TECHNICAL NOTE: MINIMUM REQUIREMENTS FOR THE SUPPLY OF

Lot n. 1: Thin section lapping and polishing machine

The minimum characteristics of the machine required by the Department must comply to the following:

a) Automation:
   o Possibility to store on and recall from an internal memory the settings of plate velocity, material removal rate, and the quantity of abrasive powder employed.

b) Functioning method:
   o Perform both polishing and lapping operations in one machine and make use loose abrasive powders (and not grinding wheels system) as loose abrasive powders allow for a better lapping and polishing of thin sections containing organic fragments and/or charcoal (very common in archaeological sediments).
   o Predisposition to lap and polish both soil samples (embedded in epoxy resin) as well as rock or ceramic samples.

  c) Sample holder(s):
     o The machine should be able to host up to two sample-holders at the same time (see below for sample holders’ characteristics).
     o Each sample holder must be capable to hold at least two 60x90 mm glass slides at the same time.
     o Sample-holders must be able to function together with an automatic system to control the planarity of the samples being lapped/polished.
     o The error of the system of thickness control should not exceed 2 µm in excess or in defect.
     o The microscope slides must be held onto the sample holders by a vacuum system.

  d) Power supply requirements: single phase 220/240 V.

  e) Training: training course on the basics of functioning of the apparatus of the minimum duration of one day to be held at the Dipartimento di Geoscienze, Via Gradenigo 6 – Padova (Italy) once the machine has been installed and tested by skilled personnel.

  f) Warranty: must cover all defective and/or malfunctioning parts arrived from the factory lasting at least 18 months (eighteen months) from the date of installation of the machine.