



ABOVE AND BEYOND **HONING**

SVL-2115

PRECISION VERTICAL LAPPING SYSTEM



SUNNEN'S SVL-2115 LAPPING MACHINE: INCREASES PRODUCTIVITY AND PARTS CONSISTENCY



Sunnen's SVL-2115 automated lapping machines bring increased safety, productivity, and part consistency to what is traditionally a manual process. The SVL-2115 is based on the same machine platform as the proven SV-2100 honing system and provides single setup processing of hydraulic valves, sleeves, fuel system components and other parts that are prone to distortion when honed.

The Sunnen lapping system handles workpiece diameters from 6.3 to 45 mm (0.25 to 1.77 in) and lengths up to 12 times the bore diameter, not to exceed 200 mm (7.87 in).

Sunnen has developed patented laps to accompany this system. Easy tooling and probe changeovers accommodate frequent part changes during the course of a shift. A stack light allows operators to monitor cycle completions or faults from a distance. The lapping system is available with Sunnen's new SVF-15 filtration system.

Sunnen's SVL-2115 is built in the USA and backed by Sunnen, the world wide leader in precision bore sizing and finishing.



Your Sunnen Technical Specialist will work with you to determine the best solution for your needs – it's all part of the added value you get with Sunnen. Plus, our worldwide sales and service team provides comprehensive support for the installation and operation of every system we make.

Whatever your need, we have the expertise and product range to create the right solution for you and the dedication to support you for the long run.

To find the Sunnen representative nearest you, visit our website:
www.sunnen.com



THE SVL-2115 LAPPING MACHINE BRINGS INCREASED PRODUCTIVITY AND PART CONSISTENCY

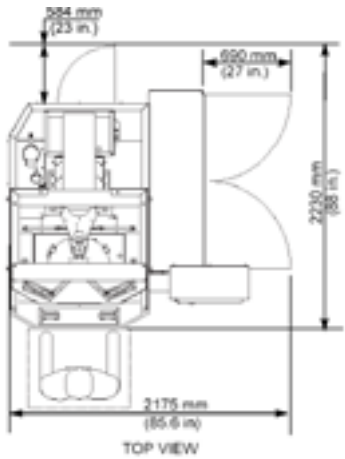
STANDARD & OPTIONAL FEATURES

- SVL-2115 base machine includes single spindle, lapping module, base part fixture, air gage column, and servo index table. Part fixture nest, lap expander/retractor and air gage probes/master rings must be ordered separately.
- Low maintenance stainless steel enclosure provides good visibility and ensures operator safety.
- “Lubed-for-life” over-sized stroke guideways ensure superior performance and long, trouble-free life.
- Precision 1.5 kW (2HP) servo spindle.
- Advanced servo ball screw stroke control.
- Flexible modular design allows custom machine configurations to optimize part processing.
- Rugged, solid cast polymer composite base reduces vibration for enhanced performance and precision.
- Cast iron column for increased rigidity and optimum precision
- Latest in safety technology with safety PLC and safe drive systems; interlocked doors, light curtain and dual palm button cycle start
- Standard LED work area lighting.
- Standard automatic stroker lube system
- Standard machine status light
- MT Connect and Industry 4.0 capable
- Standard PC uninterruptible power supply (UPS) eliminates unsafe shutdown of control system and ensures a safe start-up.



OPERATOR INTERFACE & SOFTWARE FEATURES

- Patented easy-to-use Windows®-based PC touch screen control system provides optimum process control with ease of set-up. (Large 482 mm - 19 in - touch screen)
- Stock removal mode optimizes lapping cycle time
- Spindle speed and column speed can be varied as needed.
- Automation interface provides seamless automation integration: robotic interface for loading and unloading; pneumatic interface for easy fixture integration.
- Multiple setups can be entered and saved for future production runs of the same components.
- State-of-the-art electronics with touch screens and hand wheel controls reduce setup time and increase machine “up time.”
- Multiple languages available.
- USB Port for ease of system backup/update.



SVL-2115 FLOOR PLAN LAYOUT

OTHER FEATURES & OPTIONS:

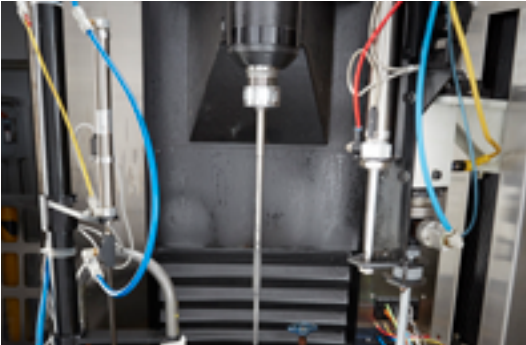
CUSTOM PART FIXTURING



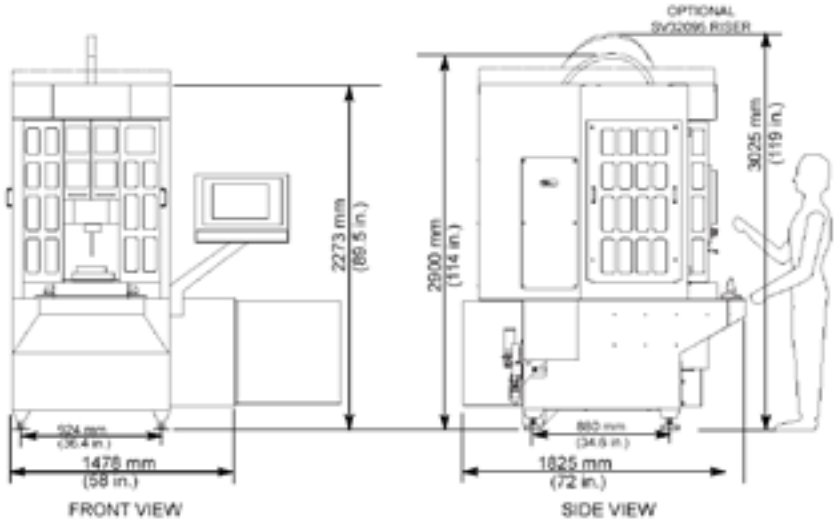
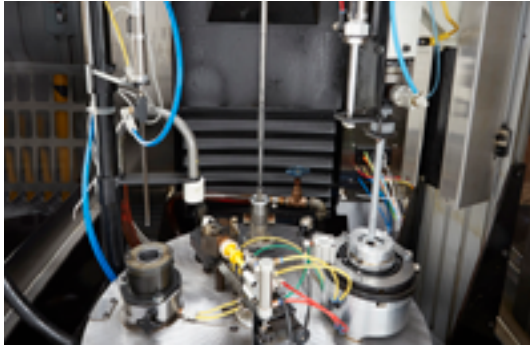
CUSTOM AIR-GAGING



CUSTOM ROBOTIC PARTS HANDLING



CUSTOM FIXTURES & TABLE CONFIGURATIONS





CUSTOMIZE YOUR SYSTEM TO YOUR EXACT REQUIREMENTS

Sunnen's high-precision bore sizing systems represent the very finest solutions available anywhere in the world. They are reliable, durable, and flexible systems designed to deliver the production quality and precision our customers have grown to expect.

From design to delivery, you have the Sunnen commitment to service and quality assurance. Our technical experts will work with you to determine the number of spindles, style of tooling, fixturing, abrasives, in-process and/or post-process gaging, and method of parts loading and unloading (including robotics) you require. Then we'll provide you a written proposal.

After your system is built, we'll set up a live run-off demonstration at our facility. Once it meets all specifications, we'll commission your system and train your staff.

AUTOMATION OPTIONS



A TWO-AXIS OR MULTI-AXIS SERVO ROBOT CAN BE INTEGRATED INTO A SUNNEN MODULAR SYSTEM.

Our automation options are designed to increase the operational efficiency of your precision system. They shorten cycle times, increase tool life, and – most importantly – radically reduce labor costs. Sunnen automation solutions can keep your system running 24 hours a day, seven days a week.

SPECIFICATIONS:

WORKPIECE DIAMETER RANGE:

6.3 to 45 mm (.25 to 1.77 in)

WORKPIECE BORE LENGTH RANGE

Up to 12 times bore diameter, not exceeding 200 mm (7.874 in)

SPINDLE SPEED RANGE:

100 - 2000 rpm during lapping

SERVO SPINDLE MOTOR:

1.5 kW (2 HP)

CARRIAGE TRAVEL:

630 mm (24.8 in)

RECIPROICATION RATE (STROKE):

0 - 350 spm

SERVO STROKER MOTOR: 7,5 kW (10 hp)

COOLANT SUMP PUMP:

Centrifugal Pump: 27 kW (.36 hp)
80 LPM (20 GPM)
(Separate Coolant System Required)

FLOOR SPACE

(COOLANT SYSTEM NOT INCLUDED):

2175 W x 2230 D x 2900 H mm
(83 x 86 x 114 in.)

FLOOR WEIGHT:

2154 kg (4750 lbs.)

FLOOR LOAD: 2050 kg/sq. meter

(415 lbs./sq. ft) (SVL-2115)

PNEUMATIC REQUIREMENTS: 5,5 to 6,9 Bar

(80 to 100 psi) required. Filter regulator included with base machine.

ELECTRICAL REQUIREMENTS:

460V, 60Hz, 3Ph

400V, 50Hz, 3Ph

* DIAMETER RANGE, LENGTH RANGE AND WORKPIECE WEIGHT ARE CONTINGENT ON WORKPIECE AND APPLICATION.

STANDARD MACHINE OPTIONS:

- SVF-15 Coolant systems
- Automation PLC
- Robot interface
- MMT-SC1 17 mm MMT collet
- MMT-SC2 23 mm MMT collet
- MMT-SC3 25 mm MMT collet



SVF-15 Grit Guard® Coolant Filter (below) is optional on the SVL-2115 lapping system. The filter is available in both 208 liter (55 gallon) and 416 liter (110 gallon) models.

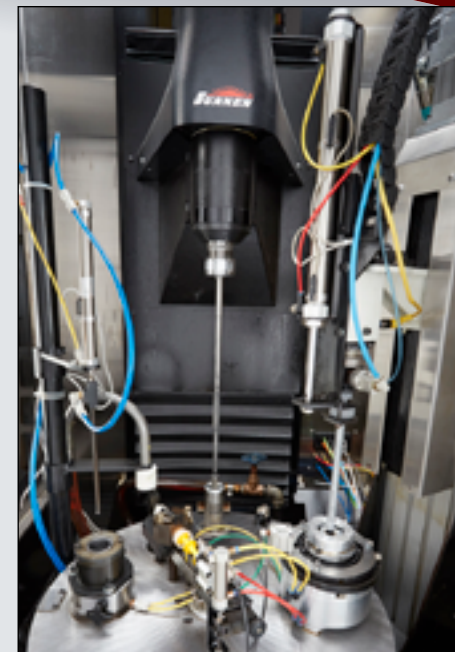


TOOLING

The SVL-2115 incorporates the latest technology in vertical bore lapping. Patented lapping tools are custom-designed to meet your bore diameter and length requirements.

Custom designed lapping arbor and sleeve (left).

Closeup of SVL-2115 fixture with lapping tool.



LAPPING PASTE

For Sunnen's Lapping System, specially blended pastes of superabrasives and conventional abrasives are available for each application. These pastes are provided in containers that plug into the applicator and eliminate the mess and inconsistency that comes from having operators mix their own.

GET THE PRECISION YOU NEED WITH SUNNEN PREMIUM CUTTING FLUIDS

Sunnen's premier line of oil and waterbase cutting fluids for honing, superfinishing, and lapping increasing cutting rates while reducing abrasive consumption. Delivering faster, lower cost per part processes leads to more profits.



A LEGACY OF EXCELLENCE SINCE 1924.

WORLDWIDE

Our global manufacturing, distribution, and sales and service network allows us to deliver quality Sunnen solutions worldwide.

And our state-of-the-art Technical Services Centers allow our technical experts to develop innovative solutions to customer application challenges. The Centers also provide answers for customer questions and training for Sunnen representatives around the world.

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