

HLV[®] Super-Precision[®] Toolroom Lathe



More
Power—4X
Torque—50%
Threading Range

The Hardinge HLV toolroom lathe has been the benchmark in toolroom machining for over 60 years. This generation HLV design configuration provides the operator with more power and torque, plus the ability to thread just about any inch or metric thread at the touch of a button. There's no need to take the time, or expense, to change out mechanical gears for the desired thread. An electronic, brushless servo motor and threading computer does it all. Thread range now goes from .10 to 6.50mm (4.0 to 250.0 TPI). In addition, multiple start threads—up to four—can be machined. The threading system is easy to use and has fewer moving parts.

Collet-Ready Spindle

The high-precision 5C spindle features a max spindle runout (TIR) of .00065mm (.000025"). The preloaded spindle ensures maximum rigidity and sustained accuracy, eliminating end play and radial play for truer turning. The fast and easy lever-operated collet closer provides positive workpiece gripping. Hardinge offers a wide range of precision spindle tooling to suit any workholding application.

Powerful Spindle Drive

The 3.7-kW (5-hp) drive system offers 400% more power than earlier HLV lathes with the mechanical gearbox. The spindle drive motor also produces 50% more torque—20Nm (15 ft-lb). Spindle speed range is 100 to 3000 rpm; base speed is 1750 rpm.

Electronic Servo Motor and Threading Computer

A brushless servo motor provides 5 Nm (44 in-lb) of continuous torque to the 8-pitch threading lead screw. The green 3.2" LCD mounted in the Digital Readout case provides visual threading information. The 32-button keypad allows the operator to quickly enter thread data into the threading computer's 4MB internal memory. A compact Flash socket and USB port are included.

Hardinge Inc.

One Hardinge Drive

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HLV

- 5C collet-ready spindle
- 3.7-kW (5-hp) spindle drive system
- 3,000-rpm spindle speed
- 127mm (5") jaw chuck capacity
- Electronic servo motor and threading computer
- Digital readout
- #2MT tailstock



Digital readout and threading computer

Digital Readout—standard

The Hardinge digital readout allows super-accurate tool positioning and allows the operator to cut to "zero" reading. X and Z axes positions appear in the 7-digit display with 40 millionths resolution. The spindle speed's 4-digit reading also appears in the red LED display. Readout features include set zero mode for each axis, diameter/radius mode (X axis), inch/metric mode and absolute/incremental mode.

Dovetail Carriage and Tailstock

The dovetail design of the hand-scraped, full-bearing carriage and bedways provides maximum tool rigidity for high accuracy machining. The tailstock body is of one-piece construction and features a hardened and precision ground #2MT spindle. Easy-reading black and white dials are included on the carriage, cross slide, tool post slide and tailstock.

TURNING MILLING
GRINDING WORKHOLDING

HARDINGE
EXPECT MORE™

HLV[®] Super-Precision[®] Toolroom Lathe

Features:

General

| | |
|---|---|
| No. 2 Morse Taper Tailstock | ● |
| Max Spindle Runout (TIR)—.00065mm (.000025") | ● |
| Spindle Speed Selector Switch with Indicator | ● |
| Computer-Controlled Threading Range— 0.10 to 6.50mm (4.0 to 250.0 TPI) | ● |
| Non-standard Pitched Threading | ● |

Tooling

| | |
|---|---|
| 5C Precision Spindle Tooling | ○ |
| Special-Accuracy 5C Collets | ○ |
| 2-, 3-, and 4-Jaw Chucks | ○ |
| Size of Lathe Tool— | |
| Wedge-Type Tool Post (3/8" x 3/8") | ○ |
| Rocker-Type Tool Post (3/8" x 1") | ○ |
| Precision Carbide and Indexable Insert Finishing Tools | ○ |
| Hardinge HDB Precision Bushings | ○ |

Accessories

| | |
|------------------------------------|---|
| Fast-Change Tool Holder | ○ |
| Steady Rest/Follow Rest | ○ |
| HTL Square Production Turret | ○ |
| L6 Indexing Turret | ○ |
| Tailstock Centers | ○ |
| Rear Tool Holder Slide and Tooling | ○ |
| Contour Tracing Attachment | ○ |
| Taper Turning Attachment (inch/mm) | ○ |
| Radius Turning Attachment (inch) | ○ |

Miscellaneous

| | |
|--|---|
| Easy-Reading Black and White Dials— | |
| Carriage (inch only) | ● |
| Cross Slide (inch only) | ● |
| Quick-Acting Tool Post Slide (inch/mm) | ● |
| Tailstock (inch/mm) | ● |
| Headstock Center and Drive Plate | ○ |
| Fluorescent Lamp | ○ |
| Transparent Chip and Coolant Shield | ● |
| Tool Storage Compartment with Two Swing-Out Collet Boards | ● |
| Coolant Facilities for Oil-Base Coolant | ● |
| 3-Year Warranty | ● |
| Hardinge Digital Readout | ● |
| One Complete Machine Documentation Package | ● |

● Standard ○ Optional



HARDINGE BRIDGEPORT HAUSER
KELLENBERGER TRIPET TSCHUDIN

Specifications:

Collet-Ready Spindle

| | |
|------------------------------------|-----------------------------|
| Spindle Capacity | |
| With Round 5C Collets | 27mm (1 1/16") |
| With Hexagon 5C Collets | 22mm (7/8") |
| With Square 5C Collets | 19mm (3/4") |
| With Step Chucks | 152mm (6") |
| With Jaw Chucks | 127mm (5") |
| With Expanding Collets | 76mm (3") |
| Spindle Configuration ¹ | 5C Hardinge Tapered Nose |
| Hole Through Spindle | 31mm (1 1/4") |

Belted Drive System

| | |
|------------------------------------|------------------|
| Infinitely Variable Spindle Speeds | 100 to 3,000 rpm |
| Base Speed | 1750rpm |
| Power | 3.7 kW (5 hp) |
| Torque | 20 Nm (15 ft-lb) |

Capacity

| | |
|---|----------------------------------|
| Swing Over Bed | 279mm (11") |
| Swing Over Carriage | 228mm (9") |
| Swing Over Cross Slide | 152mm (6") |
| Between-Centers Distance | 457mm (18") |
| Compound Slide Travel | 76mm (3") |
| Carriage Power Feed Range | 8 to 178 mm/min 5/16 to 7 ipm |
| Cross Slide Power Feed Range | 5 to 102 mm/min 3/16 to 4 ipm |
| Coolant Sump Capacity (Oil-base coolants only) | 11.4 Liters (3 US Gallons) |

Threading

| | |
|-------------------------|------------------------------------|
| Thread Range | 0.10 to 6.50 mm (4.0 to 250.0 TPI) |
| | Right- and Left-Hand Threads |
| 4.01 - 6.50mm <250 rpm | 4.0 - 10.0 TPI <250 rpm |
| 2.01 - 4.00mm <750 rpm | 10.1 - 24.0 TPI <1000 rpm |
| 1.01 - 2.00mm <1500 rpm | 24.1 - 80.0 TPI <1500 rpm |
| 0.10 - 1.00mm <2000 rpm | 80.1 - 250.0 TPI <2000 rpm |
| Multiple Start Threads | Up to 4 |
| Lead Screw Pitch | 8 Pitch |

Tailstock

| | |
|----------------------------|---------------|
| Morse Taper Center | MT No. 2 |
| Tailstock Spindle Diameter | 35mm (1 3/8") |
| Tailstock Spindle Travel | 95mm (3 3/4") |

Miscellaneous²

| | |
|-------------------------------------|--------------------|
| Approximate Net Weight ³ | 1021 kg (2,250 lb) |
| Machine Dimensions | |
| Length | 1816mm (71 1/2") |
| Depth | 787mm (31") |
| Height | 1848mm (72 3/4") |

¹ - Threaded-Nose Spindle also available

² - Voltages other than 200 to 240V require an external transformer

³ - Add 68kg (150lb) for crating