

# MegaTorr® PS7-H Hydrogen Gas Purifiers

*Efficient bulk gas removal of H<sub>2</sub>O, O<sub>2</sub>, CO, CO<sub>2</sub>, THC, and N<sub>2</sub>*

The adsorber and getter MegaTorr® PS7-H Series hydrogen gas purifiers are enhanced, optimized designs providing sub-ppb performance in compact footprints. Two ambient temperature adsorber vessels remove water (H<sub>2</sub>O), oxygen (O<sub>2</sub>), CO, and CO<sub>2</sub>, while the downstream getter vessel, operated at an elevated temperature, eliminates nitrogen (N<sub>2</sub>) and methane (CH<sub>4</sub>). Adsorber regeneration is accomplished by back flushing with purified hydrogen at elevated temperatures.

Entegris has drawn on years of experience in ultra-high purity (UHP) piping design, advanced process material analysis, and state-of-the-art integrated control systems to develop this family of purifiers to meet the needs of low capital cost, high reliability, and high performance.

## APPLICATIONS

- Semiconductor
- Data storage
- Flat panel display
- LED
- Solar

## FEATURES & BENEFITS

<b>Uses a combination of heated getter and ambient catalytic adsorption processes</b>	Provide ultra-high purity hydrogen gas for semiconductor applications
<b>Two adsorber vessels alternate between purify and regeneration modes</b>	Provide continuous purification in a single process
<b>Optimized design</b>	Provides sub-ppb performance in small footprints with flow rates up to 3,333 slpm (200 Nm <sup>3</sup> /hr)



*Optimized design with flow rates up to 3,333 slpm*

## SPECIFICATIONS

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<b>Gas purified</b>	H <sub>2</sub>
<b>Impurities removed to &lt;1 ppb</b>	H <sub>2</sub> O, O <sub>2</sub> , CO, CO <sub>2</sub> , THC (including CH <sub>4</sub> ), N <sub>2</sub>
<b>Maximum flow rates</b>	
PS7-MGT20	20 Nm <sup>3</sup> /hr (333 slpm)
PS7-MGT40	40 Nm <sup>3</sup> /hr (667 slpm)
PS7-MGT100	100 Nm <sup>3</sup> /hr (1,667 slpm)
PS7-MGT200	200 Nm <sup>3</sup> /hr (3,333 slpm)
<b>Maximum pressure drop</b>	<1 bar (100 kPa)
<b>Average power consumption</b>	
PS7-MGT20	4 kW
PS7-MGT40	8 kW
PS7-MGT100	22 kW
PS7-MGT200	50 kW

**Note:** Purifiers are gas specific and should only be used for the gas indicated.

### Standard Features

- Automated microprocessor controller
- Touchscreen operation interface
- Password protected control system
- System alarms
- Temperature interlocks
- N<sub>2</sub> purged secondary enclosure
- H<sub>2</sub> leak detection sensor
- Vented cabinet purge
- Over-pressurization safety relief system
- Electric gas preheater
- Dual, closed-loop temperature controls
- Redundant heating elements
- Pressure transducers
- Battery backup
- Back-up pneumatic reservoir
- Water cooled heat exchanger
- All metal enclosure with doors

### Optional Features

- Mass flowmeter with 4-20 mA output
- Internal auto bypass
- Separate control power
- UPS - uninterruptible power supply

### Customer Interface Connections

- Alarm relay - fail safe relay contacts allow remote alarm condition detection
- Remote contact shutdown - allows remote purifier shutdown

## SPECIFICATIONS

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- Mass flowmeter and totalizer 4-20 mA is available when MFM is specified
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### FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit [entegris.com](http://entegris.com) and select the [Contact Us](#) link to find the customer service center nearest you.

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