



ABOVE AND BEYOND HONING

SV-10

VERTICAL HONING MACHINE



SUNNEN'S SV-10 VERTICAL HONING MACHINE BUILT FOR PRECISION AND PERFORMANCE



The Sunnen® SV-10 is designed with power, precision, durability and advanced technology to deliver state-of-the-art performance ... perfect for honing big, heavy or odd shaped workpieces.

The SV-10 is power packed with two motors, one for the spindle and one for the stroker. This combination provides the SV-10 the muscle to run Sunnen's new DH-Series Diamond Honing System with multi-point cutting action, plus Sunnen's full array of industrial tooling.

In addition, the easy-to-use, yet highly advanced touch screen control projects Sunnen's patented full bore profile display. This real time graphical display of the bore cross section allows the operator to dwell in the exact position where the bore is visually smaller ... there's no need for guesswork.

Ø 137.185±0.025
0.18 A-B
0.025 LG H
0.013/20° LG H



Bottom line: We listened to the market and are proud to introduce the highly advanced SV-10 ... the next generation of Sunnen's industry-leading Automatic Cylinder Hones. Built to make your vertical honing faster, easier, more precise, more productive and more profitable.

- Value priced – priced to match the industry standard CV-616.
- Precision control – corrects taper and out-of-round, producing surface finish, size, roundness and straightness tolerances to meet OEM specifications.
- One easy setup – handles complete resizing and finishing of all cylinders, replacing both boring and hand honing.
- Built and backed by Sunnen – the leader in honing since 1924.



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 SV-10 IS LOADED WITH ADVANCED FEATURES YET PRICED TO MATCH THE CV-616.

STANDARD & OPTIONAL FEATURES

- 1 Individual 1 HP (.75 kW) stroker and 3 HP (2.25 kW) spindle motors provide more horsepower than any competitive machine – now you can run Sunnen's Diamond Honing System for faster production and rounder bores.
- 2 Variable speed control – significantly reduces number of mechanical parts for long, trouble-free service.
- 3 Mechanical power stroking system – provides superior control and ensures consistent crosshatch angles and surface finish, cylinder after cylinder
- 4 Patented bore profile display – allows operator to hone cylinder round and straight without stopping to gage.
- 5 Standard multi-position rollover fixture accomodates most automotive engine blocks. Optional SV-6200 clamp kit holds a wide variety of engine blocks.
- 6 Precise zero shut-off – ensures consistent size control bore after bore.
- 7 Advanced stroking system – can dwell in any part of the bore – top, middle or bottom – selectively removing stock for the straightest, roundest bore possible.
- 8 Operator-friendly, multi-language touch screen control panel – allows easy setup and easy speed adjustment ... no more belts and pulleys to adjust or buttons to push. Convenient, upfront touch-screen control – allows the operator to safely and easily see and operate ... no need to reach across the machine to make adjustments.
- 9 Sunnen Diamond Honing System with multi-point cutting action – spreads out force for faster, rounder bores and improved productivity.
- 10 Attractive, long-life, low- maintenance stainless steel front doors – ensure operator safety, provide for easy cleaning and improve the look of any shop.





THE COMPUTERIZED SV-10 PUTS YOU IN COMPLETE CONTROL FOR INCREASED PRECISION, CONSISTENCY, PRODUCTIVITY AND QUALITY

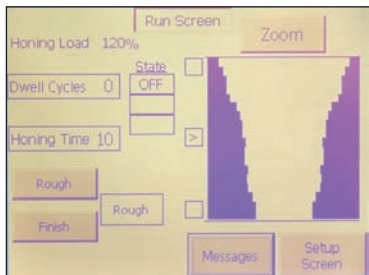
- **PATENTED full bore profile display** – projects a real-time display of the bore cross section (see screen shots at bottom of page) that simplifies removing taper from the bore ... allows user to dwell in the exact position and as long as necessary where bore is visually smaller.
- **Rough and finish cycles** - rough cycle removes stock fast and automatically switches to finish cycle for optimum bore geometry and for the desired crosshatch angle.
- **EXCLUSIVE STANDARD PROGRAMMABLE Auto Dwell for unattended operation** - the machine automatically dwells in the tightest part of the bore – top, middle or bottom.
- **On-the-fly changing of spindle and stroke speeds.**
- **Advanced control** – allows variable speed for a much wider range of control and consistent crosshatch pattern. Switch from rough to finish honing with one push of a button.
- **Built-in calculator system** – figures crosshatch, stroke length, stroke speed and spindle speed calculations on the fly.

- Built-in filter system – Settling tank and two filter cartridges catch dirt and grit, keeping oil clean to assure proper surface finish and longer coolant life.

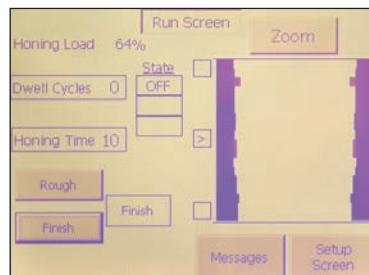
- Safety features include interlocked sliding front door and right/left spindle drive tube guards in addition to control panel E-stop.



EXCLUSIVE BORE PROFILE DISPLAY



Exclusive, easy-to-read and use bore profile display takes the guesswork out of removing taper.



The patented SV-10 bore profile display provides a real time graphical display of the bore cross section. Photos show bore as honing cycle “starts” (top) and just before the workpiece is to “size” (bottom).

EASY AND ECONOMICAL TO RUN

The Sunnen SV-10 is simple to operate. Even the newest operator can learn to run it in a few hours. Setup is quick and easy using the menu-driven microprocessor system control. Stock removal is preset and the machine shuts off automatically when the honing cycle is completed. Stroke and spindle operation are computer controlled for consistent geometry and finish from bore to bore. No continual adjusting to maintain accuracy. All controls are easy to reach, out front, and at eye level. And, you can change stones in seconds.

SPECIFICATIONS:

SPINDLE SPEED:

90-350 RPM

SPINDLE POWER:

3 hp (2.25 kW).

STROKER:

1 hp (0,75 kW)

Variable speed: 40-80 SPM

Stroke Length: 0 to 9 inches (225 mm)

CARRIAGE TRAVEL:

35 in. (889 mm) left/right travel available (X axis)

CYLINDER LENGTH RANGE:

Up to 11 in. (279 mm)

(18 in. with special tooling such as P-28 mandrels)

BORE DIAMETER RANGE:

750-8 inches (19-203 mm) depending on tooling option.

MAXIMUM WORKPIECE WEIGHT:

(including fixture) 1496 lbs (680 kg)

MAXIMUM WORKPIECE SIZE:

46 in. L x 22 in. W x 26.5 in. H
(1168 x 558 x 673 mm)

GENERAL REQUIREMENTS:

Dry Weight: 1900 lbs. (861 kg)

Shipping Weight: 2500 lbs. (1134 kg)

Dimensions (approximately):

	inches	mm
Length	89,5	2280
Width	72,5	1842
Height	86,5	2198

HONING FLUID/FILTER SYSTEM:

Honing Oil Reservoir: 55-gallon

(206-liter) capacity.

Removable settling tanks and screens for easy cleaning.

10-GPM @ 25 PSI (37.8 lpm @ 1.72 Bar)

– two 3,5 gallon (13,25-liter) filter containers. Filter cartridges quickly and easily removed and installed.

VOLTAGES AVAILABLE

Electrical System:

SV-10CD - 230 volt, 60 Hz, 3-phase

SV-10CFM - 220 volt, 50 Hz, 3-phase

All Models CE Compliant

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

SV-10 TOOLING, ABRASIVES AND LUBRICANTS

From the company with over 35 years experience with metal bond stone technology and diamond abrasive, Sunnen now introduces the perfect combination of machine, tooling and abrasives for precision automatic cylinder honing.

The SV-10 allows you to choose the exact tooling and abrasive to meet your specific production requirements. Sunnen is the only full-line company that produces its own precision honing abrasives ... and has the largest variety of diamond or Borazon® superabrasives and conventional vitrified abrasives to ensure the most exact and consistent surface finish in the industry. Or select PHT plateau honing brushes to easily achieve a plateau surface finish.



SUNNEN ABRASIVES & LUBRICANTS

From aluminum oxide to silicon carbide to diamond and CBN, Sunnen offers the industry's largest variety of mounted or un-mounted stick abrasives, bond types, grain sizes and stone configurations.

Before any stone is shipped, it is graded and qualified, maintaining the most exacting quality control standards in the industry to assure you of the most precise honing performance available.

Sunnen's premium honing oils and coolants provide extreme lubricity for higher honing pressure and harder abrasives, delivering faster, lower cost-per-part and ultimately more profitable cutting rates.



DH-SERIES DIAMOND HONING SYSTEM

Sunnen's Diamond Honing System features multi-point cutting action that spreads out force for faster, rounder bores and greatly improves productivity and performance. Three different tools cover the size range. An excellent choice for blind bores or ported cylinder heads.

BORE DIAMETER RANGE:*

70 - 141 mm (2.75 - 5.5 in.)



SUNNEN CV-TYPE TOOLING

Industry standard CV-Type tools are the reason an SV-10 can do the same job as bigger machines costing two or three times as much. CV-Type tools cut fast. They're rugged, economical and easy to use. They have a large range, and the stones can be changed in seconds. Bores are finished faster and more accurately with minimum stock removal.

BORE DIAMETER RANGE:

50, 8 - 203 mm (2-8 inches)



FL6X -20 PORTABLE TOOL ADAPTER

The FL6X Portable Tool Adapter with ANR tooling can be used on the SV-10 for expanded I.D. range versatility. Perfect for large diameter engines and general machine shop applications such as hydraulic cylinders, compressors, pumps, marine engines, etc.

BORE DIAMETER RANGE:

63-203 mm (2.5 - 8 inches)



SUNNEN STANDARD MANDRELS

These versatile tools perform both rough and fine honing operations (stone or brush) within the same honing tool – without changing stones – to reduce your bore sizing costs.

BORE DIAMETER RANGE:

50,9 - 150 mm (2-6 inches)



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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