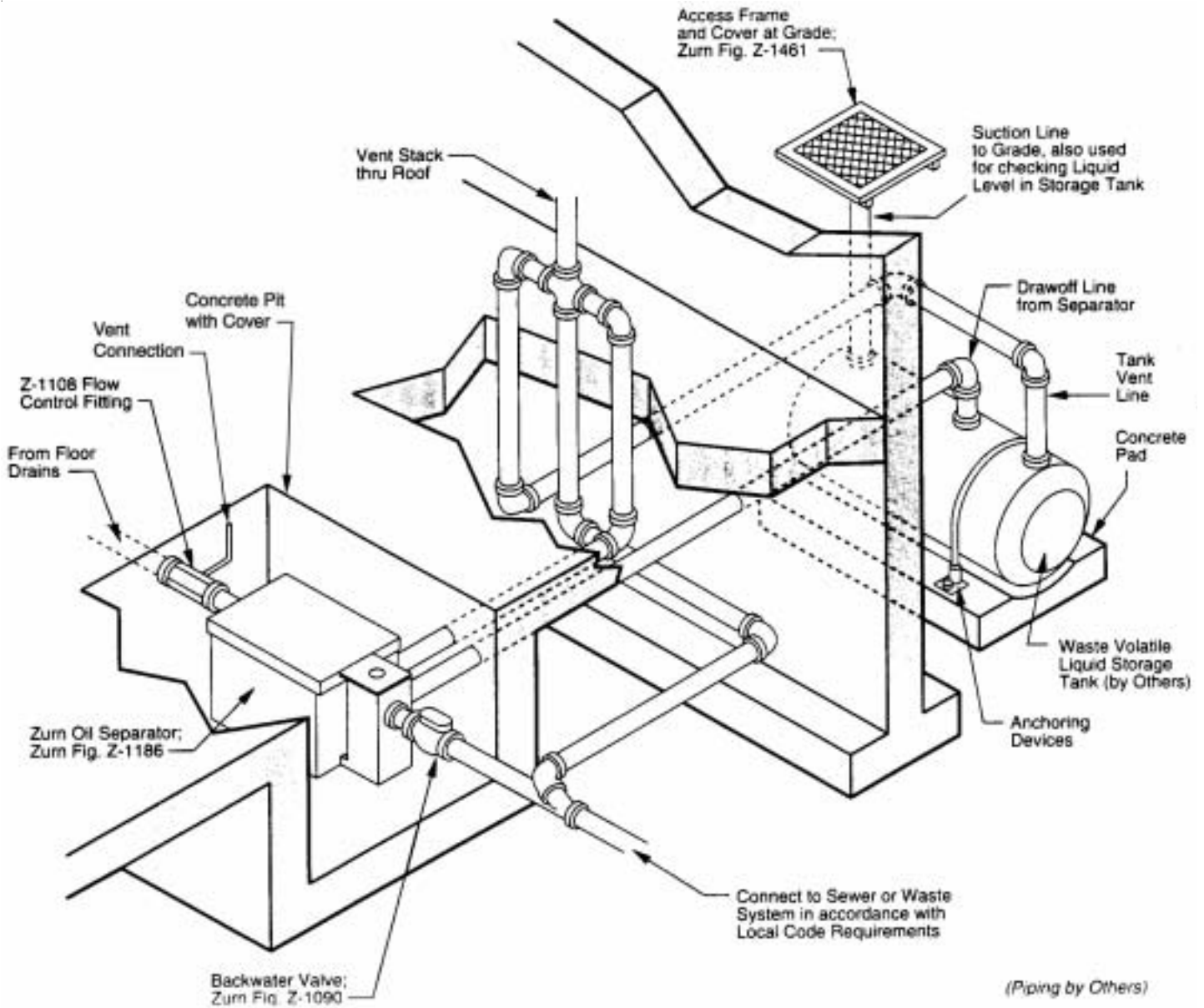
After the oil interceptor is put in operation and oil and low density substances will accumulate at the surface to a depth of 2" to 2-1/2" before the adjustable draw-off will start. Draw-off setting should be checked by taking samples while the oil interceptor is in operation. If the sleeve is properly set, no water will drain off with the oil.



TYPICAL INSTALLATION

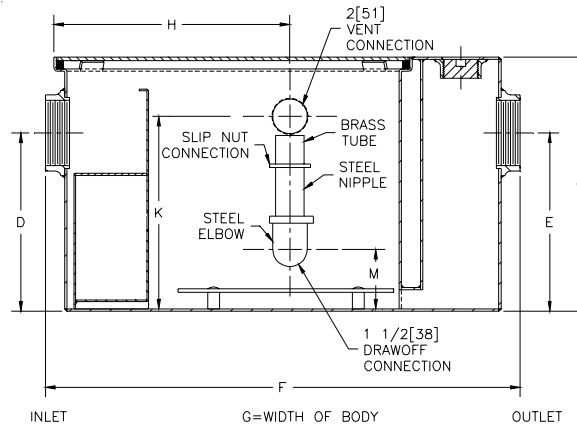
Z1186 OIL INTERCEPTOR

Pictured is a Z1186 installed in a pit with a vent connection and oil storage tank. It is installed with a Z1108 flow control and a Z1090 backwater valve.



Z1186 OIL INTERCEPTOR

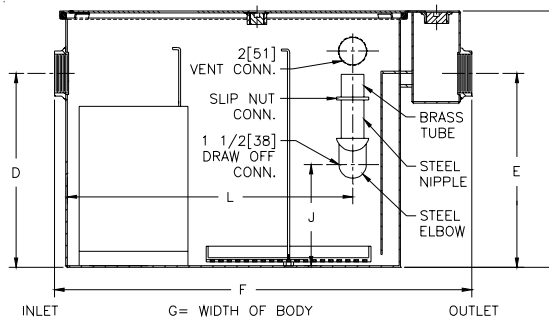
Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice



Size	Inlet/ Outlet Size **	Flow Rate GPM [L]	Water Cap. Gal. [L]	Approx. Wt. Lbs. [kg]	Dimensions In Inches						
					C	D/E	F	G	H	K	M
300	2 [50]	10 [38]	7 [26]	56 [25]	13 5/8 [346]	8 1/8 [206]	25 1/8 [638]	14 [356]	11 5/8 [295]	10 5/8 [270]	4 5/16 [110]
400	2 [50]	15 [57]	9 [34]	77 [35]	14 [356]	8 1/4 [210]	25 1/4 [641]	14 1/8 [359]	11 5/8 [295]	11 [279]	4 7/16 [113]
500	3 [75]	20 [76]	10 [38]	106 [48]	15 1/2 [394]	9 3/8 [238]	27 1/8 [689]	16 3/4 [425]	13 1/4 [336]	12 1/2 [318]	5 9/16 [141]
600	3 [75]	25 [94]	16 [60]	116 [53]	18 1/4 [464]	11 3/4 [298]	30 [762]	17 1/4 [438]	16 [406]	15 1/4 [387]	6 1/4 [159]
700	3 [75]	35 [132]	21 [79]	140 [64]	19 3/4 [502]	12 1/2 [318]	32 1/4 [819]	19 7/8 [505]	16 3/8 [416]	16 3/4 [425]	6 7/16 [164]
800	3 [75]	50 [189]	30 [113]	171 [78]	24 1/4 [616]	14 1/4 [362]	34 1/8 [867]	22 1/2 [572]	17 1/4 [438]	21 1/4 [540]	8 3/16 [208]

Z1188 OIL INTERCEPTOR

Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice



Flow Rate GPM [L] Min	Inlet/Outlet Size**	Water Capacity Gal. [L]	App. Wt. Lbs. [Kg]	No. of Covers	Dimensions In Inches					
					C	D/E	F	G	J	L
75 [284]	3 [75]	65 [246]	332 [151]	1	22 3/4 [578]	18 1/2 [470]	36 [914]	28 5/8 [727]	8 [203]	25 3/4 [654]
100 [379]	3 [75]	110 [306]	432 [196]	1	27 [686]	23 [584]	42 3/4 [1086]	33 5/8 [854]	10 [254]	30 1/8 [765]
125 [473]	3 [75]	150 [568]	780 [354]	2	30 1/8 [765]	24 1/2 [622]	49 1/4 [1251]	40 [1016]	14 1/4 [362]	36 5/8 [916]
150 [568]	4 [100]	190 [719]	888 [403]	2	30 3/4 [781]	25 1/4 [641]	56 [1422]	41 3/8 [1051]	14 [356]	43 7/8 [1114]
200 [757]	4 [100]	265 [1003]	1055 [478]	2	35 1/2 [901]	29 7/8 [759]	61 [1549]	43 5/8 [2286]	18 [457]	46 5/8 [1184]
250 [946]	5 [125]	460 [1741]	1438 [625]	2	41 [1041]	36 [914]	71 [1803]	51 3/8 [1305]	20 [508]	56 5/8 [1438]
300 [1136]	5 [125]	660 [2498]	1840 [835]	2	46 1/4 [1175]	39 5/8 [1006]	80 [2032]	58 3/8 [1483]	20 5/8 [524]	65 5/8 [1667]
350 [1325]	6 [150]	860 [3255]	2180 [989]	2	50 1/2 [1283]	43 7/8 [1114]	87 [2210]	63 5/8 [1616]	20 1/4 [514]	74 1/8 [1882]
400 [1514]	6 [150]	1090 [4126]	2536 [1150]	3	54 1/4 [1378]	47 5/8 [1210]	94 [2388]	67 [1702]	20 1/2 [521]	79 1/8 [2009]
450 [1703]	6 [150]	1275 [4826]	2816 [1277]	3	55 1/4 [1403]	48 5/8 [1235]	100 [2540]	72 [1829]	22 1/4 [565]	85 3/8 [2168]
500 [1893]	6 [150]	1435 [5431]	2970 [1347]	3	57 1/4 [1454]	51 5/8 [1311]	104 [2642]	74 [1880]	23 1/4 [591]	88 3/8 [2245]

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ZURN INDUSTRIES, INC. ♦ SPECIFICATION DRAINAGE OPERATION ♦ 1801 Pittsburgh Ave. ♦ Erie, PA 16514

Phone: 814/455-0921 ♦ Fax: 814/454-7929 ♦ World Wide Web: www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292