



# COMPUTERIZED BALLOON FORMING MACHINE

MODEL BFM-4410



**Description:** 

The Confluent Medical Technologies BFM-4410 is designed to produce a trio of high-strength polymer balloons using a stretch, blow molding process. Balloons are formed from precision extruded balloon tubing inside a metal mold. The BFM-4410 provides optimal synchronization of heating, axial stretching and internal tubing pressurization for all 3 water jacket channels producing high-quality, consistent balloons.

Confluent Medical Technologies BFM-4410 - More balloons, higher-quality, repeatable results for predictable, greater balloon yields.

- One cycle produces 3 balloons
- High-efficiency triple water jacket for uniform heating and cooling
- High-precision pressure and flow control during balloon forming
- Easier setup and improve operator performance
  Reduced footprint One balloon forming
  machine replaces three

### Three is Better than One:

Confluent Medical developed a new blow-molding process to be able to form three balloons with the same high-quality results. The Confluent Medical balloon forming equipment BFM-4410 has newer components and technology to allow repeatability for a trio of balloons in one forming cycle thereby reducing overall cycle and setup times.



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t 510-683-2000 ConfluentMedical.com Advancements in the balloon forming process include improved accuracy in pressure and flow rates through all three channels simultaneously resulting in consistent yields for all three formed balloons.

Operators are able to setup the BFM-4410 for all 3 channels and then run with the touch of a button improving efficiency and reducing setup time.



Confluent Medical recommends purchasing the CPS-1000 parison stretcher in tandem with the Confluent Medical BFM-4410. The CPS-1000 has enhanced software built-in that adds a parison conditioning step to insure blowing the balloon from the center for ideal results.







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### **High-efficiency Triple Water Jacket:**

A water jacket is the balloon forming machine module that facilitates mold heating and cooling. Confluent Medical high-efficiency triple water jackets create a more uniform thermal profile, shorter process times and repeatable ramping capabilities. All three balloons are formed with wall-thickness consistency as a result of the uniform thermal profiling. The high-efficiency water jacket provides better control and cycle times, resulting in improved balloon yields.

- Repeatable and smooth thermal ramping
- Stable plateau
- Quicker thermal stability
- Uniform heating of circumference and length of molds

|  | <b>Precision</b> | <b>Pressure</b> | and Flow | Contro | : |
|--|------------------|-----------------|----------|--------|---|
|--|------------------|-----------------|----------|--------|---|

Confluent Medical BFM-4410 equipment enhancements provide for more precise control over both flow rate and flow pressure for balloon forming. These improvements allow for uniform shaping for all three balloons during a single cycle.

The improved flow and pressure control allows for increased expansion ratio that lead to thinner walls, lower compliance and higher burst capability than currently available on single balloon producing models. This control also reduces material stress, lessening defects such as fish eyes.

### **Perfecting the Process Requires Exacting Equipment:**

Confluent Medical balloon forming equipment provides very accurate and repeatable control for processing high-quality balloons with tight tolerances in an extensive variety of sizes, shapes and material capabilities.

Confluent Medical is known for creating balloon forming equipment that delivers consistent performance, reduced cycle times, increased yields and higher quality, along with real-time balloon forming profiling. Now, the Confluent Medical BFM-4410 takes balloon forming equipment to the next level, offering high-quality balloons with greater balloon yields and production capabilities.

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| High-efficiency Triple Water Jacket Sizing Chart |                      |                            |                          |                          |  |
|--|----------------------|----------------------------|--------------------------|--------------------------|--|
| Water<br>Jacket Part<br>Number                   | Water Jacket<br>Size | Balloon<br>Max<br>Diameter | Balloon<br>Min<br>Length | Balloon<br>Max<br>Length |  |
| 502820   | Small-Short          | 6                          | 4                        | 35                       |  |
| 502821   | Small-Medium         | 6                          | 34                       | 65                       |  |
| 502822   | Small-Long           | 6                          | 64                       | 95                       |  |
| 502823   | Small-X-Lg           | 6                          | 94                       | 117                      |  |
| 502824   | Medium-Short         | 12                         | 7                        | 35                       |  |
| 502825   | Medium-Medium        | 12                         | 32                       | 60                       |  |
| 502826   | Medium-Long          | 12                         | 57                       | 85                       |  |
| 502827   | Medium-X-Lg          | 12                         | 82                       | 110                      |  |

| SPECIFICATIONS   |  |  |  |  |
|------------------|--|--|--|--|
| Part Number      | 1A714044 (230V)  |  |  |  |
| Size Range       | Diameters from 1 to 12 mm<br>Length: up to 6 mm diameter,<br>lengths from 4 to 117 mm<br>Length: up to 12 mm diameter,<br>lengths from 7 to 110 mm |  |  |  |
| Electrical       | 230 V, 50 Hz/60 Hz<br>Up to 3,300 Watts  |  |  |  |
| Dimensions       | 64" long x 22" wide x 21" high,<br>1625 mm x 560 mm x 535 mm<br>(23" high with safety cover)<br>(585 mm with safety cover)                         |  |  |  |
| Weight           | ≈ 300 lbs (135 Kg)   |  |  |  |
| Materials        | Nylon, PEBAX®, polyurethane, PET, PE, Polyamides, etc.   |  |  |  |
| Forming Pressure | Up to 1,000 psi (6.89 MPa) dry<br>nitrogen   |  |  |  |
| Compressed Air   | 80 to 120 psi (0.55 to 0.83 MPa)   |  |  |  |

