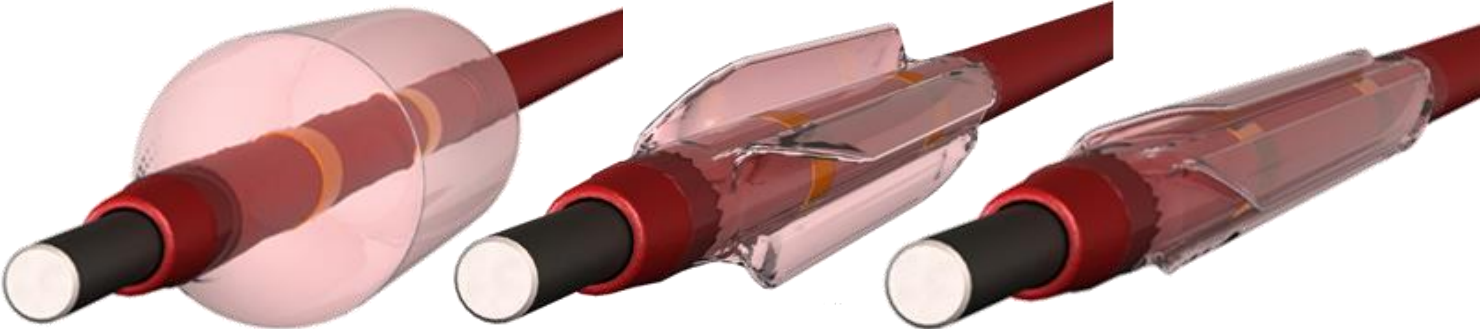


Balloon Wrapping Machines: Model VC with Pneumatic Actuation Model VE with Stepper Motor Actuation



www.blockwise.com

Blockwise Balloon Wrappers are tabletop machine that wrap catheter balloons tightly around a catheter shaft in three steps:



1) Inflate

2) Pleat

3) Compress

Pleating Step performed by an Alpha-Pleat™ or TwinCam™ pleating station, a set of heated dies moves inward toward a low-pressure air-inflated balloon to form the balloon into a number of equal “pleats” or “wings”.

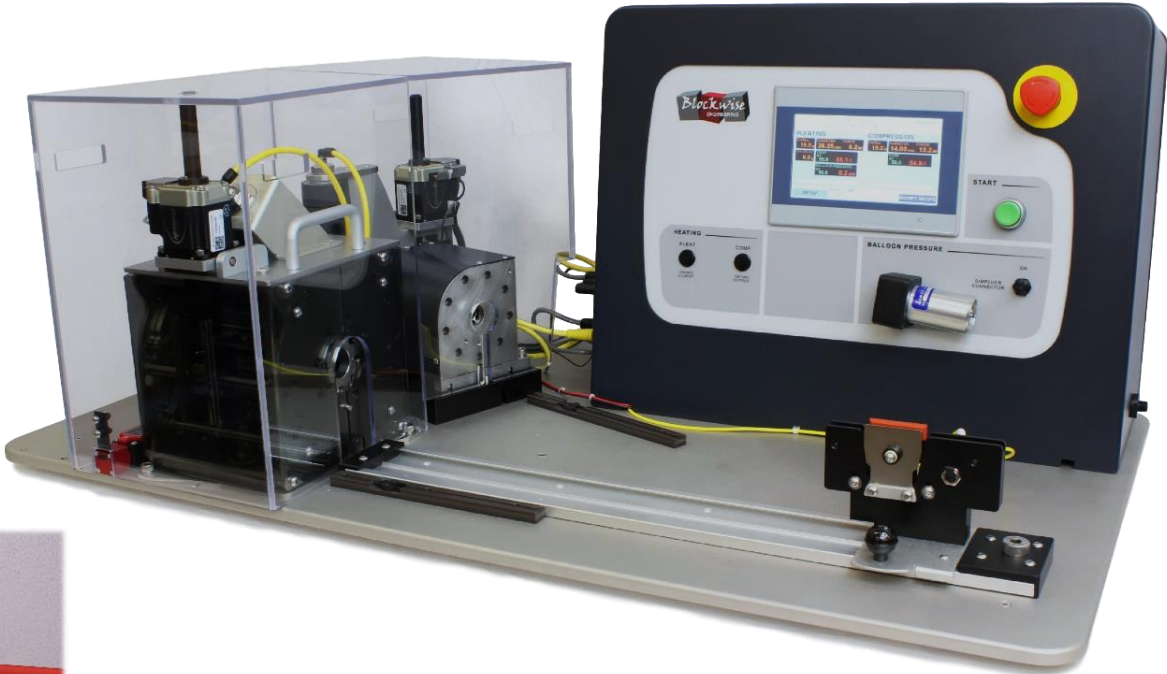
Compression Step performed by a J-Crimp™ or Twin-Cam™ compression station. A set of heated dies forms an adjustable cylinder-shaped opening that radially compresses the vacuumed & pleated balloon, forming it so that the pleats are tightly wrapped around the catheter shaft. After the compression step, the “wrapped” balloon is typically placed in a sheath.

Complete Balloon Wrapping Machine includes: one machine control base, one compression station, plus pleating station modules for various balloon geometries which can be easily removed and replaced. Pleating stations are customized to match the diameter, length and other geometry of your balloons. Each station will cover a large range of balloon geometries. Additional pleating stations may be purchased and easily interchanged to process various numbers of wings, diameter ranges, and wall thicknesses.

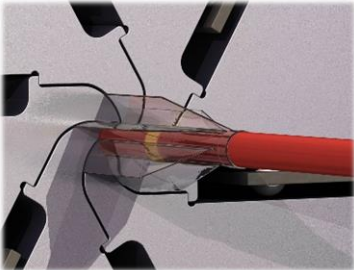
Model VE Balloon Wrapper Base supports stepper motor actuated pleating & compression stations.

Model VC Balloon Wrapper Base supports pneumatic cylinder actuated pleating & compression stations.

Model VEG or VCG for AlphaPleat™ & J-Crimp™ stations. Model VET or VCT for TwinCam™ & all other stations



Custom Pleating
Die Geometry



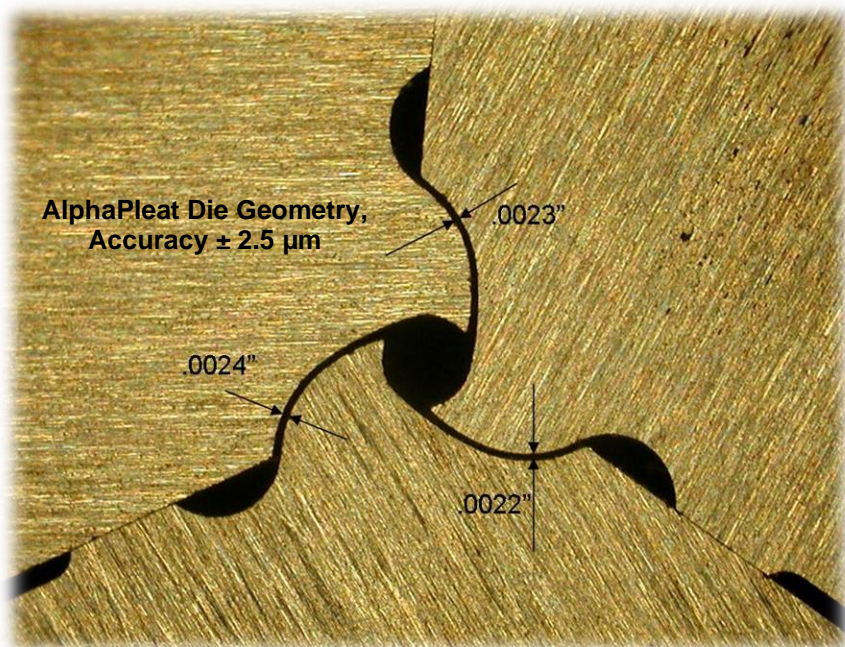
Model VET TwinCam Wrapping Machine,
Shown with custom safety enclosure

Comparison of Functionality: Stepper Motor vs. Pneumatic Cylinder Actuated Balloon Wrapping Machines

Feature	Model VE	Model VC
Pleat & Compression Actuation	Stepper Motor	Pneumatic Cylinder
Pleat Open Diameter Stop	Set in Recipe	Set with manual knob
Pleat Closed Diameter Stop	Set in Recipe	Not Available
Pleat Diameter Display	Touchscreen Interface	External Digital Indicator
Pinch Detection - Pleating (if balloon is misplaced or mandrel between dies)	Yes	Not Available
Compression Minimum Diameter Stop	Set in Recipe	Set with manual knob
Compression Open Diameter Stop	Set in Recipe	Not Available
Compression Diameter Display	Touchscreen Interface	External Digital Indicator (optional)
Maximum Compression Force (During diameter step)	Set in Recipe	Not Available
Compression Verification (Diameter & Force)	Yes	Not Available
Recipe Selection	Barcode Scanner (optional) & Touchscreen	Touchscreen
Leak Detection	Yes (optional)	Not Available
Inputting Process settings/parameters or creating "recipes"	All settings in the touchscreen interface	Most settings in the touchscreen interface

Specifications:

Lengths Available	AlphaPleat: 62 (3 wing only), 124 mm TwinCam: 62, 124, 186, 248, 310 mm
Number of Balloon Wings	AlphaPleat: 2, 3, 4, 5, 6 TwinCam: 2, 3, 4, 5, 6, 8
Inflated Balloon Diameter Range (with pleat station change-outs)	AlphaPleat: 0.75 mm to 15 mm TwinCam: 2.0 mm to 30.0 mm <i>Each station covers a diameter range of 3:1</i>
Compression Station Opening Diameter Range	AlphaPleat: 0.5 mm to 16 mm TwinCam: 0.5 to 30.0 mm
Machine Dimensions	AlphaPleat: 61 cm deep x 61 cm high x 61 cm width TwinCam: 61 cm deep x 61 cm high x 90 cm width
Pleat & Compression Die Temperature Ranges	Room Temp to 100°C
Die Material	Hardened, Electropolished, Certified Stainless Steel
Sequence Control	Touchscreen interface with 100 recipe memory and custom board for control
Service Connections	AC Power: 120/240 V, 3A Air: 4.8-6.9 bar
Catheter Connection	Standard Luer Fitting, Using Simpluer Connector



Typical Result: 6 Pleat

