# Lathes


## D2000 E

Page 22

| | |
|---|---|
| Centre distance | 350 mm |
| Centre height | 110 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **30 - 2300 r.p.m.** |
| Feed rates | 0.085 and 0.16 mm |


## D2400 E

Page 22

| | |
|---|---|
| Centre distance | 500 mm |
| Centre height | 110 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **30 - 2300 r.p.m.** |
| Feed rates | 0.085 and 0.16 mm |


## D3000 E

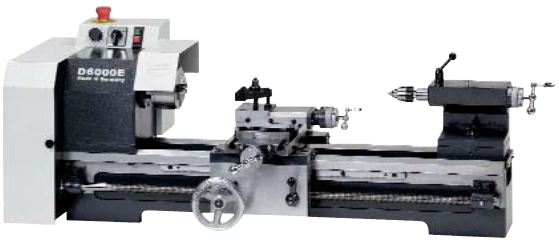
Page 22

| | |
|---|---|
| Centre distance | 500 mm |
| Centre height | 110 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **30 - 2300 r.p.m.** |
| Feed rates infinitely variable | 0 - 250 mm/min |


## D4000 E

Page 32

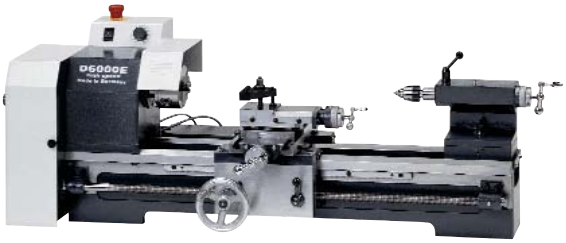
| | |
|---|---|
| Centre distance | 350 mm |
| Centre height | 100 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **30 - 2300 r.p.m.** |
| Feed rates | 0.085 and 0.16 mm |




## D6000 E

Page 32

| | |
|---|---|
| Centre distance | 600 mm |
| Centre height | 135 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **30 - 2300 r.p.m.** |
| Feed rates | 0.085 and 0.16 mm |




## D6000 E high speed

Page 32

| | |
|---|---|
| Centre distance | 600 mm |
| Centre height | 135 mm |
| Power | **2.0 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **100 - 5000 r.p.m.** |
| Feed rates | 0.085 and 0.16 mm |


## DF1680 E

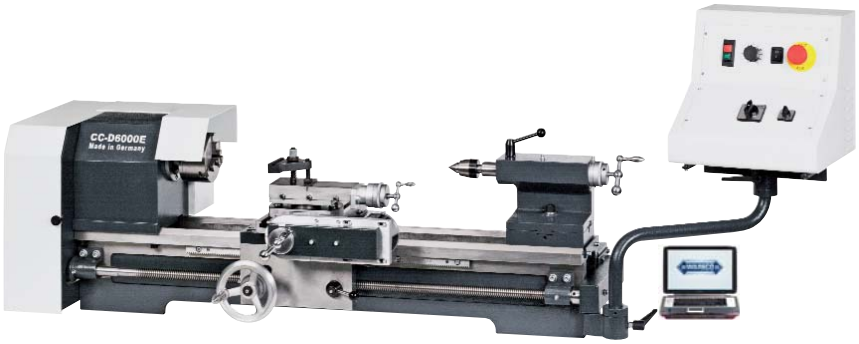
Page 40

| | |
|---|---|
| Longitudinal X-axis | 500 mm |
| Transverse Y-axis | 140 mm |
| Vertical Z-axis | 280 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **140 - 3000 r.p.m.** |


## CC-D4000 E

Page 48

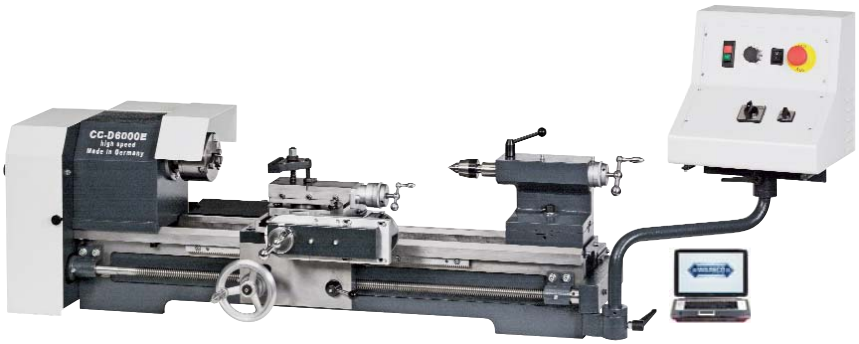
| | |
|---|---|
| Centre distance | 350 mm |
| Centre height | 100 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **30 - 2300 r.p.m.** |
| Path feed rate | Up to max. 500 mm/min |




## CC-D6000 E

Page 48

| | |
|---|---|
| Centre distance | 600 mm |
| Centre height | 135 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **30 - 2300 r.p.m.** |
| Path feed rate | Up to max. 1000 mm/min |




## CC-D6000 E high speed

Page 48

| | |
|---|---|
| Centre distance | 600 mm |
| Centre height | 135 mm |
| Power | **2.0 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **100 - 5000 r.p.m.** |
| Path feed rate | Up to max. 1000 mm/min |

# Milling machines


## F1200 E

Page 62

| | |
|---|---|
| Longitudinal X-axis | 260 mm |
| Vertical Z-axis | 280 mm |
| Transverse Y-axis | 150 mm |
| Work bench | 450 x 180 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **140 - 3000 r.p.m.** |

## F1200 E high speed

Page 62

| | |
|---|---|
| Longitudinal X-axis | 260 mm |
| Vertical Z-axis | 280 mm |
| Transverse Y-axis | 150 mm |
| Work bench | 450 x 180 mm |
| Power | **2.0 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **100 - 7500 r.p.m.** |


## F1210 E

Page 62

| | |
|---|---|
| Longitudinal X-axis | 500 mm |
| Vertical Z-axis | 280 mm |
| Transverse Y-axis | 150 mm |
| Work bench | 700 x 180 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **140 - 3000 r.p.m.** |

## F1210 E high speed

Page 62

| | |
|---|---|
| Longitudinal X-axis | 500 mm |
| Vertical Z-axis | 280 mm |
| Transverse Y-axis | 150 mm |
| Work bench | 700 x 180 mm |
| Power | **2.0 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **100 - 7500 r.p.m.** |


## F1410 LF

Page 64

| | |
|---|---|
| Longitudinal X-axis | 500 mm |
| Vertical Z-axis | 280 mm |
| Transverse Y-axis | **200 mm** |
| Work bench | 700 x 180 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **140 - 3000 r.p.m.** |

## F1410 LF high speed

Page 64

| | |
|---|---|
| Longitudinal X-axis | 500 mm |
| Vertical Z-axis | 280 mm |
| Transverse Y-axis | **200 mm** |
| Work bench | 700 x 180 mm |
| Power | **2.0 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **100 - 7500 r.p.m.** |

## CC-F1200 E

Page 78

| | |
|---|---|
| Longitudinal X-axis | 260 mm |
| Vertical Z-axis | 280 mm |
| Transverse Y-axis | 150 mm |
| Work bench | 450 x 180 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **140 - 3000 r.p.m.** |
| Path feed rate for | up to max. 1200 mm/min |

## CC-F1200 E high speed

Page 78

| | |
|---|---|
| Longitudinal X-axis | 260 mm |
| Vertical Z-axis | 280 mm |
| Transverse Y-axis | 150 mm |
| Work bench | 450 x 180 mm |
| Power | **2.0 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **100 - 7500 r.p.m.** |
| Path feed rate for | up to max. 1200 mm/min |

## CC-F1210 E

Page 78

| | |
|---|---|
| Longitudinal X-axis | 500 mm |
| Vertical Z-axis | 280 mm |
| Transverse Y-axis | 150 mm |
| Work bench | 700 x 180 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **140 - 3000 r.p.m.** |
| Path feed rate for | up to max. 1200 mm/min |

## CC-F1210 E high speed

Page 78

| | |
|---|---|
| Longitudinal X-axis | 500 mm |
| Vertical Z-axis | 280 mm |
| Transverse Y-axis | 150 mm |
| Work bench | 700 x 180 mm |
| Power | **2.0 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **100 - 7500 r.p.m.** |
| Path feed rate for | up to max. 1200 mm/min |

## CC-F1410 LF

Page 82

| | |
|---|---|
| Longitudinal X-axis | 500 mm |
| Vertical Z-axis | 280 mm |
| Transverse Y-axis | **200 mm** |
| Work bench | 700 x 180 mm |
| Power | **1.4 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **140 - 3000 r.p.m.** |
| Path feed rate for | up to max. 1200 mm/min |

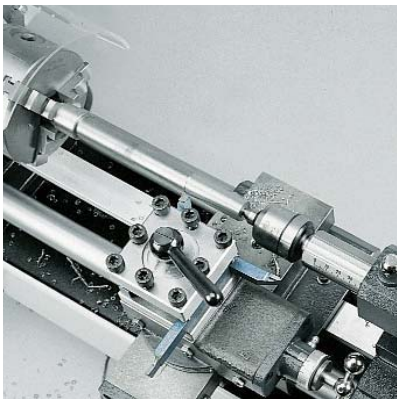
## CC-F1410 LF high speed

Page 82

| | |
|---|---|
| Longitudinal X-axis | 500 mm |
| Vertical Z-axis | 280 mm |
| Transverse Y-axis | **200 mm** |
| Work bench | 700 x 180 mm |
| Power | **2.0 kW, 230 V, 50 Hz** |
| Spindle speed indefinitely variable | **100 - 7500 r.p.m.** |
| Path feed rate for | up to max. 1200 mm/min |

# Lathes with cylindrical guideways

Parting off



Longitudinal turning

Thread cutting

Taper turning

**WABECO technology has proofed itself - the fact that thousands of lathes with massive cylindrical guide-ways have been sold without a complaint speaks for itself.**

**You want to turn with precision!**

WABECO lathes guarantee you ultimate precision covering the entire working range of the lathe. **Production in Germany** on state-of-the-art machine tools guarantees this. The result is WABECO lathes made to toolmaker's accuracy.

**You want quality!**

WABECO lathes are produced on state-of-the-art machine tools with a machine precision in accordance with DIN (German Industrial Norm). In order to guarantee our quality, we run tests during assembly and perform a written final test report. This is composed of, among other things, (declaration of average-value specifications): truth of rotation of the work spindle 0.005 mm, cylindrical turning with finishing cut to 100 mm flying 0.01 mm, cylindrical turning with finishing cut to 300 mm between centres 0.015 mm.

**You want a robust lathe!**

By means of the powerful and infinitely variable drive, it is possible, for example, with round bars of steel with a diameter of 50 mm, to turn down diameters of a work piece by 5 mm with one feed operation. **We would be glad to supply the proof.**

**You want a wear-free lathe!**

By means of our cylindrical guideways, optimal swarf removal is ensured. Swarf scrapers in the tool slide prevent dirt and swarf entering the guideways. We offer a **10-year warranty** on the guideway pillar.

**You want using over generations!**

This is guaranteed by in-house design and construction. The supply of replacement parts is also guaranteed for decades.

**You want expert advice!**

If you have technical inqueries or you wish to be advised in selecting the most suitable lathe and the corresponding accessories for your requirements, our WABECO team is at your disposal for advice.

**You want safety!**

The lathes' electrical systems have been constructed in accordance with the VDE (Association of German electrical technicians' regulations).

**You want a warranty!**

We offer you a **5-year warranty** - the warranty does not cover parts subject to wear.

**High torque** - thanks to the countershaft the lathes have high torque inserted between the drive and the work spindle and this is ideal for machining materials which are hard and difficult to cut.

**Extremely silent running** by means of modern, electronically regulated drive technology.

**Overload clutch** - to prevent damage to the feed system, the lead screw and the lead screw drive are connected to the overload clutch.

**Rigid work spindle** - the rigid work spindle is mounted on 2 precision-DIN adjustable tapered roller bearings. The centering of the work spindle nose is in accordance with DIN 6350.

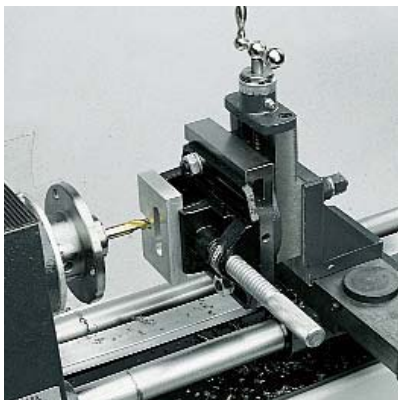
**Universally adjustable cross table** - all parts of the cross table are made of high-quality grey cast iron and the dovetail guides are adjustable and play-free. Milled graduations in the graduated collars make cuts in the hundredths range possible. The upper slide can be rotated 360° on the traverse slide in order to turn different tapers.

**Powerful tailstock** - in order to turn slender tapers, the upper part of the tailstock can be adjusted. The tailstock sleeve is provided with a internal morse taper MT2.
A graduated scale on the sleeve allows the depth setting to be read.

**Precision guides** - precision-ground high-quality solid steel guide ways guarantee a high level of durability, precision and a long life.

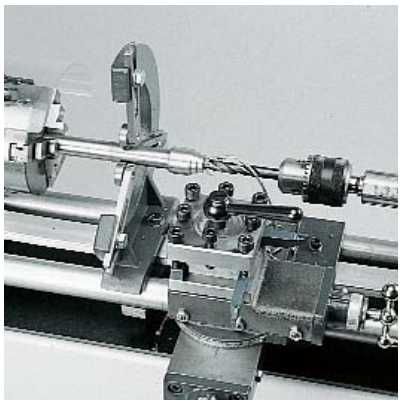
The ON-OFF switch is equipped with a **low voltage release**, i.e. the machine will not re-start automatically in the event of a power failure. The drive electronics are equipped with a multiple fault monitoring circuit and this permits a smooth start under all operation conditions.

**Easy maintenance** - WABECO lathes are easy to maintain because all the modules are easy to reach. The modules can easily be removed for repair purposes.

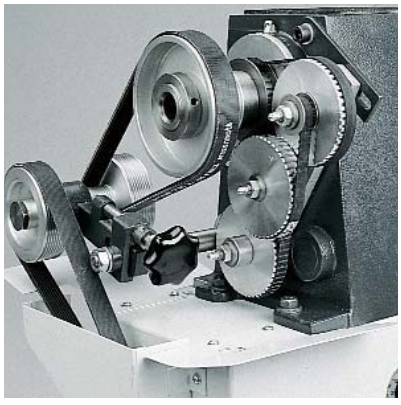


Milling with an angle plate with milling machine table

Inside turning



Drilling



View of gear train

# Lathes with cylindrical guideways


## D2000 E


## D2400 E


## D3000 E

# Basic equipment

## … for all lathes

- 5-year warranty
- we guarantee ultimate precision due to **production in Germany** on state-of-the-art machine tools
- made to toolmaker's accuracy with test report
- with electronically infinitely variable drive **30 - 2300 r.p.m**. Equipped with a strong work spindle drive with dynamic, speed-controlled main drive motor, which can be adjusted by means of a potentiometer over a wide range of cutting speeds
- with single-phase inverse speed motor **1.4 kW, 230 V, 50 Hz** as a direct current model with continuous r.p.m. surveillance
- work spindle bore Ø 20 mm (optional Ø 30 mm)
- clockwise/anticlockwise rotation of work spindle
- with leading spindle drive and change gear quadrant for **thread cutting**
- **automatic longitudinal feed**
- constant torque throughout the entire speed range
- also available in 110V - 60 Hz and inch models

## … especially for lathes D2000 E

- standard lathe chuck with turning and drilling jaw
- fixed lathe centre MT2
- optional - change gears set for metric (0.4-4.0 mm) and inch (10-32 TPI) threads (No. 10179)

| | |
|---|---|
| with 3-jaw lathe chuck Ø 100 mm | Order No. 10108 |

## … especially for lathes D2400 E

- precision lathe chuck with turning and drilling jaw
- fixed lathe centre MT2
- optional - change gears set for metric (0.4-4.0 mm) and inch (10-32 TPI) threads (No. 10179)

| | |
|---|---|
| with 3-jaw lathe chuck Ø 100 mm | Order No. 10200 |
| with 3-jaw lathe chuck Ø 125 mm | Order No. 10201 |
| with 4-jaw lathe chuck Ø 125 mm | Order No. 10202 |

## … especially for lathes D3000 E

- precision lathe chuck with turning and drilling jaw
- live lathe centre MT2
- automatic longitudinal turning and thread cutting without exchanging loose change gear
- the conventional longitudinal feed of the cross support is accomplished with an angular gear
- the automatic longtitudinal feed is infinitely adjustable by means of a potentiometer
- the feed direction can be selected by means of a switch
- change gears set for threading metric (0.4-4.0 mm) and inch (10-32 TPI) threads

| | |
|---|---|
| with 3-jaw lathe chuck Ø 100 mm | Order No. 10300 |
| with 3-jaw lathe chuck Ø 125 mm | Order No. 10301 |
| with 4-jaw lathe chuck Ø 125 mm | Order No. 10302 |

# Technical data

| | D2000 E | D2400 E | D3000E |
|---|---|---|---|
| | | | |
| Centre distance | 350 mm | 500 mm | 500 mm |
| Centre height | 110 mm | 110 mm | 110 mm |
| Power 230 V, 50 Hz | 1.4 kW | 1.4 kW | 1.4 kW |
| Spindle speed infinitely variable | 30 - 2300 r.p.m. | 30 - 2300 r.p.m. | 30 - 2300 r.p.m. |
| Spindle bore | 20 mm - optional 30 mm | 20 mm - optional 30 mm | 20 mm - optional 30 mm |
| Taper in spindle nose | MT3<br>only if spindle bore<br>20 mm | MT3<br>only if spindle bore<br>20 mm | MT3<br>only if spindle bore<br>20 mm |
| Ø-of chuck work above cross slide rest | 126 mm | 126 mm | 126 mm |
| Travel of cross slide | 110 mm | 110 mm | 110 mm |
| Travel of longitudinal slide | 58 mm | 58 mm | 58 mm |
| Swivel range of the upper slide rest | 360 ° | 360 ° | 360 ° |
| max. height of turning tools | 20 mm | 20 mm | 20 mm |
| Truth of rotation of spindle nose | 0.005 mm | 0.005 mm | 0.005 mm |
| Cylindrical turning to 100 mm unsupported | 0.01 mm | 0.01 mm | 0.01 mm |
| Ø of chuck work, measured above the guiding bars | 220 mm | 220 mm | 220 mm |
| Travel of tailstock sleeve | 65 mm | 65 mm | 65 mm |
| Tailstock sleeve taper | MT2 | MT2 | MT2 |
| Tailstock offset range | ± 10 mm | ± 10 mm | ± 10 mm |
| Automatic feed | 0.085 mm<br>optional 0.16 mm | 0.085 mm<br>optional 0.16 mm | 0 - 250 mm/min<br>infinitely variable |
| Thread pitch<br>metric thread<br>inch thread | optional<br>0.4-4.0 mm<br>10-32 TPI | optional<br>0.4-4.0 mm<br>10-32 TPI | 0.4-4.0 mm<br>10-32 TPI |
| Machine dimensions (W x H x D) | 1050 x 410 x 420 mm | 1200 x 410 x 420 mm | 1140 x 410 x 420 mm |
| Weight net without packing | 59 kg | 65 kg | 71 kg |

**- Technical details are subject to change -**

# Options

## Work spindle bore Ø 30 mm

- no retrofitting
- without morse taper

Order No. 10278

## Change gears set

- for optional retrofitting
- for metric (0.4-4.0 mm) and inch (10-32TPI) threads
- the change gears are part of the standard equipment for the **D3000 E**

Order No. 10179

## Pair of toothed wheels for left-hand thread

- for optional retrofitting

Order No. 10180

## Pan for coolant and cutting

- for optional retrofitting

| | |
|---|---|
| for D2000 | Order No. 10174 |
| for D2400 E/D3000 E | Order No. 10175 |

## Base cabinet

- H 85 x W 106 x D 45 cm
- with 2 lockable doors and 2 shelves
- made of powder-coated sheet steel

Order No. 10267

## Levelling elements

- vibration pick up and absorption element
- Ø 80 mm, thread M10
- prevents the machine and cabinet moving
- for precise height adjustment on uneven ground
- 4 levelling elements are required per cabinet/machine

pack. unit: 1 piece — Order No. 10268

# Options

## Coolant unit with splash guard

- for optional retrofitting
- for cooling and lubrication
- complete with feed pump 230 V, 50 Hz
- flexible hose with stop value and nozzle
- content coolant: 19 litres

**Application:** i.e. when processing high alloy steel and aluminium, improves the surface finish, increases tool endurance, prevents built-up edges, maintains dimensional accuracy of work pieces

Order No. 10264

## 3-axis digital readout system and linear measuring scales

- switchable from lathes to milling machines
- for a precise, fast and reliable production
- smooth installation by exact positioning
- no parallax or reading errors
- absolute accuracy of repeat machining
- glass measuring scales are protected against shock and dirt
- colour display, 7-digit position indicator an +/- display
- resolution 0.005 mm
- ergonomically designed folio keyboard - dust and splash guard
- reversible metric/inch
- reversion of count (up or down) by means of operation sign change
- coordinates value setting or origin of zero setting
- data is preserved in the fixed set point memory in the case of a power cut
- incremental or absolute measurement input
- parameter input
- diameter or radius readout
- display of the axes Z0 and Z1 with adding function, either the addition value or the individual values are displayed
- can be installed by the customer

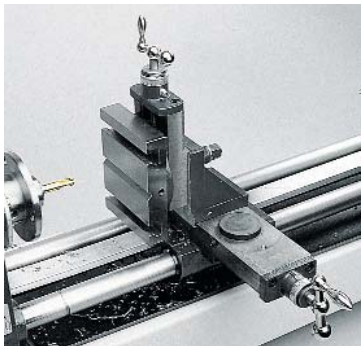

**Illustration D3000 E**
**with 3-axis digital readout system**

| | | |
|---|---|---|
| 3-axis digital readout system | | Order No. 10280 |
| Linear measuring scales for transverse X-axis | measuring length 170 mm | Order No. 10284 |
| Linear measuring scales for longitudinal Z-axis | | |
| ▪ for D2000 E | measuring length 320 mm | Order No. 10286 |
| ▪ for D2400 E/D3000 E | measuring length 520 mm | Order No. 10287 |
| Bracket for readout system and protective cover for the glass measuring scales | | Order No. 10289 |
| Factory-installed readout system and glass measuring scales | | Order No. 10288 |

# Options

## Angle plate with milling table

- for optional retrofitting
- for drilling and milling
- can be traversed in 3 axis
- work bench 130 x 100 mm
- work bench can be rotated infinitely variable 360°



Order No. 10270

## Start set 1

- **for lathes D2000 E/D2400 E**

consisting of:
- universal carbide tipped tools set 6-pieces
- Live lathe centre MT2
- precision quick-action drill chuck
- taper shaft for drill chuck

Order No. 10990

## Start set 2

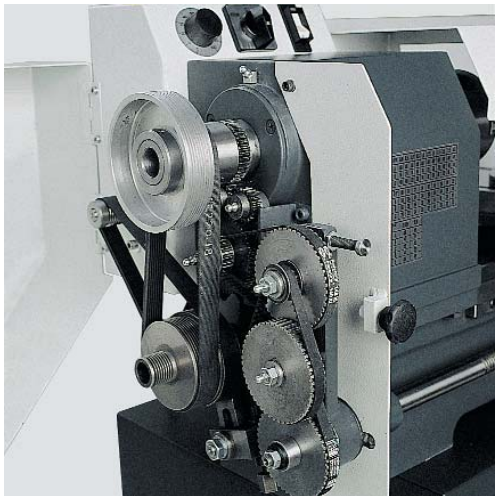
- **for lathes D2000 E/D2400 E/D3000 E**

consisting of:
- universal carbide tipped tools set 6-pieces
- precision quick-action drill chuck
- taper shaft for drill chuck
- quick-change tool holder, basic body
- holder for drill steel
- holder for turning steel

**for lathes D2000E/D2400 E additional consisting of:**
- Live lathe centre MT2

| | |
|---|---|
| for D2000 E/D2400 E | Order No. 10991 |
| for D3000 E | Order No. 10992 |

# Lathes with prismatic cast iron bed



View of gear train

Drilling with stay

Thread cutting

**You want to turn with precision!**

WABECO lathes guarantee you ultimate precision covering the entire working range of the machine. **Production in Germany** on state-of-the-art machine tools guarantees this. The result is WABECO lathes made to toolmaker's accuracy.

**You want quality!**

WABECO lathes are produced on state-of-the-art machine tools with a machine precision in accordance with DIN (German Industrial Norm). In order to guarantee our quality, we run tests during assembly and perform a written final test report. This is composed of, among other things, (declaration of average-value specifications): truth of rotation of the work spindle 0.005 mm, cylindrical turning with finishing cut to 100 mm flying 0.01 mm, cylindrical turning with finishing cut to 300 mm between centres 0.015 mm.

**You want a robust lathe!**

By means of the powerful and infinitely variable drive, it is possible, for example, with round bars of steel with a diameter of 50 mm, to turn down diameters by 10 mm with one feed operation. **We would be pleased to proof it to you.**

**You want a wear-free lathe!**

Swarf scrapers with felt in the tool slide prevent dirt and swarf entering the guideways.

**You want generations of use!**

This is guaranteed by in-house design and construction. The supply of replacement parts is also guaranteed for decades.

**You want expert advice!**

If you have technical inquiries or you wish to be advised in selecting the most suitable machine and the corresponding accessories for your requirements, our WABECO team is at your disposal for advice.

**You want safety!**

The lathes' electrical systems have been constructed in accordance with the VDE (Association of German electrical technicians' regulations).

**You want a warranty!**

We offer you a **5-year warranty** - the warranty does not cover parts subject to wear.

**Engine bed** - the hardened, rigid machine bed is made of multiple diagonally ribbed grey cast iron. The vee guides are ground.

**High torque** - on the work spindle allows working without problems even in the lower speed ranges for example when machining materials which are hard and difficult to cut.

**Extremely silent running** by means of modern, electronically regulated drive technology.

**Rigid work spindle** - the rigid work spindle is mounted on 2 adjustable precision DIN tapered roller bearings. The centering of the work spindle nose is in accordance with DIN 6350.

**Tailstock** - the housing is made of grey cast iron and centered on the engine bed by means of a hand scraped vee groove.

**Tumble gear** - can be switched on alternatively for left or right hand thread.

**Universal adjustable cross table** - all parts of the cross table are made of high-quality grey cast iron and the dovetail guides are adjustable and play-free. Milled graduations in the graduated collars make cuts in the hundredths range possible. The upper slide can be rotated 360° on the transverse slide in order to turn different tapers.

**Powerful tailstock** - in order to turn slender tapers, the upper part of the tailstock can be adjusted. The tailstock sleeve is provided with a internal morse taper MT2.
A graduated scale on the sleeve allows the depth setting to be read.

The ON-OFF switch is equipped with a **low voltage release**, i.e. the machine will not re-start automatically in the event of a power failure. The drive electronics are equipped with a multiple fault monitoring circuit and this permits a smooth start under all operation conditions.

**Easy maintenance** - WABECO lathes are easy to maintain, because all the modules are easy to reach. The modules can easily be removed for repair purposes.

Inside turning

Knurling

Turning with collet chuck

# Lathes with prismatic cast iron bed


**D4000 E**
**with base cabinet and coolant unit**


**D6000 E**
**with base cabinet**


## D6000 E

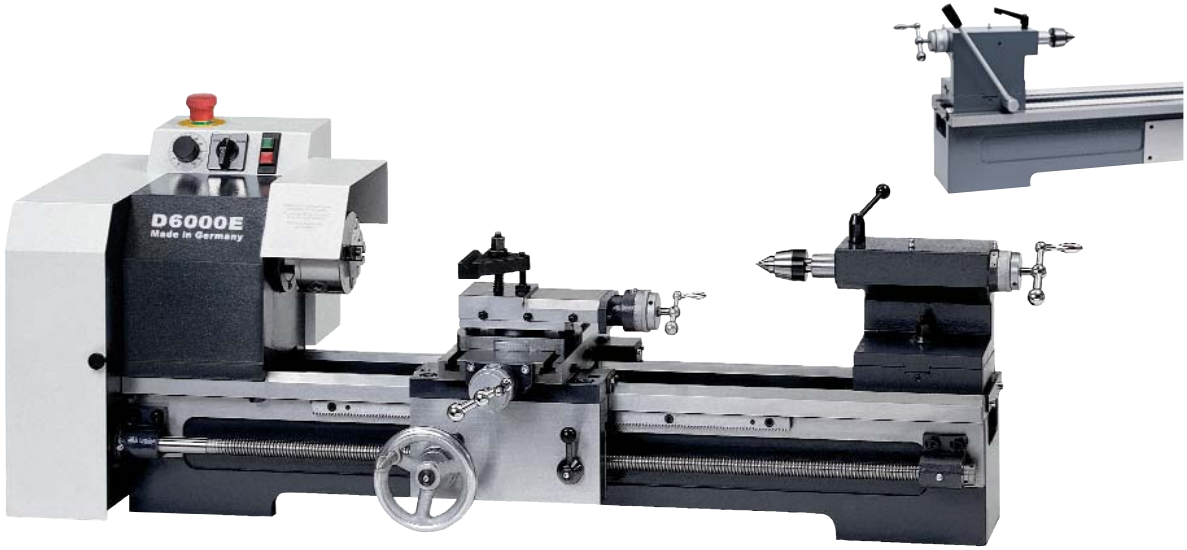
**with base cabinet and coolant unit**


## D6000 E

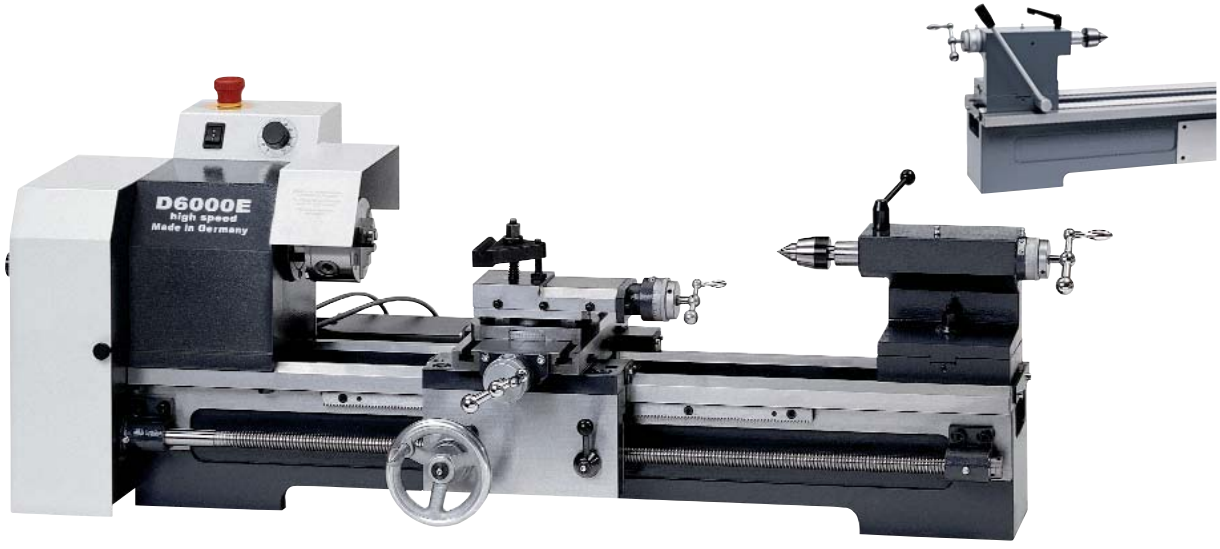
**with ball screws incl. lead-or ball screw protective cover, base cabinet and coolant unit**

# Lathes with prismatic cast iron bed


## D4000 E




## D6000 E




## D6000 E high speed

## … for all lathes

- 5-year warranty
- we guarantee ultimate precision due to **production in Germany** on state-of-the-art machine tools
- **with hardened prismatic cast iron bed**
- made to toolmaker's accuracy with test report
- work spindle bore Ø 20 mm (optional Ø 30 mm for all lathes D6000 E)
- precision lathe chuck with turning and drilling jaw
- live lathe centre MT2
- clockwise/anticlockwise rotation of work spindle
- tumbler gear for left and right threads
- change gear set for **threading** metric (0.4-4.0 mm) and inch (10-32 TPI) threads
- 2 automatic longitudinal feeds rates/lead screw drive
- constant torque throughout the entire speed range

## … especially for lathes D4000 E

- with electronically infinitely variable drive **30 - 2300 r.p.m.** Equipped with a strong work spindle drive with dynamic, speed-controlled main drive motor, which can be adjusted by means of a potentiometer over a wide range of cutting speeds
- with single-phase inverse-speed motor **1.4 kW, 230 V, 50 Hz** as a direct current model with continuous r.p.m. surveillance
- also available in 110V - 60 Hz and inch model

| | |
|---|---|
| with 3-jaw lathe chuck Ø 100 mm | Order No. 10400 |
| with 3-jaw lathe chuck Ø 125 mm | Order No. 10401 |
| with 4-jaw lathe chuck Ø 125 mm | Order No. 10402 |

## … especially for lathes D6000 E

- with electronically infinitely variable drive **30 - 2300 r.p.m.** Equipped with a strong work spindle drive with dynamic, speed-controlled main drive motor, which can be adjusted by means of a potentiometer over a wide range of cutting speeds
- with single-phase inverse-speed motor **1.4 kW, 230 V, 50 Hz** as a direct current model with continuous r.p.m. surveillance
- **teilstock with quick-release**
- also available in 110V - 60 Hz and inch model

| | |
|---|---|
| with 3-jaw lathe chuck Ø 100 mm | Order No. 10600 |
| with 3-jaw lathe chuck Ø 125 mm | Order No. 10601 |
| with 3-jaw lathe chuck Ø 160 mm | Order No. 10603 |
| with 4-jaw lathe chuck Ø 125 mm | Order No. 10602 |

## … especially for lathes D6000 E high speed

- robust, speed regulated motor, which can be adjusted by means of a potentiometer over a wide range of cutting speeds. Power **2.0 kW, 230 V, 50 Hz**
- spindle speed **100 - 5000 r.p.m.** (with lathe chuck Ø 125 mm max. 4800 r.p.m.)
- suitable for small diameter tools due to high speed
- **teilstock with quick-release lever**

| | |
|---|---|
| with 3-jaw lathe chuck Ø 100 mm | Order No. 10605 |
| with 3-jaw lathe chuck Ø 125 mm | Order No. 10606 |
| with 4-jaw lathe chuck Ø 125 mm | Order No. 10607 |

# Basic equipment

## … for all D6000 E lathes equipped with Camlock fixture

- 5-year warranty
- we guarantee ultimate precision due to **production in Germany** on state-of-the-art machine tools
- **with hardened prismatic cast iron bed**
- **tailstock with quick-release lever**
- made to toolmaker's accuracy with test report
- work spindle bore Ø 20 mm (optional Ø 30 mm for all CNC lathes CC-D6000 E)
- Precision Camlock lathe chuck with turning and drilling jaws
  Camlock spindle holder according to DIN 55029 size 4
  for quick changing of lathe chucks and collet chucks by means of the quick-fastener
- live lathe centre MT2
- clockwise/anticlockwise rotation of work spindle
- tumbler gear for left and right threads
- change gear set for **threading** metric (0.4-4.0 mm) and inch (10-32 TPI) threads
- 2 automatic longitudinal feed rate/lead screw drive
- constant torque throughout the entire speed range

## … especially for lathes D6000 E

- with electronically infinitely variable drive **30 - 2300 r.p.m**. Equipped with a strong work spindle drive with dynamic, speed-controlled main drive motor, which can be adjusted by means of a potentiometer over a wide range of cutting speeds
- with single-phase inverse-speed motor **1.4 kW, 230 V, 50 Hz** as a direct current model with continuous r.p.m. surveillance

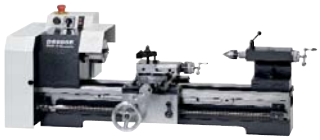
| | |
|---|---|
| with Camlock 3-jaw lathe chuck Ø 125 mm | Order-No. 10630 |
| with Camlock 4-jaw lathe chuck Ø 125 mm | Order-No. 10632 |

## … especially for lathes D6000 E high speed

- robust, speed regulated motor, which can be adjusted by means of a potentiometer over a wide range of cutting speeds. Power **2.0 kW, 230 V, 50 Hz**
- spindle speed **100 - 5000 r.p.m.** (with lathe chuck Ø 125 mm max. 4800 r.p.m.)
- suitable for small diameter tools due to high speed

| | |
|---|---|
| with Camlock 3-jaw lathe chuck Ø 125 mm | Order No. 10636 |
| with Camlock 4-jaw lathe chuck Ø 125 mm | Order No. 10638 |

# Technical Data



| | D4000 E | D6000 E | D6000 E high speed |
|---|---|---|---|
| | | | |
| Centre distance | 350 mm | 600 mm | 600 mm |
| Centre height | 100 mm | 135 mm | 135 mm |
| Power 230 V, 50 Hz | 1.4 kW | 1.4 kW | 2.0 kW |
| Spindle speed infinitely variable | 30 - 2300 r.p.m. | 30 - 2300 r.p.m. | 100 - 5000 r.p.m. |
| Spindle bore | 20 mm | 20 mm<br>optional 30 mm | 20 mm<br>optional 30 mm |
| Taper in spindle nose | MT3 | MT3 | MT3 |
| Ø-of chuck work above cross slide rest | 120 mm | 170 mm | 170 mm |
| Travel of cross slide | 100 mm | 140 mm | 140 mm |
| Travel of longitudinal slide | 50 mm | 60 mm | 60 mm |
| Swivel range of the upper slide rest | 360 ° | 360 ° | 360 ° |
| max. height of turning tools | 16 mm | 20 mm | 20 mm |
| Truth of rotation of spindle nose | 0.005 mm | 0.005 mm | 0.005 mm |
| Cylindrical turning to 100 mm unsupported | 0.01 mm | 0.01 mm | 0.01 mm |
| Ø of chuck work, measured above the guiding bars | 200 mm | 270 mm | 270 mm |
| Travel of tailstock sleeve | 45 mm | 65 mm | 65 mm |
| Tailstock sleeve taper | MT2 | MT2 | MT2 |
| Tailstock offset range | ± 10 mm | ± 10 mm | ± 10 mm |
| Automatic feed | 0.085 and 0.16 mm | 0.085 and 0.16 mm | 0.085 and 0.16 mm |
| Thread pitch<br>metric thread<br>inch thread | 0.4-4.0 mm<br>10-32 TPI | 0.4-4.0 mm<br>10-32 TPI | 0.4-4.0 mm<br>10-32 TPI |
| Machine dimensions (W x H x D) | 860 x 400 x 380 mm | 1230 x 500 x 470 mm | 1200 x 630 x 479 mm |
| Weight net without packing | 71 kg | 150 kg | 177 kg |

**- Technical details are subject to change -**

# Options

## Work spindle bore Ø 30 mm

- no retrofitting
- with ground inner taper MT3
- not available for lathe D4000 E

Order No. 10678

## Ball screws

**Illustration D6000 E with ball screws and lead-or ball screw protective cover**

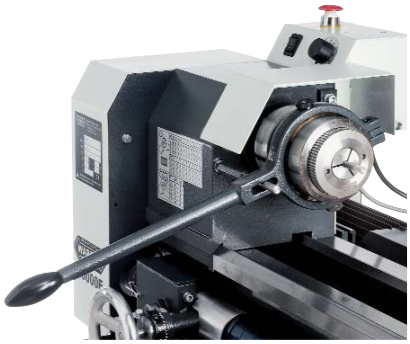
- no retrofitting
- for both axes
- very high pitch and positioning precision
- wear-free
- **incl. lead-or ball screw protective cover**
- not available for lathe D4000 E

Order No. 10645

## Lead-or ball screw protective cover

- no retrofitting
- to protect the leading spindle and nut against swarf
- to prevent premature wear and loss of precision
- not available for lathe D4000 E

Order No. 10680



## Quick-action collet chuck

- no retrofitting
- quick clamping device for interchangeable collet chucks
- clamping range 1 - 30 mm
- **to be used only up to max. 4000 r.p.m.**
- clamping and unclamping of the work piece done by hand lever
- self-locking
- collets from 1 - 30 mm available - price upon request
- not available for lathe D4000 E

Order No. 10930

## Base cabinet

- H 85 x W 106 x D 45 cm
- with 2 lockable doors and 2 shelves
- made of powder-coated sheet steel

Order No. 10267

## Levelling elements

- vibration pick up and absorption element
- Ø 80 mm, thread M10
- prevents the machine and cabinet moving
- for precise height adjustment on uneven ground
- 4 levelling elements are required per cabinet/machine

pack. unit: 1 piece — Order No. 10268

## Coolant unit with splash guard

- for optional retrofitting
- for cooling and lubrication
- complete with feed pump 230 V, 50 Hz
- flexible hose with stop valve and nozzle
- content coolant: 19 liters

**Application:** i. e. when processing high alloy steel and aluminium, improves the surface finish, increases tool endurance, prevents built-up edges, maintains dimensional accuracy of work pieces

| | |
|---|---|
| for D4000 E | Order No. 10464 |
| for D6000 E/D6000E high speed | Order No. 10664 |

## Universal drilling and milling unit DF1680 E

- for optional retrofitting
- product description see page 40
- not available for lathes D4000 E

| | |
|---|---|
| | Order No. 10692 |

## Angle plate with milling table

- for optional retrofitting
- complete with milling table and vertical slide rest
- for drilling and milling
- can be traversed in 3 axes
- work bench 130 x 100 mm
- work bench can be rotated infinitely variable 360°

| | |
|---|---|
| for D4000 E | Order No. 10470 |
| for D6000 E/D6000 E high speed | Order No. 10671 |

## Start set 1

consisting of:

- universal carbide tipped tools set 6-pieces
- precision quick-action drill chuck with taper shaft for drill chuck
- square turret tool-post

| | |
|---|---|
| for D4000 E | Order No. 10994 |
| for D6000 E/D6000 E high speed | Order No. 10996 |

## Start set 2

consisting of:

- universal carbide tipped tools set 6-pieces
- precision quick-action drill chuck with taper shaft for drill chuck
- quick-change tool holder, basic body
- holder for drill steel
- holder for turning steel

| | |
|---|---|
| for D4000 E | Order No. 10997 |
| for D6000 E/D6000 E high speed | Order No. 10995 |

# Options

## Digital measuring gages

- for optional retrofitting
- digital measuring gages for precise and exact processing of a work piece, without monitioring spindle play
- the digital measuring slide shows values with a reading accuracy of 0.01 mm on the LCD display
- reversible metric/inch
- all digital measuring gages are equipped with an interface for position readout
- Reset function
- can be installed by the customer

| | | |
|---|---|---|
| Digital measuring gage transverse X-axis | | |
| ▪ for allen D4000 E | measuring length 100 mm | Order No. 11370 |
| ▪ for allen D6000 E | measuring length 150 mm | Order No. 11371 |
| Digital measuring gage longitudinal Z-axis | | |
| ▪ for allen D4000 E | measuring length 400 mm | Order No. 11364 |
| ▪ for allen D6000 E | measuring length 500 mm | Order No. 11365 |
| Digital measuring gage upper longitudinal support Z-axis | | |
| with vertical LCD display | measuring length 100 mm | Order No. 11360 |
| Set of fastenings for all 3 axes | | |
| ▪ for allen D4000 E | | Order No. 10499 |
| ▪ for allen D6000 E | | Order No. 10699 |
| Factory-installed readout system and glass measuring gages | | Order No. 10698 |

# Options

## 3-axis digital readout system and linear measuring scales

- switchable from lathes to milling machines
- for a precise, fast and reliable production
- smooth installation by exact positioning
- no parallax or reading errors
- absolute accuracy of repeat machining
- glass measuring scales are protected against shock and dirt
- colour display, 7-digit position indicator and +/-display
- resolution 0.005 mm
- ergonomically designed folio keyboard – dust and splash guard
- reversible metric/inch
- reversion of count (up and down) by means of operation sign change
- coordinates value setting or zero setting
- data is preserved in the fixed set point memory in the case of a power cut
- incremental or absolute measurement input
- parameter input
- diameter or radius readout
- display of the axes Z0 and Z1 with adding function, either the addition vaulue or the individual values are displayed
- can be installed by the customer


**Illustration D6000 E**
**with 3-axis digital readout system**

| | | |
|---|---|---|
| 3-axis digital readout system | | Order No. 10280 |
| Linear measuring scales for longitudinal X-axis | measuring length 170 mm | Order No. 10284 |
| Linear measuring scales for longitudinal Z-axis | | |
| ▪ for D4000 E | measuring length 320 mm | Order No. 10286 |
| ▪ for D6000 E/D6000 E high speed | measuring length 520 mm | Order No. 10287 |
| Bracket for readout system and protective cover for the glass measuring scales | | |
| ▪ for D4000 E | | Order No. 10489 |
| ▪ for D6000 E/D6000 E high speed | | Order No. 10689 |
| Factory-installed readout system and glass measuring scales | | Order No. 10688 |