

**perske**



Perske motors make a difference,  
no matter what you make.



**Routing · Drilling · Sawing · Shaping · Cutting · Boring · Grinding**

CRP Industries is the exclusive representative for Walter Perske GmbH in North America — this brochure details the line of Perske motors we offer. We invite you to read and learn more!

# Perske Motors

## Perske Motors: Designed for Performance & Built to Last

We understand that your business is built on the quality, performance, and reliability of your production machinery and the motors that drive it. That's why our business is built on motors that deliver the highest possible quality, performance, and reliability.

Each Perske precision motor is made in Mannheim, Germany by Walter Perske GmbH and designed with a very specific application in mind. Because every motor is optimized for the task for which it will be used, the end user enjoys peak performance and enhanced reliability.

Perske's first-tier reputation is based on a celebrated history comprising over 60 years of industry leadership in electric motor research and development. Perske engineers are always exploring the limits of high frequency motor design, and Perske is an original equipment supplier for a number of major machinery makers in a wide variety of industries.

### Brought to you by CRP Industries

CRP Industries is a leading industrial importer with over 50 years of excellence. An ISO 9001:2008 certified organization, CRP is the exclusive North American representative of Perske motors, and offers experienced sales and support as well as a factory-authorized service center for repair and restoration of all Perske motors.





## Some Perske Advantages

- A wide selection of standard and non-standard motor configurations, often with numerous tool holding options (including direct mounting) as well as a range of HP/RPM variants
- Extreme precision in design and manufacture allows for continuous duty rating, high overload capacities, and extended service life
- Motors deliver efficient and economical service due to precision balancing and micron run-out tolerances
- Custom solutions available in every line of motors — if you don't see what you need, we can make it

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# Routing

## Perske High Frequency Routing Motors Built for especially demanding applications.

Perske motors have long been recognized as the first choice of the woodworking industry for a wide range of routing, finishing, and shaping applications. Our high frequency routing motors also excel in the cutting, trimming, and shaping of various materials including metal, plastic, stone, glass, and composites.

Perske's complete line of routing motors offers tremendous flexibility to meet almost any production requirement. A variety of mounting options and configurations can be suited to tasks like cabinet making and finishing, sign manufacturing, and cutting and forming doors and staircases — and the list goes on and on. Our routing motors are designed for superior performance and offer the features and benefits listed below.

### Overall benefits:

- High frequency offering speeds up to 24,000 RPM
- Micron quality run-out
- Heavy-duty design and construction for a reliable workhorse that won't break down in production cycles
- Direct tool mounting achieves precise and accurate cutting within very small tolerances, as well as prolonged tool life expectancy and efficient cutting performance
- Various tool holding options enable cost effective methods for tool use and changeover
- Range of collet capabilities to support tool sizes as small as 1/8 inch and as large as 1 inch
- Long service life performance with low maintenance needs due to special lifetime lubricated angular contact bearings
- 100% continuous duty rated with heavy duty production performance and high overload capacity

### Overall features for versatility:

- Motors can be placed in either a horizontal or vertical position
- Can be mounted on CNC industrial routers to meet heavy production levels
- Can also be mounted on a router table or bench for light production requirements



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MOTOR SERIES TYPE	POWER OPTIONS (HP)	MAX. SPEED AVAILABLE (RPM)	MAX. TOOL CAPACITY	SPECIAL FEATURES	COLLET & COVERNUT	HSK-C	QUICK CLAMPING SYSTEMS	SPECIAL DESIGN
KRS 35	1 to 3	18,000	1/2"		Y	N	N	Y
KRS 50	4 to 6.5	18,000	5/8"		Y	Y	N	Y
KRSV 51	6.5	18,000	1"		Y	N	Y	Y
KRS 60	9.0	18,000	3/4"		Y	Y	N	Y
KRSV 61	9.0	18,000	1"		Y	Y	Y	Y
KNO 70	10 to 17	18,000	1"		Y	Y	Y	Y
VS 50/60	2 to 7	24,000	1/2"		Y	N	N	Y
VUS 50/60	1 to 3.5	24,000	1/2"	Non-ventilated	Y	N	N	Y

<b>TOOL SYSTEMS:</b>	<ul style="list-style-type: none"> <li>• Collet &amp; covernut</li> <li>• HSK-C</li> <li>• Quick clamping systems</li> <li>• Cylindrical shaft with or without key</li> <li>• Cylindrical shaft with or without key and outside thread</li> <li>• Cylindrical shaft with or without key and inside thread</li> </ul>
<b>FREQUENCY:</b>	<ul style="list-style-type: none"> <li>• 60 to 500 HZ (3,600 to 30,000 RPM)</li> <li>• Electrical performance data (HP) are only valid for the stated constant frequency</li> </ul>
<b>VOLTAGE:</b>	<ul style="list-style-type: none"> <li>• 230/400V standard according to DIN/VDE regulations; however, other voltage options are available</li> <li>• Insulation class F standard</li> <li>• If using a static frequency converter, it is necessary to use line reactors or filters to smooth out the sine wave</li> </ul>
<b>BEARINGS:</b>	<ul style="list-style-type: none"> <li>• Lifetime lubricated, high precision hybrid bearings</li> <li>• Drive end bearing is fixed and non-drive end bearing is self-aligning</li> <li>• With heavy tooling, double bearing arrangements are recommended for front bearing position to eliminate axial shaft play</li> </ul>
<b>FEATURES:</b>	<ul style="list-style-type: none"> <li>• TEFC motors are self-ventilated with a built in fan which works most effectively at the motor's maximum operating speed</li> <li>• Labyrinth seals at both ends of the motor to protect against dust or particle penetration into the motor when under power</li> <li>• Motors are balanced to a vibration speed of <math>V_{eff} = 1.8</math> mm/sec at zero load and rated operating speed</li> <li>• Most motors are available according to NEMA or CSA standards (L.R. 16 865)</li> </ul>

**Don't see what you need? Ask about Perske custom motors built to your unique requirements.**





## Perske Saw Arbor Motors

**Ideal for high volume, heavy duty wood cutting.**

Those in the field of lumber processing are facing many new demands to be safer and more efficient in order to stay competitive. There is a movement toward minimizing waste by optimizing sawing of logs, as well as a need for more reliable, higher-performing equipment to achieve these goals.

In environments that demand high-volume production and high-efficiency, Perske saw arbor motors really shine. Our saw arbor motors are specifically designed for heavy duty wood cutting and offer the features listed below.

### **Features for durability:**

- Rugged construction
- Rated for continuous duty or intermittent where required

### **Features for efficiency:**

- Extremely high stalling torque as well as overload capacity (2-3 times full load)
- Totally enclosed and fan cooled (TEFC) to handle heavy volume without overheating
- Equipped with saw collars for direct mounting of blades, circular saws, pendulum saws, and tools for heavy duty woodworking applications

### **Features for performance:**

- Slim, low profile design; allows for deeper cutting depth than standard motors
- Lifetime lubricated bearings
- Low vibration ensures uniform cutting and shaping patterns

Perske saw arbor motors offer special features for enhanced operator safety, including a squirrel caged design. Special ventilator-cooled electromagnetic and high pressure braking action are available. Also ideal for heavy duty cutting and shaping of metals, plastics, and stone.



MOTOR SERIES TYPE	POWER OPTIONS (HP)	MAX. SPEED AVAILABLE (RPM)	SAW COLLARS DIAMETER	SHAFT NUT
KNS 50	1 to 2	3,600	80mm	M20
KNS 60	2.7 to 5.3	3,600	100mm	M20
KCS 70	5 to 12	3,600	120mm	M30
KS 80	10 to 24	3,600	160mm	M30
KS 90	30	3,600	180mm	M36
KS 110	50 to 75	3,600	200mm	M56
KS 140	75 to 105	3,600	300mm	M76
KS 160	130 to 160	3,600	Special	Special
KS 200	200 to 230	3,600	Special	Special

<b>TOOL SYSTEMS:</b>	<ul style="list-style-type: none"> <li>• Saw collars/flanges with threaded nut (RH or LH)</li> <li>• HSK-C</li> <li>• Hydro-clamp chuck system</li> <li>• Cylindrical shaft with or without key</li> <li>• Cylindrical shaft with or without key and outside thread</li> <li>• Cylindrical shaft with or without key and inside thread</li> </ul>
<b>FREQUENCY:</b>	<ul style="list-style-type: none"> <li>• 60 HZ (3,600 RPM) standard (Some motors are capable of running up to 7,200 RPM)</li> <li>• Electrical performance data (HP) are only valid for the stated constant frequency</li> </ul>
<b>VOLTAGE:</b>	<ul style="list-style-type: none"> <li>• 230/460V standard according to DIN/VDE regulations; however, other voltage options are available including 575V for Canada</li> </ul>
<b>BEARINGS:</b>	<ul style="list-style-type: none"> <li>• Lifetime lubricated, high precision bearings (where required)</li> <li>• Drive end bearing is fixed and non-drive end bearing is self-aligning</li> <li>• With heavy tooling, double bearing arrangements are recommended for front bearing position to eliminate axial shaft play</li> </ul>
<b>FEATURES:</b>	<ul style="list-style-type: none"> <li>• TEFC motors are self-ventilated with a built in fan which works most effectively at the motor's maximum operating speed</li> <li>• Labyrinth seals at both ends of the motor to protect against dust or particle penetration into the motor when under power</li> <li>• Motors are balanced to a vibration speed of <math>V_{eff} = 1.8</math> mm/sec at zero load and rated operating speed</li> <li>• Terminal box can be located on right or left side pending customers preference</li> <li>• An electromechanical brake can be integrated as an option</li> <li>• Motors are available according to NEMA or CSA standards (L.R. 16 865)</li> </ul>

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# Shaping

## Perske Shaping Motors

### Flexibility for a diverse array of configurations.

In the fields of lumber and materials processing, there is an ever-increasing need for productivity and adaptability. Perske shaping motors rise to the challenge, with features that allow for a variety of shaping operations and a range of tooling options. Designed to handle light-duty or heavy-duty production, these motors increase efficiency in shaping applications for woodworking, plastics, composites, and sheet metals.

#### Features for versatility:

- A variety of direct tool mounting options including the popular HSK-C tooling interface, which results in excellent radial and axial precision cutting
- Ease of changing out custom tool templates for the profile design of a wide range of woodworking and material shaping jobs
- Optional shaft designs include an outside tool shank and inside bore, a special shaft for hydro-clamping systems, as well as a collet and covernut to allow for flexible shaping tool options

#### Features for performance:

- Low profile motors allow for deep woodcutting within tight and precise tolerances to contour arches and scale radius tops on wood, glass, or plastic surfaces
- A variety of machine bits and collet capacities on KNS motor types allows for shaping and profiling V-grooves, dovetails, beaded corners, and rounded edges
- Speeds range from 3,600 RPM to 30,000 RPM, and output levels vary from 0.2 HP to 17 HP to handle almost any production requirement
- KNS motors have an outside rib design and labyrinth seals for problem-free operation, even in dusty environments
- Low maintenance motors are equipped with lifetime lubricated bearings
- Precision balanced to ensure micron-quality run-out tolerances

The Perske logo consists of the word "perske" in a white, lowercase, sans-serif font, enclosed within a white rectangular border with rounded corners. A registered trademark symbol (®) is positioned to the upper right of the logo.

perske®

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MOTOR SERIES TYPE	POWER OPTIONS (HP)	MAX. SPEED AVAILABLE (RPM)	MAX. SHAFT DIAMETER SINGLE BEARING	MAX. SHAFT DIAMETER DOUBLE BEARING	COLLET & COVERNUT	HSK-C	HYDRO-CLAMP	SPECIAL DESIGN
KN 20	0.5 to 1	30,000	25 mm	20mm	Y	N	N	Y
KR 35	1.3 to 3	24,000	25 mm	25mm	Y	N	N	Y
KN 50	4 to 6.5	18,000	30 mm	30mm	Y	Y	Y	Y
KN 60	9.0	18,000	35 mm	50mm	Y	Y	Y	Y
KN 70	10 to 17	18,000	50 mm	50mm	Y	Y	Y	Y

<b>TOOL SYSTEMS:</b>	<ul style="list-style-type: none"> <li>• Collet &amp; covernut</li> <li>• HSK-C</li> <li>• Hydro-clamp chuck system (ETP HydroGrip)</li> <li>• Quick clamping systems</li> <li>• Cylindrical shaft with or without key</li> <li>• Cylindrical shaft with or without key and outside thread</li> <li>• Cylindrical shaft with or without key and inside thread</li> <li>• Saw blade flanges and nut available</li> <li>• Custom shaft design available to suit customer application</li> </ul>
<b>FREQUENCY:</b>	<ul style="list-style-type: none"> <li>• 60 to 500 HZ (3,600 to 30,000 RPM)</li> <li>• Electrical performance data (HP) are only valid for the stated constant frequency</li> </ul>
<b>VOLTAGE:</b>	<ul style="list-style-type: none"> <li>• 230/400V standard according to DIN/VDE regulations; however, other voltage options are available</li> <li>• Insulation class F standard</li> <li>• If using a static frequency converter, it is necessary to use line reactors or filters to smooth out the sine wave</li> </ul>
<b>BEARINGS:</b>	<ul style="list-style-type: none"> <li>• Lifetime lubricated, high precision hybrid bearings (where required)</li> <li>• Drive end bearing is fixed and non-drive end bearing is self-aligning</li> <li>• With heavy tooling, double bearing arrangements are recommended for front bearing position to eliminate axial shaft play</li> </ul>
<b>FEATURES:</b>	<ul style="list-style-type: none"> <li>• TEFC motors are self-ventilated with a built in fan which works most effectively at the motor's maximum operating speed</li> <li>• Labyrinth seals at both ends of the motor to protect against dust or particle penetration into the motor when under power</li> <li>• Motors are balanced to a vibration speed of <math>V_{eff} = 1.8</math> mm/sec at zero load and rated operating speed</li> <li>• Most motors are available according to NEMA or CSA standards (L.R. 16 865)</li> </ul>

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# Special Applications

## Perske Motors for Special Applications such as Boring, Drilling, Grinding, and Machining

### Maximum precision for a range of critical functions.

When the difference between success and failure can be measured by microns, you need Perske motors. Perske offers a line of multipurpose motors that meet the demand for extremely fine machining tolerances.

### Industry applications that require Special Application motors include:

- Aerospace manufacturing
- Automotive industry metalworking and finishing
- Medical and dental equipment
- Renewable energy products such as wind power systems, turbines, and solar panels
- Plastic industry
- Woodworking finishing

### Overall features for precision, performance, and durability:

- High-speed performance motors reach speeds ranging from 3,600 RPM to 30,000 RPM
- Motor power ratings are rated for continuous duty
- Lifetime lubricated, high precision bearings
- Motors are designed for exacting and precise grinding applications on materials including wood, metals, and composites
- Narrow motor design allows for small axial distances between the grinding wheel and machine shaft for ultimate precision when attaining extremely small tolerances
- Careful dynamic balancing to ensure micron-quality run-out tolerances and precision cutting performance
- Varying collet capabilities and types accommodate different grinding wheel sizes with a maximum tool shank up to 1 inch (depending on motor design)
- Direct tool mounting options include outside tool shank with inside bore, collet and covernut, and HSK-C
- On boring/drilling-specific motors, shaft design can incorporate an outside taper, inside bore, and outside thread or a collet and covernut



MOTOR SERIES TYPE	POWER OPTIONS (HP)	MAX. SPEED AVAILABLE (RPM)	MAX. TOOL CAPACITY	SPECIAL FEATURES	COLLET & COVERNUT	HSK-C	HYDRO-CLAMP	QUICK CLAMPING SYSTEM
KN 20	0.5 to 1	30,000	1/2"		Y	N	Y	Y
KRS 35	1 to 3	18,000*	1/2"	*Available in 24,000 RPM	Y	N	N	N
KRS 50	4 to 6.5	18,000	5/8"		Y	Y	N	N
KRSV 51	6.5	18,000	1"		Y	N	Y	Y
KRS 60	9.0	18,000	3/4"		Y	Y	N	Y
KRSV 61	9.0	18,000	1"		Y	N	Y	Y
KN 50	4 to 6.5	18,000	5/8"	†HSK-C Optional	Y	O†	N	N
KN 60	9.0	18,000	5/8"	†HSK-C Optional	Y	O†	N	N
KNO 70	10 to 17	18,000	1"		Y	Y	Y	Y
VS 50/60	2 to 7	24,000	1/2"		Y	N	Y	Y
WS 50/60	1 to 3.5	24,000	1/2"	Non-ventilated	Y	N	N	N

<b>TOOL SYSTEMS:</b>	<ul style="list-style-type: none"> <li>• Collet &amp; covernut</li> <li>• HSK-C (Standard and optional as indicated in chart)</li> <li>• Hydro-clamp chuck systems (ETP HydroGrip) on selected models</li> <li>• Quick clamping systems on selected models</li> <li>• Cylindrical shaft with or without key</li> <li>• Cylindrical shaft with or without key and outside thread</li> <li>• Cylindrical shaft with or without key and inside thread</li> <li>• Saw blade flanges and nut available</li> <li>• External or internal taper</li> </ul>
<b>FREQUENCY:</b>	<ul style="list-style-type: none"> <li>• 60 to 500 HZ (3,600 to 30,000 RPM)</li> <li>• Electrical performance data (HP) are only valid for the stated constant frequency</li> </ul>
<b>VOLTAGE:</b>	<ul style="list-style-type: none"> <li>• 230/400V standard according to DIN/VDE regulations; however, other voltage options are available</li> <li>• Insulation class F standard</li> <li>• If using a static frequency converter, it is necessary to use line reactors or filters to smooth out the sine wave</li> </ul>
<b>BEARINGS:</b>	<ul style="list-style-type: none"> <li>• Lifetime lubricated, high precision hybrid bearings (where required)</li> <li>• Drive end bearing is fixed and non-drive end bearing is self-aligning</li> <li>• With heavy tooling, double bearing arrangements are recommended for front bearing position to eliminate axial shaft play</li> </ul>
<b>FEATURES:</b>	<ul style="list-style-type: none"> <li>• TEFC motors are self-ventilated with a built in fan which works most effectively at the motor's maximum operating speed</li> <li>• Labyrinth seals at both ends of the motor to protect against dust or particle penetration into the motor when under power</li> <li>• Motors are balanced to a vibration speed of <math>V_{eff} = 1.8</math> mm/sec at zero load and rated operating speed</li> <li>• Most motors are available according to NEMA or CSA standards (L.R. 16 865)</li> </ul>

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## Service That Exceeds Your Expectations

CRP Industries is proud to offer service that truly matches the high standards of Perske motors. As a mature yet forward thinking industrial products company, CRP has been Perske's official North American representative for more than 30 years. In addition to sales and service, we can even provide pre-sale engineering support — to ensure that you get the correct motor and options for your needs, even if it means custom building a unique product.

Our relationship with Walter Perske GmbH is so strong that we have the only repair shop in North America factory authorized for warranty work. And should your Perske motor ever need repairs or adjustments, CRP maintains a deep inventory of motors and replacement parts so our factory-trained technicians have everything they need to get your job done quickly and efficiently in our state-of-the-art facility.

### THE PERSKE PERFORMANCE TEAM OFFERS:

- An experienced customer service department with access to a wide selection of standard & non-standard motors
- A full complement of genuine Perske replacement parts and accessories
- A state-of-the-art repair facility staffed with factory-trained technicians
- Decades of experience selling and servicing Perske products

For all questions regarding sales, service, or support for  
Perske motors , call **800-526-4066** today.

email: [perske@crpindustries.com](mailto:perske@crpindustries.com) web: [www.crpindustries.com/bu\\_perske\\_ps.asp](http://www.crpindustries.com/bu_perske_ps.asp)





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