| ROMI ES-40 | ROMI ES-40A | ROMI ES-40B

ENGINE LATHES

# ROMI ES SERIES

**ROMI** Industrial Complex, in
Santa Bárbara d'Oeste - SP, Brazil

# **INNOVATION** + QUALITY

**ROMI: Producing high quality technology since 1930.**
Since its foundation, the company is recognized by its focus on creating products and innovative solutions which guarantees its technological leadership among big manufacturers of machine tools market. ROMI industrial complex is among the most modern and productive ones in the segments of machine tools, plastic processing machines and cast iron parts of high quality.

**Continuous investments in Research & Development result in products with state-of-the-art technology.**
The high technology applied to Romi machines offer highly reliable products, with high accuracy, efficiency and great flexibility for several types of machining processes.
Romi R&D is focused on increasing competitiveness for its customers.

**Present throughout Brazil and in over 60 countries.**
Romi covers all domestic territory through its sales subsidiaries network fully prepared to support customers supplying an extensive range of services from marketing to after sales.
International market is covered by its subsidiaries located in United States, Mexico and Europe and also by its dealers network located in strategic logistic centers around the globe completely capable for serving customers in 5 continents.

Plant 16

# ROMI ES SERIES

ROMI ES-40 | ROMI ES-40A | ROMI ES-40B

## Engine lathes for tool room production and maintenance

ES Series engine lathes are versatile and accurate. They provide multiple speed and feed combinations, to meet the most diverse machining requirements.

Flexibility and productivity for several types of application, with capacity to machine parts up to Ø 640 mm (25.2").

**ES-40**

- Headstock: 18 speeds, max. 2,360 rpm
- Spindle nose ASA L1, Ø 65 mm (2.56") thru-hole
- Main motor: 15 hp / 11,2 kW

**ES-40A**

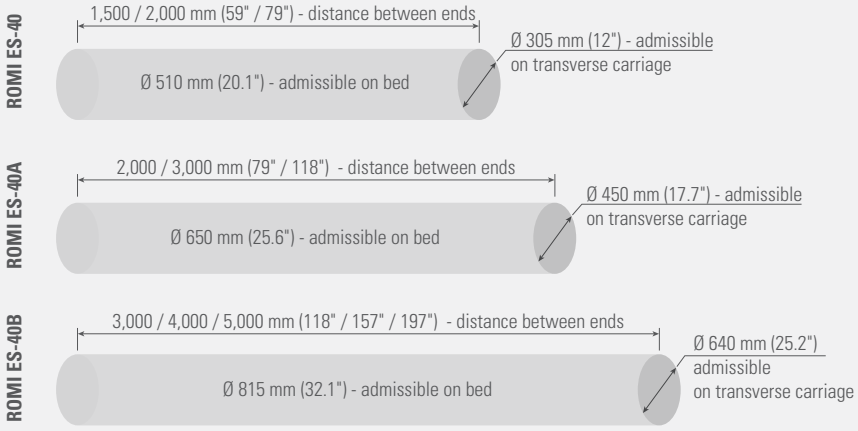
- Headstock: 18 speeds, max. 1,700 rpm
- Spindle nose ASA L1, Ø 65 mm (2.56") thru-hole
- Main motor: 15 hp / 11,2 kW

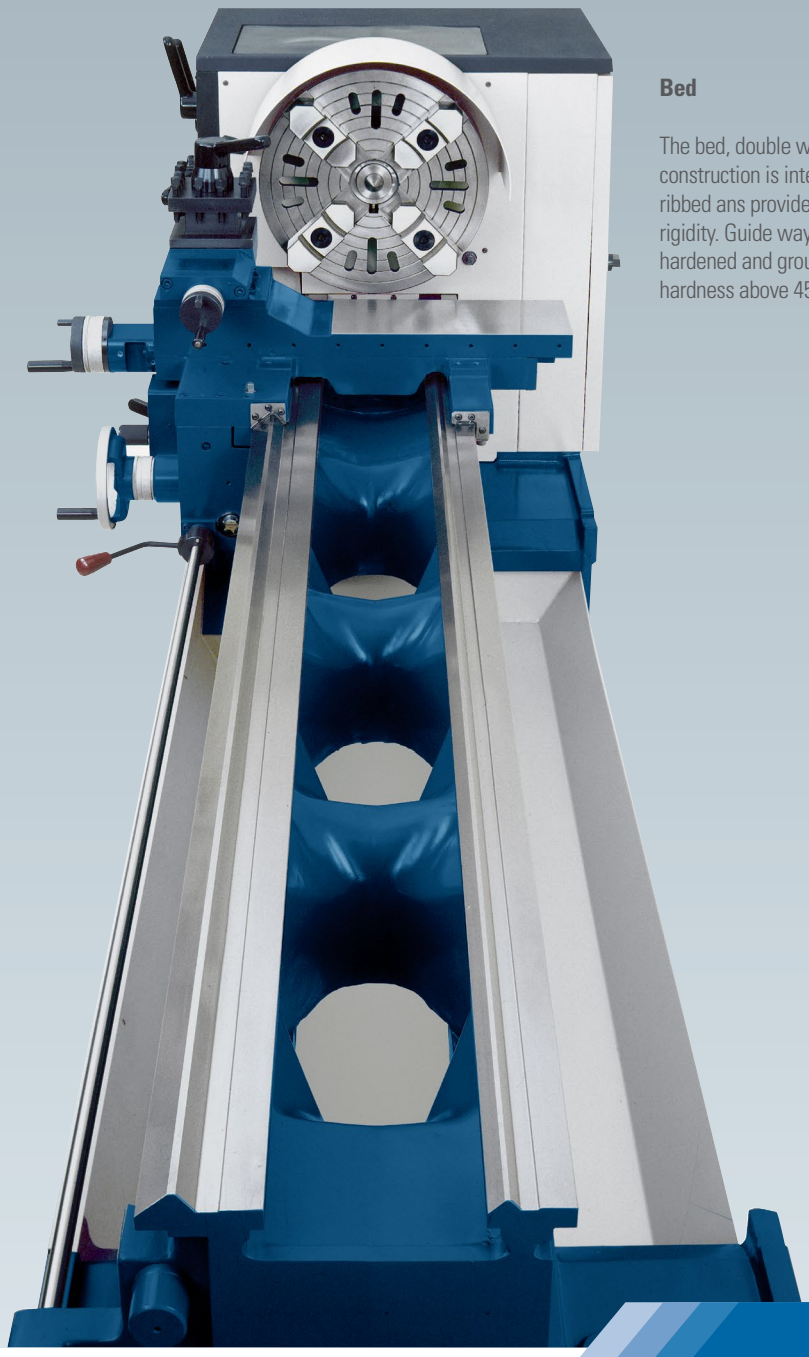
**ES-40B**

- Headstock: 18 speeds, max. 1,180 rpm
- Spindle nose ASA L1, Ø 65 mm (2.56") thru-hole
- Main motor: 15 hp / 11,2 kW

# ROMI **ES-40 / ES-40A / ES-40B**

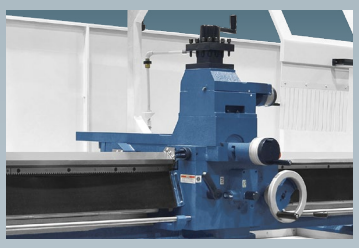
## Capacities





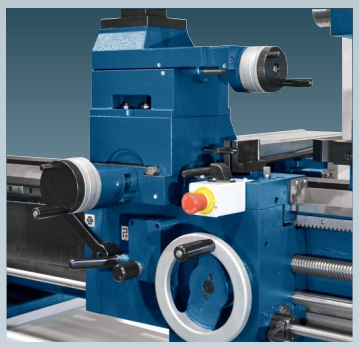
### Bed

The bed, double wall, construction is internally ribbed ans provides excellent rigidity. Guide ways are hardened and ground with hardness above 450 Brinell.



### Guide spindle protection system and feed shaft

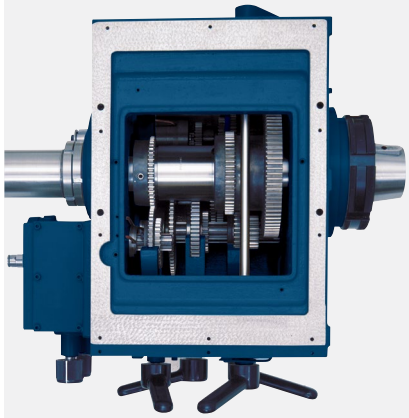
It offers protection and safety, not allowing operator contact with the guide spindle and feet shaft, thus avoiding the possibility of accidents.



### Carriage

Structurally rigid, the cross slide covers the full lenght os saddle guide ways.
It incorporates a system to eliminate backlash between nut and cross feed screw.
The top slide and tool post may be positioned at any angle for turning operations.

# **HEADSTOCK** AND BED

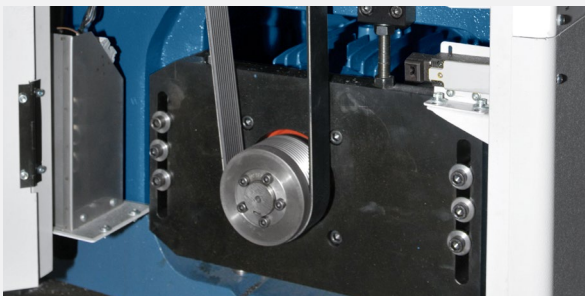


### Headstock

Hardened and ground gears and shafts, are dinamically balanced and run in an oil bath. The rigid cast housing together with the excellent transmission system ensure high performance and a long working life.

### Breaking system

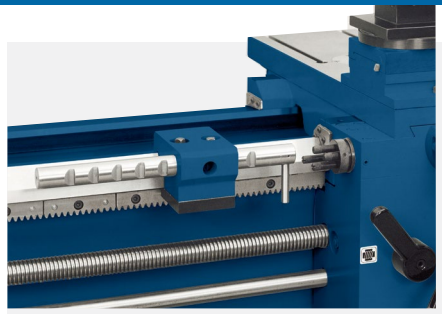
It has an automatic safety system that activates the eletromagnetic brake if a power failure occurs.



**End gearing**

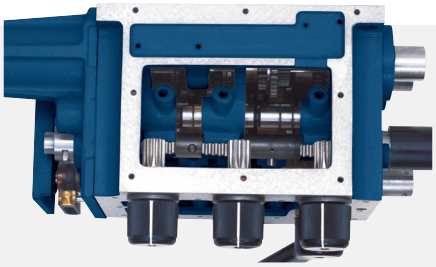
All gears all made of steel. There is no gear change required for conversion from Metric to Inch threads or from Module to Diametral Pitch threads. Gear change is required only for conversion from Metric and Inch threads to Module and Diametral Pitch threads.

# END GEARING



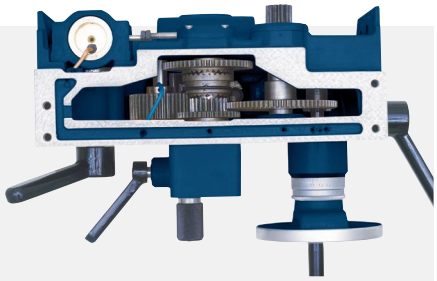
**Automatic disengagement**

Enables accurate repeatability of up to 4 linear measurements, decreasing cycle times for the production of multiple parts. ES-40 / ES-40A models also incorporate an adjustable single-position cross automatic disengagement.



**Thread and feed gearbox**

Provides multiple feed and thread pitch combinations. Gears and shafts are hardened, run in precision bearings all in an oil bath for optimum lubrication. Provides excellent performance and a long working life.



**Apron**

Utilizes hardened gears and shafts running in oil bath. It features smooth engagement of cross and longitudinal feed levers. During thread cutting the half-nut is engaged and receives additional lubrication automatically.

| Technical Specifications | | ROMI ES-40 | ROMI ES-40A | ROMI ES-40B |
|---|---|---|---|---|
| **Capacity** | | | | |
| Centers height | mm (in) | 250 (9.8) | 325 (13) | 420 (17) |
| Distance between centers | m (in) | 1.5 / 2.0 (59 / 79) | 2.0 / 3.0 (79 / 118) | 3.0 / 4.0 / 5.0 (118 / 157 / 197) |
| Swing over bed | mm (in) | 510 (20) | 650 (26) | 815 (32) |
| Swing over saddle wings | mm (in) | 480 (19) | 600 (24) | 750 (30) |
| Swing over cross slide | mm (in) | 305 (12) | 450 (18) | 640 (25) |
| Swing through gap | mm (in) | - | - | 1,080 (43) |
| Length of gap in front of chuck | mm (in) | - | - | 260 (10) |
| Cross slide travel | mm (in) | 280 (11) | 360 (14) | 450 (18) |
| Tool post carriage travel | mm (in) | 150 (5.9) | 150 (5.9) | 190 (7.5) |
| Tool section | mm (in) | 32 x 32 (1.3 x 1.3) | 32 x 32 (1.3 x 1.3) | 32 x 32 (1.3 x 1.3) |
| **Bed** | | | | |
| Width | mm (in) | 380 (15) | 380 (15) | 380 (15) |
| Height | mm (in) | 380 (15) | 380 (15) | 380 (15) |
| **Headstock** | | | | |
| Spindle nose | ASA | L1 | L1 | L1 |
| Spindle hole diameter | mm (in) | 65 (2.6) (A) | 65 (2.6) (A) | 65 (2.6) |
| Spindle taper hole degrees | degrees | 1° 26' | 1° 26' | 1° 26' |
| Reduction sleeve taper hole | MT | 5 | 5 | 5 |
| Spindle diameter at front bearing | mm (in) | 110 (4.3) (A) | 110 (4.3) (A) | 110 (4.3) |
| Number of speeds | | 18 | 18 | 18 |
| Speed ranges | rpm | 32 to 2.360 (A) | 23 to 1.700 (A) | 16 to 1.180 |
| **Tailstock** | | | | |
| Quill travel | mm (in) | 200 (7.9) | 200 (7.9) | 200 (7.9) |
| Quill diameter | mm (in) | 88 (3.5) | 88 (3.5) | 88 (3.5) |
| Quill taper | MT | 5 | 5 | 5 |
| **Gearbox threads and feeds** | | | | |
| Longitudinal feeds | mm/rot | 192 / 0.046 to 8.224 | 192 / 0.046 to 8.224 | 192 / 0.046 to 8.224 |
| Cross feeds | mm/rot | 192 / 0.022 to 3.984 | 192 / 0.022 to 3.984 | 192 / 0.022 to 3.984 |
| Inch threads | fpp | 97 / 42 to 0.5 | 97 / 42 to 0.5 | 97 / 42 to 0.5 |
| Metric threads | mm (in) | 96 / 0.4 to 56 | 96 / 0.4 to 56 | 96 / 0.4 to 56 |
| Module threads | Mod | 96 / 0.1 to 14 | 96 / 0.1 to 14 | 96 / 0.1 to 14 |
| Diametral Pitch threads | DP | 96 / 168 to 2 | 96 / 168 to 2 | 96 / 168 to 2 |
| Leadscrew | fpp | 4 | 4 | 4 |
| **Power** | | | | |
| Main motor | hp | 15 | 15 | 15 |
| Clutch lubricating pump (B) | hp | 0.125 | 0.125 | 0.125 |
| **Dimension and weight (approximate)** | | | | |
| Floor space required | m (in) | (B.C. 1,5*) 2,760 x 1,600 (109 x 63) (B.C. 2,0*) 3,260 x 1,600 (128 x 63) | (B.C. 2,0*) 3,260 x 1,600 (128 x 63) (B.C. 3,0*) 4,260 x 1,600 (168 x 63) | (B.C. 3,0*) 4,260 x 1,600 (168 x 63) (B.C. 4,0*) 5,260 x 1,600 (207 x 63) (B.C. 5,0*) 6,260 x 1,600 (246 x 63) |
| Net weight | kg (lb) | (B.C. 1.5*) 3,300 (7,275) (B.C. 2.0*) 3,800 (8,377) | (B.C. 2.0*) 4,000 (8,818) (B.C. 3.0*) 5,000 (11,023) | (B.C. 3.0*) 5,200 (11,464) (B.C. 4.0*) 6,200 (13,668) (B.C. 5.0*) 7,200 (15,873) |

(A) As an option and at extra cost may be provided with: Spindle with Ø 104 mm hole, CAMLOCK D1-11 nose, spindle diameter at front bearing 140 mm and 18 speeds from 22.4 to 1,180 rpm. (ROMI ES-40 / ROMI ES-40A)

(B) Optional at extra cost.
(*) B.C. = between centers (m)

## Standard equipment

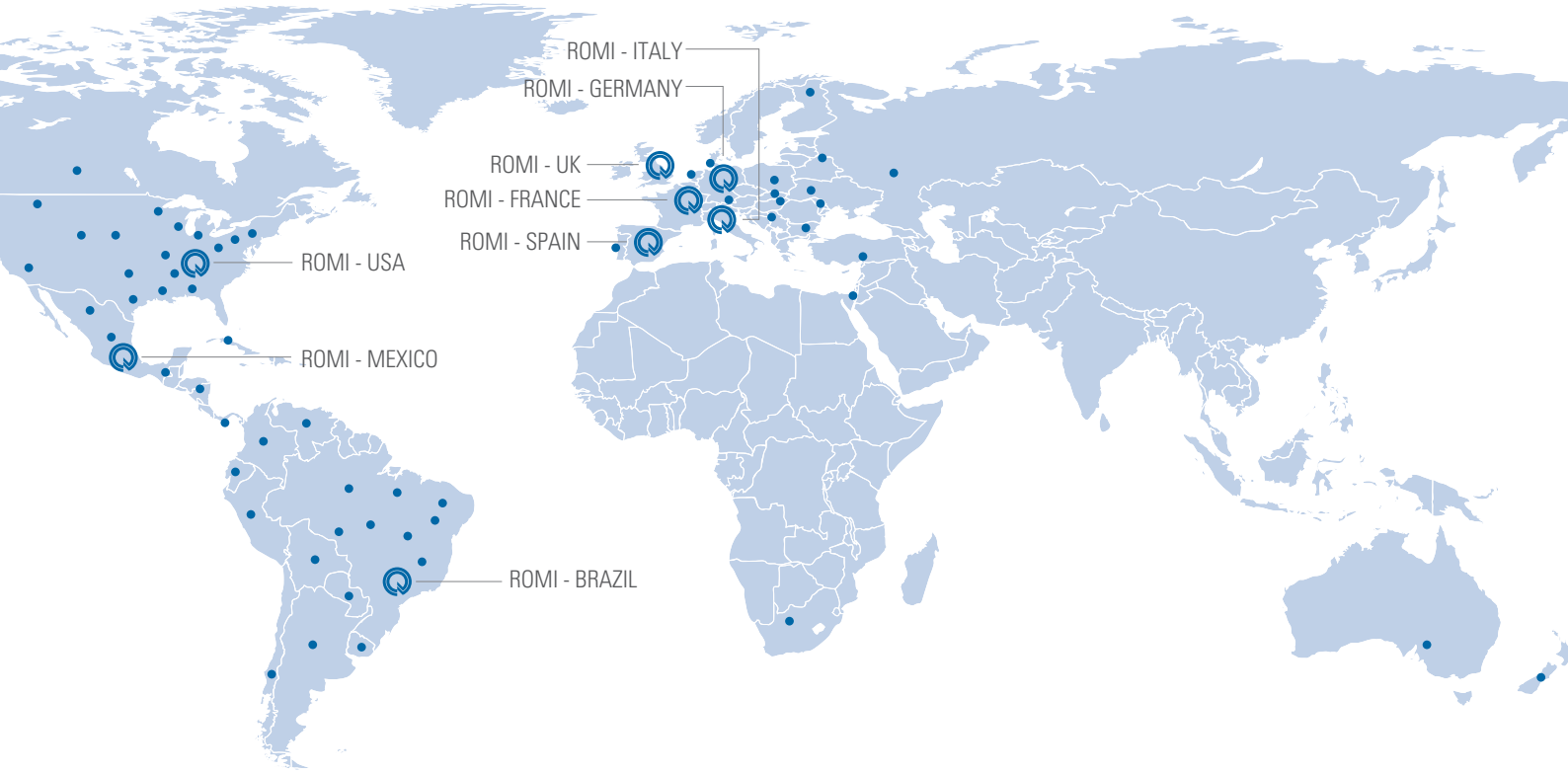
- Apron equiped with command lever with safety lock
- Removable chip box
- Reduction sleeve MT-5 for spindle
- Bed with gap (ROMI ES-40B - 3m, 4m and 5m)
- Tailstock with manual body positioning manually operated quill, graduated in mm and inch, with CM-5 x 60°
- Spindle nose ASA L1, Ø 65 mm (2.56")
- thru-hole
- End gearing that allows threading with only two assembling settings
- Enclosed lead screw and feed rod set
- Complete documentation for ROMI product
- Electrical installation available for the following voltage/frequencys: 400VAC 60Hz
- Main set of wrenches for machine operation
- Set of levelling screws and nuts
- Asynchronous AC motor for headstock driven, with electromagnetic safety brake
- Standard colors: Texturized Epoxy enamel Munsell Blue 10B-3/4 and Texturized Epoxy Gray RAL7035
- 8-position square tool holder (ROMI ES-40B)
- 4-position square tool holder Prismatic with base (ROMI ES-40/40A)
- CE safety regulation compliance
- Rear guard
- Mobile operator's guard with micro switches and 2 channel safety interlock and a fixing (attachement / locking) system that cannot be bypassed
- Chuck guard with safety interlock through micros with 2 canals and anti-fraud
- Wide range threading system, incorporated to headstock
- Longitudinal carriage stop system (Z axis) with adjustment

## Optional equipment

- Graduated handwheel (mm) for apron
- Graduated to handwheel of tailstock
- Tapering attachment with telescopy
- Electrical installation 390VAC/60Hz
- Complete coolant system
- Flange chuck adaption Ø 210 mm, Ø 250 mm, Ø 315 mm e Ø 400 mm
- Sealed worklight
- Follow rest with bronze tips, Ø 12 to 105mm capacity
- Steady rest with bronze tips, Ø 12 to 150mm capacity
- Steady rest with rollers, Ø 12 to 150mm capacity
- Steady rest with rollers, Ø 150 to 300mm capacity
- Drive plate Ø 250 mm
- Digital reader for X and Z axes or X, Z and Z1 axes
- Swivel base for 8 positions square tool post (ES-40/ES-40A) **(A)**
- 4 jaws independents chuck Ø 400 mm, Ø 500 mm (ROMI ES-40A/B) e Ø 630 mm (ROMI ES-40B)
- Universal chucks
  - Ø 250 mm - 3 jaws universal chuck (Cast Iron), solid jaws
  - Ø 315 mm or Ø 400 mm - 3 jaws universal chuck (Steel), solid jaws
  - Ø 250 mm, Ø 315 mm or Ø 400 mm - 3 jaws universal chuck (Steel), reversible jaws
- Live center MT-5
- 8 position square tool post (in place of prismatic 4 position) (ES-40/40A) **(B)**
- Open rear tool post with fixed base (ES-40)
- Open sided rear tool post with fixed base (ES-40A/B)

**(A)** (A) To sell mandatory the accessory "8 position square tool post"
**(B)** Mandatory the sale of the accessory "Swivel base for 8 positions square tool post"

## WORLDWIDE PRESENCE



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**CE safety regulation compliance available only for the European Community or under request.**
**Check availability and technical characteristics of the products to your country.**

CE

ISO 9001:2015
Certificate No. 31120

ISO 14001:2015
Certificate No. 70671

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