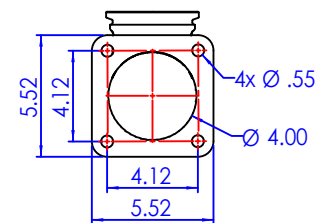


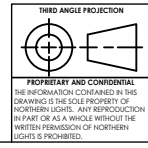
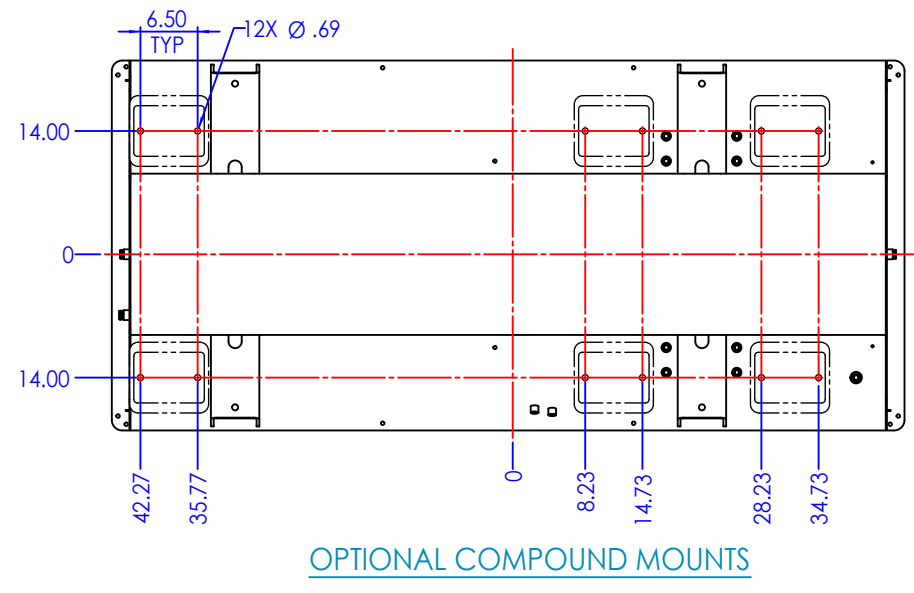
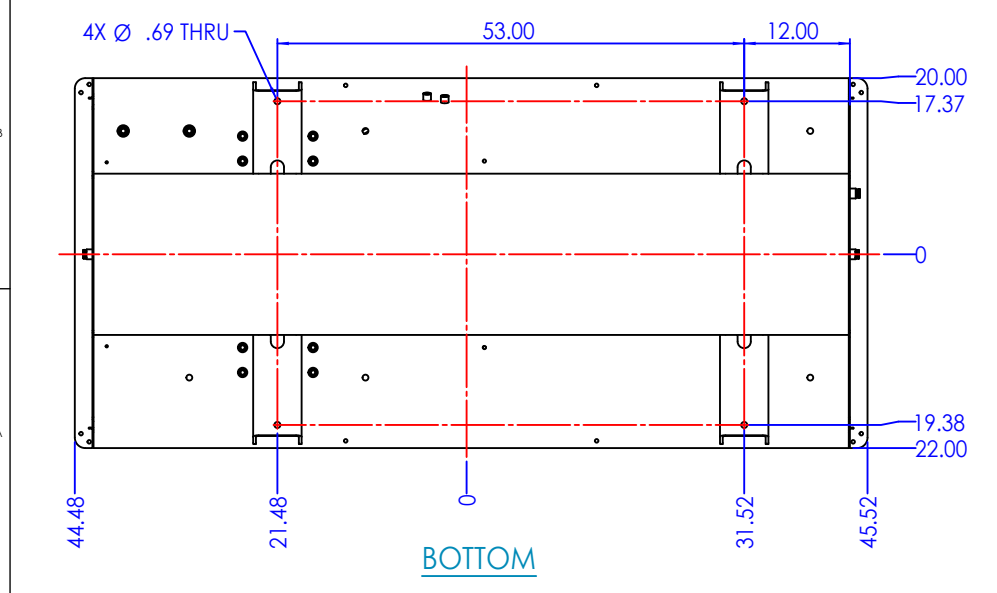
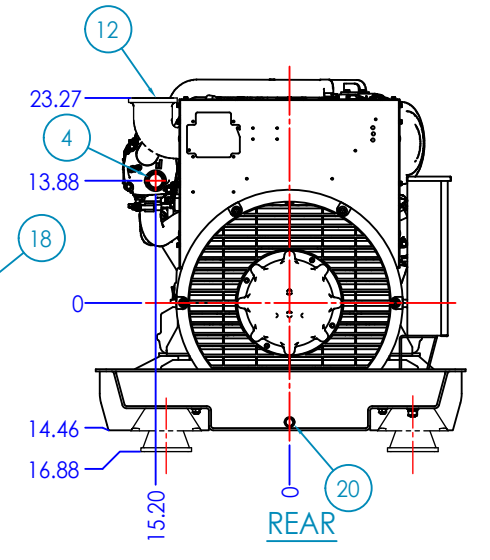
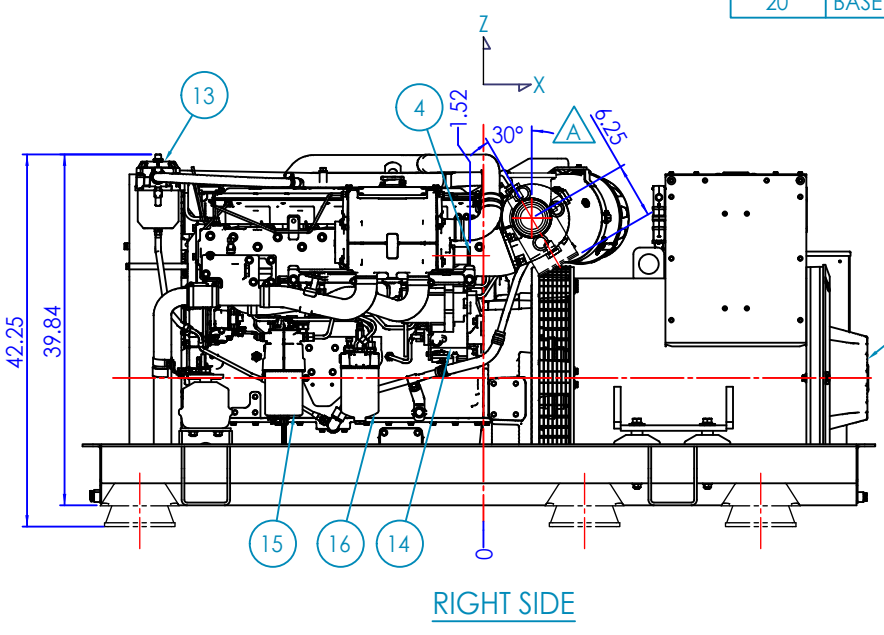
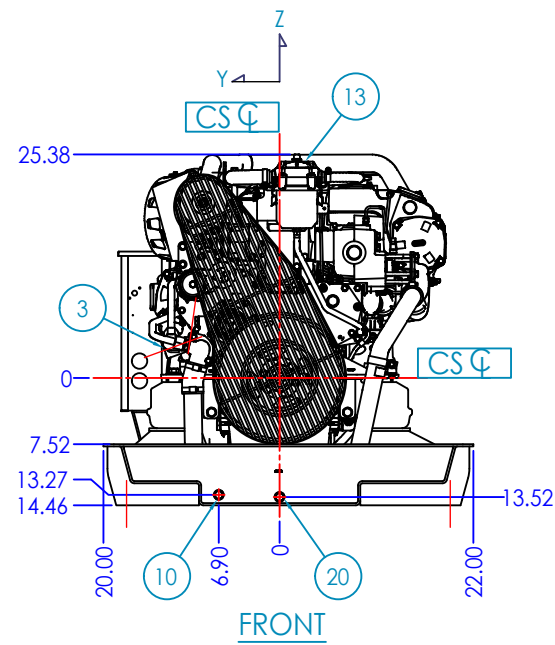
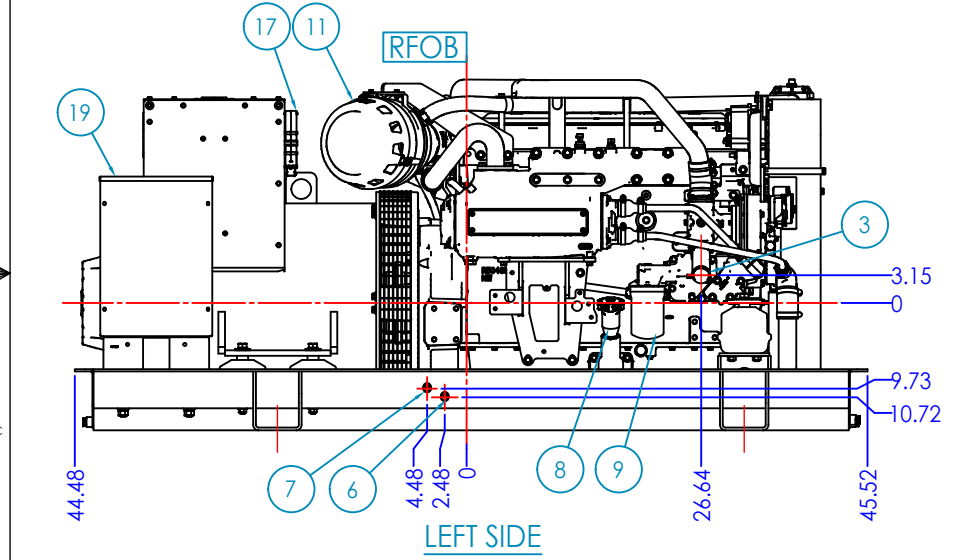
EST. WEIGHT AND C.G.				
MODEL	WEIGHT	C.G.		
	LBS.	X	Y	Z
M150A13.11L (150kW/60Hz)	3500	-19	-31	2.26
M150A13.51L (125kW/50Hz)	3645	.90	-30	2.17

NOTE: WEIGHTS INCLUDE OIL, NO COOLANT.



OPTIONAL DRY EXHAUST ELBOW SCALE 1:4

ITEM	DESCRIPTION
1	EXPANSION TANK
2	COOLANT FILL
3	SEAWATER INLET - Ø 2.0 H.B.
4	SEAWATER OUTLET (DRY EXHAUST) - Ø 2.0 H.B.
5	OPTIONAL WET EXHAUST ELBOW - Ø 6.0 H.B.
6	FUEL SUPPLY - 3/8 NPT
7	FUEL RETURN - 3/8 NPT
8	CRANKCASE OIL FILL/DIPSTICK
9	CRANKCASE OIL FILTER
10	ENGINE OIL DRAIN - 1/2 NPT
11	AIR INLET FILTER
12	OPTIONAL DRY EXHAUST ELBOW - SEE DETAIL
13	CLOSED CRANKCASE VENTILATION SYSTEM
14	ELECTRIC STARTER
15	PRIMARY FUEL FILTER
16	FINAL FUEL FILTER
17	ENGINE CONTROL UNIT
18	PMG
19	D.C. JUNCTION BOX
20	BASE PAN DRAIN - 1/2 NPT



REV.	DESCRIPTION	DATE	BY	CHECKED
A	CHANGED WET EXHAUST ELBOW ANGLE AND LENGTH, UPDATED BELT GUARD, ECH 6234	10/2/2019	MG	LTP

UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN INCHES  
 TOLERANCES:  
 ANGULAR: MACH 0.5° BEND ± 1.0°  
 X ± 0.1  
 Y ± 0.05  
 Z ± 0.05  
 INTERFERING DIMENSIONS: TOLERANCING PER ADME Y14.5M

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DO NOT SCALE

**NORTHERN LIGHTS**  
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 Seattle, WA 98107  
 (206) 789-3880  
 www.northern-lights.com

TITLE: INSTALLATION DIMENSIONS  
 M150A13L HEAT EXCHANGER COOLED

SIZE: PART NO. DWG. NO. REV  
 D 1:10 WEIGHT: LBS. SHEET 1 OF 1

D-5020