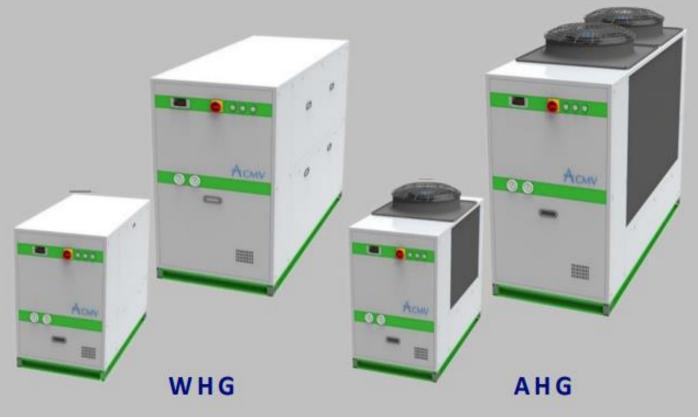


"Better Buildings. Better World"







HEAT GENERATOR HEAT RECOVERY CHILLER HEAT PUMP HRU

ENERGY EFFICIENT HUMIDITY CONTROL SOLUTIONS

# ACMV HEAT GENERATOR MECHANICAL DEHUMIDIFIER Heat Recovery Chiller

## Water Cooled: For Heating & Cooling Process Capacity range : 5 - 500 kW

ACMV P L Water Cooled Heat Generators are compact units are designed for use in HVAC and process industry, supplied with hermetic scroll or reciprocating compressors, high efficiency heat exchangers and options of capacity controls to cater wide range of heating requirements.

The 50/60 Hz version covers wide operating conditions range well suited to precise controls in air-conditioning and process cooling, while saving energy and protecting the environment.

ACMV Heat Generators are fitted with heat exchangers to generate hot water and recover the cooling for commercial, Health institutions and industrial applications and to meet requirements of ASHRAE 15. Heat exchangers of cleanable and potable type is optional.

Heat exchangers can be supplied as vented cleanable double wall, single wall, and brazed type as options.

Capacity Control options available from On-Off, and infinite VFD control 40 to 100% and CRII type from 10-100%.

ACMV Heat Generators are designed to generate the exact heat required and recover the cooling.

## Air Cooled: For Heating & Cooling Process Capacity range 7 - 500 kW

ACMV P L Air Cooled Heat Generators are compact, low noise fans units are designed for use in HVAC and process industry, supplied with hermetic scroll or reciprocating compressors, high efficiency finned tube air cooled heat exchangers and options of capacity controls to cater wide range of heating requirements.

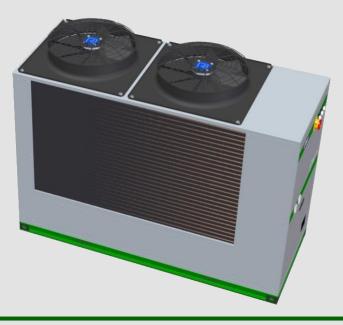
The 50/60 Hz version covers wide operating conditions range well suited to precise controls in air-conditioning and process cooling, while saving energy and protecting the environment.

ACMV Heat Generators are fitted with heat exchangers to generate hot water and recover the cooling for commercial, Health Institutions and industrial applications and to meet requirements of ASHRAE 15.

Heat exchangers to generate hot water and recover cooling can be supplied as vented cleanable double wall, single wall, and brazed type as options.

Capacity Control options available from On-Off, and infinite VFD control 40 to 100% and CRII type from 10-100%. VSD driven fans are optional.

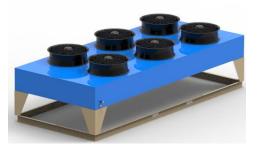
ACMV Heat Generators are designed to generate the exact heat required and recover the cooling.

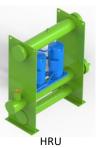


## **SPECIFICATIONS**

WHG Heat Generator	Water Cooled Models																		
	W007	W010	W012	W018	W030	W035	W045	W050	W060	W070	W080	W090	W100	W120	W135	W150	W170	W200	W250
Nominal Cooling Capacity, kW	7	10	12	18	30	35	45	50	60	70	80	90	100	120	135	150	170	200	250
Power Input, kW	1.7	2.4	2.8	4.3	6.9	8.1	10.8	12.5	14.6	16.1	18.8	23.9	24.8	29.3	31.9	37.1	42.3	49.1	59.5
Heating Capacity, kW	8.7	12.4	14.8	22.3	36.9	43.1	55.8	62.5	74.6	76.1	98.8	113.9	124.8	149.3	166.9	187.1	212.3	249.1	309.5
COP (Cooling)	4.1	4.2	4.2	4.2	4.3	4.3	4.2	4.0	4.1	4.3	4.3	3.8	4.0	4.1	4.2	4.0	4.0	4.1	4.2
COP (Reheating recover cooling)	9.23	9.33	9.57	9.37	9.69	9.64	9.33	9.0	9.21	9.1	9.51	8.53	9.1	9.2	9.46	9.1	9.03	9.14	9.4
Power Supply	400VAC +/-10%, 3 Phase / 50 Hz																		
Sound Pressure Level	52	52	53	55	56	56	55	54	54	54	56	57	59	54	56	57	58	59	61
Dimensions, meters																			
Width	0.65	0.65	0.67	0.67	0.78	0.78	0.78	0.78	0.87	0.87	0.87	0.87	1.18	1.18	1.28	1.28	1.28	1.35	1.5
Depth	1200	1200	1.35	1.35	1.88	1.88	1.88	1.88	2.28	2.28	2.28	2.28	2.8	2.8	3.1	3.1	3.1	3.65	3.65
Height	1.1	1.1	1.3	1.3	1.35	1.35	1.35	1.35	1.95	1.95	1.95	1.95	2.05	2.05	2.05	2.05	2.05	2.05	2.05
Installed Weight, kg (approx. w/ Pump)	298	320	358	378	529	696	704	725	978	1061	1094	1105	1438	1523	1731	1780	1816	2297	2317
Water Connections (DN)																			
Condenser	25	25	32	32	40	40	40	40	50	50	50	50	65	65	65	65	80	80	90
Evaporator	25	25	32	32	40	40	40	40	50	50	50	50	65	65	65	65	80	80	90

AHG Heat Generator	Air Cooled Models																		
	A005	A007	A010	A015	A020	A030	A035	A040	A045	A050	A060	A070	A080	A090	A100	A115	A135	A160	A180
Nominal Cooling Capacity, kW	5	7	9.2	14.2	22	27.5	34	40	44	50	59	68	81	92	102	114	137	161	178
Power Input, kW	2.0	2.9	3.73	5.6	8.9	10.2	12.1	14.8	16.9	20.29	22.7	27.2	27.9	32.0	39.2	43.8	52.7	57.5	63.6
Heating Capacity, kW	7.0	9.9	12.93	19.8	30.9	37.7	46.1	54.8	60.9	70.29	81.7	95.2	108.9	124.0	141.2	157.8	189.7	218.5	241.6
COP (Cooling)	2.5	2.41	2.46	2.53	2.47	2.7	2.8	2.7	2.6	2.46	2.59	2.5	2.9	2.87	2.6	2.6	2.6	2.8	2.8
COP (Reheating recover cooling)	6.0	5.82	5.93	6.1	5.94	6.39	6.61	6.4	6.2	5.92	6.19	6.0	6.8	6.75	6.2	6.2	6.2	6.6	6.6
Power Supply	400VAC +/-10%, 3 Phase / 50 Hz																		
Sound Pressure Level	56	57	58	57	59	56	60	60	58	59	62	60	61	63	63	65	65	64	65
Dimensions, meters																			
Width	0.56	0.56	0.6	0.6	0.78	0.78	0.78	0.78	0.88	0.88	0.88	0.88	1.18	1.18	1.28	1.28	1.28	1.28	1.35
Depth	1.2	1.2	1.3	1.3	1.35	1.35	1.88	1.88	1.88	2.28	2.28	2.28	2.9	2.9	3.3	3.3	3.3	3.3	3.5
Height	0.8	0.8	1.35	1.35	1.88	1.88	1.88	1.88	2.28	2.28	2.28	2.28	2.85	2.85	3.31	3.31	3.31	3.55	3.55
Installed Weight, kg (approx. w/ Pump)	210	215	340	352	495	650	670	685	1020	1035	1068	1070	1415	1520	1775	1796	2280	2295	2310
Water Connections (DN)																			
	20	20	25	25	40	40	40	50	50	50	50	65	65	65	65	65	80	80	90







Heat Recovery Chiller

Air Cooled Heat Recovery Chiller Heat Recovery Unit	Models											
Heating Capacity, kW	A150HRDe	A180HRDe	A210HRDe	A250HRDe	A300HRDe	A350HRDe	A400HRDe	A450HRDe				
Nominal Cooling Capacity, kW	150	182	220	283.8	300	354	397	450				
Power Input, kW	40	46	56.8	73.2	80	89.1	100.8	117.3				
Heating Capacity, kW	190	228	278.6	344.4	380	445.8	498	573				
Nominal COP (Cooling)	3.8	3.96	3.9	3.87	3.67	4	3.93	3.88				
Nominal COP (Recover Heat)	4.12	5.15	4.57	4.79	5.00	5.17	4.49	4.53				
Recovery Heat Exchanger, kW	75	91	110	141.9	150	177	198.5	225				
Power Supply	400VAC +/-10%, 3 Phase / 50 Hz											
Total Fan Power Input, kW	14.6	6.98	15.34	15.6	10.03	13.6	31.8	31.84				
Sound Pressure Level	65	58	64	66	62	69	70	70				
Dimensions, meters												
Lenght	3.6	3.6	3.6	4.7	5.8	5.8	5.8	5.9				
Width	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2				
Height	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5				
Installed Weight, kg (approx. w/ Pump)	1768	1872	1976	2478	2565	2876	3368	4132				

Note: Dimension as excluded control panel

#### Notes:

- 1. Noise values are average measure in a free field about 10 meters distance and height of 1.65 m from the unit base level w/ tolerance of +/-2.5 dB
- 2. Units dimensions are nominal and may change based on customer requirements or in adherence to the company's continuous development
- 3. policy.
- 4. ACMV P L reserves the rights to change specifications without prior notice
- 5. Consult the factory for special voltage requirements, 60 Hz frequency
- Capacity indicated are nominal and components would be sized by ACMV P L to meet customer's specifications or with the given operating conditions.





Scroll Compressor

Screw Compressor

Reciprocating Compressor

Tube-in-Tube Cleanable Heat Exchanger

Brazed plate Heat Exchanger

### **BENEFITS**

- Shell & Tube condensers designed for low water pressure drop in order to save pumping energy and costs. Other heat exchanger type available are brazed, shell and tube and coaxial type depending on the customer's application.
- Reduced sound pressure level
- Optional Storage tank compensate load fluctuations can be fitted as option
- Wide operating limits
- Operating pressure up to 10 bar
- Compact design
- Designed for Outdoor
- Water by-pass for safety
- Available for customized solutions
- Easy installation, use and maintenance
- Designed to operate long hours under the most demanding HVAC conditions
- Able to communicate to BMS

### **TECHNICAL FEATURES**

- , Casing are made of G.I. sheets finished with powdered coat as option
- Compact Shell & Tube condensers or brazed type heat exchangers options
- Pressure gauges are built-in
- Pumps are fitted as option. Pumps are supplied only upon customer request.
- ✓ All-In-One PLC control and w/ HMI Factory pre-programmed
- General alarm free contact and remote ON/OFF digital input
- Water flow pressure gauge (option)
- Phase monitor (option)
- Compressor crankcase heaters
- Flow switches for condenser and shilled water
- Electric power supply 400/3/50
- Capacity control : On-Off, and infinite control using VFD (40-100%) and CRII from 10-100%



Multi-Scroll VFD Heat Generator



Screw Compressor VFD Heat Generator

### **ACMV Pte. Ltd.** 59P Tuas South Ave. 1, Singapore (637415) T. +65-68633231 ; F. +65-62805122 <u>www.acmvtech.com</u>



Programmable Logic Controller