

DRA

“ELECTRIC DRAGON”

Portable Industrial Electric Blower Heater

- **7.5 TO 30 kW**
- **208, 240, 480,
600 Volts**
**240 Volt rated for
240 or 208 Volts**
- **Single or 3-Phase
Field Convertible
Through 20 kW**
- **25,590 to 102,360
BTU Hour**
- **UL Listed and CSA
Certified**
- **Shipped fully
assembled.**



Chromalox[®]
PRECISION HEAT AND CONTROL

PH: 412-967-3800 • FX: 412-967-5148

PDS DRA



Description

The Chromalox DRA is a rugged industrial grade, self contained, highly mobile, electric blower heater. The DRA can be left unattended without the threat of poisoning from combustion by-products associated with fuel fired heaters. The built in safety features include an adjustable thermostat to control the outlet air temperature, auto-reset cutouts for the fan motor and heating elements. The thermostat provides settings for full off, fan only and temperature control in the heating setting. Dragon heaters feature a large, easily accessible control and wiring compartment containing a magnetic contactor; additional safety is provided by a 120 volt control voltage transformer and motor starter on 480 and 600 volt units. The bright red polyester powder coated heating cylinder is highly visible and can be rotated to direct heat or fan driven air movement where it is needed. For assured safety, all standard units meet the requirements of UL (File No. E207486) and CSA (File No. LR40859).

Construction

Leg Assembly

Each side consists of a one piece, 12 gauge, formed steel member, which accepts a steel tubular handle, held in place with a 1 1/2" long x 1/4" bolt on each side. The handle can be raised from the shipping position if desired. The rubber, pneumatic wheels are 10" diameter and 3 1/2" wide to provide ease of transporting the heater on irregular and gravel surfaces. The large wheels make it easy to roll up stairways without damage to decorative step surfaces.

Heating Cylinder

A structural frame consisting of 2 spun steel rings and 2 formed steel channels support a 20 gauge steel cylinder phosphate coated for corrosion resistance, and finished in red polyester powder coat paint. The heating cylinder pivots vertically to direct air flow.

Safety Guards

Front and rear grills are 10 gauge finished in black polyester powder coat and are designed to meet OSHA safety requirements.

Heating Assembly

The patented metal sheath Fintube[®] heating elements consist of steel fins furnace brazed on industrial grade .475 diameter steel sheath tubular heaters for maximum heat transfer. The elements are held in place with steel bulkhead fittings for durability. The elements feature a high temperature finish for corrosive protection.

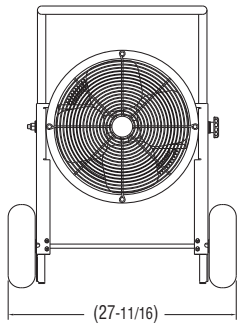
Fan Assembly

The self-centering fan assembly consists of a totally enclosed, permanently lubricated motor and a dynamically balanced aluminum fan blade for smooth, quiet operation.

Controls

A thermostat, with a temperature range of 40 °F to 100 °F is included, with a full off position, a fan only position and an adjustable range of temperature settings in the heating mode position. Each unit includes a 3 pole magnetic contactor and auto-reset thermal cutout. 480 volt and 600 volt units also include a motor relay and 120 volt control voltage transformer for personnel safety.

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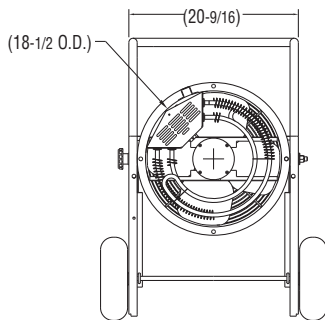
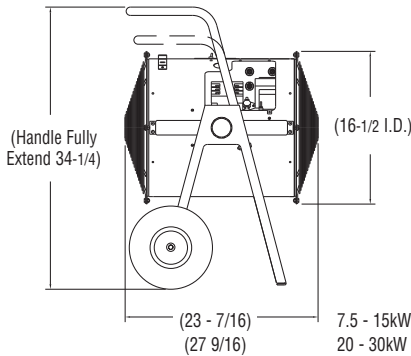


Applications

- Any Commercial or Industrial Application Needing Instant Fan Forced Heat
- Building Construction
- Curing Plaster and Concrete
- Warming Workers
- Thawing Frozen Pipes
- Thawing Railroad Cars
- Heating Large Tents
- Non-Hazardous Areas
- For best results, use in an enclosed area with ceiling heights below 15 feet.

Advantages

- No Fumes or Annoying Smell
- Safer, No Open Flame
- Safe to Operate in Unattended Areas
- No moisture added to the air - oil and gas fuels add moisture to the air
- Minimum Maintenance
- No fuel to store
- Long horizontal Air Throw
- Quiet Operation
- Easy Installation
- Field Convertible Sizes for 1 or 3 Operation
- 240v Units Can Be Used on 208v Power Sources
- Fan Only For Summer Cooling
- Single Knob Adjustment of Fan Direction
- No Assembly Required
- Long Life Industrial Finned Tubular Heating Elements and High Limit Thermal Cut-out Switch



Specifications And Ordering Information

To order please specify kW, volts, phase, catalog number, PCN and quantity. See back page for control, thermostat and fan options.

kW	Electrical Data (60 Hz)				Fan Motor			Model	Stock	PCN	Wt. (Lbs.)
	Volts	Phase	Amps*	BTU/H	HP	CFM	Temp Rise (°F) ⁺				
7.5	208	1 and 3	36.3/21.0	25,590	0.06	1070	23	DRA-07-83	NS	295523	65
7.5/5.6	240/208	1 and 3	31.5/18.3**	25,590	0.06	1070	23	DRA-07-23	ST	295531	65
9.75	208	1 and 3	47.1/27.3	33,267	0.06	1070	31	DRA-10-83	ST	295540	65
9.7/7.3	240/208	1 and 3	40.8/23.7**	33,267	0.06	1070	31	DRA-10-23	ST	295558	65
15	208	3	41.8	51,180	0.06	1070	46	DRA-15-83	NS	295566	65
15/11.2	240/208	3	36.3**	51,180	0.06	1070	46	DRA-15-23	ST	295574	65
15	480	1 and 3	31.4/18.2	51,180	0.06	1070	46	DRA-15-43	ST	295582	65
15	600	1 and 3	25.2/14.6	51,180	0.06	1070	46	DRA-15-93	NS	295596	65
19.5/15	240/208	3	47.1**	66,534	0.06	1070	61	DRA-20-23	ST	295603	75
20	480	1 and 3	42.0/24.4	68,240	0.06	1070	62	DRA-20-43	ST	295611	75
20	600	1 and 3	33.5/19.4	68,240	0.06	1070	62	DRA-20-93	NS	295620	75
30	480	3	36.3	102,360	0.06	1070	92	DRA-30-43	ST	295638	75
30	600	3	29.1	102,360	0.06	1070	92	DRA-30-93	NS	295646	75

+ = Temperature rise at 240V operation

* = Includes motor amps

** = 208V amperage is 86% of 240V value

All units are factory wired for 3 phase operation. Models designated 1 and 3 phase can be field wired for single phase operation.

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Cord & Plug Selection Guide

Cat. No.	kW	Volts	Phase	Amps	Wire Size	25' Cord Set Chromalox Catalog No.	Optional Plugs	
							Locking Type	Non Lock Type
DRA-07-83	7.5	208	1	36.3	8/3	PLC-2508-3	PGL-3763C	PGN-6-50
DRA-07-83	7.5	208	3	21.0	10/4	PLC-2510-4	PGL-15-30	PGN-15-50
DRA-07-23	5.6	208	1	27.1	10/3	PLC-2510-3	PGL-15-30	PGN-6-50
DRA-07-23	5.6	208	3	15.7	12/4	PLC-2512-4	PGL-15-20	PGN-15-20
DRA-07-23	7.5	240	1	31.5	8/3	PLC-2508-3	PGL-3763C	PGN-6-50
DRA-07-23	7.5	240	3	18.2	12/4	PLC-2512-4	PGL-15-20	PGN-15-20
DRA-10-83	9.75	208	1	47.1	6/3	PLC-2506-3	PGL-3763C	PGN-6-50
DRA-10-83	9.75	208	3	27.2	8/4	PLC-2508-4	PGL-15-30	PGN-15-50
DRA-10-23	7.3	208	1	35.4	8/3	PLC-2508-3	PGL-3763C	PGN-6-50
DRA-10-23	7.3	208	3	20.4	10/4	PLC-2510-4	PGL-15-30	PGN-15-50
DRA-10-23	9.75	240	1	40.8	6/3	PLC-2506-3	PGL-3763C	PGN-6-50
DRA-10-23	9.75	240	3	23.6	10/4	PLC-2510-4		PGN-15-50
DRA-15-83	15	208	3	41.8	6/4	PLC-2506-4		PGN-15-50
DRA-15-23	11.2	208	1	54.3	6/3	PLC-2506-3		
DRA-15-23	11.2	208	3	31.4	8/4	PLC-2508-4		PGN-15-50
DRA-15-23	15	240	3	36.3	6/4	PLC-2506-4		PGN-15-50
DRA-15-43	15	480	1	31.5	8/3	PLC-2508-3	PGL-3763C	
DRA-15-43	15	480	3	18.2	12/4	PLC-2512-4	PGL-16-30	
DRA-15-93	15	600	1	25.2	10/3	PLC-2510-3	PGL-3763C	
DRA-15-93	15	600	3	14.6	14/4	PLC-2514-4	PGL-17-30	
DRA-20-23	15	208	3	41.8	6/4	PLC-2506-4		PGN-15-50
DRA-20-23	20	240	3	48.3	4/4	PLC-2504-4		PGN-15-50
DRA-20-43	20	480	1	41.9	6/3	PLC-2506-3	PGL-3763C	
DRA-20-43	20	480	3	24.4	10/4	PLC-2510-4	PGL-17-30	
DRA-20-93	20	600	1	33.5	8/3	PLC-2508-3	PGL-3763C	
DRA-20-93	20	600	3	19.4	12/4	PLC-2512-4	PGL-17-30	
DRA-30-43	30	480	3	36.3	6/4	PLC-2506-4	PGL-3764C	
DRA-30-93	30	600	3	29.1	8/4	PLC-2508-4	PGL-17-30	

Power Cord based on 600V Hard Service Cord Rated 90°C

Cable Kits for Chromalox DRA Series Portable Blower Heaters

Cable packages include 25 feet Type SO cable, with either 3-conductors or 4-conductors, depending on the heater requirements. Each cable assembly includes the proper cord (connector). Plugs are not included. All models are factory wired for 3-phase, but can be field wired for single phase, select plug and cord accordingly.

Catalog No.	Used on Heater	Cable Specifications			Cord Connector		Stock	PCN	Wt. (Lbs.)
		Size/Type	Max. Amp	Temperature Ratings	NPT				
PLC-2514-4	15kW 600V 3PH	14/4 SO	15	90 Deg. C	3/4"	ST	295427	7	
PLC-2512-4	7.5kW 240V 3PH	12/4 SO	20	90 Deg. C	1"	ST	295435	9	
	15kW 480V 3PH 20kW 600V 3PH								
PLC-2510-3	15kW 600V 1PH	10/3 SO	30	90 Deg. C	1"	ST	295443	9	
PLC-2510-4	7.5kW 208V 3PH	10/4 SO	25	90 Deg. C	1"	ST	295451	11	
	9.75kW 240V 3PH 20kW 480V 3PH								
PLC-2508-3	7.5kW 208V 1PH	8/3 SO	40	90 Deg. C	1"	ST	295460	12	
	7.5kW 240V 1PH 15kW 480V 1PH 20kW 600V 1PH								
PLC-2508-4	9.75kW 208V 3PH 30kW 600V 3PH	8/4 SO	35	90 Deg. C	1"	ST	295478	15	
PLC-2506-3	9.75kW 208V 1PH	6/3 SO	55	90 Deg. C	1"	ST	295486	16	
	9.75kW 240V 1PH 20kW 480V 1PH								
PLC-2506-4	15kW 240V 3PH 30kW 480V 3PH	6/4 SO	45	90 Deg. C	1"	ST	295494	17	
PLC-2504-4	19.5kW 240V 3PH	4/4 SO	60	90 Deg. C	1 1/4"	ST	295515	25	

SO = Hard Service Cord, 600V.
Length = 25 Feet

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Plug Kits

Plug Type	Catalog Number	Description	Volts	Amps	Configuration	NEMA#	ANSI#	Fits Cable Dia.	Stock	PCN	Wt. (Lbs.)
LOCKING	PGL-15-20	3 Pole, 4 Wire	250	20		L15-20	C73.85	.385"-.780	ST	338845	0.5
LOCKING	PGL-15-30	3 Pole, 4 Wire	250	30		L15-30	C73.86	.385"-.780	ST	338853	0.5
LOCKING	PGL-16-30	3 Pole, 4 Wire	480	30		L16-30	C73.88	.595"-1.150	ST	338861	0.5
LOCKING	PGL-17-30	3 Pole, 4 Wire	600	30		L17-30	C73.89	.595"-1.150	ST	338870	0.5
LOCKING	PGL-3763C	2 Pole, 3 Wire	600	50		-	-	.750"-1.125"	ST	338917	0.5
LOCKING	PGL-3765C	3 Pole, 4 Wire	600	50		-	-	.750"-1.125"	ST	338925	0.5
NON LOCKING	PGN-6-50	2 Pole, 3 Wire	250	50		6-50	C73.53	.625"-1.187"	ST	338888	0.5
NON LOCKING	PGN-15-20	3 Pole, 4 Wire	250	20		15-20	C73.59	.390"-.775"	ST	338896	0.5
NON LOCKING	PGN-15-50	3 Pole, 4 Wire	250	50		15-50	C73.61	.750"-1.250"	ST	338909	0.5

The above plugs are designed to be used with specific ranges of cable diameters. If not used with Chromalox Cable Kits, check cable manufacturers cable diameter to be sure plug fits selected cable.

Cubic Feet Heated In 2 Hours With One Heater

Temperature Rise °F	Heater Output kW				
	7.5	9.75	15	20	30
10	35,000	45,500	70,000	93,330	140,000
20	17,500	22,750	35,000	46,650	69,980
30	11,667	15,170	23,340	31,110	46,670
40	8,750	11,375	17,500	23,330	35,000
50	7,000	9,100	14,000	18,670	28,000
60	5,830	7,580	11,660	15,550	23,300
70	5,000	6,500	10,000	13,335	20,000
80	4,375	5,690	8,755	11,675	17,500
90	3,890	5,060	7,785	10,380	15,600

Area heated assumes 15' maximum ceiling height and with little or no outside exposure. No roof or floor with outside exposure; only one wall exposed with not over 15% door and window area.

PF311-2
PDS DRA
JANUARY 2002