



6245 State Road  
Philadelphia  
PA 19135-2996

Telephone 215-624-4800  
800-344-4802  
FAX: 215-624-6966

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# TECHNICAL MANUAL

FOR

# TRAY DRYER

MODEL  
TD321-3



**TECHNICAL MANUAL**  
**including Installation, Operation, and Maintenance Instructions**  
**FOR**  
**TRAYDRYERS**  
**MODEL: TD 321-3**





Thank you for Purchasing this quality Insinger product.

On the space provided please record the Model, Serial Number and Start-up date of this unit:

Model: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Start-up Date: \_\_\_\_\_

When referring to this equipment please have this information available.

Each piece of equipment at Insinger is carefully tested before shipment for proper operation. If the need for service should arise please contact your local Authorized Insinger Service Company. A Service Network Listing is provided within this manual. Check this list for your local authorized servicer.

For proper activation of the *Insinger Limited Warranty* a SureFire™ Start-up should be completed on your machine. Refer to the Introduction section in this manual for an explanation of Insinger's SureFire™ Start-up and Check-out Program.

Please read the Insinger Limited Warranty and all installation and operation instructions carefully before attempting to install or operate your new Insinger product.

To register your machine for warranty by phone, fax, or the internet or for answers to questions concerning installation, operation, or service contact our Technical Services Department:

Toll-Free	800.344.4802
Fax	215.624.6966
Email	service@insingermachine.com
World-Wide Web	http://www.insingermachine.com

Thank you.  
Insinger





PART 1  
**TECHNICAL INFORMATION**





**TRAYDRYER**  
**MODEL: TD 321-3**  
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Thank you for Purchasing this quality Insinger product.

On the space provided please record the Model and Serial Number of this unit:

Model: \_\_\_\_\_

Serial Number: \_\_\_\_\_

When referring to this equipment please have these numbers available.

Each piece of equipment at Insinger is carefully tested before shipment for proper operation. If the need for service should arise please contact your local Authorized Insinger Service Company. If you do not know the name of your Authorized Service Company please contact our Technical Services Department toll-free, 800/344-4802.

For proper activation of the *Insinger Limited Warranty* the **Warranty Registration Card** provided with your unit must be returned within 30 days of the installation date.

Please read the Insinger Limited Warranty and all installation and operation instructions carefully before attempting to install or operate your new Insinger product.

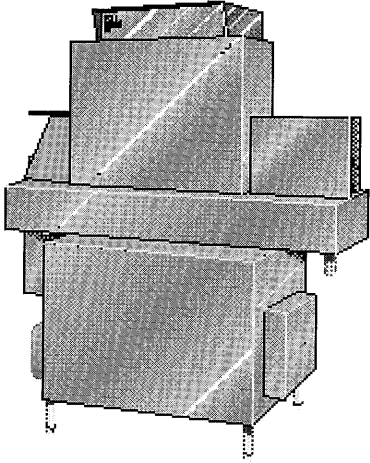
Thank you.

Insinger Machine Company



## TD 321-3

### AUTOMATIC TRAY DRYER OPTIONAL COMPONENT

**DESIGN**

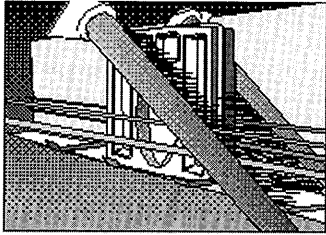
Automatic conveyor, tray dryer with Insinger's unique Air Wiper design. Capacity is 528 trays per hour (based on a 15" tray) with an adjustable conveyor speed. Designed for left or right hand conveyor travel, as specified. Furnished only as an added component to a TRAC 321-2 or TRAC 321-2 RPW tray washer.

**STANDARD EQUIPMENT**

- S/S frame, legs and feet
- Top mounted NEMA 12 control panel
- SureFire™ Start-Up and Check-Out Service

**OPTIONAL ACCESSORY EQUIPMENT**

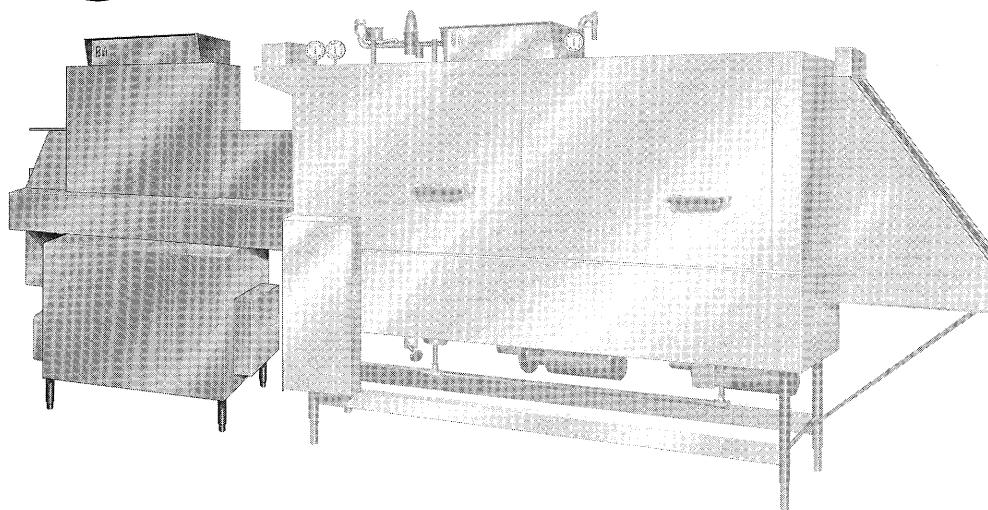
- Security package



The TD 321-3 completes Insinger's powerful tray drying system using the unique Air Wiper (shown at left) which leaves the trays virtually free of water.



CSI - 11400


**SPECIFICATIONS**

**CONSTRUCTION** - Hood and tank constructed of 16 gauge 18-8 type 304 S/S. Hood unit of all welded seamless construction. S/S frame, legs and feet.

**CONVEYOR** - One S/S roller conveyor chain with tray cradles, through both washer and dryer. Width between guide rails is factory adjustable from 1.5" to 3.7". Conveyor accommodates trays up to 15" high. Conveyor drive system includes direct drive gear motor with frictionless, trouble-free overload release system continuously running.

**CONTROLS** - Top-mounted control cabinet, NEMA 12 rated, housing motor controls and overload protection, transformer and contactor. All controls safe low voltage 24 VAC.

**BLOWER** - 10 HP regenerative blower with Insinger's specially designed "air wiper" mounted on either side of conveyor. "Air wipers" are mounted on a diagonal to sweep water in controlled movement preventing splashing and uneven results.

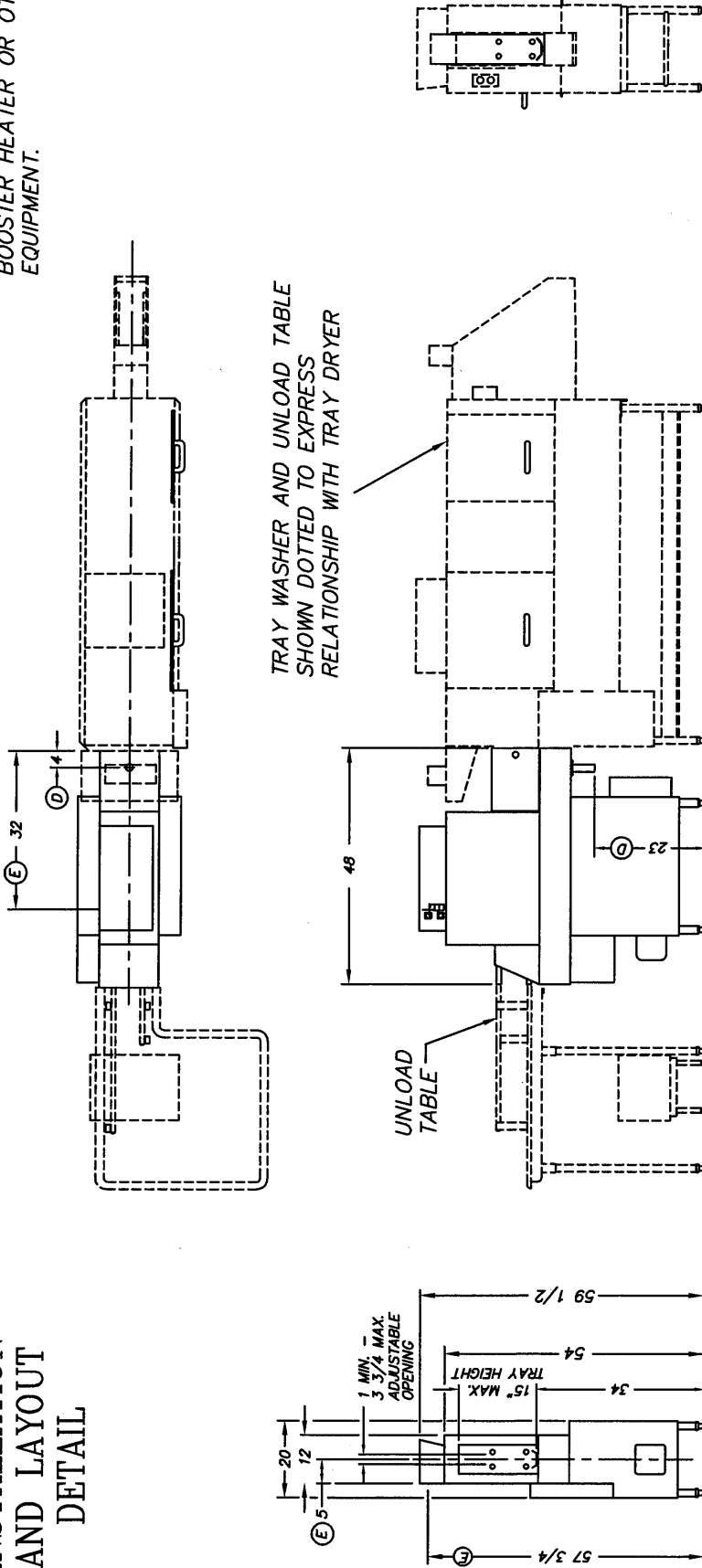
**DRAIN** - All water is drained back into TRAC 321-2 or TRAC 321-2 RPW with a gravity drain connection. Factory installed drain connection to tray washer provided if dryer is ordered with a TRAC 321-2 or TRAC 321-2 RPW.

**UNLOAD TABLE** - A stainless steel tray unload table receives clean trays. Table constructed with guide rails which ease the trays onto table.

Capacity per hour	Motor size	Shipping weight	Additional current draw	Electric Customer Fuse amps
528 trays	10 hp (blower) 1/8 hp (conveyor)	700 lbs.	208/3/60.....	31.0 .....FRN-R-60
			240/3/60.....	28.2 .....FRN-R-60
			380/3/50.....	17.0 .....FRS-R-35
			480/3/60.....	14.1 .....FRS-R-30

# INSTALLATION AND LAYOUT DETAIL

**NOTE:**  
INSTALLATION ON EXISTING UNITS  
MAY REQUIRE RELOCATION OF  
BOOSTER HEATER OR OTHER  
EQUIPMENT.



TRAY DRYER  
UNLOAD END SHOWN

RIGHT TO LEFT FEED

**NOTE:** HOOK UP KIT FOR CONNECTION TO INSINGER  
TRAY WASHER AVAILABLE, DWG. # 1361-105.

Information and Specifications  
Subject to Change Without Notice.

ELECTRICAL CHARACTERISTICS	
VOLTAGE	AMPS
208	31
230	28.2
460	14.1
380	17
CUSTOMER FUSE	
FRN-R-60	
FRN-R-60	
FRS-R-30	
FRS-R-35	

INSTALLATION CONNECTIONS	
LTR	DESCRIPTION
E	ELECT. SERVICE - BLOWER MTR.
D	DRAIN
	1 1/2 O.D. TUBE
	TO HP
	SIZE

THE INFORMATION ON THIS DRAWING IS THE PROPRIETARY PROPERTY OF INSINGER AND SHOULD BE KEPT CONFIDENTIAL. IT IS TO BE USED ONLY FOR THE LIMITED TO THE SCOPE OF THE MANUFACTURING OF A SINGLE OR SEVERAL PARTS, COMPONENTS OR ASSEMBLIES. NO OTHER REPRODUCTION OR TRANSMISSION OF THIS INFORMATION SHALL BE MADE WITHOUT THE WRITTEN PERMISSION OF INSINGER. INSINGER ASSUMES NO LIABILITY FOR APPROPRIATE LEGAL ACTION.

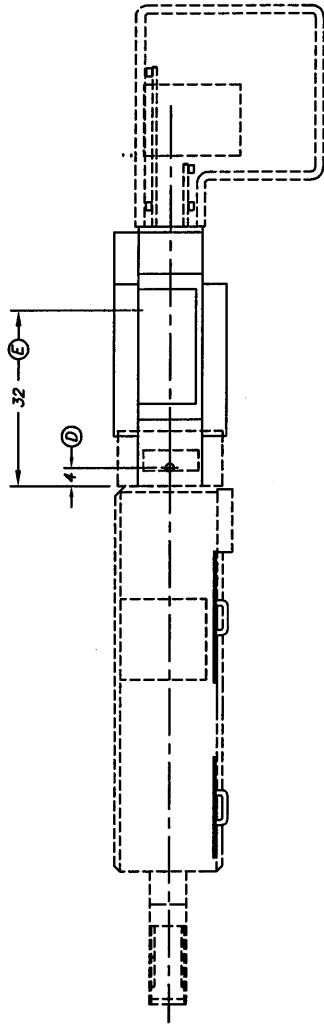
TD 321-3 TRAY DRYER		Philadelphia, PA 19135	
SINGLE TANK CONVEYOR TYPE DISHWASHING MACHINE		(215) 624-4800	
Insinger		FAX (215) 624-6886	
DRWN: EMM	01.17.00	SCALE	DWG. NO.
REV: PI	04.10.07	1/2" = 1'	TD321-3R F
FILE: STD \TD321-3R			



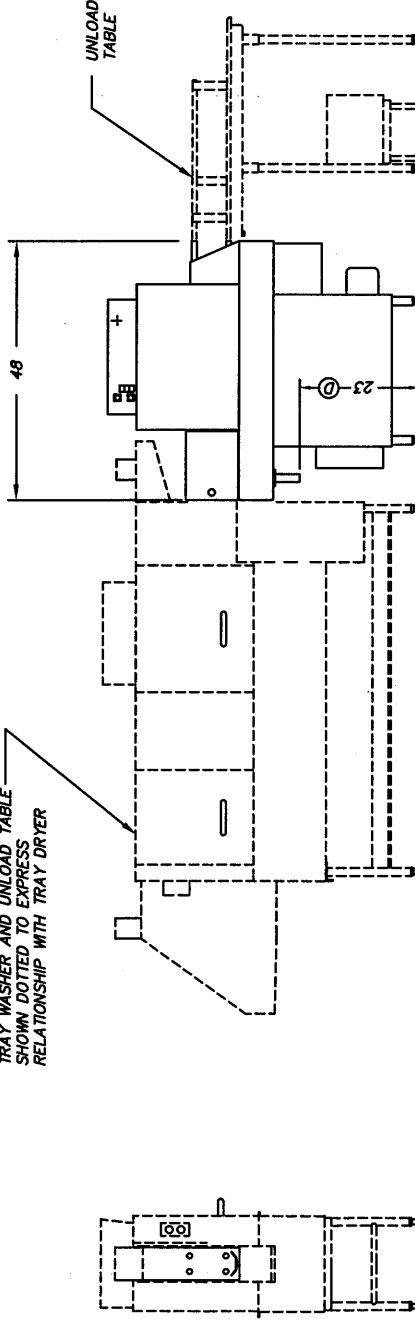


**NOTE:**

INSTALLATION ON EXISTING UNITS  
MAY REQUIRE RELOCATION OF  
BOOSTER HEATER OR OTHER  
EQUIPMENT.



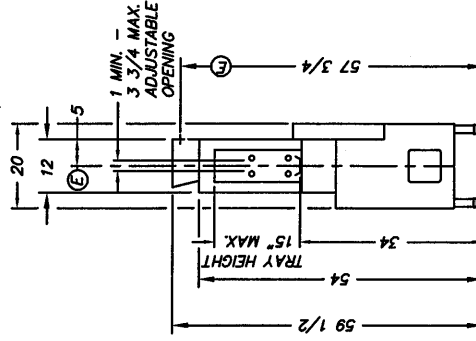
TRAY WASHER AND UNLOAD TABLE  
SHOWN DOTTED TO EXPRESS  
RELATIONSHIP WITH TRAY DRYER



LEFT TO RIGHT FEED

TRAY DRYER  
UNLOAD END SHOWN

INSTALLATION  
AND LAYOUT  
DETAIL



NOTE: HOOK UP KIT FOR CONNECTION TO INSINGER  
TRAY WASHER AVAILABLE. DWG. # 1361-105.

Information and Specifications  
Subject to Change Without Notice.

ELECTRICAL CHARACTERISTICS	
VOLTAGE	AMPS
208	31
230	28.2
460	14.1
380	17

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TD 321-3 TRAY DRYER		Philadelphia, PA 19135	
SINGLE TANK CONVEYOR TYPE DISHWASHING MACHINE		(215) 824-4800	
Insinger		FAX (215) 824-6986	
DRWN. EMM	01.17.00	SCALE	DWG. NO.
REV	PI	1/2" = 1'	TD321-3L
	04.10.07		F
	FILE: STD\TD321-3L		

INSTALLATION CONNECTIONS	
LTR	DESCRIPTION
E	ELECTRICAL CONNECTION
D	DRAIN
	SIZE
	10 HP
	1 1/2 O.D. TUBE



12/12/2002

## SERVICE NETWORK LISTING

### ALABAMA

**Greene's Service Company**  
3515 Spann St.  
Harvest, AL 35749  
256.859-1816

**Jones-McLeod Appliance Service**  
1616 7th Avenue, North  
Birmingham, AL 35203  
205.251-0159  
205.322-1440 (fax)  
800.821-1150  
[www.jones-mcleod.com](http://www.jones-mcleod.com)

**Total Equipment Service Co.**  
2302 3rd St.  
Attala, AL 37954  
256.538-0261

### ALASKA

**J & J Service**  
5001 Eagle St.  
Anchorage, AK 99503  
907.561-1060

### ARIZONA

**Commercial Food Equipment**  
2010 E. University Drive #23  
Tempe, AZ 85281  
480.927-9262  
480.927-9266 (fax)

### ARKANSAS

**Bromley Parts and Service, Inc.**  
10<sup>th</sup> & Ringo  
Little Rock, AR 72201  
501.374-0281  
501.661-0223 (fax)  
800.482-9209  
[www.bromleyparts.com](http://www.bromleyparts.com)

**Scott Service Co., Inc.**  
7123 I-30, Suite 51  
Little Rock, AR 72209  
501.562-1863  
501.562-2308

### CALIFORNIA

**Chapman Appliance Service**  
1784 San Diego Ave.  
San Diego, CA 92110  
619.298-7106  
619.298-7591 (fax)

**Commercial Appliance**  
165 Commerce Circle, Suite B  
Sacramento, CA 95815  
916.567-0203  
916.567-0324 (fax)  
800.464-2222  
[www.commercialappliance.com](http://www.commercialappliance.com)

**Magna Mechanical<sup>1</sup>**  
724 Ave. B, Suite A  
National City, CA 91950  
619.239-8008

**Ridge Electric Motor Company**  
1235 G St.  
Fresno, CA 93706  
559.268-5031

**Sterling Service**  
664 W. Hawthorne St.  
Glendale, CA 91204-1002  
818.243-1234  
818.243-4021 (fax)  
800.396-0010  
[www.sterlingsru.com](http://www.sterlingsru.com)

**P&D Appliance**  
100 S. Linden Ave  
South San Francisco, CA 94080  
800-424-1414  
650-635-1900  
650-635-1919 (fax)

**P&D Appliance**  
4220 "C" Roseville Rd  
North Highlands, CA 95660  
800-824-7219  
916-974-2772  
916-974-2774 (fax)

### COLORADO

**General Parts**  
4910 Fox Street, Unit F  
Denver, CO 80239  
303.373.2714  
303.373.2724 (fax)

**General Parts**  
Colorado Springs, CO 80901  
303.373.2714

**General Parts**  
Fort Collins, CO 80535  
303.373.2714

**Metro Appliance Service**  
1640 S. Broadway  
Denver, CO 80210  
303.778-1126  
303.778-0268 (fax)  
800.525-3532  
[www.metroapplianceservice.com](http://www.metroapplianceservice.com)

**Sammons Refrigeration**  
2938 Janitell Rd.  
Colorado Spring, CO 80906  
719.538-9165  
719.538-9170 (fax)

### CONNECTICUT

**A-Tech Service**  
161 San Rico Dr.  
Manchester, CT 06045  
860.649-6627  
860.649-7882 (fax)  
800.832-8324

### DELAWARE

**Insinger Machine Company**  
6245 State Road  
Philadelphia, PA 19135  
215.624-4800  
215.624-6966 (fax)  
800.344-4802  
[www.insingermachine.com](http://www.insingermachine.com)

### DISTRICT of COLUMBIA

**Equipment Engineering Co, Inc.**  
7573 Gary Road  
Manassas, VA 22110  
703.631-1575  
703.369-2082 (fax)

### FLORIDA

**A.L.T. Service Company**  
5621 Crawfordville Rd.  
Tallahassee, FL 32310  
850.878-5343  
850.656-6810 (fax)

1. These companies provide Navy Sales & Service support only. They are not intended for commercial use.



12/12/2002

## SERVICE NETWORK LISTING

### FLORIDA (con't)

**BGSI, Inc**  
3121 NW 16<sup>th</sup> Terrace  
Pompano Beach, FL 33064  
954.971-0456  
954.973-1825 (fax)  
800.253-0200  
[www.bgsiflorida.com](http://www.bgsiflorida.com)

**BGSI, Inc**  
3311 Bartlett Ave.  
Orlando, FL 32811  
407.316-8010  
407.316-0279 (fax)  
888.399-2474  
[www.bgsiflorida.com](http://www.bgsiflorida.com)

**Commercial Appliance Service**  
8416 Laurel Fair Circle  
Building 6, Suite 114  
Tampa, FL 33610  
813.663-0313  
813.663-0212 (fax)  
800.282-4718  
[www.comapp.com](http://www.comapp.com)

**Commercial Appliance Repair**  
9507 Sandpiper St.  
Pensacola, FL 32514  
850.478-5533  
850.478-7062 (fax)

**JS Equipment**  
19881 Date Palm Drive  
Sugarloaf Key, FL 33042  
305.745-3289

**Specialty Marine Supply<sup>1</sup>**  
2057 Mayport Rd.  
Atlantic Beach, FL 32233  
904.247-3303  
904.247-6403 (fax)

**Whaley FoodService Repairs**  
8421 Atlantic Blvd.  
Jacksonville, FL 32211-8737  
904.725-7800  
904.725-7328 (fax)  
800.824-5843  
[www.whaleyfoodservice.com](http://www.whaleyfoodservice.com)

### GEORGIA

**Adcox Service Company, Inc**  
500-4 Hillcrest Indl Blvd  
Macon, GA 31204  
404.361-8010  
404.361-3907 (fax)  
800.722-6434

**Georgia Con't  
SRS**  
2200 Norcross Parkway  
Suite 210  
Norcross, GA 30071  
800-235-6516  
770-446-6177  
770-446-3157 (fax)

**Food Equipment Technology**  
4786 Lakepark Court  
Lilvern, GA 30247  
770.638-8600  
770.275-6585 (fax)  
770.377-5382 (cell)

**Frothingham Commercial  
Services**  
PO Box 320  
Evans, GA 30809-0320  
706.863-8609

**Total Service of Albany**  
835 Flint Ave.  
Albany, GA 31701  
912.888-2302  
912.883-1548 (fax)  
800.648-8321

**Whaley FoodService Repairs**  
109-A Owens Industrial Drive  
Savannah, GA 31405  
912.447-0827  
912.447-0826 (fax)  
[www.whaleyfoodservice.com](http://www.whaleyfoodservice.com)

### HAWAII

**Food Equipment Service  
Company**  
300 Puuhale Rd.  
Honolulu, HI 96819  
808.847-4871  
808.842-1560 (fax)

### IDAHO

**Ron's Service**  
703 E. 44<sup>th</sup> St., Suite 10  
Boise, ID 83714  
208.375-4073  
208.375-4402 (fax)

### ILLINOIS

**Cone's Repair Service**  
2408 40<sup>th</sup> Ave.  
Moline, IL 61265  
309.797-5323

**Eichenauer Services**  
130 S. Oakland  
Decatur, IL 62522  
217.429-4229  
217.429-0226 (fax)  
[www.esiquality.com](http://www.esiquality.com)

**Eichenauer Services**  
1066 McClure  
Peria, IL 61604  
217.359-4200  
217.398-2960 (fax)  
[www.esiquality.com](http://www.esiquality.com)

**General Parts**  
248 James Street  
Bensenville, IL 60106  
630.595.3300  
630.595.0003 (fax)

**Major Appliance Service**  
4330 Prescott Ave.  
Lyons, IL 60534  
708.447-4100  
708.447-4157 (fax)

### INDIANA

**Commercial Parts & Service**  
5310 E. 25<sup>th</sup> St.  
Indianapolis, IN 46218  
317.251-9255  
317.549-6282 (fax)  
800.727-8710  
[www.commercialparts.com](http://www.commercialparts.com)

**General Parts**  
Indianapolis, IN  
800.880.3604  
800.880.5027 (fax)

### IOWA

**Cones Repair Service, Inc.**  
1056 27<sup>th</sup> Ave, SW  
Cedar Rapids, IA 52404  
319.365-3325  
800.716-7070

**Goodwin Service Co., Inc.**  
2900 Delaware Ave.  
Des Moines, IA 50317  
515.262-9308  
515.262-2936 (fax)  
800.372-6066  
[www.goodwintucker.com](http://www.goodwintucker.com)

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