

ACTIONLASERS™ INDUSTRIAL HARDWARE CATALOG

Laser Rotary Attachments & Tooling Fixtures Engineering Selection Handbook

30 High-Precision Rotary Axes, Rollers, Chucks, Turntables & Slide Stages for 360° Cylindrical & Irregular
Laser Processing



Publisher: ActionLasers™ Technology Co., Ltd.

Applicable Machines: Fiber, MOPA, UV Cold Laser, CO2 & Green Subsurface Systems

Software Support: EZCAD 2/3, LightBurn, LaserCAD, MarkingMate

Official URL: <https://www.actionlasers.com/>

1. Family 1: Mechanical 3-Jaw & 4-Jaw Scroll Chucks

Core Capability: High-rigidity positive clamping for solid metal shafts, pipe fittings, heavy flanges, and drill bits without rotational slippage.



Item	Fixture Model	Structural Mechanism	Industrial Application
[Item 1]	Vertical Fixed 3-Jaw Chuck	50/65mm scroll chuck on perpendicular L-bracket	Solid cylinders, sockets, round metal tags, shanks
[Item 2]	0°–90° Tilttable Swivel Chuck	Calibrated radial arc mount with angle lock	Bevel gears, tapered nozzles, angled rings
[Item 3]	Cantilever Height-Adjustable Chuck	Elevated cantilever stanchion with clearance	Cups with handles, asymmetric hanging parts
[Item 11]	Heavy-Duty Tilttable 3-Jaw Chuck	80mm/100mm industrial chuck on hinge base	Heavy steel shafts, hydraulic couplings
[Item 14]	Heavy-Duty Swivel-Arm Chuck	Cast arc frame with timing-belt reduction	Deep relief metal engraving, zero-backlash
[Item 15]	Elevated Stanchion Dual Chuck	High center-line clearance, multi-slot table	Large-diameter cylinders, oversized flanges
[Item 21]	Low-Profile Compact Chuck	Space-saving horizontal motor layout	Enclosed Class 1 cabinets (restricted Z-height)

2. Family 2: Friction Roller & Dual-Wheel Rotaries

Core Capability: 100% scratch-free rotation for powder-coated drinkware (Yeti/Stanley cups), wine bottles, and glass mugs.

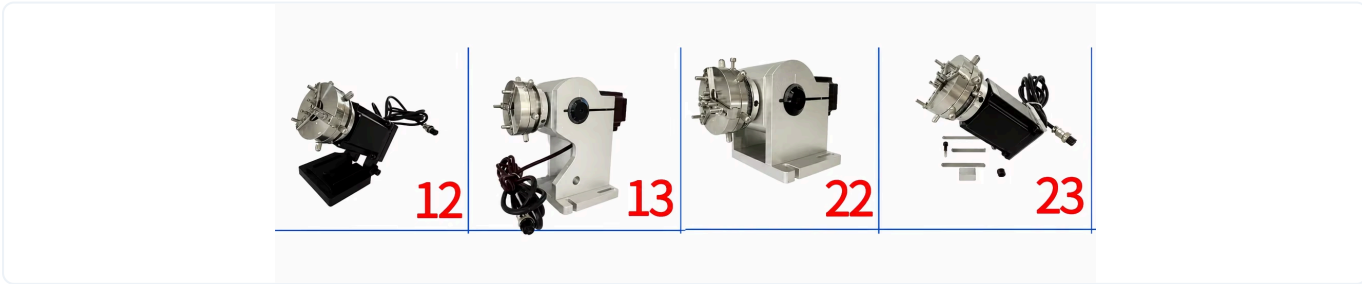


Item	Fixture Model	Structural Mechanism	Industrial Application
[Item 4/5]	Adjustable / Linked Wheel Roller	Twin rubber wheel pairs with thumb-screw spacing	Stepped bottles, wine glasses, cans
[Item 7/8]	Silicone Roller Bed (Open/Enclosed)	Dual continuous silicone rubber drive rollers	Coated tumblers, painted aluminum bottles
[Item 9/10]	Desktop / Anti-Bounce Top Roller	Bottom rollers + spring-loaded top silicone wheel	Empty lightweight beverage cans, thin tubes

[Item 18/19]	Extended Long-Shaft Dual-Rail Roller	Long-span modular aluminum rails with sync shaft	Golf club shafts, fishing rods, architectural pipes
[Item 24/25]	Axial Stop / All-Gear Heavy Roller	Blue silicone rollers with adjustable stop fence	Cosmetic tubes, medical vials (<0.05mm walking)

3. Family 3: Jewelry Multi-Pin & Finger Chuck Rotaries

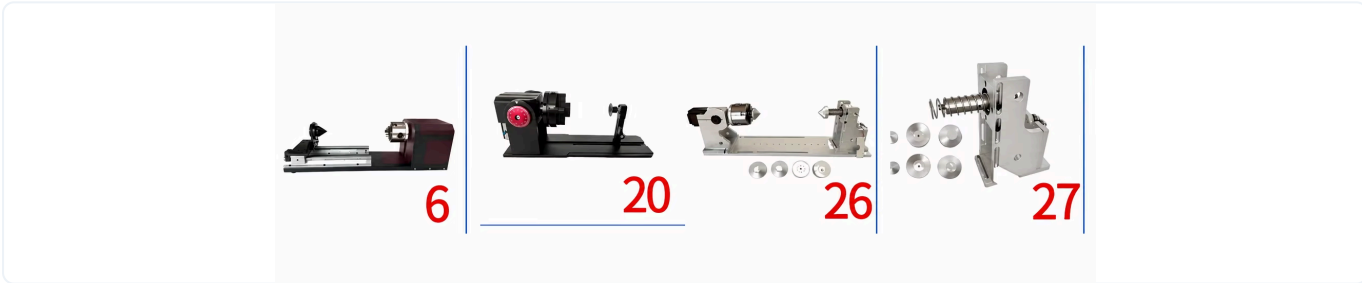
Core Capability: Precise 360° internal and external hallmarking on precious metal rings (Gold, Platinum, Silver) and bangles without clamping marks.



Item	Fixture Model	Structural Mechanism	Industrial Application
[Item 12]	Tiltable Multi-Pin Jewelry Chuck	Expandable stepped brass/steel pins on tilt base	Ring inside/outside engraving (zero marks)
[Item 13]	Cast-Aluminum Heavy Jewelry Rotary	Heavy-duty cast aluminum body, microstepping drive	Jewelry store batch hallmarking of trademarks
[Item 22]	Low-Profile Wide Bangle Rotary	Wide expansion pins (10–80mm), compact height	Bangles, cuff bracelets, wide bands in cabinets
[Item 23]	Direct-Drive Micro Jewelry Rotary	Direct motor shaft coupling (zero belt backlash)	Ultra-fine vector script, cursive names & hallmarks

4. Family 4: Lathe Chuck + Tailstock Live-Center Systems

Core Capability: Concentric dual-end rigid clamping for slender pens, drills, and shafts to eliminate rotational runout.



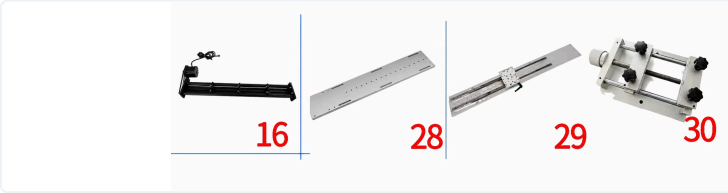
Item	Fixture Model	Structural Mechanism	Industrial Application
[Item 6]	Lathe-Bed Chuck + Tailstock System	Linear guide rail bed with drive chuck & live center	Luxury metal pens, screwdrivers, slender shafts
[Item 20]	Precision Mini Lathe Center Rotary	Micro scroll chuck with micrometer tailstock	Tungsten carbide end mills, medical drills
[Item 26/27]	Multi-Cone / Quick-Release Tailstock	Stepped cones + spring-loaded pull lever	Hollow pen barrels, high-speed lines (2s change)

5. Family 5: Indexing Turntables & Family 6: Stages & Vises

[Item 17] Automated Indexing Turntable



[Items 16, 28, 29, 30] Stages, Breadboards & Vises



Item	Fixture Model	Structural Mechanism	Industrial Application
[Item 17]	Motorized Indexing Turntable	Planetary reduction stepper, radial jig dial plate	Continuous batch marking (3x–5x speedup)
[Item 16]	Motorized Linear Slide Stage	Synchronized ball-screw / belt linear axis	Long measuring tapes, extrusions (500–1000mm)
[Item 28]	M6 Thread Grid Breadboard	CNC anodized plate with standard 25mm M6 array	Universal baseplate for quick fixture zeroing
[Item 29/30]	Micrometer Stage & 3D Vise	Dovetail fine adjustment + knurled leveling clamp	Optical focal micro-tuning, irregular cast parts

6. Customer Selection Matrix & Pulse Calibration

Workpiece Type & Material	Recommended Nos.	Operational Advantage
Rings, Bangles (Gold, Pt, Silver)	[12], [13], [22], [23]	Zero clamp marks; 360° inside/outside micro hallmarking
Tumblers, Water Bottles, Cans	[4], [7], [8], [10], [24]	Silicone scratch-free drive; anti-bounce top wheel
Metal Pens, End Mills, Drill Bits	[6], [20], [26], [27]	Lathe live-center eliminates deflection and runout
Heavy Pipes, Flanges, Hardware	[1], [2], [11], [14], [15]	High clamping torque; 0°–90° tiltable axis
Mass Small Tags, Bottle Caps	[17] (Turntable)	Continuous load while marking (300%–500% daily output)

EZCAD / LightBurn Pulse Formula:
Pulses Per Rotation = (Motor Full Steps × Driver Microstepping × Gear Ratio) / 360°

ActionLasers™ Official Customer Engineering Support
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