accu-kut

The **AKS Cutting Systems "accu-kut"** is the industry standard in premium, high accuracy, high performance, high production, unitized platform, Hy-Defintion® plasma cutting.

The **AKS "accu-kut"** is a CNC x-y programmable plasma cutting system that combines the best of Hypertherm SureCut™ Technology with over 100 years of AKS superior machine experience.

The **AKS "accu-kut"** is manufactured to the highest machine tool standards incorporating a modular uni-frame design which provides the highest accuracy, rigidity and stability. The **AKS "accu-kut"** unitized frame is machined in one single set-up, resulting in the highest achievable accuracies of motion of any plasma cutting system on the market. The **AKS "accu-kut"** uses the same controls, motors, drives and controller as all **AKS Cutting Systems** achieving superior motion accuracy and precision.

The **AKS "accu-kut"** uses **standard** all **Hypertherm** technology including:

- **Hypertherm** Plasma Power Supply Unit
- **Hypertherm** Edge Connect™ CNC Controller
- **Hypertherm** Phoenix Operating Software

- **Hypertherm** ProNest™ Programming Software
- **Hypertherm** Sensor™ Advanced Torch Height Control (THC)
- **Hypertherm** Torch Head and Consumables

The **AKS "accu-kut"** is a standard down draft table with multi-zone operation for optimum smoke collection and control. (Smoke collector filtration unit or blower fan must also be included.) The **AKS "accu-kut"** standard down draft table takes full advantage of the Hy-Definition plasma cutting capability and optimizes the cutting speed and edge quality, with a simpler, smoother and cleaner cutting operation, superior to water table cutting systems, which sometimes interfere with the cutting process, often resulting in excess dross and slag.

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CUTTING SYSTEMS

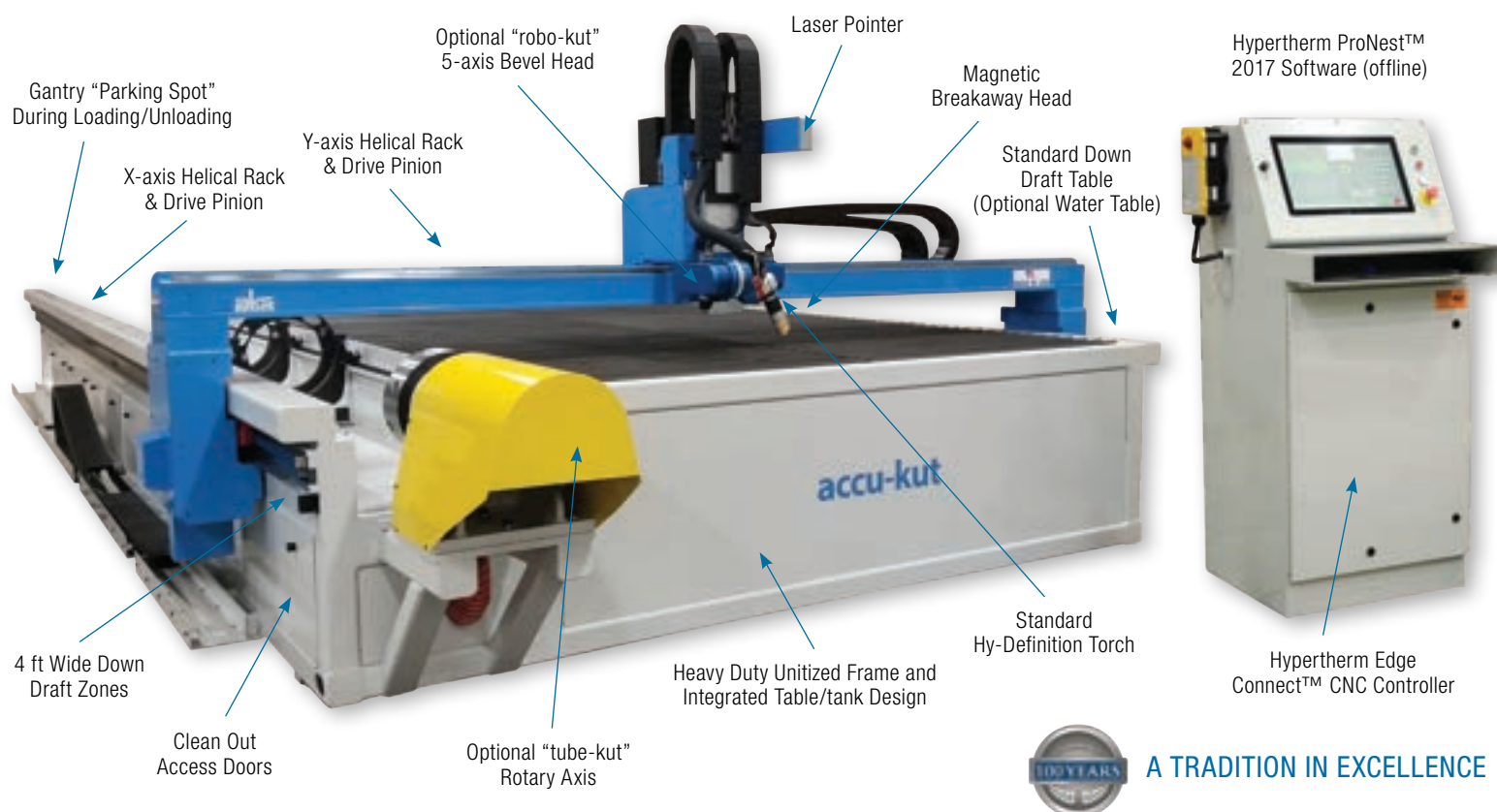# The AKS "accu-kut" offers these unique features & benefits:

- Heavy-Duty "Unitized" One-Piece Frame Machine Tool
- Removable/Replaceable Slat Table System
- Cutting Table 4" Thick Z-axis Clearance Standard
- Standard Down Draft Table (optional Water Table for 12 ft. length machines)
- Standard Automatic Multi-Zone Air Down Draft Control
- X-axis Dual Synchronized Helical Rack & Pinion Drives on both sides
- Y-axis Bridge Single Helical Rack & Pinion Drive
- Z-axis Hypertherm Sensor™ Advanced Torch Height Control (THC)
- Hypertherm Hy-Definition HPR and XPR Family Plasma Power Unit & Torch
- Hypertherm Auto Gas Control Console
- Side Clean-Out Doors for Manual Scrap/Slag Removal
- Magnetic Breakaway Torch
- Laser Pointer for Plate Alignment and Location Finding
- Hypertherm Edge Connect™ CNC Controller
- 19" Color Touch Screen Operator Control Console
- Hypertherm ProNest™ Programming Software
- +/-.003" per 3' Positioning Accuracy of Motion
- 1200 ipm travel speed
- Optional AKS "robo-kut" 5-Axis Bevel Cutting Head
- Optional AKS "tube-kut" Rotary Axis Tube/Pipe Cutting Unit

Hypertherm

☑ SureCut™

AKS Cutting Systems is a genuine **Hypertherm SureCut™ Technology Integrator** which enables users to fully optimize their plasma cutting process with exclusive features like:

- **True Hole®**
- **True Bevel™**
- **Rapid Part™**
- **Power Pierce™**
- **Optimized Process Parameters**
- **Optimized Consumable Life**

Gantry "Parking Spot" During Loading/Unloading

X-axis Helical Rack & Drive Pinion

Y-axis Helical Rack & Drive Pinion

Optional "robo-kut" 5-axis Bevel Head

Laser Pointer

Magnetic Breakaway Head

Standard Down Draft Table (Optional Water Table)

Hypertherm ProNest™ 2017 Software (offline)

4 ft Wide Down Draft Zones

Clean Out Access Doors

Optional "tube-kut" Rotary Axis

Heavy Duty Unitized Frame and Integrated Table/tank Design

Standard Hy-Definition Torch

Hypertherm Edge Connect™ CNC Controller

A TRADITION IN EXCELLENCE

The AKS "accu-kut" offers these optional upgrade items:

Upgrade to Larger Sizes – the same AKS "accu-kut" chassis and performance designed into longer and/or wider cutting envelopes. Standard widths of 6', 8', and 10' and standard lengths of 12', 24', 36', and 48' are available in different modular combinations. All axes utilize the same precision ground helical rack and pinion drive system as all AKS "accu-kut" machines.

Upgrade to Larger Hypertherm Power Supply – the AKS "accu-kut" comes standard with Hypertherm HPR-XD "Hy-Definition™" or XPR "X-Definition™" Plasma Power Supply units and torches. The AKS "accu-kut" is specifically designed for premium accuracy, maximum speed and superior performance to take advantage of the Hy-Definition arc beam. The "accu-kut" is integrated with the Hypertherm Hy-Defintiton capability and utilizes the HPR or XPR family of cutting power supply units provides Hypertherm SureCut technology included.

AKS robo-kut – is the most powerful plasma cutting 5-axis bevel head in the industry and is protected by several U.S. Patents. The AKS "robo-kut" is capable of +/-45 degrees for A,V,K, X, top-Y and bottom-Y style bevel cuts for weld prep applications, countersinks, and chamfers, and also is capable of precision taper compensation or "back-beveling". Most importantly, the AKS "robo-kut" can produce a ½" dia "bolt ready hole" in 1" thick steel plate, for a ½ : 1 ratio for hole diameter: thickness in many applications, which is superior over competitive machines which are limited to traditional 1 : 1 ratio only. The AKS plasma "robo-kut" incorporates robotic style precision gearing and planetary gearboxes that can be incremented in arc-seconds, or fractions of degrees, for tightest precision and accuracy. The "robo-kut" performs continuous unlimited rotation without interruption, for cutting of the most complex 5-axis parts without having to stop and unwind; and includes a magnetic breakaway head to prevent damage upon a crash.

AKS tube-kut – is one of the most valuable and productive AKS accessories. The tube/pipe cutting capability complements the flat plate cutting area. This unit greatly increases flexibility and capability, while saving floor space and capital investment, compared to a dedicated tube & pipe cutting system. It includes an integrated servo-controlled rotary axis, controlled by the CNC Controller, which holds the tube/pipe via a headstock 4-jaw chuck which rotates as the plasma torch cuts the tube wall. Together with the AKS "robo-kut" 5-axis Bevel Head and servo-controlled THC—Torch Height Control, and using the Hypertherm "Rotary Tube Pro" Software Module, the "tube-kut" cuts up to 8"x8" standard tube or 10.75" OD round pipe, up to 20 ft. long, with maximum weight of 500kg (1200 lb). Also included are two (2) standard "steady-rest" manual clamping supports.

Smoke Collector Filtration Unit – coupled with the Down Draft Table, the Smoke/Dust Collector Filtration Unit provides suction air capable of both removing and filtering the plasma cutting process smoke. It is a stand-alone unit either installed indoors, near the plasma cutting machine, or outdoors for quieter operation. The Smoke Collector unit contains a series of high capacity HEPA filters which efficiently re-circulate clean air back into your plant.

Oxy-Fuel Torch – *complimentary* cutting technology on a separate carriage, but on the same bridge as the plasma torch. The Oxy-Fuel torch is powered by either independent servo control, or mechanical slave linkage. Also included standard features are: auto gas control, built-in auto remote ignition, integrated Coolex technology, digitally controlled high capacity manifold gas system, pre-heating transducer and fuel gas transducer, and automatic settings for faster oxygen and gas pre-heating, cutting speed and kerf. The Oxy-Fuel torch uses Oxygen for cutting 1/8"- 6" thick carbon steel and cannot cut stainless steel and aluminum.

RECOMMENDED MACHINE LAYOUT

ELECTRICAL CONNECTION
208~230V 3PH
60HZ 20A FLA

3'

2'-2"

7'-6"

SHOP AIR AND WATER CONNECTION
1/2" WATER TUBING REQ. (WATER TABLES ONLY)
300 SCFH @ 90 PSI MINIMUM

3'

8'-10"

24'-4"

3'

3'

8' EARTH GROUND

3'

2'-8"

2'-5"

7'-11"

2'-6"

3'

HYPERTHERM XPR300
480V 3PH 60HZ 86A FLA
CLEAN, DRY COMPRESSED AIR — 250 SCFH @ 110 ±5 PSI
OXYGEN, 99.5% PURE — 150 SCFH @ 110 ±5 PSI
NITROGEN, 99.99% PURE — 380 SCFH @ 110 ±5 PSI

22'-4"

HYPERTHERM EDGE CONNECT™ CONTROLLER

The **AKS "accu-kut"** utilizes the **Hypertherm EDGE Connect™ CNC Controller**, the leading plasma cutting controls package in the industry. The **EDGE Connect™** combines Hypertherm's embedded expertise foundation with AKS Cutting Systems customization.

- Utilizes **Hypertherm Phoenix™** Operating Software
- **19" Color Projected Capacitive Touch Screen**
- One touch access for support documentation including cutting optimization tips, consumable change instructions and diagnostic tools

- Configurable **Watch Windows™** enable on-screen real time monitoring of key process performance parameters while cutting
- **Two Year Warranty**
- **Remote Help™** over the internet reduces down time and the need for on-site visits

HYPERTHERM PRONEST PROGRAMMING SOFTWARE

- **Powerful single solution** CAD/CAM nesting software
- Increases material savings, boosts productivity, reduces operating costs and improves part quality
- Compatible with most drawing formats with **direct import** of **.dxf** and **.dwg**
- Uses the patented **CutPro® Wizard**, with database cut charts, so even new operators can be ready to cut production parts in minutes
- Enables users to obtain optimal part cut quality with *automatic* nesting and *automatic* process optimization
- Backed by **Hypertherm's global network** of professionals for service, support and troubleshooting

Hypertherm
ProNest® 2017
CAD/CAM Nesting Software

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