

# INVERSYS PLUS PM

Rotary Screw Air Compressors

**NEW**

**DALGAKIRAN**



**INVERSYS PLUS PM 37**



5-75 kW

**DALGAKIRAN**



NEW GENERATION

# INVERSYS PLUS PM

Dalgakiran New Generation Inversys Plus <sup>PM</sup> Series provides up to 55% energy efficiency thanks to Internal Permanent Magnet Motor (IPM) and VSD technology, while offering an ergonomic working environment with its compact design and low noise level. With its small footprint, the New Generation Inversys Plus <sup>PM</sup> Series offers effective and innovative solutions for the variable compressed air needs of industry.



0,25,-14,58  
m<sup>3</sup>/min

5-75  
kW

7,5-8,5  
10-13  
bar



# INVERSYS PLUS<sup>PM</sup> SERIES

*Oil Injected, Direct Coupled, Variable Speed  
Rotary Screw Air Compressors*

Thanks to its high quality equipment and advanced engineering solutions, it provides efficient and flexible use according to your industrial production needs.

## Genel Features

- IE5 high efficiency-class IPM electric motor
- Operating with low noise level
- Soft start with variable speed power transmission
- Dryer and tank mounted option (up to 22 kW)
- Integrated dryer and heat recovery recovery option (18 kW and above)

## Advantages

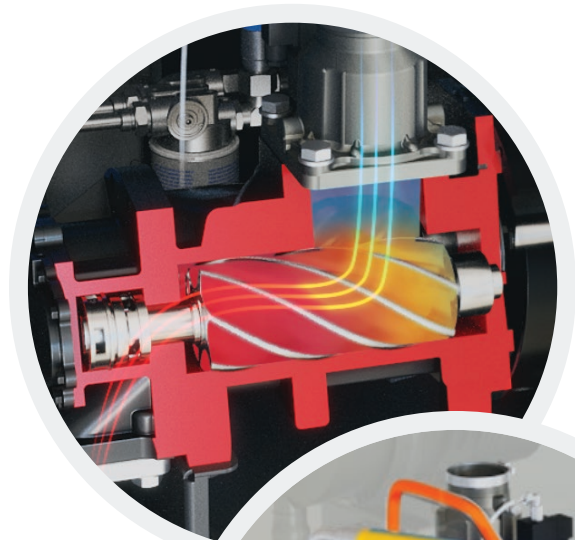
- One of the products in its class that takes up the least footprint.
- It saves up to 55% energy.\*
- It operates at constant output pressure value.
- It has wide operating pressure range (5-13 bar).\*\*
- It provides effective and energy efficient compressed air production even in case of highly variable compressed air requirements.
- Long component life cycle thanks to soft start.
- It has the feature of protecting against the adverse effects of peak currents.

\* When compared with compressors without an inverter for applications with variable requirements

\*\* If requested, it is produced specially according to the need.

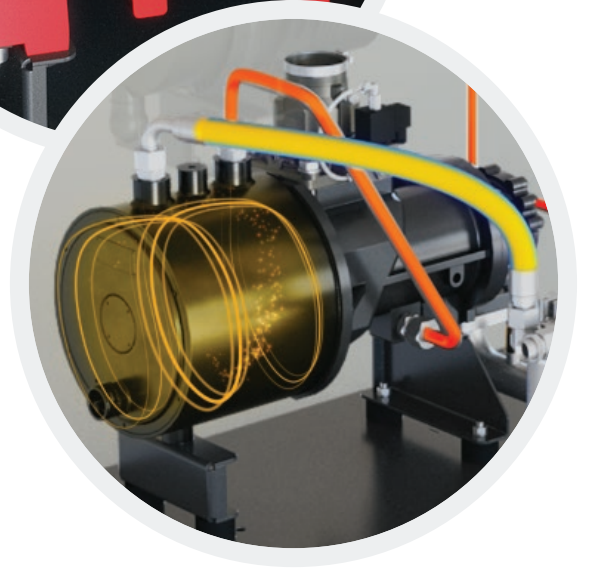
## **Screw Block**

- Zero transmission losses by compact direct power transmission
- High performance even at low speeds
- New rotor profiles for reduced loss air production
- Next gen bearing design for improved load bearing capabilities
- Thanks to low rotor speeds, a long service life



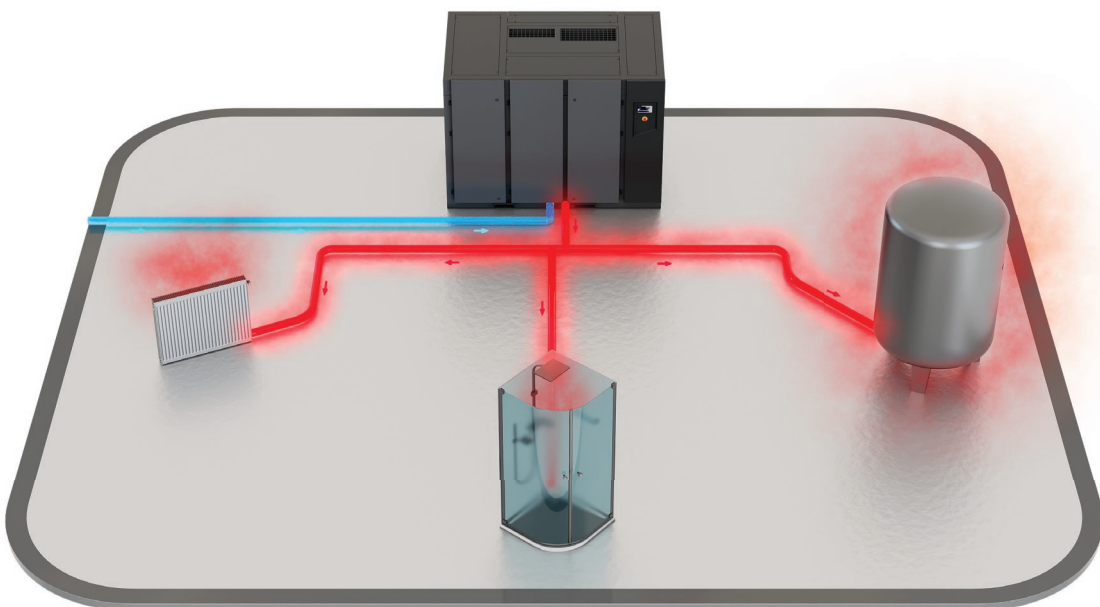
## **Electric Motor**

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



## **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.

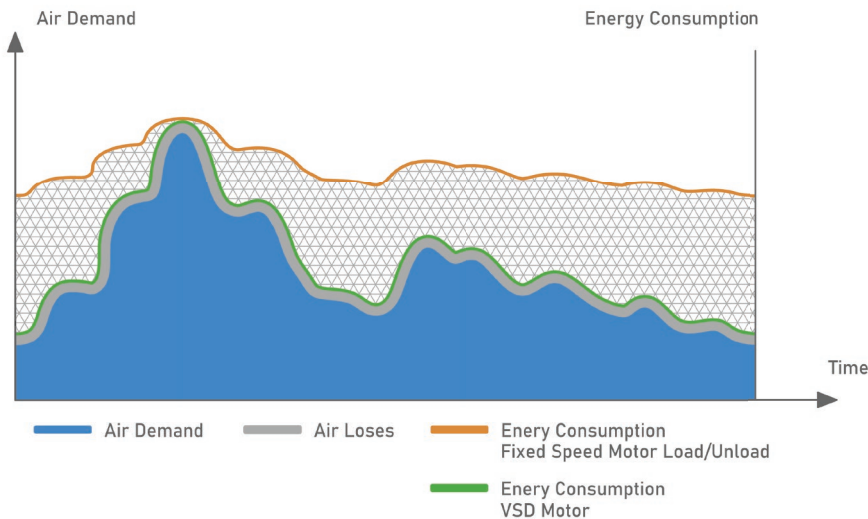


## VSD What is VSD Technology?

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

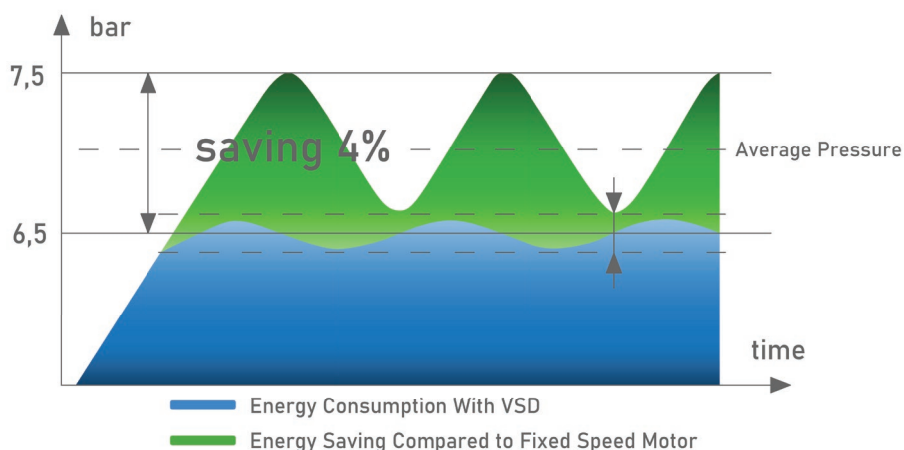
In such conditions our compressors automatically adjust the compressor's operating speed to match air production to demand in real time, saving significant amounts of energy.

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.



## VSD Why Dalgakıran VSD?

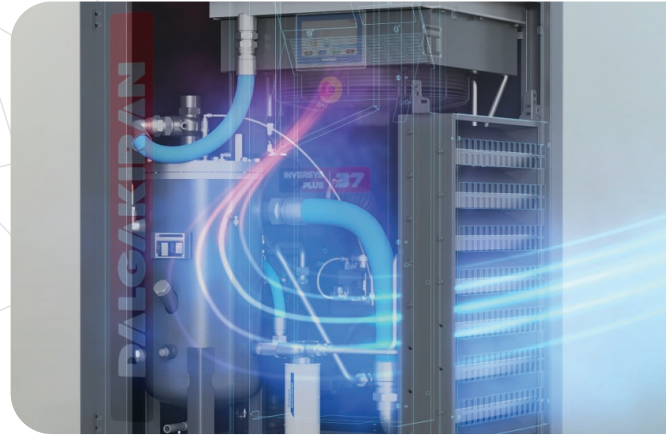
- Whereas VSD compressor works only according to the amount of need, it reduces the energy cost.
- There is no need to unload, which saves both time and energy.
- Air system pressure is more consistent and also lower, minimizing energy consumption and air leaks.
- Motor and inverter are specially designed 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.





## Intake System

- Air circulation inside the cabin with negative pressurized cabin and sealed cover structure.
- Fresh air intake thanks to hot air evacuated at a point away from the suction
- Low noise level thanks to intake blinds. (18 kW and above)

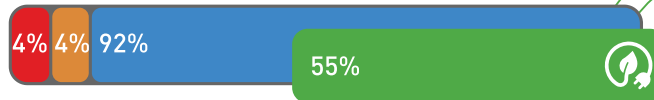


## Air Filter

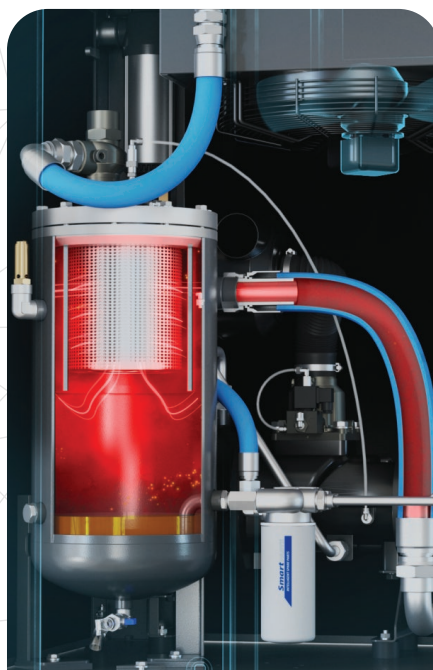
- 99.9% efficiency in particle separation down to 3 microns
- Low pressure loss (starting pressure fall <3mbar)
- Easy maintenance
- Long service life



up to **55%\***  
energy savings

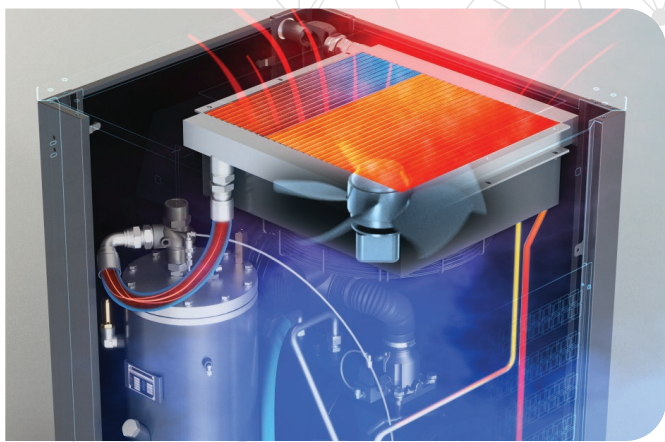


- Energy Consumption
- Energy Savings With VSD Motor
- Initial Investment
- Maintenance



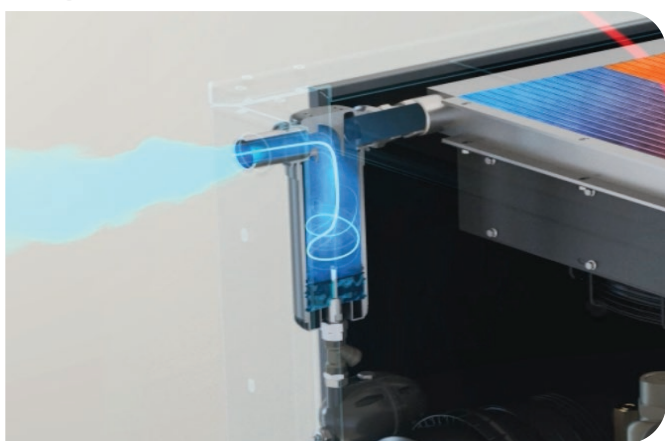
## Air & Oil Separator

- Effective separator elements keep the amount of oil in the outlet air low (1-3 mg/m<sup>3</sup>) for highquality compressed air
- Spin-on or immersion type separator design depending on the product series
- Easy-to-detach spin-on type separator (Inversys Plus <sup>pm</sup> 5-22)
- High-efficiency immersion type separator with long service life (30 kW and above)



## **Cooling System**

- Temperature controlled axial fan (Inversys Plus <sup>PM</sup> 5-15)
- Optimum working temperature thanks to inverter controlled fans, provides additional energy efficiency (18 kW and above)



## **Water Separator**

- Separation performance is >99% even in very hot and humid conditions
- Compact, integrated and unique design (18 kW and above)
- High energy efficiency with minimal pressure loss (18 kW and above)

## **Controller**

- User-friendly display interface with 7" LED display
- Group operation of up to 4 compressors
- Possibility to choose Master/Slave compressor
- Ability to connect to customer DCS system via ModbusTCP
- 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
- Ability to determine co-aging times of the system with selectable parameters
- Built-in phase sensor



## **Certification**

- High-quality components such as electrical materials selected in accordance with IEC and CE standards and a high efficiency, less energy consuming screw block offered as standard.

- 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.

Model	Pressure		Capacity*				Motor	Connection	Dimensions [Length x Width x Height] (mm)		Weight (kg)		Air Receiver	Noise dB (A)
			Minimum		Maximum				Base Mounted	Tank + Dryer	Base Mounted	Tank + Dryer		
	bar	psi	m <sup>3</sup> /min	cfm	m <sup>3</sup> /min	cfm	kW/HP							
INVERSYS PLUS <sup>pm</sup> 5	7,5	110	0,27	9,5	0,91	32,1	5,5/7	G1/2"	755 x 630 x 1100	1870 x 680 x 1600	153	316	250L	63
	8,5	125	0,28	9,9	0,83	29,3								
	10	145	0,25	8,8	0,71	25,1								
	13	190	0,25	8,8	0,53	18,7								
INVERSYS PLUS <sup>pm</sup> 7	7,5	110	0,32	11,3	1,24	43,9	7,5/10	G1/2"	755 x 630 x 1100	1870 x 680 x 1600	153	335	250L	64
	8,5	125	0,31	10,9	1,13	39,8								
	10	145	0,27	9,5	1,0	35,3								
	13	190	0,42	14,8	0,74	26,2								
INVERSYS PLUS <sup>pm</sup> 11	7,5	110	0,58	20,5	2,01	70,9	11/15	G3/4"	835 x 730 x 1200	1870 x 730 x 1700	210	394	250L	69
	8,5	125	0,56	19,8	1,89	66,8								
	10	145	0,54	19,1	1,69	59,6								
	13	190	0,51	18,0	1,13	39,8								
INVERSYS PLUS <sup>pm</sup> 15	7,5	110	0,75	26,5	2,5	88,3	15/20	G3/4"	835 x 730 x 1200	1870 x 730 x 1700	236	423	250L	69
	8,5	125	0,73	25,8	2,3	81,3								
	10	145	0,6	21,2	1,94	68,4								
	13	190	0,59	20,8	1,36	48								
INVERSYS PLUS <sup>pm</sup> 18	7,5	110	0,81	28,6	3,4	120	18,5/25	G1"	870 x 905 x 1400	2150 x 1225 x 1950	350	766	2x270L	64
	8,5	125	0,77	27,2	3,2	113								
	10	145	0,72	25,4	2,83	99,8								
	13	190	0,66	23,3	2,39	84,5								
INVERSYS PLUS <sup>pm</sup> 22	7,5	110	1,08	38,1	3,9	138	22/30	G1"	870 x 905 x 1400	2150 x 1225 x 1950	338	759	2x270L	68
	8,5	125	0,97	34,3	3,66	129								
	10	145	0,99	35,0	3,26	115								
	13	190	0,92	32,5	2,65	93,4								
INVERSYS PLUS <sup>pm</sup> 30	7,5	110	1,36	48,0	5,61	198	30/40	G1 1/2"	1030 x 935 x 1400	-	468	-	-	70
	8,5	125	1,32	46,6	5,2	184								
	10	145	1,32	46,6	4,73	167								
	13	190	1,2	42,4	3,87	137								
INVERSYS PLUS <sup>pm</sup> 37	7,5	110	1,84	65,0	6,64	235	37/50	G1 1/2"	1030 x 935 x 1400	-	475	-	-	73
	8,5	125	1,71	60,4	6,27	221								
	10	145	1,51	53,3	5,55	196								
	13	190	1,31	46,3	4,54	160								
INVERSYS PLUS <sup>pm</sup> 45	7,5	110	1,42	50,6	8,43	298	45/60	G1 1/2"	1095 x 1300 x 1600	-	760	-	-	73
	8,5	125	1,41	49,8	7,93	280								
	10	145	1,37	48,4	7,22	255								
	13	190	-	-	-	-								
INVERSYS PLUS <sup>pm</sup> 55	7,5	110	2,5	88,3	10,42	368	55/75	G1 1/2"	1095 x 1300 x 1600	-	910	-	-	74
	8,5	125	2,44	86,2	9,65	341								
	10	145	2,42	85,5	8,76	310								
	13	190	-	-	-	-								
INVERSYS PLUS <sup>pm</sup> 75	7,5	110	3,42	121	14,58	515	75/100	G 2"	1295 x 1400 x 1700	-	1130	-	-	75
	8,5	125	3,31	117	13,92	492								
	10	145	3,25	115	12,76	451								
	13	190	-	-	-	-								

- 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.

- Dalgakiran 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.