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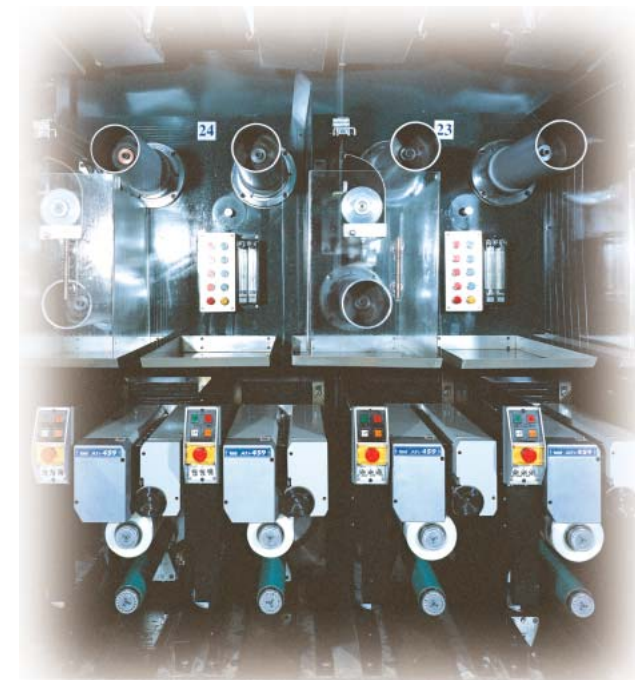
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*Due to continuous product improvement, specifications are subject to change without notice.*

CAT. NO. TMT-21TK01 06-08-1

# Spandex Winder



Advanced Technology Innovative Take-up Winder

# ATi-459



**TMT MACHINERY, INC.**

**TMT Machinery Presents**

**Advanced Technology Innovative Take-up Winder**

# **ATi-459** SPANDEX WINDER

People everywhere are always looking for more comfortable and more fashionable clothing. The elastic yarn "Spandex" is now almost an essential element of stylish apparel for women, and of highly functional sportswear. The TMT's ATi-459 Spandex Winder has been adopted by users all over the world. Renowned for high reliability and outstanding performance, the ATi-459 Spandex Winder is now acknowledged as the industry standard. In providing this outstanding Spandex Winder, TMT continues to support the world's fashions.



Continually **E**volving to **M**eet User Needs

## **1** Spandex Winder - Reliability and Performance

Many users have adopted the ATi-459 since we first released it as an 8-end type in 1993. From that moment, the ATi-459 has continued to grow, reflecting the diverse, changing needs of users and becoming ever easier to use. The highly versatile ATi-459 is easily adapted to the specialized Spandex spinning processes of individual user companies. Performance has continued to rise, and the ATi-459 is now used all over the world regardless of differences in spinning processes, whether dry, melt, wet, or some other. Moreover, our readiness to customize specifications to satisfy individual requirements is also highly acclaimed, and has earned us the full trust of users the world over.

## **2** Auto-Revolving System

The greatest feature of the ATi-459 is a unique and original yarn transfer method. Using an original mechanism, the auto-revolving system enables reliable yarn transfer. It permits a large yarn-to-bobbin twining angle and continuous Spandex yarn production, from a fine 20 denier to 1,000 denier.

## **3** Front Support Type

A front support specification has been added to the line-up. The front support type incorporates many new ideas. It is an indispensable element of new equipment programs for the 21st century, as replacement equipment for handling the increase in number of ends due to fine denier yarn, and for better use of existing space.



**16-end front support type**  
Individual control panel mounted style

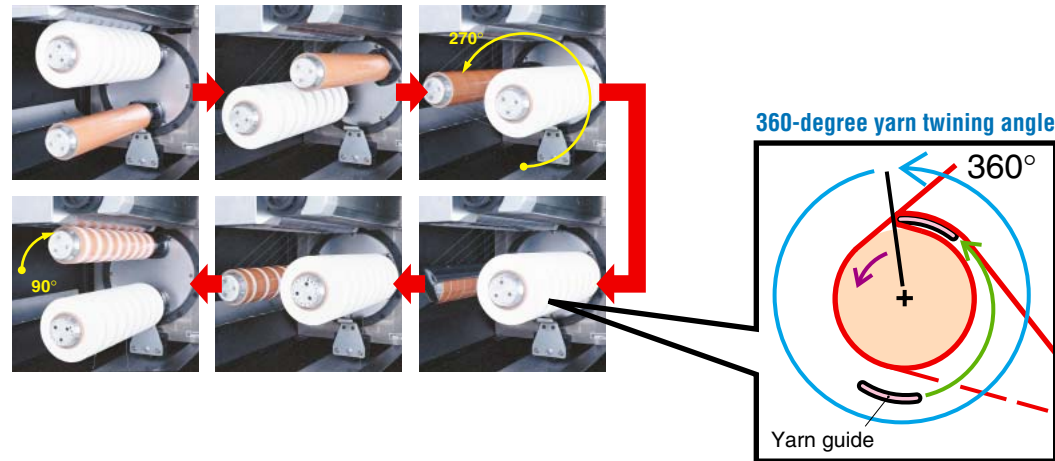
TMT's **A**dvanced **T**echnology  
Innovative Take-up Winder

# **ATi-459**

## Advantages of the ATi-459 Spandex Winder

### A Auto-Revolving System (Patented worldwide as a Yarn Transfer Mechanism)

With the 270-degree revolving angle and the operation of the yarn guide, the twining angle of the empty bobbin becomes 360-degree, enabling reliable yarn transfer.



### B Dual-end Bobbin Holder (Front Support Type)

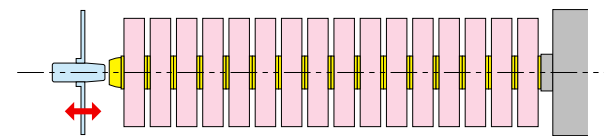
To prevent vibration of longer bobbin holders, the holder is supported also at the front. This modification has made possible a maximum winding speed of 1,000m/min.

**ATi-459**

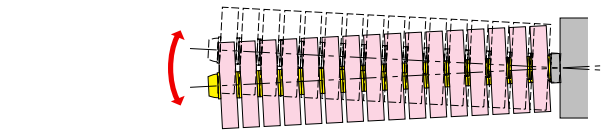
16-end  
Front support type



Front support type



Conventional type

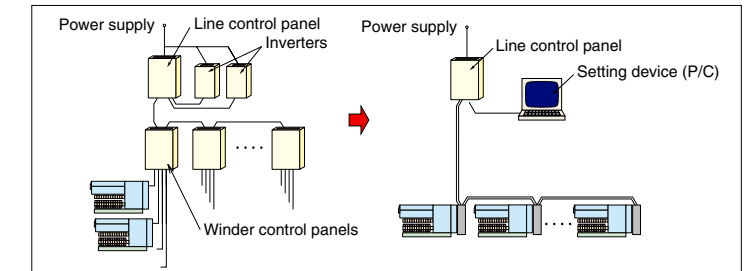
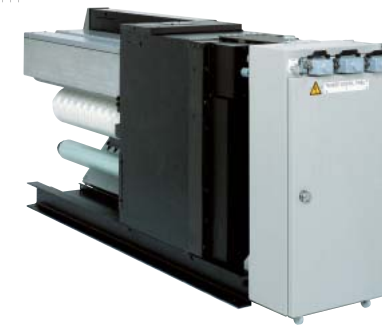


### C Individual Control System

Using compact inverters, TMT has developed a space-saving, piggy back type control panel that is mounted onto each Winder. Given individual winder control, flexible traverse control and TMT's original creeping function result in ideal winding configurations.

#### 1. Saving of Space & Simplified Electrical Wiring

Individual winder control cuts the number of line control panels, with clear benefits in the reduction of electrical wiring.

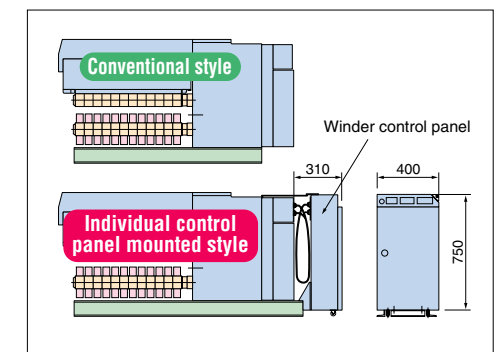
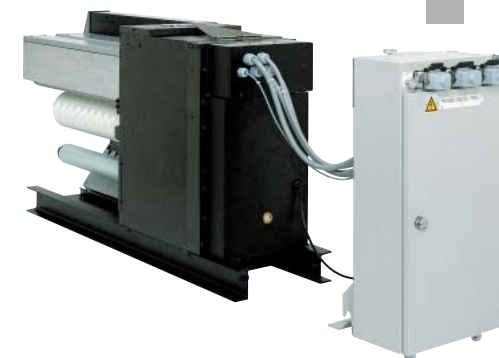


#### 2. Diverse Functions

Individual control System	Function	Conventional System
Separate inverter attached to each winder	Inverter	Line inverter
Winding angle can be programmed to change with package diameter	Traverse speed control	Fixed winding angle only
Creeping function by Traverse Width Control (Option)	Package oscillation	(Multi-cycle cam) (Option)
Centralized setting via setting device (P/C) linked to winder control panels	Setting of operating conditions	Set in turn at each local panel
Centralized management via setting device (P/C) linked to winder control panels	Monitoring of operating conditions	—

#### 3. Easy Maintenance Panel Design (patent pending)

The compact, piggy back type control panel has been designed with minimal external wiring. The panel is mounted onto the winder and can be removed without difficulty for easy maintenance.



## Main Specifications of Standard Type

	8-end Type	12-end Type
Take-up yarn	Spandex: 20 to 1,000 denier	
Take-up speed	300 to 1,000m/min	300 to 800m/min
Number of packages	8 (4)	12 (6)
Package diameter	Maximum ø200mm	
Package volume	1.14dm <sup>3</sup> (2.38dm <sup>3</sup> )	
Bobbin size	ø73.5mm x ø83mm - 57.5mm (ø73.5mm x ø83mm- 115mm)	
Drive system	Friction drive by synchronous motor	
Traverse system	Cam traverse	
Control system	Individual inverter control	
Power supply voltage	380 to 460V	
Air supply pressure	0.6MPa (6kgf/cm <sup>2</sup> G)	
Minimum installation pitch	450mm (430mm: in case of maximum package diameter is up to ø180mm )	

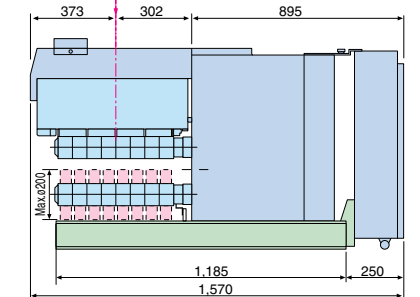
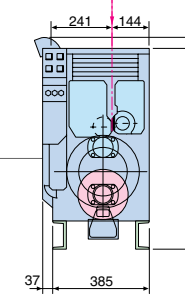
## Main Specifications of Front Support Type

	12-end Type	16-end Type	Large Package Type (For heavy denier)
Take-up yarn	Spandex: 20 to 1,000 denier		Spandex: 20 to 1,500 denier
Take-up speed	300 to 1,000m/min		150 to 500m/min 300 to 700m/min
Number of packages	12 (6)	16 (8)	6 (4)
Package diameter	Maximum ø200mm		Maximum ø300mm
Package volume	1.14dm <sup>3</sup> (2.38dm <sup>3</sup> )		6.0dm <sup>3</sup> (9.14dm <sup>3</sup> )
Bobbin size	ø73.5mmx ø83mm-57.5mm (ø73.5mmx ø83mm-115mm)		ø73.5mmx ø83mm-115mm (ø73.5mmx ø83mm-172.5mm)
Drive system	Friction drive by synchronous motor		
Traverse system	Cam traverse		
Control system	Individual inverter control		
Power supply voltage	380 to 460V		
Air supply pressure	0.6MPa (6kgf/cm <sup>2</sup> G)		
Minimum installation pitch	475mm		650mm

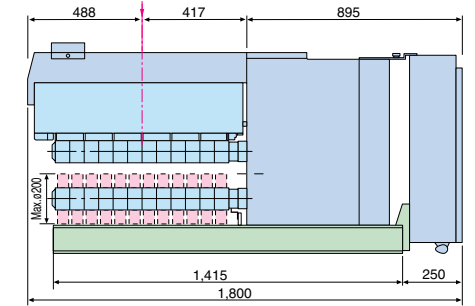
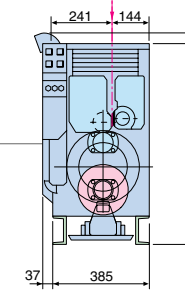
## Winder Dimensions

### Standard Type

#### 8-end Type

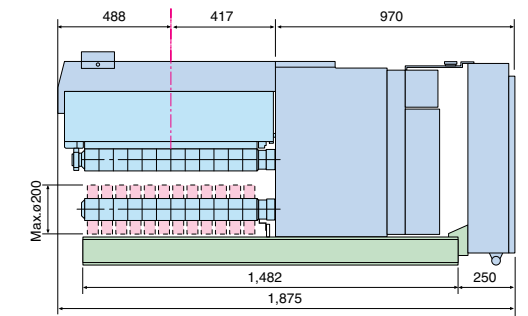
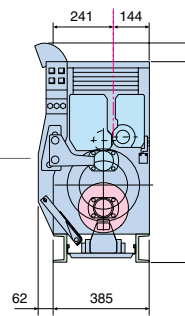


#### 12-end Type

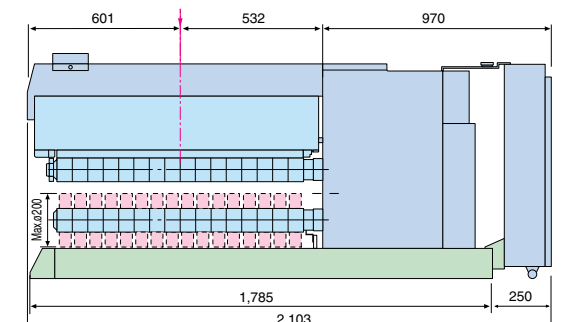
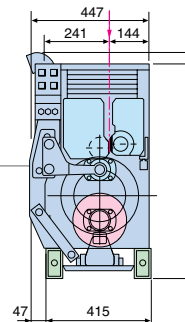


### Front Support Type

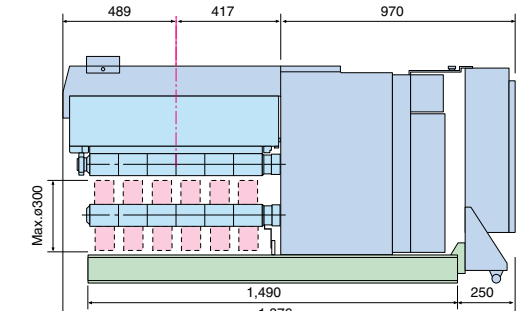
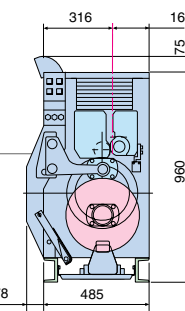
#### 12-end Type



#### 16-end Type



#### Large Package Type



(mm)

TMT's Advanced Technology  
Innovative Take-up Winder

**ATi-459**

TMT's Advanced Technology  
Innovative Take-up Winder

**ATi-459**