

## DIAPHRAGM CHECK VALVES Series CKD

### INSTALLATION & MAINTENANCE INSTRUCTIONS

#### IMPORTANT - BEFORE INSTALLING

CKD check valves will prevent back flow when properly installed and used within the recommended ranges of pressure, temperature, and chemical compatibility. The ultimate determination of material compatibility is previous successful use in the same application. Call our Technical Support for information about your application.

Caution: Plastic materials will degrade in ultraviolet (UV) light or sunlight.

Caution: Polypropylene and PVDF (Kynar) often look similar. Do not install in your system if you are not sure.

#### MAXIMUM INLET PRESSURES for WATER\*

BODY MAT'L	COLOR	77 °F (25 °C)	105 °F (40 °C)	at MAXIMUM TEMPERATURE
PVC	DARK GRAY	140 PSI 10 Bar	100 PSI 7 Bar	40 PSI @ 140 °F 3 Bar @ 60 °C
Polypro	TRANSLUCENT WHITE	125 PSI 7 Bar	100 PSI 7 Bar	25 PSI @ 180 °F 2 Bar @ 105 °C
Kynar PVDF	TRANSLUCENT WHITE (yellowish)	100 PSI 10 Bar	100 PSI 8 Bar	30 PSI @ 280 °F 2 Bar @ 140 °C
Teflon PTFE	OPAQUE WHITE	100 PSI 3 Bar	80 PSI 2 Bar	5 PSI @ 300 °F 35 KPa @ 140 °C

\*or compatible chemical - ratings reduced for some applications.

Minimum temperature 40°F (5°C).

EPDM seals limited to 250 °F (120°C), Buna-N to 200 °F (95°C).

KYNAR is a trademark of Elf Atochem

TEFLON is a trademark of Dupont Company

See the Product Data Sheet or consult our Technical Support staff for more information.

#### INSTALLATION INSTRUCTIONS

The valve must be installed in the proper flow direction as indicated by the flow label. Because the disc and diaphragm will sink in water, the flow direction should point up. This way the valve will seal even in low flow conditions.

Caution: For liquids heavier than water, where the disc and diaphragm float in the process liquid, the flow direction should point down so that the diaphragm floats against the seal.

**THREADED CONNECTION** - A suitable thread sealant (ex. Teflon® tape) should be applied to male tapered threads to assure a "leak-tight" seal. The assembly need only be made "hand-tight" followed by a quarter (1/4) turn with a strap wrench. Do not over tighten or use pipe wrenches on plastic pipe and components.

Caution: Teflon® tape will "*string*" as pipe threads are joined. Loose "*strings*" could lay across the seating surface and prevent the valve from completely closing. To avoid this problem, clean out old tape, and do not apply tape to the first thread.

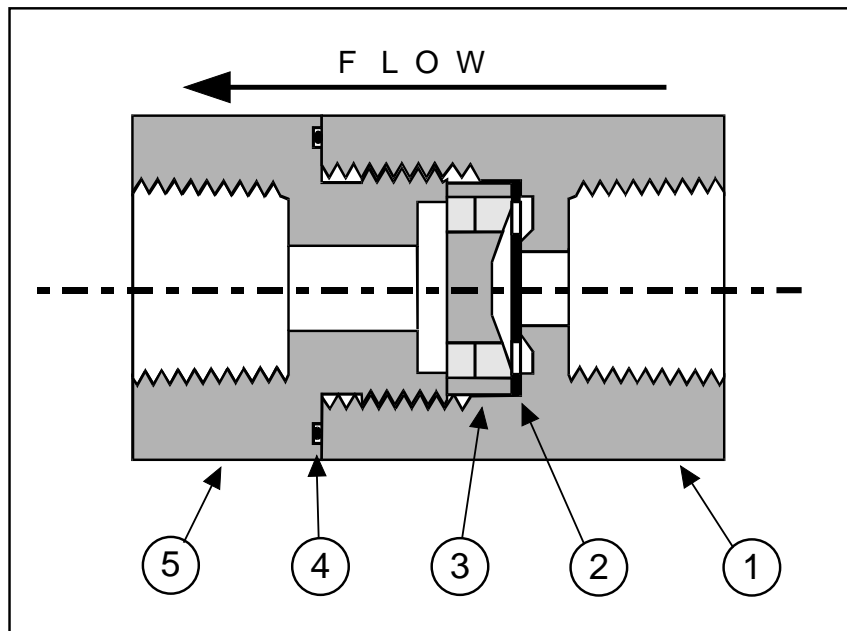
**Caution:** Connections should be made only to plastic fittings; metal pipe should only be installed with an intervening plastic nipple. Metal pipe and straight threaded pipe tend to cut, stretch, and distort the plastic bodies, which could result in cracking or leaking over time.

**NON-THREADED CONNECTIONS** - For solvent cementing or heat fusion, follow instructions supplied with the cement or fusion equipment, or contact your distributor.

**MAINTENANCE**

Plast-O-Matic recommends keeping a spare seal kit available for repairs. Seal life will vary in applications due to cycles, temperatures, pressures, chemicals, and concentration. Based on the application, a periodic inspection and maintenance plan should be established. The seal kit part number is "SK" plus the part number less the material suffix. For example, the seal kit for CKD050V-PV is SKCKD050V. The seal kit contains one O-ring and one diaphragm.

**PARTS & ILLUSTRATION**



#	QTY	DESCRIPTION	MATERIAL
1	1	INLET SIDE	see note 2
2	1	DIAPHRAGM	see note 1
3	1	LOOSE DISC	see note 2
4	1	O-RING	see note 1
5	1	OUTLET SIDE	see note 2

- ① Seal elastomer suffix: EP for EPDM, V for Viton®
- ② Material suffix: PV for PVC, PP for Polypropylene, TF for PTFE, PF for PVDF.  
VITON is a registered trademark of the DuPont Company

