

# CIRCULATOR PUMP ENERGY RATING LABEL

An industry label for energy efficient circulator pumps



## Energy Rating Simplifies Energy Efficiency Programs

The Energy Rating label and database provides a clear and easy way to identify energy efficient circulator pumps inclusive of controls and indicates a range of possible power savings. The higher the Energy Rating, the more savings the circulator can provide. Circulators listed in the Energy Rating database provide:

- Trusted performance data
- Third-party lab accreditation
- Tested to industry standards
- Ratings include integrated control modes
- Database streamlines management of a qualified product list
- Standardized energy savings calculation
- Promotes market transformation
- Broad industry participation



Brand XYZ WAIP: 0.068  
Model #: ABC123

**CIRCULATOR PUMP** **CEI: 0.60 (ER 180)**

**ENERGY RATING**

150 180

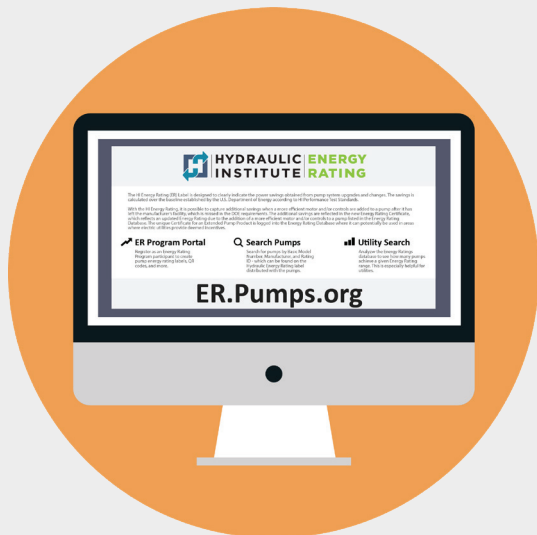
Most Consumptive      RANGE      Least Consumptive

Note: The ER value is dependent on the selected control. Multiple options may be available on this pump, as follows:

- Full Speed
- Manual Speed
- External Input Signal
- Pressure (Rated)
- Temperature

Power savings (watts) over a baseline case can be estimated by multiplying the ER by WAIP and multiplying by 7.46. Multiplying power savings by operating hours and cost of energy will yield estimated cost savings.

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### Increases Return on Investment

Using the Energy Rating, energy efficiency programs can claim greater savings based on actual control modes. Utilities can also streamline their programs by using the Energy Rating database as a qualified product list for approved circulator models, reducing program operational costs.

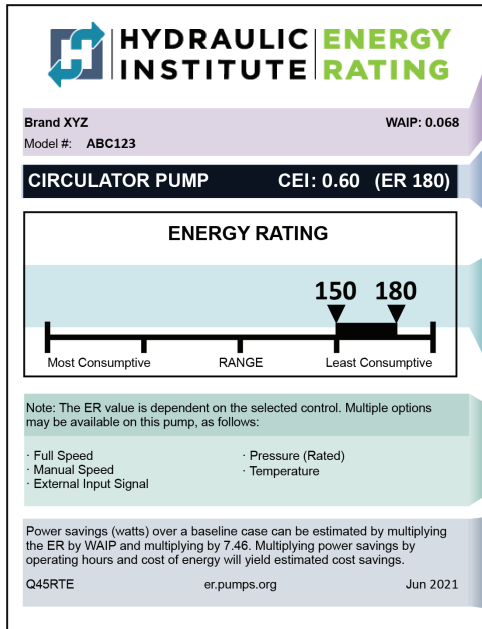
### Have Confidence in the Hydraulic Institute Energy Rating Program

The Energy Rating Program is a collaborative effort by circulator manufacturers, energy organizations, and government. It utilizes a uniform test procedure in labs audited by the Hydraulic Institute to ensure compliance. The Energy Rating has broad industry support and participation.

# Reading the Energy Rating Label

The Energy Rating label enables the comparison of selected\* circulator pumps based on the average power consumption. It can be used to estimate the power savings or to compare the power savings between multiple circulator pumps. The Energy Rating label will be displayed in sales literature, on packaging, and on the product to make it easy for customers to recognize an energy efficient circulator pump.

\*Comparison of Energy Rating labels should be done after the correct pumps are selected for your specific application



**1. Basic Information**  
Pump brand, model number, weighted average input power (in horsepower) for a baseline ECM circulator.

**2. Circulator Energy Index (CEI)**  
Rating index comparing power consumption to a traditional circulator. Lower values are better.

**3. Energy Rating**  
Rating indicating relative energy usage of a basic model compared to other basic models. The higher the energy rating, the greater the savings. The range represents the most and least consumptive available control modes.

**4. Available Controls**  
Shows available control methods.

**5. Estimated Savings**  
Illustrates the method for using the ER rating to determine actual savings

## Standardizing Calculations

The Energy Rating allows the industry to standardize savings calculations. Below is an example using a sample label.

### Power Savings

Energy Rating  $\times$  WAIP  $\times$  7.46  
 $180 \times 0.068 \text{ hp} \times 7.46$   
 Estimated Power Savings = 91 Watts

### Energy Savings

Estimated Power Savings/1,000  $\times$  Operating Hours  
 $91 \text{ Watts}/1,000 \times 3,000 \text{ hours/year}$   
 Energy Savings (kWh) = 273 kWh/year

### Cost Savings

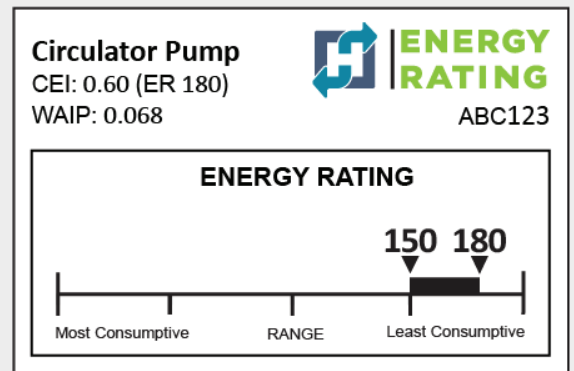
$273 \text{ kWh/year} \times \$0.1331/\text{kWh}^*$   
 Cost Savings = \$36.30/year

(\*) Average cost of electricity in the U.S.

## Substantial Impact Toward Sustainability

The Energy Rating is the industry recognized mark for energy efficiency. The Energy Rating Program supports the increased adoption of efficient products into the market. Rated circulators will save energy, maximize overall system efficiency, cut operating costs, and reduce carbon emissions.

The Energy Rating label and database can be used by utilities and energy efficiency program administrators to provide incentives for the selection of energy efficient circulators.



Small version of the Energy Rating label applied to the circulator pump

**Streamline your energy efficiency program and subscribe to the database**



**Contact Us**  
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The lifetime electricity saved from the transition to efficient circulators with integrated controls for heating, cooling, and domestic hot water recirculation could save the equivalent of the annual electricity usage of **1.4 million homes** plus additional natural gas savings equivalent to the annual energy use of 153,000 homes. The lifetime energy savings could reach over one billion dollars!



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 ENERGY RATING PROGRAM AND DATABASE  
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