- Directive 2005/32/EC of the European Parliament and of the Council;
- Commission regulation (EU) No 547/2012 Implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for water pumps.

1.1 Introduction

SPX Flow Technology Assen B.V. is an associate member of the HOLLAND PUMP GROUP, an associate member of EUROPUMP, the organization of European pump manufacturers.

Europump promotes the interest of the European pump industry with the European institutions.

Europump welcomes the aim of the European Commission to reduce eco-impact of products in the European Union. Europump is fully aware of the eco-impact of pumps in Europe. For many years the ecopump initiative is one of the strategic columns in the work of Europump. From the first of January 2013 the regulation is coming into force concerning minimum required efficiencies of rotodynamic water pumps. The regulation sets minimum efficiency requirements on water pumps set out under the Ecodesign Directive for energy related products. This regulation mainly addresses manufacturers of water pumps placing these products on the European market. But as a consequence customers may also be affected by this regulation. This document gives necessary information related to the coming into force of the water pump regulation EU 547/2012.

1.2 Scope off implementing Directive 2009/125/EC

1.2.1 Definitions:

“This Regulation establishes eco-design requirements for the placing on the market of rotodynamic water pumps for pumping clean water, including where integrated in other products.”
“Water pump” is the hydraulic part of a device that moves clean water by physical or mechanical action and is of one of the following designs:

- End suction own bearing (ESOB);
- End suction close coupled (ESCC);
- End suction close coupled inline (ESCCi);
- Vertical multistage (MS-V);
- Submersible multistage (MSS);”

‘*End suction water pump*’ means a glanded single stage end suction rotodynamic water pump designed for pressures up to 1600 kPa (16 bar), with a specific speed ns between 6 and 80 rpm, a minimum rated flow of 6 m^3/h, a maximum shaft power of 150 kW, a maximum head of 90 m with nominal speed of 1450 rpm and a maximum head of 140 m with nominal speed of 2900 rpm;

‘*End suction close coupled water pump*’ (ESCC) is an end suction water pump of which the motor shaft is extended to become also the pump shaft;

‘*End suction close coupled inline water pump*’ (ESCCi) means a water pump of which the water inlet of the pump is on the same axis as the water outlet of the pump;

‘*Vertical multistage water pump*’ (MS-V) means a glanded multistage (i > 1) rotodynamic water pump in which the impellers are assembled on a vertical rotating shaft, which is designed for pressures up to 2500 kPa (25 bar), with a nominal speed of 2900 rpm and a maximum flow of 100 m^3/h;

‘*Submersible multistage water pump*’ (MSS) means a multistage (i > 1) rotodynamic water pump with a nominal outer diameter of 4” (10,16 cm) or 6” (15,24 cm) designed to be operated in a borehole at nominal speed of 2900 rpm, at operating temperatures within a range of 0°C and 90°C;

This Regulation shall not apply to:

1 water pumps designed specifically for pumping clean water at temperatures below -10°C or above +120°C;

2 water pumps designed only for fire-fighting applications;

3 displacement water pumps;

4 self-priming water pumps.

1.2.2 Enforcement:

In order to enforce this there will be a **Minimum Efficiency Index** (M.E.I.) criteria set for the above list of pumps. The MEI is a dimensionless figure that is derived from a complex calculation based on the efficiencies at BEP (Best Efficiency Point), 75% BEP & 110% BEP, and the specific speed. The range is used so that manufacturers do not take an easy option of providing good efficiency at one point i.e. BEP.
The value ranges from 0 to 1,0 with the lower value being less efficient, this provides the basis of eliminating the less efficient pumps starting with 0,10 in 2013 (the lowest 10%) and 0,40 (the lowest 40 %) in 2015.
The MEI value of 0,70 is classed benchmark for the most efficient pumps in the market at the time of developing the directive.

The milestones for the MEI values are as follows;

1 1st January 2013 all pumps shall have a minimum MEI value of 0,10;

2 1st January 2015 all pumps shall have a minimum MEI value of 0,40.

The most important point of this is that unless the pumps comply then they will not be allowed to have a CE marking.

1.3 Scope of Implementing Directive 2009/125/EC

The following SPX Flow Technology products are in the scope of the directive:

- CombiNorm (ESOB)
- CombiChem (ESOB)
- CombiBloc (ESCC)
- CombiBlocHorti (ESCC)
- CombiLine (ESCCi)
- CombiLineBloc (ESCCi)

Pumps with half-open impeller are excluded from the scope of the directive. Half-open impellers are designed for pumping liquids containing solids.

The vertical multistage pump range MCV(S) is out of the scope of the directive, these pumps are designed for pressures up to 4000 kPa (40 bar).

Submersible multistage pumps are not available in the SPX product portfolio.

1.4 Product information

Product information regarding Ecodesign requirements of the above mentioned product lines is available in the Instruction Manuals of these products.

The Instruction Manuals are available on the SPX website

http://global.johnson-pump.com/JPIndustry/Downloads.htm

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