



HC Manufacturers (Pty) Ltd

AIR CONDITIONING PRODUCTS



HC Manufacturers (Pty) Ltd

HC Manufacturers BROCHURE INDEX

HCM

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MEDIUM CLIP ON UNIT (MCP)

The all new HC Manufacturers Medium Clip On Package Unit (MCP). Specifically designed and manufactured to face the challenges of modern Data Centres and E-houses, whether locally or in the furthest reaches of Africa.

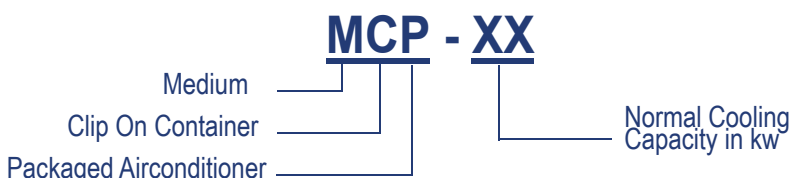
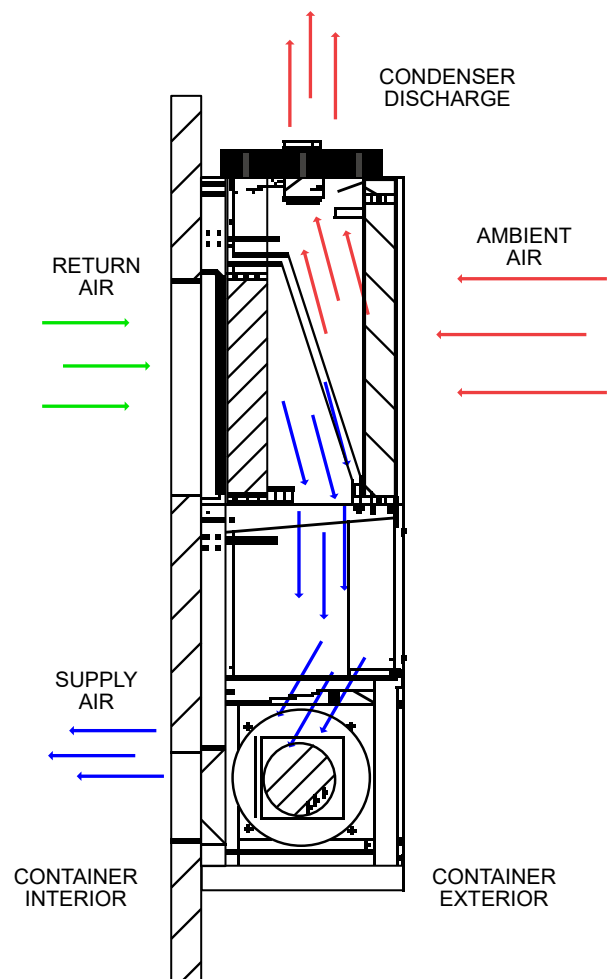
With a fully integrated condenser and all-aluminium powder coated construction, the unit is simply bolted to the outside of any structure, and once supplied with power is ready to run without any refrigeration work.

Its large interconnecting coils provide a Sensible Heat Ratio close to 1 to ensure rated capacity is always achieved in ambient conditions up to 45°C, whilst the high-power EC plug fans ensure there's always enough pressure to meet your under-floor airflow distribution requirements. A high ambient version is available on request.



STANDARD FEATURES

- Easy mounting, reassembly free, ready to run.
- Advanced microprocessor control with scheduling, lead/lag & failover, service reminders, alarm monitoring, logging and close control.
- IP65 Electrical box door.
- Sans 10142 compliant wiring with PLC & mechanical safeties.
- Easy to maintain, high-thermal efficiency rifle-bore tube & coated fin.
- Adaptive airflow with high ESP EC Plug Fans to suit under-floor ventilation & hot-aisle/cold-aisle applications.
- Airflow pressure transducer to monitor required airflow and identify blocked filters.
- Light-weight all-aluminium powder coated frame for easy mounting and shipping with excellent corrosion resistance.
- Side by side mounting compatibility with top-discharge Condenser air to avoid condenser recirculation in high ambient conditions.





HC Manufacturers (Pty) Ltd

Medium Clip On Unit (MCP)

MCP

SL-MCP-01/2007

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MCP 25 Unit Overview

Unit inlet air temperature	32	°C	Altitude	1039	m
Unit inlet air humidity	30	%	Refrigerant	R407C	
Unit airflow	5688	m ³ /hr	Unit power supply	400V/3Ph/	
ESP	50	Pa	Compressor type	50Hz	
Air flow configuration	Downblow		Expansion valve	Scroll	
				EEV	

Unit Performance

Gross total cooling capacity	26.12	kW	Unit COP	3.60	
Gross sensible capacity	26.12	kW	System power input	7.26	kW
Coil air pressure drop	106	Pa	Internal filter class	G4	
Off coil air temperature	16.08	°C	Internal filter pressure drop	150	Pa
Condensing temperature	49	°C	Off coil air relative humidity	16.2	%

Evaporator Fan Specifications

Main supply air fan	Backward Curve EC	Running amperage	1.48	A	
Power supply	400V / 3Ph / 50Hz	Full load amperage	2.90	A	
Fan power input	0.954	kW	Maximum External pressure	300	Pa

Compressor Specifications

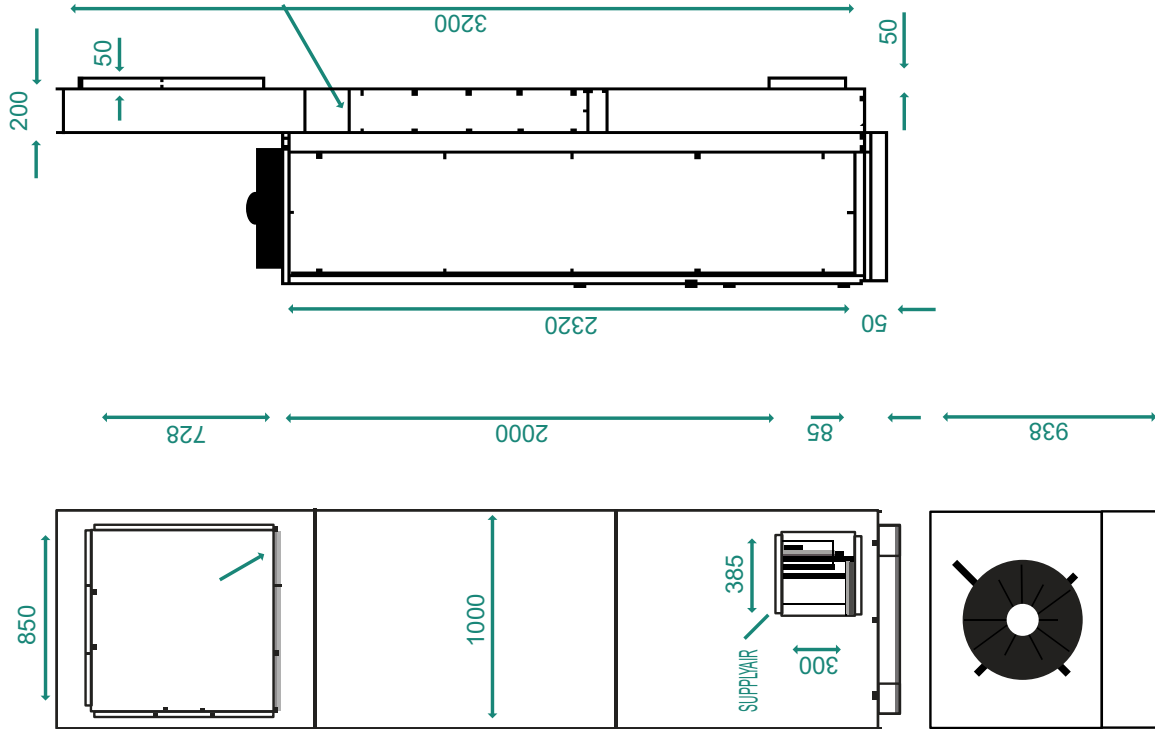
Type	Single Scroll	Compressor COP	4.70		
Power supply	400V / 3Ph / 50Hz	Operating amperage	10.22	A	
Full load amperage	15	A	Locked rotor amperage	101	A

Condenser Specifications

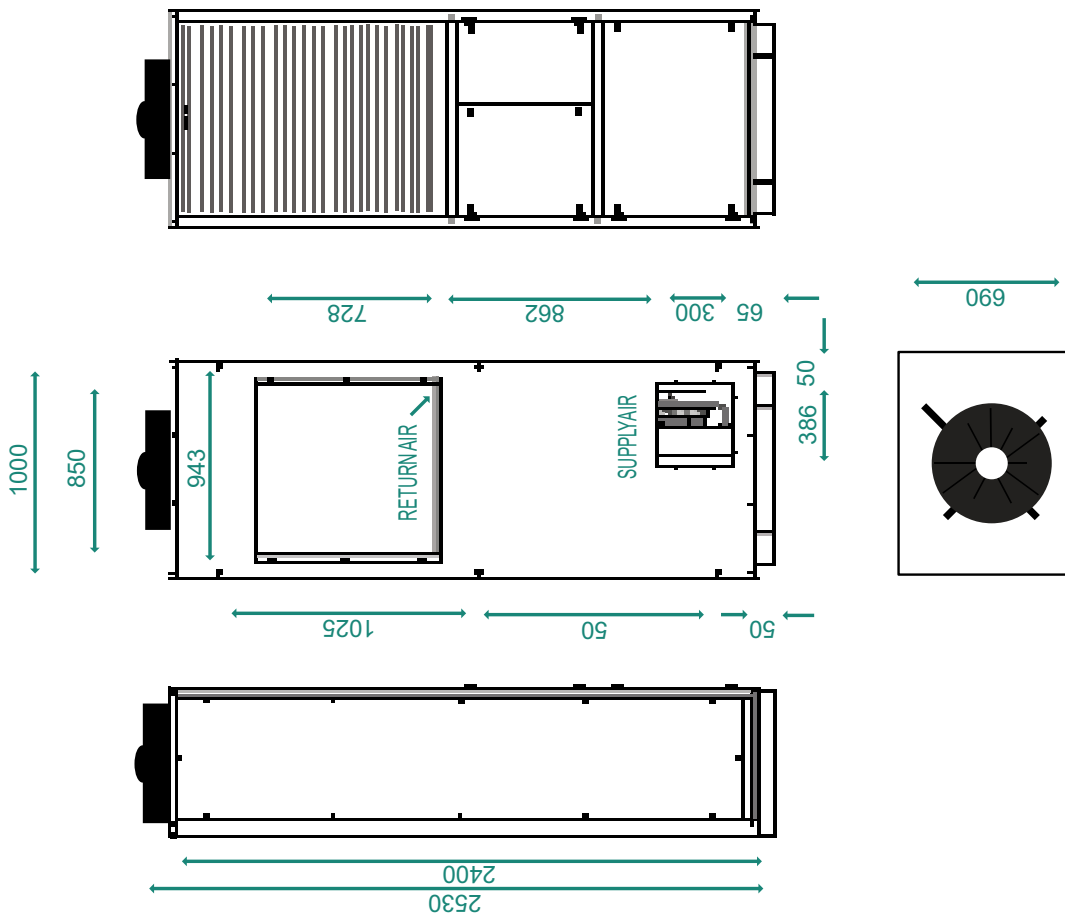
Air discharge	Upblow	Fan power input	1.05	kW	
Power supply	400V / 3Ph / 50Hz	Full load amperage	1.9	A	
Heat load	29.87	kW	Fan Type	EC	
Outdoor air temperature	35	°C	Fan airflow	6540	m³/hr

Unit Dimensions

Width	1000	mm	Height	2530	mm
Depth	690	mm	Weight	280	kg



MCP 20/25 WITH OPTIONAL
SNORKEL KIT



MCP 20/25 WITHOUT
SNORKEL KIT



HC Manufacturers (Pty) Ltd

ROOF MOUNTED UNIT AIR COOLED

GRM

SL-GRM-01/2007

Page 1 of 2

DUTYRANGE: 18 to 100 kW

GENERAL DESCRIPTION

The HC Manufacturers Air Cooled Roof Top Mounted Units (GRM) are designed for medium capacities ranging from 18 to 100 kW. The units are fully self-contained and are ideal for any roof mount application. The condenser coils incorporate a patented floating coil construction eliminating tube failure at the tube plates, with resultant refrigerant loss and thus ensuring long trouble-free service life. All the units are galvanized steel epoxy powder coated construction.



• STANDARD FEATURES

- High efficiency Rifle Bore Tube Evaporator Coils(Cu,Al,Al)
- Patented Floating Coil Condensers
- R407C Refrigerant Charge
- High Efficiency Hermetic Compressors
- 50mm Pleated Washable Filters
- RAL-7032 Kiesel Grey Colour
- Standard Electric Package Including:
 - Evap Fan Contractors
 - Compressor Contractors
 - Temperature Controller
- Return Air Temp Sensor
- Head Pressure Control by HP Switches
- Evap Fan Overload Protection
- Compressor Service Valves and Crank Case Heaters
- Liquid Line Sight Glass
- Galvanised, epoxy powder coated
- Hail guards to protect condenser coils
- Main Isolator

• OPTIONAL FEATURES

- Cu/Cu/Ss Condenser Coils
- Electric Heating with airflow Switch and overheat stats
- Larger Evap Fan Motor for higher ESP
- Pumps Down System
- Variable Fan Speed Head Pressure Control
- Economy Cycle (Control Only)
- Secondary Filters
- S/Steel Casting Construction

NOMENCLATURE

GRM - 48

H.C.M.

Evaporative condenser cooled

Nominal capacity in kW



HC Manufacturers (Pty) Ltd

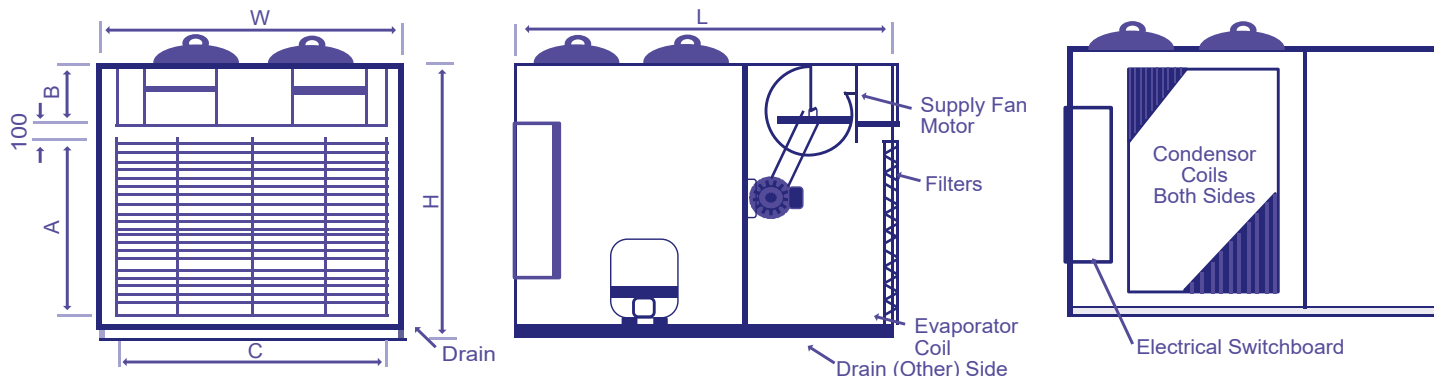
ROOF MOUNTED UNIT AIR COOLED

GRM

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Technical & Physical Data



MODEL GRM			18	20	26	31	40	50	60	70	80	100
Nominal Capacity	kW		17.5	19.7	26.0	31.4	39.6	48.3	61.4	72.0	79.7	102.7
@27DB 19WBAir On / 35Amb/Sea Level												
Capacity 2	kW		16.4	18.7	23.4	29.4	37.1	45.2	58.7	67.4	73.3	96.4
@25DB/17WBAir On/35Amb/Sea Level												
SupplyAir Fan Quantity			1	1	1	1	2	2	2	2	2	2
Motor (380V/3/50Hz)	kW		1.1	1.1	1.5	2.2	2.2	3.0	4.0	5.5	5.5	5.5
NominalAir Flow @ 150 Pa ESP	m3/s		1.09	1.23	1.57	1.92	2.46	3.04	3.84	4.58	5.3	5.5
Face Velocity	m/s		2.52	2.52	2.52	2.57	2.62	2.58	2.75	2.64	2.65	2.75
Fan Speed	rpm		1220	1242	1240	1258	1283	1078	858	893	893	890
Evaporator Coil/s												
Total FaceArea	m2		0.43	0.49	0.61	0.73	0.95	1.10	1.44	1.73	2.00	2.00
Condenser Fan/Motor/s(220V/1/50Hz)												
Quantity			1	1	2	2	2	3	4	4	4	4
NominalAir Flow	m3/s		2.11	2.04	3.84	4.11	4.34	6.21	7.03	8.55	8.7	8.46
Diameter (Fan)	mm		500	500	500	500	500	500	500	500	500	500
Condenser Coil/s												
Quantity	mm		1	1	1	1	2	2	2	2	2	2
Filter Size	m2		0.65	0.82	0.96	1.14	1.54	1.77	2.15	2.77	3.09	3.09
Filters (50 mm Pleated)												
Quantity			2	2	2	3	4	6	8	6	6	6
Filter Size	mm		400x625	400x625	500x625	400x625	625x400	500x400	500x400	625x500	625x500	625x500
Compressor/s (Fully Hermetic)												
Quantity			1	1	1	1	2	2	2	2	2	2
Electric Heating (Optional) (2 Steps)	kW		6	6	9	9	12	15	18	24	24	30
HeaterAmps/Phase	A		9.10	9.10	13.6	13.6	18.2	22.7	27.3	36.4	36.4	45
Electric Data												
FLC Compressors			15	23	22	27	46	44	54	60	72	74
FLC SupplyAir Fan Motor	A		2.7	2.7	3.4	4.8	4.8	6.3	9.0	12.1	12.1	12.1
FLC Condensor Fan Motor	A		2.8	2.8	5.6	5.6	5.6	8.4	11.2	11.2	11.2	11.2
Full Load Current (Total)	A		23	31	33	39	58	61	76	85	97	99
Dimensions	W	mm	960	1100	1250	1450	1500	1700	1700	1980	1980	1980
	L	mm	1740	1740	1780	1780	1950	2100	2100	2420	2420	2420
	H	mm	1148	1148	1148	1148	1248	1288	1578	1578	1780	1780
	A	mm	626	626	574	574	729	717	1007	944	1141	1141
	B	mm	292	292	344	344	292	344	344	407	407	407
	C	mm	760	900	1050	1250	1300	1500	1500	1780	1780	1780
Net Mass	kg		345	380	440	490	580	675	770	920	960	1000



HC Manufacturers (Pty) Ltd

ROOFTOP PACKAGED UNIT AIR COOLED

GRA

SL-GPA-01/2007

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DUTY RANGE: 75 to 155 kW

GENERAL DESCRIPTION

The HC Manufacturers Air Cooled Roof Mounted Units (GRA) are designed for medium to high capacities ranging from 75 to 155 kW. The units are fully self-contained and are ideal for any roof mount application. The condenser coils incorporate a patented floating coil construction eliminating tube failure at the tube plates, with resultant refrigerant loss and thus ensuring long trouble-free service life. The packaged unit uses a chromadeck sandwich constructed Casing. (The factory-built plantroom).



STANDARD FEATURES

- Totally self-contained
- Container type box construction with stainless chromadek surface
- Fully weatherproof
- Airtight lockable access doors to Filters and fan/compressor compartments
- Available as indoor split air cooled or outdoor air-cooled packaged unit
- Motor and switchgear to SABS standards
- High efficiency rifle bore evaporator
- Condenser coils have floating copper tubes with aluminium fins
- High- and low-pressure protection
- Automatic pump-down cycle
- Condenser temperature/fire thermostat
- Lifting facility provided at each corner of base
- Microprocessor based controls with time clock
- High E-SPEC fan

OPTIONAL FEATURES

- Stainless steel coils and casing
- Dehumidification reheat coils
- Variable speed EC fans
- Bluchin coated coils
- Economy cycle control with low and coil ice-up protection

NOMENCLATURE

H.C.M. _____ **GRA 135** _____
Nominal capacity in kW



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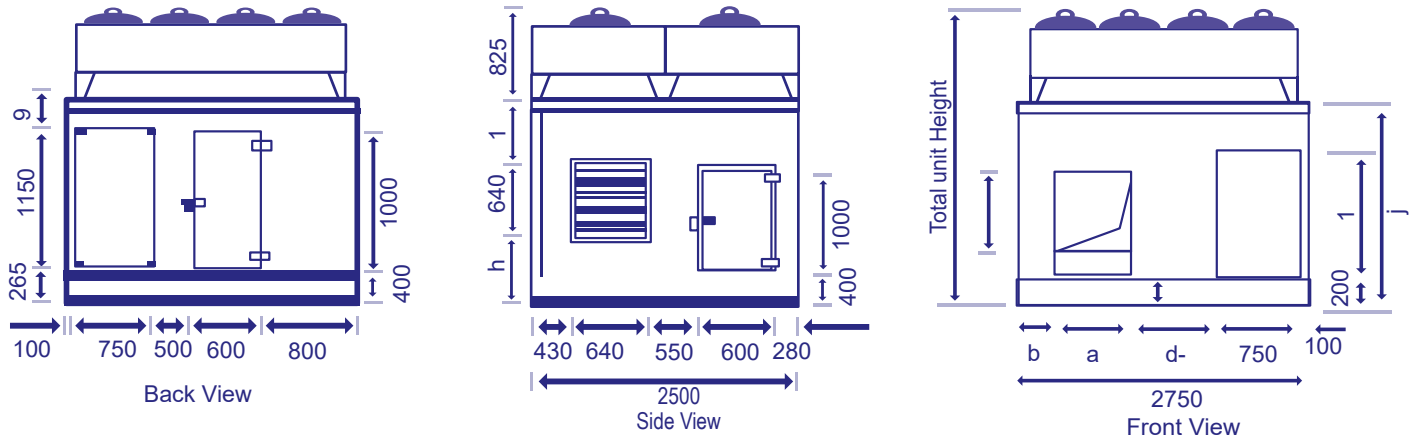
ROOFTOP PACKAGED UNIT AIR COOLED

GRA

SL-GPA-01/2007

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TECHNICAL & PHYSICAL DATA



Dimensions*c = Top horizontal and *k = Bottom horizontal discharge

Model	a	b	*c	d	e	f	g	h	i	j	*k
GRA-75	635	395	596	870	2425	1200	1200	480	480	1600	350
GRA-95	710	395	630	795	2625	1200	1200	580	580	1800	380
GRA-115	710	395	630	795	2625	1500	1500	580	580	1800	380
GRA-135	800	395	825	705	2975	1700	1700	755	755	2150	475
GRA-155	800	395	825	705	2975	1700	1700	755	755	2150	475

MODEL		GRA-75	GRA-95	GRA-115	GRA-135	GRA-155
Nominal Capacity	kW	76	99	115	135	156
Airflow (1400m)	m3/s	4.50	5.84	6.80	8.00	9.22
Airflow (Sea Level)	m3/s	3.76	4.88	5.69	6.7	7.71
Heating (Electric)	kW	24	30	36	45	45
External Static	Pa	250	250	250	250	250
Unit Duty	A	53.6	64.6	79.6	96.9	119
Unit FLC	A	77.3	85.8	92.5	116.4	128.4
SST/SD	°C	6/49	6/49	6/49	6/49	6/49
Unit Mass	kg	2500	2600	2700	280	2850

DIMENSIONS*c = TOP HORIZONTAL AND *K = BOTTOM HORIZONTAL DISCHARGE

Altitude		1400 m	Sea Level
Airon CoilDb/Wb	°C	25.2 / 16.85	25.6 / 17.85
Airoff CoilDb/Wb	°C	12 / 11	12 / 11
Room SHF		0.85	0.85
Air on Condenser Db	°C	31	33
Fresh AirDb/Wb	°C	31 / 21	33 / 24
Fresh Air Quantity	%	17.5	17.5
Room Rel.Humidity	%	50	50
Room Temperature	°C	22.5	22.5

NOTE: Add 20% to rated mass for lifting purposes.

Subject to Change Without Notice

GAUTENG
P.O.Box 147
Maraisburg, 1700
Tel:(011) 674-1237
Fax:(011) 674-1268



DUTY RANGE: 75 to 155 kW

General Description

The HC Manufacturers Air Cooled Roof Mounted Units (GPA) are designed for high capacities ranging from 170 to 470 kW. The units are fully self-contained and are ideal for any roof mount application. The condenser coils incorporate patented floating coil construction, eliminating tube failure at the tube plates, with resultant refrigerant loss and thus ensuring long trouble-free service life. The packaged unit uses a chromadeck sandwich constructed casing. (The factory-built plantroom).



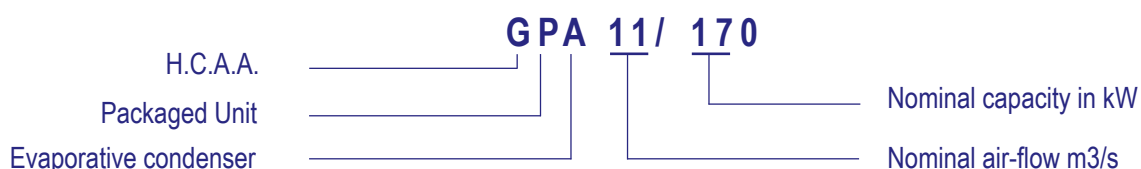
• STANDARD FEATURES

- Totally self-contained
- Container type box construction with stainless chromadek surface
- Fully weatherproof
- Airtight lockable access doors to filters and fan/compressor compartments
- Available as indoor air-cooled or outdoor air-cooled packaged unit
- Motor and switchgear to SABS standards
- Motors and switchgear to SABS standard
- High efficiency rifle bore evaporator
- Condenser coils have floating copper tubes with aluminium fins
- High- and low-pressure protection
- Full display mimic panel
- Automatic pump-downcycle
- Condenser temperature control
- High return air temperature/fire thermostat
- Lifting facility provided at each corner of base
- Microprocessor based controls with time clock

• OPTIONAL FEATURES

- Filter inclined manometer
- Economy cycle control with low ambient & coil ice- upper protection
- Start-Delta starting
- Low voltage protection
- Phase failure protection
- Remote control and air flow status monitoring panel
- Copper fins
- Fibre-glass Casing
- Electric heating in 2 x steps

NOMENCLATURE





HC Manufacturers (Pty) Ltd

GIANT ROOFTOP PACKAGED UNIT AIRCOOLED

GPA

SL-GPA-2-01/2007

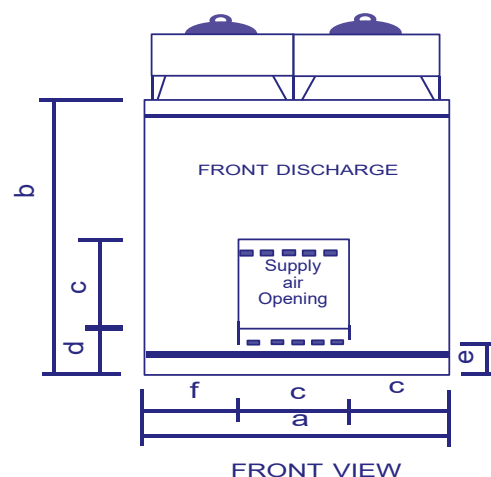
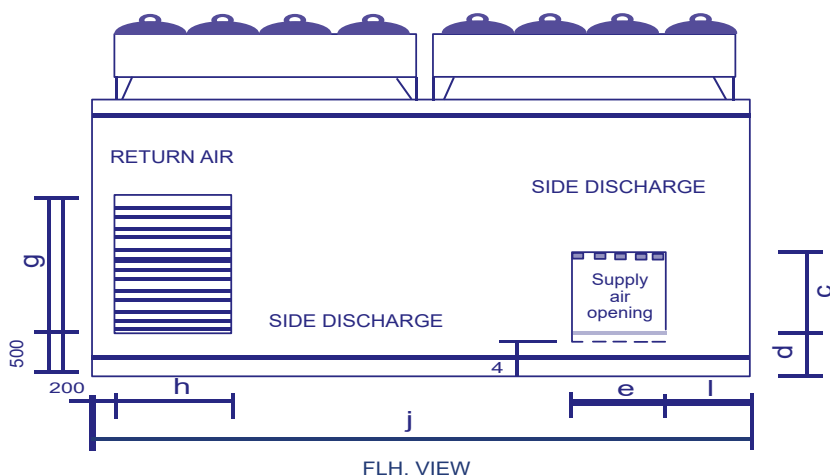
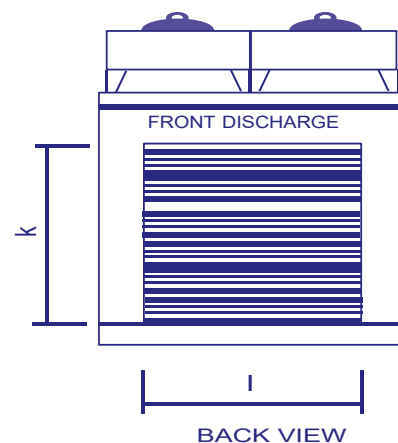
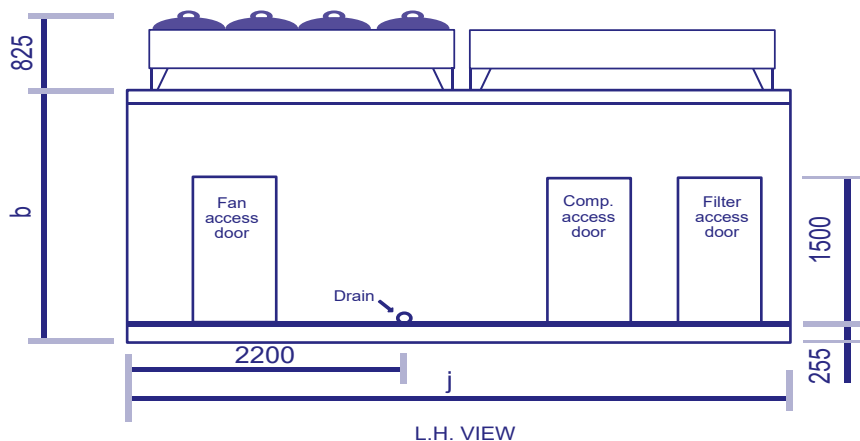
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TECHNICAL & PHYSICAL DATA

DIMENSIONS

Dimension d for top horizontal fan discharge, dimension e for bottom horizontal fan discharge

MODEL	11	12	13	14	15	16	17	19	21	24
a	2500	2500	2500	3100	3100	3100	3100	3100	3100	3100
b	2500	2800	2800	2500	2800	2800	2800	2800	2800	2800
c	900	900	900	900	1000	1000	1000	1120	1120	1250
d	865	865	865	865	970	970	970	1050	1050	1110
e	475	475	475	475	510	510	510	520	520	515
f	800	800	800	1100	1050	1050	1050	1000	1000	950
g	1600	1600	1600	1800	1800	1800	1800	1800	1800	1800
h	1000	1000	1000	1000	1000	1000	1200	1600	1600	1600
i	400	400	400	400	450	450	450	500	500	550
j	5500	5500	5500	5500	5500	5500	6000	6000	7500	7500
k	2000	2000	2000	2400	2400	2400	2400	2400	2400	2400
l	1800	1800	1800	1800	1800	1800	2400	2400	2400	2400



Downblow unit with through the floor return air available on request

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HC Manufacturers (Pty) Ltd

GIANT ROOFTOP PACKAGED UNIT AIRCOOLED

GPA

SL-GPA-2-01/2007

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TECHNICAL & PHYSICAL DATA

STANDARD SPECIFICATIONS

ALTITUDE – 1400 M

PERFORMANCE BASED ON THE FOLLOWING:

Evaporator coil entering 25,2 °Cdb / 16.85 °Cwb
Evaporator coil leaving 12.0°Cdb / 11.0 °C

Evaporator Condenser entering 33.0 °Cwb
SST/SDT 6°C/ 49 °C

UNIT MODEL		11/175	12/195	13/210	14/230	15/250	16/270	17/290	19/310	21/345	24/405
Airflow	m3/s	10.32	11.68	12.63	13.57	14.81	15.99	17.23	18.41	20.35	24.01
External Static	Pa	250	250	250	250	250	250	250	250	250	250
Cooling Duty	kW	175	198	214	230	251	271	292	312	345	407
Unit Mass	*kg	4548	4757	4893	5111	5394	5721	6050	6664	6814	8047
Unit Duty	A	123.5	135.4	151.5	165.6	176.6	197.6	221.1	236.8	244.95	289.4
Unit FLC	A	170.6	186.4	188.2	197.8	211.7	241.2	252.3	263.4	284.7	365.2
Heating (Electric)	kW	54	54	54	72	72	90	90	90	108	108

SEA LEVEL

PERFORMANCE BASED ON THE FOLLOWING:

Evaporator coil entering 25,6 °Cdb / 17.85 °Cwb
Evaporator coil leaving 12.0°Cdb / 11.0 °C

Evaporator Condenser Entering 33.0 °Cwb
SST/SDT 6°C/ 49 °C

UNIT MODEL		11/210	12/230	13/250	14/270	15/290	16/310	17/345	19/385	21/405	24/470
Airflow	m3/s	10.55	11.34	12.37	13.36	14.39	15.38	17.0	18.9	20.06	23.07
External Static	Pa	250	250	250	250	250	250	250	250	250	250
Cooling Duty	kW	214	230	251	271	292	312	345	384	407	468
Unit Mass	*kg	4790	5025	5245	5486	5819	6132	6505	7212	7455	7999
Unit Duty	A	151.5	167.6	184.6	201.6	219.2	242.8	250.95	279.4	298.4	385.2
Unit FLC	A	188.2	190.0	219.5	241.2	252.3	263.4	284.7	328.1	365.2	432.1
Heating (Electric)	kW	54	72	72	90	90	90	108	108	108	135

* Add20%to rated mass for lifting purposes

For other than standard conditions and for Cu/Cu Coils contact factory

Subject to Change Without Notice



HC Manufacturers (Pty) Ltd

AIR HANDLING UNIT CHILLED WATER

GAU - 1

SL-GAU - 1 -01/2007

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DUTYRANGE: 600 L/S to 6500 L/S

GENERAL DESCRIPTION

The new range of HC Manufacturers Chilled Water Air Handling Units (GAU) Are designed to provide comfort air-conditioning for different applications. The range comprises 11 units for capacities from 14 kW to 158 kW. They are available in basically three arrangements, i.e. Up blow, Down blow and Horizontal Blow.



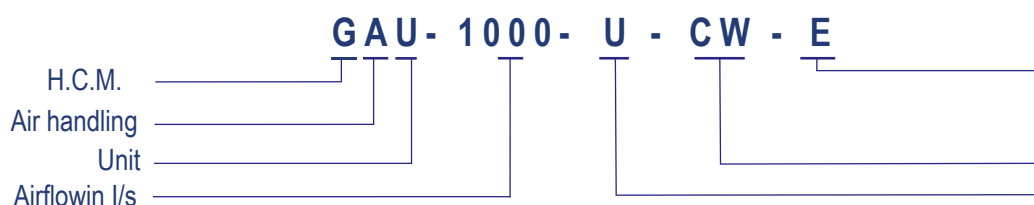
• STANDARD FEATURES

- Modular Construction
- Epoxy Powder Coated Construction for Maximum corrosion Resistance
- RAL - 7032 Kiesel Grey Colour
- Forward Curved Centrifugal Fan (Belt Driven)
- 50mm Pleated Washable Filters (Front Withdrawal)
- 4 Row Chilled Water Coil (Cu/Al/Al)
- All Electric Connections Wired to Terminal Strip

• STANDARD FEATURES

- Standard Electrical Package:
 - Evap Fan Contactor
 - Temperature Controller
 - Evap Fan Overload Protection
 - Return Air Temperature Sensor
- Two Way or Three Way Water Valve
- Main Isolator
- Electric Heating with Air Flow Switch and Overheat Slats
- Cu/Cu/Ss Coil
- Larger Evap Fan Motor for High ESP
- Direct Drive Fans
- Stainless Steel Drip Tray
- Upto 6 Row Coil
- Variable Speed Supply Air Fan
- Side or Top Withdrawal
- Secondary Filters
- Side or Top Withdrawal Primary Filters

NOMENCLATURE



Electric Heating
Optional

Chilled Water

U = Upblow

H = Horizontal

D = Downblow **Pg 11**



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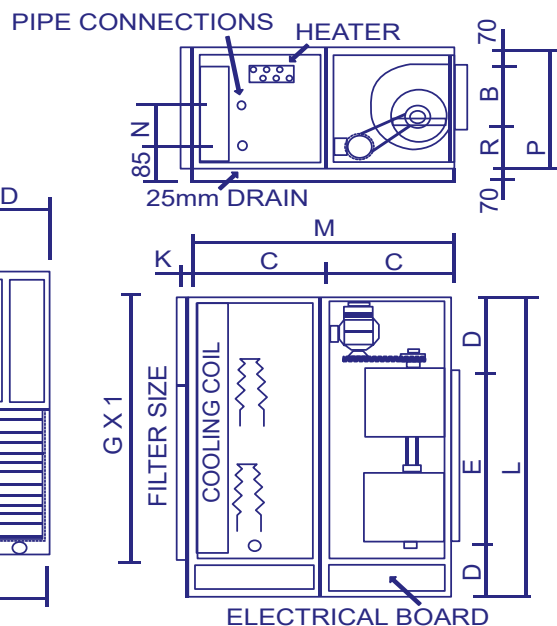
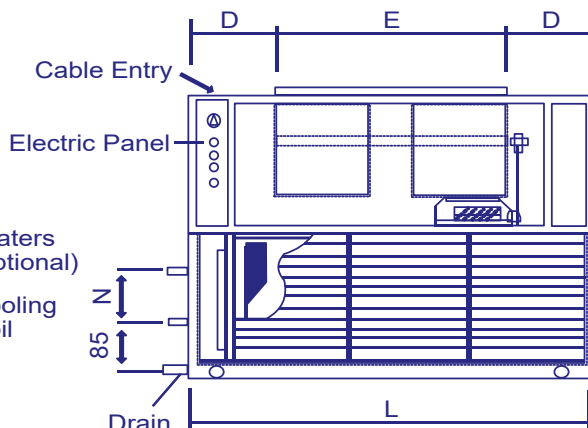
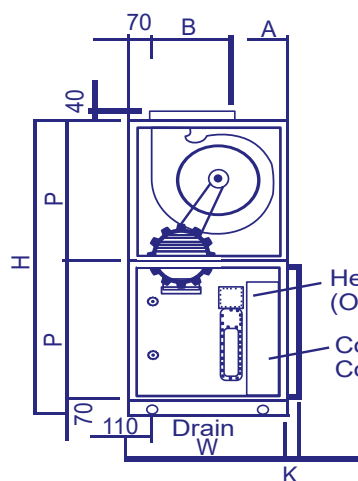
AIR HANDLING UNIT CHILLED WATER

GAU - 1

SL-GAU - 1 -01/2007

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GENERAL DESCRIPTION



MODEL GAU- CHILLED WATER		600	1000	1350	1650	2000	2650	3300	3600	4500	5500	6500
Nominal Capacity	kW	14	24	33	41	47	67	82	90	117	129	158
@27DB/19WB Air On/35 Amb/Sea Level)	DegC											
Capacity2	kW	11	18	26	33	37	48	63	70	92	100	123
@25DB/17WB Air On/35 Amb/Sea Level)	DegC											
Supply Air Fan												
Quantity)		1	1	1	1	2	2	2	2	2	2	2
Motor (380V/3/50hZ	m3/s	.55	1.10	1.50	2.20	2.20	3.00	4.00	4.00	5.50	7.50	7.50
Nominal Air Flow @ 150 PaESP	m3/s	.60	1.00	1.35	1.65	2.00	2.65	3.30	3.60	4.50	5.50	6.50
Face Velocity	m/s	2.74	2.60	2.75	2.75	2.64	2.72	2.67	2.71	2.69	2.68	2.77
Fan Speed	rpm	1390	1273	1097	1091	1164	1151	1136	1156	952	959	818
Chilled Water Coils												
Face Area	m2	0.22	0.38	0.49	0.60	0.76	0.97	1.23	1.33	1.67	2.02	2.36
Water Flow	l/s	0.56	0.95	1.33	1.66	1.88	2.68	3.25	3.59	4.65	5.11	6.29
Coil Pressure Drop	kPa	23.20	16.20	33.40	37.50	12.10	44.10	24.10	30.20	57.00	11.60	19.00
Pipe Connections in/out	mm	25	32	32	38	38	38	50	50	64	64	64
	BSPM											
Filters (50mm Pleated												
Quantity		1	2	2	3	3	6	6	6	10	4	5
Filter Size	mm	625x500	625x400	625x500	625x400	625x500	500x400	625x400	500x400	500x400	500x625	500x625
Electric Heating (Optional)(kW)		3	4.5	66	9	12	15	18	18	24	24	30
FLC Heating (Optional)	A	6.4	9.80	13.10	19.30	24.00	35.30	37.20	37.20	49.80	49.80	63.30
Electric Data FLC Cooling	A	1.6	2.60	3.50	5.00	5.00	6.60	8.50	8.50	11.50	15.50	15.50
Dimensions	A	mm	326	326	245	245	245	245	245	383	383	383
	B	mm	264	264	345	345	345	345	345	407	407	407
	C	mm	660	660	660	660	660	660	660	860	860	860
	D	mm	227/149	363	415	515	310	310	500	570	713	710
	E	mm	237	304	400	400	1110	1110	1110	1324	1330	1330
	F	mm	200	430	485	635	440	440	560	630	755	1005
	G	mm	508	816	1016	1218	1524	1524	1896	2032	2540	2032
	H	mm	1390	1390	1390	1390	1390	1790	1790	1790	2055	2055
	I	mm	632	632	632	632	816	816	816	816	1045	1045
	(Side Removal) K	mm	130	130	130	130	130	130	130	130	130	130
	(Front Removal) K	mm	50	50	50	50	50	50	50	50	50	50
	*L	mm	730	1030	1230	1430	1730	1730	2110	2250	2750	2750
	M	mm	1320	1320	1320	1320	1320	1320	1320	1720	1720	1720
	N	mm	490	250	250	250	250	250	250	250	955	955
	P	mm	660	660	660	660	660	860	860	860	1125	1125
	R	mm	326	326	245	245	245	245	245	383	648	648
	W	mm	660	660	660	660	660	660	660	860	860	860
Net Mass	kg	165	185	200	220	260	305	345	380	450	600	720



HC Manufacturers (Pty) Ltd

AIR HANDLING UNIT CHILLED WATER

GAU - 2

SL-GAU - 2 -01/2007

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DUTYRANGE: 600 L/S to 6500 L/S

GENERAL DESCRIPTION

The new HC Manufacturers range of DX Air Handling Units (GAU) are designed to provide comfort air-conditioning for different applications. The range comprises 11 units for capacities from 12 kW to 130 kW. They are available in basically Three arrangements, i.e. Up-blow, Down-blow and Horizontal-Blow. When combined with the condensing units they provide complete split systems for different applications.



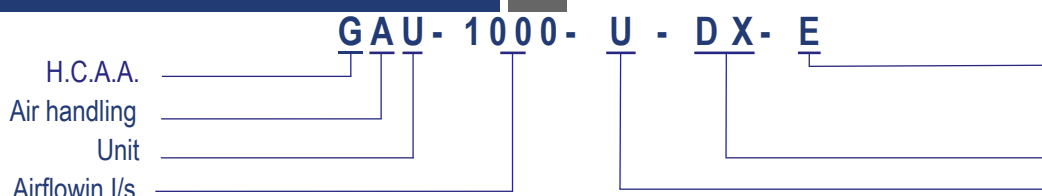
• STANDARD FEATURES

- Modular Construction
- Epoxy Powder Coated Construction for Maximum corrosion Resistance
- RAL - 7032 Kiesel Grey Colour
- Forward Curved Centrifugal Fan (Belt Driven)
- 50mm Pleated Washable Filters (Front Withdrawal)
- 4 Row Chilled Water Coil (Cu/Al/Al)
- All Electric Connections Wired to Terminal Strip
- Liquid Distribution

• STANDARD FEATURES

- Standard Electrical Package: Evap Fan Contactor, Temperature Controller, Evap Fan Overload Protection, Return Air Temperature Sensor
- Two Way or Three Way Water Valve
- Main Isolator
- Electric Heating with Air Flow Switch and Overheat Slats
- Cu/Cu/Ss Coil
- Larger Evap Fan Motor for High ESP
- Direct Drive Fans
- Stainless Steel Drip Tray
- Upto 6 Row Coil
- Variable Speed Supply Air Fan
- Side or Top Withdrawal
- Secondary Filters
- Side or Top Withdrawal Primary Filters

NOMENCLATURE



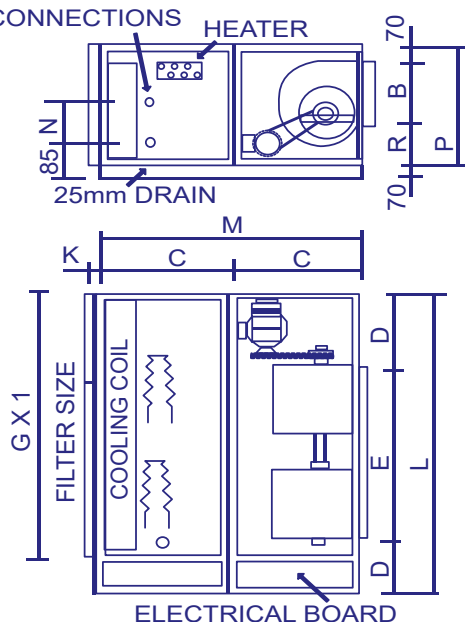
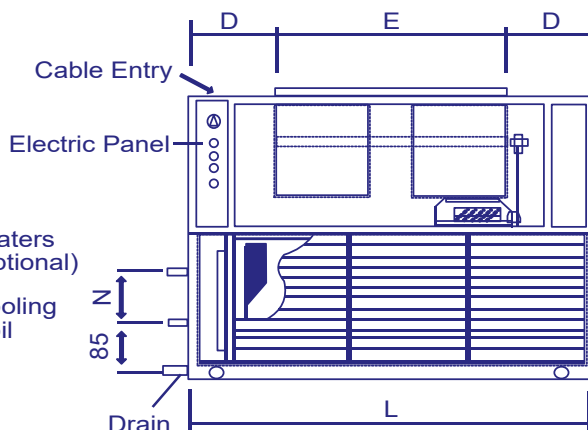


GAU - 2

SL-GAU - 2 -01/2007

Page 2 of 2

PIPE CONNECTIONS HEATER



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HC Manufacturers (Pty) Ltd

AIR & WATER COOLED PACKAGED AIRCON UNIT

PAA

SL-PAA-2-01/2007

Page 1 of 1

GENERAL DESCRIPTION

The HC Manufacturers Modular Aircooled split package airconditioning units are designed to provide close control and comfort airconditioning for many different applications. The equipment is used extensively for the Telecommunications and computer room and data centre environments.

The range is comprehensive and extends from 8kW to 70kW cooling capacity / heating optional. The evaporator coil incorporates high efficiency rifle bore tubes for enhanced heat transfer, resulting in reduced fan power requirement. When combined with the HC Manufacturers aircooled condensers, (HCV) they provide complete airconditioning systems. Alternative to the air cooled arrangement, the air handling equipment is also suitable for chilled water applications as well as water cooled package applications, utilising Shell and tube or plate type condensers.



**CLOSE
CONTROL**

**A
I
R**

&

**W
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R**

**C
O
O
L
E
D**

**PACKAGED
AIR
CONDITIONER**

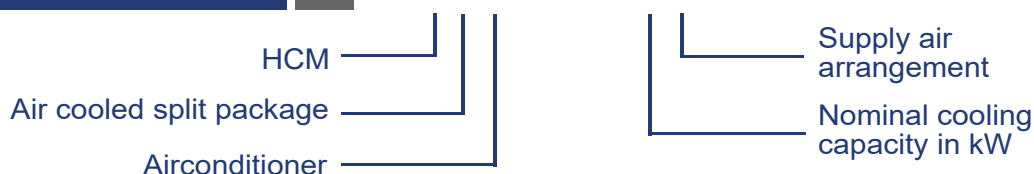
STANDARD FEATURES

- Quiet, high efficiency hermetic compressors.
- HP, LP and freeze-up protection.
- Motors and Switchgear to SABS standard.
- Epoxy powder coated steel casting & aluminium frame for maximum corrosion resistance.
- Robust modular construction permits transportation without damage.
- Easily removable panels provide good all round access.
- Supply air delivery can be vertical, top-horizontal or down blow.
- All components are selected for long life, 24hr continuous operation.
- Compressor Service Valves and Crankcase Heaters.
- Dehumidification coincidental.

OPTIONAL FEATURES

- Filters easily removable from front of unit. Slide or top withdrawal filters optional.
- Secondary Filters.
- Remote condensers have copper tubes and aluminium fins. Other fin materials and casing optional.
- Adjustable floor supports eliminate vibration into service floor.
- Hot gas Reheat for constant under floor temperature.
- Micro processor control standard, remote management optional.
- Pressure transducers for digital refrigeration and pressure information.
- Variable fan Speed Head Pressure Control.
- Electric heaters, humidification and control.

NOMENCLATURE



PAA - 20 Up/Dn

Note: Any / All specifications subject to change without notice



HCM ROW COOLER (HRC)

The all new HC Manufacturers in Row Cooler Unit (HRC). Specifically designed and manufactured to face the challenges of modern Datacentres, whether locally or in the furthest reaches of Africa. Its large coils provide a Sensible Heat Ratio close to 1 to meet high capacity demands of modern datacentres.

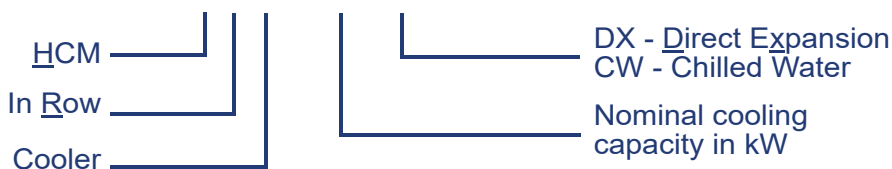
The high-power EC plug fans ensure there's always enough pressure to meet your airflow distribution requirements. Our units are available in full (600mm) and half (300mm) modules. Intelligent control monitors the functionality of the system and can interface with most BMS monitoring systems. Optional humidification & dehumidification

STANDARD FEATURES

- Advanced microprocessor control with scheduling, lead/lag & failover, service reminders, alarm monitoring & logging and close control
- Real time remote monitoring & BMS integration
- Sans 10142 compliant wiring with PLC & safeties
- Easy to maintain, high-thermal efficiency rifle-bore tube & coated fin
- Adaptive airflow with high ESP EC Plug Fans to suit any application
- Airflow pressure transducer to monitor required airflow and identify blocked filters
- Dual A-B power inputs
- Remote probes for intelligent capacity control
- Designed for minimum 15 year lifespan
- Replacement components are freely available



HRC - XX DX





HC Manufacturers (Pty) Ltd

HCM In-Row Cooler

HRC

SL-HRC-2-01/2007

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Specifications	HRC - 60 F					
Chilled water [°C] (on/off)	7/13.6	7/13.6	7/13.6	7/14.7	7/14.7	7/15.8
Return Air [°C] (db/wb)	26.7/17.1	29.4/18.1	32.2/18.9	35/19.8	37.8/20.7	40.6/21.6
Sensible Duty [kW]	44	52	59	65	72	78
SHR	1	1	1	1	1	1
Evaporator Airflow [m ³ /s]	2.83	2.83	2.83	2.83	2.83	2.83
Evaporator Fan	EC Variable					
Maximum Amperage [A]	14					
Running Amperage [A]	10					
Max Power Draw [kW]	7.8					
Approximate Mass [kg]	240					



HC Manufacturers (Pty) Ltd

HCM Unit Comparison GA)

GA

SL-GA-01/2007

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PAA CRAC UNIT

PLACED WITHIN THE SPACE

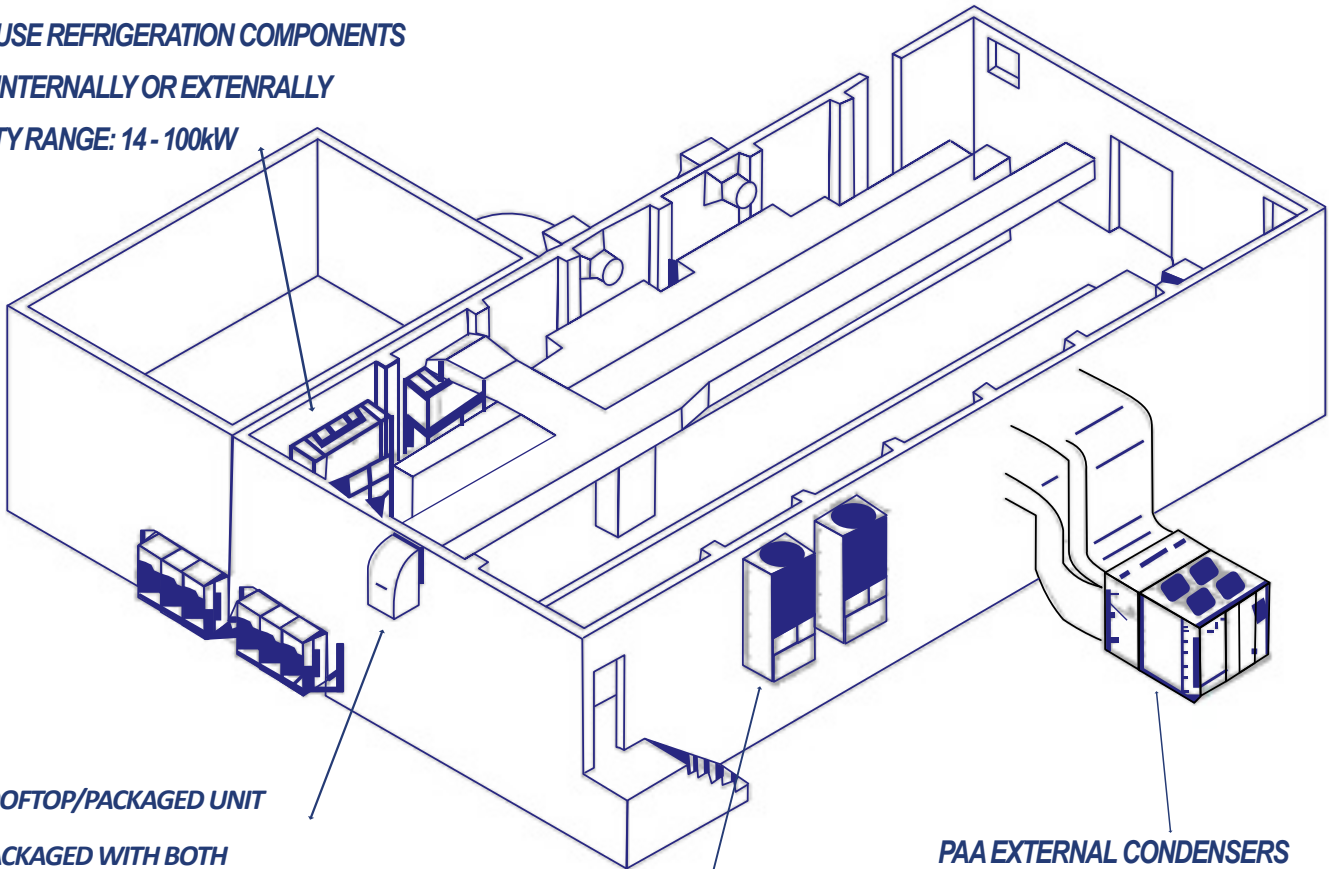
DUCTED SUPPLY AIR - RETURN AIR

FROM WITHIN SPACE

MAY HOUSE REFRIGERATION COMPONENTS

EITHER INTERNALLY OR EXTERNALLY

CAPACITY RANGE: 14 - 100kW



GRM ROOFTOP/PACKAGED UNIT

FULLY PACKAGED WITH BOTH

EVAPORATOR & CONDENSER SECTION

REQUIRES DUCTING OF RETURN &

SUPPLY AIR INTO & OUT OF SPACE

CAPACITY RANGE: 20 - 100kW

(LARGER UNITS AVAILABLE)

MCP CLIP ON UNIT

SELF CONTAINED UNIT WITH

BOTH EVAPORATOR & EXTERNAL

CONDENSER - CLIPPED ON TO EXTERNAL

WALL. REQUIRES ONLY ELECTRICAL

CONNECTIONS

CAPACITY RANGE: 9 - 30kW

(45kW POSSIBLE IN CERTAIN CONDITIONS)

PAA EXTERNAL CONDENSERS

REQUIRED TO BE CONNECTED

TO INTERNAL UNITS WITH BOTH

ELECTRICAL & REFRIGERATION

PIPE RUNS



HC Manufacturers (Pty) Ltd

AIR HANDLING UNIT CHILLED WATER

GOT

SL-GOT - 02/2000

Page 1 of 2

DUTYRANGE: 15 and 25 kW

GENERAL DESCRIPTION

The HC Manufacturers Operating Theatre Unit is designed to provide the right conditions for any critical Hospital application. The unit operates on 100% fresh air and comprises of two models, i.e. 15kW and 25kW. The units are designed to withstand the harshest weather conditions and are fully self contained. The Evaporator Coil incorporates high efficiency rifle bore tubes for enhanced heat transfer and resulting reduced fan power requirement. The condenser Coil incorporates GUNTERS patented floating coil construction, eliminating tube failure at the tube plates, with resultant refrigerant loss and thus ensuring long trouble free service life.



• STANDARD FEATURES

- Robust Construction
- Rifle Bore Tube Evaporator
- Wide Evaporator Fin Spacing
- High Efficiency Hermetic Compressors
- Multi Circuit Evaporator for Capacity Control
- Dual Stainless Evaporator Fans with Speed Control for constant Volume
- Double Skin Evaporator with Stainless steel inner skin
- Minihelic gauges
- 50mm Primary Washable Pleated Filter
- 300mm Secondary Pleated Filters
- Pressure Operated Head Pressure Control
- Patented Floating Coil Condenser
- RAL-7032 Kiesel grey colour
- Electrical package with Microprocessor Control
- Electrode immersion type humidifier

• OPTIONAL FEATURES

- Cu/Cu/Ss Condenser Coil

NOMENCLATURE

GOT - 25

Legacy

Operating

Theatre

Nominal cooling capacity in kW

Note: Any / All specifications subject to change without notice

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HC Manufacturers (Pty) Ltd

AIR HANDLING UNIT CHILLED WATER

GOT

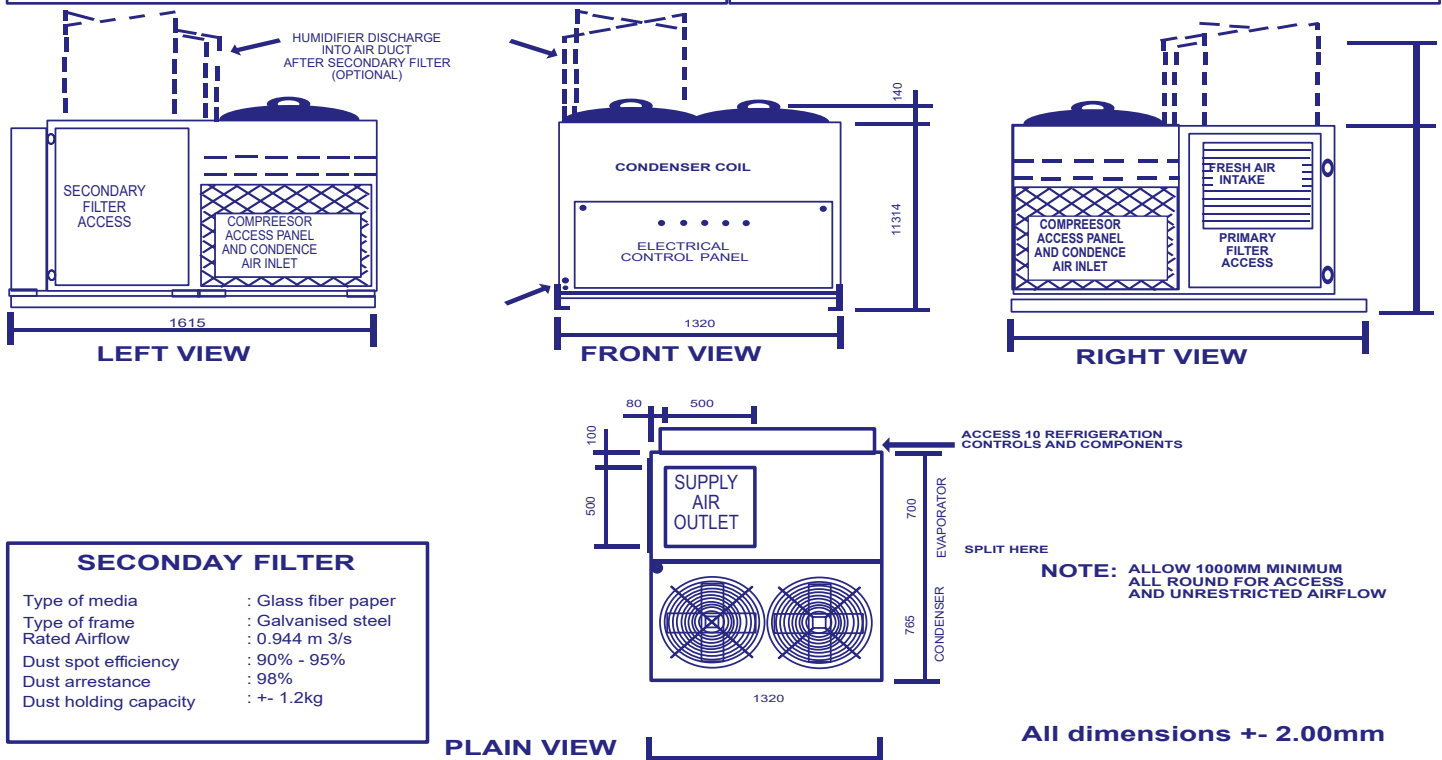
SL-GOT - 02/2000

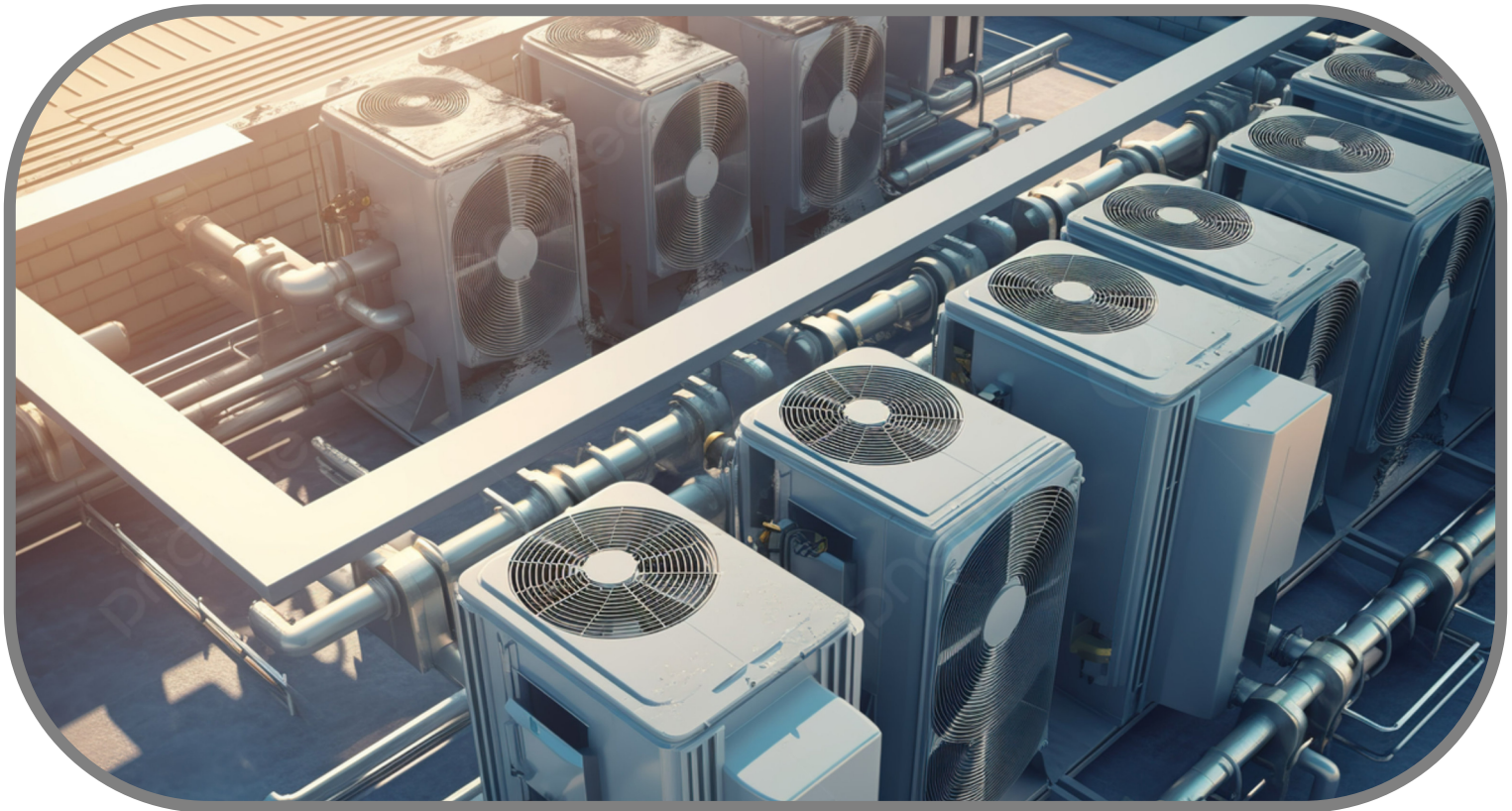
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Technical & Physical Data

MODEL GOT			15	25
Cooling Capacity	Total	kW	15.1	26.2
Reheating Capacity	Total	kW	9.00	18.0
Pre-heat for low ambient (optional)	Total	kW	7.5	7.5
Evaporator Fan	Airflow	m ³ /s	0.40	0.70
	Fan Model / no. off		AT 9-9 / 2	AT 9-9 / 2
	Fan Speed	rpm	Variable	Variable
	Ext static available	Pa	100	300
Evaporator Coil	Size of motor	kW	1.1	1.5
	Face Area	m ²	0.32	0.32
	No. of Rows/FPI		6/6	6/10
Condenser Fan	No. of Rows/FPI	m/8	1.75	2.20
	Airflow	m ³ /s	2.00	2.92
	Fan Model / No. off		FB050 / 1	FB050 / 2
Condenser Coil	Fan Speed	rpm	Variable	Variable
	Size of motor	kW	0.37	0.37
	Face Area	m ²	0.89	0.89
	No. of Rows/FPI		4/12	4/12
Compressor	Face Velocity	m/8	2.24	3.28
	Make & Model		Maneurop MT36	Maneurop MT64
			Maneurop MT22	Maneurop MT32
Filter - Primary	Size	mm	600 x 600 x 50	600 x 600 x 50
	Area	m ²	0.36	
	Face Velocity	m/8	1.1	1.9
Filter - Secondary	Size	mm	500 x 500 x 300	500 x 500 x 300
	Area	m ²	0.25	0.25
	Face Velocity	m/s	1.6	2.8
Mass (Unpacked)	Maximum FLC	kg	600	650
Electrical		A		60

Based on: Sea-level & 35°C DB, 23°C WB





HC Manufacturers (Pty) Ltd

AIR CONDITIONING PRODUCTS

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