

June 28, 2023

**Attention:** Tanya Francis  
TECHNICAL STANDARDS & SAFETY AUTHORITY  
345 CARLINGVIEW DRIVE  
TORONTO, ON M9W 6N9

The design submission, Tracking Number 2023-02677, Web Portal Number 2023-S1506, originally received on April 24, 2023 was surveyed and accepted for registration as follows:

<b>CRN :</b> 0D24488.52	<b>Accepted on:</b> June 28, 2023
<b>Reg Type:</b> NEW DESIGN	<b>Expiry Date:</b> April 03, 2033
<b>Drawing No. :</b> SCOPE OF CRN REGISTRATION	
<b>Fitting type:</b> PTFE FLEXIBLE HOSE ASSEMBLIES	
Design registered in the name of : AFLEX HOSE LTD	

**The registration is conditional on your compliance with the following notes:**

*\*\* Design Report: R-1319A Rev 0*

*\*\* See attached for a list of manufacturing locations. The ISO scope of the three US manufacturing locations (Watson - Marlow Inc.) is assembly and distribution of hoses and hose adapters*

*As indicated on AB-41 Statutory Declaration or AB-351 Declaration of Conformity form and submitted documentation, the code of construction are ASME B31.3 and other engineering analysis.*

- It is our understanding that the fitting(s), included as the scope of this submission, that is(are) subject to the Safety Codes Act shall comply with the requirements of the indicated Standard or Code of Construction on the AB-41 Statutory Declaration or AB-351 Declaration of Conformity as supported by the attached data which identifies the dimensions, materials of construction, press./temp. ratings and the basis for such ratings, and the identification marking of the fittings.*
- This registration is valid only for fittings fabricated at the location(s) covered by the QC certificate attached to the accepted AB-41 Statutory Declaration or AB-351 Declaration of Conformity form.*
- This registration is valid only until the indicated expiry date and only if the Manufacturer maintains a valid quality management system approved by an acceptable third-party agency, and maintains a valid Certification of Authorization Permit if required by the jurisdiction where manufacturing takes place, until that date.*
- Should the approval of the quality management system lapse before the expiry date indicated above, this registration shall become void.*

An invoice covering survey and registration fees will be forwarded from our Revenue Accounts.

If you have any question don't hesitate to contact me by phone at (780) 433-0281 ext 3337 or fax (780) 437-7787 or e-mail Dick@absa.ca.

Sincerely,



POON, ASHLING, P. Eng.  
DOP Cert. No. D00007936



the pressure equipment safety authority

9410 - 20 Ave N.W.  
Edmonton, Alberta, Canada T6N 0A4  
Tel: (780) 437-9100 / Fax: (780) 437-7787

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June 28, 2023



Technical Standards and Safety Authority  
345 Carlingview Drive  
Toronto, Ontario M9W 6N9  
www.tssa.org

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below



AFLEX HOSE or "AFLEX"

## STATUTORY DECLARATION Registration of Fittings

I, Dr. Leigh Mulvaney-Johnson PHD CENG (MIMECHE), Technical Manager

(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of AFLEX Hose Ltd.

(Name of Manufacturer)

Located at Bradley Business Park, Dyson Wood Way, Bradley, Huddersfield, HD2 1GZ, United Kingdom

(Plant Address)

(Telephone No.)

(Fax No.)

☒ do solemnly declare that the fittings listed hereunder, which are subject to the **Technical Standards and Safety Act**, Boilers and Pressure Vessels Regulation, comply with all of the requirements of  
ASME B31.3, ASME BPE, ARPM IP-2

(Title of recognized North American Standard)

which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service;

☐ or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with \_\_\_\_\_ as supported by the attached data which identifies the dimensions, material of construction, pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service.

I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO 9001:2015 which has been verified by the following authority, bsi, TUV

The items covered by this declaration, for which I seek registration, are category D - Flexible Hose Assemblies type fittings. In support of this application, the following information and/or test data are attached as follows:

SCOPE OF CRN REGISTRATION, REPORTS, DRAWINGS, CALCULATIONS

(drawings, calculations, test reports, etc.)

Declared before me at Hetheridge in the County of West Yorkshire  
the 12<sup>th</sup> day of December AD 20 22.

Commissioner for Oaths:

MARY MAHON

(Printed name)

[Signature]

(Signature)

**mary mahon**  
SOLICITOR

TEL: 01422 844997 FAX: 01422 844797  
EMAIL: mary@marymahonsolicitor.co.uk  
8 WRAGLEY HOUSE, VALLEY ROAD  
HEBDEN BRIDGE, WEST YORKSHIRE, HX7 7BN

[Signature]  
(Signature of Declarer)

### FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the **Technical Standards and Safety Act**, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category 'D'

CRN: \_\_\_\_\_

Registered by: \_\_\_\_\_

Dated: 2023-06-28

NOTE: This registration expires on: 2033-04-03

2023-02677

**ABSA**

**SAFETY CODES ACT - PROVINCE OF ALBERTA**

**ACCEPTED: 024488 52**

**See acceptance letter for  
conditions of registration.**

Date: 6/28/2023

By: Tik Han Poon  
ASHLING POON, P. Eng.  
DOP: D00007936

This stamp and signature have been affixed electronically to this registered design as required by Section 20(1) of the Pressure Equipment Safety Regulation, in accordance with the Electronic Transactions Act.

\*Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request.

PV 09553 (04/17)

**\*\* The scope of this registration include the PTFE flexible hose assemblies, see scope of CRN registration for detail.**

**\*\* Design report #: R-1319A Rev 0**

**AFLEX HOSE LTD.**  
BRADLEY BUSINESS PARK  
DYSON WOOD WAY  
BRADLEY, HUDDERSFIELD  
HD2 1GZ, UNITED KINGDOM



30-Nov-22

## SCOPE OF CRN REGISTRATION

PAGE 1 OF 8

**Hose Type(s)** Pharmaline N, stainless steel braid, silicone cover, non-lined fittings  
Bioflex Ultra, stainless steel braid, silicone cover, non-lined fittings  
Fabline, stainless steel braid, silicone cover, non-lined fittings

**THIS IS PART OF CRN**  
0D24488.5  
Technical Standards and Safety Authority  
Boilers and Pressure Vessels Safety  
Program

**Important: The CRN Pressure-Temperature Ratings listed in this document are the hose maximum CRN ratings. Consult hose product literature for recommended hose maximum operating conditions.**

The maximum CRN ratings are applicable to the following Service Types:

Service Type **Group 1**: Water and all other liquids, solid materials suspended in liquids or air, compressed air and other gases.

Service Type **Group 2**: Liquid media that immediately changes into gas under standard atmospheric conditions.

Service Type **Group 3**: Steam

Product Description	Design Code	Material Specifications	MDMT	Report Number
Flexible Hose Assemblies	ASME B31.3, ASME BPE, ARPM IP-2	ASTM A479-304/304L, ASTM A479-316/316L ASTM A240-304/304L, ASTM A240-316/316L Stainless Steel meeting the requirements of ASTM A478 and ASTM A580, PTFE Hose, Silicon Cover	- 73°C / -100°F	R-1319A Rev. 0

## PRESSURE - TEMPERATURE RATINGS

Process Connections		Grooved Stand Pipe / Tube End, FNPT - Female, MNPT - Male			
Service Type	Group 1		Group 2		Group 3
Size	MAWP at 400°F (psig)	MAWP at 204°C (barg)	MAWP at 400°F (psig)	MAWP at 204°C (barg)	MAWP at Steam Saturation Temperature (Note 2)
1/4"	1160.32	80	928.26	64	232 psig at 400°F 16 barg at 204°C
3/8"	1160.32	80	928.26	64	232 psig at 400°F 16 barg at 204°C
1/2"	1015.28	70	812.22	56	232 psig at 400°F 16 barg at 204°C
5/8"	942.76	65	754.21	52	232 psig at 400°F 16 barg at 204°C
3/4"	870.24	60	696.19	48	232 psig at 400°F 16 barg at 204°C
1"	725.20	50	580.16	40	232 psig at 400°F 16 barg at 204°C
1-1/4"	652.68	45	522.14	36	232 psig at 400°F 16 barg at 204°C
1-1/2"	580.16	40	464.13	32	232 psig at 400°F 16 barg at 204°C
2"	435.12	30	348.10	24	174 psig at 377°F 12 barg at 192°C
2-1/2"	290.08	20	232.06	16	87 psig at 329°F 6 barg at 164°C
3"	217.56	15	174.05	12	87 psig at 329°F 6 barg at 164°C



**SCOPE OF CRN REGISTRATION**

<b>PRESSURE - TEMPERATURE RATINGS</b>						
<b>Process Connections</b>		<b>CL150 ASME B16.5 Flanged Type 304SS</b>				
<b>Service Type</b>	<b>Group 1</b>		<b>Group 2</b>		<b>Group 3</b>	
<b>Size</b>	<b>MAWP at 100°F(psig)</b>	<b>MAWP at 38°C(barg)</b>	<b>MAWP at 100°F(psig)</b>	<b>MAWP at 38°C(barg)</b>	<b>MAWP at Steam Saturation Temperature (Note 2)</b>	
1/2"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
3/4"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
1"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
1-1/4"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
1-1/2"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
2"	275.00	18.96	275.00	18.96	174 psig at 377°F	12 barg at 192°C
2-1/2"	275.00	18.96	232.06	16.00	87 psig at 329°F	6 barg at 164°C
3"	217.56	15.00	174.05	12.00	87 psig at 329°F	6 barg at 164°C
<b>Size</b>	<b>MAWP at 200°F(psig)</b>	<b>MAWP at 93°C(barg)</b>	<b>MAWP at 200°F(psig)</b>	<b>MAWP at 93°C(barg)</b>	<b>In all cases the Group 3 Pressure-Temperature Ratings are limited by ASME B16.5 Table II-2-2.1 Pressure-Temperature Ratings (Note 6)</b>	
1/2"	230.00	15.86	230.00	15.86		
3/4"	230.00	15.86	230.00	15.86		
1"	230.00	15.86	230.00	15.86		
1-1/4"	230.00	15.86	230.00	15.86		
1-1/2"	230.00	15.86	230.00	15.86		
2"	230.00	15.86	230.00	15.86		
2-1/2"	230.00	15.86	230.00	15.86		
3"	217.56	15.00	174.05	12.00		
<b>Size</b>	<b>MAWP at 300°F(psig)</b>	<b>MAWP at 149°C(barg)</b>	<b>MAWP at 300°F(psig)</b>	<b>MAWP at 149°C(barg)</b>		
1/2"	205.00	14.13	205.00	14.13		
3/4"	205.00	14.13	205.00	14.13		
1"	205.00	14.13	205.00	14.13		
1-1/4"	205.00	14.13	205.00	14.13		
1-1/2"	205.00	14.13	205.00	14.13		
2"	205.00	14.13	205.00	14.13		
2-1/2"	205.00	14.13	205.00	14.13		
3"	205.00	14.13	174.05	12.00		
<b>Size</b>	<b>MAWP at 400°F(psig)</b>	<b>MAWP at 204°C(barg)</b>	<b>MAWP at 400°F(psig)</b>	<b>MAWP at 204°C(barg)</b>		
1/2"	190.00	13.10	190.00	13.10		
3/4"	190.00	13.10	190.00	13.10		
1"	190.00	13.10	190.00	13.10		
1-1/4"	190.00	13.10	190.00	13.10		
1-1/2"	190.00	13.10	190.00	13.10		
2"	190.00	13.10	190.00	13.10		
2-1/2"	190.00	13.10	190.00	13.10		
3"	190.00	13.10	174.05	12.00		

**SCOPE OF CRN REGISTRATION**

PRESSURE - TEMPERATURE RATINGS						
Process Connections		CL150 ASME B16.5 Flanged Type 316SS				
Service Type	Group 1		Group 2		Group 3	
Size	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at Steam Saturation Temperature (Note 2)	
1/2"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
3/4"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
1"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
1-1/4"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
1-1/2"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
2"	275.00	18.96	275.00	18.96	174 psig at 377°F	12 barg at 192°C
2-1/2"	275.00	18.96	232.06	16.00	87 psig at 329°F	6 barg at 164°C
3"	217.56	15.00	174.05	12.00	87 psig at 329°F	6 barg at 164°C
Size	MAWP at 200°F(psig)	MAWP at 93°C(barg)	MAWP at 200°F(psig)	MAWP at 93°C(barg)	In all cases the Group 3 Pressure-Temperature Ratings are limited by ASME B16.5 Table II-2-2.2 Pressure-Temperature Ratings (Note 6)	
1/2"	235.00	16.20	235.00	16.20		
3/4"	235.00	16.20	235.00	16.20		
1"	235.00	16.20	235.00	16.20		
1-1/4"	235.00	16.20	235.00	16.20		
1-1/2"	235.00	16.20	235.00	16.20		
2"	235.00	16.20	235.00	16.20		
2-1/2"	235.00	16.20	232.06	16.00		
3"	217.56	15.00	174.05	12.00		
Size	MAWP at 300°F(psig)	MAWP at 149°C(barg)	MAWP at 300°F(psig)	MAWP at 149°C(barg)		
1/2"	215.00	14.82	215.00	14.82		
3/4"	215.00	14.82	215.00	14.82		
1"	215.00	14.82	215.00	14.82		
1-1/4"	215.00	14.82	215.00	14.82		
1-1/2"	215.00	14.82	215.00	14.82		
2"	215.00	14.82	215.00	14.82		
2-1/2"	215.00	14.82	215.00	14.82		
3"	215.00	14.82	174.05	12.00		
Size	MAWP at 400°F(psig)	MAWP at 204°C(barg)	MAWP at 400°F(psig)	MAWP at 204°C(barg)		
1/2"	195.00	13.44	195.00	13.44		
3/4"	195.00	13.44	195.00	13.44		
1"	195.00	13.44	195.00	13.44		
1-1/4"	195.00	13.44	195.00	13.44		
1-1/2"	195.00	13.44	195.00	13.44		
2"	195.00	13.44	195.00	13.44		
2-1/2"	195.00	13.44	195.00	13.44		
3"	195.00	13.44	174.05	12.00		

**SCOPE OF CRN REGISTRATION**

<b>PRESSURE - TEMPERATURE RATINGS</b>						
<b>Process Connections</b>		<b>CL300 ASME B16.5 Flanged Type 304SS</b>				
<b>Service Type</b>	<b>Group 1</b>		<b>Group 2</b>		<b>Group 3</b>	
<b>Size</b>	<b>MAWP at 100°F(psig)</b>	<b>MAWP at 38°C(barg)</b>	<b>MAWP at 100°F(psig)</b>	<b>MAWP at 38°C(barg)</b>	<b>MAWP at Steam Saturation Temperature (Note 2)</b>	
1/2"	720.00	49.64	720.00	49.64	232 psig at 400°F	16 barg at 204°C
3/4"	720.00	49.64	696.19	48.00	232 psig at 400°F	16 barg at 204°C
1"	720.00	49.64	580.16	40.00	232 psig at 400°F	16 barg at 204°C
1-1/4"	652.68	45.00	522.14	36.00	232 psig at 400°F	16 barg at 204°C
1-1/2"	580.16	40.00	464.13	32.00	232 psig at 400°F	16 barg at 204°C
2"	435.12	30.00	348.10	24.00	174 psig at 377°F	12 barg at 192°C
2-1/2"	290.08	20.00	232.06	16.00	87 psig at 329°F	6 barg at 164°C
3"	217.56	15.00	174.05	12.00	87 psig at 329°F	6 barg at 164°C
<b>Size</b>	<b>MAWP at 200°F(psig)</b>	<b>MAWP at 93°C(barg)</b>	<b>MAWP at 200°F(psig)</b>	<b>MAWP at 93°C(barg)</b>	<b>In all cases the Group 3 Pressure-Temperature Ratings are limited by ASME B16.5 Table II-2-2.1 Pressure-Temperature Ratings (Note 6)</b>	
1/2"	600.00	41.37	600.00	41.37		
3/4"	600.00	41.37	600.00	41.37		
1"	600.00	41.37	580.16	40.00		
1-1/4"	600.00	41.37	522.14	36.00		
1-1/2"	580.16	40.00	464.13	32.00		
2"	435.12	30.00	348.10	24.00		
2-1/2"	290.08	20.00	232.06	16.00		
3"	217.56	15.00	174.05	12.00		
<b>Size</b>	<b>MAWP at 300°F(psig)</b>	<b>MAWP at 149°C(barg)</b>	<b>MAWP at 300°F(psig)</b>	<b>MAWP at 149°C(barg)</b>		
1/2"	540.00	37.23	540.00	37.23		
3/4"	540.00	37.23	540.00	37.23		
1"	540.00	37.23	540.00	37.23		
1-1/4"	540.00	37.23	522.14	36.00		
1-1/2"	540.00	37.23	464.13	32.00		
2"	435.12	30.00	348.10	24.00		
2-1/2"	290.08	20.00	232.06	16.00		
3"	217.56	15.00	174.05	12.00		
<b>Size</b>	<b>MAWP at 400°F(psig)</b>	<b>MAWP at 204°C(barg)</b>	<b>MAWP at 400°F(psig)</b>	<b>MAWP at 204°C(barg)</b>		
1/2"	495.00	34.13	495.00	34.13		
3/4"	495.00	34.13	495.00	34.13		
1"	495.00	34.13	495.00	34.13		
1-1/4"	495.00	34.13	495.00	34.13		
1-1/2"	495.00	34.13	464.13	32.00		
2"	435.12	30.00	348.10	24.00		
2-1/2"	290.08	20.00	232.06	16.00		
3"	217.56	15.00	174.05	12.00		

**SCOPE OF CRN REGISTRATION**

PRESSURE - TEMPERATURE RATINGS						
Process Connections		CL300 ASME B16.5 Flanged Type 316SS				
Service Type	Group 1		Group 2		Group 3	
Size	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at Steam Saturation Temperature (Note 2)	
1/2"	720.00	49.64	720.00	49.64	232 psig at 400°F	16 barg at 204°C
3/4"	720.00	49.64	696.19	48.00	232 psig at 400°F	16 barg at 204°C
1"	720.00	49.64	580.16	40.00	232 psig at 400°F	16 barg at 204°C
1-1/4"	652.68	45.00	522.14	36.00	232 psig at 400°F	16 barg at 204°C
1-1/2"	580.16	40.00	464.13	32.00	232 psig at 400°F	16 barg at 204°C
2"	435.12	30.00	348.10	24.00	174 psig at 377°F	12 barg at 192°C
2-1/2"	290.08	20.00	232.06	16.00	87 psig at 329°F	6 barg at 164°C
3"	217.56	15.00	174.05	12.00	87 psig at 329°F	6 barg at 164°C
Size	MAWP at 200°F(psig)	MAWP at 93°C(barg)	MAWP at 200°F(psig)	MAWP at 93°C(barg)	In all cases the Group 3 Pressure-Temperature Ratings are limited by ASME B16.5 Table II-2-2.2 Pressure-Temperature Ratings (Note 6)	
1/2"	620.00	42.75	620.00	42.75		
3/4"	620.00	42.75	620.00	42.75		
1"	620.00	42.75	580.16	40.00		
1-1/4"	620.00	42.75	522.14	36.00		
1-1/2"	580.16	40.00	464.13	32.00		
2"	435.12	30.00	348.10	24.00		
2-1/2"	290.08	20.00	232.06	16.00		
3"	217.56	15.00	174.05	12.00		
Size	MAWP at 300°F(psig)	MAWP at 149°C(barg)	MAWP at 300°F(psig)	MAWP at 149°C(barg)		
1/2"	560.00	38.61	560.00	38.61		
3/4"	560.00	38.61	560.00	38.61		
1"	560.00	38.61	560.00	38.61		
1-1/4"	560.00	38.61	522.14	36.00		
1-1/2"	560.00	38.61	464.13	32.00		
2"	435.12	30.00	348.10	24.00		
2-1/2"	290.08	20.00	232.06	16.00		
3"	217.56	15.00	174.05	12.00		
Size	MAWP at 400°F(psig)	MAWP at 204°C(barg)	MAWP at 400°F(psig)	MAWP at 204°C(barg)		
1/2"	515.00	35.51	515.00	35.51		
3/4"	515.00	35.51	515.00	35.51		
1"	515.00	35.51	515.00	35.51		
1-1/4"	515.00	35.51	515.00	35.51		
1-1/2"	515.00	35.51	464.13	32.00		
2"	435.12	30.00	348.10	24.00		
2-1/2"	290.08	20.00	232.06	16.00		
3"	217.56	15.00	174.05	12.00		



**SCOPE OF CRN REGISTRATION**

PRESSURE - TEMPERATURE RATINGS						
Process Connections		ASME BPE Ferrule, ASME BPE Ferrule 45°, ASME BPE Ferrule 90°				
Service Type	Group 1		Group 2		Group 3	
Size	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at Steam Saturation Temperature (Note 2)	
1/4"	200.00	13.79	200.00	13.79	232 psig at 400°F	16 barg at 204°C
3/8"	200.00	13.79	200.00	13.79	232 psig at 400°F	16 barg at 204°C
1/2"	200.00	13.79	200.00	13.79	232 psig at 400°F	16 barg at 204°C
3/4"	200.00	13.79	200.00	13.79	232 psig at 400°F	16 barg at 204°C
1"	200.00	13.79	200.00	13.79	232 psig at 400°F	16 barg at 204°C
1-1/2"	200.00	13.79	200.00	13.79	232 psig at 400°F	16 barg at 204°C
2"	200.00	13.79	200.00	13.79	174 psig at 377°F	12 barg at 192°C
2-1/2"	200.00	13.79	200.00	13.79	87 psig at 329°F	6 barg at 164°C
3"	200.00	13.79	174.05	12.00	87 psig at 329°F	6 barg at 164°C
Size	MAWP at 400°F (psig)	MAWP at 204°C (barg)	MAWP at 400°F (psig)	MAWP at 204°C (barg)	In all cases the Group 3 Pressure-Temperature Ratings are limited by ASME BPE Table DT-2-1 Pressure-Temperature Ratings (Note 7)	
1/4"	170.00	11.73	170.00	11.73		
3/8"	170.00	11.73	170.00	11.73		
1/2"	170.00	11.73	170.00	11.73		
3/4"	170.00	11.73	170.00	11.73		
1"	170.00	11.73	170.00	11.73		
1-1/2"	170.00	11.73	170.00	11.73		
2"	170.00	11.73	170.00	11.73		
2-1/2"	170.00	11.73	170.00	11.73		
3"	170.00	11.73	170.00	11.73		

**Note 1:** MAWP = Maximum Allowable Working Pressure, MAWT = Maximum Allowable Working Temperature, MDMT = Minimum Design Metal Temperature.

**Note 2:** Higher temperatures are possible under super-heated steam conditions. In all cases the Maximum Allowable Working Temperature (MAWT) is limited to 400°F / 204°C.

**Note 3:** The Maximum Allowable Working Pressure (MAWP) is the maximum allowed under this CRN. Aflex may limit certain hose applications to lower pressures than specified above. Please consult Aflex literature.

**Note 4:** For low temperature operation the products shall conform to the rules of the applicable codes under which they are used.

**SCOPE OF CRN REGISTRATION**

**Note 5:** The ASME BPE Ferrule connection shall be used with a clamp, however the assembly clamp is not part of this CRN. Pressure-Temperature ratings may be limited by the clamp type used in the joint assembly. The clamp used to complete the joint shall have its own CRN and shall have pressure-temperature ratings the same or higher than the product ratings.

**Note 6:** Part of ASME B16.5 Table II-2-2.1 and II-2-2.2 shown below:

**Table II-2-2.1 Pressure-Temperature Ratings for Group 2.1 Materials**

Nominal Designation		Forgings		Castings		Plates	
18Cr-8Ni		A182 Gr. F304 (1)		A351 Gr. CF3 (2)		A240 Gr. 304 (1)	
18Cr-8Ni		A182 Gr. F304H		A351 Gr. CF8 (1)		A240 Gr. 304H	
Working Pressures by Classes, psig							
		Class					
Temp., °F	150	300	400	600	900	1500	2500
-20 to 100	275	720	960	1,440	2,160	3,600	6,000
200	230	600	800	1,200	1,800	3,000	5,000
300	205	540	715	1,075	1,615	2,690	4,480
400	190	495	660	995	1,490	2,485	4,140

**Table II-2-2.2 Pressure-Temperature Ratings for Group 2.2 Materials**

Nominal Designation		Forgings		Castings		Plates	
16Cr-12Ni-2Mo		A182 Gr. F316 (1)		A351 Gr. CF3M (2)		A240 Gr. 316 (1)	
16Cr-12Ni-2Mo		A182 Gr. F316H		A351 Gr. CF8M (1)		A240 Gr. 316H	
18Cr-13Ni-3Mo		A182 Gr. F317 (1)		...		A240 Gr. 317 (1)	
19Cr-10Ni-3Mo		...		A351 Gr. CG8M (3)		...	
Working Pressures by Classes, psig							
		Class					
Temp., °F	150	300	400	600	900	1500	2500
-20 to 100	275	720	960	1,440	2,160	3,600	6,000
200	235	620	825	1,240	1,860	3,095	5,160
300	215	560	745	1,120	1,680	2,795	4,660
400	195	515	685	1,025	1,540	2,570	4,280

**Note 7:** ASME BPE Table DT-2-1 shown below:

**Table DT-2-1**  
**Metallic Fittings: Rated Internal Working Pressure**

Temperature		<3 in.		3 in.		4 in.		6 in.	
°F	°C	psig	kPa	psig	kPa	psig	kPa	psig	kPa
100	38	200	1 379	200	1 379	200	1 379	150	1 034
200	93	200	1 379	200	1 379	200	1 379	150	1 034
300	149	188	1 293	188	1 293	188	1 293	141	970
400	204	170	1 173	170	1 173	170	1 173	128	880

GENERAL NOTES:

- (a) These pressure ratings apply to metallic fittings, including butt welded or hygienic clamped connections.
- (b) For installation practices of hygienic clamp connections, refer to [Figure DT-9.4-1](#).
- (c) Manufacturers may publish higher pressure ratings; see [DT-2](#).

**Note 8:** See attached Worldwide Locations Appendix for the manufacturing locations applicable to this CRN.



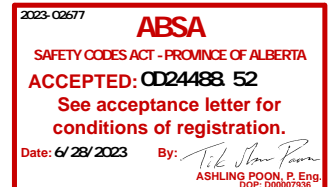
## **WORLDWIDE LOCATIONS APPENDIX**

### **AFLEX HOSE MANUFACTURING LOCATIONS & CERTIFYING AUTHORITIES**

THIS IS PART OF CRN  
0D24488.5  
Technical Standards and Safety Authority  
Boilers and Pressure Vessels Safety  
Program

(rev. November 30, 2022)

**Aflex Hose Ltd**  
Bradley Business Park  
Dyson Wood Way  
Bradley  
Huddersfield  
HD2 1GZ  
United Kingdom  
**ISO 9001 Certified by bsi**



This stamp and signature have been affixed electronically to this registered design as required by Section 20(1) of the Pressure Equipment Safety Regulation, in accordance with the Electronic Transactions Act.

In addition, in accordance with CSA B51 paragraph 4.2.5 Aflex Hose is taking responsibility for the product covered under this CRN that is manufactured at:

**Watson-Marlow, Inc.**  
37 Upton Technology Park  
Wilmington, MA, 01887  
USA  
**ISO 9001 Certified by TUV**

**Watson-Marlow, Inc.**  
20472 Crescent Bay  
Suite #104  
Lake Forest, CA, 92630  
USA  
**ISO 9001 Certified by TUV**

**Watson-Marlow, Inc.**  
32 Appletree Lane  
Pipersville, PA, 18947  
USA  
**ISO 9001 Certified by TUV**