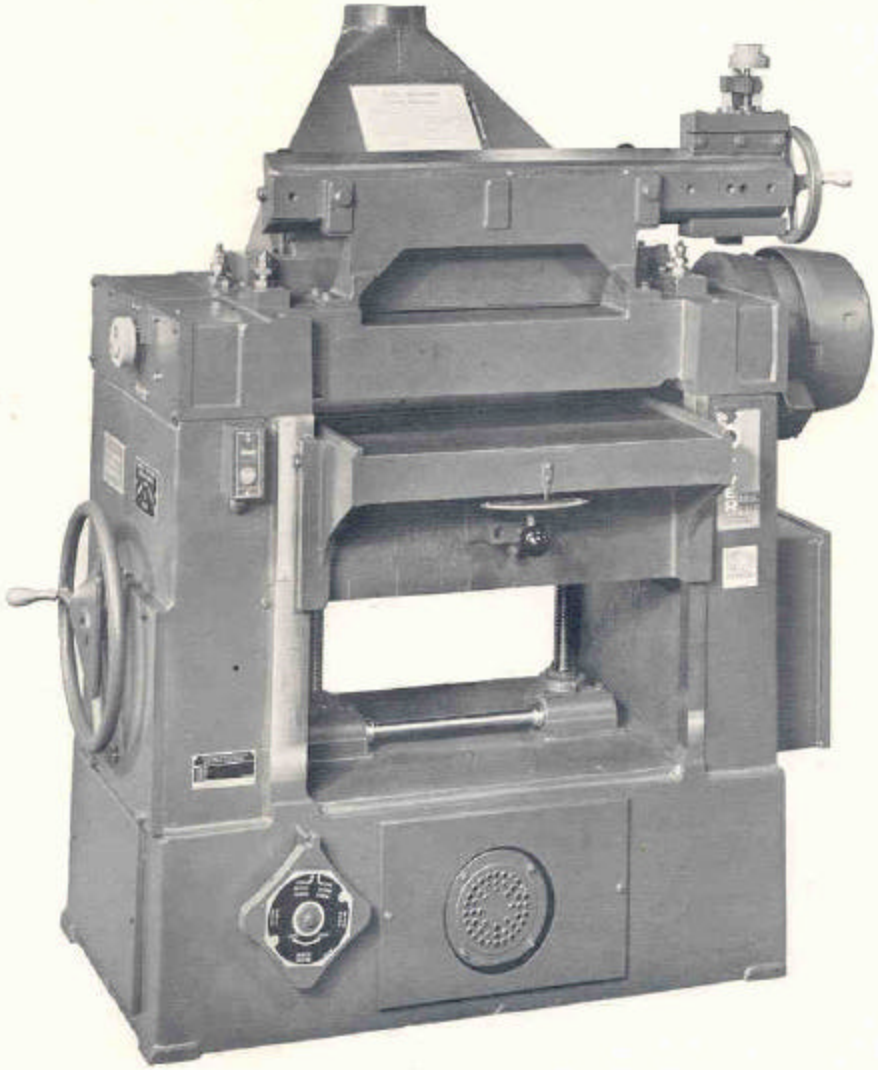
No. 299 - 24-inch (610 mm)
SINGLE SURFACER

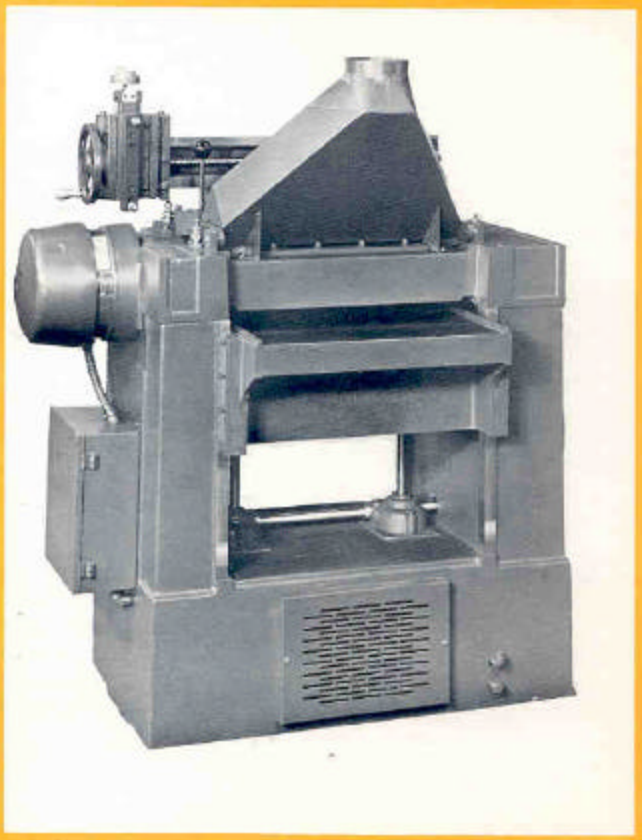


OLIVER®

OLIVER MACHINERY CO., GRAND RAPIDS, MICH.

Does your surfacer have an I.T.C.H.* cutterhead?

*(INSERTED TOOTH CARBIDE HEAD)



Rear view of 299 Surfacer with dust hood attached.

The Oliver No. 299 Surfacer will plane stock up to 24 inches (610 mm) wide, up to 8 inches (203 mm) thick at any speed from 15 to 60 feet (4 to 18 M) per minute. Feed speed is controlled by dial located convenient to the operator.

BASE

A one-piece, heavy box-type casting, having a three-point floor bearing, forms the base of this surfacer. It assures a base properly aligned to support the table and cutter head yoke. The covers at the front and rear of the base provide ready access to the 1½ h.p. ball bearing feed motor and the V-belt variable speed feed drive. Large, flat, machined vertical ways are properly spaced to provide more than adequate support for the table, and supplement the table elevating screws located on a heavy section midway between the vertical ways. The one-piece casting insures accurate and permanent alignment of all moving parts. It guarantees trouble-free, unexcelled planing.

CUTTER HEAD YOKE

A one-piece casting is located on the top of the base casting. In this yoke are located both upper rolls, chip-breaker, pressure bar, cutter head, cutter head motor and grinding bar. Permanent alignment of these parts is insured.

TABLE

The heavily ribbed table is a quality casting. It carries the two lower rolls, providing a fully enclosed space for the roll drive mechanism. The vertical ways with adjustable gibs provide maximum bearing area to mate with the corresponding ways on the main frame. A convenient handwheel operates the two large elevating screws through worm and gear mounted in grease packed, fully enclosed chambers. Screws have ball bearing thrust bearings. Power table hoist unit is an available option.

FEED ROLLS

Four steel rollers feed the stock through the surfacer. The upper yoke carries a sectional infeed and ground steel outfeed roll. Two rolls are mounted in the table. They are 3⅝" (92 mm) diameter and spaced at 10½" (267 mm). The sectional infeed roll is made up of twelve 2-inch (51 mm) cast steel corrugated sections mounted on a steel drive shaft. Each section is spring loaded to provide adequate yield. All rolls have alloy steel sprockets

driven by self-lubricating chain. All rolls are mounted on high quality bearings with adequate means of lubrication. The lower table rolls have micrometer adjustment through a lever located beneath the infeed table, convenient to operator.

CUTTERHEAD

The Inserted Tooth Carbide Bit cutterhead is a 3-knife equivalent having 84 four sided bits inserted in the cutterhead body. It reduces the noise level from that of the straight knife head and provides a considerably longer time between grinds.

SECTIONAL CHIPBREAKER

The steel sectional toes are 2 inches (51 mm) wide. Each toe is loaded with a helical spring, and has an independent lift of ¼ inch (6 mm). The group of toes, mounted on a steel bar, swing up and away from the cylinder when greater movement than that of the independent toes is necessary. The entire assembly swings out of position when knives are ground.

PRESSURE BAR

A heavy section C.I. pressure bar is located back of the cutter head. The pressure bar can be easily removed from the machine without disturbing any other part of the mechanism.

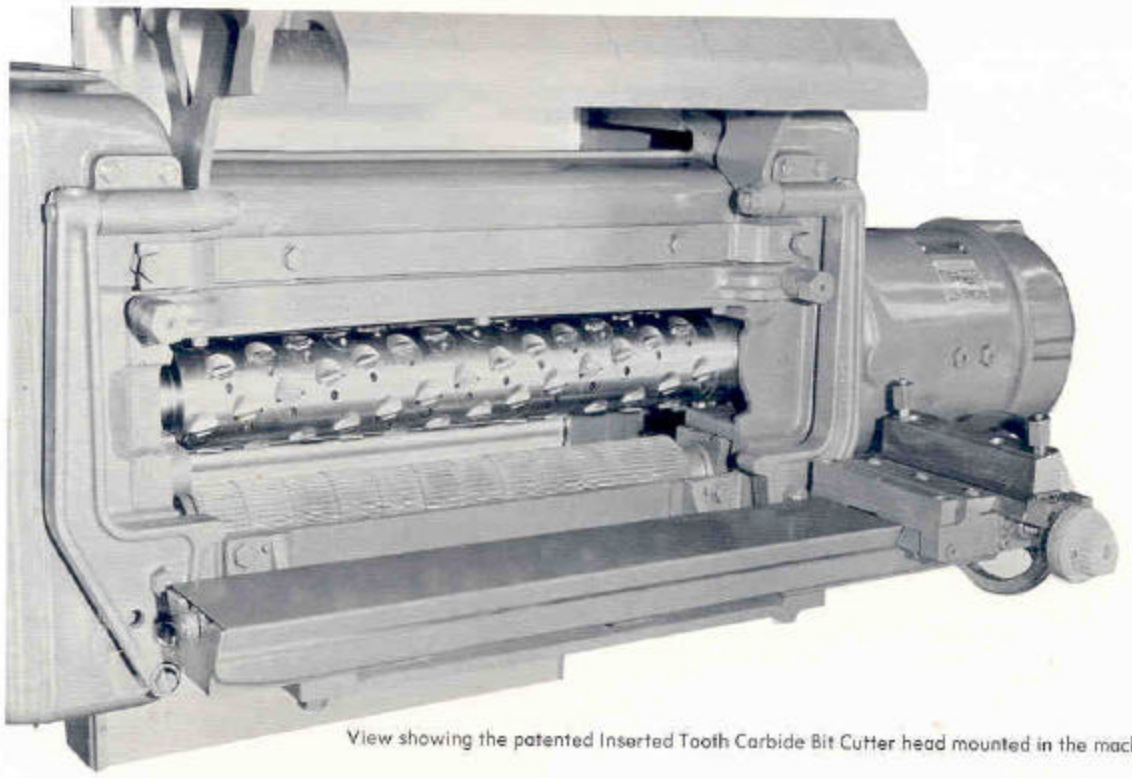
KNIFE GRINDING ATTACHMENT

A heavy, U-type section bar is attached to the cylinder yoke. A gibbed slide, having long ways mounted in permanent position on the bar, is moved along the bar by screw and handwheel. The slide has a plate to carry the grinding motor. It accurately and quickly grinds the knives. When grinding is completed the device remains at end of bar. Vertical adjustments of the grinder are made by micrometer screw.

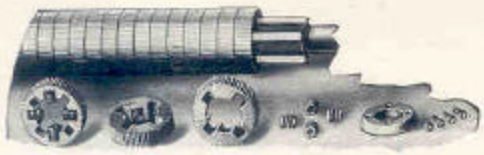
The grinding unit has constant speed ball bearing motor with cord and switch. It has V-belt drive to a diamond grinding wheel.

CONTROL

Electrical and mechanical controls are centralized at operator's left. Motors have overload and low voltage magnetic type control. Operation of brake handle disconnects both cutter head and feed motors, quickly stops the cylinder. The feed motor starts with cylinder motor.



View showing the patented Inserted Tooth Carbide Bit Cutter head mounted in the machine.



Sectional upper infeed roll showing the positive drive, fool-proof construction.

BEARINGS

All rotating parts of this surfacer are mounted on finest ball bearings of adequate capacity.

LUBRICATION

All revolving parts are mounted on ball bearings or oilite bearings. Separate grease fittings are used on independent bearings when required.

MOTOR DRIVE

The cylinder or cutter head is driven by a 7½ h.p., 3600 r.p.m. T.E.F.C. motor. For three phase A.C. this motor is mounted directly on the cylinder shaft and held in a housing bolted to the top yoke. For single phase the cylinder motor is mounted at the end of the cylinder and coupled to it. The feed motor is 1½ h.p., 1800 r.p.m. mounted in the base of the machine but easily accessible.

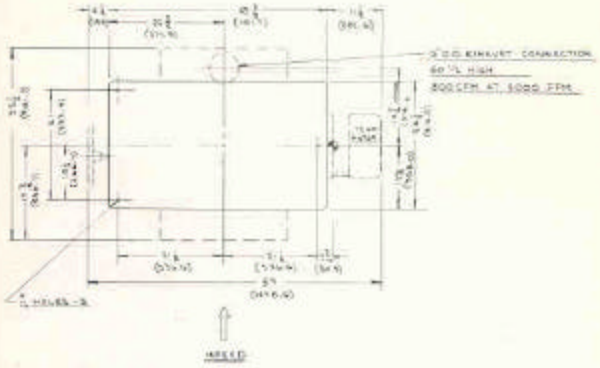
STANDARD EQUIPMENT

Cutter head motor is 7½ h.p., 3600 r.p.m. for three phase, 60 hertz, 208/220/440 volts. The feed motor is 1½ h.p., 1800 r.p.m. totally enclosed fan cooled. Magnetic control with push button station. Micrometer adjustment for lower feed rolls. Shaving hood with 6" (152 mm) outlet. Knife grinding attachment for single phase, 60 hertz, 115 volts. Hand brake to stop cutter head is interconnected to electrical control to cut off power supply.

OPTIONAL EQUIPMENT

10 h.p. cutter head motor. Power hoist for raising and lowering table. 20 inch table extension.

FLOOR PLAN



SPECIFICATIONS

SIZE: 24" x 8" (610 x 203 mm)

MOTORS
- Cylinder — 7½ h.p., 3600 r.p.m.
- Feed — 1½ h.p., 1800 r.p.m.
- Knife Grinder — 1/3 h.p., 3600 r.p.m.

CONTROL
- Full magnetic control with overload and low voltage protection.

FEED WORKS
- Reeves variable speed — 15 to 60 f.p.m. (0/203 mm).

TABLE
- 24" wide, 35½" long (610 x 902 mm).
- Screw mechanism to raise or lower.

CAPACITY
- Planes stock up to 24" (610 mm) wide.
- Planes stock up to 8" (203 mm) thick.
- Planes stock as short as 11" (279 mm).

CYLINDER
- Inserted tooth carbide bit type.
- 4¼-inch (108 mm) cutting circle.

BASE
- One-piece casting for rigidity and perfect alignment.

FEED ROLLS
- Two lower rolls 3⅝" (92 mm) diameter.
- Upper outfeed roll 3⅝" (92 mm) diameter.
- Upper infeed roll is sectional — Twelve 2-inch (51 mm) wide sections.
- All rolls fitted with precision ball bearings.
- All rolls power driven.
- Single lever micrometer adjustment of lower rolls.

CHIPBREAKER
- Sectional type.
- Twelve 2-inch (51 mm) wide sections — ¼" (6 mm) independent lift.

No. 299 MOTOR KNIFE GRINDING ATTACHMENT
- 1/3 h.p. ball bearing motor with V-belt drive.

EQUIPMENT
- Motors and control, completely wired.
- Shaving hood, 6" (152 mm) outlet.
- Micrometer adjustment for lower rolls.
- Motor Knife Grinding attachment.

SHIPPING WEIGHT: 3000 pounds (1362 kilograms)

(Specifications are subject to change without notice.)

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