



**OIL & GAS DEVELOPMENT COMPANY LIMITED**  
**KPD-TAY PLANT.**



**TOR / SOW FOR HIRING OF TRANSPORTATION & RIGGING SERVICES**  
**FOR GAS COMPRESSOR PACKAGE AT KPD-TAY PLANT**

**Tender Doc No. TE/MECH/WT/KPD-0003/2023**

## 1 INTRODUCTION

Oil and Gas Development Company Ltd (OGDCL) is Pakistan's National Oil & Gas Exploration and Production Company. OGDCL is currently operating Country's largest Oil & Gas sector.

KPD-TAY Integrated Development Project Phase-II is a Gas & NGL Processing Plant, located in Hyderabad District about 25 km away from Hyderabad City and approx. 195 km from Karachi, Sindh Province of Pakistan.

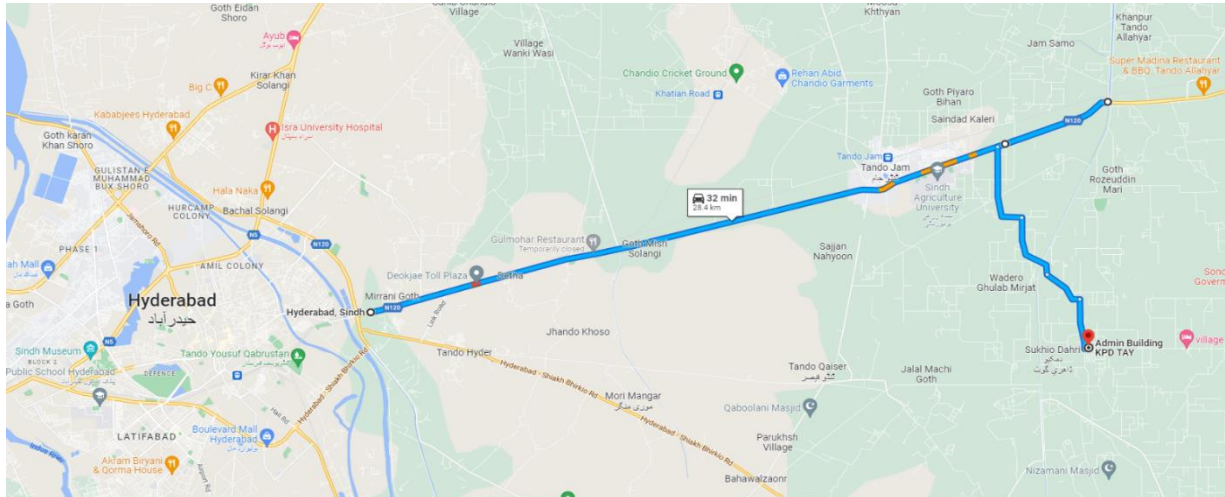


Figure 1: Location of the Plant

## 2 SCOPE OF WORK

OGDCL intends to relocate a Gas Engine driven Compressor Package from Qadirpur Gas Plant located in District Ghotki (Origin) to KPD-TAY Plant, located in District Hyderabad (Destination) for which Transportation (From Origin to Destination) & Rigging Services (at Destination Only) are required to unload Compressor Package from Trailers.

All the activities to be performed in line with industry best practices, superior quality workmanship and in safe manner. The Scope of Work comprises of following:

- 2.1 Supply of 3<sup>rd</sup> Party Certified Trailers along with experienced crew for transportation of Compressor Package Skid, Cooler Skid and Auxiliary Equipment / Piping / Components / Valves & Accessories from Qadirpur Gas Plant, Ghotki Sindh to KPD-TAY Plant, Tando Jam, Hyderabad. As per estimate 02 Nos Low Bed, 40ft Trailers will be required for transportation of aforesaid machinery and items. The bidders may visit site for their working before submission of bid. The payment against Hiring of Trailers will be paid as per actual requirement / quantity of trailers engaged.
- 2.2 Supply of Lifting & Rigging services along with 3<sup>rd</sup> Party Certified Hydraulic Telescopic Crane (atleast 160 Tonnes Weight Lifting Capacity), Accessories (Slings, Shackles, Rope Wires, Ropes etc.) and 3<sup>rd</sup> Party Certified Crew for Unloading of Compressor Package Skid, Cooler Skid and accessories from Trailers after arrival at KPD-TAY Plant. The skids will be placed directly on civil foundations aligned to each other as per Assembly Drawing.

The contractor shall provide detailed lifting plan for unloading of Compressor Package Skid (Weight: ~ 61 Tonnes) and Cooler Skid (Weight: ~ 25 Tonnes) including complete detail of accessories etc. along with marked load chart of crane to ensure safe rigging.

The dimensions and weights of Skids are provided in Annexure-1 of this scope of work along with Drawings of Compressor Package for reference.

The Contractor may visit site before submission of bid for estimation of required crane capacity and understanding of area layout to prepare lifting plan accordingly.

### 3 WARRANTIES AND GUARANTEES

Contractor will be required to render warranties and guaranties for all of the works to be completed as part of this SOW. Contractor shall have primary accountability and responsibility for safe execution of all works which constitute part of SOW in timely and safe manner. In the event of any mishap arising from deviation from best industrial practices, Contractor shall have responsibility to take remedial action and rectify all issues under the scope of this Contract and with no additional cost to Company. Contractor shall hold full responsibility for safe planning & execution of all jobs under this SOW up to Company's satisfaction.

### 4 PROJECT EXECUTION PLAN.

No	Activity Description	Time for Activity	Notes
1.	Award of Contract	0	Start of Contract
2.	Kick off meeting	1 day	
3.	Site visit by Contractor team (onsite)	1~2 days	
4.	Execution of Scope of Work	2~3 days	Tentative Schedule: 1-10 <sup>th</sup> November 2023

### 5 METHODOLOGY AND EXECUTION STRATEGY

- 5.1 Contractor will prepare detailed Journey Management Plan for transportation of loads considering prevailing local geo-political and environmental conditions at the time of execution and submit to the Company for approval.
- 5.2 Contractor will ensure use of 3<sup>rd</sup> party certified Trailers for transportation of compressor package and auxiliaries.
- 5.3 Contractor will ensure that the compressor package & auxiliary equipment to be transported is secured and tied properly on the trailers to avoid damage during transportation.
- 5.4 Contractor will ensure use of water proof tarpaulins to safeguard all the equipment and components from dust and moisture ingress during transportation.
- 5.5 Contractor will prepare detailed lifting plans for unloading of loads considering all site related variables and submit to the Company for approval. Ample safety margin to be kept to ensure risk free execution of lifting jobs.
- 5.6 Contractor will ensure use of 3<sup>rd</sup> party certified and defect-free tools and equipment for execution of all works awarded under this SOW.
- 5.7 The Lifting / Rigging crew should be well experienced and 3<sup>rd</sup> Party Certified to conduct lifting operations.
- 5.8 Contractor will ensure adherence to Company's Work Procedures, Permit to Work System and Integrated HSE System Manual during planning and execution of all jobs under this scope of work.

### 6 GENERAL TERMS & CONDITIONS

- 6.1 Company will provide food and accommodation to Contractor's personnel at their camp located within the close proximity of KPD-TAY Gas Processing Plant.
- 6.2 All the documents to be produced by Contractor (Journey Management Plan, Lifting Plan etc.) will be in English language.
- 6.3 Company may request Bidder to submit sample Journey Management Plan / Lifting Plan etc. from their previous projects for reference during Technical/ Commercial bid evaluation stage.

- 6.4 Company reserves the right to monitor/ assess the performance of Contractor to ensure conformity with the Contract Documents. Contractor shall promptly rectify all such deficiencies and/or flaws that are brought to the Contractor's knowledge by the Company. Company's review/approval of any document shall not relieve the Contractor from any of their responsibilities/ accountabilities and obligations under the CONTRACT/ PO.
- 6.5 Company reserves the right to cancel the Contract/ PO at any stage without any obligation, if it proves that the objectives are not being achieved and / or suitably experienced people / equipment / machinery are not on-board to carry out the SOW.
- 6.6 Contractor will ensure that all equipment and accessories are properly covered, packed and tied to safeguard from environmental effects and any possible damage during road transportation.
- 6.7 Contractor shall be responsible to arrange all ropes, tie-belts and tarpaulins in sufficient quantity to safeguard loads onto the trailers. All the ropes, tie-belts and tarpaulins should be in defect-free and in healthy condition.
- 6.8 The Tyres and Prime Movers of Trailers should be in very good condition and fit for use in line with local, provincial and federal regulations.
- 6.9 The Trailer Drivers must possess valid HTV Licence and permits in line with local, provincial and federal regulations and should have minimum 10 years of experience of HTV.
- 6.10 The Crane Operator must possess valid HTV Licence, must be 3rd party certified and have permits in line with local, provincial and federal regulations and should have minimum 10 years of experience of Crane Operation.
- 6.11 Contractor to ensure use of certified lifting tools and accessories including spreader bars (if required) for safe lifting and rigging of heavy loads and skids.
- 6.12 Contractor will ensure that skids are unloaded and placed aligned to each other as per requirement and satisfaction of OGDCL.
- 6.13 Contractor shall be responsible to ensure safe transportation of all equipment and accessories from Qadirpur Plant to KPD-TAY Plant and shall be responsible to replace and rectify any damaged item during transportation.

## **7 DOCUMENTS TO BE SUBMITTED ALONG WITH TECHNICAL BIDS**

Following documents should be attached with the technical bids:

- 7.1 CV of Team Lead / Supervisor proposed by the bidder to carry out this SOW. CVs should include exact description of similar works completed along with brief details of their scope/role.
- 7.2 CVs of Rigging Crew along with Third Party Certification documents.
- 7.3 Third Party Certification, Load Chart & Lifting Plan of Selected Crane.
- 7.4 Detailed Execution Methodology, rigging study along with Resource Deployment Plan.

## **8 COMMERCIAL QUOTE SUBMISSION**

This is single stage TWO ENVELOPE bid submission.

Therefore Technical and Financial bids will be submitted in two separate sealed envelopes (then placed in single envelope and sealed & stamped by the bidder with transparent tape on sealing flap).

Financial bids to be submitted in accordance with the financial bids format. Financial bids will only be opened after completing the technical bids evaluation process and for the technically compliant bidders.

**Financial Bid Format.**

Sr No.	Scope of Work	Cost on Lump Sum Basis (PKR)
1	<p>Supply of Lifting &amp; Rigging Services along with 3rd Party Certified Hydraulic Telescopic Crane(at least 160 Tonnes Weight Lifting Capacity), Accessories (Slings, Shackles, Rope Wires, Ropes etc.) and 3rd Party Certified Crew for Unloading of Compressor Package Skid and Cooler Skid at KPD-TAY Plant, Tando Jam, Hyderabad in line with SOW &amp; T&amp;Cs defined in Scope of Work Document.</p> <p>The cost should include all the expenditures including diesel and consumables for operation of crane at site and mob/ demob cost to / from KPD-TAY Plant.</p>	
2	<p>Supply 02 Nos. of 3<sup>rd</sup> Party Certified 40ft, Low Bed Trailers along with Crew, tarpaulins , Ropes, Tie-Belts etc. as per SOW for Shifting of Compressor Package &amp; Cooler Skids (61 Tonnes &amp; 25 Tonnes Weight) from Qadirpur Gas Plant to KPD-TAY Plant.</p> <p>Refer attached drawings for Skids Dimensions.</p>	
<b>TOTAL QUOTE VALUE (PKR)</b>		
<p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. Quoted prices shall be inclusive of all taxes, duties, levies, and charges. ICT/PST (which ever applicable) on services shall be quoted as separate line item accordingly to applicability on each line item on the basis of province wherein the services are being rendered.</li> <li>2. 100% payment shall be made through account payee cheque after completion of jobs awarded as per Contract / PO and submission of final report along with invoice duly accepted/approved by OGDCL. Taxes shall be deducted at source.</li> <li>3. Quote validity should be 90 days from the date of submission.</li> <li>4. Prices shall not vary within the Quote validity.</li> </ol>		

**ANNEXURE-1****LIST OF DOCUMENTS ATTACHED WITH SCOPE OF WORK DOCUMENT**

Sr #	Description	Document
1	GA Drawings of Compressor Package	V38690200-01~15-02
2	Compressor Package Weight Details	KT-ECR-1104-63-LL-001 REV.00

**NOTE:** Additional docs will be provided by Company on request and as per requirement of the Bidder.



# VALERUS COMPRESSION

Document #: KT-ECR-1104-63-LL-001 REV.00

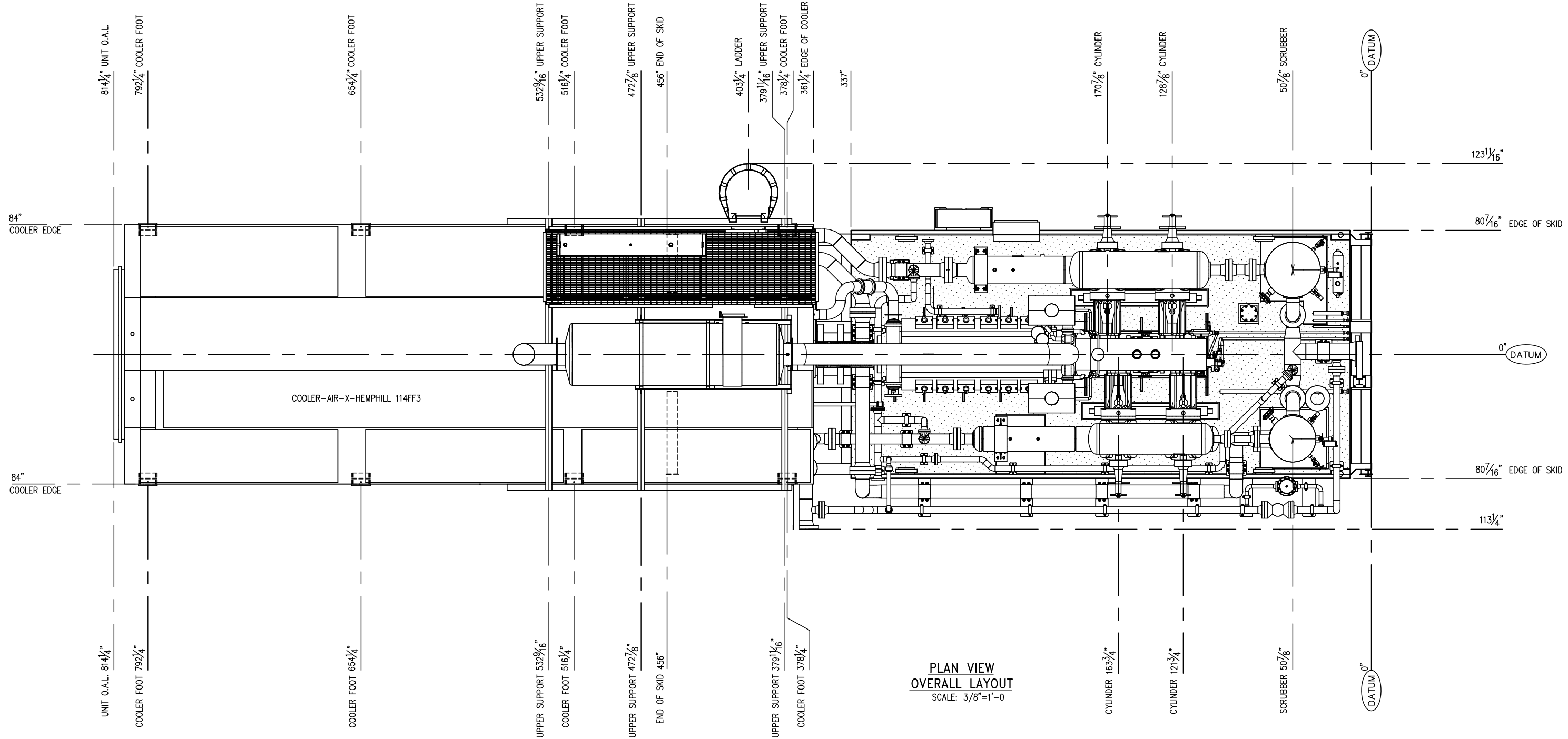
## Compressor Package Weight

**Unit Number** FG102477  
**Customer** OIL AND GAS DEVELOPMENT COMPANY  
**Description** 5794/JGT4 (2)9.125T x 6.75T

Components Shipping With Skid		
Engine	22,750 Lbs.	WAUK 5794/7044GSI
Frame & Cylinders	20,967 Lbs.	JGT
Crosshead Supports	1,382 Lbs.	FG501104
Coupling	559 Lbs.	FS70-28
Scrubbers	8,952 Lbs.	FG501167 & FG501168
Bottles	8,735 Lbs.	FG501169-FG501172
Skid	58,147 Lbs.	FG501173
Fuel Filter	250 Lbs.	FG102031
Weld Pipe	6,646 Lbs.	
Misc. Piping, Etc.	5,136 Lbs.	4 % of on-skid items

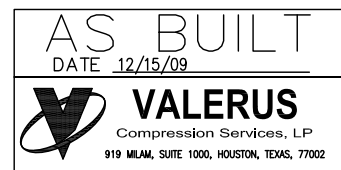
Additional Components For Complete Package		
Ladder	441 Lbs.	
Muffler/Support	2,320 Lbs.	EAC4-67-14/FG102188
Exhaust Pipe	900 Lbs.	
Surgetank	380 Lbs.	FG102013
Catwalk	780 Lbs.	FG501265
Cooler	43,500 Lbs.	49598
Additional Weld Pipe	4,189 Lbs.	
Valves	2,800 Lbs.	
Misc. Piping, Etc.	1,106 Lbs.	2 % of ship loose items

Total w/ Cooler	<b>189,940 Lbs.</b>
Total w/o Cooler	<b>133,530 Lbs.</b> (Shipping Weight)



**PLAN VIEW  
OVERALL LAYOUT**  
SCALE: 3/8"=1'-0"

- NOTE:
- 316SS/NACE PROCESS VALVE & INSTRUMENT CONNECTIONS
  - EXTRA WIRE TO BE BUNDLED AT EDGE OF SKID.
  - 100% X-RAY VESSELS AND PIPING.
  - SUCTION VALVE, SUCTION SPOOL (10"600#S/XH, OAL 30"), & DISCHARGE VALVES TO SHIP LOOSE.
  - HARDNESS TEST ALL WELDS. PHWT IF FAILURE.
  - TOTAL UNIT WEIGHT: 189,940 LBS; UNIT WEIGHT MINUS COOLER & FALL OFF: 133,530 LBS
  - TOTAL UNIT CG: X: 286.02 Y: 53.02 Z: 0.95  
UNIT MINUS COOLER & FALL OFF: X: 180.30 Y: 37.84 Z: 3.19
  - SHIP LOOSE ORIFICE PLATES R0-2030/R0-2011
  - BAY CITY TO SUPPLY PAST THIS POINT.
  - BAY CITY TO SUPPLY ENGINE WATER JACKET PIPING & EXHAUST PIPING.
  - FULL BORE ORIFICES INSTALLED IN R2010/2032/2033/2041/2021,  
INSTALL SUPPLIED ORIFICES IF NEEDED.



DATE	DRAWN	CHECKED	APPROVED
6/1/09	CDN	-	

CLIENT: OGDCL

TITLE: COMPRESSOR PACKAGE  
GENERAL ARRANGEMENT OVERALL  
REFERENCE: MD-V3869 (AS-BUILT)

SCALE: 3/8"=1'-0"	FG# FG102477	JOB#
DRAWING NUMBER	SHEETS	REV
V38690200-01-02	SHT# 1 OF 15	2

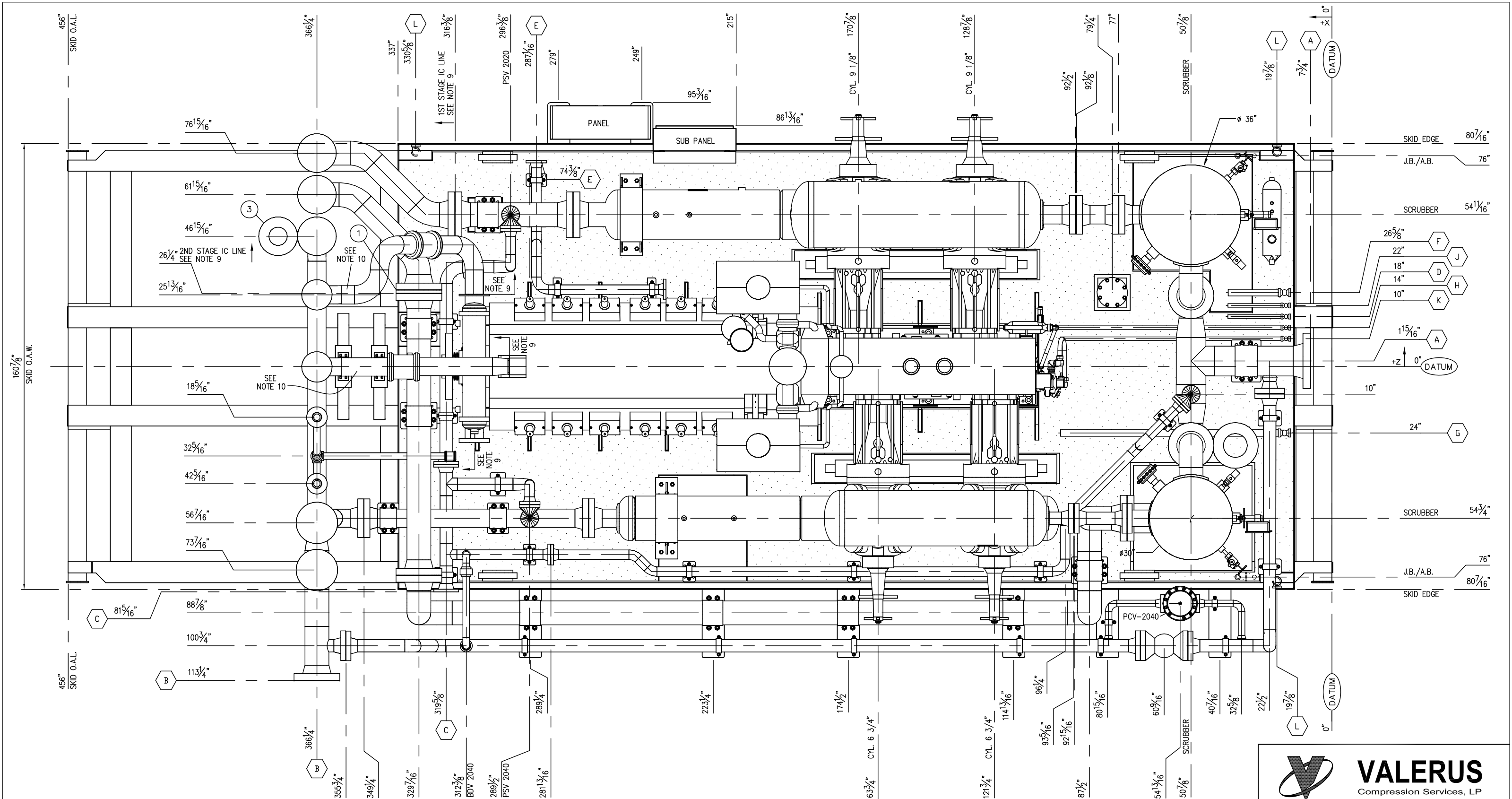
L	FOUR	2"	2000 LB.	FNPT	SKID DRAINS	11 5/8"
K	ONE	1"	2000 LB.	FNPT	LUBE OIL MAKEUP	21 7/16"
J	ONE	1"	2000 LB.	FNPT	INSTRUMENT AIR SUPPLY	21 7/16"
H	ONE	1"	2000 LB.	FNPT	EJW LOW POINT DRAIN / TAW DRAIN	21 7/16"
G	ONE	2"	2000 LB.	FNPT	ENGINE AND COMPRESSOR OIL DRAIN	22"
F	ONE	2"	2000 LB.	FNPT	FUEL GAS INLET	22"
E	ONE	3"	150 LB.	RFWN	LOW PRESSURE VENT HEADER	22 1/2"
D	ONE	1"	2000 LB.	FNPT	SCRUBBER DRAINS	21 7/16"
C	ONE	4"	150 LB.	RFWN	HIGH PRESSURE VENT HEADER	24 1/2"
B	ONE	8"	600 LB.	RFWN	UNIT DISCHARGE	22 1/2"
A	ONE	10"	600 LB.	RFWN	UNIT SUCTION	32 11/16"
MK	QTY	SIZE	RATING	TYPE	SERVICE	ELEVATION

FIG. 8 BLIND No.	SINGLE STAGE	TWO STAGE
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②	<input type="radio"/> OPEN	<input checked="" type="radio"/> CLOSED
①	<input checked="" type="radio"/> CLOSED	<input type="radio"/> OPEN

COMPRESSOR	SHIMS	ENGINE
ARIEL JGT-4	(10) SM20/3/4" SHM	(2) 9 1/8" (2) 6 3/4"
WAUKESHA 5794	SOLE PLATES & GROUT	COMPRESSION
TBWOODS FSH70-28	1/4" SHIM	DIST/PC SUPPORT
AIR-X-HEMPHILL 114FF3	(10) CAPSCREW, 3/4" x 5" LG.	ENGINE
-	(8) CAPSCREW, 1" x 5" LG.	COMPRESSION
-	SHV, 6C, 24.4" OD W/F QD	DIST/PC SUPPORT
-	SHV, 6C, 9.4" OD W/F QD	COOLER
-	SHV, 6C, 8.4" OD W/E QD	ENGINE
-		IDLER


REV.	DESCRIPTION	DATE	BY	CK
2	AS BUILT - NOTES	12/15/09	RB	ML/RL
1	REVISED PER ECN #552	11/19/09	RB	ML/RL
0	ISSUED FOR CONSTRUCTION	10/5/09	RB	AM/RL

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PLAN VIEW  
SKID ONLY  
SCALE: 1/2"=1'-0"

AS BUILT  
DATE 12/15/09



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Compression Services, LP  
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REV.	DESCRIPTION	DATE	BY	CK
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1	REVISED PER ECN #552	11/19/09	RB	ML/RL
0	ISSUED FOR CONSTRUCTION	10/5/09	RB	AM/RL



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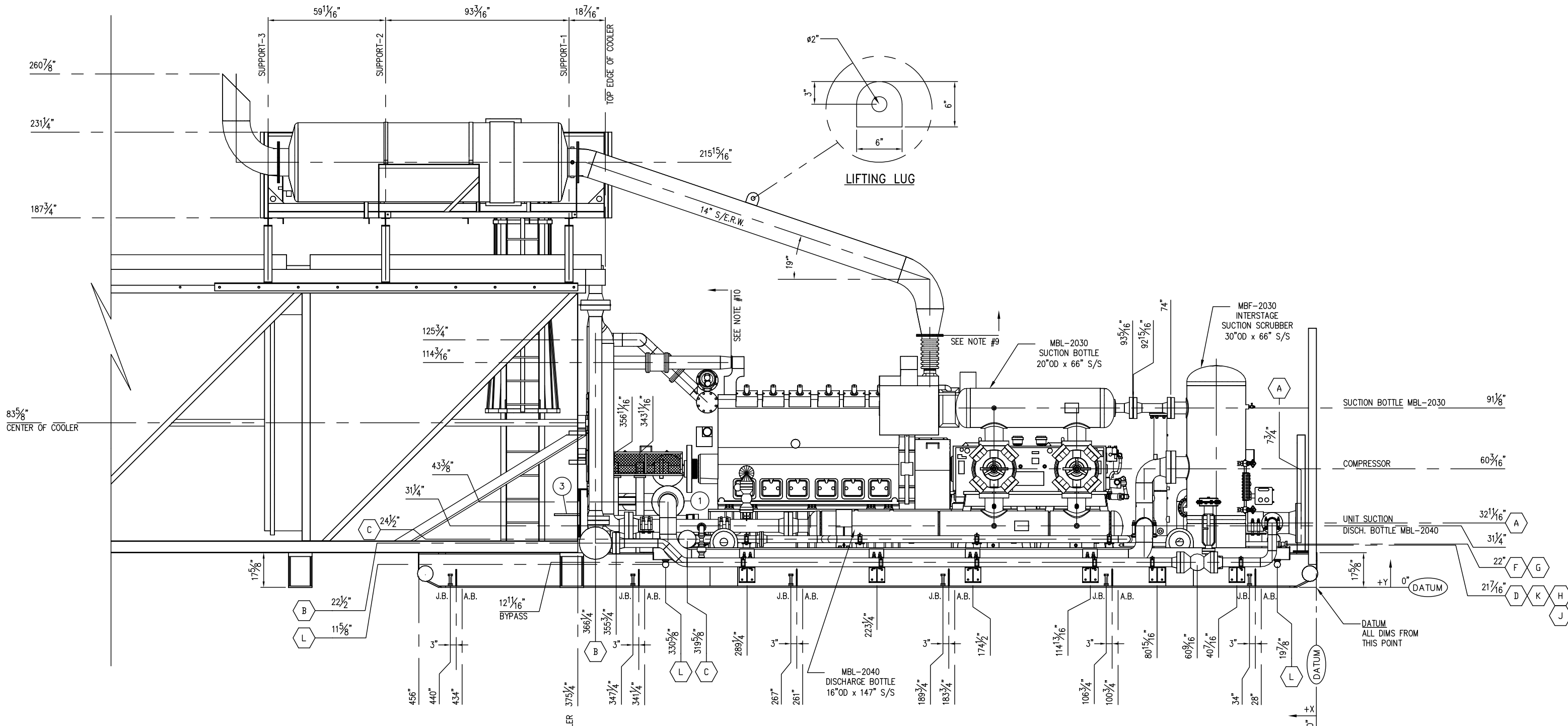
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6/1/09	CDN	-	

CLIENT: OGDCL

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GENERAL ARRANGEMENT SKID ONLY  
REFERENCE: MD-V3869 (AS-BUILT)

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V38690200-02-02	SHT# 2 OF 15	2





DATE	DRAWN	CHECKED	APPROVED
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GENERAL ARRANGEMENT  
SOUTH SIDE VIEW

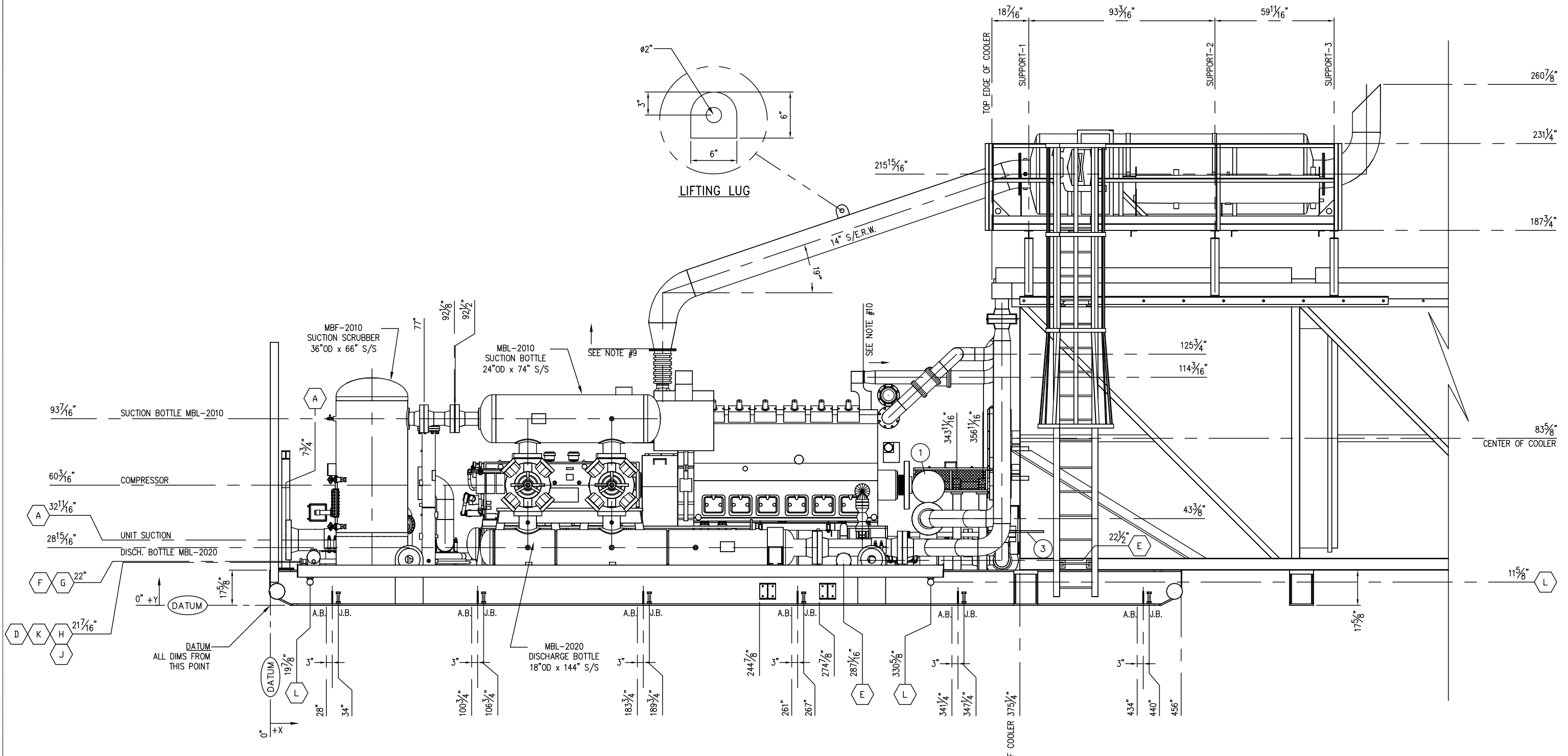
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**AS BUILT**  
DATE: 12/15/09

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**NORTH VIEW**  
SCALE: 1/2"=1'-0"

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TITLE: **COMPRESSOR PACKAGE  
GENERAL ARRANGEMENT  
NORTH SIDE VIEW**

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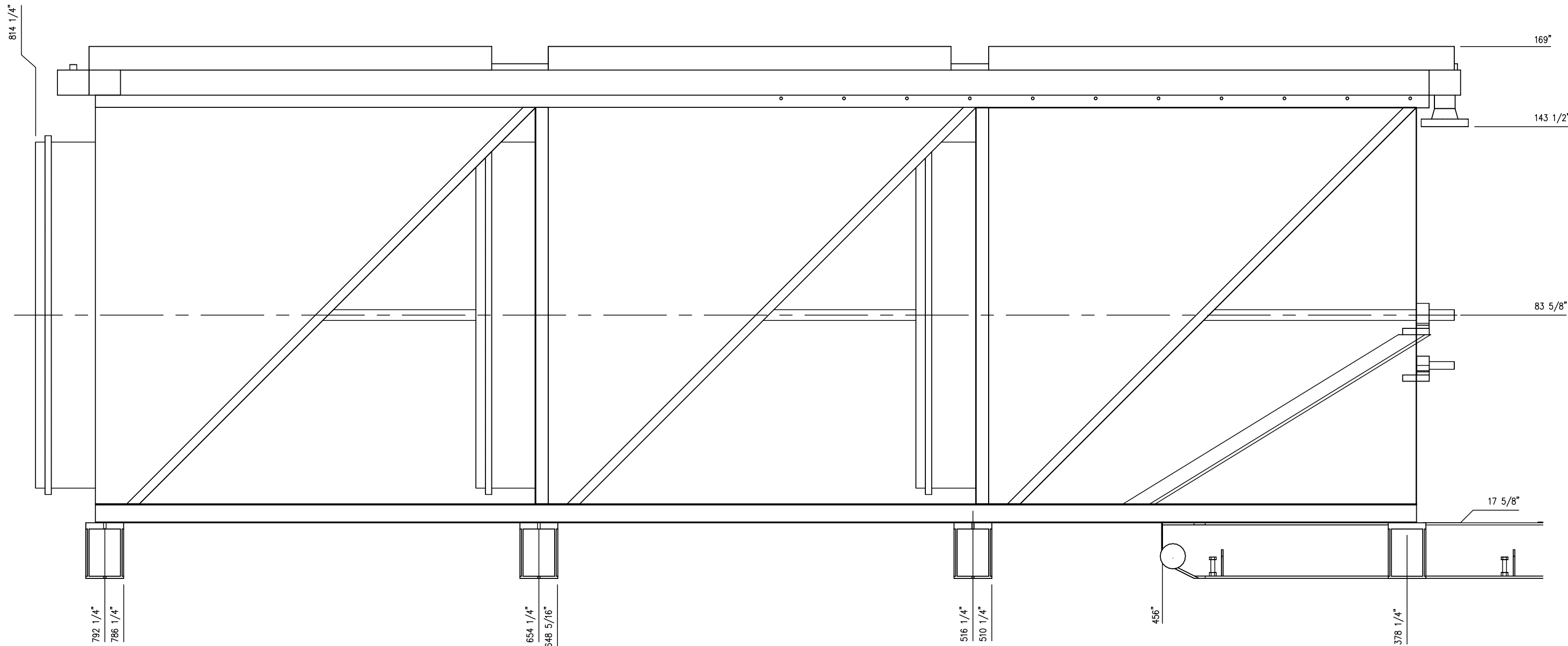
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DATE 12/15/09

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COOLER END VIEW



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TITLE  
COMPRESSOR PACKAGE  
GENERAL ARRANGEMENT  
COOLER LEFT SIDE VIEW

SCALE: 3/4" = 1'-0"	FG# FG102477	JOB#
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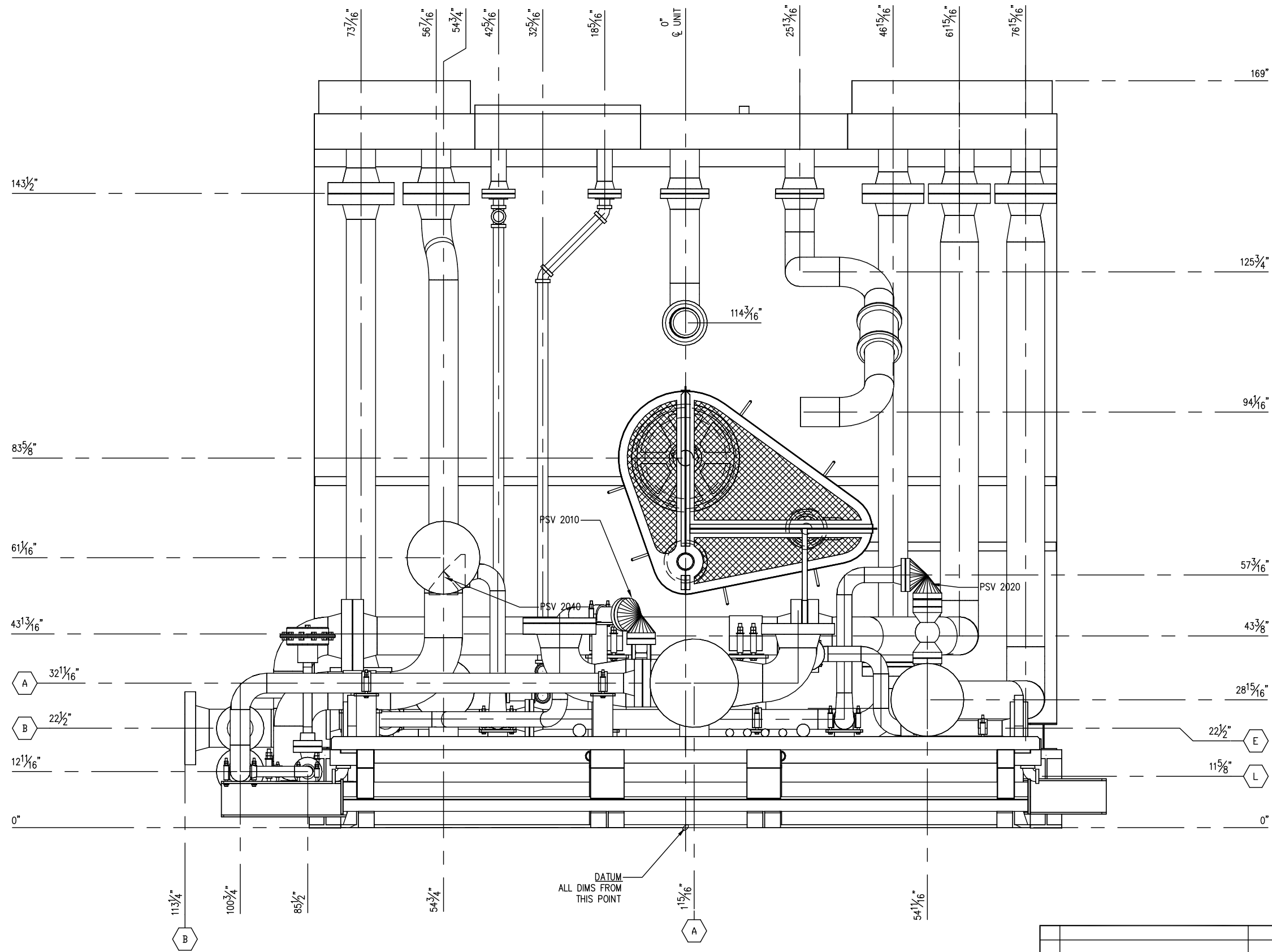
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COOLER END VIEW

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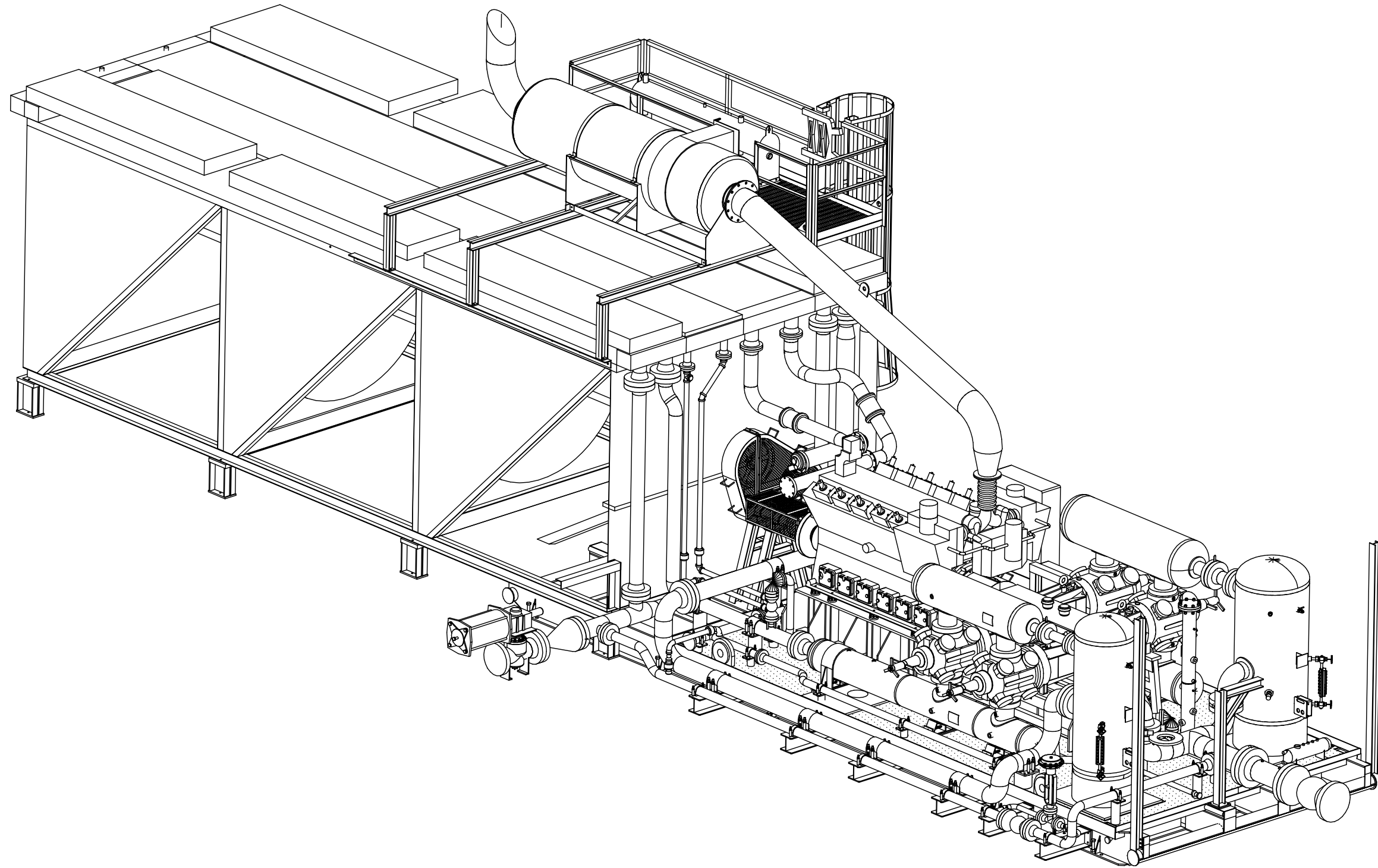
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TITLE: COMPRESSOR PACKAGE  
GENERAL ARRANGEMENT  
COOLER END VIEW


SCALE: 3/4" = 1'-0" FG# FG102477 JOB#

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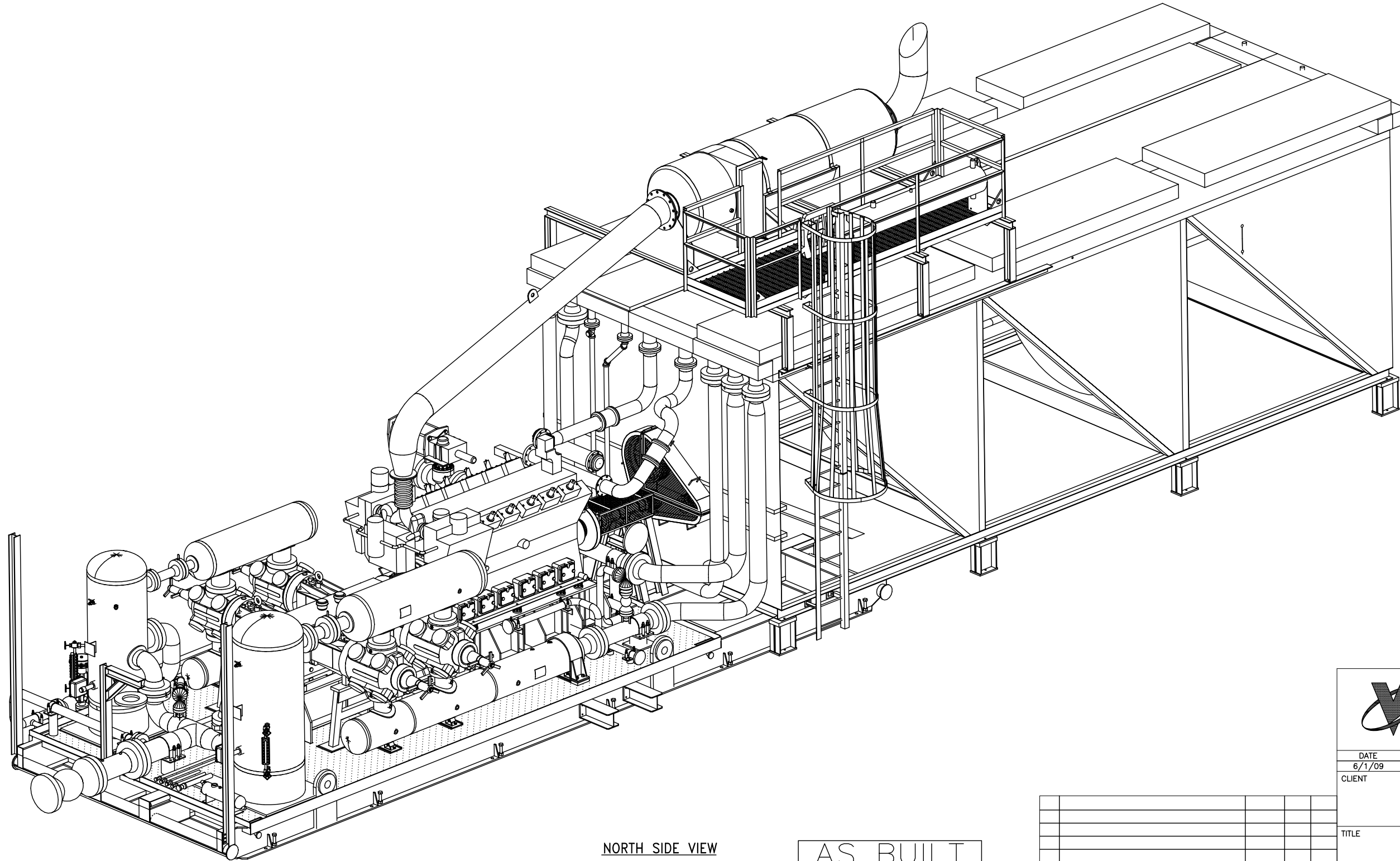


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DATE 6/1/09	DRAWN CDN	CHECKED -	APPROVED
CLIENT OGDCL			
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DRAWING NUMBER V38690200-07-02		SHEETS 7 OF 15	REV 2

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NORTH SIDE VIEW

AS BUILT  
DATE 12/15/09



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919 MILAM, SUITE 1000, HOUSTON, TEXAS, 77002

REV.	DESCRIPTION	DATE	BY	CK
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Compression Services, LP  
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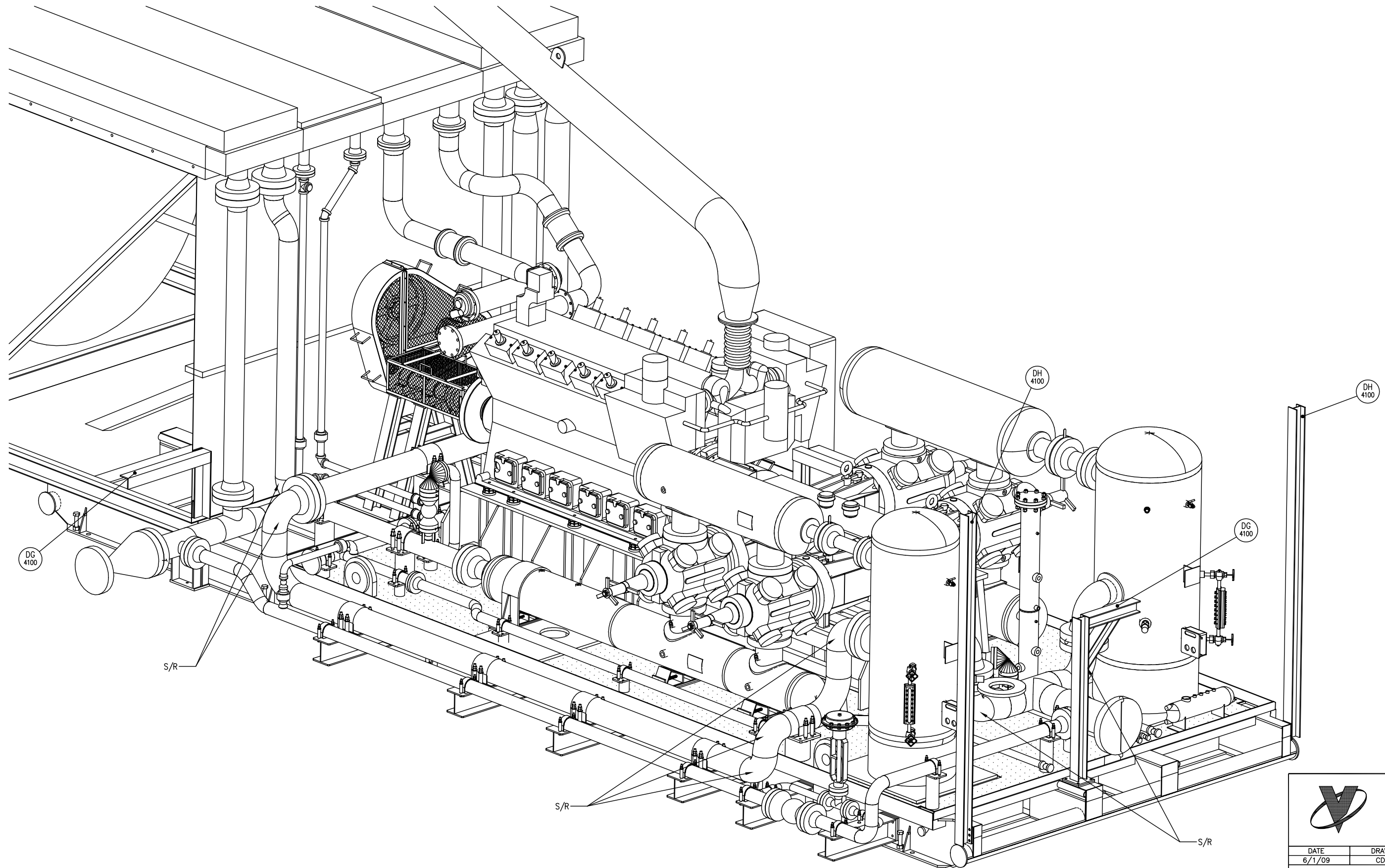
CLIENT  
OGDCL

TITLE  
COMPRESSOR PACKAGE  
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ISO VIEW 2


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V38690200-08-02	SHT# 8 OF 15	2


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REV.	DESCRIPTION	DATE	BY	CK
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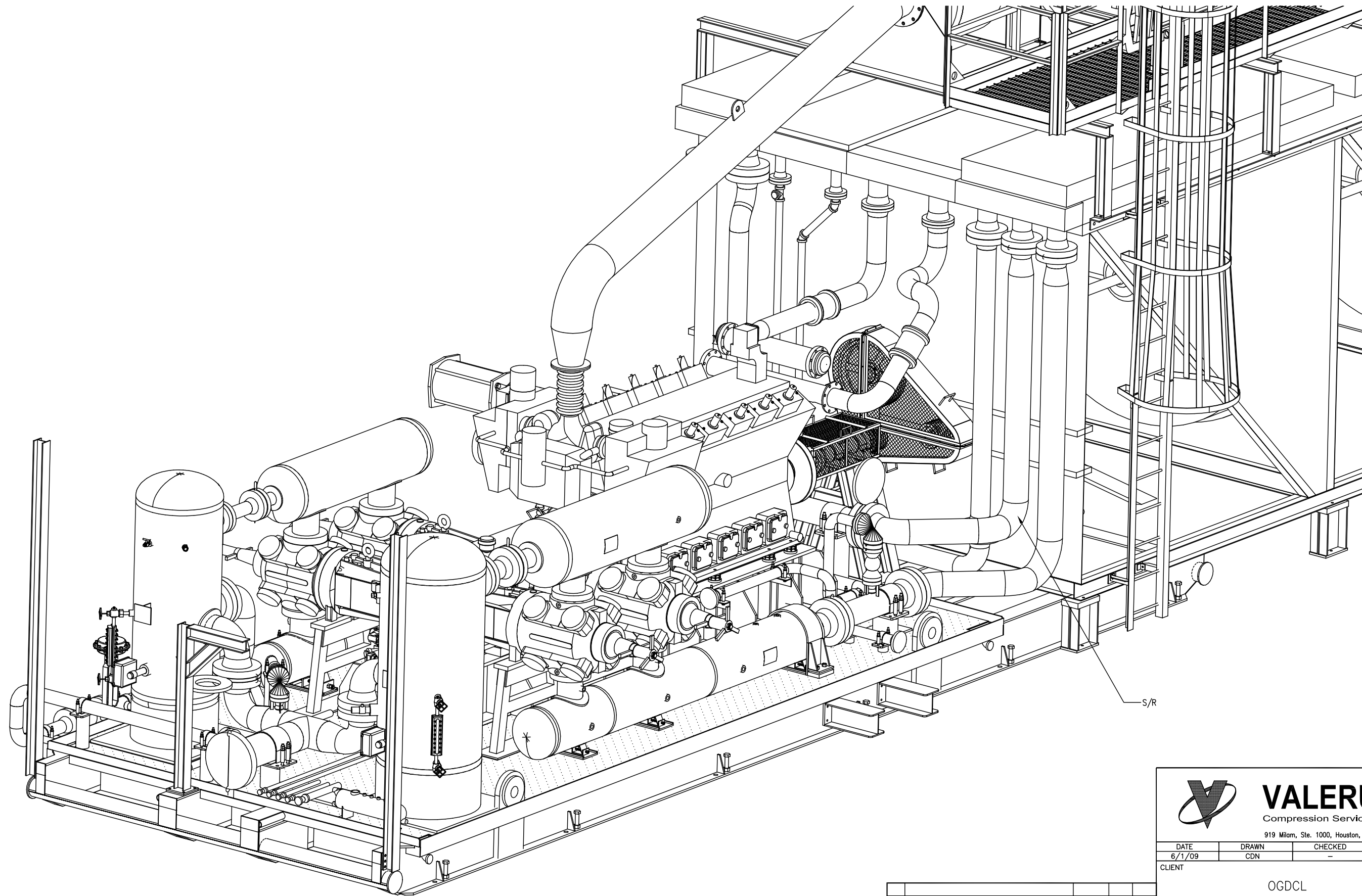
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6/1/09	CDN	-	

CLIENT: OGDCL

TITLE: COMPRESSOR PACKAGE GENERAL ARRANGEMENT ISO VIEW


SCALE: 3/4"=1'-0"	FG# FG102477	JOB#
DRAWING NUMBER	SHEETS	REV
V38690200-09-02	SHT# 9 OF 15	2

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ISOMETRIC IVEW

AS BUILT  
DATE 12/15/09



**VALERUS**  
Compression Services, LP  
919 MILAM, SUITE 1000, HOUSTON, TEXAS, 77002

REV.	DESCRIPTION	DATE	BY	CK
2	AS BUILT - NO CHANGES	12/15/09	RB	ML/RL
1	REVISED PER ECN #552	11/19/09	RB	ML/RL
0	ISSUED FOR CONSTRUCTION	10/5/09	RB	AM/RL



**VALERUS**  
Compression Services, LP  
919 Milam, Ste. 1000, Houston, TX, 77002

DATE	DRAWN	CHECKED	APPROVED
6/1/09	CDN	-	

CLIENT  
OGDCL

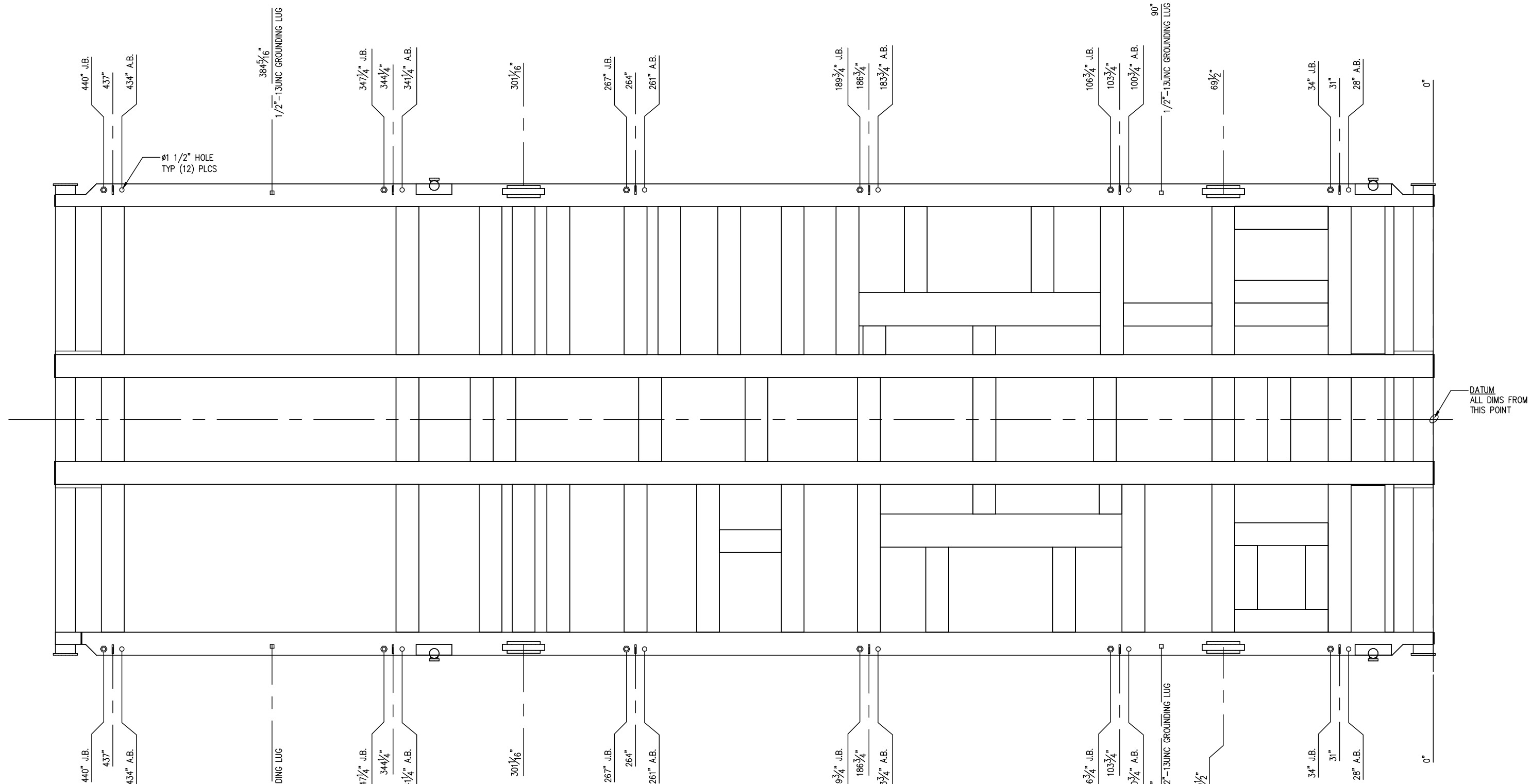
TITLE  
COMPRESSOR PACKAGE  
GENERAL ARRANGEMENT  
ISO VIEW

SCALE:	FG#	JOB#
3/4"=1'-0"	FG102477	

DRAWING NUMBER	SHEETS	REV
V38690200-10-02	SHT# 10 OF 15	2


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Ø1 1/2" HOLE  
TYP (12) PLCS

DATUM  
ALL DIMS FROM  
THIS POINT

**AS BUILT**  
DATE 12/15/09  
 **VALERUS**  
Compression Services, LP  
919 MILAM, SUITE 1000, HOUSTON, TEXAS, 77002

REV.	DESCRIPTION	DATE	BY	CK
2	AS BUILT - NO CHANGES	12/15/09	RB	ML/RL
1	REVISED PER ECN #552	11/19/09	RB	ML/RL
0	ISSUED FOR CONSTRUCTION	10/5/09	RB	AM/RL



**VALERUS**  
Compression Services, LP  
919 Milam, Ste. 1000, Houston, TX, 77002

DATE 6/1/09	DRAWN CDN	CHECKED -	APPROVED
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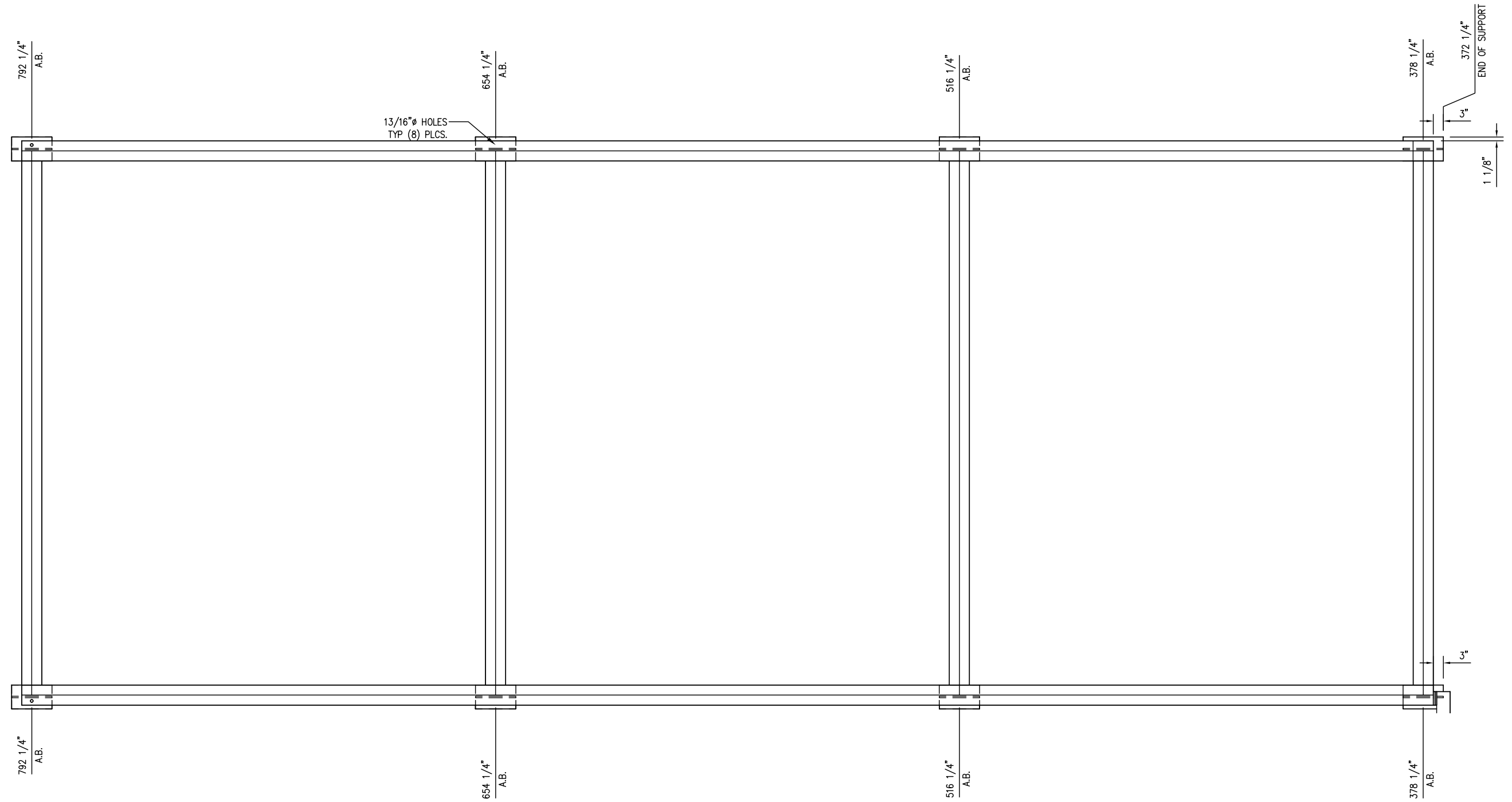
CLIENT  
OGDCL

TITLE  
COMPRESSOR PACKAGE  
GENERAL ARRANGEMENT  
ANCHOR BOLT LAYOUT

SCALE: 3/4" = 1'-0"	FG# FG102477	JOB#
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DRAWING NUMBER V38690200-11-02	SHEETS 11 OF 15	REV 2
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13/16" Ø HOLES  
TYP (8) PLCS.


NOTE:  
1. ALL DIMS ARE FROM DATUM.

**AS BUILT**  
DATE 12/15/09



**VALERUS**  
Compression Services, LP  
919 MILAM, SUITE 1000, HOUSTON, TEXAS, 77002

REV.	DESCRIPTION	DATE	BY	CK
2	AS BUILT - NO CHANGES	12/15/09	RB	ML/RL
1	REVISED PER ECN #552	11/19/09	RB	ML/RL
0	ISSUED FOR CONSTRUCTION	10/5/09	RB	AM/RL



**VALERUS**  
Compression Services, LP  
919 Milam, Ste. 1000, Houston, TX, 77002

DATE	DRAWN	CHECKED	APPROVED
6/1/09	CDN	-	

CLIENT  
OGDCL

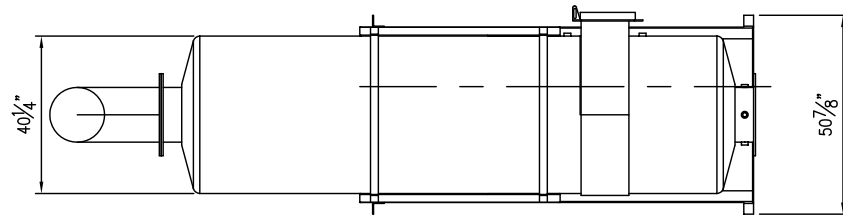
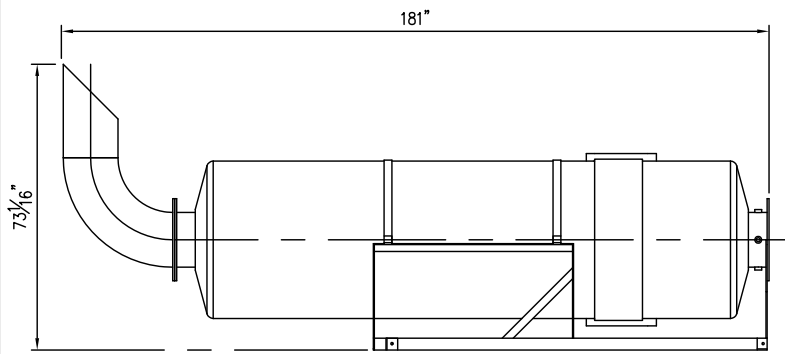
TITLE  
COMPRESSOR PACKAGE  
GENERAL ARRANGEMENT  
ANCHOR BOLT LAYOUT

SCALE:	FG#	JOB#
3/4" = 1'-0"	FG102477	

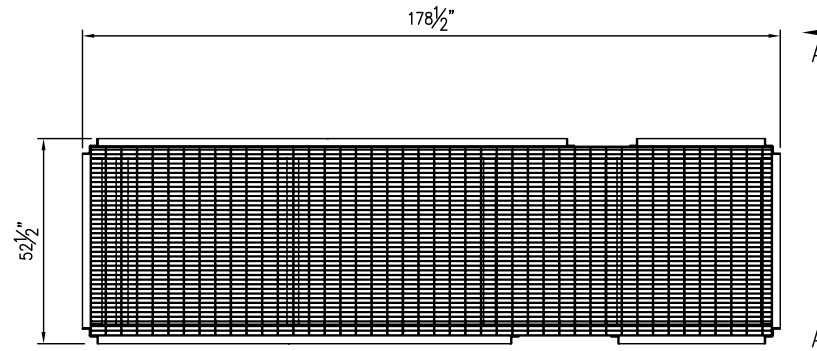
DRAWING NUMBER	SHEETS	REV
V38690200-12-02	SHT# 12 OF 15	2

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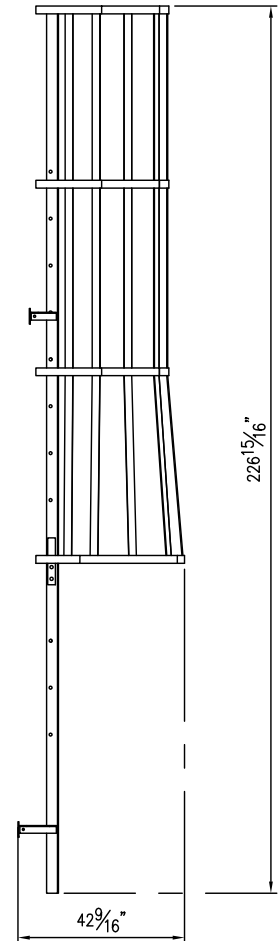
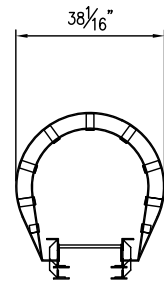
BAY CITY RESPONSIBLE FOR SHIP LOOSE ITEMS (SHEETS 13-15) FOR ALL 14 UNITS



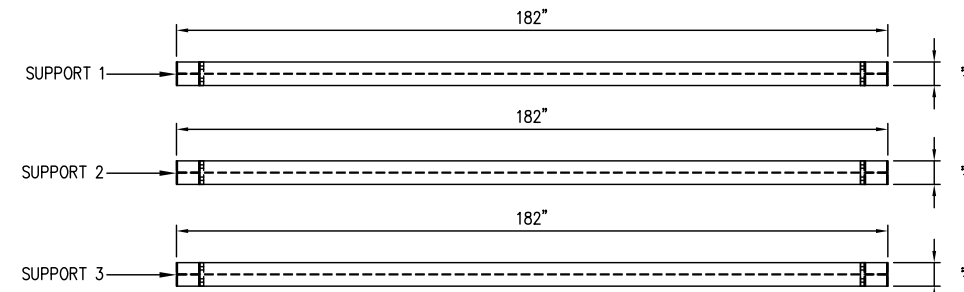
MUFFLER/MUFFLER SUPPORT



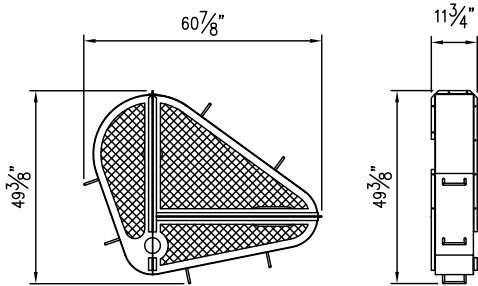
CATWALK



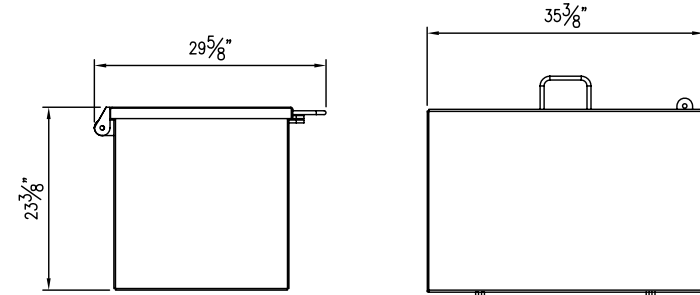
LADDER



CATWALK SUPPORTS PLAN VIEW

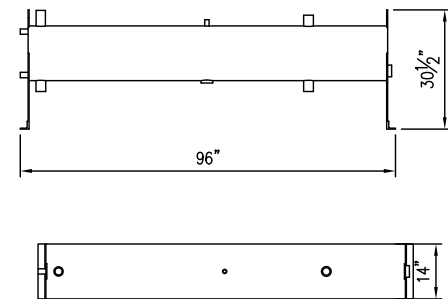


BELT GUARD

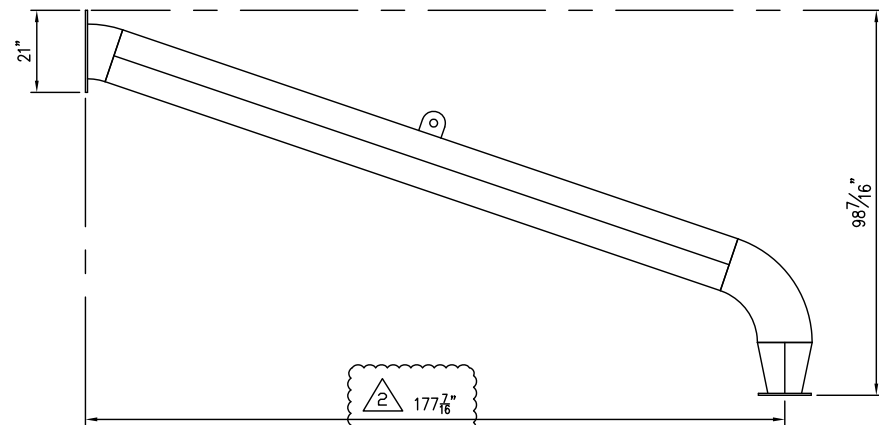


SPARE PARTS BOX

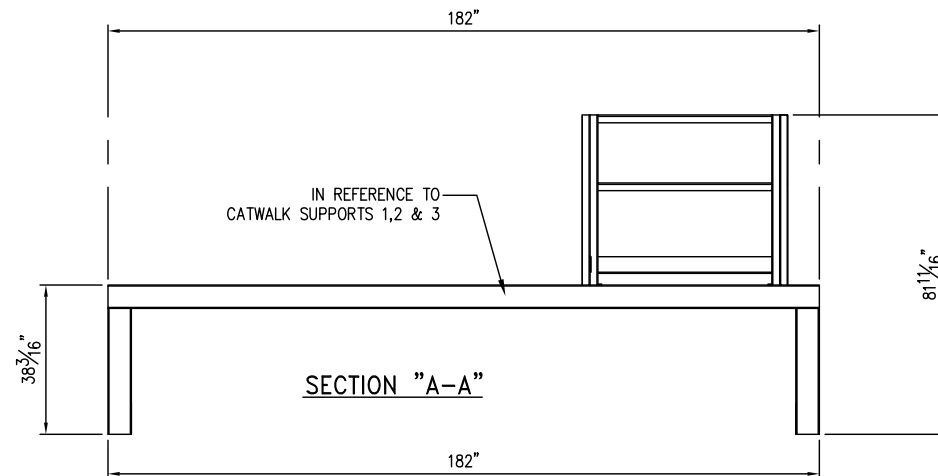
SCALE: 1"=1'-0"



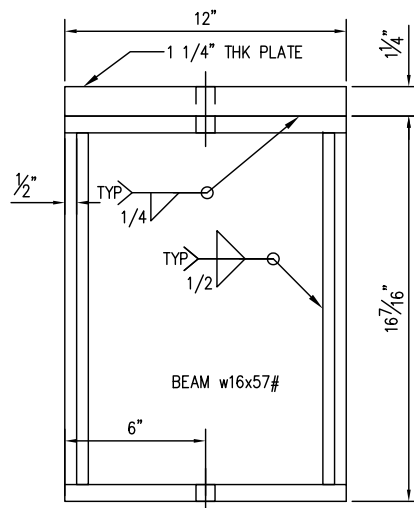
SURGE TANK



MUFFLER PIPE

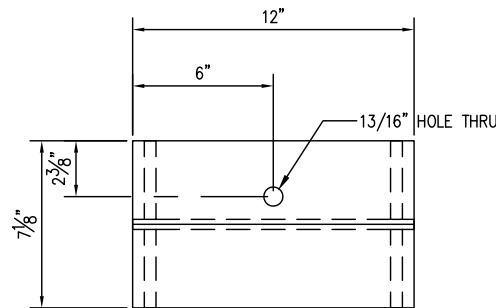


SECTION "A-A"

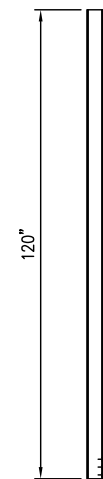


COOLER SUPPORT

EIGHT (8) REQ'D  
EIGHT (8) 5/8" x 4" LG. BOLTS/NUTS

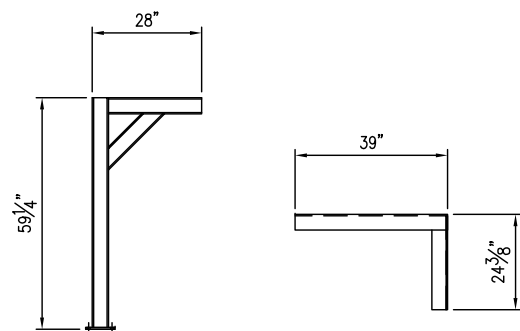


COOLER SUPPORT



FIRE DETECTOR SUPPORT

TWO (2) REQ'D



GAS DETECTOR SUPPORTS

ONE (1) EACH REQ'D

AS BUILT  
DATE 12/15/09  
VALERUS  
Compression Services, LP  
919 MILAM, SUITE 1000, HOUSTON, TEXAS, 77002

VALERUS  
Compression Services, LP  
919 Milam, Ste. 1000, Houston, TX, 77002

DATE 6/1/09	DRAWN CDN	CHECKED -	APPROVED
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CLIENT  
OGDLC

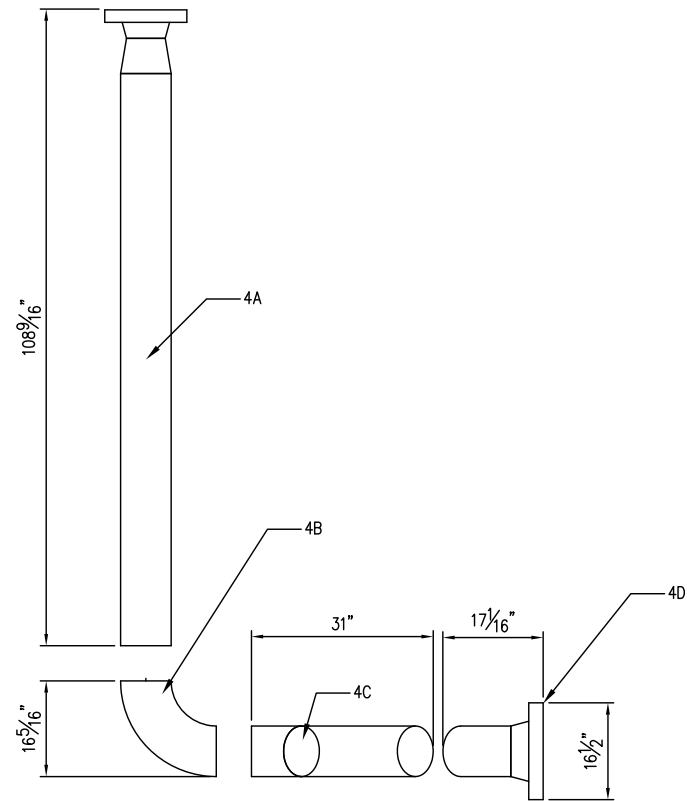
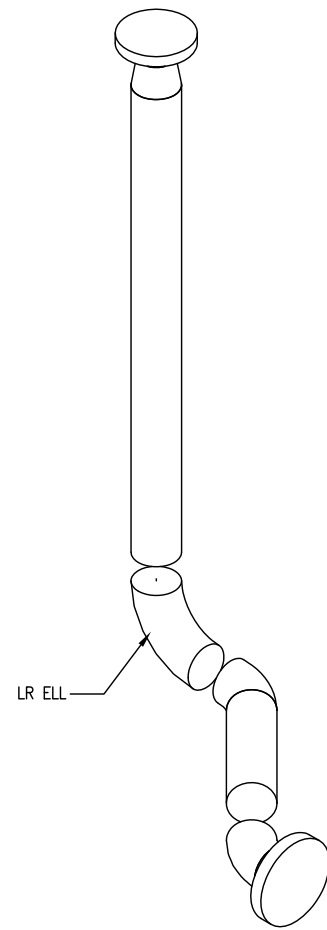
TITLE  
COMPRESSOR PACKAGE  
GENERAL ARRANGEMENT  
SHIP LOOSE SHEET

REV.	DESCRIPTION	DATE	BY	CK
2	AS BUILT - MUFFLER DIMENSION	12/15/09	RB	ML/RL
1	REVISED PER ECN #552	11/19/09	RB	ML/RL
0	ISSUED FOR CONSTRUCTION	10/5/09	RB	AM/RL

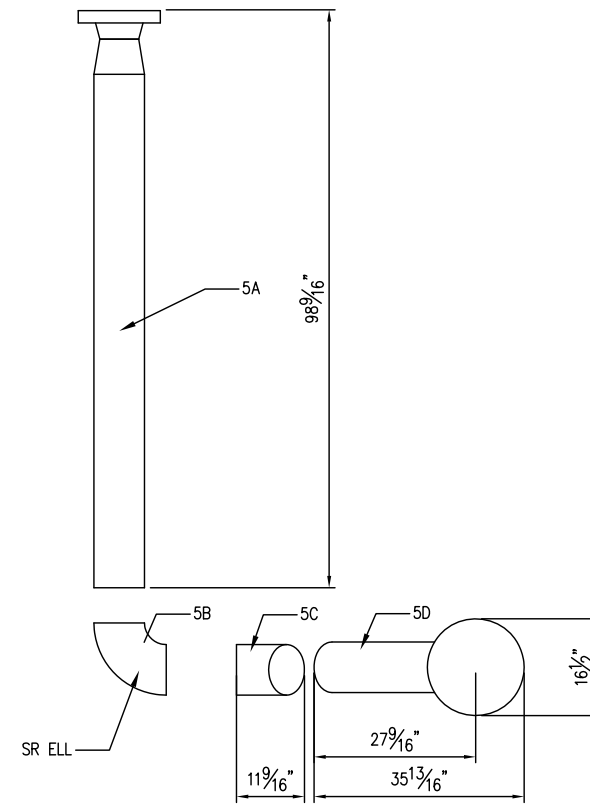
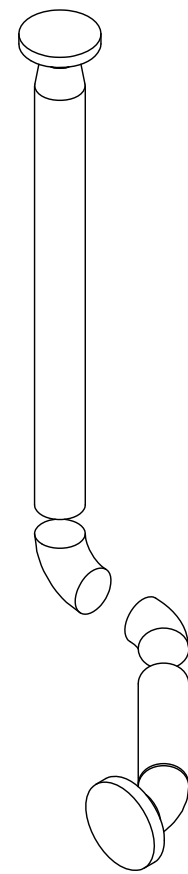
SCALE: 1/2"=1'-0"	FG# FG102477	JOB#
DRAWING NUMBER V38690200-13-02	SHEETS 13 OF 15	REV 2

NOTE:  
1. ALL DIMS ARE FROM DATUM.

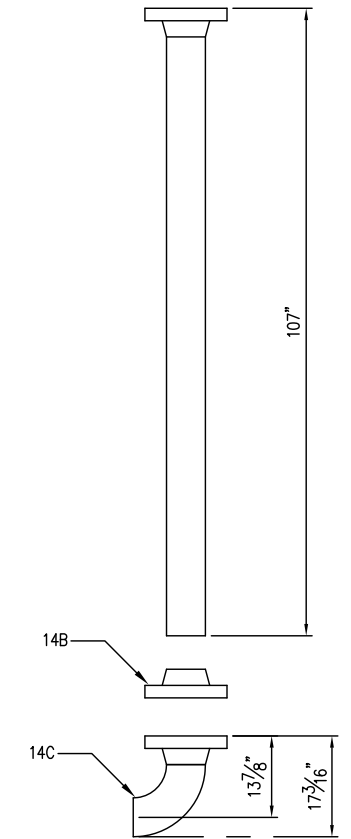
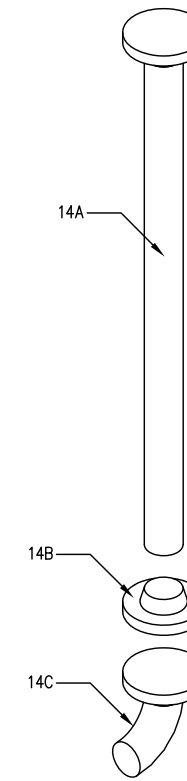
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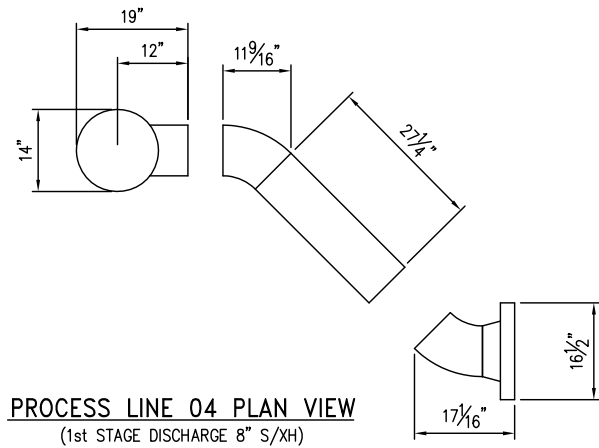
**PROCESS LINE 04 ELEVATION VIEW**  
(1st STAGE DISCHARGE 8" S/XH)



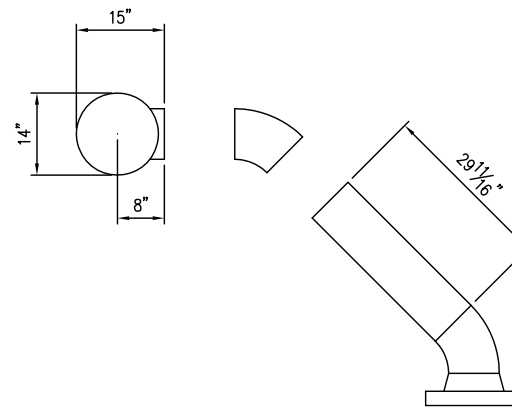
**PROCESS LINE 05 ELEVATION VIEW**  
(2nd STAGE SUCTION 8" S/XH)



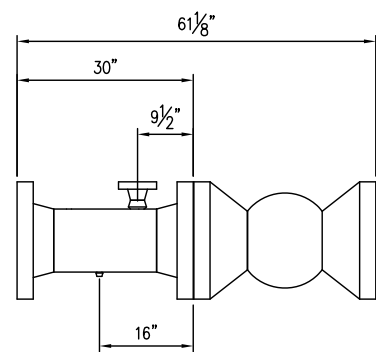
**PROCESS LINE 14 PLAN VIEW**  
(FINAL DISCHARGE 6" S/XH)



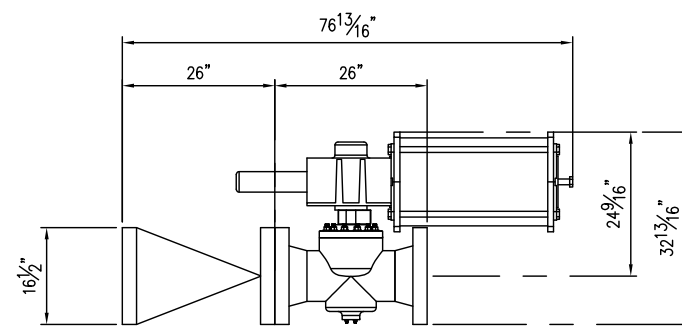
**PROCESS LINE 04 PLAN VIEW**  
(1st STAGE DISCHARGE 8" S/XH)



**PROCESS LINE 05 PLAN VIEW**  
(2nd STAGE SUCTION 8" S/XH)

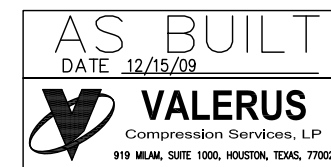


**SUCTION SPOOL**  
(1st STAGE SUCTION SPOOL 10" S/XH)




**FINAL DISCHARGE SPOOL**  
(8" S/XH)

NOTE:  
1. ALL DIMS ARE FROM DATUM.



REV.	DESCRIPTION	DATE	BY	CK
2	AS BUILT - NO CHANGES	12/15/09	RB	ML/RL
1	REVISED PER ECN #552	11/19/09	RB	ML/RL
0	ISSUED FOR CONSTRUCTION	10/5/09	RB	AM/RL

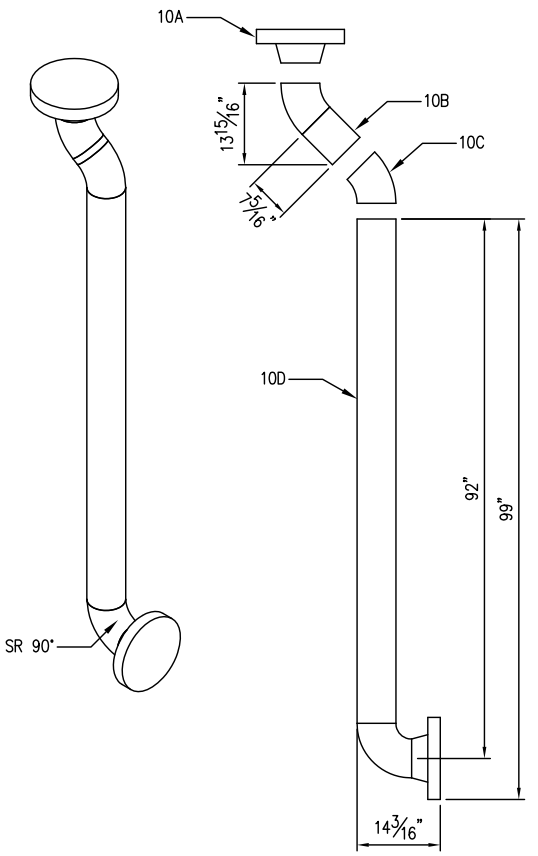


# VALERUS

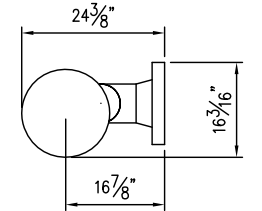
Compression Services, LP  
919 Milam, Ste. 1000, Houston, TX, 77002

DATE 6/1/09	DRAWN CDN	CHECKED -	APPROVED
CLIENT OGDCL			
TITLE COMPRESSOR PACKAGE GENERAL ARRANGEMENT SHIP LOOSE PIPE SPOOLS SHT 1			
SCALE: 1/4" = 1'-0"	FG# FG102477	JOB#	
DRAWING NUMBER V38690200-14-02		SHEETS SHT# 14 OF 15	REV 2

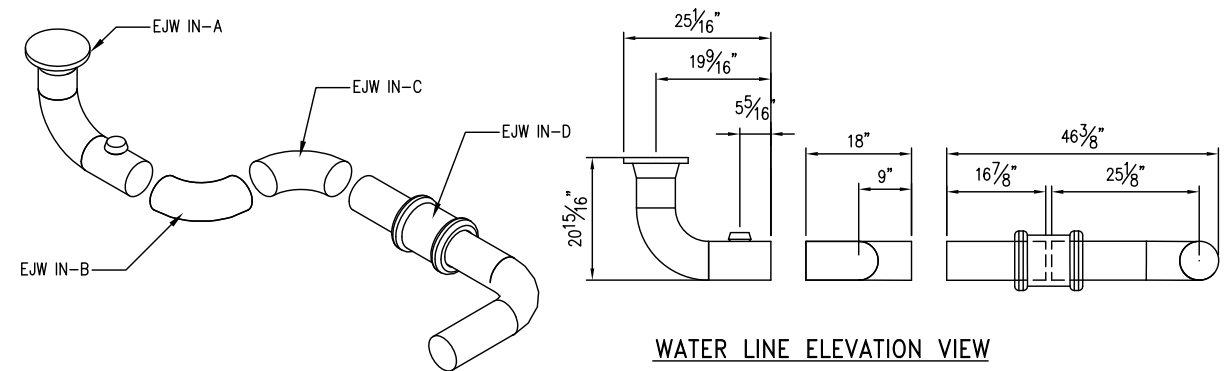
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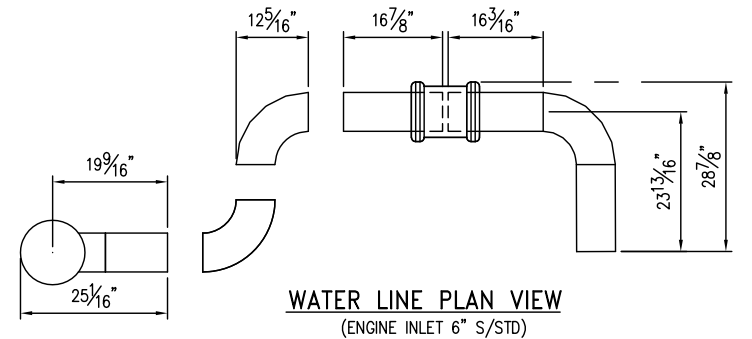
**PROCESS LINE 10 ELEVATION VIEW**  
(2nd STAGE DISCHARGE 6" S/XH)



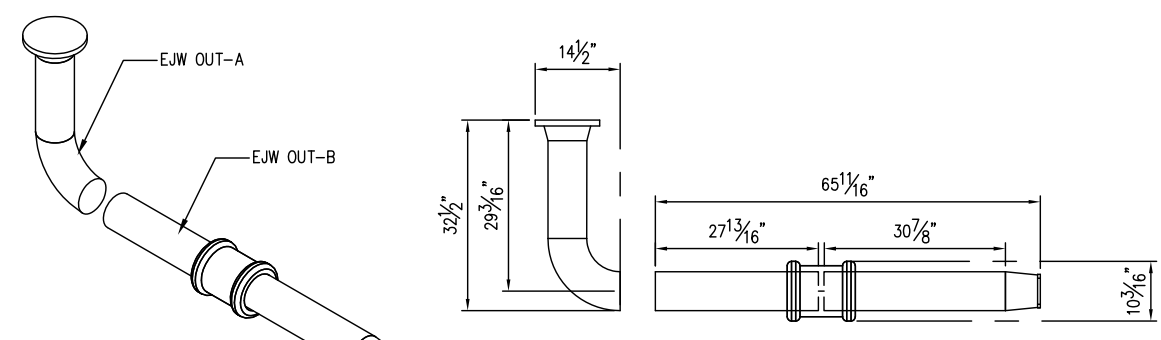
**PROCESS LINE 10 PLAN VIEW**  
(2nd STAGE DISCHARGE 6" S/XH)



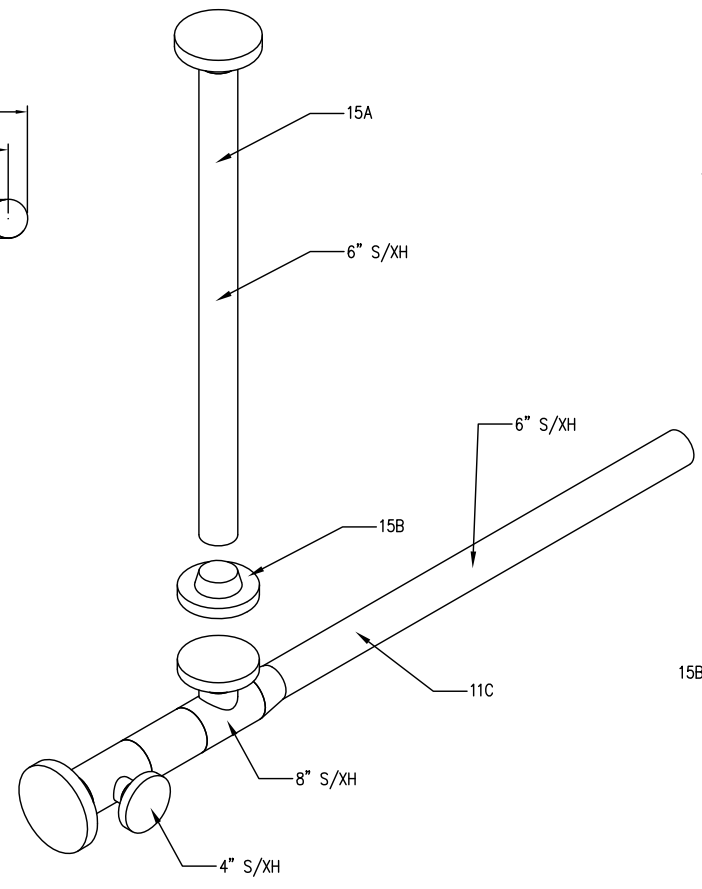
**WATER LINE ELEVATION VIEW**



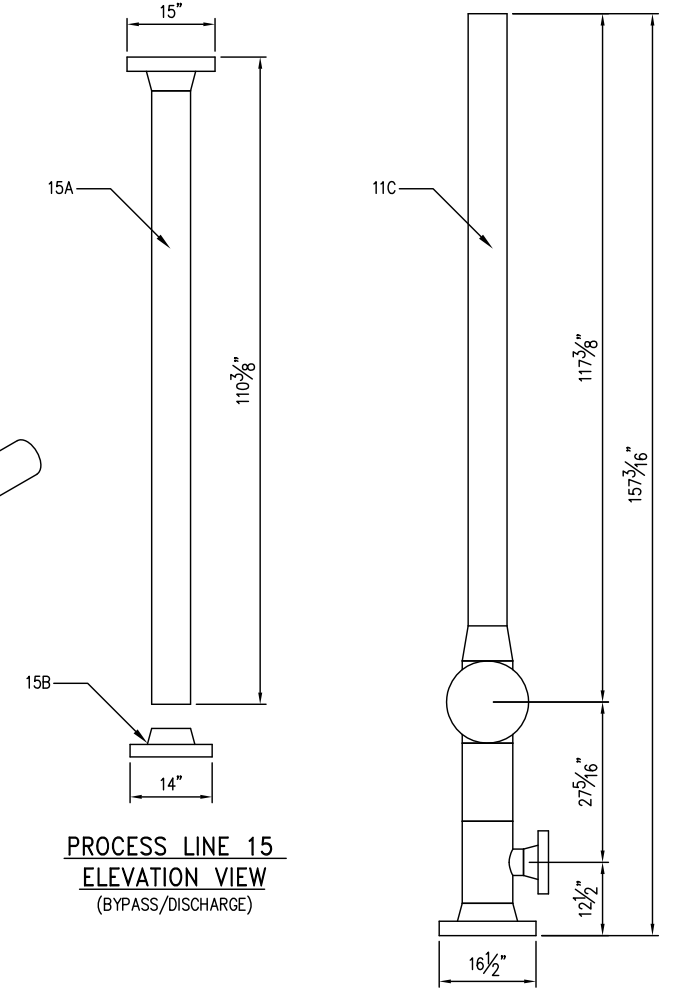
**WATER LINE PLAN VIEW**  
(ENGINE INLET 6" S/STD)



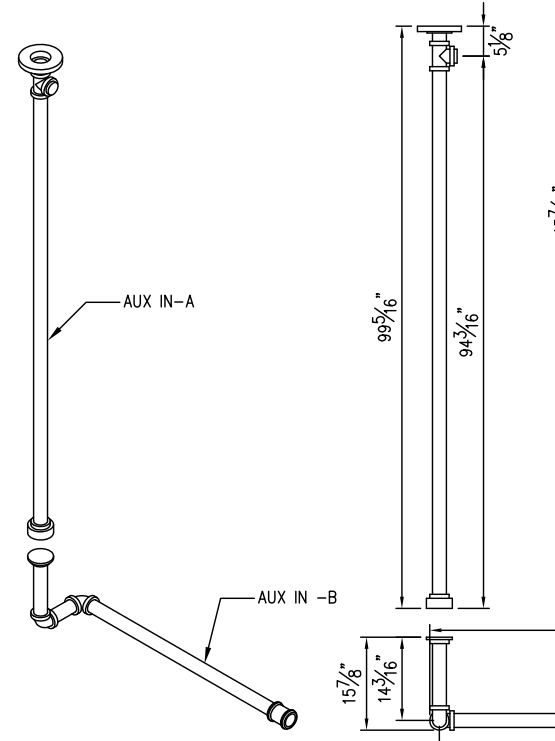
**WATER LINE**  
(ENGINE OUTLET 6" S/STD)



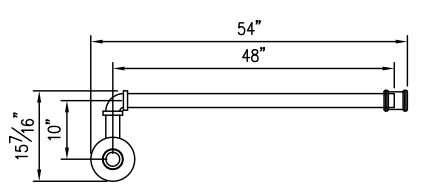
**PROCESS LINE 15 ELEVATION VIEW**  
(BYPASS/DISCHARGE)



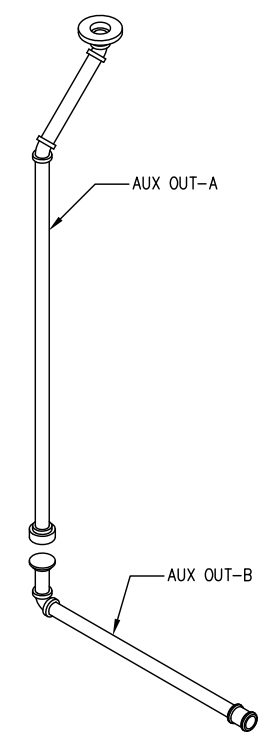
**PROCESS LINE 11 PLAN VIEW**  
(BYPASS/DISCHARGE 6", 8" & 4" S/XH)



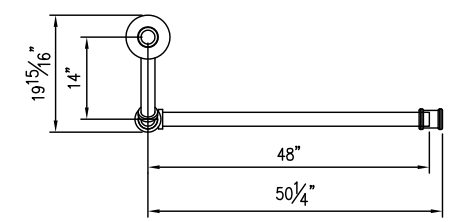
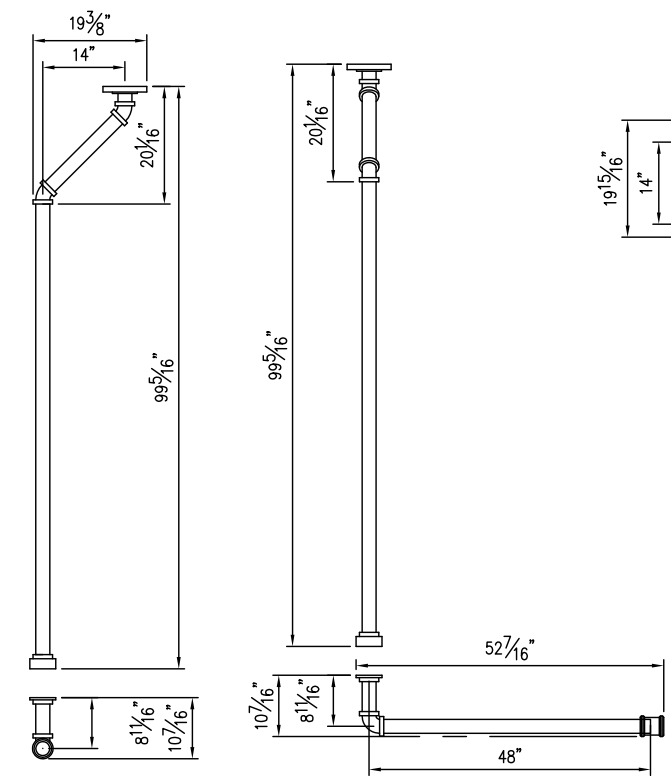
**AUXILIARY-IN ELEVATION VIEW**  
(AUX IN-A & B 2" NPT S/XH)



**AUXILIARY-IN PLAN VIEW**  
(AUX IN-A & B 2" NPT S/XH)



**AUXILIARY-OUT ELEVATION VIEW**  
(AUX OUT-A & B 2" NPT S/XH)



**AUXILIARY-OUT PLAN VIEW**  
(AUX OUT-A & B 2" NPT S/XH)

NOTE:  
1. ALL DIMS ARE FROM DATUM.

REV.	DESCRIPTION	DATE	BY	CK
2	AS BUILT - NO CHANGES	12/14/09	RB	ML/RL
1	REVISED PER ECN #552	11/19/09	RB	ML/RL
0	ISSUED FOR CONSTRUCTION	10/5/09	RB	AM/RL

**AS BUILT**  
DATE 12/15/09  
**VALERUS**  
Compression Services, LP  
919 MILAM, SUITE 1000, HOUSTON, TEXAS, 77002

**VALERUS**  
Compression Services, LP  
919 Milam, Ste. 1000, Houston, TX, 77002

DATE	DRAWN	CHECKED	APPROVED
6/1/09	CDN	-	

CLIENT: OGDCL

TITLE: COMPRESSOR PACKAGE  
GENERAL ARRANGEMENT  
SHIP LOOSE PIPE SPOOLS SHT 2

SCALE: 1/4" = 1'-0"	FG# FG102477	JOB#
DRAWING NUMBER	SHEETS	REV
V38690200-15-02	SHT# 15 OF 15	2