

Concept Key Parameters

Parameter	Present value [†]	ITER-era goal	Reactor Target
Confining Field ^a (T)			
Ratio of field in plasma to maximum at coil			
Plasma current ^b (MA)			
Pulse length Δt (sec) and $\Delta t/\tau_E$			
External sustainment/current drive type			
External sustainment/current drive power [‡] (MW)			
Current drive efficiency [‡] (η)			
Major Radius ^c (m)			
Minor Radius ^c (m)			
Elongation (κ)			
Central density n_e or $\langle n_e \rangle$ (m^{-3})			
Central T_e or $\langle T_e \rangle$ (keV)			
Central T_i or $\langle T_i \rangle$ (keV)			
Central beta (% and β_N)			
Energy confinement time ^d τ_E (s)			
Fusion power density $p\tau_E$ or $\beta^2 B_{tot}^4$ (atm-s)			
Core electron transport ^d χ_e (m^2/s)			
Core ion transport ^d χ_i (m^2/s)			
$\rho_* = \rho_D / a$ or $S_D = L^{\S} / \rho_D$			
$S_\alpha = L^{\S} / \rho_\alpha$			
Collisionality (ν_*)			
Normalized pulse length $(\tau/\tau_r)^{\#}$			
Normalized pulse length $(\tau/\tau_{Ti=Te})^{\#}$			
Estimated Fusion Power (MW)			
Estimated wall loading (MW/m ²)			
Estimated plasma exhaust power (MW/m ²)			

^a central ($B_T^2 + B_p^2$) ^b ohmic or driven or diamagnetic ^c mean values if not axisymmetric

[‡] power to plasma needed to maintain configuration, magnetic field, or plasma current

^d measured or estimated from power balance, size, beta, or n_e , T_e , and T_i

[#] τ_r ($\tau_{Ti=Te}$) is relevant time scale for configuration redistribution (temperature equilibration)

^{*} use either a or R as appropriate [†] indicate if not simultaneous

Table values based upon known or estimated values from present experiments, possible ITER-era targets based on extrapolation from present experiments, and estimated reactor conditions based on previous reactor studies or back-of-envelope style spreadsheet calculations where available.

Please provide definitions, formulary, or assumptions on a separate sheet.