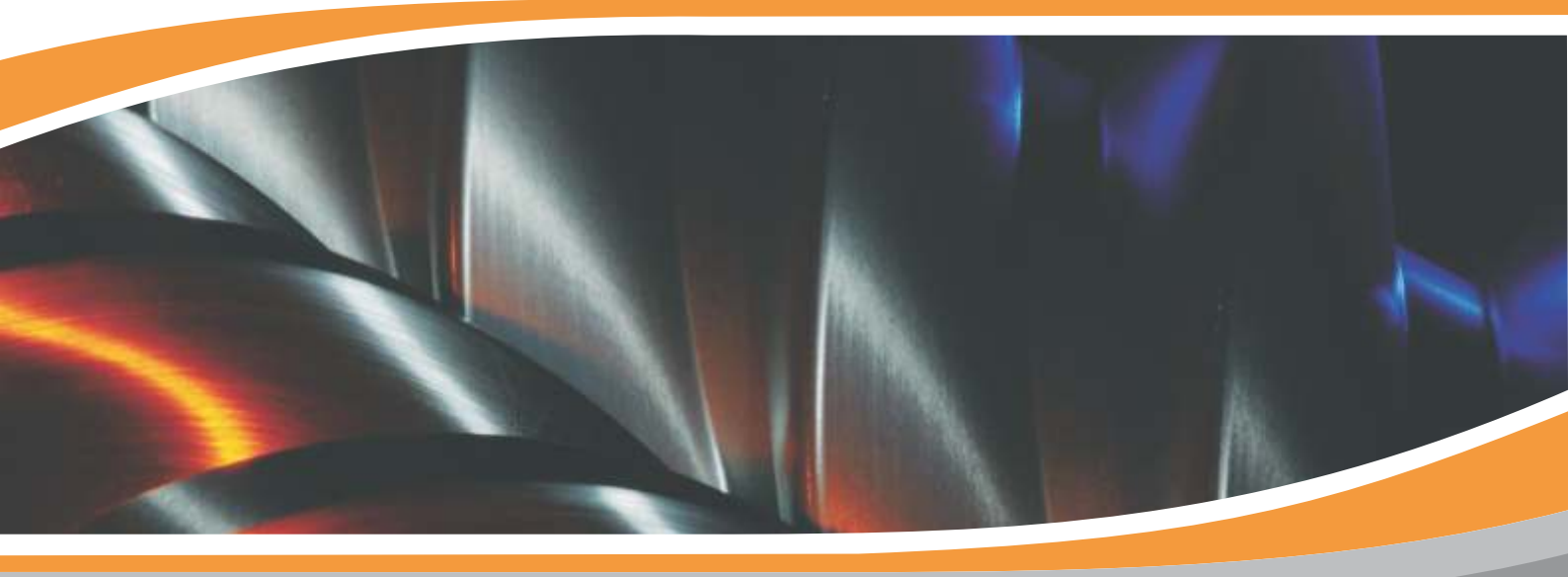


Horizon Series Screw Air Compressors

Built to last



Two-Stage : 75-160 kW





a tradition of RELIABILITY

Elgi, established in 1960, designs and manufactures a wide range of 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 emerged as a multi-product, multi-market enterprise providing total compressed air 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 China, France, India and Italy with subsidiaries in Australia, Brazil, UAE and USA. The company is fast expanding its global footprint attracting distributors and customers with its latest generation products.

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 air ends and compressor packages in the world. Elgi's patent portfolio is a testament to the company's continuous research and innovation capability.



robust INFRASTRUCTURE

Elgi has modern manufacturing facilities in equipped with advanced high precision grinding machines, turning centres and CNC horizontal and vertical machining centres. Screw air ends 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.

Tandem Two-Stage Screw Air Compressors

75 - 160 kW | 16 - 30.7 m³/min



- High efficiency
- High energy saving
- High reliability

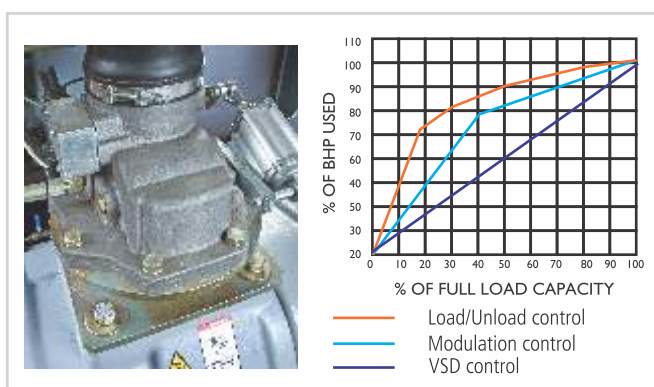
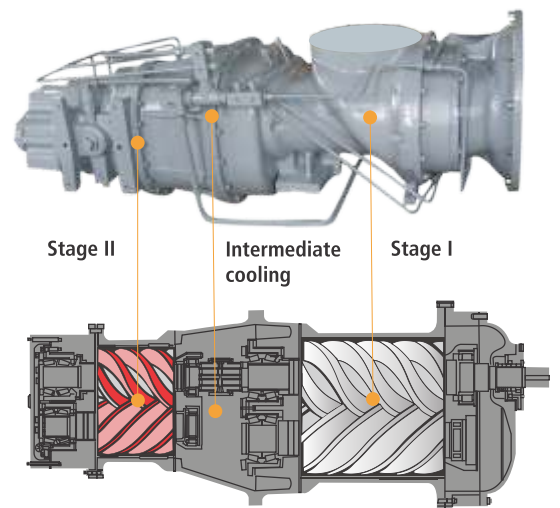
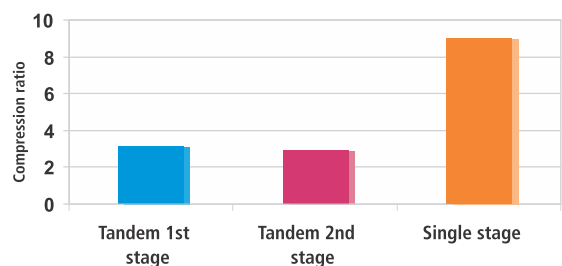
Elgi offers tandem screw compressors to help industries reduce their operating and energy costs. It is a two-stage compressor, having energy efficiency as the key feature. The compression is done in two-stages to improve the volumetric efficiency and thereby contributing to decrease in power consumption and increase in saving energy costs. Tandem air compressors consume 8-12% less power and offer a return on investment within 8-15 months when compared to single-stage compressors

A single-stage compressor, operating at a discharge pressure of 9 bar, has a compression ratio of 1:9 (Ratio of Suction to Discharge of a Screw Aired). In a two-stage compressor operating at the same discharge pressure, the compression ratio is divided between the two stages of tandem airend and is about 1:3 in each stage. This makes the airend more reliable and efficient due to smaller loads on the bearings. The volumetric efficiency of two-stage is better than single-stage compression

Dual control mode

- Auto dual control, operates on modulation mode from 100-60% loading and in load-unload mode for loads below 60%
- Constant pressure due to gradual opening or closing of suction valve with respect to demand (multi-point control)
- Option for selecting load-unload / modulation auto dual mode for all large screw compressor models as a standard feature
- Smooth operation by modulation ensures longer life of airend, valves and all mechanical components. It also ensure no sudden spikes or drop in line pressure
- Lowest power consumption in its class of compressor controls, even with fluctuating loads

Compression ratio comparison for a 9 bar g Compressor



Efficient coupling

Airend and motor shafts are coupled through a permanently aligned cushion type claw coupling. Elgi's efficient coupling ensures efficient power transmission and constant FAD throughout the life

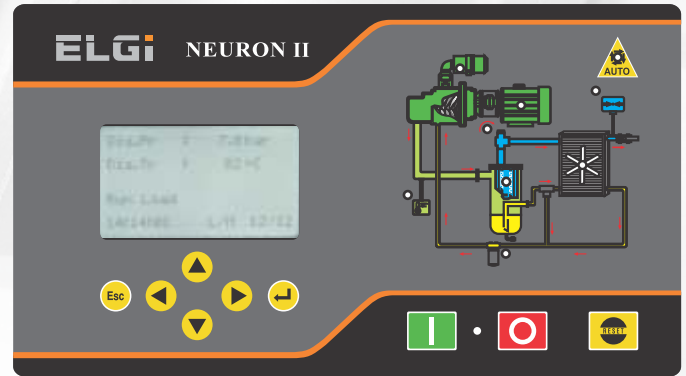


Efficient air oil separation with OSBIC

Elgi has perfected the "OSBIC" (Oil Separation by Impact and Centrifugal Action) process which enables efficient separation of air and oil with minimum pressure drop. The process results in low oil carry-over (< 2 ppm) level at the output of the compressor



Microcontroller edge



Elgi's Neuron II is a high end RISC microcontroller for control of medium to large screw air compressors. The system allows you to monitor and control overall system performance with service indications, malfunction alarms and safety shutdowns. It also includes a service and operational history feature to provide real-time feedback and increases system productivity

Reports

- Cumulative Report (Run Hours, Load Hours, Unload Hours, Stop Hours, Fault Hours and remaining AFCT, OFCT, OSCT, OCT and RGT)
- Detailed Report - Previous 30 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)

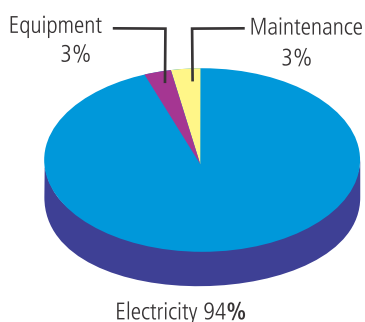
Remote monitoring



- **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

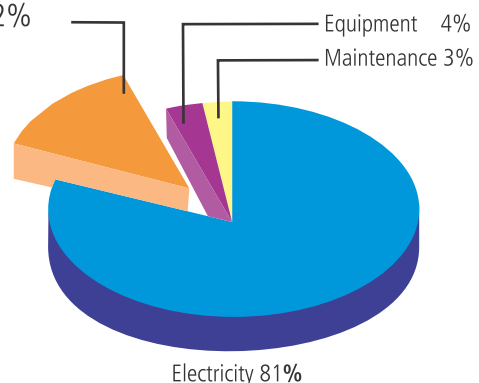
Typical lifetime cost of compressed air over 10 years

Single-Stage Compressor



Tandem Two-Stage Compressor




Tandem Saving 12%



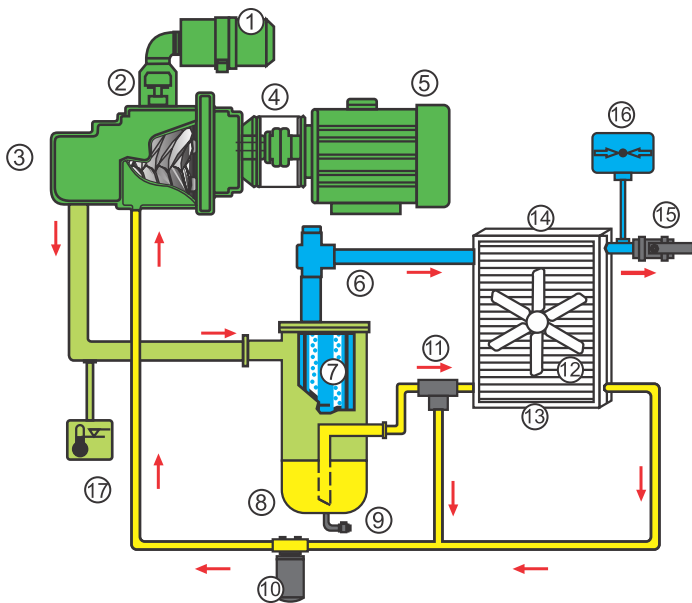
Energy savings

The annual power cost for a 100kW compressor running on continuous duty is US\$ 126000 while a Tandem two-stage compressor uses US\$ 111000 and saves power costs annually by US\$ 15000

Technical Specification

Model 50 Hz	 Rated Power	Working Pressure	 FAD		 Weight	Air outlet connection
	kW	bar g	m ³ /min	cfm	Kg	
Dimension LxBxH(mm): 3400 x 1620 x 1972 mm						
EE75-8	75	7	16.0	565	3300	2 1/2" NPT
EE75-9	75	8	15.2	535	3300	2 1/2" NPT
EE75-10.5	75	9.5	13.3	470	3300	2 1/2" NPT
EE75-13.5	75	12.5	11.5	405	3300	2 1/2" NPT
EE90-8	90	7	18.4	650	3400	2 1/2" NPT
EE90-9	90	8	16.7	590	3400	2 1/2" NPT
EE90-10.5	90	9.5	15.3	540	3400	2 1/2" NPT
EE90-13.5	90	12.5	13.2	465	3400	2 1/2" NPT
EE110-8	110	7	22.6	800	3600	2 1/2" NPT
EE110-9	110	8	21.2	750	3600	2 1/2" NPT
EE110-10.5	110	9.5	19.6	691	3600	2 1/2" NPT
EE110-13.5	110	12.5	16.4	580	3600	2 1/2" NPT
EE132-8	132	7	27.3	965	3700	2 1/2" NPT
EE132-9	132	8	24.9	881	3700	2 1/2" NPT
EE132-10.5	132	9.5	23.6	832	3700	2 1/2" NPT
EE132-13.5	132	12.5	19.7	695	3700	2 1/2" NPT
EE160-8	160	7	30.7	1085	3850	2 1/2" NPT
EE160-9	160	8	30.5	1076	3850	2 1/2" NPT
EE160-10.5	160	9.5	28.0	990	3850	2 1/2" NPT
EE160-13.5	160	12.5	23.2	820	3850	2 1/2" NPT

Note:
 All models are available in air-cooled as standard and water-cooled variants as option
 Max. pressure or unload pressure for all models is 1 bar above the working pressure i.e. for a EE90-8, working pressure is 7 bar and max pressure is 8 bar
 Due to continuous engineering improvements, the specifications are subject to change without prior notice

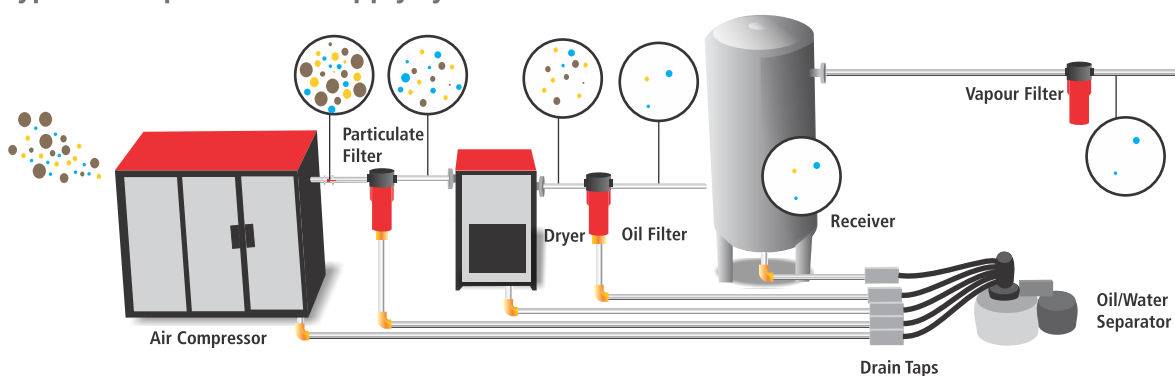


Compressor Air/Oil Schematic (single-stage)

- 1. Air Intake filter
- 2. Intake valve
- 3. Airend
- 4. Drive coupling
- 5. Electric motor
- 6. Minimum pressure valve
- 7. Separator element
- 8. Separator tank
- 9. Drain valve
- 10. Oil filter
- 11. Thermal valve
- 12. Fan
- 13. Oil cooler
- 14. After cooler
- 15. Ball valve-service line
- 16. Pressure transmitter
- 17. Temperature Sensor Probe

■ Air-oil mixture
 ■ Oil
 ■ Air

Typical Compressed Air Supply system



Air Treatment Accessories



Refrigeration Air Dryer

Capacity : 1-90 m³/min
Working pressure : 7 - 13 bar g
Dew point : +3 ° C PDP



Airmate Filter

Capacity : 1 - 90 m³/min
Working pressure : 7- 13 bar g
Filtration Range : 1 - 0.003 microns



Air Receiver

Capacity : 0.3 - 20m³
Working pressure : 7 - 13 bar g

Energy Saving Solution

Variable Frequency Drive

Capacity : 11-250 kW
Standalone ready to use package



Automatic Supply Side Controller

- 2 - 12 compressors integration
- Multi-compressor control up to 12 compressors



global REACH

Elgi serves the world marketplace. Over two million compressors are powering business in 63 countries worldwide. The company offers a strong sales and service network with a well-knit distribution network of more than 250 dealers worldwide. Elgi has its own manufacturing facilities in China, France, India and Italy. Additionally, Elgi has warehouse operations to stock units and parts in Australia, Brazil, UAE and USA.



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