

This sub-technology category was removed from the ETL on 29th March 2019.

Flow Controllers

Date added to ETL 2008.

1. Definition of Technology

Flow controllers are products that are specifically designed to regulate the pressure in compressed air systems in a manner that maintains a set pressure regardless of volumetric changes caused by a fluctuating compressed air demand.

2. Technology Description

Flow controllers can be used, in conjunction with appropriate air storage capacity, to reduce the pressure fluctuations that normally occur in compressed air distribution systems when machines turn on and off, or compressed air demand is variable. This enables compressed air generation systems to be operated closer to the minimum required air distribution pressure, thereby realising energy savings.

Investments in flow controllers can only qualify for Enhanced Capital Allowances if the specific product is named on the Energy Technology Product List. To be eligible for inclusion on the Energy Technology Product List, products must meet the eligibility criteria as set out below.

3. Eligibility Criteria

To be eligible, products must:

- Incorporate a pressure transducer that has a measurement accuracy of at least (i.e. \leq) $\pm 0.5\%$ of full scale output across its rated operating pressure range and across a rated temperature range of -25 to 80 degrees Centigrade.
- Incorporate one or more precision control valves and associated valve positioning devices that do not vent more than 10 standard litres per minute (SLPM at 20 degrees Centigrade) of compressed air to atmosphere during normal operation.
- Incorporate a microprocessor based controller that is pre-programmed to:
 - a) Define the downstream air pressure set-point in intervals not exceeding 0.1 bar.
 - b) Calibrate the operation of the product's control valve(s) and associated valve positioner(s) to ensure correct operation across the product's turn down range.
 - c) Tune the controller operation to eliminate controller hunting, minimise valve overshoot, and compensate for valve hysteresis and/or stiction.
- Be able to automatically regulate the air pressure downstream of the product, to within ± 0.1 bar of a set-point, across a minimum turn down range of 5:1, as air demand varies between the product's minimum and maximum rated air flows.

- Incorporate an anti-tampering mechanism that prevents automatic control from being disabled, except during commissioning, maintenance or testing.
- Conform with the requirements of the EU Pressure Equipment Directive (PED) 97/23/EC, and be CE Marked.
- **Not** incorporate facilities to directly control the operation of air compressors.

Where the product provides facilities for users to temporarily override automatic control, the product must automatically reset the override within 24 hours.

4. Scope of Claim

Expenditure on the provision of plant and machinery can include not only the actual costs of buying the equipment, but other direct costs such as the transport of the equipment to site, and some of the direct costs of installation. Clarity on the eligibility of direct costs is available from [HMRC](#).

Withdrawn