

# APU SERIES

## Arsenic and Heavy Metal Treatment Systems

Compliance with U.S. EPA regulations for arsenic and heavy metal contaminants will affect thousands of small public water systems in the U. S. For this reason, AdEdge Technologies, Inc. (AdEdge) has developed an Adsorption Package Unit (APU) series of treatment systems that provide a new level of quality and simplicity in the market place. These packaged and pre-engineered treatment systems are based on years of experience and specifically designed for removal of arsenic and other heavy metals. The APU systems can utilize one of several AdEdge adsorption media for reliable, simple, and cost-effective treatment. The systems can operate over a wide range of water quality, and do not require any regeneration chemicals, salts, or other additives. Only periodic backwashing is required and spent media, upon exhaustion, is easily disposed as non-hazardous waste. Treatment scenarios can be modified for varying water-quality parameters.

### Features and benefits include:

- ◆ completely pre-packaged, pre-designed modular system for ease of use;
- ◆ minimal site engineering for simple permitting and “plug and play” installation;
- ◆ high performance granular ferric oxide adsorption media for most heavy metals removal;
- ◆ up to 99 percent contaminant removal without chemical addition;
- ◆ Custom options for adsorbers available in composite or carbon steel;
- ◆ automatic controls with LCD display/readout or optional PLC and touch screen interface
- ◆ proven, reliable treatment without the hassle of chemicals or brine; and
- ◆ long product life for economical performance.

### System Applications

- ◆ Community Drinking Water Systems
- ◆ Non-Transient, Non-Community Systems
- ◆ Remediation and Industrial Treatment

- Small Utilities
- Subdivisions
- Schools
- Mobile Home Communities
- Parks and Recreation Facilities
- Retirement / Day care Facilities
- Commercial Facilities
- Groundwater Remediation Sites
- Industrial Treatment



## APU Typical System Parameters

System Parameters	APU-10	APU-15	APU-25	APU-50	APU-75	APU-100	APU-150
Peak design flow rate	10 gpm	15 gpm	25 gpm	50 gpm	75 gpm	100 gpm	150 gpm
Average flow rate	7-8 gpm	10-12 gpm	15-20 gpm	30-35 gpm	50-60 gpm	60-70 gpm	120-130 gpm
Typical Throughput	< 3,000 gpd	< 5,000 gpd	< 10,000 gpd	< 25,000 gpd	< 20,000 gpd	< 50,000 gpd	< 90,000 gpd
Contact Time	3.2-4 min (typ)	3.2-4 min (typ)	3.2-4 min (typ)	3.2-4 min (typ)	3.2-4 min (typ)	3.2-4 min (typ)	3.2-4 min (typ)
No of Vessels	2	2	2	2	2	2	2
Vessel size	14 in	16 in	30 in	30 in	36 in	42 in	48 in
Approx. Media volume	5.5 ft <sup>3</sup>	7.6 ft <sup>3</sup>	12.4 ft <sup>3</sup>	24.6 ft <sup>3</sup>	39.1 ft <sup>3</sup>	47.2ft <sup>3</sup>	69.9 ft <sup>3</sup>
Auto backwashing	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Backwash flow rate	9 (gpm/ft <sup>2</sup> )	9 (gpm/ft <sup>2</sup> )	9 (gpm/ft <sup>2</sup> )	9 (gpm/ft <sup>2</sup> )	9 (gpm/ft <sup>2</sup> )	9 (gpm/ft <sup>2</sup> )	9 (gpm/ft <sup>2</sup> )
Backwash frequency	1x / 45 days	1x / 45 days	1x / 45 days	1x / 45 days	1x / 45 days	1x / 45 days	1x / 45 days
Media life	Site Specific** (Typ 12-36 mo)	Site Specific** (Typ 12-36 mo)	Site Specific** (Typ 12-36 mo)	Site Specific** (Typ 12-36 mo)	Site Specific** (Typ 12-36 mo)	Site Specific** (Typ 12-36 mo)	Site Specific** (Typ 12-36 mo)
Total System Pressure drop (psi) @ ave flow	< 5	< 5	< 5	< 5	< 5	< 5	< 5

\*\* Based on site-specific water profile; contact AdEdge for a site specific estimate or proposal for your site  
 Not all configurations/design shown in Table above  
 Some configurations can be provided unassembled for sites with limited access

## About AdEdge Technologies

AdEdge Technologies, Inc. develops and supplies specialty adsorbents, packaged treatment systems, and products for contaminant removal from aqueous streams. Our products are used in a variety of industries and applications including drinking water, chemical, medical, pharmaceutical, environmental remediation, and wastewater. The company's management team has world-renowned reputations in adsorption technology, specifically in arsenic removal and process separations. AdEdge is one of the leading providers of adsorbent-based solutions and products utilized for arsenic and heavy metals removal from small municipal drinking water systems, private well applications, home water systems, and environmental remediation systems.

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