

# Galtek® Check Valves, 3/4" Orifice, O-ring Free Design

*Excel in bulk chemical distribution, chemical dispense, and wet process applications*



Corrosion-resistant Galtek® check valves reduce contamination potential in your high-purity chemical applications and provide clean delivery of sophisticated chemicals. An O-ring-free design provides a simple, clean, compact valve with a high flow rate and increased reliability. We offer a full range of 3/4" orifice check valves with a variety of industry standard end connections including PrimeLock®, Flaretek®, and PureBond®.

*Provide clean delivery of sophisticated chemicals.*

## APPLICATIONS

- Bulk chemical distribution
- Wet processing
- Chemical dispensing

## FEATURES & BENEFITS

O-ring free design	Reduces potential contamination
Simple, clean, compact valve	Provides high flow chemical delivery
All wetted parts are molded PFA and machined PTFE	Provides corrosion resistance and a cleaner overall process
No metal parts	Will not corrode or contribute to contamination
Poppet design	Allows a high flow through rate and maximizes rinsability

## SPECIFICATIONS

<b>Pressure range</b>	100 psig (690 kPa) up to 150°F (65°C) To calculate the maximum pressure rating, subtract 1 psig (6.9 kPa) from 100 psig (690 kPa) for every 1°F/0.5°C temperature rise above 150°F (65°C).
<b>Temperature range</b>	0° to 212°F (-18° to 100°C)
<b>Cracking pressure (opening)</b>	Minimum of 1 psig (6.9 kPa) to achieve full open
<b>Sealing pressure (closing)</b>	Minimum of 5 psig (34.5 kPa) back pressure
<b>Materials</b>	All wetted parts, including the spring are molded PFA and PTFE

## Valve Reliability Test Results

### Valve Qualification Testing

Extensive qualification testing ensures products meet all design requirements for use in even the most demanding environments. Whenever possible, this testing is carried out in actual or simulated customer-use conditions.

**Burst Pressure** – quantifies the maximum pressure the valve can safely contain media, providing confidence in the product design.

	Test conditions	Acceptance criteria	Test results
Burst test	Hydraulic oil pressure increased until leakage detected; test performed @ 23°C (73°F)	Burst pressure must be >3 times rated pressure	PASS

**Safety Pressure** – determines the duration the valve can safely operate under pressure, assuring long-term product performance and safety.

	Test conditions	Acceptance criteria	Test results
Pressure envelope cyclic testing	1034 kPa (150 psig) @ 23°C (73°F)	No external media leakage for 1 million cycles @ 1.5 times rated pressure applied to each media port	PASS
Pressure envelope cyclic testing	393 kPa (57 psig) @ 100°C (212°F)	No external media leakage for 1 million cycles @ 1.5 times rated pressure applied to each media port	PASS

**Accelerated Life Cycle** – determines how many cycles the valve can perform reliably and safely in various process environments, including high temperatures, vacuum conditions, and with corrosive chemicals.

	Test conditions	Acceptance criteria	Test results
Accuation cyclic testing	275 kPa (40 psig) water @ 23°C (73°F)	No external media leakage. Port-to-port seal <0.05 cc H <sub>2</sub> O/hr for over 1.0 million cycles	PASS

### Production Performance Evaluation

One hundred percent of 3/4" check valves undergo manufacturing performance testing and validation to assure product performance, functionality, and safety – before the product ever arrives on site.

Test	Test conditions	Acceptance criteria
External media seal	689 kPa (100 psig) CDA	Zero bubbles per minute through 1/32" ID tube immersed in water
Port-to-port valve seal	34 kPa (5 psig) CDA	<4 bubbles per minute through 1/32" ID tube immersed in water

## SPECIFICATIONS

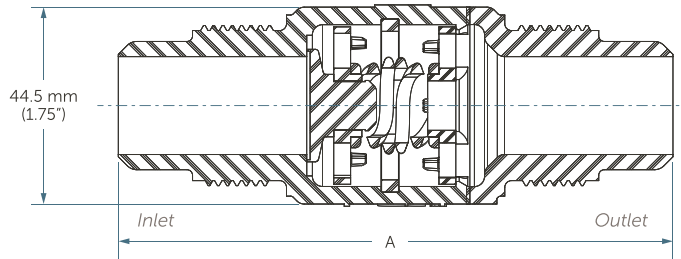
Minimum cracking  
pressure

7 kPa (1 psig) CDA

Valve must open and allow flow

## DIMENSIONS

Molded 3/4" Check Valve



Part Number	Flow Factor	Inlet	Outlet	Dimension A
CKM12-12F-12F*	6.1 C <sub>v</sub> (87.1 K <sub>v</sub> )	3/4" Flaretek®	3/4" Flaretek	4.45" (113.0 mm)
CKM12-12F-12P*	6.1 C <sub>v</sub> (87.1 K <sub>v</sub> )	3/4" Flaretek	3/4" PureBond fusible pipe	3.95" (100.3 mm)
CKM12-12K-12K	6.1 C <sub>v</sub> (87.1 K <sub>v</sub> )	3/4" PrimeLock®	3/4" PrimeLock	4.46" (113.3 mm)
CKM12-12K-12P	6.1 C <sub>v</sub> (87.1 K <sub>v</sub> )	3/4" PrimeLock	3/4" PureBond fusible pipe	3.95" (100.3 mm)
CKM12-12P-12P	7.9 C <sub>v</sub> (112.8 K <sub>v</sub> )	3/4" PureBond® fusible pipe	3/4" PureBond fusible pipe	3.44" (87.4 mm)
CKM12-16F-12P*	7.9 C <sub>v</sub> (112.8 K <sub>v</sub> )	1" Flaretek	3/4" PureBond fusible pipe	4.19" (106.4 mm)
CKM12-16F-16F*	8.7 C <sub>v</sub> (124.2 K <sub>v</sub> )	1" Flaretek	1" Flaretek	4.93" (125.2 mm)
CKM12-16K-12P	7.9 C <sub>v</sub> (112.8 K <sub>v</sub> )	1" PrimeLock	1" PureBond fusible pipe	4.13" (104.9 mm)
CKM12-16K-16K	8.7 C <sub>v</sub> (124.2 K <sub>v</sub> )	1" PrimeLock	1" PrimeLock	4.82" (122.4 mm)

\*Dimensions for PVDF, -3 (PFA), -6 (CPFA), and -II (FlareLock II) nuts

## ORDERING INFORMATION

PART NUMBER	INLET	OUTLET	NUT OPTION
CKM12-12F-12F	3/4" Flaretek®	3/4" Flaretek®	PVDF Flaretek® nut
CKM12-12F-12F-3	3/4" Flaretek®	3/4" Flaretek®	PFA Flaretek® nut
CKM12-12F-12F-6	3/4" Flaretek®	3/4" Flaretek®	CPFA Flaretek® nut
CKM12-12F-12F-II	3/4" Flaretek®	3/4" Flaretek®	PFA FlareLock® II nut
CKM12-12F-12P	3/4" Flaretek®	3/4" PureBond® pipe	PVDF Flaretek® nut
CKM12-12F-12P-3	3/4" Flaretek®	3/4" PureBond® pipe	PFA Flaretek® nut

## ORDERING INFORMATION

PART NUMBER	INLET	OUTLET	NUT OPTION
CKM12-12F-12P-6	3/4" Flaretek®	3/4" PureBond® pipe	CPFA Flaretek® nut
CKM12-12F-12P-II	3/4" Flaretek®	3/4" PureBond® pipe	PFA FlareLock® II nut
CKM12-12K-12K	3/4" PrimeLock®	3/4" PrimeLock®	PFA PrimeLock® nut
CKM12-12K-12P	3/4" PrimeLock®	3/4" PureBond® pipe	PFA PrimeLock® nut
CKM12-12P-12P	3/4" PureBond® pipe	3/4" PureBond® pipe	N/A
CKM12-16F-12P	1" Flaretek®	1" PureBond® pipe	PVDF Flaretek® nut
CKM12-16F-12P-3	1" Flaretek®	1" PureBond® pipe	PFA Flaretek® nut
CKM12-16F-12P-6	1" Flaretek®	1" PureBond® pipe	CPFA Flaretek® nut
CKM12-16F-12P-II	1" Flaretek®	1" PureBond® pipe	PFA FlareLock® II nut
CKM12-16F-16F	1" Flaretek®	1" Flaretek®	PVDF Flaretek® nut
CKM12-16F-16F-3	1" Flaretek®	1" Flaretek®	PFA Flaretek® nut
CKM12-16F-16F-6	1" Flaretek®	1" Flaretek®	CPFA Flaretek® nut
CKM12-16F-16F-II	1" Flaretek®	1" Flaretek®	PFA FlareLock® II nut
CKM12-16K-12P	1" PrimeLock®	3/4" PureBond® pipe	PFA PrimeLock® nut
CKM12-16K-16K	1" PrimeLock®	1" PrimeLock®	PFA PrimeLock® nut

## FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit [entegris.com](https://www.entegris.com) and select the [Contact Us](#) link to find the customer service center nearest you.

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