

Creating Value For The Customer
Through The Absorption Technology

World EnC Co.,Ltd.

THE BEST SOLUTION FOR
ABSORPTION CHILLER & SCREW CHILLER

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By Continuing challenge
We will open the eco-friendly future

By continuing challenge, We will open the eco-friendly future.

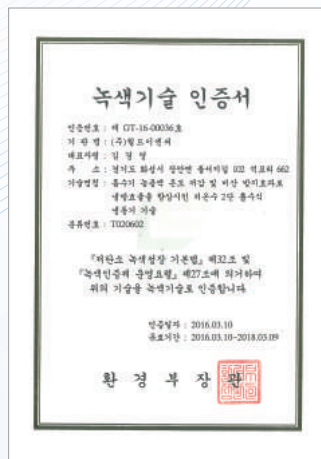
WORLD EnC ABSORPTION CHILLER & SCREW CHILLER

We challenge, innovate and strive to satisfy our customers with the best value by providing the most pleasant environment and happiness for the mankind based on our accumulated technology. The company being advanced backed up by customer's encouragement and trust.

The company always seeking innovation with the sense of responsibility and future-oriented mind. We commit ourselves to taking our full responsibility as a new leader of the future energy industry based on the best quality and the latest technology.



Designation of
Excellent Product



Green Technology



High Efficiency
Energy Equipment



Business Registration
Certificate



Factory Resistration
Certificate



Construction
Registration Certificate



PPS High Quality
Product Certificate



INNO-BIZ
Certificate



Promising
SME Certificate



ISO 9001
Certificate



ISO 14001
Certificate



CE Certificate
Single Effect Double Lift
Hot Water Driven
Absorption Chiller



CE Certificate
Double Effect Direct Fired
Absorption Chiller & Heater



KARSE Certificate
Double Effect Direct Fired
Absorption Chiller & Heater



Q-Mark
Double Effect Direct Fired
Absorption Chiller & Heater



Patent
Double Effect Direct Fired
Absorption Chiller & Heater



Patent
Double Lift
Absorption Chiller



Patent
Single Effect Double Lift
Hot Water Driven
Absorption Chiller



Patent
Heat Exchanger
Effects Applied AHU



Patent
Safety Valve for
Absorbent Cooling Device



Patent
Pressure Relief
Absorption Valve for Direct Fired
Absorption Chiller



Patent
Absorb Exhausted
Energy Heat Exchanger



Patent
Absorb Exhausted
Energy Heat Exchanger
Applied AHU



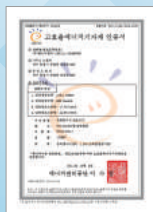
Patent
Heat Exchanger
Applied AHU



Patent
Heat Exchanger
Applied AHU



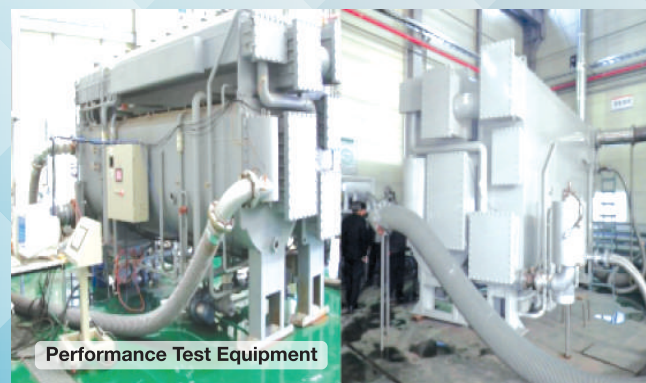
High Efficiency
Energy Equipment
Medium Temperature
Water Absorption Chiller



High Efficiency
Energy Equipment
Fired Absorption
Chiller & Heater
170RT COP 1.24

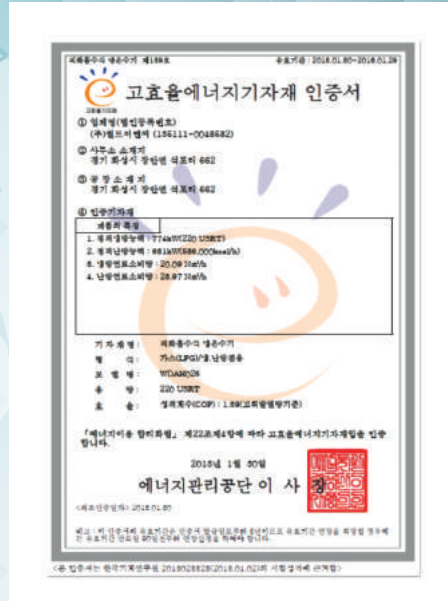
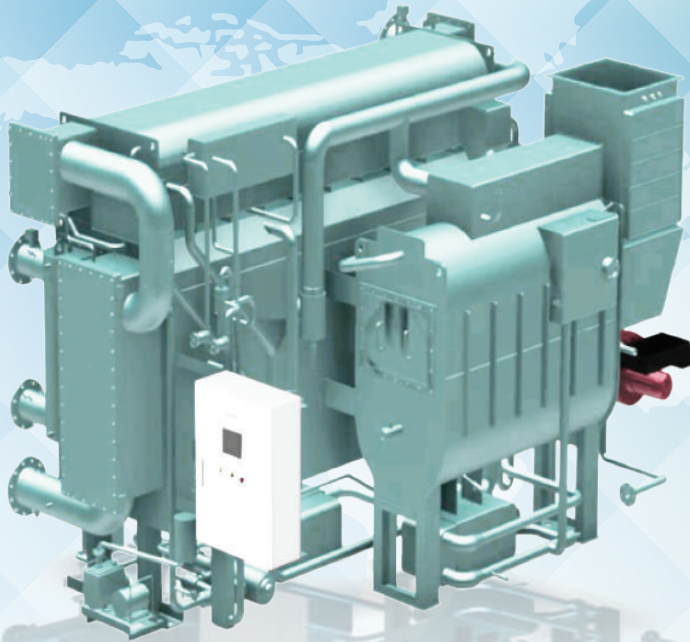
Brief History

- 2018** Development of High Efficiency of Water Cooled Screw Chiller
- 2017** Initiate national project of development of Heat Pump and transformer
Initiate national project of development of Adsorption Chiller
- 2016** Certificate of Designation of Excellent Product by Public Procurement
Service Registraion of Direct Fired Absorption Chiller&Heater in Korea Public Procurement Agency
Certificate of green technology (Double Lift Hot water Driven Absorption Chiller)
Certificate of high efficiency energy material (Double Lift Hot water Driven Absorption Chiller)
New business for Screw chiller and Absorption heat pump
- 2015** Start to develop absorption heat pump for nation project
Development of Air Handling Unit (AHU) for exhaust heat recovery
- 2014** Registration Air Handling Unit in Public Procurement Agency
CE : Double-Effect Direct Fired Absorption Chiller&Heater
Single-Effect Double Lift Hot water Driven Absorption Chiller (WDL 75~975 Series)
- 2013** Certificate ISO 14001
Build a new factory for Air Handling Unit(AHU)
- 2011** Development of High-efficiency Direct Fired Absorption chiller&heater (COP 1.36, 1.51(LHV))
- 2010** Resigtration of Double Lift Hot water Driven Absorption Chiller as excellent product by Korea Public Procure Agency
- 2009** Development of exhaust gas absorption chiller-heater
- 2007** Registration of patent (Double Lift Hot water Driven Absorption Chiller)
- 2006** Development of Double Lift Hot water Absorption Chiller
Development of Single Effect Hot water Driven Absorption Chiller
Certificate INNO BIZ by SMBA
- 2005** Registration license of making specific facility, Certificate of venture company
Establish research affiliated with World E&C (Korea industrial technology promotion association)
- 2001-2003** Certificate ISO 9001 / 9002
- 1999** Business for high temperature generator in Direct Fired Absorption Chiller&Heater
Establish World EnC



Double-Effect Direct Fired Absorption Chiller & Heater

30RT ~ 1500RT 29 Model



1. High reliability

- Designed to enhance the reliability and durability
- Robust structure through the perfect reliability test for long time and higher reliability by adopting high quality components

2. Efficient operation

- Energy saving and efficiency realized
- Optimal control for the solution cycling volume by inverter depending on the cooling load
- Optimal PID control by sensing the operating condition with the level sensor
- Minimized power consumption due to precise operation and partial load operation

[Option] Early reduction, Anti-freezing, Refrigerant generation, Solution refining, Tube ball clean, Crystal forming prevention from power failure

3. Convenient partition

- Repair and maintenance is easy. Multi-partition structure
- Mounting/detaching structure for easy repair and maintenance
- Partial incoming to make it possible for field work such as remodeling at narrow space. Assembling at field is possible.

5. Low noise and low vibration

- Below 75dB at 1m distance for noise level

4. Perfect vacuum

- High performance & purge system. Cost-efficiency for maintenance
- Leakage for one month at below 3cc. High vacuum condition
- Auto purge. Non-condensing gas storage
- Maintaining optimal operating condition. Operation with only minimum steam extraction.

6. Enough capacity

- Heating capacity increase system
- Designed to increase up to 3 stages from the standard.
- Designed to increase up to 3 stages from the standard.

7. Latest operation

- Latest MICOM, remote control and BAS compatible.
- Self-diagnosis, 16-bit Micro Process to ensure precise and safe operation
- Simple operation. Easy MICOM setting designed with algorithm allowing automatic operation
- Customer's convenience for operation due to remote control function along with the operating condition record and schedule operation

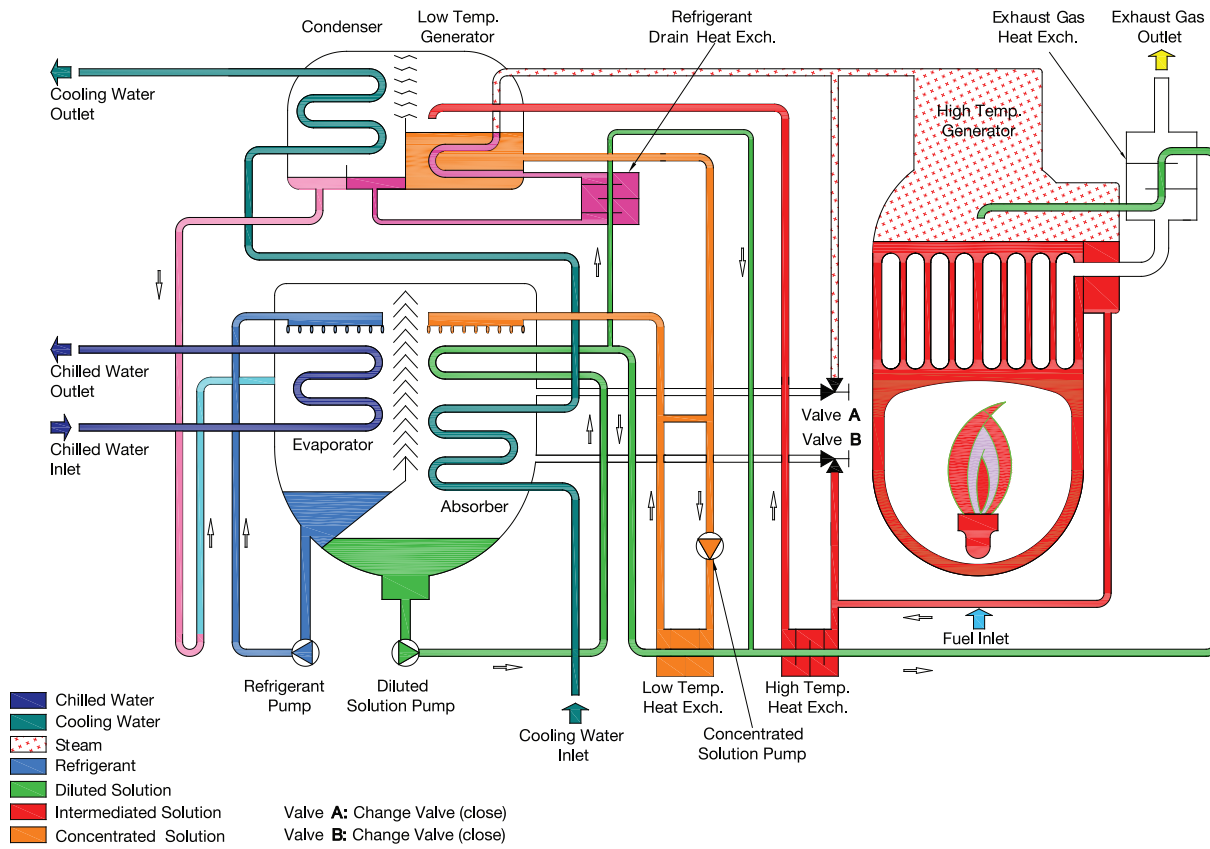
[Option] Monitoring system

Features of WDA Series

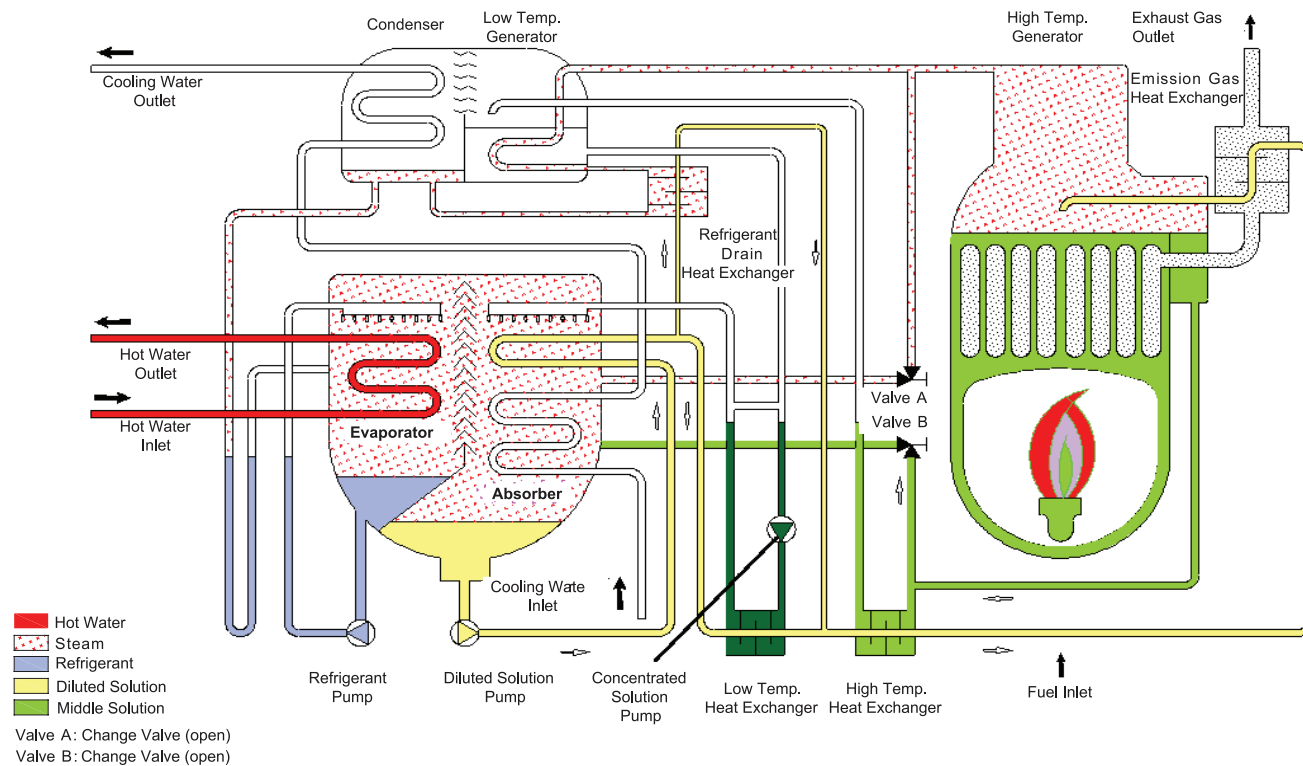
CYCLE DIAGRAM

Double-Effect Direct Fired Absorption Chiller & Heater

Cooling Cycle Diagram



Heating Cycle Diagram



SPECIFICATION [WDA Series]

Double-Effect Direct Fired Absorption Chiller & Heater

COP 1.1(LHV)

MODEL		UNIT	WDA 005	WDA 006	WDA 007	WDA 008	WDA 010	WDA 012	WDA 015	WDA 018	WDA 021	WDA 024	WDA 028	WDA 032	WDA 036	WDA 040					
Cooling capacity	usRT		50	60	70	80	100	120	150	180	210	240	280	320	360	400					
	kW		176	211	246	281	352	422	528	633	739	844	985	1,125	1,266	1,407					
Heating Capacity	Mcal/h		151	181	212	242	302	363	454	544	635	726	847	968	1,089	1,210					
	kW		176	211	246	281	352	422	528	633	739	844	985	1,125	1,266	1,407					
Chilled & Hot Water	Temp.	°C	12/7°C (Heating 55/ 60°C)																		
	Flow rate	m³/h	30.2	36.3	42.3	48.4	60.5	72.6	90.7	108.9	127.0	145.2	169.3	193.5	217.7	241.9					
	P.Drop	mAq	7.6	7.7	5.8	5.4	5.9	6.0	8.0	8.1	7.5	7.4	5.3	5.2	5.7	5.9					
	Connection	mm	80				100				125			150							
Cooling Water	Temp.	°C	32/37.5°C																		
	Flow rate	m³/h	50	60	70	80	100	120	150	180	210	240	280	320	360	400					
	P.Drop	mAq	3.5	3.7	8.2	7.7	3.3	3.5	9.6	10.1	5.8	4.7	8.7	8.8	8.9	8.8					
	Connection	mm	100				125				150			200							
Fuel	Gas	Cooling	Nm³/h	15.9	19.1	22.3	25.5	31.8	38.2	47.7	57.3	66.8	76.4	89.1	101.9	114.6	127.3				
		Heating	Nm³/h	18.9	22.7	26.5	30.2	37.8	45.4	56.7	68.0	79.4	90.7	105.9	121.0	136.1	151.2				
		Connection	mm	40(4,000mmAq)																	
	Oil	Cooling	kg/h	16.4	19.7	23.0	26.3	32.9	39.4	49.3	59.2	69.0	78.9	92.0	105.2	118.3	131.5				
		Heating	kg/h	19.5	23.4	27.3	31.2	39.0	46.8	58.6	70.3	82.0	93.7	109.3	124.9	140.5	156.1				
		Connection	mm	10				15				20									
Electric	Power Source	-	3Ø 380V50Hz																		
	Abs. Pump No.1	kW(A)	1.2(4.0)				2.0(6.0)				2.4(7.5)			3.0(11.0)		3.4(10.2)					
	Abs. Pump No.2	kW(A)	0.3(1.6)				0.4(1.6)				1.2(4.5)			1.5(5.0)							
	Ref. Pump	kW(A)	0.2(1.1)				0.3(1.5)				0.4(1.5)										
	Purge Pump	kW(A)	0.4(1.4)																		
	Burner Blower	kW(A)	0.37(1.0)		0.75(2.1)				1.5(4.0)			2.2(5.0)		3.0(6.5)							
	Oil Pump	kW(A)	-				0.24(0.6)				0.55(2.1)										
	Control Panel	kW(A)	0.2(0.5)																		
	Total Amp.	Gas	kW(A)	2.67(9.6)			3.05(10.7)			4.05(13.1)			4.8(15.0)		6.1(19.4)		7.4(23.9)		8.1(23.6)	8.9(25.1)	
		Oil	kW(A)	2.67(9.6)			3.05(10.7)			4.29(13.7)			5.35(17.1)		19.95(21.5)		7.95(26.0)		8.65(25.7)	9.45(27.2)	
Size	Length(L)	mm	,630			2,700			2,853			3,644			3,696			4,782		4,867	
	Width(W)	mm	1,840			1,840			1,940			2,051			2,102			2,200			2,287
	Height(H)	mm	1,910				2,020				2,390				2,585						
Weight	Rigging	Ton	2.7	2.9	3.1	3.5	3.8	4.0	4.9	5.3	6.1	7.2	7.7	8.3	10.3	10.5					
	Operation	Ton	3.0	3.2	3.4	3.8	4.6	4.8	5.8	6.4	7.5	7.8	8.7	9.3	11.7	12.1					
Space for Tube Replacement	mm	2,000			2,400				3,400				4,600								

Remark 1) 1usRT = 3,024 kcal/h

2) Working Pressure of each water side is based on 1.0MPa [151psig]

3) Natural Gas LHV(Lower Heating Value) : 9,500kcal/Nm³, Diesel Oil LHV(Lower Heating Value) : 9,200kcal/kg

4) Fouling factor 0.0001m²·h·°C/kcal for Absorber and Condenser, 0.0001m²·h·°C/kcal for Evaporator.

5) Catalogue specifications are subject to change without prior notice.

MODEL		UNIT	WDA 045	WDA 050	WDA 056	WDA 063	WDA 070	WDA 080	WDA 090	WDA 100	WDA 110	WDA 120	WDA 130	WDA 140	WDA 150	
Cooling capacity	usRT		450	500	560	630	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	
	kW		1,583	1,758	1,969	2,216	2,462	2,814	3,165	3,517	3,869	4,220	4,572	4,924	5,275	
Heating Capacity	Mcal/h		1,361	1,512	1,693	1,905	2,117	2,032	2,286	2,540	2,794	3,048	3,302	3,556	3,810	
	kW		1,583	1,758	1,969	2,216	2,462	2,363	2,659	2,954	3,250	3,545	3,840	4,136	4,431	
Chilled & Hot Water	Temp.	°C	12 / 7°C (Heating 55 / 60°C)													
	Flow rate	m³/h	272,2	302,4	338,7	381,0	423,4	483,8	544,3	604,8	665,3	725,8	786,2	846,7	907,2	
	P.Drop	mAq	5,1	5,3	4,2	5,7	7,6	5,5	7,4	9,7	7,4	9,4	11,7	9,4	11,5	
	Connection	mm	200					250			300			350		
Cooling Water	Temp.	°C	32 / 37,5°C													
	Flow rate	m³/h	450	500	560	630	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	
	P.Drop	mAq	8,6	8,7	6,4	8,8	11,7	9,1	12,3	16,2	12,3	15,7	7,2	12,8	15,7	
	Connection	mm	250			300			350			400				
Fuel	Gas	Cooling	Nm³/h	143,2	159,2	178,3	200,5	222,8	254,7	286,5	318,3	350,1	382,0	413,8	445,6	477,5
		Heating	Nm³/h	170,1	189,0	211,7	238,2	264,6	254,0	285,8	317,6	349,3	381,1	412,8	444,6	476,3
		Connection	mm	50 (4,000mmAq)						65 (4,000mmAq)						
	Oil	Cooling	kg/h	147,9	164,3	184,1	207,1	230,1	263,0	295,8	328,7	361,6	394,4	427,3	460,2	493,0
		Heating	kg/h	175,7	195,2	218,6	245,9	273,3	262,3	295,1	327,9	360,7	393,5	426,3	459,1	491,9
		Connection	mm	20					25							
Electric	Power Source	-	3Ø 380V 50Hz													
	Abs. Pump No.1	kW(A)	3,4(10,2)		5,5(14,5)			6,6(16,2)			7,5(25,0)					
	Abs. Pump No.2	kW(A)	1,5 (5,0)		2,0(6,0)			2,2(7,0)			4,5(16,0)					
	Ref. Pump	kW(A)	0,4(1,5)					1,5(4,0)								
	Purge Pump	kW(A)	0,4(1,4)													
	Burner Blower	kW(A)	3,0(6,5)		5,5(13,0)			7,5(15,8)			11,0(22,7)					
	Oil Pump	kW(A)	0,55(2,1)					1,1(4,0)								
	Control Panel	kW(A)	0,2(0,5)													
	Total Amp.	Gas	kW(A)	8,9(25,1)		14(36,9)			18,4(44,9)			25,1(69,6)				
		Oil	kW(A)	9,45(27,2)		14,55(39,0)			19,5(48,9)			26,2(73,6)				
Size	Length(L)	mm	4,880	4,960	5,100	5,600	6,150	5,750	6,250	6,800	6,200	6,700	7,200	6,900	7,400	
	Width(W)	mm	2,550		3,150			3,400			4,210			4,630		
	Height(H)	mm	2,800		3,300			3,600			3,600			3,800		
Weight	Rigging	Ton	12,6	12,8	18,1	19,6	21,0	27,9	30,2	32,6	37,8	40,7	43,2	47,5	50,0	
	Operation	Ton	14,5	14,8	20,7	22,3	24,0	31,8	34,3	37,0	42,1	45,2	48,1	52,7	55,6	
Space for Tube Replacement	mm	4,600			5,200	5,700	5,200	5,700	6,200	5,700	6,200	6,700	6,200	6,700		

SPECIFICATION [WDA-E Series]

Double-Effect Direct Fired Absorption Chiller & Heater

COP 1.36(LHV) Middle-efficiency model

MODEL		Units	WDAE 005	WDAE 006	WDAE 007	WDAE 008	WDAE 010	WDAE 012	WDAE 015	WDAE 018	WDAE 021	WDAE 024		
Cooling capacity	usRT		50	60	70	80	100	120	150	180	210	240		
	kW		176	211	246	281	351	422	527	633	738	844		
Heating Capacity	Mcal/h		133	160	186	213	266	319	399	479	559	639		
	kW		155	186	217	247	309	371	464	557	650	742		
Chilled & Hot Water	Temp.	°C	12 / 7°C (Heating 55.6 / 60°C)											
	Flow rate	m³/h	30.2	36.3	42.3	48.4	60.5	72.6	90.7	108.9	127.0	145.2		
	P.Drop	mAq	7.6	7.7	5.8	5.4	5.9	6.0	8.0	8.1	7.5	7.4		
	Connection	mm	80					100			125			
Cooling Water	Temp.	°C	32 / 37.3°C											
	Flow rate	m³/h	50	60	70	80	100	120	150	180	210	240		
	P.Drop	mAq	3.5	3.7	8.2	7.7	3.3	3.5	9.6	10.1	5.8	4.7		
	Connection	mm	100					125			150			
Fuel	Gas	Cooling	Nm³/h	12.1	14.5	17.0	19.4	24.2	29.1	36.3	43.6	50.9	58.2	
		Heating	Nm³/h	15.2	18.2	21.3	24.3	30.4	36.5	45.6	54.7	63.8	72.9	
		Connection	mm	40 (4,000mmAq)										
	Oil	Cooling	kg/h	16.4	19.7	23.0	26.3	32.9	39.4	49.3	59.2	69.0	78.9	
		Heating	kg/h	19.5	23.4	27.3	31.2	39.0	46.8	58.6	70.3	82.0	93.7	
		Connection	mm	10					15			20		
Electric	Power Source	–	3Ø 380V 50Hz											
	Abs. Pump No.1	kW(A)	1.2(4.0)				2.0(6.0)			2.4(7.5)				
	Abs. Pump No.2	kW(A)	0.3(1.6)				0.4(1.6)			1.2 (4.5)				
	Ref.Pump	kW(A)	0.2(1.1)				0.3(1.5)			0.4 (1.5)				
	Purge Pump	kW(A)	0.4(1.4)											
	Burner Blower	kW(A)	0.37(1.0)			0.75(2.1)				1.5(4.0)				
	Oil Pump	kW(A)	–					0.24 (0.6)			0.55 (2.1)			
	Control Panel	kW(A)	0.2(0.5)											
	Total Amp.	Gas	kW(A)	2.67(9.6)			3.05(10.7)		4.05(13.1)			4.8(15.0)	6.1(19.4)	
		Oil	kW(A)	2.67(9.6)			3.05(10.7)		4.29(13.7)			5.35(17.1)	19.95(21.5)	
Size	Length(L)	mm	2,630			2,700		2,853		3,644		3,696		
	Width(W)	mm	1,840			1,840		1,940		2,051		2,102		
	Height(H)	mm	1,910					2,020				2,390		
Weight	Rigging	Ton	2.8	3.0	3.3	3.7	4.0	4.2	5.1	5.6	6.4	7.6		
	Operation	Ton	3.2	3.4	3.6	4.0	4.8	5.0	6.1	6.7	7.9	8.2		
Space for Tube Replacement	mm	2,000			2,400				3,400					

Remark 1) 1usRT = 3,024 kcal/h

2) Working Pressure of each water side is based on 1.0MPa [151psig]

3) Natural Gas LHV(Lower Heating Value) : 9,500kcal/Nm³, Diesel Oil LHV(Lower Heating Value) : 9,200kcal/kg

4) Fouling factor 0.0001m²·h·°C/kcal for Absorber and Condenser, 0.0001m²·h·°C/kcal for Evaporator.

5) Catalogue specifications are subject to change without prior notice.

MODEL		Units	WDAE 028	WDAE 032	WDAE 036	WDAE 040	WDAE 045	WDAE 050	WDAE 056	WDAE 063	WDAE 070	WDAE 080	WDAE 090	WDAE 100	
Cooling capacity		usRT	280	320	360	400	450	500	560	630	700	800	900	1000	
		kW	984	1,125	1,265	1,406	1,582	1,757	1,968	2,214	2,460	2,814	3,165	3,517	
Heating Capacity		Mcal/h	745	852	958	1064	1198	1331	1693	1905	2117	2032	2286	2540	
		kW	866	990	1,113	1,237	1,392	1,546	1,968	2,214	2,460	2,363	2,658	2,954	
Chilled & Hot Water	Temp.	°C	12/7°C (Heating 55,6/60°C)												
	Flow rate	m³/h	169,3	193,5	217,7	241,9	272,2	302,4	338,7	381,0	423,4	483,8	544,3	604,8	
	P.Drop	mAq	5,3	5,2	5,7	5,9	5,1	5,3	4,2	5,7	7,6	5,5	7,4	9,7	
	Connection	mm	150				200				250				
Cooling Water	Temp.	°C	32/37,3°C												
	Flow rate	m³/h	280	320	360	400	450	500	560	630	700	800	900	1000	
	P.Drop	mAq	8,7	8,8	8,9	8,8	8,6	8,7	6,4	8,8	11,7	9,1	12,3	16,2	
	Connection	mm	200				250			300			350		
Fuel	Gas	Cooling	Nm³/h	67,8	77,5	87,2	96,9	109,0	121,2	135,7	152,7	169,6	232,6	261,7	290,8
		Heating	Nm³/h	85,1	97,2	109,4	121,6	136,8	151,9	193,4	217,6	241,7	232,1	261,1	290,1
		Connection	mm	40 (4,000mmAq)				50 (4,000mmAq)							
	Oil	Cooling	kg/h	92,0	105,2	118,3	131,5	147,9	164,3	184,1	207,1	230,1	263,0	295,8	328,7
		Heating	kg/h	109,3	124,9	140,5	156,1	175,7	195,2	218,6	245,9	273,3	262,3	295,1	327,9
		Connection	mm	20								25			
Electric	Power Source		–	3Ø 380V 50Hz											
	Abs. Pump No.1		kW(A)	3,0(11,0)			3,4(10,2)			5,5 (14,5)			6,6 (16,2)		
	Abs. Pump No.2		kW(A)	1,2(4,5)			1,5(5,0)			2,0 (6,0)			2,2 (7,0)		
	Ref.Pump		kW(A)	0,4 (1,5)								1,5 (4,0)			
	Purge Pump		kW(A)	0,4 (1,4)											
	Burner Blower		kW(A)	2,2 (5,0)			3,0 (6,5)			5,5(13,0)			7,5 (15,8)		
	Oil Pump		kW(A)	0,55 (2,1)								1,1 (4,0)			
	Control Panel		kW(A)	0,2 (0,5)											
	Total Amp.	Gas	kW(A)	7,4(23,9)		8,1(23,6)	8,9(25,1)			14(36,9)			18,4(44,9)		
		Oil	kW(A)	7,95(26,0)		8,65(25,7)	9,45(27,2)			14,55(39,0)			19,5(48,9)		
Size	Length(L)	mm	4,782		4,867	4,880	4,960	5,100	5,600	6,150	5,750	6,250	6,800		
	Width(W)	mm	2,200		2,287	2,550			3,150			3,400			
	Height(H)	mm	2,390		2,585	2,800			3,300			3,600			
Weight	Rigging	Ton	8,1	8,7	10,8	11,0	13,2	13,4	18,1	19,6	21,0	27,9	30,2	32,6	
	Operation	Ton	9,1	9,8	12,3	12,7	15,2	15,5	20,7	22,3	24,0	31,8	34,3	37,0	
Space for Tube Replacement		mm	4,500						5,200	5,700	5,200	5,700	6,200		

SPECIFICATION [WDA-H Series]

Double-Effect Direct Fired Absorption Chiller & Heater

COP 1.51(LHV) High-efficiency model

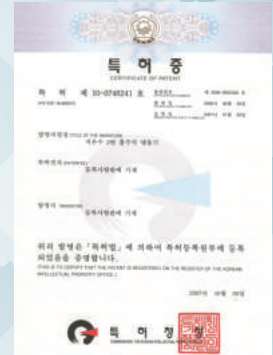
MODEL		Units	WDAH 004	WDAH 005	WDAH 006	WDAH 007	WDAH 008	WDAH 010	WDAH 012	WDAH 015	WDAH 018	WDAH 021	WDAH 024	
Cooling capacity	usRT		40	50	60	70	80	100	120	150	180	210	240	
	kW		141	176	211	246	281	352	422	528	633	739	844	
Heating Capacity	Mcal/h		106	133	160	186	213	266	319	399	479	559	639	
	kW		124	155	186	217	248	309	371	464	557	650	743	
Chilled & Hot Water	Temp.	°C	12 / 7 °C(Heating 55.6 / 60)											
	Flow rate	m³/h	24.2	30.2	36.3	42.3	48.4	60.5	72.6	90.7	108.9	127.0	145.2	
	P.Drop	mAq	4.8	5.5	4.1	4.3	4.0	4.3	5.4	5.8	5.7	5.8	4.0	
	Connection	mm	80				100				125		150	
Cooling Water	Temp.	°C	32 / 37 °C											
	Flow rate	m³/h	40	50	60	70	80	100	120	150	180	210	240	
	P.Drop	mAq	5.4	6.0	5.9	6.0	4.3	4.8	6.4	7.3	7.3	7.8	6.6	
	Connection	mm	100				125				150		200	
Fuel	Gas	Cooling	Nm³/h	8.9	11.2	13.4	15.7	17.9	22.4	26.8	33.6	40.3	47.0	53.7
		Heating	Nm³/h	11.6	14.5	17.4	20.4	23.3	29.1	34.9	43.6	52.3	61.1	69.8
		Connection	mm	40 (4,000mAq)										
Electric	Power Source	—	3Ø 380V50Hz											
	Abs. Pump No.1	kW(A)	1.2 (4.0)				2.0 (6.0)				2.4 (7.5)		3.0 (11.0)	
	Abs. Pump No.2	kW(A)	0.3 (1.6)				0.4 (1.6)				1.2 (4.5)			
	Ref.Pump	kW(A)	0.2 (1.1)				0.3 (1.5)				0.4 (1.5)			
	Purge Pump	kW(A)	0.4 (1.4)											
	Burner Blower	kW(A)	0.37 (1.0)		0.72 (2.1)				1.5 (4.0)				2.2 (5.0)	
	Control Panel	kW(A)	0.2 (0.5)											
	Total Amp.	kW(A)	2.67 (9.6)		3.055 (10.7)			4.05 (13.1)			4.8 (15.0)	6.1 (19.4)		7.4 (23.9)
Size	Length(L)	mm	2,630		2,700		2,800		3,660		3,700		4,770	
	Width(W)	mm	1,840		1,840		1,970		2,075		2,100		2,200	
	Height(H)	mm	1,978				2,150				2,500		2,510	
Weight	Rigging	Ton	2.8	3.0	3.3	3.7	4.0	4.2	5.1	5.6	6.4	7.6	8.1	
	Operation	Ton	3.2	3.4	3.6	4.0	4.8	5.0	6.1	6.7	7.9	8.2	9.1	
Space for Tube Replacement		mm	2,000			2,400			3,400			4,500		

- Remark**
- 1usRT = 3,024 kcal/h
 - 2) Working Pressure of each water side is based on 1.0MPa [151psig]
 - 3) Natural Gas LHV(Lower Heating Value) : 9,500kcal/Nm³, Diesel Oil LHV(Lower Heating Value) : 9,200kcal/kg
 - 4) Fouling factor 0.0001m²·h·°C/kcal for Absorber and Condenser, 0.0001m²·h·°C/kcal for Evaporator.
 - 5) Catalogue specifications are subject to change without prior notice.

MODEL		Units	WDAH 028	WDAH 032	WDAH 036	WDAH 040	WDAH 045	WDAH 050	WDAH 056	WDAH 063	WDAH 070	WDAH 080	WDAH 090	
Cooling capacity	usRT		280	320	360	400	450	500	560	630	700	800	900	
	kW		985	1,125	1,266	1,407	1,583	1,758	1,969	2,216	2,462	2,814	3,165	
Heating Capacity	Mcal/h		745	852	958	1064	1198	1331	1490	1677	2129	2395	2661	
	kW		867	990	1,114	1,238	1,393	1,547	1,733	1,950	2,476	2,785	3,095	
Chilled & Hot Water	Temp.	°C	12 / 7 °C(Heating 55.6 / 60)											
	Flow rate	m³/h	169.3	193.5	217.7	241.9	272.2	302.4	338.7	381.0	483.8	544.3	604.8	
	P.Drop	mAq	4.1	4.6	4.9	3.8	4.2	3.4	4.6	6.3	4.3	6.0	8.1	
	Connection	mm	150			200			250					
Cooling Water	Temp.	°C	32 / 37 °C											
	Flow rate	m³/h	280	320	360	400	450	500	560	630	700	800	900	
	P.Drop	mAq	6.9	7.3	7.3	6.8	7.0	5.2	7.2	9.7	7.2	10.0	13.4	
	Connection	mm	200			250			300			350		
Fuel	Gas	Cooling	Nm³/h	62.6	71.6	80.5	89.5	100.7	111.8	125.3	140.9	156.6	178.9	201.3
		Heating	Nm³/h	81.4	93.0	104.7	116.3	130.8	145.4	162.8	183.2	232.6	261.7	290.8
	Connection	mm	40 (4,000mmAq)						50 (4,000mmAq)					
Electric	Power Source	—	3Ø 380V50Hz											
	Abs. Pump No.1	kW(A)	3.0 (11.0)	3.4 (10.2)			5.5 (14.5)			6.6 (16.2)				
	Abs. Pump No.2	kW(A)	1.2(4.5)	1.5 (5.0)			2.0 (6.0)			2.2 (7.0)				
	Ref.Pump	kW(A)	0.4 (1.5)						1.5 (4.0)					
	Purge Pump	kW(A)	0.4 (1.4)											
	Burner Blower	kW(A)	2.2 (5.0)		3.0 (6.5)			5.5 (13.0)			7.5 (15.8)			
	Control Panel	kW(A)	0.2 (0.5)											
	Total Amp.	kW(A)	7.4(23.9)	8.1(23.6)	8.9(25.1)			14(36.9)			18.4(44.9)			
Size	Length(L)	mm	4,770	4,870		4,900		5,100	5,600	6,150	5,750	6,250	6,800	
	Width(W)	mm	2,200	2,300	2,430	2,650			3,150			3,400		
	Height(H)	mm	2,510	2,640		2,900		3,394			3,720			
Weight	Rigging	Ton	8.7	10.8	11.0	13.2	13.4	18.1	19.6	21.0	27.9	30.2	32.6	
	Operation	Ton	9.8	12.3	12.7	15.2	15.5	20.7	22.3	24.0	31.8	34.3	37.0	
Space for Tube Replacement		mm	4,500						5,200	5,700	5,200	5,700	6,200	

Double Lift Hot Water Driven Absorption Chiller

75RT ~ 1500RT 27 Model



WDLE / Stable, Convenient, Efficient and Reliable

Non-carbon eco-friendly chiller

- Use of regional heating hot water (Energy use efficiency 84%. The ratio of incineration heat of the combined waste heat - 74%).
- Use of natural refrigerant water instead of Freon refrigerant destroying ozone layer.
- No CO2 and Nox which cause the global warming

Zero explosive danger by vacuum operation

- Internal pressure vacuum .
- No danger of gas explosion by use of hot water
- Safety from the danger of high-pressure damage.

The excellent partial load part-load value

- Auxiliary cycle auto stop if the cooling load is below 80%.
- Energy saving by 25% per chilled ton due to the increase in the efficiency by 25%.

Low noise & Low vibration

- Noise level: Below 75 dB at 1m distance

IPLV(Integrated Part-Load Value)

	Chilled water inlet °C	Cooling capacity	COP	Part Load rate	IPLV
Single effect double lift type	31,0	100%	0,64	0,01	0,83
	29,8	75%	0,82	0,42	
	28,8	50%	0,85	0,45	
	28,0	25%	0,81	0,12	
Single effect type	Chilled water inlet °C	Cooling capacity	COP	Part Load rate	IPLV
	31,0	100%	0,72	0,01	0,68
	29,9	75%	0,71	0,42	
	29,1	50%	0,68	0,45	
28,1	25%	0,59	0,12		

1) Chilled water outlet temp keeps at 8°C and hot water inlet temp keeps at 95°C
 2) Assuming that the ambient humid temp is 27°C for the chilled water inlet temp, it was designed to be lower depending on the hot water flow rate.
 3) Part load rate is subject to the paragraph 5.3.2.2 of AR1560-2000.

Economic air-conditioning

- Conventional Chiller: Δ 15 °C (95°C -> 80°C)
 – Insufficient heating hot water
- Sing-effect/ Double-lift Chiller: Δ 40 °C (95°C -> 55°C)
 – Saving 60% of the existing hot water use capacity
 Wide range of the use

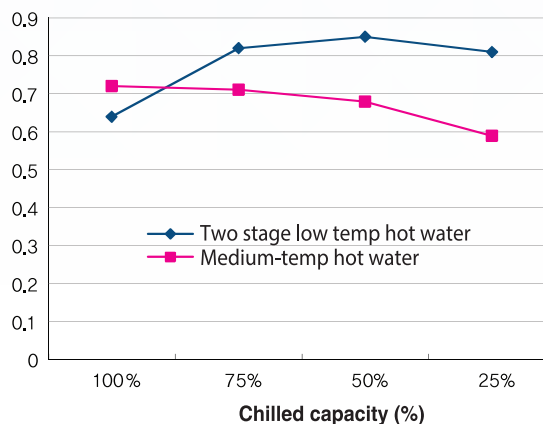
Micro processor control with only start-up signal for automatic operation

- Precise control of start-up, stop, capacity control, abnormal stop, etc.
- Easy to handle due to the touch screen.
- Control of auxiliary cycle, self-diagnostic function & other controls

Saving maintenance cost

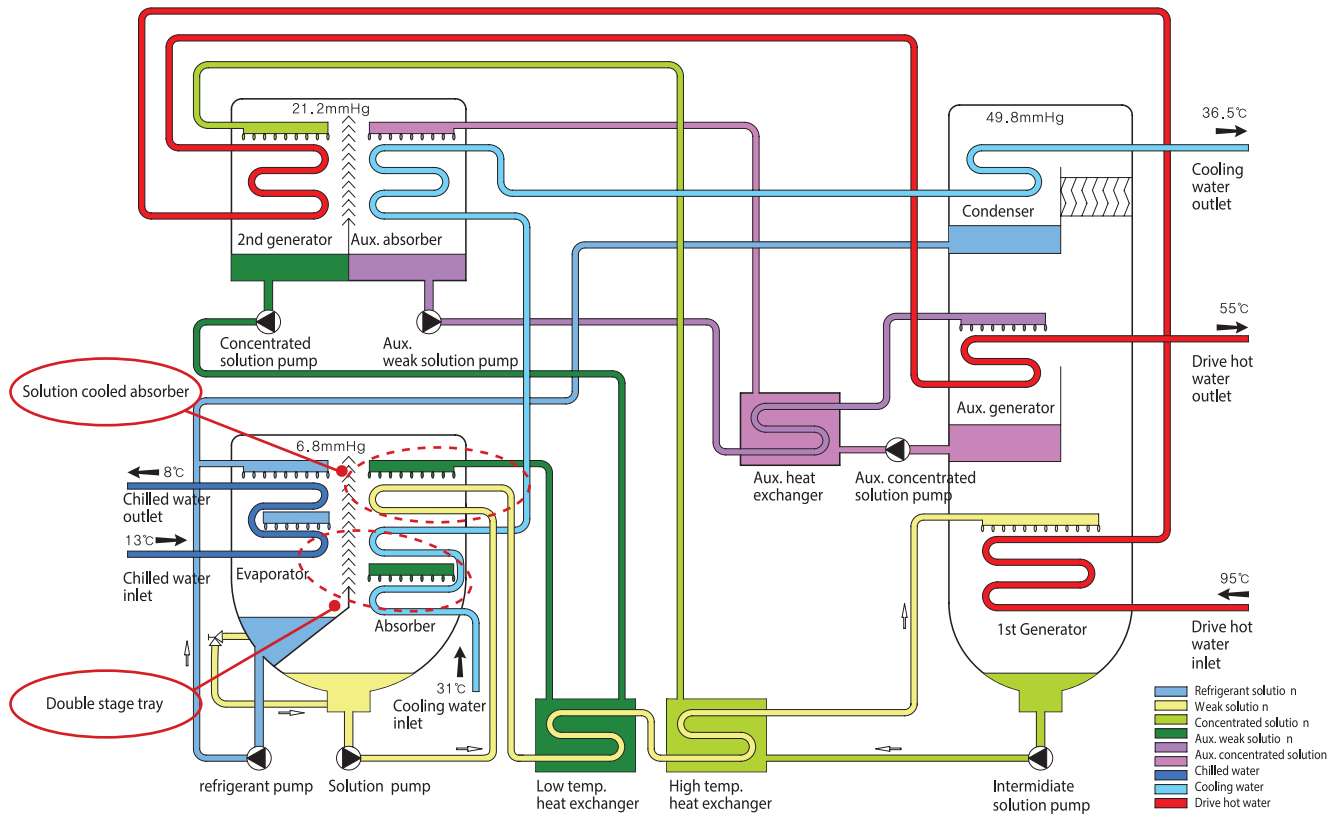
- Leakage per month: 3cc or below. High vacuum condition.
- Auto steam extraction. Non-condensing gas storage.
- Optimal condition of the operation.
- Operating with only minimum purging.

Comparison of partial load COP



CYCLE DIAGRAM

Double Lift Hot Water Driven Absorption Chiller



As the refrigerant is evaporated from the evaporator, the chilled water flowing inside the heating tube of the evaporator is cooled down and the refrigerant evaporated is absorbed by the concentrated absorbing liquid from the 2nd generator.

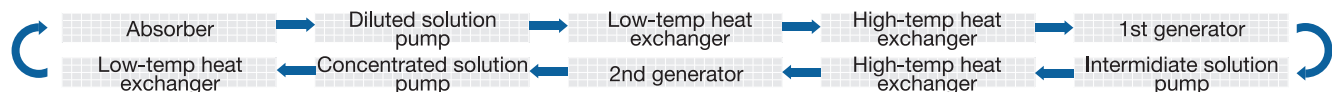
The concentrated absorbing liquid will become thick absorbing liquid and the heat generate will be absorbed by the chilled water. The thick absorbing liquid which absorbed the refrigerant steam from the absorbing unit will go to the 1st generator passing through the low-temp and high-temp heat exchangers. The hot water at 95° in the 1st generator will heat the thick absorbing liquid to generate the refrigerant steam and then it flows to the 2nd generator after passing through the high-temp heat exchanger. The medium concentrated thick absorbing liquid com from the 2nd generator will be heated by the hot water come from the 1st generator to generate the refrigerant steam.

The refrigerant steam generated from the 2nd generator will be absorbed by the absorbing liquid flowing outside the heat tube and the thick absorbing liquid which absorbed the refrigerant steam from the aux absorbing unit will flow to the aux generator after passing through aux heat exchanger, so that it is heated by the hot water flowing the heat tube of the aux generator to generate the refrigerant steam. Then, the concentrated absorbing liquid is returned back to the aux absorbing unit after passing through the aux heat exchanger.

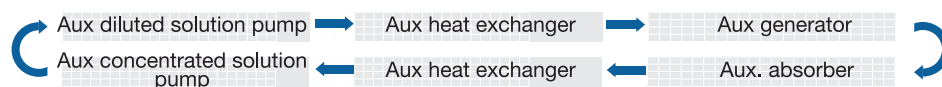
The refrigerant steam generated from the 1st generator and the aux generator will condense the refrigerant with the leakage of the chilled water inside the heat tube and then it absorbs the heat generated.

That is, the hot water flows the 1st generator → 2nd generator → aux generator while the chilled water flows absorbing unit → aux absorbing unit → condenser in order to form a chilled cycle. In addition, the low-temp hot water two stage absorbing chiller has main cycle and aux cycle and the details of the solution (liquid) flow are as below.

Main cycle solution flow



Aux cycle solution flow



SPECIFICATION [WDLE Series]

Single Effect Double Lift Hot Water Absorption Chiller

Hot Water inlet temp 95°C

Model		Unit	WDLE 75		WDLE 90		WDLE 110		WDLE 135		WDLE 155		WDLE 180		WDLE 210		WDLE 240		WDLE 270		WDLE 300		WDLE 340			
Chilled Water temp. in-outlet		°C	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8		
Cooling Capacity		KW	257	264	309	316	376	387	464	474	531	545	619	633	721	738	823	844	928	949	1,030	1,054	1,167	1,195		
		usRT	73	75	88	90	107	110	132	135	151	155	176	180	205	210	234	240	264	270	293	300	332	340		
Chilled Water	Flow rate	m³/h	44.2	45.4	53.2	54.4	64.7	66.5	79.8	81.6	91.3	93.7	106	109	124	127	142	145	160	163	177	181	201	206		
	Pressure drop	mAq	6.1	6.4	6.6	6.8	9.1	9.6	10.1	10.5	9.1	9.5	9.3	9.6	9.3	9.7	9.1	9.5	9.8	10.2	10.1	10.5	8.9	9.3		
	Nozzle size	mm	80				100				125				150				200							
Cooling Water	in-outlet temp.	°C	31 / 36.5																							
	Flow rate	m³/h	104	107	125	128	152	156	188	192	215	220	251	256	292	298	333	341	376	383	418	426	473	483		
	Pressure drop	mAq	10.0	10.5	10.2	10.6	10.7	11.1	11.8	12.1	11.5	11.9	12.4	12.7	12.2	12.6	12.3	12.8	12.0	12.3	12	12.3	12.0	12.4		
Hot Water	in-outlet temp.	°C	95 / 55																							
	Flow rate	ton/h	8.8	8.9	10.6	10.7	12.9	13.1	15.9	16	18.2	18.4	21.2	21.4	24.7	24.9	28.1	28.5	31.8	32	35.2	35.6	39.9	40.4		
	Pressure drop	Main body	mAq	3.5	3.6	3.5	3.6	5.4	5.5	5.9	6.0	5.7	5.8	6.0	6.1	5.5	5.6	5.7	5.9	5.2	5.3	5.4	5.5	5.5	5.8	
Control valve		mAq	2.3	2.4	3.3	3.4	1.8	1.9	2.8	2.9	1.5	1.5	2.0	2.1	2.7	2.8	1.4	1.4	1.8	1.8	2.2	2.3	2.8	2.9		
Electrical power	Nozzle size	mm	65						80						100											
	Control valve nozzle size	mm	40				50				65				80											
	Power	-	3 φ, 380, 50Hz																							
Dimension	Solution pump	kW(A)	3.3(12.8)				3.9(14.8)				4.5(15.8)				5.1(16.8)				5.1(16.8)				6.0(18.8)			
	Refrigerant pump	kW(A)	0.2(1.1)				0.3(1.5)				0.4(1.5)															
	Purge pump	kW(A)	0.4(1.4)																							
	Control panel	kW(A)	0.2(0.5)																							
	Max. ampere@380V	kW(A)	4.1(15.8)				4.8(18.2)				5.4(19.2)				6.1(20.2)				6.1(20.2)				7(22.2)			
Weight	Length(L)	mm	2,670				3,690				3,696				4,767				4,852				4,866			
	Width(W)	mm	1,736						1,989						2,240						2,350					
	Height(H)	mm	2,293						2,428						2,566						2,963					
Tube exchange space	Rigging weight	Ton	4.4	4.6	5.7	6	7.2	7.5	8.8	9.2	11.3	11.8	13.5													
	Operation weight	Ton	5.1	5.3	6.6	7	8.4	8.9	10.4	10.9	13.4	14.1	16.2													

Hot Water inlet temp 115°C

Model		Unit	WDLE 75		WDLE 90		WDLE 110		WDLE 135		WDLE 155		WDLE 180		WDLE 210		WDLE 240		WDLE 270		WDLE 300		WDLE 340			
Chilled Water temp. in-outlet		°C	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8		
Cooling Capacity		KW	274	285	331	341	404	418	496	513	570	591	661	686	770	798	879	914	988	1,027	1,101	1,143	1,245	1,294		
		usRT	78	81	94	97	115	119	141	146	162	168	188	195	219	227	250	260	281	292	313	325	354	368		
Chilled Water	Flow rate	m³/h	47.2	49	56.9	58.7	69.6	72	85.3	88.3	98	102	114	118	132	137	151	157	170	177	189	197	214	223		
	Pressure drop	mAq	11.3	12.1	12	12.7	10.3	11	11.4	12.1	10.3	11	10.4	11.1	10.4	11.1	10.2	11	11	11.7	11.3	12.1	10	10.7		
	Nozzle size	mm	80				100				125				150				200							
Cooling Water	in-outlet temp.	°C	31 / 36.5																							
	Flow rate	m³/h	105	109	127	130	156	160	191	196	219	226	254	262	296	305	338	350	380	393	423	437	479	495		
	Pressure drop	mAq	10.5	11.2	11	11.4	11.2	11.8	12.1	12.7	11.9	12.6	12.8	13.5	12.5	13.2	12.7	13.5	12.3	13	12.3	13	12.3	13.1		
Hot Water	in-outlet temp.	°C	115 / 55																							
	Flow rate	ton/h	5.7	5.9	6.9	7.1	8.5	8.7	10.4	10.6	11.9	12.2	13.8	14.2	16.1	16.5	18.4	18.9	20.7	21.3	23	23.7	26.1	26.8		
	Pressure drop	Main body	mAq	3	3.1	3.3	3.4	5.3	5.5	5.9	6.2	4.9	5.1	5.4	5.7	4.2	4.4	4.5	4.7	3.7	3.9	3.9	4.1	4.1	4.3	
Control valve		mAq	1	1.1	1.5	1.6	2.2	2.3	1.2	1.3	1.6	1.7	2.2	2.3	3.1	3.2	4	4.2	2	2.1	2.5	2.6	3	3.2		
Electrical power	Nozzle size	mm	65						80																	
	Control valve nozzle size	mm	40				50				65															
	Power	-	3 φ, 380, 50Hz																							
Dimension	Solution pump	kW(A)	3.3(12.8)				3.9(14.8)				4.5(15.8)				5.1(16.8)				6.0(18.8)							
	Refrigerant pump	kW(A)	0.2(1.1)				0.3(1.5)				0.4(1.5)															
	Purge pump	kW(A)	0.4(1.4)																							
	Control panel	kW(A)	0.2(0.5)																							
	Max. ampere@380V	kW(A)	4.1(15.8)				4.8(18.2)				5.4(19.2)				6.1(20.2)				7(22.2)							
Weight	Length(L)	mm	2,670				3,690				3,696				4,767				4,852				4,866			
	Width(W)	mm	1,736						1,989						2,240						2,350					
	Height(H)	mm	2,293						2,427						2,566						2,963					
Tube exchange space	Rigging weight	Ton	4.4	4.6	5.7	6	7.2	7.5	8.8	9.2	11.3	11.8	13.5													
	Operation weight	Ton	5.1	5.3	6.6	7	8.4	8.9	10.4	10.9	13.4	14.1	16.2													

- Remark**
- 1) Standard pressure : Chilled water and cooling water 1.0MPa(10kgf/c_G), Hot water 1.6MPa(16kgf/c_G)
 - 2) Power standard : 380V, 3Phase, 60Hz(220V, 440V, 460V also available)
 - 3) The specification could be changed without any notice.

Hot Water inlet temp 95°C

Model		Unit	WDLE 375		WDLE 420		WDLE 470		WDLE 525		WDLE 600		WDLE 675		WDLE 750		WDLE 825		WDLE 900		WDLE 975																																			
Chilled Water temp. in-outlet		°C	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8																																		
Cooling Capacity		kW	1,287	1,318	1,442	1,476	1,614	1,652	1,804	1,845	2,061	2,110	2,317	2,373	2,574	2,637	2,834	2,901	3,091	3,165	3,347	3,428																																		
		usRT	366	375	410	420	459	470	513	525	586	600	659	675	732	750	806	825	879	900	952	975																																		
Chilled Water	Flow rate	m³/h	221	227	248	254	278	284	310	318	354	363	399	408	443	454	487.5	499	532	544	576	590																																		
	Pressure drop	mAq	9.3	9.7	7.1	7.4	9.8	10.2	4.4	4.5	9.7	10.1	4.3	4.5	5.7	6.0	7.4	7.7	6.3	6.6	7.8	8.2																																		
	Nozzle size	mm	200						250						300																																									
in-outlet temp.		°C	31 / 36.5																																																					
Cooling Water	Flow rate	m³/h	522	533	584	596	654	667	731	746	835	852	939	959	1,043	1,065	1,149	1,172	1,253	1,278	1,357	1,385																																		
	Pressure drop	mAq	12.1	12.5	8.7	9.0	11.3	12.2	15.9	16.3	12.7	13.0	17.1	17.6	12.6	13.0	16.1	16.6	17.6	18.3	21.9	22.8																																		
	Nozzle size	mm	250				300				350				400																																									
in-outlet temp.		°C	95 / 55																																																					
Hot Water	Flow rate	ton/h	44	44.5	49.3	49.9	55.2	55.8	61.7	62.3	70.5	71.2	79.3	80.1	88	89	96.9	97.9	106	107	114	116																																		
	Pressure drop	Main body	mAq	5.5	5.6	4.9	5.0	5.1	5.2	3.9	4.0	4.4	4.5	3.2	3.3	4.2	4.3	5.4	5.5	4.3	4.5	5.2	5.5																																	
		Control valve	mAq	1.4	1.4	1.7	1.7	2.1	2.2	2.7	2.7	3.5	3.6	1.7	1.7	2.1	2.1	2.5	2.6	2.9	3.1	3.4	3.6																																	
	Nozzle size	mm	100						125																																															
	Control valve nozzle size	mm	100						125																																															
Electrical power	Power	-	3φ, 380, 50Hz																																																					
	Solution pump	kW(A)	6.0(18.8)				6.7(22.2)				10.4(35.0)				14.1(48.0)																																									
	Refrigerant pump	kW(A)	0.4(1.5)				1.5(4.0)																																																	
	Purge pump	kW(A)	0.4(1.4)																																																					
	Control panel	kW(A)	0.2(0.5)																																																					
Max. ampere@380V	kW(A)	7.0(22.2)				7.7(25.6)				12.5(40.9)				17.2(53.9)																																										
Dimension	Length(L)	mm	4,866				5,005				5,544				6,045				5,638				6,136				6,661				7,189				6,791				7,291																	
	Width(W)	mm	2,350																																																					
	Height(H)	mm	2,963						3,262						3,600						3,931																																			
Weight	Rigging weight	Ton	14				19				20.7				22.2				26.7				28.7				30.7				36.4				38.4				40.8																	
	Operation weight	Ton	16.9				23				25				26.9				31.6				34				36.3				43.1				45.5				48.3																	
Tube exchange space		mm	4,600						5,200						5,700						5,200						5,700						6,200						6,700						6,200						6,700					

Hot Water inlet temp 115°C

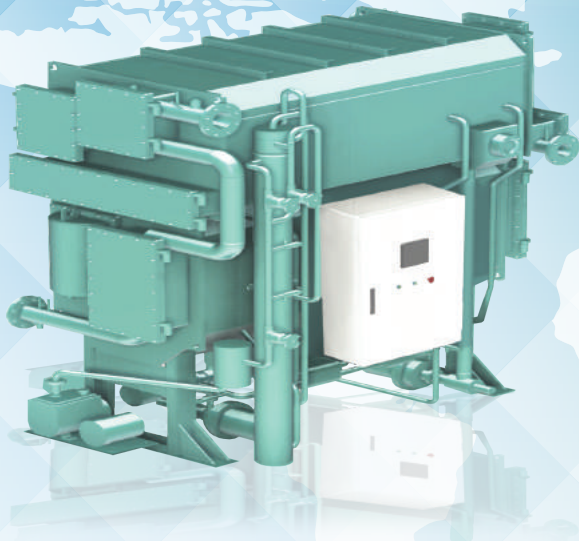
Model		Unit	WDLE 375		WDLE 420		WDLE 470		WDLE 525		WDLE 600		WDLE 675		WDLE 750		WDLE 825		WDLE 900		WDLE 975																																			
Chilled Water temp. in-outlet		°C	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8																																		
Cooling Capacity		kW	1,375	1,428	1,540	1,600	1,723	1,790	1,923	2,001	2,198	2,286	2,475	2,570	2,750	2,855	3,024	3,144	3,298	3,428	3,573	3,713																																		
		usRT	391	406	438	455	490	509	547	569	625	650	704	731	782	812	860	894	938	975	1,016	1,056																																		
Chilled Water	Flow rate	m³/h	236	246	265	275	296	308	331	344	378	393	426	442	473	491	520	541	567	590	614	639																																		
	Pressure drop	mAq	10.5	11.2	8	8.5	11	11.8	4.8	5.2	10.6	11.4	4.8	5.1	6.3	6.7	4.3	4.6	5.5	5.9	6.8	7.3																																		
	Nozzle size	mm	200						250						300																																									
in-outlet temp.		°C	31 / 36.5																																																					
Cooling Water	Flow rate	m³/h	529	546	592	612	663	684	740	765	845	874	952	983	1,058	1,092	1,163	1,202	1,269	1,311	1,374	1,420																																		
	Pressure drop	mAq	12.4	13.2	9.8	10.4	13.4	14.2	17.7	18.9	13.9	14.8	18.8	19.9	13.5	14.3	9.1	9.7	11.6	12.3	14.4	15.3																																		
	Nozzle size	mm	250				300				350				400																																									
in-outlet temp.		°C	115 / 55																																																					
Hot Water	Flow rate	ton/h	28.8	29.6	32.2	33.1	36.1	37.1	40.3	41.4	46	47.3	51.8	53.2	57.6	59.1	63.3	65.1	69	71	74.8	76.9																																		
	Pressure drop	Main body	mAq	4.4	4.6	3	3.1	3.9	4.1	5.1	5.4	3.3	3.5	4.4	4.6	5.7	6	4.7	4.9	5.8	6.1	4.9	5.2																																	
		Control valve	mAq	3.9	4.1	1.9	2	2.4	2.5	2.9	3.1	1.5	1.6	2	2.1	2.4	2.5	2.9	3.1	1.3	1.4	1.5	1.6																																	
	Nozzle size	mm	80						100						125																																									
	Control valve nozzle size	mm	65						80						100						125																																			
Electrical power	Power	-	3φ, 380, 50Hz																																																					
	Solution pump	kW(A)	6.0(18.8)				6.7(22.2)				10.4(35.0)				14.1(48.0)																																									
	Refrigerant pump	kW(A)	0.4(1.5)				1.5(4.0)																																																	
	Purge pump	kW(A)	0.4(1.4)																																																					
	Control panel	kW(A)	0.2(0.5)																																																					
Max. ampere@380V	kW(A)	7.0(22.2)				7.7(25.6)				12.5(40.9)				17.2(53.9)																																										
Dimension	Length(L)	mm	4,866				5,005				5,544				6,045				5,638				6,136				6,661				7,189				6,791				7,291																	
	Width(W)	mm	2,350																																																					
	Height(H)	mm	2,963						3,262						3,600						3,931																																			
Weight	Rigging weight	Ton	14				19				20.7				22.2				26.7				28.7				30.7				36.4				38.4				40.8																	
	Operation weight	Ton	16.9				23				25				26.9				31.6				34				36.3				43.1				45.5				48.3																	
Tube exchange space		mm	4,600						5,200						5,700						5,200						5,700						6,200						6,700						6,200						6,700					

Option In different heat source and operation, the conditions can be selected as an option.

- 1) When the water pressure different from the standard.
- 2) When heat tube material is not copper nor with different tickness.
- 3) When Hot/cooling/chilled water temp. are different from standard.

Single Effect Double Stage Generation Hot Water Absorption Chiller

30RT ~ 300RT



Patant

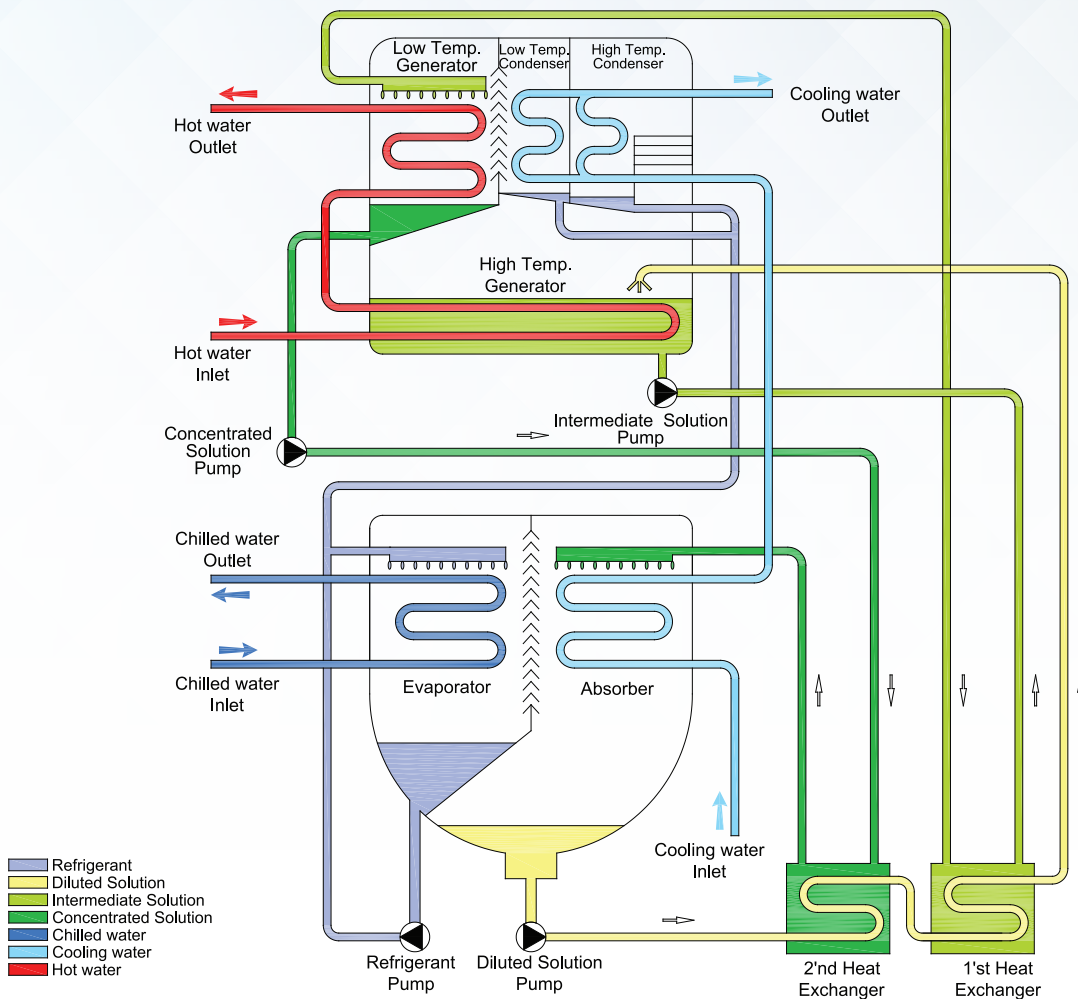


Economic Air-Condition

Chiller Type	Hot Water Temp.		Temp. Gap
	Inlet	Outlet	
Conventional (General Chiller)	95 °C	80 °C	Δ 15 °C
WORLD EnC (New Developed Chiller)	95 °C	75 °C	Δ 20 °C

Hot Water temp. 95 °C → 75 °C

Cycle Diagram



SPECIFICATION

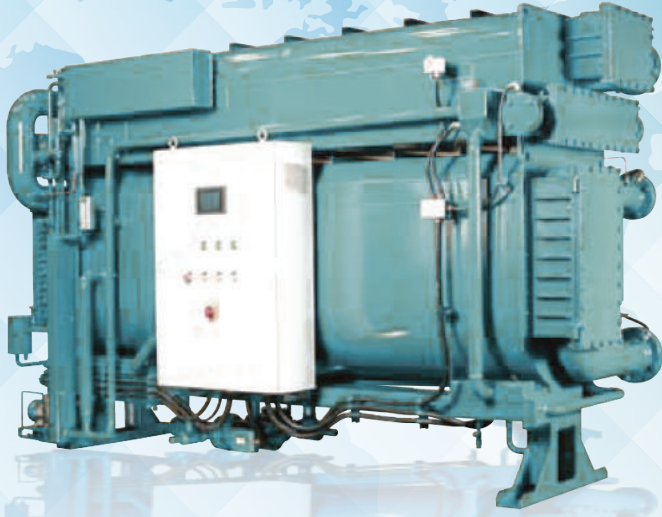
Single Effect Double Stage Generation Hot Water Absorption Chiller

MODEL		UNIT	WHL 30	WHL 40	WHL 50	WHL 75	WHL 90	WHL 110	WHL 135	WHL 155	WHL 180	WHL 210	WHL 240	WHL 270	WHL 300		
Cooling Capacity		kW	105	141	176	264	316	387	474	545	633	738	844	949	1,054		
		usRT	30	40	50	75	90	110	135	155	180	210	240	270	300		
Chilled Water	Temp.	°C	13 - 8														
	Flow Rate	m³/h	18.1	24.2	30.2	45.4	54.4	66.5	81.6	93.7	109.0	127.0	145.0	163.0	181.4		
	Pressure Drop	mH ₂ O	7.3	8.3	7.0	6.4	6.8	9.6	10.5	9.5	9.6	9.7	9.5	10.2	10.5		
	Connection Size	mm	65		80			100			125			150			
Cooling Water	Temp.	°C	31 - 36.5														
	Flow Rate	m³/h	37.1	49.5	61.9	92.8	111.3	136.1	167.0	240.2	222.7	259.8	296.9	334.0	371.1		
	Pressure Drop	mH ₂ O	8.9	9.8	12.0	8.4	8.8	8.0	8.7	12.0	8.5	7.5	7.6	7.5	7.3		
	Connection Size	mm	80		100			125			150		200		250		
Hot Water	Temp.	°C	95 - 75														
	Flow Rate	ton/h	4.5	6.0	7.6	11.3	13.6	16.6	20.4	23.4	27.2	31.8	36.3	40.8	45.4		
	Pressure Drop	Shell	mH ₂ O	1.6	2.0	3.4	3.1	3.2	4.3	4.8	4.3	4.3	5.1	4.9	4.9	4.7	
		Control Valve	mH ₂ O	2.2	1.5	1.0	2.2	2.1	3.1	1.9	2.5	3.3	1.8	2.3	3.0	1.4	
	Connection Size	mm	65				80				100						
	Control Valve Size	mm	25	40			50			65			80		100		
Electric	Power Source	-	3Ø 380V50Hz														
	Abs. Pump	kW (A)	1.6(6.6)			1.8(7.2)			2.1(8.2)			2.8(9.2)			3.2(10.2)		
	Ref. Pump	kW (A)	0.2(1.1)				0.3(1.5)				0.4(1.5)						
	Purge Pump	kW (A)	0.4(1.4)														
	Control Panel	kW (A)	0.2(0.5)														
	Total Ampere	kW (A)	2.4(9.6)			2.6(10.2)			3(11.6)			3.7(12.6)			4.2(13.6)		
Size	Length[L]	mm	2,052		2,552	2,605		3,680		3,710		4,740		4,780			
	Width[W]	mm	1,351				1,370				1,520				1,810		
	Height[H]	mm	2,133				2,370				2,430				2,670		
Weight	Rigging	ton	2.2	2.3	2.8	4.0	4.2	5.1	5.3	6.1	6.4	7.5	7.8	9.7	10.1		
	Operating	ton	2.6	2.7	3.3	4.7	4.9	5.7	5.9	6.8	7.1	8.3	8.7	10.8	11.2		

- Remark**
- 1) 1usRT = 3,024 kcal/h
 - 2) Available max. working pressure of chilled water /cooling water/hot water : 1.0MPa
 - 3) Fouling factor 0,0001 m²h°C/kcal for Absorber and Condenser, 0,0001 m²h°C/kcal for Evaporator and Generator.
 - 4) Catalogue specifications are subject to change without prior notice.

Single Lift Hot Water Driven Absorption Chiller

75RT ~ 1125RT 27 Model



WSL / Single Lift Hot Water Driven Absorption

1. Compact and Energy saving Design

With using high efficiency heat tube, smaller and lighter design to conventional things. Installation space also gets decreased.

2. Easy operation and convenience

Full automatic system with up-to-date control technology such as operation, setting, monitoring, and control flow chart.

3. Safe and efficient chiller

Being operated in vacuum condition, it keeps internal pressure in vacuum status even in stop mode. With 2 pumps for solution and refrigerant, it is totally quiet. No noise and No vibration.

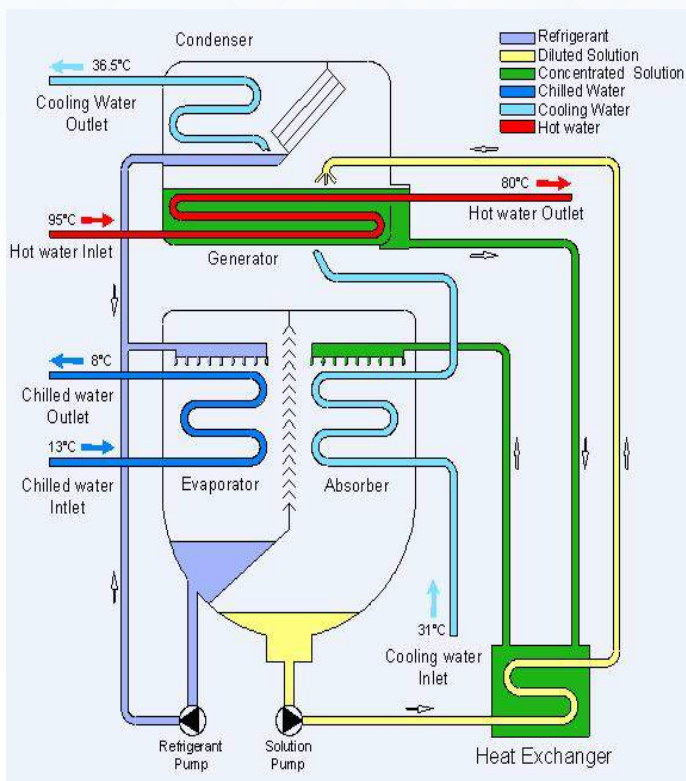
4. Maintenance cost reduction and only one purging during a season

Optimized operation condition and trouble-free system under strict manufacturing standard: 1×10^{-6} atm.cc/sec leakage for a month.

5. High performance Automatic Purge system

An automatic purge unit to collect into a purge tank remaining Non-condensable gases in system and purge tank for storing Non-condensable gases make long time operation without manual purging

Hot water Absorption chiller operation flow chart



SPECIFICATION

Hot Water Absorption Chiller

Hot water inlet temp. 95°C

Model	Unit	WSL75	WSL90	WSL110	WSL135	WSL155	WSL180	WSL210	WSL240	WSL270	WSL300			
Chilled water temp. at in-outlet	°C	12-7 13-8	12-7 13-8	12-7 13-8	12-7 13-8	12-7 13-8	12-7 13-8	12-7 13-8	12-7 13-8	12-7 13-8	12-7 13-8			
Cooling capacity	usRT	70 75 85 90	103 110 122 135	141 155 169 180	198 210 226 240	254 270 282 300								
Chilled water	Flow rate	m³/h	42,3 45,4 51,4 54,4	62,3 66,5 73,8 81,6	85,3 93,7 102,2 108,9	119,8 127,0 136,7 145,2	153,6 163,3 170,6 181,4							
	Pressure drop	mAq	7,8 9,0 8,5 9,5	7,5 8,6 7,4 9,1	7,0 8,4 7,9 9,0	7,5 8,4 7,9 8,9	7,8 8,8 8,0 9,1							
	Pipe size	mm	80			100			125			150		
Cooling water	Flow rate	m³/h	92,5 99,1 112,3 118,9	136,1 145,3 161,1 178,3	186,2 204,7 223,2 237,8	261,5 277,4 298,5 317,0	335,5 356,6 372,5 396,3							
	Pressure drop	mAq	10,1 11,6 9,8 11,0	4,7 5,4 4,2 5,2	4,6 5,5 4,8 5,5	9,7 10,8 9,5 10,7	9,3 10,5 9,0 10,2							
	Pipe size	mm	125			150			200					
Hot water	Flow rate	m³/h	19,6 21,0 23,8 25,2	28,8 30,8 34,2 37,8	39,5 43,4 47,3 50,4	55,4 58,8 63,3 67,2	71,1 75,6 79,0 84,0							
	Pressure drop	mmAq	0,9 1,0 0,9 1,0	0,4 0,5 0,5 0,6	0,5 0,6 0,5 0,6	1,1 1,2 1,1 1,2	1,0 1,1 1,0 1,1							
	Pipe size	mm	65			80			100					
	Valve size	mm	50	65		80			100					
Electricity	Power	-	3Ø 380V50Hz											
	Solution Pump	kW(A)	1,5(4,7A)			2,0(6,1A)			2,4(7,3A)					
	Refrigerant Pump	kW(A)	0,3(1,7A)						0,4(1,7A)					
	Purge Pump	-	0,4(1,5A)											
	Total Ampere	kW(A)	2,2(7,9)			2,7(9,3)			3,2(10,5)					
Dimension	Length	mm	2,640			3,680			4,744			4,776		
	Width	mm	1,244			1,244			1,365			1,495		
	Height	mm	2,255			2,255			2,389			2,575		
Weigh	Equipment weight	Ton	3,6 3,7	4,6 4,8	5,8 6,0	7,0 7,3	9,0 9,4							
	Operation weight	Ton	4,1 4,3	5,3 5,6	6,7 7,1	8,2 8,7	10,6 11,1							
	Conveyance	-	One body											

- Remark**
- Standard pressure:
Cooling and Chilled water:0.8Mpagf(8kgf/cm2G),
Hot water standard pressure:1.6Mpa(16kgf/cm2G)
 - Chilled water standard TEMP:Inlet: 13°C, Outlet :8°C
Cooling water standard TEMP: Inlet: 31°C, Outlet :36.5°C
 - Hot water standard TEMP: Inlet: 95°C, Outlet :80°C.
 - Power standard : 380V, 3Phase,60Hz,(220,440,460V also available)
 - The specification could be changed without any notice.

SPECIFICATION

Hot Water Absorption Chiller

Hot water inlet temp. 95°C

Model		Unit	WSL340		WSL375		WSL420		WSL470		WSL525		WSL600		WSL675		WSL750		WSL825		
Chilled water temp. at in-outlet		°C	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	12-7	13-8	
Cooling capacity		usRT	320	340	360	375	399	420	446	470	494	525	569	600	641	675	712	750	783	825	
Chilled water	Flow rate	m³/h	193,5	204,4	217,7	226,8	241,3	254,0	269,7	286,1	298,8	317,5	344,4	362,9	387,4	408,2	430,5	453,6	473,5	499,0	
	Pressure drop	mAq	7,1	7,9	7,6	8,3	6,0	6,6	8,1	9,1	3,5	4,0	2,5	2,8	3,5	3,9	4,6	5,1	3,5	3,9	
	Pipe size	mm	200						250						300						
Cooling water	Flow rate	m³/h	422,7	446,5	475,5	495,3	527,0	554,8	589,1	624,8	652,5	693,5	752,1	792,5	846,1	891,6	940,2	990,7	1034,2	1089,7	
	Pressure drop	mAq	9,4	10,5	9,8	10,6	6,8	7,5	9,2	10,4	12,1	13,7	8,9	9,9	12,0	13,3	15,9	17,6	16,2	18,0	
	Pipe size	mm	250				300				350				400						
Hot water	Flow rate	m³/h	89,6	94,6	100,8	105,0	111,7	117,6	124,98	132,4	138,3	147,0	159,4	168,0	179,4	189,0	199,3	210,1	219,2	231,0	
	Pressure drop	mAq	1,0	1,1	1,0	1,1	1,0	1,1	1,4	1,6	1,9	2,1	1,2	1,3	1,5	1,7	2,1	2,3	2,3	2,5	
	Pipe size	mm	125						150						200						
	Valve size	mm	125						150						200						
Electricity	Power	-	3Ø 380V50Hz																		
	Solution Pump	kW(A)	2,4(7,3A)				3,0(10A)								4,5(16,2A)						
	Refrigerant Pump	kW(A)	0,4(1,7A)																		
	Purge Pump	-	0,4(1,5A)																		
	Total Ampere	kW(A)	3,2(10,5)				3,8(13,2)								5,3(21,7)						
Dimension	Length	mm	4,780				4,870	5,410	5,910	5,618	6,116	6,641	7,141								
	Width	mm	1,595				1,955				2,200										
	Height	mm	2,850				3,150				3,840										
Weigh	Equipment weight	Ton	10,7	11,7	14,9	16,2	17,4	20,8	22,5	24,0	28,3										
	Operation weight	Ton	12,7	13,2	18,0	19,6	21,0	25,0	27,0	28,8	34,0										
	Conveyance	-	One Body																		

Option In different heat source and operation, the conditions can be selected as an option.

- 1) When the water pressure different from the standard.
- 2) When heat tube material is not copper nor with different tickness.
- 3) When Hot/cooling/chilled water temp. are different from standard.

Double Effect Steam Fired Absorption Chiller

100RT ~ 1500RT



WSA / Double Effect Steam Fired Absorption Chiller

Eco friendly and energy-saving design

WSA uses steam as the energy resource, LiBr as absorbent and water as refrigerant. With use of eco friendly materials, WSA does not raise the carbon dioxide which causes the global warming. The cost for electricity and operation can be saved in the area where steam is enough to use.

Reliable and efficient operation

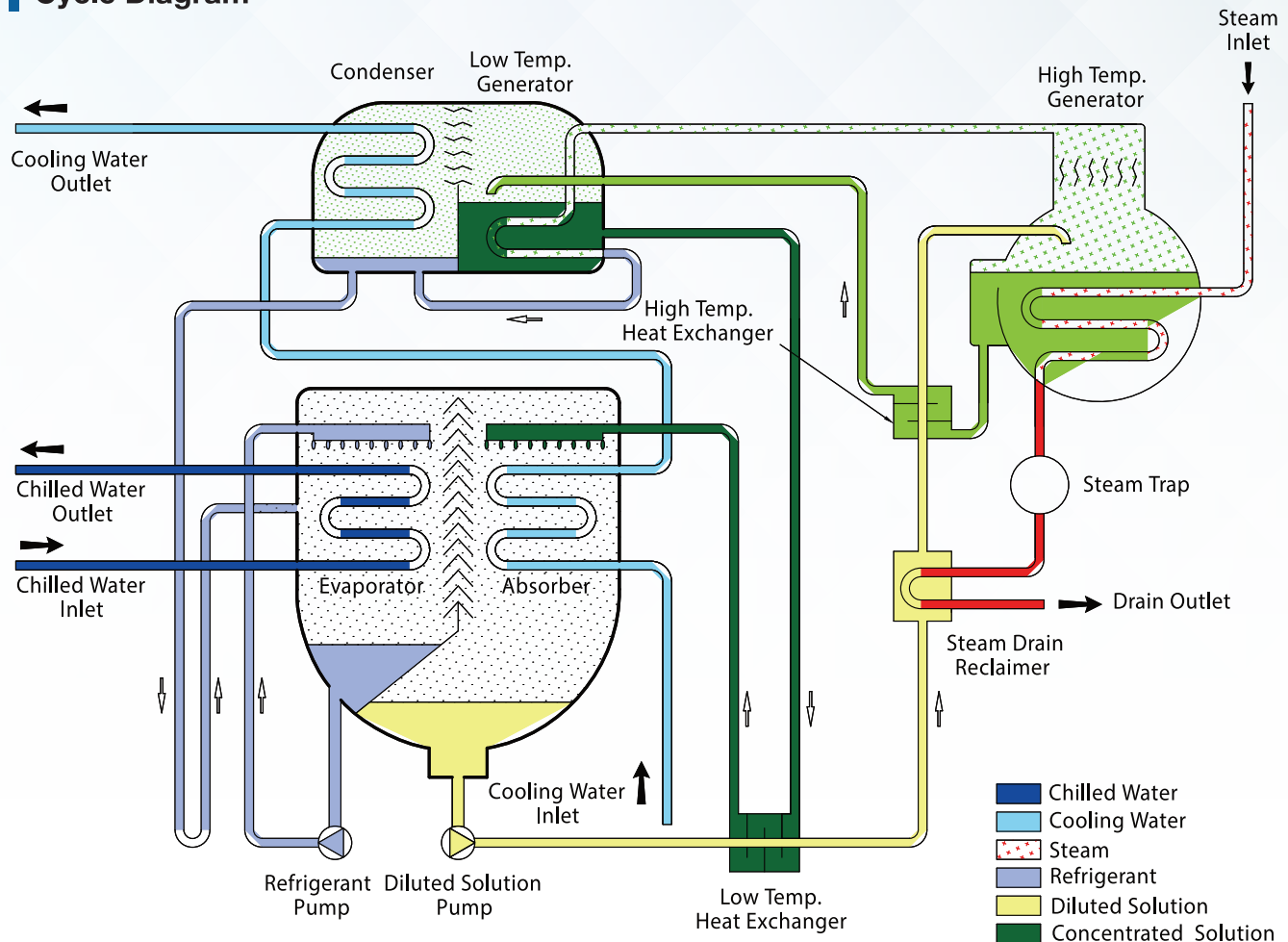
WSA is designed to enhance the reliability and durability. Inver control of absorbent depending on cooling load makes efficient operation.

Intelligent operation system

Micro process control realizes precise contro and efficient operation of the unit. And the user can operate the unit easily on the touch screen.

Steam Consumption: 3.5kg/h·RT ~ 4.4kg/h·RT

Cycle Diagram



SPECIFICATION

Double Effect Steam Fired Absorption Chiller

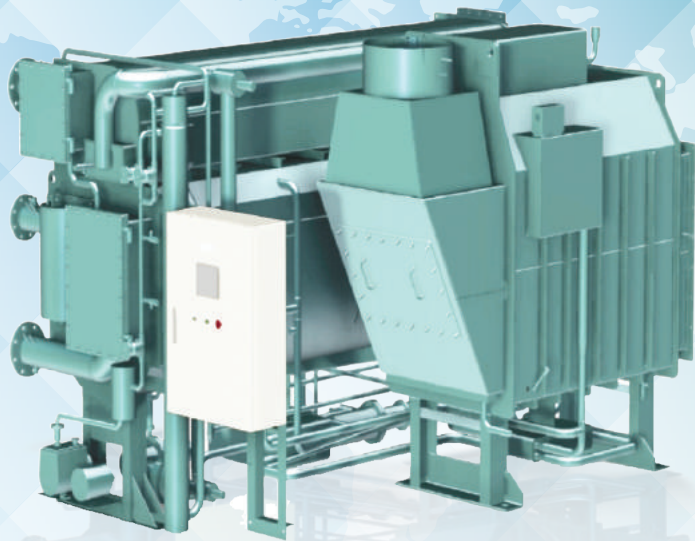
Model	Unit	WSA 010	WSA 012	WSA 015	WSA 018	WSA 021	WSA 024	WSA 028	WSA 032	WSA 036	WSA 040	WSA 045		
Cooling capacity	usRT	100	120	150	180	210	240	280	320	360	400	450		
	kW	352	422	528	633	739	844	985	1,125	1,266	1,407	1,583		
Chilled Water	Temp.	12/7°C												
	Flow rate	ton/h	60,5	72,6	90,7	108,9	127,0	145,2	169,3	193,5	217,7	241,9	272,2	
	P. Drop	mAq	6,5	6,4	8,0	8,3	7,5	7,9	5,1	5,5	5,8	6,1	5,2	
	Connection	mm	100				125			150				
Cooling Water	Temp.	32/37,5°C												
	Flow rate	m ³ /h	100	120	150	180	210	240	280	320	360	400	450	
	P. Drop	mAq	3,9	4,4	6,5	7,7	5,6	6,2	10,9	12,1	8,7	9,4	10,3	
	Connection	mm	125				150			200				
Steam	Flow rate	kg/h	440	530	660	790	920	1060	1230	1410	1580	1760	1980	
	Steam Inlet onnect.	A	50				65				80			
	Drain Outlet onnect.	A	25								40			
	Control Valve Size	A	25	40				50						
Electric	Power Source	—	3 ø 400V 50Hz											
	Abs. Pump #1	kW(A)	2,0 (6,0)				2,4 (7,5)			3,0 (11,0)		3,4 (10,2)		3,4
	Abs. Pump #2	kW(A)	0,4 (1,6)				1,2 (4,5)				1,5 (5,0)		1,5	
	Ref. Pump	kW(A)	0,3 (1,5)				0,4 (1,5)							
	Purge Pump	kW(A)	0,4 (1,4)											
	Control Panel	kW(A)	0,2 (0,5)											
	Total Ampere	kW(A)	3,3 (11,0)				4,6 (15,4)			5,2 (18,9)		5,9 (18,6)		
Size	Length (L)	mm	2,632	2,832	3,644		3,670		4,720		4,860		4,910	
	Width (W)	mm	1,775				1,880				2,110		2,250	
	Height (H)	mm	2,030				2,300				2,550		2,780	
Widght	Rigging	Ton	3,9	4,1	5,1	5,2	6,2	6,4	7,7	8,0	9,8	10,1	11,8	
	Operation	Ton	4,3	4,5	5,6	5,8	6,9	7,2	8,6	9,0	11,0	11,4	13,5	
Space for Tube Replacement	mm	2,400			3,400				4,500					

- Remark**
- 1) 1usRT = 3,024 kcal/h
 - 2) Standard Steam Pressure is 0.8M
 - 3) Working Pressure of chilled water and cooling water side is based on 1.0MPaPa
 - 4) Fouling factor 0.0001m²·h·°C/kcal for Absorber and Condenser, 0.0001m²·h·°C/kcal for Evaporator.
 - 5) Catalogue specifications are subject to change without prior notice.

Model		Unit	WSA 050	WSA 056	WSA 063	WSA 070	WSA 080	WSA 090	WSA 100	WSA 110	WSA 120	WSA 130	WSA 140	WSA 150	
Cooling capacity		usRT	500	560	630	700	800	900	1000	1100	1200	1300	1400	1500	
		kW	1,758	1,969	2,216	2,462	2,814	3,165	3,517	3,869	4,220	4,572	4,924	5,275	
Chilled Water	Temp.	°C	12/7°C												
	Flow rate	ton/h	302,4	338,7	381,0	423,4	483,8	544,3	604,8	665,3	725,8	786,2	846,7	907,2	
	P. Drop	mAq	5,5	4,6	6,2	8,1	4,7	6,4	8,4	6,2	7,9	9,8	8,0	9,8	
	Connection	mm	200			250			300			350			
Cooling Water	Temp.	°C	32/37,5°C												
	Flow rate	m³/h	500	560	630	700	800	900	1000	1100	1200	1300	1400	1500	
	P. Drop	mAq	11,2	7,1	9,4	12,1	8,4	11,1	14,3	8,8	10,9	13,4	12,3	14,6	
	Connection	mm	250	300			350			400					
Steam	Flow rate	kg/h	2200	2460	2770	3080	3520	3960	4400	4840	5280	5720	6160	6600	
	Steam Inlet onnect.	A	80	100			125			150					
	Drain Outlet onnect.	A	40	50			65			80					
	Control Valve Size	A	65			80			100						
Electric	Power Source	—	3 Ø400V50Hz												
	Abs. Pump #1	kW(A)	3,4(10,2)	5,5 (20,0)			6,6 (16,2)			7,5 (25,0)					
	Abs. Pump #2	kW(A)	1,5 (5,0)	2,0 (6,0)			2,2 (7,0)			4,5 (16,0)					
	Ref. Pump	kW(A)	0,4 (1,5)			1,5 (4,0)									
	Purge Pump	kW(A)	0,4 (1,4)												
	Control Panel	kW(A)	0,2 (0,5)												
	Total Ampere	kW(A)	5,9 (18,6)	8,5 (29,4)			10,9 (29,1)			14,1 (46,9)					
Size	Length (L)	mm	4,910	5,040	5,580	6,080	5,720	6,220	6,740	6,150	6,670	7,170	6,830	7,330	
	Width (W)	mm	2,250	2,480			2,825			3,000			3,250		
	Height (H)	mm	2,780	3,255			3,400			3,600			3,650		
Widght	Rigging	Ton	12,1	16,6	18,1	19,4	24,6	26,3	28,3	31,8	33,9	35,8	39,6	41,8	
	Operation	Ton	13,9	19,2	20,8	22,3	28,7	30,7	32,8	36,4	38,8	40,9	45,3	47,7	
Space for Tube Replacement		mm	4,500		5,200	5,700	5,200	5,700	6,200	5,700	6,200	6,700	6,200	6,700	

Double Effect Exhaust Gas Driven Absorption Chiller & Heater

100RT ~ 1500RT 23 Model



1. Waste exhaust gas can be used for drive heat source.
2. Convertible use of cooling and heating
3. Energy saving product
4. Increase in the efficiency of total energy
5. No power overload in summer season
6. Environment-friendly to use water as refrigerant

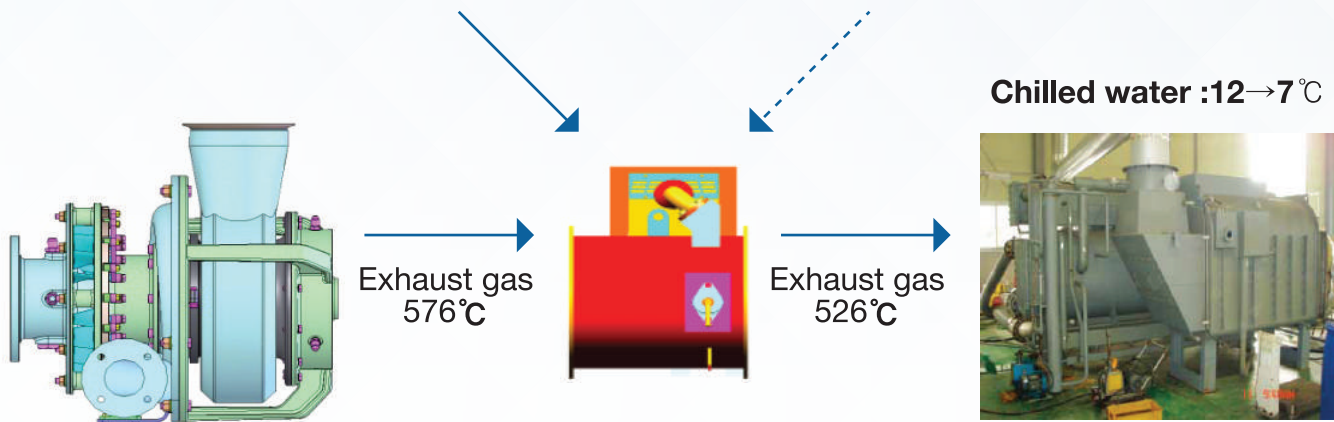
WEG / Chilled water 12 → 7°C

Development of diverter valve

- Working at high temp 500°C. Endurability
- Maximum flow for exhaust gas: 90kg/min

Development of diverter valve

- Working at high temp 500°C. Endurability
- Maximum flow for exhaust gas: 90kg/min



High temp. generator

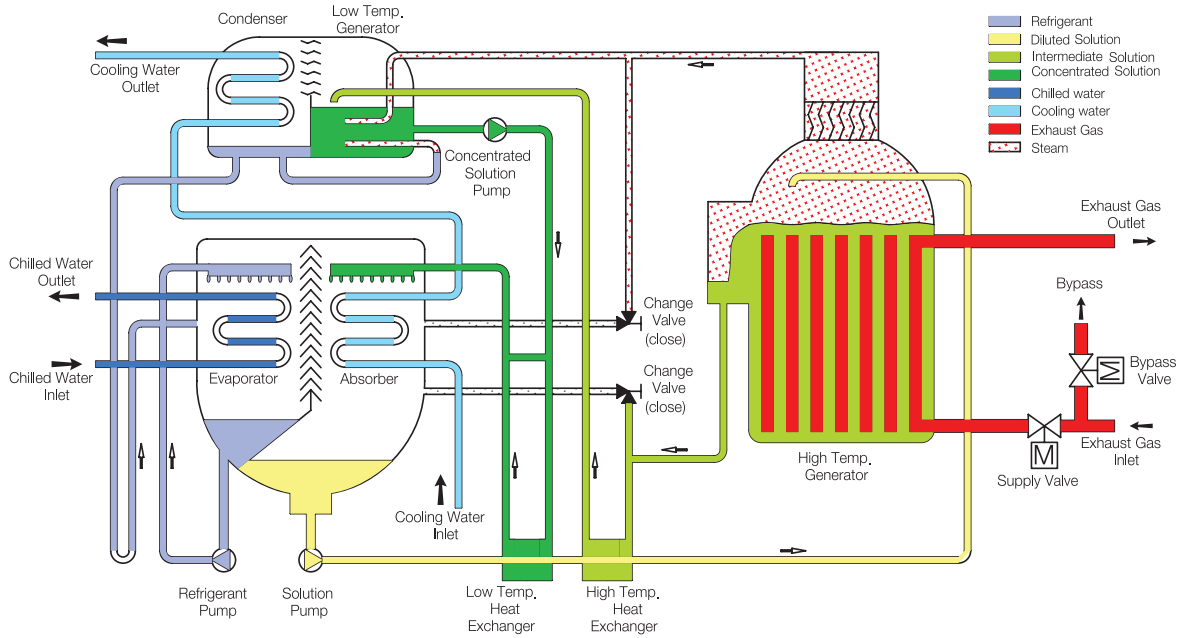
- Vertical water tube - Fin tube, 1 Pass
- UA
- Loss of pressure calculation
- Endurable from high temp corrosion

150°C
Exhaust Gas Outlet

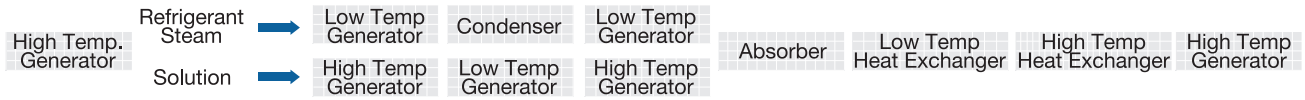
CYCLE DIAGRAM

Double Effect Exhaust Gas Driven Absorption Chiller & Heater

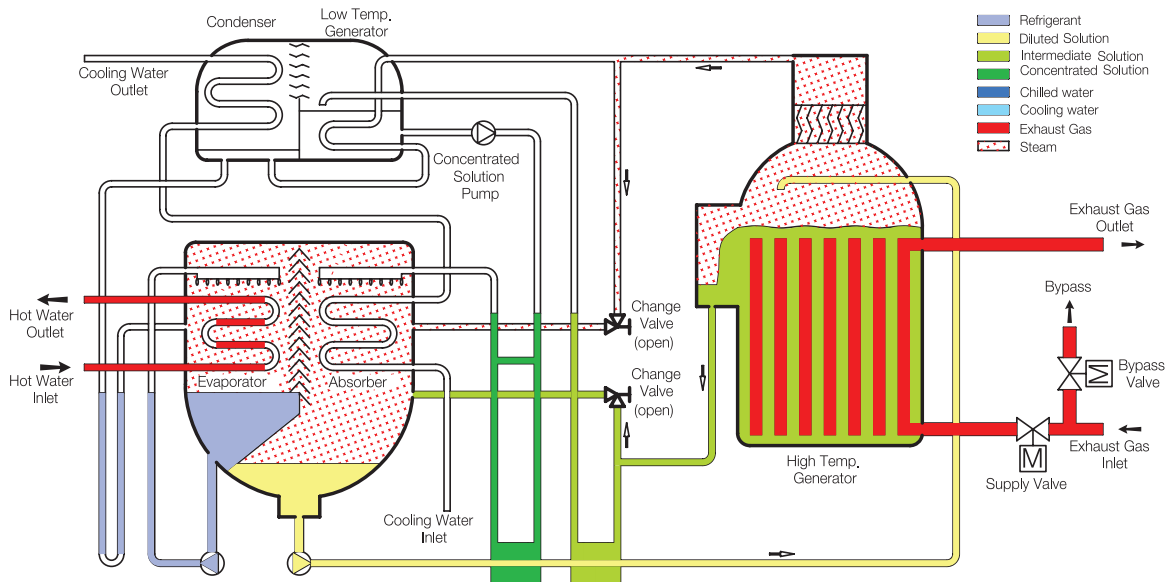
Cooling Cycle Diagram



Cooling Cycle



Heating Cycle Diagram



Heating Cycle



SPECIFICATION

Double Effect Exhaust Gas Driven Absorption Chiller & Heater

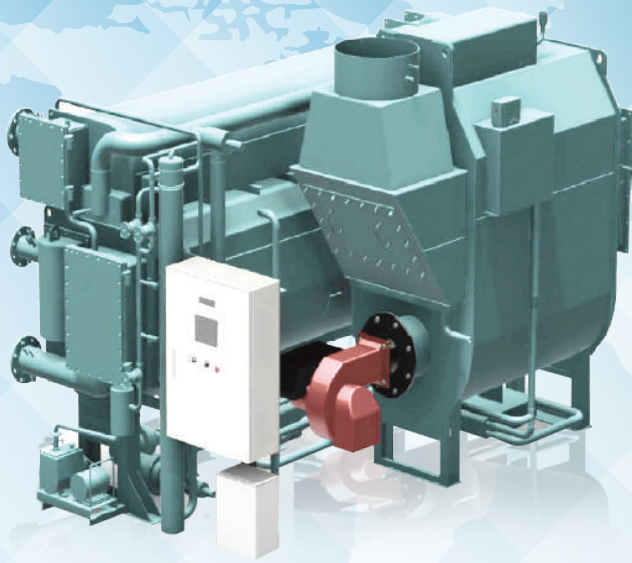
Model		Unit	WEG 010	WEG 012	WEG 012	WEG 018	WEG 021	WEG 024	WEG 028	WEG 032	WEG 036	WEG 040	WEG 045	
Cooling capacity	usRT		100	120	150	180	210	240	280	320	360	400	450	
	kW		351	422	527	633	738	844	984	1,125	1,265	1,406	1,582	
Heating capacity	Mcal/h		283	340	425	510	595	680	793	906	1019	1133	1274	
	kW		329	395	494	592	691	790	922	1053	1185	1317	1481	
Chilled Water	Temp.	°C	12 / 7											
	Flow rate	m³/h	60.5	72.6	90.7	109	127	145	169	194	218	242	272	
	P. Drop	mAq	4.8	5.1	6.6	7.0	6.4	6.3	4.6	4.5	5.0	5.1	4.4	
	Connection	mm	100				125			150				
Cooling Water	Temp.	°C	32/37.5											
	Flow rate	m³/h	100	120	150	180	210	240	280	320	360	400	450	
	P. Drop	mAq	11.1	11.3	11.5	11.8	11.8	12.1	11.2	10.7	11.1	10.8	10.7	
	Connection	mm	125			150				200				250
Exhaust Gas	Temp.	kg/sec	0.88	1.05	1.32	1.58	1.84	2.11	2.46	2.81	3.16	3.51	3.95	
	Temp.	Cooling	°C 450/165											
		Heating	°C 450/125											
	P. Drop	mmAq	77	82	79	92	97	113	129	131	123	131	133	
	Outlet Conn	mm	400				500				600			
	Diverter Valve	mm	400				500				600			
Electric	Power source	—	3Ø 380V(50Hz)											
	Abs. Pump	kW(A)	2.0(5.7)				2.4(6.1)				3.4(9.0)			
	Ref. Pump	kW(A)	0.3(1.5)				0.4(1.6)							
	Purge Pump	kW(A)	0.4(1.4)											
	Control Pump	KVA	0.2(0.5)											
	Amp. (400 Vac)	kW(A)	2.9(9.10)				3.4(9.6)				4.4(12.5)			
Size	Length (L)	mm	2,597		3,680		3,686		4,744		4,776		4,954	
	Width (W)	mm	1,662	1,740	1,857	1,935	2,150	2,189	2,267	2,375	2,270	2,309	2,491	
	Height (H)	mm	1,979				2,303				2,470		2,744	
Weight	Rigging	mm	5.0	5.3	6.4	6.8	7.9	8.5	9.8	10.3	12.8	13.2	15.7	
	Operation	Ton	5.4	5.8	7.0	7.4	8.6	9.3	10.7	11.3	14.0	14.6	17.2	
Tube exchange space		Ton	2,400			3,400				4,500				

Remark Working Pressure of each water side is based on 1.0Mpu(150psig.)

Model		Unit	WEG 050	WEG 056	WEG 063	WEG 070	WEG 080	WEG 090	WEG 100	WEG 110	WEG 120	WEG 130	WEG 140	WEG 150	
Cooling capacity	usRT		500	560	630	700	800	900	1000	1100	1200	1300	1400	1500	
	kW		1,757	1,968	2,214	2,460	2,812	3,163	3,515	3,866	4,218	4,569	4,921	5,272	
Heating capacity	Mcal/h		1416	1586	1784	1982	2266	2549	2832	3115	3398	3682	3965	4248	
	kW		1646	1843	2074	2304	2633	2962	3291	3621	3950	4279	4608	4937	
Chilled Water	Temp.	°C	12 / 7												
	Flow rate	m³/h	302	339	381	423	484	544	605	665	726	786	847	907	
	P. Drop	mAq	3,9	3,6	5,0	6,6	4,7	6,4	8,5	7,2	9,2	11,5	8,3	10,2	
	Connection	mm	200				250			300			350		
Cooling Water	Temp.	°C	32 / 37,5												
	Flow rate	m³/h	500	560	630	700	800	900	1000	1100	1200	1300	1400	1500	
	P. Drop	mAq	10,8	7,7	10,6	14,0	8,7	11,8	15,6	3,0	3,8	4,8	4,0	4,9	
	Connection	mm	250	300			350			400					
Exhaust Gas	Temp.	kg/sec	4,39	4,92	5,53	6,15	7,03	7,91	8,78	9,66	10,54	11,42	12,30	13,18	
	Temp.	Cooling	°C	450/165											
		Heating	°C	450/125											
	P. Drop	mmAq	134	143	133	146	155	153	176	213	221	212	206	184	
	Outlet Conn	mm	600	750					1000						
	Diverter Valve	mm	600	750					1000						
Electric	Power source	—	3Ø380V(50Hz)												
	Abs. Pump	kW(A)	3,4(9,0)	5,5(14,3)					7,5(21,9)						
	Ref. Pump	kW(A)	0,4(1,6)				1,5(3,8)								
	Purge Pump	kW(A)	0,4(1,4)					0,75(2,2)							
	Control Pump	KVA	0,2(0,5)												
	Amp. (400 Vac)	kW(A)	4,4(12,5)	6,5(17,8)			7,6(20,0)			9,95(28,4)					
Size	Length (L)	mm	4,954	4,998	5,540	6,038	5,460	5,958	6,483	6,293	6,818	7,318	6,974	7,475	
	Width (W)	mm	2,569	2,934	3,069	3,459	3,330	3,480	3,530	4,348	4,448	4,598	4,932	5,182	
	Height (H)	mm	2,744	3,057			3,390			3,678			3,700		
Weight	Rigging	mm	16,5	21,2	23,1	24,6	31,0	33,6	35,6	41,1	43,4	46,4	50,2	54,1	
	Operation	Ton	18,1	23,7	25,8	27,5	34,8	37,6	39,9	46,2	48,8	52,1	56,5	60,8	
Tube exchange space		Ton	4,500		5,200	5,700	5,200	5,700	6,200	5,700	6,200	6,700	6,200	6,700	

Multi-Fuel Absorption Chiller & Heater

100RT ~ 1000RT

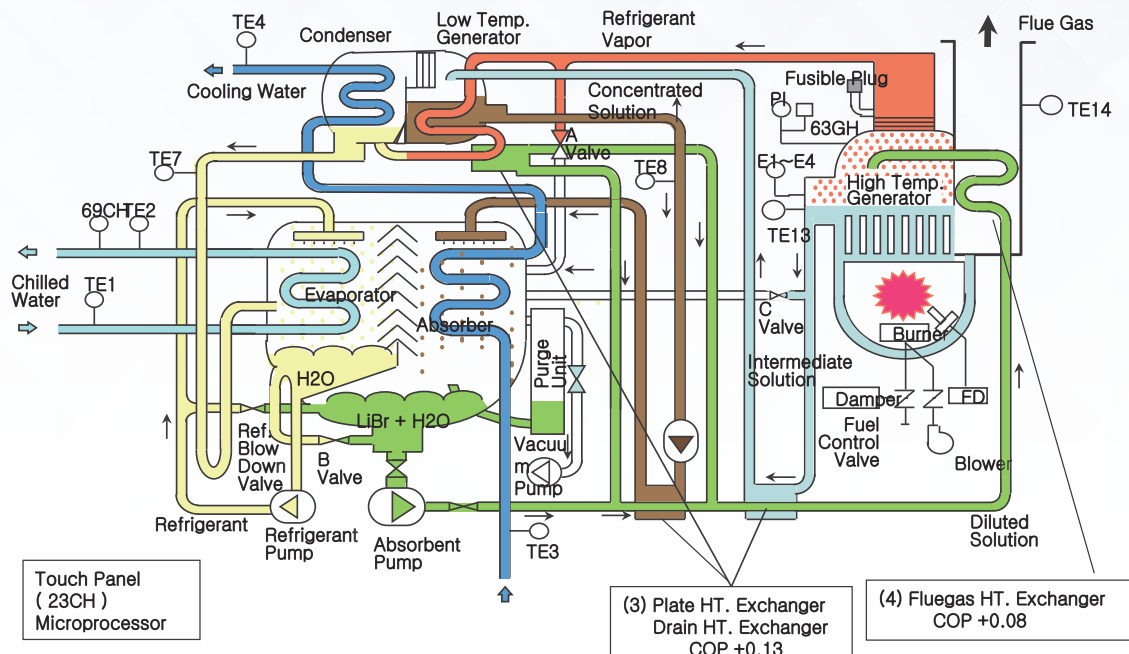


This model is designed to use different energy resource for cooling and heating. Exhaust gas, steam and hot water can be used with gas or oil.

Heat resource: Natural Gas, Oil, Steam, Hot Water

CYCLE DIAGRAM

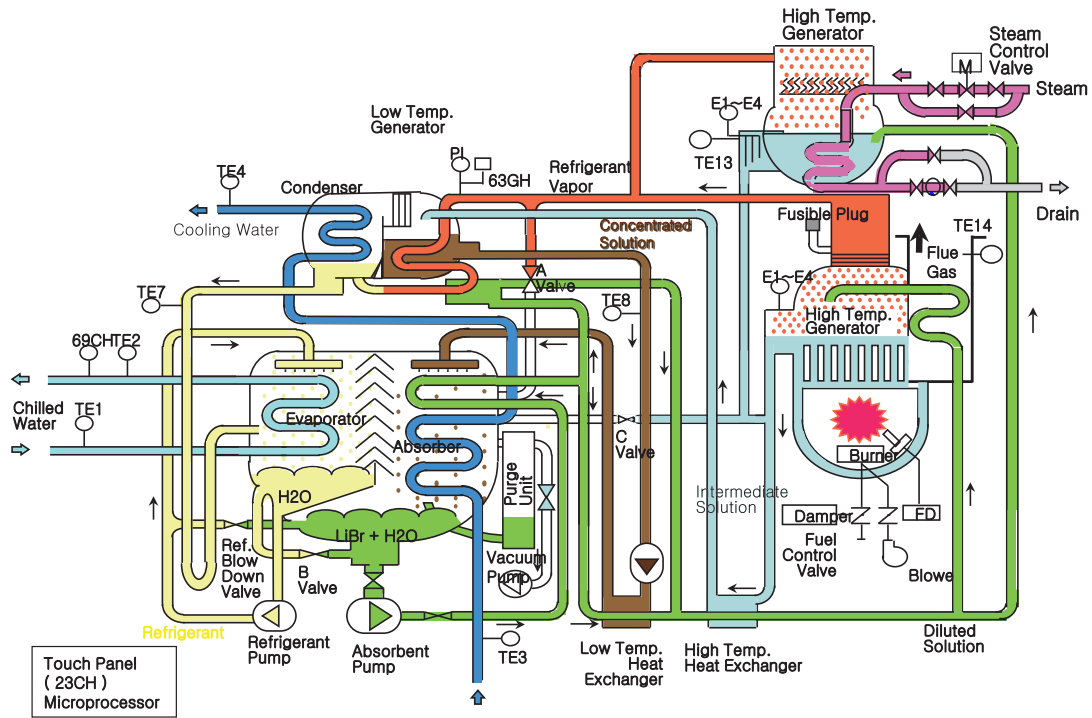
Multi-Fuel Absorption Chiller & Heater



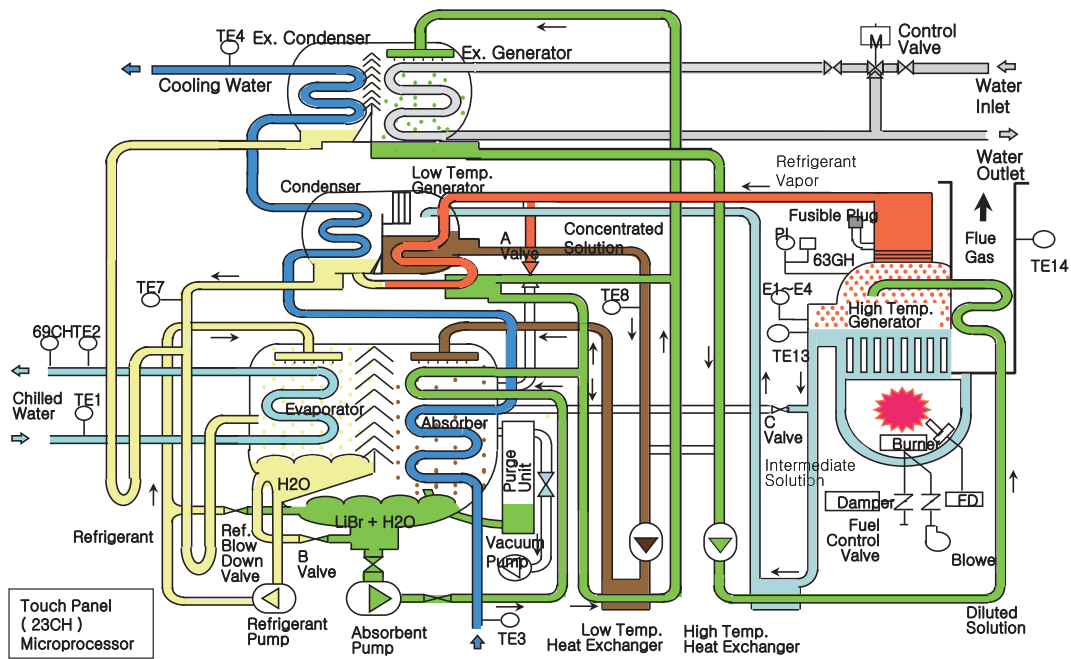
CYCLE DIAGRAM

Multi-Fuel Absorption Chiller & Heater

Gas & Steam Fired(Dual Fuel)



Gas & Water Fired(Dual Fuel)



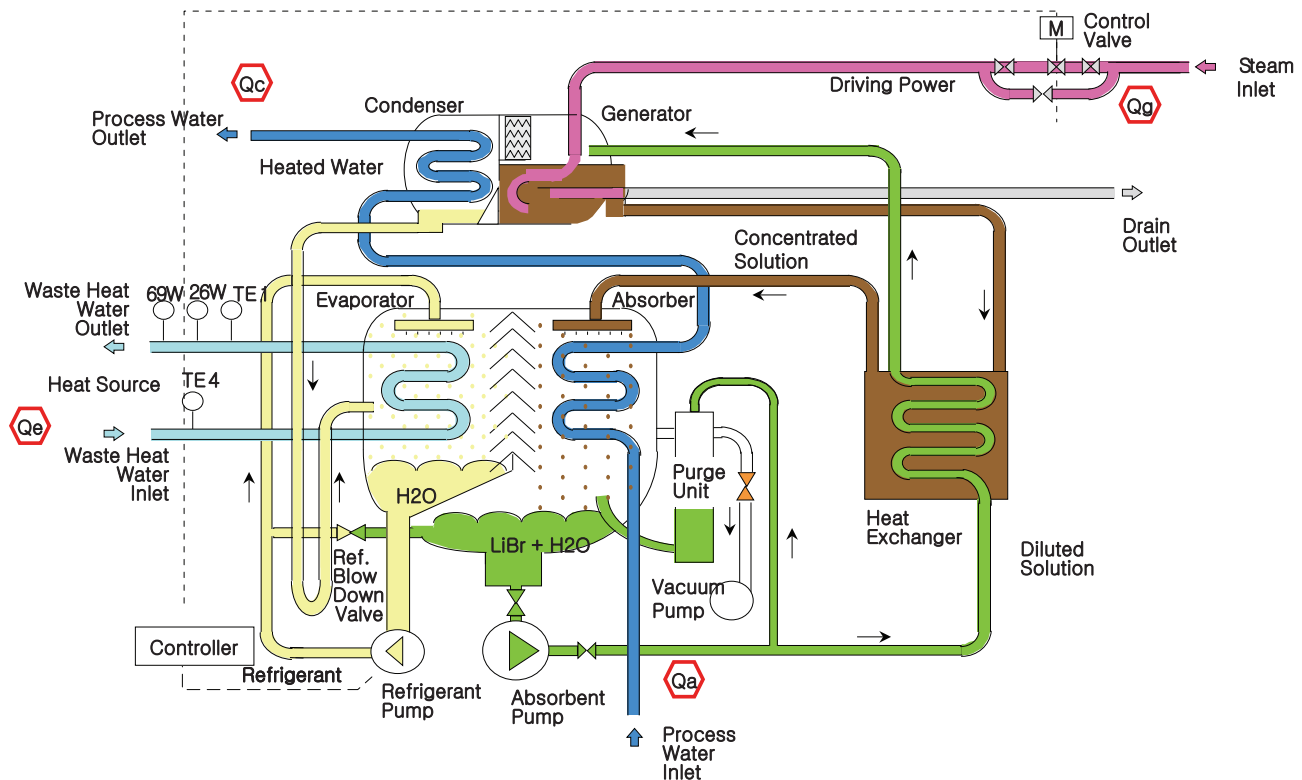
HEAT PUMP

ABSORPTION HEAT PUMP

Absorption Heat Pump developed to produce medium temperature energy by using high temperature energy resource such as steam, hot water and exhaust gas and low temperature waste heat energy.

This Absorption Heat Pump can be used to supply hot water for heating in a building or to supply hot water in the process of factory by using waste heat resource.

Cycle Diagram(Heated Water)



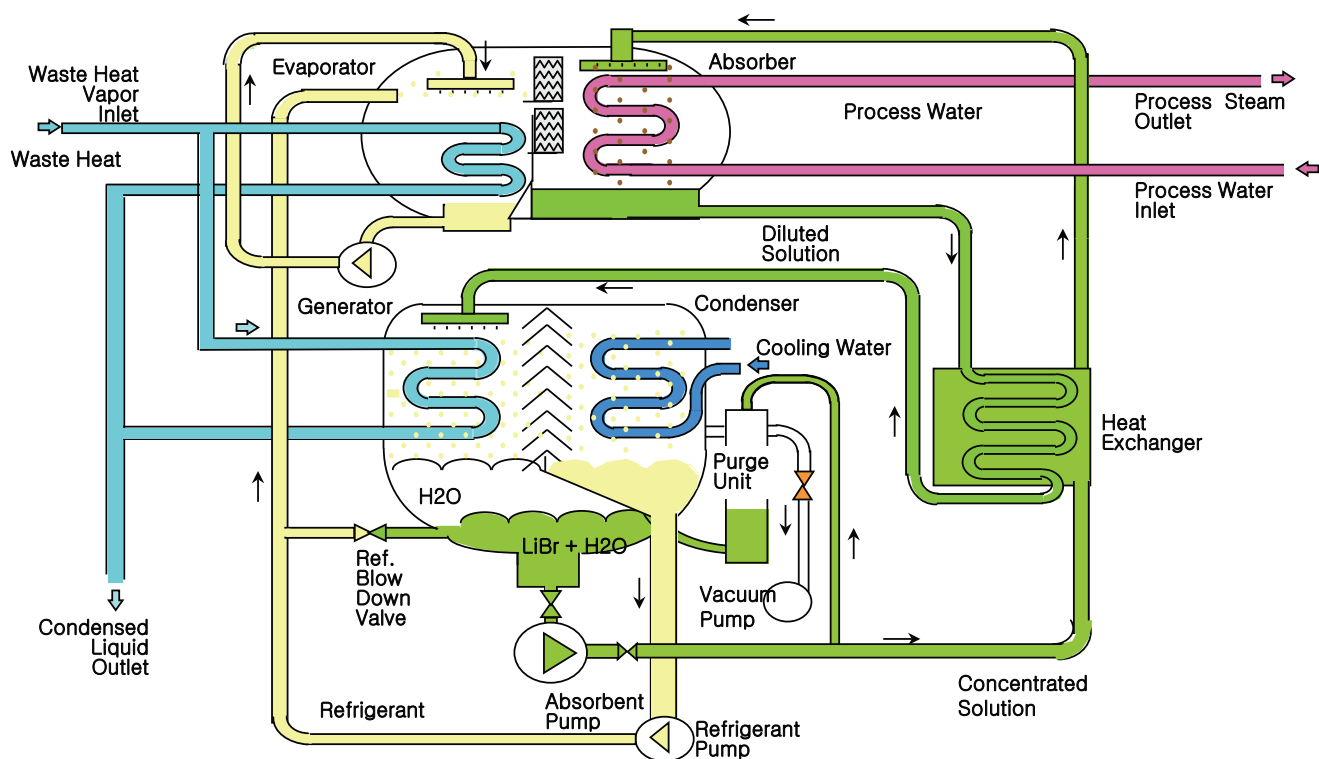
- Generator** Vapor is generated from heat supplied by driven hot water. the generated vapor is moved into Condenser.
- Condenser** The vapor is condensed on the tubes. And the heat is transferred to hot water inside the tubes.
- Evaporator** The evaporator takes evaporating heat from the waste hot water and the evaporated vapor moves into Absorber.
- Absorber** The evaporated vapor is absorbed into concentrated solution coming from a generator. And the heat is transferred to process hot water.

Absorption Heat Transformer

ABSORPTION HEAT PUMP

Absorption Heat Transformer developed to produce high temperature energy by using medium temperature energy resource in the process of factory. This Absorption Heat Transformer can be used in the plants that have high temperature waste heat resource to recycle it.

Cycle Diagram(Steam Gene.)



Generator Vapor is generated from heat supplied by driven hot water. the generated vapor is moved into Condenser.

Condenser The vapor is condensed on the tubes. And the heat is transferred to hot water inside the tubes.

Evaporator The evaporator takes evaporating heat from the waste hot water and the evaporated vapor moves into Absorber.

Absorber The evaporated vapor is absorbed into concentrated solution coming from a generator. And the heat is transferred to process hot water.

FIELD INSTALLED

World EnC Co.,Ltd.

Hot Water Absorption Chiller



Incheon Airport
975RT 8units



Lotte Chemical Industry
1300RT 3units, 975RT 1unit



Sejong City Government Office
600RT 8units



Lotte Mall
1050RT 3units, 600RT 1unit, 155RT 2units



Cogeneration Plant
210RT 4units, 180RT 3units



Daegu Regional Government Complex
420RT 2units



Korea Venture Town
340RT 6units, 300RT 4units



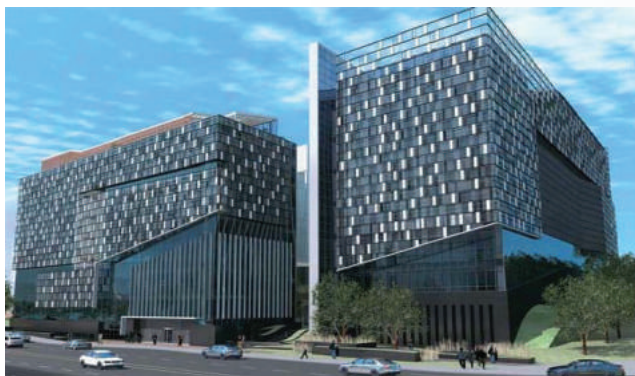
Everland
400RT 3units, 210RT 3units



Nexen RnD Center
1000RT 2units



Hanlim University Hospital
900RT 2units



Pangyo CHA Hospital Institute
675RT 3units



SK V1 Center
750RT 3units



Hanwha Techwin
675RT 3units



Samsung Training Institute
600RT 5units



NC Soft R&D Center
600RT 4units



Korea Institute of Brain Research
825RT 2units

FIELD INSTALLED

World EnC Co.,Ltd.

Hot Water Absorption Chiller



Lotte Outlet
600RT 7units, 135RT 2units



IT Valley
825RT 5units, 270RT 3units



Knowledge Industry Center (Hanam)
525RT 5units



Knowledge Industry Center (Moonjung)
800RT 5units



Complex Building
470RT 2units, 340RT 4units



N-Square
520RT 3units, 370RT 2units



Avenue Hill
200RT&300RT 8units



Harrington Tower
240RT 5units

Direct Fired Absorption Chiller



Gimpo Airport
700RT 12units



Lotte Mall
700RT 6units



Home Plus
650RT 5units



Inha Univ. Hospital
800RT 4units



Yongsan International Building
500RT 2 units, 560RT 2units, 150RT 2units



Busan University Hospital
320RT 4units



Namdaemun office building
560RT 2 units



Garak Complex
630RT 2units

FIELD INSTALLED

World EnC Co.,Ltd.

Steam Fired Absorption Chiller



ilsan Hospital
900RT 2units, 300RT 1unit



Aju Univ. Hospital
1100RT 1unit



Korean Armed Forces Capital Hospital
800R 1 unit



Iran BAHAR Hospital
500RT 2units



Holiday Inn
400RT 2units



GyungSang Univ. Hospital
300RT 2units



Seoul Cerebrovascular Hospital
280RT 2units



Asan Indoor Pool
120RT 2units

MEMO

A large rectangular area containing horizontal dashed lines for writing.