



**HOSE KNITTING MACHINE**  
**- High Speed Online**

**P**enguin Hose Knitting machine is used for knit-reinforced hoses used extensively in automobiles as radiator hoses and for similar low pressure applications.

This machine is characterized by high productivity, simplicity and excellent performance.

The knitting is done over the inner lining. The machine can be used with both cotton or rayon yarn. The knitting process is closely controlled to ensure a perfect knit structure that is built over the hose at suitable tensions. Thus high performance can be achieved from the end product. The machine is provided with ergonomically located controls and workspace. The centerline of the machine can be adjusted so that hoses of different diameter can be made to rest on the roller stands conveniently.

The machine operates with belt drive, with infinitely variable electric motor, which ensures quiet running. The knitted layer provides excellent internal reinforcement and provides superior adhesion of the two rubber layers. Penguin hose knitting machine is highly recommended for automotive, rubber and ancillary industries.

**Features**

- Stainless Steel Yarn cover to avoid entanglement at high speed
- Suitable for low-medium pressure knitted hose
- Minimum distortion from the manufacturing process
- Photo sensor stop motion for yarn cut
- Precision cams for efficient knitting
- Large yarn capacity - Big bobbins
- Variable speed drive
- Precision pulling caterpillar
- HMI - Multi function
- Rope pulley for interchangeable Knitting head
- Use of Economical and sturdy knitting needles
- Front door opening protected with safety switch
- Automatic PLC Control system
- Pneumatic caliper brake

**CATERPILLAR**

- Sturdily built rigid structure with enclosures
- Contact length ~ 600mm, width 76 mm
- Linatex coated timing belt - 2Nos.
- Control system with communication to the knitting machine drive
- Speed adjustment by potentiometer with digital display
- Encoder for measuring real product speed
- Hose guide assembly at both the ends of caterpillar



Caterpillar



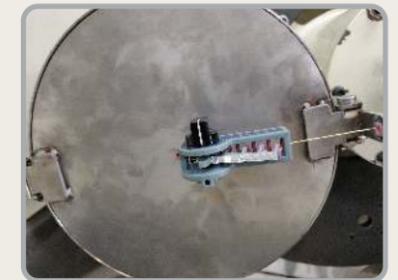
Human Machine Interface



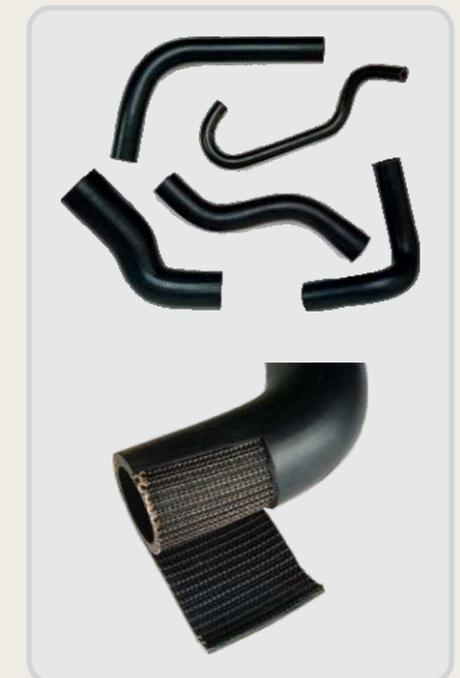
Control panel with HMI

**Specifications**

Number of feeders	8
Yarn content / bobbin	5 kg max.
Maximum diameter of knitted hose	10 - 80 mm (other sizes optional)
Bobbin dimensions (Ø x L)	240 x 260 mm
Knitting module power	5 HP
Caterpillar power	3 HP
Interchangeable heads	Optional
Head speed	upto 400 rpm
Type of needle	Crank type
Line speed	upto 20 m / min. (depending on pitch)
Knitted reinforcement	Circular knitting type, plain stitch
Yarn type	Dipped or un-dipped (Aramid, Polyester, Rayon)
Yarn package type	Cross-wound on cylindrical standard bobbins type
Rubber types	EPDM, NBR, NBR/PVC, CR, EACM, CSM, CPE .
Knitted hose types	Radiator hoses, fuel hoses and other hoses
Power supply	380 - 440V, Three phase, 50 - 60 Hz
Electronic Control	Siemens make PLC & 4" HMI



Yarn tensioner



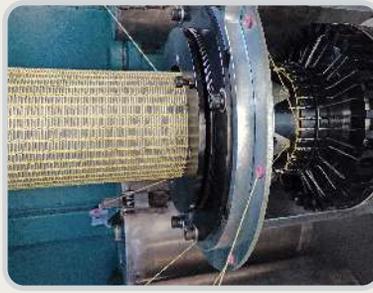
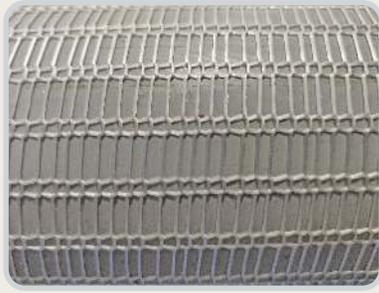
\* **Note:** The line speed is depending on hose diameter, pitch / stitch size, rubber compound and viscosity, die resistance, max. allowed output temperature etc.



Rope pulley for Interchangeable knitting heads



Pneumatic caliper brake



Structure of Knitted hose

## YARN SPIRALER



**S**piraling machine is used in construction of spiral structure of yarn over rubber hose. Spiraling is done to increase the compressive strength of rubber hose. The spiraled rubber hose can be used in production of low and medium pressure hoses.



Manufactured by



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