



PO Box 700005  
Tulsa, Oklahoma 74170  
(918) 252-2571  
(918) 252-2574 Fax  
Sales@CoolersbyRR.com

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## AIR COOLED EXCHANGERS

September 7, 2011

Natural Gas Compression Systems, Inc.  
2480 Aero Park Drive  
Traverse City, MI 49686

**RE: R&R Engineering Cooler Model UI-13-25, S/N R-548  
Purchase Order: 111327-C380**

Enclosed, please find data documents for the R&R Engineering Co., Inc. product referenced above. The enclosed documents include:

- Basic Operating and Maintenance Instructions
- Warranty
- Specification Sheet, If Applicable
- Form U-1A Manufacturer's Data Reports, If Applicable
- Final Drawing

If you require additional information, please don't hesitate to contact us at (918) 252-2571. It has been a pleasure doing business with you.

Sincerely,  
The Entire Staff  
R&R Engineering Co., Inc.

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PROVEN PERFORMANCE SINCE 1968

R & R ENGINEERING CO., INC.  
TULSA, OKLAHOMA

-----SPECIFICATION SHEET-----

CUSTOMER	NATURAL GAS COMPRESSION	DATE	08/13/2010
REFERENCE	3516LEAFRC-JGH/4	ITEM	08NG120(10)
MODEL	UI-13-25	NUMBER REQUIRED:	ONE
R&R SERIAL NUMBER:	R-548	FILE:	R-548.DOC

-----PERFORMANCE OF ONE UNIT-----

FLUID	EJW	TAW	IC1	IC2	AC
FLOW, LBM/HR	269874.	157200.	11600.	11486.	11384.
, GPM OR MMSCFD	525.200	301.092	4.506	4.448	4.396
PCT EG OR GAS SP.GR.	50.00	50.00	0.81	0.81	0.82
TEMPERATURE IN, DEG F	180.0	128.0	280.0	260.0	245.0
TEMPERATURE OUT, DEG F	165.0	122.0	120.0	120.0	120.0
INLET PRESSURE, PSIA	NOMINAL	NOMINAL	85.5	212.7	474.0
PRESSURE DROP, PSI.	6.0	7.1	3.9	4.4	1.9
DUTY, BTU/HR	3486120.	789360.	950174.	830433.	759419.
CORRECTED MTD, DEG F	45.6	13.0	51.8	46.5	45.0
BARE TUBE RATE	130.2	113.9	50.1	72.2	76.8
FOULING	0.00100	0.00100	0.00100	0.00100	0.00100
BARE TUBE SURF., SQ.FT.	586	534	367	247	219
TOTAL SURFACE, SQ.FT.	9383	11434	5865	5298	3518

-----CONSTRUCTION-----

NUMBER OF SECTIONS	1	1	1	1	1
TUBES/SECTION	144	82	90	38	54
LENGTH, FEET	25	25	25	25	25
ROWS - PASSES	4 - 1	4 - 2	5 - 1	4 - 2	4 - 1
TUBE O.D. AND BWG	0.625x16	1.000x16	0.625x16	1.000x16	0.625x16
TUBE MATERIAL	SA214	SA214	SA214	SA214	SA214
DESIGN PRESS., PSI.	150	150	200	250	550
DESIGN TEMP. DEG.F	300	300	330	330	330
NOZZLES	6"150#RF	3"150#RF	6"150#RF	4"300#RF	4"300#RF
HEADERS	CARBON STEEL, BOX TYPE WITH REMOVABLE PLUGS				
PLUG TYPE	TAPERED	SHOULDER	SHOULDER	SHOULDER	SHOULDER
PLUG MATERIAL	STEEL	STEEL	STEEL	STEEL	STEEL
FINS	ALUMINUM, ANGLE BASE, MECHANICALLY BONDED				
ASME CODE STAMP	NO	NO	YES	YES	YES
NATIONAL BOARD	NO	NO	YES	YES	YES
C.R.N.	NO	NO	NO	NO	NO
GROOVED TUBEHOLES	NO	YES	YES	YES	YES
CORROSION ALLOW., INCHES	0.000	0.000	0.000	0.000	0.000
SHUTTERS - MANUAL	NO	NO	YES	YES	YES

-----AIR DATA-----

INLET AIR, DEG F	105.0	ELEVATION, FEET	50.
OUTLET AIR, DEG F	130.2	TOTAL SCFM REQUIRED	248912.

-----MECHANICAL EQUIPMENT-----

FAN	CLASS 10000VT	DRIVE	DRIVER
NUMBER	ONE	V-BELT	TYPE
HP/FAN	78	SIZE	MAKE
RPM	290	NUMBER	SIZE
DIAMETER	156"	LARGE SHV.	HP/DRIVER
BLADES	10	SMALL SHV.	RPM
PITCH	14.6°@	CLEVIS	ENCLOSURE
MAKE	MOORE SER. 48	RATIO	
MATERIAL	ALUMINUM	AGMA HP	VOLTAGE
BORE	3 7/16"	COUPLING	PHASE
ROTATION	LEFT		CYCLES
WEIGHT		REMARKS:	



**FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS**  
 (Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)  
 As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by R & R Engineering Company, Inc., 12585 East 61st Street, Tulsa, OK 74012  
(Name and address of Manufacturer)

2. Manufactured for NATURAL GAS COMPRESSION 2480 AERO PARK DRIVE, TRAVERSE CITY, MI 49686  
(Name and address of Purchaser)

3. Location of installation Unknown  
(Name and address)

4. Type HORIZ. R-548.3 N/A R-548 2207 2011  
(Horizontal or vertical, tank) (Manufacturer's serial number) (CRN) (Drawing number) (National Board Number) (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Div. 1 2010  
Year

to N/A None None  
(Addenda (date)) (Code Case numbers) (Special service per UG-120(d))

6. Shell N/A N/A N/A N/A N/A  
(Material spec. number, grade) (Nominal thickness) (Corr. allow.) (Inner diameter) (Length (overall))

7. Seams Corner Joint N/A 100 N/A N/A N/A N/A N/A -- --  
[Long. (welded, dbl., sngl., lap, butt)] [R.T. (spot or full)] (Eff., %) [H.T. temp. (°F)] (Time, hr) [Girth (welded, dbl., sngl., lap, butt)] [R.T. (spot or full)] (Eff., %) (No. of courses)

8. Heads: (a) Material SA516-70 (b) Material SA516-70  
(Spec. no., grade) (Spec. no., grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemi-spherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	T & P Sheet	3/4"	0"	Max	Span	6 7/8"	--	--	7 5/8"	29 1/8"
(b)	Wrap & Ends	3/8"	0"	Max	Span	5 7/8" -	--	--	6 1/8" -	36"

If removable, bolts used (describe other fastenings) 180 PCS 3/4"X16 SHOULDER STEEL PLUGS SA105  
(Material spec. number, grade, size, number)

9. MAWP 200 N/A psi at max temp. 330 N/A °F.  
(Internal) (External) (Internal) (External)

Min. design metal temp. -20 °F at 200 psi. Hydro., pneu., or comb. test pressure 260 psi.

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diameter or Size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Inlet	1	6" 150	RFWN	SA106-B	SA105	XH	0"	Weld	UW-16.1(a)	Welded	Head
Outlet	1	6" 150	RFWN	SA106-B	SA105	XH	0"	Weld	UW-16.1(a)	Welded	Head

11. Supports: Skirt NO Lugs N/A Legs N/A Other Channels Attached Welded to 1 Header  
(Yes or No) (Number) (Number) (Describe) (Where and how)

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

90 Pcs 5/8"X16 Ga SA214 Steel Tubes 25'0" Long

Exempt from Impact Testing Per UG-20(f) and UCS-66. Constructed in conformance with Appendix 28

**CERTIFICATE OF SHOP/FIELD 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 BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. "U" Certificate of Authorization Number 10139  
 expires FEB. 28, 2012.

Date 8/24/11 Co. Name R & R ENGINEERING CO., INC. Signed Beverly Kendrick  
(Manufacturer) (Representative)

**CERTIFICATE OF SHOP/FIELD INSPECTION**

Vessel constructed by R & R ENGINEERING CO., INC. at Tulsa, Oklahoma  
 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 Oklahoma and employed by HSB CT

have inspected the component described in this Manufacturer's Data Report on 9/2/11, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her 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 9/2/11 Signed [Signature] Commissions NB136354/OK969  
(Authorized Inspector) (National Board (incl. endorsements), State, Province, and number)



**FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS**  
**(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)**  
**As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1**

1. Manufactured and certified by R & R Engineering Company, Inc., 12585 East 61st Street, Tulsa, OK 74012  
(Name and address of Manufacturer)

2. Manufactured for NATURAL GAS COMPRESSION 2480 AERO PARK DRIVE, TRAVERSE CITY, MI 49686  
(Name and address of Purchaser)

3. Location of installation Unknown  
(Name and address)

4. Type HORIZ. R-548.4 N/A R-548 2208 2011  
(Horizontal or vertical, tank) (Manufacturer's serial number) (CRN) (Drawing number) (National Board Number) (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Div. 1 2010  
Year

to N/A None None  
(Addenda (date)) (Code Case numbers) (Special service per UG-120(d))

6. Shell N/A N/A N/A N/A N/A  
(Material spec. number, grade) (Nominal thickness) (Corr. allow.) (Inner diameter) (Length (overall))

7. Seams Corner Joint N/A 100 N/A N/A N/A N/A N/A -- --  
(Long. welded. dbl. sngl. lap. butt) [R.T. (spot or full)] (Eff., %) [H.T. temp. (°F)] (Time, hr) [Girth (welded. dbl. sngl. lap. butt)] [R.T. (spot or full)] (Eff., %) (No. of courses)

8. Heads: (a) Material SA516-70 (b) Material SA516-70  
(Spec. no., grade) (Spec. no., grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemi-spherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	T & P Sheet	3/4"	0"	Max	Span	7 7/8"	--	--	8 5/8"	23 1/2"
(b)	Wrap & Ends	3/8"	0"	Max	Span	3 7/8"	--	--	4 1/8"	31 3/8"

If removable, bolts used (describe other fastenings) 76 PCS 1 1/8"X12 SHOULDER STEEL PLUGS SA105  
(Material spec. number, grade, size, number)

9. MAWP 250 N/A psi at max temp. 330 N/A °F.  
(Internal) (External) (Internal) (External)  
 Min. design metal temp. -20 °F at 250 psi. Hydro., pneu., or comb. test pressure 325 psi.

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diameter or Size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Inlet	1	4" 300	RFWN	SA106-B	SA105	XH	0"	Weld	UW-16.1(a)	Welded	Head
Outlet	1	4" 300	RFWN	SA106-B	SA105	XH	0"	Weld	UW-16.1(a)	Welded	Head

11. Supports: Skirt NO Lugs N/A Legs N/A Other Channels Attached Welded to 1 Header  
(Yes or No) (Number) (Number) (Describe) (Where and how)

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

38 Pcs 1"X16 Ga SA214 Steel Tubes 25'0" Long  
 Exempt from Impact Testing Per UG-20(f) and UCS-66. Constructed in conformance with Appendix 28

**CERTIFICATE OF SHOP/FIELD 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 BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. "U" Certificate of Authorization Number 10139  
 expires FEB. 28, 2012.

Date 8/24/11 Co. Name R & R ENGINEERING CO., INC. Signed Beverly Kendrick  
(Manufacturer) (Representative)

**CERTIFICATE OF SHOP/FIELD INSPECTION**

Vessel constructed by R & R ENGINEERING CO., INC. at Tulsa, Oklahoma  
 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 Oklahoma and employed by HSB CT

have inspected the component described in this Manufacturer's Data Report on 9/2/11, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her 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 9/2/11 Signed [Signature] Commissions NB13635A/OK969  
(Authorized Inspector) (National Board (incl. endorsements), State, Province, and number)



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**As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1**

1. Manufactured and certified by R & R Engineering Company, Inc., 12585 East 61st Street, Tulsa, OK 74012  
(Name and address of Manufacturer)
2. Manufactured for NATURAL GAS COMPRESSION 2480 AERO PARK DRIVE, TRAVERSE CITY, MI 49686  
(Name and address of Purchaser)
3. Location of installation Unknown  
(Name and address)
4. Type HORIZ. R-548.5 N/A R-548 2209 2011  
(Horizontal or vertical, tank) (Manufacturer's serial number) (CRN) (Drawing number) (National Board Number) (Year built)
5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Div. 1 2010  
Year
- to N/A None None  
(Addenda (date)) (Code Case numbers) (Special service per UG-120(d))
6. Shell N/A N/A N/A N/A N/A  
(Material spec. number, grade) (Nominal thickness) (Corr. allow.) (Inner diameter) (Length (overall))
7. Seams Corner Joint N/A 100 N/A N/A N/A N/A N/A -- --  
(Long. (welded, dbl., sngl., lap, butt)) [R.T. (spot or full)] (Eff., %) [H.T. temp. (°F)] (Time, hr) [Girth (welded, dbl., sngl., lap, butt)] [R.T. (spot or full)] (Eff., %) (No. of courses)
8. Heads: (a) Material SA516-70 (b) Material SA516-70  
(Spec. no., grade) (Spec. no., grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemi-spherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	T & P Sheet	3/4"	0"	Max	Span	5 1/2"	--	--	6 1/2"	22 3/8"
(b)	Wrap & Ends	1/2"	0"	Max	Span	3 7/8"	--	--	4 1/8"	27 7/8"

If removable, bolts used (describe other fastenings) 108 PCS 3/4"X16 SHOULDER STEEL PLUGS SA105  
(Material spec. number, grade, size, number)

9. MAWP 550 N/A psi at max temp. 330 N/A °F.  
(Internal) (External) (Internal) (External)
- Min. design metal temp. -20 °F at 550 psi. Hydro., pneu., or comb. test pressure 715 psi.

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diameter or Size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Inlet	1	4" 300	RFWN	SA106-B	SA105	XH	0"	Weld	UW-16.1(a)	Welded	Head
Outlet	1	4" 300	RFWN	SA106-B	SA105	XH	0"	Weld	UW-16.1(a)	Welded	Head

11. Supports: Skirt NO Lugs N/A Legs N/A Other Channels Attached Welded to 1 Header  
(Yes or No) (Number) (Number) (Describe) (Where and how)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report:

(Name of part, item number, Manufacturer's name and identifying stamp)  
54 Pcs 5/8"X16 Ga SA214 Steel Tubes 25'0" Long, (1) 2"-3000# HALF CPLG, SA105; (1) 2"-3000# TOL, SA105  
Exempt from Impact Testing Per UG-20(f) and UCS-66. Constructed in conformance with Appendix 28

**CERTIFICATE OF SHOP/FIELD 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 BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. "U" Certificate of Authorization Number 10139  
 expires FEB. 28, 2012.

Date 8/24/11 Co. Name R & R ENGINEERING CO., INC. Signed Beverly Kendrick  
(Manufacturer) (Representative)

**CERTIFICATE OF SHOP/FIELD INSPECTION**

Vessel constructed by R & R ENGINEERING CO., INC. at Tulsa, Oklahoma  
 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 Oklahoma and employed by HSB CT

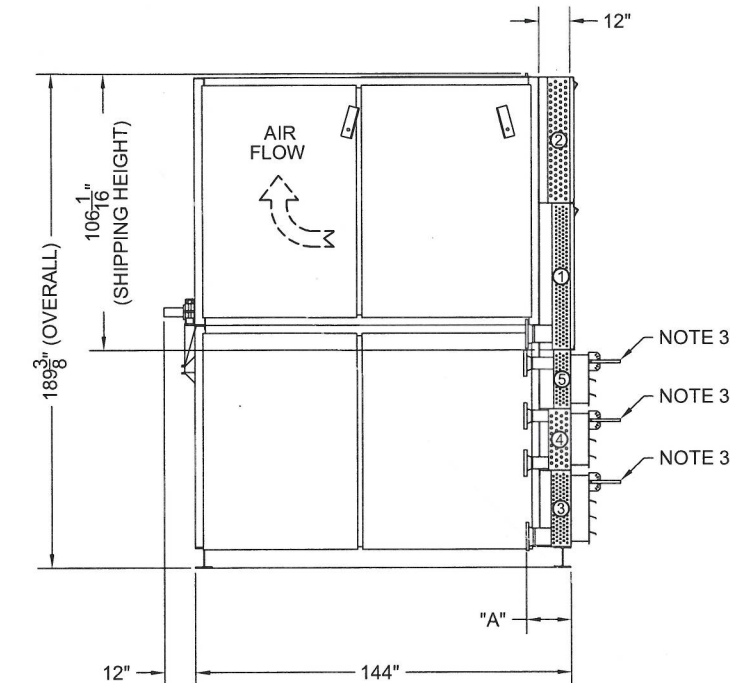
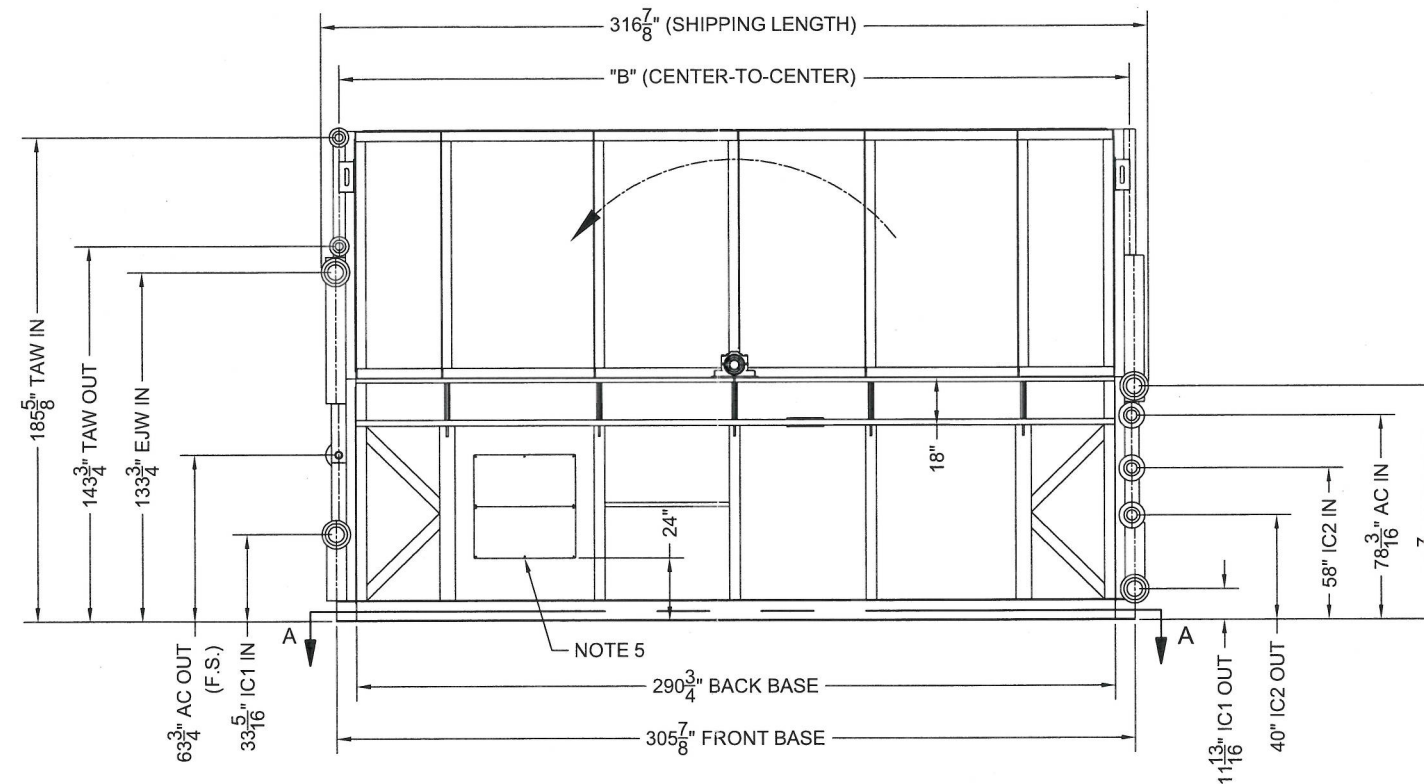
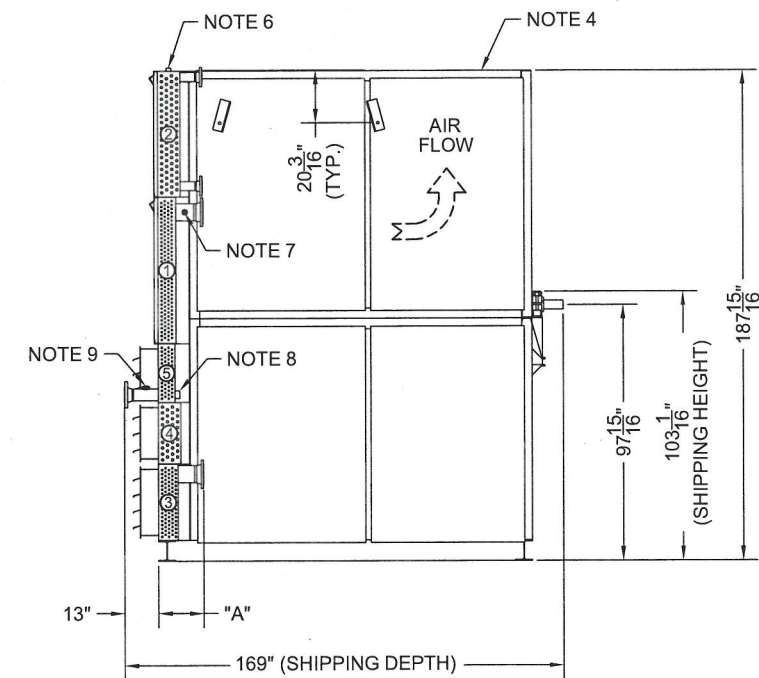
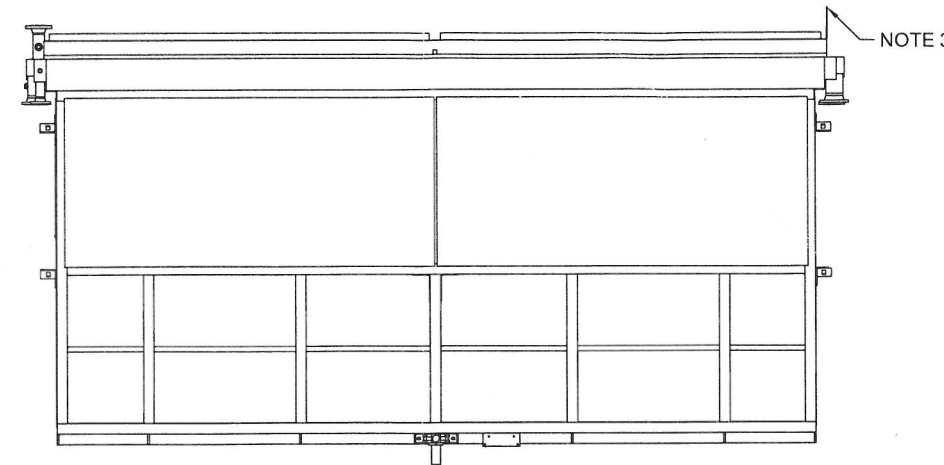
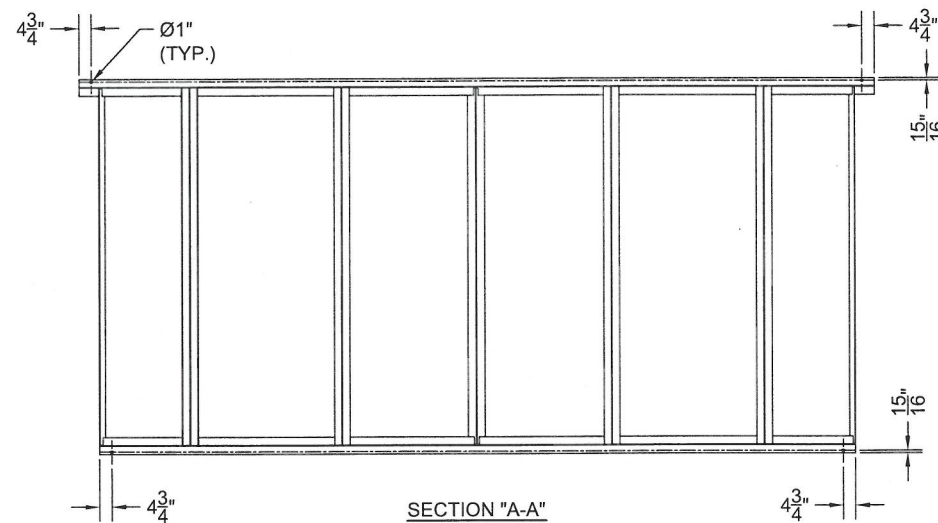
have inspected the component described in this Manufacturer's Data Report on 9/2/11, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her 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 9/2/11 Signed [Signature] Commissions NB19635A/OK969  
(Authorized Inspector) (National Board (incl. endorsements), State, Province, and number)



RELEASED FOR FABRICATION  
CERTIFIED CORRECT

By *JW* Date *8-9-11*



- NOTES:  
1. COOLER TO BE PAINTED WITH R&R STANDARD RED PRIMER.  
2. COOLER TO BE SPLIT FOR SHIPPING.  
3. MANUAL LOUVER OPERATOR LOCATION.  
4. WELDED GUARD OVER DISCHARGE.  
5. 39" x 45" ACCESS DOOR.  
6. 1"-3000# HALF COUPLING.  
7. 1"-3000# THREADOLET.  
8. 2"-3000# HALF COUPLING.  
9. 2"-3000# THREADOLET.

BEARING DATA		FAN DATA		REFERENCE DIMENSIONS				
FAN:	3 7/16" D.I. PB	TYPE:	MOORE CLASS 10000 VT	COIL	DIM "A"	DIM "B"	DIM "C"	DIM "D"
IDLER:	2 3/16" FAN & BLOWER (BY CUSTOMER)	SERIES:	48	1	17 3/8"	305 3/4"		
		HP:	78	2	17 1/8"	302 7/8"		
		RPM:	290	3	17 3/8"	305 7/8"		
		DIAMETER:	156"	4	18 1/8"	303 7/8"		
		BLADES:	10	5	18 1/8"	303 7/8"		
		PITCH:	14.6° @ CLEVIS	6				

REVISIONS			
REV	DESCRIPTION	DATE	BY
1	CORRECTED AUX. CONNECTIONS IN COIL DATA FOR COILS 1 & 2.	08/08/11	DNA

COIL DATA					
COIL 1	COIL 2	COIL 3	COIL 4	COIL 5	COIL 6
SERVICE: EJW	SERVICE: TAW	SERVICE: IC1	SERVICE: IC2	SERVICE: AC	SERVICE:
DESIGN/TEST PRES: 150/195 PSIG	DESIGN/TEST PRES: 200/260 PSIG	DESIGN/TEST PRES: 250/260 PSIG	DESIGN/TEST PRES: 250/325 PSIG	DESIGN/TEST PRES: 550/715 PSIG	DESIGN/TEST PRES:
MDMT/DESIGN TEMP: ---/300°F	MDMT/DESIGN TEMP: ---/300°F	MDMT/DESIGN TEMP: -20/330°F	MDMT/DESIGN TEMP: -20/330°F	MDMT/DESIGN TEMP: -20/330°F	MDMT/DESIGN TEMP:
ASME CODE STAMP: NO	ASME CODE STAMP: NO	ASME CODE STAMP: YES	ASME CODE STAMP: YES	ASME CODE STAMP: YES	ASME CODE STAMP:
NATIONAL BOARD: NO	NATIONAL BOARD: NO	NATIONAL BOARD: YES	NATIONAL BOARD: YES	NATIONAL BOARD: YES	NATIONAL BOARD:
<b>CONNECTIONS</b>	<b>CONNECTIONS</b>	<b>CONNECTIONS</b>	<b>CONNECTIONS</b>	<b>CONNECTIONS</b>	<b>CONNECTIONS</b>
INLET: (1) 6"-150# RF WN	INLET: (1) 3"-150# RF WN	INLET: (1) 6"-150# RF WN	INLET: (1) 4"-300# RF WN	INLET: (1) 4"-300# RF WN	INLET:
OUTLET: (1) 6"-150# RF WN	OUTLET: (1) 3"-150# RF WN	OUTLET: (1) 6"-150# RF WN	OUTLET: (1) 4"-300# RF WN	OUTLET: (1) 4"-300# RF WN	OUTLET:
AUX: (1) 1"-3000# TOL	AUX: (1) 1"-3000# HALF CPLG	AUX:	AUX:	AUX: (1) 2"-3000# HALF CPLG	AUX:
AUX:	AUX:	AUX:	AUX:	AUX: (1) 2"-3000# TOL	AUX:
<b>LOUVER / GUARD</b>	<b>LOUVER / GUARD</b>	<b>LOUVER / GUARD</b>	<b>LOUVER / GUARD</b>	<b>LOUVER / GUARD</b>	<b>LOUVER / GUARD</b>
CORE GUARD	CORE GUARD	MANUAL LOUVERS	MANUAL LOUVERS	MANUAL LOUVERS	

**R&R ENGINEERING CO., INC.**  
P.O. Box 70005  
Tulsa, Oklahoma 74170  
(918) 252-2571  
(918) 252-2574 Fax

CUSTOMER: **NATURAL GAS COMPRESSION SYSTEMS, INC.**

BY: DNA DATE: 06/24/2011

SPEC. SHEET: 08NG120.DOC

P.O. #: PO111327-C380

EST. SHIP WT: TOP - 18,000 LBS.  
BOTTOM - 27,000 LBS.

DRAWING REVISION #: 1

ONE MODEL: UI-13-25

DRAWING NO.: R-548