

Cartridge Check Valves



Cartridge Check Valve

Cartridge check valves (also called non-return valves) are designed for simple installation and offer outstanding performance inside mating housing. They are valves which only allows water to flow in one direction and prevents backflow.

XHnotion cartridge check valves are not only for water, also for air now. Applications include faucets, showers, valves and heating systems for residential or commercial installations, as well as pumps,

All the models are 100% tested during production for drip tight operation. Maximum temperature and pressure rating is for most models 200F(90C)/230psi. The average cracking (opening) pressure of most valves is between 0.25and 0.33 of a psi.

Features and Benefits

1. Zero leak at low and high pressure and temperature.
2. Generous flow structure promise the lowest headloss.
3. Compact, easy installation, 8mm-50mm diameter to meet all the system.
4. No thread connection to avoid potential leakage

Specification

Material	Acetal housing, core, cover; EPDM O-Ring; SS304 Spring
Medium	water, air
Size	8mm to 50mm
Cracking Pressure	0.25Psi
Max Pressure	230 Psi
Max temperature	100 C (212F)
Production Capacity	1,000,000 pcs each month
Packing Details	Poly bag, outer carton and pallet.
Payment Term	T/T, PAYPAL, WESTERN UNION
Delivery Time	3-20 days after confirming the order
Minium Order Quantity	2000 pcs
Certificate	ROHS, ACS, FDA, REACH

Application Examples

In water filter system, heating devices, household pipe systems, and water outlet appliances, XHnotion cartridge check valves have wide applications and reliability in a wide range of clear water systems.

- Protect drinking water from contamination by backflow resulting from gravity, backsiphonage or backpressure. (Example: Hose connected kitchen faucet or shower hand spray.)



- Hold water in a system after the flow has been turned off to prevent drainage or facilitate restart. (Example: Pumping systems.)



- For the catering industry to prevent siphon electronic equipment for fluid gravity drip. (Example: coffee machine, water machine, beverage machine)



- Prevent crossover flow in systems with unequal line pressures. (Example: Cold and hot water inlets in thermostatic mixers.)



- Protect sensitive equipment against possible damage or contamination resulting from a reversal of flow direction. (Example: Water meter, pump or filter.)



- Reduce the risk of backflow or leakage in case of valve failure. (Example: Solenoid valve at the inlet of an appliance.)



- Allow complex systems to function properly by ensuring unidirectional flow. (Example: Multi-zone heating system or booster pumps.)

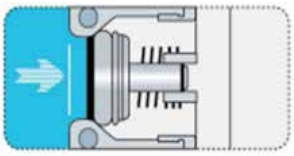


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Working Principles

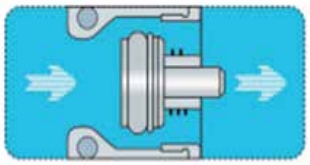
In static conditions (no flow)

The check valve is normally closed. The spring tension forces the plunger into its seat keeping the check valve closed.



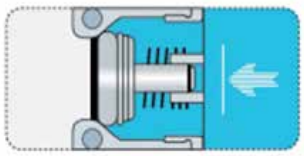
In dynamic conditions (flow)

The water pressure exceeds the spring tension. The plunger is lifted off its seat allowing water to flow through the valve.

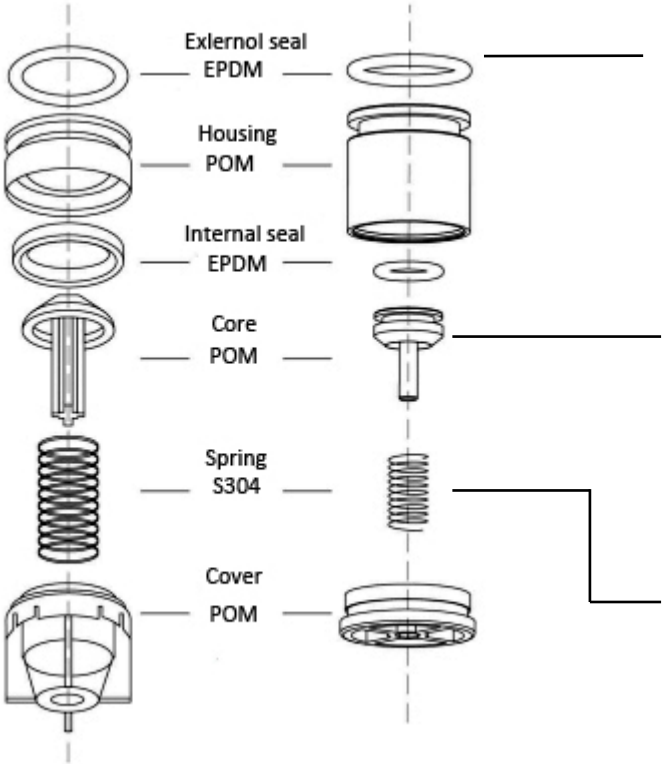


In backflow conditions (reversed flow)

If the pressure downstream of the valve increases (back pressure conditions) or if the system pressure upstream of the valve decreases (backsiphonage conditions) causing the flow to reverse direction, the spring-loaded plunger closes and prevents backflow.



Structure



External o-ring seal provides sealing between the check valve cartridge and the mating cavity into which it is inserted.

Center stem guidance optimizes the return of the plunger head into its seat for effective sealing and to prevent jamming even in hard water conditions (water with high mineral content or sediments)

Standard XHnotion check valves are spring loaded to ensure reliable operation in any position of installation and fast positive sealing even in low backpressure conditions.

Cartridge Check Valve

Cartridge - Style DN 8MM-25MM OD

DN cylindrical cartridges cover a size range from 8 mm to 25 mm and offer the easiest assembly: they can be inserted into the application device both in the direction of flow and against the direction of flow. They need to be held into place (retention) in both directions

Feature and Benefits

1. 100% factory tested drip in operation.
2. Easy to insert into the application devive.
3. Spring loaded plunger: operates in any position.
4. Extra low headloss, extra low cracking pressure.



Certification

SGS(RoHS) REACH FDA LFGB ACS

Option Available		
Part #	Housing	Closing system
DN	White	White



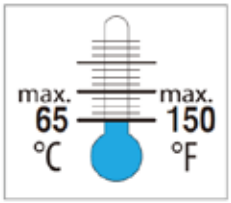
Materials	
Name	DN8, DN10, DN12, DN13,DN14, DN15,DN16, DN17, DN18, DN19, DN20, DN22, DN25.
Housing	Acetal
Guide	Acetal
Core	Acetal
Spring	Stainless steel AISI 304

Technical Data



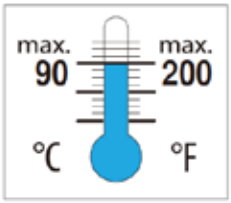
Medium:	Clear water only
Cracking Pressure:	0.23psi

Continuous





Short-term(5minutes max.)





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Cartridge Check Valve

Insert - Style OV 15MM-50MM OD

OV inserts cover a size range from 15 mm to 50 mm and provide superior flow performance (reduced headloss). They can only be inserted against the direction of flow but require no retainer in the direction of flow ("snap-fit" design with flexible tabs).

Feature and Benefits

1. 100% factory tested drip in operation.
2. Easy to insert into the application devive.
3. Spring loaded plunger: operates in any position.
4. Extra low headloss, extra low cracking pressure.



Certification

SGS(RoHS) REACH FDA LFGB ACS

Option Available		
Part #	Housing	Closing system
OV	White	White



Materials	
Name	OV15, OV20, OV25, OV32,OV40, OV50.
Housing	Acetal
Guide	Acetal
Core	Acetal
Spring	Stainless steel AISI 304

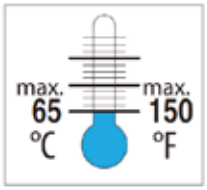


Technical Data

Medium: Clear water only

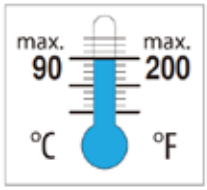
Cracking Pressure: 0.23psi

Continuous





Short-term(5minutes max.)





Cartridge Check Valve

Insert - Style OV 15MM-32MM OD - Half

OV inserts half surroudings cover a size range from 15 mm to 32 mm and provide superior flow performance (reduced headloss). They can only be inserted against the direction of flow but require no retainer in the direction of flow ("snap-fit" design with flexible tabs).

Feature and Benefits

1. 100% factory tested drip in operation.
2. Easy to insert into the application devive.
3. Spring loaded plunger: operates in any position.
4. Extra low headloss, extra low cracking pressure.



Certification

SGS(RoHS) REACH FDA LFGB ACS

Option Available		
Part #	Housing	Closing system
OV	White	White



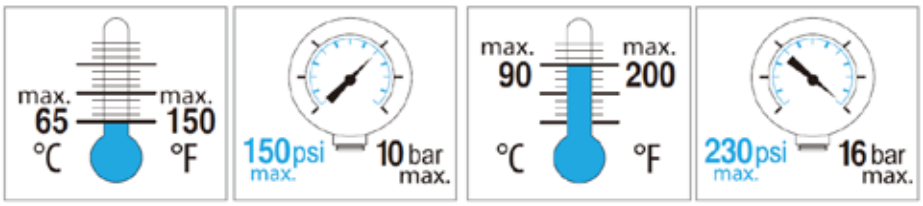
Materials	
Name	OV15S, OV20S, OV25S, OV32S.
Housing	Acetal
Guide	Acetal
Core	Acetal
Spring	Stainless steel AISI 304



Technical Data

Medium:	Clear water only
Cracking Pressure:	0.23psi

Contlnuous		Short-term(5minutes max.)	



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Cartridge Check Valve

High Temperature- Style OV 15MM-40MM OD

OV inserts high temperature cover a size range from 15 mm to 40 mm and provide superior flow performance (reduced headloss). Glass filled noryl and EPDM seals make the valve reach to 120 C for long time working.

Feature and Benefits

1. 100% factory tested drip in operation.
2. Easy to insert into the application devive.
3. Extra low headloss and low cracking pressure.
4. External O-ring in groove.



Certification

SGS(RoHS) REACH FDA LFGB ACS

Option Available		
Part #	Housing	Closing system
OV	Black	Black



Materials	
Name	OV15HT, OV25HT, OV32HT.,OV40HT.
Cap	Glass filled Noryl
Guide	Glass filled Noryl
Core	Glass filled Noryl
Spring	Stainless steel AISI 304
O-ring seal	EPDM rubber



Technical Data

Medium:	Clear water only
Cracking Pressure:	~0.41psi

Contlnuous		Short-term(5minutes max.)	
max. 120 °C max. 250 °F	150psi max. 10 bar max.	max. 125 °C max. 260 °F	230psi max. 16 bar max.

Cartridge Check Valve

High Pressure - Style DN 14MM-15MM OD

DN cylindrical cartridges high pressure cover a size range from 14 mm to 15 mm and offer the easiest assembly. To strengthen spring force, this range has a bigger cracking pressure.

Feature and Benefits

1. 100% factory tested drip in operation.
2. Easy to insert into the application devive.
3. Spring loaded plunger: operates in any position.
4. Extra low headloss, extra low cracking pressure.



Certification

SGS(RoHS) REACH FDA LFGB ACS

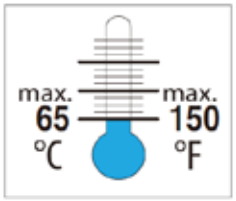
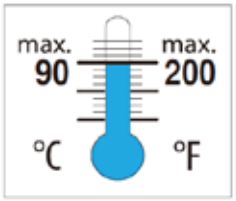
Option Available		
Part #	Housing	Closing system
DN	White	White



Materials	
Name	DN14HP, DN15HP
Housing	Acetal
Guide	Acetal
Core	Acetal
Spring	Stainless steel AISI 304

Technical Data

Medium:	Clear water only
Cracking Pressure:	4.5Kpa

Continuous		Short-term(5minutes max.)	
			

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Cartridge Check Valve

Flow regulator - Style ON 14MM-15MM OD

This series covers a size range from 14 mm to 15 mm and offer the easiest assembly. They combines check valve and flow regulator.

Feature and Benefits

1. 100% factory tested drip in operation.
2. Easy to insert into the application devive.
3. Spring loaded plunger: operates in any position.
4. Constant flow on pressure range.
5. Combines check valve and flow regulator.





Certification

SGS(RoHS) REACH FDA LFGB ACE

Option Available		
Part #	Housing	Closing system
DN	White	Light Blue, Yellow, Purple, Grey, Green, Lilac





Materials	
Name	DN14FR, DN15FR
Housing	Acetal
Guide	Acetal
Core	Acetal
Spring	Stainless steel AISI 304
O-ring seal	EPDM



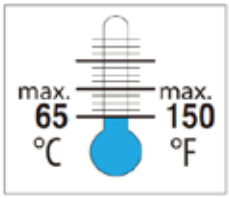


Technical Data

Medium: Clear water only

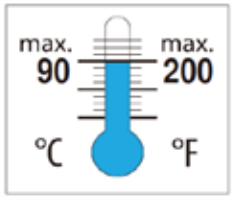
Cracking Pressure: 0.23psi

Continuous





Short-term(5minutes max.)





Cartridge Check Valve

By Pass - Style DN 15MM OD

This series cylindrical cartridges can set up cracking pressure by adjusting spring force and inside structure. Size range from 14 mm to 15 mm.

Feature and Benefits

1. 100% factory tested drip in operation.
2. Easy to insert into the application devive.
3. Spring loaded plunger: operates in any position.
4. Extra low headloss, extra low cracking pressure.



Certification

SGS(RoHS) REACH FDA LFGB ACS

Option Available		
Part #	Housing	Closing system
DN	White	White

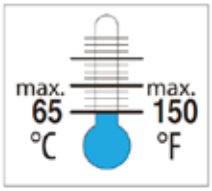


Materials	
Name	DN14, DN15
Housing	Acetal
Guide	Acetal
Core	Acetal
Spring	Stainless steel AISI 304

Technical Data

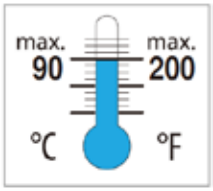
Medium:	Clear water only
Cracking Pressure:	0.23psi

Continuous





Short-term(5minutes max.)





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Cartridge Check Valve

Double Head - Style OH 32MM OD

This series cylindrical cartridges include two check valves to make sure the system can work normally even if one check valve is broken. It can be used for sensitive equipment against possible damage.

Feature and Benefits

1. 100% factory tested drip in operation.
2. Easy to insert into the application devive.
3. Spring loaded plunger: operates in any position.
4. Extra low headloss, extra low cracking pressure.



Certification

SGS(RoHS) REACH FDA LFGB ACS

Option Available		
Part #	Housing	Closing system
DN	White	White

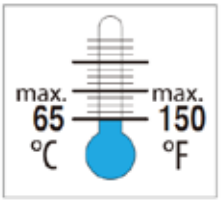


Materials	
Name	DN32DH
Housing	Acetal
Guide	Acetal
Core	Acetal
Spring	Stainless steel AISI 304

Technical Data

Medium:	Clear water only
Cracking Pressure:	0.23psi

Continuous





Short-term(5minutes max.)

