

# Commercial Expansion Tanks

## TK300 Series Expansion Tanks—Heating



Expansion Tanks absorb hot water expansion in closed heating systems. They are equipped with butyl diaphragms to separate the air from the system water. Pre-pressurized, the tank keeps fluids circulating and maintains minimum pressure.

- Butyl/EPDM diaphragm - 9 times better than natural rubber
- Deep-drawn steel tank
- Controls system pressure
- Air-tight cushion—factory pre-charged to 12 psig and 100% tested
- 7 year warranty for units with date code 1901 or newer.

Maximum Safe Operating Pressure (psi): 100 psi  
Maximum Safe Operating Pressure (kPa): 689 kPa

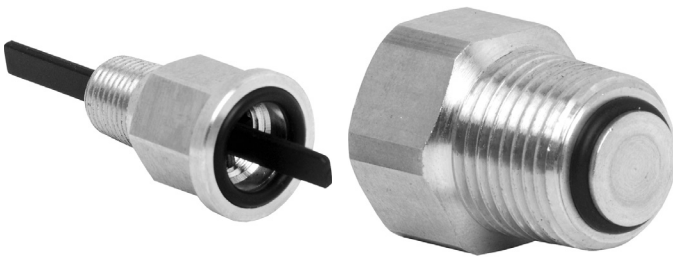
Operating Temperature Range: 240°F Maximum (115°C Maximum)  
Comments: Heating

| Material Number | Connection Size (in.) | Connection Type | Diameter              | Height              | Volume            | Weight          | Maximum Acceptance Volume | Materials                               |
|-----------------|-----------------------|-----------------|-----------------------|---------------------|-------------------|-----------------|---------------------------|---|
| TK300-15/U      | 1/2 in.               | Male NPT        | 8 in. (203.2 mm)      | 12 5/8 in. (321 mm) | 2.0 gal (7.6 L)   | 5 lb (2.3 kg)   | 1 gal (3.8 L)             | Steel shell; Heavy duty Butyl diaphragm |
| TK300-30/U      | 1/2 in.               | Male NPT        | 11 in. (279 mm)       | 15 1/2 in. (394 mm) | 4.4 gal (16.7 L)  | 9 lb (4.1 kg)   | 2.5 gal (9.5 L)           | Steel shell; Heavy duty Butyl diaphragm |
| TK300-60/U      | 1/2 in.               | Male NPT        | 11 in. (279 mm)       | 23 in. (584 mm)     | 7.6 gal (28.8 L)  | 14 lb (6.4 kg)  | 2.5 gal (9.5 L)           | Steel shell; Heavy duty Butyl diaphragm |
| TK300-90/U      | 1/2 in.               | Male NPT        | 15 3/8 in. (390.5 mm) | 21 in. (533 mm)     | 14.0 gal (53.1 L) | 23 lb (10.4 kg) | 11.5 gal (40.1 L)         | Steel shell; Heavy duty Butyl diaphragm |

## Expansion Tank Sizing based on BTU's

| Boiler<br>Net Output in 1000's of BTU/Hr | Type of Radiation                      |                            |                     |                     |
|--|--|----------------------------|---------------------|---------------------|
|  | Finned Tube Baseboard or Radiant Panel | Convectors or Unit Heaters | Radiators Cast Iron | Baseboard Cast Iron |
| MBH                                      | Use Model                              | Use Model                  | Use Model           | Use Model           |
| 25                                       | TK300-15                               | TK300-15                   | TK300-15            | TK300-15            |
| 50                                       | TK300-15                               | TK300-15                   | TK300-30            | TK300-30            |
| 75                                       | TK300-30                               | TK300-30                   | TK300-30            | TK300-60            |
| 100                                      | TK300-30                               | TK300-30                   | TK300-60            | TK300-60            |
| 125                                      | TK300-30                               | TK300-60                   | TK300-60            | TK300-90            |
| 150                                      | TK300-30                               | TK300-60                   | TK300-90            | TK300-90            |
| 175                                      | TK300-60                               | TK300-60                   | XPS-030V            | XPS-030V            |
| 200                                      | TK300-60                               | TK300-60                   | XPS-030V            | XPS-030V            |
| 250                                      | TK300-60                               | TK300-90                   | XPS-030V            | XPS-040V            |
| 300                                      | TK300-90                               | XPS-030V                   | XPS-030V            | XPS-040V            |
| 350                                      | XPS-030V                               | XPS-030V                   | XPS-040V            | XPS-060V            |
| 400                                      | XPS-030V                               | XPS-040V                   | XPS-040V            | XPS-060V            |

## Service Check Valves



Service Check Valves for air vents and expansion tanks allow easy field service without draining system.

**CAUTION:** Reduce system temperature to ambient and pressure to 0 psi before servicing component. Failure to do so may result in injuries.

Maximum Safe Operating Pressure (psi): 100 psi  
Maximum Safe Operating Pressure (kPa): 689 kPa  
Operating Temperature Range: 240°F Maximum (115°C Maximum)

| Material Number | Connection Size (in.) | Connection Type         |
|-----------------|-----------------------|-------------------------|
| SCV-0125/U      | 1/8 in.               | Inlet FNPT, Outlet MNPT |
| SCV-050/U       | 1/2 in.               | Inlet FNPT, Outlet MNPT |

## Expansion Tank Sizing based on BTU's

| Boiler<br>Net Output in 1000's of BTU/Hr | Type of Radiation                      |                            |                     |                     |
|--|--|----------------------------|---------------------|---------------------|
|  | Finned Tube Baseboard or Radiant Panel | Convectors or Unit Heaters | Radiators Cast Iron | Baseboard Cast Iron |
| MBH                                      | Use Model                              | Use Model                  | Use Model           | Use Model           |
| 25                                       | TK300-15                               | TK300-15                   | TK300-15            | TK300-15            |
| 50                                       | TK300-15                               | TK300-15                   | TK300-30            | TK300-30            |
| 75                                       | TK300-30                               | TK300-30                   | TK300-30            | TK300-60            |
| 100                                      | TK300-30                               | TK300-30                   | TK300-60            | TK300-60            |
| 125                                      | TK300-30                               | TK300-60                   | TK300-60            | TK300-90            |
| 150                                      | TK300-30                               | TK300-60                   | TK300-90            | TK300-90            |
| 175                                      | TK300-60                               | TK300-60                   | XPS-030V            | XPS-030V            |
| 200                                      | TK300-60                               | TK300-60                   | XPS-030V            | XPS-030V            |
| 250                                      | TK300-60                               | TK300-90                   | XPS-030V            | XPS-040V            |
| 300                                      | TK300-90                               | XPS-030V                   | XPS-030V            | XPS-040V            |
| 350                                      | XPS-030V                               | XPS-030V                   | XPS-040V            | XPS-060V            |
| 400                                      | XPS-030V                               | XPS-040V                   | XPS-040V            | XPS-060V            |

## TAXV Series Expansion Tanks—Commercial Usage



**TAX Series (commercial) Expansion Tanks** are designed to absorb hot water expansion in closed heating systems of large installations. TAX tanks are equipped with butyl diaphragms to separate the air from the system water (glycol).

- ASME construction: Horizontal TAX Series tanks.

**Maximum Safe Operating Pressure (psi):** 125 psi

**Maximum Safe Operating Pressure (kPa):** 862 kPa

**Precharge (psi):** 12 psi

**Materials:** Steel shell; Heavy duty Butyl diaphragm

**Operating Temperature Range:** 240°F Maximum (115°C Maximum)

**Comments:** ASME Construction

| Material Number | Connection Size (in.) | Diameter              | Height                 | Volume              | Weight            | Maximum Acceptance Volume |
|-----------------|-----------------------|-----------------------|------------------------|---------------------|-------------------|---------------------------|
| TAXV-015/U      | 1/2 in.               | 12 in. (304.8 mm)     | 19 1/4 in. (489 mm)    | 7.8 gal (29.6 L)    | 48 lb (21.8 kg)   | 2.5 gal (9.5 L)           |
| TAXV-020/U      | 1/2 in.               | 12 in. (304.8 mm)     | 26 in. (660 mm)        | 10.9 gal (40.2 L)   | 61 lb (27.7 kg)   | 2.5 gal (9.5 L)           |
| TAXV-040/U      | 1/2 in.               | 16 1/4 in. (412.7 mm) | 29 1/2 in. (749 mm)    | 21.7 gal (82.2 L)   | 116 lb (52.7 kg)  | 11.3 gal (42.8 L)         |
| TAXV-060/U      | 1/2 in.               | 16 1/4 in. (412.7 mm) | 45 1/8 in. (1146 mm)   | 33.6 gal (127.3 L)  | 145 lb (65.9 kg)  | 11.3 gal (42.8 L)         |
| TAXV-080/U      | 1/2 in.               | 16 1/4 in. (412.7 mm) | 56 in. (1422 mm)       | 44.4 gal (168.3 L)  | 70 lb (89.1 kg)   | 22.6 gal (85.6 L)         |
| TAXV-100/U      | 1/2 in.               | 16 1/4 in. (412.7 mm) | 68 1/4 in. (1734 mm)   | 55.7 gal (211 L)    | 231 lb (105 kg)   | 22.6 gal (85.6 L)         |
| TAXV-120/U      | 1 in.                 | 24 in. (609.6 mm)     | 44 1/4 in. (1124 mm)   | 68 gal (257.7 L)    | 233 lb (105.9 kg) | 34 gal (128.9 L)          |
| TAXV-144/U      | 1 in.                 | 24 in. (609.6 mm)     | 49 1/8 in. (1247.8 mm) | 77.0 gal (291.8 L)  | 256 lb (116.4 kg) | 34 gal (128.9 L)          |
| TAXV-180/U      | 1 in.                 | 24 in. (609.6 mm)     | 56 1/2 in. (1435 mm)   | 90 gal (341.1 L)    | 286 lb (130 kg)   | 34 gal (128.9 L)          |
| TAXV-200/U      | 1 in.                 | 24 in. (609.6 mm)     | 63 in. (1600 mm)       | 110 gal (416.9 L)   | 326 lb (148.2 kg) | 34 gal (128.9 L)          |
| TAXV-240/U      | 1 in.                 | 30 in. (762 mm)       | 49 1/8 in. (1368.4 mm) | 132.0 gal (500.3 L) | 456 lb (207.3 kg) | 46 gal (174.3 L)          |
| TAXV-260/U      | 1 in.                 | 30 in. (762 mm)       | 49 1/8 in. (1247.8 mm) | 158.0 gal (500.3 L) | 435 lb (207.3 kg) | 56 gal (174.3 L)          |
| TAXV-280/U      | 1 in.                 | 30 in. (762 mm)       | 49 1/8 in. (1247.8 mm) | 211.0 gal (500.3 L) | 435 lb (207.3 kg) | 84 gal (174.3 L)          |