

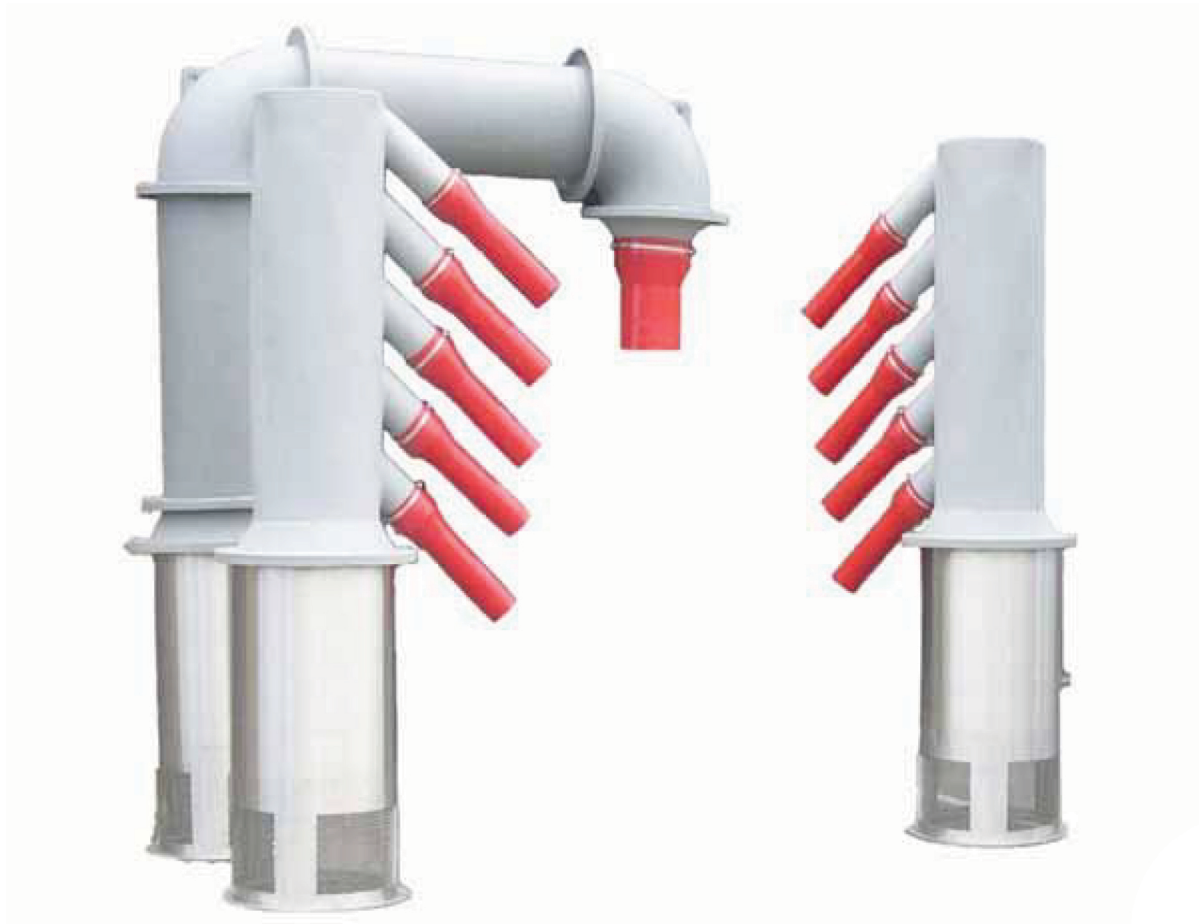
Simply smart drying systems

INTERNATIONAL DRYING
CORPORATION

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"YOUR CAR WASH DRYING EXPERTS"

Molded Resin System Installation Manual Single Motor



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INTRODUCTION

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

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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
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AIR VELOCITY			150MPH
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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

30hp 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

40 hp IDC SS DRYER
 (without dual motors)

Dimensions	Tunnel Length	120" (10FT)
	Tunnel Width	172" (14FT 4IN)
	Unit Height	128" (10FT 8IN)
	Vehicle Clearance	96" (8FT)

Electrical	40HP 208VAC	3 PHASE 150 AMPS
	40HP 230VAC	3 PHASE 125 AMPS
	40HP 460VAC	3 PHASE 80 AMPS
	60HP 208VAC	3 PHASE 200 AMPS
	60HP 230VAC	3 PHASE 200 AMPS
	60HP 460VAC	3 PHASE 100 AMPS

50 hp Spyder Dryer
(without dual motors)

Dimensions	Tunnel Length	168" (14FT)
	Tunnel Width	172" (14FT 4IN)
	Unit Height	128" (10FT 8IN)
	Vehicle Clearance	96" (8FT)

Electrical	50HP 208VAC	3 PHASE 180 AMPS
	50HP 230VAC	3 PHASE 150 AMPS
	50HP 460VAC	3 PHASE 100 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) (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).



2. Once the intake section is completely positioned properly, install foam tape on top ring of intake section



3. Install transition ring on top of intake using four (4) 1½” stainless steel bolts, eight (8) stainless steel fender washers and four (4) stainless steel nuts. Apply foam tape to the exposed side of poly transition ring.



4. Apply foam tape to the top of the vertical poly blank. Attach elbow assembly using four (4) 1½” stainless steel bolts, eight (8) stainless steel fender washers and four (4) stainless steel nuts. Lift the entire section and place it on top of the intake section. Secure using four (4) 1½” stainless steel bolts, eight (8) stainless steel fender washers and four (4) stainless steel nuts.



5. Apply foam tape to both ends of poly horizontal blank. Attach elbow to one end using four (4) 1&½” stainless steel bolts, eight (8) stainless steel fender washers and four (4) stainless steel nuts. Apply foam tape to the exposed side of elbow and attach poly hogger using four (4) 1&½” stainless steel bolts, eight (8) stainless steel fender washers and four (4) stainless steel nuts.



6. Raise and attach horizontal and elbow (with hogger) to the attached poly vertical blank using four (4) 1&½” stainless steel bolts, eight (8) stainless steel fender washers and four (4) stainless steel nuts.



7. Attach top foam nozzle with supplied clamp

8. 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 HP P/S Side Column Section

1. Place 48” motor intake section 60” from center line to inside of the column. Level & anchor unit with 6 anchor bolts (not supplied)



2. Once the intake section is completely positioned properly, 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 using four (4) 1&½” stainless steel bolts, eight (8) stainless steel fender washers and four (4) stainless steel nuts. Direct nozzles at 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 48” motor intake section 58-1/2” from center line to inside of the column. Level & anchor unit with 6 anchor bolts (not supplied)



2. Once the intake section is completely positioned properly, 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 using four (4) 1&½” stainless steel bolts, eight (8) stainless steel fender washers and four (4) stainless steel nuts. Direct nozzles at 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.

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.**

DRYER CONFIGURATIONS

Pictured Below

PARTS LIST

(PER HEAD)

<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
Motor10hp	10hp motor	1
Fanaxial10hp	Axial fan	1
B-loc 1&3/8	1&3/8" B-loc	1
Hdw-ssmr	Hardware kit	1
SNozzle	Side nozzle	4
Tnozzle	Top nozzle	1
Clamphosess	Stainless steel nozzle clamp (Top and side)	6
Foam_tape	Foam sealant tape (roll)	1

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, <u>Keystock, motor mount</u>
	Misaligned or Damaged Fan	Inspect, Adjust, or Replace as Necessary

Problem	Possible Cause	Probable Remedy
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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
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High Bearing Temperature	Improper Lubrication	Too much, too little, or unsuitable lubrication
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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