

Shelton™

Modular Chillers

VFD INVERTER



proudly

SAE-IMAC25

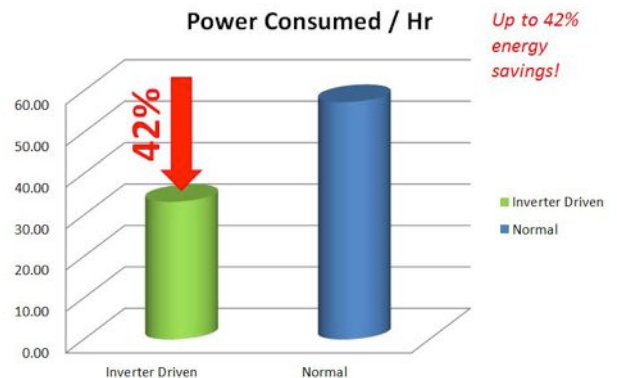


Efficient to Operate

Shelton Chillers installed at ST Andrews Community Hospital replaces existing inefficient screw chillers, thereby effectively reducing utility bills by up to 20%.

Maximum efficiency is achieved with Scroll Compressors. With fewer moving parts, they provide better reliability, thereby reducing maintenance requirements.

Inverter driven feature variable speed driven compressors that further enhance part load efficiency. Such setups allow the compressors to precisely match their output capacity according to load requirements, thereby providing superior efficiencies at all conditions.



Featuring leading full- and part-load efficiency. Scroll compressors are powered independently according to load requirements, thereby providing efficient operations at all load conditions. Equipped with plate type stainless steel heat exchanger/ Shell & Tube Condenser, Shelton Industrial Chillers enjoy extensive heat transfer area between water and refrigerant. Coupled with an oversized condenser, Shelton Industrial Chillers have been designed for maximum efficiency.



Located at the roof top of Temasek Laboratory in the National University of Singapore. Shelton Inverter Chillers provide unparalleled reliability for advanced research carried out at the laboratories.

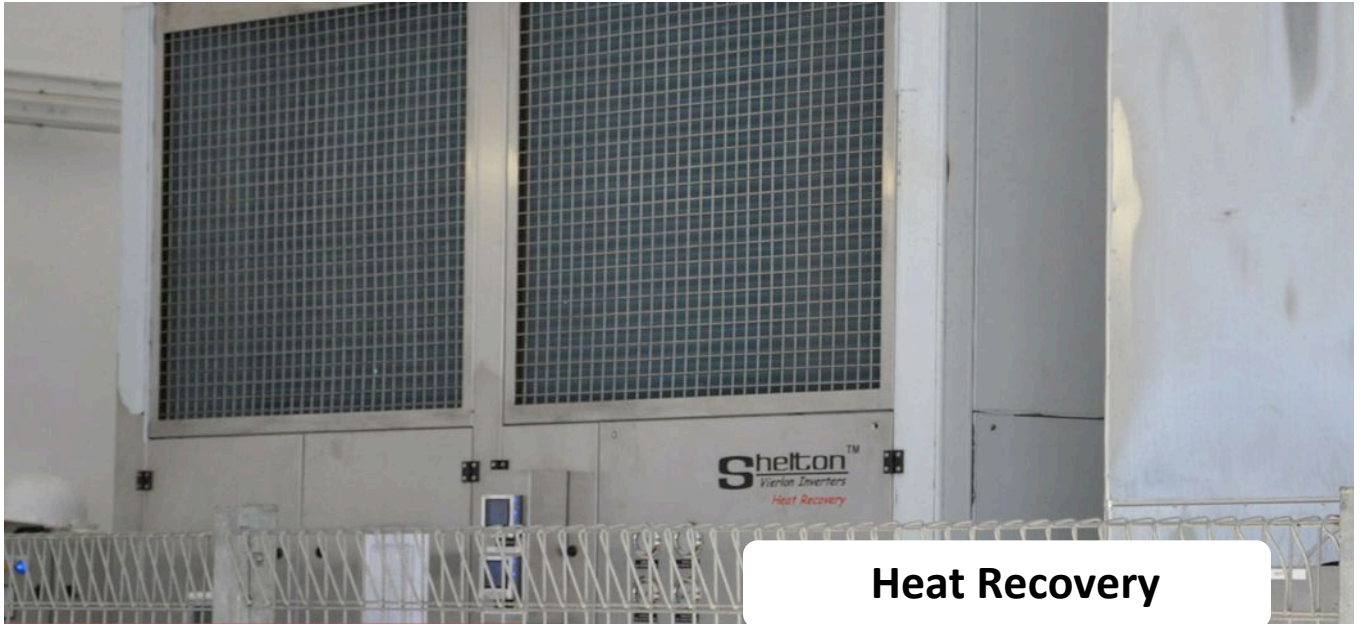
Increased Reliability as refrigeration circuits function independently from each other. One defective refrigerant circuit will only cause a fraction of the module to stand down, resulting in minimal disruption to operations and greater reliability.



Lower maintenance costs are achieved through the ability of the circuitries to function independently – defective portions are isolated, hence lowering replacements costs and shortening downtime.



Each module consists of independent control circuit, electronics circuitry, and refrigeration systems. A failure of any system will only result in a partial system failure. Other modules continue to function independently.



Heat Recovery

Shelton Inverter Chillers with Heat Recovery earns **Green Mark Platinum Award** at Maple Tree Business City– the highest accredited award for Green Buildings in Singapore.

Simultaneous production of hot water made possible by recovery waste heat from condensers.

Recovered hot water usable for humidity control, process heating and daily hot water requirements.

Up to 60°C of hot water can be recovered from waste heat to produce useful energy.

Elimination of auxiliary heaters allow for up to 70% energy savings as compared to conventional heater and chiller combination.



BCA GREEN MARK

SPRING
singapore

Enabling Enterprise

Awarded Shelton a TIP grant in recognition of constant innovation and development for Heat Recovery usage in Chillers.



Intelligent

Advanced programmable controllers installed at Nanyang Technological University. Allow operators to have even greater accessibility and control over the chiller units.

A developed electronic circuitry protects both the compressor and the motor from typical electrical fault conditions like thermal overload and current overload. Our enhanced condenser coil structure is designed to reduce the potential for leaks, thereby increasing the lifespan of the chiller unit. Advanced microprocessor control systems provide improved user control capabilities and interface.



Complete with an intelligent controller optimized specially for chiller usage, Shelton Industrial Chillers are packed with customizable features. Large numerical displays, coupled with icons that light up, allow the operator to view major equipment and temperature status at a glance.



Inverter Driven Chillers located at the heart of a campus garden in National University of Singapore. Minimal operating noise ensures minimal disruption to students taking a stroll amidst the greenery.

Noise-Cancelling Acoustic setups* feature noise cancelling foams to eliminate excessive operating noise, thereby delivering a quieter experience. Sound levels are approximately 10% lower than standard scroll chillers without acoustic setups, and up to 30% lower than their screw counterparts.

Chilled Water Expansion Tank* allows for hassle free self-installation. If otherwise preferred, Shelton Tanks are customizable. They are pre-insulated to retard energy loss, and are available in various sizes. Such designs are perfect for process cooling and where extreme fluctuations in load conditions are frequent.

Powder-coated paint is opted over conventional liquid coatings for a smoother finish.

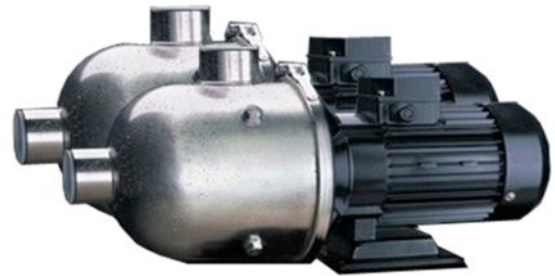
It emits near zero volatile organic compounds, and is environmentally and health friendly for its users. Furthermore, it seals every small crevice to prevent moisture and corrosive particles from reaching the steel, thus providing complete protection against harsh weather conditions in the outdoors.



Installation Features

Chiller system installed for clean room air conditioning usage at Tuas West Drive.

Our Pump package* features a built-in hydronics system that eliminates the need for auxiliary installation of external chilled water systems. Integration of control and power circuitry into existing chiller systems allows for greater synergy, and reduced interfacing and installation costs.



Our Dual Pump package* provides recovery functionality through a standby pump. It ensures the reliability of having chilled water supply by guarding against downtime caused by standard failure. Advanced control algorithm allows automatic switchover and scheduled switchover of pumps for optimization of pump performance and operational readiness. Failure and downtime are hence greatly reduced or prevented with such setups.



Trusted Reliability

We take pride in our quick time-to-market deliveries of superior performance, which has earned us numerous recognition from our customers.

Assembled and engineered in Singapore, Shelton Chillers take pride in being homegrown. Every unit that reaches our customers would have been subject to over 20 stringent quality tests, and up to 7 days of field simulation before delivery. It's no surprise, that we are trusted by many as their preferred integrators.



Mr Tan Kok Kheng :

Deputy Director of STsynthesis

I would fully and whole-heartedly recommend their Shelton brand to other official companies. Shelton Pte Ltd would be a definite asset to all companies



Dr Sankha Dhar :

thanks for your great service during the movement of our lab and the chiller is running nicely.



Sankar Mukherjee :

(National Univeristy Singapore Nanocore Lab, Temasek Laboratory)

Chiller is working great, and it has not given me any problems



Prof Tan Kah Lock :

Professor Nanyang Polytechnic – School of Engineering, Manufacturing)

I seldom use the chiller, but the chiller performance and service are very good.



Prof Zhang Jian:

Professor Nanyang Technological University – Advance Material Research Centre)

Performance very good. So far very good. The chiller is very critical to my furnace, as the chiller cannot fail. It is very durable, and I am very happy with the overall experience



Andy Law:

Chiller located at General Electric Aviation Singapore)

Chiller at GEASO is great. Very stable. Has been working very well



Mr Choo Chow Meng:

(KES Energy – Sunright Group)

The support from Shelton is great. I know I can count on them. Chillers at my place have been durable and good



Type	Air Cooled <i>Fixed Speed</i>				Air Cooled <i>Inverter Driven</i>				
Model	AC01	AC02	AC05	IAC05	IAC07	IAC10	IAC15	IAC20	
Refrigeration Capacity	kw RT x10 ³ kcal/hr	2.8 0.8 2.4	5.3 1.5 4.5	13.6 3.9 11.7	13.6 3.9 11.7	17.5 5.0 15.1	27.2 7.7 23.4	40.3 11.5 34.7	54.4 15.5 46.8
Total Power	BTU/hr	9000	18000	46000	46000	60000	93000	138000	186000
Total Current	kW	1.55	2.50	5.30	5.30	6.27	9.75	14.05	19.50
Isolator Requirement	A	8.93	12.31	10.73	16.00	12.83	18.70	26.79	37.50
	A	1PH 13A	1PH 15A	3PH 16A	3PH 20A	3PH 20A	3PH 25A	3PH 40A	3PH 50A
Type	Fixed Speed	Fixed Speed	Fixed Speed	Inverter Driven	Inverter Driven	Inverter Driven	Inverter Driven	Inverter Driven	
Refrigerant	R22 / R407c								
Number of compressor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0
Capacity Control	Via Hot Gas Bypass	0-100% Stepless Control							
Input Power	kW	0.89	1.77	4.30	4.30	5.27	8.10	12.40	16.20
Operation Current	A	4.78	7.84	8.10	16.00	10.20	14.60	22.69	29.20
Number of fan	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0
Input Power	kW	0.11	0.18	0.25	0.25	0.25	0.55	0.55	1.10
Input Current	A	0.50	0.82	0.80	1.60	0.80	1.50	1.50	3.40
Flow rate	L/Min	7.9	15.1	39.0	39.0	50.2	78.0	115.5	155.9
	M ³ /H	0.5	0.9	2.3	2.3	3.0	4.7	6.9	9.4
	US GPM	2.1	4.0	10.3	10.3	13.2	20.6	30.5	41.2
Pump Pressure	Bar	4.0	4.0	4.0	4.0	3.3	4.0	2.6	3.5
Pipe Connection	DN	DN15	DN15	DN25	DN25	DN25	DN25	DN40	DN50
Input Power	kW	0.55	0.55	0.75	0.75	0.75	1.10	1.10	2.20
Input Current	A	3.65	3.65	1.83	4.80	1.83	2.60	2.60	4.90
Reservoir Volume	L	16	16	75	75	75	125	145	250
Efficiency	COP	2.8	2.7	3.0	3.0	3.2	3.1	3.1	3.1
	EER	8.7	8.5	9.4	9.4	10.0	9.9	9.8	9.9
Dimension	Length	650	650	1150	1150	1150	1505	1505	1755
	Width	550	550	740	740	740	850	850	900
	Height	850	850	1375	1375	1375	1475	1550	1780
Weight	kg	73	100	220	220	220	360	450	650

Conditions for above mentioned : Chilled Water In : 12°C, Chilled Water Out : 7°C, Ambient Temperature : 35°C (Rated in accordance with AHRI Standard 550/590)
Power supply specification: 3P/415V/50hz. 60Hz is available on request ▶ AC1, AC2 are of power source : 1P / 220V/50Hz. Incoming Power shall consist of 4 wires, of L1, L2, L3 and Neutral

Type	Air Cooled <i>Inverter</i> Driven								
Model	IMAC25	IMAC40	IMAC60	IMAC80	IMAC120	IMAC180	IMAC240	IMAC300	IMAC360
Combination	1 x IMAC25	1 x IMAC40	1 x IMAC60	2 x IMAC40	2 x IMAC60	3 x IMAC60	4 x IMAC60	5 x IMAC60	6 x IMAC60
	65.0	100.0	150.0	200.0	300.0	450.0	600.0	750.0	900.0
Refrigeration Capacity	RT	28.5	42.7	57.0	85.5	128.2	170.9	213.7	256.4
	55.9	86.0	129.0	172.0	258.0	387.0	516.0	645.0	774.0
	222000	341000	512000	682000	1024000	1535000	2047000	2559000	3071000
Total Power	21.6	34.9	52.2	69.8	104.4	156.6	208.8	261.0	313.2
Total Current	41.1	65.8	97.2	131.6	194.4	291.6	388.8	486.0	583.2
Type	Inverter Driven + Scroll Combination								
Refrigerant	R22 / R407c								
Number of compressor	3.0	4.0	6.0	8.0	12.0	18.0	24.0	30.0	36.0
Capacity Control	0-100% Stepless Control								
Input Power	20.3	32.4	48.6	64.8	97.2	145.8	194.4	243.0	291.6
Operation Current	37.5	60.0	90.0	120.0	180.0	270.0	360.0	450.0	540.0
Number of fan	2.0	2.0	2.0	4.0	4.0	6.0	8.0	10.0	12.0
Input Power	1.3	2.5	3.6	5.0	7.2	10.8	14.4	18.0	21.6
Input Current	3.6	5.8	7.2	11.6	14.4	21.6	28.8	36.0	43.2
Flow rate	L/Min	186.3	286.6	429.9	573.2	859.8	1289.7	1719.6	2579.4
	M ³ /H	11.2	17.2	25.8	34.4	51.6	77.4	103.2	154.8
	US GPM	49.2	75.7	113.6	151.4	227.1	340.7	454.3	681.4
Pipe Connection	DN	DN50	DN65	DN65	2 X DN65	2 x DN65	3 x DN65	4 x DN65	5 x DN65
Efficiency	COP	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
	EER	9.5	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Dimension	Length	2130	2130	2285	2130	2285	2285	2285	2285
	Width	1080	1080	1360	2160	2720	4080	5440	6800
	Height	2000	2000	2320	2200	2200	2320	2320	2320
Weight	kg	800	900	1250	1800	2500	3750	5000	6250

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Conditions for above mentioned : Chilled Water In : 12°C, Chilled Water Out : 7°C, Ambient Temperature : 35°C (Rated in accordance with AHRI Standard 550/590)

Power supply specification: 3P/415V/50hz. 60Hz is available on request *Pumps & Reservoirs are optional add-ons. Specifications customizable upon request



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