



TELEDYNE
ENERGY SYSTEMS, INC.

A Teledyne Technologies Company

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TITAN™ EC SERIES

On-site Hydrogen Generation System

Teledyne Energy Systems builds decades of engineering excellence into every hydrogen generator system, ensuring the most reliable and durable on-site hydrogen solutions available.

TITAN EC Advantages

Ultra Pure Gas

Ultra pure (99.9998%) gas generation with continuous purity monitoring increases equipment life, saving considerable maintenance and replacement costs.

Proven Reliability

Durable stainless steel process components maximize system life. Demonstrated life span of 25+ years.

Comprehensive Installation

Every TITAN hydrogen generator system is fully assembled and skid-mounted for trouble-free shipping, and simple installation.

Fully Tested

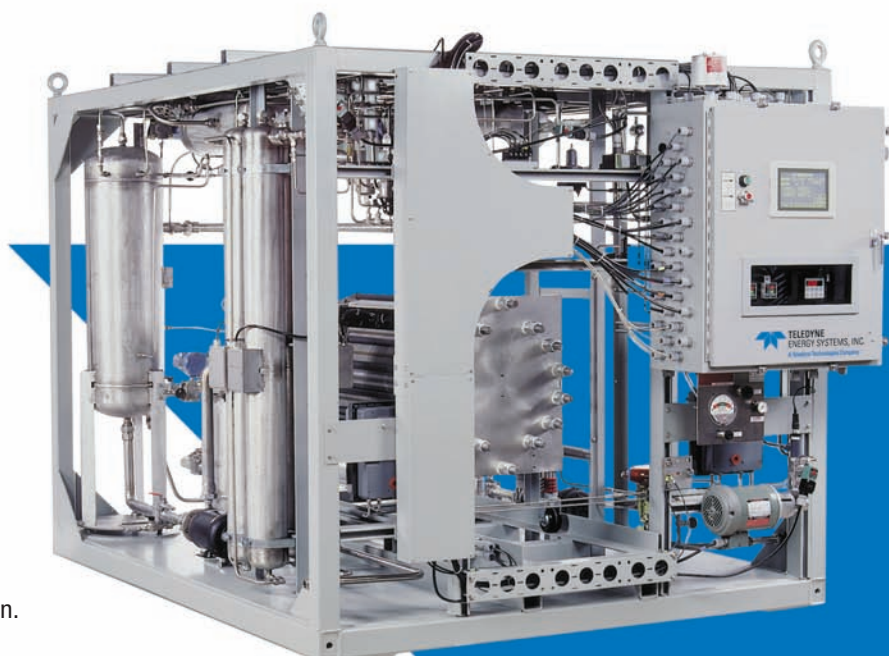
Each unit is thoroughly factory-tested to meet Teledyne's exacting standards and exceed industry codes.

On Demand Gas Delivery

- Operator adjustable pressure up to 150 psig (10 barg)
- Maximum flow delivery ranges of 500, 600, 750 and 1000 SLM
- Higher flow delivery ranges available to meet your specific hydrogen requirements

Custom Engineered Design

Custom-engineered hydrogen generating solutions available for optimum integration with existing plant infrastructure.



Safe, Unattended Operation

- Fully automatic operation with on-board diagnostics
- Minimal on-board gases and no sparking components
- Uninterruptible Power Supply (UPS) ensures system control in the event of power outage
- Remote monitoring and operation option
- O₂ byproduct is safely vented outside your facility or can be optionally configured for use in your process

TELEDYNE TITAN™ EC SERIES

MODEL		EC-500	EC-600	EC-750	EC-1000
Hydrogen Gas Production					
Max. Flow Rate	SLM	500	600	750	1000
	Nm ³ /hr	28	33	42	56
	scfh	1060	1272	1589	2119
	kg/day	64.8	77.8	97.2	129.6
Oxygen Gas Production					
Max. Flow Rate	SLM	250	300	375	500
	Nm ³ /hr	14	17	21	28
	scfh	530	636	795	1059
Feed Water Consumption					
	l/hr	27	32	42	56
	g/hr	7	8	11	15
Power Supply					
	Voltage	Factory Configured, 380-480 VAC, 3 Phase 50 or 60 Hz			
	Frequency	50 or 60 Hz			
H₂ Purity					
				99.9998%*	
O₂ Purity					
				99.9993%**	

*Subject to ambient and condenser water temperatures, as well as dissolved gas content in feed water. **With use of integrated purification package

SPECIFICATIONS

H₂ Delivery Pressure		
	kg/cm ² gauge	7.0 to 10.2 operator selected
	psig	100 to 150 operator selected

O₂ Delivery Pressure		
	kg/cm ² gauge	4.2 to 6.3 operator selected
	psig	60 to 90 operator selected

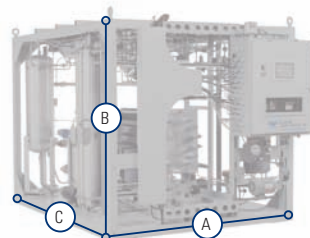
Cooling Water		
Max. Inlet Temp.	°C	40
	°F	104
Max. Flow	lpm	113 to 189
	gpm	30 to 50
Max. System Pressure	kg/cm ² gauge	10.5
	psig	150
Pressure Drop	kg/cm ² gauge	2
	psi	28

Condenser Cooling Water ***		
Max. Temperature	°C	up to 10
Max. Allowable Pressure	kg/cm ² gauge	7
Required Flow	lpm	11 to 19
	gpm	2.9 to 5
Pressure Drop	kg/cm ² gauge	0.2
Max. Heat Load	kW	4

Instrument Gas		
Pressure	kg/cm ² gauge	6.0 to 17.0
	psig	85 to 242
Average Consumption	Nm ³ /hr	1.6
	scfh	60

Pressurization Gas		
Pressure	kg/cm ² gauge	4.2 to 7.0
	psig	60 to 100
Average Consumption for Start-up	Nm ³	1.2
	scf	40

Feed Water Specification		
ASTM D1193-99, Type II		
Min. Resistivity	MegOhm-cm	1.0
Min. Supply Pressure	kg/cm ² gauge	0.4
	psig	5.7



- A: 203 cm | 80 in
- B: 203 cm | 80 in
- C: 312 cm | 123 in

Note: The power supply is a separate enclosure which can be isolated from the generator. The power supply footprint can vary, but is approximately 137.3 cm (54 in) x 121.92 (48 in).

Normal Conditions: 0°C and 1 kg/cm² abs (68°F and 14.7 psia)
 Standard Conditions: 20°C and 1 atm
 System can be installed indoors or outdoors in a protected environment between 5°C and 40°C
 Specifications are subject to change

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***To achieve 99.9998% H₂ purity & 99.9998% O₂ purity