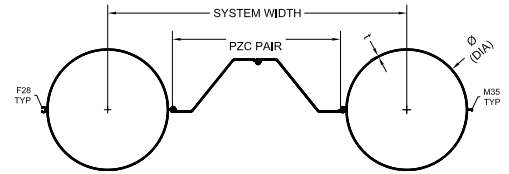


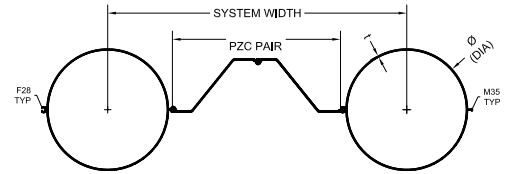
# PIPE PZC COMBI-WALL SYSTEM



|  | Sheet Pile Section | Pipe-Sheet Connector | System Width   | Per Unit of Wall         |                                 |                               | 50 ksi                       | 60 ksi               | Mass: Beam/Sheet Ratio |                       |                        | Coating Area           |               |
|-----------------------------------------------------------------------------------|--------------------|----------------------|----------------|--------------------------|---------------------------------|-------------------------------|------------------------------|----------------------|------------------------|-----------------------|------------------------|------------------------|---------------|
|                                                                                   |                    |                      |                | Cross Sectional Area (A) | Combined Moment of Inertia (Iy) | Combined Elastic Modulus (Sx) | Ultimate Bend. Moment (Mmax) | PIPE / PZC 60% (m)'' | PIPE / PZC 80% (m)''   | PIPE / PZC 100% (m)'' | Waterside Surface (A') | Landside Surface (A'') |               |
|                                                                                   |                    |                      |                | mm                       | cm²                             | cm⁴/m                         | cm³/m                        | kN-m/m               | kg/m²                  | kg/m²                 | kg/m²                  | m²/m                   | m²/m          |
| PIPE PZC13                                                                        |                    |                      | in             | in²                      | in⁴/ ft                         | in³/ ft                       | kip-ft/ft                    | lbs/ft²              | lbs/ft²                | lbs/ft²               | ft²/ft                 | ft²/ft                 |               |
| JDF 30 ODx0.500/PZC13                                                             | PZC13              | MF63                 | 2241<br>88.23  | 1295.1<br>79.0           | 106762.0<br>781.8               | 2802.2<br>52.1                | 966.3<br>217.2               | 1159.6<br>260.6      | 149.0<br>30.5          | 163.8<br>33.6         | 178.6<br>36.6          | 2.90<br>9.53           | 2.90<br>9.53  |
| JDF 30 ODx0.625/PZC13                                                             | PZC13              | MF63                 | 2241<br>88.23  | 1480.9<br>90.4           | 128711.6<br>942.5               | 3378.3<br>62.8                | 1165.0<br>261.8              | 1398.0<br>314.2      | 174.7<br>35.8          | 189.4<br>38.8         | 204.2<br>41.8          | 2.90<br>9.53           | 2.90<br>9.53  |
| JDF 30 ODx0.750/PZC13                                                             | PZC13              | MF63                 | 2241<br>88.23  | 1665.1<br>101.6          | 150096.0<br>1099.1              | 3939.5<br>73.3                | 1358.6<br>305.3              | 1630.3<br>366.4      | 200.1<br>41.0          | 214.8<br>44.0         | 229.6<br>47.0          | 2.90<br>9.53           | 2.90<br>9.53  |
| JDF 36 ODx0.500/PZC13                                                             | PZC13              | MF63                 | 2393<br>94.23  | 1449.6<br>88.5           | 165073.6<br>1208.8              | 3610.5<br>67.2                | 1245.1<br>279.8              | 1494.1<br>335.8      | 159.5<br>32.7          | 173.3<br>35.5         | 187.2<br>38.3          | 3.14<br>10.31          | 3.14<br>10.31 |
| JDF 36 ODx0.625/PZC13                                                             | PZC13              | MF63                 | 2393<br>94.23  | 1674.0<br>102.2          | 201283.5<br>1474.0              | 4402.5<br>81.9                | 1518.2<br>341.2              | 1821.9<br>409.4      | 188.5<br>38.6          | 202.3<br>41.4         | 216.1<br>44.3          | 3.14<br>10.31          | 3.14<br>10.31 |
| JDF 36 ODx0.750/PZC13                                                             | PZC13              | MF63                 | 2393<br>94.23  | 1896.8<br>115.8          | 236720.3<br>1733.5              | 5177.6<br>96.3                | 1785.5<br>401.3              | 2142.6<br>481.5      | 217.2<br>44.5          | 231.1<br>47.3         | 244.9<br>50.2          | 3.14<br>10.31          | 3.14<br>10.31 |
| JDF 40 ODx0.500/PZC13                                                             | PZC13              | MF63                 | 2495<br>98.23  | 1552.5<br>94.7           | 213682.3<br>1564.8              | 4206.3<br>78.2                | 1450.6<br>326.0              | 1740.7<br>391.2      | 165.7<br>33.9          | 179.0<br>36.7         | 192.3<br>39.4          | 3.30<br>10.84          | 3.30<br>10.84 |
| JDF 40 ODx0.625/PZC13                                                             | PZC13              | MF63                 | 2495<br>98.23  | 1802.7<br>110.0          | 261792.8<br>1917.1              | 5153.4<br>95.9                | 1777.2<br>399.4              | 2132.6<br>479.3      | 196.7<br>40.3          | 210.0<br>43.0         | 223.3<br>45.7          | 3.30<br>10.84          | 3.30<br>10.84 |
| JDF 40 ODx0.750/PZC13                                                             | PZC13              | MF63                 | 2495<br>98.23  | 2051.3<br>125.2          | 308981.1<br>2262.6              | 6082.3<br>113.1               | 2097.5<br>471.4              | 2517.0<br>565.7      | 227.5<br>46.6          | 240.8<br>49.3         | 254.1<br>52.0          | 3.30<br>10.84          | 3.30<br>10.84 |
| JDF 44 ODx0.500/PZC13                                                             | PZC13              | MF63                 | 2597<br>102.23 | 1655.5<br>101.0          | 270422.0<br>1980.3              | 4839.3<br>90.0                | 1668.9<br>375.1              | 2002.6<br>450.1      | 171.5<br>35.1          | 184.3<br>37.7         | 197.0<br>40.4          | 3.46<br>11.36          | 3.46<br>11.36 |
| JDF 44 ODx0.625/PZC13                                                             | PZC13              | MF63                 | 2597<br>102.23 | 1931.4<br>117.9          | 332438.4<br>2434.4              | 5949.2<br>110.7               | 2051.6<br>461.1              | 2461.9<br>553.3      | 204.3<br>41.9          | 217.1<br>44.5         | 229.9<br>47.1          | 3.46<br>11.36          | 3.46<br>11.36 |
| JDF 44 ODx0.750/PZC13                                                             | PZC13              | MF63                 | 2597<br>102.23 | 2205.7<br>134.6          | 393376.2<br>2880.6              | 7039.7<br>130.9               | 2427.7<br>545.6              | 2913.2<br>654.7      | 237.0<br>48.5          | 249.7<br>51.2         | 262.5<br>53.8          | 3.46<br>11.36          | 3.46<br>11.36 |
| JDF 48 ODx0.500/PZC13                                                             | PZC13              | MF63                 | 2698<br>106.23 | 1758.5<br>107.3          | 335537.3<br>2457.1              | 5504.2<br>102.4               | 1898.2<br>426.6              | 2277.8<br>511.9      | 176.8<br>36.2          | 189.1<br>38.7         | 201.4<br>41.2          | 3.62<br>11.88          | 3.62<br>11.88 |
| JDF 48 ODx0.625/PZC13                                                             | PZC13              | MF63                 | 2698<br>106.23 | 2060.1<br>125.7          | 413529.0<br>3028.2              | 6783.6<br>126.2               | 2339.4<br>525.7              | 2807.2<br>630.9      | 211.4<br>43.3          | 223.7<br>45.8         | 235.9<br>48.3          | 3.62<br>11.88          | 3.62<br>11.88 |
| JDF 48 ODx0.750/PZC13                                                             | PZC13              | MF63                 | 2698<br>106.23 | 2360.1<br>144.0          | 490279.5<br>3590.3              | 8042.6<br>149.6               | 2773.5<br>623.3              | 3328.2<br>748.0      | 245.8<br>50.3          | 258.0<br>52.8         | 270.3<br>55.4          | 3.62<br>11.88          | 3.62<br>11.88 |
| JDF 52 ODx0.625/PZC13                                                             | PZC13              | MF63                 | 2800<br>110.23 | 2188.8<br>133.6          | 505328.8<br>3700.5              | 7651.9<br>142.3               | 2638.8<br>593.0              | 3166.5<br>711.6      | 217.9<br>44.6          | 229.8<br>47.1         | 241.6<br>49.5          | 3.78<br>12.41          | 3.78<br>12.41 |
| JDF 52 ODx0.750/PZC13                                                             | PZC13              | MF63                 | 2800<br>110.23 | 2514.6<br>153.5          | 600010.6<br>4393.8              | 9085.6<br>169.0               | 3133.2<br>704.1              | 3759.8<br>845.0      | 253.9<br>52.0          | 265.7<br>54.4         | 277.5<br>56.8          | 3.78<br>12.41          | 3.78<br>12.41 |
| JDF 52 ODx0.875/PZC13                                                             | PZC13              | MF63                 | 2800<br>110.23 | 2838.8<br>173.2          | 693296.6<br>5076.9              | 10498.1<br>195.3              | 3620.3<br>813.6              | 4344.4<br>976.3      | 289.7<br>59.3          | 301.5<br>61.8         | 313.3<br>64.2          | 3.78<br>12.41          | 3.78<br>12.41 |
| JDF 56 ODx0.750/PZC13                                                             | PZC13              | MF63                 | 2901<br>114.23 | 2669.0<br>162.9          | 722844.4<br>5293.3              | 10163.7<br>189.0              | 3505.0<br>787.7              | 4206.0<br>945.2      | 261.4<br>53.5          | 272.9<br>55.9         | 284.3<br>58.2          | 3.94<br>12.93          | 3.94<br>12.93 |
| JDF 56 ODx0.875/PZC13                                                             | PZC13              | MF63                 | 2901<br>114.23 | 3018.9<br>184.2          | 836055.3<br>6122.3              | 11755.6<br>218.7              | 4054.0<br>911.1              | 4864.7<br>1093.3     | 298.7<br>61.2          | 310.1<br>63.5         | 321.5<br>65.9          | 3.94<br>12.93          | 3.94<br>12.93 |
| JDF 56 ODx1.00/PZC13                                                              | PZC13              | MF63                 | 2901<br>114.23 | 3367.2<br>205.5          | 947711.9<br>6940.0              | 13325.5<br>247.9              | 4595.4<br>1032.7             | 5514.4<br>1239.3     | 335.8<br>68.8          | 347.2<br>71.1         | 358.6<br>73.5          | 3.94<br>12.93          | 3.94<br>12.93 |
| JDF 60 ODx0.750/PZC13                                                             | PZC13              | MF63                 | 3003<br>118.23 | 2823.5<br>172.3          | 859018.5<br>6290.5              | 11273.2<br>209.7              | 3887.6<br>873.7              | 4665.1<br>1048.4     | 268.5<br>55.0          | 279.5<br>57.3         | 290.5<br>59.5          | 4.10<br>13.45          | 4.10<br>13.45 |
| JDF 60 ODx0.875/PZC13                                                             | PZC13              | MF63                 | 3003<br>118.23 | 3199.1<br>195.2          | 994357.7<br>7281.6              | 13049.3<br>242.7              | 4500.1<br>1011.3             | 5400.1<br>1213.6     | 307.1<br>62.9          | 318.2<br>65.2         | 329.2<br>67.4          | 4.10<br>13.45          | 4.10<br>13.45 |
| JDF 60 ODx1.00/PZC13                                                              | PZC13              | MF63                 | 3003<br>118.23 | 3573.2<br>218.0          | 1127965.5<br>8260.0             | 14802.7<br>275.3              | 5104.8<br>1147.2             | 6125.7<br>1376.7     | 345.6<br>70.8          | 356.7<br>73.1         | 367.7<br>75.3          | 4.10<br>13.45          | 4.10<br>13.45 |
| JDF 64 ODx0.750/PZC13                                                             | PZC13              | MF63                 | 3105<br>122.23 | 2977.9<br>181.7          | 1008739.6<br>7386.9             | 12410.7<br>230.8              | 4279.9<br>961.8              | 5135.8<br>1154.2     | 275.1<br>56.3          | 285.7<br>58.5         | 296.4<br>60.7          | 4.26<br>13.98          | 4.26<br>13.98 |
| JDF 64 ODx0.875/PZC13                                                             | PZC13              | MF63                 | 3105<br>122.23 | 3379.3<br>206.2          | 1168446.7<br>8556.4             | 14375.6<br>267.4              | 4957.5<br>1114.1             | 5949.0<br>1336.9     | 315.0<br>64.5          | 325.7<br>66.7         | 336.4<br>68.9          | 4.26<br>13.98          | 4.26<br>13.98 |
| JDF 64 ODx1.00/PZC13                                                              | PZC13              | MF63                 | 3105<br>122.23 | 3779.1<br>230.6          | 1326241.1<br>9711.9             | 16317.0<br>303.5              | 5627.0<br>1264.6             | 6752.4<br>1517.5     | 354.8<br>72.7          | 365.5<br>74.9         | 376.2<br>77.0          | 4.26<br>13.98          | 4.26<br>13.98 |
| JDF 68 ODx0.750/PZC13                                                             | PZC13              | MF63                 | 3206<br>126.23 | 3132.4<br>191.1          | 1172188.0<br>8583.8             | 13573.3<br>252.5              | 4680.8<br>1051.9             | 5617.0<br>1262.3     | 281.2<br>57.6          | 291.6<br>59.7         | 301.9<br>61.8          | 4.42<br>14.50          | 4.42<br>14.50 |
| JDF 68 ODx0.875/PZC13                                                             | PZC13              | MF63                 | 3206<br>126.23 | 3559.5<br>217.2          | 1358534.5<br>9948.4             | 15731.1<br>292.6              | 5424.9<br>1219.2             | 6509.9<br>1463.0     | 322.4<br>66.0          | 332.7<br>68.2         | 343.1<br>70.3          | 4.42<br>14.50          | 4.42<br>14.50 |
| JDF 68 ODx1.00/PZC13                                                              | PZC13              | MF63                 | 3206<br>126.23 | 3985.0<br>243.2          | 1542783.2<br>11297.6            | 17864.6<br>332.3              | 6160.7<br>1384.5             | 7392.8<br>1661.4     | 363.4<br>74.4          | 373.8<br>76.6         | 384.1<br>78.7          | 4.42<br>14.50          | 4.42<br>14.50 |
| JDF 72 ODx0.750/PZC13                                                             | PZC13              | MF63                 | 3308<br>130.23 | 3286.8<br>200.6          | 1349521.9<br>9882.4             | 14758.6<br>274.5              | 5089.5<br>1143.8             | 6107.5<br>1372.6     | 287.0<br>58.8          | 297.0<br>60.8         | 307.1<br>62.9          | 4.58<br>15.02          | 4.58<br>15.02 |
| JDF 72 ODx0.875/PZC13                                                             | PZC13              | MF63                 | 3308<br>130.23 | 3739.7<br>228.2          | 1564807.1<br>11458.9            | 17112.9<br>318.3              | 5901.5<br>1326.3             | 7081.8<br>1591.5     | 329.3<br>67.5          | 339.4<br>69.5         | 349.4<br>71.6          | 4.58<br>15.02          | 4.58<br>15.02 |
| JDF 72 ODx1.00/PZC13                                                              | PZC13              | MF63                 | 3308<br>130.23 | 4190.9<br>255.7          | 1777806.1<br>13018.7            | 19442.3<br>361.6              | 6704.8<br>1506.8             | 8045.7<br>1808.1     | 371.5<br>76.1          | 381.5<br>78.1         | 391.5<br>80.2          | 4.58<br>15.02          | 4.58<br>15.02 |

\* Larger, custom pipe sizes and wall thicknesses are available upon request. Please contact us at [eng@jdfields.com](mailto:eng@jdfields.com) for availability.

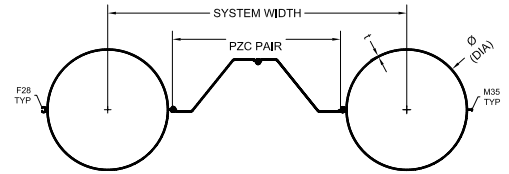
# PIPE PZC COMBI-WALL SYSTEM



|  | Sheet Pile Section | Pipe-Sheet Connector | System Width   | Per Unit of Wall         |                                 |                               | 50 ksi                                 | 60 ksi           | Mass: Beam/Sheet Ratio |                      |                       | Coating Area           |                        |
|-----------------------------------------------------------------------------------|--------------------|----------------------|----------------|--------------------------|---------------------------------|-------------------------------|----------------------------------------|------------------|------------------------|----------------------|-----------------------|------------------------|------------------------|
|                                                                                   |                    |                      |                | Cross Sectional Area (A) | Combined Moment of Inertia (Iy) | Combined Elastic Modulus (Sx) | Ultimate Bend. [No S.F.] Moment (Mmax) |                  | PIPE / PZC 60% (m)''   | PIPE / PZC 80% (m)'' | PIPE / PZC 100% (m)'' | Waterside Surface (A') | Landside Surface (A'') |
|                                                                                   |                    |                      |                | mm                       | cm²                             | cm⁴/m                         | cm³/m                                  | kN-m/m           | kg/m²                  | kg/m²                | kg/m²                 | m²/m                   | m²/m                   |
| PIPE PZC18                                                                        |                    |                      | in             | in²                      | in⁴/ ft                         | in³/ ft                       | kip-ft/ft                              | lbs/ft²          | lbs/ft²                | lbs/ft²              | ft²/ft                | ft²/ft                 |                        |
| JDF 30 ODx0.500/PZC18                                                             | PZC18              | MF63                 | 2095<br>82.48  | 1295.2<br>79.0           | 121326.9<br>888.5               | 3184.4<br>59.2                | 1098.2<br>246.8                        | 1317.8<br>296.2  | 159.4<br>32.7          | 175.2<br>35.9        | 191.0<br>39.1         | 2.90<br>9.53           | 2.90<br>9.53           |
| JDF 30 ODx0.625/PZC18                                                             | PZC18              | MF63                 | 2095<br>82.48  | 1481.0<br>90.4           | 144806.7<br>1060.4              | 3800.7<br>70.7                | 1310.7<br>294.6                        | 1572.8<br>353.5  | 186.8<br>38.3          | 202.6<br>41.5        | 218.4<br>44.7         | 2.90<br>9.53           | 2.90<br>9.53           |
| JDF 30 ODx0.750/PZC18                                                             | PZC18              | MF63                 | 2095<br>82.48  | 1665.2<br>101.6          | 167681.9<br>1227.9              | 4401.1<br>81.9                | 1517.7<br>341.1                        | 1821.3<br>409.3  | 214.0<br>43.8          | 229.8<br>47.1        | 245.6<br>50.3         | 2.90<br>9.53           | 2.90<br>9.53           |
| JDF 36 ODx0.500/PZC18                                                             | PZC18              | MF63                 | 2247<br>88.48  | 1449.6<br>88.5           | 182440.2<br>1336.0              | 3990.4<br>74.2                | 1376.1<br>309.3                        | 1651.3<br>371.1  | 169.9<br>34.8          | 184.6<br>37.8        | 199.3<br>40.8         | 3.14<br>10.31          | 3.14<br>10.31          |
| JDF 36 ODx0.625/PZC18                                                             | PZC18              | MF63                 | 2247<br>88.48  | 1674.0<br>102.2          | 221003.3<br>1618.4              | 4833.8<br>89.9                | 1667.0<br>374.6                        | 2000.4<br>449.6  | 200.7<br>41.1          | 215.4<br>44.1        | 230.2<br>47.1         | 3.14<br>10.31          | 3.14<br>10.31          |
| JDF 36 ODx0.750/PZC18                                                             | PZC18              | MF63                 | 2247<br>88.48  | 1896.8<br>115.8          | 258743.0<br>1894.7              | 5659.3<br>105.3               | 1951.6<br>438.6                        | 2342.0<br>526.3  | 231.4<br>47.4          | 246.1<br>50.4        | 260.8<br>53.4         | 3.14<br>10.31          | 3.14<br>10.31          |
| JDF 40 ODx0.500/PZC18                                                             | PZC18              | MF63                 | 2349<br>92.48  | 1552.6<br>94.7           | 233320.0<br>1708.6              | 4592.9<br>85.4                | 1583.9<br>356.0                        | 1900.7<br>427.1  | 176.1<br>36.1          | 190.2<br>38.9        | 204.2<br>41.8         | 3.30<br>10.84          | 3.30<br>10.84          |
| JDF 40 ODx0.625/PZC18                                                             | PZC18              | MF63                 | 2349<br>92.48  | 1802.7<br>110.0          | 284421.9<br>2082.8              | 5598.9<br>104.1               | 1930.8<br>433.9                        | 2316.9<br>520.7  | 209.0<br>42.8          | 223.1<br>45.7        | 237.2<br>48.6         | 3.30<br>10.84          | 3.30<br>10.84          |
| JDF 40 ODx0.750/PZC18                                                             | PZC18              | MF63                 | 2349<br>92.48  | 2051.3<br>125.2          | 334544.1<br>2449.8              | 6585.5<br>122.5               | 2271.0<br>510.4                        | 2725.3<br>612.5  | 241.7<br>49.5          | 255.8<br>52.4        | 269.9<br>55.3         | 3.30<br>10.84          | 3.30<br>10.84          |
| JDF 44 ODx0.500/PZC18                                                             | PZC18              | MF63                 | 2451<br>96.48  | 1655.5<br>101.0          | 292627.2<br>2142.9              | 5236.7<br>97.4                | 1805.9<br>405.8                        | 2167.1<br>487.0  | 181.7<br>37.2          | 195.3<br>40.0        | 208.8<br>42.8         | 3.46<br>11.36          | 3.46<br>11.36          |
| JDF 44 ODx0.625/PZC18                                                             | PZC18              | MF63                 | 2451<br>96.48  | 1931.4<br>117.9          | 358339.6<br>2624.1              | 6412.7<br>119.3               | 2211.4<br>497.0                        | 2653.7<br>596.4  | 216.5<br>44.3          | 230.0<br>47.1        | 243.6<br>49.9         | 3.46<br>11.36          | 3.46<br>11.36          |
| JDF 44 ODx0.750/PZC18                                                             | PZC18              | MF63                 | 2451<br>96.48  | 2205.7<br>134.6          | 422909.2<br>3096.9              | 7568.2<br>140.8               | 2609.9<br>586.5                        | 3131.9<br>703.8  | 251.1<br>51.4          | 264.6<br>54.2        | 278.1<br>57.0         | 3.46<br>11.36          | 3.46<br>11.36          |
| JDF 48 ODx0.500/PZC18                                                             | PZC18              | MF63                 | 2552<br>100.48 | 1758.5<br>107.3          | 360584.8<br>2640.5              | 5915.1<br>110.0               | 2039.8<br>458.4                        | 2447.8<br>550.1  | 187.0<br>38.3          | 199.9<br>41.0        | 212.9<br>43.6         | 3.62<br>11.88          | 3.62<br>11.88          |
| JDF 48 ODx0.625/PZC18                                                             | PZC18              | MF63                 | 2552<br>100.48 | 2060.1<br>125.7          | 443039.5<br>3244.3              | 7267.7<br>135.2               | 2506.3<br>563.3                        | 3007.6<br>675.9  | 223.5<br>45.8          | 236.5<br>48.4        | 249.4<br>51.1         | 3.62<br>11.88          | 3.62<br>11.88          |
| JDF 48 ODx0.750/PZC18                                                             | PZC18              | MF63                 | 2552<br>100.48 | 2360.2<br>144.0          | 524182.1<br>3838.5              | 8598.8<br>159.9               | 2965.3<br>666.4                        | 3558.4<br>799.7  | 259.8<br>53.2          | 272.8<br>55.9        | 285.8<br>58.5         | 3.62<br>11.88          | 3.62<br>11.88          |
| JDF 52 ODx0.625/PZC18                                                             | PZC18              | MF63                 | 2654<br>104.48 | 2188.8<br>133.6          | 538761.7<br>3945.3              | 8158.1<br>151.7               | 2813.4<br>632.3                        | 3376.0<br>758.7  | 229.9<br>47.1          | 242.4<br>49.6        | 254.9<br>52.2         | 3.78<br>12.41          | 3.78<br>12.41          |
| JDF 52 ODx0.750/PZC18                                                             | PZC18              | MF63                 | 2654<br>104.48 | 2514.6<br>153.5          | 638654.2<br>4676.8              | 9670.7<br>179.9               | 3335.0<br>749.5                        | 4002.0<br>899.4  | 267.9<br>54.9          | 280.3<br>57.4        | 292.8<br>60.0         | 3.78<br>12.41          | 3.78<br>12.41          |
| JDF 52 ODx0.875/PZC18                                                             | PZC18              | MF63                 | 2654<br>104.48 | 2838.8<br>173.2          | 737074.2<br>5397.5              | 11161.0<br>207.6              | 3848.9<br>865.0                        | 4618.7<br>1038.0 | 305.6<br>62.6          | 318.1<br>65.1        | 330.6<br>67.7         | 3.78<br>12.41          | 3.78<br>12.41          |
| JDF 56 ODx0.750/PZC18                                                             | PZC18              | MF63                 | 2755<br>108.48 | 2669.1<br>162.9          | 766573.9<br>5613.5              | 10778.6<br>200.5              | 3717.0<br>835.3                        | 4460.5<br>1002.4 | 275.3<br>56.4          | 287.3<br>58.8        | 299.3<br>61.3         | 3.94<br>12.93          | 3.94<br>12.93          |
| JDF 56 ODx0.875/PZC18                                                             | PZC18              | MF63                 | 2755<br>108.48 | 3019.0<br>184.2          | 885785.7<br>6486.5              | 12454.8<br>231.7              | 4295.1<br>965.3                        | 5154.1<br>1158.3 | 314.5<br>64.4          | 326.6<br>66.9        | 338.6<br>69.3         | 3.94<br>12.93          | 3.94<br>12.93          |
| JDF 56 ODx1.00/PZC18                                                              | PZC18              | MF63                 | 2755<br>108.48 | 3367.3<br>205.5          | 1003360.6<br>7347.5             | 14108.0<br>262.4              | 4865.2<br>1093.4                       | 5838.2<br>1312.1 | 353.6<br>72.4          | 365.6<br>74.9        | 377.6<br>77.3         | 3.94<br>12.93          | 3.94<br>12.93          |
| JDF 60 ODx0.750/PZC18                                                             | PZC18              | MF63                 | 2857<br>112.48 | 2823.5<br>172.3          | 908154.2<br>6650.3              | 11918.0<br>221.7              | 4110.0<br>923.7                        | 4932.0<br>1108.4 | 282.2<br>57.8          | 293.8<br>60.2        | 305.4<br>62.6         | 4.10<br>13.45          | 4.10<br>13.45          |
| JDF 60 ODx0.875/PZC18                                                             | PZC18              | MF63                 | 2857<br>112.48 | 3199.2<br>195.2          | 1050412.0<br>7692.0             | 13784.9<br>256.4              | 4753.8<br>1068.3                       | 5704.5<br>1282.0 | 322.8<br>66.1          | 334.4<br>68.5        | 346.0<br>70.9         | 4.10<br>13.45          | 4.10<br>13.45          |
| JDF 60 ODx1.00/PZC18                                                              | PZC18              | MF63                 | 2857<br>112.48 | 3573.2<br>218.1          | 1190849.8<br>8720.5             | 15628.0<br>290.7              | 5389.4<br>1211.2                       | 6467.2<br>1453.4 | 363.3<br>74.4          | 374.9<br>76.8        | 386.5<br>79.2         | 4.10<br>13.45          | 4.10<br>13.45          |
| JDF 64 ODx0.75/PZC18                                                              | PZC18              | MF63                 | 2959<br>116.48 | 2977.9<br>181.7          | 1063578.9<br>7788.5             | 13085.4<br>243.4              | 4512.5<br>1014.1                       | 5415.1<br>1216.9 | 288.7<br>59.1          | 299.9<br>61.4        | 311.0<br>63.7         | 4.26<br>13.98          | 4.26<br>13.98          |
| JDF 64 ODx0.875/PZC18                                                             | PZC18              | MF63                 | 2959<br>116.48 | 3379.3<br>206.2          | 1231169.9<br>9015.7             | 15147.3<br>281.7              | 5223.6<br>1173.9                       | 6268.3<br>1408.7 | 330.6<br>67.7          | 341.8<br>70.0        | 353.0<br>72.3         | 4.26<br>13.98          | 4.26<br>13.98          |
| JDF 64 ODx1.00/PZC18                                                              | PZC18              | MF63                 | 2959<br>116.48 | 3779.1<br>230.6          | 1396753.8<br>10228.3            | 17184.5<br>319.6              | 5926.1<br>1331.8                       | 7111.4<br>1598.2 | 372.3<br>76.3          | 383.5<br>78.6        | 394.7<br>80.8         | 4.26<br>13.98          | 4.26<br>13.98          |
| JDF 68 ODx0.750/PZC18                                                             | PZC18              | MF63                 | 3060<br>120.48 | 3132.4<br>191.2          | 1233007.3<br>9029.2             | 14277.5<br>265.6              | 4923.7<br>1106.5                       | 5908.4<br>1327.8 | 294.7<br>60.4          | 305.5<br>62.6        | 316.3<br>64.8         | 4.42<br>14.50          | 4.42<br>14.50          |
| JDF 68 ODx0.875/PZC18                                                             | PZC18              | MF63                 | 3060<br>120.48 | 3559.5<br>217.2          | 1428247.3<br>10458.9            | 16538.3<br>307.6              | 5703.3<br>1281.7                       | 6844.0<br>1538.1 | 337.8<br>69.2          | 348.6<br>71.4        | 359.4<br>73.6         | 4.42<br>14.50          | 4.42<br>14.50          |
| JDF 68 ODx1.00/PZC18                                                              | PZC18              | MF63                 | 3060<br>120.48 | 3985.0<br>243.2          | 1621289.4<br>11872.5            | 18773.6<br>349.2              | 6474.2<br>1455.0                       | 7769.0<br>1746.0 | 380.8<br>78.0          | 391.6<br>80.2        | 402.4<br>82.4         | 4.42<br>14.50          | 4.42<br>14.50          |
| JDF 72 ODx0.750/PZC18                                                             | PZC18              | MF63                 | 3162<br>124.48 | 3286.8<br>200.6          | 1416578.3<br>10373.4            | 15491.9<br>288.2              | 5342.4<br>1200.6                       | 6410.9<br>1440.8 | 300.3<br>61.5          | 310.8<br>63.7        | 321.2<br>65.8         | 4.58<br>15.02          | 4.58<br>15.02          |
| JDF 72 ODx0.875/PZC18                                                             | PZC18              | MF63                 | 3162<br>124.48 | 3739.7<br>228.2          | 1641808.0<br>12022.8            | 17955.0<br>334.0              | 6191.9<br>1391.5                       | 7430.2<br>1669.8 | 344.6<br>70.6          | 355.0<br>72.7        | 365.5<br>74.9         | 4.58<br>15.02          | 4.58<br>15.02          |
| JDF 72 ODx1.00/PZC18                                                              | PZC18              | MF63                 | 3162<br>124.48 | 4191.0<br>255.7          | 1864645.8<br>13654.6            | 20392.0<br>379.3              | 7032.3<br>1580.4                       | 8438.7<br>1896.5 | 388.7<br>79.6          | 399.1<br>81.7        | 409.6<br>83.9         | 4.58<br>15.02          | 4.58<br>15.02          |

\* Larger, custom pipe sizes and wall thicknesses are available upon request. Please contact us at [eng@jdfields.com](mailto:eng@jdfields.com) for availability.

# PIPE PZC COMBI-WALL SYSTEM



|  | Sheet Pile Section | Pipe-Sheet Connector | System Width   | Per Unit of Wall         |                                 |                               | 50 ksi                                 | 60 ksi           | Mass: Beam/Sheet Ratio |                      |                       | Coating Area           |                        |
|-----------------------------------------------------------------------------------|--------------------|----------------------|----------------|--------------------------|---------------------------------|-------------------------------|----------------------------------------|------------------|------------------------|----------------------|-----------------------|------------------------|------------------------|
|                                                                                   |                    |                      |                | Cross Sectional Area (A) | Combined Moment of Inertia (Iy) | Combined Elastic Modulus (Sx) | Ultimate Bend. [No S.F.] Moment (Mmax) |                  | PIPE / PZC 60% (m)''   | PIPE / PZC 80% (m)'' | PIPE / PZC 100% (m)'' | Waterside Surface (A') | Landside Surface (A'') |
|                                                                                   |                    |                      |                | mm                       | cm²                             | cm⁴/m                         | cm³/m                                  | kN-m/m           | kg/m²                  | kg/m²                | kg/m²                 | m²/m                   | m²/m                   |
| PIPE PZC26                                                                        |                    |                      | in             | in²                      | in⁴/ ft                         | in³/ ft                       | kip-ft/ft                              |                  | lbs/ft²                | lbs/ft²              | lbs/ft²               | ft²/ft                 | ft²/ft                 |
| JDF 30 ODx0.500/PZC26                                                             | PZC26              | MF63                 | 2238<br>88.11  | 1521.3<br>92.8           | 130762.3<br>957.6               | 3432.1<br>63.8                | 1183.6<br>266.0                        | 1420.3<br>319.2  | 168.0<br>34.4          | 189.0<br>38.7        | 210.1<br>43.0         | 3.07<br>10.08          | 3.07<br>10.08          |
| JDF 30 ODx0.625/PZC26                                                             | PZC26              | MF63                 | 2238<br>88.11  | 1707.1<br>104.2          | 152741.8<br>1118.5              | 4009.0<br>74.6                | 1382.5<br>310.7                        | 1659.0<br>372.8  | 193.6<br>39.7          | 214.7<br>44.0        | 235.7<br>48.3         | 3.07<br>10.08          | 3.07<br>10.08          |
| JDF 30 ODx0.750/PZC26                                                             | PZC26              | MF63                 | 2238<br>88.11  | 1891.3<br>115.4          | 174155.3<br>1275.3              | 4571.0<br>85.0                | 1576.3<br>354.3                        | 1891.6<br>425.1  | 219.1<br>44.9          | 240.1<br>49.2        | 261.2<br>53.5         | 3.07<br>10.08          | 3.07<br>10.08          |
| JDF 36 ODx0.500/PZC26                                                             | PZC26              | MF63                 | 2390<br>94.11  | 1675.7<br>102.3          | 187618.0<br>1373.9              | 4103.6<br>76.3                | 1415.2<br>318.1                        | 1698.2<br>381.6  | 177.2<br>36.3          | 196.9<br>40.3        | 216.6<br>44.4         | 3.31<br>10.86          | 3.31<br>10.86          |
| JDF 36 ODx0.625/PZC26                                                             | PZC26              | MF63                 | 2390<br>94.11  | 1900.1<br>116.0          | 223874.1<br>1639.4              | 4896.6<br>91.1                | 1688.6<br>379.5                        | 2026.3<br>455.4  | 206.2<br>42.2          | 225.9<br>46.3        | 245.6<br>50.3         | 3.31<br>10.86          | 3.31<br>10.86          |
| JDF 36 ODx0.750/PZC26                                                             | PZC26              | MF63                 | 2390<br>94.11  | 2123.0<br>129.6          | 259356.1<br>1899.2              | 5672.7<br>105.5               | 1956.3<br>439.6                        | 2347.5<br>527.6  | 235.1<br>48.1          | 254.8<br>52.2        | 274.5<br>56.2         | 3.31<br>10.86          | 3.31<br>10.86          |
| JDF 40 ODx0.500/PZC26                                                             | PZC26              | MF63                 | 2492<br>98.11  | 1778.7<br>108.5          | 235367.0<br>1723.6              | 4633.2<br>86.2                | 1597.8<br>359.1                        | 1917.3<br>430.9  | 182.8<br>37.4          | 201.7<br>41.3        | 220.6<br>45.2         | 3.47<br>11.39          | 3.47<br>11.39          |
| JDF 40 ODx0.625/PZC26                                                             | PZC26              | MF63                 | 2492<br>98.11  | 2028.9<br>123.8          | 283536.4<br>2076.3              | 5581.4<br>103.8               | 1924.8<br>432.6                        | 2309.7<br>519.1  | 213.8<br>43.8          | 232.7<br>47.7        | 251.6<br>51.5         | 3.47<br>11.39          | 3.47<br>11.39          |
| JDF 40 ODx0.750/PZC26                                                             | PZC26              | MF63                 | 2492<br>98.11  | 2277.4<br>139.0          | 330782.4<br>2422.3              | 6511.5<br>121.1               | 2245.5<br>504.6                        | 2694.6<br>605.6  | 244.6<br>50.1          | 263.5<br>54.0        | 282.4<br>57.8         | 3.47<br>11.39          | 3.47<br>11.39          |
| JDF 44 ODx0.500/PZC26                                                             | PZC26              | MF63                 | 2594<br>102.11 | 1881.6<br>114.8          | 291324.0<br>2133.3              | 5213.4<br>97.0                | 1797.9<br>404.0                        | 2157.4<br>484.8  | 187.9<br>38.5          | 206.0<br>42.2        | 224.2<br>45.9         | 3.63<br>11.91          | 3.63<br>11.91          |
| JDF 44 ODx0.625/PZC26                                                             | PZC26              | MF63                 | 2594<br>102.11 | 2157.6<br>131.7          | 353413.2<br>2588.0              | 6324.5<br>117.6               | 2181.0<br>490.2                        | 2617.2<br>588.2  | 220.8<br>45.2          | 238.9<br>48.9        | 257.1<br>52.7         | 3.63<br>11.91          | 3.63<br>11.91          |
| JDF 44 ODx0.750/PZC26                                                             | PZC26              | MF63                 | 2594<br>102.11 | 2431.9<br>148.4          | 414422.7<br>3034.8              | 7416.3<br>137.9               | 2557.5<br>574.8                        | 3069.0<br>689.7  | 253.4<br>51.9          | 271.6<br>55.6        | 289.8<br>59.3         | 3.63<br>11.91          | 3.63<br>11.91          |
| JDF 48 ODx0.500/PZC26                                                             | PZC26              | MF63                 | 2695<br>106.11 | 1984.6<br>121.1          | 355725.0<br>2604.9              | 5835.4<br>108.5               | 2012.4<br>452.2                        | 2414.8<br>542.7  | 192.6<br>39.4          | 210.1<br>43.0        | 227.6<br>46.6         | 3.79<br>12.43          | 3.79<br>12.43          |
| JDF 48 ODx0.625/PZC26                                                             | PZC26              | MF63                 | 2695<br>106.11 | 2286.3<br>139.5          | 433804.9<br>3176.7              | 7116.2<br>132.4               | 2454.1<br>551.5                        | 2944.9<br>661.8  | 227.2<br>46.5          | 244.7<br>50.1        | 262.1<br>53.7         | 3.79<br>12.43          | 3.79<br>12.43          |
| JDF 48 ODx0.750/PZC26                                                             | PZC26              | MF63                 | 2695<br>106.11 | 2586.3<br>157.8          | 510642.1<br>3739.4              | 8376.7<br>155.8               | 2888.7<br>649.2                        | 3466.5<br>779.0  | 261.6<br>53.6          | 279.1<br>57.2        | 296.5<br>60.7         | 3.79<br>12.43          | 3.79<br>12.43          |
| JDF 52 ODx0.625/PZC26                                                             | PZC26              | MF63                 | 2797<br>110.11 | 2415.0<br>147.4          | 524968.1<br>3844.3              | 7949.2<br>147.9               | 2741.3<br>616.1                        | 3289.6<br>739.3  | 233.2<br>47.8          | 250.0<br>51.2        | 266.8<br>54.7         | 3.95<br>12.96          | 3.95<br>12.96          |
| JDF 52 ODx0.750/PZC26                                                             | PZC26              | MF63                 | 2797<br>110.11 | 2740.7<br>167.3          | 619753.1<br>4538.4              | 9384.5<br>174.6               | 3236.3<br>727.3                        | 3883.5<br>872.8  | 269.2<br>55.1          | 286.0<br>58.6        | 302.8<br>62.0         | 3.95<br>12.96          | 3.95<br>12.96          |
| JDF 52 ODx0.875/PZC26                                                             | PZC26              | MF63                 | 2797<br>110.11 | 3064.9<br>187.0          | 713140.8<br>5222.2              | 10798.6<br>200.9              | 3723.9<br>836.9                        | 4468.7<br>1004.3 | 305.0<br>62.5          | 321.8<br>65.9        | 338.6<br>69.4         | 3.95<br>12.96          | 3.95<br>12.96          |
| JDF 56 ODx0.750/PZC26                                                             | PZC26              | MF63                 | 2898<br>114.11 | 2895.2<br>176.7          | 742024.0<br>5433.8              | 10433.4<br>194.1              | 3598.0<br>808.6                        | 4317.6<br>970.3  | 276.2<br>56.6          | 292.4<br>59.9        | 308.7<br>63.2         | 4.11<br>13.48          | 4.11<br>13.48          |
| JDF 56 ODx0.875/PZC26                                                             | PZC26              | MF63                 | 2898<br>114.11 | 3245.1<br>198.0          | 855354.0<br>6263.7              | 12026.9<br>223.7              | 4147.5<br>932.1                        | 4977.0<br>1118.5 | 313.5<br>64.2          | 329.7<br>67.5        | 346.0<br>70.9         | 4.11<br>13.48          | 4.11<br>13.48          |
| JDF 56 ODx1.00/PZC26                                                              | PZC26              | MF63                 | 2898<br>114.11 | 3593.4<br>219.3          | 967128.1<br>7082.2              | 13598.5<br>252.9              | 4689.5<br>1053.9                       | 5627.4<br>1264.7 | 350.6<br>71.8          | 366.9<br>75.1        | 383.1<br>78.5         | 4.11<br>13.48          | 4.11<br>13.48          |
| JDF 60 ODx0.750/PZC26                                                             | PZC26              | MF63                 | 3000<br>118.11 | 3049.6<br>186.1          | 877687.0<br>6427.2              | 11518.2<br>214.2              | 3972.1<br>892.7                        | 4766.5<br>1071.2 | 282.7<br>57.9          | 298.4<br>61.1        | 314.1<br>64.3         | 4.27<br>14.00          | 4.27<br>14.00          |
| JDF 60 ODx0.875/PZC26                                                             | PZC26              | MF63                 | 3000<br>118.11 | 3425.3<br>209.0          | 1013163.7<br>7419.3             | 13296.1<br>247.3              | 4585.2<br>1030.5                       | 5502.3<br>1236.5 | 321.4<br>65.8          | 337.1<br>69.1        | 352.8<br>72.3         | 4.27<br>14.00          | 4.27<br>14.00          |
| JDF 60 ODx1.00/PZC26                                                              | PZC26              | MF63                 | 3000<br>118.11 | 3799.3<br>231.8          | 1146907.2<br>8398.7             | 15051.3<br>280.0              | 5190.5<br>1166.5                       | 6228.6<br>1399.8 | 360.0<br>73.7          | 375.7<br>76.9        | 391.4<br>80.2         | 4.27<br>14.00          | 4.27<br>14.00          |
| JDF 64 ODx0.750/PZC26                                                             | PZC26              | MF63                 | 3102<br>122.11 | 3204.1<br>195.5          | 1026943.7<br>7520.2             | 12634.6<br>235.0              | 4357.1<br>979.2                        | 5228.5<br>1175.0 | 288.9<br>59.2          | 304.0<br>62.3        | 319.2<br>65.4         | 4.43<br>14.53          | 4.43<br>14.53          |
| JDF 64 ODx0.875/PZC26                                                             | PZC26              | MF63                 | 3102<br>122.11 | 3605.5<br>220.0          | 1186807.7<br>8690.9             | 14601.5<br>271.6              | 5035.4<br>1131.6                       | 6042.5<br>1357.9 | 328.9<br>67.4          | 344.0<br>70.5        | 359.2<br>73.6         | 4.43<br>14.53          | 4.43<br>14.53          |
| JDF 64 ODx1.00/PZC26                                                              | PZC26              | MF63                 | 3102<br>122.11 | 4005.2<br>244.4          | 1344757.2<br>9847.5             | 16544.8<br>307.7              | 5705.5<br>1282.2                       | 6846.6<br>1538.7 | 368.7<br>75.5          | 383.9<br>78.6        | 399.1<br>81.7         | 4.43<br>14.53          | 4.43<br>14.53          |
| JDF 68 ODx0.750/PZC26                                                             | PZC26              | MF63                 | 3203<br>126.11 | 3358.5<br>204.9          | 1189970.2<br>8714.0             | 13779.2<br>256.3              | 4751.8<br>1067.9                       | 5702.2<br>1281.5 | 294.6<br>60.3          | 309.3<br>63.4        | 324.0<br>66.4         | 4.59<br>15.05          | 4.59<br>15.05          |
| JDF 68 ODx0.875/PZC26                                                             | PZC26              | MF63                 | 3203<br>126.11 | 3785.6<br>231.0          | 1376494.0<br>10079.9            | 15939.0<br>296.5              | 5496.6<br>1235.3                       | 6596.0<br>1482.3 | 335.8<br>68.8          | 350.5<br>71.8        | 365.2<br>74.8         | 4.59<br>15.05          | 4.59<br>15.05          |
| JDF 68 ODx1.00/PZC26                                                              | PZC26              | MF63                 | 3203<br>126.11 | 4211.2<br>257.0          | 1560918.0<br>11430.4            | 18074.6<br>336.2              | 6233.1<br>1400.8                       | 7479.7<br>1680.9 | 376.9<br>77.2          | 391.6<br>80.2        | 406.3<br>83.2         | 4.59<br>15.05          | 4.59<br>15.05          |
| JDF 72 ODx0.750/PZC26                                                             | PZC26              | MF63                 | 3305<br>130.11 | 3513.0<br>214.4          | 1366921.0<br>10009.8            | 14948.8<br>278.1              | 5155.2<br>1158.5                       | 6186.2<br>1390.3 | 300.0<br>61.4          | 314.2<br>64.4        | 328.5<br>67.3         | 4.75<br>15.57          | 4.75<br>15.57          |
| JDF 72 ODx0.875/PZC26                                                             | PZC26              | MF63                 | 3305<br>130.11 | 3965.8<br>242.0          | 1582404.7<br>11587.8            | 17305.4<br>321.9              | 5967.8<br>1341.2                       | 7161.4<br>1609.4 | 342.3<br>70.1          | 356.6<br>73.0        | 370.8<br>76.0         | 4.75<br>15.57          | 4.75<br>15.57          |
| JDF 72 ODx1.00/PZC26                                                              | PZC26              | MF63                 | 3305<br>130.11 | 4417.1<br>269.5          | 1795600.1<br>13149.0            | 19636.9<br>365.2              | 6771.9<br>1521.9                       | 8126.2<br>1826.2 | 384.5<br>78.8          | 398.8<br>81.7        | 413.0<br>84.6         | 4.75<br>15.57          | 4.75<br>15.57          |

\* Larger, custom pipe sizes and wall thicknesses are available upon request. Please contact us at [eng@jdfields.com](mailto:eng@jdfields.com) for availability.