

# Paloma

## 28c SERIES

- The Paloma Tankless Series for commercial solutions
- Standardize your design of hot water systems from 200,000 to 4.0 million BTUs on a single, common component
- Compact, and takes no floor space (wall-hung installation)
- Built-in diagnostics and usage record



## Hot Water Performance

The 28c Series can be used by itself, or it can be configured into multi-unit systems of 2 to 20 units controlled with Paloma's Manifold Electronic Controller, the MIC-180.

28c SOLO Mode Performance

	Temperature Rise		
	40°	70°	100°
Gallons Per Minute	8.5	4.8	3.3
Gallons Per Hour	510	288	200

## Multi-Unit Systems

MIC-180 Manifold Controller is used to electronically control operations in a multi-unit system of 2 to 20 units. The MIC-180 Controller Kit includes the control logic for a base system with 2-6 units, a power cord, and an installation box suitable for outdoors.

For larger systems, add a MICS-180 Extended Communication Board, which will fit in the top half of the Installation Box. The controller connects to the individual units using Paloma communications cables in 16-foot, 32-foot and 65-foot lengths.

## Safety Engineering

The 28c Series includes safety engineering you will not find on other brands:

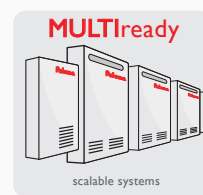
- ICAD™, our proprietary safety system that constantly monitors combustion for evidence of unsafe carbon monoxide. On the Indoor and Direct Vent models.
- Overheat Limiter Wrap, a resin film wrapped around the heat exchanger, for the earliest possible detection of unsafe overheating. On all models.
- Flame Failure Safety Monitor: Flame Rod Type
- Anti-boil protection

## Energy Efficiency

- 84% Efficiency Rating
- Uses gas only when hot water is needed and never squanders energy when facility is not in operation.

## Convenience

Digital controller lets user change temperature settings immediately and precisely.



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## specifications

### models and venting



#### Indoor

Nat. PH-28C IFSN  
LP PH-28C IFSP



#### Outdoor

Nat. PH-28C OFN  
LP PH-28C OFF



#### Direct Vent

Nat. PH-28C DVSN  
LP PH-28C DVSP

BTU Input Range	19,000 ~ 199,900 (fully modulating)
Maximum Hot Water Output	8.5 GPM (40 degree rise at 30 psi)
Minimum Flow for Ignition	0.66 GPM
Dimensions (inches)	14 7/8 (w) x 25 3/8 (h) x 11 1/8 (d)
Working Water Pressure	14 ~ 150 psi
Temperature Range	100 ~ 180 degrees F
Gas Connection	3/4" NPT Female (with included gas shutoff valve)
Water Connection	3/4" NPT Male
Efficiency Rating	84%
DOE Energy Factor	0.82
Gas Inlet Pressure (Indoor and Outdoor Models)	Natural Gas: Min 4.0" W.C.; Max. 10.5" W.C. LP Gas: Min. 8.0" W.C.; Max 14.0" W.C.
Gas Inlet Pressure (Direct Vent Model)	Natural Gas: Min 4.5" W.C.; Max. 10.5" W.C. LP Gas: Min. 10.0" W.C.; Max 14.0" W.C.
Low NOx compliant (SCAQMD Rule 1146.2)	Yes
Electrical Requirement	120 V/60 Hz AC, 2 Amps
Power Cord (Except Outdoor)	10-foot, 3-pin indoor power cord (pre-installed)
Freeze Protection	Minus 30 degrees F (including windchill factor)
Controller/Diagnostic Display	UMC-117
Electronic Manifold Ready?	Yes: 2 to 20 units (use MIC-180 Controller)
DUOnex™ Ready?	Yes: 2 units with DUOnex™ Cable
Gas Shutoff Valve	Included
Vent Requirement (Indoor/Direct Vent)	4" Category III stainless steel venting required
Vent Maximum Length	37.5 feet (with three 90-degree elbows)
Air Intake (Direct Vent)	4" stainless steel, PVC or aluminum
Air Intake Maximum Length	37.5 feet (with four 90-degree elbows)
Net Weight	55 lbs.

### safety engineering

Carbon Monoxide Safety	ICAD™, our proprietary system to monitor and optimize combustion (Not on Outdoor version).
Heat Exchanger Overheat Protection	Overheat Limiter Wrap. Resin film that surrounds the heat exchanger.
Flame Failure	Three separate flame rods to monitor flame failure.
Anti-boil Protection	Temperature sensor
Anti-scald Protection	Bath Controller maximum temp 120 degrees F. When on, Bath Controller takes priority over others. While hot water running, Bath Controller max. temp. cannot be raised above 112 degrees F.

## features

- Continuous hot water on demand
- Energy-saving design
- Compact, and takes no floor space (wall-hung installation)
- Unmatched Safety Engineering
- Proprietary ICAD™ Safety System (on indoor model)
- Proprietary Film Wrap Overheat Limiter (on heat exchanger)
- Flame failure and anti-boil protection
- Freeze protection to minus 30 degrees F
- Built-in diagnostics and usage record
- Includes Digital Controller to set temperature and display diagnostics
- 180 degrees F maximum temperature
- Power Return: AUTO-ON at last setting after power interruption
- Low NOx emissions meet SCAQMD rule 1146 requirements
- Can be used in circulation systems up to 140 degrees F

## accessories

- USC1-117 First Bath Controller
- USC2-117 Second Bath Controller
- DUOnex™ Cable for 2-unit system
- MIC-180 Controller for 2-to-6 unit systems
- MICS-180 expansion board allows 7-to-20 unit systems
- MIC Communication Cable in 16-foot, 32-foot and 65-foot lengths
- High Altitude Adjustment Chips
- Special vent terminations

## in the box

- One Paloma Tankless unit
- One Digital Controller
- One gas shutoff valve
- Attached power cord (indoor models)
- Operating and Installation Manual

## commercial warranty

- 3-Year Limited Warranty on Heat Exchanger
- 1-Year Limited Warranty on Parts

For more information, visit [www.palomatankless.com](http://www.palomatankless.com)

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