

IMPETUS

Rotary Screw Air Compressors
Double Stage



90-315 kW



DALGAKIRAN

IMPETUS SERIES

Dalgakiran Impetus Series two stage screw compressors provide compressed air suitable for your needs with its superior technological equipment, modern design and high energy savings. With the Impetus VSD Series, we can meet your compressed air needs with energy savings up to 65%. It is specially designed to meet all your needs from 90 to 315 kW.



5,2-62,67
m³/min

90-315
kW

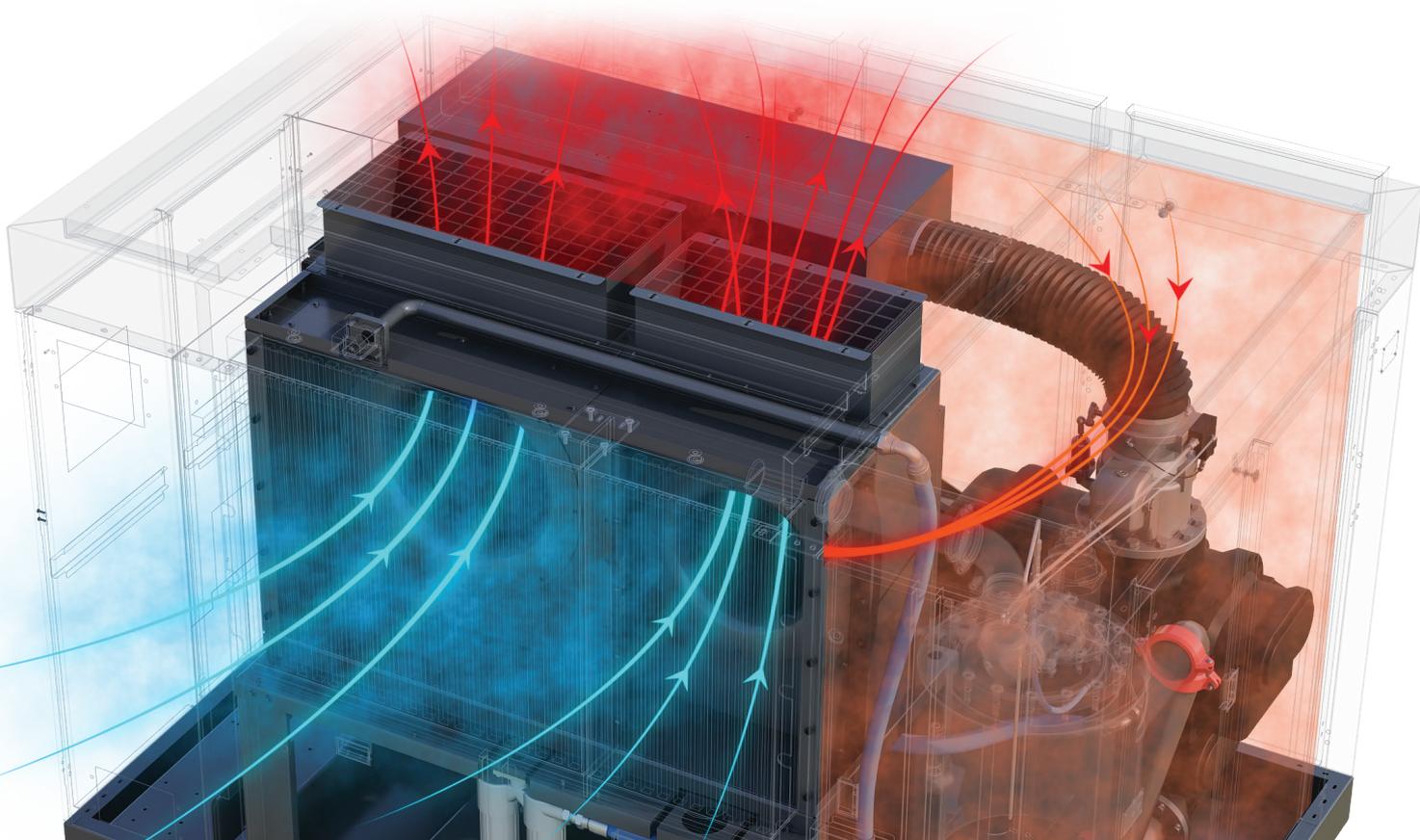
7,5-8,5
10-13
bar



IMPETUS *SERIES*

*Oil Injected, Two-Stage, Direct Coupled, Fixed/Variable Speed
Rotary Screw Air Compressors*

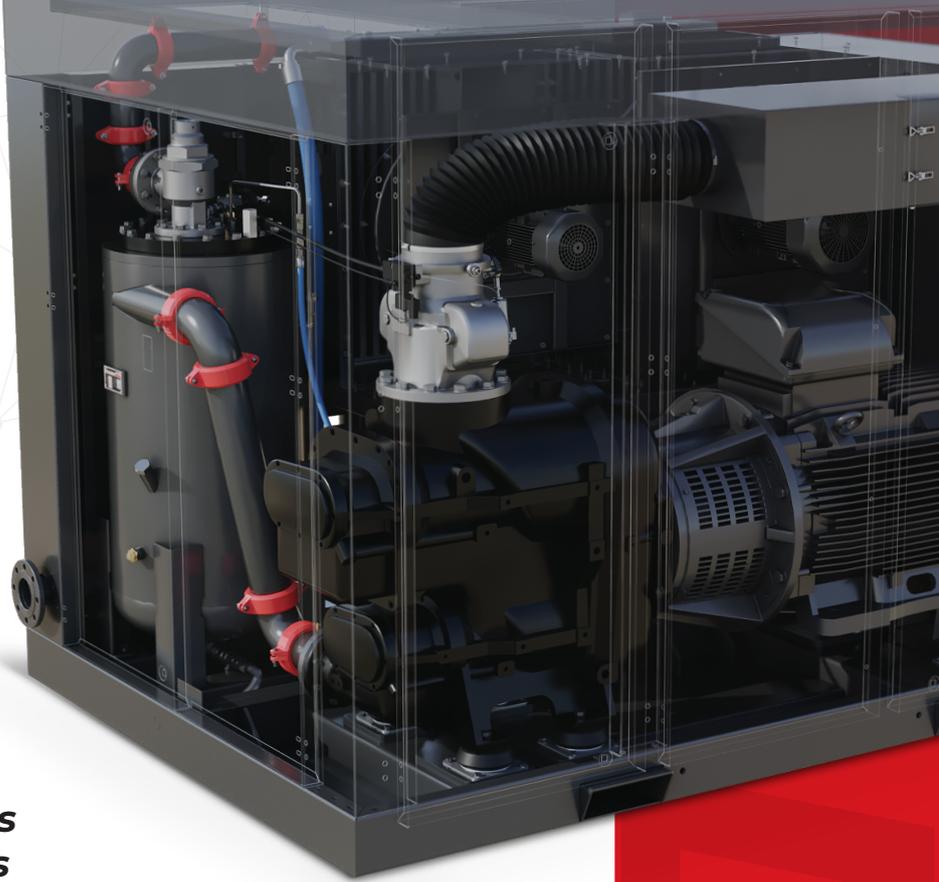
Next gen compact compressors maximize your energy saving, minimize your total cost of own.





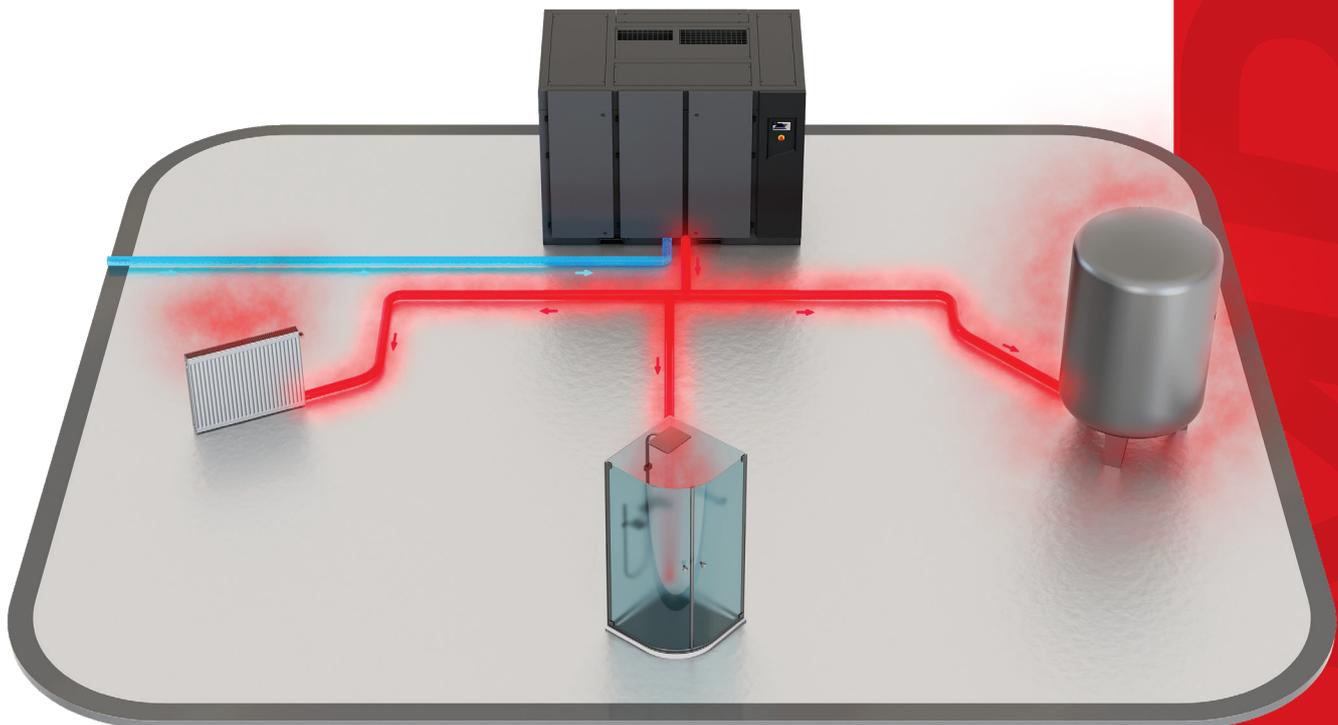
General Features

- IE4 efficiency-class electric motors
- Two-stage screw block
- Variable and fixed speed motor power options
- Water cooling and heat recovery (optional)
- Operating with low noise level



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.



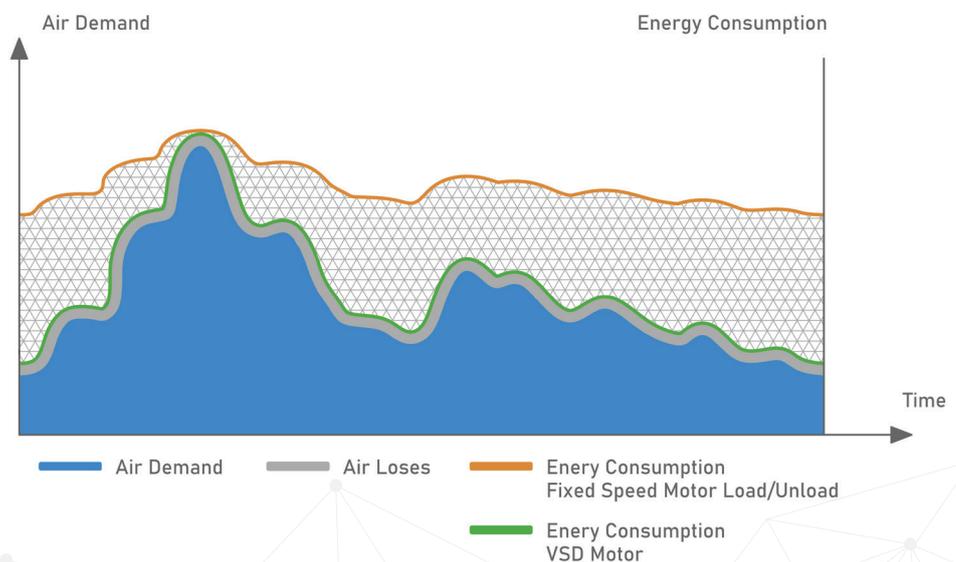


VSD What is VSD Technology?

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

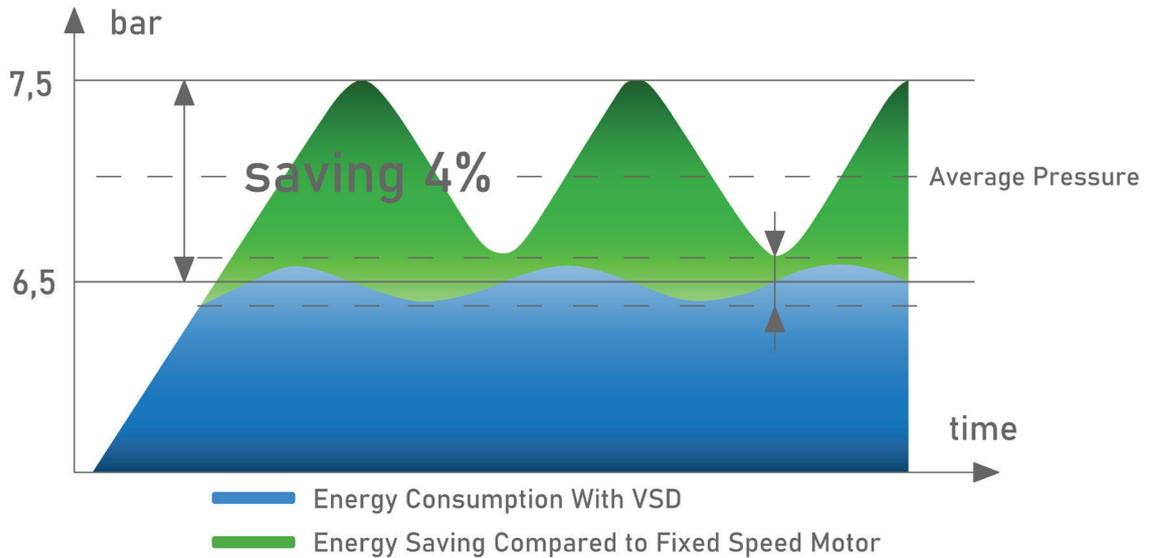
In such conditions our compressors automatically adjust the compressor's operating speed to match air production to demand in real time, saving significant amounts of energy.

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.



up to **65%***
energy savings

4% 4% 92%

65%

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



IMPETUS

IS THE NEW POWER TO MAKE THINGS HAPPEN



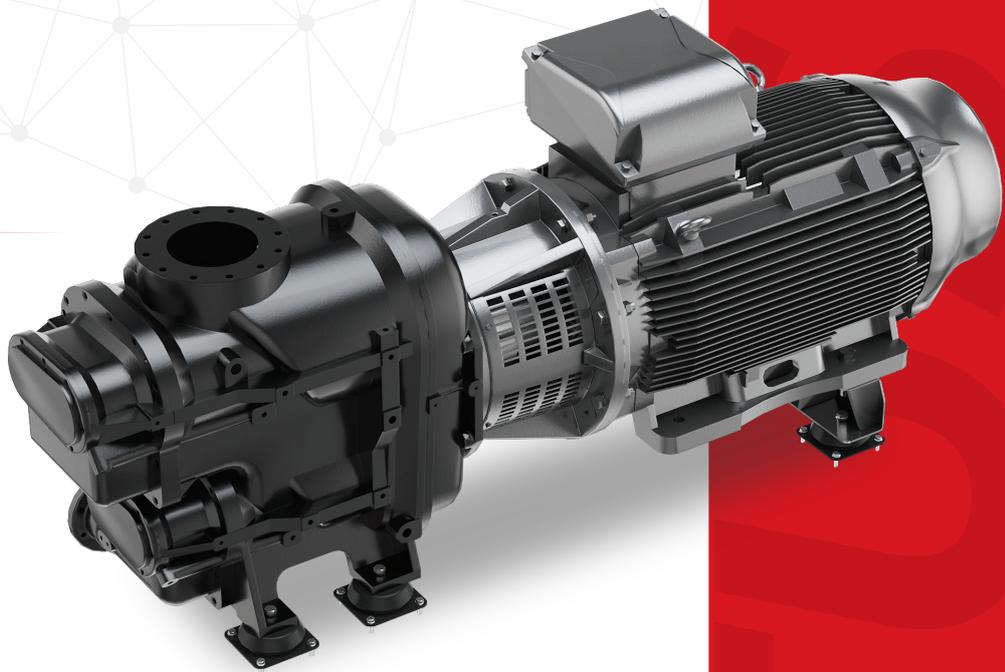
Screw Block

- Two-stage screw produces energy efficiency by up to 10%
- Higher flow rate by up to 10% comparing to single stage
- Direct coupled
- Reduced internal losses
- Thanks to low compression rate, low axial and compression forces
- Thanks to low rotor speeds, a long service life
- With two-stage compression near isothermal compression
- Reduced axial and compression forces resulting in longer screw and bearing service life



Electric Motor

- IE4 efficiency-class electric motors
- Motors have B-class temperature increase
- Continuous operating feature



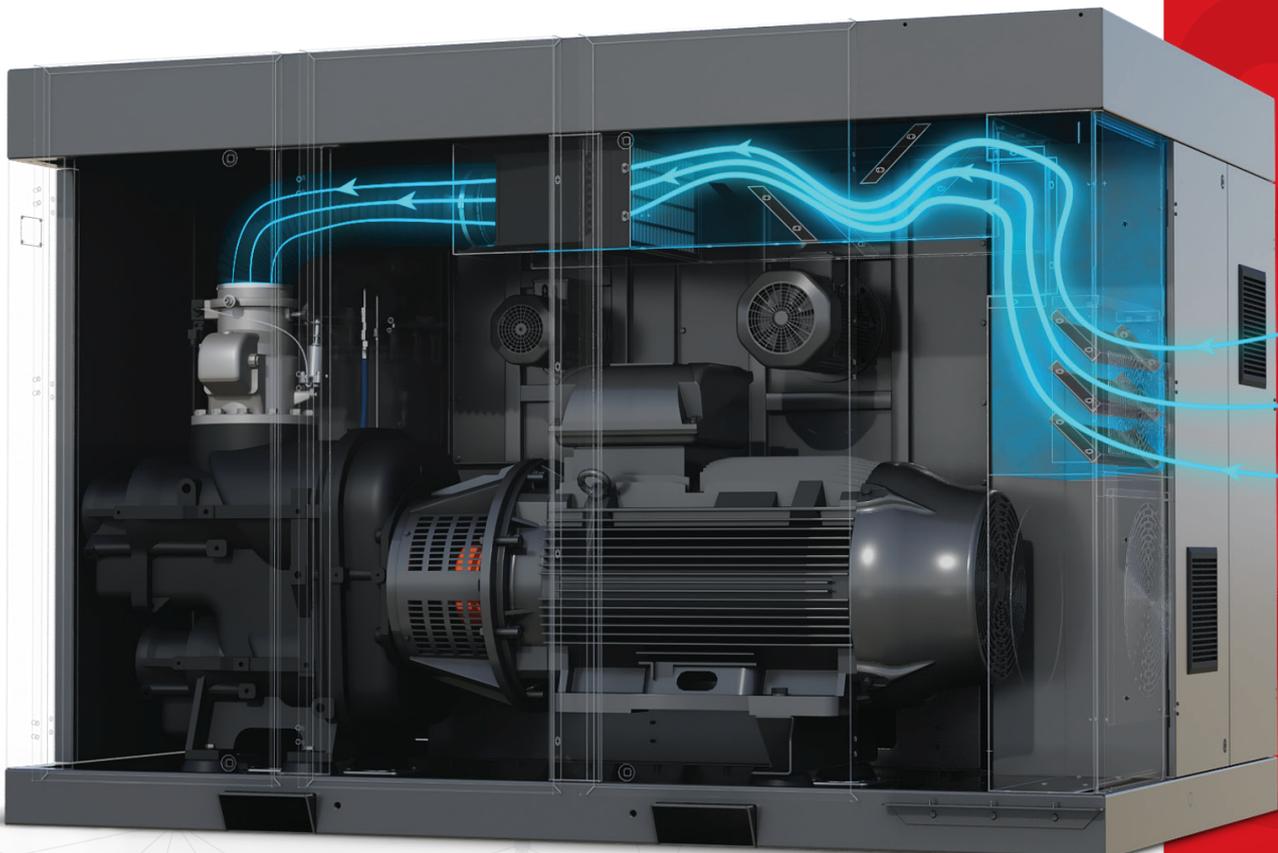
Intake Chamber

- Intake in cold air directly from the environment contributes to energy efficiency by up to 2%
- High energy efficiency with minimized intake pressure losses
- With improved acoustic designs result in low noise levels



Cooling System

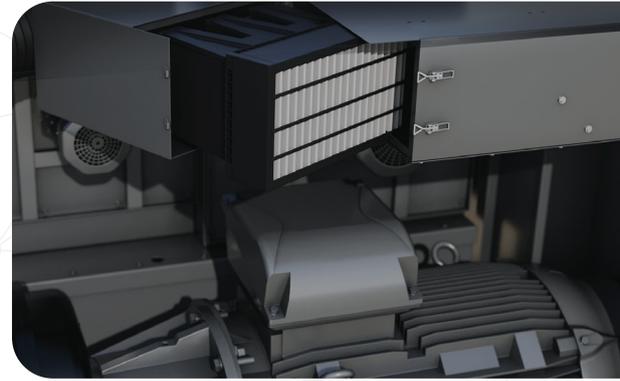
- High cooling efficiency in compact air and oil heat exchangers
- Suitable design for operating up to 45°C
- Low noise level with low speed radial fans
- Energy efficiency with optimum oil temperature thanks to VSD-controlled radial fan





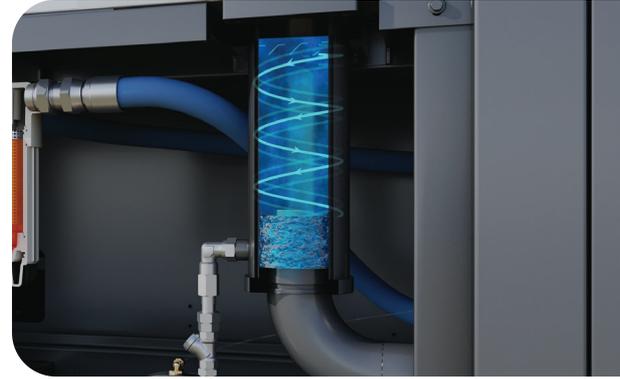
Air Filter

- Protects the screw block by separating particles down to 3 microns
- Intake pressure loss: <2 mbar results in high efficiency throughout the maintenance period
- Easy maintenance
- Long service life



Oil Filter

- Eco-friendly and recyclable oil filter
- Oil filter contains no metal alloys
- Aluminium housing
- Easy maintenance



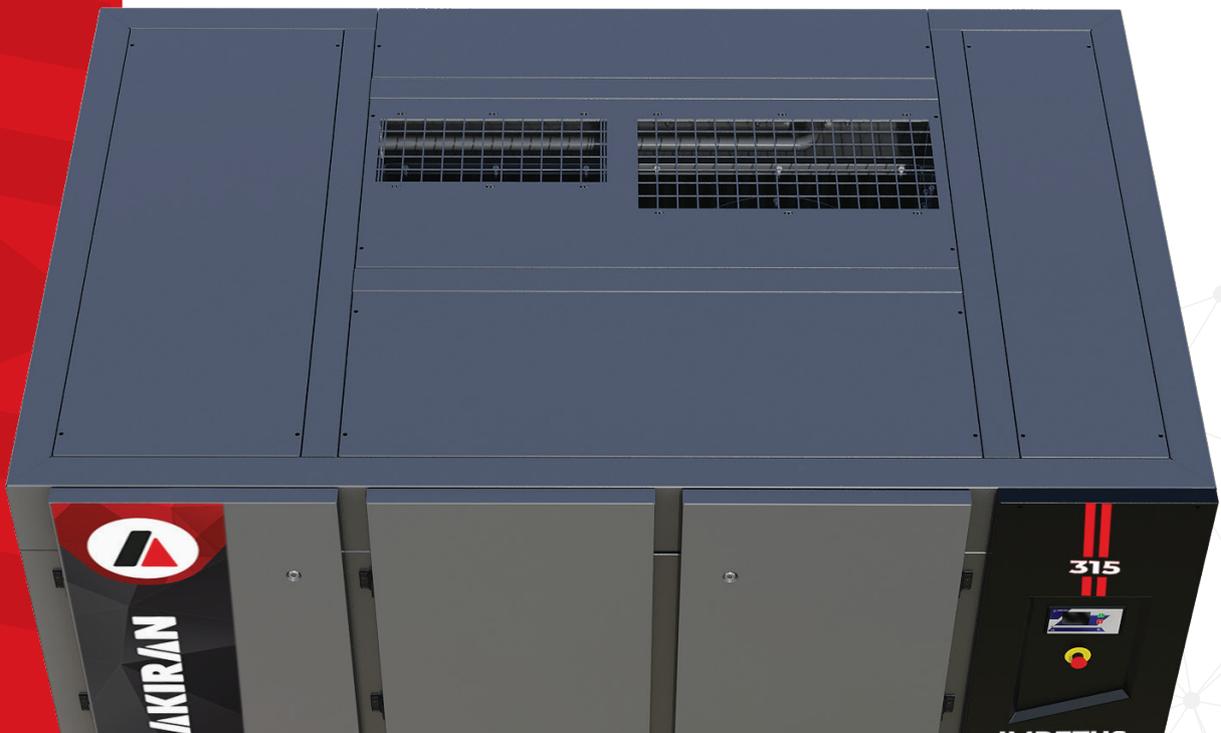
Water Separator

- Compact, integrated, and unique design
- Reliable initial separation (>% 99)
- High separation efficiency at high humidity and temperature
- Zero loss drain
- High energy efficiency with minimal pressure loss



Oil Separator

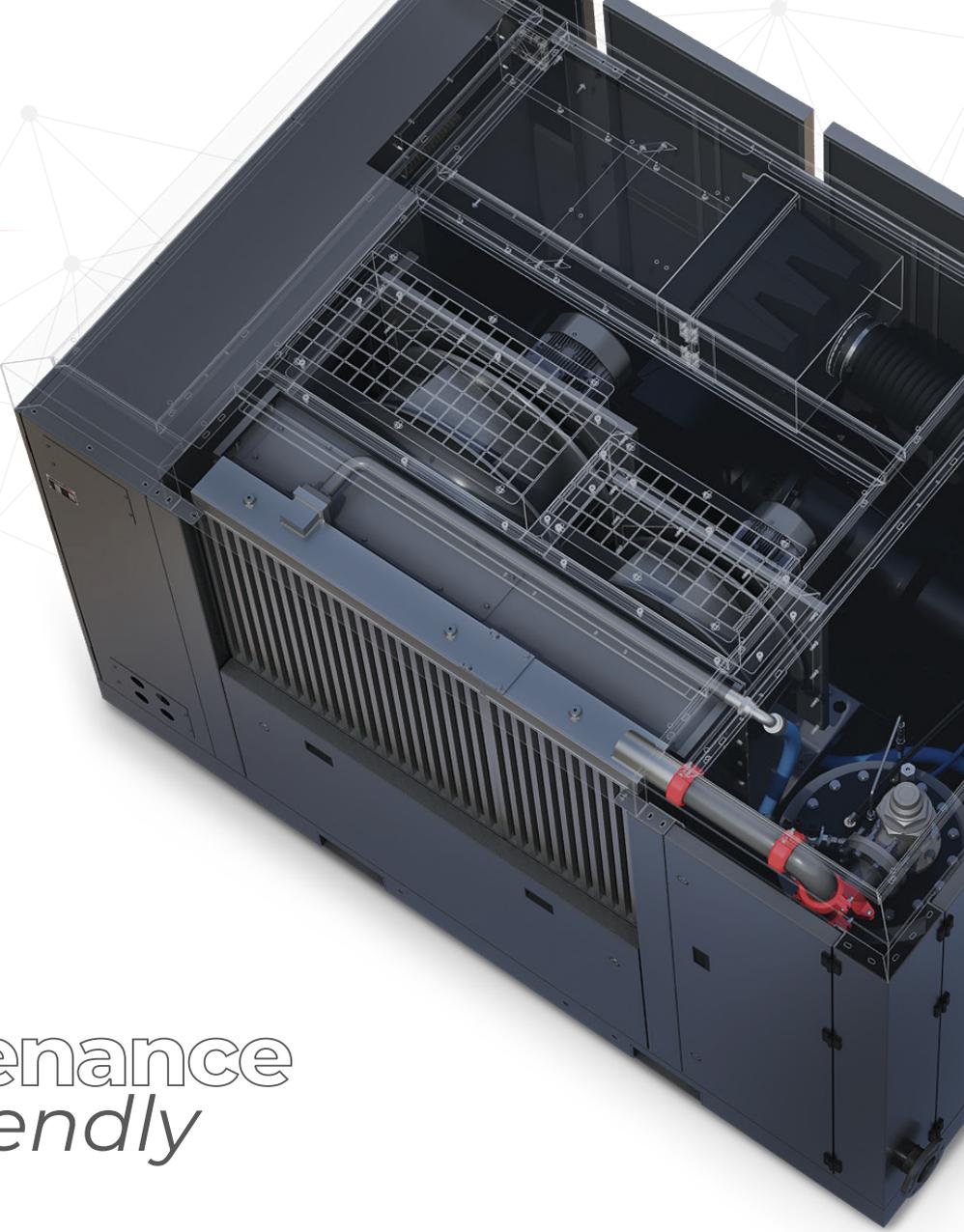
- High separation efficiency thanks to larger surface area
- The Sep-n-Sep feature results in at least 30% lower pressure drop
- The oil separator tank and sensitive dual surface air oil separator keep the amount of oil at the compressed air outlet below 3 mg/m³





Maintenance and Service

- The compressor's key components are specially designed to make servicing easy.
- Oil filter and air filters can be replaced easily
- Longer maintenance period due to less force on the bearings
- Low-speed rotors produce less vibration and noise



Easy
Maintenance
Service Friendly





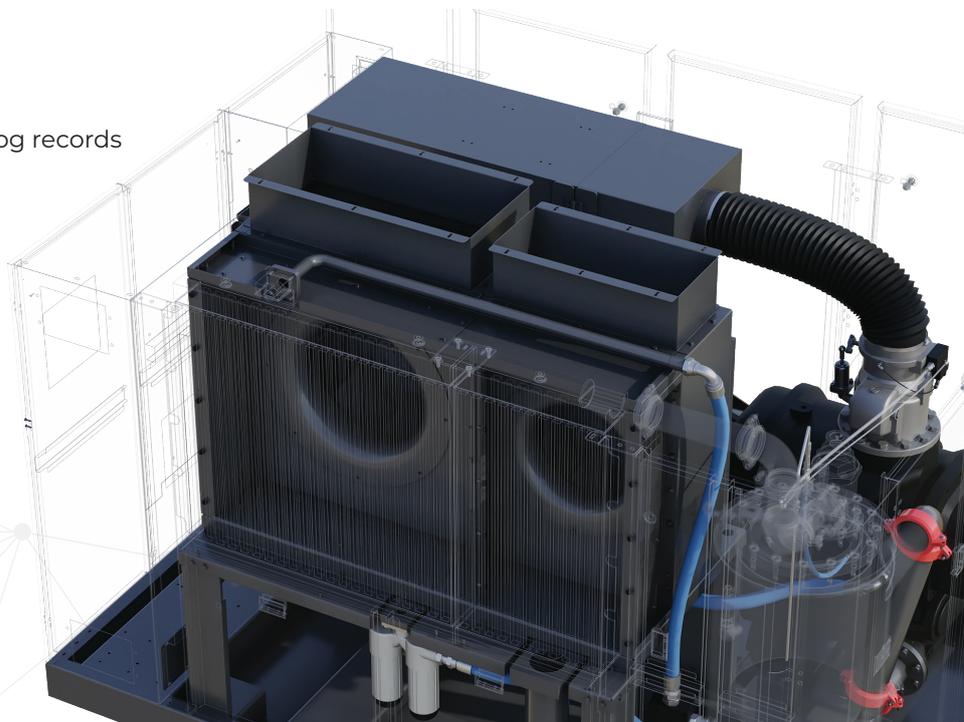
Controller

- Without the need for an external main controller, ability to work synchronized for up to 5 compressors
- Weekly scheduler for starting / stopping the machine at 3 different time intervals can be individually set for each day of the week
- Dual PID feature on inverter-equipped models can run simultaneous PID for temperature and pressure
- Pressure PID on inverter-equipped models ensures energy-efficient operation by maintaining the pressure at the required level
- Temperature PID on inverter-equipped models controls the fan speed to maintain the screw block's most efficient operating temperature
- On inverter-equipped models, all inverter and compressor control data are managed from a single point
- Internal ModBus communication
- User-friendly on-screen interface
- Alarm log records the last 20 alarms
- Periodic maintenance warnings and log records



Certification

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



Model	Pressure		Capacity*		Motor kW/HP	Connection Size	Dimensions (mm)			Weight kg	Noise dB (A)
	bar	psi	m3/min	cfm			Length	Width	Height		
IMPETUS 90	7,5	110	18,42	650	90/125	DN65	2775	1805	1926	3660	75
	8,5	125	14,72	520							
	10	145	14,65	517							
	13	190	13,65	482							
IMPETUS 110	7,5	110	23,89	844	110/150	DN65	2775	1805	1926	4000	75
	8,5	125	21,76	768							
	10	145	18,49	653							
	13	190	14,57	515							
IMPETUS 132	7,5	110	26,25	927	132/180	DN80	2950	1950	2000	4500	75
	8,5	125	26,07	921							
	10	145	23,62	834							
	13	190	21,82	771							
IMPETUS 160	7,5	110	31,72	1120	160/220	DN80	2950	1950	2000	5000	76
	8,5	125	31,29	1105							
	10	145	25,78	910							
	13	190	25,60	904							
IMPETUS 200	7,5	110	43,49	1536	200/270	DN 100	3500	2250	2350	6220	78
	8,5	125	40,70	1437							
	10	145	34,77	1228							
	13	190	30,62	1081							
IMPETUS 250	7,5	110	53,40	1886	250/340	DN 100	3500	2250	2350	9120	79
	8,5	125	50,49	1783							
	10	145	43,15	1524							
	13	190	40,53	1431							
IMPETUS 315	7,5	110	62,67	2213	315/430	DN 100	3500	2250	2350	9400	80
	8,5	125	56,95	2011							
	10	145	55,18	1949							
	13	190	44,13	1558							

- 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.

Model	Pressure		Capacity*				Motor Power	Connection Size	Dimensions (mm)			Weight	Noise
			Minimum		Maximum				Length	Width	Height		
	bar	psi	m3/min	cfm	m3/min	cfm	kW/hp	kg				dB (A)	
IMPETUS VSD 90	7,5	110	5,38	189	18,44	651	90/125	DN65	2775	1805	1926	3835	75
	8,5	125	5,36	189	17,33	612							
	10	145	5,24	185	15,87	560							
	13	190	5,15	181	13,66	482							
IMPETUS VSD 110	7,5	110	7,08	250	23,12	816	110/150	DN65	2775	1805	1926	4200	75
	8,5	125	6,9	243	21,68	766							
	10	145	6,88	242	20,2	713							
	13	190	6,82	240	17,25	609							
IMPETUS VSD 132	7,5	110	7,94	280	27,88	985	132/180	DN80	2950	1950	2000	4675	75
	8,5	125	7,9	278	26,4	932							
	10	145	7,59	268	24,51	866							
	13	190	7,5	264	21,35	754							
IMPETUS VSD 160	7,5	110	8,5	299	32,45	1146	160/220	DN80	2950	1950	2000	5300	76
	8,5	125	8,25	291	30	1059							
	10	145	8,39	296	28	989							
	13	190	9,14	322	24,98	882							
IMPETUS VSD 200	7,5	110	11,8	416	42,86	1514	200/270	DN 100	3500	2250	2350	6550	78
	8,5	125	11,8	416	39,94	1410							
	10	145	11,6	410	37,01	1307							
	13	190	11,4	402	30,54	1079							
IMPETUS VSD 250	7,5	110	17,34	612	52,41	1851	250/340	DN 100	3500	2250	2350	9400	79
	8,5	125	17,12	604	49,13	1735							
	10	145	16,76	591	45,86	1620							
	13	190	17,33	612	38,84	1372							
IMPETUS VSD 315	7,5	110	16,86	595	62,01	2190	315/430	DN 100	3500	2250	2350	9680	80
	8,5	125	16,85	595	59,31	2095							
	10	145	16,81	593	55,24	1951							
	13	190	30,33	1071	45,96	1623							

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