

**ENTRY NO:CU19****Date:** 18 Feb 2005 20:26:47**Machine Name:** TU/e cyclotron, IBA Cyclone 30**Institution:** Technische Universiteit Eindhoven (TU/e)/  
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**History****Designed by:** IBA, Louvain-la-Neuve (B)**Construction Dates:****First Beam Date:** 2004**Characteristic Beams****Transmission Efficiency (source to extracted beam)****Typical (%):****Best (%):****Emittance****Emittance Definition:****Vertical (pi mm mrad):****Horizontal (pi mm mrad):****Longitudinal (dE/E[%] x RF[deg.]):****USES****Basic Research (%):****Development (%):****Therapy (%):****Isotope Production (%):****Other Application (%):****Maintenance (%):****Beam Tuning (%):****Total Time (h/year):****TECHNICAL DATA****(a)Magnet****Type:****Kb (MeV):****Kf (MeV):****Average Field (min./max. T):****Number of Sectors:****Hill Angular Width (deg.):****Spiral (deg.):****Pole Diameter (m):****Injection Radius (m):****Extraction Radius (m):****Hill Gap (m):****Valley Gap (m):****Trim Coils****Number:****Maximum Current (A-turns):****Harmonic Coils****Number:****Maximum Current (A-turns):****Main Coils****Number:****Total Ampere Turns:****Maximum Current (A):****Stored Energy (MJ):****Total Iron Weight (tons):****Total Coil Weight (tons):****Power****Main Coils (total KW):****Trim Coils (total, maximum, KW):****Refrigerator (cryogenic, KW):****(b)RF****Acceleration****Frequency Range (MHz):****Harmonic Modes:****Number of Dees:****Number of Cavities:****Dee Angular Width (deg.):****Voltage****At Injection (peak to ground, KV):****At Extraction (peak to ground, KV):****Peak (peak to ground, KV):****Line Power (max, KW):****Phase Stability (deg.):****Voltage Stability (%):****(c)Injection****Ion Source:****Source Bias Voltage (kV):****External Injection:****Buncher Type:****Injection Energy (MeV/n):****Component:****Injection Efficiency (%):****Injector:****(d)Extraction****Elements, Characteristic:****Typical Efficiency (%):****Best Efficiency (%):****(e)Vacuum****Pumps:****Achieved Vacuum (Pa):****REFERENCES****EXPERIMENTAL FACILITIES****COMMENTS**