

Domestic Water Supply System

## MultiEco Top

### Type Series Booklet



## **Legal information/Copyright**

Type Series Booklet MultiEco Top

All rights reserved. The contents provided herein must neither be distributed, copied, reproduced, edited or processed for any other purpose, nor otherwise transmitted, published or made available to a third party without the manufacturer's express written consent.

Subject to technical modification without prior notice.

© KSB SE & Co. KGaA, Frankenthal 2023-01-25

---

## Contents

<b>Building Services: Water Supply</b> .....	<b>4</b>
Domestic Water Supply System .....	4
MultiEco Top .....	4
Fluids handled .....	4
Main applications .....	4
Operating data .....	4
Design details .....	4
Designation .....	5
Materials .....	5
Product benefits .....	5
Product information .....	5
Certifications .....	5
Function .....	5
Technical data .....	6
Characteristic curve .....	6
Dimensions and connections .....	7
Installation drawing .....	8
Accessories .....	9

## 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 [m <sup>3</sup> /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 <sub>d</sub> [bar]	≤ 10 or ≤ 6 depending on the size
Suction lift	H <sub>s</sub> [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)

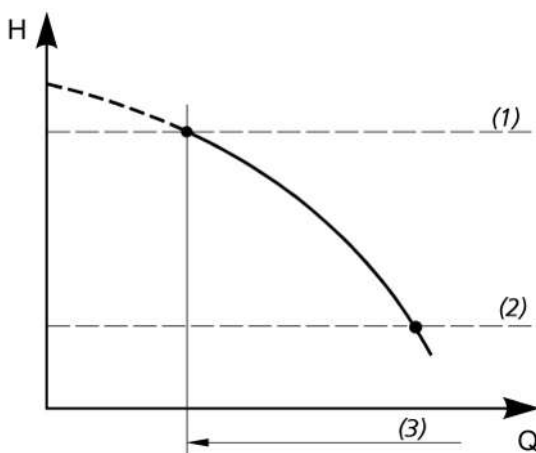
For information as per European chemicals regulation (EC) No. 1907/2006 (REACH) see <https://www.ksb.com/en-global/company/corporate-responsibility/reach>.

## Certifications

Table 4: Overview

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

## 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 5: Technical data

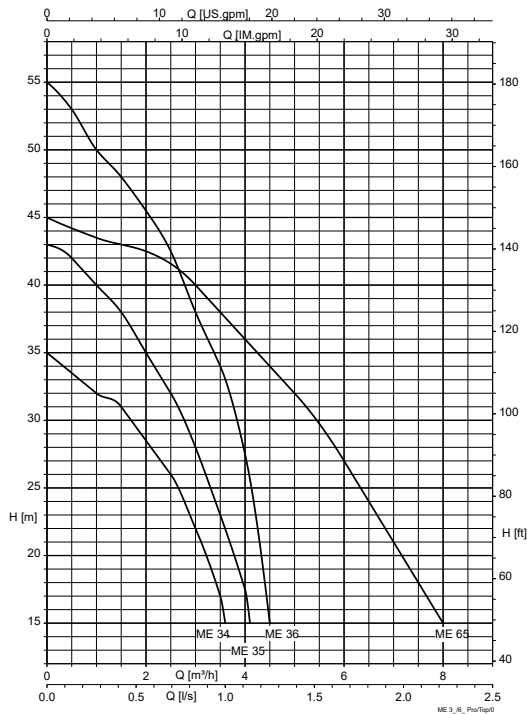
Size	Connection		Total volume [l]	Effective volume [l]	Factory settings		P <sub>1</sub> [kW]	I <sub>N</sub>			Power cable		Mat. No.	[kg]
	Suction side	Discharge side			Start	Stop		1~230 V, 50 Hz	3~230 V, 50 Hz	3~400 V, 50 Hz	H07RN-F			
								[A]	[A]	[A]	[m]	[mm <sup>2</sup> ]		
34 E 20	Rp 1	G 1	20,0	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 6: Maximum operating pressure (p<sub>d</sub>) 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

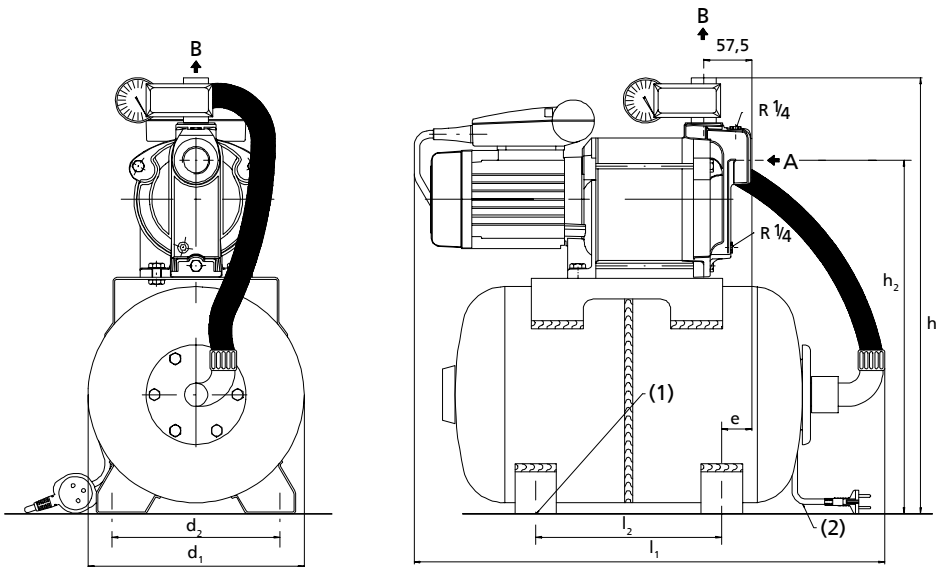


Fig. 1: Dimensions [mm]

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

Table 7: Dimensions

Size	Connection		d <sub>1</sub> [mm]	d <sub>2</sub> [mm]	l <sub>1</sub> [mm]	l <sub>2</sub> [mm]	h <sub>1</sub> [mm]	h <sub>2</sub> [mm]	e [mm]
	A (suction nozzle)	B (discharge nozzle)							
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

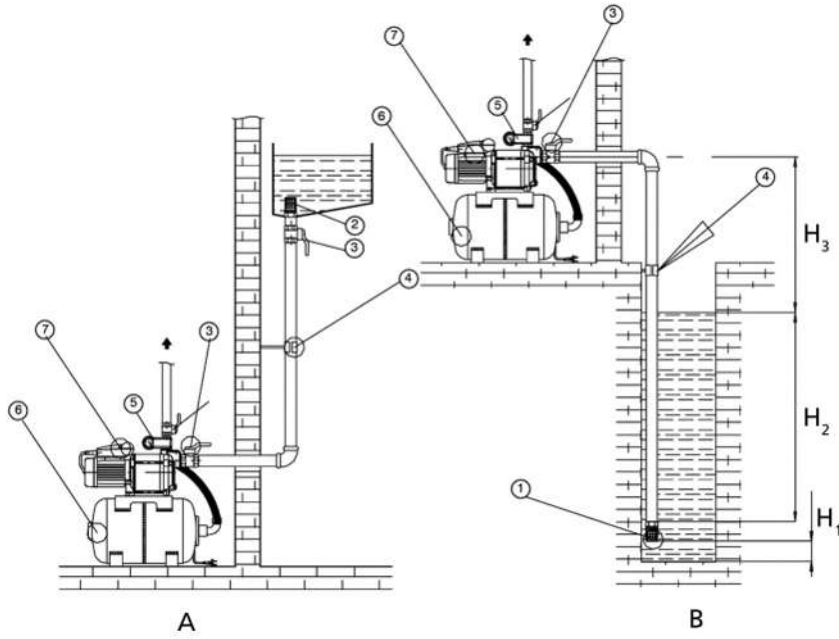







Fig. 2: Installation drawing


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







**KSB SE & Co. KGaA**  
Johann-Klein-Straße 9 • 67227 Frankenthal (Germany)  
Tel. +49 6233 86-0  
[www.ksb.com](http://www.ksb.com)