

World Class
Efficiency & Reliability

k|r|s|p 2

TWO 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 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.



KRSP2 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. KRSP2 series advanced energy saving features reduce operation costs significantly.

**LIFETIME
AIREND
WARRANTY**



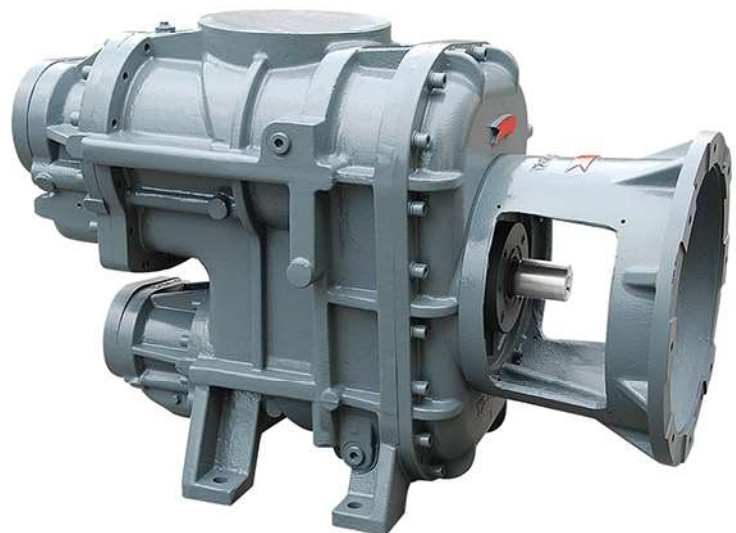
KRSP2 Series 'best in class' rotor assembly

world class engineering

Patented 'SKY' Two-Stage air end developed exclusively by Kaishan engineers

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

- **Two-Stage air end design** for high flow rate and low power consumption
- **Direct drive (through gears) 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
- **5 / 6 rotor profile** creates optimal performance while reducing energy consumption
- **2 in 1 intake valve design** (with check valve) for increased efficiency
- **Direct flow inlet valve** provides reliable capacity control
- **Triplex bearings** for durability and reliability
- **Very tight tolerances** provide maximum efficiency



KRSP2 Series patented two stage air end

SAFETY AND THE ENVIRONMENT

Reduced OSHA Risk and Injury

- The entire Kaishanrange of compressors includes full safety features such as guarded rotating components, shrouded electrical components



'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

SINGLE PASS OIL & AFTER COOLERS

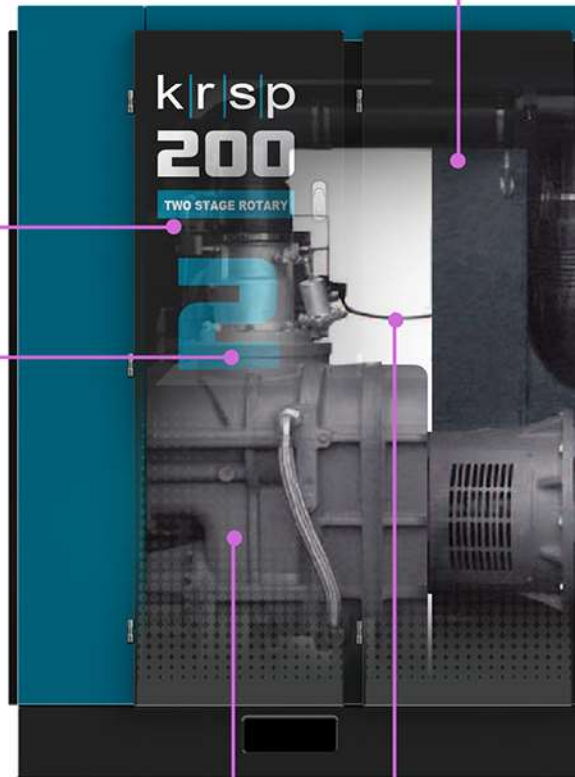
Long Life / Easily Accessible

- 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

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



TRIPLE DISCHARGE BEARINGS

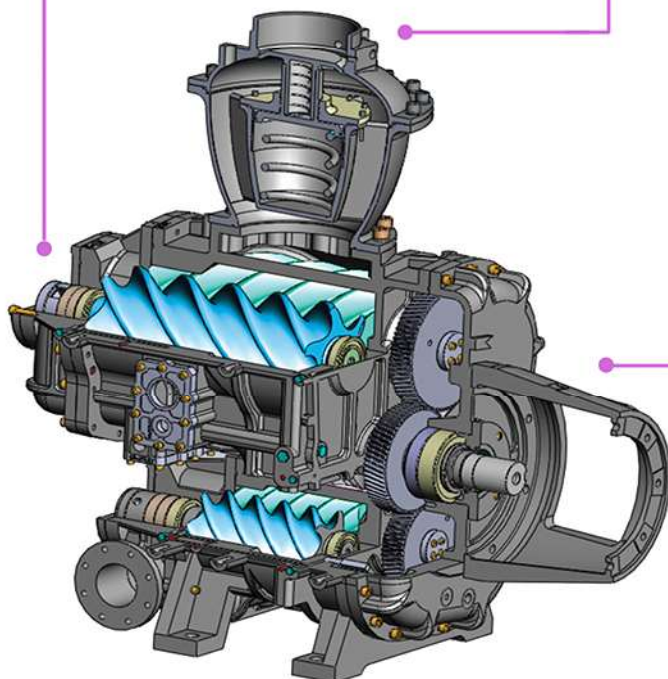
Longer Bearing Life / Quieter Operation

- The "SKY" series direct drive air ends use three discharge bearings to absorb radial and axial loads
- Longer bearing life under all operating conditions
- Increased load carrying capacity

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



'SKY' SERIES AIR END

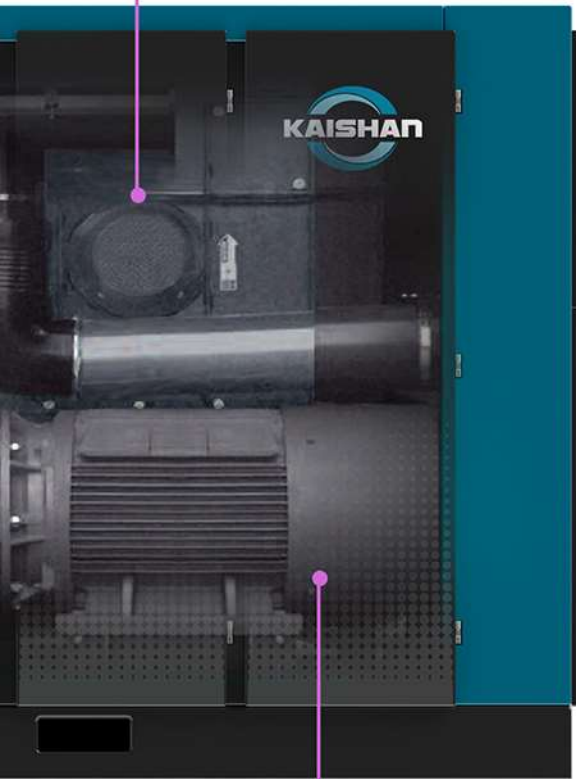
Maximum Output with Less Energy Usage

- 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

CENTRIFUGAL COOLING FANS

Increased Cooling Efficiency

- Higher static pressure allows for energy saving ductwork
- 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



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
- Delta starter is standard on all models
- MODBUS capability



INDUSTRIAL GRADE ELECTRICAL COMPONENTS

Increased Reliability / Lower Servicing Cost

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



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

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

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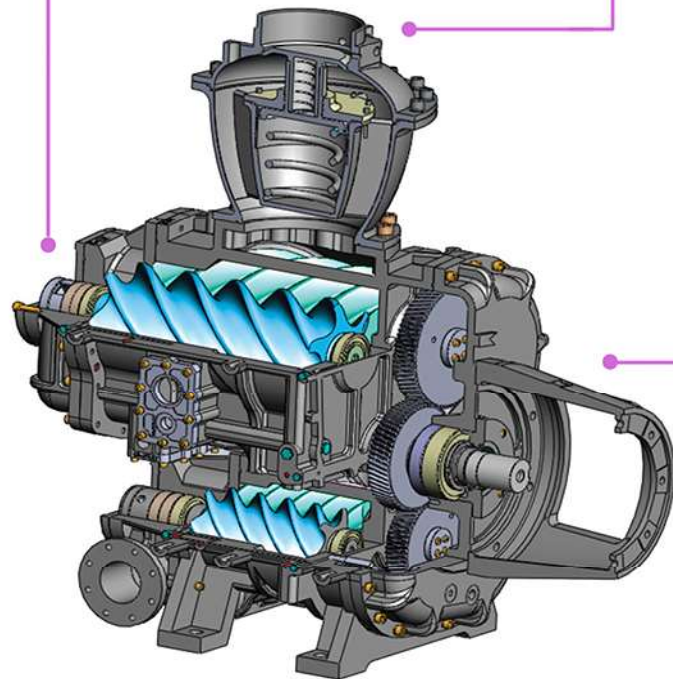
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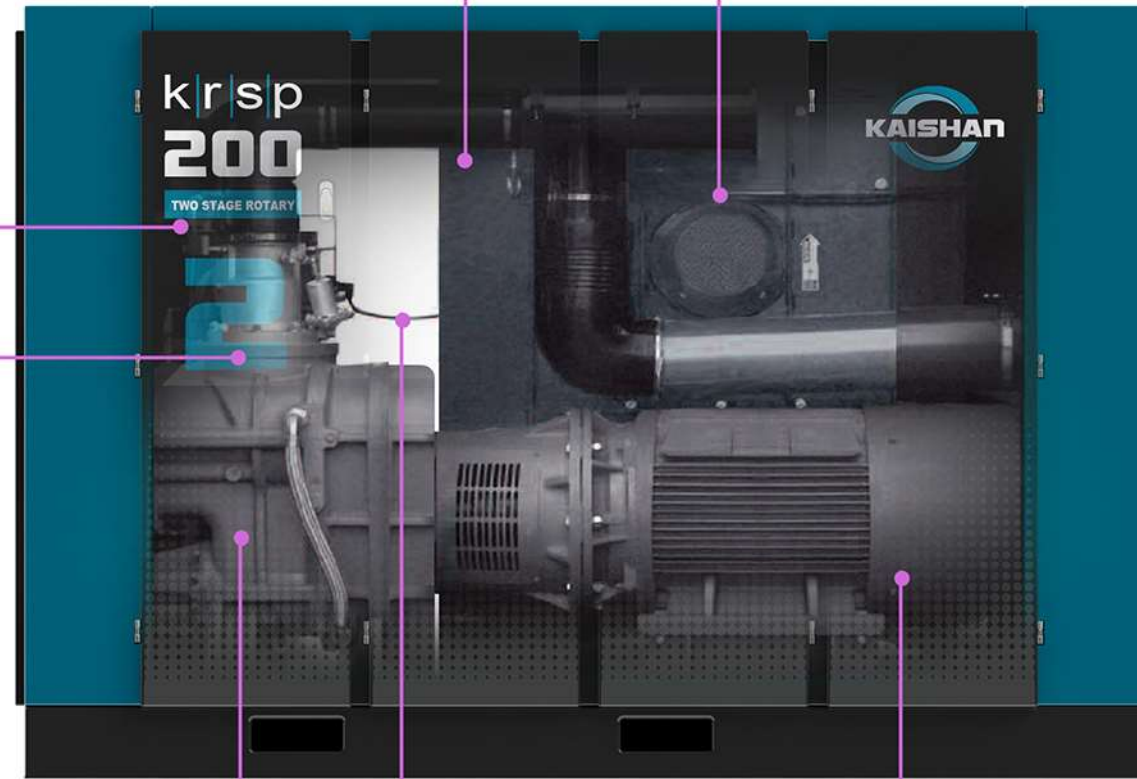
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KRSP2 series compressors provide robust, turn-key industrial solutions

KRSP2 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 convertors
- 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
- VSD cooling fan on all units 150HP and up
- Premium, efficient TEFC Electrical motors



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 element.

KRSP2 series Variable Speed Drive option provides major energy savings

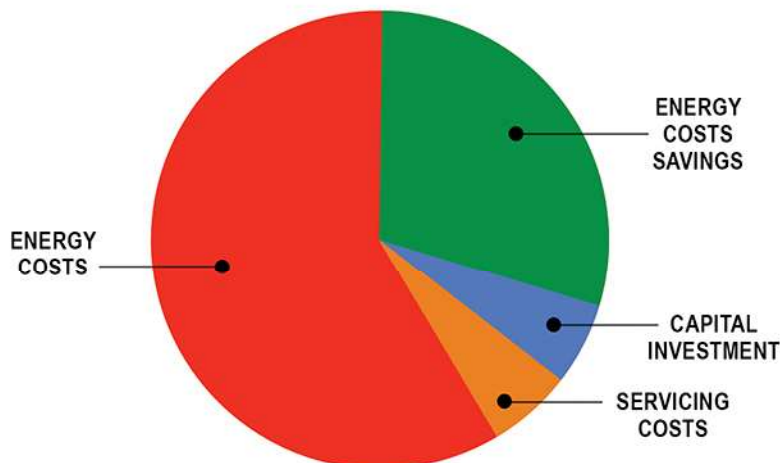
KRSP2 VSD COMBINES A ROBUST POWER PLATFORM WITH A STATE-OF-THE-ART CONTROL SCHEME

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 KRSP2 VSD compressors are renowned for:

- Efficient and reliable service
- Worldwide support



KRSP2 Series VSD Rotary Screw Compressor operating at 70% load compared to a fixed speed model.



KRSP2 Series Variable Speed Drive

KRSP2 series control system provides total management of all operating parameters

KRSP2 CONTROLLER CAPABILITIES INCLUDE THE FOLLOWING FEATURES:

- Operating parameters display
- Warning and shut down alarms
- Programmed maintenance schedules
- 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 running conditions (loaded, unloaded 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.



MAM6090
KRSP2 series System Management Control Panel

KRSP2 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
KRSP2-100-100	589	100	100	110	72	N/A	101	64	76	7275	N/A
KRSP2-100-110	562	100	110	120	72	N/A	101	64	76	7275	N/A
KRSP2-125-100	745	125	100	110	72	72	101	64	76	7495	7495
KRSP2-125-125	689	125	125	135	72	72	101	64	76	7495	7495
KRSP2-125-150	617	125	150	160	72	72	101	64	76	7495	7495
KRSP2-150-100	860	150	100	110	73	73	122	70	81	10251	8598
KRSP2-150-125	736	150	125	135	73	73	122	70	81	10251	8598
KRSP2-150-150	671	150	150	160	73	73	122	70	81	10251	8598
KRSP2-200-100	1079	200	100	110	74	74	126	76	89	11244	8929
KRSP2-200-125	955	200	125	135	74	74	122	71	82	11244	8929
KRSP2-200-150	886	200	150	160	74	74	123	71	82	11244	8929
KRSP2-250-100	1484	250	100	110	75	75	136	76	89	13889	12346
KRSP2-250-125	1291	250	125	135	75	75	136	76	89	13889	12346
KRSP2-250-150	1183	250	150	160	75	75	136	76	89	13889	12346
KRSP2-300-100	1747	300	100	110	76	76	136	76	89	15102	13889
KRSP2-300-125	1692	300	125	135	76	76	136	76	89	15102	13889
KRSP2-300-150	1504	300	150	160	76	76	136	76	89	15102	13889
KRSP2-350-100	2058	350	100	110	78	78	164	92	95	20944	17747
KRSP2-350-125	1890	350	125	135	78	78	152	85	95	20944	17747
KRSP2-350-150	1727	350	150	160	78	78	152	85	95	20944	17747
KRSP2-400-100	2354	400	100	110	82	82	139	90	89	20393	19180
KRSP2-400-125	2046	400	125	135	82	82	139	90	89	20393	19180
KRSP2-400-150	1904	400	150	160	82	82	139	90	89	20393	19180
KRSP2-500-100	2728	500	100	110	82	82	152	90	89	21054	19290
KRSP2-500-125	2591	500	125	135	82	82	152	90	89	21054	19290
KRSP2-500-150	2415	500	150	160	82	82	152	90	89	21054	19290

Consult factory for higher pressure models



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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