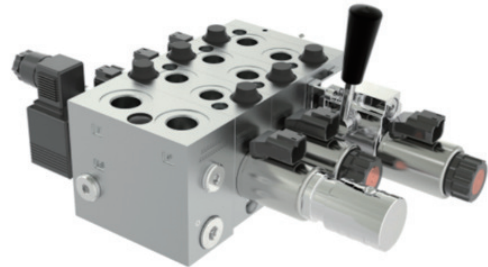


Data Sheet

CVG8 Compact Valve Group

General description CVG8 is an electrical direct actuated hydraulic, load-sensing proportional valve, designed especially for a more competitive solution for a small flow (<40 lpm) application. The CVG8 valve design includes a modular concept that enables machine designers to specify a valve solution across multiple production lines as a result in optimized and custom valve solutions across multiple applications.

- Features of CVG8**
- Load-independent flow control
 - Oil flow to an individual function is independent of the load pressure of this function.
 - Oil flow to one function is independent of the load pressure of other functions.
 - Good regulation characteristics
 - Energy-saving
 - Up to 8 basic modules per valve
 - Low weight
 - Compact design and installation
 - Manual override option



CVG8 Modules

CVP8, Pump side modules

- Built-in pressure relief valve
- Pressure gauge connection
- Versions:
 - Close center version for system with variable displacement pump, with PVPX
 - Close center version for system with variable displacement pump, without PVPX
 - Open center version for system with fixed displacement pump, with PVPX
 - Open center version for system with fixed displacement pump, without PVPX

CVB8, Basic modules

- Solenoid actuation
- Different interchangeable spool variants
- Interface plate to PVG32
- Integrated pressure compensator in P channel
- Depending on requirements the basic model can be supplied with:
 - Shock/suction valves for A and B ports.
 - Ls pressure limiting valves individually adjustable for ports A and B.

Actuation modules

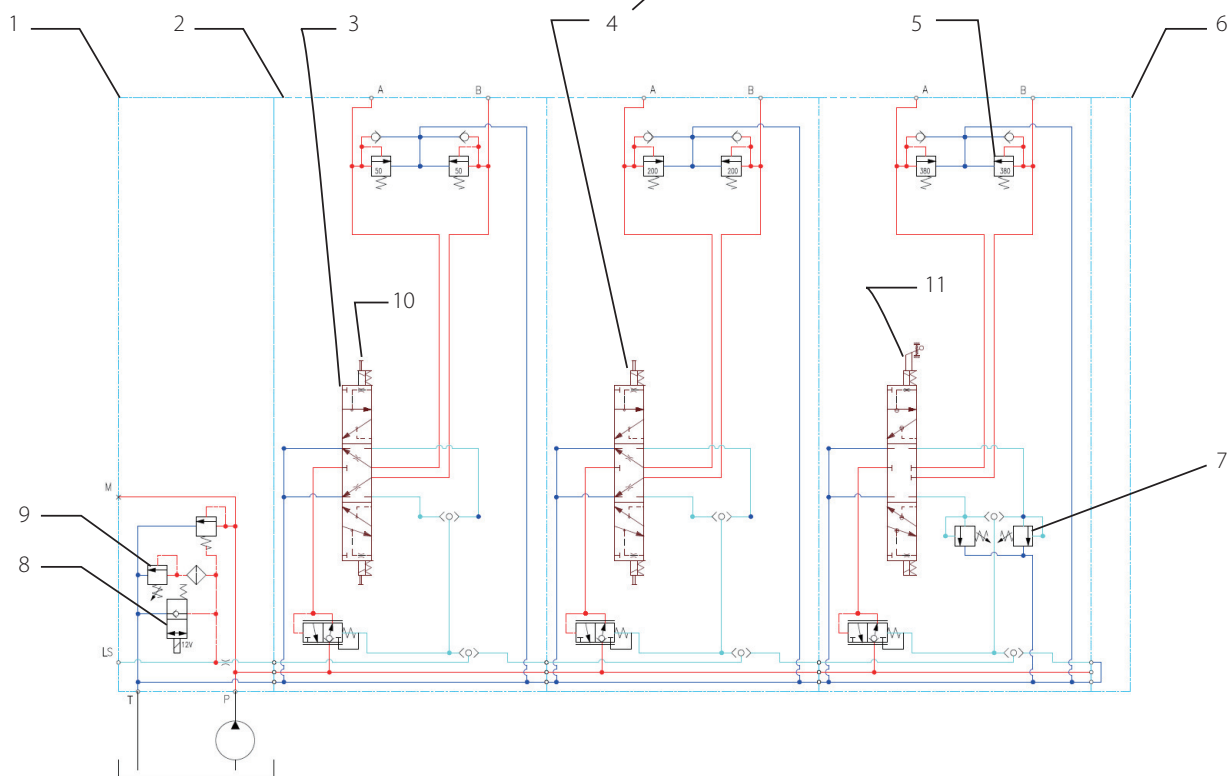
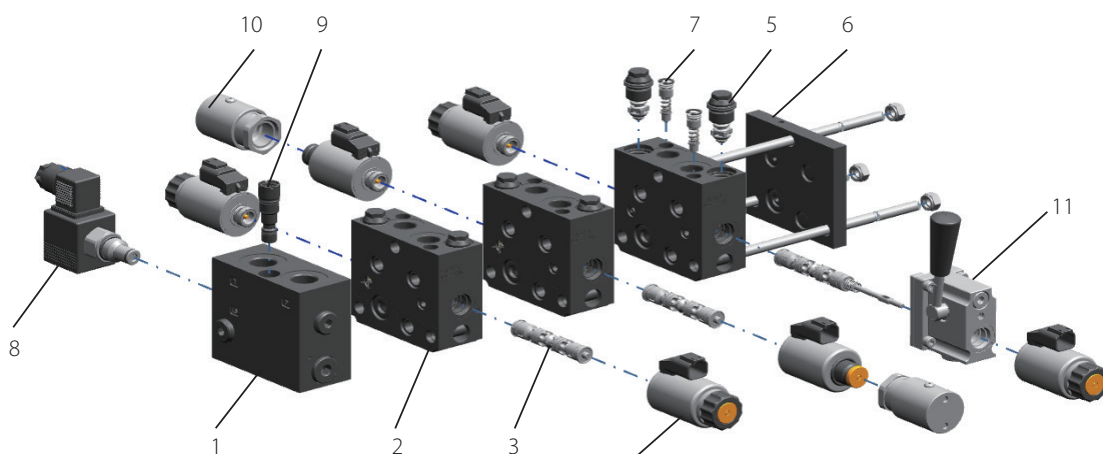
- 12V Deutsch, prop. / On-off
- 24V Deutsch, prop. / On-off

Technical Data

The characteristics in this datasheet are typical measured valves. During measuring a mineral based hydraulic oil with a viscosity of 22 ± 2 cSt at approx. 50°C.

Hydraulic			
Max. pressure	Port P/A/B(continuous)	350 bar	[5076 psi]
	Port P/A/B(intermittent)	400 bar	[5800 psi]
	Port T	100 bar	[1450 psi]
Max. rated flow	Port P	60 l/min	[15.8 gal]
Max. rated flow	Port A / B	40 l/min	[10.6 gal]
Spool travel	Proportional range	±2.2 mm	[±0.1 in]
Dead band	Standard	±0.6 mm	[±0.03 in]
Max. internal leakage at 100 bar [1450 psi]	A/B to T without shock valve	45 cm ³ /min	[2.7 in ³ /min]
	A/B to T with shock valve	50 cm ³ /min	[3 in ³ /min]
Oil temperature (Inlet)	Maximum	90°C	[194°F]
	Minimum	-20°C	[-4°F]
Recommend Ambient Temperature		-20 to 50°C	[-4°F to 122°F]
Filtration	Max. contamination (ISO 4406)	20/18/10	20/18/10
Oil Viscosity	Operating Range	12 - 75 mm ² /s	[65 - 347 SUS]
	Minimum	4 mm ² /s	[39 SUS]
	Maximum	460 mm ² /s	[2128 SUS]
Electrical (Proportional)			
Voltage Type	PWM	140 Hz (optional 80 Hz)	
Voltage Tolerance		-10% → +10% Rated Voltage	
Insulation Class		H	
Connector Type		Deu (IPX67)	
Coil Wire Temperature- Max (Recommended)		150°C	
Ambient Temperature		-20°C ~ 90°C	
Rated Voltage		12 V	24 V
The Maximum Current Allowable for The Operating Current		1.76 A	900 mA
Current Control Range at rated voltage (20°C)		850 mA ~ 1600 mA	425 mA ~ 800 mA
Coil Resistance (20°C)		3.7 Ω	14.2 Ω
Electrical (On/Off)			
Rated voltage		12 V	24 V
Voltage Tolerance		-10% → +10% Rated Voltage	
Insulation class		H	
Connector type		Deu (IPX67)	
Coil Wire Temperature- Max (Recommended)		150°C	
Ambient Temperature		-20°C ~ 90°C	
Coil Resistance (20°C)		7.2 Ω	28.8 Ω

CVG8 Structure & Schematic Configuration



- | | |
|---|--|
| 1. CVP8 Open Center, Intet Module | 7. Ls Relief Valve (Optional) |
| 2. CVB8, Basic Module | 8. PVPX-Electrical LS Unloading Valve (Optional) |
| 3. CVBS8, Main Spool | 9. Relief Valve with filter |
| 4. Actuator, PWM Signal, Proportional Control | 10. CVM-K |
| 5. PVLV-Shock and Suction Valve (Optional) | 11. CVM-Z |
| 6. CVS, End plate | |

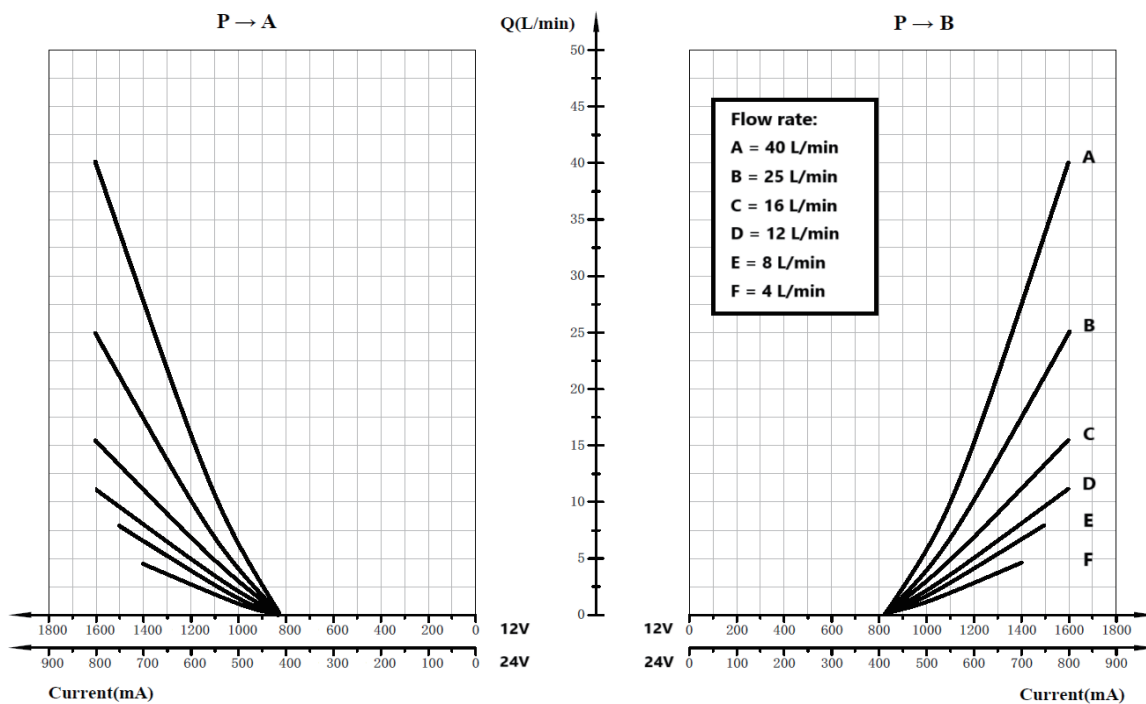
CVG Components List

Name	Part No	Description
CVP, Inlet Module	11329735	CVP8-OC
	11329718	CVP8-OC-PVPX
	11329736	CVP8-CC
	11329730	CVP8-CC-PVPX
CVB, Basic Module	11329756	CVB8
	11329745	CVB8 w. LS A/B
	11329746	CVB8 w. PVLP
	11329755	CVB8 w. LS A/B + PVLP
CVE, ACTUATOR	11340937	Proportional-12VDC-DT
	11340938	Proportional-24VDC-DT
	11341395	On/Off-12VDC-DT
	11341396	On/Off-24VDC-DT
CVM	11329690	CVM8-Z, handle type
	11335546	CVM8-K, Knob type
CVMD	11268696	Cover, when no actuator needed
Interface plate	11329741	For PVB32 and CVB
CVS, End Plate	11329747	CVS8
	11312463	CVS8 with Lx
	11329740	CVS8 for assembly with PVG32
CVBS, Spool	11329772	CVBS8-Spool-O4/FC4/FC4/O4-N
	11329766	CVBS8-Spool-C4/FC4/FC4/C4-N
	11329771	CVBS8-Spool-O8/FC8/FC8/O8-N
	11329765	CVBS8-Spool-C8/FC8/FC8/C8-N
	11329770	CVBS8-Spool-O12/FC12/FC12/O12-N
	11329764	CVBS8-Spool-C12/FC12/FC12/C12-N
	11329769	CVBS8-Spool-O16/FC16/FC16/O16-N
	11329763	CVBS8-Spool-C16/FC16/FC16/C16-N
	11329768	CVBS8-Spool-O25/FC25/FC25/O25-N
	11329762	CVBS8-Spool-C25/FC25/FC25/C25-N
	11329767	CVBS8-Spool-O40/FC40/FC40/O40-N
	11329720	CVBS8-Spool-C40/FC40/FC40/C40-N
11337783	CVBS8-SPOOL-O6/FC6/FC4/O4-STD	
CVBS, CVM Spool	11329778	CVBS8-Spool-O4/FC4/FC4/O4-CVM
	11329760	CVBS8-Spool-C4/FC4/FC4/C4-CVM
	11329777	CVBS8-Spool-O8/FC8/FC8/O8-CVM
	11329759	CVBS8-Spool-C8/FC8/FC8/C8-CVM
	11329751	CVBS8-Spool-O12/FC12/FC12/O12-CVM
	11329758	CVBS8-Spool-C12/FC12/FC12/C12-CVM
	11329750	CVBS8-Spool-O16/FC16/FC16/O16-CVM
	11329776	CVBS8-Spool-C16/FC16/FC16/C16-CVM
	11329749	CVBS8-Spool-O25/FC25/FC25/O25-CVM
	11329775	CVBS8-Spool-C25/FC25/FC25/C25-CVM
	11329748	CVBS8-Spool-O40/FC40/FC40/O40-CVM
	11329774	CVBS8-Spool-C40/FC40/FC40/C40-CVM
11332132	CVBS8-SPOOL-O8/FC8/FC16/O8-CVM	

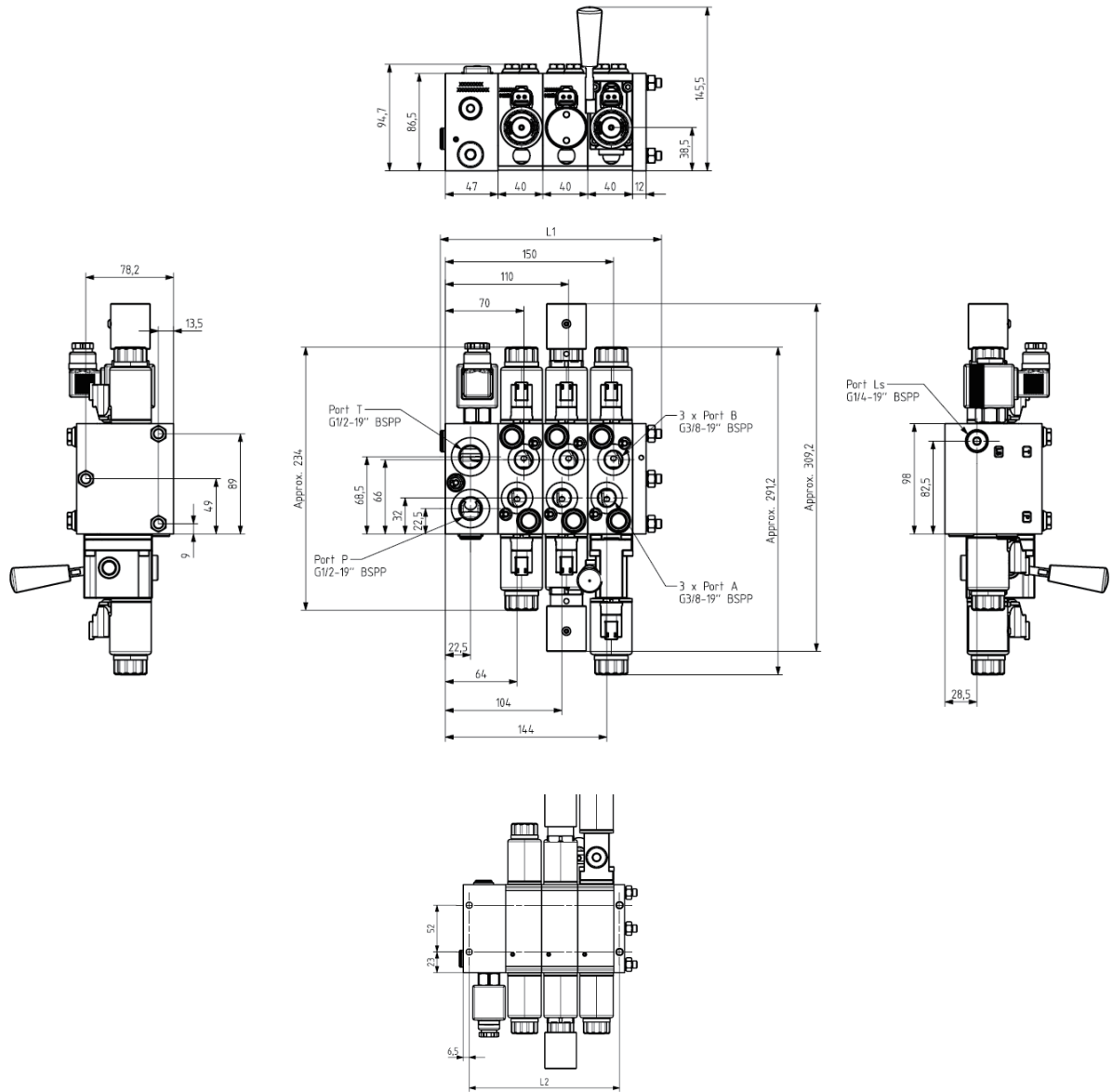
PVPX*	11180767	PVPX-Assembly-NO-1x2 DEUTSCH -24V
	11180769	PVPX-Assembly-NC-1x2 DEUTSCH -24V
	11180766	PVPX-Assembly-NO-1x2 DEUTSCH -12V
	11180768	PVPX-Assembly-NC-1x2 DEUTSCH -12V
CVAS, Assembly Kit	11300298	1 CVB
	11300279	2 CVB
	11300280	3 CVB
	11300271	4 CVB
	11300302	5 CVB
	11300303	6 CVB
	11300304	7 CVB
	11300305	8 CVB
PVL/A Shock/Suction valve	11329782	CVG SHOCK VALVE 80BAR
	11329761	CVG SHOCK VALVE100BAR
	11329792	CVG SHOCK VALVE150BAR
	11329793	CVG SHOCK VALVE210BAR
	11329794	CVG SHOCK VALVE250BAR
	11329795	CVG SHOCK VALVE300BAR
	11329796	CVG SHOCK VALVE320BAR
	11329783	CVG SHOCK VALVE350BAR
	11329784	CVG PLVA ANTI CAVITATION VALVE

*Same PVPX with PVG32.

Flowrate – Current curve diagram



CVG8 Valve Assembly Dimension



	1 CVB	2 CVB	3 CVB	4 CVB	5 CVB	6 CVB	7 CVB	8 CVB	
L1	mm	134	158	206	255	279	328	376	400
	[in]	[5.3]	[6.2]	[8.1]	[10.0]	[11.0]	[12.9]	[14.8]	[15.7]
L2	mm	93.5	133.5	173.5	213.5	253.5	293.5	333.5	373.5
	[in]	[3.7]	[5.3]	[6.8]	[8.4]	[10]	[11.6]	[13.1]	[14.7]

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