

The Perfect Temperature. Every Time.



## WASTEWATER HEATING

For Anaerobic Digestion in Municipal, Industrial  
and Agricultural Markets

# Direct Steam Injection (DSI) Heating for the Wastewater Industry

Maintaining consistent sludge temperature can be challenging. If you are looking for a more efficient, cost-effective solution for heating your sludge without the plugging that can occur with a heat exchanger, then Hydro-Thermal has your solution.



**Municipal**



**Industrial**



**Agricultural/  
(RNG)**

## Heating Flexibility

The NOH's high heating capability and range enable it to transition easily from shutdown to startup to maintenance mode, bringing the anaerobic digester up to temperature with extreme precision.

## Precise Temperatures Without Fear Of Scalding

Achieve ideal temperatures of 85-100°F (29-38°C) for mesophilic digestion or 120-140°F (49-60°C) for thermophilic digestion to optimize biogas generation. The NOH provides more efficient way of heating than the conventional heat exchanger.

## NOH Design Reduces Maintenance

The NOH's straight flow-through design can ensure that rags do not get caught and plug the heater. The NOH can be produced using wear and corrosion resistant metallurgies to withstand grit and highly abrasive materials.

## Space Savings

The inline design of the NOH frees up valuable plant space.



# Look Inside the NOH Heater

The NOH is rugged enough to handle even the toughest abrasive materials, like sand and grit, to fibrous materials and large particulates.

## HIGHLIGHTS:

### Durable & Expansive

With it's unrestricted flow there is minimal pressure drops allowing for a wide range of heating capacity. Effective seal construction for near-zero steam shut-off (CL. IV)

### Efficient & Capable

Utilizing a steam connection larger than the process connection, the max diffuser is sized to accommodate the full flow available from the steam piping.

### Compact & Powerful

Ranging from 2" to 12" [DN50-DN300] with volume capabilities all the way to 6,900 GPM [up to 1,567.2 m<sup>3</sup>/hr].



## Technical Information

Pressure & Temperature
Max Pressure - 300 PSIG / 20.7 Barg
Max Temperature - 450°F / 232°C

Product Inlet / Outlet & Steam Flange
300# raised face flanges designed (per ANSI B16.5) with lugged connections

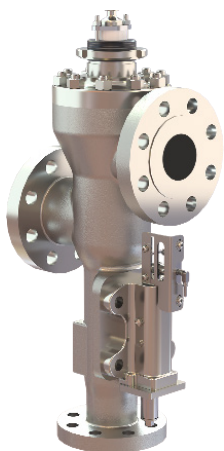
## Sizing & Processing Parameters

2" - 12" [DN50-DN300]

	NOH2		NOH4		NOH8		NOH12	
Steam Inlet (in. / mm)	3.0	76.2	6.0	152.4	8.0	203.2	12.0	304.8
Steam Drain (in. / mm)	0.5	12.7	1.0	25.4	1.0	25.4	1.0	25.4
Estimated OAL Length (in. / mm)	12.0	304.8	19.0	482.6	24.0	609.6	33.5	850.9
Estimated CL to Steam Flange (in. / mm)	5.0	127.0	6.5	165.1	8.0	203.2	11.66	296.2
Min. Flow (GPM / m <sup>3</sup> /hr)	30.0	6.8	110.0	25.0	455.0	103.4	1,035.0	235.1
Max. Flow (GPM / m <sup>3</sup> /hr)	175.0	39.7	735.0	167.0	3,053.0	693.4	6,900.0	1,567.2

Metric measurements listed in grey columns

# OTHER HEATING SOLUTIONS in Wastewater



## Hydroheater®

Also known as the Jetcooker™, our Hydroheater® has the longest proven history used for heating and processing a complex range of liquids and materials. Known for its adjustability, durability, and power, the near century of engineering and innovation behind the design of this workhorse speaks for itself.

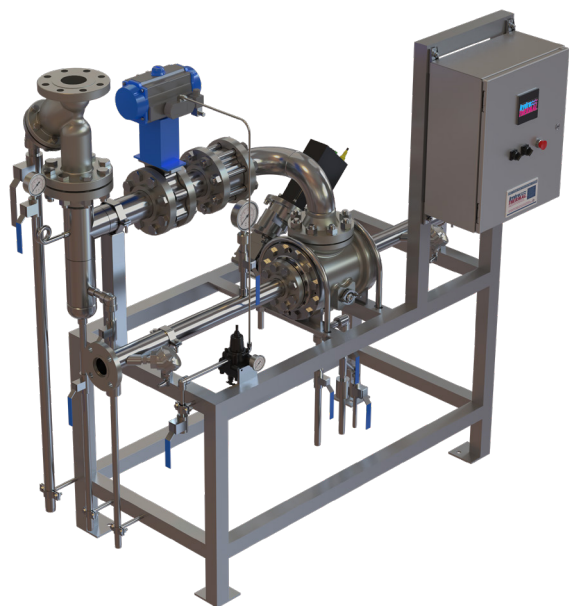
*Volume capability: 1 up to 6,700 gpm [0.2 up to 1,522 m³/hr]*



## Solaris®

Perfect for viscous slurries, the Solaris® heater features an optimized straight-through design and low shear flow perfect for heavy slurries with medium consistency or higher solid contents. The flow diffuser injects steam across the entire cross-section to ensure thorough mixing and a uniform temperature profile even at a high volume and flow rate.

*Volume capability:  
5 up to 25,000 gpm [1 up to 5,678 m³/hr]*



## NOH Skid™ Systems

The NOH Skid™ is an integrated, compact, pre-engineered heating system that comes with all the needed components for your application. Simply connect to plant utilities (steam, water, air, and power) and you're up and running in no time.

- › **Highly compact** to meet space constraints
- › Pre-designed and stocked for **shorter lead times**

**Need more information about Hydro-Thermal products?**

Visit [www.hydro-thermal.com](http://www.hydro-thermal.com) or call (800) 952-0121

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