

# PSA Oxygen Concentrator Module

# ATF Series



The Advanced Technology Fractionators® (ATF) oxygen modules incorporate proven pressure swing adsorption (PSA) principles into a unique patented design, which allows these systems to be compact, efficient, rugged, and lower in cost. The ATF module offers unparalleled design flexibility and enables applications where on-site/on-board oxygen generation was previously impractical.

A patented single rotary distribution valve built into the ATF module is continuously rotated at low speed by a small motor. The valve is maintenance-free, self-cleaning, insensitive to contamination, and invulnerable to wear. It sequentially directs the flow of compressed air to a group of four sieve beds (adsorption), while at the same time another four beds are purged into the atmosphere through the valve (desorption). The remaining four of the twelve beds are interconnected through the valve to equalize pressure as the sieve beds sequentially transition between adsorption and desorption. The small amplitude pressure swings generated by the ATF's twelve sieve beds eliminate loud noise pulses, eliminate the need for a pressure regulator, and reduce compressor wear.

## Features

- Reliable oxygen production
- Environmentally tolerant design
- Constant pneumatic impedance
- Constant delivery pressure
- Easily integrated

## Typical Applications

### Medical

- Oxygen Therapy
- Veterinary Medicine

### Manufacturing

- Brazing/Soldering
- Glass Work/Blowing

### Environmental

- Ozone (Generator) Feed Gas
- Environmental Remediation

### Additional

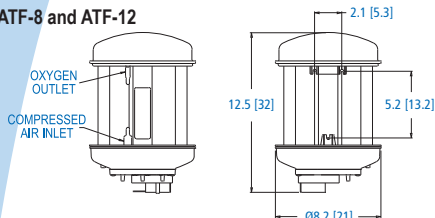
- Fish Farming
- Cosmetic

## Specifications

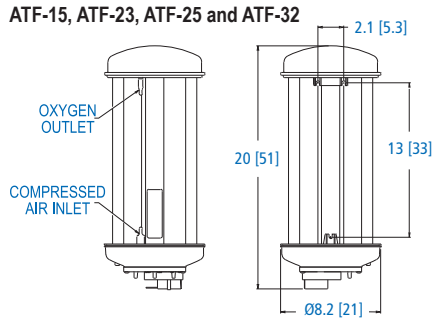
	ATF-8	ATF-12	ATF-15	ATF-23	ATF-25	ATF-32
<b>Performance Data</b>						
Product Flow <sup>1</sup>	8 SCFH (0.21 Nm <sup>3</sup> /hr or 3.8 LPM)	12 SCFH (0.31 Nm <sup>3</sup> /hr or 5.7 LPM)	15 SCFH (0.39 Nm <sup>3</sup> /hr or 7.1 LPM)	23 SCFH (0.60 Nm <sup>3</sup> /hr or 10.8 LPM)	25 SCFH (0.65 Nm <sup>3</sup> /hr or 12 LPM)	32 SCFH (0.84 Nm <sup>3</sup> /hr or 15 LPM)
Oxygen Delivery Pressure	9 psig (62 kPa or 0.62 barg)	9 psig (62 kPa or 0.62 barg)	7 psig (48 kPa or 0.48 barg)	7 psig (48 kPa or 0.48 barg)	14 psig (97 kPa or 0.97 barg)	14 psig (97 kPa or 0.97 barg)
Product Concentration	Up to 95%	Up to 95%	Up to 95%	Up to 95%	Up to 95%	Up to 95%
Product Dew Point	-100°F (-73°C)	-100°F (-73°C)	-100°F (-73°C)	-100°F (-73°C)	-100°F (-73°C)	-100°F (-73°C)
Dimensions (D x H) (nominal)	8 x 13 in (21 x 32 cm)	8 x 13 in (21 x 32 cm)	8 x 20 in (21 x 51 cm)	8 x 20 in (21 x 51 cm)	8 x 20 in (21 x 51 cm)	8 x 20 in (21 x 51 cm)
Weight	9.6 lb (4.4 kg)	9.8 lb (4.5 kg)	14.7 lb (6.7 kg)	14.7 lb (6.7 kg)	15 lb (6.8 kg)	15 lb (6.8 kg)
<b>Physical Connections</b>						
Compressed Air Inlet	½" ID tubing	½" ID tubing	½" ID tubing	½" ID tubing	½" ID tubing	½" ID tubing
Product Gas Outlet	¼" ID tubing	¼" ID tubing	¼" ID tubing	¼" ID tubing	¼" ID tubing	¼" ID tubing
<b>Ambient Operating Conditions</b>	Locate the oxygen concentrator system in a well-ventilated area that is protected from weather elements and remains between 40°F (4°C) and 130°F (54°C) inside room or operating enclosure; 0°F (-18°C) and 140°F (60°C) in storage					
<b>Input Air Requirements</b>						
Flow <sup>1</sup>	2.3 SCFM (3.9 Nm <sup>3</sup> /hr or 65 LPM)	3 SCFM (5.0 Nm <sup>3</sup> /hr or 85 LPM)	3.2 SCFM (5.4 Nm <sup>3</sup> /hr or 91 LPM)	4.2 SCFM (7.1 Nm <sup>3</sup> /hr or 120 LPM)	6.2 SCFM (10.5 Nm <sup>3</sup> /hr or 175 LPM)	6.2 SCFM (10.5 Nm <sup>3</sup> /hr or 175 LPM)
Pressure	25 psig (172 kPa or 1.72 barg)	25 psig (172 kPa or 1.72 barg)	18 psig (124 kPa or 1.24 barg)	22 psig (152 kPa or 1.52 barg)	35 psig (241 kPa or 2.41 barg)	35 psig (241 kPa or 2.41 barg)
<b>Control Power Requirements (Single Phase)</b>	120 V / 208 – 240 V ~ ±10%, 50/60 Hz, 0.025 A or 208 – 240 V ~ ±10%, 50 Hz, 0.025 A					
<b>Typical Power Consumption</b>	3 W	3 W	3 W	3 W	3 W	3 W
<b>Gear Motor</b>	7398/7383	7398	7371/7350	7371/7350	7350/7398	7371/7350
<b>Compressed Air Input Requirements</b>	Clean Air (oil-less). Maximum Temperature of 170°F (77°C). Performance rated at 120°F (49°C). Confirm to Class 5.6.1 per ISO 8573.1					
<b>Mounting</b>	Two integral mounting pads provided. Toe clamps (optional). Vertical mounting preferred. Must be isolated from compressor vibration.					
<b>Certifications and Approvals</b>	ISO 13485:2003					

<sup>1</sup> SCF (Standard cubic foot) gas measured at 1 atmosphere and 70°F / Nm<sup>3</sup> (Normal cubic meter) gas measured at 1 atmosphere and 0°C / LPM (Liters per minute) gas measured at 1 atmosphere and 21°C

**ATF-8 and ATF-12**

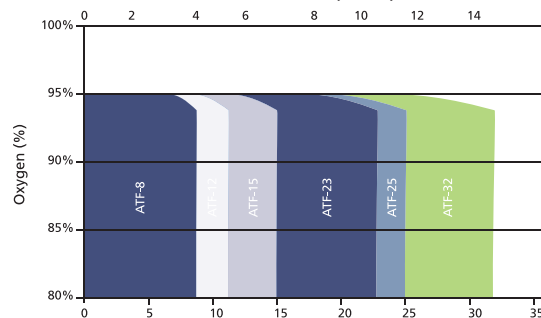


**ATF-15, ATF-23, ATF-25 and ATF-32**



Note: Dimensions are in inches (cm). All dimensions are nominal.

**Performance  
Flow Rate (SLPM)**



**Ordering Information**

Model	Part Number	Description	Compressor Part Number	Motor	Compressor Max. Pressure <sup>1</sup>	RPM	HP	Power Consumption	Net Weight
ATF-8	1265V	120 V / 208 - 240 V ~ ±10%, 50/60 Hz	7329	115 V, 60 Hz, 1Ø	30 psig (207 kPa or 2 barg)	1660	1/3	0.4 kW	13 lb (6 kg)
	7465V	208 - 240 V ~ ±10%, 50 Hz	7330	220 V, 50 Hz, 1Ø	30 psig (207 kPa or 2 barg)	1430	1/3	0.4 kW	17 lb (8 kg)
ATF-12	3586V	120 V / 208 - 240 V ~ ±10%, 50/60 Hz	1313	115 V, 60 Hz, 1Ø	30 psig (207 kPa or 2 barg)	1650	1/3	0.5 kW	16 lb (7 kg)
			1314	220 V, 50 Hz, 1Ø	30 psig (207 kPa or 2 barg)	1425	1/3	0.5 kW	14 lb (6 kg)
ATF-15	1242V	120 V / 208 - 240 V ~ ±10%, 50/60 Hz	1313	115 V, 60 Hz, 1Ø	30 psig (207 kPa or 2 barg)	1650	1/3	0.5 kW	16 lb (7 kg)
	1498V	208 - 240 V ~ ±10%, 50 Hz	1314	220 V, 50 Hz, 1Ø	30 psig (207 kPa or 2 barg)	1425	1/3	0.5 kW	14 lb (6 kg)
ATF-23	3161V	120 V / 208 - 240 V ~ ±10%, 60 Hz	7317	115 V, 60 Hz, 1Ø	30 psig (207 kPa or 2 barg)	1680	1/3	0.5 kW	15 lb (7 kg)
	3239V	208 - 240 V ~ ±10%, 50 Hz	3299	220 V, 50 Hz, 1Ø	30 psig (207 kPa or 2 barg)	1400	2/3	0.6 kW	15 lb (7 kg)
ATF-25 <sup>2</sup>	1280V	120 V / 208 - 240 V ~ ±10%, 50/60 Hz	1243	115 V, 60 Hz, 1Ø	45 psig (310 kPa or 3.1 barg)	1700	1	1 kW	39 lb (18 kg)
			7495	115 V, 60 Hz, 1Ø	36 psig (250 kPa or 2.5 barg)	1700	1.75	1.3 kW	40 lb (18 kg)
			7497	220 V, 60 Hz, 1Ø	36 psig (250 kPa or 2.5 barg)	1700	1.75	1.3 kW	40 lb (18 kg)
4140V	208 - 240 V ~ ±10%, 50 Hz	1244	220 V, 60/50 Hz, 1Ø	45 psig (310 kPa or 3.1 barg)	1700/1425	1	1 kW	39 lb (18 kg)	
		7396	220 V, 50 Hz, 1Ø	45 psig (310 kPa or 3.1 barg)	1400	1	1.1 kW	40 lb (18 kg)	
ATF-32	3328V	120 V / 208 - 240 V ~ ±10%, 60 Hz	1243	115 V, 60 Hz, 1Ø	45 psig (310 kPa or 3.1 barg)	1700	1	1 kW	39 lb (18 kg)
			7495	115 V, 60 Hz, 1Ø	36 psig (250 kPa or 2.5 barg)	1700	1.75	1.3 kW	40 lb (18 kg)
			7497	220 V, 60 Hz, 1Ø	36 psig (250 kPa or 2.5 barg)	1700	1.75	1.3 kW	40 lb (18 kg)
4104V	208 - 240 V ~ ±10%, 50 Hz	1244	220 V, 60/50 Hz, 1Ø	45 psig (310 kPa or 3.1 barg)	1700/1425	1	1 kW	39 lb (18 kg)	
		7396	220 V, 50 Hz, 1Ø	45 psig (310 kPa or 3.1 barg)	1400	1	1 kW	40 lb (18 kg)	
Accessories (contact factory)	1312 / 1317	Solenoid Valve, 110 V / Solenoid Valve, 220 V							
	1345 / 1368	Pressure Relief Valve, 50 psig (345 kPa) / Pressure Relief Valve, 35 psig (241 kPa)							
	9009	Economy Heat Exchanger							
	9015 / 9017	Heat Exchanger with Fan, 120 V, 60 Hz / Heat Exchanger with Fan, 220 V, 50/60 Hz							
	9114	Flowmeter, Dual-Scale 2 - 20 SCFH/1 - 10 LPM							
	9116 / 9124	Flowmeter 2 - 25 LPM / Flow Meter 5 - 50 SCFH							
	9125	Pressure Switch							
	9132	Filter, General Purpose Water Separator							
	9135	Continuous Oxygen Concentration Monitor							
	9150	Toe Clamps							
9155 / 9160	Compressed Air Hose ½" ID / Oxygen Product Hose ¼" ID								

Shipping Information	ATF-8	ATF-12	ATF-15	ATF-23	ATF-25	ATF-32
Class	92.5	92.5	92.5	92.5	92.5	92.5
Commodity Classification Number	8421.39.8040	8421.39.8040	8421.39.8040	8421.39.8040	8421.39.8040	8421.39.8040
Dimensions (W x D x H)	11 x 11 x 16 in (28 x 28 x 40 cm)	11 x 11 x 16 in (28 x 28 x 40 cm)	11 x 11 x 23 in (28 x 28 x 59 cm)	11 x 11 x 23 in (28 x 28 x 59 cm)	11 x 11 x 23 in (28 x 28 x 59 cm)	11 x 11 x 23 in (28 x 28 x 59 cm)
Gross Weight	11 lb (5 kg)	11 lb (5 kg)	17 lb (8 kg)	17 lb (8 kg)	17 lb (8 kg)	17 lb (8 kg)

**Warranty: 1 Year Parts and Factory Labor\***

\* An unprotected or inadequately ventilated environment, or improper control power may cause damage to the oxygen generator not covered under warranty.

<sup>1</sup>The maximum compressor pressure is a characteristic of the compressor and is higher than the air input pressure specification for the ATF modules.

<sup>2</sup>The ATF-25 and ATF-32 will achieve the specified oxygen flow and pressure when supplied with the specified air flow and pressure. Larger compressors are available to achieve slightly higher oxygen pressures. This technical data is presented as a basis for ATF and compressor selection only. Compressor performance is based upon nominal units tested with ATFs under lab conditions.

All performance ratings based on an ambient temperature up to 100°F (38°C), up to 1,000 feet elevation, and 80% relative humidity.



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