

Sure-Steam™



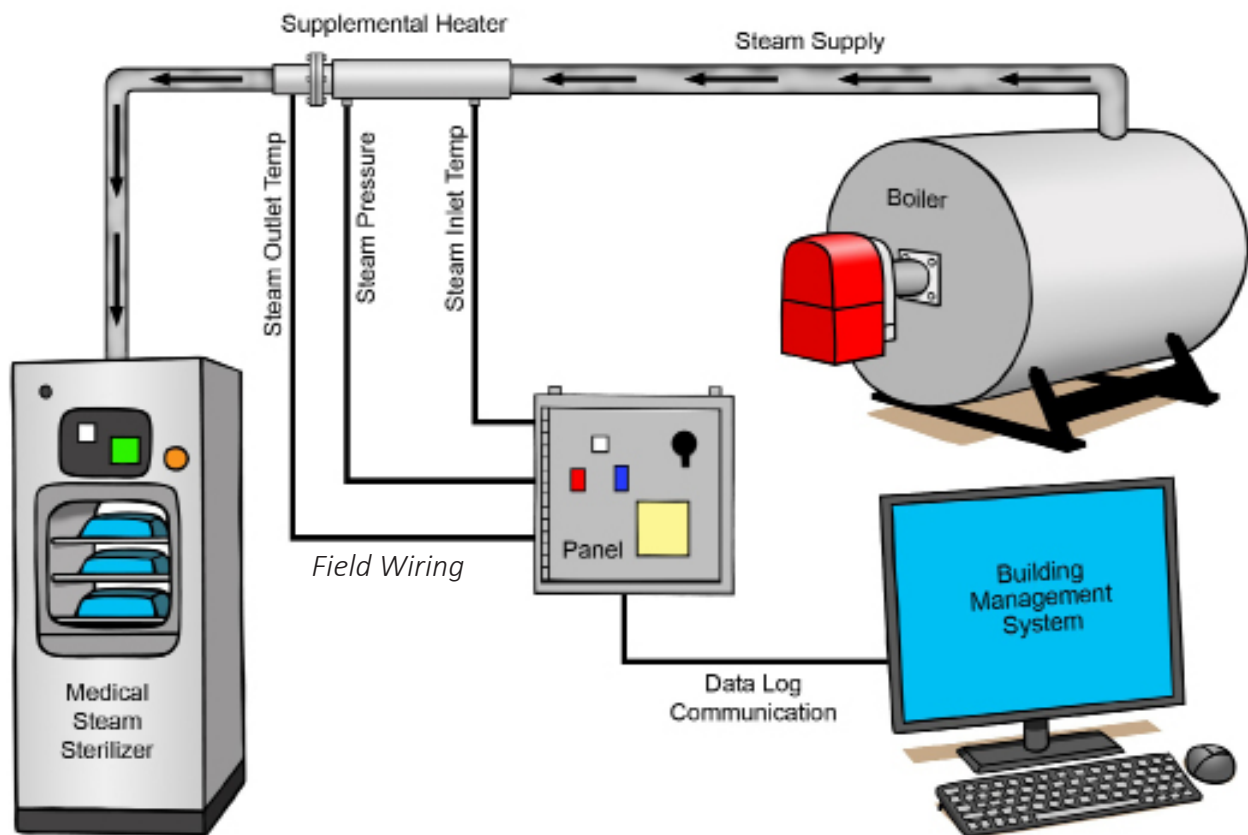
Wet pack solution for medical and dental facilities

Sure-Steam™

Indeeco's Sure-Steam™ is a patent pending steam monitoring and control system paired with a supplemental in-line electric heater that provides peace of mind and useful feedback to medical and dental facilities with steam sterilizers. Sure-Steam™ monitors and logs the steam supply to sterilizers and can provide supplemental heat using an electric heater to help maintain a dry steam supply as the steam is delivered to the sterilizer.

Customer Benefits

- Avoid canceled medical and dental procedures as a result of wet pack from poor steam supply.
- Data log of steam supply pressure and temperature to sterilizer for diagnostic support when sterilizer issues arise
- Real time alert of steam supply issues to the sterilizer
- Steam supply energy boost to maintain dry saturated steam (up to 2°F temperature rise across heater)
- Ability to monitor up to four steam process variables with a single control panel

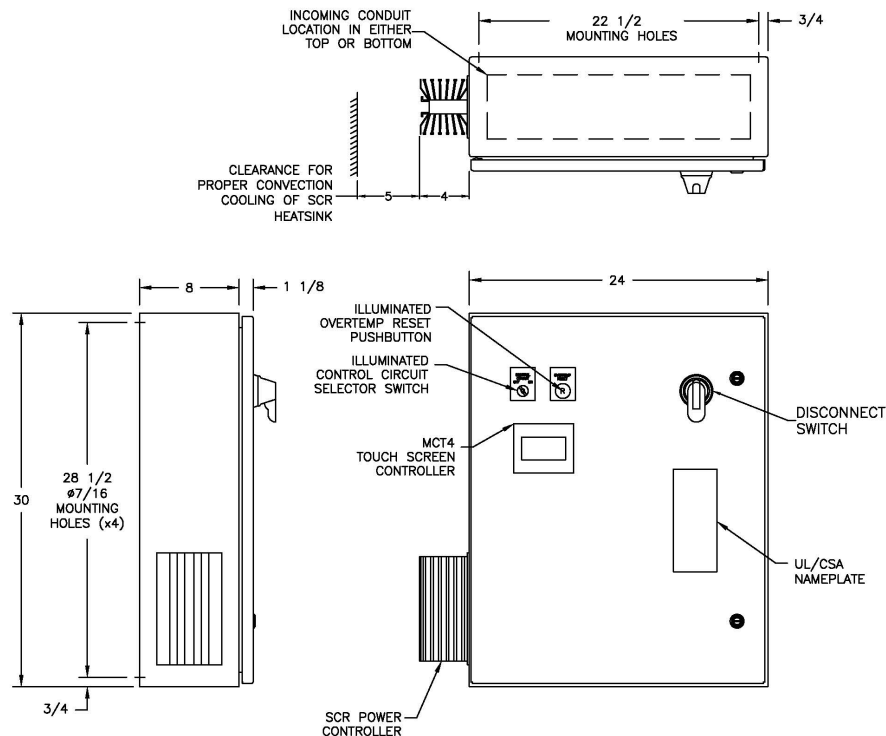


U.S. Patent Application No. 63/312577

Entitled: STEAM BOOST SYSTEM ON AN AUTOCLAVE STEAM STERILIZER

Our File: INDC F976US (17436-00026)

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



UL/CSA, NEMA TYPE 4
 MATERIAL: STEEL, PAINTED
 CONDUIT HUBS/FITTINGS (BY OTHERS) MUST BE UL LISTED
 FOR USE IN THE ENVIRONMENTAL RATING MARKED ON
 THE ENCLOSURE TO MAINTAIN ITS CERTIFICATION.
 ESTIMATED WEIGHT: 120#

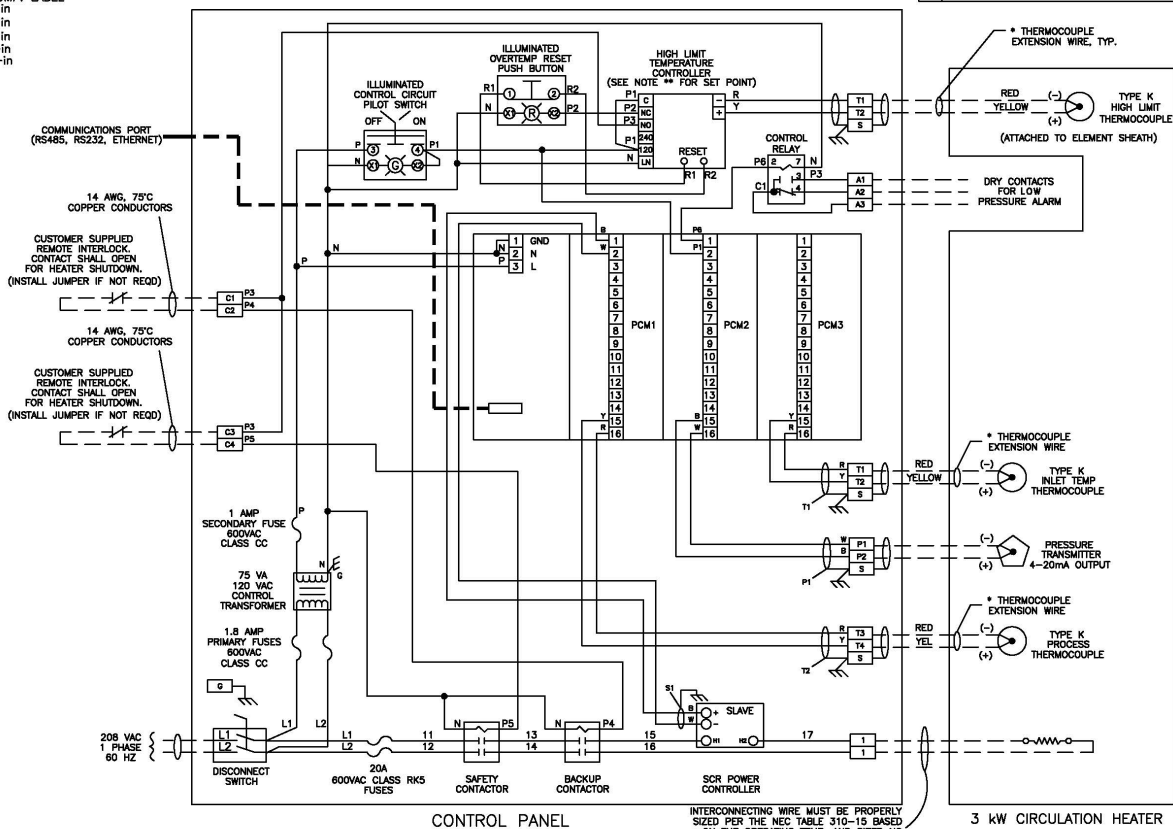
TOLERANCES UNLESS OTHERWISE SPECIFIED: REF. ONLY	DRAWING	CMK	DATE	8/24/22
	CHECK	N/A	DATE	
	ENGR.	CMK	DATE	8/24/22
	WFL	N/A	DATE	
ALL DIMENSIONS ARE IN INCHES	QA	N/A	DATE	

INDEECO INDUSTRIAL ENGINEERING
 AND EQUIPMENT COMPANY
 425 HANLEY INDUSTRIAL CT. ST. LOUIS, MO. 63144 314-644-4300
CONTROL PANEL
 CAT. NO. 870-354675

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DWG. NO.	L870N1c36409		
SIZE	B	SCALE	NONE
SHEET	1 of 1	REV	0

TORQUE REQUIREMENTS:
 DISCONNECT SWITCH: 375 lb-in(LINE)/25 lb-in(LOAD)
 FUSE BLOCK: SEE COMP. LABEL
 CONTACTOR: 40 lb-in
 TERMINAL BLOCK, POWER: 32 lb-in
 TERMINAL BLOCK, C1-C2, P1-P2: 18 lb-in
 TERMINAL BLOCK, T1-T2: 9 lb-in
 SCR: 32 lb-in

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



CONTROL PANEL

INTERCONNECTING WIRE MUST BE PROPERLY SIZED PER THE NEC TABLE 310-15 BASED ON THE OPERATING TEMP. AND SIZED NO SMALLER THAN CAN BE PROTECTED BY THE INTERNAL FUSING PROVIDED.

LEGEND

FIELD WIRING ———
 FACTORY WIRING ———

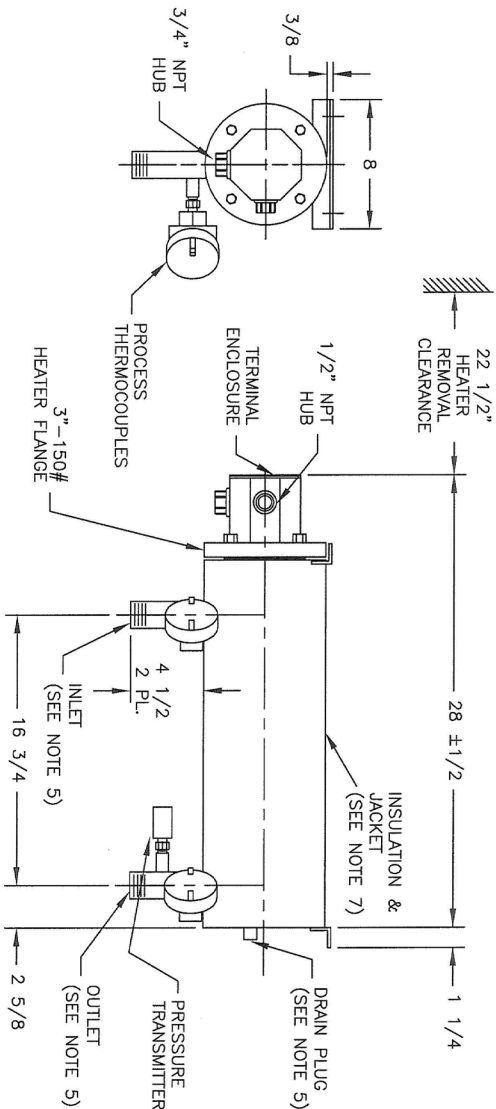
* USE TWISTED AND SHIELDED THERMOCOUPLE EXTENSION WIRE WITH MAX. 100 OHM LOOP RESISTANCE.

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APPROVALS	
DRAWN	CMK
CHECKED	N/A
DATE	8/23/22

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DWG. NO.	L870N1c36410
SIZE	REV 0

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



- | | |
|---|--------------------------------------|
| 1. DESIGN PARAMETERS: | |
| MEDIA HEATED: | STEAM |
| INLET TEMPERATURE: | 290°F |
| OPERATING PRESSURE: | 45 PSIG |
| OUTLET TEMPERATURE: | 300°F |
| FLOW RATE: | 255 LBS./HR |
| HEATER ENVIRONMENT: | INDOOR |
| TERMINAL ENCLOSURE: | NEMA 4X |
| 2. ELECTRICAL RATING: | |
| 3kW/208V/1PH/1 CIRCUIT | |
| 3. HEATING ELEMENTS: (3) | |
| SHEATH WATT DENSITY (w/in ²): | 20 |
| SHEATH MATERIAL: | INCOLOY 800 |
| 4. VESSEL CONSTRUCTION: | |
| ASME CERTIFICATION: | NONE |
| DESIGN TEMPERATURE (°F): | -20 – 350 |
| DESIGN PRESSURE (psig): | 100 |
| MATERIAL: | 316 SS/L |
| 5. VESSEL CONNECTIONS: | |
| INLET/OUTLET: | 1 1/2" NPT |
| DRAIN: | 3/4" NPT |
| 6. HEATER GASKET: | |
| 1/8" GARLOCK PTFE | |
| 7. VESSEL INSULATION: | |
| MATERIAL: | 2" FIBERGLASS |
| INSULATION JACKET: | 304 SS/L |
| 8. REFERENCE NUMBERS: | |
| CIRCULATION HTR CAT. NO.: | 350-354433 |
| 9. ACCESSORIES: | |
| HIGH LIMIT THERMOCOUPLE: | TYPE "K", ATTACHED TO ELEMENT SHEATH |
| PROCESS CONTROL TCouple: | TYPE "K", IN OUTLET NOZZLE |
| PRESSURE TRANSMITTER: | TYPE "K", IN INLET NOZZLE |
| 10. MISC: | IN OUTLET NOZZLE |
| CUSTOMER PIPING MUST ALLOW FOR LINEAR AND ANGULAR TOLERANCES LISTED | |
| INTERIOR OF TANK TO BE PASSIVATED | |

TOLERANCES UNLESS OTHERWISE SPECIFIED:		DRAWING		DATE	8/11/22	<p>INDEECO</p> <p>INDUSTRIAL ENGINEERING AND EQUIPMENT COMPANY</p> <p>425 HAWLEY INDUSTRIAL CT. ST. LOUIS, MO. 63144-3146-4300</p> <p>CIRCULATION HEATER</p> <p>WITH NEMA 4X ENCLOSURE</p> <p>KEI STEAM SOLUTIONS INC</p>
± 1/4" LINEAR		HEATH R		DATE	8/11/22	
± Z ANGULAR		ORISK		DATE	N/A	
WATTAGE +5/-10%		BURL		DATE	6/11/22	
		HEATH R		DATE	N/A	
ALL DIMENSIONS ARE IN INCHES		G.A.		DATE	N/A	
		TITLE:		<p>THIS DRAWING IS THE PROPERTY OF INDUSTRIAL ENGINEERING AND EQUIPMENT COMPANY. IT IS TO BE USED FOR THE PROJECT AND NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF INDUSTRIAL ENGINEERING AND EQUIPMENT COMPANY. IT IS TO BE RETURNED TO THE COMPANY WHEN NO LONGER REQUIRED.</p>		
		DWG NO.		L350N1e36316		
		SIZE		SCALE		
		NONE		1:1		
		SHEET		1 of 1		
		REV.		0		