

# ESBE T4 Pump Control Set

Underfloor heating control group with 4-way thermostatic mixing valve



## Overview

The ESBE T4 Pump Control Set is designed for distribution and thermostatic control of water used in secondary space heating circuits. Primarily for underfloor heating systems, the compact assembly features energy efficient ErP compliant circulation pump, BS EN 1264 compliant ESBE 4-port thermostatic valve, and mixed outlet temperature gauge as standard.



## Specification

Control valve Kv: 3.4Kv (Up to 220sqm / 18kW)

Temperature range: 20°C - 55°C

Max temperature range: 80°C

Maximum supply pressure: 10 Bar

## Optional extras

Primary isolation valves

Safety temperature switch

Manifold isolation valves

Compression fittings



## Connections

Primary connections: 3/4" BSPF

Manifold connections: 1" BSPM

## Product Information

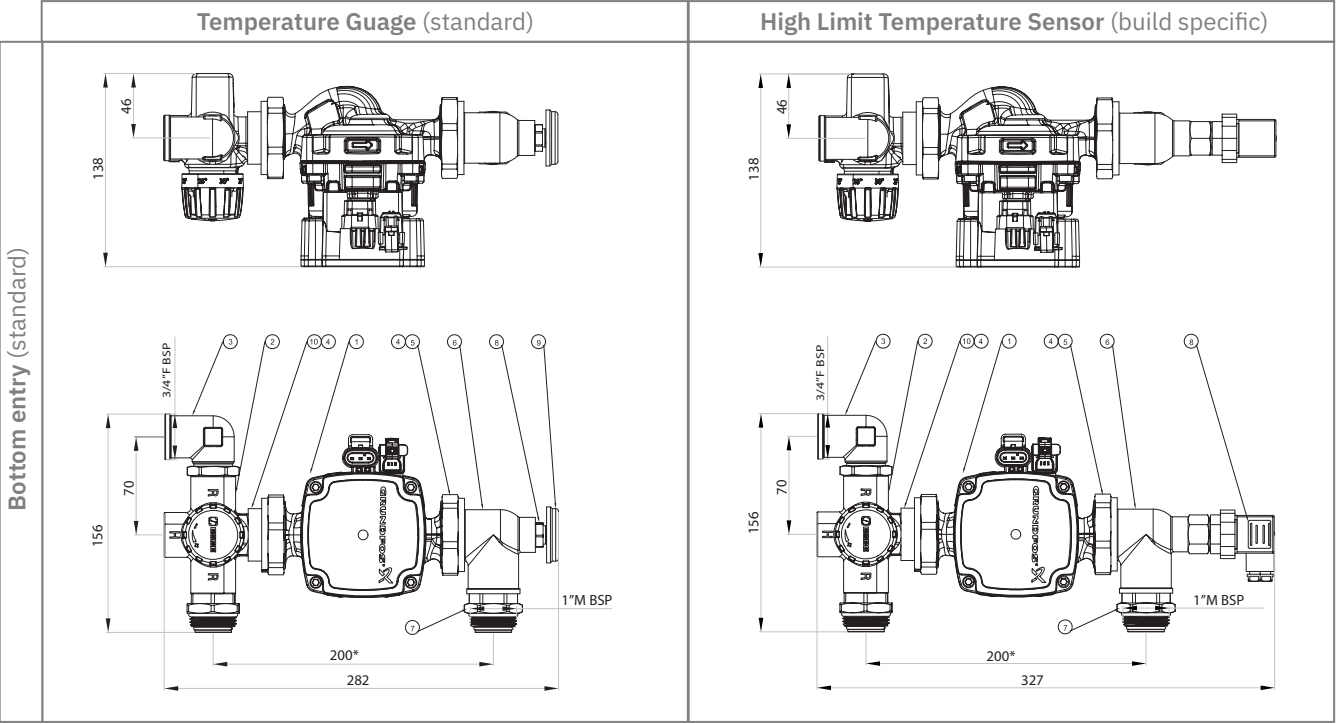
- Compact and space saving design
- 20-55°C temperature range, designed to meet screed warm-up requirements outlined in BS EN 1264
- High flow capacity 3.4 Kv self-acting ESBE thermostatic valve
- Most versatile range in the market
- Fully reversible (Left or Right sided manifold)
- Side or bottom entry connections
- Class A ErP compliant circulation pump with air venting and locking features as standard
- Assembled in the UK: pre-tested, packaged and ready for instant installation
- Self-sealing secondary side integral spinning nuts for fast manifold connections
- Integrated check valve for easy filling during commissioning
- 2 year warranty (Extended to 5 years with WITA or Taconova pump)



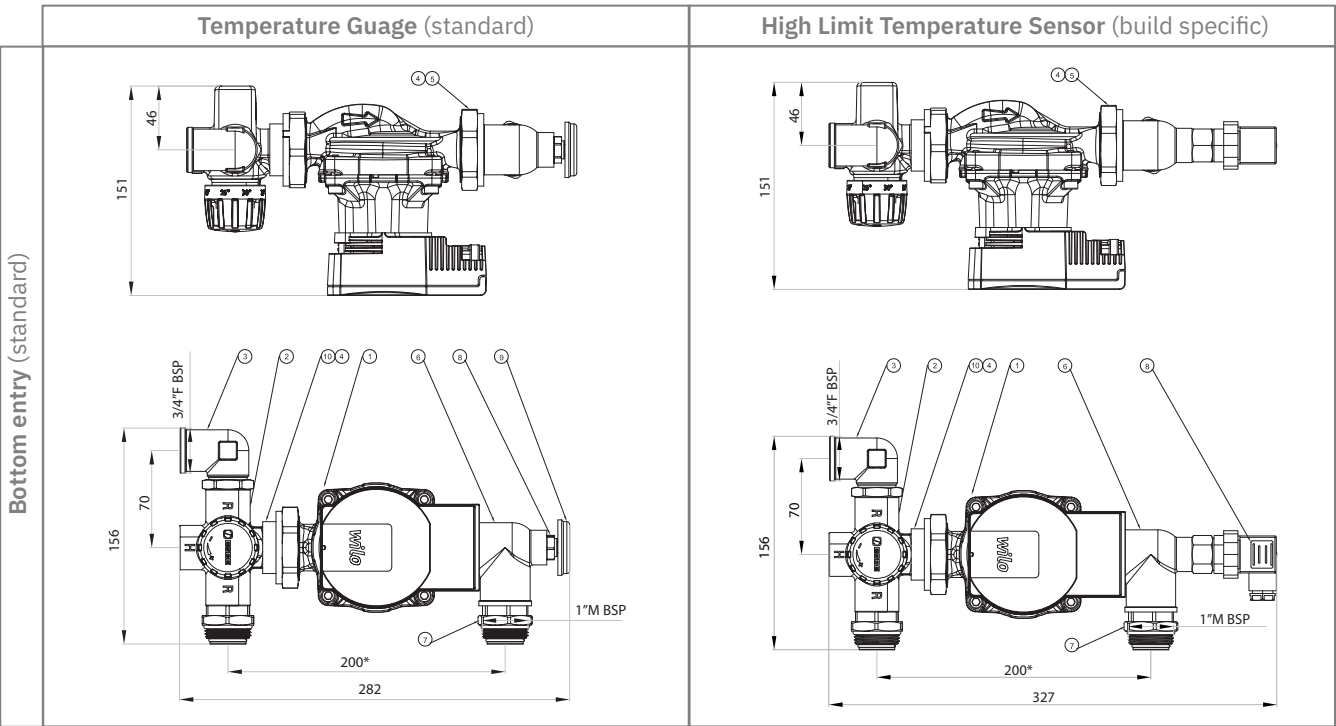
# Dimensions



## Dimensions - Grundfos Circulation Pump



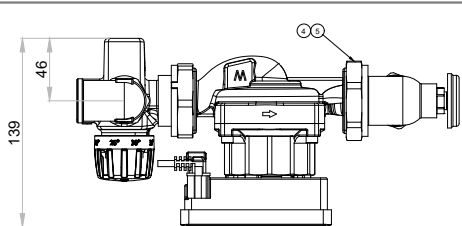
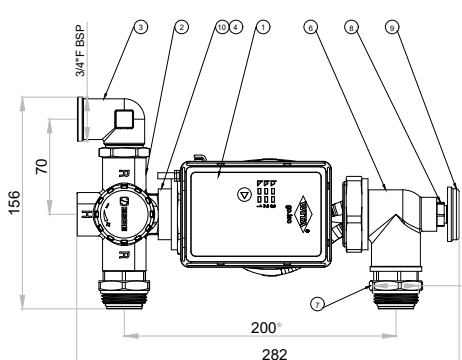
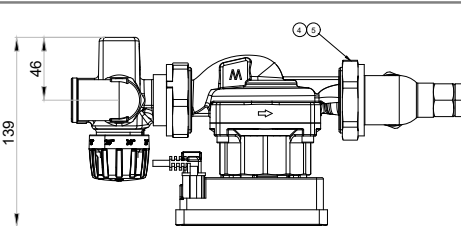
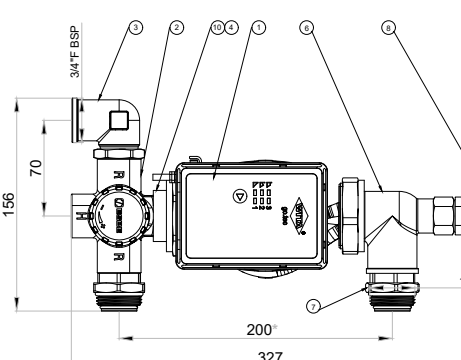
## Dimensions - Wilo Circulation Pump



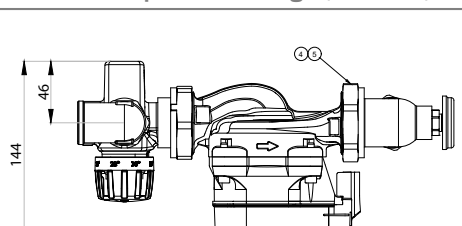
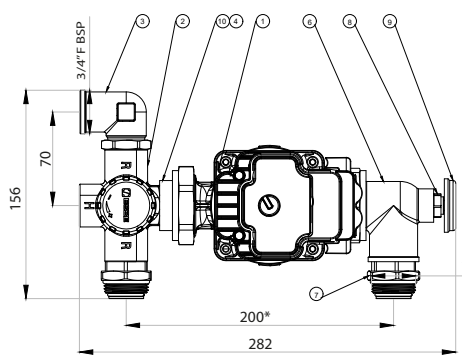
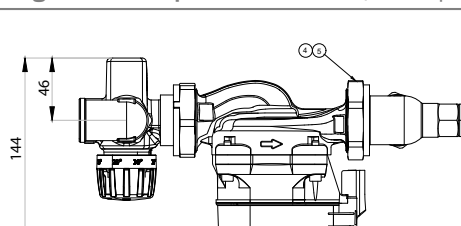
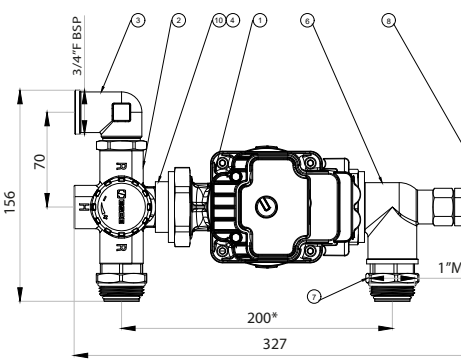
# Dimensions



## Dimensions - WITA Circulation Pump

	Temperature Guage (standard)	High Limit Temperature Sensor (build specific)
Bottom entry (standard)	 	 

## Dimensions - Taconova Circulation Pump

	Temperature Guage (standard)	High Limit Temperature Sensor (build specific)
Bottom entry (standard)	 	 

# Technical Information



## Materials

Component			Material	Grade
1	Typical pump (example Wilo)	Body	Cast iron	GG-20
		Impeller	Reinforced plastic	PP-GF40
		Shaft	Stainless steel	AISI 1.4122
		Bearing	Carbon	W02/T
2	ESBE 4-Port thermostatic mixing valve	Setting knob	Plastic	PA6
		Lid	DZR brass	CW625N
		Wax element	Copper, stainless steel, wax	-
		Regulating cone	Plastic	PPS
		Spring	Steel	EN 10270-3
		Valve body	Nickel plated DZR brass	CW602N
3	¾" Primary elbow	Body	Nickel plated brass	HPB58-3
		O-Ring	Rubber	EPDM
4	Washer		Rubber	EPDM
5	1 ½" rapid connection nut	Body	Nickel plated brass	HPB58-3
		O-Ring	Rubber	EPDM
6	Flanged elbow with integral check valve		Nickel plated brass	HPB58-3
		Body	Plastic	PA66
		Spring	Stainless steel	AISI304
		O-Ring	Rubber	EPDM
7	¾" F x 1" M self-sealing spinning nut	Body	Nickel plated brass	HPB58-3
		O-Ring	Rubber	EPDM
8	3/8" pocket		Nickel plated brass	HPB58-3
9	Temperature gauge, 0-80°C scale	Body	Various	
		Gauge cover	Cardboard	
H	Flow from heat source			
R	Return from manifold / flow to heat source			

## Technical

Assembly Specification	
Medium	Heating water to VDI 2035, glycol solutions
Max. percentage of glycol	< 50%
Max. working pressure	PN10
Max. differential pressure	1 bar
Min. recommended pressure	3 kPa
Working temperature range	0 - 80°C
Adjustable temperature range	20 - 55°C
Factory preset temperature	55°C
Temperature stability	± 3%
Minimum flow rate for stability	9 l/m (0.15 l/s)
Recommended range of temperature differential	3 - 10°C
Secondary side connections for manifold	1" M
Primary side TMV connections	¾" F

## Assembly Options

Assembly Options	
Handing	Pack can be handed left or right, with bottom or top pipe entry
Manifold bar spacing	Available from 200mm to 225mm, straight or angled
Pump	Full range of ErP compliant options from all market leaders
Elbow	Optional on primary return
Spinning Nut	Different options to suit manifolds on market
Pocket	Available with temperature gauge and/or high limit thermostat
Fittings	Various options available from male to female, compression to union
Branded	OEM product with branding options available

# Product Codes

Due to the number of possible variations of pre-assembled T4 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.

## T4 Order Codes

Pack		T4							
Handing	Left side, bottom entry		-						
	Left side, top entry		LT						
	Right side, bottom entry		RS						
	Right side, top entry		RB						
Manifold Bars c/c	200mm			0					
	205mm			1					
	210mm			2					
	225mm			3					
	200mm O/S			4					
	205mm O/S			5					
	210mm O/S			6					
Pump	Excluded				0				
	Wilo 7m				1				
	Grundfos				2				
	Stuart Turner				3				
	Wita				4				
	Grundfos Trade				5				
	Taconova 8.5m				6				
Elbow	Excluded					0			
	Included					1			
Spinning Nuts (secondary)	Exclude						0		
	1" x M (S/S)						1		
	1" x F (S/S)						2		
	1" x F (glued)						3		
Pocket	Blank pocket							0	
	Temperature gauge							1	
	H/L thermostat							2	
	Temp gauge + H/L stat							3	
Fittings (primary)	Excluded								0
	1"F fittings (glued)								1
	1"F fittings (S/S)								2
	1"F S/N fittings (S/S)								3
	1"M fittings (glued)								4
	1"M fittings (S/S)								5
	22mm fittings (glued)								6
	22mm ball valve kit								7
Branded	No								0
	Yes								1

### FULL ASSEMBLY CODE: (T4-0211100)

T	4	-	0	2	1	1	1	0	0
PACK	HANDING	C/C	PUMP	ELBOW	SPIN-NUT	POCKET	FITTINGS	BRANDING	

#### Description:

T4 Grundfos Pump pack, LB/200mm, Rtn elbow, Mx S/N s/s, TG, no fittings



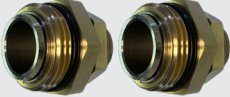
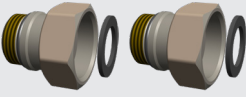
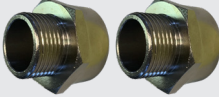
# Technical Information

## Technical





Option	Grundfos UPM3	Wilo Para	WITA go-tec H	Taconova TF3 Duo Hybrid
Head (m)*	7m	6m	7m	8.5m
Heating & cooling?	✗	✓	✓	✗
Anti-blocking	✓	✓	✓	✓
Venting program	✗	✓	✓	✓
Key lock	✓	✓	✓	✗
PWM option	✓	✓	✓	✓
Temperature range	2 – 110°C	-10 – 95°C	-10 – 110°C	2 – 110°C
Pressure rating	PN10	PN10	PN10	PN10
IP rating	IP44	IPX4D (IP44)	IP44	IP44
EEI	GOE 6m < 0.20	GOE 6m < 0.20	GOE 7m < 0.19	GOE 8.5m < 0.20
Warranty	2 years	18 months	5 years	5 years

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

## Spinning Nut Options

0	1	2	3
-			
Left with 3/4"xF connections for installer to connect to.	<b>Standard option</b> 1"M spinning nut for quick connection to manifold.	1"F spinning nut for quick connection to manifold.	1"F spinning nut, glued to pack for connection to manifold.

## Pocket Options

0	1	2	3
			
Empty dry pocket is fitted only.	<b>Standard option</b> 0-80°C temperature gauge fitted in dry pocket.	High limit stat replaces dry pocket and gauge.	Gauge is retained, and wrap around high limit stat is also supplied loose.

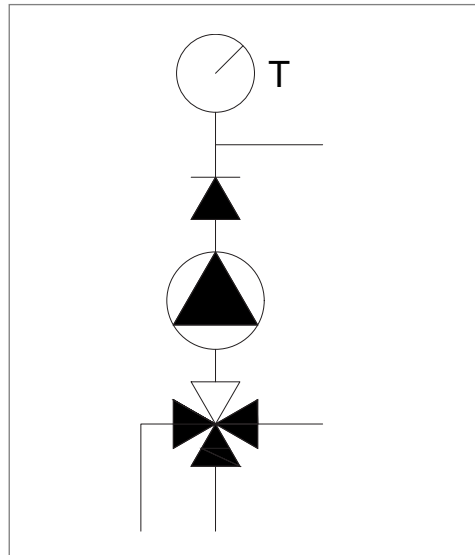


# Technical Information

## Fitting Options (primary side)

0	1	2	3
<b>Standard option</b> No fittings supplied, left for installer on site.	1" female fittings glued to primary side of pack.	1" female self-sealing fittings fitted to pack.	1" female self-sealing fittings with union fitted to pack.
4	5	6	7
1" M fittings glued to primary side TMV connections.	1" M self-sealing fittings fitted to primary side TMV connections.	22mm compression fittings glued to primary side TMV connections.	Self-sealing ball valve fitted to pack, with 22mm glued compression fittings.

## Hydraulic Schematic



### Schematic Key

Temperature gauge



Check valve



Pump



4-Port thermostatic mixing valve





# Technical Information

## Pressure Loss Graphs

**Kv (m³/h)**

2.50

