

# FLOWTITE® GRP JACKING PIPES (OD SERIES)

## TYPE FJ JOINT - PRESSURE

| SN   | 32,000               |                     |                        | 40,000     |                     |                        | 50,000     |                     |                        | 64,000     |                     |                        | 80,000     |                     |                        | 100,000    |                     |                        |            |
|------|----------------------|---------------------|------------------------|------------|---------------------|------------------------|------------|---------------------|------------------------|------------|---------------------|------------------------|------------|---------------------|------------------------|------------|---------------------|------------------------|------------|
|      | D <sub>od</sub> (mm) | d <sub>i</sub> (mm) | F <sub>perm</sub> (kN) | Mass(kg/m) | d <sub>i</sub> (mm) | F <sub>perm</sub> (kN) | Mass(kg/m) | d <sub>i</sub> (mm) | F <sub>perm</sub> (kN) | Mass(kg/m) | d <sub>i</sub> (mm) | F <sub>perm</sub> (kN) | Mass(kg/m) | d <sub>i</sub> (mm) | F <sub>perm</sub> (kN) | Mass(kg/m) | d <sub>i</sub> (mm) | F <sub>perm</sub> (kN) | Mass(kg/m) |
| 650  | -                    | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | 591                 | 345                    | 119        |
| 718  | -                    | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | 657                 | 430                    | 136        | 653                 | 548                    | 145        |
| 752  | -                    | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | 688                 | 532                    | 149        | 683                 | 662                    | 159        |
| 820  | -                    | -                   | -                      | -          | -                   | -                      | -          | 760                 | 463                    | 153        | 755                 | 614                    | 165        | 750                 | 760                    | 177        | 745                 | 915                    | 189        |
| 860  | -                    | -                   | -                      | -          | -                   | -                      | -          | 797                 | 581                    | 168        | 792                 | 747                    | 181        | 787                 | 908                    | 194        | 782                 | 1,078                  | 208        |
| 924  | -                    | -                   | -                      | -          | 861                 | 415                    | 181        | 856                 | 577                    | 194        | 851                 | 769                    | 209        | 846                 | 954                    | 224        | 840                 | 1,151                  | 240        |
| 960  | 899                  | 357                 | 182                    | 895        | 521                 | 195                    | 890        | 696                 | 209                    | 884        | 903                 | 226                    | 878        | 1,103               | 242                    | 872        | 1,315               | 259                    |            |
| 1026 | 961                  | 545                 | 208                    | 956        | 733                 | 223                    | 951        | 933                 | 239                    | 945        | 1,169               | 258                    | 939        | 1,397               | 276                    | 932        | 1,640               | 296                    |            |
| 1099 | 1029                 | 779                 | 239                    | 1024       | 994                 | 256                    | 1019       | 1,223               | 274                    | 1012       | 1,495               | 296                    | 1006       | 1,757               | 317                    | 999        | 2,035               | 339                    |            |
| 1229 | 1151                 | 1,165               | 299                    | 1145       | 1,434               | 320                    | 1139       | 1,721               | 343                    | 1132       | 2,061               | 370                    | 1125       | 2,388               | 396                    | 1117       | 2,736               | 424                    |            |
| 1280 | 1199                 | 1,373               | 324                    | 1193       | 1,665               | 347                    | 1186       | 1,976               | 372                    | 1179       | 2,344               | 401                    | 1171       | 2,699               | 430                    | 1163       | 3,077               | 460                    |            |
| 1348 | 1263                 | 1,670               | 359                    | 1256       | 1,993               | 385                    | 1249       | 2,339               | 412                    | 1241       | 2,747               | 445                    | 1233       | 3,141               | 476                    | 1225       | 3,560               | 510                    |            |
| 1434 | 1343                 | 2,078               | 406                    | 1336       | 2,444               | 436                    | 1329       | 2,835               | 467                    | 1321       | 3,297               | 504                    | 1312       | 3,743               | 539                    | 1303       | 4,217               | 577                    |            |
| 1499 | 1404                 | 2,411               | 444                    | 1397       | 2,811               | 476                    | 1389       | 3,238               | 510                    | 1380       | 3,743               | 550                    | 1372       | 4,230               | 589                    | -          | -                   | -                      |            |
| 1535 | 1438                 | 2,604               | 466                    | 1431       | 3,024               | 499                    | 1423       | 3,471               | 535                    | 1414       | 4,001               | 577                    | 1405       | 4,512               | 618                    | -          | -                   | -                      |            |
| 1638 | 1534                 | 3,065               | 530                    | 1527       | 3,543               | 568                    | 1518       | 4,052               | 609                    | 1508       | 4,655               | 657                    | -          | -                   | -                      | -          | -                   | -                      |            |
| 1720 | 1611                 | 3,564               | 584                    | 1603       | 4,091               | 626                    | 1594       | 4,653               | 671                    | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      |            |
| 1842 | 1725                 | 4,369               | 670                    | 1717       | 4,974               | 718                    | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      |            |
| 1940 | 1817                 | 5,069               | 743                    | 1808       | 5,740               | 797                    | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      |            |
| 2046 | 1916                 | 5,879               | 827                    | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      |            |

This table shows jacking pipe dimensions and maximum allowable jacking force  $F_{perm}$  (kN) for various stiffness classes with closed connection contact. The table is based on a compressive strength of 85 MPa and a factor of safety of 3.5 in accordance with ISO 25780 "Plastics piping systems for pressure and non-pressure water supply, irrigation, drainage or sewerage – Glass-reinforced thermosetting plastics (GRP) systems based on unsaturated polyester (UP) resin – Pipes with flexible joints intended to be installed using jacking techniques".



The **Type FJ** joint is comprised of a pressure coupling and is applicable for pressure applications.

Please contact Iplex Pipelines for use with this joint.

### ABBREVIATIONS

DN = Nominal diameter

$F_{perm}$  = permissible jacking force (kN)

$d_{od}$  = outside diameter (mm)

SN = nominal stiffness (N/m/m)

$d_i$  = internal diameter (mm)

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# FLOWTITE® GRP JACKING PIPES (OD SERIES)

## TYPE FJ JOINT - PRESSURE

| SN   | 128,000              |                     |                        | 160,000    |                     |                        | 200,000    |                     |                        | 320,000    |                     |                        | 640,000    |                     |                        | 1,000,000  |                     |                        |            |
|------|----------------------|---------------------|------------------------|------------|---------------------|------------------------|------------|---------------------|------------------------|------------|---------------------|------------------------|------------|---------------------|------------------------|------------|---------------------|------------------------|------------|
|      | D <sub>od</sub> (mm) | d <sub>i</sub> (mm) | F <sub>perm</sub> (kN) | Mass(kg/m) | d <sub>i</sub> (mm) | F <sub>perm</sub> (kN) | Mass(kg/m) | d <sub>i</sub> (mm) | F <sub>perm</sub> (kN) | Mass(kg/m) | d <sub>i</sub> (mm) | F <sub>perm</sub> (kN) | Mass(kg/m) | d <sub>i</sub> (mm) | F <sub>perm</sub> (kN) | Mass(kg/m) | d <sub>i</sub> (mm) | F <sub>perm</sub> (kN) | Mass(kg/m) |
| 401  | -                    | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | 348                 | 110                    | 64         | 336                 | 284                    | 78         | -                   | -                      | -          |
| 427  | -                    | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | 371                 | 170                    | 73         | 357                 | 367                    | 88         | 347                 | 511                    | 100        |
| 501  | -                    | -                   | -                      | -          | 448                 | 147                    | 82         | 444                 | 216                    | 87         | 435                 | 376                    | 100        | 419                 | 648                    | 121        | 407                 | 846                    | 137        |
| 530  | 478                  | 142                 | 85                     | 474        | 215                 | 91                     | 470        | 293                 | 97                     | 460        | 472                 | 112                    | 444        | 776                 | 136                    | 431        | 998                 | 154                    |            |
| 550  | 496                  | 187                 | 92                     | 492        | 266                 | 98                     | 488        | 350                 | 105                    | 478        | 543                 | 120                    | 460        | 870                 | 146                    | 447        | 1,109               | 165                    |            |
| 616  | 555                  | 359                 | 115                    | 551        | 458                 | 123                    | 546        | 563                 | 131                    | 535        | 805                 | 151                    | 516        | 1,216               | 183                    | 501        | 1,515               | 207                    |            |
| 650  | 586                  | 460                 | 128                    | 581        | 570                 | 137                    | 576        | 687                 | 146                    | 564        | 957                 | 168                    | 544        | 1,414               | 204                    | 529        | 1,748               | 231                    |            |
| 718  | 647                  | 689                 | 156                    | 642        | 823                 | 167                    | 636        | 966                 | 178                    | 624        | 1,295               | 205                    | 601        | 1,853               | 249                    | 584        | 2,260               | 281                    |            |
| 752  | 678                  | 816                 | 171                    | 672        | 964                 | 183                    | 667        | 1,121               | 196                    | 653        | 1,481               | 224                    | 629        | 2,093               | 273                    | -          | -                   | -                      |            |
| 820  | 739                  | 1,097               | 204                    | 733        | 1,273               | 218                    | 727        | 1,460               | 232                    | 712        | 1,889               | 267                    | 686        | 2,616               | 325                    | -          | -                   | -                      |            |
| 860  | 775                  | 1,279               | 224                    | 769        | 1,473               | 239                    | 762        | 1,678               | 256                    | 747        | 2,149               | 293                    | -          | -                   | -                      | -          | -                   | -                      |            |
| 924  | 833                  | 1,383               | 258                    | 826        | 1,606               | 276                    | 819        | 1,843               | 295                    | 802        | 2,388               | 338                    | -          | -                   | -                      | -          | -                   | -                      |            |
| 960  | 865                  | 1,566               | 279                    | 858        | 1,807               | 298                    | 851        | 2,062               | 318                    | 834        | 2,650               | 365                    | -          | -                   | -                      | -          | -                   | -                      |            |
| 1026 | 925                  | 1,926               | 318                    | 917        | 2,202               | 340                    | 909        | 2,494               | 364                    | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      |            |
| 1099 | 991                  | 2,364               | 365                    | 983        | 2,680               | 390                    | 974        | 3,014               | 417                    | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      |            |
| 1229 | 1108                 | 3,147               | 457                    | 1099       | 3,542               | 488                    | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      |            |
| 1280 | 1154                 | 3,523               | 495                    | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      |            |
| 1348 | 1215                 | 4,054               | 549                    | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      | -          | -                   | -                      |            |

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