



A Polyhydron Group Company

# PILOT OPERATED PRESSURE RELIEF VALVE Model : PPR

Ref. No. D 04897

Release 01 / 2025

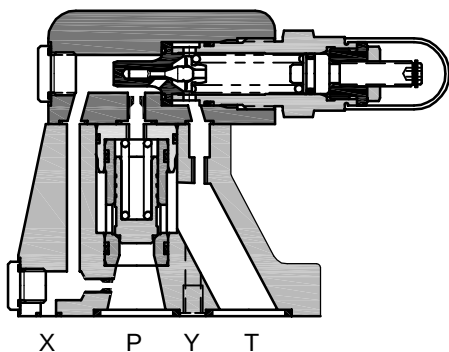
ENGINEERING - 1 of 3

## Description

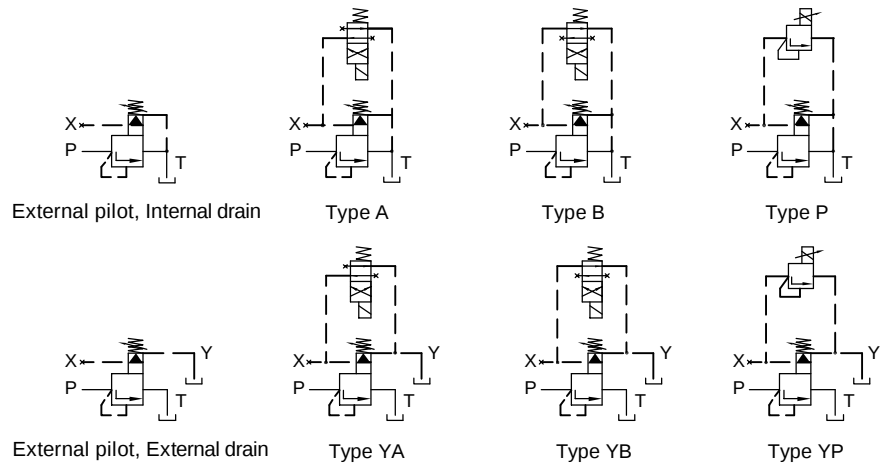
Two stage poppet type Relief valve.  
Solenoid unloading or proportional relieving facility as an optional feature.  
Vent connection for remote control.  
Two standard sizes in Threaded construction.  
Three standard sizes in Sub-plate mounting construction.



## Section



## Hydraulic symbol



## Unit dimensions

Valve : Threaded body

Dimensions in mm.

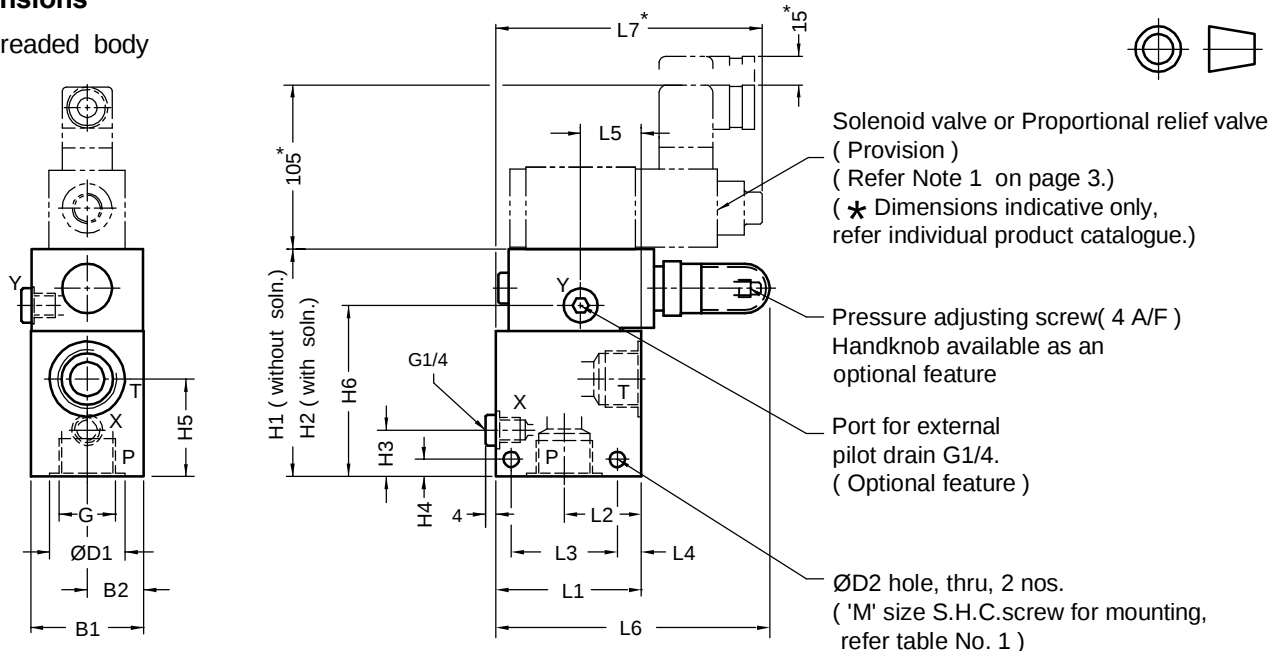


Table No. 1

| Size | Mass<br>kg. | G      | H1  | H2  | H3 | H4 | H5 | H6  | L1  | L2 | L3 | L4 | L5   | L6  | L7  | B1 | B2 | ØD1 | ØD2 | M   |
|------|-------------|--------|-----|-----|----|----|----|-----|-----|----|----|----|------|-----|-----|----|----|-----|-----|-----|
| 20   | 4.8         | G1     | 131 | 140 | 25 | 10 | 57 | 100 | 85  | 43 | 62 | 12 | 33.5 | 153 | 155 | 66 | 33 | 44  | 9   | M8  |
| 30   | 9.5         | G1-1/2 | 170 | 178 | 42 | 13 | 80 | 138 | 100 | 54 | 72 | 18 | 41.5 | 162 | 163 | 86 | 43 | 60  | 11  | M10 |

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Valve : Subplate mounting

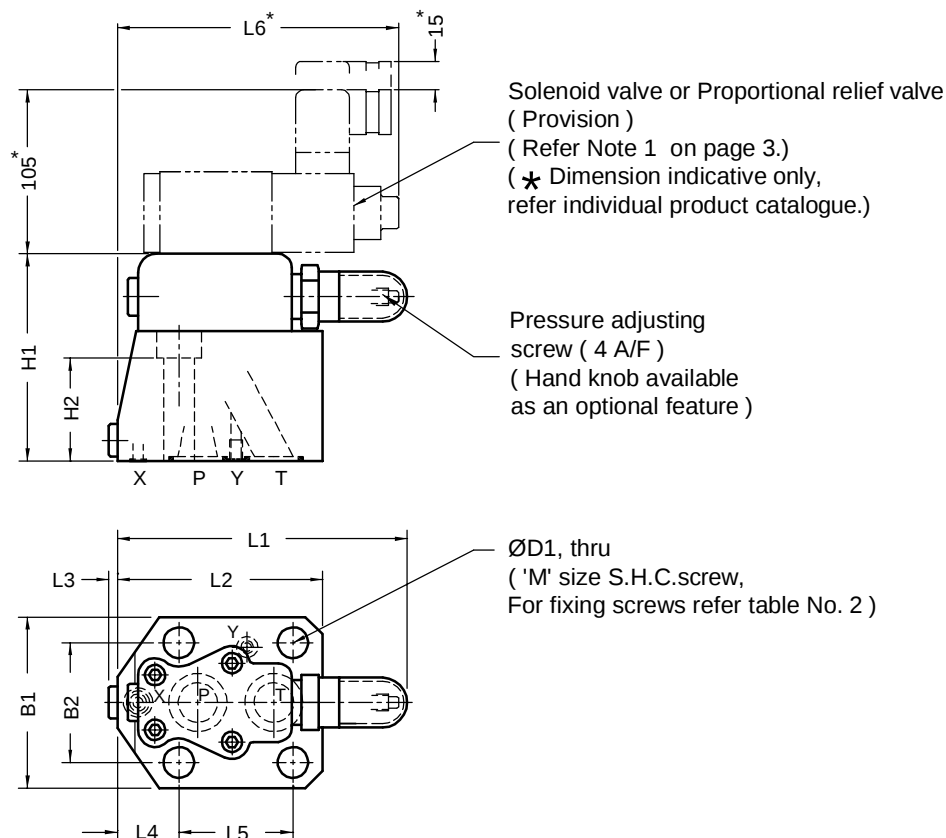
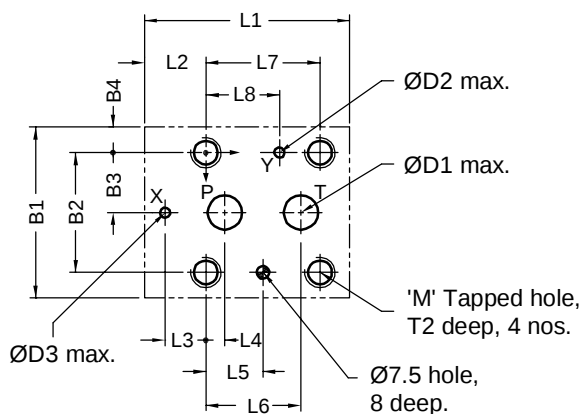


Table No. 2

| Size | H1  | H2 | L1  | L2  | L3 | L4   | L5   | L6    | ØD1 | B1  | B2   | Mass<br>kg | M<br>Valve fixing Screws                   | Tightening<br>Torque |
|------|-----|----|-----|-----|----|------|------|-------|-----|-----|------|------------|--------------------------------------------|----------------------|
| 10   | 120 | 82 | 150 | 80  | 4  | 12.9 | 53.8 | 142   | 13  | 80  | 53.8 | 4.8        | M12 x 100 L - 4 nos.                       | 125 Nm               |
| 20   | 115 | 66 | 167 | 120 | 4  | 35.9 | 66.7 | 163   | 18  | 100 | 70   | 6.7        | M16 x 90 L - 2 nos.<br>M16 x 50 L - 2 nos. | 300 Nm               |
| 30   | 143 | 93 | 182 | 155 | 4  | 47.3 | 88.9 | 178.5 | 20  | 120 | 82.6 | 12         | M18 x 120 L - 4 nos.                       | 500 Nm               |



### Interface details

Note : Surface roughness : Ra value is equal to or better than 0.8 µm  
Surface flatness : 0.01 - 100 mm.

Table No. 3

| Size | L1  | L2   | L3   | L4   | L5   | L6   | L7   | L8   | B1  | B2   | B3   | B4   | ØD1 | ØD2 | ØD3 | M   | T2 |
|------|-----|------|------|------|------|------|------|------|-----|------|------|------|-----|-----|-----|-----|----|
| 10   | 80  | 12.9 | 0    | 22.1 | 22.1 | 47.5 | 53.8 | 31.8 | 80  | 53.8 | 26.9 | 13.1 | 13  | 4.8 | 4.8 | M12 | 22 |
| 20   | 120 | 35.9 | 23.8 | 11.1 | 33.4 | 55.6 | 66.7 | 43.7 | 100 | 70   | 35   | 15   | 23  | 6.3 | 6.3 | M16 | 26 |
| 30   | 155 | 47.3 | 31.8 | 12.7 | 44.5 | 76.2 | 88.9 | 54.9 | 120 | 82.6 | 41.3 | 18.7 | 32  | 6.3 | 6.3 | M18 | 30 |

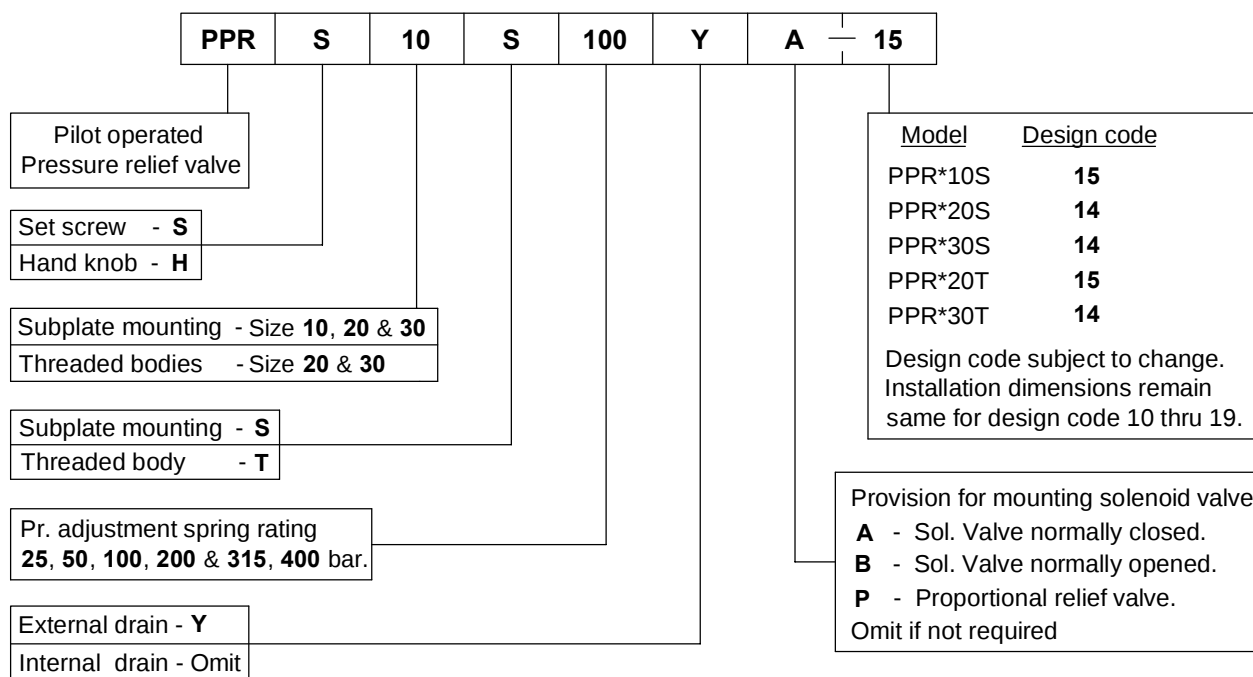


## Technical specifications

|                                                      |                                                                             |
|------------------------------------------------------|-----------------------------------------------------------------------------|
| Construction .....                                   | Two stage poppet valve.                                                     |
| Mounting .....                                       | Threaded bodies - Company standards                                         |
|                                                      | Subplate mounting - ISO6264.                                                |
| Mounting position .....                              | Optional.                                                                   |
| Flow direction .....                                 | From port P to port T.                                                      |
| Maximum Operating pressure                           |                                                                             |
| For port P and X .....                               | 315 bar.                                                                    |
| For port T and Y .....                               | 210 bar.                                                                    |
| ( For model with solenoid valve mounting provision ) |                                                                             |
| For port T and Y.....                                | Max. pressure is equal to tank port pressure rating of the valve mounted. ★ |
| Hydraulic medium .....                               | Mineral oil.                                                                |
| Viscosity range .....                                | 10 cSt to 380 cSt                                                           |
| Fluid temperature range .....                        | -20°C to +70°C                                                              |
| Fluid cleanliness requirement .....                  | ISO 4406 20/18/15 or better.                                                |
| Maximum flow handling capacity .....                 | For valve size                                                              |
|                                                      | 10 .....100 l/min                                                           |
|                                                      | 20 .....200 l/min                                                           |
|                                                      | 30 .....400 l/min                                                           |
| Mass .....                                           | Refer individual table.                                                     |

★ Port pressure is additive to the setting of the valve.

## Ordering code



Note : Solenoid ( refer spool type ) and Subplate to be ordered separately.

