



# Process to Instrument And Piping Valves

Modular Valves - Pro-Bloc® FP and TP Series



ENGINEERING YOUR SUCCESS.

|                    |                                                                          |
|--------------------|--------------------------------------------------------------------------|
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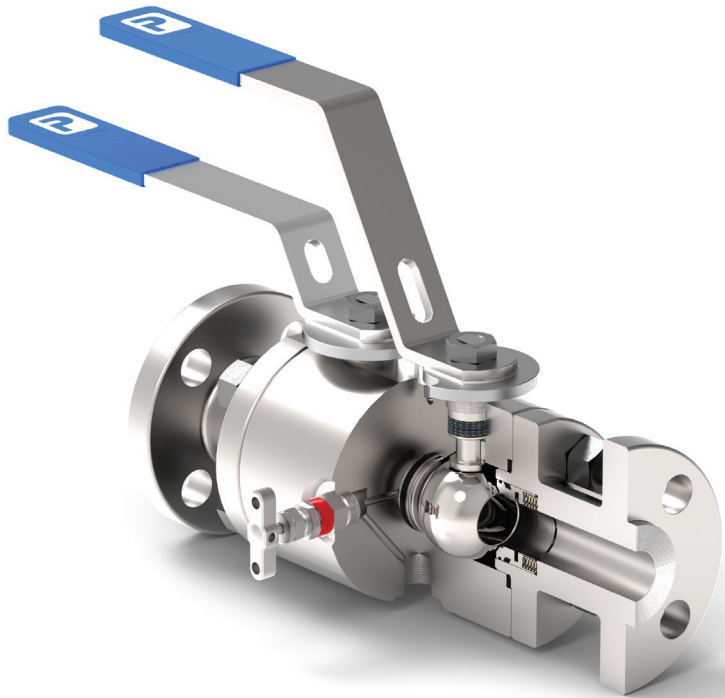
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# Pro-Bloc® FP Series

## Floating Ball Double Block and Bleed (DBB) Technical Information

Parker’s Pro-Bloc® FP series valve with floating ball design utilising both soft seats or metal seats for bubble-tight sealing at a wide range of pressures and temperatures.

The valve has double block and bleed function and consists of two separate isolating balls and one vent in a single unit. This three-piece construction offers space and weight saving benefits over the traditional method of using three separate valves in process piping applications. These valves are supplied to the API 6D standards (excluding 15 mm bore).



### Features, Benefits and Values

| Feature                     | Benefit                                          | Value                               |
|-----------------------------|--------------------------------------------------|-------------------------------------|
| Three-piece design          | Suitable for various piping configurations       | Flexibility                         |
| Anti-blow-out stem          | Valve integrity                                  | Safety                              |
| Double D drive on stems     | Facilitates correct lever realignment if removed | Ease of assembly                    |
| Cavity relief on seats      | Over-pressure protection of ball cavity          | Safety                              |
| Lockable handles option     | Prevent accidental operation                     | Safety                              |
| Graphite packing to API 622 | Low emission to atmosphere                       | Safety, performance and reliability |
| Fire safe design            | Conforms to industry codes                       | Safety                              |

### Markets / Applications:

- Petrochemical
- Low temperature and LNG (tankers, terminals, platforms, plants, air separation)
- Chemical
- Oil and Gas

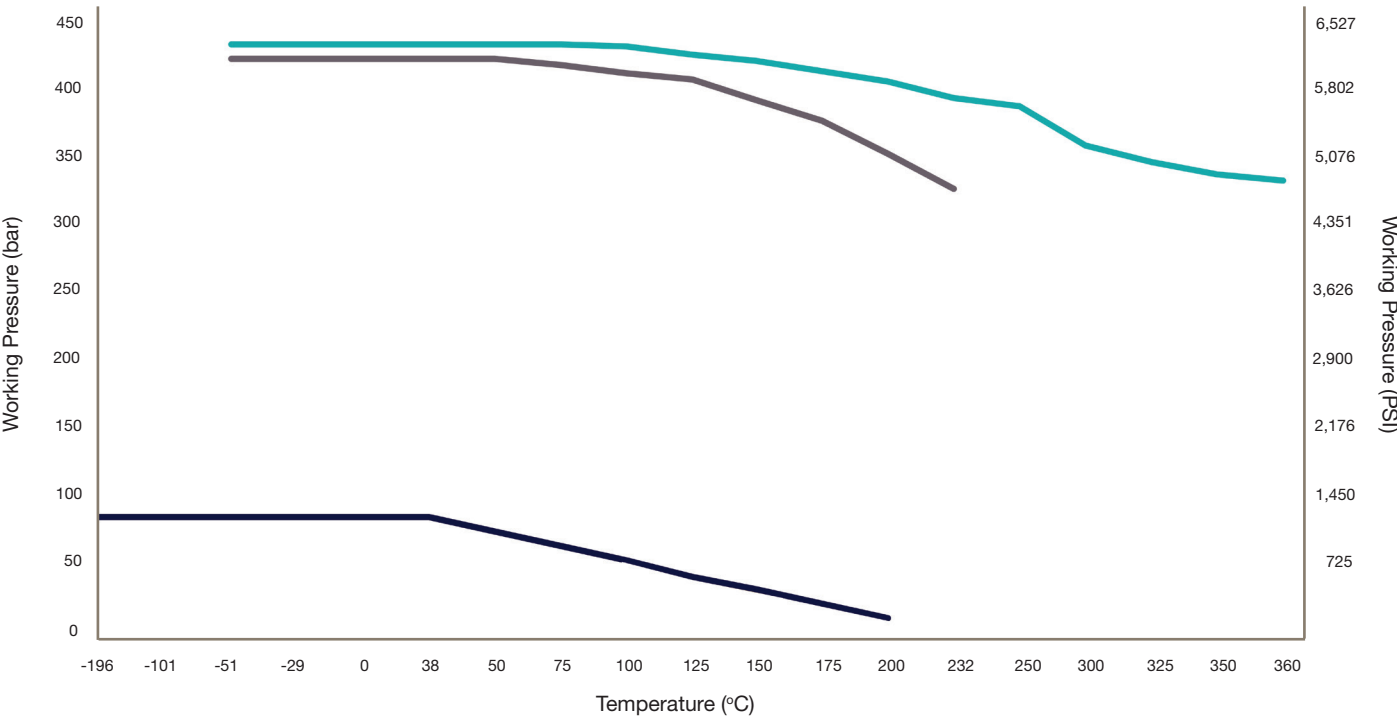
### Design Standards:

- Design: ASME B16.34, EEMUA 182
- Design pressure: ASME B16.34
- Body wall thickness: ASME B16.34, ASME VIII Div. I
- Fire safe: API 6FA and API 607

### Technical Specifications:

|                          |                                                                                                                                                                                                              |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bore sizes               | 15 mm, 25 mm, 38 mm, 50 mm                                                                                                                                                                                   |
| Seat materials           | TFM, PEEK, Metal                                                                                                                                                                                             |
| Body materials           | 316 Stainless Steel ASTM A182-F316/ UNS S31600<br>Duplex ASTM A182-F51 / UNS S31803<br>Super Duplex ASTM A182-F53/F55<br>Low Temp Carbon Steel ASTM A350 LF2<br>Alloy 625 UNS N06625<br>Alloy 825 UNS N08825 |
| Valve configurations     | Flange x screw<br>Flange x flange                                                                                                                                                                            |
| Max. Working Temperature | 360° C                                                                                                                                                                                                       |
| Min. Working Temperature | -196° C                                                                                                                                                                                                      |
| Max. Working Pressure    | 6,250 PSI (431 bar)                                                                                                                                                                                          |

### Pressure vs. Temperature



- TFM seat
- PEEK seat
- Metal seat

# Pro-Bloc® FP Series

Floating Ball Double Block and Bleed (DBB)  
Ordering Information

FP

Series

|             |    |
|-------------|----|
| Probloc® FP | FP |
|-------------|----|

X

Ball Valve Bore Size

|       |   |
|-------|---|
| 15 mm | X |
| 25 mm | V |
| 38 mm | U |
| 50 mm | T |

5

Style

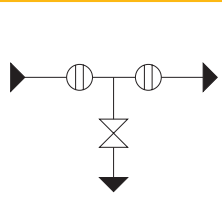
|                 |                 |   |
|-----------------|-----------------|---|
| 15, 25 mm Bore  | Flange x Screw  | 5 |
| 15 - 50 mm Bore | Flange x Flange | 6 |

E

Material

|                       |   |
|-----------------------|---|
| 316 Stainless Steel   | B |
| Duplex                | E |
| Super Duplex          | F |
| Low Temp Carbon Steel | H |
| Alloy 625             | M |
| Alloy 825             | L |

Arrangement



Block-Bleed-Block  
1st Isolate: Ball  
2nd Isolate: Ball  
Vent: Needle

\* No part number designator required

32T25

Flange Details

| Flange Size | Flange Style |    | Flange Class       |      |      |    |
|-------------|--------------|----|--------------------|------|------|----|
|             |              |    |                    |      |      |    |
| 15 mm Bore  | 1/2"         | 8  | Raised Face Spiral | F    | 150  | 01 |
|             | 3/4"         | 12 | Ring Type Joint    | T    | 300  | 03 |
|             | 1"           | 16 |                    | 600  | 06   |    |
|             | 1 1/2"       | 24 |                    | 900  | 09   |    |
|             | 2"           | 32 |                    | 1500 | 15   |    |
| 25 mm Bore  | 1"           | 16 |                    |      | 2500 | 25 |
|             | 1 1/2"       | 24 |                    |      |      |    |
|             | 2"           | 32 |                    |      |      |    |
| 38 mm Bore  | 1 1/2"       | 24 |                    |      |      |    |
|             | 2"           | 32 |                    |      |      |    |
|             | 3"           | 48 |                    |      |      |    |
| 50 mm Bore  | 2"           | 32 |                    |      |      |    |
|             | 3"           | 48 |                    |      |      |    |
|             | 4"           | 64 |                    |      |      |    |

8A

Outlet Connection

| 15 mm Bore | 1/2" NPT (F) | *    |
|------------|--------------|------|
|            | 12 mm A-LOK® | M12A |
|            | 12 mm CPI™   | M12Z |
|            | 1/2" A-LOK®  | 8A   |
|            | 1/2" CPI™    | 8Z   |
| 25 mm Bore | 1" NPT (F)   | *    |
|            | 25 mm A-LOK® | M25A |
|            | 25 mm CPI™   | M25Z |
|            | 1" A-LOK®    | 16A  |
|            | 1" CPI™      | 16Z  |

\* No part number designator required

M A3L12 F

Ball Valve Seats

| 15, 25 mm Bore | Metal | M  |
|----------------|-------|----|
|                | TFM   | T  |
| 38, 50 mm Bore | PEEK  | PB |
|                | Metal | M  |

Valve Handle Options

| Anti-tamper (Needle valve only)      | A*   |
|--------------------------------------|------|
| Padlock handle locking               | L*   |
| Anti-tamper & Padlock handle locking | A*L* |

\* Insert valve number:  
1 - Primary, 2 - Secondary, 3 - Vent, 4 - All.  
Padlocks not supplied.  
Fire Safe needle valve with locking device not available.

Condition

| Fire Safe        | F  |
|------------------|----|
| Graphite packing |    |
| NACE             | N  |
| Fire Safe & NACE | FN |

## Example Part Numbers

### Example 1 - FPX5E32T258AMA3L12F

Pro-Bloc® FP Series  
15 mm Bore  
Flange x Screw  
Block-Bleed-Block  
Duplex  
Process Flange: 2", Ring Type Joint, Class 2500  
Outlet: 1/2" A-LOK®  
Vent: 1/2" NPT (F)  
Graphite packing  
Ball valve seats: Metal  
Anti-tamper vent; lockable primary and secondary  
Fire safe design

### Example 2 - FPT6B48F15MF

Pro-Bloc® FP Series  
50 mm Bore  
Flange x Flange  
Block-Bleed-Block  
Stainless Steel  
Flange: 3" Raised Face Spiral, Class 1500  
Vent: 1/2" NPT (F)  
Graphite packing  
Ball valve seats: Metal  
Fire safe design

### Example 3 - FPU6B32F0948F09PBF

Pro-Bloc® FP Series  
38 mm Bore  
Flange x Flange  
Block-Bleed-Block  
Stainless Steel  
Process Flange:  
• 1st flange: 2" Raised Face Spiral, Class 900,  
• 2nd flange: 3" Raised Face Spiral, Class 900  
Vent: 1/2" NPT (F)  
Graphite packing  
Ball valve seats: PEEK  
Fire safe design

### Notes:

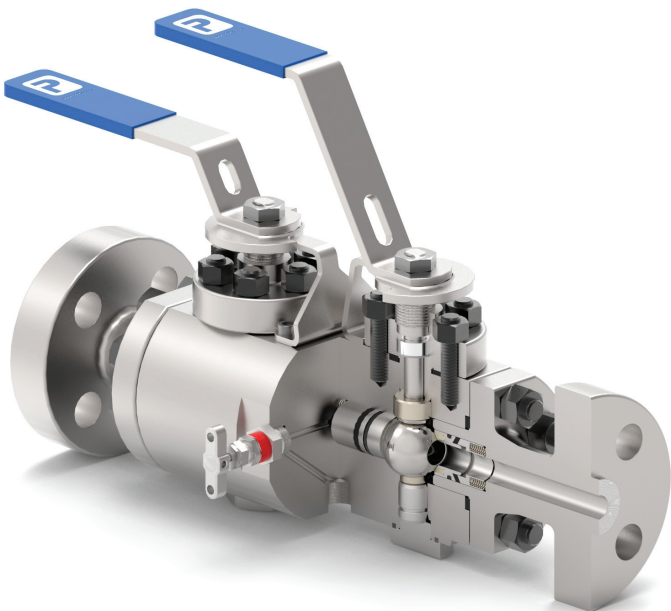
- All non-wetted parts will be supplied in standard stainless steel for corrosion resistant alloys. For carbon steel construction trim materials will be supplied in stainless steel.
- For flange x flange construction when the required flanges are different sizes, specify flange 1 details (flange size, flange style and flange class) followed by flange 2 details (flange size, flange style and flange class). For example: for flange 1 (flange size 1", Raised Face Spiral, Class 900) and flange 2 (flange size 1 1/2", Raised Face Spiral, Class 900) insert 16F0924F09.
- For customer specific options not covered here engineering will allocate a part number at quotation stage.
- Certification requirements and customer specifications MUST be provided at enquiry and order stage.

# Pro-Bloc® TP Series

## Trunnion Mount Ball Double Block and Bleed (DBB) Technical Information

Parker’s Pro-Bloc® TP series trunnion mounted valve with a low operating torque is available with either soft or metal seat options for bubble-tight sealing, spanning a wide range of pressures and temperatures.

The valve has double block and bleed function and consists of two separate isolating balls and one vent in a single unit. This three-piece construction offers space and weight saving benefits over the traditional method of using three separate valves in process piping applications. These valves are supplied to the API 6D standards (excluding 15 mm bore).



### Features, Benefits and Values

| Feature                     | Benefit                                                                               | Value                                            |
|-----------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------|
| Trunnion mount ball         | Low operating torque<br>Minimises seat wear and improves performance and service life | Ease of operation<br>Performance and reliability |
| Three piece design          | Suitable for various piping configurations                                            | Flexibility                                      |
| Anti-blow out stem          | Valve integrity                                                                       | Safety                                           |
| Double D drive on stems     | Facilitates correct lever realignment if removed                                      | Ease of assembly                                 |
| Cavity relief on seats      | Over-pressure protection of ball cavity                                               | Safety                                           |
| Lockable handles option     | Prevents accidental operation                                                         | Safety                                           |
| Graphite packing to API 622 | Low emission to atmosphere                                                            | Safety, performance and reliability              |
| Fire safe design            | Conforms to industry codes                                                            | Safety                                           |

### Markets / Applications:

- Petrochemical
- Low temperature and LNG (tankers, terminals, platforms, plants, air separation)
- Chemical
- Oil and Gas

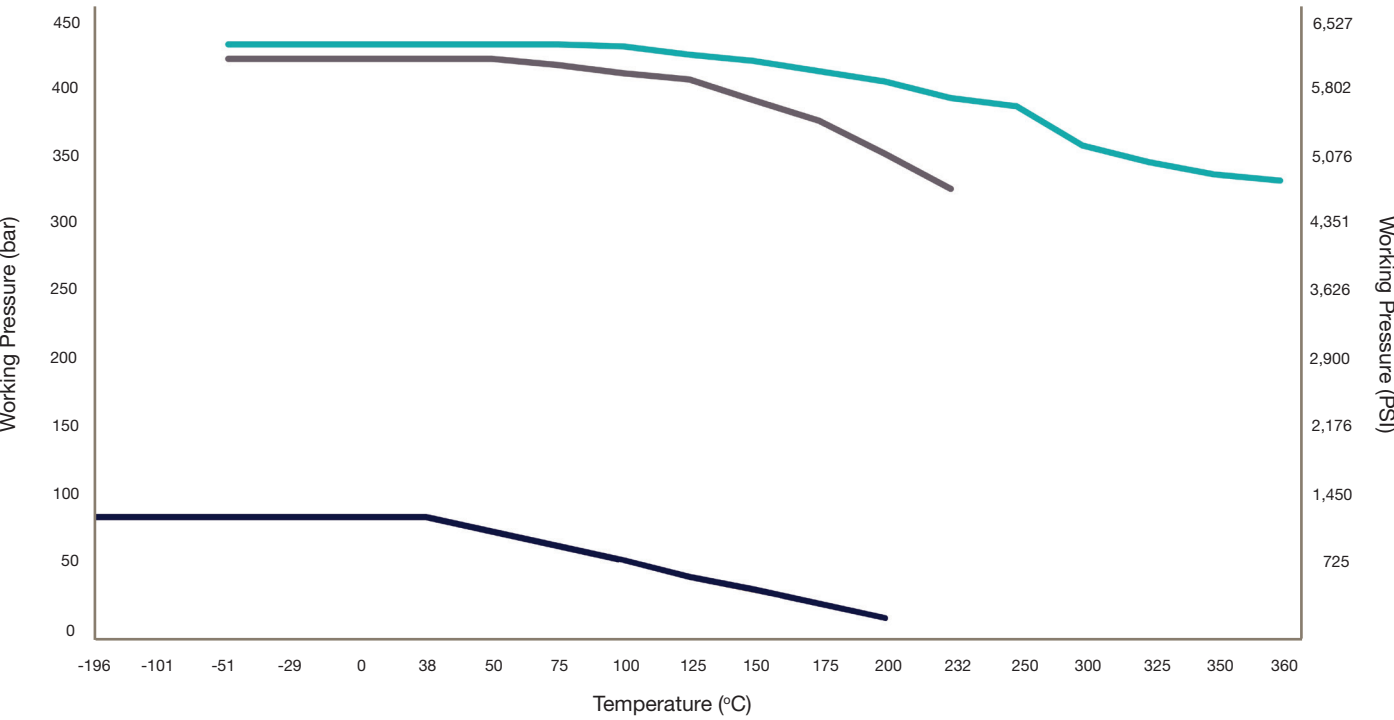
### Design Standards:

- Design: ASME B16.34, EEMUA 182
- Design pressure: ASME B16.34
- Body wall thickness: ASME B16.34, ASME VIII Div. I
- Fire safe: API 6FA and API 607

### Technical Specifications:

|                          |                                                                                                                                                                                                              |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bore sizes               | 15 mm, 25 mm, 38 mm, 50 mm                                                                                                                                                                                   |
| Seat materials           | TFM, PEEK, Metal                                                                                                                                                                                             |
| Body materials           | 316 Stainless Steel ASTM A182-F316/ UNS S31600<br>Duplex ASTM A182-F51 / UNS S31803<br>Super Duplex ASTM A182-F53/F55<br>Low Temp Carbon Steel ASTM A350 LF2<br>Alloy 625 UNS N06625<br>Alloy 825 UNS N08825 |
| Valve configurations     | Flange x screw<br>Flange x flange                                                                                                                                                                            |
| Max. Working Temperature | 360° C                                                                                                                                                                                                       |
| Min. Working Temperature | -196° C                                                                                                                                                                                                      |
| Max. Working Pressure    | 6,250 PSI (431 bar)                                                                                                                                                                                          |

### Pressure vs. Temperature



- TFM seat
- PEEK seat
- Metal seat

# Pro-Bloc® TP Series

Trunnion Mount Ball Double Block and Bleed (DBB)  
Ordering Information

TP

Series

|             |    |
|-------------|----|
| Probloc® TP | TP |
|-------------|----|

X

Ball Valve Bore Size

|       |   |
|-------|---|
| 15 mm | X |
| 25 mm | V |
| 38 mm | U |
| 50 mm | T |

5

Style

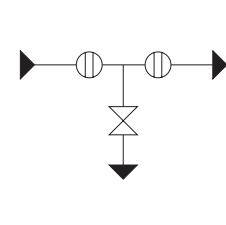
|                 |                 |   |
|-----------------|-----------------|---|
| 15 - 25 mm Bore | Flange x Screw  | 5 |
| 15 - 50 mm Bore | Flange x Flange | 6 |

E

Material

|                       |   |
|-----------------------|---|
| 316 Stainless Steel   | B |
| Duplex                | E |
| Super Duplex          | F |
| Low Temp Carbon Steel | H |
| Alloy 625             | M |
| Alloy 825             | L |

Arrangement



Block-Bleed-Block  
1st Isolate: Ball  
2nd Isolate: Ball  
Vent: Needle

\* No part number designator required

32T25

Flange Details

| Flange Size | Flange Style |    | Flange Class       |   |      |    |
|-------------|--------------|----|--------------------|---|------|----|
|             |              |    |                    |   |      |    |
| 15 mm Bore  | 1/2"         | 8  | Raised Face Spiral | F | 150  | 01 |
|             | 3/4"         | 12 | Ring Type Joint    | T | 300  | 03 |
|             | 1"           | 16 |                    |   | 600  | 06 |
|             | 1 1/2"       | 24 |                    |   | 900  | 09 |
|             | 2"           | 32 |                    |   | 1500 | 15 |
| 25 mm Bore  | 1"           | 16 |                    |   | 2500 | 25 |
|             | 1 1/2"       | 24 |                    |   |      |    |
| 38 mm Bore  | 2"           | 32 |                    |   |      |    |
|             | 3"           | 48 |                    |   |      |    |
| 50 mm Bore  | 2"           | 32 |                    |   |      |    |
|             | 3"           | 48 |                    |   |      |    |
|             | 4"           | 64 |                    |   |      |    |

8A

Outlet Connection

|            |              |      |
|------------|--------------|------|
| 15 mm Bore | 1/2" NPT (F) | *    |
|            | 12 mm A-LOK® | M12A |
|            | 12 mm CPI™   | M12Z |
|            | 1/2" A-LOK®  | 8A   |
|            | 1/2" CPI™    | 8Z   |
| 25 mm Bore | 1" NPT (F)   | *    |
|            | 25 mm A-LOK® | M25A |
|            | 25 mm CPI™   | M25Z |
|            | 1" A-LOK®    | 16A  |
|            | 1" CPI™      | 16Z  |

T A3L12 F

Ball Valve Seats

|       |    |
|-------|----|
| TFM   | T  |
| PEEK  | PB |
| Metal | M  |

Condition

|                  |    |
|------------------|----|
| Fire Safe        | F  |
| Graphite packing |    |
| NACE             | N  |
| Fire Safe & NACE | FN |

Valve Handle Options

|                                      |      |
|--------------------------------------|------|
| Anti-tamper (Needle valve only)      | A*   |
| Padlock handle locking               | L*   |
| Anti-tamper & Padlock handle locking | A*L* |

\* No part number designator required

\* Insert valve number:  
1 - Primary, 2 - Secondary, 3 - Vent, 4 - All.  
Padlocks not supplied.  
Fire Safe needle valve with locking device not available.

## Example Part Numbers

### Example 1 - TPX5E32T258ATA3L12F

Pro-Bloc® TP Series  
15 mm Bore  
Flange x Screw  
Block-Bleed-Block  
Duplex  
Process Flange: 2", Ring Type Joint, Class 2500  
Outlet: 1/2" A-LOK®  
Vent: 1/2" NPT (F)  
Graphite packing  
Ball valve seats: TFM  
Anti-tamper vent; lockable primary and secondary  
Fire safe design

### Example 2 - TPT6B48F15MF

Pro-Bloc® TP Series  
50 mm Bore  
Flange x Flange  
Block-Bleed-Block  
Stainless Steel  
Flange: 3" Raised Face Spiral, Class 1500  
Vent: 1/2" NPT (F)  
Graphite packing  
Ball valve seats: Metal  
Fire safe design

### Example 3 - TPU6B32F0948F09PBF

Pro-Bloc® TP Series  
38 mm Bore  
Flange x Flange  
Block-Bleed-Block  
Stainless Steel  
Process Flange:  
• 1st flange: 2" Raised Face Spiral, Class 900,  
• 2nd flange: 3" Raised Face Spiral, Class 900  
Vent: 1/2" NPT (F)  
Graphite packing  
Ball valve seats: PEEK  
Fire safe design

### Notes:

- All non-wetted parts will be supplied in standard stainless steel for corrosion resistant alloys. For carbon steel construction trim materials will be supplied in stainless steel.
- For flange x flange construction when the required flanges are different sizes, specify flange 1 details (flange size, flange style and flange class) followed by flange 2 details (flange size, flange style and flange class). For example: for flange 1 (flange size 1", Raised Face Spiral, Class 900) and flange 2 (flange size 1 1/2", Raised Face Spiral, Class 900) insert 16F0924F09.
- For customer specific options not covered here engineering will allocate a part number at quotation stage.
- Certification requirements and customer specifications MUST be provided at enquiry and order stage.

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