

“ Super Saver 90 ”

90% Efficiency In-Direct Fired Air Heater



1,300 KW “Super Saver 90” In-Direct Air Heater (Food Dryer)

- Food Drying
- Spray Dryer for Dairy Products
- Pharmaceutical Drying
- Heating and Drying of Chemical Products
- Tobacco Drying
- Other Processes Requiring Indirect Heating

"Super Saver 90" In-Direct Air Heater

"Super Saver 90" In-Direct Air Heater from **SEESCO** is widely used in applications where high-quality clean heated air is required.

Since the burner's combustion heat is utilized indirectly, the generated hot air is completely clean and free from soot, carbon monoxide, NOx, moisture, and other contaminants.

"Super Saver 90" In-Direct Air Heater is usually supplied as complete package including combustion chamber, burner, high efficiency heat exchanger employing an exhaust gas recirculation fan, achieving a thermal efficiency up to 90%, thereby significantly reducing fuel consumption.

Maximum 90% thermal efficiency of the "Super Saver 90" heat exchanger represents remarkable efficiency compared to general heat exchangers of which efficiency is around 80% typically.

With a maximum operating temperature of 350°C, the unit can provide much higher temperature than those achievable by thermal oil heater or steam heating systems.



"Super Saver 90" In-Direct Air Heater Live Fire Performance Test



"Super Saver 90" Heat Exchanger

Features

- **"Super Saver 90" In-Direct Air Heater** is engineered and manufactured by **SEESCO** globally recognized as specialized combustion system company ensuring superior quality and reliability.
- The system is supplied as a complete package including the combustion chamber, heat exchanger, exhaust gas recirculation fan, burner, gas train, and control panel.
- High-efficiency design with thermal efficiency up to 90%, providing significant energy savings.
- Each size of **"Super Saver 90"** heat exchanger have been performance tested for power capacity and 90% efficiency.

- By employing a high-efficiency heat exchanger with an exhaust gas recirculation fan, combustion chamber operates at a temperature more than 100°C lower than typical indirect heating systems.
As the results ;
 - ✓ Extended life time of heat exchanger
 - ✓ Significant reduction in maintenance and replacement costs
 - ✓ Increased operational productivity.
- A built-in heat exchanger protection program prevents thermal shock and thermal stress during temperature rise-up, thereby protecting the heat exchanger from cracking or damage commonly observed in conventional systems.
- All units are factory-tested, including burner ignition and functional verification prior to delivery.
This ensures trouble-free site installation and shorten commissioning time.
- Supplied as a skid-mounted package, requiring only electrical power, fuel piping, and inlet/outlet duct connections at site.
This greatly reduce installation and commissioning time and minimize related costs.
- The unique insulation and exterior panel design providing a clean and appearance similar to furniture cabinet.
- For applications requiring hygienic air contact such as food drying, dairy product drying, and pharmaceutical drying, stainless steel internal materials are applied.
- Maximum operating temperature of 350°C
- Equipped with a high-performance MAXON burner (USA).
Low-NOx burner available as option.
- Burner is supplied as a unitized assembly with air blower and air filter.
Optional silencer is available.
- The combustion safety system complies with NFPA 86 (USA), EN 746 (EU), and applicable national safety regulations.
- Korea PSM (Process Safety Management) compliant safety configuration is available upon request.

"Super Saver 90" In-Direct Air Heater Specification

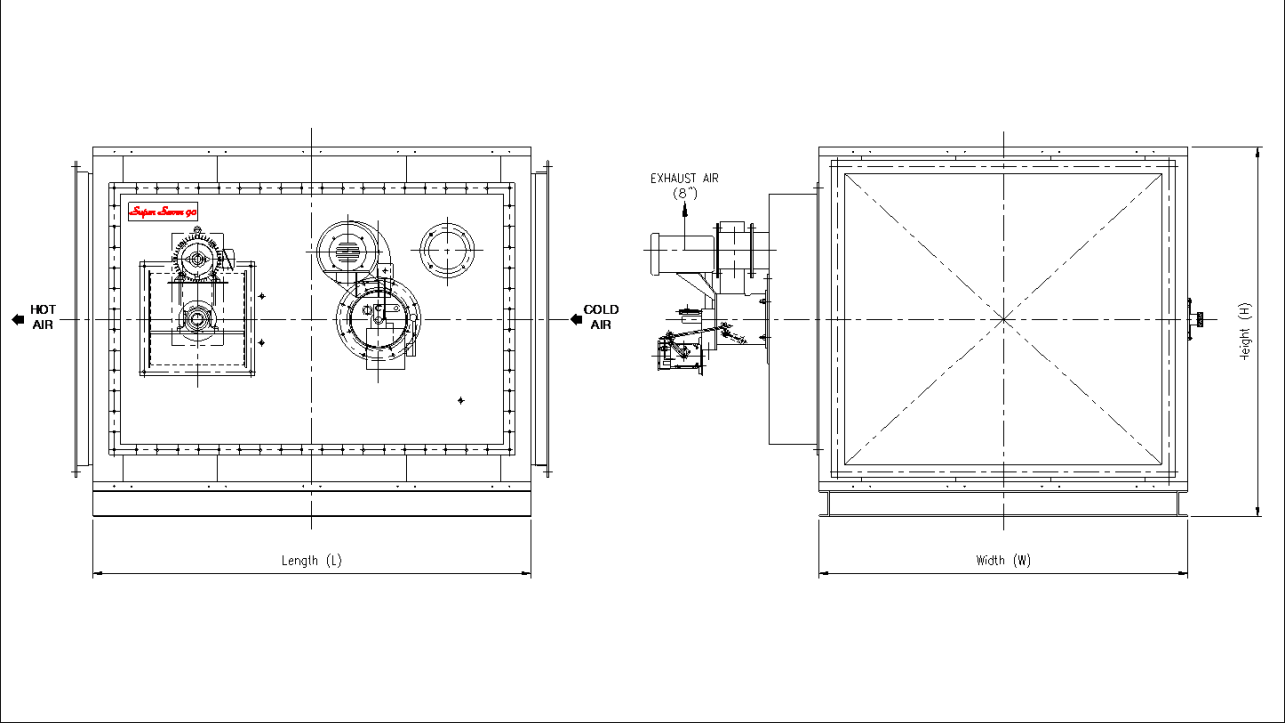
- **High Temperature Model:**
Maximum Outlet Temperature 350°C
Maximum Airflow Capacity: 465 m³/min
- **Low Temperature Model:**
Maximum Outlet Temperature 200°C
Maximum Airflow Capacity: 853 m³/min

"Super Saver 90" In-Direct Air Heater

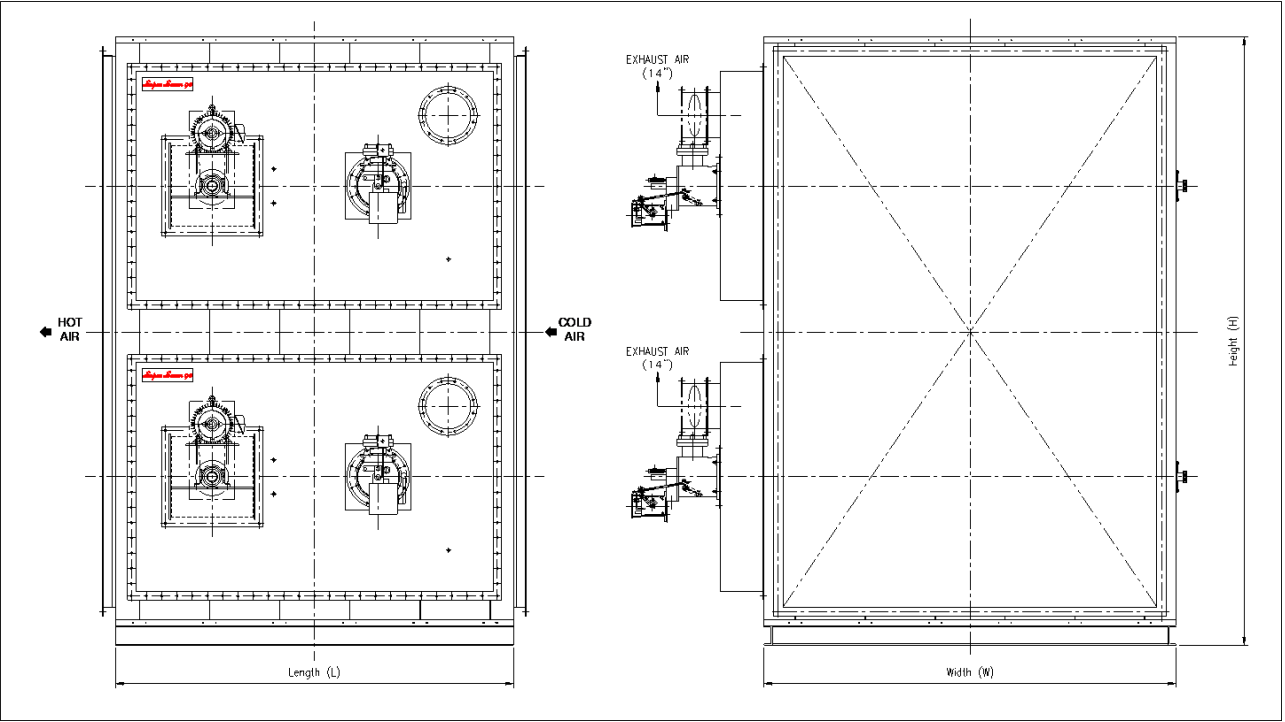
Heater Capacity		Standard Capacity							Large Capacity		
KW		300	500	700	900	1,100	1,300	1,500	2,000	2,500	3,000
Kcal/Hr		258,000	430,000	602,000	774,000	946,000	1,118,000	1,290,000	1,720,000	2,150,000	2,580,000
Heater Inlet Temperature	Deg.C	20							20		
High Temperature Model											
Heater Outlet Temperature	Deg.C	350							350		
Flow Volume / Approx	Nm ³ /Min	47	78	109	140	171	202	233	310	388	465
Estimated Pressure Drop	mmWC	40							40		
Low Temperature Model											
Heater Outlet Temperature	Deg.C	200							200		
Flow Volume / Approx	Nm ³ /Min	85	142	199	256	313	370	427	569	711	853
Estimated Pressure Drop	mmWC	80							80		
Gas Burner											
Burner Capacity	Kcal/Hr	290,000	480,000	670,000	860,000	1,050,000	1,240,000	1,430,000	1,910,000	2,390,000	2,870,000
Burner Model	60Hz	422M	432M	442M	456M	470M	470M	EB-6	EB-5 X 2	EB-5 X 2	EB-6 X 2
Burner Blower Motor		3/4 HP	3/4 HP	1 HP	1 1/2 HP	2 HP	2 HP	2.2 KW	3.7 KW	5.5 KW	3.7 KW
Burner Model	50Hz	422M	442M	456M	470M	487M	487M	EB-6	EB-5 X 2	EB-5 X 2	EB-6 X 2
Burner Blower Motor		3/4 HP	1 HP	1 1/2 HP	2 HP	3 HP	3 HP	2.2 KW	3.7 KW	5.5 KW	3.7 KW
Maker		MAXON							MAXON		
Fuel		Natural Gas or Propane							Natural Gas or Propane		
Heat Exchanger											
Model		"Super Saver 90"							"Super Saver 90"		
Energy Efficiency	%	Up to 90%							Up to 90%		
R/C Fan Motor	KW	3.7	5.5	5.5	7.5	7.5	7.5	11	7.5	7.5	11
Exhaust Gas Exit Diameter	mm	150	200	250	250	300	350	350	300 X 2	350 X 2	350 X 2
Fresh Air Heater Dimension											
Length / Approx	mm	2,550	2,750	2,750	2,850	3,050	3,150	3,150	3,050	3,150	3,150
Height / Approx	mm	2,150	2,150	2,150	2,300	2,400	2,500	2,500	4,600	4,800	4,800
Width / Approx	mm	2,150	2,150	2,650	3,250	3,250	3,250	3,250	3,250	3,250	3,250

Low NOx Burner / OPTION
Specification can be changed without notice

Dimension



Standard Capacity



Large Capacity