

ETCO

Patented Plate-Tube Packaged Evaporative-Cooled
ALL-IN-ONE PACKAGED HYBRID CHILLERS

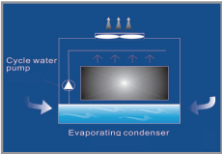
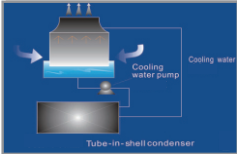


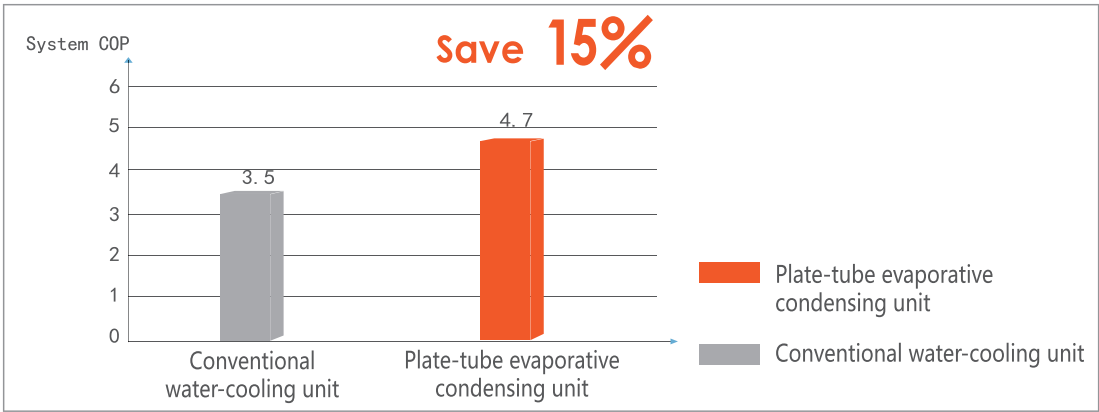


FEATURES & BENEFITS

- Green Technology** : MyHijau certification by Greentech Malaysia
- Reliability** : Simple design with unit mounted micro-processor controller
- High Performance** : 35% more efficient than air cooled systems, 15% more efficient than small water-cooled systems
- Modular Design** : Scalability of system and standardization of spare parts
- Redundancy** : Multiple Danfoss scroll compressors and refrigerant circuits
- Lowest Life Cycle Cost** : Ease of maintenance and 50% less water consumption
- Environmentally Friendly** : R410a refrigerant and no chemical treatment (recommended)
- Integration** : High level communication available
- Enhanced Protection** : Enclosure panels are alloy coated to provide superior weather resistance
- Available Option** : Real time power monitoring utilizing IoT technology

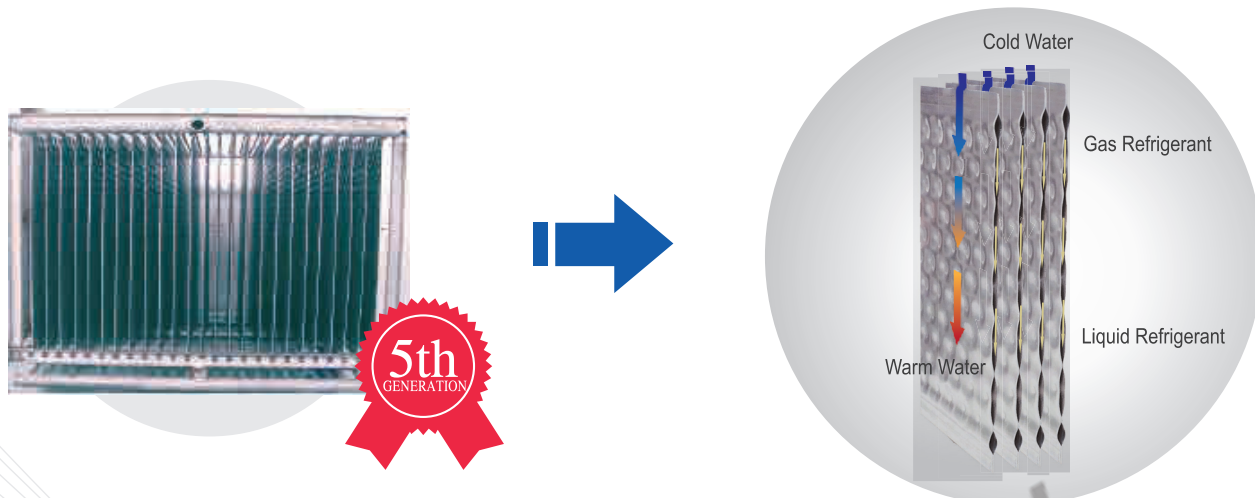
ENERGY CONSUMPTION COMPARISON

	Evaporative-cooled condenser	Water-cooled condenser
Air flow per KW cooling capacity	110-160 m ³ /h	120-200 m ³ /h
Circulating water per 100kW cooling capacity	10-12 m ³ /h	22m ³ /h
Cooling water pump lift	5m	≥20m
Condensing temperature	< 38°C	≈40°C
Energy consumption of cooling system per kW cooling capacity	0.014 kW	0.038 kW
System COP	4.2—4.7	3.5—4.0
Operation mode	<div><p>Direct Heat transfer via small kW fan and cooling water pump</p></div>	<div><p>Indirect heat transfer via large kW tower fan & cooling water pump</p></div>



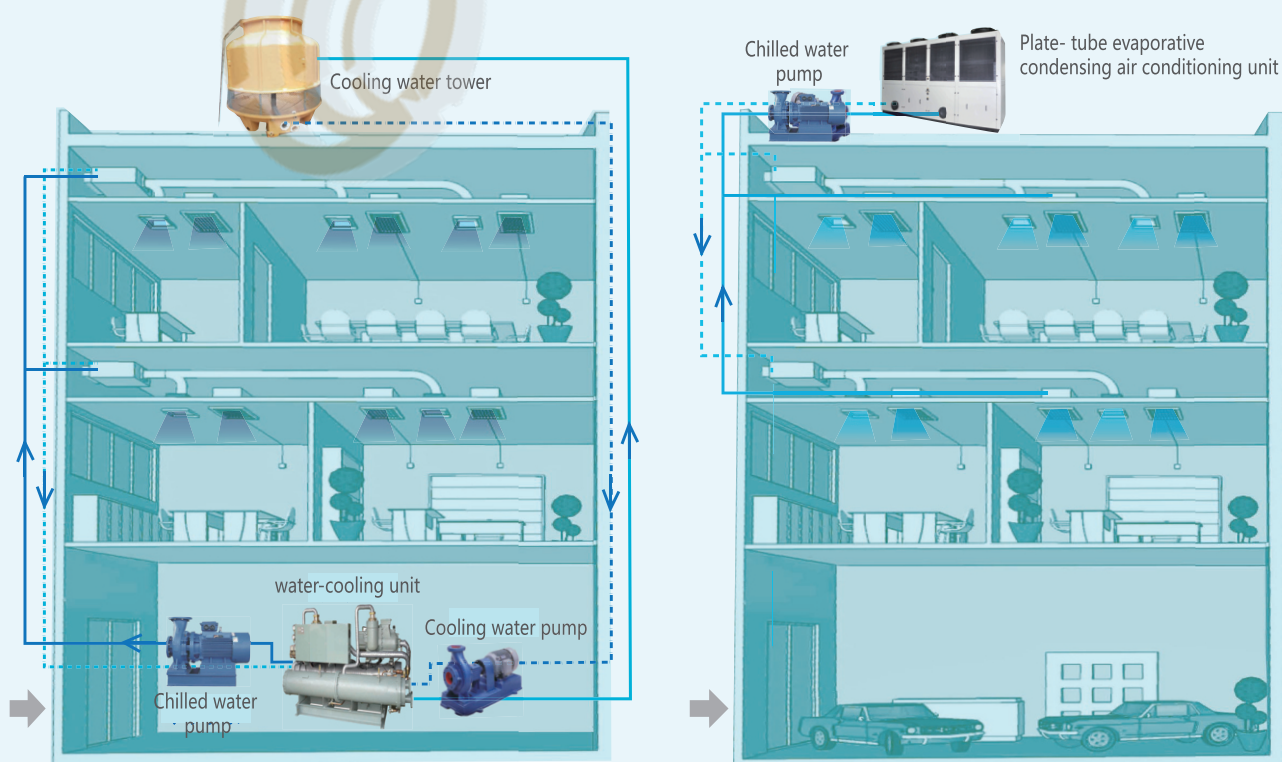
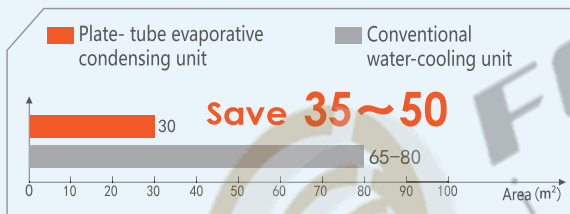
State-of-the Art Technology

Patented Plate-Tube Type Evaporative-Cooled Hybrid Chiller



Less Plant Room Size

Indoor Plant Room Area of a 300RT Chiller



Applications

Industrial, pharmaceutical, hotel, hospital, retail, education, telecommunication, commercial & government buildings

Plate-tube Evaporatively-cooled Hybrid Chiller

			WLSZ84CSG	WLSZ168CSG	WLSZ252CSG	WLSZ400CHG	WLSZ540CHG	WLSZ640CHG	WLSZ800CHG
Cooling	Capacity	Tons	24	48	72	114	154	182	227
	Input Power	kw	18.5	36.5	55	87	115	139	174
	Efficiency	kw/ton	0.775	0.764	0.768	0.765	0.749	0.764	0.765
Power Requirement	Max Operating Current	A	43	84	127	200	265	320	401
	Power Supply	V/P/Hz	415/3/50						
System Description	Refrigerant		R410A						
	No of Circuits		1	2	3	1	2	2	2
	No of Compressors		1	2	3	3	4	6	6
	Compressor Type/Brand		Hermetic Danfoss Scroll Compressor						
Evaporator	Type		Brazen Plate			Shell & Tube			
	Flow Rate	usgpm	64	127	191	303	409	485	607
	Pipe Connection	mm	DN 40	DN 80	DN 100	DN 125	DN 125	DN 200	DN 200
	Pressure drop	kPa	<70						
Evaporative Condenser	Type		Patented Plate-tube Evaporative Condenser						
	Fan Nos		1	1	1	2	3	3	4
	Fan Input Power	kw	1.5	1.5	3	6	9	9	12
	Pump Nos		1	1	1	1	1	1	2
	Pump Input Power	kw	1.1	1.5	1.5	2.2	3	3	4.4
	Water Consumption	m3/h	0.12	0.24	0.35	0.56	0.76	0.9	1.12
DIMENSION	Length	mm	1750	2300	2300	3380	5410	5410	6440
	Width	mm	1630	1630	1850	2300	2300	2300	2300
	Height	mm	2600	3150	3150	3150	3150	3150	3150
Shipping Weight		kg	1800	2750	3400	6600	9100	9300	11800
Operating Weight		kg	2100	3100	3800	7200	9900	10100	12800

Note :

1. Rated condition : 12C/7C chilled water in /out, Ambient 35CDB/26CWB, incoming water temperature 30C
2. Incoming water pressure : 0.06Mpa ~ 0.15Mpa
3. Input power includes compressors, internal water pump & fan power
4. Chilled water flow range : 50-130% rated flow
5. Rated per JB/T 12323-2015

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PT. Forthen Indonesia
Jl. Mangga besar I No. 61-G
Jakarta 11180
Indonesia
Ph. 021 624-6211
info@forthen-indonesia.com
www.forthen-indonesia.com



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ETCO has a policy of continue product and product data improvement and reserves the right to change design and specifications without notice. Only quality technicians should perform installation and servicing of equipment referred in this catalogue