

HEATER SPECIFICATIONS:

1. ANSI 14" 150# 304 SS FLANGE HEATER.
2. IMMERSION LENGTH: 104". COLD LENGTH: 12".
3. NEMA 4. CARBON STEEL ENCLOSURE WITH (3) 1 1/2" & (1) 3/4" NPT CONDUITS, EQUALLY SPACED.
4. ALL WELDS INSPECTED WITH AIR PRESSURE TEST @ 225 PSI.
5. ALL GTAW WELDING PER DUREX INDUSTRIES WORK INSTRUCTIONS F-MF-0400.
6. STAMP LABEL PER INSPECTION POINTS AND GLUE TO ENCLOSURE LID.
7. STAMP "UP": MAINTAIN CONDUITS TO FLANGE ORIENTATION.

ELECTRICAL SPECIFICATIONS:

8. (54) Ø .475, INCOLOY 800 ELEMENTS: 4814W, 480V, 17.5W/IN²
9. TOTAL POWER: 240KW, 480V, 3 PH, 3 CIRCUITS
10. OHMS AS JUMPED: 5.32 NOMINAL (5.05 MIN. - 5.85 MAX)
11. 104.34 AMPS PER CIRCUIT.
12. RESISTANCE TOLERANCE +10% -5%
13. INSULATION RESISTANCE: 100 MEGOHMS MIN @ 1000VDC
14. HIPOT VALUE- 2mA MAX LEAKAGE/ELEMENT @ 1960 VAC

DUREX INDUSTRIES
100 Industrial Blvd., Suite 100, Houston, TX 77058
713-661-0000

DETAIL A
SCALE 1:1.5

REV	ECN	DESCRIPTION	REV BY	APP BY	DATE
1	N/A	CUSTOMER APPROVAL	RG		

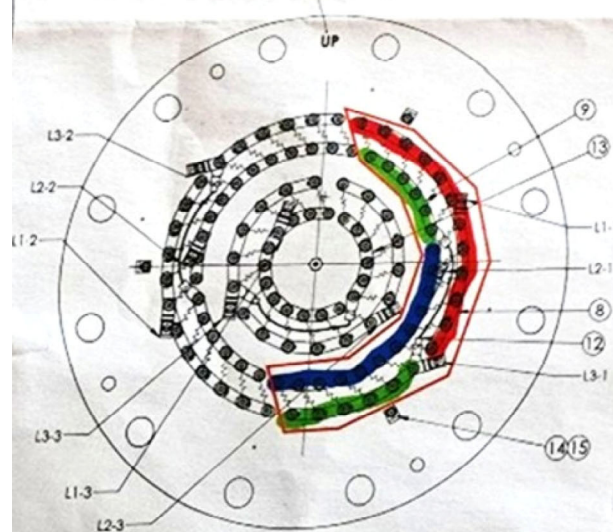
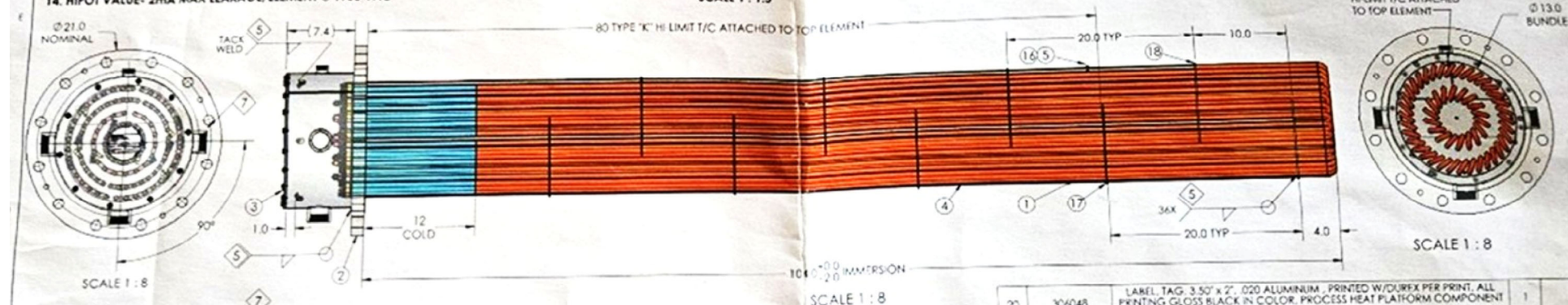
FOR APPROVAL ONLY
CUSTOMER NAME: CIELO
CUSTOMER PO#: 0-02

QUANTITY: 1

APPROVAL NAME: Jason Gilbertson

APPROVAL SIGNATURE: *Jason Gilbertson*

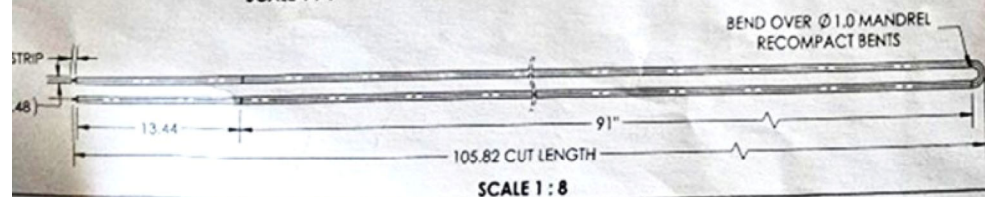
APPROVAL DATE: January 13, 2022



WIRING DIAGRAM
3 PH DELTA, 3 CIRCUITS
SCALE 1:4



COMPONENTS HIDDEN
FOR CLARITY
SCALE 1:2



SCALE 1:8

NO.	ITEM NUMBER	DESCRIPTION	QTY
20	306048	LABEL TAG, 3.50" X 2", .020 ALUMINUM, PRINTED W/DUREX PER PRINT, ALL PRINTING GLOSS BLACK IN COLOR, PROCESS HEAT PLATFORM COMPONENT NO UL MARKING	1
19	295001	COMPOUND, CONTACT ADHESIVE TRANSLUCENT LIQUID, LOCTITE R495	A/R
18	181510	STAMPING, BAFFLE, 304 SS, 13" OD, 12" THICK FOR (54) 475" ELEMENTS, 30% OPEN	4
17	181509	STAMPING, BAFFLE, 304 SS, 13" OD, 12" THICK FOR (54) 475" ELEMENTS, 30% OPEN	5
16	M10185	THERMOCOUPLE, DC6, K CAL STD LHM, UGND, 304SS, .125" OD X .88" LG, 120" FG/FG STR LDS, 2" SPLIT ENDS	1
15	206995	FASTENER, SCREW, HEX SLOTTED PHILLIPS HEAD, 10-32 SELF TAPPING, 3/8" LONG, GROUND SCREW, GREEN ZINC PLATED STL	3
14	205001	WELD NUT BRACKET L-SHAPE, NICKEL PLATED, .625" X .625"	3
13	187337	STAMPING, JUMPER, 1/8" THICK COPPER, 0.625" X 0.750" CENTERS, 70 AMPS, PROCESS HEAT PLATFORM COMPONENT	16
12	046177	LEADWIRE, 1 COND, 6 GA, 0.162" OD, STRANDED, NPC, (Mica-Glass 600 VOLT 450 °C TEMP RATING UL 5107) R0HS	3
11	251058	TERMINAL, #10 RING UNINSULATED FOR 6 GA WIRE, PACKED IN BULK	6
10	251049	TERMINAL, WIRING LUG, 1.44 LG, 0.50" WD, 1.00" TALL, 2-8 AWG, COPPER, BURNED #KLU70 (or equiv), PROCESS HEAT PLATFORM COMPONENT	9
9	186026	STAMPING, JUMPER, 1.35" LG, 0.44" WIDE, .125" THK COPPER, PROCESS HEAT PLATFORM COMPONENT	32
8	181110-2	STAMPING, JUMPER, 1/8" THICK COPPER, 0.875" X 1.25" CENTERS, PROCESS HEAT PLATFORM COMPONENT	48
7	TA1014	TERMINAL, TYPE "S", 10-32 TERM STUD, 1.16" LONG, FOR FLANGE AND SCREW PLUG STANDARD	99
6	TA1013	TERMINAL, TYPE "S", 10-32 TERM STUD, 1.16" LONG STANDARD, INSTALLED ON L1, L2, L3	9
5	116074	ADAPTER, HOSE CLAMP, .219"-.625", 5/16" WIDE, 316 SS BAND, 316 SS SCREW	1
4	276115	METAL, ROD, .25" OD, 304SS, 12 FT LENGTHS, ASME CERTS REQUIRED	4
3	NEMA4FLG-14-CS-1	ENCLOSURE, NEMA 4, 14" FLANGE HEATER, CS, (3) 1 1/2" & (1) 3/4" NPT COUPLINGS	1
2	370401	FLANGE, BLIND, ANSI 14", 150#, RF 304 SS 21.0 OD, 1.38 THICK, (54) 475" ELEMENTS, (1) 1/8" NPT HOLE, MACHINE PER DRAWING	1
1	EL14613	ELEMENT, 0.475 Dia, Incoloy, 211 25 SL, 184.35 HL, 13.45 CL, 4814W 480V, 47.860 Ohms	54

UNLESS OTHERWISE SPECIFIED:

WELDED ASSEMBLIES	STRAIGHT DIMENSIONS
IMMERSION LENGTH	0.125" = 1/16"
UP TO 1/16"	0.250" = 1/8"
OVER 1/16" - 1/8"	0.375" = 3/8"
OVER 1/8" - 1/4"	0.500" = 1/2"
OVER 1/4" - 3/8"	0.625" = 5/8"
OVER 3/8" - 1"	0.750" = 3/4"
OVER 1" - 2"	1.000" = 1"
OVER 2" - 4"	1.250" = 1 1/4"
OVER 4" - 6"	1.500" = 1 1/2"
OVER 6" - 8"	1.750" = 1 3/4"
OVER 8" - 10"	2.000" = 2"
OVER 10" - 12"	2.250" = 2 1/4"
OVER 12" - 14"	2.500" = 2 1/2"
OVER 14" - 16"	2.750" = 2 3/4"
OVER 16" - 18"	3.000" = 3"
OVER 18" - 20"	3.250" = 3 1/4"
OVER 20" - 22"	3.500" = 3 1/2"
OVER 22" - 24"	3.750" = 3 3/4"
OVER 24" - 26"	4.000" = 4"
OVER 26" - 28"	4.250" = 4 1/4"
OVER 28" - 30"	4.500" = 4 1/2"
OVER 30" - 32"	4.750" = 4 3/4"
OVER 32" - 34"	5.000" = 5"
OVER 34" - 36"	5.250" = 5 1/4"
OVER 36" - 38"	5.500" = 5 1/2"
OVER 38" - 40"	5.750" = 5 3/4"
OVER 40" - 42"	6.000" = 6"
OVER 42" - 44"	6.250" = 6 1/4"
OVER 44" - 46"	6.500" = 6 1/2"
OVER 46" - 48"	6.750" = 6 3/4"
OVER 48" - 50"	7.000" = 7"
OVER 50" - 52"	7.250" = 7 1/4"
OVER 52" - 54"	7.500" = 7 1/2"
OVER 54" - 56"	7.750" = 7 3/4"
OVER 56" - 58"	8.000" = 8"
OVER 58" - 60"	8.250" = 8 1/4"
OVER 60" - 62"	8.500" = 8 1/2"
OVER 62" - 64"	8.750" = 8 3/4"
OVER 64" - 66"	9.000" = 9"
OVER 66" - 68"	9.250" = 9 1/4"
OVER 68" - 70"	9.500" = 9 1/2"
OVER 70" - 72"	9.750" = 9 3/4"
OVER 72" - 74"	10.000" = 10"
OVER 74" - 76"	10.250" = 10 1/4"
OVER 76" - 78"	10.500" = 10 1/2"
OVER 78" - 80"	10.750" = 10 3/4"
OVER 80" - 82"	11.000" = 11"
OVER 82" - 84"	11.250" = 11 1/4"
OVER 84" - 86"	11.500" = 11 1/2"
OVER 86" - 88"	11.750" = 11 3/4"
OVER 88" - 90"	12.000" = 12"
OVER 90" - 92"	12.250" = 12 1/4"
OVER 92" - 94"	12.500" = 12 1/2"
OVER 94" - 96"	12.750" = 12 3/4"
OVER 96" - 98"	13.000" = 13"
OVER 98" - 100"	13.250" = 13 1/4"
OVER 100" - 102"	13.500" = 13 1/2"
OVER 102" - 104"	13.750" = 13 3/4"
OVER 104" - 106"	14.000" = 14"
OVER 106" - 108"	14.250" = 14 1/4"
OVER 108" - 110"	14.500" = 14 1/2"
OVER 110" - 112"	14.750" = 14 3/4"
OVER 112" - 114"	15.000" = 15"
OVER 114" - 116"	15.250" = 15 1/4"
OVER 116" - 118"	15.500" = 15 1/2"
OVER 118" - 120"	15.750" = 15 3/4"
OVER 120" - 122"	16.000" = 16"
OVER 122" - 124"	16.250" = 16 1/4"
OVER 124" - 126"	16.500" = 16 1/2"
OVER 126" - 128"	16.750" = 16 3/4"
OVER 128" - 130"	17.000" = 17"
OVER 130" - 132"	17.250" = 17 1/4"
OVER 132" - 134"	17.500" = 17 1/2"
OVER 134" - 136"	17.750" = 17 3/4"
OVER 136" - 138"	18.000" = 18"
OVER 138" - 140"	18.250" = 18 1/4"
OVER 140" - 142"	18.500" = 18 1/2"
OVER 142" - 144"	18.750" = 18 3/4"
OVER 144" - 146"	19.000" = 19"
OVER 146" - 148"	19.250" = 19 1/4"
OVER 148" - 150"	19.500" = 19 1/2"
OVER 150" - 152"	19.750" = 19 3/4"
OVER 152" - 154"	20.000" = 20"
OVER 154" - 156"	20.250" = 20 1/4"
OVER 156" - 158"	20.500" = 20 1/2"
OVER 158" - 160"	20.750" = 20 3/4"
OVER 160" - 162"	21.000" = 21"
OVER 162" - 164"	21.250" = 21 1/4"
OVER 164" - 166"	21.500" = 21 1/2"
OVER 166" - 168"	21.750" = 21 3/4"
OVER 168" - 170"	22.000" = 22"
OVER 170" - 172"	22.250" = 22 1/4"
OVER 172" - 174"	22.500" = 22 1/2"
OVER 174" - 176"	22.750" = 22 3/4"
OVER 176" - 178"	23.000" = 23"
OVER 178" - 180"	23.250" = 23 1/4"
OVER 180" - 182"	23.500" = 23 1/2"
OVER 182" - 184"	23.750" = 23 3/4"
OVER 184" - 186"	24.000" = 24"
OVER 186" - 188"	24.250" = 24 1/4"
OVER 188" - 190"	24.500" = 24 1/2"
OVER 190" - 192"	24.750" = 24 3/4"
OVER 192" - 194"	25.000" = 25"
OVER 194" - 196"	25.250" = 25 1/4"
OVER 196" - 198"	25.500" = 25 1/2"
OVER 198" - 200"	25.750" = 25 3/4"
OVER 200" - 202"	26.000" = 26"
OVER 202" - 204"	26.250" = 26 1/4"
OVER 204" - 206"	26.500" = 26 1/2"
OVER 206" - 208"	26.750" = 26 3/4"
OVER 208" - 210"	27.000" = 27"
OVER 210" - 212"	27.250" = 27 1/4"
OVER 212" - 214"	27.500" = 27 1/2"
OVER 214" - 216"	27.750" = 27 3/4"
OVER 216" - 218"	28.000" = 28"
OVER 218" - 220"	28.250" = 28 1/4"
OVER 220" - 222"	28.500" = 28 1/2"
OVER 222" - 224"	28.750" = 28 3/4"
OVER 224" - 226"	29.000" = 29"
OVER 226" - 228"	29.250" = 29 1/4"
OVER 228" - 230"	29.500" = 29 1/2"
OVER 230" - 232"	29.750" = 29 3/4"
OVER 232" - 234"	30.000" = 30"
OVER 234" - 236"	30.250" = 30 1/4"
OVER 236" - 238"	30.500" = 30 1/2"
OVER 238" - 240"	30.750" = 30 3/4"
OVER 240" - 242"	31.000" = 31"
OVER 242" - 244"	31.250" = 31 1/4"
OVER 244" - 246"	31.500" = 31 1/2"
OVER 246" - 248"	31.750" = 31 3/4"
OVER 248" - 250"	32.000" = 32"
OVER 250" - 252"	32.250" = 32 1/4"
OVER 252" - 254"	32.500" = 32 1/2"
OVER 254" - 256"	32.750" = 32 3/4"
OVER 256" - 258"	33.000" = 33"
OVER 258" - 260"	33.250" = 33 1/4"
OVER 260" - 262"	33.500" = 33 1/2"
OVER 262" - 264"	33.750" = 33 3/4"
OVER 264" - 266"	34.000" = 34"
OVER 266" - 268"	34.250" = 34 1/4"
OVER 268" - 270"	34.500" = 34 1/2"
OVER 270" - 272"	34.750" = 34 3/4"
OVER 272" - 274"	35.000" = 35"
OVER 274" - 276"	35.250" = 35 1/4"
OVER 276" - 278"	35.500" = 35 1/2"
OVER 278" - 280"	35.750" = 35 3/4"
OVER 280" - 282"	36.000" = 36"
OVER 282" - 284"	36.250" = 36 1/4"
OVER 284" - 286"	36.500" = 36 1/2"
OVER 286" - 288"	36.750" = 36 3/4"
OVER 288" - 290"	37.000" = 37"
OVER 290" - 292"	37.250" = 37 1/4"
OVER 292" - 294"	37.500" = 37 1/2"
OVER 294" - 296"	37.750" = 37 3/4"
OVER 296" - 298"	38.000" = 38"
OVER 298" - 300"	38.250" = 38 1/4"
OVER 300" - 302"	38.500" = 38 1/2"
OVER 302" - 304"	38.750" = 38 3/4"
OVER 304" - 306"	39.000" = 39"
OVER 306" - 308"	39.250" = 39 1/4"
OVER 308" - 310"	39.500" = 39 1/2"
OVER 310" - 312"	39.750" = 39 3/4"
OVER 312" - 314"	40.000" = 40"
OVER 314" - 316"	40.250" = 40 1/4"
OVER 316" - 318"	40.500" = 40 1/2"
OVER 318" - 320"	40.750" = 40 3/4"
OVER 320" - 322"	41.000" = 41"
OVER 322" - 324"	41.250" = 41 1/4"
OVER 324" - 326"	41.500" = 41 1/2"
OVER 326" - 328"	41.750" = 41 3/4"
OVER 328" - 330"	42.000" = 42"
OVER 330" - 332"	42.250" = 42 1/4"
OVER 332" - 334"	42.500" = 42 1/2"
OVER 334" - 336"	42.750" = 42 3/4"
OVER 336" - 338"	43.000" = 43"
OVER 338" - 340"	43.250" = 43 1/4"
OVER 340" - 342"	43.500" = 43 1/2"
OVER 342" - 344"	43.750" = 43 3/4"
OVER 344" - 346"	44.000" = 44"
OVER 346" - 348"	44.250" = 44 1/4"
OVER 348" - 350"	44.500" = 44 1/2"
OVER 350" - 352"	44.750" = 44 3/4"
OVER 352" - 354"	45.000" = 45"
OVER 354" - 356"	45.250" = 45 1/4"
OVER 356" - 358"	45.500" = 45 1/2"
OVER 358" - 360"	45.750" = 45 3/4"
OVER 360" - 362"	46.000" = 46"
OVER 362" - 364"	46.250" = 46 1/4"
OVER 364" - 366"	46.500" = 46 1/2"
OVER 366" - 368"	46.750" = 46 3/4"
OVER 368" - 370"	47.000" = 47"
OVER 370" - 372"	47.250" = 47 1/4"
OVER 372" - 374"	47.500" = 47 1/2"
OVER 374" - 376"	47.750" = 47 3/4"
OVER 376" - 378"	48.000" = 48"
OVER 378" - 380"	48.250" = 48 1/4"
OVER 380" - 382"	48.500" = 48 1/2"
OVER 382" - 384"	48.750" = 48 3/4"
OVER 384" - 386"	49.000" = 49"
OVER 386" - 388"	49.250" = 49 1/4"
OVER 388" - 390"	49.500" = 49 1/2"
OVER 390" - 392"	49.750" = 49 3/4"
OVER 392" - 394"	50.000" = 50"
OVER 394" - 396"	50.250" = 50 1/4"
OVER 396" - 398"	50.500" = 50 1/2"
OVER 398" - 400"	50.750" = 50 3/4"
OVER 400" - 402"	51.000" = 51"
OVER 402" - 404"	51.250" = 51 1/4"
OVER 404" - 406"	51.500" = 51 1/2"
OVER 406" - 408"	51.750" = 51 3/4"
OVER 408" - 410"	52.000" = 52"
OVER 410" - 412"	52.250" = 52 1/4"
OVER 412" - 414"	52.500" = 52 1/2"
OVER 414" - 416"	52.750" = 52 3/4"
OVER 416" - 418"	53.000" = 53"
OVER 418" - 420"	53.250" = 53 1/4"
OVER 420" - 422"	53.500" = 53 1/2"
OVER 422" - 424"	53.750" = 53 3/4"
OVER 424" - 426"	54.000" = 54"
OVER 426" - 428"	54.250" = 54 1/4"
OVER 428" - 430"	54.500" = 54 1/2"
OVER 430" - 432"	54.750" = 54 3/4"
OVER 432" - 434"	55.