Allgemeine Maschinen Fabrik (Northwest) CC
20 Meul Street George Industria, 6529
P.O. Box 1819, George, 6530
T - 0027 44 873 4649/56
sales@amf.co.za

ASSEMBLY PROCEDURES - 80mm Manual Flush Valve Gasket Seat

Tooling required

EP2 grease
Bench vice with aluminium jaws
Ring spanner 17mm
Ring spanner 19mm
Torque wrench

Testing Jigs required

Outlet flange testing jig TEST FL 150 (shell & seat tightness 500kPa)
Outlet flange testing jig TEST FL 124/150 (shell & seat tightness 500kPa)
Main flange testing jig TEST FL 190 (shell tightness 20kPa)
Main flange testing jig TEST FL 150/190 (shell tightness 20kPa)

ASSEMBLY PROCEDURE

Spindle Assembly

1 Fit the spindle (#12) into the sealing disc (#13). Fit PTFE gasket (#14) over the spindle (#12) and onto the sealing disc (#13) followed by (#15) spindle retainer.
2 Fit the spring washers (#16) onto the M10 x 20mm bolts (#17) and insert and hand tighten the bolts into the sealing disc (#13)
3 Secure the spindle assembly into the bench vice (with aluminium jaws).Tighten and secure M10 bolts (#17) with 17mm ring spanner followed by torque wrench (set at 70Nm).

Spindle Nut Assembly

4 Apply a small amount of EP2 grease to the M10 x 60mm bolts (#29) and fit the bolts to the M10 tapped holes on the spindle nut (#18). Place the spindle nut loosely into the bench vice (with aluminium jaws) Tighten and secure M10 x 60mm bolts (#29) with 17mm ring spanner.
5 Fit a M10 nut (#25) on each of the M10 x 60mm bolts (#29) secured on the spindle nut (#18) and hand tighten only.

Fitment and assembly of Main body, Spindle Assembly, Top Gland and Spindle nut

6 Fit main body over the spindle assembly (on a flat, clean surface).
7 Fit and secure the first PTFE bush (#7) followed by the PTFE yarn (#26) and last PTFE bush (#7) in the bottom of the gland box (#6).
8 Fit the top gland (#10/11) over the spindle and secure the top gland in the gland box (#6).
9 Fit the spindle nut (#18) on the spindle (#12) and secure the spindle nut on the gland box ears (#9). Fit the open and close plate (#24) on the gland box ear and spindle nut facing the outlet flange (#4) and secure with M10 x 30mm bolts (#28) followed by the M10 spring washer (#16) and M10 nut (#25) with 17mm ring spanner
10 Fit handle assembly (#22/23) on spindle square (#12). Secure handle assembly with M12 flat washer (#31) followed by M12 nylock nut (#32) and fasten with 19mm ring spanner.

AFTER TESTING - Secure top gland

11 Fit M10 nut (#25) on M12 x 60mm bolts (#29) located on spindle nut and lock in place with 17mm spanner

TESTING PROCEDURES - 80mm Manual Flush Valve Gasket Seat

1 Adjust the packing of the gland box evenly on both sides of the top gland. Do not over-tighten. Test the opening/closing function of the sealing disc 4 - 5 cycles.
2 Fit and secure the "TEST FL 150/190" jig to the "TEST FL 190" jig with washers and nuts, secure the main flange of the flush valve to the "TEST FL 150/190" jig with washers and nuts, ensure nuts are - fully and securely fastened to the jig
3 Insure sealing disc is in the close position
4 Test the Seat tightness at 20kPa for 5 minutes
5 Check for leaks
a - interal sealing area - sealing disc/main body sealing area

6 Fit and secure the "TEST FL 124/150" jig to the "TEST FL 150" jig with washers and nuts, secure the outlet flange of the flush valve to the "TEST FL 124/150" jig with washers and nuts, ensure nuts are fully - and securely fastened to the jig
7 Insure the sealing disc is in the close position
8 Test the Shell and Seat tightness at 200kPa for 5 minutes
9 Check for leaks
a - all welding
b - external sealing area - sealind disc/main body sealing area
c - gland box (if there is leakage at the gland box release the testing pressure and tighten the top gland redo testing step 6 - 9)

As per EN12266-1:2012 and EN122662:2012 testing regulations Table A.5
"A" No visually detectable leaks for the duration of the test

ASSEMBLY & TESTING PROCEDURES - 80mm Manual Flush Valve Gasket Seat







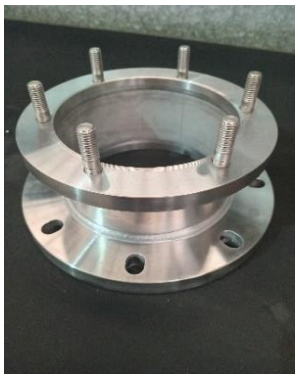

1 - 3 Spindle assembly





4 - 5 Spindle nut assembly

6 - 10 Main body, spindle assembly, top gland and spindle nut assembly
(see parts assembly drawing for parts configuration)







Test 1: Seat tightness @ 20kPa








Test 2: Shell tightness @ 200kPa and Seat tightness @ 200kPa