

WORLD CLASS · EFFICIENCY · RELIABILITY

# k|r|s|p

SINGLE STAGE ROTARY



Kaishan Compressor USA





WE MANUFACTURE **85%**  
OF THE COMPRESSOR COMPONENTS INTERNALLY,  
ENSURING QUALITY AND CONTROLLING COSTS

**60+**  
YEARS  
IN BUSINESS

**OVER  
70,000**  
COMPRESSORS  
PRODUCED  
**A YEAR**

**3RD LARGEST**  
COMPRESSOR MANUFACTURER  
IN THE WORLD



LOCATED IN  
**LOXLEY, AL  
USA**

**MADE IN  
ALABAMA**

## 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



### INDUSTRIAL GRADE ELECTRICAL COMPONENTS

#### Increased Reliability / Lower Servicing Cost

- Outstanding reliability
- Excellent component life
- Industry recognized brands, with local support
- UL (cUL) Approved



### 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
- Premium efficiency motors

### 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



### 316 STAINLESS STEEL CONTROL TUBING

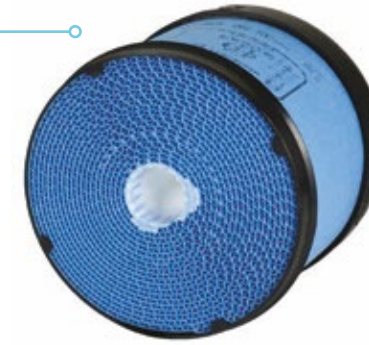
#### Long Tubing Life / Reduced Downtime

- No cheap rubber hoses
- Stainless lines increase reliability due to corrosion free material
- Reduces nuisance breakdowns

### '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



### 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

### MODULATING 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

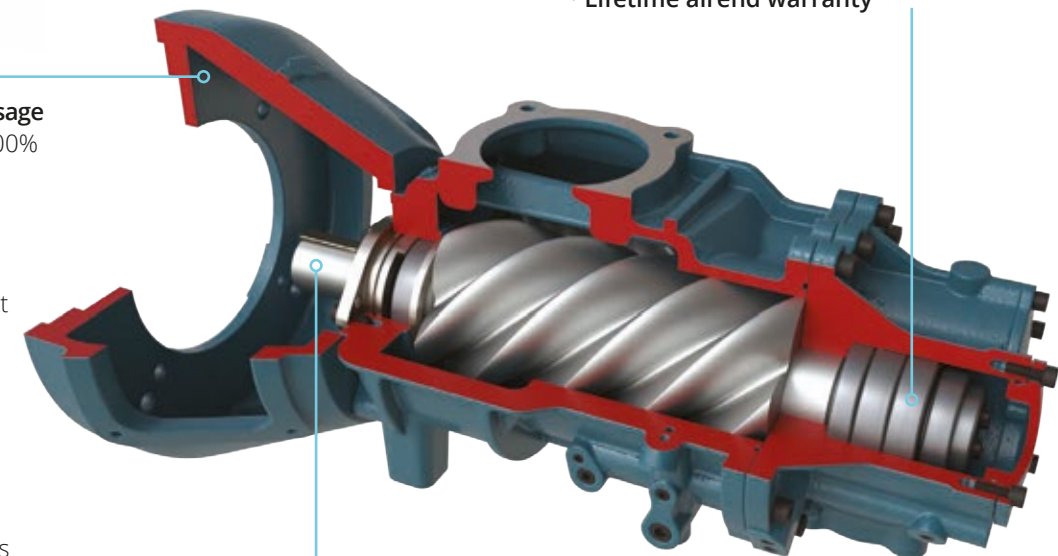
#### Maximum Output with Less Energy Usage

- Asymmetric 5 / 6 rotor profile with 100% SKF bearings
- KAPP Grinder rotor technology for tighter clearances and world class efficiency and performance
- Flanged motor adapter ensures perfect coupling 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



### 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

### SINGLE PASS OIL & AFTER COOLERS

#### Long Life / Easily Accessible

- Minimize thermal stress
- Coolers oversized to accommodate 122F° (50°C) ambient temperatures
- Low cooling air velocity reduces dust build up

### QUADRUPLE DISCHARGE BEARINGS

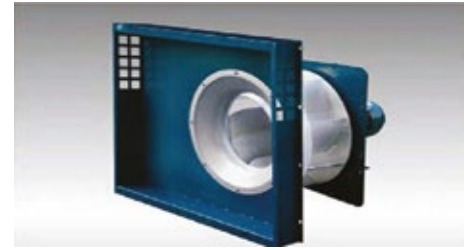
#### Longer Bearing Life / Quieter Operation

- 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

## KRSP SERIES COMPRESSORS PROVIDE TURN-KEY INDUSTRIAL SOLUTIONS

### KRSP has low life cycle cost by providing:

- High performance electrical wiring 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.

## 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 specially 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 FIXED SPEED

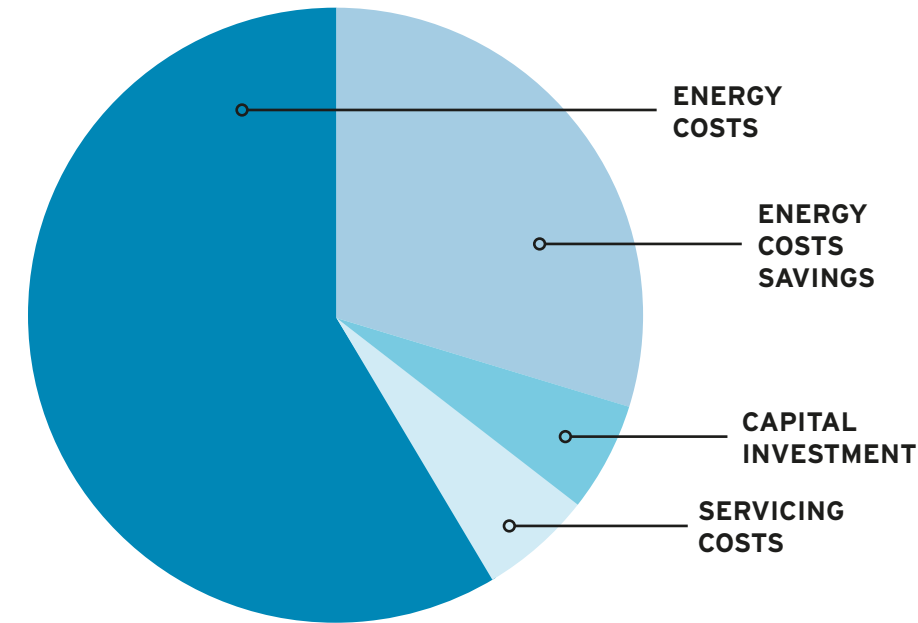
MODEL	POWER		FLOW (CFM / M3/min)								SOUND dBA	WEIGHT		DIMENSIONS (LxWxH)	
	HP	kW	115 psi	8 bar	125 psi	8.6 bar	150 psi	10 bar	175 psi	12 bar		lbs	ks	in	mm
KRSP-40	40	30	202	5.72	199	5.64	160	4.53	139	3.94	71	2271	1031	71x46x54	1803x1168x1372
KRSP-50	50	37	239	6.77	235	6.65	194	5.49	154	4.36	71	2359	1071	71x46x54	1803x1168x1372
KRSP-60	60	45	288	8.16	284	8.04	234	6.63	187	5.30	72	3660	1662	89x56x68	2261x1422x1727
KRSP-75	75	55	361	10.22	356	10.08	281	7.96	228	6.46	75	4012	1821	89x56x68	2261x1422x1727
KRSP-100	100	75	501	14.19	494	13.99	424	12.01	360	10.19	76	5490	2492	98x60x72	2489x1524x1829
KRSP-125	125	90	613	17.36	608	17.22	441	12.49	434	12.29	77	5864	2662	98x60x72	2489x1524x1829
KRSP-150	150	110	728	20.62	721	20.42	593	16.79	480	13.59	78	8135	3693	122x67x81	3099x1702x2057
KRSP-200	200	150	965	27.33	960	27.18	750	21.24	702	19.88	79	8973	4074	122x67x81	3099x1702x2057

MODEL	POWER		FLOW (CFM / M3/min)								SOUND dBA	WEIGHT		DIMENSIONS (LxWxH)	
	HP	kW	100 psi	7 bar	125 psi	8.6 bar	150 psi	10 bar	175 psi	12 bar		lbs	ks	in	mm
KRSP-250	250	190	1257	35.59	1189	33.67	973	27.55	749	21.21	80	11949	5425	140x75x91	3556x1905x2311
KRSP-300	300	220	1502	42.53	1405	39.79	1186	33.58	941	26.65	80	12645	5741	140x75x91	3556x1905x2311
KRSP-350	350	250	1923	54.45	1531	43.35	1401	39.67	1112	31.49	81	14222	6457	152x87x89	3861x2210x2261
KRSP-400	400	300	2102	59.52	1913	54.17	1586	44.91	CF	CF	82	17640	8009	168x89x89	4267x2261x2261
KRSP-500	500	375	2475	70.09	2175	61.59	1808	51.20	CF	CF	82	18522	8409	168x89x89	4267x2261x2261

## KRSP SERIES VARIABLE SPEED DRIVE 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 VARIABLE SPEED

MODEL	POWER		FLOW (CFM / M3/min)								SOUND dBA	WEIGHT		DIMENSIONS (LxWxH)	
	HP	kW	100 psi	7 bar	115 psi	8 bar	125 psi	8.6 bar	150 psi	10 bar		lbs	ks	in	mm
KRSP-40	40	30	208	5.89	200	5.66	195	5.52	175	4.96	71	2403	1091	71x46x54	1803x1168x1372
KRSP-50	50	37	248	7.02	242	6.85	236	6.68	212	6.00	71	2711	1231	71x46x54	1803x1168x1372
KRSP-60	60	45	300	8.50	288	8.16	282	7.99	252	7.14	72	3660	1662	89x56x68	2261x1422x1727
KRSP-75	75	55	371	10.51	362	10.25	356	10.08	318	9.00	75	4012	1821	89x56x68	2261x1422x1727
KRSP-100	100	75	500	14.16	478	13.54	470	13.31	422	11.95	76	5292	2403	98x60x72	2489x1524x1829
KRSP-125	125	90	632	17.90	616	17.44	602	17.05	540	15.29	77	5864	2662	98x60x72	2489x1524x1829
KRSP-150	150	110	770	21.80	740	20.95	721	20.42	648	18.35	78	8334	3784	122x67x81	3099x1702x2057
KRSP-200	200	150	1014	28.71	982	27.81	950	26.90	875	24.78	79	9083	4124	122x67x81	3099x1702x2057
KRSP-250	250	190	1225	34.69	1186	33.58	1147	32.48	1057	29.93	80	12658	5747	140x75x91	3556x1905x2311
KRSP-300	300	220	1521	43.07	1488	42.14	1422	40.27	1308	37.04	80	12897	5855	140x75x91	3556x1905x2311
KRSP-350	350	250	1875	53.10	1809	51.23	1681	47.60	1372	38.85	81	14454	6562	152x87x89	3861x2210x2261
KRSP-400	400	300	2131	60.34	2027	57.40	1819	51.51	1559	44.15	82	18120	8226	168x89x89	4267x2261x2261
KRSP-500	500	375	2429	68.78	2318	65.64	2208	62.52	2098	59.41	82	19103	8673	168x89x89	4267x2261x2261





MODEL	COMPRESSOR TYPE	FEATURES
KRSP2	30-600 HP Two Stage	Global leader in air compressor efficiency
KRSP	40-500 HP Single Stage	Patented 'SKY' air end, quadruple SKF bearings
KRSD	15-200 HP Single Stage	Direct drive, TEFC motor, low sound enclosure
KRSB	5-50 HP Single Stage	Belt drive optional tank & dryer packages
KRSL	Single Stage Low Pressure	Pressure as low as 30 PSI
KRSV	Rotary Screw Vacuum Pump	World class vacuum efficiency



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