goslyn™
ENVIRONMENTAL SYSTEMS

Municipality Information Guide

The easiest and most efficient Grease Removal Device to operate and maintain.

Grease Management

The build-up of FOG (Fats, Oil, and Greases) within a drainage network is a key factor when examining blockages and overspills through the world's water systems. The variety of performance levels from the available treatment or prevention systems have enabled inferior protection to a growing problem.

Under Sink Traps

- Small under sink units that retain grease internally.
- Have a limited amount of space before failure.
- Subject to continual reduction in space due to FOG and Food filling capacity
- FOG pumping can require disruption to business and has noticeable stench.

Enzyme and Bacterial Dosing

- Outlawed in numerous parts of the world.
- Susceptible to varying PH levels, temperatures, and Anti-Bacterial cleaning agents (which are required under HAACP Regulations)
- Still requires the Grease trap to be pumped.

Large In-Ground Traps

- Large Tanks that require expensive installation costs.
- Effective at removing fog if properly maintained.
- Grease recovered is septic, providing little to no value.
- FOG pumping can require disruption to business and has noticeable stench.

Mechanical Grease Removal Device

- Mechanical wheel and scraper system
- NSF Testing shows 66% effective at removing FOG
- Mechanical failure allows FOG to be discharged into drain lines

Goslyn Automatic Grease Removal Device

- Using hydrostatic pressures and no moving parts, the system automatically discharges the fog into oil collection containers. No pumping required.
- 95%+ effective at separating and removing FOG (per NSF testing).
- Solid Debris and FOG are removed daily (no decay = no odors!)
- Recovered FOG is non-septic and low moisture which adds value.

SSO's and CSO's

A **Sanitary Sewer Overflow** (or SSO) is an unintentional discharge of raw sewage from a municipal sanitary sewer system. The EPA estimates that there are at least 23,000 – 75,000 SSOs per year; that figure does not include overflows that backup inside buildings.

A **combined sewer** is a type of sewer system that collects sanitary sewage and storm water runoff in a single pipe system. A **combined sewer overflow (CSO)** is the discharge of wastewater and storm water from a combined sewer system directly into a river, stream, lake, or ocean.

Results:

Environment

- Releases in between 3 billion and 10 billion gallons of untreated wastewater into waterways.
- Contaminates our waters resulting in serious water quality problems.
- Kills Fish and harms plankton vital to aquatic ecosystems

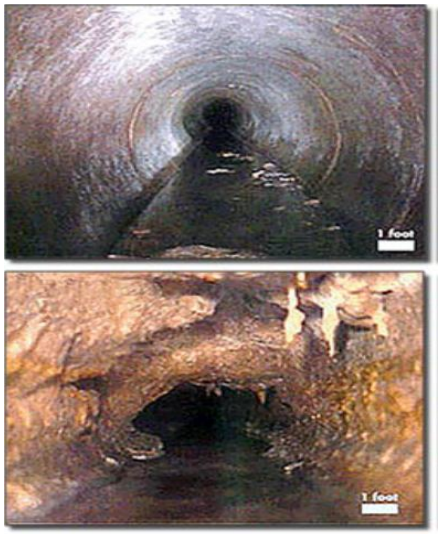
People

- Introduction of Microbial Pathogens to water ways.
- Significant increase in Gastrointestinal Illness per year.
- Contributes to excessive Infant death rates in particular regions.

Economy

- Detrimental to attractions such as beaches, lakes, and rivers.
- Causes extensive property damage to buildings and waterways
- Restricts fishing and related industries

The Cost of SSO's



The EPA Report from The Washington Suburban Sanitary Commission examines the cost associated with sanitary sewer remediation to both homeowners and the agency responsible for management of the sanitary sewer collection system

Costs:

- $6 million annually for sewer reconstruction
- $10 million annually for a maintenance program.
- SSOs result in significant economic losses. SSO's cost Lynn, Massachusetts an estimated $2.6 million as well. (Study). "Clean water facilities have done an outstanding job in reducing sewer overflows, but federal funding is needed to address the $88 billion and $50.6 billion EPA-estimated cost to fully control SSOs and CSOs, respectively, over the next 20 years

According to the city of Austin, there was an average of almost five SSO's per month between October 1st, 2009 and September 30th, 2010. This resulted to an average cost of $4,700 per month amounting to over $56,000. The city of Austin also had an overflow of 85,333 gallons from Grease related SSO's. (Austin, TX Report).

However, the biggest costs associated with SSO's tend to be the fines and requirements handed down by the EPA. In March of 2008, The Town of Bristol, Rhode Island reached a settlement with the EPA requiring the town to pay a $75,000 fine and spend an additional $62,800 to conduct a "supplemental environmental project" to improve water quality.

How can the Goslyn help?

The Goslyn serves as a filter between the FOG source and the municipal gray lines. First the Goslyn removes any solids. Next the Goslyn automatically removes up to 95% of the oil and discharges it into a reusable plastic oil collection container.

Furthermore, with no moving parts the system has no opportunity to fail. Once the Goslyn is in place and properly maintained by the customer, the city can feel at ease knowing the Goslyn is preventing potential stoppages.

For Goslyn Customers, the Goslyn can save them from costly pumping and repairs.

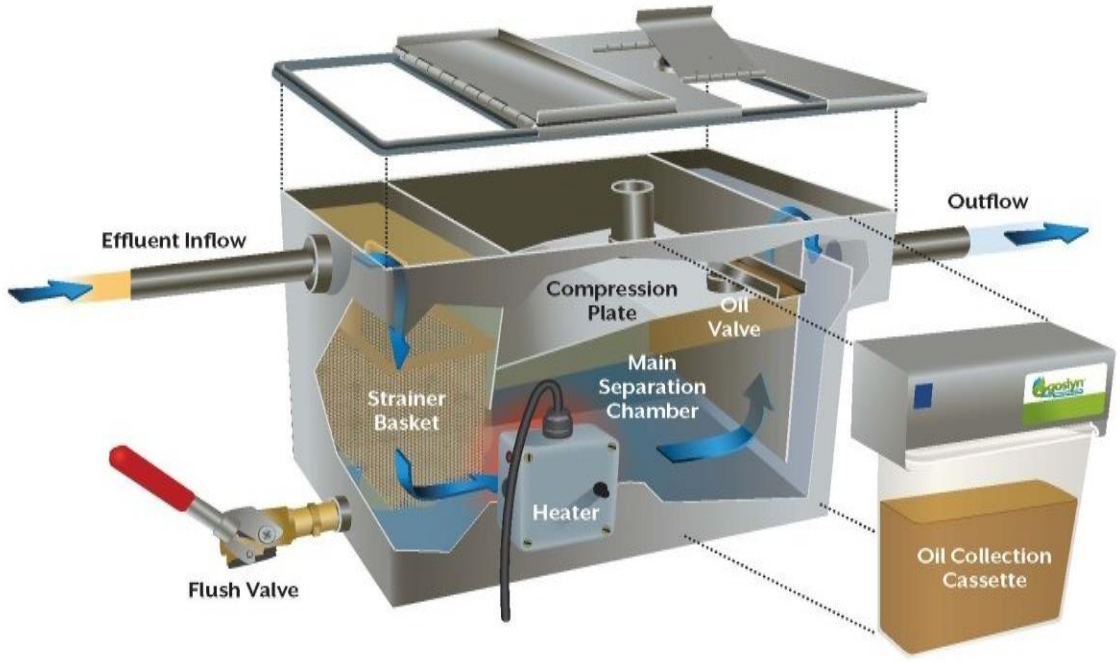
One Operations Manager at a "Big Box Store" was quoted saying

"It saves around $6,000 per year in pumping costs for the underground grease trap because it usually cuts your service visits in ½. The best benefit is that it reduces the chance of your plumbing becoming clogged due to all the grease traveling down the pipes. When the pipes clog, repairs are very costly, sometimes $10,000 to $14,000 per service visit. But more importantly, to avoid potential environmental fines due to too much oil in the underground grease trap, we place the Goslyn unit at the rotisserie ovens wherever possible."

As you can see the Goslyn will save problems that could harm your local businesses as well as the municipal gray lines. The Goslyn will help reduce the city's costs at dealing with FOG related SSO's.

The Product

The Goslyn™ Grease Recovery Device is an immiscible liquid separator designed for the Foodservice Industry and other applications that generate Fats, Oils, and Grease & Solids (FOGS). The patented operating technology of Goslyn™ separators virtually eliminates FOGS in wastewater effluent. There are no moving parts to break and no messy, time-consuming grease traps to clean. Plus, its small footprint makes it easy to install in even the smallest prep kitchens.



Stage 1: Waste Water Flow Control: Effluent flow rates are controlled by the sized inlet flow restrictor to maintain operating efficiency and to prevent effluent surges.

Stage 2: Food Removal: The effluent is channeled through a removable strainer basket where food debris is automatically captured and retained.

Stage 3: Oil Separation: The Goslyn™ innovative oil separation chamber operates under hydrostatic pressure at 40°C / 104°F for highly efficient oil separation.

Stage 4: Oil removal: Hydrostatic pressure forces up to 99.6% of FOG out through the oil discharge valve into the oil cassette, while "clean" water is discharged into the sewer system.

Customers who need Goslyn AGRDs

- Fast Food Restaurants
- Restaurants
- Supermarkets
- Hotels
- "Big Box" Stores
- Gas Stations

Goslyn Rotisserie Combi- Oven Program

The Goslyn Rotisserie/Combi Oven system is an Automatic Grease Removal Device that is connected to the Rotisserie or Combi Oven's drain lines and separates and recovers the fats, oils and grease (FOG) that is produced during the cooking process. The recovered FOG is collected in a container so that it can be transported to the recycled oil bin.

The Goslyn Rotisserie/Combi Oven Platform can be configured to handle as many ovens as needed (and has already proven very effective in treating as many as 8 ovens at the same time with just one Goslyn unit)

Goslyn Sizing Guide

The Goslyn AGRD's small footprint enables the unit to fit in any kitchen. Goslyn units can maintain efficiency with flow rates as low as 4 gpm and as high as 250 gpm. There are almost no applications where a Goslyn AGRD will not benefit the customer while protecting municipal waterlines.

Unit	GPM	Height	Length	Width	Inlet Ht.	Outlet Ht.
GOS20	4 GPM	12.0"	16.0"	15.0"	10.0"	8.25"
GOS40	10 GPM	14.0"	24.0"	20.0"	10.0"	8.0"
GOS60	15 GPM	14.0"	36.0"	20.0"	10.0"	8.0"
GOS80	25 GPM	19.5"	33.0"	20.0"	15.0"	11.5"
GOS80LP	25 GPM	14.0"	40.0"	28.0"	10.0"	8.0"
GOS160	50 GPM	24.0"	42.0"	28.0"	15.6"	13.2
GOS320	100 GPM	32.0"	45.0"	30.0"	24.0"	15.0"

** Inlet/Outlet height are measured to the center** **Length does not include Silt Valve** ** LP= Low Profile Unit** **Electrical and Material Specifications**:

- Standard GFI 3 Prong Plug - 110 Volt, 1000 watts, 9 amps
- Exterior construction - 2.5mm 304 stainless steel

Unit Capabilities

The inclusion of a flow control device in the inlet connection of the **Goslyn** ensures the designed maximum flow rate cannot be exceeded and the **Goslyn** will not be overwhelmed by effluent surges.

The cumulative total volumes of the sinks and equipment draining into a **Goslyn** are not critical in the determination of its required flow capacity. The desired time taken to empty the sinks etc. becomes the determining factor, together with the layout of the kitchen such as where the lines of above floor drainage are interrupted by circulation routes, or the invert of the drain line becomes too low to enter the **Goslyn.**

Extensive field testing in restaurant kitchen environments has shown that a GOS40 (10gpm) will serve either a rinse sink and dishwasher or up to a three pot sink (3 compartments sink) without exceeding the industry standard drain down times. Similarly, a GOS80/GOS80LP (25gpm) will handle a rinse sink and dishwasher plus a three compartment sink any extra effluent loads resulting from a Combi-oven or rotisserie that may be routed through either **Goslyn** without affecting performance

Unit	GPM	Capabilities
GOS20	4	• Rinse sink • Single sink
GOS40	10	• Rinse sink + Dishwasher • Single double or three compartment sinks + rinse sink
GOS60	15	• Rinse sink + Dishwasher • Single double or three compartment sinks • Either of the above + Combi oven + Wok+ Rotisserie
GOS80/GOS80LP	25	• Rinse sink + Dishwasher • Single, double or three compartment sinks • Combi oven+ Wok + Rotisserie

Certifications

Please see our website for all documents and certifications.

Goslyn has received UL Listing as well as numerous other certifications including NSF Certification for passing the industry standard ASME A112.14.3 and ASME A112.14.4 tests. And as a matter of fact, Goslyn ***far exceeded*** those standards. Just take a look at the numbers below!

ASME112.14.4- Grease Recovery Device Requirements

Pounds of grease added to device	75.0 lbs
ASME required amount of grease to recover	25.0 lbs
Actual amount of grease recovered in cassette	74.0 lbs
ASME maximum water content allowed in grease recovered:	5.0%
Actual water content in grease recovered:	0.3%

The Goslyn meets and exceeds the industry codes and standards including UL, IPC, UPC, IRC, NPC, ASME A112.14.3, ASME A112.14.4, PDI G101 & CSA B481.1