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ASSEMBLY PROCEDURES - Vapour Transfer Valve

Tooling required

Thread tape
Pliers
Phillips screwdriver
Flat screwdriver
Ring spanner 13mm
Ring spanner 18mm
Bench vice with aluminium jaws
EP2 grease
Blanking plug

Assembly Jigs required

Butterfly valve circlip tool

Testing Jigs required

Main body TEST FL 130 jig (seat tightness 5,5kPa)
Main body TEST FL 130 jig (Gland box 500kPa)

ASSEMBLY PROCEDURE

Fitment and assembly of main body, piston, spring, spring retainer and sealing disc

1 Insert and secure the vapour transfer valve main body into the bench vice
2 Apply a small amount of EP2 grease onto the inner wall of the glandbox (#4),
3 Fit the BS216 o-ring (#7) onto the top groove of the piston (#5) and then the Viton o-ring (#6) to the bottom groove, thread the thread tape around the undercut of the thread on the piston (#5)
4 Fit and secure the piston (#5) into the glanbox (#4).
5 Fit the spring (#10) over the piston (#5) and secure the spring on the bottom of the glandbox (#4)
6 Fit the spring retainer (#8) over the piston (#5), use the butterfly valve circlip tool to push the spring retainer into the glandbox (#4). Fit the locking washer to the inner groove of the glandbox using the flat screwdriver remove the butterfly valve circlip tool and make sure the locking washers are secured in the glandbox groove.
7 Fit the straight air fitting (#14) to the bottom air port of the glandbox (#4) and secure with ring spanner 13mm
8 Fit the elbow air fitting (#15) to the top air port of the glandbox (#4) and secure with ring spanner 13mm
9 Insert the blanking plug into the straight air fitting (#14). Fit the 6mm air tube to the elbow air fitting (15#) and apply air pressure to the valve to engage the piston (#5).
9 With the piston engaged insert the phillips screwdriver into the hole located on the piston (#5)
10 Fit the BS337 o-ring (#11) onto the groove of the sealing disc (#11) and hand tighten the sealing disc on the piston (#5)
11 While holding the phillips screwdriver in one hand use the ring spanner 18mm to secure the sealing disc in place
12 Insert the split pin (#13) above the sealing disc (#11) into the piston (#5) and secure with pliers

TESTING PROCEDURES - Vapour Transfer Valve

1 Test the opening/closing function of the main piston 4 - 5 cycles at 600kPa

2 Fit and secure the outlet flange of the coupling to the "TEST FL 130" jig with washers and nuts - ensure nuts are fully and securely fastened to the jig
3 Test the Seat tightness at 5,5kPa for 5 minutes
4 Check for leaks
a - internal sealing area - sealing disc/main body sealing area

5 Fit and secure the outlet flange of the coupling to the "TEST FL 130" jig with washers and nuts - ensure nuts are fully and securely fastened to the jig
6 Test the Gland box at 500kPa for 5 minutes
7 Check for leaks
a - glandbox

As per EN12266-1:2012 testing regulations Table A.5
criteria:
"A" No visually detectable leaks for the duration of the test

ASSEMBLY & TESTING PROCEDURES - Vapour Transfer Valve











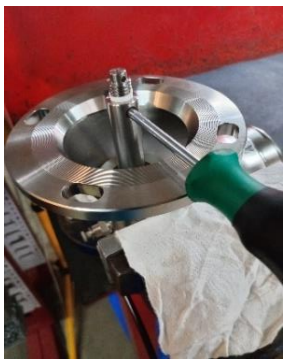






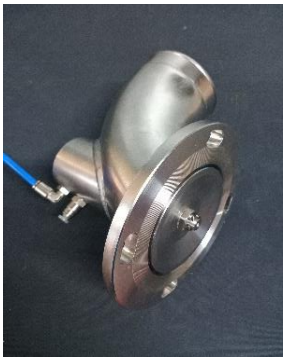




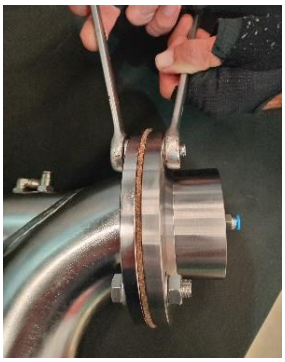




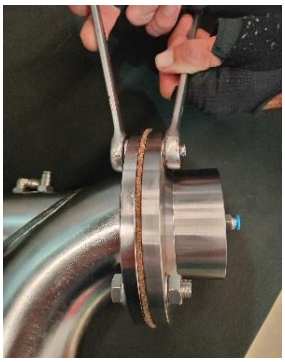

1 - 12 Main body assembly, piston, spring, spring retainer and sealing disc

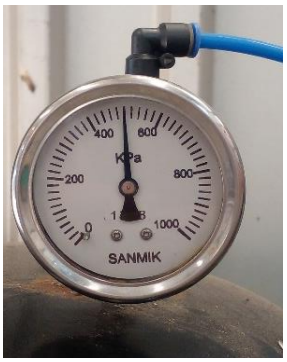



Operability testing opening/closing of main piston



Test 1: Seat tightness @ 5,5kPa





Test 2: Gland Box @ 500kPa