**Bill of Materials for PanFab Commercial PAPR Design**

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Following are the parts used in the PanFab Commercial PAPR Design. The estimated costs assume a total production run of 2000 units.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Item** | **Qty.** | **Supplier/Method** | **Part No.** | **Estimated cost ($)** |
| 1 | Enclosure | 1 | Pelican | V100 Vault | 40 |
| 2 | Threaded Inserts for Filter | 2 | ABS Molding | N/A | 6 (Tooling Cost = 6645) |
| 3 | Threaded Insert for Hose | 1 | ABS Molding | N/A | 2.80 (Tooling Cost = 6846) |
| 4 | Blower, Centrifugal | 1 | Delta Electronics | BFB1012HD-04D4L | 36 |
| 5 | Battery pack, 12V NiMH | 1 | Tenergy | Amazon Standard Identification Number: B077Y9HNTF | 23 |
| 6 | Controller | 1 | Arduino | R3 | 23 |
| 7 | PCB Shield | 1 | OSH Park | N/A | 9.50 |
| 8 | Differential Pressure Sensor | 1 | Sensirion | SDP810-500PA | 19 |
| 9 | Buzzer | 1 | Mallory Sonalert Products | PS-580Q | 5 |
| 10 | Potentiometer | 1 | Bourns Inc. | 93R1A-R22-A12L | 3 |
| 11 | Transistor | 1 | ON Semiconductor | 2N3904BU | 0.20 |
| 12 | Resistor | 1 | Vishay BC Semiconductor | PR02000201001JR500 | 0.32 |
| 13 | Electrical connector | 1 | TE Connectivity AMP Connectors | 1-2834184-3 | 1.40 |
| 14 | Venturi | 1 | BPE Inc. | 178-71-2 | 0.54 |
| 15 | Venturi Ports | 2 | Car-Anth Manufacturing | 16-1204-2 | 0.68 (Tooling Cost = 375) |
| 16 | Blower silicone tube | 1 | McMaster-Carr | 3038K29 | N/A |
| 17 | Venturi silicone tube | 2 | McMaster-Carr | 3038K12 | N/A |
| 18 | Blower adapter | 1 | ABS 3D printing | N/A | 6 |
| 20 | Switch | 1 | McMaster-Carr | 8002K114 | 28 |
| 21 | Switch Cover | 1 | McMaster-Carr | 70205K4 | 4.40 |
| 22 | Gaskets for threaded connections | 4 | McMaster-Carr | 5647K62 | 3 |
| 23 | Waist strap | 1 | Skil-Care | PathoShield Gait Belt | 11 |
| 24 | Filter | 2 | Milwaukee | 49-90-1900 | 40 |
| 25 | Filter Adapter | 2 | ABS Injection molding | N/A | 6 (Tooling Cost = 6846) |
| 26 | Filter Cover | 2 | ABS Injection molding | N/A | 8 (Tooling Cost = 18345) |
| 27 | Hose adapter | 2 | ABS Injection molding | N/A | 6.60 (Tooling Cost = 9997) |
| 28 | Hose | 1 | Flexaust | Flex-Tube PU-IH, PN: 33800125000 | 8.50 |
| 29 | Hood coupler | 1 | ABS Injection molding | N/A | 3.30 (Tooling Cost = 7456) |
| 30 | Locking ring | 1 | ABS Injection molding | N/A | 2.70 (Tooling Cost = 5156) |
| 31 | Hood | 1 | University of Washington | VHA ADAPT PAPR Hood | 30 |
| **Total** | | | |  | **327.94** |

Notes:

1.  Several costs are unofficial quotes

2. Tooling cost for machining the Pelican case and joining the threaded inserts (Items 2 and 3) are TBD