

APT INDUSTRIAL CHILLER

INDUSTRIAL COOLING
REFERENCE DOCUMENT

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2HP Air Cooled Chiller for Commercial Cold Plunge Bath Cooling

Industrial Cooling Reference for Recovery Bath
and Ice Bath Equipment

AIR COOLED

2HP REFERENCE

COLD PLUNGE

OEM COOLING

CASE REFERENCE

Project Snapshot

2HP air cooled chiller direction for a commercial cold plunge bath cooling project.

APPLICATION Commercial Cold Plunge Bath Cooling	INDUSTRY Wellness Equipment / Recovery Center
COOLING TARGET Cold plunge bath water temperature control	CHILLER DIRECTION 2HP Air Cooled Industrial Chiller
REVIEW FOCUS Bath volume, pull-down time, target temperature, user frequency, insulation, water quality, ventilation	



2HP COLD PLUNGE CHILLER REFERENCE

ENGINEERING REVIEW

Engineering Matrix

ENGINEERING ITEM	WHY IT MATTERS	DATA TO CONFIRM
Bath Volume	Total water volume strongly affects pull-down time and practical capacity direction.	Usable water volume and refill condition.
Target Temperature	Cold plunge setpoint defines the required cooling duty and control logic.	Required bath temperature and allowable fluctuation.
Pull-Down Time	Rapid cooling expectation may require different sizing review.	Target cooling time from starting water temperature.
User Frequency	Frequent commercial use increases continuous cooling demand.	Daily sessions and peak traffic window.
Insulation	Bath insulation affects heat gain and chiller operating load.	Insulation thickness, lid use, and ambient exposure.
Water Quality	Water cleanliness supports exchanger reliability and maintenance practice.	Filtration, sanitation, and water treatment review.
Ventilation	Air cooled condenser performance depends on practical installation airflow.	Room ventilation and heat rejection clearance.

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

COOLING CHALLENGE

Process Review

- Bath water temperature must remain stable during repeated user cycles and recovery sessions.
- Pull-down time and target bath temperature strongly affect practical capacity review.
- Insulation quality changes the real cooling duty and operating stability of the system.
- Ventilation and compact installation condition affect air cooled heat rejection performance.

RECOMMENDED DIRECTION

A 2HP air cooled industrial chiller was considered as the preliminary direction for this commercial cold plunge bath cooling project. Final selection depends on bath volume, target temperature, pull-down time, ambient temperature, insulation, water flow, and installation ventilation.

2HP Air Cooled Chiller Configuration

Main configuration points for a commercial cold plunge bath cooling reference project.



- 01

Compact Air Cooled Design
Independent cooling direction suitable for compact bath-side installation.
- 02

Bath Temperature Control
Controller logic supports cold plunge setpoint review and operation stability.
- 03

Tank and Pump
Circulation arrangement follows bath volume and practical flow requirement.
- 04

OEM Integration
Compact chiller direction can be reviewed for packaged bath equipment support.

TECHNICAL REFERENCE

COOLING METHOD Air cooled condenser	CAPACITY DIRECTION 2HP reference	TYPICAL APPLICATION Cold plunge bath / recovery tank / OEM bath cooling	COOLING CIRCUIT Closed-loop process water
OUTLET TEMP. Project-defined by bath target and operating logic	PUMP SELECTION By required flow and head	POWER SUPPLY 220-460V, 50/60Hz by destination	FINAL REVIEW Bath volume / pull-down time / insulation / ventilation

Review Note
Final selection depends on bath volume, target temperature, pull-down time, ambient temperature, insulation, water flow, and installation ventilation. A specific bath temperature should not be assumed for every bath size without final engineering review.

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