



## Series 700 / 710 Lined Butterfly Valves Installation Instructions

Nil-Cor Reserves The Right To Change Product  
And Performance Specifications Without Notice



Nil-Cor Recommends  
Installation with **Task-  
Line®** Gaskets. See  
Page 2 for details..

**Task-Line®** gaskets are  
available from your Nil-  
Cor Distributor.

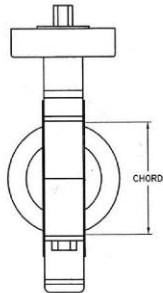
This instruction is intended for use by persons having technical skill and valve installation experience, at their own discretion and risk.

Questions regarding this instruction should be directed to Nil-Cor Customer Service or your authorized stocking distributor. A distributor list can be found on the Internet at [www.nilcor.com](http://www.nilcor.com).

Nil-Cor Lined Composite Butterfly Valves offer superior shutoff performance in a wide range of corrosive and erosive media and unmatched protection from external corrosion. At less than half the weight of lined iron valves, they are less costly to transport, install and support. This installation instruction will help you obtain the full benefit of the world's best-performing lined butterfly valves.

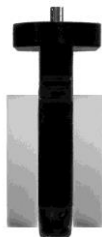
### Inspection

- Do not remove protective covers until just prior to the valve installation. If covers are removed for inspection, they should be replaced immediately afterward. This precaution is to protect the sealing faces from damage during storage and handling operations.
- Match the serial number on valve nameplate with the serial number on the enclosed warranty card. If the numbers match, please complete the warranty card and mail back to Nil-Cor. If the numbers do not match, contact Nil-Cor Customer Service.
- Check the valve nameplate before installation to ensure that the pressure rating and materials of construction are compatible with the intended service conditions.
- Inspect adjoining pipelines and remove any material that could damage the valve liner during installation.
- The 700/710 series valve is designed to be installed between ANSI Class 150 flanges. Contact Customer Service for guidance with DIN PN10, 16 flanges. Check clearance in piping flange to permit full disc swing of the valve. The table below lists disc swing clearance requirements for pipe flanges.



VALVE SIZE ( IN. )	DISC CHORD ( IN. )
3	2.59
4	3.47
6	5.50
8	7.38
10	9.56
12	11.56

- If the connecting flanges have an inside diameter that does not allow for full swing of the disc, install spacers with a larger I.D. These spacers are available from Nil-Cor.
- Important – Always use spacers when connecting the valve directly to fittings such as elbows, short stack tees, etc., to permit full swing of valve disc.
- Ensure that adjoining flanges are clean and free of debris that could scratch the valve seal faces.



NIL-COR SPACERS

### Installation

- Gaskets are normally not required for 710 Series PTFE or UHMWPE-Lined Valves when installed in plastic lined pipe such as PTFE. If mating flanges are not lined with plastic, a gasket is recommended such as **Task-Line**<sup>®</sup>, PTFE encapsulating a stainless steel core. **Task-Line**<sup>®</sup> gaskets can operate in extreme conditions and are resistant to virtually all chemicals from -60°F to 400°F and they won't cold flow.

Gaskets are not required for the 700 Series elastomer-lined valve in any piping system.

- Install the valve with the disc closed.
- Keep the valve liner clean during installation. Dirt or debris may scratch the liner or disc edge, which could cause leakage.
- Do not allow the liner to catch on the mating flange and fold over during installation. This will cause flange leakage and damage the valve.

**Note: When connecting valve to FRP flanges, full face spacers may be required to limit bending stress on the pipe flanges.**

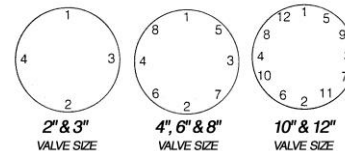
**Alternatively, elastomer gaskets may be used to minimize flange bolt torque for sealing. Consult your piping mfg. for maximum FRP flange bolt torque values.**

- Ensure proper alignment of valve with mating flanges so valve disc is clear to fully rotate without contacting mating pipe I.D.
- Tighten the flange bolts in the proper sequence to the values listed below.

MINIMUM RECOMMENDED FLANGE TORQUES

Valve Size (IN.)	PTFE (FT./LBS.)	UHMWPE (FT./LBS.)	EPDM / HYP (FT./LBS.)
2	50	90	25
3	50	90	25
4	40	70	35
6	60	120	40
8	90	160	50
10	80	150	60
12	110	200	60

TORQUE SEQUENCE FOR ANSI CLASS 150 FLANGES



- If a flange leak occurs and the bolts of the leaking side have been properly tightened, they should not be tightened further or permanent damage to the valve sealing face may occur. Instead, loosen the bolts on the opposite side of the same flange a half turn at a time and then tighten the bolts on the leaking side by the same amount.
- If leaking persists, remove bolts and examine sealing faces for scratches or dents across the entire face. Any scratches which do not exceed 20% of the valve lining thickness can be eliminated by hand polishing with fine abrasive cloth or paper (applies to PTFE only).
- If leaks occur after system has been cycled to elevated temperature and back to ambient temperature, re-torque bolts to recommended torque after cool down. No further adjustments should be necessary.