

efi MEZZERA JIGGER

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

Technologies for open width fabric.



Technologies for open width

Atmospheric



VGC-E 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



VGF-E 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



VGO-E 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



VGM-E 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



VGJ-E 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

fabric dyeing

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



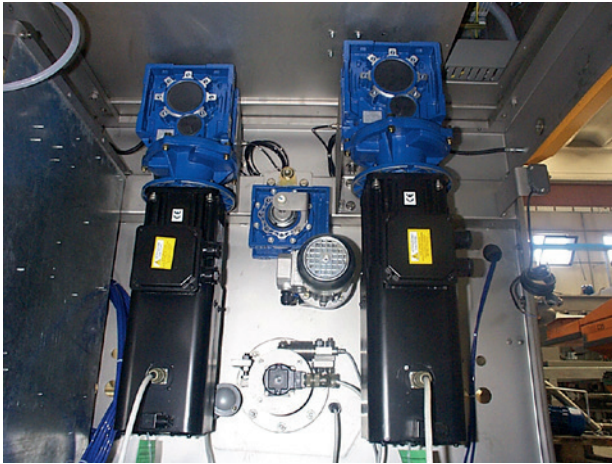
HT Celsius 1050
PES dyeing

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



Discontinuous treatment of open-width fabrics

With over 60 years of experience, Mezzera is in the ideal position to supply a range of jiggers for all needs, from the smallest jigger for sampling to jumbo machines.

Drive system

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

Speed adjustment

The circuit that controls the speed uses a high-resolution encoder. It ensures accurate adjustments despite changes in fabric roll diameter.

Tension control

The required tension can be set in the PLC according to the fabric specifications. The load cell, positioned on the back-roller under the liquor, measures the tension applied to the fabric in real time and sends a feedback signal to the PLC. Then, set values and measured values are compared and the difference, if any, is immediately set to zero, automatically synchronising the AC motors through the inverters. This system provides a very fast and accurate compensation of any tension fluctuation that may occur during the cycle. Thus, tension applied to the fabric permits the processing of delicate fabrics (including bi-stretch) with the same tension throughout the cycle.

Equaliser

When treating delicate fabrics that are very sensitive to the applied tension, a central equaliser swingarm, positively driven, is used, whereas an oscillating equaliser is applied for medium to heavy fabrics. Both solutions allow the fabric to be rolled/unrolled onto the winding rollers.

Liquor circulation – heating

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

Washing and rinsing

A special technical execution allows washing and rinsing in a counter-current, which ensures effective action with significant advantages in terms of water consumption. The washing effect is also increased by a twin set of spray pipes (positioned on each side of the swing lever) that generates a blade of water that gives an efficient washing effect.



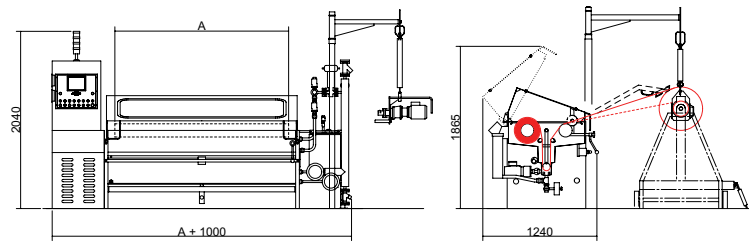
Dyeing process control system

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 a touch screen that allows you to save the working cycle in the PLC and recall and execute the cycles whenever necessary.

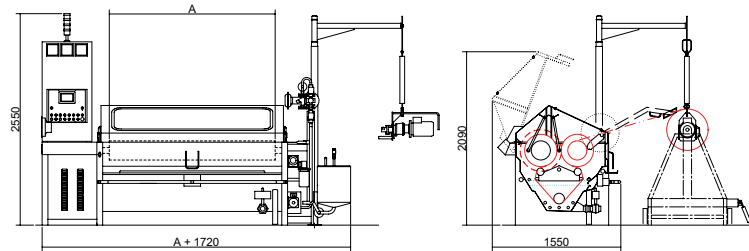


Technical data

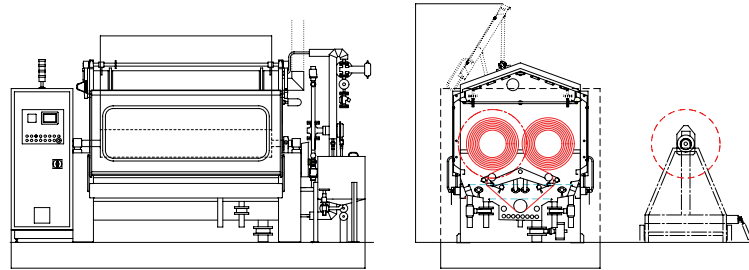
VGC-E 300



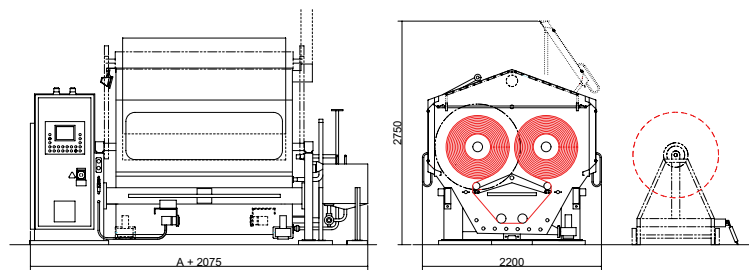
VGf-E 500



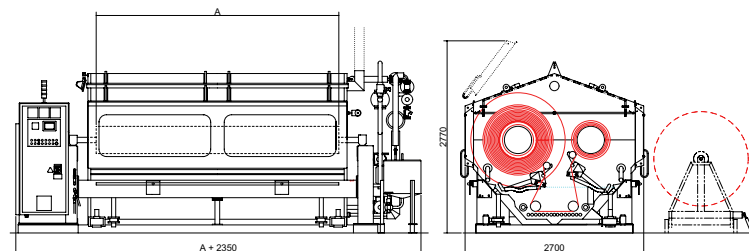
VGO-E 800



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	2105	5-60	A+2350	2700	2770

HT JIGGER

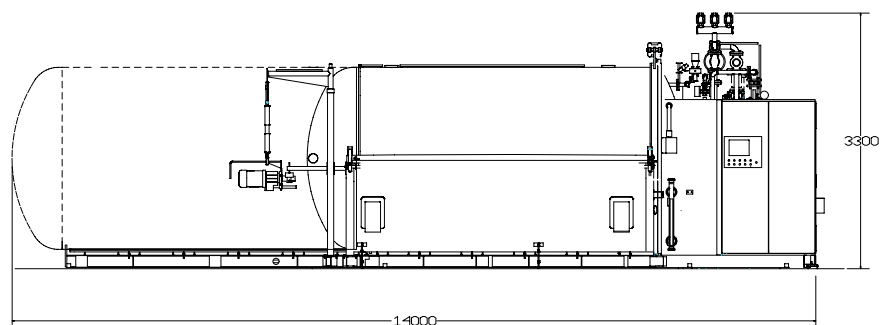
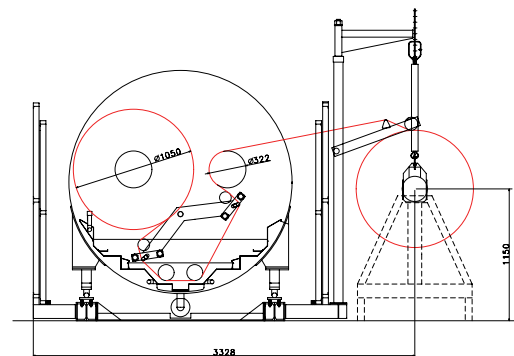
The latest generation of pressured jiggers for high-temperature dyeing

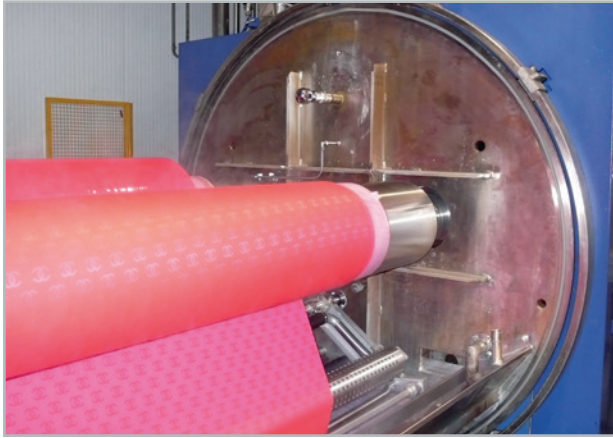
Our 40 years of manufacturing experience together with the highest production technology have led to the design and production of the most recent jigger in the Mezzera production line.

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 speeds independently controlled by vectorial inverters. The tension value applied to the fabric is controlled by the two synchronised motors through encoder and mathematical models on the PLC. The real fabric tension value during production is checked by the load cell, which is 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, which is made of 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 creases, a device consisting of a fixed fabric-expanding bar and an idle guide roller has been fitted onto the machine bi-stretch, resulting in the same tension throughout the cycle.





LOADING CAPACITY

Fabric thickness (mm)

	WEIGHT (G/M ²)	30-60	60-110	110-135	135-170	170-240	240-280	280-320	320-350	350-420	42-500	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 and 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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