

Domestic Water Supply System with  
Automatic Control Unit

## Multi Eco-Pro

### Type Series Booklet



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Type Series Booklet Multi Eco-Pro

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## Building Services: Water Supply

### Domestic Water Supply Systems with Automatic Control Unit

# Multi Eco-Pro with Controlmatic E.2



#### Fluids handled

- Clean to turbid water not containing aggressive, abrasive or solid substances
- River water, lake water and groundwater

#### Main applications

- General irrigation systems
- Domestic water supply
- Washing plants

#### Operating data

##### Operating properties

Characteristic		Value
Flow rate	Q [m <sup>3</sup> /h]	≤ 8
	Q [l/s]	≤ 2,22
Head	H [m]	≤ 54
Fluid temperature	T [°C]	≤ +50 for continuous duty
		≤ +60 for 10 minutes
Operating pressure	p <sub>d</sub> [bar]	Depending on pump size <sup>1)</sup>
Suction lift	H <sub>s</sub> [m]	≤ 8

#### Designation

##### Example: Multi Eco-Pro 35

##### Designation key

Code	Description
Multi Eco-Pro	Type series
35	Size

#### Design details

##### Design

- Centrifugal pump
- Close-coupled design
- Multistage
- Self-priming

##### Automation

- Controlmatic E.2 is used to start up and stop the pump in line with consumer demand.
- Controlmatic E.2 protects the pump against dry running

##### Drive

- Single-phase AC motor
- Range of rated voltage: 220 - 240 V
- Frequency 50 Hz
- Thermal overload protection
- Enclosure IP44
- Thermal class F

##### Bearings

- Deep groove ball bearings
- Grease-lubricated for life

#### Materials

##### Overview of available materials

Component	Material
Pump casing	Grey cast iron with anti-corrosive coating
Discharge cover	Grey cast iron with anti-corrosive coating
Impeller/stage casing	Noryl
Jacket	Stainless steel
Shaft	Chrome steel
Motor housing	Aluminium

Housing of Controlmatic E or E.2 made of glass-fibre reinforced polyamide

1) The Controlmatic E or E.2 must be protected against pressures exceeding the permissible nominal pressure p<sub>d</sub>.

**Product benefits**

- Reliable, sturdy pump installation thanks to corrosion-protected pump casing with stainless steel jacket
- Ready-to-connect, easy installation and commissioning
- Automatic and quick priming once the pump casing has been filled. Suction lift up to 8 m thanks to self-priming design (KSB patent).
- Energy-efficient low-noise operation thanks to wear-resistant multistage hydraulic system with optimised efficiency

The pump is protected from dry running by simultaneous pressure and flow monitoring. If there is a lack of water, Controlmatic E or E.2 stops the pump and the red "Failure" lamp is lit.


**Product information**

**Product information as per Regulation No. 1907/2006 (REACH)**

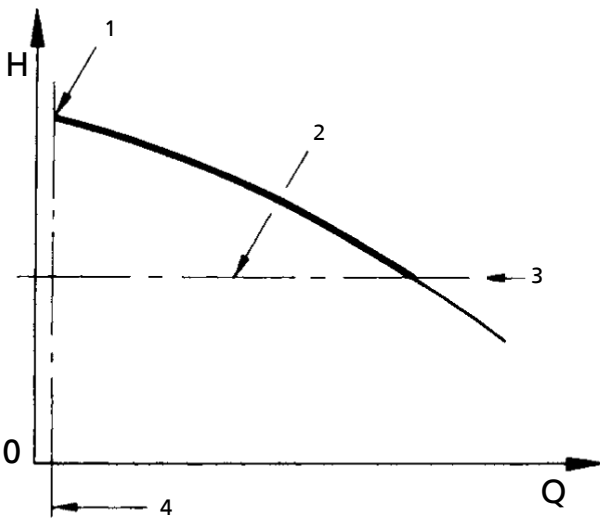
For information as per chemicals Regulation (EC) No. 1907/2006 (REACH), see <http://www.ksb.com/reach>.

**Certifications**

Overview

Label	Effective in:	Comment
	France	Approved in accordance with the French drinking water regulation

**Function**



1	Minimum flow	2	Pump starts up
3	Start-up pressure	4	Pump stops

- The start-up pressure is set to 1.5 bar at the factory. If necessary, it can be increased to 2.6 bar by means of a screw driver.
  - Minimum flow: 0.1 m<sup>3</sup>/h
1. When the tap is closed, the pump is stopped. The green "Power" signal lamp of Controlmatic E or E.2 is lit.
  2. When the tap is opened, the water pressure in the system decreases. The pump is started up.
  3. The pump is running, the yellow "On" lamp is lit.
  4. When the tap has been closed and the flow rate is zero, the pump is stopped after 10 seconds.

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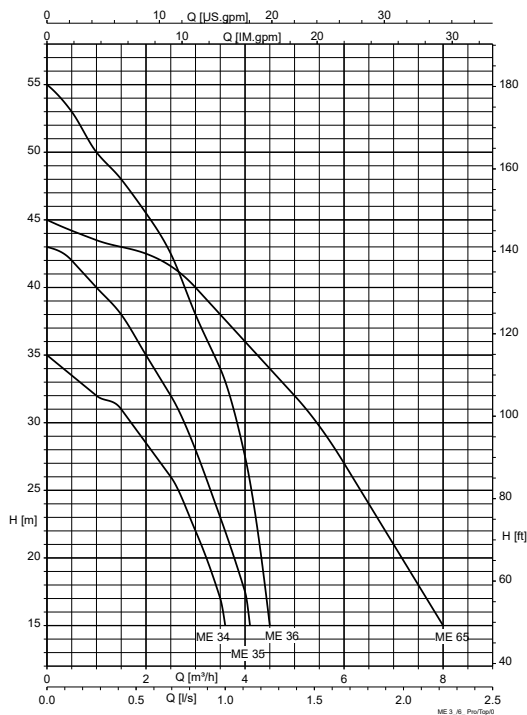
### Multi Eco-Pro with Controlmatic E.2

Selection table

Size	Number of stages	Ø		p <sub>d</sub> <sup>2)</sup>	Motor 1~230 V		Cable H07RN-F		Mat. No.	[kg]
		Suction side	Discharge side		[bar]	P <sub>1</sub>	I	[m]		
				[kW]		[A]				
Multi Eco-Pro 34-1	4	G 1	G 1	6	0,66	3,1	1,5	3 × 1	39300040	0
Multi Eco-Pro 35-1	5	G 1	G 1	10	0,80	3,7	1,5	3 × 1	39300041	0
Multi Eco-Pro 36-1	6	G 1	G 1	10	1,10	5,5	1,5	3 × 1	39300042	0
Multi Eco-Pro 65-1	5	G 1 1/4	G 1	10	1,30	6,1	1,5	3 × 1	39300043	0

Under no circumstances must Controlmatic E.2 be exposed to pressures exceeding the nominal pressure p<sub>d</sub>. A suction strainer with a foot valve must be fitted in the suction line upstream of the pump.

### Multi Eco-Pro 34/35/36/65; n = 2800 rpm



The discharge head is the sum of suction lift + pressure head + friction losses in suction and discharge lines + required tap pressure. The flow rate depends on the relevant discharge head. Maximum suction lift for all pump sizes: approx. 8 m.

2) p<sub>d</sub> = max. pressure at pump discharge nozzle

Dimensions

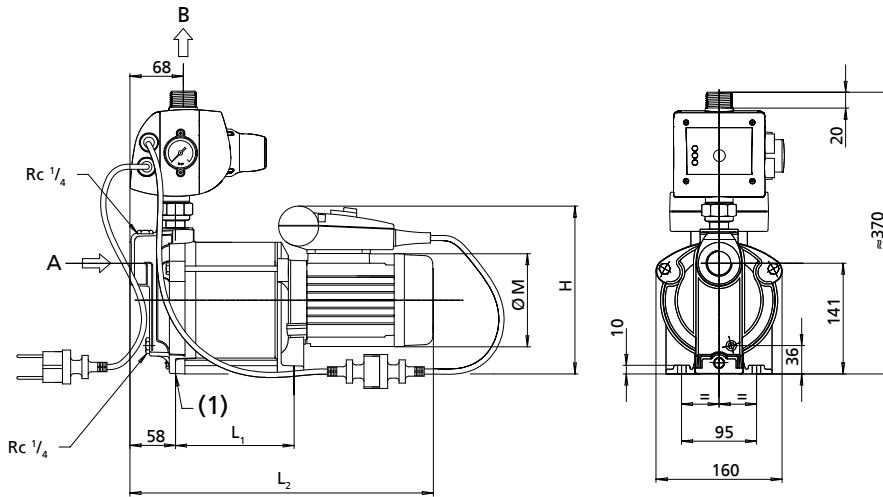


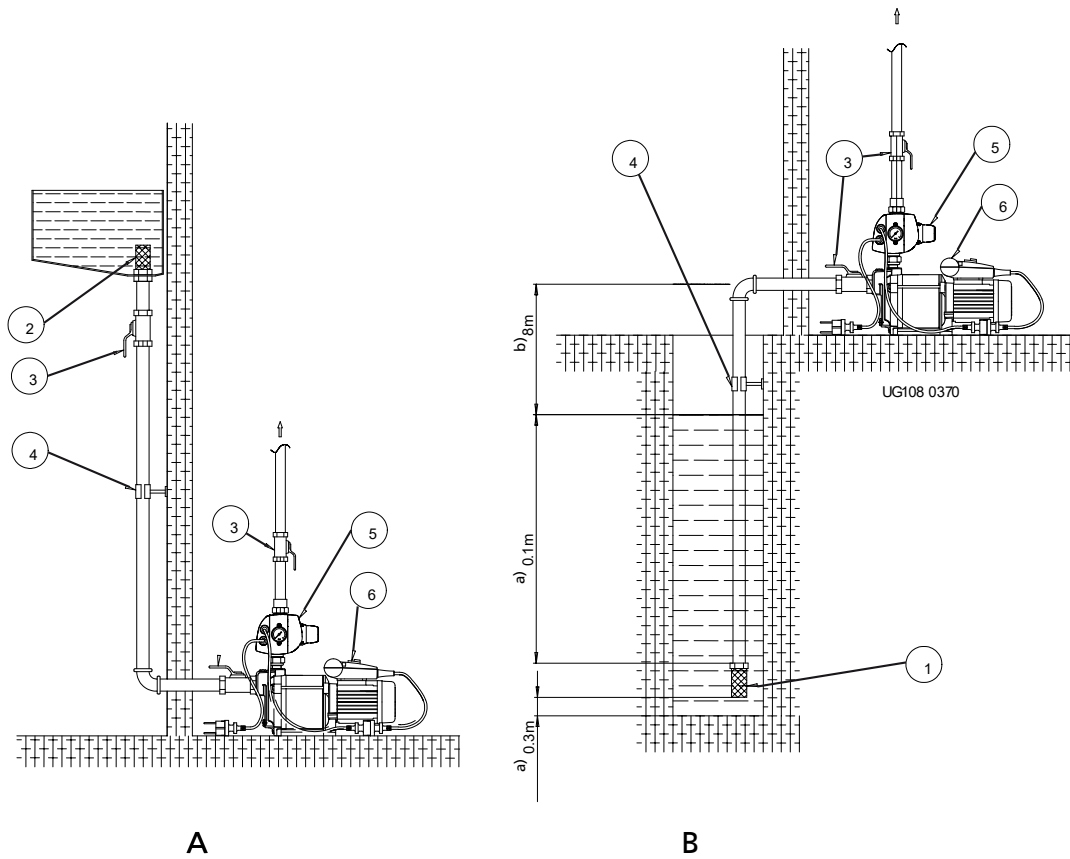
Fig. 1: Dimensions Multi Eco-Pro with Controlmatic E.2 [mm]

A	Suction nozzle	(1)	2 holes Ø 8
B	Discharge nozzle		

Dimensions [mm]

Multi Eco-Pro	Ø A suction nozzle	Ø B discharge nozzle	L <sub>1</sub>	L <sub>2</sub>	H	Ø M
34-1	G 1	G 1	151	387	215	118
35-1	G 1	G 1	180	415	215	118
36-1	G 1	G 1	208	467	230	140
65-1	G 1 1/4	G 1 1/4	208	467	230	140

Installation drawing








A	Suction head operation	B	Suction lift operation
a)	Minimum	b)	Maximum
1	Suction strainer with foot valve	2	Suction strainer
3	Gate valve	4	Pipe clamp
5	Automatic control unit	6	Pump set




## Accessories

### Pump accessories

	Description	Connection	Mat. No.	[kg]
	Suction strainer with foot valve, PVC (for pipe of DN 25)	G 1	40980710	0,2
	Suction hose kit, complete with suction strainer and spring-loaded lift check valve, 7 m	G 1	40980203	1,5
	E62.1	Float switch housing: polypropylene	11037759	0,6
		Float switch housing: polypropylene	11037760	0,9
	Weight for float switch not suitable for drinking water applications		01076688	0,3
	Anti-vibration pump bracket fits all Multi Eco/Multi Eco-Pro		18040802	1,6

### Control unit / switchgear accessories

	Description	Mat. No.	[kg]
	Safety switch STECKMAT (1~230 V) Trips in approx. 0.03 seconds, from approx. 0.03 A	00534217	0,5







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