

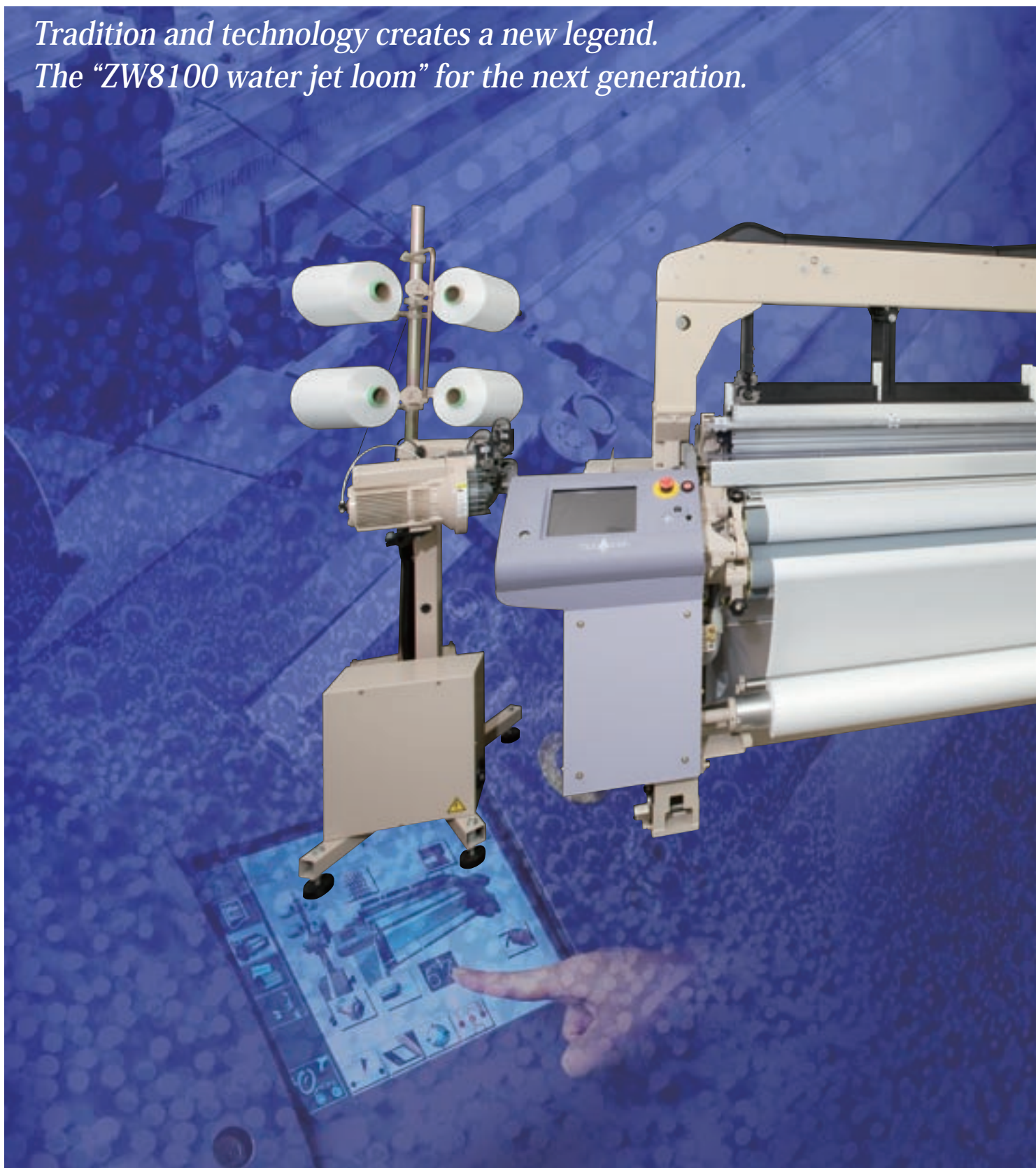
ZW^{Professional}**8100**

WATER JET LOOM



ZW^{Professional}**8100** WATER JET LOOM

*Tradition and technology creates a new legend.
The “ZW8100 water jet loom” for the next generation.*



The Weave Navigator

The basic abilities of the existing series are inherited and further enhanced for the next generation.

Tsudakoma's water jet loom "ZW series" has a sales record of 120,000 sets and has enjoyed an excellent reputation as the global standard water jet loom. The new model "ZW8100" is developed for the next generation by applying Tsudakoma's long-cultivated know-how about water-jet weaving. While focusing on higher speed, best quality, wider versatility and higher operability as well as effective environmental measures, it is re-designed completely from its frames to the mechanism.



Higher productivity

We believe that speed is a fundamental mission of jet looms. The "ZW8100" demonstrates 10% or more increased speed compared with existing models because of its new robust frame structure, stable filling insertion ability, and the optimized shedding & beating mechanism.

Best quality

The robust frame structure, reinforcement of the let-off motion, and shortening the cloth route at loom front allow higher pick density. High speed keeping the best fabric quality is attained at high levels. Furthermore, the PSS-W Programmable Start is developed to efficiently prevent stop marks.

Wider versatility

A new nozzle allows stable filling insertion. A short cloth route at loom front allows higher density fabric to be woven steadily. Therefore, a wider range of fabrics can be woven: from fine to thick yarns, from narrow to wide widths, and also, with unbalanced construction.

Environmental measures

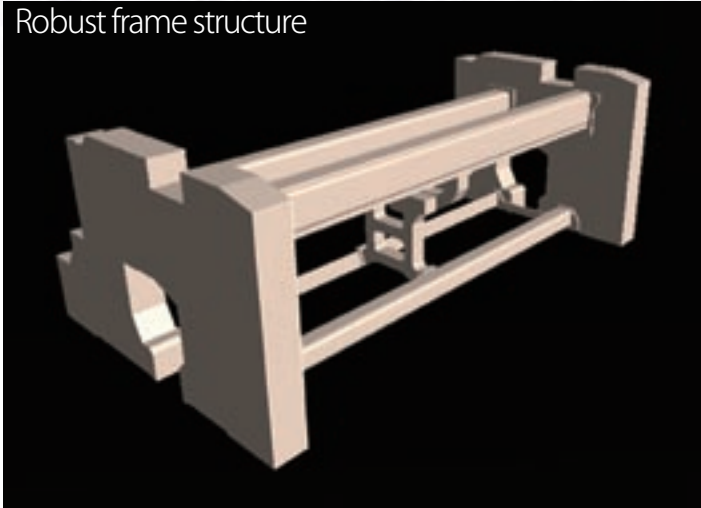
Tsudakoma always positively works on environmental issues. The "ZW8100" reduces about 5% of electric power consumption compared with the existing model thanks to redesigning the mechanism for filling insertion, shedding, and beating. In addition, its robust frame structure and the optimized beating mechanism reduce floor vibration by 25% compared with the existing model.

Higher operability

The "ZW8100" is designed for easy operation. Its warp line height is low enough for easy access. The Navi-board provides simple operations for almost all settings. Furthermore, it automatically conducts pick finding after recovering from a loom stoppage and re-starts, performing outstanding operability.

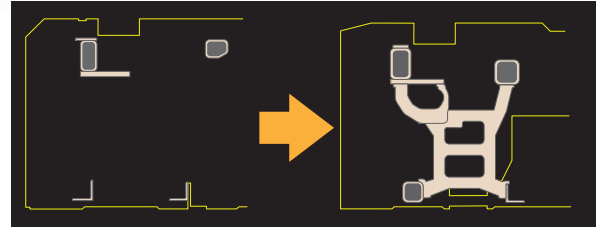
In pursuit of high speeds and high quality while saving energy

Robust frame structure



Higher productivity

A transverse rail is employed to increase rigidity.



ZW408

ZW8100

Best quality

The front top stay, the bottom stay and the back top stay are strengthened for stable operation at high speed. High rigidity of beams is efficient to reduce resonance marks.

Environmental measures

The loom frames with enhanced rigidity grossly reduce floor vibration.

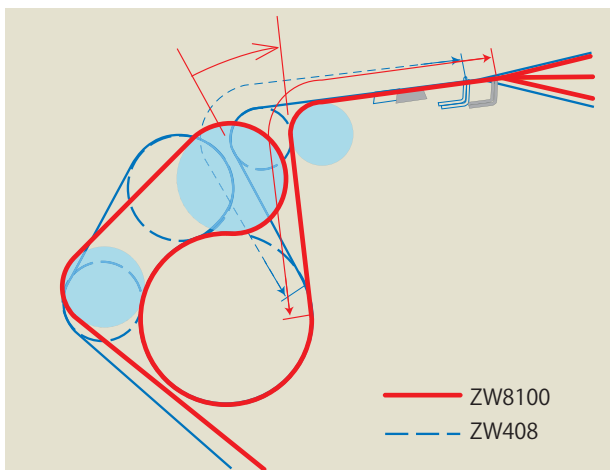
Higher pick density

Best quality

Shortening the cloth passage allows stable weaving of higher density fabrics.

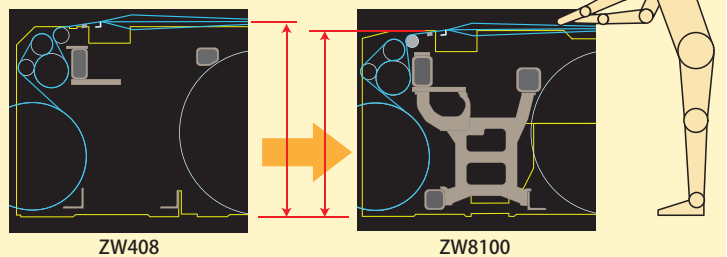
Wider versatility

By inclining the cloth passage from the cloth fell, the stable operation to produce even unbalanced fabric construction such as double weave is possible, without causing vertical movement at the cloth fell. (For S-type inclined cloth passage specification)



Higher operability

A 40-mm lower warp line compared with the existing model enhances workability. The underslung structure contributes to stable operation.



ZW408

ZW8100

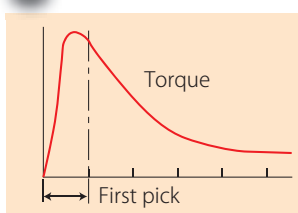
APF-W Automatic Pick Finder

Higher operability

The APF-W automatically rotates the loom in reverse to find a pick when the loom is stopped. With its automatic re-starting operation, the number of times that an operator must operate the buttons is decreased. Thus, the operability is increased. The pick finding position to stop reverse rotation of the loom can be set for two reasons for loom stoppage: filling and other than filling.

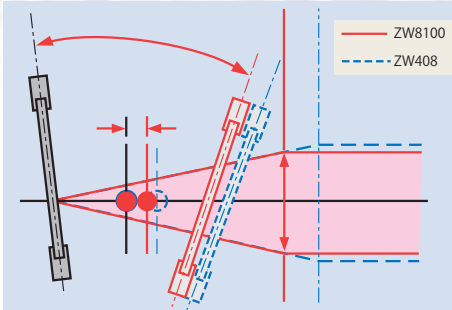
Rush-start motor

Best quality



The rush-start motor provides an ultra-high torque start and effectively prevents stop marks and first pick looseness. Large capacity electromagnetic brakes directly connected to the crankshaft accurately stop the loom at the programmed position.

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Short stroke beating

Higher productivity

A shortened beating stroke backs up high-speed operation while keeping high quality level of fabrics.

Environmental measures

Electric power consumption is reduced about 5 % compared with the existing model.

New catch cord spindle

Best quality



Catch cord vibration is eliminated and catching failure is reduced.

FDP-A III Free Drum Pooling device

Wider versatility

Best quality



Because an advancing mechanism that is excellent at high-speed and positively separates yarns is provided, even a thick yarn is easily stored and released. Various types of filling yarns are available.



New nozzle

Wider versatility

The pitch between the nozzles is shortened. This decreases the difference between the filling inserting conditions of the two nozzles while filling insertion periods are the same. Consistent filling insertion under high-speed operation is attained. The optional airflow guide controls disturbance in airflow caused by reed movement for stable filling insertion at high speed.

PSS-W Programmable Start

Best quality

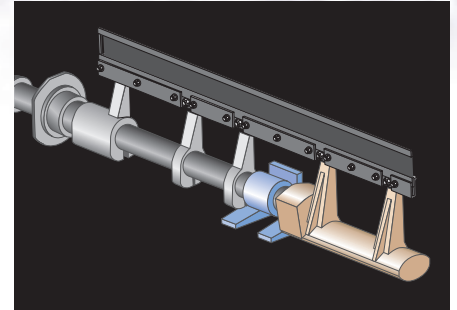
In addition to the cloth fell control just before re-start using kickback, the PSS-W compensates for speeds immediately after re-start to reduce stop marks after the cloth fell. Thick marks are also reduced by recovering the warp tension that has become low during loom stoppage just before re-start.



Fabric quality and let-off

Best quality

The reinforced let-off motion responds to light to heavy fabrics while upgrading fabric quality. The ELO electronic let-off motion provided with the kickback function minimizes stop marks.



Offset rocking shaft

Higher productivity

An offset rocking shaft with small inertia moment is employed to attain well-balanced beating even at high speed.

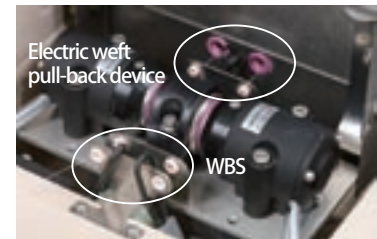
Environmental measures

It reduces 25% of floor vibration compared with the existing model together with the robust frame structure. Stable operation is possible at high speed.

WBS Weft Brake System Option

Best quality

The WBS effectively reduces peak tension at the end of filling insertion and makes the crimping effect of high-twist yarn fabric even. It also prevents tight or loose pick of textured fabrics.



Electric weft pull-back device Option

For some fabrics, the filling tip that protrudes from the nozzle is pulled back to give it a good posture in order to prevent the filling yarns from being entangled. This stabilizes filling insertion.

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■ Specifications

Item		Description	Optional
Reed space	Nominal (cm)	190, 210, 230	
	Useful reed space	Nominal reed space with maximum reduction of 50cm	
Filling selection		2-color at-will	
Driving	Start	Driven by a rush-start motor	
	Motor capacity	2.7kW, 3.0kW, 3.7kW	
	Operation	Stopped by the electromagnetic brake at the programmed position Push button operation (arrange, run, stop, forward inching, reverse inching, programmed position stop after one cycle reverse rotation) APF-W Automatic Pick Finder	
Beating		Crank beating, multiple sword beating system. Oil bath lubricating system	
Filling insertion	Pump system	Plunger-type spring pressure system	
	Nozzle	Ring nozzle stabilizer system (Ceramic needle)	
	Measuring & storage	FDP-AⅢ Free Drum Pooling (2 colors)	WBS Weft Brake System Electric weft pull-back device
Shedding		Crank type plain shedding: for 4 heald frames, for 6 heald frames Cam shedding: Top-mounted positive cam for 10 heald frames Dobby shedding: Top-mounted negative dobbie for 16 heald frames, Top-mounted positive dobbie for 16 heald frames	
Let-off		ELO Electronic Let-Off, PSS-W Programmable Start	
	Maximum tension	2300N, 4000N	
	Distance from cloth fell to tension roll	Standard	
	Flange diameter	800mm	
Take-up		ETU Electronic Take-Up	
	Cloth wind-up diameter	520mm	
	Cloth passage	S-type inclined, S-type	
Yarn package stand		Floor-mounted, horizontal stand for 4 packages (2 colors)	
Selvage formation		Twisting by planetary gear system	
Catch cord		Spindle twisting system	
Cutter		Mechanical cutter	
Temple		Top mounted. 2-barrel type with 2 rings each	
Water suction		Slit tube suction system (Blower 400W)	
Stop motion	Filling	OPF feeler	
	Indication of loom stop causes	Indication by message on Navi-board 4-color multi-function indication lamp	
Weave Navigation System	Navi-board	Automatic data setting, recommended setting indication, optimum weaving condition information, automatic control, troubleshooting, self-diagnosis function, operating data indication, maintenance data indication	
	Network application	Weaving advice, operation manual & parts catalog browse TLM Tsudakoma Loom Monitoring system	

Note 1: Specifications, drawings, and photos in this brochure are subject to change for improvement without prior notice.

Note 2: Some photos in this brochure include optional items.

Weave Navigation System

Ultimate weaving support

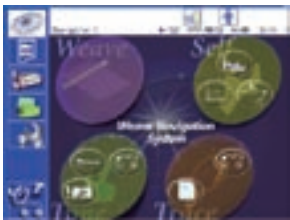
True user-friendliness is realized.

The system that is mounted on our air jet looms and enjoys a good reputation is mounted on our water jet loom for the first time. Even during operation, the loom conditions are monitored while navigating you to the best weaving possible.

The automatic setting function and the simple setting function are extended and enhanced. More detailed control for various items is done by simpler operations.

Conditions to control weaving are set automatically, and our recommended mechanical values are shown.

Weave Navi



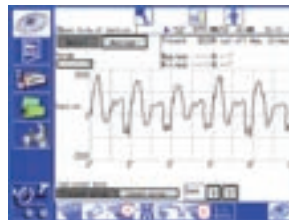
Main menu

Tune Navigation



Stop mark prevention

Self Navigation



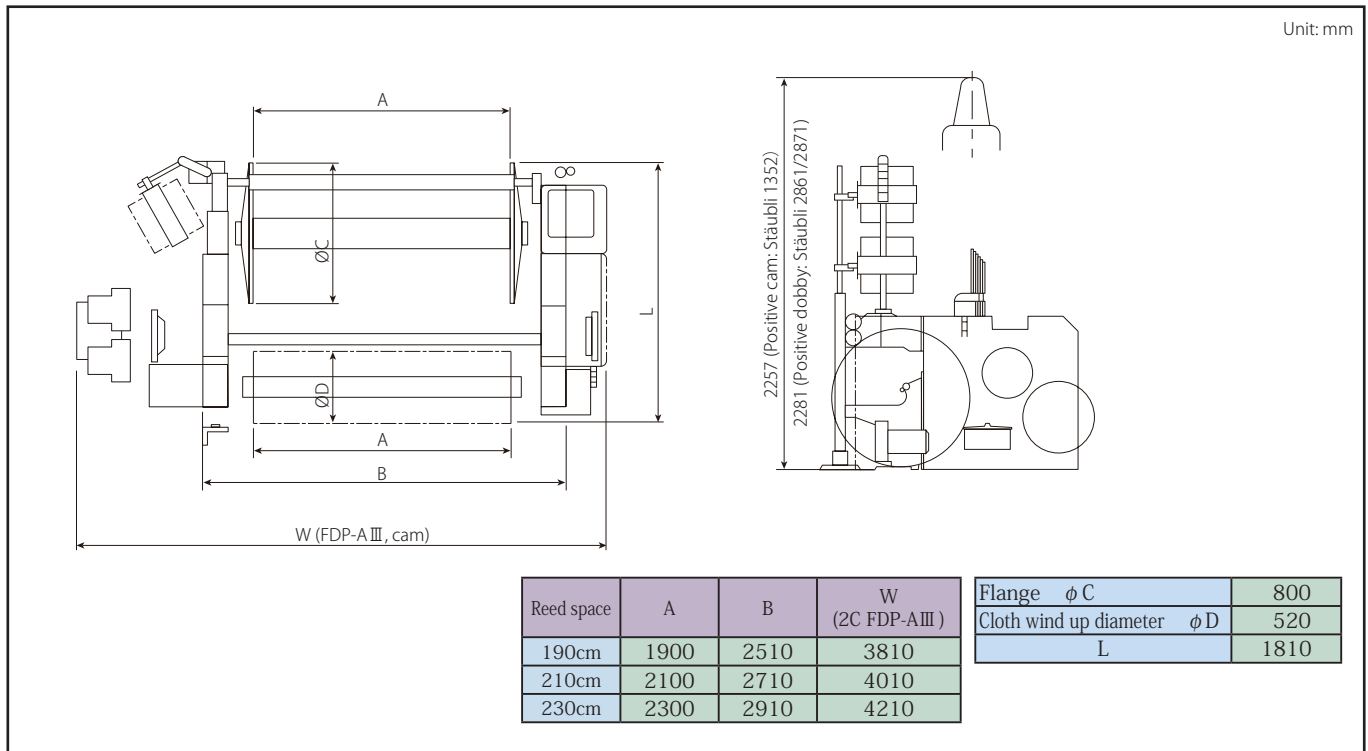
Let-off, take-up & tension graph

Weave Tips



Feeler waveform

■ Dimensions



Note: Dimensions may differ depending on the specifications. Please contact Tsudakoma for final confirmation.



The Weave Navigator



Since its founding in 1909, Tsudakoma has been a vigorous pioneer in weaving technology.

While achieving higher productivity, improving fabric quality, and saving energy, Tsudakoma has poured its energy into satisfying the demands of multi-colored, wide, and value-added fabrics. As a result, Tsudakoma is the leader in cutting-edge weaving technology.

Tsudakoma, as the Weave Navigator, continues creating excellent textile machinery, opening the door to a new era of weaving.



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