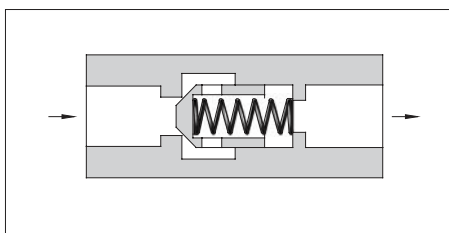


# Check/Pilot Controlled Check Valves

| Valve Type                  | Graphic Symbols                                                                     | Max. Operating Pressure<br>MPa (PSI) | U.S.GPM                                                        |    |   |    |    |    |     |     |     |      |      |      | Page |
|-----------------------------|-------------------------------------------------------------------------------------|--------------------------------------|----------------------------------------------------------------|----|---|----|----|----|-----|-----|-----|------|------|------|------|
|                             |                                                                                     |                                      | .3                                                             | .5 | 1 | 2  | 5  | 10 | 20  | 50  | 100 | 200  | 500  | 1000 |      |
|                             |                                                                                     |                                      | 1                                                              | 2  | 5 | 10 | 20 | 50 | 100 | 200 | 500 | 1000 | 2000 | 5000 |      |
|                             |                                                                                     |                                      | L/min                                                          |    |   |    |    |    |     |     |     |      |      |      |      |
| Check Valves                |  | 25<br>(3630)                         | In-Line (CIT) 02 03 06 10                                      |    |   |    |    |    |     |     |     |      |      |      | 498  |
|                             |                                                                                     |                                      | Right Angle (CRT/CRG) 03 06 10                                 |    |   |    |    |    |     |     |     |      |      |      |      |
|                             |                                                                                     |                                      | Right Angle, Flanged Connection (CRF) 10 16 24                 |    |   |    |    |    |     |     |     |      |      |      |      |
| Pilot Operated Check Valves |  | 25<br>(3630)                         | Threaded Connection(CP*T)<br>Sub-plate Mounting(CP*G) 03 06 10 |    |   |    |    |    |     |     |     |      |      |      | 504  |
|                             |                                                                                     |                                      | Flanged Connection(CP*F) 10 16                                 |    |   |    |    |    |     |     |     |      |      |      |      |

## In-Line Check Valves

These valves allow free flow in one direction and prevent flow in the reverse direction. Cracking pressure specified is the pressure required to open the valve and allow free flow.



Graphic Symbol



### Specifications

| Model Numbers         | Rated Flow*<br>L/min (U.S.GPM) | Max. Operating Pres.<br>MPa (PSI) | Cracking Pres.<br>MPa (PSI)       | Approx. Mass<br>kg (lbs.) |
|-----------------------|--------------------------------|-----------------------------------|-----------------------------------|---------------------------|
| CIT-02-*-50/5080/5090 | 16 (4.23)                      | 25<br>(3630)                      | 0.04 (6)<br>0.35 (50)<br>0.5 (70) | 0.1 (.22)                 |
| CIT-03-*-50/5080/5090 | 30 (7.93)                      |                                   |                                   | 0.3 (.66)                 |
| CIT-06-*-50/5080/5090 | 85 (22.5)                      |                                   |                                   | 0.8 (1.8)                 |
| CIT-10-*-50/5080/5090 | 230 (60.8)                     |                                   |                                   | 2.3 (5.1)                 |

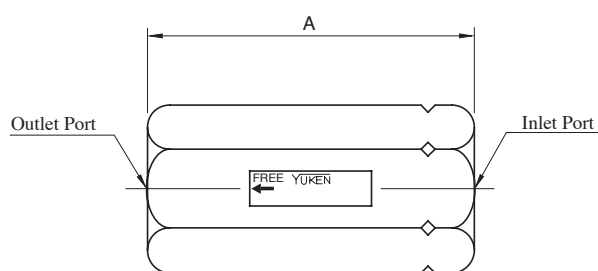
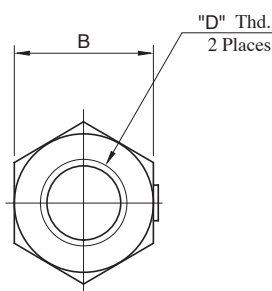
★ Rated flow is the approximate flow rate, when there is a free flow pressure drop of maximum 0.3 MPa (44 PSI), the fluid has a specific gravity of 0.85 and a kinematic viscosity of 20 mm<sup>2</sup>/s (98 SSU), and the cracking pressure is 0.04 MPa (6 PSI).

### Model Number Designation

| CI                                | T                                | -03        | -04                                                                | -50           | *                                                                                                         |
|-----------------------------------|----------------------------------|------------|--------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------|
| Series Number                     | Type of Connection               | Valve Size | Cracking Pressure MPa (PSI)                                        | Design Number | Design Standards                                                                                          |
| <b>CI:</b><br>In-Line Check Valve | <b>T:</b><br>Threaded Connection | <b>02</b>  | <b>04:</b> 0.04 (6)<br><b>35:</b> 0.35 (50)<br><b>50:</b> 0.5 (70) | <b>50</b>     | <b>None:</b> Japanese Std. "JIS"<br><b>80:</b> European Design Std.<br><b>90:</b> N. American Design Std. |
|                                   |                                  | <b>03</b>  |                                                                    | <b>50</b>     |                                                                                                           |
|                                   |                                  | <b>06</b>  |                                                                    | <b>50</b>     |                                                                                                           |
|                                   |                                  | <b>10</b>  |                                                                    | <b>50</b>     |                                                                                                           |

Note: For In-Line Check Valves, standard type (for petroleum base oils) can be used phosphate ester type fluid.

CIT-02-\*-50/5080/5090  
CIT-03-\*-50/5080/5090  
CIT-06-\*-50/5080/5090  
CIT-10-\*-50/5080/5090



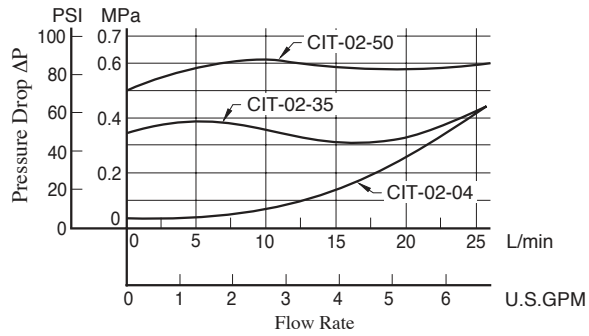
| Model Numbers | mm (Inches) |           | "D" Thd.    |
|---------------|-------------|-----------|-------------|
|               | A           | B         |             |
| CIT-02-*-50   | 58 (2.28)   | 19 (.75)  | Rc 1/4      |
| CIT-02-*-5080 | 65 (2.56)   | 22 (.87)  | 1/4 BSP.F   |
| CIT-02-*-5090 | 58 (2.28)   | 19 (.75)  | 1/4 NPT     |
| CIT-03-*-50   | 76 (2.99)   | 27 (1.06) | Rc 3/8      |
| CIT-03-*-5080 | 83 (3.27)   |           | 3/8 BSP.F   |
| CIT-03-*-5090 | 76 (2.99)   |           | 3/8 NPT     |
| CIT-06-*-50   | 95 (3.74)   | 41 (1.61) | Rc 3/4      |
| CIT-06-*-5080 | 102 (4.02)  |           | 3/4 BSP.F   |
| CIT-06-*-5090 | 95 (3.74)   |           | 3/4 NPT     |
| CIT-10-*-50   | 133 (5.24)  | 60 (2.36) | Rc 1-1/4    |
| CIT-10-*-5080 |             |           | 1-1/4 BSP.F |
| CIT-10-*-5090 |             |           | 1-1/4 NPT   |

**DIMENSIONS IN  
MILLIMETRES (INCHES)**

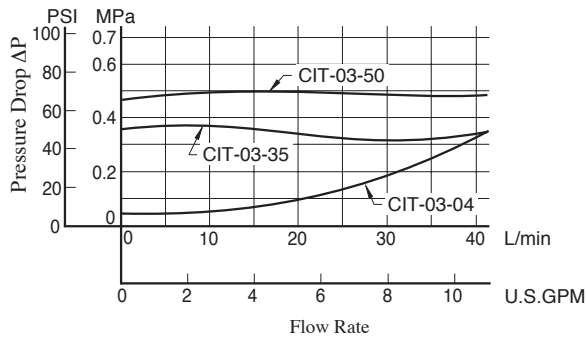
## Pressure Drop

Hydraulic Fluid: Viscosity 30 mm<sup>2</sup>/s (141 SSU), Specific Gravity 0.850

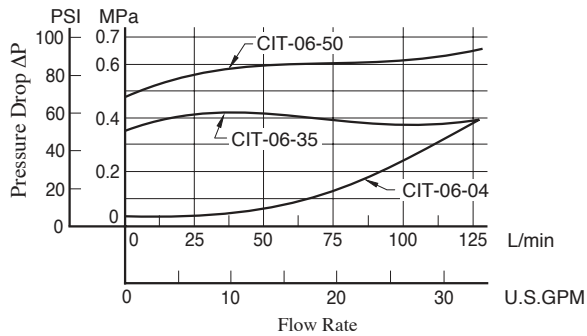
### CIT-02



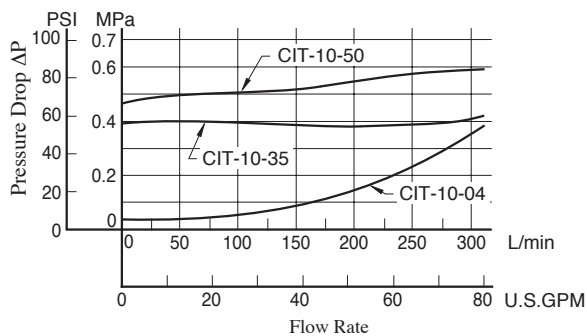
### CIT-03



### CIT-06

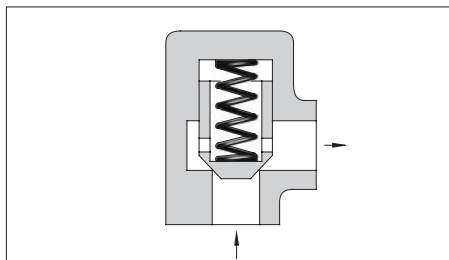


### CIT-10

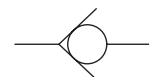


## Right Angle Check Valves

These valves allow free flow in one direction and prevent flow in the reverse direction. Cracking pressure specified is the pressure required to open the valve and allow free flow.



Graphic Symbol



### Specifications

| Type of Connection  | Model Numbers        | Rated Flow*<br>L/min (U.S.GPM) | Max. Operating Pres.<br>MPa (PSI) | Cracking Pres.<br>MPa (PSI) | Approx. Mass<br>kg (lbs.) |
|---------------------|----------------------|--------------------------------|-----------------------------------|-----------------------------|---------------------------|
| Threaded Connection | CRT-03-*50/5080/5090 | 40 (10.6)                      | 25 (3630)                         | 0.04 (6)                    | 0.9 (2.0)                 |
|                     | CRT-06-*50/5080/5090 | 125 (33)                       |                                   | 0.35 (50)                   | 1.7 (3.7)                 |
|                     | CRT-10-*50/5080/5090 | 250 (66)                       |                                   | 0.5 (70)                    | 5.6 (12.3)                |
| Sub-plate Mounting  | CRG-03-*50/5090      | 40 (10.6)                      | 25 (3630)                         | 0.04 (6)                    | 1.7 (3.7)                 |
|                     | CRG-06-*50/5090      | 125 (33)                       |                                   | 0.35 (50)                   | 2.9 (6.4)                 |
|                     | CRG-10-*50/5090      | 250 (66)                       |                                   | 0.5 (70)                    | 5.5 (12.1)                |

\* Rated flow is the approximate flow rate, when there is a free flow pressure drop of maximum 0.3 MPa (44 PSI), the fluid has a specific gravity of 0.85 and a kinematic viscosity of 20 mm<sup>2</sup>/s (98 SSU), and the cracking pressure is 0.04 MPa (6 PSI).

### Model Number Designation

| F-                                                                                | CR                                    | T                                | -03        | -04                         | -50           | *                                                                                                         |
|-----------------------------------------------------------------------------------|---------------------------------------|----------------------------------|------------|-----------------------------|---------------|-----------------------------------------------------------------------------------------------------------|
| Special Seals                                                                     | Series Number                         | Type of Connection               | Valve Size | Cracking Pressure MPa (PSI) | Design Number | Design Standards                                                                                          |
| <b>F:</b><br>Special seals for phosphate ester type fluids (Omit if not required) | <b>CR:</b><br>Right Angle Check Valve | <b>T:</b><br>Threaded Connection | <b>03</b>  | <b>04:</b> 0.04 (6)         | <b>50</b>     | <b>None:</b> Japanese Std. "JIS"<br><b>80:</b> European Design Std.<br><b>90:</b> N. American Design Std. |
|                                                                                   |                                       |                                  | <b>06</b>  | <b>35:</b> 0.35 (50)        | <b>50</b>     |                                                                                                           |
|                                                                                   |                                       |                                  | <b>10</b>  | <b>50:</b> 0.5 (70)         | <b>50</b>     |                                                                                                           |
|                                                                                   |                                       | <b>G:</b><br>Sub-plate Mounting  | <b>03</b>  | <b>04:</b> 0.04 (6)         | <b>50</b>     | <b>None:</b> Japanese Std. "JIS"<br>& European Design Std.<br><b>90:</b> N. American Design Std.          |
|                                                                                   |                                       |                                  | <b>06</b>  | <b>35:</b> 0.35 (50)        | <b>50</b>     |                                                                                                           |
|                                                                                   |                                       |                                  | <b>10</b>  | <b>50:</b> 0.5 (70)         | <b>50</b>     |                                                                                                           |

### Sub-plate

| Valve Model Numbers | Japanese Standard "JIS" |             | European Design Standard |             | N.American Design Standard |             | Approx. Mass<br>kg (lbs.) |
|---------------------|-------------------------|-------------|--------------------------|-------------|----------------------------|-------------|---------------------------|
|                     | Sub-plate Model Numbers | Thread Size | Sub-plate Model Numbers  | Thread Size | Sub-plate Model Numbers    | Thread Size |                           |
| CRG-03              | CRGM-03-50              | Rc 3/8      | CRGM-03-5080             | 3/8 BSP.F   | CRGM-03-5090               | 3/8 NPT     | 1.6 (3.5)                 |
|                     | CRGM-03X-50             | Rc 1/2      | CRGM-03X-5080            | 1/2 BSP.F   | CRGM-03X-5090              | 1/2 NPT     | 1.6 (3.5)                 |
| CRG-06              | CRGM-06-50              | Rc 3/4      | CRGM-06-5080             | 3/4 BSP.F   | CRGM-06-5090               | 3/4 NPT     | 2.4 (5.3)                 |
|                     | CRGM-06X-50             | Rc 1        | CRGM-06X-5080            | 1 BSP.F     | CRGM-06X-5090              | 1 NPT       | 3.0 (6.6)                 |
| CRG-10              | CRGM-10-50              | Rc 1-1/4    | CRGM-10-5080             | 1-1/4 BSP.F | CRGM-10-5090               | 1-1/4 NPT   | 4.8 (10.6)                |
|                     | CRGM-10X-50             | Rc 1-1/2    | CRGM-10X-5080            | 1-1/2 BSP.F | CRGM-10X-5090              | 1-1/2 NPT   | 5.7 (12.6)                |

● Sub-plates are available. Specify the sub-plate model number from the table above. When sub-plates are not used, the mounting surface should have a good machined finish.

Yuken can offer flanged connection valves described below.

For details, contact us.

| Model No.   | Rated Flow<br>L/min (U.S.GPM) | Max. Operating Pressure<br>MPa (PSI) |
|-------------|-------------------------------|--------------------------------------|
| CRF-10-*50* | 300 (79.3)                    | 25 (3630)                            |
| CRF-16-*50* | 600 (159)                     |                                      |
| CRF-24-*50* | 1300 (343)                    |                                      |

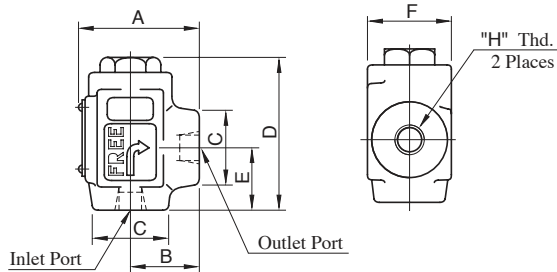
### Mounting Bolts

Socket head cap screws in the table below are included.

| Valve Model Numbers | Socket Head Cap Screw                               |                            | Qty. |
|---------------------|-----------------------------------------------------|----------------------------|------|
|                     | Japanese Standard "JIS"<br>European Design Standard | N.American Design Standard |      |
| CRG-03              | M10 × 45 Lg.                                        | 3/8-16 UNC × 1-3/4 Lg.     | 4    |
| CRG-06              | M10 × 50 Lg.                                        | 3/8-16 UNC × 2 Lg.         | 4    |
| CRG-10              | M10 × 55 Lg.                                        | 3/8-16 UNC × 2-1/4 Lg.     | 6    |

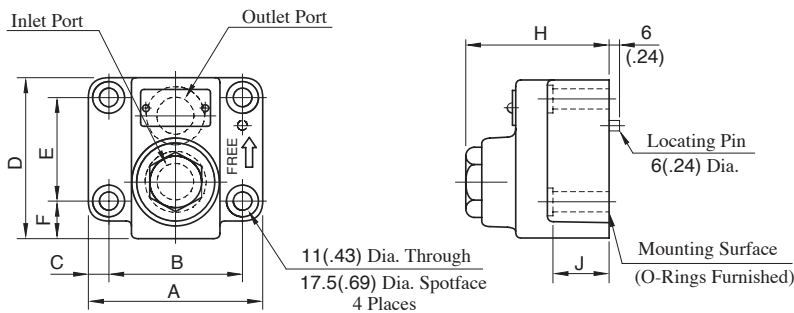
CRT-03-\*50/5080/5090  
 CRT-06-\*50/5080/5090  
 CRT-10-\*50/5080/5090

**DIMENSIONS IN  
 MILLIMETRES (INCHES)**



| Model Numbers | Dimensions mm (Inches) |        |               |        |        |        | "H" Thd.    |
|---------------|------------------------|--------|---------------|--------|--------|--------|-------------|
|               | A                      | B      | C             | D      | E      | F      |             |
| CRT-03-*50    | 62                     | 36     | 38            | 80.5   | 33     | 44     | Rc 3/8      |
| CRT-03-*5080  | (2.44)                 | (1.42) | (1.50)<br>Dia | (3.17) | (1.30) | (1.73) | 3/8 BSP.F   |
| CRT-03-*5090  |                        |        |               |        |        |        | 3/8 NPT     |
| CRT-06-*50    | 74                     | 45     | 54            | 104.5  | 49     | 54     | Rc 3/4      |
| CRT-06-*5080  | (2.91)                 | (1.77) | (2.13)<br>Dia | (4.11) | (1.93) | (2.13) | 3/4 BSP.F   |
| CRT-06-*5090  |                        |        |               |        |        |        | 3/4 NPT     |
| CRT-10-*50    | 107                    | 65     | 80            | 130    | 65     | 80     | Rc 1-1/4    |
| CRT-10-*5080  | (4.21)                 | (2.56) | (3.15)<br>SQ. | (5.12) | (2.56) | (3.15) | 1-1/4 BSP.F |
| CRT-10-*5090  |                        |        |               |        |        |        | 1-1/4 NPT   |

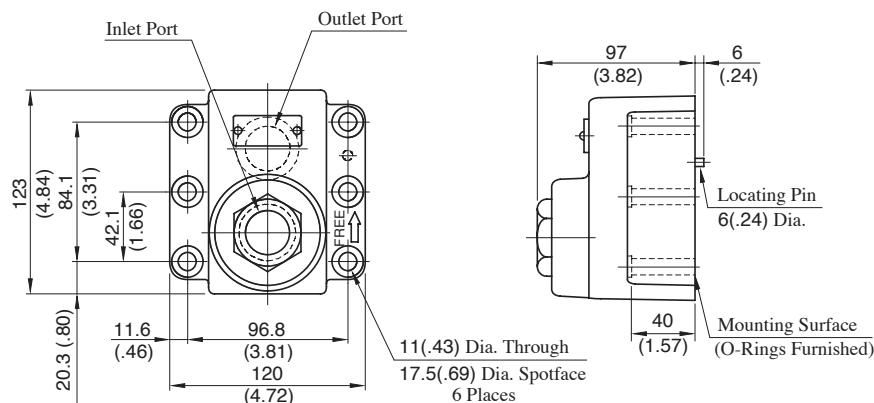
CRG-03-\*50/5090  
 CRG-06-\*50/5090



| Model Numbers | Dimensions mm (Inches) |        |       |        |        |       |        |        | Mounting Surface   |
|---------------|------------------------|--------|-------|--------|--------|-------|--------|--------|--------------------|
|               | A                      | B      | C     | D      | E      | F     | H      | J      |                    |
| CRG-03        | 90                     | 66.7   | 11.7  | 72     | 42.9   | 17.5  | 72.5   | 30     | ISO 5781-AG-06-2-A |
|               | (3.54)                 | (2.63) | (.46) | (2.83) | (1.69) | (.69) | (2.85) | (1.18) |                    |
| CRG-06        | 102                    | 79.4   | 11.3  | 93     | 60.3   | 21.4  | 84.5   | 35     | ISO 5781-AH-08-2-A |
|               | (4.02)                 | (3.13) | (.44) | (3.66) | (2.37) | (.84) | (3.33) | (1.38) |                    |

CRG-10-\*50/5090

Mounting surface: ISO 5781-AJ-10-2-A

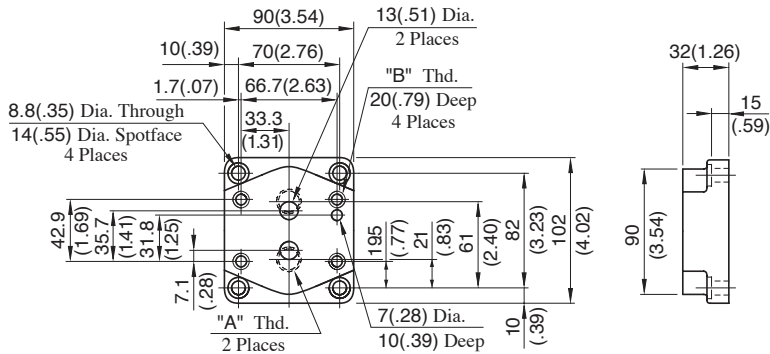


**E**

Right Angle Check Valves

**Sub-plate**

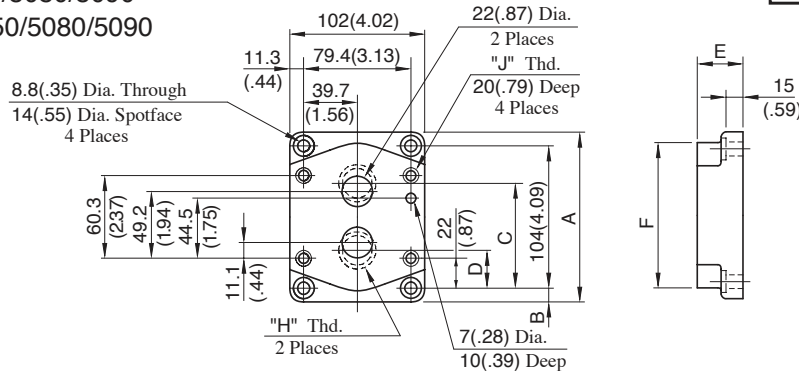
**CRGM-03-50/5080/5090**  
**CRGM-03X-50/5080/5090**



| Sub-plate<br>Model Numbers | Thread Size |            |
|----------------------------|-------------|------------|
|                            | "A" Thd.    | "B" Thd.   |
| CRGM-03-50                 | Rc 3/8      | M10        |
| CRGM-03-5080               | 3/8 BSP.F   |            |
| CRGM-03-5090               | 3/8 NPT     | 3/8-16 UNC |
| CRGM-03X-50                | Rc 1/2      |            |
| CRGM-03X-5080              | 1/2 BSP.F   |            |
| CRGM-03X-5090              | 1/2 NPT     |            |

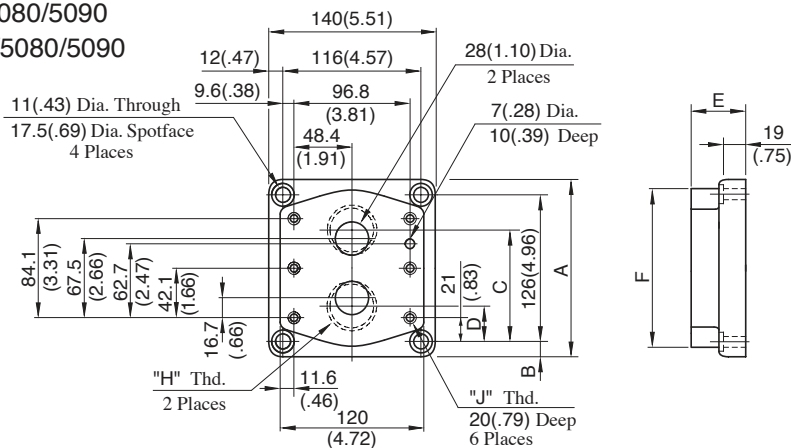
**DIMENSIONS IN  
MILLIMETRES (INCHES)**

**CRGM-06-50/5080/5090**  
**CRGM-06X-50/5080/5090**



| Sub-plate<br>Model Numbers | Dimensions mm (Inches) |             |              |              |              |               | Thread Size |            |
|----------------------------|------------------------|-------------|--------------|--------------|--------------|---------------|-------------|------------|
|                            | A                      | B           | C            | D            | E            | F             | "H" Thd.    | "J" Thd.   |
| CRGM-06-50                 | 124<br>(4.88)          | 10<br>(.39) | 77<br>(3.03) | 27<br>(1.06) | 36<br>(1.42) | 110<br>(4.33) | Rc 3/4      | M10        |
| CRGM-06-5080               |                        |             |              |              |              |               | 3/4 BSP.F   |            |
| CRGM-06-5090               |                        |             |              |              |              |               | 3/4 NPT     | 3/8-16 UNC |
| CRGM-06X-50                | 136<br>(5.35)          | 16<br>(.63) | 82.3 (3.24)  | 22 (.87)     | 45<br>(1.77) | 130<br>(5.12) | Rc 1        | M10        |
| CRGM-06X-5080              |                        |             | 80 (3.15)    | 24 (.94)     |              |               | 1 BSP.F     |            |
| CRGM-06X-5090              |                        |             | 82.3 (3.24)  | 22 (.87)     |              |               | 1 NPT       | 3/8-16 UNC |

**CRGM-10-50/5080/5090**  
**CRGM-10X-50/5080/5090**

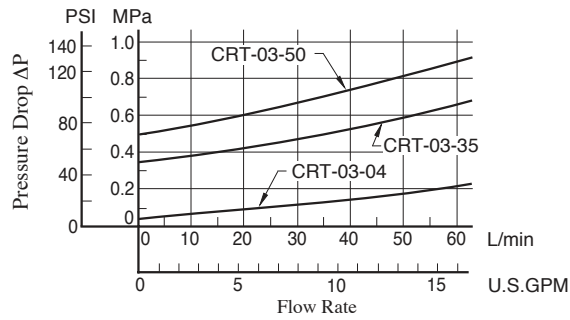


| Sub-plate<br>Model Numbers | Dimensions mm (Inches) |                |               |              |              |               | Thread Size |            |
|----------------------------|------------------------|----------------|---------------|--------------|--------------|---------------|-------------|------------|
|                            | A                      | B              | C             | D            | E            | F             | "H" Thd.    | "J" Thd.   |
| CRGM-10-50                 | 150<br>(5.91)          | 12<br>(.47)    | 96<br>(3.78)  | 30<br>(1.18) | 45<br>(1.77) | 135<br>(5.31) | Rc 1-1/4    | M10        |
| CRGM-10-5080               |                        |                |               |              |              |               | 1-1/4 BSP.F |            |
| CRGM-10-5090               |                        |                |               |              |              |               | 1-1/4 NPT   | 3/8-16 UNC |
| CRGM-10X-50                | 177<br>(6.97)          | 25.5<br>(1.00) | 104<br>(4.09) | 22<br>(.87)  | 50<br>(1.97) | 167<br>(6.57) | Rc 1-1/2    | M10        |
| CRGM-10X-5080              |                        |                |               |              |              |               | 1-1/2 BSP.F |            |
| CRGM-10X-5090              |                        |                |               |              |              |               | 1-1/2 NPT   | 3/8-16 UNC |

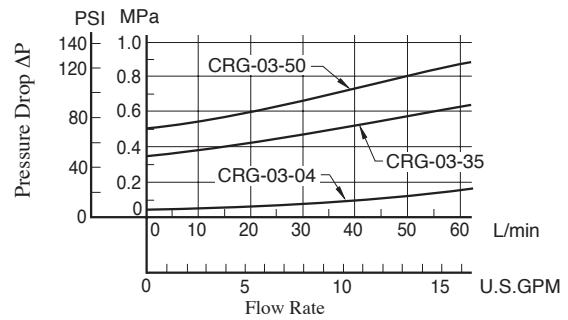
## Pressure Drop

Hydraulic Fluid: Viscosity 30mm<sup>2</sup>/s (141 SSU), Specific Gravity 0.850

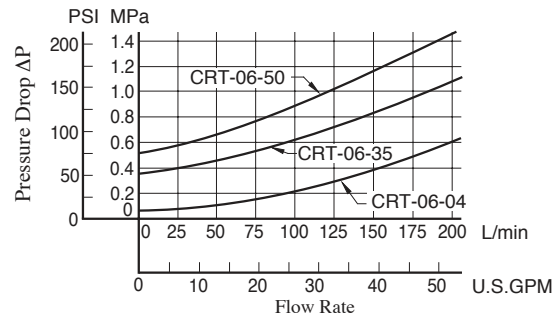
### CRT-03



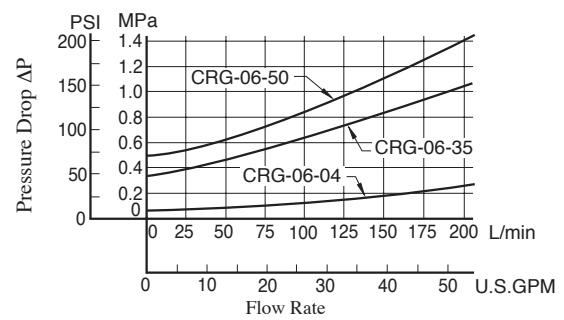
### CRG-03



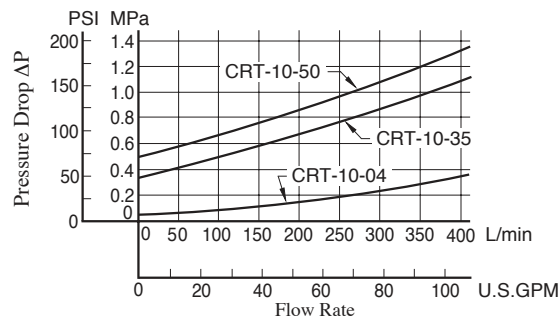
### CRT-06



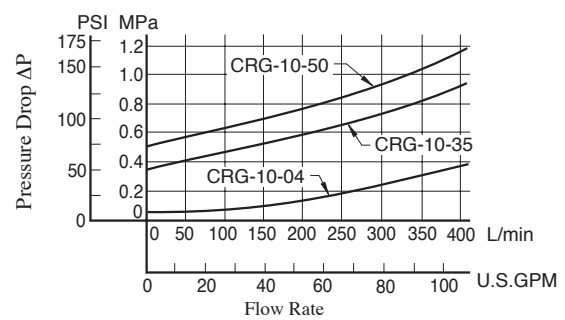
### CRG-06



### CRT-10

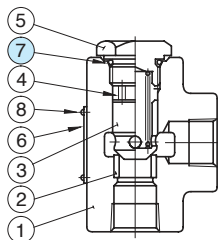


### CRG-10

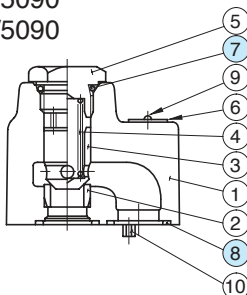


## List of Seals

CRT-03-50/5080/5090  
CRT-06-50/5080/5090  
CRT-10-50/5080/5090



CRG-03-50/5090  
CRG-06-50/5090  
CRG-10-50/5090



### List of Seals & Seal Kits

| Item | Name of Parts | Part Numbers |              |              | Qty. |
|------|---------------|--------------|--------------|--------------|------|
|      |               | CRT-03       | CRT-06       | CRT-10       |      |
| 7    | O-Ring        | SO-NB-P21    | SO-NB-P24    | SO-NB-P32    | 1    |
| ★    | Seal Kit      | KS-CRT-03-50 | KS-CRT-06-50 | KS-CRT-10-50 | —    |

★ When ordering the O-Rings, please specify the seal kit number from the table above.

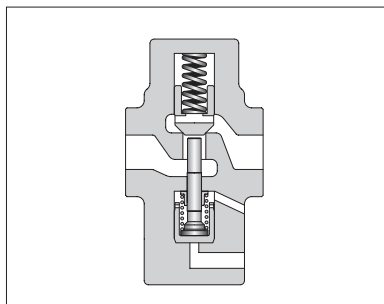
### List of Seals & Seal Kits

| Item | Name of Parts | Part Numbers |              |              | Qty. |
|------|---------------|--------------|--------------|--------------|------|
|      |               | CRG-03       | CRG-06       | CRG-10       |      |
| 7    | O-Ring        | SO-NB-P21    | SO-NB-P24    | SO-NB-P32    | 1    |
| 8    | O-Ring        | SO-NB-P18    | SO-NB-P28    | SO-NB-P32    | 2    |
| ★    | Seal Kit      | KS-CRG-03-50 | KS-CRG-06-50 | KS-CRG-10-50 | —    |

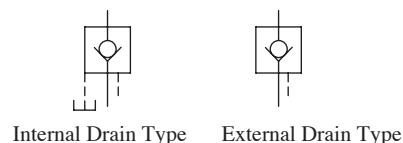
★ When ordering the O-Rings, please specify the seal kit number from the table above.

## Pilot Operated Check Valves

These check valves allow flow in one direction and prevent flow in the reverse direction, until operated by pilot pressure to allow free reverse flow. The specified cracking pressure is required to open the valve to allow free flow direction.



Graphic Symbols



## Specifications

| Type of Connection  | Model Numbers     | Rated Flow*<br>L/min (U.S.GPM) | Max. Operating Pres.<br>MPa (PSI) | Cracking Pres.<br>MPa (PSI) | Approx. Mass<br>kg (lbs.) |
|---------------------|-------------------|--------------------------------|-----------------------------------|-----------------------------|---------------------------|
| Threaded Connection | CPT/CPDT-03-*-50* | 40 (10.6)                      | 25 (3630)                         | 0.04 (6)                    | 3.0 (6.6)                 |
|                     | CPT/CPDT-06-*-50* | 125 (33)                       |                                   | 0.2 (29)                    | 5.5 (12.1)                |
|                     | CPT/CPDT-10-*-50* | 250 (66)                       |                                   | 0.35 (50)                   | 9.6 (21.2)                |
| Sub-plate Mounting  | CPG/CPDG-03-*-50* | 40 (10.6)                      | 25 (3630)                         | 0.04 (6)                    | 3.3 (7.3)                 |
|                     | CPG/CPDG-06-*-50* | 125 (33)                       |                                   | 0.2 (29)                    | 5.4 (11.9)                |
|                     | CPG/CPDG-10-*-50* | 250 (66)                       |                                   | 0.35 (50)                   | 8.5 (18.7)                |

★ Rated flow is the approximate flow rate, when there is a free flow pressure drop of maximum 0.3 MPa (44 PSI), the fluid has a specific gravity of 0.85 and a kinematic viscosity of 20 mm<sup>2</sup>/s (98 SSU), and the cracking pressure is 0.04 MPa (6 PSI).

## Model Number Designation

| F-                                                                         | CP                                                    | T                         | 03         | -E                      | -04                         | -50           | *                                                                                    |
|----------------------------------------------------------------------------|-------------------------------------------------------|---------------------------|------------|-------------------------|-----------------------------|---------------|--------------------------------------------------------------------------------------|
| Special Seals                                                              | Series Number                                         | Type of Connection        | Valve Size | Drain Connection        | Cracking Pres. MPa (PSI)    | Design Number | Design Standards                                                                     |
| F:<br>Special Seals for Phosphate Ester Type Fluids (Omit if not required) | CP:<br>Pilot Operated Check Valve                     | T:<br>Threaded Connection | 03         | None:<br>Internal Drain | 04:0.04 (6)<br>20:0.2 (29)  | 50            | None: Japanese Std. "JIS"<br>80: European Design Std.<br>90: N. American Design Std. |
|                                                                            |                                                       |                           | 06         |                         |                             | 50            |                                                                                      |
|                                                                            |                                                       |                           | 10         |                         |                             | 50            |                                                                                      |
|                                                                            | CPD:<br>Decompression Type Pilot Operated Check Valve | G:<br>Sub-plate Mounting  | 03         | E:<br>External Drain    | 35:0.35 (50)<br>50:0.5 (70) | 50            | None: Japanese Std. "JIS" & European Design Std.<br>90: N. American Design Std.      |
|                                                                            |                                                       |                           | 06         |                         |                             | 50            |                                                                                      |
|                                                                            |                                                       |                           | 10         |                         |                             | 50            |                                                                                      |

## Mounting Bolts

Socket head cap screws in the table below are included.

| Valve Model Numbers | Socket Head Cap Screw                              |                            | Qty. |
|---------------------|----------------------------------------------------|----------------------------|------|
|                     | Japanese Standard "JIS" & European Design Standard | N.American Design Standard |      |
| CP*G-03             | M10 × 45 Lg.                                       | 3/8-16 UNC × 1-3/4 Lg.     | 4    |
| CP*G-06             | M10 × 50 Lg.                                       | 3/8-16 UNC × 2 Lg.         | 4    |
| CP*G-10             | M10 × 55 Lg.                                       | 3/8-16 UNC × 2-1/4 Lg.     | 6    |

Yuken can offer flanged connection valves described below.  
For details, contact us.

| Model Numbers | Rated Flow<br>L/min (U.S.GPM) | Max. Operating Pressure<br>MPa (PSI) |
|---------------|-------------------------------|--------------------------------------|
| CP*F-10-*-50* | 250 (66)                      | 25 (3630)                            |
| CP*F-16-*-50* | 600 (159)                     | 25 (3630)                            |

## Sub-plate

| Valve Model Numbers | Japanese Standard "JIS" |             | European Design Standard |             | N. American Design Standard |             | Approx. Mass kg (lbs.) |
|---------------------|-------------------------|-------------|--------------------------|-------------|-----------------------------|-------------|------------------------|
|                     | Sub-plate Model Numbers | Thread Size | Sub-plate Model Numbers  | Thread Size | Sub-plate Model Numbers     | Thread Size |                        |
| CP*G-03             | HGM-03-20               | Rc 3/8      | HGM-03-2080              | 3/8 BSP.F   | HGM-03-2090                 | 3/8 NPT     | 1.6 (3.5)              |
|                     | HGM-03X-20              | Rc 1/2      | HGM-03X-2080             | 1/2 BSP.F   | HGM-03X-2090                | 1/2 NPT     | 1.6 (3.5)              |
| CP*G-06             | HGM-06-20               | Rc 3/4      | HGM-06-2080              | 3/4 BSP.F   | HGM-06-2090                 | 3/4 NPT     | 2.4 (5.3)              |
|                     | HGM-06X-20              | Rc 1        | HGM-06X-2080             | 1 BSP.F     | HGM-06X-2090                | 1 NPT       | 3.0 (6.6)              |
| CP*G-10             | HGM-10-20               | Rc 1-1/4    | HGM-10-2080              | 1-1/4 BSP.F | HGM-10-2090                 | 1-1/4 NPT   | 4.8 (10.6)             |
|                     | HGM-10X-20              | Rc 1-1/2    | HGM-10X-2080             | 1-1/2 BSP.F | HGM-10X-2090                | 1-1/2 NPT   | 5.7 (12.6)             |

- Sub-plates are available, specify the sub-plate model number from the table above. When sub-plates are not used, the mounting surface should have a good machined finish.
- Sub-plates are shared with those for H Type Pressure Control Valves. Refer to [pages 244 to 246](#) for dimensions.

## Instructions

### Operation of internal and external drain types

When the outlet side P1 is directly connected to the tank in reversed free flow (Fig. a), the internal drain type is normally used. When the back pressure is applied to the outlet side P1 (Fig. b), be sure to use the external drain type.

### Minimum pilot pressure characteristics

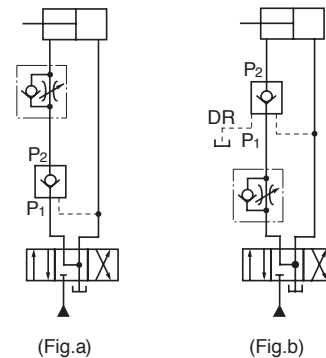
That depends on the pressure of the inlet side P2 in the reversed free flow.

This value can be determined from the characteristics chart.

### Caution on replacement of 20 design low cracking pressure type valves with 50 design valves.

In 20 design valve with cracking pressure of 0.035 MPa (5 PSI) (Code "5"), for closing the valve completely and certainly, it was necessary to introduce the pressurized oil into the drain port to push down the piston compulsory.

While in 50 design valve with cracking pressure of 0.04 MPa (6 PSI) (Code "6"), it has such structure that the valve can be closed completely and certainly without introducing the pressurized oil into the drain port. On the contrary, what is worse is that if the pressurized oil is introduced into the drain port, the oil acts towards the direction of opening the valve, which is very dangerous and has to be absolutely avoided. Therefore, please do not supply any pressurized oil into the drain port in case of using 50 design valve.



(Fig.a)

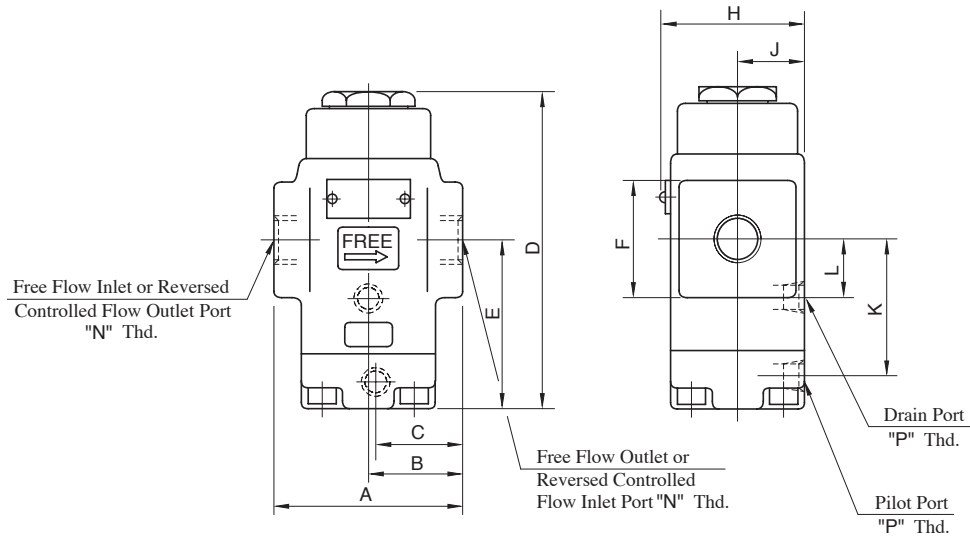
(Fig.b)



### WARNING

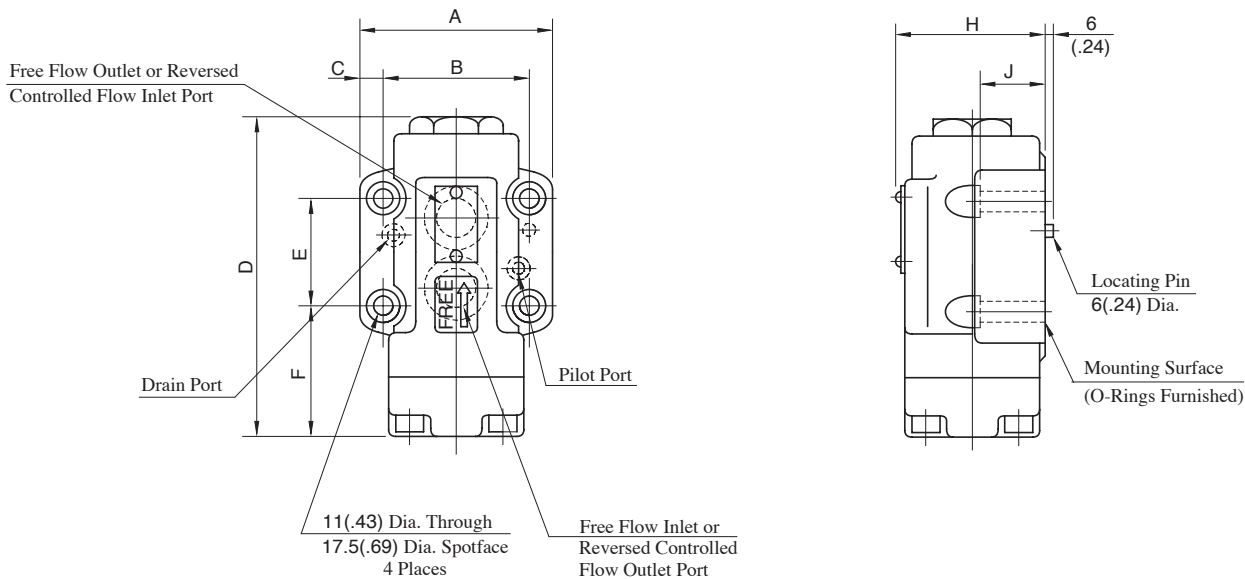
The machinery, if misused due to failure to observe the "Cautions" on the left, may perform unforeseeable movements, resulting in a disastrous accident.

CPT/CPDT-03-\*-50/5080/5090  
CPT/CPDT-06-\*-50/5080/5090  
CPT/CPDT-10-\*-50/5080/5090



| Model Numbers      | Dimensions mm (Inches) |              |              |                 |                |                      |              |              |                |                | Thread Size |           |
|--------------------|------------------------|--------------|--------------|-----------------|----------------|----------------------|--------------|--------------|----------------|----------------|-------------|-----------|
|                    | A                      | B            | C            | D               | E              | F                    | H            | J            | K              | L              | "N" Thd.    | "P" Thd.  |
| CPT/CPDT-03-*-50   | 80<br>(3.15)           | 40<br>(1.57) | 39<br>(1.54) | 150.5<br>(5.93) | 84.5<br>(3.33) | 38<br>(1.50)<br>Dia. | 60<br>(2.36) | 29<br>(1.14) | 67.5<br>(2.66) | 26.5<br>(1.04) | Rc 3/8      | Rc 1/4    |
| CPT/CPDT-03-*-5080 |                        |              |              |                 |                |                      |              |              |                |                | 3/8 BSP.F   | 1/4 BSP.F |
| CPT/CPDT-03-*-5090 |                        |              |              |                 |                |                      |              |              |                |                | 3/8 NPT     | 1/4 NPT   |
| CPT/CPDT-06-*-50   | 96<br>(3.78)           | 48<br>(1.89) | 47<br>(1.85) | 171.5<br>(6.75) | 92.5<br>(3.64) | 62<br>(2.44)<br>SQ.  | 72<br>(2.83) | 35<br>(1.38) | 75.5<br>(2.97) | 31<br>(1.22)   | Rc 3/4      | Rc 1/4    |
| CPT/CPDT-06-*-5080 |                        |              |              |                 |                |                      |              |              |                |                | 3/4 BSP.F   | 1/4 BSP.F |
| CPT/CPDT-06-*-5090 |                        |              |              |                 |                |                      |              |              |                |                | 3/4 NPT     | 1/4 NPT   |
| CPT/CPDT-10-*-50   | 140<br>(5.51)          | 70<br>(2.76) | 64<br>(2.52) | 203.5<br>(8.01) | 113<br>(4.45)  | 80<br>(3.15)<br>SQ.  | 82<br>(3.23) | 40<br>(1.57) | 96<br>(3.78)   | 43<br>(1.69)   | Rc 1-1/4    | Rc 1/4    |
| CPT/CPDT-10-*-5080 |                        |              |              |                 |                |                      |              |              |                |                | 1-1/4 BSP.F | 1/4 BSP.F |
| CPT/CPDT-10-*-5090 |                        |              |              |                 |                |                      |              |              |                |                | 1-1/4 NPT   | 1/4NPT    |

CPG/CPDG-03-\*\*-50/5090  
CPG/CPDG-06-\*\*-50/5090

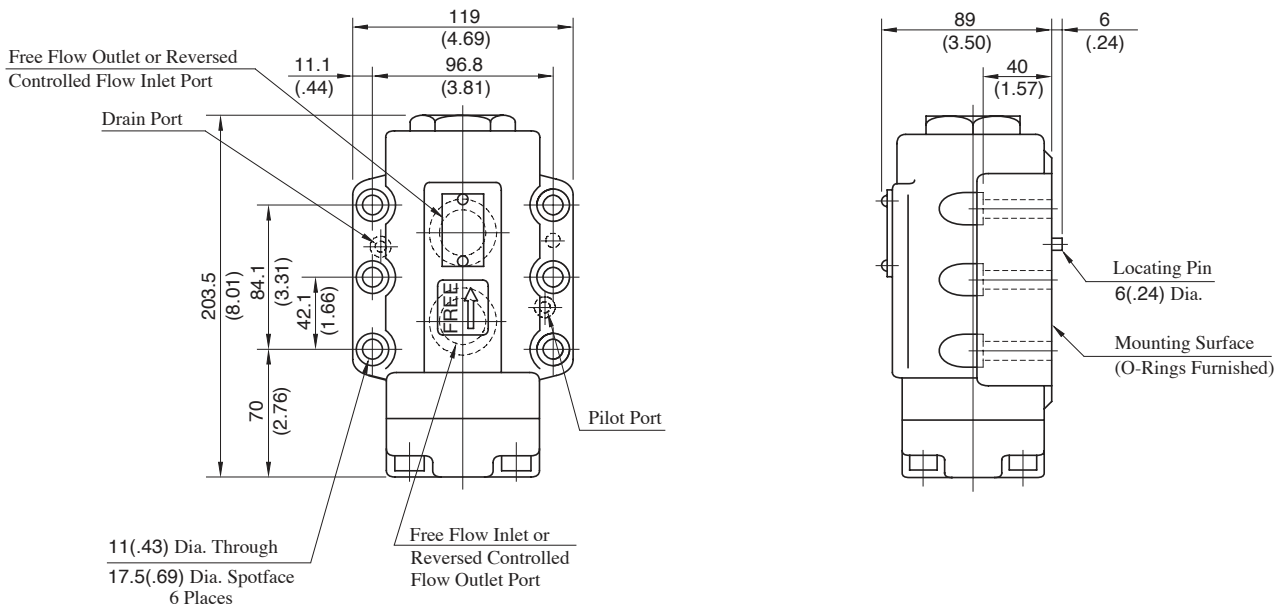


| Model Numbers          | Dimensions mm (Inches) |                |               |                 |                |                |              |              | Mounting Surface   |
|------------------------|------------------------|----------------|---------------|-----------------|----------------|----------------|--------------|--------------|--------------------|
|                        | A                      | B              | C             | D               | E              | F              | H            | J            |                    |
| CPG/CPDG-03-**-50/5090 | 90<br>(3.54)           | 66.7<br>(2.63) | 11.7<br>(.46) | 150.5<br>(5.93) | 42.9<br>(1.69) | 66<br>(2.60)   | 62<br>(2.44) | 30<br>(1.18) | ISO 5781-AG-06-2-A |
| CPG/CPDG-06-**-50/5090 | 102<br>(4.02)          | 79.4<br>(3.13) | 11.3<br>(.44) | 171.5<br>(6.75) | 60.3<br>(2.37) | 67.5<br>(2.66) | 74<br>(2.91) | 35<br>(1.38) | ISO 5781-AH-08-2-A |

CPG/CPDG-10-\*\*-50/5090

Mounting surface: ISO 5781-AJ-10-2-A

DIMENSIONS IN  
MILLIMETRES (INCHES)



E

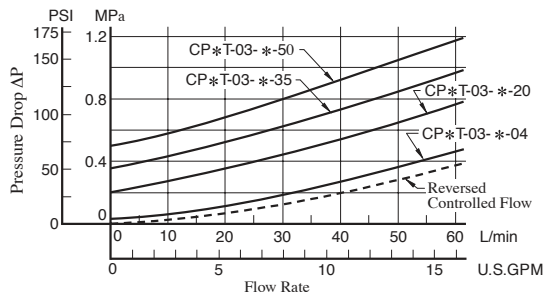


Pilot Operated Check Valves

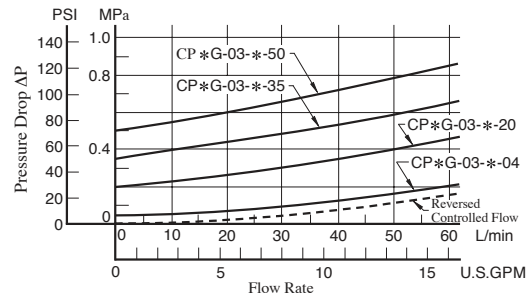
Hydraulic Fluid: Viscosity 30 mm<sup>2</sup>/s (141 SSU), Specific Gravity 0.850

**Pressure Drop**

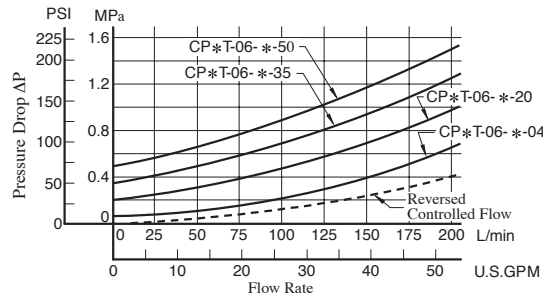
**● CPT-03, CPDT-03**



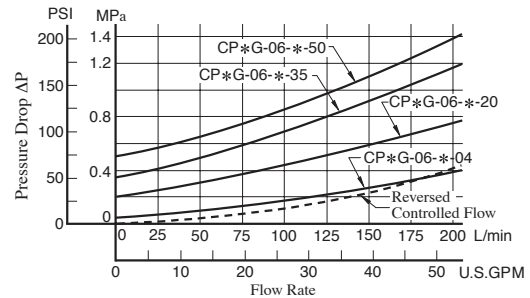
**● CPG-03, CPDG-03**



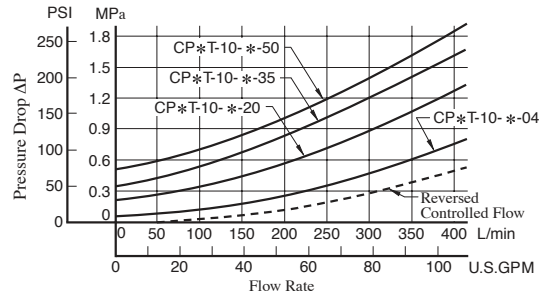
**● CPT-06, CPDT-06**



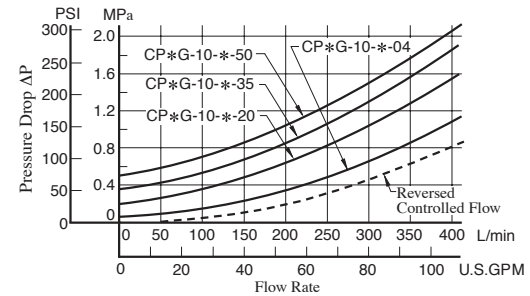
**● CPG-06, CPDG-06**



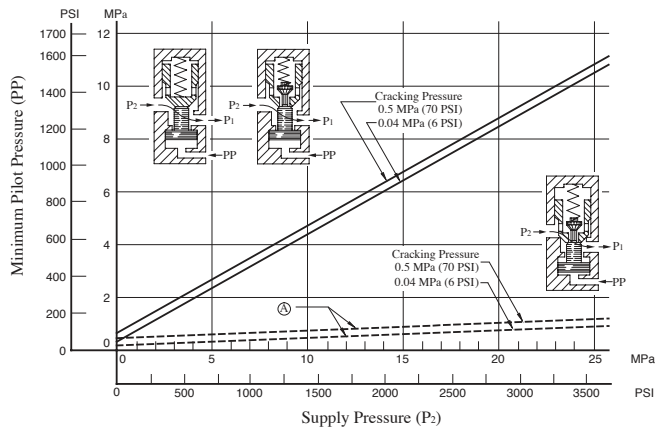
**● CPT-10, CPDT-10**



**● CPG-10, CPDG-10**



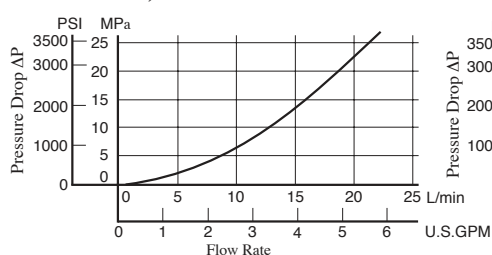
**Min. Pilot Pressure Chart**



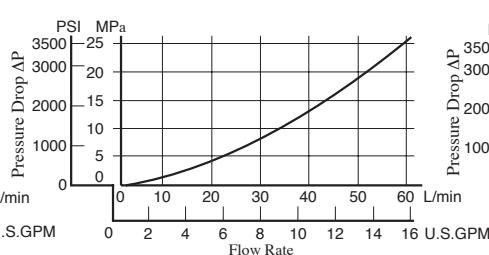
Ⓐ : Min. Pilot Pressure to open the Decompression Valve

**Pressure Drop for Reversed Controlled Flow Only when Decompression Valve is Opened**

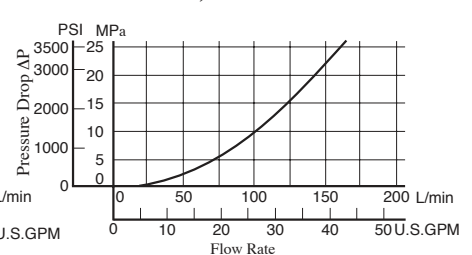
**● CPDT-03, CPDG-03**



**● CPDT-06, CPDG-06**

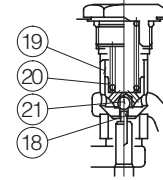
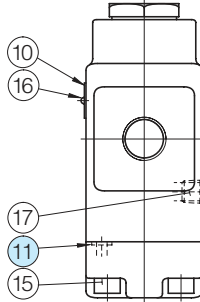
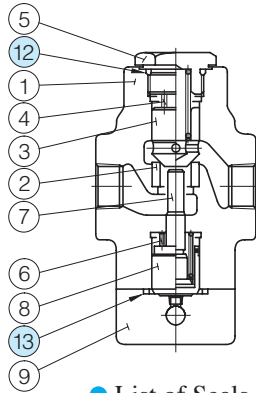


**● CPDT-10, CPDG-10**



## List of Seals

CPT/CPDT-03-\*\*-50/5080/5090  
CPT/CPDT-06-\*\*-50/5080/5090  
CPT/CPDT-10-\*\*-50/5080/5090



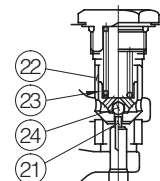
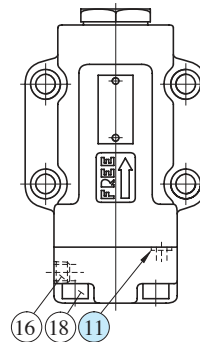
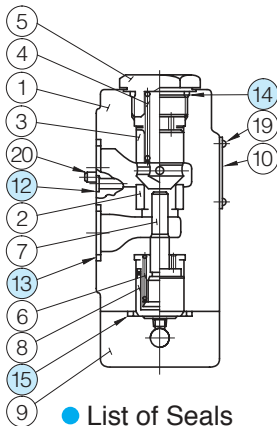
CPDT-03/06/10

### List of Seals

| Item | Name of Parts | Part Numbers |             |             | Qty. |
|------|---------------|--------------|-------------|-------------|------|
|      |               | CPT/CPDT-03  | CPT/CPDT-06 | CPT/CPDT-10 |      |
| 11   | O-Ring        | SO-NB-P7     | SO-NB-P9    | SO-NB-P9    | 1    |
| 12   | O-Ring        | SO-NB-P21    | SO-NB-P29   | SO-NB-P36   | 1    |
| 13   | O-Ring        | SO-NB-G25    | SO-NB-P32   | SO-NB-P42   | 1    |

Note: When ordering the seals, please specify the seal kit number from the table below.

CPG/CPDG-03-\*\*-50/5090  
CPG/CPDG-06-\*\*-50/5090  
CPG/CPDG-10-\*\*-50/5090



CPDG-03/06/10

### List of Seals

| Item | Name of Parts | Part Numbers |             |             | Qty. |
|------|---------------|--------------|-------------|-------------|------|
|      |               | CPG/CPDG-03  | CPG/CPDG-06 | CPG/CPDG-10 |      |
| 11   | O-Ring        | SO-NB-P7     | SO-NB-P9    | SO-NB-P9    | 1    |
| 12   | O-Ring        | SO-NB-P9     | SO-NB-P9    | SO-NB-P9    | 2    |
| 13   | O-Ring        | SO-NB-P18    | SO-NB-P28   | SO-NB-P32   | 2    |
| 14   | O-Ring        | SO-NB-P21    | SO-NB-P29   | SO-NB-P36   | 1    |
| 15   | O-Ring        | SO-NB-G25    | SO-NB-P32   | SO-NB-P42   | 1    |

Note: When ordering the O-Rings, please specify the seal kit number from the table below.

### List of Seal Kits

| Model Numbers               | Seal Kit Numbers |
|-----------------------------|------------------|
| CPT/CPDT-03-**-50/5080/5090 | KS-CPT-03-50     |
| CPT/CPDT-06-**-50/5080/5090 | KS-CPT-06-50     |
| CPT/CPDT-10-**-50/5080/5090 | KS-CPT-10-50     |
| CPG/CPDG-03-**-50/5090      | KS-CPG-03-50     |
| CPG/CPDG-06-**-50/5090      | KS-CPG-06-50     |
| CPG/CPDG-10-**-50/5090      | KS-CPG-10-50     |