



Parto Central Radiant Heating System

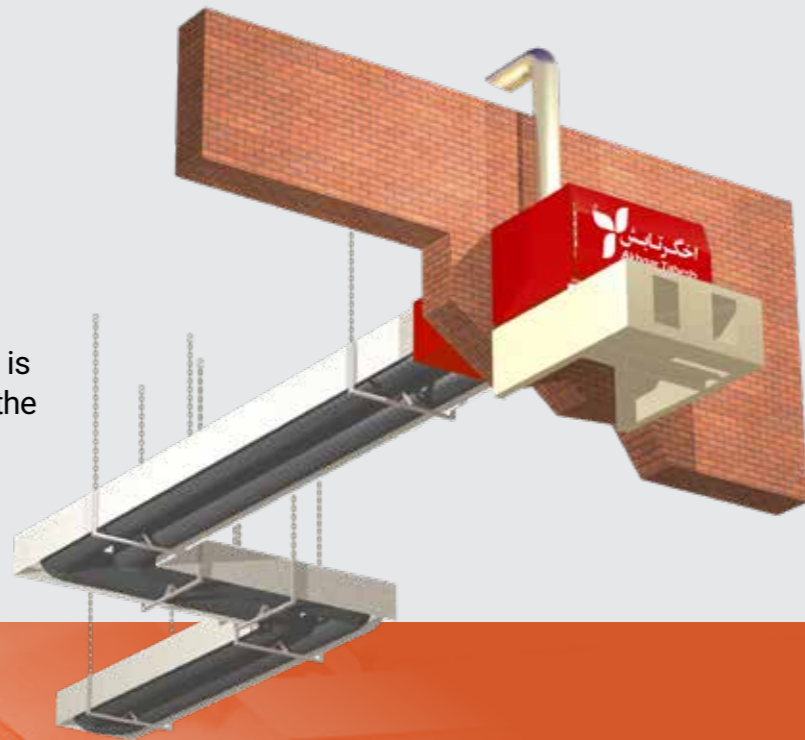
Central Unit



Advantages of Parto Central Radiant Heating System

Parto central radiant heating system is considered a appropriate option for the industrial halls and gymnasiums.

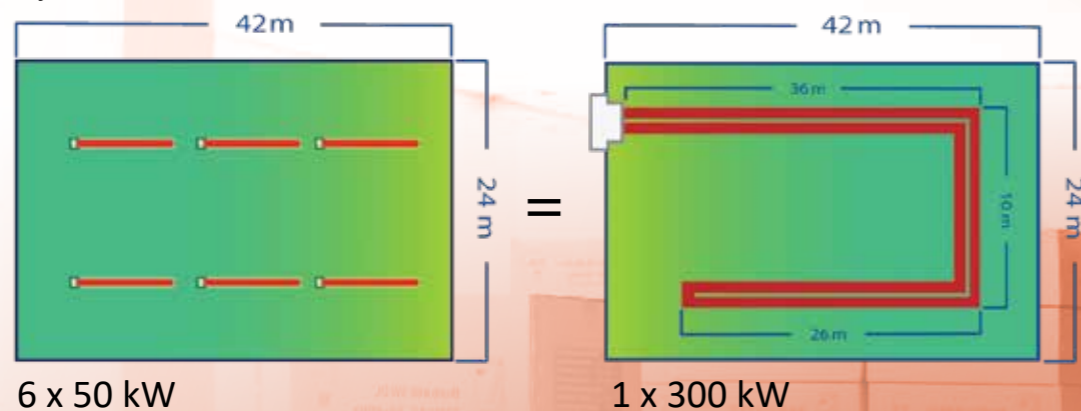
This system consists of two parts including burner and radiant bands.



In Parto system, the burner is usually installed outside the halls and the radiant band makes the surrounding environment warm by emitting infrared waves by moving around the halls.

in this system, capital waste is prevented by reducing side costs by taking some measures like the elimination of gas piping, electrical cables, electrical panels, and chimneys.

The heating power of the Parto burners is 100 to 300 kWh, and a Parto system can replace by several low-heating power systems, considering the high heating power of Parto system.



1. Reduction in fuel consumption and economic gain

In Parto system, a considerable reduction in fuel consumption is seen in relation to other heating systems. Also, saloon heating process is performed quicker due to making use of radiation heating pattern.

Applying Parto system in saloons where the ceiling height is greater than 5 meters like those of industrials sheds, sports saloons, exhibition saloons and warehouses, we can observe a a heat efficiency of more than 93%.

2. Adaptability to any type of structure

Considering the flexibility of the radiant band, Parto system can be used in different types of halls in unconventional shapes. As it can be seen in the figure, the radiant band

gets around the obstacle with two 45-degree changes in direction due to the obstacle on the path.

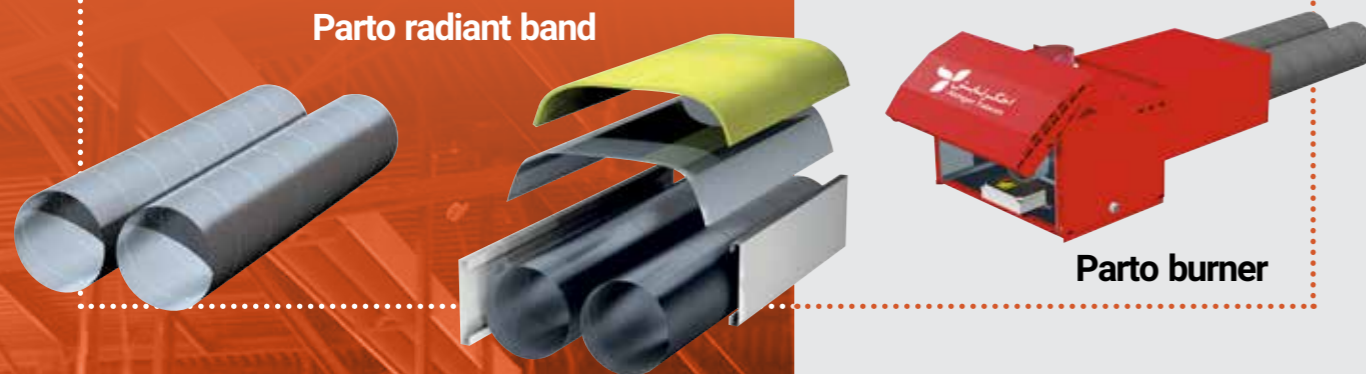


3. Convenient installation and maintenance

Parto system is installed much quicker than other common heating systems due to the shorter distance of gas piping, wiring, the maintenance of the system will be simpler to the extent that using a single burner simplifies it.

Considering the fact that the system burner is usually installed out of the hall, it is easy to access to the burner and there is no need for elevators and scaffolds for services and repairs.

In this case, performing the repair and maintenance process does not pose any disruptions in the daily activities of a hall

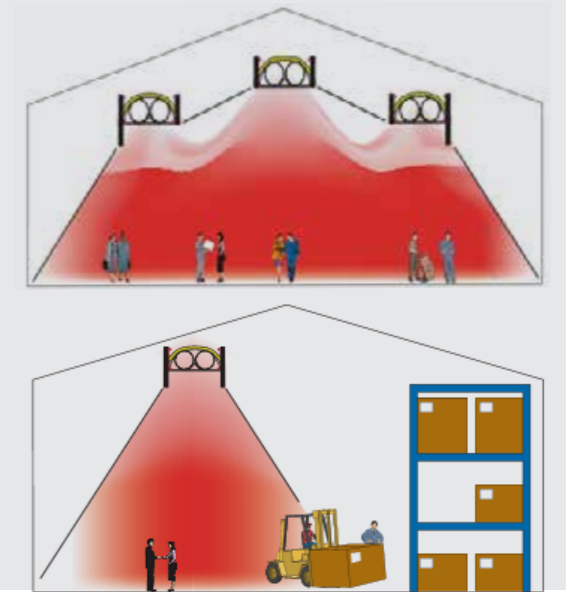


4. Temperature management and environmental health

In Parto heating system, the energy is exclusively consumed to heat the points where those need to be heated and the fuel is not wasted by heating the points where there is no need to heat.

By elimination of air circulation in the central Parto system, the dispersion of the dust and hazardous particles in the air is prevented.

Thus, workplace health is guaranteed.



5. High security

Akhgar Tabesh Company has conducted exact examinations on enhancing the security of the radiant heating system and it has succeeded in designing and producing a burner named Parto of forced suction type. in this system:

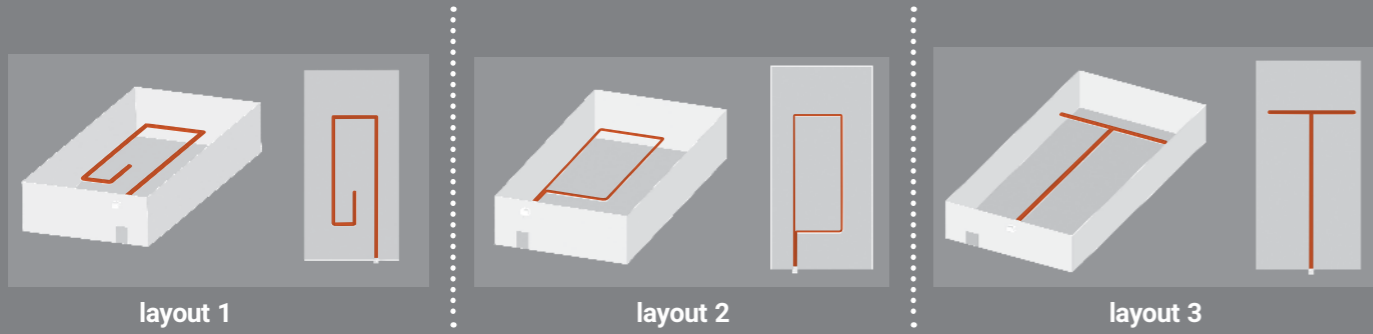
- 1) The pipes surface temperature is always lower than 300 °C
- 2) The burner is placed out of

the hall and the required air for combustion is provided from outside the hall.

3) There is no mass exchange between the air inside the saloon and radiant band.

4) Considering the installation of burner outside the hall, the fume is discharged out side of the hall.

Three layouts of radiant band for a hall



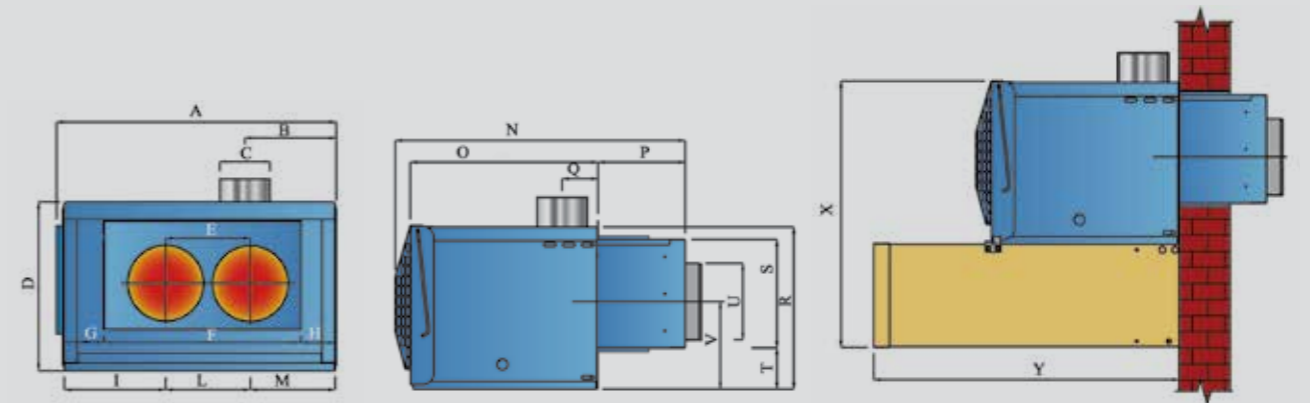
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The technical features and dimensions of PARTO

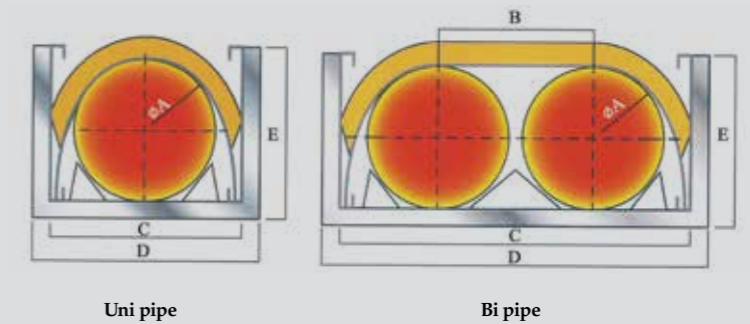
Dim.	Dimension(mm)	Dim.	Dimension(mm)
	Pipe Ø 300 mm		Pipe Ø 300 mm
A	1095	N	1142
B	349	O	740
C	200	P	343
D	664	Q	142
E	333	R	637
F	774	S	426
G	157	T	162
H	134	U	300
I	398	V	344
L	333	X	1049
M	333	Y	1202

Characteristics		C100	C150	C200	C300	
Thermal Power	kCal/hr	86000	129000	172000	258000	
	kW	100	150	200	300	
Combustion Efficiency	%	94				
Energy Consumption	Natural Gas	Nmc/h	10.5	15.8	21.16	31.75
	LPG	kg/h	7.77	11.65	15.54	23.31
Power supply	V/Hz	380V 50 Hz				
Gas Connection	Inches	$\frac{3}{4}$	1	1	1	
Weight	kg	90	230	240	260	
Maximum Length	m	60	70	100	120	
Minimum Length	m	50	60	70	100	
fume pipe Diameter	mm	200				

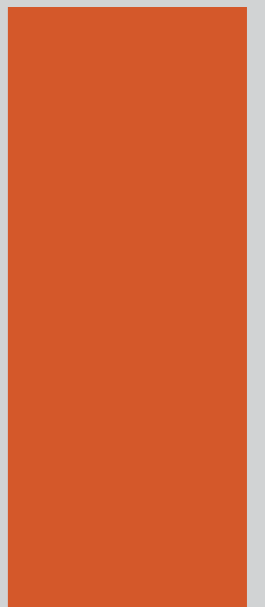


The dimensions of PARTO radiant band

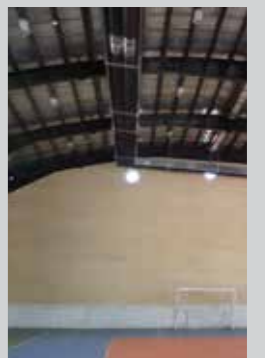
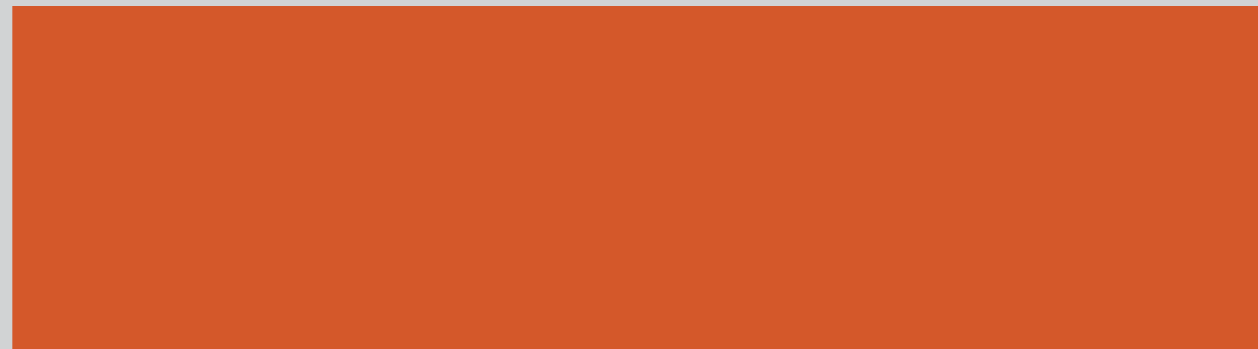
Radiant band dimensions		
Radiant Band	Uni pipe	Bi pipe
A	300	300
B	-	335
C	512	850
D	580	918
E	374	374
Weight(kg/m)	9	18



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Design, Production, Installation of Radiant Heating Systems



Akhgar Tabesh

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