the pressure equipment safety authority

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

June 06, 2023

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

The design submission, Tracking Number 2023-02995, Web Portal Number 2023-S1743, originally received on May 09, 2023 was surveyed and accepted for registration as follows:

CRN : 0H06700.52 **Accepted on:** June 06, 2023

Reg Type: RENEWAL **Expiry Date:** April 06, 2033

Drawing No. : CRN-D-08051 SHT 1-4 Rev C

Fitting type: CGA CRYOGENIC LIQUID TRANSFER CONNECTIONS

Design registered in the name of : ACME CRYOGENICS

Description	MAWP	Design Temperature
Design Pr./Temp. - Per Dwgs		

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

*** Refer to CRN 0H6700.5R2 Renewal Scope of Registration for scope changes and additions from original registration*

*** If these CGA cryogenic liquid transfer connections are connected to hose assembly, such hose assembly must have a valid Alberta CRN*

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,

Continued on the next page…

the pressure equipment safety authority

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

June 06, 2023

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

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

ACME CRYOGENICS

STATUTORY DECLARATION
Registration of Fittings

I, 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 Acme Cryogenics Inc **in the** Commonwealth **of** Pennsylvania

the 13th **day of** July **AD 20** 22.

Commonwealth of Pennsylvania - Notary Seal
EILEEN R PETRASOVITS - Notary Public
Lehigh County
My Commission Expires Jul 23, 2022
Commission Number 1191577

Commissioner for Oaths:

Eileen R Petrasovits
(Printed name)

Eileen R Petrasovits
(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 'H'.

CRN:

Registered by:

Dated: 2023-06-06

NOTE: This registration expires on: 2033-04-06

2023-02995
ABSA
SAFETY CODES ACT - PROVINCE OF ALBERTA
ACCEPTED: 0H06700.52
See acceptance letter for conditions of registration.
Date: 6/6/2023 By:
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)

** Drawing Sht 1-4 Rev C registered.

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	590-021-15ORF	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.E.-ARG 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.E.-OXY 1.5 CAST,1.5FNPT 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	590-014-15ORF	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	590-039-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.22
22.1	590-039-15ORF	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.22
22.2	600-001-15	F.E.-ARGOMIX 1.5 MACH 1.5FNPT	1½	B21 C46400 H02	600	-320	150	E11040.22
23	590-058-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.23
24	590-060-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.24
25	590-061-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.25
26	590-062-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.26
27	590-063-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.27
28	590-064-15	Fixed End Machined	1½	SA-479 316/316L	650	-320	150	E11040.28
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	E11040.30
31	590-068-15	Fixed End Machined	1½	B21 C46400 H02	600	-320	150	E11040.31
32	590-069-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.32
33	590-070-15	Fixed End Machined	1½	SA-479 304/304L	650	-320	150	E11040.33

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.E.-NIT 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.E.-NIT 2.5"TUB,BR GL 314134B	2½	SB-505 C85700	600	-320	150	E11040.48
48.2	590-112-25	F.E.-NIT 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.E.-NIT 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

2023-02995
ABSA
SAFETY CODES ACT - PROVINCE OF ALBERTA
ACCEPTED: 0H06700.52
See acceptance letter for conditions of registration.
Date: 6/6/2023 By: [signature]
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.

ORIGINAL

NOTES:

1. DESIGN CODE: ASME B31.3-2020
2. REFERENCE MATERIAL SPECIFICATIONS, PAGE ix OF CALCULATION E11040 REV 1

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

UNLESS OTHERWISE SPECIFIED

INTERPRET PER ASME Y14.5-2009

1. 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.

THIRD ANGLE PROJECTION

DESIGN BY	WJR	DATE	12/21/2011
DRAWN BY	PGZ	DATE	04/05/2012
CHECKED BY	BL	DATE	3/4/2022
APPROVED BY	JDE	DATE	03/17/2022

Title: SCOPE OF REGISTRATION - CGA STANDARD CRYOGENIC LIQUID TRANSFER CONNECTIONS

ACME CRYOGENICS

P/N:

DWG NO. CRN-D-08051

SCALE: 1:1 | Project No.: E210020 | B | SHEET: SHEET 1 OF 4 | REV. C

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	2½	SB-505 C85700	600	-320	150	E11040.79
80	580-024-25	Fixed End Machined	2½	SB-505 C85700	600	-320	150	E11040.80
81	580-036-25	Fixed End Machined	2½	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.E.-ARG 2.5 TUB BR GL 314133B	2½	SB-505 C85700	600	-320	150	E11040.85
85.2	580-112-25	F.E.-ARG 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.E.-OXY 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.E.-OXY 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	E11040.119
120	540-091-30	Fixed End Machined	3	B21 C46400 H02	600	-320	150	E11040.120
120.1	540-111-30	F.E.-OXY 3,TUB,BR GL 314135B	3	B21 C46400 H02	600	-320	150	E11040.120
120.2	540-112-30	F.E.-OXY 3,GSKLS PIPESKT BRS	3	B21 C46400 H02	600	-320	150	E11040.120
120.3	540-128-30	F.E.-OXY 3GASKETLESS SHORT	3	B21 C46400 H02	600	-320	150	E11040.120
120.4	540-128-30SP	F.E.-OXY 3GSKLS 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	1½	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 OXY SS GSKTLS 314123	3 MNPT	SA-479 304/304L	650	-320	150	E11040.155
156	ASK-40-0049	Head Piece BE	1½ TBS	B21 C46400 H02	600	-320	150	E11040.156

ORIGINAL

UNLESS OTHERWISE SPECIFIED

INTERPRET PER ASME Y14.5-2009

1. 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.

THIRD ANGLE PROJECTION

DESIGN BY	WJR	DATE	12/21/2011
DRAWN BY	PGZ	DATE	04/05/2012
CHECKED BY	BL	DATE	3/4/2022
APPROVED BY	JDE	DATE	03/17/2022

Title: SCOPE OF REGISTRATION - CGA STANDARD CRYOGENIC LIQUID TRANSFER CONNECTIONS

P/N:

ACME CRYOGENICS

DWG NO. CRN-D-08051

SCALE: 1:1 | **Project No.:** E210020 | B | SHEET: SHEET 2 OF 4 | REV. C

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-40-0117	Head Piece BE	1¼ 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	-	(deleted)	-	-	-	-		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	-	(deleted)	-	-	-	-		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.E.-CO2 1,THRD,SS	1	SA-479 304/304L	650	-320	150	E11040.177
177.3	320-019-10S-PUR	F.E.-CO2 1" S/S W/1/4"PURGE	1	SA-479 304/304L	650	-320	150	E11040.177
177.4	326-003-10	F.E.-N2O 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.E.-CO2 1.5,THRD,SS	1½	SA-479 304/304L	650	-320	150	E11040.178
178.2	320-000-15S-PUR	F.E.-CO2 1.5,S/S W/1/4"PURGE	1½	SA-479 304/304L	650	-320	150	E11040.178
178.3	326-008-15	F.E.-N2O 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	326-008-15S	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.E.-CO2 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.E.-CO2 1" W/ 1/2"&1/4"PORTS	1	B16 C36000 H02	600	-320	150	E11040.181
181.3	326-018-10	F.E.-N2O 1" W/FNPT & PURGE	1	B16 C36000 H02	600	-320	150	E11040.181
182	320-087-15	Fixed End with Purge Port	1½	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.E.-CO2 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.E.-CO2 1.5" W/1/2"&1/4"PORTS	1½	SA-479 304/304L	650	-320	150	E11040.182
182.5	326-019-15	F.E.-N2O 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.E.-NIT 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.E.-ARG 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.E.-OXY 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	650	-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	540-010-20S	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

UNLESS OTHERWISE SPECIFIED

INTERPRET PER ASME Y14.5-2009

1. 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.

THIRD ANGLE PROJECTION

DESIGN BY	WJR	DATE	12/21/2011
DRAWN BY	PGZ	DATE	04/05/2012
CHECKED BY	BL	DATE	3/4/2022
APPROVED BY	JDE	DATE	03/17/2022

Title: SCOPE OF REGISTRATION - CGA STANDARD CRYOGENIC LIQUID TRANSFER CONNECTIONS

P/N:

ACME CRYOGENICS

DWG NO. CRN-D-08051

SCALE: 1:1 | Project No.: E210020 | B | SHEET: SHEET 3 OF 4 | REV. C

SCOPE OF CRN REGISTRATION

No.	Part	Product Description	Size	Material (note 2)	Design P (psi)	MDMT	Design Temp (°F)	Calculation
212.1	580-059-25	NUT-ARG 2.5" 316L	2½	SA-479 316/316L	650	-320	150	E11040.212
212.2	580-093-25	NUT-ARG 2.5" 304 SS	2½	SA-479 304/304L	650	-320	150	E11040.212
213	580-002-15	NUT-ARG 1.5"	1½	SB-505 C86200	650	-320	150	E11040.213
213.1	580-055-15	NUT-ARG 1.5" 316L	1½	SA-479 316/316L	650	-320	150	E11040.213
214	590-000-15	NUT-NIT 1.5"	1½	SB-505 C86200	650	-320	150	E11040.214
214.1	590-055-15	NUT-NIT 1.5" 316L	1½	SA-479 316/316L	650	-320	150	E11040.214
215	590-002-25	NUT-NIT 2.5"	2½	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
215.2	590-108-25	NUT-NIT 2.5" SST	2½	SA-479 316/316L	650	-320	150	E11040.215
215.3	590-059-25	NUT-NIT 2.5" 316 SS	2½	SA-479 316/316L	650	-320	150	E11040.215
216	590-088-30	NUT-NIT 3" BRONZE	3	SB-148-C95500	650	-320	150	E11040.216
217	320-015-10	NUT-CO2 1"	1	B16 C36000 H02	650	-320	150	E11040.217
217.1	320-060-10	NUT-CO2 1" SS	1	SA-479 304/304L	650	-320	150	E11040.217
218	320-008-15	NUT-CO2 1.5"	1½	B16 C36000 H02	650	-320	150	E11040.218
218.1	320-070-15	NUT-CO2 1.5" SS	1½	SA-479 304/304L	650	-320	150	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-479 304/304L	650	-320	150	E11040.219
220	320-034-30	NUT-CO2 3"	3	SB-505 C86200	650	-320	150	E11040.220
221	320-041-40	NUT-CO2 4"	4	SB-505 C86200	650	-320	150	E11040.221
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
224	450-000-30	NUT-LNG 3"	3	SB-505 C95200	650	-320	150	E11040.224
224.1	450-000-30S	NUT-LNG 3" SST	3	SA-479 304/304L	650	-320	150	E11040.224
224.2	450-000-30S-316	NUT-LNG 3" 316 S/S	3	SA-479 316/316L	650	-320	150	E11040.224
225	600-000-15	NUT-ARGOMIX 1.5"	1½	SB-505 C95500	650	-320	150	E11040.225
226	600-000-25	NUT-ARGOMIX 2.5"	2½	SB-505 C95500	650	-320	150	E11040.226
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	450-003-30BW316	F.E.-LNG 3" 316 S/S W/BWE	3	SA-479 316/316L	650	-320	150	E11040.227
227.5	450-003-30SM	F.E.-LNG 3" 304SST FNPT	3	SA-479 304/304L	650	-320	150	E11040.227
227.6	450-003-SM316	F.E -LNG 3"316 S/S W/3"FNPT	3	SA-479 316/316L	650	-320	150	E11040.227
227.7	450-003-30SMPS	F.E LNG 3" 304S/S W/3"PIPE SKT	3	SA-479 304/304L	650	-320	150	E11040.227
227.8	450-003-30S-PS	F.E.LNG 3" 304S/S W/3"PIPE SKT	3	SA-479 304/304L	650	-320	150	E11040.227
228	450-004-30	HEADPC-3 LNG W/RETAINER ASSY.	3	SB-505 C85700	450	-320	150	E11040.228
228.1	450-004-30	HEADPC-3" LNG	3	SB-505 C85700	450	-320	150	E11040.228
228.2	450-010-30M	HEADPC-3"LNG W/2"FNPT BRASS	3	SB-505 C85700	450	-320	150	E11040.228
229	450-004-30S	HEADPC-3" LNG SS W/ 3"FNPT	3	SA-479 304/304L	650	-320	150	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
229.2	450-010-30M316	HEADPC-3" LNG 3"FNPT 316 SST	3	SA-479 316/316L	650	-320	150	E11040.229

ORIGINAL

UNLESS OTHERWISE SPECIFIED
INTERPRET PER ASME Y14.5-2009
1. 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.

THIRD ANGLE PROJECTION

DESIGN BY	WJR	DATE	12/21/2011
DRAWN BY	PGZ	DATE	04/05/2012
CHECKED BY	BL	DATE	3/4/2022
APPROVED BY	JDE	DATE	03/17/2022

Title: SCOPE OF REGISTRATION - CGA STANDARD CRYOGENIC LIQUID TRANSFER CONNECTIONS

P/N:

ACME CRYOGENICS

DWG NO. CRN-D-08051

SCALE: 1:1 | **Project No.:** E210020 | B | **SHEET:** SHEET 4 OF 4 | REV. C