



## INDUSTRIAL CHILLERS – XA Series 60 to 350kW of Cooling



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The XA series Chillers are designed to cool processes with large heat loads

They are outdoor chillers and can be configured to supply chilled water for

- Potable water applications
- Process cooling to an external buffer tank

### About Us

Stareast is Australia's leading supplier of specialized equipment to the HVAC industry. The technical team at Stareast have a combined 50 years in the Australian chiller industry – no other company can offer this level of engineering support for our customers critical applications.

Stareast has dedicated itself to providing locally specified and manufactured chillers which are supplied with components sourced from the industry's leading suppliers. Built in Australia for Australian conditions.

With specifying chillers experience counts and no other company has the experience to offer the advice and solutions the market requires.

As the Australian market grows and diversifies, Stareast can offer expert advice on chillers, heat pumps, variable speed high efficiency scroll chillers, air handling and more.

Stareast is backed by a nationwide team of service technicians who are trained in the operation and maintenance of Stareast chillers



## Chiller Applications

Industrial process chillers are designed to circulate water to a heat producing process via a water pump. The water brings the heat back to the chiller where the compression cycle cools the water before it is returned to the heat process.



Laboratories



Concrete batch cooling



Medical Apps



Process cooling



Distilling

## Features

The chillers are supplied with – as standard

- Rugged galvanized steel construction on welded frames – Suitable for external installation
- Seamless copper pipework
- Components sourced from the industry's leading suppliers
- R134a refrigerant available for high ambient temperature operation and the lowest GWP of all contemporary refrigerants
- Integrated circulation pump available
- Comprehensive 12 months warranty on all parts and labour
- Highly accurate electronic controller – plc control for PID compressor staging control
- Shell and tube evaporator
- Comprehensive factory testing before dispatch

## Technical data

Model		<b>XA2.20.SY</b>	<b>XA2-25.SY</b>	<b>XA2.30.SY</b>
<b>System type</b>	Chiller	Heat rejection		Air
<b>Capacity R407c 10C water supply 35C ambient</b>	TR	17.2	19.7	25.2
	Btu/hr	206888		
	kW	60.6	69.4	88.6
	EER (kW/TR)			
Capacity control	%	0-50%-100%		
Refrigerant	Type	R407c		
Total power input	kW	17.1	18.9	24.8
Total running current	Amps	31.8	34.4	51.2
Power requirements	V/Hz/Ph	380-415/50/3		
<b>COMPRESSOR</b>		Scroll Hermetic		
Motor size	HP	2 x 10	2 x 12.5	2 x 15
RPM	1/min	2900		
QTY		2	2	2
Maximum Power input	kW	14.4	16.2	22.1
Total running current	Amps	27.4	30.0	46.8
MCC/ comp	Amps	26.9	31.0	42.0
Rated load current / comp	Amps	17.2	19.9	26.9
Locked rotor amps	Amps	118	118	174
Oil charge / comp	L	1.1	1.3	1.6
<b>Oil type</b>	POE			
<b>CONDENSER</b>		Air cooled – heavy duty – high ambient design		
Material		Aluminum, blue fin on copper tube		
Tube diameter	Inch	3/8		
Fin spacing	mm	2.1		
<b>CONDENSER FANS</b>		External, axial fans, 4 pole – speed controlled		
Fan speed	Rpm	900		
Fan diameter	mm	630	630	630
No fans		2	2	2
Total power input	kW	2.7	2.7	2.7
Total running current	Amps	4.4	4.4	4.4
Total air flow	M3/ hr	23000		
<b>EVAPORATOR</b>		Shell and tube – DX		
No. refrigeration circuits				
Chilled water flow rate	l/s	3.0	3.3	4.2
Pressure drop	kPa	50		
Inlet / outlet CHW Temperature	C	10/05		
Working temperature range	C	05/20		
Water connections	mm	50	50	50
Evaporator protection		Flow switch		
<b>CONTROLLER</b>	PLC			
<b>HP Safety</b>	2850kPa	LP Safety		375kPa
<b>Shipping weight - dry</b>	Kg	785	850	875
<b>Buffer Tank</b>	Litres	-		
<b>BMS protocols</b>	-	Buffer tank construction		-

## Technical data

Model		<b>XA.4.40.SY</b>	<b>XA.4.50.SY</b>	<b>XA.4.60.SY</b>
<b>System type</b>	Chiller	Heat rejection		Air
<b>Capacity</b>	TR	34.5	39.5	50.4
<b>R407c</b>	Btu/hr	104232	119368	152392
<b>10C water supply</b>	kW	121.2	138.8	177.2
<b>35C ambient</b>	EER (kW/TR)			
Capacity control	%	0-25%-50%-75%-100%		
Refrigerant	Type	R407c		
Total power input	kW	34.2	37.8	49.6
Total running current	Amps	62.6	68.8	102.4
Power requirements	V/Hz/Ph	380-415/50/3		
<b>COMPRESSOR</b>		Scroll Hermetic		
Motor size	HP	4 x 10	4 x 12.5	4 x 15
RPM	1/min	2900		
QTY		4	4	4
Maximum Power input	kW	14.4	32.4	22.1
Total running current	Amps	27.4	60.0	93.6
MCC/ comp	Amps	26.9	31.0	42.0
Rated load current / comp	Amps	17.2	19.9	26.9
Locked rotor amps	Amps	118	118	174
Oil charge / comp	L	1.1	1.3	1.6
<b>Oil type</b>	POE			
<b>CONDENSER</b>	Air cooled – heavy duty – high ambient design			
Material	Aluminum, blue fin on copper tube			
Tube diameter	Inch	3/8		
Fin spacing	mm	2.1		
<b>CONDENSER FANS</b>	External, axial fans, 4 pole – speed controlled			
Fan speed	Rpm	900		
Fan diameter	mm	630	630	630
No fans		4	4	4
Total power input	kW	5.4	5.4	5.4
Total running current	Amps	8.8	8.8	8.8
Total air flow	M3/ hr	46000	46000	46000
<b>EVAPORATOR</b>	Shell and tube – DX			
No. refrigeration circuits				
Chilled water flow rate	l/s	6.0	6.6	8.4
Pressure drop	kPa	50		
Inlet / outlet CHW Temperature	C	10/05		
Working temperature range	C	05/20		
Water connections	mm	100	100	100
Evaporator protection		Flow switch		
<b>CONTROLLER</b>	PLC			
<b>HP Safety</b>	2850kPa	LP Safety	375kPa	
<b>Shipping weight - dry</b>	Kg	1135	1230	1450
<b>Buffer Tank</b>	Litres	-		
<b>BMS protocols</b>	-	Buffer tank construction	-	

## Technical data

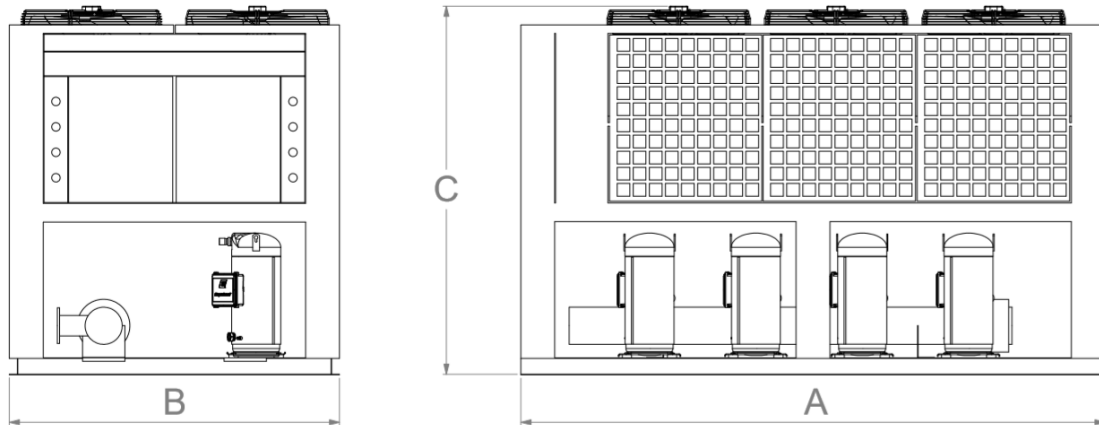
Model		<b>XA.2.40.SY</b>	<b>XA.2.50.SY</b>	<b>XA.2.60.SY</b>
<b>System type</b>	Chiller	Heat rejection		Air
<b>Capacity</b>	TR	33.4	41.9	51.3
<b>R407c</b>	Btu/hr	400121	502540	615202
<b>10C water supply</b>	kW	117.2	147.2	180.2
<b>35C ambient</b>	EER (kW/TR)			
Capacity control	%	0-50%-100%		
Refrigerant	Type	R407c		
Total power input	kW	34.4	41.4	51.9
Total running current	Amps	59.6	73.6	91.0
Power requirements	V/Hz/Ph	380-415/50/3		
<b>COMPRESSOR</b>		Scroll Hermetic		
Motor size	HP	2 x 20	2 x 25	2 x 30
RPM	1/min	2900		
QTY		2	2	2
Maximum Power input	kW	29.0	36.0	43.8
Total running current	Amps	50.8	61.0	77.8
MCC/ comp	Amps	53.0	64.8	83.0
Rated load current / comp	Amps	34.0	39.1	53.2
Locked rotor amps	Amps	225.0	272	310
Oil charge / comp	L	2.0	2.5	3.5
<b>Oil type</b>	POE			
<b>CONDENSER</b>	Air cooled – heavy duty – high ambient design			
Material	Aluminum, blue fin on copper tube			
Tube diameter	Inch	3/8		
Fin spacing	mm	2.1		
<b>CONDENSER FANS</b>	External, axial fans, 4 pole – speed controlled			
Fan speed	Rpm	900		
Fan diameter	mm	630	630	630
No fans		4	4	6
Total power input	kW	5.4	5.4	8.1
Total running current	Amps	8.8	8.8	13.2
Total air flow	M3/ hr	46000	46000	69000
<b>EVAPORATOR</b>	Shell and tube – DX			
No. refrigeration circuits				
Chilled water flow rate	l/s	5.8	7.1	9.0
Pressure drop	kPa	50		
Inlet / outlet CHW Temperature	C	10/05		
Working temperature range	C	05/20		
Water connections	mm	80	100	100
Evaporator protection		Flow switch		
<b>CONTROLLER</b>	PLC			
<b>HP Safety</b>	2850kPa	LP Safety	375kPa	
<b>Shipping weight - dry</b>	Kg	1225	1475	1670
<b>Buffer Tank</b>	Litres	-		
<b>BMS protocols</b>	-	Buffer tank construction	-	

## Technical data

Model		<b>XA.4.80.SY</b>	<b>XA.4.100.SY</b>	<b>XA-4-120.SY</b>
<b>System type</b>	Chiller	Heat rejection		Air
<b>Capacity R407c 10C water supply 35C ambient</b>	TR	66.7	83.7	102.5
	Btu/hr			
	kW	234.4	294.4	360.4
	EER (kW/TR)			
Capacity control	%	0-25%- 50%- 75% -100%		
Refrigerant	Type	R407c		
Total power input	kW	68.8	82.8	103.8
Total running current	Amps	119.2	147.2	182
Power requirements	V/Hz/Ph	380-415/50/3		
<b>COMPRESSOR</b>		Scroll Hermetic		
Motor size	HP	4 x 20	4 x 25	4 x 30
RPM	1/min	2900		
QTY		4	4	4
Maximum Power input	kW	58	72.0	87.6
Total running current	Amps	101.6	122	145.6
MCC/ comp	Amps	53.0	64.8	83.0
Rated load current / comp	Amps	34.0	39.1	53.2
Locked rotor amps	Amps	225.0	272	310
Oil charge / comp	L	2.0	2.5	3.5
<b>Oil type</b>	POE			
<b>CONDENSER</b>	Air cooled – heavy duty – high ambient design			
Material	Aluminum, blue fin on copper tube			
Tube diameter	Inch	3/8		
Fin spacing	mm	2.1		
<b>CONDENSER FANS</b>	External, axial fans, 4 pole – speed controlled			
Fan speed	Rpm	900		
Fan diameter	mm	630	630	630
No fans		6	6	8
Total power input	kW	8.1	8.1	8.1
Total running current	Amps	13.2	13.2	13.2
Total air flow	M3/ hr	69000	69000	69000
<b>EVAPORATOR</b>	Shell and tube – DX			
No. refrigeration circuits				
Chilled water flow rate	l/s	11	14	17.5
Pressure drop	kPa	50		
Inlet / outlet CHW Temperature	C	10/05		
Working temperature range	C	05/20		
Water connections	mm	100	125	125
Evaporator protection		Flow switch		
<b>CONTROLLER</b>	PLC			
<b>HP Safety</b>	2850kPa	LP Safety		375kPa
<b>Shipping weight - dry</b>	Kg	2175	2575	2750
<b>Buffer Tank</b>	Litres	-		
<b>BMS protocols</b>	-	Buffer tank construction		-



## Dimensions



Model	DIM A (mm)	DIM B (mm)	DIM C (mm)
XA.2.20.SY	2500	1000	2060
XA.2.25.SY	2500	1000	2060
XA.2.30.SY	2500	1000	2060
XA.4.40.SY	2900	2000	2155
XA-4.50.SY	3400	2000	2155
XA.4.60.SY	3400	2000	2155
XA-2.40.SY	2900	2000	2225
XA.2.50.SY	3200	2000	2225
XA.2.60.SY	3450	2000	2225
XA.4.80.SY	3450	2000	2225
XA.4.100.SY	4000	2000	2225
XA.4.120.SY	4800	2000	2225



## Options

<b>High corrosive environments</b>	<p>If the chiller is to be installed in an environment with corrosive elements present the chiller can be manufactured in such a way to extend the life of the unit</p> <p>These environments can be</p> <ul style="list-style-type: none"><li>- Coastal which high levels of salt spray present</li><li>- Mining with Sulphur present</li></ul> <p>The coils on the units can be coated with Blygold to extend their life – the coil will lose efficiency if the bond between the copper and the aluminum starts to break down and Blugold will prevent this</p> <p>In the case where flammable gas is present an Ex or ATEX rated unit maybe required</p>
<b>Soft starters</b>	<p>In installations where the power supply is not robust soft starters can be supplied on the compressors to limit the in-rush current on compressor start up.</p>
<b>Redundant pumps</b>	<p>The units can be supplied with 2 pumps that duty cycle to share the wear and tear. The software can also start the pump sitting in redundancy if the duty pump develops a fault</p>
<b>High Ambient</b>	<p>For installations such as mine sites, especially in remote areas where the temperatures are extreme the chiller can be constructed to be able to handle these extreme temperatures</p>
<b>Compressor VSD</b>	<p>Variable speed drives – fitted to the compressor to allow turn down in partial load conditions which adds to the operating efficiency of the chiller</p>

## Installation

There are certain guidelines that need to be followed to ensure the chiller operates properly and reliably. When considering the purchase of a chiller the site should be prepared so the chiller can be installed and operated reliably

The chiller should also be installed on a level firm surface and should be bolted down to prevent the unit moving. It is not necessary to install the chiller with spring vibration eliminators – waffle pad is suffice to prevent vibration from the unit

The water pipe work too and from the chiller should be properly insulated to prevent sweating and to ensure the chiller operates as efficiently as possible

There should be adequate space around the chiller to allow proper ventilation of the cooling fans – the chiller should not be installed under an awning or installed indoors if there is not proper ventilation.

All operational cooling capacity, power consumption and current draw data shown above is based on the chiller operating at the limit of its design and is intended to be an indication only.

Each chiller will be individually designed to customer requirements and a detailed product specification will be supplied at time of order including installation instructions and dimensions. The power consumed by the unit and the current it will draw vary depending on how the chiller is constructed. The chillers performance may also vary slightly from the figures above again based on customer requirements.

Stareast's product range is subject to change without notice





## Warranty

- Stareast warrants all its products for 12 months from the agreed commissioning date – no later than 30 days from invoicing date.
- The warranty is to the first purchaser of the unit
- The warranty covers all parts and labour to rectify the unit
- The warranty is subject to Stareast terms and conditions which will be provided at the time of order

## Contact

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