

**1. Exhibition theme**

**TSUDAKOMA Corp.**

## **Smart Ecology** Ecology and Economy in Harmony

TSUDAKOMA Corp. will present a creation for the complete new style weaving mill at ITMA 2015 to be held in Fiera Milano Rho from November 12th, 2015 to November 19th, 2015 for 8 days on the theme of "Smart Ecology" - Ecology and Economy in Harmony - (Hall 1-H101).

Tsudakoma has emphasized users' needs while creating weaving machinery since their foundation in 1909.

They will demonstrate their high-quality jet looms that have enhanced basic abilities, improved user friendliness and environment gentleness, and wide versatility.

Tsudakoma continues to develop their products for more user-friendliness and hearty after-sales service resulting in longer patronage while pursuing super-high speed, best quality, energy saving and value addition.

**2. Exhibits**

**1) Proposal to the next generation - "Concept Model"**

### **"Ultrahigh" productivity with the fastest jet loom at record-high RPM**



The new concept initiated by Tsudakoma is "Amazing fabric woven at a Surprising speed." To the record-high RPM for jet looms, Tsudakoma adds the task of quality. Combining speed and quality is the fundamental mission for jet looms. We are proud to introduce our new concept,

"ultrahigh" productivity as a result of our re-examination of all structures, the shedding motion, and the weft insertion system.

While attaining the ultrahigh speed, slow start & stop control is provided in order to absorb the impact to the mechanical section resulting from sudden start & stop. This function contributes to avoid malfunction and degradation without influencing fabric quality.

**● Specially designed slow start & stop control**

The slow start & stop control increases/decreases the loom RPM in a phased manner when the loom starts or stops. It absorbs the impact to the mechanical driving section resulting from a sudden start & stop. Combined with the i-Start, it drastically reduces malfunctions, shortening the life of parts and degradation while keeping fabric quality.

## 2) "Fruition of massive air saving and weft insertion ability" ZAX9200*i* MASTER Air Jet Loom

Energy saving is a common mantra for the world. Tsudakoma's high-end model, "ZAX9200*i*-MASTER," has greatly reduced air consumption and air pressure for high speed operation by a 340-cm wide loom. It has the latest weft insertion items optimizing their control and the piping system. We are sure that you can realize high-speed operation of quality value-added fabrics by combining it with the independently-driven Jacquard motion.



The DSS-II Direct Sub-nozzle System, ECO-II - a new energy-saving reed, and the weft insertion system that uncompromisingly reduces detraction in the pressure and the residual pressure have attained massive air saving and increased the weft insertion ability.

### ● Advanced DSS - DSS-II

Tsudakoma's original technology, the DSS Direct Sub-nozzle System, has been advanced to the DSS-II. The DSS-II employs highly responsive valves and optimizes the piping system from the manifolds. Stable weft insertion at high speed while saving air and keeping the air pressure low is achieved.

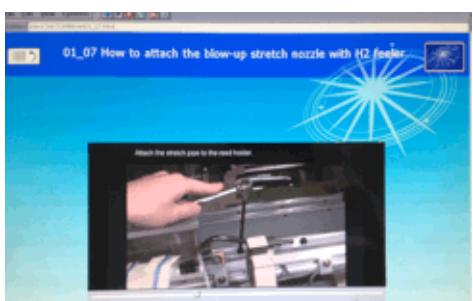
### ● Piping system best for weft insertion

The best layout of each valve greatly shortens the air piping route compared with older models. This effectively reduces the set pressure.

### ● ECO-II air-saving reed

The air guide profile is designed to improve the airflow from the sub-nozzles. The ECO-II reed can optimally save air compared with the traditional reed.

Provided with the new electric components, the number of steps weaving pattern data is drastically increased to support various fabrics. The loom data can be saved and transferred with a special USB thumb drive. Moreover, even when the LAN environment for the TLM is not provided, the manuals and the parts catalog can be displayed by the stand-alone loom.



Furthermore, the weaving support that Tsudakoma developed before the rest of the world has been upgraded to "Weave Navigation® System-II" with much enhanced user-friendliness. New electric components are provided, and the display of the Navi-board is enlarged for higher visibility. Video replay is also possible. Operators can maintain and troubleshoot their looms while referring to the video.

### 3) New TSC Tsudakoma Style Change system (PAT. P)

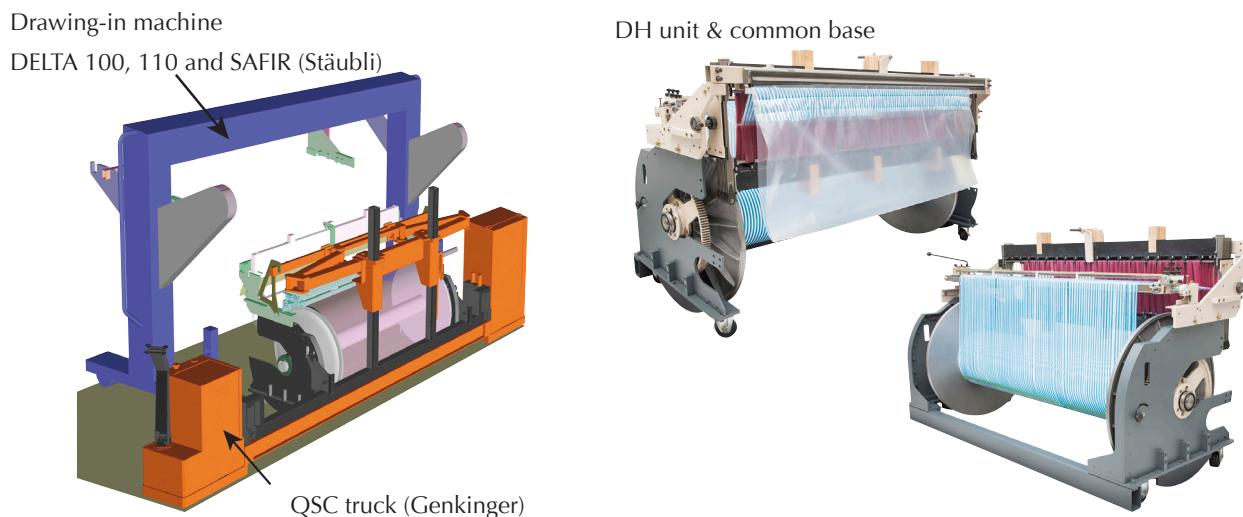
**A proposal from Tsudakoma**  
**Streamlining the whole weaving mill**

**"Streamlining the warp preparation process while reducing loom downtime"**

Not only individual looms but your whole mill can be streamlined. In addition to shortening downtime of looms, man-hours of a whole mill can be reduced for higher efficiency by using warp preparation machinery branded "T-Tech Japan."

As the warp beams are not laid on the floor, the beam flanges will not be damaged. It will also contribute to stabilizing weaving conditions.

A maximum of 30% of man-hours for a style change can be reduced depending on conditions.



### 3. Exhibits list

#### 1) Air Jet Loom (Concept Model)

Reed space: 190 cm  
Shedding: Crank  
Fabric: Pongee

#### 2) ZAX9200i-Master Air Jet Loom

Reed space: 340 cm  
Shedding: Electronic Jacquard  
Fabric: Interior cloth

#### 3) NEW TSC Tsudakoma Style Change System

DH unit & common base  
Drawing-in machine (Stäubli)  
QSC truck (Genkinger)

### 4. Vision of Internet of Things (IoT)

#### **"TISS Tsudakoma Internet Support System" (Tentative name)**

Tsudakoma envisions a support system that fully utilizes the looms and warp preparatory machines owned by users. Tsudakoma aims at creating a network between the users' looms and the preparatory machines and Tsudakoma via the Internet to help improving their performance.