

Hydro-Thermal's newest innovation, the **Non-Obstructing Heater**, is the optimal solution for heating thick and abrasive slurries.

Unrestricted flow, heating to an exact temperature, and minimized steam impingement on wear parts are just some of the benefits of the straight-tube NOH.

This system's rugged design & materials of construction allows for the efficient, responsive heating of slurries, all while helping increase output.



Benefits

- Virtually zero pressure drop
- Unrestricted flow
- Balanced, noise-cancelling design
- Wide-ranging heating capacity
- Uniform fluid heating
- Effective seal construction for near-zero steam shutoff (CL. IV)
- Adaptable, tight controlling servo-motor driven control

Steam Capacity

The system's heating capacity utilizes a steam connection larger than the process connection, with the maximum diffuser sized to accommodate the full flow available from the steam piping. For less demanding applications, the diffuser pattern and steam piping size can be reduced for improved control of steam flow.

Product Inlet/Outlet

Metric measurements listed in grey columns	NOH2		NOH4		NOH8		NOH12	
Steam Inlet (in. / mm)	3	76.2	6	152.4	8	203.2	12	304.8
Steam Drain (in. / mm)	0.5	12.7	1	25.4	1	25.4	1	25.4
Estimated OAL Length (in. / mm)	12	304.8	19	482.6	24	609.6	33.5	850.9
Estimated CL to Steam Flange (in. / mm)	5	127	6.5	165.1	8	203.2	11.66	296.2
Min. Flow (GPM / m³/hr)	30	6.8	110	25	455	103.4	1,035	235.1
Max. Flow (GPM / m³/ hr)	175	39.7	735	167	3,053	693.4	6,900	1,567.2

Controls

- NOH can be locally controlled from the panel or from DCS. For DCS integration, either Ethernet IP, Modbus TCP or limited analog and digital must be utilized.
- I/O Options
 - Larger panel size and additional analog inputs/outputs are available as an option.
- Analog Inputs
 - Temperature discharge (TC/RTD)
 - Spare (4-20mA)
- Analog Outputs
 - Two spare (4-20mA)
- Digital Inputs
 - Flow enable (flow switch)
- Digital Outputs
 - Alarms to DCS

System Patents

US: 8,568,017
 WO: PCT/US09/059366
 CA: 2,741,771
 EU: EP 2 342 004 A2
 CN: 200 890 148 139.8

Technical Information

- Pressure and Temperature
 - Max Pressure: 300 PSIG
 - Max Temperature: 450°F
- Product Inlet/Outlet & Steam Flange
 - 300# Raised face flanges designed per ANSI B16.5 w/ lugged connections

Materials

- Standard 316
- Other metallurgies available, pending request or per application

