INSTALLER'S & OWNER'S MANUAL

INSTALLER: PLEASE LEAVE MANUAL FOR HOMEOWNER

SuperDry XS™

BASEMENT AIR SYSTEM



- Free-standing dehumidification for your home.
- Includes installation, operating and safety instructions, warranty information and all ancillary products.
- Read and save these instructions.

By CONTRACTOR NATION AIR GROUP

For product information go to: www.CNAirGroup.com

PN 06583A Rev 2023-3

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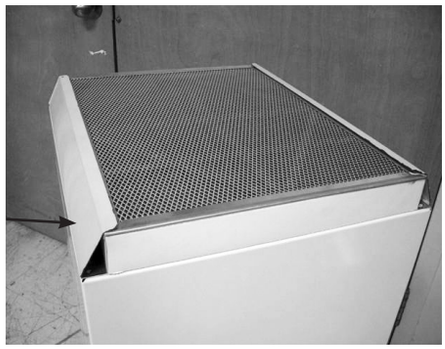
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Read the installation, operation and maintenance instructions carefully before installing and using this unit. Proper adherence to these instructions is essential to obtain maximum benefit from your SuperDry XS dehumidifier.

When unpacking, make sure to remove white protective film off of filter rails.



1. SPECIFICATIONS

Model:	SD109
Blower:	300 CFM @ 0.0" WG
Power:	742 watts @ 80°F and 60% RH
Supply Voltage:	115 volt – 1 phase - 60 Hz
Current Draw:	6.75 Amps
Fan Motor Power:	0.177HP (130W/735W=0.177HP)
BCSC:	15 Amps
Energy Factor:	2.88 L/kWh
Operating Temp.:	40°F Min., 95°F Max.
Sized for:	2500 Sq. Ft. - Typical

Minimum Performance at 80°F and 60% RH

Water Removal:	109 Pints/Day
Efficiency:	6.09 Pints/kWh

Air Filter:

Efficiency:	Standard 65% Efficient, ASHRAE Dust Spot Test
Size:	16" x 20" x 2"

Power Cord:	10', – 110-120 VAC, Ground
Drain Hose:	9/16" ID x 8' Direct Gravity Drain Hose

SuperDry XS Dimensions

	Unit	With Duct Kit	Shipping
Width:	19 ¾"	22 ¾"	20¼"
Height:	36 ½"	43"	43¼"
Depth:	17 ½"	17 ½"	22 5/8"
Weight:	106 lbs		122 lbs

⚠ CAUTION! — This symbol means important instructions. Failure to heed them can result in injury or material property damage.

2. INSTALLATION

2.1 Location

The SuperDry XS is designed to be installed indoors and is ideal for unfinished and finished basements.

⚠ CAUTION!

- **Installation outdoors, or near a pool or spa will void factory warranty.**
- **Do not use the dehumidifier as a bench or table.**

2.2 Electrical Requirements

The SuperDry XS plugs into a common grounded outlet on a 15 Amp circuit. It draws between 6 and 7 Amps under normal operating conditions.

3. Dehumidifier Operation

3.1 Humidity Control

The dehumidifier will run continuously until relative humidity (RH) is reduced to the desired humidity level using the electronic controller. Setting the electronic humidity controller to lower RH levels will **NOT** increase the unit's dehumidification rate. It is therefore pointless to set the electronic humidity controller to excessively low levels in cool rooms. Doing so will result in long periods of ineffective dehumidifier run time. An ideal setting is 55%, which prevents mold growth.

3.2 ON/OFF: Pressing the ON/OFF button once will power up the control system and illuminate the RED RUN LED. The unit will now operate in either AUTO DEHUMIDIFY or FAN MODE. Pressing the ON/OFF button again will return the unit to STANDBY MODE. The RED RUN LED will flash.

3.3 MODE: Use the MODE button to select AUTO DEHUMIDIFY or FAN mode of operation.

3.4 UP/DOWN ARROWS: Pressing the UP/DOWN arrow buttons will display and change the desired %RH. The selectable %RH range is 45 - 90%. These buttons will function while in either the AUTO DEHUMIDIFY or FAN MODE.

3.5 BUTTON PRESSING TONE: Pressing any function button will sound a tone.

4. LED DISPLAY

4.1 RUN LED: This RED indicator will flash when in STANDBY MODE. It will remain illuminated while in either AUTO DEHUMIDFY or FAN MODE.

4.2 DEFROST LED: This RED indicator will be illuminated while in the DEFROST MODE, otherwise it will be extinguished. (Reference 8.3 defrost cycle)

4.3 AUTO DEHUMIDIFY LED: This GREEN indicator will be illuminated while in the AUTO DEHUMIDIFY MODE, otherwise it will be extinguished.

4.4 FAN LED: This GREEN indicator will be illuminated while in the FAN MODE, otherwise it will be extinguished.

5. DIGITAL DISPLAY

5.1 DIGITAL DISPLAY RELATIVE HUMIDITY %: The digital display will show the current %RH. in the room that the dehumidifier is located while in stand by mode or while running in AUTO DEHUMIDFY or FAN MODES.

5.2 DIGITAL DISPLAY RELATIVE HUMIDITY % SET POINT: The digital display will show the % RH set point when a new setting is selected using the UP/DOWN arrow buttons.

5.3 DISPLAY CODES: E1 indicates that the coil temperature sensor is not functioning properly.
E2 indicates that the humidity sensor is not functioning properly.

6. MEMORY/POWER FAILURE

If a power failure occurs, the unit will store the last selected mode of operation and %RH settings for up to one year. When power returns, the SuperDry XS will resume operation in the mode previously selected.

7. OPERATING MODES:

7.1 POWER UP: When the unit is powered up, it will be in STANDBY MODE indicated by the flashing RED RUN LED. All other LEDs are extinguished. None of the buttons are functional except ON/OFF. The compressor and fan will not run.

7.2 DEFAULT SETTINGS AFTER POWER UP: The control unit displays the current %RH humidity condition of the room and sets the %RH goal to 55%.

7.3 AUTO DEHUMIDIFY MODE: When AUTO DEHUMIDIFY MODE is selected, the GREEN DEHUMIDIFY and RUN RED LED will be lit and the digital display will show the current %RH of the room. The %RH set range is 45 - 90%. When the set point is lower than the current %RH of the room, the compressor and fan will run. When the current %RH of the room is equal to or less than the set point, the compressor will stop. The fan will continue to run for an additional 30 seconds.

7.4 CHANGING MODES: Press the MODE button to change the operating mode from AUTO DEHUMIDIFY to FAN or back to AUTO DEHUMIDIFY. The corresponding LED will be lit to indicate the current operating mode.

7.5 FAN MODE: When the FAN MODE is selected, the fan will run continuously, the GREEN FAN and RED RUN LED'S will be lit, the digital display will show the current %RH of the room. The %RH set range is 45 - 90%. When the set point is lower than the current %RH of the room, the

compressor will run. When the current %RH of the room is equal to or less than the set point, the compressor will stop but the fan will continue to run.

7.6 STANDBY MODE: The unit will return to STANDBY MODE each time the ON/OFF button is pressed to leave the FAN or AUTO DEHUMIDIFY MODES indicated by the flashing RUN RED LED.

⚠ CAUTION!

When the compressor stops running for any reason it will not restart for 3 minutes. When it starts, it will run for a minimum of 5 minutes regardless of the % RH setting.

8. DEFROST CYCLE

⚠ CAUTION!

ELECTRIC SHOCK HAZARD: Maintenance and repairs should be performed by a qualified service person.

An automatic defrost temperature sensor is attached to the refrigerant tubes inside the unit. It will automatically shut the compressor off if excessive frost forms on the evaporator coil. The blower will continue to run, causing air to flow through and defrost the evaporator coil. When the evaporator temperature rises the compressor will automatically restart. During the defrost cycle process, the compressor will not be running and cool air may be coming out of the unit.

9. OTHER FUNCTIONS

9.1 LOCK: In the RUN mode, pressing the UP/DOWN buttons together for 2 seconds will lock the control. None of the buttons will function except ON/OFF. A decimal point will appear indicating this condition. Pressing the UP/DOWN arrow buttons together for 2 seconds again will unlock the control and restore the all button functions.

9.2 DISPLAY COIL TEMPERATURE:
In the RUN mode, pressing the UP arrow button and the MODE button together for 2 seconds will display the coil temperature. Pressing the UP arrow button and the MODE button together for 2 seconds again will return the display to the current %RH of the room.

10. ELECTROMAGNETIC COMPATIBLE STANDARD

10.1 Meets EN61000-3 electromagnetic compatible EMS criteria

10.2 Meets IEC6100C-4 electromagnetic compatible EMC criteria

10.3 Meets CISPR14 electromagnetic compatible EMI criteria

11. Maintenance

11.1 Air Filter

The SuperDry XS is equipped with two (2) air filters. An aluminum/ foam pre-filter followed by a standard 65% efficient pleated fabric filter. These should be checked every six months. Operating the unit with dirty filters will reduce dehumidifier capacity and efficiency and may cause the compressor to cycle off and on unnecessarily.

If dirty, the aluminum/foam prefilter can be vacuumed or carefully hand washed with warm water and mild detergent then rinsed. The pleated fabric filter can generally be vacuumed clean several times before needing replacement. Replacement filters can be ordered from Contractor Nation Air Group. **DO NOT** operate the unit without the filters or with a less effective filter. The heat exchange coils inside the unit could become clogged and require disassembly to clean.

12. SERVICE

⚠ CAUTION!

Servicing the SuperDry XS with its high-pressure refrigerant system and high-voltage circuitry presents a health hazard which could result in death, serious bodily injury, and/ or property damage. Only qualified service people should service this unit.

12.1 Warranty

A warranty certificate has been enclosed with this unit. Read it before any repair is initiated. If a warranty repair is required, call the factory first at 1-888-822-1115 for warranty claim authorization and technical assistance.

12.2 Technical Description

The SuperDry XS uses a refrigeration system similar to an air conditioner's to remove heat and moisture from incoming air and add heat to the air that is discharged (see Figure 1).

Hot, high-pressure refrigerant gas is routed from the compressor to the condenser coil (see Figure 1). The refrigerant is cooled and condensed by giving up its heat to the air that is about to be discharged from the unit. The refrigerant liquid then passes through a filter/drier and capillary tubing, which cause the refrigerant pressure and temperature to drop. It next enters the evaporator coil where it absorbs heat from the incoming air and evaporates.

The evaporator operates in a flooded condition, which means that all the evaporator tubes contain liquid refrigerant during normal operation. A flooded evaporator should maintain constant pressure and temperature across the entire coil, from inlet to outlet.

The mixture of gas and liquid refrigerant enter the accumulator after leaving the evaporator coil. The accumulator prevents any liquid refrigerant from reaching the compressor. The compressor evacuates the cool refrigerant gas from the accumulator and compresses it to a high pressure and temperature gas to repeat the process.

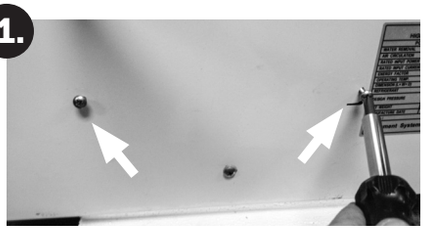
13. CONDENSATE PUMP

In the event that a gravity drain directly from the unit is not available, a separate condensate pump is needed.

The condensate water is automatically pumped to a remote location when the water level in the pump's reservoir rises to close the float switch.

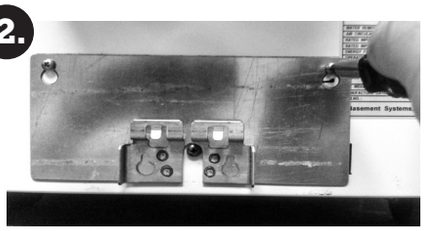
14. CONDENSATE PUMP INSTALLATION INSTRUCTIONS

1.



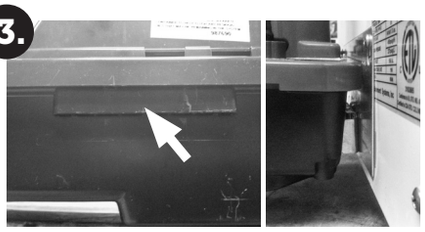
Start by installing 2 stainless steel sheet metal screws (provided in kit) into the predrilled mounting holes of the SuperDry XS. Do not tighten all the way.

2.



Slide condensate pump mounting bracket onto screws and tighten screws firmly.

3.



Using the molded slot on the back side of the condensate pump housing, slide the pump down onto the bracket mounted onto the SuperDry XS.

4.

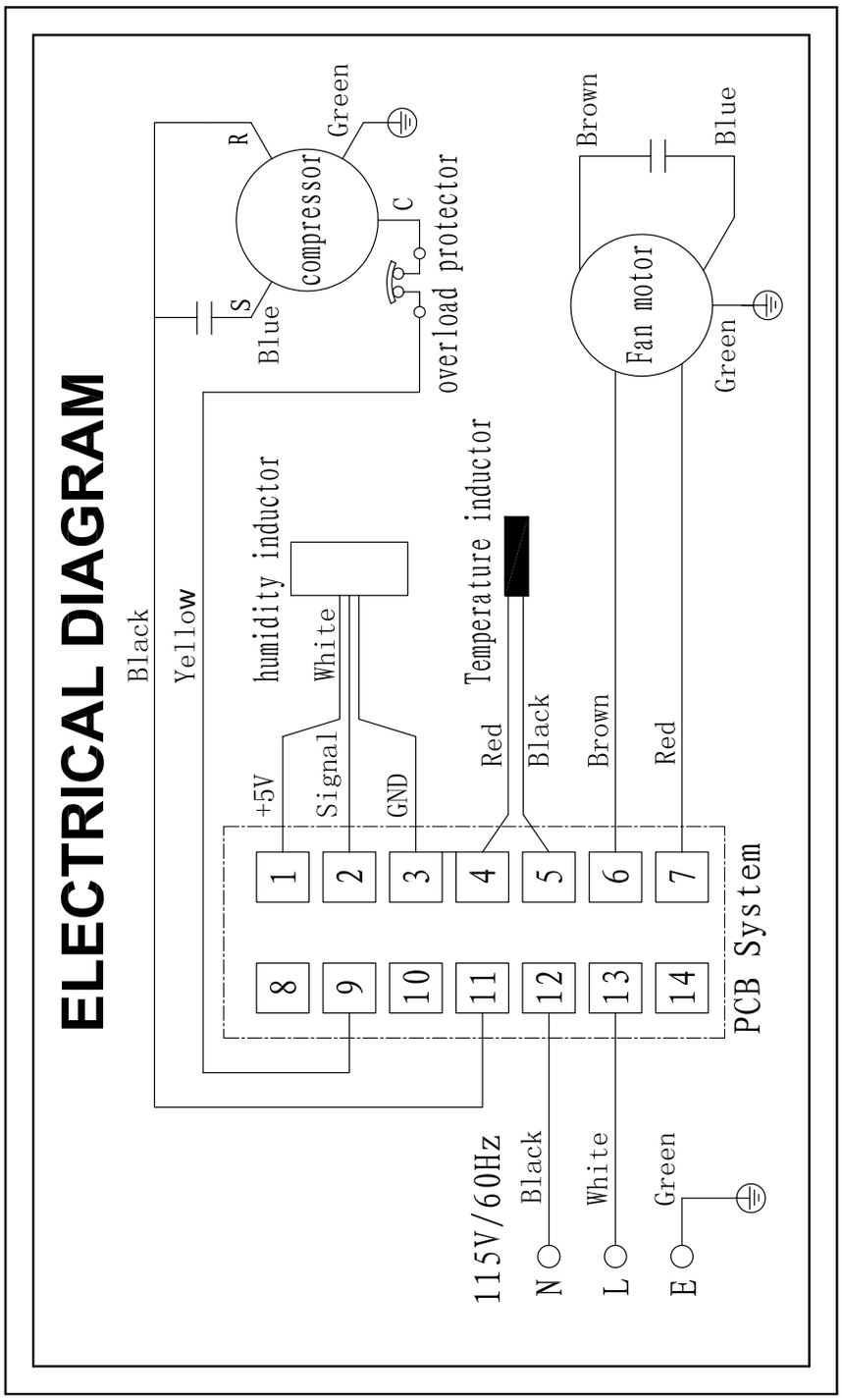


Cut discharge line at an angle and insert into the large hole on the top of the condensate pump, taking care not to kink the discharge line. Seal all unused discharge holes on top of the pump with the black knockout seals provided.

5.



Install discharge hose and clamp on the output fitting of condensate pump.

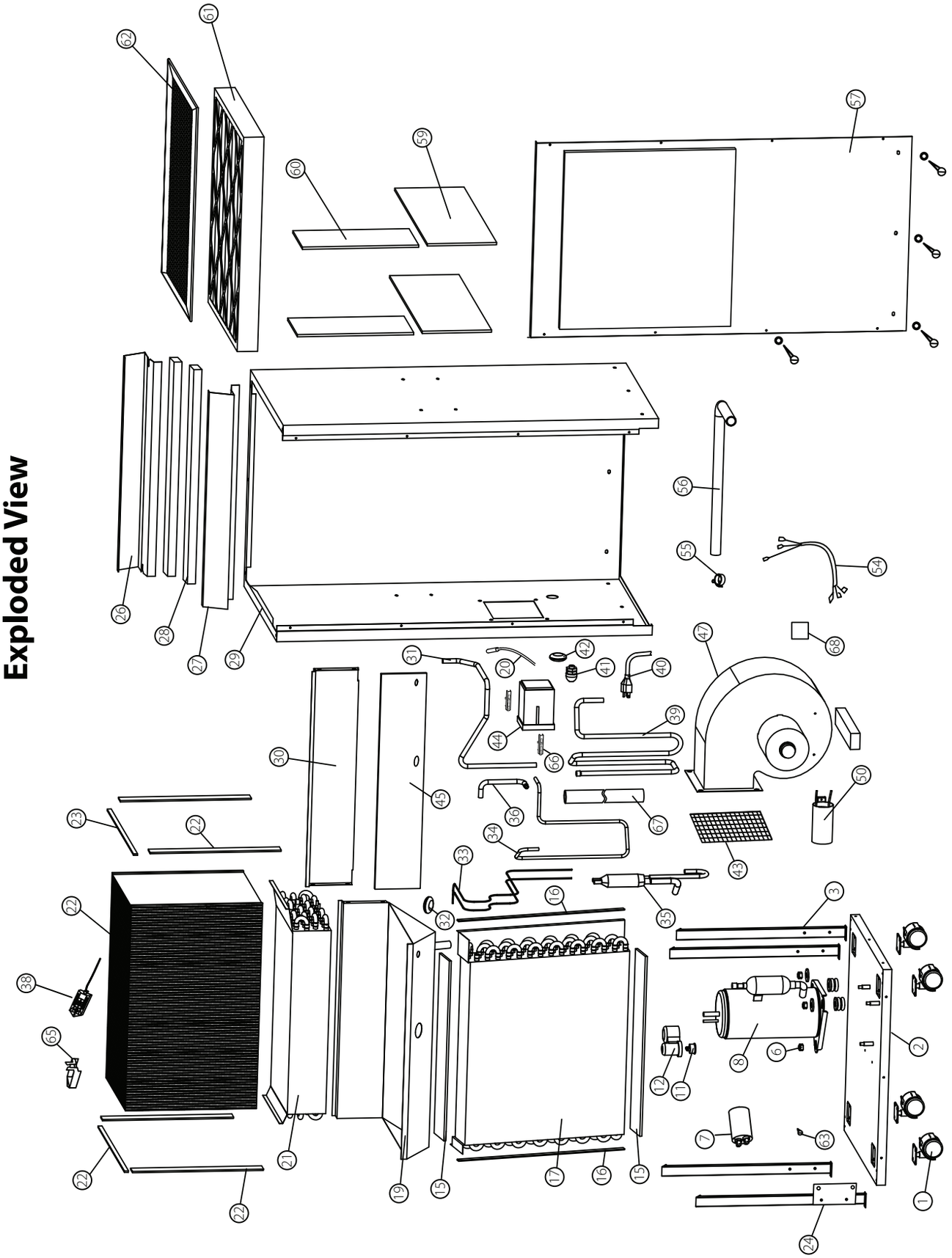


Electrical Schematic of the SuperDry XS Dehumidifier

SuperDry XS SERVICE PARTS LIST • To order, call Customer Service 1-800-640-1500

EXPLODED VIEW LOCATION	PART NUMBER	DESCRIPTION	QUANTITY (needed per unit)
1	06910	Wheels	4
2	06800	Plate, Bottom	1
3	06801	Bracket	3
6	06804	Mounting nut, compressor	3
7	06820B	Start capacitor, aluminum can	1
8	06907	Complete Compressor Assembly (4,5,6,8,9,10,11,12,13,14)	1
11	06809	Overload protector	1
12	06810	Cover, terminal	1
15	06813	Seal, upper or lower - condenser coil	2
16	06814	Seal, right and left - condenser	2
17	06906	Condenser coil	1
19	06816	Trough, collection - water drain pan	1
20	6901B	Probe, temperature sensor kit	1
21	06920	Evaporator Coil	1
22	06817	Seal, heat exchanger (same for left or right)	4
24	06792	Bracket w/ start capacitor mount	1
25	06821	Heat exchanger	1
26	06844	Guide, filter (rear)	1
27	06822	Guide, filter (front)	1
28	06823	Seal, filter guide (left and right same)	2
29	06824	Cabinet	1
30	06825	Bracket, evaporator	1
31	06826	Tubing, evaporator copper	1
32	06827	Grommet drain pan	1
33	06921	Capillary tubing copper (set of 2 tubes)	2
34	06829	Tubing, compressor discharge copper	1
35	06830	Filter, process tubing & condenser tubing	1
36	06831	Tubing	1
38	06900	Humidity sensor	1
39	06834	Tubing, suction copper	1
40	06835	Line cord 120V (comes with cord grip)	1
41	06837	Cord grip	1
42	06837	Grommet, cabinet condensate drain hose	1
43	06841	Screen, fan	1
44	06902B	Control unit & sidebar clamps	1
45	06839	Insulation, trough - water collectin drain pan	1
50	06856	Fan Capcitor only	1
43,47,50,51	07002	Fan Assembly	1
54	06848	Compressor wire harness	1
55	06848	Clamp stop, Condensate discharge tube	1
56	07014	Tubing, discharge drain 9/16" I.D. x 8'	1
57	06850	Cabinet service door & insulation	1
59	06852	Insulation, cabinet - lower	2
60	06853	Insulation, cabinet - upper	2
61	07120	Filter, main	1
62	07081	Filter, pre-filter	1
63	06892	Bracket holder - hold screw w/2 4mm x .7 x 11mm mounting screw for retro fit	2
65	07136	Humidity sensor clip	1
66	06955	Slide bar clamp	2
67	06955	White foam insulation	2
68	06904	Butyl Tape, 4" x 4"	1

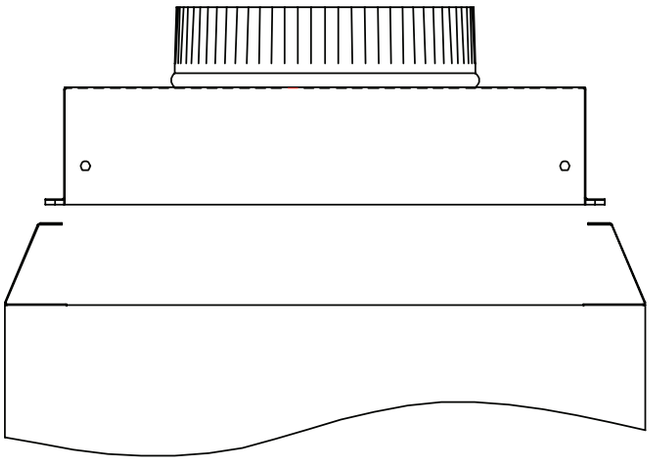
Exploded View



SuperDry XS DUCTABLE INLET MOUNTING

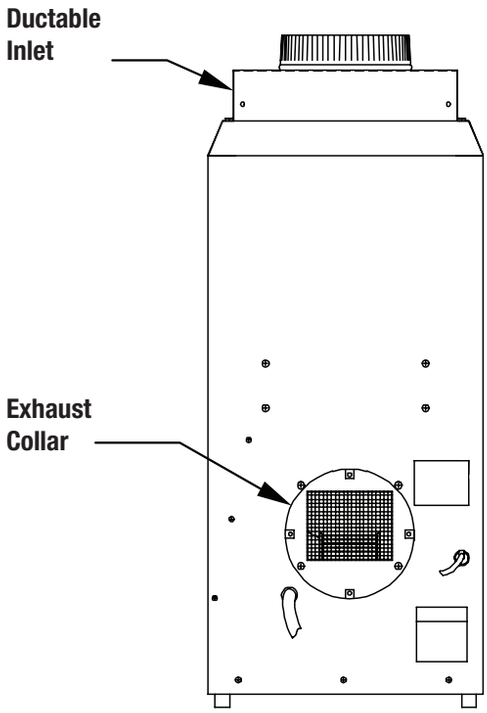
Ductable Inlet Instructions

1. Remove the Filters from the unit.
2. Remove the ductable inlet from the box and remove the release paper from the tape on the inlet flanges.
3. Center the inlet above the filter guides and attach the inlet to the guides.
4. Replace the filters in the unit.



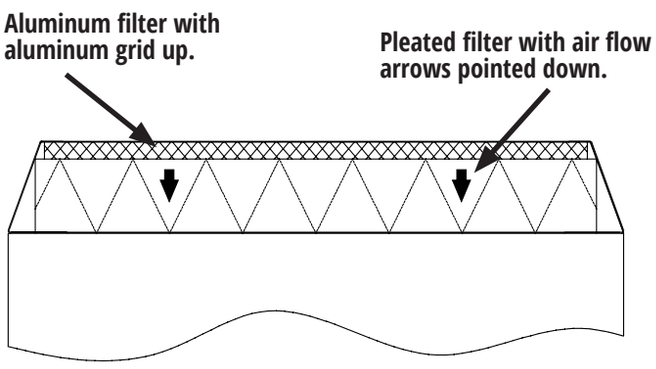
Exhaust Collar Mounting Instructions

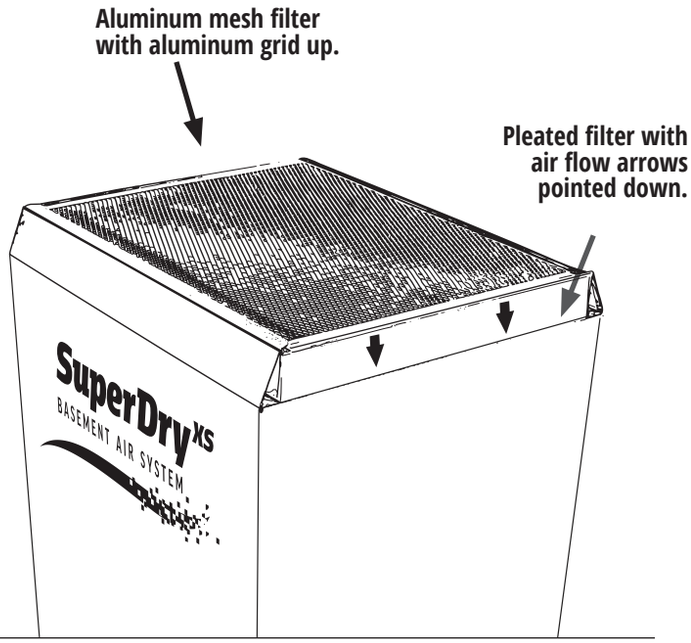
5. Remove the exhaust collar from the box and bend the tabs in.
6. Place the collar over the blower outlet and line up the tabs with the holes in the cabinet.
7. Using (4) screws from the kit, attach the collar to the unit. collar.



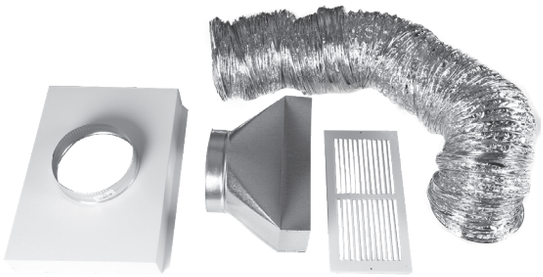
SuperDry XS FILTER INSTALLATION INSTRUCTIONS

Instructions: To prevent damaging the aluminum filter, place it "mesh-side up" on top of the pleated filter and slide them both into the filter slot.





SuperDry XS OPTIONAL EQUIPMENT



SuperDry XS Upper Duct Kit
P/N 07042K



Condensate Pump Kit
P/N 07058K



SuperDry XS Lower Duct Kit
P/N 07043K



Ductable Inlet Hood
P/N 07026K



Duct Splitter
P/N 07029K



Duet Two-Stage Air Filter
P/N 07120K

SuperDry XS Limited Warranty

Limited Warranty. Contractor Nation Air Group (CNAG) warrants as follows: the SuperDry XS dehumidifier ("Product") will be free of material defects in workmanship or materials for a period of 30 months.

If the Customer registers the Product at www.CNAirGroup.com within thirty (30) calendar days from the date of installation, the 30-month warranty period commences at date of installation. Otherwise, the 30-month warranty period commences at the date of manufacture, determined solely by the date of manufacture on the Product cabinet label.

Warranty Limitations. A "defect" under the terms of the limited warranty shall not include: (1) problems resulting from improper installation or use, (2) improper design of any system in which the Product is included, (3) misuse or abuse, (4) lack of normal care, or failure to follow instructions in the Product Owner's Manual, (5) tampering, (6) improper repair, (7) cosmetic defects in the finish on the outer shell or cabinet, (8) freezing, corrosion, acts of nature, or (9) any other causes not arising out of defects in manufacture, workmanship or material. If a Product or Product Component is replaced while under warranty, the applicable limited warranty period shall not be extended beyond the original warranty time period. The limited warranty does not cover any costs related to changes to a Product or Product Component that may be required by any codes, laws, or regulations that may become effective after the date of the Customer's initial purchase of the Product.

Limitation of Remedies. Customer's sole and exclusive remedy under the above limited warranty and CNAG entire liability thereunder shall be, at CNAG's sole option, repair or replacement of such product or its components ("Components").

Repair may be accomplished in one of two ways: (1) Customer may deliver the unit, at Customer's expense, to the CNAG Service Center located at 60 Silvermine Rd., Seymour, Connecticut, 06483, and CNAG will repair the unit at no cost to the Customer including parts or labor; or (2) Customer may have the unit repaired on their own, and CNAG will provide the parts at no cost to the Customer or the CNAG dealer doing the repair, but the cost of labor will be the exclusive responsibility of the Customer. CNAG may, at its sole discretion, choose to replace the Product with a new or refurbished Product.

Customer shall be responsible for properly packaging the Product when transported, and for all risk of loss associated with shipment. CNAG will pay for return transportation back to an authorized SuperDry dealer or homeowner anywhere in the continental U.S. or Canada. This disclaimer and exclusion shall apply even if the express warranty and limited remedy set forth herein fails of its essential purpose. Customer acknowledges that no person, entity or representative of CNAG or of their affiliates or resellers is authorized to make any representation or warranty on behalf of CNAG or any of their affiliates or resellers that is not contained in this Limited Warranty.

Customer Responsibilities. As a condition to obtaining warranty coverage, the Customer must send a valid warranty claim to CNAG and CNAG must receive that claim prior to the end of the applicable warranty period. CNAG shall have no obligation hereunder with respect to any claim received after the expiration of the applicable warranty period. In order to obtain warranty service, the Customer should first call their local CNAG dealer, or CNAG at 1-800-640-1500 and ask for the CNAG Products Service Department, which will arrange for applicable warranty service.

Disclaimer of Warranties. EXCEPT FOR THE ABOVE LIMITED WARRANTY, WHICH IS THE SOLE AND EXCLUSIVE WARRANTY PROVIDED WITH RESPECT TO THE PRODUCT AND ITS COMPONENTS, CNAG HEREBY DISCLAIMS, TO THE GREATEST EXTENT ALLOWED UNDER APPLICABLE LAW, ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Limitation of Liability. IN NO EVENT SHALL CNAG, IN CONNECTION WITH THE DESIGN, SALE, INSTALLATION, USE, REPAIR, REPLACEMENT OR PERFORMANCE OF ANY PRODUCT, COMPONENT, PART THEREOF OR WRITTEN MATERIAL PROVIDED THEREWITH, BE LIABLE, TO THE EXTENT ALLOWED UNDER APPLICABLE LAW, UNDER ANY LEGAL THEORY FOR ANY SPECIAL, DIRECT, INDIRECT, COLLATERAL OR CONSEQUENTIAL DAMAGES OF ANY KIND. NOTWITHSTANDING THE ABOVE LIMITATIONS AND WARRANTIES, THE SOLE AND EXCLUSIVE LIABILITY OF CN AIR GROUP, REGARDLESS OF THE NATURE OR THEORY OF THE CLAIM, SHALL UNDER NO CIRCUMSTANCES EXCEED THE PURCHASE PRICE OF THE PRODUCT, COMPONENT OR PART UPON WHICH THE CLAIM IS PREMISED.

Applicable Law, Jurisdiction and Venue. ANY ARBITRATION, ENFORCEMENT OF AN ARBITRATION OR LITIGATION RELATED TO THE PRODUCT WILL BE BROUGHT EXCLUSIVELY IN NEW HAVEN COUNTY, CONNECTICUT,

AND CUSTOMER CONSENTS TO THE EXCLUSIVE PERSONAL JURISDICTION OF THE FEDERAL AND STATE COURTS LOCATED THEREIN, AND WAIVES THE RIGHT TO SEEK TO CHANGE VENUE.

Miscellaneous. If any term or condition of this Limited Warranty is found by a court of competent jurisdiction to be invalid, illegal or otherwise unenforceable, the same shall not affect the other terms or conditions hereof or thereof or the whole of this Limited Warranty. Any delay or failure by CNAG to exercise or assert any right or remedy will not constitute a waiver to thereafter exercise or assert such rights.

By CONTRACTOR NATION AIR GROUP

Contractor Nation Air Group, Inc., 60 Silvermine Rd., Seymour, Connecticut, 06483
Web: www.CNAirGroup.com
For product information call 1-800-640-1500

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SuperDry XS™

BASEMENT AIR SYSTEM

www.CNAirGroup.com