## Recycling your process hydrogen exhaust isn't just good business. **It's smart business.**



SKYRE's H2RENEW<sup>™</sup> product provides on-site gas recycling to recover and purify process hydrogen.

H2RENEW recycles hydrogen process atmospheres used in heat treating, specialty metals, microelectronics, and glass manufacturing.

H2RENEW systems provide a fresh, pressurized, re-supply of hydrogen at a fraction of the cost of delivered hydrogen.

To find out how SKYRE can improve your bottom line contact us at 860-652-9690 or visit:

# $H_2 + Impurities$ $H_2 + Impurities$ $H_2 + Impurities$ Impurities $H_2 = 0$ $99.9999\% H_2$ $H_2 = 0$ $H_2 = 0$

#### skyre-inc.com

### H2RENEW<sup>™</sup> 1760 SCFH Hydrogen Recycling Specifications



#### PERFORMANCE

| Maximum H₂ Recycling Output | SCFH 70 deg F, 1 atm                | 1760       |
|-----------------------------|-------------------------------------|------------|
|                             | kg/Day                              | 100        |
|                             | Nm <sup>3</sup> /hr, 0 deg C, 1 bar | 46         |
|                             | slm, 70 deg F, 1 atm                | 830        |
| Product H₂ Purity           | %                                   | 99.9999    |
| Product Water Content       | ppm                                 | 1          |
| Product Dew Point           | deg C (deg F)                       | -76 (-105) |
| Input Gas Pressure          | psig                                | 0-1        |
| Product Hydrogen Pressure   | psig                                | 0-150      |
| Peak H₂ Yield               | %                                   | 95         |
| Typical H₂ Yield            | %                                   | >80        |
| System Availability         | %                                   | >90        |

H2RENEW extracts hydrogen from the exhaust gas stream of your industrial manufacturing process, purifies and pressurizes it to your specifications and makes it available for reuse at your facility.

The result: recycled hydrogen with the same or better quality and lower cost than that typically being delivered by merchant hydrogen providers or produced by onsite generation technologies today.

#### **POWER SUPPLY**

| AC Supply Voltage                   | VAC (3-Phase) | 480 |
|-------------------------------------|---------------|-----|
| Maximum Current Draw                | A             | 100 |
| Nominal Current Draw @ Maximum Load | А             | 90  |

#### **ENVIRONMENT**

| Ambient Temperature | deg C | Indoor Rated            |
|---------------------|-------|-------------------------|
| Relative Humidity   | %     | 5 to 100 non-condensing |
| Altitude            | ft    | 0 to 6,500              |
| Heat Rejection      | kW    | 60                      |

#### PHYSICAL

| Dimensions   | (in L x in W x in H) | 74 x 48 x 94 |
|--------------|----------------------|--------------|
| Weight       | lbs                  | 3600         |
| System Noise | dBA @ 1 meter        | 84           |

#### INTERCONNECT

| Electrical                      | Type (3 Phase, GND) | 4-Conductor 2 AWG |
|---------------------------------|---------------------|-------------------|
| H₂ Out Connection               | Compression         | 1/2"              |
| Furnace Waste Inlet Connection  | MNPT                | 2"                |
| H2RENEW Waste Outlet Connection | NPT                 | 1"                |
| N <sub>2</sub> Supply           | NPT                 | 3/8"              |
| Tap Water Connection            | NPT                 | 1/4"              |
| Water Drain Connection          | NPT                 | 1/4"              |
|                                 |                     |                   |

| CONTROL                             |          |
|-------------------------------------|----------|
| Remote Monitoring Data Transmission | Ethernet |
| Local Communications                | Ethernet |

SKYRE develops and manufactures innovative products based on a proprietary, low-cost, large format electrochemical platform. Initially developed for NASA, our H2RENEW systems provide hydrogen purification and recycling in a solid-state device for industrial gas needs.

111 Roberts Street, Suite J East Hartford, CT 06108 USA 1-860-652-9690 www.skyre-inc.com