

Inspection certificate no:- 8112620439. Dt. 10.05.2016

Manufacturer:- M/s. Excel Hydro-Pneumatics Pvt. Ltd.

Manufacturers Add. Office & Factory:- EXCEL HYDRO PNEUMATICS PVT LTD.

1, 2, 83, 1-49, 1-51, Raja Industrial Estate,
P. K. Road, Mulund (W), Mumbai-400080. INDIA
Phone: 91-22-2568 3291, 2560 6089
Fax: 91-22-2564 5538
E-mail: info@excelhyrdo.com

TUV INDIA PRIVATE LIMITED
241, Hindustan Kohinoor Complex,
Opp MTNL Office, L.B.S. Marg,
Vikhroli (West), Mumbai - 400 083
CIN : U74140MH1989PTC052930
Tel. : +91 22 6782 4100
Fax : +91 22 2579 1301
E-mail : mumbai@tuv-nord.com
Website : www.tuv-nord.com/in

TUV control no.:-

The under mentioned surveyor did visit the facilities of the above manufacturer of mechanically attached fittings, between 12.01.2016 & 16.04.2016 for the performance appraisal of tests mentioned below conducted on under mentioned sizes of fittings as per the norms of ASTM F 1387-99 (Reapproved 2012).

1) Sizes of mechanically attached fittings used for performance appraisal tests:

- 1) ¼ inch OD male connector, female connector, union, elbow, tee, tube cap, tube plug tested with
Seamless tubes of ASTM A 269 TP 316 material and ¼ inch OD x 0.049 inch wall thickness.
- 2) ⅜ inch OD male connector, female connector, union, elbow, tee, tube cap, tube plug tested with
Seamless tubes of ASTM A 269 TP 316 material and ⅜ inch OD x 0.049 inch wall thickness.
- 3) ½ inch OD male connector, female connector, union, elbow, tee, tube cap, tube plug tested with
Seamless tubes of ASTM A 269 TP 316 material and ½ inch OD x 0.065 inch wall thickness.



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II) The material used for all the above is Stainless steel Grade B

III) The test parameters used during tests on above fittings is below:-

- 1) Temperature during testing : 25 to 36 deg C (77 to 96.8 deg F)
- 2) Test pressure retained within ± 5 % PSIG.
- 3) Test medium demineralized water, SAE grade 10 W oil for hydraulic tests.
- 4) Test medium : Nitrogen for pneumatic test.
- 5) Mechanical tests done in NABL approved laboratory.

IV) Following tests conducted as per ASTM F 1387-99 (Re approved 2012) were monitored / witnessed at random

- 1) Selection of tests samples – Witnessed.
- 2) Examination of specimen as per A2 of the specification – Witnessed.
- 3) Verification of material properties – Material certificate reviewed.
- 4) Initial pneumatic proof tests as per A3 of the specification – Witnessed.
- 5) Initial hydrostatic proof tests as per A4 of the specification – Witnessed.
- 6) Tensile tests on 6 samples of fittings – Witnessed.
- 7) Impulse tests as per A5 of the specification on six fittings in three loops for 1 million cycles –
Monitored and witnessed at random.
- 8) Repeated assembly test as per A9 carried out after every 250000 cycles – Monitored and
witnessed at random.
- 9) Hydrostatic proof test as per A4 of the specification on samples undergone impulse testing –
Witnessed.
- 10) Hydrostatic burst test as A8 of the specification – Witnessed.
- 11) Selection of 6 test samples comprising of three loops for Flexure fatigue test- Witnessed.

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- 12) Flexure fatigue test (30000 cycles) as per A6 of specification – Witnessed.
- 13) Hydraulic proof pressure test as per procedure A.4.3 after completion of flexure fatigue test – Witnessed.
- 14) Rotary flex test as per A10 of the specification on six fittings in three loops for 1 million cycles – monitored and witnessed at random.
- 15) Hydrostatic proof test as per A4 of the specification on samples undergone rotary flex test – Witnessed.

All the above tests were found satisfactory.

The details of applicable test pressure with reference to various tests mentioned above have been attested by us in the data report of manufacturer.

The above mentioned fittings meets the requirement ASTM F 1387-99 (Reapproved 2012)with Reference to mandatory tests mentioned in the specification and conducted herein.

Place : Mumbai

Date : 10.05.2016


S.V.Prabhu
(Sr. Surveyor)



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