

APT INDUSTRIAL CHILLER

INDUSTRIAL COOLING
REFERENCE DOCUMENT

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24HP Stainless Steel Water Cooled Chiller for Electroplating Bath Cooling

Industrial Cooling Reference for Plating and
Chemical Bath Temperature Control

WATER COOLED

24HP REFERENCE

STAINLESS STEEL

PLATING BATH

CASE REFERENCE

Project Snapshot

24HP stainless steel water cooled chiller direction for an electroplating bath cooling project.

APPLICATION Electroplating Bath Cooling	INDUSTRY Electroplating / Surface Treatment Workshop
COOLING TARGET Plating bath temperature control and corrosion-sensitive process cooling	CHILLER DIRECTION 24HP Stainless Steel Water Cooled Industrial Chiller
REVIEW FOCUS Bath chemistry, heat load, material compatibility, condenser water condition, pump flow, water quality	



24HP WATER COOLED CHILLER REFERENCE

ENGINEERING REVIEW

Engineering Matrix

ENGINEERING ITEM	WHY IT MATTERS	DATA TO CONFIRM
Bath Chemistry	Chemical composition affects corrosion-sensitive component review.	Bath medium, pH, chloride level, and contamination risk.
Heat Load	Total plating bath duty determines whether 24HP is suitable as reference direction.	Continuous and peak cooling demand from the plating process.
Target Temperature	Bath temperature accuracy influences process quality and stability.	Required setpoint and acceptable fluctuation.
Material Compatibility	Corrosion resistance may require stainless or other project-reviewed materials.	Required materials for wetted parts and process-side circuit.
Condenser Water Condition	Water cooled performance depends on plant condenser water availability and quality.	Condenser water temperature, pressure, and fouling risk.
Flow Rate	Enough circulation is required through the process heat exchanger and bath loop.	Required L/min or m3/h through the system.
Water Quality	Process cooling reliability depends on circulation water cleanliness and maintenance approach.	Water standard, scale risk, and filtration review.

Reference direction only. Final engineering review should be completed before quotation and final model confirmation.

COOLING CHALLENGE

Process Review

- Plating bath temperature stability directly affects coating quality and process consistency.
- Bath chemistry can increase corrosion risk in the process-side water circuit and heat exchanger review.
- Condenser water condition must be checked for practical water cooled installation.
- Flow rate and pump selection must match the real electroplating circulation requirement.

RECOMMENDED DIRECTION

A 24HP stainless steel water cooled industrial chiller was considered as the preliminary direction for this electroplating bath cooling project. Final sizing and material direction should be confirmed by bath chemistry, actual heat load, target bath temperature, condenser water condition, process-side material compatibility, and flow requirement.

24HP Water Cooled Chiller Configuration

Main configuration points for an electroplating bath cooling reference project.



WATER COOLED CHILLER CONFIGURATION VIEW

01 Water Cooled Condenser

Plant condenser water supports stable heat rejection for continuous bath cooling.

02 Stainless Steel Circuit

Material direction reviewed for corrosion-sensitive plating process conditions.

03 Heat Exchanger Review

Process-side exchanger selected according to chemistry, fouling risk, and duty.

04 Process Temperature Control

Controller logic supports plating bath temperature consistency and protection.

TECHNICAL REFERENCE

COOLING METHOD Water cooled condenser	CAPACITY DIRECTION 24HP reference	TYPICAL APPLICATION Electroplating bath / process temperature control / chemical surface treatment	COOLING CIRCUIT Closed-loop process water
OUTLET TEMP. Project-defined, often 10-25 C	PUMP SELECTION By required flow and head	POWER SUPPLY 380-460V, 50/60Hz by destination	FINAL REVIEW Bath chemistry / heat load / condenser water / material compatibility

Review Note

Final material and component selection should be confirmed according to actual bath chemistry, heat load, condenser water condition, target temperature, flow rate, water quality, and installation layout.

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