



MicroAir Regulators

MicroAir Regulators series of precision air controls.

Ultra Low Pressure Air Regulators and Controllers for Manufacturers of Extruded Plastic Profiles.

The MicroAir provides high precision control of tubing outside diameter by regulating air pressure to a set point during the manufacture and extrusion of all types of profile extrusion for plastic medical, catheter, and automotive tubing.

Our precision ultra low pressure air regulators are used for precise air sizing of extruded plastic tubing. Internal air unit, air assist, support air pressure or positive air-pressure are added to control the diameter and ovality variations during extrusion. Internal air pressure (micro-air) is applied through the DIE and is maintained constant for widely varying flow rates such as when a cut is made or variations in your process, etc.

Called a “non-contact” process or “free extrusion”, the method used for many single lumen and multi-lumen tubing is to inject air-a bit of positive air pressure-through the back of the die and into the tube. The differential pressure which is caused by the internal air pressure in the tube rather than vacuum outside helps the tube expand and hold even complex profiles.

The “force balance regulator” also called “back pressure regulating valve” provides instantaneous response to changes in flow rate and maintains a set pressure with flow rates from near zero up to the rated maximum. Both our low-tension spring models and our high speed linear solid-state model offer some of the highest flow rates in the industry. Used to make critical medical tubing, medical device, micro-tube, coextruded, catheter, multi-lumen, multilumen, balloon, taper tubing, straws, and small automotive tubing. More than one unit can be built into a box for multilumen to maintain the correct pressure in each internal lumen. Ranges up to 0-5 psi available.

Ultra Low Air Pressure Regulators – Check out Air Pressure Page for more about how MicroAirs are used for Tubing Extrusion.

MicroAir I – manual model

MicroAir II – Up/Down buttons and accepts contact closures

MicroAir IV – Accepts 0-10 volt input for high speed switching for bump and taper tubing or connecting to PLC or other equipment.

All models are now  Certified for shipping internationally.



Regulating below 1" of water to maximum of 5 psi with each MicroAir having a precision magnehelic pressure meter accurate to 2% of full scale. Check out the range page for how to decide what meter you need. A fluid filled chamber mounted below the pressure relief valve adds viscostatic damping to ensure stable, hysteresis free operation. Repeatability is better than 1% of full scale with full scale being the maximum air pressure output ordered. Single channel MicroAir I, MicroAir II and MicroAir IV units are built in stainless steel enclosures 12" x 10" x 6" and multi-channel units for multi-lumen tubing are available in all models. ALL MicroAir units are built in house specifically for your order requirements and tested to assure quality and repeatability. Damping fluid is used in all MicroAirs but does not come in contact with your process air. No replacement fluid is needed as long as the unit is kept vertical.

Our highly-reliable MicroAirs have a life-expectancy of 10-20 years. For over 35 years we have been the leader and the in the industry standard for precisely regulating and controlling air pressure for extruded profiles. All units are manufactured in the United States of America at our Shrewsbury, Massachusetts facility and can be shipped worldwide by UPS, DHL, or FEDEX.

ALL UNITS:

- Need to be located close to the Die with ¼" NPT male fittings.
- Must be mounted vertically
- Have four 5/16" diameter holes for mounting
- Stainless steel pad lockable latch
- Air connections, plant air regulated down to 50-55 psi
- All units have a Three (3) -year warranty on parts and labor; and unlimited phone support
- Technical help can be found on the Services page and in your manual.
- Made in the U.S.A.