

HYPREZ® 3 Axis Plate Profiling System with Air Bearing Model #18LMF-3AR-A/B-CDP (see backside details)



- Contours & Texturizes Hyprez Composites, Soft Metal & Pitch Plates in One Operation with a Plate Radii Geometry Range of 3-999 Meters
- Precision Air Bearing Spindle for Maximum Plate Flatness, Plus Free-Joint Spindle Connect for Minimal Harmonic/Transferred Vibration
- Integrated Vacuum System for Texture Continuity and Ambient Cleanliness
- Contaminant Dust Protection (-CDP) package Ensures Longevity in Adverse Environments
- Models Available to Profile 12", 15", 16", 18" and 20" Diameter Plates
- On-Board Programmable 3-Axis Plate Profiling System with Polycrystalline Diamond (PCD) Tooling Insert:
 - Generates Flat, Spherical or Conical Plate Geometry that is Repeatable to Less than 1 Micron
 - Multi-Pass Grooving for Repeatable Datum Points
 - Windows Menu-Driven Operating System
 - Diskette Storage for Expansion
 - Programmable Cutting Feed Rates of Tooling and Plate (either direction), Depth of Cut & Facing Stroke Specs
 - Dual Compensation: Y-Axis Cantilever Yaw and Machining (tooling) Deflection
- Available Options for this System:
 - Aspherical Profiling
 - Bar Code Scanning
 - Constant Vc (Velocity/Speed) Software

Hyprez 460 LMF-AFN-3AZ-AR Profiler Spindle Comparison

	CONVENTIONAL BEARING SPINDLE	AIR BEARING SPINDLE
Description	Plate Lapping and Profiling System with 3 Axis Computer Control and Water-Cooling System	Plate Lapping and Profiling System with 3-Axis Computer Control and Water-Cooling System
Features	Designed for High Accuracy Head Crown Lapping Process	Designed for High Accuracy Head Crown Lapping Process. The spindle is connected to the drive motor on a free-joint system which reduces transfer of any machine vibration to a minimum.
Servo Motor Features	The servo motors are exclusively designed for this 3 axis system. The synchronizing computer control for these motors maintains an accurate and repeatable surface optimized for Crown Lapping with minimal maintenance.	The servo motors are exclusively designed for this 3-Axis system. The synchronizing computer control for these motors maintains an accurate and repeatable surface optimized for Crown Lapping with minimal maintenance.
Lap Plate Diameter	Models available for 14" - 20"	Models available for 14" - 20"
Z-Axis Main Drive Spindle Motor	Bearing Spindle, Hollow-Shaft Servo Motor, 1.0kW, 3 Phase	Air-Spindle, Hollow-Shaft Servo Motor, 1.0kW, 3 Phase
Plate Revolution	Range of 3.0—500.0 RPM with Slow-Start/Slow-Stop Standard. Higher speeds available upon request.	Range of 3.0-500.0 RPM with Slow-Start/Slow-Stop Standard. Higher speeds available upon request.
X-Axis Facing Mechanical Accuracy	+/- 1.50um for a 200mm Distance	+/- 1.00um for a 200mm Distance
X-Axis Facing Accuracy (Alignment Software Enhanced)	+/- 0.20um for a 200mm Distance	+/- 0.15um for a 200mm Distance
Plate Grooving Pitch	0.01—10.0mm	0.01—10.0mm
Plate Curvature Facing Range	R = 3.0—99.0 Meters	R = 3.0—99.0 Meters
Plate Curvature Facing Accuracy	+/- 1um for a 100mm Distance	+/- 1um for a 100mm Distance
X-Axis Facing Stroke	150.0—200.0mm (depending on model)	150.0—200.0mm (depending on model)
X-Axis Servo-Motor (Facing)	400W, 3 Phase	400W, 3 Phase
X-Axis Facing Speed	Maximum of 250mm/minute	Maximum of 250mm/minute
Y-Axis Vertical Spindle Servo Motor	50W, 3 Phase	50W, 3 Phase
Y-Axis Tool-Feed Minimum	Minimum Feed of 0.10um	Minimum Feed of 0.10um
Z-Axis Spindle Run-Out	Axial: < 5 micron, Radial: < 7 microns	Axial: < 1 micron, Radial: < 5 microns
Machine Dimensions	1300mm W x 1400mm D x 1650mm H	1300mm W x 1400mm D x 1650mm H
Machine Layout	2 Components, 1 Base Machine (Mechanical Profiling Unit), 1 Computer-Control/Interface Unit	2 Components, 1 Base Machine (Mechanical Profiling Unit), 1 Computer-Control/Interface Unit
Utilities Requirements	Electrical: 208V, 3 Phase, 30 Amp Air: 60 psi for Vacuum, Clean & Dry	Electrical: 208V, 3 Phase, 30 Amp Air: 100 psi for Air Spindle, Clean & Dry
Shipping Weight	800 Kilograms	820 Kilograms