

XG-TH-500 AHRI CERTIFIED RATING POINTS



RADIATED SOUND

Power Levels @ 1.5" w.g. ΔPs

Unit Size	CFM	Min ΔPs	Octave Band					
			2	3	4	5	6	7
4	150	0.03	48	41	32	28	24	20
5	250	0.06	54	46	42	34	31	30
6	400	0.10	58	53	49	44	41	36
7	550	0.06	59	53	46	41	34	31
8	700	0.09	62	56	49	44	36	32
9	900	0.02	58	57	51	43	38	33
10	1100	0.04	59	60	53	46	40	35
12	1600	0.08	60	56	54	46	41	40
14	2100	0.08	62	56	54	44	38	34
16	2800	0.08	64	62	56	50	48	44
20	4400	0.06	69	68	64	61	54	48
24	5300	0.10	73	70	66	63	59	52

DISCHARGE SOUND

Power Levels @ 1.5" w.g. ΔPs

Unit Size	CFM	Min ΔPs	Octave Band					
			2	3	4	5	6	7
4	150	0.03	63	58	54	49	43	37
5	250	0.06	65	60	56	50	46	41
6	400	0.10	66	63	59	52	48	48
7	550	0.06	73	68	60	57	53	50
8	700	0.09	75	71	63	60	56	52
9	900	0.02	71	68	62	58	54	51
10	1100	0.04	72	70	64	59	56	52
12	1600	0.08	68	67	62	60	59	56
14	2100	0.08	65	60	60	62	61	58
16	2800	0.08	73	68	66	64	62	58
20	4400	0.06	80	77	76	76	70	64
24	5300	0.10	85	81	80	81	74	66

PERFORMANCE NOTES

- 1) Radiated sound is the noise transmitted through the unit casing
- 2) Discharge sound is noise emitted from unit discharge into downstream ductwork
- 3) Sound power levels expressed in decibels, (dB) re 10⁻¹² Watts
- 4) Min ΔPs is the min. operating pressure requirement of the unit with the damper full open and is the static pressure drop from the unit inlet to the unit discharge
- 5) Performance data based on laboratory tests conducted in accordance with ASHRAE 130-2016 and AHRI 880-2017
- 6) Discharge sound power levels include duct end reflection corrections per AHRI Standard 880-2017
- 7) Sound performance based on units lined with standard dual density fiberglass insulation

RADIATED SOUND MODEL XG-TH

OCTAVE BAND SOUND POWER, L _w , dB																																				
Unit Size	CFM	Min ΔPs	ΔPs = 0.50 in. wg.							ΔPs = 1.0 in. wg.							ΔPs = 1.5 in. wg.							ΔPs = 3.0 in. wg.												
			2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC						
4	50	0.01	41	32	19	19	15	7	<15	43	34	21	21	17	9	<15	44	35	22	22	18	11	<15	45	38	25	24	23	18	<15	47	40	29	27	27	24
	100	0.02	43	34	23	22	19	13	<15	45	36	25	24	21	15	<15	46	37	26	24	22	17	20	47	40	29	27	27	24	<15	49	43	31	29	27	<15
	150	0.03	46	36	29	26	21	16	<15	48	40	31	28	23	18	<15	48	41	32	28	24	20	21	50	44	35	31	29	27	<15	53	47	41	34	31	29
	200	0.04	49	41	35	29	23	18	<15	51	43	37	31	25	20	22	52	44	38	32	26	22	31	53	47	41	34	31	29	<15	55	49	45	37	36	37
	250	0.06	51	43	39	32	28	26	<15	53	45	41	34	30	28	29	54	46	42	34	31	30	35	55	49	45	37	36	37	19						
5	150	0.03	46	38	29	26	21	16	<15	48	40	31	28	23	18	<15	48	41	32	28	24	20	<15	50	44	35	31	29	27	<15	53	47	41	34	31	29
	200	0.04	49	41	35	29	23	18	<15	51	43	37	31	25	20	<15	52	44	38	32	26	22	<15	53	47	41	34	31	29	<15	55	49	45	37	36	37
	250	0.06	51	43	39	32	28	26	<15	53	45	41	34	30	28	<15	54	46	42	34	31	30	15	55	49	45	37	36	37	19						
	300	0.07	53	46	43	35	32	30	16	55	48	45	37	34	32	19	56	49	46	38	35	34	20	57	52	49	40	40	41	23						
	350	0.09	54	48	46	38	35	33	20	56	50	48	39	37	35	22	57	51	48	40	38	37	22	58	53	51	42	42	42	25						
6	200	0.04	49	41	35	29	23	18	<15	51	43	37	31	25	20	<15	52	44	38	32	26	22	<15	53	47	41	34	31	29	<15	57	52	49	40	40	41
	300	0.07	53	46	43	35	32	30	16	55	48	45	37	34	32	19	56	49	46	38	35	34	20	57	52	49	40	40	41	23						
	400	0.10	55	50	46	41	38	30	20	57	52	48	43	40	34	22	58	53	49	44	41	36	23	59	56	52	46	46	43	26						
	500	0.14	57	53	48	44	40	34	22	59	55	50	46	42	36	24	60	56	51	46	43	38	25	61	59	54	49	48	45	29						
	600	0.15	58	54	49	45	41	35	23	60	56	51	47	43	37	25	60	57	52	47	44	39	26	61	60	55	50	49	46	30						
7	350	0.03	52	41	34	26	21	19	<15	56	47	42	36	28	24	18	56	48	43	38	32	28	18	57	49	46	43	40	38	20						
	450	0.04	52	42	35	29	22	19	<15	56	49	42	37	30	25	18	57	50	45	40	34	30	19	58	53	50	46	42	40	24						
	550	0.06	54	44	36	32	24	20	15	58	51	42	38	30	26	20	59	53	46	41	34	31	21	60	57	52	48	42	40	26						
	650	0.08	55	45	38	34	26	20	16	60	52	44	39	32	28	22	61	55	48	43	36	32	24	62	60	55	50	44	41	30						
	750	0.10	56	47	41	36	28	22	18	62	54	46	40	34	29	25	63	57	50	44	37	33	26	66	62	57	52	44	42	32						
8	400	0.04	52	42	34	28	22	19	<15	56	48	42	36	29	24	18	56	49	44	39	33	29	18	58	51	48	44	41	39	22						
	550	0.06	54	44	36	32	24	20	15	58	51	42	38	30	26	20	59	53	46	41	34	31	21	60	57	52	48	42	40	26						
	700	0.09	56	46	40	35	27	21	18	61	53	45	40	33	28	24	62	56	49	44	36	32	25	64	61	56	51	44	41	31						
	850	0.11	58	49	43	38	30	24	20	63	54	47	42	36	31	26	64	58	51	45	39	34	28	68	64	58	52	46	42	35						
	1000	0.13	60	52	46	42	34	27	22	65	57	50	45	39	33	29	66	60	53	48	42	36	30	70	66	60	54	47	42	37						
9	500	0.01	46	45	34	28	25	21	<15	51	50	44	34	30	24	18	55	51	45	38	34	29	19	59	52	47	44	41	40	21						
	700	0.01	48	47	38	32	27	22	<15	52	52	46	38	32	26	20	56	54	49	41	36	31	23	62	59	53	47	44	41	29						
	900	0.02	48	48	41	35	28	23	15	54	54	48	40	34	27	22	58	57	51	43	38	33	26	64	64	58	50	46	44	35						
	1100	0.04	51	50	44	38	30	24	18	55	55	49	41	35	29	24	59	60	53	46	40	35	30	65	68	61	53	48	47	39						
	1300	0.06	54	54	47	41	32	26	22	58	56	50	42	36	30	25	62	61	54	47	41	37	31	68	70	62	55	50	49	41						
10	700	0.01	48	47	38	32	27	22	<15	52	52	46	38	32	26	20	56	54	49	41	36	31	23	62	59	53	47	44	41	29						
	900	0.02	48	48	41	35	28	23	15	54	54	48	40	34	27	22	58	57	51	43	38	33	26	64	64	58	50	46	44	35						
	1100	0.04	51	50	44	38	30	24	18	55	55	49	41	35	29	24	59	60	53	46	40	35	30	65	68	61	53	48	47	39						
	1300	0.06	54	54	47	41	32	26	22	58	56	50	42	36	30	25	62	61	54	47	41	37	31	68	70	62	55	50	49	41						
	1500	0.08	56	56	49	42	36	20	25	61	58	51	44	38	32	28	66	62	55	48	43	39	32	72	70	63	56	50	41							
12	800	0.02	50	42	35	28	26	29	<15	54	48	45	36	32	32	19	56	51	49	40	36	36	23	58	56	50	46	47	31							
	1200	0.04	51	46	41	34	29	30	<15	56	51	49	39	35	34	23	58	55	53	44	39	38	28	62	62	54	48	48	37							
	1600	0.08	54	48	46	39	33	32	20	58	53	51	42	38	37	25	60	56	54	46	41	40	29	65	65	63	55	49	48	38						
	2000	0.12	55	51	50	42	37	36	24	59	54	52	44	41	39	26	62	58	56	48	44	42	31	66	67	64	56	50	49	39						
	2400	0.17	57	52	46	38	38	36	20	62	57	55	47	44	42	30	64	61	59	51	47	45	34	69	67	66	59	53	51	41						
14	1000	0.02	53	41	39	31	27	22	<15	55	43	41	33	29	24	16	56	44	42	34	30	24	18	57	45	43	35	31	26	19						
	1600	0.05	56	46	44	35	31	26	18	58	48	46	37	33	28	20	58	48	46	38	34	28	20	60	50	48	39	35	30	22						
	2100	0.08	59	54	51	42	36	31	25	61	56	53	44	38	33	28	62	56	54	44	38	34	29	63	58	55	46	40	35	32						
	2600	0.12	62	56	54	43	40	36	29	64	58	56	45	42	38	31	64	58	56	46	42	38	31	66	60	58	47	44	40	33						
	3100	0.16	63	59	56	45	43	39	31	65	61	58	47	45	41	33	66	61	59	48	45	41	31	67	63	60	49	47	43	35						
16	1400	0.02	58	50	40	34	29	24	20	58	54	45	38	34	28	22	60	56	49	44	38	34	25	62	60	56	52	47								

DISCHARGE SOUND MODEL XG-TH

OCTAVE BAND SOUND POWER, Lw, dB																														
Unit Size	CFM	Min ΔPs	ΔPs = 0.50 in. wg.							ΔPs = 1.0 in. wg.							ΔPs = 1.5 in. wg.							ΔPs = 3.0 in. wg.						
			2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC
4	50	0.01	59	47	39	35	29	22	<15	60	55	50	47	39	31	<15	61	56	51	48	40	32	16	64	59	52	51	43	35	20
	100	0.02	60	49	39	34	30	26	<15	61	56	52	47	40	34	16	62	57	53	48	41	35	18	65	60	54	51	44	38	21
	150	0.03	61	51	42	37	32	27	16	62	57	53	48	42	36	18	63	58	54	49	43	37	19	66	61	55	52	46	40	22
	200	0.04	62	52	45	40	34	28	18	63	58	53	49	44	37	19	64	59	54	50	45	38	20	67	62	55	53	48	41	24
	250	0.06	63	54	47	42	36	32	19	64	59	55	49	45	40	20	65	60	56	50	46	41	21	68	63	59	53	49	44	25
5	150	0.03	61	51	42	37	32	27	16	62	57	53	48	42	36	18	63	58	54	49	43	37	19	66	61	55	52	46	40	22
	200	0.04	62	52	45	40	34	28	18	63	58	53	49	44	37	19	64	59	54	50	45	38	20	67	62	55	53	48	41	24
	250	0.06	63	54	47	42	36	32	19	64	59	55	49	45	40	20	65	60	56	50	46	41	21	68	63	59	53	49	44	25
	300	0.07	64	56	51	45	38	34	16	64	61	57	50	46	43	19	65	62	58	51	47	44	20	68	65	61	54	50	47	24
	350	0.09	63	57	52	46	40	37	15	63	61	58	50	47	44	19	64	62	58	51	48	45	20	67	64	61	53	50	48	22
6	200	0.04	62	52	45	40	34	28	18	63	58	53	49	44	37	19	64	59	54	50	45	38	20	67	62	55	53	48	41	24
	300	0.07	64	56	51	45	38	34	16	64	61	57	50	46	43	19	65	62	58	51	47	44	20	68	65	61	54	50	47	24
	400	0.10	65	60	55	49	42	40	20	65	62	58	51	47	47	20	66	63	59	52	48	48	21	69	67	62	55	51	51	26
	500	0.14	68	64	59	54	48	45	22	68	66	62	56	52	50	25	69	67	63	57	53	51	26	72	70	66	60	56	54	30
	600	0.15	68	66	60	56	50	47	25	68	67	63	58	54	50	26	70	68	64	59	54	52	28	72	71	67	62	57	54	31
7	350	0.03	65	58	49	44	39	34	18	69	65	58	54	50	46	24	69	65	58	54	50	48	24	70	66	58	58	54	52	25
	450	0.04	66	60	51	47	40	36	19	71	66	60	55	51	46	25	71	66	60	56	52	50	25	72	68	60	58	54	54	28
	550	0.06	68	62	53	50	42	38	21	72	68	60	57	52	48	28	73	68	60	57	53	50	28	74	69	60	60	56	55	29
	650	0.08	70	64	55	52	44	40	24	74	70	62	59	54	49	30	74	70	62	59	55	52	30	76	72	62	61	58	56	32
	750	0.10	72	66	57	55	46	42	24	75	70	64	60	54	50	29	76	72	64	61	56	53	31	78	74	64	63	60	58	34
8	400	0.04	66	59	50	46	40	35	19	70	66	59	54	50	46	25	70	66	59	55	51	49	25	71	67	59	58	54	53	26
	550	0.06	68	62	53	50	42	38	21	72	68	60	57	52	48	28	73	68	60	57	53	50	28	74	69	60	60	56	55	29
	700	0.09	71	65	56	54	45	40	22	74	70	63	60	54	50	29	75	71	63	60	56	52	30	77	73	64	62	59	57	32
	850	0.11	73	67	59	57	48	44	25	77	72	65	62	56	51	31	78	73	65	63	58	55	32	80	75	66	66	62	60	35
	1000	0.13	75	70	62	60	52	47	29	79	74	67	65	58	53	34	80	75	68	66	60	56	35	82	77	69	70	65	62	37
9	500	0.01	60	58	48	45	36	34	15	65	64	56	53	48	44	22	66	64	58	54	49	46	22	68	66	60	58	54	52	25
	700	0.01	64	60	52	48	40	38	16	68	66	59	55	50	47	24	69	67	61	56	51	49	25	71	69	64	60	56	53	28
	900	0.02	66	62	54	50	41	40	19	70	68	61	57	53	50	26	71	68	62	58	54	51	26	73	70	66	61	57	54	29
	1100	0.04	68	64	57	53	45	43	21	72	69	63	58	55	52	28	72	70	64	59	56	52	29	74	72	68	62	59	55	31
	1300	0.06	70	68	60	57	50	48	26	74	72	66	62	56	54	31	75	72	67	62	58	54	31	78	74	70	64	62	59	34
10	700	0.01	64	60	52	48	40	38	16	68	66	59	55	50	47	24	69	67	61	56	51	49	25	71	69	64	60	56	53	28
	900	0.02	66	62	54	50	41	40	19	70	68	61	57	53	50	26	71	68	62	58	54	51	26	73	70	66	61	57	54	29
	1100	0.04	68	64	57	53	45	43	21	72	69	63	58	55	52	28	72	70	64	59	56	52	29	74	72	68	62	59	55	31
	1300	0.06	70	68	60	57	50	48	26	74	72	66	62	56	54	31	75	72	67	62	58	54	31	78	74	70	64	62	59	34
	1500	0.08	73	71	62	60	54	52	30	77	75	68	66	60	56	35	77	75	68	66	60	57	35	80	78	72	68	64	61	38
12	800	0.02	57	55	52	50	46	40	<15	62	59	54	53	51	48	15	63	59	54	54	51	49	15	66	61	55	56	53	52	18
	1200	0.04	60	58	57	53	48	43	<15	64	63	59	56	54	51	20	65	64	58	56	55	52	21	68	66	60	59	58	56	24
	1600	0.08	62	60	59	55	51	46	16	67	66	62	59	58	55	24	68	67	62	60	59	56	25	71	70	65	63	62	60	29
	2000	0.12	64	61	59	56	52	48	18	70	68	64	62	61	59	26	72	70	66	64	63	62	29	76	74	69	68	67	66	34
	2400	0.17	65	62	61	57	53	49	19	72	70	66	64	63	61	29	74	72	67	66	65	63	31	78	76	71	70	70	68	36
14	1000	0.02	46	39	39	37	31	24	<15	57	52	51	51	48	43	<15	61	56	55	56	53	48	<15	68	64	62	63	61	57	21
	1600	0.05	49	43	43	42	37	32	<15	60	55	54	55	52	48	<15	64	59	58	59	56	53	17	70	66	65	66	64	61	25
	2100	0.08	53	48	49	48	44	41	<15	62	57	57	58	57	54	18	65	60	60	62	61	58	22	71	67	66	68	68	65	28
	2600	0.12	58	52	52	51	48	47	<15	65	59	59	60	59	57	21	68	62	62	63	62	60	24	73	68	67	69	69	67	30
	3100	0.16	63	56	53	53	51	53	17	67	61	60	61	60	59	23	69	64	62	64	64	62	26	74	69	68	70	70	68	31
16	1400	0.02	52	47	44	40	35	20	<15	64	58	55	52	50	46	<15	66	62	58	56	55	52	19	72	66	64	62	62	58	24
	2100	0.05	58	52	50	48	42	38	<15	66	62	60	56	54	51	19	69	64	62	60	58	55	21	74	69	66	65	64	61	28
	2800	0.08	64	58	58	55	49	44	<15	71	66	64	61	59	55	24	73	68	66	64	62	58	26	77	72	69	68	68	64	31
	3500	0.11	68	62	63	60	54	49	19	74	68	66	64	62	58	26	76	70	68	66	66	61	29	79	74	71	70	70	66	34
	4200	0.14	72	66	66																									

XG-TH-500 STANDARD CONSTRUCTION CASING AND DAMPER LEAKAGE

Standard Construction				
Inlet Diameter	Static Pressure " w.g.	Maximum Airflow	Max Casing Leakage	Max Damper Leakage
4	3	300	5	5
5	3	375	5	5
6	3	540	5	5
7	3	760	7	7
8	3	990	9	9
9	3	1250	12	12
10	3	1640	16	16
12	3	2350	22	22
14	3	3250	32	32
16	3	4100	41	41
20	3	6430	64	64
24	3	7270	72	72

PERFORMANCE NOTES

- 1) Leakage testing conducted in accordance with ASHRAE 130-2016
- 2) Per ASHRAE Standard 130-2016 "terminal casing leakage: the amount of the air in ft³/min (L/s) leaking from the terminal unit at a given inlet pressure with the outlet(s) and inlet(s) blocked and with the damper/valve fully opened"
- 3) Per ASHRAE Standard 130-2016 "terminal damper leakage: the amount of air in ft³/min (L/s) leaking through a fully closed damper/valve of a supply/exhaust terminal unit at a given inlet pressure"opened"
- 4) Casing and Damper leakage shall not exceed 1% of the maximum rated airflow at 3" w.g.
- 5) 4" and 5" inlets are built with 6" casings

CERTIFICATIONS AND STANDARDS

- Units tested per ASHRAE Standard 130-2016.
- All model sizes certified in accordance with AHRI 880-2017 certification program.
- ETL listed to meet requirements of UL 1995 and CSA 236.
- Dual-density fiberglass insulation meets UL 181 and NFPA 90A/90B.
- Insulation meets ASHRAE 62.1 requirements for resistance to mold growth and erosion.
- Hot water coils are manufactured in accordance to AHRI Standard 410.

XG-TH-500 HOT WATER COILS MBH SELECTION DATA

Unit Size	Rows	GPM	Head Loss	CFM							
				100	200	300	350	400	450	500	600
4 5 6	1	1	0.46	5.1	7.2	8.6	9.1	9.6	10.0	10.3	11.0
		2	1.76	5.4	7.8	9.5	10.1	10.7	11.2	11.7	12.5
		3	3.86	5.5	8.1	9.8	10.5	11.2	11.7	12.2	13.2
		4	6.73	5.6	8.2	10.0	10.7	11.4	12.0	12.6	13.5
		Airside ΔPs		0.01	0.04	0.07	0.10	0.12	0.15	0.18	0.24
	2	1	0.12	7.5	11.1	13.4	14.3	15.0	15.7	16.3	17.3
		2	0.46	8.1	12.5	15.5	16.8	17.8	18.8	19.7	21.2
		4	1.75	8.4	13.4	17.0	18.4	19.8	21.0	22.1	24.1
		6	3.84	8.5	13.7	17.5	19.1	20.6	21.9	23.1	25.2
		Airside ΔPs		0.03	0.08	0.16	0.21	0.26	0.32	0.38	0.51
	3	1	0.07	8.9	13.2	15.9	16.8	17.7	18.4	19.0	20.0
		2	0.28	9.6	15.2	19.1	20.6	21.9	23.1	24.1	25.9
		4	1.09	10.0	16.5	21.3	23.2	25.0	26.6	28.0	30.5
		6	2.44	10.2	17.0	22.2	24.3	26.3	28.0	29.7	32.5
		Airside ΔPs		0.04	0.12	0.24	0.31	0.39	0.47	0.56	0.77
	4	1	0.05	9.7	14.5	17.4	18.4	19.3	20.1	20.7	21.7
		2	0.20	10.5	17.0	21.4	23.2	24.7	26.0	27.1	29.1
		4	0.79	10.9	18.6	24.2	26.6	28.7	30.6	32.3	35.3
		6	1.77	11.1	19.2	25.3	28.0	30.4	32.5	34.5	38.0
		Airside ΔPs		0.05	0.16	0.32	0.41	0.52	0.63	0.75	1.02

Unit Size	Rows	GPM	Head Loss	CFM							
				300	400	500	600	700	800	900	1000
7 8	1	1	0.63	9.9	11.1	12.1	12.9	13.5	14.1	14.6	15.1
		2	2.39	10.8	12.4	13.7	14.7	15.6	16.4	17.1	17.7
		3	5.24	11.3	12.9	14.3	15.4	16.4	17.3	18.1	18.8
		4	9.14	11.5	13.2	14.7	15.9	16.9	17.9	18.7	19.5
		Airside ΔPs		0.05	0.07	0.11	0.15	0.19	0.24	0.30	0.36
	2	1	0.17	15.1	17.1	18.6	19.8	20.9	21.7	22.1	22.5
		2	0.63	17.4	20.2	22.5	24.3	25.9	27.3	27.9	28.5
		4	2.39	18.9	22.3	25.1	27.5	29.6	31.5	32.3	33.1
		6	5.22	19.5	23.2	26.2	28.8	31.1	33.2	34.2	35.1
		Airside ΔPs		0.10	0.16	0.23	0.32	0.41	0.51	0.57	0.62
	3	1	0.08	18.0	20.2	21.8	23.1	24.1	25.0	25.7	26.3
		2	0.31	21.3	24.8	27.5	29.8	31.6	33.2	34.5	35.8
		4	1.21	23.5	28.0	31.7	34.8	37.5	39.9	41.9	43.8
		8	4.78	24.8	30.0	34.3	38.1	41.5	44.4	47.0	49.5
		Airside ΔPs		0.15	0.24	0.35	0.47	0.61	0.77	0.94	1.11
	4	2	0.21	23.8	27.8	30.9	33.4	35.4	37.1	38.5	39.9
		4	0.84	26.6	31.9	36.3	40.0	43.1	45.9	48.2	50.5
		6	1.87	27.6	33.5	38.5	42.8	46.5	49.8	52.6	55.4
		8	3.32	28.2	34.4	39.8	44.4	48.5	52.1	55.2	58.3
		Airside ΔPs		0.20	0.32	0.46	0.63	0.82	1.02	1.26	1.49

- 1) All coil performance in accordance with AHRI Standard 410-2001
- 2) Heating capacities are in MBH
- 3) Performance data based on a temperature differential of 115°F (180°F entering water temperature and 65°F entering air temperature)
- 4) For temperature differentials other than 115°F, multiply the MBH by the correction factors below
- 5) Head Loss is in feet of water
- 6) Airside ΔPs is the air pressure drop of the hot water coil
- 7) Aire temperature rise = 927 x MBH/CFM
- 8) Water temperature drop = 2.04 x MBH/GPM
- 9) Values in tables are listed for 0 ft. of altitude and no glycol in the system

MBH CORRECTION FACTORS

ΔT	50	60	70	80	90	100	115	125	140	150
Factor	0.44	0.52	0.61	0.70	0.79	0.88	1.00	1.07	1.20	1.30

XG-TH-500 HOT WATER COILS MBH SELECTION DATA

Unit Size	Rows	GPM	Head Loss	CFM							
				500	600	700	800	1000	1200	1400	1600
9 10	1	1	0.11	13.4	14.3	15.0	15.6	16.7	17.5	18.2	18.7
		2	0.43	15.7	16.9	17.9	18.8	20.4	21.6	22.7	23.6
		4	1.63	17.2	18.6	19.9	21.1	23.0	24.7	26.0	27.3
		6	3.58	17.8	19.3	20.7	22.0	24.1	25.9	27.5	28.8
		Airside ΔPs		0.06	0.08	0.10	0.13	0.19	0.25	0.33	0.42
	2	1	0.36	20.5	21.9	23.0	24.0	25.5	26.7	27.7	28.5
		2	1.43	25.2	27.4	29.3	30.9	33.6	35.8	37.6	39.1
		3	3.20	27.3	29.9	32.2	34.2	37.6	40.4	42.8	44.8
		4	5.68	28.5	31.4	34.0	36.2	40.0	43.2	46.0	48.3
		Airside ΔPs		0.12	0.17	0.22	0.27	0.39	0.54	0.69	0.87
	3	1	0.24	23.7	25.1	26.2	27.1	28.6	29.6	30.4	31.1
		2	0.94	30.4	33.0	35.1	36.9	39.9	42.2	44.0	45.5
		4	3.79	35.3	39.0	42.2	45.0	49.8	53.6	56.8	59.6
		6	8.53	37.3	41.6	45.3	48.6	54.3	59.0	63.0	66.5
		Airside ΔPs		0.19	0.25	0.33	0.41	0.59	0.80	1.04	1.30
	4	2	0.83	34.3	37.3	39.7	41.7	45.0	47.5	49.5	—
		4	3.35	40.3	44.7	48.6	51.9	57.5	62.0	65.8	—
		6	7.54	42.7	47.9	52.4	56.5	63.4	69.1	73.9	—
		8	13.41	44.0	49.6	54.6	59.0	66.8	73.2	78.8	—
		Airside ΔPs		0.25	0.34	0.43	0.54	0.79	1.07	1.39	—

Unit Size	Rows	GPM	Head Loss	CFM							
				800	1000	1200	1400	1600	1800	2000	2200
12	1	2	0.54	22.2	24.1	25.7	27.1	28.2	29.3	30.2	31.0
		4	2.07	24.8	27.3	29.4	31.2	32.7	34.1	35.4	36.5
		6	4.53	25.9	28.6	30.9	32.9	34.6	36.2	37.6	38.9
		8	7.90	26.5	29.3	31.7	33.8	35.7	37.4	38.9	40.3
		Airside ΔPs		0.07	0.11	0.15	0.19	0.24	0.30	0.36	0.42
	2	2	0.33	34.1	37.2	39.7	41.7	43.4	46.2	47.3	48.4
		4	1.30	40.4	44.9	48.7	51.8	54.6	59.2	61.2	62.9
		6	2.89	43.1	48.3	52.7	56.5	59.9	65.5	67.9	70.1
		8	5.10	44.6	50.3	55.1	59.2	62.9	69.2	71.9	74.4
		Airside ΔPs		0.16	0.23	0.32	0.41	0.51	0.74	0.87	1.01
	3	2	0.23	42.4	46.0	48.9	51.2	53.1	54.7	56.1	57.3
		4	0.90	51.3	57.2	62.0	66.1	69.6	72.6	75.2	77.6
		8	3.55	57.2	64.9	71.5	77.2	82.2	86.7	90.7	94.3
		12	7.95	59.5	68.0	75.4	81.8	87.6	92.7	97.4	101.6
		Airside ΔPs		0.24	0.35	0.47	0.61	0.77	0.93	1.11	1.31
	4	2	0.42	47.6	51.6	54.7	57.2	59.2	60.9	62.3	—
		4	0.73	58.6	65.6	71.2	76.0	79.7	83.4	86.4	—
		8	2.89	65.9	75.3	83.4	90.4	96.5	101.9	106.7	—
		12	6.47	68.7	79.2	88.4	96.4	103.5	110.0	115.8	—
		Airside ΔPs		0.32	0.46	0.63	0.82	1.02	1.25	1.49	—

- 1) All coil performance in accordance with AHRI Standard 410-2001
- 2) Heating capacities are in MBH
- 3) Performance data based on a temperature differential of 115°F (180°F entering water temperature and 65°F entering air temperature)
- 4) For temperature differentials other than 115°F, multiply the MBH by the correction factors below
- 5) Head Loss is in feet of water
- 6) Airside ΔPs is the air pressure drop of the hot water coil
- 7) Air temperature rise = 927 x MBH/CFM
- 8) Water temperature drop = 2.04 x MBH/GPM
- 9) Values in tables are listed for 0 ft. of altitude and no glycol in the system

MBH CORRECTION FACTORS

ΔT	50	60	70	80	90	100	115	125	140	150
Factor	0.44	0.52	0.61	0.70	0.79	0.88	1.00	1.07	1.20	1.30

XG-TH-500 HOT WATER COILS MBH SELECTION DATA

Unit Size	Rows	GPM	Head Loss	CFM							
				600	700	800	1000	1500	2000	2500	3000
14	1	1	0.20	19.8	21.9	22.7	23.5	26.3	28.2	29.5	30.6
		2	0.74	23.4	26.6	27.9	29.1	33.6	36.9	39.3	41.3
		3	3.36	25.9	29.8	31.4	33.0	37.1	41.1	44.2	46.8
		4	6.17	26.8	31.1	32.9	34.6	39.1	43.6	47.1	50.1
		Airside ΔPs		0.02	0.04	0.05	0.06	0.11	0.19	0.27	0.37
	2	2	0.39	34.4	39.4	41.4	43.3	50.1	54.7	58.0	60.6
		4	1.52	39.7	46.6	49.6	52.3	63.0	70.7	76.6	81.4
		6	3.36	41.8	49.7	53.1	56.2	68.9	78.4	85.8	91.9
		8	5.84	43.0	47.4	51.3	58.4	72.3	82.9	91.3	98.2
		Airside ΔPs		0.05	0.09	0.10	0.12	0.24	0.39	0.57	0.78
	3	2	0.25	42.8	46.1	48.9	53.5	61.2	66.0	69.4	71.8
		6	2.20	52.1	57.6	62.7	71.5	88.5	100.8	110.3	117.9
		8	3.89	53.4	59.4	64.8	74.5	93.4	107.6	118.7	127.8
		10	6.05	54.3	60.5	66.2	76.3	96.6	112.1	124.4	134.5
		Airside ΔPs		0.08	0.10	0.13	0.19	0.37	0.59	0.86	1.17
	4	4	0.78	55.4	61.2	66.3	75.0	90.9	101.7	109.5	115.5
		6	1.26	58.3	64.9	71.0	81.6	101.9	116.5	127.5	136.3
		8	3.08	59.8	66.9	73.5	85.2	108.2	125.3	138.6	149.4
		12	6.89	61.3	69.0	76.1	89.0	115.1	135.3	151.6	165.0
		Airside ΔPs		0.11	0.14	0.17	0.25	0.49	0.79	1.15	1.56

Unit Size	Rows	GPM	Head Loss	CFM							
				1000	1500	2000	2500	3000	3500	4000	4200
16	1	1	0.23	25.4	28.5	30.5	32.0	33.2	34.1	34.8	35.1
		2	0.86	31.6	36.7	40.3	43.1	45.3	47.1	48.7	49.2
		4	3.25	35.9	42.8	47.9	51.9	55.3	58.1	60.5	61.4
		6	7.12	37.6	45.3	51.1	55.8	59.7	63.0	65.9	66.9
		Airside ΔPs		0.04	0.08	0.14	0.20	0.27	0.36	0.45	0.49
	2	2	0.41	46.2	53.7	58.8	62.4	65.2	67.5	69.3	69.9
		4	1.59	55.8	67.8	76.4	83.0	88.4	92.7	96.5	97.8
		6	2.52	60.0	74.2	84.8	93.1	100.0	105.8	110.8	112.6
		8	6.21	62.3	77.9	89.7	99.2	107.1	113.8	119.6	121.7
		Airside ΔPs		0.09	0.18	0.29	0.42	0.57	0.74	0.93	1.01
	3	2	0.26	57.1	65.5	70.8	74.4	77.0	79.1	80.7	81.3
		4	1.03	70.4	85.7	96.3	104.2	110.3	115.3	119.4	120.8
		8	4.06	78.9	100.0	115.9	128.5	138.8	147.4	141.1	157.5
		10	6.31	80.8	103.4	120.7	134.6	146.1	155.9	154.8	167.4
		Airside ΔPs		0.14	0.27	0.44	0.63	0.86	1.11	1.40	1.51
	4	2	0.20	63.2	72.1	77.5	81.0	83.5	85.5	—	—
		4	0.80	79.5	97.1	109.1	117.8	124.4	129.7	—	—
		8	1.80	86.1	115.1	134.3	149.3	161.4	171.5	—	—
		10	4.95	91.8	119.3	140.4	157.3	171.2	182.8	—	—
		Airside ΔPs		0.18	0.36	0.58	0.84	1.15	1.49	—	—

- | | |
|---|--|
| 1) All coil performance in accordance with AHRI Standard 410-2001 | 5) Head Loss is in feet of water |
| 2) Heating capacities are in MBH | 6) Airside ΔPs is the air pressure drop of the hot water coil |
| 3) Performance data based on a temperature differential of 115°F (180°F entering water temperature and 65°F entering air temperature) | 7) Aire temperature rise = 927 x MBH/CFM |
| 4) For temperature differentials other than 115°F, multiply the MBH by the correction factors below | 8) Water temperature drop = 2.04 x MBH/GPM |
| | 9) Values in tables are listed for 0 ft. of altitude and no glycol in the system |

MBH CORRECTION FACTORS

ΔT	50	60	70	80	90	100	115	125	140	150
Factor	0.44	0.52	0.61	0.70	0.79	0.88	1.00	1.07	1.20	1.30

XG-TH-500 HOT WATER COILS MBH SELECTION DATA

Unit Size	Rows	GPM	Head Loss	CFM							
				2000	2500	3000	3500	4000	4500	5000	5500
20	1	2	0.33	43.8	46.7	49.0	50.9	52.4	53.8	54.9	55.9
		4	1.30	54.0	58.5	62.3	65.4	68.1	70.5	72.6	74.4
		6	2.89	58.6	64.0	68.5	72.4	75.7	78.7	81.3	83.7
		8	5.10	61.2	67.2	72.2	76.5	80.2	83.6	86.6	89.3
		Airsides ΔPs		0.07	0.11	0.15	0.19	0.24	0.30	0.36	0.42
	2	2	0.56	63.3	67.2	70.2	72.5	74.4	75.9	77.3	78.4
		4	1.12	84.3	91.8	97.8	102.7	106.9	110.4	113.5	116.2
		8	3.89	100.7	111.9	121.3	129.2	136.0	142.1	147.4	152.2
		10	6.05	104.8	117.1	127.3	136.2	143.9	150.7	156.8	162.2
		Airsides ΔPs		0.16	0.23	0.32	0.41	0.51	0.62	0.74	0.87
	3	4	0.44	97.4	106.1	112.9	118.5	123.1	127.1	130.5	133.4
		6	0.97	109.4	121.1	130.6	138.5	145.3	151.2	156.3	160.8
		8	1.71	116.3	130.0	141.3	151.0	159.3	166.5	173.0	178.7
		12	3.79	124.1	140.1	153.7	165.5	175.8	185.0	193.2	200.7
		Airsides ΔPs		0.19	0.29	0.40	0.52	0.66	0.81	0.97	1.15
	4	6	0.62	124.6	137.8	148.3	157.0	164.3	170.5	175.8	180.6
		10	1.70	139.8	157.5	172.4	184.9	195.8	205.3	213.8	221.3
		14	3.31	147.2	167.5	184.8	199.7	212.8	224.4	234.9	244.3
		18	5.44	151.6	173.5	192.3	208.8	223.4	236.5	248.3	259.0
		Airsides ΔPs		0.26	0.38	0.53	0.69	0.88	1.08	1.29	1.53

Unit Size	Rows	GPM	Head Loss	CFM							
				2000	2500	3000	3500	4000	5000	6000	7000
24	1	2	0.36	48.7	52.0	54.6	56.7	58.5	61.3	63.5	65.3
		4	1.41	60.3	65.7	70.0	73.7	76.8	82.0	86.2	89.6
		6	3.13	65.6	71.9	77.2	81.8	85.7	92.3	97.7	102.3
		8	5.52	68.5	75.6	81.4	86.6	91.0	98.6	104.8	110.0
		Airsides ΔPs		0.05	0.07	0.10	0.13	0.16	0.24	0.32	0.42
	2	2	0.27	68.4	72.7	75.9	78.4	80.5	83.6	85.9	87.6
		4	1.05	91.7	100.2	107.0	112.6	117.3	124.8	130.6	135.2
		8	4.15	109.9	122.7	133.4	142.6	150.5	163.8	174.4	183.2
		10	6.45	114.3	128.4	140.2	150.5	159.4	174.5	186.7	197.0
		Airsides ΔPs		0.11	0.16	0.21	0.27	0.34	0.50	0.68	0.88
	3	3	0.28	94.7	102.0	107.6	112.0	115.6	121.1	125.1	128.2
		6	1.07	118.8	132.0	142.9	151.9	159.6	172.0	181.7	189.6
		10	2.92	131.1	148.2	162.7	175.2	186.0	204.3	219.0	231.3
		15	6.46	138.0	157.5	174.3	189.1	202.2	224.5	243.1	258.8
		Airsides ΔPs		0.13	0.19	0.26	0.34	0.43	0.64	0.88	1.16
	4	4	0.29	117.9	128.3	136.3	142.6	147.7	155.5	161.3	165.7
		8	1.16	144.4	162.4	177.2	189.7	200.3	217.6	231.2	242.1
		12	2.58	155.0	176.8	195.4	211.3	225.3	248.6	267.5	283.2
		18	5.76	162.7	187.5	209.1	228.0	244.9	273.7	297.6	317.9
		Airsides ΔPs		0.17	0.25	0.35	0.46	0.58	0.86	1.18	1.54

- 1) All coil performance in accordance with AHRI Standard 410-2001
- 2) Heating capacities are in MBH
- 3) Performance data based on a temperature differential of 115°F (180°F entering water temperature and 65°F entering air temperature)
- 4) For temperature differentials other than 115°F, multiply the MBH by the correction factors below
- 5) Head Loss is in feet of water
- 6) Airside ΔPs is the air pressure drop of the hot water coil
- 7) Air temperature rise = 927 x MBH/CFM
- 8) Water temperature drop = 2.04 x MBH/GPM
- 9) Values in tables are listed for 0 ft. of altitude and no glycol in the system

MBH CORRECTION FACTORS

ΔT	50	60	70	80	90	100	115	125	140	150
Factor	0.44	0.52	0.61	0.70	0.79	0.88	1.00	1.07	1.20	1.30

XG-TH-500 ELECTRIC HEATER CAPACITIES

Single Phase XG-TH-500 kW Limits				
Unit Size	Heater Voltage	Min. kW per Step	Max. kW	Max. Steps
4	120	1	4	2
	208	0.5	4	2
5	240	0.5	4	2
6	277	0.5	4	2
	480	1.5	4	2
7	120	1	5	3
	208	0.5	8	3
	240	0.5	8	3
	277	0.5	8	3
	480	1	8	3
8	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	11	3
	277	0.5	12	3
	480	1	15	3
9	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	11	3
	277	0.5	12	3
	480	1	15	3
10	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	11	3
	277	0.5	12	3
	480	1	23	3
12	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	11	3
	277	0.5	12	3
	480	1	23	3
14	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	11	3
	277	0.5	12	3
	480	0.5	23	3
16	120	1.5	5	3
	208	0.5	9.5	3
	240	0.5	11	3
	277	0.5	12	3
	480	0.5	23	3
20	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	11	3
	277	0.5	12	3
	480	0.5	23	3
24	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	11	3
	277	0.5	12	3
	480	0.5	23	3

Three Phase XG-TH-500 kW Limits				
Unit Size	Heater Voltage	Min. kW per Step	Max. kW	Max. Steps
4	208	0.5	4	2
	480	1.5	4	2
5	208	1.5	8	3
	480	1.5	8	3
6	208	1.5	13	3
	480	1.5	15	3
7	208	1.5	16	3
	480	1.5	23	3
8	208	1.5	16	3
	480	1.5	24	3
9	208	1.5	16	3
	480	1.5	39	3
10	208	1.5	16	3
	480	1.5	39	3
12	208	1.5	16	3
	480	1.5	39	3
14	208	1.5	16	3
	480	1.5	39	3
16	208	1.5	16	3
	480	1.5	39	3
20	208	1.5	16	3
	480	1.5	39	3
24	208	1.5	16	3
	480	1.5	39	3

NOTES:

1. Heaters less than 10 kW are specifiable to nearest 0.5 kW. Heaters greater than 10 kW are specifiable to nearest 1 kW.
2. Minimum flow rate for electric heat is 70 CFM / kW. Lower CFM's can cause nuisance tripping, excessive discharge temperatures, rapid cycling, and rapid element failure. Electric Heat units running below 70 CFM / kW will void all warranties.
3. For optimum thermal comfort, the suggested discharge temperature should not exceed 20°F above room set point.
4. We do not recommend discharge temperatures in excess of 115°F to protect heater coils.
5. Maximum number of steps at "Min. kW per Step" is one step.
6. If more than 1 heater is wired into a building's circuit breaker (multi-outlet branch circuit) each heater will require the addition of power side fusing.

ELECTRIC HEAT SELECTION:

A. Specify electric duct heaters using voltage, phase, kW, and number of steps.

B. Use above chart to select voltage. Calculate required kW using following equations:

$$kW = \frac{BTU / HR}{3413} \quad kW = \frac{CFM \times \Delta \times 1.085}{3413} \quad \Delta = \frac{kW \times 3413}{CFM \times 1.085}$$

$$CFM = \frac{kW \times 3413}{\Delta \times 1.085} \quad CFM = \frac{kW \times 3413}{\Delta \times 1.085}$$

* air density at sea level — reduce by 0.036 for each 1000 feet of altitude above sea level

Where: BTU / Hr = Required heating capacity

CFM = volume of air during heating. Typically 100% of maximum cooling air volume

Δ = desired air temperature rise across the electric heater

Inlet air temperature = primary air temperature, usually 55°F

XG-TH SOUND ATTENUATORS

- The optional acoustically lined sound attenuator is designed to further reduce discharge sound levels from the air terminal. The chart below gives reductions to the discharge sound power figures at minimum static pressure for each octave band.
- Attenuators are integral to the box
- Standard attenuator is 3 ft. (36 inches) long

XG-TH-500						
Octave Band / Frequency (Hz)						
Unit Size	2 / 125	3 / 250	4 / 500	5 / 1000	6 / 2000	7 / 4000
4	2	4	8	18	20	13
5	2	4	8	18	20	13
6	2	4	8	18	20	13
7	2	3	8	16	16	11
8	2	3	8	16	16	11
9	1	3	7	15	15	11
10	1	3	7	15	15	11
12	1	3	7	14	13	10
14	1	2	6	13	12	9
16	1	2	6	13	11	8
20	1	2	5	10	7	6
24	1	2	5	10	8	6

All accessories that can be attached to the Single Duct Boxes are not a part of the AHRI certification program but ratings can be affected by their use.

XG-TH-500 RECOMMENDED MIN/MAX AIRFLOW RANGES

XG-TH-500 Recommended Minimum and Maximum Airflow Ranges						
Unit Size	Pneumatic / Analog		Digital Controls - DDC			
			Transducer Min ΔP / Min CFM		Transducer Max ΔP / Max CFM	
	Min CFM	Max CFM	0.01	0.03	1	1.5
4	50	300	30	50	300	370
5	65	375	40	65	375	460
6	95	540	55	95	540	660
7	130	760	75	130	760	930
8	170	990	100	170	990	1210
9	220	1250	125	220	1250	1530
10	285	1640	165	285	1640	2010
12	410	2350	235	410	2350	2880
14	565	3250	325	565	3250	3980
16	710	4100	410	710	4100	5020
20	1115	6430	645	1115	6430	7870
24	1260	7270	725	1260	7270	8900

PERFORMANCE NOTES

- 1) Actual minimum and maximum airflow ranges depend on the transducer differential pressure range and accuracy.
- 2) Contact the manufacturer of installed DDC equipment for transducer minimum and maximum differential pressure, ΔP , limits.
- 3) Minimum CFM for Pneumatic and Analog controls are based on a sensor differential pressure of 0.03 in. w.g.
- 4) Maximum CFM for Pneumatic and Analog controls are based on a sensor differential pressure of 1.00 in. wg.
- 5) $CFM = (\sqrt{\Delta P}) * K$ Factor
- 6) K Factor is the airflow at 1" ΔP
- 7) Recommendations are for pressure independent units.
- 8) Pressure dependent units minimum CFM is always zero and there is no maximum.