# NAF-Trunnball ball valves Fk 41.66(2)GB

DN 150 - 800, Size 6" - 32" 11.02
PN 10 - 40, ANSI Class 150 - 300

## Primary characteristics

NAF-Trunnball is a trunnion ball valve with full-bore. It is designed to give a smooth and even control even at high dp and demanding media. Due to its tightness in both directions it is excellent for use as control valve, on/off valve or shut-off valve. The ball is supported by two large trunnion bearings for consistent low torque even at high differential pressures. This gives smooth control and high resolution.

The valve has:

- a trunnion mounted ball which gives a smooth control.
- a low torque for controlling the valve.
- an easy-to-service arrangement, due to the off-center joint face of the valve body, which allows for easy replacement of the ball and seals, without the need for removing the stem and actuator.
- Spring loaded seats are in continuous contact with the ball surface. Tight in both directions with low dp.
- sturdy, blowout-proof, solidly supported stem.
- Pre-load self adjustable double stem packing. (V-rings and O-ring).
- metal-to-metal Alloy 6 seat rings or soft, enclosed carbon reinforced PTFE seat rings.
- the NAF standard for mounting the actuator, which simplifies installation and results in a compact valve/actuator unit.

CE-marked according to Pressure Equipment Directive (PED 97/23/EG) module H, category III.

## Applications

NAF-Trunnball can be used both as a control valve and as on/off or shut-off valve.
The valve represents a concrete result of our product philosophy which is focused on functionality, high quality and low life cycle costs, and is based on concentrating our range to a limited number of valve types, but all of them suitable for a wide variety of applications.

The excellent characteristics of NAF-Trunnball are particularly beneficial under the most arduous operating conditions, where difficult media and demanding pressure conditions make severe demands on the design, materials and performance.

NAF-Trunnball is recommended for applications in the following branches:

- Pulp and Paper
- Chemical and Petro Chemical
- Oil and gas
- Power stations
- Steel works

## Technical specification for standard design

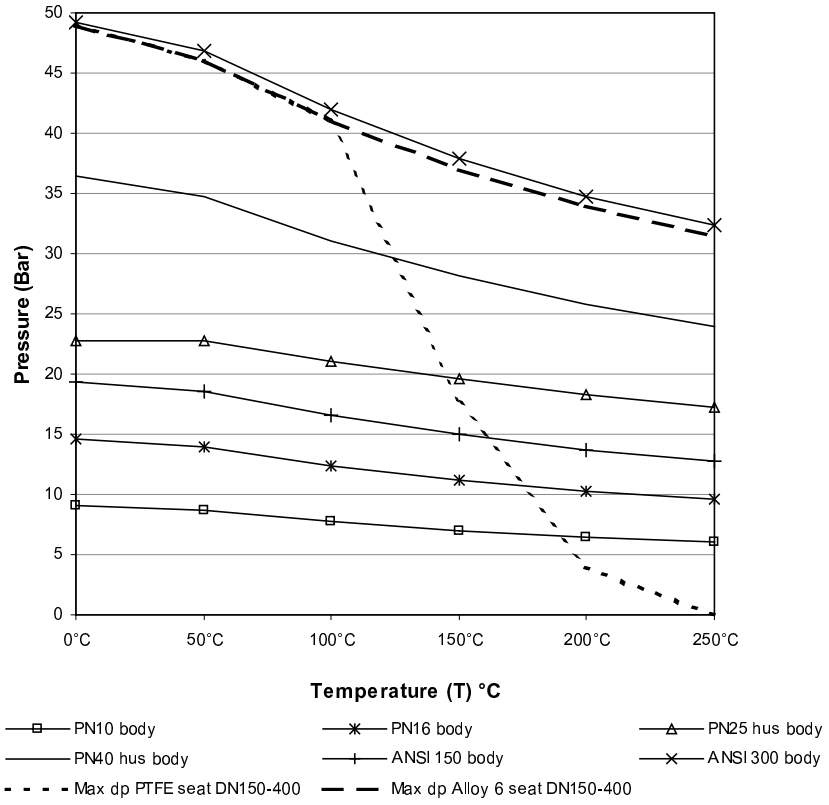
| | |
|---|---|
| Material: | EN 1.4408 |
| Size range: | DN 150—800 (6"—32") |
| Pressure ratings: | PN 10—40<br>ANSI Class 150—300 |
| Face-to face lengths: | PN 10-16 DN 150-600:<br>EN 558-1 series 12 (SSG 1042)<br>ANSI 150 Size 6"-24":<br>ANSI B 16.10 Class 150 long<br>PN 25—40 DN 150-500:<br>EN 558-1 series 4 (SSG 1043)<br>ANSI 300: ANSI B 16.10<br>Class 300 short<br>Size 6"—12"<br>Class 300 long<br>Size 14"—20" |
| Valve design: | ANSI B16.34 and EN 12 516 |
| Installation method: | Flanges acc. to DIN or ANSI B16.5 |
| Temperature range: | Max 250°C, see graph on page 2 |
| Test pressure: | 1,5xPN with valve open<br>1,1xPN with valve closed |
| Sealing class: | PTFE seats.<br>Testing medium is water.<br>EN 12266-1 Rate A<br>Metal seats<br>IEC 534-4 Class V<br>ANSI / FCI70-2 |

At request for test fluid air contact NAF for more information

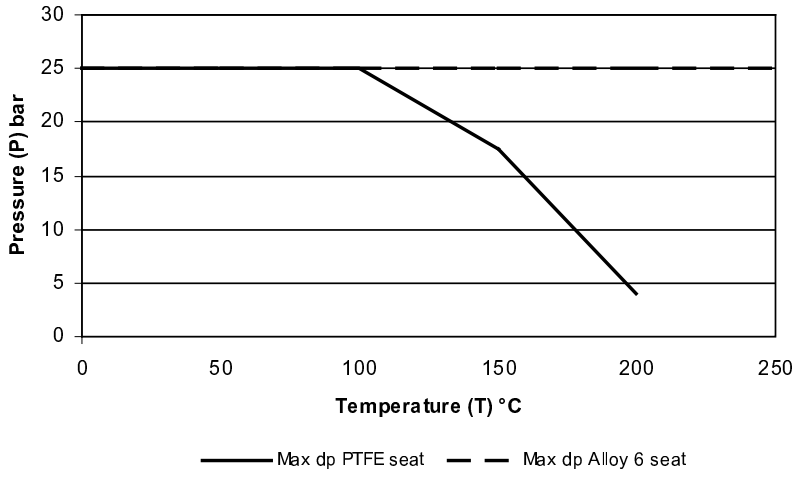
## Working pressure, differential pressure and temperature

The maximum working pressure and temperature in the body depends on pressure class according to respectively flange standards. For EN1092-1:2001 see diagram 1. The differential pressure when the valve (DN 450-800) is closed is 25 bar. The stem gland with EPDM O-ring can be used for temperatures up to 200°C. For higher temperatures, contact NAF.

## Max working pressure and max dp DN 150-400 (size 6”-16”) (Diagram 1)




## Max dp DN 450-800 (size 18”-32”) (Diagram 2)



## Flow capacities and characteristics (Table 1)

| DN | $K_v$ at an opening angle of | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
| 150 | 7 | 24 | 38 | 58 | 84 | 113 | 149 | 193 | 254 | 334 | 430 | 565 | 775 | 1111 | 1637 | 2250 |
| 200 | 12 | 43 | 67 | 103 | 149 | 200 | 265 | 343 | 451 | 594 | 765 | 1005 | 1377 | 1975 | 2910 | 4000 |
| 250 | 19 | 67 | 105 | 160 | 233 | 313 | 441 | 535 | 705 | 929 | 1195 | 1570 | 2150 | 3086 | 4547 | 6250 |
| 300 | 27 | 97 | 151 | 231 | 335 | 450 | 596 | 771 | 1015 | 1337 | 1721 | 2261 | 3098 | 4444 | 6548 | 9000 |
| 350 | 37 | 132 | 205 | 315 | 456 | 613 | 811 | 1049 | 1381 | 1820 | 2343 | 3078 | 4217 | 6048 | 8912 | 12250 |
| 400 | 48 | 172 | 268 | 411 | 596 | 800 | 1059 | 1370 | 1804 | 2377 | 3060 | 4020 | 5508 | 7900 | 11640 | 16000 |
| 450 | 61 | 218 | 339 | 520 | 756 | 1013 | 1340 | 1734 | 2283 | 3009 | 3873 | 5088 | 6971 | 9998 | 14732 | 20250 |
| 500 | 75 | 269 | 419 | 642 | 931 | 1250 | 1654 | 2141 | 2819 | 3714 | 4781 | 6281 | 8606 | 12344 | 18188 | 25000 |
| 600 | 108 | 387 | 603 | 924 | 1341 | 1800 | 2382 | 3083 | 4059 | 5349 | 6885 | 9045 | 12393 | 17775 | 26190 | 36000 |
| 700 | 147 | 527 | 821 | 1258 | 1825 | 2450 | 3243 | 4196 | 5525 | 7280 | 9371 | 12311 | 16868 | 24194 | 35648 | 49000 |
| 800 | 192 | 688 | 1072 | 1643 | 2384 | 3200 | 4235 | 5480 | 7216 | 9509 | 12240 | 16080 | 22032 | 31600 | 46560 | 64000 |

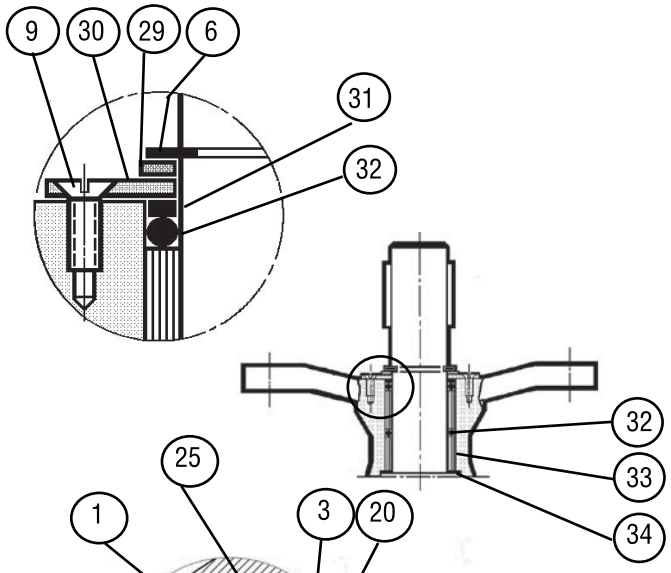
Note: For sizes < DN 150 see NAF-Duball Fk 41.61

$C_v = 1{,}16 \times K_v$

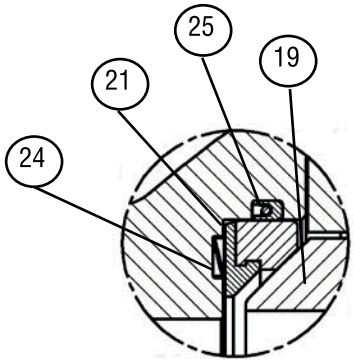
## Material specification (Table 2)

| Item | Qty | Part | Material |
|---|---|---|---|
| 1 | 1 | Body | EN 1.4408/CF8M |
| 2 | 1 | Body | EN 1.4408/CF8M |
| 3 | 1 | Ball | EN 1.4408/CF8M/Hcr |
| 4 | 2 | Seat ring | Alloy 6 |
| 5 | 1 | Stem assembly | EN 1.4460 |
| 6 | 1 | Circlip | Spring steel |
| 7 | 1 | Backing ring | PTFE |
| 8 | 1 | Upper lid | EN 1.4436 |
| 9 | 4 | Screw | A4 |
| 11 | 1 | Packing box | PTFE/PTFE+25%C |
| 12 | 1 | Bushing | PTFE +EN 1.4401 |
| 13 | 1 | Anti-friction washer | EN 1.4436 |
| 14 | 1 | Seal ring | PTFE |
| 15 | 10 | Bolt | A4-80 |
| 16 | 12 | Nut | A4 |
| 17 | 2 | Bolt | A4-80 |
| 18 | 2 | Key | A4 |
| 19 | 1 | Ball | EN 1.4408/CF8M |
| 20 | 1 | Ball | Alloy 6 |
| 21 | 2 | Seat ring | EN 1.4436/PTFE+25%C |
| 22 | 1 | Bearing | PTFE +EN 1.4401 |
| 23 | 2 | Bearing cage | EN 1.4470 |
| 24 | 2 | Spring | ASTM A316 |
| 25 | 2 | Sealing ring | PTFE+15%Graphite |
| 26 | 1 | O-ring | FPM |
| 28 | 1 | Spring | ASTM A316 |
| 29 | 1 | Backing ring | Spring steel |
| 30 | 1 | Washer | A4 |
| 31 | 1 | Backing ring | PTFE |
| 32 | 2 | O-ring | EPDM |
| 33 | 2 | Bushing | PTFE carbon reinforced |
| 34 | 1 | Washer | PTFE carbon reinforced |

### DN 450-800 (size 18”-32”)

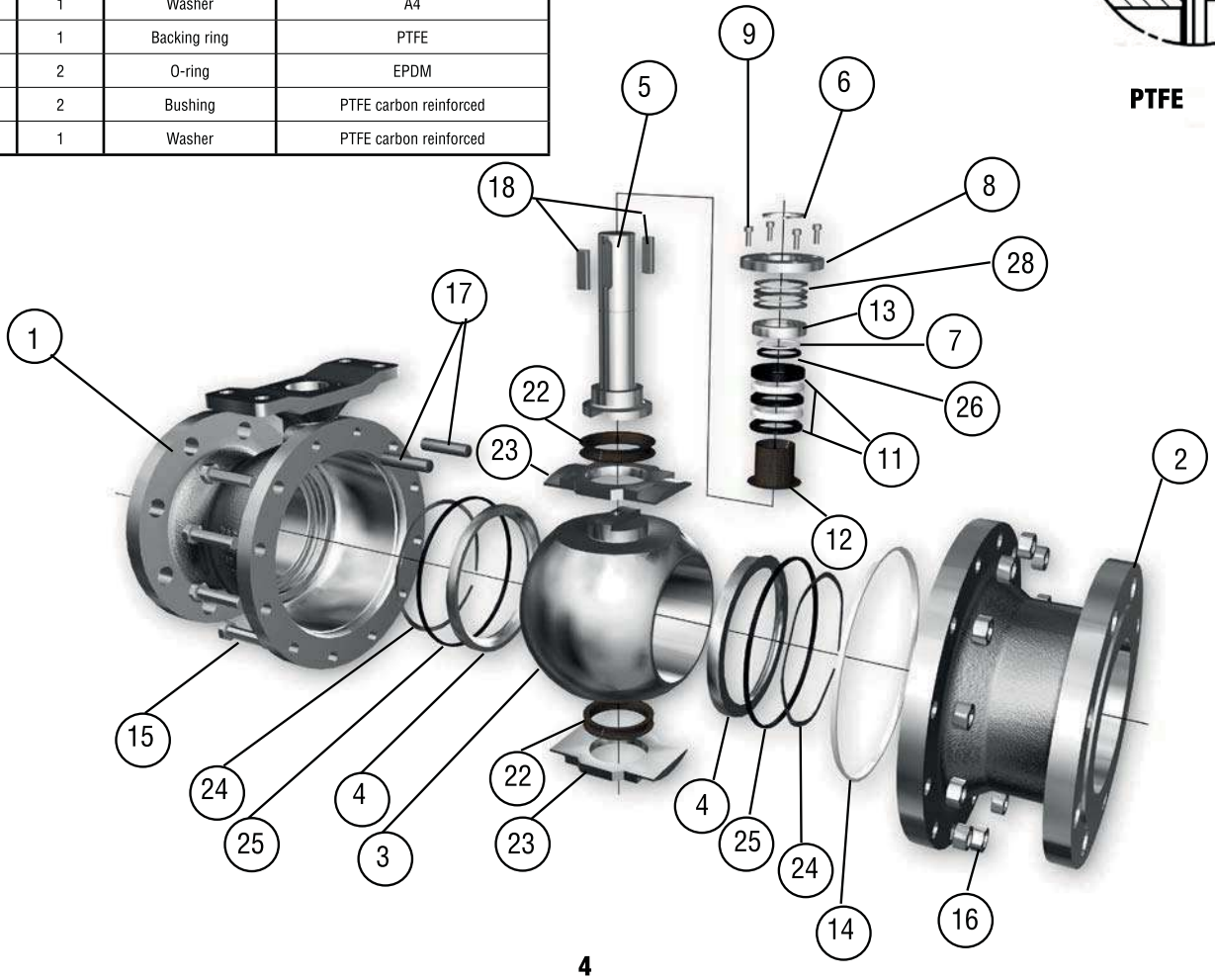



Alloy 6




PTFE

### DN 150-400 (size 6”-16”)



## Operating torque Nm (Table 3)

| DN | Size | Differential pressure bar | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 50 |
| 150 | 6” | 290 | 490 | 690 | 890 | 1090 | 1290 | 1490 | 1690 | 2090 |
| 200 | 8” | 640 | 1100 | 1550 | 2000 | 2460 | 2920 | 3380 | 3830 | 4740 |
| 250 | 10” | 900 | 1560 | 2230 | 2900 | 3560 | 4200 | 4890 | 5550 | 6880 |
| 300 | 12” | 1280 | 2230 | 3160 | 4100 | 5050 | 5990 | 6940 | 7870 | 9750 |
| 350 | 14” | 2450 | 4250 | 6020 | 7800 | 9600 | 11400 | 13200 | 14950 | 18530 |
| 400 | 16” | 3900 | 6730 | 9560 | 12400 | 15200 | 18100 | 20900 | 23700 | 29400 |
| 450 | 18” | 2500 | 4300 | 6500 | 7900 | 9700 | - | - | - | - |
| 500 | 20” | 4000 | 6300 | 9600 | 11800 | 14500 | - | - | - | - |
| 600 | 24” | 14700 | 25500 | 36400 | 47100 | 57900 | - | - | - | - |
| 700 | 28” | 21200 | 36800 | 52200 | 67800 | 83300 | - | - | - | - |
| 800 | 32” | 22100 | 38000 | 53900 | 69800 | 85700 | - | - | - | - |

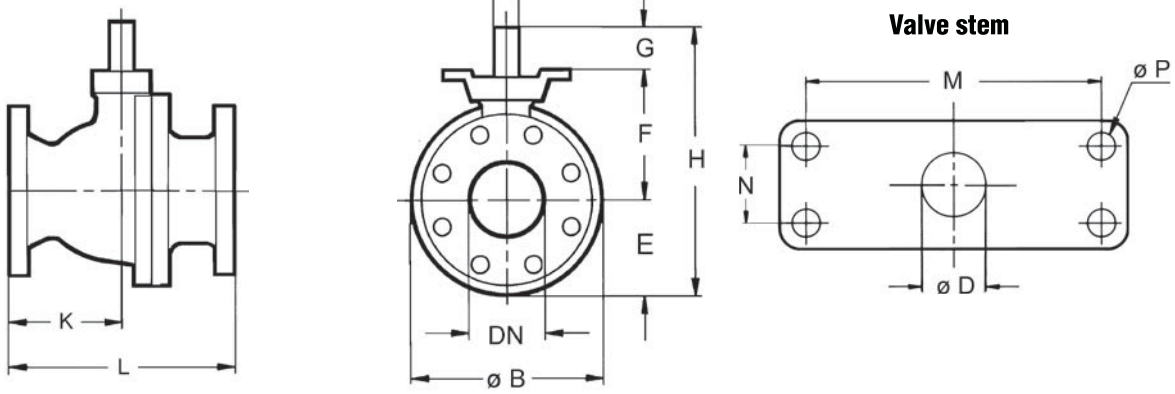
## Operating torque

The minimum design differential pressure for selecting the actuator is 5 bar. The specified torques in the table above are for clean media. For steam and with Stellite seat rings increases the required torque with factor 1.5. If the media contains solids, if it is a suspension, etc., consult NAF.

## Sizing of control valves

We have a user friendly valve calculation program which can be ordered through your NAF representative. The program is based on calculating formula according to the standards IEC 60534 and ISA S75.01.

## Dimension and mass




## PN 10 (Table 4)

| DN | Size | B | D | E | F | G | H | K | L | M | N | P | Mass kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 150 | 6” | 1) | 1) | 1) | 1) | 1) | 1) | 1) | 1) | 1) | 1) | 1) | 1) |
| 200 | 8” | 452 | 40 | 226 | 268 | 80 | 574 | 229 | 457 | 214 | 60 | 18 | 152 |
| 250 | 10” | 528 | 50 | 264 | 321 | 93 | 678 | 267 | 533 | 214 | 60 | 18 | 263 |
| 300 | 12” | 622 | 50 | 311 | 415 | 93 | 819 | 305 | 610 | 214 | 60 | 33 | 355 |
| 350 | 14” | 688 | 80 | 344 | 467 | 149 | 960 | 343 | 686 | 277 | 115 | 33 | 479 |
| 400 | 16” | 767 | 80 | 384 | 518 | 149 | 1051 | 381 | 762 | 277 | 115 | 33 | 627 |
| 450 | 18” | 827 | 80 | 414 | 542 | 149 | 1105 | 432 | 864 | 277 | 115 | 33 | 850 |
| 500 | 20” | 936 | 80 | 468 | 596 | 149 | 1213 | 457 | 914 | 277 | 115 | 33 | 1190 |
| 600 | 24” | 1300 | 100 | 650 | 820 | 190 | 1660 | 534 | 1067 | * | * | * | 3000 |
| 700 | 28” | 1400 | 120 | 700 | 870 | 241 | 1811 | 622 | 1244 | * | * | * | 3900 |
| 800 | 32” | 1450 | 130 | 725 | 920 | 241 | 1886 | 686 | 1372 | * | * | * | 4700 |

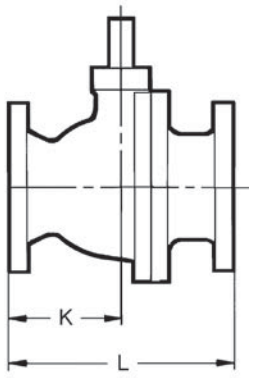
1) Choose PN 16

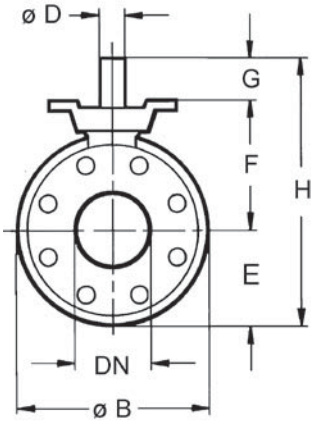
## PN 16/ANSI 150 (Table 5)

| DN | Size | B | D | E | F | G | H | K | L | M | N | P | Mass kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 150 | 6” | 336 | 40 | 168 | 218 | 80 | 466 | 197 | 394 | 214 | 60 | 18 | 100 |
| 200 | 8” | 452 | 40 | 226 | 268 | 80 | 574 | 229 | 457 | 214 | 60 | 18 | 155 |
| 250 | 10” | 528 | 50 | 264 | 321 | 93 | 678 | 267 | 533 | 214 | 60 | 18 | 269 |
| 300 | 12” | 622 | 70 | 311 | 379 | 131 | 821 | 305 | 610 | 277 | 115 | 33 | 373 |
| 350 | 14” | 688 | 80 | 344 | 467 | 149 | 960 | 343 | 686 | 277 | 115 | 33 | 494 |
| 400 | 16” | 767 | 80 | 384 | 518 | 149 | 1051 | 381 | 762 | 277 | 115 | 33 | 648 |
| 450 | 18” | 827 | 80 | 414 | 542 | 149 | 1105 | 432 | 864 | 277 | 115 | 33 | 886 |
| 500 | 20” | 936 | 80 | 468 | 596 | 149 | 1213 | 457 | 914 | 277 | 115 | 33 | 1246 |
| 600 | 24” | 1300 | 110 | 650 | 820 | 190 | 1660 | 534 | 1067 | * | * | * | 3000 |
| 700 | 28” | 1400 | 120 | 700 | 870 | 241 | 1811 | 622 | 1244 | * | * | * | 3900 |
| 800 | 32” | 1450 | 130 | 725 | 920 | 241 | 1886 | 686 | 1372 | * | * | * | 4700 |

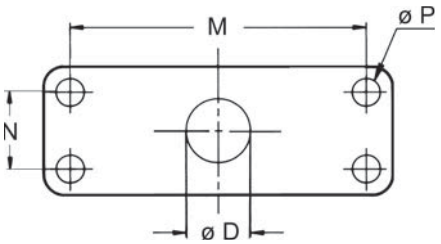
* Contact NAF

## Dimension and mass




Valve stem




### PN 25 (Table 6)

| DN | Size | B | D | E | F | G | H | K | L | M | N | P | Mass kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 150 | 6” | 1) | 1) | 1) | 1) | 1) | 1) | 1) | 1) | 1) | 1) | 1) | 1) |
| 200 | 8” | 452 | 50 | 226 | 268 | 93 | 587 | 251 | 502 | 214 | 60 | 18 | 172 |
| 250 | 10” | 528 | 50 | 264 | 321 | 93 | 678 | 284 | 568 | 214 | 60 | 18 | 288 |
| 300 | 12” | 622 | 70 | 311 | 379 | 131 | 821 | 324 | 648 | 277 | 115 | 33 | 391 |
| 350 | 14” | 688 | 80 | 344 | 467 | 149 | 960 | 381 | 762 | 277 | 115 | 33 | 561 |
| 400 | 16” | 767 | 80 | 384 | 518 | 149 | 1051 | 419 | 838 | 277 | 115 | 33 | 725 |
| 450 | 18” | 827 | 80 | 414 | 542 | 149 | 1105 | 457 | 914 | 277 | 115 | 33 | 852 |
| 500 | 20” | 936 | 80 | 468 | 596 | 149 | 1213 | 496 | 991 | 277 | 115 | 33 | 1317 |
| 600 | 24” | 1300 | 110 | 650 | 820 | 190 | 1660 | 534 | 1067 | * | * | * | 3000 |
| 700 | 28” | 1400 | 120 | 700 | 870 | 241 | 1811 | 622 | 1244 | * | * | * | 3900 |
| 800 | 32” | 1450 | 130 | 725 | 920 | 241 | 1886 | 686 | 1372 | * | * | * | 4700 |

1) Choose PN 40

### PN 40/ANSI 300 (Table 7)

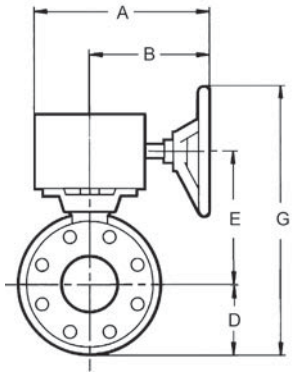
| DN | Size | B | D | E | F | G | H | K PN 40 | L PN 40 | K ANSI 300 | L ANSI 300 | M | N | P | Mass kg PN 40 | Mass kg ANSI 300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 150 | 6” | 336 | 40 | 168 | 218 | 80 | 466 | 202 | 403 | 202 | 403 | 214 | 60 | 18 | 106 | 116 |
| 200 | 8” | 452 | 50 | 226 | 268 | 93 | 587 | 251 | 502 | 210 | 419 | 214 | 60 | 18 | 182 | 176 |
| 250 | 10” | 528 | 60 | 264 | 321 | 111 | 696 | 284 | 568 | 229 | 457 | 214 | 60 | 18 | 307 | 298 |
| 300 | 12” | 622 | 70 | 311 | 379 | 131 | 821 | 324 | 648 | 251 | 502 | 277 | 115 | 33 | 421 | 397 |
| 350 | 14” | 688 | 90 | 344 | 467 | 172 | 983 | 381 | 762 | 381 | 762 | 277 | 115 | 33 | 596 | 599 |
| 400 | 16” | 767 | 100 | 384 | 518 | 190 | 1092 | 419 | 838 | 419 | 838 | 277 | 115 | 33 | 785 | 773 |
| 450 | 18” | 827 | 80 | 414 | 542 | 149 | 1105 | 457 | 914 | 457 | 914 | 277 | 115 | 33 | 990 | 1054 |
| 500 | 20” | 936 | 80 | 468 | 596 | 149 | 1213 | 496 | 991 | 496 | 991 | 277 | 115 | 33 | 1373 | 1456 |
| 600 | 24” | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 700 | 28” | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 800 | 32” | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |

* Contact NAF

## Actuators

NAF-Trunnball is available with hand levers or with pneumatic or electric actuators and accessories.
Use the following tables for selecting the hand levers and standard pneumatic actuators.
For clean media type water 20 °C.

If other pneumatic or electric actuators are required, consult your NAF representative.




## NAF-Trunnball with handgears acc. to FK 70.76

### PN 10 (8982EF-……) (Table 8)

| Valve | | Max Dp bar | Handlever | Dimensions in mm | | | | | Mass kg |
|---|---|---|---|---|---|---|---|---|---|
| DN | Size | | | A | B | D | E | G | |
| 150 | 6” | - | Choose PN16 | - | - | - | - | - | - |
| 200 | 8” | 10 | 791051-33040 | 416 | 291 | 226 | 318 | 744 | 169 |
| 250 | 10” | 10 | 791051-33050 | 416 | 291 | 264 | 386 | 850 | 280 |
| 300 | 12” | 10 | 791051-43050 | 507 | 337 | 311 | 470 | 1031 | 387 |
| 350 | 14” | 10 | 791051-55080 | 591 | 421 | 344 | 562 | 1106 | 517 |
| 400 | 16” | 8 | 791051-55080 | 591 | 421 | 384 | 613 | 1197 | 665 |
| 400 | 16” | 10 | 791051-65080 | 697 | 487 | 384 | 617 | 1301 | 695 |
| 450 | 18” | 10 | 791051-55080 | 591 | 421 | 414 | 637 | 1251 | 890 |
| 500 | 20” | 8 | 791051-55080 | 591 | 421 | 468 | 691 | 1359 | 1230 |
| 500 | 20” | 10 | 791051-65080 | 697 | 487 | 468 | 695 | 1463 | 1260 |
| 600 | 24” | - | C | - | - | - | - | - | - |
| 700 | 28” | - | C | - | - | - | - | - | - |
| 800 | 32” | - | C | - | - | - | - | - | - |

### PN16/ANSI 150 (8983EF-…/8984EF-…) (Table 9)

| Valve | | Max Dp bar | Handlever | Dimensions in mm | | | | | Mass kg |
|---|---|---|---|---|---|---|---|---|---|
| DN | Size | | | A | B | D | E | G | |
| 150 | 6” | 20 | 791051-33040 | 416 | 291 | 168 | 268 | 636 | 117 |
| 200 | 8” | 16 | 791051-33040 | 416 | 291 | 226 | 318 | 744 | 172 |
| 200 | 8” | 20 | 791051-43040 | 507 | 337 | 226 | 323 | 799 | 193 |
| 250 | 10” | 12 | 791051-33050 | 416 | 291 | 264 | 386 | 850 | 286 |
| 250 | 10” | 20 | 791051-43050 | 507 | 337 | 264 | 376 | 890 | 301 |
| 300 | 12” | 20 | 791051-55070 | 591 | 421 | 311 | 459 | 970 | 411 |
| 350 | 14” | 15 | 791051-55080 | 591 | 421 | 344 | 562 | 1106 | 532 |
| 350 | 14” | 20 | 791051-65080 | 697 | 487 | 344 | 566 | 1210 | 561 |
| 400 | 16” | 18 | 791051-65080 | 697 | 487 | 384 | 617 | 1301 | 715 |
| 400 | 16” | 20 | 791051-75080 | 747 | 537 | 384 | 617 | 1301 | 730 |
| 450 | 18” | 15 | 791051-55080 | 591 | 421 | 414 | 637 | 1251 | 924 |
| 450 | 18” | 20 | 791051-65080 | 697 | 487 | 414 | 641 | 1355 | 953 |
| 500 | 20” | 8 | 791051-55080 | 591 | 421 | 468 | 691 | 1359 | 1285 |
| 500 | 20” | 18 | 791051-65080 | 697 | 487 | 468 | 695 | 1463 | 1315 |
| 500 | 20” | 20 | 791051-75080 | 747 | 537 | 468 | 695 | 1463 | 1330 |
| 600 | 24” | - | C | - | - | - | - | - | - |
| 700 | 28” | - | C | - | - | - | - | - | - |
| 800 | 32” | - | C | - | - | - | - | - | - |

## PN25 (8985EF-……) (Table 10)

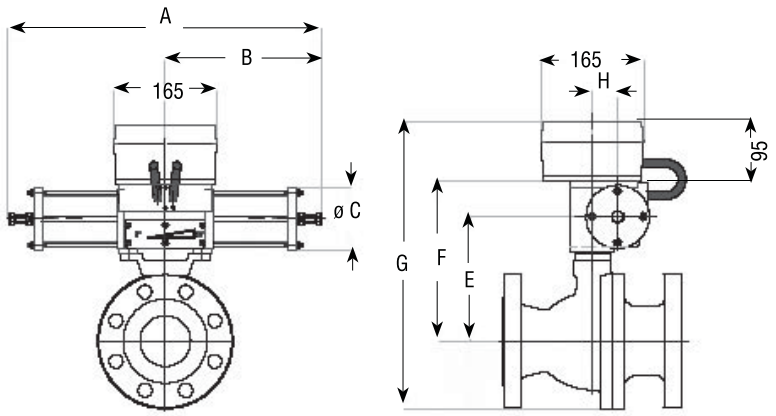
The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

| Valve | | Max. Dp bar | Handlever | Dimensions in mm | | | | | Mass kg |
|---|---|---|---|---|---|---|---|---|---|
| DN | Size | | | A | B | D | E | G | |
| 150 | 6” | - | Choose PN40 | | | | | | |
| 200 | 8” | 16 | 791051-33050 | 416 | 291 | 226 | 333 | 759 | 189 |
| 200 | 8” | 25 | 791051-43050 | 507 | 337 | 226 | 323 | 799 | 204 |
| 250 | 10” | 12 | 791051-33050 | 416 | 291 | 264 | 386 | 850 | 305 |
| 250 | 10” | 25 | 791051-43050 | 507 | 337 | 264 | 376 | 890 | 320 |
| 300 | 12” | 25 | 791051-55070 | 591 | 421 | 311 | 459 | 970 | 430 |
| 350 | 14” | 15 | 791051-55080 | 591 | 421 | 344 | 562 | 1106 | 600 |
| 350 | 14” | 25 | 791051-65080 | 697 | 487 | 344 | 566 | 1210 | 630 |
| 400 | 16” | 18 | 791051-65080 | 697 | 487 | 384 | 617 | 1301 | 792 |
| 400 | 16” | 25 | 791051-75080 | 747 | 537 | 384 | 617 | 1301 | 806 |
| 450 | 18” | 15 | 791051-55080 | 591 | 421 | 414 | 637 | 1251 | 890 |
| 450 | 18” | 25 | 791051-65080 | 697 | 487 | 414 | 641 | 1355 | 919 |
| 500 | 20” | 8 | 791051-55080 | 591 | 421 | 468 | 691 | 1359 | 1355 |
| 500 | 20” | 18 | 791051-65080 | 697 | 487 | 468 | 695 | 1463 | 1385 |
| 500 | 20” | 25 | 791051-75080 | 747 | 537 | 468 | 695 | 1463 | 1400 |
| 600 | 24” | - | C | - | - | - | - | - | - |
| 700 | 28” | - | C | - | - | - | - | - | - |
| 800 | 32” | - | C | - | - | - | - | - | - |

## PN40/ANSI 300 (8986EF-…./8987EF-….) (Table 11)

| Valve | | Max. Dp bar | Handlever | Dimensions mm | | | | | Mass kg PN40 | Mass kg ANSI300 |
|---|---|---|---|---|---|---|---|---|---|---|
| DN | Size | | | A | B | D | E | G | | |
| 150 | 6” | 40 | 791051-33040 | 416 | 291 | 168 | 268 | 636 | 123 | 133 |
| 150 | 6” | 50 | 791051-43040 | 507 | 337 | 168 | 273 | 691 | 138 | 148 |
| 200 | 8” | 16 | 791051-33050 | 416 | 291 | 226 | 333 | 759 | 199 | 193 |
| 200 | 8” | 40 | 791051-43050 | 507 | 337 | 226 | 323 | 799 | 214 | 208 |
| 200 | 8” | 50 | 791051-53050 | 591 | 421 | 226 | 323 | 749 | 220 | 214 |
| 250 | 10” | 25 | 791051-43060 | 507 | 337 | 264 | 376 | 890 | 340 | 331 |
| 250 | 10” | 50 | 791051-53060 | 591 | 421 | 264 | 376 | 840 | 345 | 336 |
| 300 | 12” | 30 | 791051-55070 | 591 | 421 | 311 | 459 | 970 | 459 | 435 |
| 300 | 12” | 50 | 791051-65070 | 697 | 487 | 311 | 468 | 1079 | 488 | 464 |
| 350 | 14” | 30 | 791051-65090 | 697 | 487 | 344 | 591 | 1235 | 665 | 668 |
| 350 | 14” | 40 | 791051-75090 | 747 | 537 | 344 | 591 | 1235 | 680 | 683 |
| 350 | 14” | 50 | 791051-85090 | 848 | 593 | 344 | 550 | 1244 | 790 | 793 |
| 400 | 16” | 18 | 791051-65100 | 697 | 487 | 384 | 657 | 1341 | 852 | 840 |
| 400 | 16” | 25 | 791051-75100 | 747 | 537 | 384 | 657 | 1341 | 870 | 858 |
| 400 * | 16” | 40 | 791051-85100 | 848 | 593 | 384 | 628 | 1362 | 980 | 968 |
| 450 | 18” | 15 | 791051-55080 | 591 | 421 | 414 | 637 | 1251 | 1030 | 1094 |
| 450 | 18” | 25 | 791051-65080 | 697 | 487 | 414 | 641 | 1355 | 1060 | 1124 |
| 500 | 20” | 8 | 791051-55080 | 591 | 421 | 468 | 691 | 1359 | 1415 | 1498 |
| 500 | 20” | 18 | 791051-65080 | 697 | 487 | 468 | 695 | 1463 | 1440 | 1523 |
| 500 | 20” | 25 | 791051-75080 | 747 | 537 | 468 | 695 | 1463 | 1455 | 1538 |
| 600 | 24” | - | C | - | - | - | - | - | - | - |
| 700 | 28” | - | C | - | - | - | - | - | - | - |
| 800 | 32” | - | C | - | - | - | - | - | - | - |

* If handgears in larger size are needed, contact NAF.




NAF 791290/791390

## NAF-Trunnball with double acting pneumatic actuator

## PN 10 (8982EF-….) (Table 12)

The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

| Valve | | Max. Dp bar at supply of | | | Double acting actuator | Dimensions in mm | | | | | | | Mass kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Size | 4 bar | 5 bar | 6 bar | | A | B | C | E | F | G | H | |
| 150 | 6” | - | - | - | Välj PN16 | - | - | - | - | - | - | - | - |
| 200 | 8” | - | 6 | 8 | 791290-2240 | 700 | 350 | 145 | 343 | 414 | 735 | 63 | 171 |
| 200 | 8” | 9 | 10 | 10 | 791290-3140 | 820 | 410 | 200 | 368 | 460 | 781 | 75 | 183 |
| 250 | 10” | 6 | 8 | 10 | 791290-3150 | 820 | 410 | 200 | 421 | 514 | 873 | 75 | 294 |
| 250 | 10” | 10 | 10 | 10 | 791290-3250 | 820 | 410 | 200 | 421 | 514 | 873 | 75 | 294 |
| 300 | 12” | - | 5 | 6 | 791290-3150 | 820 | 410 | 200 | 515 | 607 | 1013 | 75 | 386 |
| 300 | 12” | 9 | 10 | 10 | 791290-3250 | 820 | 410 | 200 | 515 | 607 | 1013 | 75 | 386 |
| 350 | 14” | 9 | 10 | 10 | 791390-4280 | 1110 | 555 | 260 | 631 | 736 | 1175 | 100 | 526 |
| 400 | 16” | - | 6 | 8 | 791390-4280 | 1110 | 555 | 260 | 682 | 787 | 1266 | 100 | 674 |
| 400 | 16” | 10 | 10 | 10 | 791390-5180 | 1600 | 800 | 395 | 700 | 846 | 1325 | 150 | 849 |
| 450 | 18” | 8 | 10 | 10 | 791390-4280 | 1110 | 555 | 260 | 706 | 811 | 1320 | 100 | 897 |
| 500 | 20” | - | 6 | 8 | 791390-4280 | 1110 | 555 | 260 | 760 | 865 | 1428 | 100 | 1237 |
| 500 | 20” | 10 | 10 | 10 | 791390-5180 | 1600 | 800 | 395 | 778 | 924 | 1487 | 150 | 1412 |
| 600 * | 24” | - | 5 | 7 | 791390-5200 | 1600 | 800 | 395 | 1002 | 1148 | 1893 | 150 | 3225 |
| 700 | 28” | - | - | - | C | - | - | - | - | - | - | - | - |
| 800 | 32” | - | - | - | C | - | - | - | - | - | - | - | - |

* If actuators in larger size are needed contact NAF
C Contact NAF

## PN 16/ANSI 150 (8983EF-..../8984EF-....) (Table 13)

The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

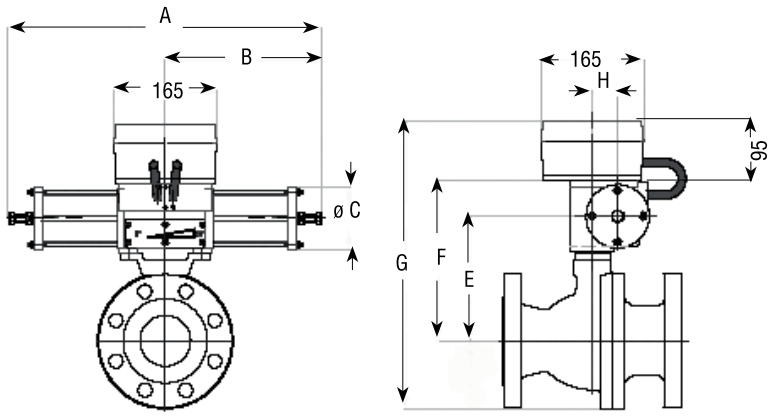
| Valve | | Max. Dp bar at supply of | | | Double acting actuator | Dimensions in mm | | | | | | | Mass kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Size | 4 bar | 5 bar | 6 bar | | A | B | C | E | F | G | H | |
| 150 | 6” | 5 | 8 | 9 | 791290-2140 | 700 | 350 | 145 | 293 | 364 | 627 | 63 | 119 |
| 150 | 6” | 14 | 16 | 20 | 791290-2240 | 700 | 350 | 145 | 293 | 364 | 627 | 63 | 119 |
| 150 | 6” | 20 | 20 | 20 | 791290-3140 | 820 | 410 | 200 | 318 | 410 | 673 | 75 | 131 |
| 200 | 8” | - | 6 | 8 | 791290-2240 | 700 | 350 | 145 | 343 | 418 | 739 | 63 | 174 |
| 200 | 8” | 9 | 12 | 15 | 791290-3140 | 820 | 410 | 200 | 368 | 460 | 781 | 75 | 186 |
| 200 | 8” | 20 | 20 | 20 | 791290-3240 | 820 | 410 | 200 | 368 | 460 | 781 | 75 | 186 |
| 250 | 10” | 6 | 8 | 10 | 791290-3150 | 820 | 410 | 200 | 421 | 514 | 873 | 75 | 300 |
| 250 | 10” | 14 | 17 | 20 | 791290-3250 | 820 | 410 | 200 | 421 | 514 | 873 | 75 | 300 |
| 250 | 10” | 20 | 20 | 20 | 791390-4250 | 1110 | 555 | 260 | 449 | 554 | 913 | 100 | 316 |
| 300 | 12” | 8 | 11 | 14 | 791390-4170 | 1110 | 555 | 260 | 507 | 612 | 1018 | 100 | 420 |
| 300 | 12” | 19 | 20 | 20 | 791390-4270 | 1110 | 555 | 260 | 507 | 612 | 1018 | 100 | 420 |
| 350 | 14” | 9 | 12 | 14 | 791390-4280 | 1110 | 555 | 260 | 631 | 736 | 1175 | 100 | 541 |
| 350 | 14” | 20 | 20 | 20 | 791390-5180 | 1600 | 800 | 395 | 649 | 795 | 1234 | 150 | 716 |
| 400 | 16” | - | 6 | 8 | 791390-4280 | 1110 | 555 | 260 | 682 | 787 | 1266 | 100 | 695 |
| 400 | 16” | 12 | 15 | 18 | 791390-5180 | 1600 | 800 | 395 | 700 | 846 | 1325 | 150 | 870 |
| 400 | 16” | 20 | 20 | 20 | 791390-5280 | 1600 | 800 | 395 | 700 | 846 | 1325 | 150 | 870 |
| 450 | 18” | 8 | 11 | 14 | 791390-4280 | 1110 | 555 | 260 | 706 | 811 | 1320 | 100 | 933 |
| 450 | 18” | 19 | 20 | 20 | 791390-5180 | 1600 | 800 | 395 | 724 | 870 | 1379 | 150 | 1108 |
| 500 | 20” | - | 6 | 8 | 791390-4280 | 1110 | 555 | 260 | 760 | 865 | 1428 | 100 | 1293 |
| 500 | 20” | 11 | 15 | 20 | 791390-5180 | 1600 | 800 | 395 | 778 | 924 | 1487 | 150 | 1268 |
| 500 | 20” | 20 | 20 | 20 | 791390-5280 | 1600 | 800 | 395 | 778 | 924 | 1487 | 150 | 1268 |
| 600 | 24” | - | - | - | C | - | - | - | - | - | - | - | - |
| 700 | 28” | - | - | - | C | - | - | - | - | - | - | - | - |
| 800 | 32” | - | - | - | C | - | - | - | - | - | - | - | - |

## PN 25 (8985EF-....) (Table 14)

The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

| Valve | | Max. Dp bar at supply of | | | Double acting actuator | Dimensions in mm | | | | | | | Mass kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Size | 4 bar | 5 bar | 6 bar | | A | B | C | E | F | G | H | |
| 150 | 6” | - | - | - | Choose PN40 | - | - | - | - | - | - | - | - |
| 200 | 8” | 9 | 12 | 15 | 791290-3150 | 820 | 410 | 200 | 368 | 460 | 781 | 75 | 203 |
| 200 | 8” | 20 | 25 | 25 | 791290-3250 | 820 | 410 | 200 | 368 | 460 | 781 | 75 | 203 |
| 250 | 10” | 6 | 8 | 10 | 791290-3150 | 820 | 410 | 200 | 421 | 514 | 873 | 75 | 319 |
| 250 | 10” | 14 | 17 | 20 | 791290-3250 | 820 | 410 | 200 | 421 | 514 | 873 | 75 | 319 |
| 250 | 10” | 25 | 25 | 25 | 791390-4250 | 1110 | 555 | 260 | 449 | 554 | 913 | 100 | 335 |
| 300 | 12” | 8 | 11 | 14 | 791390-4170 | 1110 | 555 | 260 | 507 | 612 | 1018 | 100 | 438 |
| 300 | 12” | 19 | 24 | 25 | 791390-4270 | 1110 | 555 | 260 | 507 | 612 | 1018 | 100 | 438 |
| 300 | 12” | 25 | 25 | 25 | 791390-5170 | 1600 | 800 | 395 | 561 | 707 | 1113 | 150 | 613 |
| 350 | 14” | 9 | 12 | 14 | 791390-4280 | 1110 | 555 | 260 | 631 | 736 | 1175 | 100 | 608 |
| 350 | 14” | 20 | 25 | 25 | 791390-5180 | 1600 | 800 | 395 | 649 | 795 | 1234 | 150 | 783 |
| 400 | 16” | 4 | 6 | 8 | 791390-4280 | 1110 | 555 | 260 | 682 | 787 | 1266 | 100 | 772 |
| 400 | 16” | 12 | 15 | 18 | 791390-5180 | 1600 | 800 | 395 | 700 | 846 | 1325 | 150 | 947 |
| 400 | 16” | 25 | 25 | 25 | 791390-5280 | 1600 | 800 | 395 | 700 | 846 | 1325 | 150 | 947 |
| 450 | 18” | 8 | 11 | 14 | 791390-4280 | 1110 | 555 | 260 | 706 | 811 | 1320 | 100 | 899 |
| 450 | 18” | 19 | 25 | 25 | 791390-5180 | 1600 | 800 | 395 | 724 | 870 | 1379 | 150 | 1074 |
| 450 | 18” | 25 | 25 | 25 | 791390-5280 | 1600 | 800 | 395 | 724 | 870 | 1379 | 150 | 1074 |
| 500 | 20” | 4 | 6 | 8 | 791390-4280 | 1110 | 555 | 260 | 760 | 865 | 1428 | 100 | 1364 |
| 500 | 20” | 11 | 15 | 20 | 791390-5180 | 1600 | 800 | 395 | 778 | 924 | 1487 | 150 | 1539 |
| 500 | 20” | 25 | 25 | 25 | 791390-5280 | 1600 | 800 | 395 | 778 | 924 | 1487 | 150 | 1539 |
| 600 | 24” | - | - | - | C | - | - | - | - | - | - | - | - |
| 700 | 28” | - | - | - | C | - | - | - | - | - | - | - | - |
| 800 | 32” | - | - | - | C | - | - | - | - | - | - | - | - |

C Contact NAF




NAF 791290/791390

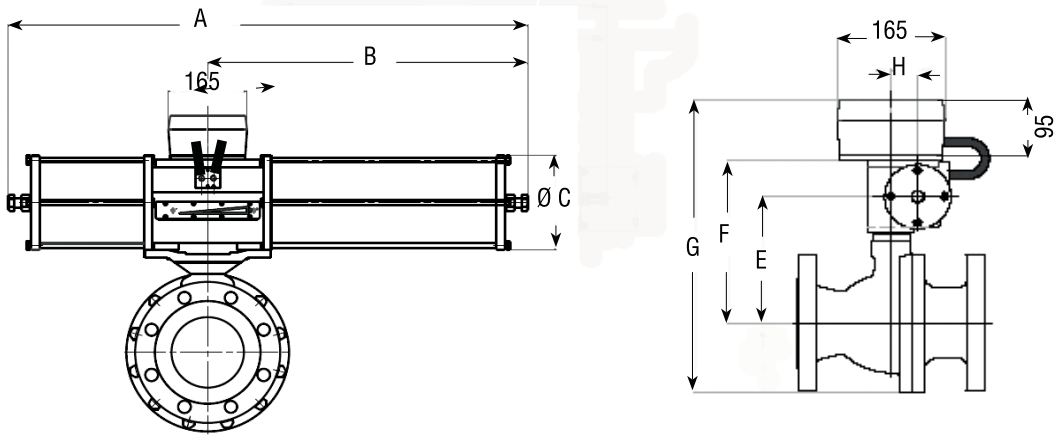
## NAF-Trunnball with double acting pneumatic actuator (cont.)

## PN40/ANSI 300 (8986EF-.../8987EF-...) (Table 15)

The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

| Valve | | Max. Dp bar at supply of | | | Double acting actuator | Dimensions in mm | | | | | | | Mass kg PN40 | Mass kg ANSI300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Size | 4 bar | 5 bar | 6 bar | | A | B | C | E | F | G | H | | |
| 150 | 6” | 5 | 8 | 9 | 791290-2140 | 700 | 350 | 145 | 293 | 364 | 627 | 63 | 125 | 135 |
| 150 | 6” | 14 | 16 | 16 | 791290-2240 | 700 | 350 | 145 | 293 | 364 | 627 | 63 | 125 | 135 |
| 150 | 6” | 18 | 30 | 36 | 791290-3140 | 820 | 410 | 200 | 318 | 410 | 673 | 75 | 137 | 147 |
| 150 | 6” | 49 | 50 | 50 | 791290-3240 | 820 | 410 | 200 | 318 | 410 | 673 | 75 | 137 | 147 |
| 200 | 8” | 9 | 12 | 15 | 791290-3150 | 820 | 410 | 200 | 368 | 460 | 781 | 75 | 213 | 207 |
| 200 | 8” | 20 | 25 | 30 | 791290-3250 | 820 | 410 | 200 | 368 | 460 | 781 | 75 | 213 | 207 |
| 200 | 8” | 41 | 50 | 50 | 791290-4250 | 1110 | 555 | 260 | 396 | 501 | 822 | 100 | 229 | 223 |
| 250 | 10” | 13 | 16 | 20 | 791390-4160 | 1110 | 555 | 260 | 449 | 554 | 913 | 100 | 354 | 345 |
| 250 | 10” | 29 | 36 | 43 | 791390-4260 | 1110 | 555 | 260 | 449 | 554 | 913 | 100 | 354 | 345 |
| 250 | 10” | 50 | 50 | 50 | 791390-5160 | 1600 | 800 | 395 | 503 | 649 | 1008 | 150 | 529 | 520 |
| 300 | 12” | 8 | 11 | 14 | 791390-4170 | 1110 | 555 | 260 | 507 | 612 | 1018 | 100 | 468 | 444 |
| 300 | 12” | 19 | 24 | 30 | 791390-4270 | 1110 | 555 | 260 | 507 | 612 | 1018 | 100 | 468 | 444 |
| 300 | 12” | 40 | 50 | 50 | 791390-5170 | 1600 | 800 | 395 | 561 | 707 | 1113 | 150 | 643 | 619 |
| 350 | 14” | 20 | 26 | 31 | 791390-5190 | 1600 | 800 | 395 | 649 | 795 | 1234 | 150 | 818 | 821 |
| 350 | 14” | 42 | 50 | 50 | 791390-5290 | 1600 | 800 | 395 | 649 | 795 | 1234 | 150 | 818 | 821 |
| 400 | 16” | 12 | 15 | 18 | 791390-5100 | 1600 | 800 | 395 | 778 | 924 | 1487 | 150 | 1007 | 995 |
| 400 * | 16” | 26 | 33 | 40 | 791390-5200 | 1600 | 800 | 395 | 778 | 924 | 1487 | 150 | 1007 | 995 |
| 450 | 18” | 8 | 11 | 14 | 791390-4280 | 1110 | 555 | 260 | 706 | 811 | 1320 | 100 | 1037 | 1101 |
| 450 | 18” | 19 | 25 | 25 | 791390-5180 | 1600 | 800 | 395 | 724 | 870 | 1379 | 150 | 1212 | 1276 |
| 450 | 18” | 25 | 25 | 25 | 791390-5280 | 1600 | 800 | 395 | 724 | 870 | 1379 | 150 | 1212 | 1276 |
| 500 | 20” | 4 | 6 | 8 | 791390-4280 | 1110 | 555 | 260 | 760 | 865 | 1428 | 100 | 1429 | 1503 |
| 500 | 20” | 11 | 15 | 20 | 791390-510 | 1600 | 800 | 395 | 778 | 924 | 1487 | 150 | 1595 | 1678 |
| 500 | 20” | 25 | 25 | 25 | 791390-5280 | 1600 | 800 | 395 | 778 | 924 | 1487 | 150 | 1595 | 1678 |

* If actuators in larger size are needed contact NAF
C Contact NAF




NAF791292/791392

## NAF-Trunnball with single acting pneumatic actuator (spring to close)

### PN 10 (8982EF-……) (Table 16)

The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

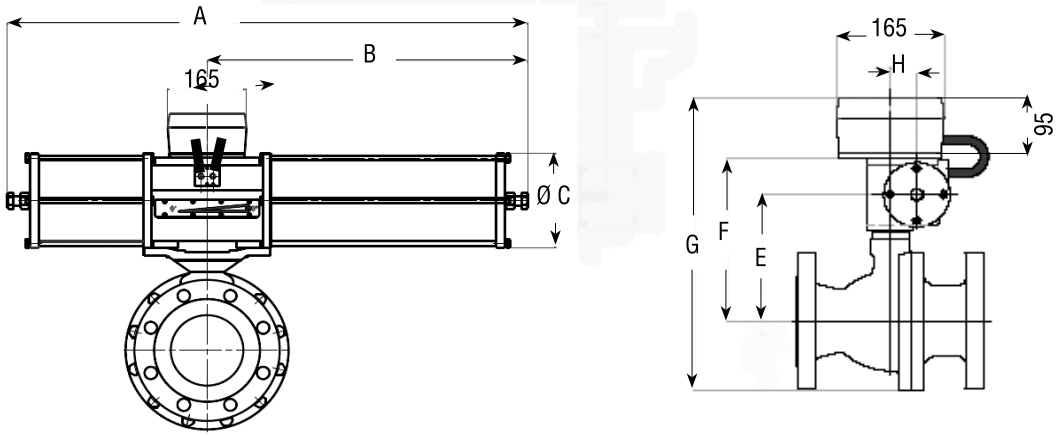
| Valve | | Max. Dp bar at supply of | | | Single acting actuator (spring to close) | Dimensions in mm | | | | | | | Mass kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Size | 4 bar | 5 bar | 6 bar | | A | B | C | E | F | G | H | |
| 150 | 6” | - | - | - | Choose PN16 | | | | | | | | |
| 200 | 8” | 9 | 10 | 10 | 791292-3240 | 1050 | 640 | 200 | 368 | 460 | 781 | 75 | 197 |
| 250 | 10” | 6 | 10 | 10 | 791292-3250 | 1050 | 640 | 200 | 421 | 513 | 872 | 75 | 308 |
| 300 | 12” | - | 6 | 6 | 791292-3250 | 1050 | 640 | 200 | 515 | 607 | 1013 | 75 | 400 |
| 300 | 12” | 10 | 10 | 10 | 791392-4250 | 1520 | 965 | 260 | 543 | 648 | 1054 | 100 | 457 |
| 350 | 14” | - | 6 | 6 | 791392-4280 | 1520 | 965 | 260 | 631 | 736 | 1175 | 100 | 581 |
| 350 | 14” | 10 | 10 | 10 | 791392-5280 | 2210 | 1370 | 395 | 649 | 795 | 1234 | 150 | 967 |
| 400 | 16” | 10 | 10 | 10 | 791392-5280 | 2210 | 1370 | 395 | 700 | 846 | 1325 | 150 | 1114 |
| 450 | 18” | - | 6 | 6 | 791392-4280 | 1520 | 965 | 260 | 706 | 811 | 1320 | 100 | 952 |
| 450 | 18” | 10 | 10 | 10 | 791392-5280 | 2210 | 1370 | 395 | 724 | 870 | 1379 | 150 | 1337 |
| 500 | 20” | 10 | 10 | 10 | 791392-5280 | 2210 | 1370 | 395 | 778 | 924 | 1487 | 150 | 1677 |
| 600 | 24” | - | - | - | C | - | - | - | - | - | - | - | - |
| 700 | 28” | - | - | - | C | - | - | - | - | - | - | - | - |
| 800 | 32” | - | - | - | C | - | - | - | - | - | - | - | - |

### PN 16/ANSI 150 (8983EF-…./8984EF-….) (Table 17)

The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

| Valve | | Max. Dp bar at supply of | | | Single acting actuator (spring to close) | Dimensions in mm | | | | | | | Mass kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Size | 4 bar | 5 bar | 6 bar | | A | B | C | E | F | G | H | |
| 150 | 6” | 6 | 10 | 10 | 791292-2240 | 890 | 540 | 145 | 293 | 364 | 627 | 63 | 125 |
| 150 | 6” | 20 | 20 | 20 | 791292-3240 | 1050 | 640 | 200 | 318 | 410 | 673 | 75 | 145 |
| 200 | 8” | 9 | 15 | 15 | 791292-3240 | 1050 | 640 | 200 | 368 | 460 | 781 | 75 | 202 |
| 200 | 8” | 20 | 20 | 20 | 791392-4240 | 1520 | 965 | 260 | 396 | 501 | 822 | 100 | 257 |
| 250 | 10” | 5 | 10 | 10 | 791292-3250 | 1050 | 640 | 200 | 421 | 513 | 872 | 75 | 314 |
| 250 | 10” | 15 | 20 | 20 | 791392-4250 | 1520 | 965 | 260 | 449 | 554 | 913 | 100 | 371 |
| 300 | 12” | 10 | 15 | 15 | 791392-4270 | 1520 | 965 | 260 | 543 | 648 | 1054 | 100 | 475 |
| 300 | 12” | 20 | 20 | 20 | 791392-5270 | 2210 | 1370 | 395 | 561 | 707 | 1113 | 150 | 860 |
| 350 | 14” | - | 6 | 6 | 791392-4280 | 1520 | 965 | 260 | 631 | 736 | 1175 | 100 | 596 |
| 350 | 14” | 20 | 20 | 20 | 791392-5280 | 2210 | 1370 | 395 | 649 | 795 | 1234 | 150 | 981 |
| 400 | 16” | 12 | 20 | 20 | 791392-5280 | 2210 | 1370 | 395 | 700 | 846 | 1325 | 150 | 1135 |
| 450 | 18” | - | 6 | 6 | 791392-4280 | 1520 | 965 | 260 | 706 | 811 | 1320 | 100 | 988 |
| 450 | 18” | 20 | 20 | 20 | 791392-5280 | 2210 | 1370 | 395 | 724 | 870 | 1379 | 150 | 1373 |
| 500 | 20” | 14 | 20 | 20 | 791392-5280 | 2210 | 1370 | 395 | 778 | 924 | 1487 | 150 | 1733 |
| 600 | 24” | - | - | - | C | - | - | - | - | - | - | - | - |
| 700 | 28” | - | - | - | C | - | - | - | - | - | - | - | - |
| 800 | 32” | - | - | - | C | - | - | - | - | - | - | - | - |

C Contact NAF




NAF791292/791392

## NAF-Trunnball with single acting pneumatic actuator (spring to close)

### PN 25 (8985EF-……) (Table 18)

The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

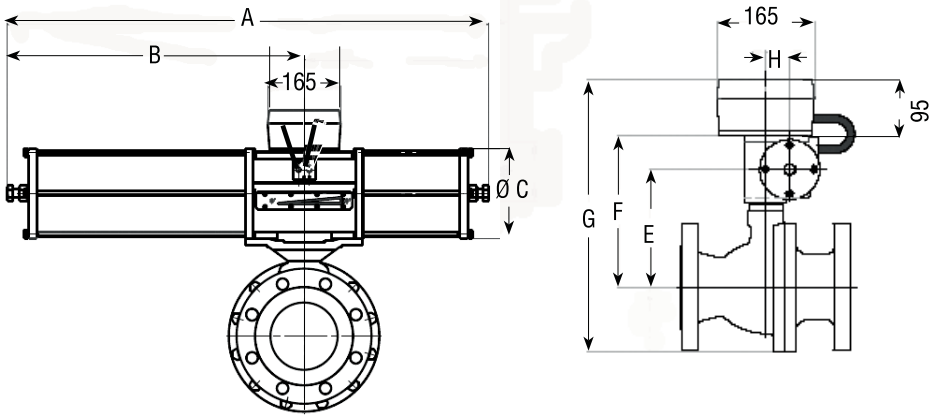
| Valve | | Max. Dp bar at supply of | | | Single acting actuator (spring to close) | Dimensions in mm | | | | | | | Mass kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Sise | 4 bar | 5 bar | 6 bar | | A | B | C | E | F | G | H | |
| 150 | 6” | - | - | - | Choose PN40 | | | | | | | | |
| 200 | 8” | 9 | 15 | 15 | 791292-3250 | 1050 | 640 | 200 | 368 | 460 | 781 | 75 | 219 |
| 200 | 8” | 23 | 25 | 25 | 791392-4250 | 1520 | 965 | 260 | 396 | 501 | 822 | 100 | 274 |
| 250 | 10” | 5 | 10 | 10 | 791292-3250 | 1050 | 640 | 200 | 421 | 513 | 872 | 75 | 333 |
| 250 | 10” | 15 | 22 | 22 | 791392-4250 | 1520 | 965 | 260 | 449 | 554 | 913 | 100 | 390 |
| 300 | 12” | 10 | 15 | 15 | 791392-4270 | 1520 | 965 | 260 | 543 | 648 | 1054 | 100 | 493 |
| 300 | 12” | 25 | 25 | 25 | 791392-5270 | 2210 | 1370 | 395 | 561 | 707 | 1113 | 150 | 878 |
| 350 | 14” | - | 6 | 6 | 791392-4280 | 1520 | 965 | 260 | 631 | 736 | 1175 | 100 | 663 |
| 350 | 14” | 22 | 25 | 25 | 791392-5280 | 2210 | 1370 | 395 | 649 | 795 | 1234 | 150 | 1048 |
| 400 * | 16” | 12 | 21 | 21 | 791392-5280 | 2210 | 1370 | 395 | 700 | 846 | 1325 | 150 | 1212 |
| 450 | 18” | - | 6 | 6 | 791392-4280 | 1520 | 965 | 260 | 706 | 811 | 1320 | 100 | 954 |
| 450 | 18” | 21 | 25 | 25 | 791392-5280 | 2210 | 1370 | 395 | 724 | 870 | 1379 | 150 | 1339 |
| 500 * | 20” | 14 | 22 | 22 | 791392-5280 | 2210 | 1370 | 395 | 778 | 924 | 1487 | 150 | 1804 |
| 600 | 24” | - | - | - | C | - | - | - | - | - | - | - | - |
| 700 | 28” | - | - | - | C | - | - | - | - | - | - | - | - |
| 800 | 32” | - | - | - | C | - | - | - | - | - | - | - | - |

### PN 40/ ANSI 300 (8986EF-…./8987EF-….) (Table 19)

The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

| Valve | | Max. Dp bar at supply of | | | Single acting actuator (spring to close) | Dimensions in mm | | | | | | | Mass kg PN40 | Mass kg ANSI 300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Size | 4 bar | 5 bar | 6 bar | | A | B | C | E | F | G | H | | |
| 150 | 6” | 6 | 10 | 10 | 791292-2240 | 890 | 540 | 145 | 293 | 364 | 627 | 63 | 131 | 141 |
| 150 | 6” | 25 | 38 | 38 | 791292-3240 | 1050 | 640 | 200 | 318 | 410 | 673 | 75 | 151 | 161 |
| 150 | 6” | 50 | 50 | 50 | 791392-4240 | 1520 | 965 | 260 | 346 | 451 | 714 | 100 | 208 | 218 |
| 200 | 8” | 9 | 15 | 15 | 791292-3250 | 1050 | 640 | 200 | 368 | 460 | 781 | 75 | 227 | 221 |
| 200 * | 8” | 23 | 34 | 34 | 791392-4250 | 1520 | 965 | 260 | 396 | 501 | 822 | 100 | 284 | 278 |
| 250 | 10” | 15 | 22 | 22 | 791392-4260 | 1520 | 965 | 260 | 449 | 554 | 913 | 100 | 409 | 400 |
| 250 | 10” | 50 | 50 | 50 | 791392-5260 | 2210 | 1370 | 395 | 503 | 649 | 1008 | 150 | 794 | 785 |
| 300 | 12” | 10 | 15 | 15 | 791392-4270 | 1520 | 965 | 260 | 543 | 648 | 1054 | 100 | 523 | 499 |
| 300 | 12” | 50 | 50 | 50 | 791392-5270 | 2210 | 1370 | 395 | 561 | 707 | 1113 | 150 | 908 | 884 |
| 350 * | 14” | 22 | 35 | 35 | 791392-5290 | 2210 | 1370 | 395 | 649 | 795 | 1234 | 150 | 1083 | 1086 |
| 400 * | 16” | 12 | 21 | 21 | 791392-5200 | 2210 | 1370 | 395 | 700 | 846 | 1325 | 150 | 1272 | 1260 |
| 450 | 18” | - | 6 | 6 | 791392-4280 | 1520 | 965 | 260 | 706 | 811 | 1320 | 100 | 1092 | 1156 |
| 450 | 18” | 21 | 25 | 25 | 791392-5280 | 2210 | 1370 | 395 | 724 | 870 | 1379 | 150 | 1477 | 1541 |
| 500 * | 20” | 14 | 22 | 22 | 791392-5280 | 2210 | 1370 | 395 | 778 | 924 | 1487 | 150 | 1860 | 1943 |
| 600 | 24” | - | - | - | C | - | - | - | - | - | - | - | - | - |
| 700 | 28” | - | - | - | C | - | - | - | - | - | - | - | - | - |
| 800 | 32” | - | - | - | C | - | - | - | - | - | - | - | - | - |

* If actuators in larger size are required contact NAF
C Contact NAF




NAF791294/791394

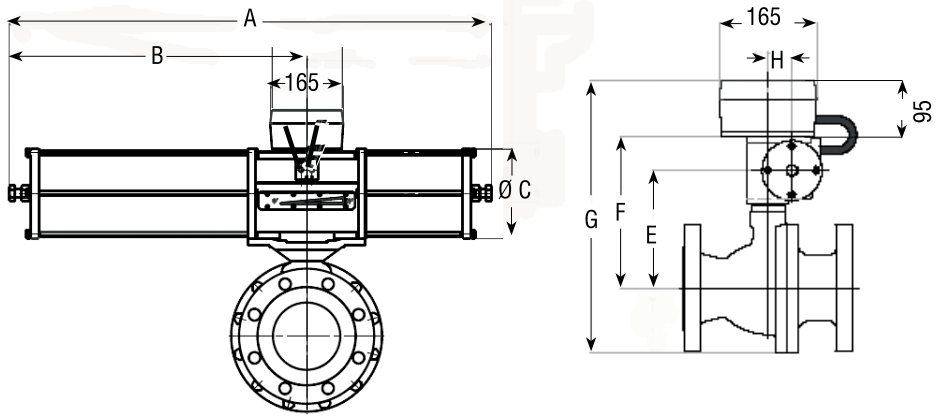
## NAF-Trunnball with single acting pneumatic actuator (spring to open)

## PN 10 (8982EF-……) (Table 20)

The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

| Valve | | Max. Dp bar at supply of | | | Single acting actuator (spring to open) | Dimensions in mm | | | | | | | Mass kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Size | 4 bar | 5 bar | 6 bar | | A | B | C | E | F | G | H | |
| 150 | 6” | - | - | - | Choose PN16 | | | | | | | | |
| 200 | 8” | - | 10 | 10 | 791294-3240 | 1050 | 640 | 200 | 368 | 460 | 781 | 75 | 197 |
| 200 | 8” | 10 | 10 | 10 | 791394-4240 | 1520 | 965 | 260 | 396 | 501 | 822 | 100 | 254 |
| 250 | 10” | - | 8 | 10 | 791294-3250 | 1050 | 640 | 200 | 421 | 513 | 872 | 75 | 308 |
| 250 | 10” | 7 | 10 | 10 | 791394-4250 | 1520 | 965 | 260 | 396 | 501 | 822 | 100 | 365 |
| 300 | 12” | - | 5 | 6 | 791294-3250 | 1050 | 640 | 200 | 515 | 607 | 1013 | 75 | 400 |
| 300 | 12” | 5 | 10 | 10 | 791394-4250 | 1520 | 965 | 260 | 543 | 648 | 1054 | 100 | 457 |
| 350 | 14” | - | 5 | 7 | 791394-4280 | 1520 | 965 | 260 | 631 | 736 | 1175 | 100 | 581 |
| 350 | 14” | 10 | 10 | 10 | 791394-5280 | 2210 | 1370 | 395 | 649 | 795 | 1234 | 150 | 967 |
| 400 | 16” | 7 | 10 | 10 | 791394-5280 | 2210 | 1370 | 395 | 700 | 846 | 1325 | 150 | 1114 |
| 450 | 18” | - | 5 | 7 | 791394-4280 | 1520 | 965 | 260 | 706 | 811 | 1320 | 100 | 952 |
| 450 | 18” | 10 | 10 | 10 | 791394-5280 | 2210 | 1370 | 395 | 724 | 870 | 1379 | 150 | 1337 |
| 500 | 20” | 7 | 10 | 10 | 791394-5280 | 2210 | 1370 | 395 | 778 | 924 | 1487 | 150 | 1677 |
| 600 | 24” | - | - | - | C | - | - | - | - | - | - | - | - |
| 700 | 28” | - | - | - | C | - | - | - | - | - | - | - | - |
| 800 | 32” | - | - | - | C | - | - | - | - | - | - | - | - |

C Contact NAF




NAF791294/791394

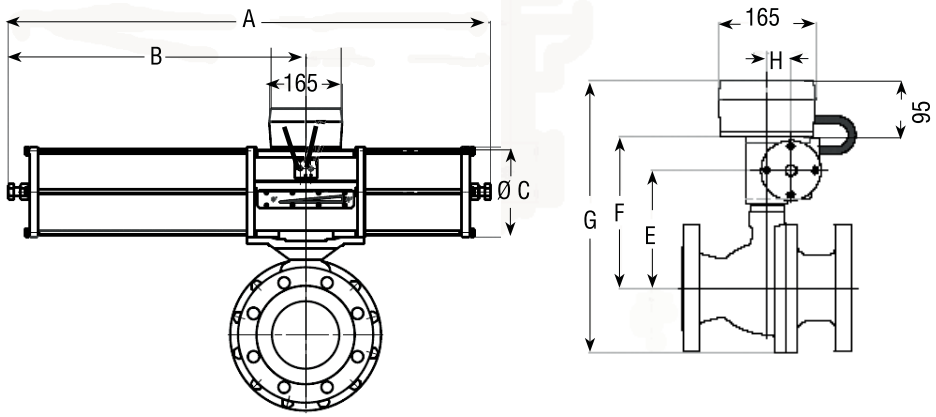
## NAF-Trunnball with single acting pneumatic actuator (spring to open)

### PN 16/ANSI 150 (8983EF-..../8984EF-....) (Table 21)

The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

| Valve | | Max. Dp bar at supply of | | | Single acting actuator (spring to open) | Dimensions in mm | | | | | | | Mass kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Size | 4 bar | 5 bar | 6 bar | | A | B | C | E | F | G | H | |
| 150 | 6” | - | 8 | 10 | 791294-2240 | 890 | 540 | 145 | 293 | 364 | 627 | 63 | 125 |
| 150 | 6” | 11 | 20 | 20 | 791294-3240 | 1050 | 640 | 200 | 318 | 410 | 673 | 75 | 145 |
| 150 | 6” | 20 | 20 | 20 | 791394-4240 | 1520 | 965 | 260 | 346 | 451 | 714 | 100 | 202 |
| 200 | 8” | - | 13 | 16 | 791294-3240 | 1050 | 640 | 200 | 368 | 460 | 781 | 75 | 202 |
| 200 | 8” | 11 | 20 | 20 | 791394-4240 | 1520 | 965 | 260 | 396 | 501 | 822 | 100 | 257 |
| 250 | 10” | - | 8 | 11 | 791294-3250 | 1050 | 640 | 200 | 421 | 513 | 872 | 75 | 314 |
| 250 | 10” | 7 | 20 | 20 | 791394-4250 | 1520 | 965 | 260 | 449 | 554 | 913 | 100 | 371 |
| 300 | 12” | 5 | 14 | 16 | 791394-4270 | 1520 | 965 | 260 | 543 | 648 | 1054 | 100 | 475 |
| 300 | 12” | 20 | 20 | 20 | 791394-5270 | 2210 | 1370 | 395 | 561 | 707 | 1113 | 150 | 860 |
| 350 | 14” | - | 5 | 7 | 791394-4280 | 1520 | 965 | 260 | 631 | 736 | 1175 | 100 | 596 |
| 350 | 14” | 12 | 20 | 20 | 791394-5280 | 2210 | 1370 | 395 | 649 | 795 | 1234 | 150 | 981 |
| 400 * | 16” | 7 | 19 | 23 | 791394-5280 | 2210 | 1370 | 395 | 700 | 846 | 1325 | 150 | 1135 |
| 450 | 18” | - | 5 | 7 | 791394-4280 | 1520 | 965 | 260 | 706 | 811 | 1320 | 100 | 988 |
| 450 | 18” | 12 | 20 | 20 | 791394-5280 | 2210 | 1370 | 395 | 724 | 870 | 1379 | 150 | 1373 |
| 500 | 20” | 7 | 20 | 20 | 791394-5280 | 2210 | 1370 | 395 | 778 | 924 | 1487 | 150 | 1733 |
| 600 | 24” | - | - | - | C | - | - | - | - | - | - | - | - |
| 700 | 28” | - | - | - | C | - | - | - | - | - | - | - | - |
| 800 | 32” | - | - | - | C | - | - | - | - | - | - | - | - |

* If actuators in larger size are needed contact NAF
C Contact NAF



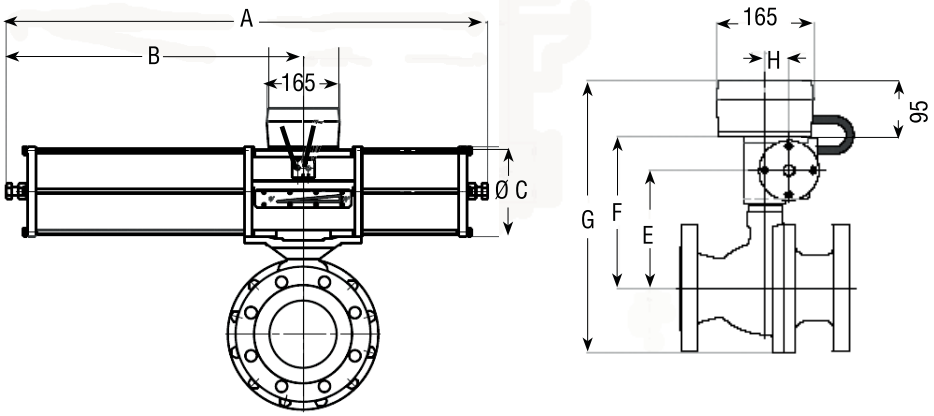

NAF791294/791394

## PN 25 (8985EF-……) (Table 22)

The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

| Valve | | Max. Dp bar at supply of | | | Single acting actuator (spring to open) | Dimensions in mm | | | | | | | Mass kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Size | 4 bar | 5 bar | 6 bar | | A | B | C | E | F | G | H | |
| 150 | 6” | - | - | - | Choose PN40 | | | | | | | | |
| 200 | 8” | 11 | 25 | 25 | 791394-4250 | 1520 | 965 | 260 | 346 | 451 | 714 | 100 | 219 |
| 250 | 10” | - | 8 | 11 | 791294-3250 | 1050 | 640 | 200 | 368 | 460 | 781 | 75 | 333 |
| 250 * | 10” | 7 | 21 | 25 | 791394-4250 | 1520 | 965 | 260 | 396 | 501 | 822 | 100 | 390 |
| 300 | 12” | 5 | 14 | 16 | 791394-4270 | 1520 | 965 | 260 | 543 | 648 | 1054 | 100 | 493 |
| 300 | 12” | 25 | 25 | 25 | 791394-5270 | 2210 | 1370 | 395 | 561 | 707 | 1113 | 150 | 878 |
| 350 | 14” | - | 5 | 7 | 791394-4280 | 1520 | 965 | 260 | 631 | 736 | 1175 | 100 | 663 |
| 350 | 14” | 12 | 25 | 25 | 791394-5280 | 2210 | 1370 | 395 | 649 | 795 | 1234 | 150 | 1048 |
| 400 * | 16” | 7 | 19 | 23 | 791394-5280 | 2210 | 1370 | 395 | 700 | 846 | 1325 | 150 | 1212 |
| 450 | 18” | - | 5 | 7 | 791394-4280 | 1520 | 965 | 260 | 706 | 811 | 1320 | 100 | 954 |
| 450 | 18” | 12 | 25 | 25 | 791394-5280 | 2210 | 1370 | 395 | 724 | 870 | 1379 | 150 | 1339 |
| 500 * | 20” | 7 | 20 | 24 | 791394-5280 | 2210 | 1370 | 395 | 778 | 924 | 1487 | 150 | 1804 |
| 600 | 24” | - | - | - | C | - | - | - | - | - | - | - | - |
| 700 | 28” | - | - | - | C | - | - | - | - | - | - | - | - |
| 800 | 32” | - | - | - | C | - | - | - | - | - | - | - | - |

* If actuators in larger size are needed contact NAF
C Contact NAF




NAF791294/791394

## NAF-Trunnball with single acting pneumatic actuator (spring to open)

### PN 40/ANSI 300 (8986EF-..../8987EF-....) (Table 23)

The stated dP values in the following tables apply for clean media type water 20 °C. For other media contact NAF, see also page 5.

| Valve | | Max. Dp bar at supply of | | | Single acting actuator (spring to open) | Dimensions in mm | | | | | | | Mass kg PN40 | Mass kg ANSI 300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | Size | 4 bar | 5 bar | 6 bar | | A | B | C | E | F | G | H | | |
| 150 | 6” | - | 8 | 10 | 791294-2240 | 890 | 540 | 145 | 293 | 364 | 627 | 63 | 131 | 141 |
| 150 | 6” | 11 | 33 | 40 | 791294-3240 | 1050 | 640 | 200 | 318 | 410 | 673 | 75 | 151 | 161 |
| 150 | 6” | 30 | 50 | 50 | 791394-4240 | 1520 | 965 | 260 | 346 | 451 | 714 | 100 | 208 | 218 |
| 200 * | 8” | 11 | 31 | 36 | 791394-4250 | 1520 | 965 | 260 | 346 | 451 | 714 | 100 | 284 | 278 |
| 250 | 10” | 7 | 21 | 25 | 791394-4260 | 1520 | 965 | 260 | 396 | 501 | 822 | 100 | 409 | 400 |
| 250 | 10” | 37 | 50 | 50 | 791394-5260 | 2210 | 1370 | 395 | 503 | 649 | 1008 | 150 | 794 | 785 |
| 300 | 12” | 5 | 14 | 16 | 791394-4270 | 1520 | 965 | 260 | 543 | 648 | 1054 | 100 | 523 | 499 |
| 300 | 12” | 25 | 50 | 50 | 791394-5270 | 2210 | 1370 | 395 | 561 | 707 | 1113 | 150 | 908 | 884 |
| 350 * | 14” | 12 | 32 | 37 | 791394-5290 | 2210 | 1370 | 395 | 649 | 795 | 1234 | 150 | 1083 | 1086 |
| 400 * | 16” | 7 | 19 | 23 | 791394-5200 | 2210 | 1370 | 395 | 700 | 846 | 1325 | 150 | 1272 | 1260 |
| 450 | 18” | - | 5 | 7 | 791394-4280 | 1520 | 965 | 260 | 706 | 811 | 1320 | 100 | 1092 | 1156 |
| 450 | 18” | 12 | 25 | 25 | 791394-5280 | 2210 | 1370 | 395 | 724 | 870 | 1379 | 150 | 1477 | 1541 |
| 500 * | 20” | 7 | 20 | 24 | 791394-5280 | 2210 | 1370 | 395 | 778 | 924 | 1487 | 150 | 1860 | 1943 |
| 600 | 24” | - | - | - | C | - | - | - | - | - | - | - | - | - |
| 700 | 28” | - | - | - | C | - | - | - | - | - | - | - | - | - |
| 800 | 32” | - | - | - | C | - | - | - | - | - | - | - | - | - |

* If actuators in larger size are needed contact NAF
C Contact NAF

## Accessories
NAF´s pneumatic actuators, see data sheet Fk74.59 can be equipped with a large number of accessories.
The following are included in NAF´s standard programme and are suitable for direct mounting to NAF pneumatic actuators.

## Valve positioner
Pneumatic and electro-pneumatic valve positioner, see data sheet Fk41.82. Intelligent valve positioner, see data sheet Fk 41.85.

## Solenoid valves
See data sheet Fk79.17.

## Filter regulator
Can be delivered (part no. 79-SMC-AW20K-F02CE-C).

## Electrical position indication
See data sheet Fk79.10.

## Terminal box
The actuator can be equipped with a junction box (part No. 349 20 930) of cast aluminium containing terminal blocks for connecting the solenoid valve and position sensors.

## Other versions

- **Degreased for oxygen**, all components of the valve are degreased before assembly. A special grease which is approved for oxygen is used in assembly.
  *Product code: D*

- **Explosive atmosphere according to Directive 94/9EC ATEX**
  NAF-Trunnball is certifierad according to ATEX 94/9/EC Ex II 2 G/D c
  *Product code: XA*

- **Straight cylindrical flow path,** DN 150-250 in design with hard chrome or chem. Nickel ball have as standard a straight cylindrical flow path. For larger DN contact NAF

- Flanges to DIN 2512, Form N or DIN 2513, Form R13
- Anti-static
- Other material

| | |
|---|---|
| CG8M | code 89E... |
| CF3M | code 89G... |
| CG3M | code 89F... |
| Duplex EN 1.4470 | code 89D... |
| Hastelloy C | code 89H... |
| Monel | code 89M... |
| 254 SMO | code 89S... |
| Carbon steel | code 896... |

## Product code NAF-Trunnball

Example:

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 89 | 8 | 2 | E | F | - | 0200 | - | B | A | B | A | D | A | (DN 150-400, size 6"-16") |
| Code | 1 | 2 | 3 | 4 | 5 | | 6 | | 7 | 8 | 9 | 10 | 11 | 12 | |
| | 89 | 8 | 2 | 9 | 5 | - | 0450 | | | | | | | | (DN 450-800, size 18"-32") |
| | 1 | 2 | 3 | 13 | 14 | | 6 | | | | | | | | |

1. Valve type
   - 89 Trunnion mounted ball valve

2. Material (Body) [1]
   - 8 EN 1.4408 / CF8M

3. Pressure class

| | | |
|---|---|---|
| 2 | PN 10 | (DN 200 - 800) [2] |
| 3 | PN 16 | (DN 150 - 800) |
| 4 | ANSI Class 150 | (Size 6" - 32") |
| 5 | PN 25 | (DN 200 - 800)[3] |
| 6 | PN 40 | (DN 150 - 800) |
| 7 | ANSI Class 300 | (Size 6" - 32") |

4. Stem journalling
   - E Metaloplast bearing, max 250°C

5. Connection
   - F Flanged

6. Dimension

| EN version DN | | ANSI version Size | |
|---|---|---|---|
| 0150 | 150 | 0006 | 6" |
| 0200 | 200 | 0008 | 8" |
| 0250 | 250 | 0010 | 10" |
| 0300 | 300 | 0012 | 12" |
| 0350 | 350 | 0014 | 14" |
| 0400 | 400 | 0016 | 16" |
| 0450 | 450 | 0018 | 18" |
| 0500 | 500 | 0020 | 20" |
| 0600 | 600 | 0024 | 24" |
| 0700 | 700 | 0028 | 28" |
| 0800 | 800 | 0032 | 32" |

7. Seat
   - A PTFE, max 200°C
   - B Alloy 6

8 Ball material
   - A EN 1.4408/CF8M

9. Ball coating
   - A None
   - B Chrome
   - C Chem Nickel
   - D Alloy 6

10. Seat sealing
    - A PTFE

11. Stem sealing DN 150-400 (Size 6"-16")
    - D PSD CL™

12. Stem material
    - A EN 1.4460

13. Stem sealing DN 450-800 (Size 18"-32")
    - 9 O-ring EPDM, max 200°C

14. Sealing material DN 450-800 (Size 18"-32")

| | Ball | Seatring |
|---|---|---|
| 5 | EN 1.4408/CF8M Hard chrome plated | Alloy 6 |
| 6 | EN 1.4408/CF8M | PTFE |
| 7 | Alloy 6 | Alloy 6 |

1) Other materials see page 19.
2) DN 150 has the same flange dimension in PN 10 and PN 16. Choose PN 16.
3) DN 150 has the same flange dimension in PN 25 and PN 40. Choose PN 40.



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