
# TEXTILE MACHINERY
## BROCHURE
AIR&WATER JET LOOM SERIES

## CONTACT US


### QINGDAO

Over the past 23 years, we have continuously upgraded and improved our textile machinery.

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## SINCE 1998

Over the past 23 years, we have continuously upgraded and improved our textile machinery,.We are committed to making the textile machinery you use more convenient and efficient.

Qingdao Aojia Machinery Technology Co., Ltd. is one of the largest manufacturers of water-jet looms ,air-jet looms in China, which integrates research anddevelopment, manufacturing and after-sales service.

# AIR&WATER JET LOOM SERIES
## BROCHURE
HIGH SPEED WEAVING

QINGDAO AOJIA MACHINERY TECHNOLOGY CO., LTD

Aojia

Loom

# AOJIA

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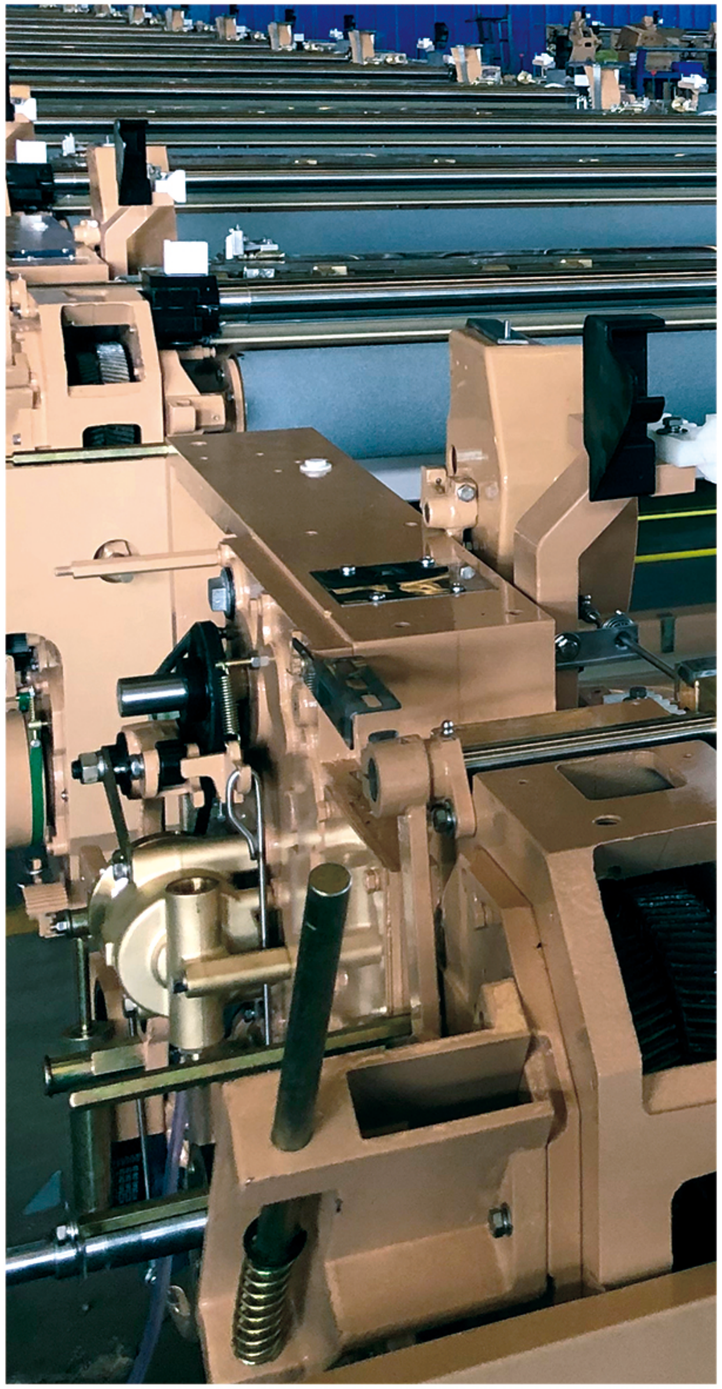
COMPANY`S CEO

#1998

Qingdao Aojia Machinery Technology Co., Ltd. is one of the largest manufacturers of water-jet looms and air-jet looms in China, which integrates research, development, manufacturing and after-sales service. With 23 years of inheritance and spanning, Aojia has provided incomparable buying experience for domestic and foreign customers with the most professional technical level and the most thoughtful after-sale service.

Aojia's headquarter is located in "China's textile machinery town" - Wangtai Town, Qingdao. At present, we have production workshops in Qingdao, Shandong Province, and Siyang, Jiangsu Province, each with a total construction area of 40,000 square meters. The company has 139 employees, including 28 senior technical personnel and 12 senior management personnel. Equipped with Japanese Panasonic CNC side plate punching machine, both factories have the capacity to produce complete machine. Our company now has more than 40 sets of CNC processing equipment, large CNC boring and milling machine, heat treatment equipment, paint surface treatment equipment and other advanced equipment. Product quality is not only the life of an enterprise, but also the dignity of Aojia. The perfect quality management system ensures the strict quality control of the purchase of raw materials, production process and QC testing to ensure the quality of the machine.

***AOJIALOOM***



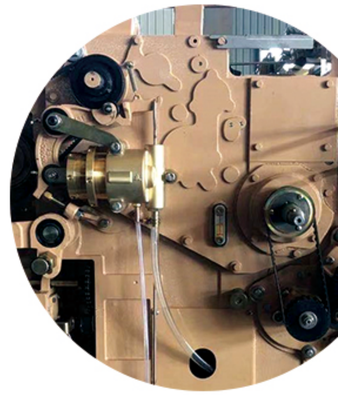
Company

# PROFILE

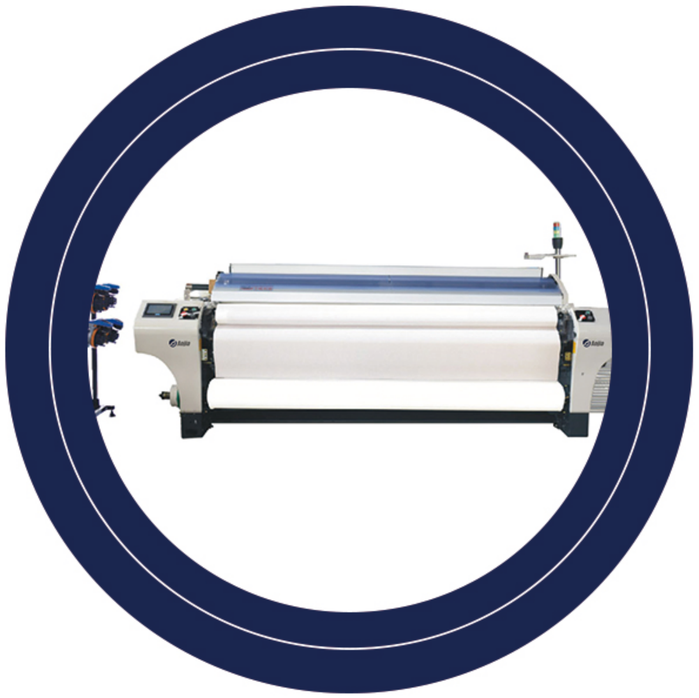
Calm and far-reaching, we forge ahead. The weaving machines which produced by Aojia machinery are widely recognized by customers at home and abroad. The annual production capacity can reach to 3000 sets. Keqiao and Shengze are the main domestic markets, and now we occupy 90% of the market share of Keqiao. Since 2013, we have started to expand the overseas market, taking "Aojia" as our own brand name, and set up a professional team to serve foreign customers. Aojia machinery has been successfully sent to India, Russia, Turkey, Sri Lanka, Indonesia, Turkmenistan, Vietnam and other countries, with total sales of nearly 70,000 sets of various types of water-jet looms and air-jet looms. Good customer feedback is a beautiful business card of Aojia.

The essence of skill is to keep improving. In 2014, new shot blasting machine and phosphating technology were euipped in Qingdao and Siyang factories. It provides phosphating and shot blasting treatment for all parts of the whole machine, and provides clean, uniform, grease free and rust free surface for metal parts of the machine body, which greatly improves the paint adhesion, wear resistance, rust and corrosion resistance of parts of the whole machine. We will try our best to provide the looms with the most reliable quality, the best technology and the most satisfactory appearance.

In the past 23 years, there were both inheritance and innovation. Aojia will continue to uphold the advantages of R&D，high-end modern equipment and high-quality products to face the challenges and strive to create a first-class brand in the textile machinery industry.



# Water Jet Loom
# **Product Center**



# “AJ379a

Aj379a has designed a stronger fabric mouth support structure and a more tensile and anti slip take-up roller structure. The stable fabric opening not only reduces the production of various cloth covers, but also makes the high tension and high weft density fabric easier to weave.

## Main Features

- **Strong frame structure**: the independent box frame with high rigidity on both sides can reduce the vibration during high-speed operation, and further stable weft insertion and beating motion can be realized due to the reduction of vibration, so as to ensure the high-grade fabric. The main driving part is arranged in the oil bath environment, so further stable high-speed operation is realized.
- **High speed medium leisurely weft insertion**: through the improvement of beating up curve, the flying angle of weft yarn is increased, so that the weft insertion of various specifications of chemical fiber raw materials is more stable, the phenomenon of opening and warp tension instability is greatly improved, and high quality differential fabric can be made.
- **Stable operation**: due to the use of strong frame structure and high rigid let off and take-up mechanism, the loom operates more stably, and the weaving range is greatly expanded from light and thin fabrics to medium and thick fabrics, and from low density fabrics to high density fabrics. Even when weaving fabrics with complex weave and unbalanced opening, the vibration is controlled to be very slight and stable.



# High Grade&
# Productivity

## Good Operability

The optimized four-bar beating up structure of aj379a wallboard frame is designed. The beating up structure has smooth movement, minimal vibration, and is most suitable for weaving requirements, which can make the structure durable.

## Versatility Improved

Aj379a adopts more reasonable plunger, softer and more stable. The weft insertion structure, pump spring, nozzle and column type one-way valve are improved to make weft insertion more convenient and prolong the service life of water pump.

Aj379a has been designed as a higher following tension system to reduce customers' worry about fabric hidden stop. The broken warp of fragile warp yarn is reduced, the opening is clearer and the fabric quality is higher. Warp stabilizer makes weaving of high tension and high weft density fabric more stable.

## Technical Parameters

Options: mechanical let off, mechanical coiling, electronic let off, electronic coiling
Optional: RDP mechanical length measurement, 1-6 jet electronic free weft selection
Configuration: crank opening, cam opening, dobby opening and jacquard device
Optional width: 135cm,150cm,170cm,190cm,210cm,230cm,260cm,280cm,300cm,320cm,340cm,360cm
Weft density range: 4-100 pieces / cm (determined according to the actual warp and weft yarn specifications and fabric weave)
Designed maximum speed: 900 RPM (determined according to actual warp and weft yarn specifications and fabric weave)
Number of heald frames: 2-8 crank openings, 2-14 cam openings and 16 dobby openings
Installed power: 1.5kw-5.4kw

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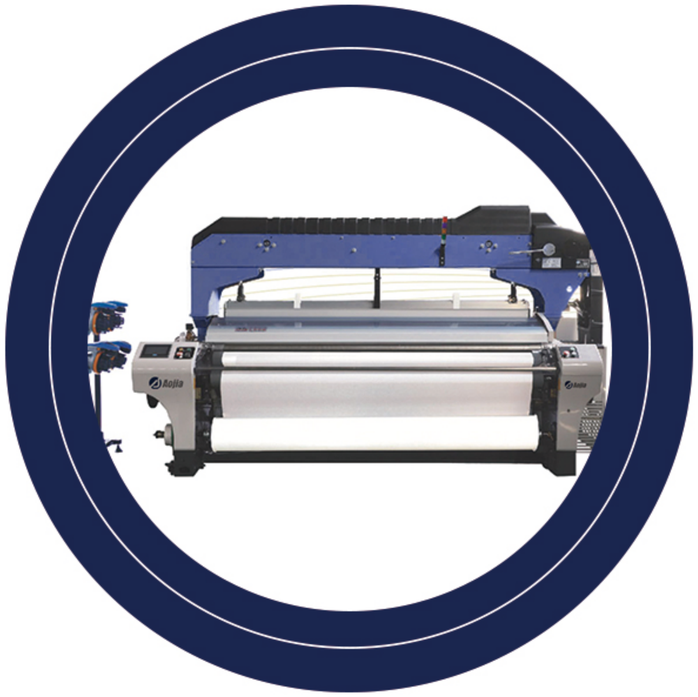
Options: mechanical let off, mechanical coiling, electronic let off, electronic coiling
Optional: 1-6 electronic weft selection
Configuration: crank opening, cam opening, dobby opening and jacquard device
Optional width:135cm,150cm,170cm,190cm,210cm,230cm,260cm,280cm,300cm,320cm,340cm,360cm
Weft density range: 4-100 pieces / cm (determined according to the actual warp and weft yarn specifications and fabric weave)
Designed maximum speed: 1100 RPM (determined according to actual warp and weft yarn specifications and fabric weave)
Number of heald frames: 2-8 crank openings, 2-14 cam openings and 16 dobby openings
Installed power: 1.5kw-5.4kw

# Water Jet Loom
# **Product Center**



# “ AJ379b

Aj379b series water jet loom is a high-quality water jet loom developed to improve the adaptability of weaving products and reduce the investment cost. Its weaving range is from ordinary fabrics to heavy and high value-added fabrics. One machine can meet various needs.

## Main Features

- **Strong frame structure**: the independent box frame with high rigidity on both sides can reduce the vibration during high-speed operation, and further stable weft insertion and beating motion can be realized due to the reduction of vibration, so as to ensure the high-grade fabric. The main driving part is arranged in the oil bath environment, so further stable high-speed operation is realized.
- **High speed medium leisurely weft insertion**: through the improvement of beating up curve, the flying angle of weft yarn is increased, so that the weft insertion of various specifications of chemical fiber raw materials is more stable, the phenomenon of opening and warp tension instability is greatly improved, and high quality differential fabric can be made.
- **Stable operation**: due to the use of strong frame structure and high rigid let off and take-up mechanism, the loom operates more stably, and the weaving range is greatly expanded from light and thin fabrics to medium and thick fabrics, and from low density fabrics to high density fabrics. Even when weaving fabrics with complex weave and unbalanced opening, the vibration is controlled to be very slight and stable.



# High Grade&
# Productivity

## Good Operability

The strong and tough frame structure specially developed by our company can make the machine run stably, reduce the vibration of the machine when running at high speed, so as to achieve more stable machine operation and improve the quality of fabric.

## Versatility Improved

Eccentric beating can greatly improve the beating force. Different width, the eccentric quantity can be adjusted appropriately to ensure the reliability of weft beating. The higher beating force can better weave the higher weft density fabric.

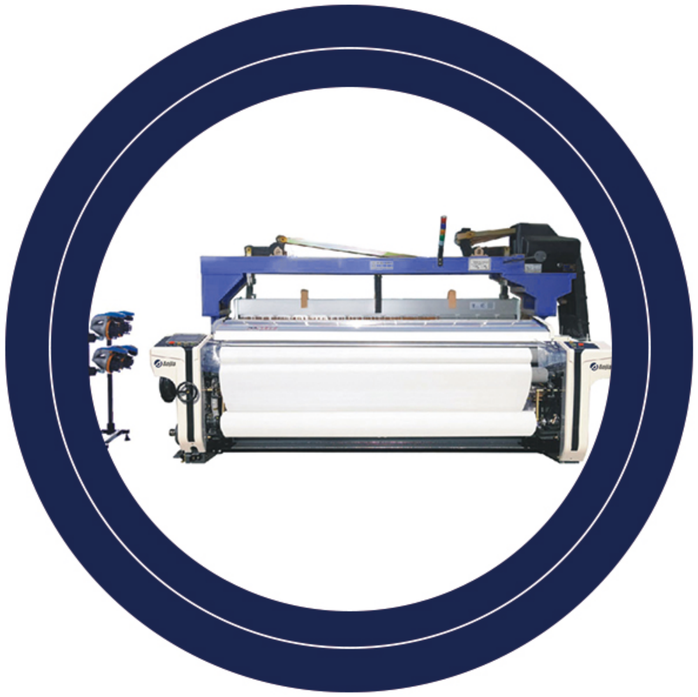
Standard distribution spindle motor can save at least 8% - 25% power compared with ordinary motor. Faster speed and higher efficiency, can steadily improve the output; better adaptability, high tension, high weft density can be easily controlled; more stable frame, greatly reduce the wear of parts.

## Technical Parameters

Options: mechanical let off, mechanical coiling, electronic let off, electronic coiling
Optional: RDP mechanical length measurement, 1-6 jet electronic free weft selection
Configuration: crank opening, cam opening, dobby opening and jacquard device
Optional width: 135cm,150cm,170cm,190cm,210cm,230cm,260cm,280cm,300cm,320cm,340cm,360cm
Weft density range: 4-100 pieces / cm (determined according to the actual warp and weft yarn specifications and fabric weave)
Designed maximum speed: 900 RPM (determined according to actual warp and weft yarn specifications and fabric weave)
Number of heald frames: 2-8 crank openings, 2-14 cam openings and 16 dobby openings
Installed power: 1.5kw-5.4kw

“ Options: mechanical let off, mechanical coiling, electronic let off, electronic coiling
Optional: 1-6 electronic weft selection
Configuration: crank opening, cam opening, dobby opening and jacquard device
Optional width:135cm,150cm,170cm,190cm,210cm,230cm, 260cm,280cm,300cm,320cm,340cm,360cm
Weft density range: 4-100 pieces / cm (determined according to the actual warp and weft yarn specifications and fabric weave)
Designed maximum speed: 1100 RPM (determined according to actual warp and weft yarn specifications and fabric weave)
Number of heald frames: 2-8 crank openings, 2-14 cam openings and 16 dobby openings
Installed power: 1.5kw-5.4kw

# Water Jet Loom
# **Product Center**



## “AJ736

Always regard high speed performance as the basic mission of water jet loom. "Aj736" through the strong frame structure, integrated wallboard design, more stable weft insertion performance, reasonable opening and beating up mechanism, etc., to play a higher speed performance than the original loom.

## Main Features

- The short moving range weft is used to adapt to high speed weaving and reduce the damage of reed to fabric;
- It is helpful to shorten the length of fabric from the fabric mouth to the coiling leather roller, reduce the rebound, and improve the stability of the fabric mouth;
- Integral wall panel, the rack is equipped with longitudinal support to improve the stability of the frame;
- Eccentric shaft structure is adopted to reduce beating vibration;
- 1-4 color crank opening or crank 6 connecting rod configuration;
- Stable back beam tension structure is negative loose;



# High Grade&
# Productivity

## Versatility Improved

Aj736 series heavy weight water jet loom is based on aj721 series standard water jet loom. The main moving parts and frame mechanism are redesigned. The beating up, let off and take-up mechanisms are improved. The let off auxiliary device is added to make the whole loom run more smoothly, reduce the vibration and noise in loom operation, and improve the loom operation efficiency And expanded the range of weaving products.

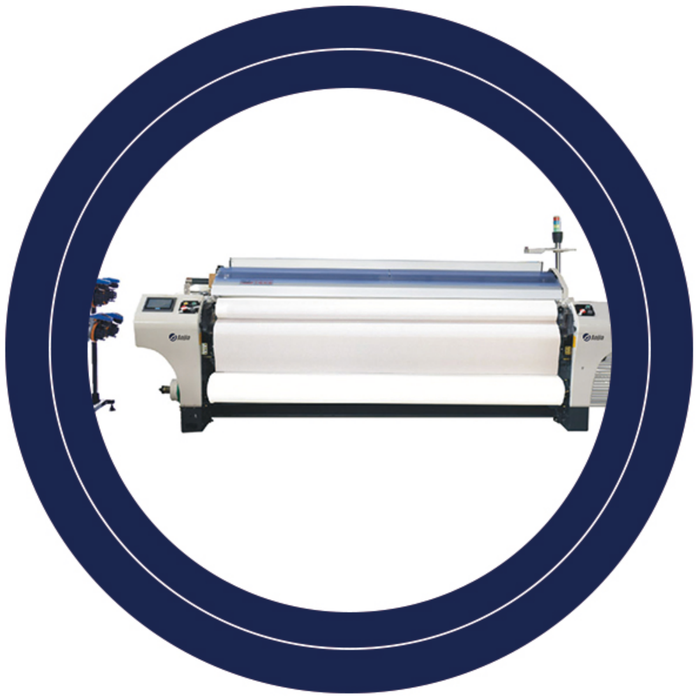
Aj736 has designed a stronger fabric mouth support structure and a more tensile and anti slip take-up roller structure. The stable fabric opening not only reduces the production of various cloth covers, but also makes the high tension and high weft density fabric easier to weave.

## Technical Parameters

**Options: mechanical let off, mechanical coiling, electronic let off, electronic coiling**
**Optional: RDP mechanical length measurement, 1-6 jet electronic free weft selection**
**Configuration: crank opening, cam opening, dobby opening and jacquard device**
**Optional width: 135cm,150cm,170cm,190cm,210cm,230cm,260cm,280cm,300cm,320cm,340cm,360cm**
**Weft density range: 4-100 pieces / cm (determined according to the actual warp and weft yarn specifications and fabric weave)**
**Designed maximum speed: 900 RPM (determined according to actual warp and weft yarn specifications and fabric weave)**
**Number of heald frames: 2-8 crank openings, 2-14 cam openings and 16 dobby openings**
**Installed power: 1.5kw-5.4kw**

1. Adopt the integrated board, optimize the design of the frame than aj379, make the frame more stable, high efficiency and better fabric quality
2. The optimized beating up design makes the beating up more powerful and suitable for high-density and high-speed fabrics
3. The designed maximum speed can reach 1400rpm
4. Take 75D fabric as an example, the highest weft density can reach 82 Shuttle / cm (208 pieces per inch)
5. Adopt eccentric rocker structure to reduce beating up vibration

# Water Jet Loom
# **Product Center**



## “AJ796

Always regard high speed performance as the basic mission of water jet loom. "Aj796" through the strong frame structure, integrated wallboard design, more stable weft insertion performance, reasonable opening and beating up mechanism, etc., to play a higher speed performance than the original loom.

## Main Features

- The short moving range weft is used to adapt to high speed weaving and reduce the damage of reed to fabric;
- It is helpful to shorten the length of fabric from the fabric mouth to the coiling leather roller, reduce the rebound, and improve the stability of the fabric mouth;
- Integral wall panel, the rack is equipped with longitudinal support to improve the stability of the frame;
- Eccentric shaft structure is adopted to reduce beating vibration;
- 1-4 color crank opening or crank 6 connecting rod configuration;
- Stable back beam tension structure is negative loose;



# High Grade&
# Productivity

## Versatility Improved

Aj796 series heavy weight water jet loom is based on aj736 series standard water jet loom. The main moving parts and frame mechanism are redesigned. The beating up and let off mechanism and coiling mechanism are improved. The let off auxiliary device is added to make the whole machine run more smoothly, The vibration and noise in loom operation are reduced, the operation efficiency of loom is improved, and the range of weaving products is expanded.

Aj796 has designed a more solid fabric mouth support structure and a more tensile and anti slip take-up roller structure. The stable weaves can reduce the cost.

## Technical Parameters

Options: mechanical let off, mechanical coiling, electronic let off, electronic coiling
Optional: RDP mechanical length measurement, 1-6 jet electronic free weft selection
Configuration: crank opening, cam opening, dobby opening and jacquard device
Optional width: 135cm,150cm,170cm,190cm,210cm,230cm,260cm,280cm,300cm,320cm,340cm,360cm
Weft density range: 4-100 pieces / cm (determined according to the actual warp and weft yarn specifications and fabric weave)
Design maximum speed: 900 RPM (determined according to actual warp and weft yarn specifications and fabric weave)
Number of heald frames: 2-8 crank openings, 2-14 cam openings and 16 dobby openings
Installed power: 1.5kw-5.4kw

1. Adopt the integrated board, optimize the design of the frame than aj379, make the frame more stable, high efficiency and better fabric quality
2. The optimized beating up design makes the beating up more powerful and suitable for high-density and high-speed fabrics
3. The designed maximum speed can reach 1400rpm
4. Take 75D fabric as an example, the highest weft density can reach 82 Shuttle / cm (208 pieces per inch)
5. Adopt eccentric rocker structure to reduce beating up vibration

# Water Jet Loom
# **Product Center**

## “AJ9700

Always regard high speed performance as the basic mission of water jet loom. "Aj9700" through the strong frame structure, integrated wallboard design, more stable weft insertion performance, reasonable opening and beating up mechanism, etc., to play a higher speed performance than the original loom.

## Main Features

- The short moving range weft is used to adapt to high speed weaving and reduce the damage of reed to fabric;
- It is helpful to shorten the length of fabric from the fabric mouth to the coiling leather roller, reduce the rebound, and improve the stability of the fabric mouth;
- Integral wall panel, the rack is equipped with longitudinal support to improve the stability of the frame;
- Eccentric shaft structure is adopted to reduce beating vibration;
- 1-4 color crank opening or crank 6 connecting rod configuration;
- Stable back beam tension structure is negative loose;



# High Grade&
# Productivity

## Good Operability

Aj9700 is developed for easy operation. The position line of warp is reduced and the operation is improved.

## Versatility Improved

By shortening the warp path of the fabric before weaving, it is possible to weave stably with higher density. From fine count yarn to coarse count yarn, from narrow width to wide width and even unbalanced weave fabric, it is expected to be able to cope with a wider range of weaving products.

By shortening the nozzle spacing, the difference of weft insertion state between the first nozzle and the second nozzle is very small, even if the loom runs at high speed, it can achieve uniform weft insertion.

## Technical Parameters

1. Nominal Reed: 150cm,170cm,190cm,210cm,230cm,280cm,300cm,320cm,340cm,360cm
2. Effective door width: 0 ~ -500mm (standard); 0 ~ -700mm (optional)
3. Number of nozzles: single spray, double spray, three spray, four spray
4. Opening mode: flat opening, cam opening, multi arm opening, big jacquard
5. Beating method: four connecting rod weft (standard is to strengthen solid weft axis, and six connecting rod is selected for weft beating)
6. Scissors and optical exploration: mechanical ceramic scissors; photoelectric weft detector
7. Diameter of pan head: ϕ 800mm, ϕ 1000mm (optional)

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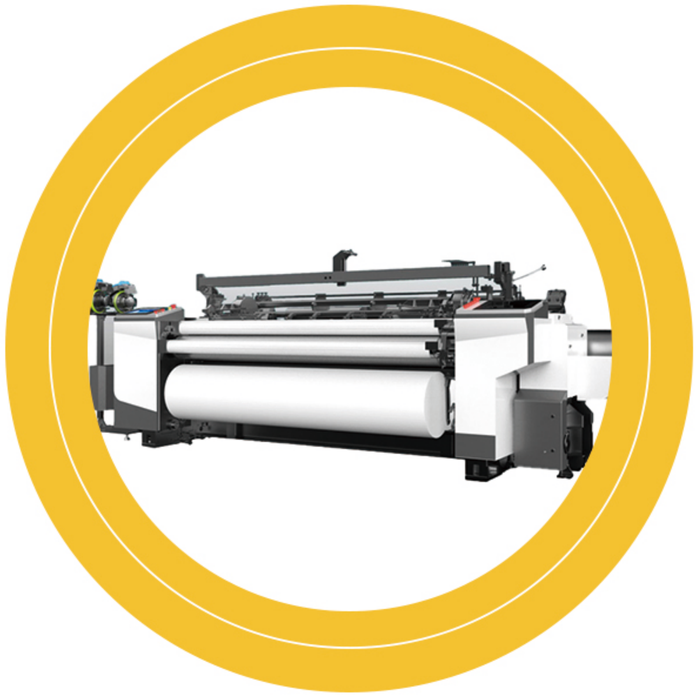
1. Adopt the integrated board, optimize the design of the frame than aj379, make the frame more stable, high efficiency and better fabric quality
2. The optimized beating up design makes the beating up more powerful and suitable for high-density and high-speed fabrics
3. The designed maximum speed can reach 1400rpm
4. Take 75D fabric as an example, the highest weft density can reach 82 Shuttle / cm (208 pieces per inch)
5. Adopt eccentric rocker structure to reduce beating up vibration

Air Jet Loom
**Product Center**



# AJ960

The weft detector adopts the double probe mode, which can detect not only the normal short weft or bent weft, but also the phenomenon of weft being blown short or long, so as to ensure that there is no mistake.

## Main Features

- The short moving range weft is used to adapt to high speed weaving and reduce the damage of reed to fabric;
- It is helpful to shorten the length of fabric from the fabric mouth to the coiling leather roller, reduce the rebound, and improve the stability of the fabric mouth;
- Integral wall panel, the rack is equipped with longitudinal support to improve the stability of the frame;
- Eccentric shaft structure is adopted to reduce beating vibration;
- 1-4 color crank opening or crank 6 connecting rod configuration;
- Stable back beam tension structure is negative loose;



High Grade&
# Productivity

## Versatility Improved

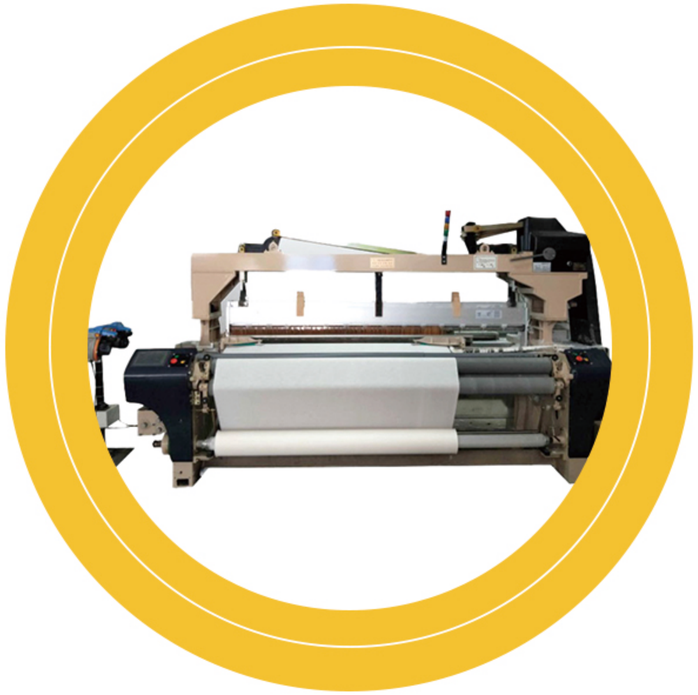
The total warp tension is detected by the tension sensor. The CPU processes the warp tension changes caused by the opening or the change of the let off, let off and the winding diameter of the warp shaft, and instructs the servo motor to drive the warp shaft, so as to maintain the balanced tension in the working process, eliminate the secret driving gear, and ensure the balanced and smooth fabric. By using rigid frame, large diameter warp shaft gear and oil bath type positive loosing drive shaft, the loom can further realize high speed and more sensitive to meet the weaving requirements of high-density fabrics.

## Technical Parameters

1. Aj960 air jet loom is compact in design and easy to operate.
2. The beating up mechanism adopts eccentric beating up shaft structure, which has large beating up force and small vibration, and is suitable for high-speed weaving and high-density weaving.
3. The auxiliary jet adopts one drag two structure to reduce the injection time of the nozzle, and further reduce the air consumption by precisely controlling the injection time of the nozzle.
4. The narrow loom adopts 4-link beating up, which is suitable for high speed weaving; the wide loom adopts 6-link beating up, which increases the weft insertion time, so that the weft can be accelerated under low pressure without breaking the weft, so as to realize stable weaving.
5. Electronic let off and electronic take-up are adopted, with the functions of automatic weft finding, eliminating stop stop and variable weft density weaving.
6. Opening form, optional crank opening, lower cam, lower dobby and jacquard opening.

Mechanical continuous coiling and electronic coiling are adopted. Combined with the electronic let off, it is very effective to prevent parking through accurate forward and reverse rotation.

Air Jet Loom
# Product Center



## AJ970

The weft detector adopts the double probe mode, which can detect not only the normal short weft or bent weft, but also the phenomenon of weft being blown short or long, so as to ensure that there is no mistake.

## Main Features

- The short moving range weft is used to adapt to high speed weaving and reduce the damage of reed to fabric;
- It is helpful to shorten the length of fabric from the fabric mouth to the coiling leather roller, reduce the rebound, and improve the stability of the fabric mouth;
- Integral wall panel, the rack is equipped with longitudinal support to improve the stability of the frame;
- Eccentric shaft structure is adopted to reduce beating vibration;
- 1-4 color crank opening or crank 6 connecting rod configuration;
- Stable back beam tension structure is negative loose;



High Grade&
# Productivity

### Good Operability

Mechanical continuous coiling and electronic coiling are adopted. Combined with the electronic let off, it is very effective to prevent parking through accurate forward and reverse rotation.

### Versatility Improved

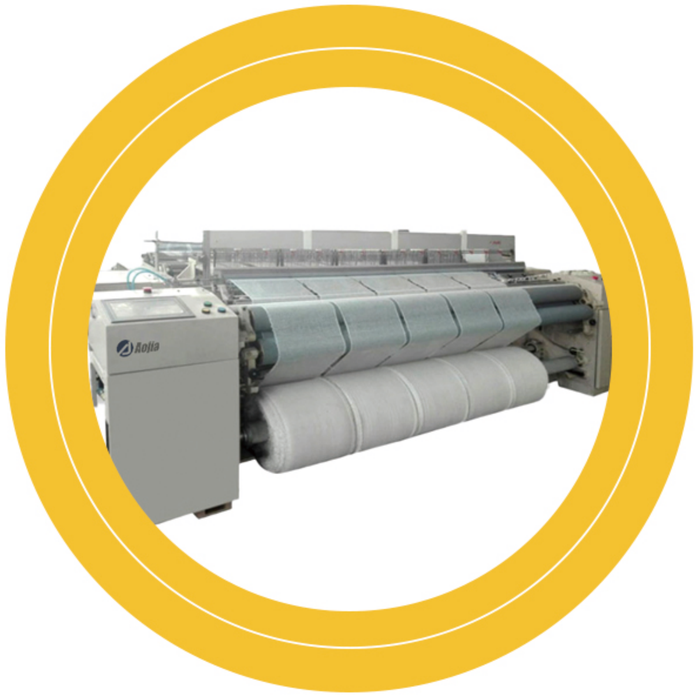
The total warp tension is detected by the tension sensor. The CPU processes the warp tension changes caused by the opening or the change of the let off, let off and the winding diameter of the warp shaft, and instructs the servo motor to drive the warp shaft, so as to maintain the balanced tension in the working process, eliminate the secret driving gear, and ensure the balanced and smooth fabric. By using rigid frame, large diameter warp shaft gear and oil bath type positive loosing drive shaft, the loom can further realize high speed and more sensitive to meet the weaving requirements of high-density fabrics.

## Technical Parameters

1. Aj970 air looms are positioned in the water jet loom Market, especially suitable for chemical filament manufacturing
2. It adopts 379 frame of water jet loom and four-bar beating up structure. The beating up structure has smooth motion and small vibration, and is suitable for high-speed weaving.
3. The auxiliary spray adopts a one drag three structure, and the auxiliary spray solenoid valve is fixed on the front upper beam to shorten the length of the gas pipe and reduce the pressure loss.
4. Accurate control between main injection and auxiliary injection, saving energy and reducing consumption
5. The computer screen is used for operation, and the parameters can be changed easily. The workers can master and apply them quickly through learning.
6. Electronic let off and electronic take-up are adopted, with functions of automatic weft finding and elimination of parking gear.
7. Adopting solid beating up mechanism with multiple reeds, the vibration of the whole machine is greatly reduced.
8. Opening form, crank opening, upper cam and upper dobby.

Mechanical continuous coiling and electronic coiling are adopted. Combined with the electronic let off, it is very effective to prevent parking through accurate forward and reverse rotation.

Air Jet Loom
# Product Center



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## AJ980

The weft detector adopts the double probe mode, which can detect not only the normal short weft or bent weft, but also the phenomenon of weft being blown short or long, so as to ensure that there is no mistake.

## Main Features

- The short moving range weft is used to adapt to high speed weaving and reduce the damage of reed to fabric;
- It is helpful to shorten the length of fabric from the fabric mouth to the coiling leather roller, reduce the rebound, and improve the stability of the fabric mouth;
- Integral wall panel, the rack is equipped with longitudinal support to improve the stability of the frame;
- Eccentric shaft structure is adopted to reduce beating vibration;
- 1-4 color crank opening or crank 6 connecting rod configuration;
- Stable back beam tension structure is negative loose;



High Grade&
# Productivity

## Versatility Improved

1. AJ980 type air-jet loom for gauze is designed with let off, take-up, side support and other mechanisms to adapt to the manufacturing of thin weft and dense weft.
2. According to the user's requirements, the middle opening mechanism can be configured to realize multiple weaving.
3. According to the user's requirements, it can be equipped with large package outside the machine.
4. The opening type is generally crank opening.

## Technical Parameters

1. Nominal reed width: 150cm,170cm,190cm,210cm,230cm,280cm,300cm,320cm,340cm,360cm
2. Effective gate width: 0 ～ - 500mm (standard configuration); 0 ～ - 800mm (optional configuration)
3. Number of nozzles: double spray, four spray and six spray
2. Opening mode: flat opening, cam opening, dobby opening, jacquard opening
3. Beating up mode: four link beating up, six link beating up (optional)
4. Diameter of pan head: ϕ 800mm, ϕ 1000mm (optional)

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Mechanical continuous coiling and electronic coiling are adopted. Combined with the electronic let off, it is very effective to prevent parking through accurate forward and reverse rotation.