

Domestic Water Supply System

MultiEco Top

Type Series Booklet



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Type Series Booklet MultiEco Top

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Building Services: Water Supply

Domestic Water Supply System

MultiEco Top



Drive

Single-phase AC motor:

- Range of rated voltage: 220 - 240 V
- Frequency 50 Hz
- Thermal overload protection

Three-phase motor:

- Range of rated voltage: 380 - 415 V
- Frequency 50 Hz
- 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]	≤ 2,2
Head	H [m]	≤ 54
Fluid temperature	T [°C]	≤ +50 for continuous duty
		≤ +70 for 10 minutes
Operating pressure	p _a [bar]	≤ 10 or ≤ 6 depending on the size
Suction lift	H _s [m]	≤ 8

Design details

Design

- Centrifugal pump
- Multistage
- Self-priming
- Membrane-type accumulator, pressurised at the factory
- Pressure switch for automatic operation, factory-set

Designation

Example: MultiEco Top 35 E 50

Table 2: Designation key

Code	Description	
MultiEco Top	Type series	
35	Size	
E	D	Three-phase motor
	E	Single-phase AC motor
50	Total membrane-type accumulator volume [l]	

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

Accumulator made of steel, with replaceable membrane approved for drinking water

Product benefits

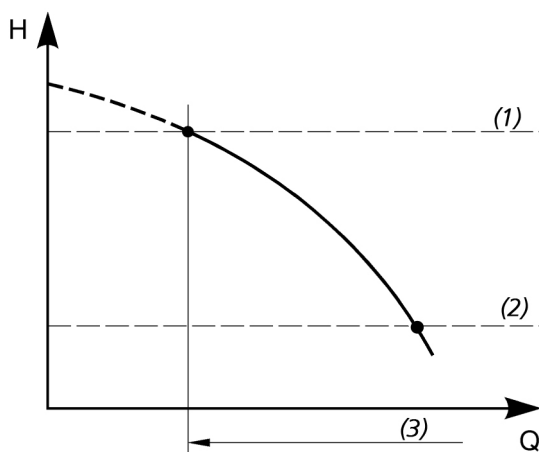
- Reliable, sturdy pump installation thanks to corrosion-protected pump casing with stainless steel jacket
- Automatic and quick priming once the pump casing has been filled. Suction lift up to 8 m thanks to self-priming design (KSB patent).
- Energy-efficient low-noise operation thanks to wear-resistant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



- The start-up and stop pressure can be set as a function of demand.
- Maximum stop pressure p_d .
- The start-up pressure must exceed the maximum inlet pressure by at least 0.5 bar.

(1)	Stop point pump = available tank pressure
(2)	Start-up pressure pump
(3)	Operating range of the pump

Technical data

MultiEco Top

Table 4: Technical data

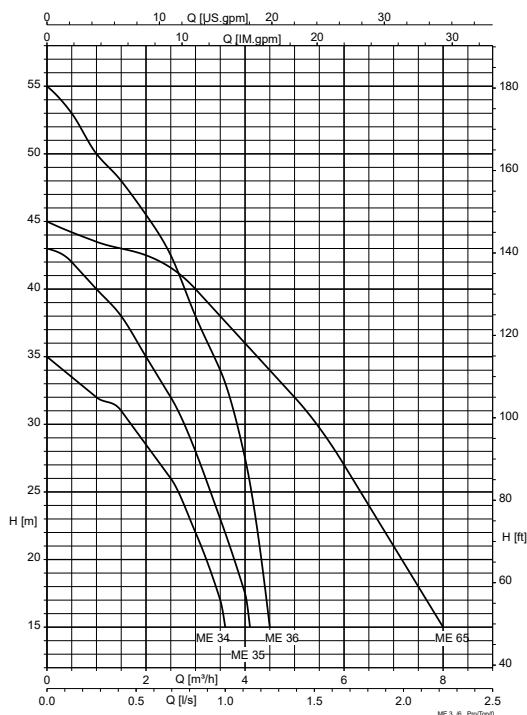
Size	Connection		Total volume	Effective volume	Factory settings		P ₁	I _N			Power cable		Mat. No.	[kg]
	Suction side	Discharge side			Start	Stop		1~230 V, 50 Hz	3~230 V, 50 Hz	3~400 V, 50 Hz	H07RN-F			
					[bar]	[bar]		[kW]	[A]	[A]	[A]	[m]		
34 E 20	Rp 1	G 1	20,0	6,5	1,5	2,5	0,66	3,1	-	-	1,5	3 × 1	40982854	19
35 E 20	Rp 1	G 1	20,0	7,0	1,5	3,0	0,80	3,7	-	-	1,5	3 × 1	40982855	19
35 E 50	Rp 1	G 1	50,0	17,0	1,5	3,0	0,80	3,7	-	-	1,5	3 × 1	40982856	23
36 E 50	Rp 1	G 1	50,0	17,0	1,5	3,0	1,10	5,5	-	-	1,5	3 × 1	40982857	27
36 D 50	Rp 1	G 1	50,0	17,0	1,5	3,4	1,00	-	3,1	1,8	-	-	48242857	27
65 E 50	Rp 1 1/4	G 1	50,0	17,0	1,5	3,0	1,30	6,1	-	-	1,5	3 × 1	40982859	27
65 D 50	Rp 1 1/4	G 1	50,0	17,0	1,5	3,0	1,10	-	3,5	2,0	-	-	48242858	27

Table 5: Maximum operating pressure (p_d) depending on local regulations

Size	F	GB, DK, I, IRL	A, B, CH, CZ, D, E, NL, P, PL, S
	[bar]	[bar]	[bar]
34	3,9	6	6
35	3,9	6	7
36	3,9	6	7
65	3,9	6	7

Characteristic curve

MultiEco Top 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

MultiEco Top

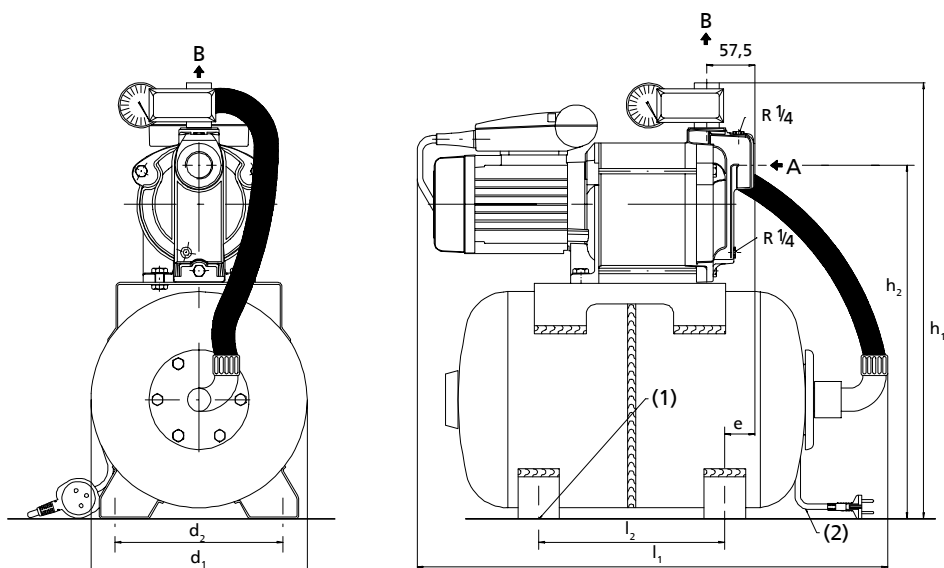


Fig. 1: Dimensions [mm]

A	Suction nozzle	(1)	4 holes (8 mm in diameter)
B	Discharge nozzle	(2)	Length 1.5 m

Table 6: Dimensions

Size	Connection		d ₁	d ₂	l ₁	l ₂	h ₁	h ₂	e
	A (suction nozzle)	B (discharge nozzle)	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
34 E 20	Rp 1	G 1	260	219	570	155	526	435	28
35 E 20	Rp 1	G 1	260	219	570	155	526	435	57
35 E 50	Rp 1	G 1	360	219	650	235	627	532	17
36 E 50 / 36 D 50	Rp 1	G 1	360	219	650	235	627	532	46
65 E 50 / 65 D 50	Rp 1 1/4	G 1	360	219	650	235	627	532	46

Installation drawing

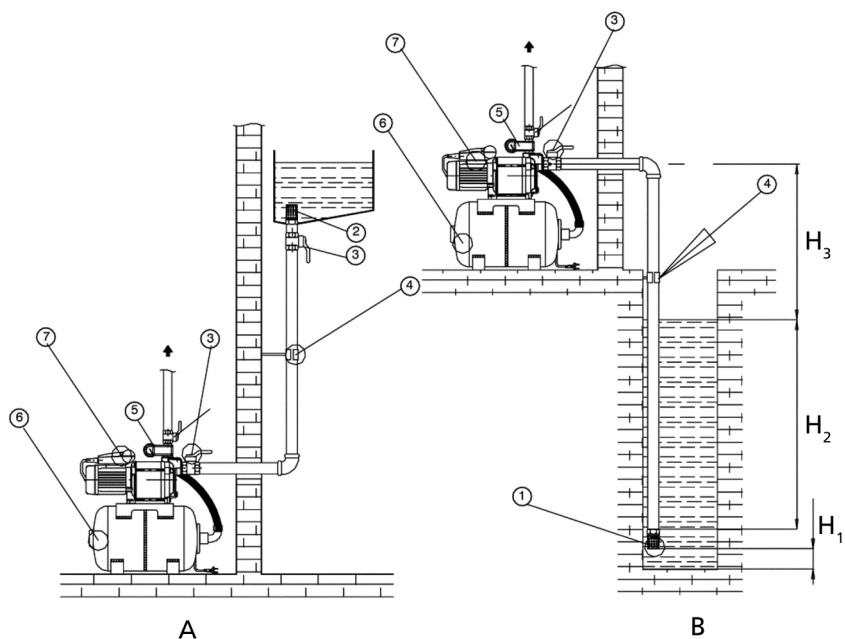


Fig. 2: Installation drawing

A	Suction head operation	B	Suction lift operation
H_1	Minimum 0.3 m	H_2	Minimum 0.1 m
H_3	Maximum 8 m		
1	Suction strainer with foot valve	2	Suction strainer
3	Gate valve	4	Pipe clamp
5	Pressure switch	6	Accumulator
7	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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