

## What is the cleanH2steam Dynamic Combustion Chamber™ (DCC)?

DCC™ is a breakthrough boiler that enables the transformation of H<sub>2</sub> and O<sub>2</sub> to high value steam without generating any air pollutants. It does not require a smokestack or any other energy dissipating exhaust and is nearly 30% more efficient in fuel usage than a typical conventional steam boiler.

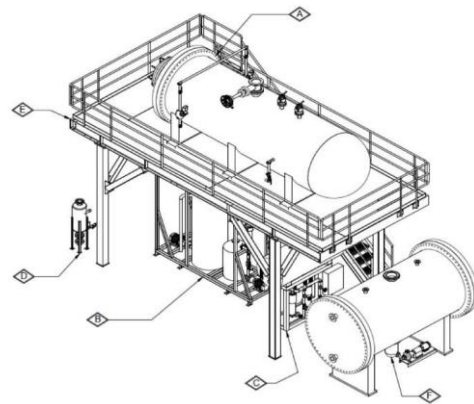
### Key Features:

>95% efficient thermal condensing hydrogen

ZERO emission design - heat and water only

- Refractory lined reaction box
- Fire free heat transfer tubes
- Reverse superheat steam tube design for maximum condensation
- 100% Water Fuel Recycled
- Endorsed by San Joaquin Unified Air Pollution Control District, California, USA
- ASME code constructed & stamped
- UV flame detector
- Flame observation ports
- Steel skids and lifting eyes

- A. 5MW Boiler steam generator
- B. Torricellian Column
- C. Feed Water
- D. Blow-Down Separator Skid
- E. Boiler Support Structure
- F. Turbine Condenser byproducts



| DCC-0100                                                                                   | DCC-1000                                                                                    | DCC-5000                                                                                            | DCC-10000                                                                                                                       |
|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| To produce sufficient steam to drive a 100 kWe Siemens SST-040 micro-steam turbine genset. | To produce sufficient steam to drive a Siemens SST-110 turbine genset up to 1 MWe capacity. | To produce sufficient process steam to drive a Siemens SST-110 turbine genset up to 5 MWe capacity. | Composed of twin DCC-5000 in parallel to produce process steam or drive a Siemens SST-110 turbine genset up to 10 MWe capacity. |
| <b>STEAM OUTPUT RATE</b>                                                                   |                                                                                             |                                                                                                     |                                                                                                                                 |
| 1,360 Kg/hr<br>2,992 lbs/hr                                                                | 6,000 Kg/hr<br>13,200 lbs/hr                                                                | 28,182 Kg/hr<br>62,000 lbs/hr                                                                       | 56,364 Kg/hr<br>124,000 lbs/hr                                                                                                  |
| <b>OUTLET PRESSURE</b>                                                                     |                                                                                             |                                                                                                     |                                                                                                                                 |
| Up to 40 bar / 580 psi                                                                     |                                                                                             | Up to 40 bar / 580 psi                                                                              |                                                                                                                                 |
| <b>STEAM TEMPERATURE</b>                                                                   |                                                                                             |                                                                                                     |                                                                                                                                 |
| Up to 400°C / 752°F                                                                        | Up to 400°C / 752°F                                                                         | Up to 400°C / 752°F                                                                                 | Up to 400°C / 752°F                                                                                                             |
| <b>H<sub>2</sub> FUEL CONSUMPTION</b>                                                      |                                                                                             |                                                                                                     |                                                                                                                                 |
| Up to 30 Kg/hr 67 lbs/hr                                                                   | Up to 123 Kg/hr 270 lbs/hr                                                                  | Up to 568 Kg/hr 1,250 lbs/hr                                                                        | Up to 1,136 Kg/hr 2,500 lbs/hr                                                                                                  |
| <b>DIMENSIONS(L X W X H)</b>                                                               |                                                                                             |                                                                                                     |                                                                                                                                 |
| 576 x 376 x 569 cm                                                                         | 732 x 465 x 645 cm                                                                          | 884 x 465 x 686 cm                                                                                  | 844 x 930 x 686 cm                                                                                                              |
| 227 x 148 x 224 in                                                                         | 288 x 183 x 254 in                                                                          | 348 x 183 x 270 in                                                                                  | 348 x 366 x 270 in                                                                                                              |