



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

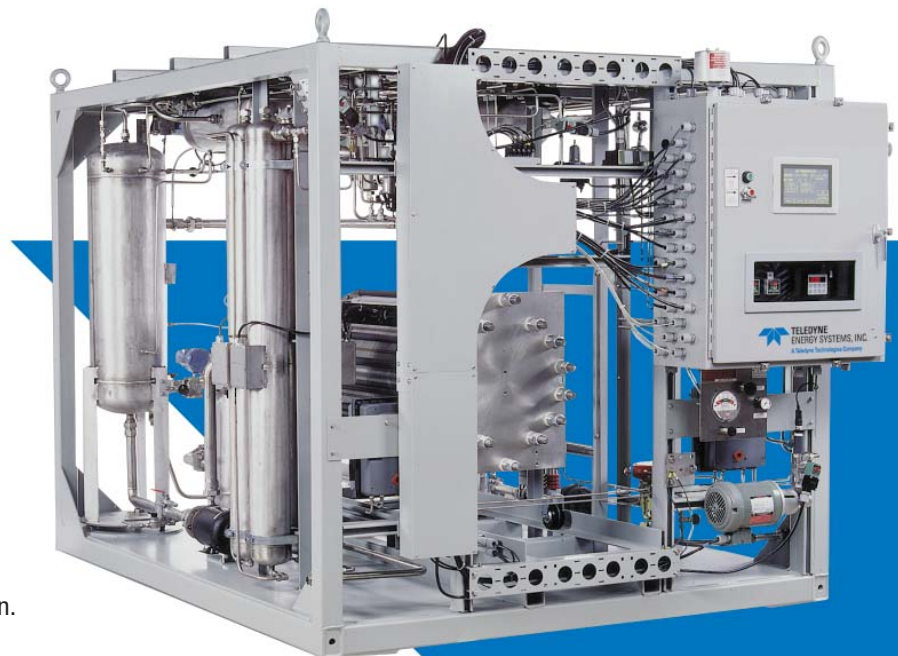
Each unit is thoroughly factory-tested to meet Teledyne's exacting standards and exceed industry codes.

On Demand Gas Delivery

- Pressure up to 150 psig (10 barg)
- Maximum flow delivery ranges of 500, 600 and 750 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

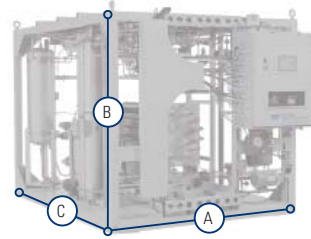
MODEL		EC-500	EC-600	EC-750
Hydrogen Gas Production				
Max. Flow Rate	SLM	500	600	750
	Nm ³ /hr	28	33	42
	scfh	1060	1271	1589
	kg/day	60.1	72.1	90.1
Oxygen Gas Production				
Max. Flow Rate	SLM	250	300	375
	Nm ³ /hr	14	17	21
	scfh	530	636	795
Feed Water Consumption				
	l/hr	26	31	38
	g/hr	6.7	8.1	10.1
Power Supply				
	Voltage	Factory Configured, 380-480 VAC, 3 Phase		
	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 10.3
	psig	100 to 150
O₂ Delivery Pressure		
	kg/cm ² gauge	4.2 to 6.3
	psig	60 to 90
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
Main Heat Load	watts/slpm H ₂	127.5
Condenser Cooling Water ***		
Max. Temperature	°C	up to 10
Max. Allowable Pressure	kg/cm ² gauge	7
	Required Flow	lpm
	gpm	2.9 to 5
Pressure Drop	kg/cm ² gauge	0.2
Condenser Heat Load	kW	4.5 to 7.5
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		N ₂ or other inert 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: 312 cm | 123 in
 B: 203 cm | 80 in
 C: 203 cm | 80 in

Approximate Weight:
 4014 kgs / 8850 lbs

Power Supply Required: L 121 cm / 48 in x
 W 121 cm / 48 in x H 205 cm / 81 in
 Mass 2540 kgs / 5600 lbs

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

 **TELEDYNE**
ENERGY SYSTEMS, INC.
 A Teledyne Technologies Company

10707 Gilroy Rd
 Hunt Valley, MD 21031-1311, U.S.A.
 +1.410.771.8600 FAX: +1.410.771.8618
 www.teledynees.com
 Email: Energy.Systems@TeledyneES.com

***To achieve 99.9998% H₂ purity & 99.998% O₂ purity