



# AF SERIES

## VARIABLE SPEED COMPRESSORS



ENERGY SAVING ROTARY SCREW COMPRESSORS.

# AF SERIES.

LEGENDARY RELIABILITY. Built Into Each Compressor.

## THE NEXT GENERATION

Engineers have pushed their colleagues through collaboration to create pyramids and columns that have stood the test of time. Since 1854, CURTIS has engineered the longest lasting, best-built line of industrial air compressors. Today, the FSCURTIS honors that heritage by incorporating Automatic Flow™ technology into our AF Series line of rotary screw air compressors .

## ENERGY SAVINGS WITH ADVANCED TECHNOLOGY

FSCURTIS AF Series Screw air compressors are manufactured to the latest ISO 9001:2000 standard. The AF Series uses industry leading Variable Speed Drive (VSD) technology to provide compressed air with the least amount of energy possible. The Automatic Flow™ (AF) compressors are dependable, energy efficient and will provide years of reliable service.

The AF Series compressors are designed, built and tested in the USA. FSCURTIS has built more than 150 years of American heritage into the AF product line. FSCURTIS AF compressors are known for their legendary durability and performance. The AF Series' features are some of the most advanced in the industry.

FSCURTIS is committed to extensive research and development. We promise to continue our uncompromising pursuit of excellence and to provide the highest level of customer service through our international network of factory-trained distributors.



## LOWER LIFE CYCLE COST (LCC)

- Energy savings over fixed speed compressor up to 40%
- Less wear and tear resulting in lower maintenance cost
- Optimal operating speed per real air demand for reduced service cost

## HIGHLY EFFICIENT

- Efficient air end technology with the latest rotor profile design
- Reduced losses through design and component selection
- Automatically matches compressor speed to your air system demand

AF-460



*Genuine. FSCURTIS.*

# AUTOMATIC FLOW.

## ENERGY SAVING VARIABLE SPEED COMPRESSORS.

### DO YOU KNOW YOUR ACTUAL AIR COMPRESSOR LIFE CYCLE COST?

Energy cost can be up to 85% of the compressors Life Cycle Costs (LCC). Industry in the United States spends, on average, 10% of their power consumption to generate compressed air. What do you spend? Are you interested in real cost savings with a variable speed versus fixed speed compressor?

The AF Series variable speed compressors can save up to 40% of the energy cost compared to traditional compressors. The total LCC savings over the compressor lifetime will be substantial.

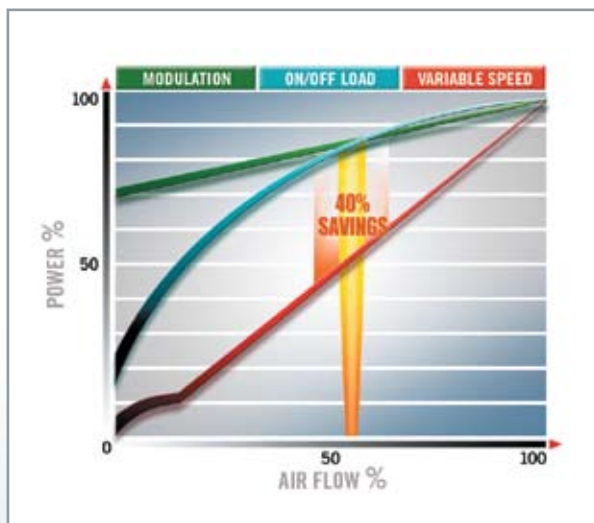


## THE RIGHT CHOICE.

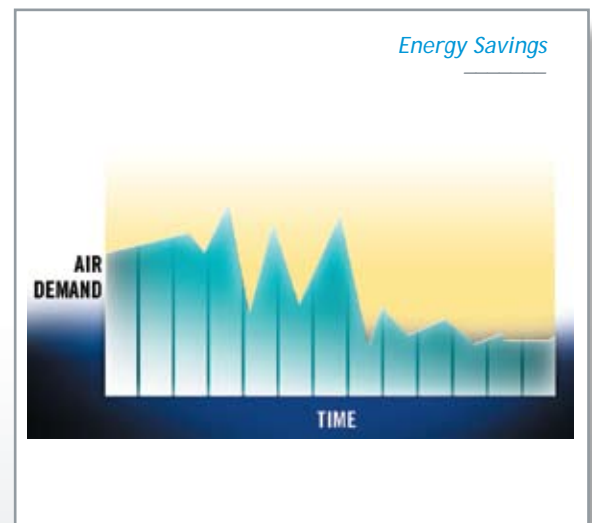
### FSCURTIS VARIABLE SPEED COMPRESSORS

A majority of compressors operate at considerably less than 100% capacity most of the time. Fixed speed compressors often need large receivers and air storage at higher than required pressure to compensate for demand fluctuations. This compensation results in higher energy costs, higher maintenance costs and reduced equipment life.

The FSCURTIS AF Series compressors adapt to air demand by automatically adjusting the compressor flow to real air demand — the FSCURTIS Automatic Flow™.



Varying Air  
Demand



# AF SERIES.

## FSCURTIS AF SERIES. COMPRESSOR BENEFITS IN DETAIL.

### LOW COST AND EASY MAINTENANCE

- Standard and high efficiency motors and other components, versus other brands of variable speed compressors with proprietary parts
- Open and uncluttered layout for easy access and fast service
- Service intervals adapt to actual operating conditions using FSCURTIS custom developed software

### HIGH EFFICIENCY

- Automatic Flow™ matches the compressor speed to your air demand, reducing power consumption up to 40%
- High efficiency motor and drive with a broad turn-down range minimizes energy consumption in all applications
- Precise pressure control and automatic stand-by mode provide additional savings

### LOWER LIFE CYCLE COSTS

- Stable and accurate operating pressure with no over-pressurization minimizes energy costs
- Soft start and stop features with reduced (average) compressor speed reduces compressor wear and tear and minimizes stress to power supply system
- Reduced wear and tear minimizes service and maintenance requirements
- Simple design with standard components provides best reliability, value and cost savings over the compressor Life Cycle

### HIGH RELIABILITY

- Low air end and motor speeds provide long and trouble free operational life
- Standard components are proven, reliable and require minimum service
- Standard EMC-filter and Line Reactor in the VFD (Variable Frequency Drive) lowers total investment cost and prevents harmful effects to your power supply and other equipment

### TOUCH SCREEN CONTROL

- Industry's best user-friendly interface with simple menu structure and touch screen control
- Real time operational data display for easy reading and operation
- Multiple user-friendly features for service advisories, fault alarms, history logs and status
- Expandable features for additional control, monitoring and customer benefits

AF-370



Contact Your Local Distributor About This Product  
[www.fscurtis.com](http://www.fscurtis.com)

800.925.5431

# ENERGY SAVING

## CALCULATE YOUR POTENTIAL SAVINGS. FSCURTIS Automatic Flow™ Compressors.

Studies have shown typical screw compressor load over time to be 50 - 75%.

Estimated average of full load capacity **62** %.

### MODULATING COMPRESSOR

**2050** hrs (x) **5** (x) **0.12** (x) **37** kW (x) **.90** % / **0.93** %  
 operating hrs/yr. yrs. of operation power cost / \$ / kWhr shaft power kW of full load motor efficiency  
 (table 1)

= \$ **44,042** (+) \$ **14,000** (+) \$ **4,500** (=) \$ **62,542**  
 energy cost investment maintenance total cost of ownership  
(5 x 900)

### FSCURTIS AF COMPRESSOR

**2050** hrs (x) **5** (x) **0.12** (x) **37** kW (x) **0.60** % / **0.93** %  
 operating hrs/yr. yrs of operation power cost / \$ / kWhr shaft power kW of full load motor efficiency  
 (table 2)

= \$ **29,361** (+) \$ **19,000** (+) \$ **4,000** (=) \$ **52,361**  
 energy cost investment maintenance total cost of ownership  
(5 x 800)

### SAVINGS

\$ **62,542** (-) \$ **52,361** (=) \$ **10,181**  
 Total Cost Total Cost Savings  
 (Modulating) (FSCURTIS AF)

AF-460

TABLE 1:

Power consumption for modulating compressor

Load	100	90	80	70	60	50	40
Power	100%	97%	94%	91%	88%	85%	82%

TABLE 2:

Power consumption for Automatic Flow™ compressor

Load	100	90	80	70	60	50	40
Power	100%	89%	78%	68%	57%	47%	37%

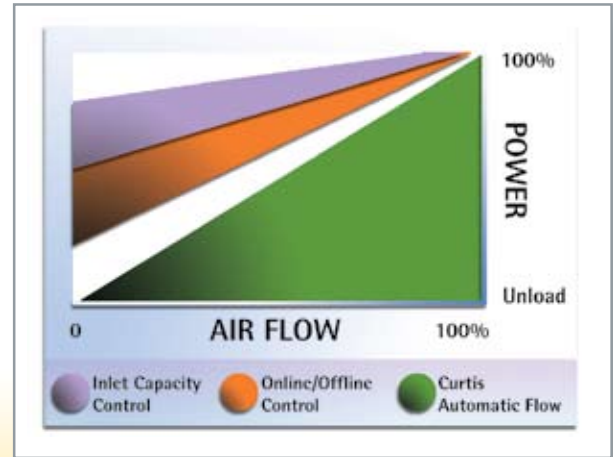


# GENUINE. FSCURTIS.

## ENERGY SAVINGS.

### REDUCED ENERGY CONSUMPTION

FSCURTIS AUTOMATIC FLOW compressors offer you reduced energy consumption when compressor is operating at less than 100% capacity. Any decrease in system air demand corresponds to a direct, linear percentage decrease in power consumption. Unnecessary energy usage from other forms of compressor control is eliminated resulting in major pay back potential on your investment. At zero air flow, adjustable "sleep mode" timer turns unit off for additional energy savings.



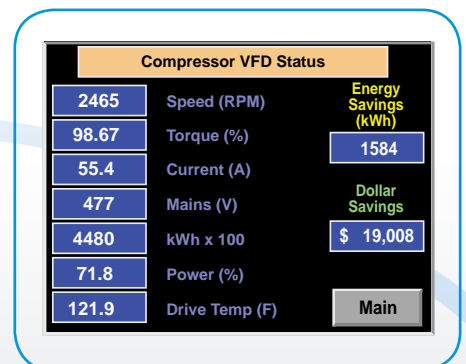
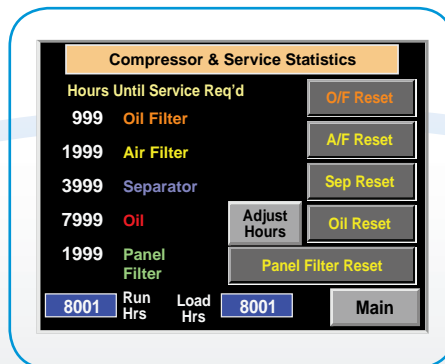
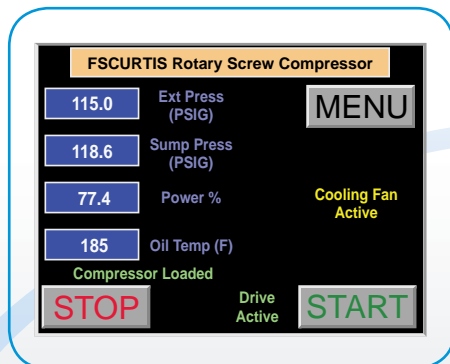
## PRECISE CONTROL...



### COLOR TOUCH SCREEN CONTROL

Available on AF-225 through AF-960 models. Advanced, simple to use high resolution color touch screen control monitors the parameters and working conditions of the compressor and allows for precise control of all operational functions. Screen displays include the following:

- Comprehensive operational data display
  - Motor speed
  - Motor torque
  - Drive temperature
  - Current
  - Voltage
  - kW/hour
  - Calculates percentage of power being used
  - Calculates accumulative energy savings
- System pressure
- Separator pressure
- Operating temperature
- Hour meters
- Service maintenance advisories
  - Air intake filter change
  - Oil filter change
  - Oil change
  - Separator element change
  - Panel filter change
- Fault shutdown alarms
  - High pressure
  - High differential pressure
  - High temperature
  - Motor overload
  - Motor phase loss
  - High or low voltage
  - Blocked air intake filter
  - Emergency stop
- Fault shutdown history display
  - Records fault description
  - Records time and date
  - Records time of corrective procedure
  - Displays corrective procedure taken
- Compressor status display
  - Compressor in running mode
  - Compressor in standby mode
  - Compressor in load or blow down mode
- Additional capabilities
  - Automatic restart after power interruption
  - Remote control (optional remote station required)
  - Lead lag control (optional timer required)



# INTEGRATED SYSTEMS.

## HIGH QUALITY COMPRESSED AIR.

**DEWPOINTS TO +38 °F**  
(Refrigerated Dryer)

**DEWPOINTS TO -100 °F**  
(Desiccant Dryer)



Refrigerated Air Dryers  
Dew Points to +38° F



Desiccant Air Dryers  
Dew Points to -100° F



Filters— Particulate  
and Coalescing



FSCURTIS Energy  
Management Systems



Oil Water  
Separators

RELY ON FSCURTIS TO HELP YOU GET THE AIR QUALITY AND SYSTEM PERFORMANCE YOU NEED.

Protect Your Investment and Maximize Your Energy Savings.

**DEMAND  
FSCURTIS®  
GENUINE PARTS.**



## SPECIFICATIONS AND PERFORMANCE

HP	Model	Air Delivery				Air Discharge	Dimensions	Weight	
		CFM @				NPT	L x W x H	Open	Enclosed
		100 PSI	125 PSI	150 PSI	175 PSI	Inches	Inches	Lbs.	Lbs.
25	AF108	30 - 108	25 - 104	22 - 92	20 - 80	1	60 x 44 x 43	1100	1250
30	AF140	40 - 140	35 - 125	30 - 118	25 - 97	1	60 x 44 x 43	1200	1350
50	AF225	49 - 225	47 - 212	40 - 186	36 - 172	1-1/4	72 x 48 x 50	1950	2150
50	AF250	92 - 250	90 - 222	88 - 195	85 - 171	1-1/2	72 x 48 x 50	2100	2300
60	AF280	78 - 280	90 - 275	88 - 236	85 - 212	1-1/2	98 x 48 x 63	2300	2700
75	AF370	93 - 370	90 - 329	88 - 305	85 - 277	2	114 x 54 x 60	2900	3340
100	AF460	191 - 460	187 - 454	88 - 371	85 - 340	2	114 x 54 x 60	3150	3600
125	AF600	200 - 633	195 - 570	192 - 516	189 - 440	2	114 x 66 x 72	5000	5600
150	AF760	199 - 760	195 - 712	192 - 591	188 - 546	2	114 x 66 x 72	5300	5900
200	AF960	300 - 960	280 - 860	230 - 770	210 - 680	2-1/2	150 x 80 x 84	6000	6700

## STANDARD FEATURES

- Automatic Flow™ variable frequency speed control
- Heavy duty intake filter
- High efficiency air end
- Low loss drive system
- High efficiency, inverter duty TEFC electric motors
- 115V control voltage
- Soft start feature
- NEMA 12 control panel
- Easy key pad control (AF108 - AF140)
- High resolution touch screen control (AF225 - AF960)
- Automatic restart
- Multi-stage oil separation system
- Heavy-duty oil filter with by-pass
- Oil level sight glass
- Side-by-side oil/air cooler
- Air cooled
- Rigid base with forklift slots



- Multi-level safety systems
- Pressure relief valve
- Emergency stop
- Factory fill synthetic oil
- 460v, 60Hz supply voltage
- Variable speed fan control

## OPTIONAL FEATURES

- Quiet Enclosure
- Water Cooled
- Alternative Voltages (200, 230, 575V, 60Hz with pre-transformer)



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