

DATUMS:

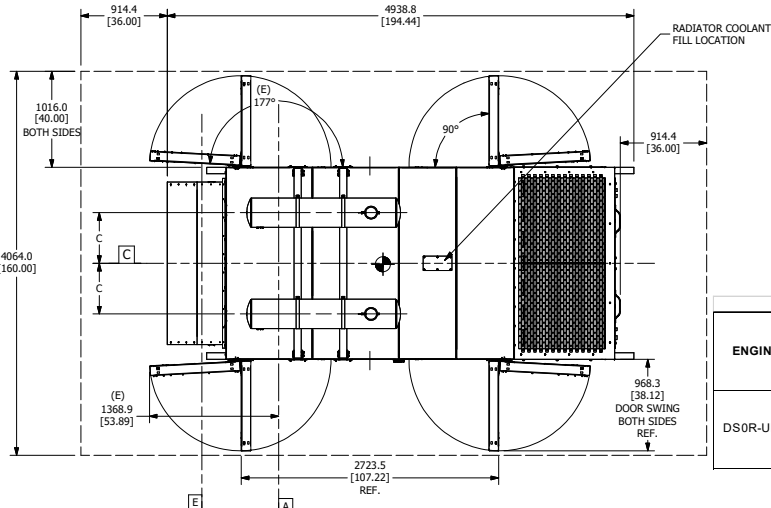
- A- -MOUNTING FACE OF FLYWHEEL
- B- -ENGINE CRANKSHAFT HORIZONTAL CENTERLINE
- C- -ENGINE CRANKSHAFT VERTICAL CENTERLINE
- D- -PUMP INPUT SHAFT OR RIGHT ANGLE GEAR INPUT SHAFT HORIZONTAL CENTERLINE
- E- -PUMP INPUT SHAFT OR RIGHT ANGLE GEAR INPUT SHAFT VERTICAL FACE

CAUTION:

ALL PLUMBING MUST BE SUPPORTED AND/OR ISOLATED SO THAT NO WEIGHT OR STRESS IS APPLIED TO ANY ENGINE COMPONENT.

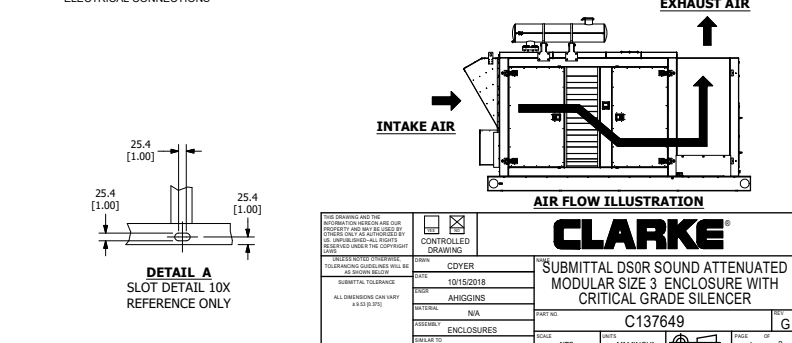
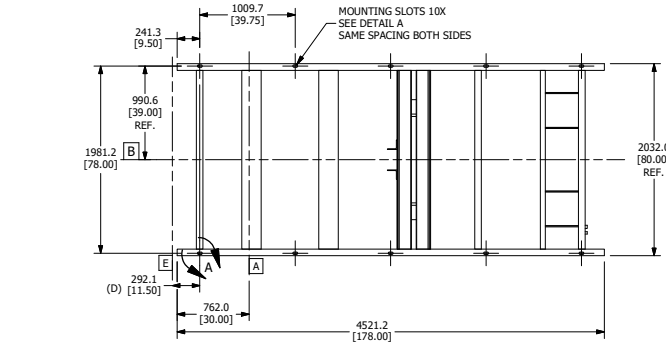
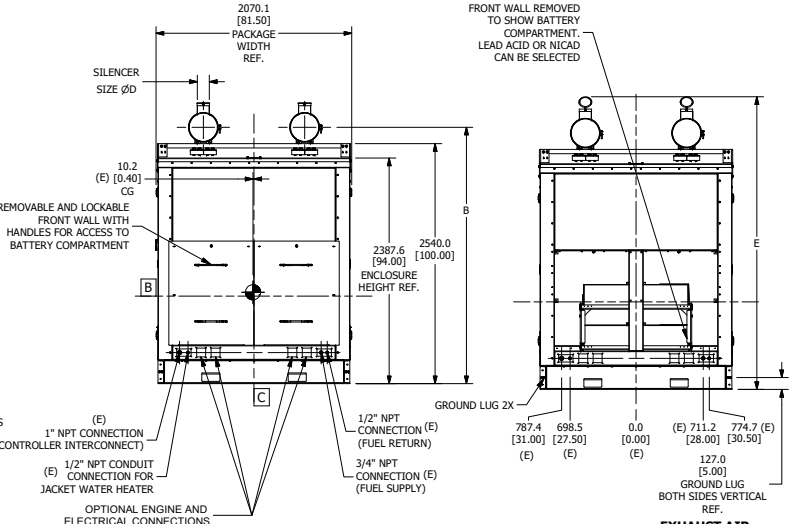
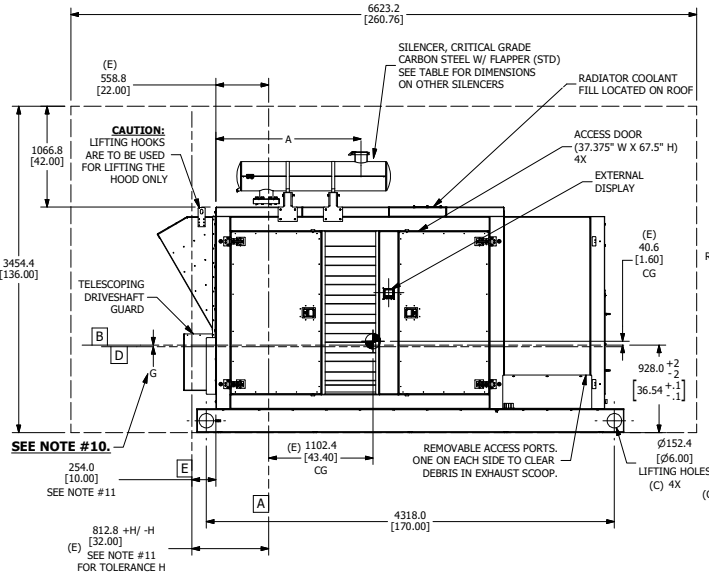
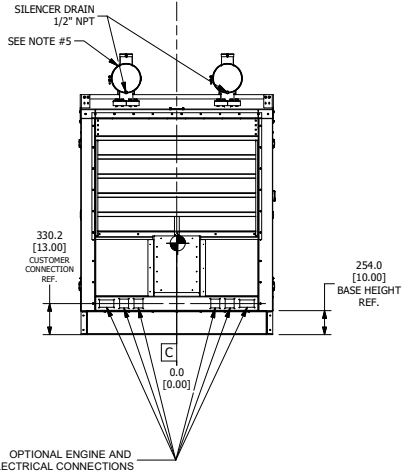
INSTALLATION NOTES:

- 1) CAUTION: SPREADER BARS REQUIRED TO MOVE PACKAGE DAMAGE DUE TO IMPROPER HANDLING IS NOT WARRANTABLE
- 2) FUEL SUPPLY PIPING FROM TANK TO ENGINE SHOULD BE 3/4" MINIMUM PIPE DIAMETER
- 3) FUEL RETURN PIPING FROM TANK TO ENGINE SHOULD BE 1/2" MINIMUM PIPE DIAMETER
- 4) PIPING & CABLING CONNECTIONS BETWEEN THE DIESEL ENGINE CONTROLLER & FUEL TANK TO BE DONE BY CUSTOMER. FUEL TANK & CONTROLLER TO BE INSTALLED ACCORDING TO NFPA-20 AND ENGINE MANUFACTURER RECOMMENDATIONS.
- 5) ENGINE SILENCER, MOUNTING BRACKETS, MOUNTING BANDS, FLAPPER, RAIN CAP, AND HARDWARE TO BE SHIPPED SEPARATELY ON A SKID AND INSTALLED ON SITE.
- 6) ENGINE, FRAME, AND ENCLOSURE TO BE THE COLOR: RAL 3001 SIGNAL RED.
- 7) ENCLOSURE FINISH TO BE TEXTURED POWDER COAT.
- 8) ENCLOSURE MATERIAL: 0.10" THICK 5052 H32 ALUMINUM
- 9) FOR PROPER LIFTING, ESTIMATED TOTAL WEIGHT AND SHIPPING DIMENSIONS SEE DRAWING C137470.
- 10) OFFSET "G" CAN BE ABOVE OR BELOW DATUM B. THIS OFFSET IS REQUIRED AND IS THE RESPONSIBILITY OF THE CUSTOMER TO SET THE PROPER HEIGHT FOR THE PUMP. SEE PAGE 2 FOR OFFSET FOR PUMP SHAFT WITH OR WITHOUT A TORSIONAL COUPLING
- 11) LOCATION OF THE PUMP INPUT SHAFT OR RIGHT ANGLE GEAR INPUT SHAFT IS HELD BY CONTROLLING THE COMBINATION OF DRIVE PLATE OR TORSIONAL COUPLING AND THE DRIVESHAFT. SEE PAGE 2 FOR TOLERANCE BETWEEN DATUMS A AND E.
- 12) THIS PACKAGE WILL REQUIRE A HIGH-CUBE CONTAINER FOR SEA FREIGHT



REV	DESCRIPTION	ECN#	DWN	APVD	DATE
A	PRELIMINARY ENGINEERING DRAWING	5076	CRD	ACH	16OCT18
B	REMOVED NOTES NOT NEEDED FOR RADIATOR UNIT, UPDATED "C" DIMENSION	5076	CRD	JCA	29NOV18
C	UPDATED DIMENSIONS FOR SILENCERS, DISPLAY LOCATION, NUMBER OF SPARE PORTS, AND LIFTING HOLE SIZE	5076	ACH	ACH	16SEP19
D	CORRECTED OFFSET OF DATUMS ON BASE VIEW, ADDED PAGE 2 AND UPDATED NOTES.	5076	ACH	ACH	03MAR20
E	ADDED TABLE HEADERS AND FIGURE CALL OUTS ON PAGE 2. MOVED ELECTRICAL, FUEL TO BATTERY COMPARTMENT END AS STANDARD, ADDED TOLERANCE BETWEEN DATUMS, REMOVED TOLERANCE, ADDED CG DIMENSIONS, ADDED FULL SWING DIMENSIONS	5076	CRD	ACH	01APR20
-	ADDED MISSING DIMENSIONS	5076	CRD	ACH	15FEB22
F	UPDATED FIG. A & B (SEE PAGE 2)	5076	CRD	ACH	27NOV23
G	ADDED RADIATOR COOLANT FILL LOCATION NOTE	5076	JCA	JCA	27DEC23

ENGINE MODELS	DIMENSIONS	CARBON STEEL	316 STAINLESS STEEL	CARBON STEEL SPARK ARRESTING	STAINLESS STEEL SPARK ARRESTING	COOLING WATER		FUEL LINE SIZE	
						SUPPLY	RETURN	SUPPLY	RETURN
DSOR-UFAA67, AA59	A	58 [C]	65 [C]	73.5 [C]	76.5 [C]	N/A	N/A	75" MINIMUM	0.5" MINIMUM
	B	106.875	106.875	108 [C]	108 [C]				
	C			21.1					
	D			5					
	E	122	123	124	125				



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CLARKE
CONTROLLED DRAWING

DESIGN: CDYVER
DATE: 10/15/2018
DRAWN: AHIGGINS
CHECKED: N/A
APPROVED: ENCLOSURES
SUBMIT TO: C137466

ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN INCHES (MM IN PARENTHESIS)

SUBMITTAL DSOR SOUND ATTENUATED MODULAR SIZE 3 ENCLOSURE WITH CRITICAL GRADE SILENCER
C137649

DATE: NTS
SCALE: 1:1
PAGE: 1 OF 2

BOUNDARY BOX SHOWS MINIMUM CLEARANCE AROUND ENCLOSURE

DATUMS

- A-** - MOUNTING FACE OF FLYWHEEL
- B-** - ENGINE CRANKSHAFT CENTERLINE
- D-** - PUMP OR RIGHT ANGLE GEAR SHAFT HORIZONTAL CENTERLINE
- E-** - END OF PUMP OR RIGHT ANGLE GEAR SHAFT

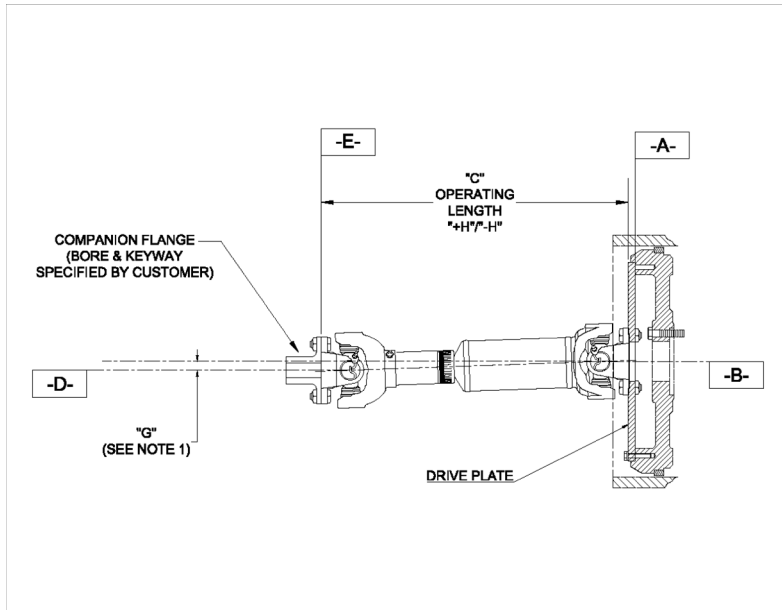


FIGURE A

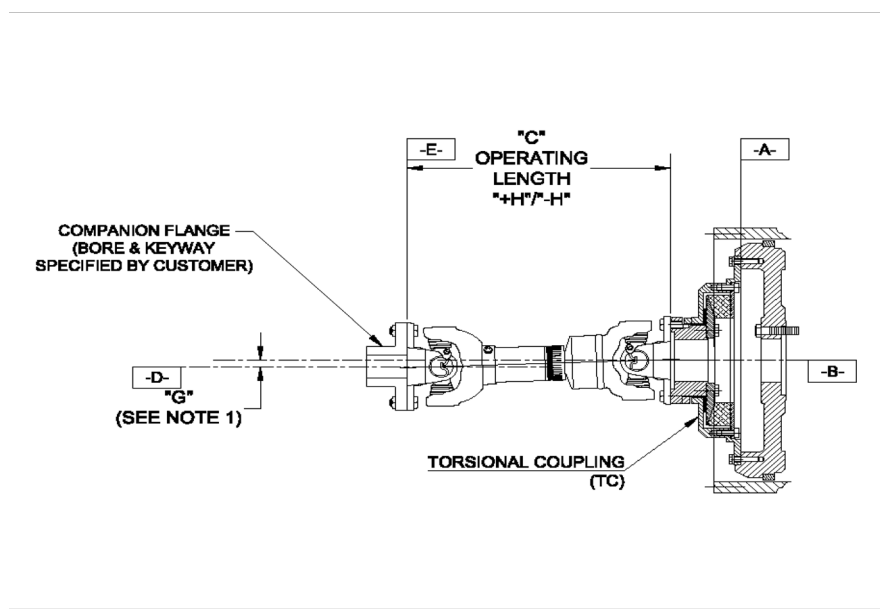


FIGURE B

Driveshaft Only (See Figure A)									Driveshaft and TC (See Figure B)				
Clarke Engines, UL/FM approved Heat Exchanger and Radiator Cooled Models	UL Listed Driveshaft Model	Non-Listed Driveshaft Model	Drive Disc	Companion Flange	Driveshaft Model Without Torsional Coupling (See Note 3)	"H" Horizontal Tolerance (+)	"H" Horizontal Tolerance (-)	"G" Vertical Parallel Offsets of Shafts	Torsional Coupling Model	Driveshaft Model With Torsional Coupling (See Note 3)	"H" Horizontal Tolerance (+)	"H" Horizontal Tolerance (-)	"G" Vertical Parallel Offsets of Shafts
DS0R-UFAA67, AA59	N/A	VA2365	C084930	180-10	VA2365-31	51.8 [2.04]	57.9 [2.28]	19.6± 9.8 [0.77] ±[0.39]	TC55-14-180.10-FS	VA2365-27	57.9 [2.28]	51.8 [2.04]	15.8 ± 7.9 [0.62] ± [0.31]

NOTES:

1. CAUTION: THE DRIVESHAFT IS DESIGNED TO OPERATE AT A 2° ANGLE WITH THE INPUT AND THE OUTPUT SHAFTS IN PARALLEL OFFSET OF "G" INCH VERTICALLY ABOVE OR BELOW THE ENGINE CRANKSHAFT CENTERLINE (DATUM B). THE OFFSET SHOULD BE 0.00" PARALLEL OFFSET HORIZONTALLY RIGHT OR LEFT OF DATUM B. REFER TO THE CERTIFIED DRIVESHAFT INSTALLATION MANUAL FOR ALIGNMENT INSTRUCTIONS.
2. BASED ON THE TORSIONAL VIBRATION ANALYSIS (TVA) THE SIZE OF THE TORSIONAL COUPLING COULD CHANGE TO A SMALLER **TC15-11.5-55-FS**. **NOTE: THIS WILL AFFECT THE FINAL INSTALLATION (DIMENSIONS "C" SHOWN IN THE DIAGRAM AT THE TOP OF THE PAGE). THE PUMP INSTALLER MUST BE MADE AWARE OF THIS CHANGE.**
3. LENGTHS SHOWN USE THE VALUE FOR THE LISTED DRIVESHAFT WHERE AVAILABLE.

- 1 -1760 RPM ONLY
- 2 -2100 RPM ONLY
- 3 -2350 RPM ONLY
- 4 -1470 RPM ONLY
- 5 -1800 RPM ONLY
- 6 -2650 RPM ONLY
- 7 -1900 RPM ONLY

<small>THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE UNCLASSIFIED AND MAY BE USED BY OTHERS WITHOUT RESTRICTIONS IF IT IS RELEASED UNDER THE COPYRIGHT NOTICE.</small>		<input checked="" type="checkbox"/> CONTROLLED DRAWING	
<small>UNLESS NOTED OTHERWISE, TOLERANCING CONSIDERATIONS WILL BE AS SHOWN HEREIN.</small>		DESIGNED BY: CDYER DATE: 10/15/2018	CLARKE SUBMITTAL DSOR SOUND ATTENUATED MODULAR SIZE 3 ENCLOSURE WITH CRITICAL GRADE SILENCER PART NO: C137649 SCALE: NTS UNITS: MM (INCH)
SUBMITTAL TOLERANCE: AS SHOWN (DIP)	DRAWN BY: AHIGGINS	CHECKED BY: N/A	
ALL DIMENSIONS CAN VARY ±0.10 (DIP)	ASSEMBLY: ENCLOSURES	DATE:	
DRAWING NO: C137346	SHEET NO: 2	OF: 2	

DATUMS:

- A- MOUNTING FACE OF FLYWHEEL
- B- ENGINE CRANKSHAFT HORIZONTAL CENTERLINE
- C- ENGINE CRANKSHAFT VERTICAL CENTERLINE
- ◆ -CENTER OF GRAVITY

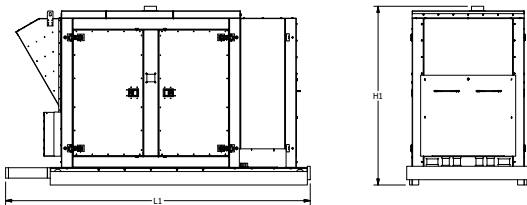
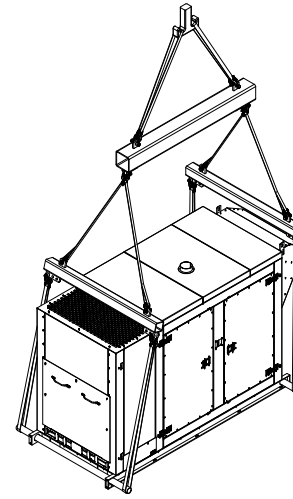
LIFTING HOOK TO BE CENTERED OVER UNIT CENTER OF GRAVITY

SPREADER BARS

LIFTING HOLES IN BASE (SEE NOTE 3)

LIFTING HOLES IN BASE (SEE NOTE 3)

LIFTING EXAMPLE



AS SHIPPED

- NOTES:**
- THE RIGGING SETUP SHOWN ON THIS DRAWING IS FOR REFERENCE ONLY. THIS IS NOT THE EXACT SETUP THAT SHOULD BE USED, AND THE REQUIRED SETUP FOR EACH UNIT WILL BE DIFFERENT.
 - THE RIGGING SETUP SHOULD BE DONE SUCH THAT IT COMPLIES WITH LOCAL REQUIREMENTS. THIS SHOULD ALSO BE DONE BY A REPUTABLE VENDOR. IT IS THE RESPONSIBILITY OF THE CUSTOMER TO UTILIZE PROPER RIGGING AND LIFTING PROTOCOLS.
 - THE LIFTING HOLES IN THE BASE ARE SIZED SO THAT STRUCTURAL PIPE CAN BE SLID THROUGH THE OPENING TO ALLOW FOR EASIER ROUTING OF LIFTING STRAPS, CHAINS, OR CABLES.
 - THE WEIGHTS SHOWN IN THE TABLE ARE APPROXIMATE AND INCLUDE THE COMPLETE ENCLOSED UNIT MINUS THE SILENCER WEIGHT.

Engine Models	Weight as Shipped * kg [lbs]	Overall Length		Overall Width		Overall Height	
		Enclosure Only (L)	Enclosure with Shipping Block (L1)	Enclosure Only (W)	Enclosure with Shipping Block (W1)	Enclosure Only (H)	Enclosure with Shipping Block (H1)
JU4R-UF40, UF49, UF51, UF53, UF09, UF11, UF13, UF19, UF21, UF23, UFAEA9, UFAEE7, UFAEF1	1879 [4134]						
JU4H-UF34, UF40, UF42, UF50, UF54, UFH0, UFH2, UF10, UF12, UF14, UF20, UF52, UF22, UF24, UFAD2, UFAD8, UFAEA0, UFAEE8, UFAEF2, JU4H-UFAD5G, UFADJ3, UFADP6, UFADP0, UFADW8, UFADY8, UFAD98	1981 [4359]						
JU6H-UF30, UF32, UF34, UF50, UF52, UF54, UF58, UF60, UF62, UF64, UF66, UF68, UFAA08, UFAA80, UFAA82, UFAA84, UFAA86, UFAA88, UFAA90, UFAA92, UFAA94, UFAA96, UFAA98, UFAA00, UFAA02, UFAA04, UFAA06, UFAA08, UFAA10, UFAA12, UFAA14, UFAA16, UFAA18, UFAA20, UFAA22, UFAA24, UFAA26, UFAA28, UFAA30, UFAA32, UFAA34, UFAA36, UFAA38, UFAA40, UFAA42, UFAA44, UFAA46, UFAA48, UFAA50, UFAA52, UFAA54, UFAA56, UFAA58, UFAA60, UFAA62, UFAA64, UFAA66, UFAA68, UFAA70, UFAA72, UFAA74, UFAA76, UFAA78, UFAA80, UFAA82, UFAA84, UFAA86, UFAA88, UFAA90, UFAA92, UFAA94, UFAA96, UFAA98	2259 [4969]	3975.4 [156.51]	4152.9 [163.50]	1562.1 [61.50]	1625.6 [64.00]	2286 [90.00]	2438.4 [96.00]
JU6R-UFAD9, D1, 29, 31, 33, UFAAM7, M9, M1, 57, 49, 51, 53, 59, 61, 63, UFAAPF, Q7, R, S9	2343 [5154]						
JW6H-UFAA50, UFAA52, UFAA54, UFAA56, UFAA58, UFAA60, UFAA62, UFAA64, UFAA66, UFAA68, UFAA70, UFAA72, UFAA74, UFAA76, UFAA78, UFAA80, UFAA82, UFAA84, UFAA86, UFAA88, UFAA90, UFAA92, UFAA94, UFAA96, UFAA98	2310 [5081]						
JW6H-UFAA50, UFAA52, UFAA54, UFAA56, UFAA58, UFAA60, UFAA62, UFAA64, UFAA66, UFAA68, UFAA70, UFAA72, UFAA74, UFAA76, UFAA78, UFAA80, UFAA82, UFAA84, UFAA86, UFAA88, UFAA90, UFAA92, UFAA94, UFAA96, UFAA98	3140 [6908]						
C13H0-UFAD20, UFAD22, UFAD22-D, UFAD28, UFAD30, UFAD32, UFAD32-D, UFAD38, UFAD40, UFAD50, UFAD52, UFAD58, UFAD60, UFAD62, UFAD62-D, UFAD68, UFAD70, UFAD72, UFAD72-D, UFAD78	3721 [8187]	4329.2 [170.44]	4559.3 [179.50]				
DS6H-UFAA50, AA60, AA68, AA88	3343 [7355]			2070.1 [81.50]	2133.6 [84.00]	2387.6 [94.00]	2540 [100.00]
DS8H-UFAA40, AA56, AA62, AA88	3443 [7575]						
DS0H-UFAA00, AA00, AA60, AA68, UFAA92, AA98	3874 [8523]						
DS0R-UFAA67, AA59	4539 [9986]						
DT2H-UFAA20, AA50, AA58, AA88	4531 [9968]						
DT2S-UFAA19, 49	5153 [11403]						
DT2H-UFAA60, AA92, AA98	4535 [9978]						
C18H0-UFAD10, 12, 12-D, 22, 22-D, 18, 20, 28, 30, 32, 32-D, 36, 40, 42, UFAAD46, 50, 58, 68, 70, 78, C18H-UFAA78, C18H-UFAC10, 18, 20, 28, FMAD12-S, 12-DS, 22-S, 22-DS, 32-S, 32-DS, 42-D, 42-S, 42-DS	4938.8 [1094.44]	4938.8 [194.44]	5168.9 [203.50]				
C18H0-UFAD10, 12, 12-D, 22, 22-D, 18, 20, 28, 30, 32, 32-D, 36, 40, 42, UFAAD46, 50, 58, 68, 70, 78, C18H-UFAA78, C18H-UFAC10, 18, 20, 28, FMAD12-S, 12-DS, 22-S, 22-DS, 32-S, 32-DS, 42-D, 42-S, 42-DS	4334 [9535]						

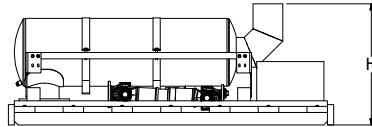
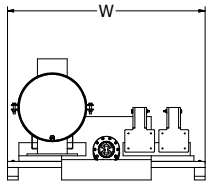
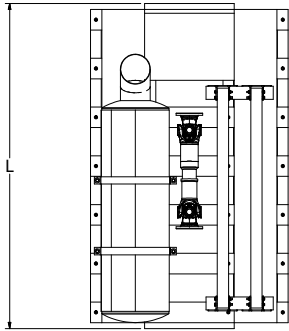
REV	DESCRIPTION	ECN#	DWN	APVD	DATE
A	INITIAL ENGINEERING DRAWING	5076	ACH	ACH	28MAY20
B	ADDED C18 MODELS	5076	ACH	ACH	10DEC20
C	UPDATED DIMENSIONS AND ADDED C13 MODELS	5076	ACH	ACH	04AUG23

CLARKE

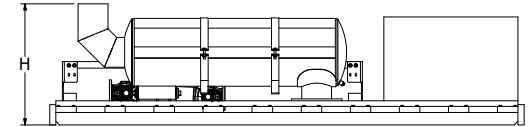
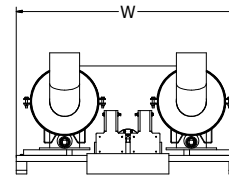
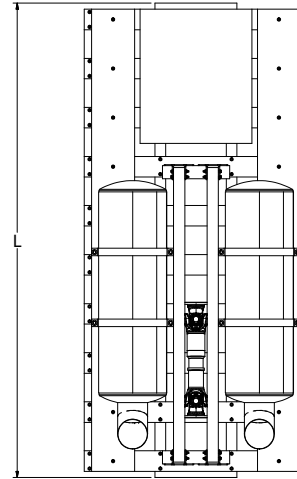
PROPER LIFTING, SHIPPING WEIGHTS, AND DIMENSIONS FOR MODULAR ENCLOSED UNITS

C1317470

1



SINGLE SILENCER SHIPPING SKID DIMENSIONS



DUAL SILENCER SHIPPING SKID DIMENSIONS

ENGINE MODELS	DESCRIPTION	OVERALL HEIGHT (H)	OVERALL WIDTH (L)	OVERALL LENGTH (L)	TOTAL WT KG [LBS]
JU4H, JU4R	SIZE 1 SHIPPING SKID SINGLE SILENCER 4 IN	723.9 (28.50)	1143 (45)	2041.5 (80.38)	211 [465]
JU6H, JU6R	SIZE 1 SHIPPING SKID SINGLE SILENCER 5 IN	723.9 (28.50)	1143 (45)	2041.5 (80.38)	228 [501]
DR8H, DS0H, DS0R	SIZE 2-3 SHIPPING SKID DUAL 5 INCH SILENCER	723.9 (28.50)	1524 (60)	3232.2 (127.25)	391 [859]
DT2H DRY, DT2R	SIZE 2-3 SHIPPING SKID DUAL 6 INCH SILENCER	774.7 (30.50)	1524 (60)	3232.2 (127.25)	433 [952]
DT2H WET	SIZE 2-3 SHIPPING SKID DUAL 8 INCH SILENCER	825.5 (32.50)	1524 (60)	3232.2 (127.25)	451 [991]
DQ6H, JW6H	SIZE 2 SHIPPING SKID SINGLE 6 INCH SILENCER	774.7 (30.50)	1346.2 (53)	2216.2 (87.25)	289 [636]
C13H0, C18H0	SIZE 2 SHIPPING SKID SINGLE 8 INCH SILENCER	825.5 (32.50)	1346.2 (53)	2216.2 (87.25)	296 [650]

<input type="checkbox"/> UNCONTROLLED DRAWING <input type="checkbox"/> CONTROLLED DRAWING		CLARKE PROPER LIFTING, SHIPPING WEIGHTS, AND DIMENSIONS FOR MODULAR ENCLOSED UNITS
DATE: _____ BY: _____ CHECKED BY: _____	PART NO: C137470	
SCALE: _____ UNIT: _____	SHEET NO: 2 OF 2	
REVISION: _____	DRAWING PART: _____	