



WPR Range

Water Cooled Packaged Units

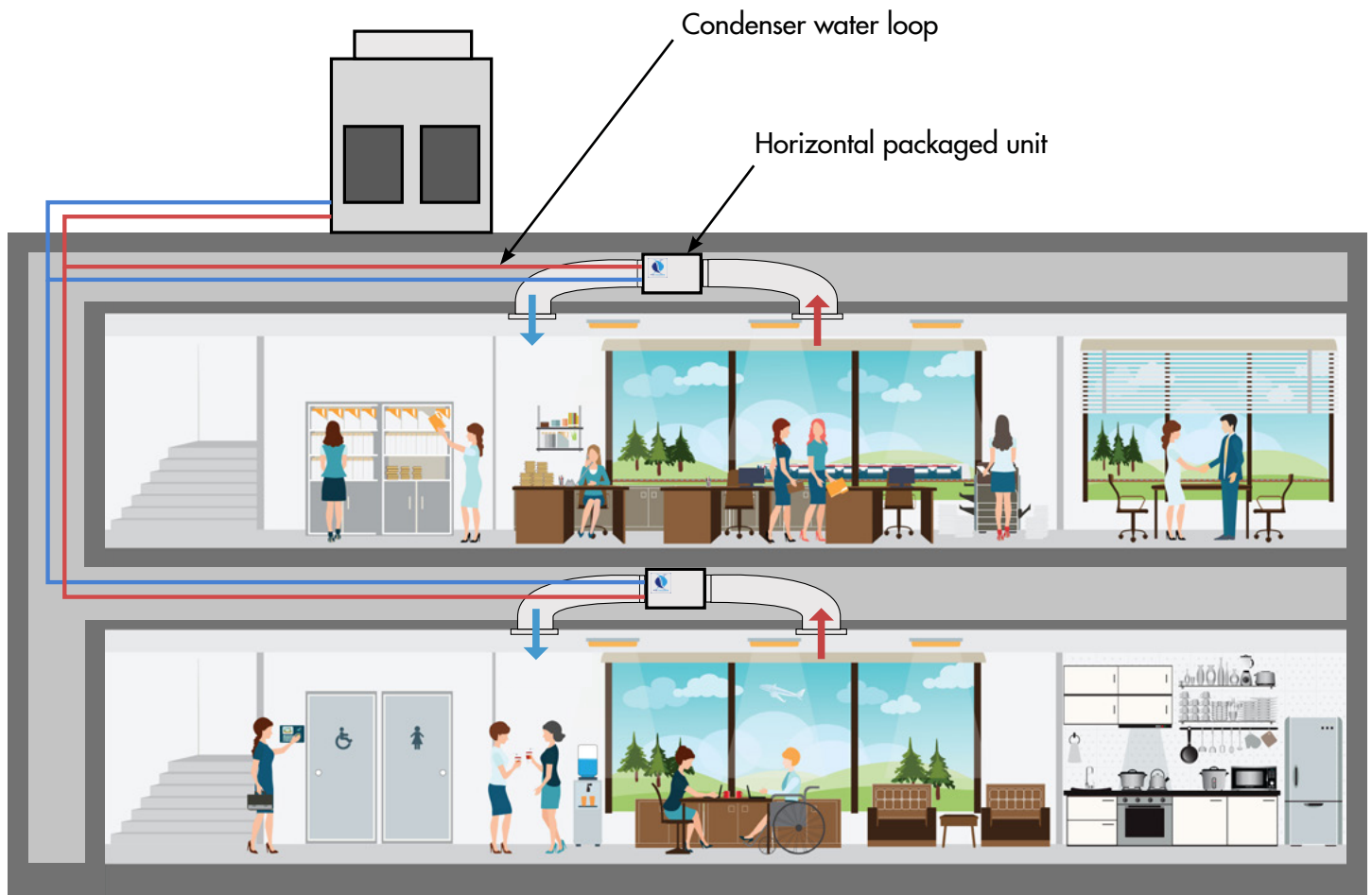


Horizontal Configuration



Vertical Configuration

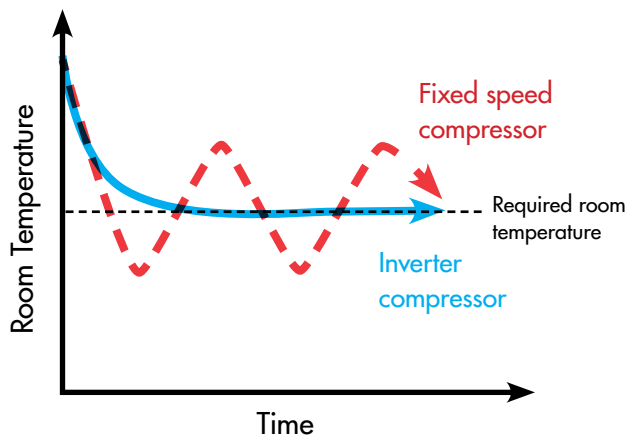
How it Works



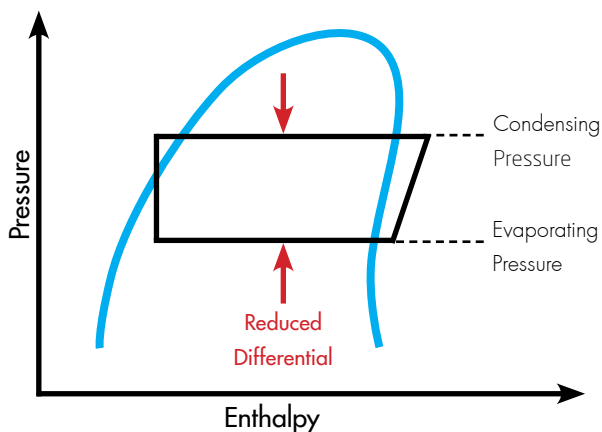
With the packaged configuration, there is no on-site refrigerant line installation. Instead, condenser water is fed directly to the unit.

Air Change water-cooled package units are available in a horizontal configuration for ceiling installation, and a vertical configuration for floor standing installation.

Features



Smooth and steady control of room temperature achieved by inverter compressors.

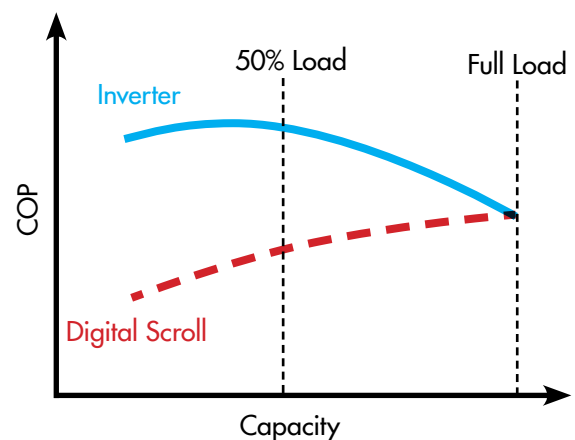


The reduced evaporating to condensing pressure differential during capacity turn-down of inverter compressors greatly improves efficiency.

BLDC Inverter Compressors (Option)

BLDC inverter compressors have a high efficiency permanent magnet motor that can be electronically speed controlled to modulate the refrigerant mass flow rate through the refrigeration circuit. The benefits are:

- Greater temperature control precision with capacity turn-down ratios of typically 5:1
- Significantly improved COP during capacity turn-down because of the reduced condensing to evaporating pressure differential. This results in large overall energy savings as air conditioners typically spend minimal time at design capacity
- Reduced compressor wear due to the largely diminished need for compressor on/off cycling
- Reduced stress on refrigeration pipework due to compressor soft-starting
- No spikes in current draw during compressor start-up due to soft-starting
- Reduced compressor noise during capacity turn-down
- The ability to be used in Variable Air Volume (VAV) installations

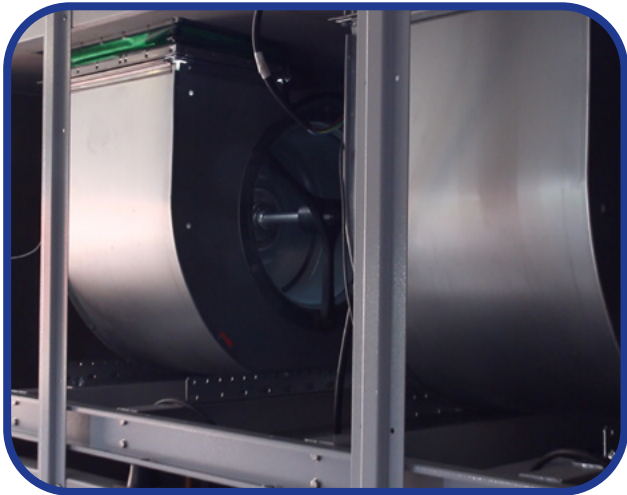


Indicative COP vs. capacity profiles of inverter and digital scroll compressors.

Features

Electric Heater (Option)

Electric element heaters are available as an option. This allows for uninterrupted heating during cold conditions where refrigeration systems require defrost cycles.



EC Supply Fans (Option)

EC plug or EC scroll fans permit variable capacity airflow to the space when required offering optimal energy efficiency.

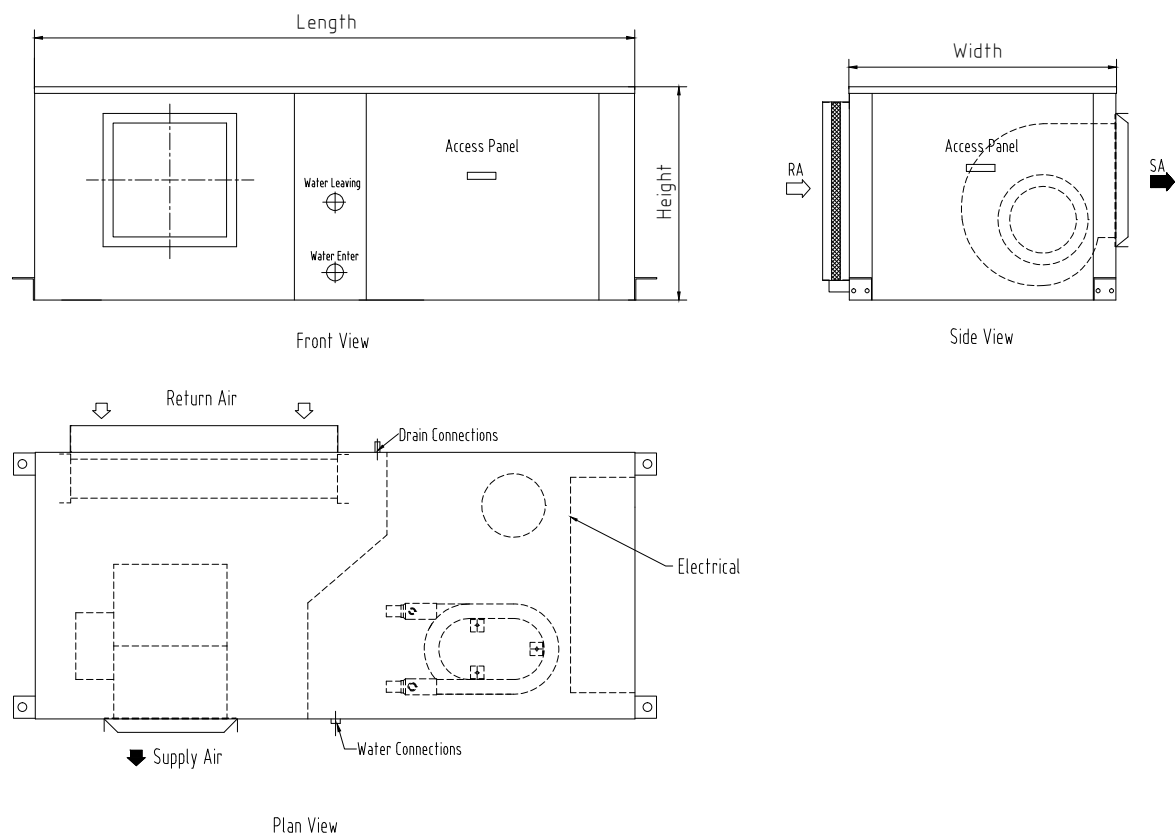
Technical Data

Horizontal Units

	WPR											
Model Number:	4	5	6.5	8	9.5	12	14	16	19	25	30	38
Capacity												
Total Cooling (kW)	4.1	4.8	6.3	8.0	9.3	11.6	13.9	15.8	18.9	23.2	29.6	37.3
Sensible Cooling (kW)	3.4	4.0	5.2	6.6	7.6	9.0	11.7	13.2	15.7	18.6	24.1	30.4
Heating (kW)	4.3	5.1	6.8	8.5	9.9	12.4	14.3	17.0	20.0	23.7	30.4	38.3
Airflow												
Nominal (l/s)	210	260	330	420	475	660	760	850	1000	1150	1500	1900
Power												
Power Supply (V/Ph/Hz)	240 / 1 / 50							415 / 3 / 50				
Full Load Amps (A)	7.9	7.9	11.0	12.5	15.8	20.9	22.9	12.2	15.8	18.8	24.6	31.8
Compressors												
Compressor Type	Fixed Speed Scroll (standard) or BLDC Inverter (option)											
Refrigerant	R410A or R407C											
Fans												
Type	Forward Curve Centrifugal (standard) or EC Plug/Scroll (option)											
Condenser Water												
Nominal Flowrate (l/s)	0.25	0.3	0.4	0.5	0.6	0.7	0.9	1.0	1.1	1.3	1.7	2.2
Cond. Pressure Drop (kPa)	38	38	38	38	40	40	40	40	40	44	48	48
Connection Size (Inch)	3/4	3/4	3/4	1	1	1	1	1	1	1 1/4	1 1/4	1 1/4
EER	3.8	4.0	3.9	4.0	3.6	3.5	3.6	3.8	3.8	4.1	4.2	4.1
Body Dimensions												
Length (mm)	1151	1151	1151	1351	1351	1900	1900		2000	2104	2104	2404
Width (mm)	552	552	552	602	602	800	800	800	800	804	804	854
Height (mm)	420	420	420	480	480	500	500	500	500	540	650	650
Weight (kg)	110	120	120	140	140	170	170	185	185	240	280	340

Notes:

- Tech data is subject to change. Refer to project certified documentation for finalised details.
- Cooling capacity based on: entering air 27/19°C DB/WB and entering water 21°C. Heating capacity based on: entering air 21°C and entering water 21°C



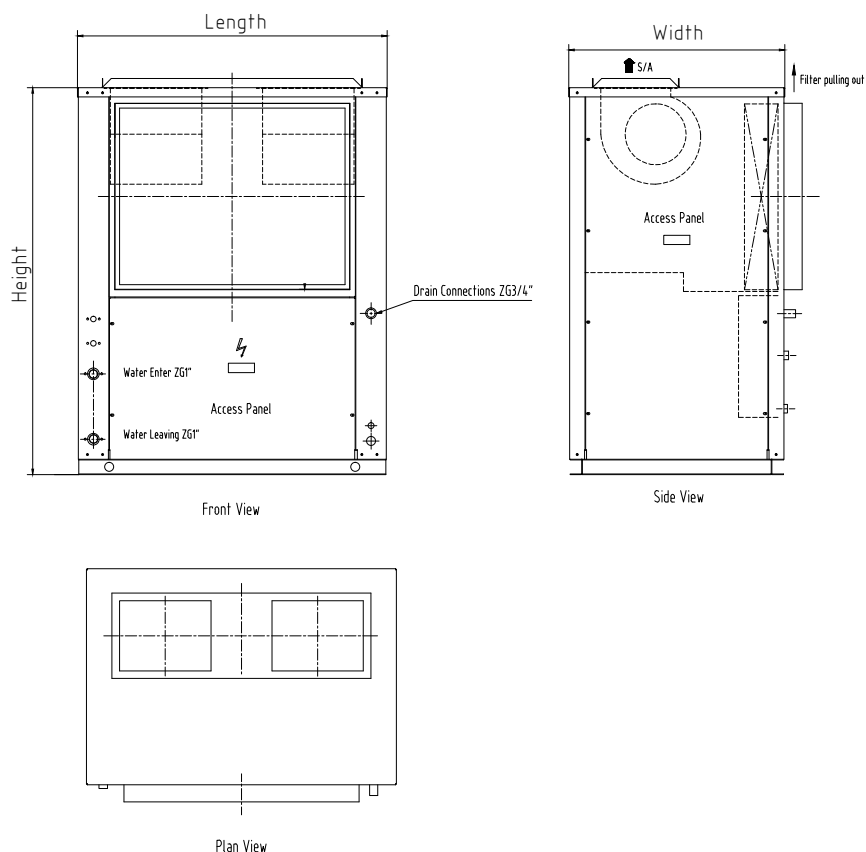
Technical Data

Vertical Units

	WPR																			
Model Number:	4L	5L	6.5L	8L	9.5L	12L	14L	16L	25L	30L	38L	45L	52L	70L	84L	100L	120L	142L	160L	
Capacity																				
Total Cooling (kW)	4.1	4.8	6.3	8.0	9.3	11.6	13.9	15.8	23.2	29.6	37.3	45.9	52.5	69.4	83.5	96.6	118.6	136	155.5	
Sensible Cooling (kW)	3.4	4.0	5.2	6.6	7.6	9.0	11.7	13.2	18.6	24.1	30.4	37.2	41.7	57.1	67.7	79.4	95.3	108.9	127.3	
Heating (kW)	4.3	5.1	6.8	8.5	9.9	12.4	14.3	17.0	23.7	30.4	38.3	46.5	53	70.3	84.3	102.5	120.5	141.7	159.1	
Airflow																				
Nominal (l/s)	210	260	330	420	475	660	760	850	1150	1500	1900	2300	2400	3600	4200	5000	5850	6650	7500	
Power																				
Power Supply (V/Ph/Hz)	240 / 1 / 50								415 / 3 / 50											
Full Load Amps (A)	7.9	10.3	12.5	15.5	16.2	24.5	27.9	12.0	16.4	22.7	26.8	32.4	33.1	47.3	55.8	67.6	81.7	93.3	111	
Compressors																				
Compressor Type	Fixed Speed Scroll (standard) or BLDC Inverter (option)																			
Refrigerant	R410A or R407C																			
Fans																				
Type	Forward Curve Centrifugal (standard) or EC Plug/Scroll (option)																			
Condenser Water																				
Nominal Flowrate (l/s)	0.25	0.31	0.4	0.5	0.6	0.7	0.9	1.0	1.3	1.7	2.2	2.8	3.1	4.2	5.1	5.8	7.3	8.4	9.8	
Cond. Pressure Drop (kPa)	38	38	38	38	40	40	40	40	44	48	48	48	52	52	48	48	50	52	52	
Connection Size (Inch)	3/4	3/4	3/4	1	1	1	1	1	1 1/4	1 1/4	1 1/4	2	2	2	2	2	2	3	3	
EER	3.7	3.69	3.69	4.0	3.6	3.5	3.5	3.7	4.1	4.1	4.0	3.86	4.0	4.0	4.0	4.06	4.06	4.0	4.0	
Body Dimensions																				
Length (mm)	606	606	626	626	626	666	666	1017	1147	1347	1347	1420	1780	1820	1905	2155	2155	2405	2405	
Width (mm)	606	606	626	626	626	666	666	709	709	729	789	750	760	894	1215	1215	1215	1605	1605	
Height (mm)	1320	1370	1470	1470	1470	1620	1620	1270	1270	1270	1532	1850	2100	2102	1675	1925	1925	2152	2152	
Weight (kg)	150	160	160	160	170	240	250	270	300	320	350	580	690	900	1000	1550	1600	1800	1850	

Notes:

- Tech data is subject to change. Refer to project certified documentation for finalised details.
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For more than 20 years, Air Change has provided unique equipment and engineering solutions for local and international clients using our internationally patented heat and energy recovery technology. During that time, we have developed a comprehensive range of energy efficient products to deliver controlled indoor climate conditions satisfying the requirements of all project stakeholders: the developer, the design engineer, and the building's owner and occupants.

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