



# PRODUCT SPECIFICATIONS OF HP STACKS

|  | FCS 2-HP                              | FCS 5-HP     | FCS 8-HP    | FCS 10-HP   |
|--|---------------------------------------|--------------|-------------|-------------|
| <b>Electrical Output</b>                   |                                       |              |             |             |
| Rated Power (kWe)                          | 2.0                                   | 5.0          | 8.5         | 10.0        |
| Voltage range (V)                          | 9 - 16                                | 22 - 39      | 37 - 63     | 43 - 73     |
| Current range (A)                          | 0 - 230                               | 0 - 230      | 0 - 230     | 0 - 230     |
| <b>Mechanical</b>                          |                                       |              |             |             |
| Weight (kg)                                | 20                                    | 28           | 36          | 40          |
| Size (mm)                                  | 217x194x288                           | 353 x194x288 | 491x194x288 | 550x194x288 |
| <b>Operating condition</b>                 |                                       |              |             |             |
| Temperature and pressure level             | 65 °C, ambient pressure               |              |             |             |
| Max. cooling requirement (kW thermal)      | 3.3                                   | 8.3          | 13          | 16          |
| <b>Hydrogen</b>                            |                                       |              |             |             |
| Purity                                     | Grade ≥ 2.5 (CO < 0.2 ppm)            |              |             |             |
| Humidity (at stack temperature)            | 40% RH                                |              |             |             |
| Pressure level (barg)                      | 0.15 - 0.3                            |              |             |             |
| Pressure drop (bar)                        | < 0.05                                |              |             |             |
| Stoichiometry                              | > 1.25                                |              |             |             |
| Max. H <sub>2</sub> consumption (NI/min)   | 25                                    | 64           | 102         | 119         |
| Max. required H <sub>2</sub> flow (NI/min) | 32                                    | 80           | 128         | 149         |
| <b>Air</b>                                 |                                       |              |             |             |
| Quality                                    | Instrument air quality                |              |             |             |
| Humidity (at stack temperature)            | 40% RH                                |              |             |             |
| Pressure drop (bar)                        | < 0.12                                |              |             |             |
| Stoichiometry                              | 2.0                                   |              |             |             |
| Max. air flow (NI/min)                     | 122                                   | 305          | 488         | 572         |
| <b>Cooling</b>                             |                                       |              |             |             |
| Medium                                     | DI water or BASF FC G20               |              |             |             |
| Pressure drop (bar)                        | < 0.15 DI water or < 0.45 BASF FC G20 |              |             |             |
| Operating window                           | ΔT < 5K                               |              |             |             |