

## **GEM Aqua Saver** **Dry Cooling Tower**

**GAS**  
*Series*



**WORLD**  
CLASS  
COOLING TOWERS





## INTRODUCTION

**GEM Aqua Savers** are designed to meet your cooling requirements while minimizing or eliminating expensive water and sewer costs. All **GEM Aqua Savers** feature a weather proof enclosure which contain all necessary electrical components.



## FUNCTION & FEATURE



### Casing

Built to last with corrosion resistant bright GI / Aluminium sheet. The casing is divided by baffles, into individual fan sections, to ensure proper air distribution through the coils and maximize efficiency at part loads.



### Coils

Constructed with Copper tubes and Aluminum fins for maximum performance. Coils are leak tested at 300 psig, dehydrated, evacuated, and sealed prior to shipment, to ensure safe reliable operation.



### Fans

Made from durable aluminium / FRP and dynamically balanced for quiet, vibration free operation.



### Fan Motors

415 Volt, 3 Ph motor, IP54 and mounted on rigid galvanized steel supports.



### Single and Dual Pump Module\*

The module comes complete with industrial grade, close-coupled, centrifugal pumps. The pumps are mounted on a common base and include inlet and discharge piping with throttling, isolating, and check valves.



### Electrical Controls\*

All electrical components are located in a weather proof enclosure which is integral to **GEM Aqua Savers**. A built in disconnect is provided as a standard feature. Installation costs are greatly reduced. Fan cycling is also provided as an energy saving feature on all multi fan coolers.



### Energy Saving Control Panel\*

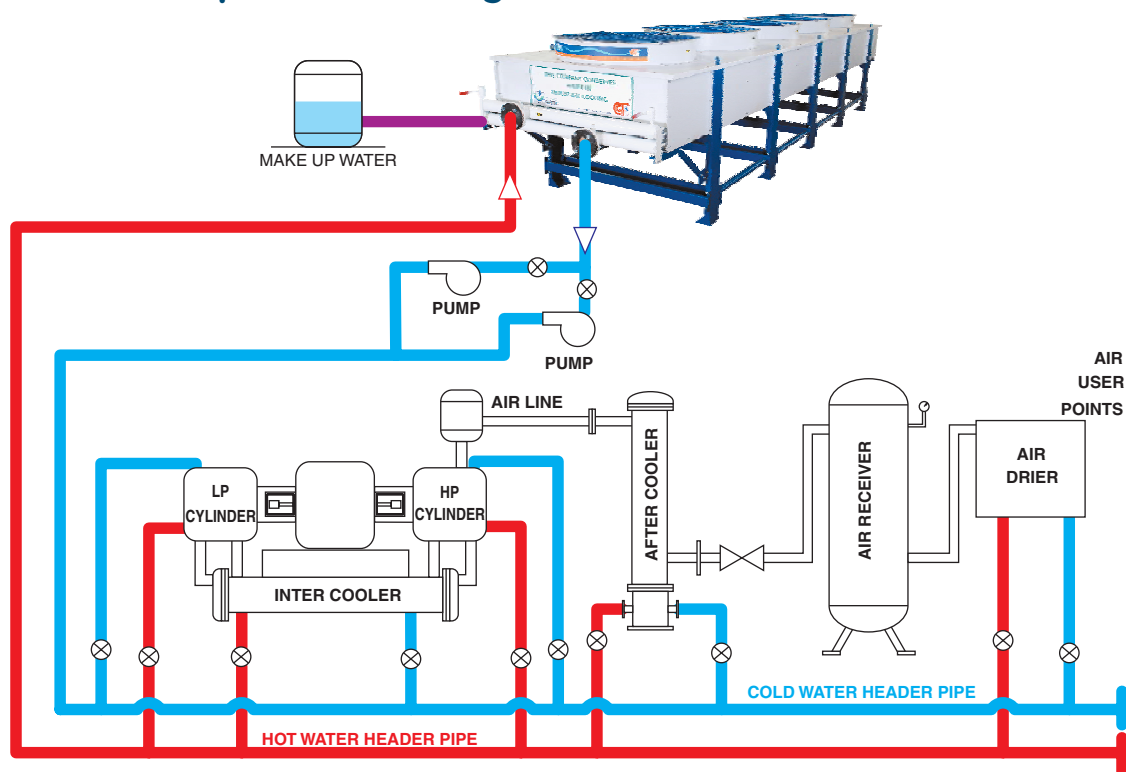
**GEM Aqua Saver** series heat exchangers include on/off switch, Power on indicator, fan motor starter and fan cycling thermostats. Fan cycling saves energy and provided temperature control under varying load and ambient conditions

**Closed Loop  
Clean Water  
Cooling System**

*\* Optional*



## Water Cooled Compressor Cooling



Can be installed to suit water cooled Rotary Compressor (Screw & Centrifugal)



## SELECTION GUIDE FOR AIR COMPRESSORS

Model	# Compressor with after cooler		Total Connected Power HP	Water In / Out
	at ambient temp. 35° C HP	at ambient temp. 40° C HP		
GAS-045/2	15	10	2	3"/3" NB
GAS-058/2	25	20	4	3"/3" NB
GAS-075/2	30	25	6	3"/3" NB
GAS-090/2	40	30	4	3"/3" NB
GAS-090/3	75	60	6	3"/3" NB
GAS-145/2	100	75	6	3"/3" NB
GAS-145/3	120	100	9	3"/3" NB
GAS-160/2	150	125	6	3"/3" NB
GAS-175/2	175	150	8	3"/3" NB
GAS-175/3	200	175	12	3"/3" NB
GAS-225/2	250	200	8	3"/3" NB
GAS-275/2	275	250	10	3"/3" NB

# Approximate capacity at 40°C ambient, 45°C Outlet temperature and 52°C Inlet temperature

\* Power selection based on specific conditions

\* For all other selections, please contact factory

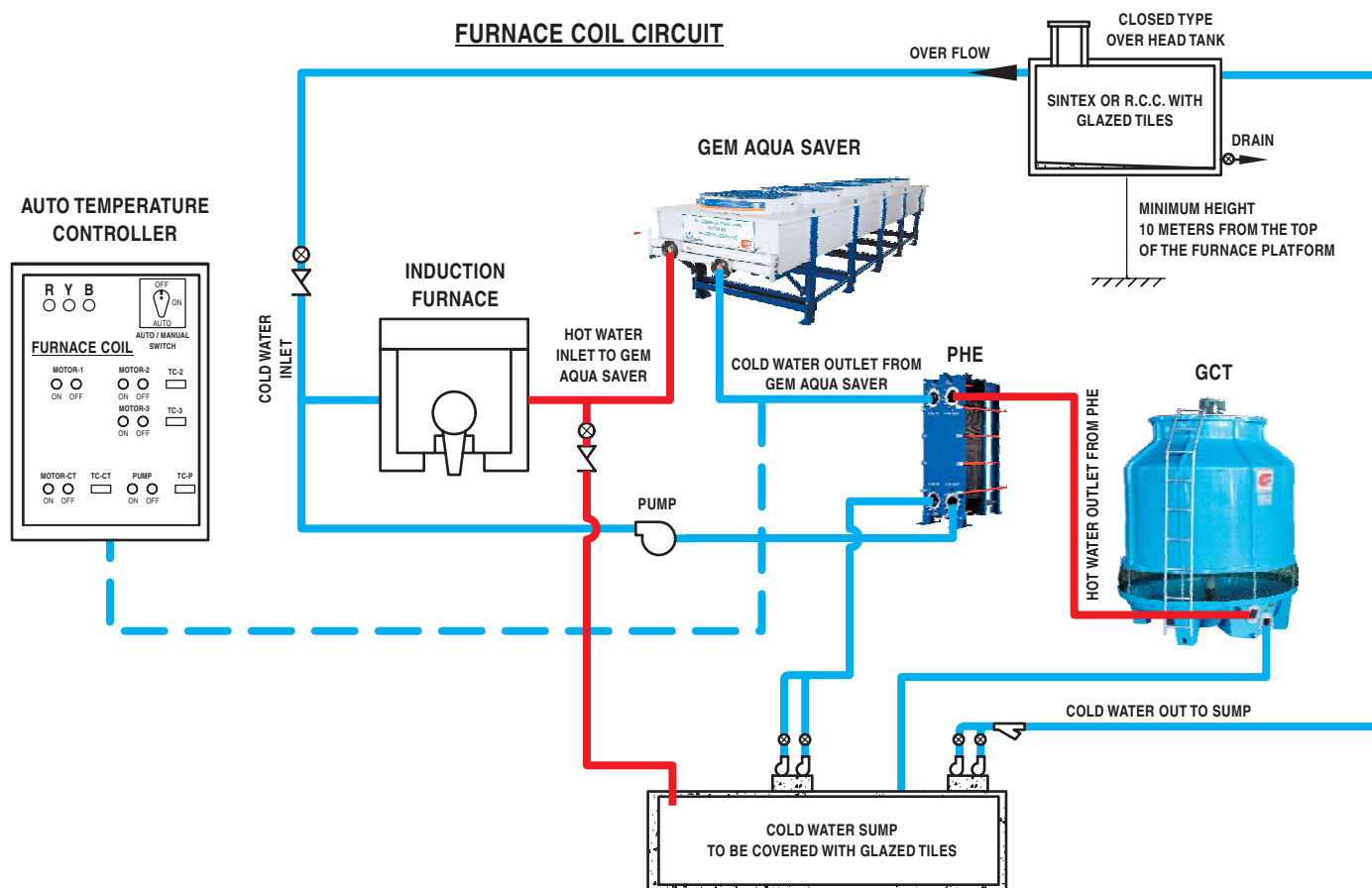
\* Select higher model for ambient temperature above than 40°C or if extra safety is required

\* Specifications are bound to change due to constant development and improvement



## Aqua Saver INSTALLATION

### Induction Furnace Coil & Electrical Control Panel Cooling



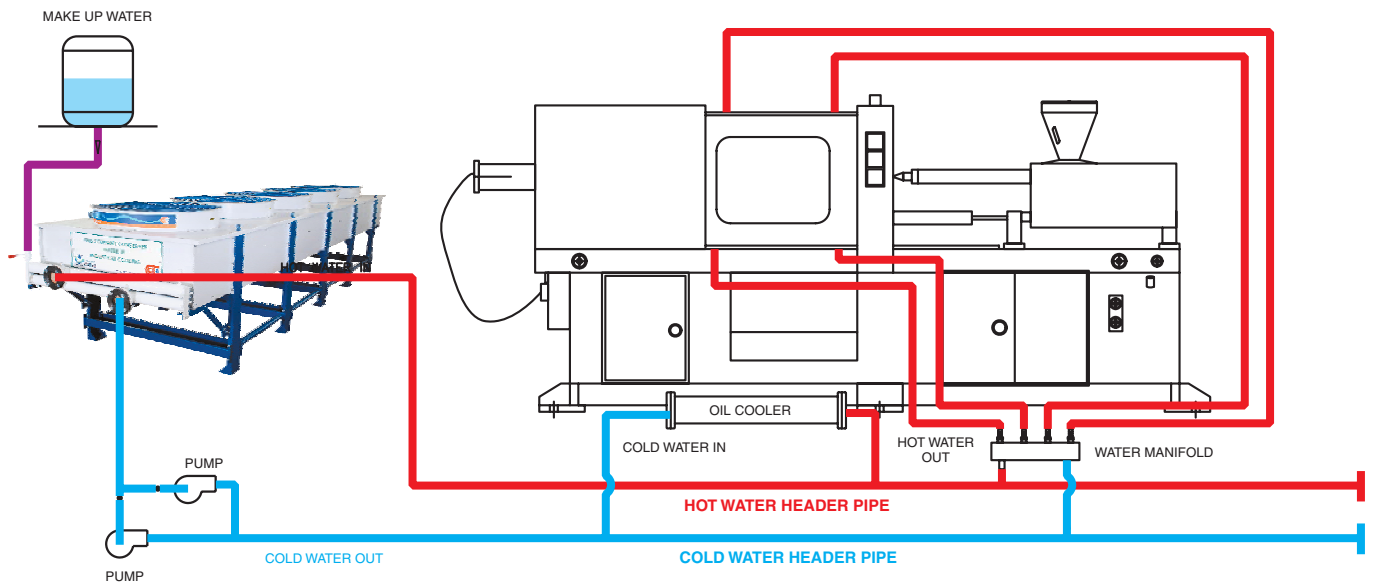
## SELECTION GUIDE FOR INDUCTION FURNACES

Furnace Capacity kW	Coil Cooling water flow rate lpm	Model Suggested for combination system	Combination system Max. water consumption per day
250	150	GAS - 145/2 - 1 no. GCT - 10TR - 1 no.	1250*
500	300	GAS - 225/2 - 1 no. GCT - 20TR - 1 no.	2500*
750	430	GAS - 275/2 - 1 no. GCT - 40TR - 1 no.	3750*
1000	575	GAS - 225/2 - 2 nos. GCT - 50TR - 1 no.	5000*
1250	720	GAS - 275/2 - 2 nos. GCT - 60TR - 1 no.	6250*
2000	1150	GAS - 225/2 - 3 nos. GCT - 100TR - 1 no.	10000*
4000	2300	GAS - 275/2 - 5 nos. GCT - 200TR - 1 no.	20000*

\* Design based on 45°C, Max ambient temperature  
 Water inlet temperature to coil cooling, maximum 39°C  
 For panel cooling requirement, please contact factory  
 PHE can also be supplied against requirement  
 Sufficient safety margin has been considered for safe operation



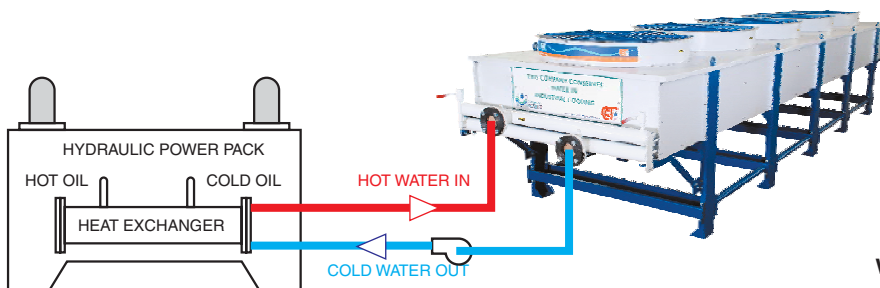
## Plastic Injection Moulding Machine Cooling



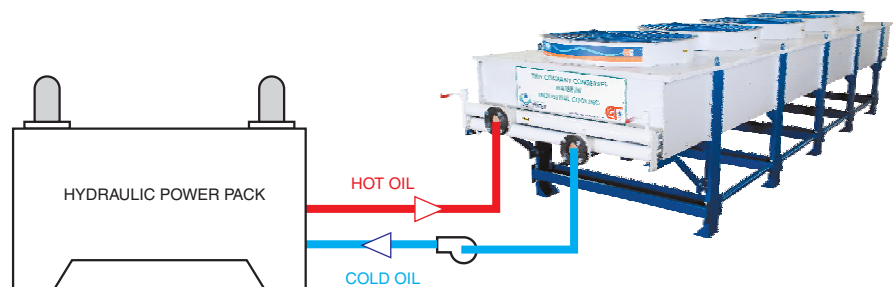
**Model Selection: Based on heat load, inlet and outlet temperature**

## Hydraulic Power Pack Cooling

**WITH HEAT EXCHANGER**



**WITHOUT HEAT EXCHANGER**



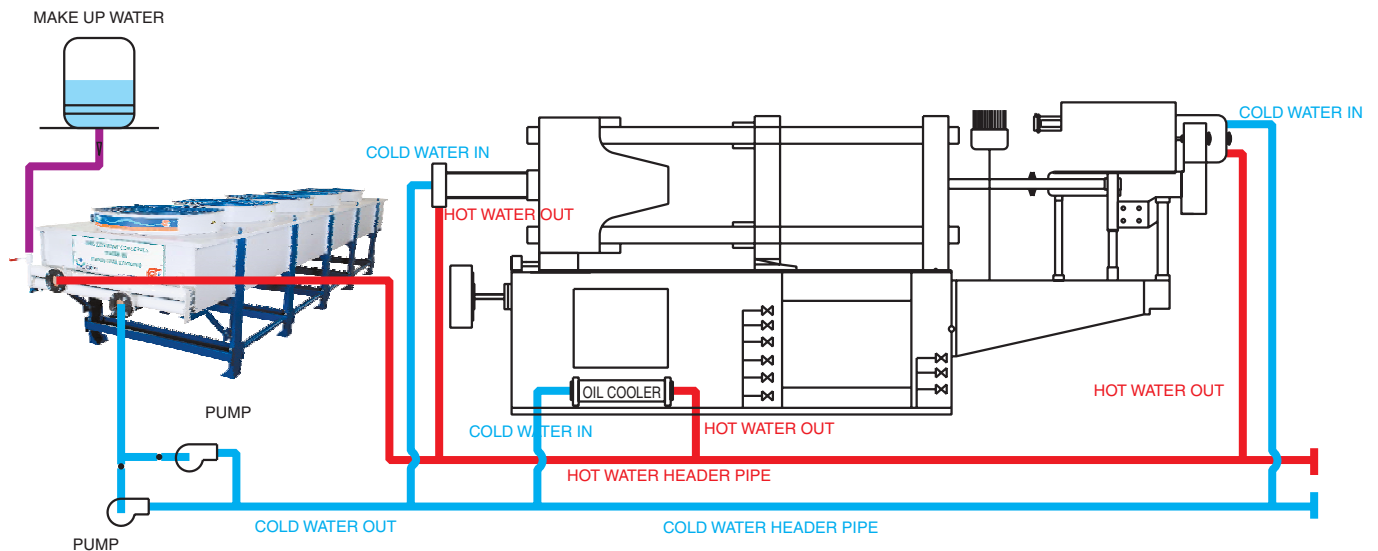
*\* If uniform return line flow is available at or less than 10 kg/cm<sup>2</sup> pressure pump shall be avoided.*

**Model Selection: Based on heat load, inlet and outlet temperature**



## Aqua Saver INSTALLATION

### Aluminium Die Casting Machine Cooling



**Model Selection: Based on heat load, inlet and outlet temperature**



## BENEFITS

- Reduce water usage by over 95% with an Aqua Saver System.
- Eliminate algae and bacteria type problems.
- No water consumption.
- Eliminate sewer charges.
- Adaptable to heat recovery.
- Eliminate scale and corrosion.
- Extend equipment life.
- Reduce maintenance cost.
- Reduce down time.
- Easy installation.



## OPTIONS

- Dual Pump Module
- Weather Proof Electrical Controls
- Energy Saving Control Panel
- Packaged Aqua Saver Systems.
- Freeze-Protector heat transfer fluid.
- Fan Cycling High Temperature indicator and / or alarm.
- Pump failure indicator and / or alarm.
- Pump auto start (duplex pump only).
- TEFC Motors, fan(s) and pump(s)



## SOME OF OUR ESTEEMED CUSTOMERS

### COMPRESSOR APPLICATION

Ammarun Foundries, Coimbatore, TN  
Armstrong Spinning Mills, Gobi, TN  
Eastman Spinning Mills, Veda sandur, TN  
Indian Nippon Electricals, Hosur, TN  
Jai Jagathambiga Textiles, Arupukottai, TN  
Leeds Spg. Mills, Sathy, TN  
Livia Polymers P. Ltd., Trichy, TN  
Megala Carona Textiles, Gobi, TN  
Prabhu Spinning Mills, Veda sandur, TN  
Prabhu O.E. Division, Veda sandur, TN  
Sivaraj Spinning Mills, Veda sandur, TN  
Sri Velaythaswamy Spg. Mills, Veda sandur, TN  
Sri Shanmugavel Weaving Division, Veda sandur, TN  
S.J.L.T. Textiles, Namakal, TN  
Sambandam Spinning Mills, Salem, TN  
Sri Jaya Jothi Textiles, Rajapalayam, TN

Sambandam Siva Textiles, Salem, TN  
Jayanthi Drinks, Alwar, RJ  
Lekhraj Narendra Kumar, Kaithal, HR  
Megala Carona Textile Unit - II, Vadamadurai, TN  
Sri Krishna Rice Mills, Kapurthala, PN  
Ramalinga Mills Unit - A, Arupukottai, TN  
Ashok Leyland Unit - II, Hosur, TN  
Saint Gobain, Bangalore, KA  
Sarmangal Synthetics Ltd. TN  
Sun Star Overseas Ltd., HR  
Lakshmi Machine Works, Coimbatore, TN  
Virudhunagar Textiles & Mills Ltd., Virudhunagar, TN  
Rasi Techni Tex, Salem, TN  
Bhageswari Spinning Mills Ltd., Salem, TN  
Sri Ramalinga Mills Ltd., Arupukottai, TN  
K.P.R. Textiles Pvt. Ltd., Coimbatore, TN  
Avanitha Textiles Pvt. Ltd., Coimbatore, TN  
Wheels India Limited, Chennai, TN

### FURNACE APPLICATION

Ammarun Foundries, Coimbatore, TN  
Ferro Links, Coimbatore, TN  
Indo Shell Cast (P) Ltd., Coimbatore, TN  
Meltech Castings (P) Ltd., Coimbatore, TN  
Sandfit Foundries, Coimbatore, TN  
V.R. Foundries, Coimbatore, TN  
Super Auto Forge (P) Ltd., Chennai, TN  
Castech Foundries (P) Ltd., Rajkot, GJ  
Creative Castings Pvt. Ltd., Rajkot, GJ  
Rolex Rings Pvt. Ltd., Rajkot, GJ  
KOSO Fluid Control Systems, Coimbatore, TN  
Rangasayee Alloy Castings, Coimbatore, TN

Amteck Castings Pvt. Ltd., Coimbatore, TN  
Sarvalakshmi Foundries, Coimbatore, TN  
Dakshin Foundry Pvt. Ltd., Bangalore, KA  
PSG Foundry Division, Coimbatore, TN  
Sandfit Foundries Pvt. Ltd., Coimbatore, TN  
LMW Unit - III, Coimbatore, TN  
Amex Alloys, Coimbatore, TN  
Indo Shell Automotive System, Coimbatore, TN  
Lakshmi Ring Travellers, Coimbatore, TN  
Hi-Tech Minerals Industries Ltd., Salem, TN  
Defree Engg. Coimbatore, TN  
Electrotherm India Ltd. GJ



## TECHNOLOGY



Technically qualified team of engineers with computer aided design facility and software to meet specific application needs.

GEM Equipments Limited is experienced in designing industrial cooling towers for the past two decades to cater to the demanding applications of numerous customers.



## SHIPPING DATA

GAS Model	Overall Dimension L x W x H mm	Header Pipe & Flange Size	Fan Diameter mm	Quantity	Dry Weight kg	Wet Weight kg
GAS-045/2	1300x1300x1346	2"/2"NB	1060	1	448	472
GAS-058/2	1910x995x1346	2"/2"NB	750	2	504	496
GAS-075/2	2825x995x1346	2"/2"NB	750	3	756	810
GAS-090/2	2520x1300x1345	2"/2"NB	1060	2	896	960
GAS-090/3	2520x1300x1346	2"/2"NB	1060	2	896	960
GAS-145/2	3760x1305x1380	3"/3"NB	1060	3	710	810
GAS-145/3	3760x1305x1380	3"/3"NB	1060	3	710	810
GAS-160/2	3760x1610x1380	3"/3"NB	1060	3	890	1010
GAS-160/3	3760x1610x1380	3"/3"NB	1060	3	890	1010
GAS-175/2	4960x1305x1380	3"/3"NB	1060	4	950	1080
GAS-175/3	4960x1305x1380	3"/3"NB	1060	4	950	1080
GAS-225/2	4960x1610x1380	3"/3"NB	1060	4	1200	1360
GAS-225/3	4960x1610x1380	3"/3"NB	1060	4	1200	1360
GAS-275/2	6200x1610x1380	3"/3"NB	1060	5	1480	1680
GAS-275/3	6200x1610x1380	3"/3"NB	1060	5	1480	1680
GAS-300/5	4960x2135x1400	3"/3"NB	1400	3	1070	1300
GAS-350/5	6200x2135x1400	3"/3"NB	1400	4	1670	2006

Motor make: SIEMENS

## TYPICAL APPLICATION

Air compressor  
Induction furnace  
Plastic Injection moulding machine  
Hydraulic power pack  
Aluminium die casting machine  
Pressure die casting machine  
Process cooling

## SALES & CUSTOMER CARE



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