

MARSILLI

**Our Ne|W
Stand Alone
needle winders**



Needle
Winding

The Ne|W 4-200, 3-200 and 2-400
are the stand alone versions of our advanced Platform
for needle winding technology.

Expandable Ne|W Stand Alone 2-400, 3-200, 4-200

■ INNOVATIVE CONCEPT

The Ne|W Stand Alone is:

- **FLEXIBLE:** able to manufacture different types of stators
- **CONFIGURABLE:** various options are available to make the machine suitable for specific applications
- **SCALABLE:** possibility to increase the number of needle heads or partialise their usage
- **ERGONOMIC:** designed to grant a high degree of accesibility
- **NOISELESS:** direct drive motion, without any vibration (**no belt, no cams, no screws**)
- **SIMPLE TO BE PROGRAMMED:** user friendly machine interface

The Ne|W Stand Alone can be delivered with **2, 3 or 4 needles** and can be **upgraded at a later time**.

Designed as a **stand alone machine**, it can be integrated into a production line with the appropriate configuration.



**PATENT PENDING
SOLUTIONS**

■ DIFFERENT PRODUCT TYPES

The Ne|W Platform can work with the following product types:

- inner straight slot stators
- inner skewed slot stators
- outer straight and skewed slot stators

All these types can be manufactured by simply switching between the different programs and the tooling, whenever changeover is needed.

■ TOTALLY INDEPENDENT MOTORIZED WINDING SET

The winding operation is obtained by the interpolation of the needle head with the rotating spindle (winding set).

Each winding set of this machine is totally independent:

- Machine scalability (adding winding set).
- Activation or deactivation of each winding set.
- High dynamic / low inertia.
- Easier alignment of the winding set.

Other features:

- Layering axes for external or internal stator winding (Y axes)
- Wire routing and wrapping (interpolation between X and Y axis)

■ WIRE GUIDE TUBE POSITIONING

In the basic configuration of Ne|W, the wire guide tube is fixed in horizontal position.

As an option, it is possible to apply a motorized tilting movement that allows both upper and lower routing and simplifies the wrapping and routing operation.

The **wire guide tube** is **programmable** on all positions **from +90° to -70°**.

■ TENSIONER CLOSED TO NEEDLE

A correct wire tension is essential to grand winding quality. The best way to do this is to install the tensioners close to the winding process. For this reason, Marsilli design their machines with the **tensioners next to the needle**.

Moreover it is possible to have **two different types of tensioners for each head** to manage two different wire tension ranges (available only for the 2-400 spindle version). This option allows fast retooling and also the winding of an extended wire range.

■ PROGRAMMING

The Ne|W is delivered with an innovative software, conceived to re-program autonomously the machine thanks to a user-friendly interface.

Parameters:

- number of teeth per stator
- indexing error
- trajectory optimization
- vertical stroke

Features:

- error proofing (anti-collision on needle trajectory)
- choice of the optimized trajectory
- teach-in mode available

TECHNICAL DATA

Dimensions

- 1500 mm (W) X 1670 mm (L) x 1800 mm (H)

Weight

- 1800 Kg

Wire range

- 0.2 mm – 1.5 mm

Stator range

- Max Outside diameter: 150 mm with manual loading, 80 mm with loading/unloading bar
- Max Stack height: 110 mm, including end caps

Tooling holder strokes

- Motorized rotation 360°
- Motorized lateral movement +100mm / -100mm
- Motorized in-out movement +100mm / -100mm

Needle Head strokes

- Linear motor 135 mm

Needle head

- three different needle head sizes to cover the entire range
- fixed in basic configuration
- +90° / -70° tilting as an option

Wire clamping and cutting

- Motorized lateral movement
- Pneumatic in-out movement (option: motorized)

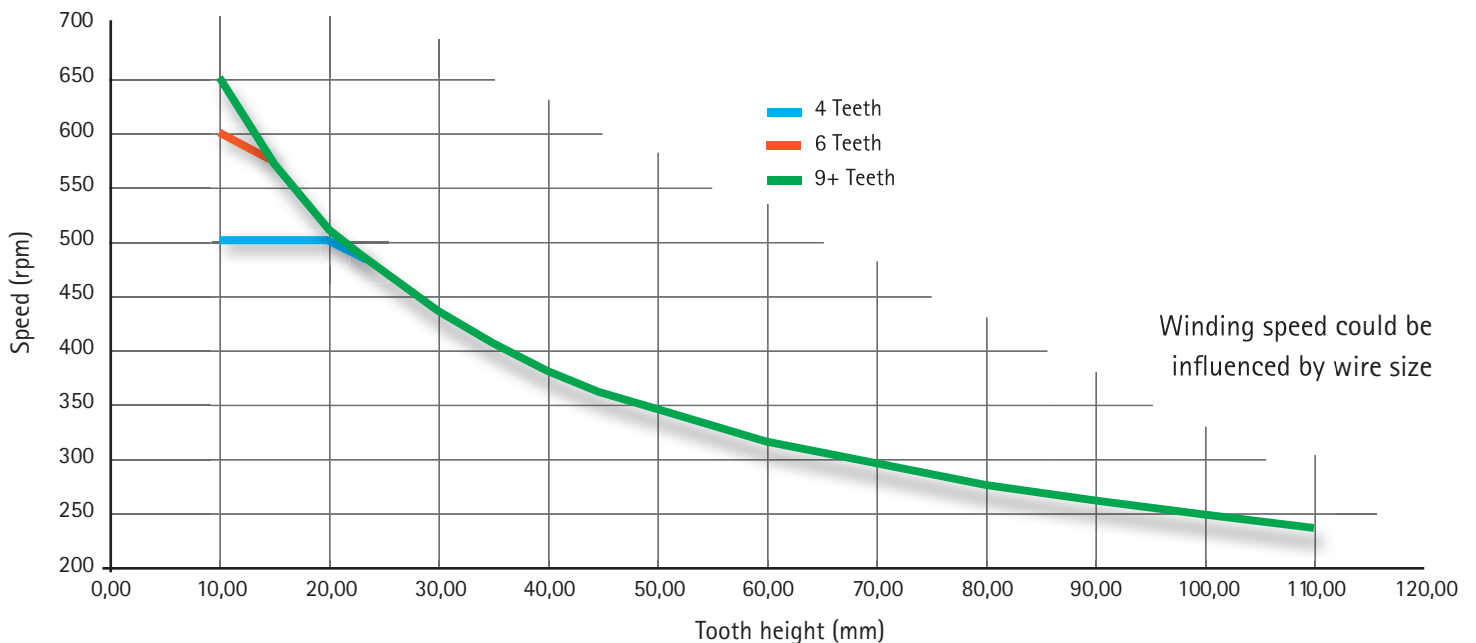
Tensioner

- MT12 from 0.1 to 0.5 mm
- MT23 from 0.3 to 1 mm
- MT34 from 0.5 mm to 1.5 mm

Winding Speed up to 650 rpm (see diagram)

Diffent tooling configurations are available, on request, to make the machine suitable for all applications

WINDING SPEED DIAGRAM



The Ne|W Platform

This machine is part of a wider range of needle winding machines developed and manufactured by Marsilli.

Inside this range, we can also offer:

- single head needle winder for laboratory or manufacturing of small batches
- heavy duty single head winder
- 6 to 10 winding sets needle winder that can be used as stand alone machine or integrated into a production system