

Series CKS Self-Closing Check Valves In Sizes 1 1/2", 2" and 3"



Features/Benefits:

- Designed to provide the same superior performance as the existing 1/2", 3/4" and 1" sizes.
- Rugged thermoplastic construction meets highest industry standards.
- Normally-closed design, self-sealing, not dependent upon gravity, mounting position or reverse flow... a significant improvement over ball check valves.
- Leak-free sealing protects against the potential hazards created by reverse flow of corrosive liquids such as acids, caustics and chlorine solutions.
- Teflon® PFA encapsulated stainless steel spring provides bubble-tight seal mounted in any position.
- Rapid closure by spring-loaded poppet helps to eliminate sudden back-flow water hammer.
- Positive repetitive sealing: Poppet automatically positions itself against seat in the identical location each time for long cycle life dependability.

- Convenience: Union nuts simplify valve installation, inspection and removal.
- Minimal Cracking Pressure: Valve begins to opens at approximately 1.0 to 1.5 PSI.

Materials of Construction:

Plast-O-Matic Series CKS Check Valves are available standard in PVC (Polyvinyl Chloride), Polypropylene and Kynar® PVDF in sizes 1 1/2", 2" and 3".

Seals are in Buna-N, EPDM, or Viton®. Threaded or socket connections are standard.

Note: For information on 1/2", 3/4" and 1" Self-Closing Check Valves, refer to Catalog CKL.

Design:

Series CKS Check Valves are normally-closed in design. They feature a corrosion resistant Teflon® PFA encapsulated spring which energizes a poppet seal that will neither stick nor chatter and is automatic in action. The valves are not dependent upon gravity or reverse flow and represent a significant improvement over ball check valves. They can be mounted in any position. Even in the absence of reverse flow or pressure, the poppet will automatically reposition itself to seal against the valve seat. The unique poppet will seal in the identical location every time, producing a reliable and repetitive seal.

Series CKS Check Valves 1 1/2", 2" and 3"

Operation:

Flow entering the valve inlet will open the valve by pushing the poppet off the valve seat. In this position, the valve seat is kept clean by flushing action of the internal flow, keeping the entire sealing area free of particles which could cause leakage.

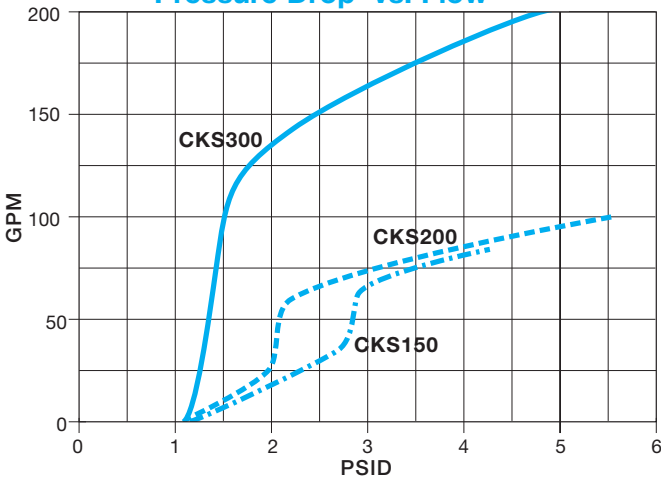
If the inlet flow is stopped, or if a backflow of a higher pressure is sensed, the spring-loaded poppet will automatically reposition itself, closing off the valve seat. Reverse flow or pressure is not required to close the valve when the inlet flow stops. If reverse pressure is present it simply creates a tighter seal.



Installation:

Because of their normally-closed design Plast-O-Matic CKS Check Valves can be installed in any position. Concern over the valve seat closing due to gravity (as with ball check designs) is of no consequence since CKS valves seal in any position. Caution should be exercised to make certain that the direction of flow is correct. Threaded connections should never be made to metal piping and should always be wrapped with Teflon® or other acceptable pipe sealant to effect a seal. The assembly need only be made hand-tight followed by a one-quarter turn more with a strap wrench. **DO NOT** overtighten and **DO NOT** use a pipe wrench as a future valve fracture could result.

Series CKS Performance Curve Pressure Drop vs. Flow



Typical data, actual may vary due to spring force variation

Series CKS Dimensions & Model Numbers

PIPE SIZE (NPT)	Cv FACTOR	A		B		C		MODEL NUMBER*
		In.	mm	In.	mm	In.	mm	
1 1/2"	45	7.4	188	2.5	64	3.5	89	CKS150VT-NC-PV
2"	45	8.4	213	3.3	83	4.5	114	CKS200VT-NC-PV
3"	95	9.9	251	4.3	109	5.5	140	CKS300VT-NC-PV

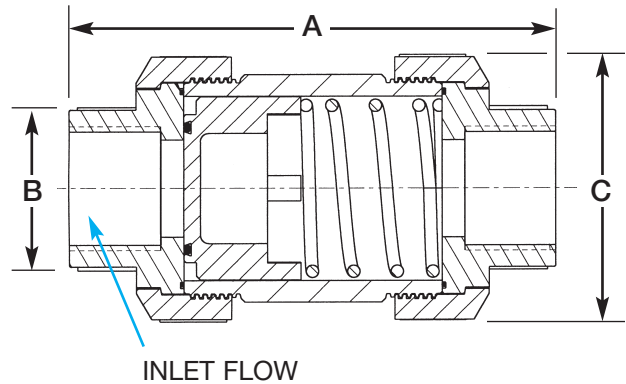
*Model numbers shown for valves with Viton seal, threaded connection and PVC body material.

- For Buna-N seals, change first "V" to "B"; i.e. CKS150BT-NC-PV.
For EPDM seals, change first "V" to "EP"; i.e. CKS150EPT-NC-PV.
- For socket connections, change "T" to "S"; i.e. CKS150VS-NC-PV.
- For Natural Polypropylene body change "PV" to "PP".
For Kynar PVDF body change "PV" to "PF"; i.e. CKS150VT-NC-PF.

Series CKS Pressure Ratings

VALVE BODY MATERIAL	MAXIMUM WORKING PRESSURE		
	77°F (25°C)	105°F (40°C)	AT MAXIMUM TEMPERATURE
	Inlet & Reverse	Inlet & Reverse	Inlet & Reverse
PVC	150 PSI 10 BAR	100 PSI 7 BAR	40 PSI @ 140°F 3 BAR @ 60°C
POLYPRO	100 PSI 7 BAR	70 PSI 5 BAR	25 PSI @ 180°F 3 BAR @ 105°C
PVDF (KYNAR®)	150 PSI 10 BAR	120 PSI 8 BAR	30 PSI @ 280°F 2 BAR @ 140°C

- Notes: 1. 140°F (60°C) is the maximum recommended temperature for PVC.
2. For information on 1/2", 3/4" and 1" self-closing check valves request Catalog CKL.



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