

## K36E zone module with integrated temperature/flow bypass valve

1 1/4"/DN 32

With thermal control valve, to compensate temperature differences in solid fuel boilers as well as in wood firing and stove heating systems

### Features:

#### 2" female connections.

#### Large ball valve handles

Easy handling, visible closing position.

**Design insulation with optimized function** made of durable elastic EPP, **100% insulation of the fittings**, ventilation openings to cool the pumps.

**Free access** to the pump head by simply pulling off the cover.

#### Check valve in return pipe

prevents any noise when electronically controlled pumps are used, manual opener, 200 mm water column, spring-operated, thus suitable for horizontal and overhead installation.

#### Supply on the right = standard

The supply and return line can be changed infilled.

#### All water-carrying parts are made of brass.

#### All-metal temperature gauges

can be pulled off, integrated in the ball valve with an immersion sleeve.

#### Fully assembled with flat gaskets.

#### PAW heating circulation pumps - flanged 2-bolt

already installed, integrated in the insulation, pressure tested, serial numbered. **For technical reasons electronically controlled pumps are not recommended in the K36E modular heating circuit!**

#### Flat sealing 2" male connections

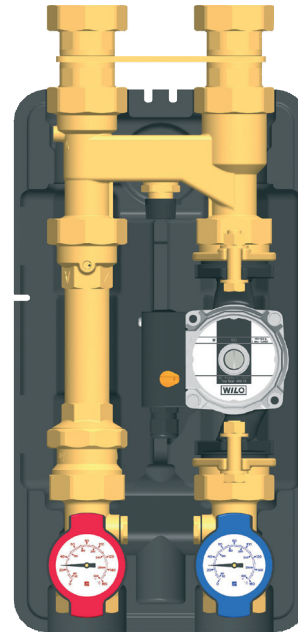
incl. 1 1/2" union nut for the installation on PAW modular distribution manifolds. Individual installations with wall brackets are possible by using the PAW mounting equipment.

#### Thermal control valve with automatic bypass and integrated bypass overflow valve

ensures that the boiler always keeps a minimum temperature (= opening temperature +/- 5 °F, +/- 3 °C) and prevents the boiler from contamination.

The special feature of the thermal control valve of the K36E heating circuit is the integrated **bypass overflow valve**. By means of this adjustable valve the K36E can be adjusted optimally to all possible working and mounting conditions:

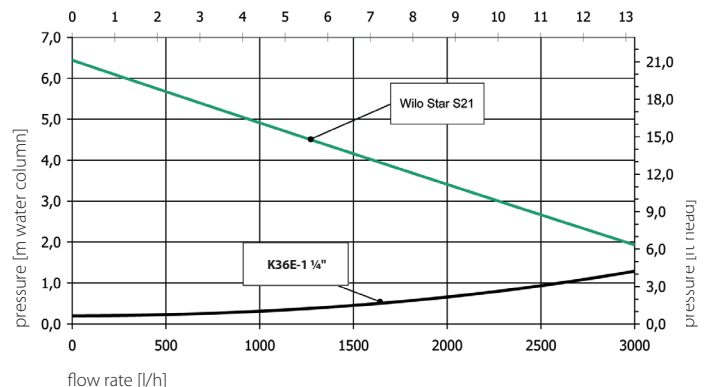
- When mounted to a buffer storage tank or a hydraulic separator the overflow valve must be closed. When the opening temperature in the boiler circuit is achieved, the power of the integrated boiler pump is high enough to load the storage tank/hydraulic separator.
- When mounted to distribution manifolds the pump pressure is reduced by means of the integrated bypass valve. The pump must operate at speed stage II. Unwanted circulation, for example excessive charging of potable water storage tanks is prevented this way.



### TECHNICAL DATA Zone Module K36E

<b>Dimension</b>	1 1/4" - DN 32	
<b>Opening temperature</b>	122 °F/131 °F/140 °F 50/55/60 °C	
<b>Materials</b>	Fittings	Brass
	Gaskets	EPDM/NBR
	Insulation	EPP
<b>Technical data</b>	Max. pressure	87 psi/6 bar
	Max. temperature	230 °F/110 °C
	CV value	8.3
<b>Dimensions</b>	Zone module inlet	2" female
	Zone module outlet	1 1/4" female
	Center distance	125 mm/4 21/32"
	Length	435 mm/17 1/8"
	Width insulation	250 mm/9 27/32"
<b>Recommended application</b>	Height insulation	462 mm/18 3/16"
	at ΔT = 36 °F/20 K at 11.4 USgpm/2600 l/h	<b>up to 205 MBH/60 kW</b>

Pressure drop K36E/pump characteristics  
 flow rate [USgpm]





## K36E zone module with integrated pressure bypass valve

1 ¼"/DN 32

With thermal control valve, to compensate temperature differences in solid fuel boilers as well as in wood firing and stove heating systems

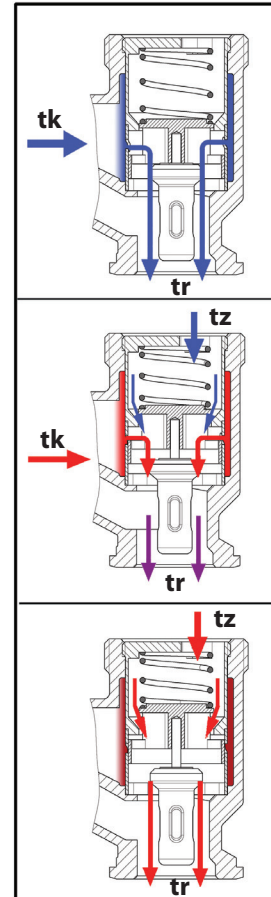
### Thermal control valve with bypass and integrated overflow valve

#### Function:

1. The thermal control valve shuts off the connection to the heating/storage tank (load) as long as the water in the boiler circuit is colder than the opening temperature of the thermal control valve. The pump in the K36E circulates the water in the boiler loop by means of the automatic bypass which is completely open.
2. When the water in the boiler circuit has reached the opening temperature (+/- 5 °F) of the thermal control valve this valve opens the flow from/to the load. The bypass shuts off to the same extent as the flow to the load is opened. The control valve opens the return line of the load and enables the water to circulate in the circuit depending on the setting of the integrated pressure bypass valve. The cold water from the consumer return line is mixed in the control valve with the hot water from the bypass. Depending on the temperature and the flow rate of the water from the return line the thermal control valve shuts off the connection to the lead. Thus the return line which leads to the boiler always remains at a certain temperature level.
3. With rising temperature in the boiler supply line or rising temperature in the return line from the load the thermal control valve opens (the flow connection to the lead). The temperature of the return line of the boiler remains nearly constant (+/- 5 °F, +/- 3 °C).

#### Please notice:

The boiler thermostat setpoint has to be set 36 °F (20 °C) higher than the opening temperature of K36E.



Boiler temperature tk is lower than the opening temperature; tr = tk

Boiler temperature tk is higher than the opening temperature. tr is approximately equivalent to the opening temperature.

Return line temperature tz from the consumer is higher than the opening temperature; tr = tz

Illustration	Option	Information	PAW pump	Item #
	<b>K36E</b> Opening temp. <b>122 °F/50 °C</b>	<b>Advantage PAW pump:</b> <ul style="list-style-type: none"> <li>• completely preassembled</li> <li>• precisely integrated in the insulation</li> <li>• pressure tested</li> <li>• serial number</li> <li>• 3-speed pump</li> </ul>	<b>Wilo Star S 21 FX</b>	<b>4739035 WI21 NA</b>
	<b>K36E</b> Opening temp. <b>131 °F/55 °C</b>		<b>Wilo Star S 21 FX</b>	<b>4739036 WI21 NA</b>
	<b>K36E</b> Opening temp. <b>140 °F/60 °C</b>		<b>Wilo Star S 21 FX</b>	<b>4739037 WI21 NA</b>
	<b>Wall bracket set for PAW modular heating circuit</b> Not required for installation in connection with a PAW modular distribution manifold. Using the wall bracket wall distances from 142.5 mm up to 167.5 mm is possible. Consists of: steel wall bracket, galvanized, mounting equipment.			
	<b>Wall bracket for heating circuits 1 ¼"</b>			<b>3722</b>
	<b>Connection set 1 ¼"</b> 2 x insertion piece 2" male for nut thread 1 ¼" NPT, brass			<b>3732 NA</b>