



# ESBE SL Pump Control Set

Underfloor heating single loop (SL) control group with thermostatic mixing valve

## Overview

The ESBE SL Pump Control Set is designed for distribution and thermostatic control of water used in a single secondary space heating circuit. Primarily for underfloor heating systems and ideally suited for home extensions where an UFH circuit may be later added to an existing radiator circuit. The compact assembly features energy efficient ErP compliant circulation pump, ESBE 3-port thermostatic valve, and optional normally open temperature switch.



## Product Information

- Compact and space saving design, preassembled to wall mounting plate
- High flow capacity 1.6 Kvs self-acting ESBE thermostatic valve with 35-60°C temperature range
- Assembled in the UK: pressure tested, packaged and ready for instant installation
- Optional temperature switch (40°C standard)
- In-built primary isolation valves
- Class A ErP compliant circulation pump with air venting and locking features as standard
- 2 year warranty (Extended to 5 years with Taconova pump)

## Specification

- Kv: 1.6 (Up to 90sqm / 5kW)
- Adjustable temperature range
- Working temperature range: 0-80°C
- Maximum supply pressure: 10 Bar

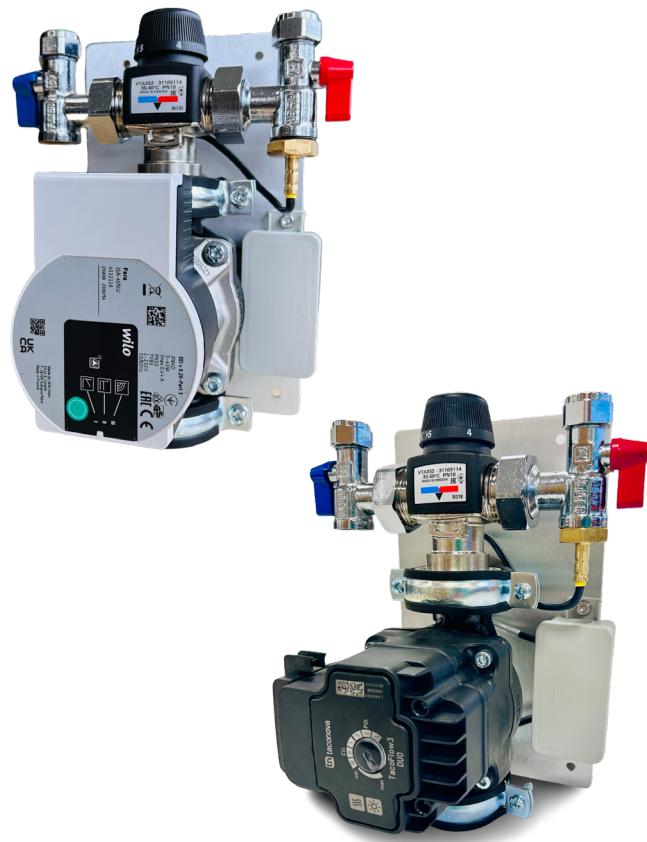
## Standard Assembly



- 140mm fixed center distance between primary flow and return pipework
- ½" F Secondary mixed outlet fitting supplied and fitted (unless requested otherwise)
- Configured to primary connections top entry, mixed secondary outlet bottom exit
- 6m head circulation pump

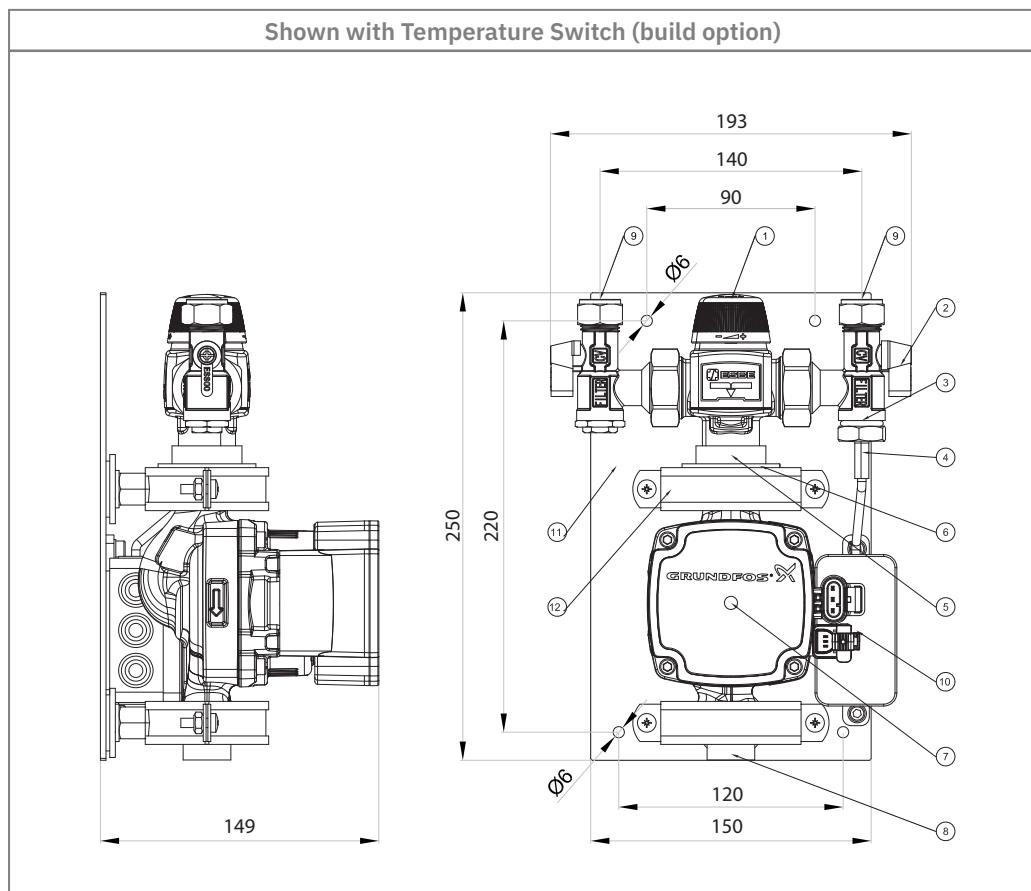
## Optional

- Normally open flow temperature switch fitted to initiate the pump when flow temperature meets or exceeds its 40deg setpoint
- Larger head options for circulation pumps to suit larger projects

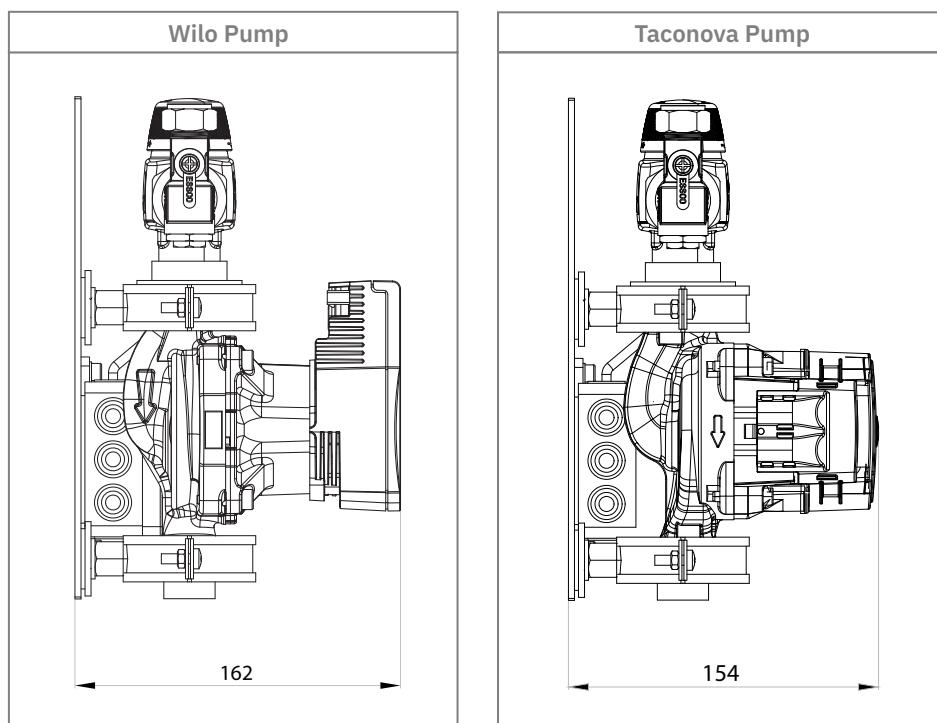


# Dimensions

## Dimensions - Grundfos Circulation Pump



## Dimensions - Alternative Pump Options



# Technical Information



## Materials

| Component   | Material               | Grade                        |
|---|------------------------|------------------------------|
| 1 ESBE 3-Port thermostatic mixing valve   | Setting knob           | Plastic                      |
|   | Lid                    | DZR brass                    |
|   | Wax element            | Copper, stainless steel, wax |
|   | Regulating cone        | Plastic                      |
|   | Spring                 | Steel                        |
|   | Valve body             | Nickel plated DZR brass      |
| 2 15mm compression angled isolation valves (pair, red/blue)   | Chrome plated brass    | HPB583                       |
| 3 O-Ring  | Plastic                | EPDM                         |
| 4 1/2" M Normally open bimetal temperature switch. 40°C fixed. Brass body, flying lead (build option) | Brass                  |                              |
| 5 1" F x 1 1/2" x 15mm Pump flange  | Nickel plated brass    | HPB583                       |
| 6 53mm nut for 1 1/2" Pump flange   | Nickel plated brass    | HPB583                       |
| 7 WILO 25/6-SCU pump  | Body                   | Cast iron                    |
|   | Impeller               | Reinforced plastic           |
|   | Shaft                  | Stainless steel              |
|   | Bearing                | Carbon                       |
| 8 1/2" F x 1 1/2" Pump flange outlet  | Nickel plated brass    | HPB583                       |
| 9 Compression fittings  | Nickel plated brass    | HPB583                       |
| 10 IP54-Rated Junction box 75mm x 40mm x 37mm (LWH)   | Plastic                | PE                           |
| 11 3mm Wall mounted fixing plate  | Aluminium              |                              |
| 12 Rubber lined pipe bracket / clamp 54mm   | Zinc plated mild steel |                              |

## Technical

| Assembly Specification                        |   |
|---|---|
| Medium  | Heating water to VDI 2035, glycol solutions |
| Max. percentage of glycol                     | < 50%                                       |
| Max. working pressure                         | PN10  |
| Max. differential pressure                    | 3 bar                                       |
| Min. recommended pressure                     | 4 kPa                                       |
| Working temperature range                     | 0 - 80°C                                    |
| Adjustable temperature range                  | 35 - 60°C                                   |
| Factory preset temperature                    | 60°C  |
| Temperature stability                         | ± 2%  |
| Minimum flow rate for stability               | 4 l/m (0.067 l/s)                           |
| Recommended range of temperature differential | 10°C  |
| Secondary side connections for manifold       | 1/2" F                                      |
| Primary side TMV connections                  | 15mm Compression                            |

## Pump Comparison

| Option             | Grundfos UPM3 | Wilo Para     | Taconova TF3 Duo Hybrid |
|--------------------|---------------|---------------|-------------------------|
| Head (m)*          | 7m            | 6m            | 8.5m                    |
| Heating & cooling? | ☒             | ✓             | ☒                       |
| Anti-blocking      | ✓             | ✓             | ✓                       |
| Venting program    | ☒             | ✓             | ✓                       |
| Key lock           | ✓             | ✓             | ☒                       |
| PWM option         | ✓             | ✓             | ✓                       |
| Temperature range  | 2 – 110°C     | -10 – 95°C    | 2 – 110°C               |
| Pressure rating    | PN10          | PN10          | PN10                    |
| IP rating          | IP44          | IPX4D (IP44)  | IP44                    |
| EEI                | GOE 6m < 0.20 | GOE 6m < 0.20 | GOE 8.5m < 0.20         |
| Warranty           | 2 years       | 18 months     | 5 years                 |

\*Standard option stated. Other options are available on request.  
Pump curves can be found in installation and operations manual (IOM).



# Technical Information

Due to the number of possible variations of pre-assembled SL pump packs available, a full list of product codes is available on request. Information on how assembly build codes are generated is below for reference.

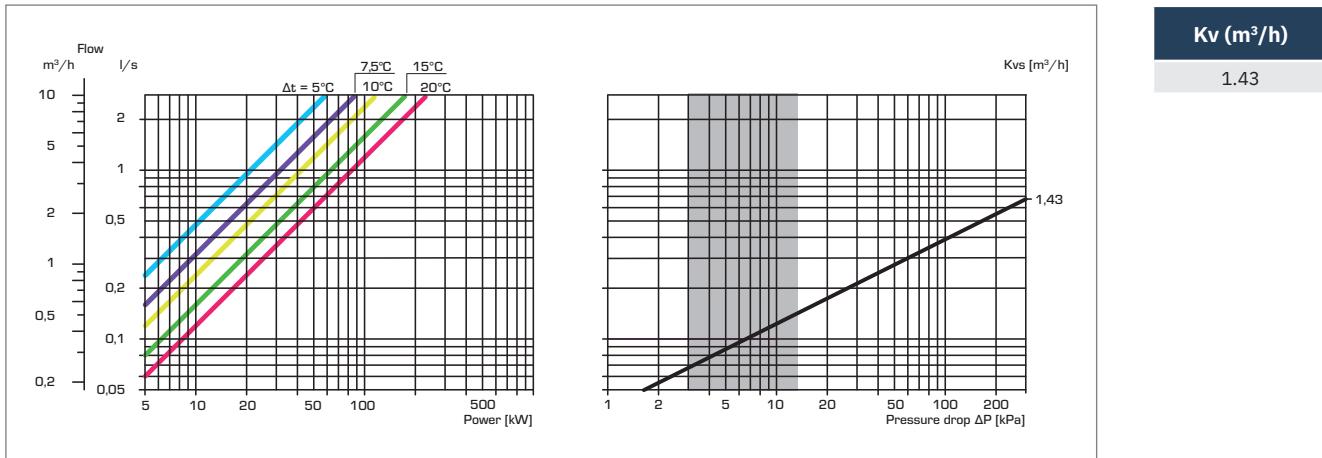
| SL Order Codes |                                       |   |  |  |  |  |  |
|----------------|---------------------------------------|---|--|--|--|--|--|
| Handing        | Standard                              |   |  |  |  |  |  |
| Spacing        | 140mm                                 | 0 |  |  |  |  |  |
| Pump           | Excluded                              | 0 |  |  |  |  |  |
|                | Wilo 7m                               | 1 |  |  |  |  |  |
|                | Grundfos                              | 2 |  |  |  |  |  |
|                | Grundfos Trade                        | 5 |  |  |  |  |  |
|                | Taconova 8.5m                         | 6 |  |  |  |  |  |
| Pocket         | Blank                                 | 0 |  |  |  |  |  |
|                | c/w Temp switch                       | 1 |  |  |  |  |  |
| Mixed Outlet   | Standard 1/2" F                       | 0 |  |  |  |  |  |
|                | Customer free-issued part for fitting | 1 |  |  |  |  |  |
| Branding       | Customer branding                     | 0 |  |  |  |  |  |
|                | Branded                               | 1 |  |  |  |  |  |

**FULL ASSEMBLY CODE: (SL-02100)**

|          |          |          |          |          |              |          |          |
|----------|----------|----------|----------|----------|--------------|----------|----------|
| <b>S</b> | <b>L</b> | <b>-</b> | <b>0</b> | <b>2</b> | <b>1</b>     | <b>0</b> | <b>0</b> |
| PACK     | HANDING  | Spacing  | PUMP     | Pocket   | Mixed Outlet | Branding |          |

**Description:**  
SL (140mm) Grundfos Pump pack, H/L, IV, branding

## Pressure Loss Graphs



## Hydraulic Schematic

