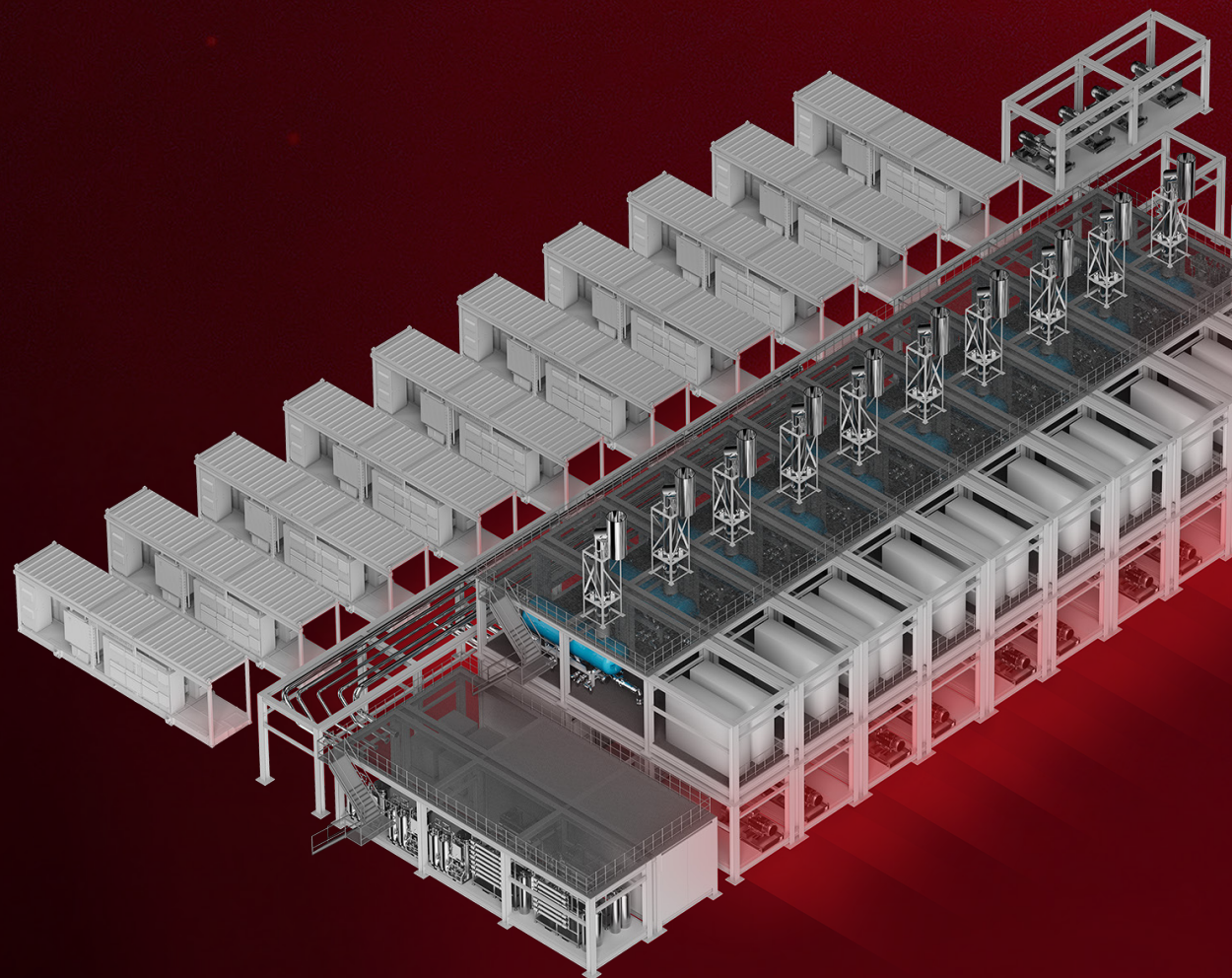


ALPHA

MODULAR. HIGH-PERFORMING. COMPETITIVE.

ALPHA 50 unites technology, engineering, manufacturing, and deployment, in one full-scope 50 MW plant.

With its compact footprint and designed for outdoor installation, ALPHA 50 can be easily configured into larger plants. Fully skid-mounted, pre-fabricated and standardised, offering in-built redundancy for key components to maximise uptime, the full-scope plant can cope with the widest ambient temperature range and is capable of being deployed globally into any territory.



CONTACT OUR SALES TEAM

sales@itm-power.com

EUR 50,000,000*



REFINERIES



AMMONIA



METHANOL



TRANSPORT



SEMICONDUCTORS



STEEL



STORAGE



MINING

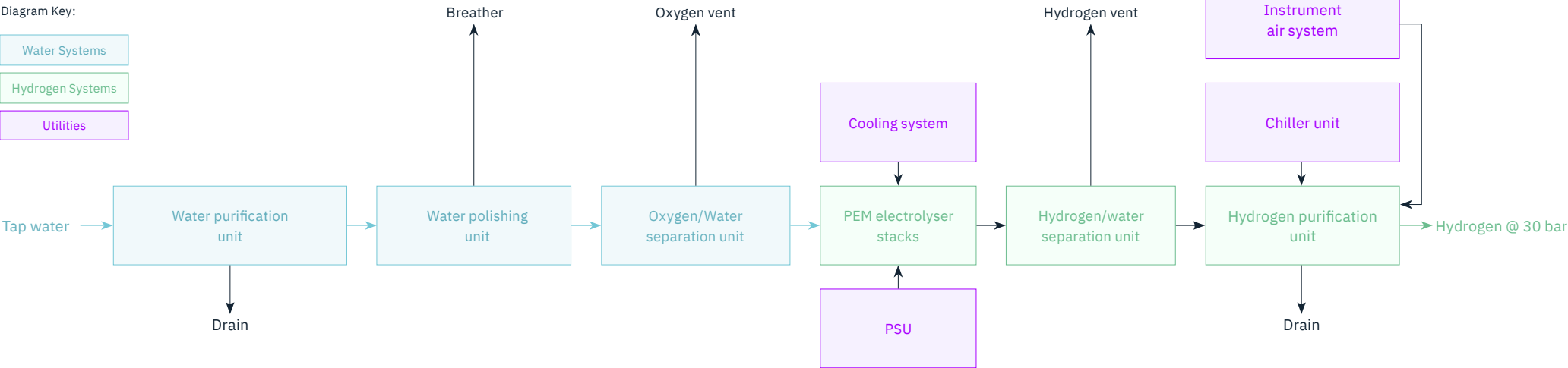


HEATING



ELECTRICITY

ALPHA 50: PROCESS FLOW & SPECIFICATIONS

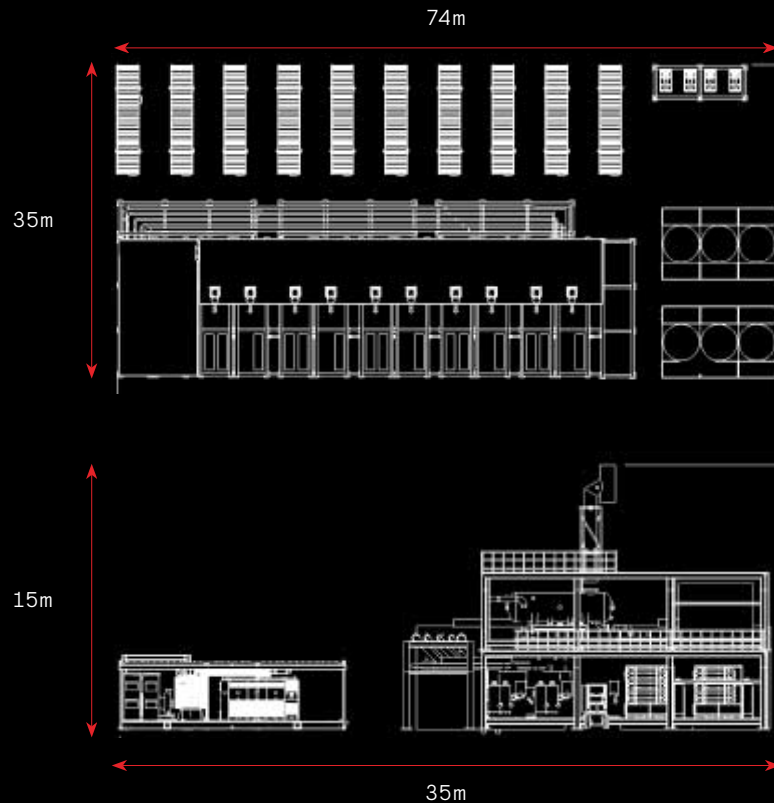


TECHNOLOGY	PEM	H2 PRODUCTION	900 kg/hr
NUMBER OF STACKS	80	H2 OUTPUT PRESSURE	30 bar(g)
CAPACITY	50 MW	H2 OUTPUT PURITY	<5ppm H2O, <5ppm O2 (EN 17124 & ISO 14687)
AC POWER CONSUMPTION	55.9 kWh/kg*	AMBIENT TEMPERATURE RANGE	-20°C to + 45°C
SYSTEM FOOTPRINT	74 x 35 m	MODULATION	10% per second ramp-up 50% per second ramp-down
OPERATING RANGE	12.5–100%	INSTALLATION	Outdoor installation
INPUT WATER PURITY	Potable Water**	COMPLIANCE	CE/ASME

* This is the full system (water purification, stack, and BOP) energy consumption at beginning of life

** Input water to the system, prior to purification

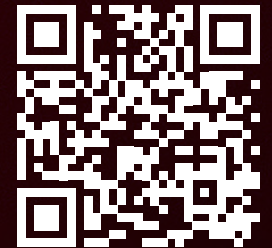
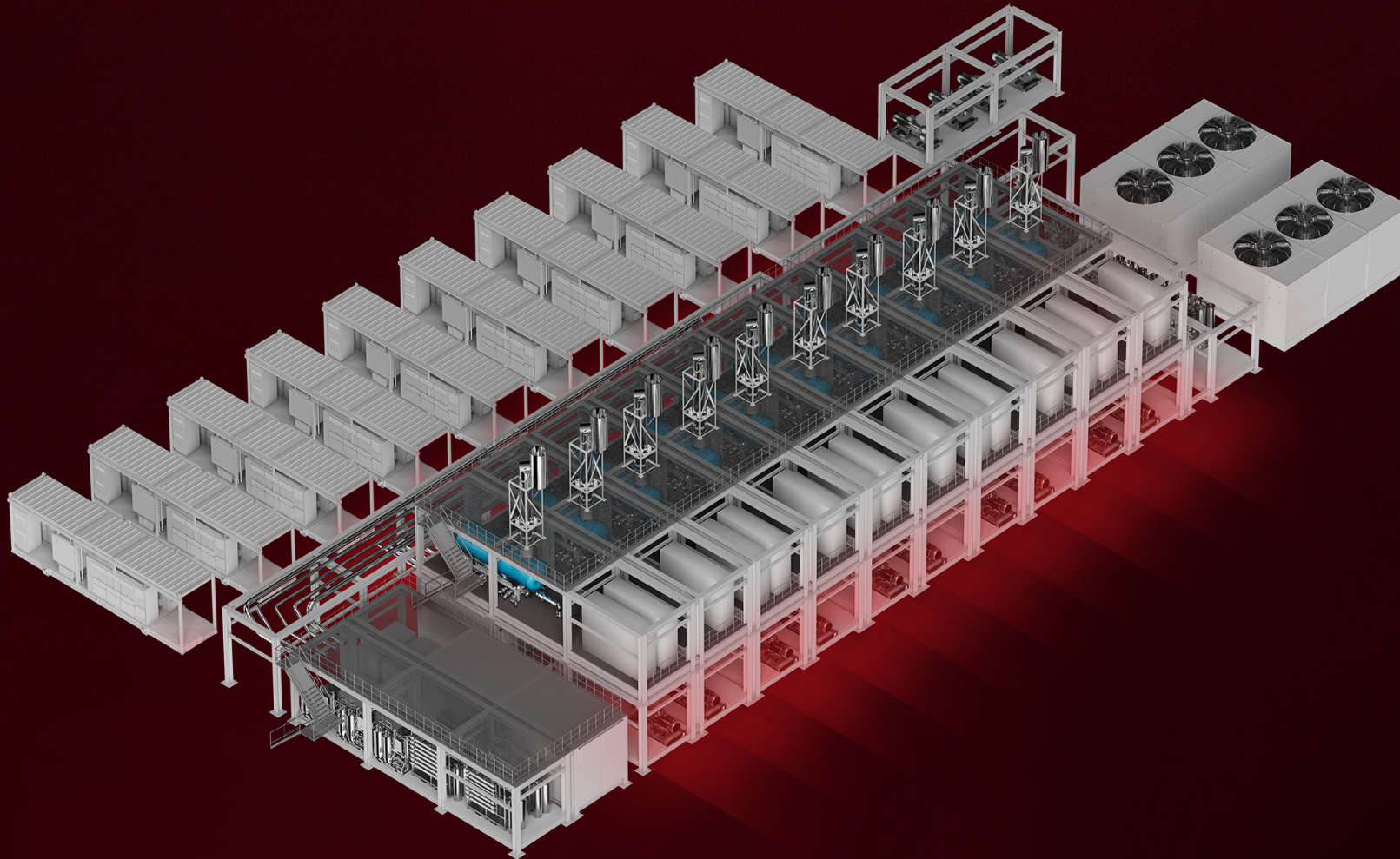
SCHEMATIC



SCOPE OF SUPPLY

- Water purification unit
- Water polishing unit
- PEM stacks and skids
- Hydraulic package unit
- Cooling system – hybrid cooling tower
- Hydrogen purification unit
- Power supply unit including MV trafo, dual-rectifier and cooling system, specifically designed to match our electrolyser
- Plant DCS (Siemens PCS7) and safety system
- Heat-tracing installation and insulation for ISBL
- All piping, instrumentation and electrical interconnections prefabricated within the process units

ALPHA 50: FULL-SCOPE



Find out the detailed
scope of supply and more
on our product page

CONTACT OUR SALES TEAM

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itm-power.com/products/alpha

