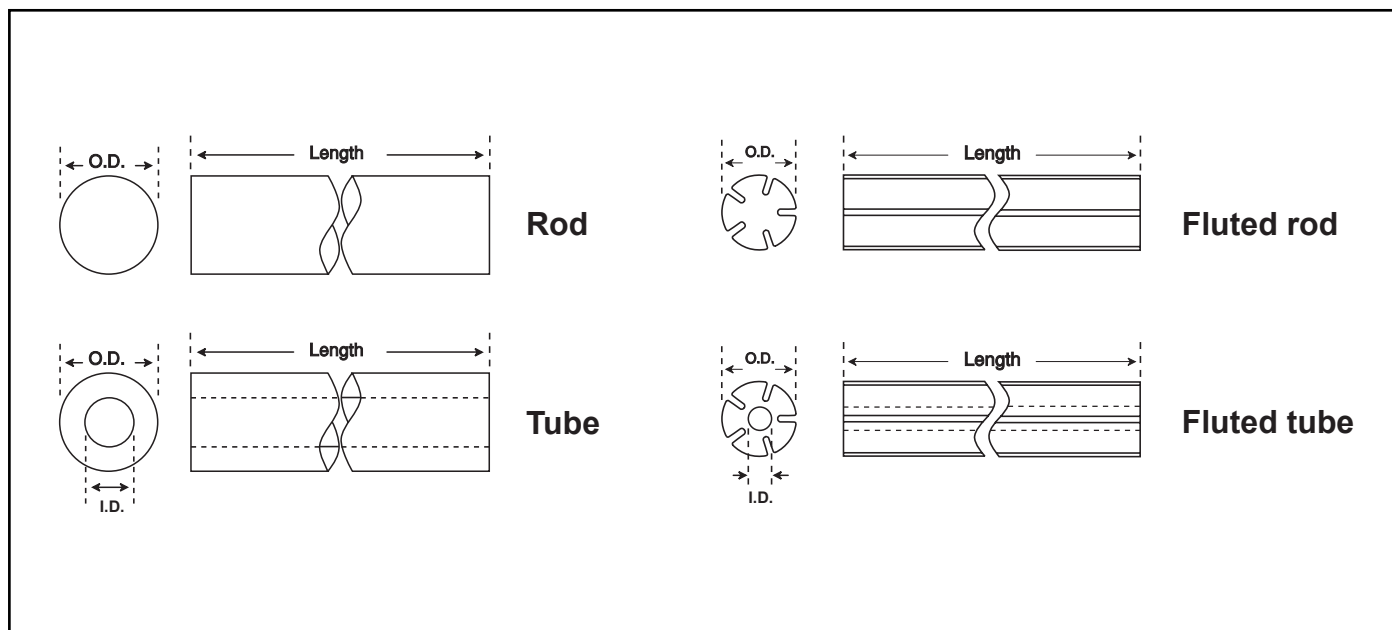


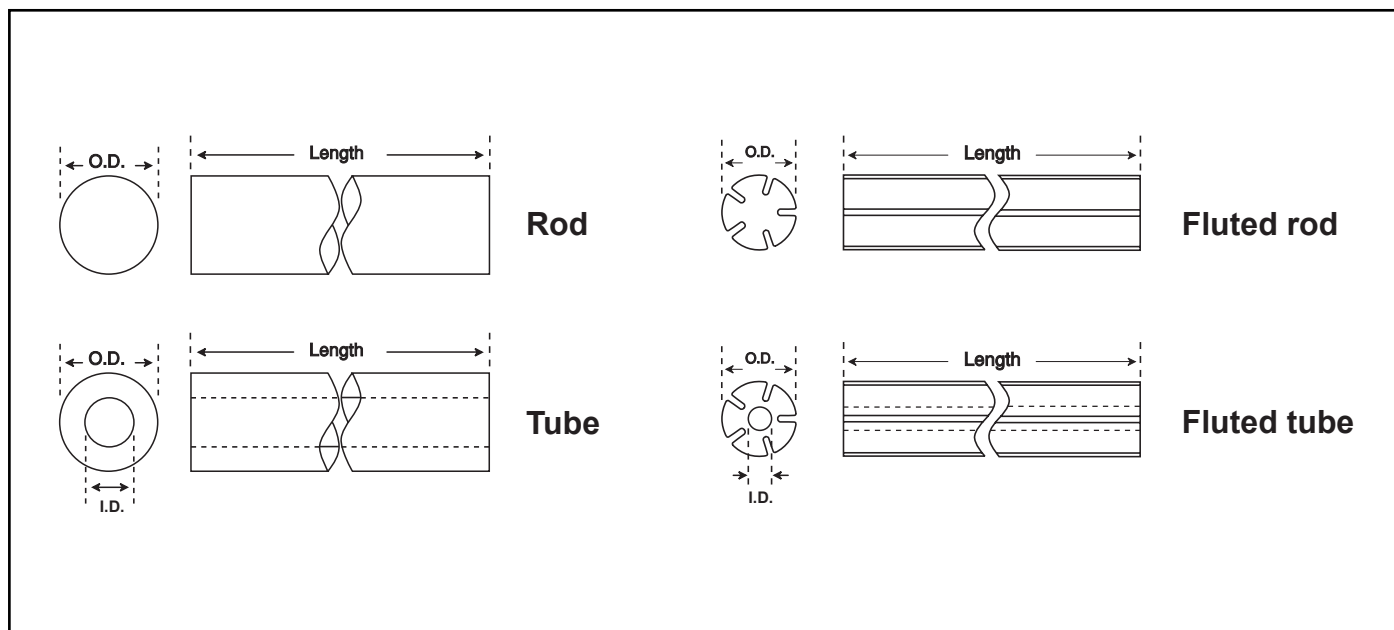
## Short Rods (length up to and incl. 50.80mm)

| Dimensions (mm) |           |        |           | Material | Part No.   |
|-----------------|-----------|--------|-----------|----------|------------|
| O.D.            | Tolerance | Length | Tolerance |          |            |
| 2.00            | ±0.02     | 11.00  | ±0.50     | F14      | 36-160-31  |
| 3.18            | ±0.13     | 9.50   | ±0.50     | F14      | 36-254-31  |
| 3.55            | ±0.14     | 28.50  | ±0.86     | F8       | 36-904-28  |
| 4.00            | ±0.17     | 20.00  | ±0.60     | F48      | 36-309-48  |
| 4.00            | ±0.17     | 40.00  | ±1.20     | F8       | 36-303-28  |
| 4.76            | ±0.20     | 19.05  | ±0.57     | F14      | 36-351-31  |
| 5.00            | ±0.20     | 35.00  | ±1.05     | F5C      | 36-387-S49 |
| 5.00            | ±0.20     | 35.00  | ±1.05     | F25      | 36-387-34  |
| 5.00            | ±0.20     | 38.00  | ±1.14     | F13      | 36-906-30  |
| 6.35            | ±0.25     | 6.50   | ±0.50     | F14      | 36-481-31  |
| 6.35            | ±0.25     | 9.00   | ±0.50     | F13      | 36-487-30  |
| 6.35            | ±0.25     | 12.70  | ±0.50     | F13      | 36-488-30  |
| 6.35            | ±0.25     | 15.00  | ±0.50     | F14      | 36-461-31  |
| 6.35            | ±0.25     | 19.05  | ±0.57     | F14      | 36-452-31  |
| 6.35            | ±0.25     | 25.40  | ±0.76     | F14      | 36-453-31  |
| 6.35            | ±0.25     | 27.70  | ±0.83     | F14      | 36-454-31  |
| 6.35            | ±0.25     | 31.00  | ±0.93     | F25      | 36-465-34  |
| 6.35            | ±0.25     | 31.75  | ±0.95     | F13      | 36-455-30  |
| 6.35            | ±0.25     | 38.10  | ±1.14     | F6       | 36-456-26  |
| 6.35            | ±0.25     | 43.75  | ±1.31     | F8       | 36-478-28E |
| 7.92            | ±0.27     | 25.40  | ±0.76     | F14      | 36-504-31  |
| 7.92            | ±0.27     | 31.75  | ±0.95     | F6       | 36-505-26  |



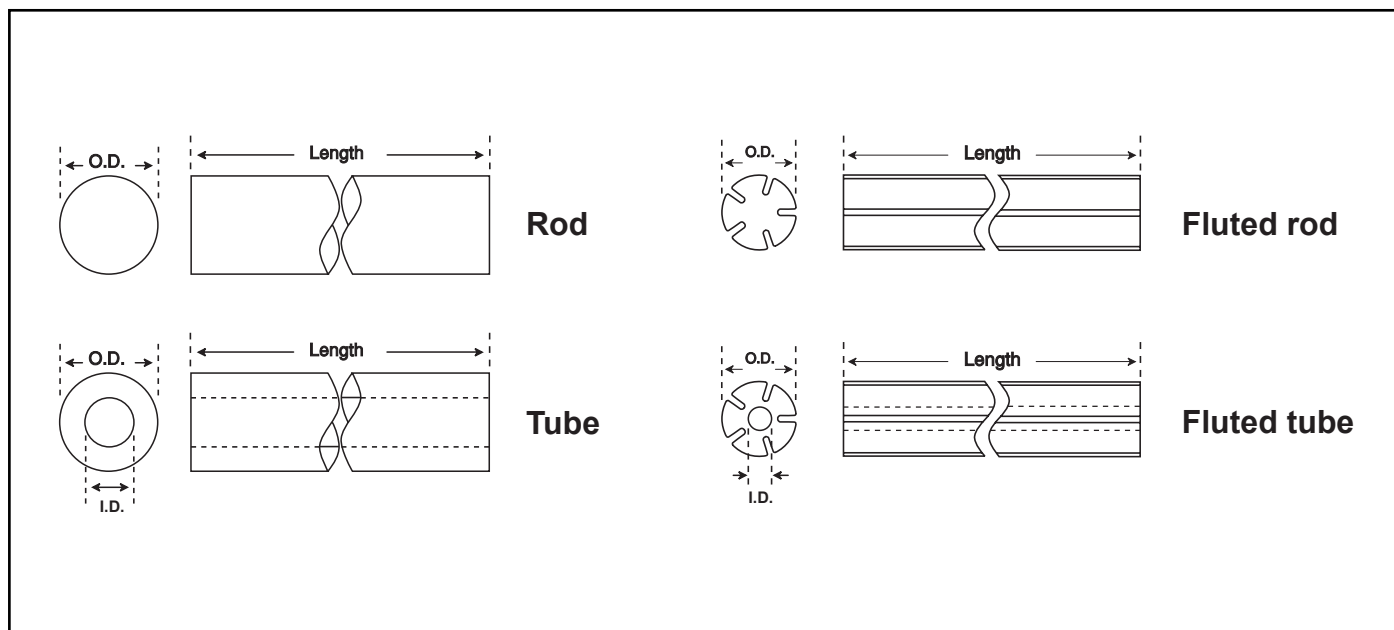
## Short Rods (length up to and incl. 50.80mm) continued

| Dimensions (mm) |           |        |           | Material | Part No.   |
|-----------------|-----------|--------|-----------|----------|------------|
| O.D.            | Tolerance | Length | Tolerance |          |            |
| 7.92            | ±0.27     | 38.10  | ±1.14     | F8       | 36-501-28  |
| 7.92            | ±0.27     | 45.00  | ±1.35     | F16      | 36-525-32  |
| 8.25            | ±0.27     | 28.50  | ±0.86     | F14      | 36-958-31  |
| 9.50            | ±0.29     | 23.00  | ±0.69     | F14      | 36-629-31  |
| 9.50            | ±0.29     | 25.40  | ±0.76     | F6       | 36-601-26  |
| 9.50            | ±0.29     | 50.80  | ±1.52     | F14      | 36-606-31  |
| 10.00           | ±0.30     | 30.00  | ±0.90     | F14      | 36-652-31  |
| 10.00           | ±0.30     | 35.00  | ±1.05     | F14      | 36-675-31M |
| 10.50           | ±0.32     | 19.00  | ±0.57     | F14      | 36-970-31  |
| 10.54           | ±0.32     | 41.91  | ±1.26     | F14      | 36-653-31  |
| 10.54           | ±0.32     | 43.18  | ±1.30     | F13      | 36-653-30  |
| 11.00           | ±0.33     | 42.00  | ±1.26     | F25      | 36-678-34  |
| 12.70           | ±0.38     | 25.40  | ±0.76     | F6       | 36-701-26  |
| 12.70           | ±0.38     | 32.00  | ±0.96     | F5       | 36-706-25  |
| 12.70           | ±0.38     | 50.80  | ±1.52     | F6       | 36-702-26  |
| 15.90           | ±0.48     | 14.00  | ±0.50     | F5A      | 36-753-49  |
| 16.00           | ±0.48     | 38.10  | ±1.14     | F6       | 36-757-26  |
| 19.05           | ±0.57     | 38.10  | ±1.14     | F6       | 36-803-26  |
| 19.05           | ±0.57     | 38.10  | ±1.14     | F48      | 36-803-48  |
| 19.05           | ±0.57     | 45.00  | ±1.35     | F16      | 36-806-32  |



### Long Rods (length over 50.80mm)

| Dimensions (mm) |           |        |           | Material | Part No.  |
|-----------------|-----------|--------|-----------|----------|-----------|
| O.D.            | Tolerance | Length | Tolerance |          |           |
| 6.35            | ±5.0%     | 81.50  | ±1.63     | F14      | 36-480-31 |
| 6.35            | ±5.0%     | 81.50  | ±1.63     | F8       | 36-480-28 |
| 6.35            | ±5.0%     | 85.00  | ±1.70     | F14      | 36-473-31 |
| 8.00            | ±5.0%     | 75.00  | ±1.50     | F14      | 36-553-31 |
| 9.50            | ±5.0%     | 65.00  | ±1.30     | F8       | 36-608-28 |
| 9.50            | ±5.0%     | 203.20 | ±4.06     | F8       | 37-256-28 |
| 9.50            | ±5.0%     | 203.20 | ±4.06     | F14      | 37-256-31 |
| 12.70           | ±5.0%     | 55.00  | ±1.10     | F14      | 36-713-31 |
| 12.70           | ±5.0%     | 70.00  | ±1.40     | F14      | 36-703-31 |
| 12.70           | ±5.0%     | 101.60 | ±2.03     | F8       | 37-356-28 |
| 12.70           | ±5.0%     | 203.20 | ±4.06     | F14      | 37-355-31 |

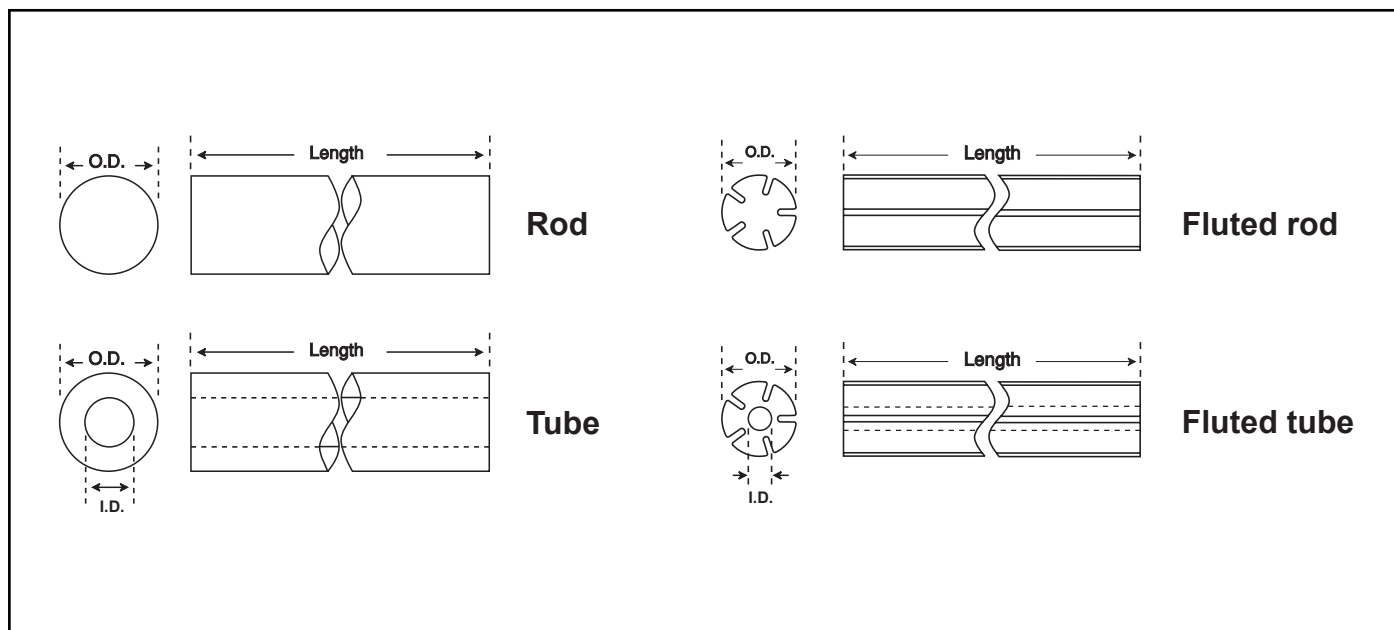


Fluted Rods

| Dimensions (mm) |           |        |           | Material | Part No.    |
|-----------------|-----------|--------|-----------|----------|-------------|
| O.D.            | Tolerance | Length | Tolerance |          |             |
| 6.00            | ±5.0%     | 200.00 | ±4.00     | F59      | 38-0620-59* |
| 8.00            | ±5.0%     | 200.00 | ±4.00     | F59      | 38-0820-59* |
| 10.00           | ±5.0%     | 200.00 | ±4.00     | F6       | 38-1020-26  |
| 12.70           | ±5.0%     | 200.00 | ±4.00     | F6       | 38-025-26   |
| 16.00           | ±5.0%     | 200.00 | ±4.00     | F6       | 38-032-26   |
| 19.00           | ±5.0%     | 200.00 | ±4.00     | F6       | 38-042-26   |
| 19.00           | ±5.0%     | 200.00 | ±4.00     | F59      | 38-042-59   |

\* Impeder welding applications only.





Tubes

| Dimensions (mm) |           |      |           |        |           | Material | Part No.  |
|-----------------|-----------|------|-----------|--------|-----------|----------|-----------|
| O.D.            | Tolerance | I.D. | Tolerance | Length | Tolerance |          |           |
| 16.00           | ±5.0%     | 7.00 | ±0.35     | 200.00 | ±4.00     | F6       | 35-625-26 |
| 20.00           | ±5.0%     | 9.00 | ±0.45     | 200.00 | ±4.00     | F6       | 35-635-26 |

Fluted Tubes

| Dimensions (mm) |           |      |           |        |           | Material | Part No.     |
|-----------------|-----------|------|-----------|--------|-----------|----------|--------------|
| O.D.            | Tolerance | I.D. | Tolerance | Length | Tolerance |          |              |
| 12.00           | ±5.0%     | 6.00 | ±0.30     | 200.00 | ±4.00     | F59      | 40-12H20-59* |
| 16.00           | ±5.0%     | 7.00 | ±0.35     | 200.00 | ±4.00     | F6       | 40-16J20-26  |

\* Impeder welding applications only.

