

## DUO CHECK VALVE



It is a type of check valve which consists of a cylindrical body, two discs in semicircular shape and a shaft that holds the discs. It is a type which needs less installation space.

Even it is fully open, disc is located on flow path. This is the reason why it cannot be used in sewage media, but can be used only in clean water.

Duo check valves are used at outlet side of pumps. When flow begins, discs, that look like butterfly wings, are pushed forward by effect of flow. Flow passes around the discs and continues its travel. When pump begins to slow down to stop, disc closes by assistance of back flow and spring force. Its closure prevents the water in the pipe line to flow reversely.

As a result of geometric design, travel of discs to closed position is short. For that reason closure time is also short; vibration, noise or shock is not created.

DUO-M, Seats of cover and discs are metallic. Sealing is metal-to-metal.

DUO-K, Cover carries a ring made of NBR or EPDM. Seat of discs is metallic. Sealing is rubber-to-metal.

#### Installation Position,

Shaft of the check valve must be in vertical position.

#### Maintenance,

There is no need for maintenance for these valves that are installed especially in clean water pipe-line.

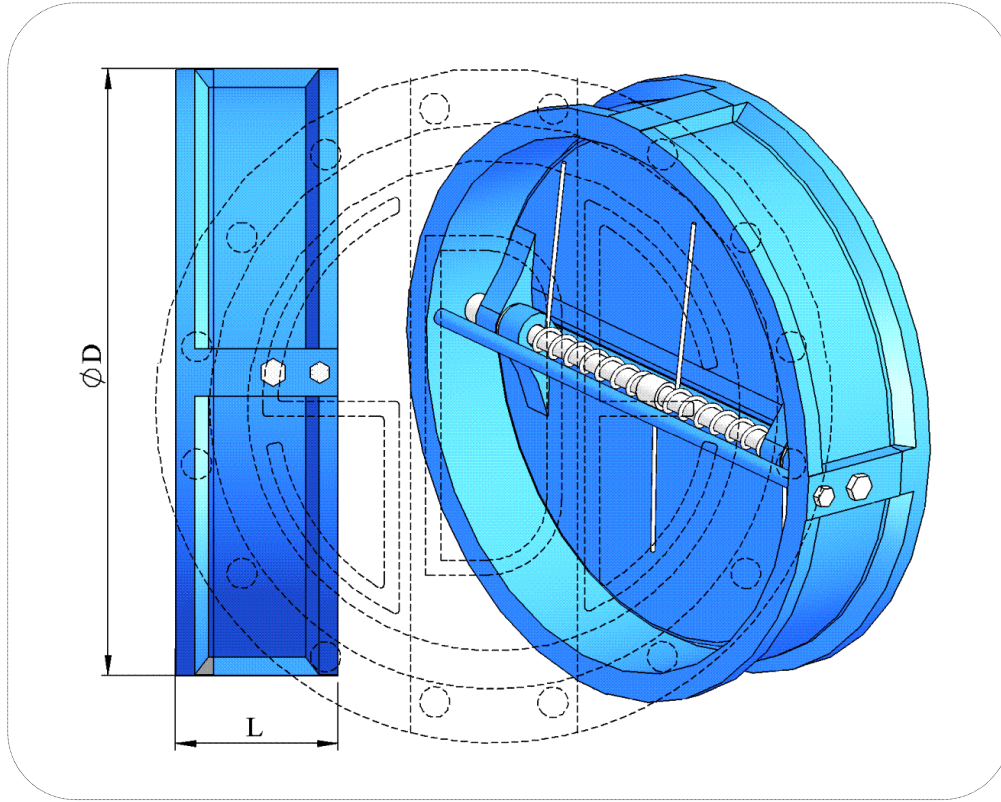
If it is uninstalled, it is recommended to check rings and change if necessary. We also recommend cleaning inside.

## DUO CHECK VALVE

Valve Standard : -

Body Length Standard : EN 558-1,S 16  
EN 558-1,S 13

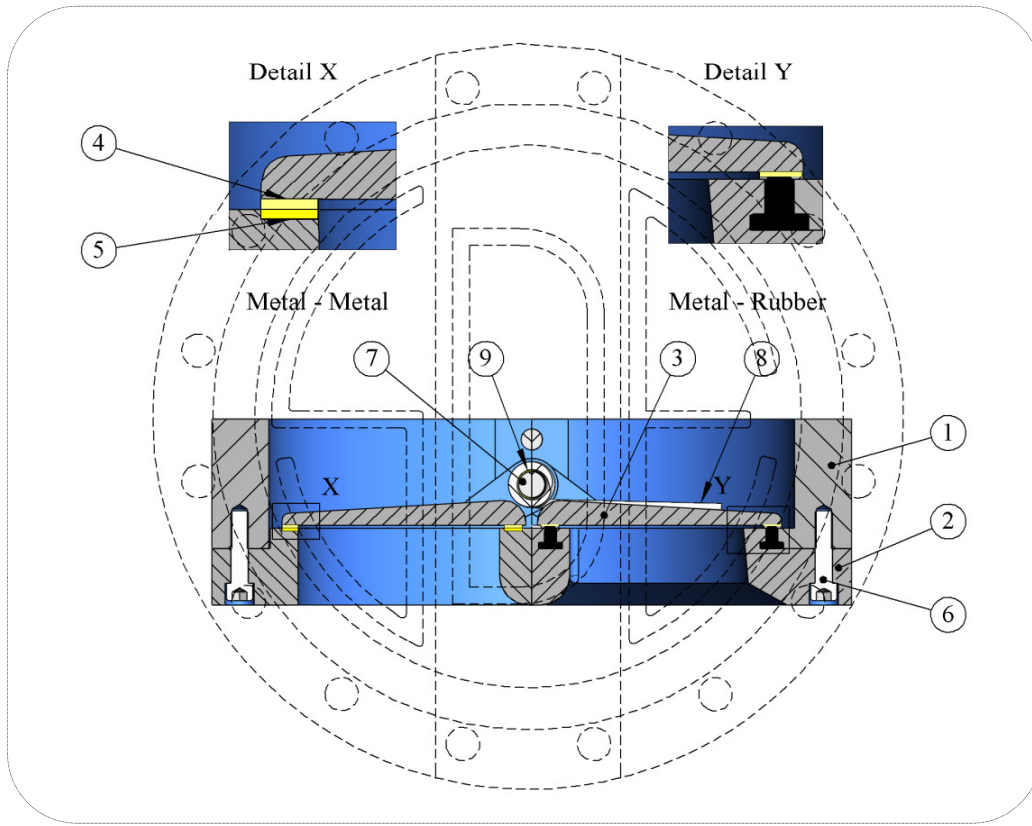
Maximum allowable working temperature for all types of our valves is 80 degrees Celcius.



## DIMENSIONS

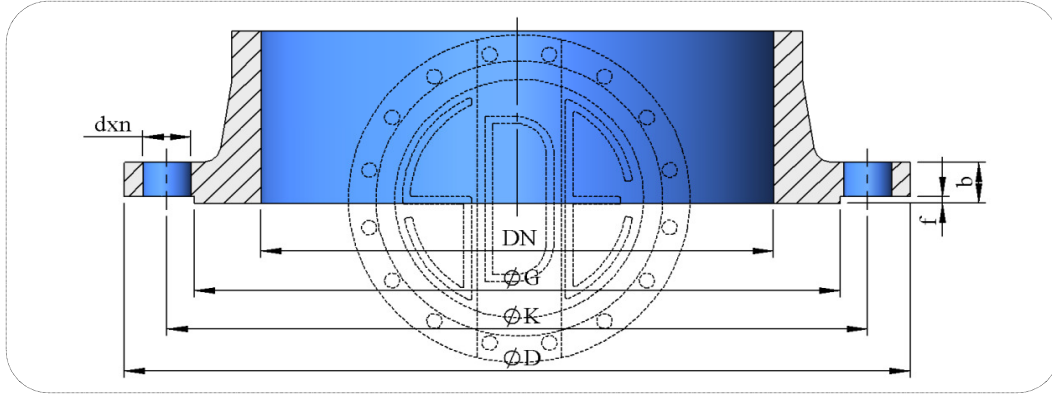
| DN    | PN 10         |     |     | PN 16         |     |     | PN 20         |     |     | PN 25         |     |     | Inch | ANSI 125      |     |     |
|-------|---------------|-----|-----|---------------|-----|-----|---------------|-----|-----|---------------|-----|-----|------|---------------|-----|-----|
|       | EN 558-1,S 16 |     |     | EN 558-1,S 16 |     |     | EN 558-1,S 13 |     |     | EN 558-1,S 13 |     |     |      | EN 558-1,S 13 |     |     |
|       | D             | L   | Kg  | D             | L   | Kg  | D             | L   | Kg  | D             | L   | Kg  |      | D             | L   | Kg  |
| 200   | 271           | 89  | 25  | 271           | 89  | 26  | 281           | 152 | 37  | 281           | 152 | 37  | 8    | 281           | 152 | 37  |
| 250   | 326           | 114 | 35  | 326           | 114 | 37  | 337           | 165 | 52  | 337           | 165 | 52  | 10   | 337           | 165 | 52  |
| 300   | 376           | 114 | 49  | 381           | 114 | 52  | 397           | 178 | 72  | 397           | 178 | 72  | 12   | 397           | 178 | 72  |
| 350   | 436           | 127 | 64  | 441           | 127 | 69  | 454           | 190 | 95  | 454           | 190 | 95  | 14   | 454           | 190 | 95  |
| 400   | 486           | 140 | 83  | 492           | 140 | 91  | 510           | 216 | 125 | 510           | 216 | 125 | 16   | 510           | 216 | 125 |
| 450   | 536           | 152 | 105 | 552           | 152 | 116 | 560           | 222 | 158 | 560           | 222 | 158 | 18   | 560           | 222 | 158 |
| 500   | 591           | 152 | 133 | 614           | 152 | 148 | 620           | 229 | 203 | 620           | 229 | 203 | 20   | 620           | 229 | 203 |
| 550   | 640           | 178 | 168 | 670           | 178 | 188 | 672           | 250 | 256 | 672           | 250 | 256 | 22   | 672           | 250 | 256 |
| 600   | 692           | 178 | 207 | 730           | 178 | 232 | 727           | 267 | 316 | 727           | 267 | 316 | 24   | 727           | 267 | 316 |
| 650   | 750           | 229 | 252 | 765           | 229 | 283 |               |     |     |               |     |     |      |               |     |     |
| 700   | 807           | 229 | 306 | 800           | 229 | 343 |               |     |     |               |     |     |      |               |     |     |
| 750   | 864           | 241 | 375 | 860           | 241 | 421 |               |     |     |               |     |     |      |               |     |     |
| 800   | 914           | 241 | 449 | 907           | 241 | 504 |               |     |     |               |     |     |      |               |     |     |
| 900   | 1.014         | 241 | 574 | 1.007         | 241 | 649 |               |     |     |               |     |     |      |               |     |     |
| 1.000 | 1.120         | 300 | 737 | 1.124         | 300 | 837 |               |     |     |               |     |     |      |               |     |     |

## DUO CHECK VALVE



| No                                                                                       | Item Name        | Material                                                        | Description              | EN Standard        | Material No |
|------------------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------|--------------------------|--------------------|-------------|
| 1-2-3                                                                                    | Body, Cover Disc | GGG 40                                                          | Ductile Iron             | EN-GJS-450-15      | 0.7040      |
|                                                                                          |                  | GGG 50                                                          |                          | EN-GJS-500-7       | 0.7050      |
|                                                                                          |                  | 304                                                             | Stainless Steel Casting  | G - X6CrNi 18-9    | 1.4308      |
|                                                                                          |                  | 316                                                             |                          | G - X6CrNiMo 18-10 | 1.4408      |
|                                                                                          |                  | CC 331G-GS                                                      | Aluminium Bronze Casting | CuAl10Fe2-C        | 2.0940.01   |
| 4                                                                                        | Disc Seat        | 316 L                                                           | Stainless Steel Welding  | 12072              | 1.4430      |
|                                                                                          |                  | CuAl8                                                           | Aluminium Bronze Welding | 14640 S Cu 6100    | 2.0921      |
| 5                                                                                        | Cover Seat       | NBR - EPDM                                                      | Rubber                   | -                  | -           |
| 6                                                                                        | Bolts            | A 2 - A 4                                                       | Stainless Steel          | -                  | -           |
| 7                                                                                        | Shaft            | 304                                                             | Stainless Steel          | X5CrNi 18-10       | 1.4301      |
|                                                                                          |                  | 316                                                             |                          | X5CrNiMo17-12-2    | 1.4401      |
|                                                                                          |                  | 431                                                             |                          | X17CrNi16-2        | 1.4057      |
| 8                                                                                        | Spring           | 301                                                             | Stainless Steel          | X 12 CrNi 17-7     | 1.4310      |
| 9                                                                                        | Bearing          | Rg 5                                                            | Bronze                   | CC 491 K           | 2.1096.01   |
| Coating                                                                                  |                  | WRAS approved fusion bonded epoxy. 300 microns dft as standard. |                          |                    |             |
| Maximum allowable working temperature for all types of our valves is 80 degrees Celcius. |                  |                                                                 |                          |                    |             |

## FLANGE DIMENSIONS



| Nominal Dia | Outside Dia | Raised Face |        | Flange Holes |     |         | Flange Thickness | Outside Dia | Raised Face |        | Flange Holes |     |         | Flange Thickness |
|-------------|-------------|-------------|--------|--------------|-----|---------|------------------|-------------|-------------|--------|--------------|-----|---------|------------------|
|             |             | Dia         | Height | Circle Dia.  | Dia | Num ber |                  |             | Dia         | Height | Circle Dia.  | Dia | Num ber |                  |
| DN          | D           | G           | f      | K            | d   | n       | b                | D           | G           | f      | K            | d   | n       | b                |
| PN 10       |             |             |        |              |     |         |                  | PN 16       |             |        |              |     |         |                  |
| 100         | 220         | 158         | 3      | 180          | 19  | 8       | 19               | 220         | 158         | 3      | 180          | 19  | 8       | 19               |
| 125         | 250         | 188         | 3      | 210          | 19  | 8       | 19               | 250         | 188         | 3      | 210          | 19  | 8       | 19               |
| 150         | 285         | 212         | 3      | 240          | 23  | 8       | 19               | 285         | 212         | 3      | 240          | 23  | 8       | 19               |
| 200         | 340         | 268         | 3      | 295          | 23  | 8       | 20               | 340         | 268         | 3      | 295          | 23  | 12      | 20               |
| 250         | 395         | 320         | 3      | 350          | 23  | 12      | 22               | 405         | 320         | 3      | 355          | 28  | 12      | 22               |
| 300         | 445         | 370         | 4      | 400          | 23  | 12      | 25               | 460         | 378         | 4      | 410          | 28  | 12      | 25               |
| 350         | 505         | 430         | 4      | 460          | 23  | 16      | 25               | 520         | 438         | 4      | 470          | 28  | 16      | 27               |
| 400         | 565         | 482         | 4      | 515          | 28  | 16      | 25               | 580         | 490         | 4      | 525          | 31  | 16      | 28               |
| 450         | 615         | 532         | 4      | 565          | 28  | 20      | 26               | 640         | 550         | 4      | 585          | 31  | 20      | 30               |
| 500         | 670         | 585         | 4      | 620          | 28  | 20      | 27               | 715         | 610         | 4      | 650          | 34  | 20      | 32               |
| 600         | 780         | 685         | 5      | 725          | 31  | 20      | 30               | 840         | 725         | 5      | 770          | 37  | 20      | 36               |
| 700         | 895         | 800         | 5      | 840          | 31  | 24      | 33               | 910         | 795         | 5      | 840          | 37  | 24      | 40               |
| 800         | 1.015       | 905         | 5      | 950          | 34  | 24      | 35               | 1.025       | 900         | 5      | 950          | 41  | 24      | 43               |
| 900         | 1.115       | 1.005       | 5      | 1.050        | 34  | 28      | 38               | 1.125       | 1.000       | 5      | 1.050        | 41  | 28      | 47               |
| 1.000       | 1.230       | 1.110       | 5      | 1.160        | 37  | 28      | 40               | 1.255       | 1.115       | 5      | 1.170        | 44  | 28      | 50               |
| 1.200       | 1.455       | 1.330       | 5      | 1.380        | 41  | 32      | 45               | 1.485       | 1.330       | 5      | 1.390        | 50  | 32      | 57               |
| 1.400       | 1.675       | 1.535       | 5      | 1.590        | 44  | 36      | 46               | 1.685       | 1.530       | 5      | 1.590        | 50  | 36      | 59               |
| 1.500       | 1.785       | 1.640       | 5      | 1.700        | 44  | 36      | 48               | 1.820       | 1.640       | 5      | 1.710        | 57  | 36      | 63               |
| 1.600       | 1.915       | 1.760       | 5      | 1.820        | 50  | 40      | 49               | 1.930       | 1.750       | 5      | 1.820        | 57  | 40      | 65               |
| 1.800       | 2.115       | 1.950       | 5      | 2.020        | 50  | 44      | 52               | 2.130       | 1.950       | 5      | 2.020        | 57  | 44      | 69               |
| 2.000       | 2.325       | 2.150       | 5      | 2.230        | 50  | 48      | 55               | 2.345       | 2.150       | 5      | 2.230        | 62  | 48      | 73               |
| 2.200       | 2.550       | 2.370       | 5      | 2.440        | 57  | 52      | 59               | 2.555       | 2.360       | 5      | 2.440        | 62  | 52      | 80               |
| PN 25       |             |             |        |              |     |         |                  | PN 40       |             |        |              |     |         |                  |
| 100         | 235         | 162         | 3      | 190          | 23  | 8       | 19               | 235         | 162         | 3      | 190          | 23  | 8       | 19               |
| 125         | 270         | 188         | 3      | 220          | 28  | 8       | 19               | 270         | 188         | 3      | 220          | 28  | 8       | 24               |
| 150         | 300         | 218         | 3      | 250          | 28  | 8       | 20               | 300         | 218         | 3      | 250          | 28  | 8       | 26               |
| 200         | 360         | 278         | 3      | 310          | 28  | 12      | 22               | 375         | 285         | 3      | 320          | 31  | 12      | 30               |
| 250         | 425         | 335         | 3      | 370          | 31  | 12      | 25               | 450         | 345         | 3      | 385          | 34  | 12      | 35               |
| 300         | 485         | 395         | 4      | 430          | 31  | 16      | 28               | 515         | 410         | 4      | 450          | 34  | 16      | 40               |
| 350         | 555         | 450         | 4      | 490          | 34  | 16      | 30               | 580         | 465         | 4      | 510          | 37  | 16      | 44               |
| 400         | 620         | 505         | 4      | 550          | 37  | 16      | 32               | 660         | 535         | 4      | 585          | 41  | 16      | 48               |
| 450         | 670         | 548         | 4      | 600          | 37  | 20      | 34               | 685         | 560         | 4      | 610          | 41  | 20      | 50               |
| 500         | 730         | 615         | 4      | 660          | 37  | 20      | 37               | 755         | 615         | 4      | 670          | 44  | 20      | 52               |
| 600         | 845         | 720         | 5      | 770          | 41  | 20      | 42               | 890         | 735         | 5      | 795          | 50  | 20      | 58               |
| 700         | 960         | 820         | 5      | 875          | 44  | 24      | 47               | 995         | 840         | 5      | 900          | 50  | 24      | 63               |
| 800         | 1.085       | 930         | 5      | 990          | 50  | 24      | 51               | 1.140       | 960         | 5      | 1.030        | 57  | 24      | 68               |
| 900         | 1.185       | 1.030       | 5      | 1.090        | 50  | 28      | 56               | 1.250       | 1.070       | 5      | 1.140        | 57  | 28      | 73               |
| 1.000       | 1.320       | 1.140       | 5      | 1.210        | 57  | 28      | 60               | 1.360       | 1.180       | 5      | 1.250        | 57  | 28      | 80               |
| 1.200       | 1.530       | 1.360       | 5      | 1.420        | 57  | 32      | 69               | 1.575       | 1.385       | 5      | 1.460        | 62  | 32      | 88               |
| 1.400       | 1.755       | 1.570       | 5      | 1.640        | 62  | 36      | 74               | 1.795       | 1.600       | 5      | 1.680        | 62  | 36      | 98               |
| 1.500       | 1.865       | 1.680       | 5      | 1.750        | 62  | 40      | 75               | 1.910       | 1.700       | 5      | 1.790        | 70  | 40      | 102              |
| 1.600       | 1.975       | 1.790       | 5      | 1.860        | 62  | 40      | 81               | 2.025       | 1.815       | 5      | 1.900        | 70  | 40      | 108              |
| 1.800       | 2.195       | 2.000       | 5      | 2.070        | 70  | 44      | 88               |             |             |        |              |     |         |                  |
| 2.000       | 2.425       | 2.230       | 5      | 2.300        | 70  | 48      | 95               |             |             |        |              |     |         |                  |