

AIR COOLED CONDENSING UNIT

MODEL: PNSA-U-CU

CAPACITY: 6.7 to 33.3 Nominal Tons

80,000 to 400,000 BtuH

23.4 to 117.2 KW



VERTICAL (STANDARD)

Features/Benefits

The PNSA-U-CU unit has a compact design that is up to 30% smaller than earlier air-cooled chillers. The compact footprint can yield substantial installation savings by requiring less structural steel, concrete, security fencing or architectural screening. The PNSA-U-CU unit is delivered as a complete package for easy installation. A quick start-up is assured once installation is complete, since each PNSA-U-CU unit is manufactured at an ISO 9002 listed manufacturing facility to ensure quality. In addition, all units are factory run tested under full load to provide reliable start-up.

PHYSICAL DATA & ELECTRICAL DATA

MODEL: PNSA-U-CU		007 (H)	009 (H)	010 (H)	012 (H)	015 (H)	020 (H)	025 (2H)	030 (2H)	040 (2H)	
Nominal Cooling Capacity	BTUH	80,000	90,700	100,000	120,000	150,000	200,000	250,000	300,000	400,000	
	Tons	6.67	7.56	9.58	10.38	12.83	15.67	19.17	23.25	32.42	
	KWH	23.4	26.6	33.7	36.5	45.1	55.1	67.4	81.8	114.0	
Rated Voltage	380V / 3P / 50Hz - 440V / 3P / 60Hz										
Power Consumption		7.39	8.67	10.19	12.03	15.32	19.90	24.06	29.71	40.09	
Compressor Type	Hermetic (Scroll)										
Circuit	1					2					
Condenser Coil	Type/Material	Aluminium / Copper Corrugated Fin With Inner Groove Copper Tube									
	Face area (Sq. Ft.)	14.22	24.00			32.00	41.67	47.78		67.22	
	Rows..Fins/In	2....16							3....14	3....10	
	Tube Size (in)	3/8									
Condenser Fan	Type	Propeller Fan : Vertical Discharge : Direct Drive									
	Diameter (in)	30									
	Diameter (mm)	761									
	Rpm.	900									
	Qty./Unit	1			2				3		
	EACH MOTOR (H.P.)	3/4		1		3/4			1		
	Air Quantity (CFM)	7,000	8,000	10,000		14,000		20,000		30,000	
Refrigerant	Type	R-22 (R-407C On Request Only)									
	Charge	Nitrogen									
Connections	(Each)										
Suction	(in.)	1-1/8	1-3/8				1-5/8	1-3/8		1-5/8	
Liquid	(in.)	5/8					7/8	5/8		7/8	
Weight Operation	(Kgs.)	198	215	284	317	405	443	474	528	686	

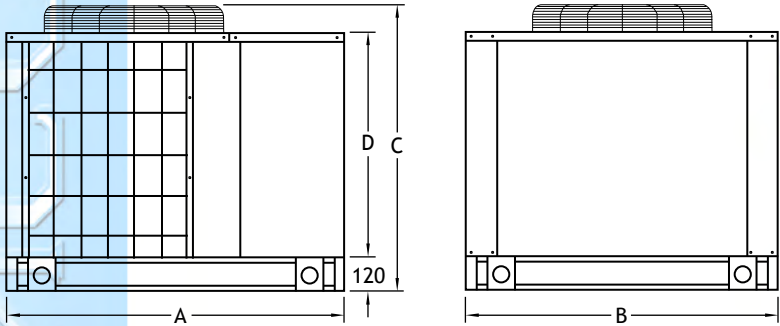
ELECTRICAL DATA

MODEL : PNSA-U-CU	007	009	010	012	015	020	025	030	040	
Compressor										
Voltage / Phase / Hz	380V / 3P / 50Hz - 440V / 3P / 60Hz									
Power Input	6,548	7,821	8,957	10,800	13,622	18,200	10,800	13,622	18,200	
FLA. (Amp.)	12.1	14.3	20.7	22.9	24.2	35.7	22.9	24.2	35.7	
LRA. (Amp.)	98.0	130	130	145	175	215	145	175	215	
Fan Motor (Each)										
Voltage / Phase / Hz	380V / 3P / 50Hz - 440V / 3P / 60Hz									
Quantity.	1			2				3		
Power Input (Watt)	850		1,233			850		1,233		
FLA. (Amp.)	1.2		2.3			1.2		2.3		

Note: * Nominal capacity based on 7.2 deg. C section temperature and 35 deg. C ambient temperature
 ** Power consumption, FLA and LRA rating depend on type of compressor used.
 *** Refer to unit data plate for better rating

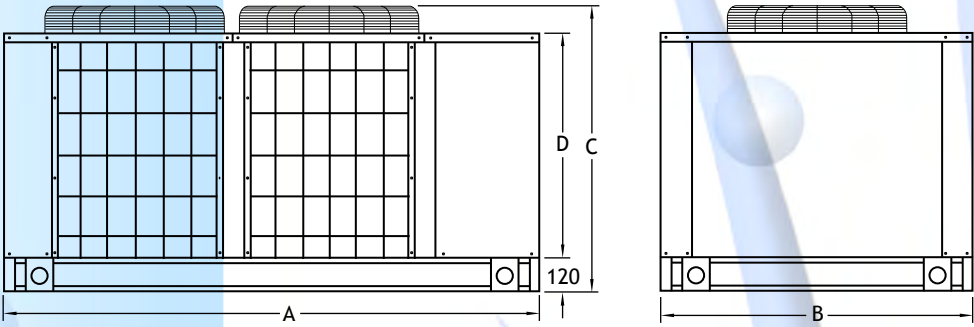
DIMENSIONAL DRAWING

PNSA-U-CU-007-012



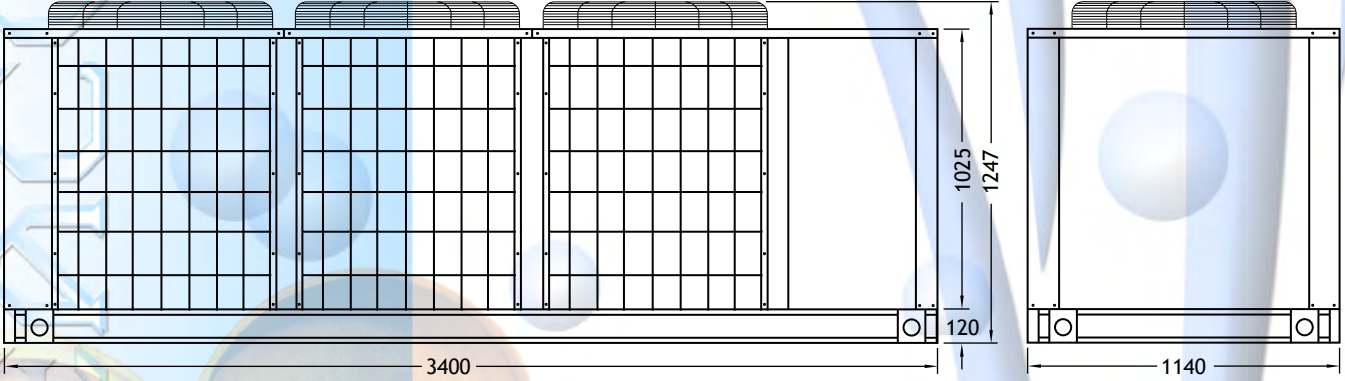
PNSA-U-CU	A	B	C	D
	(mm)			
007	1240	850	1044	822
009	1240	850	1044	822
010	1600	1140	1044	822
012	1600	1140	1044	822

PNSA-U-CU-015-030



PNSA-U-CU	A	B	C	D
	(mm)			
015	2140	1140	1044	822
020			1247	1025
025	2500			
030				

PNSA-U-CU-040



PNSA-U-CU	SST (°C)	TEMP. AIR ENTERING CONDENSER (° C)														
		29			32			35			38			41		
		Cap.	SCT	KW	Cap.	SCT	KW	Cap.	SCT	KW	Cap.	SCT	KW	Cap.	SCT	KW
007	-1	63.1	109.9	5.49	61.2	114.8	5.79	59.4	119.9	6.13	57.5	124.9	6.45	47.6	132.5	7.66
	2	69.7	111.8	5.61	67.9	116.8	5.93	66.0	121.8	6.25	63.8	126.7	6.60	53.0	134.0	7.80
	3	76.7	113.6	5.73	74.9	118.7	6.06	72.7	123.4	6.37	70.4	128.4	6.76	58.0	143.1	7.95
	7	84.5	115.7	5.86	82.3	120.8	6.18	80.0	125.5	6.49	77.5	133.4	6.89	64.5	145.1	8.09
	10	92.9	117.7	5.95	90.4	122.9	6.26	87.8	127.7	6.62	85.2	132.5	6.99	71.0	146.8	8.17
009	-1	74.9	118.1	6.71	69.0	117.1	6.77	69.9	122.1	7.16	59.6	127.2	7.60	58.5	142.0	8.99
	2	83.0	120.6	6.90	76.7	119.5	6.93	74.2	124.1	7.29	66.1	129.3	7.75	64.8	144.0	9.14
	3	91.1	122.7	7.03	84.4	121.3	7.03	81.9	126.1	7.40	72.9	131.1	7.87	71.7	145.9	9.26
	7	100.3	125.1	7.17	92.8	123.7	7.16	90.0	128.3	7.55	80.3	133.3	8.02	78.8	147.7	9.40
	10	109.9	127.4	7.33	101.5	125.8	7.32	98.4	130.6	7.76	88.0	135.5	8.24	86.5	149.6	9.56
010	-1	88.2	111.6	7.08	76.8	105.0	6.77	74.5	109.9	7.18	71.2	114.6	7.61	65.6	128.7	9.12
	2	97.4	113.2	7.20	84.8	106.6	6.89	82.8	111.3	7.31	80.5	116.0	7.74	72.5	130.0	9.24
	3	107.0	115.0	7.35	94.0	108.0	7.02	91.1	112.7	7.44	88.4	117.4	7.86	80.2	131.4	9.34
	7	117.3	116.5	7.50	104.3	109.2	7.14	100.0	114.2	7.57	97.4	118.9	7.99	88.4	132.6	9.44
	10	128.4	118.3	7.62	115.4	111.1	7.27	109.6	115.8	7.66	106.7	120.4	8.11	97.1	134.2	9.59
012	-1	105.0	116.3	8.94	93.6	111.1	8.67	90.9	116.0	9.18	88.2	121.0	9.69	69.8	133.0	10.27
	2	115.9	118.3	9.17	103.3	112.9	8.88	100.4	117.8	9.37	97.7	122.8	9.94	90.5	135.2	11.52
	3	127.4	120.2	9.39	113.3	114.7	9.09	110.3	119.4	9.55	107.6	124.4	10.24	100.4	137.8	12.30
	7	139.7	122.2	9.62	124.2	116.7	9.29	120.9	121.3	9.78	117.1	126.0	10.33	104.8	139.2	12.87
	10	152.7	124.1	9.85	136.2	118.7	9.52	132.4	123.3	9.98	127.7	127.8	10.39	120.8	141.3	13.17
015	-1	120.7	112.6	11.10	117.6	117.6	11.73	114.4	122.5	12.35	109.9	127.3	12.78	93.8	140.6	13.65
	2	132.6	114.6	11.38	129.1	129.1	12.00	125.2	124.4	12.63	122.8	129.7	13.70	114.5	145.7	16.02
	3	144.4	116.6	11.68	139.5	139.0	12.29	137.1	126.4	12.99	133.6	131.4	13.58	122.8	146.5	16.53
	7	159.1	118.5	11.96	154.2	154.2	12.60	150.0	128.4	13.12	144.4	132.8	13.85	127.4	147.6	17.22
	10	176.9	121.2	12.34	173.0	173.0	13.00	173.0	130.8	13.70	161.2	135.4	14.42	143.2	149.1	17.49
020	-1	167.8	112.8	17.24	162.9	117.3	18.01	155.4	121.3	18.39	148.3	16.3	18.77	144.9	137.3	19.92
	2	183.5	115.0	17.82	179.5	119.9	19.34	176.0	124.9	19.58	172.7	17.9	20.61	161.9	144.3	21.11
	3	200.5	117.0	18.31	195.2	121.6	19.47	190.0	126.3	20.01	184.3	18.4	21.12	168.6	146.4	23.08
	7	217.0	119.3	18.82	209.5	123.5	19.41	200.9	128.5	20.64	194.4	19.3	22.13	171.9	147.6	23.92
	10	235.7	122.3	19.84	229.4	126.6	20.83	222.6	131.1	21.71	215.8	19.8	22.79	195.9	149.1	24.79
025	-1	186.3	114.2	16.25	180.3	119.2	17.14	173.9	124.5	18.18	166.8	129.4	19.32	141.7	156.9	21.96
	2	212.9	117.3	16.47	206.5	122.3	17.37	200.1	127.1	18.44	194.1	132.3	19.56	175.8	180.6	22.55
	3	239.1	120.0	16.70	232.0	124.8	17.60	224.9	130.0	18.69	217.4	134.8	19.80	195.3	203.0	23.30
	7	267.2	122.8	16.97	259.7	127.5	17.90	250.0	132.0	18.99	240.2	136.7	20.09	211.0	225.6	24.24
	10	297.6	126.0	17.20	287.8	130.5	18.19	277.7	135.0	19.29	267.2	139.4	20.39	236.1	250.6	25.22
030	-1	333.4	113.0	22.37	234.0	117.8	23.55	227.8	113.8	24.27	211.9	144.1	25.33	164.8	138.5	26.73
	2	264.9	115.2	22.98	257.7	121.1	24.24	250.8	125.0	24.84	245.0	161.5	26.36	226.4	145.4	27.55
	3	290.0	117.4	23.63	282.1	122.5	24.88	275.9	127.4	25.68	269.7	174.6	27.04	251.5	147.4	29.19
	7	320.0	119.8	24.90	310.7	124.8	25.53	300.0	129.0	26.54	289.0	184.7	27.65	256.7	146.8	29.49
	10	356.8	123.0	25.17	343.0	127.4	26.17	329.1	131.9	27.40	316.2	199.1	28.49	275.9	148.6	30.85
040	-1	326.2	115.1	30.37	317.2	125.8	31.79	304.1	124.4	33.08	282.4	128.4	33.69	275.9	143.3	35.47
	2	360.0	117.6	31.37	350.0	128.5	32.92	341.4	127.4	35.13	333.1	132.6	35.57	308.0	154.7	37.73
	3	394.7	119.7	32.32	384.4	130.7	34.15	375.8	129.5	36.63	367.1	134.8	37.44	341.4	148.1	39.79
	7	432.6	122.4	33.46	418.5	133.0	34.87	400.9	131.3	37.52	389.6	135.7	39.21	346.5	149.0	41.60
	10	471.6	124.2	34.58	455.3	135.5	35.80	438.9	134.2	38.61	423.9	130.1	39.66	375.8	151.3	44.81

Note :
SST = Saturated Suction Temp.
Cap = Capacity MBH. (1 MBH. = 1,000 Btuh.)
SCT = Saturated Condensing Temp.
KW = Compressor Motor Power input at Rated Voltage