

iv. Pressure Ratings

Each component of the RHIC Cryogenic System has been designed and tested to meet the pressure conditions which may exist during operation of the system. The major subsystems and their pressure ratings are shown in Table 3-8. The piping design, fabrication, relief valve settings and test pressures are to comply with ASME Pressure Vessel Code, Section VIII and Piping Code B31.3.

Table 3-8. Cryogenic System Pressure Ratings

Sub-System	Pressure (bar, absolute except as noted)				
	Nominal Oper.	Design Working (Max Diff)	Relief Valve Set (Gauge)	Pneu. Test -Piping (Gauge)	Pneu. Test -Vessels (Gauge)
Magnet Loop	5.0	18.7	17.7	20.6	23.4
Recooler Supply Header	6.0	18.7	17.7	20.6	23.4
Return (Cold) Header 1.3	18.7	17.7	20.6	23.4	
Utility Header	1.3	18.7	17.7	20.6	23.4
Heat Shield	15.0	18.7	17.7	20.6	23.4
Ambient Temp. Return	1.4	18.7	18.7	20.6	23.4
Main Compressor Suction	1.05	6.8	5.2	7.5	8.5
Main Compressor 1st Stage Disch.	4.0	6.8	6.8	7.5	8.5
Main Compressor Interstage	4.0	9.1	9.1	10.0	11.4
Main Compressor 2nd Stage Disch.	16.4	18.7	18.7	20.6	23.4