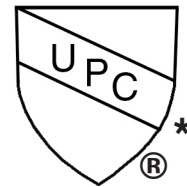




**BIG DIPPER® IS**



**BIG DIPPER® AST**



*\* Please consult Thermaco, Inc. for specific models tested, certified and/or listed by these organizations.*

**BIG DIPPER®** Thermaco, Inc. Patents

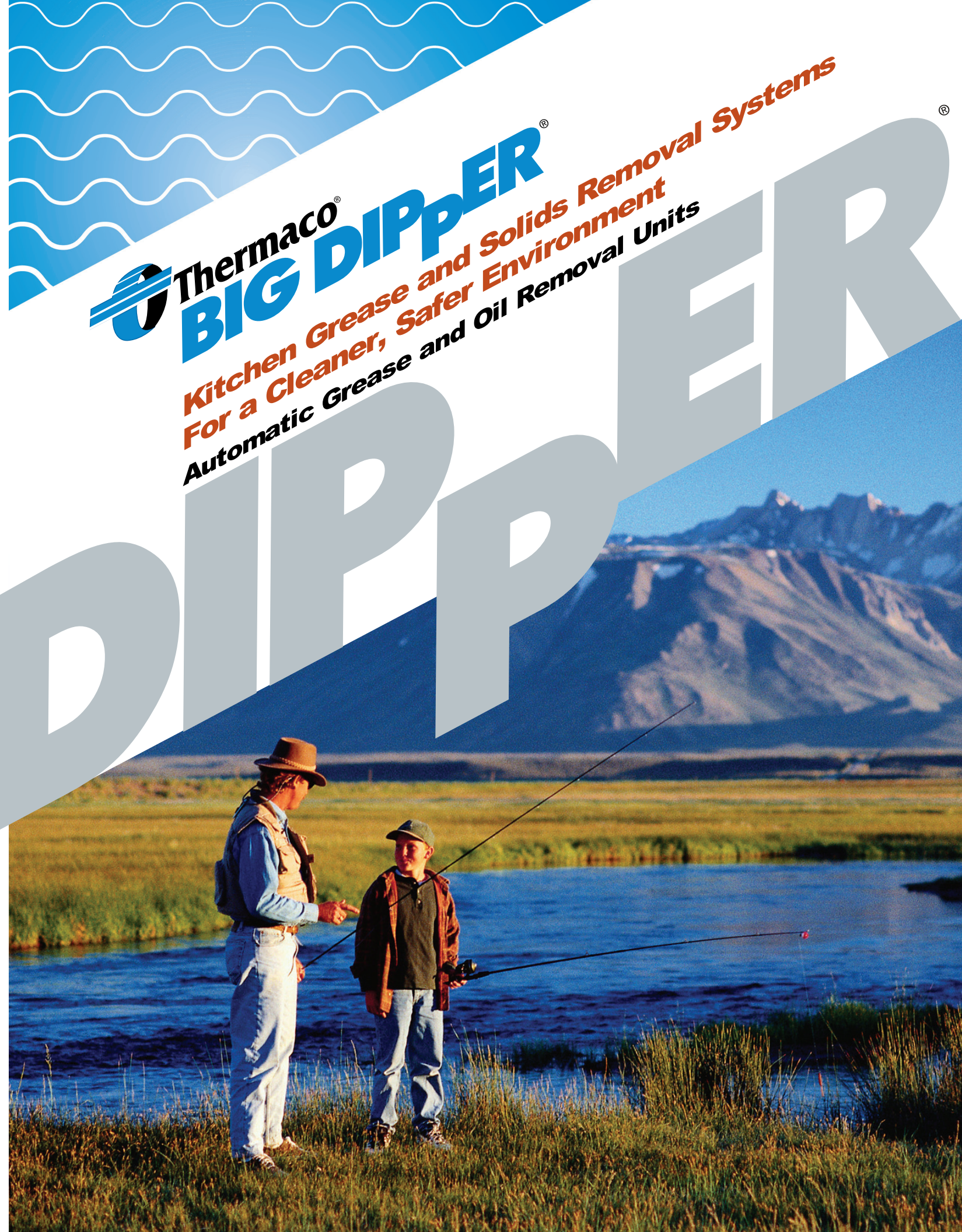
7,153,439	6,413,435
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6,878,270	5,492,619
6,800,195	5,360,555
6,491,830	5,271,853

Big Dipper® is a Registered Trademark of Thermaco, Inc.

Big Dipper® products are covered by U.S. and International patents and patents pending

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**Thermaco®**  
**BIG DIPPER®**  
 Kitchen Grease and Solids Removal Systems  
 For a Cleaner, Safer Environment  
 Automatic Grease and Oil Removal Units



Are you planning to build a Foodservice Facility or renovate an old one? A **Big Dipper®** grease and oils removal system will help you avoid expensive business interruptions and higher operating costs while meeting plumbing/building requirements.

**Here's how**

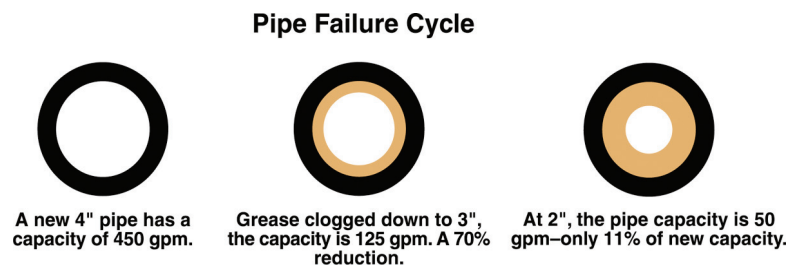
An affordable Big Dipper® system solves tough free-floating drainwater problems by removing and recovering up to 98.6% of the grease, oils, fats<sup>1 2</sup> and incidental food solids from kitchen and food processing flows.<sup>3</sup> Big Dipper® products help prevent drain line clogging and protect septic fields and on-site treatment facilities. Big Dipper® systems are designed to eliminate grease trap pumping costs and expensive sewer surcharges while saving the cost of large in-ground grease traps or interceptors. Big Dipper® systems have been performance-proven in hundreds of worldwide restaurants, hospitals, schools, prisons, casinos and food processing plants.

**Does this look familiar?**

This section of pipe was removed from a major fast food restaurant in a large metropolitan city before they installed a Big Dipper® unit. A large



precast concrete grease trap had previously serviced the restaurant. The copper nipple at the top had been an attempt to clear grease congestion using enzymes and bacteria. The restaurant had been using these enzymes and bacteria for nearly eight years. You can see the results yourself! If you are having problems with grease clogging your pipes, Big Dipper® presents a clear solution.



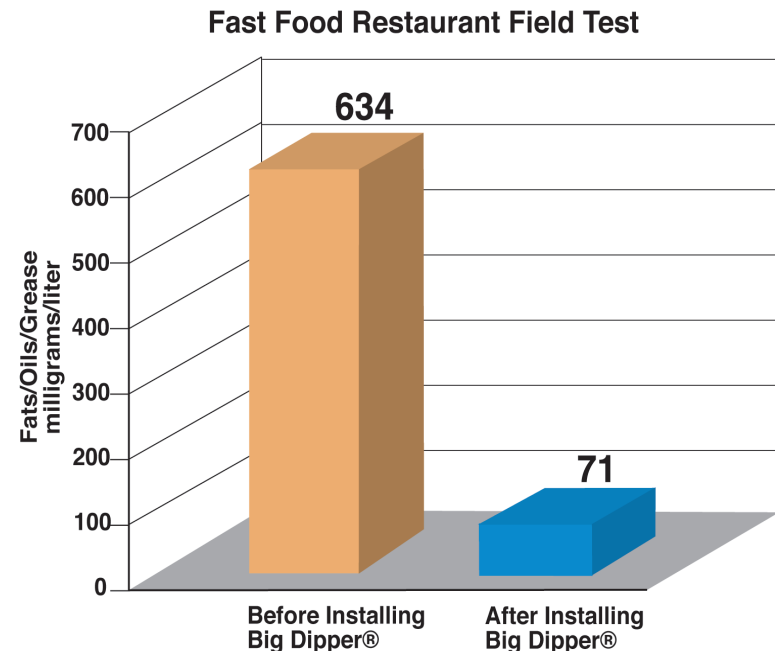
Big Dipper® systems are designed for easy field upgrading and a range of options enable installations to be customized to meet various conditions. For example, air-gap kits are available in code-required areas. Solids strainers are available to filter food scraps and other solids from kitchen drain flows. Your Big Dipper® Distributor can assist you with choosing options to fit your application.

**Performance**

The most important characteristic about Big Dipper® removal systems is that they work. There are countless success stories. One nationally known fast food facility cut grease trap pumping costs by over \$25,000. A large hospital in the Northeast saved an estimated \$50,000 a year in fines and maintenance costs by installing a Big Dipper®.

Big Dipper® systems solved a huge grease problem at two Puerto Rican prisons and weekly remove more than 100 gallons of grease from each prison. Furthermore, in most applications, the recovered grease can be recycled and used in bio-diesel fuel, cosmetics, animal foods and more.

<sup>1</sup> non-emulsified fats, oils, and grease  
<sup>2</sup> as tested to ASME standards A112.14.3 and A112.14.4



- 1 The **BIG DIPPER® SFK Support Frame Series** raises BIG DIPPER® units off of the floor. It also enables the customer to use the larger **DRUM-55 Grease Collector**.
- 2 Best used in conjunction with BIG DIPPER® units installed in basement locations or mechanical rooms.
- 3 The **Sump Adapter (SA)** together with the **Sump Hose (SH)** enables a BIG DIPPER® to discharge to a Drum-55 Grease Collector.
- 4 The **In-Line Strainer (ILS)** separates and collects coarse solids larger than 1" (25 mm) in diameter found in institutional-type kitchen flows. Comes supplied with adjustable 48" support legs for flexibility in installation. Designed to couple with BIG DIPPER® Central Grease Removal Units.



75 gpm W-750-AST Central Grease Removal Unit with Optional Modules

**Other Options**

The **Horizontal Flow Splitter (FSH)** divides a kitchen drain flow into two equal flows. Allows two smaller units to do the job of one large unit; for example, couple two 50 GPM W-500-IS Point Source Units in place of one 125 GPM W-1250-IS Centralized Grease Removal Unit to treat a 100 GPM kitchen flow. Designed to couple BIG DIPPER® units in a side-by-side (horizontal) manner.

The **External Solids Strainer (ESU)** is an additional point source solids separator used in conjunction with BIG DIPPER® W-200-IS & W-250-IS systems. Separates & collects coarse solids larger than 0.125" (3.175 mm) in diameter. Best utilized where codes require a separate solids strainer in front of point source grease removal units. Dewatered solids may be emptied into a trash receptacle.

**BIG DIPPER® Product Applications**

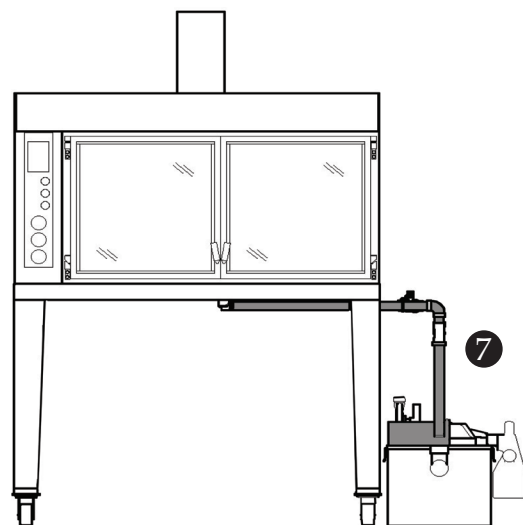
- |                         |                                |                       |
|-------------------------|--------------------------------|-----------------------|
| <b>Restaurants</b>      | <b>Hospitals</b>               | <b>Resorts</b>        |
| <b>Shopping Centers</b> | <b>Correctional Facilities</b> | <b>Airports</b>       |
| <b>Cafeterias</b>       | <b>Casinos</b>                 | <b>Grocery Stores</b> |
| <b>Schools</b>          | <b>Hotels</b>                  |                       |



20 GPM Point Source BIG DIPPER® Model W-200-IS shown with options



25 GPM Point Source BIG DIPPER® Model W-250-IS shown with options



- 1 The **Support Frame Kit (SFK)** raises Big Dipper Point Source Models W-200-IS and W-250-IS off of the floor for easy cleaning underneath the unit. Complete with adjustable legs for flexibility in installation.
- 2 The **Horizontal Air Gap Assembly Kit (HAG)** offers a simple yet effective method for providing an air gap for meeting health department or plumbing code requirements. Prevents cross-contamination between sink bowls.
- 3 The optional field-installable **HAG-BA-1 Solids Strainer Baskets** collect incidental solids from the drain flow entering the HAG Horizontal Air Gap. Dewatered solids may be emptied into a trash receptacle.
- 4 The **Flat Strainer (FS)** separates & collects coarse solids such as rice, coleslaw and other food scraps larger than 0.125" (3.175 mm) in diameter found in point source drain flows. Designed to replace food disposals. Dewatered solids may be emptied into a trash receptacle.
- 5 The **Alarm Probe (AP-6000-1)** provides an early warning that grease is building up either in the BIG DIPPER® Unit (model AP-6000-1-TK) or in the DRUM-55 grease collector (model AP-6000-1-DR). Emits a loud warning tone when attention is required. Optional alarm probe with dry contact for warning light available.
- 6 The **CleanZone™ (CZONE-1)** provides a sanitary shroud between BIG DIPPER® Models W-200-IS and W-250-IS and the wall of the installation. Keeps refuse from falling behind the unit and allows easy mopping around the BIG DIPPER®. CleanZone™ is field-modifiable for flexibility in installation.
- 7 The **Supplemental Water Supply System (SWS)** is designed to mate with a Big Dipper W-200-IS or W-250-IS Point Source Grease Removal Unit for servicing Rotisserie Ovens, Combi-Steam Ovens and similar cooking devices. The SWS-1 water replenishment system supplies a flow of water to replace the removed grease.



### Satisfying the Inspector

Many local plumbing codes require large in-ground grease traps. Approximately 30% of existing foodservice sites cannot install large in-ground traps because of space restrictions or excessive site construction costs (\$10,000-\$45,000)!

With thousands of systems installed in the field worldwide, Thermaco, Inc. is the number one manufacturer of automatic grease & oil removal units. Featuring a small footprint, Big Dipper systems are the logical solution for space-constrained sites. Big Dippers also work well in metropolitan and heavily developed settings, where exterior space for installing a large, in-ground trap is limited or non-existent.

### Satisfying the Sewer Authority

Grease that collects in sewers and treatment plants is a problem shared by all wastewater treatment and collection system operators. In the past, engineers and operators designed systems to remove grease after it got to

the plant. In the meantime; however, the grease would clog pipes, create large grease balls, and damage equipment like lift stations.

Today, wastewater treatment plant operators are lowering operating costs and making their plants significantly more efficient by eliminating grease before it reaches the plant. Requiring system users to install automatic grease removal units accomplishes this.

### Reliability and Maintenance

Big Dipper® products have an international reputation for reliability and effectiveness in wastewater pretreatment. Constructed of corrosion resistant materials, the systems are engineered for longevity and low maintenance.



### Customer Service and Assurance

Customer service and dedication to quality does not end with the sale. Experienced management and field sales distributors are available to help customers with special needs. Big Dipper® products are backed by years of testing and in-service refinement. Of all the systems installed throughout the world in the past two decades, over 95% are still operating efficiently every day. This is quality you can trust.

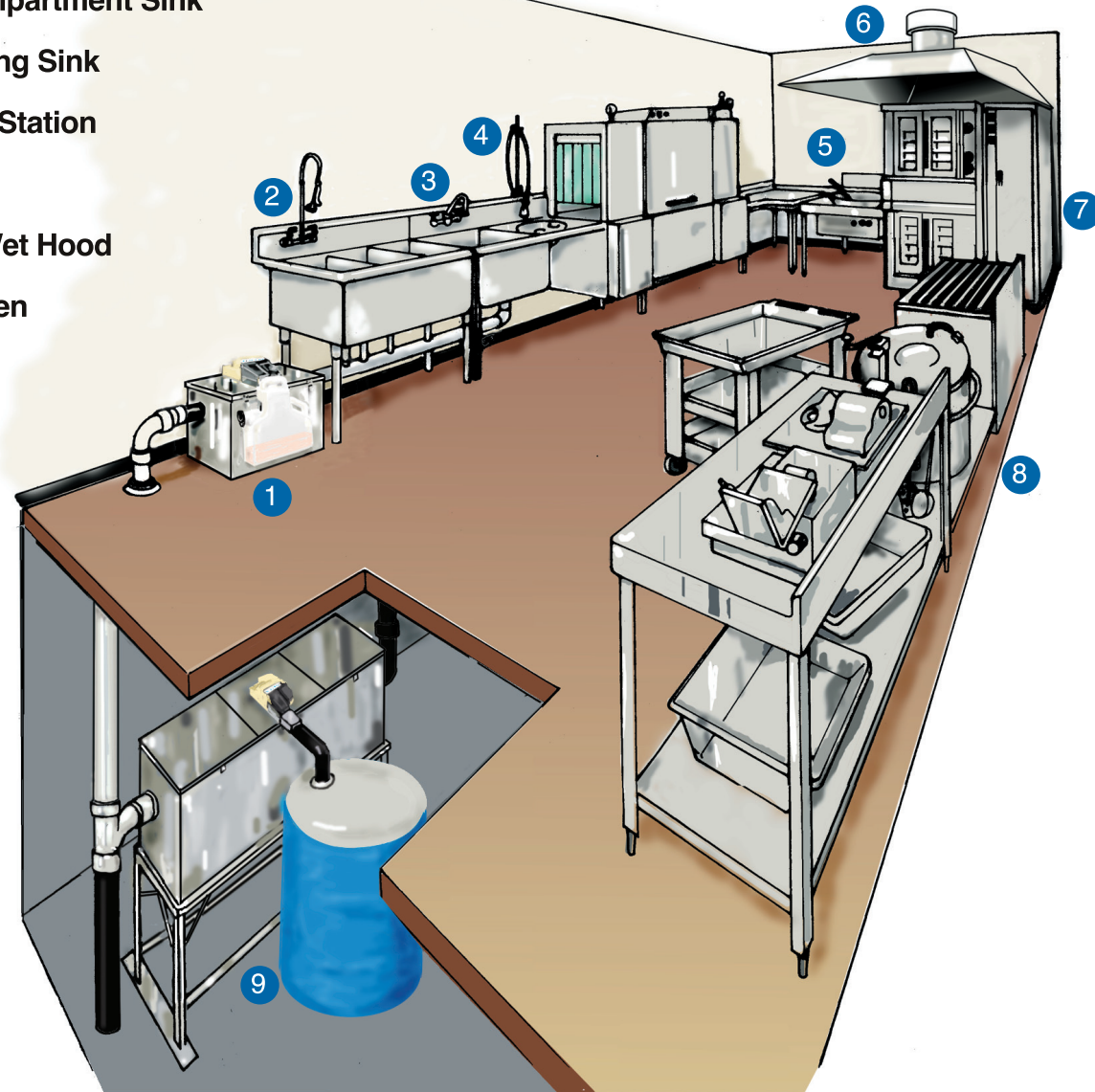
### Commitment

Big Dipper is committed to total customer satisfaction. We are dedicated to the continuous improvement of our products through uncompromising attention to quality in both design and workmanship. Our drive to do the best job possible has been demonstrated in the evolution of our products and methods.



## Most Effective Sites in a Kitchen

- ② Three Compartment Sink
- ③ Pot Washing Sink
- ④ Pre-Rinse Station
- ⑤ Wok
- ⑥ Exhaust Wet Hood
- ⑦ Combi-Oven
- ⑧ Tilt Kettle



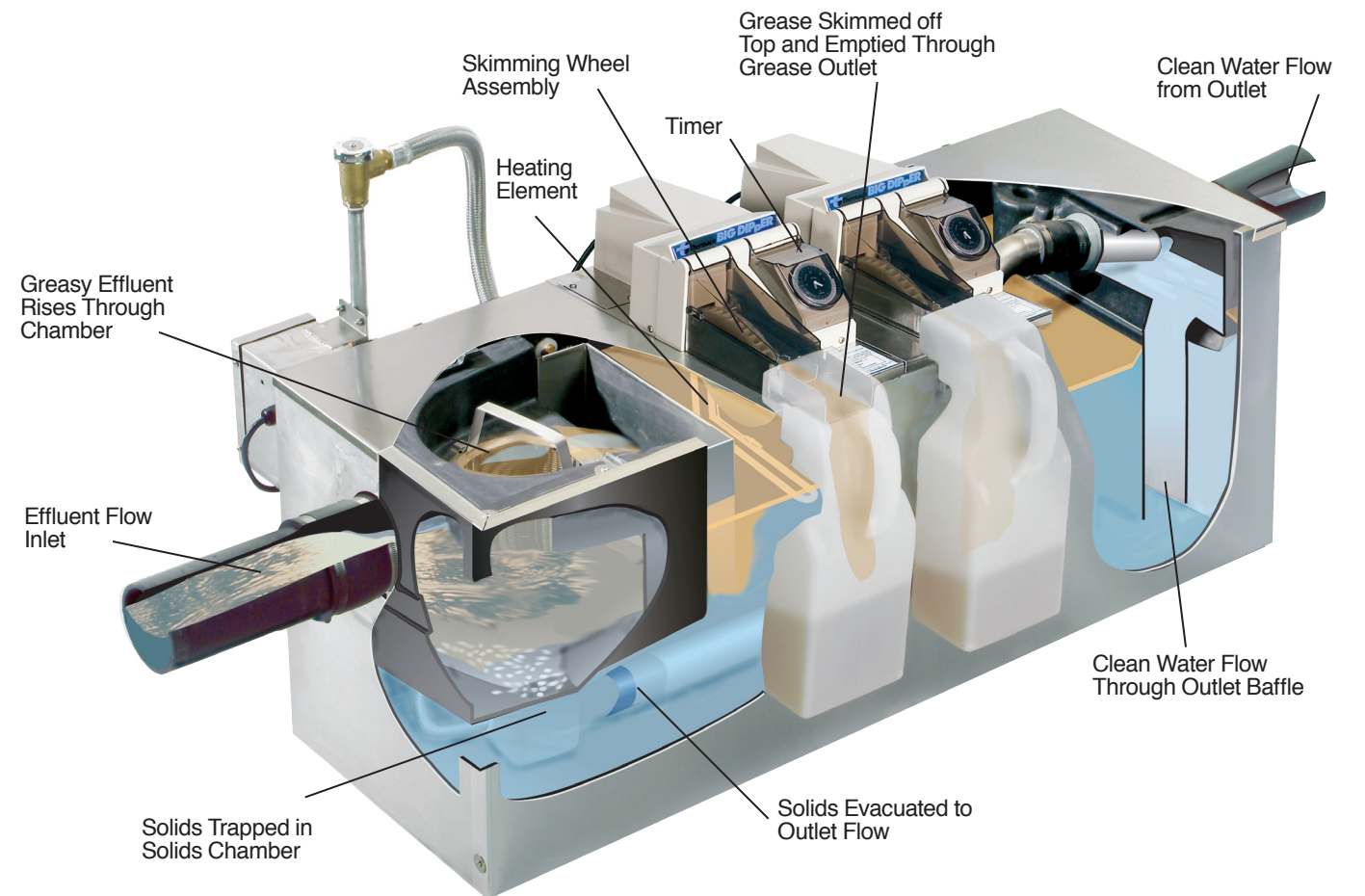
### Point-Source Grease Removal

Smaller installations such as fast food restaurants, schools, or cafeterias usually require Point-Source removal units. ① These units are typically installed directly at the source, usually at a three-compartment sink or a pot-washing sink. The units most proficient at removing grease from the source are the smaller Big Dipper units. Point-Source Units easily fit under the drain boards at the three-compartment sink or pre-rinse station in the kitchen operation. Point-Source Removal Units include the W-200-IS (20 GPM) through the W-500-IS (50 GPM) Internal Strainer Series units and the W-250-AST (25 GPM) Automatic Solids Transfer unit.

### Central Grease Removal

Some installations require the removal of grease & oils from a centralized location such as a basement or mechanical room. Here, several different effluent sources from the kitchen may be plumbed through the Big Dipper. These include sites such as hospitals, correctional facilities, casinos, and other large, institutional-type kitchen sites with high-volume kitchen flows and heavy loadings of incidental solids are present. The larger units in the Big Dipper® equipment line are best suited for these installations. ⑨ These units are easily located in a basement or equipment room site. Central Removal Units include the W-750-IS (75 GPM) and W-1250-IS (125 GPM) Internal Strainer Series units and W-750-AST (75 GPM) and W-1250-AST (125 GPM) Automatic Solids Transfer units. Grouped systems servicing up to a 500 GPM capacity are available using horizontal flow splitter modules to parallel couple up to four (4) Big Dipper units.

## BIG DIPPER® Central Grease Removal AST Units



Cutaway Drawing of BIG DIPPER® W-1250-AST

**BIG DIPPER® Automatic Solids Transfer (AST)** series units provide full automatic grease removal and solids handling. Incidental solids<sup>3</sup> are strained out of the kitchen wastewater and trapped in the solids chamber. Periodically, a water-driven eductor automatically empties the incidental solids out of the solids chamber. Like the IS series, the AST series has a skimming wheel system inside the unit which skims the grease & oils out of the retention area when activated by an integral timer. AST models treat kitchen wastewater flows of 75 and 125 gallons per minute. These systems are geared towards larger facilities like hospitals, correctional facilities or casinos, where grease removal from a central location is important.

<sup>3</sup> Incidental solids are small food solids typical of those that are rinsed off of plates before going to a dishwasher. They do not include non-food products such as plastic, rubber and metal articles. The Eductor of the W-250-AST is designed to transfer incidental solids less than 1" (25 mm) in diameter. The Eductor of the W-750-AST and W-1250-AST is designed to transfer incidental solids less than 1.5" (38 mm) in diameter.

### Central Grease Removal AST Unit Specifications

#### W-750-AST • 75 GPM (4.73 l/s)

Exterior Construction: 304 Stainless Steel, Bright Finish  
 Skimming Rate: 20 lb./hr. (9.08 kg/hr)  
 Automatic Solids Transfer Feature<sup>2</sup>  
 4" Inlet/Outlet (100 mm)  
 535W/115V/60 Hz<sup>1</sup>

#### W-1250-AST • 125 GPM (7.89 l/s)

Exterior Construction: 304 Stainless Steel, Bright Finish  
 Skimming Rate: 40 lb./hr. (18.16 kg/hr)  
 Automatic Solids Transfer Feature<sup>2</sup>  
 4" Inlet/Outlet (100 mm)  
 1055W/115V/60 Hz<sup>1</sup>

<sup>1</sup> 220-240V / 50Hz models available

<sup>2</sup> Big Dipper Models W-750-AST and W-1250-AST require a separate, facility-supplied 12 GPM (.757 l/s) water supply for operation. Thermaco, Inc. provides a 0.5" (13mm) female connector to accommodate this connection. Thermaco, Inc. also provides a 0.5" (13 mm) Backflow Preventer with female connectors for connection between the water supply & AST Water Supply. Minimum water supply pressure should be 50 PSI (3.45 Bar); maximum water supply pressure should be 70 PSI (4.83 Bar).

## BIG DIPPER® Central Grease Removal Units

### Central Grease Removal IS Unit Specifications

#### W-750-IS • 75 GPM (4.73 l/s)

Exterior Construction: 304 Stainless Steel, Bright Finish  
Skimming Rate: 20 lb. / hr. (9.08 kg / hr)  
Solids Strainer Capacity: 3.7 gallons (14 l)  
4" Inlet/Outlet (100 mm)  
520W / 115V / 60 Hz<sup>1</sup>

#### W-1250-IS • 125 GPM (7.89 l/s)

Exterior Construction: 304 Stainless Steel, Bright Finish  
Skimming Rate: 40 lb. / hr. (18.16 kg / hr)  
Solids Strainer Capacity: 3.7 gallons (14 l)  
4" Inlet/Outlet (100 mm)  
1040W / 115V / 60 Hz<sup>1</sup>

### Central Grease Removal AST Unit Specifications

#### W-750-AST • 75 GPM (4.73 l/s)

Exterior Construction: 304 Stainless Steel, Bright Finish  
Skimming Rate: 20 lb. / hr. (9.08 kg / hr)  
Automatic Solids Transfer Feature<sup>2</sup>  
4" Inlet/Outlet (100 mm)  
535W / 115V / 60 Hz<sup>1</sup>

#### W-1250-AST • 125 GPM (7.89 l/s)

Exterior Construction: 304 Stainless Steel, Bright Finish  
Skimming Rate: 40 lb. / hr. (18.16 kg / hr)  
Automatic Solids Transfer Feature<sup>2</sup>  
4" Inlet/Outlet (100 mm)  
1055W / 115V / 60 Hz<sup>1</sup>



BIG DIPPER® W-1250-AST

<sup>1</sup> 220-240V / 50Hz models available

<sup>2</sup> Big Dipper Models W-750-AST and W-1250-AST require a separate, facility-supplied 12 GPM (.757 l/s) water supply for operation. Thermaco, Inc. provides a 0.5" (13mm) female connector to accommodate this connection. Thermaco, Inc. also provides a 0.5" (13 mm) Backflow Preventer with female connectors for connection between the water supply & AST Water Supply. Minimum water supply pressure should be 50 PSI (3.45 Bar); maximum water supply pressure should be 70 PSI (4.83 Bar).

**Note: Installations must comply with all applicable local, state and national codes for your area.**

## Which Units Work Best In What Setting?

Within the Point Source Unit and Central Grease Removal Unit categories, Thermaco, Inc. offers two distinct types of units. These include the **Internal Strainer (IS)** Series and **Automatic Solids Transfer (AST)** Series. What's the difference between these types, and which one works best in what setting?



BIG DIPPER® W-250-IS

wastewater flows of 75 and 125 gallons per minute.



BIG DIPPER® W-1250-AST

treat kitchen wastewater flows of 75 and 125 gallons per minute.

<sup>3</sup> Incidental solids are small food solids typical of those that are rinsed off of plates before going to a dishwasher. They do not include non-food products such as plastic, rubber and metal articles. The Eductor of the W-250-AST is designed to transfer incidental solids less than 1" (25 mm) in diameter. The Eductor of the W-750-AST and W-1250-AST is designed to transfer incidental solids less than 1.5" (38 mm) in diameter.

### Point Source Grease Removal Units:

#### Internal Strainer (IS) Series

W-200-IS

W-250-IS

W-350-IS

W-500-IS

#### Automatic Solids Transfer (AST) Series

W-250-AST

### BIG DIPPER® IS (Internal Strainer) Series Units

utilize an internal strainer basket to capture incidental solids<sup>3</sup> in kitchen wastewater flows. Each unit has a skimming wheel mechanism inside the unit that skims the grease & oils out of the retention area when activated by an integral timer. The strainer basket should be emptied at least once per day, more often if the kitchen is a particularly busy one. Point Source Internal Strainer Series units handle kitchen flows of 20 to 50 gallons per minute. Central Grease Removal Internal Strainer Series Units treat kitchen

### Central Grease Removal Units:

#### Internal Strainer (IS) Series

W-750-IS

W-1250-IS

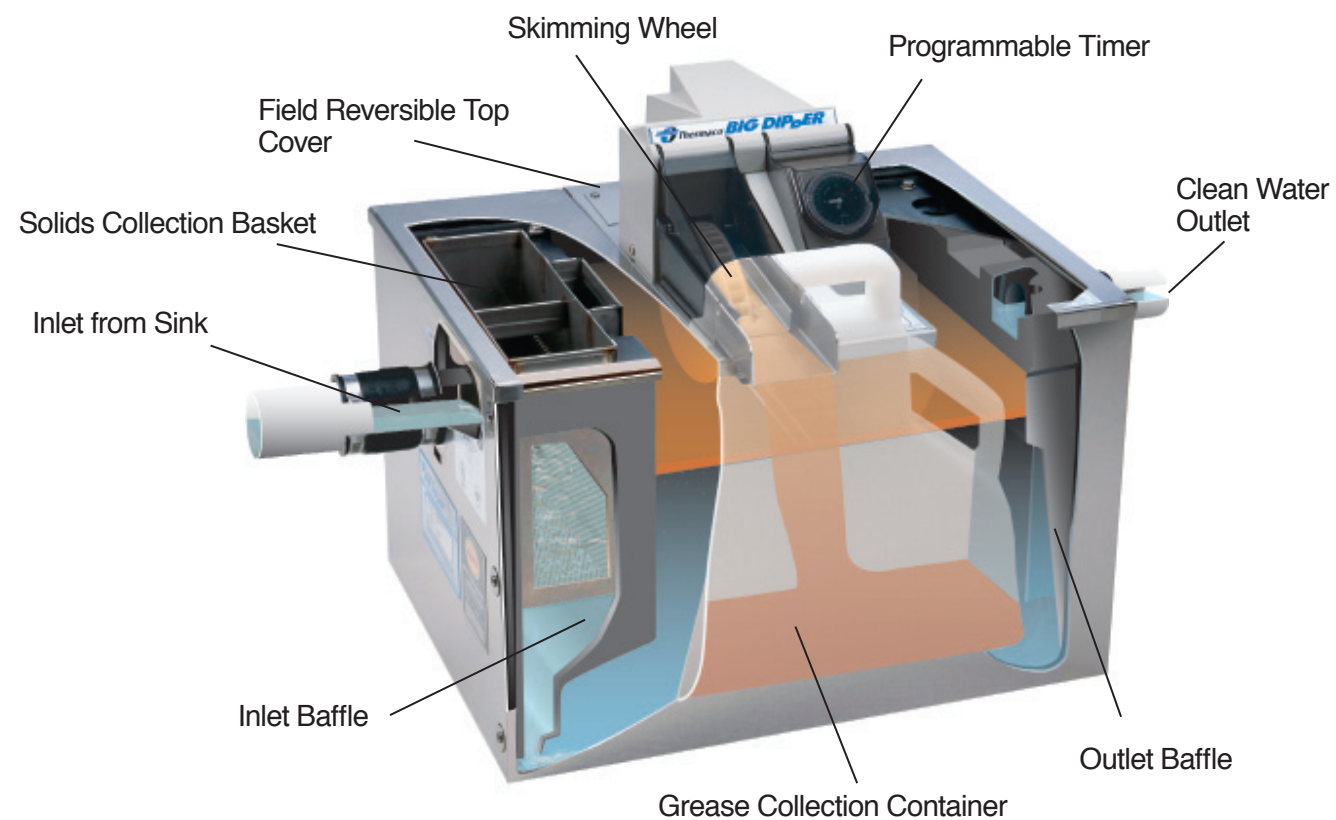
#### Automatic Strainer Transfer (AST) Series

W-750-AST

W-1250-AST

### BIG DIPPER® Automatic Solids Transfer (AST) Series Units

provide full automatic grease removal and solids handling. Incidental solids<sup>3</sup> are strained out of the kitchen wastewater and trapped in the solids chamber. Periodically, a water-driven eductor automatically empties the incidental solids out of the solids chamber. Like the IS series, the AST series has a skimming wheel mechanism inside the unit which skims the grease & oils out of the retention area when activated by an integral timer. Point Source Automatic Solids Transfer Series Units handle kitchen flows of 25 gallons per minute. Automatic Solids Transfer Units in the Central Grease Removal category



Cutaway Drawing of BIG DIPPER® W-200-IS

## BIG DIPPER® Product Features and Benefits

- **BIG DIPPER® units separate fats, oils and grease with a proven efficiency of up to 98.6%.<sup>2</sup> Automatic removal of grease retains unit separation efficiency.**
- **Fully automatic self cleaning cycle with 24-hour programmable timer**  
Removes collected grease & oils from tank without any operator assistance.
- **Constructed of corrosion resistant materials.** Suitable for installation in virtually any location.
- **Integrated Motor/Grease Outlet/Heater/Lid on the IS Series.** Enables fast, do-it-yourself unit operation reversal.
- **Incidental solids automatically removed in AST Series.** No strainer basket to manually empty.
- **Easy lift grease collector in the IS Series.** Simplifies grease collection container emptying.
- **Compact footprint.** Makes installation possible in tight spaces.

<sup>2</sup> As tested to ASME standards A112.14.3 and A112.14.4

## Point Source Grease Removal IS Unit Specifications

### W-200-IS • 20 GPM (1.26 l/s)

Exterior Construction: 304 Stainless Steel, Bright Finish  
Skimming Rate: 20 lb. / hr. (9.08 kg / hr)  
Solids Strainer Capacity: 1.85 gallons (7 l)  
2" Inlet/Outlet (50 mm)  
520W / 115V / 60 Hz <sup>1</sup>

### W-250-IS • 25 GPM (1.58 l/s)

Exterior Construction: 304 Stainless Steel, Bright Finish  
Skimming Rate: 20 lb. / hr. (9.08 kg / hr)  
Solids Strainer Capacity: 1.85 gallons (7 l)  
2" Inlet/Outlet (50 mm)  
520W / 115V / 60 Hz <sup>1</sup>

### W-350-IS • 35 GPM (2.21 l/s)

Exterior Construction: 304 Stainless Steel, Bright Finish  
Skimming Rate: 20 lb. / hr. (9.08 kg / hr)  
Solids Strainer Capacity: 2.5 gallons (9.5 l)  
3" Inlet/Outlet (75 mm)  
520W / 115V / 60 Hz <sup>1</sup>

### W-500-IS • 50 GPM (3.15 l/s)

Exterior Construction: 304 Stainless Steel, Bright Finish  
Skimming Rate: 20 lb. / hr. (9.08 kg / hr)  
Solids Strainer Capacity: 2.5 gallons (9.5 l)  
3" Inlet/Outlet (75 mm)  
520W / 115V / 60 Hz <sup>1</sup>

### W-250-AST • 25 GPM (1.58 l/s)

Exterior Construction: 304 Stainless Steel, Bright Finish  
Skimming Rate: 20 lb. / hr. (9.08 kg / hr)  
Automatic Solids Transfer Feature <sup>2</sup>  
2" Inlet/Outlet (50 mm)  
535W / 115V / 60 Hz <sup>1</sup>

<sup>1</sup> 220-240V / 50Hz models available

<sup>2</sup> The Big Dipper Model W-250-AST requires a separate, facility-supplied 5 GPM (.315 l/s) water supply for operation. Thermaco, Inc. provides a 0.5" (13 mm) garden hose female connector to accommodate this connection. Minimum water supply pressure should be 50 PSI (3.45 Bar); maximum water supply pressure should be 70 PSI (4.83 Bar).



BIG DIPPER® W-250-IS

**Note: Installations must comply with all applicable local, state and national codes for your area.**