Simply smart drying systems

INTERNATIONAL DRYING CORPORATION

815-477-4911 phone
815-477-7445 fax

"YOUR CAR WASH DRYING EXPERTS"

Limited Space System Installation Manual

International Drying Corporation
160 Chicago St
Cary, IL 60013

WWW.INTERNATIONALDRYING.COM

815-477-4911 phone
815-477-7445 fax

TABLE OF CONTENTS:

INTRODUCTION

This Manual contains all the information required for a successful installation, operation and maintenance of your new IDC Stainless Steel Dryer.

Please read the enclosed information prior to installing your new dryer. There is vital information for the erection and electrical connections necessary for a successful and profitable installation. By taking the time and effort to read and understand this manual, will allow your installation to be accurate and trouble-free.

Should you have any questions before, during or after your installation, please feel free to contact our office for technical assistance.

International Drying Corporation
2510 Route 176
Suite G
Prairie Grove, Il. 60012
815-477-4911

SPECIFICATIONS:

10HP Producer		
VOLTAGE:	AMP DRAW:	SERVICE FACTOR:
208vac	26.7 Amps	1.15/40
230vac	23 Amps	1.15/40
460vac	11.5 Amps	1.15/40

CFM'S (Cubic feet per minute)(Air Flow)	**RPM 3510**	**9600CFM**

AIR VELOCITY				**150MPH**

TEFC MOTORS									**3 Phase**
FRAME SIZE									**215**
WEIGHT									**250lbs.**

GENERAL INFORMATION

- Touch Free Drying System
- Stainless Steel Construction
- All TEFC Motors
- High Efficiency Motors
- Each 10HP motor delivers 9600CFM
- Lifetime Fan Warranty
- No Maintenance
- Systems from 30HP to 300HP

OPTIONAL EQUIPMENT AVAILABLE

Starter Motor Panel
Additional side columns or top columns

GENERAL SAFETY INFORMATION

All Warnings, Cautions, and Safety Tips below concern the safe operation of your New IDC Stainless Steel Dryer. Please abide by this information as listed for your protection. Please read completely with all personnel.

- Never attempt to work on equipment while it is running
- Disconnect and lock out power
- Personnel must be trained in safe operating procedures
- All personnel should review this manual periodically
- Never allow fan to come in contact with Side Column
- Keep inlet screen free of debris
- Periodically clean all debris from fan blades to maintain balance during high speed operation
- Should an unusual noise or vibration develop, shut down the dryer immediately and investigate the cause. Do not restart the dryer until the cause is identified and rectified
- Wear hearing protection when working around the dryer operating area
- Emergency stop buttons must be well marked and their location and operation reviewed by all personnel
- Maintenance or repair work on equipment to be performed only by trained technician or service personnel
- Do not wear loose fitting clothing when working on or around equipment
- All car washes should have horn or alarm that sounds prior to equipment starting
- No unauthorized individuals should be allowed near the equipment at any time

EQUIPMENT SPECIFICATIONS

30 hp IDC SS Dryer

Dimensions	**Tunnel Length**	**72” (6FT)**
	Tunnel Width	**172” (14FT 4IN)**
	Unit Height	**128” (10FT 8IN)**
	Vehicle Clearance	**96” (8FT)**

Electrical	**30HP 208VAC**	**3 PHASE 120 AMPS**
	30HP 230VAC	**3 PHASE 100 AMPS**
	30HP 460VAC	**3 PHASE 60 AMPS**

INSTALLATION

Standard 30 HP Dryer

Suggested Installation Tools and Materials

- Hammer Drill with 1⁄2” Drill Bit
- Sledge Hammer
- Set of standard Combo Wrenches
- Set of Standard 3/8” Drive Ratchet Set
- Measuring Tape
- (18) 1⁄2”x3-3/4” Wedge Anchors
- Safety Goggles
- Torpedo Level
- Manpower (2 Men Required)
- Time 1 to 6 Hours (30hp or 45hp) (Assuming no issues)

Installation Steps – 10 HP Top Section

1. Place first top column intake section(section with motor in it) 60” from center line to inside of column. Level & anchor unit with 6 anchor bolts (not supplied) when the intake section is completely positioned properly.
2. Install foam tape on top ring of intake section
3. Lift up 4ft Blank or motor section of dual motor system with attached elbow and place it on top of Intake section. Bolt in place with supplied hardware.
4. Place foam tape on exposed ring of elbow section
5. Lift up top hogger section and bolt to elbow section with supplied hardware. NOTE: top nozzle should be positioned at a ten degree angle towards entrance of car wash.
6. Attach top foam nozzle with supplied clamp
7. If top hogger is poly you will need to attach a threaded rod or support chain to the top nozzle and secure to ceiling

Installation Steps – 10 P/S Side Column Section

1. Place intake section (section with motor in it) 60” from center line to inside of the column. Level & anchor unit with 6 anchor bolts (not supplied) when the intake section is completely positioned properly.
2. Install foam tape on top ring of intake section
3. Lift up the side nozzle column section and place it on top of the Intake section. Bolt in place with supplied hardware with approximately a 15 degree angle to the entrance.
4. Install foam side nozzles with supplied clamps
5. NOTE: If system has multiple side columns use the taller sections closer to the entrance.

Installation Steps – 10 HP D/S Side Column Section

1. Place intake section (section with motor in it) 58-1/2” from center line to the inside of the column. Level & anchor unit with 6 anchor bolts (not supplied) when the intake section is completely positioned properly.
2. Install foam tape on top ring of intake section
3. Lift up the side nozzle column section and place it on top of the Intake section. Bolt in place with supplied hardware with approximately a 15 degree angle to the entrance.
4. Install foam side nozzles with supplied clamps

Electrical Installation

● Electrician to provide materials and labor to install 3-phase power (208vac, 230vac or 460vac) to the air dryer motors on the dryer arch through properly sized 3 pole circuit breakers and motor starters with thermal overloads in conjunction with any and all local codes.

● Electrician is to provide materials and labor to install single phase (24vac or 120vac) power from the equipment controller (equipment start/stop system) to the actuation for each electric motor on the dryer

● BE SURE THAT ALL ELECTRIC MOTORS ARE PROPERLY WIRED FOR THE SITE SUPPLY VOLTAGE BEING USED

● Wire all air producer 3 phase motors for staggered start. That is, no more than one motor should start at the same time

● Do not use wire nuts for electric motor connections. All motor connections should be wired using properly sized split bolt connectors. (Failure to use split bolt connectors can void motor warranty)

● Test all legs of each motor when running to ensure the motor is running within spec.

DIMENSIONS

DRYER CONFIGURATIONS

Pictured Below

PARTS LIST
(Per Head)

Part Number	Description	Quantity

TROUBLESHOOTING

Problem	Possible Cause	Probable Remedy
Dryer Does Not Energize	Overload Tripped	Check Motor Starter Overload and Reset If Overload Trips Frequently check trip Setting vs motor name Plate amp draw
	Tunnel Controller Issue	Check Tunnel Controller Programming
	Loose Wire(s)	Check Wire and terminations
	Motor Problem	If proper voltage is reaching Motor terminals, check motor integrity. Repair or replace As necessary
Excessive Vibration	Check for Material Build up on Fan	Inspect and Clean fan
	Missing Counter Balance	Inspect and replace fan
	Looseness in Drive Train	Inspect and tighten or replace taperlock, Keystock, motor mount
	Misaligned or Damaged Fan	Inspect, Adjust, or Replace as Necessary

Problem	Possible Cause	Probable Remedy
Change in Noise Or Sound Level	Bearing	Lubricate or Replace
	Scraping or Ticking	Rotating parts contacting Inspect and Correct
	Misaligned or Damaged Fan	Inspect, Adjust, or Replace as Necessary
High Motor Temperature	High Amp Draw	Check Amp Draw at Motor. Do not continue operation until cause is determined and Rectified
High Bearing Temperature	Improper Lubrication	Too much, too little, or unsuitable lubrication
Poor Performance	Blocked Intake	Clean Debris from Intake screen
	Dirty Fan	Clean and Inspect fan
	Incorrect fan rotation	Verify fan rotation
	Blocked Exit Nozzle	Clean Exit Nozzle