



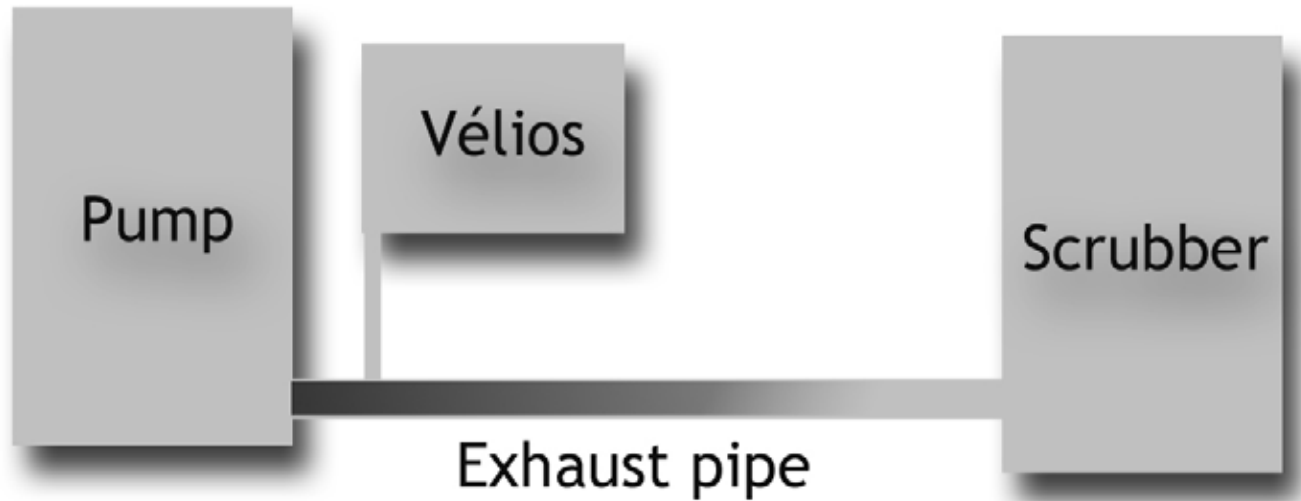
1 kW Hot Nitrogen Generator



- For direct injection of hot gas into exhaust pipe
- Halogen lamp heat source
- Maintains constant temperature
- 120 second ramp!
- Complete cross-sectional heating of exhaust gases
- 75% cheaper than heater jackets

UL Version

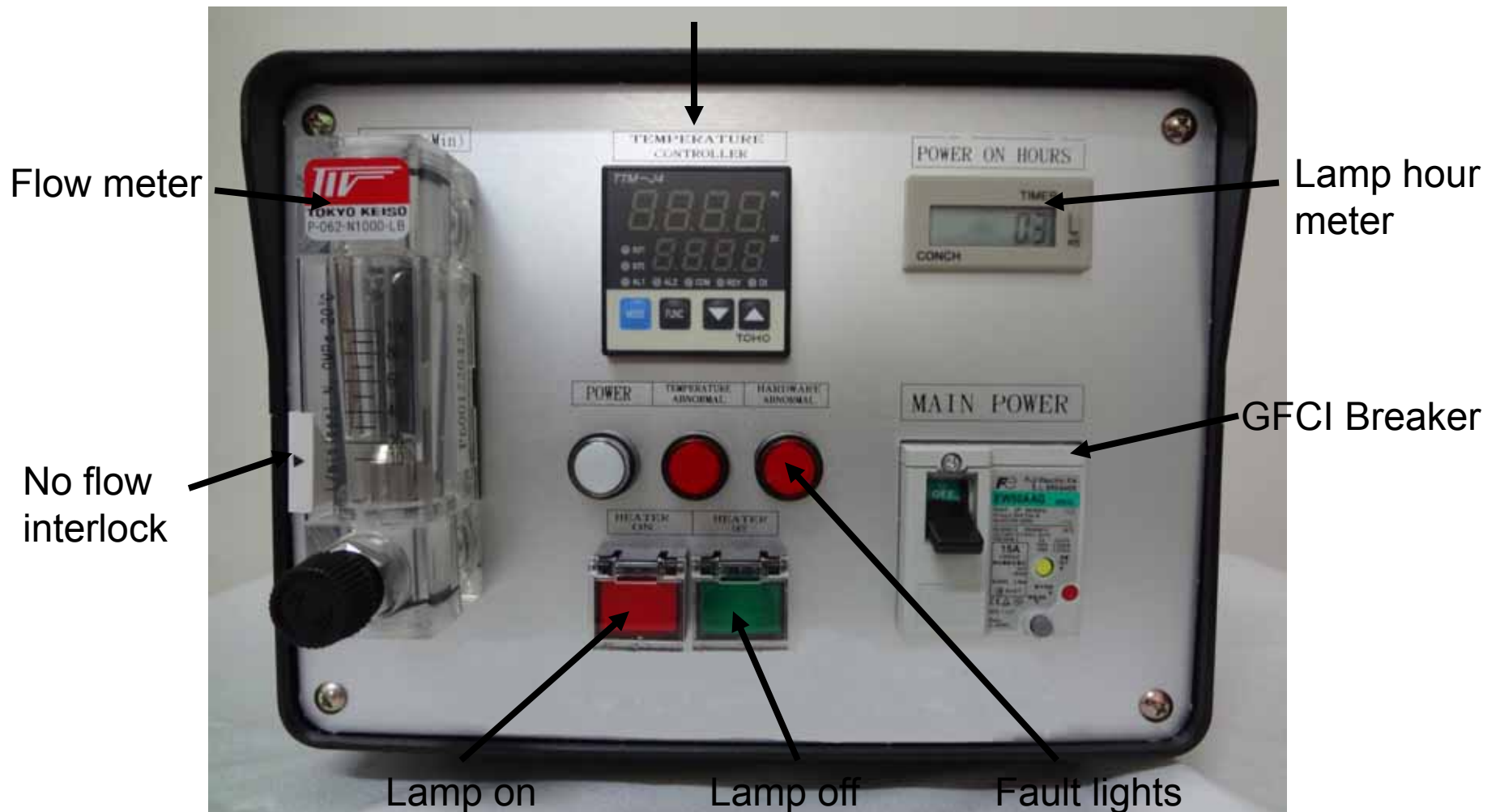




Vélios injects heated N₂ into exhaust lines and prevents condensation. **Vélios** is more efficient and cost-effective than thermal jackets and cartridge heaters. Temperature control is independent of gas residence time.

Vélios analog controller

PID temperature controller



Heater description

- Double wall stainless steel cylinder
- Welded SS coil within inner cylinder
- Radiative heating
- Optional mounting feet
- Swagelok or VCR connections
- TC located inside outlet T
- Patented



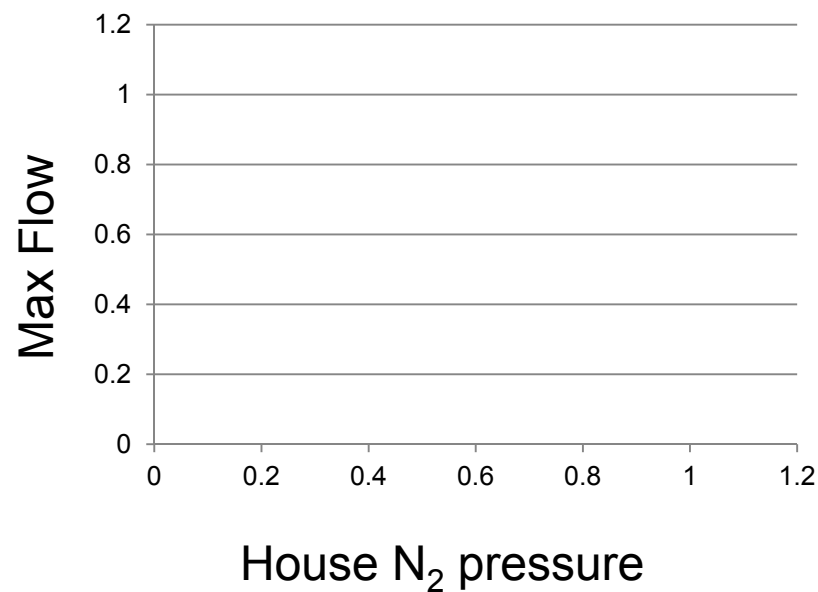
Vélios

Key parameters 1 kW heater

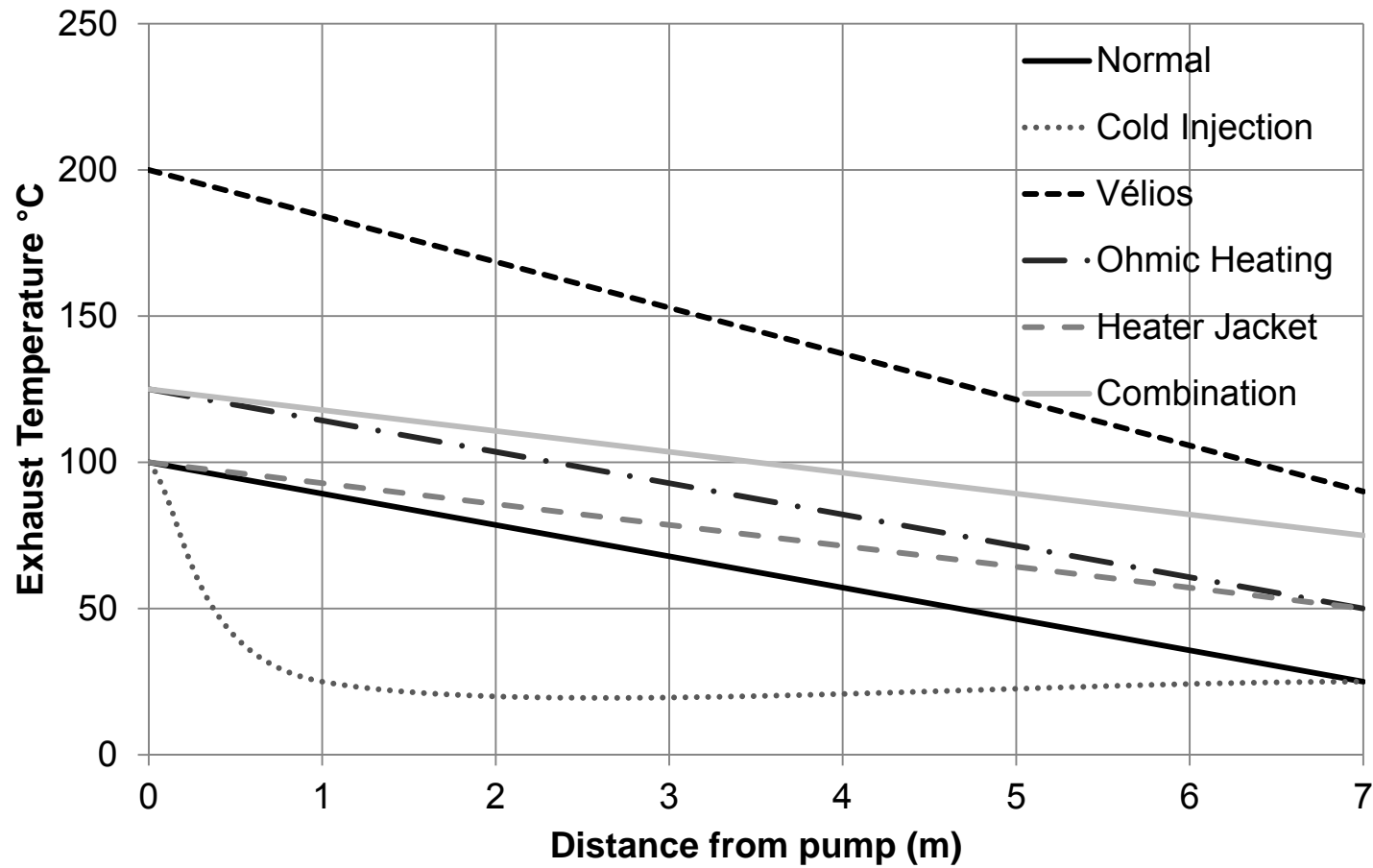
Set Point	Flow	Power (W)
	20	345
150 °C	40	529
	60	640
250 °C	20	414
	40	644
	60	870
280 °C	20	437
	60	920

- @ 85 PSI
- Time to reach set point <30 s

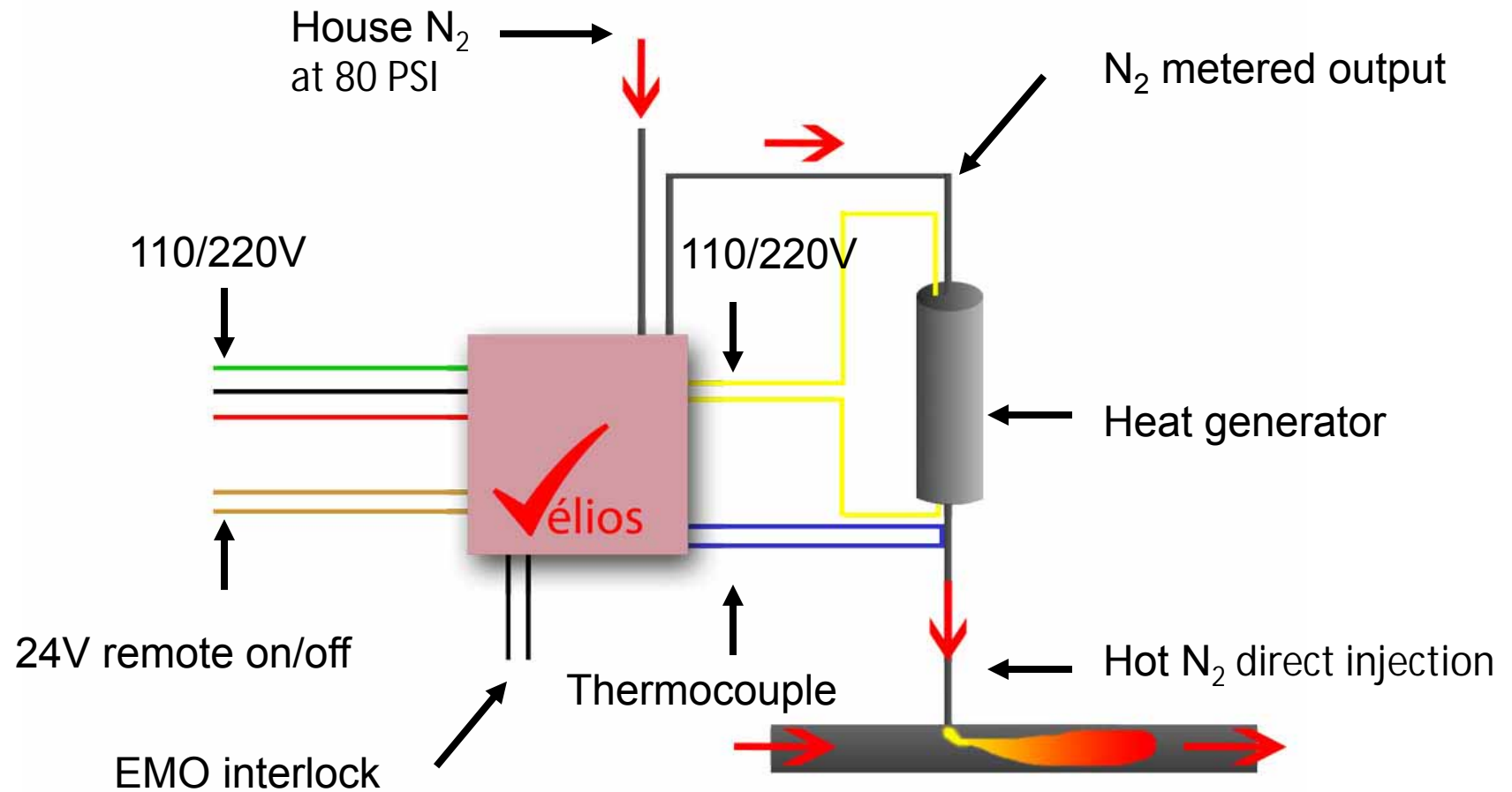
Flow as a function of pressure



Temperature vs. techniques



Basic connection overview

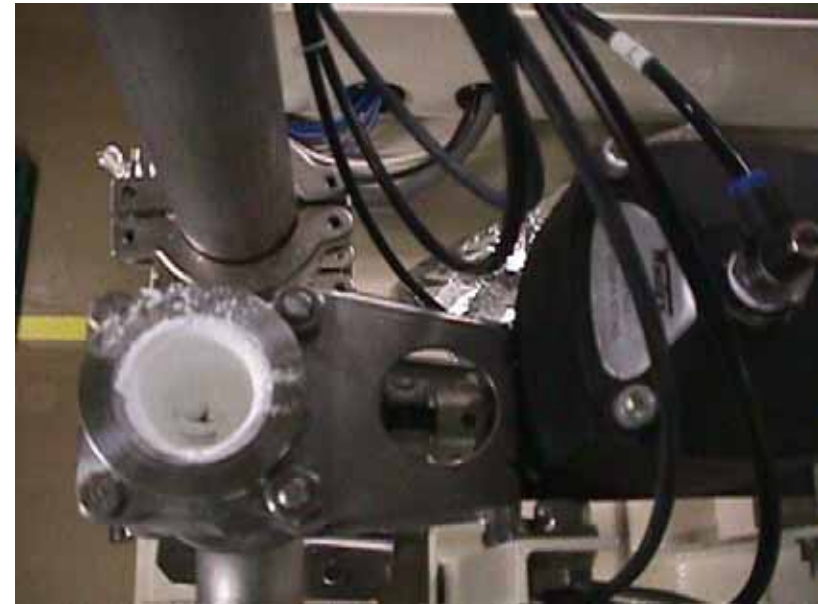


Vélios vs. heater jacket

Vélios pipe condition
- 1 year

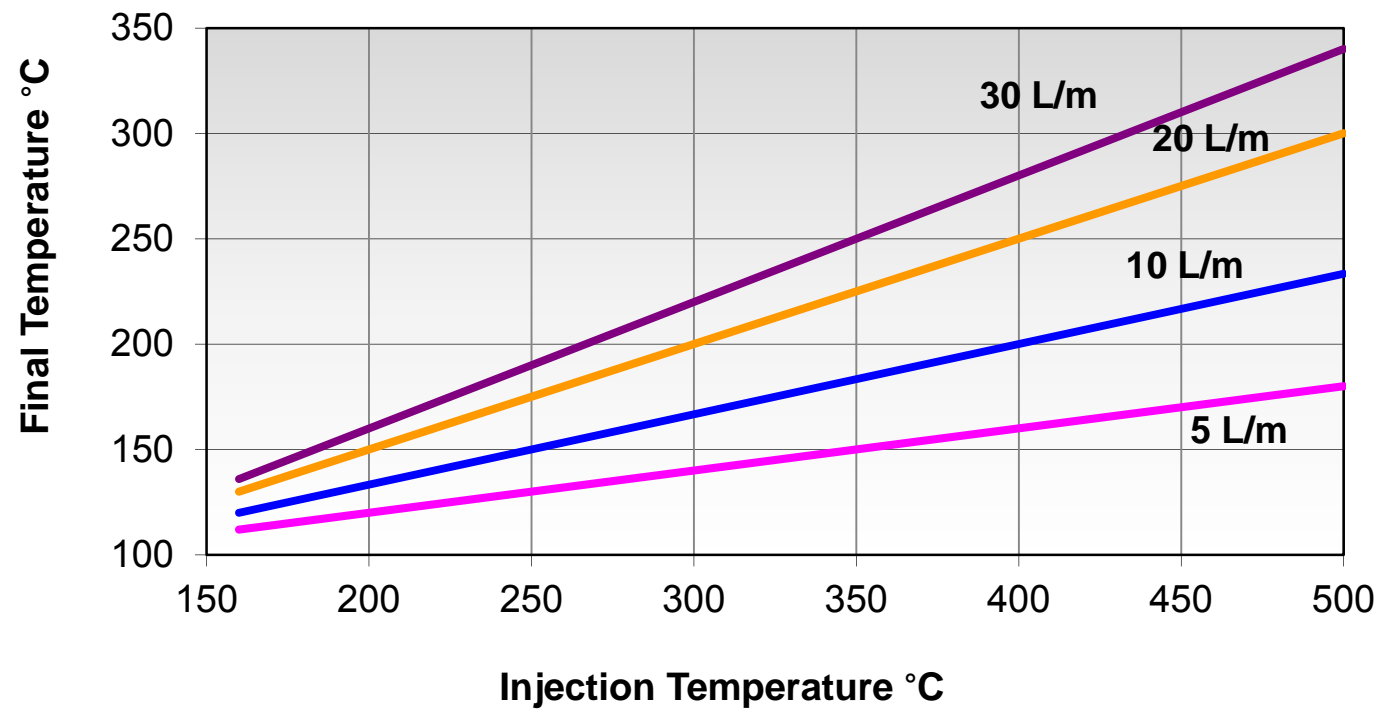


Heater jacket pipe condition
- 2 weeks



Injection Temperature and Final T

Pump exhaust: 25 L/m 100 °C



Specifications

- Heating Flow Rate: 20 L/min – 100 L/min (>200V 1Φ needed at high flow)
- Temperature : ambient to 350 °C (Option: over 350 °C)
- Control type: PID
- Thermocouple equipped at N₂ outlet
- Heater generator body material: Stainless Steel
- Heat source : Halogen lamp
- Voltage: 100 ~ 240 V
- Power : 500 ~ 1000 W
- Connection Piping Swagelok: 1/4 in ~ 3/8 in
- Max. Pressure : 10 kg/cm²
- Weight: 2.6 kg (Main Body)
- Weight: 5.2 kg (Control Unit)
- Size: L 430 mm x ID 89 mm (Main Body)
- Size: L 250 mm x W 200 mm x H 160 mm (Control Unit)