

DRO PROS

The Digital Readout Experts

WEISS WBL290F Lathe Advantages

Congratulations on considering the purchase of a Weiss WBL290F Lathe. There are several key aspects that make the WBL290F a superior machine. A difficult aspect to communicate is the "feel" of the machine. Technically, the specs of the 290F are very similar to its' smaller cousin, the WBL250F. However, the 290F is nearly double the weight, and correspondingly, the 290F just feels smoother and more robust. If possible, we would always recommend coming in to our show-room and see them for yourself!

Imperial (Inch) Leadscrews – Weiss machines sold under the DRO PROS name all have imperial or inch leadscrews on all axis. Many manufacturers install metric leadscrews in an effort to cut costs. A machine with metric screws and imperial handwheels loses position and accuracy with every turn of the handwheel as the distance traveled will mis-match the handwheel reading. As this affects every part you make, our advice is to never consider buying (at any price), a machine with metric leadscrews.

Separate Leadscrew and Feed Rod – The 290F has a separate leadscrew and feed rod. These can be seen as the two horizontal shafts parallel to each other on the front of the lathe. In this way, the leadscrew is used to precisely move the carriage when cutting threads, and the feed rod is used to provide movement to the carriage or cross slide during cutting operations.

Less expensive lathes will use a single shaft or leadscrew for both thread cutting and cutting operations. The downside of having a single leadscrew performing both operations is that it causes premature wear and tear on the leadscrew as it must perform both functions. Additionally, a separate feed rod for cutting is better as it's stronger, due to its hexagonal shape.

D1-4 Camlock Chuck Spindle Mount - The 290F uses an American Std type D1-4 camlock mounting system.

Independent Leadscrew and Feed Rod – The 290F has a selectable knob on the front panel which allows the user to power the leadscrew, the feed rod, or neither. Some lathes require both shafts to turn at the same time, which increases wear and tear.

Feed Direction Switch – The 290F leadscrew and feed rod rotate independently of the spindle. The front panel has a convenient direction knob which allows the user to select the direction of rotation of the leadscrew and/or feed rod. This is entirely independent of spindle rotation. Lesser lathes don't have this feature or if they do, require you to change the gear drivetrain.

Belt Drive – The 290F has a belt drive between the motor and spindle. This arrangement reduces vibration and noise significantly.

Hi-Torque Brushless DC Motor – The 290F motor has higher torque, and is maintenance free due to its brushless design.

Quick Change Gearbox – The 290F has a quick change gearbox for threading operations. This makes threading a lot more convenient and means there's a lot less need to change gears.

Oil Reservoir – The 290F gearbox has an oil bath, ensuring less wear and longer life for the gears.

Lever Lock Tailstock – The tailstock securely locks in position via a lever. Some manufacturers use a nut and bolt, which requires tools to lock them down. The 290F tailstock requires no tools to lock it in position.

Variable Speed & Digital RPM Display – A rotatable knob on the front panel controls the 290F speed, and a digital LED display shows the machines rpm.

Power Feed – Both the carriage and the cross slide have power feed. Both directions, and unlike some other lathes, the movement is independent of which direction the chuck is rotating.

T-Slotted Cross Slide – The cross slide is slotted which allows the compound to be independently positioned.

WEISS Lathe Comparison Sheet

	WBL210V	WBL250F	WBL290F
Price	\$1,199	\$1,699	\$2,699
Size	8" x 16"	10" x 30"	11" x 29"
Motor Wattage	750W	1,100W	1,500W
Cross Slide Travel	4.59"	4.53"	7.16"
Carriage Travel	15.5"	31.3"	28.7"
Compound Travel	3.56"	2.78"	2.61"
Tailstock quill travel	2.60"	2.98"	3.81"
Width of bed	3.93"	5.26"	7.17"
Spindle bore	.83"	1.02"	1.50"
Swing Over Bed	8.04"	10"	11.27"
Distance Between Centers	15.75"	29.69"	29.0"
Swing over cross slide	5.72"	6"	7"
Speed range	50 - 2,250 rpm	50 - 2,000 rpm	80 - 2,000 rpm
Inch threads	8 - 44 TPI	8 - 80 TPI	8 - 48 TPI
Metric threads	0.4 - 3mm	0.35 - 3.0mm	0.2 - 3.5mm
Spindle taper	MT3	MT4	MT5
Tailstock taper	MT2	MT2	MT3
Carriage leadscrew (imperial)	12 TPI	8 TPI	10 TPI
Cross slide leadscrew (imperial)	20 TPI	10 TPI	13 TPI
Compound leadscrew (imperial)	20 TPI	20 TPI	10 TPI
Power Supply	110 Volts	110 Volts	110 Volts
Machine Weight	120 lbs	300 lbs	473 lbs
Shipping Weight	160 lbs	377 lbs	583 lbs
Shipping Dimensions	36 x 19 x 20	59 x 23 x 24	59 x 28 x 29
Chuck	4" (100mm)	5" (125mm)	6.3" (160mm)
Belt Drive	YES	YES	YES
Variable Speed	YES	YES	YES
Digital RPM Display	YES	YES	YES
Brushless DC motor	YES	YES	YES
Lever Lock Tailstock	YES	YES	YES
Digital RPM speed control & readout	YES	YES	YES
Leadscrews are imperial	YES	YES	YES
Hardened and Ground Bed	YES	YES	YES
Powered Carriage	YES	YES	YES
Feed Direction Switch	NO	YES	YES
Indep. Spindle / Leadscrew direction	NO	YES	YES
Powered Cross Slide	NO	YES	YES
T-Slotted Cross Slide	NO	YES	YES
Quick-Change Gearbox	NO	YES	YES
Oil Reservoir	NO	YES	YES
D1-4 American Std Camlock Spindle	NO	NO	YES
Separate Leadscrew / Feed Rod	NO	NO	YES
Spindle Oiling Holes	NO	NO	YES
Toolless Thread Change Gears	NO	NO	YES
Access Door on GearBox	NO	NO	YES