Part number:

HYDROMA
HYDRAULICKÉ SYSTÉMY

HIDROMA SISTEMS
UKŁADY HYDRAULICZNE

HYDROMA
ГИДРАВЛИЧЕСКИЕ СИСТЕМЫ



# CRQ

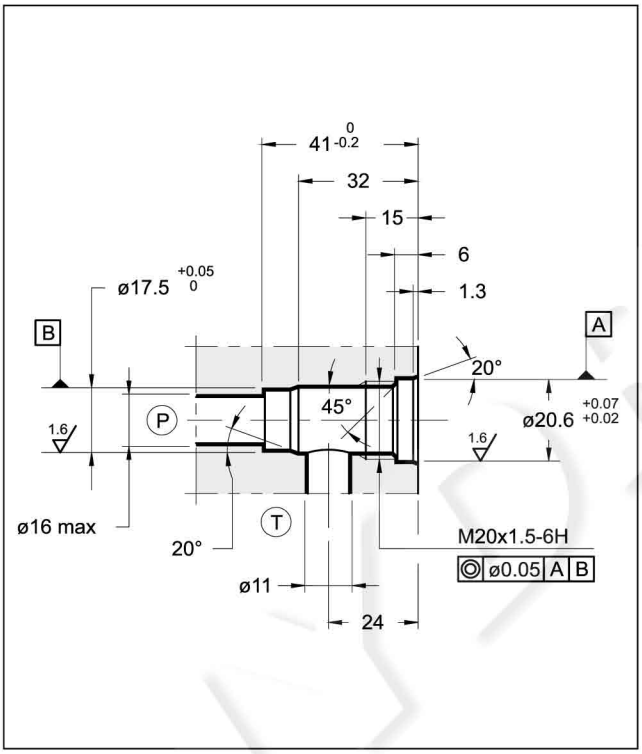
## PILOT OPERATED PRESSURE CONTROL VALVE

### SERIES 12

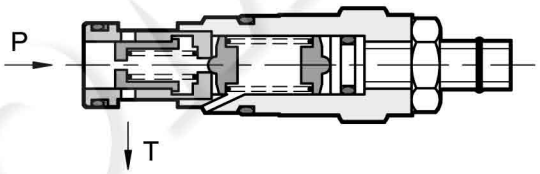
## CARTRIDGE TYPE

**p** max **350** bar
**Q** max **100** l/min

### SEAT DIMENSIONS: D-10C




### OPERATING PRINCIPLE




— The CRQ valve is a pilot operated pressure control valve cartridge type that can be used in blocks or panels with D-10C type seat.

— It is normally used to control the hydraulic circuit pressure and allows use of the entire flow of the pump even at pressure values near the set value.

— It is available in four different pressure control ranges up to 350 bar.

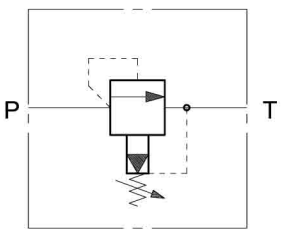
— It consists of a main balanced type spool and a pilot stage. The main spool, normally closed, opens when the circuit pressure exceeds the set value generated by the pilot stage, discharging the excess flow in port T, directly connected to the tank.

— The pressure is adjustable with a screw, usually supplied as the countersunk hex type, equipped with locking nut and with maximum adjustment limiter.

### PERFORMANCES (measured with mineral oil of viscosity 36 cSt at 50°C)

| | | |
|---|---|---|
| Max working pressure | bar | 350 |
| Minimum controlled pressure and pressure drop | see diagram | |
| Maximum flow rate | l/min | 100 |
| 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 | 0,16 |
| Surface treatment:electrolytic zinc covering | Fe/Zn 8/B ISO 2081 | |

### HYDRAULIC SYMBOL



## 1 - IDENTIFICATION CODE

| C | R | Q | | / | | / | 12 | / | |
|---|---|---|---|---|---|---|---|---|---|

Pilot operated pressure control valve
Cartridge type

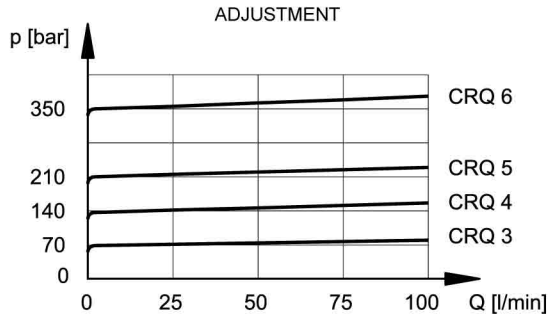
Pressure adjustment range:
**3** = up to 70 bar
**4** = up to 140 bar
**5** = up to 210 bar
**6** = up to 350 bar

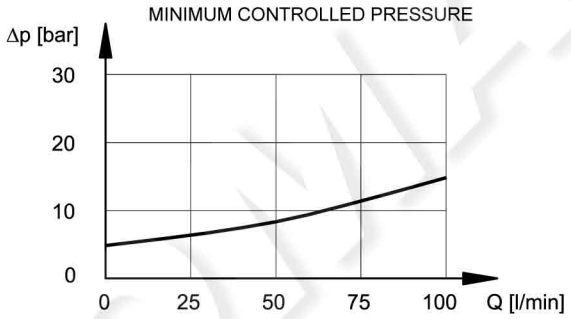
**M1** = Adjustment knob
(omit for adjustment with countersunk hex screw)

Series No. (the overall and mounting dimensions remain unchanged from 10 to 19)

Seals: omit for mineral oils
**V** = viton for special fluids

## 2 - CHARACTERISTIC CURVES (values obtained with viscosity of 36 cSt at 50°C)

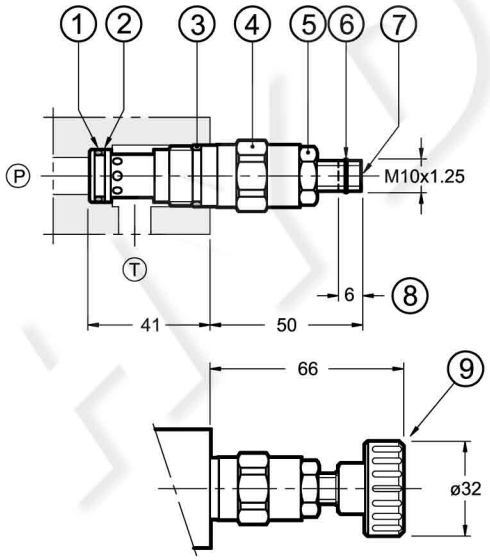



## 3 - HYDRAULIC FLUIDS

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 - OVERALL AND MOUNTING DIMENSIONS




dimensions in mm

| | |
|---|---|
| 1 | OR type 2056 (14.00x1.78)<br>90 Shore |
| 2 | Parbak 8-015 (14.81x1.14x1.35) |
| 3 | OR type 3062 (15.54x2.62)<br>90 Shore |
| 4 | Hexagonal: spanner 22<br>Tightening torque 45 ÷ 50 Nm |
| 5 | Locking nut: spanner 17 |
| 6 | Maximum adjustment limiting device |
| 7 | Countersunk hex adjustment screw: spanner 5<br>Clockwise rotation to increase pressure |
| 8 | Maximum screw stroke |
| 9 | Adjustment knob: M1 |