



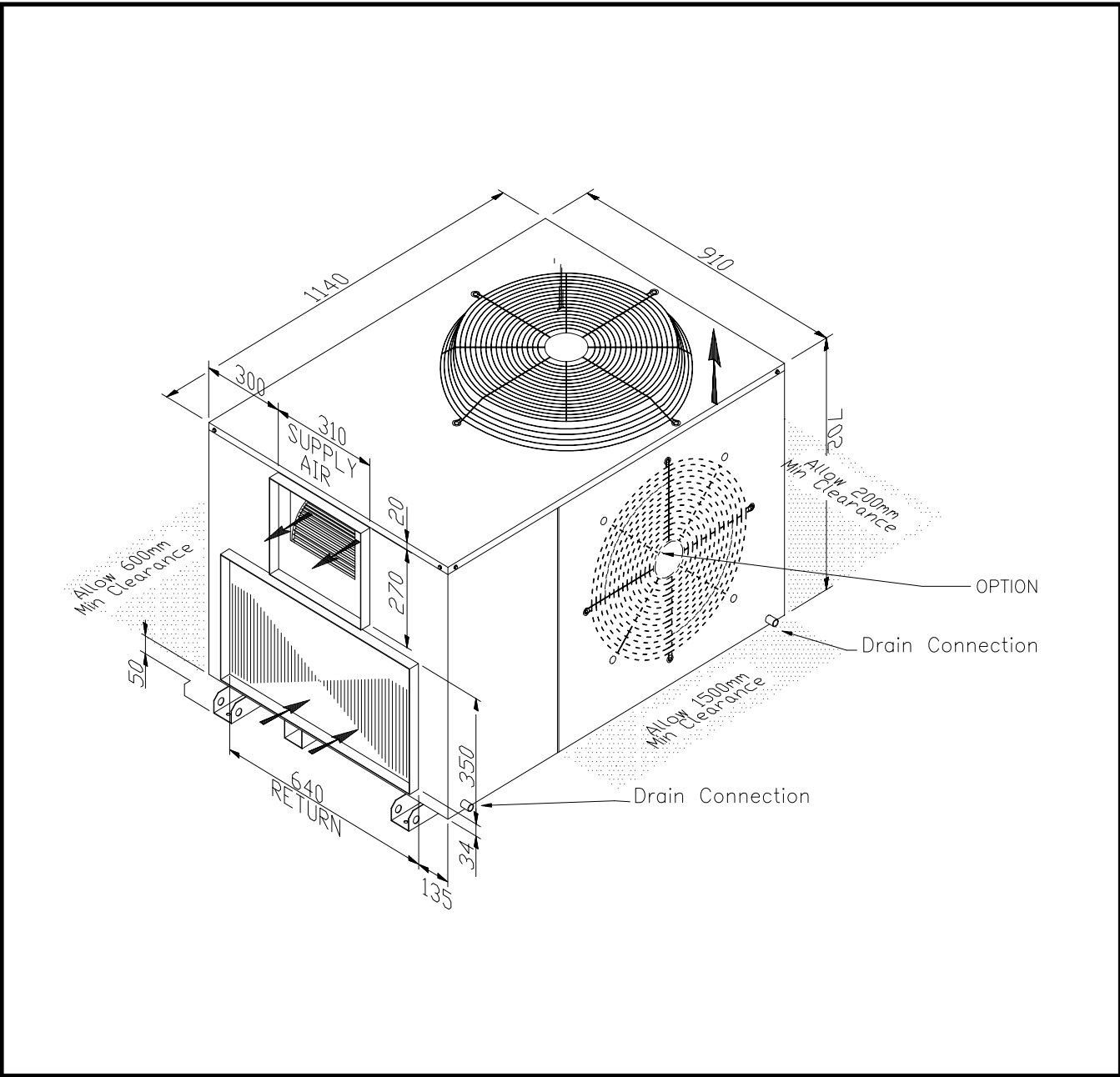
air conditioning
enviro3



Model No:	BENDX-1T-RP-10RV
Nominal Capacity	33900 BTU 9.9 kW
Nominal Air Flow	1100 CFM 520 I/S

PACKAGED SYSTEM HEAT PUMP

DIMENSIONAL DETAILS - UNDER AND OVER SUPPLY AND RETURN CONNECTIONS



CONDENSED TECHNICAL SPECIFICATION

TOTAL COOLING CAPACITY ¹	9.9 KW (33900 BTU)	NORMAL MAXIMUM AMPS ³	13.2 Amps.
SENSIBLE COOLING CAPACITY	7.9 KW (26900 BTU)	UNIT WEIGHT	118 kgs
HEATING CAPACITY ²	10 kW (34130 BTU)	INPUT POWER (Cool ¹ /Heat ²)	3.3/3.0 kW

¹ At 27°C DB/19°C WB entering air temperature and 35°C ambient temperature (does not include supply fan kW).
² At 21°C entering air temperature and 8°C ambient temperature (does not include supply fan kW).
³ Normal maximum amps not to be used to calculate running costs.



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COOLING CAPACITY

UNIT PERFORMANCE DATA

INDOOR COIL ENTERING AIR TEMPERATURE °C		OUTDOOR COIL ENTERING AIR TEMPERATURE °C											
		30			35			40			45		
		Total Cap kW	Sens Cap kW	LWB Deg C	Total Cap kW	Sens Cap kW	LWB Deg C	Total Cap kW	Sens Cap kW	LWB Deg C	Total Cap kW	Sens Cap kW	LWB Deg C
DB	WB												
21	17	9.7	5.8	11.0	9.2	5.6	11.2	8.7	5.4	11.5	8.2	5.4	11.8
	18	10.0	5.2	11.4	9.5	5.0	12.4	9.0	4.8	12.6	8.5	4.7	12.9
	19	10.3	4.6	13.0	9.8	4.4	13.2	9.3	4.2	13.5	8.8	4.1	13.7
	20	10.6	4.0	14.0	10.1	3.8	14.2	9.6	3.6	14.5	9.2	3.5	14.7
23	17	9.7	7.0	10.9	9.2	6.8	11.2	8.7	6.6	11.5	8.2	6.4	11.8
	18	10.0	6.4	12.1	9.5	6.2	12.3	9.0	6.0	12.6	8.5	5.8	12.9
	19	10.3	5.8	12.9	9.8	5.6	13.2	9.3	5.4	13.5	8.8	5.2	13.7
	20	10.6	5.2	13.9	10.1	5.0	14.2	9.6	4.8	14.5	9.2	4.6	14.7
	21	11.0	4.6	15.0	10.5	4.4	15.2	9.9	4.2	15.5	9.5	4.0	15.7
25	17	9.7	8.0	10.9	9.3	7.7	11.12	8.8	7.5	11.4	8.4	7.3	11.7
	18	10.0	7.8	12.0	9.5	7.3	12.3	9.0	7.1	12.5	8.5	7.0	12.8
	19	10.3	7.5	12.9	9.8	6.8	13.2	9.3	6.5	13.5	8.8	6.4	13.7
	20	10.6	7.2	13.9	10.1	6.2	14.2	9.6	6.0	14.5	9.2	5.8	14.7
	21	11.0	6.9	15.0	10.5	5.5	15.7	9.9	5.3	15.5	9.5	5.2	15.7
27	17	9.8	8.9	10.8	9.4	8.7	11.1	9.0	8.3	11.3	8.6	8.1	11.5
	18	10.1	8.5	11.9	9.6	8.3	12.2	9.1	8.1	12.4	8.7	7.9	12.7
	19	10.3	8.1	12.9	9.9	7.9	13.2	9.3	7.7	13.5	8.8	7.6	13.7
	20	10.6	7.5	13.9	10.1	7.3	14.2	9.6	7.1	14.5	9.1	7.0	14.7
	21	11.0	6.8	15.0	10.5	6.6	15.2	9.9	6.4	15.5	9.5	6.3	15.7
29	17	10.0	10.0	10.8	9.6	9.6	11.0	9.2	9.2	11.3	8.8	8.8	11.5
	18	10.2	9.4	11.8	9.8	9.1	12.0	9.3	8.8	12.4	8.9	8.6	12.5
	19	10.4	9.1	12.9	9.9	8.9	13.2	9.4	8.6	13.5	9.0	8.4	13.7
	20	10.6	8.6	13.9	10.1	8.4	14.2	9.6	8.2	14.5	9.2	8.1	14.7
	21	11.0	8.0	14.8	10.4	7.8	15.1	9.9	7.6	15.5	9.5	7.4	15.5
31	17	10.4	10.4	10.4	10.0	10.0	10.7	9.5	9.5	10.9	9.2	9.2	11.1
	18	10.4	10.3	11.7	10.0	9.9	11.9	9.6	9.5	12.2	9.2	9.2	12.4
	19	10.6	9.9	12.8	10.1	9.6	13.0	9.6	9.3	13.3	9.3	9.1	13.5
	20	10.7	9.7	13.8	10.2	9.4	14.1	9.7	9.2	14.4	9.3	9.0	14.6
	21	11.0	9.1	15.0	10.5	8.9	15.2	9.9	8.7	15.5	9.5	8.5	15.7

Air Quantity correction factors should be applied to the above capacities to adjust for reduced or increased air flow.

AIR QUANTITY CORRECTION FACTORS-COOLING					
% Rated Air Quantity					
Capacity	80	90	100	110	120
Total Cooling	0.95	0.98	1	1.02	1.04
Sensible cooling	0.89	0.95	1	1.05	1.09

HEATING CAPACITY

OUTDOOR DB °C	0	4	8	12	18
HEATING CAP kW	8.6	9.0	10.0	10.7	12.3

OUTDOOR DB °C	0	4	8	12	18
HEATING CAP kW	8.6	9.0	10.0	10.7	12.3

HEATING PERFORMANCE CORRECTION

%Rated Air	Multiplie	Return air °C	Multiplie	Outdoor air DB	Approx defrost
80	0.93	15	1.05	0	0.8
90	0.97	18	1.03	2	0.78
100	1	21	1	4-6	0.75
110	1.03	24	0.97	7	0.87
120	1.05	27	0.95	8	1

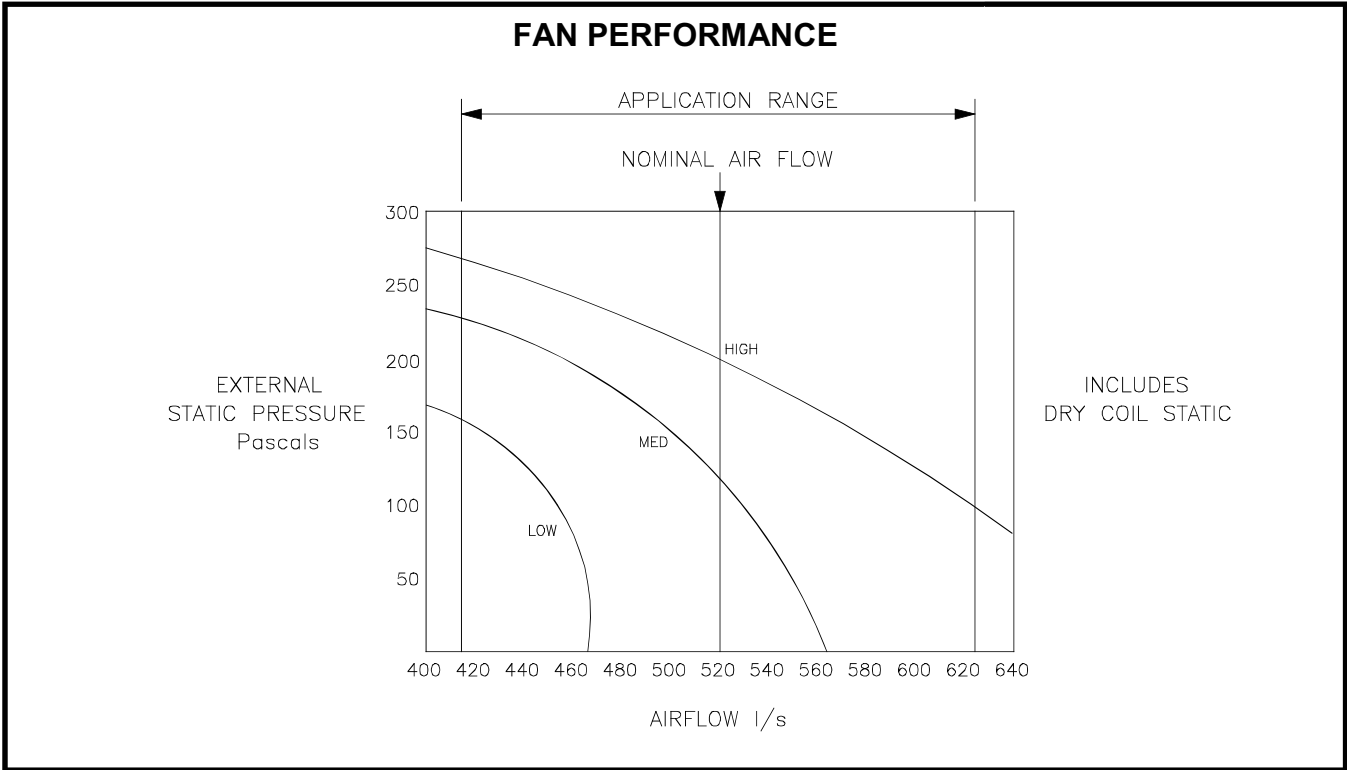
Heating capacities are based on 21 °C D.B. return air at Nominal Evaporator air flow with the outdoor coil free of ice. Apply multipliers from the heating correction table to allow for defrost cycle and airflow selection other than nominal air flow.

Frost accumulation will have the greatest effect at ambient temperatures between 4 to 6 °C. Above 8°C defrost is not usually required and a factor of 1.0 may be applied.



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UNIT PERFORMANCE



SPECIFICATION

EVAPORATOR

FAN

TYPE	Forward Curve Centrifugal
DIAMETER x WIDTH	241 x 241 mm
DRIVE	Direct Drive Or Belt Drive (Option)
MOTOR TYPE	1 Phase
MOTOR V / Ph / Hz	220-240 / 1 / 50
MOTOR OUTPUT POWER	358 watts

COIL

TYPE	Copper Tube /Alum Fin
FACE AREA	0.23m ²
ROWS	4
FINS PER METRE	472
TUBE TYPE	3/8 (Option- Rifle Bore)

CONDENSER

FAN

TYPE	Axial
NUMBER OF FANS	1
NUMBER OF BLADES	4
DIAMETER x PITCH	508 x 39 ⁰
DRIVE	Direct
MOTOR TYPE	1 Phase ,3 Phase
MOTOR V / Ph / Hz	240 / 1 / 50, 415 / 1 / 50
MOTOR OUTPUT POWER	150 watts

COIL

TYPE	Copper Tube /Alum Fin
FACE AREA	0.38m ²
ROWS	4
FINS PER METRE	472
TUBE TYPE	3/8 (option- Rifle Bore)

The propeller type axial fans fitted to the condenser will not accept any external resistance to air flow. If duct connections to or from the condenser are required, the ducting must be of negligible loss or optional higher performance axial flow or centrifugal fans must be fitted.



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UNIT PERFORMANCE DATA

SPECIFICATIONS

COMPRESSOR

TYPE	Scroll
NUMBER PER UNIT	1
COMPRESSOR V / Ph / Hz	415 / 3 / 50
INPUT POWER (nom)	2.9 kW
NORMAL MAX AMPS	5.4
LOCKED ROTOR AMPS	46.0

REFRIGERATION SYSTEM

REFRIGERANT TYPE	R290
NOM CHARGE REQD (Kg)	Max Charge Per Circuit 2.5kg
EXPANSION DEVICE	Bi-Flow TX Valve Externally Equalized
FILTER DRIER	Optional
SIGHT GLASS	Optional

ELECTRICAL

POWER REQUIREMENTS	3 Phase 380-415 volt 50 Hz
NORMAL MAX AMPS	13.2
ISOLATOR SELECTION	16 amp
HRC FUSE SELECTION	16 amp M20

SERVICE & FILTERS

SERVICE CONNECTIONS	6 mm Shredder valves
FILTER RAIL WIDTH	50 mm (optional extra)
FILTERS	To be provided by installer

CONTROLS & SAFETY DEVICES

HIGH PRESSURE SWITCH SETTING	2800 kPa
LOW PRESSURE SWITCH SETTING	300 kPa
COMPRESSOR TIMER	VARIABLE
CONTROL CIRCUIT BREAKER	10 amp
INDOOR FAN OVERLOAD	Internal
OUTDOOR FAN OVERLOAD	Internal

INSULATION

TYPE	Closed cell foil reinforced P.E.
CONDUCTIVITY	0.032 w/mK @ 20°C (JISA1413)
FIRE RATING - IGNITABILITY	0
- SPREAD OF FLAME	0
- HEAT EVOLVED INDEX	0

SAFETY REQUIRED UNDER AS1677

THERMAL PLUG	YES
PRESSURE RELIEF VALVES	YES

CONSTRUCTION

STRUCTURE	1.5 / 1.0 mm EG
PANELS	1.5 / 1.0 mm EG
SURFACE FINISH	Polyester Powder Coat
SUPPORT FEET	50 x 50 x 1.5 with lifting holes

FEATURES & OPTIONS

STANDARD FEATURES

Overload protection on all motors
Filter Drier
Compressor run timer
Coin locks on access doors
Liquid line valve
(for full options refer options list)

OPTIONS

Acoustically Insulated compressor compartment
24 Volt control
Suction Accumulator
Heat Pump
Expansion valve
Centrifugal Condenser fan
Sight glass

To ensure optimum efficiency and reliable operation care must be taken to match unit capacity and heat load requirements. Selection of unit must not be made outside of the range shown in the unit performance data. For operation on cooling below 20°C a head pressure control system must be installed.

Benson supports a policy of continuous product improvement. In line with this policy specifications and designs are subject to change without prior notice.