

APW-3020BAI-ZZ

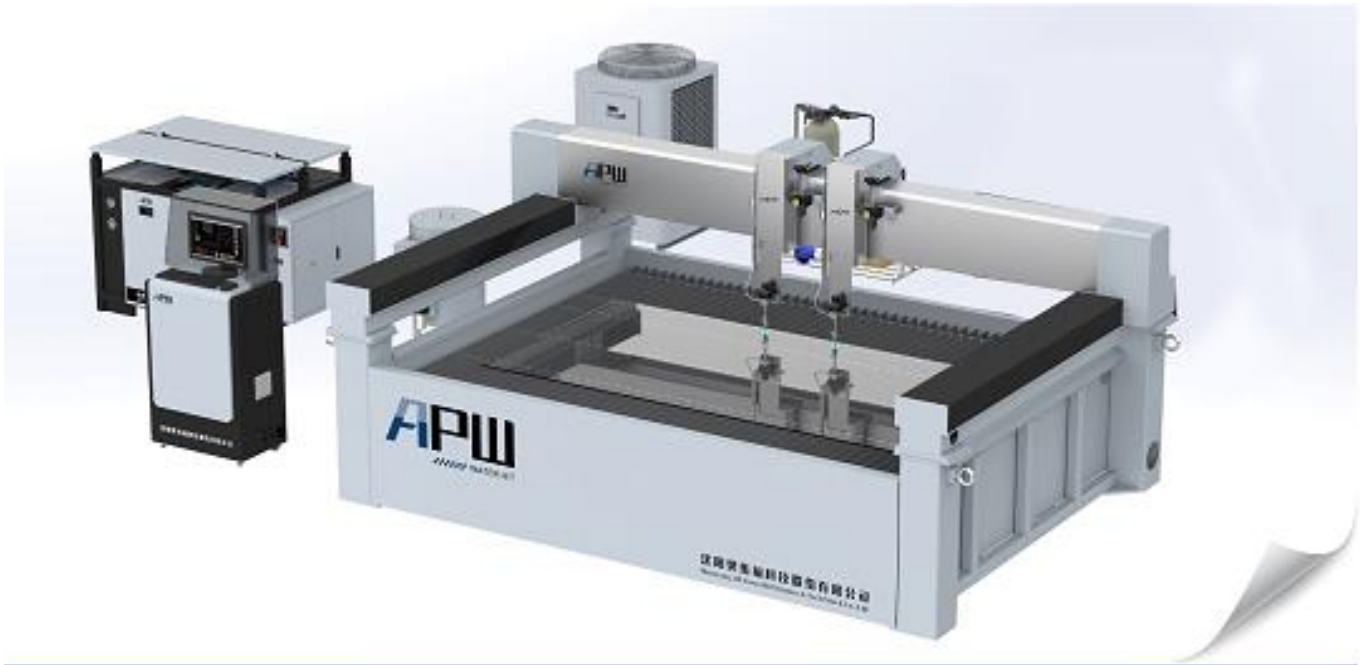
Integrated Dual-head Glass Waterjet Cutting Machine

1. Product Overview

The APW-3020BAI-ZZ is a new-generation integrated dual-head waterjet cutting machine developed specifically for glass processing applications.

Designed as an upgrade to traditional split-frame gantry dual-head waterjet machines, the APW-3020BAI-ZZ integrates the water tank, cutting table, and main machine structure into a single unit. While retaining the high productivity of dual-head cutting, it further improves overall structural rigidity, cutting accuracy, installation efficiency, and ease of maintenance.

The machine features a crane-liftable integrated design, minimizing onsite assembly and enabling rapid installation. It also makes future equipment relocation and production-floor reconfiguration easier.



2. Key Product Advantages

2.1 Integrated Machine Structure

From Split Assembly to Integrated Construction

Unlike traditional split-frame designs with separate water tanks and gantry structures, the APW-3020BAI-ZZ integrates the water tank, cutting table, and main machine structure into one unit.

The reinforced integrated structure increases overall machine rigidity while reducing the impact of split assembly and onsite adjustment on cutting accuracy.

Customer Benefits:

- Less onsite assembly
- Easier installation and commissioning
- Greater overall structural stability
- Crane-liftable for easier relocation
- Easier production-floor reconfiguration

2.2 High-Efficiency Dual-head Cutting

Dual Heads for Flexible Production

The machine comes standard with two cutting heads. Head spacing and the number of active cutting heads can be customized according to production requirements.

The dual-head configuration can process identical or different workpieces simultaneously, making it ideal for high-volume and multiproduct glass processing.

Customer Benefits:

- Higher throughput
- Shorter production cycles
- Adjustable cutting-head spacing
- Greater flexibility for different production requirements

2.3 High-Precision Motion System

From Assembly Adjustment to Precision Manufacturing

The Y-axis features reinforced column supports to increase structural rigidity over the full travel range.

Critical transmission mounting surfaces are machined as integrated reference surfaces, reducing cumulative errors associated with conventional split assembly.

Combined with high-precision servo motors, precision ball screws, and linear guides, the system delivers stable and accurate motion control.

Cutting accuracy: ± 0.10 mm

Repeat positioning accuracy: ± 0.05 mm

Customer Benefits:

- Improved dimensional consistency

- Reduced machining deviation

- Less rework and material waste

- Suitable for high-precision custom glass processing

2.4 Flexible Production Layout

Built for Today's Production—and Tomorrow's Automation

The crane-liftable integrated structure makes the machine easier to relocate and allows production layouts to be reconfigured when customers add automated loading/unloading systems, glass conveyors, robotic arms, or other auxiliary equipment.

Customer Benefits:

- Faster production-floor reconfiguration

- Easier future automation upgrades

- Lower production-line modification costs

- Greater long-term equipment value

2.5 Optimized Leveling & Maintenance Design

Easier Installation. Easier Maintenance.

The machine uses multiple adjustable support points with an optimized support layout and leveling mechanism to reduce operator-induced leveling errors and improve installation stability.

The integrated structure also reduces connections and assembly components found in conventional split machines, making inspection, adjustment, and maintenance easier.

Customer Benefits:

- Easier machine leveling
- Reduced installation errors
- Easier routine maintenance
- Less equipment downtime

3. Applications

The APW-3020BAI-ZZ is suitable for:

- Architectural and decorative glass
- Furniture glass
- Appliance glass
- Bathroom and sanitary glass
- Engineering glass
- Custom-shaped glass
- Small-batch, high-mix glass production
- Batch production of glass components

It is particularly well suited for glass processors looking to upgrade from traditional gantrystyle dual-head waterjets and improve precision, production flexibility, equipment deployment, and automation readiness.

4. Typical Processing Capabilities

The machine can be used for:

- Straight-line glass cutting
- Curved and contour cutting
- Hole cutting
- Slot cutting
- Complex-profile cutting
- Custom glass processing
- Batch production of glass components

5. Technical Specifications

Category	Parameter	Specification
Processing	Effective Cutting Area	3000 × 2000 mm
	Cutting Accuracy	±0.10 mm
	Repeat Positioning Accuracy	±0.05 mm
Motion	Rapid Traverse Speed	10 m/min
Dual-head System	Cutting Heads	Standard Dual-head Configuration
Power & Electrical	Rated Power Supply	380V / 100A / 50Hz, 3Phase, 5Wire
	Total Machine Power	42 kW
Drive System	Transmission System	High-Precision Servo Motors + Precision Ball Screws + Linear Guides
Machine Dimensions	Overall Dimensions	3917 × 2965 × 1922 mm
	Net Weight	3200 kg
	Standard Table Height	900 mm

6. Recommended System Configuration

Recommended Configuration: APW-3020BAI-A15-B-ZZ

15B High-Pressure Pump

A proven and reliable pump configuration providing stable High-Pressure waterjet power for standard glass cutting applications.

DN500 Abrasive Delivery System

Provides stable and continuous abrasive delivery for abrasive waterjet cutting and continuous glass processing.

NC Studio CNC Control System

Supports CAD/DXF file import, toolpath setup, and machine motion control. Easy to operate and suitable for standard glass waterjet production.

7. Optional Equipment

Oil Cooler

Optimizes High-Pressure pump cooling for extended operation and improved system stability.

Water Softener

Improves incoming water quality and helps reduce scale buildup in the High-Pressure system and critical components.

Automatic Abrasive Removal System

Reduces manual water tank and abrasive sediment cleaning, lowering maintenance requirements.

8. Upgrade Options

A24P-45 / A24P-55 Dual-Intensifier **Servo** High-Pressure **Pump**

The APW-3020BAI-ZZ can be upgraded to an A24P45 or A24P55 Dual-Intensifier servo High-Pressure pump.

The Dual-Intensifier configuration provides higher High-Pressure water flow, delivering greater cutting capacity for dual-head operation and demanding continuous production applications.

Upgrade Benefits:

Higher High-Pressure water flow

Greater dual-head cutting capacity

Higher production throughput

Better suited for continuous production

Future-ready capacity expansion

9. Available Cutting Table Sizes

Different table sizes are available to meet different glass dimensions and facility requirements.

Model	X-Axis Length	Y-Axis Length
2010	2000 mm	1000 mm
2015	2000 mm	1500 mm
3020	3000 mm	2000 mm
4020	4000 mm	2000 mm

10. Product Value

The Same Dual-Head Productivity.

A Completely Upgraded Integrated Design.

More Precision

More Rigidity

Easier Installation

Easier Relocation

Easier Maintenance

Greater Automation Readiness

More Flexible Production

APW-3020BAI-ZZ

Upgrade from Traditional Gantry Dual-Head Waterjet Cutting
to a More Flexible, More Stable, Automation-Ready Glass Waterjet Solution.

APW-LX3020I-ZZ

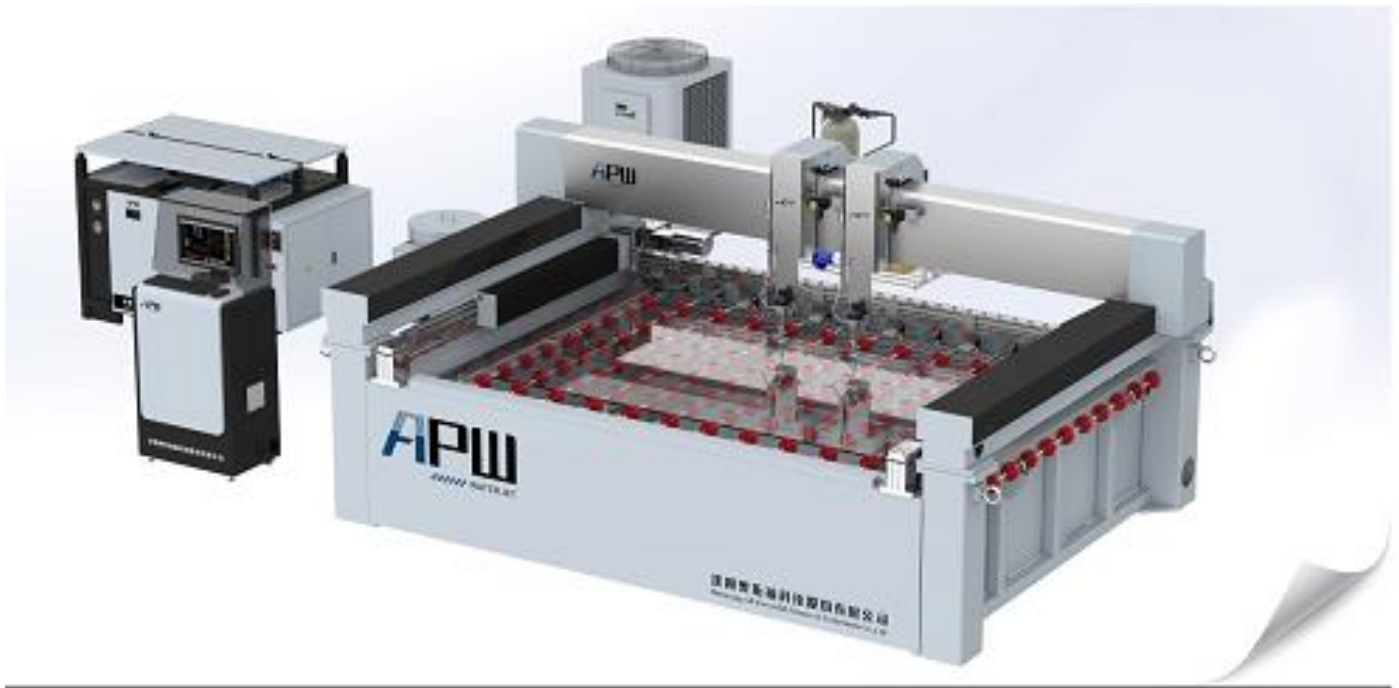
Fully Automatic Inline Glass Waterjet Cutting Machine

1. Product Overview

The APW-LX3020I-ZZ is a fully automatic inline ultra-High-Pressure waterjet cutting machine developed specifically for the glass processing industry.

The machine integrates glass conveying, automatic positioning, barcode/QR code identification, submerged cutting, dual-head machining, and post-cut washing into a single production unit.

Unlike conventional standalone glass waterjet cutting machines, the APW-LX3020I-ZZ is designed around continuous production-line operation. Automated conveying, intelligent positioning, cutting, and washing minimize manual handling and positioning, transforming waterjet cutting from a standalone process into an intelligent processing unit within the glass production line.



2. Key Product Advantages

2.1 Fully Automatic Inline Production

From Standalone Cutting to Continuous Production

The machine integrates glass conveying, positioning, cutting, and washing and can be connected to upstream and downstream production equipment.

The maximum conveying speed reaches 30 m/min, with stepless speed adjustment to match different production line takt times.

Customer Benefits:

- Less manual loading and unloading
- Less material handling
- Higher production continuity
- Lower labor requirements

2.2 Intelligent Positioning & Alignment

Automatic Alignment. Less Human Error.

The machine features a modular glass positioning system including:

- Guide rollers
- Clamping devices
- Protective limiters
- Adjustable positioning mechanisms

As the glass enters the cutting area, it is automatically guided, positioned, and secured, minimizing positional deviations caused by manual handling.

Customer Benefits:

- Higher positioning accuracy
- Less operator-induced error
- Better batch to batch consistency
- Lower risk of misalignment and scrap

2.3 Submerged Low Damage Cutting

Automatic Lowering for Reduced Glass Damage

The machine uses an automatic submerged waterjet cutting process.

Once the glass reaches the designated cutting position, the system automatically lowers the worktable, bringing the glass into a shallow water environment for cutting. After cutting, the worktable automatically returns to its operating height.

Submerged cutting helps absorb and dissipate the impact of the ultra-High-Pressure waterjet, reducing vibration and shock transmitted to the glass during machining.

The submerged water level can be manually adjusted to suit different glass types and processing requirements.

Customer Benefits:

- Reduced edge chipping risk
- Reduced risk of subsurface microcracks
- Improved glass processing quality
- Better suited for high volume production

2.4 High-Efficiency Dual-head Cutting

Higher Throughput for Continuous Production

The APW-LX3020I-ZZ features dual Z-axis cutting heads for simultaneous dual-head machining.

The dual-head configuration is designed specifically for continuous, high volume glass production.

Customer Benefits:

- Higher throughput
- Shorter production cycles

Better synchronization with production-line takt time

Higher machine utilization

2.5 Flexible Roller Conveying System

One Machine. More Glass Sizes.

The conveying platform uses a modular roller design.

Roller positions, spacing, and quantity can be adjusted according to different glass sizes and processing requirements. Individual rollers can also be removed and replaced independently.

After adjustment, the roller system does not require complete rebalancing, allowing rapid adaptation to different production requirements.

Customer Benefits:

Handles a wider range of glass sizes

Faster product changeovers

Lower changeover costs

Easy replacement of wear components

Greater long-term production flexibility

2.6 Integrated Cutting & Washing

Cut. Wash. Move to the Next Process.

An automatic washing station is integrated directly after the cutting area.

After waterjet cutting, the glass is automatically conveyed into the washing zone, where multiple spray nozzles clean the glass surface and remove residual abrasive and cutting debris.

The standard washing section is approximately 2 meters long and equipped with 14 spray units for continuous surface coverage.

Customer Benefits:

- Eliminates manual secondary washing
- Reduces glass handling
- Minimizes abrasive residue
- Seamlessly connects to downstream processes

2.7 Intelligent Barcode & QR Code Scanning

One Sheet. One Digital Identity.

A highspeed industrial camera scans QR codes or barcodes while the glass is being conveyed.

The system can automatically associate each piece of glass with its corresponding cutting program and production information.

Customer Benefits:

- Less manual data entry
- Reduced risk of incorrect sheets or programs
- Faster order changeovers
- Individual product traceability
- Foundation for digital factory management

2.8 High-Rigidity Integrated Machine Frame

Built for Stable Continuous Production

The machine features a High-Rigidity integrated frame with reinforced Y-Axis supports designed for continuous production.

Critical transmission mounting surfaces are precision-machined as integrated reference surfaces, improving motion-system installation accuracy and long-term stability.

Customer Benefits:

- More stable continuous operation
- Reduced machine vibration

Improved processing consistency

Greater long-term reliability

2.9 Modular Maintenance Design

Faster Maintenance. Easier Upgrades.

The machine uses a modular layout for the High-Pressure, conveying, control, and washing systems.

Core components are highly standardized for easier inspection, removal, and replacement.

The glass guiding, clamping, limiting, and washing modules are also designed for flexible configuration according to different production requirements.

The machine can be securely anchored to the floor to further improve platform stability.

Customer Benefits:

Faster fault diagnosis

Easier component replacement

Shorter maintenance downtime

Lower production losses

Easier future automation upgrades

3. Applications

The APW-LX3020I-ZZ is designed for:

Appliance glass

Architectural and decorative glass

Furniture glass

Bathroom and sanitary glass

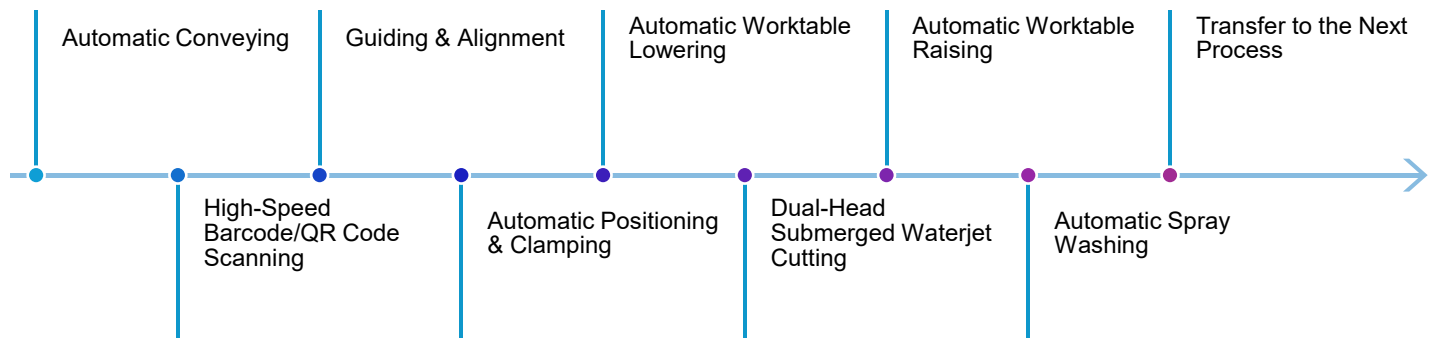
Engineering glass

High volume glass processing

Multiproduct continuous production

It is particularly suitable for glass processors looking to reduce labor, increase production throughput, improve processing consistency, and implement digital production management.

4. Typical Production Workflow



The entire workflow is coordinated by the CNC control system, minimizing manual intervention and enabling continuous processing from material entry through cutting and post-cut washing.

5. Technical Specifications

Category	Parameter	Specification
Processing	Effective Cutting Area	3000 × 2000 mm
	Maximum Glass Thickness	70 mm
	Cutting Accuracy	±0.10 mm
	Repeat Positioning Accuracy	±0.05 mm
Motion	Rapid Traverse Speed	10 m/min
	Maximum Conveying Speed	30 m/min
	Z-axis Travel	150 mm
Power & Electrical	Rated Power Supply	380V / 100A / 50Hz, 3Phase, 5Wire
	Total Machine Power	45 kW
Drive System	Transmission System	High-Precision Servo Motors + Precision Ball Screws + Linear Guides
Machine Dimensions	Overall Dimensions	4495 × 2980 × 1930 mm
	Net Weight	3650 kg
	Standard Platform Height	900 mm
Washing System	Washing Section	Approx. 2 m
	Spray Units	14

6. Recommended System Configuration

Recommended Configuration: APW-LX3020I-A15-B-ZZ

15B High-Pressure Pump

A proven pump configuration that provides stable High-Pressure waterjet power for standard glass cutting applications.

DN500 Abrasive Delivery System

Provides stable and continuous abrasive delivery for abrasive waterjet cutting and continuous glass processing.

NC Studio CNC Control System

Supports CAD/DXF file import, toolpath setup, and machine motion control. Easy to operate and suitable for standard glass waterjet production.

7. Optional Equipment

Oil Cooler

Optimizes High-Pressure pump cooling for extended operation and improves system stability.

Water Softener

Improves incoming water quality and helps reduce scale buildup in the High-Pressure system and critical components.

Automatic Abrasive Removal System

Reduces manual water tank and abrasive sediment cleaning, lowering maintenance requirements and supporting longer periods of continuous operation.

8. Upgrade Options

A24P-45 / A24P-55 Dual-Intensifier Servo High-Pressure Pump

The APW-LX3020I-ZZ can be upgraded to an A24P45 or A24P55 Dual-Intensifier servo High-Pressure pump according to production capacity and continuous-operation requirements.

The Dual-Intensifier design provides higher High-Pressure water flow, delivering additional cutting capacity for dual-head operation and demanding continuous production applications.

Upgrade Benefits:

- Higher High-Pressure water flow
- Greater dual-head cutting capacity
- Higher production throughput
- Better suited for continuous production
- Future-ready capacity expansion

9. Available Configurations

9.1 Available Cutting Table Sizes

Different cutting table sizes are available to accommodate different glass dimensions, production requirements, and facility layouts.

Model	X-Axis Length	Y-Axis Length
2010	2000 mm	1000 mm
2015	2000 mm	1500 mm
3020	3000 mm	2000 mm
4020	4000 mm	2000 mm

9.2 Available Platform Heights

Platform height options: 850 mm / 900 mm

The platform height can be customized to match upstream and downstream equipment, automated conveying systems, and production-line interface requirements.

9.3 Flexible Conveying Configuration

The conveying rollers support:

- Adjustable spacing
- Adjustable positioning
- Adjustable quantity
- Individual roller removal and replacement

The conveying system can be configured according to glass dimensions and production requirements.

9.4 Positioning Module Options

The positioning system can be configured with:

- Guide rollers
- Clamping devices
- Protective limiters
- Adjustable positioning mechanisms

10. Product Value

From Standalone Cutting to Intelligent Inline Production

Automatic Conveying

Less manual handling

Intelligent Positioning

Less operator-induced error

Submerged Cutting

Reduced glass processing damage

Dual-head Cutting

Higher production throughput

Automatic Washing

Less postprocessing labor

Integrated Cutting, Washing & Conveying

Enables unattended operation throughout the processing workflow

Modular Design

Easier maintenance and future upgrades

APW-LX3020I-ZZ

More Than Automatic Glass Cutting

Bringing Waterjet Cutting into the Intelligent Glass Production Line.