Specification

Model		SBL-100T	SBL-180T	SBL-250T
Swing over bed	mm	Ø350	Ø500	Ø520
Max. turning diameter (ball head)	mm	Ø100	Ø180	Ø250
Max. turning diameter (ball valve)	inch	Ø 2-1/2"	Ø 4.5"	Ø 6"
Spindle nose type	ASA	A2-4	A2-5	A2-6
Spindle chuck type		5C Collet chuck 16C Collet chuck(Opt.) 5" 3-Jaw chuck (Opt.)	16C Collet chuck 6" 3-Jaw chuck (Opt.)	16C Collet chuck 8" 3-Jaw chuck (Opt.)
Spindle bore	mm	Ø45	Ø56	Ø62
Spindle speed	rpm	4000 (Std.) 6000 (Opt.)	3000 (Std.) 4500 (Opt.)	2000 (Std.) 4000 (Opt.)
Spindle power	kw	5.5kw (Std.) 7.5kw (Opt.)	7.5kw (Std.) 10kw (Opt.)	11kw (Std.)
X-axis motor power	kw	1.2	1.2	1.8
Z-axis motor power	kw	1.8	2.5	2.5
B-axis motor power	kw	3	3	3
X-axis travel	mm	90	90	90
Z-axis travel	mm	90	90	90
B-axis travel	degree	-60° / +95°	-60° / +95°	-60° / +95°
Z-axis rapid traverse rate	mm/min	15,000	15,000	15,000
X-axis rapid traverse rate	mm/min	15,000	15,000	15,000
B-axis rapid traverse rate	mm/min	6,000	6,000	6,000
Number of tool station	T	6 (Hydraulic turret)	6 (Hydraulic turret)	6 (Hydraulic turret)
Tool size	mm	20x20	20x20	20x20
Machine dimensions (LxWxH)	m	2.5x1.9x1.8	2.8x2.2x1.9	3.1x2.3x1.9
Voltage	M	220V/60HZ/3P	220V/60HZ/3P	220V/60HZ/3P
Power requirement	kva	20	25	28
Weight	kg	3000	3300	3800

- Collet chuck
- Hydraulic cylinder
- Hydraulic turret 6 position
- Power unit
- Pneumatic system unit
- Full guard
- Machine base
- Heat exchanger
- Automatic lubrication system
- Three color warning light
- Working lamp
- Coolant system
- Tool and tool box
- Wedge block
- Leveling bolts and blocks
- Operation manual
- Machine voltage:
  220VAC / 60HZ / 3 phase
- Spindle motor upgrade
- Spindle speed upgrade
- X axis extend to 150 mm
- Z axis extend to 150 mm (for long part)
- Upgrade to hydraulic servo turret (8T)
- Upgrade to servo power turret (8T) with C axis
- C axis air breaking system
- 16C collet chuck and collet
  (work piece diameter less than Ø40 mm)
- Extention nose collet type chuck and
  collet (ball valve) with orientation pin
- 3 jaw chuck
- Chuck air blow
- Burnish diamond tool holder and tool
- Burnish diamond tool
- Chip conveyor and cart
- Transformer
- Voltage Stabilizer
- CE mark

SELICA INTERNATIONAL CO.,LTD

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ФРАКТАЛЬНІСТЬ

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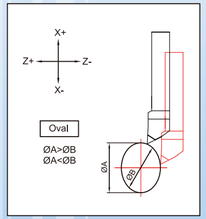
Hybrid Sphere CNC Lathe

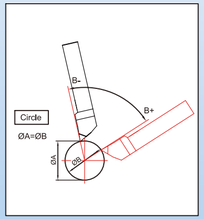
CE

Feature

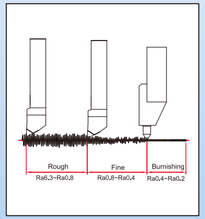
- SBL series is designed for the ball head machining, which is the best solution for high quality sphere roundness and surface roughness.
- SBL series includes rough turning, fine turning, diamond burnishing, part pulling, and cut-off process.
- Burnishing process is ideal to enhance the surface hardness, extend the life-time and enlarge the allowance of abrasion.
- About diversity of control axis, SBL series use B axis to do ball head machining and burnishing. B axis process the circular movement, so that the roundness can be achieved up to ±0.01mm. On the other hand, for traditional CNC lathe, the sphere machining is controlled by X and Y axis only, which lead to oval shape.
- Except standard advantage of CNC controller, SBL series uses sliding heading spindle design and square guide way on Z axis movement, which ensure the accuracy and stability.
- SBL series can equip with gang type tool (4-position), hydraulic turret (6-position) and power turret (8-position) to achieve multiple application.



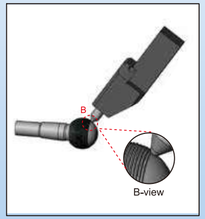
Common spherical processing



Reasonable spherical processing



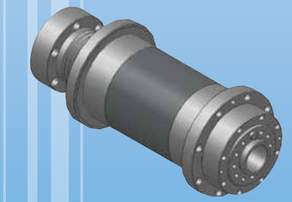
Processing and surface roughness (Ra)

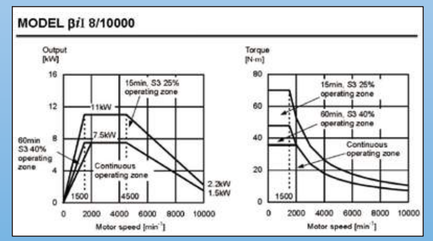


B axis machining

Spindle Feature

- Spindle motor equip Bil8/10000 (7.5kw), which hold heavy loading and stability while doing the burnishing process.
- High-rigidity spindle and high-speed bearing support spindle speed up to 6000 rpm with high stability.
- While machining special angle or using special tool, break plate support accurate position of spindle.
- Belt type driver ensures powerful loading, steady performance and low cost of maintenance.

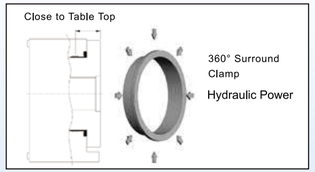




Materials

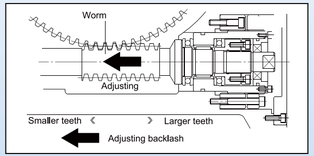
Worm gear : Special high-tensile aluminum-brass equal in strength to a steel alloy.

Worm shaft : Hardened alloy steel



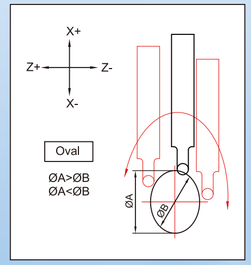
High Rotation Torque

The combination of brass and alloy steel offers less friction. Motor torque is transferred efficiently. High class Material worm system guarantees high torque transmission.

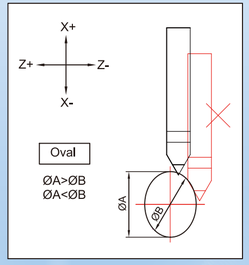


Large Worm Gear

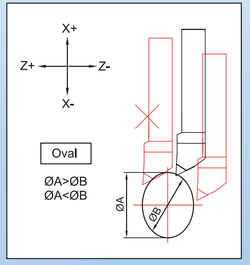
The worm gear with a large pitch diameter creates a large engagement area and less pressure on the contact surface, resulting in resistance against wear.



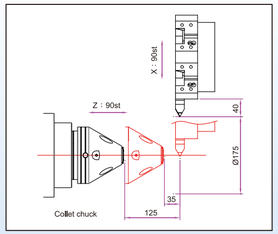
C-type tool holders



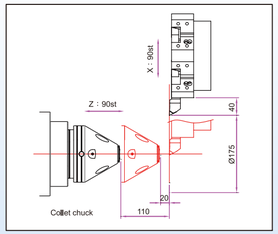
N-type tool holders



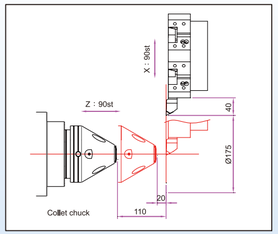
L-type tool holders



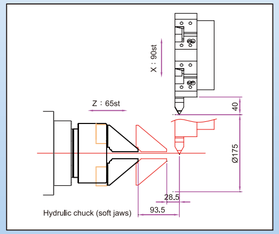
N-type tool holders



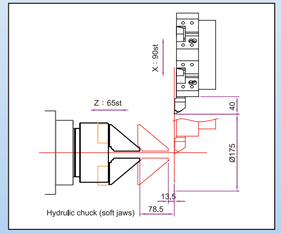
L-type tool holders



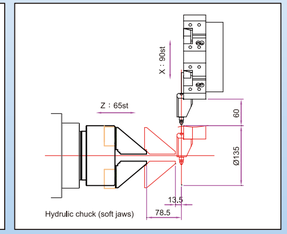
Burnishing



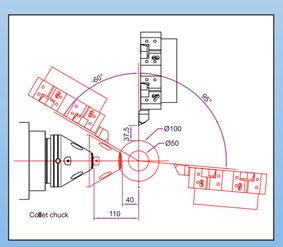
N-type tool holders



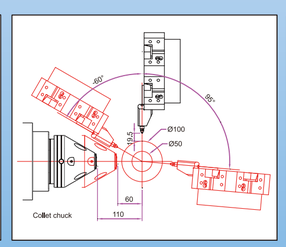
L-type tool holders



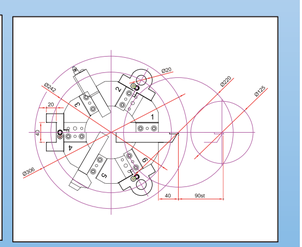
Burnishing



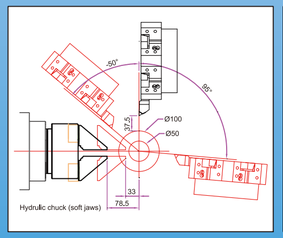
B-axis Turning angle (L-Tool)



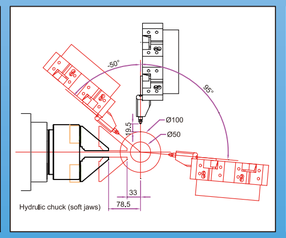
Burnishing angle in B-axis



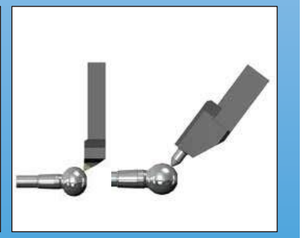
Turret interferogram



B-axis Turning angle (L-Tool)



Burnishing angle in B-axis



C-type tool holders