

Energy Using Product (EuP) Directive Preparatory Study

Lot 11: Circulators In Buildings

Outcomes of 1st Stakeholder Meeting

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Lot 11: Circulators SM1 1

1st Stakeholder meeting notes

1 Product Definition, standards and legislation - 1.1.1 Product classification

Agreed in the discussion

Circulator: *an inline pump used to re-circulate heating or cooling media within a closed circuit*

- *Heat pump applications - study group to contact heat pump associations to confirm market size and establish types of pumps used in these applications*

1 Product Definition, standards and legislation - 1.1.1 Product classification

Agreed in the discussion

- Boundary between 'pumps' & 'circulators'
 - 2500W
- Technology type
 - *Centrifugal, glandless, combined motor & pump*
- Heating & cooling applications
 - *Cooling market believed to be considerably smaller. Focus on products designed for heating applications. Europump to send further data on split between heating & cooling applications.*
- Size range
 - *Europump to send data detailing sales volumes by size*
- Stand alone or integrated (into boilers)
 - *Both to be included (about 30% of market is standalone)*

1.2 Inputs on relevant harmonised standards for performance testing/energy use/health and safety

1.2.1 Testing

Agreed in the discussion

- *EN1151 has wide tolerances.*
- *EN1151 is specified for circulators rated 200W and less.*
- *For circulators > 200W ? Consider using EN 9906, latest version will have a section for pumps down to 200W*
- ***A new standard is being drafted – EN 1151-3 Variable Speed Driven Circulators***

1.3 Existing relevant environmental legislation inside and outside EU, existing self regulation

Agreed in the discussion

- Waste Electrical and Electronic Directive (WEEE) - *Circulators are excluded in some countries in Europe as they are part of a fixed installation – see Orgalime decision tree*
- Restriction on the Use of certain Hazardous Substances in Electrical & Electronic Equipment (RoHS) - *circulators are excluded*
- Low Voltage Directive (LVD) - *only applicable to circulators >200W*
- *EN 60 335-2-51: 1997 Particular requirements for stationary circulator pumps for heating and service water installations – this std was revised in 2003*

Europump – EC Sales data (2006 estimate) Heating Circulators

Europump to provide more detailed data on sales of circulator, where possible please indicate:

- a) *Split by size, from <50W through 2500W****
- b) Split by stand alone or incorporated into boiler*
- c) Split by heating or cooling*
- d) Split by country*
- e) Split by performance label (as per labelling scheme)*

The average kW size of 0.15kW will be clarified following submission of above data.

There was some discussion about the Europump statistics identifying 6 000 000 pump units as ‘<DN15’ - this needs further clarification

**** Urgent request***

Selection of Circulators for this study

Need to establish typical operating parameters in order to select specific pumps for the study

The study group has suggested:

Circulators with P1 = 65W most likely

Flow = 1.7m³/hr

Head = 3m

These parameters will be firmed up once sales statistics have been supplied by Europump

Agreed three sizes for the study as follows:

- a) Most popular size stand alone <250W*
- b) Most popular size boiler integrated <250W*
- c) Most popular size stand alone >250W and <2500W*

Actual sizes will be determined once sales statistics have been supplied by Europump

3 Consumer Analysis and Local Infrastructure

3.2 – 3.4 System characteristics

Taking account of the factors that cause a circulator to work below BEP, we are suggesting that the average circulator is working 10-20% below BEP.