



aswathy heat tech
HEAT TREATMENT FURNACES

MOVING FORWARD WITH NEW TECHNOLOGY
AND CUSTOMER SATISFACTION



ASWATHY HEAT TECH WHO WE ARE ?

A furnace or direct fire theater is an equipment used to provide heat for a process. It can also serve as reactor providing heats of reason.

The furnace designs vary accordingly suiting its function, heating duty, type of fuel and method of introducing contribution air **Aswathy™** has emerged with esteem as a leading manufacturer, designing and building high temperature furnaces, quench tanks, and heat treating systems. With years of accumulated technical experience, backed by advanced technology and knowledge bank of our specialist international associates, **Aswathy™** ensured that the furnaces supplied achieve pivotal and high standards of performance.

Eventually,
it also keeps in mind the well
suited compatibility level
with the local conditions
and individual requirements.

ASWATHY HEAT TECH WHAT WE DO ?

Each furnace of **Aswathy™** meets precise temperature requirements, allowing for optimal flow in the forging process. They are also designed to meet key business and operational criteria for portability, automation, space conservation, robotic compatibility, flexibility, efficiency, and budgetary limitations. We serve our customers through a responsive quality system by designing, selling and delivering products that meet or exceed performance and anticipations. open, active communication and training throughout all levels of the company provides a commendable forum that further ensures understanding, implementation and maintenance of the quality policy.

Our engineering expertise and technical knowledge is at par in the industry. Using the best appliances for the job, from the latest in engineering software packages to the most advanced control systems; our engineering staffs leads you to the best solution for your application. We earn a leadership position by providing our customers with innovative, high quality, cost-effective and environment friendly products. We add value to these products by providing legendary customer service through our uncompromising commitment to customer satisfaction.



BATCH TYPE SEALED QUENCH FURNACE

Features Include

- Uniform heating through close pitch radiant tubes located on either side from top. Options for electric / gas fired radiant tubes available
- Fully automated control systems with PLC, Thyristor with PID temperature control, Carbon potential controller and scada system
- Touch screen graphic operator panel with alarm annunciation, Multi point temperature recorder
- Cast integral fan for uniformity of temperature and atmosphere
- Silicon carbide skids or Heat resistant steel T-rails
- Pneumatically operated doors, Elevators etc.
- Options for using Endo gas, Nitrogen-Methanol LPG Process Atmospheres
- Integrated and compact layout with Washing, Tempering and Material handling equipment at economical prices
- Turnkey project offered with process knowhow
- All alarms and annunciation with inter locks are provided for operating safety
- Low cost spares with easy availability

Applications

Carburising & Hardening	Carbo Nitriding	Carburising & Annealing
Bright Hardening	Nitro Carburising	Normalising

Furnace Data

Model	Effective Dimension (mm)			Max Operating Temperature °C	Power Requirement (KW)			Atmosphere Requirement Nm ³ /Hr	Gross Capacity/ Charge (Kgs)
	Length	Width	Height		Heating Chamber	Quench Oil Tank	Other		
AHT 10 X	560	300	300	950	27	12	8	4	80
AHT 30 X	600	450	350	950	30	15	10	5	200
AHT 40 X	955	510	455	950	40	30	10	8	320
AHT 40 XL	955	510	500	950	54	30	10	8	400
AHT 80 X	1230	660	500	950	80	48	16	9	550
AHT 80 XL	1230	660	650	950	80	48	19	10	600
AHT 80 EXL	1230	660	700	950	100	48	19	10	600
AHT 100 XL	1230	660	650	950	100	48	24	15	720
AHT 120 XL	1230	760	800	950	120	60	24	18	1000

- Note:
1. Power Requirements for oil tank apply for hot quenching processes.
 2. Furnaces of other dimensions can be manufactured to customer specification
 3. Overall furnace dimensions mentioned above are excluding Air & Gas piping
 4. Gas red heating option is also available



TEMPERING FURNACES

Tempering furnaces are offered for both low and high tempering processes. The options available for tempering furnaces are:

Pit type	In-out Box Type	Double door straight through Box Type
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Features

- Motorised Roller Driven
- Coiled or Radiant Tube type heaters
- Can also be used as preheating furnace
- Heat Resistant Fan and Baffle for uniformity of temperature

TEMPERING FURNACES						
Model	Effective Dimension (mm)			Max Operating Temperature °C	Gross Capacity Charge (Kgs)	Power (Kw)
	Length	Width	Height			
AHT 10 X	560	300	300	550	80	12
AHT 30 X	600	450	350	550	200	18
AHT 40 X	955	510	455	550	320	30
AHT 40 XL	955	510	500	550	350	30
AHT 80 XL	1230	660	500	550	520	45
AHT 80 EXL	1230	660	650	550	600	45
AHT 80 EXL	1230	660	700	550	600	45
AAHT 100 XL	1230	760	650	550	720	45
AHT 120 XL	1230	760	800	550	1000	48

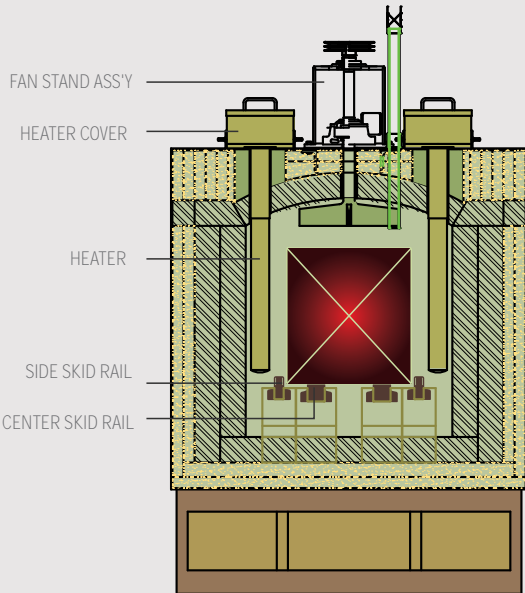


CONTINUOUS TYPE GAS CARBURISING FURNACE (CGCF)

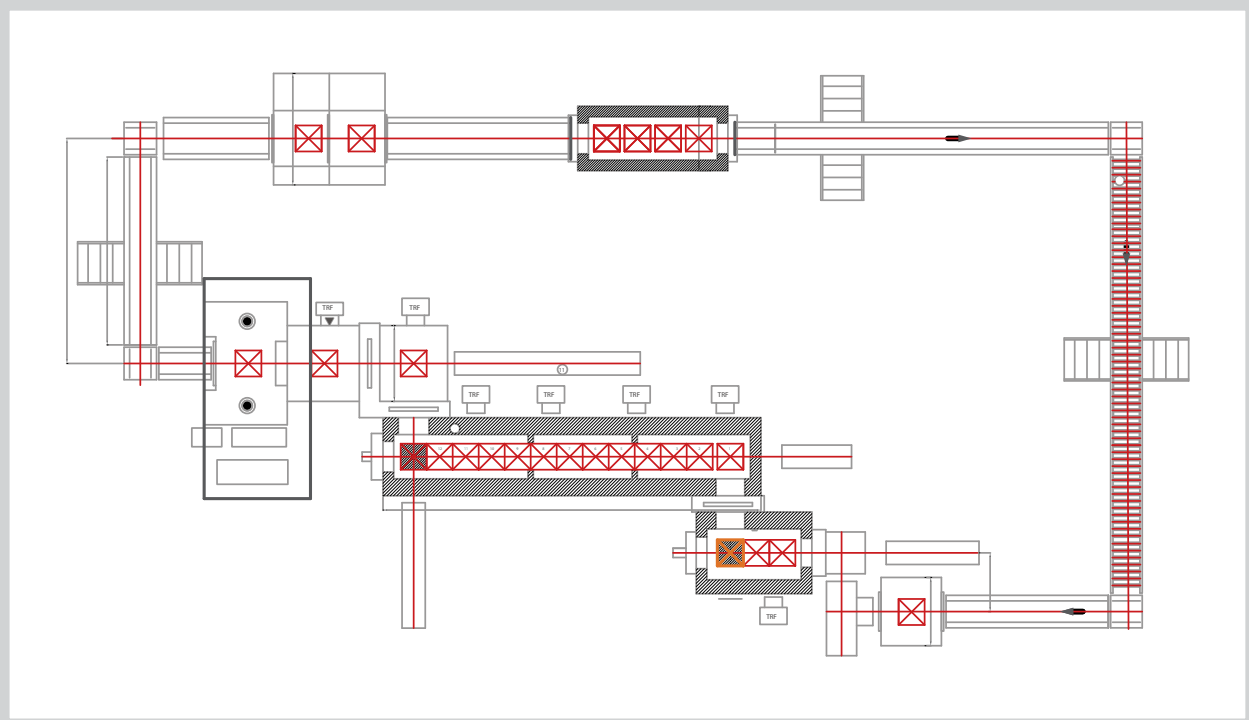
Single track continuous gas carburising design offers consistent production at low operating costs.

Newest range of sophisticated controls including data acquisition systems ensure high quality heat treatment. These furnaces are available from various capacities ranging from 125-600 Kgs per hour. The lines offered include burn off, pre-heating, main carburising chamber, optional inter cooling chamber, reheating quench tank, post wash, tempering and associated material handling equipment

These furnaces are also available with Endo gas and Nitrogen - Methanol system, as also with gas fired / electric heating.



Model	Tray Size W x L x H (mm)	Maximum operating Temperature °C	Gross Capacity Kg / Hr
AHT 01	565 x 565 x 610	950	125 - 400
AHT 02	615 x 615 x 655	950	125 - 400
AHT 03	615 x 460 x 655	950	125 - 400





ALKALI WASHING MACHINE

SINGLE ZONE 3-STAGE

- Electrically heated / heated with two or three stage designed for Pre and Post washing
- In out chain mechanism
- Over flow tank with patented skimmer mechanism removes oil from the tank
- Additional hot water spray can be incorporated optionally for final rinse
- Hot air blower dries the parts after washing



ROTARY HEARTH FURNACE

- A Furnace with rotating hearth with adjustable speed. Used mostly for reheating and hardening of pre carburised large sized components, which require press or plug quenching.
- Seperate doors for loading and unloading prevents product mix-up
- Atmosphere options for Nitrogen Methanol / Endogas gas system available.
- Can be custom built to suit individual applications.
- Maximum temperature 900C.

MESH BELT FURNACES

- Continuous type mesh belt conveyor furnaces offered for hardening of large volume components like fasteners, bearing parts, fine blanked components
- The belt can be offered with maximum width of 1000mm Furnace eatures top and bottom placed radiant tube heaters with integral quench tank for bright hardening
- Furnace can be offered for operation with Nitrogen Methanol or Endo gas atmosphere
- The full automatic line consists of vibratory / ram loaders, pre wash, harden & quench, post wash, temper and associated material handling equipment Maximum operating temperature 900°C

Mesh Belt Hardening furnaces

Capacity: 80-500 kgs/hr Maximum Temperature: 900°C

Mesh Belt Tempering furnaces

Capacity: 80-500 kgs/hr Maximum Temperature: 650°C

Mesh Belt Washing machine

Capacity 80-500 kgs/hr



PIT TYPE FURNACES

Uniform heating throughout the retort with electrical heating coils.

- Fully automated control system with Thyristor control with PID Temperature control, Carbon controller with proportional value.
- Cast fan for uniformity of temperature and atmosphere.
- Hydraulic Operated Doors.
- Options for using carbodrip, LPG & methanol, Methanol & Acetone atmosphere.
- Low cost spares with easy availability.

Applications

Carburising	Case hardening	Annealing
Hardening	Tempering	Normalising
Stress Releaving		

Model	Diamension (mm)	Heigth (mm)	Kw	Capacity (Kg)
AHT GCF 001	500	900	26	300
AHT GCF 002	550	1000	30	400
AHT GCF 003	600	1200	40	500
AHT GCF 004	650	1200	50	600
AHT GCF 005	700	1200	60	750
AHT GCF 006	850	1200	70	800
AHT GCF 007	900	1200	80	900
AHT GCF 001	1000	1200	90	1000

SPARE PARTS

The images shown below are some of our heat treatment machine's spare parts. We are selling this all over india.



JOB PRODUCTS

The images shown below are some of our sample heat treated products that we have done to our esteemed clients.







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HEAT TREATMENT FURNACES



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