

Technical Data

Precision in all dimensions

Service

Radial Drilling Machines

Cycle-Controlled Lathes

Manual/Engine Lathes

Service

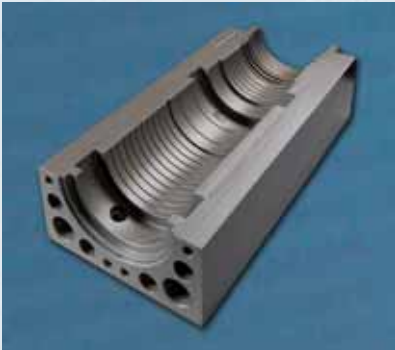
Radial Drilling Machines

Cycle-Controlled Lathes

Manual/Engine Lathes

Technical Data		E30	E40	E50	E60	E70	E80	E90	E110	E120	E150	E175
► Distance between centers	inch	29	39	39/78	39/78	39-236	39-236	78-472	78-472	78-472	78-472	78-472
► Swing over bed	inch	12.99	17.13	22.44	25.59	28.35	31.50	35.43	43.31	47.24	59.06	68.09
► Swing over cross slide	inch	6.29	7.87	13.38	15.74	16.93	20.08	20.87	28.74	32.68	40.55	50.39
► Drive power at 60%/100% duty cycle	hp	15/12	27/23	27/23	33/26	50/40	50/40	60/50	60/50	60/50	87/68	87/68
► Max. torque at the spindle	ft lb	120	330	1,100	1,300	2,300	2,300	4,400	4,400	5,900	7,400	7,400
► Spindle bore	inch	1.59	2.59	3.26-6.49	3.26	4.17-8.50	4.17-8.50	5.03-14.25	5.03-14.25	6.49-14.25	6.49-22.83	6.49-22.83
► Speed range	rpm	1-4,500	1-3,500	1-2,500 (1-1,200)	1-2,500	1-1,800 (1-1,120/ 1-900)	1-1,800 (1-1,120/ 1-900)	1-1,120 (1-700/ 1-500)	1-1,120 (1-700/ 1-500)	1-900 (1-700/ 1-500)	1-900 (1-700/ 1-500)	1-900 (1-900/ 1-500)
► Feed force longitudinal	lb	1,350	2,250	2,250	2,700	4,500	4,500	4,500	4,500	4,500	6,750	6,750
► Tailstock quill diameter	inch	1.97	2.56	3.15	3.93	4.53	4.53	5.51	5.51 (7.09)	5.51 (7.09)	7.09	7.09
► Tailstock quill taper	MT	3	4	5	5	6	6	6 (metr. 100)	6 (metr. 100)	6 (metr. 100)	metr. 100	metr. 100

Inch values may differ marginally from exact metric values.



The right to make technical changes is reserved. Photographs show machines with options - 08/12 - 5.0915.06.90.00.09



E-Series
Precision Lathes
with Automated Cycles

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Machine tools for the entire world

2/3

The company history of WEILER Werkzeugmaschinen GmbH goes back to 1938. From the very beginning, precision lathes named WEILER have earned themselves an excellent reputation amongst craftsmen as well as in industry. In 1990 the company was acquired by VOEST-Alpine Steinel Werkzeugmaschinen GmbH. Under the guidance of Friedrich K. Eisler, who took over the management of the company in 1991, WEILER became established in international markets. The VOEST Alpine product portfolio was included in the WEILER product range and the company was restructured and moved to Emskirchen, near Nuremberg, Germany.

New start under family ownership

In 1995 WEILER became a family owned company again with Friedrich K. Eisler as the sole managing shareholder. The entry to the management board of his two sons Mag. Alexander and Michael Eisler, MBA in 2002 signalled the next step in setting the course for the long-term development of the company. With this new orientation WEILER has become one of Europe's largest and best known manufacturers in its field. A company that can quickly and flexibly respond to individual customer needs.



Company headquarters with 140,000 square foot production area



WEILER trusts in its own apprenticeship program

A strong team ...

WEILER has its own apprenticeship program and currently employs 500 people. It develops and produces innovative and high quality WEILER lathes, ensures a high standard of service and provides an almost limitless supply of spare parts. A world-wide installed machine base exceeding 140,000 units is proof of the outstanding acceptance of the machines built in Emskirchen.

Quality starts in our own factory



Grinding a machine bed



Gear wheel production / hobbing



Grinding the dovetail guides



Measuring the headstock housing

WEILER

www.weiler.de

Fascinating Range

Conventional precision lathes and powerful CNC turning centers complete the extensive WEILER product range. It is one of the most varied on the market: no other lathe manufacturer can offer such variety from a single source. WEILER machines set the standard in vocational training facilities as well as in demanding industrial production environments.



State-of-the-art assembly line for the conventional range



E-Series machine in action: no fear of large parts

... and a strong location

WEILER machines are developed and built in Germany. The high level of domestic content underlines our commitment to Germany as a manufacturing location. No other lathe manufacturer is as strongly represented in Germany. An efficient and highly cost-effective production facility for large components in the Czech Republic completes WEILER's manufacturing strategy.

The E-Series – maximizes productivity and success

4/5

WEILER E-Series machines are masters of efficiency. Their ergonomics, user-friendliness and long-term precision are the basis for fast, faultless results. The unsurpassed, easy-to-use, WEILER developed human-machine interface (HMI) makes them unique. It allows the storage of numerous cycles which can be called up and run at the push of a button. These can then be run either individually or as part of an automated sequence. The returns for the user are shorter programming times and extremely efficient one-off and small batch production.

Typical E-Series: up to 3 x more efficient!

The bottom line: each E-series machine can replace up to three conventional machines. Maximum efficiency in the power consumption is also achieved – through effective use of the latest energy-saving drives.

Demand the original!

WEILER is the inventor of the cycle-controlled lathe. Our experience, our quality-consciousness and software know-how reap benefits for you: in day-to-day operation and in your balance sheet.



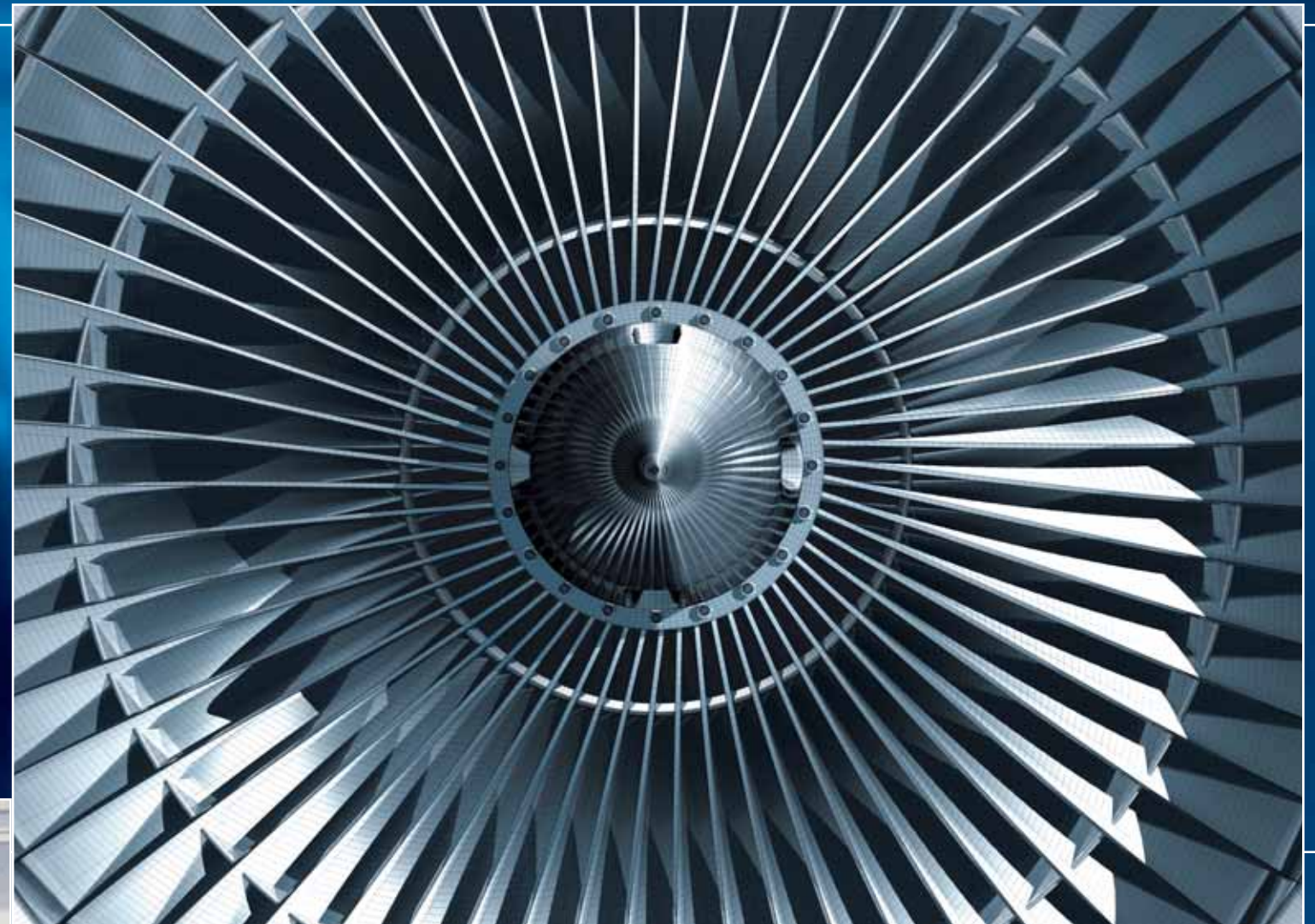
Optimum ergonomics and the user-friendly interface developed by WEILER maximize the working efficiency of each E-Series machine



Final assembly of the E90/E110/E120 range



Formidable size components machined with the highest precision



Energy efficiency – a WEILER priority

WEILER cycle-controlled lathes implement their energy saving potential through the integral TIM software.

Energy efficiency with TIM means

Time-controlled Emergency Stop operation from the standby mode according to operator requirements.

Intelligent drive management with energy recovery:
Dynamic energy management controls the flow of energy within the machine. Excess braking energy is not pointlessly converted to heat, but fed back into the supply network.

Machine status energy management of ancillary components:
Only the ancillary components that are required for the active machining process are powered up, all others are shut down.

Important applications for E-Series machines are the energy sector and oil industry. But there is almost no other technical field not employing a WEILER E-Series lathe.



The WEILER E-Series user interface:
Simply – smart!

Fast and simple communication
between man and machine

Even without prior programming knowledge, the smart WEILER software guides the operator through the program. Using automated cycles, you can control the E-Series like a “manually operated” machine. Or you can completely program the workpiece contour with the assistance of the geometry processor that can automatically calculate the points of intersection. For further information, please refer to the separate WEILER control brochure.

The three basic principles for working with all
E-series machines

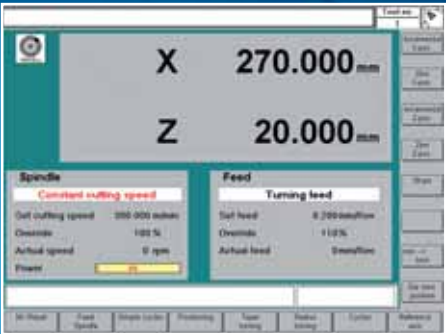
- 1) Simple workpieces are processed in the same way as with a conventional machine, only more efficiently.
- 2) Elaborate parts are processed in the same way as with a conventional machine, only faster.
- 3) Complex parts are processed in the same way as with a CNC machine, only easier.

Data transfer interfaces

- ▶ V24 / RS232
- ▶ USB
- ▶ Network-compatible



Clear user interface with 12.1" TFT screen and membrane keyboard with short-stroke keys



Straightforward input and display of
machine data

Machine and processing data are entered according to practical requirements and are clearly displayed.



Tool management

Simple, menu-controlled input and management of tool data with the capability of setting-up a user-specific technology database.



Thread cutting cycle

Only little data is required for the input of the thread geometry.



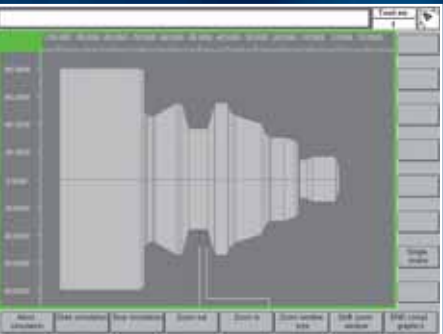
Cutting cycle technology

Cutting is possible longitudinally and cross-wise with any desired technology.



Cutting cycle geometry

The contour is generated by stringing together simple contour elements. The calculation of the points of intersection occurs automatically.



Simulation

The machining of the workpiece can be simulated through wire models or solid models.

Manual turning

- ▶ Constant cutting speed
- ▶ Oriented “spindle stop”
- ▶ Turning against the stop on all axes
- ▶ Taper turning at any angle
- ▶ Radius turning
- ▶ Storable simple cycles

Cutting cycle

- ▶ Powerful contour calculator for the calculation of non-dimensioned points of intersection
- ▶ Simple modification of existing workpiece contours
- ▶ Free definition of raw contours for forged and cast parts
- ▶ Monitoring of the tool angle

Parameter programming

Fast and simple programming of part families

DXF file import

- ▶ Workpiece contour extracted from fully imported drawings in the DXF format from a wide variety of CAD systems
- ▶ Free selection of layers and contour elements
- ▶ Mirroring and scaling of the workpiece contour

DIN-ISO programming

Creation, editing and processing of DIN-ISO programs

Grooving cycle

- ▶ Wide variety of machining technologies
 - Standard grooving
 - Step grooving
 - Turn cutting
 - Finishing of existing grooves
- ▶ Grooves on tapers or diminishing diameters
- ▶ Fast contour description without need for calculation

Bolt hole drilling cycle

To produce bore holes and threads, the drilling axis in X or Z can be selected.

Thread cutting cycle

- ▶ Picking up existing threads with stationary or turning workpiece
- ▶ Cutting of multiplex threads without starting point offset
- ▶ Cutting of almost all types of thread e.g. API, degressive, progressive pitches
- ▶ Spindle rpm changes during machining possible

Graphic display

- ▶ Wire model simulation, solid model simulation
- ▶ Display of machining time

Raw part contour definition

Simple input of the contour of precast workpieces enables efficient machining.

E30: Compact with integral success gene



E30 x 750

E40: Ergonomic power pack



E40 x 1000

Even the smallest E-series machines already feature digital drive technology and are equipped with a state-of-the-art CNC controller as well as user-oriented WEILER software.

The machine

- Enables workpiece production with the utmost accuracy
- Offers high spindle speeds and very smooth running for extremely fine workpiece surfaces
- Enables high precision handling for manual turning operations through the operating panel with hand wheels that moves together with the bed slides
- Ensures ergonomic machining through good accessibility
- Enables fatigue-free programming through a pivoted screen unit
- Offers a number of housing versions that are specific to demands

Technical Data		E30	E40
► Distance between centers	inch	29	39
► Swing over bed	inch	12.99	17.13
► Swing over cross slide	inch	6.29	7.87
► Cross slide travel	inch	7.09	10.24
► Width of bed	inch	9.45	12.99
► Drive power at 60% / 100% duty cycle	hp	15/12	27/23
► Max. torque of spindle	ft lb	120	330
► Spindle nose size acc. to DIN 55027	size	5	6
► Spindle bore	inch	1.59	2.59
► Spindle dia. in front bearing	inch	2.76	4.33
► Speed range	rpm	1-4,500	1-3,500
► Feed force longitudinal	lb	1,350	2,250
► Rapid traverse Z / X	inch/min	315/157	315/157
► Feed range	inch/rev	0.00004-1.96	0.00004-1.96
► Thread cutting range	TPI	112-1/64	112-1/64
► Tailstock quill diameter	inch	1.97	2.56
► Tailstock quill taper	MT	3	4
► Weight approx.	lb	3,100	6,600
► Acceptance accuracy	DIN	8605	8605



8 station disk turret with / without tool drive

A particularly impressive feature of the WEILER E40 cycle controlled lathe is its tremendous cutting performance. This is enabled by the main drive with a power output of 27 HP and the newly conceived headstock with a spindle bore of 2.59 inches and heavy-duty bed with a width of 12.99 inches. The WEILER E40 combines this performance with excellent ergonomics: the controller can be swivelled as desired into any position; the working area and operating elements are "cleanly" separated from each other. Three sliding cover versions are available to provide a perfect match with the range of parts that are to be produced.

E50: Power and precision in perfection

E60: Strong concept and pure power



E50 x 1000



E60 x 1000

The E50 is the right choice when a machine for high-performance turning is needed. The power and performance of the E50 impresses even the most demanding of users.

The machine

- Combines high power output with enormous torque through two gear stages
- Allows part machining with extreme accuracy and high workpiece weights
- Offers large spindle bores: 3.26 and 6.49 inches
- Ensures ergonomic machining through good accessibility
- Enables extremely precise handling for manual turning operations through solid handwheels on the saddle
- Offers a number of housing versions designed to meet specific demands
- Can be upgraded with a number of optional features to further increase productivity



Sliding door with free access to handwheels



Version with 6.5 inches spindle bore

Technical Data		E50	E60
► Distance between centers	inch	39/78	39/78
► Swing over bed	inch	22.44	25.59
► Swing over cross slide	inch	13.38	15.74
► Cross slide travel	inch	13.39	14.96
► Width of bed	inch	13.78	14.96
► Drive power at 60% / 100% duty cycle	hp	27/23	33/26
► Max. torque of spindle	ft lb	1,100	1,300
► Spindle nose size acc. to DIN 55027	size	8 (11)	8
► Spindle bore	inch	3.26 (6.49)	3.26
► Spindle dia. in front bearing	inch	4.72 (9.44)	4.72
► Speed range	rpm	1-2,500 (1-1,200)	1-2,500
► Feed force longitudinal	lb	2,250	2,700
► Rapid traverse Z / X	inch/min	394/197	394/197
► Feed range	inch/rev	0.00004-1.96	0.00004-1.96
► Thread cutting range	TPI	112-1/64	112-1/64
► Tailstock quill diameter	inch	3.15	3.93
► Tailstock quill taper	MT	5	5
► Weight approx.	lb	7,400/8,500	11,500/14,110
► Acceptance accuracy	DIN	8605	8605

The E60 impresses through a balanced machine concept with high cutting performance. This is achieved through a main drive with 33 HP power output in conjunction with a two stage ZF gearbox. The robust headstock, the strong main spindle with precision bearings and 3.26 inches spindle bore as well as the strongly ribbed bed with a width of 14.96 inches ensure optimum working results with respect to surface quality and precision.

The pivoted screen unit enhances ease of use for data input.



E70 x 3000

The E70 and E80 feature the same ease of access and ease of use as the smaller machines.

The machines of the 70 and 80 Series:

- Are equipped with high output drives and mechanical headstock gearboxes to maximize torque
- Offer large spindle bores: 4.17 and 8.50 inches
- Even at this size have a high acceptance test accuracy (tool makers accuracy according to DIN 8605)
- Can be upgraded with a number of proven tool systems and optional features to further increase productivity



Version with separately moveable screen



Version with additional sliding cover and splash guard



8 station disk turret with driven tools, 1.6 inch shank diameter



Tool holder head for turning, drilling and milling



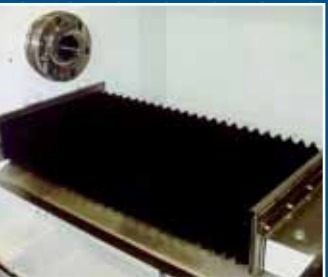
Heavy-duty tailstock with 5.51 inch quill diameter (E80 only)



Tailstock with hydraulically actuated quill



Travelling, self-centering rest, hydraulically actuated



Removable bellows cover

Technical Data		E70	E80
► Distance between centers	inch	39-236	39-236
► Swing over bed	inch	28.35	31.50
► Swing over cross slide	inch	16.93	20.08
► Cross slide travel	inch	16.14	16.14
► Width of bed	inch	18.90	18.90
► Drive power at 60% / 100% duty cycle	hp	50/40	50/40
► Max. torque of spindle	ft lb	2,300	2,300
► Spindle nose size acc. to DIN 55027	size	11 (15)	11 (15)
► Spindle bore	inch	4.17	4.17
► Other spindle bores	inch	6.49/8.50	6.49/8.50
► Spindle dia. in front bearing	inch	5.91/9.44/11.02	5.91/9.44/11.02
► Speed range	rpm	1-1,800 1-1,120/1-900	1-1,800 1-1,120/1-900
► Feed force longitudinal	lb	4,500	4,500
► Rapid traverse Z / X	inch/min	394/197	394/197
► Feed range	inch/rev	0.00004-1.96	0.00004-1.96
► Thread cutting range	TPI	112-1/64	112-1/64
► Tailstock quill diameter	inch	4.53	4.53 (5.51)
► Tailstock quill taper	MT	6	6
► Weight approx.	lb	9,900/ 19,800	11,000/ 20,900
► Acceptance accuracy	DIN	8605	8605



E110 x 3000

This series of models makes up the heavy-weight class – all of the machines are capable of machining workpieces weighing up to 22,000 lbs. Excellent accessibility and ease of operation are also key features of these models.

The machines of the 90 to 120 Series

- Are available for turning lengths of 79 to 590 inches and more
- Can be equipped with spindle bores of 5.03, 6.49, 10.31 and 14.25 inches
- Are equipped with high power drives and mechanical headstock gearboxes to maximize torque
- Can be upgraded with a number of proven tool systems and optional features to further increase productivity
- Have a high acceptance test accuracy for their size (accuracy according to DIN 8606)



Heavy-duty boring bar holder with additional support and 6.3 inches bore



Tailstock with automated clamping and dedicated drive



Ring steady rest with 10.6 inches diameter



Y-axis 7.87 inch travel (only for E110-E120)



Retractable C-axis



Pneumatically actuated front-end chuck with fixed rest

Technical Data		E90	E110	E120
▶ Distance between centers	inch	78-472	78-472	78-472
▶ Swing over bed	inch	35.43	43.31	47.24
▶ Swing over cross slide	inch	20.87	28.74	32.68
▶ Cross slide travel	inch	23.23	23.23	23.23
▶ Width of bed	inch	23.62	23.62	23.62
▶ Drive power at 60% / 100% duty cycle	hp	60/50	60/50	60/50
▶ Max. torque of spindle	ft lb	4,400	4,400	5,900
▶ Spindle nose size acc. to DIN 55027	size	11 (15/20)	11 (15/20)	15 (20)
▶ Spindle bore	inch	5.03	5.03	6.49
▶ Other spindle bores	inch	6.49/10.31/14.25	6.49/10.31/14.25	10.31/14.25
▶ Spindle dia. in front bearing	inch	7.01/9.25 12.99/17.63	7.01/9.25 12.99/17.63	9.25/12.99 17.63
▶ Speed range	rpm	1-900 1-700/1-500	1-900 1-700/1-500	1-700 1-500
▶ Feed force longitudinal	lb	4,500	4,500	4,500
▶ Rapid traverse Z / X	inch/min	394/197	394/197	394/197
▶ Feed range	inch/rev	0.00004-1.96	0.00004-1.96	0.00004-1.96
▶ Thread cutting range	TPI	112-1/64	112-1/64	112-1/64
▶ Tailstock quill diameter	inch	5.51	5.51 (7.09)	5.51 (7.09)
▶ Tailstock quill taper	MT	6	6 (metr. 100)	6 (metr. 100)
▶ Weight approx.	lb	18,700/25,400	20,900/27,600	23,100/29,600
▶ Acceptance accuracy	DIN	8606	8606	8606



E150 x 6000



The two largest WEILER E-Series machines are absolute top class players when it comes to their weight as well as the dimensions of the workpieces that they can machine. They are also based on the proven Weipert concept that has been an essential part of the Weiler design for decades. Providing dedicated customer-specific solutions is one of our specialist areas.

The machines of the 150 to 200 Series

- Are available for turning lengths of 79 to 590 inches and longer
- Can be equipped with spindle bores of 6.49, 10.31, 14.25 and 22.83 inches
- Are equipped with high output drives and mechanical headstock gearboxes with automatic shift to maximize torque
- Despite their size provide good accessibility and optimum chip and splash protection through various sliding guard solutions
- Can be upgraded with a number of proven tool systems and optional features to further increase productivity



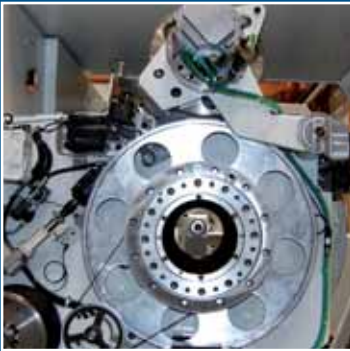
Cylinder machining



Steady rests for diameters up to 57 inches



Tool holder head for driven tools, Capto C8 holding fixture



Retractable C-axis



Y-axis with 7.87 inch travel

Technical Data		E150	E175
▶ Distance between centers	inch	78-472	78-472
▶ Swing over bed	inch	59.06	68.90
▶ Swing over cross slide	inch	40.55	50.39
▶ Cross slide travel	inch	31.10	31.10
▶ Width of bed	inch	32.68	32.68
▶ Drive power at 60% / 100% duty cycle	hp	87/68	87/68
▶ Max. torque of spindle	ft lb	7,400	7,400
▶ Spindle nose size acc. to DIN 55027	size	15 (20)	15 (20)
▶ Spindle bore	inch	6.49	6.49
▶ Other spindle bores	inch	10.31/14.25/17.72/22.83	10.31/14.25/17.72/22.83
▶ Spindle dia. in front bearing	inch	9.25/12.99/17.63/22.99/25	9.25/12.99/17.63/22.99/25
▶ Speed range	rpm	1-900/1-700 1-500/1-300	1-900/1-700 1-500/1-300
▶ Feed force longitudinal	lb	6,750	6,750
▶ Rapid traverse Z / X	inch/min	394/197	394/197
▶ Feed range	inch/rev	0.00004-1.96	0.00004-1.96
▶ Thread cutting range	TPI	112-1/64	112-1/64
▶ Tailstock quill diameter	inch	7.09	7.09
▶ Tailstock quill taper	metr.	100	100
▶ Weight approx.	lb	35,300/61,700	40,000/75,000
▶ Acceptance accuracy	DIN	8607	8607

What can we do to help you?

A number of things. WEILER Service is ready at all times to provide optimum advice, support and service for your machine.

Every WEILER lathe is designed to provide quality and efficiency right from the start and throughout decades of operation – regardless of whether in vocational training, manufacturing, production, maintenance and repair, prototyping – or any other field. A WEILER is never cheap but always worth a lot more than it costs.

That is why service pays off

To make sure that a WEILER keeps and increases its value, we have developed an extensive service concept that covers the complete life-cycle of the machine from acquisition through to recycling.



Individual and objective advice from WEILER lathe specialists



WEILER stands for expertise: from the initial design through to spare part supply



When after many years of hard use in production your WEILER looks like this ...

Managing values

"Something will only be as good as the way it is looked after" – this motto sums up the way that we view each WEILER that leaves our factory. We want our machines to give you their best, to work with absolute WEILER precision from the first day to the last.



... we can turn it into this: as good as new!

That is why the service lifetime, high precision operation and profitability of our machines exceeds that of most other lathes – good service maintains the value of your WEILER.

WEILER 5 Point Service Plan

1 Pre-sales technical consultancy

Which machine with which options is best for your needs? Is it better to buy a new WEILER or can your old WEILER be overhauled and brought up to date? Whatever is best for you – we will give you our objective advice.

2 Extended warranty

Freely definable service and maintenance agreements make sure that your machine is available when you need it, they minimize the risk of unscheduled downtime and keep maintenance costs under control.

3 Almost limitless service and spare parts supply

WEILER develops and produces in Germany. That is why we have complete control over all original equipment and spare parts for WEILER lathes. The exemplary availability of spare parts ensures that even after decades of service, a WEILER machine can maintain its pleasingly high value.

4 Second life on demand

On request we can overhaul your WEILER machine down to the last screw and make it so that it is as good as new. This service starts with the exact measurement of the machine and ends with an acceptance test according to DIN standards.

5 The WEILER precision check

Regardless of how long your WEILER has been in service: a precision check is always worth its while. We measure and analyse your machine and provide an objective statement regarding the current status as well as a free quotation of what is needed to restore the precision of your machine according to applicable DIN standards.

We don't perform cosmetic repairs!