tamsan®

COMPRESSORS

INDUSTRIAL AIR COMPRESSORS

Servo Magnet Hybrid Motor • Inverter • Single and Double Stage • Screw Air Compressors

SERVO SERIES PRODUCT CATALOGUE


COMPRESSORS

tamsan®
COMPRESSORS

Tamsan Compressor was established in 1980 ,and it entered the production cycle to produce air compressors and spare parts. In the early years, production was carried out on universal machines, but with the advancement of technology, universal machines were replaced with CNC (Computer Controlled) machines, which changed the production structure and resulted in higher quality standard Tamsan Compressor continues production in 7200 m² open and 4000 m² closed area.

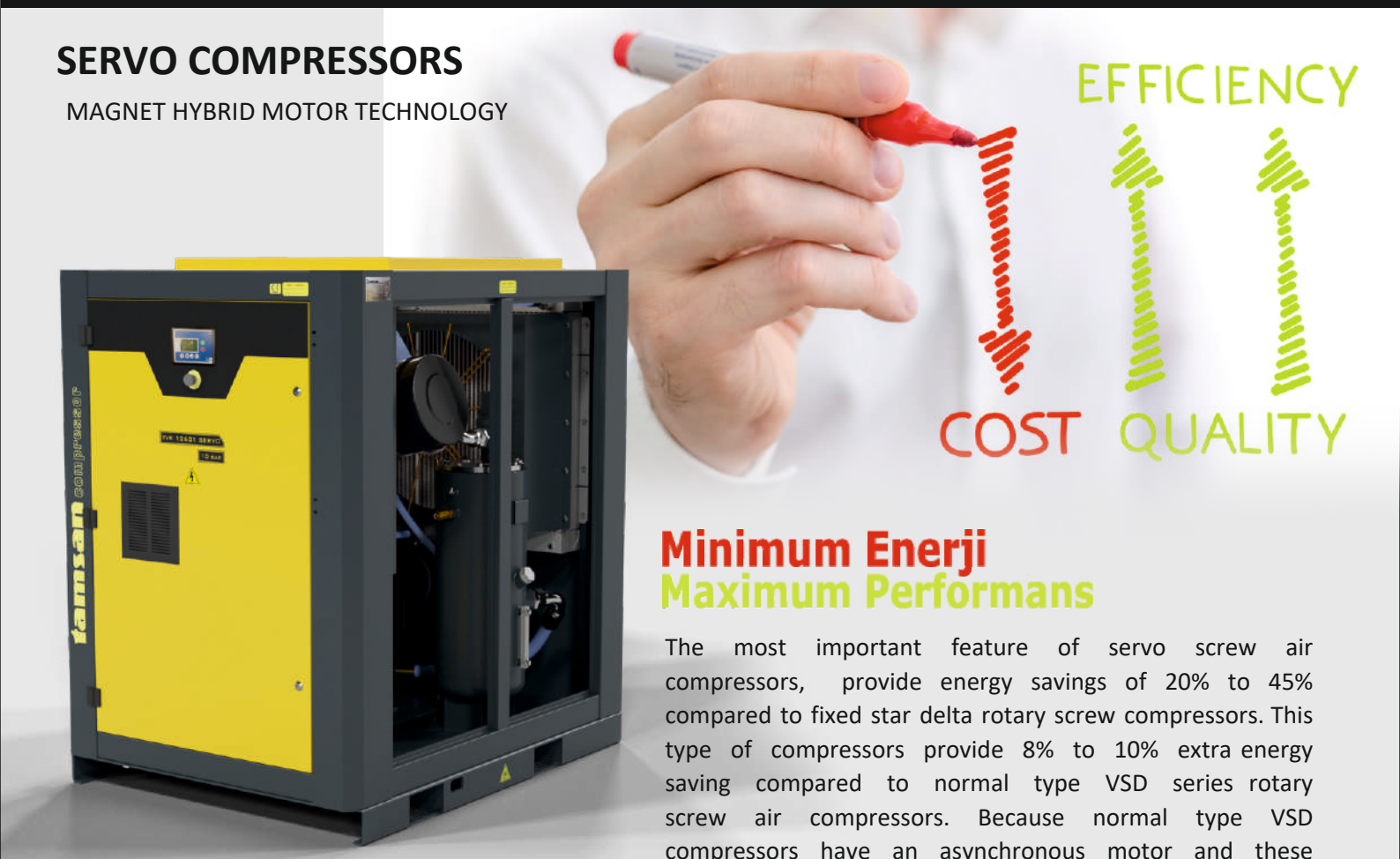
"We Produce Satisfaction"

As Tamsan, we help producers consume less and earn more.We pursue innovations from around the world, deliver world-changing technologies to our customers in the simplest and most meaningful way, protect the environment, and fulfill our corporate and social responsibilities.We have a long history of being a responsible and progressive company. Our strong market position is based on long-term partnerships with customers, technical knowledge and expertise applied in testing.

Tamsan Compressor, which does not compromise on quality, exports to many countries, especially European countries. Thanks to its exports and high quality in production, it is becoming a worldwide brand day by day. Tamsan Compressor, which is expanding its product range every day ,produces 80 different types of compressors.In addition, it works on new projects and develops different products within the framework of university-industry cooperation. As a leading brand in the sector, Tamsan Compressor aims to produce more and export more.

SERVO COMPRESSORS

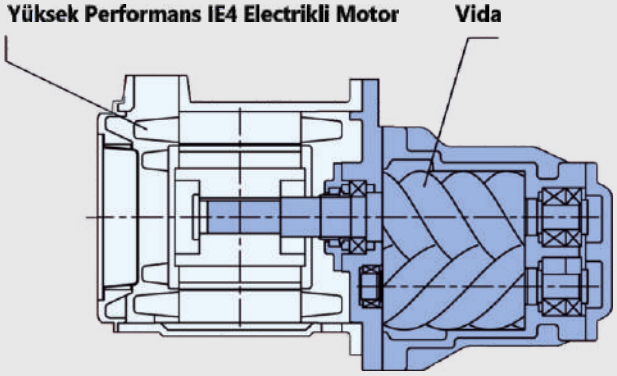
MAGNET HYBRID MOTOR TECHNOLOGY

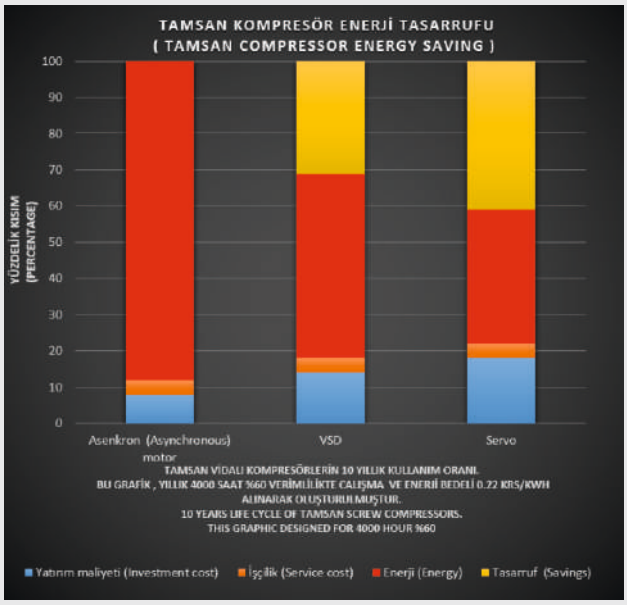


Minimum Enerji
Maximum Performans

The most important feature of servo screw air compressors, provide energy savings of 20% to 45% compared to fixed star delta rotary screw compressors. This type of compressors provide 8% to 10% extra energy saving compared to normal type VSD series rotary screw air compressors. Because normal type VSD compressors have an asynchronous motor and these motors can reach 88% and 90% efficiency.With this, the Servo series rotary screw air compressors are with synchronous motors. These motors can running at up to 98% efficiency. Therefore, they are known as First Class energy saving motors. The graph compares the efficiency of a normal type motor with a servo motor. Tamsan Servo screw air compressors have a structure with the screw unit and hight efficiency synchronous motor that integrated into the air compressors. Additionally, it takes up less space cause of it's small size and compact design.

BEARINGLESS MOTOR and COUPLING LESS DIRECT BATTERY DESIGN





Smart Control System

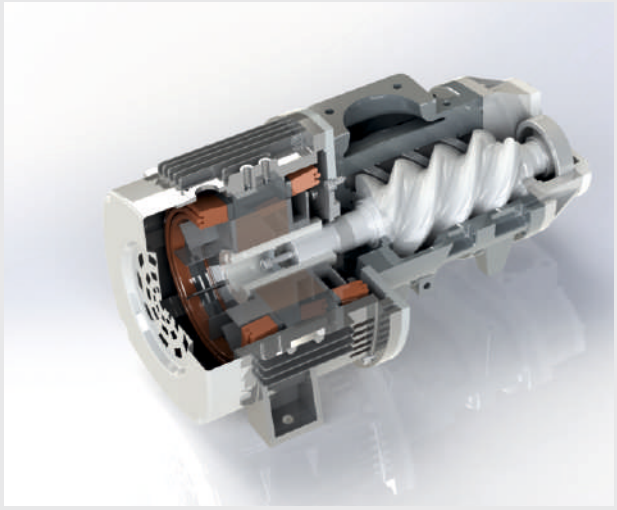
- Customized smart touch screen
- Fault and emergency warning system
- Multiple compressor operation
- Remote start - stop
- Weekly work schedule
- Remote control feature via phone (optional)
- Storing error records in memory

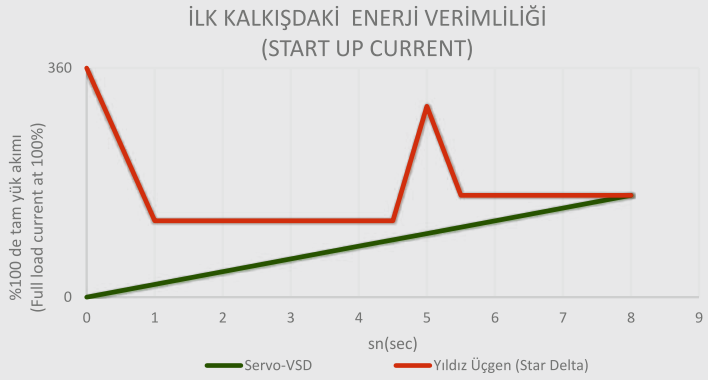
Energy saving

Permanent air supply is provided by the inverter's PID controller or the speed adjustment feature of the driver.

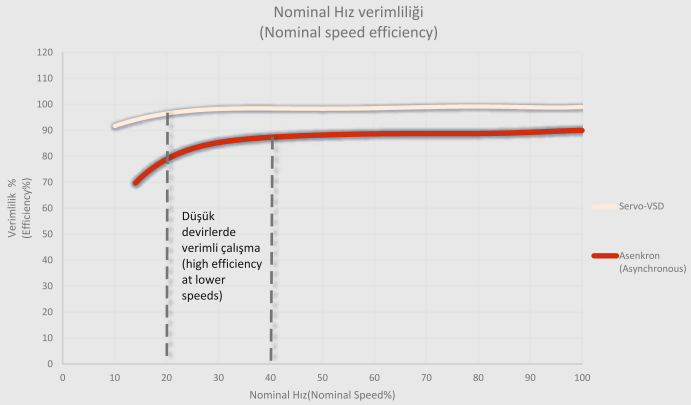
As can be seen from the image below, there is not power transmission element between the rotary screw unit and the servo motor. The male rotor shaft of the screw unit is also the shaft of the servo motor. The shaft is fixed with a bearing at the back of the motor .

Cause of no bearings are used in the motor, energy savings are achieved by reducing friction and noise levels are minimized. In addition, Space advantage is provided due to the compact structure of the system.

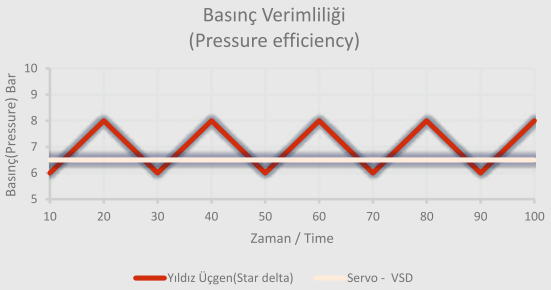




Bu grafik 90 kw lık bir kompresör için hazırlanmıştır.
(This graphic designed for 90 kw compressor.)



SERVO vs Asenkron motor verimliliği (SERVO vs Asynchronous motor efficiency)



COMPARISON TABLE			
Compressor Type	**Fix Speed**	**Normal Variable speed**	**Servo Motor Variable speed**
Compressor Connection	Kayış Kasnak /Direk Akuple	Belt Drive /Direct Drive	Integrated Connect
Transmisyon Verimliliği	%93-98%	%93-98%	100%
Working Pressure	Unstable. Load-Head Working	If there is a lot of fluctuation in the air being consumed, it is not very stable.	Fixed air pressure
Engine Efficiency	%89-91%	89%-91% When frequency is low, motor efficiency is low.	91%-96%, motor efficiency is high even at low frequencies
Variable Frequency Range	Fixed Speed	The 45%-100% variable frequency range is not very wide and cannot respond sufficiently to consumption fluctuations.	A wide frequency range between 25% and 100% can adapt to the changes in air consumption.
Sound Level	High	Relatively low	Low
Mechanical Parts	Relatively Complicated	Relatively Complicated	Simple
Reliability	Good	Good	Perfect

Innovative design contents

Safety System & Easy Maintenance

1 Electrical Motor

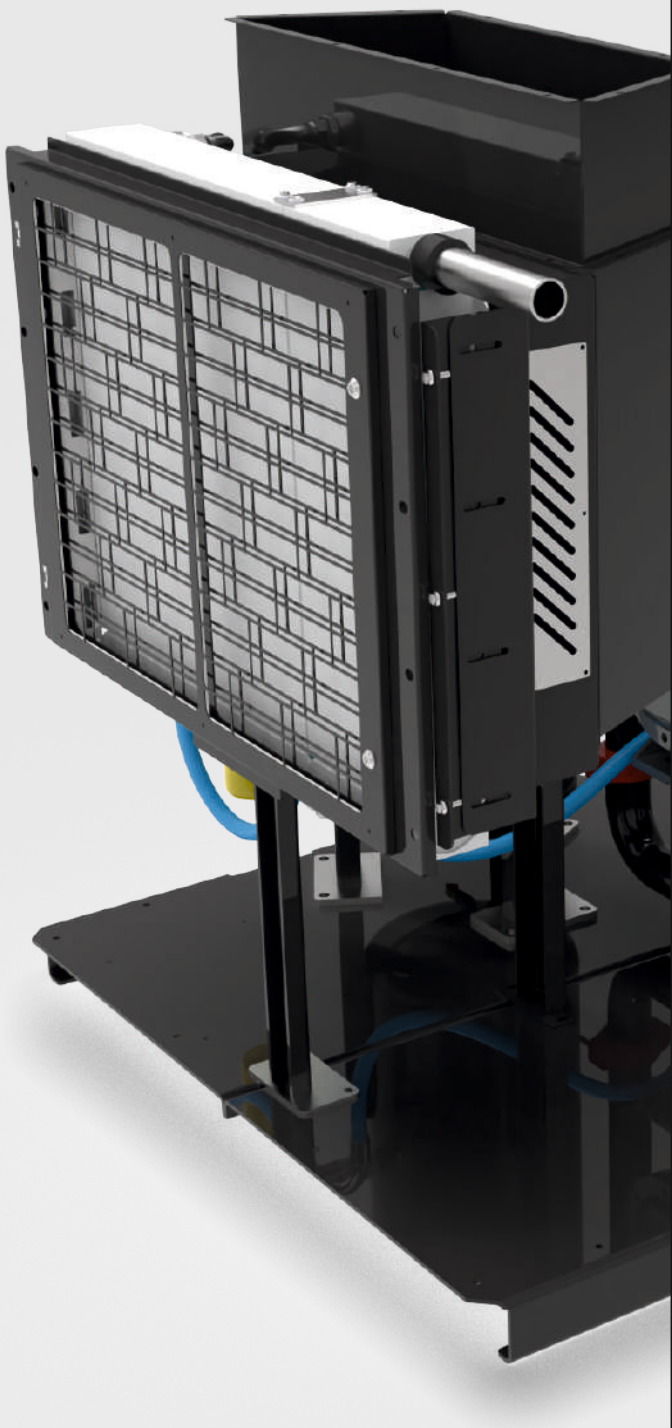
- Bearingless motor technology
- IE4 - IE5 ultra-premium energy efficient
- Interior Permanent Magnet (IPM) electrical motor
- Compact design, small size
- Low noise level
- High torque at low speeds
- PTC and thermistor protected

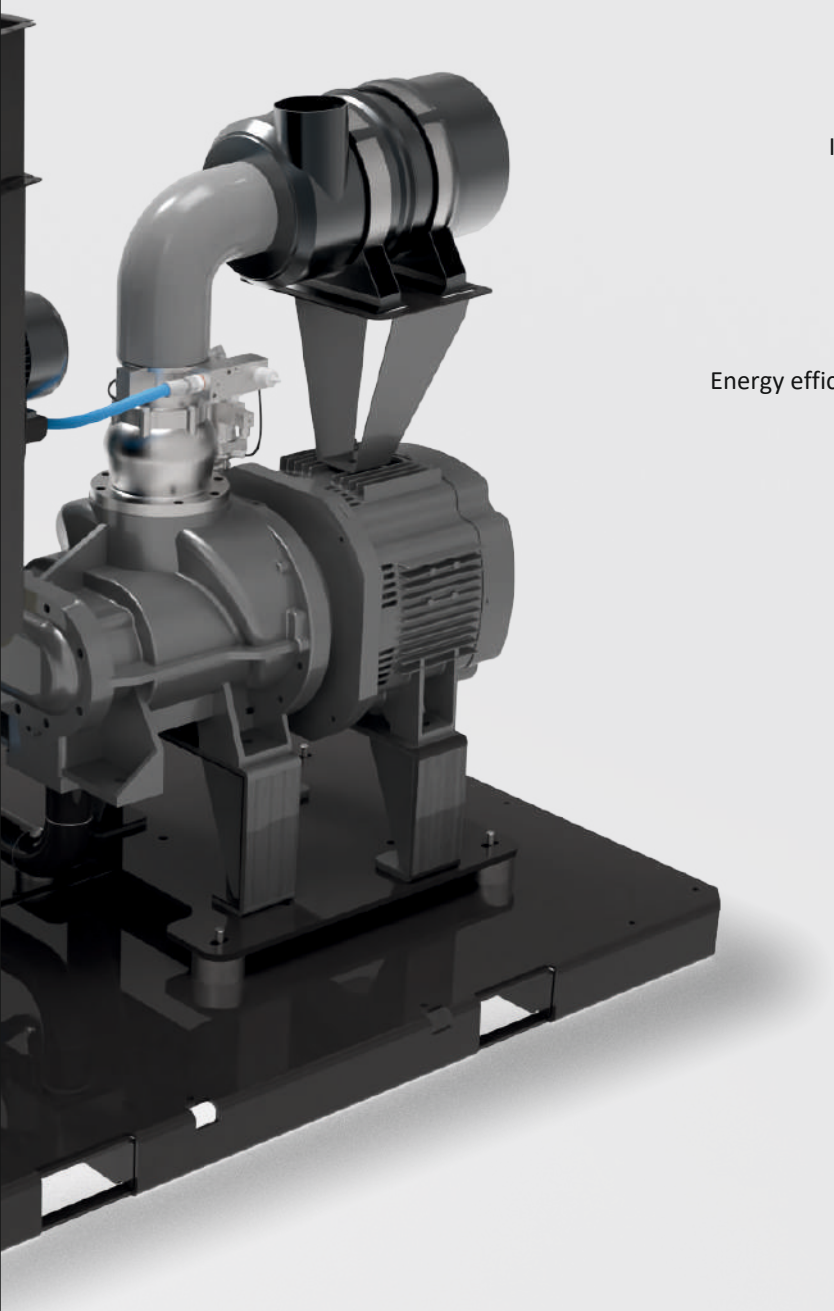
2 Long life screw group

- New generation screw profile with steel rotor
- High performance even at low speeds
- New generation heavy duty bearing design
- Long life at low speed
- Coupled connection power transmission

3 Inverter

- Vector control technologies
- Fast ramping feature
- Soft start, soft departure feature
- Specially produced inverter for the compressor





Smart control system 4

User-friendly smart touch screen•
Fault and emergency warning system •
Multiple compressor operation •
Remote start-stop•
Weekly work schedule •
Remote control feature via phone (optional) • Hata storing records•
Instant and total energy consumption display feature•

Fan 5

emperature controlled axial and radial fans •
Energy efficiency thanks to inverter-controlled fans (15 to 90 kW)
Long service life •

Hoses 6

Perfect temperature range: -40°C to +135°C High pressure resistance •
Excellent performance even in harsh conditions
Reinforcing steel mesh •
Flexible rubber structure •
Long life using •

Thermostatic valve 7

Active temperature control •
Compact structure integrated into the oil wedge
Fast lubrication feature•

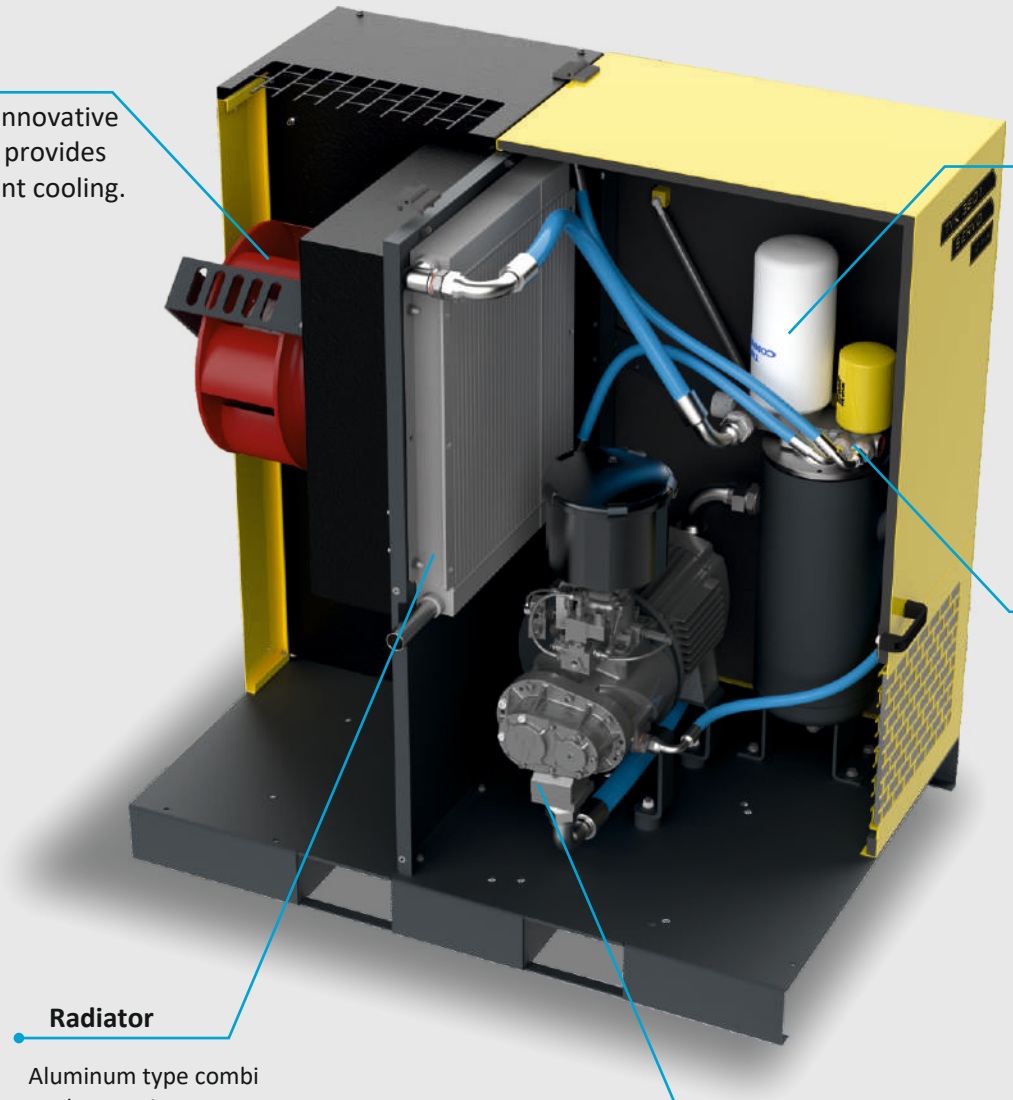
Servo Series Single Stage Compressor
Technical Details

MODEL	Pressure		MOTOR	Capacity		Connect size	Size	Weight	Sound Level
				Minimum	Maximum				
	bar	psi	kw/Hp	m3/min	m3/min		W*L*H	kg	dB(A)
TVK 1901 SERVO	6	87	11/15	0,74	2,10	3/4"	850*1140*1200	375	68
	8	116		0,67	1,90				
	10	145		0,60	1,70				
TVK 2501 SERVO	6	87	15/20	1,00	2,85	3/4"	850*1140*1200	395	69
	8	116		0,89	2,55				
	10	145		0,79	2,25				
TVK 3801 SERVO	6	87	22/30	1,45	4,15	1"	900*1320*1320	440	69
	8	116		1,31	3,75				
	10	145		1,16	3,30				
TVK 5201 SERVO	6	87	30/40	2,05	5,85	1/1/4"	1000*1220*1640	410	68
	8	116		1,84	5,25				
	10	145		1,65	4,70				
TVK 6400 SERVO	6	87	37/50	2,54	7,25	1/1/4"	1000*1220*1640	460	69
	8	116		2,29	6,55				
	10	145		2,03	5,80				
TVK 7800 SERVO	6	87	45/60	3,10	8,85	1/1/4"	1000*1220*1640	470	69
	8	116		2,80	8,00				
	10	145		2,50	7,15				
TVK 9800 SERVO	6	87	55/75	3,78	10,80	1/1/2"	1300*1740*1780	1250	70
	8	116		3,48	9,95				
	10	145		3,12	8,90				
TVK 12600 SERVO	6	87	75/100	5,13	14,65	2"	1300*1740*1780	1350	73
	8	116		4,76	13,60				
	10	145		4,27	12,20				
TVK 15800 SERVO	6	87	90/120	6,34	18,10	2"	1680*2220*1920	2000	75
	8	116		5,88	16,80				
	10	145		4,97	14,20				
TVK 18700 SERVO	6	87	110/150	7,67	21,90	2"	1680*2220*1920	2200	75
	8	116		7,04	20,10				
	10	145		5,99	17,10				
TVK 23100 SERVO	6	87	132/180	9,07	25,90	2"	1680*2220*1920	2500	78
	8	116		8,40	24,00				
	10	145		7,46	21,30				

Free air measurements at specified pressures,
Determined accordingt o I S O 1 2 1 7
A n n e x C s t a n d a r d .

Innovative design contents

Safety System & Easy Maintenance



Radial Fan

Silently, an innovative system that provides more efficient cooling.

Separator Filter

Separator filter with oil permeability below 3 mg/m³, used in larger capacity than normalr .

Combination block

Thermostatib valve and MPV(Low pressure Valve)are mounted on the aluminum block to which the separator and oil filter are connected.

Radiator

Aluminum type combi cooler, maximum efficiency even at +40° C ambient temperatures.

Screw Group

Single stage screw group, Manufactured with new generation rotor profile, silently and longer-life operating system with optimum tolerance

Tank & Dryer Top

MAGNET HYBRID MOTOR
INVERTER
SCREW AIR COMPRESSORS

TVK 1900 T SERVO, TVK 2500 T SERVO
TVK 1900 TK SERVO, TVK 2500 TK SERVO

Kompakt Tasarım

11 kw ve 15 kw vidalı kompresörümüz aynı kabin içerisinde yer almaktadır Servo motor ve asimetrik profile sahip olan vida grubu ünitesi toza karsı son derece dayanıklı rulman sistemiyle döndürülmektedir . Direk akuple tahrikli olan bu vida grupları , rulman ve profil yapısından dolayı vida grubu çok sessiz çalışmaktadır. Rakiplerinin vida gruplarına göre çok daha verimli çalışan bu Kompresörler çok uzun rulman bakım sürelerine sahiptir. Kabin kapak sistemi kolay açılabilir olan bu modeller servis kolaylığı sağlamakta ve işletmelerde hem zamandan hem de paradan tasarruf ettirmektedir. Elektronik kontrol ünitesi bakım zamanları arıza kodları ve alarmları bildirerek operatöre kompresörle ilgili bilgi vermektedir.

Dryer and Filter Integrated Design

"TK serisi" kompresörler, kompresör, hava tankı, kurutucu ve filtreleri içeren kompakt tasarımlı kompresörlerdir. TK serisinde kompresör ve kurutucu aynı hava kompresörüne monte edilmiştir. Basınçlı havanın nemi, kompresör çalışırken hava tankına gönderilirken kurutucu tarafından ayrılır.

The remaining water in the dryer and filters is drained via automatic drain. The user is informed of maintenance times thanks to the electronic control panel on the dryer and filters.

Tak & Çalıştır

TK serisi kompresörlerin en önemli özelliklerinden biri kolay kullanımdır. Bu kompresörler "Tak ve Çalıştır" kompresörleridir. Sadece kompresörü elektriğe bağlayarak tesisinizde basınçlı hava almaya başlayabilirsiniz.

Air Dryer
With Input Output Filters

T & TK SERIES
COUPLINGLESS DIRECT COUPLED SERVO MOTOR

Compact series

Model & Specifications

11KW-15 KW / T&TK SERIES

MODEL	Pressure		MOTOR	Capacity				Connection size	Size	Weight	Dryer Capacity	Air Tank
				Minimum		Maximum						
	bar	psi	kw/Hp	m3/min	cfm	m3/min	cfm		W*L*H	kg	m3/min	
TVK 1900 TK SERVO	6	87	11/15	0,74	26,0	2,10	74,2	3/4"	870*1950*1700	470	1,70	500
	8	116		0,67	23,5	1,90	67,1					
	10	145		0,60	21,0	1,70	60,0					
TVK 2500 TK SERVO	6	87	15/20	1,00	35,2	2,85	100,6	3/4"	870*1950*1700	490	2,50	500
	8	116		0,89	31,5	2,55	90,0					
	10	145		0,79	27,8	2,25	79,4					

Free air measurements at specified pressures are determined in accordance with ISO 1217 Annex C Standard.

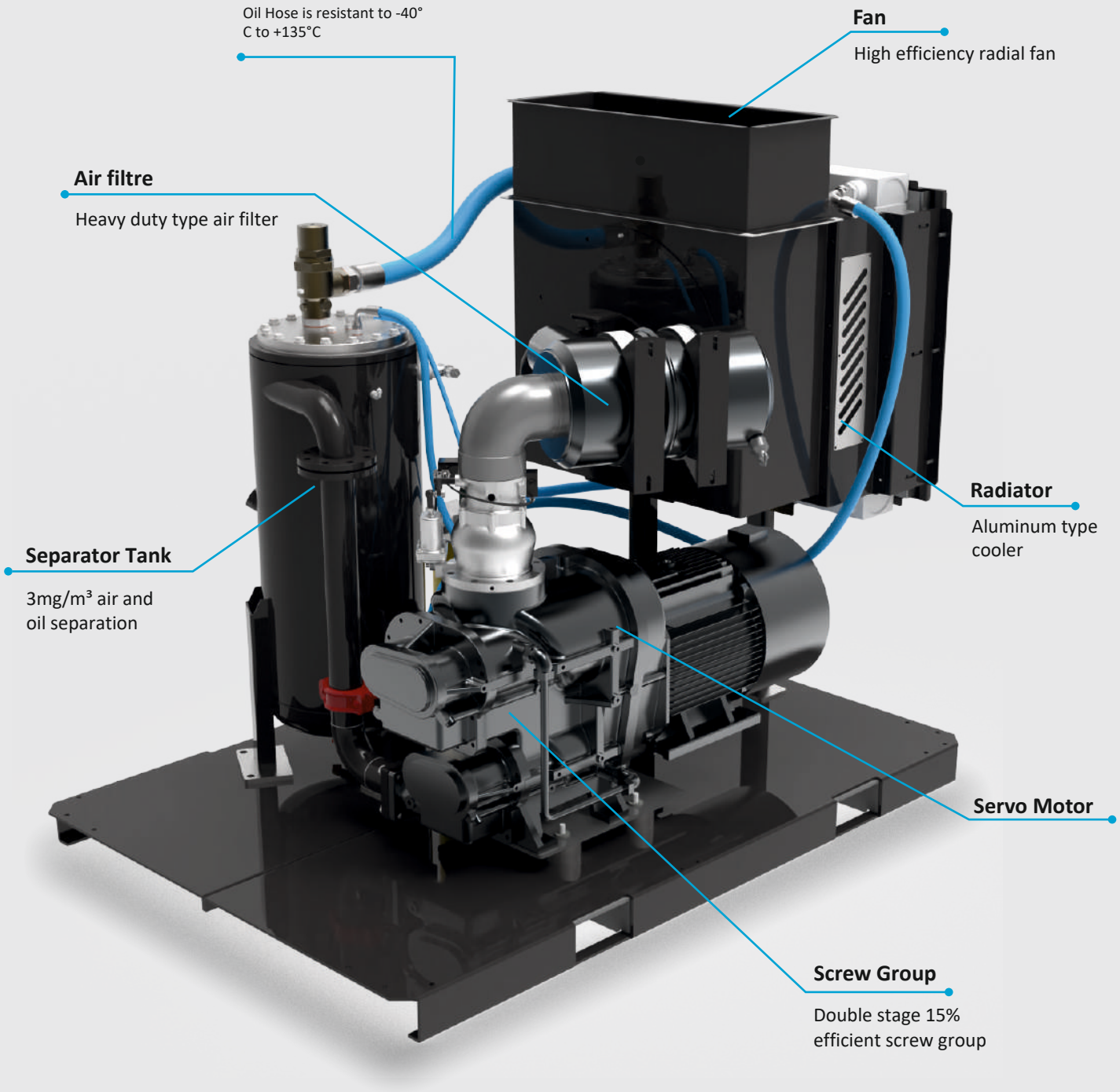
Twin Series Servo Motor

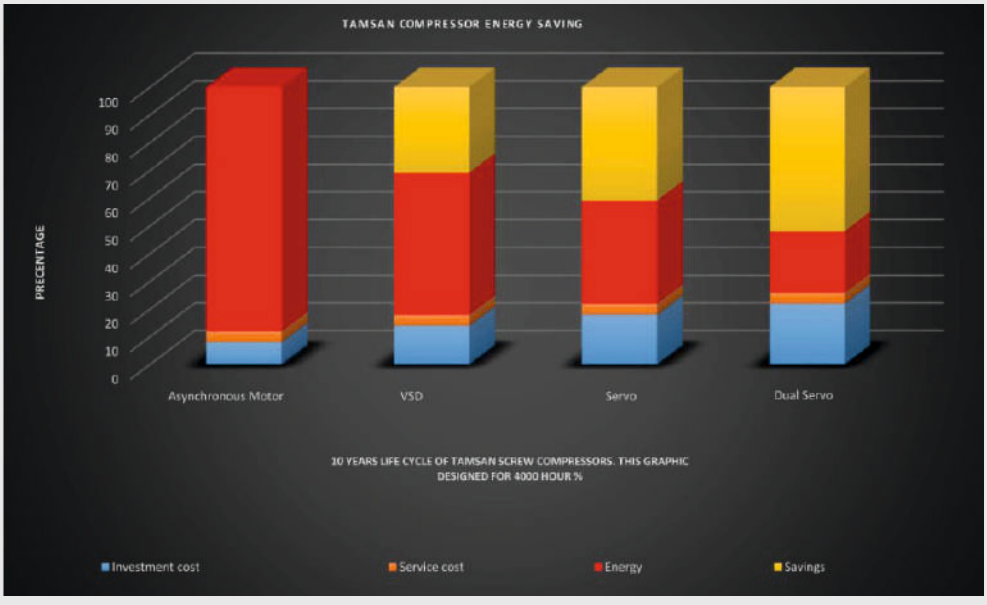
Double Stage Screw Compressors

Tamsan Compressors' new genaration 2-stage screw air compressors provide energy savings of up to 55% in their category. The high air volume formed in the first stage increases the pressure to the desired level without causing air loss when passing to the 2nd stage.

Its innovative products are environmentally friendly and also provide customer satisfaction.

55% e varan ENERGY SAVINGS





Tamsan 2-stage screw air compressors produce approximately 15% more air than single-stage screw compressors, which provides 15% energy savings..
The reason for this is that the high air volume created in the first stage does not cause air loss when passing to the second stage.

Twin Series Servo Motor

Dual Stage Screw Compressor Technical Specifications

MODEL	Pressure		MOTOR	Capacity				Connect-ion Size
				Minimum		Maximum		
	bar	psi	kw/Hp	m3/min	cfm	m2/min	cfm	
TWIN 37 SERVO	7	102	37/50	2,45	81,6	6,99	246,8	
	10	145		2,19	73,1	6,26	221,0	
	12	174		1,89	62,9	5,39	190,3	
TWIN 45 SERVO	7	102	45/55	2,84	94,8	8,12	286,7	1/1/4"
	10	145		2,40	80,0	6,85	241,9	
	12	174		2,17	72,4	6,20	218,9	
TWIN 55 SERVO	7	102	55/75	3,59	119,9	10,27	362,6	1/1/2"
	10	145		2,96	98,6	8,45	298,4	
	12	174		2,74	91,5	7,84	276,8	
TWIN 75 SERVO	7	102	75/100	5,21	173,7	14,88	525,4	2"
	10	145		4,41	147,2	12,61	445,3	
	12	174		3,48	116,1	9,95	351,3	
TWIN 90 SERVO	7	102	90/120	6,46	215,6	18,47	652,2	2"
	10	145		5,11	170,5	14,61	515,9	
	12	174		4,37	145,7	12,48	440,7	
TWIN 110 SERVO	7	102	110/150	7,75	258,4	22,14	781,8	2"
	10	145		6,39	213,1	18,26	644,8	
	12	174		5,06	168,9	14,47	510,9	
TWIN 132 SERVO	7	102	132/180	8,97	299,2	25,63	905,0	2"
	10	145		7,65	255,2	21,86	771,9	
	12	174		6,34	211,3	18,10	639,1	

Twin Series Asynchronous Motor

Dual Stage Screw Compressor Technical Specifications

MODEL	Pressure		MOTOR	Capacity				Connect -ion size
				Minimum		Maximum		
	bar	psi	kw/Hp	m3/min	cfm	m2/min	cfm	
TWIN 160 VSD	7	102	160/200	11,36	378,8	32,45	1145,8	2/1/2"
	10	145		11,27	375,7	32,19	1136,6	
	12	174		8,74	291,3	24,96	881,3	
TWIN 200 VSD	7	102	200/270	13,48	449,4	38,50	1359,4	2/1/2"
	10	145		11,10	370,1	31,71	1119,7	
	12	174		10,99	366,4	31,39	1108,4	
TWIN 250 VSD	7	102	250 /330	18,23	608,0	52,09	1839,3	3"
	10	145		14,81	494,0	42,32	1494,3	
	12	174		13,09	436,6	37,40	1320,6	

Hava Kompresörü Odası

Hava Kompresörünüze Tesisinizde Özel Oda Ayırın

Kompresör Odasını ayrı tutmanın bir çok nedeni vardır

Kendinizin ve çalışanlarınızın güvenliğini sağlar

Kompresörünüzü tesisinizdeki toz ve parçacıklardan uzak tutar

Kompresörün sesini çalışanlarınızdan uzak tutar.

DUAL SERIES

" A perfect combination of technology, innovation, productivity and durability with development processes spanning many years. "

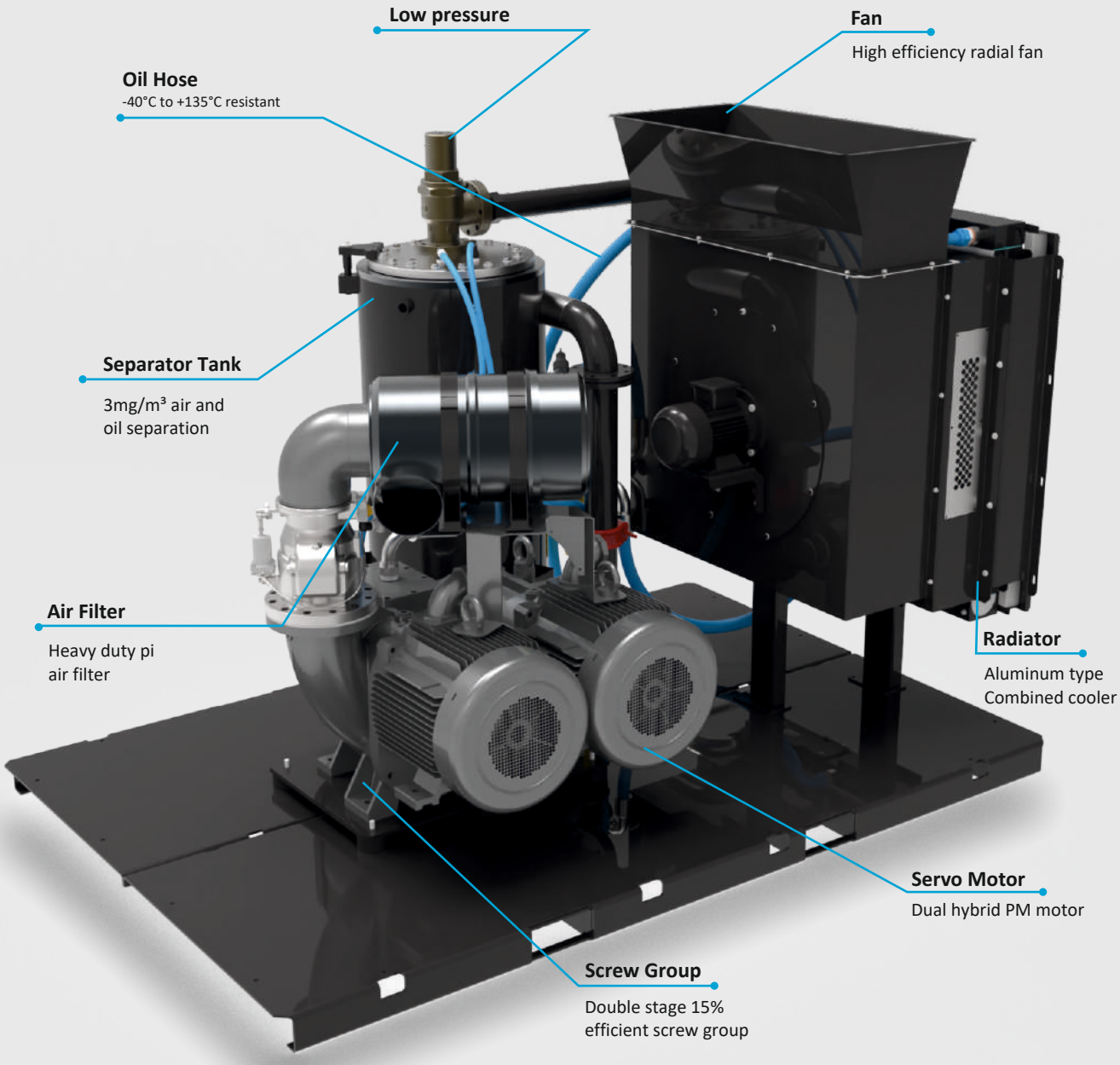
- IPM motor with magnet hybrid technology
- Two-stage compressor technology
- Top performance
- Maximum energy efficiency
- There is no gear group
- Bearingless motor
- Connect without coupling
- Premium efficient air cooling

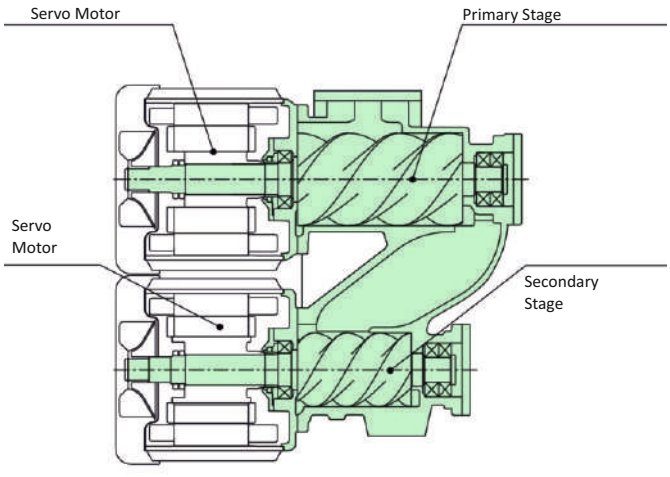
Two inverter controlled

Dual series compressors are controlled by two synchronous motors and two inverters. Two separate motors with coupling-free connection to the screw group operate with zero energy loss.

Maximum performance

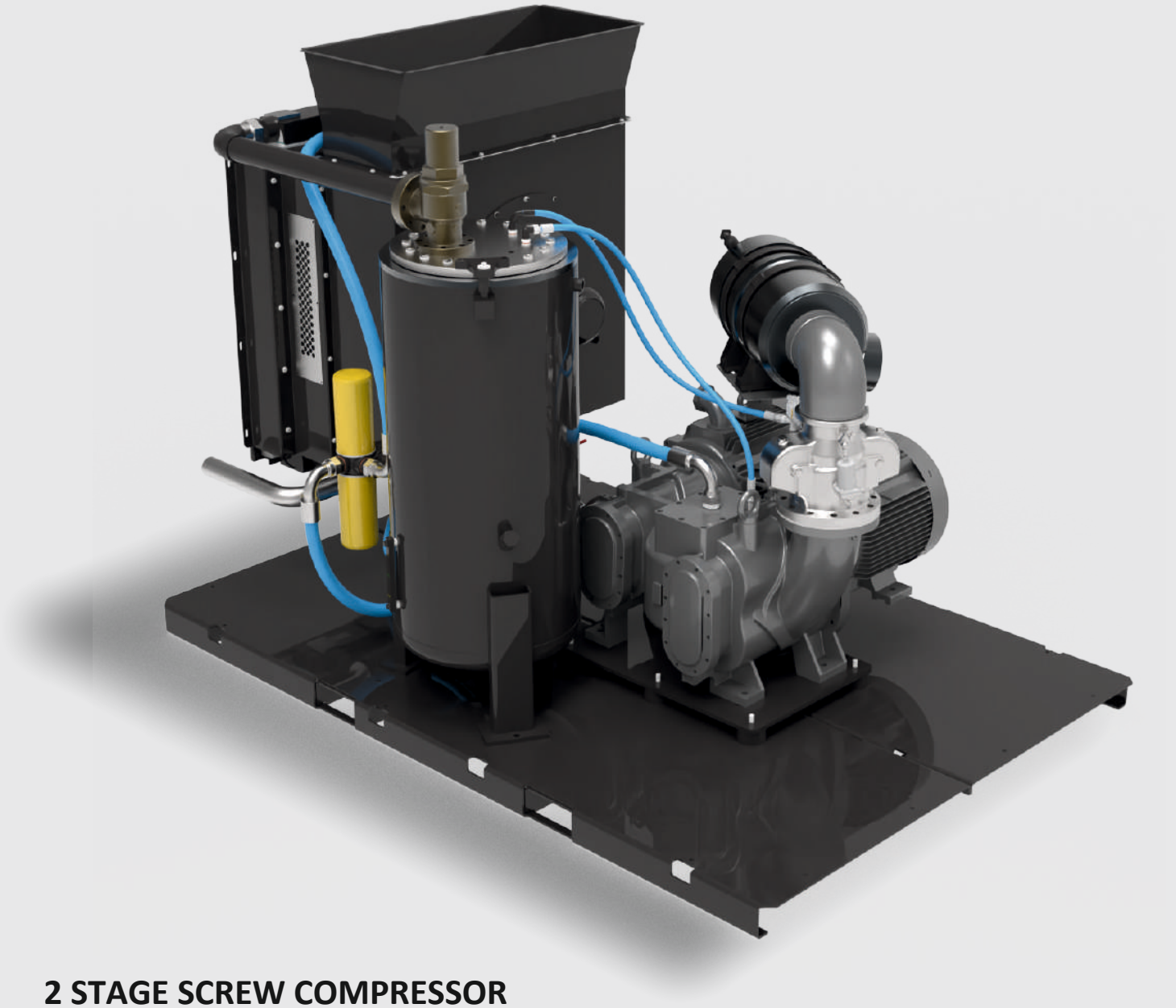
Dual compressors are high-tech products manufactured to provide the highest efficiency.





STEEL ROTOR

Asymmetrical profile rotors are manufactured from steel. Rotors are the main components of rotary screw air compressors. Rotor rotation speed is kept at the lowest level to ensure longer life for the screw unit.



2 STAGE SCREW COMPRESSOR

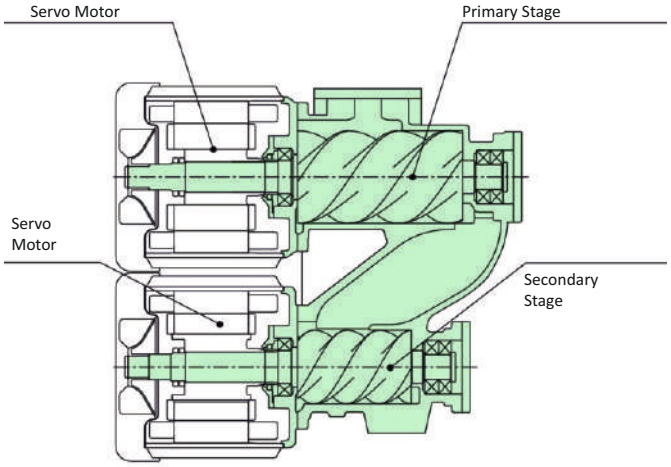
2-stage screw air compressors produce approximately 15% more air than single-stage screw compressors, which provides 15% energy savings. The reason for this is that the high air volume created in the first stage does not cause air loss when passing to the 2nd stage. YThat is, while single-stage compressors compress the air they take from atmospheric air, in 2-stage compressors we send more atmospheric air to the 2nd stage in order to compress the volumetric air, which is approximately 2 times more.
This causes more air to be compressed and provides a 15% increase in efficiency.

MOTOR

These motors, also called Magnet Hybrid technology, are used in series up to 250 kW. These are IE4 and IE5 class motors and are used as the most efficient motors in the industry. The most important feature of these motors is that they are bearingless. Therefore, it provides a longer term service opportunity in terms of after sales service. In addition, these motors have no mechanical connections and have no friction-related losses.Another feature that distinguishes these motors from their competitors is that they are directly coupled to the screw group, meaning there is no coupling group in between. The motor drive is directly driven to the screw group, the benefit of this is that there is no need for a service such as coupling replacement time and there is no service charge.

- Two-stage screw technology
- High performance
- Maximum energy savings
- Without gear
- Bearingless motor
- Connect without coupling
- Premium energy saving radial fan cooling

MODEL	Pressure		MOTOR	Capacity				Connect-ion Size	Size	Weight	Sound Level
				Minimum		Maximum					
	bar	psi	kw/Hp	m3/min	cfm	m2/min	cfm		W*L*H	kg	dB(A)
DUAL 160	6	87	160/200	13,02	459,7	37,20	1313,5	1/1/4"	2030*3050*2180	4000	
	8	116		11,84	418,0	33,82	1194,2				
	10	145		10,71	378,0	30,59	1080,1				
DUAL 200	6	87	200/270	15,36	542,4	43,89	1549,8	1/1/4"	2130*3330*2180	5100	
	8	116		14,01	494,7	40,03	1413,5				
	10	145		12,06	34,5	34,47	1217,1				
DUAL 250	6	87	250 /330	19,59	691,6	55,96	1975,9	1/1/2"	2130*3330*2180	5600	
	8	116		17,66	623,6	50,46	1781,7				
	9	131		16,79	592,8	47,97	1693,8				



Two inverter controlled

Dual series compressors are controlled by two inverters

Dual series compressors operate in stages with two motors.

Maximum Performance

Dual series compressors provide maximum performance with their two-stage screw group design.

tamsan®

COMPRESSORS

TAMSAN KOMPRESÖR A.Ş.

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