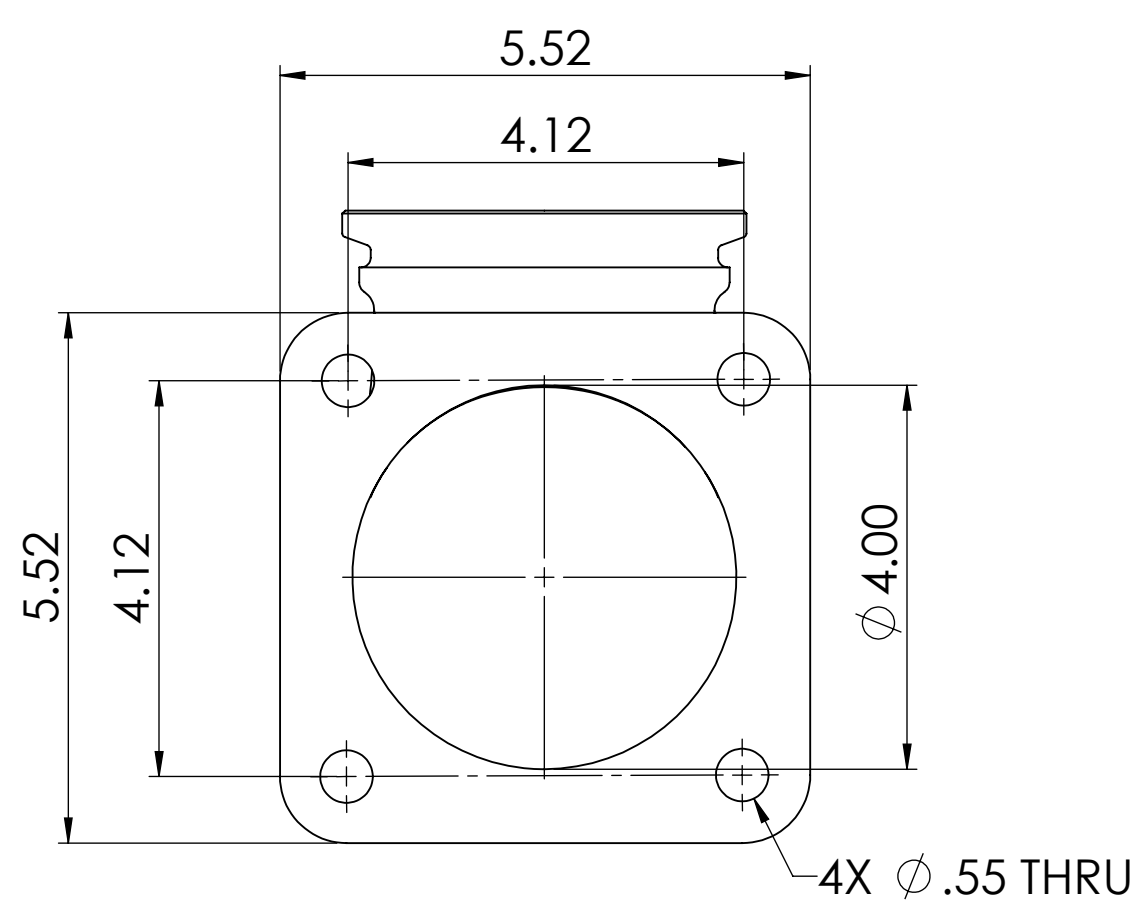
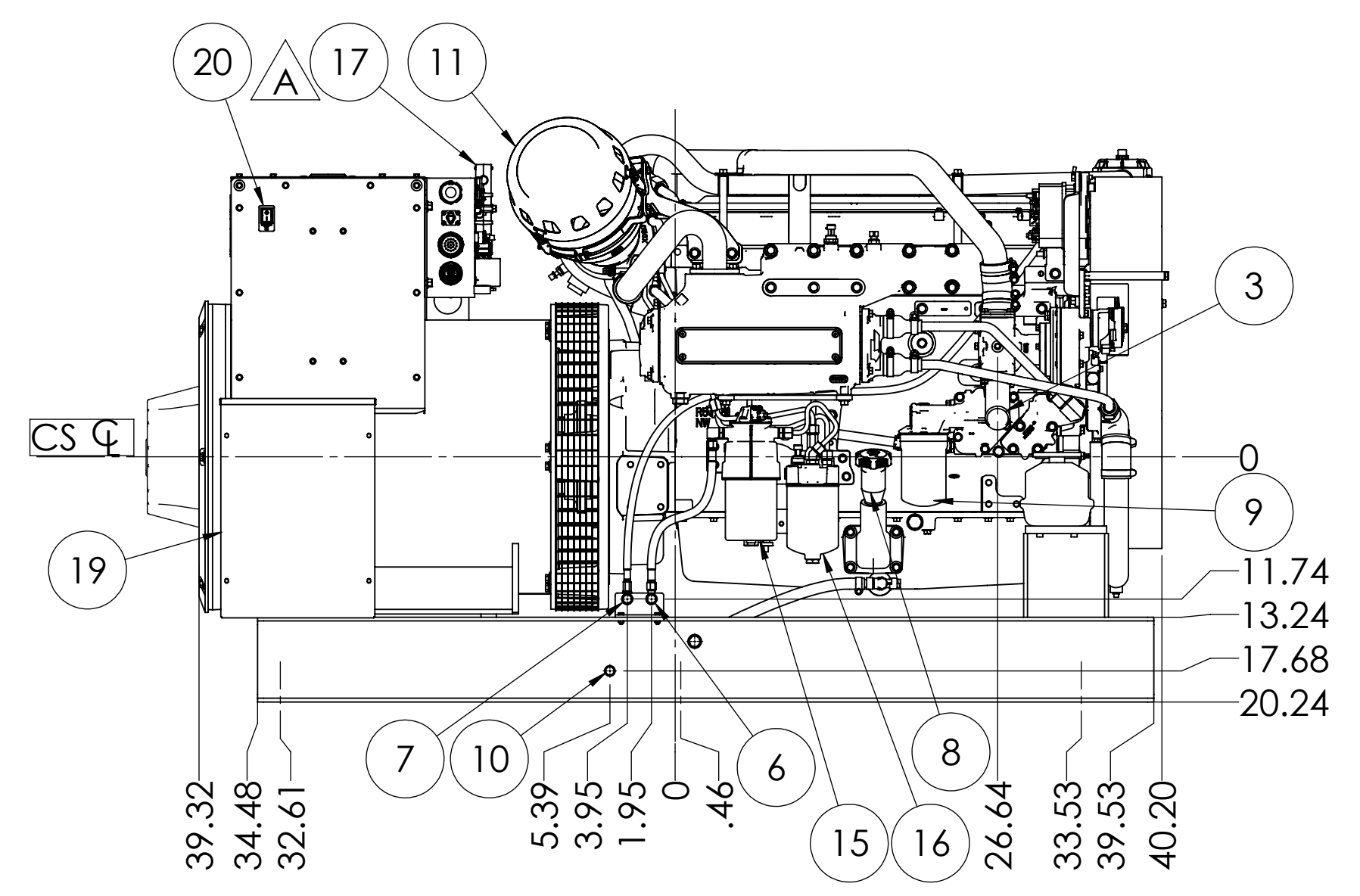


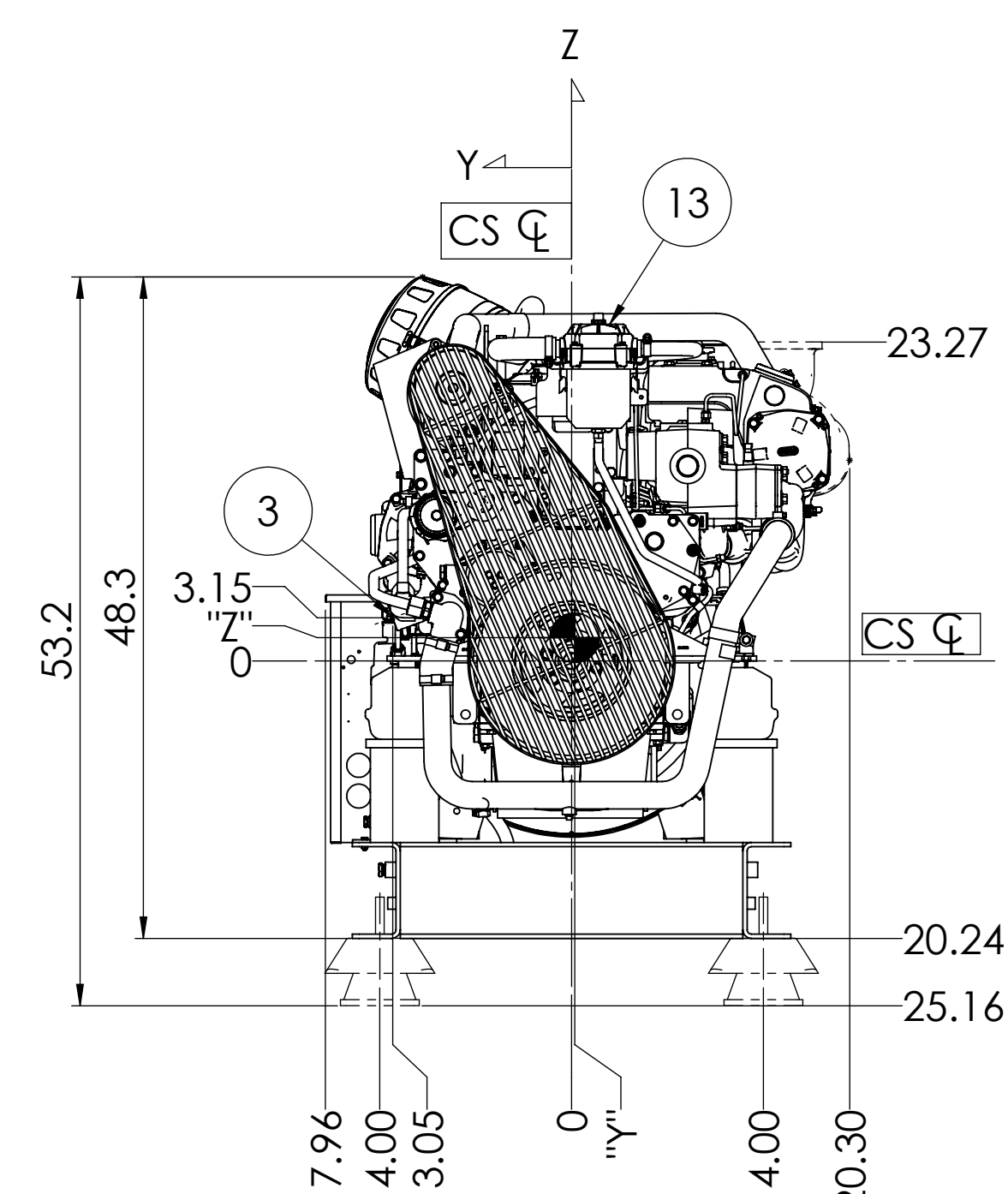
PLAN



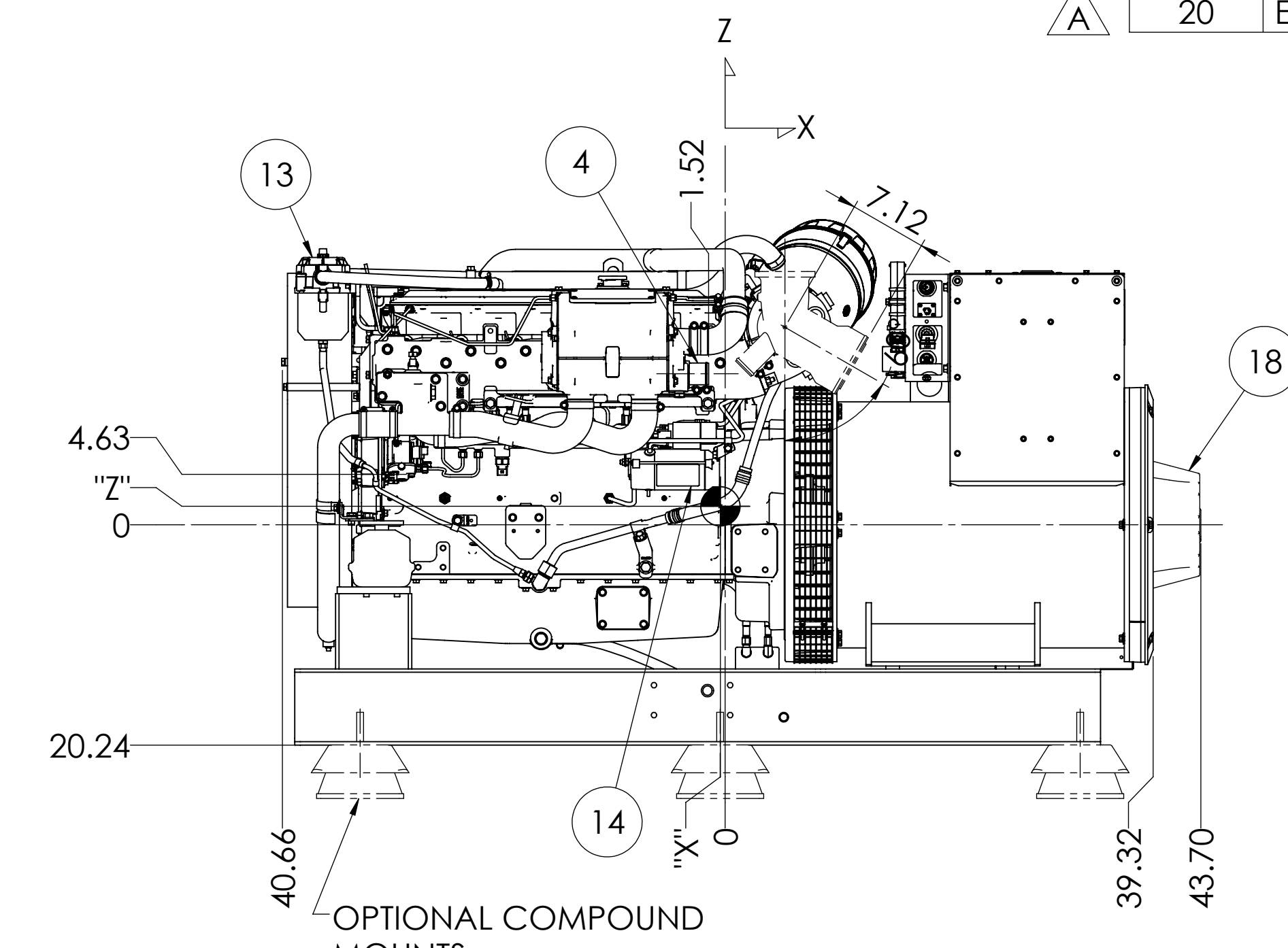
OPTIONAL DRY EXHAUST
FLANGE DETAIL
SCALE 1:4



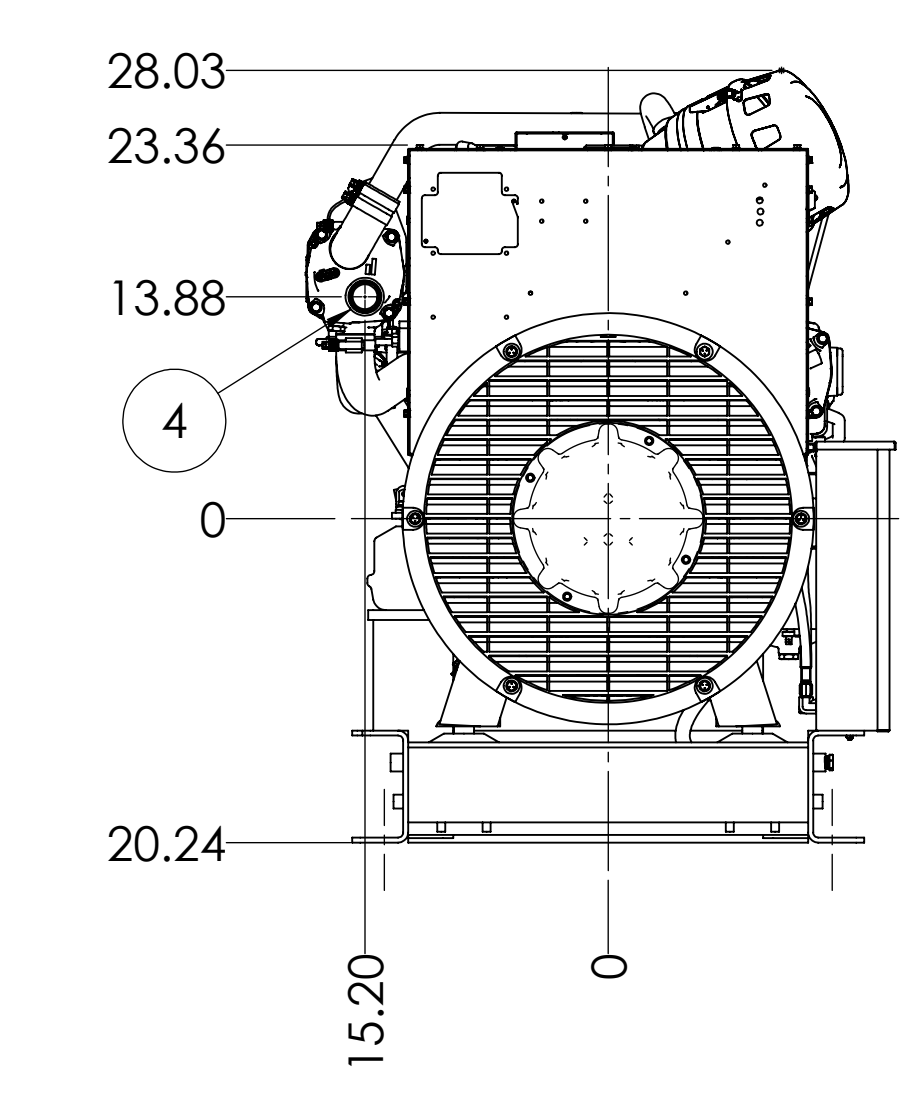
LEFT SIDE



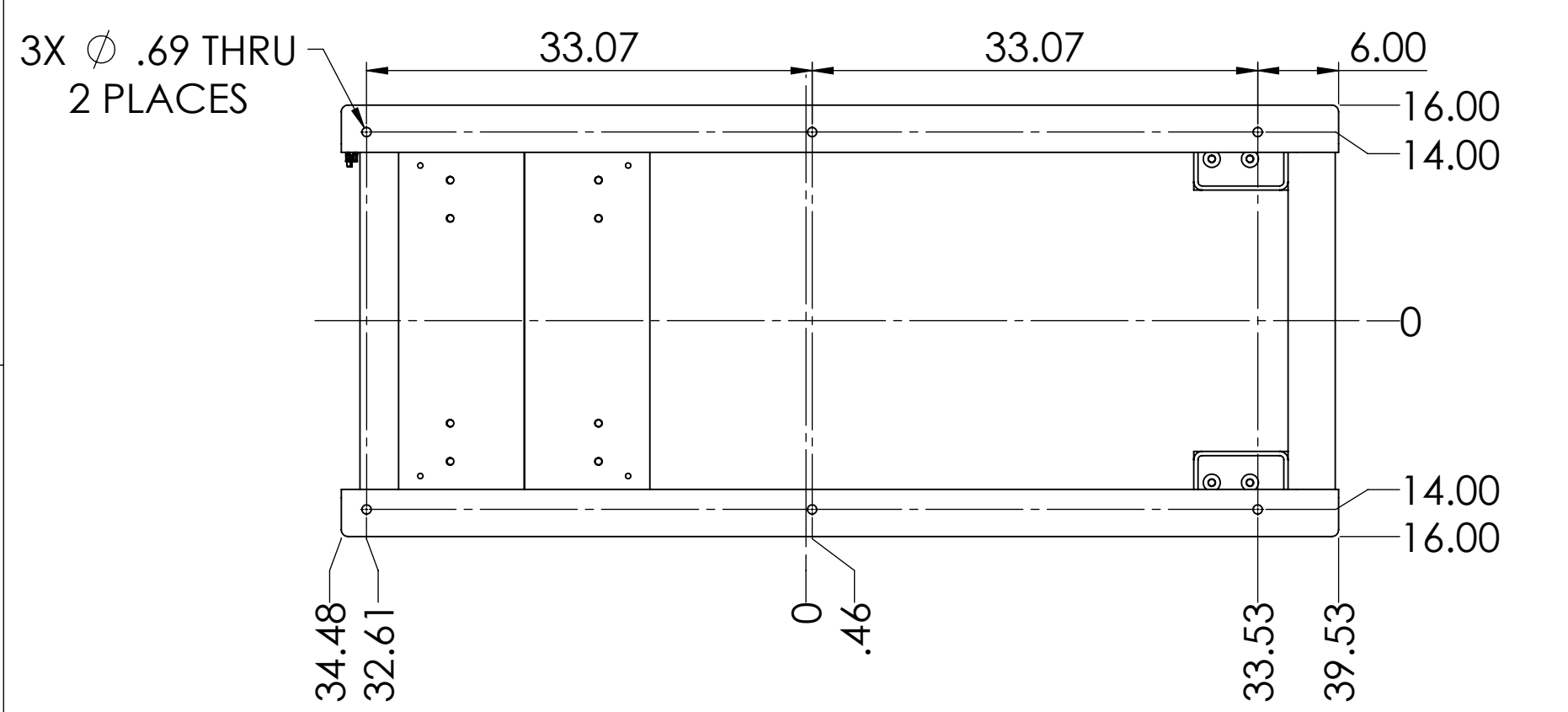
FRONT



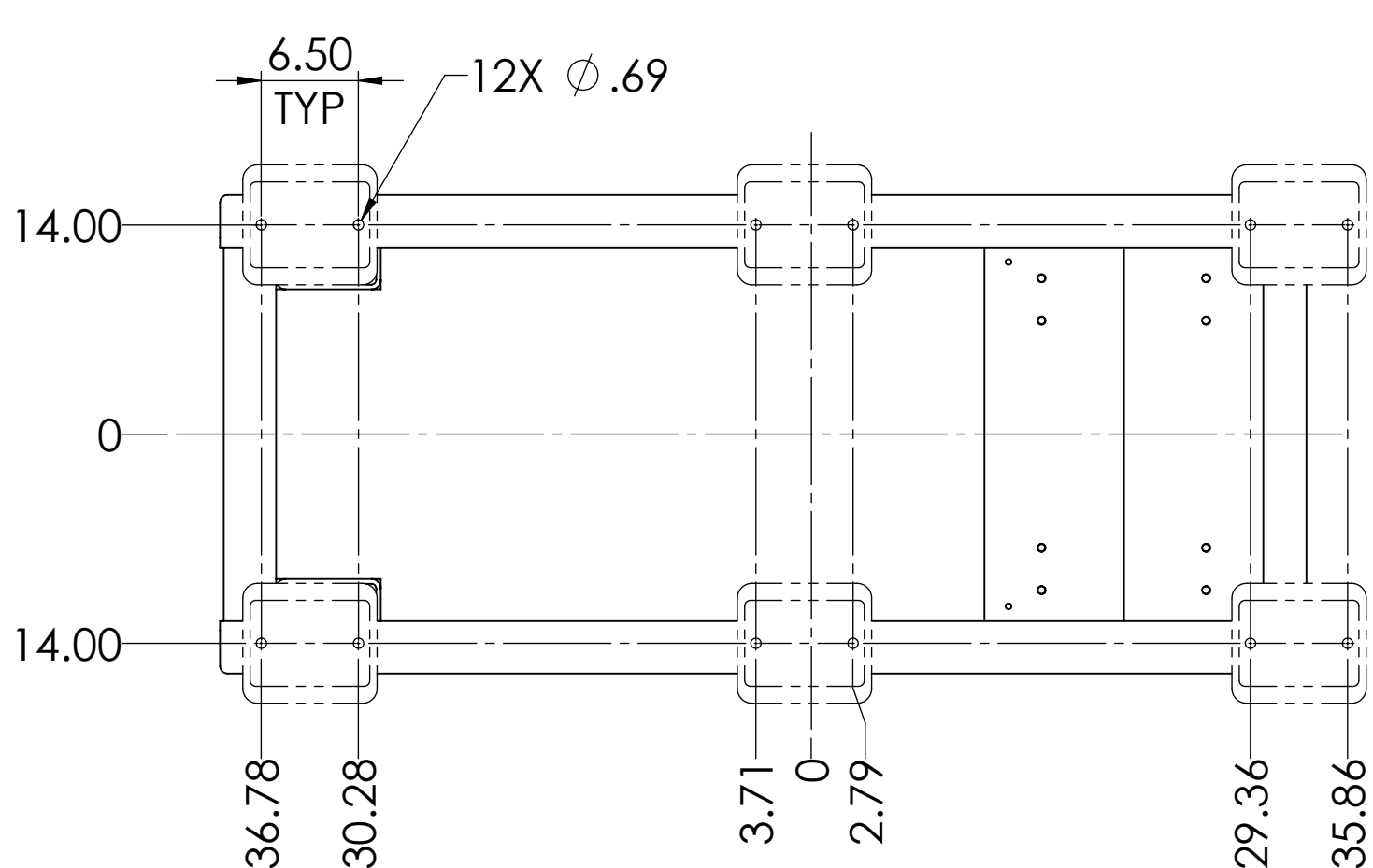
RIGHT SIDE



REAR



BOTTOM



OPTIONAL COMPOUND
MOUNTS

THE DIMENSIONS ON THIS DRAWING ARE SUBJECT TO CHANGE. PLEASE CONTACT NLI TO BE SURE YOU HAVE THE MOST CURRENT REVISION.

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 - 3/8 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	EMERGENCY STOP SWITCH

MODEL	EST. WEIGHT AND C.G.			
	WEIGHT	X	Y	Z
M150A13.11 (150kW/60Hz)	LBS. 3510	- .4	- .2	1.7
M150A13.51 (125kW/50Hz)	3655	.7	- .2	1.6
M116A13.51 (116kW/50Hz)	3655	.7	- .2	1.6

NOTE: WEIGHTS INCLUDE OIL, NO COOLANT.

REV.	DESCRIPTION	DATE	BY	CHECKED
A	RELOCATED ECU, ADDED E-STOP SWITCH, INCREASED WEIGHTS, ECU 7299	4/27/2021	MG	DV

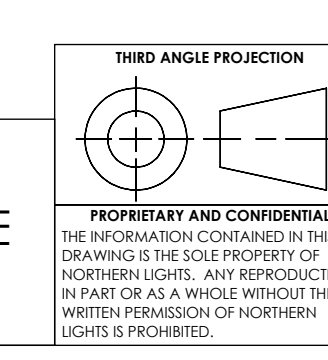
REVISIONS		NAME	DATE
DRAWN	MG	05/15/17	
CHECKED	TAH	06/22/17	
ENG APPR.			
MFG APPR.			
G.A.			

NORTHERN LIGHTS
4420 14th AVE. N.W.
Seattle, WA 98107
(206) 789-3880
www.northern-lights.com

TITLE: **INSTALLATION DIMENSIONS**
M150A13 / M116A13 HEAT EXCHANGER COOLED

SIZE	PART NO.	DWG. NO.	REV
D		D-5014	A

SCALE: 1:12 WEIGHT: LBS. SHEET 1 OF 1



PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF NORTHERN LIGHTS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF NORTHERN LIGHTS IS PROHIBITED.

D-5014