

## EG Series Screw Air Compressors

Life source of industries









## **A Tradition of Reliability**

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.



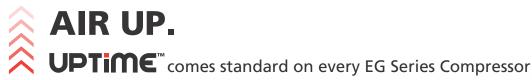
## **Robust Infrastructure**

ELGi has modern manufacturing facilities equipped with advanced high precision grinding machines, turning centres and CNC horizontal and vertical machining centres. Screw airends are manufactured with the latest rotor grinding technology, coupled with measurement technology to maintain precise manufacturing tolerances. ELGi's manufacturing plants are both ISO and EOHS certified. The products are manufactured under controlled environment to ensure that its quality continues to meet the highest standards.



## **Innovative Technology**

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



**UPTIME Design** 

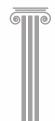
### \_\_\_

This speaks to the engineering and design of our products. Our R&D is dedicated to designing machines that run cooler, cleaner and longer... that are easy to service... with longer service intervals.



#### **UPTIME Components**

For so many of our customers, seeing is believing. They know a quality-built machine when they see it. That's why every part on a ELGi compressor is a quality part. From our proprietary air ends, to our use of leak-free hoses and piping.



#### **UPTIME Assurance**

Here is where we back our pledge, Our industry leading warranties, parts availability and call centers staffed by experts assure peace-ofmind to our customers.

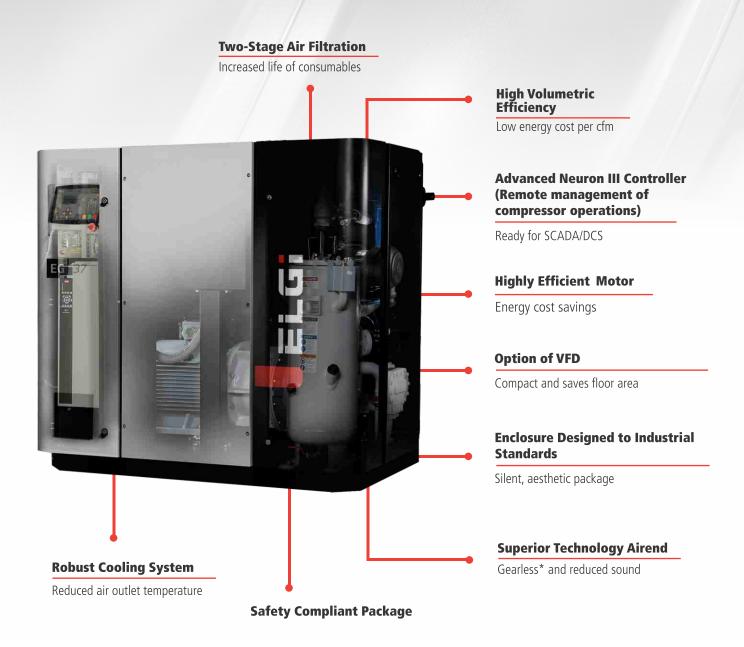


**High operator safety** 

**Eco-friendly** 



The EG Series compressors represent a giant leap in design and performance with each component designed for reliability and ease of maintenance. The compressor is manufactured in compliance with applicable international standards (UL, ASME, CE and others) and designed as per the international quality standards. These new generation compressors significantly reduce operating costs and provide cost savings with fast return on investment.



# EG Series - The Technology Edge



## **EG** Series

The Eco-friendly Energy-efficient compressors







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. The rotors ensure energy-efficient compressed air supply for all demanding applications.

- Precise rotor clearances for best-in-class energy efficiency
- Low operating speeds for long life, low maintenance and low sound level
- Complies with applicable safety standard





The new generation intake valve with integrated blow down unit, solenoid controls and actuators is designed for low losses. Intake valve optimally controls the compressor capacity during startup reducing the no-load power. This optimal capacity control results in direct savings on power consumption





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

\* as per ISO Standards





Depending on the humidity level of inlet air, bulk water remains in compressed air at varying levels and causes corrosion of piping, end tools, machinery and valves. 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, resulting in corrosion free, longer life of end use equipments and less load on the dryer





The cooling system with fans and larger cooling surface area enhances the cooling of hot air. The fan motor uses significantly low power. The integrated fanmotor assembly maintains low temperature there by increasing the life of motor. Smart cooling system design enables easy maintenance and ducting. More over, the complete system is insulated internally from other zones





EG series compressors are designed to perform at extreme temperatures - from cold to hot and from dry to extremely humid conditions







## Performance Control System

- Built-in Dryer Dew Point integration
- VFD Parameter (Power, HMR, Frequency, Ampere, Voltage)
- Read out and closed loop control
- Selectable AO (Pressure/Temperature/Dew Point) for DCS integration
- Controlled drain system



### Reports

- Cumulative Report (Run hours, load hours, unload hours, stop hours, fault hours and remaining AFCT, OFCT, OSCT, OCT and RGT)
- Detail Report Previous 15 days (Load hours, unload hours, stop hours, fault hours, and number of times machine stopped due to standby)
- Fault Report (Previous 99 faults in chronological order with real time stamping and type of fault)



## Remote Monitoring

- DCS (MODBUS RTU/RS 485): controller is enabled to synchronize with distributed control system - control of compressor from control panel of customer
- SCADA: compressor control through PC with remote monitoring by supervisory control and data acquisition process



## Safety and Protection

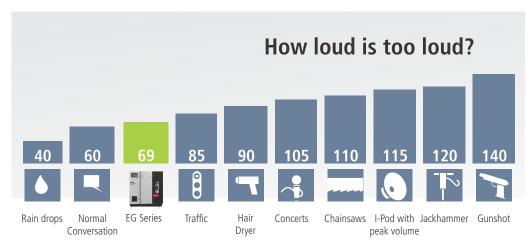
Global Series compressors are designed and perfected to ensure highest level of safety for

- Pressure regulating valve
- High pressure
- High temperature
- Pressure relief valve
- Phase order and single phase

## Compressor Near Point of Use

Compressors can be placed anywhere in assembly area without any special foundation

- Low Sound
- Low Vibration
- Compact



### **ELGi Airmate Accessories**

#### **Airmate Particulate Filter**

Air Flow: 35 - 3,200 cfm Working Pressure: 100 - 190 psi

(7 - 13 bar)

Filtration Range: 1 - 0.003 microns



#### Refrigeration air dryer

Capacity: 10 - 2000 cfm Working pressure: 100 - 870 psi

(7 - 60 bar)

Filtration range: +3°C. PDP



#### **Airmate Air Receiver**

Capacity: 250 - 10000 ltrs Working Pressure: 100 - 190 psi

(7 - 13 bar)

Code of Construction: ASME sec.

VIII Div.I or IS 2825



#### **Drain Valves**

Timer controlled and zero loss Capacity: 50 to 2000 cfm Working Pressure: 100 - 190 psi (7 - 13 bar)



#### Cooler Pre-filter Available for all the models as an optional accessory



### **After Sales Solutions**

A wide range of After Sales products and services is designed to add maximum value for our customers. Our fast serviceability ensures optimum availability and reliability of the compressors with the lowest possible operating costs

### **Genuine Spares and Service**

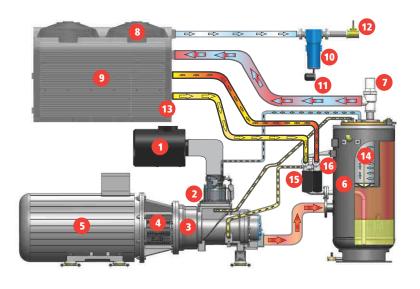
ELGi Genuine Spares helps in avoiding unexpected compressor failures and the risk of consequential damage to other vital compressor components. ELGi spares are designed, manufactured and checked for quality to meet the standards of a new compressor. The spares undergo continuous improvement to provide best results and are available through the vast network of ELGi dealers in India and International markets

## **Genuine Spares**

For enhancing performance and productivity



## Air/Oil Flow Diagram



- 1. Air Intake Filter
- 2. Suction Control Valve
- 3. Airend
- 4. Drive Coupling
- 5. Electric Motor
- 6. Air-Oil Separator Tank
- 7. Minimum Pressure Valve
- 8. Cooling Fan
- 9. After Cooler
- 10. Moisture Separator
- 11. Automatic Drain
- 12. Outlet Valve
- 13. Oil Cooler
- 14. Air-Oil Separator
- 15. Oil Filter (spin-on)
- 16. Thermal Valve Unit



**COOLED AIR** 



**HOT AIR** 



**COOLED OIL** 



**HOT OIL** 



HOT AIR/OIL MIXTURE

## **Energy Saving - The CONSERVE Way**

## In-Built ELGi CONSERVE Variable Frequency Drives (VFD)

Matches compressor output with demand by varying motor speed. The power consumption reduces in line with the reduction in demand. This Helps in eliminating the frequent load-unload cycle and also the wasted power from the energy bill.

A fixed speed compressor operates on a load unload band of at least 10 psi around the working pressure whereas with ELGi VFD, compressor can be operated within a band of 2 psi. Since the compressor is not operated under higher than working pressure requirements, there is substantial energy saving. For every 2 psi reduction in operating pressure, there is 1% power saving.

In a fixed speed compressor with Star-Delta starter, starting current is as high as three times the full load current (FLC). With ELGi VFD starting, starting current is less than the FLC. This helps to avoid using heavy rated components like fuses, MCCB, cable size, generator rating, isolators etc.

For compressed air systems with fluctuating demand pattern, giving a fast return on investment.



### **Advantages:**

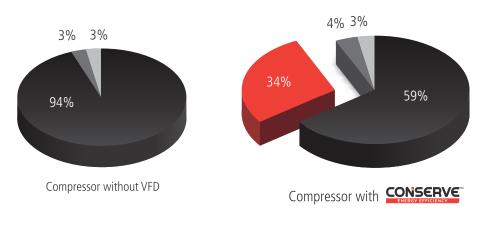
#### **Electrical:**

- Low starting current
- High efficiency
- Improved power factor
- Reduced maximum demand

#### Mechanical:

- Minimum maintenance
- Smooth start
- Smooth control

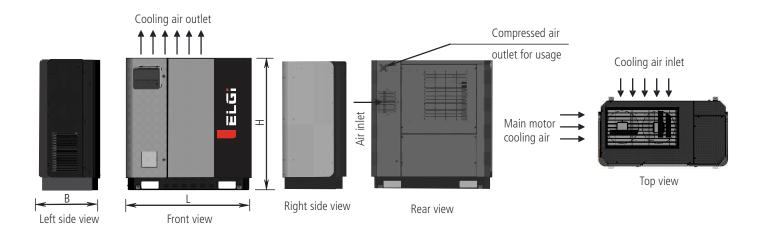
#### 10 Year Life-Cycle Cost



Electricity CostEquipment Cost

VFD SavingMaintenance Cost

## **Dimensional Data**



## **Technical Specification**

Model	Motor Power		Working Pressure		Maximum Pressure		Free Air Delivery		Weight	Noise Level
60 Hz	kW	НР	bar g	psi g	bar g	psi g	m³/min	cfm	(Kg)	dB(A)
			Length :	1425mm	Breadth:	720mm H	eight : 1470r	nm		
EG 11	11	15	6.9	100	7.4	107	2.01	71	590	69
EG 11	11	15	8.6	125	9.1	132	1.81	64	590	69
EG 11	11	15	10.3	150	10.8	157	1.61	57	590	69
EG 11	11	15	12.1	175	12.6	182	1.39	49	590	69
EG 15	15	20	6.9	100	7.4	107	2.61	92	610	69
EG 15	15	20	8.6	125	9.1	132	2.41	85	610	69
EG 15	15	20	10.3	150	10.8	157	2.21	78	610	69
EG 15	15	20	12.1	175	12.6	182	1.95	69	610	69
EG 18	18	25	6.9	100	7.4	107	3.28	116	680	69
EG 18	18	25	8.6	125	9.1	132	3.03	107	680	69
EG 18	18	25	10.3	150	10.8	157	2.58	91	680	69
EG 18	18	25	12.1	175	12.6	182	2.27	80	680	69
EG 22	22	30	6.9	100	7.4	107	3.96	140	690	69
EG 22	22	30	8.6	125	9.1	132	3.74	132	690	69
EG 22	22	30	10.3	150	10.8	157	3.17	112	690	69
EG 22	22	30	12.1	175	12.6	182	2.69	95	690	69
			Lenath:	1705mm	Breadth:	1111mm H	  eight : 1570	mm	1	
EG 30	30	40	6.9	100	7.4	107	5.75	203	990	68
EG 30	30	40	8.6	125	9.1	132	5.13	181	990	68
EG 30	30	40	10.3	150	10.8	157	4.30	152	990	68
EG 30	30	40	12.1	175	12.6	182	3.85	136	990	68
EG 37	37	50	6.9	100	7.4	107	6.99	247	1110	69
EG 37	37	50	8.6	125	9.1	132	6.06	214	1110	69
EG 37	37	50	10.3	150	10.8	157	5.44	192	1110	69
EG 37	37	50	12.1	175	12.6	182	4.84	171	1110	69
EG 45	45	60	6.9	100	7.4	107	8.49	300	1140	68
EG 45	45	60	8.6	125	9.1	132	7.53	266	1140	68
EG 45	45	60	10.3	150	10.8	157	6.26	221	1140	68
EG 45	45	60	12.1	175	12.6	182	5.58	197	1140	68
		1	Length:	1961mm	Breadth:	1265mm H	eight : 1775	mm	'	'
EG 55	55	75	6.9	100	7.9	115	10.62	375	1750	69
EG 55	55	75	8.6	125	9.7	140	9.83	347	1750	69
EG 55	55	75	10.3	150	11.4	165	8.01	283	1750	69
EG 55	55	75	12.1	175	13.1	190	7.42	262	1750	69
	1	I	Length:	2063mm l	Breadth:	1269mm H	eight : 1969	mm	1	I
EG 75	75	100	6.9	100	7.9	115	14.95	528	2020	69
EG 75	75	100	8.6	125	9.7	140	12.83	453	2020	69
EG 75	75	100	10.3	150	11.4	165	11.75	415	2020	69
EG 75	75	100	12.1	175	13.1	190	11.04	390	2020	69

Free Air Delivery(FAD) is tested as per ISO 1217: 2009 Annexure C Edition: 4 All standard models are air-cooled

Sound level measures 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

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## **Technical Specification - VFD Model**

Model	Motor Power		Working Pressure		Maximum Pressure		Free Air Delivery		Weight	Noise Level
60 Hz	kW	НР	bar g	psi g	bar g	psi g	m³/min	cfm	(Kg)	dB(A)
			Leng	th : 142!	5mm Bre	adth : 720	mm Height : 147	'0mm		
EG 11	11	15	6.9	100	7.4	107	0.76 ~ 2.01	27 ~ 71	640	69
EG 11	11	15	8.6	125	9.1	132	0.76 ~ 1.84	27 ~ 65	640	69
EG 11	11	15	10.3	150	10.8	157	0.76 ~ 1.61	27 ~ 57	640	69
EG 11	11	15	12.1	175	12.6	182	0.65 ~ 1.39	23 ~ 49	640	69
EG 15	15	20	6.9	100	7.4	107	1.05 ~ 2.61	37 ~ 92	690	69
EG 15	15	20	8.6	125	9.1	132	1.02 ~ 2.44	36 ~ 86	690	69
EG 15	15	20	10.3	150	10.8	157	1.02 ~ 2.21	36 ~ 78	690	69
EG 15	15	20	12.1	175	12.6	182	0.91 ~ 1.95	32 ~ 69	690	69
EG 18	18	25	6.9	100	7.4	107	1.56 ~ 3.28	55 ~ 116	710	69
EG 18	18	25	8.6	125	9.1	132	1.42 ~ 3.03	50 ~ 107	710	69
EG 18	18	25	10.3	150	10.8	157	1.19 ~ 2.58	42 ~ 91	710	69
EG 18	18	25	12.1	175	12.6	182	1.02 ~ 2.27	36 ~ 80	710	69
EG 22	22	30	6.9	100	7.4	107	1.84 ~ 3.96	65 ~ 140	716	69
EG 22	22	30	8.6	125	9.1	132	1.73 ~ 3.74	61 ~ 132	716	69
EG 22	22	30	10.3	150	10.8	157	1.50 ~ 3.17	53 ~ 112	716	69
EG 22	22	30	12.1	175	12.6	182	1.19 ~ 2.69	42 ~ 95	716	69
			Lenat	h · 1705	mm Brea	adth · 111	1mm Height : 15	70mm		
FC 20	20	40	6.9	100	7.4	107	2.12 ~ 5.75	75 ~ 203	1040	6
EG 30	30	40 40	8.6	125	9.1	132	2.12 ~ 5.73	73 ~ 203 73 ~ 181	1040	6
EG 30	30		10.3	150	10.8	157	2.07 ~ 3.13	73 ~ 161 72 ~ 152	1040	6
EG 30	30	40	12.1	175	12.6	182	2.04 ~ 4.30 1.84 ~ 3.85	65 ~ 136	1040	6
EG 30	30	40 50	6.9	100	7.4	107	1.64 ~ 3.85 2.63 ~ 6.99	93 ~ 247	1160	6
EG 37	37		8.6	125	9.1	132	2.65 ~ 6.99 2.61 ~ 6.06		1160	6
EG 37	37	50	10.3	150	10.8	157		92 ~ 214		6
EG 37	37	50	12.1	175	12.6	182	2.58 ~ 5.44	91 ~ 192	1160	6
EG 37	37	50	6.9	100	7.4	107	2.29 ~ 4.84	81 ~ 171	1160	6
EG 45	45	60	8.6	125	9.1	132	3.14 ~ 8.50 3.11 ~ 7.53	111 ~ 300 110 ~ 266	1190 1190	6
EG 45 EG 45	45 45	60 60	10.3	150	10.8	157	2.97 ~ 6.26	10 ~ 200	1190	6
EG 45	45	60	12.1	175	12.6	182	2.63 ~ 5.58	93 ~ 197	1190	6
EU 43	45	00					5mm Height : 177		1130	0
EG 55	55	75	6.9	100	7.9	115	3.96 ~ 10.62	140 ~ 375	1820	6
EG 55	55	75	8.6	125	9.7	140	3.94 ~ 9.83	139 ~ 347	1820	6
EG 55	55	75	10.3	150	11.4	165	3.62 ~ 8.01	128 ~ 283	1820	6
EG 55	55	75	12.1	175	13.1	190	3.57 ~ 7.59	126 ~ 268	1820	6
		_					9mm Height : 196		. 320	
EG 75	75	100	6.9	100	7.9	115	6.14 ~ 14.95	217 ~ 528	2150	6
EG 75	75 75	100	8.6	125	9.7	140	6.12 ~ 12.83	216 ~ 453	2150	6
EG 75	75	100	10.3	150	11.4	165	5.38 ~ 11.75	190 ~ 415	2150	6
[(1/)	/ 3	100	10.5	130	11.4	100	J.J0 ~ 11./J	130 ~ 413	2130	0

#### Note:

Free Air Delivery (FAD) is tested as per ISO 1217: 2009 Annexure E Edition: 4 All standard models are air-cooled

Sound level measures as per ISO 2151, Second Edition at 1m distance in field conditions, +/- 3dB(A)

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### Compressed air solutions for all sustainable air needs



**Oil-Free Series Screw** 90 - 450 kW / 480 - 2515 cfm



**EG Series Rotary Screw** 11 - 250 kW / 47 - 1612 cfm



**EN Series Rotary Screw** 2.2 - 75 kW / 8.0 - 469 cfm



Electric Portable (Trolley) 22 - 75 kW / 131 - 490 cfm



**Diesel portable (Trolley)** 185 - 1100 cfm / 100 - 300 psi



**Diesel Portable (Skid)** 475 - 1500 cfm / 150 - 400 psi



**Oil-free Recip** 1.0 - 75 HP / 1.8 - 300 cfm



Oil-lubricated Recip 1.0 - 40 HP / 2.0 - 128 cfm

#### **OVERSEAS OFFICES:**

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