

Large Straight-Tube Heat Exchangers OC Series

STRAIGHT-TUBE / FLOATING HEAD

SHELL & TUBE

REMOVABLE HEAT-TRANSFER BUNDLE



Performance Notes

- OC exchangers use a straight-tube, channel-head arrangement suited to larger industrial heat-transfer duties. The straight-tube bundle supports mechanical cleaning and accommodates service where access is important.
- Shell diameter range in supplied data: 6-20 in..
- Tube length range in supplied data: 24-216 in..
- Tube-pass arrangements in supplied data: 1-Pass, 2-Pass.

Ratings	Materials
Shell pressure 150 PSI, 125 PSI	Shell Steel
Tube pressure 150 PSI, 125 PSI	Tubes Copper
Maximum temperature 375°F	Tubesheet / bonnets Steel / Cast Iron

Series Configuration

Shell diameter	Tube OD	Tube passes	Tube lengths	Surface area
6-20 in.	5/8" O.D.	1-Pass, 2-Pass	24-216 in.	12.9-1400 ft²

Ratings, materials and dimensional ranges above are summarized from the supplied HeatX/Bell & Gossett catalog spreadsheet. Exact construction varies by model and option code.

OC Series Size Range & Model Guide



CATALOG RANGE FROM SUPPLIED DATA

Shell dia.	Catalog records	Tube length	Surface area	Passes	Tube-side conn.
6"	18	24-120 in.	12.9-65.3 ft ²	1-Pass, 2-Pass	2.5" NPT, 2.0" NPT
8"	22	24-144 in.	24.6-148.9 ft ²	1-Pass, 2-Pass	4.0" NPT, 3.0" NPT
10"	22	48-168 in.	87-306 ft ²	1-Pass, 2-Pass	4.0" NPT
12"	18	72-168 in.	192-448 ft ²	1-Pass, 2-Pass	4.0" NPT
14"	22	72-192 in.	227-606 ft ²	1-Pass, 2-Pass	Model dependent
16"	20	84-192 in.	331-758 ft ²	1-Pass, 2-Pass	Model dependent
18"	22	96-216 in.	483-1088 ft ²	1-Pass, 2-Pass	Model dependent
20"	22	96-216 in.	621-1400 ft ²	1-Pass, 2-Pass	Model dependent

Construction Summary

Feature	Catalog summary
Tube construction	5/8" O.D.
Shell material	Steel
Tube material	Copper
Tubesheet	Steel
Bonnet / head	Cast Iron
Tube passes	1-Pass, 2-Pass
Pressure / temperature	Shell: 150 PSI, 125 PSI; Tube: 150 PSI, 125 PSI; Temp: 375°F

The range table is intended as a family-level guide. Use the complete part number and current dimensional submittal when replacing an installed exchanger.

Representative OC Models

SELECTED FROM THE SUPPLIED PART-NUMBER FILE

Part / model	Shell	Length	Surface	Tube conn.	Passes
5-151-06-024-001	6"	24"	12.9	2.5" NPT	1-Pass
5-151-06-108-002	6"	108"	58.8	2.0" NPT	2-Pass
5-151-08-096-001	8"	96"	99.2	4.0" NPT	1-Pass
5-151-10-072-002	10"	72"	131	4.0" NPT	2-Pass
5-151-10-168-001	10"	168"	306	4.0" NPT	1-Pass
5-151-12-144-002	12"	144"	384	4.0" NPT	2-Pass
5-151-14-132-001	14"	132"	417	—	1-Pass
5-151-16-096-002	16"	96"	379	—	2-Pass
5-151-16-192-001	16"	192"	758	—	1-Pass
5-151-18-168-002	18"	168"	846	—	2-Pass
5-151-20-132-001	20"	132"	855	—	1-Pass
5-151-20-216-002	20"	216"	1400	—	2-Pass

Model / Part-Number Identification

Bell & Gossett heat-transfer equipment exists under multiple numbering generations. The supplied data includes current 5-xxx drawing-style numbers as well as legacy model designations on some series. For replacement work, retain the complete original model, part number and nameplate information rather than inferring construction from a shortened designation.

Selection Inputs

- Heat load or required duty
- Hot- and cold-side fluids
- Entering and leaving temperatures
- Flow rates on both sides
- Available pressure drop
- Design pressure and temperature
- Fouling allowance and fluid properties
- Required materials, code stamping and double-wall requirement where applicable

OC Application & Specification Guide



ENGINEERING CHECKLIST

Typical Applications

- Process liquid heating and cooling
- Oil cooling
- Water-to-water heat transfer
- Industrial utility service

Specification Notes

- Series: Bell & Gossett OC
- Configuration: Straight-Tube / Floating Head
- Size the exchanger on the actual fluid properties, temperatures, flow rates and allowable pressure drops.
- Confirm the exact model pressure rating, connection size, materials and tube-pass arrangement before release.
- Provide service clearance for bonnet/head removal and bundle withdrawal where the construction is removable.
- For steam service, provide proper condensate drainage and venting. For liquid service, arrange piping to keep the exchanger flooded and ventable.
- Where potable or contamination-sensitive fluids are involved, confirm local code requirements for double-wall construction and leak detection.

Source & Data Basis

Catalog values and representative part numbers in this HeatX guide are derived from the supplied Bell & Gossett series spreadsheet dated 8/9/2026. Product-family descriptions were cross-checked against official Bell & Gossett / Xylem literature, including: Bell & Gossett Type OC straight-tube heat exchanger submittal 4221 and straight-tube heat exchanger literature.

This document is a HeatX selection and replacement reference, not a substitute for the current manufacturer-certified submittal. Dimensions and ratings should be verified for the exact part number before fabrication, purchase or installation.

