

WORLD CLASS · EFFICIENCY · RELIABILITY

k|r|s|p

SINGLE STAGE ROTARY



Kaishan Compressor USA

WORLD WIDE SUPPORT

Globally recognized industrial presence

Over the last sixty years, Kaishan has steadily grown to become a significant, diversified engineering company developing high value machinery for industries worldwide. With modern, specialized manufacturing facilities positioned in seven strategic locations, Kaishan's group of thirty-two subsidiary companies produce over 60,000

rotary screw compressors annually. Kaishan is the world's third largest manufacturer of compressed air, mining and drilling equipment and supports industries in more than 60 countries including: USA, Australia, Germany, Japan, Korea, Russia, Africa and throughout Latin America.

Vertically integrated global strategy

Kaishan's global strategy of combining highly skilled engineering with highly efficient manufacturing allows us to provide performance proven, reliable equipment at a significant cost savings to our customers. Additionally, Kaishan's manufacturing processes are 85% vertically

integrated insuring full control of the material supply chain. This vertical approach supplies high quality components at a lower cost, and affords Kaishan the ability to respond rapidly to changing market demands.



- 📍 Kaishan USA Headquarters & Manufacturing Facility - Loxley, AL
- 📍 Kaishan Subsidiary
- 📍 Kaishan Headquarters - Quzhou, China

Practiced environmental sustainability

Integral to the design and manufacture of our products is outstanding energy efficiency. Kaishan's fundamental belief in environmental sustainability drives us to produce products that maximize energy efficiency and help to preserve precious energy resources. Single and two-stage compressors that produce more compressed air per unit of power input as well as expanders that utilize waste heat to produce electricity are just two of the fundamental products in our sustainable approach.

Throughout our manufacturing processes, unused waste materials are recycled at every stage to maximize the use of raw materials. This approach translates to lower initial costs and lower operating costs for our customers and a smaller environmental footprint that helps us all. Kaishan's commitment to environmental responsibility ensures that we will continue to develop technologies and manufacturing solutions that provide industry with machinery of exceptional value - now and well into the future.

KRSP SERIES COMPRESSORS PROVIDE LOW CAPITAL COST AND LOW OPERATING COST

Low cost of ownership throughout life cycle

Compressed air is often referred to as the 'fourth utility' and is critical to most manufacturing operations. Facility performance depends upon compressor reliability and efficiency.

Power consumption is a significant cost throughout the life cycle of a compressor. Therefore, it is important to consider the life cycle cost of a compressed air system when evaluating productivity improvements. KRSP series advanced energy saving features reduce operation costs significantly.



*KRSP Series 'best in class'
rotor assembly*

**LIFETIME
AIREND
WARRANTY**

WORLD CLASS ENGINEERING

INTERNATIONALLY PATENTED 'SKY' AIR END DEVELOPED EXCLUSIVELY BY KAISHAN ENGINEERS

Continued development has increased efficiency by more than 20% over earlier models

- **Direct drive (1:1 ratio) motor and air end** operate at slow speed
- **Low part load energy consumption**
- **Steady system pressure** lowers system stress and overall air demand
- **Slow speed rotors** maximize performance and increase reliability
- **Decreased energy consumption** delivers environmentally friendly savings
- **Quadruple SKF bearings** for durability and reliability
- **5 / 6 rotor profile** creates optimal performance while reducing energy consumption
- **Very tight tolerances** provide maximum efficiency
- **Direct flow inlet valve** provides reliable capacity control



KRSP Series patented air end

DIGITAL CONTROL PANEL

Monitors & Controls Key

Compressor Functions

- Protects compressor in the event of a fault
- Provides service required alert
- Sequencing of up to 16 compressors
- External monitoring via RS 485 interface
- WYE Delta starter is standard on all models
- MODBUS capability



CENTRIFUGAL COOLING FANS

Increased Cooling Efficiency

- Higher static pressure allows for energy saving heat recovery
- Even air flow across the cooler face.
- VSD cooling fan (150 HP and above) provides energy savings as cooling airflow is reduced during periods of light load or low temperatures.
- Cooling air bypasses main compressor compartment resulting in minimal internal dust build up



INDUSTRIAL GRADE

ELECTRICAL COMPONENTS

Increased Reliability / Lower Servicing Cost

- Outstanding reliability
- Excellent component life
- Worldwide support
- Standard electrical parts available locally



HIGH EFFICIENCY ELECTRIC MOTORS

Long Operating Life / Lower Power Use

- Kaishan uses high efficiency motors, which comply with all international standards:
- Motors are standard TEFC to protect from dust and moisture
- Class F insulation
- Cooling air bypasses main compressor compartment resulting in lower component operating temperatures and longer life

316 STAINLESS STEEL CONTROL TUBING

Long Tubing Life / Reduced Downtime

- Increased reliability due to corrosion free material
- Material such as nylon, copper or mild steel will fail in time causing downtime

'ULTRAWEB' AIR INTAKE FILTERS

Increased Filtration Efficiency

- Full airflow, low restriction, nanofiber technology
- Deep bed media ensures excellent dust capture
- Increased free air delivery for further savings in energy and running costs



SAFETY AND THE ENVIRONMENT

Reduced OSHA Risk and Injury

- The entire Kaishan range of compressors includes full safety features such as guarded rotating components and shrouded electrical components.



3 STAGE TANGENTIAL OIL SEPARATION

Lower Pressure Drop / Lower Absorbed Power

- Excellent oil mechanical pre-separation/ reduced direct oil impingement onto separator element
- Lower dust contact resulting in lower pressure drop/longer element life/lower energy consumption
- Residual oil carryover limited to 3 ppm

SINGLE PASS OIL & AFTER COOLERS

Long Life / Easily Accessible

- Minimize thermal stress
- Cooler running temperatures / correct running temperature @ 122F° (50°C) ambient capable
- Low oil carryover increases bearing life
- Low cooling air velocity reduces dust build up

LAMINAR FLOW INLET VALVE

Minimum Pressure Drop / Increased Output

- Laminar flow inlet valve results in lower pressure drop through the intake, increasing output and saving energy

QUADRUPLE DISCHARGE BEARINGS

Longer Bearing Life / Quieter Operation

- The "SKY" series direct drive airends use four discharge bearings to absorb radial and axial loads.
- Longer bearing life under all operating conditions
- Increased load carrying capacity
- **Lifetime** airend warranty

'SKY' SERIES AIR END

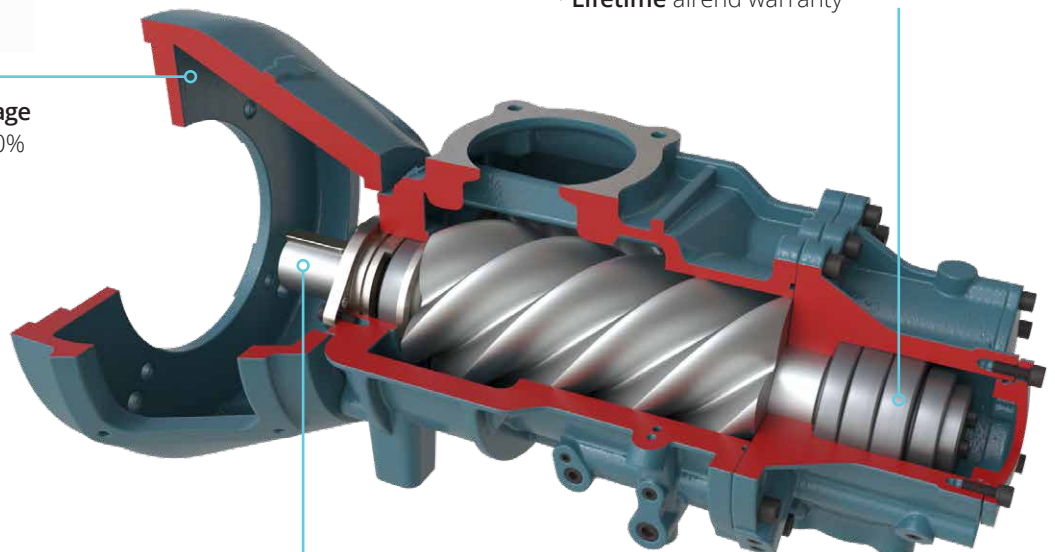
Maximum Output with Less Energy Usage

- Asymmetric 5 / 6 rotor profile with 100% SKF bearings
- KAPP Grinder rotor technology for tighter clearances and world class efficiency and performance
- Precision machined bell housing to maintain rigid alignment

DIRECT DRIVE - 1:1 DRIVE RATIO NO GEARBOX

Maximum Air Output/Reduced Energy Usage

- Large, slow running airend
- Eliminates transmission energy losses
- Increases bearing life
- Flexible coupling with easily removable coupling elements

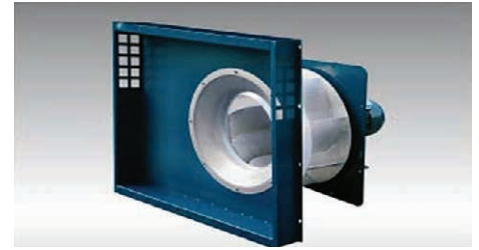


KRSP SERIES COMPRESSORS PROVIDE ROBUST, TURN-KEY INDUSTRIAL SOLUTIONS

KRSP has low life cycle cost by providing:

Low Capital Cost + Low Operating Cost + Exceptional Reliability & Efficiency

- All electrical wiring is high performance including cable and converters
- Optimum operating temperature to prevent moisture in the system
- Rugged and proven technology to ensure long operating life
- Heavy duty isolators to minimize operating vibration
- SAE fittings allow easy and low cost maintenance
- Spin-on fluid filter for quick maintenance
- VSD cooling fan on all units 150HP and up
- Premium, efficiency - IE3 TEFC Electrical motors
- Acoustic enclosure brings the sound level to industry leading level of 67 dB(A) to 80 dB(A)



VSD cooling fan provides energy savings by reducing airflow during periods of light load or low temperatures.

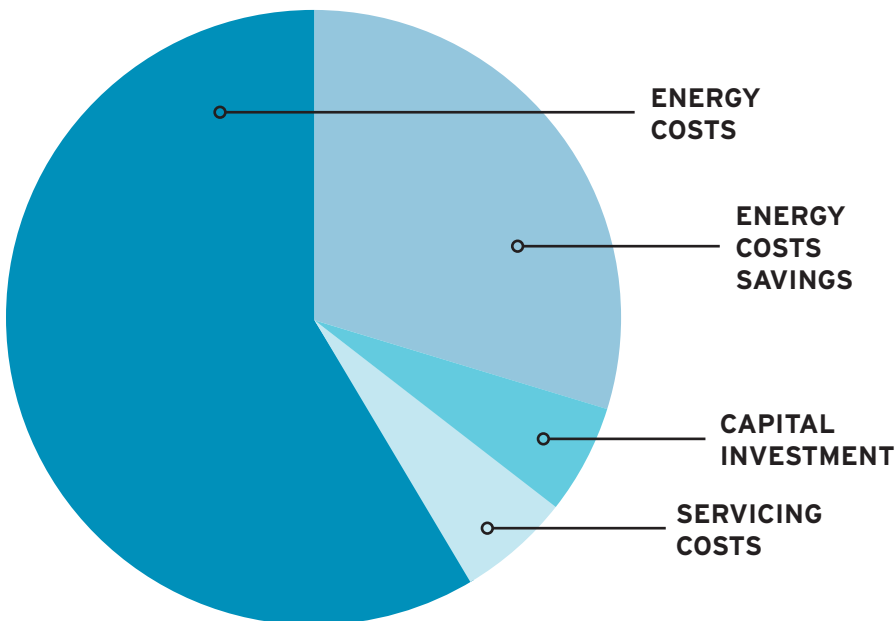


Lubricant filter assembly features a spin-on, full-flow, 12µ, high-efficiency components

KRSP SERIES VARIABLE SPEED DRIVE OPTION PROVIDES A MAJOR ENERGY SAVINGS

KRSP VSD combines a robust power platform with a state-of-the-art control scheme

The drive provides a soft start and the ability to operate efficiently through the compressor's capacity range by matching flow to demand, while maintaining a high level of pressure control. By eliminating wasted energy, cost savings as high as 35% or more are possible. With this level of savings, the additional capital cost of the variable speed drive can be recovered in less than one year's operation.



KRSP Series VSD Rotary Screw Compressor operating at 70% load compared to a fixed speed model.



KRSP Series Variable Speed Drive

Variable Speed Drive

The variable speed drive used in KRSP compressors are renowned for:

- Efficient and reliable service
- Worldwide support

KRSP SERIES CONTROL SYSTEM PROVIDES TOTAL MANAGEMENT OF ALL OPERATING PARAMETERS

KRSP controller capabilities include the following features:

- Operating parameters display
- Programmed maintenance schedules
- Warning stop alarms
- Recordings of compressor history

The control panel contains a special programmed microprocessor that can safely and efficiently control all the functions of the compressor.

The touch screen display monitors line pressure, oil temperature and working conditions (running, idling and stop). Abnormal conditions will trigger a flashing LED and a flashing message indicating the cause for the alarm. Microprocessor functions are password protected, accessible only to authorized personnel.



KRSP series System Management Control Panel

KRSP SERIES SPECIFICATIONS

MODEL KTA	CAPACITY CFM	POWER HP	FULL LOAD PSI	MAXIMUM PSI	SOUND dB(A)		DIMENSIONS (IN.)			WEIGHT (LB.)	
					AC	WC	L	W	H	AC	WC
KRSP20-115	73	20	115	125	69	N/A	68	39	49	1367	N/A
KRSP20-125	72	20	125	135	69	N/A	68	39	49	1367	N/A
KRSP25-115	107	25	115	125	70	N/A	70	38	50	1808	N/A
KRSP25-125	105	25	125	135	70	N/A	70	38	50	1808	N/A
KRSP30-115	143	30	115	125	70	N/A	70	38	50	1932	N/A
KRSP30-125	141	30	125	135	70	N/A	70	38	50	1932	N/A
KRSP40-115	202	40	115	125	71	71	71	46	54	2271	2426
KRSP40-125	199	40	125	135	71	71	71	46	54	2271	2426
KRSP50-115	239	50	115	125	71	71	71	46	54	2359	2354
KRSP50-125	235	50	125	135	71	71	71	46	54	2359	2354
KRSP60-115	288	60	115	125	72	72	89	56	68	3770	3308
KRSP60-125	284	60	125	135	72	72	89	56	68	3770	3308
KRSP75-115	361	75	115	125	75	75	89	56	68	4012	3704
KRSP75-125	356	75	125	135	75	75	89	56	68	4012	3704
KRSP100-115	501	100	115	125	74	74	98	60	72	5490	4961
KRSP100-125	494	100	125	135	74	74	98	60	72	5490	4961
KRSP125-115	613	125	115	125	75	75	98	60	72	5864	5402
KRSP125-125	608	125	125	135	75	75	98	60	72	5864	5402
KRSP150-115	728	150	115	125	76	76	122	67	81	8333	7497
KRSP150-125	721	150	125	135	76	76	122	67	81	8333	7497
KRSP200-115	946	200	115	125	76	76	122	67	81	8973	7938
KRSP200-125	941	200	125	135	76	76	122	67	81	8973	7938
KRSP250-100	1220	250	100	115	77	77	140	75	86	9592	9151
KRSP250-125	1154	250	125	135	77	77	140	75	86	9592	9151
KRSP300-100	1502	300	100	115	77	77	140	75	86	10253	9812
KRSP300-125	1364	300	125	135	77	77	140	75	86	10253	9812
KRSP350-100	1867	350	100	115	78	78	152	87	89	14222	13671
KRSP350-125	1486	350	125	135	78	78	152	87	89	14222	13671
KRSP400-100	2041	400	100	115	80	80	168	89	89	17640	16317
KRSP400-125	1857	400	125	135	80	80	168	89	89	17640	16317
KRSP500-100	2419	500	100	115	80	80	168	89	89	18522	17199
KRSP500-125	2132	500	125	135	80	80	168	89	89	18522	17199

150, 175, 200 PSI models available, consult factory.



MODEL	COMPRESSOR TYPE	FEATURES
KRSP2	Two Stage	Global leader in air compressor efficiency
KRSP	Single Stage	Patented 'SKY' air end, triple SKF bearings
KRSD	Single Stage	Direct drive, TEFC motor, low sound enclosure
KRSB	Single Stage	Belt drive, economical to own and operate
KRST	Single Stage	Belt drive, tank mounted
KRSH	Two Stage High Pressure	Pressure to 580 PSI
KRSL	Single Stage Low Pressure	Pressure as low as 45 PSI
KRSV	Rotary Screw Vacuum Pump	World class vacuum efficiency



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