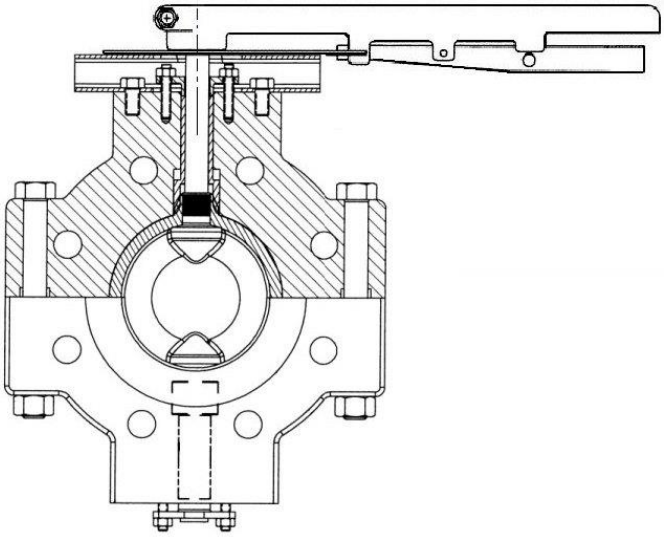
Series 710 UHMWPE Lined Butterfly Valves

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.

Nil-Cor UHMWPE-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.

Initial Inspection

1. 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.

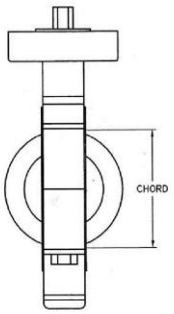
2. Match the serial number on valve nameplate with the serial number on the enclosed warranty card. If the numbers match, please complete the warranty card and mail back to Nil-Cor If the numbers do not match, contact Nil-Cor Customer Service.

3. Check the valve nameplate before installation to ensure that the pressure rating and materials of construction are compatible with the intended service conditions.

4. Inspect adjoining pipelines and remove any material that could damage the valve liner during installation.

Check Disc Clearance

1. The 710 UHMWPE 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



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

2. 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.

NIL-COR SPACERS

3. 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.

4. Ensure that adjoining flanges are clean and free of debris that could scratch the valve seal faces.

Installation

1. Gaskets are normally not required for 710 Series 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®**, PTFE encapsulating a stainless steel core. **Task-Line®** 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.

2. 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.

3. 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.

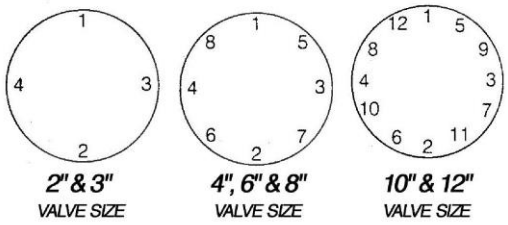
4. Ensure proper alignment of valve with mating flanges so valve disc is clear to fully rotate without contacting mating pipe I.D.

5. Tighten the flange bolts in the proper sequence to the values listed at right.

MINIMUM RECOMMENDED FLANGE TORQUES

Size (in)	2	3	4	6	8	10	12
Torque (ft-lb)	90	90	70	120	160	150	200

TORQUE SEQUENCE FOR ANSI CLASS 150 FLANGES



2" & 3" VALVE SIZE *4", 6" & 8" VALVE SIZE* *10" & 12" VALVE SIZE*

6. 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.

7. 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.

8. 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.

Gland Adjustment In The Event of Through-Leakage

1. The UHMWPE-lined version of the 710 Series is equipped with hub seal adjustment glands to center the disc and compress the liner against the disc hub.

2. With the valve closed, adjust gland nut in 1/8 -turn increments with a torque wrench, alternating between studs. Alternate between top and bottom glands to compress and center disc. Increase torque up to specified settings (see Table below).

3. When testing, if seat leaks at both ends, there is not enough compression. If seat leaks on just one side near stem, then tighten that side and back off the other side if needed.

4. Check gland bolt torque after every step of testing. Make sure valve is unpressurized when torque is applied.

5. Re-check torque before commissioning.

SIZE	GLAND TORQUE (IN-LBS)	RE-TORQUE, MIN (IN-LBS)
2"	30-40	30
3"	40-50	30-40
4"	50-60	40-50
6"	80-90	50-70
8"	90-100	60-80
10"	100-110	70-90
12"	100-110	70-90