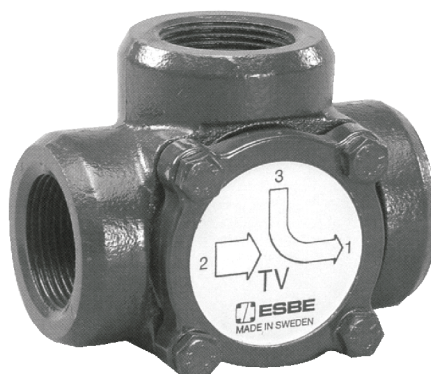


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## Thermic Valve TV

Thermostatic Bypass Valves

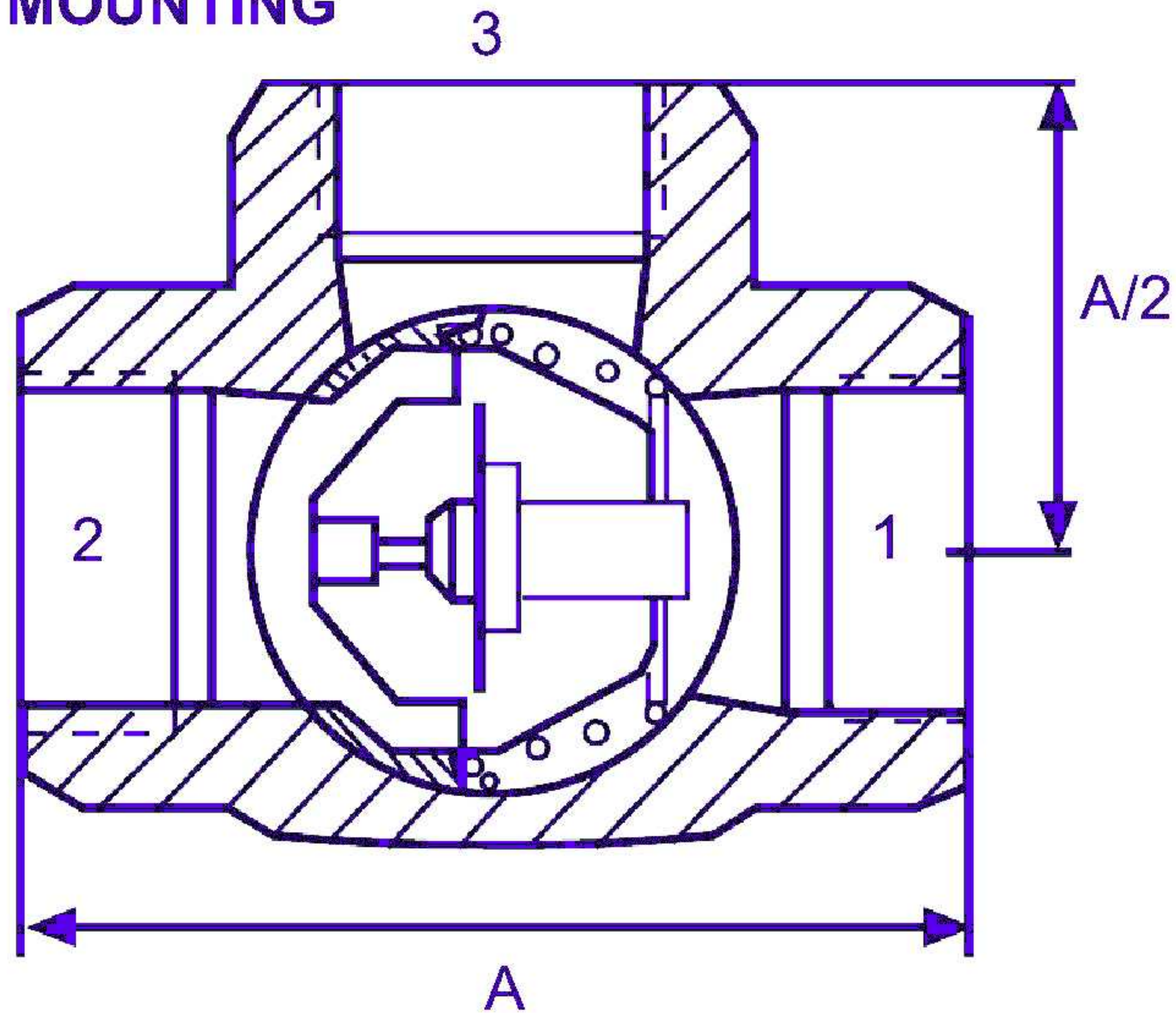
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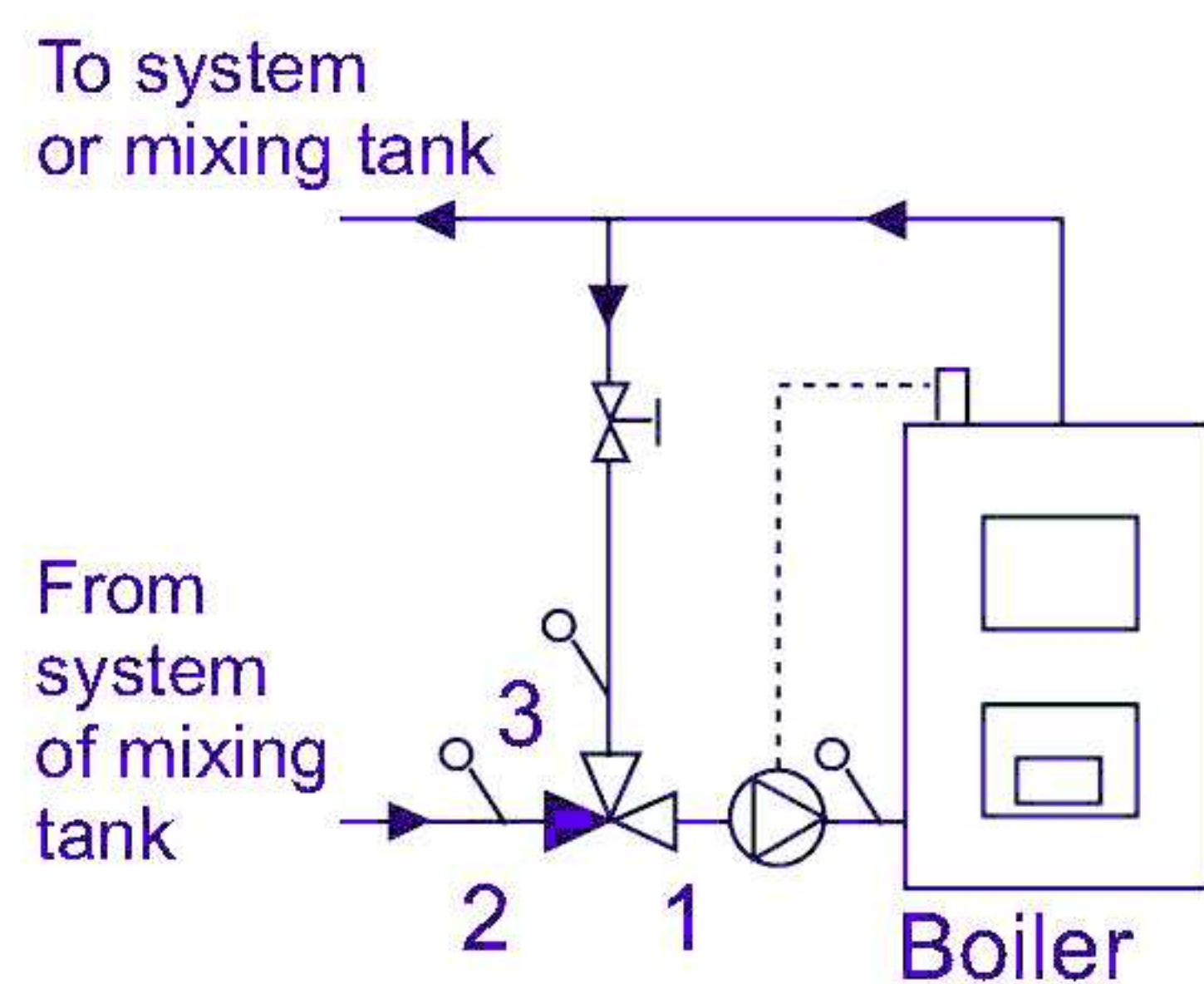


## Thermic Valve TV

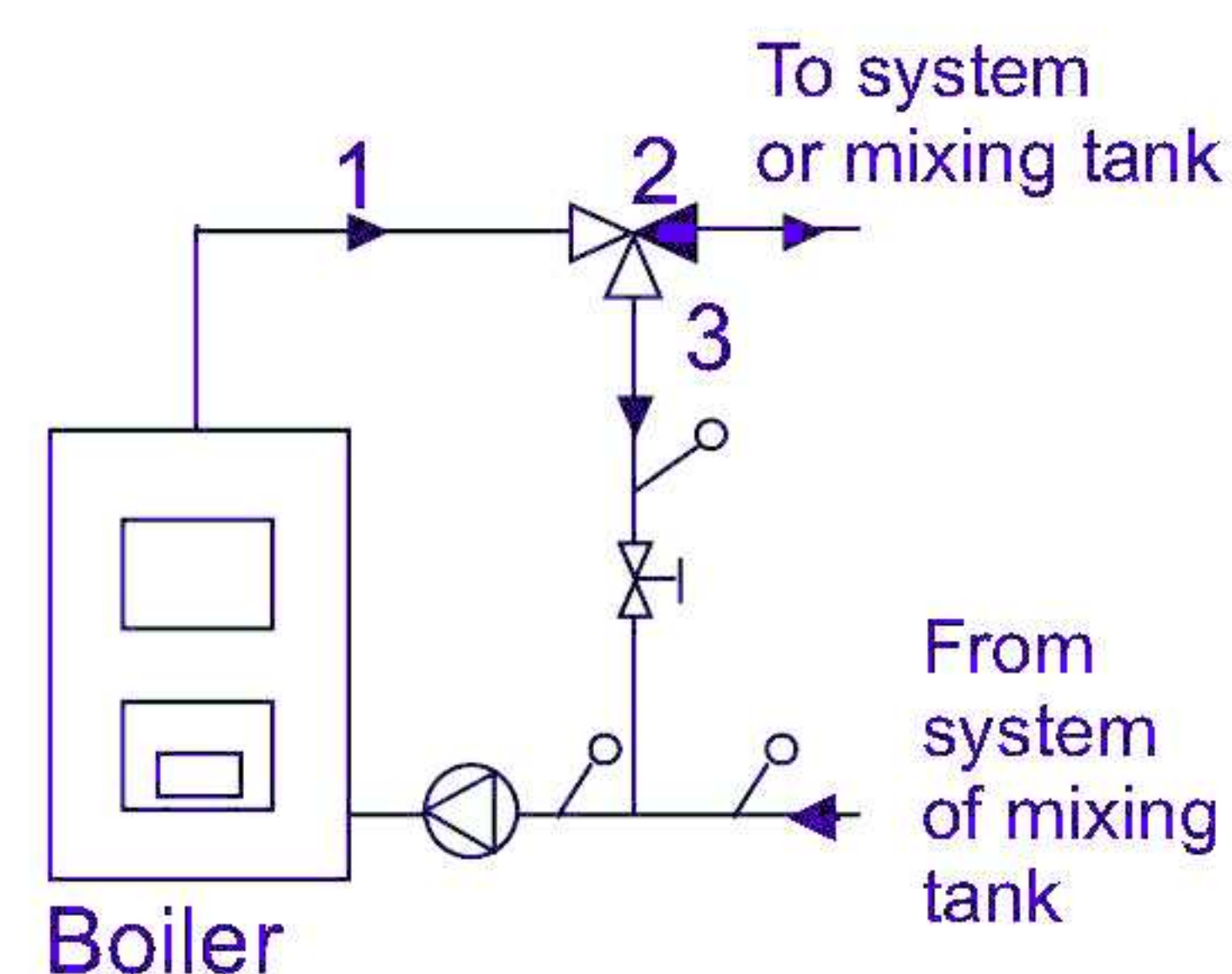
### TYPICAL MOUNTING



#### TYPICAL RETURN VALVE MOUNTING



#### TYPICAL SUPPLY VALVE MOUNTING



Temperature Ranges Supply Mounted: 160°F (72°C)  
Return Mounted: 140°F (60°C)/113°F (45°C)  
Max. Operating Pressure: 85psi/6bar  
Max. Operating Temperature: 230°F (110°C)



## Mounting

The ESBE Thermostatic valves type TV are designed to ensure optimum operating temperature inside a boiler. The thermostat within a TV valve allows flow through the bypass until the desired temperature is reached. TV valves can be mounted on either supply or return pipes.

#### Supply Mounting:

When the temperature inside the boiler reaches 160°F (72°C), the thermic TV valve will allow flow of hot water directly into the system or indirect heater. Between 160°F and 170°F, the TV valve allows the supply flow to bypass and mix with the return water, keeping the operating temperature levels high. At approximately 180°F (82°C) most of the flow is directed into the system.

#### Return Mounting:

Thermic valve TV will allow full bypass until the return flow temperature rises to 140°F (60°C). The TV valve opens when a 140°F minimum return temperature is reached. At approximately 158°F (70°C) most of the flow will be through the system.

#### Start-Up:

An adjustable balancing valve (or ball valve) must be installed on the bypass. With the bypass fully open, allow the temperature levels inside the boiler to reach standard operating level. Note, the bypass balancing valve should be adjusted (throttled) if the hot water flow is not automatically directed into the system, otherwise no adjustment is required.



## Ordering Details

Type	Part No.	Size	Instal.	Opening Temp.	A	A/2	Cv	Weight
461A	065B8920	1"NPT (Female x Female)	SUPPLY	160°F/72°C	4.2	2.1	10.5	3.3lbs
462A	065B8921	1-1/4"NPT (Female x Female)		160°F/72°C	4.5	2.25	16.4	4.4lbs
463A	065B8922	1-1/2"NPT (Female x Female)		160°F/72°C	4.7	2.35	20.0	5.3lbs
464A	065B8923	1"NPT (Female x Female)	RETURN	140°F/60°C	4.2	2.1	10.5	3.3lbs
465A	065B8924	1-1/4"NPT (Female x Female)		140°F/60°C	4.5	2.25	16.4	4.4lbs
466A	065B8925	1-1/2"NPT (Female x Female)		140°F/60°C	4.7	2.35	20.0	5.3lbs
464AL	065B8917	1"NPT (Female x Female)		113°F/45°C	4.2	2.1	10.5	3.3lbs
465AL	065B8918	1-1/4"NPT (Female x Female)		113°F/45°C	4.5	2.25	16.4	4.4lbs
466AL	065B8919	1-1/2"NPT (Female x Female)		113°F/45°C	4.7	2.35	20.0	5.3lbs