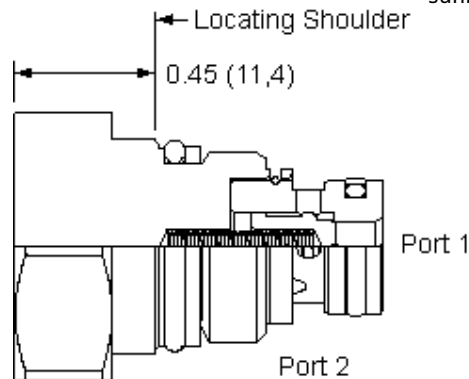
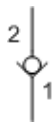




Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-8A
Series	P
Capacity	20 L/min.
Valve Hex Size	22,2 mm
Valve Installation Torque	27 - 33 Nm
Seal kit - Cartridge	Buna: 990608007
Seal kit - Cartridge	EPDM: 990608014
Seal kit - Cartridge	Viton: 990608006
Model Weight	0.05 kg.

CONFIGURATION OPTIONS

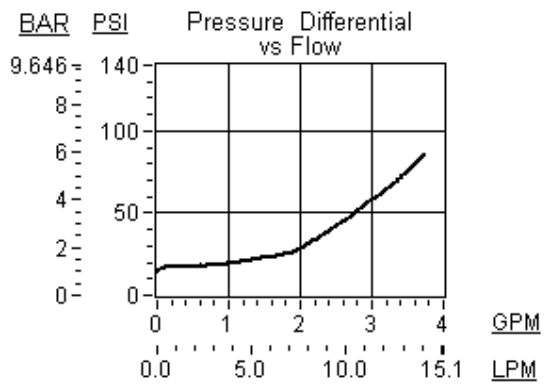
Model Code Example: CXAAXBN

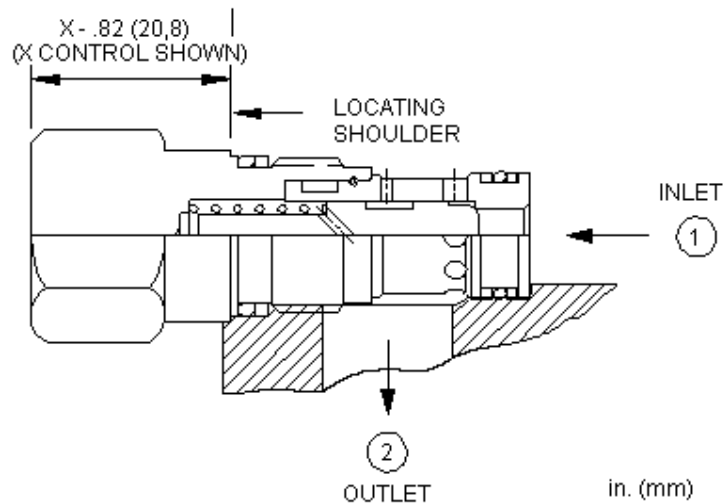
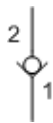
CONTROL	(X) CRACKING PRESSURE	(B) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	B 15 psi (1 bar) F 100 psi (7 bar) Z 1 psi (0,07 bar)	N Buna-N E EPDM V Viton	N Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-162A
Series	0
Capacity	40 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	19,1 mm
Valve Installation Torque	27 - 33 Nm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	EPDM: 990162014
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006
Model Weight	0.08 kg.

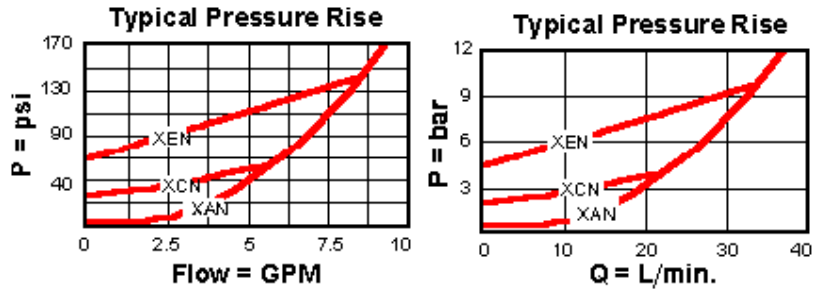
CONFIGURATION OPTIONS Model Code Example: CXBAArray

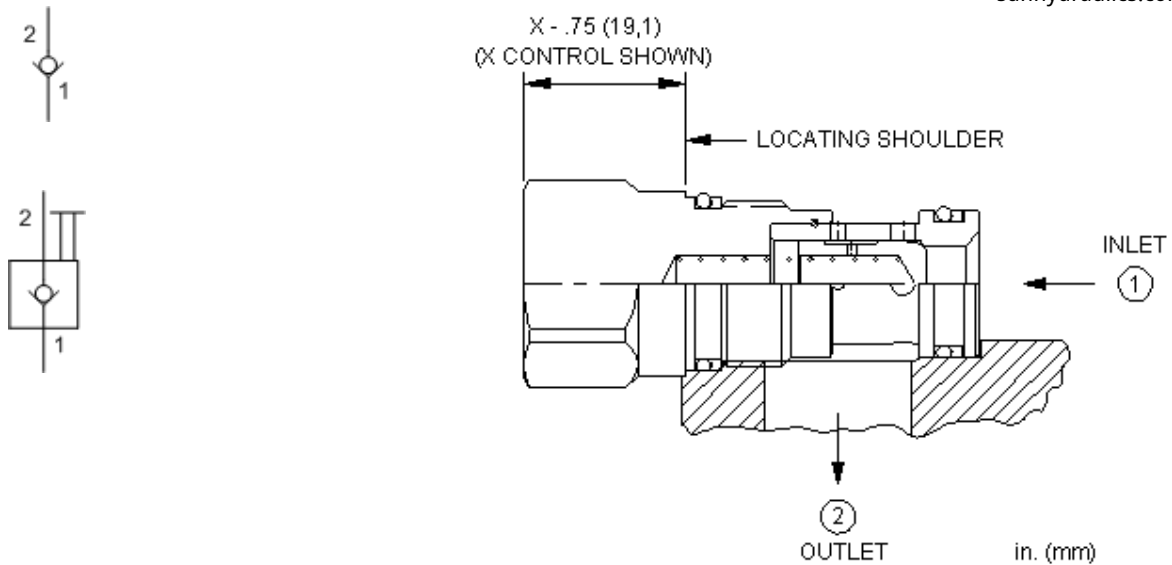
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
	A 4 psi (0,3 bar)	E EPDM	/AP Stainless Steel, Passivated
	B 15 psi (1 bar)	V Viton	/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)		
	E 75 psi (5 bar)		
	F 100 psi (7 bar)		

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-13A
Series	1
Capacity	80 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	EPDM: 990010014
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006
Model Weight	0.11 kg.

CONFIGURATION OPTIONS

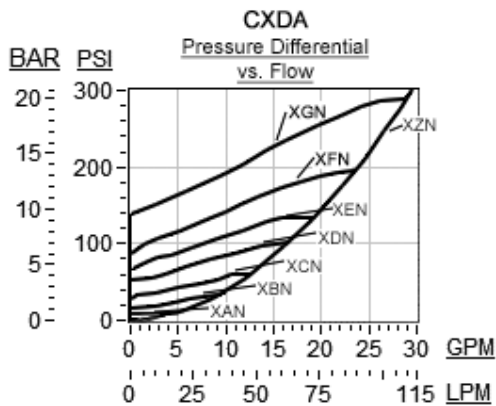
Model Code Example: CXDAArray

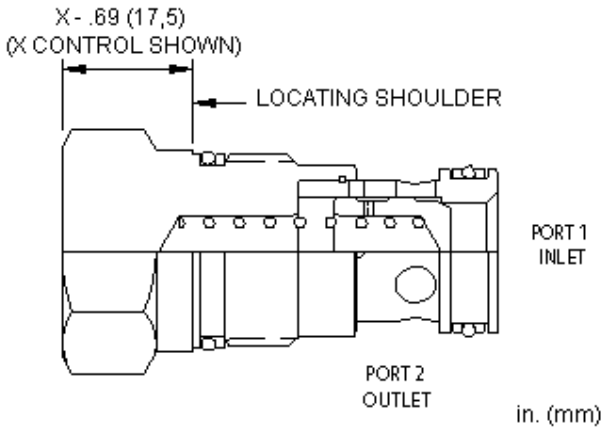
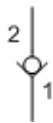
CONTROL	(X) CRACKING PRESSURE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	A 4 psi (0,3 bar) C 30 psi (2 bar) B 15 psi (1 bar) D 50 psi (3,5 bar) E 75 psi (5 bar) F 100 psi (7 bar)	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-5A
Series	2
Capacity	160 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Viton: 990203006
Model Weight	0.19 kg.

CONFIGURATION OPTIONS

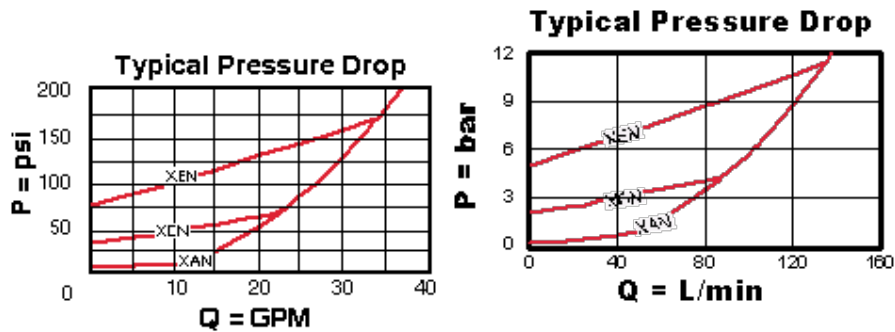
Model Code Example: CXFAXCN

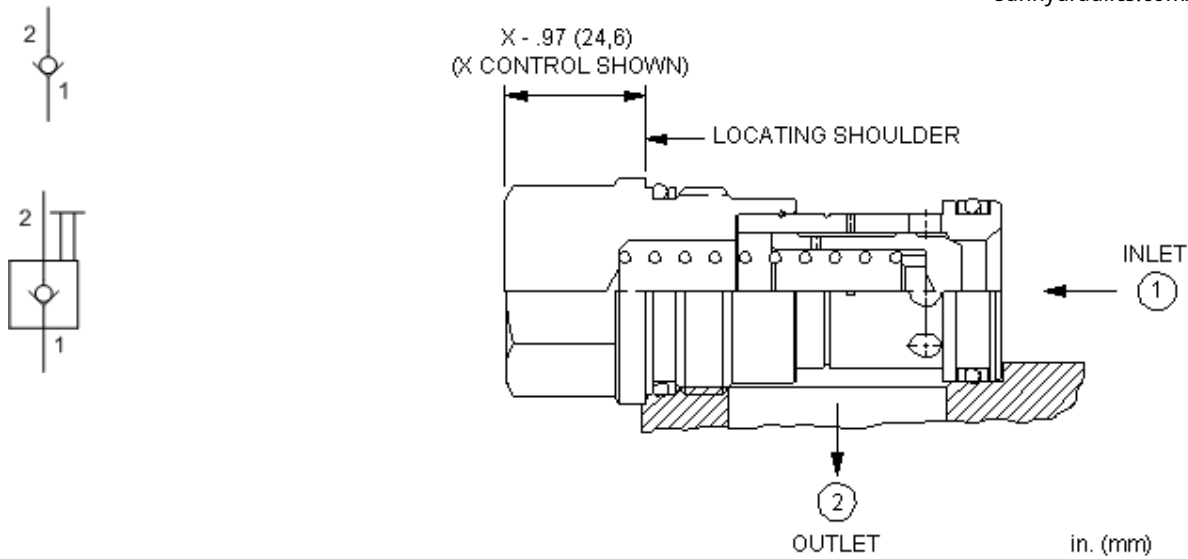
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) A 4 psi (0,3 bar) B 15 psi (1 bar) D 50 psi (3,5 bar) E 75 psi (5 bar) F 100 psi (7 bar)	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-16A
Series	3
Capacity	320 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006
Model Weight	0.43 kg.

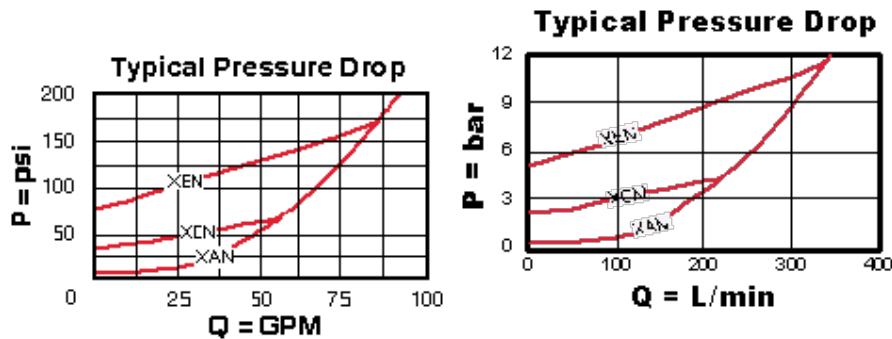
CONFIGURATION OPTIONS Model Code Example: CXHAArray

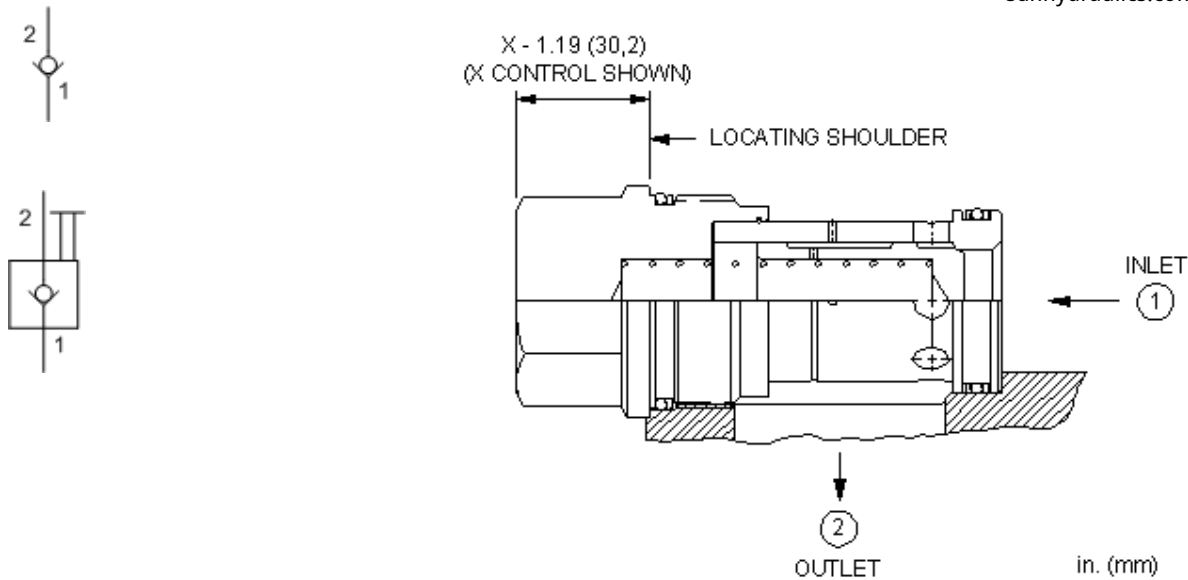
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
L Manual Override	A 4 psi (0,3 bar)	E EPDM	/AP Stainless Steel, Passivated
	B 15 psi (1 bar)	V Viton	/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)		
	E 75 psi (5 bar)		
	F 100 psi (7 bar)		

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-18A
Series	4
Capacity	610 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006
Model Weight	0.95 kg.

CONFIGURATION OPTIONS

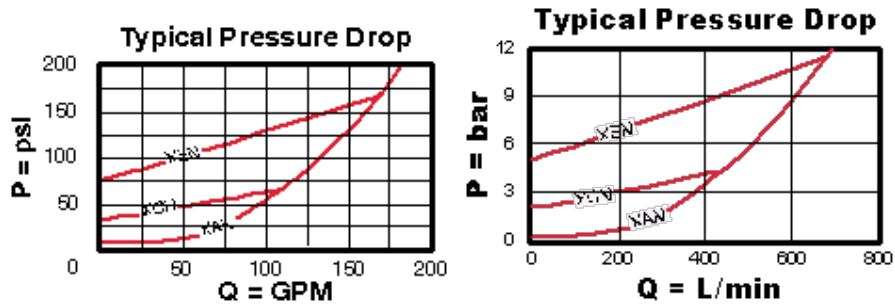
Model Code Example: CXJAXCN

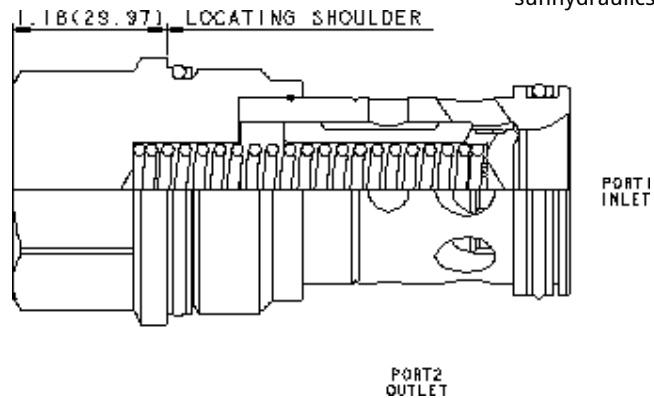
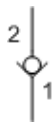
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) A 4 psi (0,3 bar) B 15 psi (1 bar) D 50 psi (3,5 bar) E 75 psi (5 bar) F 100 psi (7 bar) G 150 psi (10,5 bar)	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-18AU
Series	4
Capacity	900 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Viton: 990018006
Model Weight	0.92 kg.

CONFIGURATION OPTIONS

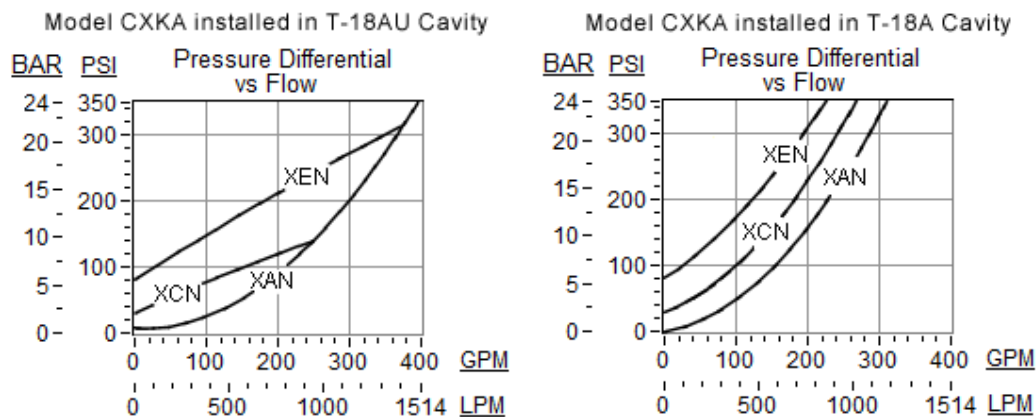
Model Code Example: CXKAXCN

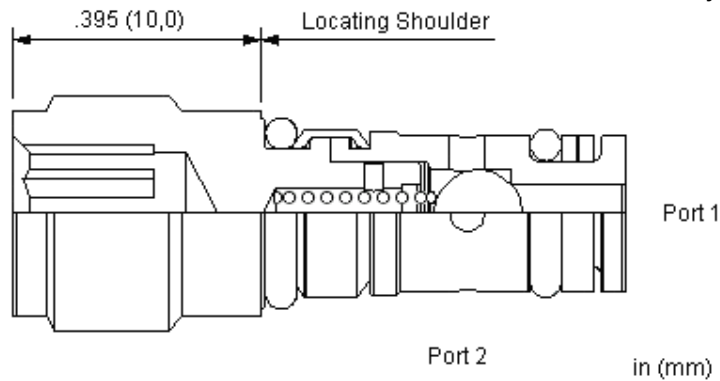
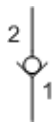
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
	A 4 psi (0,3 bar)	E EPDM	/AP Stainless Steel, Passivated
	B 15 psi (1 bar)	V Viton	/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)		
	E 75 psi (5 bar)		
	F 100 psi (7 bar)		
	G 150 psi (10,5 bar)		
	Z 1 psi (0,07 bar)		

TECHNICAL FEATURES

- These valves will work in Sun's standard T-18A cavity at lower capacity. To realize the full stated capacity, the T-18AU cavity should be used.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-382A
Series	Z
Capacity	4 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Internal Hex Size	5 mm
Valve Installation Torque	11 - 14 Nm
Seal kit - Cartridge	Buna: 990382007
Seal kit - Cartridge	EPDM: 990382014
Seal kit - Cartridge	Viton: 990382006
Model Weight	0.01 kg.

CONFIGURATION OPTIONS

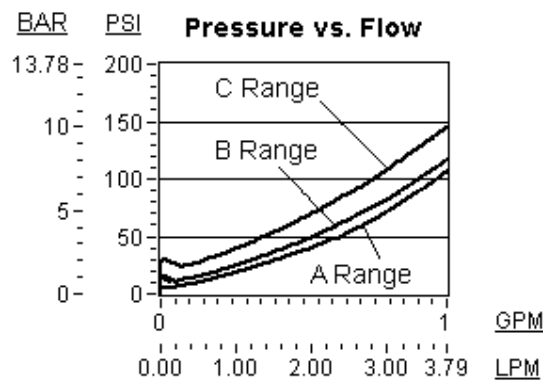
Model Code Example: CXZAXCN

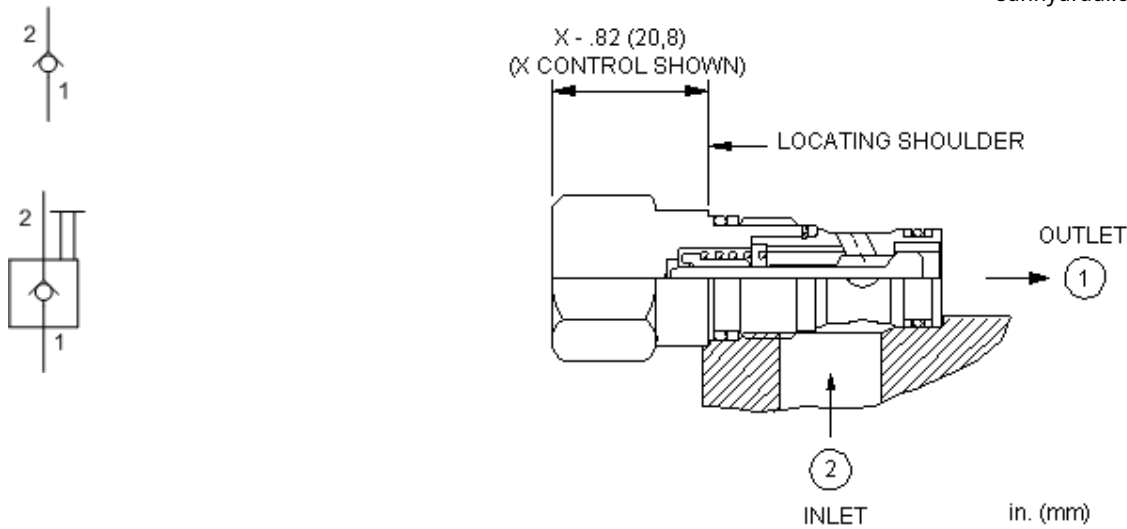
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) A 4 psi (0,3 bar) B 15 psi (1 bar)	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Due to size constraints, this valve has a .188 (3/16) inch internal hex. There is no metric equivalent.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, side-to-nose check valves are on/off circuit components that allow free flow from the inlet (port 2) to the outlet (port 1) and block flow in the opposite direction.

TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-162A
Series	0
Capacity	30 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	19,1 mm
Valve Installation Torque	27 - 33 Nm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	EPDM: 990162014
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006
Model Weight	0.08 kg.

CONFIGURATION OPTIONS

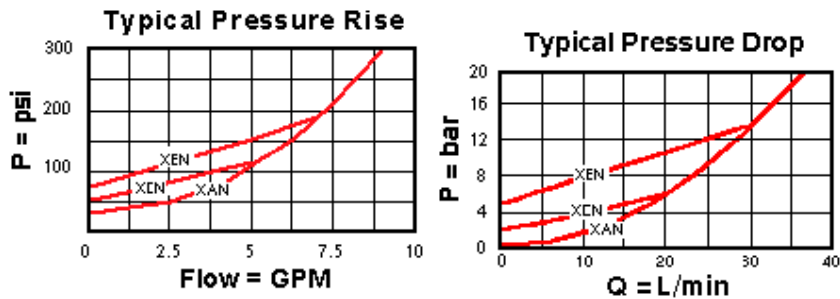
Model Code Example: CXADXCN

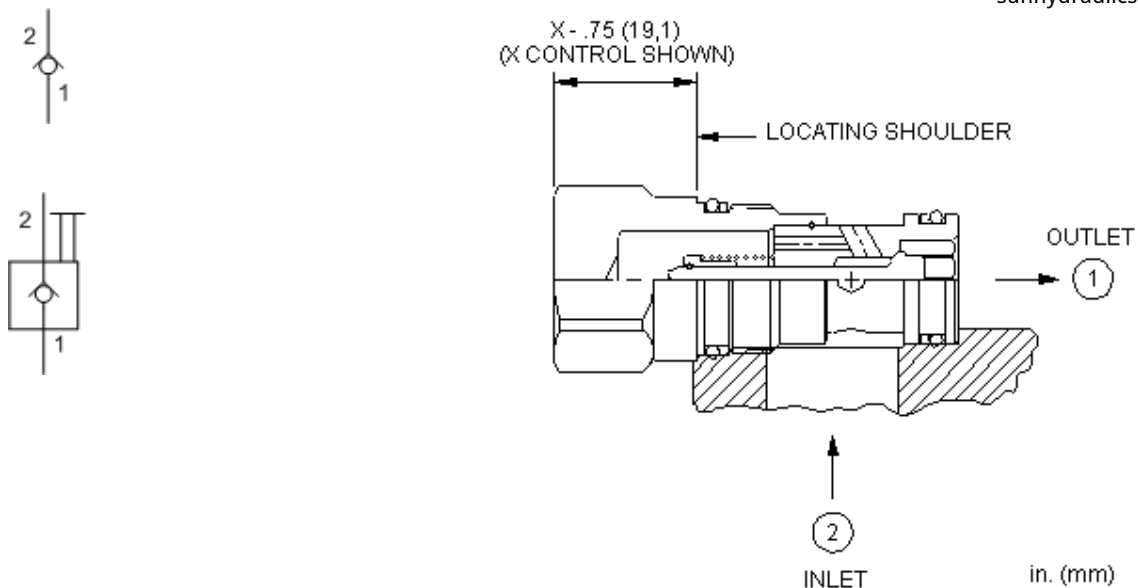
CONTROL	(X)	NOMINAL CONTROL PRESSURE	SEAL MATERIAL	(N)	MATERIAL/COATING
X Not Adjustable		(C)	N Buna-N		Standard Material/Coating
		C 30 psi (2 bar)	E EPDM		/AP Stainless Steel, Passivated
		A 4 psi (0,3 bar)	V Viton		/LH Mild Steel, Zinc-Nickel
		D 50 psi (3,5 bar)			
		E 75 psi (5 bar)			
		Z 1 psi (0,07 bar)			

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- These check valves are considered circuit savers for existing circuits where manifold drillings are incorrect. The capacity of side-to-nose (port 2 to port 1) 2-port check valves is approximately 30% less than preferred models with a nose-to-side (port 1 to port 2) flow path.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Only available with 4, 30 and 75 psi (0,3, 2 and 5 bar) cracking pressures.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, side-to-nose check valves are on/off circuit components that allow free flow from the inlet (port 2) to the outlet (port 1) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-13A
Series	1
Capacity	60 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	EPDM: 990010014
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006
Model Weight	0.10 kg.

CONFIGURATION OPTIONS

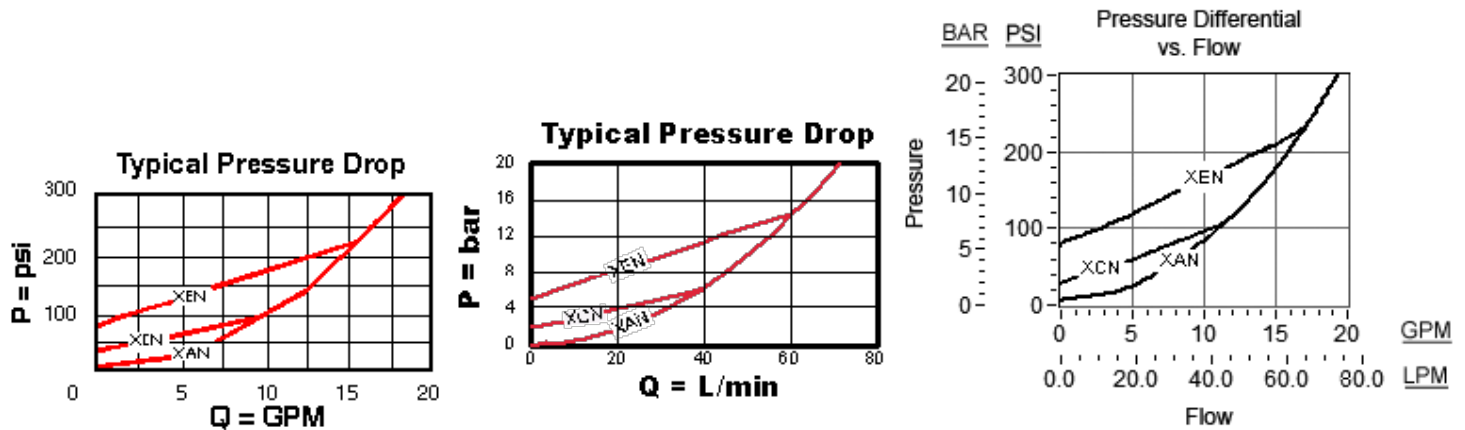
Model Code Example: CXCDArray

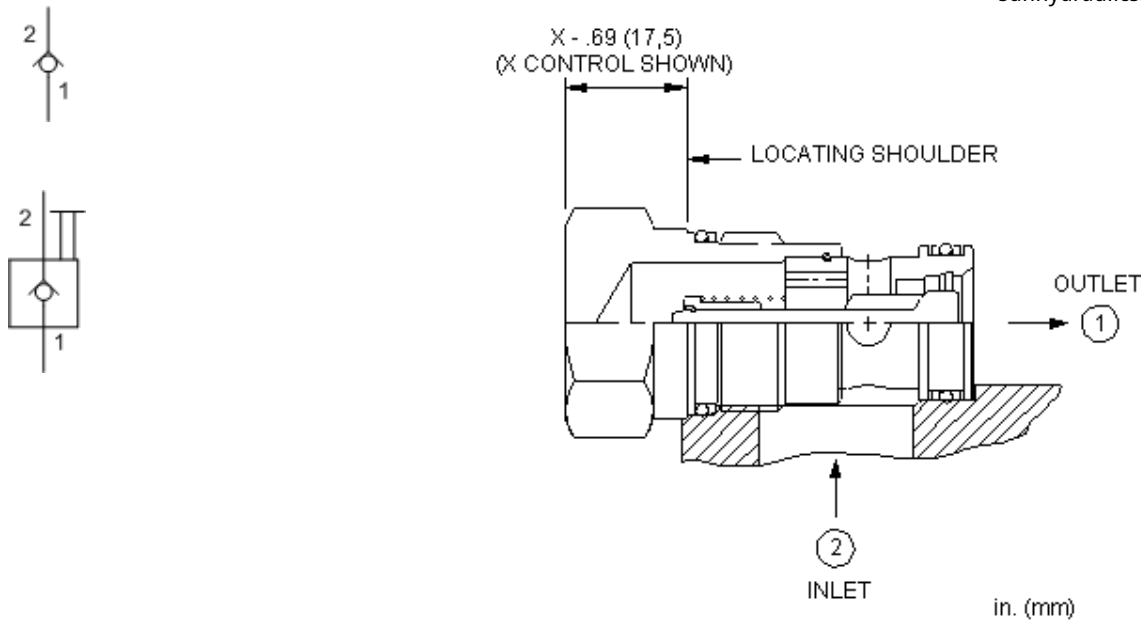
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
L Manual Override	A 4 psi (0,3 bar)	E EPDM	/AP Stainless Steel, Passivated
	B 15 psi (1 bar)	V Viton	/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)		
	E 75 psi (5 bar)		
	F 100 psi (7 bar)		

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- These check valves are considered circuit savers for existing circuits where manifold drillings are incorrect. The capacity of side-to-nose (port 2 to port 1) 2-port check valves is approximately 30% less than preferred models with a nose-to-side (port 1 to port 2) flow path.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, side-to-nose check valves are on/off circuit components that allow free flow from the inlet (port 2) to the outlet (port 1) and block flow in the opposite direction.

TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-5A
Series	2
Capacity	120 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006
Model Weight	0.17 kg.

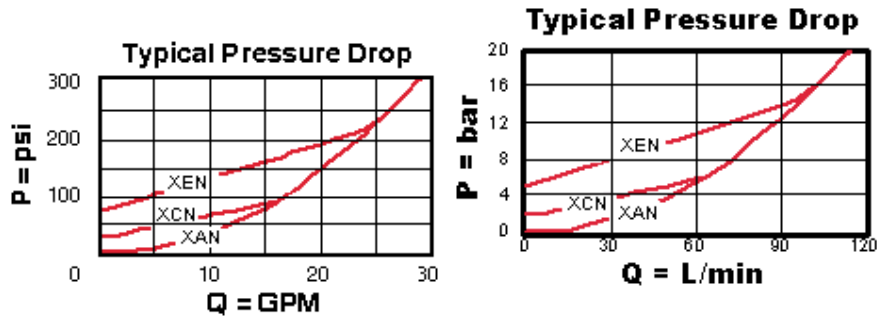
CONFIGURATION OPTIONS Model Code Example: CXEDXCN

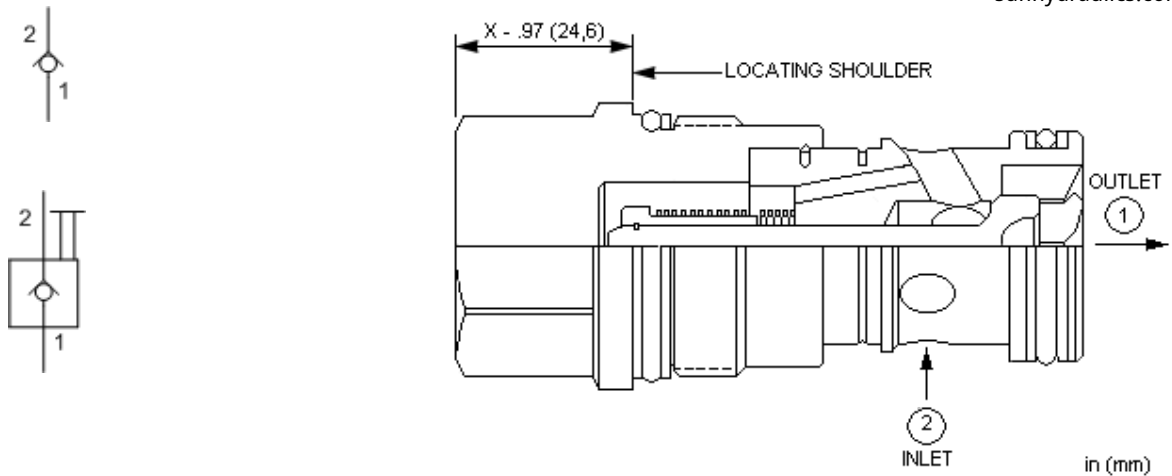
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) A 4 psi (0,3 bar) B 15 psi (1 bar) D 50 psi (3,5 bar) E 75 psi (5 bar) F 100 psi (7 bar)	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- These check valves are considered circuit savers for existing circuits where manifold drillings are incorrect. The capacity of side-to-nose (port 2 to port 1) 2-port check valves is approximately 30% less than preferred models with a nose-to-side (port 1 to port 2) flow path.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, side-to-nose check valves are on/off circuit components that allow free flow from the inlet (port 2) to the outlet (port 1) and block flow in the opposite direction.

TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-16A
Series	3
Capacity	240 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006
Model Weight	0.46 kg.

CONFIGURATION OPTIONS

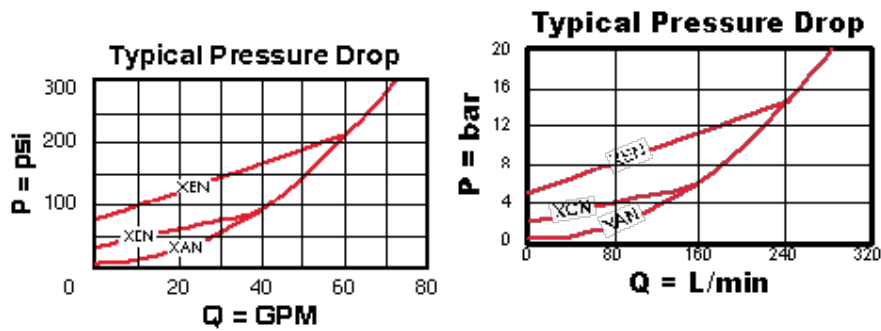
Model Code Example: CXGDXC�

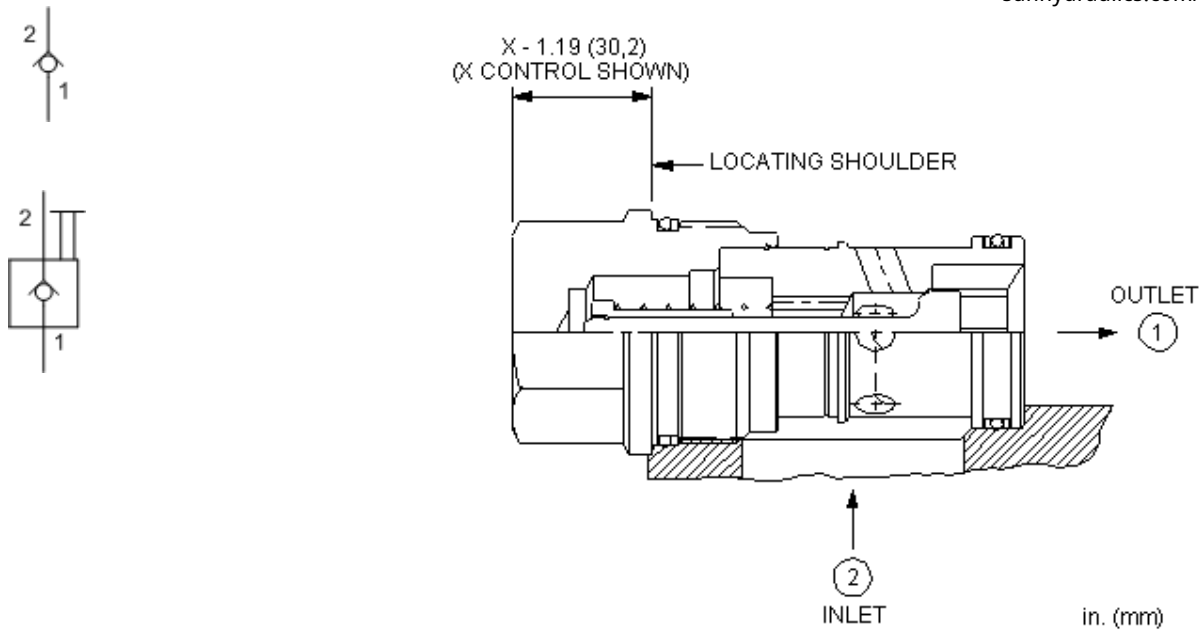
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) A 4 psi (0,3 bar) B 15 psi (1 bar) D 50 psi (3,5 bar) E 75 psi (5 bar) F 100 psi (7 bar)	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- These check valves are considered circuit savers for existing circuits where manifold drillings are incorrect. The capacity of side-to-nose (port 2 to port 1) 2-port check valves is approximately 30% less than preferred models with a nose-to-side (port 1 to port 2) flow path.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, side-to-nose check valves are on/off circuit components that allow free flow from the inlet (port 2) to the outlet (port 1) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-18A
Series	4
Capacity	480 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006
Model Weight	0.93 kg.

CONFIGURATION OPTIONS

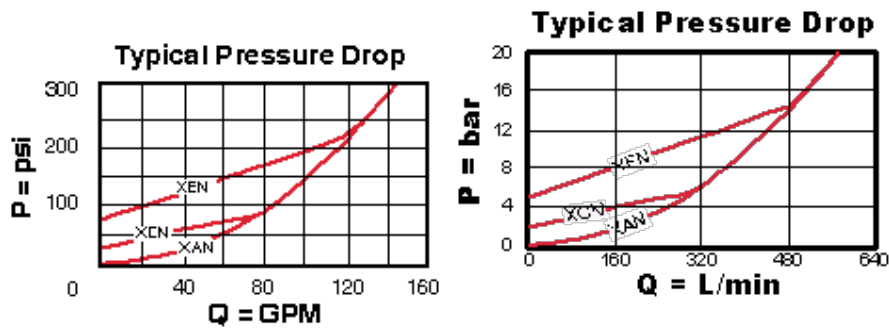
Model Code Example: CXIDXCN

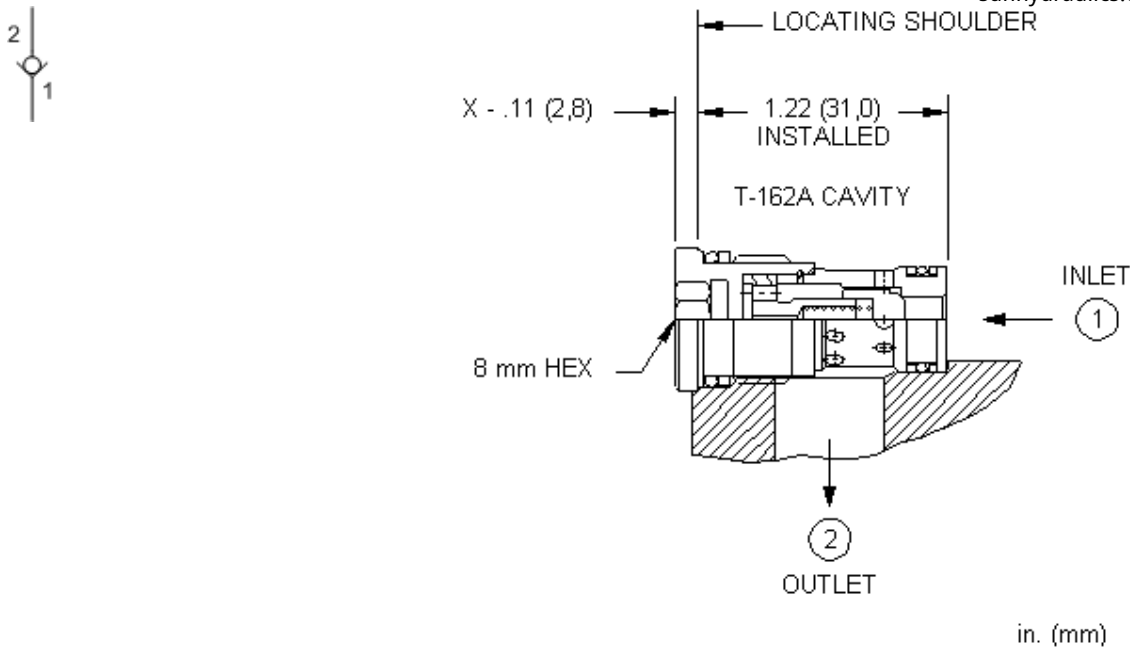
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) A 4 psi (0,3 bar) B 15 psi (1 bar) D 50 psi (3,5 bar) E 75 psi (5 bar) F 100 psi (7 bar)	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- These check valves are considered circuit savers for existing circuits where manifold drillings are incorrect. The capacity of side-to-nose (port 2 to port 1) 2-port check valves is approximately 30% less than preferred models with a nose-to-side (port 1 to port 2) flow path.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-162A
Series	0
Capacity	40 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Internal Hex Size	8 mm
Valve Installation Torque	27 - 33 Nm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006
Model Weight	0.03 kg.

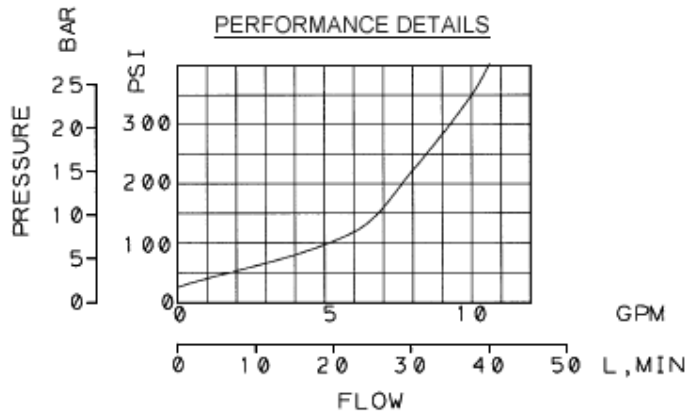
CONFIGURATION OPTIONS Model Code Example: CXBGXAN

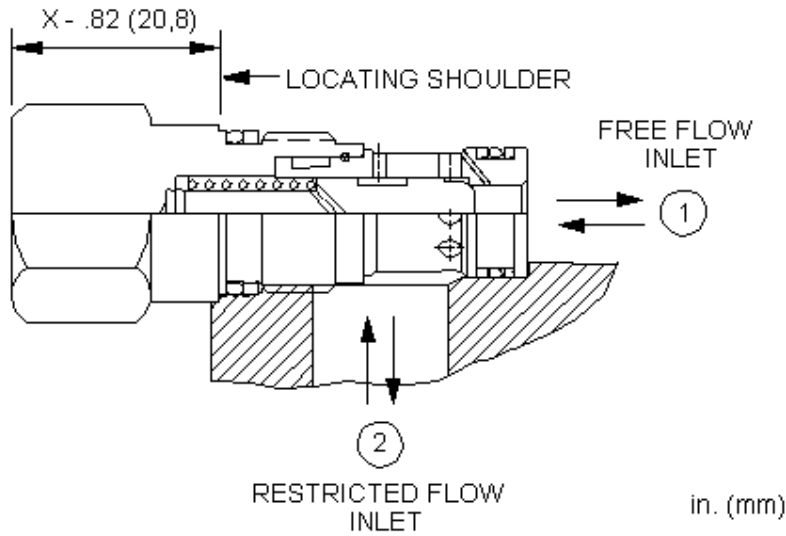
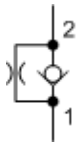
CONTROL	(X) CRACKING PRESSURE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	A 4 psi (0,3 bar) B 15 psi (1 bar) C 30 psi (2 bar) D 50 psi (3,5 bar)	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Flush mount valves provide a small footprint. They can easily be mounted flush with the surface of the manifold.
- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side check valves with a bypass orifice allow free flow from port 1 to port 2. A customer specified orifice is included to restrict flow from port 2 to port 1. See technical data below for orifice range.

TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-162A
Series	0
Capacity	30 L/min.
Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 1,6 mm
Valve Hex Size	19,1 mm
Valve Installation Torque	27 - 33 Nm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	EPDM: 990162014
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006
Model Weight	0.08 kg.

CONFIGURATION OPTIONS

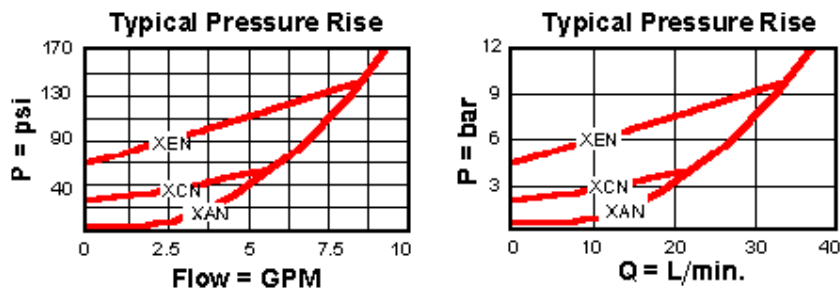
Model Code Example: CNBCXCN

CONTROL	(X) SETTING RANGE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) Cracking Pressure, .016 - .062 in. (0,4 - 1,6 mm) A 4 psi (0,3 bar) Cracking Pressure, .016 - .062 in. (0,4 - 1,6 mm) B 15 psi (1 bar) Cracking Pressure, .016 - .062 in. (0,4 - 1,6 mm) D 50 psi (3,5 bar) Cracking Pressure, .016 - .062 in. (0,4 - 1,6 mm) E 75 psi (5 bar) Cracking Pressure, .016 - .062 in. (0,4 - 1,6 mm) F 100 psi (7 bar) Cracking Pressure, .016 - .062 in. (0,4 - 1,6 mm)	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

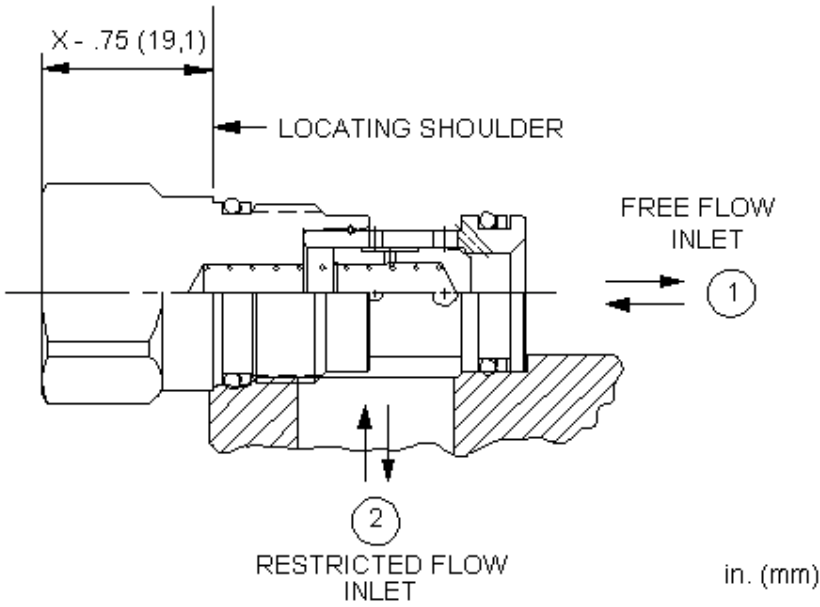
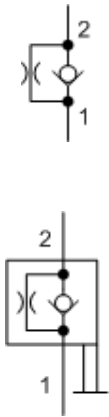
TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Valves with the opposite flow path (free flow from 2 to 1) are considered flow controls and may be found listed as fixed orifice, non-pressure compensated flow control valve with reverse flow check.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- The customer specified orifice diameter is stamped on one of the cartridge's hex faces.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES



Note: Performance data shown reflects a blocked orifice.



Free-flow, nose-to-side check valves with a bypass orifice allow free flow from port 1 to port 2. A customer specified orifice is included to restrict flow from port 2 to port 1. See technical data below for orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-13A
Series	1
Capacity	60 L/min.
Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 2,7 mm
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006
Model Weight	0.11 kg.

CONFIGURATION OPTIONS

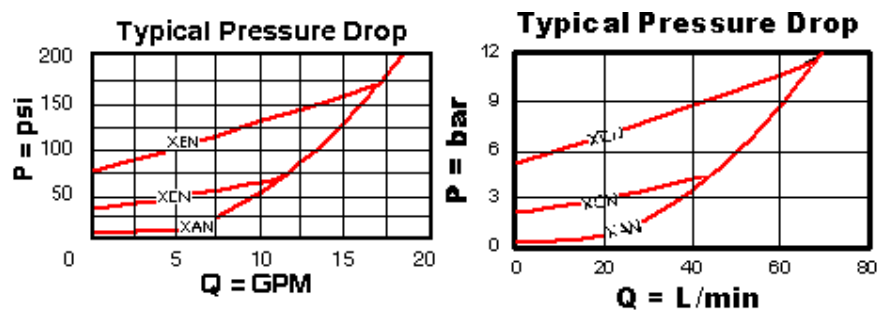
Model Code Example: CNDCArray

CONTROL	(X) SETTING RANGE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) Cracking Pressure, .016 - .107 in. (0,4 - 2,7 mm)	N Buna-N	Standard Material/Coating
L Manual Load Release	A 4 psi (0,3 bar) Cracking Pressure, .016 - .107 in. (0,4 - 2,7 mm)	V Viton	/AP Stainless Steel, Passivated
	B 15 psi (1 bar) Cracking Pressure, .016 - .107 in. (0,4 - 2,7 mm)		/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar) Cracking Pressure, .016 - .107 in. (0,4 - 2,7 mm)		
	E 75 psi (5 bar) Cracking Pressure, .016 - .107 in. (0,4 - 2,7 mm)		
	F 100 psi (7 bar) Cracking Pressure, .016 - .107 in. (0,4 - 2,7 mm)		

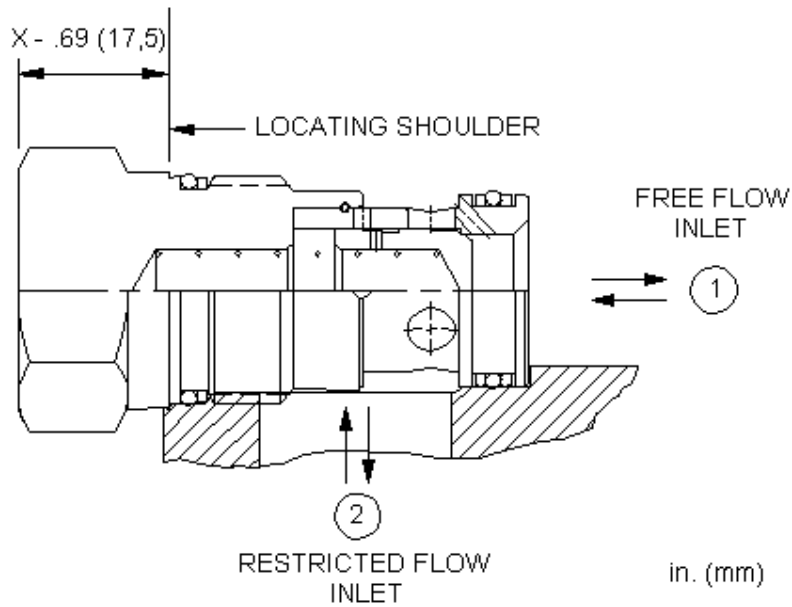
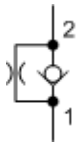
TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Valves with the opposite flow path (free flow from 2 to 1) are considered flow controls and may be found listed as fixed orifice, non-pressure compensated flow control valve with reverse flow check.
- The customer specified orifice diameter is stamped on one of the cartridge's hex faces.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES



Note: Performance data shown reflects a blocked orifice.



Free-flow, nose-to-side check valves with a bypass orifice allow free flow from port 1 to port 2. A customer specified orifice is included to restrict flow from port 2 to port 1. See technical data below for orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-5A
Series	2
Capacity	120 L/min.
Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 3,2 mm
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006
Model Weight	0.19 kg.

CONFIGURATION OPTIONS

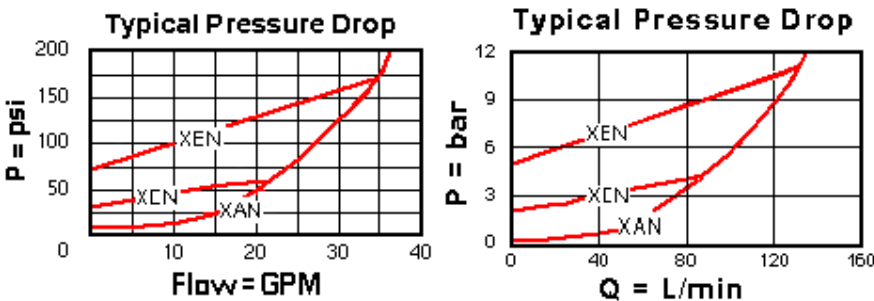
Model Code Example: CNFCXCN

CONTROL	(X) SETTING RANGE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) Cracking Pressure, .016 - .127 in. (0,4 - 3,2 mm) A 4 psi (0,3 bar) Cracking Pressure, .016 - .127 in. (0,4 - 3,2 mm) B 15 psi (1 bar) Cracking Pressure, .016 - .127 in. (0,4 - 3,2 mm) D 50 psi (3,5 bar) Cracking Pressure, .016 - .127 in. (0,4 - 3,2 mm) E 75 psi (5 bar) Cracking Pressure, .016 - .127 in. (0,4 - 3,2 mm) F 100 psi (7 bar) Cracking Pressure, .016 - .127 in. (0,4 - 3,2 mm)	N Buna-N V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

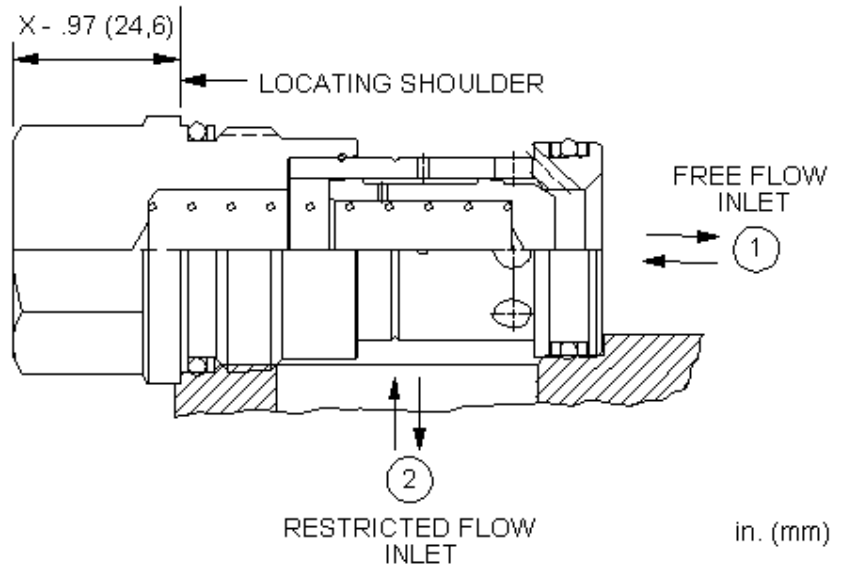
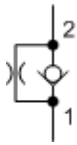
TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Valves with the opposite flow path (free flow from 2 to 1) are considered flow controls and may be found listed as fixed orifice, non-pressure compensated flow control valve with reverse flow check.
- The customer specified orifice diameter is stamped on one of the cartridge's hex faces.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES



Note: Performance data shown reflects a blocked orifice.



Free-flow, nose-to-side check valves with a bypass orifice allow free flow from port 1 to port 2. A customer specified orifice is included to restrict flow from port 2 to port 1. See technical data below for orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-16A
Series	3
Capacity	240 L/min.
Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 6,4 mm
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006
Model Weight	0.43 kg.

CONFIGURATION OPTIONS

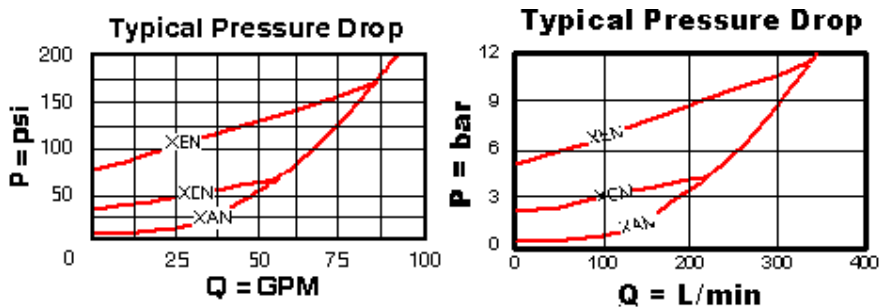
Model Code Example: CNHCXCN

CONTROL	(X) SETTING RANGE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) Cracking Pressure, .016 - .252 in. (0,4 - 6,4 mm) A 4 psi (0,3 bar) Cracking Pressure, .016 - .252 in. (0,4 - 6,4 mm) B 15 psi (1 bar) Cracking Pressure, .016 - .252 in. (0,4 - 6,4 mm) D 50 psi (3,5 bar) Cracking Pressure, .016 - .252 in. (0,4 - 6,4 mm) E 75 psi (5 bar) Cracking Pressure, .016 - .252 in. (0,4 - 6,4 mm) F 100 psi (7 bar) Cracking Pressure, .016 - .252 in. (0,4 - 6,4 mm)	N Buna-N E EPDM V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

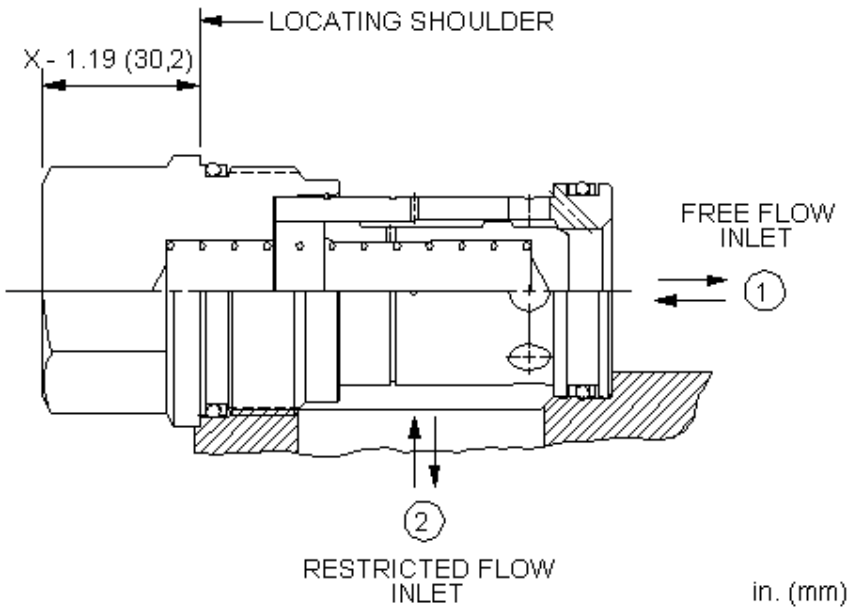
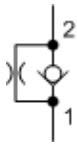
TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Valves with the opposite flow path (free flow from 2 to 1) are considered flow controls and may be found listed as fixed orifice, non-pressure compensated flow control valve with reverse flow check.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- The customer specified orifice diameter is stamped on one of the cartridge's hex faces.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES



Note: Performance data shown reflects a blocked orifice.



Free-flow, nose-to-side check valves with a bypass orifice allow free flow from port 1 to port 2. A customer specified orifice is included to restrict flow from port 2 to port 1. See technical data below for orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-18A
Series	4
Capacity	480 L/min.
Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 9 mm
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006
Model Weight	0.95 kg.

CONFIGURATION OPTIONS

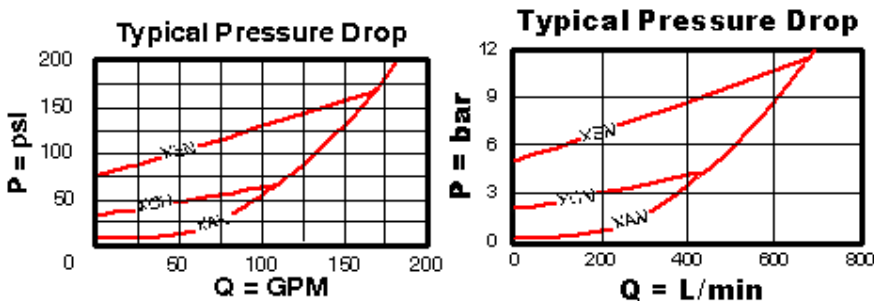
Model Code Example: CNJCArray

CONTROL	(X) SETTING RANGE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm) A 4 psi (0,3 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm) B 15 psi (1 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm) D 50 psi (3,5 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm) E 75 psi (5 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm) F 100 psi (7 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm) G 150 psi (10 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)	N Buna-N V Viton	Standard Material/Coating /AP Stainless Steel, Passivated

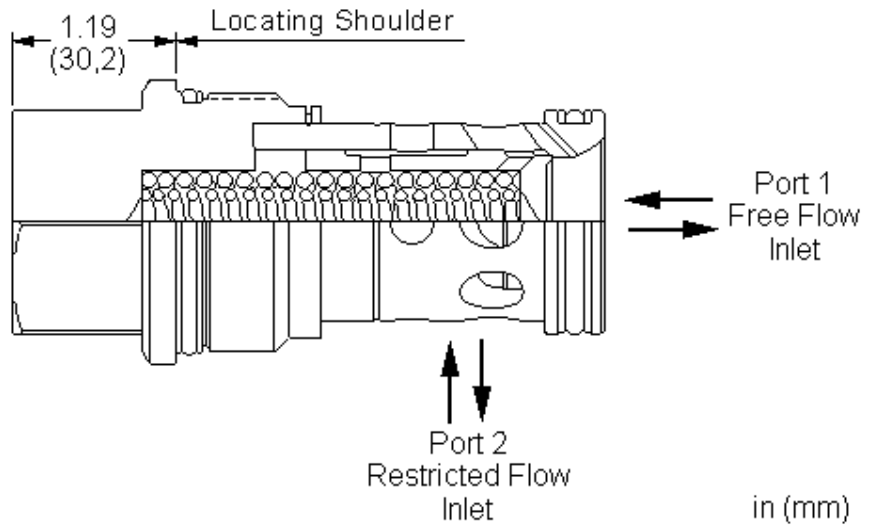
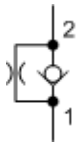
TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Valves with the opposite flow path (free flow from 2 to 1) are considered flow controls and may be found listed as fixed orifice, non-pressure compensated flow control valve with reverse flow check.
- The customer specified orifice diameter is stamped on one of the cartridge's hex faces.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES



Note: Performance data shown reflects a blocked orifice.



Free-flow, nose-to-side check valves with a bypass orifice allow free flow from port 1 to port 2. A customer specified orifice is included to restrict flow from port 2 to port 1. See technical data below for orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-18AU
Series	4
Capacity	680 L/min.
Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 9 mm
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	Viton: 990018006
Model Weight	0.90 kg.

CONFIGURATION OPTIONS

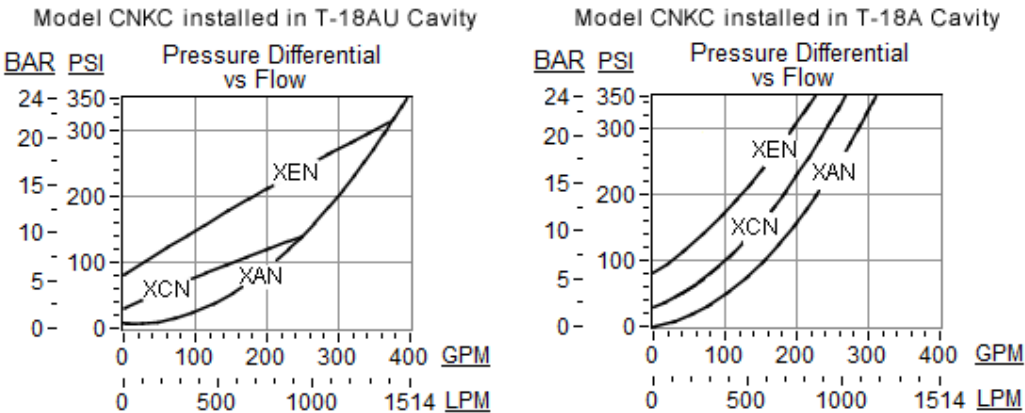
Model Code Example: CNKCXAN

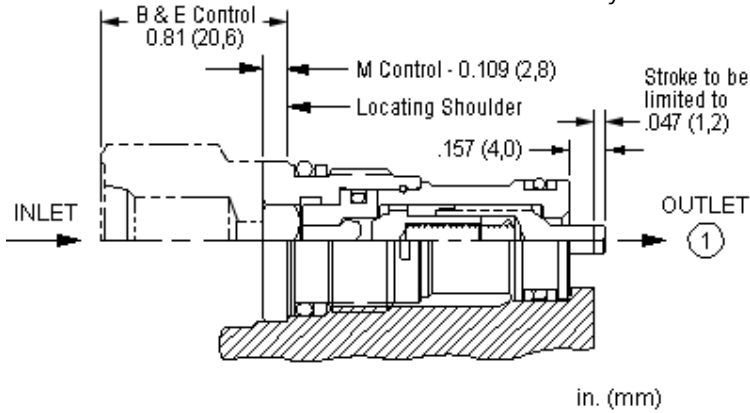
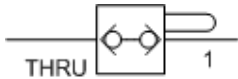
CONTROL	(X) SETTING RANGE	(A) SEAL MATERIAL	(N)
X Not Adjustable	A 4 psi (0,3 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)	N Buna-N	
	B 15 psi (1 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)	V Viton	
	C 30 psi (2 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)		
	D 50 psi (3,5 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)		
	E 75 psi (5 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)		
	F 100 psi (7 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)		
	G 150 psi (10 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)		
	Z 1 psi (0,07 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)		

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- These valves will work in Sun's standard T-18A cavity at lower capacity. To realize the full stated capacity, the T-18AU cavity should be used.
- Valves with the opposite flow path (free flow from 2 to 1) are considered flow controls and may be found listed as fixed orifice, non-pressure compensated flow control valve with reverse flow check.
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- The customer specified orifice diameter is stamped on one of the cartridge's hex faces.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





The phaser check is a pair of checks, back-to-back, with the poppet at port 1 mechanically actuated. The valve is meant to be installed into the piston of a cylinder. When the cylinder reaches the end of its stroke the poppet in the phaser check is shoved off its seat allowing flow through the piston. This allows two cylinders to get back into phase.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-162DP
Series	0
Capacity	4,7 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Internal Hex Size	8 mm
Valve Hex Size	19,1 mm
Valve Installation Torque	27 - 33 Nm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Viton: 990162006
Model Weight	0.03 kg.

CONFIGURATION OPTIONS

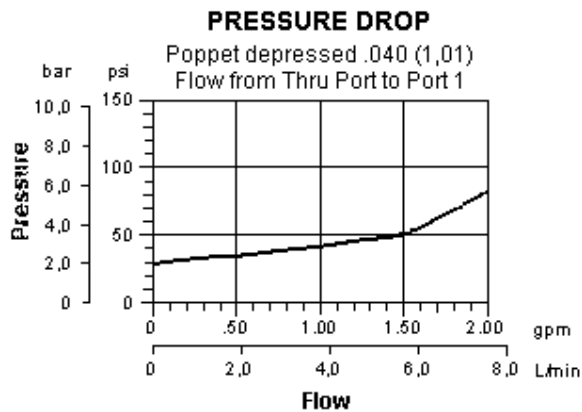
Model Code Example: CDAPMCN

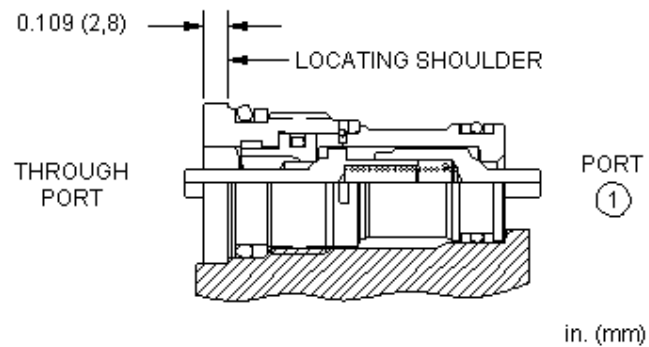
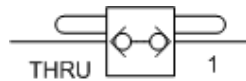
CONTROL	(M)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)
M Mechanical Actuation		C 30 psi (2 bar)		N Buna-N	
B External 1/4 BSPP Port				V Viton	
E External 4-SAE Port					

TECHNICAL FEATURES

- This valve is not designed to handle side forces. Actuating direction must be axial, and contact surface must be perpendicular to valve axis to within 5°.
- This valve is NOT meant to be cam operated.
- This valve is NOT to be used in place of a mechanical stop.
- Maximum stroke of the poppet must be limited to .047 in. (1,2 mm) by a mechanical stop other than the valve itself.
- Note: Port 2 of the T-162A cavity is not used with this valve.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- A cylinder that does its work while extending can put a large load on the rod gland at the end of its stroke. A phaser check in the piston can limit the unnecessary force on the gland.
- If you need to monitor the pressure in a cylinder, a phaser check can prevent the trapping of a false pressure value by a load holding valve.
- A phaser check in the piston of a vertically mounted cylinder will bleed air at the end of the stroke.
- Phaser checks in the pistons of master/slave cylinders will synchronize the cylinders simply by taking the mechanism to the end of its travel in both directions. This lends itself to dual cylinder steering applications.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





The phaser check is a pair of checks, back-to-back, with both poppets mechanically actuated. The valve is meant to be installed into the piston or rod of a cylinder. When the cylinder reaches the end of its stroke the poppet in the phaser check is shoved off its seat allowing flow through the piston. This allows two cylinders to get back into phase.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-162DP
Series	0
Capacity	4,7 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Internal Hex Size	8 mm
Valve Installation Torque	27 - 33 Nm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006
Model Weight	0.03 kg.

NOTES A special tool is required to install this cartridge. Use part number 998-101 to order this tool.

CONFIGURATION OPTIONS

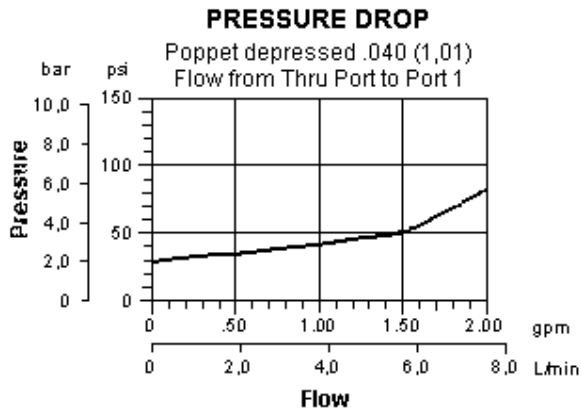
Model Code Example: CDAQMCN

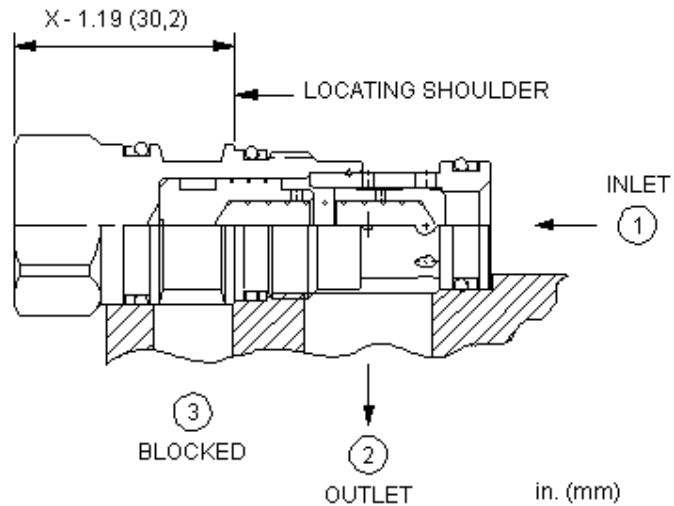
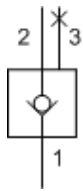
CONTROL	(M)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)
M Mechanical Actuation		C 30 psi (2 bar)		N Buna-N	
				V Viton	

TECHNICAL FEATURES

- This valve is not designed to handle side forces. Actuating direction must be axial, and contact surface must be perpendicular to valve axis to within 5°.
- This valve is NOT meant to be cam operated.
- This valve is NOT to be used in place of a mechanical stop.
- Maximum stroke of the poppet must be limited to .047 in. (1,2 mm) by a mechanical stop other than the valve itself.
- Note: Port 2 of the T-162A cavity is not used with this valve.
- A cylinder that does its work while extending can put a large load on the rod gland at the end of its stroke. A phaser check in the piston can limit the unnecessary force on the gland.
- If you need to monitor the pressure in a cylinder, a phaser check can prevent the trapping of a false pressure value by a load holding valve.
- A phaser check in the piston of a vertically mounted cylinder will bleed air at the end of the stroke.
- Phaser checks in the pistons of master/slave cylinders will synchronize the cylinders simply by taking the mechanism to the end of its travel in both directions. This lends itself to dual cylinder steering applications.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-11A
Series	1
Capacity	80 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006
Model Weight	0.13 kg.

CONFIGURATION OPTIONS

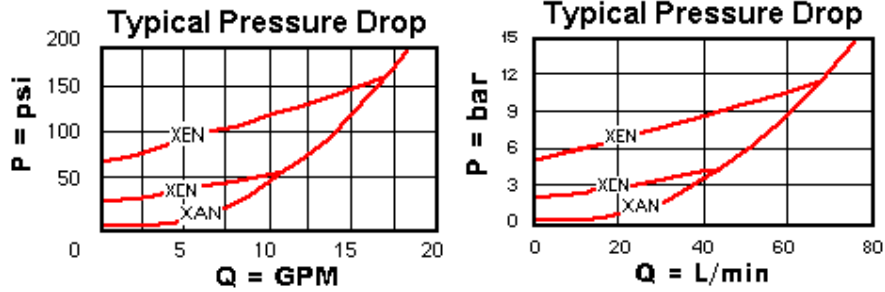
Model Code Example: CXDCXCN

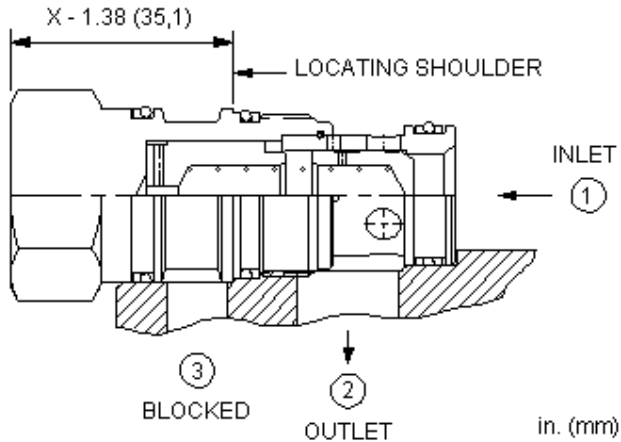
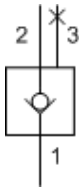
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
	A 4 psi (0,3 bar)	V Viton	/AP Stainless Steel, Passivated
	B 15 psi (1 bar)		/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)		
	E 75 psi (5 bar)		
	F 100 psi (7 bar)		
	Z 1 psi (0,07 bar)		

TECHNICAL FEATURES

- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-2A
Series	2
Capacity	160 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006
Model Weight	0.23 kg.

CONFIGURATION OPTIONS

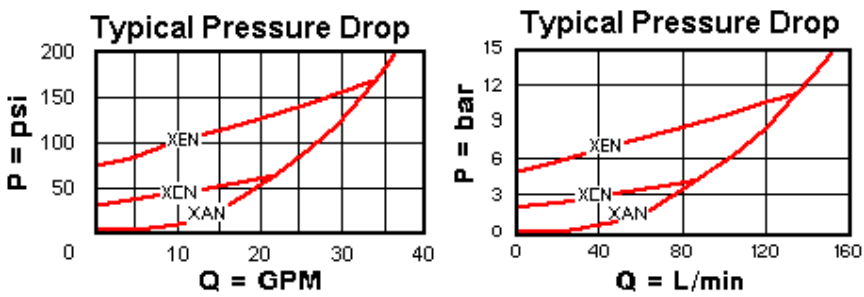
Model Code Example: CXFCXCN

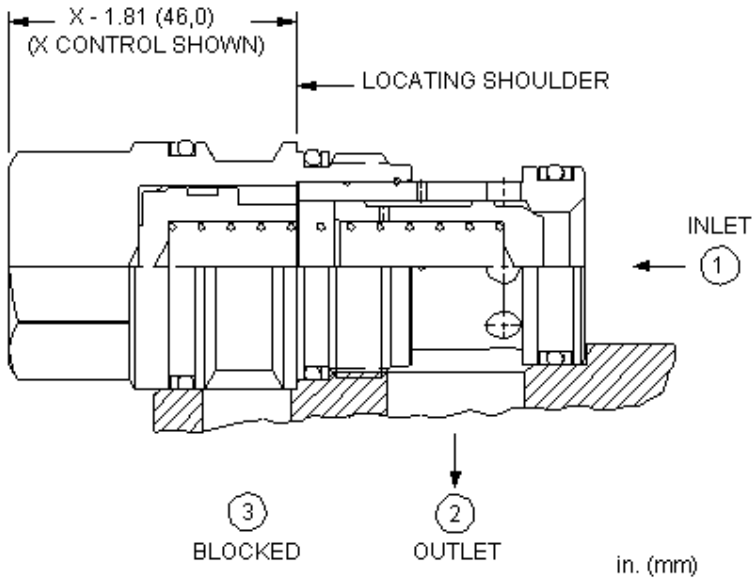
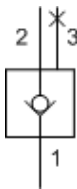
CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Not Adjustable		C 30 psi (2 bar) A 4 psi (0,3 bar) B 15 psi (1 bar) D 50 psi (3,5 bar) E 75 psi (5 bar) F 100 psi (7 bar) Z 1 psi (0,07 bar)		N Buna-N V Viton		Standard Material/Coating /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-17A
Series	3
Capacity	320 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006
Model Weight	0.50 kg.

CONFIGURATION OPTIONS

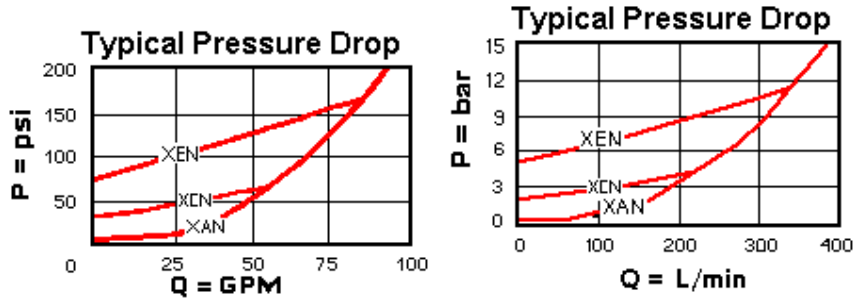
Model Code Example: CXHCArray

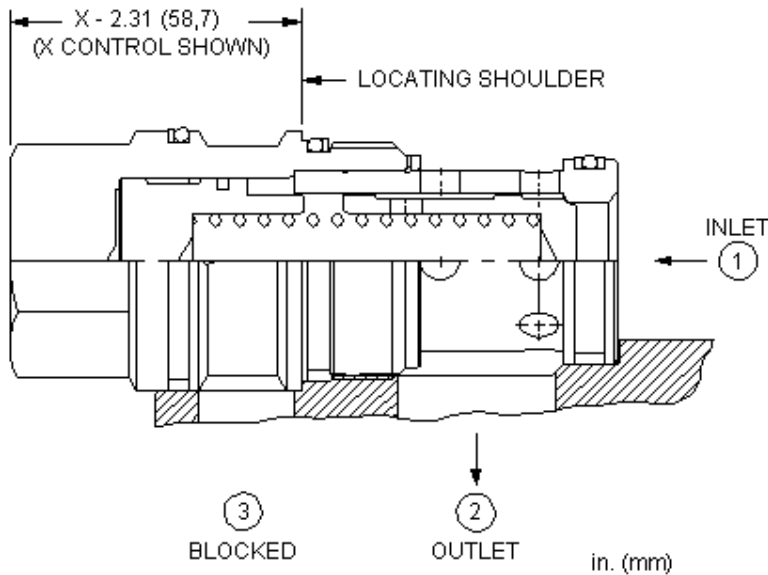
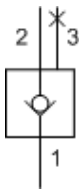
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) A 4 psi (0,3 bar) B 15 psi (1 bar) D 50 psi (3,5 bar) E 75 psi (5 bar) F 100 psi (7 bar) Z 1 psi (0,07 bar)	N Buna-N V Viton	Standard Material/Coating /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-19A
Series	4
Capacity	480 L/min.
Maximum Operating Pressure	350 bar
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006
Model Weight	1.18 kg.

CONFIGURATION OPTIONS

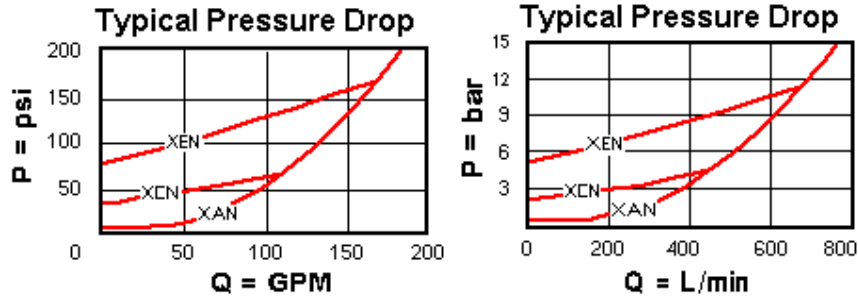
Model Code Example: CXJCArray

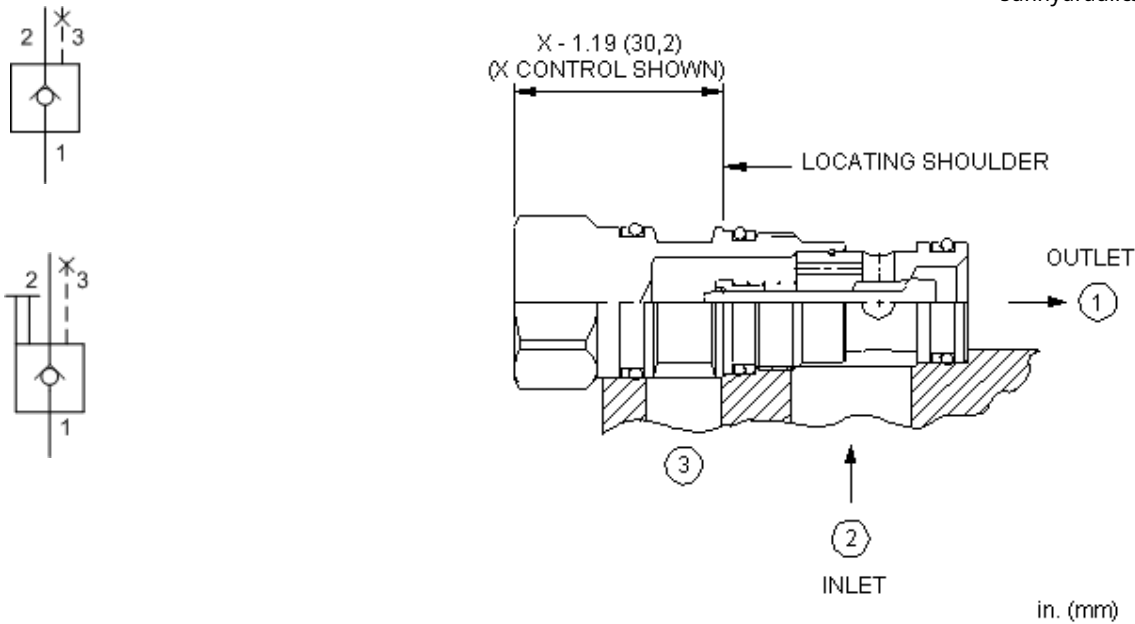
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N)
X Not Adjustable	C 30 psi (2 bar) A 4 psi (0,3 bar) B 15 psi (1 bar) D 50 psi (3,5 bar) E 75 psi (5 bar) F 100 psi (7 bar) Z 1 psi (0,07 bar)	N Buna-N V Viton	

TECHNICAL FEATURES

- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, side-to-nose cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-11A
Series	1
Capacity	60 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006
Model Weight	0.12 kg.

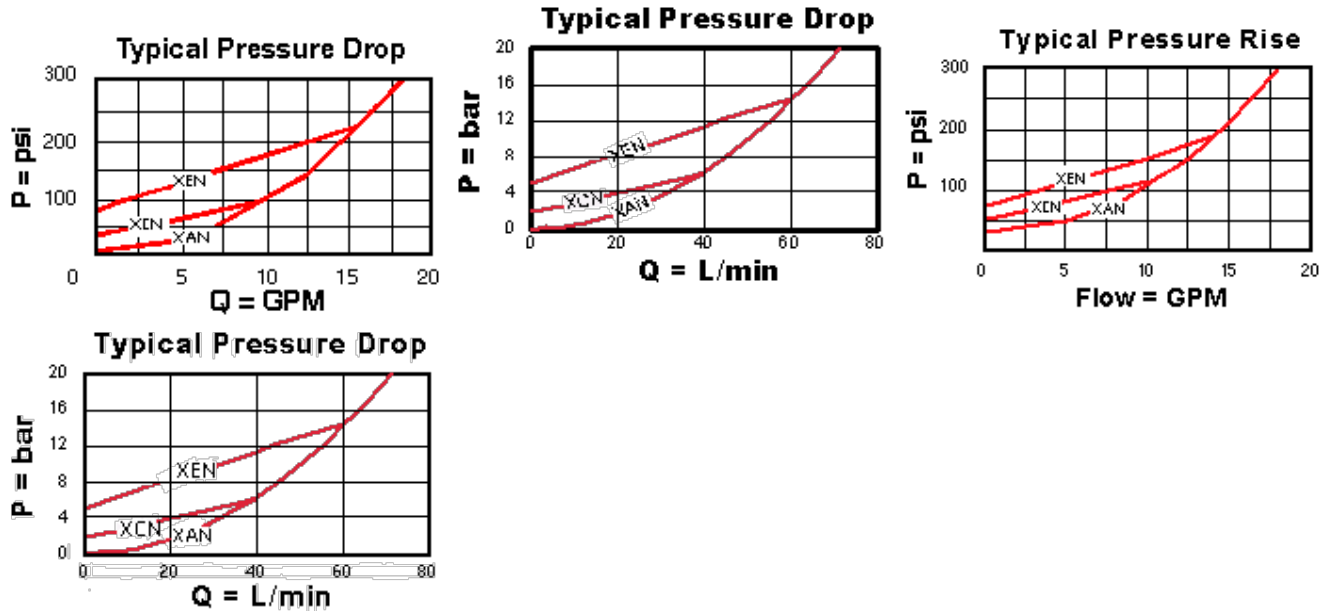
CONFIGURATION OPTIONS Model Code Example: CXCEArray

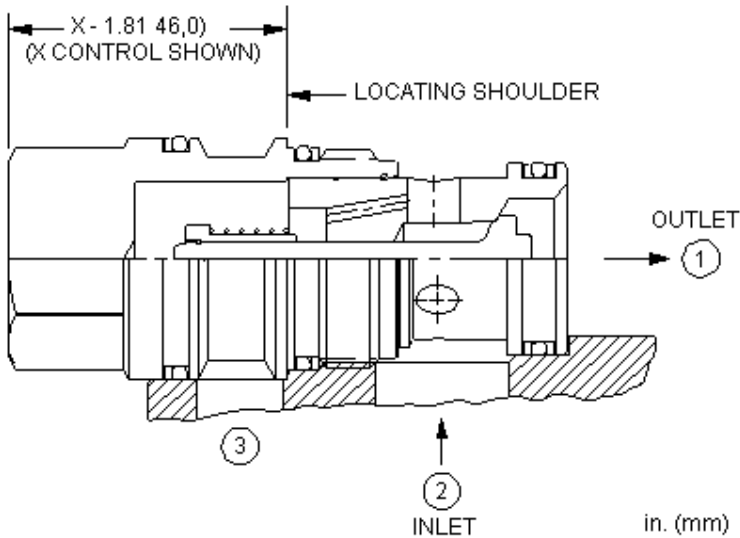
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) A 4 psi (0,3 bar) B 15 psi (1 bar) D 50 psi (3,5 bar) E 75 psi (5 bar) F 100 psi (7 bar)	N Buna-N V Viton	Standard Material/Coating /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, side-to-nose cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-17A
Series	3
Capacity	240 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006
Model Weight	0.48 kg.

CONFIGURATION OPTIONS

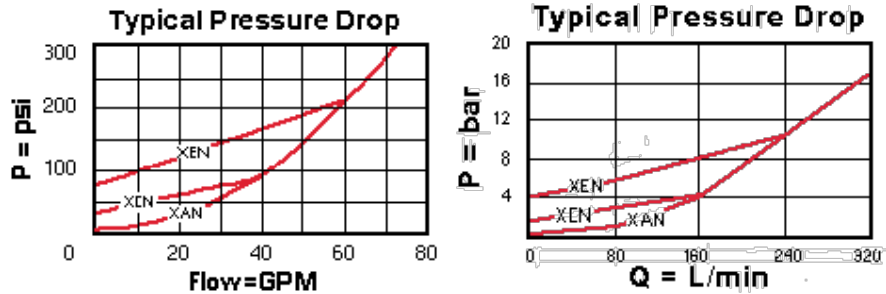
Model Code Example: CXGEXCN

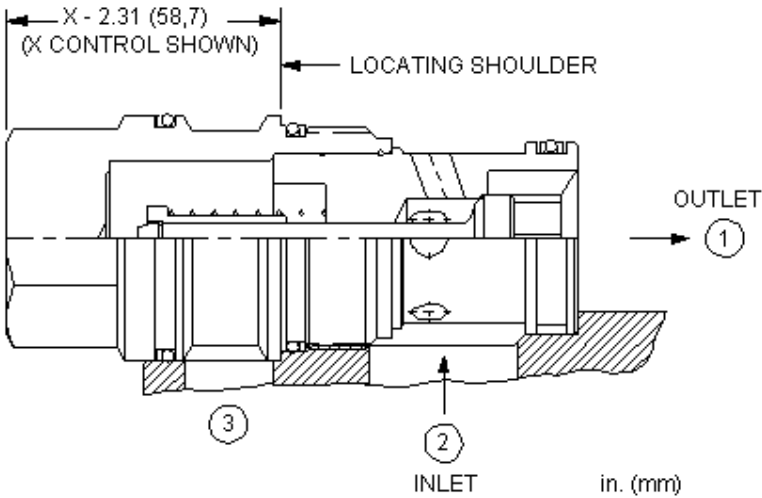
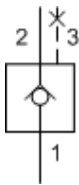
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) A 4 psi (0,3 bar) B 15 psi (1 bar) D 50 psi (3,5 bar) E 75 psi (5 bar) F 100 psi (7 bar)	N Buna-N V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, side-to-nose cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-19A
Series	4
Capacity	480 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006
Model Weight	1.08 kg.

CONFIGURATION OPTIONS

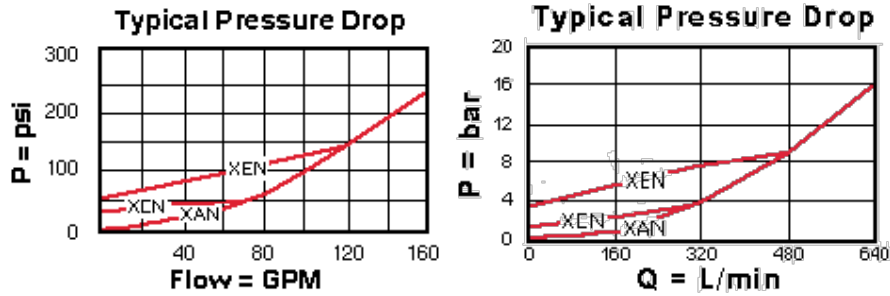
Model Code Example: CXIEXCN

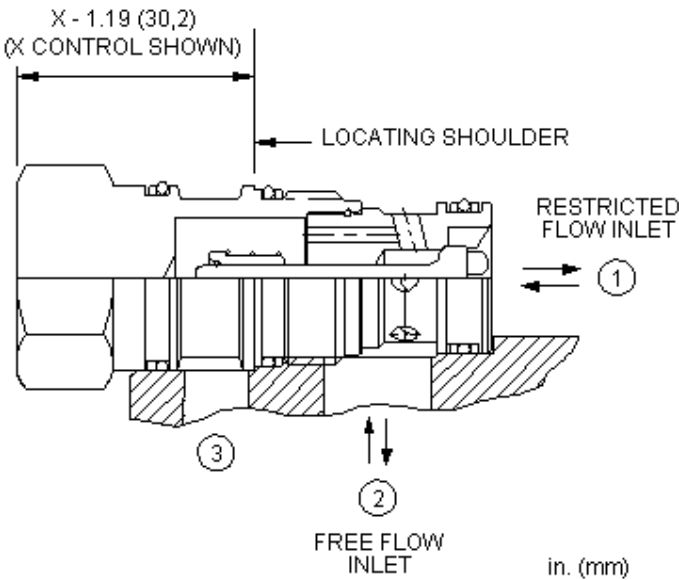
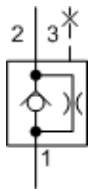
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) A 4 psi (0,3 bar) B 15 psi (1 bar) D 50 psi (3,5 bar) E 75 psi (5 bar) F 100 psi (7 bar)	N Buna-N V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, side-to-nose cheater check valves with a bypass orifice function as a 2-port check valve in a 3-port cavity. They allow free flow from port 2 to port 1 with a customer specified orifice that controls flow from port 1 to port 2. Port 3 of the cartridge is blocked off.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-11A
Series	1
Capacity	60 L/min.
Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 3,9 mm
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006
Model Weight	0.12 kg.

CONFIGURATION OPTIONS

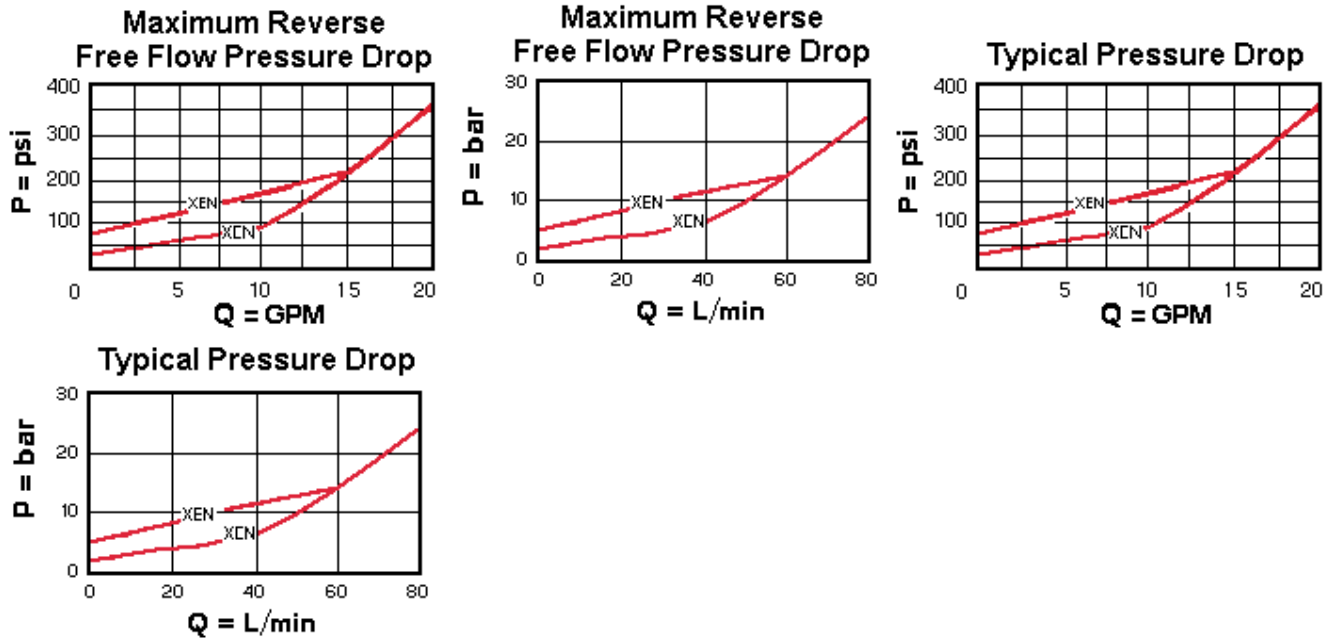
Model Code Example: CNCDXCN

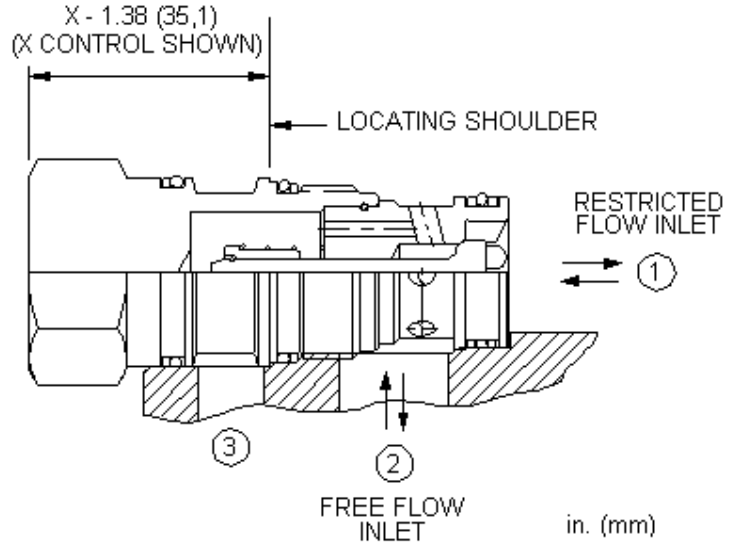
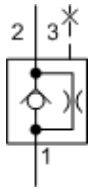
CONTROL	(X) SETTING RANGE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)	N Buna-N V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- When used in a full time regeneration circuit these valves allow full force to be developed by the cylinder when it comes to a stop. The bypass orifice drops the rod end pressure to zero when flow out of the rod stops.
- The customer specified orifice diameter is stamped on one of the cartridge's hex faces.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, side-to-nose cheater check valves with a bypass orifice function as a 2-port check valve in a 3-port cavity. They allow free flow from port 2 to port 1 with a customer specified orifice that controls flow from port 1 to port 2. Port 3 of the cartridge is blocked off.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-2A
Series	2
Capacity	120 L/min.
Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 3,4 mm
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006
Model Weight	0.22 kg.

CONFIGURATION OPTIONS

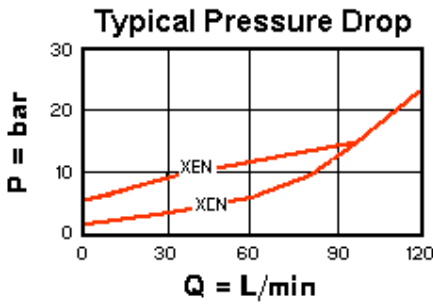
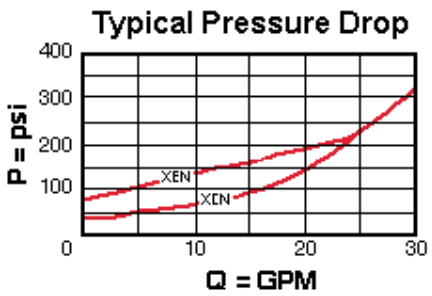
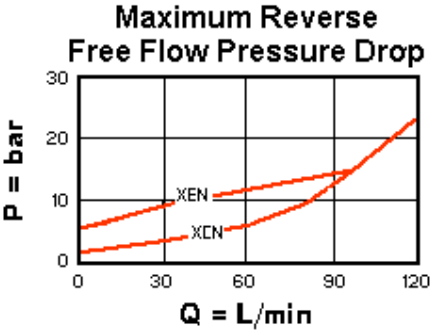
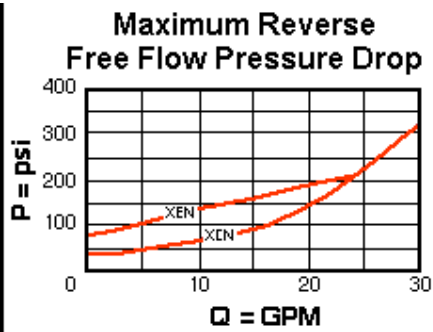
Model Code Example: CNEDArray

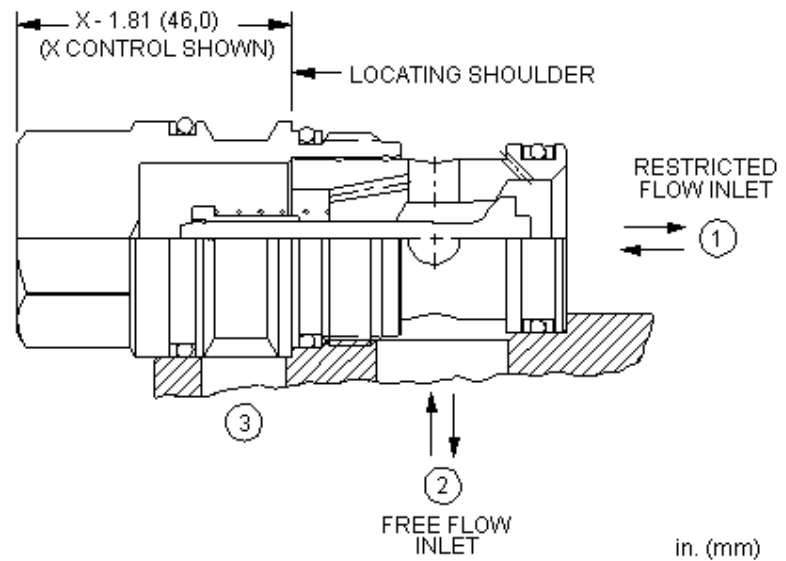
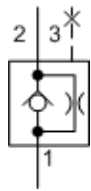
CONTROL	(X) SETTING RANGE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) Cracking Pressure, .016 - .135 in. (0,4 - 3,4 mm)	N Buna-N V Viton	Standard Material/Coating /LH Mild Steel, Zinc-Nickel

TECHNICAL FEATURES

- When used in a full time regeneration circuit these valves allow full force to be developed by the cylinder when it comes to a stop. The bypass orifice drops the rod end pressure to zero when flow out of the rod stops.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, side-to-nose cheater check valves with a bypass orifice function as a 2-port check valve in a 3-port cavity. They allow free flow from port 2 to port 1 with a customer specified orifice that controls flow from port 1 to port 2. Port 3 of the cartridge is blocked off.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-17A
Series	3
Capacity	240 L/min.
Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 5,5 mm
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006
Model Weight	0.48 kg.

CONFIGURATION OPTIONS

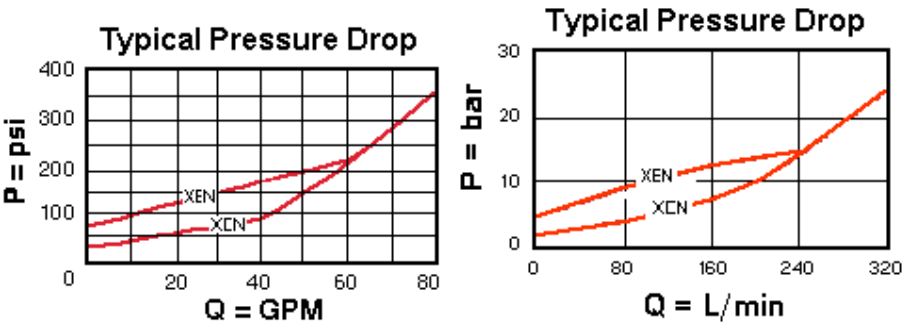
Model Code Example: CNGDArray

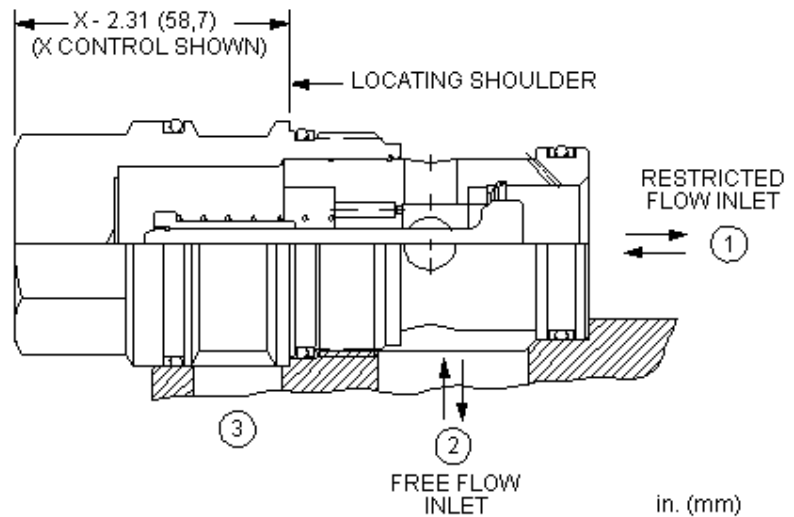
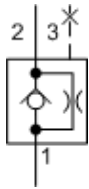
CONTROL	(X) SETTING RANGE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm) A 4 psi (0,3 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm) B 15 psi (1 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm) D 50 psi (3,5 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm) E 75 psi (5 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm) F 100 psi (7 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)	N Buna-N V Viton	Standard Material/Coating /AP Stainless Steel, Passivated

TECHNICAL FEATURES

- When used in a full time regeneration circuit these valves allow full force to be developed by the cylinder when it comes to a stop. The bypass orifice drops the rod end pressure to zero when flow out of the rod stops.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP or /LH (see CONFIGURATION section). For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, side-to-nose cheater check valves with a bypass orifice function as a 2-port check valve in a 3-port cavity. They allow free flow from port 2 to port 1 with a customer specified orifice that controls flow from port 1 to port 2. Port 3 of the cartridge is blocked off.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-19A
Series	4
Capacity	480 L/min.
Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 5,5 mm
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006
Model Weight	1.07 kg.

CONFIGURATION OPTIONS

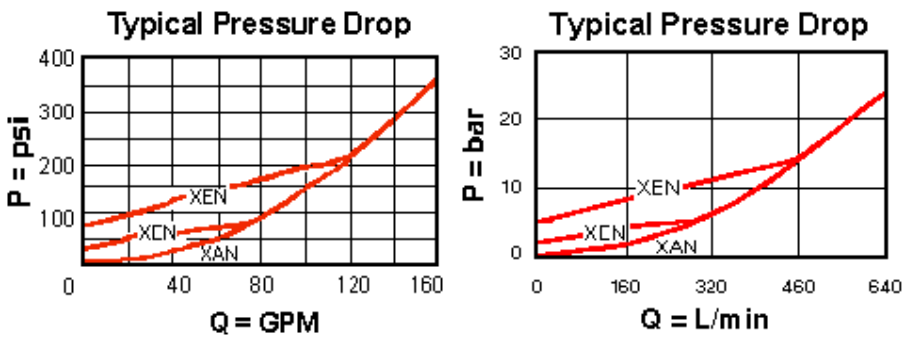
Model Code Example: CNIDArray

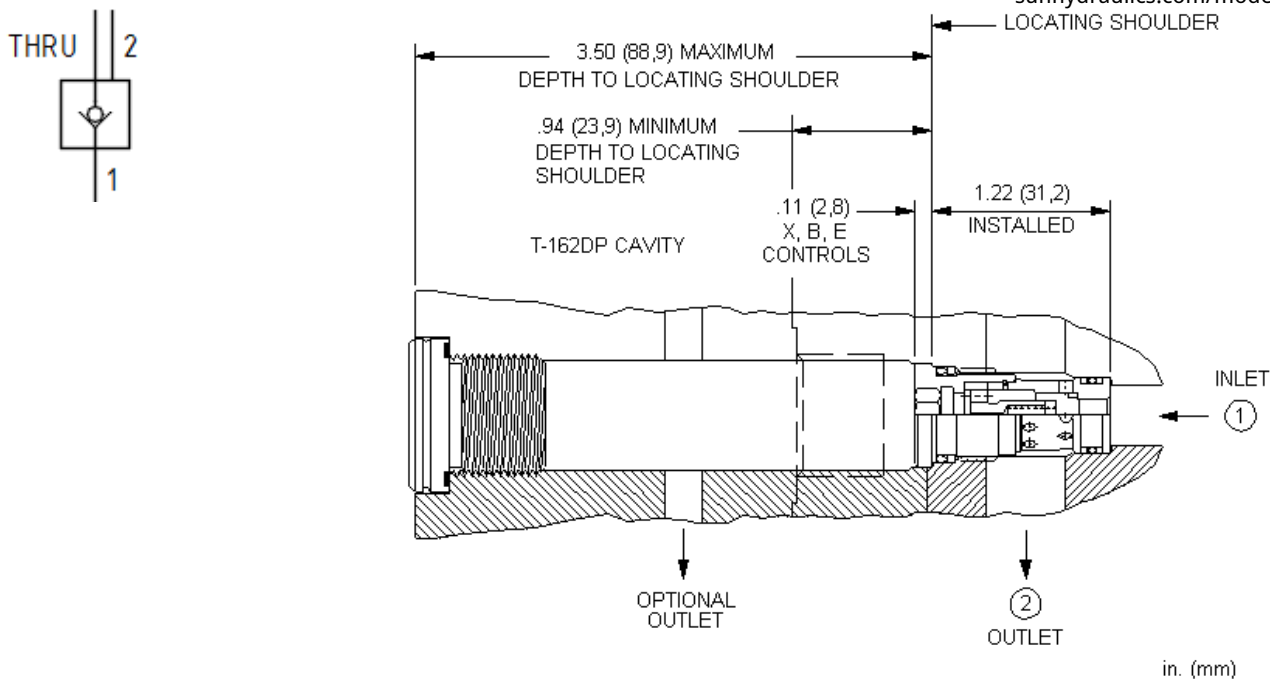
CONTROL	(X) SETTING RANGE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)	N Buna-N V Viton	Standard Material/Coating /AP Stainless Steel, Passivated

TECHNICAL FEATURES

- When used in a full time regeneration circuit these valves allow full force to be developed by the cylinder when it comes to a stop. The bypass orifice drops the rod end pressure to zero when flow out of the rod stops.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-162DP
Series	0
Capacity	40 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Internal Hex Size	8 mm
Valve Installation Torque	27 - 33 Nm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	EPDM: 990162014
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006
Model Weight	0.03 kg.

CONFIGURATION OPTIONS

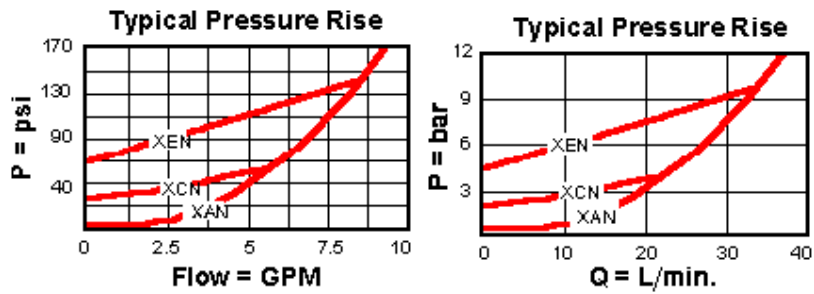
Model Code Example: CXBMArray

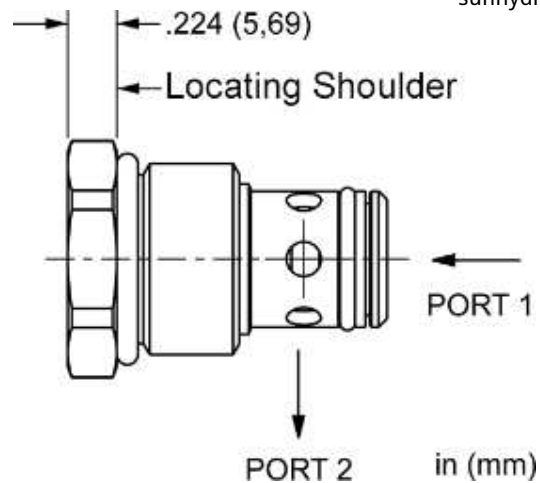
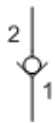
CONTROL	(X) CRACKING PRESSURE	(A) SEAL MATERIAL	(N)
X Not Adjustable	A 4 psi (0,3 bar) B 15 psi (1 bar) C 30 psi (2 bar)	N Buna-N E EPDM V Viton	

TECHNICAL FEATURES

- This valve is what we call an Insert style. It is meant to be buried in a manifold or actuator. The cavity drawing for the T-162DP cavity contains a lot of detailed information and should be studied closely when applying this valve.
- Two-port check valves share the same cavity for a given frame size, however, pay close attention as flow paths may be in opposite directions.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Check valves offer extremely low leakage rates with a maximum leakage of less than 1 drop per minute (0,07 cc/min).
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

PERFORMANCE CURVES





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	SC-10-02
Series	1C
Capacity	60 L/min.
Maximum Operating Pressure	250 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Valve Hex Size	25,4 mm
Valve Installation Torque	35 - 40 Nm
Seal kit - Cartridge	Buna: 99C102007
Seal kit - Cartridge	Viton: 99C102006
Model Weight	0.07 kg.

CONFIGURATION OPTIONS

Model Code Example: CXUTXCN

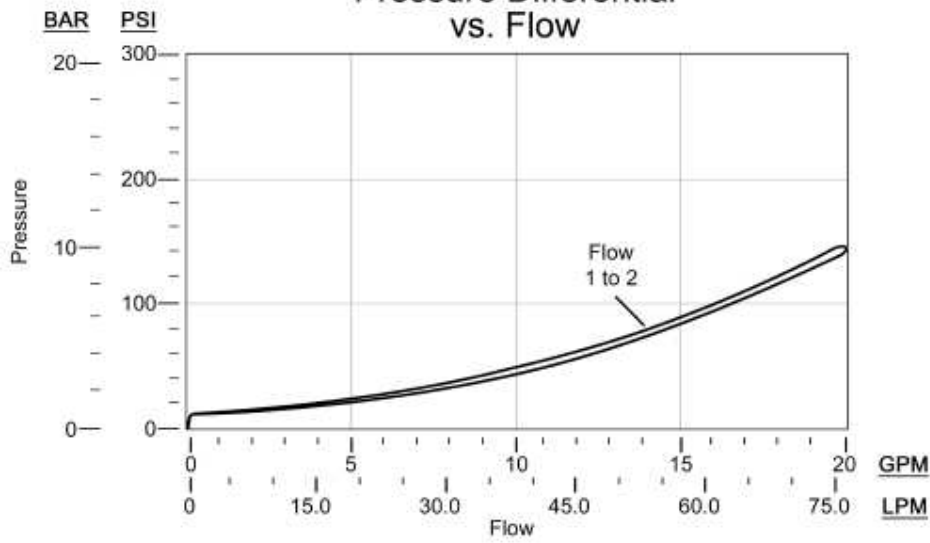
CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)
X -		C 29 psi (2.0 bar)		N Buna-N	
		A 7 psi (.5 bar)		V Viton	

TECHNICAL FEATURES

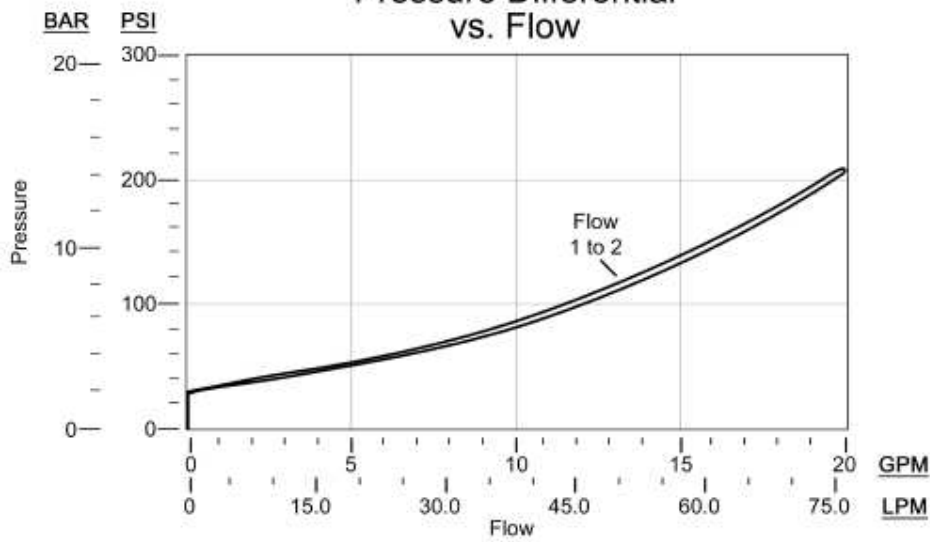
- This valve will accept 3600 psi (250 bar) at ports 1 and 2.
- This Check valve offers an extremely low leakage rate with a maximum leakage of less than 5 drops per minute (0,33 cc/min).
- All configurations of this valve include zinc plating as standard.
- All configurations of this valve provide 192 hours of corrosion resistance.

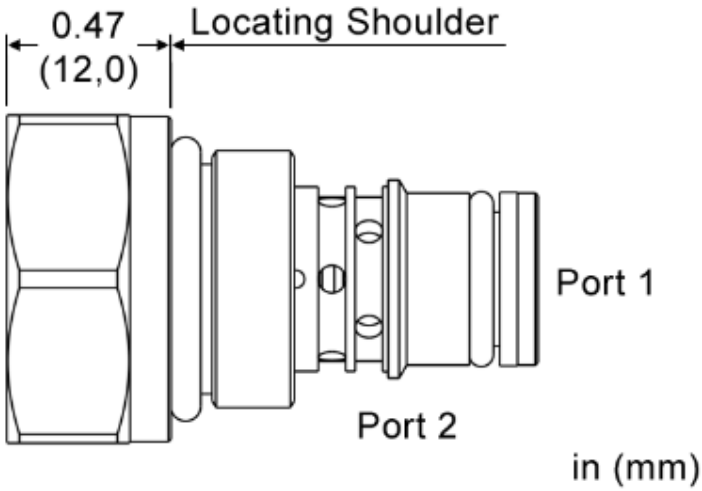
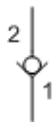
PERFORMANCE CURVES

CXUT-XA* Pressure Differential vs. Flow



CXUT-XC* Pressure Differential vs. Flow





This nose-to-side check valve allows free flow from the inlet (Port 1) to the outlet (Port 2) and blocks flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	SC-08-02
Series	0C
Capacity	40 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Valve Hex Size	24 mm
Valve Installation Torque	26 - 30 Nm
Model Weight	0.10 kg.

CONFIGURATION OPTIONS

Model Code Example: CXTAXCN

CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)
X -		C 36 psi A 5 psi E 72 psi		N Buna-N	

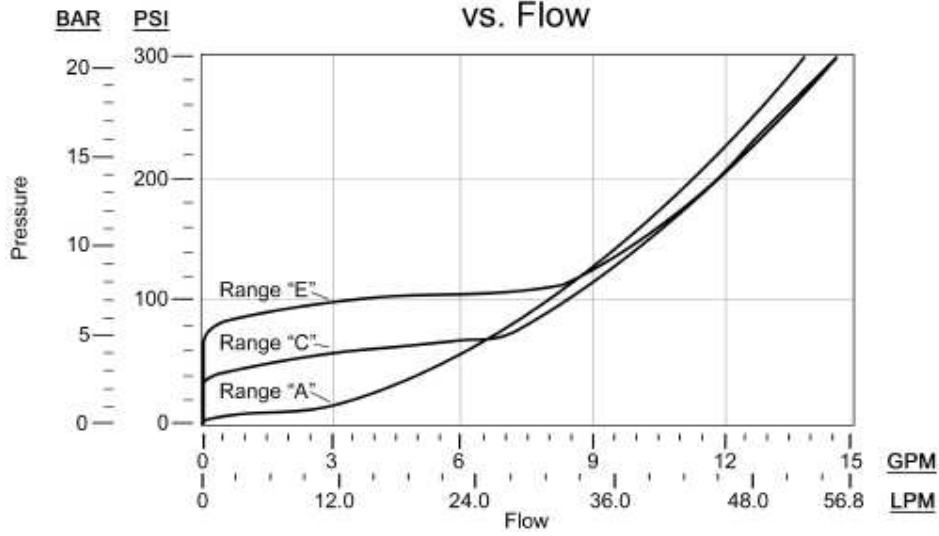
TECHNICAL FEATURES

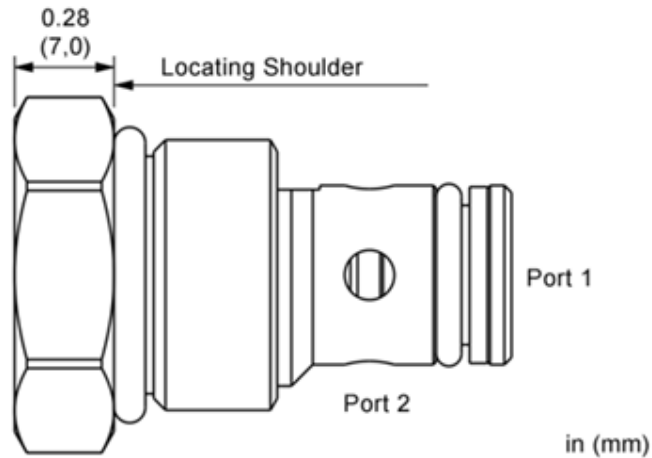
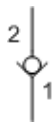
- Will accept 5000 psi (350 bar) at ports 1 and 2.
- This Check valve offers an extremely low leakage rate with a maximum leakage of less than 5 drops per minute (0,33 cc/min).
- The cartridge installation torque of 30 lbf-ft (40,7 Nm) is required for best performance.

PERFORMANCE CURVES

CXTA

Typical Pressure Differential vs. Flow





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	SC-08-02
Series	0C
Capacity	30 L/min.
Maximum Operating Pressure	210 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Valve Hex Size	22,2 mm
Valve Installation Torque	39 - 42 Nm
Model Weight	0.06 kg.

CONFIGURATION OPTIONS

Model Code Example: CXTTXAN

CONTROL	(X)	CRACKING PRESSURE	(A)	SEAL MATERIAL	(N)
X Not Adjustable		A 4.4 psi		N Buna-N	
		B 17.4 psi			
		C 24.7 psi			
		Y 10.2 psi			

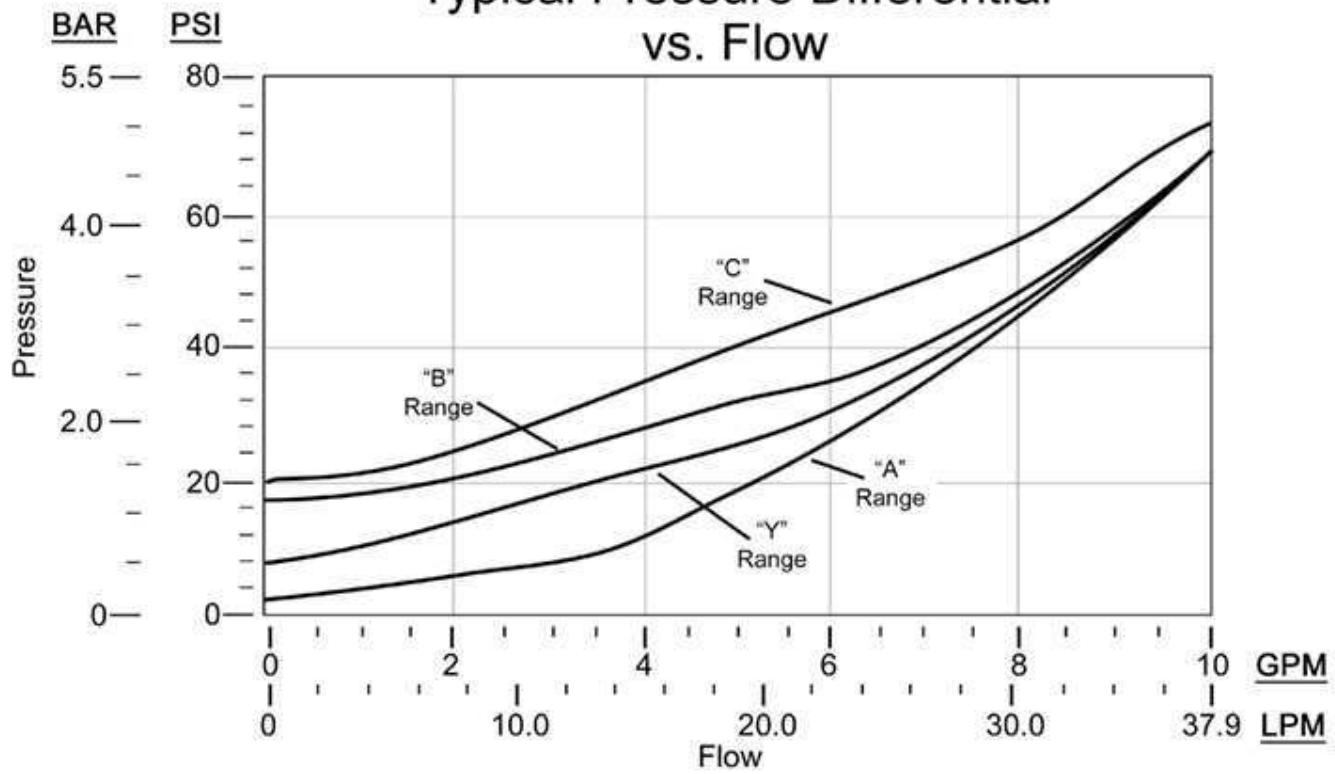
TECHNICAL FEATURES

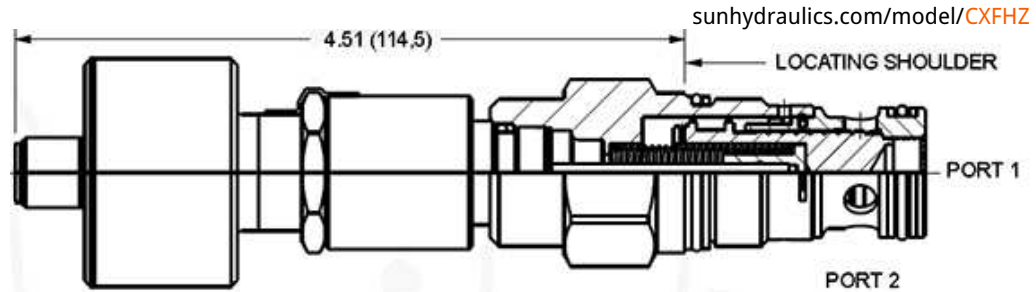
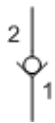
- This Check valve offers an extremely low leakage rate with a maximum leakage of less than 5 drops per minute (0,33 cc/min).
- This valve will accept 3000 psi (210 bar) at ports 1 and 2.

PERFORMANCE CURVES

CXTT

Typical Pressure Differential vs. Flow





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

This valve incorporates a position switch to provide confirmation that the valve is in the transition position or seated (closed).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-5A
Series	2
Capacity	120 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006
Model Weight	0.62 kg.

SWITCH SPECIFICATIONS

Supply Voltage	20-30 VDC
Operating Temperature Range	-25 to 80 °C
Vibration	≥ 50g, 0-500 impulses/sec
Shock	>50 g, 1ms
Reverse Polarity Protection	Yes
Maximum Output Load	≤ 400 mA, Duty Ratio 100%
Short Circuit Protection	Yes, Load Short Unlimited
Turn On Time	≤ 25 ms
Hysteresis	≤ .002 in.
Thermal Shift - 0 to 80 °C ≤ ±	0,1 mm
EMC	DIN EN 61000-6-1/2/3/4
Connector	M12 X 1 (4) Pin
Connector Environment Rating	IP65

CONFIGURATION OPTIONS

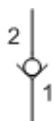
Model Code Example: CXFHZArray

CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)
C 30 psi (2 bar)		N Buna-N	
A 4 psi (0,3 bar)		V Viton	

TECHNICAL FEATURES

- The position switch in this valve provides confirmation that the valve is closed.
- This cartridge is supplied as a sealed, factory set unit and is not field serviceable. Any tampering will violate the product warranty.
- When torquing this cartridge into its cavity, a crow's foot wrench or similar will be required since the position switch precludes the use of a deep socket wrench.
- All ports will accept 5000 psi (350 bar).
- An optional protective cover, with mounting hardware included, may be ordered separately. See kit number: 991-043.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

RELATED MODELS



Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

This valve incorporates a position switch to provide confirmation that the valve is in the transition position or seated (closed).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-16A
Series	3
Capacity	240 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006
Model Weight	0.92 kg.

SWITCH SPECIFICATIONS

Supply Voltage	20-30 VDC
Operating Temperature Range	-25 to 80 °C
Vibration	≥ 50g, 0-500 impulses/sec
Shock	>50 g, 1ms
Reverse Polarity Protection	Yes
Maximum Output Load	≤ 400 mA, Duty Ratio 100%
Short Circuit Protection	Yes, Load Short Unlimited
Turn On Time	≤ 25 ms
Hysteresis	≤ .002 in.
Thermal Shift - 0 to 80 °C ≤ ±	0,1 mm
EMC	DIN EN 61000-6-1/2/3/4
Connector	M12 X 1 (4) Pin
Connector Environment Rating	IP65

CONFIGURATION OPTIONS

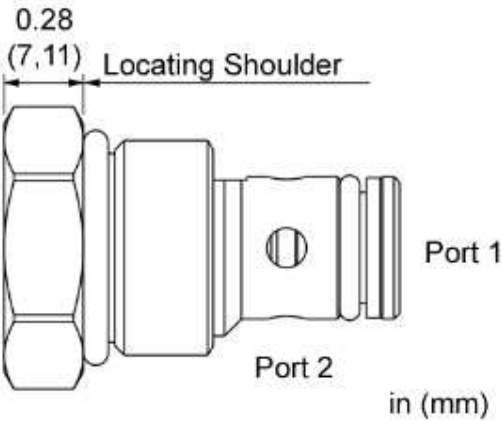
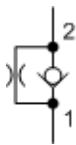
Model Code Example: CXHHZCN

CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)
C 30 psi (2 bar)		N Buna-N	
A 4 psi (0,3 bar)		V Viton	

TECHNICAL FEATURES

- The position switch in this valve provides confirmation that the valve is closed.
- This cartridge is supplied as a sealed, factory set unit and is not field serviceable. Any tampering will violate the product warranty.
- When torquing this cartridge into its cavity, a crow's foot wrench or similar will be required since the position switch precludes the use of a deep socket wrench.
- All ports will accept 5000 psi (350 bar).
- An optional protective cover, with mounting hardware included, may be ordered separately. See kit number: 991-043.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

RELATED MODELS



This nose-to-side check valve with a bypass orifice allows free flow from the inlet (Port 1) to the outlet (Port 2). Flow from Port 2 to Port 1 is restricted through a bypass orifice.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	SC-08-02
Series	0C
Capacity	30 L/min.
Maximum Operating Pressure	250 bar
Maximum Valve Leakage at Reseat	0,3 cc/min.
Bypass orifice	0,7 mm
Valve Hex Size	22,2 mm
Valve Installation Torque	26 - 30 Nm
Model Weight	0.06 kg.

CONFIGURATION OPTIONS

Model Code Example: CNTCArray

CONTROL	(X) CRACKING PRESSURE	(Y) SEAL MATERIAL	(N)
X No Manual Override	Y 10.2 psi	N Buna-N	

TECHNICAL FEATURES

- This valve will accept 3600 psi (250 bar) at ports 1 and 2.

PERFORMANCE CURVES

CNTC-*Y*

Typical Pressure Differential vs. Flow

