



DET NORSKE VERITAS
TYPE TEST CERTIFICATE

**INTERCHANGEABILITY CERTIFICATE FOR
DOUBLE FERRULE FITTINGS**

FLUID CONTROLS PVT.LTD

OFFICE: J.V.PATEL ITI COMPOUND, B.MADHURKAR MARG, MUMBAI 400 013, INDIA.
FACTORY: T-169, BHOSARI MIDC, PUNE 411 026, INDIA.

This certificate is issued by us to certify that the undersigned surveyor did, upon request, visit your factory and witnessed the assembly and testing as per your procedure and related product specification for interchangeability.

Type Of Interchange	Fitting Specimen	Size	Material Grade
Fluid Controls ferrules with Swagelok Body & Nut	Connector and end plug joined together with tube	1/4" OD X 0.035" & 0.049" WT	SS 316
		3/8" OD X 0.035" & 0.049" WT	
		1/2" OD X 0.049" & 0.065" WT	
		3/4" OD X 0.065" & 0.083" WT	
		1" OD X 0.083" & 0.095" WT	
Swagelok ferrules with Fluid Controls Body & Nut	Connector and end plug joined together with tube	1/4" OD X 0.035" & 0.049" WT	SS 316
		3/8" OD X 0.035" & 0.049" WT	
		1/2" OD X 0.049" & 0.065" WT	
		3/4" OD X 0.065" & 0.083" WT	
		1" OD X 0.083" & 0.095" WT	

SCOPE OF WORK –

1. Verified test equipments are duly calibrated within limit.
2. Samples are selected randomly and assembled & tested as per Brennan assembly procedure.
3. Tubes used for testing are seamless ASTM A269 SS316 or similar grade.
4. The Following Tests were conducted on five Specimens of each tube OD x Wall Thickness:
 - a. Pneumatic Proof Test at pressure of 40 Kg/cm² (560 PSIG) and found satisfactory.
 - b. Hydrostatic Proof Tests at 1.5 times of tube working pressure and found satisfactory.
 - c. Hydrostatic Burst Test at minimum 4 times of tube working pressure or tube burst and found satisfactory.
 - d. During Hydrostatic Proof Tests each fitting was re-assembled ten times and tested for Hydrostatic Test, no leakage was found throughout the test.
5. For further details refer to the detailed test report.

CONCLUSION - It is certified that the Fluid Controls Double Ferrule SS fittings are compatible & are interchangeable with Swagelok Double Ferrule SS fittings in the combination shown in the table above.



Anand Deshpande

Surveyor of **DET NORSKE VERITAS AS**

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