

晶圆背面研磨 气浮主轴

11082

适用于12英寸晶圆

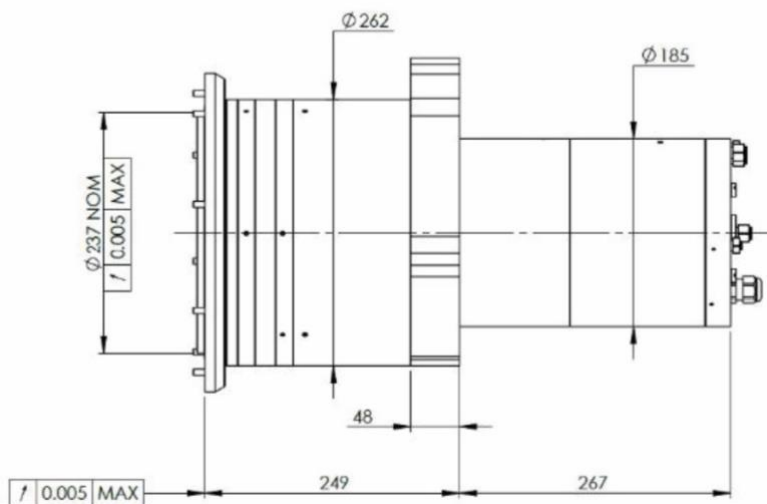
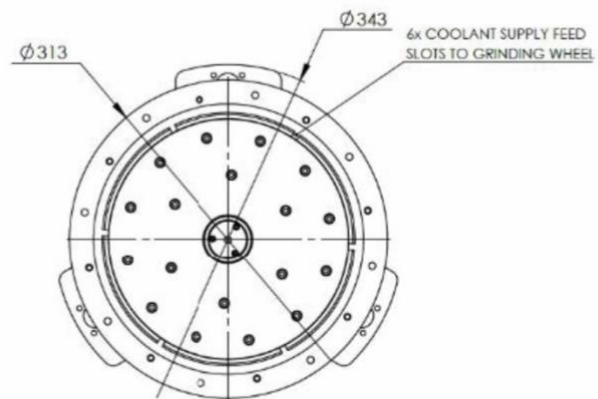
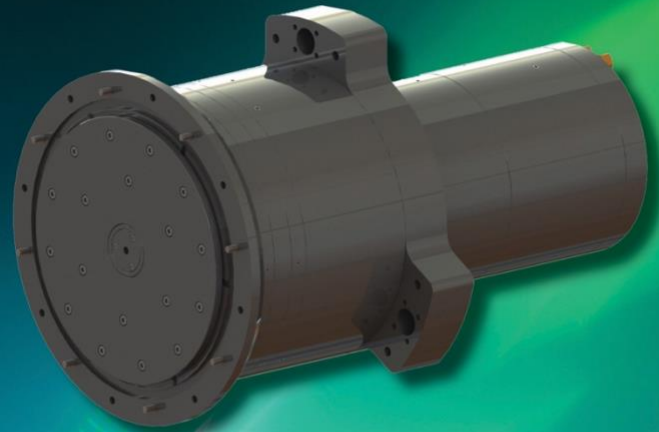
用于研磨半导体和光学材料

转速范围	1000—4,000 rpm
电机功率	6.3 kw (11 kw)
供气压力	5.5 bar
主轴耗气量	80 l/min
轴向刚度	82 kg/um
轴向失效载荷	> 1530 N
径向跳动	≤ 3 um
轴向跳动	≤ 3 um
电机类型	Brushless DC
重量	156 kg
公称直径	262 mm

- 凭借丰富的设计与开发经验，我们引领气浮
- 主轴的技术创新，为您制定最佳解决方案。
- 提供多样配置，满足不同需求。
- 定制主轴转速，注重个性化应用设计。

升级版主轴特点：

- 高刚性
- 极小振动
- 低热膨胀
- 极小的转速波动
- 双向旋转
- 通过轴心冷却



WAFER BACK GRINDING SPINDLE

11082

FOR 12" WAFERS

FOR GRINDING SEMICONDUCTOR
AND OPTICAL MATERIALS

Speed Range	1000—4,000 rpm
Motor Power	6.3 kw (11 kw)
Air Supply Pressure	5.5 bar
Bearing Air Consumption	80 l/min
Axial Stiffness	82 kg/um
Axial Failure Load	> 1530 N
Radial Runout at Tool	≤ 3 um
Axial Runout at Tool	≤ 3 um
Motor Type	Brushless DC
Weight (Approx)	156 kg
Body Diameter (nominal)	262 mm

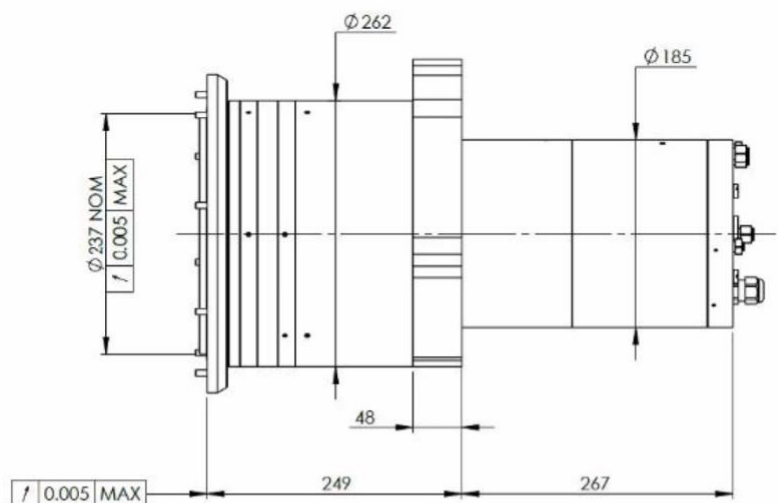
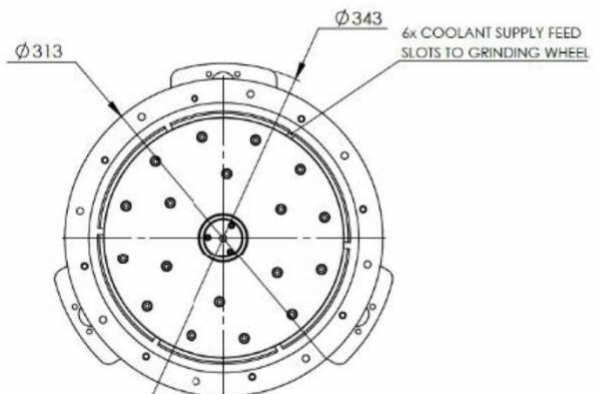
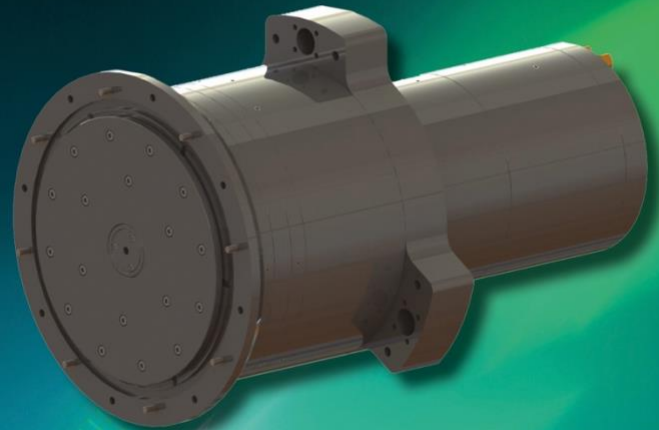
OUR DESIGN AND DEVELOPMENT
EXPERIENCE PLACES US IN THE
IDEAL POSITION TO DEVELOP NEW
AIR BEARING PRODUCTS AND
APPLICATIONS.

AVAILABLE IN A RANGE OF
CONFIGURATIONS.

ASSOCIATED SPINDLE SPEEDS TO SUIT
APPLICATION.

ENHANCED SPINDLE WITH:

- HIGH RIGIDITY
- MINIMAL VIBRATION
- LOW HEAT EXPANSION
- MINIMAL ROTATIONAL SPEED FLUCTUATION
- BI-DIRECTIONAL ROTATION
- THROUGH SHAFT COOLANT



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切割用气浮主轴

11300

顶面安装固定方式

支持顺时针/逆时针旋转

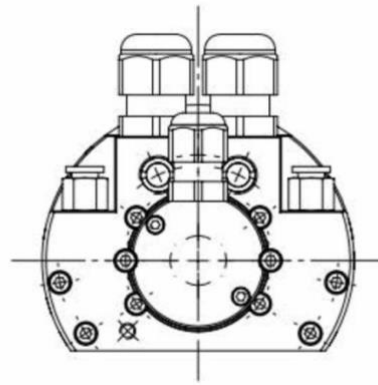
水冷

提供多种安装/固定方式

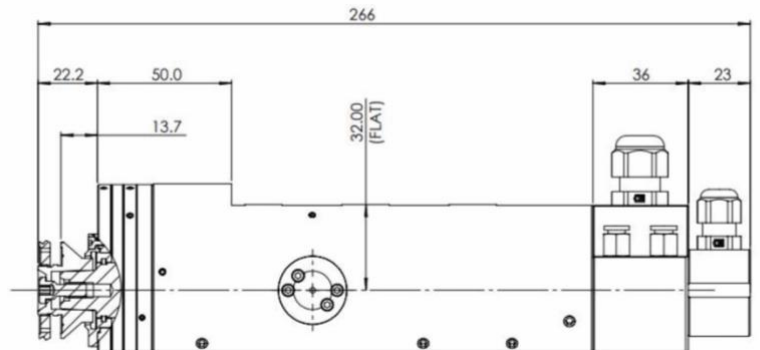
转速范围	60,000 rpm
可选电机功率	1.6 kw (2.2 kw)
供气压力	5.5 bar
主轴耗气量	80 l/min
轴向失效载荷	> 160 N
锥度跳动	≤ 1 μm
电机类型	Brushless DC
重量	9 kg
机身直径	80 mm
振动 (含法兰)	< 0.2 mm/s
振动 (无法兰)	< 0.1 mm/s

优势：

- 支持最大3英寸刀片。
- 提供一系列适用于40mm内径的软刀刀盘，以满足不同需求。
- 适用于硬刀轮安装
- 电机类型灵活：1.6/2.2千瓦，电机多样选择 - 全部集成于一个主轴内。
- 增强结构刚性。
- 延长刷子使用寿命。
- 轴锁一体，便于刀片更换。



REAR VIEW OF SPINDLE



AIR BEARING DICING SPINDLE RANGE

11300

TOP SURFACE MOUNTING

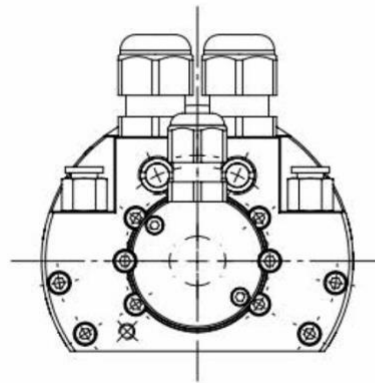
CW/CCW ROTATION AVAILABLE

ALTERNATIVE MOUNTING
ARRANGEMENTS AVAILABLE

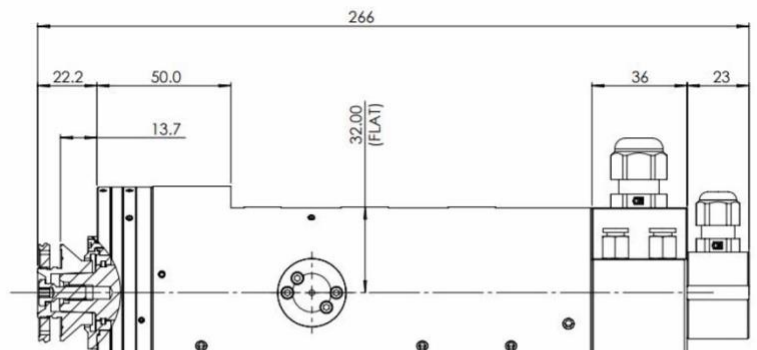
WATER COOLING

Speed Range	60,000 rpm
Motor Power Options	1.6 kw (2.2 kw)
Air Supply Pressure	5.5 bar
Bearing Air Consumption	80 l/min
Axial Failure Load	> 160 N
Taper Runout	≤ 1 μm
Motor Type	Brushless DC
Weight (Approx)	9 kg
Body Diameter (nominal)	80 mm
Vibration with wheelmount	< 0.2 mm/s
Vibration w/o wheelmount	< 0.1 mm/s

- SUPPORTS UP TO A 3" BLADE.
- RANGE OF HUBLESS BLADE HUBS AVAILABLE TO SUIT 40MM BLADE I/D.
- WHEELMOUNT TO SUIT HUBBED BLADES AVAILABLE.
- FLEXIBLE MOTOR TYPE: 1.6 / 2.2 KW, MOTOR SELECTION – ALL IN ONE SPINDLE HOUSING.
- ENHANCED STRUCTURAL RIGIDITY.
- ENHANCED BRUSH LIFE.
- INTEGRAL SHAFT LOCK FOR EASY BLADE REPLACEMENT.



REAR VIEW OF SPINDLE



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200mm 晶圆背面研磨

气浮主轴

09461

适用于8英寸晶圆

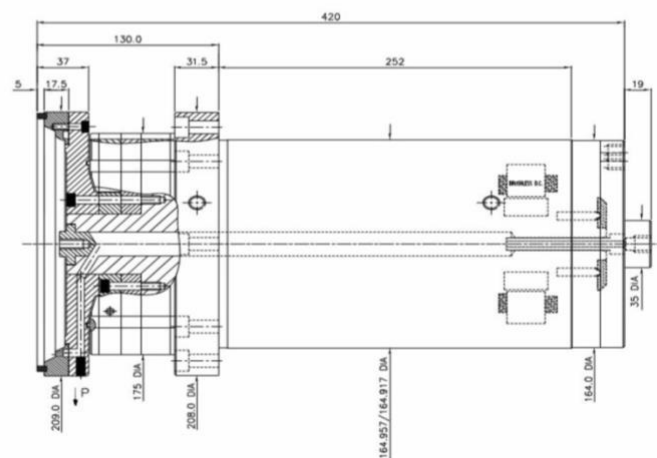
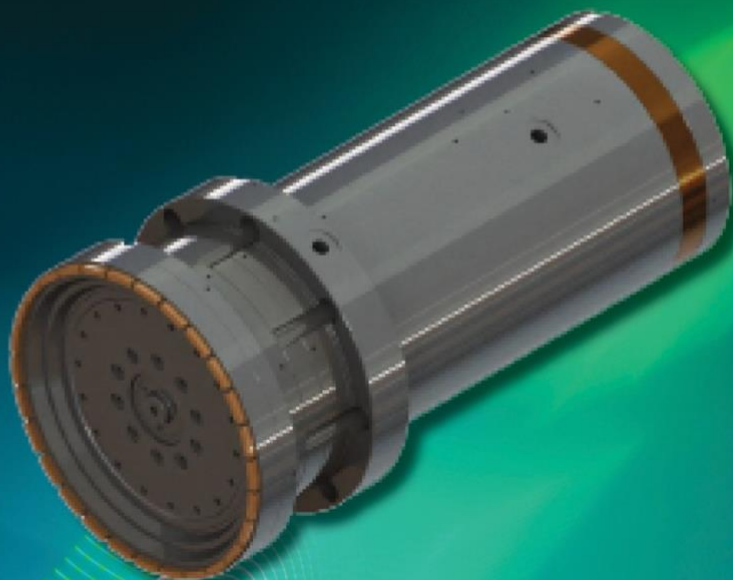
用于研磨半导体和光学材料

转速范围	1000—6,000 rpm
电机功率	4.5 kw
供气压力	5.5 bar
主轴耗气量	80 l/min
轴向刚度	13 kg/um
轴向失效载荷	> 1150 N
径向跳动	≤ 2 um
轴向跳动	≤ 1 um
电机类型	Brushless DC
重量	80 kg
机身直径	165 mm

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- 通过轴心冷却



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AIR BEARING 200MM WAFER BACK GRINDING SPINDLE

09461

FOR 8" WAFERS

FOR GRINDING SEMICONDUCTOR
AND OPTICAL MATERIALS

Speed Range	1000 - 6,000 rpm
Motor Power	4.5 kw
Air Supply Pressure	5.5 bar
Bearing Air Consumption	80 l/min
Axial Stiffness	> 13 kg/um
Axial Failure Load	> 1150 N
Radial Runout at Tool	≤ 2 um
Axial Runout at Tool	≤ 1 um
Motor Type	Brushless DC
Weight (Approx)	80 kg
Body Diameter (nominal)	165 mm

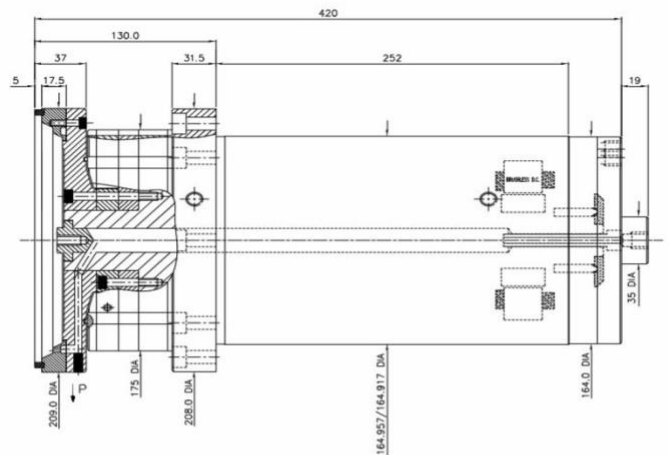
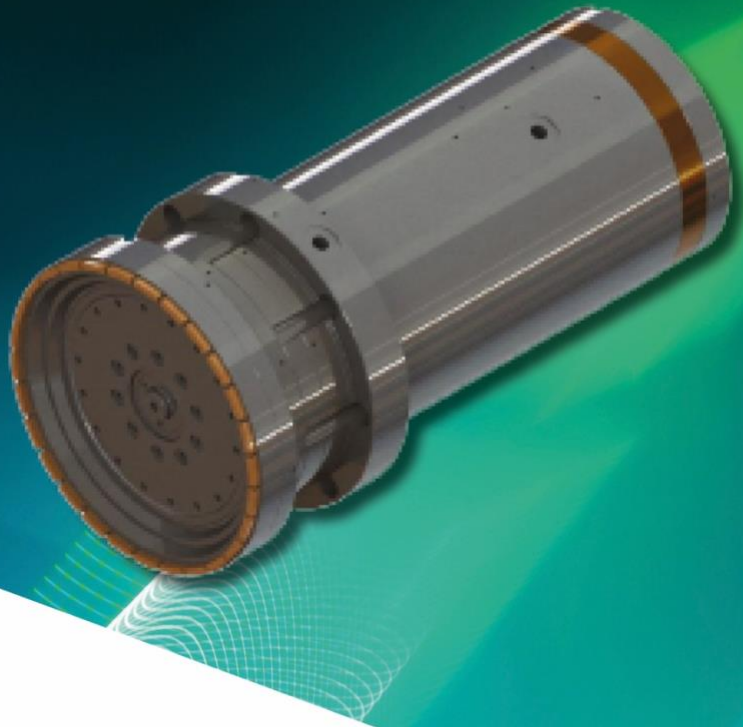
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- MINIMAL ROTATIONAL SPEED FLUCTUATION
- BI-DIRECTIONAL ROTATION
- THROUGH SHAFT COOLANT



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喷漆用气浮主轴

05334

为涂装应用提供全系列高速雾化主轴

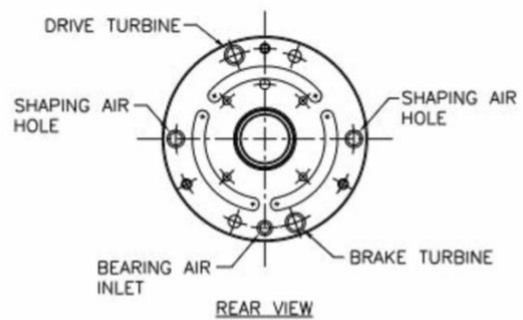
汽车原装设备制造商涂装线的行业领导者

可定制，满足任何规格要

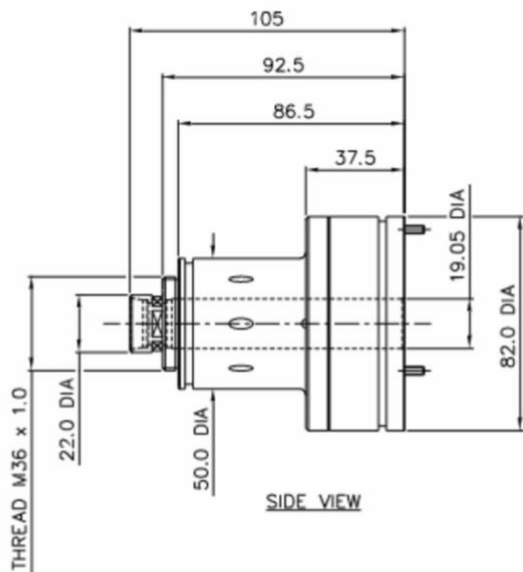
一体化成型气体供应?	Yes
旋杯最大直径	70mm
转速范围	80,000 rpm (空载) 60,000 rpm w 60,000g/min (负载涂料)
主轴供气压力	5.5 Bar
轴承气流量	80 l/min
涡轮驱动气流量	325 l/min
锥度跳动	≤ 1 um
重量	1 kg
机身直径	82mm
主轴长度	105 mm

优点：

- 经济运行：
最小化空气消耗，性价比高。
- 精密工程：
轻巧紧凑，非常适合机器人臂应用。
- 高可靠性：
设计以减少停机时间，最大化运行时间。
- 持久耐用：
非接触式空气轴承设计，延长产品寿命。
- 多功能应用：
兼容水基和溶剂基工艺。
- 多功能应用：兼容水基和溶剂基工艺。



REAR VIEW



SIDE VIEW

PAINT SPRAYING SPINDLE

05334

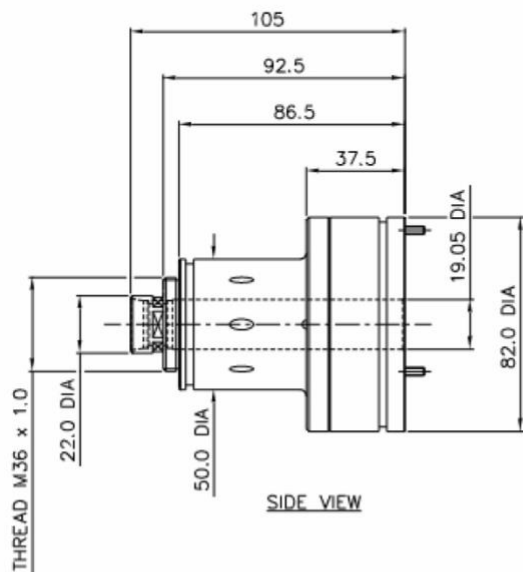
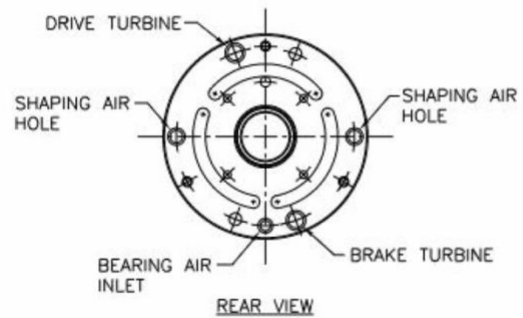
A COMPLETE RANGE OF
HIGH-SPEED ATOMISER SPINDLES
FOR PAINTING APPLICATIONS

INDUSTRY LEADERS FOR OEM
AUTOMOTIVE PAINT LINES

FULLY CUSTOMISABLE TO MEET ANY
SPECIFICATION REQUIREMENT

Integrated shaping air feed?	yes
Bell max diameter	70 mm
Speed Range	80,000 rpm unloaded, 60,000 rpm with 60,000cc/ min of paint
Bearing Air Supply Pressure	5.5 bar
Bearing Air Flow	80 l/min
Turbine Air Flow	325 l/min
Taper Runout at Tool	≤ 1 µm
Weight (Approx)	1 kg
Body Diameter (nominal)	82 mm
Spindle Length	105 mm

- **ECONOMIC OPERATION:**
MINIMISES AIR CONSUMPTION FOR
COST-EFFECTIVE PERFORMANCE.
- **PRECISION ENGINEERING:**
LIGHTWEIGHT AND COMPACT, PERFECT FOR
ROBOTIC ARM APPLICATIONS.
- **UNMATCHED RELIABILITY:**
DESIGNED FOR MINIMAL DOWNTIME AND
MAXIMUM UPTIME.
- **LONG-LASTING DURABILITY:**
NON-CONTACT AIR BEARING DESIGN
COATINGS ENSURE EXTENDED PRODUCT LIFE.
- **VERSATILE APPLICATION:**
COMPATIBLE WITH WATER AND SOLVENT
BASED PROCESSES.
- **TURBOCHARGED EFFICIENCY:**
ACCELERATES AND BRAKES SWIFTLY FOR
INCREASED PRODUCTIVITY.
- **SUPERIOR ATOMISATION:**
DELIVERS ENHANCED PERFORMANCE WITH
INTEGRATED SPEED FEEDBACK.



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研磨、
铣削和切割主轴

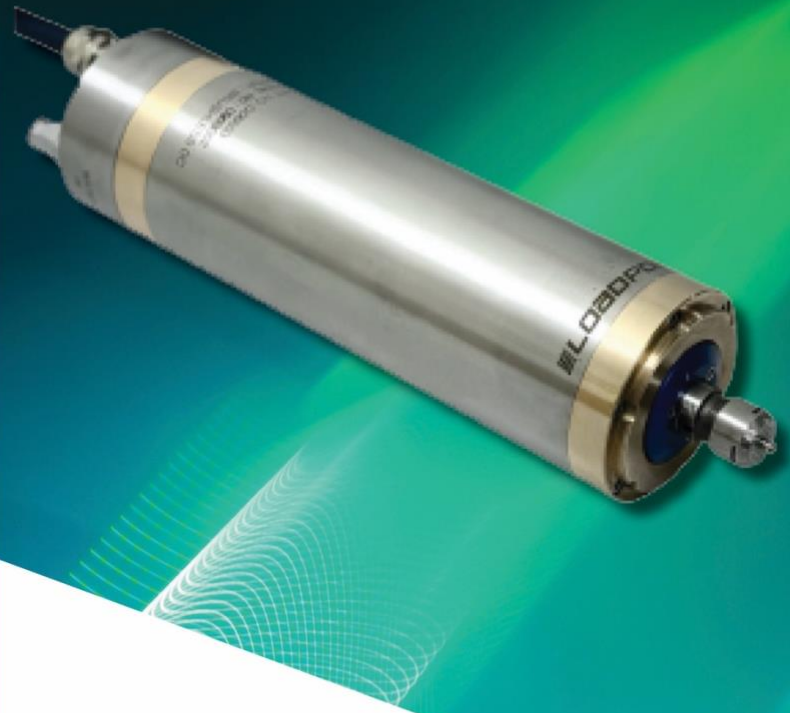
06526

支持顺时针/逆时针旋转

可互换的夹持系统

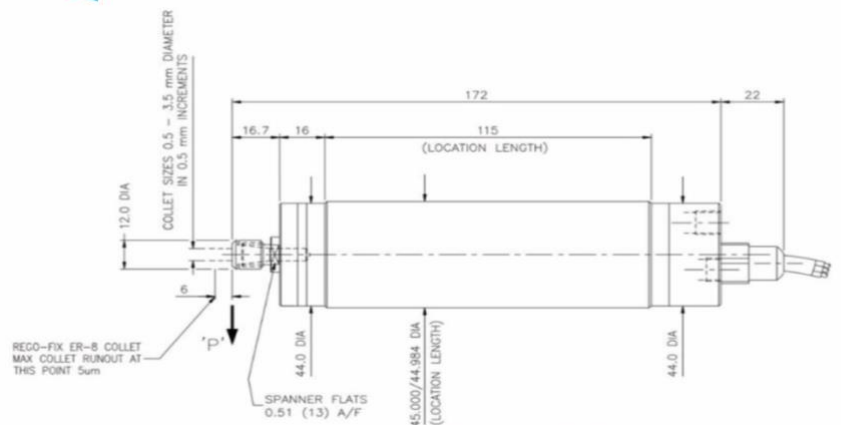
理想的研磨、铣削和切割主轴

最大转速	60,000 rpm
电机功率	120 watts
夹头孔径尺寸	1mm – 5mm
供气压力	5.5 bar
主轴耗气量	50 l/min
轴向失效载荷	> 75 N
夹头扭矩 (最大)	6 Nm
动态跳动	≤ 5 μm
电机类型	三项异步电机
重量	1.5 kgs
机身长度	45mm



优点：

- 支持直径高达6毫米的夹头互换，无需重新平衡轴，增强了灵活性。
- 前端推力轴承设计和空气冷却的主体及轴承确保了精密的加工精度。
- 与滚珠轴承主轴不同，我们的空气轴承主轴提供宽广的速度范围、平稳的旋转、低振动和长产品寿命。
- 配备强力交流电机和速度反馈功能，旨在提升生产效率。



GRINDING, MILLING AND ROUTING SPINDLE

06526

CW/CCW ROTATION AVAILABLE

INTERCHANGEABLE COLLET SYSTEM

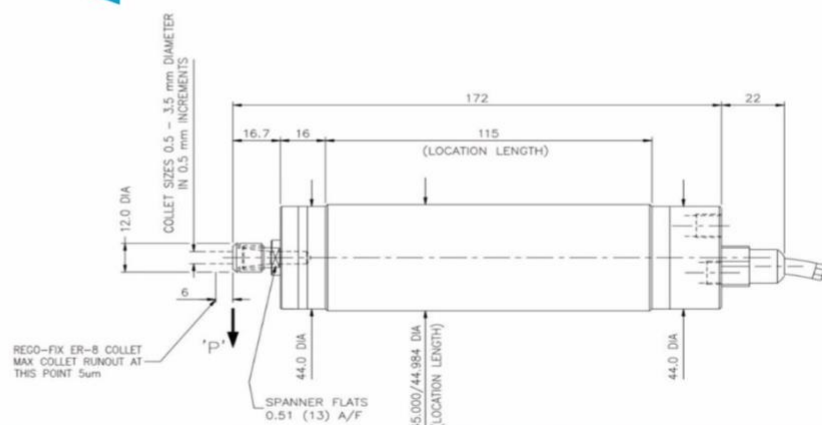
IDEAL SPINDLE FOR GRINDING, MILLING AND ROUTING

Speed Max	60,000 rpm
Motor Power	120 watts
Collet Bore Sizes	1mm—5mm
Air Supply Pressure	5.5 bar
Bearing Air Consumption	50 Litres/min
Axial Failure Load	> 75 N
Collet Torque (Max)	6 Nm
Dynamic Runout at Tool	≤ 5 µm
Motor Type	3 phase, 2 pole AC
Weight (Approx)	1.5 kg
Body Diameter (nominal)	45 mm



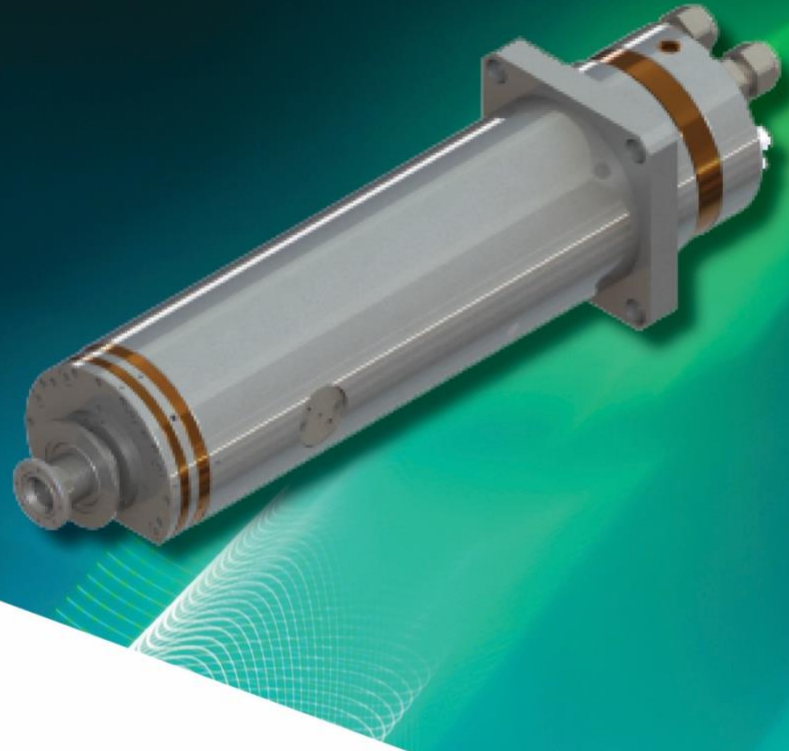
KEY BENEFITS

- COLLETS UP TO 6 MM IN DIAMETER CAN BE SWAPPED WITHOUT THE NEED FOR SHAFT REBALANCING, ENHANCING FLEXIBILITY.
- THE FRONT THRUST BEARING DESIGN, AIRCOOLED BODY AND BEARINGS GUARANTEE PRECISE MACHINING ACCURACY.
- UNLIKE BALL BEARING SPINDLES, OUR AIR BEARING SPINDLES OFFER A WIDE SPEED RANGE, SMOOTH ROTATION, LOW VIBRATION, AND LONG PRODUCT LIFESPAN.
- EQUIPPED WITH POWERFUL AC MOTORS AND SPEED FEEDBACK CAPABILITIES, THEY'RE BUILT TO ENHANCE PRODUCTIVITY.



切割用气浮主轴

10300



后法兰式固定方式

支持顺时针/逆时针旋转

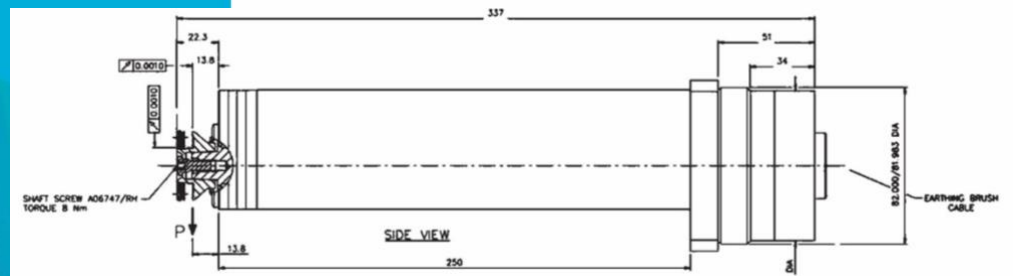
水冷

提供多种安装/固定方案选择

转速范围	60,000 rpm
可选电机功率	1.6 kw (2.2 kw)
供气压力	5.5 bar
主轴耗气量	80 l/min
轴向失效载荷	> 160 N
锥度跳动	≤ 1 um
电机类型	Brushless DC
重量	6.5 kg
机身直径	80 mm
振动 (含法兰)	< 0.2 mm/s
振动 (无法兰)	< 0.1 mm/s

优势特点：

- 可兼容最大3英寸切割刀片。
- 电机选择灵活，提供1.6/2.2千瓦电机，一主轴兼容多种电机。
- 轴锁一体设计，更换刀片简便快捷。
- 主轴前端优化气密封设计，有效阻隔灰尘入侵。



AIR BEARING DICING SPINDLE

10300



REAR FLANGE MOUNTING

CW/CCW ROTATION AVAILABLE

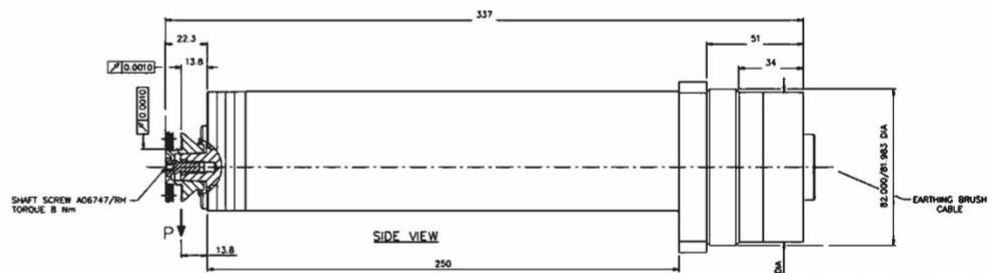
WATER COOLING

ALTERNATIVE MOUNTING
ARRANGEMENTS AVAILABLE

Speed Range	60,000 rpm
Motor Power Options	1.6 kw (2.2 kw)
Air Supply Pressure	5.5 bar
Bearing Air Consumption	80 Litres/min
Axial Failure Load	> 160 N
Taper Runout	≤ 1 µm
Motor Type	Brushless DC
Weight (Approx)	6.5 kg
Body Diameter (nominal)	80 mm
Vibration with wheelmount	< 0.2 mm/s
Vibration without wheelmount	< 0.1 mm/s

KEY BENEFITS

- SUPPORTS UP TO A 3" BLADE.
- FLEXIBLE MOTOR TYPE: 1.6/2.2 KW, MOTOR SELECTION – ALL IN ONE SPINDLE HOUSING.
- INTEGRAL SHAFT LOCK FOR EASY BLADE REPLACEMENT.
- AIR SEAL INCORPORATED AT THE SPINDLE FRONT TO PREVENT CONTAMINANT INGRESS.



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