

**ENTRY NO:** CU-16  
**Machine Name:** CYCLONE 30  
**Date:** 8/19/01 3:30:45 AM  
**Institution:** Daiichi Radioisotope Laboratories Co. Ltd.  
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## HISTORY

**Designed By:** IBA  
**Construction Dates:** 1991  
**First Beam Date:** Mar. 1991

## CHARACTERISTIC BEAMS

ions	/ energy(MeV/N)	/current(pps)	/power(w)
H-	30		6000

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

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

**tranverse emittance**

**emittance definition:**

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

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

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

## USES

<b>basic research:</b> %	<b>therapy:</b> %
<b>development:</b> %	<b>isotope production:</b> 95%
<b>other:</b> %	<b>maintenance:</b> 5%
<b>beam tuning:</b> %	<b>Total Time:</b> 6000h/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