Beam Diagnostics for the Upgraded UNILAC at GSI, P. FORCK, A. PETERS, P. STREHL, Gesellschaft Fuer Schwerionenforschung, Darmstadt - For the envisaged stepwise commissioning of the new prestripper section of the UNILAC, consisting of one RFQ and two IH-structures (energy up to 1.4 MeV/u) the design of a portable test bench, equipped with all needed beam diagnostic devices is in progress. Due to the very intense beam (reference particle: U4+, 16.5 mA, 1 ms pulse length) and the expected fluctuation of the new high current ion sources, transverse emittance will be measured within one macro pulse using a pepper-pot system in combination with a modern high resolution CCD-camera. Longitudinal intensity distribution within the bunch will be determined by an rf-synchronous detection of electrons from the residual gas ionization. For the macro pulse current determination a beam transformer is provided. Energy and energy spread will be measured with a new designed capacitive pick-up system using time of flight technique. This system also allows the non-destructive determination of the beam position. The beam profile measurement is based on residual gas ionization. The design parameters of the whole set-up will be discussed and first results from test measurements will be presented.