

Instruction Manual

# CS TSV REGULUS **PUMP STATION** - for boilers and heating systems



EN  
v. 1.0

*Regulus*

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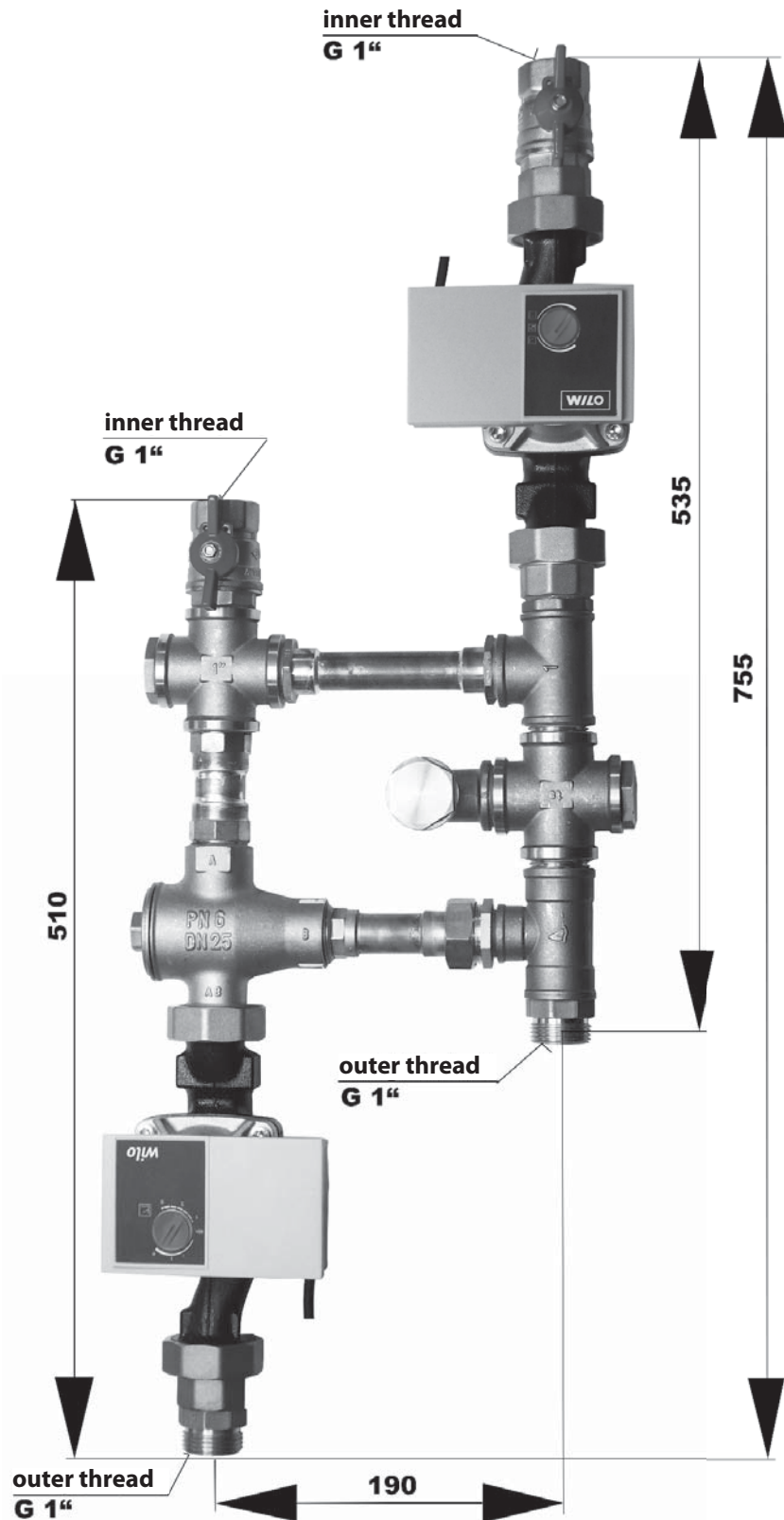
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# 1 Introduction

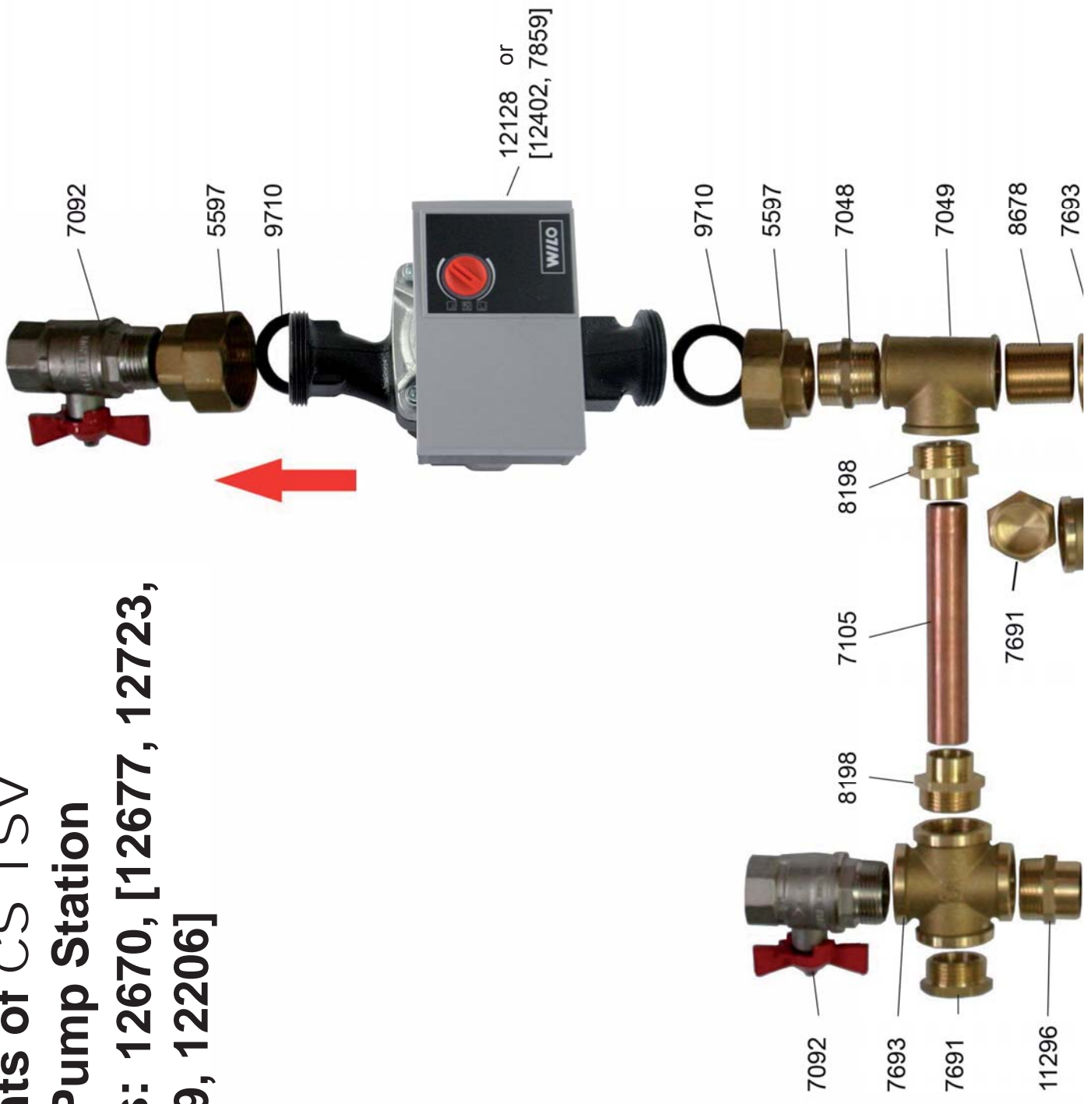
CS TSV Regulus Pump Station makes boiler installation easier. It contains all the important components necessary for boiler protection and proper operation in both space- and water heating modes. It is designed to be mounted directly on a boiler flow piping or on a wall.

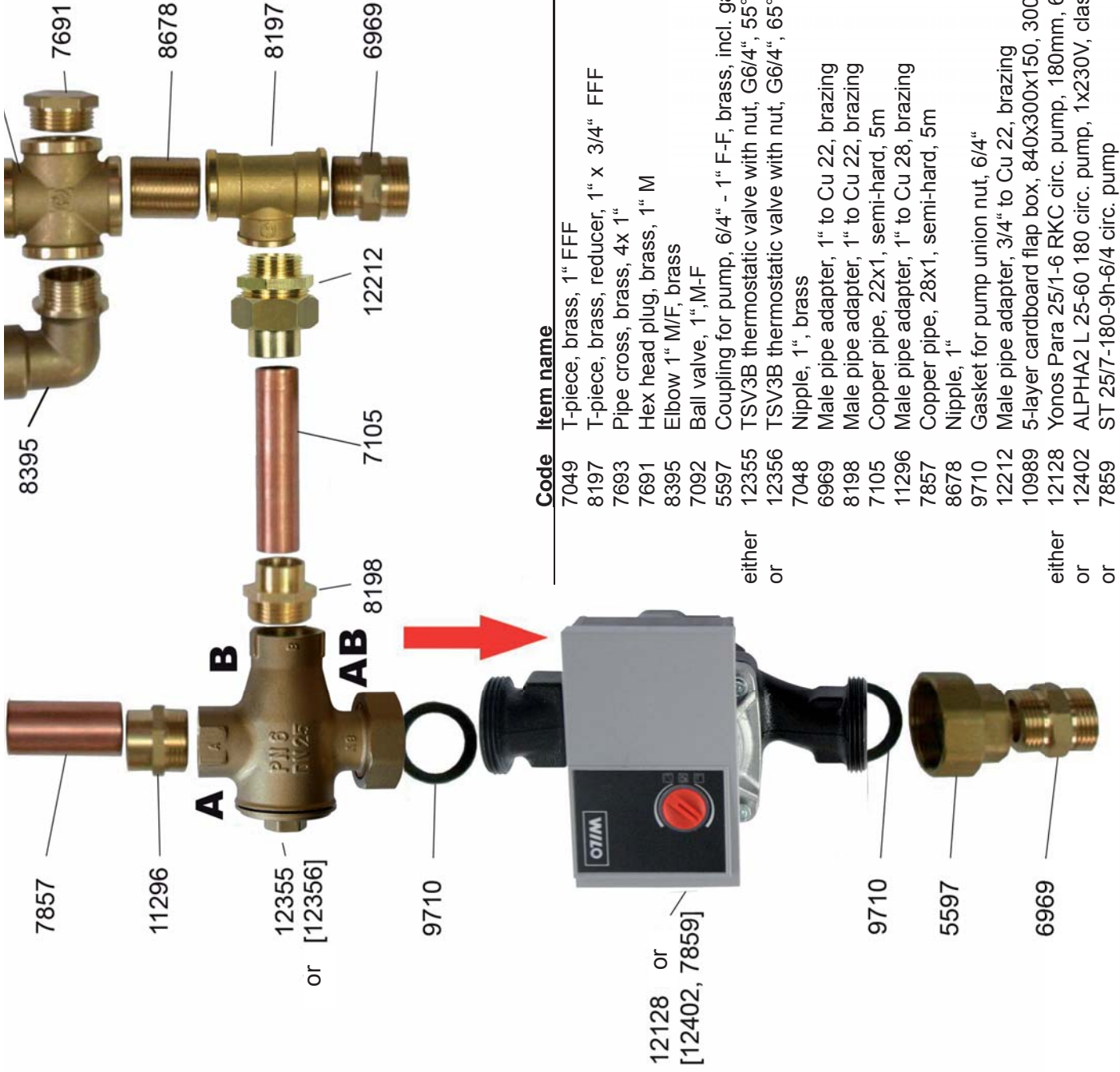
This pump station is designed for solid fuel boilers without an accumulation tank, enabling sanitary water heating in a storage tank.

## 2 Connection dimensions of CS TSV Regulus



# Components of CS TSV Regulus Pump Station with codes: 12670, [12677, 12723, 7699, 12209, 12206]





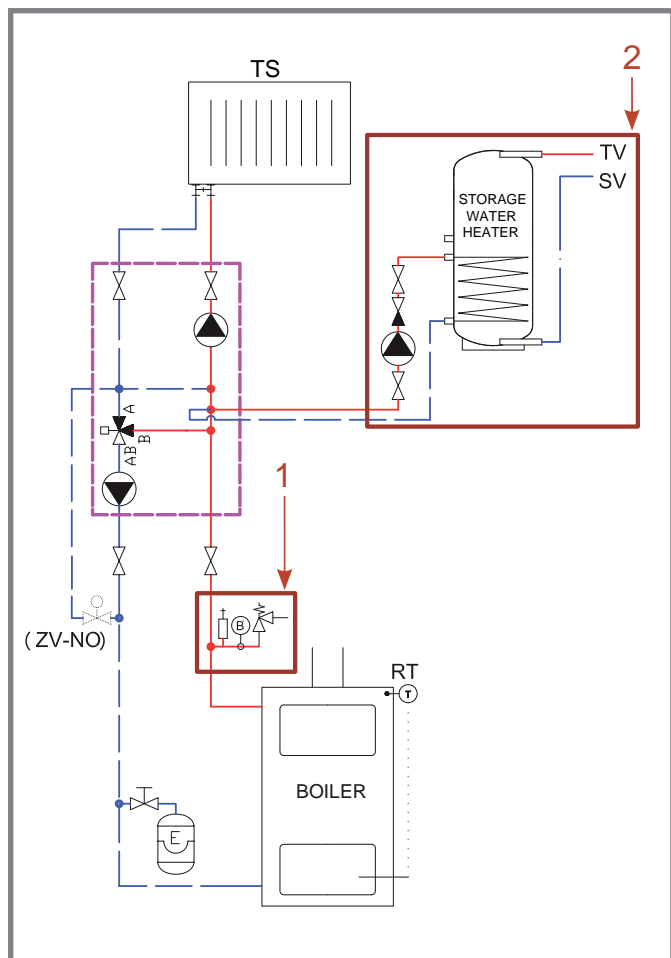
Code	Item name	Qty	Unit
7049	T-piece, brass, 1" FFF	1	pcs
8197	T-piece, brass, reducer, 1" x 3/4" FFF	1	pcs
7693	Pipe cross, brass, 4x 1"	2	pcs
7691	Hex head plug, brass, 1" M	3	pcs
8395	Elbow 1" M/F, brass	1	pcs
7092	Ball valve, 1", M-F	2	pcs
5597	Coupling for pump, 6/4" - 1" F-F, brass, incl. gaskets	3	pcs
12355	TSV3B thermostatic valve with nut, G6/4", 55°C, DN 25 G1" F	1	pcs
12356	TSV3B thermostatic valve with nut, G6/4", 65°C, DN 25 G1" F	1	pcs
7048	Nipple, 1", brass	1	pcs
6969	Male pipe adapter, 1" to Cu 22, brazing	2	pcs
8198	Male pipe adapter, 1" to Cu 22, brazing	3	pcs
7105	Copper pipe, 22x1, semi-hard, 5m	0,25	m
11296	Male pipe adapter, 1" to Cu 28, brazing	2	pcs
7857	Copper pipe, 28x1, semi-hard, 5m	0,1	m
8678	Nipple, 1"	2	pcs
9710	Gasket for pump union nut, 6/4"	4	pcs
12212	Male pipe adapter, 3/4" to Cu 22, brazing	1	pcs
10989	5-layer cardboard flap box, 840x300x150, 300x830 division	1	pcs
12128	Yonos Para 25/1-6 RKC circ. pump, 180mm, 6/4"	2	pcs
12402	ALPHA2 L 25-60 180 circ. pump, 1x230V, class A	2	pcs
7859	ST 25/7-180-9h-6/4 circ. pump	2	pcs

### 3 Function description of CS TSV Regulus

CS TSV keeps the return temperature to a boiler at 55°C [65 °C] which protects the boiler against condensation and tarring. Water for a heating system is mixed to a temperature corresponding to the boiler output.

Output for the heating system is controlled on the boiler itself - e.g. with an RT3 thermostatic controller or with a room unit with an RT3-E controller.

### 4 Schematic hydraulic diagram of CS TSV Regulus



Legenda:	
TS	- heating system
TV	- domestic hot water
SV	- cold water
E	- expansion vessel
B	- manometer
ZV-NO	- zone valve, normally open
T	- thermometer
RT	- thermostatic draft regulator
<b>1</b>	Safety assembly for a heating system, code 9797. The assembly contains a manometer, air release valve and a safety valve. In case these components are already installed on the boiler, this assembly is not needed.
<b>2</b>	A storage water heater can be connected to the pump station.

Optional accessories

### 5 Variants of CS TSV Regulus

Type	TSV temper.	Pump	Code
CS TSV 55 YP 26/1-6	55 °C	Yonos Para 25/1-6 RKC	12670
CS TSV 65 YP 26/1-6	65 °C	Yonos Para 25/1-6 RKC	12677
CS TSV 55 ST 25/7	55 °C	Star ST 25/7	12723
CS TSV 65 ST 25/7	65 °C	Star ST 25/7	7699
CS TSV 55 Alpha	55 °C	Alpha2 L 25-60	12209
CS TSV 65 Alpha	65 °C	Alpha2 L 25-60	12206

## 6 Components of CS TSV Regulus:

- » heating system pumps
- » TSV3B thermostatic mixing valve
- » 2 ball valves for connection to a heating system

## 7 Function description of the TSV3B valve [12355 - 55 °C or 12356 - 65 °C]



TSV B thermostatic mixing valve is fitted with an integrated thermostatic insert that will close the „A” inlet (from a heating system), if the return water to the boiler („AB” outlet) is colder than nominal. As soon as the nominal temperature is reached, the thermostat starts opening the „A” inlet slowly and mixing the cold return water with the hot water from the „B” inlet (boiler outlet) with the aim to reach the nominal return temperature („AB” outlet). At the same time, it closes the „B” inlet, limiting so the hot water flow coming from the by-pass till its complete tight closure. Thanks to this, no balancing valve is needed.

The Thermostatic mixing valve is made of brass, sealing of the element and body plug are made of EPDM, sealing

of closing plug is made of NBR.

## 8 G 6/4” Pumps: Wilo Star ST 25/7 - 180mm, G6/4” [7859]

**Wilo Yonos Para 25/1-6 RKC, 180mm, G6/4” [12128]**

**Grundfos ALPHA2L 25-40, 180mm, G6/4” [12402]**

### Design

Wet running circulation pumps with threaded joints. Selectable speed steps for output adjustment.

### Application

All hot/water heating systems, industrial circulation systems, cold water circulation systems and A/C units.

**Wilo Star ST 25/7 - 180mm,  
G 6/4”, code 7859**



**Wilo Yonos Para 25/1-6 RKC,  
180mm, G 6/4”, code 12128**



**Grundfos ALPHA2L 25-60,  
180mm, G 6/4”, code 12402**



## 9 Optional accessories



### **a) Safety assembly for a heating system [code 9797]**

The assembly contains a manometer, air release valve and a safety valve. In case these components are already installed on the boiler, this assembly is not needed.

### **b) Regulus storage water heaters**

- model lines RBC, R2BC, RGC, R2GC, NBC, N2BC, RDC and R2DC

### **c) Accumulation tanks**

- model lines PS, PS E, PSWF, PS2F, PS N, PSWF N, PS2F N, HSK, DUO E and DUO E2.