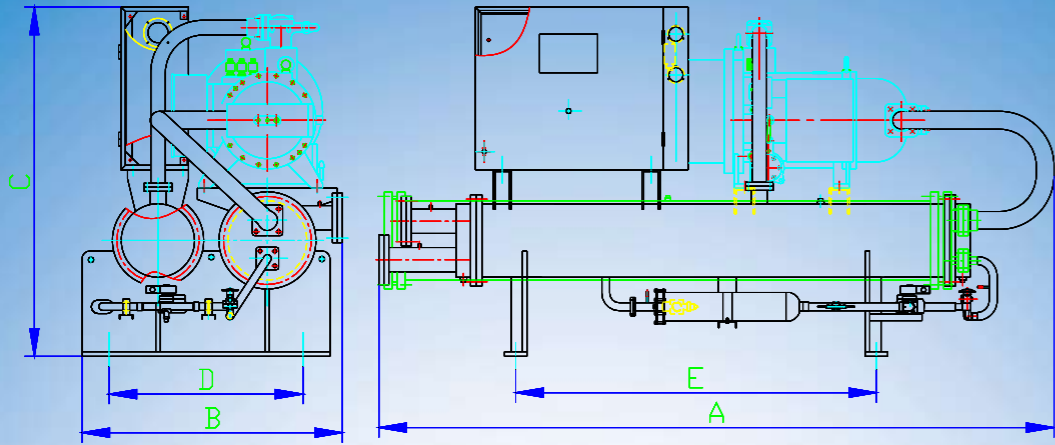


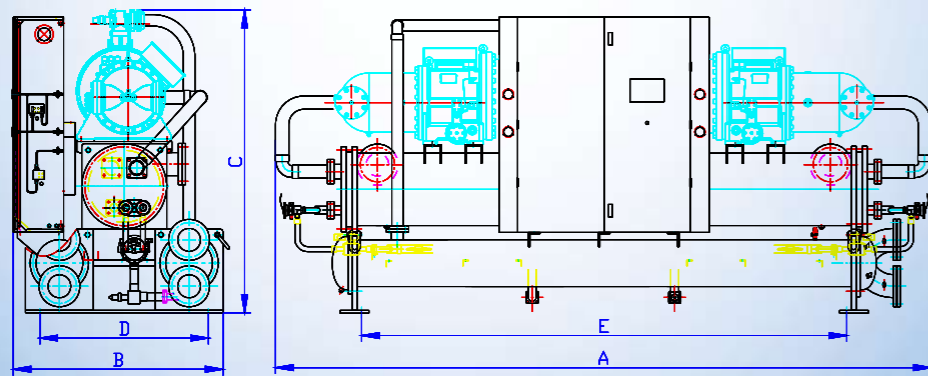
## OVERALL DIMENSIONS

Mod. LAWWHRS 220 ÷ 860



Model	A	B	C	D	E
220	2900	1090	1535	900	1450
280	3190	1085	1540	900	1800
310	2870	1235	1645	1000	1460
420	3020	1245	1650	1000	1650
540	3365	1380	1830	1020	1900
600	3635	1350	1865	1020	2300
660	3120	1390	1930	1200	1730
860	3600	1342	1990	1200	1760

Mod. LAWWHRS 920 ÷ 1800



Model	A	B	C	D	E
920	3860	1495	2040	1101	2665
1020	4160	1495	2040	1101	2965
1200	4360	1495	2040	1101	3165
1250	4280	1520	2080	1101	3065
1320	4380	1500	2055	1171	3165
1430	4545	1520	2070	1191	3365
1610	4630	1550	2195	1232	3365
1800	4645	1550	2195	1232	3465

The technical data in this documents are not binding. ATD air reserves the right to make whatever modifications it deems necessary to improve the product at any time.

**CTA International Group Pty Ltd**  
 65-67 Sheehan Road Heidelberg West Vic 3081  
 Tel: 03-94553991 Fax: 03-94553992  
 E-mail: info@atd.net.au www.atd.net.au



## Water to Water Heat Pump



### LAWWHRS 150 - 1800

Cooling capacity: 150 - 1798 kw  
 Heating capacity: 191 - 2283 kw



### FEATURES

- 18 sizes available ranging from 150 kw to 1798 kw cooling capacity.
- Reusable: using solar energy stored in earth as cooling & heating source.
- Great environmental and economic benefit: no boiler or cooling tower; less space, less CO<sub>2</sub> and less initial investment.
- Wide application as office buildings, hospitals, schools, retail buildings and industrial facilities.
- Hermetic scroll compressor for mod. 150~1800, semi-hermetic screw compressor for mod. 220~1800.
- The refrigerant circuit is complete with filter drier, high and low pressure gauges, solenoid valve, direct expansion valve, high and low pressure switch.
- Shell and tube dry expansion type condenser and evaporator, factory insulated with flexible close cell material.

- The electric panel consists of compressor breaker, compressor contactor, phase sequence relay, control circuit breaker, microprocessor control with function display.
- LCD display, touch screen control panel as standard.
- Automatic operation dramatically reducing maintenance cost thanks to reliable microprocessor system.
- For the units with semi-hermetic screw compressor, an infinitely variable capacity control system that is capable of exactly matching the demand requirement of the system is to be supplied. This system is to provide precise and stable control of supply water temperature over the complete range of operating conditions.

### OPTIONAL

- Electronic expansion valve.
- Desuperheater as optional.
- Electronic controller with BMS system.

### NOMENCLATURE

LA WW H R S C 150

① ② ③ ④ ⑤ ⑥ ⑦

- ① LA: ATD air product
- ② Unit type  
 WW: Water to Water  
 AA: Air to Air  
 AW: Air to Water  
 WA: Water to Air

- ③ C: Cooling only  
 H: Heat pump
- ④ Heat Recovery type  
 -: Without heat recovery  
 R: With heat recovery
- ⑤ Heat exchanger  
 T: Tube in tube type  
 P: Plate type  
 S: Shell and tube type

- ⑥ Refrigerant type  
 A: R410a  
 B: R134a  
 C: R407c
- ⑦ Model

## TECHNICAL DATA

Model		150	180	220	280	310	420
<b>Cooling capacity*</b>	kw	150	178	220	278	310	418
<b>Heating capacity*</b>	kw	191	226	279	353	394	531
<b>Compressor</b>							
Qty/refrigerant circuit	Nr.	2/2	2/2	1/1	1/1	1/1	1/1
Cooling power input*	kw	28.8	34.2	42.3	53.5	59.6	80.4
Heating power input*	kw	42.6	50.6	62.5	79.0	88.1	118.8
Energy adjustment steps	step	2	2	4	4	4	4
Water flow rate in cooling*	m <sup>3</sup> /h	26	31	38	48	53	72
Water flow rate in heating*	m <sup>3</sup> /h	14	17	21	26	29	39
Water side pressure drop	kPa	50	51	45	46	45	44
<b>Condenser</b>							
Water flow rate in cooling*	m <sup>3</sup> /h	14	17	21	26	29	39
Water flow rate in heating*	m <sup>3</sup> /h	26	31	38	48	53	72
Water side pressure drop	kPa	60	55	48	45	47	46
<b>Desuperheater**</b>							
Heating capacity	kw	38	45	55	70	78	105
<b>Noise level***</b>	dB(A)	68	67	69	71	70	72
<b>Dimensions</b>							
Length	mm	3065	3075	2900	3190	2870	3020
Width	mm	925	1040	1140	1135	1285	1295
Height	mm	1530	1500	1585	1600	1705	1700
<b>Net weight</b>	kg	1640	1740	1940	2140	2440	2880

Model		540	600	660	860	920	1020
<b>Cooling capacity*</b>	kw	540	600	660	860	918	1020
<b>Heating capacity*</b>	kw	686	762	838	1092	1166	1295
<b>Compressor</b>							
Qty/refrigerant circuit	Nr.	1/1	1/1	1/1	1/1	2/2	2/2
Cooling power input*	kw	103.8	115.4	126.9	165.4	176.5	196.2
Heating power input*	kw	153.4	170.5	187.5	244.3	260.8	289.8
Energy adjustment steps	step	4	4	4	4	8	8
<b>Evaporator</b>							
Water flow rate in cooling*	m <sup>3</sup> /h	93	103	113	148	158	175
Water flow rate in heating*	m <sup>3</sup> /h	50	56	62	80	86	95
Water side pressure drop	kPa	46	48	45	47	47	50
<b>Condenser</b>							
Water flow rate in cooling*	m <sup>3</sup> /h	50	56	62	80	86	95
Water flow rate in heating*	m <sup>3</sup> /h	93	103	113	148	158	175
Water side pressure drop	kPa	45	47	46	48	46	50
<b>Desuperheater**</b>							
Heating capacity	kw	135	150	165	215	230	255
<b>Noise level***</b>	dB(A)	72	73	73	73	74	74
<b>Dimensions</b>							
Length	mm	3365	3635	3120	3520	3860	4160
Width	mm	1430	1400	1440	1507	1515	1515
Height	mm	1880	1925	1980	2060	2120	2120
<b>Net weight</b>	kg	3490	3790	3990	4230	4370	4590

\* Performance values refer to the following conditions:  
 Cooling: condenser water inlet/outlet temperature: 18°C /29°C ,  
 evaporator water inlet/outlet temperature: 12°C /7°C .  
 Heating: condenser water inlet/outlet temperature: 40°C /45°C ,  
 evaporator water inlet/outlet temperature: 15°C /10°C .

\*\* Desuperheater is optional.  
 \*\*\* Noise level measured in free field condition at distance of 1 meter.  
 Power supply: 400V/3N/50Hz

## TECHNICAL DATA

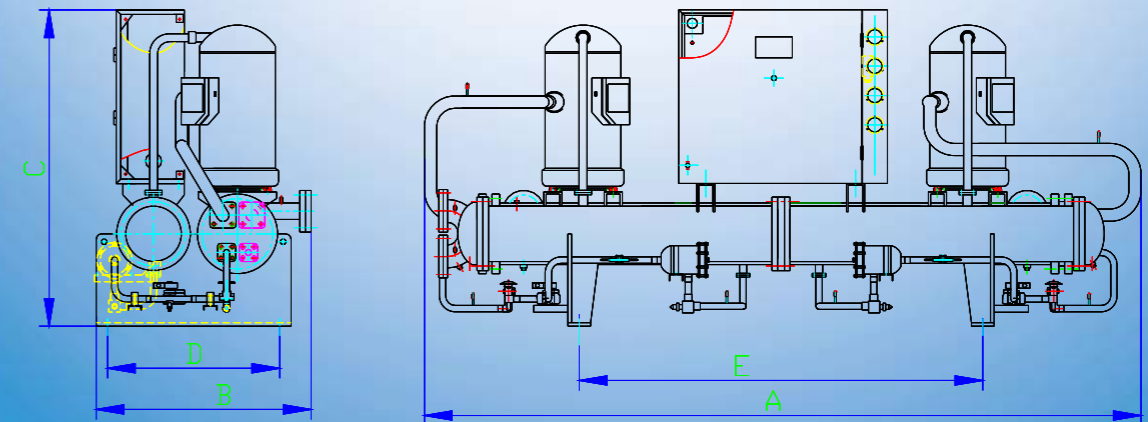
Model		1200	1250	1320	1430	1610	1800
<b>Cooling capacity*</b>	kw	1198	1250	1320	1430	1610	1798
<b>Heating capacity*</b>	kw	1521	1588	1676	1816	2045	2283
<b>Compressor</b>							
Qty/refrigerant circuit	Nr.	2/2	2/2	2/2	2/2	2/2	2/2
Cooling power input*	kw	230.4	240.4	253.8	275.0	309.6	345.8
Heating power input*	kw	340.4	355.1	375.0	406.3	457.4	510.8
Energy adjustment steps	step	8	8	8	8	8	8
<b>Evaporator</b>							
Water flow rate in cooling*	m <sup>3</sup> /h	206	215	227	246	277	309
Water flow rate in heating*	m <sup>3</sup> /h	112	117	123	133	150	168
Water side pressure drop	kPa	51	50	53	52	54	52
<b>Condenser</b>							
Water flow rate in cooling*	m <sup>3</sup> /h	112	117	123	133	150	168
Water flow rate in heating*	m <sup>3</sup> /h	206	215	227	246	277	309
Water side pressure drop	kPa	51	53	50	52	54	55
<b>Desuperheater**</b>							
Heating capacity	kw	300	313	330	358	403	450
<b>Noise level***</b>	dB(A)	74	75	75	76	78	81
<b>Dimensions</b>							
Length	mm	4360	4280	4380	4545	4630	4645
Width	mm	1515	1600	1580	1600	1630	1630
Height	mm	2120	2160	2135	2150	2275	2275
<b>Net weight</b>	kg	5220	5880	6880	7180	7380	8380

\* Performance values refer to the following conditions:  
 Cooling: condenser water inlet/outlet temperature: 18°C/29°C ,  
 evaporator water inlet/outlet temperature: 12°C/ 7°C .  
 Heating: condenser water inlet/outlet temperature: 40°C/45°C ,  
 evaporator water inlet/outlet temperature: 15°C/10°C .

\*\* Desuperheater is optional.  
 \*\*\* Noise level measured in free field condition at distance of 1 meter.

## OVERALL DIMENSIONS (H: Heat pump unit)

Mod. LAWWHRS 150 ÷ 180



Model	A	B	C	D	E	Model	A	B	C	D	E
150	3065	875	1460	700	1680	150H	3065	925	1530	700	1680
180	3075	990	1450	760	1780	180H	3075	1040	1500	760	1780