

HYTORC WASHER - Flange Installation Procedure

The following procedure covers the installation of HYTORC Reaction, HYTORC J-Washer and HYTORC Backup Washers for pressure flange bolted joints.

STEP 1: ALIGN FLANGE



Align flanges per PCC-1 requirements and ensure fastener surfaces are free of defects.

STEP 2: INSPECT BOLTS



Inspect bolts, nuts and washers to ensure they are free defects that would prevent proper assembly.

STEP 3: INSTALL BOLTS



Install the bolt through the bolt holes allowing enough length on the front side for the nut, Reaction Washer and 2 to 3 extra threads.

STEP 4: INSTALL BACKUP WASHER



Install the HYTORC Backup Washer over the bolt on the rear of the flange.

STEP 5: INSTALL BACK NUT



Install the back nut onto the bolt on the rear of the flange and tighten by hand until snug.

STEP 6: ALIGN REACTION WASHER



Align the HYTORC Reaction Washer or J-Washer with the bolt on the front side of the flange.

IMPORTANT!

**VERIFY
PROPER ORIENTATION
OF THE HYTORC WASHER
OR HYTORC J-WASHER
BEFORE SLIDING
ONTO THE BOLT.**

STEP 6A: HYTORC REACTION WASHER



Ensure the HYTORC Reaction Washer is oriented with the beveled knurled side facing the flange and the smooth flat side facing the nut.

STEP 6B: HYTORC J-WASHER



Ensure the HYTORC J-Washer is installed with the beveled side containing outer knurl ridge faces the flange and the flat side containing inner knurl ridge faces the nut.

(Continued on the reverse side.)

STEP 7A: HYTORC REACTION WASHER



Install the Reaction Washer or J-Washer over the bolt with beveled side facing the flange and the flat side facing the nut.

STEP 7B: HYTORC J-WASHER



STEP 8: VERIFY NUT RUNS FREELY



Verify that the nut will run free by hand onto the bolt on the front of the flange.

STEP 9: LUBRICATE THREADS



Select proper lubricant to achieve the desired K-Factor for the installation. Apply lubricant to the exposed threads of the bolt.

STEP 10: LUBRICATE NUT SPOT FACE



Apply lubricant to the nut spot face.

STEP 11: TIGHTEN SNUG BY HAND



Tighten the nut by hand until snug.

IMPORTANT! DO NOT APPLY LUBRICATION ON THE FLANGE OR THE BEVELED SIDE OF THE WASHER OR THE WASHER WILL NOT PROVIDE THE REACTION FUNCTION.

STEP 12A: TIGHTEN TO SPECIFICATION



Position the socket over the nut and washer. Make sure the driver is fully engaged on the hardware and tighten to specification.

STEP 12B: TIGHTEN TO SPECIFICATION



Position the link over the nut and washer. Make sure the link is fully engaged on the hardware and tighten to Specification.



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