ELGI

Think Long Run

Global Series
Screw Air Compressors

Life source of industries worldwide

90-160 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 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, China and France, and subsidiary companies in Brazil, Middle East and Australia. The company is fast expanding its global footprint attracting distributors and customers with its latest generation products.

Global Series

The new Global Series electric powered screw compressors stands as proof of Elgi's spirit of continuous development. Combining reliability with energy-efficiency, Elgi's new Global Series compressor system is designed with improved features like space-saving, significant reduction in noise level, efficient moisture separator, low oil-carry over and user-friendly controller. Moreover, low power and reduced maintenance needs ensure that operating costs will remain low throughout the compressor life. The compressor is manufactured in compliance with CE directive and designed as per the international quality standards.

MAXIMIZE
EFFICIENCY
RELIABILITY
PERFORMANCE
TECHNOLOGY

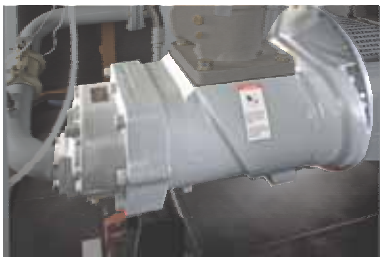
GLOBAL series

MINIMIZE
NOISE LEVEL
FOOTPRINT
MAINTENANCE
OIL CARRY OVER

Indigenous Design

Screw compression elements are manufactured in-house using state-of-the-art machining centres for rotor grinding and machining intrinsic castings of various sizes. Elgi's own eta-V profile rotors ensure energy-efficient compressed air supply for all demanding applications. The Global series compressors are powered by the patented eta-V profile axis airends.

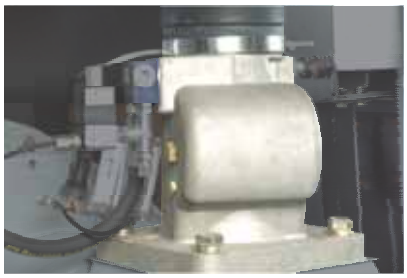
- Reduced size without compromising rotor quality and life
- Internal lubrication ensures zero leakages
- 4x5 ground rotor combination lobes result in optimum efficiency at 7-8 bar and reduced compression losses provide better specific power consumption per kW
- High volumetric efficiency and high isentropic efficiency
- Close tolerances between rotors can be achieved

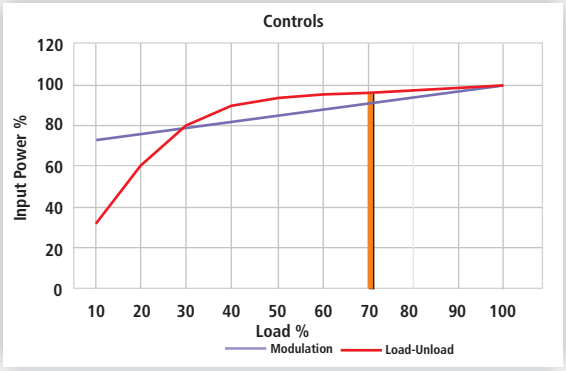


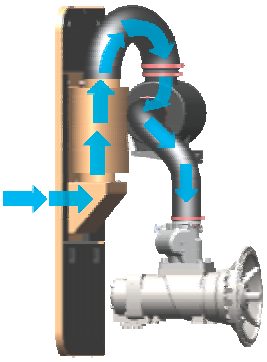
MAXIMUM Energy Efficiency

Optimal Flow Control

- The new generation intake valve with integrated blow down unit, solenoid switch and actuator is installed at the compressor inlet
- The unidirectional intake valve is optimized for full load and no load operations
- The optimal size of the intake valve reduces pressure drop (0.025 bar) and suction losses
- Modulation unit ensure effective control of inlet air flow and power saving
- Auto dual control operates on modulation mode from 100-60% in 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 ensures no sudden spikes or drop in line pressure
- Lowest power consumption in its class of compressor controls, even with fluctuating loads







MAXIMUM Reliability

Efficient Air Intake System

- Use of pre-filters ensure clean air suction unit and enhances air filter life cycle
- Heavy duty dry type air filter ensure two ways of filtration by centrifugal action and by paper filter cartridge with 99.9% efficiency
- Optimally sized 4 micron filter enhances the life of filters up to 4000 hrs
- Air filter with visual clog indicator and silencer for easy maintenance of the system
- Auto cleaning of air filter for every cycle of upload operations

High Precision Drive System

- Heavy duty TEFC squirrel cage induction motor with class F insulation and IP55 protection for assured operation in dusty environment
- Wide operating voltage +/- 10%
- Motor selected for high ambient of 45^{0}C with power variants 415V/400V/380V in 50 Hz and 380V in 60 Hz
- Motor winding temperature limited to Class B temperature rise

Drive coupling

- Ensures efficient power transmission with uniform load on bearing due to permanent alignment of airend and motor
- Easy serviceability due to easy replacement of Polyurethane coupling without dismantling

MAXIMUM Performance

Efficient Air-Oil Separation

OSBIC design

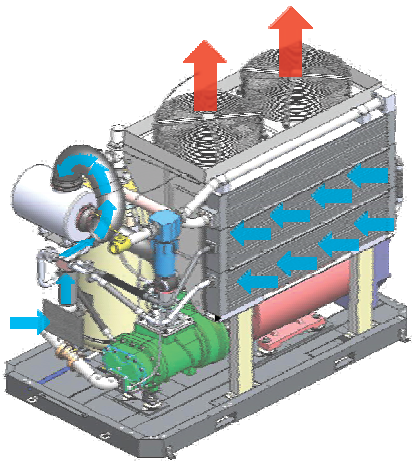
The efficient air-oil separation by OSBIC (Oil Separation By Impact and Centrifugal Action) enables efficient separation of air and oil, with minimum pressure drop. The method enables separation of oil in three stages, delivering consistent oil-free air while increasing the life of separator element

Stage 1: Impact of air-oil mixture on the radial baffle plate reduces kinetic energy
Stage 2: Centrifugal action of air-oil mixture (spin down action) to shed of the oil particles
Stage 3: Air with minor traces of oil will enter the air-oil separator element placed inside the tank to purify the air (residual oil carry over level is less than 1ppm)

- Less oil fill and refill quantity
- CE/GB certified and ASME design
- Requires less floor space
- Minimum pressure drop in tank
- Leak proof flanges with O-rings ensure leakage proof points

Integrated Moisture Separator as Standard

- Designed to handle high humid compressed air outlet from after-cooler
- 99% of bulk water removal by Impact and Centrifugal action with minimum pressure drop and automatic discharge of collected water particles by float mechanism

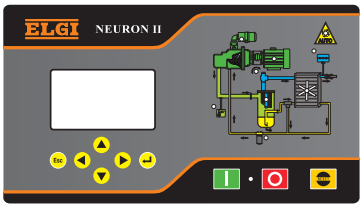


Efficient Air Cooling

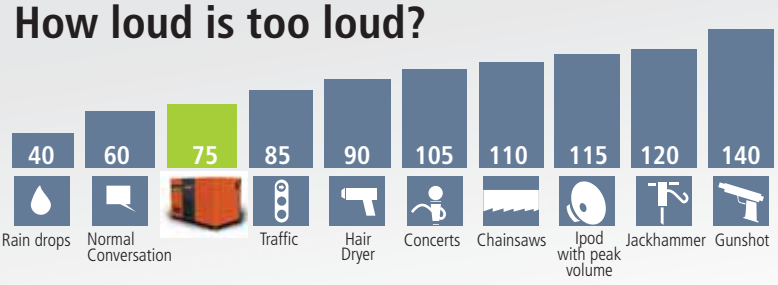
- The compressor is designed to operate in wide temperature ranges of -5 to 45^{0}C with limited temperature raise of outlet air to less than ambient +10^{0}C
- Ambient air is used to cool the aftercoolers by way of using sucker fan
- Specially designed cooling fan reduces the input power without compromising the cooling air flow, and reduces noise induced
- Unique cooling air path for aftercooler by means of closed air duct which separates cooling system from rest of the unit
- Easy access to clean cooler fins by reverse flushing

Fully Controlled System

- The Neuron II is a user-friendly, custom designed, dedicated and extremely compact industrial automation controller for medium and large size screw compressors
- This intelligent controller enables remote monitoring, synchronizing with Distributed Control System and SCADA
- The controlled enables report generation viz. Cumulative report, Detailed Report for the previous 15 days, and Fault report (Previous 99 faults in chronological order with real time stamping and type of fault)



How loud is too loud?



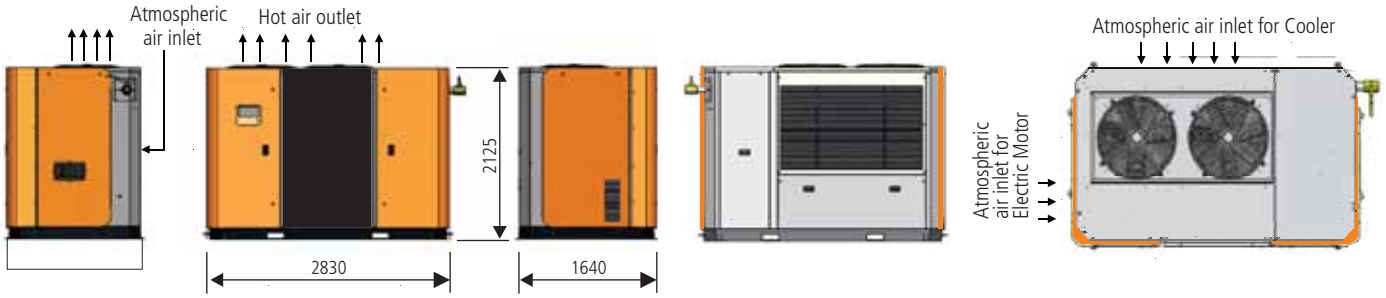
Air Treatment Accessories

Refrigeration Air Dryer
Capacity : 1-90 m^3/min
Working pressure : 7 – 13 bar g
Dew point : +3 ° C PDP

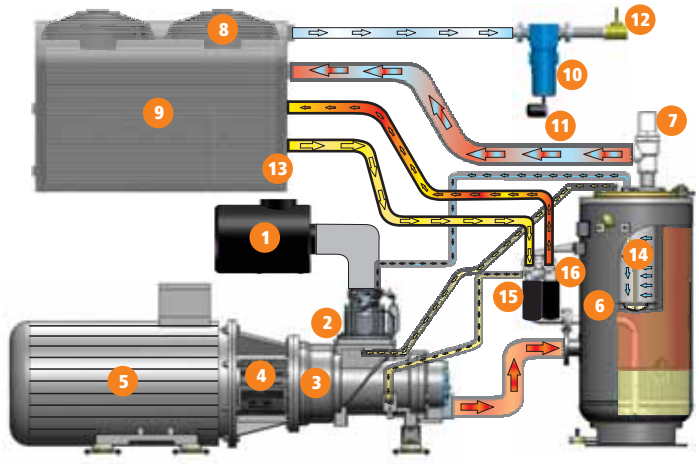
Air Receiver
Capacity : 0.3 - 20m^3
Working pressure :
7 - 13 bar g

Airmate Filter
Capacity : 1 – 90 m^3/min
Working pressure : 7– 13 bar g
Filtration Range : 1 – 0.003 microns

Dimensions



Schematic Flow Diagram



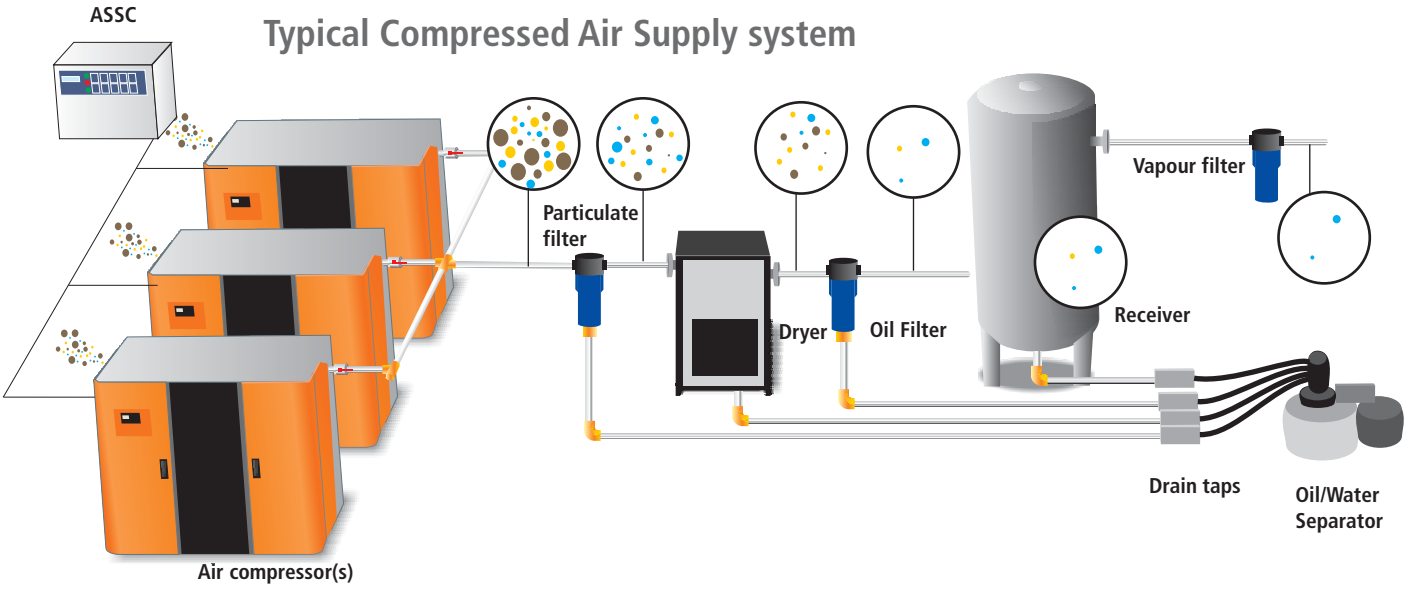
1. Air Intake Filter
2. Suction Control Valve
3. Airend
4. Drive Coupling
5. Electric Motor
6. Air-Oil Separator Tank
7. Minimum Pressure Valve
8. Cooling Fan
9. After Cooler
10. Moisture Separator
11. Automatic Drain
12. Outlet Valve
13. Oil Cooler
14. Air-Oil Separator
15. Oil Filter(spin-on)
16. Thermal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

COOLED AIR
HOT AIR
COOLED OIL
HOT OIL
HOT AIR/OIL MIXTURE

50 Hz	Power		Capacity		Working Pressure		Max. Working Pressure		Weight	Noise Levels
	kW	HP	m^3/min	cfm	bar g	psi g	bar g	psi g	Kg	dB(A)
E90-8 GS	90	125	16.55	585	7	102	8	116.02	2700	75
E90-9 GS	90	125	15.22	538	8	116	9	130.52	2700	75
E90-11 GS	90	125	13.3	470	10	145	11	159.53	2700	75
E110-8 GS	110	150	19.83	706	7	102	8	116.02	3100	75
E110-9 GS	110	150	18.36	649	8	116	9	130.52	3100	75
E110-11 GS	110	150	16.41	580	10	145	11	159.53	3100	75
E132-8 GS	132	175	24.19	855	7	102	8	116.02	3400	75
E132-9 GS	132	175	22.38	791	8	116	9	130.52	3400	75
E132-11 GS	132	175	20.09	710	10	145	11	159.53	3400	75
E160-8 GS	160	200	29.05	1026	7	102	8	116.02	3700	75
E160-9 GS	160	200	26.99	954	8	116	9	130.52	3700	75
E160-11 GS	160	200	24.05	850	10	145	11	159.53	3700	75

- Free Air Delivery(FAD) is tested as per ISO 1217 : 2009 Annex.C Ed.3
- All models are available in air-cooled and water-cooled variants
- Max pressure or unload pressure of all models is 1 bar above the working pressure i.e. For a E 90-8 working pressure is 7 bar and max. pressure is 8 bar
- FAD indicated is for the full package measured at the outlet after moisture separator
- Noise level measured as per ISO 2151,Second Edition at 1m distance-free field condition
- Due to continuous improvements, the specifications are subject to change without prior notice

Typical Compressed Air Supply system



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 114 dealers and 165 distributors worldwide. Elgi has its own manufacturing facilities in India, China and France. It has also set up warehouse facilities in Brazil, Middle East and Australia.

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COMPRESSORS AUSTRALIA

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