

# SKYMECH STAFOR ION BOILER

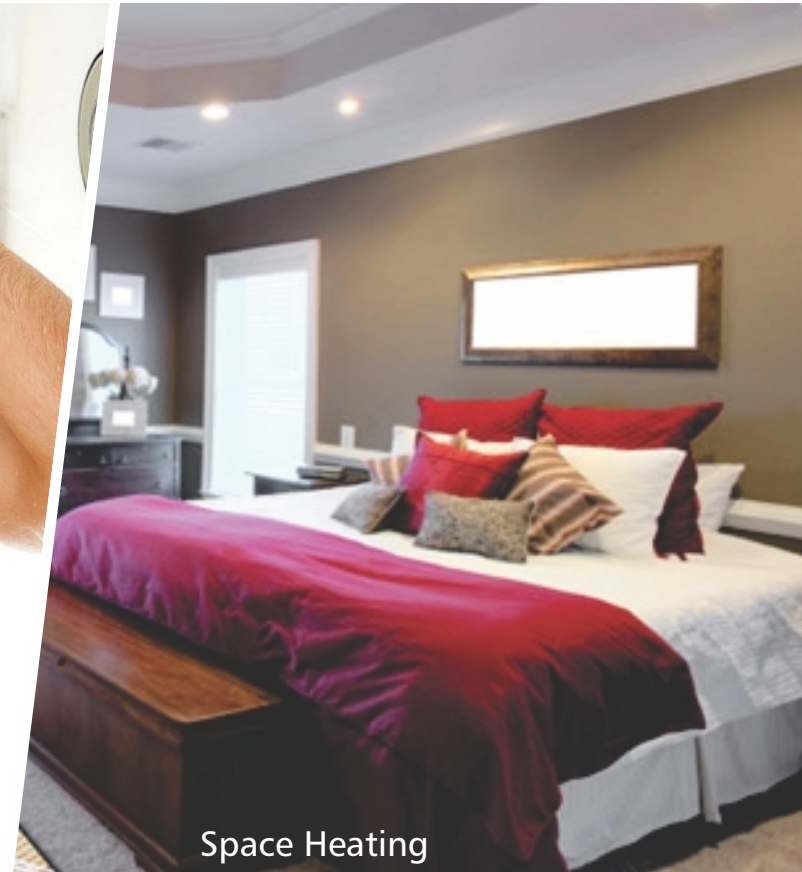
AN EUROPEAN INNOVATIVE SUPER HEATING SYSTEMS



In Industries for  
Water Heating Applications



Bath  
Heating



Space Heating



upto  
**70%**  
Cost  
**Saving**



Terms & Conditions are Applicable

## ABOUT SKYMECH STAFOR

Stafor Ltd. Latvia (Europe) is Collaborated with SKYMECH Engineers Pvt. Ltd. for manufacturing and selling its products SKYMECH STAFOR ion boiler in INDIA. SKYMECH Engineers Pvt. Ltd., Jaipur (Rajasthan) based company with an exposé of over 20 years in the business of Water Heating and water treatment handed over by our group company "UNITECH ENERGY".

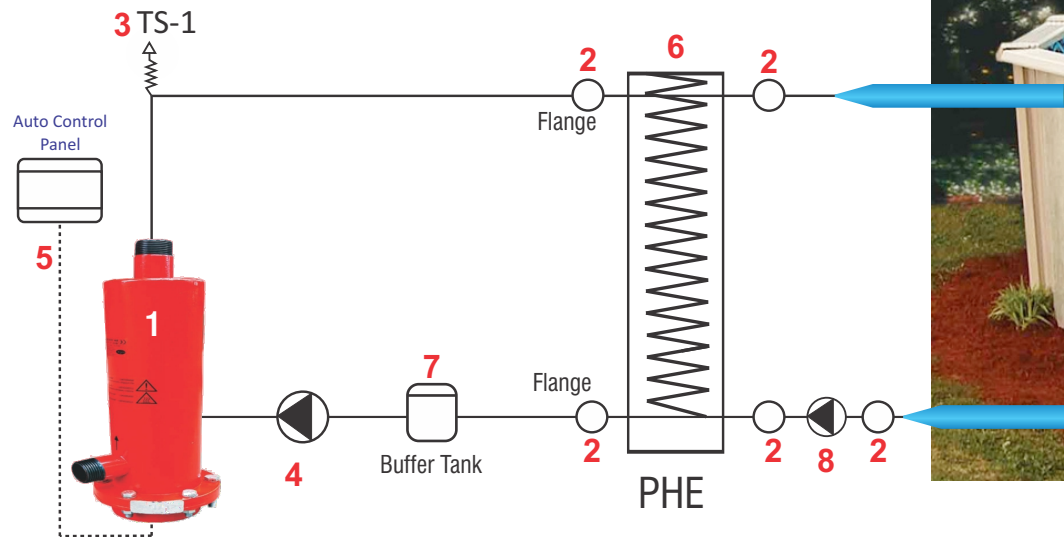
Company develops and produces totally new, for the market products. For that high-qualified external experts and company personnel is realizing big research program. In this research program, company pays attention to building technology and materials.

## ABOUT ION BOILERS

The technology of Ion Boiler is not a new one. It is a technology on which the working of sub-marines (Pandubbi) base. These have been used since decades and are still being used on large-scale by many countries of Europe, USA & South Africa.

This technology is based on the fact of getting maximum heating by giving minimum input and was exposed to public around 15 years ago. 12 year old practice of operation of heating systems with ion boilers STAFOR in Latvia shows that the heated thus cheaper than oil-fired boilers or liquefied gas. Cheaper natural gas only from the "pipe" and a solid fuel (firewood, charcoal, etc.).

### Layout Plan - SKYMECH STAFOR Ion Boiler For Water Heating



1. Ion boiler

3. Temp. Sensor

5. Auto Control Panel

7. Makeup Tank (Buffer Tank)

9. Hot Water Tank (Pool)

2. Flange

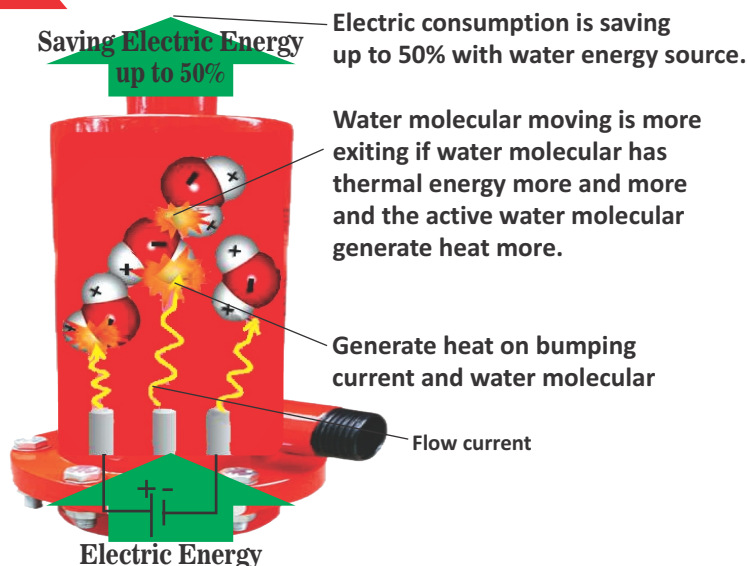
4. Pump (Primary)

6. PHE

8. Pump (Secondary)

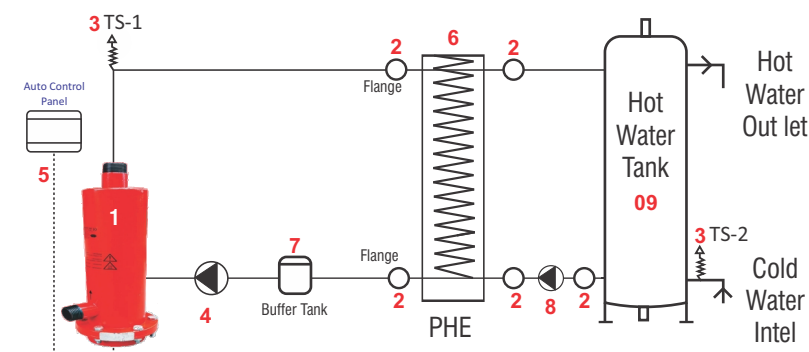


# HOW TO WORK ION BOILERS



**Working principle of Skymech Stafor Ion Boilers:** SKYMECH STAFOR's specific "Heat Carrier" which is the solution on specific ratio of DM water and other chemicals is the main functioning part of the ION Boiler. The base conductivity is zero of this solution but with the addition of another specific fluid it has convert into very high efficiency conductor means because of ionization it product +ev ions and -ev ions.

When we flow the current in the ION Boilers electrodes then the ions of heat carrier attract toward the opposite charged electrodes and the water molecule start moving more and more consequently the solution produce the thermal energy more and more. The efficiency of this heat is more than the traditional water heater. In the alternative current the electric charge change frequently in between the both electrodes, it helps to movement of ions in between electrodes and consequently more and more thermal energy produce in the heat carrier and the COP/Heat reached up to 204% comparative to traditional electric water heater.



## TECHNICAL SPECIFICATIONS

S. No.	PARAMETER	Unit	3-5 KW	5-10 KW	6-9 KW	10-20 KW	20-30 KW
1	Rated Voltage Single-phase AC in	V	230 ± 10%	230 ± 10%	400 ± 10%	400 ± 10%	400 ± 10%
2	The Minimum frequency of the AC	Hz	50	50	50	50	50
3	Operating Current, not more than	A	25	40	18	40	60
4	Nominal Power	kW	5	10	9	20	30
5	The Maximum temperature at the outlet of the ion boiler	°C	95	95	95	95	95
6	The work temperatures at the outlet of the ion boiler	°C	90	90	90	90	90
7	The size, length/height/diameter	mm	260/95/40	115/405/62	240/160/125	340/160/125	420/160/125
8	Weight, not more than	kg	2	5	5	6	10
9	Class of protection against electric shock	-	1st	1st	1st	1st	1st
10	The degree of protection from moisture	-	IP44	IP44	IP44	IP44	IP44

# KEY FEATURES OF SKYMECH STAFOR ION BOILER



## EFFICIENCY

There is increased rate of energy conversion from electrical to thermal with COP/Heat from 1 to 2.04 (204%), depending on the model of boiler and operation mode.



## ELECTRICAL SAFETY

The original, patented design of the boiler is fundamentally. It enables to use a principle of the separation of working and protective field ("Faraday Cell")

To date, it is the only ion (electrode) boiler of a flow type that is entirely consistent with the requirements of the European Community Low Voltage Directive № 73/23/ EEC on electrical safety and authorized ofr sale and use in the EU member states.



## QUALITY AND RELIABILITY

A large margin of safety for materials is incorporated in to the ion boiler SKYMECH STAFOR DURING ITS DESIGN . The use of high-tech alloys and plastics (with heat resistance up to 700°C with enhanced dielectric properties provides high quality and reliability of the boiler SKYMECH STAFOR, making it preferable in compression with other manufacture's products.)

All materials used in the manufacture of the boiler have European quality certificates.

- The service life of the ion boiler SKYMECH

STAFOR subject to the rules of installation and operation is at least 20 years. Effective and reliable automation of ion boilers STAFOR.



## SKYMECH STAFOR CONTROL PANEL

- Electronic ON & OFF of the ion boiler. Control circuit is operated by one or more powerful triacs
- Increase in equipment lifetime
- Automatic shutdown of the boiler at a "loss" of any incoming electrical phases and voltage up and down. Fully automated switch ON of system when power is restored. This keeps the boiler in economy mode.

- Automatic voltage controller.
- Completely silent operation.
- Compact & small size



Environmental merit



Quick and easy installation



No fire and explosion hazard



Protection from freezing the system (ion boilers heat carrier are not frozen to -40°C)



Class-I electrical safety (certificate Nr. T25D07, T37D08) in accordance with European Union standards

## CENTRAL HEATING IN HOTEL

Working perfectly in -40°C temperature



OUT SIDE VIEW OF HOTEL



SAME TIME IN SIDE VIEW OF HOTEL



## COMPARISON WITH OTHER SYSTEMS

SKYMECH STAFOR do not have direct analogues in the market. The design of the boiler used a patented solution to fulfill all the requirements of European directives on low voltage Nr. EN 60335-1. Our boilers have class I electrical safety, as evidenced by a record of testing Nr. T25D07, T37D08 and may, without limitation installed in the EU.

S. No.	PARAMETERS	STAFOR ION BOILER	DIESEL FIRED GENERATOR	ELECTRIC BOILER	HEAT PUMP
1	Average COP/Heat	upto 204% (on any temp.)	90%	70% - 98%	Less than 200% (When Ambient temp. less than 5°C then raise upto 50°C)
2	Heat Carrier (Media)	Stater EKO (Special Heat Carrier)	Soft Water	No media	Refrigerant
3	Place of Installation	Any Place	Any Place	In Inbuilt of Tank	Mostly in covered area
4	Source of Energy	Electricity	Diesel & Electricity	Electricity	Electricity
5	Temperature of Hot Water	up to 95°C (setting)	up to 90°C (setting)	Depends on Thermostat	Max. upto 55°C
6	Control Panel	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual
7	Climatic Constraints	No	Yes	No	Yes
8	Automatic Safety Control	Yes	No	No	NO
9	Air Pollution	No	Yes	No	No
10	Sound Pollution	No	Yes	No	Yes
11	Chimney Required	No	Yes	No	No
12	Space Required	Less Space	Big Space	Big Space	Big Space
13	Maintenance	No	Yes	Yes	Yes
14	Make up Tank	No	Yes	No	No
15	Fuel Tank Space	No	Yes	No	No
16	Guarantee	2 Year (For Electrodes)	No	No	No
17	Warranty	2 Years	1 Year	No	1 Year



## APPLICATION & INSTALLATION

• Domestic	• Swimming Pool	• Space/Central Heating
• Hospitality	• Prisons	• Automobile Industry
• Hospitals	• Sports & Wellness Centers	• Process Industry
• Hostels ( Educational / NGO )	• Army Barricks	• Dairy Industry
• Pilgrimage (Community accommodations)	• Plating Industry	• And All Types of Heating ...



Installation at :  
Hotel Kapish Smart, Banipark, Jaipur



Installation at :  
Hotel Avishi Green, Manali





Installation at :  
Hotel Maharaja, Nainital



Installation at : LK Singhania School  
(JK White Cement Ltd.), Gotan (Raj.)



Installation at : Varroc Engineering Ltd.,  
Udham Singh Nagar (UK.)



Installation at :  
Bajaj Auto Ltd, Pantnagar

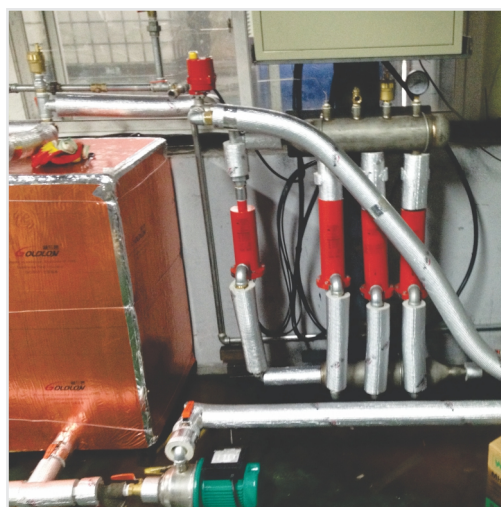




Installation at : -  
Kutchi Ashram, Haridwar



Installation at : Shekhawati hotel  
& Resorts, Churu



Installed at :  
Seoul, South Korea



Installation at :  
Shahpura Residency,  
(A Unit of Hotel Shahpura House)  
Tonk Road, Jaipur



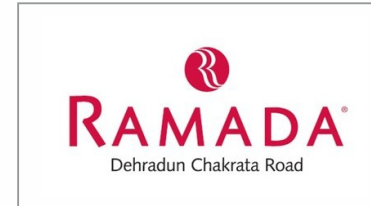
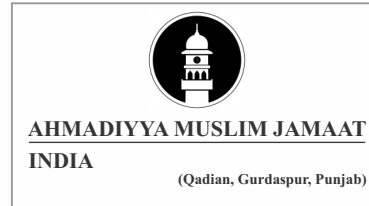
Installation at :  
Jay Shree Periwal House,  
Jaipur



Installation at :  
Ahmadiyya Muslim Jamaat  
Qadian, Gurdaspur



## Our Credentials



And many more...

## Certifications & Approvals

- C E Approved (EN603351, EN60335-2-35)
- NMC T25D07 Riga, Latvia (EUROPE)
- Regulations of European Parliament & Council (EK) NR.1907/2006 (REACH)
- European Union approved center of Metrology, Protocol 016TP11.
- Class 1 electrical safety (certificate nr. T25d07, T37d08) in accordance with European union standards.
- A++ Energy Saving Certificate (European Union)



# SKYMECH Engineers Pvt. Ltd.

(An ISO- 9001:2015 Certified Company)



Distributor / Sub. Dealer

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