

Quality Parts

Produced on Whitney Combination Plasma-Cutting and Punching Machines

Whitney

The Leader in Plate Technology

Quality x 4

1. Quality of Internal Features

- Highly accurate holes can be produced to exacting tolerances by using high quality Whitney tooling.
- No internal blemishes on internal features
- Whitney's Punch and Shave procedure makes drill-quality holes by punching. This allows punched holes to be tapped, or used for pressed bushings.

2. Quality of Formed Features

- Whitney's unique system creates highly repeatable formed features such as counter-sinks, dimples, tread plate, and others.
- This is done by using bottoming tooling that is not susceptible to material variations.
- Whitney's in-house tooling engineering department can design tooling to your exact needs.

3. Quality of Feature-To-Feature Accuracy

- All Whitney combination machines have positioning accuracy of $\pm 0.005"$ (0.12 mm).

4. Quality of External Features

- High quality and highly accurate plasma cutting systems from Hypertherm®
- A range of plasma cutting processes are available to meet your standards.
 - High speed cutting with excellent quality
 - Lower amperage cutting for outstanding quality and vertical edges
- All plasma cutting systems create little or no dross, eliminating the need for subsequent cleaning operations.

Truck Accessories



Manufacturers of truck and car accessories know that proper fit and appearance is necessary for their products. Whitney's plasma-punch machines are a perfect fit for producing parts for products such as brush guards and towing accessories whether for aftermarket or OEM equipment.

Whether made from carbon or stainless steel or aluminum, the lowest per part cost and lowest cost of operation helps truck and car accessory manufacturers succeed in this highly competitive market.

Construction Equipment

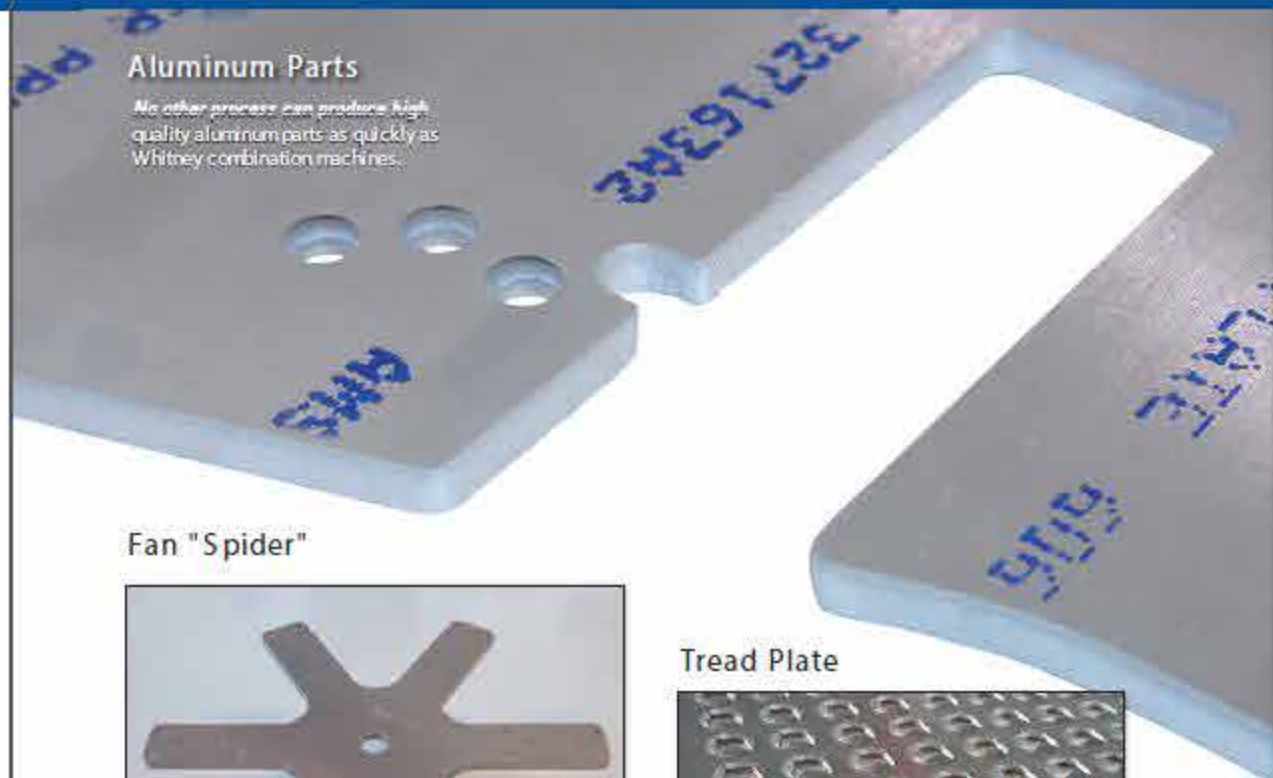


Large hole-intensive panels are frequently found in construction equipment. The Roll Over Protection Structure (ROPS) pictured here is part of a skid steer loader. The panel is made from .135" (3.5 mm) thick steel and requires 200 holes. The panel remains flat even with a mere .375" (10 mm) of web between the holes.

In addition to quality and repeatability, the large working area of Whitney's plasma-punch machines makes it the perfect manufacturing choice.

Aluminum Parts

No other process can produce high quality aluminum parts as quickly as Whitney combination machines.



Fan "Spider"



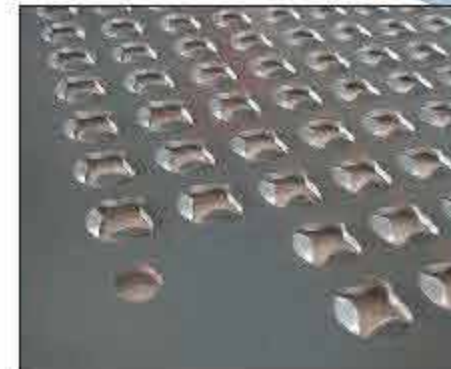
Hubs for automotive or truck fans are typically produced from materials ranging from 14 gauge to 1/4" (2 to 6 mm) thick. Although suppliers may need very large quantities, small to medium lot sizes are often required for aftermarket production.

Whitney's plasma-punch machines provide the critical high quality and the necessary repeatability.



Loader buckets, used on tractors and skid steer loaders, require heavy arms to raise and lower the buckets. These arms are commonly made on Whitney machines. The above arm is made of 3/4" (20 mm) steel, and was produced in 2 minutes, 21 seconds including automatic part removal.

Tread Plate



Mobile equipment and outdoor walkways are two typical tread plate applications. The treadplate shown here has an aggressive pattern of punched treads to provide positive traction.

Whitney machines can produce these formed treads in a single-hit (form-down) or two-hit (form-up) process. In addition to consistency and quality for the punched features, the part flatness is maintained.

Cut
Punch
Form
Drill & Tap

1.00" punched hole in 1.00" thick A36 steel.
Produced on 4400 MAX.

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- All Whitney combination machines have positioning accuracy of $\pm 0.005"$ (0.12 mm).

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Construction Equipment

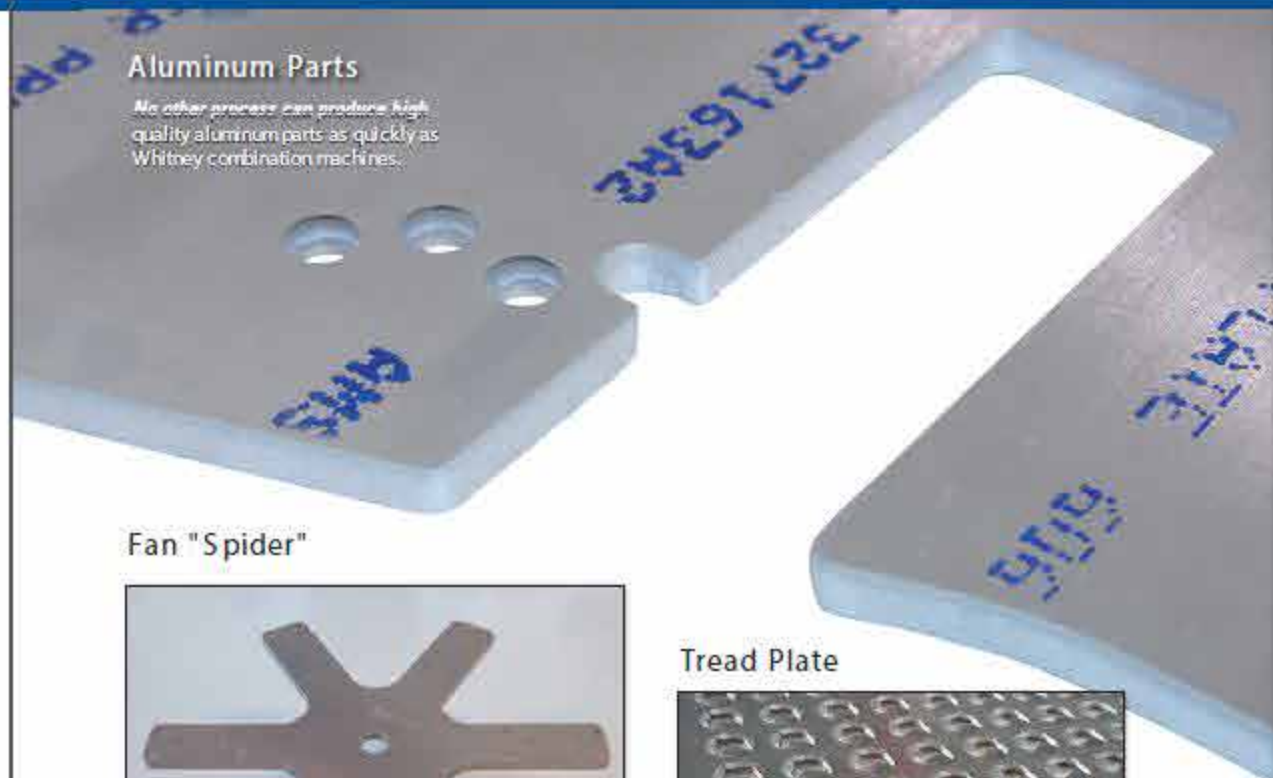


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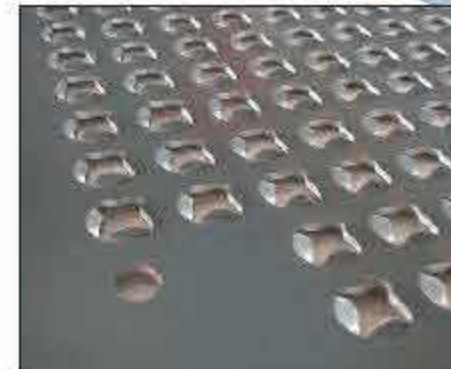
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Cut
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Form
Drill & Tap

3400 XP

Heavy Duty Machine / Affordable Price



Large 60" x 140" (1500 x 3500mm) Working Area

- Heavy duty drives and work clamps move work pieces up to 1,000 lbs (450kg).
- Material moves in X direction, punch and plasma torch move in Y direction. This prevents the work piece from "whipping", and helps maintain accuracy on even the heaviest work pieces.
- Maximum rapid speeds are achieved in all work piece weights.

Nine Station Tool changer

- Fast, simple tool changer design
- Any size tool fits any station – up to 5.00" / 127 mm diameter.

40 Ton Hydraulic Punching

- Double acting hydraulic cylinder keeps punch from "sticking" in work piece.
- Hydraulic clamping and stripping keeps material flat.
- Punches are hydraulically clamped in the cylinder to maintain precise and consistent alignment.

Uses 36TC Tooling Style

- Tools can be set-up off line – while the machine is running; tooling cartridges are quickly exchanged on the X-axis rail.

- Fast, easy set-up. Springs hold most components in place with few fasteners.
- Most Whitney 36TC tooling is available for fast (same-day) shipment.

State-of-the-Art Plasma Cutting Systems from Hypertherm

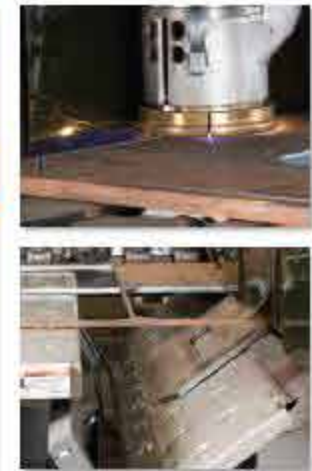
- HPR260 or HPR130 HyPerformance systems
 - Highly accurate, laser-like quality
 - HPR260 provides incredible cutting speeds in thick material.
 - Long Consumable Life
- **RAMPAGE!**
 - Very economical system – low operating costs
- All processes can be used to process Mild Steel, Stainless Steel, and Aluminum.

Standard Automated Part Removal

- 24" x 60" (600 x 1500mm) drop table removes parts automatically.
- Part detection system ensures that parts are removed.
- Average part removal time of only 2.5 seconds
- An optional conveyor brings parts to the operator as they are cut.

3400 HEAVY

Even More Capacity



Large 80" x 190" (2000 x 4800 mm) Working Area

- Heavy duty drives and work clamps move work pieces up to 1,800 lbs (800 kg).
- Material moves in X direction, punch and plasma torch move in Y direction. This prevents the work piece from "whipping", and helps maintain accuracy on even the heaviest work pieces.
- Maximum rapid speeds are achieved in all work piece weights.

Twelve Station Tool changer

- Fast, simple tool changer design
- Any size tool fits any station – up to 5.00" / 127 mm diameter.

55 Ton Hydraulic Punching

- Double acting hydraulic cylinder keeps punch from "sticking" in work piece.
- Hydraulic clamping and stripping keeps material flat.
- Punches are hydraulically locked in the punching cylinder to maintain precise and consistent alignment.

Uses 36TC Tooling Style

- Tools can be set-up off line – while the machine is running; tooling cartridges are quickly exchanged on the X-axis rail.

- Fast, easy set-up. Springs hold most components in place with few fasteners.
- Most Whitney 36TC tooling is available for fast (same-day) shipment.

State-of-the-Art Plasma Cutting Systems from Hypertherm

- HPR260 or HPR130 HyPerformance systems
 - Highly accurate, laser-like quality
 - HPR260 provides incredible cutting speeds in thick material.
 - Long Consumable Life
- **RAMPAGE!**
 - Very economical system – low operating costs
- All processes can be used to process Mild Steel, Stainless Steel, and Aluminum.

Standard Automated Part Removal

- 24" x 80" (600 x 2000 mm) drop table removes parts automatically.
- Part detection system ensures that parts are completely removed before the machine continues cutting.
- Average part removal time of only 2.5 seconds
- An optional conveyor brings parts to the operator as they are cut.

3700 SST

Heavy Duty / High Performance Machine



Large 60" x 120" (1500 x 3000mm) working area

- Heavy duty high speed drives move work pieces up to 1,000 lbs (450kg) at 2,000 inches/minute (50M/min).
- Material moves in X and Y direction, punch and plasma torch are stationary.
- Maximum rapid speeds are achieved in all work piece weights.

42 station tool changer

- Proven design, updated with high speed components.
- Any size tool fits any station – up to 5.00" / 127 mm diameter.

55 Ton Hydraulic Punching

- Double acting hydraulic cylinder keeps punch from "sticking" in work piece.
- Hydraulic clamping and stripping keeps material flat.
- Punches are hydraulically clamped in the cylinder to maintain precise and consistent alignment.
- Optional rotary ram can rotate any tool to any angle in any thickness.

Takes 36TC Tooling Style

- Tools can be set-up off line – while the machine is running.
- Fast, easy set-up. Springs hold most components in place with few fasteners.
- Most Whitney 36TC tooling is available for fast (same-day) shipment.

State-of-the-art Plasma Cutting Systems from Hypertherm

- HPR260 or HPR130 HyPerformance systems
 - Highly accurate, laser-like quality
 - HPR260 provides incredible cutting speeds in thick material.
 - Long Consumable Life
- **RAMPAGE!**
 - Very economical system – low operating costs
- All processes can be used to process Mild Steel, Stainless Steel, and Aluminum.

Standard automated part removal

- 18" x 24" (450 x 600mm) drop table removes parts automatically.
- Part detection system ensures that parts are removed.
- Average part removal time of only 1.5 seconds
- An optional conveyor brings parts to the operator as they are cut.

Automatic lubrication system reduces the amount of necessary preventive maintenance.

Standard conveyors for removing punch slugs and plasma cut slag

4400 MAX

Maximum Duty Machine – for Heavy Applications



Extra Large 96" x 170" (2500 x 4325mm) working area

- Heavy duty drives and work clamps move work pieces up to 4,900 lbs (2200kg).
- Material moves in X direction, punch and plasma torch move in Y direction. This prevents the work piece from "whipping", and helps maintain accuracy on even the heaviest work pieces.
- Maximum rapid speeds are achieved in all work piece weights.
- Optional X-Axis extension for processing 20 ft (6000mm) parts without repositioning.
- Optional 120" (3000mm) throat machine for extra-wide applications.

Three Retractable Work Clamps

- Work clamps move out of the way when the punch, torch or drill enter the avoidance zones.
- This eliminates dead zones – all of the material can be accessed by the machine.
- Machines with the optional X-Axis extension have four retractable work clamps.

Sixteen station tool changer

- Fast, simple tool changer design
- Any size tool fits any station – up to 3.00" / 75mm diameter.

100 Ton Hydraulic Punching

- Double acting hydraulic cylinder keeps punch from "sticking" in work piece.
- Hydraulic clamping and stripping keeps material flat.

- Punches are hydraulically clamped in the cylinder to maintain precise and consistent alignment.

Uses 44TC Tooling Style

- Tools can be set-up off line – while the machine is running; tooling cartridges are quickly exchanged in the tool changer.
- Fast, easy set-up. Springs hold most components in place with few fasteners.
- Most Whitney 44TC tooling is available for fast (same-day) shipment.

State-of-the-art Plasma Cutting Systems from Hypertherm

- HPR260 or HPR130 HyPerformance systems
 - Highly accurate, laser-like quality
 - HPR260 provides incredible cutting speeds in thick material.
 - Long Consumable Life
- **RAMPAGE!**
 - Very economical system – low operating costs
- All processes can be used to process Mild Steel, Stainless Steel, and Aluminum.

Standard automated part removal

- 24" x 96" (600 x 2500mm) drop table removes parts automatically.
- Average part removal time of only 6.0 seconds
- An optional conveyor brings parts to the operator as they are cut.

Automation

For 3400 XP Plasma-Punch Combination Machines

PlatePARTNER™ Semi-Automatic Loading System (optional)

Available for NEW Whitney 3400 XP
and 3700 SST Products

Available as a RETROFIT on 3400 RTC,
3500 ATC, 3700 ATC Products

- Affordable automation.
- Handles raw material up to machine capacity.
- Vacuum system automatically picks up a single piece of raw material, and places it on the infeed ball transfer table through program command.



PartSCHEDULER™ Automation Software

Available on NEW 3400 XP Automated Systems

PartSCHEDULER makes it possible for automated solutions to run in an unattended environment.

Features of PartSCHEDULER are:

- Automatically loops programs the desired number of times.
- Continually selects the next programs in priority sequence.
- Initiates cycle start automatically for truly unattended operation.
- Selects programs from networks.
- Time and date stamp for job history.



Applications

For Plasma-Punch Combination Machines

- Trucks
- Trailers
- Dump Bodies
- Farm Tractors and Implements
- Earthmoving Equipment
- Fork Trucks
- Paving Equipment
- Boom Lifts and Scissors Lifts
- School Buses and Coaches
- Recycling Equipment
- Tree Chippers and Stump Grinders
- Snow Plows and Salt Spreaders
- Grain and Water Storage
- Large Transformers
- Electrical Switchgear
- Rail Cars
- Trailer Hitches
- Containers
- Military Vehicles
- Mowing Equipment
- Emergency Vehicles
- Oilfield Equipment
- Loader Buckets



Cut
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Drill & Tap

1.25" punched and shaved vertical hole in 1.00" thick A36 steel. This was done by pre-punching the hole with a one inch punch (on left), and shaving the hole to its final size (on right) for tapping purposes, or for installing a bushing. Produced on 4400 MAX.

More parts. Better quality. Higher ROI.

Whitney Plasma-Punch Combination Machines

Outstanding value

Fast cutting speeds. Dross-free, weldable profile edges from RAMPAGE! or HPR260. Fast punching and forming. Quality parts at speeds much faster than lasers.

Superior performance.

Multiple tool stations. Large work envelope. Automatic parts removal via drop door. Remote diagnostics for fast service solutions.

Unmatched quality.

Heavy-duty, easy-to-use, reliable machinery. Only the best from Whitney.

Only from the Leader in Plate Technology.



New Machine Model! 3400 HEAVY



Whitney

The Leader in Plate
Technology

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