

List of input parameters for TASK/EQU

nr	I	257	number of grids in R
nz	I	257	number of grids in Z
nv	I	101	number of grids in ψ
device	C8	'JT60U'	device name
title	C70	"	job title
btv	R	13.5	Toroidal magnetic field multiplied by major radius $R * Bt$ [mT]
tcur	R	2.0	Plasma current I_p [MA] note: in the code, $tcu = myu0 * tcur$
icp(i)	I	1,1	dp/ds and dF/ds profiles: option id see subroutine egequ and eqpds0 in eqsub.f: icp(1)=1: v =volume $pds0 = (1 - cp4) * (1 - v^{cp2})^{cp3} + cp4$ $fds0 = (1 - cp8) * (1 - v^{cp6})^{cp7} + cp8$ icp(1)=2: $pds0 = 1 - cp2 * v^{cp3} - (1 - vp2 + cp4) * v^{cp5}$ $fds0 = 1 - cp6 * v^{cp7} - (1 - vp6 + cp8) * v^{cp9}$ icp(1)=9: see subroutine eqpdfs in eqpdfs.f icp(1)=11: hollow current profile $pds0 = (1 - cp4) * (1 - v^{cp2})^{cp3} + cp4$ $fds0 = (1 - v^{vp6})^{cp7} * (1 + cp8 * \exp(-((v - cp9)/cp10)^2))$ icp(2) > 0 : adjust poloidal beta pds 1 : adjust poloidal current fds for given $< J/R >$ 2 : adjust poloidal current fds for given $< J \cdot B >$
cp(1)	R	0.1	beta-j: see sub egequ see subroutine egequ
cp(i)	R	1.0,1.0,...0.05	dp/ds and dF/ds profiles: coefficients (i=2..10): see subroutine egequ
rwmx	R	4.20	maximum R of computation area ($R < rwmx$)
rwmn	R	1.90	minimum R of computation area ($R > rwmn$)
zwmx	R	1.20	maximum $ Z $ of computation area ($ Z < zwmx$)

iudsym	I	0	up-down symmetry (1 for symmetric)
msfx	I	9	number of marker points if positive, <code>rmaj..trig</code> are generated from
rvac, zvac			if negative, <code>rvac</code> , <code>zvac</code> are generated from <code>rmaj..trig</code>
rvac	$R(0 : \text{msfx})$		R coordinates of marker points
zvac	$Z(0 : \text{msfx})$		R coordinates of marker points
rmaj	R	3.05	optional: Major radius [m]
rpla	R	0.9	optional: Minor radius [m]
zpla	R	0.0	optional: Z position of magnetic axis [m]
elip	R	1.0	optional: ellipticity
trig	R	0.0	optional: triangularity
elipup	R	1.0	optional: ellipticity for upper
trigup	R	0.0	optional: triangularity for upper
yh	R	0.5	optional: half height
yd	R	0.995	optional: edge height
msetup	I	20	maximum iteration count of initial equilibrium
esetup	R	1.D-3	covergence criterion of initial equilibrium
ieqmax	I	20	maximum iteration count of FCT equilibrium
eeqmax	R	1.D-3	covergence criterion of FCT equilibrium
iodmax	I	10	maximum iteration count of ODE calculation
eodmax	R	1.D-5	covergence criterion of ODE calculation
iadmax	I	1	maximum iteration count of vaccum adjustment
eadmax	R	1.D-4	covergence criterion of vaccum adjustment
bavmax	R	0.8	FCT convergence parameter (see <code>eqfct</code> and <code>eqrcu</code>)
bavmin	R	0.2	FCT convergence parameter (see <code>eqfct</code> and <code>eqrcu</code>)
nsumax	I	101	number of points on plasma surface
ivac	$I(0:13)$	0,1,2,-1...	model id of coil setting: negative: fixed coil current positive: adjustable
cvac	$R(0:13)$	0.0...	surface flux <code>cvac(0)</code> and coil current [AT]
ncoil	$I(0:13)$	0,70...	number of coil turn
cvacst	$R(13)$		coil current (initial value) [AT]
cvacwg	$R(13)$		weight of coil current
cvact	$R(13)$		time derivative of coil current [AT/s]
isep	I	2	type of X point for divertor 0: no X point 1: lower X point 2: outer X point (JFT-2a) 3: upper X point 4: inner X point
dsep	R	0.001	separation between X point and LCMF (last-closed magnetic surface)