

# **BRYAN STEAM**

## **U-Tube Heat Exchangers** **US-Series, Steam to Water**



Bryan's Steam to Water Heat Exchangers are built to offer long life and maximum performance in all applications, including service water, space heating, radiation, swimming pool heating and various process applications.

These instantaneous heaters operate with steam on the shellside and water on the tubeside. Bryan offers U-Tube Heat Exchangers in sizes ranging from 4" diameter to 12" diameter and lengths up to 10', in both two and four-pass designs.

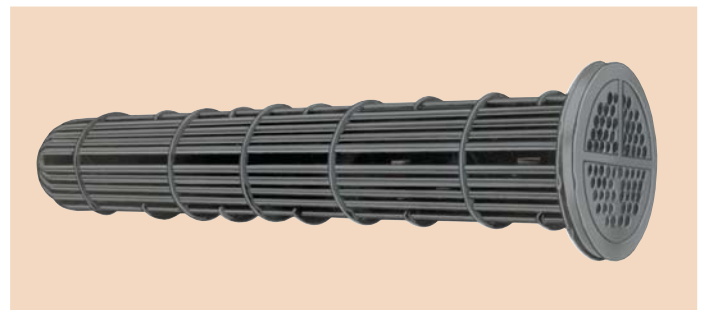
### **Material of construction**

|              |                 |
|--------------|-----------------|
| Heads:       | Cast Iron       |
| Tube sheets: | Steel           |
| Shell:       | Steel           |
| Baffles:     | Steel           |
| Bolting:     | Steel           |
| Tubes:       | ¾" O. D. copper |

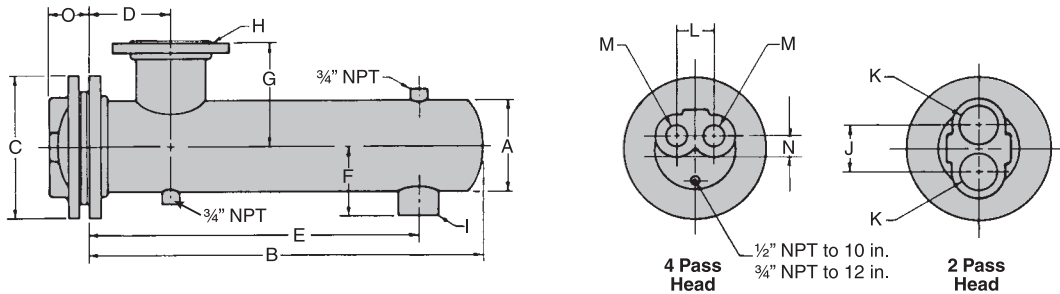
Units are available with optional materials of construction, such as brass, copper, cupro-nickel or other alloys as specified.

| Rating of Standard Units |                  |         |         |                                     |
|--------------------------|------------------|---------|---------|-------------------------------------|
| Shell<br>Diam.           | Maximum Pressure |         |         | Maximum<br>Operating<br>Temperature |
|                          | Tubes            |         | Shell   |                                     |
|                          | 2 pass           | 4 pass  |         |                                     |
| 4"                       | 150 psi          | 150 psi | 150 psi | 375°F                               |
| 6"                       | 150 psi          | 150 psi | 150 psi | 375°F                               |
| 8"                       | 150 psi          | 150 psi | 150 psi | 375°F                               |
| 10"                      | 125 psi          | 150 psi | 150 psi | 375°F                               |
| 12"                      | 125 psi          | 125 psi | 150 psi | 375°F                               |

Consult factory for working pressure and temperature higher than standard, as well as changes resulting from differences in optional construction materials.



# Bryan Steam to Water Heat Exchanger



| Model Number            |           | Dimensions (inches) |      |     |    |      |      |       |     |     |        |     |        |     |     |       | Heating Surface (sq. ft.) | Shipping Weight (lbs.) |  |
|-------------------------|-----------|---------------------|------|-----|----|------|------|-------|-----|-----|--------|-----|--------|-----|-----|-------|---------------------------|------------------------|--|
| 2 Pass                  | 4 Pass    | 2 and 4 Pass        |      |     |    |      |      |       |     |     | 2 Pass |     | 4 Pass |     |     |       |                           |                        |  |
| 4 Inch Diameter         |           | A                   | B    | C   | D  | E    | F    | G     | H   | I   | J      | K   | L      | M   | N   | O     |                           |                        |  |
| US4-2-2                 | US4-2-4   | 4½                  | 24½  | 9   | 5  | 19½  | 4⅝   | 4¾    | 1¼T | 1T  | 2½     | 1¼T | 2⅜     | 1T  | 7/8 | 27/8  | 4.6                       | 65                     |  |
| US4-3-2                 | US4-3-4   | 4½                  | 36½  | 9   | 5  | 31½  | 4⅝   | 4¾    | 1¼T | 1T  | 2½     | 1¼T | 2⅜     | 1T  | 7/8 | 27/8  | 7.0                       | 75                     |  |
| US4-4-2                 | US4-4-4   | 4½                  | 48½  | 9   | 5  | 43½  | 4⅝   | 4¾    | 1¼T | 1T  | 2½     | 1¼T | 2⅜     | 1T  | 7/8 | 27/8  | 9.3                       | 84                     |  |
| US4-5-2                 | US4-5-4   | 4½                  | 60½  | 9   | 5  | 55½  | 4⅝   | 4¾    | 1¼T | 1T  | 2½     | 1¼T | 2⅜     | 1T  | 7/8 | 27/8  | 11.7                      | 94                     |  |
| US4-6-2                 | US4-6-4   | 4½                  | 72½  | 9   | 5  | 67½  | 4⅝   | 4¾    | 1½T | 1T  | 2½     | 1¼T | 2⅜     | 1T  | 7/8 | 27/8  | 14.1                      | 104                    |  |
| US4-7-2                 | US4-7-4   | 4½                  | 84½  | 9   | 5  | 79½  | 4⅝   | 4¾    | 1½T | 1T  | 2½     | 1¼T | 2⅜     | 1T  | 7/8 | 27/8  | 16.4                      | 114                    |  |
| <b>6 Inch Diameter</b>  |           |                     |      |     |    |      |      |       |     |     |        |     |        |     |     |       |                           |                        |  |
| US6-2-2                 | US6-2-4   | 6⅝                  | 25   | 11  | 5  | 18½  | 5⅝   | 6     | 1½T | 1T  | 4      | 2T  | 3¾     | 1½T | 1¼  | 37/16 | 9.1                       | 120                    |  |
| US6-3-2                 | US6-3-4   | 6⅝                  | 37   | 11  | 5  | 30½  | 5⅝   | 6     | 2T  | 1T  | 4      | 2T  | 3¾     | 1½T | 1¼  | 37/16 | 13.8                      | 148                    |  |
| US6-4-2                 | US6-4-4   | 6⅝                  | 49   | 11  | 5  | 42½  | 5⅝   | 5     | 2½T | 1T  | 4      | 2T  | 3¾     | 1½T | 1¼  | 37/16 | 18.5                      | 182                    |  |
| US6-5-2                 | US6-5-4   | 6⅝                  | 61   | 11  | 5  | 54½  | 5⅝   | 5     | 2½T | 1T  | 4      | 2T  | 3¾     | 1½T | 1¼  | 37/16 | 23.2                      | 207                    |  |
| US6-6-2                 | US6-6-4   | 6⅝                  | 73   | 11  | 5  | 66½  | 5⅝   | 67/8  | 3T  | 1T  | 4      | 2T  | 3¾     | 1½T | 1¼  | 37/16 | 27.9                      | 235                    |  |
| US6-7-2                 | US6-7-4   | 6⅝                  | 85   | 11  | 5  | 78½  | 5⅝   | 67/8  | 3T  | 1T  | 4      | 2T  | 3¾     | 1½T | 1¼  | 37/16 | 32.6                      | 262                    |  |
| US6-8-2                 | US6-8-4   | 6⅝                  | 97   | 11  | 5  | 90½  | 5⅝   | 67/8  | 3T  | 1T  | 4      | 2T  | 3¾     | 1½T | 1¼  | 37/16 | 37.3                      | 290                    |  |
| <b>8 Inch Diameter</b>  |           |                     |      |     |    |      |      |       |     |     |        |     |        |     |     |       |                           |                        |  |
| US8-2-2                 | US8-2-4   | 8⅝                  | 26¼  | 13½ | 7  | 18   | 67/8 | 95/16 | 4F  | 1½T | 4½     | 3T  | 4½     | 2T  | 1½  | 37/8  | 16.5                      | 192                    |  |
| US8-3-2                 | US8-3-4   | 8⅝                  | 38¼  | 13½ | 7  | 30   | 67/8 | 95/16 | 4F  | 1½T | 4½     | 3T  | 4½     | 2T  | 1½  | 37/8  | 25.1                      | 234                    |  |
| US8-4-2                 | US8-4-4   | 8⅝                  | 50¼  | 13½ | 7  | 42   | 67/8 | 95/16 | 4F  | 1½T | 4½     | 3T  | 4½     | 2T  | 1½  | 37/8  | 33.7                      | 283                    |  |
| US8-5-2                 | US8-5-4   | 8⅝                  | 62¼  | 13½ | 8  | 54   | 67/8 | 95/16 | 6F  | 2T  | 4½     | 3T  | 4½     | 2T  | 1½  | 37/8  | 42.4                      | 326                    |  |
| US8-6-2                 | US8-6-4   | 8⅝                  | 74¼  | 13½ | 8  | 66   | 67/8 | 95/16 | 6F  | 2T  | 4½     | 3T  | 4½     | 2T  | 1½  | 37/8  | 51.0                      | 369                    |  |
| US8-7-2                 | US8-7-4   | 8⅝                  | 86¼  | 13½ | 8  | 78   | 67/8 | 95/16 | 6F  | 2T  | 4½     | 3T  | 4½     | 2T  | 1½  | 37/8  | 59.7                      | 390                    |  |
| US8-8-2                 | US8-8-4   | 8⅝                  | 98¼  | 13½ | 8  | 90   | 67/8 | 95/16 | 6F  | 2T  | 4½     | 3T  | 4½     | 2T  | 1½  | 37/8  | 68.3                      | 453                    |  |
| US8-9-2                 | US8-9-4   | 8⅝                  | 110¼ | 13½ | 8  | 102  | 67/8 | 95/16 | 6F  | 2T  | 4½     | 3T  | 4½     | 2T  | 1½  | 37/8  | 76.9                      | 496                    |  |
| <b>10 Inch Diameter</b> |           |                     |      |     |    |      |      |       |     |     |        |     |        |     |     |       |                           |                        |  |
| US10-2-2                | US10-2-4  | 10¾                 | 27¼  | 16  | 7  | 18   | 8    | 103/8 | 4F  | 1½T | 6¼     | 4T  | 5¼     | 3T  | 2   | 51/16 | 26.8                      | 300                    |  |
| US10-3-2                | US10-3-4  | 10¾                 | 38¼  | 16  | 7  | 29   | 8    | 103/8 | 4F  | 1½T | 6¼     | 4T  | 5¼     | 3T  | 2   | 51/16 | 40.9                      | 353                    |  |
| US10-4-2                | US10-4-4  | 10¾                 | 49¼  | 16  | 8  | 40   | 8    | 103/8 | 6F  | 2T  | 6¼     | 4T  | 5¼     | 3T  | 2   | 51/16 | 55.0                      | 415                    |  |
| US10-5-2                | US10-5-4  | 10¾                 | 62¼  | 16  | 8  | 53   | 8    | 103/8 | 6F  | 2T  | 6¼     | 4T  | 5¼     | 3T  | 2   | 51/16 | 69.2                      | 476                    |  |
| US10-6-2                | US10-6-4  | 10¾                 | 74¼  | 16  | 8  | 65   | 8    | 103/8 | 6F  | 2T  | 6¼     | 4T  | 5¼     | 3T  | 2   | 51/16 | 83.3                      | 537                    |  |
| US10-7-2                | US10-7-4  | 10¾                 | 85¼  | 16  | 8  | 76   | 8    | 103/8 | 6F  | 2T  | 6¼     | 4T  | 5¼     | 3T  | 2   | 51/16 | 97.5                      | 598                    |  |
| US10-8-2                | US10-8-4  | 10¾                 | 98¼  | 16  | 8  | 89   | 8    | 103/8 | 6F  | 2T  | 6¼     | 4T  | 5¼     | 3T  | 2   | 51/16 | 111.6                     | 660                    |  |
| US10-9-2                | US10-9-4  | 10¾                 | 110¼ | 16  | 8  | 101  | 8    | 103/8 | 6F  | 2T  | 6¼     | 4T  | 5¼     | 3T  | 2   | 51/16 | 125.7                     | 721                    |  |
| US10-10-2               | US10-10-4 | 10¾                 | 122¼ | 16  | 8  | 113  | 8    | 103/8 | 6F  | 2T  | 6¼     | 4T  | 5¼     | 3T  | 2   | 51/16 | 139.9                     | 782                    |  |
| <b>12 Inch Diameter</b> |           |                     |      |     |    |      |      |       |     |     |        |     |        |     |     |       |                           |                        |  |
| US12-3-2                | US12-3-4  | 12¾                 | 36¼  | 19  | 10 | 28¼  | 9    | 113/8 | 4F  | 1¼T | 8      | 4T  | 57/8   | 3T  | 2½  | 59/16 | 58.6                      | 510                    |  |
| US12-4-2                | US12-4-4  | 12¾                 | 48¼  | 19  | 10 | 40¼  | 9    | 113/8 | 6F  | 1¼T | 8      | 4T  | 57/8   | 3T  | 2½  | 59/16 | 79.0                      | 596                    |  |
| US12-5-2                | US12-5-4  | 12¾                 | 60¼  | 19  | 10 | 52¼  | 9    | 113/8 | 6F  | 1½T | 8      | 4T  | 57/8   | 3T  | 2½  | 59/16 | 99.5                      | 681                    |  |
| US12-6-2                | US12-6-4  | 12¾                 | 72¼  | 19  | 10 | 64¼  | 9    | 113/8 | 6F  | 2T  | 8      | 4T  | 57/8   | 3T  | 2½  | 59/16 | 119.9                     | 772                    |  |
| US12-7-2                | US12-7-4  | 12¾                 | 84¼  | 19  | 10 | 76¼  | 9    | 113/8 | 8F  | 2T  | 8      | 4T  | 57/8   | 3T  | 2½  | 59/16 | 140.3                     | 857                    |  |
| US12-8-2                | US12-8-4  | 12¾                 | 96¼  | 19  | 10 | 87¼  | 81/8 | 113/8 | 8F  | 2½T | 8      | 4T  | 57/8   | 3T  | 2½  | 59/16 | 160.8                     | 941                    |  |
| US12-9-2                | US12-9-4  | 12¾                 | 108¼ | 19  | 10 | 99¼  | 81/8 | 113/8 | 8F  | 2½T | 8      | 4T  | 57/8   | 3T  | 2½  | 59/16 | 181.2                     | 1027                   |  |
| US12-10-2               | US12-10-4 | 12¾                 | 120¼ | 19  | 10 | 111¼ | 81/8 | 113/8 | 8F  | 2½T | 8      | 4T  | 57/8   | 3T  | 2½  | 59/16 | 201.6                     | 1111                   |  |

NOTE: Dimensions and specifications are subject to change without notice. Consult factory for certified dimensions.



**Bryan Steam — Leaders Since 1916**

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