

# Unit heaters with axial fan



**GÖNKA®**  
HEATING - VENTILATING - AIR CONDITIONING



GÖNKA GTA series unit heaters are designed to meet the heating requirements of workshops, warehouses, factories, stores, garages, sporting halls etc. They are manufactured so as to be connected either to hot water, superheated water or steam lines. There are 12 models in order to provide heating capacities up to 50.000 Kcal/h and they are available in two types; wall mounted and ceiling.

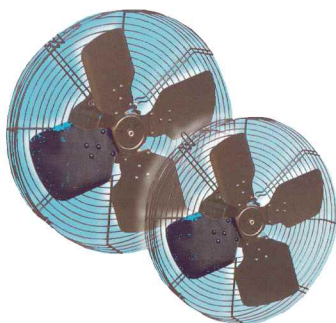
## TECHNICAL SPECIFICATION

### Casing

Manufactured from phosphatized steel sheets finished with oven baked electrostatic paint.

### Axial fan-motor group

As a standard the axial fans are directly coupled to the electric motor. With the first two unit heaters of 900 rpm, four models operate with 220 V 50 Hz, and the other models operate with 380 V 50 Hz with 1400 rpm. The fans are statically and dynamically balanced to ensure vibration and noise free operation.



### Heating coil

Heat exchanger coils are of steel pipe-steel fin type having tough structure and long operation life. In order to achieve high heat transfer rates the pipes are connected to collectors in staggered pattern. All heating coils are tested under 15 Atm pressure. When desired the heating coils can also be manufactured from copper pipes and aluminium fins.

### Air discharge louvers

In order to direct the airflow to desired direction adjustable discharge louvers, consisting of parallel moving flaps and frames are used. The louvers on wall mounted units provide airflow in one direction, while the louvers on the ceiling types distribute the air symmetrically in two directions.



### Coil connections

Connection of the coils to the hot water or steam lines is done easily via coil union stems, manufactured to fit standard pipes.

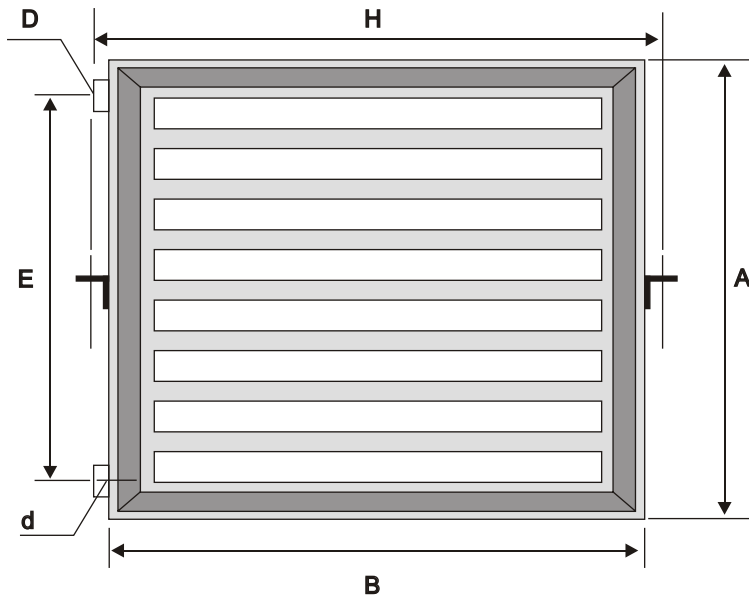
### Hanger

There are two hangers for wall mounted units and four hangers for ceiling models. Hangers are designed to carry the unit safely.

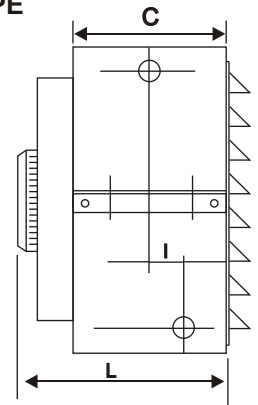


**DIMENSION TABLE**

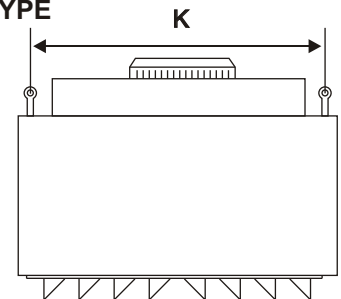
TYPE	A	B	C	E	H	I	K	L	Steam		Hot water
									D	d	D=d
GTA 4	440	440	280	370	480	140	400	410	25	3/4"	3/4"
GTA 6	440	440	280	370	480	140	400	410	25	3/4"	3/4"
GTA 8	440	440	280	370	480	140	400	410	25	3/4"	3/4"
GTA 10	440	440	280	370	480	140	400	410	25	3/4"	3/4"
GTA 12	460	460	330	390	505	190	410	465	32	3/4"	1"
GTA 16	510	510	330	430	505	190	410	465	32	3/4"	1"
GTA 20	570	570	330	535	610	180	500	465	32	3/4"	1"
GTA 24	570	570	330	535	610	180	500	465	40	1"	1"
GTA 28	620	620	350	535	660	170	520	490	40	1"	1"
GTA 32	640	640	350	560	685	170	540	490	40	1"	1"
GTA 40	720	720	350	630	760	170	630	500	50	1"	1 1/4"
GTA 50	750	750	350	670	790	170	650	500	50	1"	1 1/4"



**WALL TYPE**



**CEILING TYPE**



**CAPACITY TABLE**

TYPE	Air flow rate m <sup>3</sup> /h	Motor speed rpm	Motor Voltage V	Power input W	90/70 °C hot water 18 °C (air)			130/90 °C H.T.H. water 18 °C (air)			0.1 Atu steam 18 °C		Approx weight kg
					Kcal/h	Blow °C	P water mmSS	Kcal/h	Blow °C	P water mmSS	Kcal/h	Blow °C	
GTA 4	650	900	220	66	4000	39	30	8000	59	24	7000	54	45
GTA 6	650	900	220	66	6000	49	35	10000	69	30	9000	64	47
GTA 8	1200	1400	220	110	8000	40	80	14000	57	60	12500	53	50
GTA 10	1200	1400	220	110	10000	46	100	17500	67	75	15800	62	55
GTA 12	1600	1400	380	85	12000	43	120	19000	58	80	17000	53	62
GTA 16	2000	1400	380	130	16000	45	170	25000	60	110	24000	58	70
GTA 20	3000	1400	380	150	20000	42	310	27000	63	220	26000	61	87
GTA 24	3000	1400	380	150	24000	45	325	33500	55	260	32000	54	90
GTA 28	3000	1400	380	150	28000	49	470	36500	59	310	34500	56	107
GTA 32	3600	1400	380	250	32000	48	520	42000	57	340	44000	59	110
GTA 40	5000	1400	380	445	40000	45	900	55000	55	450	56000	56	145
GTA 50	5000	1400	380	445	50000	51	960	72000	66	490	71000	65	150

## SELECTION

### Selection

Values given in the capacity table are according to 18°C air inlet, 90/70°C hot water inlet/outlet, 130/90°C superheated water inlet/outlet temperatures and 0,1 Atm steam. To find out the capacities for different conditions coefficients given in the table below should be used.

### Example

Selection of unit heater with 16000Kcal/h capacity is required, when heating fluid is steam at 1Atm steam pressure and the air inlet temperature is 10°C. The Z coefficient is found from the below table as 1.29.

Then required capacity;

$$Q = \frac{Q'}{Z} = \frac{16000}{1.29} = 12400 \text{ Kcal/h}$$

Q : Nominal heating capacity(Kcal/h)

Q': Heating capacity under operating conditions

Z : Correction coefficient

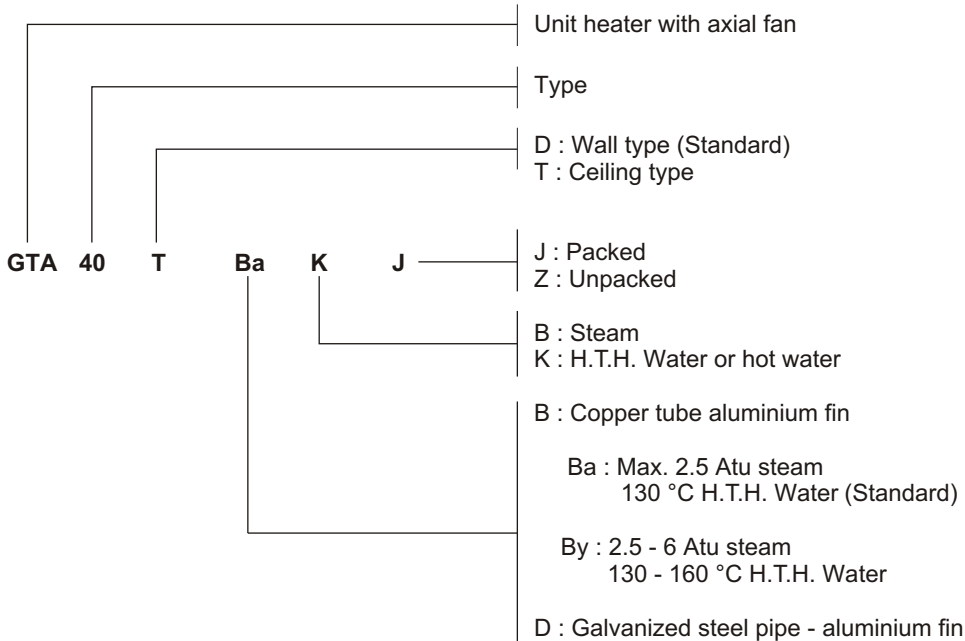
From the capacity table model GTA 8 is selected, which provides heating capacity of 12500 Kcal/h at 0,1Atm steam pressure and 18°C air inlet temperature.

At the required conditions this unit will provide 1.29x12500=16125Kcal/h heating capacity.

## CORRECTION FACTOR TABLE

Inlet air temp. °C	Air density kg/m³	Z COEFFICIENT													
		Hot water 90/70 °C	Steam									H.T.H. Water			
			0.1 Atm	0.3 Atm	0.5 Atm	1 Atm	2 Atm	2.5 Atm	3 Atm	4 Atm	6 Atm	110/80 °C	130/90 °C	150/110 °C	160/120 °C
22	1.197	0.86	0.95	0.98	1.02	1.12	1.32	1.37	1.42	1.52	1.68	0.76	0.93	1.12	1.29
20	1.205	0.97	0.98	1.04	1.09	1.18	1.37	1.42	1.47	1.57	1.73	0.82	0.98	1.20	1.32
18	1.213	1.00	1.00	1.06	1.13	1.24	1.38	1.44	1.49	1.60	1.76	0.84	1.00	1.22	1.34
15	1.226	1.03	1.05	1.10	1.16	1.26	1.42	1.48	1.53	1.64	1.81	0.87	1.03	1.25	1.38
10	1.248	1.12	1.13	1.18	1.24	1.29	1.48	1.54	1.59	1.71	1.87	0.92	1.08	1.30	1.43
5	1.270	1.19	1.21	1.28	1.32	1.43	1.56	1.62	1.68	1.81	1.97	0.97	1.13	1.35	1.48
0	1.293	1.28	1.28	1.34	1.41	1.51	1.66	1.73	1.79	1.92	2.07	1.02	1.17	1.39	1.52

## ORDER NOTATION



## FACTORY

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