

**APL-G 30/60**  
**GANTRY PLATE PROCESSOR**  
**10' x 20'**



The product images shown are for illustration purposes only and may not be an exact representation of the product.

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Thank you very much for your inquiry. We are pleased to submit the proposal for **APL-G 30/60 Combined Drilling and Oxy-Fuel Plasma Cutting Machine** for your consideration.

We have over 1,000 new and used machines in stock, please visit our website for a complete listing at [www.vanderzielmachinery.com](http://www.vanderzielmachinery.com)

If you need anything else please let us know. Please feel free to contact me should you require any additional information or assistance.

Thank you for the opportunity!  
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## AKYAPAK EXPORTS TO 6 CONTINENTS



### HIGH TECHNOLOGY FROM TURKEY TO THE WORLD

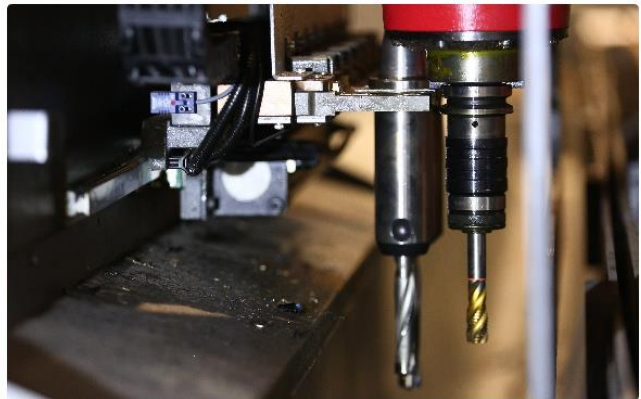
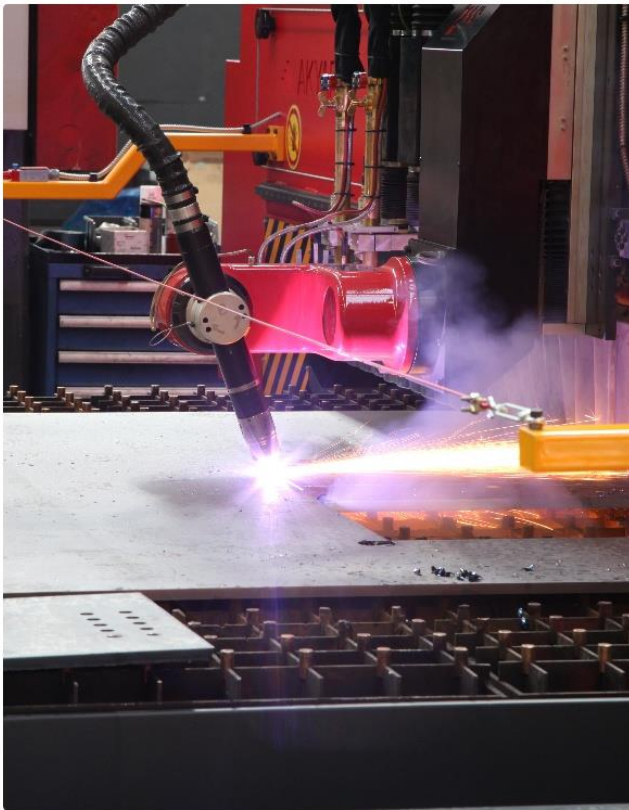
One of the longest-established producers in Bursa, Akyapak celebrates its 58<sup>th</sup> foundation anniversary. Akyapak proudly exports metal-bending, drilling, cutting machines and welding solutions to 110 countries in 6 continents and delivers high quality from Turkey to the world.

Akyapak is a source of pride to Bursa and Turkey with its total 345,000 ft<sup>2</sup> covered technological manufacturing facilities. Akyapak, established in 1962 in Bursa, is continuing to shape technology in Turkey and the world with its 370 qualified and experienced staff.

Akyapak has taken new steps to reinforce its strong image all over the world and most recently, opened Akyapak USA and Akyapak Russia offices in Tampa, Florida and Moscow.

## The Bridge Between Operations

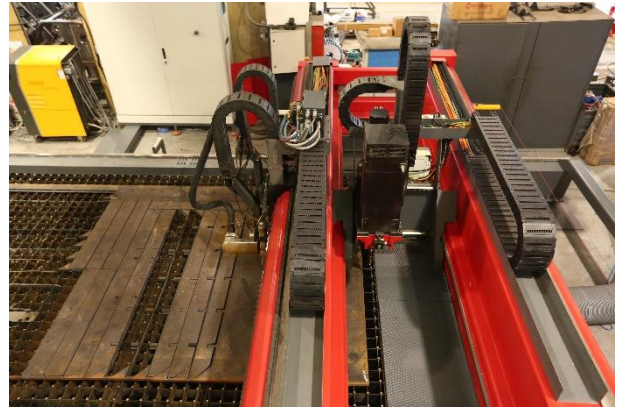
APL-G Gantry is designed with the ability to drill, cut and mark to increase efficiency, combining versatility and accuracy. APL-G Gantry model is a CNC machine produced with the half a century of experience of Akyapak Machinery. The machine frame is made of welded steel which is stress relieved, heat treated and posiotined with linear guides to drill and cut heavy duty plates to get perfect results. APL-G Gantry is designed with highest technology and controlled completely by CNC system through servo motors.



The eight-station automatic tool changer (ATC) is provided as standard and scribe marking can be executed by placing a tool in ATC without manual intervention. The oxy & plasma cutting operations are provided as standard features as well. A plasma torch is standard in order to get the best cutting results. Fumes and dusts generated during the process can be extracted and filtered through a highly effective fume extraction unit.

## DRILL UNIT

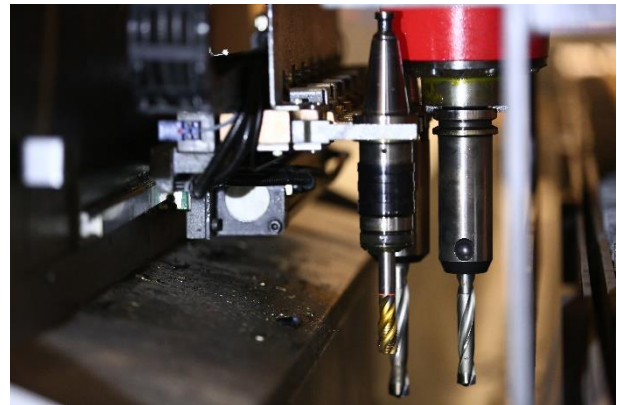
The drilling unit's torque is suitable for carbide. Tapping, countersinking, marking and basic milling can be executed. Horizontal and vertical movements of the spindle are realized by pre-loaded ball screws on linear guides. All movements are realized by servo motors so that maximum accuracy is achieved. The spindle speed can be adjusted steplessly. The workpiece is kept firm and stationary during drilling process by two vertical pressing arms. Therefore vibrations are prevented which is critical for drill success.



## AUTOMATIC TOOL CHANGER

8-station automatic tool changing (ATC) unit is provided as a standard feature. Tools can be changed without manual intervention, thus productivity increases and operator's workload is decreased.

The ATC system enables the machine to change tools quickly, eliminating manual intervention, thus reducing the downtime of the machine.



## MARKING

Marking is performed by scribe marking tool revolve at high speed. It can be seen after painting, shot blasting, coating, etc.

Marking can be done with plasma by automatically passing over to argon gas. The marking amperage can be calibrated to obtain the desired visibility. The marking speed changes depending on the thickness.

Marking depth	30 ga. – 19 ga.
Air motor	87 psi - 19000 rpm

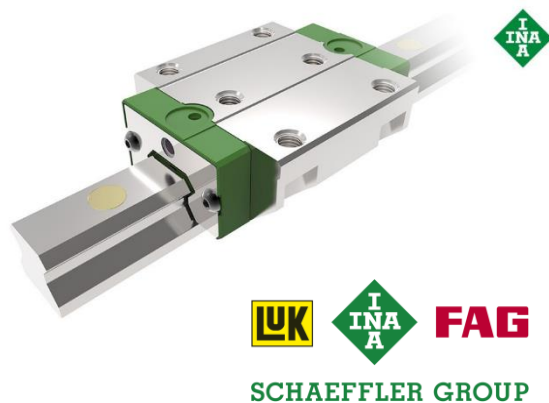
## MINIMUM QUANTITY LUBRICATION

MQL minimizes the environmental impact using 100% natural, vegetable oil-based mixture and eliminating the need for cleaning coolant liquid. Almost-dry processing allows the machine to proceed to the next operation (welding, marking, etc.) without wasting time for coolant liquid disposal. The lubricants reduce friction better than conventional oils, thus longer tool life is obtained, resulting in shorter downtime of the machine. (Approx. 25% faster drilling speed and 20% longer tool life).



## AXIS MOTIONS

The roller linear guidance system, which provides high rigidity and a load carrying capacity, is employed in the motion axes. This system supports all loads and moments from all directions. These components are chosen from high quality INA - Schaeffler Group® (Germany) products or the equivalents. Accurate positioning and high feed rates are guaranteed with servo motor driven ball screws. The components are chosen from Atlanta® (UK), Schneeberger® (Germany), WHM Herion® (Germany) or the equivalents.



## DRILLING AND CUTTING TABLE

The cutting tables is designed to provide stable positioning during processing. The tables feature changeable bronze parts on top which protects the equipment and provides safer working environment.

### TABLE SPECS.

Height	2.62 ft.
Min. material size	39.3" x 39.3"
Table capacity	164 lb/ft <sup>2</sup>



## FUME AND DUST CONNECTION UNIT

This system collects dust, fume and slag. The gases generated during oxy-plasma cutting process are filtered and released into the air without pollutants.

All our filters are in compliance with CE regulations and following international standards:

- 2006/42/AT ANNEX/EK 1, TS EN ISO 12100:2010



# XPR300™

The most significant advance in mechanized plasma cutting technology redefines what plasma can do.

## Industry leading cut quality - X-Definition

The XPR advances HyDefinition® cut quality by blending new technology with refined processes for next generation, X-Definition™ cutting on mild steel, stainless steel and aluminum.

- Consistent ISO range 2 results on thin mild steel and extended range 3 cut quality on thicker mild steel and stainless steel
- Superior results on aluminum using Vented Water Injection™ (VWI)

## Optimized productivity and reduced operating costs

- Significantly reduced operating costs than previous generation technology
- Increased cut speeds on thicker materials
- Dramatic improvement in consumable life on mild steel applications
- Thicker piercing capability than competitive plasma systems

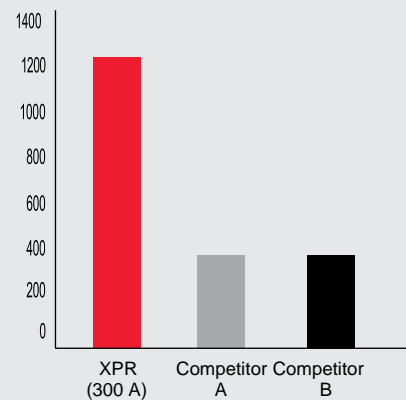
## Engineered system optimization and ease of use

- Ramp down error protection significantly increases realized consumable life
- Reduces the impact of catastrophic electrode blowouts which can damage the torch at high current levels
- Automatic system monitoring and specific troubleshooting codes for improved maintenance and service prompts
- EasyConnect™ torch lead and one hand torch-to receptacle connection for fast and easy change-outs
- QuickLock™ electrode for easy consumable replacement
- WiFi in the power supply can connect to mobile devices and LAN for multiple system monitoring and service



Mild steel		mm	inches
Pierce capacity	(argon-assist)	50	2
	(standard O <sub>2</sub> )	45	1-3/4
Severance		80	3-1/8
Stainless steel			
Pierce capacity		38	1-1/2
Severance		75	3
Aluminum			
Pierce capacity		38	1-1/2
Severance		50	2

Number of 20-second starts with 5 % ramp-down errors





## Process control and delivery

Three gas connect console options offer unmatched mild steel cut quality with each console delivering successively enhanced cutting capabilities on stainless steel and aluminum. All consoles can be fully controlled through the CNC for high productivity and ease of use.



Core™ console



Vented Water Injection™ (VWI) console



OptiMix™ console

## Specifications

Maximum open-circuit voltage	360 VDC
Maximum output current	300 A
Maximum output power	66.5 kW
Output voltage	50–222 VDC
100 duty arc voltage	222V
Duty cycle rating	100 at 66.5 kW, 40° C (104° F)
Operational ambient temperature range	-10° C–40° C (14° F–104° F)
Power factor	0.98 @ 66.5 kW
Cooling	Forced air (Class F)
Insulation	Class H
EMC emissions classification (CE models only)	Class A
Lift points	Top lift eye weight rating 680 kg (1,500 lb.) Bottom lift truck slots

Hypertherm's quality management system is registered to the International Standard ISO 9001: 2015.

Hypertherm's full-system warranty provides complete coverage for one year on the torch and leads and two years on all other system components.

Hypertherm's plasma power supplies are engineered to deliver industry leading energy efficiency and productivity with power efficiency ratings of 90% or greater and power factors up to 0.98. Extreme energy efficiency, long consumable life, and lean manufacturing lead to the use of fewer natural resources and a reduced environmental impact.

Environmental stewardship is one of Hypertherm's core values, and it is critical to our success and our customers' success. We are striving to reduce the environmental impact of everything we do. For more information: [www.hypertherm.com/environment](http://www.hypertherm.com/environment).



Hypertherm, HyDefinition, XPR, X-Definition, Vented Water Injection, EasyConnect, QuickLock, Core, and OptiMix are trademarks of Hypertherm, Inc. and may be registered in the United States and/or other countries. All other trademarks are the properties of their respective owners.

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Console	Cutting gases	Current (A)	Thickness (mm)	Approximate cutting speed (mm/min)	Thickness (in.)	Approximate cutting speed (ipm)
<b>Mild steel</b>						
Core, VWI, and OptiMix	O <sub>2</sub> plasma O <sub>2</sub> shield	30	0.5	5348	0.018	215
			3	1153	0.135	40
			5	726	3/16	30
	O <sub>2</sub> plasma Air shield	50	3	3820	0.105	155
			5	2322	3/16	95
			8	1369	5/16	55
	O <sub>2</sub> plasma Air shield	80	3	5582	0.105	225
			6	3048	1/4	110
			12	1405	1/2	55
	O <sub>2</sub> plasma Air shield	130	3	6502	0.135	240
			10	2680	3/8	110
			38	256	1-1/2	10
O <sub>2</sub> plasma Air shield	170	6	5080	1/4	200	
		12	3061	1/2	115	
		25	1175	1	45	
O <sub>2</sub> plasma Air shield	300	60	152	2-3/8	6	
		12	3940	1/2	155	
		25	1950	1	75	
N <sub>2</sub> shield	300	50	560	2	21	
		80	165	3	7	
		<b>Stainless steel</b>				
Core, VWI, and OptiMix	N <sub>2</sub> plasma N <sub>2</sub> shield	40	0.8	6100	0.036	240
			3	2683	0.105	120
			6	918	1/4	32
VWI and OptiMix	F5 plasma N <sub>2</sub> shield	80	3	4248	0.135	140
			6	1916	1/4	70
			12	864	1/2	34
OptiMix	H <sub>2</sub> -Ar-N <sub>2</sub> plasma N <sub>2</sub> shield	170	10	1975	3/8	80
			12	1735	1/2	65
			38	256	1-1/2	10
	H <sub>2</sub> -Ar-N <sub>2</sub> plasma N <sub>2</sub> shield	300	12	2038	1/2	80
			25	1040	1	40
			50	387	2	15
75	162	3	6			
VWI and OptiMix	N <sub>2</sub> plasma H <sub>2</sub> O shield	300	12	2159	1/2	85
			25	1302	1	50
			50	403	2	15
<b>Aluminum</b>						
Core, VWI, and OptiMix	Air plasma Air shield	40	1.5	4799	0.036	240
			3	2596	1/8	85
			6	911	1/4	32
VWI and OptiMix	N <sub>2</sub> plasma H <sub>2</sub> O shield	80	3	3820	1/8	140
			6	2203	1/4	80
			10	956	1/2	28
	N <sub>2</sub> plasma H <sub>2</sub> O shield	130	6	2413	1/4	95
			10	1702	3/8	70
			20	870	3/4	35
N <sub>2</sub> plasma H <sub>2</sub> O shield	300	12	2286	1/2	90	
		25	1302	1	50	
		50	524	2	20	
OptiMix	H <sub>2</sub> -Ar-N <sub>2</sub> plasma N <sub>2</sub> shield	300	12	3810	1/2	150
			25	2056	1	80
			50	391	2	15

## ECKELMANN E°EXC CONTROLLER

The E°EXC controller is the all-purpose hardware basis for PLC, motion control and CNC solutions. It supports numerous technology-specific functions and permits the development of sophisticated applications.

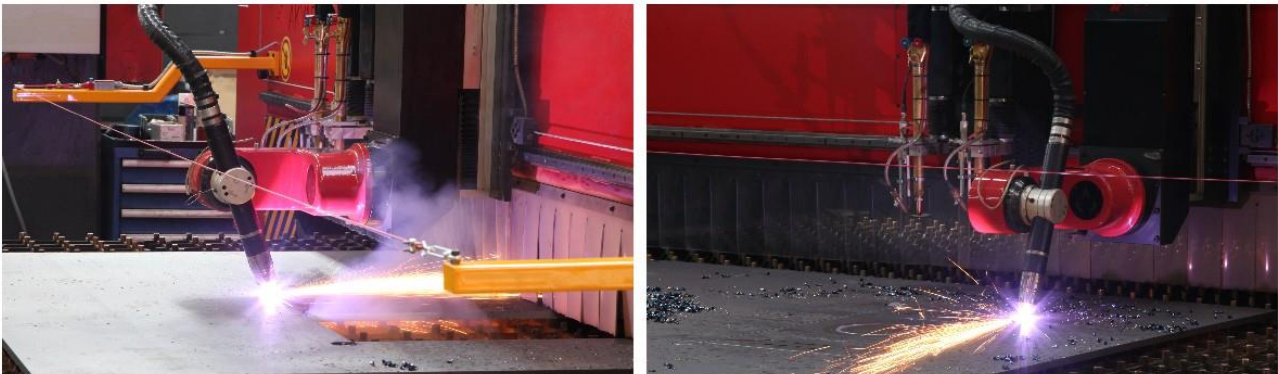


### E°EXC 89 Advantages

- Embedded controller up to 32 CNC and
- 64 Motion axes (combinable)
- Drive und I/O interfaces via EtherCAT® and CANopen®
- Modular fast E°UBM I/O modules also available for distributed operation
- Extremely short cycle times
- Low power consumption and heat (loss) input to switch cabinet

## 5-AXIS BEVEL HEAD

The bevel head which provides high accuracy and repeatability is offered as an optional feature.

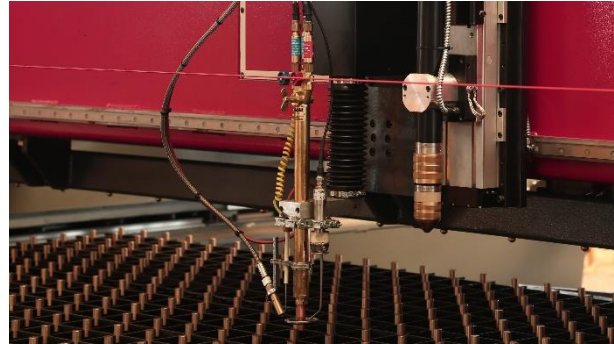
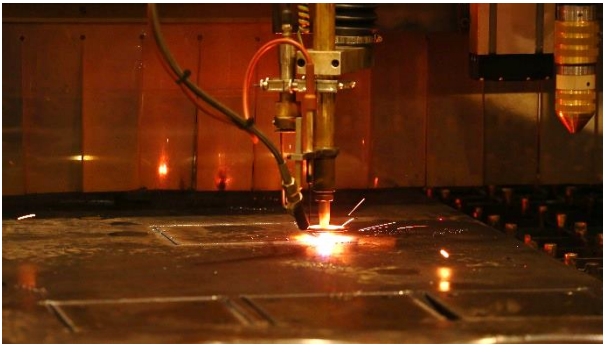


### TECHNICAL SPECIFICATIONS

	Axis A	Axis B
Servo Motors	Eckelmann	Eckelmann
Bevel Angle	± 50°	± 50°
Z-axis lifter stroke	20"	20"
Kinematics axis)	backlash < 1 arc/min	backlash < 1 arc/min

## OXY-FUEL CUTTING UNIT

The oxy cutting system provided on the machine can cut materials up to 4 inches. The gas system used during the cutting process is fed by a magnetic valve that has flashback protection. Ignition is automatically ensured during the cutting. A pressure limiter found on the circuit prevents the system from being higher or lower than the operating pressure. It is possible to cut with different gasses using different high-speed nozzles.



The oxy cutting system ensures the fully automatic cutting of the material. It is also possible to shorten the pre-heating period and immediately commence the cutting process for faster operation. When necessary, the operator can change the pre-heating period according to the required value. The standard heating speed can be set via the control panel.

Automatic height adjusting system is a standard piece of hardware for every oxy torch. The height over the material is measured with this contactless, capacitive sensor. High quality cutting results are obtained with accurately determined cutting measurements owing to the true values constantly being compared with the values identified by the controller. Tanaka brand oxy torch is available on the machine.

## CE AND INTERNATIONAL STANDARDS

All Akyapak Plate Processing Machines are in compliance with CE regulations and meet the following international standards.

Related Directives and Annex: 2006/42/EC Machinery Directive & 2014/35/EU Low Voltage Directive

Related Standards:

- EN ISO 12100:2010
- EN 12717:2001+A1:2009
- EN60204-1:2018



## SERVICE AND SPARE PARTS

With dedicated, specialized and experienced teams, Akyapak is with you even it cannot be with you to provide unparalleled technical and spare part services whether on-site or remote:

- On-site installation, training and consultancy service by qualified teams of expert
- Quick solutions without loss of time thanks to spare part stocks
- Instant error diagnosis, data analysis and support\*
- Remote support with augmented reality technology through smart phone, tablet and smart glasses\*\*

For technical service and spare part inquiries, reach us at [service@akyapakusa.com](mailto:service@akyapakusa.com) and +1 813 351 71 00.

\* Broadband internet connection is required for online services. The ethernet connection shall be provided by the customer to where the machine is installed.

\*\* Remote service with wearable augmented reality AUG is optional.



Remote service option with wearable augmented reality technology AUG

## TECHNICAL SPECIFICATIONS

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### OPERATING RANGE

<b>Min./Max. Plate Length</b>	feet	3.28 - 20
<b>Min./Max. Plate Width</b>	feet	3.28 - 10
<b>Min./Max. Plate Thickness</b>	inch	0.4 - 4*
<b>Working height</b>	feet	2.62

### DRILL UNIT

<b>Tool Holder</b>		BT-40
<b>Carbide Drill Diameter</b>	inch - Ø	7/16 - 1-9/16
<b>Thread Tapping</b>	inch	7/16 - 15/16 (M12 - M24)

### SPINDLE MOTOR

<b>Power</b>	HP	30 (conituous)
<b>Torque</b>	ft-lb	103
<b>Speed</b>	rpm	100 - 3000

\* 4" with oxy-cut. Please see the Hypertherm section above for more details with plasma cutting.

## QUOTATION

### EQUIPPED WITH

- **APL-G 10'x20' Gantry Plate Processor**
  - Hypertherm XPR 300 plasma unit (1)
  - Oxy-fuel cutting unit (1)
  - Vertical drilling unit (1)
  - Scribe marking
  - 8-station automatic tool changer
  - Minimum quantity lubrication (MQL) system
  - Automatic lubrication system
  - Air conditioning for electrical panel
  - Filtration unit
  - Eckelmann E°EXC 89 CNC
  - 17" CNC Screen (larger screen options are provided upon request)
  - Lantek Expert software (Auto Nesting and Common Line included)
  - DXF, DWG file import

	Price
<b>APL-G 10'x20' Gantry Plate Processor</b>	Call Vander Ziel Machinery for Price
<b>5-axis bevelhead</b>	Included
<b>20,000 rpm scribing tool</b>	Included
<b>8,000 m3/h filter unit</b>	Included



## HEADQUARTERS

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