

# RPC\*

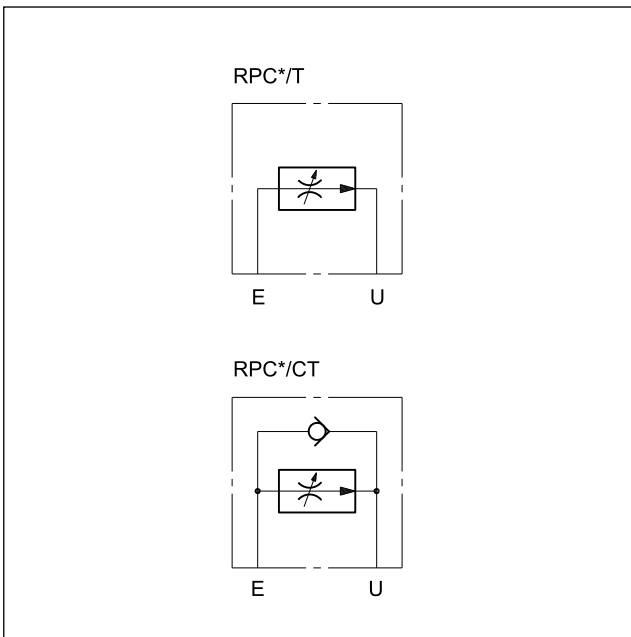
## PRESSURE AND TEMPERATURE COMPENSATED FLOW CONTROL VALVES



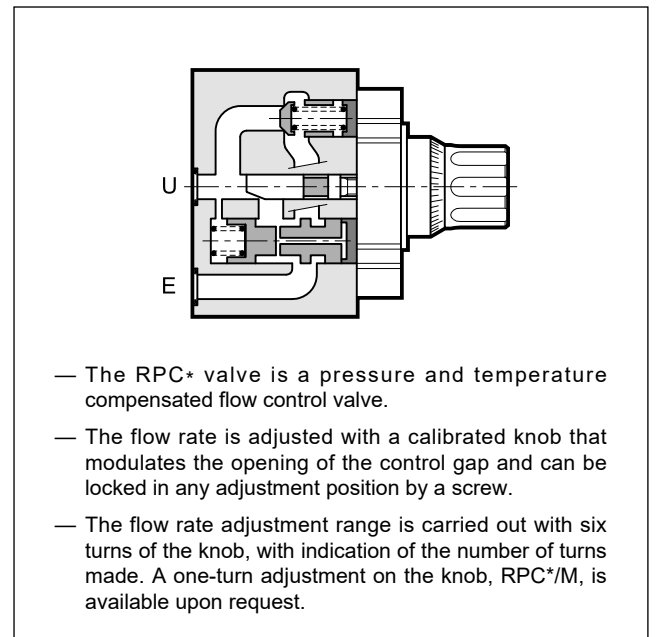
### SUBPLATE MOUNTING

RPC2      ISO 6263-06  
RPC3      ISO 6263-07

### HYDRAULIC SYMBOL



### OPERATING PRINCIPLE

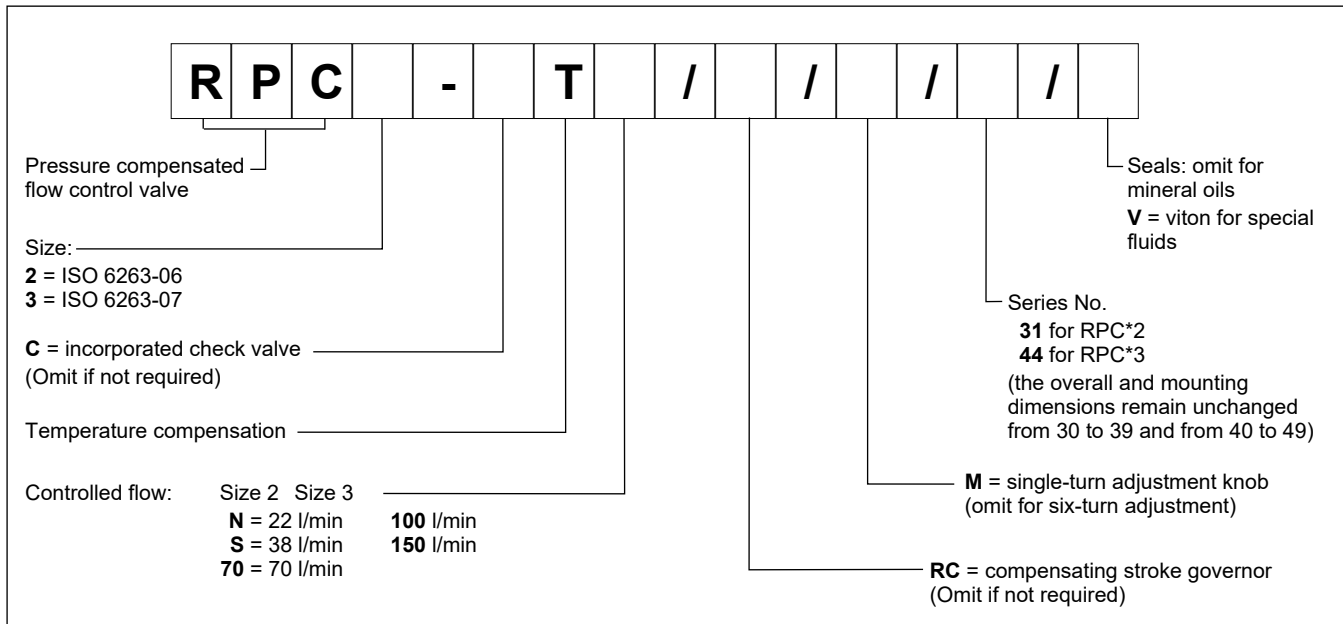


### PERFORMANCES

(obtained with mineral oil with viscosity of 36 cSt at 50°C)

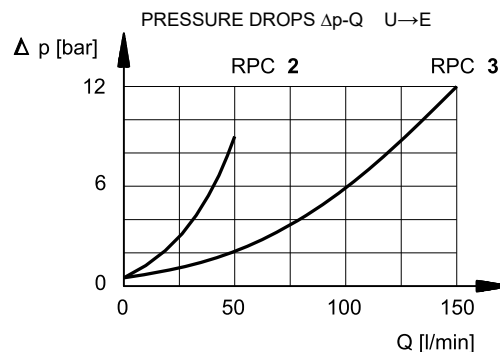
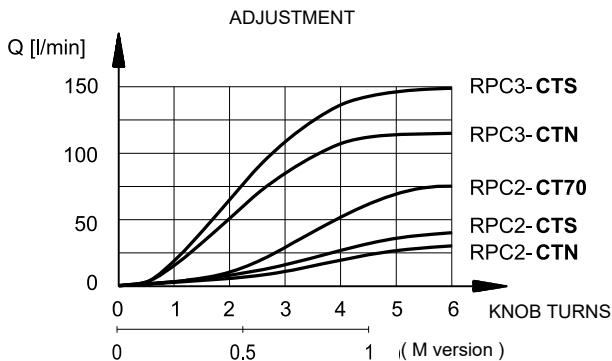
|   |       | RPC2                                      | RPC3      |
|---|-------|---|-----------|
| Maximum operating pressure                  | bar   | 320                                       | 250       |
| Check valve cracking pressure               |       | 0,5                                       | 0,5       |
| Minimum pressure difference between E and U |       | 10  | 12        |
| Maximum controlled flow rates               | l/min | 22 - 38 - 70                              | 100 - 150 |
| Minimum controlled flow rate                |       | 0,050                                     | 0,120     |
| Ambient temperature range                   | °C    | -20 / +60                                 |           |
| Fluid temperature range                     | °C    | -20 / +80                                 |           |
| Fluid viscosity range                       | cSt   | 10 + 400                                  |           |
| Fluid contamination degree                  |       | According to ISO 4406:1999 class 20/18/15 |           |
| Recommended viscosity                       | cSt   | 25  |           |
| Mass  | kg    | 3,6                                       | 7,8       |

## 1 - IDENTIFICATION CODE



## 2 - CHARACTERISTIC CURVES

(values obtained with viscosity of 36 cSt at 50°C)



## 3 - HYDRAULIC FLUIDS

Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V).

For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department. Using fluids at temperatures higher than 80 °C causes a faster degradation of the fluid and of the seals characteristics.

The fluid must be preserved in its physical and chemical characteristics.

## 4 - PRESSURE COMPENSATION

Two throttles in series are in the valve. The first is an opening regulated by the knob; the second, piloted by the pressure upstream and downstream of the first throttle, assures a constant pressure drop across the adjustable throttle.

In these conditions, the set flow rate value stays constant within a tolerance range of  $\pm 3\%$  of the maximum flow controlled by the valve for the maximum pressure variation between inlet and outlet chambers of the valve.

## 5 - TEMPERATURE COMPENSATION

A device located on the first throttle which is sensitive to the temperature fluctuations corrects the position keeping the controlled flow more or less unaltered even should the oil viscosity change.

The fluctuation of the set flow rate stays within  $\pm 2,5\%$  of the maximum flow controlled by the valve.

## 6 - REVERSE FREE FLOW

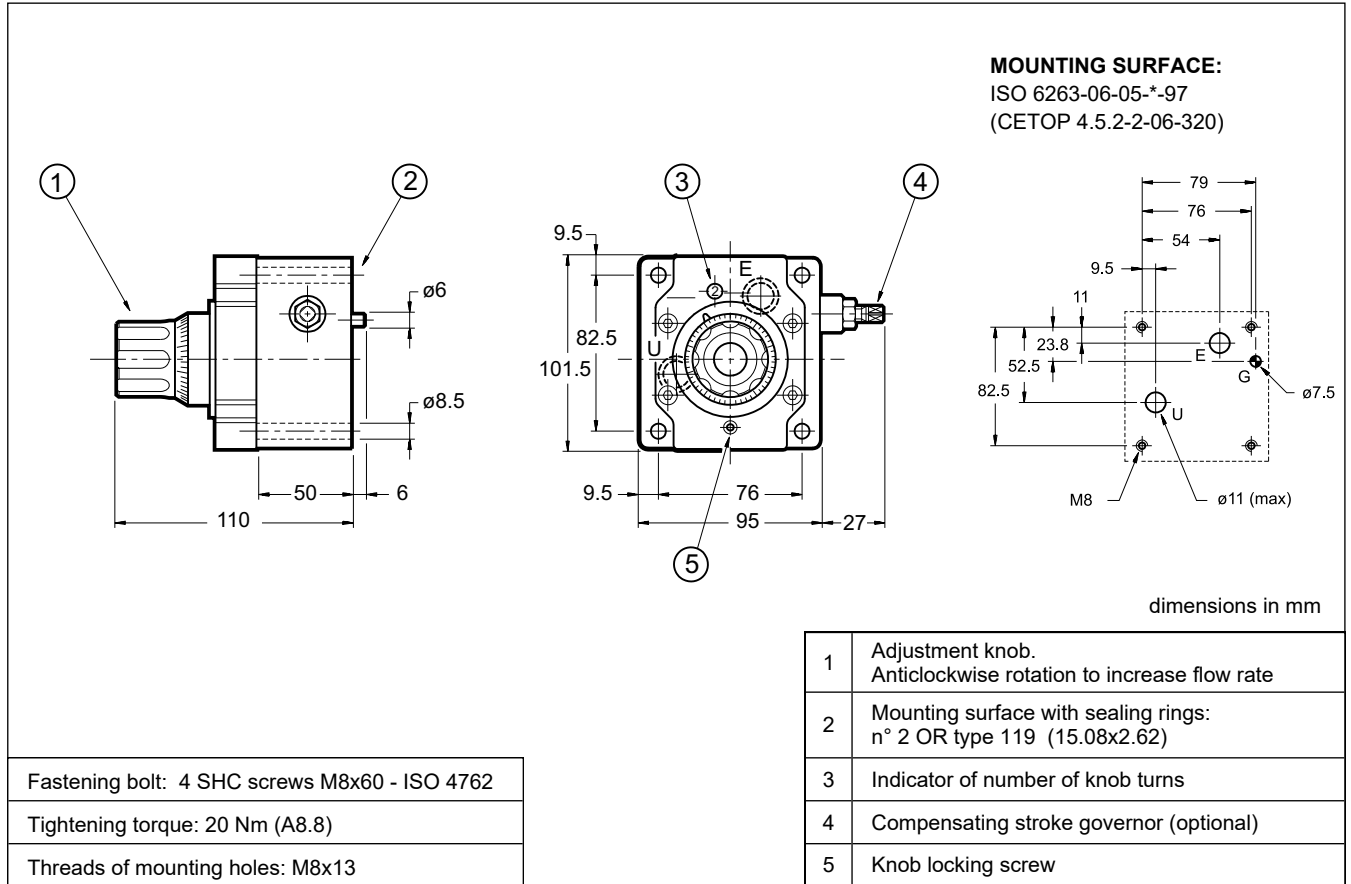
The RPC\* valves, upon request, are supplied with an incorporated check valve to allow free flow in the direction opposite of the controlled flow. In this case the valve code becomes RPC\*-CT.

## 7 - COMPENSATING STROKE GOVERNOR

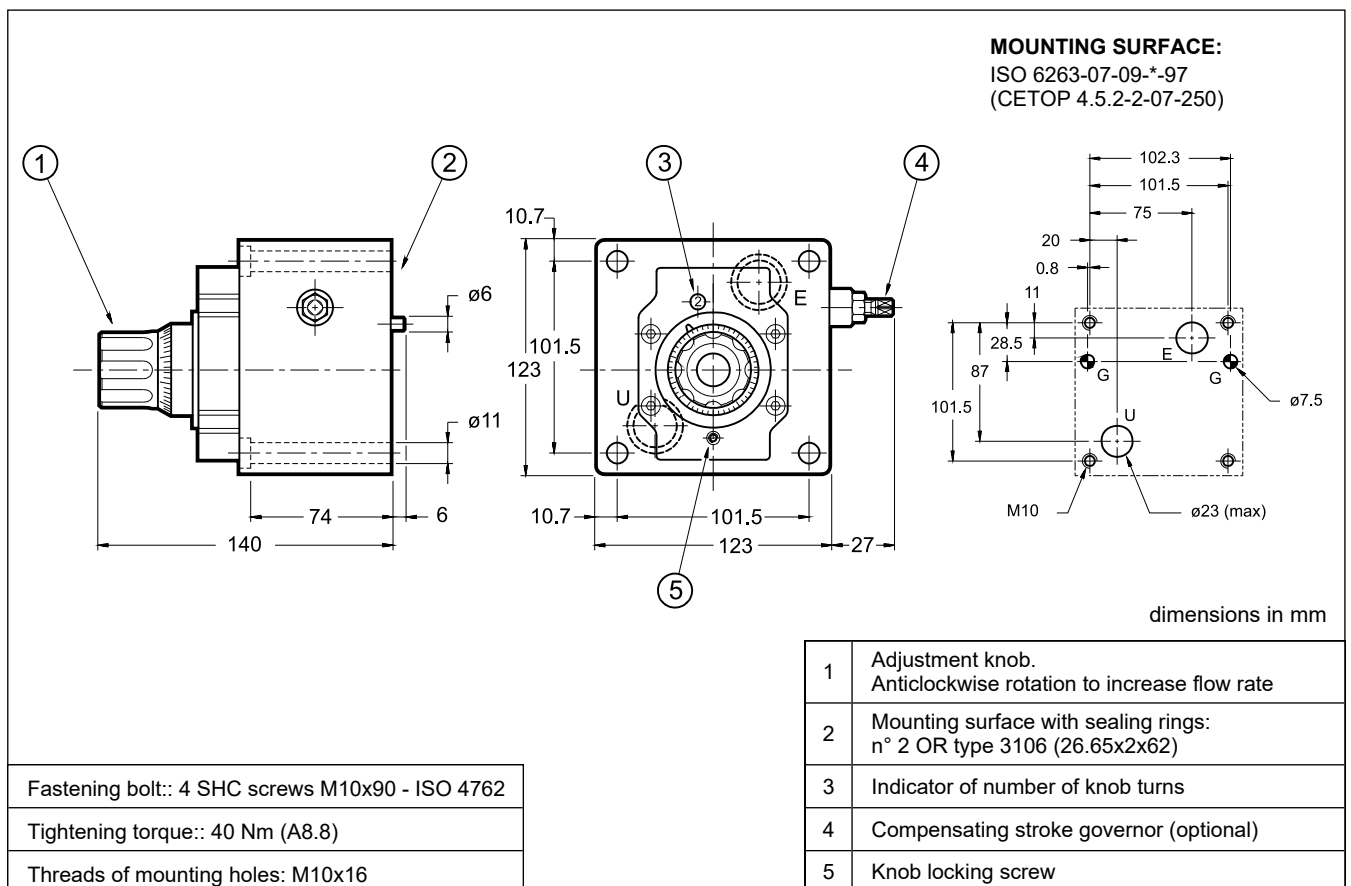
In order to avoid jumps in the actuator when it is started, the RPC valve can be equipped with a special accessory that controls the compensating stroke, thus preventing it from making uncontrolled movements.

Add the suffix **RC** to the identification code to request this governor. See paragraph 1.

8 - RPC2 OVERALL AND MOUNTING DIMENSIONS



9 - RPC3 OVERALL AND MOUNTING DIMENSIONS





## 10 - SUBPLATES

(see catalogue 51 000)

|                 | <b>RPC2</b>               | <b>RPC3</b>               |
|-----------------|---------------------------|---------------------------|
| Type            | PMRPC2-AI4G<br>rear ports | PMRPC3-AI6G<br>rear ports |
| Port dimensions | 1/2" BSP                  | 1" BSP                    |