XY table issues

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Problems

Test beam 1

Weak motors - needed a magnetic spring
Sensor size larger than table range

Test beam 2

Worked well with one sensor
Failed above 60mm with second sensor + tungsten

Testing

We have two Standa motorized positioners:

- 8MTF-100 (2-D)
- 8MT200-100 (1-D) (received after test beam)

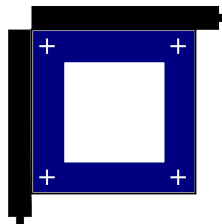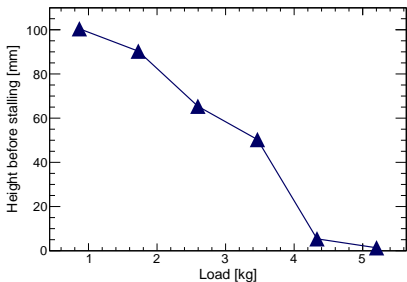Mounted both in vertical position and loaded with 0.867 kg W plates until they stopped moving.

8MTF-100

- Specs say max load $\sim$ 6 kg
- Max load varies!
  - Actual position of load doesn't matter
  - Still underperforming re: specs

8MTF-100
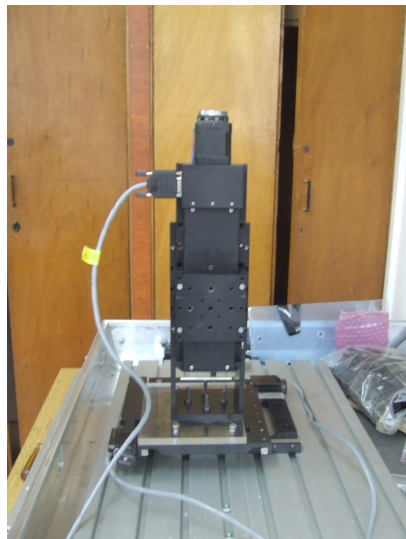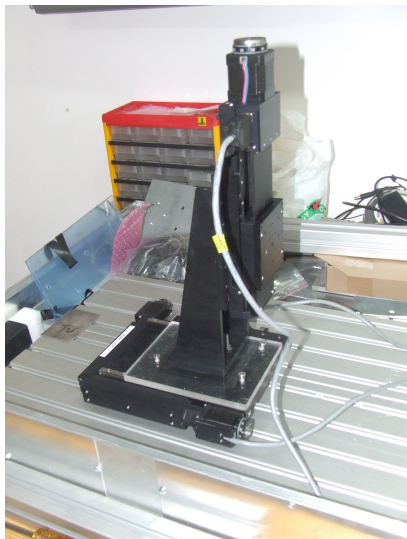

"+"s mark loads

XY table loading behavior

8MT200-100

- Specs say max load ∼6 kg
- Don't believe the specs!
    - Supports at least 9.5 kg (I ran out of tungsten)
    - Stepping resolution ($10\mu m$ with power cycling, $2.5\mu m$ without) not affected by load.
    - We should probably use this positioner at the next test beam
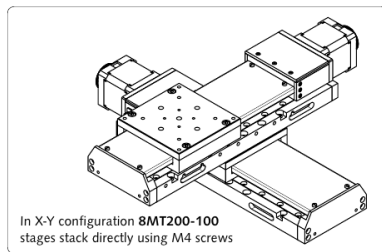

8MT200-100

Current setup at AGH

Proposals for next test beam

We currently have a 3-D setup at
AGH for measuring sensors with a
laser.

- We could bring this
    - Need enough space for
      8MTF-100 to lie horizontally
    - Software is already prepared
- Alternative: get another
  8MT200-100 ($\rightarrow$)
    - Software could be adapted
      easily
    - Solid - it may not make sense
      to have a telescope plane
      behind

In X-Y configuration **8MT200-100**
stages stack directly using M4 screws

Alternative setup