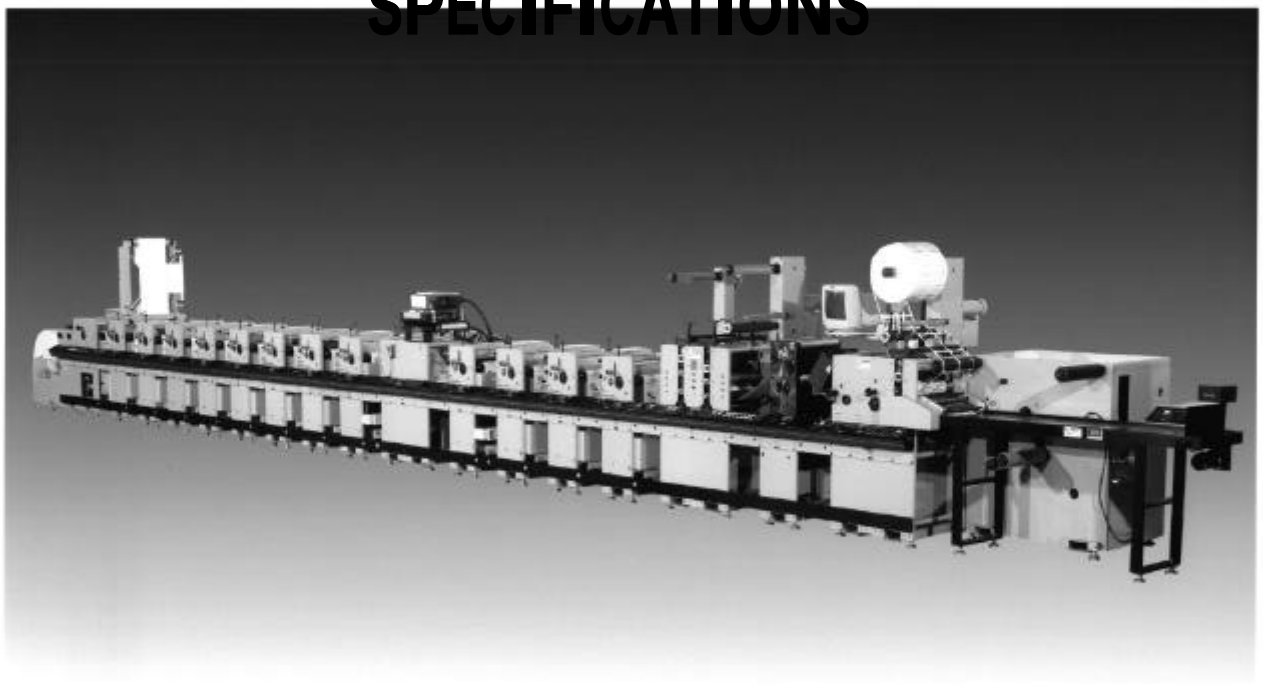
ALLIED GEAR & MACHINE COMPANY

SPECIFICATIONS



ALLIED 500 SERIES PRESS

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ALLIED 500 SERIES SPECIFICATIONS:

INTRODUCTION:

The 500 Series is Allied Gear and Machine Company's 0 to 14 color Flexographic printing press. It offers all the latest features in Flexographic technology. The 500 Series was designed to make multi-color printing and diecutting affordable. Quick-change features and ease of operation allow greater productivity and less downtime. The latest technology assures you of high quality printing, job after job. We solicited input from hundreds of press owners and operator to find out what features would go into the ideal narrow web flexo press. Armed with their ideas and a few improvements of our own, we have created what we believe is by far the most press for the money. One look at the Allied 500 Series at work and we think you'll agree. As with any Allied Gear press, you will also receive service and support from a knowledgeable staff of professionals who are always ready to help. Allied Gear offers a complete range of solidly engineered narrow web presses. All are designed to work long and hard to produce superior quality results.

GENERAL DIMENSIONS:

	10-inch	16-inch	20-inch
Max press height	80.00"	80.00"	80.00"
Max press depth	56.00"	60.00"	64.00"
Max web width	10.25"	16.50"	20.50"
Max print width	10.25"	16.25"	20.25"
Max diecut width	10.25"	16.25"	20.25"
Max print repeat	28.00"	28.00"	28.00"
Max diecut repeat	28.00"	28.00"	28.00"
Max speed	*500 fpm	*500 fpm	*500 fpm
Unwind diameter	40.00"/opt 50"	40.00"/opt 50"	40.00"/opt 50"
Rewind diameter	40.00"/opt 30"	40.00"/opt 30"	40.00"
Waste rewind diameter	24.00"	24.00"	24.00"
Drive motor	15 HP	15 HP	20 HP

*Indicates maximum mechanical speed. Actual production speed is application dependent.

ALLIED 500 SERIES SPECIFICATIONS:

CONSTRUCTION:

- The 500 Series press is an **in-line modular design** that allows for addition of printing and diecutting stations and better flexibility in press configuration. It also provides easy access and viewing area to all print stations.
- The 500 Series is constructed from **1" thick** Aluminum side plates (6061-T6 tool and jig grade material) on the printing and **1" thick steel** side plate diecutting stations to assure durability and performance. The press has a wide base and leveling bolts to assure stability and prevent vibrations.
- Mono-plate construction **full to floor** ensures precise converting and printing tolerances. This design also eliminates tracking problems that are evident in tubular frame designs, and cantilevered designs.
- **Class 10 gearing** for tighter and consistent registration.
- **German-engineered, phase shifter gearboxes** are oil filled and fully enclosed for superior print registration and low maintenance.
- All gearboxes are connected to the **1" solid steel drive shaft** with zero backlash couplings. (Torque tubes are standard on the 520)
- The **Master Control Panel** is located at the diecutting and sheeting module and has been designed to allow the operator to run the press from one location. This panel also has the Predetermined Counter and the Speed Meter.
- **Removable cabinetry** at the back of the press makes the drive train easy to get to. The sheet metal panels are removable without tools for quick access for routine maintenance.
- The spacious, well-organized electrical control box gives easy access to all electrical components.
- The drive unit includes a **15 or 20 horsepower** drive motor (15 HP for the 10" and 16" press, 20 HP for the 20" press) with electronic motor controller for controlled acceleration and emergency stop dynamic braking.
- This press has been designed with **minimal custom parts** and allows the users to purchase many of the replacement parts from local suppliers.
- **Reduced floor space**, the Allied 500 Series press requires less of your valuable space, as the drying and electrical systems are within the footprint of your press. (5.0 & 10.0 KW dryers require on external exhaust blower)

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UNWIND STATION INCLUDES:

- The **40" roll diameter unwind** to increase production with less stopping for roll changes.
- Standard **pneumatic lift** prevents back injury to the operator and allows easy loading of large rolls.
- 3" diameter unwind shafts with **air-operated coreholders**. The air pressure allows the coreholder leaves to expand which traps the core when unwinding the stock. (Other sizes optional)
- **Unwind Control Panel** located at the front panel on the unwind module. It contains the roll lift "UP" and "DOWN" buttons, the "LIFT LOCK" switch and the "E-STOP" buttons.
- **Tension control;** a load cell monitoring system is the most sophisticated method for controlling web tension. It measures tension as the web passes over it's surface, feeding information electronically to the unwind brake (disc brake system) where minute adjustments are made for constant, specified tension as the roll unwinds, allowing for more consistent print quality.
- **Tension Control Panel** located above the splicing platform is an electronic, programmable panel with full digital readout.
- **End-of-Roll Switch** that automatically shuts off the press before the stock roll run out of material.
- **Splicing platform** located close to the unwind and makes quick work of roll changes and minimizes waste of time and materials. This platform is positioned waist high to allow the operator to easily perform the splicing operation.
- The **Electronic Edge Guide System** is a standard feature, which automatically compensates for imperfect or telescoped stock rolls to keep the web at a set position in the press. As a result, make ready is easier and faster. This also aids side-to-side registry, while increasing production speeds.
- **Open-Loop Controlled In-Feed Pacing System**, which adjusts the throw length by Breaking the infeed pacing roll. It also has a pneumatically actuated nip roll; silicone rubber covered with 2" diameter bearings for rigidity.
- The **Stack Light** indicates when the press has power and is in run mode.

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PRINTING STATIONS INCLUDES:

- Available from **0 to 14 color printing stations**. All printing stations are identical to each other with exactly the same controls and adjustments. This makes the 500 Series press the easiest press to operate in the industry.
- **Independent 360-degree lineal registration** (motorized) on each print station. Also available as an option is a reversible print head.
- **28" maximum print repeat** that allows for the greatest print job versatility.
- **Quick-change print head design**. The print cylinder, anilox roll, metering rolls, doctor blades and the ink pan have been designed for quick changeover that can be accomplished within minutes.
- **Operating Control Panel** on each print station with “JOG, “IDLE”, “RUN”, “STOP”, impression “ON/OFF”, dryers switch with “OFF/ON/LOW/HIGH”, anilox “ON/OFF”, registry “ADVANCE” and “RETARD” and “E-STOP” button.
- **Automatic plate roll throw off** to prevent the printing plates from damage when the press stops.
- Automatic individually controlled **constant turning anilox and meter rolls** to prevent the ink from drying when the press stops.
- Industry standard **4 way adjustable print heads** to adjust the vertical and horizontal impression of each print cylinder from 8" to 28" repeats.
- Precision **steel adjusting arms** that rigidly support the plate rolls.
- **Ball bearing print cylinders**, which allows for much faster cylinder changes, an important feature when running short run jobs.
- 3.5" diameter **ceramic anilox rolls** and rubber meter rolls are supplied as standard and are recommended for standard applications. Other types are available upon request.
- 3.5" diameter **hardened steel impression rolls** with 2" diameter bearings. This heavy-duty design provides stability for better print repeatability and consistency.
- **Quick release plate roll mounting pins** with built-in lateral registration control of +/- 1/8". (Diameters are ½” for 510, ¾” for 516 and 1” for 520)
- **Quick-change stainless steel ink fountain assembly**. The inking rolls have 1” diameter bearings for stability and longer life.
- **Machine surfaced Teflon coated idler rolls** with less T.I.R. than bead blasted extruded rollers. This improves the within repeat registration.
- **Large viewing area** for inspection of printed material.

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DRYER PACKAGE INCLUDES:

- Each print station is followed by an **individual high-velocity impinged air-drying tunnel** with a choice of three heat settings "ON/LOW/HIGH".
- **Slotted air tunnels** as opposed to round holes. The slotted tunnels allow greater impinged air saturation to your web to improve drying.
- **Individual dryer switches at each station** that power the individual dryers heat relays. When switched "ON", the heater will be activated until the operator turns the unit off. This gives maximum flexibility and prevents excessive heat build-up at the print stations not in use. This can be a significant money/energy savings if you are not printing in each station of your press.
- **Internal blowers** that are located within the foot of the press. Each print station shares a designated blower with another print station for the pressure and exhaust.
- **4" diameter dryer ducting** offering more airflow and drying capacity to your web.
- **2 heater elements** designated for each color. Each heater element is rated at 1.8 kilowatts. Additional options are available.

DIECUTTING STATIONS INCLUDES:

- **2 diecutting stations and 1 sheeting station**. (with 1 inch (25.4mm) thick steel frames).
- **Independent 360-degree lineal registration** (motorized) on each diecutting and sheeting station.
- **Lateral Register Bearing Block Assembly** to allow the lateral registration adjustment of dies.
- Patented **micro-adjustable steel lined die slots** allowing the operator to get a precise fit on the bearing blocks, even after years of use. These die slots also prevents replacement of main diecuttting frames resulting from excessive wear.
- Independent air actuated **isolator nip** placed between print and diecut functions to effectively separate diecutting impact from affecting print quality. This also includes the Die Station Nip Control Panel located at the Master Control Panel, which has the nip "ON/OFF" switch and the nip tension gauge and regulator knob.
- **Thru hardened steel removable anvil rolls** in all the diecutting and sheeting stations. The diecutting stations have 6" diameter anvil rolls and the sheeting station has 6" diameter anvil roll. Thru hardened steels provides longer life and prevents marking from metal to metal diecuttting.

ALLIED 500 SERIES SPECIFICATIONS:

- **Thru hardened steel support rolls** for all diecutting and sheeting stations to allow for easy undercutting. Support rolls also help prevent bowing and prolongs the life of the anvil rolls.
- **Die bearing blocks standard** 1" on the 510, 1 1/4" on the 516 and 520 (other sizes are available) with 1/4 turn style for front side installation. **Heavy duty hold-down bars** that bear directly on the die bearers with bearer wipers and die pressure adjusting units.
- **28" maximum diecut repeat,** which allows for the greatest diecutting and sheeting versatility.
- **24" roll diameter waste wind-up** with 3" diameter air cores and a Waste Wind-Up Control Panel located at the Master Control Panel. This panel contains the core “ON/OFF” switch, the core clutch “ON/OFF” switch, the capstan clutch “ON/OFF” switch, the core tension gauge and regulator knob, and the capstan tension gauge and regulator knob.
- **Exit pacing** with pneumatically actuated nip roll, silicone rubber covered with 2" diameter bearings for rigidity. Exit pacing also includes an Exit Pacing Control Panel located at the Master Control Panel with nip “ON/OFF”, nip pressure gauge and regulator knob.
- **30" roll diameter rewind** with 2 horsepower DC driven motor or 4**0" roll diameter rewind** with a 5 horsepower AC drive motor.
- 3" diameter rewind shafts with **air operated coreholders**.
- **Rewind Control Panel**, which is located in the Master Control Panel. The “Core” switch that supplies air pressure to expand the coreholder leaves, the ”Clutch” switch supplies the air pressure indicated in the tension gauge to the clutch and the “Regulator” knob that regulates the air pressure supplied to the clutch, thus changing the rewind tension. (This is only standard on the 40” Unwinds)

OPTIONAL ACCESSORIES:

- **Board Configuration** the press can be configured as a board press to accept web stock of 12 to 24 point board stock. The press is manufactured with larger diameter idler rollers.
- **70" roll diameter unwind module** with 12" diameter air cores and roll adjustment. This module also includes a web tension control system and a pneumatic lift.
- **Dual web package** adds an additional unwind and web guide to bring two webs into the press at the same time.

ALLIED 500 SERIES SPECIFICATIONS:

OPTIONAL ACCESSORIES CONTINUED:

- **Automatic Registration Control System** this electronic system will adjust and maintain the registration of the print stations automatically to allow hands free operation of the press.
- **Reverse Angle Doctor Blade** this is a quick release design to allow for quick change over.
- **Enclosed Doctor Blade System** is a cartridge system which eliminates the need for the meter roll and ink pan.
- **Strobe light or Video Web Inspection Unit** are devices that allow the operator to monitor the printing quality on the web, while the press is running, before it is wound on the rewind core. The strobe light includes a manual control and all necessary connections and mounting brackets. The video web inspection unit includes a camera, a computer and a monitor unit.
- **Turnover bar** is a device that allows the web to be turned over between any two print stations. It lets you print on both sides of the web by turning the web over while running. It consists of two idler rollers, two air bars and an air regulator.
- Diaphram or variable speed peristaltic **ink pumps**, which help regulate the ink additives outside of the ink pan. Ink pumps provide a constant flow of ink into the ink pan. They are especially useful for high volume printing facilities.
- **Ink pan covers** to prevent contamination of airborne debris, and reduce solvent evaporation.
- **Reversible print heads** to allow for backside printing without the use of a turnover bar.
- **Helical gears** replace the spur gears on the print stations helps minimizes gear marking.
- **Second 24" roll diameter waste wind-up** for dual winding of waste diecutting product. This unit consists of a small idler, an adjustable belt driven capstan and a take up roll.
- **24" roll diameter lamination arm** is a device that allows you to add another layer of to the top of the web, usually a clear film. This unit includes an air actuated unwind tension control, a lateral adjust knob, a guide roll, ironing roll and pressure blocks and the Laminator Control Panel which includes the core “ON/OFF” switch, the brake “ON/OFF” switch and the brake tension gauge and regulator knob.
- Razor, air circular or mechanical circular **slitter knife** assembly with side-to-side adjustment. Slitters let you slit, score or perforate the web longitudinally while printing. The air circular type includes an Air Slitter Control Panel located at the Master Control Panel with an “ON/OFF” switch which operates the air valve that supplies air to activate the slitter blades and a “Pressure Regulator” that regulates the air pressure supplied to the slitter blades. The pressure setting is determined by the cutting requirements.
- Fixed or adjustable **die adaptors** (to make use of dies shorter than standard, which are driven from the backside of the press) include all die pressure adjusting units and necessary bearing blocks.

ALLIED 500 SERIES SPECIFICATIONS:

OPTIONAL ACCESSORIES CONTINUED:

- **Second 30” or 40" roll diameter rewind** allows the operator to rewind multiple rolls from a single web simultaneously after slitting. It includes a 3" air core and a separate second Rewind Control Panel located at the Master Control Panel.
- **6 ft or 9 ft long top stacker** for stacking printed sheets of irregular shapes in top-to-bottom order. It includes all appropriate mounting brackets, air bar, acceleration section to separate sheets, drive pulley, belt tightener, guard, support bar and Top Stacker Control Panel which includes the air bars “ON/OFF” switch, air pressure gauge and regulator knob, and the conveyor speed knob. The top stacker can be purchased with a batch counter that can speed up the conveyor belt momentarily at a pre-selected count for batch separation.
- **Dual gearing** allows the operator to run more than one gear series on the same press. The press can be configured with both1/8 CP gears on the gear side of the press and 32 DP gears on the operator side of the press.
- **B-Bunch 590 Series Fan Folder** for folding the finished product to be shipped in boxes. This unit includes the fan folder adapter kit and fan folder drive.
- **T & P drop in type male/female punch** unit punches holes in the material that will later be used in tractor feed type equipment. This unit fits in either die slot.
- **I Kela drop in type hot foil stamp equipment** applies gold or foil stamp to the web while the press is running. This unit fits in either die slot.
- **Variable information system** for printing varying information or graphics while the press is running.
- **Corona Treaters** with support rolls, ozone destruct, auto power density and installation kit. This option allows the operator to treat the film surface for better ink adhesion.
- **Web Cleaners**, available in single or double side. This option cleans the surface of the web and picks up any contaminants prior to printing.
- **Static Eliminators** that help reduce any problems related to static. Helpful in maintaining the web clean and most advantageous in film applications.
- **Delam/Relam Unit**. This option is used with pressure sensitive material where the operator is required to separate the face stock from the paper support liner, print reverse on the backside (adhesive) and then relaminate the two substrates for final finishing.
- **Safety cages** installed to surround and guard the diecutting and printing stations.
- **Rotary Screen Printing** can be easily integrated for value added printing.

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ADDITIONAL INFORMATION:

- Standard (1) **one year warranty** applies to all press purchases.
- Press requires **100 PSI** of compressed for operation.
- Standard power requirements is **240 volts, 3 phase, 60 Hertz** and **380 volts, 3 phase 50 Hertz** @ 50 amps for the basic press plus 15 amps per print station. Other voltages are available upon request. (Amperage draw is approximate)
- Due to the modular Design, 1-inch thick side frames, the **Allied 500 Series Press** is one of the easiest and most popular designs to be used in customized configurations. If you have special application requirements please contact our main office.

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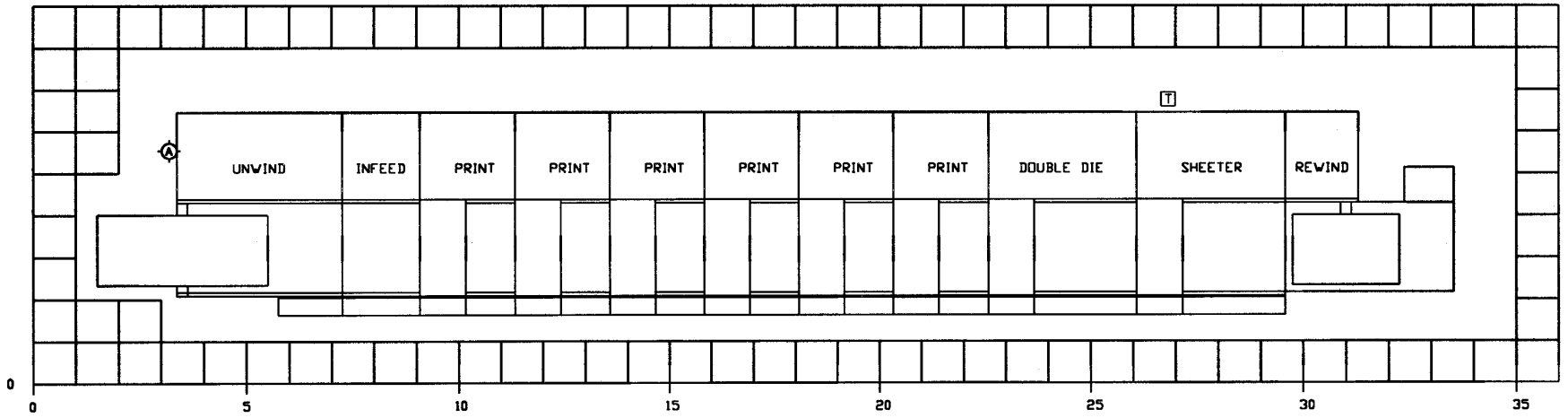
TYPICAL FOOT PRINT:



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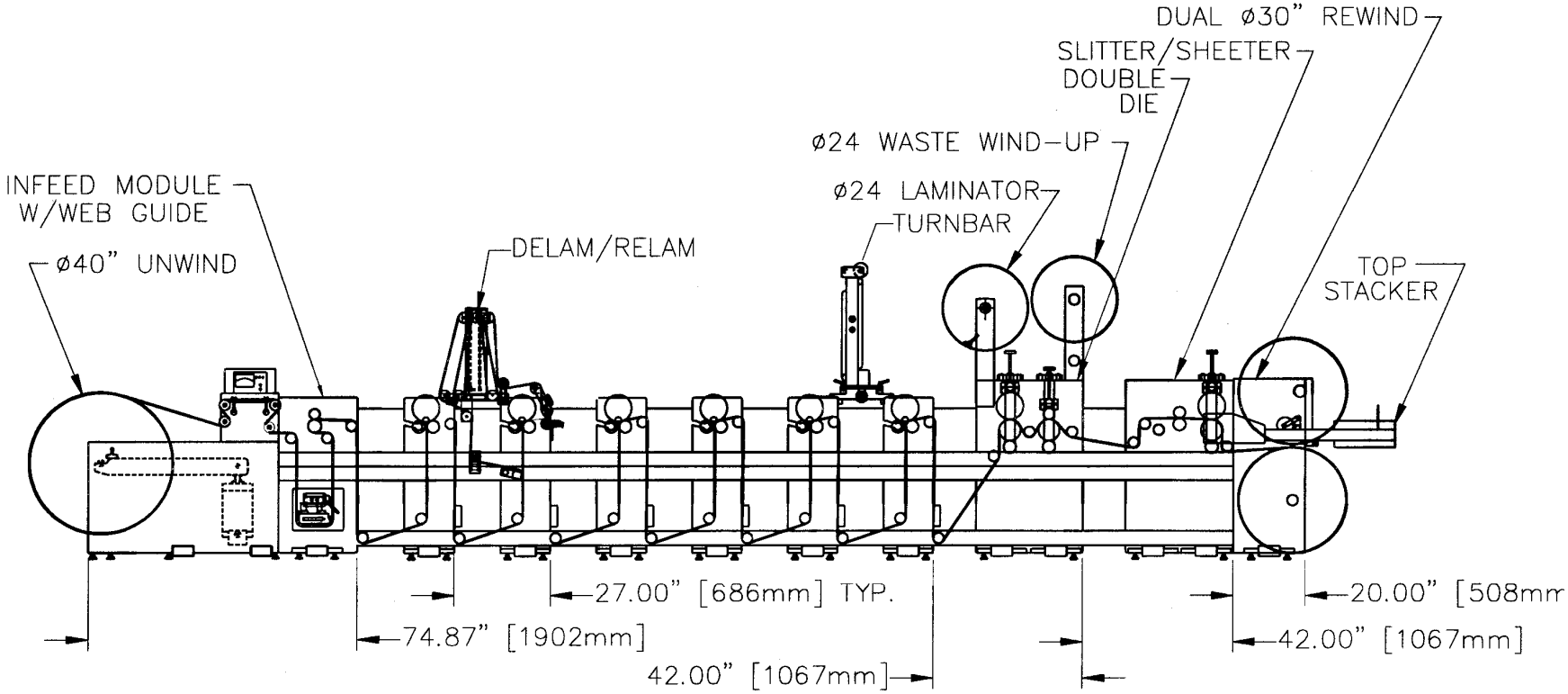
TYPICAL WEB PATH:

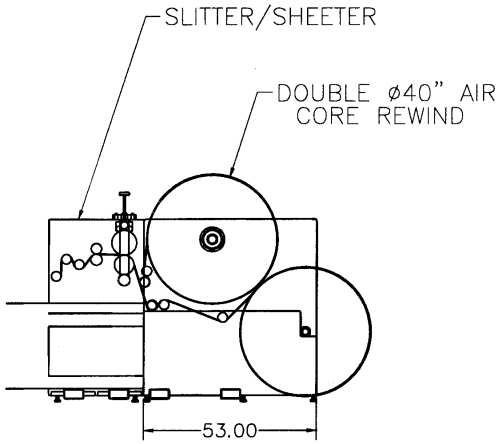


Shown with Dual 30" Rewinds.

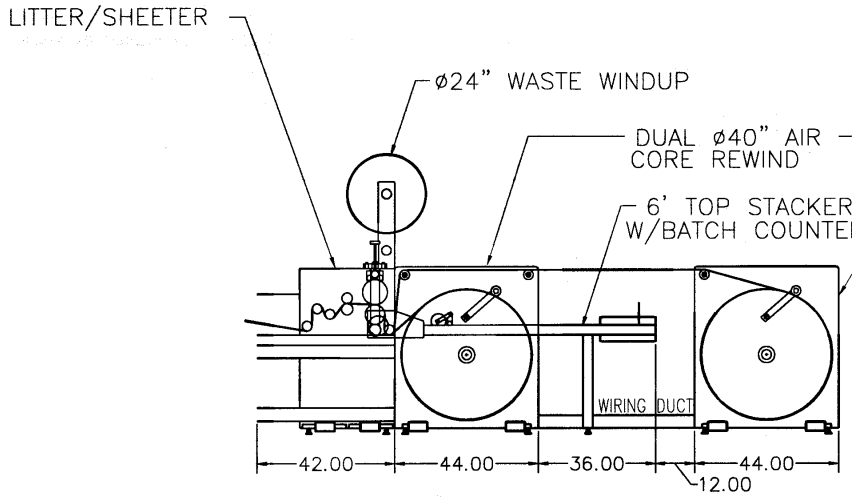
ALLIED 500 SERIES SPECIFICATIONS:

OPTIONAL DUAL 40” REWINDS

Available on all 500 Series Press



Dual 40” Rewind Stack Option



Dual 40” Rewind Inline Option

Used when a Top Stacker is present.