

Proposal

Tokamak Fusion Core Experiment (TFCX)

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Table 1.1
Reference Design Parameters

Parameter	Option 1	Option 2	Option 3
TF Coil Type	Superconducting	Superconducting Copper	Copper
Major Radius, m	3.75	3.60	3.00
Minor Radius, m	1.07	0.97	1.20
Aspect Ratio	3.5	3.7	2.5
Elongation	1.6	1.6	1.6
Triangularity	0.3	0.3	0.3
Field on Axis, T	4.3	4.8	3.8
Plasma Current, MA	7.7	7.2	11.0
Beta, %	5.9	5.6	8.3
Wall Loading, MW/m ²	0.9	1.1	1.0
Fusion Power, MW	230	250	230
TF Power, MW	~0	50	350
Relative Ignition Factor [*] (Mirnov)	0.7	0.7	1.25

* Ignition Factor Reference: INTOR, 0.6; JET (5 MA), 0.2.