canplas®

endura Grease Interceptor

ENGINEERING AND INSTALLATION MANUAL

May 2006

General Data

Congratulations on your purchase of the Endura Grease Interceptor. The Endura Grease Interceptor was designed and built to last and comes with a 10-year warranty (valid only when the warranty card is filled out and returned to the manufacturer).

Proper installation of a grease interceptor is critical to its efficient operation. Even the best designed grease interceptor will not operate efficiently if installed incorrectly. **All installation recommendations are subject to the approval of the local code authority having jurisdiction.**

The Endura Grease Interceptor may be installed on the floor, partially in the floor, or fully recessed below the floor to best suit the situation. Whichever installation configuration is used, make sure you locate the grease interceptor in an area that allows for ease of maintenance. Placement should allow the cover to be easily removed for cleaning. A minimum clearance is required above the top of the Grease Interceptor to allow removal of the internal baffles for a complete cleanout (15/20/25/35 GPM - 15", 50 GPM - 21"). With the cover removed, all internal surfaces should be visible. This is necessary not only for access to clean the interceptor, but also to inspect the interior for potential problems.

The Endura Grease Interceptor is marked with "IN and OUT" above the connections to ensure the grease interceptor is installed in the right direction. The grease interceptor should be installed as close as possible to the fixture(s) being served, as every foot of piping between the grease source and the interceptor is unprotected and a potential source for grease build-up. Installations requiring long runs of pipe [exceeding 25 feet (8m)] to reach the interceptor are to be avoided. This precaution will reduce the possibility of the pipeline becoming clogged with grease before reaching the grease interceptor. Grease waste lines should be piped at a minimum slope of 1/4 inch per foot (6mm per 304mm) to maintain flow in the drain line.

Dishwashers

If local codes permit, the Endura Grease Interceptor can be connected to dishwashers. To prevent industrial grade detergents from compromising the efficiency of the system, a separate grease interceptor is recommended for each commercial dishwasher.

The Plumbing and Drainage Institute (PDI) has done extensive testing on the effect of hot water on separation, and can support through data, the fact that hot water has little effect on separation efficiency. The Environmental Protection Agency (EPA), in their document EPA 625/R-00/008 (Design Manual: Onsite Wastewater Treatment Systems) is specific in recommending the use of hot water and proximity to the source to enhance retention of fat oil and grease (FOG).

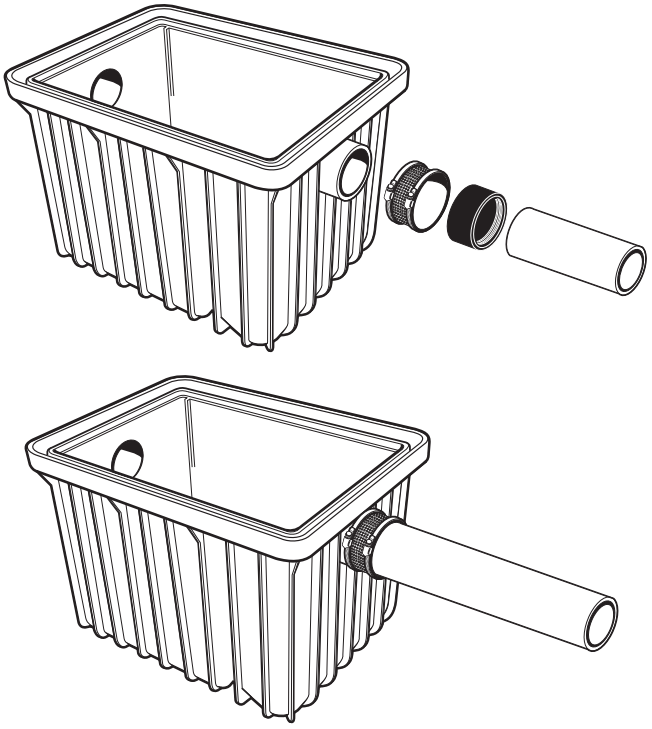
Food Grinder

It is **highly recommended that a solids interceptor be used in conjunction with the grease interceptor,** especially when a food grinder is discharging into the drain line. A solid interceptor will prevent the grease interceptor from becoming plugged and will of the grease interceptor. **If a solids interceptor is not installed, food grinder waste must bypass the grease interceptor, as rapid accumulation of solid matter will greatly reduce the grease interceptor's efficiency, preventing operation in compliance with the rated capacity.**

Piping Connections

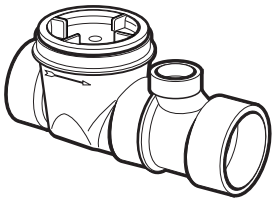
All Endura Grease Interceptors are manufactured with no hub connections. Standard mechanical joint couplings can be used to connect the grease interceptor to a metal or plastic piping system. If the piping system needs to be resized, use appropriate mechanical joint reducers, but **do not** decrease pipe diameter across the unit. (i.e. 3 inch inlet , 2 inch outlet.)

Please Note: The Endura Grease Interceptor is made of Polypropylene, which **will not** accept solvent weld cement.

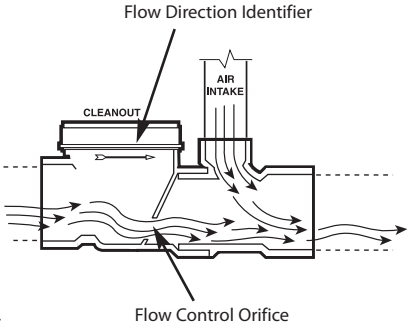


Flow Control Device Installation

The flow control device furnished with the Endura Grease Interceptor is essential to the proper operation of this unit. The flow control limits the unit to its rated capacity allowing enough time for grease separation to take place inside the interceptor.



The flow control fitting is molded in PVC and must be solvent welded using PVC solvent cement, **upstream** of the interceptor. It is to be located in the drain line beyond the last connection from the fixture and as close as possible to the underside of the lowest fixture. When the discharge from two or more sinks or fixtures are combined and served by one interceptor, a single flow control fitting should be used.

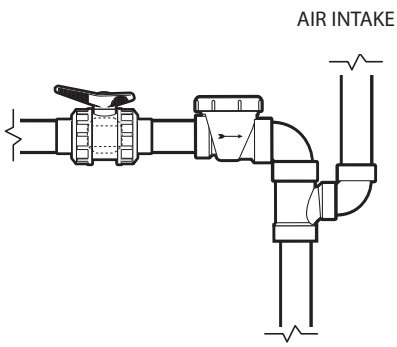


The installation of a ball valve upstream of the flow control is recommended. A ball valve provides a means of drain line isolation and will prevent flooding if the maintenance person forgets to install the sink plugs to alleviate head pressure.

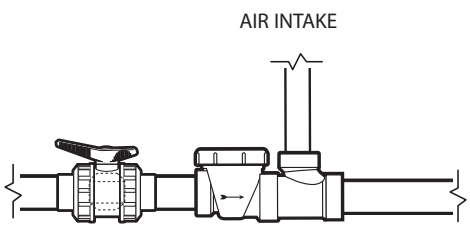
Some local plumbing codes require that grease interceptors have an internal flow control to ensure drain lines do not bypass the grease interceptor. However, if the flow control device is located immediately upstream of an interceptor, this is often considered as forming part of the interceptor. Therefore, officials having jurisdiction may accept such design as meeting the intent of the requirement. If local codes dictate the flow control must be installed directly preceding the grease interceptor inlet, and the fixtures being served are in excess of 8 ft (2.4 m) from the interceptor, we recommend a second flow control being installed as close to the last fixture as possible. Please contact your local representative if you require further clarification.

Note: Some local jurisdictions require that the interceptor service the floor drains. The floor drain must bypass the flow control to ensure the restriction does not flood the drain. Therefore, the flow control should be installed as close to the fixture as possible or directly preceding the floor drain connection.

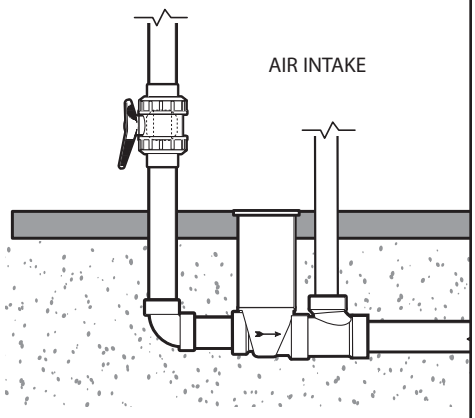
Tight Enclosures



Typical Installation



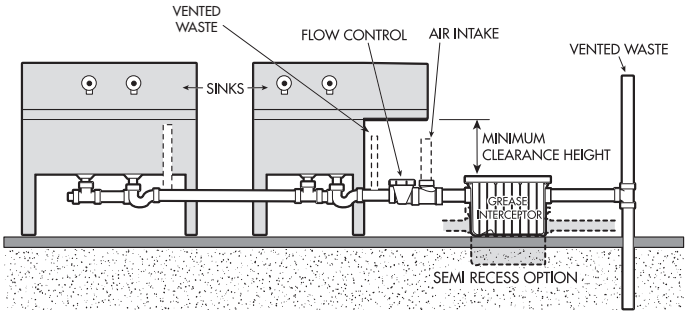
Optional In Floor



Installation Options

The following illustration represents a typical system design commonly found in food preparation facilities. Adhering to the general installation information presented earlier, select a practical layout to meet the demands of the installation.

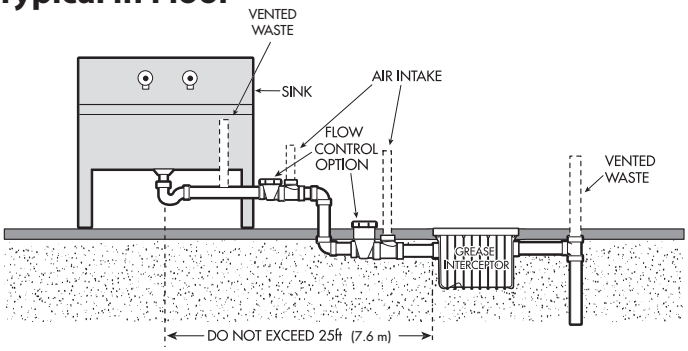
Typical On Floor



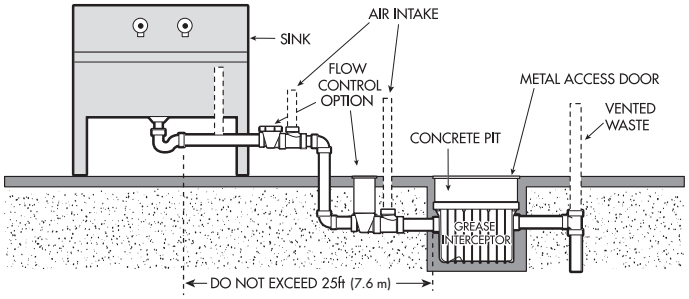
CAUTION

If installed under a sink, make sure there is at least 15" clearance (21" for 50 GPM model) to remove the baffles for cleaning and maintenance. If this is not practical, semi-recessing the tank is a viable alternative.

Typical In Floor

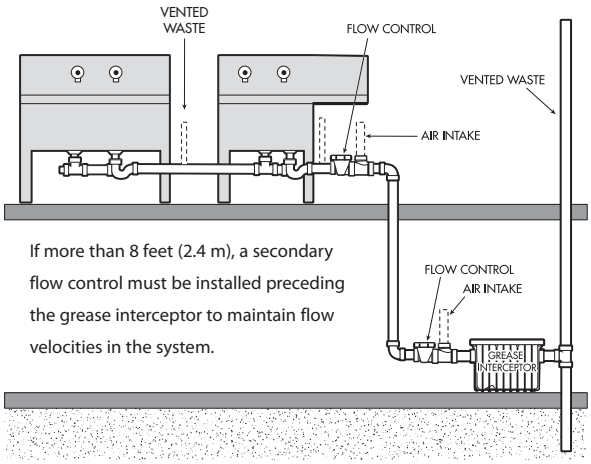


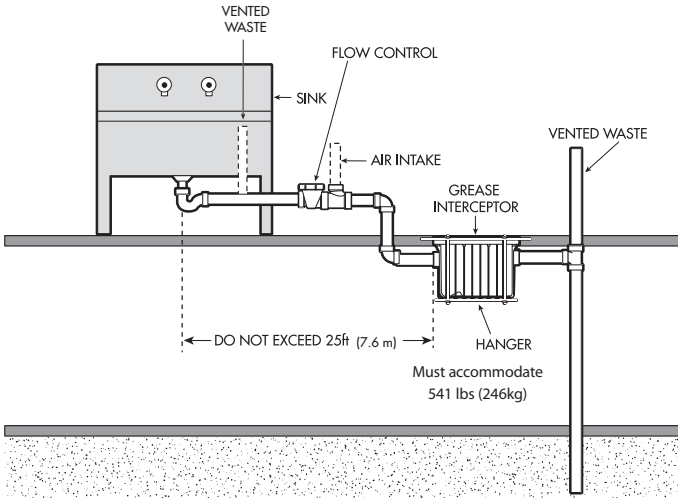
In Floor - Fork Lift, Pump Truck Traffic Area



When installing in-floor, the interceptor must have both the cover fitted and be filled with water to the inlet/outlet level. This will ensure the tank itself will not move during backfilling, pouring and/or floor finishing. When backfilling in particular, care should be taken to do so evenly around the unit and with light manual pressure only. Extension sets are available for all models and the flow control device, should you require the unit to be recessed deeper to accommodate existing drainage. Provision of a concrete pit with a load rated access cover will be required where pump trucks of fork lifts travel. Ensure that the interceptor is clearly identified to flooring contractors to prevent it from being covered with flooring material. Taping cardboard to the cover is generally effective.

Typical Multi-Story - Single Unit





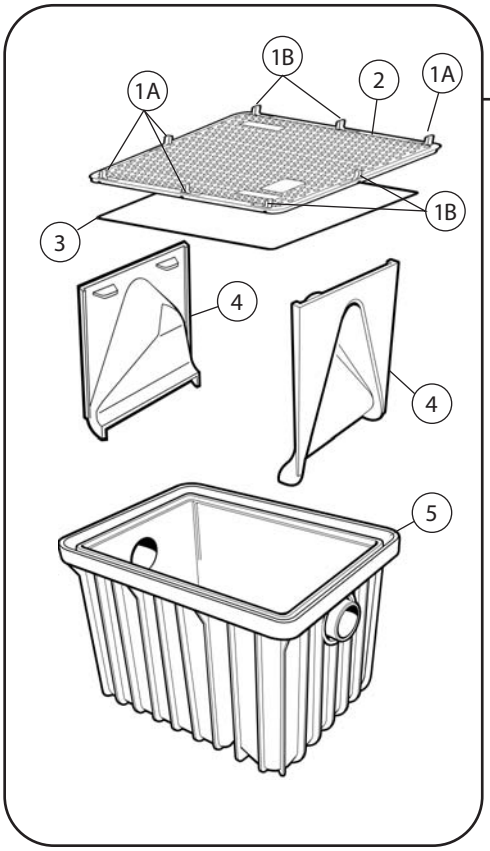
Multiple Fixture Installation

One interceptor serving multiple fixtures is recommended only when the fixtures are located close together. In such installations, each fixture should be individually trapped and back-vented.

Suspended Installation

Due to the degree of risk and potential liability for the installer, great care must be taken in designing a hanger system. Canplas recommends consulting an engineer before installing in this manner.

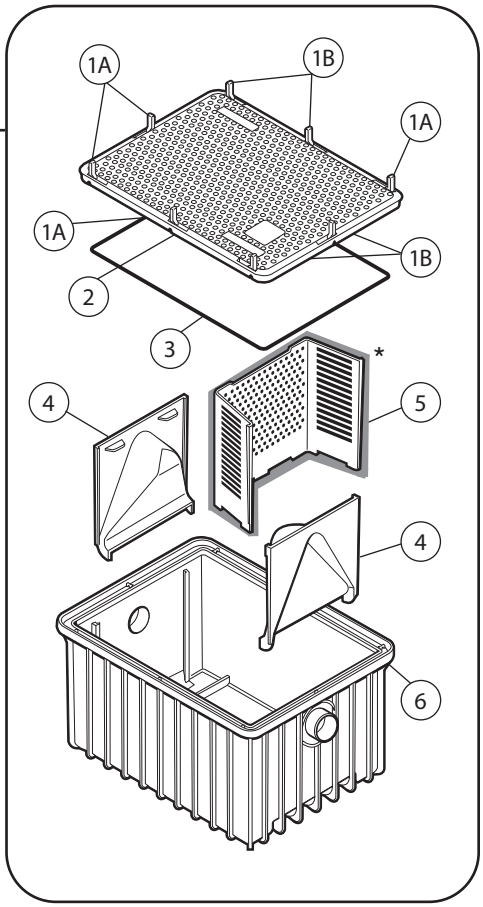
Engineering Information



Components for:
3915A02 15GPM (0.94 LPS)
3920A02 20GPM (1.26 LPS)
3925A03 25 GPM (1.6 LPS)

1. A) and B) latches 3920A-9
2. Reinforced polypropylene cover (Part #3920A-2)
3. Rubber gasket (Part #3920A-5)
4. Removable polypropylene baffles (Part #3920A03-3)
5. One-piece tank (Part #3920A03-1)

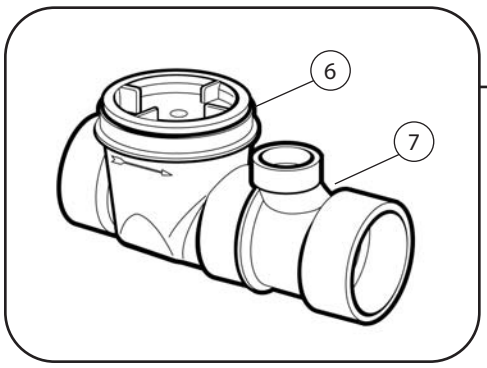
Components for:
3935A03 35GPM (2.2 LPS) 3" (76mm) connection
3935A04 35GPM (2.2 LPS) 4" (110 mm) connection
3950A03 50 GPM (3.2 LPS) 3" (76 mm) connection
3950A04 50 GPM (3.2 LPS) 4" (76 mm) connection



1. A Latches (left) 3935A-6LH2
   B Latches (right) 3935A-6RH2
2. Reinforced polypropylene cover
   (Part #3935A-2)
3. Rubber gasket (Part #3935A-5)
4. Removable polypropylene baffles 35 GPM
   (Part #3920A03-3) & 50 GPM (3950A03-3).

***5. Removable polypropylene Diffuser Baffle**
(Part #3935A03-4) - 35/50 GPM UNITS ONLY.

6. One-piece tank
   (Part #3935A03-1 3" (76 mm) connection)
   (Part #3935A110-1 4" (110mm) connection)
   (Part #3950A03-1 3" (76 mm) connection)
   (Part #3950A110-1 4" (110mm) connection)
7. 110mm to 4"DWV Mechanical coupling
   (Part #3935A-13, not shown)



PVC Flow Control Assembly with Air Intake Tee

6. Flow Control Assembly with Air Intake Tee

2" 15 GPM (.94 LPS)	Part #3922115
2" 20 GPM (1.26 LPS)	Part #3922120
3" 25 GPM (1.6 LPS)	Part #3933125
3" 35 GPM (2.2 LPS)	Part #3933135
3" 50 GPM (3.24 LPS)	Part #3933150
4" 35 GPM (2.2 LPS)	Part #3934135
4" 50 GPM (3.2LPS)	Part #3934150

7. 3" Air intake tee Part #39331
   4" Air intake tee Part #202134

Accessories

2" TUBV valve (Part #731181-020)
3" Access sleeve (Part #223303W)
3" MIP valve (Part #731015-030)
4" Access sleeve (Part #223304W)
15/20/25 GPM (.94/1.26/1.6 LPS) Replacement Latch Kit (Part # 3920A-9RPL)
35/50 GPM (2.2/3.2 LPS) Replacement Latch Kit (Part #3935A-6RPL)
15/20/25 GPM (.94/1.26/1.6 LPS) Recess Extension Kit (Part# 3920AX6)
35/50 GPM (2.2/3.2 LPS) Recess Extension Kit (Part# 3935AX6)
15/20/25 GPM (.94/1.26/1.6 LPS) Replacement Lid Assembly Kit (Part# 3920A-2ARPL)
35/50 GPM (2.2/3.2 LPS) Replacement Lid Assembly Kit (Part# 3935A-2ARPL)

Approvals

Los Angeles County, CA
Ontario Ministry of Municipal Affairs & Housing
Commonwealth of Massachusetts
City of New Orleans, LA
Dallas/Fort Worth, Tx
City of Philadelphia, PA

Certifications & Standards

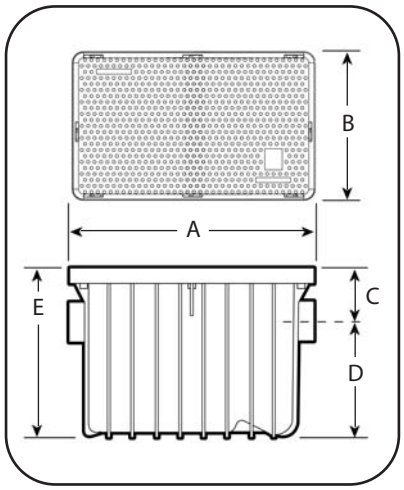
PDI-G101
UPC (IAPMO)
ANSI/ASME A112.14.3-2000

Certificates available upon request.

Technical Specifications - Sizing

US Gallons Per Minute (GPM)	15	20	25	35	50
Pounds	30	40	50	70	100
Litres Per Second (LPS)	0.94	1.26	1.6	2.2	3.2
Kilograms	13.6	18.1	22.7	31.8	45.4
Part Number	3915A02	3920A02	3925A03	3935A (**)	3950A (**)
Grease Capacity lbs (Kg) actual	65 (29.5)	70 (31.8)	74 (33.6)	115 (52.2)	122 (55.3)
Operating Temperature Capabilities	220°F (104°C)	220°F (104°C)	220°F (104°C)	220°F (104°C)	220°F (104°C)
Surface Load Capacity	440 lbs (200 kgs)	440 lbs (200 kgs)	440 lbs (200 kgs)	440 lbs (200 kgs)	440 lbs (200 kgs)
Unit Weight Capacity (Empty)	23 lbs (10.4 kgs)	23 lbs (10.4 kgs)	23 lbs (10.4 kgs)	45 lbs (20.4 kgs)	60 lbs (27.2 kgs)
Liquid Capacity	21.6 gal (81.8L)	21.6 gal (81.8L)	21.6 gal (81.8L)	39.4 gal (149.1L)	52.0 gal (197 L)
Connection size (mechanical) (110 mm available on request)	2″	2″	3″	**3″ (03) **4″ (04)	**3″ (03) **4″ (04)

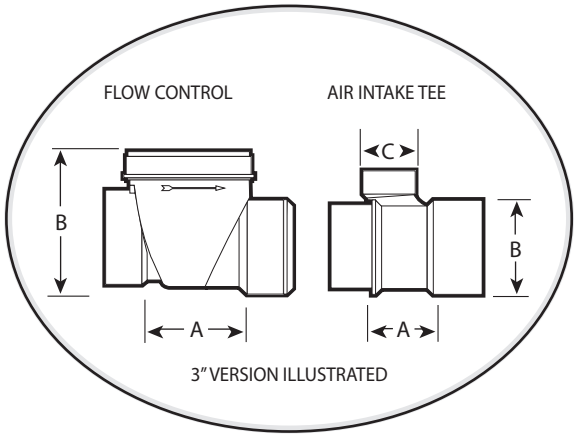
Dimensional–Tank



GPM/lbs	15/30	20/40	25/50	35/70	50/100
A	23.6″ (600mm)	23.6″ (600mm)	23.6″ (600mm)	31.0″ (787mm)	31.0″ (787mm)
B	17.5″ (444mm)	17.5″ (444mm)	17.5″ (444mm)	23.5″ (597mm)	23.5″ (597mm)
C	3.5″ (89mm)	3.5″ (89mm)	4.1″ (104mm)	5.0″ (127mm)	5.0″ (127mm)
D	12.8″ (325mm)	12.8″ (325mm)	12.2″ (310mm)	12.5″ (318mm)	18.5″ (469.9 mm)
E	16.3″ (414mm)	16.3″ (414mm)	16.3″ (414mm)	17.5″ (444mm)	23.5″ (596.9 mm)

Dimensional Flow Control Device Assembly

	Flow Control			Air Intake Tee		
Connection Iron Pipe Size (Solvent weld)	2″ h x h	3″ h x h	4″ h x h	2″ spg x h	3″ spg x h	4″ spg x h
A	3.0″ (76.2mm)	4.23″ (107.4mm)	6.13″ (155.7mm)	2.91″ (73.9mm)	2.67″ (67.8mm)	3.19″ (81mm)
B	3.84″ (97.5mm)	5.93″ (151mm)	6.84″ (173.7mm)	2.71″ (68.8 mm)	4.01″ (101.9mm)	5.04″ (128mm)
C	–	–	–	2.24″ (56mm)	2.27″ (57.7mm)	2.72″ (69.1mm)



To ensure your customer receives the best grease interceptor available, it is advised that you write your specification using the following wording:

Contractor shall install an Endura® Grease Interceptor

Part #_____(fill in)

A flow control with a rate of _____ gpm will be installed in accordance to manufacturer's instructions. The unit shall be comprised of engineered thermoplastics to withstand temperatures of 220°F (104°C) and a lid with the capability of supporting 440 lbs. (200 Kgs) The unit will be supported by a 10 year manufacturer's extended warranty.

Contractor shall provide mechanical connectors to connect the grease interceptor. The grease interceptor shall be certified by PDI G101 standard.

Sizing

For Grease Interceptor sizing, please reference the Sizing Guide or the Plumbing Drainage Institute Standard PDI-G 101. Without a properly sized flow control, the flow through the interceptor may exceed the rating of the unit, causing lower efficiencies and allowing grease to pass through the interceptor into the downstream piping. Be careful that you do not confuse liquid capacity and flow capacity. Liquid capacity is rated litres or gallons while flow capacity is rated in gpm (gallons per minute) or L/sec (litres per second).

If sizing indicates that a larger Grease Interceptor is required, you maybe able to compromise to a smaller unit by adopting to a 2 minute drain down time in your sizing calculation. Although the smaller unit will be less expensive, the grease capacity of a smaller unit will dictate the cleaning frequency required.

Mop Sink Sizing Guide

Size	LPS	US/GPM
2"	84	22
3"	142	37.5
4"	170	45

Floor Drains & Floor Sinks

Take the volume of water produced by the number of hose bibs (ie 1.5-2.0 gpm per 3/4" faucet)

Table A - Procedure for Sizing Grease Interceptors

STEP	FORMULA	EXAMPLE
1	*Determine cubic content of fixture by multiplying length x width x depth*	A sink 24" long by 20" wide by 12" deep. Cubic content: 24 x 20 x 12 = 5,760 cubic inches (61.0 x 50.8 x 30.48 cm^3)
2	*Determine capacity in gallons.* 1 gallon = 231 cubic inches	Contents in gallons: 5,760 / 231 = 24.9 gallons (94,451.42 / 1,000 = 94.45 litres
3	*Determine actual drainage load.* The fixture is normally filled to approximately 75% of capacity with water as the items being washed displace about 25% of the total fixture content. Actual drainage load = 75% of fixture capacity	Actual drainage load: .75 x 24.9 = 18.7 gallons (0.75 x 94.45 = 70.84 litres)
4	*Determine flow rate and drainage period.* In general, good practice dictates a one minute drainage period; however, where conditions permit, a two minute drainage period is acceptable. Drainage period is defined as the actual time required to completely drain the fixture. Flow rate = Actual Drainage Load / Drainage Period	Calculate flow rate for one minute drainage period: 18.7 / 1 = 18.7 g.p.m. flow rate (70.84 / 1 min. = 70.84 l.p.m. Calculate flow rate for two minute drainage period: 18.7 / 2 = 9.4 g.p.m. flow rate (70.84 / 2 min. = 35.42 l.p.m.)
5	*Select Interceptor.* From Table B select the interceptor with a flow rating at least equal to the calculated flow rate. When the calculated flow rate falls between two sizes, select the larger of the two interceptors.	*For a one minute drainage period:* 18.7 g.p.m. (70.84 l.p.m.) flow rate = 20 g.p.m. G.I. *For a two minute drainage period:* 9.4 g.p.m. (35.42 l.p.m.) flow rate = 10 g.p.m. G.I.

Table B - Procedure for Sizing Grease Interceptors

PDI Size Symbol	4	7	10	15	20	25	35	50
Flow Rate US Gallons per Minute (GPM)	4	7	10	15	20	25	35	50
Flow Rate Liters per Second (LPS)	.25	.44	.63	.95	1.26	1.58	2.20	3.16
Grease Capacity Pounds (Lbs)	8	14	20	30	40	50	70	100
Grease Capacity Kilograms (Kgs)	3.63	6.35	9.07	13.61	18.14	22.68	31.75	45.36

Sampling Access

Some municipalities require a sampling port to monitor effluent quality. If the unit is on the floor, or semi-recessed into the floor, a cleanout tee can be installed downstream of the Grease Interceptor. If the unit is installed in the floor, a backwater with its flapper removed, makes an effective collection port. Like the FCD the backwater valve can be extended to finish floor level using a sleeve kit.

Venting

Grease Interceptors must have a vented waste, sized in accordance with local code requirements for venting interceptors to retain a water seal and prevent siphoning. Most codes dictate that two vents be installed, one upstream and one downstream of the grease interceptor. The upstream vent must not be placed between the air intake and the grease interceptor.

Warranty

The Endura Grease Interceptor is inspected for manufacturing defects, however, it is not always possible to detect hidden defects. The Endura Grease Interceptor is warranted only to the extent that the manufacturer will replace without charge products proven to have manufacturing defects within twelve (12) months of the date of delivery thereof and provided Seller has been given an opportunity to inspect the product alleged to be defective and the installation and use thereof.
NO WARRANTY IS INCLUDED AGAINST ANY EXPENSE FOR REMOVAL, REINSTALLATION OR OTHER CONSEQUENTIAL DAMAGES ARISING FROM ANY DEFECT. THE WARRANTIES SET OUT ABOVE ARE THE ONLY WARRANTIES MADE BY SELLER AND ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ENDURA® Grease Interceptor 10 Year Extended Warranty

The Endura® Grease Interceptor is warranted for ten (10) years from the date of installation based on the receipt of a completed warranty card (included with the grease interceptor). Said warranty card must be returned to the manufacturer within thirty (30) days of the installation date, in order to be eligible for this extended warranty.

The ten (10) year warranty covers defects resulting from faulty manufacture of materials as well as perforation of the grease interceptor based on normal operating conditions. The manufacturer does not provide a warranty for perforation resulting from mechanical or chemical causes of abnormal use.

The Endura® Grease Interceptor is warranted only to the extent that the manufacturer will replace, without charge, products proven to have manufacturing defects or perforation (other than perforation resulting from mechanical or chemical causes) within the specified ten (10) year warranty period and provided the manufacturer has been given an opportunity to inspect the product alleged to be defective and the installation and use thereof.

No warranty is provided for any expense for removal, reinstallation or other consequential damages arising from and defect or perforation. The warranties set out above are the only warranties made by the manufacturer and are expressly in lieu of all other warranties, expressed or implied, including the warranties of merchantability and fitness for a particular purpose.

Please Note: This warranty is offered by Canplas Industries Ltd. No claim should be placed upon the Installer or Service Company if properly installed and serviced.

Endura® Grease Interceptor

FAX TO: 705-726-8991

TEN (10) Year Extended Warranty Registration Card

Thank you for your purchase of a Endura® Grease Interceptor.
Please complete and return this registration card via fax or return by mail in the envelope supplied.
FAILURE TO REGISTER THIS INSTALLATION WILL VOID THE EXTENDED WARRANTY.

Contractor/Installer (Print)

Name: _____

Co. Name: _____

Address: _____

_____

Tel: _____ Fax: _____

_____
Signature of Installer

Client/Installation Location

Name: _____

Address: _____

_____

Tel: _____ Fax: _____

Purchased From

Name: _____

Address: _____

_____

Tel: _____ Fax: _____

Size of Grease Interceptor installed?

☐ 15 GPM (.94 LPS) ☐ 20 GPM (1.26 LPS) ☐ 25 GPM (1.6 LPS)
☐ 35 GPM (2.2 LPS) ☐ 50 GPM (3.2 LPS)

Is this a new installation or replacement?

☐ New ☐ Replacement

Where was it installed?

☐ On Floor ☐ In Floor

How did you hear about the product?

☐ Supplier ☐ Trade Show ☐ Trade Magazine ☐ Specified ☐ Referral

Was this the first Canplas Endura® Grease Interceptor you have installed?

☐ Yes ☐ No

Was it easy to install?

☐ Yes ☐ No

Additional Comments: _____

_____

_____

_____

_____

_____

IMPORTANT NOTE:

This warranty card **MUST BE** filled out and returned to ensure the ten (10) year warranty is valid

Optional Return by **Mail** to: Endura Grease Interceptor, Box 1800, Barrie, ON L4M 4V3

For more information or technical assistance contact:

Tel: 1-800-461-1771
Fax: (705) 726-2186

Thank you to The Plumbing & Drainage Institute for their assistance with this publication.