



SCREW COMPRESSORS

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**PRODUCT  
CATALOGUE**



Since 1992, industries using compressed air have been reliant on EKOMAK for quality screw compressors, refrigerated, desiccant and membrane dryers, compressed air filters, condensate drains and oil/water separators, to improve productivity and save energy.

With six facilities on three continents, EKOMAK offers true global leadership solutions to your compressed air needs.

EKOMAK participates in numerous trade memberships, has obtained global certification for its major product lines, and has achieved ISO 9001 certification, the internationally accepted standard for quality assurance.

EKOMAK products and technologies, recognized worldwide for reliability and innovation, serve some of the most demanding applications in industries that include aerospace, food and beverage, chemical, biochemical, electronics, primary metals, power generation, petrochemical, paper and many more.

EKOMAK serves more than 15,000 customers with an average of two EKOMAK screw compressors per facility. Factory trained technicians and technical support is provided through our global network of authorized EKOMAK distributors.

EKOMAK compressors and professional service support is available in 48 countries around the globe.





# INTRODUCTION



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**SCREW AIR COMPRESSORS**



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# Diamond Series Screw Air Compressors

DESIGNED FOR EXCEPTIONAL  
PERFORMANCE AND EFFICIENCY FOR  
SMALL APPLICATIONS

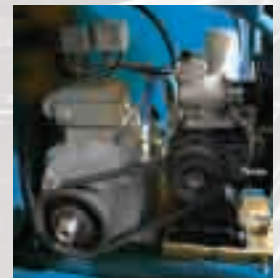
Our priority is reliability and safety, and combined with top quality components, we provide the highest guarantee for your investment. DIAMOND models have been designed and built for maximum air output, under the most severe operation conditions. If you are looking for a strong and reliable compressor for 24-hour operation : EKOMAK IS THE RIGHT CHOISE



mpressed Air Dryer

## FEATURES

- Easy installation and smooth operation
- Accessible design and simplified maintenance
- Acoustic cabinet
- Environmentally friendly
- Designed for 24-hour operation



## COMPONENTS

Very efficient cooling system, designed for high ambient temperature

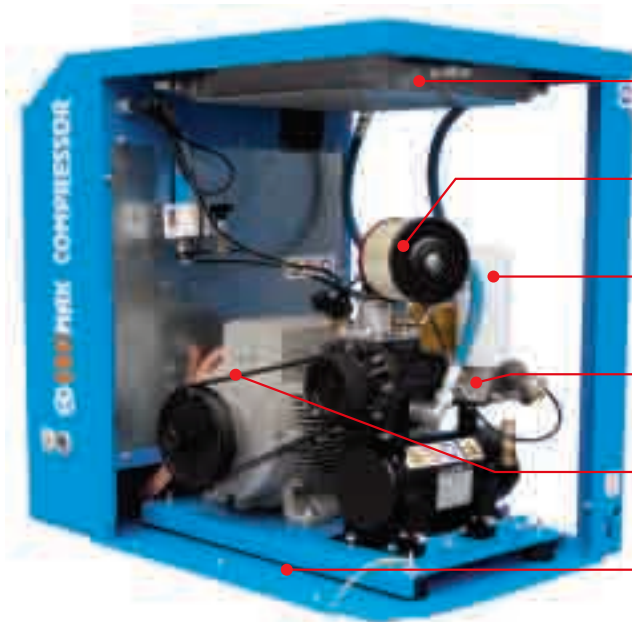
Fully equipped safety system, assuring very safe operation

Easily accessible, high capacity air/ oil separator

Thermostatic valve

High transmission rate by Poly V belt

Super silenced cabinet providing low noise level





### CONTROLLER

- Very easy and very effective operation
- Monitors temperature, pressure and working hours
- Service interval reminders
- Fault monitoring
- Remote load - unload
- RS 435 communication port
- Auto - restart option



*Compressor*

### FLEXIBLE SOLUTIONS FOR COMPRESSED AIR REQUIREMENT

- DMD C : Compressor
- DMD CR : Compressor mounted on a Receiver
- DMD CRD : Compressor and Dryer mounted on a Receiver



### FIELDS OF APPLICATION

- Painting & refinishing
- PVC doors and windows manufacturers
- Automotive workshops
- Hospitals
- Food industry
- Photographic laboratory
- Textile manufacturing
- Small furniture makers
- Dry cleaning applications
- Small enterprices







# Eko Series Belt Driven Screw Air Compressors

## COOLING

### High cooling efficiency

Highly efficient aluminium cooler block provides air outlet temperature only 10 °C above ambient, ensuring minimum oil temperature.

Full motor power available for compression: A separate motor with IP55 protection drives the cooling fan. This relieves the compressor motor and allows efficient cooling matched to ambient conditions.



## SEPARATOR

### Constant air quality

Efficient oil separation is crucial to obtain **high quality compressed air**.

- Cyclonic separation of bulk oil.
- Separation of oil particles using gravity.
- Air/oil mixture filtration through a high efficiency media.

Through this highly efficient process, minimum pressure drop and oil carryover of less than 3ppm is achieved.



## THERMOSTATIC VALVE

The thermostatic oil control valve is standard in all EKOMAK compressors, which ensures optimum oil injection temperature. Hence, oil integrity is maintained and oil change intervals extended.

## AIR INLET VALVE

The air inlet valve is designed for maximum flow to eliminate any unnecessary pressure drops. EKOMAK uses normally closed inlet valves, to avoid peak currents during start-up.





### ACCESSIBILITY

Regular service and inspection of large components can be performed easily.

- Hinged doors where required, give full access to common serviceable components such as air and oil filters, etc.
- Rear panels can be easily removed to access the complete motor - air end assembly.



### MICROPROCESSOR CONTROL

EKOMASTER microprocessor control provides the most effective operational control. A schematic compressor diagram, on the panel, shows each point of measurement.

All operational parameters and service periods can be programmed easily. In the event of deviation from the designated set points, the EKOMASTER will automatically give a warning signal or stop the compressor.



### BELT - DRIVE SYSTEM

POLY - V belt with automatic belt tensioning system ensures optimum power transmission and minimum maintenance cost.



### SAFETY EQUIPMENTS

Indicators, switches, valves, contactors and all protective equipments have been approved by International Notified Bodies.





### 1 AIRMASTER CONTROL PANEL

PLC based AIRMASTER microcontroller is able to control all parameters of the compressor.

- Early warning feature
- Service reminders
- Fault monitoring and recording
- Avoids unauthorized access
- Remote load - unload control
- Two potential free contacts for error/maintenance message

### 2 COOLING SYSTEM

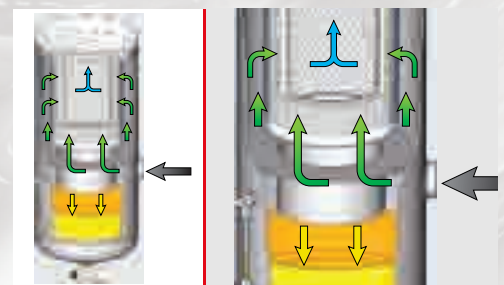
WINNER is constructed with a very efficient bar/plate type aluminium combi cooler with a separate cooling fan. This cooling system allows the compressor to operate at very high ambient conditions.

### 3 SEPARATOR

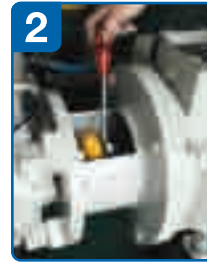
A high efficiency multistage oil separator has been developed to provide optimum performance. Oil carry over of less than 2-3 ppm achieved and reduces electrical consumption by minimizing differential pressure.

### 4 ACOUSTIC CABINET

- Acoustically designed cabinet provides silent operation.
- All components are easily accessible by removable doors.
- Clean inlet air achieved by additional EU3 filters.







**5**

## DIRECT TRANSMISSION-GEAR DRIVE

Gear drive system provides maximum energy efficiency and minimal maintenance. Easily accessible polyurethane coupling absorbs vibration and noise, and also tolerates misalignment.

**6**

## MOISTURE SEPARATOR

70 % of airborne moisture is condensed out by the after cooler and a high efficiency moisture separator, then drained automatically.

**7**

## ELECTRIC MOTOR

Very efficient, fully enclosed fan cooled, IP55, class F electric motor increases reliability for continuous, problem - free operation.

**7**



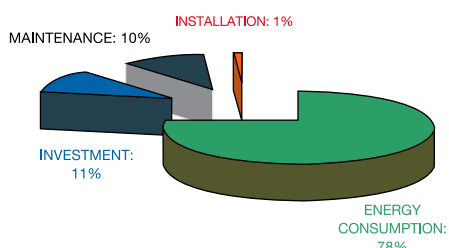
**5**

**6**



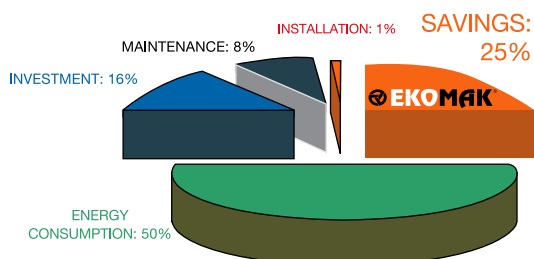
## COMPARISON OF THE TOTAL COST AFTER FIVE YEARS

### Conventional Compressors



After 5 years of continuous compressor operation, the energy costs represent around 78% of the total cost of ownership. By saving energy, the overall costs can be reduced considerably.

### VST Series Compressors



With frequency inverter controlled EKO - VST compressors, up to 36 % of the electric energy can be saved, and that means a total saving of up to 25% over the total expenditure.

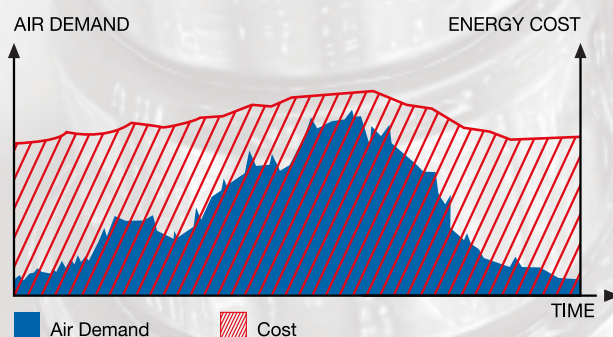
## VST Series Variable Speed Screw Air Compressors

### ENERGY SAVING up to 36%

Today, energy is one of the highest costs borne by industry. About 40 % of the total electrical expenditure goes in producing compressed air.

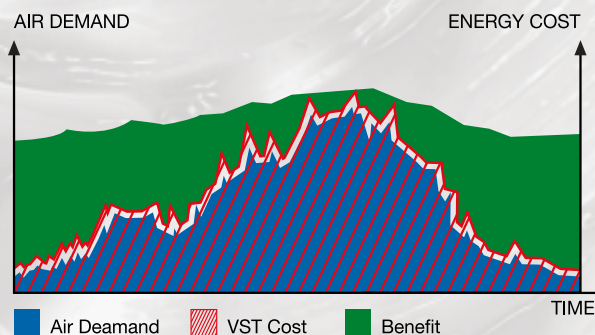
Most facilities have a fluctuating air demand. Thanks to EKO - VST compressor technology, compressed air can now be generated more efficiently.

### ENERGY COST OF CONVENTIONAL OPERATION



Standard compressors run with load - unload mode between two pressure points. When the pressure reaches the maximum level, the compressor goes unload. During the unload time, the compressor does not produce air; however it consumes about %30 of nominal power.

### ENERGY COST OF VARIABLE SPEED OPERATION



EKO - VST compressors are driven by a frequency converter. Factory air demand is measured continuously and the motor speed is automatically adjusted accordingly. Thus, the compressor produces compressed air by using only as much energy as needed, avoiding unnecessary waste.



### 1:1 DRIVE ON VST COMPRESSORS

The advantage of Ekomak's 1:1 drive eliminates transmission losses to save energy. The motor and air-end are joined by coupling and its housing.

To replace the coupling takes just few minutes without any disassembly of the unit.



#### R1 CONTROL PANEL

- LCD display
- The controller always communicates with the inverter through ModBus communication protocol.
- Code programmable
- Error and maintenance program
- Auto-restart
- 4 Potential free contacts for error/maintenance messages
- Remote on-off and load/unload options
- RS485 connection port for computer (optional)

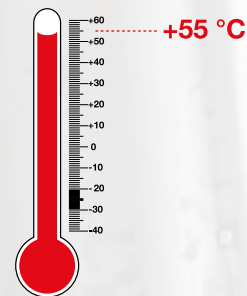


The frequency inverters used in EKO - VST compressors are equipped with high frequency filters and input chokes, which avoid current harmonics and thus comply with CE requirement.

#### AND MANY MORE ADVANTAGES...

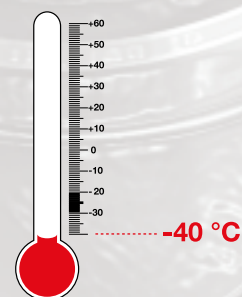
- Eliminates unload power consumption
- Ensure the outlet pressure band is within 0,1 bar
- Decreases the system leakages thanks to lower system pressure
- Eliminates the peak currents during start-up
- Ensures flexible pressure selection from 5 to 13 bar
- By decreasing start/stop and load/unload cycles, the working life of the compressor is increased.





## TROPICAL

Thanks to our special cooling system, which is designed for very hot ambient conditions, and components which are resistant to high temperatures, EKOMAK-TROPICAL models can operate up to 55 °C.



## FREEZE PROTECTION

When required, EKOMAK compressors can operate to sub zero temperatures to -40 °C. Self-regulating heating elements maintain oil temperature inside the compressors at 20°C automatically.



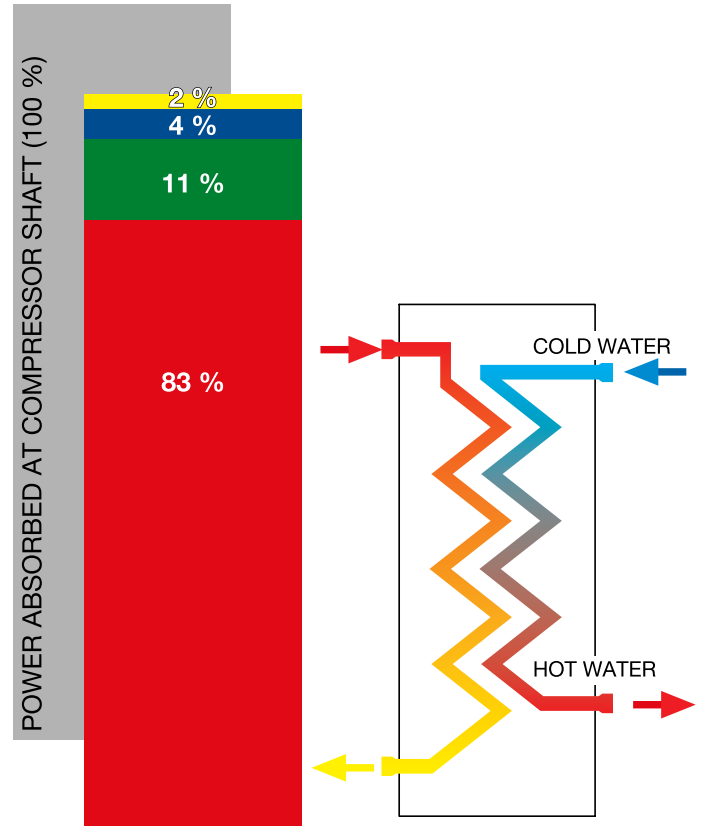
## OPTIONS



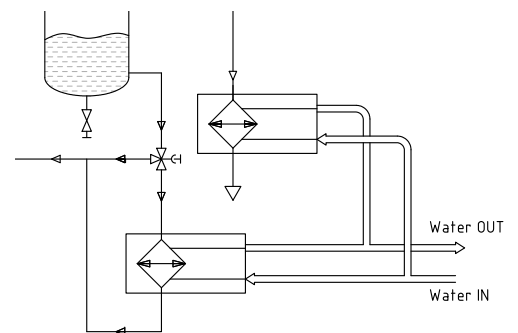
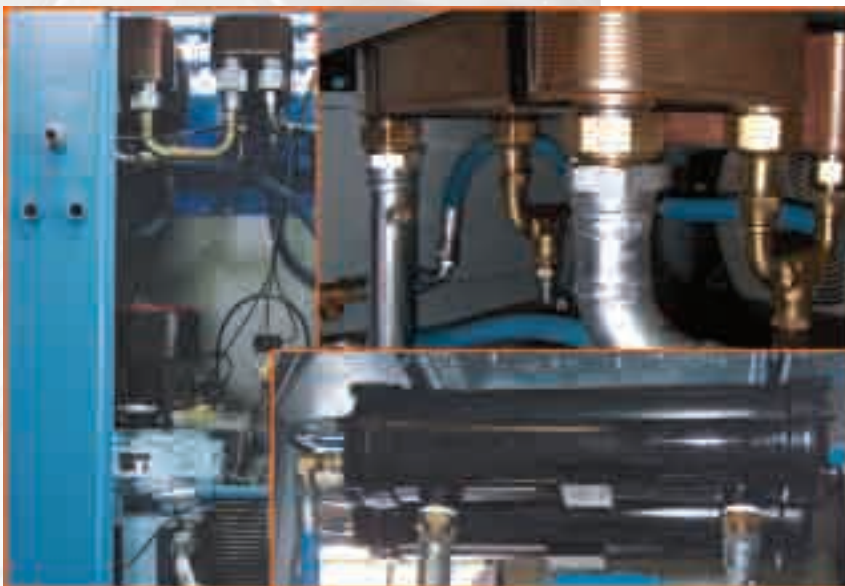
### HEAT RECOVERY

Only 15% of the input energy is converted into compressed air with the remaining 85% wasted as heat. The Ekomak Heat Recovery System, integrated in the compressor, recovers that wasted energy and can utilize it as:

- Heating the rooms or large spaces
- Water heating (e.g. in laundries)
- Pre-heating boiler feed water
- Pre-heating boiler combustion air



- Power Absorbed At Compressor Shaft (100 %)
- Heat extracted in oil cooler
- Heat extracted in air cooler
- Residual heat in compressed air
- Heat lost as a result of radiation



### WATER COOLING

As an option, Ekomak water-cooled versions are available in units above 15 kW.

Water-cooled compressors are mostly used in hot ambient conditions, where cooling water is readily available.



## SPARE PARTS

Comprehensive spare parts kits, are prepared according to completed service hours, and ensures easy maintenance programmes.

Individual spare parts are also available separately. The use of genuine Ekomak spare parts guarantees high technical standards, optimum efficiency and compressor integrity.



## AIR MANAGER

When utilizing two or more compressors, AIR MANAGER automatically selects and controls the optimum number of units in accordance with air demand in order to optimise energy use and reduce maintenance cost.

Air Manager can sequence from 4 to 16 compressors.



# Compressed Air Treatment

General industrial air, blown air,  
sandblasting

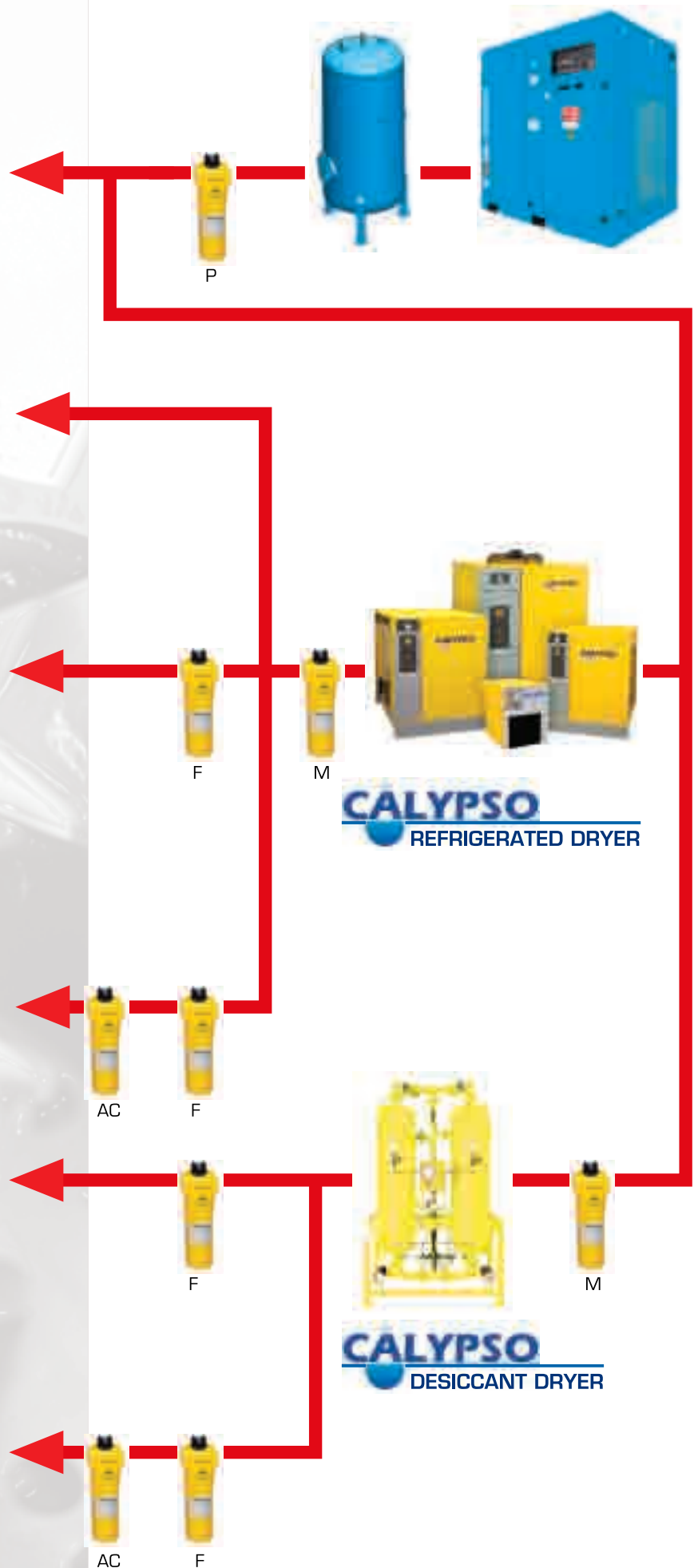
High quality sand blasting, pneumatic  
valves, hand tools

Paint spraying, conveying air,  
hand tools, pneumatic control,  
instrument air

Food packaging, textiles, cosmetics

Chemical industry, high quality paint  
spraying, photographic laboratory,  
surface finishing

Breweries, dairies, pharmaceutical  
industry, medical systems



## DIAMOND SERIES SCREW AIR COMPRESSORS



TYP	CAPACITY [m³ / min]				MOTOR POWER [HP/kW]	CONNECTION	DIMENSIONS width x length x height [mm]	WEIGHT [kg]
	7 bar	8 bar	10 bar	13 bar				
<b>DMD 30 C</b>							753 x 506 x 725	127
<b>DMD 30 CR</b>	0,34	0,33	0,29	0,24	3 / 2,2	R 1/2"	1570 x 753 x 1520	170
<b>DMD 30 CRD</b>								200
<b>DMD 40 C</b>							753 x 506 x 725	134
<b>DMD 40 CR</b>	0,43	0,42	0,38	0,32	4 / 3	R 1/2"	1570 x 753 x 1520	177
<b>DMD 40 CRD</b>								208
<b>DMD 55 C</b>							753 x 506 x 725	145
<b>DMD 55 CR</b>	0,59	0,58	0,49	0,36	5,5 / 4	R 1/2"	1570 x 753 x 1520	188
<b>DMD 55 CRD</b>								228
<b>DMD 75 C</b>							753 x 506 x 725	155
<b>DMD 75 CR</b>	0,82	0,77	0,69	0,56	7,5 / 5,5	R 1/2"	1570 x 753 x 1520	198
<b>DMD 75 CRD</b>								238
<b>DMD 100 C</b>							888 x 686 x 895	240
<b>DMD 100 CR</b>	1,15	1,1	0,95	0,75	10 / 7,5	R 3/4"	1800 x 690 x 1600	440
<b>DMD 100 CRD</b>								462
<b>DMD 150 C</b>							888 x 686 x 895	250
<b>DMD 150 CR</b>	1,7	1,65	1,35	1,17	15 / 11	R 3/4"	1800 x 690 x 1600	450
<b>DMD 150 CRD</b>								496

C : DMD Compressors  
 CR : DMD Compressors + receiver  
 CRD : DMD Compressors + receiver + air dryer

Air receiver volume for DMD 30-40-55-75 : **270 l**  
 Air receiver volume for DMD 100 - 150 : **500 l**



Dimensions and weights are used only for guidance and are not binding.  
 Ask for audited drawings





## EKO SERIES BELT DRIVEN SCREW AIR COMPRESSORS

LOT 2

TYP	CAPACITY [m <sup>3</sup> / min]				MOTOR POWER [HP/kW]	CONNECTION	DIMENSIONS width x length x height [mm]	WEIGHT [kg]
	7 bar	8 bar	10 bar	13 bar				
EKO 15	2.7	2,6	2,1	1,8	20 / 15	R 1"	895 x 820 x 1495	463
EKO 18	3.2	3,1	2,7	2,3	25 / 18,5	R 1"	895 x 820 x 1495	475
EKO 22	3.8	3,7	3,2	2,7	30 / 22	R 1"	895 x 820 x 1495	520
EKO 30	5.1	4,8	4,4	3,9	40 / 30	R 1 1/4"	1195 x 820 x 1495	678
EKO 37	6.1	5,9	5,4	4,7	50 / 37	R 1 1/4"	1000 x 1200 x 1800	764
EKO 45	7.2	7,1	6,1	5,4	60 / 45	R 1 1/2"	1000 x 1200 x 1800	892
EKO 45 S	8.1	7,8	7,1	6,2	60 / 45	R 1 1/2"	1000 x 1200 x 1800	965
EKO 55	9.5	9,0	8,2	7,4	75 / 55	R 1 1/2"	1300 x 1200 x 1900	1175
EKO 75	12.0	11,4	10,6	9,4	100 / 75	R 2"	1850 x 1360 x 1940	1600
EKO 75 S	13.7	13,1	12,1	10,6	100 / 75	R 2"	1850 x 1360 x 1940	1840
EKO 90	15.8	14,9	13,6	12,0	125 / 90	R 2"	1850 x 1360 x 1940	2100
EKO 110	18.2	17,9	15,8	14,2	150 / 110	R 2"	2100 x 1500 x 1920	2440
EKO 110 S	19.2	18,2	16,5	14,6	150 / 110	R 2"	2100 x 1500 x 1920	2450
EKO 132	23.3	22,3	19,5	16,2	180 / 132	DN 80	1900 x 2510 x 1910	3480
EKO 160	27.8	26,4	23,6	19,7	220 / 160	DN 80	1900 x 2510 x 1910	3520
EKO 200	34.9	32,2	29,1	23,6	270 / 200	DN 100	3040 x 2350 x 2500	5140
EKO 250	43.8	41,8	36,7	30,4	340 / 250	DN 100	3040 x 2350 x 2500	5840



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## WINNER SERIES DIRECT COUPLING SCREW AIR COMPRESSORS

*Winner*

TYP	CAPACITY [m³ / min]			MOTOR POWER [HP/kW]	CONNECTION	DIMENSIONS width x lenght x height [mm]	WEIGHT [kg]
	7 bar	8 bar	9.5 bar				
EKO 55 GD	10,2	9,7	8,9	75 / 55	R 1 1/2"	2290 x 1300 x 1500	1650
EKO 75 GD	13,9	13,2	12,1	100 / 75	R 2"	2390 x 1450 x 1750	1740
EKO 90 GD	16,7	15,8	14,3	125 / 90	R 2"	2840 x 1450 x 1650	1980
EKO 110 GD	20,9	19,6	17,6	150 / 110	R 2"	2885 x 1500 x 2000	2730
EKO 132 GD	24,4	23,1	21,1	180 / 132	DN 80	3185 x 1650 x 2000	3545
EKO 160 GD	29,6	28,0	25,5	220 / 160	DN 80	3185 x 1650 x 2000	3650
EKO 200 GD	36,0	34,0	31,0	270 / 200	DN 100	4000 x 2100 x 2500	5620
EKO 250 GD	45,0	42,4	38,3	340 / 250	DN 100	4000 x 2100 x 2500	6110



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## VST SERIES VARIABLE SPEED SCREW AIR COMPRESSORS

TYP	CAPACITY [m³ / min]				MOTOR POWER [HP/kW]	CONNECTION	DIMENSIONS width x lenght x height [mm]	WEIGHT [kg]
	7 bar	8 bar	10 bar	13 bar				
DMD 150 VST	0,6-1,7	0,5-1,65	0,4-1,35	0,35-1,17	15 / 11	R 3/4"	978 x 686 x 1020	275
EKO 15 VST	0,9-2,7	0,9-2,6	0,7-2,1	0,5-1,8	20 / 15	R 1"	1195 x 820 x 1495	520
EKO 18 VST	1,1-3,2	1,1-3,1	0,9-2,7	0,7-2,3	25 / 18,5	R 1"	1195 x 820 x 1495	550
EKO 22 VST	1,4-3,8	1,3-3,7	1,2-3,2	0,9-2,7	30 / 22	R 1"	1195 x 820 x 1495	580
EKO 30 VST	1,9-5,1	1,7-4,8	1,6-4,4	1,4-3,9	40 / 30	R 1 1/4"	1200 x 1000 x 1800	730
EKO 37 VST	2,2-6,1	2,1-5,9	1,9-5,4	1,7-4,7	50 / 37	R 1 1/4"	1500 x 1000 x 1800	870
EKO 45 S VST	3,0-8,1	2,9-7,8	2,7-7,1	2,2-6,2	60 / 45	R 1 1/2"	1500 x 1000 x 1800	1120
EKO 55 VST	3,5-9,5	3,3-9,0	3,0-8,2	2,6-7,4	75 / 55	R 1 1/2"	1945 x 1395 x 1940	1650
EKO 75 S VST	4,9-13,7	4,5-13,1	4,1-12,1	3,7-10,6	100 / 75	R 2"	1945 x 1395 x 1940	2140
EKO 90 VST	5,5-15,8	5,1-14,9	4,7-13,6	4,0-12,0	125 / 90	R 2"	1945 x 1395 x 1940	2420
EKO 110 VST	6,6-18,2	6,4-17,9	5,5-15,8	4,8-14,2	150 / 110	R 2"	2100 x 1650 x 1950	2540
EKO 110 S VST	7,0-19,2	6,5-18,2	5,6-16,5	4,9-14,6	150 / 110	R 2"	2100 x 1650 x 1950	2800
EKO 132 VST	8,6-23,3	8,1-22,3	6,8-19,5	5,5-16,2	180 / 132	DN 80	2785 x 1895 x 1910	3650
EKO 160 VST	10,2-27,8	9,7-26,4	8,4-23,6	7,1-19,7	220 / 160	DN 80	2785 x 1895 x 1910	3820
EKO 200 VST	12,1-34,9	11,0-32,2	8,9-29,1	6,9-23,6	270 / 200	DN 100	3490 x 2350 x 2500	5500
EKO 250 VST	15,5-43,8	14,4-41,8	12,3-36,7	9,4-30,4	340 / 250	DN 100	3490 x 2350 x 2500	6320

Belt, Direct and Gear drive models are available in VST series  
Gear Drive models start from EKO 55 VST



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Ask for audited drawings

 **EKOMAK** GERMANY



 **EKOMAK** SPAIN



 **EKOMAK** POLAND



 **EKOMAK** TURKEY



 **EKOMAK** RUSSIA



 **EKOMAK** CHINA



 **EKOMAK** SINGAPORE



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