



Series 9

Intelligent Precision Air Conditioning System

Technical Data - 50Hz

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Air-cooled System

Model no.	9AU__/9AD	06	08	12	14	16	18	20	22	26
Cooling Capacity - Rated at standard air volume & 49°C condensing temperature, R407c										
24°C(75.2°F)DB, 50%rh										
Total	kW	21.2	29.0	36.8	44.7	54.5	58.2	67.6	80.2	82.7
Sensible	kW	20.1	27.3	34.3	42.8	51.2	56.4	63.7	71.3	78.8
THR	kW	25.7	35.4	44.7	54.7	67.2	70.9	82.5	98.2	100.8
24°C(75.2°F)DB, 45%rh										
Total	kW	20.7	28.4	36.0	44.0	53.6	56.9	66.2	78.3	80.6
Sensible	kW	20.7	28.4	36.0	44.0	53.6	56.9	66.2	78.2	80.6
THR	kW	25.4	34.9	43.9	53.9	66.2	69.6	80.9	96.3	98.5
22°C(71.6°F)DB, 50%rh										
Total	kW	20.0	27.5	34.7	42.6	52.0	55.0	63.8	75.4	77.0
Sensible	kW	19.5	27.0	33.4	41.9	50.0	54.7	62.0	70.4	77.0
THR	kW	24.7	33.9	42.6	52.4	64.6	67.6	78.7	93.4	95.0
22°C(71.6°F)DB, 45%rh										
Total	kW	19.8	27.0	34.1	41.8	51.0	54.2	63.1	74.8	75.3
Sensible	kW	19.8	27.0	34.1	41.8	51.0	54.2	63.1	74.8	75.3
THR	kW	24.3	33.4	42.0	51.6	63.7	66.9	77.8	92.7	93.3
20°C(68.0°F)DB, 50%rh										
Total	kW	19.1	26.1	32.9	40.5	49.5	52.4	61.0	72.0	71.8
Sensible	kW	19.1	26.0	32.9	40.5	49.1	52.4	60.9	68.6	71.8
THR	kW	23.8	32.6	40.8	50.4	62.0	65.1	75.6	90.0	89.9
20°C(68.0°F)DB, 45%rh										
Total	kW	18.7	25.7	32.6	39.5	48.4	51.9	60.1	71.3	70.2
Sensible	kW	18.7	25.7	32.6	39.5	48.4	51.9	60.1	71.3	70.2
THR	kW	23.4	32.1	40.5	49.4	60.9	64.4	74.9	89.3	88.2
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings										
Standard Air Volume	m ³ /h	6120	8840	10540	14960	17680	18360	20400	21080	25500
External Static Pressure	Pa	75	75	75	75	75	75	75	75	75
Quantity of Fans		2	2	2	2	2	2	2	2	3
Total Fan Motor Power	kW	0.75	1.49	2.24	2.24	3.73	3.73	5.60	5.60	7.46
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	m ²	1.25	1.25	1.25	2.13	2.13	2.13	2.13	2.13	2.81
Rows Deep		3	3	4	3	3	4	4	4	4
Fins per inch		14	14	14	13	13	13	13	13	13
Face Velocity	m/s	1.36	1.97	2.35	1.95	2.31	2.39	2.66	2.75	2.52

Model no. 9AU_/9AD_†	06	08	12	14	16	18	20	22	26
Reheat Section									
<i>Electric Reheat</i> ¹ -Fully proportional, 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> - 22°C E.A.T.									
Heating Capacity kW	8.6	10.1	10.8	17.0	18.2	18.4	19.2	19.4	25.4
<i>Hot Water Reheat</i> - 82.2°C E.W.T., 22°C E.A.T. - 2-way modulating control valve, optional 3-way									
Heating Capacity kW	12.9	14.7	15.6	23.3	24.6	24.8	25.6	25.8	32.1
Water Flow Rate l/s	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Pressure Drop kPa	2.0	2.0	2.0	2.9	2.9	2.9	2.9	2.9	3.7
<i>Steam Reheat</i> - 108.3°C saturated steam, 22°C E.A.T. - 2-way modulating control valve									
Heating Capacity kW	20.6	24.0	25.6	40.4	43.1	43.7	45.4	45.9	60.2
Humidifier Section									
<i>Electrode Boiler Type, Serviceable Bottle</i> ¹									
Capacity kg/h	9	9	9	9	9	9	9	9	9
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									
<i>Upflow Models</i>									
Quantity of Filters	3	3	3	4	4	4	4	4	5
Nominal Size LxWxD-mm	508 x 635 x 101.6				508 x 635 x 101.6				
<i>Downflow Models</i>									
Quantity of Filters	4	4	4	6	6	6	6	6	8
Nominal Size LxWxD-mm	406.4 x 635 x 101.6				406.4 x 635 x 101.6				
Piping Connection Size									
Liquid Line - ODM -mm	12.7	12.7	12.7	15.9	15.9	15.9	15.9	15.9	22.2
Hot Gas Line - ODM -mm	22.2	22.2	22.2	28.6	28.6	28.6	28.6	28.6	28.6
Hot Water - ODM -mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
Steam - MPT -mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
Steam Condensate- ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
Humidifier Water - ODM -mm	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35
Condensate Drain - ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
Physical Details - For units with standard options only; consult factory for special options and configuration									
Dimensions mm	1854(W) x 864(D) x 1880(H)				2515(W) x 864(D) x 1880(H)				**
Approx. Weight kg	600	615	635	800	810	840	845	845	1012
Air Cooled Condenser – Factory matched									
Model*	DS63SE	DS66SE	DS66SE	DS67SE	DS67SE	DS68SE	DS610SE	DS610SE	SC67SE
No. of Condenser	1	1	1	1	1	1	1	1	2

* Based on maximum ambient of 38°C, ** Dimensions for 26 Ton Unit 3175(W) x 864(D) x 1880(H)

¹ Standard options

Water-cooled System

Model no. 9WU__/9WD__ [†]		06	08	12	14	16	18	20	22	26
Cooling Capacity - Rated at standard air volume, 46°C condensing temperature, R407c										
24°C(75.2°F)DB, 50%rh										
Total	kW	22.0	29.1	37.9	45.2	56.6	60.1	68.5	82.9	84.4
Sensible	kW	20.5	27.3	34.8	43.0	52.1	57.3	64.0	72.5	79.4
THR	kW	26.6	35.5	45.8	55.2	69.3	72.8	83.3	101.0	102.4
24°C(75.2°F)DB, 45%rh										
Total	kW	21.5	28.5	37.0	44.3	55.5	58.6	67.0	80.8	82.5
Sensible	kW	21.5	28.5	37.0	44.3	55.5	58.6	67.0	79.2	82.5
THR	kW	26.1	35.0	44.8	54.2	68.0	71.3	81.7	98.8	100.5
22°C(71.6°F)DB, 50%rh										
Total	kW	20.8	27.5	35.5	42.8	53.7	56.4	64.5	77.5	79.6
Sensible	kW	19.8	27.0	33.9	42.0	50.6	55.4	62.3	71.3	78.7
THR	kW	25.4	33.9	43.5	52.7	66.2	69.1	79.2	95.6	97.7
22°C(71.6°F)DB, 45%rh										
Total	kW	20.3	27.0	34.9	42.0	52.5	55.7	63.7	76.8	78.2
Sensible	kW	20.3	27.0	34.9	42.0	52.5	55.7	63.7	76.8	78.2
THR	kW	25.0	33.4	42.8	51.8	65.2	68.2	78.4	94.7	96.1
20°C(68.0°F)DB, 50%rh										
Total	kW	19.7	26.0	33.5	40.6	50.8	53.6	61.3	73.7	75.4
Sensible	kW	19.7	26.0	33.3	40.6	49.8	53.6	61.0	69.4	75.4
THR	kW	24.3	32.5	41.4	50.4	63.4	66.2	76.0	91.7	93.4
20°C(68.0°F)DB, 45%rh										
Total	kW	19.3	25.5	33.3	39.4	49.5	52.8	60.4	72.9	74.0
Sensible	kW	19.3	25.5	33.3	39.4	49.5	52.8	60.4	72.9	74.0
THR	kW	23.9	31.9	41.1	49.3	62.0	65.5	75.1	90.8	92.0
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings										
Standard Air Volume	m ³ /h	6120	8840	10540	14960	17680	18360	20400	21080	25500
External Static Pressure	Pa	75	75	75	75	75	75	75	75	75
Quantity of Fans		2	2	2	2	2	2	2	2	3
Fan Motor Power	kW	0.75	1.49	2.24	2.24	3.73	3.73	5.60	5.60	7.46
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	m ²	1.25	1.25	1.25	2.13	2.13	2.13	2.13	2.13	2.81
Rows Deep		3	3	4	3	3	4	4	4	4
Fins per inch		14	14	14	13	13	13	13	13	13
Face Velocity	m/s	1.36	1.97	2.35	1.95	2.31	2.39	2.66	2.75	2.52

Model no.	9WU__/9WD__ [†]	06	08	12	14	16	18	20	22	26
Reheat Section										
<i>Electric Reheat</i> ¹ - Fully proportional, 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> - 22°C E.A.T.										
Heating Capacity	kW	8.6	10.1	10.8	17.0	18.2	18.4	19.2	19.4	25.4
<i>Hot Water Reheat</i> - 82.2°C E.W.T., 22°C E.A.T. - 2-way modulating control valve, optional 3-way										
Heating Capacity	kW	12.9	14.7	15.6	23.3	24.6	24.8	25.6	25.8	32.1
Water Flow Rate	l/s	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Pressure Drop	kPa	2.0	2.0	2.0	2.9	2.9	2.9	2.9	2.9	3.7
<i>Steam Reheat</i> - 108.3°C saturated steam, 22°C E.A.T. - 2-way modulating control valve										
Heating Capacity	kW	20.6	24.0	25.6	40.4	43.1	43.7	45.4	45.9	60.2
Humidifier Section										
<i>Electrode Boiler Type, Serviceable Bottle</i> ¹										
Capacity	kg/h	9	9	9	9	9	9	9	9	9
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										
<i>Upflow Models</i>										
Quantity of Filters		3	3	3	4	4	4	4	4	5
Nominal Size	LxWxD-mm	508 x 635 x 101.6				508 x 635 x 101.6				
<i>Downflow Models</i>										
Quantity of Filters		4	4	4	6	6	6	6	6	8
Nominal Size	LxWxD-mm	406.4 x 635 x 101.6				406.4 x 635 x 101.6				
Condensing Water Requirement										
30°C EWT										
Flow Rate	l/s	0.59	0.84	1.21	1.08	1.45	1.55	1.86	2.47	2.45
Unit Pressure Drop	kPa	11.8	20.8	40.2	16.8	27.8	28.7	40.9	71.9	66.2
25°C EWT										
Flow Rate	l/s	0.43	0.61	0.85	0.80	1.05	1.12	1.32	1.71	1.67
Unit Pressure Drop	kPa	7.2	12.3	20.9	10.7	16.9	18.8	22.6	34.6	32.4
Water Regulating Valve - 2-way, head pressure controlled										
Size	mm	19.1	19.1	19.1	25.4	25.4	25.4	25.4	25.4	25.4
Piping Connection Size										
Liquid Line	- ODM - mm	12.7	12.7	12.7	15.9	15.9	15.9	15.9	15.9	22.2
Hot Gas Line	- ODM - mm	22.2	22.2	22.2	28.6	28.6	28.6	28.6	28.6	28.6
Condensing Water	- ODM - mm	28.6	28.6	34.9	34.9	34.9	41.3	41.3	41.3	41.3
Hot Water	- ODM - mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
Steam	- MPT - mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
Steam Condensate	- ODM - mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
Humidifier Water	- ODM - mm	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35
Condensate Drain	- ODM - mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
Physical Details* - For units with standard options only; consult factory for special options and configuration										
Dimensions	mm	1854(W) x 864(D) x 1880(H)				2515(W) x 864(D) x 1880(H)				**
Approx. Weight	kg	735	748	771	948	957	989	998	998	1103

** Dimensions for 26 Ton Unit 3172(W) x 864(D) x 1880(H)

¹ Standard Options

Glycol-cooled System

Model no. 9GU_/9GD_†		06	08	12	14	16	18	20	22	26
Cooling Capacity - Rated at standard air volume & 46°C condensing temperature, R407c										
24°C(75.2°F)DB, 50%rh										
Total	kW	22.0	29.1	37.9	45.2	56.6	60.1	68.5	82.9	84.4
Sensible	kW	20.5	27.3	34.8	43.0	52.1	57.3	64.0	72.5	79.4
THR	kW	26.6	35.5	45.8	55.2	69.3	72.8	83.3	101.0	102.4
24°C(75.2°F)DB, 45%rh										
Total	kW	21.5	28.5	37.0	44.3	55.5	58.6	67.0	80.8	82.5
Sensible	kW	21.5	28.5	37.0	44.3	55.5	58.6	67.0	79.2	82.5
THR	kW	26.1	35.0	44.8	54.2	68.0	71.3	81.7	98.8	100.5
22°C(71.6°F)DB, 50%rh										
Total	kW	20.8	27.5	35.5	42.8	53.7	56.4	64.5	77.5	79.6
Sensible	kW	19.8	27.0	33.9	42.0	50.6	55.4	62.3	71.3	78.7
THR	kW	25.4	33.9	43.5	52.7	66.2	69.1	79.2	95.6	97.7
22°C(71.6°F)DB, 45%rh										
Total	kW	20.3	27.0	34.9	42.0	52.5	55.7	63.7	76.8	78.2
Sensible	kW	20.3	27.0	34.9	42.0	52.5	55.7	63.7	76.8	78.2
THR	kW	25.0	33.4	42.8	51.8	65.2	68.2	78.4	94.7	96.1
20°C(68.0°F)DB, 50%rh										
Total	kW	19.7	26.0	33.5	40.6	50.8	53.6	61.3	73.7	75.4
Sensible	kW	19.7	26.0	33.3	40.6	49.8	53.6	61.0	69.4	75.4
THR	kW	24.3	32.5	41.4	50.4	63.4	66.2	76.0	91.7	93.4
20°C(68.0°F)DB, 45%rh										
Total	kW	19.3	25.5	33.3	39.4	49.5	52.8	60.4	72.9	74.0
Sensible	kW	19.3	25.5	33.3	39.4	49.5	52.8	60.4	72.9	74.0
THR	kW	23.9	31.9	41.1	49.3	62.0	65.5	75.1	90.8	92.0
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings										
Standard Air Volume	m ³ /h	6120	8840	10540	14960	17680	18360	20400	21080	25500
External Static Pressure	Pa	75	75	75	75	75	75	75	75	75
Quantity of Fans		2	2	2	2	2	2	2	2	3
Fan Motor Power	kW	0.75	1.49	2.24	2.24	3.73	3.73	5.60	5.60	7.46
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	m ²	1.25	1.25	1.25	2.13	2.13	2.13	2.13	2.13	2.81
Rows Deep		3	3	4	3	3	4	4	4	4
Fins per inch		14	14	14	13	13	13	13	13	13
Face Velocity	m/s	1.36	1.97	2.35	1.95	2.31	2.39	2.66	2.75	2.52

Model no. 9GU__/9GD__ [†]		06	08	12	14	16	18	20	22	26	
Reheat Section											
<i>Electric Reheat</i> ¹ - Fully proportional, 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> - 22°C E.A.T.											
Heating Capacity	kW	8.6	10.1	10.8	17.0	18.2	18.4	19.2	19.4	25.4	
<i>Hot Water Reheat</i> - 82.2°C E.W.T., 22°C E.A.T. - 2-way modulating control valve, optional 3-way											
Heating Capacity	kW	12.9	14.7	15.6	23.3	24.6	24.8	25.6	25.8	32.1	
Water Flow Rate	l/s	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	
Pressure Drop	kPa	2.0	2.0	2.0	2.9	2.9	2.9	2.9	2.9	3.7	
<i>Steam Reheat</i> - 108.3°C saturated steam, 22°C E.A.T. - 2-way modulating control valve											
Heating Capacity	kW	20.6	24.0	25.6	40.4	43.1	43.7	45.4	45.9	60.2	
Humidifier Section											
<i>Electrode Boiler Type, Serviceable Bottle</i> ¹											
Capacity	kg/h	9	9	9	9	9	9	9	9	9	
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											
<i>Upflow Models</i>											
Quantity of Filters		3	3	3	4	4	4	4	4	5	
Nominal Size	LxWxD-mm	508 x 635 x 101.6				508 x 635 x 101.6					
<i>Downflow Models</i>											
Quantity of Filters		4	4	4	6	6	6	6	6	8	
Nominal Size	LxWxD-mm	406.4 x 635 x 101.6				406.4 x 635 x 101.6					
Glycol Solution Requirement - 40% ethylene glycol											
40. 5°C EWT											
Flow Rate	l/s	1.46	2.26	3.30	2.51	2.64	2.84	3.45	4.67	5.16	
Unit Pressure Drop	kPa	31.0	72.0	84.1	53.9	51.3	61.2	92.6	129.8	43.7	
35°C EWT											
Flow Rate	l/s	0.87	1.28	1.78	1.49	1.60	1.71	2.03	2.63	2.57	
Unit Pressure Drop	kPa	12.3	26.0	25.4	22.0	22.3	24.8	33.5	40.1	13.6	
Glycol Solution Regulating Valve - 2-way, head pressure controlled											
Size	mm	25.4	25.4	31.8	31.8	31.8	31.8	31.8	38.1	50.8	
Piping Connection Size											
Liquid Line	- ODM -mm	12.7	12.7	12.7	15.9	15.9	15.9	15.9	15.9	22.2	
Hot Gas Line	- ODM -mm	22.2	22.2	22.2	28.6	28.6	28.6	28.6	28.6	28.6	
Condensing Water	- ODM -mm	28.6	28.6	34.9	34.9	34.9	41.3	41.3	41.3	41.3	
Hot Water	- ODM -mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	
Steam	- MPT -mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	
Steam Condensate	- ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	
Humidifier Water	- ODM -mm	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	
Condensate Drain	- ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	
Physical Details * - For units with standard options only; consult factory for special options and configuration											
Dimensions	mm	1854(W) x 864(D) x 1880(H)					2515(W) x 864(D) x 1880(H)				**
Approx. Weight	kg	735	748	771	948	957	989	998	998	1103	

* See Section "Physical Details – Fluid Modules" for more information, ** Dimensions for 26 Ton Unit 3172(W) x 863(D) x 1880(H)

¹ Standard Options

Chilled-Water System

Model no. 9CU__ / 9CD__		14	16	18	20	22	26
Cooling Capacity - Rated at standard air volume, 7.2°C entering water & 5.6°C temperature rise							
26°C(78.8°F)DB, 50%rh							
Total	kW	76.4	88.3	100.5	119.9	130.4	153.1
Sensible	kW	57.0	67.3	78.2	89.1	98.4	114.9
Flow Rate	l/s	3.29	3.80	4.13	5.15	5.67	6.62
Coil Pressure Drop	kPa	35	45	57	97	113	64
26°C(78.8°F)DB, 45%rh							
Total	kW	69.4	80.5	91.8	109.3	119.2	139.0
Sensible	kW	58.3	68.9	80.1	91.2	100.8	116.3
Flow Rate	l/s	2.98	3.46	3.95	4.70	5.72	5.99
Coil Pressure Drop	kPa	29	38	48	83	96	54
24°C(75.2°F)DB, 50%rh							
Total	kW	61.2	70.8	80.7	96.5	104.8	122.6
Sensible	kW	50.3	59.3	69.9	79.6	87.9	101.6
Flow Rate	l/s	2.62	3.04	3.47	4.15	5.04	5.30
Coil Pressure Drop	kPa	23	30	39	66	77	43
24°C(75.2°F)DB, 45%rh							
Total	kW	56.1	65.3	71.3	88.8	95.6	112.5
Sensible	kW	52.3	61.7	71.3	82.8	90.2	104.2
Flow Rate	l/s	2.41	2.81	3.07	3.82	3.94	4.86
Coil Pressure Drop	kPa	20	26	31	57	61	37
22°C(71.6°F)DB, 50%rh							
Total	kW	47.8	52.6	60.8	75.7	81.9	96.2
Sensible	kW	45.0	52.6	60.8	71.2	77.3	90.9
Flow Rate	l/s	2.06	2.26	2.61	3.26	3.43	4.16
Coil Pressure Drop	kPa	15	18	23	43	47	28
22°C(71.6°F)DB, 45%rh							
Total	kW	44.8	52.6	60.8	71.0	78.0	90.3
Sensible	kW	44.8	52.6	60.8	71.0	78.0	90.3
Flow Rate	l/s	1.92	2.26	2.61	3.05	3.36	3.91
Coil Pressure Drop	kPa	13	18	23	39	45	25
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings							
Standard Air Volume	m ³ /h	11900	14620	17680	18700	21080	23800
External Static Pressure	Pa	75	75	75	75	75	75
Quantity of Fans		2	2	2	2	2	3
Total Fan Motor Power	kW	2.24	3.76	3.73	5.60	5.60	7.46

Model no. 9CU__ / 9CD__		14	16	18	20	22	26	
Chilled-water Coil - A-Frame - Copper tube / aluminium fin - Stainless steel drain pan								
Face Area	m ²	2.13	2.13	2.13	2.13	2.13	2.81	
Rows Deep		4	4	4	5	5	5	
Fins per inch		13	13	13	13	13	13	
Face Velocity	m/s	1.55	1.91	2.31	2.44	2.75	2.35	
Reheat Section								
<i>Electric Reheat¹ – Fully Proportional, finned tubular type heater, SCR Controlled</i>								
Capacity	kW	12	12	12	12	12	30	
Quantity of Heaters		3	3	3	3	3	3	
<i>Hot Water Reheat - 82.2°C E.W.T., 22°C E.A.T. - 2-way modulating control valve, optional 3-way</i>								
Heating Capacity	kW	23.3	24.6	24.8	25.6	25.8	31.5	
Water Flow Rate	l/s	0.32	0.32	0.32	0.32	0.32	0.32	
Pressure Drop	kPa	2.9	2.9	2.9	2.9	2.9	3.7	
<i>Steam Reheat - 108.3°C saturated steam, 22°C E.A.T. - 2-way modulating control valve</i>								
Heating Capacity	kW	40.4	43.1	43.7	45.4	45.9	58.7	
Humidifier Section								
<i>Electrode Boiler Type, Serviceable Bottle¹</i>								
Capacity	kg/h	9	9	9	9	9	9	
Humidifier Power	kW	6.8	6.8	6.8	6.8	6.8	6.8	
Filter Section - Pleated disposable type								
<i>Upflow Models</i>								
Quantity of Filters		4	4	4	4	4	5	
Nominal Size	LxWxD-mm	508 x 635 x 101.6						
<i>Downflow Models</i>								
Quantity of Filters		6	6	6	6	6	8	
Nominal Size	LxWxD-mm	406.4 x 635 x 101.6						
Chilled-water Valve - 3-Way modulating								
Valve Size	mm	38.1	38.1	50.8	50.8	50.8	50.8	
Piping Connection Size								
Chilled-water	- ODM -mm	41.3	41.3	54.0	54.0	54.0	54.0	
Hot Water	- ODM -mm	22.2	22.2	22.2	22.2	22.2	22.2	
Steam	- MPT -mm	22.2	22.2	22.2	22.2	22.2	22.2	
Steam Condensate	- ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	
Humidifier Water	- ODM -mm	6.35	6.35	6.35	6.35	6.35	6.35	
Condensate Drain	- ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	
Physical Details - For units with standard options only; consult factory for special options and configuration								
Dimensions	mm	2515(W) x 864(D) x 1880(H)					3715(W) x 864(D) x 1880(H)	
Weight	kg	665	665	715	720	720	855	

¹Standard options

Air Dual-cooling System

Model no.	9DU__/9DD__	06	08	12	14	16	18	20	22	26
Cooling Capacity – Direct Expansion - Rated at standard air volume & 49°C condensing temperature, R407c										
24°C(75.2°F)DB, 50%rh										
Total	kW	21.2	29.0	35.0	44.7	54.5	55.4	64.3	74.2	77.2
Sensible	kW	20.1	27.3	32.5	42.8	51.2	52.6	59.6	64.7	72.8
THR	kW	25.7	35.4	42.8	54.7	67.2	68.0	79.0	92.2	95.2
24°C(75.2°F)DB, 45%rh										
Total	kW	20.7	28.4	34.4	44.0	53.6	54.3	63.2	72.8	75.6
Sensible	kW	20.7	28.4	34.4	44.0	53.6	54.3	63.2	69.8	75.6
THR	kW	25.4	34.9	42.3	53.9	66.2	67.0	77.9	90.8	93.7
22°C(71.6°F)DB, 50%rh										
Total	kW	20.0	27.5	33.3	42.6	52.0	52.7	61.3	70.8	72.9
Sensible	kW	19.5	27.0	32.2	41.9	50.0	51.2	58.0	63.1	69.0
THR	kW	24.7	33.9	41.1	52.4	64.6	65.4	76.0	88.7	90.8
22°C(71.6°F)DB, 45%rh										
Total	kW	19.8	27.0	32.7	41.8	51.0	51.8	60.2	69.4	70.5
Sensible	kW	19.8	27.0	32.7	41.8	51.0	51.8	60.2	68.0	70.5
THR	kW	24.3	33.4	40.6	51.7	63.7	64.4	74.9	87.4	88.4
20°C(68.0°F)DB, 50%rh										
Total	kW	19.1	26.1	31.6	40.5	49.5	50.3	58.3	67.4	67.6
Sensible	kW	19.1	26.0	31.1	40.5	49.1	50.3	57.2	62.3	67.5
THR	kW	23.8	32.6	39.5	50.4	62.0	62.8	73.0	85.4	85.6
20°C(68.0°F)DB, 45%rh										
Total	kW	18.7	25.7	31.1	39.5	48.4	49.0	57.1	65.9	65.3
Sensible	kW	18.7	25.7	31.1	39.5	48.4	49.0	57.1	65.9	65.3
THR	kW	23.4	32.1	39.0	49.3	60.9	61.6	71.7	83.9	83.3
Cooling Capacity - Chilled-water - Rated at standard air volume, 7.2°C entering water & 5.6°C water temperature rise										
24°C(75.2°F)DB, 50%rh										
Total	kW	26.7	34.9	39.7	58.6	65.2	66.8	71.3	72.8	77.3
Sensible	kW	22.1	29.2	33.7	53.2	59.7	61.7	67.5	68.4	77.3
Flow/Pressure Drop	l/s/kPa	1.15/18	1.50/29	1.7/37	2.52/16	2.80/20	2.87/21	3.07/23	3.13/24	3.32/27
24°C(75.2°F)DB, 45%rh										
Total	kW	22.6	30.0	34.2	53.3	60.2	61.8	66.5	68.0	77.3
Sensible	kW	22.6	30.0	34.2	53.3	60.2	61.8	66.5	68.0	77.3
Flow/Pressure Drop	l/s/kPa	0.97/14	1.29/22	1.47/28	2.27/14	2.59/17	2.66/18	2.86/20	2.93/21	3.32/27
22°C(71.6°F)DB, 50%rh										
Total	kW	20.6	25.4	29.0	45.3	50.9	52.3	56.2	57.4	65.2
Sensible	kW	19.5	25.4	29.0	45.3	50.9	52.3	56.2	57.4	65.2
Flow/Pressure Drop	l/s/kPa	0.89/12	1.09/17	1.24/21	1.95/10	2.19/13	2.25/13	2.42/15	2.42/16	2.80/20
22°C(71.6°F)DB, 45%rh										
Total	kW	19.2	25.4	29.0	45.3	50.9	52.3	56.2	57.4	65.2
Sensible	kW	19.2	25.4	29.0	45.3	50.9	52.3	56.2	57.4	65.2
Flow/Pressure Drop	l/s/kPa	0.83/10	1.09/17	1.24/21	1.95/10	2.19/13	2.25/13	2.42/15	2.42/16	2.80/20
20°C(68.0°F)DB, 50%rh										
Total	kW	15.8	20.8	23.7	37.0	41.6	42.7	45.8	46.8	52.9
Sensible	kW	15.8	20.8	23.7	37.0	41.6	42.7	45.8	46.8	52.9
Flow/Pressure Drop	l/s/kPa	0.67/7	0.90/12	1.02/15	1.59/7	1.79/9	1.84/9	1.97/11	2.01/11	2.30/14
20°C(68.0°F)DB, 45%rh										
Total	kW	15.8	20.8	23.7	37.0	41.6	42.7	45.8	46.8	52.9
Sensible	kW	15.8	20.8	23.7	37.0	41.6	42.7	45.8	46.8	52.9
Flow/Pressure Drop	l/s/kPa	0.67/7	0.90/12	1.02/15	1.59/7	1.79/9	1.84/9	1.97/11	2.01/11	2.30/14

Model no. 9DU_/9DD_	06	08	12	14	16	18	20	22	26
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings									
Standard Air Volume m ³ /h	6120	8840	10540	14960	17680	18360	20400	21080	25500
External Static Pressure Pa	75	75	75	75	75	75	75	75	75
Quantity of Fans	2	2	2	2	2	2	2	2	3
Total Fan Motor Power kW	0.75	1.49	3.73	3.73	3.73	5.60	5.60	5.60	7.46
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 m ²	1.25	1.25	1.25	2.13	2.13	2.13	2.13	2.13	2.81
Rows Deep (DX/Chilled Water)	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 m/s	1.36	1.97	2.35	1.95	2.31	2.39	2.66	2.75	2.52
Reheat Section									
<i>Electric Reheat¹ - Fully proportional, 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 - 22°C E.A.T.</i>									
Heating Capacity kW	8.6	10.1	10.8	17.0	18.2	18.4	19.2	19.4	25.4
<i>Hot Water Reheat - 82.2°C E.W.T., 22°C E.A.T. - 2-way modulating control valve, optional 3-way</i>									
Heating Capacity kW	12.9	14.7	15.6	23.3	24.6	24.8	25.6	25.8	32.1
Water Flow Rate l/s	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Pressure Drop kPa	2.0	2.0	2.0	2.9	2.9	2.9	2.9	2.9	3.7
<i>Steam Reheat - 108.3°C saturated steam, 22°C E.A.T. - 2-way modulating control valve</i>									
Heating Capacity kW	20.6	24.0	25.6	40.4	43.1	43.7	45.4	45.9	60.2
Humidifier Section									
<i>Electrode Boiler Type, Serviceable Bottle¹</i>									
Capacity kg/h	9	9	9	9	9	9	9	9	9
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									
<i>Upflow Models</i>									
Quantity of Filters	3	3	3	4	4	4	4	4	5
Nominal Size LxWxD-mm	508 x 635 x 101.6				508 x 635 x 101.6				
<i>Downflow Models</i>									
Quantity of Filters	4	4	4	6	6	6	6	6	8
Nominal Size LxWxD-mm	406.4 x 635 x 101.6				406.4 x 635 x 101.6				
Chilled-water Valve - 3-Way modulating									
Valve Size mm	25.4	25.4	38.1	38.1	38.1	50.8	50.8	50.8	50.8

Model no. 9DU_/9DD_		06	08	12	14	16	18	20	22	26
Piping Connection Size										
Liquid Line	- ODM -mm	12.7	12.7	12.7	15.9	15.9	15.9	15.9	15.9	22.2
Hot Gas Line	- ODM -mm	22.2	22.2	22.2	28.6	28.6	28.6	28.6	28.6	28.6
Hot Water	- ODM -mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
Steam	- MPT -mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
Steam Condensate-	ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
Humidifier Water	- ODM -mm	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35
Condensate Drain	- ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
Physical Details* - For units with standard options only; consult factory for special options and configuration										
Dimensions	mm	2085(W) x 864(D) x 1880(H) ·				2745(W) x 864(D) x 1880(H)				**
Approx. Weight	kg	667	681	726	840	862	908	930	930	1125
Air cooled Condenser – Factory Matched										
Model*		DS63SE	DS66SE	DS66SE	DS67SE	DS67SE	DS68SE	DS610SE	DS610SE	SC67SE
No. of Condenser		1	1	1	1	1	1	1	1	2

* Based on maximum ambient of 38°C, ** Dimensions for 26 Ton Unit 3175(W) x 864(D) x 1880(H)

¹ Standard options

Water Dual-cooling System

Model no.	9HU__/9HD__ [†]	06	08	12	14	16	18	20	22	26
Cooling Capacity – Direct Expansion - Rated at standard air volume & 46°C condensing temperature, R407c										
24°C(75.2°F)DB, 50%rh										
Total	kW	22.2	29.1	35.9	45.2	56.6	56.9	65.0	76.2	79.8
Sensible	kW	20.6	27.3	33.0	43.0	52.1	53.2	59.9	65.6	73.8
THR	kW	26.8	35.5	43.8	55.2	69.3	69.5	79.7	94.1	97.8
24°C(75.2°F)DB, 45%rh										
Total	kW	21.8	28.5	35.2	44.3	55.5	55.8	63.7	74.7	78.5
Sensible	kW	21.8	28.5	35.2	44.3	55.5	55.8	63.7	70.6	78.5
THR	kW	26.3	35.0	43.0	54.2	68.0	68.4	78.4	92.6	96.4
22°C(71.6°F)DB, 50%rh										
Total	kW	21.0	27.5	33.9	42.8	53.7	54.0	61.7	72.3	76.2
Sensible	kW	20.0	27.0	32.5	42.0	50.6	51.8	58.1	63.8	70.6
THR	kW	25.6	33.9	41.8	52.7	66.3	66.5	76.4	90.3	94.1
22°C(71.6°F)DB, 45%rh										
Total	kW	20.6	27.0	33.3	42.0	52.5	52.8	60.5	70.8	74.3
Sensible	kW	20.6	27.0	33.3	42.0	52.5	52.8	60.5	68.7	74.3
THR	kW	25.2	33.4	41.2	51.8	65.2	65.5	75.1	88.7	92.2
20°C(68.0°F)DB, 50%rh										
Total	kW	19.9	26.0	32.2	40.6	50.8	51.1	58.5	68.5	72.0
Sensible	kW	19.7	26.0	31.4	40.6	49.8	50.8	57.2	62.8	69.6
THR	kW	24.4	32.5	40.1	50.4	63.4	63.7	73.2	86.5	90.0
20°C(68.0°F)DB, 45%										
Total	kW	19.5	25.5	31.5	39.4	49.5	49.8	57.1	66.9	70.2
Sensible	kW	19.5	25.5	31.5	39.4	49.5	49.8	57.1	66.9	70.2
THR	kW	24.0	31.9	39.4	49.3	62.0	62.3	71.7	84.8	88.2
Cooling Capacity - Chilled-water - Rated at standard air volume, 7.2°C entering water & 5.6°C water temperature rise										
24°C(75.2°F)DB, 50%rh										
Total	kW	26.7	34.9	39.7	58.6	65.2	66.8	71.3	72.8	77.3
Sensible	kW	22.1	29.2	33.7	53.2	59.7	61.7	67.5	68.4	77.3
Flow/Pressure Drop	l/s/kPa	1.15/18	1.50/29	1.7/37	2.52/16	2.80/20	2.87/21	3.07/23	3.13/24	3.32/27
24°C(75.2°F)DB, 45%rh										
Total	kW	22.6	30.0	34.2	53.3	60.2	61.8	66.5	68.0	77.3
Sensible	kW	22.6	30.0	34.2	53.3	60.2	61.8	66.5	68.0	77.3
Flow/Pressure Drop	l/s/kPa	0.97/14	1.29/22	1.47/28	2.27/14	2.59/17	2.66/18	2.86/20	2.93/21	3.32/27
22°C(71.6°F)DB, 50%rh										
Total	kW	20.6	25.4	29.0	45.3	50.9	52.3	56.2	57.4	65.2
Sensible	kW	19.5	25.4	29.0	45.3	50.9	52.3	56.2	57.4	65.2
Flow/Pressure Drop	l/s/kPa	0.89/12	1.09/17	1.24/21	1.95/10	2.19/13	2.25/13	2.42/15	2.42/16	2.80/20
22°C(71.6°F)DB, 45%rh										
Total	kW	19.2	25.4	29.0	45.3	50.9	52.3	56.2	57.4	65.2
Sensible	kW	19.2	25.4	29.0	45.3	50.9	52.3	56.2	57.4	65.2
Flow/Pressure Drop	l/s/kPa	0.83/10	1.09/17	1.24/21	1.95/10	2.19/13	2.25/13	2.42/15	2.42/16	2.80/20
20°C(68.0°F)DB, 50%rh										
Total	kW	15.8	20.8	23.7	37.0	41.6	42.7	45.8	46.8	52.9
Sensible	kW	15.8	20.8	23.7	37.0	41.6	42.7	45.8	46.8	52.9
Flow/Pressure Drop	l/s/kPa	0.67/7	0.90/12	1.02/15	1.59/7	1.79/9	1.84/9	1.97/11	2.01/11	2.30/14
20°C(68.0°F)DB, 45%rh										
Total	kW	15.8	20.8	23.7	37.0	41.6	42.7	45.8	46.8	52.9
Sensible	kW	15.8	20.8	23.7	37.0	41.6	42.7	45.8	46.8	52.9
Flow/Pressure Drop	l/s/kPa	0.67/7	0.90/12	1.02/15	1.59/7	1.79/9	1.84/9	1.97/11	2.01/11	2.30/14

Model no. 9HU__/9HD__ [†]	06	08	12	14	16	18	20	22	26
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings									
Standard Air Volume m ³ /h	6120	8840	10540	14960	17680	18360	20400	21080	25500
External Static Pressure Pa	75	75	75	75	75	75	75	75	75
Quantity of Fans	2	2	2	2	2	2	2	2	3
Total Fan Motor Power kW	0.75	1.49	3.73	3.73	3.73	5.60	5.60	5.60	7.46
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 m ²	1.25	1.25	1.25	2.13	2.13	2.13	2.13	2.13	2.81
Rows Deep (DX/Chilled Water)	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 m/s	1.36	1.97	2.35	1.95	2.31	2.39	2.66	2.75	2.52
Reheat Section									
<i>Electric Reheat¹ - Fully proportional, 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 - 22°C E.A.T.</i>									
Heating Capacity kW	8.6	10.1	10.8	17.0	18.2	18.4	19.2	19.4	25.4
<i>Hot Water Reheat - 82.2°C E.W.T., 22°C E.A.T. - 2-way modulating control valve, optional 3-way</i>									
Heating Capacity kW	12.9	14.7	15.6	23.3	24.6	24.8	25.6	25.8	32.1
Water Flow Rate l/s	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Pressure Drop kPa	2.0	2.0	2.0	2.9	2.9	2.9	2.9	2.9	3.7
<i>Steam Reheat - 108.3°C saturated steam, 22°C E.A.T. - 2-way modulating control valve</i>									
Heating Capacity kW	20.6	24.0	25.6	40.4	43.1	43.7	45.4	45.9	60.2
Humidifier Section									
<i>Electrode Boiler Type, Serviceable Bottle¹</i>									
Capacity kg/h	9	9	9	9	9	9	9	9	9
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									
<i>Upflow Models</i>									
Quantity of Filters	3	3	3	4	4	4	4	4	5
Nominal Size LxWxD-mm	508 x 635 x 101.6				508 x 635 x 101.6				
<i>Downflow Models</i>									
Quantity of Filters	4	4	4	6	6	6	6	6	8
Nominal Size LxWxD-mm	406.4 x 635 x 101.6				406.4 x 635 x 101.6				

Model no. 9HU__/9HD__ [†]		06	08	12	14	16	18	20	22	26
Condensing Water Requirement										
30°C EWT										
Flow Rate	l/s	0.56	0.84	1.10	1.08	1.45	1.46	1.75	2.22	2.33
Unit Pressure Drop	kPa	11.8	20.8	34.0	16.8	27.8	26.1	37.0	62.1	60.0
25°C EWT										
Flow Rate	l/s	0.43	0.61	0.80	0.80	1.05	1.05	1.25	1.55	1.58
Unit Pressure Drop	kPa	7.2	12.3	19.5	10.7	16.9	17.0	22.6	30.1	28.1
Water Regulating Valve - 2-way, head pressure controlled										
Size	mm	19.1	19.1	19.1	25.4	25.4	25.4	25.4	25.4	25.4
Chilled-water Valve - 3-Way modulating										
Valve Size	mm	25.4	25.4	38.1	38.1	38.1	50.8	50.8	50.8	50.8
Piping Connection Size										
Liquid Line	- ODM -mm	12.7	12.7	12.7	15.9	15.9	15.9	15.9	15.9	22.2
Hot Gas Line	- ODM -mm	22.2	22.2	22.2	28.6	28.6	28.6	28.6	28.6	28.6
Condensing Water	- ODM -mm	28.6	28.6	34.9	34.9	34.9	41.3	41.3	41.3	41.3
Chilled Water	-ODM -mm	28.6	28.6	41.3	41.3	41.3	54.0	54.0	54.0	54.0
Hot Water	- ODM -mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
Steam	- MPT -mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
Steam Condensate	- ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
Humidifier Water	- ODM -mm	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35
Condensate Drain	- ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
Physical Details - For units with standard options only; consult factory for special options and configuration										
Dimensions	mm	2085(W) x 864(D) x 1880(H) ·				2745(W) x 864(D) x 1880(H)				**
Approx. Weight	kg	840	890	944	1021	1048	1094	1125	1125	1216

** Dimensions for 26 Ton Unit 3175(W) x 864(D) x 1880(H)

¹ Standard Options

Glycol Dual-cooling System

Model no.	9EU_/9ED_†	06	08	12	14	16	18	20	22	26
Cooling Capacity – Direct Expansion - Rated at standard air volume & 46°C condensing temperature, R407c										
24°C(75.2°F)DB, 50%rh										
Total	kW	22.2	29.1	35.9	45.2	56.6	56.9	65.0	76.2	79.8
Sensible	kW	20.6	27.3	33.0	43.0	52.1	53.2	59.9	65.6	73.8
THR	kW	26.8	35.5	43.8	55.2	69.3	69.5	79.7	94.1	97.8
24°C(75.2°F)DB, 45%rh										
Total	kW	21.8	28.5	35.2	44.3	55.5	55.8	63.7	74.7	78.5
Sensible	kW	21.8	28.5	35.2	44.3	55.5	55.8	63.7	70.6	78.5
THR	kW	26.3	35.0	43.0	54.2	68.0	68.4	78.4	92.6	96.4
22°C(71.6°F)DB, 50%rh										
Total	kW	21.0	27.5	33.9	42.8	53.7	54.0	61.7	72.3	76.2
Sensible	kW	20.0	27.0	32.5	42.0	50.6	51.8	58.1	63.8	70.6
THR	kW	25.6	33.9	41.8	52.7	66.3	66.5	76.4	90.3	94.1
22°C(71.6°F)DB, 45%rh										
Total	kW	20.6	27.0	33.3	42.0	52.5	52.8	60.5	70.8	74.3
Sensible	kW	20.6	27.0	33.3	42.0	52.5	52.8	60.5	68.7	74.3
THR	kW	25.2	33.4	41.2	51.8	65.2	65.5	75.1	88.7	92.2
20°C(68.0°F)DB, 50%rh										
Total	kW	19.9	26.0	32.2	40.6	50.8	51.1	58.5	68.5	72.0
Sensible	kW	19.7	26.0	31.4	40.6	49.8	50.8	57.2	62.8	69.6
THR	kW	24.4	32.5	40.1	50.4	63.4	63.7	73.2	86.5	90.0
20°C(68.0°F)DB, 45%										
Total	kW	19.5	25.5	31.5	39.4	49.5	49.8	57.1	66.9	70.2
Sensible	kW	19.5	25.5	31.5	39.4	49.5	49.8	57.1	66.9	70.2
THR	kW	24.0	31.9	39.4	49.3	62.0	62.3	71.7	84.8	88.2
Cooling Capacity - Chilled-water - Rated at standard air volume, 7.2°C entering water & 5.6°C water temperature rise										
24°C(75.2°F)DB, 50%rh										
Total	kW	26.7	34.9	39.7	58.6	65.2	66.8	71.3	72.8	77.3
Sensible	kW	22.1	29.2	33.7	53.2	59.7	61.7	67.5	68.4	77.3
Flow/Pressure Drop	l/s/kPa	1.15/18	1.50/29	1.7/37	2.52/16	2.80/20	2.87/21	3.07/23	3.13/24	3.32/27
24°C(75.2°F)DB, 45%rh										
Total	kW	22.6	30.0	34.2	53.3	60.2	61.8	66.5	68.0	77.3
Sensible	kW	22.6	30.0	34.2	53.3	60.2	61.8	66.5	68.0	77.3
Flow/Pressure Drop	l/s/kPa	0.97/14	1.29/22	1.47/28	2.27/14	2.59/17	2.66/18	2.86/20	2.93/21	3.32/27
22°C(71.6°F)DB, 50%rh										
Total	kW	20.6	25.4	29.0	45.3	50.9	52.3	56.2	57.4	65.2
Sensible	kW	19.5	25.4	29.0	45.3	50.9	52.3	56.2	57.4	65.2
Flow/Pressure Drop	l/s/kPa	0.89/12	1.09/17	1.24/21	1.95/10	2.19/13	2.25/13	2.42/15	2.42/16	2.80/20
22°C(71.6°F)DB, 45%rh										
Total	kW	19.2	25.4	29.0	45.3	50.9	52.3	56.2	57.4	65.2
Sensible	kW	19.2	25.4	29.0	45.3	50.9	52.3	56.2	57.4	65.2
Flow/Pressure Drop	l/s/kPa	0.83/10	1.09/17	1.24/21	1.95/10	2.19/13	2.25/13	2.42/15	2.42/16	2.80/20
20°C(68.0°F)DB, 50%rh										
Total	kW	15.8	20.8	23.7	37.0	41.6	42.7	45.8	46.8	52.9
Sensible	kW	15.8	20.8	23.7	37.0	41.6	42.7	45.8	46.8	52.9
Flow/Pressure Drop	l/s/kPa	0.67/7	0.90/12	1.02/15	1.59/7	1.79/9	1.84/9	1.97/11	2.01/11	2.30/14
20°C(68.0°F)DB, 45%rh										
Total	kW	15.8	20.8	23.7	37.0	41.6	42.7	45.8	46.8	52.9
Sensible	kW	15.8	20.8	23.7	37.0	41.6	42.7	45.8	46.8	52.9
Flow/Pressure Drop	l/s/kPa	0.67/7	0.90/12	1.02/15	1.59/7	1.79/9	1.84/9	1.97/11	2.01/11	2.30/14

Model no. 9EU_/9ED_†	06	08	12	14	16	18	20	22	26
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings									
Standard Air Volume m ³ /h	6120	8840	10540	14960	17680	18360	20400	21080	25500
External Static Pressure Pa	75	75	75	75	75	75	75	75	75
Quantity of Fans	2	2	2	2	2	2	2	2	3
Total Fan Motor Power kW	0.75	1.49	2.24	3.73	3.73	5.60	5.60	5.60	7.46
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 m ²	1.25	1.25	1.25	2.13	2.13	2.13	2.13	2.13	2.81
Rows Deep (DX/Chilled Water)	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 m/s	1.36	1.97	2.35	1.95	2.31	2.39	2.66	2.75	2.52
Reheat Section									
<i>Electric Reheat¹ - Fully proportional, 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 - 22°C E.A.T.</i>									
Heating Capacity kW	8.6	10.1	10.8	17.0	18.2	18.4	19.2	19.4	25.4
<i>Hot Water Reheat - 82.2°C E.W.T., 22°C E.A.T. - 2-way modulating control valve, optional 3-way</i>									
Heating Capacity kW	12.9	14.7	15.6	23.3	24.6	24.8	25.6	25.8	32.1
Water Flow Rate l/s	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Pressure Drop kPa	2.0	2.0	2.0	2.9	2.9	2.9	2.9	2.9	3.7
<i>Steam Reheat - 108.3°C saturated steam, 22°C E.A.T. - 2-way modulating control valve</i>									
Heating Capacity kW	20.6	24.0	25.6	40.4	43.1	43.7	45.4	45.9	60.2
Humidifier Section									
<i>Electrode Boiler Type, Serviceable Bottle¹</i>									
Capacity kg/h	9	9	9	9	9	9	9	9	9
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									
<i>Upflow Models</i>									
Quantity of Filters	3	3	3	4	4	4	4	4	5
Nominal Size LxWxD-mm	508 x 635 x 101.6				508 x 635 x 101.6				
<i>Downflow Models</i>									
Quantity of Filters	4	4	4	6	6	6	6	6	8
Nominal Size LxWxD-mm	406.4 x 635 x 101.6				406.4 x 635 x 101.6				

Model no. 9EU__/9ED__ [†]		06	08	12	14	16	18	20	22	26	
<i>Glycol Solution Requirement - 40% ethylene glycol</i>											
40.5°C EWT											
Flow Rate	l/s	1.46	2.26	3.26	2.51	2.64	2.66	3.23	4.18	4.92	
Unit Pressure Drop	kPa	31.0	72.0	105.5	53.9	51.3	51.7	77.9	88.6	39.8	
35°C EWT											
Flow Rate	l/s	0.87	1.28	1.75	1.49	1.60	1.61	1.91	2.39	2.46	
Unit Pressure Drop	kPa	12.3	26.0	35.7	22.0	22.3	22.4	31.4	38.8	12.8	
<i>Glycol Solution Regulating Valve - 2-way, head pressure controlled</i>											
Size	mm	25.4	25.4	31.8	31.8	31.8	31.8	31.8	38.1	50.8	
<i>Chilled-water Valve - 3-Way modulating</i>											
Valve Size	mm	25.4	25.4	38.1	38.1	38.1	50.8	50.8	50.8	50.8	
<i>Piping Connection Size</i>											
Liquid Line	- ODM -mm	12.7	12.7	12.7	15.9	15.9	15.9	15.9	15.9	22.2	
Hot Gas Line	- ODM -mm	22.2	22.2	22.2	28.6	28.6	28.6	28.6	28.6	28.6	
Glycol Solution	- ODM -mm	28.6	28.6	34.9	34.9	34.9	41.3	41.3	41.3	41.3	
Chilled Water	-ODM -mm	28.6	28.6	41.3	41.3	41.3	54.0	54.0	54.0	54.0	
Hot Water	- ODM -mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	
Steam	- MPT -mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	
Steam Condensate-	ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	
Humidifier Water	- ODM -mm	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	
Condensate Drain	- ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	
<i>Physical Details - For units with standard options only; consult factory for special options and configuration</i>											
Dimensions	mm	2085(W) x 864(D) x 1880(H)				·		2745(W) x 864(D) x 1880(H)			**
Approx. Weight	kg	840	890	944	1021	1048	1094	1125	1125	1216	

** Dimensions for 26 Ton Unit 3175(W) x 864(D) x 1880(H)

¹ Standard Options

Glycol Free-cooling System

Model no. 9FU_/9FD_†		06	08	12	14	16	18	20	22	26
Cooling Capacity – Direct Expansion - Rated at standard air volume & 46°C condensing temperature, R407c										
24°C(75.2°F)DB, 50%rh										
Total	kW	22.2	29.1	35.9	45.2	56.6	56.9	65.0	76.2	79.8
Sensible	kW	20.6	27.3	33.0	43.0	52.1	53.2	59.9	65.6	73.8
THR	kW	26.8	35.5	43.8	55.2	69.3	69.5	79.7	94.1	97.8
24°C(75.2°F)DB, 45%rh										
Total	kW	21.8	28.5	35.2	44.3	55.5	55.8	63.7	74.7	78.5
Sensible	kW	21.8	28.5	35.2	44.3	55.5	55.8	63.7	70.6	78.5
THR	kW	26.3	35.0	43.0	54.2	68.0	68.4	78.4	92.6	96.4
22°C(71.6°F)DB, 50%rh										
Total	kW	21.0	27.5	33.9	42.8	53.7	54.0	61.7	72.3	76.2
Sensible	kW	20.0	27.0	32.5	42.0	50.6	51.8	58.1	63.8	70.6
THR	kW	25.6	33.9	41.8	52.7	66.3	66.5	76.4	90.3	94.1
22°C(71.6°F)DB, 45%rh										
Total	kW	20.6	27.0	33.3	42.0	52.5	52.8	60.5	70.8	74.3
Sensible	kW	20.6	27.0	33.3	42.0	52.5	52.8	60.5	68.7	74.3
THR	kW	25.2	33.4	41.2	51.8	65.2	65.5	75.1	88.7	92.2
20°C(68.0°F)DB, 50%rh										
Total	kW	19.9	26.0	32.2	40.6	50.8	51.1	58.5	68.5	72.0
Sensible	kW	19.7	26.0	31.4	40.6	49.8	50.8	57.2	62.8	69.6
THR	kW	24.4	32.5	40.1	50.4	63.4	63.7	73.2	86.5	90.0
20°C(68.0°F)DB, 45%										
Total	kW	19.5	25.5	31.5	39.4	49.5	49.8	57.1	66.9	70.2
Sensible	kW	19.5	25.5	31.5	39.4	49.5	49.8	57.1	66.9	70.2
THR	kW	24.0	31.9	39.4	49.3	62.0	62.3	71.7	84.8	88.2
Cooling Capacity – 100% Free-cooling - Rated at standard air volume, 7.2°C entering glycol										
24°C(75.2°F)DB, 50%rh										
Total	kW	25.6	33.7	38.7	51.4	58.6	60.0	70.2	76.3	93.8
Sensible	kW	21.2	28.3	32.6	51.4	58.6	60.0	66.5	70.4	86.3
24°C(75.2°F)DB, 45%rh										
Total	kW	23.7	30.2	35.9	51.4	58.6	60.0	67.7	72.2	88.9
Sensible	kW	22.1	30.2	33.9	51.4	58.6	60.0	67.7	72.2	88.9
22°C(71.6°F)DB, 50%rh										
Total	kW	21.1	27.9	31.9	45.3	51.6	52.9	59.7	63.6	78.3
Sensible	kW	19.5	26.0	29.9	45.3	51.6	52.9	59.7	63.6	78.3
22°C(71.6°F)DB, 45%rh										
Total	kW	20.0	26.6	30.5	45.3	51.6	52.9	59.7	63.6	78.3
Sensible	kW	20.0	26.6	30.5	45.3	51.6	52.9	59.7	63.6	78.3
20°C(68.0°F)DB, 50%rh										
Total	kW	17.3	23.0	26.4	39.2	44.6	45.7	51.6	55.0	67.7
Sensible	kW	17.3	23.0	26.4	39.2	44.6	45.7	51.6	55.0	67.7
20°C(68.0°F)DB, 45%rh										
Total	kW	17.3	23.0	26.4	39.2	44.6	45.7	51.6	55.0	67.7
Sensible	kW	17.3	23.0	26.4	39.2	44.6	45.7	51.6	55.0	67.7

Model no. 9FU_/9FD_†	06	08	12	14	16	18	20	22	26
Fan Section - Two belts, variable pitch, single shaft centrifugal blower system with pillow block bearings									
Standard Air Volume m ³ /h	6120	8840	10540	14960	17680	18360	20400	21080	25500
External Static Pressure Pa	75	75	75	75	75	75	75	75	75
Quantity of Fans	2	2	2	2	2	2	2	2	3
Total Fan Motor Power kW	0.75	1.49	3.73	3.73	3.73	5.60	5.60	5.60	7.46
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 m ²	1.25	1.25	1.25	2.13	2.13	2.13	2.13	2.13	2.81
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 m/s	1.36	1.97	2.35	1.95	2.31	2.39	2.66	2.75	2.52
Reheat Section									
<i>Electric Reheat¹ - Fully proportional, 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 - 22°C E.A.T.</i>									
Heating Capacity kW	8.6	10.1	10.8	17.0	18.2	18.4	19.2	19.4	25.4
<i>Hot Water Reheat - 82.2°C E.W.T., 22°C E.A.T. - 2-way modulating control valve, optional 3-way</i>									
Heating Capacity kW	12.9	14.7	15.6	23.3	24.6	24.8	25.6	25.8	32.1
Water Flow Rate l/s	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Pressure Drop kPa	2.0	2.0	2.0	2.9	2.9	2.9	2.9	2.9	3.7
<i>Steam Reheat - 108.3°C saturated steam, 22°C E.A.T. - 2-way modulating control valve</i>									
Heating Capacity kW	20.6	24.0	25.6	40.4	43.1	43.7	45.4	45.9	60.2
Humidifier Section									
<i>Electrode Boiler Type, Serviceable Bottle¹</i>									
Capacity kg/h	9	9	9	9	9	9	9	9	9
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									
<i>Upflow Models</i>									
Quantity of Filters	3	3	3	4	4	4	4	4	5
Nominal Size LxWxD-mm	508 x 635 x 101.6				508 x 635 x 101.6				
<i>Downflow Models</i>									
Quantity of Filters	4	4	4	6	6	6	6	6	8
Nominal Size LxWxD-mm	406.4 x 635 x 101.6				406.4 x 635 x 101.6				

Model no. 9FU__/9FD__ [†]		06	08	12	14	16	18	20	22	26	
Glycol Solution Regulating Valve - 3-way modulating											
Valve Size	mm	25.4	25.4	25.4	25.4	31.8	31.8	31.8	38.1	38.1	
Quantity of Valves		2	2	2	2	2	2	2	2	2	
Glycol Solution Requirement - 40% ethylene glycol at 7.2°C entering temperature, 0°C ambient temperature											
Flow Rate	l/s	0.84	1.14	1.66	2.04	2.66	2.92	2.68	3.92	5.48	
Unit Pressure Drop	kPa	98	158	190	115	115	117	180	260	290	
Piping Connection Size											
Liquid Line	- ODM -mm	12.7	12.7	12.7	15.9	15.9	15.9	15.9	15.9	22.2	
Hot Gas Line	- ODM -mm	22.2	22.2	22.2	28.6	28.6	28.6	28.6	28.6	28.6	
Glycol Solution	- ODM -mm	28.6	28.6	34.9	34.9	34.9	41.3	41.3	41.3	41.3	
Hot Water	- ODM -mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	
Steam	- MPT -mm	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	
Steam Condensate-	ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	
Humidifier Water	- ODM -mm	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	6.35	
Condensate Drain	- ODM -mm	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	
Physical Details - For units with standard options only; consult factory for special options and configuration											
Dimensions	mm	2085(W) x 864(D) x 1880(H)				·	2745(W) x 864(D) x 1880(H)				**
Approx. Weight	kg	840	890	944	1021	1048	1094	1125	1125	1216	

** Dimensions for 26 Ton Unit 3175(W) x 864(D) x 1880(H)

[†] Standard Options

Electrical Data

Air / Water / Glycol / Cooled Systems*†

Model	9_06			9_08			9_12			9_14		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Reheat / Humidifier Option												
Electric / Boiler	25.8	29.3	35	31.0	35.0	40	35.8	40.2	45	52.1	59.5	70
Electric / None	24.6	27.8	30	29.8	33.5	35	34.6	38.7	45	52.1	59.5	70
None, Non-electric / Boiler	25.8	29.3	35	31.0	35.0	40	35.8	40.2	45	44.2	49.7	60
None, non-electric / none	15.5	16.4	20	20.7	22.1	30	25.5	27.3	35	33.9	36.8	50

Model	9_16			9_18			9_20			9_22		
	FLA	MCA	MFS	FLA	FLA	MCA	MFS	MCA	MFS	FLA	MCA	MFS
Reheat / Humidifier Option												
Electric / Boiler	61.0	69.2	80	61.0	69.3	80	68.6	77.3	90	78.8	88.8	100
Electric / None	61.0	69.2	80	61.0	69.3	80	68.6	77.0	90	78.8	88.8	100
None, Non-electric / Boiler	53.1	59.3	70	53.2	59.4	70	60.7	67.4	80	70.9	78.9	100
None, non-electric / none	42.8	46.4	60	42.9	46.5	60	50.4	54.5	70	60.6	66.0	90

Model	9_26		
	FLA	MCA	MFS
Reheat / Humidifier Option			
Electric / Boiler	109.9	126.8	130
Electric / None	109.9	126.8	130
None, Non-electric / Boiler	74.7	82.7	100
None, non-electric / none	64.4	69.8	90

Chilled Water Systems*

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 / Boiler	34.0	39.1	45	36.7	42.5	50	36.8	42.6	50	40.5	47.3	50	40.5	47.3	50
Electric / None	23.7	28.8	35	26.4	32.2	40	26.5	32.3	40	30.2	36.9	45	30.2	36.9	45
None, Non-electric / Boiler	15.8	18.9	20	18.5	22.3	25	18.6	22.4	25	22.3	27.0	30	22.3	27.0	30
None, non-electric / none	5.5	6.0	15	8.2	9.4	15	8.3	9.5	15	12.0	14.1	20	12.0	14.1	20

Model	9_26		
	FLA	MCA	MFS
Reheat / Humidifier Option			
Electric / Boiler	71.7	86.2	100
Electric / None	61.3	75.9	90
None, Non-electric / Boiler	26.1	31.8	35
None, non-electric / none	15.8	18.9	20

* Above FLA does not include air-cooled condenser amps (Air cooled units).

† 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

Dual / Free Cooled Systems*†

Model	9_06			9_08			9_12			9_14		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
Electric / Boiler	25.8	29.3	35	31.0	35.0	40	38.6	43.0	50	54.9	62.3	70
Electric / None	24.6	27.8	30	29.8	33.4	35	37.4	41.5	45	54.9	62.3	70
None, Non-electric / Boiler	25.8	29.3	35	31.0	35.0	40	38.6	43.0	50	47.0	52.5	60
None, non-electric / none	15.5	16.4	20	20.7	22.1	30	28.3	30.1	40	36.7	39.6	50

Model	9_16			9_18			9_20			9_22		
	FLA	MCA	MFS	FLA	FLA	MCA	MFS	MCA	MFS	FLA	MCA	MFS
Electric / Boiler	61.0	69.2	80	64.8	73.0	80	68.6	77.3	90	78.8	88.8	100
Electric / None	61.0	69.2	80	64.8	73.0	80	68.6	77.3	90	78.8	88.8	100
None, Non-electric / Boiler	53.1	59.3	70	56.9	63.1	70	60.7	67.4	80	70.9	78.9	100
None, non-electric / none	42.8	46.4	60	46.6	50.2	60	50.4	54.5	70	60.6	66.0	90

Model	9_26		
	FLA	MCA	MFS
Electric / Boiler	109.9	126.8	130
Electric / None	109.9	126.8	130
None, Non-electric / Boiler	74.7	82.7	100
None, non-electric / none	64.4	69.8	90

* Above FLA does not include air-cooled condenser amps (Air Dual cooled units).

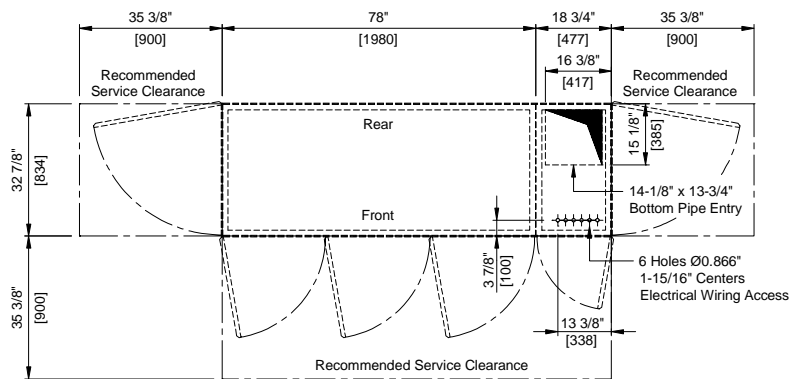
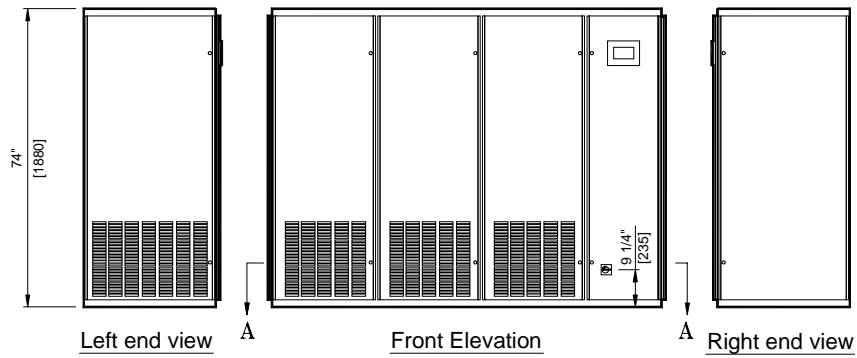
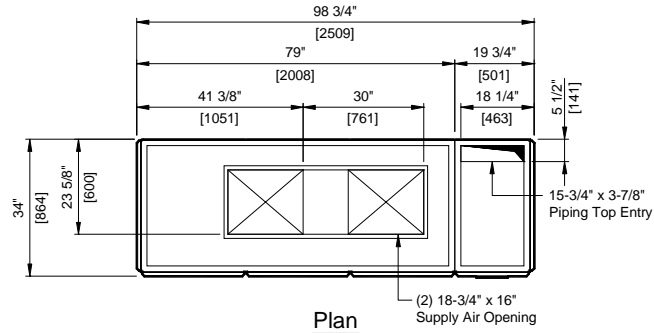
† FLA is based on full load current of individual components that result in maximum electrical load condition during unit normal operation.
 FLA = Full Load Amps MCA = Minimum Circuit Ampacity MFS = Maximum Fuse Size

Dimensional Drawings

Drawing Title	Drawing Number	Page No
Upflow System - Standard Cooling Three Module Unit (14-22 Ton)	S9DD301B	48
Upflow System – Standard Cooling Four Module Unit (26 Ton)	S9DD401C	49
Upflow System – Standard Cooling Two Module Unit (6-12 Ton)	S9DD201A	4:
Upflow System – Chilled water Cooling (3+0) Module (14-25 Ton)	S9DD351A	4;
Upflow System – Chilled water Cooling (4+0) Module (26-30 Ton)	S9DD451A	52
Downflow System – Standard Cooling Three Module Unit (14-22 Ton)	S9DD302B	33
Downflow System – Standard Cooling Four Module Unit (26 Ton)	S9DD402C	34
Downflow System – Standard Cooling Two Module Unit (6-12 Ton)	S9DD202A	35
Downflow System – Chilled water Cooling (3+0) Module (14-25 Ton)	S9DD352C	36
Downflow System – Chilled water Cooling (4+0) Module (26-30 Ton)	S9DD452C	37
Upflow System - Rear Duct Connection (14-22 Ton)	S9DD303B	58
Upflow System - Rear Duct Connection (6-12 Ton)	S9DD203A	59
Upflow System – Rear Duct Connection (26 Ton)	S9DD403B	5:
Upflow System - Dual/Free Cooling (14-22 Ton)	S9DD325A	5;
Upflow System - Dual/Free Cooling (6-12 Ton)	S9DD225A	42
Downflow System - Dual/Free Cooling (14-22 Ton)	S9DD326A	43
Downflow System - Dual/Free Cooling (6-12 Ton)	S9DD226A	44
Upflow System - Rear Duct Connection, Dual/Free Cooling (14-22 Ton)	S9DD327A	45
Upflow System - Rear Duct Connection, Dual/Free Cooling (6-12 Ton)	S9DD227A	46



**SERIES 9-VERTICAL FLOOR MOUNT UPFLOW UNIT
STANDARD COOLING THREE MODULE UNIT**

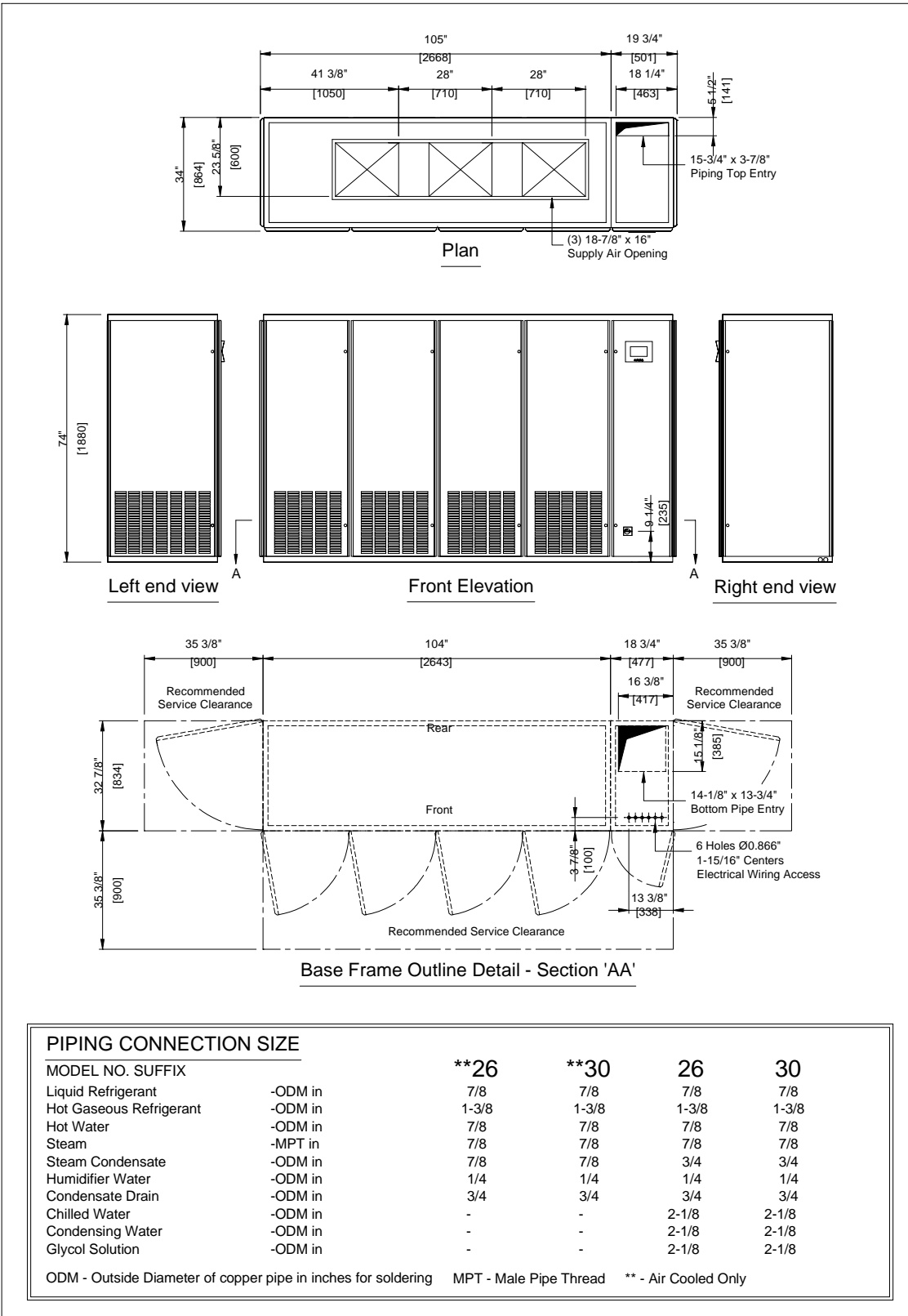


PIPING CONNECTION SIZE		14	16	18	20	22	*25
MODEL NO. SUFFIX							
Liquid Refrigerant	-ODM in	5/8	5/8	5/8	5/8	5/8	-
Hot Gaseous Refrigerant	-ODM in	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	-
Hot Water	-ODM in	1	1	1-1/8	1-1/8	1-1/8	7/8
Steam	-MPT in	7/8	7/8	7/8	7/8	7/8	7/8
Steam Condensate	-ODM in	3/4	3/4	3/4	3/4	3/4	3/4
Humidifier Water	-ODM in	1/4	1/4	1/4	1/4	1/4	1/4
Cooling Coil Condensate	-ODM in	3/4	3/4	3/4	3/4	3/4	3/4
Chilled Water	-ODM in	1-5/8	1-5/8	2-1/8	2-1/8	2-1/8	2-1/8
Condensing Water	-ODM in	1-3/8	1-3/8	1-3/8	1-3/8	1-5/8	-
Glycol Solution	-ODM in	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	-

ODM - Outside Diameter of copper pipe in inches for soldering MPT - Male Pipe Thread * - Chilled Water Only



**SERIES 9-VERTICAL FLOOR MOUNT UPFLOW UNIT
STANDARD COOLING FOUR MODULE UNIT**



PIPING CONNECTION SIZE		**26	**30	26	30
MODEL NO. SUFFIX					
Liquid Refrigerant	-ODM in	7/8	7/8	7/8	7/8
Hot Gaseous Refrigerant	-ODM in	1-3/8	1-3/8	1-3/8	1-3/8
Hot Water	-ODM in	7/8	7/8	7/8	7/8
Steam	-MPT in	7/8	7/8	7/8	7/8
Steam Condensate	-ODM in	7/8	7/8	3/4	3/4
Humidifier Water	-ODM in	1/4	1/4	1/4	1/4
Condensate Drain	-ODM in	3/4	3/4	3/4	3/4
Chilled Water	-ODM in	-	-	2-1/8	2-1/8
Condensing Water	-ODM in	-	-	2-1/8	2-1/8
Glycol Solution	-ODM in	-	-	2-1/8	2-1/8

ODM - Outside Diameter of copper pipe in inches for soldering MPT - Male Pipe Thread ** - Air Cooled Only

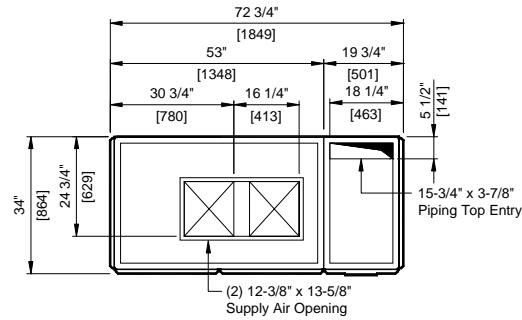
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28 OCTOBER 2002

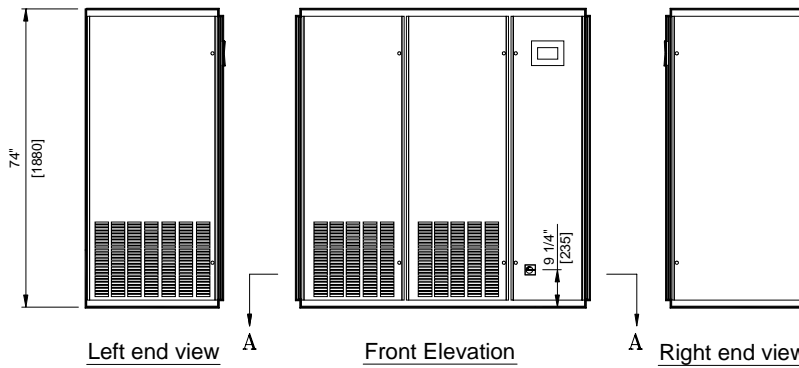
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**SERIES 9- VERTICAL FLOOR MOUNT UPFLOW UNIT
STANDARD COOLING TWO MODULE UNIT**



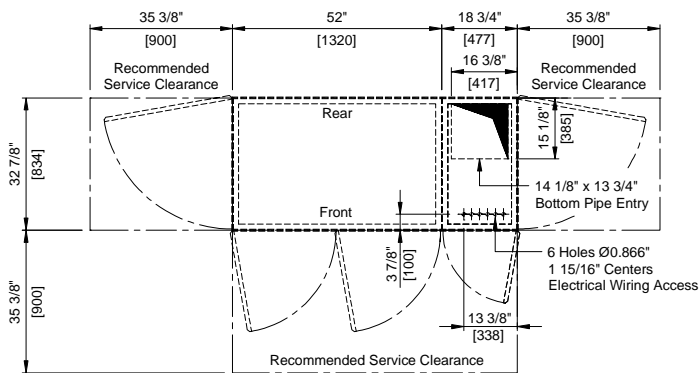
Plan



Left end view

Front Elevation

Right end view



Base Frame Outline Detail - Section 'AA'

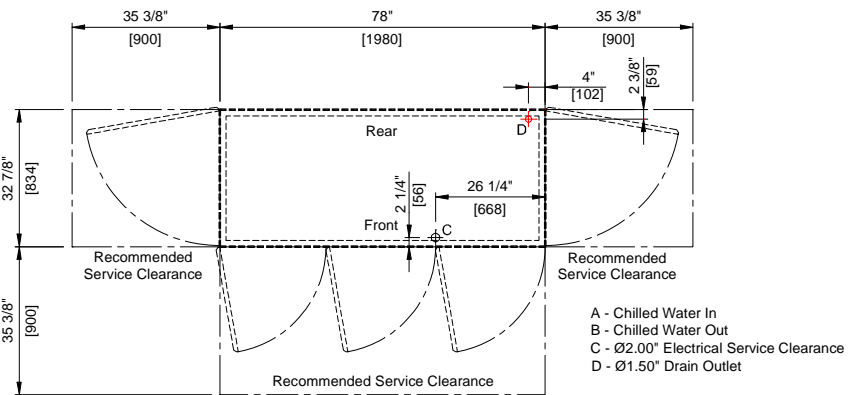
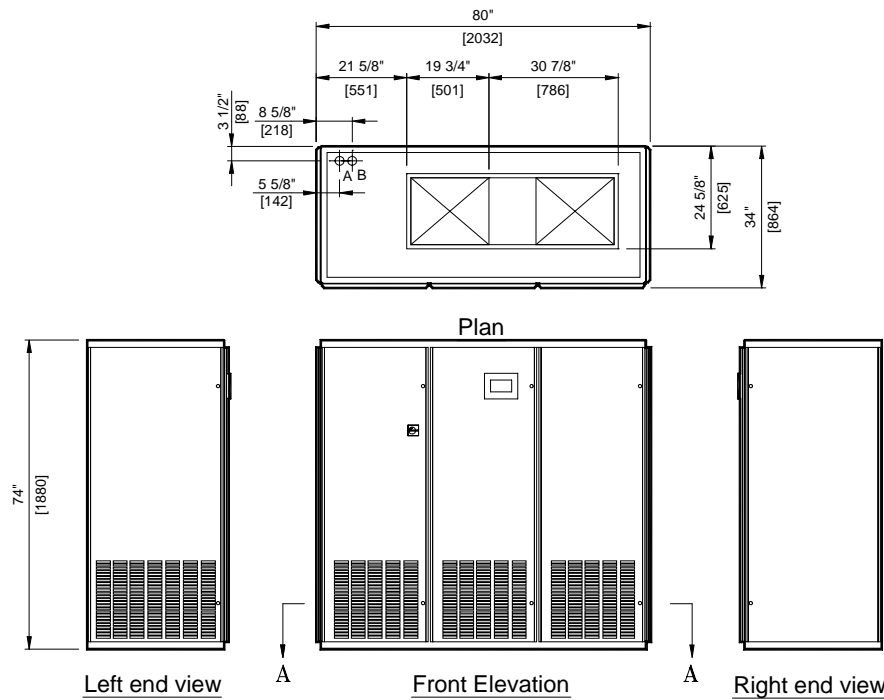
PIPING CONNECTION SIZE

MODEL NO. SUFFIX		06	08	12
Liquid Refrigerant	-ODM in	1/2	1/2	1/2
Hot Gaseous Refrigerant	-ODM in	7/8	7/8	7/8
Hot Water	-ODM in	3/4	1	1
Steam	-MPT in	7/8	7/8	7/8
Steam Condensate	-ODM in	3/4	3/4	3/4
Humidifier Water	-ODM in	1/4	1/4	1/4
Cooling Coil Condensate	-ODM in	3/4	3/4	3/4
Chilled Water	-ODM in	1-1/8	1-1/8	1-5/8
Condensing Water	-ODM in	1-1/8	1-1/8	1-3/8
Glycol Solution	-ODM in	1-5/8	1-5/8	2-1/8

ODM - Outside Diameter of copper pipe in inches for soldering MPT - Male Pipe Thread



**SERIES 9- VERTICAL FLOOR MOUNT UPFLOW UNIT
CHILLED WATER COOLING (3 +0) MODULE**



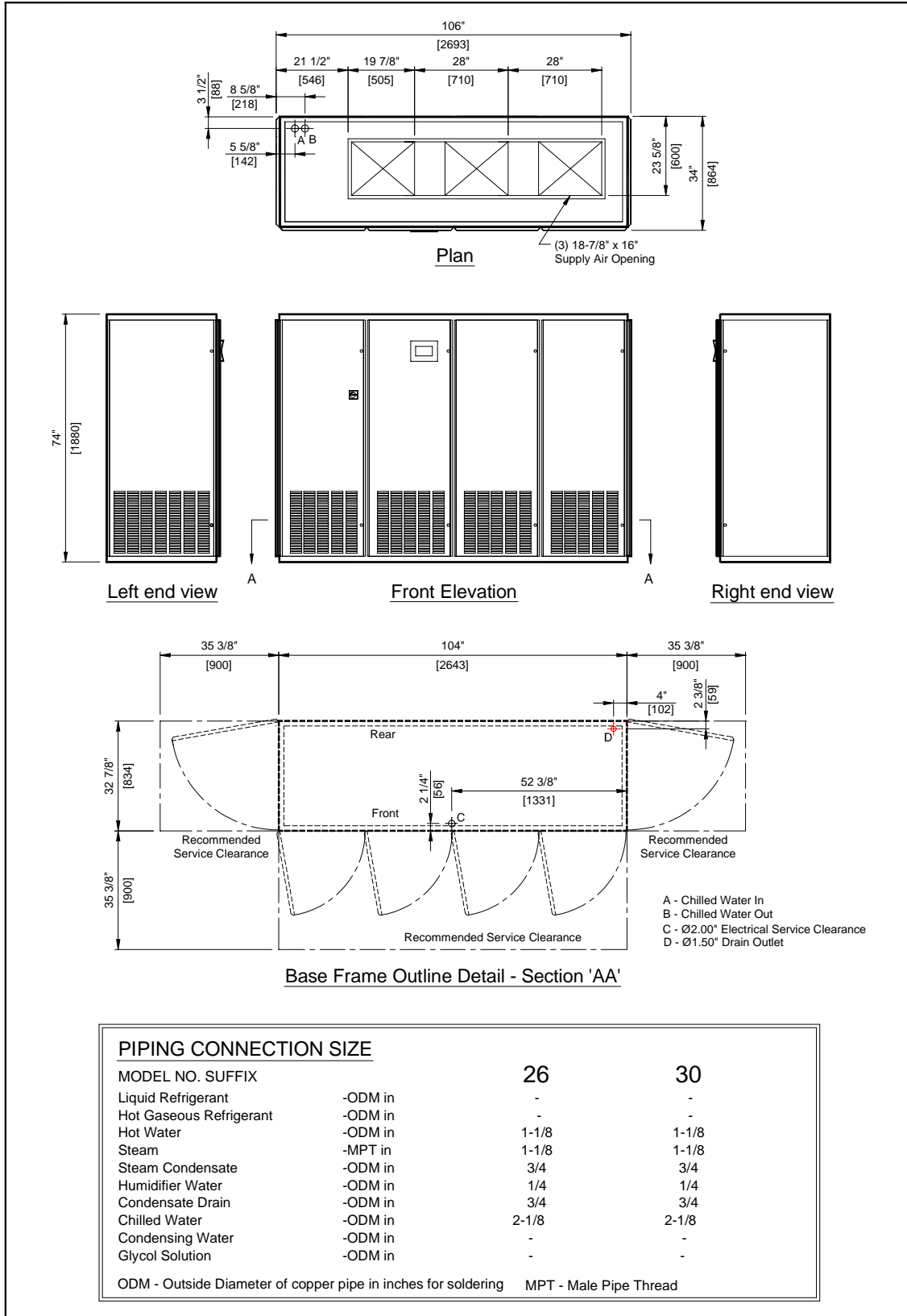
Base Frame Outline Detail - Section 'AA'

PIPING CONNECTION SIZE		14	16	18	20	22	*25
MODEL NO. SUFFIX							
Liquid Refrigerant	-ODM in	-	-	-	-	-	-
Hot Gaseous Refrigerant	-ODM in	-	-	-	-	-	-
Hot Water	-ODM in	1	1	1-1/8	1-1/8	1-1/8	7/8
Steam	-MPT in	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
Humidifier Water	-ODM in	1/4	1/4	1/4	1/4	1/4	1/4
Cooling Coil Condensate	-ODM in	3/4	3/4	3/4	3/4	3/4	3/4
Chilled Water	-ODM in	1-5/8	1-5/8	2-1/8	2-1/8	2-1/8	2-1/8
Condensing Water	-ODM in	-	-	-	-	-	-
Glycol Solution	-ODM in	-	-	-	-	-	-

ODM - Outside Diameter of copper pipe in inches for soldering MPT - Male Pipe Thread

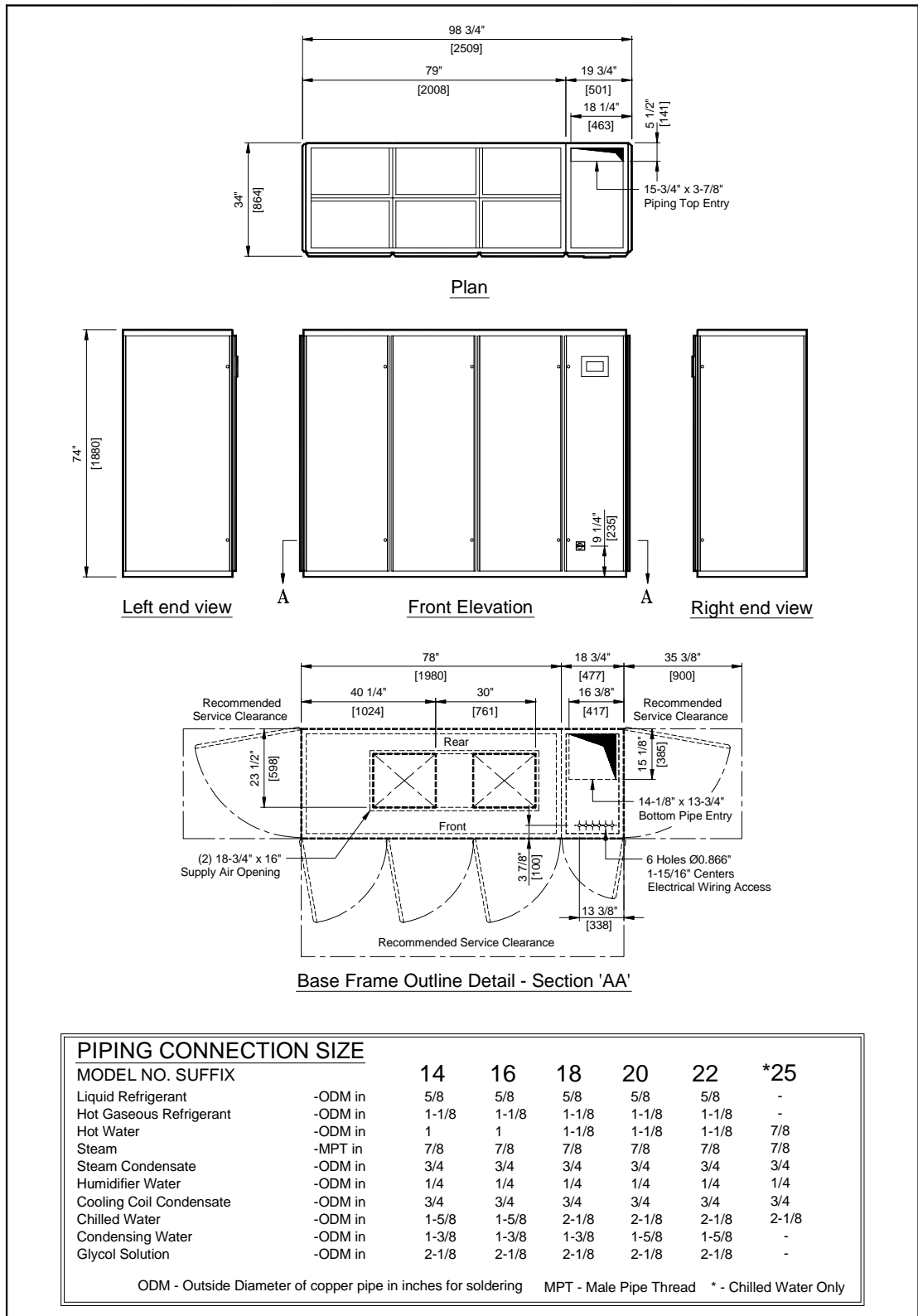


**SERIES 9-VERTICAL FLOOR MOUNT UPFLOW UNIT
CHILLED WATER COOLING (4+0) MODULE**





**SERIES 9-VERTICAL FLOOR MOUNT DOWNFLOW UNIT
STANDARD COOLING THREE MODULE UNIT**



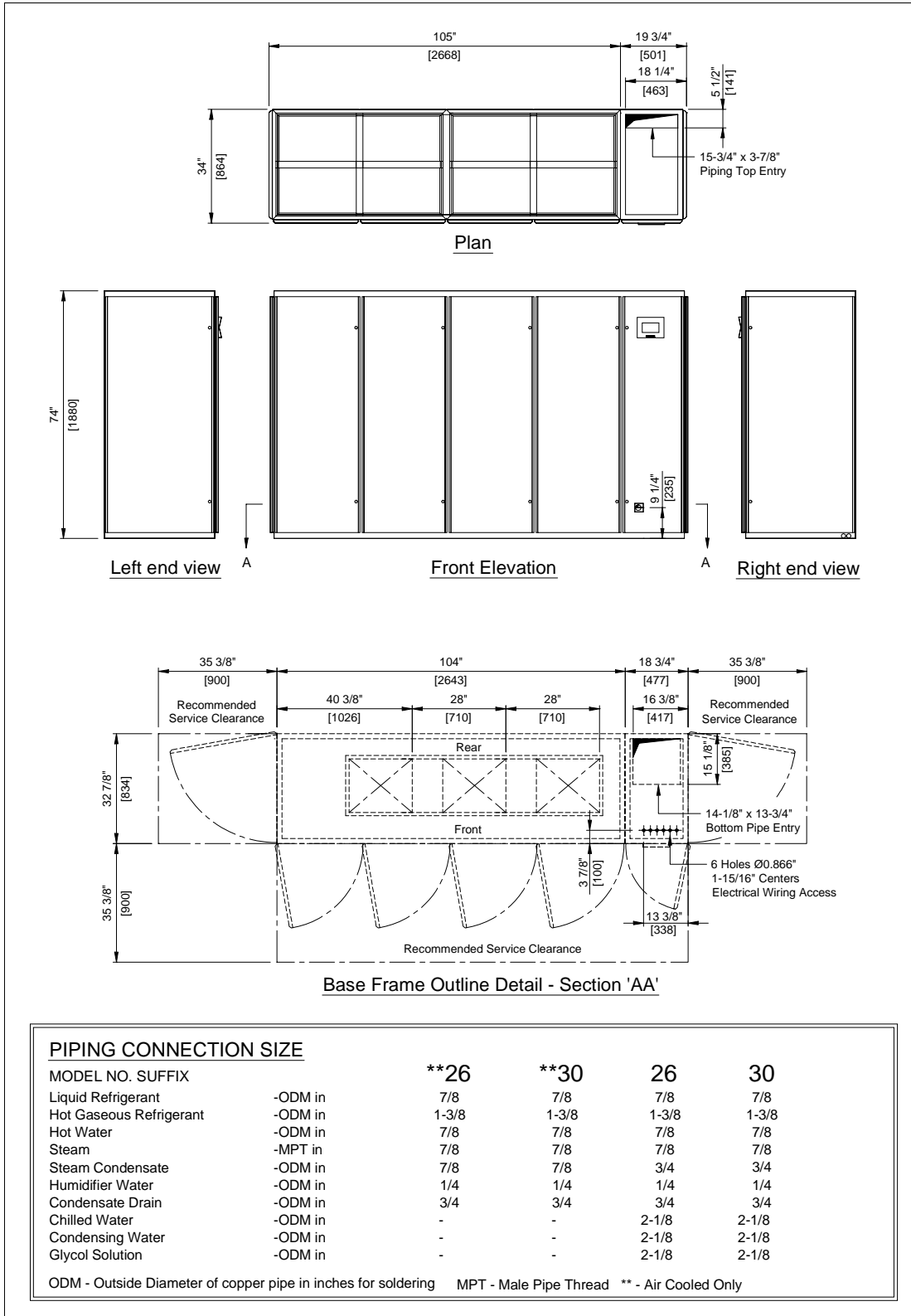
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07 February 2002

NOT TO SCALE



**SERIES 9-VERTICAL FLOOR MOUNT DOWNFLOW UNIT
STANDARD COOLING FOUR MODULE UNIT**



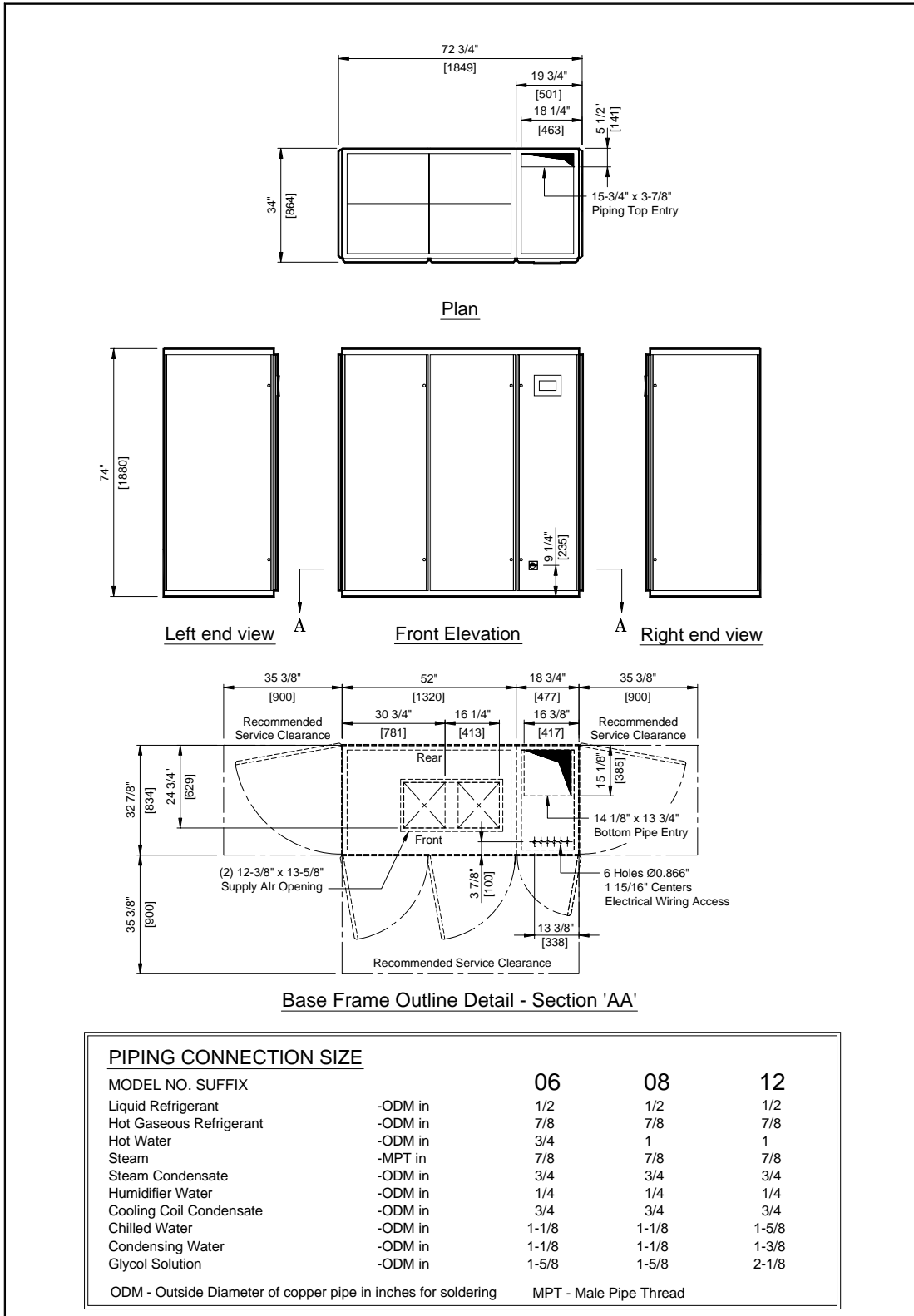
PIPING CONNECTION SIZE

MODEL NO. SUFFIX		**26	**30	26	30
Liquid Refrigerant	-ODM in	7/8	7/8	7/8	7/8
Hot Gaseous Refrigerant	-ODM in	1-3/8	1-3/8	1-3/8	1-3/8
Hot Water	-ODM in	7/8	7/8	7/8	7/8
Steam	-MPT in	7/8	7/8	7/8	7/8
Steam Condensate	-ODM in	7/8	7/8	3/4	3/4
Humidifier Water	-ODM in	1/4	1/4	1/4	1/4
Condensate Drain	-ODM in	3/4	3/4	3/4	3/4
Chilled Water	-	-	-	2-1/8	2-1/8
Condensing Water	-	-	-	2-1/8	2-1/8
Glycol Solution	-	-	-	2-1/8	2-1/8

ODM - Outside Diameter of copper pipe in inches for soldering MPT - Male Pipe Thread ** - Air Cooled Only



**SERIES 9-VERTICAL FLOOR MOUNT DOWNFLOW UNIT
STANDARD COOLING TWO MODULE UNIT**



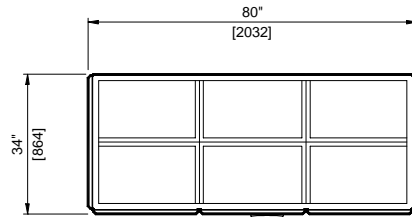
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28 November 2001

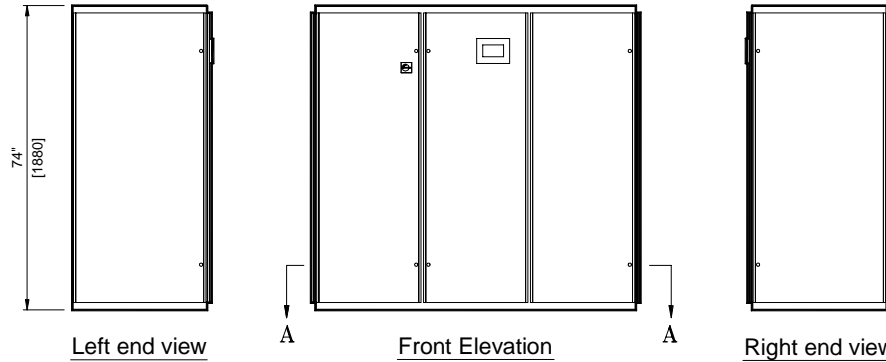
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**SERIES 9-VERTICAL FLOOR MOUNT DOWNFLOW UNIT
CHILLED WATER COOLING (3+0) MODULE**



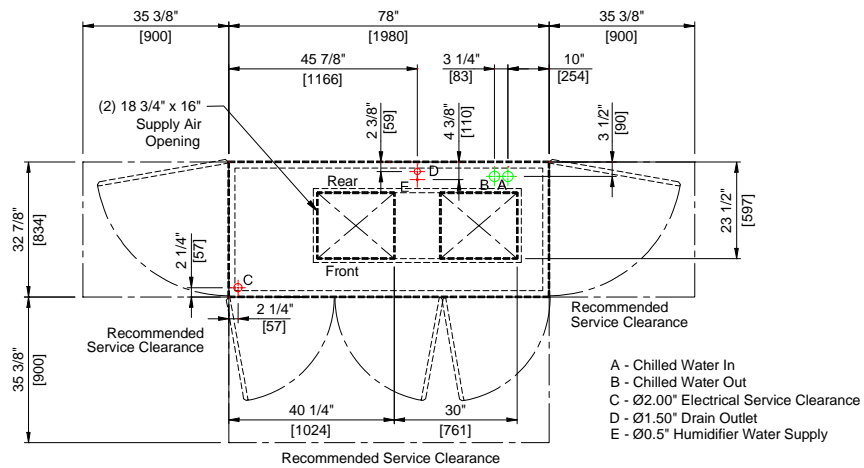
Plan



Left end view

Front Elevation

Right end view



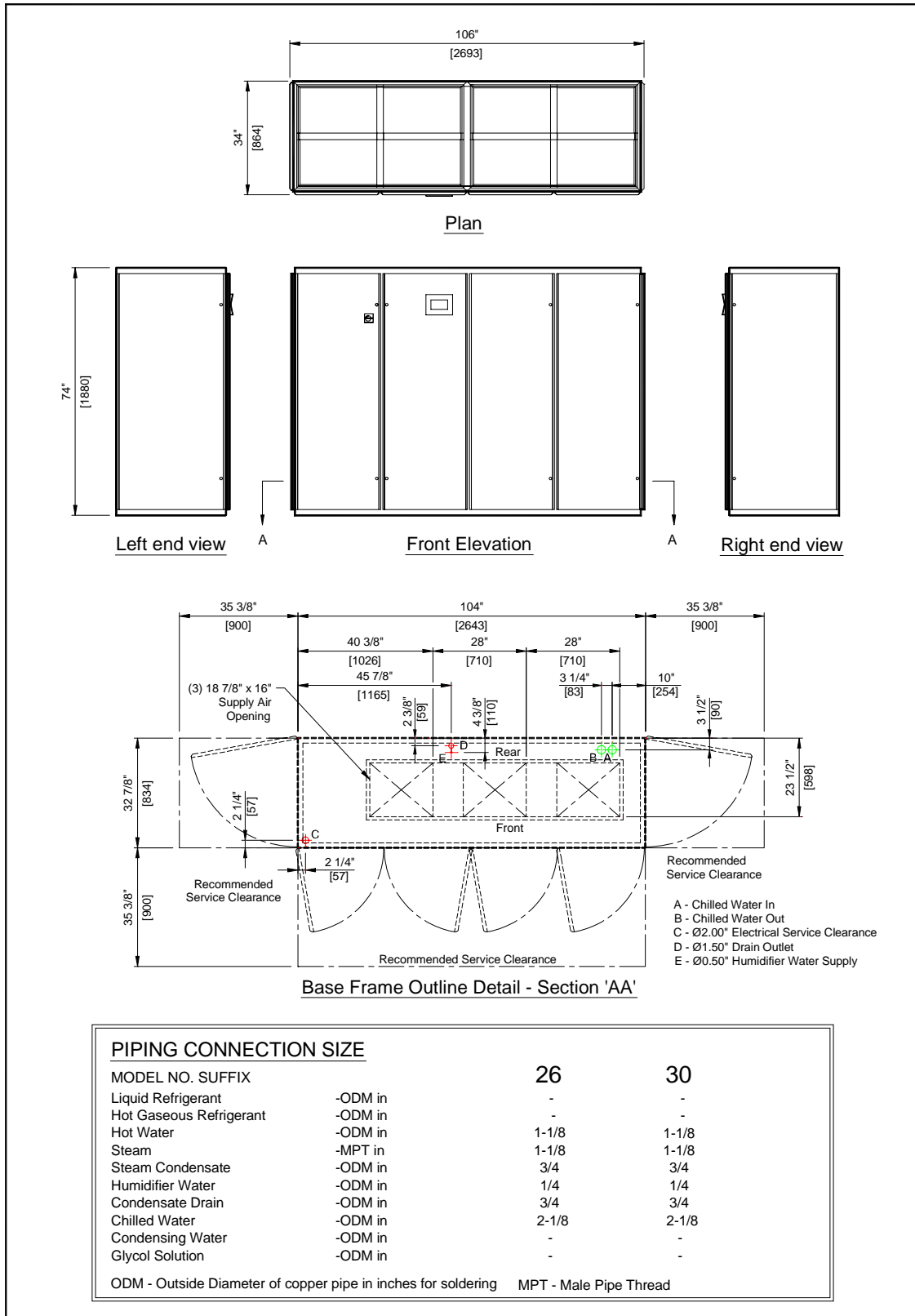
Base Frame Outline Detail - Section 'AA'

PIPING CONNECTION SIZE		14	16	18	20	22	*25
MODEL NO. SUFFIX							
Liquid Refrigerant	-ODM in	-	-	-	-	-	-
Hot Gaseous Refrigerant	-ODM in	-	-	-	-	-	-
Hot Water	-ODM in	1	1	1-1/8	1-1/8	1-1/8	1-1/8
Steam	-MPT in	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
Humidifier Water	-ODM in	1/4	1/4	1/4	1/4	1/4	1/4
Cooling Coil Condensate	-ODM in	3/4	3/4	3/4	3/4	3/4	3/4
Chilled Water	-ODM in	1-5/8	1-5/8	2-1/8	2-1/8	2-1/8	2-1/8
Condensing Water	-ODM in	-	-	-	-	-	-
Glycol Solution	-ODM in	-	-	-	-	-	-

ODM - Outside Diameter of copper pipe in inches for soldering MPT - Male Pipe Thread



**SERIES 9-VERTICAL FLOOR MOUNT DOWNFLOW UNIT
CHILLED WATER COOLING (4+0) MODULE**



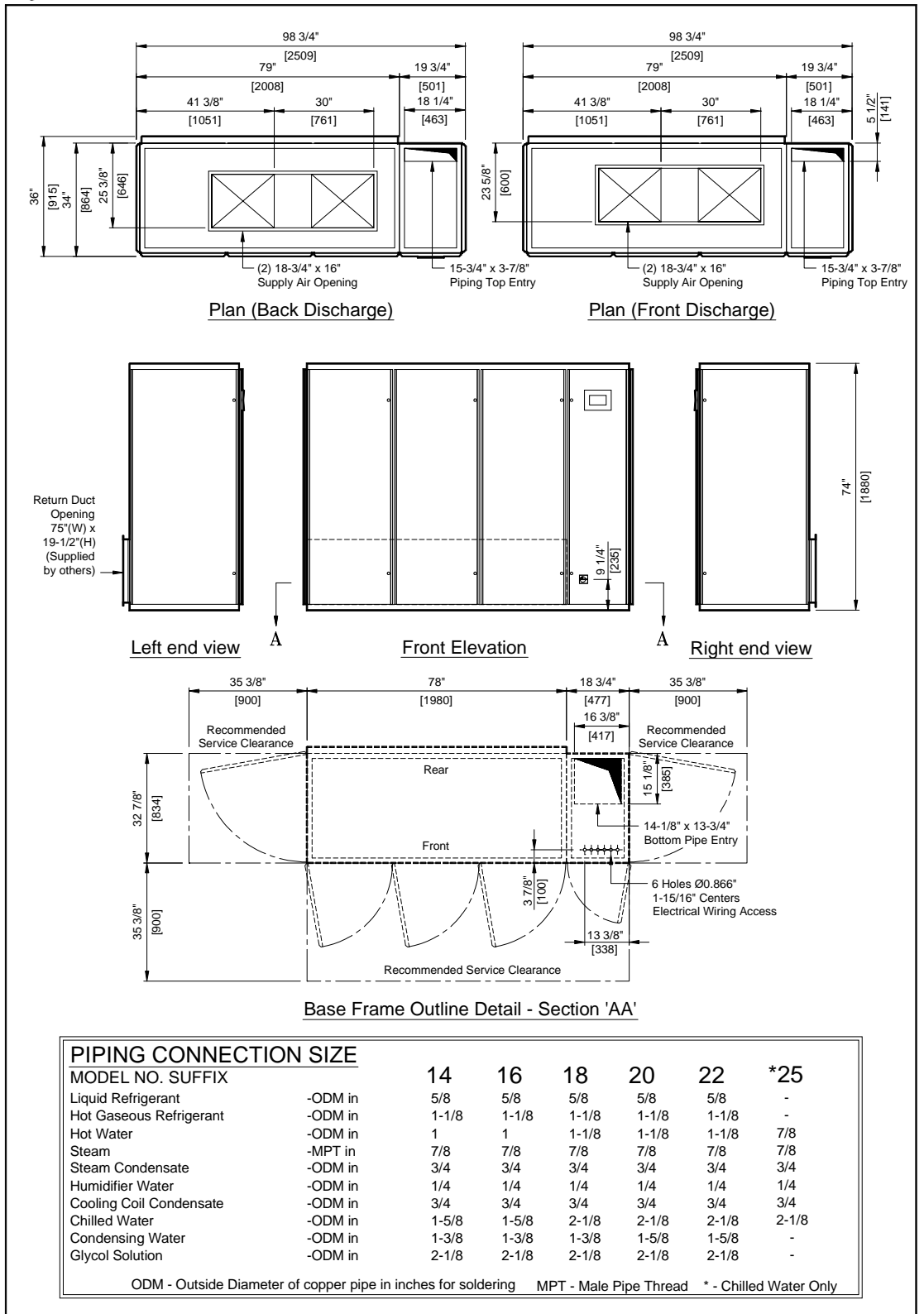
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24 JUNE, 20002

NOT TO SCALE



**SERIES 9- VERTICAL FLOOR MOUNT UPFLOW UNIT
REAR RETURN STD. COOLING THREE MODULE UNIT**

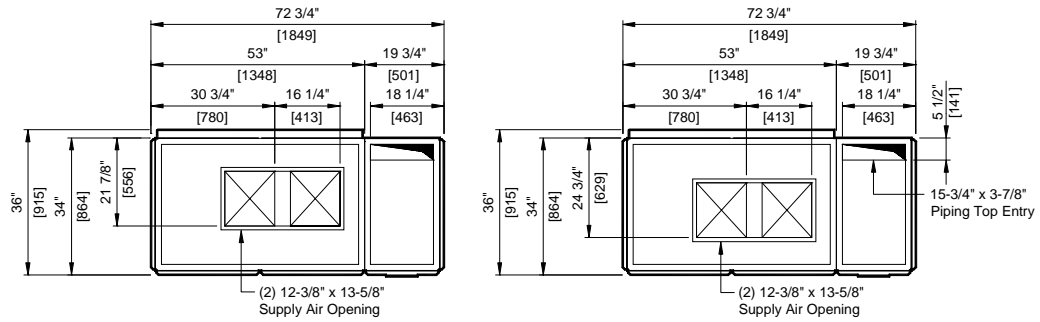


PIPING CONNECTION SIZE		14	16	18	20	22	*25
MODEL NO. SUFFIX							
Liquid Refrigerant	-ODM in	5/8	5/8	5/8	5/8	5/8	-
Hot Gaseous Refrigerant	-ODM in	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	-
Hot Water	-ODM in	1	1	1-1/8	1-1/8	1-1/8	7/8
Steam	-MPT in	7/8	7/8	7/8	7/8	7/8	7/8
Steam Condensate	-ODM in	3/4	3/4	3/4	3/4	3/4	3/4
Humidifier Water	-ODM in	1/4	1/4	1/4	1/4	1/4	1/4
Cooling Coil Condensate	-ODM in	3/4	3/4	3/4	3/4	3/4	3/4
Chilled Water	-ODM in	1-5/8	1-5/8	2-1/8	2-1/8	2-1/8	2-1/8
Condensing Water	-ODM in	1-3/8	1-3/8	1-3/8	1-5/8	1-5/8	-
Glycol Solution	-ODM in	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8	-

ODM - Outside Diameter of copper pipe in inches for soldering MPT - Male Pipe Thread * - Chilled Water Only

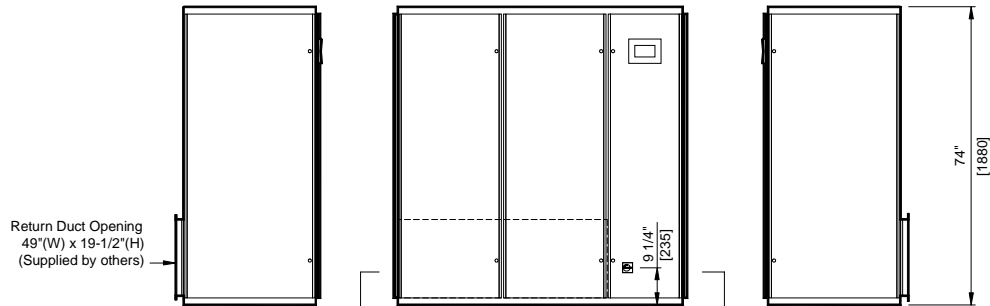


**SERIES 9- VERTICAL FLOOR MOUNT UPFLOW UNIT
REAR RETURN STD. COOLING TWO MODULE UNIT**



Plan (Back Discharge)

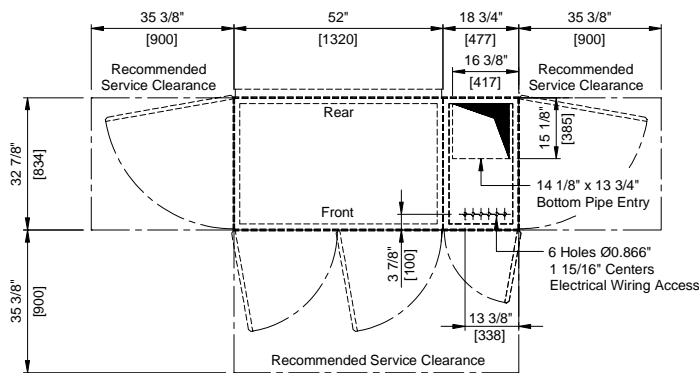
Plan (Front Discharge)



Left end view

Front Elevation

Right end view



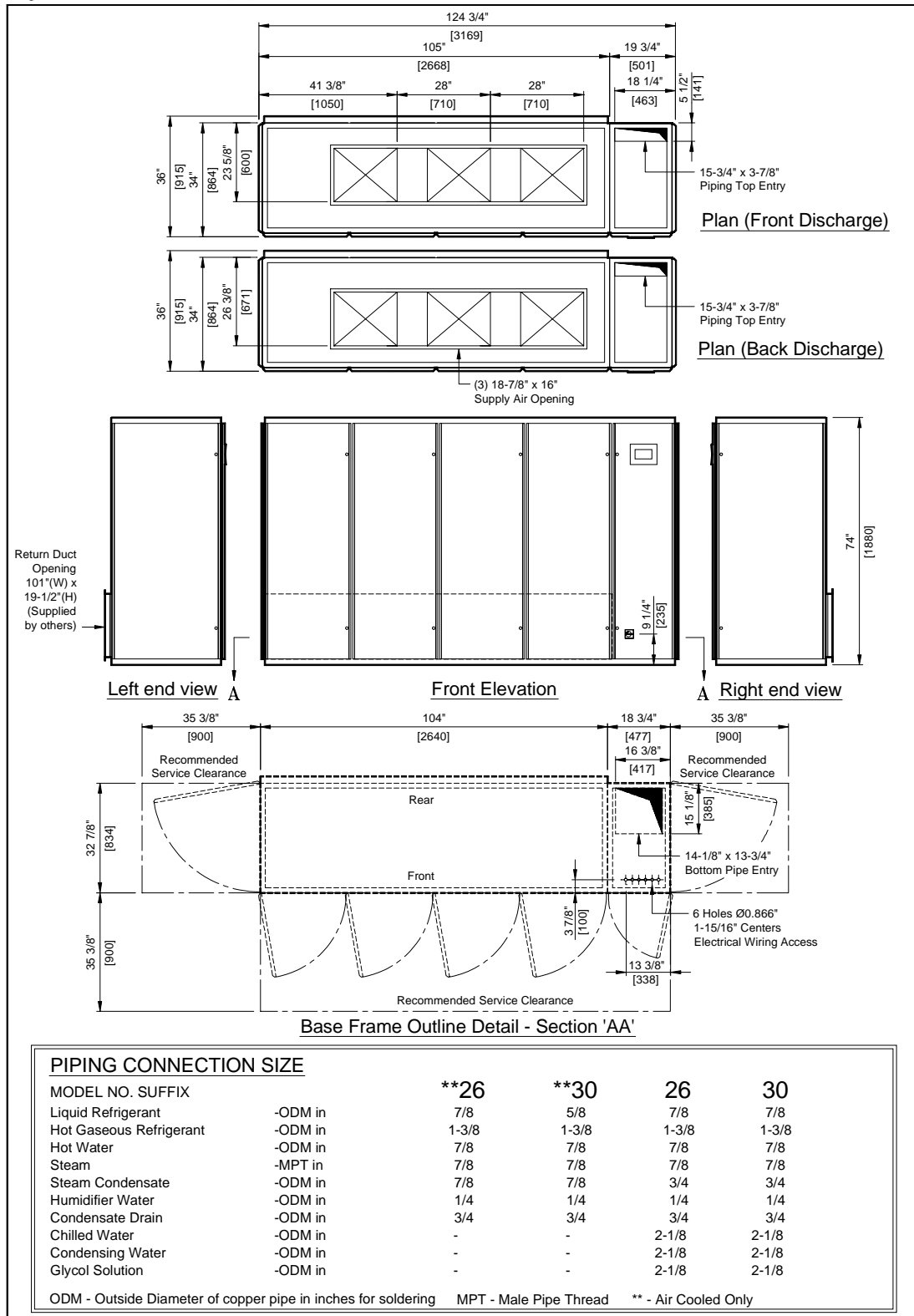
Base Frame Outline Detail - Section 'AA'

PIPING CONNECTION SIZE		06	08	12
MODEL NO. SUFFIX				
Liquid Refrigerant	-ODM in	1/2	1/2	1/2
Hot Gaseous Refrigerant	-ODM in	7/8	7/8	7/8
Hot Water	-ODM in	3/4	1	1
Steam	-MPT in	7/8	7/8	7/8
Steam Condensate	-ODM in	3/4	3/4	3/4
Humidifier Water	-ODM in	1/4	1/4	1/4
Cooling Coil Condensate	-ODM in	3/4	3/4	3/4
Chilled Water	-ODM in	1-1/8	1-1/8	1-5/8
Condensing Water	-ODM in	1-1/8	1-1/8	1-3/8
Glycol Solution	-ODM in	1-5/8	1-5/8	2-1/8

ODM - Outside Diameter of copper pipe in inches for soldering MPT - Male Pipe Thread



**SERIES 9- VERTICAL FLOOR MOUNT UPFLOW UNIT
REAR RETURN STD. COOLING FOUR MODULE UNIT**



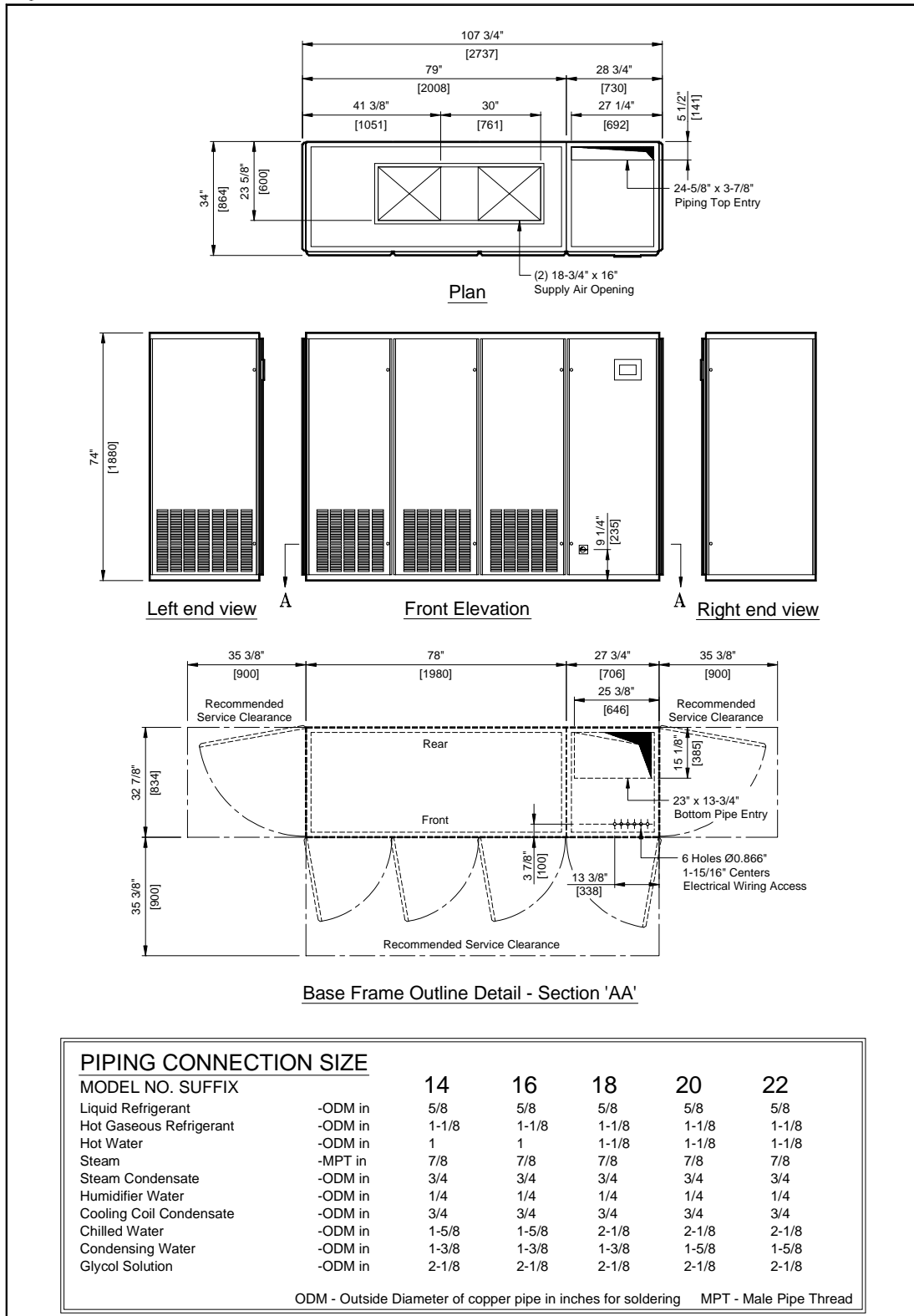
S9DD403B

07 February 2002

NOT TO SCALE



**SERIES 9-VERTICAL FLOOR MOUNT UPFLOW UNIT
DUAL COOLING THREE MODULE UNIT**



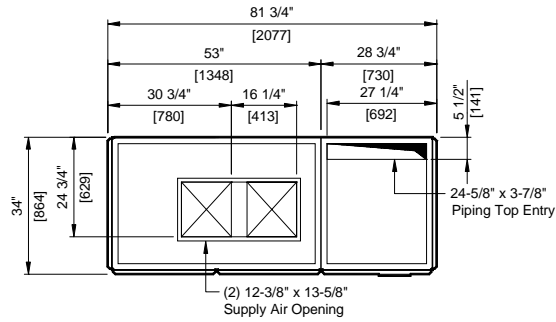
S9DD325A

29 November 2001

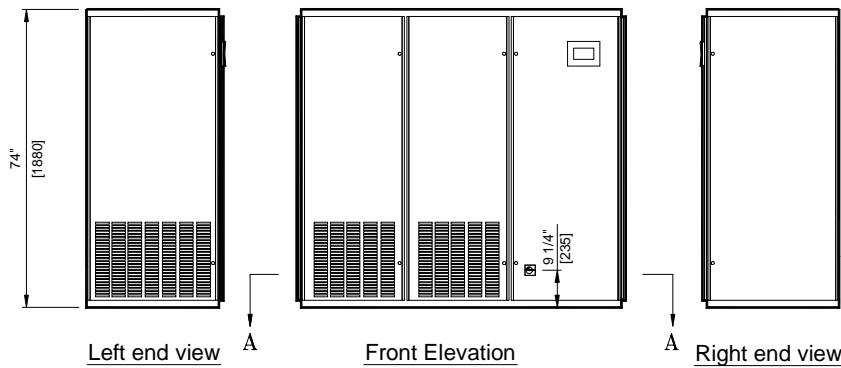
NOT TO SCALE



**SERIES 9- VERTICAL FLOOR MOUNT UPFLOW UNIT
DUAL COOLING TWO MODULE UNIT**



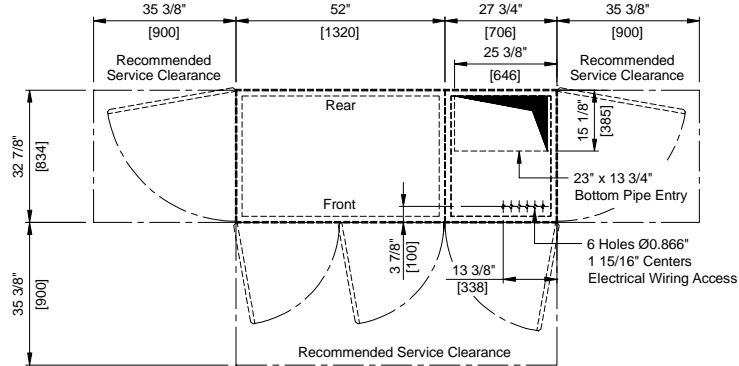
Plan



Left end view

Front Elevation

Right end view



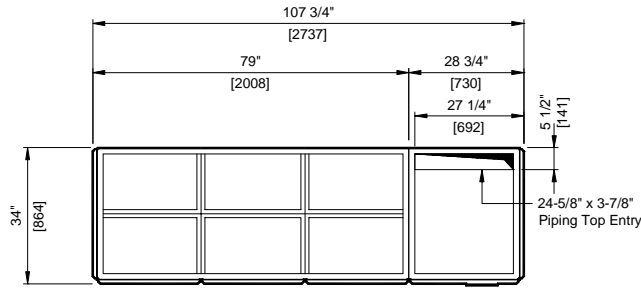
Base Frame Outline Detail - Section 'AA'

PIPING CONNECTION SIZE		06	08	12
MODEL NO. SUFFIX				
Liquid Refrigerant	-ODM in	1/2	1/2	1/2
Hot Gaseous Refrigerant	-ODM in	7/8	7/8	7/8
Hot Water	-ODM in	3/4	1	1
Steam	-MPT in	7/8	7/8	7/8
Steam Condensate	-ODM in	3/4	3/4	3/4
Humidifier Water	-ODM in	1/4	1/4	1/4
Cooling Coil Condensate	-ODM in	3/4	3/4	3/4
Chilled Water	-ODM in	1-1/8	1-1/8	1-5/8
Condensing Water	-ODM in	1-1/8	1-1/8	1-3/8
Glycol Solution	-ODM in	1-5/8	1-5/8	2-1/8

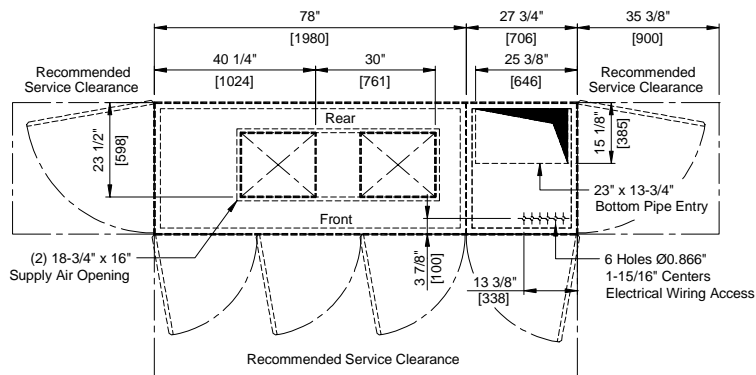
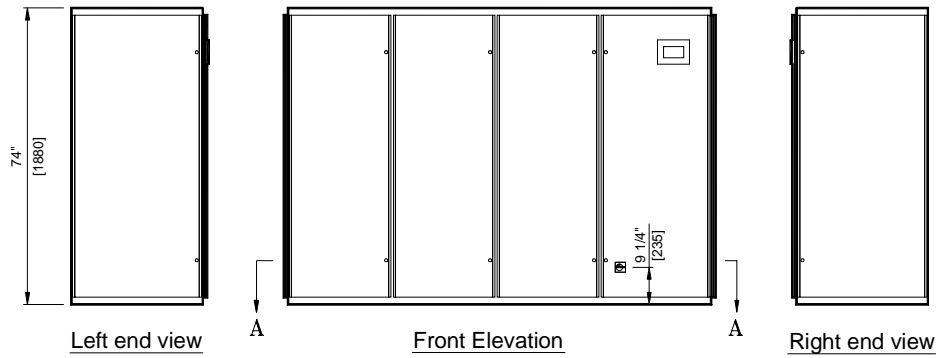
ODM - Outside Diameter of copper pipe in inches for soldering MPT - Male Pipe Thread



**SERIES 9-VERTICAL FLOOR MOUNT DOWNFLOW UNIT
DUAL COOLING THREE MODULE UNIT**



Plan



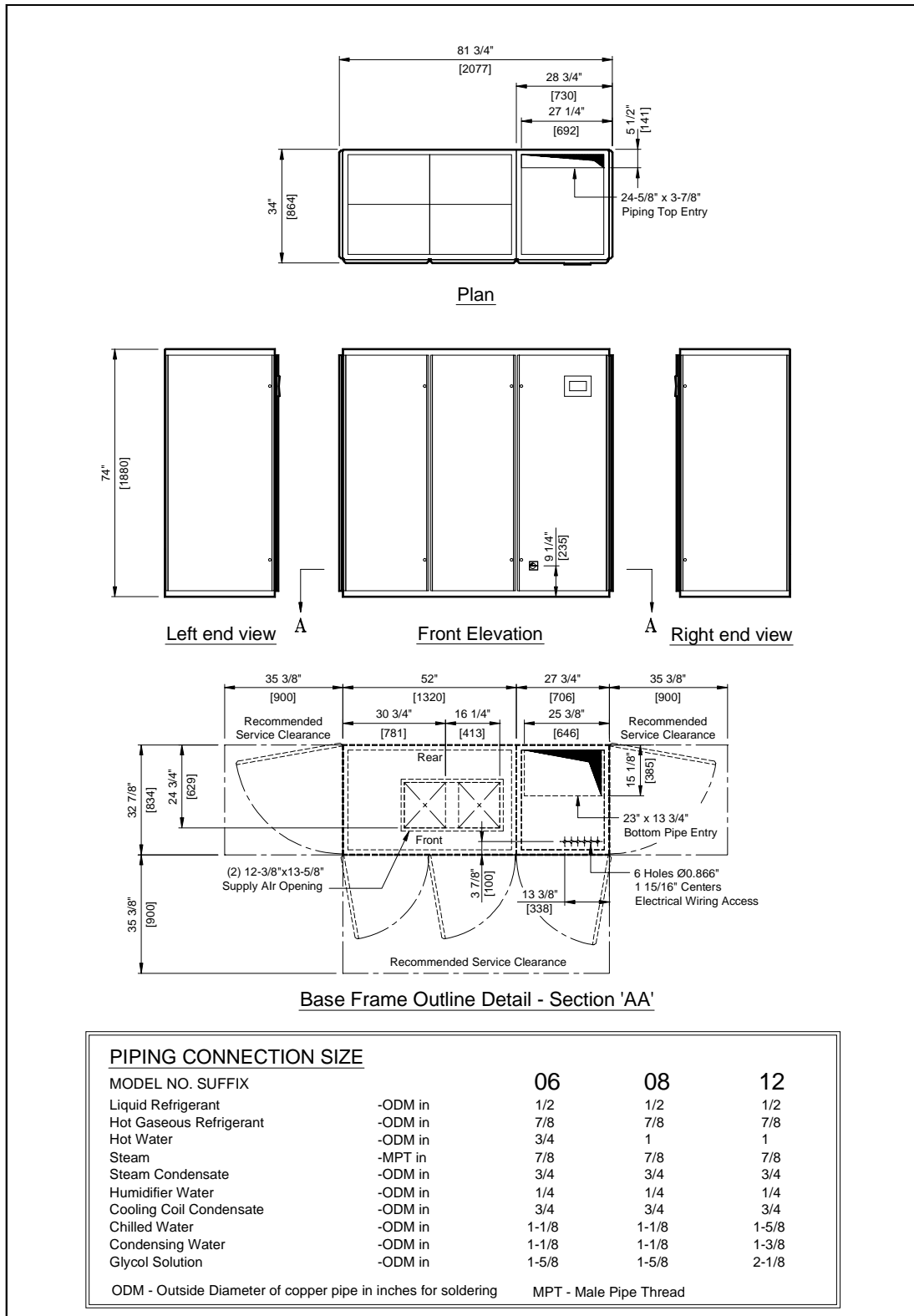
Base Frame Outline Detail - Section 'AA'

PIPING CONNECTION SIZE		14	16	18	20	22
MODEL NO.	SUFFIX					
Liquid Refrigerant	-ODM in	5/8	5/8	5/8	5/8	5/8
Hot Gaseous Refrigerant	-ODM in	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8
Hot Water	-ODM in	1	1	1-1/8	1-1/8	1-1/8
Steam	-MPT in	7/8	7/8	7/8	7/8	7/8
Steam Condensate	-ODM in	3/4	3/4	3/4	3/4	3/4
Humidifier Water	-ODM in	1/4	1/4	1/4	1/4	1/4
Cooling Coil Condensate	-ODM in	3/4	3/4	3/4	3/4	3/4
Chilled Water	-ODM in	1-5/8	1-5/8	2-1/8	2-1/8	2-1/8
Condensing Water	-ODM in	1-3/8	1-3/8	1-3/8	1-5/8	1-5/8
Glycol Solution	-ODM in	2-1/8	2-1/8	2-1/8	2-1/8	2-1/8

ODM - Outside Diameter of copper pipe in inches for soldering MPT - Male Pipe Thread



**SERIES 9-VERTICAL FLOOR MOUNT DOWNFLOW UNIT
DUAL COOLING TWO MODULE UNIT**

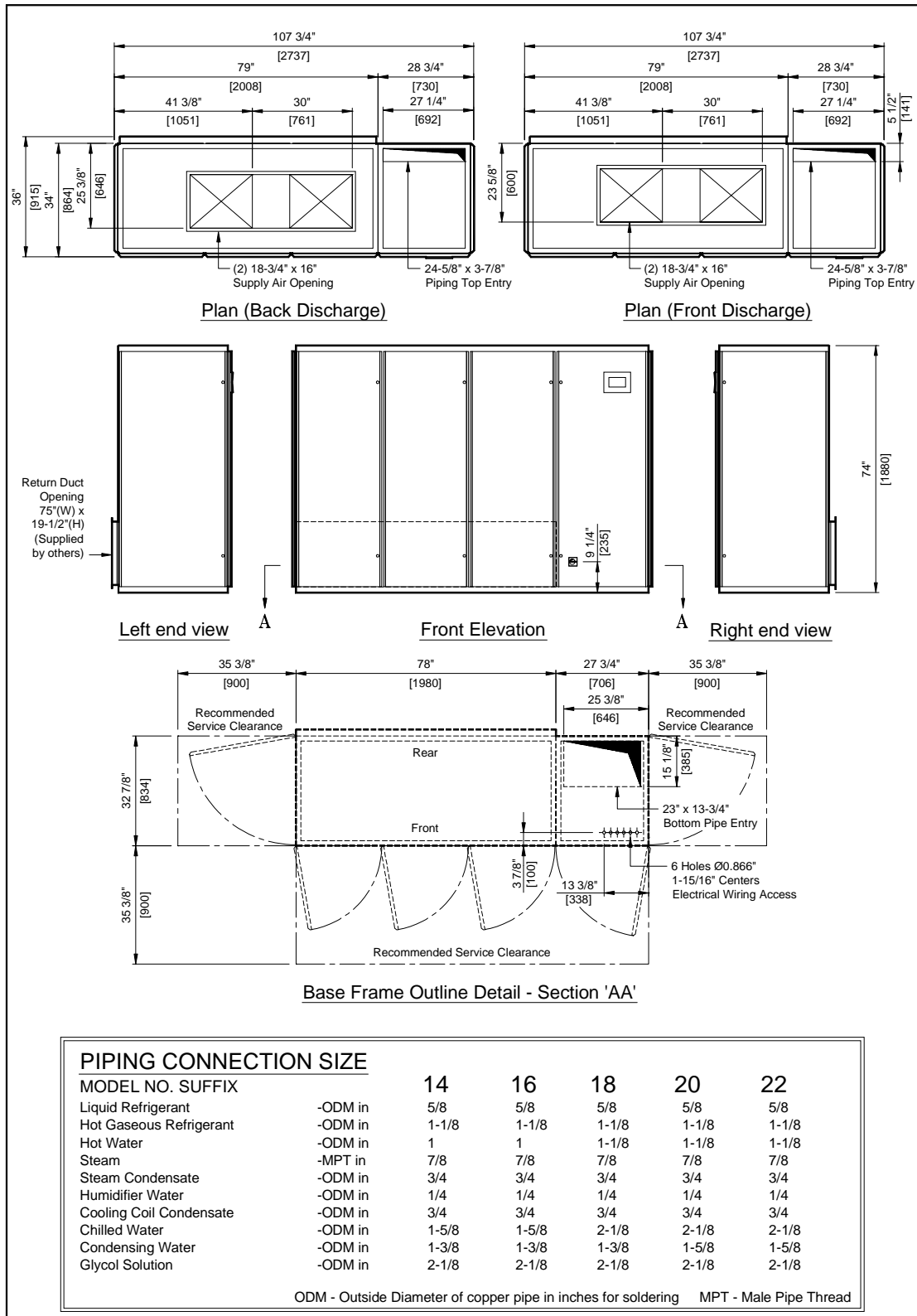


S9DD226A

28 November 2001

NOT TO SCALE

CLIMATEWORX INTERNATIONAL SERIES 9- VERTICAL FLOOR MOUNT UPFLOW UNIT
REAR RETURN DUAL COOLING THREE MODULE UNIT



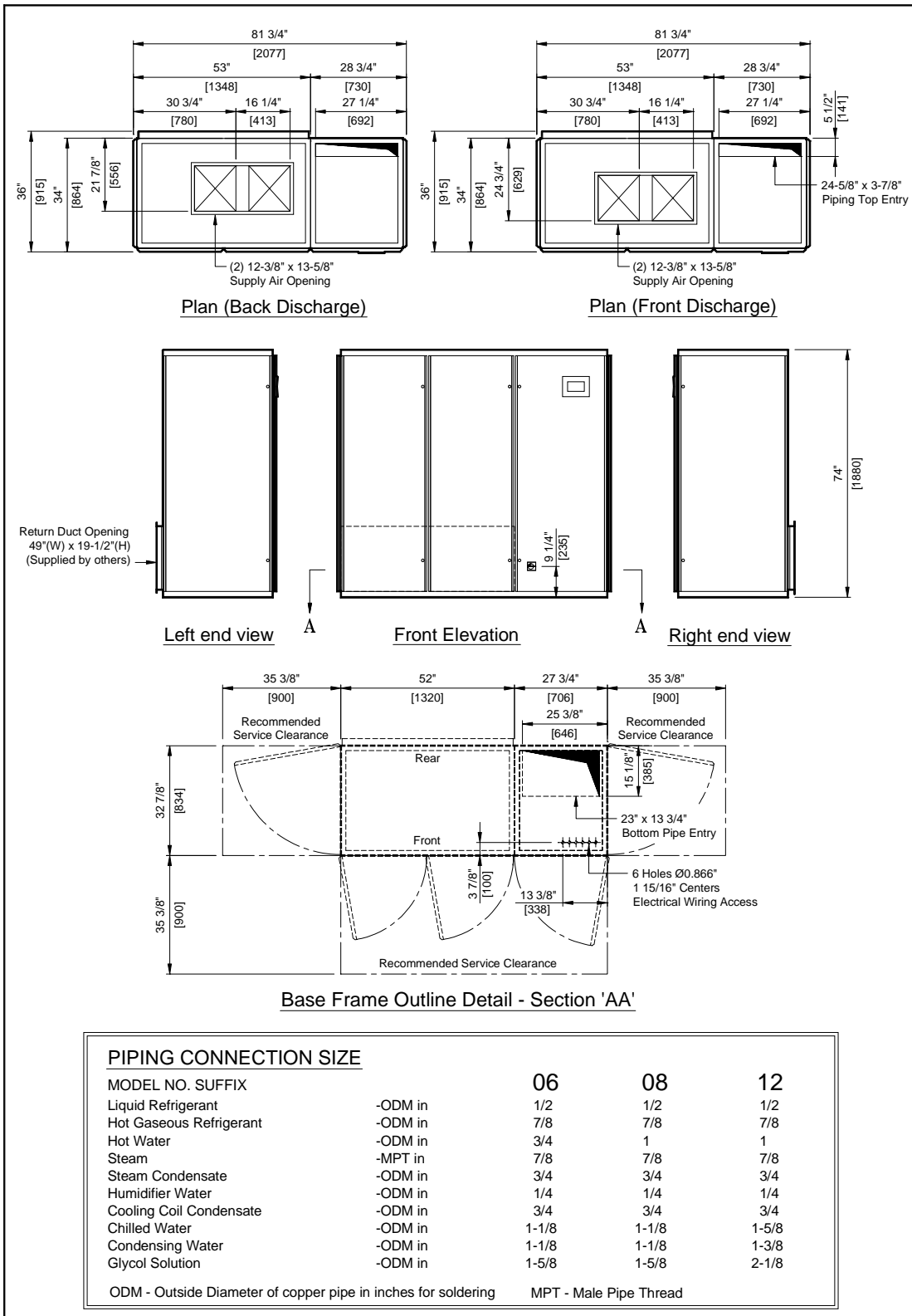
S9DD327A

28 November 2001

NOT TO SCALE



**SERIES 9- VERTICAL FLOOR MOUNT UPFLOW UNIT
REAR RETURN DUAL COOLING TWO MODULE UNIT**



PIPING CONNECTION SIZE

MODEL NO. SUFFIX		06	08	12
Liquid Refrigerant	-ODM in	1/2	1/2	1/2
Hot Gaseous Refrigerant	-ODM in	7/8	7/8	7/8
Hot Water	-ODM in	3/4	1	1
Steam	-MPT in	7/8	7/8	7/8
Steam Condensate	-ODM in	3/4	3/4	3/4
Humidifier Water	-ODM in	1/4	1/4	1/4
Cooling Coil Condensate	-ODM in	3/4	3/4	3/4
Chilled Water	-ODM in	1-1/8	1-1/8	1-5/8
Condensing Water	-ODM in	1-1/8	1-1/8	1-3/8
Glycol Solution	-ODM in	1-5/8	1-5/8	2-1/8

ODM - Outside Diameter of copper pipe in inches for soldering MPT - Male Pipe Thread