



WEILER E90 / ONE1

Spindle bore 362mm (14.25")

Precision Lathe with Automated Cycles
WEILER ONE1 Control

Weiler E90/362 x 6M – F002

EILER E90

Cycle Controlled Lathe

Quotation #:

Weiler E90 x 6m Cycle Controlled Lathe with WEILER ONE1 Control as per specifications attached, including:

- 35.4" Swing over Bed
- 20.8" Swing over Cross Slide
- 60 HP Spindle Motor
- 14.25" Spindle Bore
- Spindle Nose DIN ISO 702-1 (DIN 55026) Size 20
- 1-130 RPM Low Range
- 4-500 RPM High Range
- #6 Morse Taper in Tailstock
- Riser Block for Manual Tool Post
- Hand-Held Pendant for Jogging Mode of main Spindle
- 22" TFT Touch Screen with swipe and tap technology

FACTORY INCLUDED OPTIONS

- **Parat Size 4 Quick Change Indexable Tool Post**
 - *4 x WDR 4/40 Turning & Facing Holders*
 - *2 x WB 4/60 Ø 2.0" Diameter Boring Bar Holders*
- **Ø 32" 4-Jaw Oil Country Independent Chuck w/ 14.37" Hole (Front)**
- **Ø 32" 4-Jaw Oil Country Independent Chuck w/ 14.37" Hole (Rear)**
- **Steady Rest with Roller Jaws 8.66"-15.75" diameter**
- **Rear Quill adjustable from front**
- **Extended Quills for Roller Jaws 0.787"-8.66" diameter**
- **Chip Conveyor for 236" Center Distance Machine**
- **Removable 4" diameter Boring Bar Block**
- **Increased Capacity Coolant**

Total Price with Included Options

(Note: Step down transformer is required if incoming power is not 480V)

F.O.B. Shipping Point; subject to prior sale

EILER E90 Cycle Controlled Lathe

WEILER ONE1 Control



FEATURES

- Weiler Proprietary Software Interface
- Large 22" TFT Touch Screen
- Straight Forward Graphical User Interface (GUI)
- Large Storage Capacity
- Tool Management- 300 tools customizable user database
- Manual "Machinist-Friendly" Operation
 - Manual Facing-Turning-Boring
 - Manual Taper Turning & Radius Turning
 - Positioning and Stops Functions
- Intuitive Cutting Cycles
 - Powerful geometry calculator
 - Optimal cutting strategies
- Grooving / Part-Off Cycles
- Drilling Cycle
- Optimal Thread-Cutting/ Re-Cutting Cycle
- CAD/CAM- DXF Import, external G-Code
- Cycles for Live Tools- Milling/ Drilling/ Tapping
- Simulation
- USB Interface/ Network Interface

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Cycle Controlled Lathe

In accordance with your request, we are pleased to submit the following specifications for the Weiler **E90** CNC Turning Center with a **Weiler ONE1 Conversational CNC Control**

Standard Features

Capacity

- Spindle Bore..... 14.25"
- Chuck Size 32"
- Swing Over Bed 35.43"
- Swing Over Cross Slide 23.23"
- Center Distance 236"

Main Spindle

- Spindle Nose acc. To DIN ISO 702-1 (DIN 55026) size 20
- Spindle Diameter in front bearing 17.64"
- Spindle Bore..... 14.25"
- Back Plate at rear of spindle DIN 55026 size 20

Main Drive

- AC Drive with 2 Gear Stages
- Drive power at 60% / 100% duty cycle..... 60hp / 50hp
- Total Speed Range 1-500 rpm
- Speed Range – Gear Step I 1-130 rpm
- Speed Range – Gear Step II 4-500 rpm
- Max. torque at the main spindle 10,000 Nm

Feed Drive

- 3-Phase Digital Servo Drive
- Feed Force Longitudinal..... 4500 lbs.
- Feed Force Transverse 4500 lbs.
- Feed Range Longitudinal and Traverse 0.00004-2 inch/rev
- Time Feed 0.00004-393 inch/min
- Rapid Motion longitudinal / traverse max. 393 / 197 inch/min

Thread Range

- Metric Threads 0.1-2000 mm
- Inch Threads 112 – 1/64" TPI
- Modular Threads 0.05 – 56 mm
- Diametral Threads..... 448 -0.05 DP
- Number of thread courses.....360 max

Tailstock

- Quill Diameter 5.51"
- Quill Travel 11.81"
- Inside Taper of Quill MT 6

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Cycle Controlled Lathe

Power Requirements

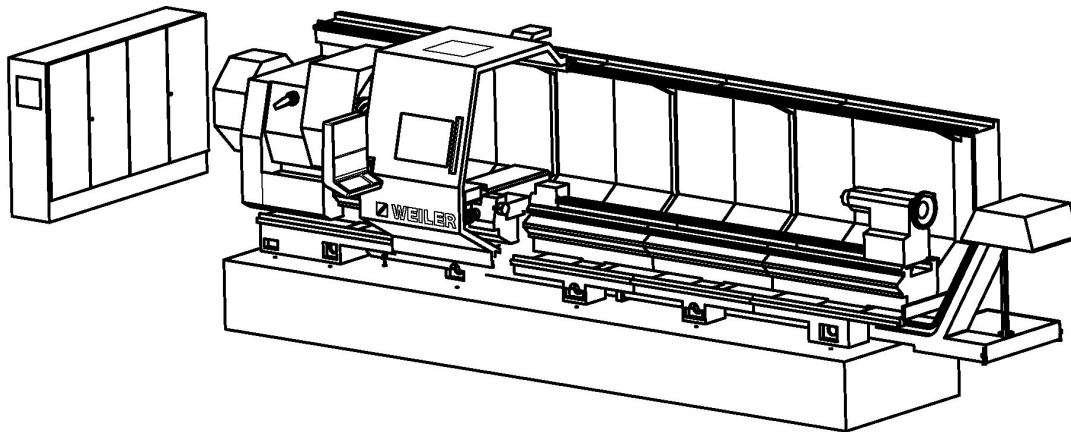
- Power Supply480 Volts / 60 Cycles
- Power Connected..... 55 KVA

Pump delivery

- Pump delivery 50 liters/min at 0.2 bar 13 gpm/ 29 psi

General

- Machine Dimensions
 - Length without Chip Conveyor 342.5"
 - w/ Chip Conveyor 399.6"
 - Width 114.2"
 - Height..... 92.52"
- Spindle Center Height from Floor 51.181"
- Floor Space w/o chip conveyor 342.5" x 114.2"
- Weight w/o additional accessories 13,000 kg (28,660 lbs.)

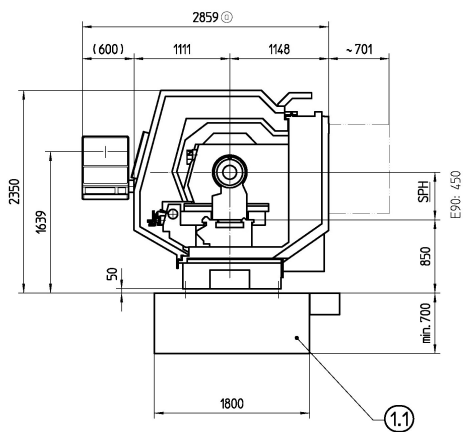
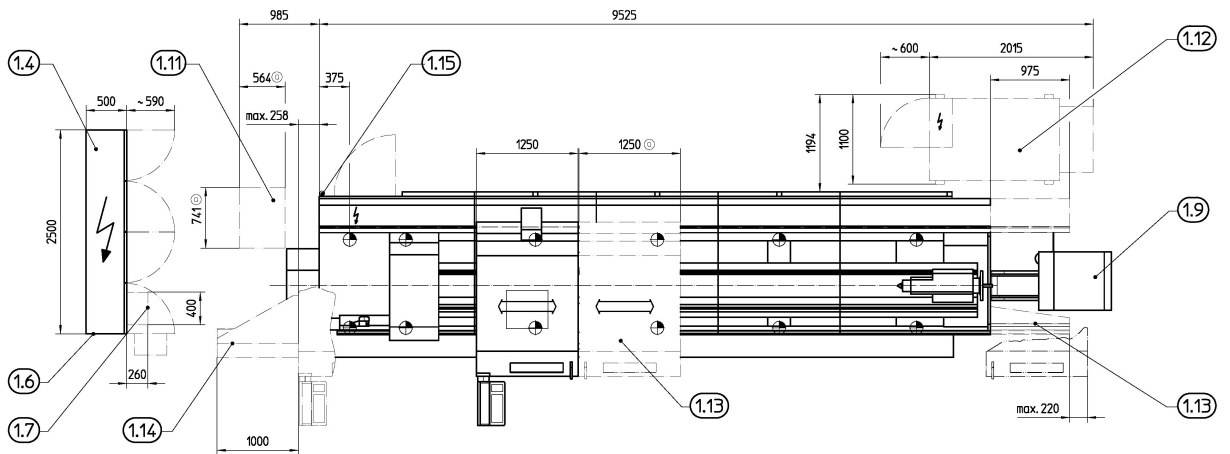
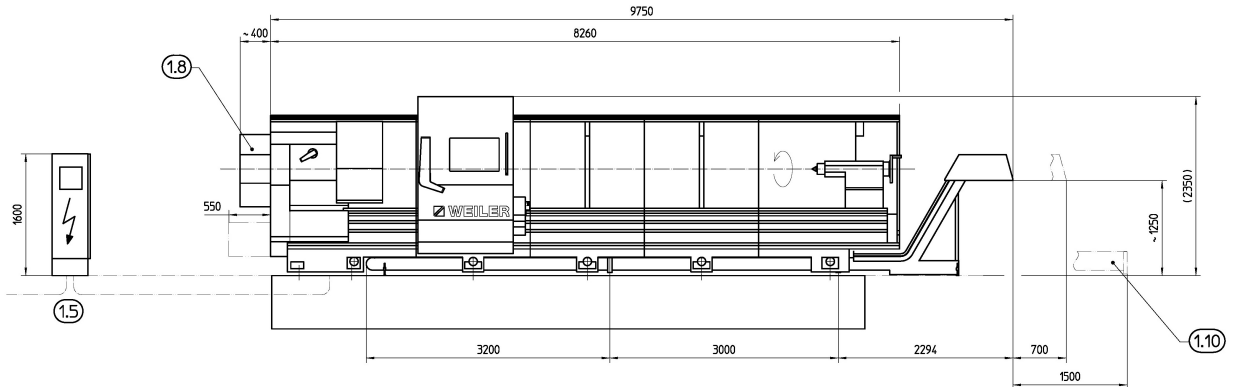


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Cycle Controlled Lathe

Floor Plan

6000mm Center Distance

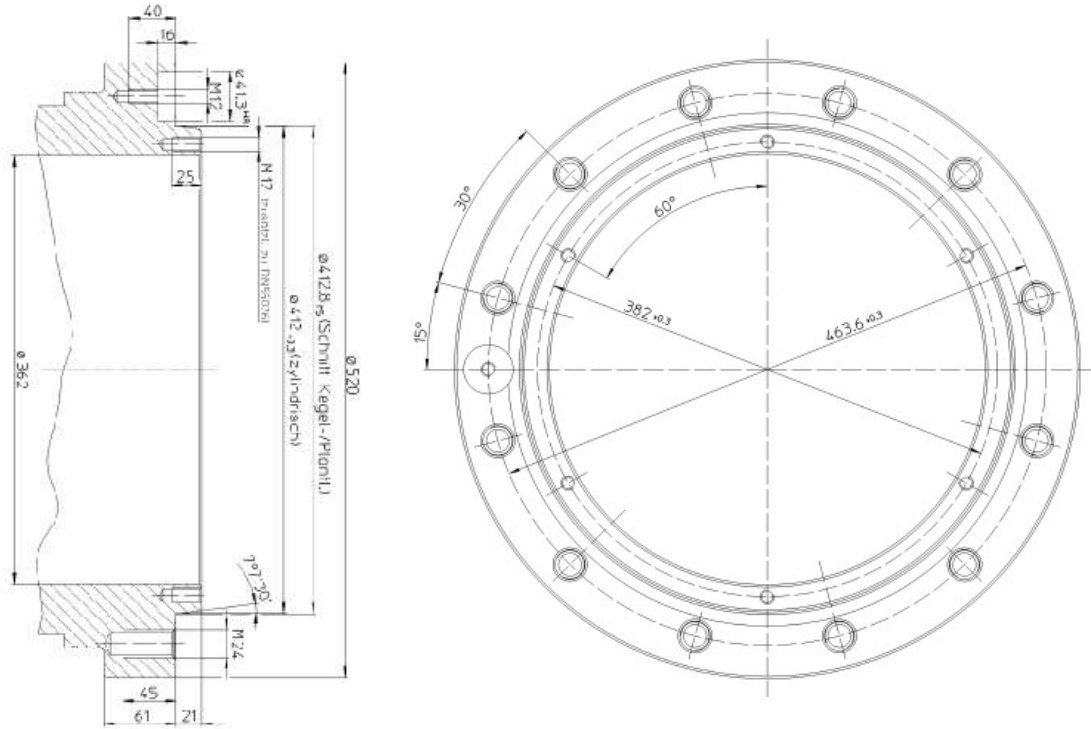


- 1.1 Foundation (alternative floor plate)
- 1.2 cable duct control cabinet to machine
- 1.3 cable entry to the machine
- 1.4 control cabinet
- 1.5 cable entry to the control cabinet
- 1.6 main switch / type labels
- 1.7 air conditioner (optional)
- 1.8 fittings on the front side of the machine (optional)
- 1.9 chip conveyor (optional)
- 1.10 space requirement for installation/removal of the chip conveyor in sections
- 1.11 hydraulic aggregate (optional)
- 1.12 filter system for cooling lubricant (optional)
- 1.13 additional moving hood (optional)
- 1.14 splash guard/chip protection (optional)
- 1.15 compressed air supply (optional)

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Cycle Controlled Lathe

Spindle nose: 362mm (14.25") Spindle Bore



Machine: E90
 Spindle bore 362 mm

Front spindle head

Spindle nose: ISO702-1 (DIN55026)
 size: 20

Rear spindle head

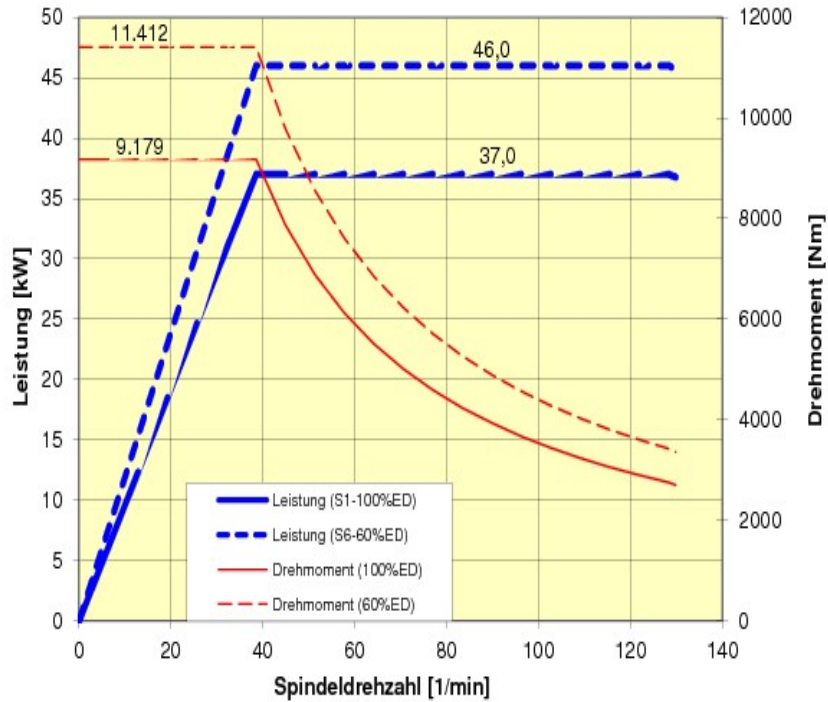
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 size: 20

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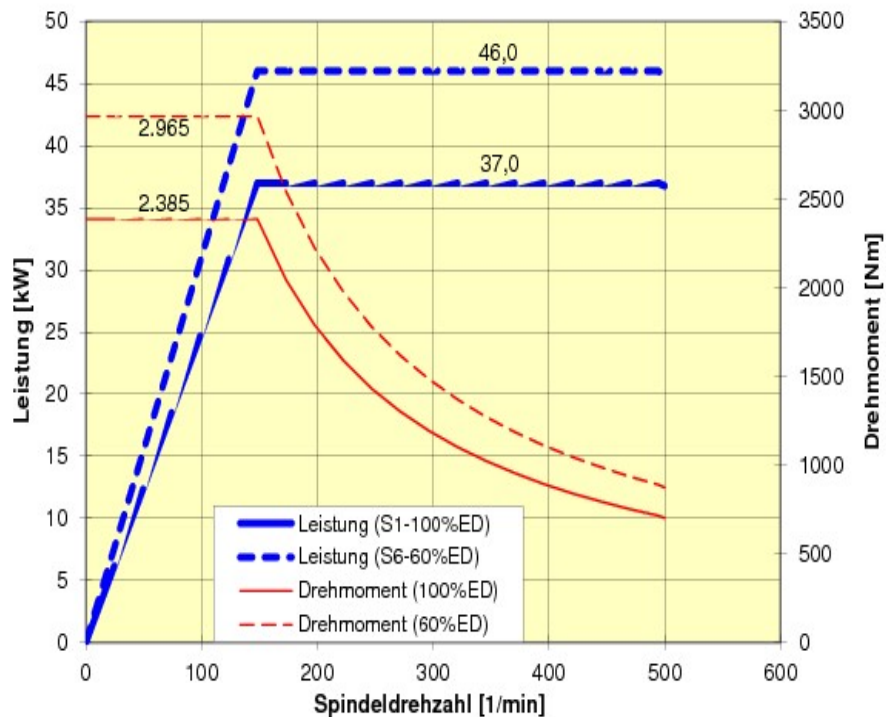
Cycle Controlled Lathe

Torque – Power – RPM: 362mm (14.25“ Spindle Bore)

Gear 1 (362mm Spindle Bore 1-130 rpm)



Gear 2 (362 Spindle Bore 4-500 rpm)



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Cycle Controlled Lathe

Subassemblies of the machine

Bed

- Torsional rigid bed made of high-quality grey cast iron
- Hardened and ground ways
- Box-type feet bolted with openings for chip conveyor

Headstock

- High accuracy and rigidity of the main spindle due to precision angular ball bearings
- Switching of the 2 mechanical gear steps via one single lever
- Circulating lubrication with separate oil pump, pressure switch and electronic level indicator

Carriage

- Long uninterrupted cross slide with adjustable taper gib
- Carriage with coated sliding, hardened cross slide guideway
- Longitudinal and transverse drives effected by controllable three-phase digital servo drives connected to precision ball screws with pre-loaded precision ball nuts
- Operation of feed and rapid motion via a 4-way "joystick" type lever
- Manual encoders in connection with incremental feed rate selector switch
- Automatic central lubrication of all guideways and ball screw nuts
- Safety switch lever for main spindle Left-Hand and Right-Hand rotation

Tailstock

- Easy positioning by manual slide coupling
- Adjustment of the quill via hand wheel with graduated ring
- I.D. quill taper with twist stop and ejection slot
- Central lubrication via hand pump

Electric Equipment

- Operating Voltage 480V / 60 cycles
- Control Voltage 24V DC
- Supply Voltage 230V / 60 cycles
- Control cabinet beside machine
- Three-Phase digital servo drives with digital converter system Sinamics S120
- Absolute Encoder in both axis
- Power Load meter of main drive in %
- Electric system in accordance with VDE 0100/0113
- High safety standard via double monitoring of the main spindle and axes (Safety Integrated)
- Connection with earthing or isolation transformer
- e-TIM consisting of:
 - Timer controlled standby function:
 - Automatically shifts machine into standby mode as per pre-programmed interval
 - Intelligent drive management
 - Built-in brake energy recover system
 - Machine status energy management
 - Automatically shifts secondary devices that have not been in use into standby mode

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Control

- Siemens control Sinumerik ONE with user-friendly WEILER software “one1”
 - 22” TFT color flat screen display
 - NCU 1740/1750 with 4 GByte user storage capacity
 - Manual control level for traditional turning
 - 300 Tool Storage Capacity
 - Graphically supported contour programming with automatic intersection point calculation
 - Automatic Tool Angle Control (Check of contour infringement)
 - Diagonal cutting external and internal machining
 - WEILER Cutting Cycle to create special contours
 - WEILER Grooving Cycle with freestyle geometry input
 - WEILER Thread repair cycle (like traditional lathe)
 - WEILER Trapezoidal Thread Cycle
 - WEILER Cable Drum Thread Cycle
 - DIN-ISO (G-Code) programming, CAM data transfer
 - Parallel Programming during machining
 - USB Interface
 - Network interface
 - Alphanumerical keyboard with short-stroke keys
- For additional information, please refer to ONE1 manual

Accuracy

- According to DIN 8606 (Tool Makers Accuracy)

Standard Equipment

- Back plate at the rear of the spindle DIN ISO 702-1/20 (DIN 55026/ size 20) with electric monitored chuck guard, max. swing diameter 820mm (32.28”)
- Movable hood with scratch resistant multilayer safety glass pane
- Rear chip dash panel with sliding doors electronically monitored
- Chuck splash guard with limit switch protection
- Stainless Steel guideway protection, removable, mounted on the left of carriage
- LED working area lighting for chip dash panel and movable hood
- Taper sleeve for main spindle MT6
- Male Center MT6
- Elapsed time hour meter
- Set of wrenches

Standard Accessories

- Coolant tank and extendible chip pans
- Coolant attachment incl. coolant pump 10 gpm at 36 psi max 72.5 psi
- Coolant connections 3/8” on cross slide
- Main spindle brake on input shaft
- Hand-Held Pendant for jogging mode of main spindle

Documentation

- Instruction manual incl. spare parts catalogue and data carrier
- Machine record card

