

APT INDUSTRIAL CHILLER

Application Cooling Solutions Catalog

Industrial process cooling solutions organized by real factory applications, equipment requirements, temperature control needs, fluid conditions, and site installation factors.

Thermal Spray Cooling

Laser Equipment Cooling

Injection Molding Cooling

Electroplating and Chemical Process Cooling

Die Casting, CNC, Laboratory, and Factory Cooling

Engineering Selection Support Before Quotation

www.applied-chiller.com



Industrial Chiller Selection Starts from the Application

APT reviews process cooling projects by cooling object, heat load, target temperature, pump requirement, fluid condition, ambient temperature, and installation environment before recommending a suitable chiller direction.

APT Industrial Chiller provides process cooling systems for industrial applications where stable water or fluid temperature is important for production, equipment protection, product quality, process stability, or test reliability. Instead of selecting only by horsepower or model name, each project should be reviewed according to the cooling object, heat load, target temperature, pump requirement, fluid condition, ambient temperature, installation space, voltage, and operating hours.

SELECTION LOGIC

Start from the cooling purpose

Match the application first, then confirm the product direction.

PRODUCT DIRECTIONS

Air cooled, water cooled, compact, and custom

Review standard and custom options before quotation.

TYPICAL READERS

Purchasers, engineers, OEM teams

Useful for supplier review, WhatsApp discussion, and email attachment.

SHORT CTA

Send your cooling application

APT can review site conditions and recommend a suitable direction.



PROCESS COOLING BY APPLICATION

Application Cooling Solution Range

Different industrial cooling applications require different review priorities. Cooling capacity, target temperature, pump flow, pump pressure, process fluid, ambient temperature, water quality, installation space, and operating hours should be confirmed before final chiller selection.

APPLICATION	COOLING OBJECT	TYPICAL CHILLER DIRECTION	KEY REVIEW FACTORS
Thermal Spray Cooling	Plasma spray, HVOF, power supply, torch, cables, and auxiliary cooling circuits.	Air cooled or custom industrial chiller.	Temperature stability, flow rate, pressure, water quality, duty cycle.
Laser Equipment Cooling	Laser source, optics, cutting head, welding system, and laser processing equipment.	Compact air cooled or OEM integrated chiller.	Temperature stability, clean water, compact space, alarms, control interface.
Injection Molding Cooling	Mold, hydraulic system, production water circuit, and process cooling loop.	Air cooled or water cooled industrial chiller.	Cycle time, capacity, flow, water quality, continuous operation.
Electroplating Cooling	Plating tank, rectifier, chemical bath, and process solution.	Water cooled, stainless steel, or special material chiller.	Corrosion risk, chemical compatibility, tank temperature, heat exchanger material.
Die Casting Cooling	Die casting machine, hydraulic oil, mold, and factory cooling circuit.	Medium or large capacity industrial chiller.	High heat load, ambient temperature, continuous operation, water flow.
Chemical Process Cooling	Reactors, tanks, condensers, special fluids, and process systems.	Custom water cooled, stainless steel, or explosion-proof chiller.	Fluid compatibility, corrosion risk, safety condition, temperature range.
CNC Machine Cooling	Spindles, hydraulic systems, cutting fluids, and machine-side circuits.	Compact air cooled or vertical industrial chiller.	Footprint, flow alarm, vibration environment, service access, voltage.
Laboratory Cooling	Lab instruments, test systems, water baths, and controlled circuits.	Compact industrial chiller or precision process chiller.	Temperature range, noise, clean water, continuous operation, space.

Main Industrial Cooling Applications

These application blocks help customers start from the real cooling object before comparing model range or condenser type.

SURFACE TREATMENT

Thermal Spray Cooling

Industrial chillers for plasma spray, HVOF, power supply, torch, cables, and auxiliary thermal spray equipment cooling.

PRECISION EQUIPMENT

Laser Equipment Cooling

Compact and stable process chillers for laser sources, optics, welding systems, cutting heads, and laser processing lines.

PLASTIC PROCESSING

Injection Molding Cooling

Industrial chillers for mold temperature control, process water cooling, production stability, and factory cooling circuits.

SURFACE FINISHING

Electroplating Cooling

Cooling solutions for plating tanks, rectifiers, chemical baths, corrosion-sensitive circuits, and process temperature control.

METAL FORMING

Die Casting Cooling

Medium and large capacity chillers for die casting machines, hydraulic systems, molds, and continuous factory cooling demand.

CHEMICAL PROCESS

Chemical Process Cooling

Custom chillers for reactors, tanks, condensers, special fluids, corrosion resistance, and safety-related process cooling.

MACHINE TOOL

CNC Machine Cooling

Compact chillers for spindles, hydraulic systems, cutting fluids, machine-side cooling, and limited

TESTING & RESEARCH

Laboratory Cooling

Compact process chillers for lab instruments, test systems, small



APPLICATION COOLING SOLUTIONS

Recommended Chiller Directions by Application

Use this matrix as an early review reference before confirming model range, pump arrangement, fluid contact material, and project-specific configuration.

APPLICATION TYPE	USUALLY CONSIDER	CUSTOM REVIEW MAY BE NEEDED WHEN	NOTES
Thermal Spray	Air cooled industrial chiller or custom process chiller.	High pump pressure, deionized water, multiple cooling circuits, or continuous operation is required.	Review equipment protection and flow stability.
Laser	Compact air cooled chiller or OEM integrated chiller.	Special control interface, compact footprint, or high stability is required.	Clean water and alarm protection are important.
Injection Molding	Air cooled or water cooled industrial chiller.	Multiple machines, high capacity, water quality, or factory water loop is involved.	Review cycle time and operating hours.
Electroplating	Water cooled, stainless steel, or special heat exchanger chiller.	Chemical compatibility, corrosion resistance, or special material is required.	Fluid contact parts should be reviewed.
Die Casting	Medium or large capacity air cooled or water cooled chiller.	High ambient temperature, continuous operation, or high heat load is involved.	Factory environment affects selection.
Chemical Process	Custom water cooled, stainless steel, or explosion-proof chiller.	Special fluid, safety classification, corrosion, or reactor cooling is involved.	Engineering review is required before quotation.
CNC	Compact, vertical, or machine-side air cooled chiller.	Limited space, special voltage, or control alarm connection is required.	Installation footprint and maintenance access matter.
Laboratory	Compact industrial chiller or precision process chiller.	Low noise, special temperature, clean water, or test loop stability is required.	Review instrument requirements.

Key Factors for Application Cooling Selection

Industrial chiller review should confirm not only cooling capacity, but also fluid condition, pump performance, installation environment, and material or safety requirements.

Cooling Object

What is being cooled?

Identify whether the chiller cools a machine, mold, tank, torch, power supply, laser source, chemical fluid, heat exchanger, or test system.

Cooling Capacity

Heat load and duty

Confirm heat load, cooling demand, fluid volume, inlet temperature, outlet temperature, and process operating condition.

Target Temperature

Control range and tolerance

Review required water or fluid temperature, allowable fluctuation, low temperature requirement, and temperature control tolerance.

Process Fluid

Water quality and compatibility

Check whether the system uses clean water, glycol, deionized water, chemical fluid, corrosive liquid, or special process fluid.

Pump Requirement

Flow and pressure review

Confirm flow rate, pressure, pipe distance, pressure loss, equipment pressure drop, and tank requirement.

Site Condition

Installation environment

Review ambient temperature, ventilation, indoor or outdoor installation, voltage, service access, and available space.

Material Requirement

Fluid-contact parts

Review stainless steel, corrosion-resistant material, special heat exchanger, or clean process water requirement.

Safety Requirement

Special electrical review

Review explosion-proof configuration, electrical safety, operating environment, and installation condition when needed.

How APT Reviews an Application Cooling Project

APT uses a step-by-step engineering review before recommending a standard model, modified standard chiller, or custom project direction.

1

Application Review

Understand the process, equipment, cooling object, heat load, target temperature, and operating condition.

2

Chiller Direction Selection

Review whether air cooled, water cooled, compact, stainless steel, high ambient, or custom direction is suitable.

3

Pump and Fluid Review

Confirm fluid type, water quality, pump flow, pump pressure, tank volume, pipe distance, and compatibility requirements.

4

Site Condition Review

Review ambient temperature, ventilation, condenser water condition, installation space, voltage, and service access.

5

Configuration Recommendation

Recommend a standard model, modified standard chiller, or custom chiller direction based on confirmed application details.

6

Quotation and Technical Discussion

Prepare quotation, technical notes, and further discussion after key requirements are confirmed.

Engineering Review Before Final Model Recommendation

Application-based cooling selection reduces mismatch risk and helps customers confirm whether a standard product, modified standard unit, or custom industrial chiller direction is more suitable for the project.

Information Needed for Application Cooling Selection

If the exact cooling capacity is not available, APT can still review the process conditions and recommend a practical starting configuration for discussion.

Process and Cooling Data

- Cooling application or equipment type
- Process description
- Required cooling capacity or heat load
- Target water or fluid temperature
- Inlet and outlet temperature if available
- Process fluid type
- Water quality requirement
- Pump flow requirement
- Pump pressure or pipe distance
- Tank volume if required

Site and Project Conditions

- Air cooled or water cooled preference
- Ambient temperature
- Indoor, outdoor, or semi-outdoor installation
- Installation space and ventilation condition
- Voltage and frequency
- Operating hours or duty cycle
- Material requirement such as stainless steel
- Safety requirement such as explosion-proof configuration
- OEM integration or communication interface requirement
- Photos, drawings, or existing equipment nameplate if available

Request PDF Catalog or Submit Cooling Requirements

APT can support supplier review, email attachment, WhatsApp discussion, and early quotation preparation with a practical application-based process cooling catalog.

Example Application Cooling Directions

These project-style blocks describe typical cooling directions without inventing fake customer names, exact project data, or unsupported performance claims.

SURFACE TREATMENT

Thermal Spray Equipment Cooling

An industrial chiller direction for plasma spray or HVOF systems where stable water temperature, pump flow, pump pressure, and equipment protection are important for continuous workshop operation.

MACHINE SIDE

Laser and CNC Machine-Side Cooling

A compact chiller direction for equipment-side cooling where limited floor space, clean water circulation, stable temperature, and alarm protection should be reviewed.

CHEMICAL / SURFACE PROCESS

Electroplating and Chemical Process Cooling

A custom chiller direction for tanks, chemical baths, reactors, and special fluids where corrosion resistance, heat exchanger material, water quality, and safety conditions require engineering review.

FACTORY COOLING

Injection Molding and Die Casting Factory Cooling

A medium or large capacity chiller direction for production cooling where heat load, water flow, ambient temperature, operating hours, and factory cooling layout should be confirmed.

Related Catalog

Air Cooled Industrial Chiller Catalog

Review product range by cooling capacity when condenser water is not preferred.

Related Catalog

Water Cooled Industrial Chiller Catalog

Compare centralized and condenser-water-based cooling directions for larger projects.

Related Catalog

Compact Industrial Chiller Catalog

Check point-of-use cooling directions for CNC, laser, laboratory, and OEM integration.

Related Catalog

Custom Industrial Chiller Catalog

Review high ambient, stainless steel, explosion-proof, mobile, and special process cooling directions.

Need an Industrial Chiller for Your Application?

applied-chiller.com

Send application, temperature, fluid, pump, voltage, ambient, and installation details for engineering review.