

ACI Central Inc.

20 McAulay Court, Charlottetown, PE C1A 9M7
P.O. Box 53, Charlottetown, PE C1A 7K1. Phone: 902-566-1975, Fax: 902-566-3133

Recommendation to Register – Pressure Vessel Design

To: Blair Rawlings

Date: 08/14/2025

From: ACI Central Inc.

Manufacturer: Chart Inc
1300 Airport Drive
Ball Ground, GA 30107

Manufacturer #: PV-9683

Subject: ACI Central Design Review

The product described on this form has satisfied the requirements for review of pressure vessel designs established by the Directors of ACI Central at their September 1994 meeting in Moncton, New Brunswick. We recommend this design be registered in your Jurisdiction under;

CRN: M5852.5

Unit Description	Drawing Number	Service	Design Code
Pressure Vessel	D-14302190 rev C	Non Lethal	ASME Sect VIII Div. 1

Shell Side

Tube Side

MAWP @ TEMP	MDMT @ MAWP	MAWP @ TEMP	MDMT @ MAWP
300 PSI @ 100 F	- 320 F @ 300 PSI		

Test Pressure: Hydro: 415 PSI	Pneu:	Test Pressure: Hydro:	Pneu:
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Part	Material	Des. t"	Act. t"	CA"	% EF	RT	PWHT	Dimensions	Notes
Shell	SA 240 201LN	0.140	0.140	-	80	RT1		OD": 24"	
Heads	SA 240 201LN	0.139	0.139	-	100			OAL": 53.11"	
								W":	
								H":	
								HS FT²:	

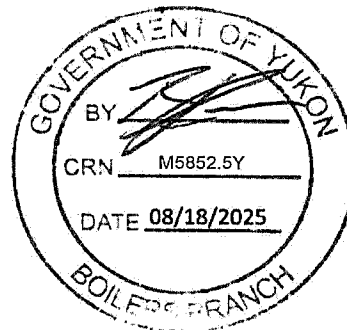
Notes:

- 1- The return of this form, bearing the signature and stamp of the Jurisdiction will legally establish the CRN shown on this form.
- 2- A copy of the Design bearing the CRN will be sent to the Manufacturer.
- 3- Details including service conditions will be posted on the 'Silent Inspector' Bulletin Board.
- 4- Copies of the Design and Specifications are available to ACIC Members on demand.
- 5- The form will be a permanent ACIC record.
- 6- To reduce turnaround times to a minimum fax your response to 902-566-3133.

ACIC Log#: 37761

Description: Pressure Vessel, 24" OD
ASME Stamp, National Board Registered

This space is for Jurisdictional stamp and signature



GENERAL DATA FOR INNER VESSEL DRAWING

PRESSURE VESSEL CODE	ASME SEC.VIII, DIV.1 2007 EDITION/ 2008 ADDENDA
MAWP	300 psi/ 20.68 bar
MAXIMUM TEMPERATURE	+100F/ 38C
MINIMUM TEMPERATURE	-320F/-196C
DESIGN PRESSURE	316.5 psi/ 21.82 bar
SPECIFIC GRAVITY CONTENT	1.52
HYDROSTATIC TEST PRESSURE	415psi/ 28.61bar
PRESSURE VESSEL LENGTH, in/mm	49.250/ 1251
PRESSURE VESSEL OUTSIDE DIAMETER, in/mm	24/ 609.6
SHELL LENGTH (INCLUDES STRAIGHT FLANGE)	37.11/ 942.6
WATER VOLUME, gal/liters	86/ 326
TYPE SERVICE	CO2
NDE REQUIREMENTS	RT-2
LONGITUDINAL SEAM	CATEGORY A, TYPE 1, 100% X-RAY
CIRCUMFERENTIAL SEAM	CATEGORY B, TYPE 2, SPOT X-RAY
MATERIAL TYPE	SA240 STAINLESS STEEL 201LN
MAXIMUM ALLOWABLE STRESS, psi	27100

SHELL DATA	
SHELL LENGTH, in/mm	36.0/ 914.4
NUMBER OF COURSES	1
MINIMUM THICKNESS, in/mm	0.140/ 3.56
WELD JOINT	CATEGORY A, TYPE 1
WELD JOINT EFFICIENCY	LONG 1.0, CIRC 0.8
CORROSION ALLOWANCE	0

HEAD DATA	
OVERALL HEIGHT, in/mm	7.250/ 184.2
MINIMUM THICKNESS, in/mm	0.139/ 3.53
TYPE	2:1 ELLIPTICAL
WELD JOINT EFFICIENCY	SEAMLESS HEAD 1.0
CORROSION ALLOWANCE	0

RELIEF VALVE DATA	
REQUIREMENTS PER CGA S1.3 VALUES ARE FOR WORST CASE ATMOSPHERIC GAS	

SETTINGS	300psi/ 20.67bar
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LOSS OF VACUUM	
CAPACITY, scfm/ m3/hr	2/ 3.1

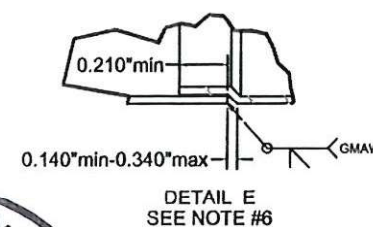
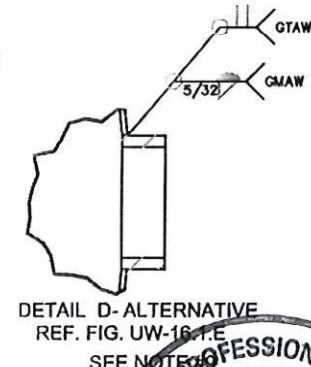
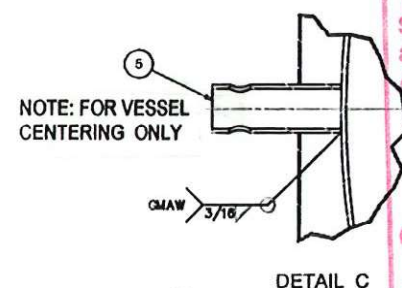
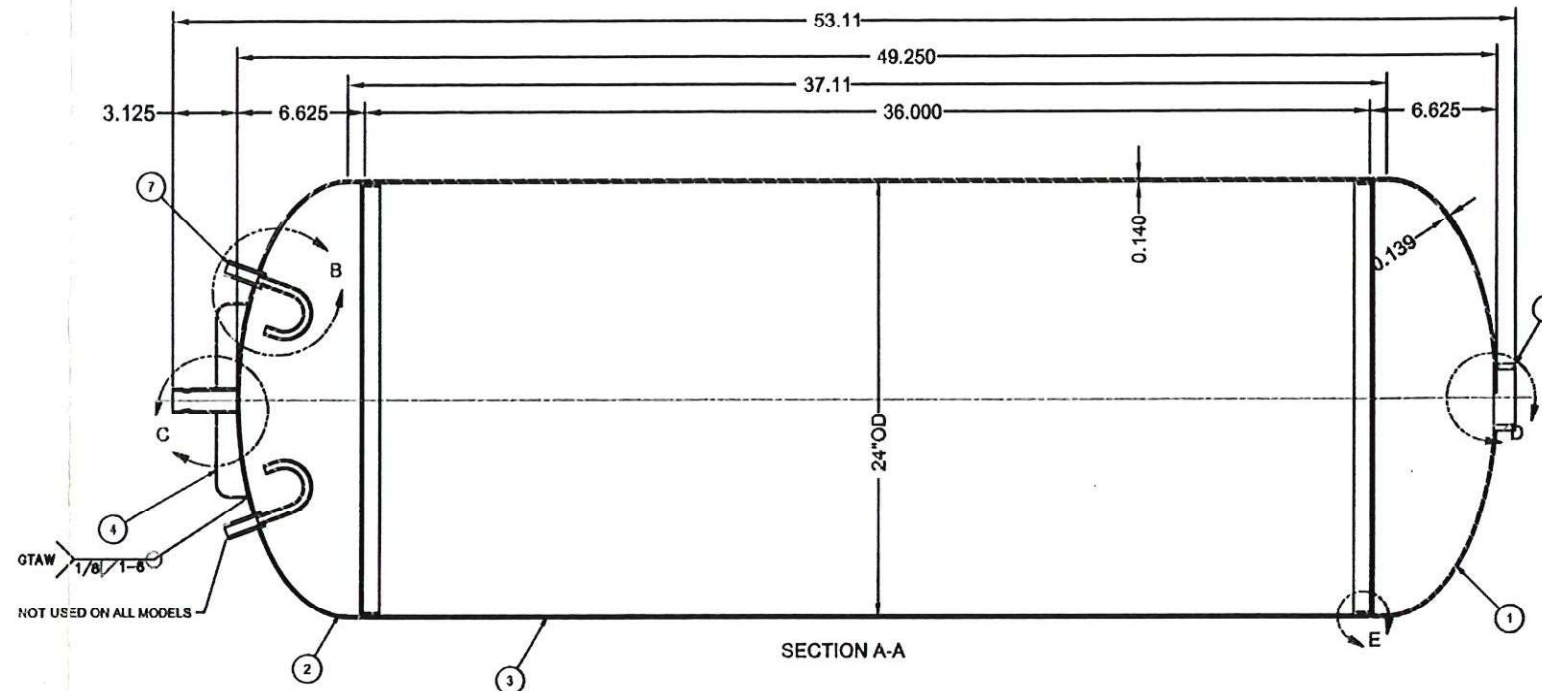
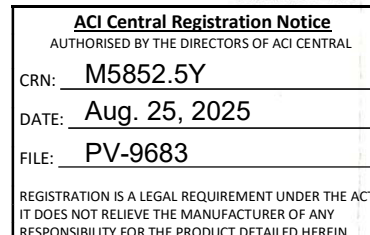
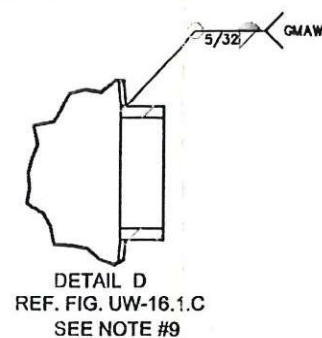
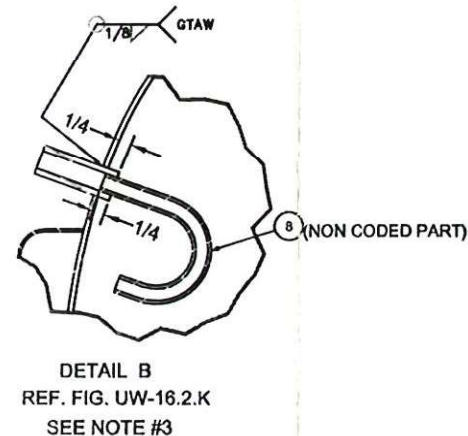
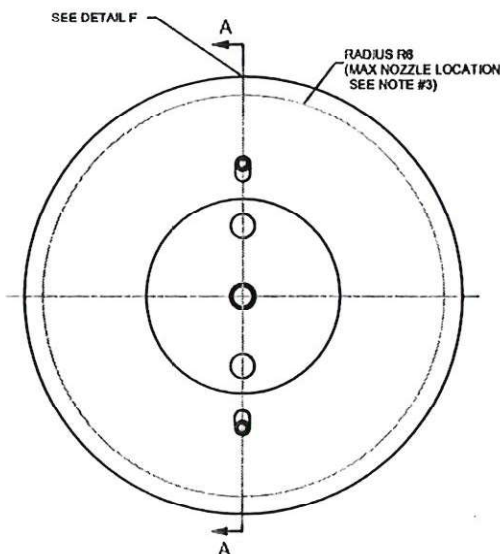
LOSS OF VACUUM/ FIRE	
CAPACITY, scfm/ m3/hr	42/ 70.6

WEIGHT	
INNER VESSEL WEIGHT (EMPTY) lbs/kg	184/ 83

PARTS LIST				
ITEM	DESCRIPTION	MATERIAL	QTY	NOTES
1	TOP HEAD	SA-240 201LN, 0.139" min	1	
2	BOTTOM HEAD	SA-240 201LN, 0.139" min	1	
3	SHELL	SA-240 201LN, 0.140" nom	1	SEE NOTE #8
4	SIEVE PAN	SA-240 T304 0.060"thk.X8.250"OD	1	
5	BOTTOM SUPPORT STUD	SA-249 T304 1.00"ODx0.083"Wx3.125"L	1	
6	COLLAR	SA-213 T304 2.75"ODx2.28"IDx0.875"L	1	
7	NOZZLE	SA-213 T304 0.625"ODx0.120"Wx1.875"L	2	MAX QTY
8	SNORKEL	SA-249 T304 .375"ODx0.065"W	2	NON-CODED

NOTES:

- INSIDE OF VESSEL MUST BE FREE OF ALL RUST, SCALE AND CORROSION BEFORE ASSEMBLING.
- DRY CONTAINER AFTER HYDROTEST AND DRAINING.
- NOZZLE AND ITS ATTACHMENT TO HEAD TO COMPLY WITH UG-45.(b)(4) AND UW-16.(f).3.(c). NOZZLES CLUSTERING ON HEADS TO COMPLY WITH G-36.(c).3.(d).
- COMPLETE RADIOGRAPH ON BOTH LONGITUDINAL AND HEAD TO SHELL CIRCULAR SEAMS TO UW-51, RADIOGRAPHIC EXAMINATION LEVEL RT-2.
- DATA PLATE IS ATTACHED TO OUTER SHELL.
- JOINTS BETWEEN THE SHELL AND THE HEADS MADE PER UW-13(b)(4) AND UW-13.1(i).
- MANUFACTURING OF VESSELS WITH LENGTH LESS THAN SHOWN IS PERMITTED.
- THICKNESS OF SHELL SHOWN IS NOMINAL. MILL UNDER-TOLERANCE REQUIREMENTS PER UG-16.C MAY APPLY.
- COLLAR (ITEM #6) MAYBE ATTACHED TO THE TOP HEAD BY FULL PENETRATION WELD AS SHOWN ON DETAILS D OR D-ALTERNATIVE AND IN COMPLIANCE WITH UW-16(C).



Technical
Standards
and Safety
Authority

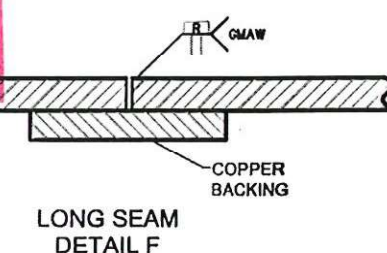
NAT'L. BD. NO. 1NB
CRN
W YEAR 20 and S/N
RT-2 Model Vessels
Safety Program

MAWP PSI
AT 100°F CERTIFIED BY
MDMT-320°F CHART, INC.
AT PSI

DATA PLATE DETAILS
SEE NOTE #5

REGISTERED

C.R.N.: M5852.5
Signed: *Adamovsky*
Date: Apr. 27, 2009



C	EP	207859	NOTES 3&6, ITEM 7 IN BOM	AS	4/22/09	APP'VD	DATE				
B	EP	ECR207854	DETAILS B, D & E, NOTES 3 & 6	AS	4.17.09	CHECKED BY	03-12-09				
A	EP	ECR207850	BOM ITEMS: DETAIL E & NOTE 8	AS	4.14.09	REVIEWER	EP	3-20-09	APPLICATION	ORIGINAL ECR/ER	
REV	APPV	ECR	REVISION DESCRIPTION	BY	DATE						

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DESIGNATES A NOTE REFERENCE.

MAT'L
SEE BOM

FINISH P/N
14302190

UNLESS OTHERWISE SPECIFIED
TOLERANCES ARE IN INCHES
DIMENSIONS
HOLE
2 PLACE DECIMAL
3 PLACE DECIMAL

SCALE 1/2"=1'

1 of 1