



Radiant Gas Tube Heaters

PCA/PCS Push Through Series



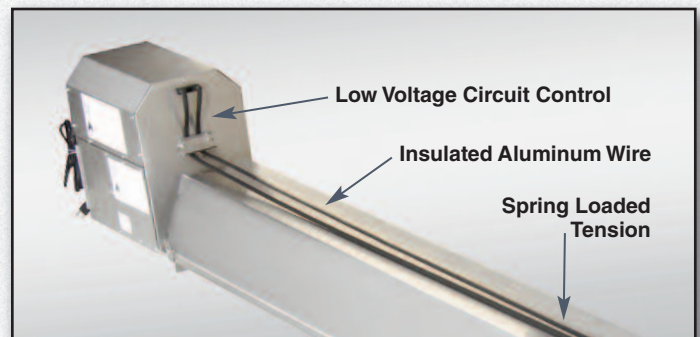
Our Angle Is On Performance And Quality

When it comes to product reliability and fuel efficient operation, Space-Ray equipment has withstood the test of time. Space-Ray's new PCA/PCS push-through series tube heaters with its patent pending Tube Integrity Safety System, TISS™, provides you real options to meet the needs of your specific application.

- An energy efficient radiant heating system that saves fuel, reduces maintenance, and permits higher mounting
- Calorized aluminized steel emitter tubes* for corrosion resistance and greater radiant output
- Heavy-duty cast iron burners for long life
- Can be used in a vented or indirect (unvented) mode. Available in either natural or propane gas models.
- Unique diagnostic monitoring lights show when heater is operating and assists with fault diagnosis
- Tube lengths from 20' to 60' & BTU input ratings from 75,000 To 150,000 BTU/Hr.
- Optional Cold Air Stopper™ stops cold or hot air from entering the poultry house when the heaters are not in operation and helps to reduce sweating problems (Not available on the 150,000 BTU/Hr. model)

Powerful And Fuel Efficient Radiant Heat

Space-Ray Radiant Gas Tube Heaters operate using the same principle as the sun. Before heating the air, radiant warmth is delivered directly to the birds and litter area where it's needed most. This warmth at floor level helps to dry out the litter area keeping ammonia levels lower. It also creates a thermal reservoir in litter area, trapping and recycling the heat to save fuel.



Patent Pending

Introducing TISS™ Tube Integrity Safety Shut-Off System

Space-Ray's patent pending innovative safety feature for positive pressure radiant tube heaters is called the "Tube Integrity Safety System" (TISS™).

In the unlikely event of a tube failure, TISS™ has been designed to automatically shut off the heater. The revolutionary TISS™ uses a simple principle to place an electrically insulated aluminum wire in tension above the reflector. Low voltage is then continuously passed along the wire in line with the gas control circuit. If heat levels increase due to heat exchanger failure, the wire melts and the safety circuit is broken, breaking the 24 volt circuit and shutting down the heater.

You may never know it is there, but it provides peace of mind.

*The first 10' of all Model PCS tube heaters utilize calorized aluminized steel tubing. Calorized aluminized steel in all tube lengths is available as an option.



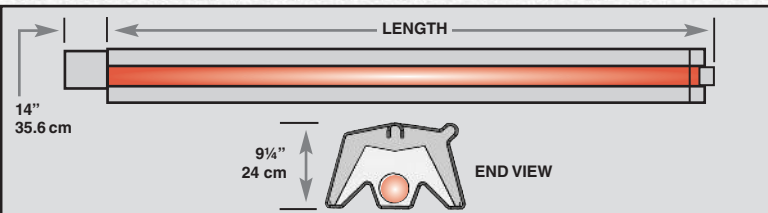
PCA/PCS SERIES TECHNICAL DATA

MODELS	SINGLE STAGE BTU/HR (Kw) INPUT	TWO STAGE		TOTAL EMITTER TUBE LENGTH				
		BTU/HR (Kw) HIGH INPUT	BTU/HR (Kw) LOW INPUT	20 FT	30 FT	40 FT	50 FT	60 FT
PCA/PCS 75	75,000 (22Kw)	75,000 (22Kw)	50,000 (14.7Kw)	●	●			
PCA/PCS 100	100,000 (29.3Kw)	100,000 (29.3Kw)	65,000 (19.1Kw)		●	●		
PCA/PCS 125	125,000 (36.6Kw)	125,000 (36.6Kw)	80,000 (23.4Kw)		●	●	●	
PCA/PCS 150	150,000 (44.0Kw)	150,000 (44.0Kw)	100,000 (29.3Kw)			●	●	●

GAS TYPE	CONTROL OPTION		BURNER PRESSURE	SUPPLY PRESSURE		VOLTAGE	AMPS	IGNITION TYPE
	SINGLE STAGE	TWO STAGE		MIN	MAX			
NATURAL	N5	N7	3.5" W.C. 8.7 mbar	5" W.C. 12.5 mbar	14" W.C. 34.9 mbar	120 VAC 60 HZ	1.8	DIRECT SPARK
PROPANE	L5	L7	10" W.C. 24.9 mbar	11" W.C. 27.4 mbar	14" W.C. 34.9 mbar			

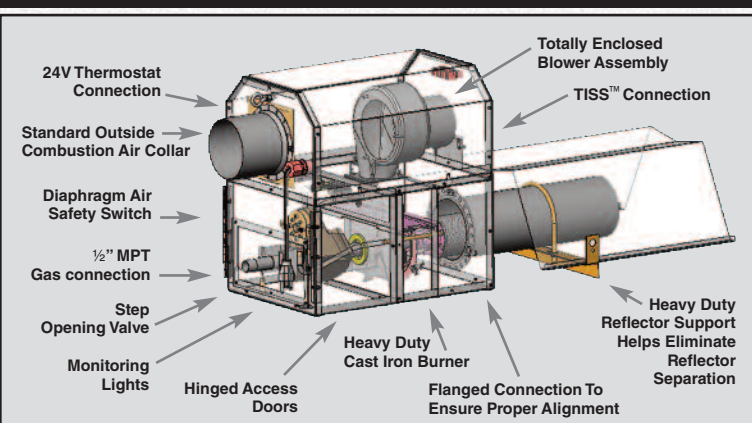
Note: For all installations higher than 2000 ft. above sea level, consult the factory for recommended derating of heaters.

TUBE HEATER DIMENSIONS



MODEL	TUBE LENGTH	TOTAL LENGTH
PCA/PCS 75	20' / 6.1m	21'2" / 6.5m
PCA/PCS 75/100/125	30' / 9.1m	31'2" / 9.5m
PCA/PCS 100/125/150	40' / 12.2m	41'2" / 12.5m
PCA/PCS 125/150	50' / 15.2m	51'2" / 15.6m
PCA/PCS 150	60' / 18.3m	61'2" / 18.6m

PCA/PCS BURNER BOX



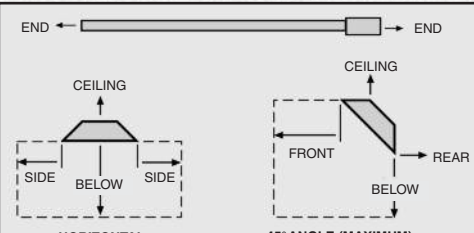
- 24V Thermostat Connection
- Standard Outside Combustion Air Collar
- Diaphragm Air Safety Switch
- 1/2" MPT Gas connection
- Step Opening Valve
- Monitoring Lights
- Hinged Access Doors
- Heavy Duty Cast Iron Burner
- Flanged Connection To Ensure Proper Alignment
- Totally Enclosed Blower Assembly
- TISS™ Connection
- Heavy Duty Reflector Support Helps Eliminate Reflector Separation

POULTRY TUBE HEATER ACCESSORIES



Ceiling Fresh Air Kit And Poultry Tube Heater Accessories
Available for all ceiling mounted Space-Ray Tube Heaters. Pictured above are "S" hooks, exhaust hood, flexible gas connector, manual shut-off valve and the unique, all metal fresh air intake.

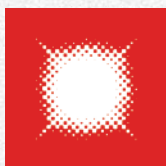
MINIMUM CLEARANCE TO COMBUSTIBLES



MODEL NO.	SIDE	CEILING*	BELOW	END	45° FRONT	45° REAR
PCA/PCS 75	27" / 68.6 cm	12" / 30.5 cm	60" / 152.4 cm	30" / 76.2 cm	48" / 121.9 cm	12" / 30.5 cm
PCA/PCS 100	66" / 167.6 cm	12" / 30.5 cm	88" / 223.5 cm	40" / 101.6 cm	66" / 167.6 cm	20" / 50.8 cm
PCA/PCS 125	66" / 167.6 cm	12" / 30.5 cm	101" / 256.5 cm	40" / 101.6 cm	66" / 167.6 cm	20" / 50.8 cm
PCA/PCS 150	84" / 213.4 cm	18" / 45.7 cm	108" / 274.3 cm	48" / 121.9 cm	84" / 213.4 cm	12" / 30.5 cm

*When used in a vented mode, clearance to the ceiling from top of the reflector may be reduced to 6" (15 cm) on all models. If optional corner or U-Bend reflectors are not used, clearance must be 18" (46.7 cm) to center.
Note: Consult factory if reduced clearances are required.

FOR YOUR SAFETY – OPERATE SPACE-RAY HEATERS WITH PROPER CARE AND OBSERVE ALL SAFETY PRECAUTIONS. Installation and service must be performed by a licensed contractor. The installation must conform to local codes. In the absence of local codes, the installation must conform with the National Fuel Gas Code ANSI Z223.1 (latest edition also known as NFPA 54) or CGA B 149 installation codes (latest edition). These codes are available from the National Fire Protection Association, Inc., Batterymarch Park, Quincy, MA02269 (www.nfpa.org) or contact CSA at 1-800-463-6727.



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