

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



#### STATUTORY DECLARATION **Registration of Fittings** David M. Rakos, Director of Quality and Engineering (Name and Position, e.g. President, Plant Manager, Chief Engineer) of Acme Cryogenics, Inc. (Name of Manufacturer) Located at 2801 Mitchell Avenue, Allentown, PA 18103 (610) 791-7909 (610) 791-2837 (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 (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 ASME B31.3 & CGA V-6 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 CSA B51 which has been verified by the following authority, TUV Rheinland The items covered by this declaration, for which I seek registration, are category H type fittings. In support of this application, the following information and/or test data are attached as follows: Drawing CRN-D-08051, Rev. B, Scope of CRN Registration, Calculations (drawings, calculations, test reports, etc.) Declared before me at Commonwealth of Pennsylvania - Notary Seal EILEEN R PETRASOVITS - Notary Public Lehigh County My Commission Expires Jul 23, 2022 Commission Number 1191577 (Signature) (Signature of Declarer) FOR OFFICE USE ONLY Technical Boilers and To the best of my knowledge and belief, the application meets the requirements of the Standards Pressure Vessels and Safety Safety Program Technical Standards and Safety Act, Boilers and Pressure Vessels Regulation, and Authority CSA Standard B51 and is accepted for registration in Category REGISTERED CRN: This Document has been C.R.N.: 0H6700.5R3 digitally signed and approved. The stamp size has been Registered by: Signed: W17 optimized for 11 x 17 documents. Date: April 6, 2023. Dated: Renewal - Scope of CRN Registration Dwg. No. CRN-D-08051 Sheet 1 to 4 Rev. C If these registered fittings are connected to a hose assembly, such hose assembly must be qualified by proof testing and registered under different CRN number for NOTE: This registration expires on: Apr. 06, 2033 installation/application in Ontario

## SCOPE OF CRN REGISTRATION

No.	Part	Product Description	Size	Material (note 2)	Design P (psi)	MDMT	Design Temp (°F)	Calculation
1	ASK-40-0072	Hex Brass Coupling	1	B16 C36000 H02	600	-320	150	E11040.01
2	ASK-40-0073	Hex Brass Coupling	1½	B16 C36000 H02	600	-320	150	E11040.02
3	ASK-40-0074	Hex Brass Coupling	2	B16 C36000 H02	600	-320	150	E11040.03
3.1	ASK-40-0174	Hex Brass Coupling with 4 Purge Ports	1	B16 C36000 H02	600	-320	150	E11040.03A
3.1.1	ASK-40-0174S	COUPLING-HEX SS,1"CO2	1	SA-479 304/304L	650	-320	150	E11040.03A
3.2	ASK-40-0171	Hex Brass Coupling with 4 Purge Ports	2	B16 C36000 H02	600	-320	150	E11040.03B
3.2.1	ASK-40-0171S	COUPLING-HEX SS 2"CO2	2	SA-479 304/304L	650	-320	150	E11040.03B
4	590-021-15	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.04
4.1	590-021-150RF	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.04
5	590-037-15	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.05
6	590-038-15	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.06
7	590-041-15	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.07
8	590-022-25	Fixed End Cast	2½	B62 C83600	600	-320	150	E11040.08
9	580-021-15	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.09
9.1	580-021-15ORF	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.09
9.2	580-021-15-STUB	F.E ARGON W/COPPER STUBS	1½	B62 C83600	600	-320	150	E11040.09
10	580-034-15	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.10
11	580-035-15	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.11
11.1	580-035-15ORF	F.EARG 1.5CAST,1.5 FNPT ORIF	1½	B62 C83600	600	-320	150	E11040.11
12	580-076-15	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.12
13	580-022-25	Fixed End Cast	2½	B62 C83600	600	-320	150	E11040.13
14	540-020-15	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.14
14.1	540-020-15ORF	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.14
15	540-036-15	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.15
15.1	540-036-15ORF	F.EOXY 1.5 CAST,1.5 FNPT ORIF	1½	B62 C83600	600	-320	150	E11040.15
16	540-038-15	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.16
17	540-076-15	Fixed End Cast	1½	B62 C83600	600	-320	150	E11040.17
18	540-021-20	Fixed End Cast	2	B62 C83600	600	-320	150	E11040.18
19	540-028-20	Fixed End Cast	2	B62 C83600	600	-320	150	E11040.19
20	590-014-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.20
20.1	590-014-150RF	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.20
21	590-023-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.21
22.1	590-039-15 590-039-15ORF	Fixed End Machined	1½ 1½	B21 C46400 H02 B21 C46400 H02	600 600	-320 -320	150 150	E11040.22
22.1	600-001-15	Fixed End Machined F.EARGOMIX 1.5 MACH 1.5FNPT	1½	B21 C46400 H02	600	-320	150	E11040.22 E11040.22
23	590-058-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.22 E11040.23
24	590-060-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.23
25	590-061-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.24
26	590-062-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.25 E11040.26
27	590-063-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.28 E11040.27
28	590-064-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.27
29	590-065-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.29
30	590-067-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.23
31	590-068-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.30
32	590-069-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.31
33	590-070-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.33
55	330 070 13				0.50	520	130	L11040.00

No.	Part	Product Description	Size	Material (note 2)	Design P (psi)	MDMT	Design Temp (°F)	Calculation
34	590-071-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.34
34.1	590-054-15	TAILPIECE-NIT 1.5" 304 SST	1½	SA-479 304/304L	650	-320	150	E11040.34
35	590-072-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.35
36	590-073-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.36
37	590-074-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.37
38	590-079-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.38
38.1	590-090-15	F.ENIT 1.5,2 ODT BWE,316L	1½	SA-479 316/316L	650	-320	150	E11040.38
39	590-090-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.39
40	590-094-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.40
41	ASK-40-0014	Fixed End Machined	2½	SB-505 C85700	600	-320	150	E11040.41
42	590-024-25	Fixed End Machined	2½	SB-505 C85700	600	-320	150	E11040.42
43	590-029-25	Fixed End Machined	2½	SB-505 C85700	600	-320	150	E11040.43
44	590-043-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.44
45	590-044-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.45
46	590-051-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.46
47	590-053-25	Fixed End Machined	2½	SB-505 C85700	600	-320	150	E11040.47
48	590-057-25	Fixed End Machined	2½	SB-505 C85700	600	-320	150	E11040.48
48.1	590-111-25	F.ENIT 2.5"TUB,BR GL 314134B	2½	SB-505 C85700	600	-320	150	E11040.48
48.2	590-112-25	F.ENIT 2.5,GSKTLS,PIPESKT BR	2½	SB-505 C85700	600	-320	150	E11040.48
49	590-075-25	Fixed End Machined	2½	SA-479 316/316L	650	-320	150	E11040.49
50	590-076-25	Fixed End Machined	2½	B21 C46400 H02	600	-320	150	E11040.50
51	590-077-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.51
52	590-078-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.52
52.1	590-099-25	F.ENIT 2.5,3"X2.5PIPESS	2½	SA-479 304/304L	650	-320	150	E11040.52
53	590-083-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.53
54	590-084-25	Fixed End Machined	2½	SA-479 316/316L	650	-320	150	E11040.54
55	590-085-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.55
56	590-086-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.56
57	580-014-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.57
58	580-015-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.58
59	580-016-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.59
59.1	580-016-15ORF	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.59
60	580-017-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.60
61	580-023-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.61
62	580-033-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.62
63	580-060-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.63
64	580-061-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.64
65	580-062-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.65
66	580-063-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.66
67	580-064-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.67
68	580-065-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.68
69	580-067-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.69
70	580-068-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.70
71	580-070-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.71
72	580-071-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.72
72.1	580-054-15	TAILPIECE-ARG 1.5"	1½	SA-479 304/304L	650	-320	150	E11040.72
73	580-072-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.73
74	580-073-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.74
75	580-074-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.75

THIS IS PART OF CRN 0H6700.5R3

Technical Standards and Safety Authority ORIGINAL **NOTES:** 

DESIGN CODE: ASME B31.3-2020 Program

REFERENCE MATERIAL SPECIFICATIONS, PAGE IX OF CALCULATION E11040 REV 1

В	REDRAWN IN SOLIDWORKS	3/17/2022	AJH	JDE	10369
С	RMV ASSY TABLES ON SHTS 5-7	4/4/2023	AJH	JDE	10480
REV	DESCRIPTION	DATE	REV BY	APPD BY	ECN NO.

INTERPRET PER ASME Y14.5-2009

. THE FOLLOWING TOLERANCES APPLY: .XX: ±.01" .XXX: ±.005" FRACTIONS: ± 1/32" ANGLES" ±0.5\*

2. ALL DIMENSIONS ARE INCHES.

3. REMOVE ALL BURRS AND SHARP EDGES .015 MAX 4. MACHINED SURFACE TO BE 125 MICR-INCHES OR BETTER. 5. DO NOT SCALE DRAWING.

		WJR		12/21/2011
DRA	AWN BY	PGZ	DATE	04/05/2012
CH	ECKED BY	BL	DATE	3/4/2022
API	PROVED BY	JDE	DATE	03/17/2022

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SCOPE OF REGISTRATION - CGA STANDARD CRYOGENIC LIQUID TRANSFER CONNECTIONS

CRYOGENICS Quint OCYI

CRN-D-08051 DWG NO.

B SHEET: SHEET 1 OF 4 REV. C

В

В

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### SCOPE OF CRN REGISTRATION

No.	Part	Product Description	Size	Material (note 2)	Design P (psi)	MDMT	Design Temp (°F)	Calculation
76	580-078-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.76
77	580-079-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.77
78	580-090-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.78
79	ASK-40-0015	Fixed End Machined	21/2	SB-505 C85700	600	-320	150	E11040.79
80	580-024-25	Fixed End Machined	21/2	SB-505 C85700	600	-320	150	E11040.80
81	580-036-25	Fixed End Machined	21/2	SB-505 C85700	600	-320	150	E11040.81
82	580-052-25	Fixed End Machined	2½	B21 C46400 H02	600	-320	150	E11040.82
83	580-057-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.83
84	580-069-25	Fixed End Machined	2½	SB-505 C85700	600	-320	150	E11040.84
85	580-075-25	Fixed End Machined	2½	SB-505 C85700	600	-320	150	E11040.85
85.1	580-111-25	F.EARG 2.5 TUB BR GL 314133B	2½	SB-505 C85700	600	-320	150	E11040.85
85.2	580-112-25	F.EARG 2.5 GSKTLS PIPESKT BR	2½	SB-505 C85700	600	-320	150	E11040.85
86	580-080-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.86
87	580-081-25	Fixed End Machined	2½	SA-479 316/316L	650	-320	150	E11040.87
88	580-082-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.88
89	580-085-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.89
89.1	580-099-25	Fixed End Machined	2½	SA-479 304/304L	650	-320	150	E11040.89A
90	540-023-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.90
90.1	540-023-15ORF	F.EOXY 1.5MACH W/ORF PLT THD	1½	B21 C46400 H02	600	-320	150	E11040.90
91	540-037-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.91
91.1	540-037-15ORF	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.91
92	540-041-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.92
92.1	540-041-15ORF	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.92
92.2	540-053-15	ADAPTOR MALE/MALE,OXY,1.5	1½	B21 C46400 H02	600	-320	150	E11040.92
93	540-060-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.93
94	540-061-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.94
95	540-062-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.95
96	540-063-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.96
97	540-064-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.97
98	540-065-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.98
99	540-067-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.99
100	540-068-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.100
101	540-070-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.101
102	540-071-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.102
103	540-072-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.103
104	540-073-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.104
105	540-074-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.105
106	540-078-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.106
107	540-079-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.107
108	540-090-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.108
108.1	540-054-15	TAILPIECE-OXY 1.5" 304 SST	1½	SA-479 304/304L	650	-320	150	E11040.108
109	540-094-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.109
110	540-022-20	Fixed End Machined	2	SB-505 C85700	600	-320	150	E11040.110
111	540-039-20	Fixed End Machined	2	SB-505 C85700	600	-320	150	E11040.111
111.1	540-040-20	F.EOXY 2,MACH,2 MNPT	2	SB-505 C85700	600	-320	150	E11040.111
112	540-075-20	Fixed End Machined	2	SA-479 304/304L	650	-320	150	E11040.112
113	540-024-30	Fixed End Machined	3	SB-505 C85700	600	-320	150	E11040.113
114	540-040-30	Fixed End Machined	3	B21 C46400 H02	600	-320	150	E11040.114
115	540-058-30	Fixed End Machined	3	B21 C46400 H02	600	-320	150	E11040.115
116	540-069-30	Fixed End Machined	3	B21 C46400 H02	600	-320	150	E11040.116
117	540-080-30	Fixed End Machined	3	B21 C46400 H02	600	-320	150	E11040.117

No.	Part	Product Description	Size	Material (note 2)	Design P (psi)	MDMT	Design Temp (°F)	Calculation
118	540-082-30	Fixed End Machined	3	SA-479 304/304L	650	-320	150	E11040.118
118.1	540-099-30	Fixed End Machined	3	SA-479 304/304L	650	-320	150	E11040.118A
119	540-089-30	Fixed End Machined	3 B21 C46400 H02 600 -320 150		150	E11040.119		
120	540-091-30	Fixed End Machined	3	B21 C46400 H02	600	-320	150	E11040.120
120.1	540-111-30	F.EOXY 3,TUB,BR GL 314135B	3	B21 C46400 H02	600	-320	150	E11040.120
120.2	540-112-30	F.EOXY 3, GSKLS PIPESKT BRS	3	B21 C46400 H02	600	-320	150	E11040.120
120.3	540-128-30	F.EOXY 3GASKETLESS SHORT	3	B21 C46400 H02	600	-320	150	E11040.120
120.4	540-128-30SP	F.EOXY 3 GSKLS SHORT NO FLATS	3	B21 C46400 H02	600	-320	150	E11040.120
121	540-092-30	Fixed End Machined	3	B21 C46400 H02	600	-320	150	E11040.121
122	ASK-40-0434	Fixed End Brazed Block	1½	B21 C46400 H02	600	-320	150	E11040.122
123	ASK-40-0454	Fixed End Brazed Block	1½	B21 C46400 H02	600	-320	150	E11040.123
124	ASK-40-0416	Fixed End Brazed Block	1%	B21 C46400 H02	600	-320	150	E11040.124
129	ASK-40-0443	Fixed End Rail Car	2½	SA-479 304/304L	275/600	-320	150	E11040.129
130	ASK-40-0444	Fixed End Rail Car	2½	SA-479 304/304L	275/600	-320	150	E11040.130
131	ASK-40-0456	Fixed End Rail Car	2	SA-479 304/304L	275/600	-320	150	E11040.131
132	ASK-40-0445	Fixed End Rail Car	3	SA-479 304/304L	275/600	-320	150	E11040.132
133	ASK-40-0086	Head Plug	1½	B21 C46400 H02	600	-320	150	E11040.133
134	ASK-40-0089	Head Plug	2	B21 C46400 H02	600	-320	150	E11040.134
135	ASK-40-0087	Head Plug	2½	B21 C46400 H02	600	-320	150	E11040.135
135.1	ASK-40-0199	HEADPLUG-2.5 GASKETLESS BRS	2½	B21 C46400 H02	600	-320	150	E11040.135
136	ASK-40-0088	Head Plug	3	B21 C46400 H02	600	-320	150	E11040.136
137	ASK-40-0086S	Head Plug	1½	SA-479 316/316L	650	-320	150	E11040.137
138	ASK-40-0003	Head Piece Threaded	1½ MNPT	B21 C46400 H02	600	-320	150	E11040.138
138.1	ASK-40-0003-6"L	Head Piece Threaded	1½ MNPT	B21 C46400 H02	600	-320	150	E11040.138
139	ASK-40-0130	Head Piece Threaded	1½ MNPT	B21 C46400 H02	600	-320	150	E11040.139
140	ASK-40-0082	Head Piece Threaded	1½ MNPT	B21 C46400 H02	600	-320	150	E11040.140
141	ASK-40-0080	Head Piece Threaded	1½ MNPT	B21 C46400 H02	600	-320	150	E11040.141
142	ASK-40-0084	Head Piece Threaded	1½ MNPT	SA-479 316/316L	650	-320	150	E11040.142
143	ASK-40-0118	Head Piece Threaded	1½ MNPT	SA-479 304/304L	650	-320	150	E11040.143
144	ASK-40-0020	Head Piece Threaded	2 MNPT	B21 C46400 H02	600	-320	150	E11040.144
144.1	ASK-40-0020BWE	HEADPC-2"W/SCH10 BWE 304 S/S	2"	B21 C46400 H02	600	-320	150	E11040.144
145	ASK-40-0050	Head Piece Threaded	2 MNPT	SB-505 C857	600	-320	150	E11040.145
146	ASK-40-0051	Head Piece Threaded	2 MNPT	B21 C46400 H02	600	-320	150	E11040.146
147	ASK-40-0127	Head Piece Threaded	2 MNPT	SA-479 304/304L	650	-320	150	E11040.147
148	ASK-40-0125	Head Piece Threaded	2 MNPT	SA-479 304/304L	650	-320	150	E11040.148
149	ASK-40-0126	Head Piece Threaded	2 MNPT	SA-479 304/304L	650	-320	150	E11040.149
150	ASK-40-0004	Head Piece Threaded	2½ MNPT	B21 C46400 H02	600	-320	150	E11040.150
151	ASK-40-0097	Head Piece Threaded	2½ MNPT	B21 C46400 H02	600	-320	150	E11040.151
151.1	ASK-40-0097EX	Head Piece Threaded	2½ MNPT	B21 C46400 H02	600	-320	150	E11040.151
152	ASK-40-0129	Head Piece Threaded	2½ MNPT	SA-479 304/304L	650	-320	150	E11040.152
152.1	ASK-40-0129-316	HEADPC-2.5 X 2.5 MNPT 316	2½ MNPT	SA-479 304/304L	650	-320	150	E11040.152
152.2	ASK-40-0129-EXT	HEADPC-2.5X2.5MNPT 304 SS 7"LG	2½ MNPT	SA-479 304/304L	650	-320	150	E11040.152
152.3	ASK-40-0178	HEADPC-2.5 AR/NI SS GSKL314124	2½ MNPT	SA-479 304/304L	650	-320	150	E11040.152
153	ASK-40-0131	Head Piece Threaded	2½ MNPT	SA-479 304/304L	650	-320	150	E11040.153
153.1	ASK-40-0131BWE	HEADPC-3 X 2.5 SCH 10 BWE	3	SA-479 304/304L	650	-320	150	E11040.153
154	ASK-40-0006	Head Piece Threaded	3 MNPT	SB-505 C857	600	-320	150	E11040.154
155	ASK-40-0128	Head Piece Threaded	3 MNPT	SA-479 304/304L	650	-320	150	E11040.155
155.1	ASK-40-0128-316	HEADPC-3 X 3 MNPT 316	3 MNPT	SA-479 316/316L	650	-320	150	E11040.155
155.2	ASK-40-0179	HEADPC-3 OXYSS GSKTLS 314123	3 MNPT	SA-479 304/304L	650	-320	150	E11040.155
	ASK-40-0049	Head Piece BE	1½ TBS	B21 C46400 H02	600	-320	150	E11040.156

### THIS IS PART OF CRN 0H6700.5R3

Technical Standards and Safety Authority Boilers and Pressure Vessels Safety Program

# **ORIGINAL**

UNLESS OTHERWISE SPECIFIED	DESIGN BY		DATE
INTERPRET PER ASME Y14.5-2009		WJR	12/21/2011
<ol> <li>THE FOLLOWING TOLERANCES APPLY: .XX: ±.01" .XXX: ±.005" FRACTIONS: ± 1/32" ANGLES" ±0.5°</li> </ol>	DRAWN BY	PGZ	DATE 04/05/2012
2. ALL DIMENSIONS ARE INCHES.	CLIECKED DV		DATE
3. REMOVE ALL BURRS AND SHARP EDGES .015 MAX	CHECKED BY	BL	DATE 3/4/2022
<ol> <li>MACHINED SURFACE TO BE 125 MICR-INCHES OR BETTER.</li> </ol>	APPROVED BY	IDF	DATE 03/17/2022
5. DO NOT SCALE DRAWING.		302	00/1//2022

THIRD ANGLE PROJECTION

SCOPE OF REGISTRATION - CGA STANDARD CRYOGENIC LIQUID TRANSFER CONNECTIONS

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DWG NO. CRN-D-08051

B SHEET: SHEET 2 OF 4 REV. C

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## SCOPE OF CRN REGISTRATION

No.	Part	Product Description	Size	Material (note 2)	Design P (psi)	MDMT	Design Temp (°F)	Calculation
157	ASK-40-0052	Head Piece BE	1½ TS	B21 C46400 H02	600	-320	150	E11040.157
157.1	ASK-40-0052DP	Head Piece BE	1½ TS	B21 C46400 H02	600	-320	150	E11040.157
158	ASK-40-0116	Head Piece BWE	1½ PBW	SA-479 316/316L	650	-320	150	E11040.158
158.1	ASK-40-0166	HEADPC-1.5" X 1" FNPT BRS	1½ PBW	B21 C46400 H02	600	-320	150	E11040.158
159	ASK-40-0135	Head Piece BWE	1½ TBW	SA-479 316/316L	650	-320	150	E11040.159
160	ASK-40-0133	Head Piece BE	1½ PS	SA-479 304/304L	650	-320	150	E11040.160
161	ASK-40-0119	Head Piece BWE	1½ PBW	SA-479 304/304L	650	-320	150	E11040.161
161.1	ASK-40-0418	HEADPC-1.5 BRAZED BLOCK	1½ PBW	SA-479 304/304L	650	-320	150	E11040.161
162	ASK-40-0053	Head Piece BE	2 TS	SB-505 C85700	600	-320	150	E11040.162
163	ASK-40-0054	Head Piece BE	2 TS	B21 C46400 H02	600	-320	150	E11040.163
164	ASK-40-0033	Head Piece BE	2 TS	B21 C46400 H02	600	-320	150	E11040.164
165	ASK-40-0034	Head Piece BE	2½ TS	B21 C46400 H02	600	-320	150	E11040.165
166	ASK-40-0120	Head Piece BWE	2½ PBW	SA-479 304/304L	650	-320	150	E11040.166
167	ASK-40-0032	Head Piece BE	3 TS	SB-505 C85700	600	-320	150	E11040.167
168	ASK-40-0121	Head Piece BWE	3 TBW	SA-479 304/304L	650	-320	150	E11040.168
168.1	ASK-40-0121-316	HEADPC-3 X 3 SCH10BWE 316 SS	3 TBW	SA-479 304/304L	650	-320	150	E11040.168
169	ASK-40-0148	Flange SBT w/Tongue	1	SB-283 C37700	300	-320	100	E11040.169
170	ASK-40-0152	Flange SBT w/Tongue	1½	SB-283 C37700	300	-320	100	E11040.170
171	-	(del eted)	-	-	-	-	100	E11040.171
172	ASK-40-0150	Blind Flange TS w/Tongue	1	SB-283 C37700	350	-320	100	E11040.172
173	ASK-40-0149	Flange SBT w/Groove	1	SB-283 C37700	300	-320	100	E11040.173
174	ASK-40-0153	Flange SBT w/Groove	1½	SB-283 C37700	300	-320	100	E11040.174
175	-	(del eted)	-	-	-	-	200	E11040.175
176	ASK-40-0151	Blind Flange SBT w/Groove	1	SB-283 C37700	350	-320	100	E11040.176
177	320-019-10	Fixed End	1	SB-283 C37700,	600	-320	150	E11040.177
177.1	320-019-10HVY	Fixed End	1	SB-283 C37700,	600	-320	150	E11040.177
177.2	320-019-10S	F.ECO2 1,THRD,SS	1	SA-479 304/304L	650	-320	150	E11040.177
177.3	320-019-10S-PUR	F.ECO2 1" S/S W/1/4"PURGE	1	SA-479 304/304L	650	-320	150	E11040.177
177.4	326-003-10	F.EN2O 1"	1	SB-283 C37700,	600	-320	150	E11040.177
177.5	326-003-10-PUR	F.E-N20 1" W/ 1/2" PURGE	1	SB-283 C37700,	600	-320	150	E11040.177
177.6	326-003-10S	F.E. N2O 1" 304 S/S	1	SA-479 304/304L	650	-320	150	E11040.177
178	320-000-15	Fixed End	1½	SB-283 C37700,	600	-320	150	E11040.178
178.1	320-000-15S	F.ECO2 1.5,THRD,SS	1½	SA-479 304/304L	650	-320	150	E11040.178
178.2	320-000-15S-PUR	F.ECO2 1.5,S/S W/1/4"PURGE	1½	SA-479 304/304L	650	-320	150	E11040.178
178.3	326-008-15	F.EN2O 1.5"	1½	SB-283 C37700,	600	-320	150	E11040.178
178.4	326-008-15-PUR	F.E-N2O 1.5" W/ 1/2" PURGE	1½	SA-479 304/304L	650	-320	150	E11040.178
178.5	326-008-15\$	F.E.N2O 1.5" 304 S/S	1½	SA-479 304/304L	650	-320	150	E11040.178
179	320-031-20	Fixed End	2	B16 C36000 H02	600	-320	150	E11040.179
179.1	320-031-20S	F.ECO2 2,THRD,SS	2	SA-479 304/304L	650	-320	150	E11040.179
180	320-038-30	Fixed End	3	B21 C46400 H02	600	-320	150	E11040.180
180.1	320-038-30S	F.E. CO2 3" THRD 304 S/S	3	SA-479 304/304L	650	-320	150	E11040.180
181	320-086-10	Fixed End with Purge Port	1	B16 C36000 H02	600	-320	150	E11040.181
181.1	320-122-10	Fixed End with Purge Port	1	B16 C36000 H02	600	-320	150	E11040.181
181.2	320-129-10	F.ECO2 1" W/ 1/2"&1/4"PORTS	1	B16 C36000 H02	600	-320	150	E11040.181
181.3	326-018-10	F.EN2O 1" W/FNPT & PURGE	1	B16 C36000 H02	600	-320	150	E11040.181
182	320-087-15	Fixed End with Purge Port	1%	B16 C36000 H02	600	-320	150	E11040.182
182.05	320-123-15	Fixed End with Purge Port	1½	B16 C36000 H02	600	-320	150	E11040.182
182.1	320-121-20	Fixed End with 2 Purge Ports	2	B16 C36000 H02	600	-320	150	E11040.182A
182.2	320-120-20	Fixed End with 2 Purge Ports	2	B16 C36000 H02	600	-320	150	E11040.182B
182.3	320-087-15S	F.ECO2 1.5" W/PURGE PORT SS	1½	SA-479 304/304L	650	-320	150	E11040.182

No.	Part	Product Description	Size	Material (note 2)	Design P (psi)	MDMT	Design Temp (°F)	Calculation
182.4	320-130-15	F.ECO2 1.5" W/1/2"&1/4"PORTS	1½	SA-479 304/304L	650	-320	150	E11040.182
182.5	326-019-15	F.EN2O 1.5 FNPT W/PURGE	1½	B16 C36000 H02	600	-320	150	E11040.182
183	320-016-10	Head Piece	1	SB-283 C37700	600	-320	150	E11040.183
183.1	320-016-10S	HEADPC-1 CO2 THRD SS	1	SA-479 304/304L	650	-320	150	E11040.183
184	320-014-15	Head Piece	1½	SB-283 C37700	600	-320	150	E11040.184
184.1	320-014-15S	HEADPC-1.5 CO2 THRD SS	1½	SA-479 304/304L	650	-320	150	E11040.184
184.2	320-014-15SPE	HEADPC-1.5 CO2 PLAIN END 316S	1½	SA-479 304/304L	650	-320	150	E11040.184
184.3	320-151-15	HEADPC 1.5"CO2 X 1" MNPT	1½	B16 C36000 H02	600	-320	150	E11040.184
184.4	326-009-15	HEADPC-1.5 NITROUS OXIDE	1½	SB-283 C37700	600	-320	150	E11040.184
185	320-028-20	Head Piece	2	B16 C36000 H02	600	-320	150	E11040.185
185.1	320-108-20	Head Piece	2	B16 C36000 H02	600	-320	150	E11040.185
185.2	320-028-20S	HEADPC-2 CO2 THRD SS	2	SA-479 304/304L	650	-320	150	E11040.185
185.3	320-028-20SPE	HEADPC 2" CO2 PLAIN END 316S	2	SA-479 316/316L	650	-320	150	E11040.185
186	320-035-30	Head Piece	3	B16 C36000 H02	600	-320	150	E11040.186
186.1	320-109-30	Head Piece	3	B16 C36000 H02	600	-320	150	E11040.186
187	320-048-10	Male Adapter	1	B16 C36000 H02	600	-320	150	E11040.187
188	320-049-15	Male Adapter	1½	B16 C36000 H02	600	-320	150	E11040.188
189	320-050-20	Male Adapter	2	B16 C36000 H02	600	-320	150	E11040.189
190	320-051-30	Male Adapter	3	B16 C36000 H02	600	-320	150	E11040.190
191	320-079-20	Male Adapter	2	B16 C36000 H02	600	-320	150	E11040.191
192	320-080-15	Male Adapter	1½	B16 C36000 H02	600	-320	150	E11040.192
193	ASK-40-0124	Hex Brass Bushing with 3 Purge Ports	1	B16 C36000 H02	600	-320	150	E11040.193
194	ASK-40-0076	Hex Brass Bushing with 3 Purge Ports	1½	B16 C36000 H02	600	-320	150	E11040.194
195	ASK-40-0077	Hex Brass Bushing with 3 Purge Ports	2	B16 C36000 H02	600	-320	150	E11040.195
195.1	ASK-40-0077SPEC	BUSHING-CO2 NO PURGE 2F 1-1/2M	2F x 1½M	B16 C36000 H02	600	-320	150	E11040.195
196	ASK-40-0078	Hex Brass Bushing with 3 Purge Ports	2	B16 C36000 H02	600	-320	150	E11040.196
197	ORIFICE-PRX-*	Orifice Plate	1.625	B16 C36000 H02	600	-320	150	E11040.197
198	590-123-15	Fixed End Cast with Integral Flange	1½	B584 C86500	600	-320	150	E11040.198
198.1	590-123-15ORF	F.ENIT 1.5,INT FLG ORF THD	1½	B584 C86500	600	-320	150	E11040.198
199	580-123-15	Fixed End Cast with Integral Flange	1½	B584 C86500	600	-320	150	E11040.199
199.1	580-123-15ORF	F.EARG 1.5 INT FLG,ORF,THD	1½	B584 C86500	600	-320	150	E11040.199
200	540-123-15	Fixed End Cast with Integral Flange	1½	B584 C86500	600	-320	150	E11040.200
200.1	540-123-15ORF	F.EOXY 1.5 INT FLG,ORF THD	1½	B584 C86500	600	-320	150	E11040.200
201	590-119-25	Head Piece Adapter	2½	B21 C46400 H02	600	-320	150	E11040.201
202	580-132-25	Head Piece Adapter	2½	B21 C46400 H02	600	-320	150	E11040.202
203	540-119-30	Head Piece Adapter	3	B21 C46400 H02	600	-320	150	E11040.203
204	ASK-40-0148S	Flange SW w/Tongue	1	SA-479 304/304L	650	-425	150	E11040.204
205	ASK-40-0152S	Flange SW w/Tongue	1½	SA-479 304/304L	650	-320	150	E11040.205
206	ASK-40-0156S	Flange BW w/Tongue	2	SA-479 304/304L	650	-320	150	E11040.206
207	ASK-40-0149S	Flange SW w/Groove	1	SA-479 304/304L	1	-320	150	E11040.207
208	ASK-40-0153S	Flange SW w/Groove	1½	SA-479 304/304L	650	-425	150	E11040.208
209	540-000-15	NUT-OXY 1.5"	1½	SB-505 C86500	650	-320	150	E11040.209
209.1	540-000-15LH	NUT-OXY 1.5" LH	1½	SB-505 C86500	650	-320	150	E11040.209
209.2	540-055-15	NUT-OXY 1.5" 316L	1½	SA-479 304/304L	650	-320	150	E11040.209
210	540-005-30	NUT-OXY 3"	3	SB-505 C86500	650	-320	150	E11040.210
210.1	540-093-30	NUT-OXY 3"	3	SA-479 304/304L	650	-320	150	E11040.210
210.2	540-059-30	NUT-OXY 3" 316L	3	SA-479 316/316L	650	-320	150	E11040.210
211	540-010-20	NUT-OXY 2"	2	SB-505 C86500	650	-320	150	E11040.211
211.1	540-010-20\$	NUT-OXY 2" SS	2	SA-479 316/316L	650	-320	150	E11040.211
212	580-000-25	NUT-ARG 2.5"	2½	SB-505 C86500	650	-320	150	E11040.212

## **ORIGINAL**

THIS IS PART OF CRN 0H6700.5R3

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Technical Standards and Safety Authority Boilers and Pressure Vessels Safety Program

DATE 12/21/2011 DESIGN BY WJR INTERPRET PER ASME Y14.5-2009 THE FOLLOWING TOLERANCES APPLY: .XX: ±.01" .XXX: ±.005" FRACTIONS: ± 1/32" ANGLES" ±0.5° DATE 04/05/2012 DRAWN BY PGZ 2. ALL DIMENSIONS ARE INCHES. CHECKED BY BL DATE 3/4/2022 REMOVE ALL BURRS AND SHARP EDGES
 .015 MAX

APPROVED BY JDE

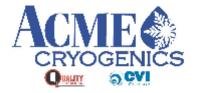
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Project No.: E210020

DATE 03/17/2022

SCOPE OF REGISTRATION - CGA STANDARD CRYOGENIC LIQUID TRANSFER CONNECTIONS



DWG NO. CRN-D-08051

B SHEET: SHEET 3 OF 4

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3 SCOPE OF CRN REGISTRATION Material (note 2) Design P (psi) MDMT Design Temp (°F) No. Part **Product Description** Size Calculation 212.1 580-059-25 2½ SA-479 316/316l -320 E11040.212 NUT-ARG 2.5" 316L 650 150 212.2 580-093-25 NUT-ARG 2.5" 304 SS 21/2 SA-479 304/304L 650 -320 150 E11040.212 -320 213 580-002-15 NUT-ARG 1.5" 1½ SB-505 C86200 650 150 E11040.213 213.1 580-055-15 NUT-ARG 1.5" 316L 1½ SA-479 316/316 650 -320 150 E11040.213 1½ SB-505 C86200 -320 E11040.214 214 590-000-15 NUT-NIT 1.5" 650 150 214.1 590-055-15 NUT-NIT 1.5" 316L 1½ SA-479 316/316 650 -320 150 E11040.214 215 590-002-25 NUT-NIT 2.5" 21/2 SB-505 C86200 650 -320 150 E11040.215 215.1 590-093-25 NUT-NIT 2.5" 304 2½ SA-479 304/304L 650 -320 150 E11040.215 В 215.2 -320 590-108-25 NUT-NIT 2.5" SST 2½ SA-479 316/316 650 150 E11040.215 215.3 2½ 590-059-25 NUT-NIT 2.5" 316 SS SA-479 316/316 650 -320 150 E11040.215 216 590-088-30 3 SB-148-C95500 650 -320 150 E11040.216 NUT-NIT 3" BRONZE 217 320-015-10 NUT-CO2 1" 1 B16 C36000 H02 650 -320 150 E11040.217 SA-479 304/304L 217.1 -320 320-060-10 NUT-CO2 1" SS 1 650 150 E11040.217 218 320-008-15 NUT-CO2 1.5" 1½ B16 C36000 H02 650 -320 150 E11040.218 218.1 1½ 650 -320 150 320-070-15 NUT-CO2 1.5" SS SA-479 304/304l E11040.218 219 320-027-20 NUT-CO2 2" 2 SB-505 C86200 650 -320 150 E11040.219 219.1 320-027-20S NUT-CO2 2" SS 2 SA-479 304/304 650 -320 150 E11040.219 220 320-034-30 NUT-CO2 3" 3 SB-505 C86200 650 -320 150 E11040.220 221 NUT-CO2 4" 4 SB-505 C86200 650 -320 150 E11040.221 320-041-40 222 326-000-10 **NUT-NITROUS OXIDE 1"** 1 B16 C36000 H02 650 -320 150 E11040.222 223 326-005-15 **NUT-NITROUS OXIDE 1.5"** 1½ B16 C36000 H02 650 -320 150 E11040.223 3 224 450-000-30 NUT-LNG 3" SB-505 C95200 650 -320 150 E11040.224 THIS IS PART OF CRN 224.1 450-000-30S 3 SA-479 304/304 650 -320 150 E11040.224 NUT-LNG 3" SST 0H6700.5R3 224.2 450-000-30S-316 NUT-LNG 3" 316 S/S 3 SA-479 316/316 650 -320 150 E11040.224 Technical Standards and Safety Authority 225 600-000-15 NUT-ARGOMIX 1.5' 1½ SB-505 C95500 650 -320 150 E11040.225 **Boilers and Pressure Vessels Safety** 226 600-000-25 NUT-ARGOMIX 2.5" 21/2 SB-505 C95500 650 -320 150 E11040.226 Program 227 450-003-30 F.E.-LNG 3" W/GASKET ASSY 3 B505 93200 450 -320 150 E11040.227 227.1 450-003-30C836 F.E.-LNG 3" C83600 3 B62 C83600 450 -320 150 E11040.227 227.2 450-003-30M F.E.-LNG 3" 3 B505 93200 450 -320 150 E11040.227 227.3 450-003-30S F.E.-LNG 3" 304S/S W/3"FNPT 3 SA-479 304/304L 650 -320 150 E11040.227 227.4 50-003-30BW316 F.E.-LNG 3" 316 S/S W/BWE 3 SA-479 316/316 650 -320 150 E11040.227 227.5 450-003-30SM F.E.-LNG 3" 304SST FNPT 3 SA-479 304/304 650 -320 150 E11040.227 227.6 SA-479 316/316l -320 450-003-SM316 F.E -LNG 3"316 S/S W/3"FNPT 3 650 150 E11040.227 227.7 450-003-30SMPS F.E LNG 3" 304S/S W/3"PIPE SKT 3 SA-479 304/304 650 -320 150 E11040.227 227.8 450-003-30S-PS F.E.LNG 3" 304S/S W/3"PIPE SKT 3 SA-479 304/304 650 -320 150 E11040.227 228 3 SB-505 C85700 -320 150 450-004-30 HEADPC-3 LNG W/RETAINER ASSY. 450 E11040.228 228.1 450-004-30 HEADPC-3" LNG 3 SB-505 C85700 450 -320 150 E11040.228 228.2 3 -320 450-010-30M HEADPC-3"LNG W/2"FNPT BRASS SB-505 C85700 450 150 E11040.228 Α 3 -320 150 229 450-004-30S HEADPC-3" LNG SS W/3"FNPT SA-479 304/304 650 E11040.229 229.1 450-004-30-316 HEADPC 3" LNG 316 S/S W/BWE 3 SA-479 316/316l 650 -320 150 E11040.229 -320 229.2 450-010-30M316 HEADPC-3" LNG 3"FNPT 316 SST 3 SA-479 316/316L 650 150 E11040.229 ORIGINAL UNLESS OTHERWISE SPECIFIED DATE 12/21/2011 **DESIGN BY** Title: WJR INTERPRET PER ASME Y14.5-2009 SCOPE OF REGISTRATION - CGA DRAWN BY DATE 04/05/2012 **PGZ** STANDARD CRYOGENIC LIQUID 2. ALL DIMENSIONS ARE INCHES. DATE 3/4/2022 3. REMOVE ALL BURRS AND SHARP EDGES CHECKED BY TRANSFER CONNECTIONS CRYOGENICS MACHINED SURFACE TO BE 125 MICR-INCHES OR BETTER. Owner SCYI APPROVED BY JDE DATE 03/17/2022 5. DO NOT SCALE DRAWING. THIS DRAWING AND THE INFORATION OR DATA CONTAINED HEREIN ASE CONSIDERED PROPRIETARY TO ACME CRYGGENICS, INC. AND IS NOT TO SE COPIED, REPRODUCED, DUPLICATED OR DISCLOSED TO OTHER IN WHOLE OR IN ARRY WITHOUT THE PRIOR WRITTEN CONSENT OF ACME CRYGGENICS, INC. THE DRAWING SHOULD BE RETURNED AS SOON AST HAS SERVED THE PURPOSES FOR WHICH IT IS FURNISHED AND WHILE IN THE POSSESSION OF THE RECURS! THIRD ANGLE PROJECTION CRN-D-08051 DWG NO. **Project No.:** E210020 B | SHEET: SHEET 4 OF 4 HOULD BE PROPERLY SAFEGUARDED AGAINST DISCLOSURE TO ANYONE EXCEPT EMPLOYEES WHO REQUIRE IT FOR WORK

OF A JOB. THIS RESTRICTION SHALL NOT APPLY TO INFORMATION OR DATA CONTAINED HEREIN WHICH IS AVAILABLE TO SCALE: 1:1 REV. 3 2



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



#### STATUTORY DECLARATION **Registration of Fittings** David M. Rakos, Director of Quality and Engineering (Name and Position, e.g. President, Plant Manager, Chief Engineer) of Acme Cryogenics, Inc. (Name of Manufacturer) Located at 2801 Mitchell Avenue, Allentown, PA 18103 (610) 791-7909 (610) 791-2837 (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 (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 ASME B31.3 & CGA V-6 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 CSA B51 which has been verified by the following authority. TUV Rheinland The items covered by this declaration, for which I seek registration, are category H type fittings. In support of this application, the following information and/or test data are attached as follows: Drawing CRN-D-08051, Rev. B, Scope of CRN Registration, Calculations (drawings, calculations, test reports, etc.) ogenics in the Communeasth Declared before me at Commonwealth of Pennsylvania - Notary Seal EILEEN R PETRASOVITS - Notary Public Commissioner for Oaths: Lehigh County My Commission Expires Jul 23, 2022 Commission Number 1191577 (Signature) (Signature of Declarer) FOR OFFICE USE ONLY 2023-02995 To the best of my knowledge and belief, the application meets the requirements of the **ARSA** Technical Standards and Safety Act, Boilers and Pressure Vessels Regulation, and SAFETY CODES ACT - PROVINCE OF ALBERTA CSA Standard B51 and is accepted for registration in Category ACCEPTED: 0H06700, 52 See acceptance letter for CRN: conditions of registration. Registered by: ASHLING POON, P. Eng 2023-06-06 This stamp and signature have been affixed electronically Dated: to this registered design as required by Section 20(1) of the Pressure Equipment Safety Regulation, in accordance 2033-04-06

NOTE: This registration expires on:

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



## **Statutory Declaration Registration of Fittings**

Building Act (B-1.1)
Regulation respecting pressure vessels (B-1.1, r. 6.1)
Boiler, pressure vessel, and pressure piping code (CSA B51)

This declaration must be filled out and sent to the Régie du bâtiment du Québec (RBQ) by pressure fitting manufacturers when they make an application registration for fittings.

For more information on the application registration for fittings, consult the www.rbq.gouv.qc.ca/fittings-pv.

### 1. Fittings to register

List the fittings included in this declaration and that you wish to register.

Nº Des	ription	Additional information (detail, calculations or approval sheets)
1	Drawing CRN-D-08051, Rev. B, C	
2	Scope of CRN Registration,	
3	CALCULATIONS	ACME ==
4		
5	COMPANY LOGO - SEE RIGHT	- CRYOGENICS -

## 2. Declaration of the person in charge

The person in charge is someone in a position of authority, such as a vice-president, a plant manager or a chief engineer.

I, the ur	ndersigned,	David	M. Rakos	Directo	r of Quality and Engineering				
		(Name of the person in charge)		(Title of the person in charge)					
from _	Acme Cry	ogenics, Inc.	, located at		enue, Allentown, PA 18103				
	(Compan				lant's address)				
hereby declare that the above-mentioned fittings and subject to the Regulation respecting pressure installations:									
					ation, material and purpose				
■ are not covered by the ANSI/ASME codes, but are in compliance with  ASME B31.3 & CGA V-6									
	(Name of code or standard)								
code or	standard and ar	e designed accord	ing to the best current e	ngineering practice, as p	roven by the enclosed approval report.				
2.2 Mar	nufacturing qua	lity control							
I further	declare that the	manufacture of the	se fittings is controlled I	by a quality control progra	am that complies with the requirements of the				
	g code:C	SA B51	and has been verified b		TUV Rheinland				
	(Nam	ne of code)	$\bigcap$		(Authorized agency)				
Signatu	re of the person	in charge:		Date (yyyy-mm-dd):	2672-47-13				

2.1 Design

## 3. Declaration of commissioner for oaths

I certify that this declaration has	s been administered before me, at <u>Acme</u>	(Location)		0002 - 07-13 (Date (yyyy-mm-dd)):
Signature of commissioner for o	aths: Celeer Retra	sovits	Date (yyyy-mm	n-dd): 2022-07-13
Stamp the seal:		V. 0		
	Cemmenwealth of Pennsylvania - Notary Seal EILEEN R PETRASOVITS - Notary Public Lehigh County My Commission Expires Jul 23, 2022 Cemmission Number 1191577			

# 4. Registration confirmation (for RBQ's use only)

accepted for registration in the class	quirements of the Act and with standard CSA B51, Part 1, section 4.2, and is		
This registration expires in ten (10) years after the date of registration indicated above, and it must be validated again after this period			
Canadian registration number (CRN):	Registration date (yyyy-mm-dd):		
	anistré au Qua		
	tines one one of the		
	Régie du bâtiment		
	Québec * *		
	14/06/2023		

ve par la K

#### **Documents to attach**

Any application registration for fittings must include these documents:

- Statutory Declaration Registration of Fittings (2 copies)
- Detailed calculations or burst test report (1 copy)
- Detailed technical drawings or catalogues (2 copies)
- Example of the manufacturer's marking (1 copy)
- Proof that a valid and approved quality control program has been implemented (1 copy)
- Form Application for design registration (1 copy)

#### Sending the form

This declaration is necessary to submit an application for design registration. Design registration applications must be sent by email only to <a href="mailto:enregistrementdesplans@rbq.gouv.qc.ca">enregistrementdesplans@rbq.gouv.qc.ca</a>.

Documents must be in PDF format and in separate files.



2202 2nd Avenue Regina, SK S4R 1K3 PH: (306)798-7111 Toll Free: (866)530-8599

Website: www.tsask.ca

Email: designsubmission@tsask.ca

## Statutory Declaration (Registration of Fittings)

	TSK-10
Declaration Information	
David M. Rakos	In this space, show facsimile of
Director of Quality and Engineering	manufacturer's logo or trademark as it will appear on the fitting.
(company title, e.g. vice president, plant manager, chief engineer) (must be in a position of authority in the manufacturing plant where the fitting is pr	ACME
Acme Cryogenics, Inc.	CRYOGENICS
(name of manufacturer)	CRIOGENICS
cated at: 2801 Mitchell Avenue, Allentow	n, PA 18103
	ity,Prov) (Postal Code)
solemnly declare that the fittings listed hereinunder, which are subsessel Act (check one)	ject to the <i>Saskatchewan Boiler and Pressure</i>
Comply with the requirements of	which specifies the dimensions,
(title of recognized North American Materials of construction, pressure / temperature ratings and i	dentification marking of the fittings, or
Are not covered by the provisions of a recognized North Ame to comply with ASME B31.3 & CGA V-6	rican standard and are therefore manufacturedas supported by the attached
data which identifies the dimensions, materials of construction	•
for such ratings, and the marking of the fittings for identificatio	n.
urther declare that the manufacturer of these fittings is controlled by	a quality control program which has been
rified by the following authority, <u>TUV Rheinland</u>	as being suitable for the manufacturer
these fittings to the stated standard. The fittings covered by this de	eclaration, for which I seek registration, are
Category H - CGA Cryogenic Liquid Transfer Fittin@	
support of this application, the following information, calculations a	nd / or test data are attached:
	Commonwealth of Pennsylvania - Notary Seal EILEEN R PETRASOVITS - Notary Public Lehigh County My Commission Expires Jul 23, 2022 Commission Number 1191577
Declaration	
ECLARED before me at <u>Acme Cypgenics</u> In the <u>Comm</u>	inwealth of Hennsylvania
is 1346 day of July Inc	2000
	The desired
(print name) KPOTRASOVITS	(Signature)
Doub Retaskants	(Signatura)
(Signature of Commissioner of Oaths)	
Office Hee Only	
. Office Use Only the best of my knowledge and belief, the application meets the requirement	anto of the Reiley and Bressure Vessel Act and COA
Clause 4.2, and is accepted for registration in Category	
	Technical Safety Authority
(Registration Number) (Date Regis	of Saskatchewan M DD YYYY)
(1 0. 1.10 0.111	Registration No0H6700.53
	Registered
	Date: May 25, 2023

April 6, 2033

Codes & Standards Compliance Office



June 16, 2023

TSSA 345 Carlingview Drive Toronto, ON M9W 6N9

#### Dear Tanya Francis,

#### Re: Reciprocal CRN Registration in Manitoba

As indicated by the Regulatory Reconciliation and Cooperation Table and the Reconciliation Agreement for the Canadian Registration Number (CRN) for Pressure Equipment, the design reviews conducted and accepted by the Canadian province or territory, or their delegated safety authority, will be mutually recognized in the Province of Manitoba. If a registration is conditionally based on compliance with the notes set by the original issuing Jurisdiction, such compliance shall be applied the same to this Province.

Your submission has been registered, as follows:

File Number: 74-R3234 CRN: 0H6700.54

Scope: RENEWAL - SCOPE OF CRN REGISTRATION DWG. NO. CRN-D-08051

SHEET 1 TO 4 REV. C

Manufacturer: ACME CRYOGENICS, INC.

Expiry Date: 6 April 2033

Along with this letter is the invoice for registration.

In addition, every Pressure Vessel, Boiler, and Heat Exchanger shall be stamped with the registration number and as required by CSA Code B51, a Manufacturer's Data Report (MDR) must be forwarded to this office immediately at the time a unit is shipped to Manitoba. Send your MDR to <a href="mailto:qasupport@gov.mb.ca">qasupport@gov.mb.ca</a>. In your subject line, indicate "Manufacturer's Data Report-CRN No." A fee shall be billed to the Manufacturer to process data reports in accordance with the Steam and Pressure Plants Regulation section 17.1.

Please contact <a href="mailto:qasupport@gov.mb.ca">qasupport@gov.mb.ca</a> for any questions or concerns.

#### **Inspection and Technical Services**

Labour and Immigration 508 – 401 York Avenue, Winnipeg, MB R3C 0P8 **T** (204) 945-3373 | **F** (204) 948-2089



Suite 600 - 2889 East 12th Avenue

Vancouver, BC V5M 4T5 Toll Free: 1-866-566-7233 www.technicalsafetybc.ca

ATTN: TSSA BPV NATIONAL REGISTRATION TECHNICAL STANDARDS & SAFETY AUTHORITY 345 CARLINGVIEW DRIVE TORONTO ON M9W 6N9 **Date:** 19-Sep-2023

TSBC Account #: 061440
TSBC Admin Number: 97747

Canadian Registration Number: 0H6700.51

#### Re: Application for Design Registration

The design, as detailed in your Design Portal application 0H6700.5R3 - ACME CRYOGENICS, INC. for a Pressure Fitting is registered with the following notes and considerations:

Registered To: ACME CRYOGENICS, INC.

**Project Name:** 0H6700.5R3 - ACME CRYOGENICS, INC.

Drawing #: RENEWAL - SCOPE OF CRN REGISTRATION DWG. NO. CRN-D-08051 SHEET 1 TO 4

REV. C

Drawing Revision: -

### **Conditions of Registration:**

(1)Fitting Registration Expiry Date: 06-Apr-2033 (2) The registration is valid until the indicated expiry date only if the Manufacturer maintains a valid quality management system approved by an acceptable third-party agency until that date. Should the approval of quality management system lapse before the expiry date indicated above, this registration shall become void.

#### Reviewer's Notes:

Any additional conditions and considerations from the initial province of registration shall apply to this BC registration.

Full details of this submission including the scope of registration, design conditions, fabrication details, and calculations pertaining to this design are located in the above Admin Number on the Design Portal. For all other enquiries, please contact eim@technicalsafetybc.ca.

The Engineering Information Management Team

Newfoundland and Labrador

Prince Edward Island

New Brunswick

Nova Scotia

Nunavut Yukon Northwest Territo	ries
Manufacturers Name; Acme Cryogenics, Inc.	
Manufacturers Address; 2801 Milcholl Avenue, Allentown, PA 18103	
Plant Locations: same as above	
Category of Fittings to be registered. Circle one Category A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unlons, pipe caps, o	Title of the Standard of Construction
B Flanges: all flanges C Valves: all flanges	The state of the s
D Expansion joints, flexible connections, and hose assemblies; all types	ASME B31.3, CGA V-6
E Strainers, filters, separators, and steam traps F Measuring devices, including pressure gauges, level gauges, sight glasses, level	
transmitters	
G Certified capacity-rated pressure relief devices acceptable as primary over pre- bollers, pressure vessels, plping and fusible plugs	ssure protection on
(H)Pressure retaining components that do not fall into one of the above categories	•
N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐ , (Meeting CNSC or Show Manufacturers Name, Trademark, or Logo as it will appear or	ASME requirements)  Type of Construction
A	Forged D Welded B Wrought D
	Cast 6 Other p
	Describe other:
CRYOGENICS	
List of supporting documentation and identification of the actual ite	
Drawing CRN-D-08051, Rev. B, Scope of CRN Registi	ration, Calculations
Scope: CRN renewal. CGA standard cryogenic connections. In	cludes Liquid Transfer Conn. (Nitrogen, Oxygen
and Argon), Standard Carbon Dioxide Transfer Connections ar	nd Liquid Natural Gas I NG Fittings
Note: If the registered fittings are connected to a hose assemble proof testing and registered under a different CRN. Scope of restrictions are connected to a hose assemble proof testing and registered under a different CRN.	ly, the hose assembly must be qualified by
(DGallant)	gistration CKIN-D-08051 Sheet 1 10 4 KeV.C
Declaration:   Cavid M. Rakos, Director of Quality and Englisheding (see note 3) employed by Acme Cryog	ienies Inc
and responsibility for the quality of the end product do solemnly declare the	genics, Inc. and being the person having full authority
my knowledge represents the product for which registration is sought. The	e dimensions, materials of construction, prosecure tomporature
ratings, and identification markings are in accordance with the herein nam	and standards i further declare that the manufacture of these
intings is regulated by a Quality Control Program which extends to each p	lant where fabrication occurs in whole or in part and has been
believing it to be true, and knowing that it is of the same force and effect a	rpose and I make this solemn declaration conscientiously is if made under oath.
	- I III - I I I I I I I I I I I I I I I
Signature of Declarer:	
Declared before me at Acne Cypgenics Inc	
This 13 4 day of July AB 2022	Use this space for the Official Seal
Commissioner of Oaths	Commonwealth of Pennsylvania - Notary Seal
Or Notary Public: (slgn) <u>Cleer K Petrassort</u>	EILEEN R PETRASOVITS - Notary Public Lehler County
(Affix Official seal to the right)	My Commission Expires Jul 23, 2022 Commission Number 1191577
This space for Regulatory / This registration must be revalidated after ten (10	Authority use.
CRN: 0H6700.5 Rev3	) years from the date of assentance.
OTTIV.	NOVA TOTA
FID#: 1556	10/10
Notes:	@ Date May 19/23 0
All Fittings shall be registered in the name of the Manufacturer.	C.R.N. OH 6700.58REV3
Each Category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.	Dwg. as described
The Declaration shall be made by the person having full authority and	
responsibility for the quality of the end product.	Signed
Quality Control programs shall be resubmitted for validation.	Sect 1.0 - Fittings Rev.2
11/2016	Part
CRN expires April 6th, 2033	REGUL

New Brunswick	Nova Scotla	Prince Edward Islan	d Ne	wfoundland and	d Labrador
Nunavut	Yukon	Northwest Territories	5		
Manufacturers Nan	CO' Arma Caracalas Inc		P3		
	[GSS: 2801 Milcholl Avenue, Atlentown,	PA 18103			
Plant Locations: sam	no as above				The second secon
Category	y of Fittings to be registered.	Circle one Category	only		the Standard of
B Flanges: all flanges	g couplings, tees, elbows, Ys, plug	s, unions, pipe caps, or rec	Jucers	Co	nstruction
C Valves; all line valves	s dble connections, and hose assem	Luce - M. Common		ASME B31.	3, CGA V-6
E Strainers, fillers, sept	arators, and steam trans				
r Measuring devices, in	ncluding pressure gauges, level ga	uges, sight glasses, levels	, or pressure		
G Certified capacity-rate	ed pressure relief devices acceptat	ole as primary over pressur	e protection on		
Dollers, pressure ves	sels, piping and fusible plugs omponents that do not fall into one				
Show Manufacturer	: Class 1   Class 2   Class 3   S Name, Trademark, or Logo	as it will annear on th	ME requirements)	Tuno	Captavallan
	A	as it will appear on th	e product		of Construction
	ACME	ARN.		Cast 5 Ot	her o
	T BOTABL.	The same		Describe other:	
	CRYOGE	11.00			
List of supporting d	locumentation and identificat	tion of the actual items	to be registered	d:	
Drawing CRN-D	-08051, Rev. B, Scope	of CRN Registrat	ion, Calculati	ons	
Scope: CRN renew	al. CGA standard cryogen	ic connections Inclu	ides Liquid Tra	nsfer Conn (N	litronen Ovvoen
and Argon), Standa	ard Carbon Dioxide Transfi	er Connections and	Liquid Natural (	Gas LNG Fittin	os.
Note: If the register	red fittings are connected t	o a hose assembly,	the hose assen	nbly must be q	jualified by
(DGallant)	egistered under a different	CKIN. Scope or regis	stration CKN-D	-uous i Sneet	1 10 4 Rev.C
			ACTION AND ADDRESS OF THE PARTY	245.75.	
Declaration:		Acron Courses	lan lan		
and responsibility for the	he quality of the end product do	yed by Acine Cryogen	the information of	d being the perso	on having full authority
my knowledge represe	ents the product for which reals	tration is sought. The d	imensions, mater	ials of constructly	on, pressure temperature
ratings, and identificati	ion markings are in accordance	with the herein named	standards. I furth	her declare that t	he manufacture of these
verified by TUV Rhelahad	a Quality Control Program which	ch extends to each plan g sultable for that purpo	t where fabricatio	n occurs in whole	e or in part and has been
	and knewing that it is of the sai	me force and effect as it	made under oath	is soleilli decigi i.	addit conscientiously
Clauston of Dantage	WALL	7			
Signature of Declarer:	4/1/4	1000000			
Declared before me-at		nics Inc			
This <u>/ 公 坦</u> day	1	2022	Use this s	pace for the Oi	ficial Seal
Commissioner of Oath	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	1	Commonw	realth of Pennsylvania - No	Stary Seal
Or Notary Public: (sign	1) Cileriffe	MADOULL		R PETRASOVITS - Hotary Lehler County	
	(Affix Official seal to the right	1)		mmission Expires Jul 23, immission Number 11915	
	Thi	s space for Regulatory Aut	hority use		
CPM. 0H6700.5	This registration must be r	evalidated after ien (10) yr		acceptance.	
ONN.			Lährador		
FID#: 1556				- 0 -	
Notes:			oo F3HO bered	· 50 Kers	
1. All Fittings shall be re	egistered in the name of the Manufactur	or. Date	May 24	2023	
	be supported with two Statutory Declara corting documentation.	ation forms Engine	ering and inspection	Servises	
3. The Declaration shall	be made by the person having full auth		and the same of th	tuy	
	quality of the end product. ams shall be resubmitted for validation.		ER THE AUTHORIT		
- Submy control plugi	e-test ne transmittan iot Abudgggur	1	PUBLIC SAFETY AC DILER, PRESSURE \		Sect 1 0 - Fittings Rev.2
11/2016			PRESSED GAS REG		

CRN expires April 6th, 2033

New Brunswick Nunavut Nova Scotia Yukon Prince Edward Island Northwest Territories Newfoundland and Labrador

Manufacturers Name: Acme Cryogenics, Inc.	
Manufacturers Address: 2801 Mitchell Avenue, Allentown, PA 18103	
Plant Locations; same as above	
Category of Fittings to be registered. Circle one Cate A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe cape B Flanges: all flanges C Valves: all line valves	Egory only s, or reducers  Title of the Standard of Construction  ASME B31.3, CGA V-6
<ul> <li>D Expansion joints, flexible connections, and hose assemblies: all types</li> <li>E Strainers, filters, separators, and steam traps</li> <li>F Measuring devices, including pressure gauges, level gauges, sight glasses transmitters</li> </ul>	, levels, or pressure
G Certified capacity-rated pressure relief devices acceptable as primary over boilers, pressure vessels, piping and fusible plugs  H Pressure retaining components that do not fall into one of the above category.	pries
N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐ , (Meeting CNSC	
Show Manufacturers Name, Trademark, or Logo as it will appear  CRYOGENICS	Type of Construction Forged  Welded  Wrought Describe other:
List of supporting documentation and identification of the actua	litems to be registered:
Drawing CRN-D-08051, Rev. B, Scope of CRN Regi	
Scope: CRN renewal. CGA standard cryogenic connections and Argon), Standard Carbon Dioxide Transfer Connections Note: If the registered fittings are connected to a hose asser proof testing and registered under a different CRN. Scope of (DGallant)	Includes Liquid Transfer Conn. (Nitrogen, Oxygen and Liquid Natural Gas LNG Fittings.) The hose assembly must be qualified by
and responsibility for the quality of the end product do solemnly declare my knowledge represents the product for which registration is sought. ratings, and identification markings are in accordance with the herein n fittings is regulated by a Quality Control Program which extends to each verified by TOV Rheinland as being suitable for that believing it to be true, and knowing that it is of the same force and effect Signature of Declarer:  Declared before me-at Home Carbon Product do solemnly declared before me-at Home Carbon Product do solemnly declared before me-at Home Product do solemnly declared by the produc	The dimensions, materials of construction, pressure temperature amed standards. I further declare that the manufacture of these h plant where fabrication occurs in whole or in part and has been purpose and I make this solemn declaration conscientiously ct as if made under oath.
This 134 day of July AD 2022	Use this space for the Official Seal
Commissioner of Oaths	
Or Notary Public: (sign)	Complex wealth of entity wards Heary Seal EULEN 2 P. Full Seal Seal Letter Comp. My Commission Expires Jul 23, 2022
This space for Regulate This registration must be revalidated after ten CRN: 0H6700.5 Rev3	
FID#: 1556	CRN OH6700.57 Rev3
Notes:	CRN CT TOO. 3 TREES
All Fittings shall be registered in the name of the Manufacturer.	00
<ol><li>Each Category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.</li></ol>	CHIEF BOILER INSPECTOR
<ol><li>The Declaration shall be made by the person having full authority and responsibility for the quality of the end product.</li></ol>	DATE 5/19/23
Quality Control programs shall be resubmitted for validation.	Sact 10 - Fittings Pay 2
11/2016	Sect 1.0 - Fittings Rev.2
CRN expires April 6th, 2033	□BLRs □PVs
	FITTINGS   NUCLEAR COMPONENTS

New Brunswick Nunavut	Nova Scotia Yukon	Prince Edward Island Northwest Territories	Newfoundland and Labrador	
Manufacturers Nam	D'A-i-i-a-i-a-i-a-i-a-i-a-i-a-i-a-i-a-i-a-			
Manufacturers Addr	ess: 2801 Mitchell Avenue, Allen	town, PA:18103		
Plant Locations: same	as above	, 11		
A Pipe fittings, including B Flanges: all flanges	of Fittings to be register couplings, tees, elbows, Ys,	red. Circle one Category only plugs, unions, pipe caps, or reducers	Title of the Standard of Construction	f
C Valves: all line valves D Expansion joints flevil	ble connections, and hose as		ASME B31.3, CGA V-6	
F Measuring devices, inc	alors, and steam trans	semblies: all types al gauges, sight glasses, levels, or pres		
G Certified capacity-rated	pressure relief devices acce	ptable as primary over pressure protec		
	els, piping and fusible plugs apponents that do not fall into		NOTI OU	
N Nuclear components:	Class 1 ☐ Class 2 ☐ Clas	s 3 □ , (Meeting CNSC or ASME requ	rements)	
Show Manufacturers	Name, Trademark, or Lo	ogo as it will appear on the produ	Ict Type of Construction	
	ACMI	E & ENICS	Forged a Welded & Wrough Cast & Other a Describe other:	nt, ca
List of supporting do		cation of the actual items to be		
Diawing CKM-D-(	18051, Rev. B, Sco	pe of CRN Registration, C	alculations	
Note: If the registere	d fittings are connected	d to a hose assembly, the hos	uid Transfer Conn. (Nitrogen, Oxyge Natural Gas LNG Fittings. e assembly must be qualified by CRN-D-08051 Sheet 1 TO 4 Rev.C	:n
(DGallalil)				
ratings, and identification ittings is regulated by a confided by TUV Rheinland	markings are in accordan Quality Control Program was be	gistration is sought. The dimension nce with the herein named standard hich extends to each plant where	and being the person having full auth nation contained in this form is true to the b is, materials of construction, pressure temp is. I further declare that the manufacture of abrication occurs in whole or in part and ha make this solemn declaration consciention deroath.	f these
Signature of Declarer:	WYOL	) ·		
Declared before me-at	Acne Crisa	PRICE Inc		
This 13 45 day of	July AD	2002 Us	e this space for the Official Seal	
Commissioner of Oaths	10 - 00	7		
Or Notary Public: (sign)	CleerKie	trasovite	Commonwealth of Pennsylvania - Notary Seal   EILEEN R PETRASOVITS - Notary Public	
	(Affix Official seal to the rig	aht)	LeFigh County Hy Commission Expires Jul 23, 2022	
	T	his space for Regulatory Authority use	Commission Number 1191577	— <u> </u>
CRN: 0H6700.5 R	This registration must be ev3	e revalidated after ten (10) years from t	RPTED	
FID#: 1556		PROVINCE OF PRI	ICE EDWARD ISLAND	
Notes:		COMMUNITIES, LA	ND & ENVIRGINMENT	
<ol> <li>All Fittings shall be registed.</li> </ol>	ered in the name of the Manufact	urer.	6700,52 Rev 3	
<ol><li>Each Category shall be s and one copy of supportir</li></ol>	upported with two Statutory Decis	aration forms C.R.N.	1963	
	made by the person having full at	athority and		
4. Quality Control programs	shall be resubmitted for validation	The state of the s	ERVICES SECTION Sect 1.0 - Fittings Rev.2	
CRN expires April 6t	h 2033.	EOSLER/PRESSE	RE VESSEL BRANC Sect 1.0 - Fittings Rev.2	
OTHER POPULOS WALLING	, 2000			

Prince Edward Island

New Brunswick

Nova Scotia

New Brunswick Nunavut	Nova Scotia Yukon	Prince Edward Island Northwest Territories	Newfoundland and Labrador
Manufacturers Name	Mana Camanala I		
Manufacturers Addre	SS: 2801 Milchell Avenue, Allento	Atom De Abann	
Plant Locations; same a	is above	WII, PA 18103	
Category	f Fittings to be registers	d. Circle one Category only lugs, unions, pipe caps, or reducers	Title of the Standard of Construction
C Valves: all line valves D Expansion joints, flexible E Streiners, filters, separa	e connections, and hose assetors, and sleam trans		ASME B31.3, CGA V-6
r Measuring devices, incli	uding pressure gauges, level	gauges, alght glasses, levels, or pressu table as primary over pressure protectic	
H Pressure retaining comp	s, piping and fusible plugs conents that do not fall into or	ne of the above categories	
N Nuclear components: ( Show Manufacturers N	Class 1 ☐ Class 2 ☐ Class Iame, Trademark, or Loc	3 [], (Meeting CNSC or ASME require to as it will appear on the produc	ments)  Type of Construction
	ACMI	E	Forged D Welded & Wrought Describe other:
List of supporting doc		ation of the actual items to be re	
		e of CRN Registration, Cal	
Scope: CRN renewal	CGA standard corone	nic connections. Includes Lieu	aid Transfer Cons. (Nitseans Conse
and Argon), Standard Note: If the registered proof testing and regis (DGallant)	Carbon Dioxide Trans fittings are connected stered under a differen	fer Connections, includes Eliquifer Connections and Liquid National American American CRN. Scope of registration C	atural Gas LNG Fittings. assembly must be qualified by CRN-D-08051 Sheet 1 TO 4 Rev.C
Declaration:   David M. Rakos, Director of Clustry by	nd Engineering (see note 3) Ammi	oyed by Acme Cryogenics, Inc.	and halos the second by the fill of the state
and responsibility for the c my knowledge represents ratings, and identification (	uality of the end product of the product for which regionarishes are in accordance	to solemnly declare that the information is accept. The dimensions are with the baselin named standards	and being the person having full authority ation contained in this form is true to the best of materials of construction, pressure temperature. I further declare that the manufacture of these
ABINIACI DA LOS INIGINAS	as bai	iich extends to each plant where fal ng sultable for that purpose and I m ame force and effect as if made und	brication occurs in whole or in part and has been nake this solemn declaration conscientiously
Signature of Declarer:	West	7	ici dani,
Declared before me-at	Hene Cryoge	nics Inc	
This day of _	July AD.	2022 Use	this space for the Official Seal
Commissioner of Oaths Or Notary Public: (sign)	aleer Rfe	trasovits 1	Commonwealth of Pennsylvania - Notory Seal EILEEN R PETRASOVITS - Netary Public
***	(Affix Official seal to the righ	11)	Lef-lgr County My Commission Expires Jul 23, 2022 Commission Number 1191577
	This registration must be	is space for Regulatory Authority use revalidated after ten (10) years from the	
CRN: 0H6700.5 Re	ev3		San
FID#: 1556 Notes:	_	1	
	ed in the name of the Manufactur	nr. Northwest	
	ported with two Statutory Declara	ation from Territories	. 1
	ade by the person having full auth	REGISTEF UNDER THE AUTH	
	hall be resubmitted for validation.	THE BOILER AND I	
11/2016		C.R.N.O.H.6.70	
CRN expires April 6th	, 2033		Burnelist
		04	
		DATE THAY 2	,
			65.00

Newfoundland and Labrador

Prince Edward Island

New Brunswick

Nova Scotia

Nunavut Yukon Northwest Territories Manufacturers Name: Acme Cryogenics, Inc. Manufacturers Address: 2801 Mitchell Avenue, Allentown, PA 18103 Plant Locations: same as above Category of Fittings to be registered. Circle one Category only Title of the Standard of A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers Construction B Flanges: all flanges C Valves: all fine valves ASME B31.3, CGA V-6 D Expansion joints, flexible connections, and hose assemblies: all types E Strainers, filters, separators, and steam traps F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs H)Pressure retaining components that do not fall into one of the above categories N Nuclear components: Class 1 Class 2 Class 3 (Meeting CNSC or ASME requirements) Show Manufacturers Name, Trademark, or Logo as it will appear on the product Type of Construction Forged Welded B Wrought o 0 Cast # Other o Describe other: List of supporting documentation and identification of the actual items to be registered: Drawing CRN-D-08051, Rev. B, Scope of CRN Registration, Calculations Scope: CRN renewal. CGA standard cryogenic connections. Includes Liquid Transfer Conn. (Nitrogen, Oxygen and Argon), Standard Carbon Dioxide Transfer Connections and Liquid Natural Gas LNG Fittings.

Note: If the registered fittings are connected to a hose assembly, the hose assembly must be qualified by proof testing and registered under a different CRN. Scope of registration CRN-D-08051 Sheet 1 TO 4 Rev.C (DGallant) Declaration: Devid M. Rakes, Director of Quality and Engineering (see note 3) employed by Acme Cryogenics, Inc. and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whote or in part and has been verified by TUV Rheinland as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knewing that it is of the same force and effect as if made under oath. Signature of Declarer. Declared before me at This 13 出 day of Use this space for the Official Seal Commissioner of Oaths ELEEN R PETRASOVITS - Hotary Jubiles
Lines Louis Louise
My Communication States 80 115, 2022 Or Notary Public: (sign) (Affix Official seal to the right) Commission Humber 1191577 This space for Regulatory Nuthority use. This registration must be revalidated after ten 10) years from the date of aceptalancare Vessels Act CRN: 0H6700.5 Rev3 Nunavut 1556 REGISTERED FID#: Notes. All Fittings shall be registered in the name of the Manufacturor. 2 Each Category shall be supported with two Statutory Declaration forms and one copy of supporting documentation. The Declaration shall be made by the person having full authority and Signed\_ responsibility for the quality of the end product. Chiefinspector Quality Control programs shall be resubmitted for validation. Territorial Registration Fee CRN expires April 6th, 2033

New Brunswick Nova Scotia Prince Edward Island Newfoundland and Labrador Nunavut Yukon Northwest Territories Manufacturers Name: Acme Cryogenics, Inc. Manufacturers Address: 2801 Milchell Avenue, Allentown, PA 18103 Plant Locations; same as above Category of Fittings to be registered. Circle one Category only Title of the Standard of A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers Construction B Flanges: all flanges Valves: all line valves ASME B31.3, CGA V-6 D Expansion joints, flexible connections, and hose assemblies: all types E Strainers, filters, separators, and steam traps Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs (H)Pressure retaining components that do not fall into one of the above categories N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐ , (Meeting CNSC or ASME requirements) Show Manufacturers Name, Trademark, or Logo as it will appear on the product Type of Construction Welded 5 Forged n Wrought a Cast H Other n Describe other: CRYOGENICS List of supporting documentation and identification of the actual items to be registered: Drawing CRN-D-08051, Rev. B, Scope of CRN Registration, Calculations Scope: CRN renewal. CGA standard cryogenic connections. Includes Liquid Transfer Conn. (Nitrogen, Oxygen and Argon), Standard Carbon Dioxide Transfer Connections and Liquid Natural Gas LNG Fittings. Note: If the registered fittings are connected to a hose assembly, the hose assembly must be qualified by proof testing and registered under a different CRN. Scope of registration CRN-D-08051 Sheet 1 TO 4 Rev.C (DGallant) Declaration: David M. Rakos, Director of Quality and Engineering (see note 3) employed by Acme Cryogenics, Inc. and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by TUV Rheinland as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath. Signature of Declarer: Declared before me-at 13 生 day of Use this space for the Official Seal Commissioner of Oaths Commonwealth of Pennsylvania - Notary Seal Or Notary Public: (sign) EILEEN R PETRASOVITS - Notary Public Lehigr County
My Commission Expires Jul 23, 2022 (Affix Official seal to the right) Commission Number 1191577 This space for Regulatory Authority use. This registration must be revalidated after ten (10) years from the date of acceptance. 0H6700.5 Rev3 CRN: 1556 FID#: Notes: 1. All Fittings shall be registered in the name of the Manufacturer. Each Category shall be supported with two Statutory Declaration forms 0H6700.5Y REV3 and one copy of supporting documentation. The Declaration shall be made by the person having full authority and 05/12/2023 responsibility for the quality of the end product. Quality Control programs shall be resubmitted for validation. 0 - Fittings Rev.2

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CRN expires April 6th, 2033