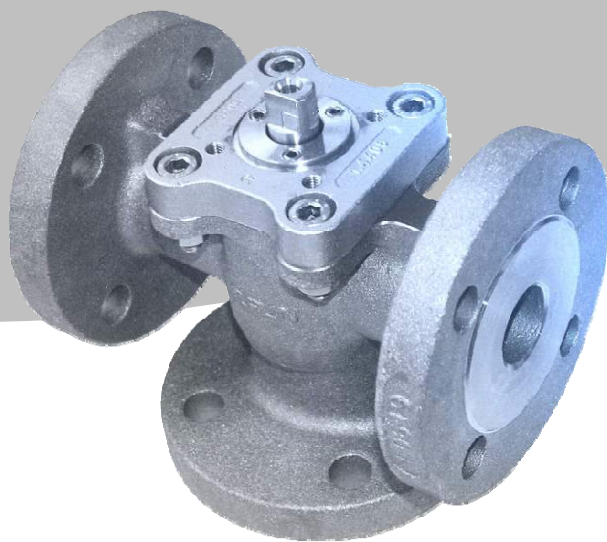


## Technische Dokumentation Technical Documentation



### TUFLIN<sup>®</sup> Multiport Plug Valves



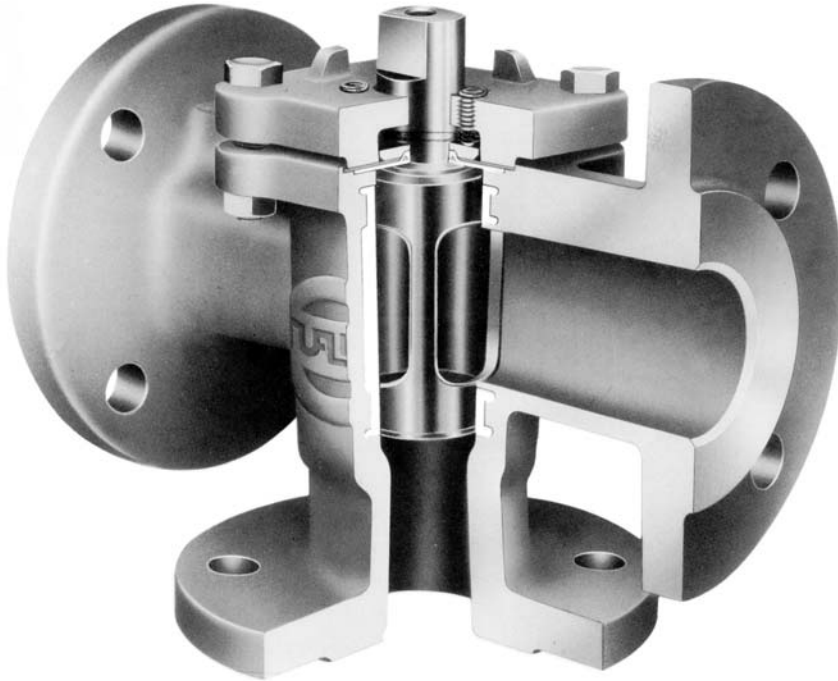
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# XOMOX®

Sleeves

Design Features of TUFLIN® Multiport Plug Valves with Teflon®



TUFLIN® Valves incorporate a plug rotating in a Teflon®-sleeve locked in the body. The Teflon®-sleeve serves as a self-lubricating seal against leakage through ports and to the atmosphere.

TUFLIN® Valves provide tight shut-off for liquids, gases or slurries, plus corrosion resistance with the absence of product contamination. The special TUFLIN® design accommodates specified changes in temperature, high vacuum as well as rated pressures, while still maintaining complete shut off.

The low friction Teflon® sleeve surrounding the plug permits quick and easy operation. Costly lubrication and maintenance are eliminated.

The seats are not exposed to the media in either the open or closed position.

The cold flow properties of Teflon® and the tendency to expand under heat are prevented by the special design of the body interior. The sleeve is locked into the body by means of metal lips surrounding the port areas and by the shoulders at the top and bottom in the body, thus restrained from rotation and movement. The ribs provided around the ports, at the top and bottom establish a very high compression of the Teflon®-sleeve against the plug.

**Features: No lubrication, no seizing of plug**  
**Teflon®-sleeve fully retained at top, bottom and around ports**  
**No maintenance cost**  
**Minimized body cavities for residuals or contamination**  
**Complete shut off**

## Components and Material Availability

### Available Materials for Multiport Valves:

\* Ductile Iron EN-JS1049 (0.7043, GGG 40.3),  
as per EN 1563, 0.7659 (Ni Resist) as per DIN 1694  
\* Carbon Steel EN10213-2 (1.0619, GS-C25),  
A216-WCB, A352-LCB  
Stainless Steel 1.4408, 1.4552, 1.4309 as per EN10213-4,  
CF8M, CF8C, CF8, CF3M, CF3,  
Argonit 1 (1.4361 casting), CN7M (A 20), A494-M-35-1  
(Alloy 400, Monel), A494-CZ100 (Alloy 200, Nickel),  
A494-N7M (Alloy B2), A494-CW2M (Alloy C4),  
B367-C2 (Titanium), Zirconium R60702, A494-CY-40 (Alloy 600)

Other materials upon request.

\*Available with fluorocarbon lining in PFA  
(see technical data sheet: tdb\_lpv\_gb).

Combinations of different materials for body and plug are  
available. Body and plug are of the same material unless  
otherwise requested.

Standard plug material is stainless steel 1.4408.

Seals and sleeves are pure Teflon® (no regenerate).  
Teflon®-fiberglass reinforced sleeves available on request.  
Other sleeve materials depending on pressure and temperature.  
Other fluorocarbon seals for special applications on request.  
All Multiport Valves are available in FIRESAFE – design acc. to  
API 607 4th edition, also with electrostatic eliminator or free of  
oil and grease.

### Available Flange Standards:

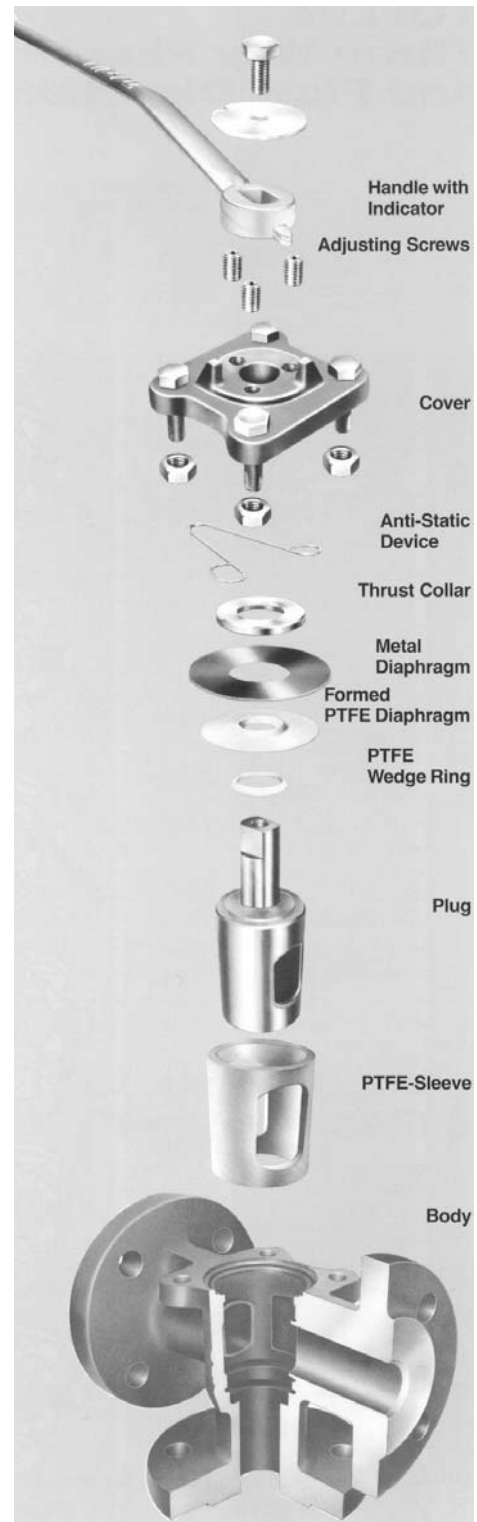
PN 10-40 (EN 1092-1)  
PN 63-100 (EN 1092-1)  
CLASS 150, 300, 600 (ASME B16.5)  
JIS (JIS B2210)  
British Standard (BS1560)  
Screwed Ends: Whitworth R (DIN 2999-1)  
or NPT (ASME B1.20.1)  
Welded Ends: EN12760 (SW)  
EN12627 (BW)

Temperature range: 173 K to 553 K (-100° C to +280° C)  
(more details see page 14)
























Suitable for vacuum services  
(Vacuum range:  $1.33 \cdot 10^3$  to  $1.33 \cdot 10^{-2}$  mbar)

Strength calculation method against internal pressure:  
The calculation procedure for pressure retaining valve  
components has been performed acc. to DIN 3840 (EN12516).

Subject to technical modifications.



## TUFLIN® Three Way Plug Port Arrangements and Flow Directions

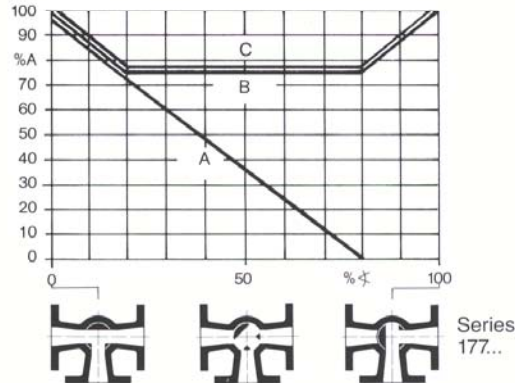
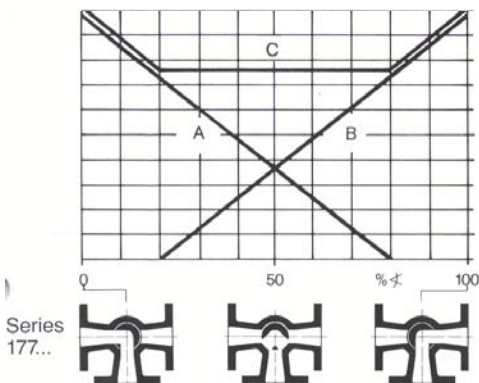
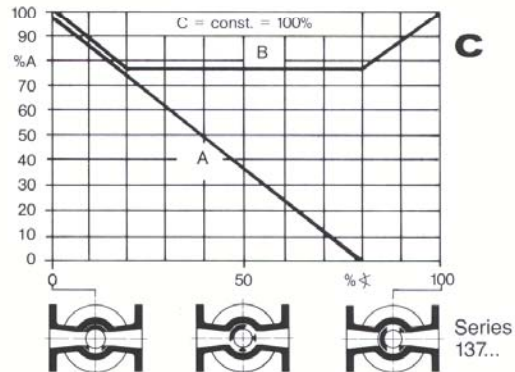
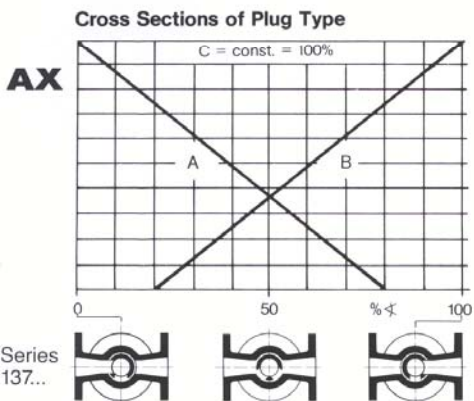
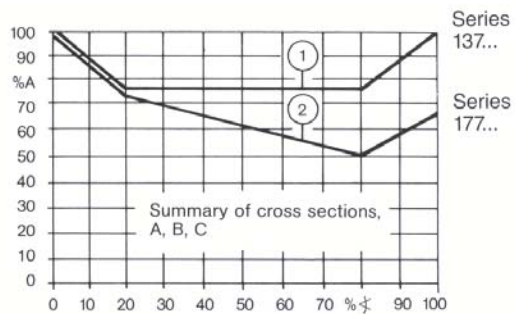
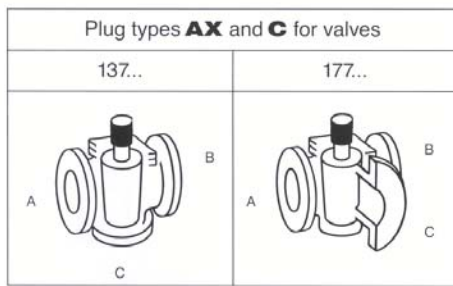
| Type |   | Position 1  | Position 2   | Position 3  |
|------|---|---|--|---|
| I    |    |    |    |   |
| D    |    |    |    |    |
| C    |    |    |    |    |
|      |   |   |   |   |
| AX   |  |  |  |   |
|      |   |  |  |   |
| A    |  |  |  |  |

Handle and position indicator can be refitted 180° from orientation shown.



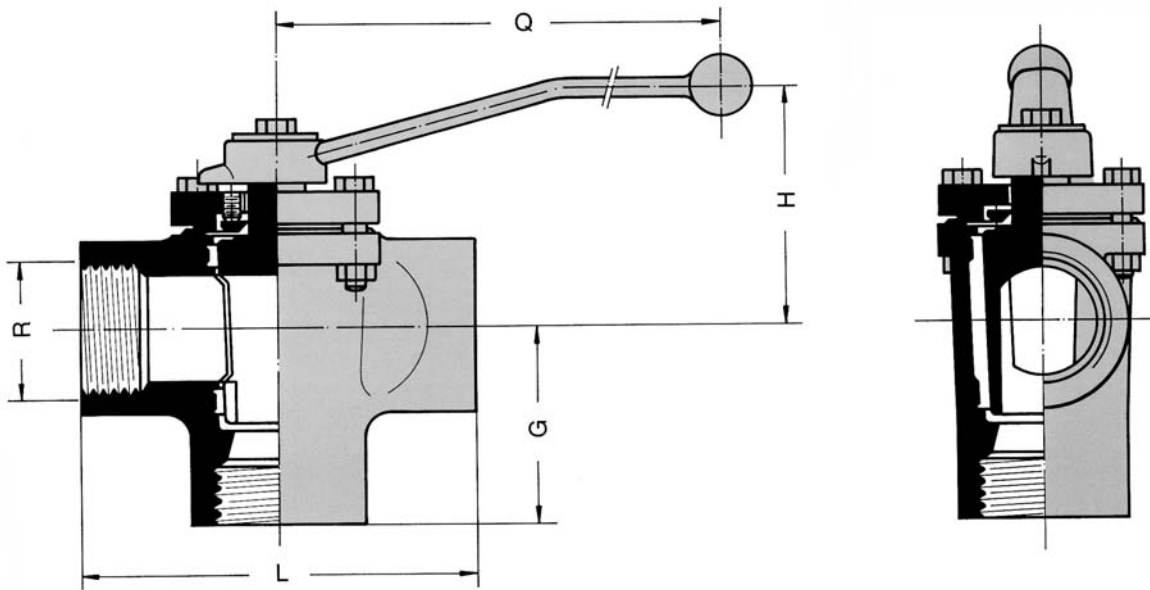
- 1 - Summary of cross sections A+B+C of plug type AX and C (valve series 137...)
- 2 - Summary of cross sections A+B+C of plug type AX and C (valve series 177 )
- A - Cross section of view A
- B - Cross section of view B
- C - Cross section of view C

% A = Cross section in %; < % = Angel in %



## TUFLIN® Three Way Valves with Screwed Ends

Type 136 DIN PN 10-40      Whitworth R ½ - 2  
 Type 036 ASME Class 150    NPT R ½ - 2  
 Type 0336 ASME Class 300   NPT R ½ - 2  
 Type 0636 ASME Class 600   NPT R ½ - 2



### Dimensions in mm

| DN | NPS | R<br>NPS<br>136 | R<br>NPS<br>036-0336-0636 | L   | G  | H   | Q   | Approx.<br>Weight<br>in kg |
|----|-----|-----------------|---------------------------|-----|----|-----|-----|----------------------------|
| 15 | ½   | R ½ *           | ½ NPT                     | 85  | 43 | 76  | 180 | 0.8                        |
| 20 | ¾   | R ¾ *           | ¾ NPT                     | 85  | 43 | 76  | 180 | 0.7                        |
| 25 | 1   | R 1 *           | 1 NPT                     | 118 | 59 | 96  | 260 | 2.2                        |
| 40 | 1 ½ | R 1 ½ *         | 1 ½ NPT                   | 140 | 70 | 106 | 362 | 3.8                        |
| 50 | 2   | R 2 *           | 2 NPT                     | 165 | 83 | 118 | 435 | 6.5                        |

Please indicate type of plug when ordering.

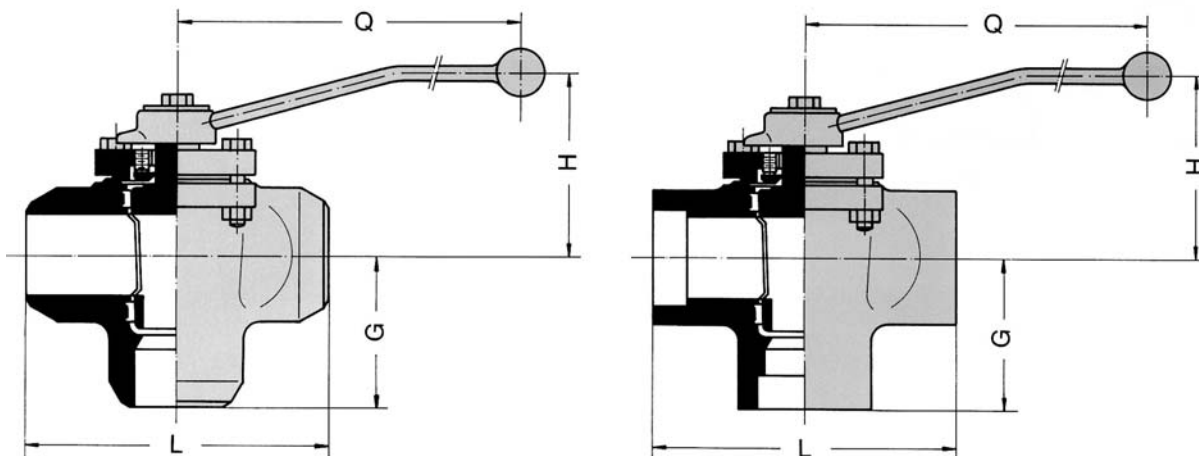
## TUFLIN® Three Way Valves with Weld Ends

Type 136 BW or SW  
 Type 036 BW or SW  
 Type 0336 BW or SW  
 Type 0636 BW or SW

DIN PN 10 - 40  
 ASME Class 150  
 ASME Class 300  
 ASME Class 600

DN 15 - 50  
 NPS ½ - 2  
 NPS ½ - 2  
 NPS ½ - 2

Other sizes on request.



### Dimensions in mm

| DN | NPS | L   | G  | H   | Q   | Approx. Weight in kg (BW) | Approx. Weight in kg (SW) |
|----|-----|-----|----|-----|-----|---------------------------|---------------------------|
| 15 | ½   | 85  | 43 | 76  | 180 | 0.8                       | 0.7                       |
| 20 | ¾   | 85  | 43 | 76  | 180 | 0.8                       | 0.6                       |
| 25 | 1   | 118 | 59 | 96  | 260 | 2.1                       | 2.3                       |
| 40 | 1 ½ | 140 | 70 | 106 | 362 | 3.7                       | 4.0                       |
| 50 | 2   | 165 | 83 | 118 | 435 | 6.4                       | 6.5                       |

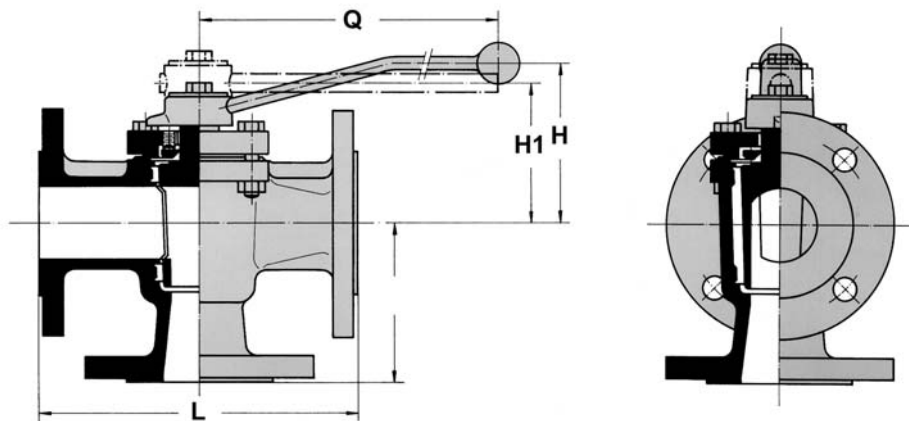
Please give pipe details, indicate type of plug and dimensions when ordering.



## TUFLIN® Three Way Valves with Flanged Ends

|           |                |             |
|-----------|----------------|-------------|
| Type 137  | DIN PN 10 - 40 | DN 15 - 100 |
| Type 037  | ASME Class 150 | NPS ¼ - 4   |
| Type 0337 | ASME Class 300 | NPS ½ - 4   |
| Type 0637 | ASME Class 600 | NPS ½ - 4   |

Above DN 100 / NPS 4 please see page 10.



H1 Hebelausführung DN 100 / NPS 4

### Dimensions in mm

| DN  | NPS | L   |     |      | G   |     |      | H   | Q   | Approx. Weight in kg |      |      |
|-----|-----|-----|-----|------|-----|-----|------|-----|-----|----------------------|------|------|
|     |     | 137 | 037 | 0337 | 137 | 037 | 0337 |     |     | 137                  | 037  | 0337 |
| 15  | ½   | 130 | 108 | 150  | 65  | 70  | 73   | 76  | 180 | 3.3                  | 2.6  | 4.5  |
| 20  | ¾   | 150 | 118 | 152  | 75  | 73  | 76   | 76  | 180 | 4.0                  | 3.0  | 4.7  |
| 25  | 1   | 160 | 127 | 159  | 80  | 89  | 95   | 96  | 260 | 6.0                  | 5.0  | 7.1  |
| 32  |     | 180 |     |      | 90  |     |      | 96  | 260 | 8.3                  |      |      |
| 40  | 1 ½ | 200 | 165 | 190  | 100 | 105 | 111  | 106 | 362 | 10.0                 | 7.5  | 12.0 |
| 50  | 2   | 230 | 178 | 216  | 115 | 114 | 121  | 118 | 435 | 14.2                 | 12.0 | 15.2 |
| 65  |     | 290 |     |      | 145 |     |      | 112 | 435 | 18.0                 |      |      |
| 80  | 3   | 310 | 203 | 283  | 155 | 130 | 141  | 132 | 435 | 23.0                 | 20.0 | 28.0 |
| 100 | 4   | 350 | 229 | 305  | 175 | 152 | 171  | 151 | 600 | 33.0                 | 34.5 | 48.5 |

Please indicate type of plug when ordering.

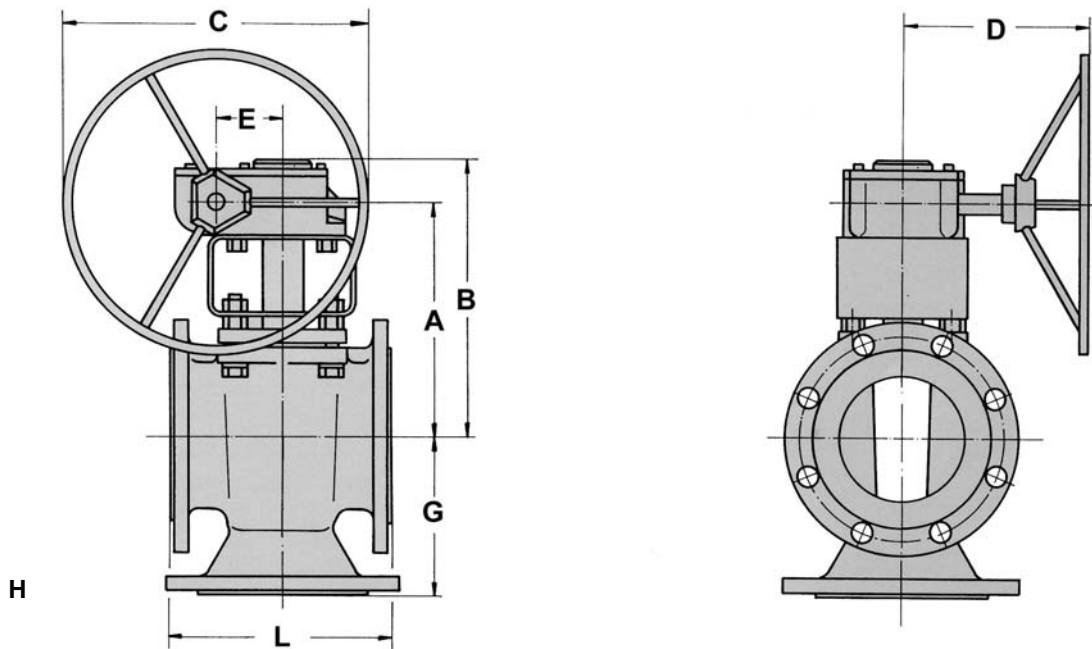
Dimensions of flanges in accordance with standards.

## TUFLIN® Three Way Valves with Flanged Ends

|             |                |             |
|-------------|----------------|-------------|
| Type 137 G  | DIN PN 10 - 40 | DN 80 - 300 |
| Type 037 G  | ASME Class 150 | NPS 3 - 12  |
| Type 0337 G | ASME Class 300 | NPS 3 - 8   |
| Type 0637 G | ASME Class 600 | on request  |

Below DN 80 / NPS 3 please see page 9

“G” indicates gear operated



### Dimensions in mm

| DN   | NPS | L   |     |      | G   |     |      | A   | B   | C   | D   | E  | Approx. Weight in kg |       |       |
|------|-----|-----|-----|------|-----|-----|------|-----|-----|-----|-----|----|----------------------|-------|-------|
|      |     | 137 | 037 | 0337 | 137 | 037 | 0337 |     |     |     |     |    | 137                  | 037   | 0337  |
| 80   | 3   | 310 | 203 | 283  | 155 | 130 | 141  | 204 | 236 | 200 | 169 | 52 |                      |       |       |
| 100  | 4   | 350 | 229 | 305  | 175 | 152 | 171  | 235 | 267 | 200 | 169 | 52 |                      |       |       |
| 125  | 5   | 267 | 267 |      | 190 | 190 |      | 308 | 347 | 300 | 223 | 67 | 60.9                 | 60.9  |       |
| 150  | 6   | 267 | 267 | 403  | 190 | 190 | 216  | 308 | 347 | 300 | 223 | 67 | 63.8                 | 63.8  | 104.8 |
| 200  | 8   | 292 | 292 | 419  | 229 | 229 | 254  | 345 | 384 | 300 | 223 | 67 | 103.0                | 103.0 | 142.0 |
| *250 | 10  | 330 | 330 |      | 290 | 280 |      | 450 | 494 | 457 | 279 | 90 | 118.5                | 118.5 |       |
| *300 | 12  | 356 | 356 |      | 350 | 350 |      | 478 | 522 | 457 | 279 | 90 | 180.0                | 180.0 |       |

\*PN 10 - 16 only (higher pressure classes on request).

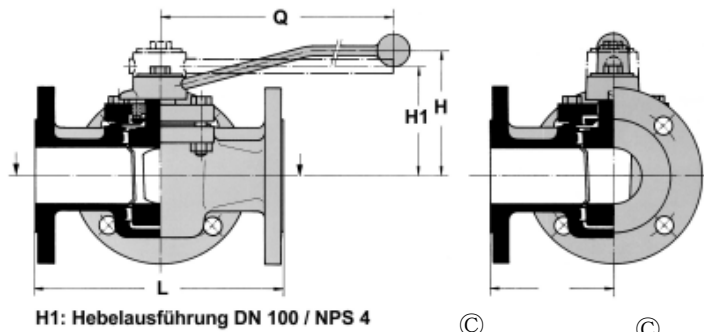
Please indicate type of plug when ordering.

Dimensions of flanges in accordance with standards.

## TUFLIN® Three Way Valves with Flanged Ends

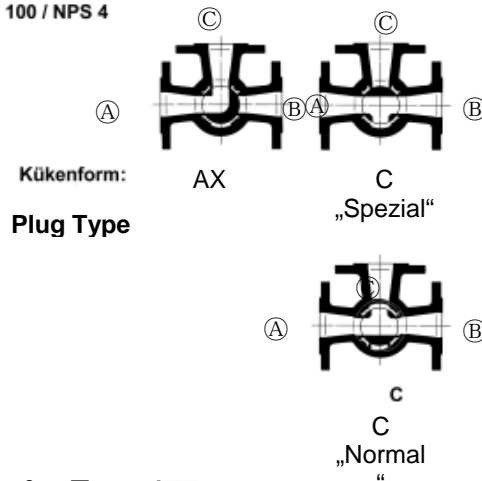
|           |                |             |
|-----------|----------------|-------------|
| Type 177  | DIN PN 10 - 40 | DN 15 - 100 |
| Type 077  | ASME Class 150 | on request  |
| Type 0377 | ASME Class 300 | on request  |
| Type 0677 | ASME Class 600 | on request  |

Above DN 100 / NPS 4 please see page 12



H1: Hebelausführung DN 100 / NPS 4

Lever design DN 10/NPS 4



### Dimensions in mm for Type 177

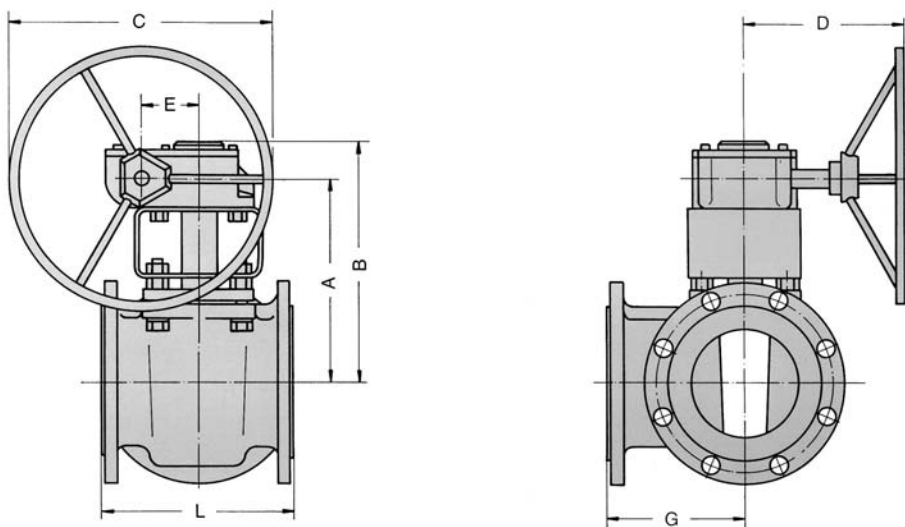
| DN  | NPS | L   | G   | H   | Q   | Approx. Weight in kg |
|-----|-----|-----|-----|-----|-----|----------------------|
| 15  | ½   | 130 | 65  | 76  | 180 | 3.3                  |
| 20  | ¾   | 150 | 75  | 76  | 180 | 4.2                  |
| 25  | 1   | 160 | 80  | 96  | 260 | 6.0                  |
| 32  | 1 ¼ | 180 | 90  | 96  | 260 | 8.0                  |
| 40  | 1 ½ | 200 | 100 | 106 | 362 | 10.5                 |
| 50  | 2   | 230 | 115 | 118 | 435 | 15.0                 |
| 65  | 2 ½ | 290 | 145 | 112 | 435 | 18.5                 |
| 80  | 3   | 310 | 155 | 132 | 435 | 19.0                 |
| 100 | 4   | 350 | 175 | 151 | 600 | 34.5                 |

Please indicate type of plug when ordering.  
 Dimensions of flanges in accordance with standards.

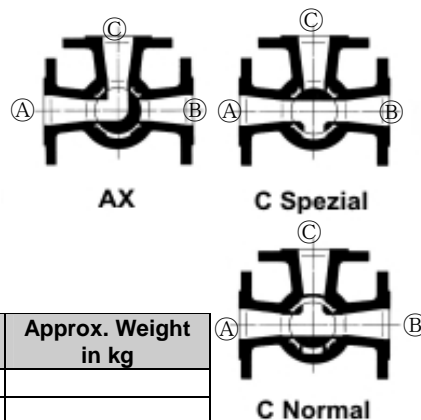
## TUFLIN® Three Way Valves with Flanged Ends

|             |                |             |
|-------------|----------------|-------------|
| Type 177 G  | DIN PN 10 - 40 | DN 80 - 200 |
| Type 077 G  | ASME Class 150 | on request  |
| Type 0377 G | ASME Class 300 | on request  |
| Type 0677 G | ASME Class 600 | on request  |

Below DN 80 / NPS 3 please see page 11 "G" indicates gear operated



Plug Type



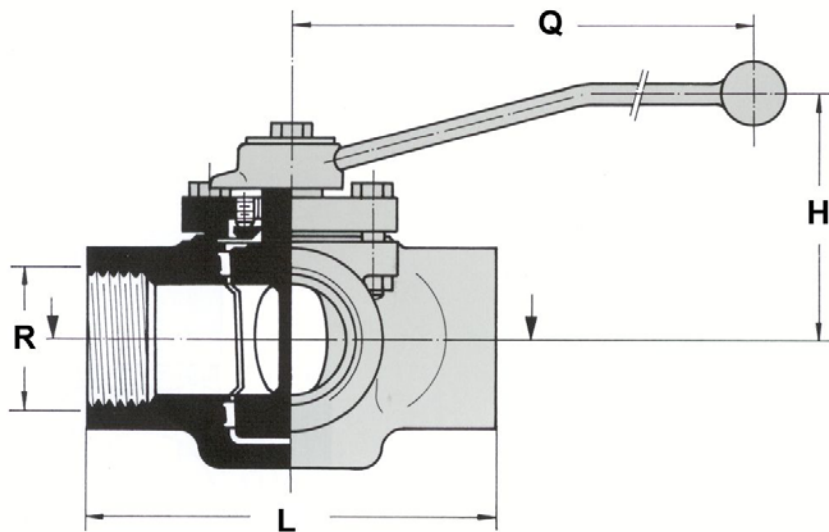
### Dimensions in mm for Type 177

| DN   | NPS | L   | G   | A   | B   | C   | D   | E  | Approx. Weight in kg |
|------|-----|-----|-----|-----|-----|-----|-----|----|----------------------|
| 80   | 3   | 310 | 155 | 204 | 236 | 200 | 169 | 52 |                      |
| 100  | 4   | 350 | 175 | 235 | 267 | 200 | 169 | 52 |                      |
| 125  | 5   | 267 | 200 | 308 | 347 | 300 | 223 | 67 | 63.5                 |
| *150 | 6   | 267 | 185 | 308 | 347 | 300 | 223 | 67 | 68.5                 |
| *200 | 8   | 292 | 260 | 345 | 384 | 300 | 223 | 67 | 109.0                |

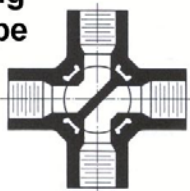
\* PN 10-16 only (higher pressure classes on request)

Please indicate type of plug when ordering.  
Dimensions of flanges in accordance with standards.

Type 146 DIN PN 10-40      Whitworth R NPS ½ - 2  
 Type 046 ASME Class 150 NPT ½ - 2  
 Type 0346 ASME Class 300 NPT ½ - 2

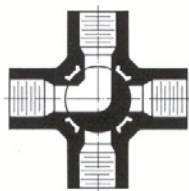


**Plug Type**

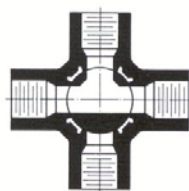


**V**

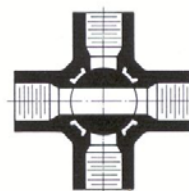
**Standard Version**



**AX**



**C**



**Through Port**

### Dimensions in mm

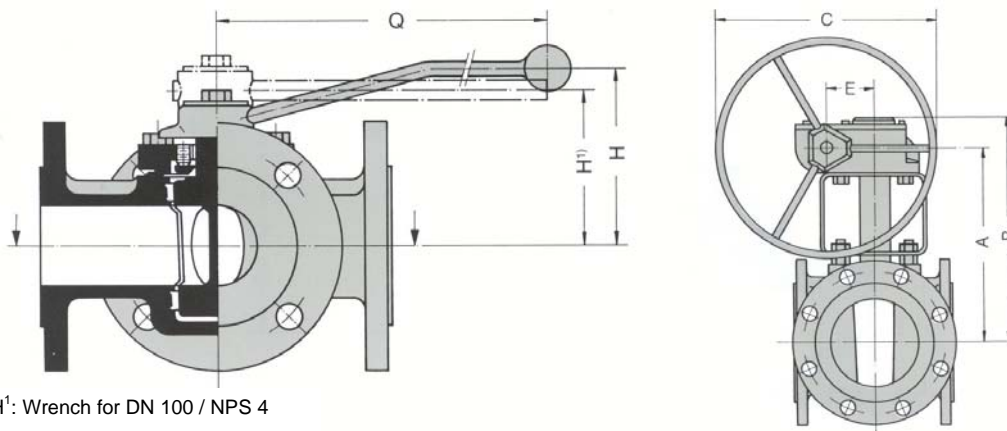
| DN | NPS | R    |          | L   | H   | Q   | Approx. Weight in kg |
|----|-----|------|----------|-----|-----|-----|----------------------|
|    |     | 146  | 046-0346 |     |     |     |                      |
| 15 | ½   | R ½  | ½ NPT    | 118 | 98  | 362 | 3.7                  |
| 20 | ¾   | R ¾  | ¾ NPT    | 118 | 98  | 362 | 4.0                  |
| 25 | 1   | R 1  | 1 NPT    | 118 | 98  | 362 | 4.4                  |
| 40 | 1½  | R 1½ | 1½ NPT   | 140 | 107 | 362 | 5.6                  |
| 50 | 2   | R 2  | 2 NPT    | 165 | 123 | 435 | 10.2                 |

Please indicate type of plug when ordering.

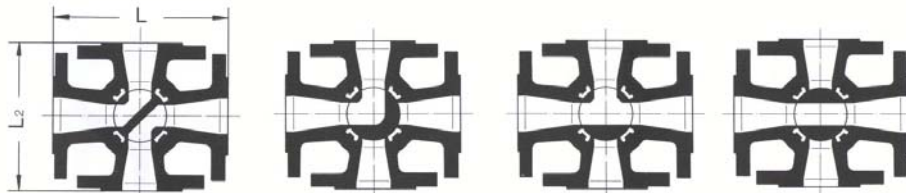
## TUFLIN® Four Way Valves with Flanged Ends

Type 147 and 147G DIN PN 10 - 40 DN 15 - 200  
 Type 047 and 047G ASME Class 150 NPS 1 - 8  
 Type 0347 and 0347G ASME Class 300 on request

“G” indicates gear operated



H¹: Wrench for DN 100 / NPS 4



Plug Type: V Standard design AX C Through-Port

### Dimensions in mm

| Type 147 | Material     |                        |     | Type 047 | Material     |                        |     | Approx. Weight in kg |     |                        |     |     |    |          |          |          |          |
|----------|--------------|------------------------|-----|----------|--------------|------------------------|-----|----------------------|-----|------------------------|-----|-----|----|----------|----------|----------|----------|
|          | Ductile Iron | Steel and Other Alloys |     |          | Ductile Iron | Steel and Other Alloys |     | Ductile Iron         |     | Steel and Other Alloys |     |     |    |          |          |          |          |
| DN       | L=L2         | L                      | L 2 | NPS      | L=L2         | L                      | L 2 | H                    | Q   | A                      | B   | C   | E  | Type 147 | Type 047 | Type 147 | Type 047 |
| 15       |              | 150                    | 150 |          |              |                        |     | 98                   | 362 |                        |     |     |    |          |          | 6.4      |          |
| 25       | 160          | 160                    | 160 | 1        | 160          | 127                    | 127 | 98                   | 362 |                        |     |     |    | 8.5      | 6.5      | 8.5      | 5.5      |
| 40       | 200          | 200                    | 200 | 1 ½      | 200          | 164                    | 165 | 107                  | 362 |                        |     |     |    | 13.8     | 8.7      | 13.8     | 9.0      |
| 50       | 230          | 230                    | 230 | 2        | 230          | 178                    | 178 | 118                  | 435 |                        |     |     |    | 21.5     | 17.5     | 21.5     | 17.5     |
| *80      | 310          | 203                    | 260 | 3        | 310          | 203                    | 260 | 132                  | 435 |                        |     |     |    | 27.0     | 28.0     | 27.0     | 28.0     |
| *100     |              | 229                    | 305 | 4        |              | 229                    | 305 | 151                  | 600 |                        |     |     |    |          |          | 44.0     | 49.5     |
| *150     | 480          | 267                    | 370 | 6        | 480          | 267                    | 370 |                      |     | 388                    | 427 | 300 | 67 | 85.7     | 85.7     | 85.7     | 85.7     |
| *200     | 600          | 292                    | 520 | 8        | 600          | 292                    | 520 |                      |     | 425                    | 464 | 300 | 67 | 120.0    | 120.0    | 120.0    | 120.0    |

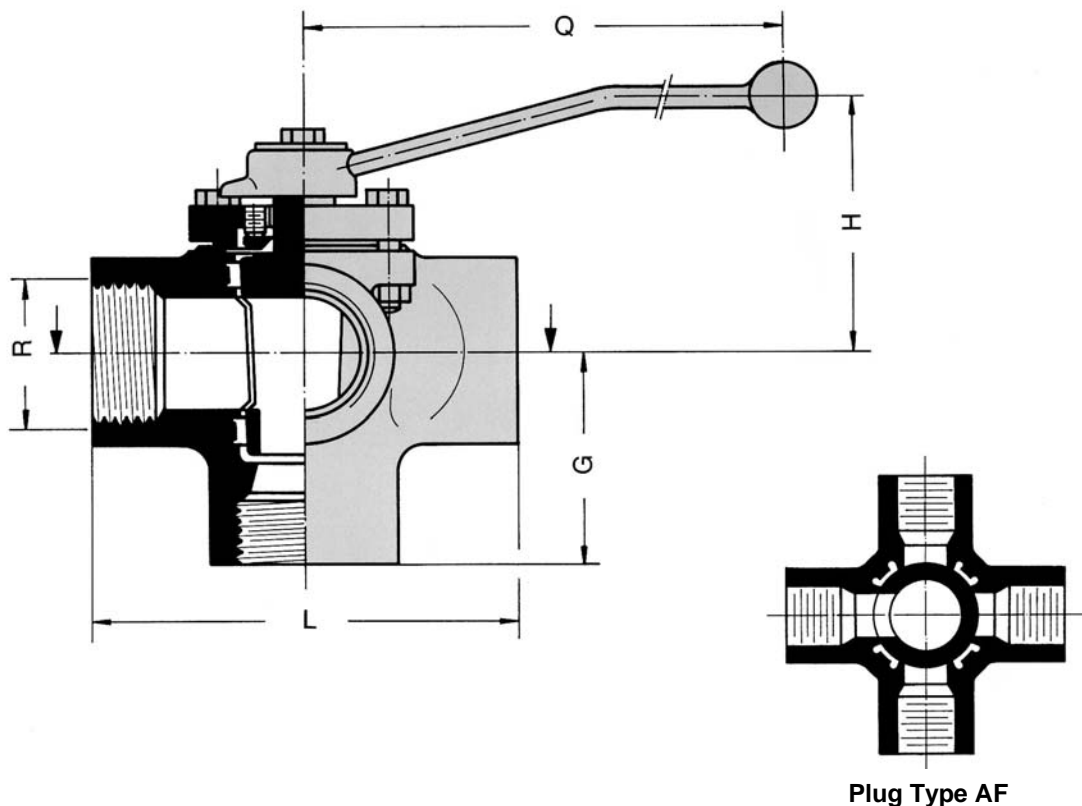
\* PN 10 - 16 only (other pressure classes on request)

Please indicate type of plug when ordering.  
 Dimensions of flanges according to standards.



## TUFLIN® Five Way Valves with Screwed Ends

Type 156     DIN PN 10 – 40 Whitworth R NPT ½ - 2  
 Type 056     ASME Class 150     NPT ½ - 2  
 Type 0356     ASME Class 300     NPT ½ - 2

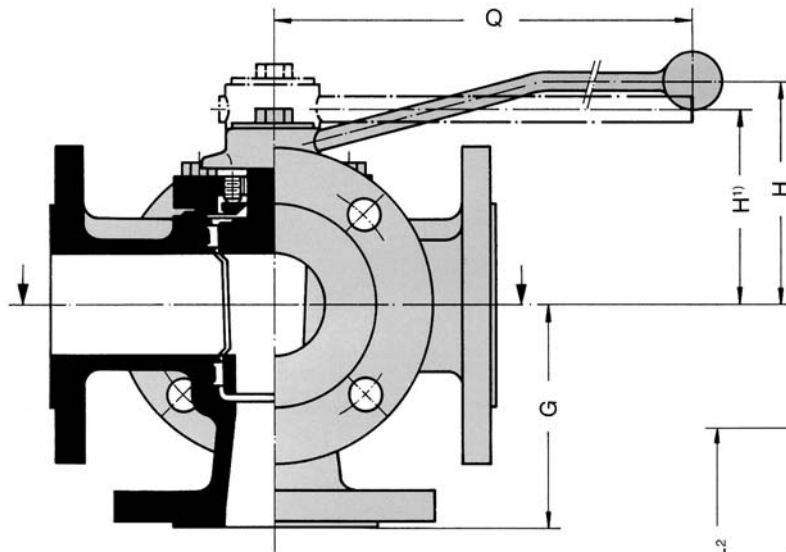


### Dimensions in mm

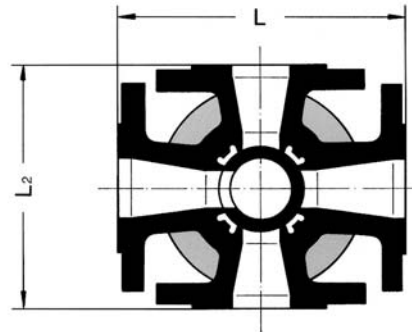
| DN | NPS | R    |          | L   | G  | H   | Q   | Approx. Weight in kg |
|----|-----|------|----------|-----|----|-----|-----|----------------------|
|    |     | 156  | 056-0356 |     |    |     |     |                      |
| 15 | ½   | R ½  | ½ NPT    | 118 | 59 | 98  | 362 | 3.7                  |
| 20 | ¾   | R ¾  | ¾ NPT    | 118 | 59 | 98  | 362 | 4.1                  |
| 25 | 1   | R1   | 1 NPT    | 118 | 59 | 98  | 362 | 4.5                  |
| 40 | 1 ½ | R 1½ | 1 ½ NPT  | 140 | 70 | 107 | 362 | 5.9                  |
| 50 | 2   | R 2  | 2 NPT    | 165 | 83 | 123 | 435 | 11.2                 |

## TUFLIN® Five Way Valves with Flanged Ends

Type 157      DIN PN 10 – 40 DN 25 - 100  
 Type 057      ASME Class 150      NPS 1 - 4  
 Type 0357      ASME Class 300      on request



1 Wrench DN 100 / NPS 4



Plug Type AF

### Dimensions in mm

| DN   | Type 157 |     |     | Type 057 |     |     | G   | H   | Q   | Approx. Weight in kg |          |
|------|----------|-----|-----|----------|-----|-----|-----|-----|-----|----------------------|----------|
|      | L        | L2  | G   | NPS      | L   | L2  |     |     |     | Type 157             | Type 057 |
| 25   | 160      | 160 | 80  | 1        | 127 | 127 | 86  | 98  | 362 | 10.2                 | 6.8      |
| 40   | 200      | 200 | 100 | 1 ½      | 165 | 165 | 99  | 107 | 362 | 16.0                 | 11.0     |
| 50   | 230      | 230 | 115 | 2        | 178 | 178 | 118 | 123 | 435 | 24.5                 | 20.0     |
| *80  | 203      | 260 | 130 | 3        | 203 | 260 | 130 | 132 | 435 | 31.0                 | 33.2     |
| *100 | 229      | 305 | 152 | 4        | 229 | 305 | 152 | 151 | 600 | 49.5                 | 57.0     |

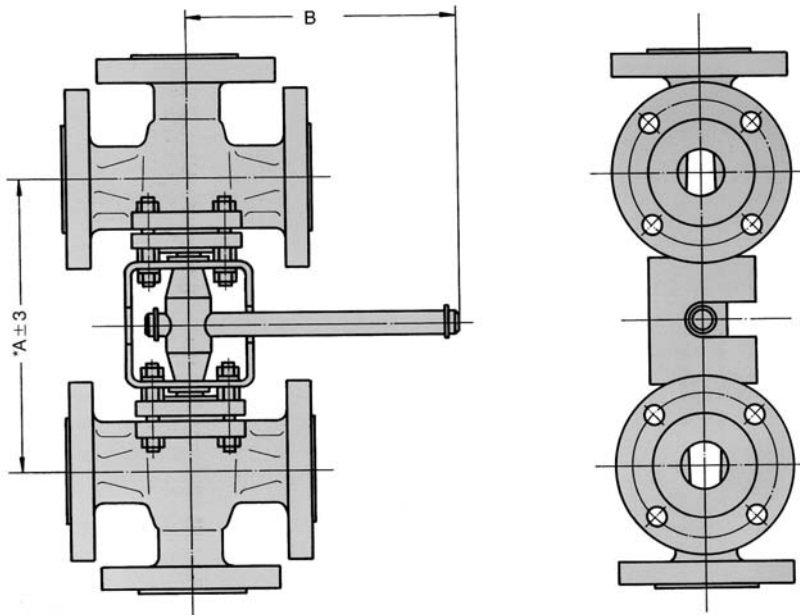
\* PN 10 - 16

Dimensions of flanges acc. to standards.

## TUFLIN® Interconnected Multiport Valves Wrench Operated

|   |            |
|---|------------|
| Type H 10 137 (Linked Three Way Valves Type 137)  | DN 15 - 65 |
| Type H 10 037 (Linked Three Way Valves Type 037)  | NPS ½ - 2  |
| Type H 100337 (Linked Three Way Valves Type 0337) | NPS ½ - 2  |
| Type H 100637 (Linked Three Way Valves Type 0637) | on request |

Above DN 65 / NPS 2 ½: with gear operator: please see page 19  
with pneumatic actuator: please see page 20



### Dimensions in mm

| Dimensions in mm |     |     |     | Approx. Weight in kg |               |                |
|------------------|-----|-----|-----|----------------------|---------------|----------------|
| DN               | NPS | *A  | B   | Type H 10 137        | Type H 10 037 | Type H 10 0337 |
| 15               | ½   | 150 | 243 | 8.0                  | 6.7           | 10.5           |
| 20               | ¾   | 150 | 243 | 9.3                  | 7.5           | 10.9           |
| 25               | 1   | 203 | 293 | 14.0                 | 11.8          | 16.2           |
| 32               |     | 203 | 293 | 18.5                 |               |                |
| 40               | 1 ½ | 240 | 393 | 23.0                 | 18.0          | 27.0           |
| 50               | 2   | 290 | 593 | 33.5                 | 30.0          | 36.3           |
| 65               |     | 277 | 593 | 42.0                 |               |                |

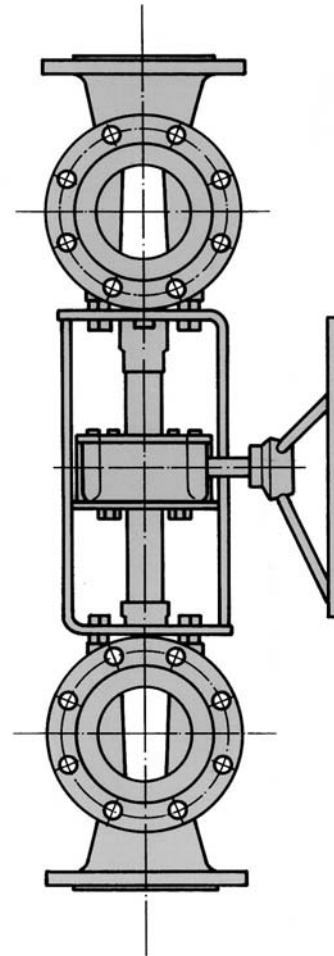
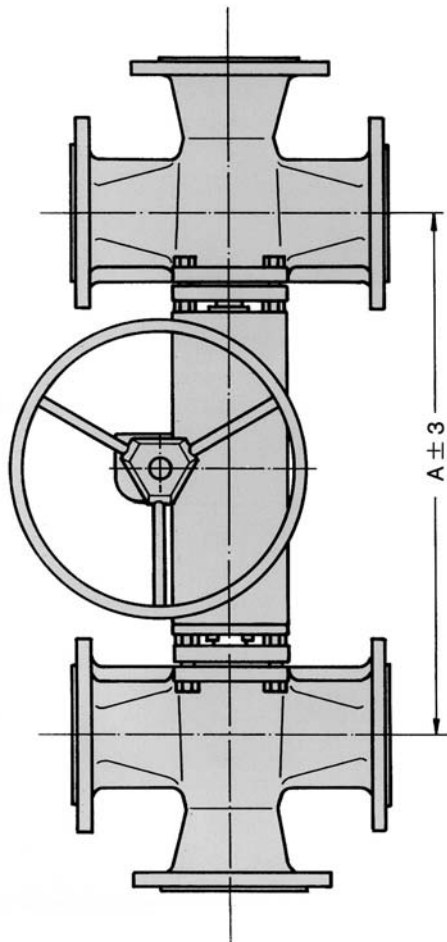
\* Standard center distance  
Other dimensions on request.

For dimensions of valves see appropriate page.  
Please indicate types of plug and send flow sheet with required positions when ordering.  
Combinations of different sizes of XOMOX plug and butterfly valves are possible.

## TUFLIN® Interconnected Multiport Valves Gear Operated

**Type G 10 137 (Linked Three Way Valves Type 137)**  
**Type G 10 037 (Linked Three Way Valves Type 037)**  
**Type G 100337 (Linked Three Way Valves Type 0337)**  
**Type G 100637 (Linked Three Way Valves Type 0637)**

**DN 80 - 300**  
**NPS 3 - 12**  
**PS 3 - 8**  
**on request**

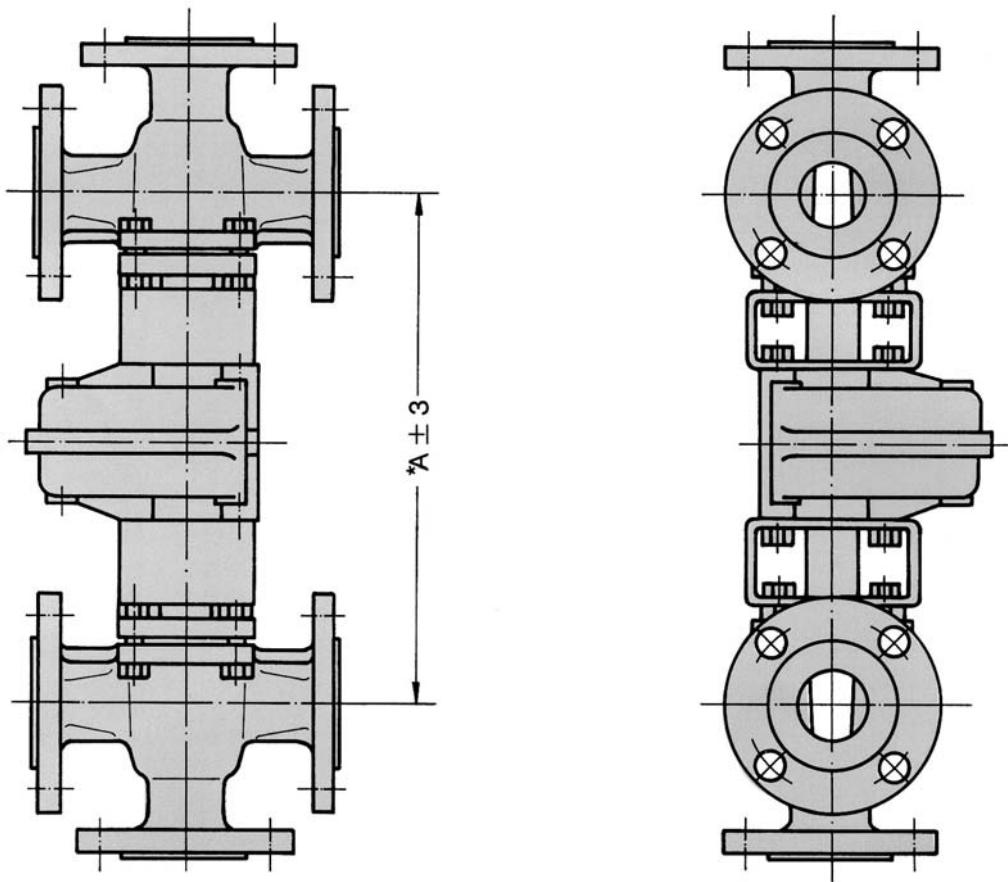


For dimensions of valves please see appropriate page.  
 Please indicate types of plug and send flow sheet with required positions when ordering.  
 Center distance "A" to suit individual application.  
 Combinations of different sizes and types of valves on request.

## TUFLIN® Interconnected Multiport Valves with Pneumatic Actuator

Type PN 10 137 (Liked Three Way Valves Type 137) DN 15 - 100  
Type PN 10 037 (Liked Three Way Valves Type 037) NPS ½ - 4  
Type PN 100337 (Liked Three Way Valves Type 0337) NPS ½ - 4  
Type PN 100637 (Liked Three Way Valves Type 0637) on request

Above DN 100 / NPS 4 on request



For dimensions of valves please see appropriate page.  
Please indicate type of plug and send flow sheet with required positions when ordering.  
Center distance "A" to suit individual application  
Combinations of different sizes and types of valves on request.

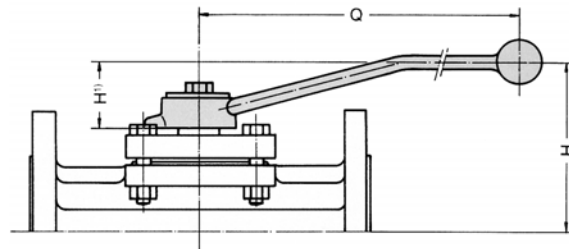
## TUFLIN® Design and Dimensions of Wrenches (with flow direction indicator)

- Figure 1**      **Standard Wrench, Material: Aluminium**  
**Figure 2**      **Wrench with hub cap, Material: Steel**  
 (Special design for DN 15 - 80 / NPS ½ - 3)  
**Figure 3**      **T-Wrench, Material: Steel**  
 (Recommended wrench for isolated piping systems.)

### Dimensions in mm

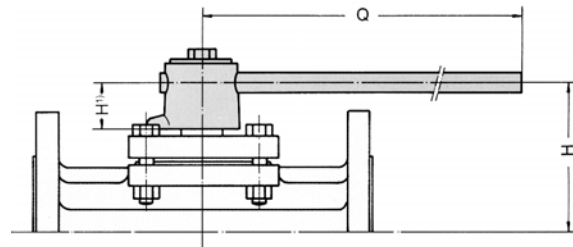
| DN | NPS | H   | H1 | Q   | Approx. Weight in kg |
|----|-----|-----|----|-----|----------------------|
| 15 | ½   | 76  | 45 | 180 | 0.1                  |
| 20 | ¾   | 76  | 45 | 180 | 0.1                  |
| 25 | 1   | 96  | 46 | 260 | 0.2                  |
| 32 |     | 96  | 46 | 260 | 0.2                  |
| 40 | 1 ½ | 106 | 45 | 362 | 0.3                  |
| 50 | 2   | 118 | 47 | 435 | 0.4                  |
| 65 |     | 112 | 47 | 435 | 0.4                  |
| 80 | 3   | 132 | 47 | 435 | 0.4                  |

Standard wrench DN 100 / NPS 4: Fig. 2



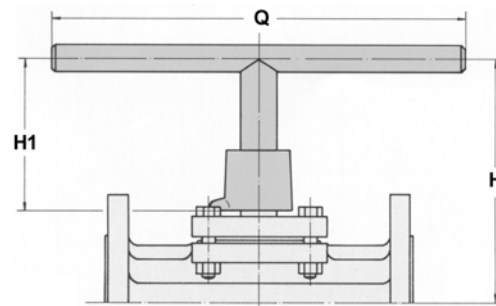
### Dimensions in mm

| DN  | NPS | H   | H1 | Q   | Approx. Weight in kg |
|-----|-----|-----|----|-----|----------------------|
| 15  | ½   | 68  | 36 | 190 | 0.3                  |
| 20  | ¾   | 68  | 36 | 190 | 0.3                  |
| 25  | 1   | 80  | 30 | 250 | 0.7                  |
| 32  |     | 80  | 30 | 250 | 0.7                  |
| 40  | 1 ½ | 91  | 30 | 300 | 1.1                  |
| 50  | 2   | 108 | 37 | 450 | 1.6                  |
| 65  |     | 102 | 37 | 450 | 1.6                  |
| 80  | 3   | 122 | 37 | 450 | 1.6                  |
| 100 | 4   | 151 | 45 | 600 | 3.2                  |



### Dimensions in mm

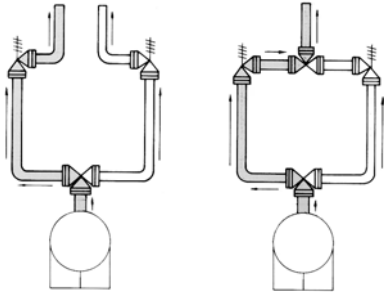
| DN  | NPS | H   | H1  | Q   | Approx. Weight in kg |
|-----|-----|-----|-----|-----|----------------------|
| 15  | ½   | 132 | 100 | 300 | 0.3                  |
| 20  | ¾   | 132 | 100 | 300 | 0.3                  |
| 25  | 1   | 195 | 145 | 300 | 0.6                  |
| 32  |     | 195 | 145 | 300 | 0.6                  |
| 40  | 1 ½ | 206 | 145 | 400 | 0.9                  |
| 50  | 2   | 216 | 145 | 500 | 1.3                  |
| 65  |     | 210 | 145 | 500 | 1.3                  |
| 80  | 3   | 230 | 145 | 500 | 1.3                  |
| 100 | 4   | 256 | 150 | 600 | 2.8                  |



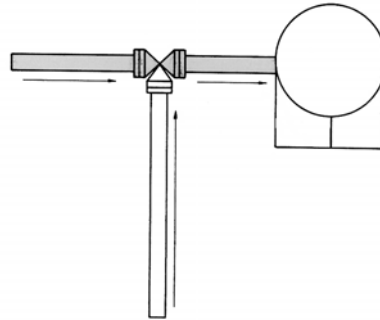
As standard DN 125 – 300 / NPS 5 – 12 are equipped with worm gear (see page 11)  
 Other dimensions on request.



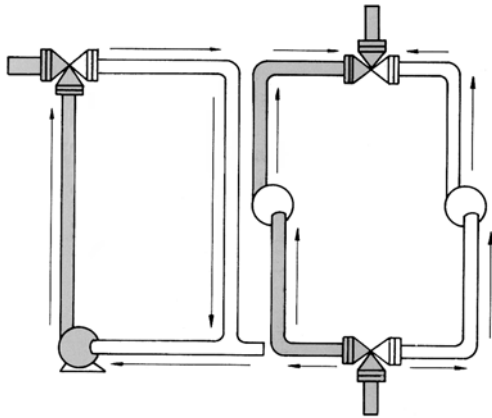
## Typical Applications of TUFLIN®-Multiport Plug Valves



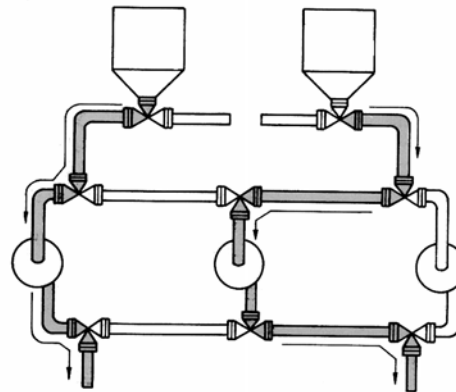
Three-way changeover valves for pressure relief duties (no shut off during plug rotation)



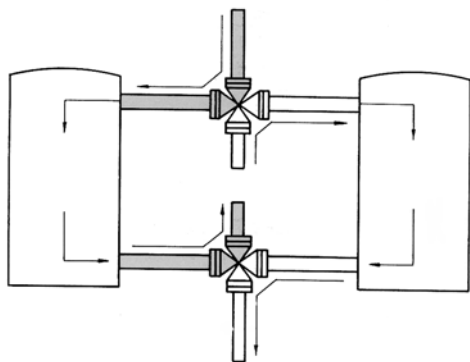
Three-way valves as by-pass or for mixing operation



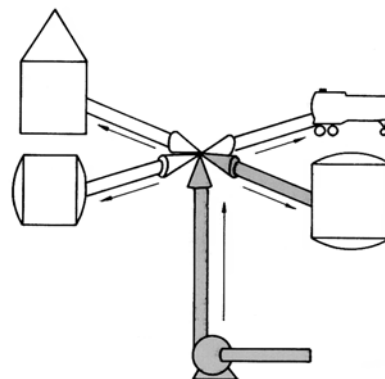
Three way switchover valves for filtration circuits



Three way valves in the pulp and paper industries



Three and four way valves in filtration or drying plants.



Five way valves for multi point distribution

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