



# EG Premium Series Screw Air Compressors

Life source of industries

# ELGI

Always Better.

**UPTIME**<sup>TM</sup>  
ASSURANCE



CIN: L29120TZ1960PLC000351

125 - 200 HP / 90 - 160 kW  
Water Cooled Version

[www.elgi.com](http://www.elgi.com)

# ELGi

Always Better.

ELGi, established in 1960, designs and manufactures a wide range of air compressors. The company has gained its reputation for design and manufacture of screw compressors through strategic partnerships and continuous research and development. Over the years, it has emerged as a multi-product, multi-market enterprise providing total compressed air solutions in all segments. ELGi's design capabilities translated into a wide range of products ranging from oil-lubricated and oil-free rotary screw compressors, reciprocating compressors and centrifugal compressors. ELGi has its own manufacturing operations in India, Italy and USA with subsidiaries in Australia, Brazil, UAE and Indonesia. The company is fast expanding its global footprint attracting distributors and customers with its latest generation products.

Screw Compressor elements are manufactured in-house using state-of-the-art machining centres for rotor grinding and machining castings of various sizes. ELGi's own eta-V profile rotors ensure energy-efficient compressed air supply for all demanding applications. ELGi is one of the few companies capable of manufacturing wide range of airends and compressor packages in the world. ELGi's patent portfolio is a testament to the company's continuous research and innovation capability



**AIR UP.**



**UPTIME™**

comes standard on every EG Premium Series Compressor



**EG**

**PREMIUM  
SERIES**

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The "EG Premium" is the new generation compressor series which represents the reflection of the current market requirements on Energy efficiency, lesser maintenance and higher reliability. These compressors are designed and manufactured in compliance with the Global standards like UL, ASME, CE, GB and others and significantly reduce the operating costs and provide cost savings with quicker return on investment



Ease of Maintenance



Low cost of ownership



Compact, safe and silent

\* Warranty applicable only for Airend



High air quality

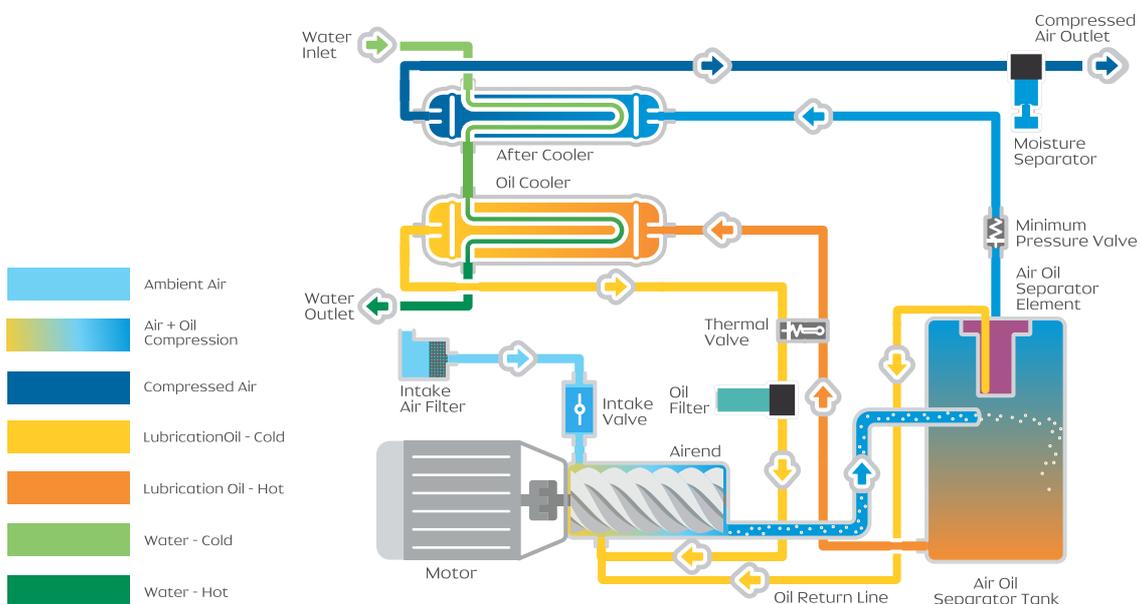


Energy efficient



High reliability

## EG Premium Series - Schematic Diagram



## EG<sup>↑</sup> Premium Series

### Advanced Neuron III Controller

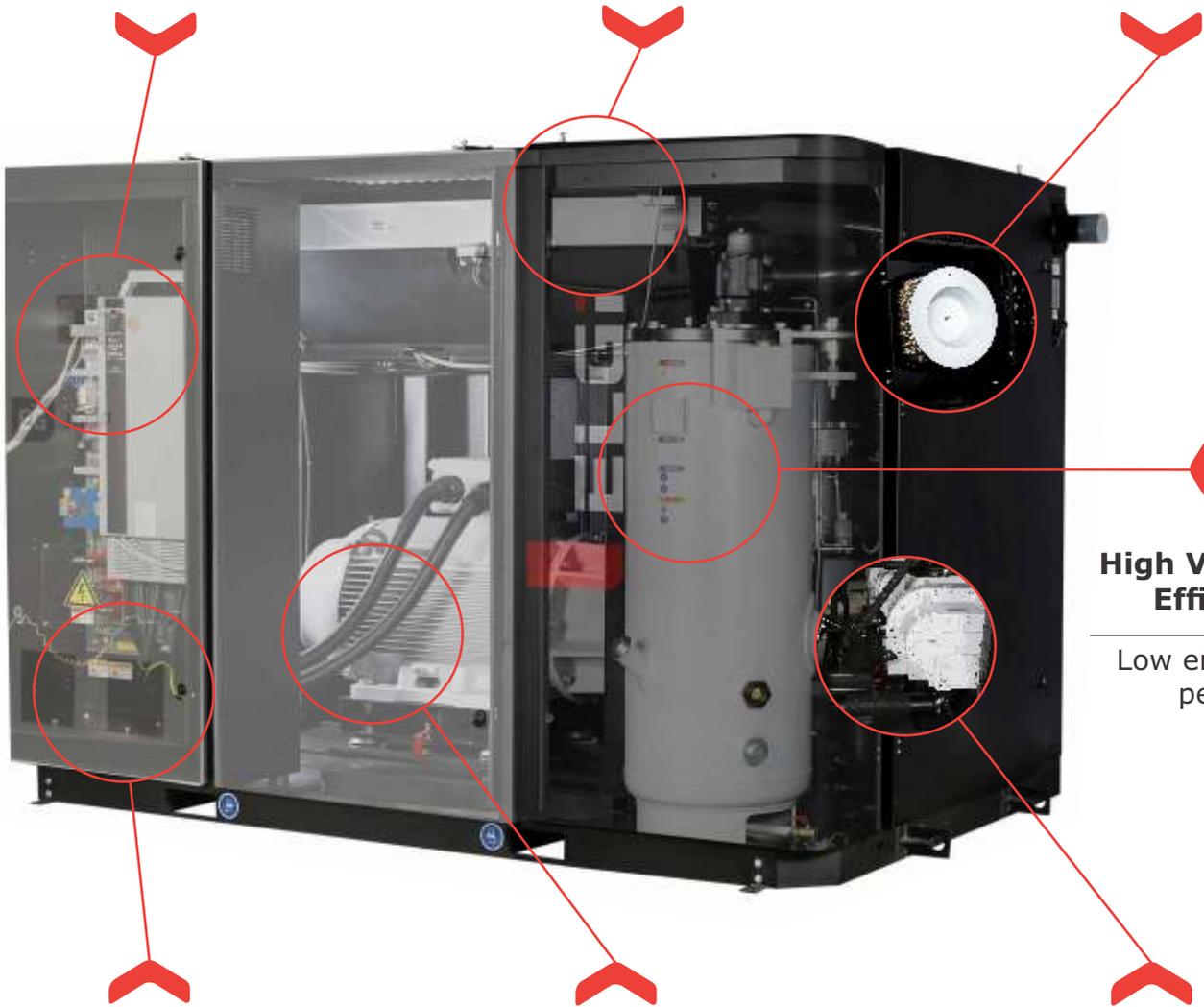
Remote management of compressor operations

### Robust Cooling System

Reduced air outlet temperature

### Three-Stage Air Filtration

Increased life of consumables



### High Volumetric Efficiency

Low energy cost per cfm

### Enclosure designed to Industrial standards

Robust, silent and aesthetic package

### NEMA Premium Efficiency

For maximum ambient temperature

### Superior Technology Airend

Precise rotor clearances for higher energy efficiency

# Eco-friendly energy efficient compressor



## Premium efficiency airend

ELGi's airends are equipped with in-house developed eta-V profile rotors, with 4/5 lobe combination, the rotors are designed to run at optimum speeds. This unique design reduces pressure losses and increased efficiencies.

- Precise rotor clearances for best-in-class energy efficiency
- Low operating speeds for longer life, low sound level with lesser maintenance
- Complies with applicable safety standards

## Higher efficiency motor

- Premium efficiency IE3 class motors are used as standard
- Heavy duty TEFC induction motor with IP55 protection for assured operation in dusty environments
- Motor selected for high ambient of 122°F / 50°C with power variants 460V in 60Hz
- Wide operating voltage- +/- 10%
- Regreasable ball bearings
- Rugged design to ensure higher life



## Efficient air inlet system

- Three stages of filtration of inlet air
- Heavy duty dry type air filter optimally designed for higher efficiency (99.9%)
- Reduced suction noise through baffle arrangement
- Air filter with visual condition indicator for ease of maintenance
- Automatic cleaning of air filters for every cycle for enhanced life

## In take valve system

The new generation intake valve comes with integrated blow down valve, solenoid switch and actuator for smooth operation

- Optimum size of the intake valve minimizes pressure drop and suction losses
- The suction modulation unit ensures effective control of inlet air flow and maximizes power savings
- Auto dual control operates on modulation mode from 100 – 60% in loading and in load/unload mode for loads below 60%
- An unique alternative method for energy savings without VFD





### Oil-less air (1ppm\*)

ELGi has applied unique OSBIC process (Oil Separation By Impact and Centrifugal action) which enables efficient separation of air and oil, with minimum pressure drop. The method enables separation of oil in three stages, delivering consistent oil-free air while increasing the life of separator element. Designed for international certifications

\* as per ISO Standard

### Efficient Cooling System

- Cooling system with large surface area for efficient cooling
- ERP compliant Fan motor with significantly lower power consumption
- Easy and quick access points, thus enables easy service and maintenance
- After cooler and Oil cooler isolated for enhancing cooling efficiency



### Moisture - free air

EG Series air compressor has a custom designed centrifugal type moisture separator with an automatic drain. This comes as a part of the package at no extra cost and removes over 99% of bulk water from the compressed air system, resulting in corrosion free, longer life of the end use equipments and less load on the dryer.

### Oil indicator

Display in Controller for indicating the change period of Air oil separator and Oil filter



# Eco-friendly energy efficient compressor

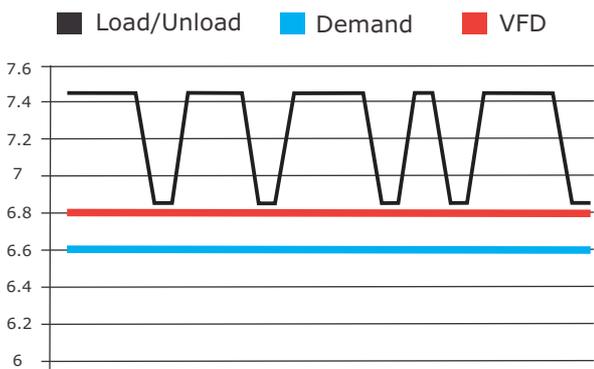


## Neuron III Controller

- Detects and prevents starting compressor from Phase loss and Phase reversal
- Remote Load / Unload and Start / Stop
- Run hour report for different speeds
- Provision for entering Latitude and Longitude to detect machine location
- Up to 99 fault reports with fault description and time stamp which captures exact time and operational parameters at the time of each failure

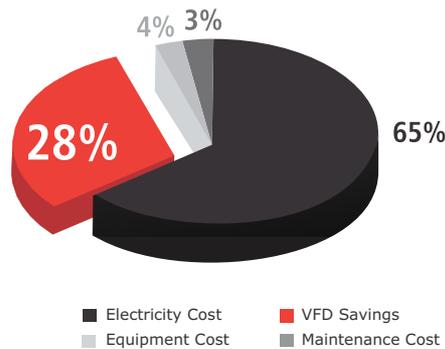
## Integrated VFD (Variable Frequency Drive)

- ELGi's VFD are specially configured to run efficiently with the ELGi's advanced eta-v profile airends
- VFD varies the compressor speed which in turn varies the air flow as per demand. This results in stabilization of pressure and saves energy
- VFD integrated machines operate at a very minimal pressure band of 0.2 bar when compared to a fixed speed machine which operates at a much higher pressure of 0.5 bar. This saves considerable energy
- All the above advantages combined, a VFD machine can typically offer a savings of between 20% - 30% depending on the demand variation available in the system



Typical Pressure pattern using a standard compressor and a compressor with VFD

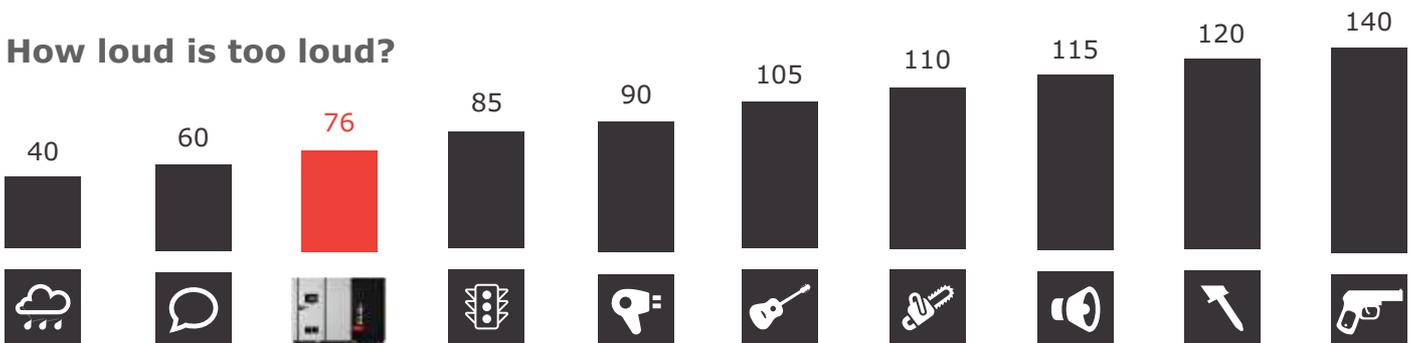
Typical compressor life cycle cost with VFD



## Low sound level, low vibration and compact

All these improvements are offered without compromising on the USP of low noise and vibration

### How loud is too loud?



# Technical Specification - 60 Hz

Model	Motor Power		Working Pressure		Free Air Delivery		Weight	Noise	Dimension(LxBxH)
	60 Hz	kW	HP	bar g	psi g	m <sup>3</sup> /min	cfm	(lbs)	dB(A)
EG 90P	90	125	7.0	100	17.41	615	6197	75	114.8 x 74.2 x 75.8
EG 90P	90	125	8.5	125	15.57	550	6197	75	114.8 x 74.2 x 75.8
EG 90P	90	125	10.0	150	13.39	476	6197	75	114.8 x 74.2 x 75.8
EG 90P	90	125	12.5	175	12.06	426	6197	75	114.8 x 74.2 x 75.8
EG 110P	110	150	7.0	100	21.55	761	6197	76	114.8 x 74.2 x 75.8
EG 110P	110	150	8.5	125	19.26	680	6197	76	114.8 x 74.2 x 75.8
EG 110P	110	150	10.0	150	16.85	595	6197	76	114.8 x 74.2 x 75.8
EG 110P	110	150	12.5	175	15.01	530	6197	76	114.8 x 74.2 x 75.8
EG 160P	160	200	7.0	100	29.76	1051	8936	76	114.8 x 74.2 x 75.8
EG 160P	160	200	8.5	125	26.05	920	8936	76	114.8 x 74.2 x 75.8
EG 160P	160	200	10.0	150	24.30	858	8936	76	114.8 x 74.2 x 75.8
EG 160P	160	200	12.5	175	20.39	720	8936	76	114.8 x 74.2 x 75.8

## Integrated VFD (Variable Frequency Drive) models

EG 90VP	90	125	7~10	100~150	17.33	612	6307	75	114.8 x 74.2 x 75.8
EG 110VP	110	150	7~10	100~150	21.55	761	6307	76	114.8 x 74.2 x 75.8
EG 160VP	160	200	7~10	100~150	29.76	1051	9046	76	114.8 x 74.2 x 75.8

### Note:

- Free Air Delivery(FAD) measured in accordance to ISO 1217 : 2009 Annex.C Ed.4
- FAD is declared at the working pressure
- All models are available in air-cooled and water-cooled variants
- Unload pressure (or) max pressure with suction modulation is 1 bar above the working pressure
- FAD indicated is for the full package measured at the outlet after moisture separator
- Sound level measured as per ISO 2151, Second Edition at 1m distance in field conditions, +/-3dB(A)
- Due to continuous improvements, the specifications are subject to change without prior notice

## ELGi Airmate Accessories



### Downstream filter

- Capacity: 35-3200 cfm
- Working pressure : 100-190psig (7-13 bar g)
- Filtration Range: 1-0.003 microns



### Drain valves

Timer controller & zero loss

- Capacity: 500 - 2000 cfm
- Working pressure: 100-190 psig (7-13 bar g)



### Refrigeration air dryer

- Flow range: 10~2000 cfm
- Working pressure: 100-870 psi (7-60 bar g)
- Filtration range: +3°C. PDP



### Oil water separator

- Capacity: 70 - 1060 cfm
- Max. Oil adsorption capacity: 20 Lts
- Media: Condensate
- Separation Efficiency: <10ppm



### Air receiver

- Capacity: 250 - 10000 ltrs.
  - Working pressure: 100-190 psi g (7-13 bar g)
- code of construction: ASME sec. VIII Div.I or IS 2825



### Heat recovery system

- Models: 11 - 250 kW
- Heat Capacity: 10.5 - 225 kW

# ELGi

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