 TORUS	· Owner PROCESS DATASHEET, H-101 INDIRECT-FIRED LINE HEATER	Document No.	PRO-DS-009		
		Revision / Date	A · September 29, 2026		
		Issue purpose	Issued for Review		
PROCESS · PROCESS DATASHEET, H-101 INDIRECT-FIRED LINE HEATER					
Rev.	Date	Revision description	Prepared	Reviewed	Approved
A	2026-09-29	Issued for Review			

OPERATING CASES

Case	Flow, MMSCFD	Inlet, psig	Inlet, °F	Outlet, °F	Absorbed, MMBtu/h
C1	120	1,146	45	67	3.96
C5	120	894	60	60	0.03
C7	120	1,095	60	68	1.52
Winter normal	90	1,047	45	54	1.13

HEATER

Item	Value	Item	Value
Type	Indirect water bath, API 12K	Firebox rating, HHV	6.0 MMBtu/h
Design absorbed duty	4.35 MMBtu/h	Thermal efficiency, HHV	75 %
Bath fluid	50 wt % ethylene glycol and water	Bath temperature	180 °F design
Shell	96 in x 29 ft ( MEC-DS-003)	Overall envelope	About 34 ft x 9.5 ft
Firetube surface	600 ft ² min., 10,000 Btu/h-ft ² on fired rating		

PROCESS COIL

Item	Value	Item	Value
Pipe	NPS 6 Sch 80, SA-106 Gr B SMLS	Arrangement	3 paths x 5 passes x 22 ft
Outside area	572 ft ²	U, case C1, clean	64.6 Btu/h-ft ² ·°F
Design	1,440 psig at 250 °F	Nozzles	Class 900
Pressure drop, case C1	2.0 psi	Pressure drop, case C5	2.8 psi

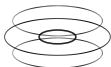
FUEL AND BURNER

Item	Value	Item	Value
Fuel	Design gas, 1,104 Btu/scf	Supply pressure	15 psig
Fuel at rating	5,440 scf/h	Pilot	25 scf/h
Burner	Natural draft	Fuel trim valve	TCV-152

CONTROLS AND PROTECTION

Item	Value
Outlet temperature control	TIC-152, setpoint from the TT-135 pressure-compensated schedule
Burner management	BMS-150, SIL 2, two diverse flame detectors BE-153A and BE-153B
Gas outlet high-high	TT-156 at 140 °F trips the burner



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Item	Value		
Bath high-high	TSHH-155 at 200 °F trips the burner		
Bath low level	LSL-154 trips the burner		
Coil relief	PSV-157, set 1,440 psig		

NOTES

1. Sizing per  PRO-CAL-004, Line Heater. The winter normal case is case C2 flow and pressures with a 45 °F inlet.
2. Line 1022 carries a coincident design point of 1,360 psig at 200 °F.
3. Efficiency, firetube arrangement and envelope: Vendor to confirm (HOLD H-15).
4. Process data only. The mechanical, instrument and electrical datasheets complete the purchase specification.
5. Pressures are gauge unless stated. Standard conditions are 14.73 psia and 60 °F; local atmospheric pressure is 14.10 psia.
6. Values marked HOLD H-15 are typical and shall be confirmed by the selected vendor.

