

Technical Specification AHU90R Split Ducted Model

Indoor Unit Model Number	AHU90R	Nominal Evaporator Air Flow (l/s)	1390
Outdoor Unit Model Number	LCU90R	Number of Compressors	1
Total Cooling Capacity (kW)*	26.08	Power Requirements (Volt / Phase)	415/3
Sensible Cooling Capacity (kW)*	20.89	Normal Max. Current (Amps / Phase)	24
Heating Capacity (kW)**	26.73		
*Entering are @ 27/19 °C and ambient 35 °C		** Entering air @ 21 °C DB and 7 °C ambient	

Air Quantity Multiplying Factors

	% Rated Air Quantity-Nominal 1390 l/s				
Capacity	80	90	100	110	120
Total	0.95	0.98	1.00	1.02	1.04
Sensible	0.89	0.95	1.00	1.05	1.09

Heating Performance Data

Outdoor Coil Entering DB temp					
	0	4	8	12	18
Heating Capacity kW	22.7	24.9	27.4	30	34.2

Heating Performance Correction

% Rated Air Quality	Multiplier	Return Air Temp °C	Multiplier	Outdoor Air Temp °C	Approx. Defrost Factor
80	0.93	15	1.05	0	0.80
90	0.97	18	1.03	2	0.78
100	1.00	21	1.00	4-6	0.75
110	1.03	24	0.97	7	0.87
120	1.05	27	0.95	8	1.00

Compressor

Number Per Unit	1
Type	Scroll
RPM (Nom)	2900
Normal Max. Current (Amps / Phase)	14.9
Locked Rotor Current (Amps / Phase)	105
Displacement (m ³ /h)	18.11

Electrical Controls and Safeties

High Pressure Switch(Setting kPa)	4100	Defrost	
Low Pressure Switch(Setting kPa)	170	Initiation Temperature (°C)	-4
Indoor Fan Overload	Internal	Termination Temperature (°C)	10
Outdoor Fan Overload	Internal	Min. Period Between De-Ice (min)	30
Compressor Delay Timer	180 sec	Max. De-Ice Period (min)	10

Standard Features

Auto reset high pressure and auto reset low pressure cutouts	
Thermal overload protection on all motors	Suction line accumulator
Compressor crankcase heater	Automatic de-ice system
Limit start timer (anti short cycling)	Thermally insulated indoor unit

Evaporator

Type	Copper Tube/Aluminium Fins
Face Area (m ²)	0.697
Air Quantity (l/s)	1390

Evaporator (Indoor)

Number of Fans	3
Type	Centrifugal
Drive	Direct
Motor Voltage/Phase/Frequency	220-240/1/50
Motor (kW) Standard	3x 0.250
Max. Fan Speed (rpm)	1250

Electrical

Power Requirements	3 Phase / 415V / 50Hz
Recommend fuse size (Amps/Phase)	30

Condenser

Type	Copper Tube / Aluminium Fins
Face Area (m ²)	1.65

Condenser (Outdoor)

Number of Fans	1
Type	Axial
Drive	Direct
Type	Enclosed
Motor Watts / rpm	440 / 900
Motor Voltage/Phase/Frequency	240 / 1 / 50

Refrigerant System

Refrigerant Type	R410a
Charge (kg)	7
Line Size (mm)	
Liquid 0-10 metres	12.7
Gas 0-10 meters	22.23
Max.height difference metres	25
Max.pipe length metres	50
Service Connections	Pack valve
Expansion Control - in outdoor unit	Capillary

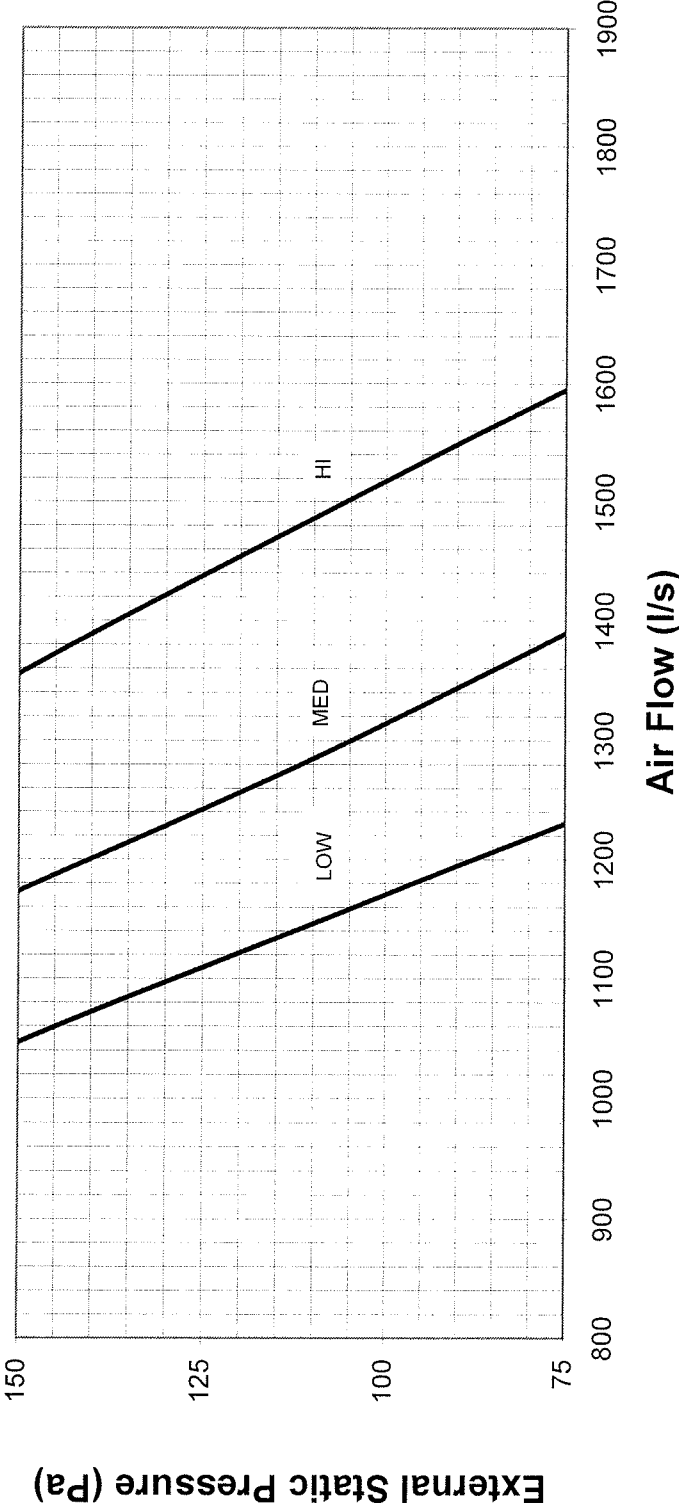
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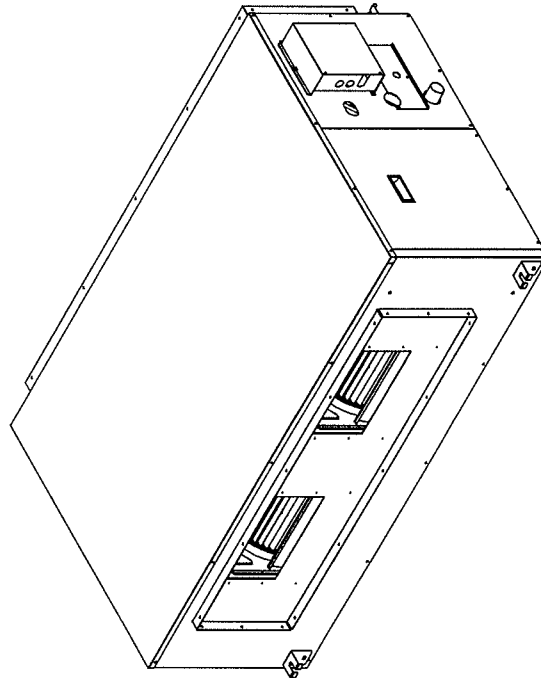
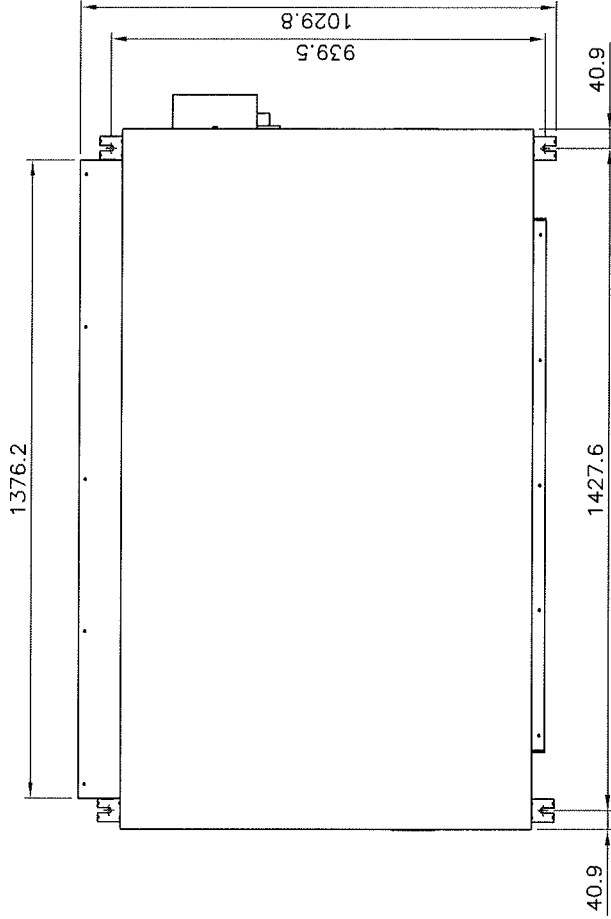
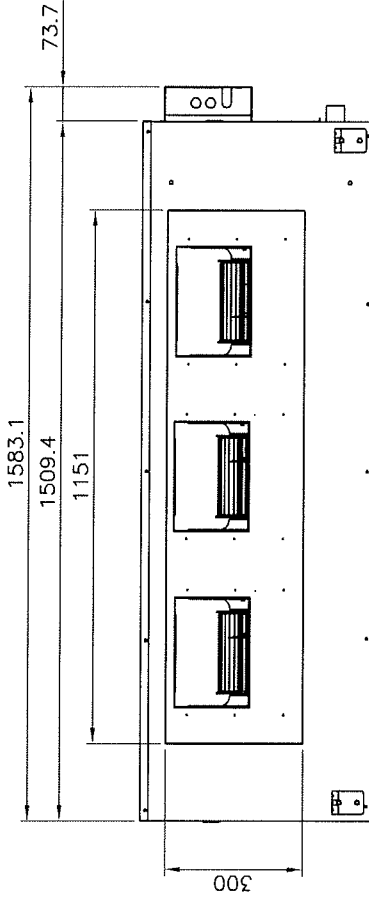
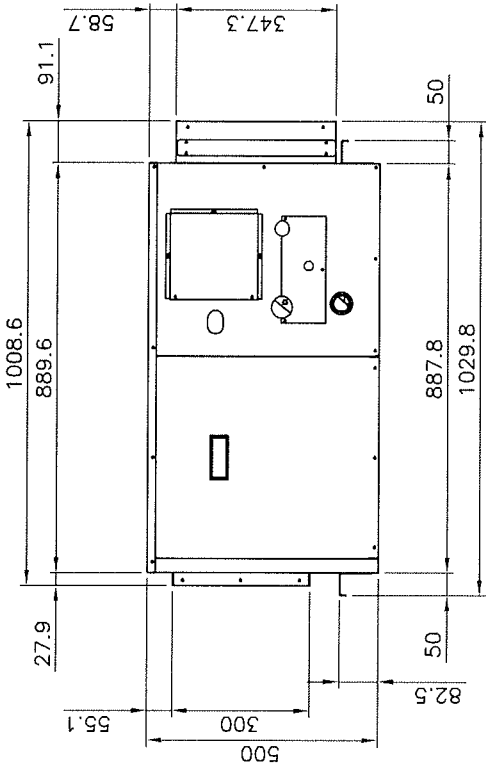
Cooling Performance Data Model AHU90R/LCU90R

INDOOR COIL ENTERING AIR TEMP °C		OUTDOOR COIL ENTERING AIR TEMPERATURE °C											
		30°C			35°C			40°C			45°C		
		Tot Cap	Sens Cap	LWB	Tot Cap	Sens Cap	LWB	Tot Cap	Sens Cap	LWB	Tot Cap	Sens Cap	LWB
DB°C	WB°C	kW	kW	°C	kW	kW	°C	kW	kW	°C	kW	kW	°C
21	17	25.41	16.16	11.00	24.27	15.58	11.30	23.03	14.99	11.60	21.67	14.32	11.90
	18	26.28	14.74	12.00	24.93	14.19	12.30	23.63	13.61	12.60	22.22	12.95	13.00
	19	27.46	13.26	12.90	26.23	12.72	13.20	24.87	12.16	13.50	23.37	11.57	13.90
	20	28.48	11.64	13.90	27.22	11.13	14.20	25.87	10.61	14.50	24.36	10.01	14.90
23	17	25.61	18.77	10.90	24.47	18.21	11.20	23.23	17.59	11.50	21.88	16.91	11.80
	18	26.20	17.53	11.90	25.03	16.97	12.20	23.77	16.35	12.50	22.42	15.69	12.90
	19	26.93	16.07	13.00	25.74	15.55	13.30	24.44	14.96	13.60	23.01	14.31	13.90
	20	28.03	14.66	14.00	26.73	14.14	14.30	25.22	13.57	14.60	23.57	12.92	15.00
	21	29.18	13.10	15.00	27.88	12.60	15.30	26.47	12.07	15.60	24.90	11.48	16.00
25	17	25.71	21.49	10.80	24.61	20.92	11.10	23.39	20.28	11.40	22.08	19.61	11.80
	18	26.43	20.14	11.90	25.27	19.56	12.20	24.01	18.94	12.50	22.62	18.25	12.80
	19	27.08	18.90	13.00	25.90	18.34	13.20	24.60	17.74	13.50	23.20	16.89	13.80
	20	27.80	17.46	14.00	26.58	16.90	14.30	25.25	16.31	14.60	23.79	15.65	14.90
	21	28.51	16.02	15.10	27.26	15.48	15.40	25.89	14.89	15.70	24.38	14.24	16.00
27	17	25.94	24.12	10.70	24.83	23.49	11.00	23.64	22.77	11.30	22.35	21.90	11.60
	18	26.53	22.82	11.70	25.38	22.23	12.00	24.16	21.60	12.30	22.78	20.87	12.70
	19	27.27	21.46	12.90	26.08	20.89	13.10	24.79	20.28	13.50	23.38	19.59	13.80
	20	28.00	20.05	13.90	26.78	19.50	14.20	25.45	18.88	14.50	24.00	18.24	14.80
	21	28.63	18.81	15.00	27.38	18.26	15.30	25.99	17.65	15.50	24.56	17.00	15.90
29	17	26.31	26.31	10.60	25.31	25.31	10.80	24.26	24.26	11.10	23.08	23.08	11.40
	18	26.82	25.37	11.70	25.69	24.71	12.00	24.49	23.93	12.20	23.10	23.10	12.60
	19	27.44	24.15	12.80	26.26	23.56	13.10	24.99	22.89	13.40	23.55	22.11	13.60
	20	28.11	22.77	13.80	26.89	22.21	14.10	25.61	21.59	14.40	24.15	20.89	14.80
	21	28.87	21.39	15.00	27.62	20.83	15.20	26.26	20.22	15.50	24.76	19.54	15.90
31	17	27.25	27.25	10.20	26.27	26.27	10.50	25.20	25.20	10.80	24.00	24.00	11.10
	18	27.26	27.26	11.50	26.29	26.29	11.70	25.22	25.22	12.00	24.01	24.01	12.30
	19	27.72	26.61	12.70	26.58	25.92	12.90	25.24	25.19	13.30	24.03	24.03	13.50
	20	28.32	25.43	13.80	27.12	24.81	14.10	25.83	24.15	14.40	24.41	23.36	14.70
	21	28.96	24.06	14.80	27.73	23.49	15.10	26.40	22.86	15.40	24.92	22.17	15.70

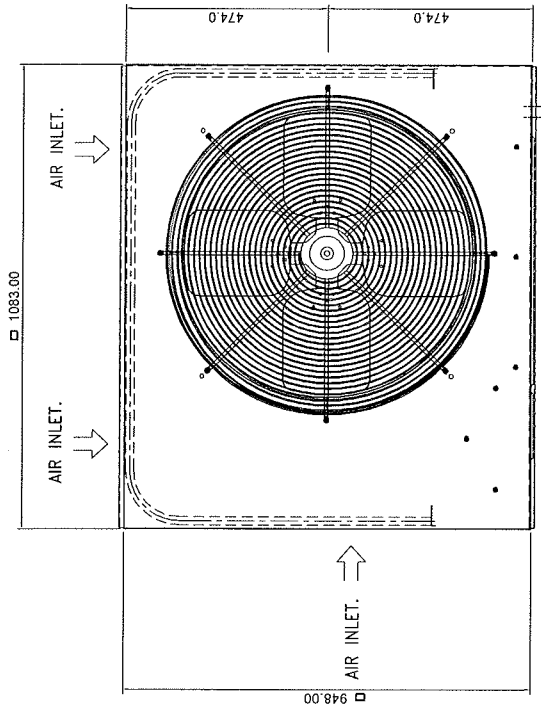
Capacity multipliers should be applied to above capacities to adjust for reduced or increased air flow.

PERFORMANCE CURVE OF AHU-90(new)
(220/240 V. - 50Hz.)



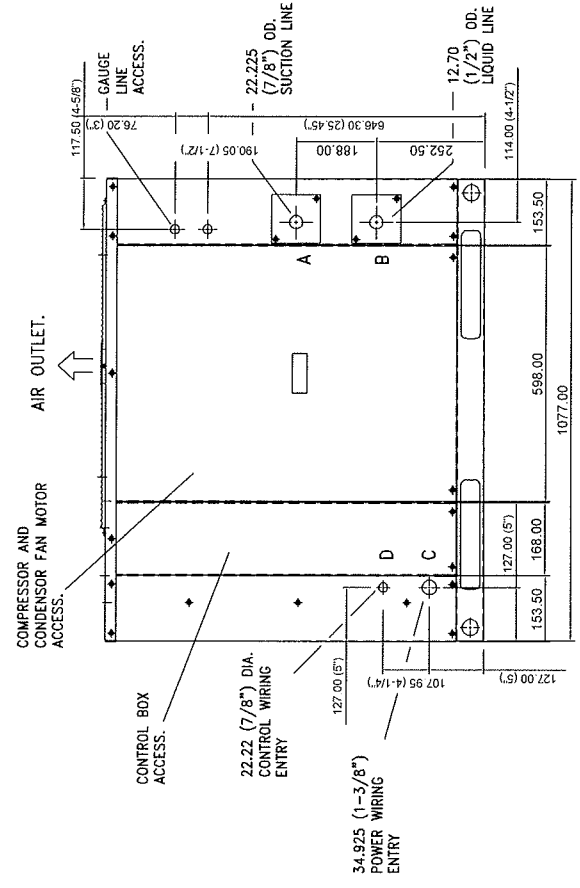
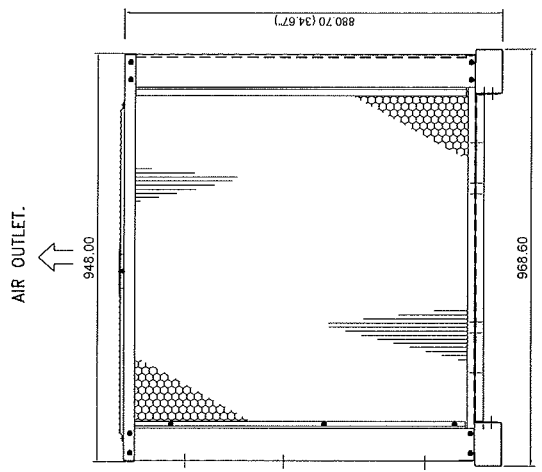


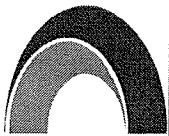
REVISION RECORD		ITEM	PART NAME	MATERIAL	SIZE	QTY.	DWG. NO.
DESCRIPTION/DETAIL	NAME	DATE	TITLE : Product Dimension AHU 90(new)				
			DRAWN :	DATE :	PART NUMBER		
			K.ANURAK		-		
			CHECKED :	DATE :			
			A.CHAN				
			APPROVED :	DATE :	SCALE : 1 : 17		
			DI MARTINO GIUSEPPE				
			UNIT : mm.	DRAWING No. : -	REV. 0	TOLERANCE ± 5	
			 DUNN AIR (Aust) Pty Ltd				



COMMERCIAL UNIT

CONNECTION ENTRY	CONNECTION SIZE
Suction Line	A 7/8"
Liquid Line	B 1/2"
Power Wiring	C 1-3/8"
Control Wiring	D 7/8"



REVISION RECORD		ITEM	PART NAME	MATERIAL	SIZE	QTY.	DWG. NO.
ITEM	DESCRIPTION/DETAIL	NAME	DATE	TITLE : PRODUCT DIMENSION COMMERCIAL UNIT Model: LCU 90 (90,000 BTU)/(26.38 kW)			
ADD DIMENSIONS			16-05-09	DRAWN : PICHET DATE : 16/05/2009 PART NUMBER			
				CHECKED : A.CHAN DATE : 16/05/2009			
				APPROVED : DI MARTINO GIUSEPPE DATE : 16/05/2009			
				SCALE : NTS.			
				UNIT : mm.			
				DRAWING No. : CMU90D-00-00			
				REV. 0			
				TOLERANCE ± 0.5			
			 DUNN AIR (Aust) Pty Ltd				