

# SPECIFICATION: WATER COOLED PACKAGE - FLOOR STANDING DUCTED - HWPf 050-290 & FLOOR STANDING WITH FRONT FREE-BLOW - HWPf 050P-200P

MODEL	Floor Standing Ducted Type		HWPf 050	HWPf 060	HWPf 075	HWPf 100	HWPf 120	HWPf 150
	Floor Standing Free-Blow Type		HWPf 050-P	HWPf 060-P	HWPf 075-P	HWPf 100-P	HWPf 120-P	HWPf 150-P
Cooling Capacity	Nominal Capacity	Btu/Hr	50,000	60,000	75,000	100,000	120,000	150,000
		Watt	14,650	17,580	21,980	29,300	35,170	43,960
<b>CASING MATERIAL AND SIZE</b>								
Casing	Material		Electro Galvanized Mild Steel					
	Finishing		Epoxy Polyester Powder Coating					
	Insulation		Polyethylen Foam					
HWPf	Height	mm (in)	1670 (65.7)	1670 (65.7)	1670 (65.7)	1670 (65.7)	1670 (65.7)	1670 (65.7)
HWPf - P	Height	mm (in)	1870 (73.6)	1870 (73.6)	1870 (73.6)	1870 (73.6)	1870 (73.6)	1870 (73.6)
Dimension	Width	mm (in)	1000 (39.4)	1000 (39.4)	1000 (39.4)	1000 (39.4)	1457 (57.4)	1457 (57.4)
	Depth	mm (in)	540 (21.3)	540 (21.3)	540 (21.3)	540 (21.3)	610 (24.0)	610 (24.0)
<b>EVAPORATOR COIL</b>								
Type		Corrugated aluminium fin with seamless cross flow finned copper tubes						
Tube	Diameter	mm (in)	9.52 (3/8)					
Fin	Row		2	2	3	4	3	4
	Fins per inch		10	14	14	14	12	14
Face Area	sq.m (sq.ft)		0.50 (5.33)	0.50 (5.33)	0.50 (5.33)	0.50 (5.33)	0.78 (8.33)	0.78 (8.33)
<b>EVAPORATOR BLOWER and MOTOR - HWPf MODELS WITH DUCTED TOP DISCHARGE</b>								
Motor Type / Drive		Centrifugal/ Direct Drive				Centrifugal/ Belt Drive		
Blower Material		Zinc Coated Steel						
No of Blower		1	1	1	1	1	1	1
Blower Diameter - HWPf		mm (in)	228(9.0)	254(10.0)	254(10.0)	254(10.0)	305(12)	305(12)
Air flow		CMM(CFM)	59 (2100)	68 (2400)	68 (2400)	76 (2700)	105 (3700)	105 (3700)
External Static Pressure - HWPf		Pa (in w.g.)	100 (0.4)	100 (0.4)	100 (0.4)	125 (0.5)	125 (0.5)	125 (0.5)
Motor Type		Squirrel Cage Induction						
Motor Power Supply		V / PH / HZ	220-240 / 1 / 50			380-415 / 3 / 50		
Motor Rated output		Watt	450	550	550	1100	1500	1500
Motor Poles			4	4	4	4	4	4
Starter Type		Direct-On-Line						
Air Filter Type		Washable R29, 1 inch thick, GI frame						
<b>EVAPORATOR BLOWER and MOTOR - HWPf-P MODELS WITH FRONT FREE-BLOW.</b>								
Motor Type / Drive		Centrifugal/ Direct Drive						
Blower Material		Zinc Coated Steel						
No of Blower		1	1	1	1	1	1	1
Blower Diameter - HWPf		mm (in)	228(9.0)	254(10.0)	254(10.0)	254(10.0)	305(12)	305(12)
Air flow		CMM(CFM)	59 (2100)	68 (2400)	68 (2400)	76 (2700)	105 (3700)	105 (3700)
Motor Type		Squirrel Cage Induction						
Motor Power Supply		V / PH / HZ	220-240 / 1 / 50			380-415 / 3 / 50		
Motor Rated output		Watt	450	550	550	1100	1500	1500
Motor Poles			4	4	4	4	4	4
Starter Type		Direct-On-Line						
Air Filter Type		Washable R29, 1 inch thick, GI frame						
<b>CONDENSER - SHELL AND TUBE</b>								
Type		Cleanable Shell and Tube Condenser						
Tube	Diameter	mm (in)	15.88 (5/8) Copper Finned Tube					
Water Flow Rate		USgpm	12.5	15	18.75	25	30	37.5
Pressure Drop		ft w.g.	2	3	3	3	5	5
Water Inlet/Outlet Connection		BSP inch	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/2
<b>CONDENSER - TUBE IN TUBE</b>								
Type		High performance Tube in Tube Condenser						
Tube	Diameter	mm (in)	Inner copper finned tube 22.2(7/8) and outer steel tube 28.6(1-1/8)					
Water Flow Rate		USgpm	12.5	15	18.75	25	30	37.5
Pressure Drop		ft w.g.	9.9	14	10	10.1	14.2	14.1
Water Inlet/Outlet Connection		BSP inch	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/2
<b>COMPRESSOR</b>								
Type		Scroll Hermetic						
No of Compressor		1	1	1	1	1	1	1
Power Supply		V/PH/HZ	380-415 / 3 / 50					
nominal running current/unit		Amp	5.4	7.1	7.3	10	12.8	14
Rated Current / Unit		Amp	6.1	8.2	8.8	12.5	15.8	17.7
Rated Power / Unit		Watt	3600	4430	5200	6750	9000	10100
Protection Device		Phase Protector, Overload Protector, and Auto Reset High and Low Pressure Switch						
Capacity Control		On /Off						
Capacity Step		% full capacity	100%-0%					
Starter Type		Direct On Line						
<b>REFRIGERANT</b>								
Type		R22						
Charged Amount		kg	1.88	2.25	2.81	3.75	4.50	5.63
Control type		Thermostatic Expansion Valve (TXV)						
Drain Pipe Connection		BSP inch	1	1	1	1	1	1

**Note:**

- Nominal cooling capacities are based on on-coil DB 80degF, WB 67degC, and condenser with 85degF water in, 95degF water out.
- Nominal cooling capacities are based on the conditions: indoor DB 80degF, WB 67degC,
- Available static (air filter + duct work) is based on standard drive and nominal air flow.
- For free-blow type with plenum, add 200mm to unit height.
- All specifications are subjected to change without prior notice.

SPEC: HWPf-V2-2012



## SPECIFICATION: WATER COOLED PACKAGE - FLOOR STANDING DUCTED - HWPFO50-290 & FLOOR STANDING WITH FRONT FREE-BLOW - HWPFO50P-200P

MODEL	Floor Standing Ducted Type	HWPFO 180	HWPFO 200	HWPFO 220	HWPFO 240	HWPFO 290	
	Floor Standing Free-Blow Type	HWPFO 180-P	HWPFO 200-P	HWPFO 220-P	HWPFO 240-P	HWPFO 290-P	
Cooling Capacity	Nominal Capacity	Btu/Hr	180,000	200,000	220,000	240,000	290,000
		Watt	52,760	58,620	64,480	70,340	85,000
<b>CASING MATERIAL AND SIZE</b>							
Casing	Material	Electro Galvanized Mild Steel					
	Finishing	Epoxy Polyester Powder Coating					
	Insulation	Polyethylenen Foam					
HWPFO	Height	mm (in)	1920 (75.6)	1920 (75.6)	1920 (75.6)	1920 (75.6)	
HWPFO - P	Height	mm (in)	2120 (83.5)	2120 (83.5)	2120 (83.5)	2120 (83.5)	
Dimension	Width	mm (in)	1457 (57.4)	1457 (57.4)	1965 (77.4)	1965 (77.4)	1965 (77.4)
	Depth	mm (in)	700 (27.6)	700 (27.6)	700 (27.6)	700 (27.6)	700 (27.6)
<b>EVAPORATOR COIL</b>							
Type	Corrugated aluminium fin with seamless cross flow finned copper tubes						
Tube	Diameter	mm (in)	9.52 (3/8)				
Fin	Row		4	4	3	3	4
	Fins per inch		12	14	12	14	14
Face Area	sq.m (sq.ft)		0.97 (10.42)	0.97 (10.42)	1.36 (14.58)	1.36 (14.58)	1.36 (14.58)
<b>EVAPORATOR BLOWER and MOTOR - HWPFO MODELS WITH DUCTED TOP DISCHARGE</b>							
Motor Type / Drive	Centrifugal/ Direct Drive						
Blower Material	Zinc Coated Steel						
No of Blower		1	1	1	1	1	
Blower Diameter - HWPFO	mm (in)	381(15.0)	381(15.0)	381(15.0)	381(15.0)	381(15.0)	
Air flow	CMM(CFM)	130 (4600)	147 (5200)	198 (7000)	207 (7300)	207 (7300)	
External Static Pressure - HWPFO	Pa (in w.g.)	125 (0.5)	125 (0.5)	125 (0.5)	125 (0.5)	125 (0.5)	
Motor Type	Squirrel Cage Induction						
Motor Power Supply	V / PH / HZ	380-415 / 3 / 50					
Motor Rated output	Watt	1500	2200	3000	4000	4000	
Motor Poles		4	4	4	4	4	
Starter Type	Direct-On-Line						
Air Filter Type	Washable R29, 1 inch thick, GI frame						
<b>EVAPORATOR BLOWER and MOTOR - HWPFO-P MODELS WITH FRONT FREE-BLOW.</b>							
Motor Type / Drive	Centrifugal/ Direct Drive						
Blower Material	Zinc Coated Steel						
No of Blower		1	1	1	1	1	
Blower Diameter - HWPFO	mm (in)	381(15.0)	381(15.0)	381(15.0)	381(15.0)	381(15.0)	
Air flow	CMM(CFM)	130 (4600)	147 (5200)	198 (7000)	207 (7300)	207 (7300)	
Motor Type	Squirrel Cage Induction						
Motor Power Supply	V / PH / HZ	380-415 / 3 / 50					
Motor Rated output	Watt	1500	2200	3000	4000	4000	
Motor Poles		4	4	4	4	4	
Starter Type	Direct-On-Line						
Air Filter Type	Washable R29, 1 inch thick, GI frame						
<b>CONDENSER - SHELL AND TUBE</b>							
Type	Cleanable Shell and Tube Condenser						
Tube	Diameter	mm (in)	15.88 (5/8) Copper Finned Tube				
Water Flow Rate	USgpm		45	50	55	60	72.5
Pressure Drop	ft w.g.		6	6	7	6	6
Water Inlet/Outlet Connection	BSP inch		1-1/2	1-1/2	1-1/2	2-1/2	2-1/2
<b>CONDENSER - TUBE IN TUBE</b>							
Type	High performance Tube in Tube Condenser						
Tube	Diameter	mm (in)	Inner copper finned tube 22.2(7/8) and outer steel tube 28.6(1-1/8)				
Water Flow Rate	USgpm		45	50	55	60	72.5
Pressure Drop	ft w.g.		14.2	13	12	14.1	14
Water Inlet/Outlet Connection	BSP inch		1-1/2	1-1/2	1-1/2	2-1/2	2-1/2
<b>COMPRESSOR</b>							
Type	Scroll Hermetic						
No of Compressor		1	2	2	2	2	
Power Supply	V/PH/HZ	380-415 / 3 / 50					
nominal running current	Amp	21.2	7.1/14	7.3/14	12.8/12.8	14/14	
Rated Current / Unit	Amp	24.2	8.2 / 17.7	8.8 / 17.7	15.8 / 15.8	17.7 / 17.7	
Rated Power / Unit	Watt	13620	4430 / 101000	5200 / 10100	9000 / 9000	10100 / 10100	
Protection Device	Phase Protector, Overload Protector, and Auto Reset High and Low Pressure Switch						
Capacity Control	On /Off						
Capacity Step	% full capacity	100%-0%					
Starter Type	Direct On Line						
<b>REFRIGERANT</b>							
Type	R22						
Charged Amount	kg	6.75	7.50	8.25	9.00	10.88	
Control type	Thermostatic Expansion Valve (TXV)						
Drain Pipe Connection	BSP inch	1	1	1	1	1	

**Note:**

- Nominal cooling capacities are based on on-coil DB 80degF, WB 67degC, and condenser with 85degF water in, 95degF water out.
- Nominal cooling capacities are based on the conditions: indoor DB 80degF, WB 67degC,
- Available static (air filter + duct work) is based on standard drive and nominal air flow.
- For free-blow type with plenum, add 200mm to unit height.
- All specifications are subjected to change without prior notice.

SPEC: HWPFO-V2-2012



## SPECIFICATION: WATER COOLED PACKAGE - CEILING HANG DUCTED- HWPB 050-290

MODEL	Ceiling Hang Ducted Type		HWPB 050	HWPB 060	HWPB 075	HWPB 100	HWPB 120	HWPB 150
Cooling Capacity	Nominal Capacity	Btu/Hr	50,000	60,000	75,000	100,000	120,000	150,000
		Watt	14,650	17,580	21,980	29,300	35,170	43,960
<b>CASING MATERIAL AND SIZE</b>								
Casing	Material	Electro Galvanized Mild Steel						
	Finishing	Epoxy Polyester Powder Coating						
	Insulation	Polyethylenen Foam						
Dimension	Height	mm (in)	705 (27.8)	705 (27.8)	705 (27.8)	705 (27.8)	755 (29.7)	755 (29.7)
	Width	mm (in)	1620 (63.8)	1620 (63.8)	1620 (63.8)	1720 (67.7)	2320 (91.3)	2320 (91.3)
	Depth	mm (in)	750 (29.5)	750 (29.5)	750 (29.5)	750 (29.5)	850 (33.5)	850 (33.5)
<b>EVAPORATOR COIL</b>								
Type	Corrugated aluminium fin with seamless cross flow finned copper tubes							
Tube	Diameter	mm (in)	9.52 (3/8)					
Fin	Row		2	2	3	4	3	4
	Fins per inch		10	14	14	14	12	14
Capacity Step	% full capacity	100%-0%						
Face Area	sq.m (sq.ft)		0.50 (5.33)	0.50 (5.33)	0.50 (5.33)	0.50 (5.33)	0.78 (8.33)	0.78 (8.33)
<b>EVAPORATOR BLOWER and MOTOR</b>								
Motor Type / Drive	Centrifugal/ Direct Drive				Centrifugal/ Belt Drive			
Blower Material	Zinc Coated Steel							
No of Blower			1	1	1	1	1	1
Blower Diameter - HWPB	mm (in)		228(9.0)	254(10.0)	254(10.0)	254(10.0)	305(12)	305(12)
Air flow	CMM(CFM)		59 (2100)	68 (2400)	68 (2400)	76 (2700)	105 (3700)	105 (3700)
External Static Pressure - HWPB	Pa (in w.g.)		100 (0.4)	100 (0.4)	100 (0.4)	125 (0.5)	125 (0.5)	125 (0.5)
Motor Type	Squirrel Cage Induction							
Motor Power Supply	V / PH / HZ		220-240 / 1 / 50			380-415 / 3 / 50		
Motor Rated output	Watt		450	550	550	1100	1500	1500
Motor Poles			4	4	4	4	4	4
Starter Type	Direct-On-Line							
Air Filter Type	Washable R29, 1 inch thick, GI frame							
<b>CONDENSER - SHELL AND TUBE</b>								
Type	Cleanable Shell and Tube Condenser							
Tube	Diameter	mm (in)	15.88 (5/8) Copper Finned Tube					
Water Flow Rate	USgpm		12.5	15	18.75	25	30	37.5
Pressure Drop	ft w.g.		2	3	3	3	5	5
Water Inlet/Outlet Connection	BSP inch		1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/2
<b>CONDENSER - TUBE IN TUBE</b>								
Type	High performance Tube in Tube Condenser							
Tube	Diameter	mm (in)	Inner copper finned tube 22.2(7/8) and outer steel tube 28.6(1-1/8)					
Water Flow Rate	USgpm		12.5	15	18.75	25	30	37.5
Pressure Drop	ft w.g.		9.9	14	10	10.1	14.2	14.1
Water Inlet/Outlet Connection	BSP inch		1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/2
<b>COMPRESSOR</b>								
Type	Scroll Hermetic							
No of Compressor			1	1	1	1	1	1
Power Supply	V/PH/HZ		380-415 /3 /50					
Nominal running current/unit	Amp		5.4	7.1	7.3	10	12.8	14
Rated Current / Unit	Amp		6.1	8.2	8.8	12.5	15.8	17.7
Rated Power / Unit	Watt		3600	4430	5200	6750	9000	10100
Protection Device	Phase Protector, Overload Protector, and Auto Reset High and Low Pressure Switch							
Capacity Control	On /Off							
Starter Type	Direct On Line							
<b>REFRIGERANT</b>								
Type	R22							
Charged Amount	kg		1.88	2.25	2.81	3.75	4.50	5.63
Control type	Thermostatic Expansion Valve (TXV)							
Drain Pipe Connection	BSP inch		1	1	1	1	1	1

**Note:**

- Nominal cooling capacities are based on on-coil DB 80degF, WB 67degC, and condenser with 85degF water in, 95degF water out.
- Nominal cooling capacities are based on the conditions: indoor DB 80degF, WB 67degC,
- Available static (air filter + duct work) is based on standard drive and nominal air flow.

- All specifications are subjected to change without prior notice.

SPEC: HWPB-V2-2012

## SPECIFICATION: WATER COOLED PACKAGE - CEILING HANG DUCTED- HWPB 050-290

MODEL	Ceiling Hang Ducted Type		HWPB 180	HWPB 200	HWPB 220	HWPB 240	HWPB 290
Cooling Capacity	Nominal Capacity	Btu/Hr	180,000	200,000	220,000	240,000	290,000
		Watt	52,760	58,620	64,480	70,340	85,000
<b>CASING MATERIAL AND SIZE</b>							
Casing	Material		Electro Galvanized Mild Steel				
	Finishing		Epoxy Polyester Powder Coating				
	Insulation		Polyethylenen Foam				
Dimension	Height	mm (in)	905 (35.6)	905 (35.6)	905 (35.6)	905 (35.6)	905 (35.6)
	Width	mm (in)	2620 (103.1)	2620 (103.1)	2620 (103.1)	2620 (103.1)	2620 (103.1)
	Depth	mm (in)	1150 (45.3)	1150 (45.3)	1150 (45.3)	1150 (45.3)	1150 (45.3)
<b>EVAPORATOR COIL</b>							
Type		Corrugated aluminium fin with seamless cross flow finned copper tubes					
Tube	Diameter	mm (in)	9.52 (3/8)				
Fin	Row		4	4	3	3	4
	Fins per inch		12	14	12	14	14
Capacity Step	% full capacity		100%-0%				
Face Area	sq.m (sq.ft)		0.97 (10.42)	0.97 (10.42)	1.36 (14.58)	1.36 (14.58)	1.36 (14.58)
<b>EVAPORATOR BLOWER and MOTOR - HWPB MODELS WITH DUCTED TOP DISCHARGE</b>							
Motor Type / Drive		Centrifugal/ Direct Drive					
Blower Material		Zinc Coated Steel					
No of Blower			1	1	1	1	1
Blower Diameter - HWPB	mm (in)		381(15.0)	381(15.0)	381(15.0)	381(15.0)	381(15.0)
Air flow	CMM(CFM)		130 (4600)	147 (5200)	198 (7000)	207 (7300)	207 (7300)
External Static Pressure - HWPB	Pa (in w.g.)		125 (0.5)	125 (0.5)	125 (0.5)	125 (0.5)	125 (0.5)
Motor Type		Squirrel Cage Induction					
Motor Power Supply	V / PH / HZ		380-415 / 3 / 50				
Motor Rated output	Watt		1500	2200	3000	4000	4000
Motor Poles			4	4	4	4	4
Starter Type		Direct-On-Line					
Air Filter Type		Washable R29, 1 inch thick, GI frame					
<b>CONDENSER - SHELL AND TUBE</b>							
Type		Cleanable Shell and Tube Condenser					
Tube	Diameter	mm (in)	15.88 (5/8) Copper Finned Tube				
Water Flow Rate	USgpm		45	50	55	60	72.5
Pressure Drop	ft w.g.		6	6	7	6	6
Water Inlet/Outlet Connection	BSP inch		1-1/2	1-1/2	1-1/2	2-1/2	2-1/2
<b>CONDENSER - TUBE IN TUBE</b>							
Type		High performance Tube in Tube Condenser					
Tube	Diameter	mm (in)	Inner copper finned tube 22.2(7/8) and outer steel tube 28.6(1-1/8)				
Water Flow Rate	USgpm		45	50	55	60	72.5
Pressure Drop	ft w.g.		14.2	13	12	14.1	14
Water Inlet/Outlet Connection	BSP inch		1-1/2	1-1/2	1-1/2	2-1/2	2-1/2
<b>COMPRESSOR</b>							
Type		Scroll Hermetic					
No of Compressor			1	2	2	2	2
Power Supply	V/PH/HZ		380-415 / 3 / 50				
Nominal running current/unit	Amp		21.2	7.1/14	7.3/14	12.8/12.8	14/14
Rated Current / Unit	Amp		24.2	8.2 / 17.7	8.8 / 17.7	15.8 / 15.8	17.7 / 17.7
Rated Power / Unit	Watt		13620	4430 / 101000	5200 / 10100	9000 / 9000	10100 / 10100
Protection Device		Phase Protector, Overload Protector, and Auto Reset High and Low Pressure Switch					
Capacity Control		On /Off					
Starter Type		Direct On Line					
<b>REFRIGERANT</b>							
Type		R22					
Charged Amount	kg		6.75	7.50	8.25	9.00	10.88
Control type		Thermostatic Expansion Valve (TXV)					
Drain Pipe Connection	BSP inch		1	1	1	1	1

**Note:**

- Nominal cooling capacities are based on on-coil DB 80degF, WB 67degC, and condenser with 85degF water in, 95degF water out.
- Nominal cooling capacities are based on the conditions: indoor DB 80degF, WB 67degC,
- Available static (air filter + duct work) is based on standard drive and nominal air flow.
  
- All specifications are subjected to change without prior notice.

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