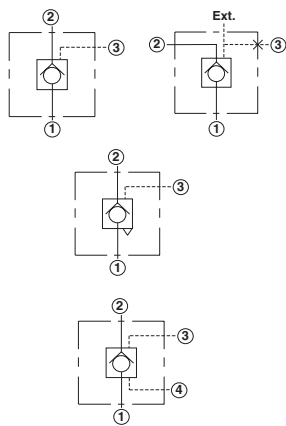


Pilot-to-Open Check Cartridge Valves



Cartridge Type

Non-Vented, Standard Pilot
and Sealed Pilot, Steel Seat

Atmospherically Referenced,
Vented, Sealed Pilot, Steel Seat

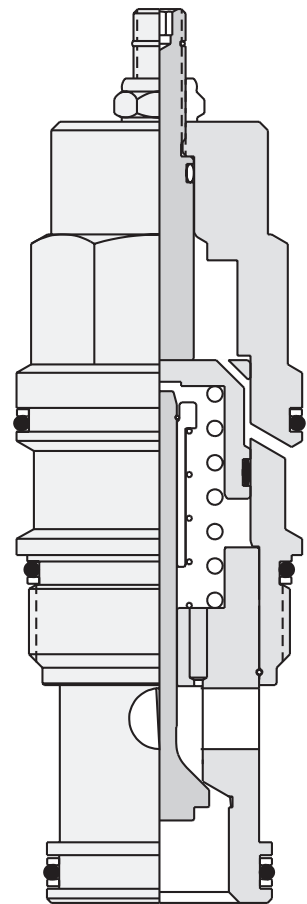
Vented, Sealed Pilot, Steel Seat

Page

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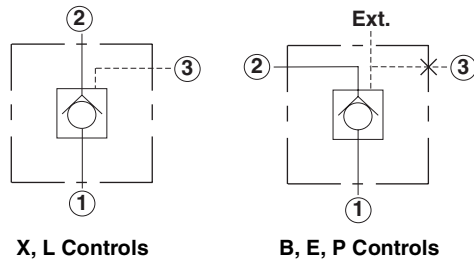
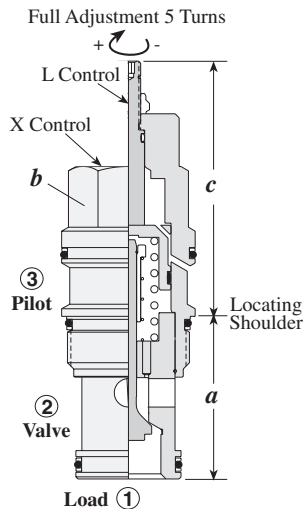
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Pilot-to-Open Check Valves

NON-VENTED, STANDARD PILOT (CK*B), SEALED PILOT (CK*D), STEEL SEAT



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions				Installation Torque (Nm)
			a	b	c X,B,E,P	L	
30 L/min.	CKBB - XCN	T - 163A	31,0	19,1	31,8	42,5	35 - 40
60 L/min.	CKCB - XCN	T - 11A	35,1	22,2	30,2	63,5	45 - 50
120 L/min.	CKEB - XCN	T - 2A	35,1	28,6	35,1	71,4	60 - 70
240 L/min.	CKGB - XCN	T - 17A	46,0	31,8	46,0	83,3	200 - 215
480 L/min.	CKIB - XCN	T - 19A	63,5	41,3	58,7	100,1	465 - 500

Performance Curves

CKB*

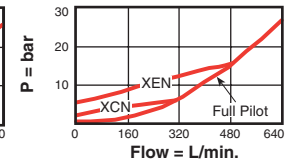
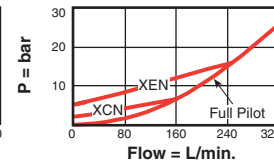
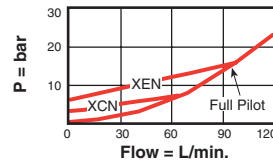
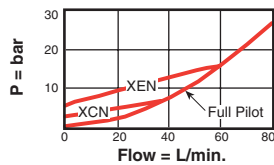
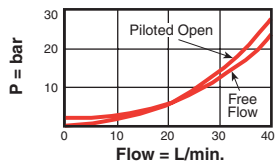
CKC*

CKE*

CKG*

CKI*

Typical Pressure Drop



- Pilot Ratio = 3:1.
- Maximum operating pressure = 350 bar.
- Maximum valve leakage at 24 cSt = 0,07 cc/min.
- CKBB, CKBD available only with 2 bar or 5 bar check valve cracking pressures.
- CK*B has standard unsealed pilot to allow air trapped in the pilot line to be purged from the circuit.
- CK*D has sealed pilot for use in circuits where cross-port leakage is undesirable.

OPTION ORDERING INFORMATION

Nominal Capacity	Version	Control**	Cracking Pressure	Seal Material
B 30 L/min.	B Bleed through Pilot	A Available for all CK*B, CK*D	A 0,3 bar	N Buna-N
C 60 L/min.	D Sealed Pilot	X Standard Pilot	B 1,0 bar	V Viton
E 120 L/min.		L Manual Load Release	C* 2,0 bar	
G 240 L/min.		E External SAE-4 Pilot, Port 3 blocked	D 3,5 bar	
I 480 L/min.		P External 1/4" NPTF Pilot, Port 3 blocked	E* 5,0 bar	
		B External 1/4" BSPP Pilot Port 3 blocked	F 7,0 bar	

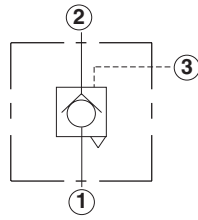
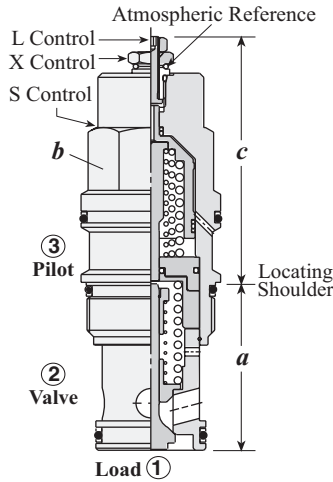
* CKBB, CKBD available with C and E cracking pressures only.

** See page 178 for information on Control Options

Consult the Sun website for our most recent and complete information on the full Corrosion Resistant line of products.

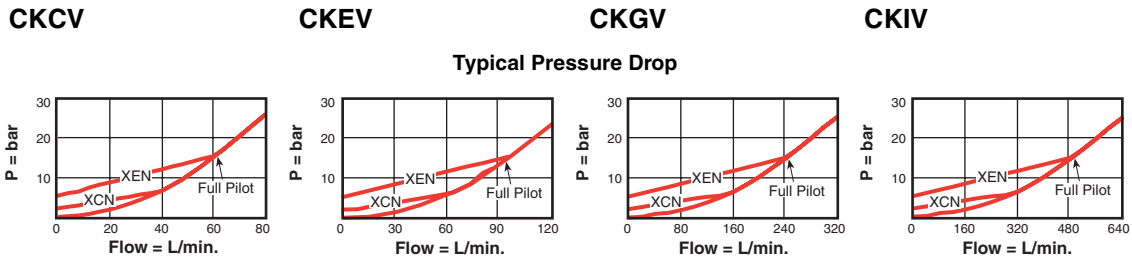
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ATMOSPHERICALLY REFERENCED, VENTED, SEALED PILOT, STEEL SEAT



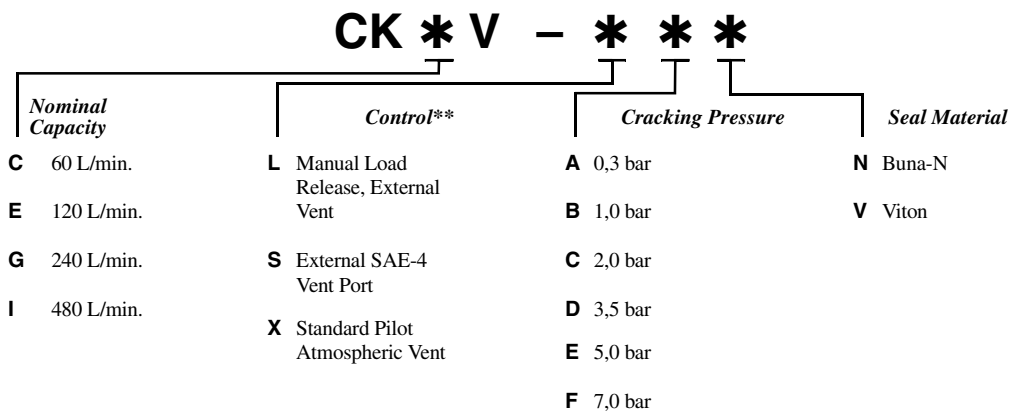
Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions					Installation Torque (Nm)
			a	b	X	L	S	
60 L/min.	CKCV – SCN	T - 11A	35,1	22,2	51,0	56,9	42,7	40 - 50
120 L/min.	CKEV – SCN	T - 2A	35,1	28,6	59,0	65,0	50,8	60 - 70
240 L/min.	CKGV – SCN	T - 17A	46,0	31,8	71,0	76,7	62,7	200 - 215
480 L/min.	CKIV – SCN	T - 19A	63,5	41,3	84,0	95,8	—	465 - 500

Performance Curves



- Pilot Ratio = 3:1.
- Maximum operating pressure = 350 bar.
- Maximum valve leakage at 24 cSt = 0,07 cc/min.
- Approximately 0,07 cc of fluid will pass from the pilot area to the vented spring chamber every 4000 cycles.
- For models with manual load release control option, turn load release clockwise to release load.
- Atmospherically referenced pilot-to-open check valves are considered problem solvers for existing circuits using non-vented valves. However, the atmospherically referenced valve will eventually leak externally or allow moisture into the spring chamber. Four-port vented pilot-to-open check cartridges are recommended for new applications.

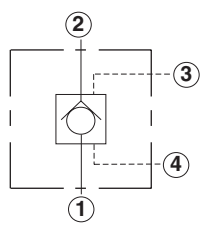
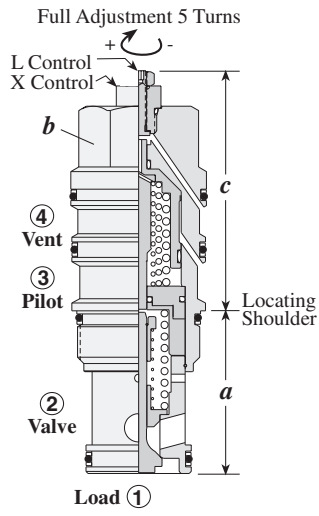
OPTION ORDERING INFORMATION



** See page 178 for information on Control Options

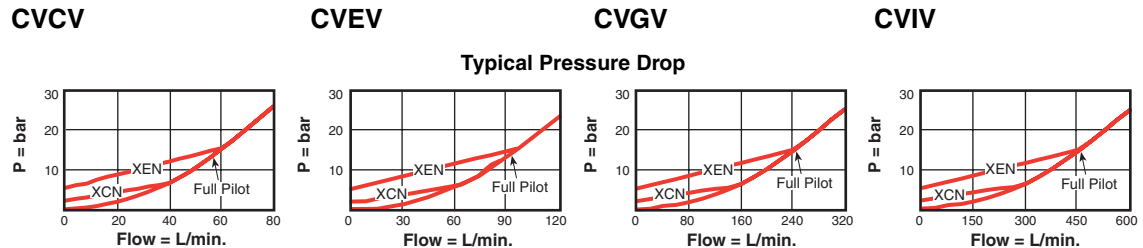
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VENTED, SEALED PILOT, STEEL SEAT



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions				Installation Torque (Nm)
			a	b	c		
60 L/min.	CVCV – XCN	T - 21A	35,1	22,2	X 53,3	L 59,4	45 - 50
120 L/min.	CVEV – XCN	T - 22A	35,1	28,6	X 59,4	L 65,0	60 - 70
240 L/min.	CVGV – XCN	T - 23A	46,0	31,8	X 71,4	L 77,0	200 - 215
480 L/min.	CVIV – XCN	T - 24A	63,5	41,3	X 88,9	L 95,8	465 - 500

Performance Curves



- Pilot Ratio = 3:1.
- Maximum operating pressure = 350 bar.
- Maximum valve leakage at 24 cSt = 0,07 cc/min.
- Port 4 (vent) should never be blocked as seal weepage will eventually cause valve to malfunction.
- Will accept pressure at port 4 (vent) up to 350 bar maximum but back pressure will increase by 1 + pilot ratio times back pressure.

OPTION ORDERING INFORMATION

CV * V		- * * *		
Nominal Capacity	Control**	Adjustment Range		Seal Material
C 60 L/min.	X Standard Pilot	A 0,3 bar	N Buna-N	
E 120 L/min.	L Manual Load Release	B 1,0 bar	V Viton	
G 240 L/min.		C 2,0 bar		
I 480 L/min.		D 3,5 bar		
		E 5,0 bar		
		F 7,0 bar		

** See page 178 for information on Control Options

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