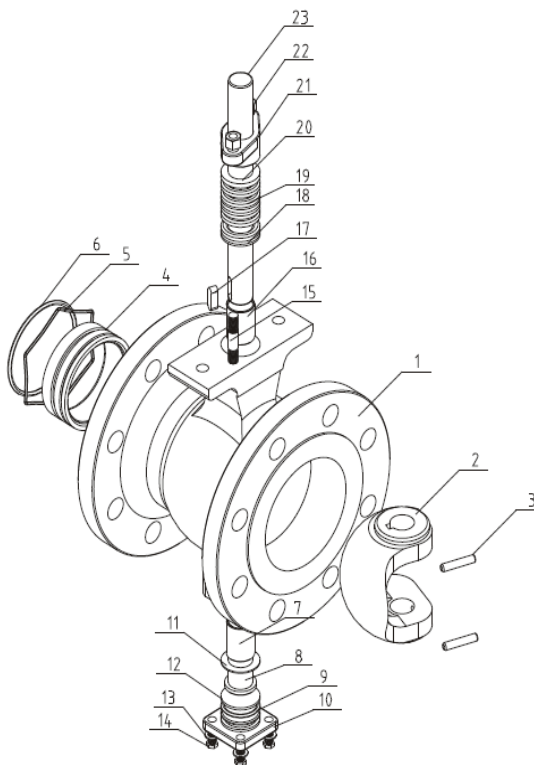


VQF Series Segment Control Valve (Flange)
ISO9001 & CE Accredited
Overview

The Hiton VQF series segment control valve is primarily designed for flow control, and it can also be used for shut-off operation. The notched port on the segment trim on tributes to strong shear stress to cut through media with fibers and particles. Consequently, this valve is a good general control valve for most pulp and paper process applications, or similar flow contains fibers and particles.

Application

Pulp and Paper/Waste Water Treatment/ Food and Beverage/Chemical Plants/ Power Plants/ Steel Industry/Etc.


1. Design Features

STANDARD PART LIST

| Parts | WCB | CF8 | CF8M |
|-------------------|----------|------------------|----------|
| 1. Body | WCB | CF8 | CF8M |
| 2. V-port Segment | CF8+HCr | CF8+HCr | CF8M+HCr |
| 3. Pin | 304 | 304 | 316 |
| 4. Seat | 304+STL | 304+STL | 316+STL |
| 5. Spring | | 316L | |
| 6. O-ring | | VITON | |
| 7. Bearing | 304+PTFE | 304+PTFE | 316+PTFE |
| 8. Lower Stem | 304 | 304 | 316 |
| 9. O-ring | | Viton | |
| 10. Packing Gland | WCB | CF8 | CF8M |
| 11/12. Gasket | | PTFE | |
| 13. Washer | Q235 | 304 | 316 |
| 14/15 Bolt | 25 | 304 | 304 |
| 16. Bearing | 304+PTFE | 304+PTFE | 316+PTFE |
| 17. Key | 304 | 304 | 316 |
| 18/19/20. Packing | | PTFE or Graphite | |
| 21. Packing Gland | WCB | CF8 | CF8M |
| 22. Nut | Q235 | 304 | 304 |
| 23. Upper Stem | 304 | 304 | 316 |

As a solution provider, we do more than valves.

Body

- Single-piece body prevents leaks caused by separate flanges or locking rings.

V-port Segment:

- Specially designed V-notch trim provides strong cutting stress and tight sealing. Well ground notched trim surface ensures small operating torque and tight seal, especially for metal seated segment valve.

Seat

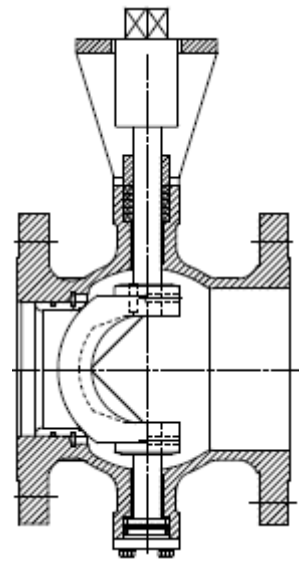
- Special seat design eliminates cavity between seat and valve body. This, consequently, prevents media from jamming between seat and body, ensure reliable sealing.

Seal Surface

- Nitriding/Tungsten Carbide/Satellite Alloy/Nickle Base Alloy plating are available for abrasive media.

Stem

- Stem is finely grounded to match actuator excellently, which prevents rocking motion and potential failure of the v-port segmented valve.
- Close-fit spline or pin-key are available for stem-segment trim connection to provide reliable transmission without motion lost or dead band.



Flow Direction →

2. Technical Specification

Size Range

1" ~20" (DN25~DN500)

Pressure Rate

DIN PN10, 16, 25, 40,63; ANSI
150,300,600

Body Material

WCB, CF8, CF8M, CF3M, etc.

Ball/Seat:

Metal Seat

CF8+HCr/304+STL, CF8M+HCr/316+STL,
CF3+HCr/304L+STL, etc.

Nitriding/Tungsten Carbide/Satellite
Alloy/Nickle Base Alloy plating are
available for abrasive media.

Soft Seat

Devlon/PEEK/PCTFE are available

End Connection

Flange Type

Face to Face

ISA S75.04, IEC/DIN 534-3-2

Temp. Range:

-29°C ~ 240°C with Soft Seat

-29°C ~ 350°C with Metal Seat

Seal Tightness:

Metal Seat

Class V (standard), Class VI (with
Tungsten Carbide coated trim)

Soft Seat

Class VI

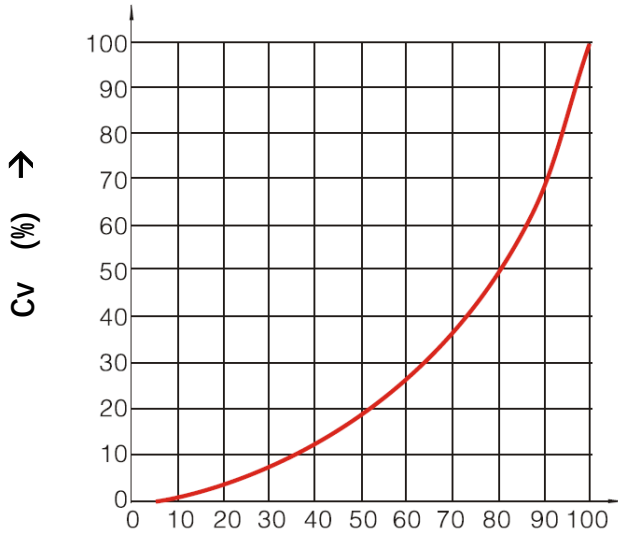
Valve Trim Rotation

Clockwise to close

Flow Characteristic

Equal Percentage

3. Flow Characteristic



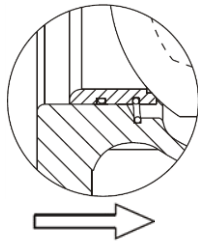
| Size | CV |
|-------|------|
| DN25 | 36 |
| DN32 | 56 |
| DN40 | 94 |
| DN50 | 152 |
| DN65 | 262 |
| DN80 | 358 |
| DN100 | 540 |
| DN125 | 906 |
| DN150 | 1424 |
| DN200 | 2176 |
| DN250 | 3532 |

| Size | CV |
|-------|-------|
| DN300 | 5732 |
| DN350 | 8245 |
| DN400 | 10651 |
| DN450 | 12878 |
| DN500 | 16343 |

*The rated Cv value is for reference only.

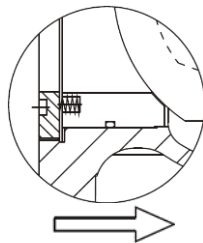
4. Seat Options

Metal Seat A



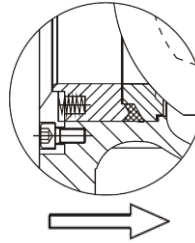
Flow Direction

Metal Seat B



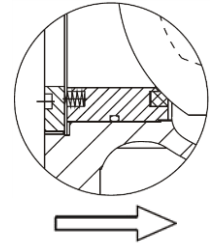
Flow Direction

High Temp Metal Seat C.



Flow Direction

Soft Seat D



Flow Direction

Metal Seat A/ Metal Seat B

| | | |
|-------------|-------------|------------------|
| Seat | 304/316+STL | |
| Spring | 17-7PH/316L | |
| O-ring | Viton | High Temp. Viton |
| Packing | PTFE | Graphite |
| Temp. Range | -29~150°C | -29~220°C |

High Temp Metal Seat C

| | |
|-------------|-------------|
| Seat | 304/316+STL |
| Spring | 17-7PH/316L |
| O-ring | Graphite |
| Packing | Graphite |
| Temp. Range | -29~350°C |

Soft Seat D

| | | | | |
|-------------|-------------|-----------|-----------|-----------|
| Seat | DEVLON | PCTFE | PEEK | |
| Spring | 17-7PH/316L | | | |
| O-ring | Viton | | | |
| Packing | PTFE | | Graphite | |
| Temp. Range | -29~120°C | -29~120°C | -29~150°C | -29~240°C |

5. Actuator Options

Manual

Handle Bar (DN25-DN100 Only)
Worm Gear

Automatic

Electric
Pneumatic (single & double-acting)

Accessories

Actuator Manual Override
Limit Switches
Air Filter

Positioner
Solenoid Valve
Mounting Bracket

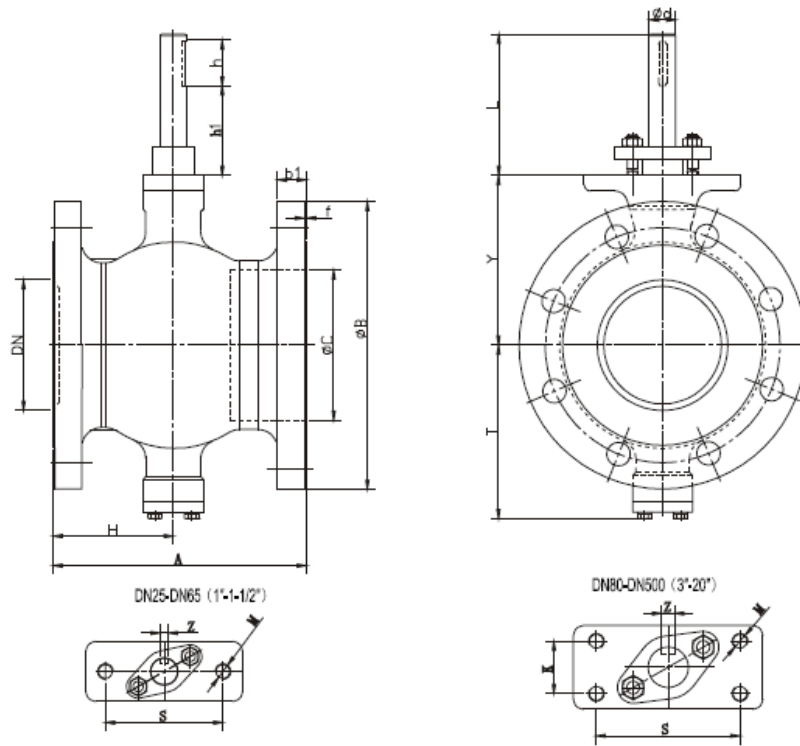
***Note: for more options, please contact us for availability.**

6. Valve Torque (1.3 Safety Factor)

| Size | PN16 10 Bar Pressure Metal Seat | PN16 10 Bar Pressure Soft Seat | PN25 20 Bar Pressure Metal/Soft Seat | PN40 30 Bar Pressure Metal/Soft Seat | PN63 50 Bar Pressure Metal/Soft Seat |
|-------|---------------------------------------|--------------------------------------|--|--|--|
| DN25 | 20 | 20 | 30 | 70 | 150 |
| DN32 | 25 | 25 | 36 | 90 | 230 |
| DN40 | 30 | 30 | 40 | 140 | 270 |
| DN50 | 35 | 35 | 42 | 150 | 520 |
| DN65 | 50 | 50 | 62 | 300 | 640 |
| DN80 | 60 | 80 | 95 | 300 | 640 |
| DN100 | 80 | 120 | 140 | 420 | 900 |
| DN125 | 110 | 180 | 220 | 600 | 1600 |
| DN150 | 170 | 300 | 360 | 950 | 1600 |
| DN200 | 240 | 500 | 590 | 1500 | 2700 |
| DN250 | 430 | 900 | 1100 | 2300 | 4700 |
| DN300 | 600 | 1400 | 1500 | 3500 | 7000 |
| DN350 | 1200 | 2000 | 2500 | 6200 | 9300 |
| DN400 | 1800 | 3200 | 4000 | 7200 | 13000 |
| DN450 | 3000 | 4500 | 5600 | 11000 | 17300 |
| DN500 | 4600 | 6500 | 8200 | 12500 | 22000 |

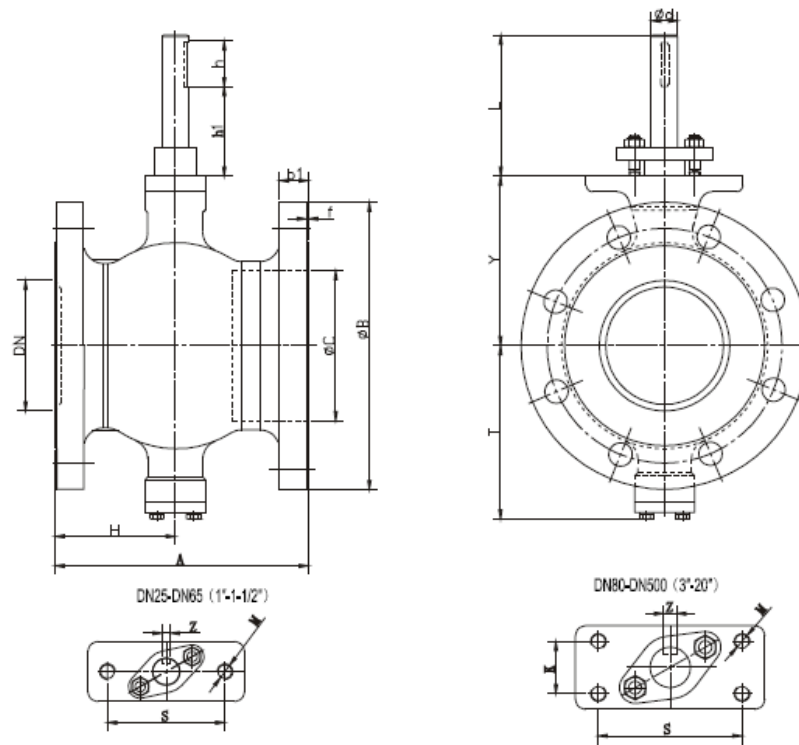
| Size | 150LB 10 Bar Pressure Metal Seat | 150LB 10 Bar Pressure Soft Seat | 150LB 20 Bar Pressure Metal/Soft Seat | 300LB 35 Bar Pressure Metal/Soft Sea | 600LB 70 Bar Pressure Metal/Soft Sea |
|-------|--|---------------------------------------|---|--|--|
| DN25 | 20 | 20 | 30 | 85 | 210 |
| DN32 | 25 | 25 | 36 | 105 | 320 |
| DN40 | 30 | 30 | 40 | 180 | 380 |
| DN50 | 35 | 35 | 42 | 190 | 730 |
| DN65 | 50 | 50 | 62 | 380 | 930 |
| DN80 | 60 | 80 | 95 | 380 | 1000 |
| DN100 | 80 | 120 | 140 | 530 | 1000 |
| DN125 | 110 | 180 | 220 | 720 | 2200 |
| DN150 | 170 | 300 | 360 | 1180 | 2500 |
| DN200 | 240 | 500 | 590 | 1750 | 3800 |
| DN250 | 430 | 900 | 1100 | 2800 | 6500 |
| DN300 | 600 | 1400 | 1500 | 4000 | 10000 |
| DN350 | 1200 | 2000 | 2500 | 7800 | 13100 |
| DN400 | 1800 | 3200 | 4000 | 9000 | 18000 |
| DN450 | 3000 | 4500 | 5600 | 13700 | 24000 |
| DN500 | 4600 | 6500 | 8200 | 15500 | 31000 |

7. Dimension



PN16

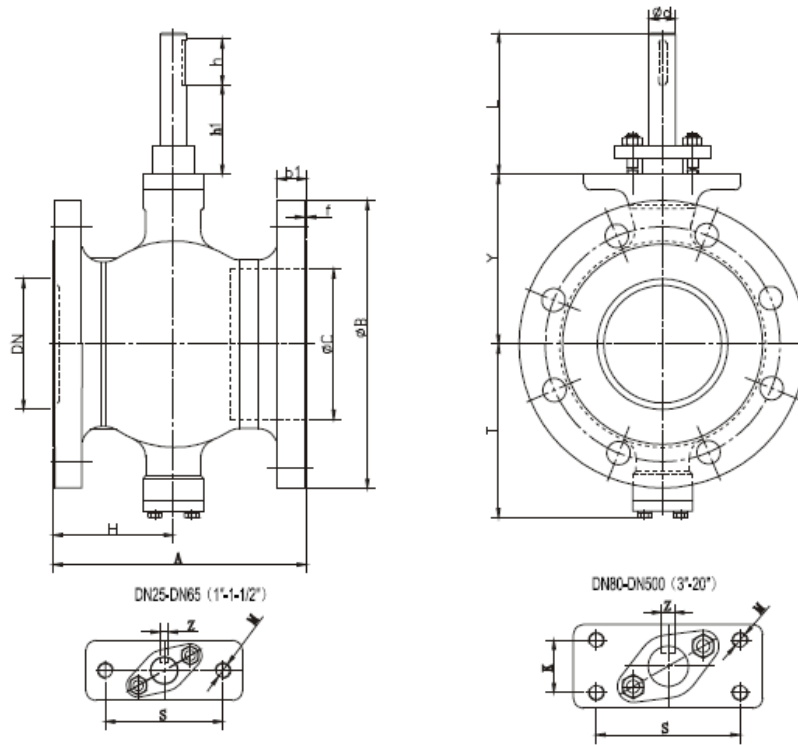
| DN | A | B | b1 | f | C | T | Y | L | d | H | S | K | M | Z | Weight (kg) |
|-----|-----|-----|----|---|-----|-----|-----|-----|----|-----|-----|----|-------|----|-------------|
| 25 | 102 | 115 | 16 | 2 | 38 | 81 | 73 | 75 | 16 | 35 | 75 | / | 2-M10 | 5 | 4.9 |
| 32 | 102 | 140 | 18 | 2 | 45 | 86 | 78 | 75 | 16 | 35 | 75 | / | 2-M10 | 5 | 6.6 |
| 40 | 114 | 150 | 18 | 2 | 50 | 90 | 80 | 75 | 16 | 35 | 75 | / | 2-M10 | 5 | 7.6 |
| 50 | 124 | 165 | 20 | 2 | 62 | 93 | 90 | 75 | 16 | 35 | 75 | / | 2-M10 | 5 | 9.5 |
| 65 | 145 | 185 | 20 | 2 | 73 | 108 | 105 | 75 | 16 | 35 | 75 | / | 2-M10 | 5 | 12.4 |
| 80 | 165 | 200 | 20 | 2 | 90 | 123 | 118 | 75 | 20 | 35 | 90 | 28 | 4-M10 | 6 | 15.5 |
| 100 | 194 | 220 | 22 | 2 | 115 | 138 | 130 | 75 | 20 | 35 | 90 | 28 | 4-M10 | 6 | 20.6 |
| 125 | 194 | 250 | 22 | 2 | 134 | 148 | 145 | 80 | 25 | 40 | 90 | 28 | 4-M10 | 8 | 28.6 |
| 150 | 229 | 285 | 24 | 2 | 164 | 170 | 170 | 94 | 30 | 50 | 110 | 40 | 4-M12 | 8 | 42.5 |
| 200 | 243 | 340 | 24 | 2 | 206 | 200 | 201 | 94 | 30 | 50 | 110 | 40 | 4-M12 | 8 | 59.5 |
| 250 | 297 | 405 | 26 | 2 | 260 | 240 | 237 | 98 | 40 | 60 | 135 | 40 | 4-M16 | 12 | 99 |
| 300 | 338 | 460 | 28 | 2 | 316 | 286 | 282 | 98 | 40 | 60 | 135 | 40 | 4-M16 | 12 | 148 |
| 350 | 400 | 520 | 30 | 2 | 372 | 330 | 337 | 125 | 50 | 60 | 140 | 64 | 4-M16 | 14 | 216 |
| 400 | 400 | 580 | 32 | 2 | 420 | 367 | 372 | 172 | 60 | 80 | 170 | 80 | 4-M20 | 18 | 285 |
| 450 | 520 | 640 | 40 | 2 | 470 | 422 | 432 | 172 | 70 | 90 | 190 | 90 | 4-M24 | 20 | 370 |
| 500 | 600 | 715 | 44 | 2 | 516 | 490 | 498 | 180 | 80 | 100 | 190 | 90 | 4-M24 | 22 | 480 |



PN25

| DN | A | B | b1 | f | C | T | Y | L | d | h | S | K | M | Z | Weight (kg) |
|-----|-----|-----|----|---|-----|-----|-----|-----|----|----|-----|----|-------|----|-------------|
| 25 | 102 | 115 | 16 | 2 | 40 | 88 | 86 | 75 | 20 | 35 | 90 | 28 | 4-M10 | 6 | 5.4 |
| 32 | 102 | 140 | 18 | 2 | 48 | 90 | 90 | 75 | 20 | 35 | 90 | 28 | 4-M10 | 6 | 7.3 |
| 40 | 114 | 150 | 18 | 2 | 56 | 95 | 93 | 80 | 25 | 40 | 90 | 28 | 4-M10 | 8 | 8.4 |
| 50 | 124 | 165 | 20 | 2 | 65 | 98 | 98 | 80 | 25 | 40 | 90 | 28 | 4-M10 | 8 | 10.5 |
| 65 | 145 | 185 | 22 | 2 | 81 | 130 | 125 | 95 | 30 | 50 | 110 | 40 | 4-M12 | 8 | 13.2 |
| 80 | 165 | 200 | 24 | 2 | 95 | 128 | 128 | 95 | 30 | 50 | 110 | 40 | 4-M12 | 8 | 17.7 |
| 100 | 194 | 235 | 24 | 2 | 115 | 142 | 142 | 95 | 30 | 50 | 110 | 40 | 4-M12 | 8 | 24.7 |
| 125 | 194 | 270 | 26 | 2 | 138 | 175 | 170 | 100 | 40 | 60 | 135 | 40 | 4-M16 | 12 | 34.5 |
| 150 | 229 | 300 | 28 | 2 | 170 | 215 | 215 | 125 | 50 | 60 | 140 | 64 | 4-M16 | 14 | 50.7 |
| 200 | 243 | 360 | 30 | 2 | 208 | 228 | 228 | 125 | 50 | 60 | 140 | 64 | 4-M16 | 14 | 72.7 |
| 250 | 297 | 425 | 32 | 2 | 265 | 260 | 260 | 150 | 60 | 80 | 170 | 80 | 4-M20 | 18 | 116 |
| 300 | 338 | 485 | 34 | 2 | 320 | 310 | 310 | 150 | 60 | 80 | 170 | 80 | 4-M20 | 18 | 169 |

As a solution provider, we do more than valves.



ANSI 150

| DN | A | B | b1 | f | C | T | Y | L | d | h | S | K | M | Z | Weight (kg) |
|--------|-----|-----|------|---|-----|-----|-----|-----|----|-----|-----|----|-------|----|-------------|
| 1" | 102 | 108 | 14.5 | 2 | 38 | 81 | 73 | 75 | 16 | 35 | 75 | / | 2-M10 | 5 | 5.4 |
| 1 1/4" | 102 | 115 | 14.5 | 2 | 45 | 86 | 78 | 75 | 16 | 35 | 75 | / | 2-M10 | 5 | 7.3 |
| 1 1/2" | 114 | 127 | 14.5 | 2 | 50 | 90 | 80 | 75 | 16 | 35 | 75 | / | 2-M10 | 5 | 8.4 |
| 2" | 124 | 152 | 16.3 | 2 | 62 | 93 | 90 | 75 | 16 | 35 | 75 | / | 2-M10 | 5 | 10.5 |
| 2 1/2" | 145 | 180 | 18 | 2 | 73 | 108 | 105 | 75 | 16 | 35 | 75 | / | 2-M10 | 5 | 13.2 |
| 3" | 165 | 191 | 19.5 | 2 | 90 | 123 | 118 | 75 | 20 | 35 | 90 | 28 | 4-M10 | 6 | 17.7 |
| 4" | 194 | 230 | 24 | 2 | 115 | 138 | 130 | 75 | 20 | 35 | 90 | 28 | 4-M10 | 6 | 24.7 |
| 5" | 194 | 255 | 24.3 | 2 | 134 | 148 | 145 | 80 | 25 | 40 | 90 | 28 | 4-M10 | 8 | 34.5 |
| 6" | 229 | 280 | 26 | 2 | 164 | 170 | 170 | 94 | 30 | 50 | 110 | 40 | 4-M12 | 8 | 50.7 |
| 8" | 243 | 340 | 29 | 2 | 206 | 200 | 201 | 94 | 30 | 50 | 110 | 40 | 4-M12 | 8 | 72.7 |
| 10" | 297 | 405 | 30.6 | 2 | 260 | 240 | 237 | 98 | 40 | 60 | 135 | 40 | 4-M16 | 12 | 116 |
| 12" | 338 | 485 | 32.2 | 2 | 316 | 286 | 282 | 98 | 40 | 60 | 135 | 40 | 4-M16 | 12 | 169 |
| 14" | 400 | 535 | 35.4 | 2 | 372 | 330 | 337 | 125 | 50 | 60 | 140 | 64 | 4-M16 | 14 | 249 |
| 16" | 400 | 595 | 37 | 2 | 420 | 367 | 372 | 172 | 60 | 80 | 170 | 80 | 4-M20 | 18 | 326 |
| 18" | 520 | 635 | 40.1 | 2 | 470 | 422 | 432 | 172 | 70 | 90 | 190 | 90 | 4-M24 | 20 | 410 |
| 20" | 600 | 700 | 44 | 2 | 516 | 490 | 498 | 180 | 80 | 100 | 190 | 90 | 4-M24 | 22 | 510 |