[2-4-3] Beam Drift Chambers (BDC1, BDC2)

* Design

Two sets of BDC's are used to measure the phase space of the incident secondary beams on the reaction target. It is a Walenta-type drift chamber with 2.5mm drift distance for high beam rates. BDC is shown in Fig. 2-4-2, and summarized in the table.

Anode wire	16 μ m ϕ Au-W/Re
Potential wire	80 μ m ϕ Au-Al
anode – potential (drift) distance	2.5mm
anode – cathode gap	2.5mm (combination of 2.4mm & 2.6mm-thick G10)
cathode	8 μ m-thick Al-Kapton, x 9
gas window	4 μ m-thick Aramid, x2
effective area	80mm x 80mm
anode configuration	xx'yy'xx'yy'
#anode / plane x #planes	16 wires/plane x 8 planes = 128 wires/detector
Operation gas	He+60%CH_4 at 1 atm, i-C_4H_{10} below 200 torr
HV	cathode, potential
Readout / 2sets	ASD x16, ASD PS x2, TDC x4

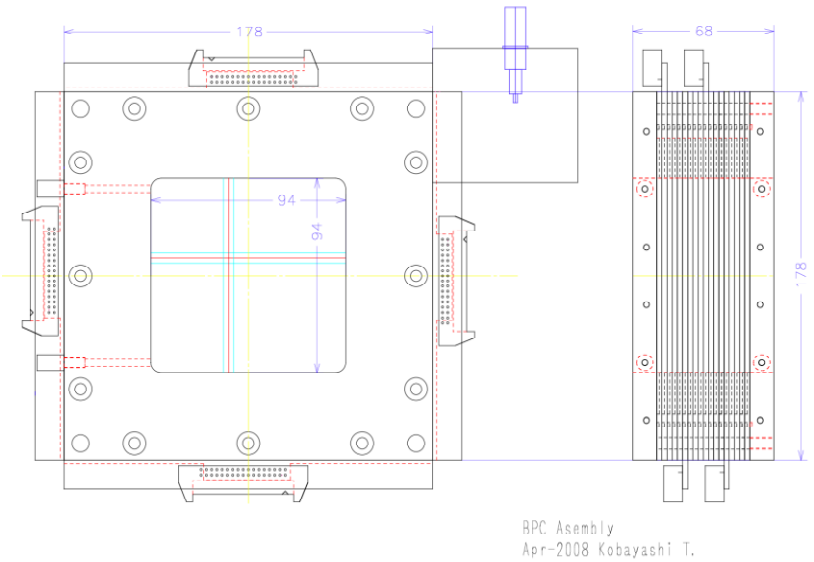

Fig. 2-4-2 : BDC assembly