Zeus Series

AC-ZEU-VSA-168



The Zeus series from Aqua Chiller offers robust screw chillers designed specifically for the demanding Australian climate, with capacities ranging from 155 kW to 322 kW. Engineered for reliability and efficiency, the Zeus chillers are the ideal solution for large-scale industrial applications that require powerful and consistent cooling.

Features

- Compressor suction and discharge valves.
- Compressor crankcase heater.
- Oil level switch.
- INT 69 RCY motor protection module.
- Compressor motor protector switch.
- Part-winding start.
- Electronic expansion valve.
- Suction and discharge pressure transducers.
- Carel pCO5 controller.
- Anti vibration dampers.
- Flow-switch.
- Main interlock switch.
- Alarm output relay.
- Carel pC0xcontrol card.
- Phase monitoring and rotation detection relay.
- Back-up battery for EEV.
- Shell and tube evaporators.

Benefits

Built for the toughest environments, the Zeus series incorporates advanced features like compressor motor protection, electronic expansion valves, and shell-and-tube evaporators to ensure optimal performance under all conditions. These chillers also include compressor suction and discharge valves, an INT 69 RCY motor protection module, and a pCO5 advanced Carel controller for dependable cooling management. To enhance durability and longevity, the Zeus series is equipped with additional safeguards such as phase monitoring, rotation detection, and anti-vibration dampers. These features make the Zeus series the ultimate choice for critical industrial cooling needs, delivering unmatched reliability and performance for large-scale applications.

3 year warranty



All Aqua Chiller units are tested throughout the manufacturing process followed by a substantial and comprehensive test upon completion. Coupled with the world's most trusted component brands, Aqua Chiller's products are designed and built to last.



Notes

- (a) Onsite commissioning included in metro areas only. Additional travel fees apply for areas outside of metro regions and will be specified on quotation.
- (b) 3 year warranty valid when unit installed to our specifications verified by Aqua Chiller commissioning visit. 6 month maintenances must be completed and logged on our website by qualified personel. Annual water treatment and filter changes must occur with proof provided. Aqua Chiller can offer install and maintenance packages to suit.

Your Partner in Cool.

Online:www.aquacooler.comEmail:care@aquacooler.comPhone:1300 278 226



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Specifications

| Cooling Capacity +7C supply +3SC ambientkW155.1Compressor Power InputkW46RefrigerantR134aOutdoor InstallationSuitableExpansion DeviceElectronic Expansion ValveOperating CurrentAmp70Max Current DrawAmp169Locked Rotor AmpsAmp298Condenser TypeCopper Pipes, Aluminum FinsNumber of Condensers2Fan TypeAxial (280)Fan quentity3Fan power input3x1.2Fan air flowkWSyz2500Fan Speed Controlm3/hYes1Compressors1Compressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator typeShell & tubeEvaporator typeShell & tubeEvaporator flow ratem3/hOption125Type of flow protectionFlow switchWater Inlet Connection SizeDN125OptionSupervisory connection and web interface cardOptionHP ControlPressure Switch and TransducerLP ControlTransducerDimensionsmmData SigneryOptionDurational Kg1300 W x 3900 D x 2530 HDry WeightKg1950 | Model | | AC-ZEU-VSA-168 |
|---|--------------------------------|------|------------------------------------|
| RefrigerantR134aOutdoor InstallationSuitableExpansion DeviceElectronic Expansion ValveOperating CurrentAmp70Max Current DrawAmp169Locked Rotor AmpsAmp298Condenser TypeCopper Pipes, Aluminum FinsNumber of Condensers2Fan TypeAxial (Ø80)Fan quantity3Fan power input3x1.2Fan air flowkWSpeed Controlm3/hYesCompressorsCompressors1Compressors1Compressors1Evaporator typeShell & tubeEvaporator typeShell & tubeEvaporator typeShell & tubeEvaporator typeOptionNumber of pumpsOptionNumber of flow protectionFlow switchWater Inlet Connection SizeDNMater Outlet Connection SizeDNSupervisory connection and web interface cardOptionHP ControlPressure Switch and TransducerLP ControlTransducerLockerTransducerLockerPressure Switch and Transducer <th></th> <th>kW</th> <th>155.1</th> | | kW | 155.1 |
| Number of InstallationSuitableExpansion DeviceElectronic Expansion ValveOperating CurrentAmp70Max Current DrawMax Current DrawAmp169Locked Rotor AmpsLocked Rotor AmpsAmp298Condenser TypeCondenser TypeCopper Pipes, Aluminum FinsNumber of Condensers2Fan TypeAxial (Ø80)Fan quantity3Fan apower input3x1.2Fan air flowkW3x22500Fan Speed Controlm3/hYesCompressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator flow ratem3/h20ption26.7Tank volumeOptionNumber of pumpsOptionPump PressureOptionType of flow protectionFlow switchWater Inlet Connection SizeDN125Type of controllerCarel pCOS SeriesOptionModbusOptionSupervisory connection and web interface cardOptionHP ControlPressure Switch and TransducerLP ControlTransducerDimensionsmm1300 W x 3900 D x 2530 H | Compressor Power Input | kW | 46 |
| Expansion DeviceElectronic Expansion ValveOperating CurrentAmp70Max Current DrawAmp169Locked Rotor AmpsAmp298Condenser TypeCopper Pipes, Aluminum FinsNumber of Condensers2Fan TypeAxial (Ø80)Fan quantity3Fan power input3x1.2Fan air flowkWSpeed Controlm3/hYesCompressor TypeCompressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator typeShell & tubeEvaporator flow ratem3/hQptionPlopsNumber of pumpsOptionNumber of pumpsOptionNumber of pumpsOptionPump PressureOptionType of flow protection SizeDN125Type of controllerCarel pCOS SeriesOptionModbusOptionSupervisory connection and webOptionHP ControlPressure Switch and TransducerLP ControlPressure Switch and TransducerLP ControlTransducerDimensionsmm1300 W x 3900 D x 2530 H | Refrigerant | | R134a |
| Operating CurrentAmp70Max Current DrawAmp169Locked Rotor AmpsAmp298Condenser TypeCopper Pipes, Aluminum FinsNumber of Condensers2Fan TypeAxial (Ø80)Fan quantity3Fan power input3x1.2Fan air flowkW3x22500Fan Speed Controlm3/hYesCompressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Gapacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator flow ratem3/hZank volumeOptionNumber of pumpsOptionNumber of pumpsOptionPump PressureOptionType of flow protection SizeDN125Type of controllerCarel pCOS SeriesOptionModbusOptionSupervisory connection and web interface cardOptionHP ControlPressure Switch and TransducerLP ControlTransducerDimensionsmm1300 W x 3900 D x 2530 H | Outdoor Installation | | Suitable |
| Max Current DrawAmp169Locked Rotor AmpsAmp298Condenser TypeCopper Pipes, Aluminum FinsNumber of Condensers2Fan TypeAxial (Ø80)Fan quantity3Fan power input3x1.2Fan air flowkWSpeed Controlm3/hYesCompressor TypeCompressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator typeShell & tubeEvaporator flow ratem3/hQptionYpe of flow protectionType of flow protectionFlow switchWater Inlet Connection SizeDN125UptionYpe of controllerCarel pCO5 SeriesModbusOptionSupervisory connection and web interface cardOptionHP ControlPressure Switch and TransducerLP ControlTransducerDimensionsmm1300 W x 3900 D x 2530 H | Expansion Device | | Electronic Expansion Valve |
| Amp298Condenser TypeCopper Pipes, Aluminum FinsNumber of Condensers2Fan TypeAxial (Ø80)Fan quantity3Fan power input3x1.2Fan air flowkWSpeed Controlm3/hYesCompressor TypeCompressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator typeShell & tubeEvaporator flow ratem3/hOptionVesNumber of pumpsOptionNumber of four pressureDN125Vater Outlet Connection SizeType of controllerCarel pCO5 SeriesModbusOptionSupervisory connection and web interface cardPressure Switch and TransducerLP ControlPressure Switch and TransducerLP ControlTransducer | Operating Current | Amp | 70 |
| Condenser TypeCopper Pipes, Aluminum FinsNumber of Condensers2Fan TypeAxial (Ø80)Fan quantity3Fan power input3x1.2Fan air flowkW3x22500Fan Speed Controlm3/hYesCompressor TypeCompressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator typeShell & tubeEvaporator flow ratem3/hQptionQptionNumber of pumpsOptionNumber of folw protectionFlow switchWater Unlet Connection SizeDN125Water Outlet Connection SizeType of controllerCarel pCO5 SeriesModbusOptionSupervisory connection and webOptionHP ControlPressure Switch and TransducerLP ControlTransducerDimensionsmm1300 W x 3900 D x 2530 H | Max Current Draw | Amp | 169 |
| Number of Condensers2Fan TypeAxial (Ø80)Fan quantity3Fan power input3x1.2Fan air flowkWSpeed Controlm3/hYesCompressor TypeCompressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator typeShell & tubeEvaporator flow ratem3/hQptionQptionNumber of pumpsOptionPump PressureOptionType of flow protectionFlow switchWater Inlet Connection SizeDN125UNWater Outlet Connection SizeDNSupervisory connection and web interface cardOptionHP ControlPressure Switch and TransducerLP ControlTransducerDimensionsmm1300 W x 3900 D x 2530 H | Locked Rotor Amps | Amp | 298 |
| Fan TypeAxial (Ø80)Fan quantity3Fan power input3x1.2Fan air flowkW3x22500Fan Speed Controlm3/hYesSemi-hermetic ScrewNo. Compressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator typeShell & tubeEvaporator flow ratem3/h2.6.7Tank volumeOptionOptionNumber of pumpsOptionPump PressureOptionType of flow protectionFlow switchWater Inlet Connection SizeDN125Type of controllerCarel pCOS SeriesModbusModbusOptionHP ControlPressure Switch and TransducerLP ControlTransducerDimensionsmm1300 W x 3900 D x 2530 H | Condenser Type | | Copper Pipes, Aluminum Fins |
| Fan quantity3Fan quantity3Fan power input3x1.2Fan air flowkW3x22500Fan Speed Controlm3/hYesSemi-hermetic ScrewNo. Compressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator typeShell & tubeEvaporator flow ratem3/h2.6.7Tank volumeOptionOptionNumber of pumpsOptionPump PressureOptionType of flow protectionFlow switchWater Inlet Connection SizeDN125Usate ConstructionSupervisory connection and web interface cardOptionHP ControlPressure Switch and TransducerLP ControlTransducerDimensionsmm1300 W x 3900 D x 2530 H | Number of Condensers | | 2 |
| Fan power input 3x1.2 Fan air flow kW 3x22500 Fan Speed Control m3/h Yes Compressor Type Semi-hermetic Screw No. Compressors 1 Compressor Capacity Control 0%, then stepless from 50% to 100% Number of refrigerant circuits 1 Evaporator type Shell & tube Evaporator flow rate m3/h 26.7 Tank volume Option Number of pumps Option Pupe Pressure Option Type of flow protection Flow switch Water Inlet Connection Size DN 125 Type of controller Carel pCOS Series Modbus Option Option Supervisory connection and web Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | Fan Type | | Axial (Ø80) |
| Fan air flowkW3x22500Fan Speed Controlm3/hYesCompressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator typeShell & tubeEvaporator flow ratem3/h26.7CompressureTank volumeOptionNumber of pumpsOptionPump PressureOptionType of flow protectionFlow switchWater Inlet Connection SizeDN125OptionSupervisory connection and web interface cardOptionHP ControlPressure Switch and TransducerLP ControlTransducerDimensionsmmMain 1300 W x 3900 D x 2530 H | Fan quantity | | 3 |
| An Speed Controlm3/hYesCompressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator typeShell & tubeEvaporator flow ratem3/h26.7Tank volumeNumber of pumpsOptionNumber of pumpsOptionPump PressureOptionType of flow protectionFlow switchWater Outlet Connection SizeDN125Type of controllerSupervisory connection and web interface cardOptionHP ControlPressure Switch and TransducerLP ControlTransducerDimensionsmm1300 W x 3900 D x 2530 H | Fan power input | | 3x1.2 |
| No. Compressor TypeSemi-hermetic ScrewNo. Compressors1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator typeShell & tubeEvaporator flow ratem3/h26.7CompressorTank volumeOptionNumber of pumpsOptionPump PressureOptionType of flow protectionFlow switchWater Outlet Connection SizeDN125Type of controllerSupervisory connection and web interface cardOptionHP ControlPressure Switch and TransducerLP ControlTransducerDimensionsmm1300 W x 3900 D x 2530 H | Fan air flow | kW | 3x22500 |
| No. Compressor1Compressor Capacity Control0%, then stepless from 50% to 100%Number of refrigerant circuits1Evaporator typeShell & tubeEvaporator flow ratem3/h26.7OptionNumber of pumpsOptionNumber of flow protectionFlow switchWater Inlet Connection SizeDN125UNYpe of controllerCarel pCOS SeriesModbusOptionSupervisory connection and web interface cardPressure Switch and TransducerLP ControlTransducerDimensionsmm1300 W x 3900 D x 2530 H | Fan Speed Control | m3/h | Yes |
| Compressor Capacity Control 0%, then stepless from 50% to 100% Number of refrigerant circuits 1 Evaporator type Shell & tube Evaporator flow rate m3/h 26.7 Tank volume Option Number of pumps Option Pump Pressure Option Type of flow protection Flow switch Water Inlet Connection Size DN 125 Type of controller Carel pCO5 Series Modbus Option Supervisory connection and web interface card Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | Compressor Type | | Semi-hermetic Screw |
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| Evaporator type Shell & tube Evaporator flow rate m3/h 26.7 Tank volume Option Number of pumps Option Pump Pressure Option Type of flow protection Flow switch Water Inlet Connection Size DN 125 Water Outlet Connection Size DN 125 Type of controller Carel pCOS Series Modbus Option Supervisory connection and web interface card Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | Compressor Capacity Control | | 0%, then stepless from 50% to 100% |
| Evaporator flow rate m3/h 26.7 Tank volume Option Number of pumps Option Pump Pressure Option Type of flow protection Flow switch Water Inlet Connection Size DN 125 Water Outlet Connection Size DN 125 Type of controller Carel pCO5 Series Modbus Option Supervisory connection and web interface card Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm | Number of refrigerant circuits | | 1 |
| Tank volume Option Number of pumps Option Pump Pressure Option Type of flow protection Flow switch Water Inlet Connection Size DN 125 Water Outlet Connection Size DN 125 Type of controller Carel pCO5 Series Modbus Option Supervisory connection and web interface card Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | Evaporator type | | Shell & tube |
| Number of pumps Option Pump Pressure Option Type of flow protection Flow switch Water Inlet Connection Size DN 125 Water Outlet Connection Size DN 125 Type of controller Carel pCO5 Series Modbus Option Supervisory connection and web interface card Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | Evaporator flow rate | m3/h | 26.7 |
| Pump Pressure Option Type of flow protection Flow switch Water Inlet Connection Size DN 125 Water Outlet Connection Size DN 125 Type of controller Carel pCO5 Series Modbus Option Supervisory connection and web interface card Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | Tank volume | | Option |
| Type of flow protection Flow switch Water Inlet Connection Size DN 125 Water Outlet Connection Size DN 125 Type of controller Carel pCO5 Series Modbus Option Supervisory connection and web interface card Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | Number of pumps | | Option |
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| Water Outlet Connection Size DN 125 Type of controller Carel pCO5 Series Modbus Option Supervisory connection and web interface card Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | Type of flow protection | | Flow switch |
| Type of controller Carel pCO5 Series Modbus Option Supervisory connection and web interface card Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | Water Inlet Connection Size | DN | 125 |
| Modbus Option Supervisory connection and web interface card Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | Water Outlet Connection Size | DN | 125 |
| Supervisory connection and web interface card Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | Type of controller | | Carel pCO5 Series |
| Interface card Option HP Control Pressure Switch and Transducer LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | Modbus | | Option |
| LP Control Transducer Dimensions mm 1300 W x 3900 D x 2530 H | | | Option |
| Dimensions mm 1300 W x 3900 D x 2530 H | HP Control | | Pressure Switch and Transducer |
| | LP Control | | Transducer |
| Dry Weight Kg 1950 | Dimensions | mm | 1300 W x 3900 D x 2530 H |
| · · · | Dry Weight | Kg | 1950 |

Notes

- Nominal cooling capacity is calculated with 7°C chilled-water supply and 35°C inlet cooling air temperature at system flow rate and pressure
- Recommended temperature range of chilled fluid: 3°C and 25°C. Use of glycol recommended for set points under 6°C.
- Temperature difference between inlet and outlet chilled fluid between 4°C and 7°C. Contact us for temperature splits outside of this range
- All figures are at the rating point of 7c supply in 35c ambient.
- We recommend the use of R134a when ambient temperatures are expected to reach 42°C+

Features

- Compressor internal protectors respond to over-current and overheating.
- High and low pressure protection.
- Temperature protection via high and low alarm.
- Flow switch protection.
- Fan speed controller.
- Receiver, filter dryer and sight glass on refrigerant circuit.
- Integrated insulated water buffer tank and pump.

Company details

| Registered Company Name: | Aqua Cooler Pty Ltd |
|--------------------------|---|
| ABN Number: | 88 151 215 351 |
| Address | 38-44 Relentless Court PARK RIDGE QLD 4125 |
| Postal Address: | PO Box 3225 LOGANHOLME QLD 4128 |
| Telephone: | 1300 278 226 |
| Website: | www.aquachiller.com |
| Email: | care@aquachiller.com |

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