

## Functional specifications for PXIE MEBT absorber

The absorber is the part of the PXIE MEBT chopping system used to absorb the chopped out portion of the H- beam.

Ion energy	2.1 MeV
Nominal average current	5 mA
Maximum average current	10 mA
Beam cross section at the absorber center, sigma*	2 mm (identical in X and Y)
Nominal beam angle at the beam center	< 3 mrad
Angle error at time scale > 1 $\mu$ s	< 3 mrad
Beam time structure at time scale > 1 $\mu$ s: At maximum average power	CW
During commissioning, average power < 100W	trains up to 1 ms
Thermal cycling at maximum power during the lifetime	10,000
Expected life time, not less than	1 year
Available length, flange-to-flange	650 mm
Vacuum with no beam	< 30 nTorr
Vacuum with full power	< 1 $\mu$ Torr

The absorber is to be mounted below the beam axis.

\*- if the beam emittance is smaller than the nominal, focusing is adjusted to preserve this value.