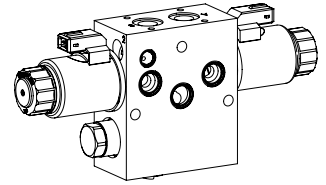


Control Section CMVA-MC06-...-P

Directional control valve section, with pressure compensator, proportional, with load sensing

- ◆ $Q_{max} = 60 \text{ l/min}$
- ◆ Various volume flow levels
- ◆ $p_{max} = 250 \text{ bar}$



DESCRIPTION

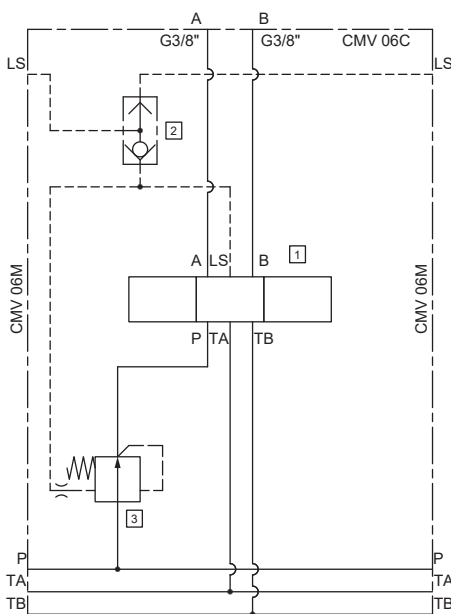
Direct operated, proportional directional spool valve in sectional design, with combined individual pressure compensator and integrated LS port. The volume flow adjustment takes place by a Wandfluh proportional solenoid. Proportional to the solenoid current, the spool stroke, the spool opening and the valve volume flow increase. The individual pressure compensator is used to adjust the pressure drop across the inlet control edge in the range of 5-15 bar. This keeps the pressure drop and thus the volume flow to the actuator constant, independently of the inlet or load pressure. For the control, Wandfluh proportional amplifiers are available (see register 1.13). Additional functions can be flanged directly to the actuator side. The appropriate mounting interface must be provided (see type code).

APPLICATION

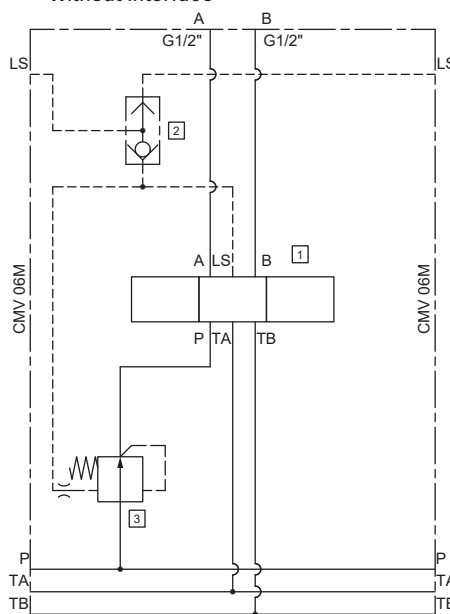
Directional control valve sections with integrated LS connection have been specially developed for mobile applications and are characterised by high performance and flexibility at a low weight. They are suitable for demanding tasks where the volume flow to the consumer must be controlled independently of the load conditions of the other sections, thanks to their good resolution and low hysteresis. These valves are typically used in agricultural, construction and municipal machinery, as well as in material handling equipment, where hydraulic drives need to be controlled sensitively, softly and in a controlled manner.

SYMBOL

A+B G3/8" with interface CMV
06C for additional functions



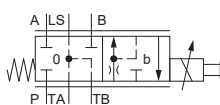
A+B G1/2" without interface



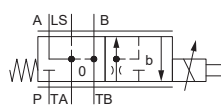
Designs of spool valve

6/2-way execution

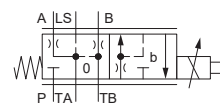
CB2-V



DB2-V

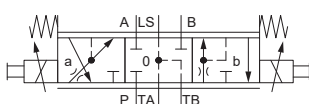


OB2-V

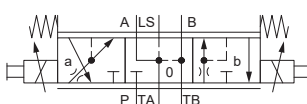


6/3-way execution

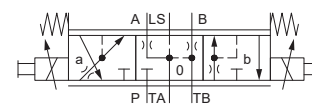
ACB-V



ADB-V



AOB-V



TYPE CODE

Control Section MC06

Material	A	Aluminium
Modul Description	MC06	Control Section with CMV LS installation kit 06, with pressure compensator
Connections for actuators A+B		
Threaded BSP 3/8" connections with CMV-06 interface for additional functions	A	
Threaded connections BSP 1/2" without interface	B	
Sealing material	D0	NBR
Proportional solenoid		
Designation of symbols according to table		
Forward flow control		
Nominal volume flow rate Q_N at Δp 10 bar	4 l/min	04
	16 l/min	16
	32 l/min	32
	48 l/min	48
Pressure range pressure compensator	5 bar	05
	10 bar	10
	15 bar	15
	adjustable 5 to 15 bar	05/15
Coil	without coil (standard)	X5 (available coils see below)
Manual override	actuation pin integrated in armature tube (standard)	
Design index (subject to change)		

4.1-30

AVAILABLE COILS

Order separate. See data sheet 1.1-182.

		DC current	
		12 VDC	24 VDC
Connector socket DIN EN 175301-803/ISO 4400	D: IP65	WDE45/23x50-G12	WDE45/23x50-G24
Connector Deutsch DT04-2P	G: IP67 and IP69K	WGE45/23x50-G12	WGE45/23x50-G24
Connector socket AMP Junior-Timer axial	I: IP66	WIE45/23x50-G12	WIE45/23x50-G24
Connector socket AMP Junior-Timer radial	J: IP66	WJE45/23x50-G12	WJE45/23x50-G24
Relative duty factor	100 % ED		
Limiting current at 50 °C	$I_G = 905 \text{ mA}$ ($U_N = 24 \text{ VDC}$) $I_G = 1750 \text{ mA}$ ($U_N = 12 \text{ VDC}$)		

Note! Other electrical specifications see data sheet 1.1-182



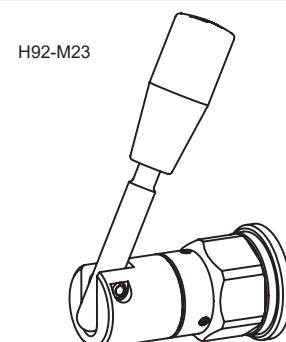
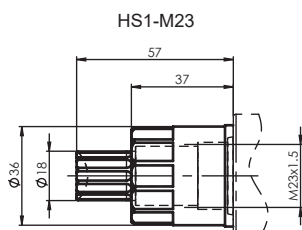
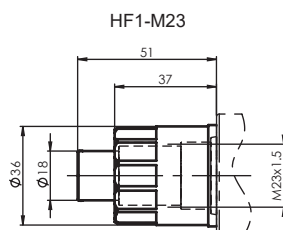
OPTIONAL MANUAL OVERRIDES

Order separate. See data sheet 1.1-312. Instead of the knurled nut, it is mounted on the anchor tube.

HF1-M23 push button

HS1-M23 spindle

H92-M23 hand lever (TFS 1.1)



GENERAL SPECIFICATIONS

Designation	Proportional spool valve
Construction	Direct operated
Mounting	Sectional design
Nominal size	CMVA-06
Actuation	Proportional solenoid
Ambient temperature	-25...+50 °C
Weight	2.05 kg (6/2-way execution) 2.65 kg (6/3-way execution) (incl. solenoids, excl. IDW)

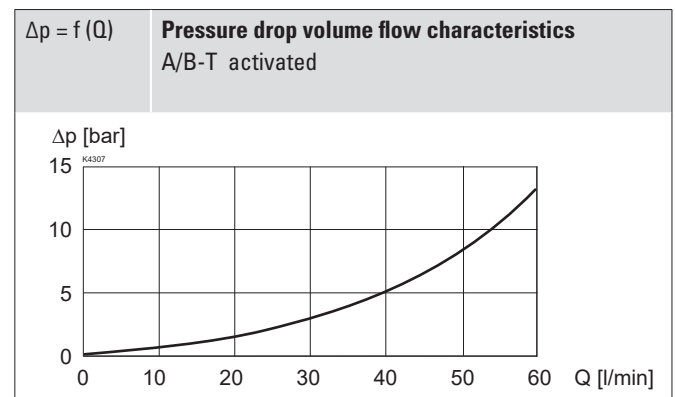
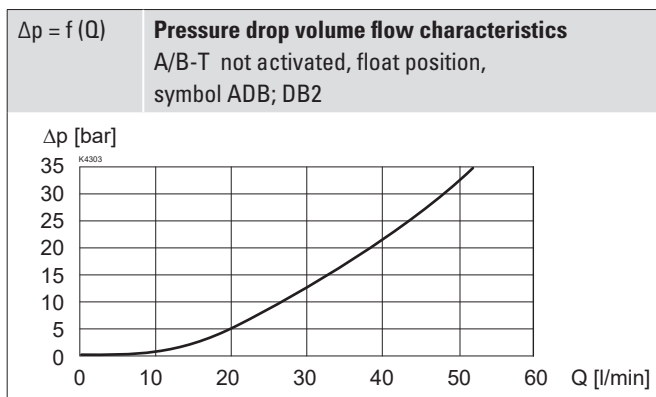
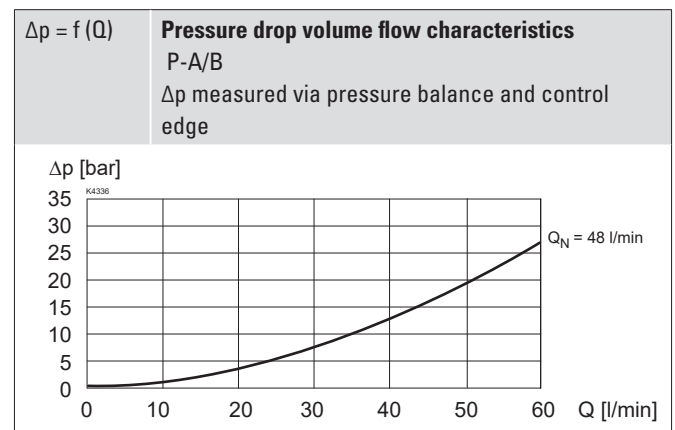
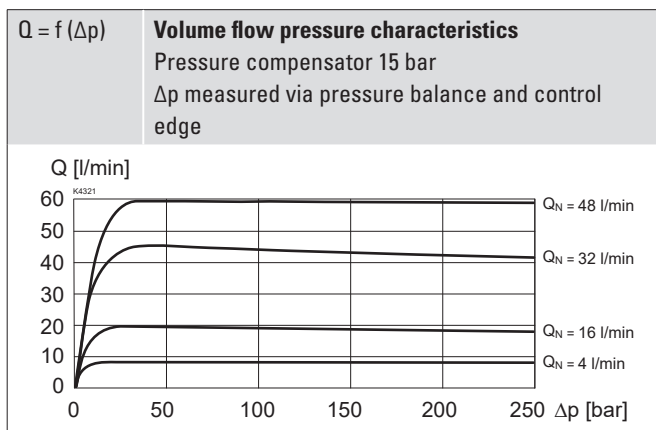
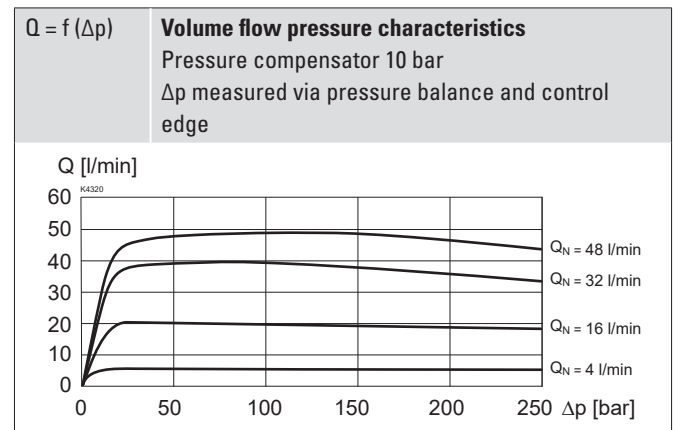
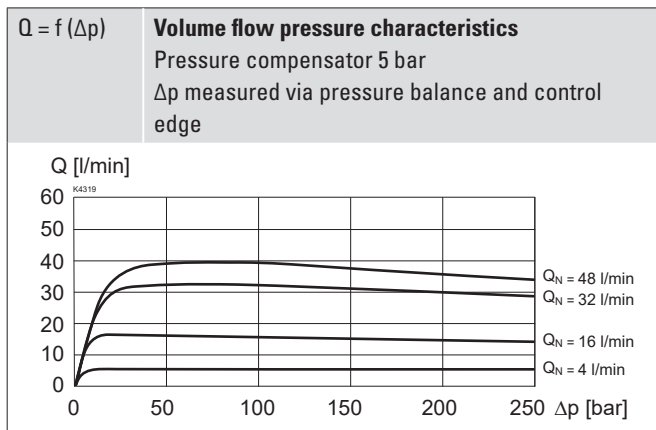
HYDRAULIC SPECIFICATIONS

Working pressure	$p_{\max} = 250 \text{ bar}$
Maximum volume flow	$Q_{\max} = 60 \text{ l/min}$
Nominal volume flow	
Leakage oil	On request
Hysteresis	$\leq 5 \%$ at optimal dither signal
Fluid	Mineral oil, other fluid on request
Viscosity range	12 mm ² /s...320 mm ² /s
Temperature range fluid	-25...+70 °C
Contamination efficiency	Class 18 / 16 / 13
Filtration	Required filtration grade $\beta_{6...10} \geq 75$, see data sheet 1.0-50

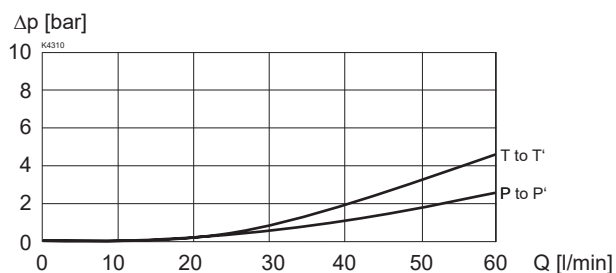
PERFORMANCE SPECIFICATIONS

Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

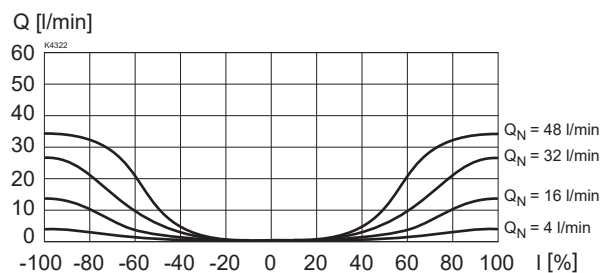
Measured with limiting current at 50° C = 905 mA ($U_N = 24\text{VDC}$) / 1750 mA ($U_N = 12\text{VDC}$)



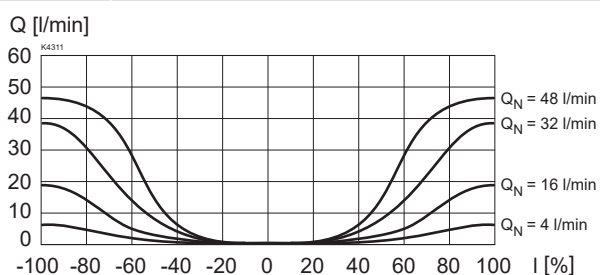
$\Delta p = f(Q)$ **Pressure drop volume flow characteristics**
via P and T port



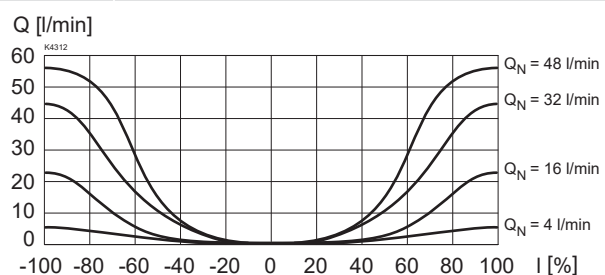
$Q = f(I)$ **Volume flow adjustment characteristics**
 $\Delta p = 5 \text{ bar}$



$Q = f(I)$ **Volume flow adjustment characteristics**
 $\Delta p = 10 \text{ bar}$

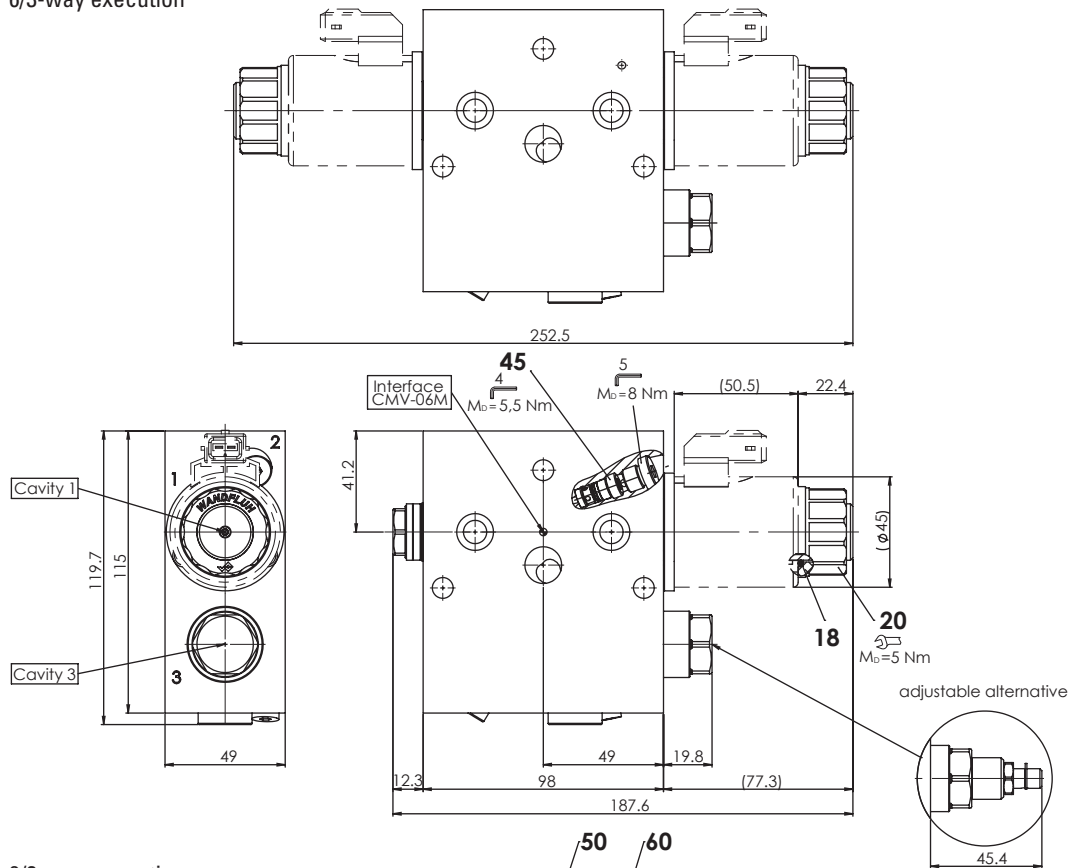


$Q = f(I)$ **Volume flow adjustment characteristics**
 $\Delta p = 15 \text{ bar}$

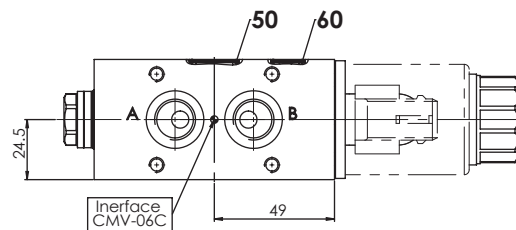


DIMENSIONS

6/3-way execution

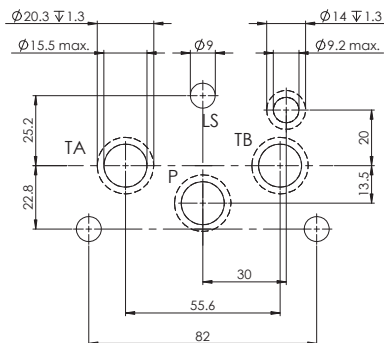


6/2-way execution

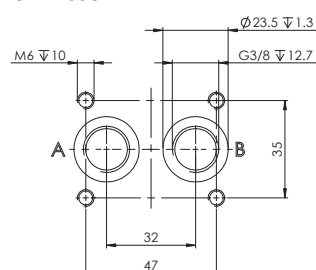


HYDRAULIC CONNECTION

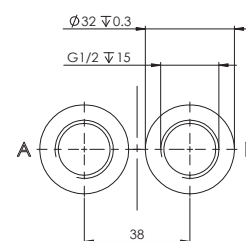
Main connections
CMV-06M



A+B G3/8"
with interface for additional functions
CMV-06C



A+B G1/2"
without interface



PARTS LIST

Position	Article	Description
45	106198	Shuttle valve
20	154.2701	Knurled nut M23 x 1,5 x 19,7
	107145	Seal kit CMV.-MA06-D0
		Seal kit consisting of:
18		O-ring ID 22,22 x 2,62
50		O-ring ID 17,17 x 1,78
60		O-ring ID 10,82 x 1,78

SEALING MATERIAL

NBR or FKM (Viton) as standard, choice in the type code

INSTALLATION NOTES

Mounting type	Sectional mounting Three through holes for M8 Screws / threaded tie rods
Mounting position	Any, preferably horizontal
Tightening torque	Fixing screws $M_0 = 23,5 \text{ Nm}$ (screw quality 8,8, zinc coated) $M_0 = 5 \text{ Nm}$ knurled nut

SURFACE TREATMENT

- ◆ The external steel parts are zink/nickel coated
- ◆ The aluminium housings are untreated

ACCESSORIES

Mating connector grey (A)	Article no. 219.2001
Mating connector black (B)	Article no. 219.2002
Proportional amplifier	Register 1.13

STANDARDS / TECHNICAL INFORMATION

Contamination efficiency	ISO 4406
Filtration	Data sheet 1.0-50
Technical explanations	Data sheet 1.0-100
Relative duty factor	Data sheet 1.1-430