
ErP ready

easy

air

autounlock

The adjustment is simple and intuitive: simply turn the regulator to select the desired program

Pull-out resistant cable gland with integrated sealing lip

Flat surfaces on the pump housing provide a secure hold when tightening

## DESIGN

Askoll ENERGY SAVING is a wet rotor high efficiency circulator, driven by a permanent magnets synchronous motor (PM motor) controlled by an on board inverter. The motor is protected against overload thanks to a thermal protection and an automatic electronic release function of the rotor. No external protection is required. Operated by selector technology. LED user interface.

## APPLICATION

Hot-water heating systems of all kinds, in domestic and commercial buildings.

## PRODUCT FEATURES AND BENEFITS

- Very high degrees of efficiency due to Askoll permanent magnets motor
- Compact design: the smallest available on the market
- A LED provides information about the operation status of the circulator
- Electronic controls allow to set advanced features and load adjustment capacity Δp-c (constant differential pressure) and Δp-v (proportional differential pressure)
- Min-Max mode: allows to set the exact working point across the range
- The pump housing is cataphoresis treated (KTL) and resistant to corrosion

## MOTOR TECHNICAL DATA

| | |
|---|---|
| **Power supply** | 1x230 V (-10%; + 6%); Frequency: 50 Hz |
| **Electrical connection** | Pull resistant cable clamp PG11 |
| **Energy Efficiency Index (EEI)*** | ≤ 0,21 – Part 2 |
| **Input power ($P_1$)** | Min 3W, Max 56W |
| **Input current ($I_1$)** | Min 0.03A, Max 0.44A |
| **Insulation class** | H |
| **Protection class** | IP44 |
| **Appliance class** | II |

## PUMP TECHNICAL DATA

| | |
|---|---|
| **Ambient temperature** | from +2°C to +40°C |
| **Allowed liquid temperature**** | from +2°C to +95°C |
| **Temperature range at max. ambient temperature** | of 30°C = +30°C to +95°C<br>of 35°C = +35°C to +90°C<br>of 40°C = +40°C to +70°C |
| **Maximum operating pressure** | Max 0.6 MPa - 6 bar |
| **Minimum pressure on the intake opening** | 0.03 MPa (0.3 bar) at 50°C<br>0.10 MPa (1.0 bar) at 95°C |
| **Maximum relative humidity** | ≤ 95% |
| **Sound pressure level** | < 43 dB(A) |
| **Low Voltage directive (2006/95/CE)** | Standard used: EN 62233, EN 60335-1 and EN 60335-2-51 |
| **EMC Directive (2004/108/CE)** | Standard used: EN 61000-3-2 and EN 61000-3-3, EN 55014-1 and EN 55014-2 |
| **Ecodesign directive (2009/125/CE)** | Standard used: EN 16297-1 and EN 16297-2 |
| **Approved fluids** | Water for heating according to VDI 2035. Mixtures of water and glycol with glycol percentages not greater than 30%. |

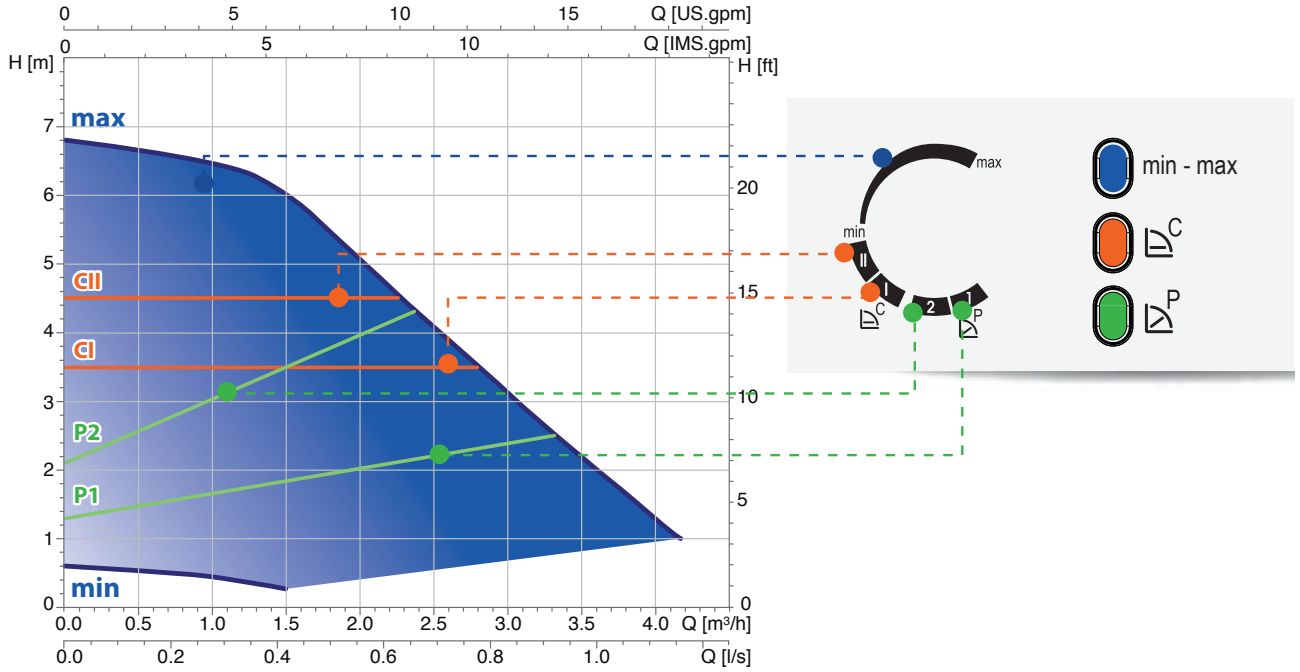
## TYPE KEY

Example **ES2** 25 - 70 / 180

- Electronic circulator
- Standard version
  ADAPT: Version with activeADAPT
  SOLAR: Solar thermal version
- Cast-iron pump housing
  C: Composite pump housing
  B: Bronze pump housing
  A: Pump housing with air separator
- Nominal diameter (DN) of suction and discharge ports (15 = G1, 25 = G1 1/2, 32 = G2)
- Maximum head [dm]
- Port-to-port length [mm]

* The benchmark for most efficient circulators is EEI ≤ 0,20.
** To avoid condensation in the motor and electronics the temperature of the pumped liquid must always be greater than the ambient temperature.

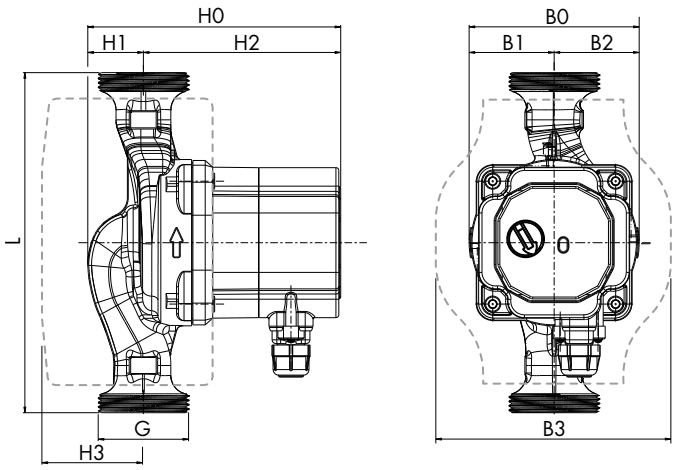
## PERFORMANCE CURVES AND PUMP SETTINGS




## MATERIALS

| Model | Pump housing | Impeller | Shaft | Bearing | Thrust bearing | Rotor can |
|---|---|---|---|---|---|---|
| **ES2 70** | Cast iron EN-GJL-200 with cataphoretic coating (KTL) | Composite | Ceramic | Carbon | Ceramic | Composite |

## DIMENSIONS, WEIGHTS




| MODEL | THREAD | DIMENSIONS [mm] | | | | | | | | | WEIGHTS [kg] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | G | L | B0 | B1 | B2 | B3 | H0 | H1 | H2 | H3 | Net | Gross |
| **ES2 15 - 70/130** | G 1 | 130 | 90 | 45 | 45 | 124 | 143,8 | 29,4 | 114,4 | 49 | 1,91 | 2,11 |
| **ES2 25 - 70/130** | G 1 1/2 | 130 | 90 | 45 | 45 | 124 | 143,8 | 29,4 | 114,4 | 49 | 2,05 | 2,25 |
| **ES2 25 - 70/180** | G 1 1/2 | 180 | 90 | 45 | 45 | 124 | 143,8 | 29,4 | 114,4 | 49 | 2,20 | 2,40 |
| **ES2 32 - 70/180** | G 2 | 180 | 90 | 45 | 45 | 124 | 143,8 | 29,4 | 114,4 | 49 | 2,34 | 2,54 |

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