

Specifications

| Item | | Unit | UPZ315Li | UPZ52Li |
|------------------------|--|-------------------|------------------------------------|------------------------------------|
| Capacity | Work table size | mm | 450x170 | 550x220 |
| | Table travel distance | mm | 500 | 600 |
| | Distance from table surface to under wheel | mm | 12.5~395 | 12.5~395 |
| | Chuck size (LengthxWidthxHeight) | mm | 350x150x80 | 500x200x80 |
| | Maximum weight of table (including chuck) | kg | 60 (28) | 60 (41) |
| Table feed (X-axis) | Feed rate | m/min | 0.1~25 (Average) | 0.1~25 (Average) |
| | Maximum travel movement | mm | 500 | 600 |
| | Rapid feed (Jog feed) | mm/min | 5000 | 5000 |
| | Minimum increment | mm | 0.0001 | 0.0001 |
| | Manual feed amount (M.P.G) | Graduation | mm | 0.0001 / 0.001 / 0.01 / 0.05 |
| Revolution | | mm | 0.01 / 0.1 / 1.0 / 5.0 | 0.1 / 0.1 / 1.0 / 5.0 |
| Cross feed (Z-axis) | Feed rate | m/min | 1~2000 | 1~2000 |
| | Maximum travel movement | mm | 180 | 230 |
| | Rapid feed (Jog feed) | mm/min | 2000 | 2000 |
| | Minimum increment | mm | 0.0001 | 0.0001 |
| | Manual feed amount (M.P.G) | Graduation | mm | 0.0001 / 0.001 / 0.01 / 0.05 |
| Revolution | | mm | 0.01 / 0.1 / 1.0 / 5.0 | 0.01 / 0.1 / 1.0 / 5.0 |
| Vertical feed (Y-axis) | Feed rate | m/min | 1~2000 | 1~2000 |
| | Maximum travel movement | mm | 382.5 | 382.5 |
| | Rapid feed (Jog feed) | mm/min | 2000 | 2000 |
| | Minimum increment | mm | 0.0001 | 0.0001 |
| | Manual feed amount (M.P.G) | Graduation | mm | 0.0001 / 0.001 / 0.01 |
| Revolution | | mm | 0.01 / 0.1 / 1.0 | 0.01 / 0.1 / 1.0 |
| Grinding wheel | Grinding wheel size (O.D.xWxI.D) | mm | φ205x13xφ31.75 | φ205x13xφ31.75 |
| | Speed | min ⁻¹ | 0~3600 | 0~3600 |
| Motor | Wheel spindle | kW | 3.7/2 Fluid Cooling Motor | 3.7/2 Fluid Cooling Motor |
| | Vertical feed (AC servo motor) | kW | 1.3 | 1.3 |
| | Cross feed (AC servo motor) | kW | 0.85 | 0.85 |
| | Table feed (Linear motor) | kW | 3.0x2 | 3.0x2 |
| Power | Electric power | kVA | 25.5 (Different by specifications) | 25.5 (Different by specifications) |
| Floor space | LengthxWidthxHeight | mm | 2100x2340x2237 | 2300x2340x2237 |
| Weight | Machine weight (approx) | kg | 4000 | 4500 |

*Electrical Power Consumption, Floor Space will be changed by Specifications

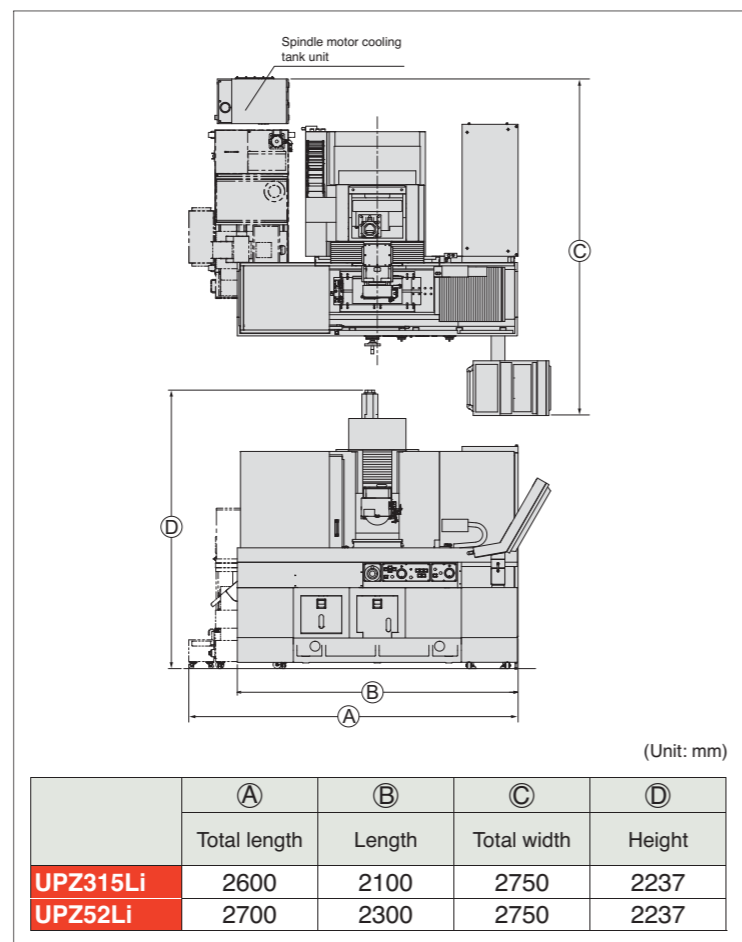
Standard accessories

| |
|--|
| Grinding wheel (15X60H2G) |
| Wheel adaptor |
| Fluid coolant type build-in motor |
| Spindle inverter 2.2kW (High. Low speed set up function) |
| Oil cooling type spindle head (co-use with Table Linear Motor) |
| 3 axis full closed loop feedback |
| Circuit breaker |
| 3-Direction type Table Dresser |
| Flexible type Coolant nozzle |
| Spindle Taper is the same with AZZ450DX |
| Table splash cover (Right side box, Left side Nil, 1pc Door) |
| Manual Interruption |
| Interruption dress function |
| Necessary tools & tool box |
| Levering bolts & Plate |

Optional accessories

| | |
|------------------------------------|---|
| Coolant & mist collector | Coolant system with magnetic dust separator |
| | Coolant system with magnetic dust separator, auto-paper filter and temperature control unit |
| Chuck | Mist collector |
| | Electro-magnetic chuck with chuck controller |
| Dresser & others | Electro-permanent chuck with chuck controller |
| | Chuck back side datum plate |
| | Graphic digital process system CCD camera, optical auto retract plate |
| | 2-point rotary dresser + Single point dresser (GRIND-X products) |
| | Twin rotary dresser (GRIND-X) with measurement |
| | Punch grinding index device (GRIND-X) |
| | Additional 1-axis for NC index device |
| | Cylindrical grinding device (GRIND-X) |
| | Vertical type rotary dresser (GRIND-X) |
| | Rectangular rotary dresser (GRIND-X) |
| | Full enclosure type table cover |
| | Work light (LED-flat type, water proof type) |
| | Table water supply for swarf cleaning and temperature control |
| Accumulate machine operation meter | |
| Calender timer | |
| Auto power shutdown device | |

Machine overview and layout



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CAUTION

*When and before using our products, you are requested to well go through the articles on danger, warning and attention for the sake of safety described in operation manual attached to the machine and also in the warning plates mounted on the machine.

*When a product manufactured at our factory comes under the Foreign Exchange And Foreign Trade Control Law and is exported or carried overseas, it is necessary to receive permission or approval of the Japanese Government.

*Specifications subject to change without notice.

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GRIND-X
OKAMOTO PRECISION SYSTEMS
Okamoto

UPZ-Li SERIES

Ultra Precision Form Grinder



Okamoto

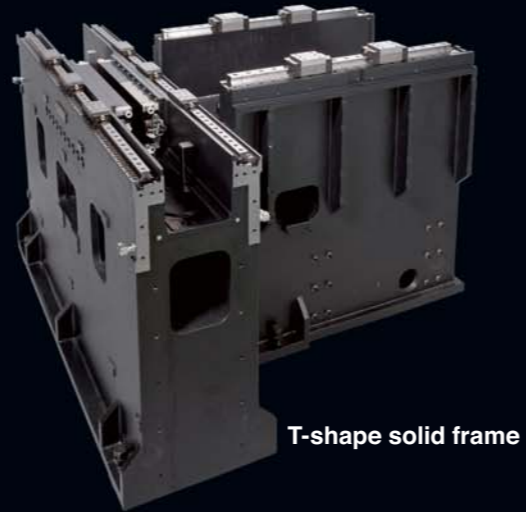
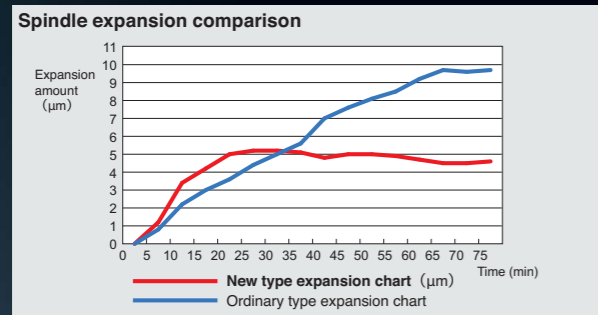
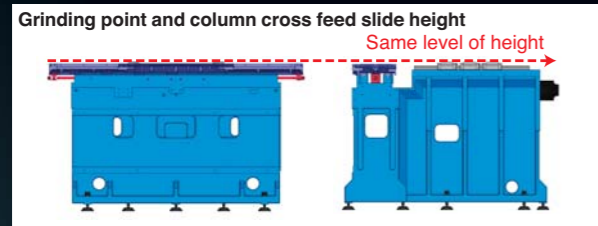
Highest performance • highest rigidity • speed up with table linear motor drive • easy to use
Next generation's profile grinder

ULTRA PRECISION FORM GRINDING MACHINE **UPZ-Li SERIES**

Particular design to achieves less than 1 μm of ultra precision forming

Special machine structure to hold heat displacement

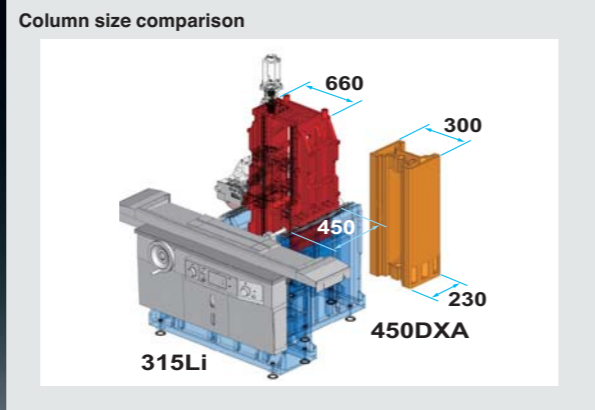
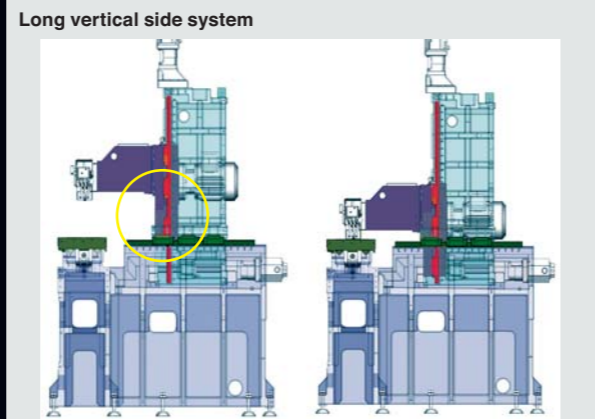
- Oil cooling type grinding head
- Fluid coolant type build-in motor
- Column cross feed slide-way design come close grinding point to avoid and minimize heat displacement
- Hydraulic cylinder less table drive method
- Specific spindle design for shortest saturate by heat expansion and prevent expansion of thrust direction
- 3-axes scale feed back control, accurate positioning



T-shape solid frame

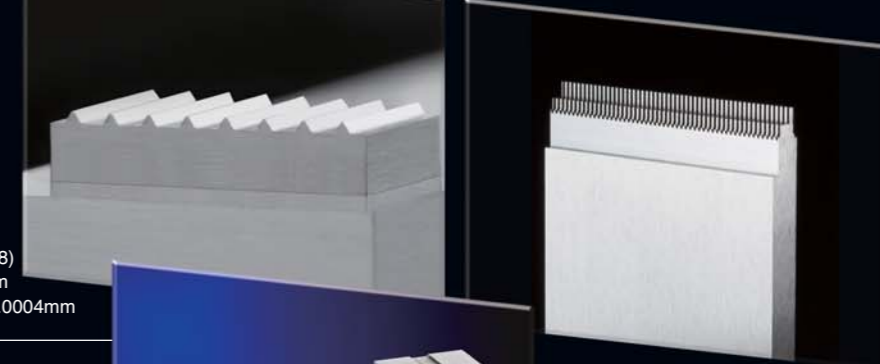
Highest rigidity machine design

- Column traveling type
- T-shape solid frame
- Long slide and sink under than table
- Table no overhung from frame
- Increase column size for more rigidity



Work sample

Parts : Optic fiber
Material : ASP60 (HRc 67~68)
Profile accuracy : ±0.0015mm
Accumulate pitch : 3.5231 ±0.0004mm



Parts : Connector
Material : SKD 11 (HRc 56~58)
Slot depth : 32 ±0.0011mm
Accumulate pitch : 25.05 ±0.0012mm
Number of slot : 52 pcs

Advantage of table linear motor drive

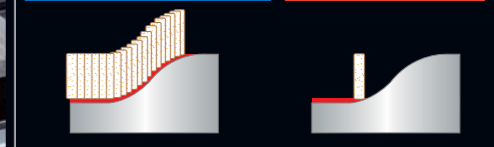
- High speed reciprocation (500SPM by 10mm stroke)
- Multi-position suitable for various kinds and small lot production
- Stopping accuracy with in 1μm (by shoulder grinding)
- Shift plunge save cycle time
- High speed contouring grinding available
- Accurate positioning suitable for on machine measuring



Multi-grind-position table

Shift plunge grinding + Traverse grinding

Course grinding by shift plunge Fine grinding by traverse



Original software support easy to use

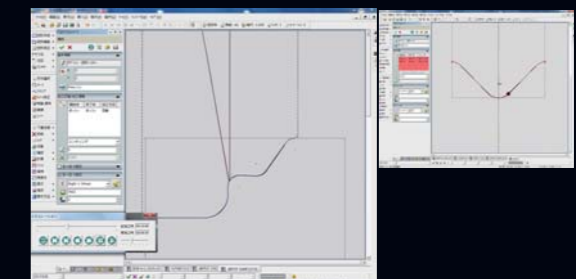
Original Software

Original software can use immediately without know how



i-CAM

Convert grinding software from DXF data



Various option

On machine profile measuring by CCD camera



NC index for punch



2-point rotary dresser + single point dresser



On machine height measuring by touch probe



Swing type forming dresser



Rectangular rotary dresser



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* Machine equipped options