IMPETUS

Rotary Screw Air Compressors

Double Stage

22-75 kW

JOURNEY OF AIR

DALGAKIRAN

1,02-16 m³/min

22-75 kW

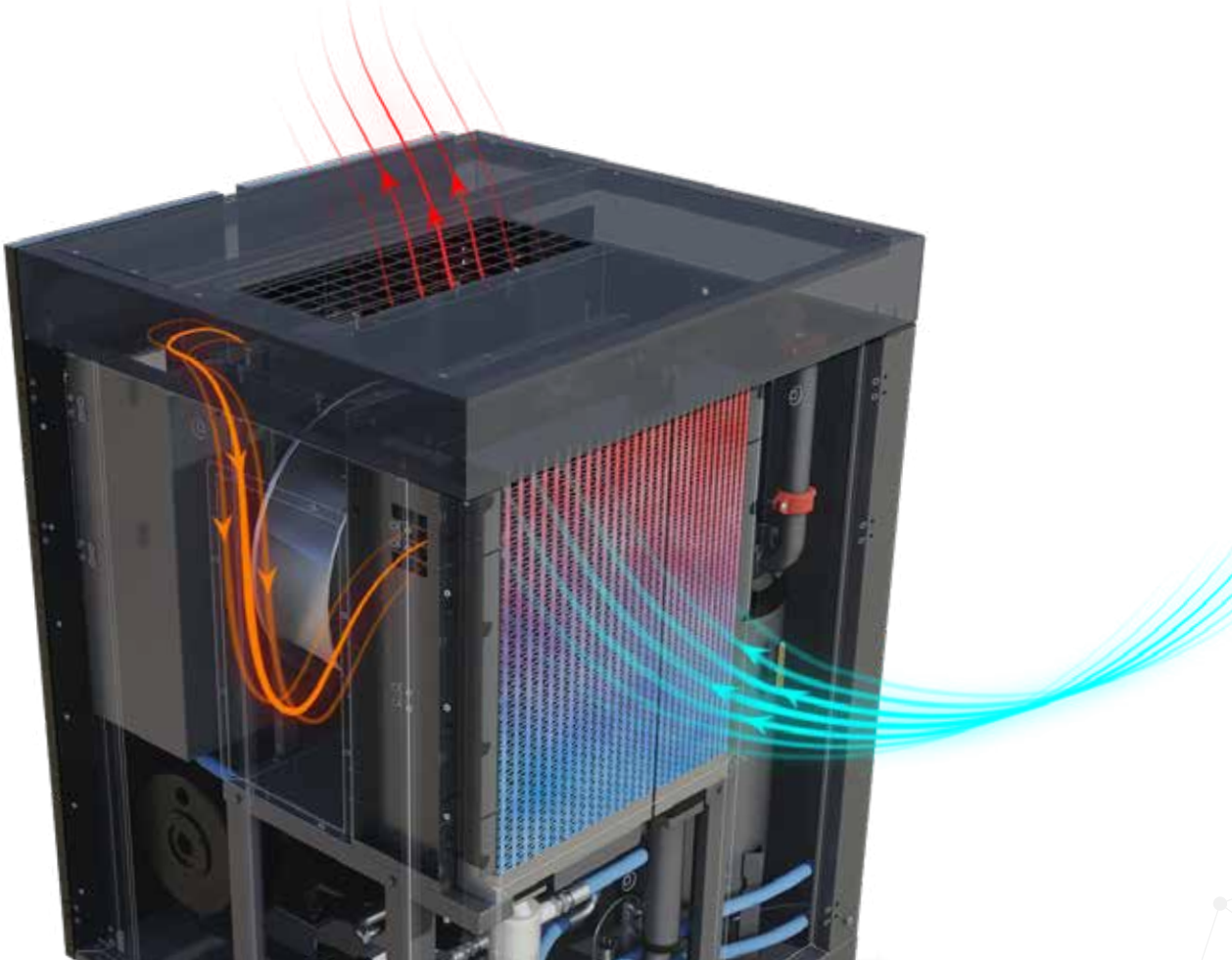
7,5-8,5-10 bar

IMPETUS SERIES

Oil Injected, Two-Stage, Direct Coupled, Fixed/Variable Speed

Rotary Screw Air Compressors

Next gen compact compressors maximize your energy saving, minimize your total cost of own.

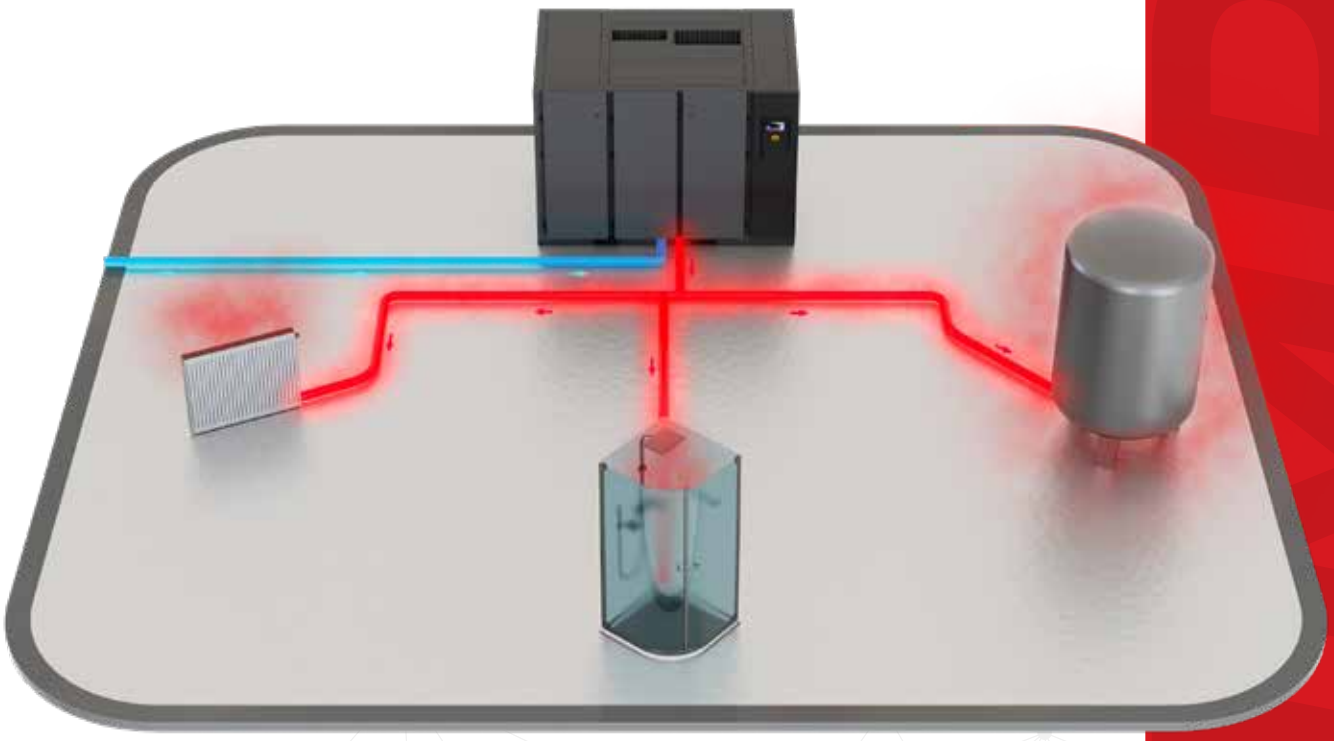


General Features

- IE5 efficiency-class IPM electric motors
- Two-stage screw block
- Water cooling (37 kW and above)
- Soft start with variable speed power transmission
- Operating with low noise level
- Integrated dryer (optional)
- Heat recovery (optional)

Heat Recovery Options For Even More Savings

- In compressor, a high amount of heat is released during the compression of the air.
- A large amount of heat is recovered with a suitable oil/water exchanger placed at the oil tank outlet of the compressor. The hot water obtained with the heat recovery can be used in many areas in your facilities.
- By directing the hot air coming out of the compressor, a room can be heated when heating is required, or hot air can be given outside with thermostatic control, in accordance with seasonal changes. In this way, savings from the heating system and natural gas are provided.
- 80% of the compressor's total energy consumption can be recovered.

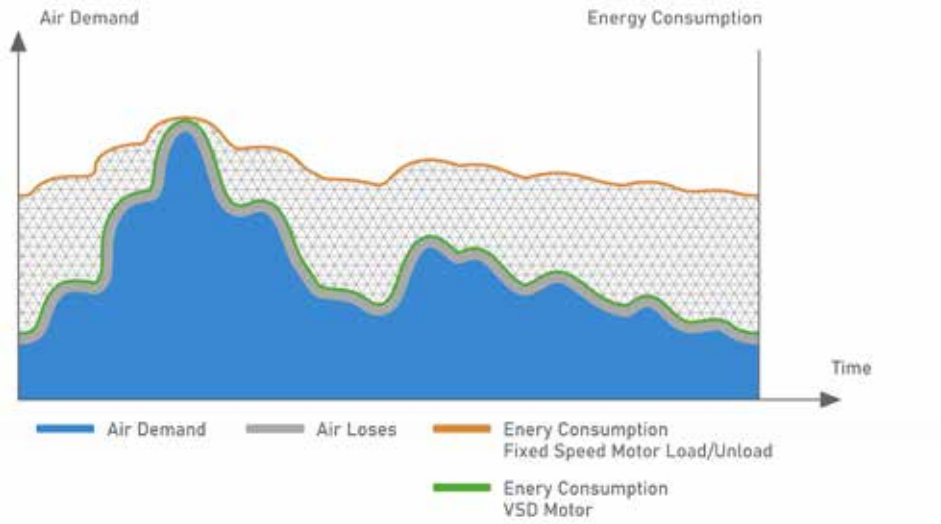


What is VSD Technology?

Some of industrial operations, the demand for compressed air is variable.

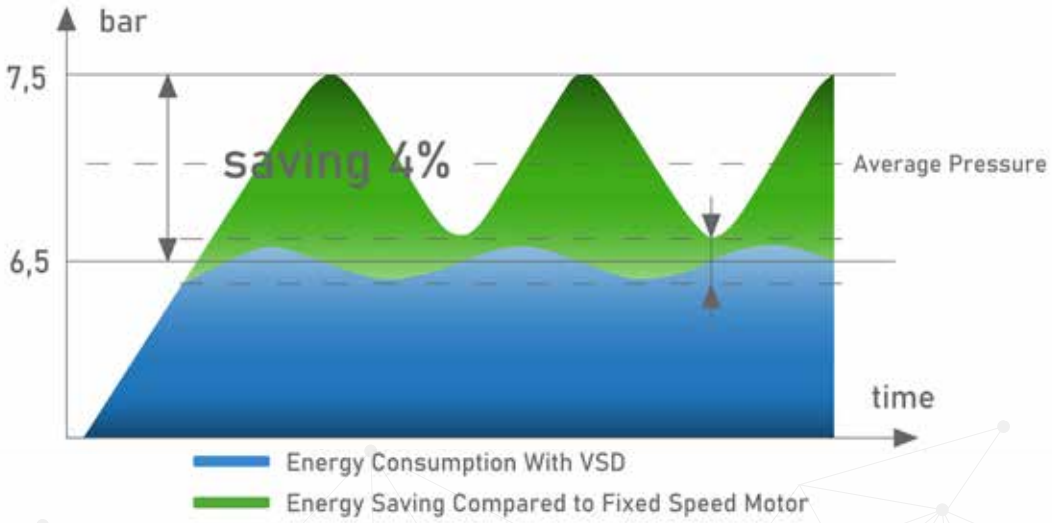
In such conditions our compressors automatically adjust the compressor's operating speed to match air production to demand in real time, saving significant amounts of energy.

A traditional fixed speed air compressor can only operate at full capacity. Fixed speed compressors consume a lot of energy when less air is required and some of the energy is wasted.

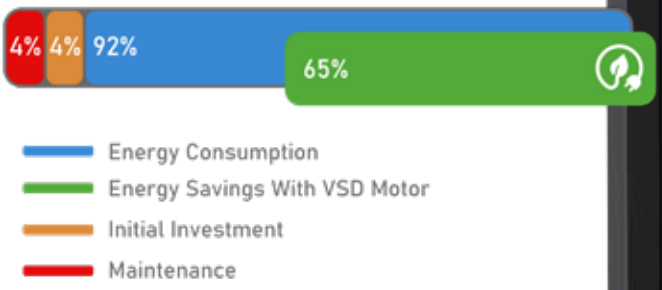


Why Dalgakıran VSD?

- Whereas VSD compressor works only according to the amount of need, it reduces the energy cost.
- There is no need to unload, which saves both time and energy.
- Air system pressure is more consistent and also lower, minimizing energy consumption and air leaks.
- Motor and inverter are specially designed to provide maximum efficiency.
- The motors have successfully passed tests performed in the harshest conditions such as high temperature and high pressure.
- Variable speed compressors vibrate less than the other models used in the market.



up to 65%* energy savings



Screw Block

- Two-stage screw produces energy efficiency by up to 10%
- Higher flow rate by up to 10%.
- Thanks to low compression rate low axial and compression forces
- Zero transmission losses by compact direct power transmission
- No requirement for a power transmission element results in a compact design
- Low axial and compression forces due to low compression ratio between screw blocks
- Thanks to low rotor speeds, a long service life
- Thanks to two-stage compression, low noise and vibration levels

Electric Motor

- Ultra Premium IE5 energy efficiency-class electric motors
- Internal Permanent Magnet Motor (IPM)
- Compact design
- F-class insulation
- Optimum oil cooling at all speeds for high efficiency
- Low noise levels
- Grease-free lubricated motor bearings

Electric Motor Drive

- The drive and IMP meet the requirements of IES2 (EN50598)
- Functionality in a single unit
- Uses fewer components
- Long service life helps minimize environmental impact.

Intake Chamber

- High acoustic performance in noise dampening
- Insulated cold air intake for energy efficiency

Cooling System

- High cooling efficiency in compact air and oil heat exchangers
- Suitable design for operating up to 45°C
- Radial fan for high cooling efficiency (37 kW and above)
- Low noise level with low speed radial fans
- Cooling fan driver for maximum energy efficiency

Air Filter

- Two-stage filtration (Initial filtration/precision filtration)
- 99.9% efficiency in particle separation down to microns
- Low pressure loss (starting pressure fall<3mbar)
- Easy maintenance
- Long service life

Oil Filter

- Non-metallic, environmentally friendly and recyclable oil filter
- Aluminium housing
- Easy maintenance
- Compact design

Separator System

- Effective separator elements keep the amount of oil in the outlet air low (1-3 mg/m³) for high-quality compressed air
- Sep-n-sep type separator with enlarged surface area (55-75 kW)
- Easy to service
- High efficiency three stage air-oil separation system

Water Separator

- Compact, integrated, and unique design
- Separation performance is %99 even in very hot and humid conditions
- High energy efficiency with minimal pressure loss

Maintenance and Service

- The compressor's key components are specially designed to make servicing easy.
- Maintenance friendly internal design.
- Oil filter and air filters can be replaced easily
- The compressor oil cools the motor and lubricates the bearings so, no extra lubrication and maintenance are needed.
- Low-speed rotors produce less vibration and noise.
- Compact IPM motors keep the machine size small. This creates great advantages for unit placement.

Easy Maintenance

Service Friendly

Controller

- 7” LED Display
- Compact construction with integrated driver and controller
- Weekly scheduler for starting/stopping the machine at 2 different time intervals can be individually set for each day of the week
- Dual PID feature can run simultaneous PID for temperature and pressure
- Pressure PID ensures energy-efficient operation by maintaining the pressure at the desired level
- Temperature PID controls the fan speed to maintain the screw block’s most efficient operating temperature
- All inverter and compressor control data are managed from a single point
- Internal ModBus communication
- Built-in phase sensor
- Design does not need an external module and connection
- User-friendly on-screen interface

Certification

- Motor and driver meet the requirements of IEC2 (EN50598) and CE certificates

Model	Pressure		Capacity*				Motor Power	Connection Size	Dimensions (mm)			Weight	Noise
			Minimum		Maximum								
	bar	psi	m3/min	cfm	m3/min	cfm	kW/hp		Length	Width	Height	kg	dB (A)
IMPETUS VSD 22	7,5	110	1,02	36	4,35	154	22/30	G 1 1/4"	955	1095	1580	750	72
	8,5	125	1,04	37	4,17	147			955	1095	1580		
	10	145	1,03	36	3,76	133			955	1095	1580		
IMPETUS VSD 30	7,5	110	1,63	58	6,36	225	30/40	G 1 1/4"	955	1095	1580	875	72
	8,5	125	1,60	57	5,91	209			955	1095	1580		
	10	145	1,57	55	5,41	191			955	1095	1580		
IMPETUS VSD 37	7,5	110	1,77	63	7,76	274	37/50	G 1 1/2"	1195	1250	1860	1220	71
	8,5	125	1,77	63	7,27	257			1195	1250	1860		
	10	145	1,76	62	6,52	230			1195	1250	1860		
IMPETUS VSD 45	7,5	110	2,30	81	9,30	329	45/60	G 1 1/2"	1195	1250	1860	1400	72
	8,5	125	2,28	80	8,73	308			1195	1250	1860		
	10	145	2,27	80	8,01	283			1195	1250	1860		
IMPETUS VSD 55	7,5	110	2,60	92	11,60	410	55/75	G 2"	1400	1450	1965	1620	72
	8,5	125	2,54	90	10,85	383			1400	1450	1965		
	10	145	2,53	89	9,54	337			1400	1450	1965		
IMPETUS VSD 75	7,5	110	3,51	124	16,01	565	75/100	G 2"	1400	1450	1965	1850	72
	8,5	125	3,63	128	15,27	539			1400	1450	1965		
	10	145	3,57	126	13,22	467			1400	1450	1965		

- Unit performances measured in reference conditions which are 1 bar absolute air Pressure, %0 relative humidity, 20°C inlet air temperature, 71°C thermostatic valve set temperature and use of Smartoil.
- Dalgakıran reserves its rights to make changes in its products and specifications without prior notice.

* Refers to free air delivery measured according to ISO 1217:2009, Annex E standard.

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