Automatic balling machine KW 765 and KW 765 G

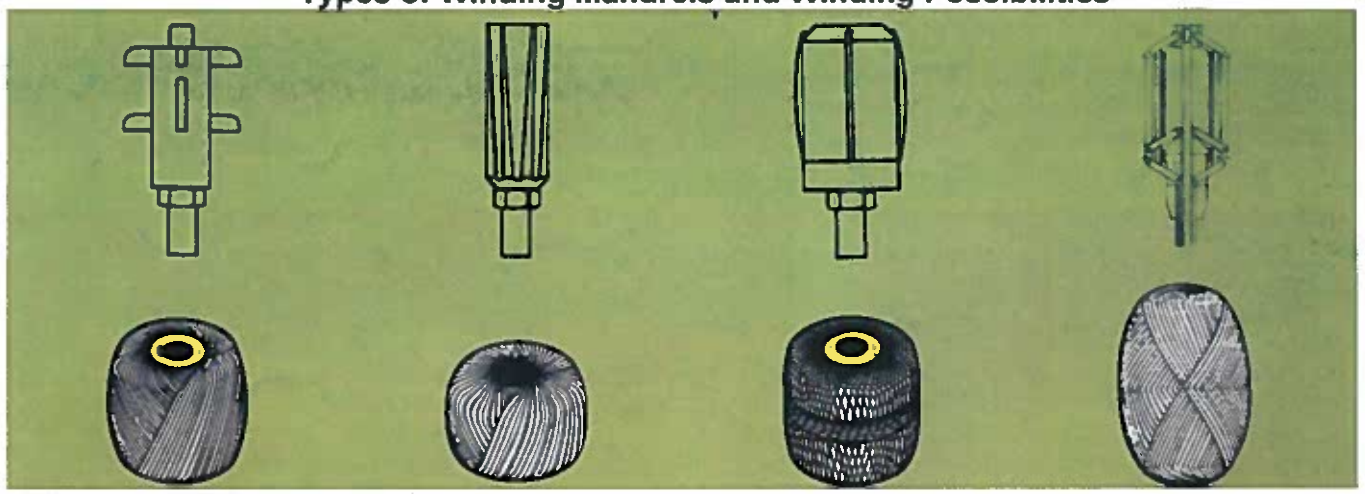
Additional Equipment:

- Automatic tube supply unit
- Automatic labelling device
- Material supply creel with reserve connection
- 3 to 8 cross winding and/or smooth winding for hand knitting yarn
- Exchange set for a different tube or label size
- Thread end clamping
- Thread tension compensation
- Thread breakage control with machine stop
- Cycle counter with preset option and total production counter included into the operation panel
- Thread breakage control with automatic ball counting device
- Ball conveyor with elevator
- Automatic infeed into fully automatic JBF packaging machines.

Production Data:

- Depending on ball weight and quality of yarn.

Types of Winding Mandrels and Winding Possibilities



Expanding mandrel for winding onto large-diameter tubes

Compact mandrel for winding tubeless balls

Compact tube mandrel for winding onto small-diameter tubes

Expanding mandrel for winding hand-knitting yarn balls

Sizes of winding mandrel	KW 765	KW 765 G
Compact Mandrel		
Diameter	8 - 52 mm	27 - 52 mm
Winding length	12 - 85 mm	22 - 130 mm
Compact Tube Mandrel		
Inside diameter of tube	8 - 52 mm	27 - 52 mm
Length of tube	12 - 85 mm	12 -85 mm
Expanding Mandrel		
Inside diameter of tube	35 - 57 mm	35 - 90 mm
Length of tube	12 - 85 mm	12 - 100 mm

Technical Data:	KW 765	KW 765 G
Winding heads	10, 16 or 20	10 or 16
Spindle gauge	165.1 mm (5.51")	203.3 mm (8")
Flyer speed	max. 2200 rpm.	max. 2000 rpm.
Label diameter	22 - 45 mm	25 - 60 mm
Ball weight	approx. 1 - 50 g	approx. 50 - 150 g
Outside ball diameter	max. 85 mm	max. 120 mm
Ball length	max. 90 mm	max. 130 mm
Material supply	spools max. 300 mm ø, 450 mm long	
Power consumption	5.0 kw	5.0 kw
Air consumption	10 spindles max. 1.5 m^3/h	
	16 spindles max. 2.0 m^3/h	
	20 spindles max. 2.5 m^3/h	max. 2 m^3/h
Air pressure	6.0 bar	6.0 bar
Machine weight	10 spindles approx. 1800 kg	
	16 spindles approx. 2150 kg	
	20 spindles approx. 2350 kg	approx. 2350 kg
Space requirement	approx. 8.5 m^2	approx. 11 m^2

Subject to technical modifications without notice

10/03

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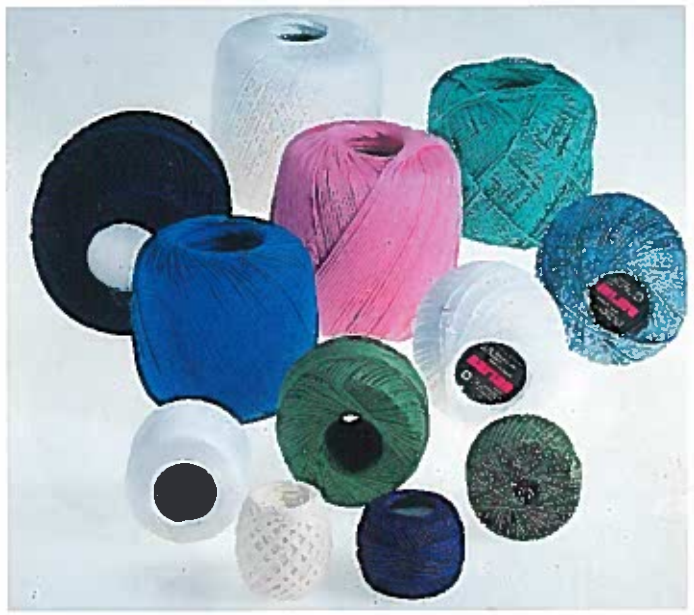
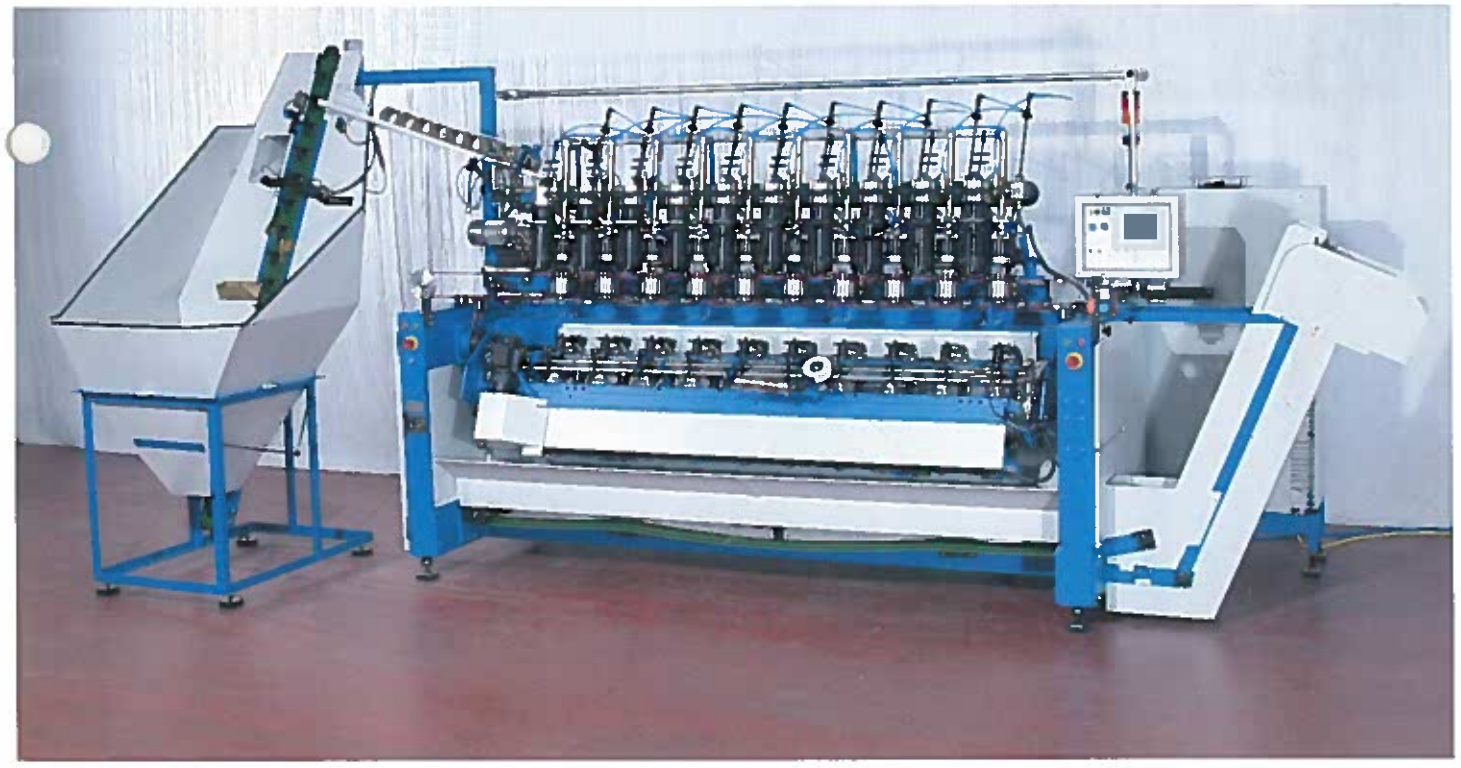
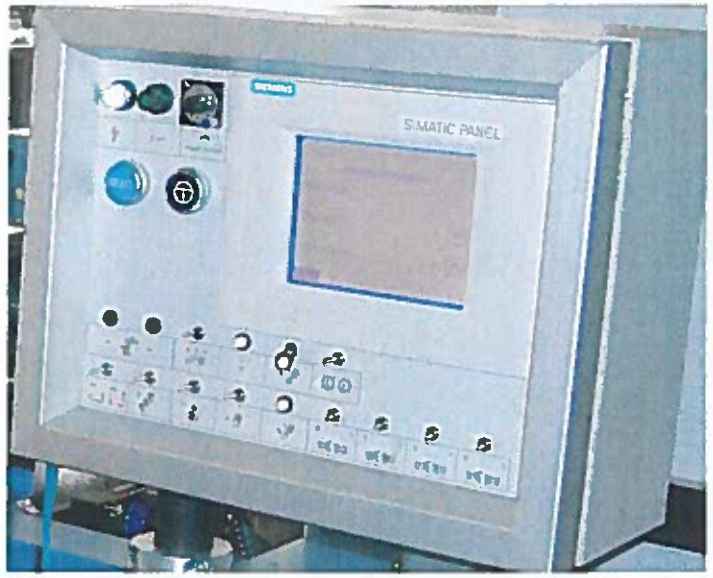
Automatic Balling Machine KW 765 and KW 765 G





Automatic Balling Machine KW 765 and KW 765 G is capable of winding all kinds of yarn on tubes as well as to wind tubeless balls.

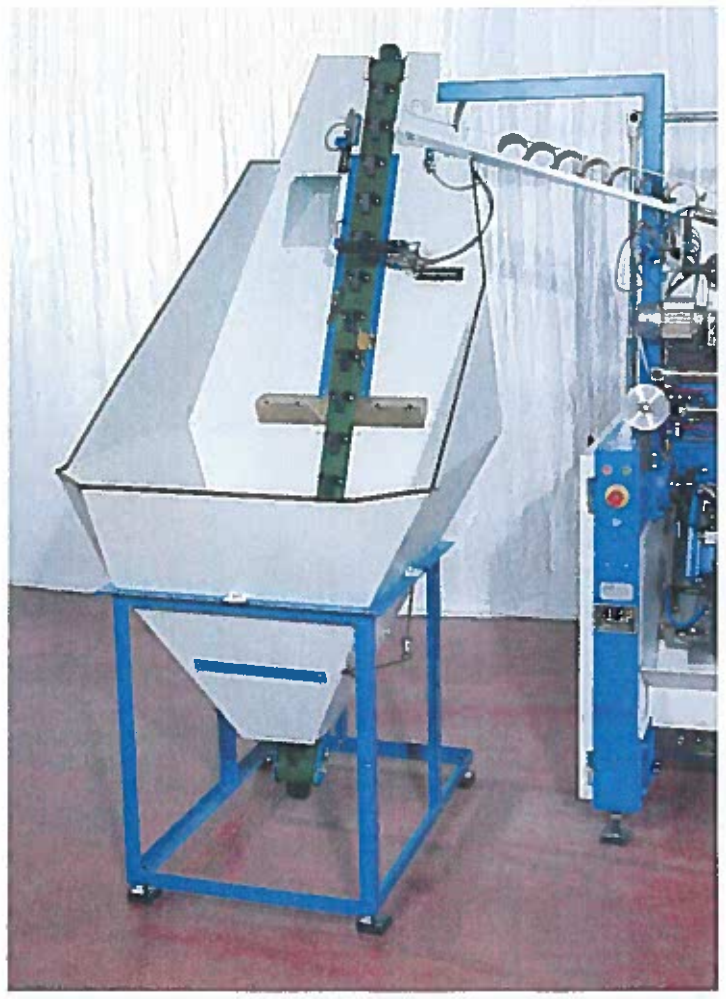


Operation panel

Highly sophisticated electronic controls allow the production of balls of any shape, size, make-up and yarn running length.

Easy and reproducable change-over to other manufacturing batches is consequently ensured as well.

The operation of the machine is through a large operation panel. All machine parameters and error messages are displayed in clear language on the display. All ball parameters like running-length mandrel-beam-position, winding speed etc. can be stored in up to 99 storage places for shortest change-over-times.



Automatic tube supply:

When winding balls on tubes, these tubes can be either loaded manually or with the automatic tube supply unit into the tube magazines above each winding position.

Tubes are picked up from a central container by a conveyor and are preorientated and lined up by guide rails. Wrongly arranged tubes will be returned into the central container.

During every winding process an empty tube is taken from each tube magazine. At the beginni of a new winding cycle this tube is pushed onto the winding mandrels by tube supply cylinders.

Two light barriers are monitoring the winding area for safety reasons permanently.

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Initial form winding:


Initial form winding

The thread end is still held In the cutting and clamping device of the previous cycle.
After some flyer revolutions the thread end is released and wound in the initial form winding. The position of the mandrels during the initial form winding is almost in line with the flyer axis. This way a rather narrow initial winding is obtained.

Base winding:


Base winding

After preselection in the electronic controls the mandrel beam is raised and lowered repeatedly for an individual styling of the ball shape. During that operation the mandrel runs with increased speed. This causes an open and massive ball structure.
The ratio mandrel revolutions to flyer revolutions can be adjusted stepless at any mandrel beam position and stored into the operation panel storage place.

Surface layer winding:


Surface layer winding

With the same constant flyer speed the rotating speed of the mandrel is now reduced. This causes a closed thread lay on the ball surface. The compactness of the thread layer in this phase forms the final look of the ball and is infinitely adjustable.
The diameter of the ball opening can be determined by the inclination angle of the mandrel beam towards the flyers.
Optional there is the possibility to position round labels on the balls through suction cylinders. The following surface layer winding gives the label the necessary support.

Circumference winding:


Circumference winding

By actuating a switch it is possible to produce either balls with or without circumference winding. The desired width and compactness of the thread lay can simply be adjusted.
After completion of the winding process, the machine stops and the thread is placed into the extended knives. During the retraction of the knives the thread is pushed into the eye of the needle already pushed through the outer layers of the ball. The thread is cut by the knife and securely held In the clamping device for the next winding cycle. Simultaneously the thread end is drawn into the finished ball by the needle. The finished balls are pushed off the mandrels and depending on further processing doffed on a suitable transportation system.

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