Unit Heater

MODEL KEYWORD

UHC 1 50 6 2 B

- **Production series**
- **Number of rows :** *1,2,3,4*
- **Fan diameter :** 350 , 400 , 450 , 500 [mm]
- **Number of poles :** 4,6
- **Number of fans :** 1,2
- **FPI :** FPI=8 (A) , FPI=10 (B) , FPI=12 (C)

General Description:

"UNIT HEATERS" of TECHNO ACTOR Corporation are manufactured using the best quality materials. These products are of low sound level and high thermal capacities. They are made to be installed in a panel with one or two axial fans. To avoid any oscillation, fans are balanced before installations.

Components description:

Casing:

Casings are made of 1.5mm thick iron sheet with cooked electrostatic-resistant paint.

Coils:

Coils are manufactured from 100 to 200 microns aluminum fins (8 F.P.I fin space).*
Copper tubes of 5/8 OD, which have been mechanically expanded, are used with fins.
Each coil has a pair of standard galvanized steel (or aluminum) tube sheets.**
Hot water and steam coils are produced in 1-4 rows and "staggered arrangment"of 25*50 tubes pitch.
Treated head connections are made of standard size tubes.

*: Copper fins are optional
**: Aluminum tube sheets are optional

Fans and motors:

Axial fans with 4 or 6 poles and single phase are used.Different types of fans can be installed upon request.

Selection method for hot water coil unit heater :

Tables 2 to 5 are used for selecting hot water coil Unit Heater where the heat load is known. The values of these tables are based on 180°F entering and 160°F leaving water temperature and 60°F entering air temperature. In cases where temperature is out of these values the heat capacity read from these tables will be multipled by factors that are given in Correction Factor table (table 6).

Selection method for steam coil unit heater :

Steam coils can be selected according to specifications mentioned in tables 2 to 5.Correction factors for other conditions, other than those mentioned at capacity tables can be obtained from tables7 and 8.

HEATING CAPACITY

MODEL	ROW	HOT WATER COIL				STEAM COIL		
		BTU/HR	GPM	FINAL TEMP.[°F]	PD[ft-water]	BTU/HR	FINAL TEMP.[°F]	COND.[lb/hr]
UHC*3561A	1	28200	3	81	0.28	60000	103	1.04
	2	52600	5.5	99	1.8	98800	131	1.71
	3	64800	6.5	107	1.19	125300	150	2.17
	4	74100	7.5	114	0.92	144600	164	2.5
UHC*4061A	1	39400	4	78	0.6	83800	99	1.46
	2	62500	6.5	89	0.29	140800	125	2.44
	3	81500	8.5	98	0.26	181100	144	3.13
	4	108500	11	111	1.62	210900	157	3.64
UHC*4561A	1	49000	5	76	0.56	103200	93	1.8
	2	96800	10	92	4.3	179600	118	3.11
	3	107300	11	95	0.33	236500	136	4.09
	4	147400	15	108	2.5	279800	150	4.84
UHC*5061A	1	73000	7.5	81	1	147400	101	2.55
	2	117400	12	93	0.7	244300	128	4.23
	3	147900	15	102	0.5	311700	147	5.39
	4	172000	18	109	0.41	360600	161	6.24
UHC*3562A	1	65300	6.5	84	2	120000	103	2.08
	2	104200	10.5	98	1.42	197700	131	3.42
	3	143400	14.5	113	8	255900	152	4.43
	4	163400	16.5	120	6.6	289200	164	5
UHC*4062A	1	92200	9.5	82	5	167700	99	2.91
	2	147900	15	95	2.4	281600	125	4.87
	3	188600	19	104	2	362200	144	6.26
	4	217000	22	111	1.4	421800	158	7.29
UHC*4562A	1	114400	12	79	5	206600	93	3.58
	2	193600	20	92	3.7	359200	117	6.21
	3	251700	26	101	2.8	473100	136	8.17
	4	296300	30	108	3.3	559600	150	9.69
UHC*5062A	1	165200	17	83	8	297800	102	5.17
	2	267300	27	98	5.5	497800	129	8.62
	3	336900	34	108	3.9	623400	147	10.78
	4	388600	40	115	3.15	721300	161	12.48
UHC*3541A	1	29500	3	75	0.28	65800	93	1.14
	2	59400	6	90	2.1	114800	117	1.99
	3	72900	7.5	97	0.67	151700	135	2.63
	4	91600	9.5	106	1.4	179800	149	3.12
UHC*4041A	1	38900	4	74	0.6	79900	89	1.39
	2	64500	6.5	83	0.29	144800	112	2.51
	3	88400	9	92	0.28	195500	130	3.38
	4	123000	13	105	2.2	235500	144	4
UHC*4541A	1	46300	5	72	0.58	92000	84	1.59
	2	95500	10	86	4.2	174000	106	3
	3	112900	12	90	0.39	241900	124	4.19
	4	157300	16	103	2.8	296800	139	5.13
UHC*5041A	1	75300	8	77	1.13	148600	93	2.57
	2	126000	13	89	0.78	258500	118	4.47
	3	163800	17	97	0.61	340400	136	5.8
	4	217500	22	109	4.2	403300	150	6.97
UHC*3542A	1	69800	7	77	2.3	131600	93	2.28
	2	118900	12	90	1.8	229800	117	3.98
	3	155300	16	99	1.46	303300	135	5.25
	4	183200	19	106	1.2	359800	149	6.23
UHC*4042A	1	89100	9	76	4.6	159800	89	2.77
	2	154700	16	88	2.7	289700	112	5
	3	206000	21	97	2.4	391100	130	6.76
	4	244500	25	104	1.75	471000	144	8.15
UHC*4542A	1	104400	11	74	4.2	184000	84	3.19
	2	19100	20	86	3.7	348000	106	6
	3	258300	26	95	2.86	483800	124	8.37
	4	314600	32	103	2.48	593700	139	10.2
UHC*5042A	1	167500	17	79	8	297600	93	5.18
	2	285000	29	92	6	524500	119	9
	3	371200	38	102	4.8	680900	136	11.77
	4	435100	44	109	3.74	806600	150	13.9

**Heating capacity are based on air inlet: 60°F water inlet: 180°F and water outlet: 160°F & steam pressure 15 psi for steam coil.*

Table - 2 : HOT WATER COIL CORRECTION FACTOR

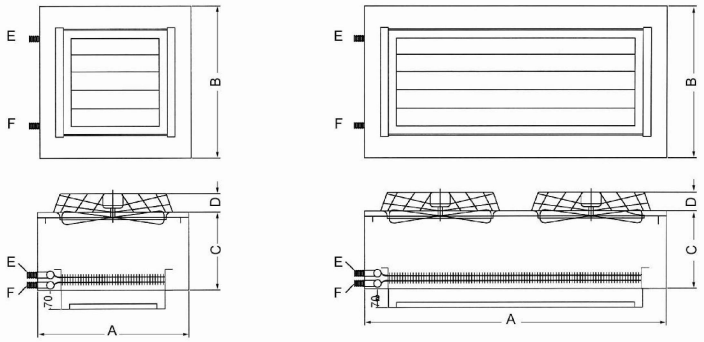
ENTERING AIR TEMP. [°F]	ENTERING WATER TEMP. [°F]						
	160	170	180	190	200	210	220
50	0.91	1.02	1.11	1.21	1.32	1.41	1.52
60	0.8	0.9	1	1.1	1.19	1.29	1.39
70	0.69	0.79	0.89	0.98	1.08	1.18	1.27

Table - 3: STEAM COIL CORRECTION FACTOR

ENTERING AIR TEMP. [°F]	STEAM PRESSURE (PSI)						
	5	15	30	60	100	150	200
50	0.95	1.07	1.24	1.38	1.55	1.69	1.81
60	0.88	1	1.17	1.3	1.46	1.61	1.72
70	0.81	0.92	1.09	1.22	1.38	1.53	1.64

Table - 4: CONDENSATE CORRECTION FACTOR

ENTERING AIR TEMP. [°F]	STEAM PRESSURE (PSI)						
	5	15	30	60	100	150	200
50	0.93	1.07	1.27	1.44	1.66	1.87	2.04
60	0.86	1	1.19	1.36	1.57	1.77	1.94
70	0.79	0.92	1.11	1.28	1.48	1.68	1.85



*DIMENSIONS

MODEL	A	B	C	D	E			
					1 ROW	2 ROW	3 ROW	4 ROW
UHC*35*1	580	580	300	150	3/4"	3/4"	1"	1"
UHC*40*1	630	630	300	150	3/4"	1"	1 ¼"	1 ¼"
UHC*45*1	680	680	300	150	1"	1 ¼"	1 ½"	1 ½"
UHC*50*1	780	780	300	150	1 ¼"	1 ½"	1 ½"	1 ½"
UHC*35*2	780	580	300	150	1	1 ¼"	1 ¼"	1 ½"
UHC*40*2	980	630	300	150	1	1 ½"	1 ½"	2"
UHC*45*2	1180	680	300	150	1 ¼"	1 ½"	2"	2"
UHC*50*2	1380	780	300	150	1 ½"	2"	2"	2"

**All dimensions are in mm.*

CAPACITY CORRECTION FACTOR FOR DIFFERENT F.P.I

F.P.I=8 (A)	F.P.I=10 (B)	F.P.I=12 (C)
1.00	1.12	1.21

PHYSICAL DATA

MODEL	UHC*35*1	UHC*40*1	UHC*45*1	UHC*50*1	UHC*35*2	UHC*40*2	UHC*45*2	UHC*50*2
Fan								
Number of fan	1	1	1	1	2	2	2	2
Fan diameter(mm)	350	400	450	500	350	400	450	500
Power(w)	65-130	120-160	165-245	250-300	2*65-2*130	2*120-2*160	2*165-2*245	2*250-2*300
cfm	1240-1800	1930-2500	2780-3350	3200-4000	2480-3600	3860-5000	5560-6700	6400-8000
Poles	6-4	6-4	6-4	6-4	6-4	6-4	6-4	6-4
Volt	220-240	220-240	220-240	220-240	220-240	220-240	220-240	220-240
Accessory Coils								
Number of Tubes/Row	8	9	10	12	8	9	10	12
Fin length(mm)	400	450	500	600	800	900	1000	1200
Height(mm)	400	450	500	600	400	450	500	600
Face Area(m^2)	0.16	0.202	0.25	0.36	0.32	0.404	0.5	0.72
Number of Rows	1,2,3,4	1,2,3,4	1,2,3,4	1,1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4
Fin/inch	8,10,12	8,10,12	8,10,12	8,10,12	8,10,12	8,10,12	8,10,12	8,10,12