



Oil, Sand, and Sediment Interceptors

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APPLICATION INDEX

Product selection should be made with a specific application and the type of construction in mind. The varied types and sizes of Zurn interceptors, along with their options, offer a selection for all applications.

APPLICATION	RECOMMENDED INTERCEPTOR
Maintenance, Parking Garage, Oil Spill Areas, Service Stations, Wash-Down Areas	Z1186, Z1186-ST, Z1187, Z1187-SI, Z1188, Z1188-ST, Z1189, Z1196, Z1198
Municipal Water Systems, Wells	Z1187
Electronic Oil Level Sensor	Z1194, Z1196, Z1198

PICTORIAL INDEX

<p>Z1186 Oil Interceptor</p> 	<p>Z1186-ST Oil Interceptor with Integral Storage Tank</p> 	<p>Z1187 Sand and Sediment Interceptor</p> 	<p>Z1187-SI Sand Interceptor</p> 
<p>Z1188 Large Capacity Oil Interceptor</p> 	<p>Z1188-ST Oil Interceptor with Integral Storage Tank</p> 	<p>Z1189 Oil/Sediment Interceptor</p> 	<p>Z1194 Oil Level Sensor Retrofit Kit</p> 
<p>Z1196 Oil Interceptor with Oil Level Sensor</p> 	<p>Z1198 Large Capacity Oil Interceptor with Oil Level Sensor</p> 		

PURPOSE

For nearly sixty 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 and the water to fall. Zurn oil interceptors come equipped with a removable sediment bucket on the inlet to trap stones, grit, and other substances. Their perforated flow-diffusing baffle eliminates turbulence and allows for high efficiency of separation.

All Zurn Z1186 and Z1188 oil interceptors are supplied with an oil draw-off valve assembly. The interceptors are constructed of 100% steel, coated with a blue acid resistant epoxy. Most 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 perforated baffle plates opposite the inlet of the oil interceptor diffuse the flow into the interceptor and lessen 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 held 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 perforated baffle plate design permits almost 90 percent of the interior of the interceptor to be used for the function of oil separation.

INSTALLATION CONSIDERATIONS

Install interceptor as close as practical to the fixture or fixtures being serviced. The interceptor may be set on the floor, partially recessed in the floor with 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. **Note:** All oil interceptors must be vented to atmosphere.

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.

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. Refer to Zurn flow control literature for orifice sizing under pressure head conditions.

VENTING

All Zurn oil interceptors must be vented to atmosphere and are furnished with vent connections of 1-1/4" or 1-1/2" IPS on both the right- and left-hand side of the interceptor as specified to suit the installation. If necessary, the vent connection can be changed from one side to the other at the time of installation.

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

ADJUSTABLE DRAW-OFF (Z1186 and Z1188)

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 of 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 the top of the water flow level in the interceptor chamber and at the bottom of the intercepted substances floating on the top surface of the interceptor. 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 (Z1186 and Z1188)

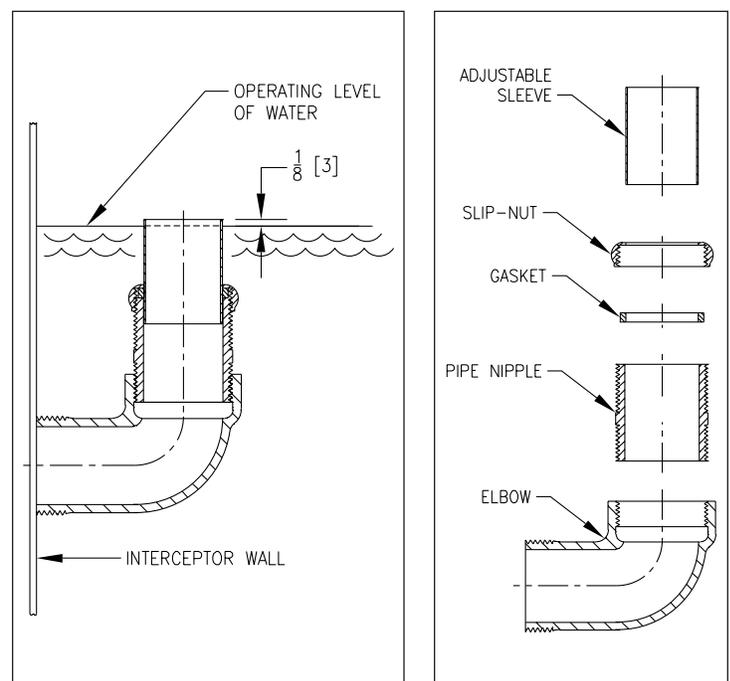
The Zurn oil interceptor should be completely installed and all connections made, including the adjustable draw-off.

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.

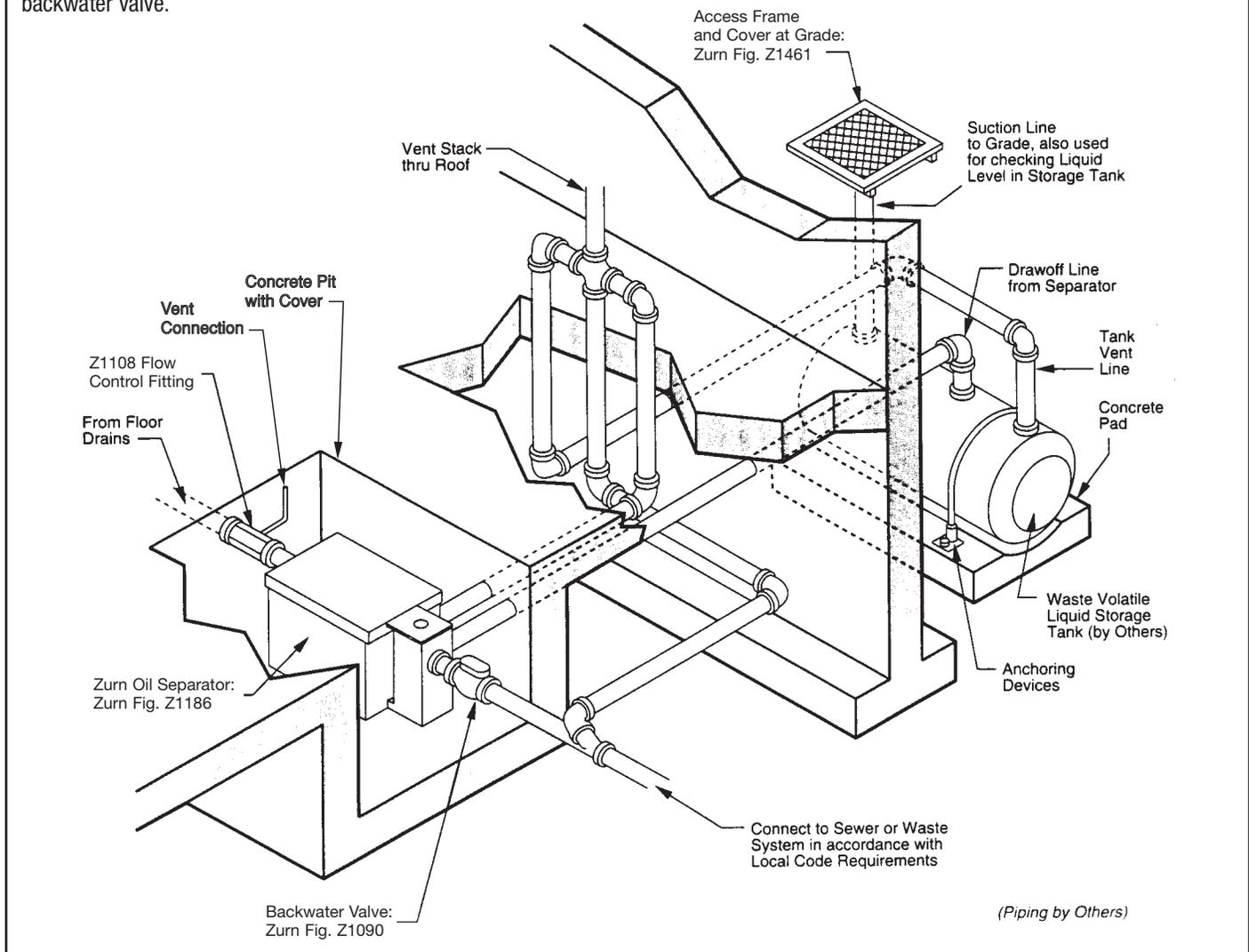
After the oil interceptor is put in operation and a film of oil and low density substances has accumulated at the surface, the adjustable draw-off setting should be checked by taking samples while the oil interceptor is in operation. If the sleeve is properly set, no water will drain off with the oil, and the adjustable sleeve should be moved up or down until only oil and no water comes through the draw-off standpipe.



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-ST and Z1188-ST SERIES Zurn Engineered Oil Interceptors with Integral Storage Tank

Zurn Z1186-ST and Z1188-ST Series are designed to incorporate an integral oil storage tank within them. The same practices, as with the standard Z1186 and Z1188 oil interceptors, should be followed with regard to sizing, installation, and flow control usage.

VENTING

The Zurn Z1186-ST and Z1188-ST Series oil interceptor with integral storage tank is furnished with 1-1/2" IPS vent connections located on all sides of the unit to accommodate the installation of the vent piping. Three of the vent connections are located on the oil storage tank, and one vent connection is located on the interceptor body upstream of the double wall trap seal. It is important that the unit be vented using any one of the vent connections provided. This will allow any of the volatile gases rising from the intercepted substances to be carried from the interceptor and storage tank to the atmosphere.

ADJUSTABLE DRAW-OFF

The Zurn oil interceptor with integral storage tank is furnished with an adjustable oil draw-off gate plate. This draw-off creates a passageway for intercepted oils to travel from the main separation chamber to the oil storage tank. The oil draw-off consists of an adjustable gate plate on the inside of the intercepting chamber. The adjustable gate plate can be raised or lowered inside of 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 accumulated inside the interceptor, they will drain from the interceptor chamber by gravity flow over the internal gate plate. The gate plate shall be adjusted so that its top edge is above the operating 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 over the draw-off gate plate after it has been properly adjusted and tightened.

HOW TO SET ADJUSTABLE DRAW-OFF

The Zurn oil interceptor with integral storage tank should be completely installed and all connections made, including the adjustable draw-off gate plate. Loosen all bolts securing the gate plate as well as those above the gate plate. Slide the gate plate up to its highest position and tighten in place.

Clean water is then run through the oil interceptor at the flow the interceptor is rated for. This establishes the operating water level. The operating water level is marked on the inside of the intercepting chamber. The marking of the operating water level must be done while there is water flowing through the interceptor. If the mark is established at the static water level, excess amounts of water will pass over the draw-off gate plate when the flow rate through the interceptor increases to its rated capacity. In this case, the draw-off gate plate would become submerged.

Loosen the bolts securing the gate plate and slide the gate plate down so that the top edge is 1/8" above the operating water level mark. Tighten bolts securing the gate plate at this level. After the oil interceptor is put into operation and a film of oil and low density substances has accumulated at the surface, the adjustable draw-off setting should be checked by taking samples while the oil interceptor is in operation. If the gate plate is properly set to the correct height, the drawn-off oil should have no water in it. If it is apparent that water is present in the drawn-off oil, the adjustable gate plate should be moved up until only oil travels over the draw-off gate plate.

Z1186-ST and Z1188-ST SERIES Zurn Engineered Oil Interceptors with Integral Storage Tank

OPERATION

Figure 1 below shows the conditions inside the interceptor in a “non-operating” mode. It can be seen that the oil has separated itself from the water. The oil is floating on the surface of the water in the main separation compartment and the top of the oil is below the top of the adjustable oil draw-off gate plate (see “How To Set Adjustable Draw-off” section).

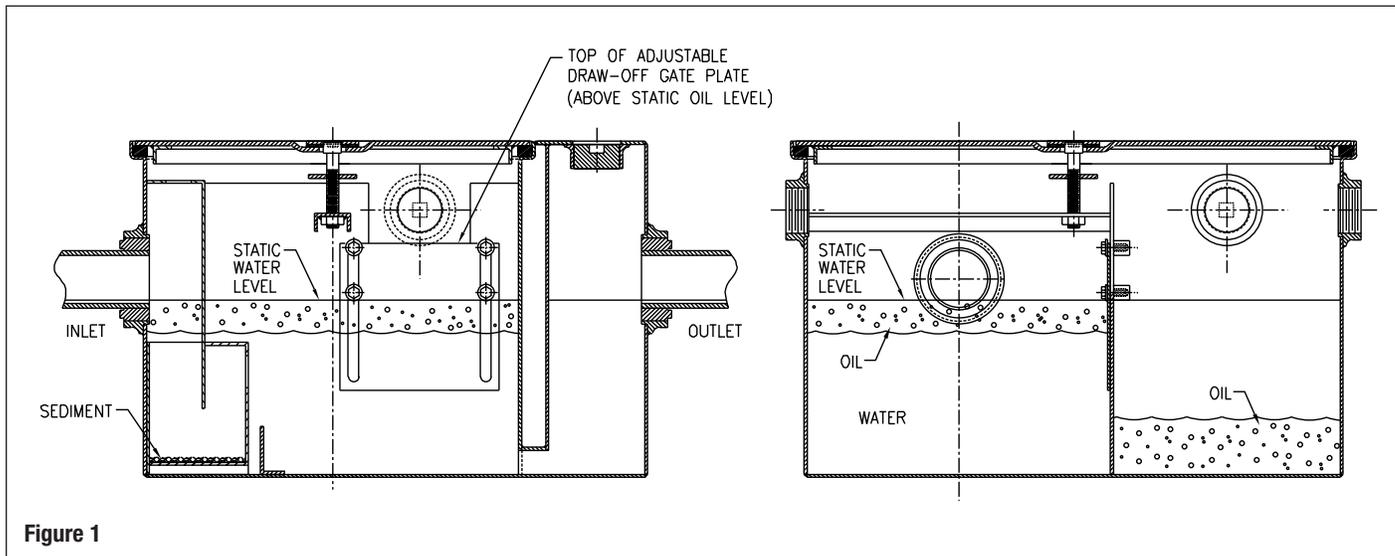
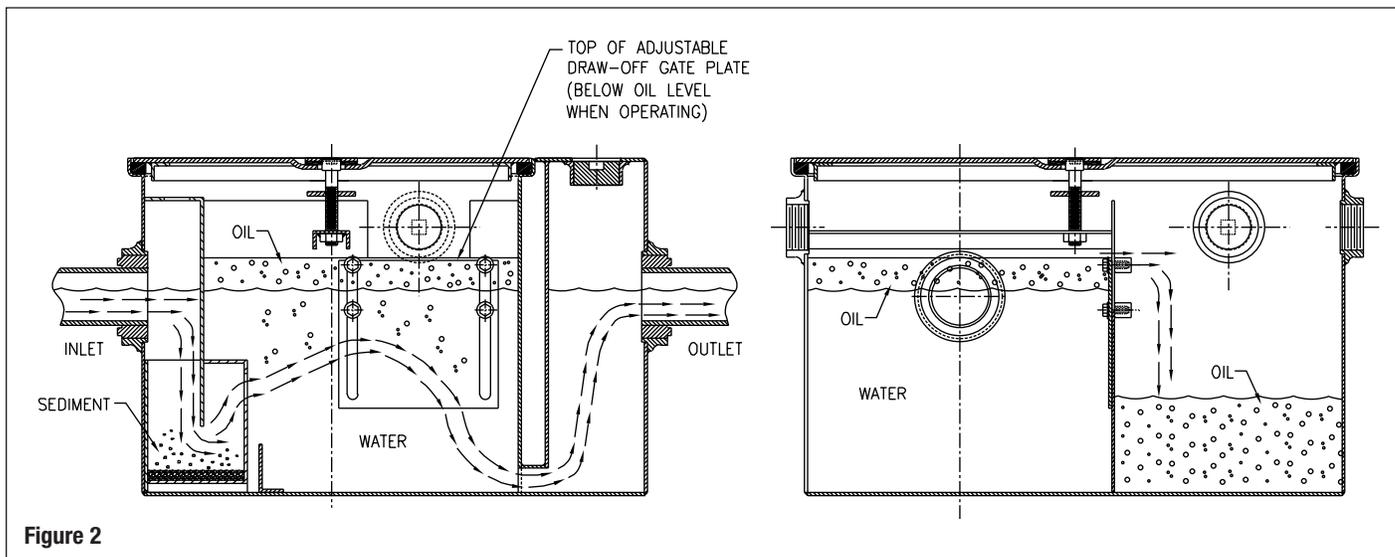


Figure 2 below shows the conditions inside the interceptor in an “operating” or “flowing” mode. The oil/water mixture flows from the inlet piping into the interceptor and causes the oil/water level to rise. The mixture is directed downward into and through a removable sediment bucket. Heavier particles and sediment are collected in the bucket while the oil/water mixture continues through the bucket and is directed into the main separation compartment. The oil separates from the water by rising to the top and is now on the surface of the water. The oil/water level inside the interceptor has risen to a level which puts the layer of oil above the top of the adjustable draw-off gate plate allowing the oil to “spill” over the top of the gate plate and into the oil storage compartment. The water exits the main separation compartment through the outlet opening at the bottom of the unit passing through the outlet trap and into the discharge waste system plumbing.

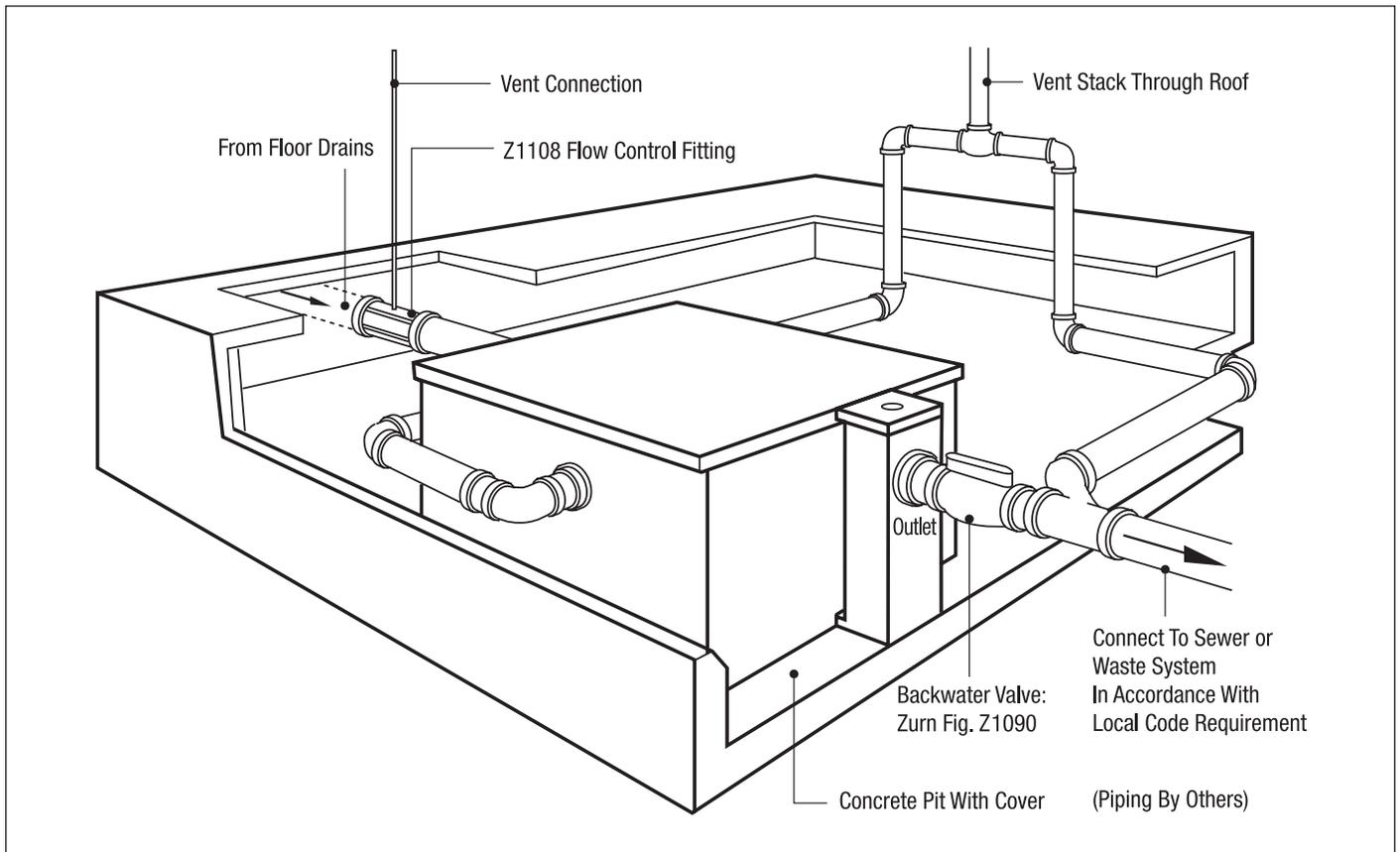


Z1186-ST and Z1188-ST SERIES Zurn Engineered Oil Interceptors with Integral Storage Tank

MAINTENANCE

Periodic checks of the oil storage compartment is recommended. The accumulated oil in the storage compartment should be pumped out before the oil level has risen to the gate plate height. As these periodic checks are made, a general inspection of the interceptor, plumbing connections, and gasketing should be made. Any required maintenance needed should be performed at this time.

Pictured is a Zurn oil interceptor with integral storage tank installed in a pit with vent connections. It is installed with a Z1108 flow control fitting and a Z1090 backwater valve.



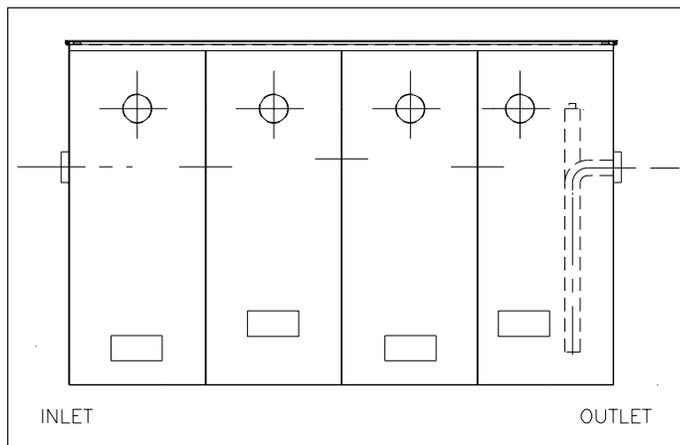
Z1187 SAND and SEDIMENT INTERCEPTOR Operation and Maintenance Instructions

SIZING

The sizing of this interceptor is generally based upon the expected amount of solids and waste to be retained. Secondly, sizing will determine the frequency for which cleaning shall be required. Larger units will handle greater volumes of solids between cleaning, and therefore larger flow rates. All units are made with a standard 4" [102 mm] pipe size inlet and outlet and are capable of handling drainage volumes standard to 4" [102 mm] pipe.

DESIGN

The Zurn Z1187 Sand and Sediment Interceptor is designed to separate and retain sand, gravel, and similar materials, in addition to any oil, grease, gas, or diesel fuel-laden waste material. This is accomplished through the principle of gravity and flotation separation. The separator's eight chambers, with varying passage elevations, trap virtually all materials which separate from water under gravity conditions. Larger and heavier materials are retained in the first compartment, while smaller and lighter materials are trapped in other compartments. Oil, grease, and similar materials will be retained at the surface of some or all eight compartments. Any gaseous fumes will be collected between the top of the water and the bottom of the cover and vented through the four individual 2" [51 mm] threaded vent connections.



OPERATION

The wastewater flows from the inlet piping into and through the separator, and is regulated upward and downward through openings in the stationary baffles that divide the separator into eight compartments, assisting in the separation and collection of solids and oil particles, then exits the interceptor to the sanitary drain system.

MAINTENANCE

Cleaning should be done on a regular basis, either before or after baffle openings are clogged. Remove the covers and skim off any oil or grease accumulation, then, using a mechanical pumping system, pump out all eight compartments of water and accumulated solids. Make sure that all vents are free of debris to allow gases and odors to exit from the unit. Make certain cover gasket is intact and clean. Apply a light coating of oil on the cover gasket, which helps prevent the cover gasket from adhering to cover and aids in maintaining a complete seal. The covers should then be placed back on the unit and secured. Efficiency of operation is directly related to the level of maintenance.

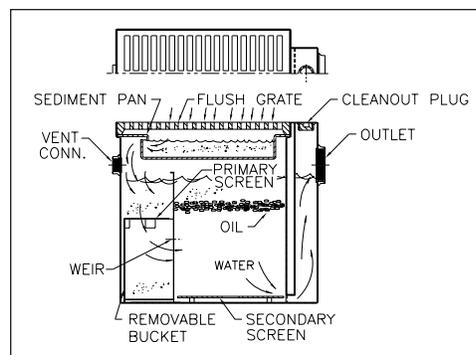
Z1189 OIL and SEDIMENT INTERCEPTOR Operation and Maintenance Instructions

SIZING

The sizing of this interceptor is generally based upon the expected amount of sediment and solid waste to be retained. Secondly, sizing will determine the frequency for which cleaning shall be required. Larger units will handle greater volumes of waste between cleanings. All units are made with a standard pipe size outlet and are capable of handling drainage volumes standard to their respective pipe size.

DESIGN

The Zurn Z1189 Oil and Sediment Interceptor for garage and industrial floor drainage applications is designed to retain mud, sand, sediment, greasy sludge, or any other solids entering a floor drain, in addition to any oil/grease laden waste material. This is accomplished through the principle of gravity and flotation separation. The sediment pan retains greasy sludge and solids. The removable bucket/weir will also retain solids and act to stop water turbulence so oil and grease can separate from the water, and be retained in the main separation chamber.



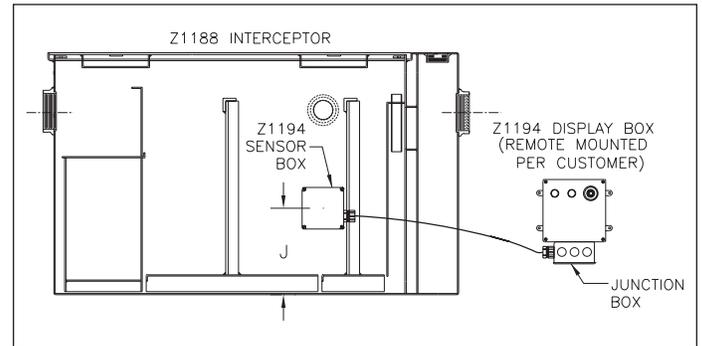
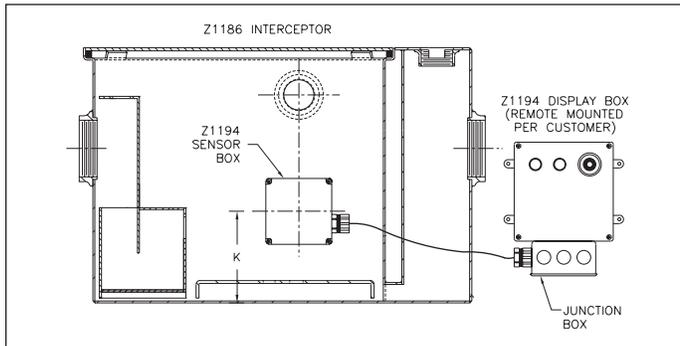
OPERATION

The wastewater flows through the grate into the sediment pan, then down into the removable bucket, exiting through the weir at back of the bucket into the main separating chamber, down through the secondary screen, into the cleanout chamber, then exits the interceptor to the sanitary drain system.

MAINTENANCE

Cleaning should be done on a regular basis, either before or after sediment pan passageway becomes blocked. Remove the grate, sediment pan and bucket, and clean out all debris. Skim oil/grease from top of water or pump contents out. After cleaning, all materials should be disposed of properly. Efficiency of operation is directly related to the level of maintenance. Cleaning should be done regularly to avoid oil/sludge from passing through the unit.

Z1194 OIL LEVEL SENSOR FOR RETROFIT APPLICATIONS Operation and Maintenance Instructions



SAFETY WARNINGS

- **Do not** apply power before you read and complete Start-up List (page 10).
- **Do not** remove electrical enclosure cover when main cover is open and electricity is on.
- **Do not** expose electrical components to water or oil.
- **CAUTION: Do not** apply power until all provisions of Personal Safety Procedure #29CFR 1910.335 and Lockout and Tag Procedure #29CFR 1910.147 are in compliance.

INSTALLATION

The Zurn Oil Interceptors with Oil Level Sensors must be installed in accordance with the Oil Interceptor Installation Instructions (Form No. IT84) and in compliance with local codes and regulations.

All Zurn Oil Interceptors with Oil Level Sensors are for ON-THE-FLOOR INSTALLATION ONLY.

VARIABLES THAT MIGHT AFFECT OPERATION

Operators and users of Zurn Oil Interceptors must be familiar with the variables which may adversely affect the efficiency of the interceptor. These are as follows:

1. **Velocity of Incoming Water** A higher velocity of water will contribute to a more turbulent mixture. This will slow the separation process and thereby reduce efficiency.
2. **Ratio of Oil to Water** The higher the ratio of oil to water, the lower the efficiency.
3. **Specific Gravity (Weight) of the Oil** Oil with a lower specific gravity will rise to the surface much quicker, while oil with a higher specific gravity will have a tendency to linger toward the bottom, taking a longer time to surface.
4. **Possible Presence of Detergents in the System** Oil cutting detergents will break the oil into minute particles that can pass through the interceptor.
5. **Presence of Large Particles Mixed with the Oil** Particles allowed to pass into the interceptor will allow adhesion of the oil to these particles. This reduces efficiency.

Job condition variables may warrant the use of a larger size interceptor than normal sizing indicates. This will help to ensure efficient operation as variables change throughout the operation cycle. Local codes and job conditions prevail and may warrant alternate sizes.

Prior to doing any troubleshooting on a unit which appears to be malfunctioning, make certain that none of the variables which affect the operation of the unit are present.

Z1194 OIL LEVEL SENSOR FOR RETROFIT APPLICATIONS Operating Instructions

INSTALLATION INSTRUCTIONS

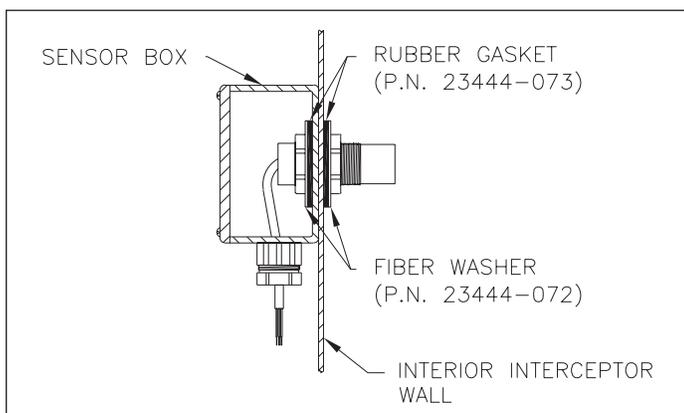
1. Install the Oil Interceptor in accordance with the installation instructions (Form No. IT84).
2. Remove the steel nipple from the draw-off tube assembly and replace it with a plug so that the draw-off assembly is no longer operational.
3. Using the chart below, locate and drill a 1-1/4" hole in the side of the interceptor approximately 2-1/2" over from the draw-off fitting, toward the inlet.

Z1186	
Flow Rate G.P.M.	K Dim. Inches
10	5-7/16
15	5-7/16
20	6-5/8
25	7-3/4
35	7-3/4
50	9-1/16

Z1188	
Flow Rate G.P.M.	J Dim. Inches
75	10
100	15-3/8
125	15-11/16
150	17-5/16
200	21-1/16
250	27-13/16
300	32
350	35-5/16
400	39-5/16
450	40-3/8
500	43-3/16

4. Remove the four cover securing screws of the sensor box and remove the cover.
5. Unscrew the nut that holds the sensor to the box.
6. With the sensor still inside the box, place the sensor through the 1-1/4" hole, orienting the box so that the conduit connection faces the required direction.
7. Place a second rubber gasket and fiber washer over the sensor on the inside of the interceptor wall. Secure the sensor with the nut that was removed in Step 5.
8. Replace the cover back on the sensor box and secure with the four screws provided.

Note: A bead of silicon sealant may be placed between the sensor box and the outside wall of the interceptor for additional protection against leaks.

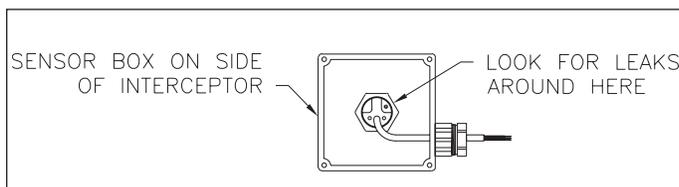


WIRING INSTRUCTIONS

1. After the Display Box is mounted in the desired location, remove the smaller junction box cover.
2. Locate the two bundles of three wires each inside.
3. One bundle has white, black, and green wires in it. These three wires are to be connected to the dedicated 120V GFCI service.
4. The other bundle has blue, white, and brown wires in it. These wires are to be connected to the same colored wires from the sensor inside the sensor box on the interceptor.
5. All wires should be run in conduit and in compliance with local codes.

START-UP LIST

1. Be sure that power is OFF (circuit breaker in off position).
2. Make sure that all connections and fittings are tight and secure.
3. Verify that the flow control fitting was properly installed and vented.
4. The display panel should be readily visible.
5. Remove the interceptor cover and the electrical enclosure cover of the sensor box.
6. Check that the baffles are installed.
7. The display box should be connected to a dedicated 120V, 60 Hz, GFCI service. **Do not turn power on.**
8. Go to source that spills into the interceptor and turn on cold water.
9. Turn the water supply off once the sensor is fully engulfed in water. Watch for leaks, both from the interceptor and the electrical enclosure around the sensor.



10. Replace cover on the interceptor and enclosure cover of the sensor box. If all steps were completed to this point, turn the power on.
11. If all functions are normal, a green light will be displayed.
12. The unit is now operational.

Note: All oil level sensors come preset from the factory. There should be no need for adjustment of the sensor in the field.

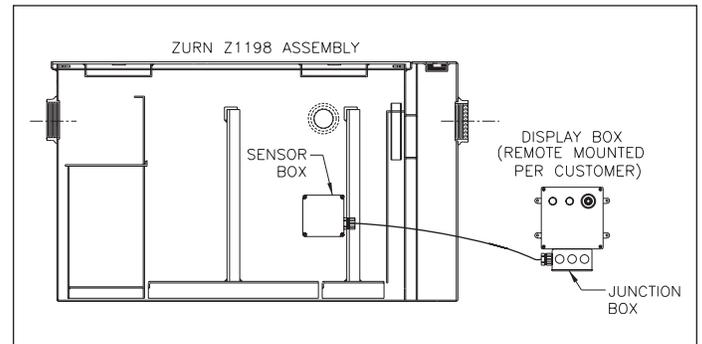
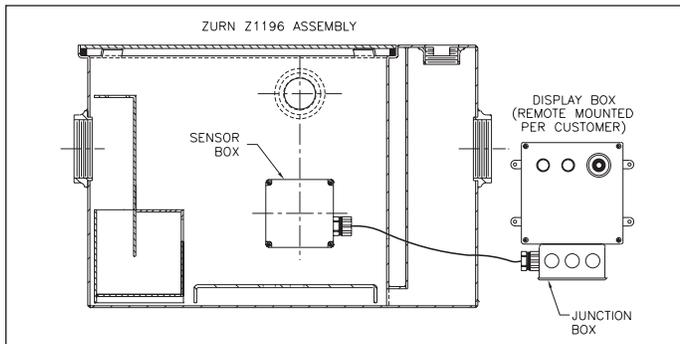
Z1194 OIL LEVEL SENSOR FOR RETROFIT APPLICATIONS Daily Operation and Maintenance

DAILY OPERATION AND MAINTENANCE

1. The interceptor must be cleaned on a regular basis. Volume of debris entering unit will determine the cleaning schedule.
2. The unit should be opened, checked, cleaned of debris, and the sensor wiped off on a monthly basis.
3. **Caution:** If substances other than oil have entered the unit, noxious odor may be present.
4. Once the red light and audible alarm have been activated, the service power should be turned OFF to the unit, the interceptor cover removed, and the accumulated oil removed.
5. **Caution:** There are regulations in all areas regarding the proper disposal of oil and oil products. It is illegal to dispose of this oil in any other manner.
6. Once all the oil has been removed, turn on water to the interceptor and raise the static water level inside the interceptor up over the oil sensor.
7. Once the interceptor has been filled with clean water, replace the cover and turn the service power ON.
8. If all these steps were followed properly, the light on the display should be green and the alarm off.

If you have any problems or concerns, feel free to contact Zurn Industries at 814-455-0921, or contact your local Zurn Representative.

Z1196 and Z1198 OIL INTERCEPTOR WITH OIL LEVEL SENSOR Operation and Maintenance Instructions



Zurn oil interceptors with oil level sensors are efficient appliances designed to separate oil from water.

SAFETY WARNINGS

- **Do not** apply power before you read and complete Start-up List (page 13).
- **Do not** remove electrical enclosure cover when main cover is open and electricity is on.
- **Do not** expose electrical components to water or oil.
- **CAUTION: Do not** apply power until all provisions of Personal Safety Procedure #29CFR 1910.335 and Lockout and Tag Procedure #29CFR 1910.147 are in compliance.

INSTALLATION

The Zurn Oil Interceptors with Oil Level Sensors must be installed in accordance with the recommended oil interceptor installation instructions and in compliance with local codes and regulations.

All Zurn Oil Interceptors with Oil Level Sensors are FOR FLOOR OR RECESSED PIT INSTALLATION ONLY. For pit installation it is required that a drain or sump pump be used to keep the pit relatively dry.

VARIABLES THAT MIGHT AFFECT OPERATION

Operators and users of the Zurn Z1196/Z1198 appliance must be familiar with the variables which may adversely affect the efficiency of the interceptor. These are as follows:

1. **Velocity of Incoming Water** A higher velocity of water will contribute to a more turbulent mixture. This will slow the separation process and thereby reduce efficiency.
2. **Ratio of Oil to Water** The higher the ratio of oil to water, the lower the efficiency.
3. **Specific Gravity (Weight) of the Oil** Oil with a lower specific gravity will rise to the surface much quicker, while oil with a higher specific gravity will have a tendency to linger toward the bottom, taking a longer time to surface.

4. **Possible Presence of Detergents in the System** Oil cutting detergents will break the oil into minute particles that can pass through the interceptor.
5. **Presence of Large Particles Mixed with the Oil** Particles allowed to pass into the interceptor will allow adhesion of the oil to these particles. This reduces efficiency.

Job condition variables may warrant the use of a larger size interceptor than normal sizing indicates. This will help to ensure efficient operation as variables change throughout the operation cycle. Local codes and job conditions prevail and may warrant alternate sizes.

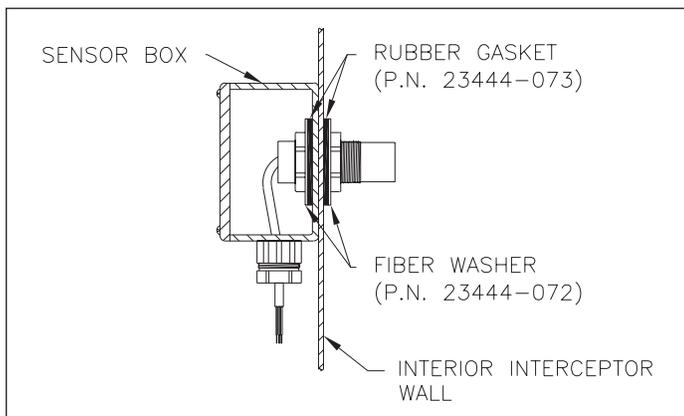
Prior to doing any troubleshooting on a unit which appears to be malfunctioning, make certain that none of the variables which affect the operation of the unit are present.

Z1196 and Z1198 OIL INTERCEPTOR WITH OIL LEVEL SENSOR Operating Instructions

INSTALLATION INSTRUCTIONS

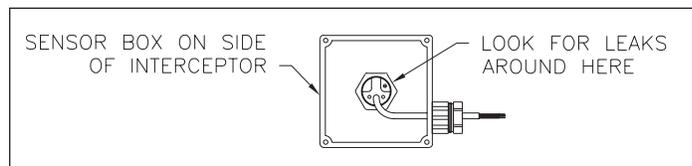
1. Install the Oil Interceptor in accordance with the installation instructions (Form No. IT84).
2. Remove the four cover securing screws of the sensor box and remove the cover.
3. Unscrew the nut that holds the sensor to the box.
4. With the sensor still inside the box, place the sensor through the 1-1/4" hole, orienting the box so that the conduit connection faces the required direction.
5. Place a second rubber gasket and fiber washer over the sensor on the inside of the interceptor wall. Secure the sensor with the nut that was removed in Step 3.
6. Replace the cover back on the sensor box and secure with the four screws provided.

Note: A bead of silicon sealant may be placed between the sensor box and the outside wall of the interceptor for additional protection against leaks.



START-UP LIST

1. Be sure that power is OFF (circuit breaker in off position).
2. Make sure that all connections and fittings are tight and secure.
3. Verify that the flow control fitting was properly installed and vented to atmosphere.
4. The display panel should be readily visible.
5. Remove the interceptor cover and the electrical enclosure cover.
6. Check that the baffles are installed and secured.
7. The display box should be connected to a dedicated 120V, 60 Hz, GFCI service. **Do not turn power on.**
8. Go to source that spills into the interceptor and turn on cold water.
9. Turn the water supply off once the sensor is fully engulfed in water. Watch for leaks, both from the interceptor and the electrical enclosure around the sensor.
10. Replace cover on the interceptor. If all steps were completed to this point, turn the power on.
11. If all functions are normal, a green light will be displayed.
12. The unit is now operational.



WIRING INSTRUCTIONS

1. After the display box is mounted in the desired location, remove the smaller junction box cover.
2. Locate the two bundles of three wires each inside.
3. One bundle has white, black, and green wires in it. These three wires are to be connected to the dedicated 120V GFCI service.
4. The other bundle has blue, white, and brown wires in it. These wires are to be connected to the same colored wires from the sensor inside the sensor box on the interceptor.
5. All wires should be run in conduit, and in compliance with local codes and regulations.

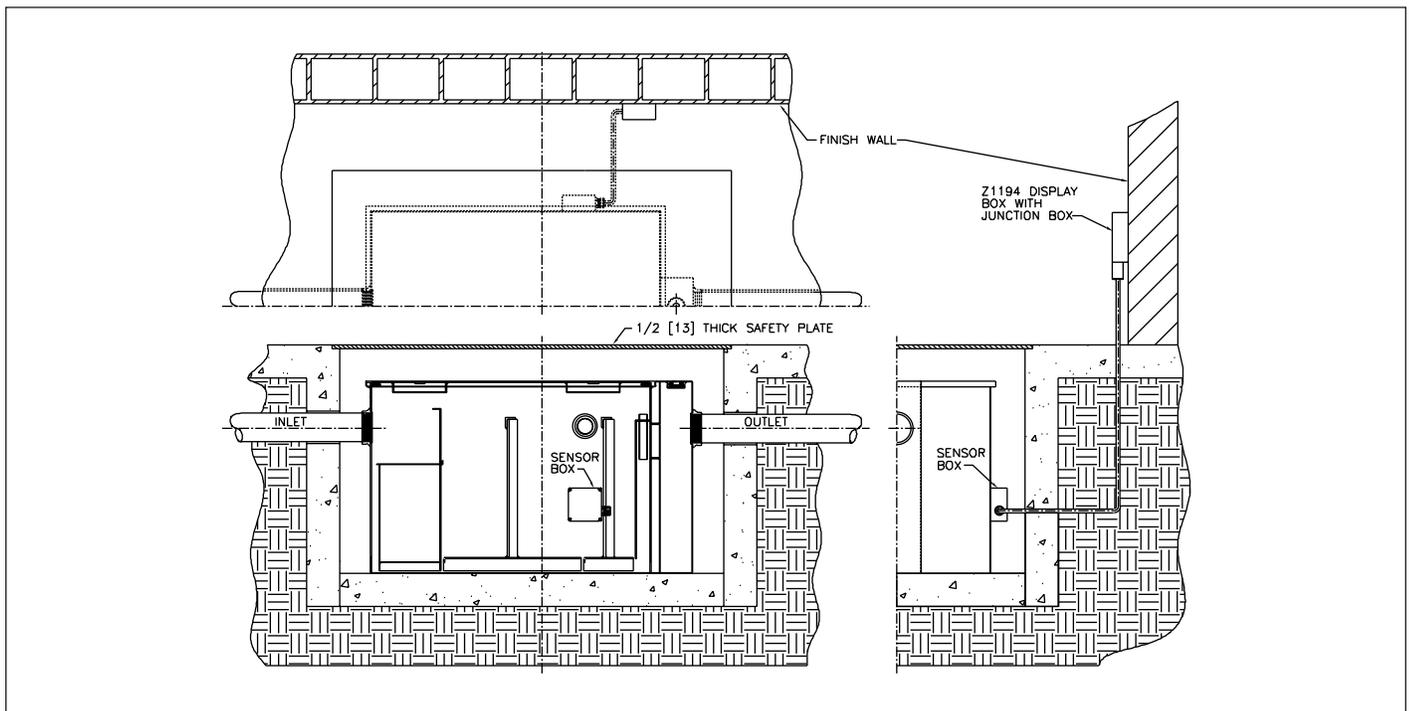
Z1196 and Z1198 OIL INTERCEPTOR WITH OIL LEVEL SENSOR Daily Operation and Maintenance

DAILY OPERATION AND MAINTENANCE

1. The interceptor must be cleaned on a regular basis. Volume of debris entering unit will determine the cleaning schedule.
2. The unit should be opened, checked, cleaned of debris, and the sensor wiped off on a monthly basis.
3. **Caution:** If substances other than oil have entered the unit, noxious odor may be present.
4. Once the red light and audible alarm have been activated, the service power should be turned OFF to the unit, the interceptor cover removed, and the accumulated oil removed.
5. **Caution:** There are regulations in all areas regarding the proper disposal of oil and oil products. It is illegal to dispose of this oil in any other manner.
6. Once all the oil has been removed, turn on water to the interceptor and raise the static water level inside the interceptor up over the level of the oil sensor.
7. Once the interceptor has been filled with clean water, replace the cover and turn the service power ON.
8. If all these steps were followed properly, the light on the display should be green and the alarm turned off.

If you have any other problems or concerns, feel free to contact Zurn Industries at 814-455-0921, or contact your local Zurn Representative.

Z1198 Large Capacity Oil Interceptor with Oil Level Sensor Pit Installation Example



OPTIONS and VARIATIONS

All interceptor options and variations are specified as a PREFIX and/or SUFFIX letter or number added to the series designation. Listed below are the available options and a brief description of each.

PREFIXES

Z Acid Resistant Coated Fabricated Steel

SUFFIXES

-DG Duresist Grate

-E Extension

Acid resistant coated interior and exterior fabricated steel extension section. The extension option is specified when the interceptor is in a recessed installation and proper piping elevations must be met. Zurn extensions can be furnished in two different ways:

- 1. Retrofit Extension:** This type of extension is a separate piece, bolted onto the top of the unit and gasketed. This allows for modification to the height of the unit after the unit has already been furnished. Note: The heavy-duty cover option (-HD) cannot be specified when a retrofit extension is used.
- 2. Integral Extension:** This type of extension is built directly into the unit as one piece.

Note: When specifying the extension option (-E), it is **required** that the overall height dimension ('C' Dimension) of the interceptor body be specified to ensure that the unit is furnished properly.

-HD Heavy-Duty Cover

Reinforced cover rated at 10,000 lbs. maximum safe live load. When this option is specified, it is necessary to extend the overall height of the interceptor body to accommodate for necessary supports. The additional extension height does not have to be specified when ordering the product; it is automatically built into the unit as an integral part. The following chart illustrates the required extended height:

Model	Size	Extension Height Added To Unit
Z1188	75	4"
Z1188	100	6"
Z1188	125-500	3"

-K Anchor Flange

Located 1-3/4" down from the top of the unit and 2" wide. The anchor flange is used for structural support when installing the unit. See note under (-KC) option for extension requirements.

-KC Anchor Flange with Clamp Collar

Located 1-3/4" down from the top of the unit and 2" wide. The anchor flange with clamp collar is designed for installations that require the use of a waterproofing membrane. When the (-K) and (-KC) options are specified, it is necessary to extend the overall height of the interceptor body by 3" to accommodate attachment of the flange. The additional extension height **does not** have to be specified when ordering the product; it is automatically built into the unit as an integral part.

-NH No-Hub Inlet and Outlet

See Z1040.

-STR Storage Tank on Right-Hand Side When Facing Inlet

See Z1186-ST.

-VP Vandal-Proof Screws



CHEMICAL RESISTANCE CHART Typical Powder Coatings

Key: E – No attack
 F – Some attack, but unseeable in some instances
 N – Rapidly attacked
 H – Hot, 180°F (82.2°C) or boiling point of solvent

G – Appreciably no attack
 P – Attacked, not recommended for use
 C – Cold, 70°F (21.1°C)
 * – And nitrate and sulfate

Chemical	Epoxy		Chemical	Epoxy		Chemical	Epoxy		Chemical	Epoxy	
	C	H		C	H		C	H		C	H
Acids:			Acids (Continued):			Acid Salts:			Solvents:		
Acetic, 10%	F	N	Maleic, 25%	E	E	Aluminum Sulfate	E	E	Alcohols	E	E
Acetic, Glacial	N	N	Nitric, 5%	E	G	Ammonium Chloride*	E	E	Aliphatic Hydrocarbons	E	E
Benzene Sulfonic, 10%	E	E	Nitric, 30%	G	P	Copper Chloride*	E	E	Aromatic Hydrocarbons	E	E
Benzoic	E	E	Oleic	E	E	Iron Chloride*	E	E	Chlorinated Hydrocarbons	F	F
Boric	E	E	Oxalic	E	E	Nickel Chloride*	E	E	Ketones	F	F
Butyric, 100%	P	N	Phosphoric	G	F	Zinc Chloride*	E	E	Ethers	F	F
Chloroacetic, 10%	E	E	Picric	G	F	Alkaline Salts:			Esters	F	F
Chromic, 5%	F	N	Stearic	E	E	Barium Sulfide	E	E	Gasoline	E	E
Citric, 10%	E	N	Sulfuric, 50%	G	F	Sodium Bicarbonate	E	E	Carbon Tetrachloride	E	E
Fatty Acids	E	E	Sulfuric, 80%	F	N	Sodium Sulfide	E	E	Organics:		
Fluosilicic	N	N	Tannic	E	E	Trisodium Phosphate	E	E	Aniline	G	P
Formic, 90%	E	F	Alkalies:			Neutral Salts:			Benzenc	E	E
Hydrobromic, 20%	G	G	Ammonium Hydroxide	E	G	Calcium Chloride*	E	E	Formaldehyde, 37%	E	G
Hydrochloric, 20%	E	G	Calcium Hydroxide	E	E	Magnesium Chloride*	E	E	Phenol, 5%	G	F
Hydrocyanic	E	E	Potassium Hydroxide	E	E	Potassium Chloride*	E	E	Mineral Oils	E	E
Hydrofluoric, 20%	G	G	Sodium Hydroxide	E	E	Sodium Chloride*	E	E	Vegetable Oils	E	E
Hypochlorous, 5%	F	N									
Lactic, 5%	F	N									

Z1180 and Z1184 CHEMICAL RESISTANCE CHART For Composite Material in Light Acid Concentration Environment Only

Key: E – Excellent Corrosion Resistance G – Good F – Fair P – Poor

Medium	Rating	Medium	Rating	Medium	Rating	Medium	Rating
General Outdoor	E	Salts (Continued):		Gases (Wet):		Oils, Fuels, and Other:	
Marine Outdoor	E	Copper Sulfate	E	Ammonia	E	ASTM No. 1 Oil	E
General Industrial	E	Ferric		Carbon Dioxide	E	ASTM No. 3 Oil	E
Water – Pure	E	Chloride		Chlorine	E	Detergents	E
Water – Sea	E	Sulfate	E	Hydrogen Sulfide	E	Gasoline	E
Acids:		Magnesium		Nitrogen Dioxide	G-E	Grease	E
Acetic	E	Chloride	E	Sulfur Dioxide	E	Jet Fuel	E
Boric	E	Sulfate	E	Carbon Disulfide	E	Hydraulic Fluid (Ester)	E
Chromic	E	Mercuric Chloride	E	Solvents:		Kerosene	E
Citric	E	Nickel		Acetone	E	Motor Oil	E
Fatty	E	Chloride	E	Benzene	E		
Formic	E	Sulfate	E	Carbon Tetrachloride	E		
Hydrochloric	G	Potassium		Ethyl Acetate	E		
Hydrofluoric	F-P	Chloride	E	Ethyl Alcohol	E		
Nitric	F	Sulfate	E	Ethyl Ether	E		
Phosphoric	G	Sodium		Ethylene Dichloride	E		
Picric	G	Bicarbonate	E	Ethylene Glycol	E		
Sulfuric	G	Bisulfate	E	Freon	E		
Bases:		Chloride	E	Methyl Alcohol	E		
Ammonium Hydroxide	E	Hypochlorite	E	Methyl Ethyl Ketone	E		
Potassium or Sodium Hydroxide	F-G	Nitrate	E	Methylene Chloride	E		
Salts:		Phosphate	E	Perchloroethylene	E		
Aluminum Sulfate	E	Silicate	E	Trichloroethylene	E		
Ammonium		Sulfate	E	Toluene	E		
Chloride	E	Thiosulfate	E	Xylene	E		
Nitrate	E	Zinc					
Phosphate	E	Chloride	E				
Sulfate	E	Sulfate	E				
Borax	E	Calcium Chloride	E				
		Sodium Carbonate	E				

CHEMICAL RESISTANCE CHART Typical Corrosion Resistance of Stainless Steel to Various Media

CODE: a – Unaffected. b – Slightly attacked. c – Attacked. m – Complete details concerning the conditions of service must be evaluated.

MEDIUM	TYPE CF8 304	NUMBERS CF8M 316	MEDIUM	TYPE CF8 304	NUMBERS CF8M 316	MEDIUM	TYPE CF8 304	NUMBERS CF8M 316
Organic Substances:			Salts:			Salts (Continued):		
Acetone	a	a	Aluminum chloride	c	c	Silver cyanide	a	a
Benzol	a	a	Aluminum fluoride	c	b	Sodium bicarbonate	a	a
Carbon tetrachloride	c	c	Aluminum sulfate	a	a	Sodium borate	a	a
Ethyl alcohol	a	a	Ammonium alum	a	a	Sodium bromide	a	a
Ethyl chloride	a	a	Ammonium bromide	c	a	Sodium chloride (2% aerated)	a	a
Ethyl ether	a	a	Ammonium chloride	b	a	Sodium citrate	a	a
Food pastes	a	a	Ammonium hydroxide	a	a	Sodium fluoride	b	–
Fruit juices	a	a	Ammonium nitrate	a	a	Sodium hydroxide	a	a
Ink	m	m	Ammonium sulfate	a	a	Sodium nitrate	a	a
Mustard	b	a	Barium chloride	a	a	Sodium peroxide (212°F)	a	a
Paregoric compd	a	a	Bleaching powder	c	a	Stannic chloride	c	c
Quinine bisulfate	b	a	Calcium chloride	c	a	Stannous chloride	b	–
Quinine sulfate	a	a	Calcium hydroxide or oxide	a	a	Sulfur (molten) 500°F	a	a
Vinegar at 70°F	m	m	Copper chloride	c	c	Sulfur chloride	b	–
Acids:			Copper cyanide	a	a	Titanium tetrachloride	a	a
Acetic	m	m	Copper nitrate	a	a	Zinc chloride	c	b
Benzoic	a	a	Copper sulfate (plus 2% sulfuric acid)	a	a	Zinc sulfate	a	a
Boric	a	a	Copper sulfate	a	a	Miscellaneous:		
Carbolic	a	a	Creosote	c	a	Ammonia	a	a
Chromic (50%)	c	c	Creosote (plus 3% salt)	c	c	Baking oven gases	a	a
Citric	a	a	Hydrogen peroxide	b	a	Bromine	c	c
Formic	c	m	Magnesium carbonate	a	a	Carbonated beverages	a	a
Hydrobromic	c	c	Magnesium chloride	m	m	Chlorine (wet and dry)	c	c
Hydrocyanic	a	a	Magnesium sulfate	a	a	Glycerin	a	a
Hydrochloric	c	c	Magnesium hydroxide	a	a	Hydrogen sulfide (400°F)	b	a
Hydrofluoric	c	c	Magnesium nitrate	a	a	Iodine	c	a
Lactic	a	a	Phosphorous trichloride	a	a	Lead (molten)	c	c
Nitric (conc.)	a	a	Potassium bromide	a	a	Lysol	m	m
Nitric (conc. plus 2% HCl)	a	–	Potassium carbonate	a	a	Mercury	a	a
Nitrous (conc.)	a	a	Potassium chloride	m	m	Sauerkraut brine	c	a
Oxalic	m	m	Potassium chlorate	a	a	Sea water	m	m
Phosphoric	a	a	Potassium cyanide	a	a	Sulfur dioxide	b	b
Phosphoric (10%)	a	a	Potassium dichromate	a	a	Vegetable juices	a	a
Picric (conc.)	a	a	Potassium ferricyanide	a	a	X-ray developing solution	b	a
Pyrogallic (conc.)	a	a	Potassium ferricyanide (boiling)	a	a	Zinc (molten)	c	c
Pyroligneous (conc.)	a	a	Potassium hypochlorite	c	m			
Stearic (conc.)	a	a	Potassium iodide	a	a			
Succinic (molten)	c	–	Potassium iodide	a	a			
Sulfuric (conc.)	a	a	(sat. plus 0.1% sodium carbonate evaporated to dryness)					
Sulfuric (dil.)	m	m	Potassium hydrate	a	a			
Sulfuric 15% (plus 2% potassium dichromate)	a	a	Potassium nitrate	a	a			
Sulfurous (conc.)	b	a	Potassium oxalate	a	a			
Tannic (conc.)	a	a	Potassium permanganate	a	a			
Tartaric (conc.)	a	a	Potassium sulfate	a	a			
Trichloroacetic acid (10%)	a	a	Silver nitrate	a	a			
Uric (conc.)	a	a						

MATERIALS and FINISHES

“Zurn Dura Coat” is a specially formulated paint designed to resist cracking and chipping. Dura Coat is a latex based coating developed to be used with cast iron substrate.

Aluminum supplied is casting grade 319. This is an alloy containing both silicon and copper. It is a solid cast metal in a pleasing light gray color. The light weight, coupled with its exceptional strength and corrosion resistance, makes it ideal for drain components such as sediment buckets and strainers. When used with acid-resisting porcelain enamel coated drains, the possibility of chipping is minimized.

Zurn Stainless Steel castings are normally produced in Type CF8 (304) which is an 18-8 Austenitic Stainless possessing excellent corrosion resistant qualities. For some applications where conditions demand, Type CF8M (316) stainless steel can be supplied. Items formed from stainless steel sheet and other stainless steel products are regularly furnished in Type 304 with 316 as an optional material.

A.R.C. Acid Resisting Epoxy Coating is a baked-on powder coating, which produces a smooth, hard, high gloss finish. This epoxy based coating offers high impact resistance and excellent life expectancy in all drainage applications. Zurn A.R.C. coating conforms to the requirements of F.D.A. (Food and Drug Administration) Regulation 21-CFR5 117.1360.