



THE NETHERLANDS

COMMUNICATIONConcerning ⁽¹⁾:

- approval granted
- approval extended
- approval refused
- approval withdrawn
- production definitively discontinued

of a type of CNG/LNG component pursuant to Regulation number 110.


Approval number: E4*110R05/00*0455*02

1. CNG/LNG component considered:

- Container(s) or cylinder(s)⁽⁺⁾
- Tank(s) or vessel(s)⁽⁺⁾
- CNG accumulator(s)⁽⁺⁾
- Pressure indicator⁽⁺⁾
- Pressure relief valve⁽⁺⁾
- Automatic valve(s)⁽⁺⁾
- Excess flow valve⁽⁺⁾
- Gas-tight housing⁽⁺⁾
- Pressure regulator(s)⁽⁺⁾
- Non-return valve(s) or check valve(s)⁽⁺⁾
- Pressure relief device (PRD)(temperature triggered)⁽⁺⁾
- Manual valve⁽⁺⁾
- Flexible fuel lines ⁽¹⁾
- Filling unit or receptacle⁽⁺⁾
- Gas injector(s)⁽⁺⁾
- CNG Compressor⁽⁺⁾
- Gas flow adjuster⁽⁺⁾
- Gas/air mixer⁽⁺⁾
- Electronic control unit⁽⁺⁾
- Pressure and temperature sensor(s)⁽⁺⁾
- CNG filter(s)⁽⁺⁾
- PRD (pressure triggered)⁽⁺⁾
- Fuel rail⁽⁺⁾
- Heat exchanger(s)/vaporizer(s)⁽⁺⁾



- Natural gas detector(s)⁽¹⁾
- LNG filling receptacle(s)⁽¹⁾
- LNG pressure control regulator(s)⁽¹⁾
- LNG pressure and/or temperature sensor(s)⁽¹⁾
- LNG manual valve(s)⁽¹⁾
- LNG automatic valve(s)⁽¹⁾
- LNG non-return valve(s)⁽¹⁾
- LNG pressure relief valve(s)⁽¹⁾
- LNG excess flow valve(s)⁽¹⁾
- LNG fuel pump(s)⁽¹⁾

2. Trade name or mark : LNG Hose Class 5
3. Manufacturer's name and address : Swagelok Company
29500 Solon Industries Parkway
44139 Solon, Ohio
United States of America
4. If applicable, name and address of manufacturer's representative : N.A.
5. Submitted for approval on : October 2016
6. Technical service responsible for conducting approval tests : Kiwa Nederland B.V.
P.O. Box 137
7300 AC Apeldoorn
The Netherlands
7. Date of report issued by that service : 13-04-2023
8. Number of report issued by that service : 160800722_P000311690
9. Approval : ~~granted/refused/extended/withdrawn~~⁽¹⁾
10. Reason(s) of extension (if applicable) : The currently homologated LNG Hose Class 5 is updated to the latest Revision of the ECE Regulation 110.
11. Place : Zoetermeer
12. Date : 25 April 2023
13. Signature : 
R.F.R. Clement
14. The documents filed with the application or extension of approval can be obtained upon request.

⁽¹⁾ Strike out what does not apply.

ADDENDUM

1. Additional information concerning the type approval of a type of CNG/LNG components pursuant to Regulation number 110.
 - 1.1. Natural Gas Storage System
 - 1.1.1. Container(s) or cylinder(s) (for CNG system)
 - 1.1.1.1. Dimensions :
 - 1.1.1.2. Material :
 - 1.1.2. Tank(s) or vessel(s) (for LNG system)
 - 1.1.2.1. Capacity :
 - 1.1.2.2. Material :
 - 1.1.3. CNG accumulator
 - 1.1.3.1. Dimensions :
 - 1.1.3.2. Material :
 - 1.1.3.3. Capacity :
 - 1.2. Pressure indicator
 - 1.2.1. Working pressure(s) ⁽²⁾ :
 - 1.2.2. Material :
 - 1.3. Pressure relief valve (discharge valve)
 - 1.3.1. Working pressure(s) ⁽²⁾ :
 - 1.3.2. Material :
 - 1.4. Automatic valve(s)
 - 1.4.1. Working pressure(s) ⁽²⁾ :
 - 1.4.2. Material :
 - 1.5. Excess flow valve
 - 1.5.1. Working pressure(s) ⁽²⁾ :
 - 1.5.2. Material :
 - 1.6. Gas-tight housing
 - 1.6.1. Working pressure(s) ⁽²⁾ :
 - 1.6.2. Material :
 - 1.7. Pressure regulator(s)
 - 1.7.1. Working pressure(s) ⁽²⁾ :
 - 1.7.2. Material :
 - 1.8. Non-return valve(s) or check valve(s)
 - 1.8.1. Working pressure(s) ⁽²⁾ :
 - 1.8.2. Material :
 - 1.9. Pressure relief device (temperature triggered)
 - 1.9.1. Working pressure(s) ⁽²⁾ :
 - 1.9.2. Material :



- 1.10. Manual valve
 - 1.10.1. Working pressure(s) ⁽²⁾ :
 - 1.10.2. Material :
- 1.11. Flexible fuel lines
 - 1.11.1. Working pressure(s) ⁽²⁾ : 5.17 MPa (51.7 Bar)
 - 1.11.2. Material : See drawing at report 160800722 and its extensions
- 1.12. Filling unit or receptacle
 - 1.12.1. Working pressure(s) ⁽²⁾ :
 - 1.12.2. Material :
- 1.13. Gas injector(s)
 - 1.13.1. Working pressure(s) ⁽²⁾ :
 - 1.13.2. Material :
- 1.14. Gas flow adjuster
 - 1.14.1. Working pressure(s) ⁽²⁾ :
 - 1.14.2. Material :
- 1.15. Gas/air mixer
 - 1.15.1. Working pressure(s) ⁽²⁾ :
 - 1.15.2. Material :
- 1.16. Electronic control unit
 - 1.16.1. Basic software principles :
- 1.17. Pressure and temperature sensor(s)
 - 1.17.1. Working pressure(s) ⁽²⁾ :
 - 1.17.2. Material :
- 1.18. CNG filter(s)
 - 1.18.1. Working pressure(s) ⁽²⁾ :
 - 1.18.2. Material :
- 1.19. PRD (pressure triggered)
 - 1.19.1. Working pressure(s) ⁽²⁾ :
 - 1.19.2. Material :
- 1.20. Fuel rail(s)
 - 1.20.1. Working pressure(s) ⁽²⁾ :
 - 1.20.2. Material :
- 1.21. Heat Exchanger(s)/Vaporizer(s)
 - 1.21.1. Working pressure(s) ⁽²⁾ :
 - 1.21.2. Material :



- 1.22. Natural gas detector(s)
- 1.22.1. Working pressure(s) ⁽²⁾ :
- 1.22.2. Material :
- 1.23. LNG filling receptacle(s)
- 1.23.1. Working pressure(s) ⁽²⁾ :
- 1.23.2. Material :
- 1.24. LNG pressure control regulator(s)
- 1.24.1. Working pressure(s) ⁽²⁾ :
- 1.24.2. Material :
- 1.25. LNG pressure and/or temperature sensor(s)
- 1.25.1. Working pressure(s) ⁽²⁾ :
- 1.25.2. Material :
- 1.26. LNG manual valve(s)
- 1.26.1. Working pressure(s) ⁽²⁾ :
- 1.26.2. Material :
- 1.27. LNG automatic valve(s)
- 1.27.1. Working pressure(s) ⁽²⁾ :
- 1.27.2. Material :
- 1.28. LNG non-return valve(s)
- 1.28.1. Working pressure(s) ⁽²⁾ :
- 1.28.2. Material :
- 1.29. LNG pressure relief valve(s)
- 1.29.1. Working pressure(s) ⁽²⁾ :
- 1.29.2. Material :
- 1.30. LNG excess flow valve(s)
- 1.30.1. Working pressure(s) ⁽²⁾ :
- 1.30.2. Material :
- 1.31. LNG fuel pump(s)
- 1.31.1. Working pressure(s) ⁽²⁾ :
- 1.31.2. Material :
- 1.32. CNG Compressor
- 1.32.1. Working pressure(s) ⁽²⁾ :
- 1.32.2. Material :

⁽²⁾ Specify the tolerance.



Appendix 1 – Drawings

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DWG. NO. **SS-FJ8-ECE-APPROVAL**

Mo./Year **E4** 10R-030455 T*

Swagelok
 LNG Class 5
 100% Cr-10% Ni-5% Cu
 1/2 in. Working Pressure of 51.7 Bar

LABEL DESCRIPTION:
 BLACK LABEL W/ SILVER TEXT
 ADHESIVE TYPE = 3M 468

LABEL

NOTES:
 1) XXX = CUSTOMER REQUESTED LENGTH
 2) 093 = DESIGNATOR FOR ECE R110 HOSE
 3) LABELS ARE PLACED A MAX OF EVERY 45cm [18"] ALONG HOSE

ITEM	DESCRIPTION	MATERIAL
1	END CONNECTION	316 SS
2	LABEL	AL
3	HOSE	316 SS

END CONNECTION	SIZE	PART NUMBER DESIGNATOR
SWAGelok TUBE ADAPTER	FRACTIONAL - 1/2"	TA8
	METRIC - 12MM	TM12

UNLESS OTHERWISE SPECIFIED

TITLE	1/2" FJ SERIES ALL METAL HOSE
DIMENSIONS ARE IN INCHES	
XX	±.01
XXX	±.005
XXXX	±.0015
ANGLES	±30 MINUTES
INTERPRET DIM. AND TOL. PER ASME Y14.5M-1994	

SAP CHANGE NUMBER	DATE	DWG. NO.	REV.
DCN-00238696	2/15/2023	SS-FJ8-ECE-APPROVAL	C

Swagelok

SHEET 1 of 1
 VS 03

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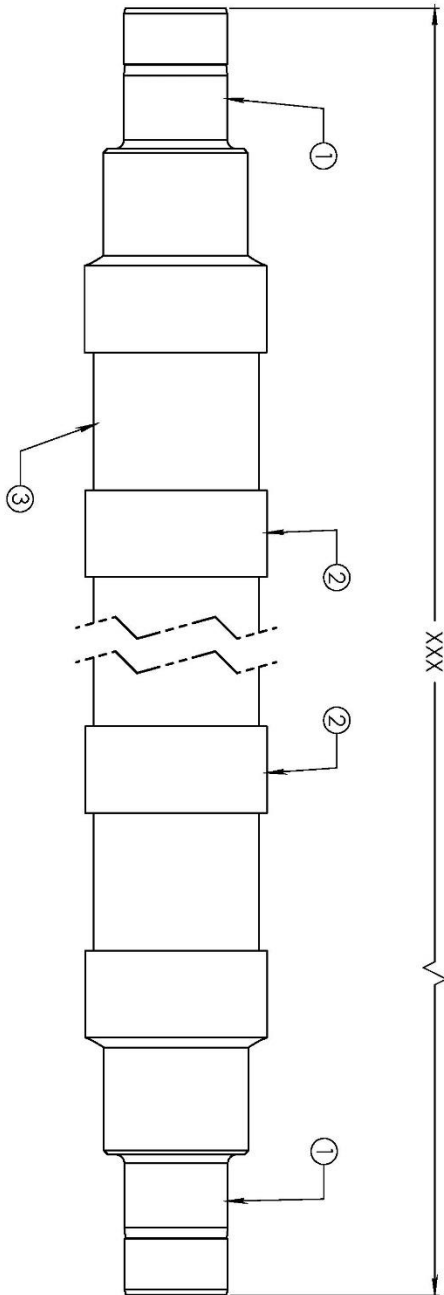
DWG. NO. SS-FJ12-ECE-APPROVAL

- NOTES:
- 1) XXXX = CUSTOMER REQUESTED LENGTH
 - 2) 093 = DESIGNATOR FOR ECE R110 HOSE
 - 3) LABELS ARE PLACED A MAX OF EVERY 45cm [18"] ALONG HOSE

Swagelok
 Mo./Year
E4
 LNG CLASS 5
 -162°C to +105°C
 3/4" WORKING PRESSURE OF 51.7 BAR 110R-050455 T¹

LABEL DESCRIPTION:
 BLACK LABEL W/ SILVER TEXT
 ADHESIVE TYPE = 3M 468

LABEL



ITEM	DESCRIPTION	MATERIAL
1	END CONNECTION	316 SS
2	LABEL	AL
3	HOSE	316 SS

END CONNECTION	SIZE	PART NUMBER DESIGNATOR
SWAGelok TUBE ADAPTER	METRIC - 18MM to 20MM	TM18, TM20
	FRACTIONAL - 3/4"	TA12

UNLESS OTHERWISE SPECIFIED		TITLE		SHEET	
DIMENSIONS ARE IN INCHES		3/4" FJ SERIES ALL METAL HOSE		1 of 1	
XX	±.01	MATERIAL		VS. 03	
.XXX	±.005	SAP CHANGE NUMBER		REV. C	
.XXXX	±.0015	DCN-00238696			
ANGLES	±.30 MINUTES	DATE			
INTERPRET DIM. AND TOL. PER ASME Y14.5M-1994		2/15/2023			
		DWG. NO.		SS-FJ12-ECE-APPROVAL	

