



# Penguin

## HOSE WRAP / UNWRAP SYSTEM (For Flexible Mandrels)



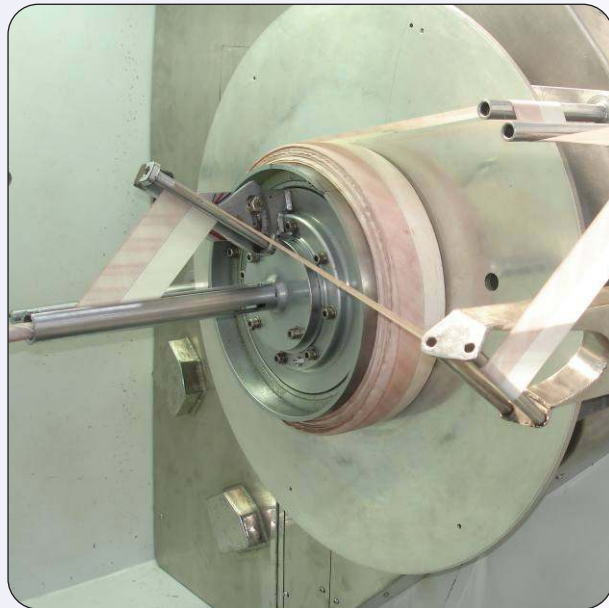
**Model: WRAPMASTER 1000C with LH Head assembly**

Penguin Wrapmaster 1000C wraps and unwraps cured tape over flexible mandrels. The machine can wrap hoses of different diameter and use range of tape widths. The operation is completely controlled from the interactive touch screen. The machine ensures that wrapping is

done with minimum variation in pitch and at controlled wrap and unwrap tension. The mechanical sub systems are the wrap head, haul-off caterpillar, brand tape feeder and doors.

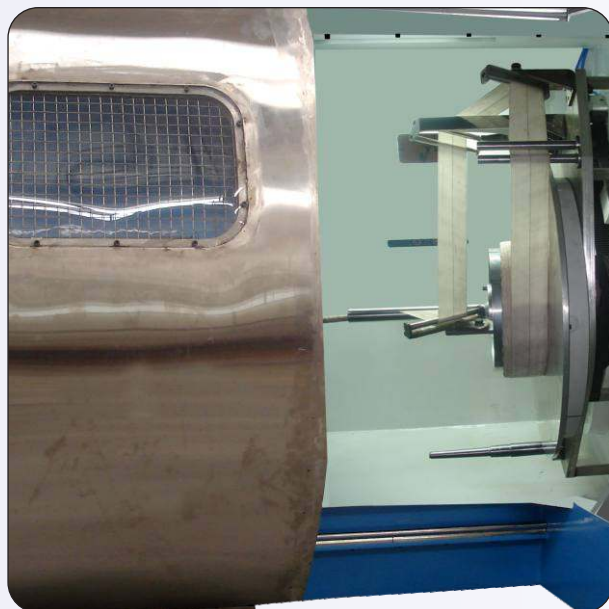


**Model:  
WRAPMASTER 1000C  
with RH Head assembly**



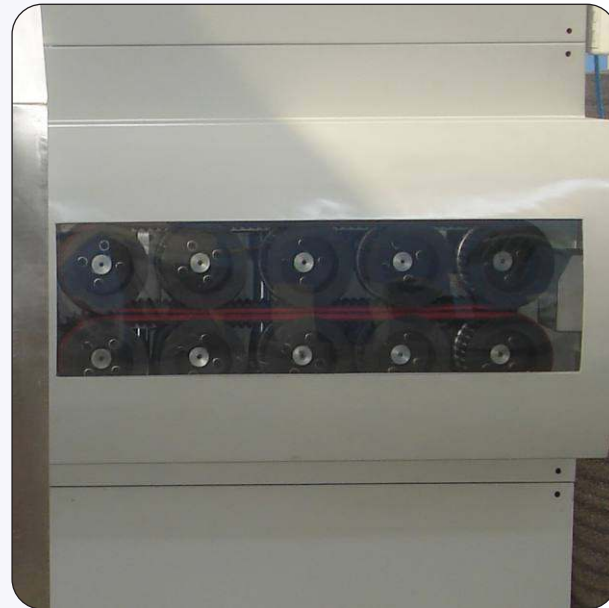
### Wrapping head

The head has a wrapping plate and tape spool mounted concentrically on a hollow pintle. The tape spool can be mounted to the spool drive plate by three setscrews. The machine uses 'C' type split spool cores.



### Sliding door

The machine is provided with sliding doors. Convenient transparent window is provided on the door for the operator to monitor the progress of the operation. This stainless steel door collects the water splashing during the wrapping operation and provides for convenient drainage.



### Caterpillar

The caterpillar has rubber lined positive drive belts and both the top and bottom belts are power driven. The caterpillar jaws are opened and closed pneumatically. The front side is covered and provided with a transparent window. The caterpillar can be accessed for lubrication and adjustments with conveniently located rear doors.



### Brand tape system

The Wrapmaster 1000C has an unique brand tape feeding and collection system. The system is driven by separate motor with drive and ensures trouble free feeding of brand tape even at high speeds. Short time changeovers from wrap to unwrap mode are possible even when the brand tape system is ON. A simple foolproof tape guide provides convenience and flexibility (and the point of delivery of tape can be adjusted). During unwrapping, the spent tape can be reeled over disposable cores. The traverse arrangement for winding disposable bobbins is conveniently located.

## SPECIFICATIONS

Head drive	22 kW
Spool drive	15 kW
Caterpillar drive	3.3 kW
Brand tape drive	1.5 kW
Drives	Servo drives
HMI 9"	Colour touch screen
Operation	Fully automatic with PLC Control
Frame	Heavy duty steel structural frame
Caterpillar	Positive drive belt with pressure distributing rollers
Compressed air	7 kg / cm <sup>2</sup> ; 30 litres / hour
Noise level	< 75 dB

### PRODUCTION DATA:

Mandrel system	Flexible mandrel
Hose / Cable length	No restriction
Type of hose	Wire / fabric reinforced
Pintle bore diameter	Upto 80 mm
Output	Upto 60 m / min.

### TAPE SPOOL CAPACITY:

Core	Taper core with removable section
Storage	One operational + two storage

### TAPE:

Core diameter	308 mm (12.1")
Maximum tape spool dia.	750 mm (30")
Tape width	30 mm to 100 mm (1.2" to 4")
Maximum tape length	1600 m (5,252 ft)
Power consumption	<15 kW
Floor space	1.4 x 3.0 M
Weight	3500 kg

The wrapping machine is driven by four electric motors viz.

- Head drive motor
- Spool drive motor
- Caterpillar drive motor and
- Brand tape drive motor

The motors are driven by precision drives and are synchronized through the drive controllers. The synchronization between the head and caterpillar speed ensures less than  $\pm 0.1\%$  (one in thousand) variation in pitch during wrapping. During unwrapping, the caterpillar responds almost instantaneously to ensure that the tape is unwrapped neatly under control of optic sensors. The machine can be brought to rapid stop in a controlled manner without variation in pitch. The spool motor is controlled accurately to maintain tension set through the operator interface.



Control panel with AC



Drives



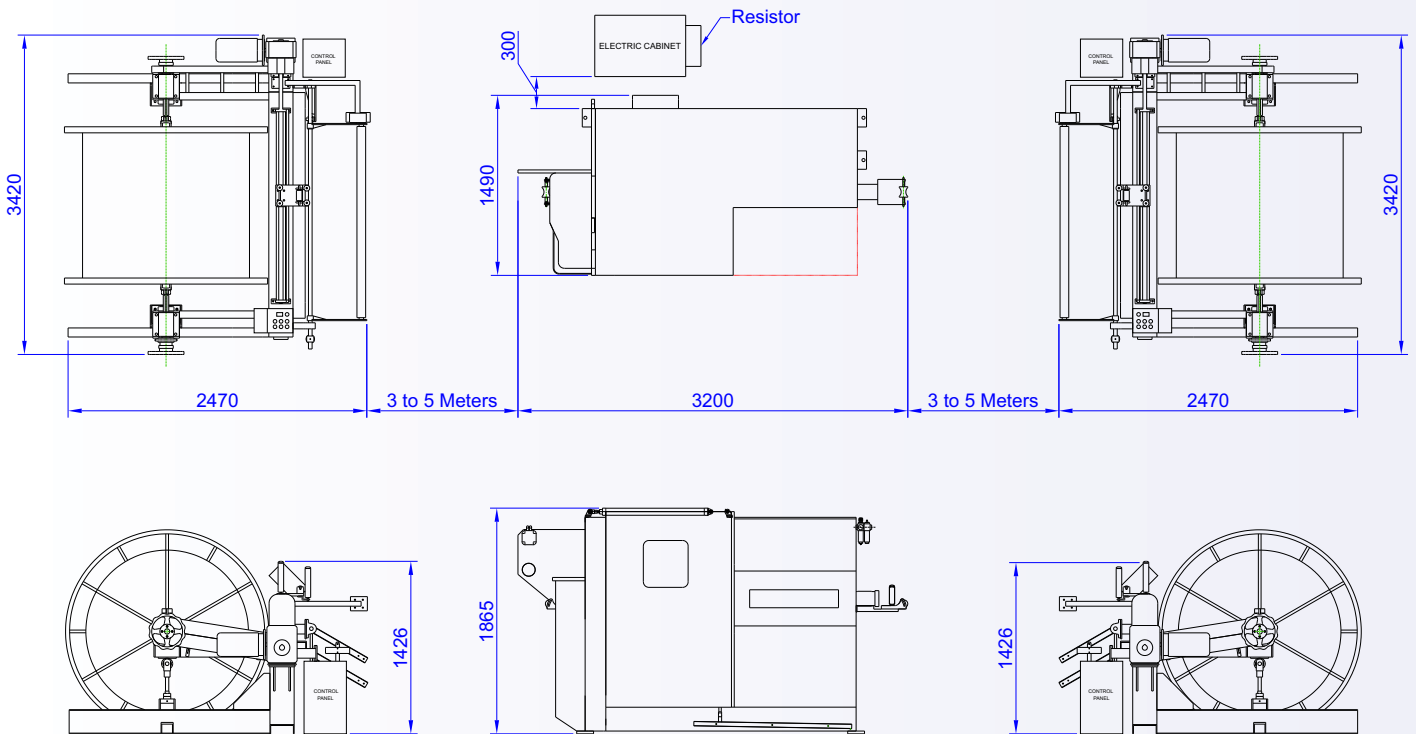
## LAYOUT OF HOSE WRAP / UNWRAP SYSTEM - For Flexible Mandrels (WRAPMASTER 1000C)

### WITH TAKE-UP / LET-OFF UNITS

LET-OFF UNIT

HOSE WRAP / UNWRAP

TAKE-UP UNIT



9" touch screen

Wrapmaster 1000C is controlled by state-of-the-art controller that communicates with the individual motor drives at high speeds. The operator controls the machine through the interactive touch screen and the push button stations provided in the machine.

The machine can be brought to rapid stop in a controlled manner without variation in pitch. The spool motor is controlled in a torque controlled mode and it responds to torque value set through the operator interface.



Manufactured by



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