

# EN Series Screw Air Compressors

**Essentials Encapsulated** 









# **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.

# **EN Series**

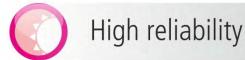
compact, silent and efficient

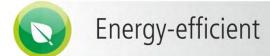


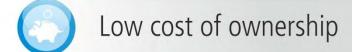
ELGi's EN series screw compressors are designed to encapsulate all functional components and compressor within a common housing. With its small footprint, high reliability and low maintenance requirements, the compressors are ideal for all industrial applications where size, efficiency and cost matter.

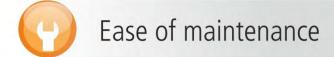


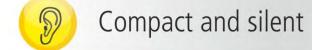












## **Encapsulated airend\***

The EN series compressors are fitted with ELGi's unique assembly which encapsulates all major functional systems such as intake system, compression system and separation system within a common frame

- Energy efficient
- · Minimal pressure drop across the system
- Compact
- Silent







# Efficient air-oil separation with (<3ppm)

The air-oil separation by impact and deceleration action involves three stages:

**Stage 1:** Impact of air-oil mixture on the tank circumferential area

**Stage 2:** Deceleration action of air-oil mixture to remove the oil particles

**Stage 3:** Air with minor traces of oil enters the spin on separator for purification

### Ease of maintenance

- Single service door access to routine maintenance points
- Spin-on oil filter and separator elements for fast and easy routine service





### **Reliable Neuron Controller**

The Neuron XT controller has been custom designed and engineered as an efficient control solution for encapsulated series. The system allows you to monitor and control overall performance with easy-to-use service indications, malfunction alarms and safety shutdowns. The controller is built-in with 'service protect' modules. It also includes a service and operational log feature to provide real-time feedback and increase system productivity



- Designed for wide range of temperatures upto 50°C
- Integration to energy management system
- MODBUS communications for DCS control through RS485 port
- · In-built phase loss & phase reversal protection
- · Remote start / stop facility

# **High efficiency motor**

- Heavy duty TEFC / S1 / IP55 motor suited for ambient temperature up to  $50^{\circ}\text{C}$
- Built-in safety systems





# **Energy Saving**

### In-Built ELGi 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 there by providing savings in energy.

\* Available in select models only



# Low cost of ownership



### Design

- Space saving design
- Powered by ELGi's energy-efficient eta-V rotor profiles
- Zero leakage due to integration of components/connections
- Fewer parts and connections require only minimum maintenance

# **Operational**

### Longer life of consumables

- Efficient air filtration system where air enters through prefiltered enclosure. Cleaner suction air keeps the internal components of the compressor clean and maintains optimum cooling efficiency
- Low oil-fill

### Robust cooling system in high ambient temperature

- Air cooling with separate hot and cold zones
- High efficiency coolers and cooling fans ensure low operating temperature
- Improved cooling ensures longer life of compressor



After cooler is standard in all models



### **Technical Specification (50Hz)**

Model	Motor Power		Working Pressure		Max. Pressure		Free Air Delivery		Weight*	Noise	Tank**
50Hz	kW	HP	bar g	psi g	bar g	psi g	m³/min	cfm	Kg	dB(A)	Ltrs.
	20.0		Ler	ngth:615mm	Breadth:71	5mm Heigl	ht: 845mm				
EN 2	2.2	3.0	7.0	102	7.2	104	0.32	11.2	133	61	220/270
EN 2	2.2	3.0	9.5	138	9.7	141	0.25	8.7	133	61	220/270
EN 3	3.0	4.0	7.0	102	7.2	104	0.43	15.3	133	61	220/270
EN 3	3.0	4.0	9.5	138	9.7	141	0.36	12.7	133	61	220/27
EN 3	3.0	4.0	12.5	181	12.7	184	0.25	9.0	133	61	220/27
EN 4	4.0	5.0	7.0	102	7.2	104	0.54	19.0	143	64	220/27
EN 4	4.0	5.0	9.5	138	9.7	141	0.48	16.9	143	64	220/27
EN 4	4.0	5.0	12.5	181	12.7	184	0.40	14.2	143	64	220/27
EN 5	5.5	7.5	7.0	102	7.2	104	0.74	26.0	150	64	220/27
EN 5	5.5	7.5	9.5	138	9.7	141	0.64	22.4	150	64	220/27
EN 5	5.5	7.5	12.5	181	12.7	184	0.53	18.6	150	64	220/27
EN 3	5.5	7.5						10.0	150	04	220121
400.0		7.5			Breadth:80			20.5			070/50
EN 5x	5.5	7.5	7.0	102	7.2	104	0.84	29.5	235	66	270/50
EN 5x	5.5	7.5	9.5	138	9.7	141	0.68	24.0	235	66	270/50
EN 5x	5.5	7.5	12.5	181	12.7	184	0.54	19.2	235	66	270/50
EN 7	7.5	10.0	7.0	102	7.2	104	1.13	40.0	260	66	270/50
EN 7	7.5	10.0	9.5	138	9.7	141	0.93	33.0	260	66	270/50
EN 7	7.5	10.0	12.5	181	12.7	184	0.76	27.0	260	66	270/50
EN 11	11.0	15.0	7.0	102	7.2	104	1.76	62.0	280	71	270/50
EN 11	11.0	15.0	9.5	138	9.7	141	1.47	52.0	280	71	270/50
EN 11	11.0	15.0	12.5	181	12.7	184	1.23	43.6	280	71	270/50
EN 15	15.0	20.0	7.0	102	7.2	104	2.04	72.0	310	71	270/50
EN 15	15.0	20.0	9.5	138	9.7	141	1.78	63.0	310	71	270/50
EN 15	15.0	20.0	12.5	181	12.7	184	1.57	55.5	310	71	270/50
							ght: 1450mm	1			
EN 15x	15.0	20.0	7.0	102	7.2	104	2.48	88	520	69	BM
EN 15x	15.0	20.0	9.5	138	9.7	141	2.12	75	520	69	BM
EN 15x	15.0	20.0	12.5	181	12.7	184	1.81	64	520	69	BM
	18.5	25.0	7.0		7.2		3.11	110	558	69	
EN 18	18.5	25.0	9.5	102		104	2.63	93	558	69	BM
EN 18		C10 001	1000	138	9.7	141		1000			BM
EN 18	18.5	25.0	12.5	181	12.7	184	2.15	76	558	69	BM
EN 22	22.0	30.0	7.0	102	7.2	104	3.54	125	610	69	BM
EN 22	22.0	30.0	9.5	138	9.7	141	3.06	108	610	69	BM
EN 22	22.0	30.0	12.5	181	12.7	184	2.60	92	610	69	BM
EN 30	30.0	40.0	7.0	102	7.2	104	4.30	152	678	69	BM
EN 30	30.0	40.0	9.5	138	9.7	141	3.60	127	678	69	BM
EN 30	30.0	40.0	12.5	181	12.7	184	3.00	106	678	69	BM
			Leng	th: 1250mm	Breadth: 10	025mm Hei	ght: 1650mn	n			
EN 30x	30.0	40.0	7.0	102	7.5	109	5.41	191	850	74	BM
EN 30x	30.0	40.0	9.5	138	10.0	145	4.39	155	850	74	BM
EN 30x	30.0	40.0	12.5	181	13.0	189	3.60	127	850	74	BM
EN 37	37.0	50.0	7.0	102	7.5	109	6.57	232	890	74	BM
EN 37	37.0	50.0	9.5	138	10.0	145	5.47	193	890	74	BM
EN 37	37.0	50.0	12.5	181	13.0	189	4.70	166	890	74	BM
EN 45	45.0	60.0	7.0	102	7.5	109	7.93	280	950	77	BM
EN 45	45.0	60.0	9.5	138	10.0	145	6.80	240	950	77	BM
	13.0	60.0	12.5	181	13.0	189	5.66	200	950	77	BM

Note: 1. Free Air Delivery (FAD) is tested as per ISO 1217: 2009 Annexure C Edition: 4. Sound level measured as per ISO 2151, Second Edition at 1m distance in field conditions,+/-3dB(A) 2. BM - Base Mounted. \* Weight and dimension are for Base Mounted models. \*\* Compressors mounted on horizontal receiver tank and dryer available as option (for models up to EN15) 3. DOL Starter for EN 2 to EN 7, Star Delta Starter for EN 11 to EN 45, EN 5 / EN 7 / EN 5x are also available with Star Delta Star 4. Due to continuous engineering improvements, the specifications are subject to change without prior notice.

5. Product images displayed in this brochure are only for representative purpose and may not exactly match the actual product 6. EN 2 - 9.5 is also available in 230V single phase 50Hz variant

### **Technical Specification - VFD Model**

Model 50Hz	Motor Power		Working Pressure		Max. Pressure		Free Air Delivery		Weight*	Noise	Tank**
	kW	HP	bar g	psi g	bar g	psi g	m³/min	cfm	Kg	dB(A)	Ltrs.
			Ler	ngth:615mm	Breadth:71	5mm Heig	ht: 845mm				
EN 5x	5.5	7.5	7.0	102	7.2	104	0.37~0.84	13~29.5	240	66	270/500
EN 5x	5.5	7.5	9.5	138	9.7	141	0.29~0.68	10.2~24	240	66	270/500
EN 7	7.5	10.0	7.0	102	7.2	104	0.55~1.20	19.5~42.5	265	66	270/500
EN 7	7.5	10.0	9.5	138	9.7	141	0.52~0.93	18.3~33	265	66	270/500
EN 11	11.0	15.0	7.0	102	7.2	104	0.89~1.77	31.5~62.5	285	71	270/500
EN 11	11.0	15.0	9.5	138	9.7	141	0.73~1.53	25.7~54	285	71	270/500
EN 15	15.0	20.0	7.0	102	7.2	104	1.01~2.05	35.5~72.4	315	71	270/500
EN 15	15.0	20.0	9.5	138	9.7	141	0.88~1.80	31~63.5	315	71	270/500

#### Note:

- Free Air Delivery (FAD) is tested as per ISO 1217: 2009 Annexure E Edition: 4 All standard models are air-cooled
- \* Weight and dimension are for Base Mounted models. \*\* Compressors mounted on horizontal receiver tank and dryer available as option
- 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
- Product images displayed in this brochure are only representative and may not exactly match the actual product

### **ELGi Airmate Accessories**



#### Moisture separator

- Capacity: 100-365 cfm
- Working pressure: 16 bar g



#### **Downstream filter**

- Capacity: 19-1200 cfm
- Working pressure: 7-60 bar
- Filtration range: 1-0.003 microns



#### Refrigeration air dryer

- Capacity: 10-2000 cfm
- Working pressure: 7-60 bar
- Filtration range: +3°C. PDP



#### **Drain valves**

(Timer controlled & zero loss)

- Capacity: 50-2000 cfm
- Working pressure: 16 bar
- Media : Condensate



#### Dessicant air dryer

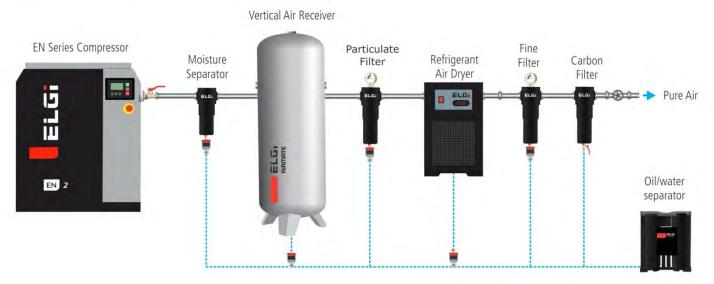
- Capacity: 10-45 cfm
- Working pressure : 16 bar g



#### Air receiver

- Capacity: 250-10000 ltrs.
- Working pressure: 7-12.5 bar
- Code of construction: ASME sec. VIII Div.I or IS 2825

# Typical compressed air supply system



# **Genuine Spares**

For enhancing performance and productivity



### 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 - 45 kW / 8.0 - 283 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

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