

# 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>

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



**Perske Tough for 50 years**  
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