

**FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS**  
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

Form U-1

1. Manufactured and certified by ISOTHERM, INC. 1118 Enterprise Place Arlington, Texas, USA 76001  
(Name and address of Manufacturer)

2. Manufactured for JIM BEAM BRANDS, CO 149 HAPPY HOLLOW RD CLERMONT, KY USA 40110  
(Name and address of Purchaser)

3. Location of installation "Not Known"  
(Name and address)

4. Type: Horiz. Heat Exh. 00038X - 00025A 66 2000  
(Horiz., vert., or sphere) (Tank, separator, jkt. vessel, heat exh., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

5. ASME Code, Section VIII, Div. 1 1998 Edition, A -99 Addenda  
Edition and Addenda (date) Code Case No. Special Service per UG-120 (d)

Items 6 - 11 Incl. to be completed for single wall vessels, jackets of jacketed vessels, shell of heat exchangers, or chamber of multi-chamber vessels.

6. Shell (a) No. of course(s): (1) (b) Overall length (ft & in.): 14' -8 5/8"

| No. | Course(s)     |                   | Material<br>Spec./Grade or Type | Thickness |       | Long. Joint (Cat. A) |                  |      | Circum. Joint (Cat. A, B & C) |                  |      | Heat Treatment |      |
|-----|---------------|-------------------|---------------------------------|-----------|-------|----------------------|------------------|------|-------------------------------|------------------|------|----------------|------|
|     | Diameter, in. | Length (ft & in.) |                                 | Nom.      | Corr. | Type                 | Full, Spot, None | Eff. | Type                          | Full, Spot, None | Eff. | Temp.          | Time |
| 1   | 12 3/4"       | 14' -8 5/8"       | SA312-TP304                     | 0.375"    | 0"    | S                    | None             | 85%  | 2                             | None             | 65%  | -              | -    |

7. Heads: (a) (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp. (b) (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp.

|     | Location (Top, Bottom, Ends) | Thickness |       | Radius |         | Elliptical<br>Ratio | Conical<br>Apex Angle | Hemispherical<br>Radius | Flat<br>Diameter | Side to Pressure |         | Category A |                  |
|-----|------------------------------|-----------|-------|--------|---------|---------------------|-----------------------|-------------------------|------------------|------------------|---------|------------|------------------|
|     |                              | Min.      | Corr. | Crown  | Knuckle |                     |                       |                         |                  | Convex           | Concave | Type       | Full, Spot, None |
| (a) |                              |           |       |        |         |                     |                       |                         |                  |                  |         |            |                  |
| (b) |                              |           |       |        |         |                     |                       |                         |                  |                  |         |            |                  |

If removable, bolts used (describe other fastening) (Mat'l Spec. No., Grade, size, No.)

8. Type of Jacket Jacket Closure (Describe as ogee & weld, bar, etc.)  
If bar, give dimensions If bolted, describe or sketch.

9. MAWP 100 psi at max. temp. 200 °F Min. design metal temp. -20 °F at 100 psi.  
(internal) (external) (internal) (external)

10. Impact test No. Exempt per UHA 51(d)(1)(a).  
(Indicate yes or no and the component(s) Impact tested)

11. Hydro., pneu., or comb. test press. 132 (pneu.) Proof test -

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: SA240-304 12.000" 1.500" 0" Welded  
Stationary (Mat'l Spec. No.) Dia., in. (subject to press.) Nom. thk., in. Corr. Allow., in. Attachment (welded or bolted)

Floating (Mat'l Spec. No.) Dia., in. Nom. thk., in. Corr. Allow., in. Attachment

13. Tubes: SA249-TP304 0.625" 16 ga 154 Straight  
Mat'l Spec. No., Grade or Type O.D., in. Nom. thk., in. or gauge Number Type (Straight or U)

Items 14 - 18 Incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

14. Shell (a) No. of course(s) (2) (b) Overall length (ft & in.): 0' -2 1/8"

| No. | Course(s)     |                   | Material<br>Spec./Grade or Type | Thickness |       | Long. Joint (Cat. A) |                  |      | Circum. Joint (Cat. A, B & C) |                  |      | Heat Treatment |      |
|-----|---------------|-------------------|---------------------------------|-----------|-------|----------------------|------------------|------|-------------------------------|------------------|------|----------------|------|
|     | Diameter, in. | Length (ft & in.) |                                 | Nom.      | Corr. | Type                 | Full, Spot, None | Eff. | Type                          | Full, Spot, None | Eff. | Temp.          | Time |
| 1   | 12.750"       | 0' -2 1/8"        | SA312-TP304                     | 0.375"    | 0"    | S                    | None             | 85%  | 4                             | None             | -    | -              | -    |
| 2   | 12.750"       | 0' -2 1/8"        | SA312-TP304                     | 0.375"    | 0"    | S                    | None             | 85%  | 4                             | None             | -    | -              | -    |

15. Heads: (a) SA240-304, No H.T. (b) SA240-304, No H.T.  
(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp

|     | Location (Top, Bottom, Ends) | Thickness |       | Radius |         | Elliptical<br>Ratio | Conical<br>Apex Angle | Hemispherical<br>Radius | Flat<br>Diameter | Side to Pressure |         | Category A |                  |      |
|-----|------------------------------|-----------|-------|--------|---------|---------------------|-----------------------|-------------------------|------------------|------------------|---------|------------|------------------|------|
|     |                              | Min.      | Corr. | Crown  | Knuckle |                     |                       |                         |                  | Convex           | Concave | Type       | Full, Spot, None | Eff. |
| (a) | End                          | 1.500"    | 0"    |        |         |                     |                       |                         | 12.000"          |                  |         | S          | None             | 1    |
| (b) | End                          | 1.500"    | 0"    |        |         |                     |                       |                         | 12.000"          |                  |         | S          | None             | 1    |

If removable, bolts used (describe other fastening) SA193-B8, Ø3/4" x 5" lg, (12) each end.  
(Mat'l Spec. No., Grade, Size, No.)

16. MAWP 250 (internal) (external) psi at max temp. 200 (internal) (external) °F. Min. design metal temp. -20 °F at 250 psi.  
 17. Impact test No. Exempt per UHA 51(d)(1)(a).  
 (Indicate yes or no and the component(s) impact tested)  
 18. Hydro., pneu., or comb. test press. 330 (pneu.) Proof test

19. Nozzles, inspection, and safety valve openings:

| Purpose (Inlet, Outlet, Drain, etc.) | No. | Diameter or Size | Flange Type | Material |        | Nozzle Thickness |       | Reinforcement Material | How Attached |        | Location (Insp. Open.) |
|--------------------------------------|-----|------------------|-------------|----------|--------|------------------|-------|------------------------|--------------|--------|------------------------|
|                                      |     |                  |             | Nozzle   | Flange | Nom.             | Corr. |                        | Nozzle       | Flange |                        |
| Inlet                                | 2   | 1 1/4"           |             | *        |        | 0.191"           | 0"    | Inherent               | **           |        | Head (a)               |
| Outlet                               | 2   | 3"               |             | *        |        | 0.300"           | 0"    | Inherent               | **           |        | Head (a)               |
| Inlet /Outlet                        | 2   | 4"               | 150#SO      | *        | ***    | 0.237"           | 0"    | Inherent               | **           | Welded | Shell                  |
| Vent                                 | 1   | 3/4"             | CPLG        |          | ***    | 3000#            | 0"    | Inherent               |              | ****   | Shell                  |
| Drain                                | 1   | 1"               | CPLG        |          | ***    | 3000#            | 0"    | Inherent               |              | ****   | Shell                  |
| Equal.                               | 2   | 1/4"             | CPLG        |          | ***    | 3000#            | 0"    | Inherent               |              | ****   | Head (a) Outlet        |


20. Supports: Skirt No Lugs No Legs No Others (2) Saddles Attached Welded to shell  
 (Yes or No) (No.) (No.) (Describe) (Where and how)

21. Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report:  
 (List the name of part, item number, mfg's. name and identifying number)

22. Remarks: Model IX-1215C for non-lethal, non-corrosive service. Pressure relief devices by others.  
 No insp. open. per UG 46(a). Channel girth flanges, SA240-304.  
 \* SA312-TP304. \*\* UW 16.1(c). \*\*\* SA182-F304. \*\*\*\* UW 16.1(z-1).

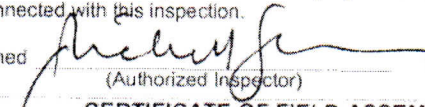
**CERTIFICATE OF SHOP COMPLIANCE**

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.  
 U Certificate of Authorization No. 31,095 Expires 06/17/2002

Date 07/14/2000 Name ISOTHERM, INC. (Manufacturer) Signed  (Representative)

**CERTIFICATE OF SHOP INSPECTION**

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Texas and employed by IB & M RE, Inc of Arlington, Texas have inspected the pressure vessel described in this Manufacturer's Data Report on 7-18-00 and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 7-18-00 Signed  (Authorized Inspector) Commissions 9441A-TX-1066 (Nat'l Board incl. endorsement, State, Province and No.)

**CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE**

We certify that the statements on this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME Code, Section VIII, Division 1.  
 U Certificate of Authorization No. Expires

Date Name Signed (Assembler) (Representative)

**CERTIFICATE OF FIELD ASSEMBLY INSPECTION**

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of and employed by have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items not included in the certificate of shop inspection, have been inspected by me and to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with ASME Code, Section VIII, Division 1. The described vessel was inspected and subjected to a hydrostatic test of psi. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Signed (Authorized Inspector) Commissions (Nat'l Board incl. endorsement, State, Province and No.)