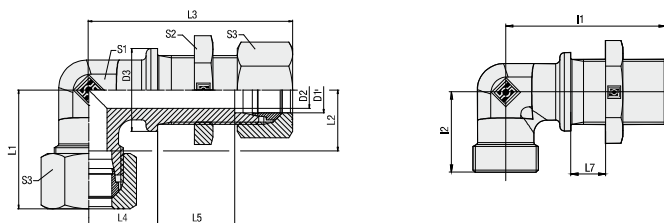


## Elbow Bulkhead Fittings Type FI-WS ■ Series L / S



| Series | Tube OD | PN   | Dimensions |         |         |         |                 |         |                 |         |         |                 |                 |         |         |         | Weight               | Ordering Codes <sup>3</sup> |  |
|--------|---------|------|------------|---------|---------|---------|-----------------|---------|-----------------|---------|---------|-----------------|-----------------|---------|---------|---------|----------------------|-----------------------------|--|
|        | (mm/in) |      | (mm/in)    | (mm/in) | (mm/in) | (mm/in) | (mm/in)         | (mm/in) | (mm/in)         | (mm/in) | (mm/in) | (mm/in)         | (mm/in)         | (mm/in) | (mm/in) | (mm/in) | (kg/lbs) ca.         |                             |  |
|        | D1      |      | D2         | L       | i1      | i2      | L1 <sup>1</sup> | L2      | L3 <sup>1</sup> | L4      | L5      | L7 <sup>1</sup> | L7 <sup>1</sup> | S1      | S2      | S3      | per 100 <sup>2</sup> |                             |  |
| L      | 6       | 315  | 4          | 17      | 48      | 19      | 27              | 12      | 56              | 14      | 27      | 3               | 16              | 12      | 17      | 14      | 4,88                 | FI-WS-06L-W3-SKM            |  |
|        | .24     | 4568 | .16        | .67     | 1.89    | .75     | 1.06            | .47     | 2.20            | .55     | 1.06    | .12             | .63             | .47     | .67     | .55     | 10,74                |                             |  |
|        | 8       | 315  | 6          | 19      | 51      | 21      | 29              | 14      | 59              | 17      | 27      | 3               | 16              | 12      | 19      | 17      | 6,11                 | FI-WS-08L-W3-SKM            |  |
|        | .31     | 4568 | .24        | .75     | 2.01    | .83     | 1.14            | .55     | 2.32            | .67     | 1.06    | .12             | .63             | .47     | .75     | .67     | 13,43                |                             |  |
|        | 10      | 315  | 8          | 22      | 53      | 22      | 30              | 15      | 61              | 18      | 28      | 3               | 16              | 14      | 22      | 19      | 7,89                 | FI-WS-10L-W3-SKM            |  |
|        | .39     | 4568 | .31        | .87     | 2.09    | .87     | 1.18            | .59     | 2.40            | .71     | 1.10    | .12             | .63             | .55     | .87     | .75     | 17,35                |                             |  |
|        | 12      | 315  | 10         | 24      | 56      | 24      | 32              | 17      | 64              | 20      | 29      | 3               | 16              | 17      | 24      | 22      | 9,65                 | FI-WS-12L-W3-SKM            |  |
|        | .47     | 4568 | .39        | .94     | 2.20    | .94     | 1.26            | .67     | 2.52            | .79     | 1.14    | .12             | .63             | .67     | .94     | .87     | 21,23                |                             |  |
|        | 15      | 315  | 12         | 27      | 61      | 28      | 36              | 21      | 69              | 23      | 31      | 3               | 16              | 19      | 30      | 27      | 16,31                | FI-WS-15L-W3-SKM            |  |
|        | .59     | 4568 | .47        | 1.06    | 2.40    | 1.10    | 1.42            | .83     | 2.72            | .91     | 1.22    | .12             | .63             | .75     | 1.18    | 1.06    | 35,88                |                             |  |
|        | 18      | 315  | 15         | 32      | 64      | 31      | 40              | 23,5    | 73              | 24      | 32,5    | 3               | 16              | 24      | 36      | 32      | 23,82                | FI-WS-18L-W3-SKM            |  |
|        | .71     | 4568 | .59        | 1.26    | 2.52    | 1.22    | 1.57            | .93     | 2.87            | .94     | 1.28    | .12             | .63             | .94     | 1.42    | 1.26    | 52,40                |                             |  |
|        | 22      | 250  | 19         | 36      | 72      | 35      | 44              | 27,5    | 81              | 30      | 34,5    | 4               | 16              | 27      | 41      | 36      | 30,41                | FI-WS-22L-W3-SKM            |  |
|        | .87     | 3625 | .75        | 1.42    | 2.83    | 1.38    | 1.73            | 1.08    | 3.19            | 1.18    | 1.36    | .16             | .63             | 1.06    | 1.61    | 1.42    | 66,90                |                             |  |
|        | 28      | 250  | 24         | 42      | 77      | 38      | 47              | 30,5    | 86              | 34      | 35,5    | 4               | 16              | 36      | 46      | 41      | 45,92                | FI-WS-28L-W3-SKM            |  |
|        | 1.10    | 3625 | .94        | 1.65    | 3.03    | 1.50    | 1.85            | 1.20    | 3.39            | 1.34    | 1.40    | .16             | .63             | 1.42    | 1.81    | 1.61    | 101,03               |                             |  |
|        | 35      | 250  | 30         | 50      | 86      | 45      | 56              | 34,5    | 97              | 39      | 36,5    | 4               | 16              | 41      | 55      | 50      | 75,00                | FI-WS-35L-W3-SKM            |  |
|        | 1.38    | 3625 | 1.18       | 1.97    | 3.39    | 1.77    | 2.20            | 1.36    | 3.82            | 1.54    | 1.44    | .16             | .63             | 1.61    | 2.17    | 1.97    | 165,00               |                             |  |
|        | 42      | 250  | 36         | 60      | 90      | 51      | 63              | 40      | 102             | 43      | 36      | 4               | 16              | 50      | 65      | 60      | 107,00               | FI-WS-42L-W3-SKM            |  |
|        | 1.65    | 3625 | 1.42       | 2.36    | 3.54    | 2.01    | 2.48            | 1.57    | 4.02            | 1.69    | 1.42    | .16             | .63             | 1.97    | 2.56    | 2.36    | 235,40               |                             |  |
| S      | 6       | 630  | 4          | 19      | 53      | 23      | 31              | 16      | 61              | 17      | 29      | 3               | 16              | 12      | 19      | 17      | 7,34                 | FI-WS-06S-W3-SKM            |  |
|        | .24     | 9135 | .16        | .75     | 2.09    | .91     | 1.22            | .63     | 2.40            | .67     | 1.14    | .12             | .63             | .47     | .75     | .67     | 16,15                |                             |  |
|        | 8       | 630  | 5          | 22      | 54      | 24      | 32              | 17      | 62              | 18      | 29      | 3               | 16              | 14      | 22      | 19      | 10,16                | FI-WS-08S-W3-SKM            |  |
|        | .31     | 9135 | .20        | .87     | 2.13    | .94     | 1.26            | .67     | 2.44            | .71     | 1.14    | .12             | .63             | .55     | .87     | .75     | 22,35                |                             |  |
|        | 10      | 630  | 7          | 24      | 57      | 25      | 34              | 17,5    | 66              | 20      | 29,5    | 3               | 16              | 17      | 24      | 22      | 12,59                | FI-WS-10S-W3-SKM            |  |
|        | .39     | 9135 | .28        | .94     | 2.24    | .98     | 1.34            | .69     | 2.60            | .79     | 1.16    | .12             | .63             | .67     | .94     | .87     | 27,71                |                             |  |
|        | 12      | 630  | 8          | 27      | 59      | 29      | 38              | 21,5    | 68              | 21      | 30,5    | 3               | 16              | 17      | 27      | 24      | 16,05                | FI-WS-12S-W3-SKM            |  |
|        | .47     | 9135 | .31        | 1.06    | 2.32    | 1.14    | 1.50            | .85     | 2.68            | .83     | 1.20    | .12             | .63             | .67     | 1.06    | .94     | 35,30                |                             |  |
|        | 14      | 630  | 10         | 27      | 63      | 30      | 40              | 22      | 73              | 23      | 32      | 3               | 16              | 19      | 30      | 27      | 19,62                | FI-WS-14S-W3-SKM            |  |
|        | .55     | 9135 | .39        | 1.06    | 2.48    | 1.18    | 1.57            | .87     | 2.87            | .91     | 1.26    | .12             | .63             | .75     | 1.18    | 1.06    | 43,17                |                             |  |
|        | 16      | 400  | 12         | 30      | 64      | 33      | 43              | 24,5    | 74              | 24      | 31,5    | 3               | 16              | 24      | 32      | 30      | 24,14                | FI-WS-16S-W3-SKM            |  |
|        | .63     | 5800 | .47        | 1.18    | 2.52    | 1.30    | 1.69            | .96     | 2.91            | .94     | 1.24    | .12             | .63             | .94     | 1.26    | 1.18    | 53,10                |                             |  |
|        | 20      | 400  | 16         | 36      | 74      | 37      | 48              | 26,5    | 85              | 30      | 33,5    | 4               | 16              | 27      | 41      | 36      | 38,01                | FI-WS-20S-W3-SKM            |  |
|        | .79     | 5800 | .63        | 1.42    | 2.91    | 1.46    | 1.89            | 1.04    | 3.35            | 1.18    | 1.32    | .16             | .63             | 1.06    | 1.61    | 1.42    | 83,63                |                             |  |
|        | 25      | 400  | 20         | 42      | 81      | 42      | 54              | 30      | 93              | 34      | 35      | 4               | 16              | 36      | 46      | 46      | 61,10                | FI-WS-25S-W3-SKM            |  |
|        | .98     | 5800 | .79        | 1.65    | 3.19    | 1.65    | 2.13            | 1.18    | 3.66            | 1.34    | 1.38    | .16             | .63             | 1.42    | 1.81    | 1.81    | 134,42               |                             |  |
|        | 30      | 400  | 25         | 50      | 90      | 49      | 62              | 35,5    | 103             | 39      | 37,5    | 4               | 16              | 41      | 50      | 50      | 91,00                | FI-WS-30S-W3-SKM            |  |
|        | 1.18    | 5800 | .98        | 1.97    | 3.54    | 1.93    | 2.44            | 1.40    | 4.06            | 1.54    | 1.48    | .16             | .63             | 1.61    | 1.97    | 1.97    | 200,20               |                             |  |
|        | 38      | 315  | 32         | 60      | 96      | 57      | 72              | 41      | 112             | 43      | 37      | 4               | 16              | 50      | 65      | 60      | 138,90               | FI-WS-38S-W3-SKM            |  |
|        | 1.50    | 4568 | 1.26       | 2.36    | 3.78    | 2.24    | 2.83            | 1.61    | 4.41            | 1.69    | 1.46    | .16             | .63             | 1.97    | 2.56    | 2.36    | 305,58               |                             |  |

<sup>1</sup> Approximate dimension in assembled condition.

<sup>2</sup> Weight excluding cutting rings and union nuts.

<sup>3</sup> Standard scope of delivery: Fitting body only.

### Ordering Codes

**\*FI-WS\*-10\*L\*-W3\*-MS**

|                                                                         |                                                                      |
|-------------------------------------------------------------------------|----------------------------------------------------------------------|
| * Elbow Bulkhead Fitting                                                | FI-WS                                                                |
| * Outside Tube Diameter D1 (in mm)                                      | -10                                                                  |
| * Series                                                                | Light Series<br>Heavy Series                                         |
|                                                                         | L<br>S                                                               |
| * Material Code                                                         | Steel, zinc/nickel-plated                                            |
|                                                                         | -W3                                                                  |
| Please contact STAUFF for alternative materials and surface finishings. |                                                                      |
| * Assembling / Kitting                                                  | Fitting body only                                                    |
|                                                                         | —                                                                    |
|                                                                         | Fitting body supplied with hexagon lock nut                          |
|                                                                         | -SKM                                                                 |
|                                                                         | Fitting body supplied with cutting rings and union nuts              |
|                                                                         | -MS                                                                  |
|                                                                         | Fitting body supplied with soft-sealing cutting rings and union nuts |
|                                                                         | -MSV                                                                 |

### Connecting Parts

|  |                                           |         |
|--|-------------------------------------------|---------|
|  | Cutting Ring<br>Type FI-DS                | Page 26 |
|  | Soft-Sealing Cutting Ring<br>Type FI-WDDS | Page 27 |
|  | Support Sleeve<br>Type FI-VH              | Page 28 |
|  | STAUFF Form Ring<br>Type FI-AR            | Page 30 |
|  | Union Nut<br>Type FI-M                    | Page 31 |
|  | 37° Flared Tube Fitting Set<br>Type FI-AB | Page 35 |

### Spare Parts / Accessories

|  |                                 |          |
|--|---------------------------------|----------|
|  | Hexagon Lock Nut<br>Type FI-SKM | Page 205 |
|--|---------------------------------|----------|

