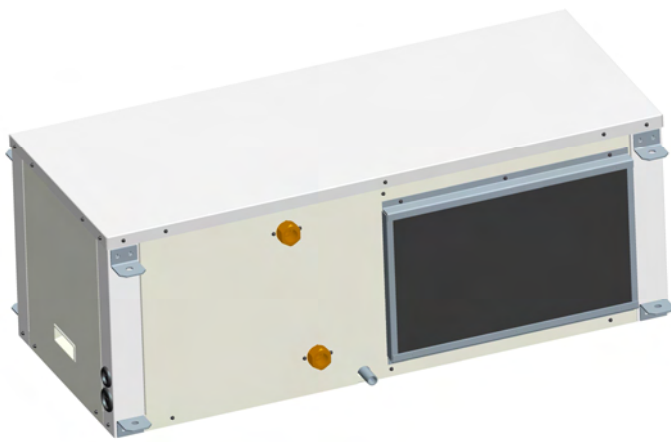




WPH SERIES

PRODUCT BROCHURE

R410a Water Source Heat Pump Unit



R410A

Capacity from 3.5-5-7-10-12-14kw

Single Phase Power Supply for 3.5-5-7-10kw

High External Static Pressure

Extra Long Life

High Efficiency

Electric Heater (Optional)

BMS as standard

Features

Structure

Panels and frame are made from galvanized steel protected with polyester powder painting to ensure total resistance to atmospheric agents.

Hermetic Compressor

Single phase rotary compressor is used for this type unit, with built-in thermal overload cut-out, mounted on rubber vibration dampers.

Centrifugal fan

High efficiency, double inlet centrifugal fan Protection level IP44. Low noise, low speed, big air flow and high ESP.

Water side heat exchanger

High efficiency coaxial heat exchanger, factory insulated with flexible close cell material.

Refrigerant circuit

Copper tube connection with charge valves, filter, expansion valve, high pressure switch and low pressure switch.

Electric panel

Consists of:

- (1) Compressor contactor
- (2) Compressor protection breaker
- (3) Microprocessor with function display

All models are equipped with wire controller with the following features:

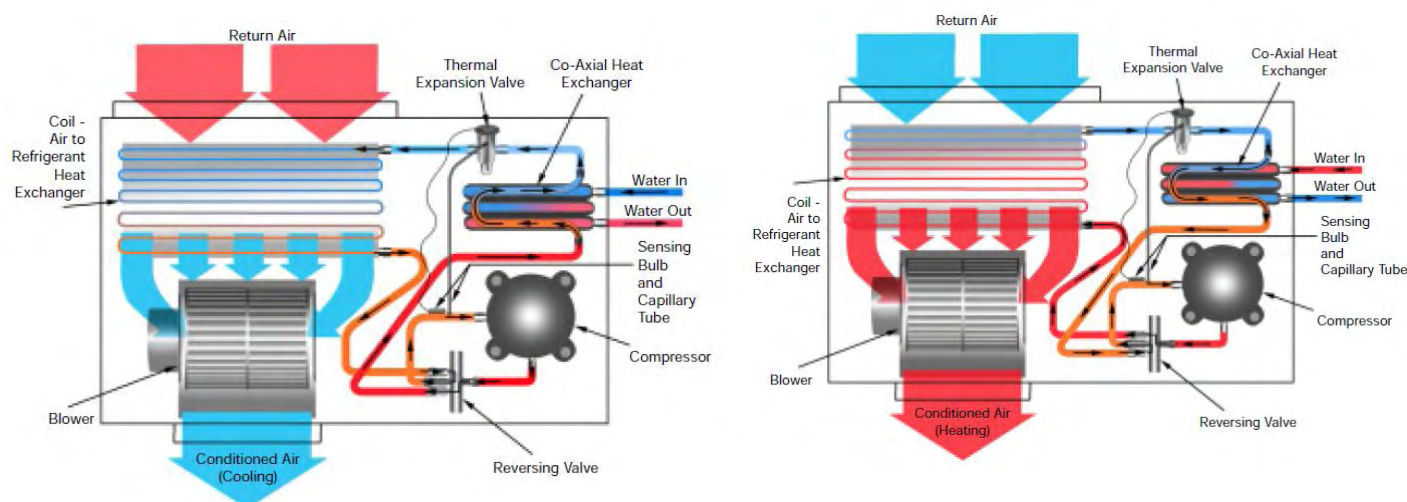
- (1) 7 days programmable timer
- (2) Auto random restart
- (3) Error self diagnostic

Safety Protection:

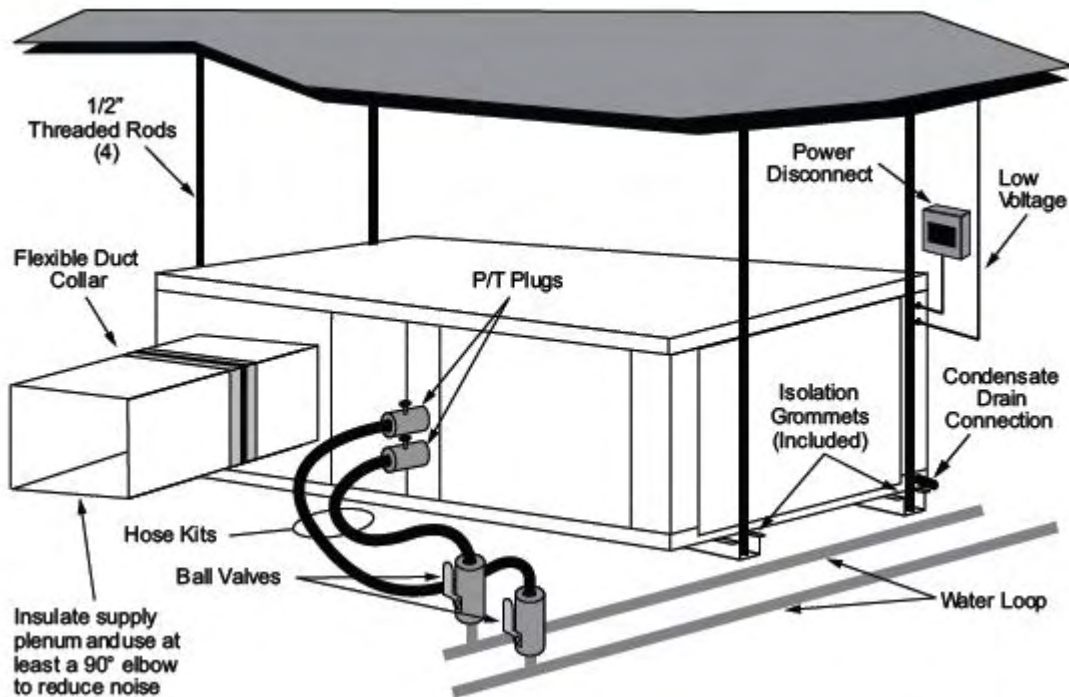
- (1) High pressure switch
- (2) Low pressure switch
- (3) Discharge temperature protection,
- (4) Anti freezing protection

LCD display

Working principle diagram



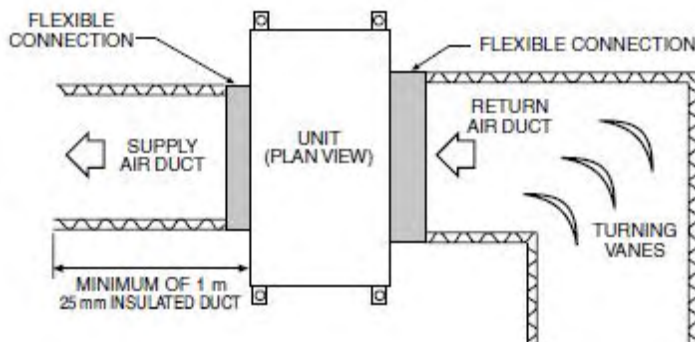
Typical Horizontal Application



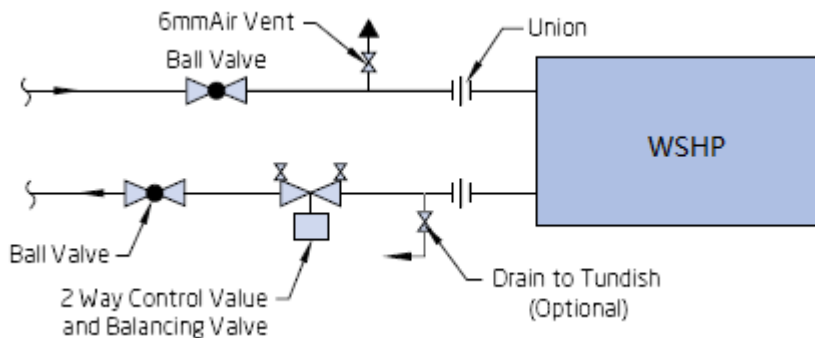
Recommendations for Noise Isolation

- particularly for high static installations:

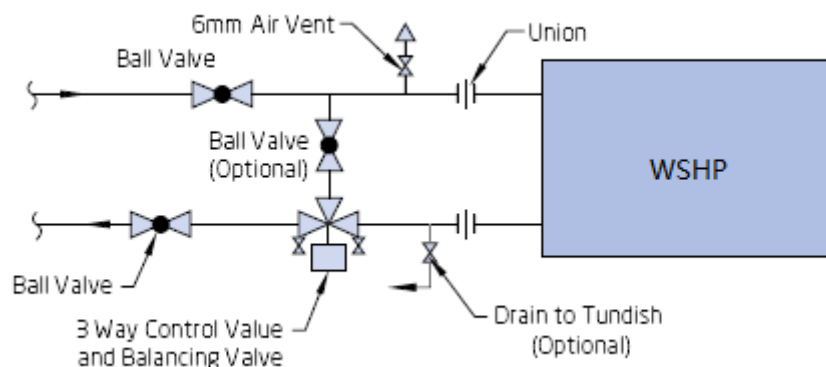
- (1) Avoid installing units, with non-ducted return air, directly above spaces where noise is critical.
- (2) Use flexible connections between unit and rigid ducting.
- (3) Use generously sized acoustically lined ducts.
- (4) If generous duct size is not possible, use turning vanes on bends to reduce air turbulence (regenerated noise).
- (5) Use 90° bends in ducting to significantly assist in noise reduction.



Typical Two-Way Valve Installation



Typical Three-Way Valve Installation



Technical specification

Cooling only models

Capacity		kW	3.5	5	7
Model name		Unit	WPC04D1D	WPC05D1D	WPC07D1D
Power supply		V/Ph/Hz	230- 240v/1/50	230- 240v/1/50	230- 240v/1/50
Cooling	Capacity	KW	3.6	5.0	7.2
	Sensible cooling capacity	KW	2.9	3.7	5.61
	Power Input	KW	1.02	1.24	2.0
	Rated current	A	4.40	5.83	9.25
	EER	W/W	3.53	4.03	3.60
Max. input consumption		KW	1.4	2.4	2.66
Max. current		A	6.0	10.0	11.38
Starting current		A	20	28	30
External static pressure at (Hi speed)		Pa	50	60	100
Indoor air flow (Hi speed)		m ³ /h	700	1000	1360
Indoor noise level(Hi)		dB(A)	42	44	45
Net Dimension	W	mm	1065	1065	1165
	H	mm	405	405	455
	D	mm	480	480	620
Weight	Net	kg	70	86	97
	Gross	kg	78	94	107
Compressor	Type		Rotary	Rotary	Rotary
	Quantity		1	1	1
Water flow		m ³ /h	0.79	1.04	1.58
Diameter of water in/out pipe			DN20	DN20	DN20
Diameter of drain pipe		inch	3/4	3/4	3/4
Refrigerant control			capillary	capillary	capillary
Water coil pressure drop		kpa	25	40	41
Refrigerant	Type		R410a	R410a	R410a
	Charge	g	830	990	1020

COOLING CAPACITY UNDER CONDITION: WATER 30deg in /35 deg out; air DB 27deg/ WB 19 deg

Cooling only models

Capacity		kW	9	12	14
Model name		Unit	WPC09D1D	WPC12D1D	WPC14D1D
Power supply		V/Ph/Hz	230- 240v/1/50	380- 4150v/3/50	380- 4150v/3/50
Cooling	Capacity	KW	9.5	12.3	14
	Sensible cooling capacity	KW	7.2	9.48	11.8
	Power Input	KW	2.58	3.02	3.95
	Rated current	A	11.5	4.77	6.45
	EER	W/W	3.68	4.07	3.46
Max. input consumption		KW	4.0	4.2	5.7
Max. current		A	17.1	5.5	7.4
Starting current		A	40	16	22
External static pressure at (Hi speed)		Pa	120	120	150
Indoor air flow (Hi speed)		m ³ /h	1700	2300	2700
Indoor noise level(Hi)		dB(A)	47	50	52
Net Dimension	W	mm	1165	1365	1365
	H	mm	455	555	555
	D	mm	620	670	670
Weight	Net	kg	115	148	155
	Gross	kg	127	136	165
Compressor	Type		Rotary	scroll	scroll
	Quantity		1	1	1
Water flow		m ³ /h	2.09	2.63	3.20
Diameter of water in/out pipe			DN20	DN25	DN25
Diameter of drain pipe		inch	3/4	3/4	3/4
Refrigerant control			capillary	capillary	capillary
Water coil pressure drop		kpa	40	51	55
Refrigerant	Type		R410a	R410a	R410a
	Charge	g	1300	2050	2300

COOLING CAPACITY UNDER CONDITION: WATER 30deg in /35 deg out; air DB 27deg/ WB 19 deg

Heat Pump models

Capacity		kW	3.5	5	7
Model name		Unit	WPH04D1D	WPH05D1D	WPH07D1D
Power supply		V/Ph/Hz	230- 240v/1/50	230- 240v/1/50	230- 240v/1/50
Cooling	Capacity	KW	3.6	5.0	7.2
	Sensible cooling capacity	KW	2.9	3.7	5.61
	Power Input	KW	1.02	1.24	2.0
	Rated current	A	4.40	5.83	9.25
	EER	W/W	3.53	4.03	3.60
Heating	Capacity	KW	3.82	5.7	7.89
	Input	KW	1.07	1.4	2.20
	Rated current	A	4.8	6.35	9.81
	COP	W/W	3.57	4.07	3.59
Max. input consumption		KW	1.4	2.4	2.66
Max. current		A	6.0	10.0	11.38
Starting current		A	20	28	30
External static pressure at (Hi)		Pa	50	60	100
Indoor air flow (Hi)		m ³ /h	700	1000	1360
Indoor noise level(Hi)		dB(A)	42	44	45
Dimension	W	mm	1065	1065	1165
	H	mm	405	405	455
	D	mm	480	480	620
Weight	Net	kg	75	90	103
	Gross	kg	82	97	110
Compressor	Type		Rotary	Rotary	Rotary
	Quantity		1	1	1
Water flow (nomina1)		m ³ /h	0.79	1.04	1.58
Diameter of water in/out pipe			DN20	DN20	DN20
Diameter of drain pipe		inch	3/4	3/4	3/4
Refrigerant control			capillary	capillary	capillary
Water coil pressure drop		kpa	25	40	41
Refrigerant	Type		R410a	R410a	R410a
	Charge	g	830	990	1020

COOLING CAPACITY UNDER CONDITION: WATER 30deg in /35 deg out; air DB 27deg/ WB 19 deg

HEATING CAPACITY UNDER CONDITION :WATER 20deg in, air DB 20 deg/WB 15 deg

Heat Pump models

Capacity		kW	9	12	14
Model name		Unit	WPH09D1D	WPH12D1D	WPH14D1D
Power supply		V/Ph/Hz	230- 240v/1/50	380- 4150v/3/50	380- 4150v/3/50
Cooling	Capacity	KW	9.5	12.3	14
	Sensible cooling capacity	KW	7.2	9.48	11.8
	Power Input	KW	2.58	3.02	3.95
	Rated current	A	11.5	4.77	6.45
	EER	W/W	3.68	4.07	3.46
Heating	Capacity	KW	10.2	12.7	15
	Input	KW	2.65	3.28	4.14
	Rated current	A	11.9	5.15	6.83
	COP	W/W	3.85	3.87	3.62
Max. input consumption		KW	4.0	4.2	5.7
Max. current		A	17.1	5.5	7.4
Starting current		A	40	16	22
External static pressure at (Hi)		Pa	120	120	150
Indoor air flow (Hi)		m ³ /h	1700	2300	2700
Indoor noise level(Hi)		dB(A)	47	50	52
Dimension	W	mm	1165	1365	1365
	H	mm	455	555	555
	D	mm	620	670	670
Weight	Net	kg	120	152	162
	Gross	kg	129	161	170
Compressor	Type		Rotary	Scroll	Scroll
	Quantity		1	1	1
Water flow		m ³ /h	2.09	2.63	3.20
Diameter of water in/out pipe			DN20	DN25	DN25
Diameter of drain pipe		inch	3/4	3/4	3/4
Refrigerant control			capillary	capillary	capillary
Water coil pressure drop		kpa	40	51	55
Refrigerant	Type		R410a	R410a	R410a
	Charge	g	1300	2050	2300

COOLING CAPACITY UNDER CONDITION: WATER 30deg in /35 deg out; air DB 27deg/ WB 19 deg

HEATING CAPACITY UNDER CONDITION :WATER 20deg in, air DB 20 deg/WB 15 deg