

**efi** MEZZERA JIGGER

*Discontinuous Desizing, Scouring, Bleaching and Dyeing Machine for Open Width Woven Fabric*

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# Technologies for open width fabric.



# Technologies for open width fabric dyeing

## Atmospheric



**VGCE 300**  
*Sampling, Silk, Lining*

Drive system: inverter  
Max roller batch diameter: 300 mm  
Max speed: 30 m/min  
Min-Max liquor content: 10 - 35 l/m width



**VGFE 500**  
*Silk, Lining, Small Batches*

Drive system: inverter  
Max roller batch diameter: 500 mm  
Max speed: 80 m/min  
Min-Max liquor content: 95 - 165 l/m width



**VGOE 800**  
*Lining and Medium Batches*

Drive system: inverter  
Max roller batch diameter: 800 mm  
Max speed: 120 m/min  
Min-Max liquor content: 120 - 315 l/m width



**VGME 1050**  
*Medium Batches*

Drive system: inverter  
Max roller batch diameter: 1050 mm  
Max speed: 150 m/min  
Min-Max liquor content: 220 - 515 l/m width



**VGJE 1400**  
*Large Batches*

Drive system: inverter  
Max roller batch diameter: 1400 mm  
Max speed: 150 m/min  
Min-Max liquor content: 290 - 600 l/m width



## High temperature



**HT Celsius 500**  
**PES dyeing**

Drive system: inverter  
Max roller batch diameter: 500 mm  
Max speed: 80 m/min  
Min-Max liquor content: 95 - 165 l/m width



**HT Celsius 800**  
**PES dyeing**

Drive system: inverter  
Max roller batch diameter: 800 mm  
Max speed: 120 m/min  
Min-Max liquor content: 120 - 315 l/m width



**HT Celsius 1050**  
**PES dyeing**

Drive system: inverter  
Max roller batch diameter: 1050 mm  
Max speed: 150 m/min  
Min-Max liquor content: 120 - 430 l/m width



**HT Celsius 1300**  
**PES dyeing**

Drive system: inverter  
Max roller batch diameter: 1300 mm  
Max speed: 150 m/min  
Min-Max liquor content: 140 - 470 l/m width



### **Dis-continuous treatment of open-width fabrics**

With over 60 years of experience and thousands of machines sold throughout the world, Mezzera is in the ideal position to supply a range of jiggers for all needs, from the smallest jigger for sampling to the jumbo machine including all intermediate sizes. The Mezzera jiggers are the outcome of the long experience acquired working on the field.

### **Drive system**

The jigger is equipped with two separate electric motors with variable speed driven by independent AC vectorial inverters.

### **Speed adjustment**

The circuit that controls the speed uses a high resolution encoder. It ensures accurate adjustment despite the change in the diameter of the fabric roll.

### **Tension control**

The required tension can be set in the PLC accordingly to the fabric specifications. The load cell, positioned on the back-roller under the liquor, measures in real time the tension applied to the fabric and sends a feedback signal to the PLC; set value and measured value are compared and the difference, if any, is immediately set to zero synchronizing the A.C. motors through the inverters. That is done automatically and this system provides a very fast and accurate compensation of any tension fluctuation which may occur during the cycle. Thus, tension applied to the fabric permits to process delicate fabrics (including bi-stretch) with the same tension all over the cycle.

### **Equalizer**

When treating delicate fabrics, thus very sensitive to the applied tension, a central equalizer swingarm, positively driven, is used, whereas for medium-heavy fabrics an oscillating equalizer is applied. Both solutions perfectly aid the fabric to be rolled/unrolled onto the winding rollers.

### **Liquor circulation- heating**

The liquor circulation unit consists of a pump and two pipes, one suction pipe and one delivery pipe, positioned at the bottom of the main tank. The liquor circulation unit has been designed to keep treatment liquor flowing all times, so that the chemical products are perfectly mixed together and to ensure a perfect and uniform dyeing. Both direct and indirect heating system, based on a steam pipe inside the vat, ensures fast temperature control, saving production time and steam consumption. The external heat exchanger is also available on demand. The chemical products are prepared in an external tank which has its own direct heating pipeline, a circular washing pipeline, filter and a discharge on/off valve.

### **Washing and rinsing**

A special technical execution permit to wash and rinse in countercurrent, ensuring an effective washing action with significant advantages in terms of water consumption. The washing effect is increased also thank to a twin set of spray pipes (positioned on each side of the swing lever) to generate a blade of water with an efficient washing effect.

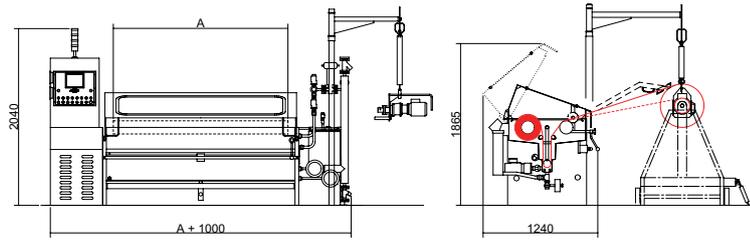


### **Control system of dyeing process**

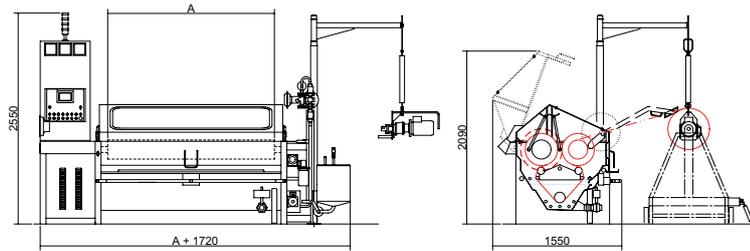
The control system is based on a state-of-the-art PLC installed in a watertight cabinet. This unit is controlled from an ergonomic control panel with touch screen that allows to save the working cycle, into the PLC, recall and execute the cycles whenever is necessary.

Technical data

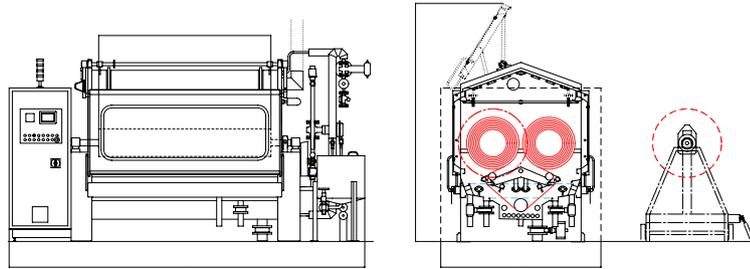
VGC-E 300



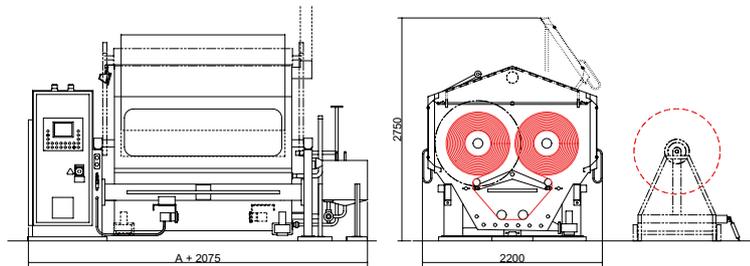
VGf-E 500



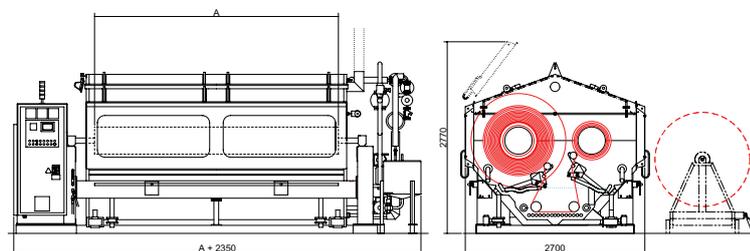
VGO-E 800



VGM-E 1050



VGJ-E 1400



TECHNICAL DATA	ROLLER WIDTH (A) MM	TANK CAPACITY MIN/MAX (LXM)	INSTALLED POWER (KW)	FABRIC SPEED (M/MIN)	FABRIC TENSION (KGF)	MAX LENGTH (MM)	MAX WIDTH (MM)	MACHINE HEIGHT (MM)
VGC-E 300	1400 - 2400	10 - 35	1,5	30	5-40	A+1000	1240	1865
VGf-E 500	1400 - 2400	95 - 165	6	80	5-40	A+1720	1550	2090
VGO-E 800	1400 - 2800	120 - 315	10	120	5-50	A+2130	1860	2790
VGM-E 1050	1400 - 3800	220 - 515	12	150	5-60	A+2075	2200	2750
VGJ-E 1400	2000 - 3800	290 - 600	16,8	150	5-60	A+2350	2700	2770

# HT JIGGER

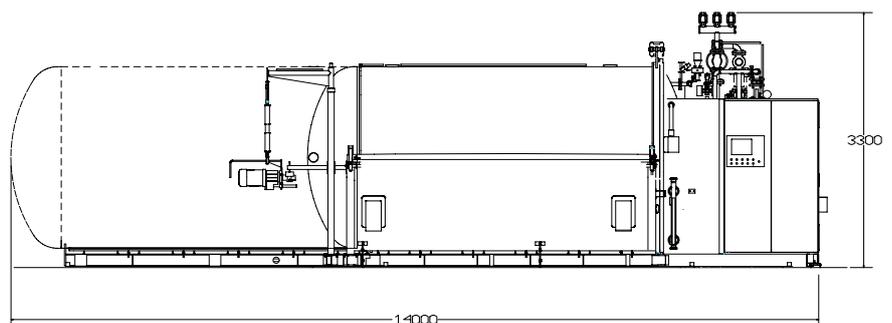
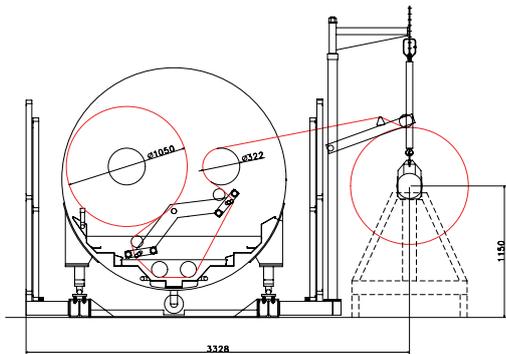
## **THE LAST GENERATION OF PRESSURED JIGGERS FOR HIGH TEMPERATURE DYEING**

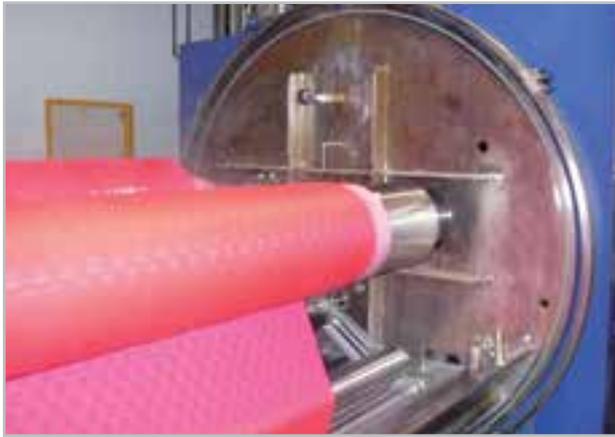
The forty years of manufacturing experience together with the highest production technology have led to design and to product the most recent jigger in the Mezzera production line.

The jigger is available in four versions: 500,800, 1050 or 1300 mm as maximum diameter of the winding fabric rollers. The dyeing quality is blended with totally safe high temperature operation up to 143°C.

The jigger is equipped with two electric motors with variable speed independently controlled by vectorial inverters. The tension value applied on the fabric is controlled by the two synchronized motors through encoder and mathematical models on the PLC. The real fabric tension value during production is checked by the load cell, located in one of the two cylinders at the bottom of the tank. The swing-levers have been designed to obtain crease-free dyeing in even the most delicate fabrics.

The tank, in stainless steel, and the operating methods have been designed to reach the highest washing efficiency. The jigger is equipped with an axial fabric unloading system. To make fabric winding easier without getting any folds or crease a device, made up of a fixed fabric-expanding bar and an idle guide roller, has been fitted onto the machine. bi-stretch) with the same tension all over the cycle.





## LOADING CAPACITY

Fabric thickness (mm)

	WEIGHT (g/m <sup>2</sup> )	30-60	60-110	110-135	135-170	170-240	240-280	280-320	320-350	350-420	420-500	500-590
TYPE	MAX ROLL DIAMETER (MM)	0,08	0,1	0,2	0,25	0,35	0,45	0,55	0,65	0,75	0,85	0,95
VGC-E	300	491	393	196	157	112	87	71	60	52	46	41
VGF-E	500	1930	1544	772	617	441	343					
CELSIUS 500	500	1930	1544	772	617	441	343					
VGO-E	800	5263	4210	2105	1684	1203	936	765	648	561		
CELSIUS 800	800	5263	4210	2105	1684	1203	936	765	648	561		
VGM-E	1050			3920	3136	2240	1742	1426	1206	1045	922	825
CELSIUS 1050	1050			3920	3136	2240	1742	1426	1206	1045	922	825
CELSIUS 1300	1300			6226	4981	3558	2767	2264	1916	1660	1465	1311
VGJ-E	1400				5689	4064	3161	2586	2188	1896	1673	1497

All the above data are given on an indicative basis are not technically binding for the product. Mezzera reserves the right to modify at any time and without prior notice, the data and technical specifications published herein.

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