World Class
Efficiency & Reliability

k|r|s|b

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 and 250,000 reciprocating 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.

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 committment 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.

KRSB 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. KRSB series advanced energy saving features reduce operation costs significantly.

5 YEAR AIREND WARRANTY

KRSB Series 'best in class' rotor assembly

world class engineering

Internationally patented 'SKK' air end developed exclusively by Kaishan engineers

CONTINUED DEVELOPMENT HAS INCREASED EFFICIENCY BY MORE THAN 20% OVER EARLIER MODELS

- **Belt, motor and air end** operate at slow speed
- **Slow speed male rotor** maximizes performance and increases efficiency
- **Steady system pressure** lowers system stress and overall air demand
- **Decreased energy consumption** delivers environmentally friendly savings
- **Duplex SKF bearings** for durability and reliability
- **Low part load energy consumption**
- **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

KRSB Series patented air end

DIGITAL CONTROL PANEL

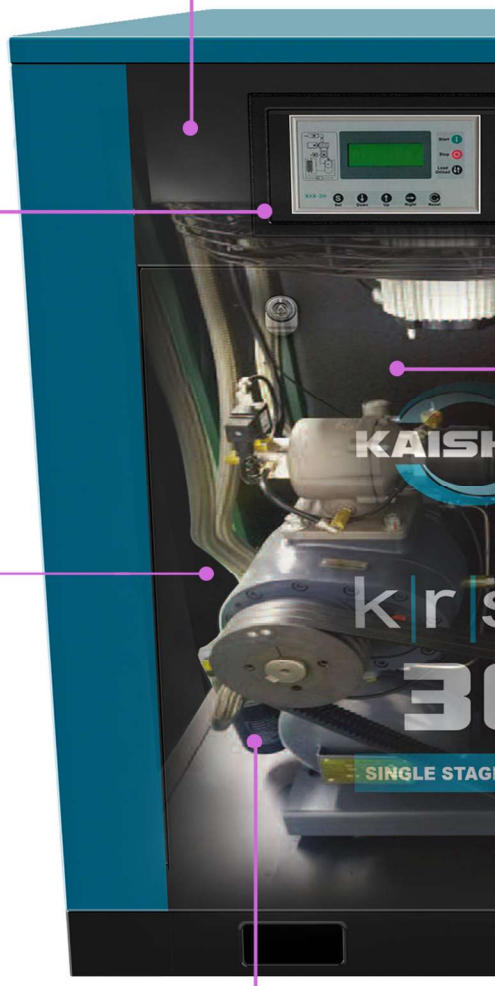
Monitors & Controls Key Compressor Functions

- Protects compressor in the event of a fault
- Provides service alerts
- Sequencing of up to 16 compressors
- External monitoring via RS 485 interface
- WYE Delta starter (15 HP+) standard to reduce electrical load stress

AXIAL COOLING FANS

Increased Cooling Efficiency

- Higher static pressure allows for energy saving ductwork
- Even air flow across the cooler face



PREMIUM DISCHARGE BEARINGS

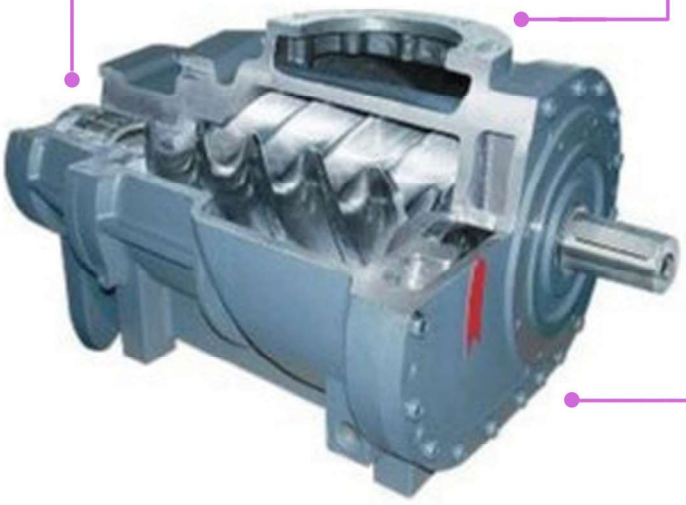
Longer Bearing Life / Quieter Operation

- The “SKK” series belt drive air ends use two discharge bearings to absorb radial and axial loads
- Longer bearing life under all operating conditions
- Increased load carrying capacity

DIRECT FLOW INLET VALVE

Minimum Pressure Drop / Increased Output

- Lower pressure drop through the intake, increasing output and saving energy



‘SKK’ 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 improved lubrication
- Precision machined bell housing to maintain coupling alignment

'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, shrouded electrical components

EFFICIENTIAL OIL SEPARATION

- 10-20 HP use spin on separator elements for ease of service
- 25-50 HP use traditional tank inserted separator elements
- Residual oil carryover limited to 3 ppm

SINGLE PASS OIL & AFTER COOLERS

Long Life / Easily Accessible

- Minimize thermal stress
- 122F° (50°C) ambient capable
- Low oil carryover increases bearing life
- Low cooling air velocity reduces dust build up

HIGH EFFICIENCY ELECTRIC MOTORS

Long Operating Life / Lower Power Use

- Kaishan uses high efficiency motors, which comply with all international standards:
- TEFC (IP 54) standard, IEC frame
- Class F insulation
- Premium, efficient motors

INDUSTRIAL GRADE ELECTRICALS

Increased Reliability / Lower Servicing Cost

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

BELT GUARD (not shown)

- All rotating parts protected with a fully enclosed belt guard as standard

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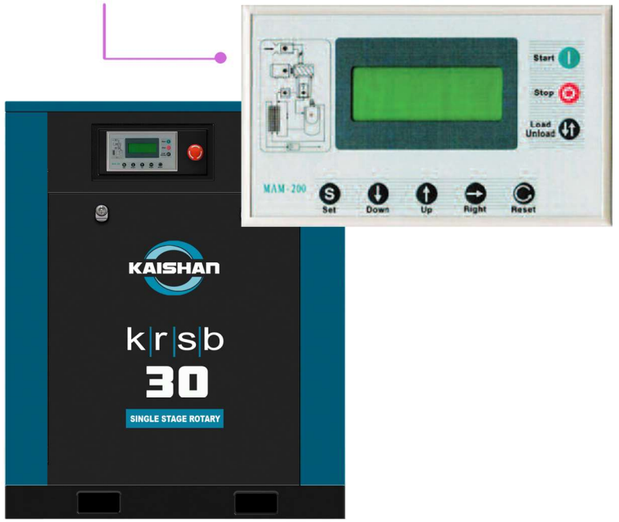

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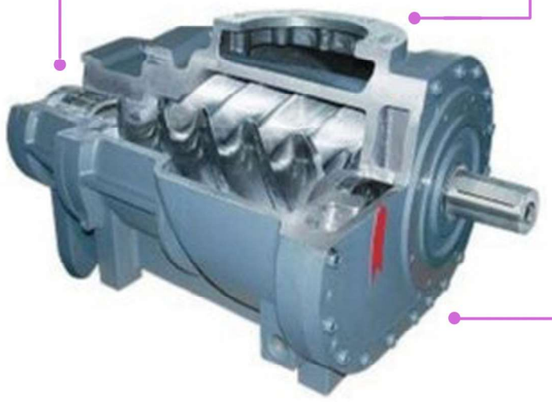

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KRSB series compressors provide robust, turn-key industrial solutions

KRSB 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 greatly reduce oil leaks
- Spin-on fluid filter for quick maintenance
- Premium, efficient TEFC Electrical motors
- Acoustic enclosure brings the sound level to industry leading level of 70 to 75 dB(A)

Cycling 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 element

KRSB series Variable Speed Drive option provides major energy savings

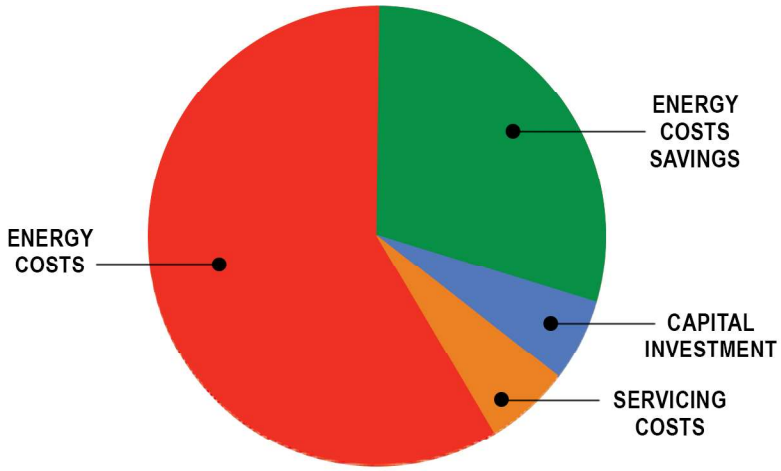
KRSB VSD COMBINES A ROBUST POWER PLATFORM WITH A STATE-OF-THE-ART CONTROL SCHEME

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.

VARIABLE SPEED DRIVE

The Variable Speed Drive used in KRSB VSD compressors are reknowned for:

- Efficient and reliable service
- Worldwide support



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

KRSB Series Variable Speed Drive

KRSB series control system provides total management of all operating parameters

KRSB CONTROLLER CAPABILITIES INCLUDE THE FOLLOWING FEATURES:

- Operating parameters display
- Warning amd shut down alarms
- Programmed maintenance schedules

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

The display monitors the 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.

KRSB series System Management Control Panel

KRSB SERIES SPECIFICATIONS

MODEL KTA	CAPACITY ACFM	POWER HP	PRESSURE PSI	MAXIMUM PSI	SOUND dB(A)	DIMENSIONS (IN.) L	W	H	WEIGHT LB
KRSB10-115	37	10	115	125	70	35	28	41	772
KRSB10-125	35	10	125	135	70	35	28	41	772
KRSB10-150	30	10	150	160	70	35	28	41	772
KRSB15-115	60	15	115	125	71	42	31	48	1103
KRSB15-125	59	15	125	135	71	42	31	48	1103
KRSB15-150	48	15	150	160	71	42	31	48	1103
KRSB20-115	89	20	115	125	71	42	31	48	1213
KRSB20-125	88	20	125	135	71	42	31	48	1213
KRSB20-150	69	20	150	160	71	42	31	48	1213
KRSB25-115	109	25	115	125	73	43	35	56	1433
KRSB25-125	108	25	125	135	73	43	35	56	1433
KRSB25-150	92	25	150	160	73	43	35	56	1433
KRSB30-115	120	30	115	125	73	43	35	56	1544
KRSB30-125	117	30	125	135	73	43	35	56	1544
KRSB30-150	107	30	150	160	73	43	35	56	1544
KRSB40-115	173	40	115	125	74	51	43	65	2205
KRSB40-125	164	40	125	135	74	51	43	65	2205
KRSB40-150	156	40	150	160	74	51	43	65	2205
KRSB50-115	214	50	115	125	75	51	43	65	2315
KRSB50-125	203	50	125	135	75	51	43	65	2315
KRSB50-150	195	50	150	160	75	51	43	65	2315

Performance test based on ISO 1217.

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

CAGI Compressed Air & Gas Institute

IAF Member of Multilateral Recognition Arrangement

SGS

Email: info@KaishanUSA.com
Address: 7650-A Stanton Rd.
Daphne, AL 36526 USA
Telephone: +1 251.202.0577
Website: KaishanUSA.com

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