



# SHELTON AIR COOLED CHILLERS SAE-AC2 with *Hot Gas Bypass*

- Designed Cooling Capacity of 5.3 kW
- Outlet temperature preset of 7°C
- Temperature Stability of up to +/- 0.5°C
- Panasonic Rotary Compressor
- Hot Gas Bypass Technology
- Stainless steel chilled water pump
- Stainless steel plate type evaporator
- Built in expansion water tank
- Single speed low noise condenser fan
- Proudly assembled in Singapore



## COMPRESSOR

- 1 No of Compressor ( DOL – Fixed speed )
  - Panasonic Low Noise Rotary Compressor
  - Power input : 1.77 kW / 7.84 A
- Single refrigerant circuit



## WATER CIRCUIT

- 1 No of Circulation Water Pump
  - Stainless Steel 304 Horizontal Multistage Centrifugal
  - Duty Flow rate : 4 US GPM ( 15 L/min )
  - Duty Pressure : 58 PSI ( 4 Bar )
  - Power input : 0.55 kW / 3.65 A
- 16L Stainless Steel Insulated Buffer Water Tank



## AIR COOLED CONDENSER

- Single Speed Axial Fan
  - 400mm Diameter, 1380 RPM low noise fan
  - Air flow of 2400 m<sup>3</sup>/hr
  - Power input : 0.18 kW / 0.82 A
- Optimized Copper Tube Aluminum Fin Ambient Air Cooled Condenser



## HEAT EXCHANGER

- Stainless Steel 316 Copper Brazed Plate Type
- Efficient heat transfer with small footprint



## POWER REQUIREMENTS

Incoming Power : 1 PH 220V 50Hz  
Total Input Power : 2.5 kW  
Total Current : 12.3 A  
Recommended Breaker : 15A 3 Pin Plug



## CONFIGURATIONS

Adjustable Temperature Range : 7°C - 35°C  
Capacity Control : 0% / 100% via Hot Gas Bypass  
Inlet Connection : DN15 ( 0.5 Inch )  
Outlet Connection : DN15 ( 0.5 Inch )  
Length : 650 mm  
Width : 550 mm  
Height : 850 mm  
Weight : 100 kg



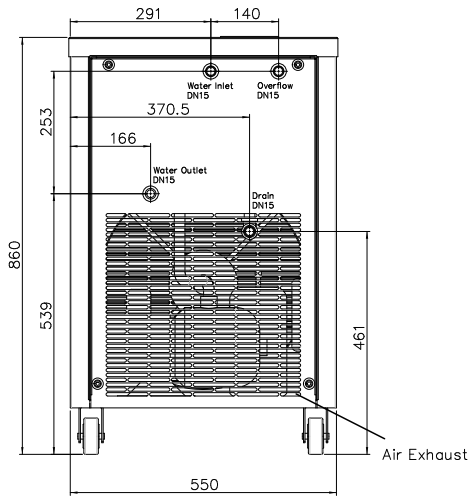
## SAFETY PROTECTION DEVICES

High Refrigerant Discharge Pressure Switch  
Low Refrigerant Discharge Pressure Switch  
Condenser Overload  
Water Pumps Overload  
Compressor Overload  
Anti Freeze Backup for Primary Sensor  
Pressure Differential Flow Switch  
Automatic over pressure relief valve

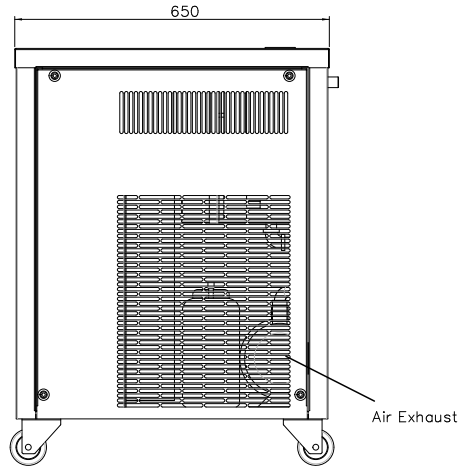
Model	SAE-AC2
Refrig. Capacity @ 7°C	5.3 kW 18,000 Btu 4500 Kcal
Refrig. Capacity @ 15°C	7.34 kW 24,930 Btu 6,233 Kcal
Temperature Range	5°C - 35°C up to -20°C option avail.
Temperature Stability	+/- 0.5°C up to +/- 0.1°C option avail.
Power Requirement	1Ph 200V 50Hz 15A plug 3 Pin
Consumed Power (Total)	2.5 kW 12.3 A
Capacity Control	Hot Gas Bypass
Refrigerant	R22 / R407c
Compressor Type Power Input	1 No of Rotary, Fixed Speed 1.77 kW / 7.84 A
Condenser Fan Type Power Input	1 No of Quiet Axial Fan 0.18 kW / 0.82 A
Water Pump Type Power Input Performance	SS304 Centrifugal Pump 0.55 kW / 3.65 A 4.0 US GPM @ 58 PSI (15.1 L/min @ 4 Bar )
Reservoir Vol	Insulated Welded Tank of SS304 grade, of 16L capacity
Evaporator	Copper Brazed, with SS316 Plates
Water Inlet / Outlet Connection	DN15 (0.5 Inch)
Dimensions	650 mm (Length) 550 mm (Width) 850 mm (Height)
Weight	100 kG

# CHILLER DIMENSIONAL DRAWING

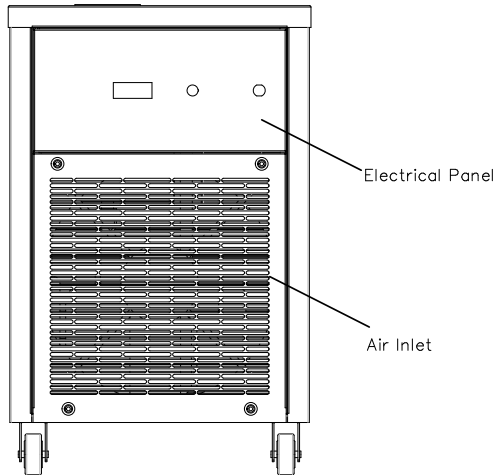
BACK VIEW



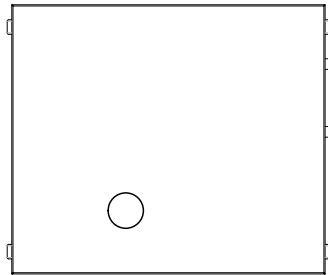
SIDE VIEW



FRONT VIEW

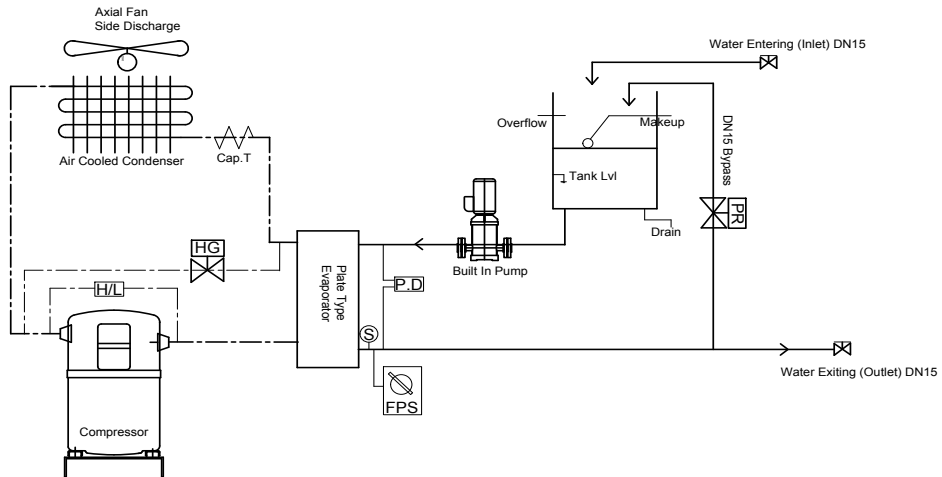





TOP VIEW










## Schematic Drawing

Applicable for : SAE-AC1, SAE-AC2



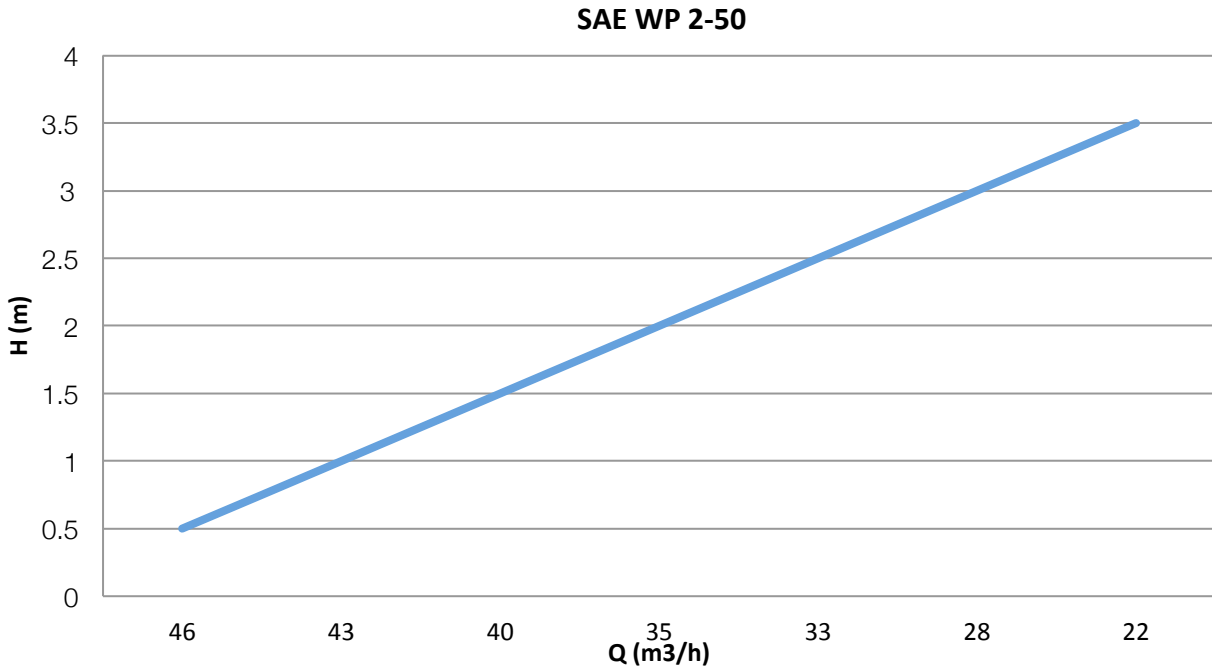
-  Refrigerant High / Low Pressure Switch
-  Hot Gas Bypass Solenoid Valve
-  Capillary Tube

-  Freeze Point Sensor
-  Water Temperature Sensor (Digital)
-  Water Isolation Valve
-  Water Over Pressure Relief Valve
-  Flow Switch ( Pressure Differential )

-  Refrigerant Circuit
-  Water Circuit

## Hydraulic Performance

Applicable for : SAE-AC1, SAE-AC2



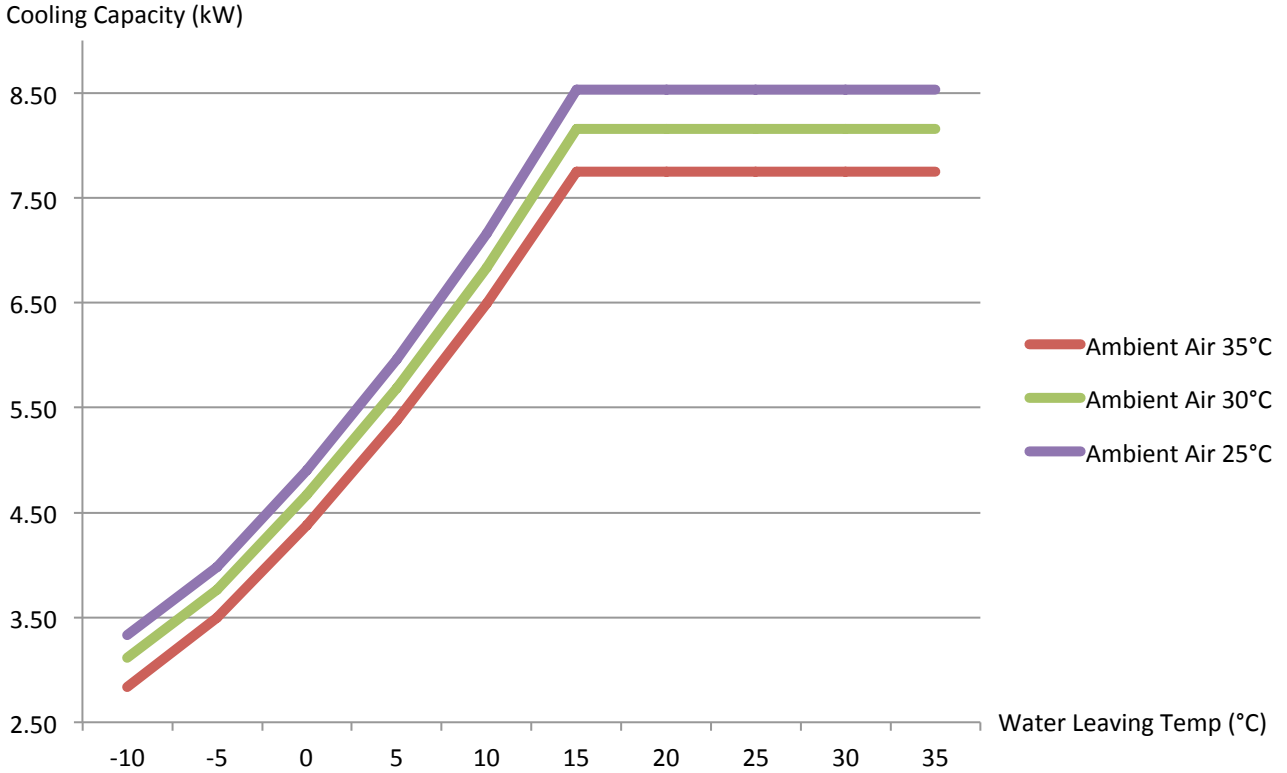
### SAE WP 2-50

**0.55 KW / 3.65 A**

Q (m³/h)	0.5	1.0	1.5	2.0	2.5	3.0	3.5
H (m)	46	43	40	35	33	28	22

## Water Leaving Correction

Applicable for : SAE-AC2



### Ambient Entering Air Temperature

		Ambient Entering Air Temperature		
		35°C	30°C	25°C
SAE-AC1	LWT (°C)			
	-10	2.84	3.11	3.33
	-5	3.50	3.76	3.98
	0	4.38	4.67	4.90
	5	5.38	5.68	5.96
	7	5.80	6.12	6.42
	10	6.49	6.83	7.16
	15	7.75	8.15	8.53
	20	7.75	8.15	8.53
	25	7.75	8.15	8.53
	30	7.75	8.15	8.53
35	7.75	8.15	8.53	



# NOTES :

---

## Shelton (S) Pte Ltd

### Contact Us

Phone +65-6745 5553  
Fax +65-6741 6038  
Address 5A East Point Terrace, Kaki Bukit Road 3  
Singapore 417826  
Website [www.shelton.com.sg](http://www.shelton.com.sg)

