

## THERMO-ELECTRIC COOLERS

### Classic Model 20410

Perma Pure's Baldwin™ Classic Series Model 20410 Thermo-Electric Coolers is specifically designed for high ambient temperature & high water volume applications and can be used in single stream or dual stream applications. The Model 20410 features an oversized heat sink and high performance thermoelectric devices for high heat removal capacity. Heat sinks used in the Baldwin-Series Thermo-Electric Coolers are made out of high heat transfer extruded aluminum with large 3/4" thick end plates. The Model 20410 incorporates a special controller specifically designed to run at high ambient temperatures up to 110°F (43°C).

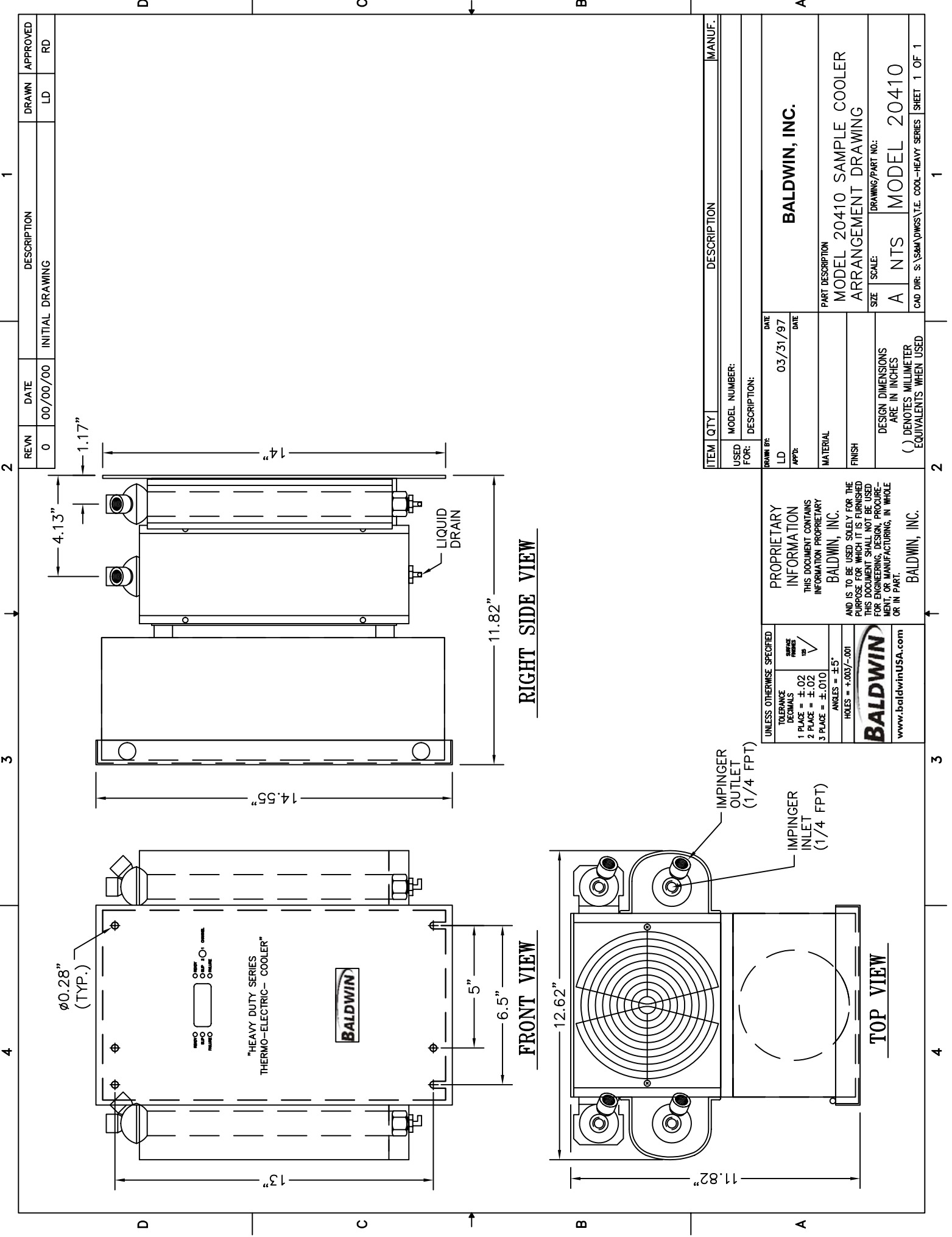


#### Physical Description

Single (Series) / Dual (Parallel) Stream System  
 4 x 10" Heat Exchangers connected in parallel or series (passive/active, passive/active)  
 2 Passive (cooled to ambient), 2 Active (cooled to 4°C) Heat Exchangers  
 LCD temperature display, water slip relay

#### Operating Specifications

Sample Gas Flow Range	10-20 LPM (Series configuration) 21.2-42.4 SCFH
Average Inlet Dew Point at Rated Flow	175°F @ 43% H <sub>2</sub> O, 10 LPM 61°C
Dimensions	14.50 x 12.5 x 12.00 in. HWD 36.8 x 31.75 x 30.5 cm
Weight	41 lbs 19.0 kg
Maximum Inlet Sample Temperature	400°F (205°C) SS, Glass, Durinert® 280°F (138°C) Kynar Impinger
Maximum Inlet Pressure	45 psig 3 bar / 2250 mmHg
Maximum Heat Exchanger Pressure Drop	<+1 in. H <sub>2</sub> O
Ambient Temperature Range	33-104°F 0.56-40°C
Outlet Sample Gas Dew Point	41°F 5°C
Inlet Tubing Connection	3/8 in. FNPT (heat exchanger 1) 1/4 in. FNPT (heat exchangers 2,3,4)
Outlet Tubing Connection	1/4 in. FNPT
Drain Tubing Connection	3/8 in. FNPT
Voltage	110 (220 optional) VAC 50/60 Hz
Thermoelectric Elements	40 mm
Power Supply	500W
Cooling Down Time	Less than 3 minutes



REV#	DATE	DESCRIPTION	DRAWN	APPROVED
0	00/00/00	INITIAL DRAWING	LD	RD

ITEM	QTY	DESCRIPTION	MANUF.
USED FOR:			
MODEL NUMBER:			
DESCRIPTION:			
DRAWN BY:	LD	DATE	03/31/97
APPR:		DATE	
MATERIAL:			
FINISH:			
PART DESCRIPTION:	MODEL 20410 SAMPLE COOLER ARRANGEMENT DRAWING		
SIZE:	A	SCALE:	N T S
DRAWING/PART NO.:	MODEL 20410		
DESIGN DIMENSIONS ARE IN INCHES	()		
EQUIVALENTS WHEN USED	MILLIMETER		
CAD DIR: S:\\$B&W\DWGS\T.E. COOL-HEAVY SERIES			

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 BALDWIN, INC.

UNLESS OTHERWISE SPECIFIED:	
TOLERANCE DECIMALS	ANGLES
1 PLACE = ±.02	15°
2 PLACE = ±.02	15°
3 PLACE = ±.010	15°
Holes = ±.5°	
Holes = +.003/-001	
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