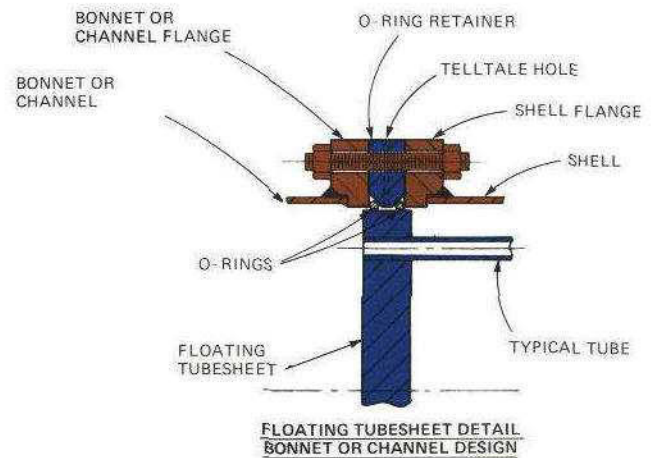
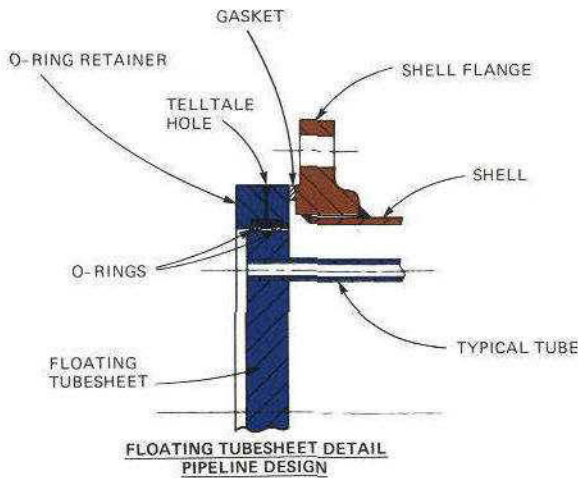
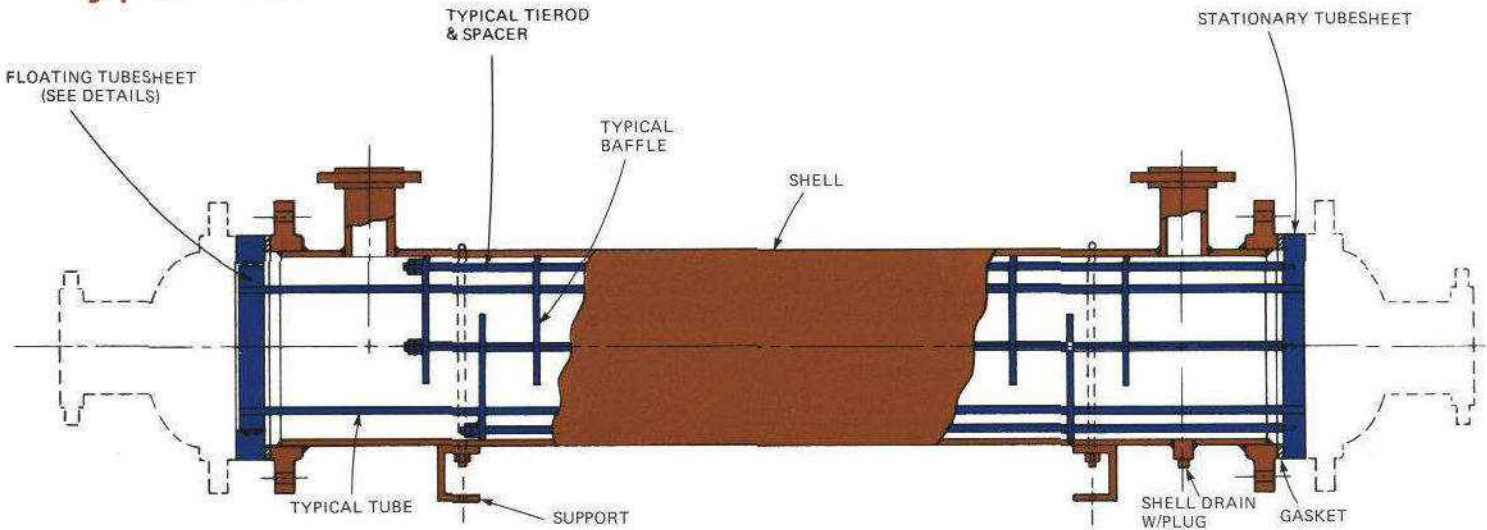


# Type "OR"



## Construction

Removable bundle, straight tube, full floating head with double "O" ring seal, ASME and TEMA "B", "C" or "R" construction.

## Application

Recommended for inert gases such as air, nitrogen and carbon dioxide. Also used for oil and water cooling and heating.

## Advantages

- Double "O" ring seal allows tube bundle to expand and contract freely without bolting strain. Prevents intermixing of shell and tube side fluids.
- Telltale holes are provided in the "O" ring retainer for leak detection, in the event of an "O" ring failure.
- Provides maximum heat transfer surface per given shell size for removable bundle design. Thermal efficiency is good, since the O.T.L. is close to the shell ID.
- Straight tubes can be easily cleaned by rodding.
- Tube bundle can be easily removed for cleaning shell side, repairing or replacing.
- With the threaded "O" ring retainer, it is not necessary to drain or depressurize the shell side, to inspect or clean the tube side.
- Less costly than either the skirted floating head or full internal floating head type construction.
- All gasketed joints are exposed for easy observation of leaks.

## Limitations

1. Should not be used for hydrocarbon gases, oxygen, lethal gases or gases with low molecular weights. Also should not be used for volatile, toxic or flammable fluids.
2. Tube passes are limited to one or two only.
3. Fluid intermixing is possible in the event of an "O" ring leak, if not detected in time from telltale holes.
4. Maximum temperatures limited except for certain operational considerations.

## General Specifications

**Shell side:** Sizes from 6" to 30" dia.

**Materials:** Carbon steel is standard, alloys are available.

**Pressures:** 150 PSIG standard, up to 600 PSIG available.

**Temperatures:** Up to 375°F.

**Tube side:** Tube sizes 3/8" OD to 1" OD.

**Materials:** Admiralty and copper alloys, carbon steel, stainless steel, monel and others.

**Pressures:** 150 PSIG to 1000 PSIG for sizes 6" to 16"; 150 PSIG and 300 PSIG for sizes over 16".

**Temperatures:** Up to 375°F.