

Stress Grader (Mk V)

Skookum Code: 2193



Manufacturer: Computermatic

Description 1:

A simple to operate single pass Stress Grading Machine

Type: Timber Stress Grading Machine

Model: MKV MPC (Measuring & Process Controls Ltd)

Serial: 121UK

Description 2:

This stress grader was manufactured in Australia and then imported from Sweden, we are fitting:

- New panel view PLC control system
- New MAC valves
- New ink jet spray system
- New load cells
- New sensors

The machine will be mechanically checked and operationally tested before delivery.

Computermatic Stress Grading Machine

The machine is designed to accept timber of a common cross section but random lengths (practical minimum 1.8m) and, in a single pass, allocate a strength grade.

The operating principle of the machine takes the proven principle, that for all timbers, there is a satisfactory working relationship between the stiffness and ultimate rupture strength, this relationship remaining true even when the timber is tested in the narrow-section but used and loaded in the deep section.

During the single pass through the machine the timber is first measured for straightness in an unloading condition at intervals of 152mm. This straightness measurement is then entered into a progressive memory whilst the timber enters into the lead section of the machine and effectively travels with the piece being tested.

When the sample point arrives under the lead roller, which exerts a precise load, the deflection created by that load is measured. From this measurement is subtracted the original straightness value, thus leaving a net value which is directly equitable to the stiffness of the piece.

This net value is then set in comparison with data (compiled by the appropriate authorities) to achieve one of five grades. This procedure is repeated each 152mm down the length of the timber and the appropriate grade registration by the application of a coloured spray. The process continues until the timber leaves the machine, when the lowest grade registered (which has been stored in memory) will action a final grade which is recognisable by the application of a longer spray of the appropriate colour. At this time the board is fully tested and ancillary output signals are generated to action any supporting mechanical handling.

The Computermatic in all its variants has been the machine chosen by approximately 60-70% of all timber stress grading machine users, whether in the fields of research, or production.

It was the first practical machine produced to give an accurate, whilst economic, evaluation of the strength of timber and has continued to be developed using today's technology whilst retaining all which the past 12 years experience have shown to be correct.

Technical Specifications:

Machine Size:

Length: 2575
Width: 1270
Height: 1630
Weight: 1250kg

Machine Capacity:

Timber Length: 1.8m min., 8m max
Species: All timber for which mechanical stress boundaries exist.
Machine Speed: 23-152 m/min

Electrical:

Supply Voltage: 415/380 volts, 3 phase, 50Hz
Plus EARTH & NUTRAL.
Other voltage & frequencies must be specified with order.

Consumption:

5 KVA

Air Supply:

5.5 atmosphere (80 PSI) (550 KPA) – clean, dry, non-lubricated.

Consumption:

0.4 cu.m / minute @ 5.5 atmospheres).

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