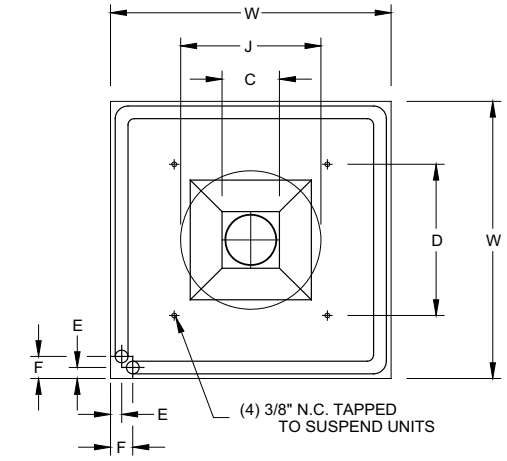
V Series

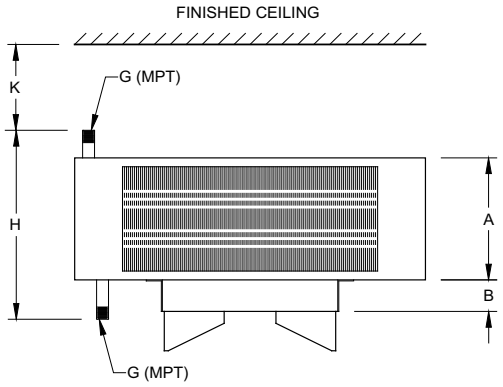
Vertical Unit Heaters

AIRTEX™

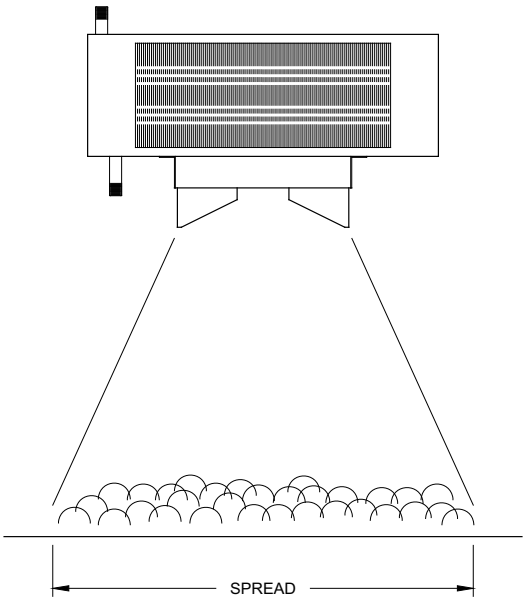
HYDRONIC SYSTEMS

HEAT TRANSFER DIVISION





SHOWN WITH THE STANDARD
LOUVRE CONE DIFFUSER (LCD)



NOTE:
THE FIGURES GIVEN FOR SPREAD IN THE TABLE BELOW INDICATE THE NECESSITY TO UTILIZE THE STANDARD LOUVRE CONE DIFFUSER WHEN HIGH MOUNTING HEIGHTS ARE REQUIRED OR WHEN WARM AIR NEEDS TO BE DIRECTED TO A PARTICULAR AREA.

DIMENSION K IS MINIMUM RECOMMENDED CLEARANCE.

IMPERIAL

MODEL	H (in)	W (in)	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	J (in)	K (in)	NOISE LEVEL	WEIGHT (LBS.)	MAX. MTG. HEIGHT (FT)		SPREAD (FEET)	
														W/O LCD	WITH LCD	W/O LCD	WITH LCD
V 1	12	22	7 3/4	1 1/2	5	12	7/8	1 3/4	3/4	10 1/2	7	LOW	56	13	16	27	18
V 2	13	22	7 3/4	1 1/2	6	12	7/8	1 3/4	3/4	12 1/2	8	LOW	84	16	20	42	23
V 3	13	36	9 1/4	1 1/2	6	20	2	3 3/8	1 1/4	12 1/2	8	LOW	95	18	23	48	27
V 4	16	36	9 1/4	2	7	20	2	3 3/8	1 1/4	18 3/4	10	MED	118	23	34	56	36
V 5	18	36	13 3/4	2	7	20	2	3 3/8	1 1/4	18 3/4	12	MED	124	25	37	58	39
V 6	19	36	13 3/4	2 1/2	7	20	2	3 3/8	1 1/4	23	12	MED	131	28	39	63	43
V 7	19	42	13 3/4	2 1/2	7	24	2 3/8	4 1/4	2	25 1/4	12	HIGH	138	29	41	65	44
V 8	22	42	16 3/4	2 1/2	7	24	2 3/8	4 1/4	2	25 1/4	15	HIGH	238	30	43	66	44
V 9	23	46	16 3/4	3 1/4	7	26	2 1/2	4 3/4	2 1/2	25 1/4	15	HIGH	285	34	48	69	52
V 10	23	46	16 3/4	3 1/4	8	26	2 1/2	4 3/4	2 1/2	25 1/4	15	HIGH	337	36	53	73	53
V 11	26	46	19 3/4	4	8	26	2 1/2	4 3/4	2 1/2	27 1/4	18	HIGH	442	44	62	80	65
V 12	31	46	24 3/4	4	8	26	2 1/2	4 3/4	2 1/2	27 1/4	23	HIGH	534	49	68	91	73

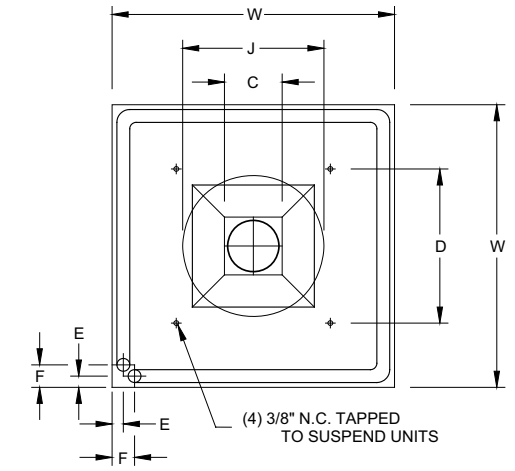
IMPERIAL

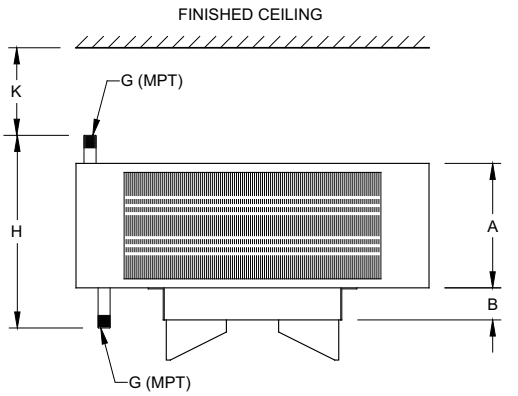
MODEL No AF RATE	MOTOR		WATER T.D. °F	200°F EWT			180°F EWT			160°F EWT			2 PSIG STEAM	
	HP (AMPS)	RPM		CAP. (MBH)	FLOW (GPM)	P.D. (FT.)	CAP. (MBH)	FLOW (GPM)	P.D. (FT.)	CAP. (MBH)	FLOW (GPM)	P.D. (FT.)	CAP. (MBH)	FLOW (LBS/HR)
V1 710 CFM	1/20 (1.6)	1500	**20**	**52.4**	**5.4**	**1.0**	**42.5**	**4.4**	**0.7**	**32.4**	**3.3**	**0.5**	64.8	67.1
			30	46.4	3.2	0.5	36.3	2.5	0.3	23.5	1.6	0.2		
			40	40.2	2.1	0.3	26.9	1.4	0.2	10.9	0.6	0.1		
V2 1150 CFM	1/12 (3.8)	1500	**20**	**68.6**	**7.1**	**1.5**	**55.5**	**5.7**	**1.1**	**42.3**	**4.3**	**0.7**	82.7	85.6
			30	60.6	4.2	0.7	46.9	3.2	0.5	32.2	2.2	0.3		
			40	52.0	2.7	0.4	36.8	1.9	0.2	11.5	0.6	0.1		
V3 1200 CFM	1/12 (3.8)	1500	**20**	**105.5**	**10.9**	**1.1**	**87.4**	**9.0**	**0.8**	**69.2**	**7.1**	**0.5**	123.7	128.1
			30	97.6	6.7	0.5	79.0	5.4	0.3	60.4	4.1	0.2		
			40	89.3	4.6	0.3	70.0	3.6	0.2	48.5	2.5	0.1		
V4 2300 CFM	1/6 (3.0)	1075	**20**	**155.2**	**16.1**	**2.2**	**128.3**	**13.2**	**1.5**	**100.9**	**10.3**	**1.0**	175.8	182.0
			30	142.7	9.8	0.9	115.2	7.9	0.6	87.1	5.9	0.4		
			40	129.5	6.7	0.5	101.5	5.2	0.3	72.2	3.7	0.2		
V5 2400 CFM	1/6 (3.0)	1075	**20**	**187.1**	**19.3**	**2.3**	**155.5**	**16.0**	**1.7**	**122.5**	**12.5**	**1.1**	220.9	228.7
			30	172.9	11.9	1.0	139.1	9.5	0.7	105.8	7.2	0.4		
			40	157.3	8.1	0.5	122.7	6.3	0.3	84.5	4.3	0.2		
V6 3500 CFM	1/6 (3.0)	1075	**20**	**236.1**	**24.5**	**3.6**	**195.2**	**20.0**	**2.5**	**153.6**	**15.6**	**1.6**	268.3	277.8
			30	217.2	14.9	1.5	173.5	11.9	1.0	131.0	8.9	0.6		
			40	196.1	10.1	0.8	152.7	7.8	0.5	106.2	5.4	0.3		
V7 4820 CFM	1/3 (6.5)	1075	**20**	**316.5**	**32.7**	**2.5**	**261.3**	**26.8**	**1.8**	**207.4**	**21.2**	**1.2**	349.0	361.3
			30	291.8	20.1	1.1	236.4	16.2	0.7	180.4	12.2	0.5		
			40	267.1	13.8	0.6	210.3	10.8	0.4	153.5	7.8	0.2		
V8 5000 CFM	1/3 (6.5)	1075	**20**	**355.4**	**36.8**	**2.5**	**295.6**	**30.3**	**1.7**	**234.5**	**23.9**	**1.2**	399.0	413.1
			30	329.8	22.7	1.1	268.5	18.3	0.7	204.4	13.9	0.5		
			40	301.2	15.5	0.6	238.8	12.2	0.4	174.3	8.9	0.2		
V9 6300 CFM	1/2 (9.9)	1050	**20**	**428.8**	**44.3**	**3.2**	**357.8**	**36.8**	**2.3**	**284.6**	**29.0**	**1.6**	472.6	489.4
			30	398.5	27.4	1.4	325.3	22.2	1.0	249.4	17.0	0.6		
			40	366.2	18.9	0.7	291.1	14.9	0.5	214.2	10.9	0.3		
V10 7500 CFM	1 (*)	1140	**20**	**469.9**	**48.5**	**3.8**	**391.1**	**40.2**	**2.7**	**309.8**	**31.7**	**1.8**	516.8	535.1
			30	436.0	30.0	1.6	354.3	24.2	1.1	272.7	18.5	0.7		
			40	399.8	20.6	0.9	317.5	16.3	0.6	234.0	11.9	0.4		
V11 8180 CFM	1 (*)	1140	**20**	**537.1**	**55.4**	**4.0**	**447.7**	**45.9**	**2.9**	**355.5**	**36.3**	**1.9**	590.7	611.6
			30	497.7	34.2	1.7	405.4	27.7	1.2	311.5	21.2	0.8		
			40	458.2	23.6	0.9	363.2	18.9	0.6	269.3	13.7	0.4		
V12 8880 CFM	1 (*)	1140	**20**	**609.8**	**63.0**	**3.9**	**504.4**	**51.7**	**2.8**	**401.2**	**40.9**	**1.8**	673.9	697.7
			30	564.3	38.8	1.7	458.5	31.3	1.2	353.4	24.0	0.7		
			40	518.9	26.7	0.9	410.4	21.0	0.6	301.9	15.4	0.4		

NOTES: All data for 60°F EAT

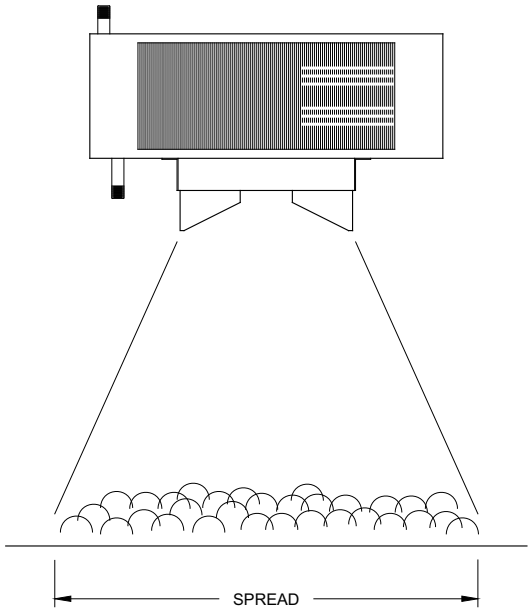
For alternate operating conditions refer to page 70.

(*) Amperage varies with voltage. Contact your sales representative for more information,





SHOWN WITH THE STANDARD
LOUVRE CONE DIFFUSER (LCD)



NOTE:
THE FIGURES GIVEN FOR SPREAD IN THE TABLE BELOW INDICATE THE NECESSITY TO UTILIZE THE STANDARD LOUVRE CONE DIFFUSER WHEN HIGH MOUNTING HEIGHTS ARE REQUIRED OR WHEN WARM AIR NEEDS TO BE DIRECTED TO A PARTICULAR AREA.

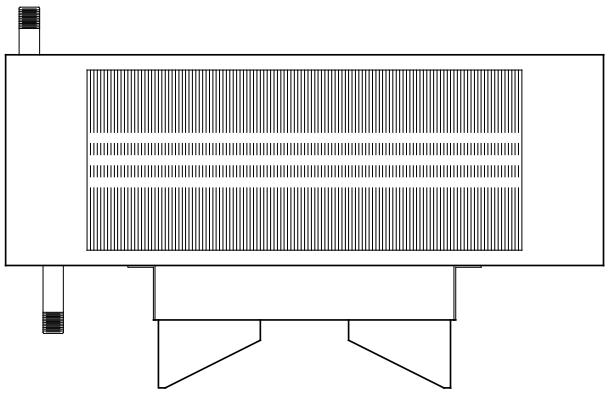
DIMENSION K IS MINIMUM RECOMMENDED CLEARANCE.

METRIC

MODEL	H (mm)	W (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	J (mm)	K (mm)	NOISE LEVEL	WEIGHT (KG.)	MAX. MTG. HEIGHT (M)		SPREAD (METERS)	
														W/O LCD	WITH LCD	W/O LCD	WITH LCD
V 1	305	559	197	38	127	305	22	44	19	267	178	LOW	25	4.0	4.9	8.2	5.5
V 2	330	559	197	38	152	305	22	44	19	318	203	LOW	38	4.9	6.1	12.8	7.0
V 3	330	914	235	38	152	508	51	86	32	318	203	LOW	43	5.5	7.0	14.6	8.2
V 4	406	914	235	51	178	508	51	86	32	476	254	MED	54	7.0	10.4	17.1	11.0
V 5	457	914	349	51	178	508	51	86	32	476	305	MED	56	7.6	11.3	17.7	11.9
V 6	483	914	349	64	178	508	51	86	32	584	305	MED	60	8.5	11.9	19.2	13.1
V 7	483	1067	349	64	178	610	60	108	51	641	305	HIGH	63	8.8	12.5	19.8	13.4
V 8	559	1067	425	64	178	610	60	108	51	641	381	HIGH	108	9.1	13.1	20.1	13.4
V 9	584	1168	425	83	178	660	64	121	64	641	381	HIGH	130	10.4	14.6	21.0	15.8
V 10	584	1168	425	83	203	660	64	121	64	641	381	HIGH	153	11.0	16.2	22.3	16.2
V 11	660	1168	502	102	203	660	64	121	64	692	457	HIGH	201	13.4	18.9	24.4	19.8
V 12	787	1168	616	102	203	660	64	121	64	692	584	HIGH	243	14.9	20.7	27.7	22.3

STEAM PRESSURE PSI (kPa)	ENTERING AIR TEMPERATURE °F (°C)							
	30 (-1)	40 (4)	50 (10)	60 (15)	70 (21)	80 (26)	90 (32)	100 (37)
0 (0)	1.18	1.11	1.03	0.96	0.89	0.82	0.75	0.69
2 (14)	1.22	1.14	1.07	1.00	0.93	0.86	0.79	0.73
5 (34)	1.26	1.19	1.11	1.05	0.98	0.91	0.84	0.77
10 (69)	1.33	1.25	1.18	1.11	1.04	0.97	0.90	0.84
15 (103)	1.38	1.31	1.24	1.17	1.10	1.03	0.96	0.90
20 (138)	1.42	1.35	1.28	1.21	1.14	1.07	1.00	0.94
50 (345)	1.63	1.55	1.48	1.42	1.35	1.28	1.21	1.15
75 (518)	1.75	1.68	1.61	1.54	1.47	1.40	1.33	1.27
100 (690)	1.85	1.77	1.70	1.63	1.56	1.49	1.43	1.36

ENTERING WATER TEMP. °F (°C)	ENTERING AIR TEMPERATURE °F (°C)							
	30 (-1)	40 (4)	50 (10)	60 (15)	70 (21)	80 (26)	90 (32)	100 (37)
100 (38)	0.57	0.49	0.40	0.36	0.26	0.17	0.10	0.00
120 (49)	0.71	0.63	0.54	0.48	0.40	0.31	0.23	0.16
140 (60)	0.85	0.77	0.68	0.61	0.53	0.45	0.37	0.30
160 (71)	0.98	0.90	0.82	0.74	0.66	0.58	0.51	0.43
180 (82)	1.11	1.03	0.95	0.87	0.80	0.72	0.64	0.57
200 (93)	1.24	1.16	1.08	1.00	0.92	0.85	0.77	0.70
220 (104)	1.36	1.28	1.20	1.12	1.05	0.97	0.89	0.82
240 (116)	1.47	1.40	1.32	1.24	1.17	1.09	1.01	0.94



NOTES: Apply to 2 PSIG (13.8 kPa) steam or 200°F (93°C) EWT and 60°F (16°C) EAT.

METRIC

MODEL No. AF RATE	MOTOR		WATER T.D. °C	93°C EWT			82°C EWT			71°C EWT			13.8 kPa STEAM	
	WATTS (AMPS)	RPM		CAP. (kW)	FLOW (L/s)	P.D. (kPa)	CAP. (kW)	FLOW (L/s)	P.D. (kPa)	CAP. (kW)	FLOW (L/s)	P.D. (kPa)	CAP. (kW)	FLOW (KG/HR)
V1 335 L/s	37 (1.6)	1500	**11**	**15.4**	**0.34**	**3.0**	**12.5**	**0.28**	**2.2**	**9.5**	**0.21**	**1.4**	19.0	30.5
			17	13.6	0.20	1.4	10.6	0.16	1.0	6.9	0.10	0.5		
			22	11.8	0.13	0.8	7.9	0.09	0.4	3.2	0.04	0.2		
V2 543 L/s	62 (3.8)	1500	**11**	**20.1**	**0.45**	**4.6**	**16.3**	**0.36**	**3.2**	**12.4**	**0.27**	**2.1**	24.2	38.9
			17	17.8	0.27	2.0	13.7	0.20	1.4	9.4	0.14	0.8		
			22	15.2	0.17	1.1	10.8	0.12	0.7	3.4	0.04	0.2		
V3 566 L/s	62 (3.8)	1500	**11**	**30.9**	**0.69**	**3.3**	**25.6**	**0.57**	**2.4**	**20.3**	**0.45**	**1.6**	36.3	58.2
			17	28.6	0.42	1.5	23.1	0.34	1.0	17.7	0.26	0.7		
			22	26.2	0.29	0.8	20.5	0.23	0.5	14.2	0.16	0.3		
V4 1086 L/s	124 (3.0)	1075	**11**	**45.5**	**1.02**	**6.5**	**37.6**	**0.83**	**4.6**	**29.6**	**0.65**	**3.0**	51.5	82.7
			17	41.8	0.62	2.7	33.8	0.50	1.9	25.5	0.37	1.2		
			22	38.0	0.42	1.5	29.8	0.33	1.0	21.2	0.23	0.6		
V5 1133 L/s	124 (3.0)	1075	**11**	**54.8**	**1.22**	**7.0**	**45.6**	**1.01**	**5.0**	**35.9**	**0.79**	**3.2**	64.7	103.9
			17	50.7	0.75	3.0	40.8	0.60	2.0	31.0	0.45	1.3		
			22	46.1	0.51	1.6	36.0	0.40	1.0	24.8	0.27	0.6		
V6 1652 L/s	124 (3.0)	1075	**11**	**69.2**	**1.55**	**10.7**	**57.2**	**1.26**	**7.4**	**45.0**	**0.98**	**4.7**	78.6	126.3
			17	63.9	0.94	4.4	50.8	0.75	3.0	38.4	0.56	1.8		
			22	57.5	0.64	2.2	44.7	0.49	1.5	31.1	0.34	0.8		
V7 2275 L/s	248 (6.5)	1075	**11**	**92.7**	**2.06**	**7.4**	**76.6**	**1.69**	**5.3**	**60.8**	**1.34**	**3.5**	102.3	164.3
			17	85.5	1.27	3.2	69.3	1.02	2.2	52.9	0.77	1.4		
			22	78.3	0.87	1.7	61.6	0.68	1.1	45.0	0.49	0.7		
V8 2360 L/s	248 (6.5)	1075	**11**	**104.1**	**2.32**	**7.3**	**86.6**	**1.91**	**5.2**	**68.7**	**1.51**	**3.5**	116.9	187.8
			17	96.6	1.43	3.1	78.7	1.15	2.2	59.9	0.88	1.4		
			22	88.2	0.98	1.6	70.0	0.77	1.1	51.1	0.56	0.7		
V9 2974 L/s	373 (9.9)	1050	**11**	**125.7**	**2.80**	**9.6**	**104.8**	**2.32**	**7.0**	**83.4**	**1.83**	**4.6**	138.5	222.4
			17	116.8	1.73	4.2	95.3	1.40	2.9	73.1	1.07	1.9		
			22	107.3	1.19	2.2	85.3	0.94	1.5	62.7	0.69	0.9		
V10 3540 L/s	746 (*)	1140	**11**	**137.7**	**3.06**	**11.3**	**114.6**	**2.54**	**8.1**	**90.8**	**2.00**	**5.4**	151.4	243.2
			17	127.7	1.89	4.9	103.8	1.53	3.4	79.9	1.17	2.2		
			22	117.2	1.30	2.6	93.0	1.03	1.7	68.6	0.75	1.0		
V11 3861 L/s	746 (*)	1140	**11**	**157.4**	**3.50**	**11.9**	**131.2**	**2.90**	**8.5**	**104.2**	**2.29**	**5.7**	173.1	278.0
			17	145.8	2.16	5.1	118.8	1.75	3.5	91.3	1.34	2.3		
			22	134.3	1.49	2.7	106.4	1.19	1.8	78.9	0.86	1.1		
V12 4191 L/s	746 (*)	1140	**11**	**178.7**	**3.98**	**11.7**	**147.8**	**3.26**	**8.2**	**117.5**	**2.58**	**5.5**	197.5	317.2
			17	165.4	2.45	5.0	134.3	1.98	3.4	103.6	1.51	1.2		
			22	152.0	1.68	2.6	120.2	1.33	1.8	88.4	0.97	1.1		

NOTES: All data for 16°C EAT.
For alternate operating conditions refer to page 70.
(*) Amperage varies with voltage. Contact your Engineered Air sales representative for more information,

VERTICAL UNIT HEATERS

1. Casings shall be 18 gauge (1.2mm) for sizes V-1 and V-2, 16 gauge (1.5mm) for sizes V-3 to V-6 and 14 gauge (1.9mm) for sizes V-7 to V-12 satin coat steel with electrostatically applied powder coat prime finish and shall have four integral 3/8" (10mm) threaded hanger connections. Provide louvre cone diffusers.

2. Coils shall be 5/8" (16mm) copper _____ steel tube with rippled aluminum fins. Headers include steel MPT pipe connections located on top of and below unit. Coils to be factory tested with air at 300 psig (2070 kPa).

3. Fans shall be aluminum propeller type, dynamically balanced and direct connected to motor shaft.

4. Motors shall incorporate sleeve bearings and automatic re-set overload protection. V-1 through V-3 use 1550 RPM open shaded pole _____ totally enclosed permanent split capacitor, type motors. Size V-4 through V-8 motors are 1050 RPM totally enclosed permanent split capacitor type. Size V-9 motor is 1050 RPM open permanent split capacitor type. Sizes V-10 through V-12 utilize 1140 RPM, voltage varies, 3 phase motors. Motors for V-1 through V-9 are 115/1/60 power.

5. Optional explosion proof motors: 1/4 HP (.19 kW) 4.6 amps 1725 RPM V-1 through V-3; 1/4 HP (.19 kW) 4.4 amps 1140 RPM V-4 through V-6; 1/3 HP (.24 kW) 7.0 amps 1140 RPM V-7 and V-8; 1/2 HP (.37 kW) 9.4 amps 1140 RPM V-9; 1 HP 3 phase (.75 kW) (amps vary with voltage) V-10 through V-12.

6. Optional Stainless Steel: Casing shall be 18 gauge (1.3mm) 304 Stainless Steel. Coil shall have baked Heresite coating and motor shall be totally enclosed.

7. Units shall be Airtex Hydronic Systems, model numbers and sizes as indicated on drawings and/or schedules.

VERTICAL UNIT HEATER SCHEDULE
(BASED ON AIRTEX HYDRONIC SYSTEMS)

TYPE ON PLAN	MODEL	MBH (kW)	HP (WATTS)	REMARKS

helpful hints

H Series

Horizontal Unit Heaters

AIRTEX™

HYDRONIC SYSTEMS

HEAT TRANSFER DIVISION