

## Why QMaster?

- 1. 4 Stage control!** QMaster ATCs come standard with 4 Stage programmability. Each stage can be programmed with different pit temps and times along with the high and low alarm settings.
- 2. Multiple displays!** Quad display on Senior shows current pit temp, target pit temp, current meat temp and target meat temp, all at a glance. Junior shows both current and target temp on a dual display.
- 3. Dual PID/meat control!** On Senior, when meat hits target temp the meat probe can be programmed to take over and control the fire. NO MORE BURNT MEAT!
- 4. Best fan control and options!**
  - Output voltage is varied to provide stepless control of fan speed, not just off or on like many competitors.
  - QMaster ATCs come with a 10 cfm fan that is suitable for most grills and smaller pits, including bullet smokers, UDS, ceramic eggs, and small offsets.
  - A 50 cfm fan is available for a small fee to control larger smokers, including large stick-burning offset pits. None of our competitors have the ability to control a single, 50 cfm fan.
  - Max output voltage is programmable to cap fan at between 5 and 50 cfm – allows the 50 cfm fan to be used on a wide range of smokers.
- 5. High-quality stainless steel fan adapters!** Adapters available for most applications. All adapters have an internal check valve.
- 6. High-quality temperature probes!** All probes are accurate 3-wire, high temperature probes.
- 7. Ease of connection!** Probes, fan and power supply all connect to the ATC with standard electronic connectors, allowing components to be connected, disconnected, or swapped out quickly.

## U.S. Sales and Customer Service

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*Tell Javier that you were referred by  
Billy Callahan and Mac Talbert of  
Smoke-N-Shine!*

We use QMaster ATCs exclusively in 3 different offset stick burning pits (100 gallon, 120 gallon, and a 250 gallon trailer-mounted pit), and in a ProQ bullet-style charcoal burner.

### YouTube Videos

#### QMaster Products:

<https://www.youtube.com/watch?v=xUiw6wlQoYg>

#### Senior Basic Setup:

<https://www.youtube.com/watch?v=58wbWiE4bCw>

#### Junior Basic Setup:

<https://www.youtube.com/watch?v=waV74k0ST6I>

#### Fan Adapters:

<https://www.youtube.com/watch?v=5mKN-31gBK8>

#### Troubleshoot Probes:

<https://www.youtube.com/watch?v=Z2FZD111qno>

#### Inventor website:

<http://allchinas.com/>

# QMaster

## Automatic Temperature Controllers



Our automatic temperature controllers (ATC) use PID technology and fans to control the air supply to the fire in any type of wood or charcoal burning grill or pit.

The result is a steady pit temperature that can be programmed at different values during different stages of the cook.

Why constantly tweak your air dampers when you can let QMaster expertly control the fire while you focus on the many other tasks that are so important to great BBQ?

## What is a PID?

- PID is short for “Proportional-Integral-Derivative”
- A PID is a control system that manipulates an output variable to minimize the error between a measured value and a desired setpoint
- In QMaster controllers, the output variable is the voltage to the fan, the measured value is pit and/or meat temp, and the desired setpoint is the programmed pit and/or meat temp
- The 3 algorithms of a PID do the following:
  1. Proportional – calculates current error
  2. Integral – calculates accumulation of past errors
  3. Derivative – predicts future errors
- The output (fan voltage/speed) is optimized based on all three calculations

## Difference Between QMaster Junior and Senior

- QMaster Junior has one PID
  1. Has one probe that is typically used to measure and control by pit temp
  2. Dual display shows probe temp and setpoint temp
- QMaster Senior has two PIDs
  1. Has two probes (default is one pit and one meat)
  2. Quad display shows both probe temps and both setpoint temps
  3. Can be programmed to control the fire based on pit temp until meat reaches a certain temp, then control based on the meat temp

## QMaster Kits

Each kit includes:

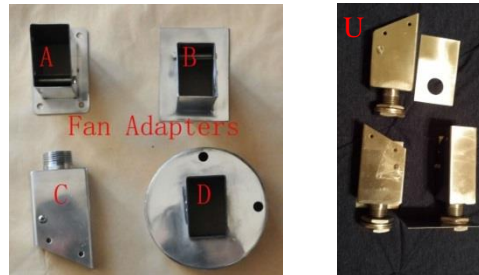
1. QMaster Senior or Junior ATC
2. Temp probe(s) – Senior comes with one pit probe and one meat probe, Junior comes with one pit probe
3. Clip to connect pit probe to rack
4. 10 cfm fan (50 cfm optional (+\$20))
5. AC/DC power supply (50 cfm fan option includes upgraded power supply)
6. Stainless steel fan adapter

## Fans



Standard 10 cfm fan shown on right, optional 50 cfm fan on left (+\$20)

## Fan Adapters



Adapter dimensions and typical uses:

- A – 3” x 2” plate with (4) ¼” holes (offset)
- B – 3 ¼” x 2 3/8” plate (ceramic/egg)
- C – ¾” NPT threads (UDS)
- D – 4” diameter (WSM) (+\$10)
- U – ½” NPT, var. plates (universal) (+\$10)

## Price List

### Kit Prices:

<b>QMaster Junior</b>	<b>\$150</b>
<b>QMaster Senior</b>	<b>\$185</b>
50 CFM fan upgrade(includes 3A (PS))	\$20
Fan adapter D or U upgrade	\$10
Shipping (Priority 2 day – med box)	\$12

### Individual component prices:

Pit probes	\$25
Meat probes	\$25
50 cfm fan and 3 Amp power supply	\$45
Fan only – 50 CFM (used)	\$20
Fan only – 10 CFM (new)	\$20
Power supply – 12V 3A higher rated	\$25
Power supply – 12V regular	\$20
Fan adapter A, B, or C	\$25
Fan adapter D or U	\$30
Shipping (Priority 2 day – small box)	\$5.20

\*Note – prices effective as of Jan 2016, but are subject to change. Contact Javier Magana for latest prices.



QMaster Junior Kit shown with fan adapter A



QMaster Senior Kit shown with fan adapter C