

Steam-to-Liquid Shell & Tube SU Series



U-TUBE REMOVABLE BUNDLE

Performance Notes

- Designed for steam on the shell side heating liquid in the tubes
- Removable U-tube bundle simplifies inspection and replacement
- U-bend construction accommodates differential thermal expansion and thermal shock
- Single-pass shell promotes steam condensation and drainage
- Broad material options for tubes, tubesheets, shell and bonnets
- ASME Section VIII, Division 1 construction

Ratings

Shell side 150 PSI standard; options to 300 PSI

Tube side 4-8 in. dia.: 150 PSI; 10-20 in. dia.: 125 PSI; 22-30 in. dia.: 150 PSI; options to 300 PSI

Maximum temperature 375°F



Materials

Shell Fabricated carbon steel; stainless option

Tube sheets Carbon steel; stainless, 90/10 CuNi and brass options

Tubes Copper; stainless steel, 90/10 or 70/30 CuNi options

Bonnets Cast iron; cast 316 stainless and cast bronze options

Feet / bolting Cast iron / carbon steel

Series Configuration

Shell Diameter	Standard Tube OD	Tube Passes	Typical Tube Lengths	Service
4-30 in.	3/4 in.	2, 4 or 6 pass*	24-120 in. and larger by series	Steam-to-liquid

*Pass availability and pressure ratings vary by shell diameter and head construction. Confirm the selected model before ordering.

How to Specify

- 1 Heat load / duty
- 2 Steam pressure at the exchanger
- 3 Tube-side fluid and flow rate
- 4 Tube-side entering and leaving temperatures
- 5 Maximum allowable pressure drop
- 6 Fouling factor / added surface requirement
- 7 Fluid properties when the tube-side fluid is not water

SU Series Size Range & Model Guide

Bell & Gossett SU exchangers are offered across a broad range of shell diameters. The table below is a practical family-level guide; exact dimensions, connections, heating surface and shipping weight depend on tube length and pass arrangement.

Shell dia.	Tube-side design pressure	Shell-side design pressure	Max. temp.	Typical connection style
4-8 in.	150 PSI	150 PSI	375°F	NPT / model dependent
10-20 in.	125 PSI standard**	150 PSI	375°F	NPT or flanged / model dependent
22-30 in.	150 PSI	150 PSI	375°F	Flanged / model dependent

**Some pass/head configurations are rated 150 PSI. Refer to the dimensional submittal for the exact unit.

Representative Models from the Supplied SU Data

Model	Shell dia.	Tube length	Surface area	Tube conn.	Passes
5-260-04-024-011	4 in.	24 in.	4.5 ft ²	1.5 in. NPT	2
5-260-06-096-001	6 in.	96 in.	36.2 ft ²	2.0 in. NPT	2
SU102-2	10 in.	24 in.	27 ft ²	4.0 in. NPT	2
SU105-2	10 in.	60 in.	71 ft ²	4.0 in. NPT	2
SU1010-2	10 in.	120 in.	146 ft ²	4.0 in. NPT	2

Model Numbering

Legacy SU model numbers commonly identify the shell-size family, tube-length increment and tube-side pass count. Current 5-260 part numbers likewise encode the SU steam-to-liquid configuration, shell diameter, tube length and construction option. Because exact coding varies by size and vintage, use the complete model or part number when requesting a replacement.

Construction Notes

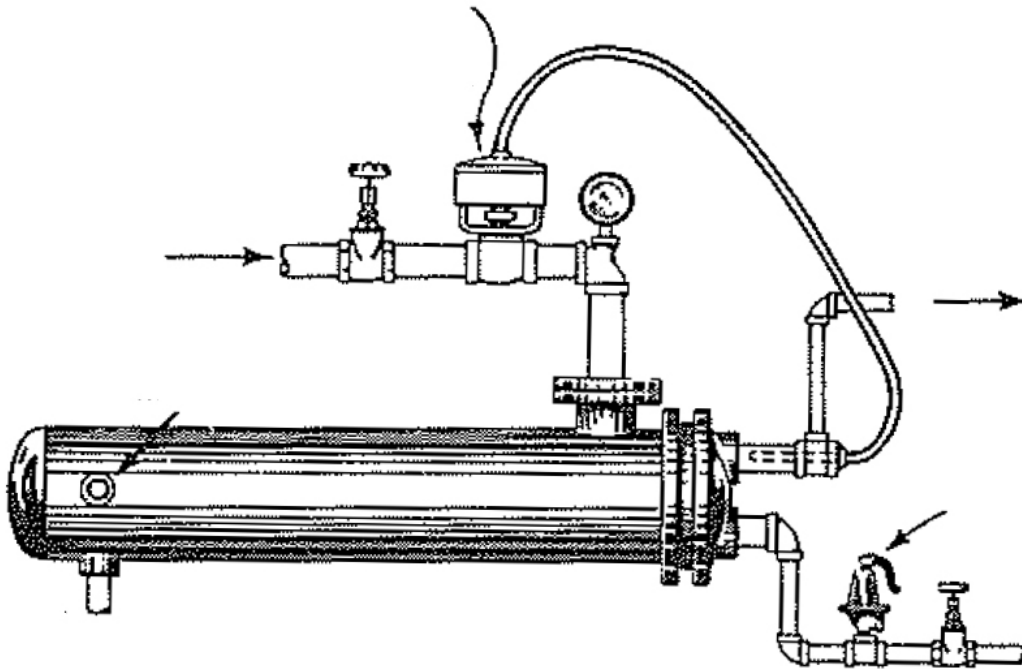
Feature	SU Series
Bundle	Removable U-tube
Shell flow	Single pass steam
Tube attachment	Tube ends expanded into a stationary tubesheet
Thermal movement	U-bend accommodates expansion/contraction
Code	ASME Section VIII, Division 1; CRN/PED options may be available
Related configurations	WU liquid-to-liquid; DSU/DWU double-wall; HTWU high-temperature; tank heater designs

Application & Installation SU Series

Typical applications

- Comfort heating in apartments, hotels, hospitals, schools, offices and process plants
- High-rise heating where the exchanger isolates high building static pressure from a lower-pressure steam boiler
- Radiant panel heating
- Snow-melt systems using antifreeze solutions
- Instantaneous domestic / service water heating
- Storage-tank water heating when peak demand exceeds instantaneous steam capacity
- Swimming-pool heating

Typical Steam-Side Arrangement



A typical instantaneous-heater arrangement uses a steam control valve, vacuum breaker or air vent, properly sized condensate trap, relief protection on the heated-water side, and temperature control.

Installation Notes

- **Steam hammer:** Condensate must drain freely. Use the appropriate trap and size the condensate return for the full exchanger capacity.
- **Vacuum protection:** Provide a vacuum breaker and/or vent appropriate to the system arrangement.
- **Trap sizing:** Size the trap for the pressure available at the trap, not simply the steam-control-valve inlet pressure.
- **Water-side protection:** Install a properly sized relief valve to protect against volumetric expansion.
- **Selection:** Confirm steam pressure, heat load, temperatures, flow, pressure drop and fouling allowance before finalizing the unit.

Technical basis: Bell & Gossett / Xylem SU/WU brochure C-122 and SU dimensional submittals; model-level values also cross-checked against the supplied SU.xlsx catalog. Product image and installation diagram are reproduced from Bell & Gossett technical literature for identification/reference.