

O p t i c a l M a c h i n e

LC-50



NAKAMURA-TOME
PRECISION INDUSTRY CO.,LTD.

We introduced the latest technology in optical machine.

The latest technology that changed the times has Optical Machines.

All automatic NC lens Centering Machines

LC-50



- The double productivity by 2 NC control axes.
- Automatic transport processing from ϕ 1mm lens.
- Space-saving with double role.
- High efficiency by superior operability and functionality.

The Centering Machine Changes Common Sense.

- Low $\lceil Z \rceil$ Lens
- High-speed Processing
- Precision stability
- shortens the processing time

Regardless of large and small, More speedily, More productively

LC-50

Processible from φ 1mm to φ 55mm.
Abundant variation of processing!

$\Phi 1$

$\Phi 55$

OD Chamfering / D Cut

Variant Processing

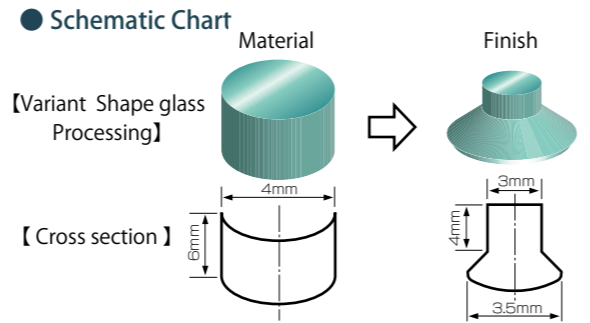
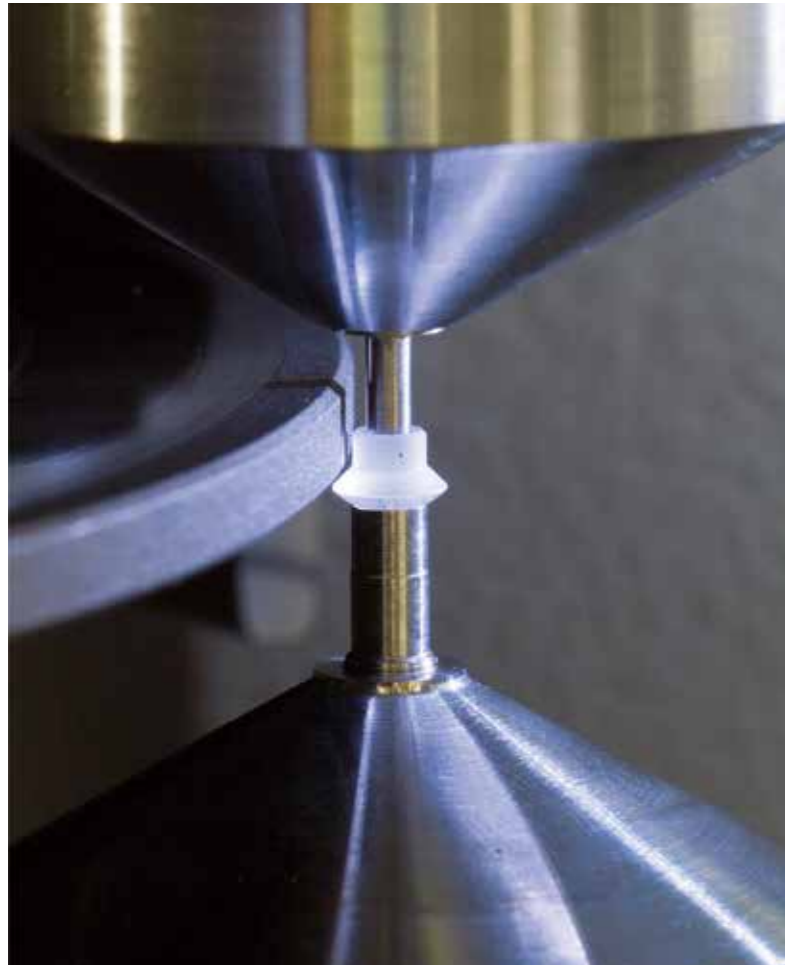
I Cut / Square Process

Low Z Processing

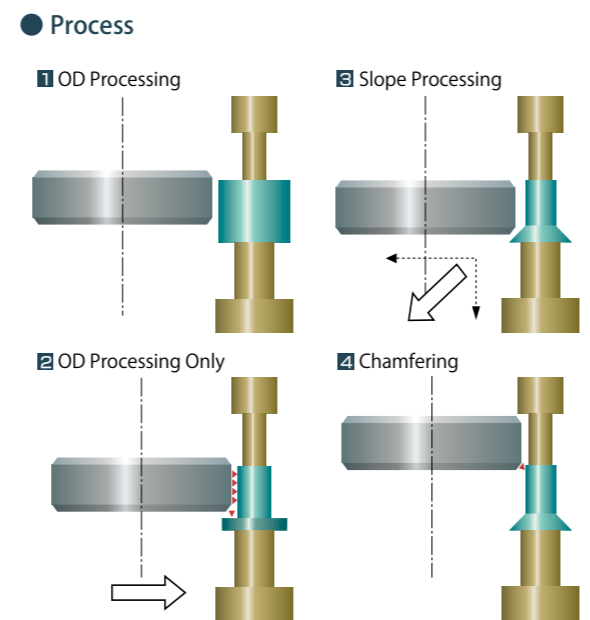
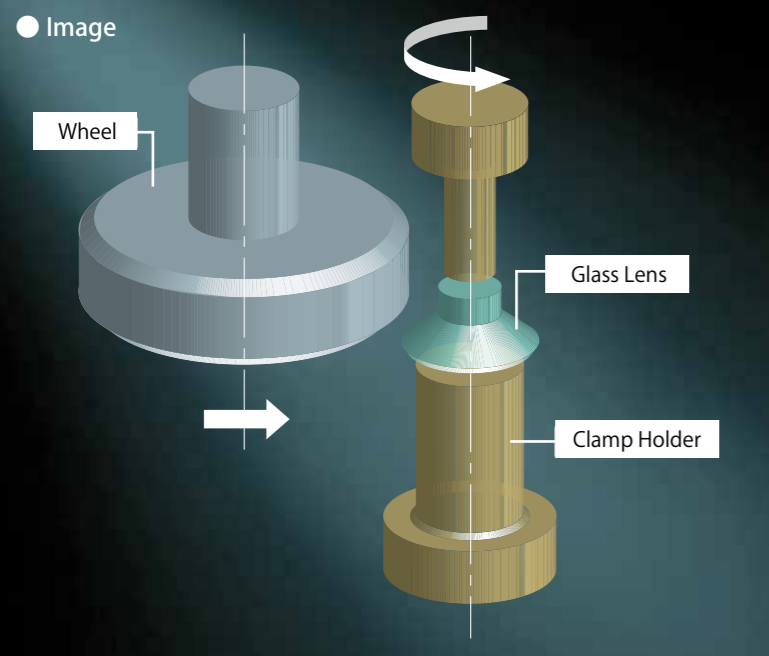
Lens processing of φ 1mm to φ 55mm size is possible with LC-50. OD chamfering, I-cut, D-cut, or Variant-formed processing are possible with easy program by NC control. Also, It corresponds a low centering coefficient lens. It is highly precise, high quality and excellent operability because of using the technique of combined machining machine.

Variant Shape Processing

● Wheel move to 2 directions at the same time, and make movement of the slanted line.

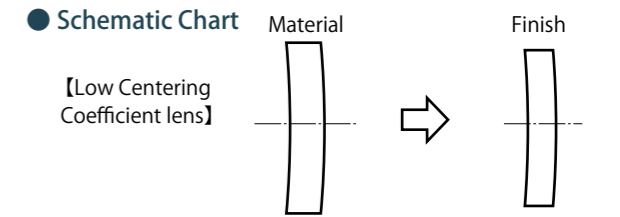


| Specification | Condition | | |
|-----------------------|---------------|------------------------|----------|
| Material | S-BAH27 | Work Spindle | rpm |
| Knoop Hardness | 514 | Wheel | rpm 3600 |
| Abrasion Degree | 160 | Cycle Time | sec |
| Focal Distance f | -36.427 | High-pressure Clamp | Mpa |
| Refractive Index nd | 1.70154 ± 30 | Low-pressure Clamp | Mpa |
| Eccentric | less than 30" | Holder Diameter(Upper) | mm |
| Press Diameter | 39.2 | Holder Diameter(Lower) | mm |
| Finishing Diameter | 37.51 ± 0.005 | Particle Size | # 400 |
| R1 | | Coolant | CL5 |
| R2 | | | |
| Centering Coefficient | 0.257 | | |

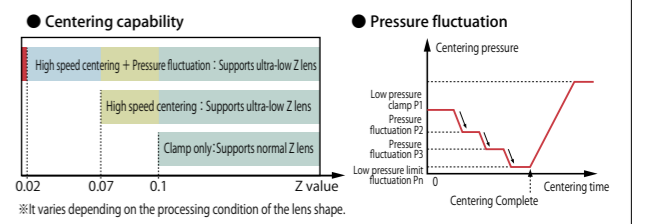
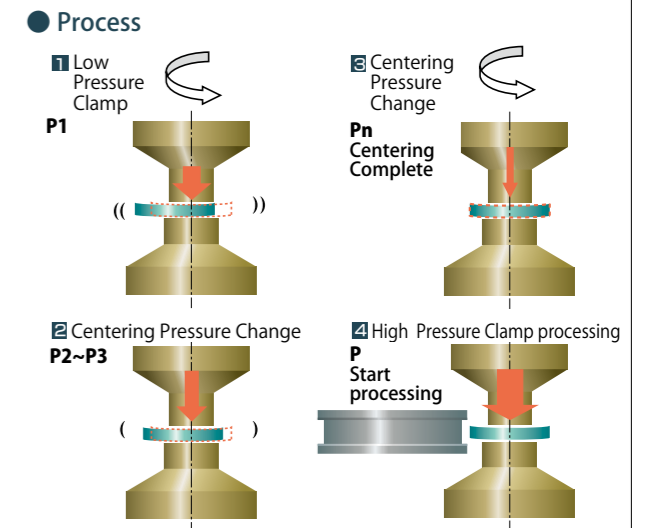


Low Z Processing

● Low centering coefficient processing is possible because of clamp pressure change at speedy centering.



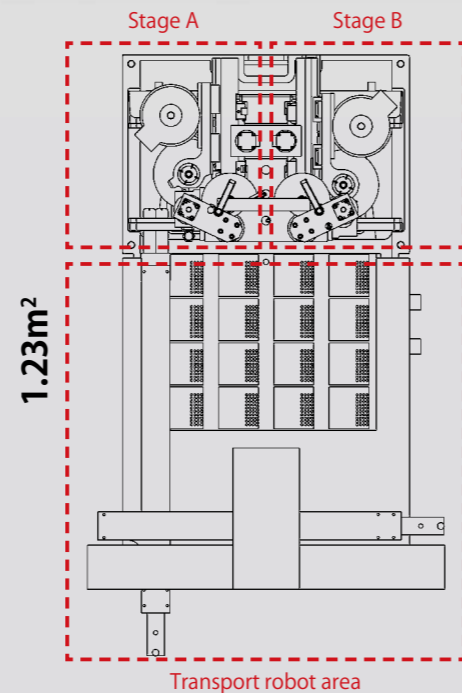
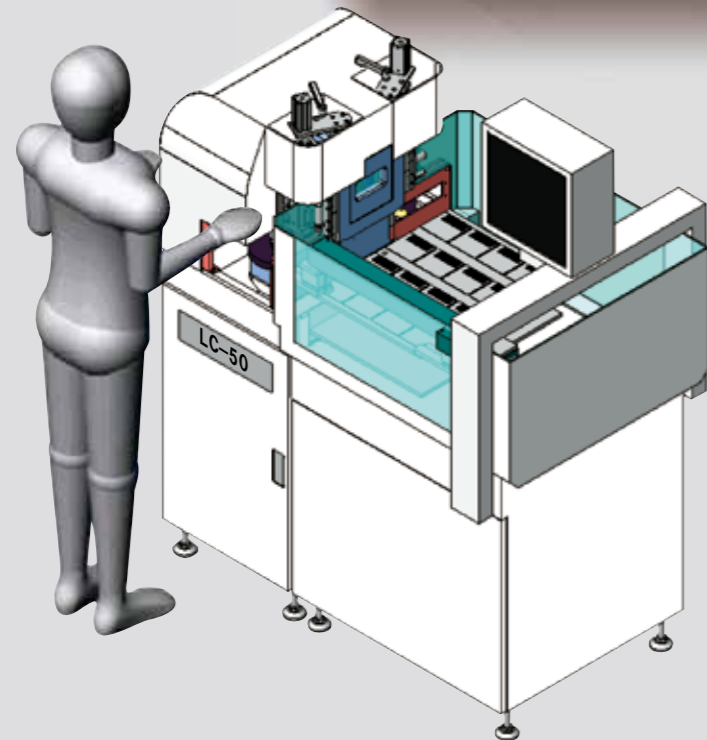
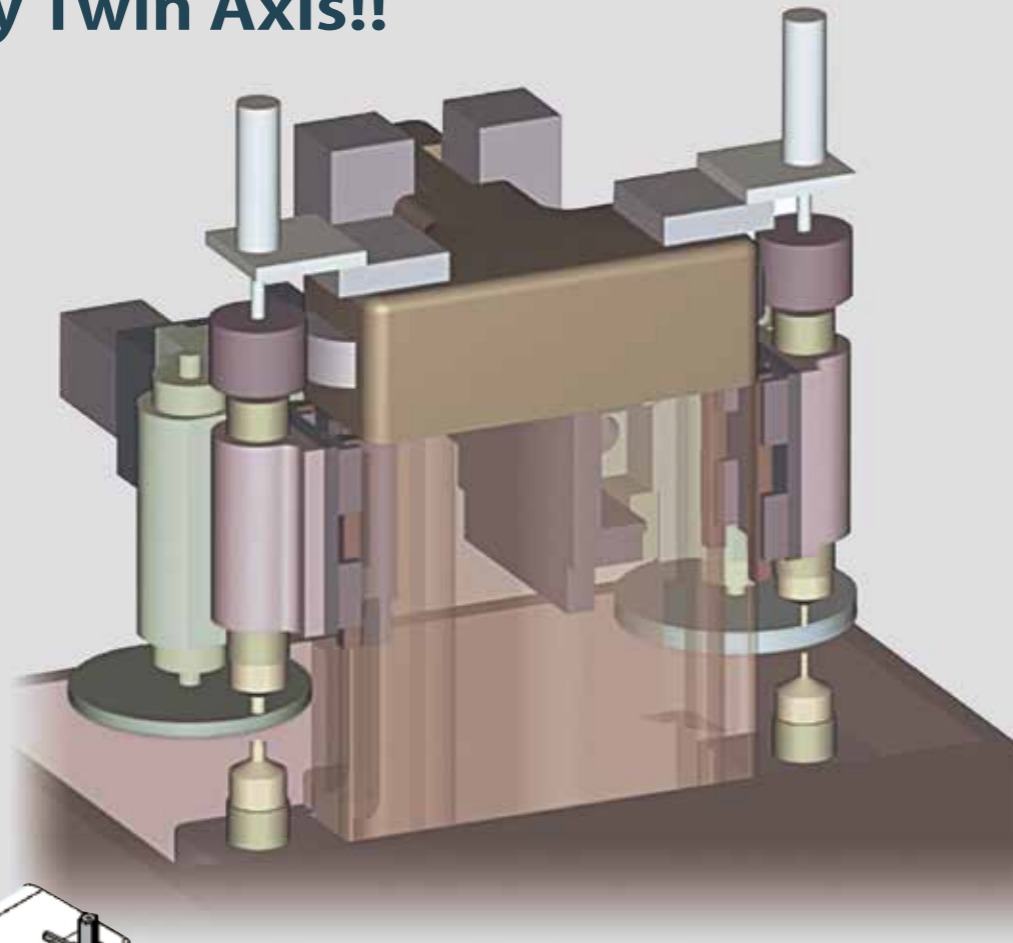
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| R1 | | Coolant | CL5 |
| R2 | | | |
| Centering Coefficient | 0.020 | | |



Double Ability Twin Axis!!

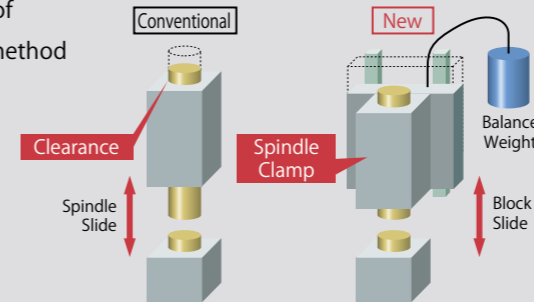
Double Productivity!!

Max Stock Space
735 × 570mm
(Flat, 2 Hands)

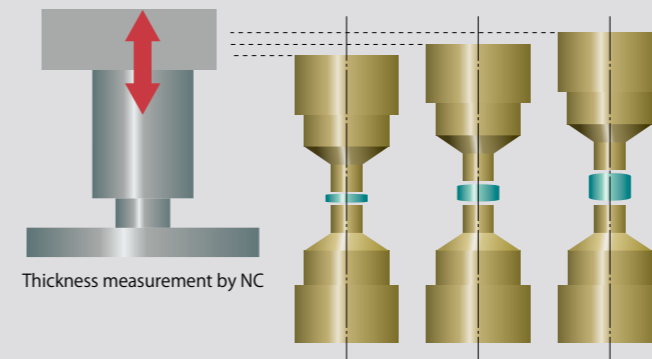


High-Precision

■ Adoption of new clamp method

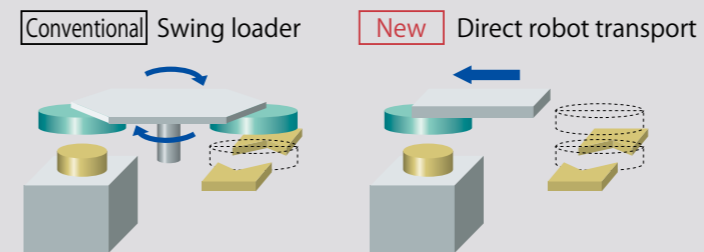


■ Min size 0.0001mm available
■ Automatic thickness measurement machine



Improvement Of Work Efficiency

■ There is no turning type loader

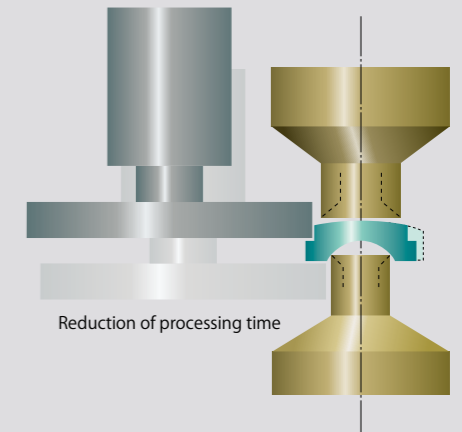


■ Unified control units

Realized Cam-less by NC control

- Improvement of preparation ability
 - Registration of the processing program every kind.
 - The ability for difficult programming is unnecessary.
 - Correction of dimension is only input to a panel.
 - It is easy to operate because of the large panel.
- Shortening of tact time
 - It is effective processing because there is no limit of cam shape and shifting speed.

Shortening of tact time of processing lens machining allowance.

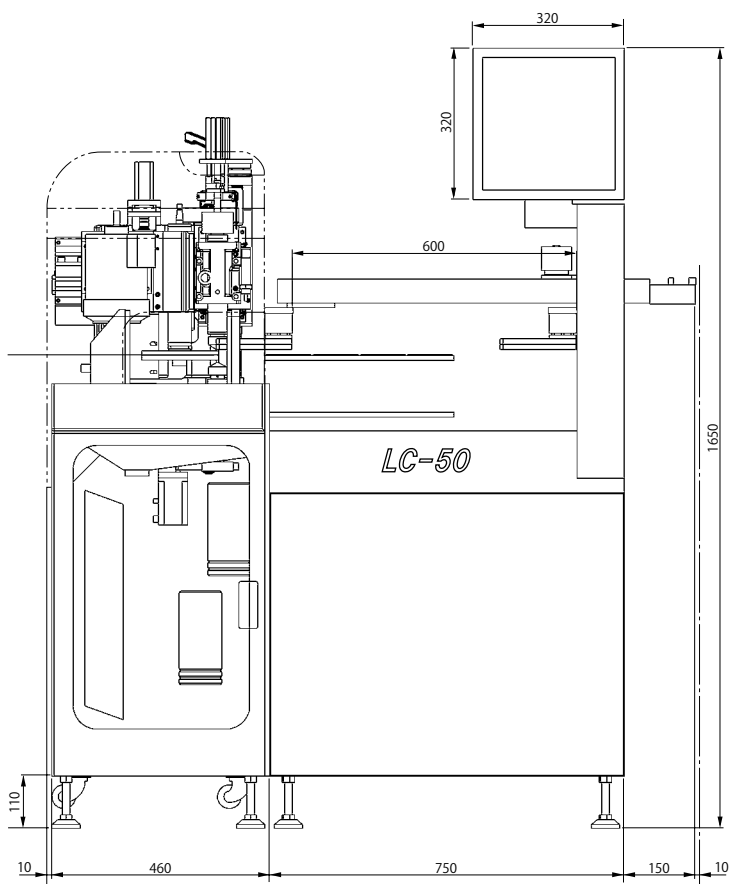
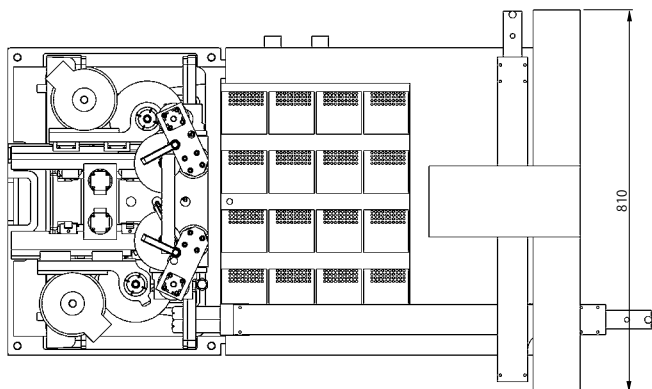


The pattern of loader operation

- 2 axes + 4 hands + 2 V clamp (OP)
- Material : Flat Pallet
- 1 axis + 2 hands + V clamp
- Material : Cleaning Basket



LC-50 Specification



Summary

| | | |
|-----------|--------------------------|---|
| Lens | Size | Φ 2mm ~ Φ 55mm (~ Φ 30mm) |
| | Max Thickness | 10mm |
| Control | Method | Numerical control |
| | Axis | 6 axis |
| | Min Unit | 0.0001mm |
| Whetstone | Diameter | Φ 160mm |
| Stocker | Loader Movement | X : 600mm Y : 600mm |
| | Min Unit | 0.01mm |
| | Z drive / Carrier System | Air cylinder / Vacuum contact |
| Power | Supply | 11kVA |
| | Air Pressure | 0.5Mpa |
| Machine | Height | 1650mm |
| | Floorspace | 1380mm × 890mm |
| | Weight | 800kg |

● Please note that specifications may be changed without notice due to improvements in machines and so on.



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