



## TH750 SIZING AND SELECTION CURVES



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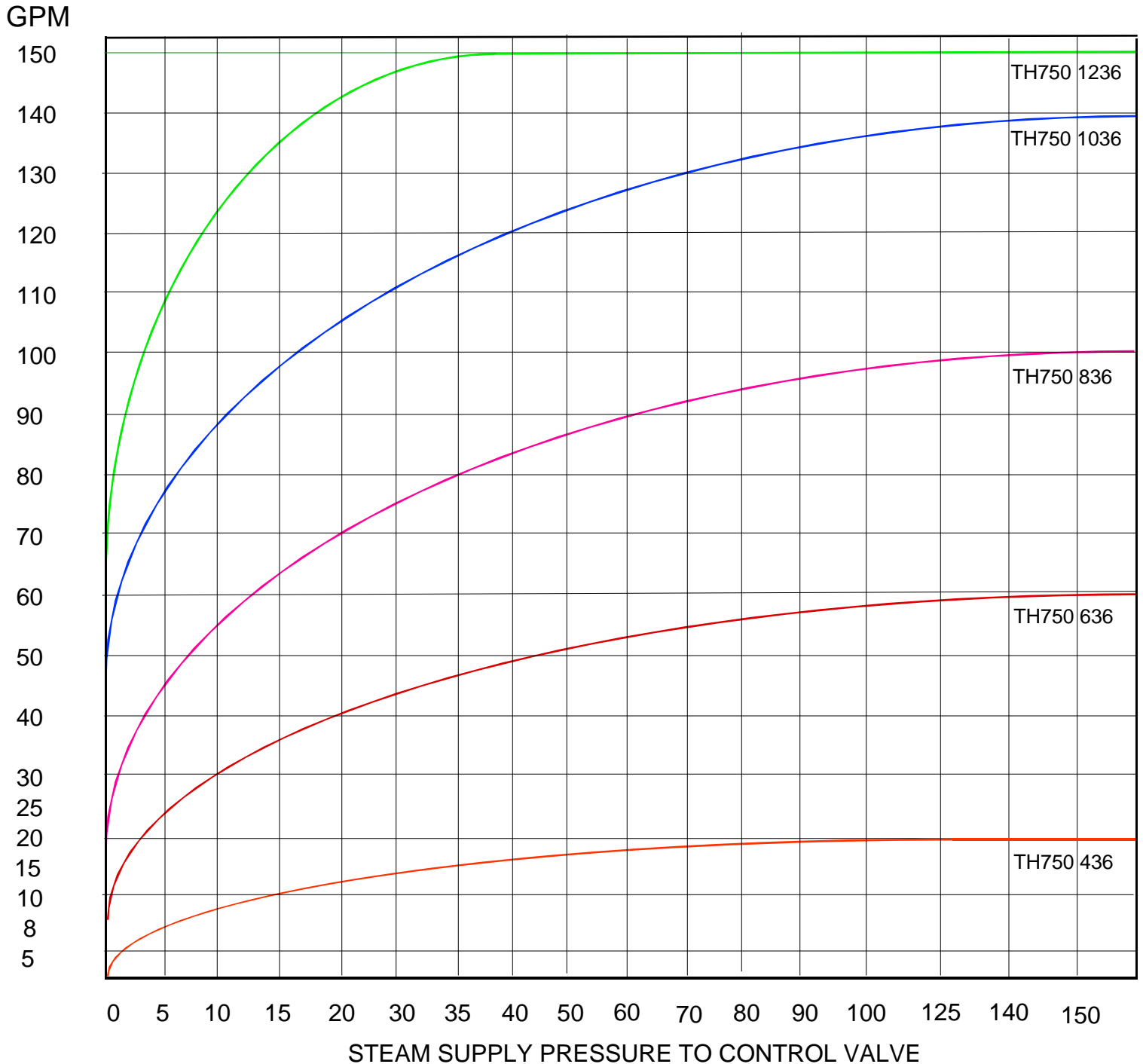
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## SIZING AND SELECTION NOTES

1. Always allow a margin of safety when sizing or selecting any TH750 type heater. Never size a heater at its maximum output point for normal demand. Allow at least a 10% safety margin. These selection curves are limited in GPM per size due to shell side velocities above 5 ft/sec.
2. These sizing and selection charts are designed mainly for domestic water service as the delta T levels are to heat water from 40F to 120F or 140F outlet temperatures.
3. It is always advisable to heat domestic water to 140F then blend it to 110-120F out to users.
4. When sizing any TH750 heater its always advisable to select a subcooling type unit in order to avoid condensate temperatures on the outlet of the steam trap above 200F. This will allow any electric condensate pump to operate without cavitation or seal failures. Wasted flash steam will also be eliminated as well as flash tanks in many piping designs.
5. When selecting a TH750 above 30 psig inlet pressure steam and not selecting the heater for sub cooling flash steam and high temperature condensate will exist.
6. When steam pressures are above 30 psig to any TH750 heater the Thermaflo EC1000 type electronic controller should be used that controls the pressure to the tubes and the outlet water simultaneously avoiding costly steam pressure reducing valve stations. Consult Thermaflo Applications or your Thermaflo representative for more information.
7. The sizing charts apply to vertical or horizontal configuration type heaters.
8. When using saturated steam for heating the required capacity in lbs/hr of flow can be simply calculated with the GPM divided by 2 x the temperature rise x 1.10 latent heat correction factor. For example 100 GPM required max flow being heated from 40F to 140F will require 5,500 lbs hr saturated steam. The correction factor also takes into consideration steam quality which is lower than 100% in all cases. After calculating the lbs/hr required consult the Thermaflo JVV steam control valve sizing table for the recommended control valve size. A main drip steam trap and wye strainer should always be installed as close to the steam control valve inlet as possible to avoid condensate buildup in the steam supply line and dirt and scale from lodging in the control valve. Refer to the TH750 hookup drawing for details. possible to avoid any condensate build up in the steam supply line
9. It is also advisable to consult the Thermaflo steam supply line sizing chart and keep the velocity between 4000 and 8000 Ft/min in order to avoid pressure drop at higher flows to the TH750.
10. Consult your Thermaflo representative for application and sizing details.

TH750 CAPACITIES 40F to 120F SINGLE WALL COPPER AND COPPER NICKEL TUBES  
36" INTERNAL LENGTH

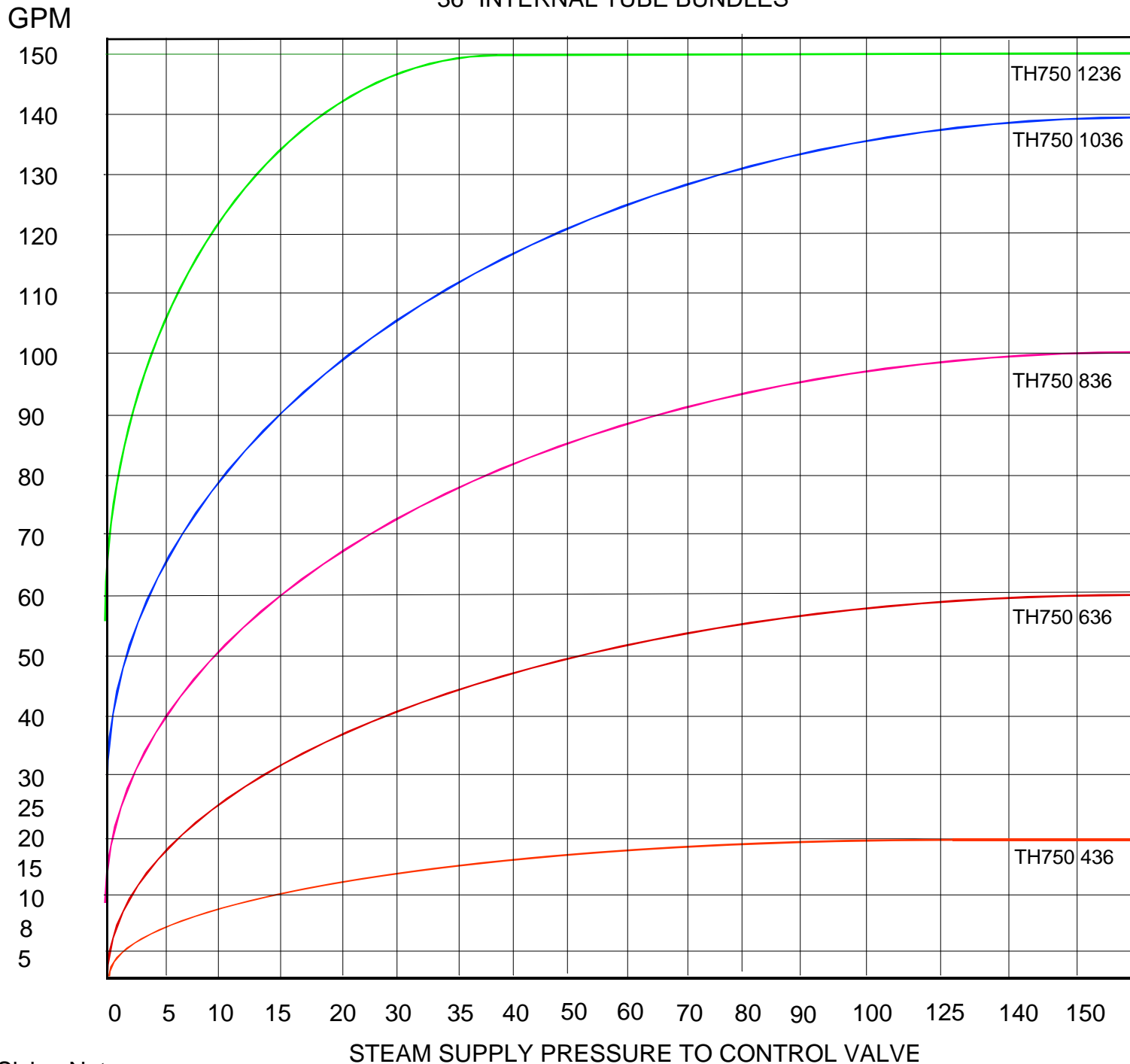


Sizing Notes:

1. When selecting a heater never select at the model numbers maximum flow rate. Allow a minimum of 10% safety margin. Select steam pressure to the control valve and move up vertically to the TH750 heater flow curve that meets or exceeds your desired GPM flow rate.
2. When sizing a TH750 heater for Zero Flash subcooling service select the model and flow rate using 15 psig and below supply pressure point even when a higher pressure steam is supplied to the control valve. TH750 heaters selected above 30 psig will generate flash steam at maximum demands.
3. Flow rates are limited to 1 psig shell side pressure drop and a flow velocity of 5 ft/sec or below.
4. Consult Thermaflo applications for conditions other than shown in this chart.

TH750 CAPACITIES 40F to 120F DOUBLE WALL COPPER AND COPPER NICKEL TUBES  
 TH750 CAPACITIES 40F to 120F SINGLE WALL 316L STAINLESS STEEL TUBES

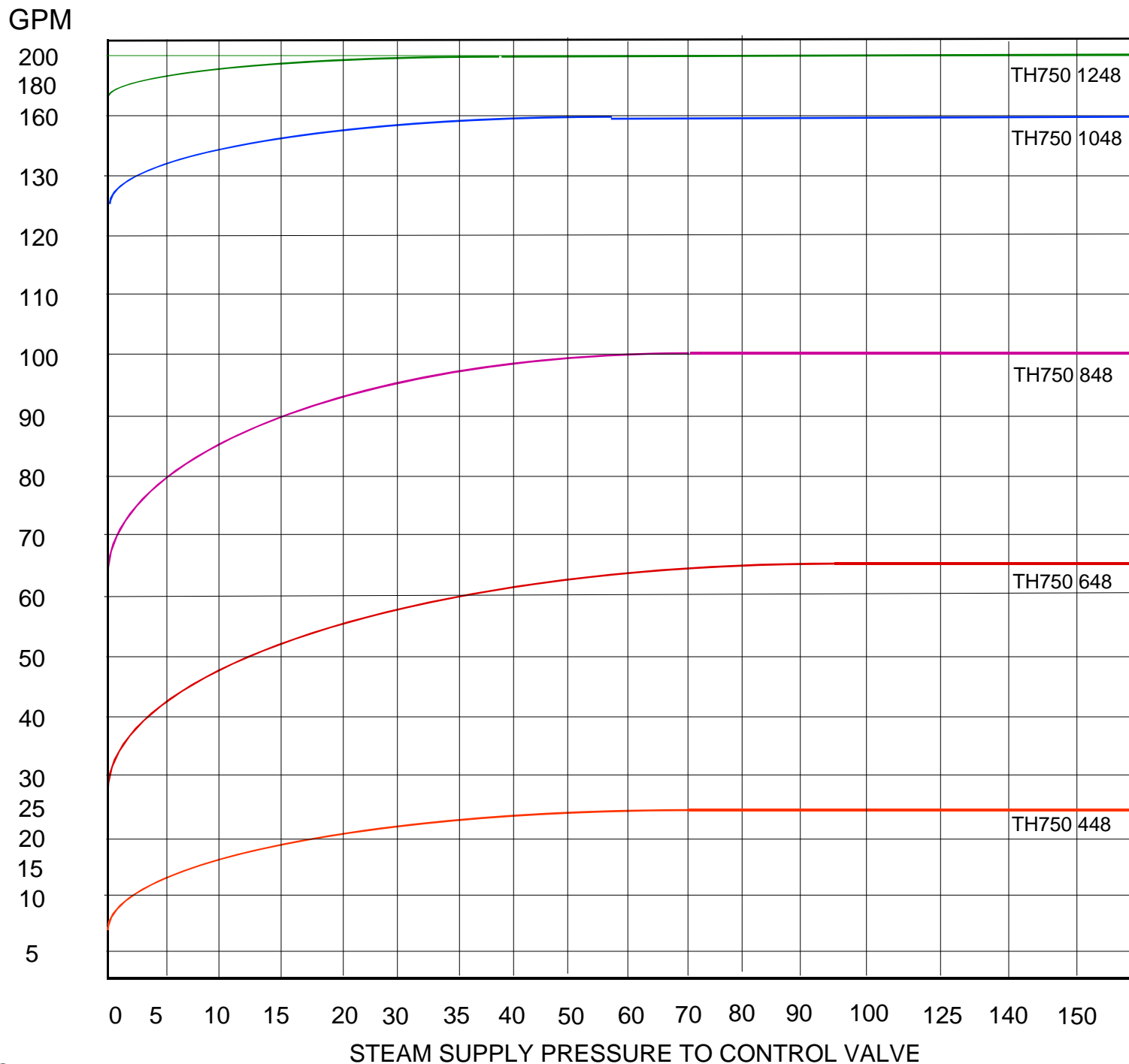
36" INTERNAL TUBE BUNDLES



Sizing Notes:

1. When selecting a heater never select at the model numbers maximum flow rate. Allow a minimum of 10% safety margin. Select steam pressure to the control valve and move up vertically to the TH750 heater flow curve that meets or exceeds your desired GPM flow rate.
2. When sizing a TH750 heater for Zero Flash subcooling service select the model and flow rate using 15 psig and below supply pressure point even when a higher pressure steam is supplied to the control valve. TH750 heaters selected above 30 psig inlet steam pressures will generate flash steam at maximum flow demands.
3. Flow rates are limited to 1 psig shell side pressure drop and a flow velocity shell side of 5 ft/sec or below.
4. Consult Thermaflo applications for conditions other than shown in this chart.

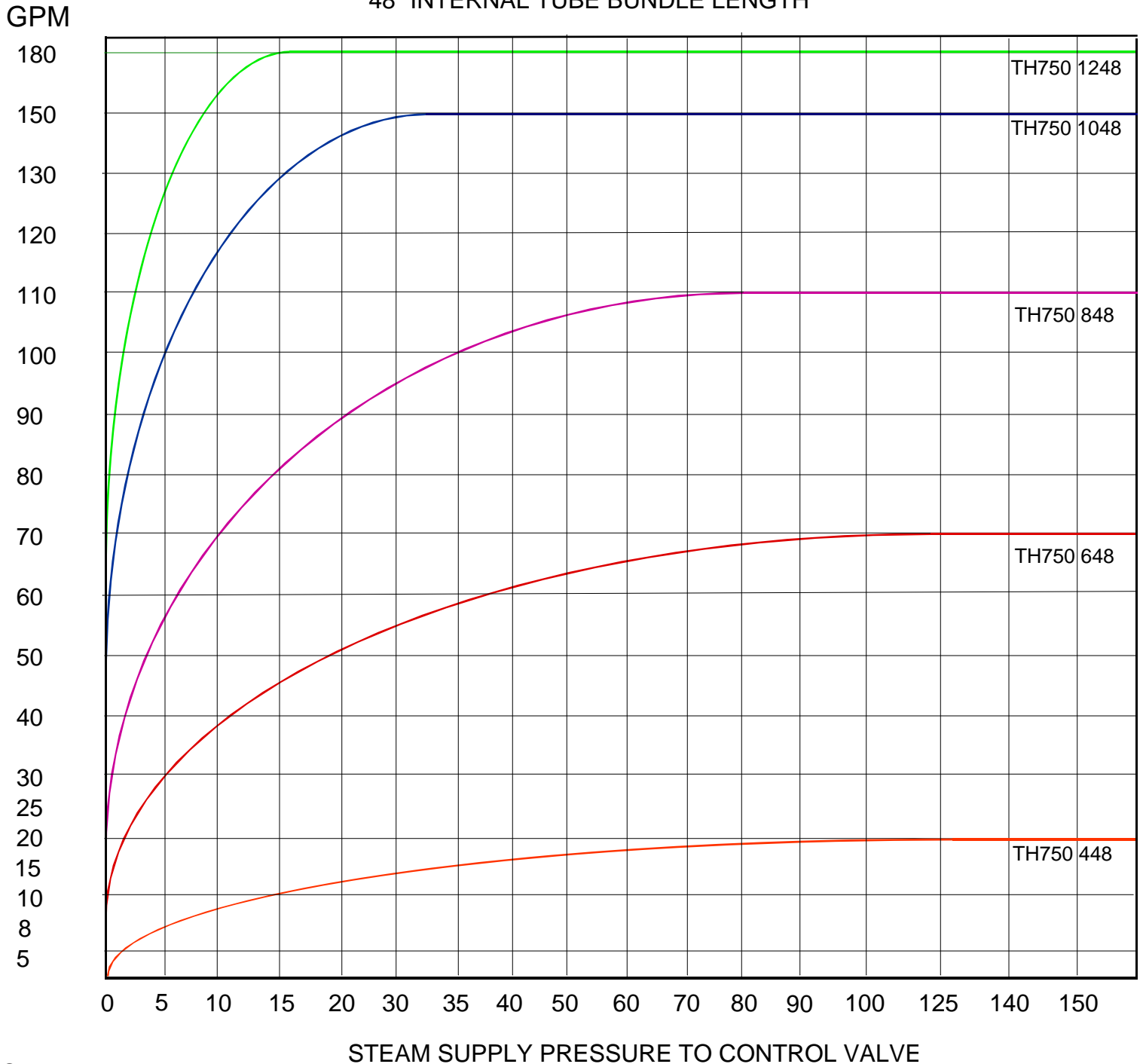
TH750 CAPACITIES 40F to 120F SINGLE WALL COPPER AND COPPER NICKEL TUBES  
48" INTERNAL TUBE BUNDLE LENGTH



Sizing Notes:

1. When selecting a heater never select at the model numbers maximum flow rate. Allow a minimum of 10% safety margin. Select steam pressure to the control valve and move up vertically to the TH750 heater flow curve that meets or exceeds your desired GPM flow rate.
2. When sizing a TH750 heater for Zero Flash subcooling service select the model and flow rate using 15 psig and below supply pressure point even when a higher pressure steam is supplied to the control valve. The TH750 heaters selected above 30 psig will generate flash steam at maximum demands.
3. Flow rates are limited to 1 psig pressure drop through the shell and velocity of 5' ft/sec or below.
4. Consult Thermaflo Applications for conditions of service other than shown on this chart.

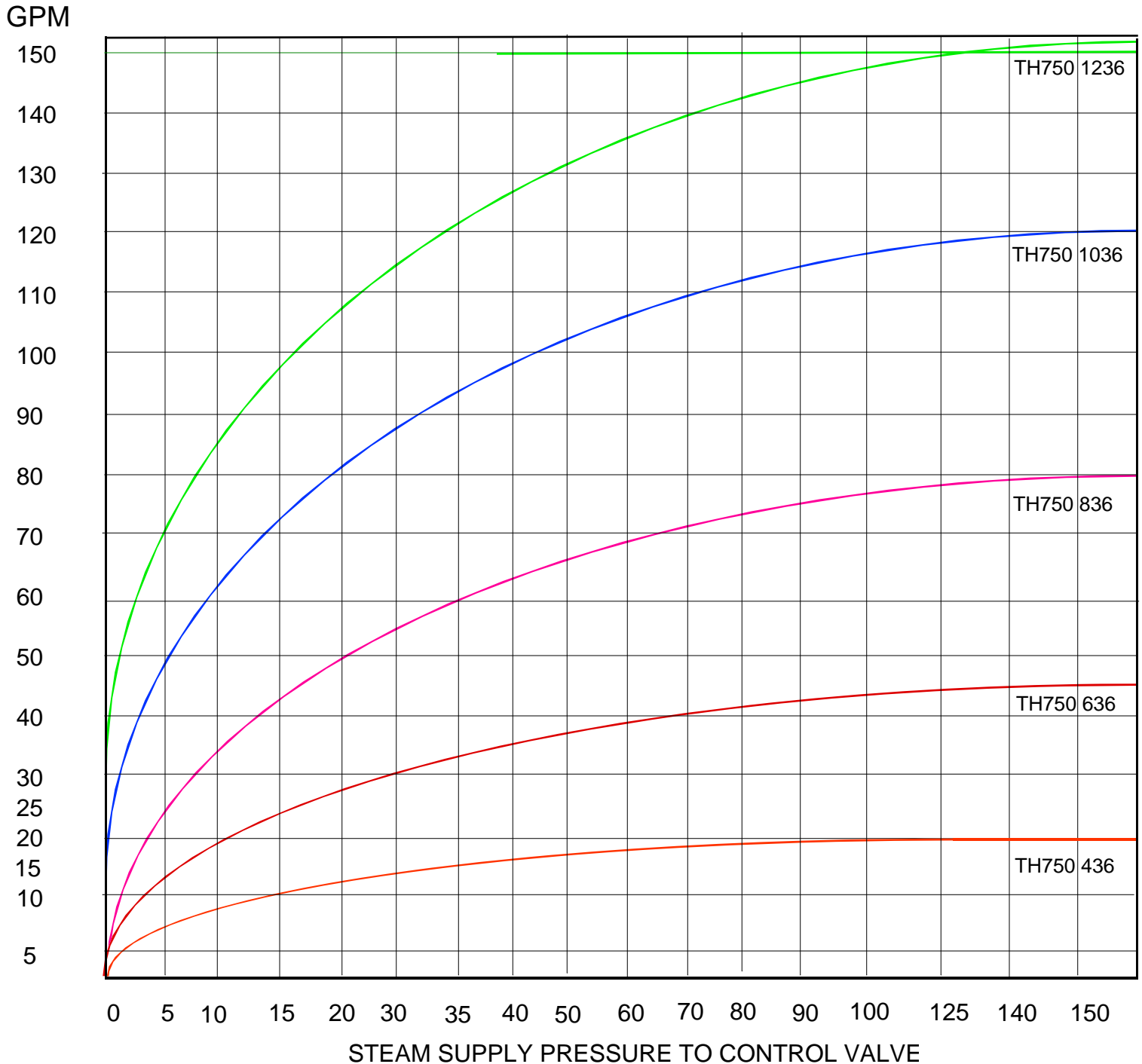
TH750 CAPACITIES 40F to 120F DOUBLE WALL COPPER AND COPPER NICKEL TUBES  
 TH750 CAPACITIES 40F to 120F SINGLE WALL 316L STAINLESS STEEL TUBES  
 48" INTERNAL TUBE BUNDLE LENGTH



Sizing Notes:

1. When selecting a heater never select at the model numbers maximum flow rate. Allow a minimum of 10% safety margin for desired max flow. Select steam pressure to the control valve and move up vertically to the TH750 heater flow curve that meets or exceeds your desired GPM flow rate.
2. When sizing a TH750 heater for Zero Flash subcooling service select the model and flow rate using 15 psig and below supply pressure point even when a higher pressure steam is supplied to the control valve. The TH750 heaters selected above 30 psig will generate flash steam at maximum demand rates.
3. Flow rates are limited to 1 psig shell side pressure drop through the shell and velocity 5 ft/sec or below.
4. Consult Thermaflo Applications for conditions of service other than shown on this chart.

TH750 CAPACITIES 40F to 140F SINGLE WALL COPPER AND COPPER NICKEL TUBES  
36" INTERNAL TUBE BUNDLE LENGTH

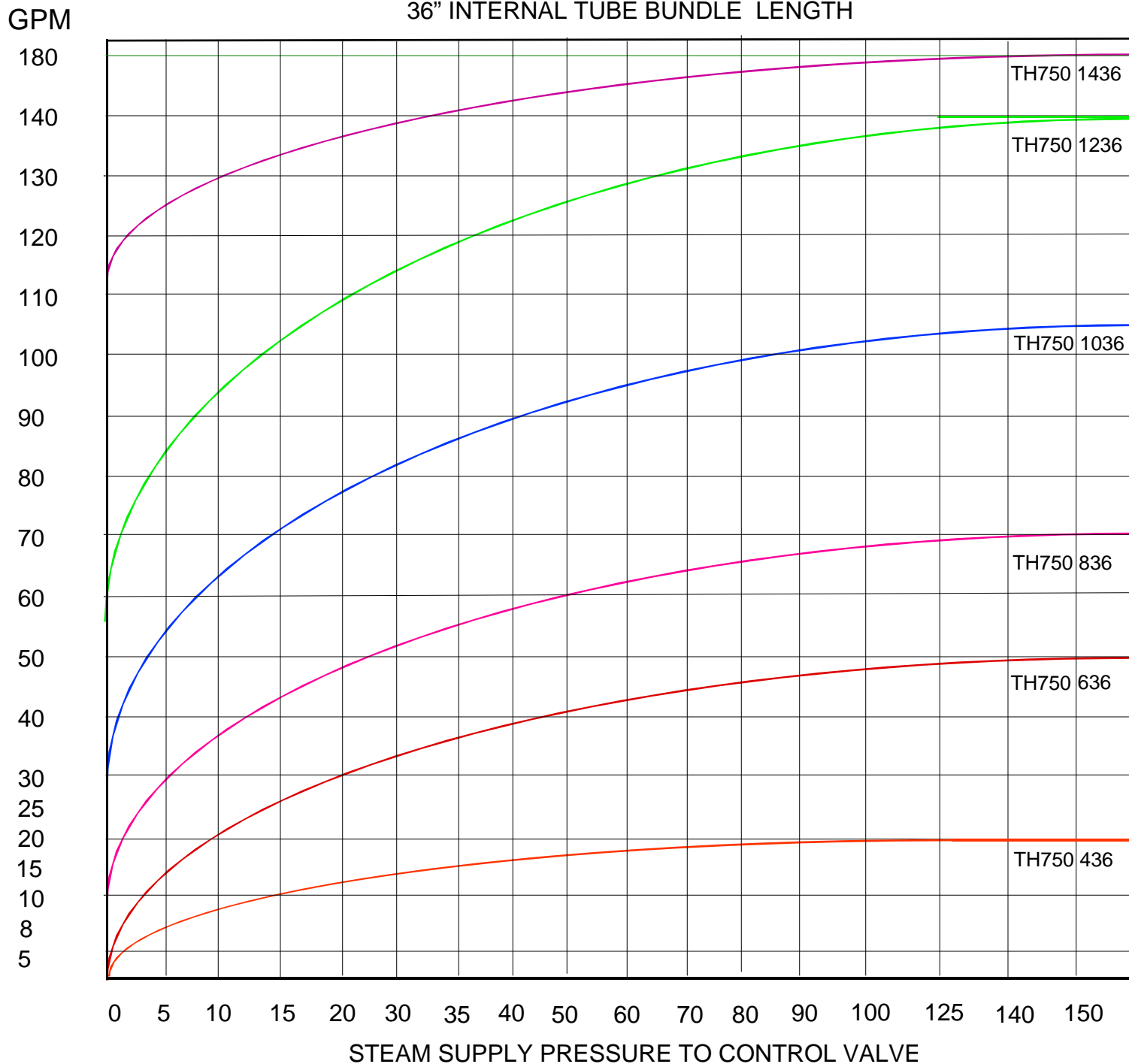


Sizing Notes:

1. When selecting a heater never select at the model numbers maximum flow rate. Allow a minimum of 10% safety margin for the desired flow. Select the steam pressure to the control valve and move up vertically to the TH750 heater flow curve that meets or exceeds your desired flow rate.
2. When sizing a TH750 heater for Zero Flash subcooling service select the model and flow rate using 15 psig and below supply pressure point even when a higher pressure steam is supplied to the control valve.
3. Flow rates are limited to 1 psig shell side pressure drop and shell side water flow velocity of 5 ft/sec or below.
4. Consult Thermaflo Applications for conditions of service other than shown on this chart.



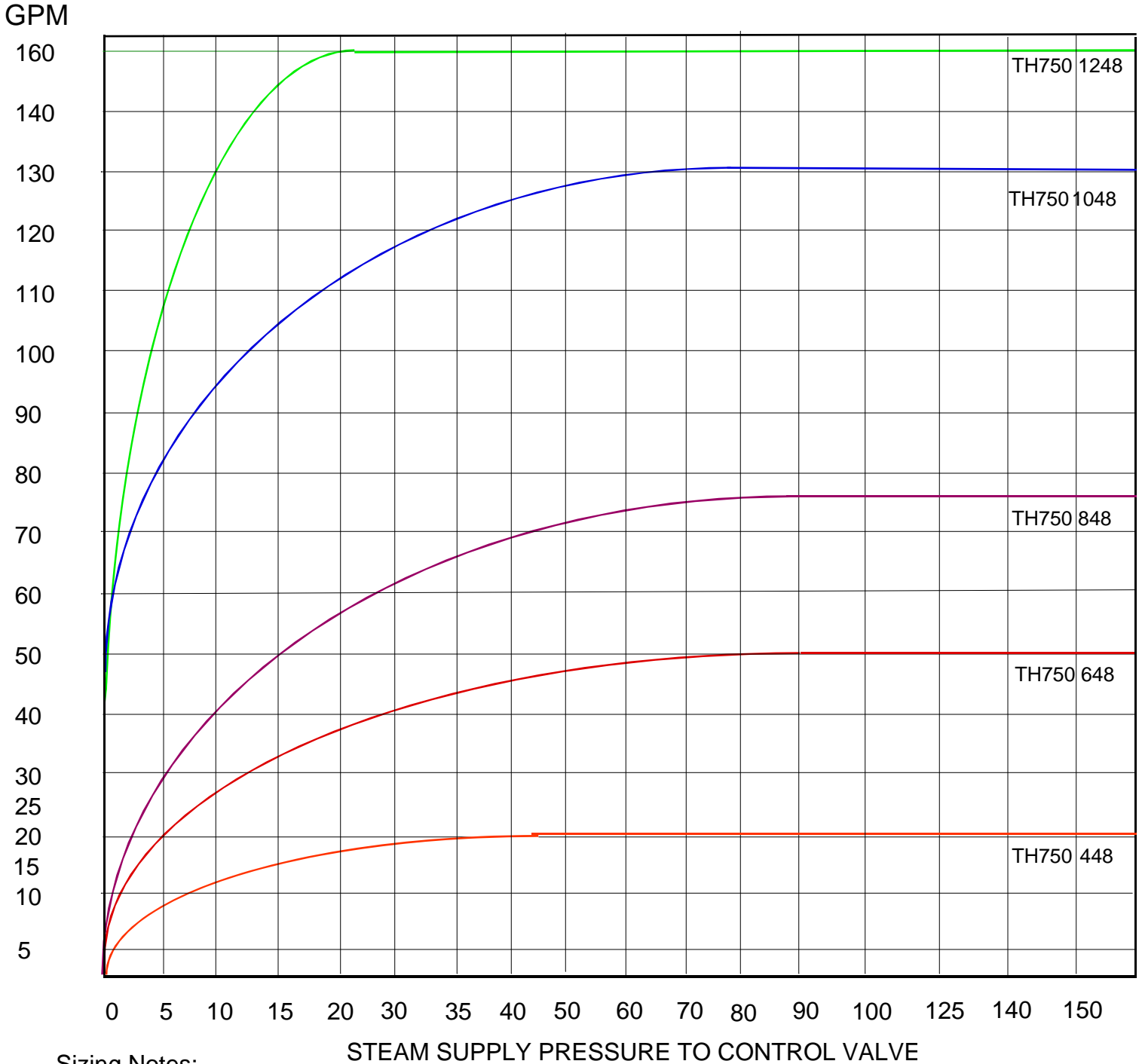
TH750 CAPACITIES 40F to 140F DOUBLE WALLCOPPER AND COPPER NICKEL TUBES  
 TH750 CAPACITIES 40F to 140F SINGLE WALL 316L STAINLESS STEEL TUBES  
 36" INTERNAL TUBE BUNDLE LENGTH



Sizing Notes:

1. When selecting a heater never select at the model numbers maximum flow rate. Allow a minimum of 10% safety margin for the desired flow. Select steam pressure to the control valve and move up vertically to the TH750 heater flow curve that meets or exceeds your desired GPM flow rate.
2. When sizing a TH750 heater for Zero Flash subcooling service select the model and flow rate using 15 psig and below supply pressure point even when a higher pressure steam is supplied to the control valve. The TH750 heaters selected above 30 psig will generate flash steam at maximum demand rates.
3. Flow rates are limited to 1 psig shell side pressure drop and shell flow velocity 5 ft/sec or below.
4. Consult Thermaflo Applications for conditions of service other than shown on this chart.

TH750 CAPACITIES 40F to 140F SINGLE WALL COPPER AND COPPER NICKEL TUBES  
48" INTERNAL TUBE BUNDLE LENGTH

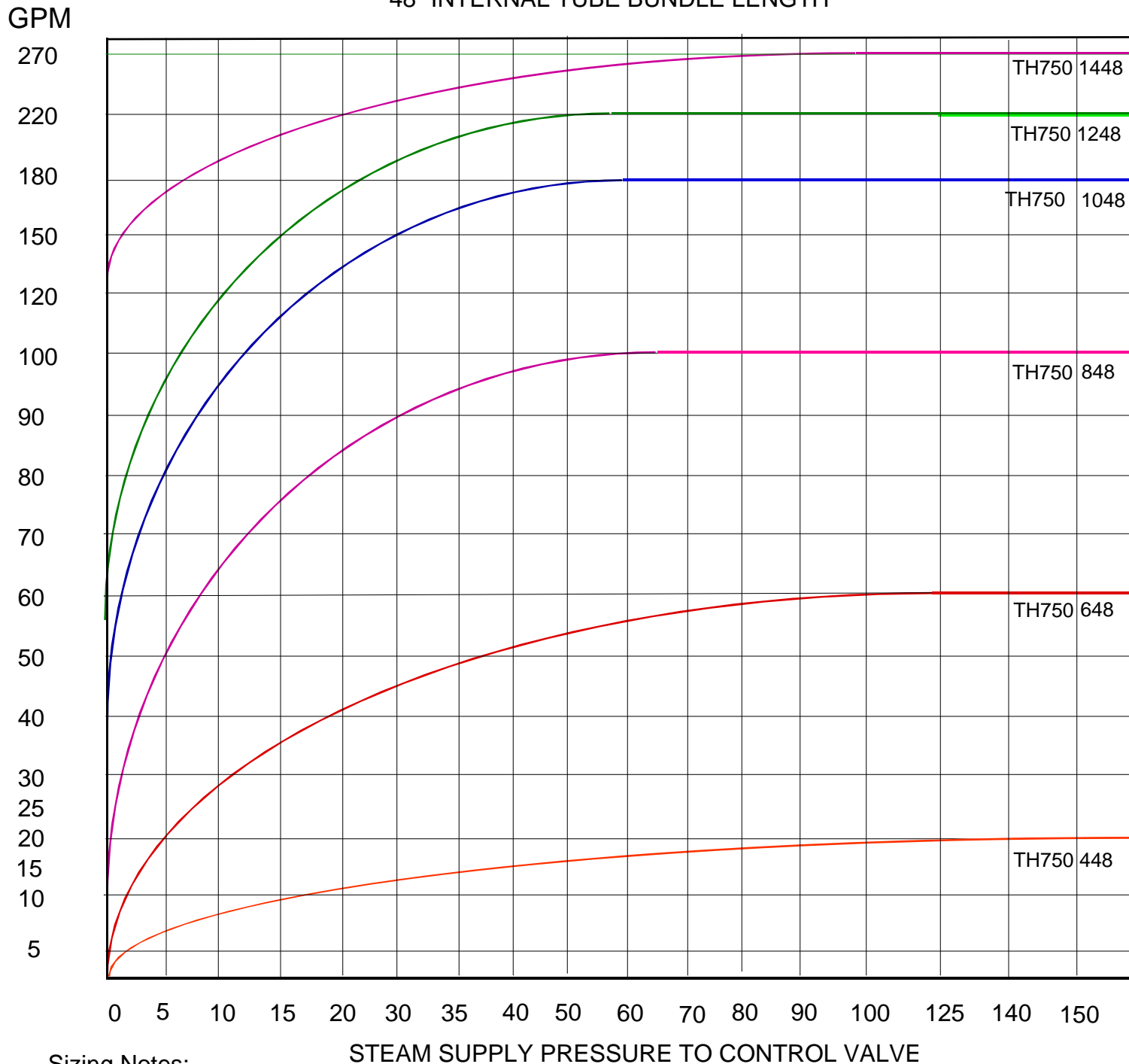


Sizing Notes:

STEAM SUPPLY PRESSURE TO CONTROL VALVE

1. When selecting a heater never select at the model numbers maximum flow rate. Allow a minimum of 10% safety margin. Select the steam pressure to the control valve and move up vertically to the TH750 heater flow curve that meets or exceeds your desired flow rate.
2. When sizing a TH750 heater for Zero Flash subcooling service select the model and flow rate using 15 psig and below supply pressure point even when a higher pressure steam is supplied to the control valve. Selecting a TH750 heater with steam supply above 30 psig will generate flash steam at higher demand flow rates.
3. Flow rates are limited to 1 psig shell side pressure drop and shell side water flow velocity below 5' ft/sec or below
4. Consult Thermaflo Applications for conditions of service other than shown on this chart.

TH750 CAPACITIES 40F to 140F DOUBLE WALL COPPER AND COPPER NICKEL TUBES  
 TH750 CAPACITIES 40F to 140F SINGLE WALL 316L STAINLESS STEEL TUBES  
 48" INTERNAL TUBE BUNDLE LENGTH



Sizing Notes:

STEAM SUPPLY PRESSURE TO CONTROL VALVE

1. When selecting a heater never select at the model numbers maximum flow rate. Allow a minimum of 10% safety margin for the desired flow. Select the steam pressure to the control valve and move up vertically to the TH750 heater flow curve that meets or exceeds your desired flow rate.
2. When sizing a TH750 heater for Zero Flash subcooling service select the model and flow rate using 15 psig and below supply pressure point even when a higher pressure steam is supplied to the control valve. Selecting a TH750 heat exchanger above 30 psig steam supply pressure will generate flash steam at higher flow rates.
3. Flow Rates are limited to 1 psig pressure drop and shell side water flow velocity of 5' ft/sec or below.
4. Consult Thermaflo Applications for conditions of service other than shown on this chart.