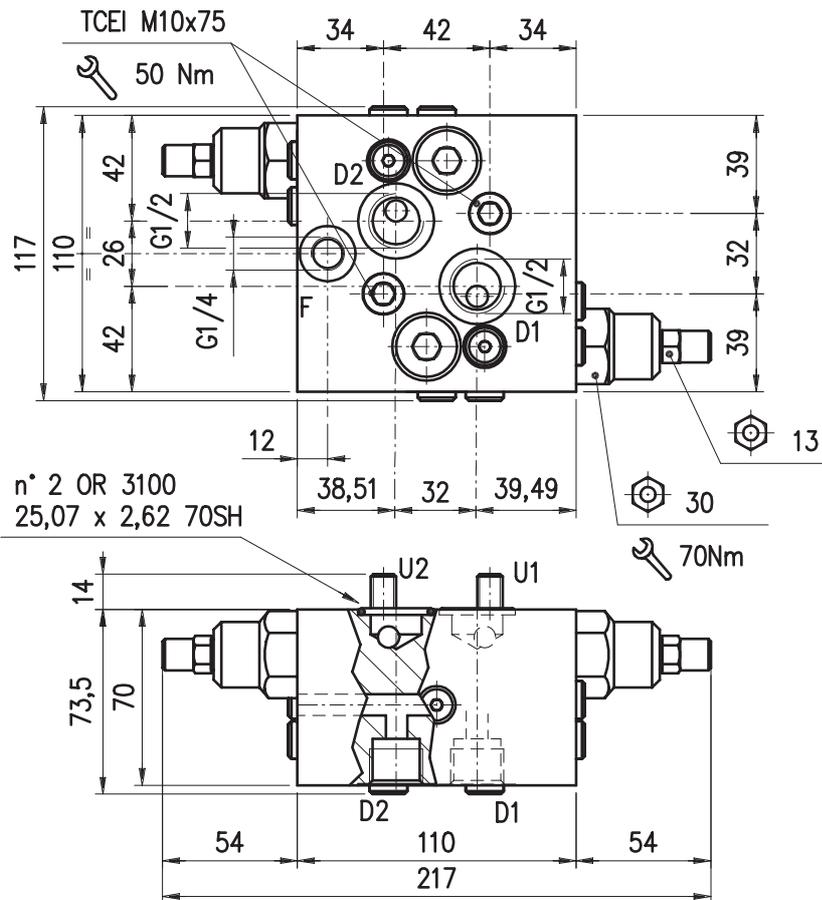


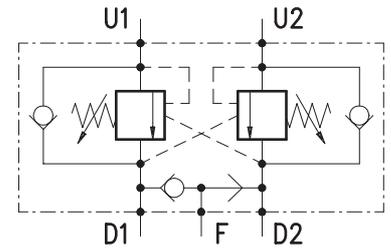
# OVERCENTER VALVES (DANFOSS MOTOR) VODL/SC/F/A 12/OMS



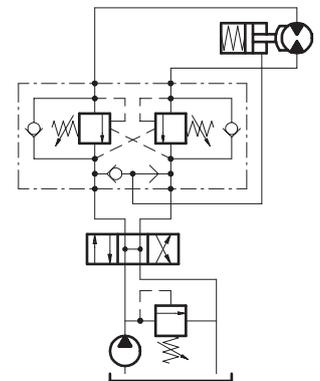
## • DIMENSIONS (mm)



## • HYDRAULIC DIAGRAM



## • ASSEMBLY DIAGRAM



## • DESCRIPTION

Dual overcenter valves, face mounting for Sauer Danfoss motor OMS series with connection gate for hydraulic brake release.

## • OPERATION

The oil flow is allowed from D1 (D2) to U1 (U2) and is stopped in the opposite way from U1 (U2) to D1 (D2) up to the spring setting value. Free oil flow from U1 (U2) to D1 (D2) is strictly possible when the pilot pressure in D2 and U2 (D1 and U1) is strong enough to pilot the valve poppet.

Use the following formula to assert the applicable pilot pressure:

$$(\text{valve setting} - \text{load pressure}) \div \text{pilot ratio} = \text{pilot pressure}$$

For example:

If your pilot ratio is 1:3, your setting pressure is 250 bar and your load pressure is 130 bar then you will need 30 bar pilot pressure in order to displace the load.  $[(250 \text{ bar} - 130 \text{ bar}) \div 3 = 40 \text{ bar}]$ .

Should counterpressure arise in D1 (D2), the setting value of valve poppet (1:1 ratio) will increase and the pilot pressure be negatively affected (1:1 ratio).

The special shuttle valve allows releasing of the hydraulic parking brakes.

## • PERFORMANCE

**Maximum flow:** 70 l/min

**Maximum Pressure:**

- Aluminium body: 210 bar
- Steel body: 350 bar

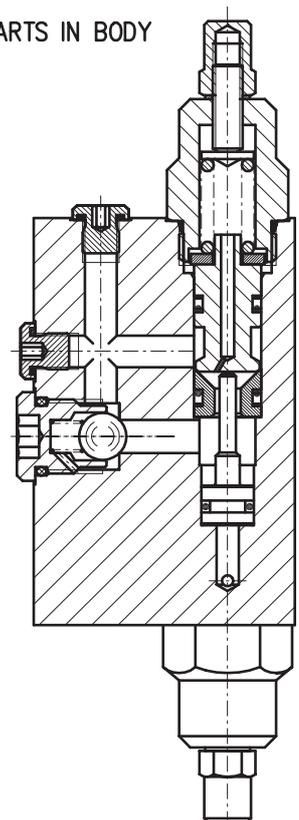
**Application range with standard springs:**

- 5 - 210 bar pressure increase = 36 bar/turn (test setting: 170 bar at 5 l/min)
- 50 - 350 bar pressure increase = 90 bar/turn (test setting: 280 bar at 5 l/min) STANDARD

**Oil leaks from U1 (U2) to D1 (D2):** 0.25 cc/minute (5 drops) at 210 bar and 80% of the spring setting value with oil viscosity of 46 cSt

## • CROSS SECTION

PARTS IN BODY



**Pilot ratio:**

- 1:3 (standard type)
- 1:7 (on request only)

**Working temperature:**

- Minimum -25°C max 90°C with standard BUNAN gaskets
- Minimum -20°C max 200°C with optional VITON gaskets

**Spare parts KIT:** Screws and Seals (Ordering code: 5KTM0OMS05)

**• RECOMMENDATIONS**

**Fluid:** best use mineral oil with viscosity ranging between 10 and 200 cSt

**Filter:** see page Z.9000.000.

**Weight:**

- aluminium valves 2.7 kg
- steel valves 5.7 kg

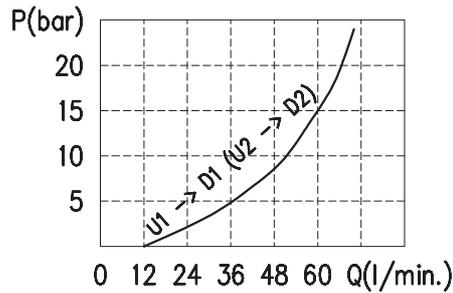
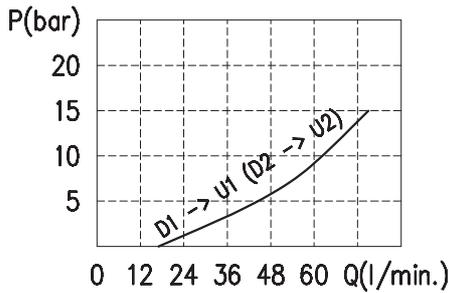
**Material:** made out of high-grade steel duly treated and fabricated.

For more information please ask our technical office.

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**• RATING DIAGRAMS**



Oil viscosity 46 cSt

**• CODE NUMBER**

VODL / SC / F/A 12 / OMS/□□ . S . □□ . PG . □□ / □□

