



CLIMATEWORX
INTERNATIONAL

MISSION CRITICAL Air Conditioning Systems

Series 9, Vertical Floor-Mount Units

Technical Data– 60 Hz

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Air-cooled System

Model no. 9AU_/_/9AD_ _		6	8	12	14	16	18	20	22	26	30
Cooling Capacity - Rated at standard air volume, 95°F (35°C) ambient temperature											
75F°(24°C) DB, 50%rh											
Net Total	BTUH	74785	93788	114976	140966	154687	194618	212020	244128	291440	351447
Net Sensible	BTUH	66013	87093	112533	140611	154652	193020	210871	229385	268472	297942
THR	BTUH	95051	123670	156793	188873	212824	261914	291285	335277	387293	478791
75F° (24°C) DB, 45%rh											
Net Total	BTUH	73798	92397	112742	138964	152198	191326	208201	239819	285919	344625
Net Sensible	BTUH	73697	92397	112742	138964	148172	191261	208196	239819	285919	331158
THR	BTUH	94026	122224	154213	186551	209915	258123	286795	330217	380996	470866
72F° (22°C) DB, 50%rh											
Net Total	BTUH	71373	89357	108960	134410	146947	185354	201693	232561	278194	335412
Net Sensible	BTUH	65359	86464	108867	134067	146872	183950	200671	228874	266353	295457
THR	BTUH	91510	119063	150247	181753	204252	252063	280141	322838	372984	461328
72F ° (22°C) DB, 45%rh											
Net Total	BTUH	70477	88086	106910	132559	144871	182277	198210	228170	272962	329125
Net Sensible	BTUH	70351	88086	106910	131079	144871	174551	198210	228170	272962	327710
THR	BTUH	90580	117742	147869	179593	201804	248572	276015	317823	366892	453871
68F° (20°C) DB, 50%rh											
Net Total	BTUH	66970	83648	101129	125145	135893	173353	188248	217471	264616	322527
Net Sensible	BTUH	64554	83620	100915	124963	135872	172472	187571	217113	264616	298046
THR	BTUH	86943	113125	141656	171685	192113	239302	265636	306618	354196	438693
68F ° (20°C) DB, 45%rh											
Net Total	BTUH	66164	82485	99192	124543	135528	170874	185165	213831	256190	308882
Net Sensible	BTUH	66046	82475	93995	124543	135528	170874	185165	213831	256190	308882
THR	BTUH	86108	111915	139476	170958	191558	236375	262017	302120	348895	431657
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings											
Standard Air Volume	CFM	3600	5200	6200	8800	10400	10800	12000	12400	14000	15000
External Static Pressure	in	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Quantity of Fans		1	1	1	2	2	2	2	2	3	3
Net Total Fan Motor Power	HP	1	3	5	5	7.5	7.5	10	10	10	10
Absorbed Power	HP	0.97	2.33	3.81	3.67	5.68	6.70	8.71	9.65	7.48	9.13
Compressor - Refrigerant R407C											
Quantity of Compressors		2	2	2	2	2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Evaporator Coil - A-Frame- Copper tube / aluminium fin - Stainless steel drain pan											
Face Area	ft²	13.42	13.42	13.42	22.92	22.92	22.92	22.92	22.92	30.21	30.21
Rows Deep		3	3	4	3	3	4	4	4	4	4
Fins per inch		14	14	14	13	13	13	13	13	13	13
Face Velocity	FPM	268	387	462	384	454	471	524	541	463	496
Refrigerant Charge	Lbs	8.6	8.6	10.9	14.2	14.2	18.5	19.5	19.5	26.4	26.4

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Model no. 9AU_/_9AD_ _		6	8	12	14	16	18	20	22	26	30	
Reheat Section												
<i>Electric Reheat¹ - Single Stage, finned tubular type heater, SCR Controlled</i>												
Capacity	kW	6	6	6	12	12	12	12	12	30	30	
Quantity of Heaters		3	3	3	3	3	3	3	3	3	3	
<i>Hot Gas Reheat - 71.6 °F (22 °C) E.A.T., two stages</i>												
Heating Capacity	BTUH	29324	34326	36832	57958	61968	62886	65470	66280	84420	86724	
<i>Hot Water Reheat - 180 °F (82.2 °C) E.W.T., 71.6°F (22 °C) E.A.T. - 2-way modulating control valve, optional 3-way</i>												
Heating Capacity	BTUH	44112	50302	53294	79623	83775	84708	87300	88101	107588	109632	
Water Flow Rate	GPM	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	
Pressure Drop	ft-H ₂ O	0.67	0.67	0.67	0.96	0.96	0.96	0.96	0.96	1.22	1.22	
<i>Steam Reheat - 227 °F (108.3 °C) saturated steam, 71.6°F (22 °C) E.A.T. - 2-way modulating control valve</i>												
Heating Capacity	BTUH	70441	81739	87347	137996	146975	149025	154783	156583	200318	205460	
Humidifier Section												
<i>Electrode Boiler Type¹</i>												
Capacity	lb/hr	20	20	20	20	20	20	20	20	20	20	
Humidifier Power	kW	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	
Filter Section - Pleated disposable type, 30%efficiency to ASHRAE 52-76												
<i>Upflow Models</i>												
Quantity of Filters		3	3	3	4	4	4	4	4	5	5	
Nominal Size	LxWxD-in	20x25x4			20x25x4							
<i>Downflow Models</i>												
Quantity of Filters		4	4	4	6	6	6	6	6	8	8	
Nominal Size	LxWxD-in	16x25x4			16x25x4							
Piping Connection Size												
Liquid Line	- ODM -in	1/2	1/2	1/2	5/8	5/8	5/8	5/8	5/8	7/8	7/8	
Hot Gas Line	- ODM -in	7/8	7/8	7/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-3/8	1-3/8	
Hot Water	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	1-1/8	1-1/8	
Steam	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	
Steam Condensate	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	7/8	7/8	
Humidifier Water	- ODM -in	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	
Condensate Drain	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	
Physical Details - For units with standard options only; consult factory for special options and configuration												
Dimensions	in	73(W)x34(D)x74(H)			99(W) x34(D) x74(H)				125(W)x34(D)x74(H)			
Approx. Weight	lbs	1320	1353	1400	1760	1780	1850	1860	1860	2230	2270	
Matching Air-Cooled Condenser - Selected at 95 °F Ambient												
Model		KS12-128-2	KS12-154-2	KS12-154-2	KS12-193-2	KS13-230-2	KS13-288-2	KM13-305-2	KM13-356-2	KM13-396-2	KM14-492-2	
Width x Depth x Height	in	68 x 30 x 54	68 x 30 x 54	68 x 30 x 54	88 x 30 x 54	54 x 30 x 54	69 x 30 x 54	135x30x48	135x30x48	135x30x48	150x30x48	
Weight	lbs	274	289	289	345	401	467	630	650	695	840	

¹ Standard options

Water-cooled System

Model no. 9WU_ _/9WD_ _		06	08	12	14	16	18	20	22	26	30
Cooling Capacity - Rated at standard air volume											
75°F (24°C) DB, 50%rh											
Net Total	BTUH	75068	94962	120713	146584	159939	200288	219151	251768	302289	364520
Net Sensible	BTUH	66044	87294	112703	146259	159921	199016	218477	230147	271496	301860
THR	BTUH	95160	124126	159715	191210	215126	264547	294688	338941	392471	485195
75°F (24°C) DB, 45%rh											
Net Total	BTUH	73988	93416	118069	144236	157095	196520	214764	246884	295956	356856
Net Sensible	BTUH	73918	93416	118069	144236	157095	196285	214743	246884	295956	334513
THR	BTUH	94097	122610	156896	188703	211984	260503	289892	333309	385746	476913
72°F (22°C) DB, 50%rh											
Net Total	BTUH	71352	90062	113605	139029	151054	189786	207362	238518	286890	346008
Net Sensible	BTUH	65344	86596	112400	138711	151031	188487	206532	229202	268246	298702
THR	BTUH	91503	119318	152507	183583	205970	254037	282730	325537	376877	466196
72°F (22°C) DB, 45%rh											
Net Total	BTUH	70373	88654	111343	136885	148415	186396	203426	234152	281251	339110
Net Sensible	BTUH	70259	88644	111343	136885	147058	186396	203426	234152	281251	328742
THR	BTUH	90540	117936	150006	181280	203042	250370	278391	320433	370856	458795
68°F (20°C) DB, 50%rh											
Net Total	BTUH	66595	83804	104608	129344	139615	176399	192508	221734	267631	323064
Net Sensible	BTUH	64380	83770	104608	129063	139564	175428	191828	221734	263591	294393
THR	BTUH	86822	113174	143381	173795	194194	240633	267521	308565	357372	442612
68°F (20°C) DB, 45%rh											
Net Total	BTUH	65726	82552	102571	127517	137906	173365	188774	217539	262513	315965
Net Sensible	BTUH	65610	82536	102571	127517	137906	173047	184169	217539	262513	315965
THR	BTUH	85967	111943	141106	171877	192296	237320	263593	303910	351876	434886
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings											
Standard Air Volume	CFM	3600	5200	6200	8800	10400	10800	12000	12400	14000	15000
External Static Pressure	in	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Quantity of Fans		1	1	1	2	2	2	2	2	3	3
Net Total Fan Motor Power	HP	1	3	5	5	7.5	7.5	10	10	10	10
Absorbed Power	HP	0.97	2.33	3.81	3.67	5.68	6.70	8.71	9.65	7.48	9.13
Compressor - Refrigerant R407C											
Quantity of Compressors		2	2	2	2	2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Evaporator Coil - A-Frame - Copper tube / aluminium fin - Stainless steel drain pan											
Face Area	ft ²	13.42	13.42	13.42	22.92	22.92	22.92	22.92	22.92	30.21	30.21
Rows Deep		3	3	4	3	3	4	4	4	4	4
Fins per inch		14	14	14	13	13	13	13	13	13	13
Face Velocity	FPM	268	387	462	384	454	471	524	541	463	497

Model no. 9WU_ _/9WD_ _		06	08	12	14	16	18	20	22	26	30		
Reheat Section													
<i>Electric Reheat</i> ¹ - Single Stage, finned tubular type heater, SCR Controlled													
Capacity	kw	6	6	6	12	12	12	12	12	30	30		
Quantity of Heaters		3	3	3	3	3	3	3	3	3	3		
<i>Hot Gas Reheat</i> - 71.6°F (22°C) E.A.T., two stages													
Heating Capacity	BTUH	29324	34326	36832	57958	61968	62886	65470	66280	84420	86724		
<i>Hot Water Reheat</i> - 180°F (82.2°C) E.W.T., 71.6°F (22°C) E.A.T. - 2-way modulating control valve, optional 3-way													
Heating Capacity	BTUH	44112	50302	53294	79623	83775	84708	87300	88101	107588	109632		
Water Flow Rate	GPM	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1		
Pressure Drop	ft-H ₂ O	0.67	0.67	0.67	0.96	0.96	0.96	0.96	0.96	1.22	1.22		
<i>Steam Reheat</i> - 227°F (108.3°C) saturated steam, 71.6°F (22°C) E.A.T. - 2-way modulating control valve													
Heating Capacity	BTUH	70441	81739	87347	137996	146975	149025	154783	156583	200318	205460		
Humidifier Section													
<i>Electrode Boiler Type</i> ¹													
Capacity	lb/hr	20	20	20	20	20	20	20	20	20	20		
Humidifier Power	kw	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8		
Filter Section - Pleated disposable type, 30%efficiency to ASHRAE 52-76													
<i>Upflow Models</i>													
Quantity of Filters		3	3	3	4	4	4	4	4	5	5		
Nominal Size	LxWxD-in			20x25x4				20x25x4					
<i>Downflow Models</i>													
Quantity of Filters		4	4	4	6	6	6	6	6	8	8		
Nominal Size	LxWxD-in			16x25x4				16x25x4					
Condensing Water Requirement													
75°F EWT													
Flow Rate	GPM	9.0	14.0	16.4	22.0	28.0	24.0	28.0	34.4	23.9	29.4		
Unit Pressure Drop	ft-H ₂ O	3.9	7.0	6.4	7.4	10.4	5.8	7.2	10.1	6.6	5.4		
85°F EWT													
Flow Rate	GPM	14.0	16.6	26.0	36.0	26.0	36.0	42.8	56.0	42.2	51.5		
Unit Pressure Drop	ft-H ₂ O	6.7	6.7	12.3	16.1	9.7	10.5	13.9	22.0	15.9	13.7		
Water Regulating Valve - 2-way, head pressure controlled													
Size - 75°F EWT	in	3/4	3/4	3/4	1	1	1	1	1	1	1-1/4		
Size - 85°F EWT	in	3/4	3/4	1	1	1	1-1/4	1-1/4	1-1/2	1-1/4	1-1/2		
Piping Connection Size													
Liquid Line	- ODM -in	1/2	1/2	1/2	5/8	5/8	5/8	5/8	5/8	7/8	7/8		
Hot Gas Line	- ODM -in	7/8	7/8	7/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-3/8	1-3/8		
Condensing Water	- ODM -in	1-1/8	1-1/8	1-3/8	1-3/8	1-3/8	1-5/8	1-5/8	1-5/8	2-1/8	2-1/8		
Hot Water	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	1-1/8	1-1/8		
Steam	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8		
Steam Condensate	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4		
Humidifier Water	- ODM -in	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4		
Condensate Drain	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4		
Physical Details - For units with standard options only; consult factory for special options and configuration													
Dimensions	in	73(W)x34(D)x74(H)				99(W) x34(D) x74(H)				125(W)x34(D)x74(H)			
Approx. Weight	lbs	1620	1650	1700	2090	2110	2180	2200	2200	2430	2470		

¹ Standard options

Glycol-cooled System

Model no.	9GU__/9GD__	06	08	12	14	16	18	20	22	26	30
Cooling Capacity - Rated at standard air volume											
75°F (24°C) DB, 50%rh											
Net Total	BTUH	69053	86788	109886	134440	145691	183108	200698	230257	280628	333639
Net Sensible	BTUH	64580	85838	109272	134079	145596	181260	199096	229246	271634	292812
THR	BTUH	93070	121122	154239	186254	209232	256692	286153	329046	380344	470983
75°F (24°C) DB, 45%rh											
Net Total	BTUH	68008	85389	107352	132288	143673	179601	196516	225200	270596	326037
Net Sensible	BTUH	67843	85364	107352	132288	143673	179601	194883	225073	270596	326037
THR	BTUH	92043	119686	151533	184013	207019	252988	281569	323667	373838	462681
72°F (22°C) DB, 50%rh											
Net Total	BTUH	65543	82174	103221	127304	137322	173102	189623	217887	262989	318818
Net Sensible	BTUH	64064	82131	102656	127040	137283	171885	188548	216741	261709	289647
THR	BTUH	89624	116607	147484	179045	200639	246706	274858	316562	366554	455816
72°F (22°C) DB, 45%rh											
Net Total	BTUH	64576	80880	100887	125771	136010	170575	186340	213215	256600	309192
Net Sensible	BTUH	64444	80873	98115	125771	136010	170575	186340	213215	256600	309192
THR	BTUH	88675	115273	144978	177425	199223	243979	271321	311501	359692	445433
68°F (20°C) DB, 50%rh											
Net Total	BTUH	61026	76243	94607	118130	126515	160176	175267	201927	243732	294300
Net Sensible	BTUH	60808	76139	94330	118130	124334	152118	175267	201084	243432	285677
THR	BTUH	85191	110796	138742	169759	189563	233799	260296	300444	347043	430644
68°F (20°C) DB, 45%rh											
Net Total	BTUH	46040	75092	93474	117350	126144	158728	173416	197948	238716	287128
Net Sensible	BTUH	46040	75092	93474	117350	126144	158728	173416	193064	230601	287128
THR	BTUH	64997	109600	137036	168899	189182	232285	258279	295870	341493	422819
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings											
Standard Air Volume	CFM	3600	5200	6200	8800	10400	10800	12000	12400	14000	15000
External Static Pressure	in	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Quantity of Fans		1	1	1	2	2	2	2	2	3	3
Net Total Fan Motor Power	HP	1	3	5	5	7.5	7.5	10	10	10	10
Absorbed Power	HP	0.97	2.33	3.81	3.67	5.68	6.70	8.71	9.65	7.48	9.13
Compressor - Refrigerant R407C											
Quantity of Compressors		2	2	2	2	2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Evaporator Coil - A-Frame - Copper tube / aluminium fin - Stainless steel drain pan											
Face Area	ft ²	13.42	13.42	13.42	22.92	22.92	22.92	22.92	22.92	30.21	30.21
Rows Deep		3	3	4	3	3	4	4	4	4	4
Fins per inch		14	14	14	13	13	13	13	13	13	13
Face Velocity	FPM	268	387	462	384	454	471	524	541	463	497

Face Velocity	FPM	268	387	462	384	454	471	524	541	463	497
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Model no. 9GU_/_9GD_ _		06	08	12	14	16	18	20	22	26	30
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Reheat Section

Electric Reheat¹ - Single Stage, finned tubular type heater, SCR Controlled

Capacity	kW	6	6	6	12	12	12	12	12	30	30
Quantity of Heaters		3	3	3	3	3	3	3	3	3	3

Hot Gas Reheat - 71.6 °F (22 °C) E.A.T., two stages

Heating Capacity	BTUH	29324	34326	36832	57958	61968	62886	65470	66280	84420	86724
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Hot Water Reheat - 180 °F (82.2 °C) E.W.T., 71.6°F (22 °C) E.A.T. - 2-way modulating control valve, optional 3-way

Heating Capacity	BTUH	44112	50302	53294	79623	83775	84708	87300	88101	107588	109632
Water Flow Rate	GPM	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Pressure Drop	ft-H ₂ O	0.67	0.67	0.67	0.96	0.96	0.96	0.96	0.96	1.22	1.22

Steam Reheat - 227 °F (108.3 °C) saturated steam, 71.6°F (22 °C) E.A.T. - 2-way modulating control valve

Heating Capacity	BTUH	70441	81739	87347	137996	146975	149025	154783	156583	200318	205460
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Humidifier Section

Electrode Boiler Type¹

Capacity	lb/hr	20	20	20	20	20	20	20	20	20	20
Humidifier Power	kW	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8

Filter Section - Pleated disposable type, 30%efficiency to ASHRAE 52-76

Upflow Models

Quantity of Filters		3	3	3	4	4	4	4	4	5	5
Nominal Size	LxWxD-in			20x25x4				20x25x4			

Downflow Models

Quantity of Filters		4	4	4	6	6	6	6	6	8	8
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Glycol Solution Requirement - 40% ethylene glycol

95°F EWT

Flow Rate	GPM	18.0	22.0	32.0	26.4	32.0	44.0	52.6	38.0	26.7	31.8
Unit Pressure Drop	ft-H ₂ O	8.1	7.7	14.2	7.4	9.6	15.7	21.3	14.1	2.1	2.2

105°F EWT

Flow Rate	GPM	22.6	36.0	32.0	42.0	52.0	42.0	48.8	54.0	50.4	59.5
Unit Pressure Drop	ft-H ₂ O	8.0	16.6	7.3	12.2	17.5	13.1	17.3	21.1	11.6	11.6

Glycol Solution Regulating Valve -2-way, head pressure controlled

Size	in	1	1	1 ¼	1 ¼	1 ¼	1 ¼	1 ¼	1 ¼	1-1/2	1-1/2
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Piping Connection Size

Liquid Line	- ODM -in	1/2	1/2	1/2	5/8	5/8	5/8	5/8	5/8	7/8	7/8
Hot Gas Line	- ODM -in	7/8	7/8	7/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-3/8	1-3/8
Glycol Solution	- ODM -in	1-1/8	1-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8
Hot Water	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	1-1/8	1-1/8
Steam	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8
Steam Condensate	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Humidifier Water	- ODM -in	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
Condensate Drain	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4

Physical Details - For units with standard options only; consult factory for special options and configuration

Dimensions	in	73(W)x34(D)x74(H)		99(W) x34(D) x74(H)		125(W)x34(D)x74(H)
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Chilled-Water System

Model no. 9CU_ _ / 9CD_ _		14	16	18	20	22	25	26	30
Cooling Capacity - Rated at standard air volume, 45°F (7.2°C) entering water & 10°F (5.6°C) temperature rise									
80°F (26°C) DB, 50%rh									
Net Total	BTUH	254912	293505	329718	389497	416816	422002	471956	550713
Net Sensible	BTUH	174143	203699	232707	263932	285082	286250	327241	369396
Flow Rate	GPM	52.2	60.7	69.1	81.8	88.7	88.9	98.8	115.5
Unit Pressure Drop	ft-H ₂ O	22.2	29.3	28.1	45.6	52.8	26.1	31.7	32.1
80°F (26°C) DB, 45%rh									
Net Total	BTUH	230805	267224	300315	353460	379114	382599	430033	499809
Net Sensible	BTUH	177590	209658	240133	270389	293484	293129	336824	377753
Flow Rate	GPM	47.3	55.2	63.2	74.5	81.0	81.0	90.4	105.3
Unit Pressure Drop	ft-H ₂ O	18.5	24.6	23.9	38.6	44.9	21.9	26.9	27.0
75°F (24°C) DB, 50%rh									
Net Total	BTUH	186761	215663	241342	285173	304582	307376	345790	402539
Net Sensible	BTUH	148583	175168	200047	225046	243402	243353	280281	313989
Flow Rate	GPM	38.5	44.9	51.3	60.8	66.1	65.9	73.5	85.8
Unit Pressure Drop	ft-H ₂ O	12.7	16.8	16.4	26.8	31.1	15.0	18.4	18.4
75°F (24°C) DB, 45%rh									
Net Total	BTUH	171127	198828	224675	262778	282143	283321	321574	370586
Net Sensible	BTUH	153972	182170	210308	234614	255329	253964	294214	326791
Flow Rate	GPM	35.4	41.6	48.0	56.3	61.5	61.0	68.6	79.3
Unit Pressure Drop	ft-H ₂ O	10.8	14.6	14.6	23.3	27.3	13.0	16.1	15.8
72°F (22°C) DB, 50%rh									
Net Total	BTUH	150444	174930	197111	232155	248055	248310	282514	325159
Net Sensible	BTUH	133831	158143	181974	203608	220607	219421	254650	282726
Flow Rate	GPM	31.2	36.9	42.5	50.2	54.7	54.0	60.8	70.2
Unit Pressure Drop	ft-H ₂ O	8.6	11.7	11.7	19.0	22.2	10.4	12.9	12.6
72°F (22°C) DB, 45%rh									
Net Total	BTUH	141742	165933	188912	219252	235878	234446	270202	306575
Net Sensible	BTUH	141176	165933	188912	215803	235256	232763	270202	299423
Flow Rate	GPM	29.5	35.0	40.8	47.5	52.2	51.2	58.2	66.3
Unit Pressure Drop	ft-H ₂ O	7.7	10.6	10.9	17.2	20.3	9.4	11.9	11.3

Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings

Standard Air Volume	CFM	7000	8600	10400	11000	12400	12000	14000	15000
External Static Pressure	in	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Quantity of Fans		1	1	1	2	2	2	3	3
Net Total Fan Motor Power	HP	3	5	7.5	7.5	10	10	10	10
Absorbed Power	HP	2.20	3.67	6.06	7.35	9.87	8.58	8.49	9.21

Chilled-water Coil - A-Frame - Copper tube / aluminium fin - Stainless steel drain pan

Face Area	ft ²	22.92	22.92	22.92	22.92	22.92	30.21	30.21	30.21
Rows Deep		4	4	4	5	5	5	5	6
Fins per inch		13	13	13	13	13	13	13	13
Face Velocity	FPM	305	375	454	480	541	397	463	497

Model no. 9CU_ _ / 9CD_ _		14	16	18	20	22	25	26	30	
Reheat Section										
<i>Electric Reheat</i> ¹ - Three stages, finned tubular type heater, SCR Controlled										
Capacity	kW	12	12	12	12	12	30	30	30	
Quantity of Heaters		3	3	3	3	3	3	3	3	
<i>Hot Water Reheat</i> – 180° F (82.2°C) E.W.T., 71.6° F (22°C) E.A.T. - 2-way modulating control valve, optional 3-way										
Heating Capacity	BTUH	79623	83775	84708	87300	88101	87300	107588	109632	
Water Flow Rate	GPM	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	
Pressure Drop	ft-H ₂ O	0.96	0.96	0.96	0.96	0.96	2.9	3.7	3.7	
<i>Steam Reheat</i> - 227° F (108.3°C) saturated steam, 71.6° F (22°C) E.A.T. - 2-way modulating control valve										
Heating Capacity	BTUH	137996	146975	149025	154783	156583	154783	200318	205460	
Humidifier Section										
<i>Electrode Boiler Type</i> ¹										
Capacity	lb/hr	20	20	20	20	20	20	20	20	
Humidifier Power	kW	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	
Filter Section - Pleated disposable type, 30% efficiency to ASHRAE 52-76										
<i>Upflow Models</i>										
Quantity of Filters		4	4	4	4	4	4	5	5	
Nominal Size	LxWxD-in				20 x 25 x 4					
<i>Downflow Models</i>										
Quantity of Filters		6	6	6	6	6	6	8	8	
Nominal Size	LxWxD-in				16 x 25 x 4					
Chilled-water Valve - 2-Way modulating										
Valve Size	in	1 1/2	1 1/2	2	2	2	2	2	2	
Piping Connection Size										
Chilled-water	- ODM -in	1 5/8	1 5/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	
Hot Water	- ODM -in	7/8	7/8	7/8	7/8	7/8	1 1/8	1 1/8	1 1/8	
Steam	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	
Steam Condensate	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	
Humidifier Water	- ODM -in	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	
Condensate Drain	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	
Physical Details - For units with standard options only; consult factory for special options and configuration										
Dimensions	in			99(W) x34(D) x74(H)				125(W)x34(D)x74(H)		
Weight	lbs	1463	1463	1573	1585	1585	1610	1885	1932	

¹ Standard options

Air Dual-cooling System

Model no.	9DU /9DD	06	08	12	14	16	18	20	22	30
Cooling Capacity - Rated at standard air volume, 95°F (35°C) ambient temperature										
75°F (24°C) DB, 50%rh										
Net Net Total	BTUH	72010	90475	105404	139254	152019	181642	196571	224112	273192
Net Sensible	BTUH	64992	85636	98460	138900	151984	180511	196143	206513	258800
THR	BTUH	94173	122783	147420	188867	212818	249785	277340	318062	374770
75°F (24°C) DB, 45%rh										
Net Net Total	BTUH	71139	89283	103696	137425	149829	178921	193404	220377	268437
Net Sensible	BTUH	71016	89283	103696	137425	145534	178921	193404	220377	268437
THR	BTUH	93177	121380	145307	186569	209937	246456	273333	313433	369082
72°F (22°C) DB, 50%rh										
Net Net Total	BTUH	68772	86216	99714	132916	144431	173017	186970	213617	260426
Net Sensible	BTUH	64392	85079	97531	132571	144355	173017	186970	205145	257677
THR	BTUH	90739	118285	141157	181761	204262	240468	266762	306421	360764
72°F (22°C) DB, 45%rh										
Net Net Total	BTUH	67972	85117	98231	131125	142686	170485	183953	210097	256163
Net Sensible	BTUH	67829	85096	98231	129643	142686	170485	183953	210097	256163
THR	BTUH	89818	116979	139174	179594	201804	237340	262992	302026	355387
68°F (20°C) DB, 50%rh										
Net Net Total	BTUH	64647	80853	92358	124490	134609	161801	174518	199821	244057
Net Sensible	BTUH	63854	80790	92358	124293	134596	161801	174518	199821	244057
THR	BTUH	86294	112473	133011	172517	193106	228323	253112	291292	342762
68°F (20°C) DB, 45%rh										
Net Net Total	BTUH	63865	79733	90842	123178	133343	159236	171449	196286	239901
Net Sensible	BTUH	63759	79733	90842	123178	133343	159236	171449	196286	239901
THR	BTUH	85466	111290	131214	170958	191558	225451	249655	287252	337834
Cooling Capacity - Chilled-water - Rated at standard air volume, 45°F entering water & 10°F water temperature rise										
75°F (24°C) DB, 50%rh										
Net Total	BTUH	77105	99873	110892	177203	193280	196924	205434	207702	281340
Net Sensible	BTUH	66459	87956	99036	155666	173486	177774	188577	191712	249348
Flow/Pressure Drop	GPM/ft-H ₂ O	16.0/8.3	21.4/14.4	24.3/8.7	37.6/10.2	42.1/12.6	43.1/9.5	46.1/10.8	47.0/11.2	61.5/22.0
75°F (24°C) DB, 45%rh										
Net Total	BTUH	71526	93539	104543	166601	183880	187713	197186	199873	266876
Net Sensible	BTUH	69766	93234	104543	165095	183880	187713	197186	199873	266517
Flow/Pressure Drop	GPM/ft-H ₂ O	14.9/7.2	20.1/12.8	23.0/7.8	35.5/9.1	40.1/11.5	41.2/8.8	44.3/10.0	45.3/10.4	58.4/20.1
72°F (22°C) DB, 50%rh										
Net Total	BTUH	61001	79598	88659	143010	157513	160847	169487	170819	231399
Net Sensible	BTUH	59820	79573	88659	141562	157513	160847	169487	170819	228815
Flow/Pressure Drop	GPM/ft-H ₂ O	12.8/5.4	17.3/9.6	19.8/6.0	30.8/7.0	34.9/8.9	35.9/6.8	38.7/7.8	39.6/8.2	51.4/15.9
72°F (22°C) DB, 45%rh										
Net Total	BTUH	59037	77629	86814	139600	154393	158016	166943	169307	226598
Net Sensible	BTUH	59037	77629	86814	139600	154393	158016	166943	169307	226598
Flow/Pressure Drop	GPM/ft-H ₂ O	12.4/5.4	16.9/9.2	19.4/5.8	30/6.7	34.2/8.5	35.2/6.6	38.2/7.7	39.1/8.0	50.3/15.3
68°F (20°C) DB, 50%rh										
Net Total	BTUH	43488	58127	64792	106397	117209	119751	125423	126772	176850
Net Sensible	BTUH	43488	58127	64792	106397	117209	119751	125423	126772	176850
Flow/Pressure Drop	GPM/ft-H ₂ O	9.3/3.0	13.0/5.6	15.0/3.6	23.4/4.2	26.8/5.4	27.6/4.3	29.9/4.9	30.7/5.2	40.4/10.3
68°F (20°C) DB, 45%rh										
Net Total	BTUH	43898	58215	64960	106749	117101	119989	125809	127230	177485
Net Sensible	BTUH	43898	58215	64960	106749	117101	119989	125809	127230	177485
Flow/Pressure Drop	GPM/ft-H ₂ O	9.3/3.0	13.0/5.6	15.1/3.7	23.5/4.2	26.8/5.4	27.6/4.3	30.0/4.9	30.7/5.2	40.5/10.4

Model no. 9DU__/9DD__		06	08	12	14	16	18	20	22	30
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings										
Standard Air Volume	CFM	3600	5200	6200	8800	10400	10800	12000	12400	15000
External Static Pressure	in 0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Quantity of Fans		1	1	1	2	2	2	2	2	3
Net Total Fan Motor Power	HP	1.5	3	5	5	7.5	7.5	10	15	10
Absorbed Power	HP	1.10	2.73	4.18	4.35	6.73	7.32	9.71	10.70	9.20
Compressor - Refrigerant R407C										
Quantity of Compressors		2	2	2	2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Evaporator Coil - A-Frame- Copper tube / aluminium fin - Stainless steel drain pan										
Face Area	ft ²	13.42	13.42	13.42	22.92	22.92	22.92	22.92	22.92	30.21
Rows Deep (DX/Chilled W _i :3/3)		3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	
Fins per inch		14	14	14	13	13	13	13	13	13
Face Velocity	FPM	268	387	462	384	454	471	524	541	497
Reheat Section										
<i>Electric Reheat</i> ¹ - Single Stage, finned tubular type heater, SCR Controlled										
Capacity	kW	6	6	6	12	12	12	12	12	30
Quantity of Heaters		3	3	3	3	3	3	3	3	3
<i>Hot Gas Reheat</i> - 71.6 °F (22 °C) E.A.T., two stages										
Heating Capacity	BTUH	29324	34326	36832	57958	61968	62886	65470	66280	86724
<i>Hot Water Reheat</i> - 180 °F (82.2 °C) E.W.T., 71.6 °F (22 °C) E.A.T. - 2-way modulating control valve, optional 3-way										
Heating Capacity	BTUH	44112	50302	53294	79623	83775	84708	87300	88101	109632
Water Flow Rate	GPM	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Pressure Drop	ft-H ₂ O	0.67	0.67	0.67	0.96	0.96	0.96	0.96	0.96	1.22
<i>Steam Reheat</i> - 227 °F (108.3 °C) saturated steam, 71.6 °F (22 °C) E.A.T. - 2-way modulating control valve										
Heating Capacity	BTUH	70441	81739	87347	137996	146975	149025	154783	156583	205460
Humidifier Section										
<i>Electrode Boiler Type</i> ¹										
Capacity	lb/hr	20	20	20	20	20	20	20	20	20
Humidifier Power	kW	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Filter Section - Pleated disposable type, 30%efficiency to ASHRAE 52-76										
<i>Upflow Models</i>										
Quantity of Filters		3	3	3	4	4	4	4	4	5
Nominal Size	LxWxD-in		20x25x4				20x25x4			
<i>Downflow Models</i>										
Quantity of Filters		4	4	4	6	6	6	6	6	8
Nominal Size	LxWxD-in		16x25x4				16x25x4			

Model no. 9DU__/9DD__		06	08	12	14	16	18	20	22	30	
Chilled-water Valve - 2-Way modulating											
Valve Size	in	1	1	1 ½	1 ½	1 ½	2	2	2	2	
Piping Connection Size											
Liquid Line	- ODM -in	1/2	1/2	1/2	5/8	5/8	5/8	5/8	5/8	7/8	
Hot Gas Line	- ODM -in	7/8	7/8	7/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-3/8	
Glycol Solution	- ODM -in	1-1/8	1-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	
Chilled Water	-ODM -in	1 1/8	1 1/8	1 5/8	1 5/8	1 5/8	2 1/8	2 1/8	2 1/8	2-1/8	
Hot Water	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	1-1/8	
Steam	- MPT -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	
Steam Condensate	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	
Humidifier Water	- ODM -in	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	
Condensate Drain	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	
Physical Details - For units with standard options only; consult factory for special options and configuration											
Dimensions	in	82(W) x 34(D) x 74(H)				108(W) x 34(D) x 74(H)				134(W)x34(D)x74(H)	
Approx. Weight	lbs	1470	1500	1600		1850	1900	2000	2050		2050 2570
Matching Air-Cooled Condenser - Selected at 95° F Ambient											
Model		KS11-097-2	KS12-128-2	KS12-154-2	KS12-193-2	KS13-230-2	KS13-288-2	KM13-305-2	KM13-334-2	KM13-396-2	
Width x Depth x Height in		51 x 30 x 54	68 x 30 x 54	68 x 30 x 54	88 x 30 x 54	54 x 30 x 54	69 x 30 x 54	135x30x48	135x30x48	135x30x48	
Weight	lbs	217	274	289	345	401	467	630	640	695	

¹ Standard options

Water Dual-cooling System

Model no.	9HU	/9HD	06	08	12	14	16	18	20	22	30
Cooling Capacity – Direct Expansion - Rated at standard air volume											
75°F (24°C) DB, 50%rh											
Net Total	BTUH		74727	93938	109389	144864	157277	185586	201621	231528	281908
Net Sensible	BTUH		65703	86270	99424	144539	157259	181254	197068	208298	260412
THR	BTUH		95160	124126	149200	191210	215126	251403	279468	321161	378676
75°F (24°C) DB, 45%rh											
Net Total	BTUH		73715	92597	107454	142666	154706	182583	198290	227370	276818
Net Sensible	BTUH		73645	92597	107454	142666	154706	182583	198290	227370	276818
THR	BTUH		94097	122610	146960	188703	211984	247918	275257	316335	372842
72°F (22°C) DB, 50%rh											
Net Total	BTUH		71011	89175	102958	137459	148597	176041	190915	219603	267601
Net Sensible	BTUH		65002	85709	98238	137141	148573	176041	190915	206418	258098
THR	BTUH		91503	119318	142538	183583	205970	241641	268398	308826	363979
72°F (22°C) DB, 45%rh											
Net Total	BTUH		70100	87835	101106	135452	146162	173264	187585	215691	262755
Net Sensible	BTUH		69986	87825	101106	135452	144805	173264	187585	215691	262755
THR	BTUH		90540	117936	140450	181280	203042	238381	264464	304249	358345
68°F (20°C) DB, 50%rh											
Net Total	BTUH		66322	82985	94603	127911	137430	163657	177127	203985	249277
Net Sensible	BTUH		64107	82951	94603	127629	137379	163657	177127	203985	249277
THR	BTUH		86822	113174	133919	173795	194194	229029	254126	292826	345002
68°F (20°C) DB, 45%rh											
Net Total	BTUH		65453	81733	92885	126152	135653	160891	173809	200167	244554
Net Sensible	BTUH		65337	81717	92885	126152	135653	160891	173809	200167	244554
THR	BTUH		85967	111943	132036	171877	192296	226052	250549	288619	339905
Cooling Capacity - Chilled-water - Rated at standard air volume, 45°F entering water & 10°F water temperature rise											
75°F (24°C) DB, 50%rh											
Net Total	BTUH		77105	99873	110892	177203	193280	196924	205434	207702	281340
Net Sensible	BTUH		66459	87956	99036	155666	173486	177774	188577	191712	249348
Flow/Pressure Drop	GPM/ft-H ₂ O		16.0/8.3	21.4/14.4	24.3/8.7	37.6/10.2	42.1/12.6	43.1/9.5	46.1/10.8	47.0/11.2	61.5/22.0
75°F (24°C) DB, 45%rh											
Net Total	BTUH		71526	93539	104543	166601	183880	187713	197186	199873	266876
Net Sensible	BTUH		69766	93234	104543	165095	183880	187713	197186	199873	266517
Flow/Pressure Drop	GPM/ft-H ₂ O		14.9/7.2	20.1/12.8	23.0/7.8	35.5/9.1	40.1/11.5	41.2/8.8	44.3/10.0	45.3/10.4	58.4/20.1
72°F (22°C) DB, 50%rh											
Net Total	BTUH		61001	79598	88659	143010	157513	160847	169487	170819	231399
Net Sensible	BTUH		59820	79573	88659	141562	157513	160847	169487	170819	228815
Flow/Pressure Drop	GPM/ft-H ₂ O		12.8/5.4	17.3/9.6	19.8/6.0	30.8/7.0	34.9/8.9	35.9/6.8	38.7/7.8	39.6/8.2	51.4/15.9
72°F (22°C) DB, 45%rh											
Net Total	BTUH		59037	77629	86814	139600	154393	158016	166943	169307	226598
Net Sensible	BTUH		59037	77629	86814	139600	154393	158016	166943	169307	226598
Flow/Pressure Drop	GPM/ft-H ₂ O		12.4/5.4	16.9/9.2	19.4/5.8	30/6.7	34.2/8.5	35.2/6.6	38.2/7.7	39.1/8.0	50.3/15.3
68°F (20°C) DB, 50%rh											
Net Total	BTUH		43488	58127	64792	106397	117209	119751	125423	126772	176850
Net Sensible	BTUH		43488	58127	64792	106397	117209	119751	125423	126772	176850
Flow/Pressure Drop	GPM/ft-H ₂ O		9.3/3.0	13.0/5.6	15.0/3.6	23.4/4.2	26.8/5.4	27.6/4.3	29.9/4.9	30.7/5.2	40.4/10.3
68°F (20°C) DB, 45%rh											
Net Total	BTUH		43898	58215	64960	106749	117101	119989	125809	127230	177485
Net Sensible	BTUH		43898	58215	64960	106749	117101	119989	125809	127230	177485
Flow/Pressure Drop	GPM/ft-H ₂ O		9.3/3.0	13.0/5.6	15.1/3.7	23.5/4.2	26.8/5.4	27.6/4.3	30.0/4.9	30.7/5.2	40.5/10.4

Model no. 9HU__/9HD__		06	08	12	14	16	18	20	22	30
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings										
Standard Air Volume	CFM	3600	5200	6200	8800	10400	10800	12000	12400	15000
External Static Pressure	in	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Quantity of Fans		1	1	1	2	2	2	2	2	3
Net Total Fan Motor Power	HP	1.5	3	5	5	7.5	7.5	10	15	10
Absorbed Power	HP	1.10	2.73	4.18	4.35	6.73	7.32	9.71	10.70	9.20
Compressor - Refrigerant R407C										
Quantity of Compressors		2	2	2	2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Evaporator Coil - A-Frame- Copper tube / aluminium fin - Stainless steel drain pan										
Face Area	ft ²	13.42	13.42	13.42	22.92	22.92	22.92	22.92	22.92	30.21
Rows Deep (DX/Chilled W _{3/3})		3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	
Fins per inch		14	14	14	13	13	13	13	13	13
Face Velocity	FPM	268	387	462	384	454	471	524	541	497
Reheat Section										
<i>Electric Reheat¹ - Single Stage, finned tubular type heater, SCR Controlled</i>										
Capacity	kW	6	6	6	12	12	12	12	12	30
Quantity of Heaters		3	3	3	3	3	3	3	3	3
<i>Hot Gas Reheat - 71.6°F (22°C) E.A.T., two stages</i>										
Heating Capacity	BTUH	29324	34326	36832	57958	61968	62886	65470	66280	86724
<i>Hot Water Reheat - 180°F (82.2°C) E.W.T., 71.6°F (22°C) E.A.T. - 2-way modulating control valve, optional 3-way</i>										
Heating Capacity	BTUH	44112	50302	53294	79623	83775	84708	87300	88101	109632
Water Flow Rate	GPM	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Pressure Drop	ft-H ₂ O	0.67	0.67	0.67	0.96	0.96	0.96	0.96	0.96	1.22
<i>Steam Reheat - 227°F (108.3°C) saturated steam, 71.6°F (22°C) E.A.T. - 2-way modulating control valve</i>										
Heating Capacity	BTUH	70441	81739	87347	137996	146975	149025	154783	156583	205460
Humidifier Section										
<i>Electrode Boiler Type¹</i>										
Capacity	lb/hr	20	20	20	20	20	20	20	20	20
Humidifier Power	kW	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Filter Section - Pleated disposable type, 30%efficiency to ASHRAE 52-76										
<i>Upflow Models</i>										
Quantity of Filters		3	3	3	4	4	4	4	4	5
Nominal Size	LxWxD-in		20x25x4				20x25x4			
<i>Downflow Models</i>										
Quantity of Filters		4	4	4	6	6	6	6	6	8
Nominal Size	LxWxD-in		16x25x4				16x25x4			

Model no. 9HU__/9HD__		06	08	12	14	16	18	20	22	30	
Condensing Water Requirement											
75°F EWT											
Flow Rate	GPM	9.0	14.0	14.6	22.0	28.0	21.6	26.0	32.0	22.8	
Unit Pressure Drop	ft-H ₂ O	3.9	7.0	5.7	7.4	10.4	5.0	6.5	8.9	6.2	
85°F EWT											
Flow Rate	GPM	14.0	16.6	22.4	36.0	26.0	32.0	40.0	50.0	40.2	
Unit Pressure Drop	ft-H ₂ O	6.7	6.7	10.2	16.1	6.5	9.1	12.2	14.9	9.7	
Water Regulating Valve - 2-way, head pressure controlled											
Size - 75°F EWT	in	3/4	3/4	3/4	1	1	1	1	1	1	
- 85°F EWT	in	3/4	3/4	3/4	1	1	1	1	1-1/4	1	
Chilled-water Valve - 2-Way modulating											
Valve Size	in	1	1	1 1/2	1 1/2	1 1/2	2	2	2	2	
Piping Connection Size											
Liquid Line	- ODM -in	1/2	1/2	1/2	5/8	5/8	5/8	5/8	5/8	7/8	
Hot Gas Line	- ODM -in	7/8	7/8	7/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-3/8	
Glycol Solution	- ODM -in	1-1/8	1-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	
Chilled Water	-ODM -in	1 1/8	1 1/8	1 5/8	1 5/8	1 5/8	2 1/8	2 1/8	2 1/8	2-1/8	
Hot Water	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	1-1/8	
Steam	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	
Steam Condensate	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	
Humidifier Water	- ODM -in	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	
Condensate Drain	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	
Physical Details - For units with standard options only; consult factory for special options and configuration											
Dimensions	in	82(W) x 34(D) x 74(H)				108(W) x 34(D) x 74(H)				134(W)x34(D)x74(H)	
Approx. Weight	lbs	1470	1500	1600	1850	1900	2000	2050	2050	2720	

¹ Standard options

Glycol Dual-cooling System

Model no. 9EU_/_9ED_		06	08	12	14	16	18	20	22	30
Cooling Capacity – Direct Expansion - Rated at standard air volume										
75°F (24°C) DB, 50%rh										
Net Total	BTUH	68712	85832	99754	132733	142961	169706	184879	212091	257877
Net Sensible	BTUH	64239	84882	97449	132372	142866	169706	184879	204196	257877
THR	BTUH	93070	121122	145006	186254	209232	245019	272678	313467	368115
75°F (24°C) DB, 45%rh										
Net Total	BTUH	67735	84501	97916	130718	141216	166820	181392	208087	252739
Net Sensible	BTUH	67570	84477	97916	130718	141216	166820	181392	208087	252739
THR	BTUH	92043	119686	142864	184013	207019	241661	268657	308804	362301
72°F (22°C) DB, 50%rh										
Net Total	BTUH	65202	81287	93666	125666	134797	160617	174652	200802	244304
Net Sensible	BTUH	63723	81244	93666	125402	134758	160617	174652	200802	244304
THR	BTUH	89624	116607	138688	179045	200639	235671	262165	301859	354186
72°F (22°C) DB, 45%rh										
Net Total	BTUH	64303	80061	91891	124337	133826	157902	171507	196969	239240
Net Sensible	BTUH	64171	80054	91891	124337	133826	157902	171507	196969	239240
THR	BTUH	88675	115273	136676	177425	199223	232482	258351	297434	348535
68°F (20°C) DB, 50%rh										
Net Total	BTUH	60753	75424	86297	116765	124262	148589	161519	186127	226819
Net Sensible	BTUH	60535	75320	86297	116765	122082	148589	161519	186127	226788
THR	BTUH	85191	110796	130989	169759	189563	223517	248486	286746	336085
68°F (20°C) DB, 45%rh										
Net Total	BTUH	45767	74273	84008	115916	123959	146073	158356	182453	222022
Net Sensible	BTUH	45767	74273	84008	115916	123959	146073	158356	182453	212571
THR	BTUH	64997	109600	128660	168899	189182	220797	245134	282682	330816
Cooling Capacity - Chilled-water - Rated at standard air volume, 45°F entering water & 10°F water temperature rise										
75°F (24°C) DB, 50%rh										
Net Total	BTUH	77105	99873	110892	177203	193280	196924	205434	207702	281340
Net Sensible	BTUH	66459	87956	99036	155666	173486	177774	188577	191712	249348
Flow/Pressure Drop	GPM/ft-H ₂ O	16.0/8.3	21.4/14.4	24.3/8.7	37.6/10.2	42.1/12.6	43.1/9.5	46.1/10.8	47.0/11.2	61.5/22.0
75°F (24°C) DB, 45%rh										
Net Total	BTUH	71526	93539	104543	166601	183880	187713	197186	199873	266876
Net Sensible	BTUH	69766	93234	104543	165095	183880	187713	197186	199873	266517
Flow/Pressure Drop	GPM/ft-H ₂ O	14.9/7.2	20.1/12.8	23.0/7.8	35.5/9.1	40.1/11.5	41.2/8.8	44.3/10.0	45.3/10.4	58.4/20.1
72°F (22°C) DB, 50%rh										
Net Total	BTUH	61001	79598	88659	143010	157513	160847	169487	170819	231399
Net Sensible	BTUH	59820	79573	88659	141562	157513	160847	169487	170819	228815
Flow/Pressure Drop	GPM/ft-H ₂ O	12.8/5.4	17.3/9.6	19.8/6.0	30.8/7.0	34.9/8.9	35.9/6.8	38.7/7.8	39.6/8.2	51.4/15.9
72°F (22°C) DB, 45%rh										
Net Total	BTUH	59037	77629	86814	139600	154393	158016	166943	169307	226598
Net Sensible	BTUH	59037	77629	86814	139600	154393	158016	166943	169307	226598
Flow/Pressure Drop	GPM/ft-H ₂ O	12.4/5.4	16.9/9.2	19.4/5.8	30/6.7	34.2/8.5	35.2/6.6	38.2/7.7	39.1/8.0	50.3/15.3
68°F (20°C) DB, 50%rh										
Net Total	BTUH	43488	58127	64792	106397	117209	119751	125423	126772	176850
Net Sensible	BTUH	43488	58127	64792	106397	117209	119751	125423	126772	176850
Flow/Pressure Drop	GPM/ft-H ₂ O	9.3/3.0	13.0/5.6	15.0/3.6	23.4/4.2	26.8/5.4	27.6/4.3	29.9/4.9	30.7/5.2	40.4/10.3
68°F (20°C) DB, 45%rh										
Net Total	BTUH	43898	58215	64960	106749	117101	119989	125809	127230	177485
Net Sensible	BTUH	43898	58215	64960	106749	117101	119989	125809	127230	177485
Flow/Pressure Drop	GPM/ft-H ₂ O	9.3/3.0	13.0/5.6	15.1/3.7	23.5/4.2	26.8/5.4	27.6/4.3	30.0/4.9	30.7/5.2	40.5/10.4

Model no. 9EU__/9ED__		06	08	12	14	16	18	20	22	30
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings										
Standard Air Volume	CFM	3600	5200	6200	8800	10400	10800	12000	12400	15000
External Static Pressure	in	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Quantity of Fans		1	1	1	2	2	2	2	2	3
Net Total Fan Motor Power	HP	1.5	3	5	5	7.5	7.5	10	15	10
Absorbed Power	HP	1.10	2.73	4.18	4.35	6.73	7.32	9.71	10.70	9.20
Compressor - Refrigerant R407C										
Quantity of Compressors		2	2	2	2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Evaporator Coil - A-Frame- Copper tube / aluminium fin - Stainless steel drain pan										
Face Area	ft ²	13.42	13.42	13.42	22.92	22.92	22.92	22.92	22.92	30.21
Rows Deep (DX/Chilled W _{3/3})		3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	
Fins per inch		14	14	14	13	13	13	13	13	13
Face Velocity	FPM	268	387	462	384	454	471	524	541	497
Reheat Section										
<i>Electric Reheat¹ - Single Stage, finned tubular type heater, SCR Controlled</i>										
Capacity	kW	6	6	6	12	12	12	12	12	30
Quantity of Heaters		3	3	3	3	3	3	3	3	3
<i>Hot Gas Reheat - 71.6 °F (22 °C) E.A.T., two stages</i>										
Heating Capacity	BTUH	29324	34326	36832	57958	61968	62886	65470	66280	86724
<i>Hot Water Reheat - 180 °F (82.2 °C) E.W.T., 71.6°F (22 °C) E.A.T. - 2-way modulating control valve, optional 3-way</i>										
Heating Capacity	BTUH	44112	50302	53294	79623	83775	84708	87300	88101	109632
Water Flow Rate	GPM	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Pressure Drop	ft-H ₂ O	0.67	0.67	0.67	0.96	0.96	0.96	0.96	0.96	1.22
<i>Steam Reheat - 227 °F (108.3 °C) saturated steam, 71.6°F (22 °C) E.A.T. - 2-way modulating control valve</i>										
Heating Capacity	BTUH	70441	81739	87347	137996	146975	149025	154783	156583	205460
Humidifier Section										
<i>Electrode Boiler Type¹</i>										
Capacity	lb/hr	20	20	20	20	20	20	20	20	20
Humidifier Power	kW	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Filter Section - Pleated disposable type, 30%efficiency to ASHRAE 52-76										
<i>Upflow Models</i>										
Quantity of Filters		3	3	3	4	4	4	4	4	5
Nominal Size	LxWxD-in		20x25x4				20x25x4			
<i>Downflow Models</i>										
Quantity of Filters		4	4	4	6	6	6	6	6	8
Nominal Size	LxWxD-in		16x25x4				16x25x4			

Model no. 9EU__/9ED__		06	08	12	14	16	18	20	22	30	
Glycol Solution Requirement - 40% ethylene glycol											
95°F EWT											
Flow Rate	GPM	18.0	22.0	29.0	26.4	32.0	40.0	48.4	36.0	25.5	
Unit Pressure Drop	ft-H ₂ O	8.1	7.7	11.9	5.6	7.3	10.9	15.0	10.2	2.3	
105°F EWT											
Flow Rate	GPM	22.6	36.0	28.4	42.0	52.0	38.4	46.0	50.0	48.0	
Unit Pressure Drop	ft-H ₂ O	8.0	16.6	8.2	12.2	17.5	11.9	15.5	18.5	11.6	
Glycol Solution Regulating Valve - 2-way, head pressure controlled											
Size	in.	1	1	1	1 ¼	1 ¼	1 ¼	1 ¼	1 ¼	1-1/2	
Chilled-water Valve - 2-Way modulating											
Valve Size	in.	1	1	1 ½	1 ½	1 ½	2	2	2	2	
Piping Connection Size											
Liquid Line	- ODM -in	1/2	1/2	1/2	5/8	5/8	5/8	5/8	5/8	7/8	
Hot Gas Line	- ODM -in	7/8	7/8	7/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-3/8	
Glycol Solution	- ODM -in	1-1/8	1-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	
Chilled Water	-ODM -in	1 1/8	1 1/8	1 5/8	1 5/8	1 5/8	2 1/8	2 1/8	2 1/8	2-1/8	
Hot Water	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	1-1/8	
Steam	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	
Steam Condensate	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	
Humidifier Water	- ODM -in	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	
Condensate Drain	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	
Physical Details - For units with standard options only; consult factory for special options and configuration											
Dimensions	in	82(W) x 34(D) x 74(H)				108(W) x 34(D) x 74(H)				134(W)x34(D)x74(H)	
Approx. Weight	lbs	1470	1500	1600		1850	1900	2000	2050		2050 2720

¹ Standard options

Glycol Free-cooling System

Model no. 9FU__/9FD__		06	08	12	14	16	18	20	22	30
Cooling Capacity – Direct Expansion - Rated at standard air volume										
75°F (24°C) DB, 50%rh										
Net Total	BTUH	68712	85832	99754	132733	142961	169706	184879	212091	257877
Net Sensible	BTUH	64239	84882	97449	132372	142866	169706	184879	204196	257877
THR	BTUH	93070	121122	145006	186254	209232	245019	272678	313467	368115
75°F (24°C) DB, 45%rh										
Net Total	BTUH	67735	84501	97916	130718	141216	166820	181392	208087	252739
Net Sensible	BTUH	67570	84477	97916	130718	141216	166820	181392	208087	252739
THR	BTUH	92043	119686	142864	184013	207019	241661	268657	308804	362301
72°F (22°C) DB, 50%rh										
Net Total	BTUH	65202	81287	93666	125666	134797	160617	174652	200802	244304
Net Sensible	BTUH	63723	81244	93666	125402	134758	160617	174652	200802	244304
THR	BTUH	89624	116607	138688	179045	200639	235671	262165	301859	354186
72°F (22°C) DB, 45%rh										
Net Total	BTUH	64303	80061	91891	124337	133826	157902	171507	196969	239240
Net Sensible	BTUH	64171	80054	91891	124337	133826	157902	171507	196969	239240
THR	BTUH	88675	115273	136676	177425	199223	232482	258351	297434	348535
68°F (20°C) DB, 50%rh										
Net Total	BTUH	60753	75424	86297	116765	124262	148589	161519	186127	226819
Net Sensible	BTUH	60535	75320	86297	116765	122082	148589	161519	186127	226788
THR	BTUH	85191	110796	130989	169759	189563	223517	248486	286746	336085
68°F (20°C) DB, 45%rh										
Net Total	BTUH	45767	74273	84008	115916	123959	146073	158356	182453	222022
Net Sensible	BTUH	45767	74273	84008	115916	123959	146073	158356	182453	212571
THR	BTUH	64997	109600	128660	168899	189182	220797	245134	282682	330816
Cooling Capacity – 100% Free-cooling - Rated at standard air volume, 45°F entering glycol										
75°F (24°C) DB, 50%rh										
Net Total	BTUH	77839	103677	115975	186050	205209	209587	219975	222756	261069
Net Sensible	BTUH	66738	89428	101054	159046	178162	182736	194224	197514	241198
75°F (24°C) DB, 45%rh										
Net Total	BTUH	70775	95450	107576	172072	191347	195944	207346	210506	250006
Net Sensible	BTUH	69360	93889	106791	167040	188447	193691	207310	210506	250006
72°F (22°C) DB, 50%rh										
Net Total	BTUH	58485	80938	91323	148297	164596	168325	177554	180021	210569
Net Sensible	BTUH	58485	80196	91029	143717	161675	165933	177028	180021	210569
72°F (22°C) DB, 45%rh										
Net Total	BTUH	57011	78713	89427	143614	160758	164832	175089	178043	209660
Net Sensible	BTUH	57011	78713	89427	143614	160758	164832	175089	178043	209660
68°F (20°C) DB, 50%rh										
Net Total	BTUH	38913	57741	66588	110329	123630	126719	133946	135811	153466
Net Sensible	BTUH	38913	57741	66588	110329	123630	126719	133946	135811	153466
68°F (20°C) DB, 45%rh										
Net Total	BTUH	38949	57848	66838	110561	123880	126974	134282	136287	149411
Net Sensible	BTUH	38949	57848	66838	110561	123880	126974	134282	136287	149411

Model no. 9FU__/9FD__		06	08	12	14	16	18	20	22	30
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings										
Standard Air Volume	CFM	3600	5200	6200	8800	10400	10800	12000	12400	15000
External Static Pressure	in	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Quantity of Fans		1	1	1	2	2	2	2	2	3
Net Total Fan Motor Power	HP	1.5	3	5	5	7.5	7.5	10	15	10
Absorbed Power	HP	1.10	2.73	4.18	4.35	6.73	7.32	9.71	10.70	9.20
Compressor - Refrigerant R407C										
Quantity of Compressors		2	2	2	2	2	2	2	2	2
Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Evaporator Coil - A-Frame- Copper tube / aluminium fin - Stainless steel drain pan										
Face Area	ft ²	13.42	13.42	13.42	22.92	22.92	22.92	22.92	22.92	30.21
Rows Deep (DX/Free Cooling)		3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3/3
Fins per inch		14	14	14	13	13	13	13	13	13
Face Velocity	FPM	268	387	462	384	454	471	524	541	497
Reheat Section										
<i>Electric Reheat</i> ¹ - Single Stage, finned tubular type heater, SCR Controlled										
Capacity	kW	6	6	6	12	12	12	12	12	30
Quantity of Heaters		3	3	3	3	3	3	3	3	3
<i>Hot Gas Reheat</i> - 71.6°F (22°C) E.A.T., two stages										
Heating Capacity	BTUH	29324	34326	36832	57958	61968	62886	65470	66280	86724
<i>Hot Water Reheat</i> - 180°F (82.2°C) E.W.T., 71.6°F (22°C) E.A.T. - 2-way modulating control valve, optional 3-way										
Heating Capacity	BTUH	44112	50302	53294	79623	83775	84708	87300	88101	109632
Water Flow Rate	GPM	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Pressure Drop	ft-H ₂ O	0.67	0.67	0.67	0.96	0.96	0.96	0.96	0.96	1.22
<i>Steam Reheat</i> - 227°F (108.3°C) saturated steam, 71.6°F (22°C) E.A.T. - 2-way modulating control valve										
Heating Capacity	BTUH	70441	81739	87347	137996	146975	149025	154783	156583	205460
Humidifier Section										
<i>Electrode Boiler Type</i> ¹										
Capacity	lb/hr	20	20	20	20	20	20	20	20	20
Humidifier Power	kW	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Filter Section - Pleated disposable type, 30% efficiency to ASHRAE 52-76										
<i>Upflow Models</i>										
Quantity of Filters		3	3	3	4	4	4	4	4	5
Nominal Size	LxWxD-in	20x25x4					20x25x4			
<i>Downflow Models</i>										
Quantity of Filters		4	4	4	6	6	6	6	6	8
Nominal Size	LxWxD-in	16x25x4					16x25x4			

Model no. 9FU__/9FD__		06	08	12	14	16	18	20	22	30
Glycol Solution Regulating Valve - 3-way modulating										
Valve Size	in	1	1	1 ¼	1 ¼	1 ¼	1 ¼	1 ¼	1 ¼	1-1/2
Quantity of Valves		2	2	2	2	2	2	2	2	2
Glycol Solution Requirement - 40% ethylene glycol at 7.2°C (45°F) entering temperature, 0°C (32°F) ambient temperature										
Flow Rate	GPM	32.2	44.2	50.5	78.7	88.8	91.1	97.7	99.8	81.9
Unit Pressure Drop	ft-H ₂ O	20.6	36.5	36.1	33.9	42.0	40.0	45.3	47.0	41.8
Piping Connection Size										
Liquid Line	- ODM -in	1/2	1/2	1/2	5/8	5/8	5/8	5/8	5/8	7/8
Hot Gas Line	- ODM -in	7/8	7/8	7/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-3/8
Glycol Solution	- ODM -in	1 1/8	1 1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8
Hot Water	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	1-1/8
Steam	- ODM -in	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8
Steam Condensate	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Humidifier Water	- ODM -in	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
Condensate Drain	- ODM -in	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Physical Details - For units with standard options only; consult factory for special options and configuration										
Dimensions	in	82(W) x 34(D) x 74(H)				108(W) x 34(D) x 74(H)				134(W)x34(D)x74(H)
Approx. Weight	lbs	1470	1500	1600		1850	1900	2000	2050	2050 2720

¹ Standard options

Electrical Data/ 208V, 3Ph, 60Hz

Air/Water/Glycol Cooled Systems*[■], 208V/3Ph/60Hz

Model	9_06			9_08			9_12		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option									
Electric (6kW)/Boiler	48.0	55.7	60	59.6	68.1	70	64.6	73.1	80
Electric (6kW)/None	45.8	53.0	60	57.4	65.4	70	62.4	70.4	80
Electric (12kW)/Boiler	62.4	73.8	80	74.0	86.2	90	79.0	91.2	100
Electric (12kW)/None	62.4	73.8	80	74.0	86.2	90	79.0	91.2	100
None, Non-electric/Boiler	48.0	55.7	60	59.6	68.1	70	64.6	73.1	80
None, Non-electric/None	29.1	32.2	40	40.7	44.6	50	45.7	49.6	60

Model	9_14			9_16			9_18			9_20			9_22		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option															
Electric (12kW)/Boiler	85.4	98.4	100	99.8	113.7	120	112.6	128.1	140	122.2	138.1	150	136.4	154.0	180
Electric (12kW)/None	85.4	98.4	100	99.8	113.7	120	112.6	128.1	140	122.2	138.1	150	136.4	154.0	180
Electric (24kW)/Boiler	118.7	140.0	150	133.1	155.4	160	145.9	169.8	180	155.5	179.7	190	169.7	195.7	210
Electric (24kW)/None	118.7	140.0	150	133.1	155.4	160	145.9	169.8	180	155.5	179.7	190	169.7	195.7	210
None, Non-electric/Boiler	71.0	80.3	90	85.4	95.7	110	98.2	110.1	130	107.8	120.0	140	122.0	136.0	160
None, Non-electric/None	52.1	56.8	70	66.5	72.1	90	79.3	86.5	110	88.9	96.4	120	103.1	112.4	140

Model	9_26			9_30		
	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option						
Electric (30kW)/Boiler	187.0	218.0	230	219.6	253.8	280
Electric (30kW)/None	187.0	218.0	230	219.6	253.8	280
None, Non-electric/Boiler	122.6	137.5	170	155.2	173.3	220
None, Non-electric/None	103.7	114.0	150	136.3	149.8	200

Chilled Water Systems, 208V/3Ph/60Hz

Model	9CU/CD14			9CU/CD16			9CU/CD18			9CU/CD20			9CU/CD22		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option															
Electric (12kW)/Boiler	62.1	72.6	90	67.1	78.9	90	73.9	87.4	100	73.9	87.4	100	80.9	96.1	120
Electric (12kW)/None	43.2	53.7	60	48.2	60.0	70	55.0	68.5	80	55.0	68.5	80	62.0	77.2	90
Electric (24kW)/Boiler	95.4	114.2	140	100.4	120.5	150	107.2	129.0	160	107.2	129.0	160	114.2	137.7	170
Electric (24kW)/None	76.5	95.4	110	81.5	101.6	120	88.3	110.1	130	88.3	110.1	130	95.3	118.9	140
None, Non-electric/Boiler	28.8	35.7	40	33.8	41.9	50	40.6	50.4	60	40.6	50.4	60	47.6	59.2	70
None, Non-electric/None	9.9	12.1	15	14.9	18.4	20	21.7	26.9	30	21.7	26.9	30	28.7	35.6	40

* Above FLA does not include air-cooled condenser and condensate pump amps.

■ FLA is based on full load current of individual components that result in maximum electrical load condition during unit normal operation.
FLA = Full Load Amps MCA = Minimum Circuit Ampacity MFS = Maximum Fuse Size

Electrical Data/ 208V, 3Ph, 60Hz

Chilled Water Systems, 208V/3Ph/60Hz

Model	9CU/CD25			9CU/CD26			9CU/CD30		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option									
Electric (30kW)/Boiler	130.8	158.6	190	130.8	158.6	190	130.8	158.6	190
Electric (30kW)/None	112.0	139.7	170	112.0	139.7	170	112.0	139.7	170
None, Non-electric/Boiler	47.6	59.2	70	47.6	59.2	70	47.6	59.21	70
None, Non-electric/None	28.7	35.6	40	28.7	35.6	40	28.7	35.6	40


Dual / Free Cooling Systems* , 208V/3Ph/60Hz

Model	9_06			9_08			9_12		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option									
Electric (6kW)/Boiler	49.2	56.9	60	59.6	68.1	70	64.6	73.1	80
Electric (6kW)/None	47.0	54.2	60	57.4	65.4	70	62.4	70.4	80
Electric (12kW)/Boiler	63.6	75.0	80	74.0	86.2	90	79.0	91.2	100
Electric (12kW)/None	63.6	75.0	80	74.0	86.2	90	79.0	91.2	100
None, Non-electric/Boiler	49.2	56.9	60	59.6	68.1	70	64.6	73.1	80
None, Non-electric/None	30.3	33.4	45	40.7	44.6	50	45.7	49.6	60

Model	9_14			9_16			9_18			9_20			9_22		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option															
Electric (12kW)/Boiler	85.4	98.4	100	99.8	113.7	120	112.6	128.1	140	122.2	138.1	150	148.6	166.2	190
Electric (12kW)/None	85.4	98.4	100	99.8	113.7	120	112.6	128.1	140	122.2	138.1	150	148.6	166.2	190
Electric (24kW)/Boiler	118.7	140.0	150	133.1	155.4	160	145.9	169.8	180	155.5	179.7	190	181.9	207.9	220
Electric (24kW)/None	118.7	140.0	150	133.1	155.4	160	145.9	169.8	180	155.5	179.7	190	181.9	207.9	220
None, Non-electric/Boiler	71.0	80.3	90	85.4	95.7	110	98.2	110.1	130	107.8	120.0	140	134.2	148.2	180
None, Non-electric/None	52.1	56.8	70	66.5	72.1	90	79.3	86.5	110	88.9	96.4	120	115.3	124.6	160

Model	9_30		
	FLA	MCA	MFS
Reheat/Humidifier Option			
Electric (30kW)/Boiler	194.0	225.0	240
Electric (30kW)/None	194.0	225.0	240
None, Non-electric/Boiler	129.6	144.5	180
None, Non-electric/None	110.7	121.0	160

* Above FLA does not include air-cooled condenser and condensate pump amps.

 FLA is based on full load current of individual components that result in maximum electrical load condition during unit normal operation.
 FLA = Full Load Amps MCA = Minimum Circuit Ampacity MFS = Maximum Fuse Size

Electrical Data/ 460V, 3Ph, 60Hz

Air/Water/Glycol Cooled Systems*¹, 460V/3Ph/60Hz

Model	9_06			9_08			9_12		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option									
Electric (6kW)/Boiler	22.3	25.3	30	27.3	30.6	35	29.5	32.9	35
Electric (6kW)/None	21.3	24.1	30	26.3	29.4	35	28.5	31.6	35
Electric (12kW)/Boiler	28.8	33.5	35	33.8	38.8	40	36.1	41.1	45
Electric (12kW)/None	28.8	33.5	35	33.8	38.8	40	36.1	41.1	45
None, Non-electric/Boiler	22.3	25.3	30	27.3	30.6	35	29.5	32.9	35
None, Non-electric/None	13.8	14.7	20	18.8	20.0	25	21.0	22.2	25

Model	9_14			9_16			9_18			9_20			9_22		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option															
Electric (12kW)/Boiler	39.9	45.3	50	46.7	52.7	60	54.3	61.2	70	59.1	66.2	70	62.5	70.0	80
Electric (12kW)/None	39.9	45.3	50	46.7	52.7	60	54.3	61.2	70	59.1	66.2	70	62.5	70.0	80
Electric (24kW)/Boiler	54.9	64.2	70	61.8	71.5	80	69.4	80.0	90	74.2	85.0	90	77.6	88.9	90
Electric (24kW)/None	54.9	64.2	70	61.8	71.5	80	69.4	80.0	90	74.2	85.0	90	77.6	88.9	90
None, Non-electric/Boiler	33.3	37.2	40	40.2	44.5	50	47.8	53.0	60	52.6	58.0	70	56.0	61.9	70
None, Non-electric/None	24.8	26.5	35	31.7	33.8	45	39.3	42.4	50	44.1	47.4	60	47.5	51.2	60

Model	9_26			9_30		
	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option						
Electric (30kW)/Boiler	84.7	98.2	100	107.1	123.0	140
Electric (30kW)/None	84.7	98.2	100	107.1	123.0	140
None, Non-electric/Boiler	55.6	61.8	70	78.0	86.6	110
None, Non-electric/None	47.1	51.2	70	69.5	76.0	100

Chilled Water Systems*, 460V/3Ph/60Hz

Model	9CU/CD14			9CU/CD16			9CU/CD18			9CU/CD20			9CU/CD22		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option															
Electric (12kW)/Boiler	28.1	32.4	40	30.4	35.2	40	33.4	39.0	45	33.4	39.0	45	36.6	43.0	50
Electric (12kW)/None	19.6	23.8	25	21.9	26.6	30	24.9	30.5	35	24.9	30.5	35	28.1	34.5	40
Electric (24kW)/Boiler	43.2	51.2	60	45.5	54.0	60	48.5	57.8	70	48.5	57.8	70	51.7	61.8	70
Electric (24kW)/None	34.7	42.7	50	36.9	45.5	50	40.0	49.3	60	40.0	49.3	60	43.2	53.3	60
None, Non-electric/Boiler	13.1	15.7	15	15.3	18.5	20	18.4	22.3	25	18.4	22.3	25	21.6	26.3	30
None, Non-electric/None	4.6	5.0	15	6.8	7.8	15	9.9	11.6	15	9.9	11.6	15	13.1	15.6	15

* Above FLA does not include air-cooled condenser and condensate pump amps.

¹ FLA is based on full load current of individual components that result in maximum electrical load condition during unit normal operation.
FLA = Full Load Amps MCA = Minimum Circuit Ampacity MFS = Maximum Fuse Size

Electrical Data/ 460V, 3Ph, 60Hz

Chilled Water Systems*, 460V/3Ph/60Hz

Model	9CU/CD25			9CU/CD26			9CU/CD30		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option									
Electric (30kW)/Boiler	59.2	71.2	80	59.2	71.2	80	59.2	71.2	80
Electric (30kW)/None	50.7	62.7	70	50.7	62.7	70	50.7	62.7	70
None, Non-electric/Boiler	21.6	26.3	30	21.6	26.3	30	21.6	26.3	30
None, Non-electric/None	13.1	15.6	15	13.1	15.6	15	13.1	15.6	15


Dual / Free Cooling Systems*, 460V/3Ph/60Hz

Model	9_06			9_08			9_12		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option									
Electric (6kW)/Boiler	22.9	25.9	30	27.3	30.6	35	29.5	32.9	35
Electric (6kW)/None	21.9	24.7	30	26.3	29.4	35	28.5	31.6	35
Electric (12kW)/Boiler	29.4	34.1	40	33.8	38.8	40	36.1	41.1	45
Electric (12kW)/None	29.4	34.1	40	33.8	38.8	40	36.1	41.1	45
None, Non-electric/Boiler	22.9	25.9	30	27.3	30.6	35	29.5	32.9	35
None, Non-electric/None	14.4	15.3	20	18.8	20.0	25	21.0	22.2	25

Model	9_14			9_16			9_18			9_20			9_22		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option															
Electric (12kW)/Boiler	39.9	45.3	50	46.7	52.7	60	54.3	61.2	70	59.1	66.2	70	68.0	75.5	80
Electric (12kW)/None	39.9	45.3	50	46.7	52.7	60	54.3	61.2	70	59.1	66.2	70	68.0	75.5	80
Electric (24kW)/Boiler	54.9	64.2	70	61.8	71.5	80	69.4	80.0	90	74.2	85.0	90	83.1	94.4	100
Electric (24kW)/None	54.9	64.2	70	61.8	71.5	80	69.4	80.0	90	74.2	85.0	90	83.1	94.4	100
None, Non-electric/Boiler	33.3	37.2	40	40.2	44.5	50	47.8	53.0	60	52.6	58.0	70	61.5	67.4	80
None, Non-electric/None	24.8	26.5	35	31.7	33.8	45	39.3	42.4	50	44.1	47.4	60	53.0	56.7	70

Model	9_30		
	FLA	MCA	MFS
Reheat/Humidifier Option			
Electric (30kW)/Boiler	87.9	101.4	110
Electric (30kW)/None	87.9	101.4	110
None, Non-electric/Boiler	58.8	65.0	80
None, Non-electric/None	50.3	54.4	70

* Above FLA does not include air-cooled condenser and condensate pump amps.

 FLA is based on full load current of individual components that result in maximum electrical load condition during unit normal operation.
 FLA = Full Load Amps MCA = Minimum Circuit Ampacity MFS = Maximum Fuse Size

Electrical Data/ 575V, 3Ph, 60Hz

Air/Water/Glycol Cooled Systems*¹, 575V/3Ph/60Hz

Model	9_06			9_08			9_12		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option									
Electric (6kW)/Boiler	17.2	19.5	25	20.9	23.4	25	22.9	25.5	30
Electric (6kW)/None	16.4	18.5	20	20.1	22.4	25	22.1	24.5	30
Electric (12kW)/Boiler	22.4	26.0	30	26.1	30.0	35	28.1	32.0	35
Electric (12kW)/None	22.4	26.0	30	26.1	30.0	35	28.1	32.0	35
None, Non-electric/Boiler	17.2	19.5	25	20.9	23.4	25	22.9	25.5	30
None, Non-electric/None	10.3	11.0	15	14.0	14.9	20	16.0	16.9	20

Model	9_14			9_16			9_18			9_20			9_22		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option															
Electric (12kW)/Boiler	32.3	36.7	40	36.6	41.2	45	41.6	46.9	50	46.7	52.3	60	47.3	53.0	60
Electric (12kW)/None	32.3	36.7	40	36.6	41.2	45	41.6	46.9	50	46.7	52.3	60	47.3	53.0	60
Electric (24kW)/Boiler	44.3	51.8	60	48.6	56.3	60	53.6	61.9	70	58.7	67.3	70	59.3	68.0	70
Electric (24kW)/None	44.3	51.8	60	48.6	56.3	60	53.6	61.9	70	58.7	67.3	70	59.3	68.0	70
None, Non-electric/Boiler	27.1	30.2	35	31.4	34.7	40	36.4	40.3	45	41.5	45.8	50	42.1	46.4	50
None, Non-electric/None	20.2	21.7	25	24.5	26.2	30	29.5	31.8	40	34.6	37.2	45	35.2	37.9	50

Model	9_26			9_30		
	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option						
Electric (30kW)/Boiler	66.5	77.1	80	85.4	98.1	110
Electric (30kW)/None	66.5	77.1	90	85.4	98.1	110
None, Non-electric/Boiler	43.2	48.0	60	62.1	68.9	90
None, Non-electric/None	36.3	39.5	50	55.2	60.4	80

Chilled Water Systems*, 575V/3Ph/60Hz

Model	9CU/CD14			9CU/CD16			9CU/CD18			9CU/CD20			9CU/CD22		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option															
Electric (12kW)/Boiler	22.5	25.9	30	24.3	28.1	35	26.8	31.3	35	26.8	31.3	35	29.3	34.4	40
Electric (12kW)/None	15.7	19.1	20	17.5	21.3	25	20.0	24.4	30	20.0	24.4	30	22.5	27.6	30
Electric (24kW)/Boiler	34.6	41.0	50	36.4	43.2	50	38.9	46.3	50	38.9	46.3	50	41.4	49.5	60
Electric (24kW)/None	27.7	34.1	40	29.5	36.4	45	32.0	39.5	45	32.0	39.5	45	34.5	42.6	50
None, Non-electric/Boiler	10.5	12.5	15	12.3	14.8	20	14.8	17.9	20	14.8	17.9	20	17.3	21.0	25
None, Non-electric/None	3.6	4.0	15	5.4	6.3	15	7.9	9.4	15	7.9	9.4	15	10.4	12.5	15

* Above FLA does not include air-cooled condenser and condensate pump amps.

¹ FLA is based on full load current of individual components that result in maximum electrical load condition during unit normal operation.
FLA = Full Load Amps MCA = Minimum Circuit Ampacity MFS = Maximum Fuse Size

Electrical Data/ 575V, 3Ph, 60Hz

Chilled Water Systems, 575V/3Ph/60Hz

Model	9CU/CD25			9CU/CD26			9CU/CD30		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option									
Electric (30kW)/Boiler	47.4	57.0	70	47.4	57.0	70	47.4	57.0	70
Electric (30kW)/None	40.6	50.2	60	40.6	50.2	60	40.6	50.2	60
None, Non-electric/Boiler	17.3	21.0	25	17.3	21.0	25	17.3	21.0	25
None, Non-electric/None	10.4	12.5	15	10.4	12.5	15	10.4	12.5	15


Dual / Free Cooling Systems* , 575V/3Ph/60Hz

Model	9_06			9_08			9_12		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option									
Electric (6kW)/Boiler	17.6	20.0	25	20.9	22.3	25	22.9	25.5	30
Electric (6kW)/None	16.8	19.0	20	20.1	22.4	25	22.1	24.5	30
Electric (12kW)/Boiler	22.8	26.5	30	26.1	30.0	35	28.1	32.0	35
Electric (12kW)/None	22.8	26.5	30	26.1	30.0	35	28.1	32.0	35
None, Non-electric/Boiler	17.6	20.0	25	20.9	23.4	25	22.9	25.5	30
None, Non-electric/None	10.8	11.4	15	14.0	14.9	20	16.0	16.9	20

Model	9_14			9_16			9_18			9_20			9_22		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat/Humidifier Option															
Electric (12kW)/Boiler	32.3	36.7	40	36.6	41.2	45	41.6	46.9	50	46.7	52.3	60	51.7	57.4	60
Electric (12kW)/None	32.3	36.7	40	36.6	41.2	45	41.6	46.9	50	46.7	52.3	60	51.7	57.4	60
Electric (24kW)/Boiler	44.3	51.8	60	48.6	56.3	60	53.6	61.9	70	58.7	67.3	70	63.7	72.4	80
Electric (24kW)/None	44.3	51.8	60	48.6	56.3	60	53.6	61.9	70	68.7	67.3	70	63.7	72.4	80
None, Non-electric/Boiler	27.1	30.2	35	31.4	34.7	40	36.4	40.3	45	41.5	45.8	50	46.5	50.8	60
None, Non-electric/None	20.2	21.7	25	24.5	26.2	30	29.5	31.8	40	34.6	37.2	45	39.6	42.3	50

Model	9_30		
	FLA	MCA	MFS
Reheat/Humidifier Option			
Electric (30kW)/Boiler	69.0	79.6	90
Electric (30kW)/None	69.0	79.6	90
None, Non-electric/Boiler	45.7	50.5	60
None, Non-electric/None	38.8	42.0	50

* Above FLA does not include air-cooled condenser and condensate pump amps.

 FLA is based on full load current of individual components that result in maximum electrical load condition during unit normal operation.
 FLA = Full Load Amps MCA = Minimum Circuit Ampacity MFS = Maximum Fuse Size

Appendix A: Dimensional Drawing List

Drawing Title	Drawing No.
Upflow System (6-12 Ton) 2 + 1 Module	S9DD201
Upflow System (14-22 Ton) 3 + 1 Module	S9DD301
Upflow System (14-25 Ton) 3 + 0 Module - (Chilled Water Units Only)	S9DD351
Upflow System (26-30 Ton) 4 + 1 Module	S9DD401
Upflow System (26-30 Ton) 4 + 0 Module - (Chilled Water Units Only)	S9DD451
Downflow System (6-12 Ton) 2 + 1 Module	S9DD202
Downflow System (14-22 Ton) 3 + 1 Module	S9DD302
Downflow System (14-25 Ton) 3 + 0 Module - (Chilled Water Units Only)	S9DD352
Downflow System (26-30 Ton) 4 + 1 Module	S9DD402
Upflow System (26-30 Ton) 4 + 0 Module - (Chilled Water Units Only)	S9DD452
Upflow System (6-12 Ton) 2 + 1 Module (Rear Duct Connection)	S9DD203
Upflow System (14-22 Ton) 3 + 1 Module (Rear Duct Connection)	S9DD303
Upflow System (26-30 Ton) 4 + 1 Module (Rear Duct Connection)	S9DD403
Upflow System (6-12 Ton) 2 + 1B Module (Dual /Free cooling Units)	S9DD225
Upflow System (14-22 Ton) 3 + 1B Module (Dual /Free cooling Units)	S9DD325
Upflow System (30 Ton) 4 + 1B Module (Dual /Free cooling Units)	S9DD425
Downflow System (6-12 Ton) 2 + 1B Module (Dual /Free cooling Units)	S9DD226
Downflow System (14-22 Ton) 3 + 1B Module (Dual /Free cooling Units)	S9DD326
Downflow System (30 Ton) 4 + 1B Module (Dual /Free cooling Units)	S9DD426
Upflow System (6-12 Ton) 2 + 1B Module (Rear Duct Connection)	S9DD227
(Dual /Free cooling Units)	
Upflow System (14-22 Ton) 3 + 1B Module (Rear Duct Connection)	S9DD327
(Dual /Free cooling Units)	
Discharge Plenum Detail	S9DD600

NOTE: These drawings are available at: www.climateworxinternational.com