

Aircooled Water Chiller Hermetic Scroll (R410a)



Model Series		WCH10	WCH12	WCH15	WCH20	WCH25	WCH30	WCH40	WCH50 (25 x 2)	WCH60 (30 x 2)	WCH80 (40 x 2)
Performance Unit											
Cooling Capacity	TR	7.58	8.50	11.33	14.58	18.42	23.67	29.25	36.83	47.42	58.50
	Btu/h	91,000	102,000	136,000	175,000	221,000	284,000	351,000	442,000	569,000	702,000
	KW	26.75	30	39.8	51.3	64.7	83.3	102.8	129.4	166.6	205.6
EER	(Btu/hr) / watts	3.40	3.40	3.42	3.41	3.42	3.41	3.41	3.42	3.42	3.41
No. of Refrigerant Circuit		1	1	1	1	1	1	1	2	2	2
Control	System	Digital Thermostat, Phase Failure, High-Low Pressure Control									
	Refrigerant	Thermostatic Expansion Valve									
Refrigerant	Type	R410a									
Power Supply	V / Ph / Hz	380 - 420 / 3 / 50									
Compressor		Bitzer Hermetic Scroll Orbit 6				Bitzer Hermetic Scroll Orbit 8					
Model		GSD60120	GSD60137	GSD60182	GSD60235	GSD80295	GSD80385	GSD80485	GSD80295	GSD80385	GSD80485
No. of Comp.		1	1	1	1	1	1	1	2	2	2
Motor Size	HP	10	12	15	20	25	30	40	25	30	40
Displacement	m ³ /h	19.8	22.2	29.2	37.6	38.6	61.8	77.2	38.6	61.8	77.2
Max Operation / comp	A	21.3	24.1	30.2	39.9	53	66	81	53	66	81
LRA / Comp	A	123	138	172	202	210	287	299	210	287	299
Total Power Input Pe	KW	8.2	9.2	11.98	15.88	21.08	26.65	32.7	42.16	53.3	65.4
Protection		Integrated PTC Motor Protection									
Oil Charge	L	2.7	2.7	2.7	2.7	5.5	5.5	5.5	5.5	5.5	5.5
Condenser Coil		Inner Grooved Copper Tube on Ripple Edge Aluminium Fins with Galvanize Steel Plate									
Tubes Diameter	inch	3/8									
Fin Spacing	fp	12									
Fan Condenser		External Rotor Motor (Axial Fan)									
Fan Speed	rpm	1390	1390	885	885	885	1330	1330	1330	1330	1330
Blade Diameter	mm	500	500	630	630	630	630	630	630	630	630
No of Fans	qty	2	2	2	2	2	2	3	4	4	6
Total Power Input / Fan	KW	0.72	0.72	0.61	0.61	0.61	1.9	1.9	1.9	1.9	1.9
Total Airflow	m ³ /h	14200	13550	15000	16800	20800	29900	44700	41600	59000	89400
Cooler Unit		Shell & Tubes Heat Exchanger									
No. of Refrigerant Circuit		1	1	1	1	1	1	1	2	2	2
Chilled Water Flow	m ³ /h	6	6	8	9.6	11.4	16.4	20.6	23.2	28.3	34.2
Pressure Drop	bar	0.29	0.27	0.41	0.35	0.39	0.46	0.29	0.44	0.5	0.38
Inlet/Outlet Temperature	°C	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7
Chilled Water Connection	inch	1 1/2	2	2	2 1/2	2 1/2	2 1/2	3	3	3	4
Dimension Unit											
Length	mm	1650	1650	2100	2100	2100	2500	3300	3300	2400	3300
Width	mm	850	850	850	950	1150	1150	1150	1500	2200	2200
Height	mm	900	900	900	900	900	900	900	2200	2200	2200
Approximately Weight	kg	275	295	325	370	495	525	685	955	1,050	1,300

Cooling Capacity Based on : Ambient 35°C, 55% RH, Condensing Temperature at 50°C, Evaporating Temperature at 5 °C, Refrigerant R410a, Chilled Water In 12°C, Out 7°C

Aircooled Water Chiller Hermetic Scroll (R410a)



www.wongsocool.com

Model Series		WCH3	WCH5	WCH8	WCH10	WCH12	WCH15	WCH20 (10 X 2)	WCH25 (12 X 2)	WCH30 (15 X 2)
Performance Unit										
Cooling Capacity	<i>TR</i>	2.17	3.75	5.50	7.42	8.25	11.08	14.83	16.50	22.17
	<i>Btu/h</i>	26,000	45,000	66,000	89,000	99,000	133,000	178,000	198,000	266,000
	<i>KW</i>	7.7	13.1	19.4	26	29	39	52	58	78
EER	<i>(Btu/hr) / watts</i>	3.38	3.45	3.40	3.42	3.41	3.41	3.42	3.41	3.41
No. of Refrigerant Circuit		1	1	1		1	1	2	2	2
Control	System	Digital Thermostat, Phase Failure, High-Low Pressure Control								
	Refrigerant	Thermostatic Expansion Valve								
Refrigerant	Type	R410a								
Power Supply	V / Ph / Hz	380 - 420 / 3 / 50								
Compressor										
Hermetic Scroll										
No. of Comp.		1	1	1	1	1	1	2	2	2
Motor Size	<i>HP</i>	3	5.1	7.6	10.2	11.4	15.2	10.2	11.4	15.2
Displacement	<i>cc/Rev.</i>	34.4	58.1	84.6	112.3	127.2	167.2	112.3	127.2	167.2
Max Operation / comp	<i>A</i>	5.4	8.3	12.4	16.6	18.3	26.3	16.6	18.3	26.3
LRA / Comp	<i>A</i>	46	64	101	139	118	174	139	118	174
Total Power Input Pe	<i>KW</i>	2.94	4.75	6.79	9.16	10.2	13.5	9.16	10.2	13.5
Protection		Internal Inherent Protection - One protector, use with contactor								
Oil Charge	<i>L</i>	1.24	1.66	1.77	2.51	3.25	3.25	2.51	3.25	3.25
Condenser Coil										
Inner Grooved Copper Tube on Ripple Edge Aluminium Fins with Galvanize Steel Plate										
Tubes Diameter	<i>inch</i>	3/8								
Fin Spacing	<i>fpi</i>	12								
Fan Condenser										
External Rotor Motor (Axial Fan - Made in Germany)										
Fan Speed	<i>rpm</i>	1390	1390	885	1390	1390	885	885	885	1330
Blade Diameter	<i>mm</i>	450	500	630	500	500	630	630	630	630
No of Fans	<i>qty</i>	1	1	1	2	2	2	2	2	2
Total Power Input / Fan	<i>Watt</i>	250	800	720	780	780	720	720	720	1900
Total Airflow	<i>m³/h</i>	4200	7600	7700	14200	13550	15000	16800	20800	29900
Cooler Unit										
PHE / Shell & Tubes Heat Exchanger										
No. of Refrigerant Circuit		1	1	1	1	1	1	2	2	2
Chilled Water Flow	<i>m³/h</i>	1.8	4	6	6	6	8	9.6	11.4	16.4
Pressure Drop	<i>bar</i>	0.08	0.16	0.29	0.29	0.27	0.41	0.35	0.39	0.46
Inlet/Outlet Temperature	<i>°C</i>	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7
Chilled Water Connection	<i>inch</i>	1	1 1/2	1 1/2	1 1/2	2	2	2 1/2	2 1/2	2 1/2
Dimension Unit										
Length	<i>mm</i>	1150	1150	1300	1650	1650	2100	2100	2100	2500
Width	<i>mm</i>	600	850	850	850	850	850	950	1150	1150
Height	<i>mm</i>	800	800	800	900	900	900	900	900	900
Approximately Weight	<i>kg</i>	135	170	197	230	265	300	385	465	500

Cooling Capacity Based on : Ambient 35°C, 55% RH, Condensing Temperature at 50°C, Evaporating Temperature at 5 °C, Refrigerant R410a, Chilled Water In 12°C, Out 7°C

Watercooled Water Chiller Hermetic Scroll (R410a)



www.wongsocool.com

Model Series		WCH10	WCH12	WCH15	WCH20	WCH25	WCH30	WCH40	WCH50 (25 x 2)	WCH60 (30 x 2)	WCH80 (40 x 2)
Performance Unit											
Cooling Capacity	TR	8.67	9.75	12.92	16.67	21.33	27.33	34.00	42.58	54.75	68.08
	Btu/h	104,000	117,000	155,000	200,000	256,000	328,000	408,000	511,000	657,000	817,000
	KW	30.6	34.35	45.5	58.7	74.9	96.2	119.6	149.8	192.4	239.2
EER	(Btu/hr) / watts	3.40	3.41	3.41	3.41	3.42	3.41	3.41	3.41	3.41	3.42
No. of Refrigerant Circuit		1	1	1	1	1	1	1	2	2	2
Control	System	Digital Thermostat, Phase Failure, High-Low Pressure Control									
	Refrigerant	Thermostatic Expansion Valve									
Refrigerant	Type	R410a									
Power Supply	V / Ph / Hz	380 - 420 / 3 / 50									
Compressor		Bitzer Hermetic Scroll Orbit 6				Bitzer Hermetic Scroll Orbit 8					
Model		GSD60120	GSD60137	GSD60182	GSD60235	GSD80295	GSD80385	GSD80485	GSD80295	GSD80385	GSD80485
No. of Comp.		1	1	1	1	1	1	1	2	2	2
Motor Size	HP	10	12	15	20	25	30	40	25	30	40
Displacement	m ³ /h	19.8	22.2	29.2	37.6	38.6	61.8	77.2	38.6	61.8	77.2
Max Operation / comp	A	21.3	24.1	30.2	39.9	53	66	81	53	66	81
LRA / Comp	A	123	138	172	202	210	287	299	210	287	299
Total Power Input Pe	KW	8.2	9.2	11.98	15.88	21.08	26.65	32.7	42.16	53.3	65.4
Protection		Integrated PTC Motor Protection									
Oil Charge	L	2.7	2.7	2.7	2.7	5.5	5.5	5.5	5.5	5.5	5.5
Condenser		Shell & Tubes Heat Exchanger									
No. of Cond.		1	1	1	1	1	1	1	2	2	2
Chilled Water Flow	m ³ /h	8.56	10.71	18.32	18.32	23.32	23.32	30	23.32	23.32	30
Pressure Drop	bar	0.33	0.4	0.3	0.3	0.3	0.3	0.38	0.3	0.3	0.38
Inlet/Outlet Temperature	°C	30/35	30/35	30/35	30/35	30/35	30/35	30/35	30/35	30/35	30/35
Chilled Water Connection	inch	1 1/4	1 1/4	1 3/4	1 3/4	1 3/4	1 3/4	2 1/4	1 3/4	1 3/4	2 1/4
Cooler Unit		Shell & Tubes Heat Exchanger									
No. of Refrigerant Circuit		1	1	1	1	1	1	1	2	2	2
Chilled Water Flow	m ³ /h	6	6	8	9.6	11.4	16.4	20.6	23.2	28.3	34.2
Pressure Drop	bar	0.29	0.27	0.41	0.35	0.39	0.46	0.29	0.44	0.5	0.38
Inlet/Outlet Temperature	°C	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7
Chilled Water Connection	inch	1 1/2	2	2	2 1/2	2 1/2	2 1/2	3	3	3	4
Dimension Unit											
Length	mm	1400	1600	1800	1800	1800	2200	2200	2500	2800	2800
Width	mm	850	850	850	950	1150	1150	1150	1500	2200	2200
Height	mm	600	600	600	650	650	650	700	700	700	700
Approximately Weight	kg	220	235	275	300	390	425	520	735	750	915

Cooling Capacity Based on : Ambient 35°C, 55% RH, Condensing Temperature at 40°C, Evaporating Temperature at 5 °C, Refrigerant R410a, Chilled Water In 12°C, Out 7°C

Watercooled Water Chiller Hermetic Scroll (R410a)



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Model Series		WCH3	WCH5	WCH8	WCH10	WCH12	WCH15	WCH20 (10 X 2)	WCH25 (12 X 2)	WCH30 (15 X 2)
Performance Unit										
Cooling Capacity	<i>TR</i>	2.50	4.33	6.33	8.50	9.50	12.83	17.08	19.08	25.58
	<i>Btu/h</i>	30,000	52,000	76,000	102,000	114,000	154,000	205,000	229,000	307,000
	<i>KW</i>	8.9	15.2	22.4	30	33.5	45	60	67	90
EER	<i>(Btu/hr) / watts</i>	3.37	3.42	3.39	3.40	3.40	3.42	3.42	3.42	3.41
No. of Refrigerant Circuit		1	1	1	1	1	1	2	2	2
Control	System	Digital Thermostat, Phase Failure, High-Low Pressure Control								
	Refrigerant	Thermostatic Expansion Valve								
Refrigerant	Type	R410a								
Power Supply	V / Ph / Hz	380 - 420 / 3 / 50								
Compressor		Hermetic Scroll								
No. of Comp.		1	1	1	1	1	1	2	2	2
Motor Size	<i>HP</i>	3	5.1	7.6	10.2	11.4	15.2	10.2	11.4	15.2
Displacement	<i>cc/Rev.</i>	34.4	58.1	84.6	112.3	127.2	167.2	112.3	127.2	167.2
Max Operation / comp	<i>A</i>	5.4	8.3	12.4	16.6	18.3	26.3	16.6	18.3	26.3
LRA / Comp	<i>A</i>	46	64	101	139	118	174	139	118	174
Total Power Input Pe	<i>KW</i>	2.94	4.75	6.79	9.16	10.2	13.5	9.16	10.2	13.5
Protection		Internal Inherent Protection - One protector, use with contactor								
Oil Charge	<i>L</i>	1.24	1.66	1.77	2.51	3.25	3.25	2.51	3.25	3.25
Condenser		Shell & Tubes Heat Exchanger								
No. of Cond.		1	1	1	1	1	1	2	2	2
Chilled Water Flow	<i>m³/h</i>	2.74	6.41	8.56	8.56	10.71	18.32	8.56	10.71	18.32
Pressure Drop	<i>bar</i>	0.15	0.33	0.33	0.33	0.4	0.3	0.33	0.4	0.3
Inlet/Outlet Temperature	<i>°C</i>	30/35	30/35	30/35	30/35	30/35	30/35	30/35	30/35	30/35
Chilled Water Connection	<i>inch</i>	1	1 1/4	1 1/4	1 1/4	1 1/4	1 3/4	1 1/4	1 1/4	1 3/4
Cooler Unit		PHE / Shell & Tubes Heat Exchanger								
No. of Refrigerant Circuit		1	1	1	1	1	1	2	2	2
Chilled Water Flow	<i>m³/h</i>	1.8	4	6	6	6	8	9.6	11.4	16.4
Pressure Drop	<i>bar</i>	0.08	0.16	0.29	0.29	0.27	0.41	0.35	0.39	0.46
Inlet/Outlet Temperature	<i>°C</i>	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7
Chilled Water Connection	<i>inch</i>	1	1 1/2	1 1/2	1 1/2	2	2	2 1/2	2 1/2	2 1/2
Dimension Unit										
Length	<i>mm</i>	1200	1200	1400	1400	1600	1700	1700	1800	2200
Width	<i>mm</i>	600	850	850	850	850	850	950	1150	1150
Height	<i>mm</i>	600	600	600	650	650	650	800	800	800
Approximately Weight	<i>kg</i>	110	136	145	155	185	220	285	340	410

Cooling Capacity Based on : Ambient 35°C, 55% RH, Condensing Temperature at 40°C, Evaporating Temperature at 5 °C, Refrigerant R410a, Chilled Water In 12°C, Out 7°C