

# Coolpak™ GAS FIRED COOLING



## General Description

The Coolpak™ series of chiller-arrays is designed to provide comfort cooling for large residential, institutional and commercial buildings, as well as process cooling for commercial and industrial applications. These units are self-contained, air-cooled, natural or propane gas-fired chillers designed for outdoor installation. The chillers are mounted on rail sets for slab or post-and-rail installation, with single point connections for gas, electric, chilled water and control wiring. The chiller array includes a sequencer to maintain chilled water temperatures through control of the individual chiller modules. The chillers are UL listed.

## Coolpak Features

- Highest GAX chiller efficiency
- 0.68+ Coefficient of Performance (COP)
- Proprietary heat exchangers
- TEV for improved efficiency at all ambient conditions
- Multi-speed condenser fans for variable loads
- Direct spark ignition
- Unique Lo-NOX power burner (<25 PPM)
- Closed water loop
- Internal secondary water pumps in each chiller module

## Coolpak Options (Factory Installed)

- Chilled water pumps (Coolpak 10-25)
- Gas-fired boilers (Coolpak 10-25)
- Waste heat or thermal solar powered with variable capacity gas burner for back-up

## Performance Specifications

Description	Coolpak 10	Coolpak 15	Coolpak 20	Coolpak 25	Coolpak 30
Cooling capacity (MBH)*	120	180	240	300	360
Gas input (MBH)	178	267	356	445	584
Chilled water flow (GPM)	24	36	48	60	72
Condenser air flow (CFM)	14,000	21,000	28,000	35,000	42,000
Internal pressure drop (ft. H <sub>2</sub> O)	2.0	2.0	2.0	2.0	2.0
Electrical power requirements	208/230V (60 Hz, single phase)				
Minimum circuit ampacity (MCA)	20	30	40	50	60

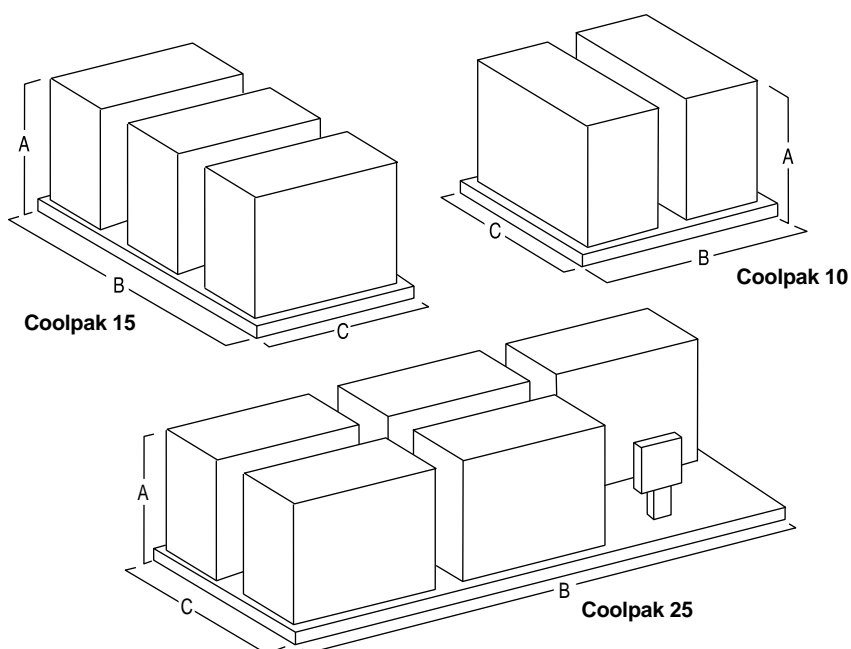
\*Cooling capacity based on ARI conditions of 95°F ambient temperature, 45°F chilled water supply temperature and 55°F return water temperature.

## Physical Specifications

Description	Coolpak 10	Coolpak 15	Coolpak 20	Coolpak 25	Coolpak 30
Height (inches) – (A)	64	64	68	68	68
Length (inches) – (B)	120	163	165	214	214
Width (inches) – (C)	56	56	96	96	96
Approximate weight (lbs)	2900	4200	6400	8000	9100
Chilled water, supply/return (in.)	1.5	1.5	2.0	2.0	2.0
Gas inlet (in. mpt)	3/4	3/4	1.25	1.25	1.25
Electrical connection (in. knockout)	.875/1.25	.875/1.25	.875/1.25	.875/1.25	.875/1.25

\*Specifications are subject to change and periodic updates

## Chiller Array Layout



## Benefits

### Operational Benefits

- Operating savings; gas vs. electric rates
- Reduced demand charges
- Simplified zone control (chilled water loop)
- Modulated multi-unit operation
- Low power requirement (< 0.27 kw/ton)
- Ideal for peak-shaving applications
- Integrates to building control systems
- No capacity loss over time
- Increased part load efficiency
- Automatic chilled water isolation for each chiller module
- Low internal head pressure (<2 Ft.)

### Service Benefits

- Easy service access
- High quality and reliability
- Sealed systems; few moving parts
- Reduced service costs; no compressor unit
- Reduced maintenance costs; no cooling tower

### Installation Benefits

- Self contained, air-cooled package
- No cooling tower required
- Eliminates machinery room
- Minimizes roof penetrations
- No three-phase power required
- Single point utility connection
- Ideal for renovation projects
- Uses less expensive heating/cooling fan coils
- Single installation for both heating and cooling

## Product Summary

- Thermally activated
- Uses reliable and plentiful natural or propane gas
- No CFC's or HCFC's for cooling
- Flexible – adapts easily to many applications
- Low noise level
- Low operating costs
- Low maintenance costs
- Low installation costs
- Long product life
- Lowest total life cycle costs

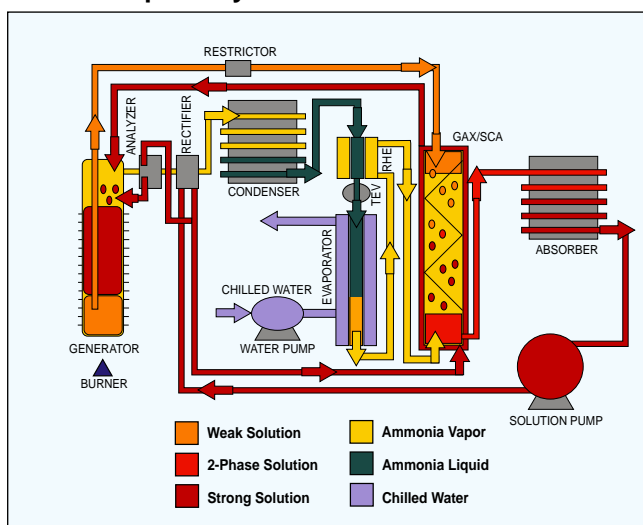


## Features

### Standard Features

- UL listed for safety
- Available for natural or propane gas
- Sequencing chilled water controller  
Senses chilled water temperature to +/- 1°F  
Automatic sequencing of chiller modules for improved temperature control and part load operating efficiency
- Circuit breaker per chiller module
- Environmentally sensitive  
R-717 (ammonia) refrigerant  
No CFC's, HCFC's, or HCF's
- Thermal expansion valve (TEV) for improved efficiency at all ambient conditions
- Unique power burner system  
Direct spark ignition  
Low NOx ((less than) 25 ppm)
- Condenser fans  
Multi-speed fans for all ambient and load conditions  
High efficiency, low noise, composite fan blades
- Pre-cooler for improved performance at high and low ambient temperatures
- Channel base to maintain unit integrity for slab or post-and-rail installation
- Chilled water strainers in each chiller module
- Chilled water air bleeds in each chiller module
- Vibration isolation for solution pumps
- Secondary chilled water pumps in each chiller module

### GAX Absorption Cycle



## Cooling Technologies, Inc.