Instruction Manual
Pressurized Dual Curing Chamber
Model 7375

Revision A – October 3, 2024
P/N: 7375-1050

S/N: _____

CHANDLER ENGINEERING®

AMETEK®

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General Information

Instrument Application

The Pressure Curing Chamber is used for curing tensile or compression specimens of oil well cements at elevated temperatures and at pressures above atmospheric, simulating conditions in the well.

Briefly, the procedure is to prepare the test specimens according to API Spec. 10[(1)]. The specimen slurries are poured into molds, and the molds are lowered into the pressure curing cylinder. The cylinder plug is installed, the thermocouple is inserted into the cylinder head, and the cylinder is filled with water to expel air. Heat, regulated by an Automatic Temperature Program System, and pressure are then applied to the cylinder in accordance with applicable schedules of API Spec. 10[(1)]. Maximum pressure and temperature are maintained until shortly before the end of the curing time specified. The temperature is then reduced, pressure is regulated to atmospheric, and the test specimens are removed for testing.

Equipment Description

Model Number	Maximum			Input Power		Circuit Breaker
	Temperature		Pressure	MPa	kVA	
	°F	°C	Psi/Bar			
7375	700	370	3000/207	21	8.5	45A

Model Number	# of Cubes	Weight				Shipping Dimensions
		Net		Ship		
		Lb	kg	Lb	Kg	W x D x H
7375	16	1030	468	1200	545	53x38x66 (134x97x167cm)

References [(1)]American Petroleum Institute; API Specification 10 for Materials and Testing for Well cements, Latest Edition; Dallas, Texas.

Features

- PID temperature controllers
- High wattage heaters
- Stainless steel pressure vessels
- Metal-to-metal sealing rings
- Operating temperatures to 700°F (370°C)
- Operating pressures to 3000 psi (21 MPa)
- Stainless steel enclosure

Safety features are incorporated into the curing chamber. Over-temperature protection is provided using redundant thermocouples and latching circuits. Over-pressure protection is furnished by relief valves equipped with heat exchangers, through which water exhausts if pressure exceeds the 3000 psi (21 MPa). Rupture discs rated at 4000 psi (276 Bar nominal) are also incorporated as an additional safety feature.

Where to Find Help

In the event of problems, your local sales representative will be able to assist, or you can contact the personnel at Chandler Engineering using the following:

- Telephone: 918-250-7200
- FAX: 918-459-0165
- E-mail: chandler.sales@ametek.com
- Website: www.chandlereng.com

Section 1 - Installation

Prior to operating this instrument, the technician should study the drawings accompanying the operating and maintenance instructions to become thoroughly familiar with the curing chamber operation and its parts.

Before a curing chamber leaves the factory, tests are conducted to verify that the assembly meets performance standards.

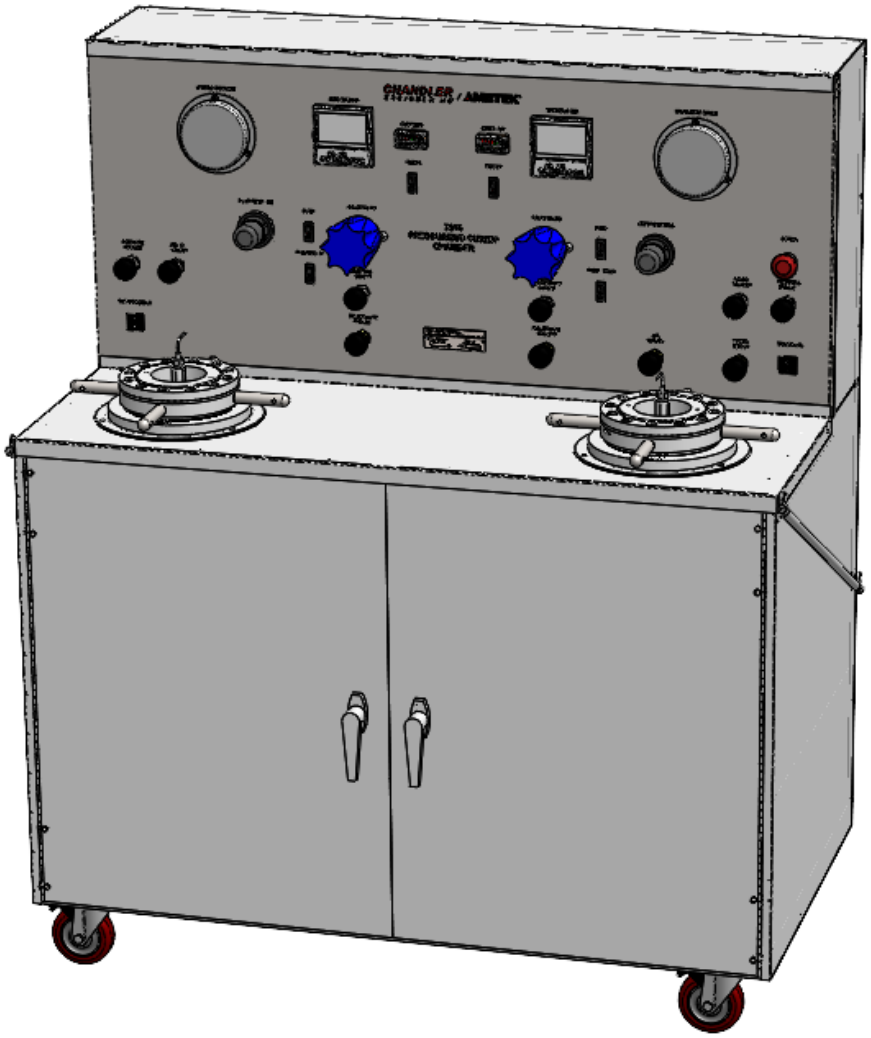


Figure 1 - Model 7375 Dual Curing Chamber

Unpacking the Instrument

After the instrument is removed from the shipping crate, the operating equipment and spare parts on the packing list should be checked to affirm that all have been received and none are damaged.

Note: File an insurance claim with your freight carrier if damage has occurred during shipment. Verify that all parts received appear on the enclosed packing list. If items are missing, please notify Chandler Engineering immediately.

Help Line

On site training classes are available. For more information, contact our Sales Department at Chandler Engineering. (918) 250-7200 or visit our website at www.chandlereng.com.

If you encounter problems during your installation or with any phase of operation, contact our service department. We would also appreciate your suggestions on product improvements. Please call our factory at (918) 250-7200 for service, supplies, or problems and ask for one of our trained product support specialists in the sales or service departments.

Utilities Required

The utilities required to operate the instrument are compressed air at 100-125 psi (6.9-8.6 Bar) and electric current of 230-volt, single-phase, 50 Hz/60 Hz. The circuit breaker needs to be sized based on the instrument rating. Refer to the table in the previous section for circuit breaker ratings.

Water: 20-80 psi/1.38-5.52 Bar; nominal flow 4 lpm. Water is used as the hydraulic medium.

Connection of Water, Air, and Electrical Services

Hose or copper tubing may be used for the water supply connections to the curing chamber. All connections are located at the rear of the cabinet. The electrical cable (supplied with instrument) is to be connected to mating receptacle. This unit is supplied with an installation kit, which includes the necessary hardware for the water, air, and electrical hook-ups.

Caution: Wiring must comply with local electrical codes. Pressure curing chamber should be securely connected to separate ground. The ground wire must have a larger diameter than that of the supply voltage conductors.

Water discharged from the curing chamber, during a high-temperature test, may vaporize into steam. If the outlet tube becomes hot, a correct outlet tube must be installed. Copper tubing is recommended instead of a hose connection. This outlet also must handle discharge in the event of blow-out disc rupture.

Tools and Equipment Required

A standard maintenance or mechanics tool set is adequate for the installation, operation, and maintenance of the instrument. No special tools are required.

Safety Requirements

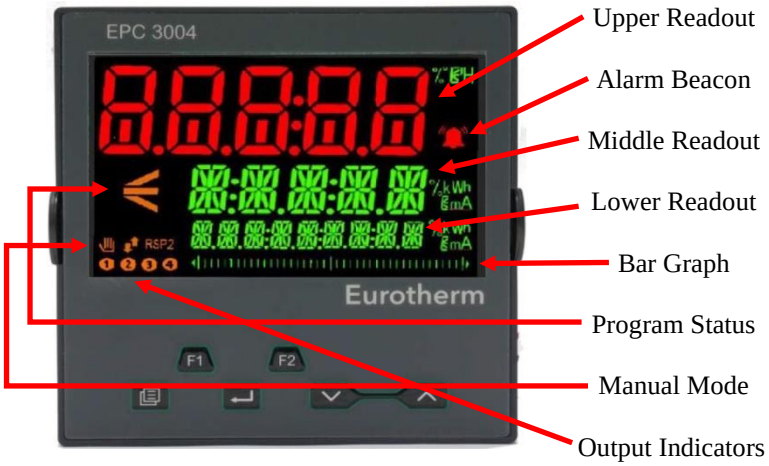
READ BEFORE ATTEMPTING OPERATION OF INSTRUMENT!

Any instrument that is capable of extremely high temperatures and pressures, such as a curing chamber, should always be operated with CAUTION. The instrument is designed for operator safety; however, to ensure that safety:

- Locate the instrument in a **low traffic area**.
- Post signs where the instrument is being operated, to warn non-operating personnel.
- **Read** and **understand** instructions before attempting operation; observe warning and caution notes throughout this manual.
- Observe and follow the **Warning Labels** on the instrument.
- **Never** exceed the instrument maximum pressure and temperature ratings secured on the machine.
- **Always** disconnect main power to the instrument before attempting any repair or when opening the instrument cabinet; **HIGH VOLTAGE CAN KILL!**
- Keep front access doors **closed** when operating instrument.
- A fire extinguisher, Type 8 BC should be located within 50 feet of instrument.

Note: All Chandler Engineering equipment are calibrated and tested prior to shipment.

Controller Set-Up



9050 Controller Panel

Button Layout

Upper Readout: Displays the current Temperature. This value is green when the controller or display is not in an Alarm state.

Alarm Beacon: Flashes when any new alarm occurs (e.g. Over Temperature or Sensor Break). The beacon will stay illuminated when an alarm is acknowledged but still active.

Middle Readout: Displays the target set point if the controller is running a program.

Lower Readout: Displays the current output power demanded by the controller. This line may also display a scrolling message.

Bar Graph: A graphical representation of the current output power. The scale is 0 to 100% (left-to-right).

Program Status: Indicates the state of [not sure what this should be] the current Program Step:

Indicates Ramp / Step Up

Indicates Dwell (Flashing indicates Dwell End)

Indicates Ramp / Step Down.

Manual Mode: Indicates Manual Mode has been selected. In Manual Mode, the Raise and Lower buttons operate on the Output Power. In Automatic Mode (this icon is off), the Raise and Lower buttons operate on the Set Point.

Output Indicators: Illuminate when the appropriate output is activated. Output 1 is used to heat. Other outputs may be activated during an alarm or error condition.

F1: Toggles between Automatic and Manual mode. When in Manual Mode the "hand" icon  is illuminated.

F2: Program Run / Reset. Press once to Start the program. Press again to Reset the program.

Page: Used to page through the various menus in the controller.

Scroll: Used to scroll through the parameter settings within a menu page.

Note: Press Page + Scroll to return to the "Home" Display. When at the Home Display, Page + Scroll will acknowledge any alarm.

Lower / Raise: Used to change the value of a parameter. Press and hold the button for rapid changes.

Configuring the controller to perform a temperature control profile involves defining the time to ramp to a new temperature from the current temperature and the final stable temperature. This process is commonly referred to as the ***ramp time*** and the ***dwell temperature.*** The time to ramp to a new temperature may be defined as the time between two temperatures (*minutes*), or a ramp rate (*degrees/minute*).

Configuring the controller involves entering a control program. Once the operator exits from editing the control program, the program is executed by changing to Automatic Mode (press the F1 button; the "hand" icon  turns off). The program is then started by pressing the F2 button (the Program Status light turns on). To end a program, press the F2 button to reset the program. Press the F1 button to return to Manual Mode. When switching from Manual Mode to Automatic Mode, the Controller will reset the set point to 0°C (32°F).

The Chandler 5270 DACS software may be used to operate, monitor and program (version 2.7.3 and later) controllers on instrument models equipped with a communications interface (refer to the 5270 help system for details). Alternatively, the program may be entered using the buttons on the controller. The following example describes a ramp and dwell program (each parameter may be changed using the "Raise" and "Lower" buttons):

1. Press the "Page" button until P.SET is displayed
2. Press "Scroll"; Observe P.NUM (Program Number) 1 is indicated
3. Press "Scroll"; Verify that HB.STY (Holdback Style) is set to PROG.
4. Press "Scroll"; Verify that HB.TYP (Holdback Type) is set to OFF.
5. Press "Scroll"; Verify that RAMP.U (Ramp Units) is set to P.mIN (Per Minute).
6. Press "Scroll"; Verify that DWEL.U (Dwell Units) is set to mINS (minutes).
7. Press "Scroll"; Verify that P.CYC (Program Cycles) is set to 1.

8. Press “Scroll”; Change P.END (Program End Type) as desired. For this example, dwEL (Dwell) is used.
   a. dwEL (Dwell): Dwell at the last set point.
   b. rSEt (Reset): Reset to the set point used prior to starting the program.
      Note: it is not recommended to set Program End Type to Reset when programming Pressure Controllers. This can cause a sudden decrease in pressure at the end of the program.
   c. tRAk (Track): same effect as Dwell
9. Press “Scroll”; Observe that S.NUM (Segment Number) 1 appears.
10. Press “Scroll”; Change S.TYPE (Segment Type) as desired. For this example, tImE (Time to Target) is used.
    a. rAtE (Ramp at Rate to Target): Ramp the set point at a given Rate (°/min) for a given Time.
    b. tImE (Time to Target): Ramp to a given Target for a given Time.
    c. dwEL (Dwell): Dwell at the last set point for a given Time.
    d. StEP (Step to Target): Instantaneously change to the given Set Point.
    e. CALL (Call Program Number): Execute another program as a subroutine (this is not common).
    f. ENd (End Program): The very last segment of a program. Behavior is defined by the Program End Type (see above).
11. Press “Scroll”; Change TSP (Target Setpoint) to the desired sample temperature using the “Lower” or “Raise” buttons (temperature or pressure at the end of the ramp).
12. Press “Scroll”; Change R.TIME (Ramp Time) to the desired ramp time in hh:mm (Duration of Ramp).
13. Press “Scroll”; Verify that EV.OP (Event Output) is set to 0.
14. Press “Scroll”; Observe that S.NUM (Segment Number) is now 2.
15. Press “Scroll”; Change S.TYPE (Segment Type) to ENd (End).
16. Press “Scroll”; Verify that EV.OP (Event Output) is set to 0.
17. Press “Scroll”; Observe P.NUM (Program Number) 1 is indicated.
18. Press the “Page” button twice to return to the Home display.

To Run the program, press the F1 button to set to Automatic Mode (the “hand” icon  is off). Press the F2 button to start the program (the Program Status indicator turns on).

Note: Once a program has been defined within the controller, it may be reused.

Note: The Chandler 5270 DACS Software always writes to Program 1.

For complete operating instructions, see the *9050, 9051, 9060, 9061, 9080, 9081 Operating Instructions* included with your order.

Section 2 – Operation

Placing Molds in Pressure Cylinders

1. Line up each brass mold on the bottom plate, with center tube in place, and fill greased molds with slurry prepared in accordance with *API Spec 10(1)*. Place the cover on each mold, with slotted side down (pin in plate goes through matched hole in mold).

2. Clamp molds with "T" handle to prevent spillage of slurry.

3. Lower molds into cylinder. Unscrew and remove the "T" handle.

4. Thoroughly lubricate plug threads and seal ring with "Liqui-Moly" or similar high temperature lubricant. Lower the plug into the cylinder and screw down firmly to ensure metal-to-metal seat. Use a torque wrench to tighten set screws.

Caution: Too rapid spinning of plug handles when seating plug will cause binding of metal-to-metal seal and plug removal will be difficult. Final two turns of plug should be spun more slowly, following instructions on drawing 07-0749.

5. Thread thermocouple fitting part way into cylinder head. Delay tightening thermocouple gland until cylinder is completely full and no air remains.

6. Open Water Inlet Valve to allow water to enter cylinder and force air trapped in cylinder to escape through thermocouple gland. When water begins to flow past gland, tighten thermocouple fitting.

Pressurizing the Cylinders

1. Fully open the air supply valve.

2. Turn on pump switch.

3. Adjust air pressure to air-operated hydraulic pump by turning regulator handle clockwise until desired pressure is reached. (Refer to the control panel drawings for regulator location.)

Caution: Too rapid a pumping cycle can cause air lock in pump piston cavity.

4. When cylinder is pressurized to the desired limit, and pump slows down, adjust air pressure regulator to maintain the desired pressure.

Applying Heat to the Cylinders

1. Turn Heater switch to ON. Current will not be supplied to the heaters until the temperature controller program is started.

2. Program the desired schedule into the controller (see Section 1: Controller Setup)

Starting a Test

1. Press the **F1** button (Automatic / Manual Mode Toggle) to place controller in auto mode.

2. Press the **F2** button (Program Run / Reset) to start the program.

3. Switch the heater to on.

Stopping a Test

1. Turn off the heater at the switch.

2. Press the **F2** button (Program Run / Reset); the Program Status indicator will turn off.

3. Press the **F1** button (Automatic / Manual Mode) to place the controller in the manual mode. The "hand" icon is illuminated. The controller will reset to 32°F (0°C).

Cooling of Cylinders

1. Leave the pressure release valves closed and adjust the pumps to maintain pressure. Water will be pumped into the cylinder to improve cooling efficiency. Control the pumps at the pump regulators to limit the amount of cold water contacting the hot cylinder.

   The rate of pressure loss during cooling should be reduced by leaving the water inlet valve open and adjusting the regulator knob to keep pressure above 500 psi (34.5 Bar).

3. When the cylinder and plug are cooled below 200ºF (93°C), turn off the pump, open the pressure release and water supply valves, and circulate water through the cylinder for more rapid cooling.

Emptying the Cylinders of Water

1. Open the pressure release valve and turn off the water supply valve.

2. Open air-to-cylinder valve. After water has drained from the cylinder, as indicated by air coming out of the drain, close the air-to-cylinder valve.

3. Unscrew the thermocouple gland on the cylinder head and remove the thermocouple.

4. Loosen the set screws on the cylinder plug head.

5. Unscrew the cylinder plug and lift the plug from the cylinder.

6. Attach a "T" handle or eye bolt to the molds and lift them from the cylinder.

7. Transfer molds to the water bath, according to *API Spec. 10*.

Relief Valve Seats

The relief valves are equipped with a high temperature polymer seat, a requirement for leak-tight operation at temperatures below 400ºF (204ºC). At operating temperatures above this limit, open the Relief Valve Cooling valves. This circulates water through a heat exchanger upstream of the relief valve to reduce the temperature of the water entering the pressure relief valve.

Section 3 – Maintenance Schedule

Component	Each Test	Monthly	3 Months	6 Months	Annual
Cylinder	Check Plug Seal Surface				Test By Qualified Factory Tech.
Temp Controller		Check Calibration			
Piping	Check For Leaks				
Molds	Check Surfaces for Nicks				
Pump			Clean Check Valves		
Pressure Gauge				Check Calibration	Cal. By Qualified Factory Tech.
Thermocouple Circuit		Calibrate			
Lubrication		Lubricate Plug Threads			
Relief Valve					Replace Seat
Pump Lubricator		Replace Oil in Lubricator			
Heaters					Test By Qual. Factory Tech.
High Pressure Filter		Clean			
Low Pressure Filter		Replace Filter			

Cleaning and Service Tips

Before each test, cement and other foreign matter should be cleaned off the plug and cylinder threads, the threads should be wiped dry, and the threads and seal ring should be lubricated with "Liqui-Moly" or similar high-temperature lubricant. The factory application of “Xylan" and the technician's application of lubricant before each test enable effortless cylinder-plug removal, even after most severe high-temperature testing.

1. The top and sealing surface of the seal ring (see cylinder assembly drawings) and mating surface of the cylinder plug must be kept clean and lubricated to prevent metal galling.

2. If loose cement falls into the bottom of the cylinder, the waste must be removed immediately to prevent it from being forced out through the pressure release valve. This will erode the stem and seat shortening the valve life and plug the connecting tubing.

3. The relief valve seat is a high-temperature polymer and may require replacement if damaged by foreign particles. Spare seats are supplied in the accessory and spares kits.

   If the relief valve operation degrades during a long-term test, the operator may close the Relief Valve Cutoff valve to continue the test. Afterwards, the relief valve must be serviced, reopening the Relief Valve Cutoff valve.

4. Add SAE 10 oil to the air lubricator on the air-operated pressure pump as required (avoid running the lubricator dry). Occasionally, this lubricator should be checked to verify that oil is being fed into the air inlet to the pump at a rate of three to five drops per minute when the pump is operating.

Section 4 – Troubleshooting Guide

PROBLEM	CHECK THIS	DO THIS
No Power	Circuit Breakers	Reset Or Replace
Will Not Heat	Heater Switch Over-temperature Circuit Heater Circuit Breaker Temperature Controller	Turn On Reset Reset or Replace
Won't Hold Pressure	Pressure Release Valve External Leak	Close Tighten Connections
Can't Release Pressure	Pressure Release Valve High Pressure Filter	Replace Clean Or Replace
High Pressure	Relief Valve	Adjust or Replace
Loss of Pressure	Rupture Disc	Replace
Erratic Temperature	Thermocouple Socket or Plug Temperature Controller	Clean Check Program
Will Not Pump	Air Supply Valve Regulator Pump Switch	Open Turn Clockwise Turn On
Cylinder Plug Leaking	Plug Loose Seal Dirty	Tighten Clean And Inspect

Section 5 - Parts Lists

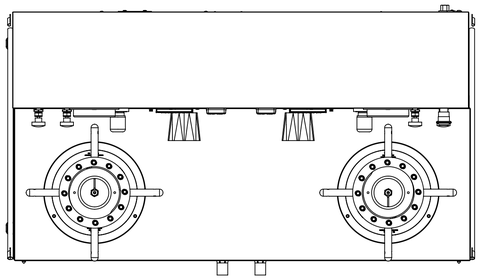
Part Number	Description
07-0389	HEATER STRAP
07-0773	INSULATION JACKET
07-0774	THERMOCOUPLE ASSEMBLY
07-0779	THERMOCOUPLE, CYLINDER, ADAPTER
07-0845	MOLD,H.T.
07-0886	MOLD COVER PLATE
07-1273	CABLE ASSEMBLY
98-0314	HEAT EXCHANGER ASSEMBLY
C08262	RELAY,SPST,240VAC,45A,CHASSIS
C09111	NEEDLE VALVE, 1/4T X 1/4T, SST, ANGLE
C09215	REG,BACK,50-6KSI
C09567	BUTTON,22MM,MUSHROOM,RED
C11915	SWITCH,BUTTON BASE,22MM,2 NC
C12161	SWITCH,RCKR,PNL,SPST,10A,250V,0-1
C15413	VALVE,RELIEF,SS,10KPSI,HIP
C16390	CONTROLLER,LIMIT,EZ-ZONE,1/32
C16906	VALVE,BALL,BRS,2WY-ANG,1/4" SW
C16981	THERMOCOUPLE, TYPE J, BOLT ON
C17220	HEATER,HALFCR,750W,230V,9X3.5
C17221	HTR,RING,500W,230V,5.5inOD
C17675	CONTROLLER,ETHERM,EPC3004,1/4-DIN,2OP,ETH/RS485
C17988	DISK,RUP,3743-4090 PSI,700 degF,0.25,INCONEL
C19532	GAUGE,5000PSI,4IN,1/4FNPT,PNLMT
C19607-CART	CARTRIDGE,WATER,C19607
P-0518	LUBR,HYDR,.33PT,.25FPX.25FP
P-0586	CHECK VALVE, .25FP X .25FP, SST
P-0674	MUFFLER,1/2MPT,3.75Dx5.5L
P-0908	AIR-HYD. PUMP, 4600 X 100 PSI
P-1280	FILTER,AIR,.25FPX.25FP
P-1456	O-RING, BUNA
P-1587	GREASE, LIQUI-MOLY
P-1954	CONN,BRS,1/4FPX1/4T,BHD,SW
P-2380	JACK,PNL,TC,1.12,RND FACE
P-3107	VALVE,SOL,SS,1/4F,2WY,240VAC
R-0596	INSULATION 1.00”T
ZC11516	XDCR,PRESSURE,3000 PSI

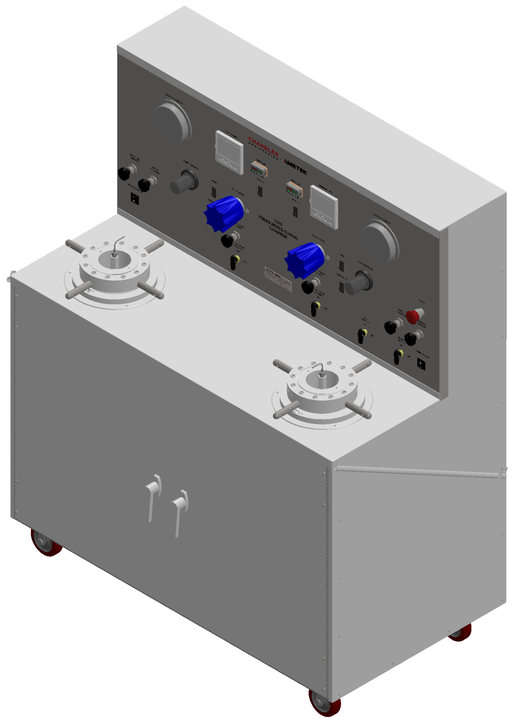
To ensure correct part replacement, always specify Model and Serial Number of instrument when ordering or corresponding.

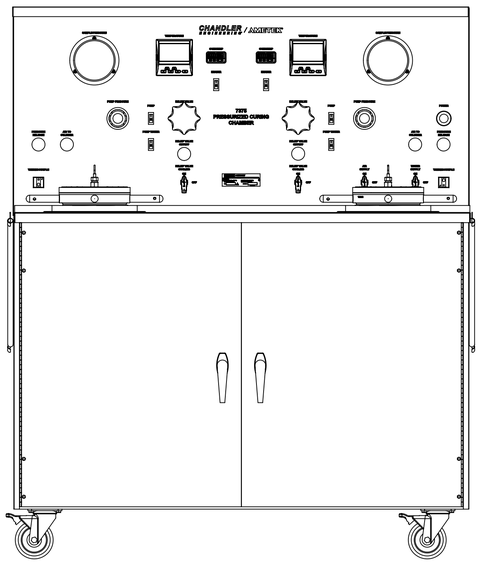
Section 6 - Drawings and Schematics

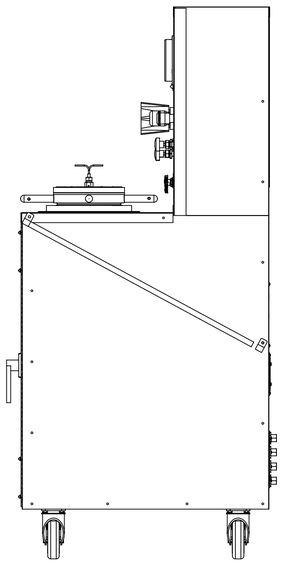
Drawing Number	Description
7375	Model 7375 Dual Curing Chamber
7370	Model 7370 Curing Chamber
07-1207	Schematic, Wiring (Model 7375)
07-1206	Schematic, Piping (Model 7375)
07-0889	Schematic, Wiring (Model 7370)
07-0860	Assembly, Double Compression Mold
07-0834	Diagram, Piping (Model 7370)
07-0749	Modified Bridgeman Seal
07-0701	Assembly, Cylinder

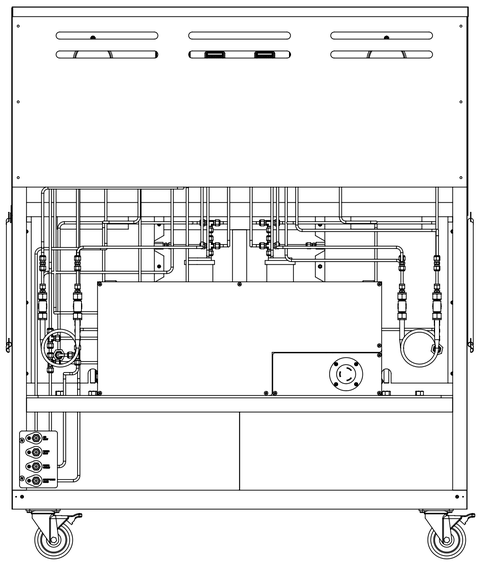
REV	DESCRIPTION	DATE	APPROVED
V	ECN T10026; UPDATE ASSEMBLY DUE TO CHANGES TO 98-0314 HEAT EXCHANGER. ADD QTY 4 P-1403 UNIONS ADD QTY 4 H-25-108 SCREW ADD QTY 4 H-25-008 SET SCREWS	9/20/2024	JJM











ITEM	PART NUMBER	DESCRIPTION	QTY	UoM
1	07-0992	CABINET ASSY	1	
2	07-0770	CYLINDER ASSY,FOR 7-750	2	
3	P-0255	NIPPLE,ST,1/4MPX3L,CA,BLK	4	
4	P-0256	BUSHG,BRS,1/4FPX1/2MP PK	2	
5	C09111	VALVE,NDL,SS,1/4TX1/4T,2WY-ANG	6	
6	P-0518	LUBR,HYDR.,33PT.,25FPX.25FP	2	
7	P-0586	VALVE,CHK,SS,1/4FX1/4F,5000PSI	2	
8	P-0674	MUFFLER,1/2MPT,3.75Dx5.5L	2	
9	P-0735	ADPTR,SS,1/4FHPX1/8MP,HIP	2	
10	P-0784	DISK,RUPTURE,5525 PSI,0.250,IN	1	
11	P-2380	JACK,PNL,TC,1.12,RND FACE	2	
12	P-1206	SAFETY HEAD,1/4 HIGH PRESSURE	2	
13	P-1280	FILTER,AIR,.25FPX.25FP	2	
14	P-1378	CONN,SS,1/8FPTX1/4T,SW	2	
15	P-1389	CONN,SS,3/8MPTX1/4T,SW	4	
16	P-1486	CONN,SS,1/8MPT X 1/4T,SW	4	
17	P-1285	ELBOW,ST,1/2FX1/2MP,ST	2	
18	C07817	CLAMP,SINGLE LINE 1/2 OD,316SS	4	
19	P-1255	ELBOW,BR,1/4MPX1/4T	12	
20	P-1496	ELBOW,BR,1/4FPX1/4MP,STREET,90DEG	4	
21	07-1273	CABLE ASSY,POWER,200-240 VAC	1	
22	TC-HOLSTER	HOLSTER,THERMOCOUPLE	2	
23	07-0967	FILTER,MNTG MOD FOR P-0921	1	
24	P-3107	VALVE,SOL,SS,1/4F,2WY,240VAC	4	
25	7375-0211	PLATE,FLUID SERVICE	1	
26	C08268	RETAINER,SST,3/4ID,BHD,SW	4	
27	P-1268	NIPPLE,BR,1/4MPX1L,HEX	4	
28	P-1488	CONN,SS,1/4MPT X 1/4T,SW	4	
29	P-1954	CONN,BRS,1/4FPX1/4T,BHD,SW	4	
30	07-0860	MOLD ASSY,FOUR,DBL COMPR	2	

ITEM	PART NUMBER	DESCRIPTION	QTY	UoM
31	07-1573	RING,CYLINDER DECK	2	
32	07-0772	HANDLE,PLUG	8	
33	07-1580	PANEL,BACK,EXP ALUM	1	
34	P-0908	PUMP,AIR-HYDR,4600X100PSI	2	
35	C17675	CONTROLLER,ETHERM,EPC3004,1/4-DIN,2OP,ETH/RS485	2	
36	P-0866	BUSHG,BRS,RDCG,1/4FPX3/8MP UB	8	
37	P-1265	TEE,UNION,BR,1/4T	12	
38	98-0314	HEAT EXCHANGER ASSEMBLY	2	
39	C16390	CONTROLLER,LIMIT,EZ-ZONE,1/32	2	
40	C15660	CABLE,PATCH,3 FT,CAT-5E,BLUE	1	
41	7375-0200	ELECTRONICS ASSEMBLY	1	
42	C19532	GAUGE,5000PSI,4IN,1/4NPT,PNLMT	2	
43	C12161	SWITCH,RCKR,PNL,SPST,10A,250V,0-1	6	
44	ZC11516	XDCR,PRESSURE,3000 PSI	2	
45	C15783	REG,PRES,0-150,3/8NPT,AIR	2	
46	C18333	NUT,PANEL,REGULATOR,NORGREN R73	2	
47	C11915	SWITCH,BUTTON BASE,22MM,2 NC	1	
48	C09567	BUTTON,22MM,MUSHROOM,RED	1	
49	7375-CU-01	COPPER TUBE 1	1	
50	7375-CU-02	COPPER TUBE 2	8	
51	7375-CU-03	COPPER TUBE 3	1	
52	7375-CU-04	COPPER TUBE 4	1	
53	7375-CU-05	COPPER TUBE 5	1	
54	7375-CU-06	COPPER TUBE 6	1	
55	7375-CU-07	COPPER TUBE 7	1	
56	7375-CU-08	COPPER TUBE 8	1	
57	7375-CU-09	COPPER TUBE 9	1	
58	7375-CU-10	COPPER TUBE 10	1	
59	7375-CU-11	COPPER TUBE 11	1	
60	7375-CU-12	COPPER TUBE 12	1	
61	7375-CU-13	COPPER TUBE 13	1	
62	7375-CU-14	COPPER TUBE 14	1	
63	7375-CU-15	COPPER TUBE 15	1	
64	7375-CU-16	COPPER TUBE 16	1	
65	7375-CU-17	COPPER TUBE 17	1	
66	7375-CU-18	COPPER TUBE 18	1	
67	7375-CU-19	COPPER TUBE 19	1	
68	7375-CU-20	COPPER TUBE 20	2	
69	7375-CU-21	COPPER TUBE 21	1	
70	7375-CU-22	COPPER TUBE 22	2	
71	7375-CU-23	COPPER TUBE 23	1	
72	25-329	TEE,RUN,SS,1/4TX1/4FPX1/4T	2	
73	7375-SS-01	SST TUBE 1	1	
74	7375-SS-02	SST TUBE 2	2	
75	7375-SS-03	SST TUBE 3	1	
76	P-1942	TEE,UNION,SS,1/4T	4	
77	7375-SS-04	SST TUBE 4	2	
78	7375-SS-05	SST TUBE 5	2	
79	7375-SS-06	SST TUBE 6	4	
80	7375-SS-07	SST TUBE 7	1	
81	P-1941	CROSS,SS,1/4T,SW	2	
82	7375-SS-08	SST TUBE 8	1	
83	7375-SS-09	SST TUBE 9	1	
84	7375-SS-10	SST TUBE 10	1	
85	7375-SS-11	SST TUBE 11	1	
86	7375-SS-12	SST TUBE 12	1	
87	7375-SS-13	SST TUBE 13	1	
88	7375-SS-14	SST TUBE 14	1	
89	7375-SS-15	SST TUBE 15	1	
90	7375-SS-16	SST TUBE 16	1	
91	7375-CU-24	COPPER TUBE 24	2	
92	7375-CU-25	COPPER TUBE 25	1	
93	H-10-132	SCREW,FHMS,SS,10-32X0.500	6	
94	H-10-130	NUT,KEPS,SS,10-32	10	
95	H-25-009	SCREW,HHMS,SS,1/4-20X0.500,HEX	6	
96	H-50-003	NUT,HEX,CD,1/2-13	16	
97	7375-0084	NPL,SN,PWR RATING,7375	1	
98	H-100000	RIVET,POP,AL,0.093X0.375L	2	
99	7375-SS-17	SST TUBE 17	2	
100	7375-CU-XX	TUBE SET, COPPER	1	
101	7375-SS-XX	TUBE SET, SS	1	
102	P-1402	CONN,SS,1/4FPTX1/4T,SW	2	
103	7375-ACCESS	ACCESSORIES,MODEL 7375	1	
104	7375-SS-18	SST TUBE 18	1	
105	7375-SS-19	SST TUBE 19	1	
106	07-1206	DIAGRAM,PIPING,DUAL	1	REF
107	07-1207	DIAGRAM,WIRING,7375	1	REF
108	7375-1050	MANUAL,MODEL 7375	1	REF
109	07-1352	PROC,CURING CHAMBER TEST	1	REF
110	P-1403	UNION,SS,1/4TX1/4T	4	
111	H-25-108	SCREW,THMS,SS,1/4-20X0.625,PHL	4	
112	H-25-008	SCREW,SKHSS,SS,1/4-20X0.375,CP	4	
113	H-6015	SCREW,THMS,SS,6-32X0.375,PHIL	4	
114	H-25-012	SCREW,BHMS,SS,1/4-20X.500,PHIL	2	
115	P-1772	ELBOW,SS,1/4TX1/4MP	2	
116	C09215	REG,BACK,50-6KSI	2	
117	C17988	DISK,RUP,3743-4090 PSI,700 degF,0.25,INCONEL	2	
118	C16906	VALVE,BALL,BRS,2WY-ANG,1/4" SW	4	
119	C19607	FILTER,HOUSING,WATER	1	
120	C19607-BRKT	BRACKET,FILTER,C19607	1	
121	C11476	SCREW,THMS,SS,10-32X0.375,PHIL	4	

BREAK EDGES, DEBURR
UON DIMS ARE IN INCHES
1 PLC ±0.030 2 PLC ±0.010
3 PLC ±0.005 ANGL ±1/2°
SURFACE FINISH 63 RMS
THIRD ANGLE PROJECTION

DRAWN: JJM 2024-07-23
MFG: JJM 2024-07-23
ENGR: JJM 2024-07-23

TYPE:
STRUCT:

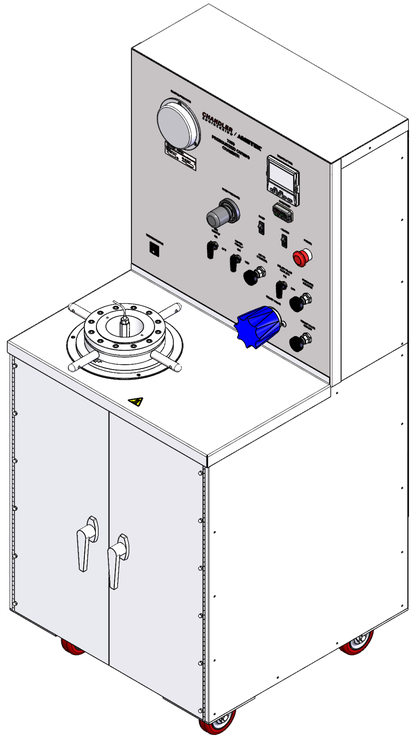
CHANDLER ENGINEERING
CUR CHAMB,DUAL COMPACT,370 C

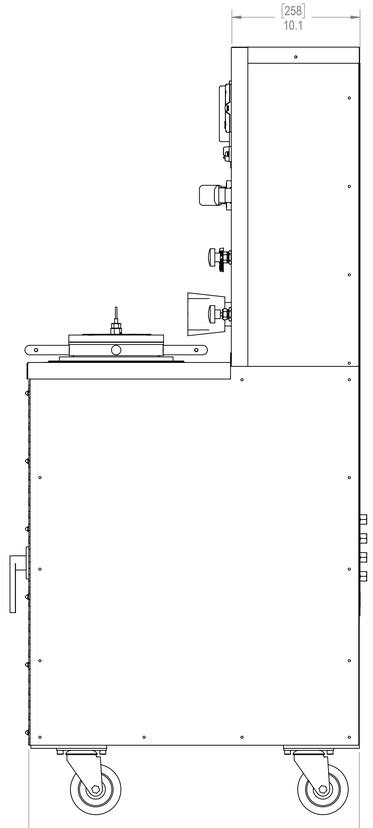
PN: 7375
PROJ: 7375

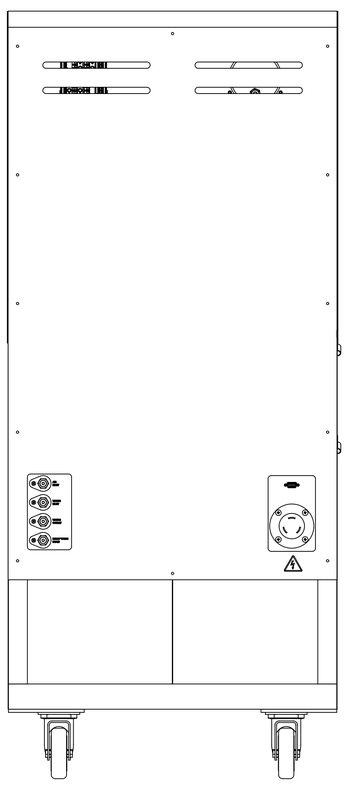
REV V SIZE D
SHEET 1 OF 1

TITLE BLOCK REV 3

REV	DESCRIPTION	DATE	APPROVED
AN	ECN T9833; REMOVED C09043 AND C10056	4/5/2024	JS
AP	ECN T9965; CORRECTED PARTS PER BUILD	9/10/2024	JS
AR	ECN T10027; UPDATE ASSEMBLY	10/7/2024	JJM/BCH







ITEM	PART NUMBER	DESCRIPTION	QTY	UoM
1	07-0822	CABINET ASSEMBLY, 7370	1	
2	07-0800	7370 EBOX ASSEMBLY	1	
3	P-1954	CONN,BRS,1/4FPX1/4T,BHD,SW	4	
4	07-0701	CYLINDER ASSEMBLY	1	
5	07-0773	JACKET,INSULATION,7370,7375	1	
6	P-1562	GROMMET,RBR,.625X1.125X.0625	1	
7	07-1573	RING,CYLINDER DECK	1	
8	P-2036	LOCK,CAM,HANDLE	2	
9	C08150	HANDLE,W/O LOCK,CTE CABINET	2	
10	C07817	CLAMP,SINGLE LINE 1/2 OD,316SS	2	
11	P-1941	CROSS,SS,1/4T,SW	2	
12	P-1265	TEE,UNION,BR,1/4T	4	
13	P-0866	BUSHG,BRS,RDCG,1/4FPX3/8MP UB	5	
14	P-0908	PUMP,AIR-HYDR,4600X100PSI	1	
15	P-1285	ELBOW,ST,1/2FX1/2MP,ST	1	
16	P-0674	MUFFLER,1/2MPT,3.75Dx5.5L	1	
17	P-1389	CONN,SS,3/8MPTX1/4T,SW	1	
18	P-1378	CONN,SS,1/8FPTX1/4T,SW	1	
19	P-1246	ELBOW,BR,1/8MPX1/4T	1	
20	P-0269	BUSHING,BR,RDCG,1/8FPX3/8MP	1	
21	P-0735	ADPTR,SS,1/4FHPX1/8MP,HIP	1	
22	P-1206	SAFETY HEAD,1/4 HIGH PRESSURE	1	
23	P-1255	ELBOW,BR,1/4MPX1/4T	6	
24	P-3107	VALVE,SOL,SS,1/4F,2WY,240VAC	1	
25	P-0255	NIPPLE,ST,1/4MPX3L,CA,BLK	1	
26	P-0256	BUSHG,BRS,1/4FPX1/2MP PK	1	
27	P-1486	CONN,SS,1/8MPT X 1/4T,SW	2	
28	C09111	VALVE,NDL,SS,1/4TX1/4T,2WY-ANG	3	
29	P-1254	CONN,BRS,1/4 MP x 1/4 T,SW	1	
30	C08268	RETAINER,SST,3/4ID,BHD,SW	4	

ITEM	PART NUMBER	DESCRIPTION	QTY	UoM
31	C16390	CONTROLLER,LIMIT,EZ-ZONE,1/32	1	
32	C12161	SWITCH,RCKR,PNL,SPST,10A,250V,0-1	2	
33	C17675	CONTROLLER,ETHERM,EPC3004,1/4-DIN,2OP,ETH/RS485	1	
34	P-2380	JACK,PNL,TC,1.12,RND FACE	1	
35	C14023	LABEL,WARNING,HAZARD VOLTAGE,1.00" BASE	1	
36	C15746	LABEL,WARNING,HOT SURFACE HAZARD,1.00" BASE	1	
37	07-0860	MOLD ASSY,FOUR,DBL COMPR	1	
38	07-0889	DIAGRAM,WIRING,7370	1	REF
39	98-0314	HEAT EXCHANGER ASSEMBLY	1	
40	C17988	DISK,RUP,3743-4090 PSI,700 degF,0.25,INCONEL	1	
41	C19532	GAUGE,5000PSI,4IN,1/4NPT,PNLMT	1	
42	C15783	REG,PRES,0-150,3/8NPT,AIR	1	
43	C18333	NUT,PANEL,REGULATOR,NORGREN R73	1	
44	7370-0084	NPL,SN,PWR RATING,7370	1	
45	ZC11516	XDCR,PRESSURE,3000 PSI	1	
46	P-0586	VALVE,CHK,SS,1/4FX1/4F,5000PSI	1	
47	C09567	BUTTON,22MM,MUSHROOM,RED	1	
48	C11915	SWITCH,BUTTON BASE,22MM,2 NC	1	
49	7375-0211	PLATE,FLUID SERVICE	1	
50	P-1402	CONN,SS,1/4FPTX1/4T,SW	1	
51	7370-ACCESS	ACCESSORIES,MODEL 7370	1	
52	25-329	TEE,RUN,SS,1/4TX1/4FPX1/4T	1	
53	P-0518	LUBR,HYDR,.33PT,.25FPX.25FP	1	
54	P-1280	FILTER,AIR,.25FPX.25FP	1	
55	P-1496	ELBOW,BR,1/4FPX1/4MP,STREET,90DEG	2	
56	P-1268	NIPPLE,BR,1/4MPX1L,HEX	2	
57	P-1403	UNION,SS,1/4TX1/4T	2	
58	C09704	CONN,PORT,1/4	1	
59	7370-250SS-T7	SS TUBE 7	1	REF
60	7370-250SS-T4	SS TUBE 4	2	REF
61	P-1488	CONN,SS,1/4MPT X 1/4T,SW	2	
62	7370-250SS-T2	SS TUBE 2	1	REF
63	7370-250SS-T8	SS TUBE 8	1	REF
64	7370-250CU-T1	CU TUBE 1	2	REF
65	7370-250CU-T2	CU TUBE 2	1	REF
66	7370-250CU-T3	CU TUBE 3	1	REF
67	7370-250CU-T4	CU TUBE 4	1	REF
68	7370-250CU-T5	CU TUBE 5	1	REF
69	7370-250CU-T6	CU TUBE 6	1	REF
70	7370-250CU-T7	CU TUBE 7	1	REF
71	7370-250CU-T8	CU TUBE 8	1	REF
72	7370-250SS-T9	SS TUBE 9	1	REF
73	7370-250CU-T9	CU TUBE 9	1	REF
74	7370-250CU-T11	CU TUBE 11	1	REF
75	7370-250CU-T10	CU TUBE 10	1	REF
76	7370-250CU-T12	CU TUBE 12	1	REF
77	P-1772	ELBOW,SS,1/4TX1/4MP	1	
78	7370-250SS-T10	SS TUBE 10	1	REF
79	7370-250CU-T13	CU TUBE 13	1	REF
80	7370-250CU-T14	CU TUBE 14	1	REF
81	7370-250CU-T15	CU TUBE 15	1	REF
82	7370-250CU-T16	CU TUBE 16	1	REF
83	C09215	REG,BACK,50-6KSI	1	
84	H-25-108	SCREW,THMS,SS,1/4-20X0.625,PHL	2	
85	H-10-132	SCREW,FHMS,SS,10-32X0.500	7	
86	H-6015	SCREW,THMS,SS,6-32X0.375,PHIL	4	
87	70-198-2101	SCREW,SHCS,SS,5/16-18X0.500,AL	2	
88	H-8015	SCREW,FHMS,SS,8-32X0.500,PHIL	3	
89	7370-1050	MANUAL,7370	1	REF
90	C16906	VALVE,BALL,BRS,2WY-ANG,1/4" SW	3	
91	C19607	FILTER,HOUSING,WATER	1	
92	C19607-BRKT	BRACKET,FILTER,C19607	1	
93	H-100000	RIVET,POP,AL,0.093X0.375L	2	
94	H-10-130	NUT,KEPS,SS,10-32	2	
95	7370-250SS-T1	TUBE 1	1	REF
96	7370-250SS-T3	TUBE 3	1	REF
97	7370-250SS-T5	TUBE 5	1	REF
98	7370-250SS-T6	TUBE 6	1	REF
99	7370-250CU-XX	TUBE SET,COPPER,7370	1	
100	7370-250SS-XX	TUBE SET,SS,7370	1	
101	07-0834	DIAGRAM,PIPING,7370	1	REF
102	07-1352	PROC,CURING CHAMBER TEST	1	REFF

BREAK EDGES, DEBURR
UON DIMS ARE IN INCHES
1 PLC ±0.030 2 PLC ±0.010
3 PLC ±0.005 ANGL ±1/2°
SURFACE FINISH 63 RMS
THIRD ANGLE PROJECTION

DRAWN: TC 2015-02-03
MFG: TC 2015-02-03
ENGR: JJM 2015-02-03
TYPE:
STRUCT:

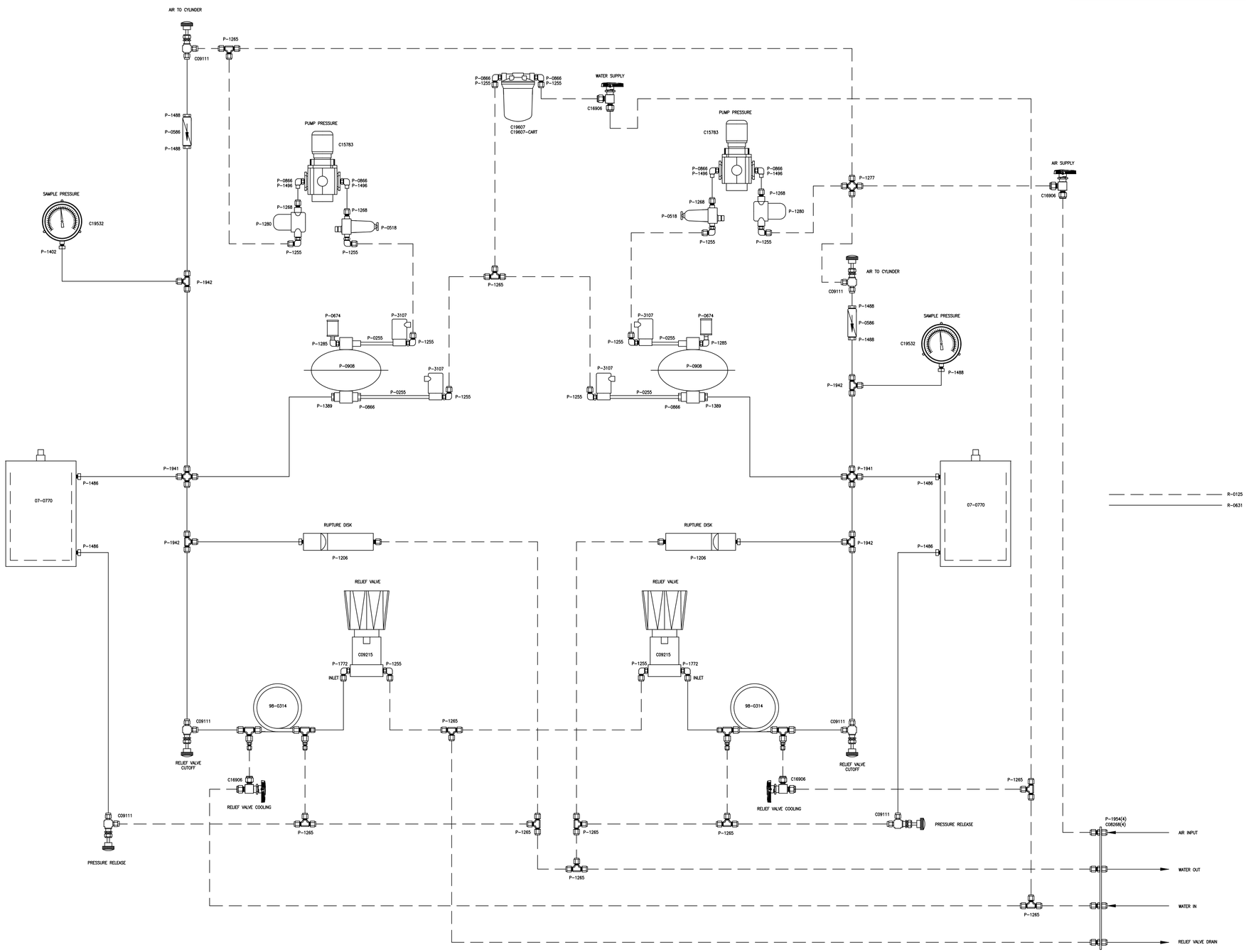
CHANDLER ENGINEERING
CURING CHAMBER,COMPACT,370 C
PN: 7370
PROJ: 7370
REV AR SIZE D
SHEET 1 OF 1
TITLE BLOCK REV 3

REVISIONS					
ZONE	REV	DESCRIPTION OF REVISION	DATE	APPROVALS	
	M	ECN T3055, UPDATE ADD NOTES	6/11/10	SS	TC
	N	ECN T5164; REMOVED P-0627 TRANSFORMER	02/19/13	AMH	TC
	P	ECN T7796; UPDATED OT THERMOCOUPLE	09/12/17	JJM	JJM
	R	ECN T7893; UPDATED DRAWING	09/12/17	TS	JS
	T	ECN T9203; EPC UPDATE	04/30/21	WJW	JS
	U	ECN T9961; UPDATE ALL ELECTRONICS	04SEP24	TAS	JS

220 VAC 50/60 Hz
CIRCUIT REQUIRED
BLU-8
8 GRN/YEL
BRN-8
C16049 20A
C16148
C10715 x2
C16049 20A
C16428 5A
S1(POWER)
C11975
C09567
C16791
C16390
TEMPERATURE LIMIT
REORDER 8053-7375
LEFT HEATER SWITCH
C12161
RIGHT HEATER SWITCH
C12161
TB1 L1
TB2 L2
C13966 X2
C13972 X1
C13968 X2
C13972 X1
SSR
C08262
C16981 THERMOCPL
C17220 HEATERS
750 WATT HALF
BANDS (2 REQ'D)
C17221 RING HEATER
C16981 THERMOCOUPLE
C09911
EUROTHERM CONTROL
C17675
REORDER: 9050-7375
ETHERNET
(+) WHITE
(–) RED
P-2380 SOCKET
(PANEL MOUNT)
07-0774 THERMOCOUPLE
ZC11516
PRESSURE
C12161
LEFT PUMP SWITCH
C12161
RIGHT PUMP SWITCH
C12161
LEFT WATER SWITCH
C12161
RIGHT WATER SWITCH
C06892
THYSISTOR
P-3107 SOLENOID
(PUMP)
P-3107 SOLENOID
(WATER)
C08975
+12VDC
GND
GND
TC(B)
TC(A)

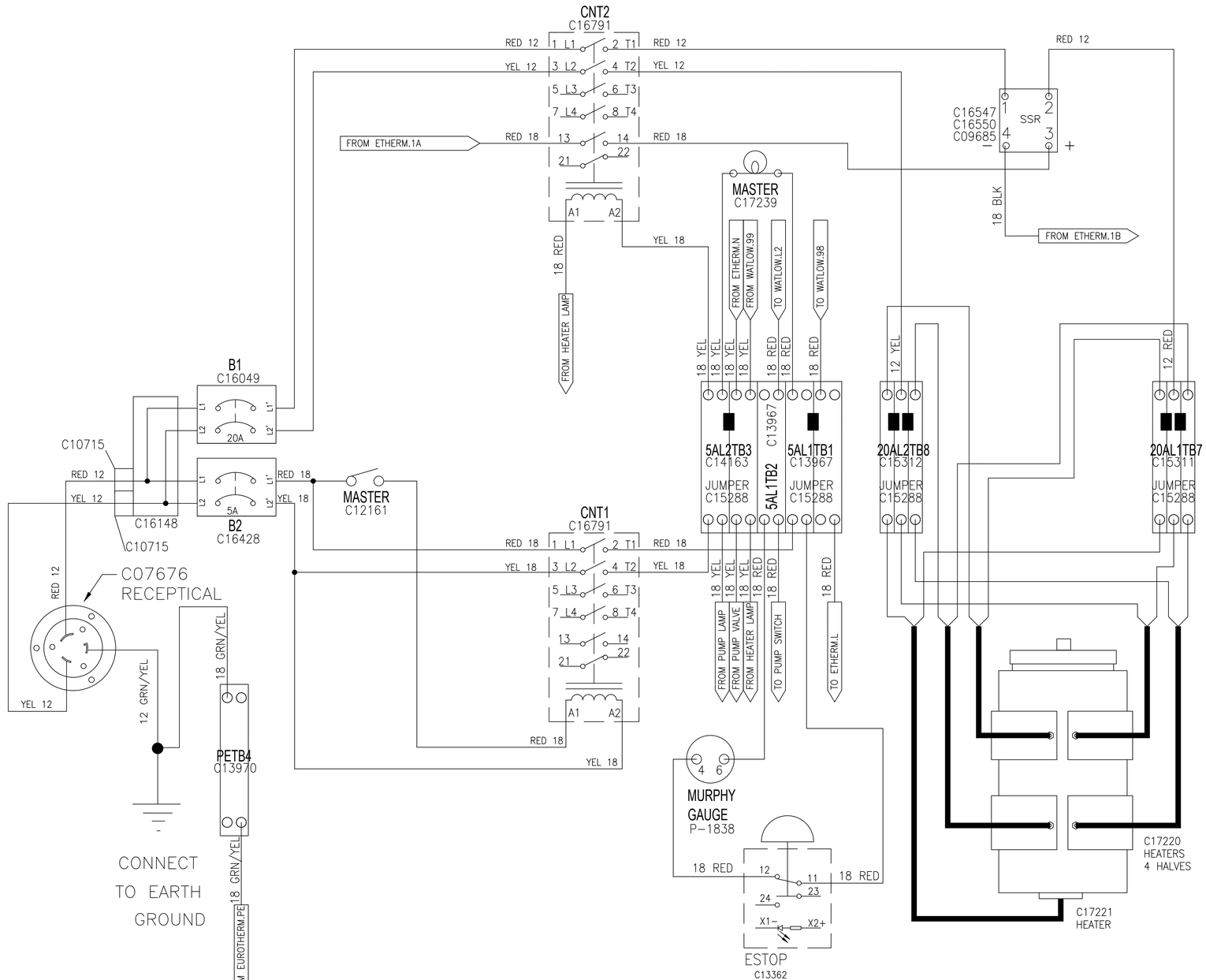
		UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES [mm]		CHANDLER ENGINEERING	
		TOLERANCES:			
7375	7375 DUAL COMPACT C.C	1 PLACE ±0.030 2 PLACE ±0.010 3 PLACE ±0.005 ANGLES ±1/2°		TITLE	SCHEMATIC, WIRING DUAL COMPACT C.C.
NEXT ASSY	USED ON	SURF. FINISH	63		
APPLICATION		BREAK SHARP EDGES, DEBURR			
		APPROVALS	DATE		
		DRAWN: AMW	01-24-01	SIZE D	S.O. NO.
		CHECKED: BD	01-24-01	DWG NO. 07-1207	REV. U
		ENGR.: BD	01-24-01	SCALE: 1 = 1	TITLE BLOCK REV: 1.0
				SHEET: 1 of 1	

REVISIONS					
ZONE	REV	DESCRIPTION OF REVISION	DATE	APPROVALS	
	M	ECN T10026; RELIEF VALVE, ADD C16906 VALVES	10/07/24	JJM	JS



		UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES [mm]		CHANDLER ENGINEERING			
		TOLERANCES:					
		1 PLACE ±0.030 [.76]					
		2 PLACE ±0.010 [.25]					
NEXT ASSY	USED ON	3 PLACE ±0.005 [.127]					
		ANGLES ±1/2°					
APPLICATION		SURF. FINISH 32		TITLE	TUBING DIAGRAM DUAL CURING CHAMBER		
BREAK SHARP EDGES, DEBURR		APPROVALS	DATE				
This document and the drawings and technical data contained hereon are the property of AMETEK CHANDLER ENGINEERING. Reproduction or dissemination in any form except as expressly authorized by the owner is forbidden. The holder agrees to return this document to the owner on demand.		DRAWN: JJM	07/02/24	SIZE	S.O. NO.	DWG NO. 07-1206	REV. M
		CHECKED:					
Copyright by AMETEK CHANDLER ENGINEERING		ENGR.: JJM	0709/24	SCALE: 1 = 1	TITLE BLOCK REV: 1.0	SHEET: 1 of 1	

REVISIONS				
ZONE	REV	DESCRIPTION OF REVISION	DATE	APPROVALS
BOM	Y	ECN T5630; CHG P-1838 TO REF	11/25/13	TC TC
BOM	Z	ECN T6000; CHG'D C15588 TO C08931	05/30/14	AMH AMH
BOM	AA	ECN T6494; REPL 07-0176 W/ 07-0437-02	03/20/15	TC TC
BOM	AB	ECN T7796; CORRECTED O/T THERMOCOUPLE	09/12/17	JJM JJM
	AC	ECN T8041; REDESIGN	03/12/18	WJW JS
	AD	ECN T8160; UDATE FOR NEW HEATERS, ESTOP	07/10/18	TAS JS
	AE	ECN T8267; MOVE P-3107 TO ESTOP LOOP	08/30/18	TAS JS
	AF	ECN T8762; DRAWING CORRECTIONS	11/12/19	WJW DLR
	AG	ECN T9203; EPC UPDATE	04/30/21	WJW JS
	AH	ECN T9896; REMOVED OVERTEMP COMM	06/17/24	WJW JDS



-04	-03	-02	-01	PART NUMBER	DESCRIPTION	MATERIAL SPEC.	ITEM
QTY. REQD.				PARTS LIST			
				UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES [mm]			
				TOLERANCES: 1 PLACE ±0.030; 2 PLACE ±0.010; 3 PLACE ±0.005; ANGLES ±1/2°; SURF. FINISH 63			
				7370 CURING CHAMBER			
NEXT ASSY				USED ON			
APPLICATION				APPROVALS	DATE		
				DRAWN: WJW	03-12-18		
				CHECKED: WJW	03-12-18		
				ENGR.: WJW	03-12-18		

CHANDLER ENGINEERING

TITLE: WIRING DIAGRAM 7370

SIZE | S.O. NO. | DWG NO. 07-0889 | REV. AH

SCALE: NONE | DO NOT SCALE DRAWING | SHEET: 1 of 2

TO 5AL2TB3
18 YEL
FROM 5AL1TB2
18 RED
18 RED
PUMP
C12161
PUMP
C13375
18 RED
PUMP
VALVE
P-3107
TO 5AL2TB3
18 YEL
TO 5AL2TB3
18 YEL
FROM 5AL1TB1
18 RED
WATLOW LIMIT
C16390
NC
NC
NC
L2
K2
T1
S1-
R1+
98
99
CA
CB
CC
NC
NC
NC
18 RED
FROM 5AL1TB2
HEATER T/C
JUMPER FROM
EUROTHERM S+/S-
RED
WHT
18 RED
18 RED
HEATER
C12161
HEATER
C13375
TO CNT2.A1
18 RED
TO 5AL2TB3
18 YEL
TO PETB4
TO CNT2.13
18 RED
TO SSR.4
18 BLK
FROM 5AL1TB1
TO 5AL2TB3
1A
1B
2A
2B
LB
LC
4A
4B
5A
5B
L
N
D1
D2
D3
D4
DC
E
ETHERNET
SI
S+
S-
3A
3B
3C
HD
HE
HF
CT
C
LA
VI
V+
V-
BLK
RED
WHT
WHT
RED
SAMPLE T/C
P-2380
EUROTHERM CONTROL
C17675
REORDER: 9050-7170
HEATER T/C
JUMPER FROM
WATLOW S1-/R1+
TD(A)
TD(B)
GND
GND
+12V
RED
WHT
BLK
8-754
C10792
CONV1

-04	-03	-02	-01	PART NUMBER	DESCRIPTION	MATERIAL SPEC.	ITEM
QTY. REQD.				PARTS LIST			

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES [mm]
TOLERANCES:
1 PLACE ±0.030
2 PLACE ±0.010
3 PLACE ±0.005
ANGLES ±1/2°
SURF. FINISH 63

7370 CURING CHAMBER
NEXT ASSY | USED ON
APPLICATION

CHANDLER ENGINEERING

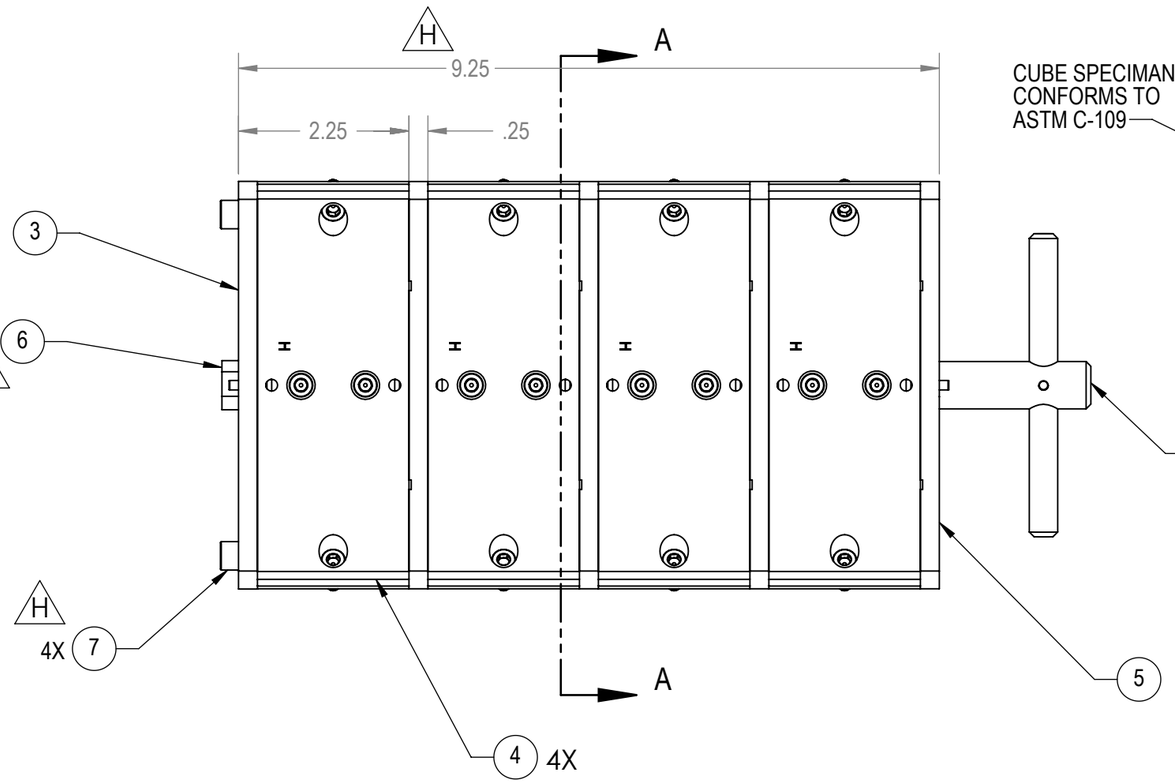
TITLE
WIRING DIAGRAM 7370

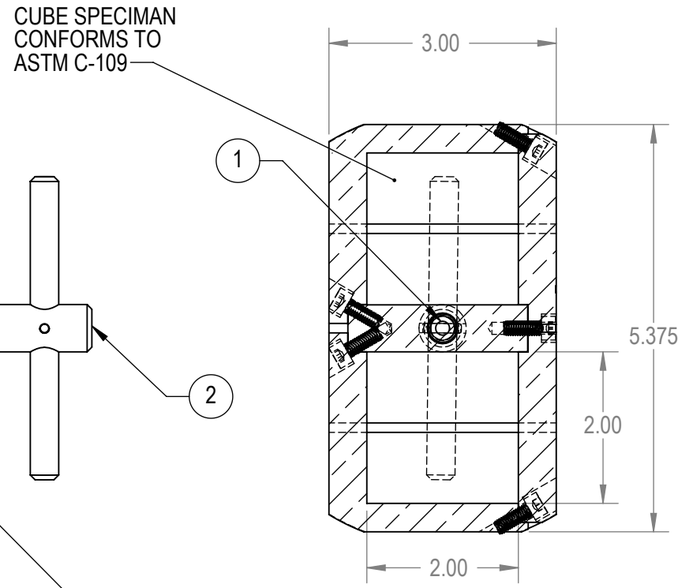
APPROVALS		DATE
DRAWN:	WJW	03-12-18
CHECKED:	WJW	03-12-18
ENGR.:	WJW	03-12-18

SIZE | S.O. NO. | DWG NO. 07-0889 | REV. AH
SCALE: NONE | DO NOT SCALE DRAWING | SHEET: 2 of 2

NOTES:
1. CAPACITY OF COMPACT CURING CHAMBER CYLINDER; 4 DOUBLE COMPRESSION MOLDS (8 CUBES) (SHOWN) 8 DOUBLE COMPRESSION MOLDS (16 DUMBELLS) OR ANY COMBINATION NOT EXCEEDING A STACKED HEIGHT OF 11 1/8"
2. AN EXTRA JAM NUT FOR USE WHEN THE HANDLE IS REMOVED.
3. MATERIALS COMPLY WITH API SPEC 10 AND ASTM C-109
4. PLATES (ITEMS (5) & (3)) MANUFACTURED FROM UNS S30400, HARDNESS EXCEEDS 55 HRB.
5. MOLDS (ITEM (4)) MANUFACTURED FROM UNS UNS C61400 AND UNS C95400, HARDNESS EXCEEDS 55 HRB.

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	G	ECN T3327; H-37-003 WAS H-37-102	9/21/10	TC
	H	ECN T6480: DEL H-25-002,H-25-010,H37-003,ADD C16616,C16626	3/20/2015	ES
	J	ECN T9452; ADD API 10 NOTES 3 THRU 5	7/6/2022	DLR





SECTION A-A
SCALE 1 : 2

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	07-0797	TUBE,CENTER,4-MOLD,7370/7375	1
2	07-0796	HANDLE,T	1
3	07-0882	PLATE,BOTTOM	1
4	07-0845	MOLD,H.T.	4
5	07-0886	PLATE,COVER	4
6	C16616	NUT,HEX,SS,3/8-16,JAM	2
7	C16626	SCREW,SHCS,SS,1/4-20x0.250	4

H

BREAK EDGES, DEBURR
UON DIMS ARE IN INCHES
1 PLC ±0.030 2 PLC ±0.010
3 PLC ±0.005 ANGL ±1/2°
SURFACE FINISH 63 RMS
THIRD ANGLE PROJECTION

DRAWN: TC 8/31/2007
MFG: TC 8/31/2008
ENGR: JJM 8/31/2008
TYPE:
STRUCT:

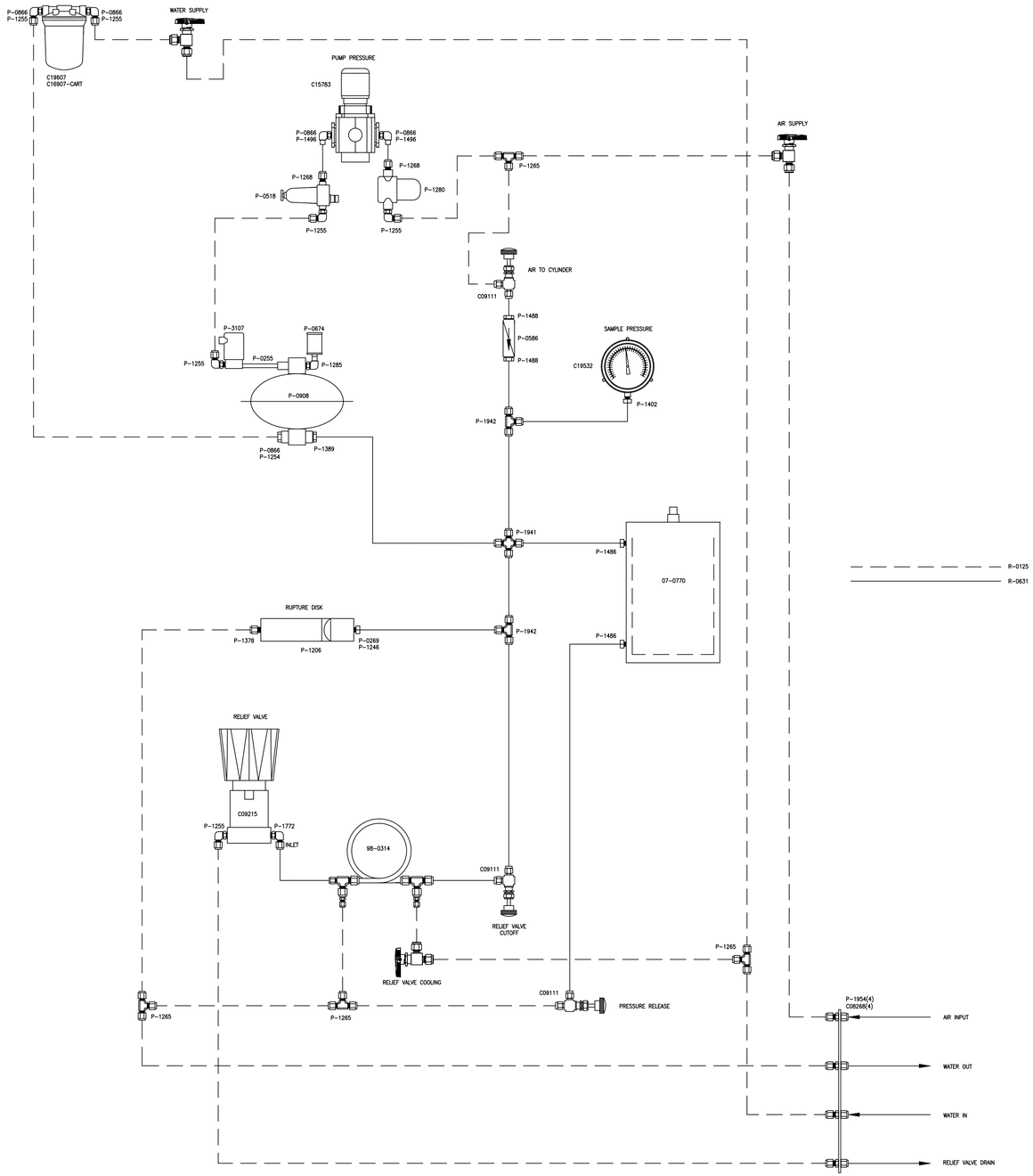
CHANDLER ENGINEERING

MOLD ASSY,FOUR,DBL COMPR

PN: 07-0860 REV J SIZE B
PROJ: 07 SHEET 1 OF 1

TITLE BLOCK REV 3

REVISIONS					
ZONE	REV	DESCRIPTION OF REVISION	DATE	APPROVALS	
	AD	ECN T10027; REDESIGNED BASED ON 07-1206	10/07/24	JJM	JS



		UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES [mm]		CHANDLER ENGINEERING		
		TOLERANCES:				
		1 PLACE ±0.030 [.76]				
		2 PLACE ±0.010 [.25]				
		3 PLACE ±0.005 [.127]				
NEXT ASSY	USED ON	ANGLES ±1/2°		TITLE	DIAGRAM,PIPING,7370 CURING CHAMBER	
APPLICATION		SURF. FINISH 32				
		BREAK SHARP EDGES, DEBURR	APPROVALS	DATE		
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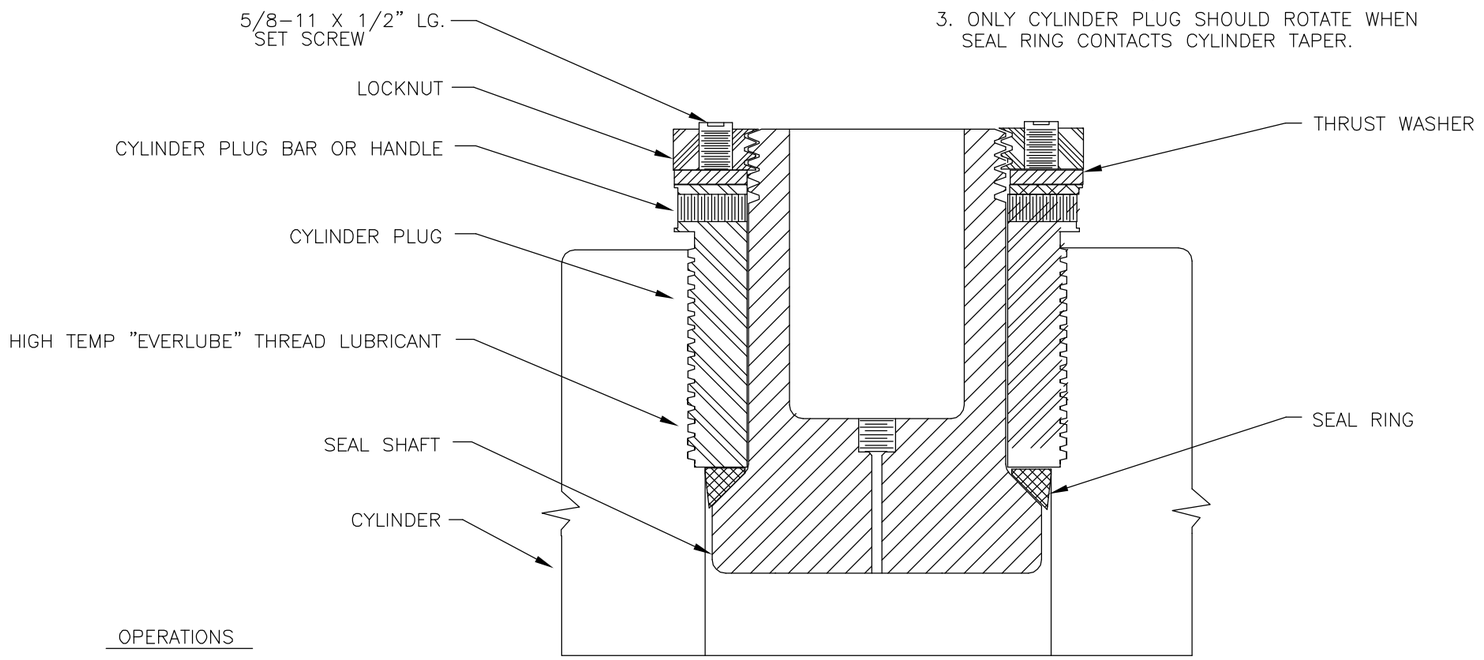
Copyright by AMETEK CHANDLER ENGINEERING		CHECKED:				
		ENGR.: JJM	09/26/24	SCALE: 1 = 1	TITLE BLOCK REV: 1.0	SHEET: 1 of 1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
ALL	D	ECN 7100; CHANGED REV LETTER	01/24.01	AMW/BD

NOTES

1. KEEP SEAL SURFACES CLEAN.
2. TIGHTEN OPPOSING SET SCREWS TO 35 ft–lbs (47N–m) TORQUE PER SHEET 2 OF 2.
3. ONLY CYLINDER PLUG SHOULD ROTATE WHEN SEAL RING CONTACTS CYLINDER TAPER.



OPERATIONS

1. THREADED PLUG IS SCREWED INTO CYLINDER UNTIL CONTACT IS MADE BETWEEN SEAL RING AND CYLINDER. BAR IS USED TO GENTLY TIGHTEN PLUG.
2. SET SCREWS ARE TIGHTENED ACCORDING TO PATTERN SHOWN ON SHEET 2 OF 2, PULLING SEAL SHAFT AGAINST SEAL RING AND MAKING INITIAL SEAL.
3. INTERNAL PRESSURE THEN FORMS A TIGHTER JOINT.

–04	–03	–02	–01	PART NUMBER	DESCRIPTION	MATERIAL SPEC.	ITEM

QTY. REQD. — PARTS LIST

NEXT ASSY | USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES [mm]

TOLERANCES:
1 PLACE ±0.030 [.76]
2 PLACE ±0.010 [.25]
3 PLACE ±0.005 [.127]
ANGLES ±1/2°
SURF. FINISH 32

APPROVALS	DATE
DRAWN: AEB	01/27/99
CHECKED: JH	01/28/99
ENGR.: JJM	01/28/99

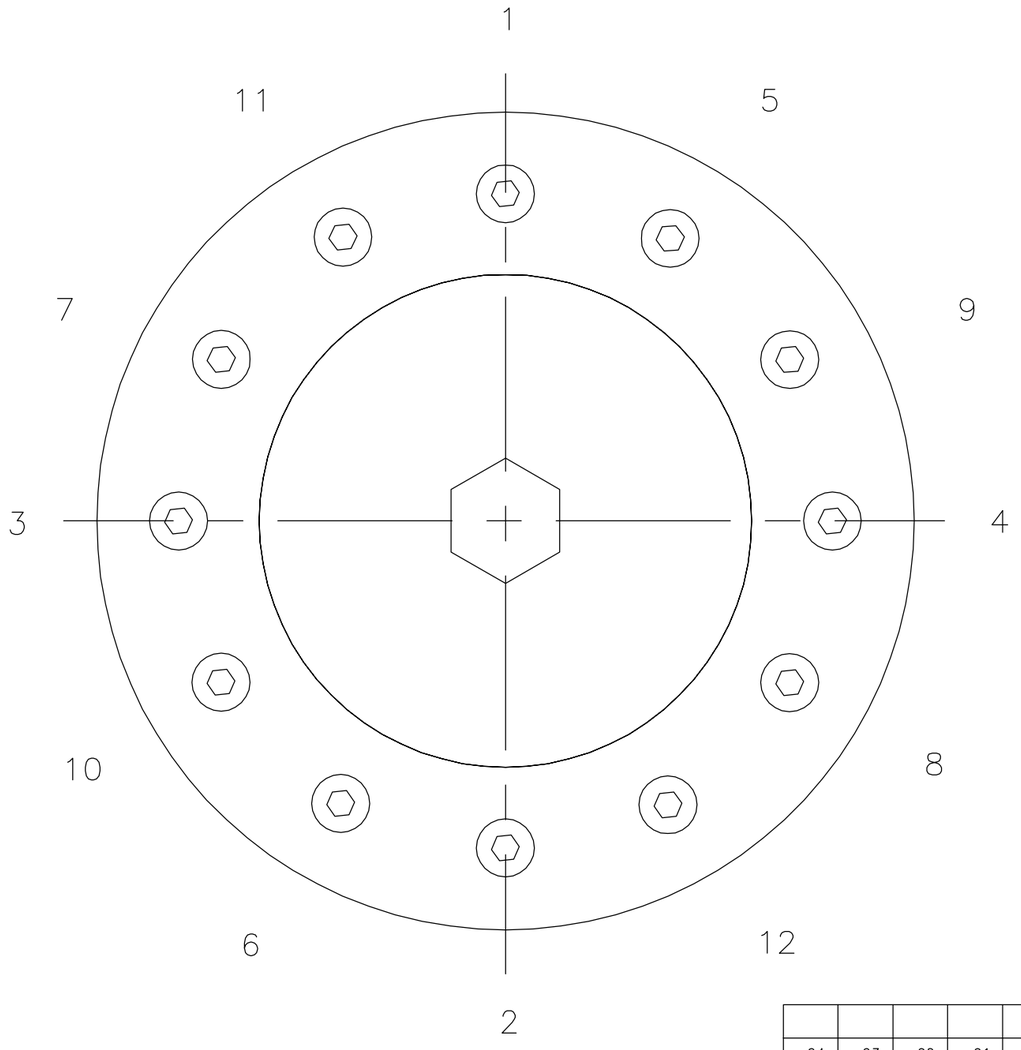
CHANDLER ENGINEERING

TITLE
MODIFIED BRIDGMAN SEAL

SIZE	S.O. NO.	DWG NO.	REV.
A3		07–0749	D

SCALE: 1 = 1 | DO NOT SCALE DRAWING | SHEET: 1 of 2

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
ALL	C	ECN 7100; CHANGED REV LETTER	01/24/01	AMW/BD



1. TORQUE SCREWS AS PATTERN INDICATES
2. TORQUE SCREWS TO 20 ft–lbs (27 N–m) FIRST ROTATION
3. TORQUE SCREWS TO 35 ft–lbs (47 N–m) DURING SECOND ROTATION

–04	–03	–02	–01	PART NUMBER	DESCRIPTION	MATERIAL SPEC.	ITEM
QTY. REQD.				PARTS LIST			

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES [mm]

TOLERANCES:
1 PLACE ±0.030 [.76]
2 PLACE ±0.010 [.25]
3 PLACE ±0.005 [.127]
ANGLES ±1/2°
SURF. FINISH 32

NEXT ASSY | USED ON

APPLICATION

CHANDLER ENGINEERING

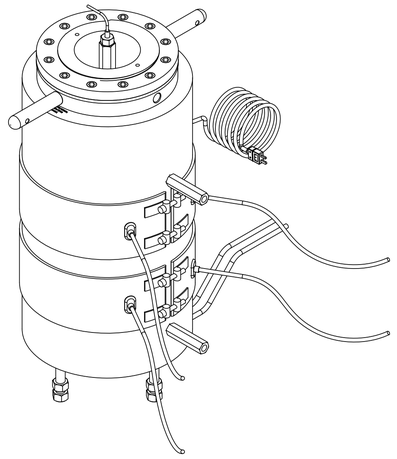
TITLE
MODIFIED BRIDGMAN SEAL

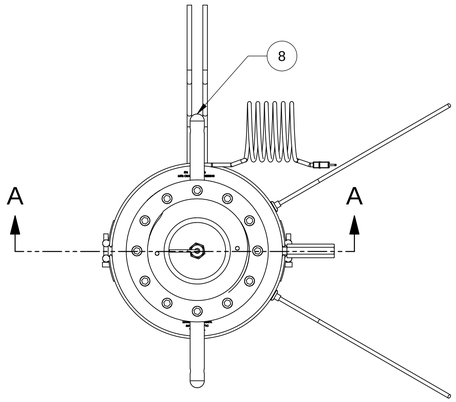
APPROVALS	DATE
DRAWN: AEB	01/27/99
CHECKED: JH	01/28/99
ENGR.: JJM	01/28/99

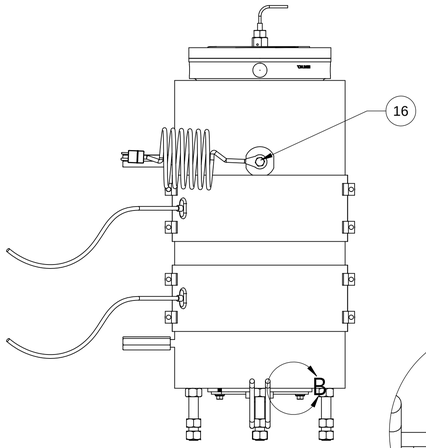
SIZE	S.O. NO.	DWG NO.	REV.
A3		07–0749	D

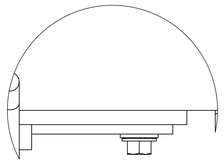
SCALE: 1 = 1 | DO NOT SCALE DRAWING | SHEET: 2 of 2

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	Y	ECN T7197; DELETED 07-0778, P-1349, P-1812, 07-1491, ADDED C17220, C17221, C16981, AND 07-0866-STEN	4/12/16	NSM
	AA	ECN T7244; REPL H-25-125 W/ C17244	5/2/16	NSM

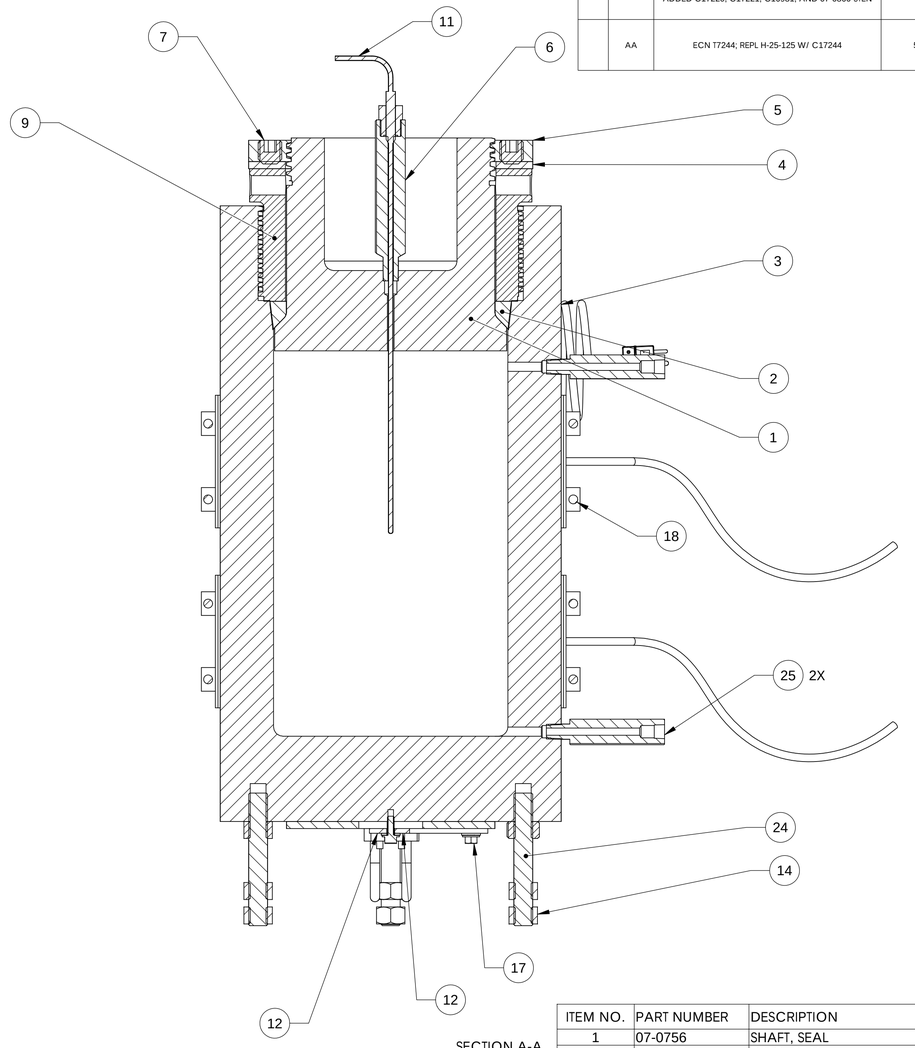








DETAIL B
SCALE 1 : 1

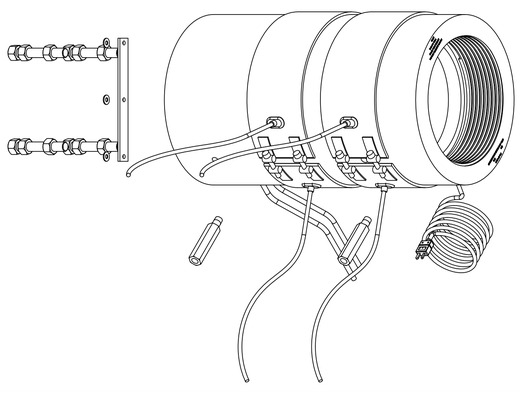


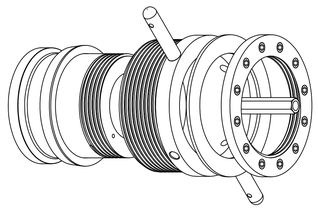
SECTION A-A
SCALE 1 : 2

NOTES:
1. PRESSURE TEST PER 07-1350.
2. TORQUE SPECS AND SEQUENCING PER 07-0749.
3. COAT WITH C12056, SUPER SILVER SEALANT.

CYLINDER DIMENSIONS:

OUTSIDE DIA.: 9" (22.9 CM)
OUTSIDE LENGTH: 16-1/4" (41.3 CM)
INSIDE DIA.: 6-3/16 (15.7 CM)
INSIDE DEPTH: 11" (27.9 CM)
WALL THICKNESS: 1-3/8" (3.5 CM)
END THICKNESS: 2-1/4" (5.7 CM)





ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	07-0756	SHAFT, SEAL	1
2	07-0758	RING, SEAL	1
3	07-0866	CYLINDER	1
4	07-0762	THRUST WASHER	1
5	07-0760	LOCKNUT	1
6	07-0779	ADAPTER	1
7	P-1792	SCREW,SKHSS,5/8-11X5/8LG,FL	12
8	07-0772	HANDLE,PLUG	2
9	07-0754	PLUG, CYLINDER	1
10			
11	07-0774	TC,SPECIAL TYPE J	1
12	07-0389	HEATER STRAP	1
13	C17221	HTR,RING,500W,230V,5.5inOD	1
14	H-50-001	NUT, 1/2-13	12
15	H-10-003	WASHER,FLAT,SS,#10	3
16	H-25-019	SCREW,HHCS,SS,1/4-20X0.750,HEX	1
17	C17244	SCREW,HHCS,SS,10-32X0.500,HEX	3
18	C17220	HEATER,HALFCR,750W,230V,9X3.5	2
19			
20			
21	R-1421	WIRE, 12 AWG, TAN, HI TEMP, TGGT	10'
22	R-0596	INSULATION, 1.0T, DURA BLKT #4DNS	8.75'
23			
24	R-0679	ST,ALL THREAD,1/2-13,CR	4
25	07-0777	ADAPTER	2
26	C16981	THERMOCOUPLE, TYPE J, BOLT ON	1
27	07-0866-STEN	STENCIL,7370	1

BREAK EDGES, DEBURR
UON DIMS ARE IN INCHES
1 PLC ±0.030 2 PLC ±0.010
3 PLC ±0.005 ANGL ±1/2°
SURFACE FINISH 63 RMS
THIRD ANGLE PROJECTION

DRAWN: NSM 04-12-16
MFG: TC 04-12-16
ENGR: NSM 04-12-16

CHANDLER ENGINEERING
ASSY,CYLINDER

TYPE:
STRUCT:

PN: 07-0701
PROJ: 7370

REV AA SIZE D
SHEET 1 OF 1

TITLE BLOCK REV 3

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Please Send Us Your Comments on This Manual

Model Number _____ Serial Number _____

Printing Date of this manual (from the Title Page) _____

Please circle a response for each of the following statements. Use:

(1)= Strongly agree (2) =Agree (3) =Neutral, no opinion (4) =Disagree (5) =Strongly disagree

a) The manual is well organized.	**1**	**2**	**3**	**4**	**5**
b) I can find the information I want.	**1**	**2**	**3**	**4**	**5**
c) The information in the manual is accurate.	**1**	**2**	**3**	**4**	**5**
d) I can easily understand the instructions.	**1**	**2**	**3**	**4**	**5**
e) The manual contains enough examples.	**1**	**2**	**3**	**4**	**5**
f) The examples are appropriate and helpful.	**1**	**2**	**3**	**4**	**5**
g) The manual layout is attractive and useful.	**1**	**2**	**3**	**4**	**5**
h) The figures are clear and helpful.	**1**	**2**	**3**	**4**	**5**

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_____

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