

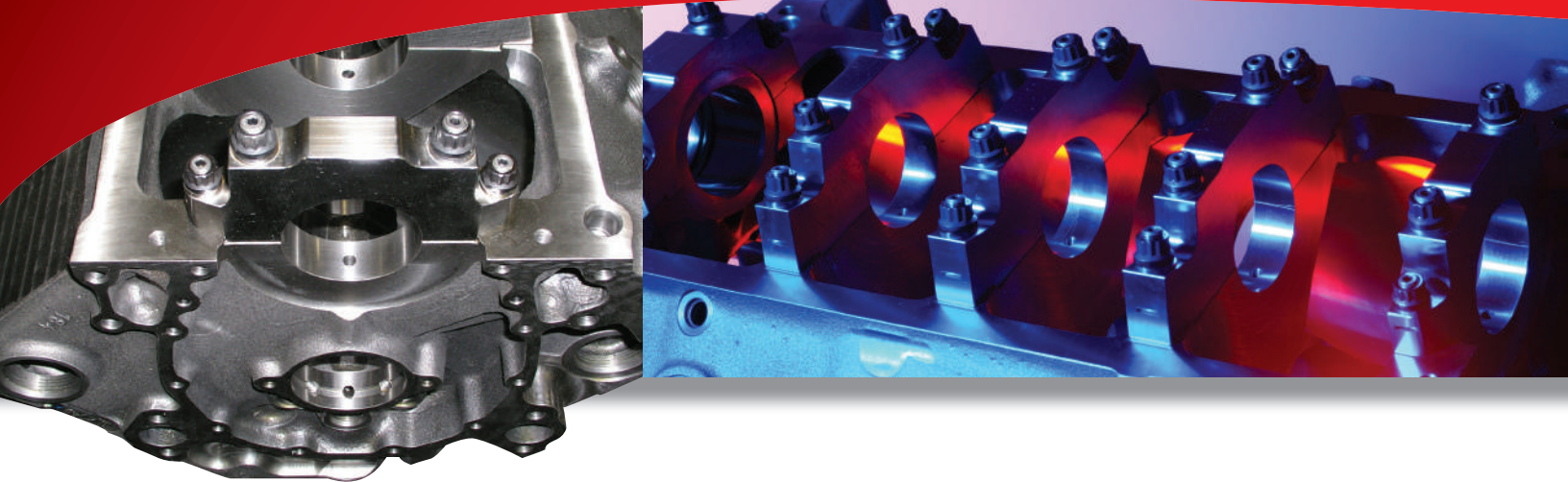


ABOVE AND BEYOND HONING

CH-100 LINE HONE

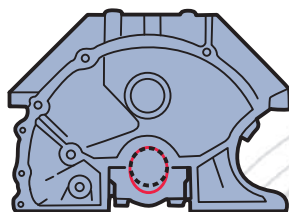


SUNNEN'S CH-100 LINE HONE MAIN BEARING BORE ALIGNMENT — ESSEN



WARPAGE.

Continual heating and cooling of engine causes block warpage and distortion. Result: misalignment of the main bearing bores. As warpage occurs slowly, the original inserts and crankshaft compensate for the warpage through gradual wear. If you install a reground crankshaft and new inserts in the warped block, this misalignment (even though slight) causes crankshaft bind. As inserts and crankshaft try to compensate for the existing warpage ... they wear out quickly.

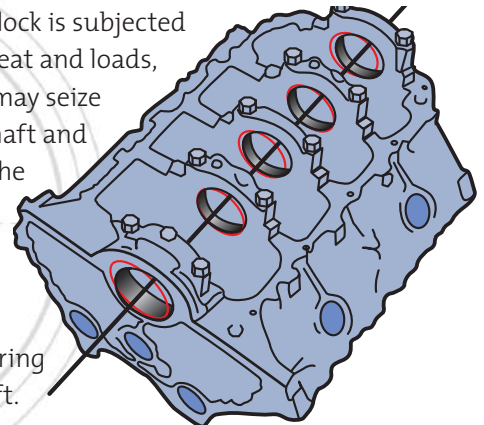


STRETCH.

High loads usually cause main bearing cap to “stretch” vertically and “pinch in” at the parting line. Again, the original inserts compensate for this distortion through wear. Installing new inserts with stretched caps causes crankshaft bind and failure of the new insert or crankshaft.

SPIN.

If an engine block is subjected to excessive heat and loads, the bearings may seize to the crankshaft and spin with it. The result is a cored main bearing bore housing with “burned” bearing and crankshaft.



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

TIAL TO ALL ENGINE REBUILDING JOBS



If you put in a reground crankshaft and new inserts without an align hone job ... you'll wind up with crankshaft bind. This robs the engine of horsepower and causes new inserts to wear quickly. Or, excessive cap stretch reduces bearing crush (which holds the insert in place), causing the insert to seize and spin. This results in a scored main bearing bore housing and often a broken crankshaft.

Main bearing bore misalignment is usually detected only after the crankshaft and new inserts are installed. Piece-meal corrections then must be made (time-consuming hammering, filing, etc.) or the engine may even have to be torn down again to correct the problem.

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:

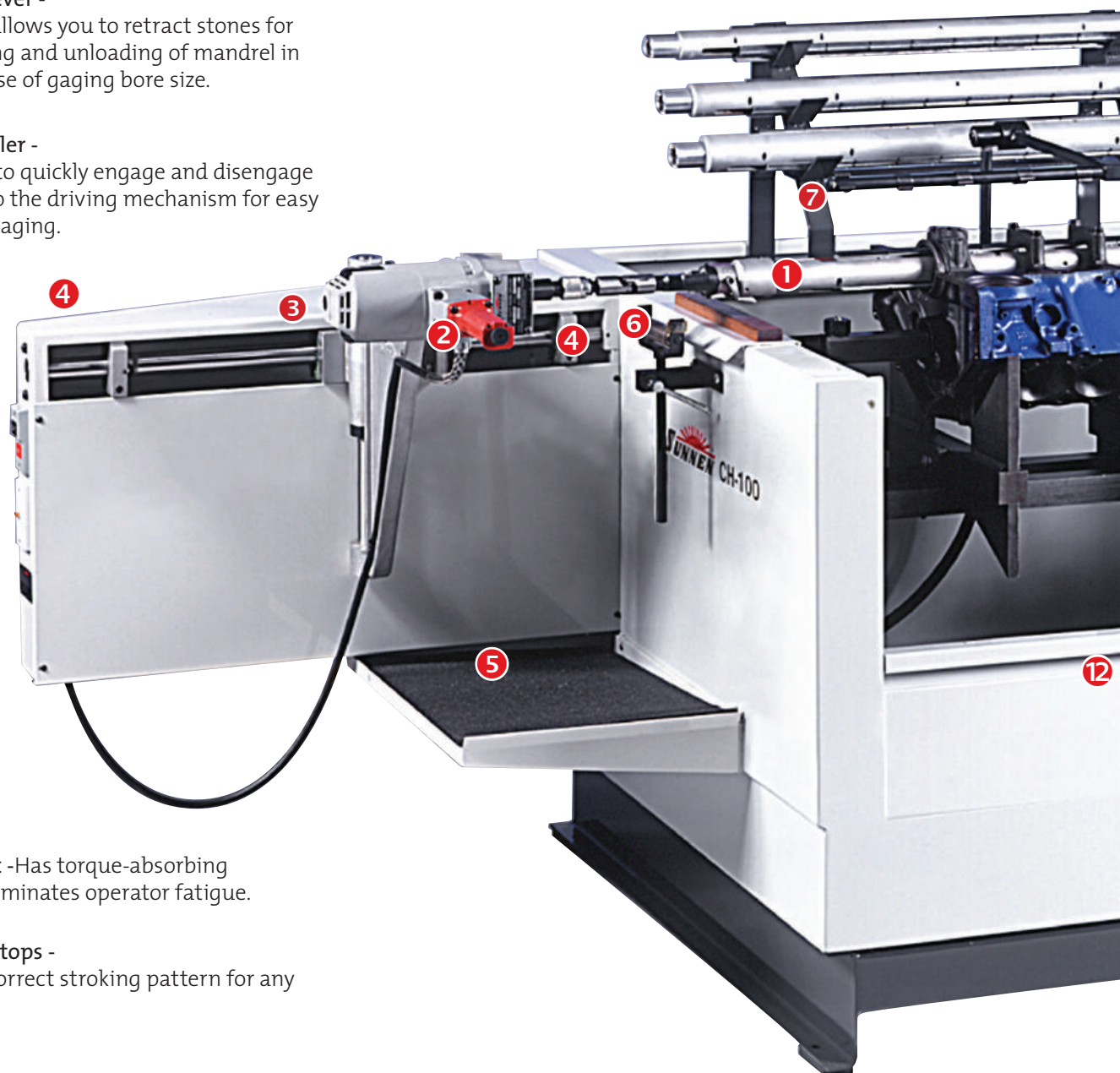
www.sunnen.com



THE CH-100 HORIZONTAL HONE PACKED WITH THE FEATURES THAT DELIVER PRECISION ACCURACY IN MAIN BEARINGS

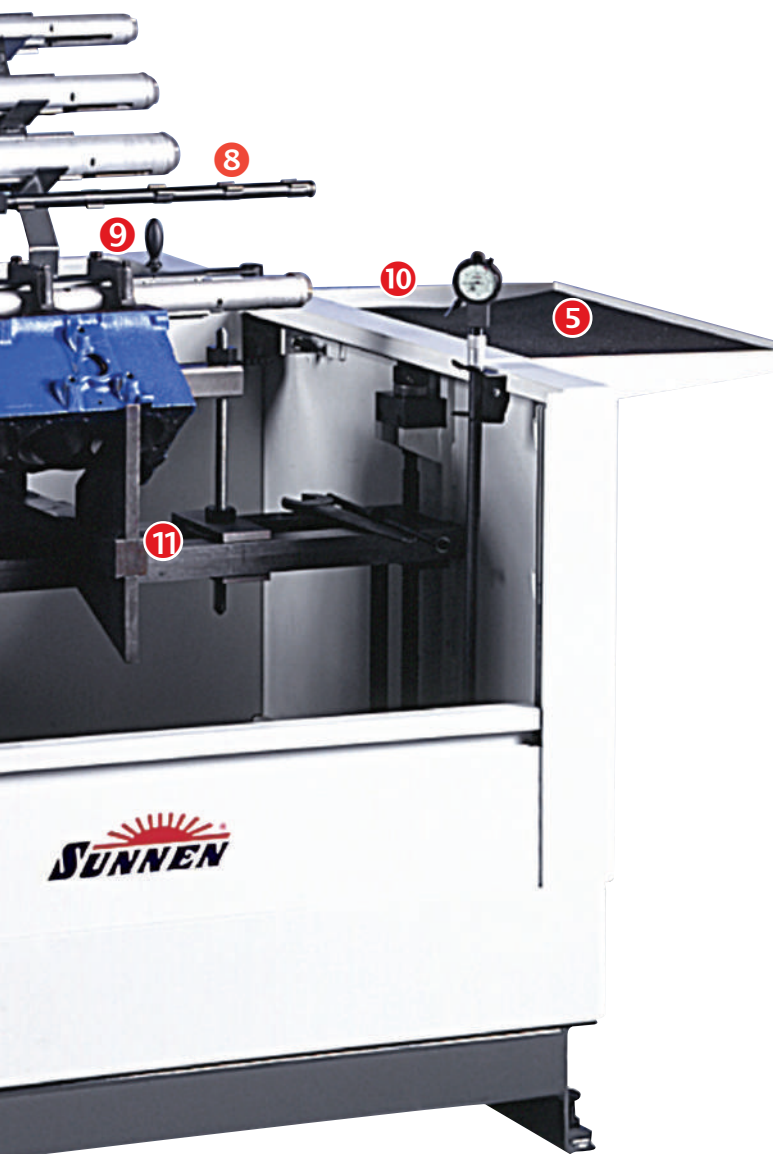
EASY OPERATING FEATURES

- 1 Retractor Lever -**
Drive Unit allows you to retract stones for quick loading and unloading of mandrel in block for ease of gaging bore size.
- 2 Quick-Coupler -**
Allows you to quickly engage and disengage hone unit to the driving mechanism for easy setup and gaging.



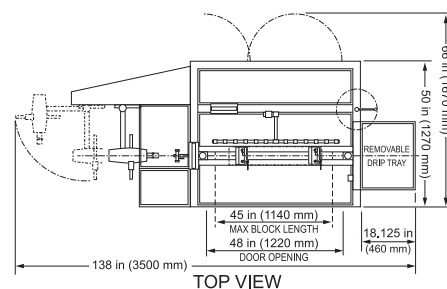
- 3 Drive Unit -**Has torque-absorbing mount. Eliminates operator fatigue.
- 4 Stroking Stops -**
Help set correct stroking pattern for any block.

ING BORE FINISHING



- 5 Drip Tray - Catches oil runoff.
- 6 Mandrel Support - (Optional)
Allows mandrels to be rolled into and out of honing position with less lifting by operator.
- 7 Mandrel Storage Rack - (Optional)
Holds three mandrels up to 3" (76,2 mm) in diameter.
- 8 Oil Control -
Directs oil to main bearing web area. Oil flow automatically shuts off when oil line is raised.
- 9 Crank Handle -
Allows quick, easy height adjustment of block.
- 10 Exclusive design of Sunnen Hone Unit-
Rounds up holes quickly with minimum stock removal. (Honing Units must be ordered separately.)
- Adjustable Block Cradle -
Accepts in-line and V-type blocks (both 60° and 90°).
- Front Panel -
Drops down for easy loading and unloading. (Shown in lowest position.)

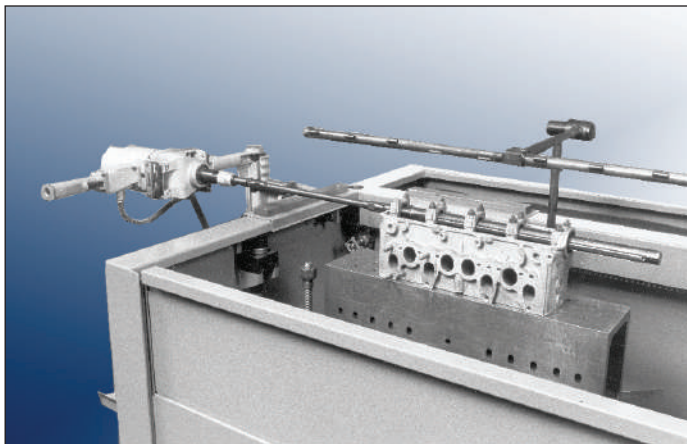
CH-100 LAYOUT



BUILT WITH BENEFITS THAT ASSURE PRECISION AND PROFITS

- **Minimum Stock Removal**– Usually less than .003" (.076 mm) off the caps compared to as much as .010" (.254 mm) with boring. And so little stock out of the main bearing bores that thrust faces or oil seal grooves are not affected.
- **No Delays During Engine Assembly**– No binding crankshafts or bearing misalignment.
- **Fast, Easy Set Up**– After grinding and replacing the caps, you position the block ... insert and adjust the Honing Units ... engage the drive arm and set the limit stops. You're ready to hone.
- **Easy to Use**– Any shop person can run the CH-100 right away ... *the old pro* or your newest hire.
- **Optimum Precision in Every Way**– You're sure to meet or exceed original factory accuracy. For alignment, roundness, and size.
- **Maximum Precision**– The CH-100 hone corrects distortion caused by warpage and cap stretch. High spots in the bore are removed to achieve alignment.

CAMSHAFT BORE HONING ON OVERHEAD CAM CYLINDER HEADS



For the small shop with limited requirements, mandrels may be special ordered to allow honing various O.H.C. cylinder heads. Contact Customer Service for details and information. Pictured is a cylinder head being honed on CH-100 Honing Machine with a hand fed Porta-Hone.

SPECIFICATIONS:

CAPACITY:

- V-blocks, both 90° and 60°: overhead and L-head in-line blocks: angle head blocks; up to 45" (1140 mm) long. 28" (710 mm) from head deck to main bearing centerline

MAIN BEARING BORE DIAMETER RANGE:

- 1.800" - 7.000" (46 - 178 mm)

HONING LUBRICANT:

- Sunnen MAN-845 Honing Oil is recommended for most applications.
- MB-30 or SHO-965 can be used in more difficult applications, with the SHO-965 the preferred choice in places, like parts of California, where VOC limits are in place.

HONING OIL RESERVOIR:

- 35 gallon (132 liter) capacity

ELECTRICAL SYSTEM:

- CH-100K: 115V, 1-phase, 60 Hz
- CH-100CA 220 V, 1-phase, 50 Hz

FLOOR AREA:

- 116" x 50" (2946 mm x 1270 mm)

WEIGHT:

- Approximately 1450 lbs. (660 kg)

SHIPPING WEIGHT:

- Approximately 1650 lbs. (760 kg)

ORDERING INFORMATION:

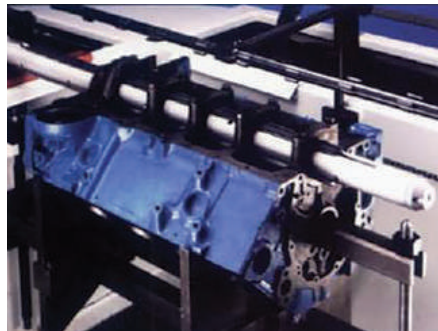
CH-100 HONING UNIT	DIAMETER RANGE	
	INCHES	MM:
10RY-1800F	1.800-2.100	46-54
10RY-2100F	2.100-2.400	54-61
8RY-2400G	2.400-2.700	61-69
8RY-2700G	2.700-3.000	69-77
10RY-2400G	2.400-2.700	61-69
10RY-2700G	2.700-3.000	69-77
10RY-3000H	3.000-3.500	77-89
10RY-4500H	4.500-5.000	115-127
15RY-3500H	3.500-4.000	89-102
15RY-4000H	4.000-4.500	102-115
15RY-4500H	4.500-5.000	115-127
10RY-5000H	4.500-5.000	115-127
10RY-5500H	5.500-6.000	140-152
10RY-6000H	6.000-6.500	152-165
10RY-6500H	6.500-7.000	165-178
15RY-5000H	5.000-5.500	127-140
15RY-5500H	5.500-6.000	140-152
15RY-6000H	6.000-6.500	152-165
15RY-6500H	6.500-7.000	165-178

SUNNEN CH-100 ACCESSORIES FEATURE VERSATILITY AND EFFICIENCY

CH-100-I AVAILABLE FOR INDUSTRIAL APPLICATIONS:

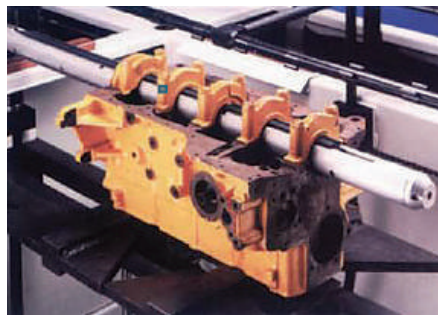
The CH-100-I is equipped with a universal vise fixture for industrial applications such as hydraulic cylinders, spool valves, tandem bores and shotgun barrels. See your Sunnen Field Engineer for details.

LINE-HONING SAVES TIME AND ASSURES PRECISION



LINE HONE

- All in-line and V-type passenger car and light truck blocks are easy work for the Model CH-100.



VERSATILE

- Block cradle adjusts easily to accept small in-line 4-cylinder blocks.

Why Line-Hone?

The Sunnen CH-100 does the complete job of alignment and sizing main bearing bores in about 30 minutes. That's floor-to-floor time for an average passenger car block. Add a few minutes more for truck blocks.

But in the long run, quality of the job is the final determining factor for which method is best. It can make or break your reputation.

The CH-100 has no equal for doing quality work. That's why it has a practical and profitable application in any shop ... for big blocks or little blocks.



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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