

**ENTRY NO:** CU-13  
**Machine Name:** Scanditronix MC40  
**Date:** 5/21/01 1:01:40 PM  
**Institution:** European Commission -Institute for Health and Consumer Protection  
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## HISTORY

**Designed By:** Scanditronix

**Construction Dates:**

**First Beam Date:** 1982

## CHARACTERISTIC BEAMS

| ions      | / energy(MeV/N) | /current(pps) | /power(w) |
|-----------|-----------------|---------------|-----------|
| protons   | 39 MeV          | 60 uA max     |           |
| deuterons | 20 MeV          | 60 uA max     |           |
| alphas    | 39 MeV          | 30 uA max     |           |

**transmission efficiency(source to extract beam)**

**typical:** % - **best:** %

**transverse emittance**

**emittance definition:**

**vertical:**  $\pi$  mm mrad

**horizontal:**  $\pi$  mm mrad

**longitudinal:** ( $\Delta$ ) E/E)%xdeg RF

## USES

**basic research:** %

**therapy:** %

**development:** %

**isotope production:** %

**other:** %

**maintenance:** %

**beam tuning:** %

**Total Time:** h/year

## TECHNICAL DATA

**a)magnet:**      **type:**

**Kb:** MeV/A    **Kf:** MeV/A

**average field (min/max):** T

**number of magnet sectors:**

**hill angular width:** hill angular width

**spiral (max):** deg

**pole parameters**

**diameter:** m

**injection radius:** m

**extraction radius:** m

**hill gap:** m    **valley gap:** m

**trim coils**

-number: x2

-current(max): A-turns

**harmonic coils**

-number: xNsectorsx2

-current(max): A-turns

**main coils**

**number:** x2

**total ampere-turns:** A-turns

**current:** A

**stored energy:** MJ

**weight - iron:** t    **coils:** t

**power**

**main coils (total):** kW

**trim coils (total max):** kW

**refrigerator (cryogenic):** kW

**b)RF**

**acceleration**

**frequency range:** MHz

**harmonic modes:**

**number of dees:**

**number of cavities:**

**dee angular width:** degrees

**voltage**

at injection: kV(peak to ground, max)

at extraction: kV(peak to ground, max)

peak: kV(peak to ground, max)

**line power(max):** kW

**stability**

**phase:** deg

**voltage:** %

**injection**

**c)ion source:**

**external injection:**

**components:**

**source bias voltage:** kV

**injection energy:** MeV/N

**buncher:**

**injection efficiency:** %

**d)injector:**

**e)extraction**

**efficiency**

**typical:** %

**best:** %

**f)vacuum**

**pumps:**

**achieved vacuum:** Pa

## REFERENCES

## EXPERIMENTAL FACILITIES

## COMMENTS