APT INDUSTRIAL CHILLER

Water Cooled Industrial Chiller Datasheet Reference

Technical reference for water cooled industrial chiller configuration, condenser water conditions, evaporator selection, pump review, electrical data, and quotation preparation.

> This datasheet is for preliminary engineering review. Final selection should be confirmed according to cooling capacity, condenser water condition, process fluid, flow rate, pump head, voltage, and installation layout.

https://applied-chiller.com/ | sales@applied-chiller.com

Technical Datasheet Preview

DATASHEET TYPE	Water Cooled Industrial Chiller
CHILLER CATEGORY	Water Cooled Process Chiller
CAPACITY DIRECTION	Medium to large industrial cooling load
CONDENSER TYPE	Water cooled condenser
UTILITY REQUIREMENT	Cooling tower or condenser water loop
APPLICATION	Process cooling, production line cooling, equipment cooling
DOCUMENT ROLE	Preliminary engineering datasheet reference

QUICK DATASHEET SUMMARY

Quick Datasheet Summary

Core reference data for early water cooled industrial chiller discussion before final engineering selection.

Water Cooled Industrial Chiller General Data

ITEM	REFERENCE DATA	ENGINEERING NOTES
Chiller Type	Water cooled industrial chiller	Suitable when condenser water or cooling tower water is available
Cooling Capacity	Project-defined, medium to large range	Confirm by real heat load, inlet/outlet temperature, and duty cycle
Condenser	Water cooled condenser	Requires condenser water flow and temperature confirmation
Evaporator	Plate heat exchanger / shell and tube / project-defined	Selected according to fluid, flow, material, and maintenance needs
Compressor	Scroll / semi-hermetic / screw / project-selected	Depends on capacity, refrigerant, voltage, and operation duty
Cooling Medium	Water / glycol water / DI water / project-defined	Water quality affects material and heat exchanger selection
Temperature Range	Project-defined	Confirm process outlet temperature and allowable fluctuation
Pump System	Built-in or external pump	Confirm flow rate, head, pipe resistance, and tank requirement
Power Supply	380V / 400V / 415V / 460V / 480V or project-defined	Voltage, phase, and frequency must be confirmed before production
Control System	Temperature controller / PLC / project-defined	Alarm, remote signal, and interface can be reviewed

> Water cooled chillers should not be selected by cooling capacity only. Condenser water temperature, condenser water flow, process water flow, and electrical configuration must be reviewed together.

CONFIGURATION DATASHEET

Water Cooled Chiller Configuration Reference

Typical configuration items and project conditions used during water cooled chiller datasheet review.

Main Configuration Datasheet

CONFIGURATION ITEM	TYPICAL OPTIONS	SELECTION NOTES
Compressor Type	Scroll, semi-hermetic, screw	Selected according to cooling capacity and operating duty
Refrigerant	R410A / R407C / R134a / project-defined	Depends on compressor, temperature range, and regional requirement
Condenser	Shell and tube / tube-in-tube / project-defined	Must match condenser water quality and flow condition
Evaporator	Plate / shell and tube / stainless steel option	Selected according to process fluid and maintenance needs
Water Tank	Built-in / external / no tank	Depends on temperature stability and process loop volume
Pump	Standard / high pressure / stainless steel / external	Confirm flow rate, head, pipe length, and equipment pressure drop
Filter	Y-strainer / water filter / project-defined	Recommended according to water quality and heat exchanger type
Control	Standard controller / PLC / remote signal	Depends on application equipment integration
Cabinet	Standard electrical cabinet / customized layout	Confirm local electrical requirement and maintenance access

Application and System Fit

PROJECT CONDITION	WATER COOLED CHILLER FIT	REVIEW NOTES
Factory has cooling tower water	Suitable	Confirm tower water temperature and flow
Large heat load	Usually suitable	Water cooled design may be more efficient than air cooled
Continuous operation	Suitable	Review compressor duty and condenser water stability
Limited ventilation space	Suitable	Heat is rejected through condenser water instead of workshop air
High ambient workshop	Often suitable	Condenser water system reduces dependence on air cooling
Corrosion-sensitive fluid	Project review required	Stainless steel or special material may be needed
DI water or clean water loop	Project review required	Material compatibility must be confirmed
Outdoor installation	Project review required	Electrical protection and enclosure design should be reviewed

WATER CIRCUIT REVIEW

Condenser Water and Process Water Reference

Condenser water and process water data should be confirmed together because both sides affect capacity, stability, and maintenance planning.

Condenser Water Datasheet Reference

ITEM	DATA TO CONFIRM	ENGINEERING NOTES
Condenser Water Inlet Temperature	Project-defined	Affects chiller capacity and compressor operating condition
Condenser Water Outlet Temperature	Project-defined	Used to calculate heat rejection and flow requirement
Condenser Water Flow	Project-defined	Must match condenser heat exchange requirement
Cooling Tower Availability	Yes / No / project-defined	Water cooled chiller requires stable heat rejection utility
Water Quality	Clean water / treated water / project-defined	Scaling and contamination affect condenser performance
Water Pressure	Project-defined	Confirm condenser circuit pressure and pump arrangement
Fouling Control	Filter / treatment / maintenance plan	Important for long-term heat exchange efficiency
Installation Distance	Project-defined	Pipe length affects pressure drop and pump selection

Process Water Datasheet Reference

ITEM	DATA TO CONFIRM	ENGINEERING NOTES
Process Water Outlet Temperature	Required target temperature	Main selection condition for chiller design
Process Water Inlet Temperature	Return water temperature	Used for heat load and capacity confirmation
Process Flow Rate	L/min or m^3/h	Must match heat exchanger and pump selection
Pump Head	m or bar	Confirm pipe length, height difference, filters, and equipment resistance
Fluid Type	Water / glycol / DI water / special fluid	Affects material, pump, seal, and heat exchanger selection
Tank Volume	Built-in / external / project-defined	Supports temperature stability and process buffer
Water Contact Material	Carbon steel / stainless steel / copper / project-defined	Confirm according to fluid quality and corrosion risk
Filtration Requirement	Optional / required	Recommended for plate heat exchanger and sensitive process loops

QUOTATION PREPARATION

Electrical and Quotation Data Checklist

Prepare these electrical and project inputs before requesting a water cooled industrial chiller datasheet or quotation.

Electrical Datasheet Reference

ITEM	REFERENCE DATA	NOTES
Voltage	380V / 400V / 415V / 460V / 480V / project-defined	Confirm actual site voltage
Phase	Three phase / project-defined	Most industrial water cooled chillers use three phase power
Frequency	50Hz / 60Hz	Compressor, pump, and electrical components must match
Control Voltage	24V / 110V / 220V / project-defined	Confirm maintenance and local service requirement
Protection	Overload, phase sequence, high/low pressure, anti-freezing	Final protection depends on design
Remote Signal	Optional	Start/stop, alarm output, or PLC interface can be reviewed
Electrical Cabinet	Standard or project-defined	Confirm cable entry, enclosure, and site requirement

Information Needed Before Quotation

REQUIRED INFORMATION	CUSTOMER INPUT
Required cooling capacity or heat load	
Process outlet and inlet temperature	
Process water flow rate	
Required pump head or pressure	
Cooling medium	
Condenser water inlet/outlet temperature	
Condenser water flow	
Cooling tower or condenser water source	
Site voltage / phase / frequency	
Installation country	
Indoor or outdoor installation	
Ambient temperature	
Application equipment type	
Pipe distance and layout	
Special material requirement	
Photos or drawings of equipment	

Send the above data to APT for water cooled industrial chiller datasheet review and quotation preparation.

FAQ AND CONTACT

Water Cooled Industrial Chiller Datasheet FAQ

Common questions before requesting a project-specific water cooled chiller datasheet.

When should a water cooled industrial chiller be selected?

A water cooled industrial chiller is suitable when the factory has cooling tower water or condenser water support, especially for medium to large heat loads, continuous operation, or workshops with limited ventilation.

What data is required before preparing a water cooled chiller datasheet?

APT usually needs cooling capacity, process temperature, process water flow, pump head, condenser water temperature, condenser water flow, voltage, installation condition, and application equipment details.

Why is condenser water data important?

Water cooled chillers reject heat through condenser water. Condenser water temperature, flow rate, pressure, and water quality directly affect chiller capacity, stability, and long-term operation.

Can APT provide stainless steel water cooled chiller configurations?

Yes. Stainless steel tanks, piping, evaporators, and wetted parts can be reviewed when water quality, corrosion resistance, hygiene, or special process fluid is important.

Can the pump and tank be customized?

Yes. Pump flow, pump head, tank volume, stainless steel pump options, and external circulation design can be reviewed according to the process loop.

Is this datasheet a final quotation?

No. This PDF is a technical reference for early engineering review. Final quotation should be confirmed after all project data and component selections are reviewed.

Need a Water Cooled Industrial Chiller Datasheet for Your Project?

Send your cooling capacity, target temperature, process fluid, condenser water condition, flow rate, pump pressure, voltage, and application details for engineering review.

EMAIL

sales@applied-chiller.com

WEBSITE

https://applied-chiller.com/