

Domestic Water Supply System with
Automatic Control Unit

MultiEco Pro

Type Series Booklet



Legal information/Copyright

Type Series Booklet MultiEco Pro

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Building Services: Water Supply

Domestic Water Supply Systems with Automatic Control Unit

MultiEco Pro with Controlmatic E.2



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

- 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-packed bearings sealed for life

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

Table 1: Operating properties

Characteristic		Value
Flow rate	Q [m³/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 _d [bar]	Depending on pump size ¹⁾
Suction lift	H _s [m]	≤ 8

¹⁾ Controlmatic E or E.2 must be protected against pressures exceeding the permissible nominal pressure p_d.

Designation

Example: MultiEco Pro 35 E2

Table 2: Designation key

Code	Description
MultiEco Pro	Type series
35	Size
E2	Controlmatic E.2

Materials

Table 3: Overview of available materials

Part No.	Description	Material
101	Pump casing	Grey cast iron with anti-corrosive coating
160	Discharge cover	Grey cast iron with anti-corrosive coating
230	Impeller/stage casing	Noryl
109	Shroud	Stainless steel
210	Shaft	Chrome steel
801	Motor housing	Aluminium

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

Product benefits

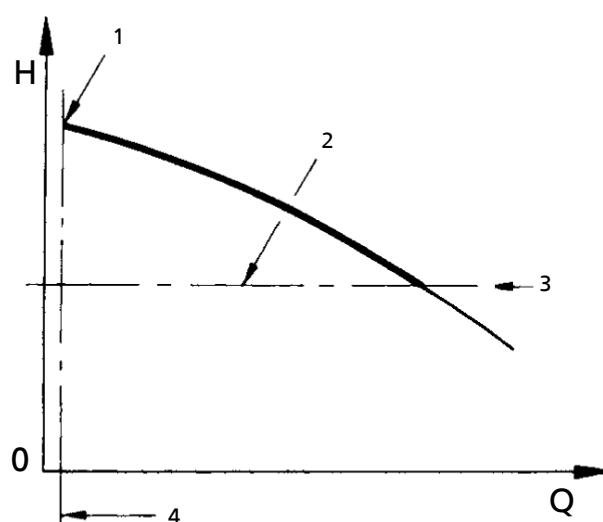
- Reliable, sturdy pump installation thanks to corrosion-protected pump casing with stainless steel jacket
- Ready-to-connect, easy installation and commissioning
- Automatic and quick priming once the pump casing has been filled. Suction lift up to 8 m thanks to self-priming design (KSB patent).
- Energy-efficient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

Product information

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

For information as per European chemicals regulation (EC) No. 1907/2006 (REACH) see <https://www.ksb.com/en-global/company/corporate-responsibility/reach>.

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 m³/h

- When the tap is closed, the pump is stopped. The green "Power" signal lamp of Controlmatic E or E.2 is lit.
- When the tap is opened, the water pressure in the system decreases. The pump is started up.
- The pump is running, the yellow "On" lamp is lit.
- When the tap has been closed and the flow rate is zero, the pump is stopped after 10 seconds.

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.

Technical data

MultiEco Pro with Controlmatic E.2

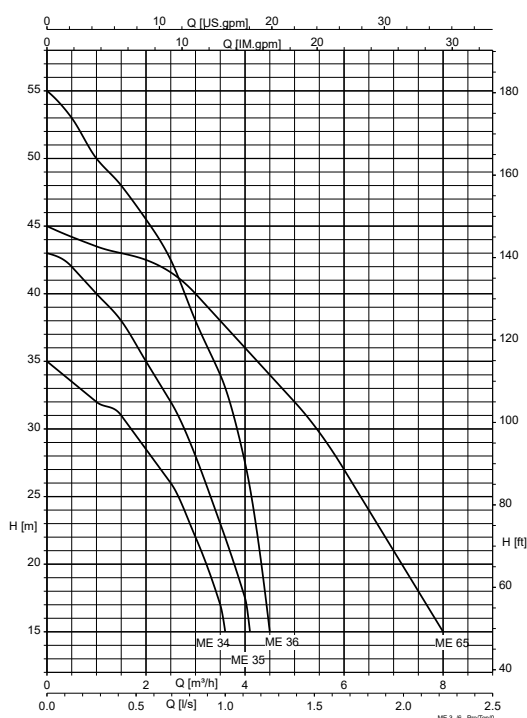
Table 4: Selection table (50 Hz)

Size	Number of stages	Connection		$p_d^{2)}$ [bar]	P_1 [kW]	I_N [A]	Power cable H07RN-F		Mat. No.	[kg]
		Suc- tion side	Dis- charge side				[m]	[mm ²]		
34 E2	4	G 1	G 1	6	0,64	3,0	1,5	3 × 1	05216874	13
35 E2	5	G 1	G 1	10	0,81	3,7	1,5	3 × 1	05216862	13
36 E2	6	G 1	G 1	10	1,03	4,8	1,5	3 × 1	05216863	16
65 E2	5	G 1 1/4	G 1	10	1,22	5,6	1,5	3 × 1	05216864	16

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

Characteristic curves

MultiEco 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.

Dimensions and connections

²⁾ Maximum operating pressure

MultiEco Pro with Controlmatic E.2

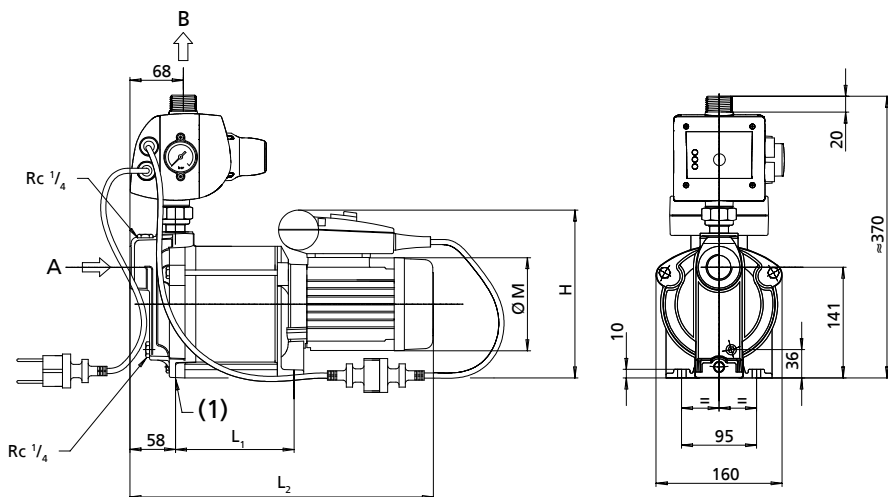


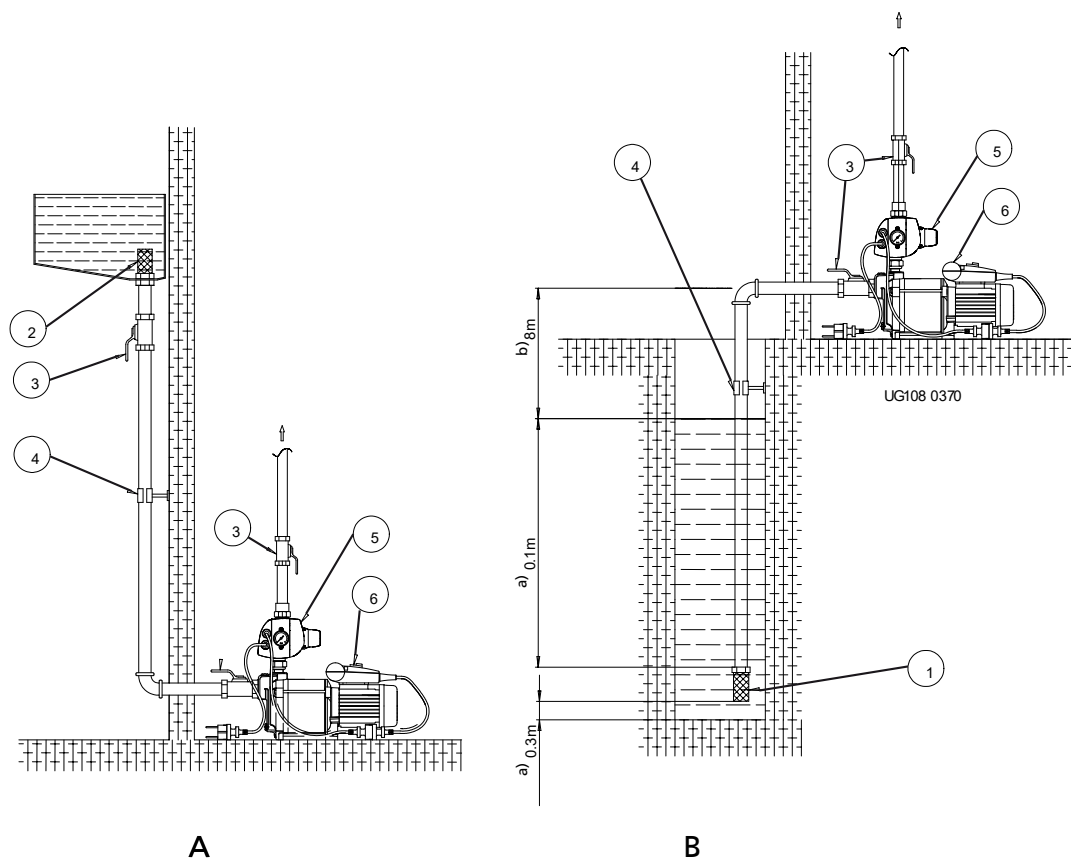
Fig. 1: Dimensions of MultiEco Pro with Controlmatic E.2 [mm]

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

Table 5: Dimensions [mm]

Size	Ø A suction nozzle	Ø B discharge nozzle	L ₁	L ₂	H	Ø M
34 E2	G 1	G 1	151	387	215	118
35 E2	G 1	G 1	180	419	215	118
36 E2	G 1	G 1	208	478	230	140
65 E2	G 1 1/4	G 1 1/4	208	478	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/ length	Mat. No.	[kg]
		[m]		
	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
	Float switch with shockproof plug Function: circuit open in upper float position (normally closed contact) Float switch housing: polypropylene Fluid temperature: 70 °C max. Power cable: H07RN-F3G1	3	11037759	0,6
		5	11037760	0,9
	Weight for float switch not suitable for drinking water applications	-	01076688	0,3
	Anti-vibration pump bracket fits all MultiEco / MultiEco 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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