## Que Design

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## Adult Pendant

**2 ball check valves** (non-electric)

* One at entry and one at exit of wick chamber
* Entry valve prevents backflow of essential oil into electronics
* Exit valve prevents unwanted escape of essential oil scent
* Exit valve promotes water resistance

Alternatives:

* Flap valve
* None, simply make the exit hole sufficiently small so that not enough scent escapes when propellant mechanism is not in operation

**Micro blower**

* Low power requirements
* Quiet

Alternatives:

* Micro fan
  + Almost the same as micro blower, but wider horizontal form factor
* Air pump
  + Uses more power
  + Louder

**Custom PCB**

* Significantly smaller than the Arduino Nano due to only needing a single digital output compared to several on the Arduino Nano
* Will include charging port and required circuitry to charge battery
* Bluetooth connectivity for communication with app and heartrate monitor

**Rechargeable battery**

## Child Pendant

Differences from adult pendant

* 4 ball check valves, 2 per wick chamber (non-electric)
* 2 wick chambers
* TPU case outside the ABS housing to improve durability to withstand autistic children