

Reactor Incremental Spreadsheet by mahahana v3.0

Heat generation total	0	0	Power generation total	0	0
Heat reduction total	0	0	Power reduction total	18	18
Reactor plating	1,000	1K	Power capacity	100	100

Version 3.1 is here: <https://docs.google.com/spreadsheets/d/9GBE2Tf3L1v3KbX0U1aX7BfMWFYOLkV3Eyma3/edit?usp=sharing>
 Usage Info: Add components to your reactor and the spreadsheet calculates the power and heat output (including effects from neighboring cells and reflectors). On the second sheet you can enter your upgrade and prestige tiers. Each component is given an abbreviation. Cells: First two letters and a number for single (1), double (2) or quad (4) cells (i.e. Single Uranium -> U1, Double Thorium -> T12, Quad Protium -> P4). Other Components: CF -> Capacitor tier #, V# -> Vent tier #, P# -> Plating tier # -> R -> Reflector, HO -> Heat outlet, HI -> Heat inlet, CC -> Coolant Cell. Please take a look at the abbreviations.

Reactor Builder	Component abbreviation overview																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			

Please don't use cut/paste in the reactor else you destroy the formatting! Copy/paste is ok

Placement multiplier* [1]	x	1	Count empty cells as ultimate capacitors	0 (0=off, 1=on)
Power generation single placement	0	0	Heat generation single placement	0
Power generation incl. multiplier	0	0	Heat generation incl. multiplier	0
Heat generation modifier [2]	0	0	Power generation modifier [3]	0
Reactor heat level for forceful fusion [4]	48,000,000,000 [5]	48T	Forceful fusion effect strength	36.48%

Power map

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			

Heat ^^ map

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			

Pulse map

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			

Reflector map

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			

Power map (unreadable)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Abbr	Name	Tier	Base power	Base heat	Cell power/heat multi	Cell level - Infused	Amount
P1	Protium	Single	1	1	1	1	800%
P2	Protium	Double	1	1	4	4	800%
P3	Protium	Quad	1	1	12	12	800%
P4	Protium	Single	150	150	1	1	600%
P5	Protium	Double	150	150	4	4	600%
P6	Protium	Quad	150	150	12	12	600%
T1	Thorium	Single	7,400	7,400	1	1	600%
T2	Thorium	Double	7,400	7,400	4	4	600%
T3	Thorium	Quad	7,400	7,400	12	12	600%
S1	Seaborgium	Single	1,582,000	1,582,000	1	1	900%
S2	Seaborgium	Double	1,582,000	1,582,000	4	4	900%
S3	Seaborgium	Quad	1,582,000	1,582,000	12	12	900%
D1	Dobornium	Single	226,996,000	226,996,000	1	1	900%
D2	Dobornium	Double	226,996,000	226,996,000	4	4	900%
D3	Dobornium	Quad	226,996,000	226,996,000	12	12	900%
N1	Nefutium	Single	51,871,000,000	51,871,000,000	1	1	1000%
N2	Nefutium	Double	51,871,000,000	51,871,000,000	4	4	1000%
N3	Nefutium	Quad	51,871,000,000	51,871,000,000	12	12	1000%
P1	Protium	Single	1,250,000,000,000	1,250,000,000,000	1	1	800%
P2	Protium	Double	1,250,000,000,000	1,250,000,000,000	4	4	800%
P3	Protium	Quad	1,250,000,000,000	1,250,000,000,000	12	12	800%

Abbr	Name	Tier	Base power	Base heat	Cell power/heat multi	Cell level - Infused	Amount
P1	Plating	Basic	-	-	-	-	0
P2	Plating	Advanced	-	-	-	-	0
P3	Plating</						

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links: [pains](#) [cable](#) [aha](#)

Heat generation total	0	0	Power generation total	0	0
Heat reduction total	0	0	Power reduction total	18	18
Reactor rating	1,000	1K	Power capacity	100	100

min	VALUE!	second	VALUE!	third	VALUE!	max	
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Heat ^^ map (unreadable)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

min	VALUE!	second	VALUE!	third	VALUE!	max	
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Reactor Incremental Spreadsheet by muhahaha		v3.0		links: game reddit wiki		
Heat generation total [6]	0	0	Power generation total [7]	0	0	
Heat reduction total [8]	0	0	Power reduction total [9]	18	18	
Reactor plating	1,000	1K	Power capacity	100	100	
Usage info The unlocked upgrades and prestige bonuses can be stated. The level when hovering over the upgrade is used! (Initial level = 1)						
Upgrades [10]	Name	Level	Effect	Cum. eff.	Effect in reactor	Description
	Potent Uranium	3	100%	100%	200%	200% cells power output +100%
	Potent Plutonium	1	100%	100%	0%	0% cells power output +100%
	Potent Thorium	1	100%	100%	0%	0% cells power output +100%
	Potent Seaborgium	3	100%	100%	200%	200% cells power output +100%
	Potent Dolorium	4	100%	100%	300%	300% cells power output +100%
	Potent Nefastium	5	100%	100%	400%	400% cells power output +100%
	Burned up Protium Cells [11]	200	1%	1%	200%	200% cells power output +1%
	Improved Chronometers	9	100%	100%	800%	800% tick per second +1
	Forceful Fission	9	1%	1%	8%	36.48% [12] produce more power when reactor is heated
	Improved Alloys	24	100%	100%	2300%	2300% platings plating +100%
	Improved Power Lines	19	1%	1%	18%	18% sell 1% max power per tick
	Improved Wiring	24	100%	100%	2300%	2300% capacitors power +100%
	Improved Heat Vents	10	100%	100%	900%	900% heat vents vent and plating +100%
	Active Venting	10	1%	1%	9%	0% increases vents vent by placed capacitors
Prestige	Name	Level	Effect	Cum. eff.	Effect in reactor	Description
	Infused Fuel Cells	7	100%	100%	600%	600% cells power output +100%
	Unleashed Fuel Cells	7	100%	100%	600%	600% cells power and heat *2
	Quantum Buffering	9	100%	100%	800%	800% capacitors power *2, platings plating *2
	Full Spectrum Reflectors	6	5%	5%	25%	35% [13] reflectors +5%
	Fluid Hyperdynamics	8	100%	100%	700%	700% heat vents vent *2
Reactor	Component	Tier	Amount	Component	Tier	Amount
	Capacitor	Basic	0	Uranium	Single	0
		Advanced	0		Double	0
		Super	0		Quad	0
		Wondrous	0	Plutonium	Single	0
		Ultimate	0		Double	0
					Quad	0
	Vent	Basic	0	Thorium	Single	0
		Advanced	0		Double	0
		Super	0		Quad	0
		Wondrous	0	Seaborgium	Single	0
		Ultimate	0		Double	0
					Quad	0
	Reactor Plating	Basic	0	Dolorium	Single	0
		Advanced	0		Double	0
		Super	0		Quad	0
		Wondrous	0	Nefastium	Single	0
		Ultimate	0		Double	0
					Quad	0
	Reflector	all	0	Protium	Single	0
	Heat Inlet	all	0		Double	0
	Heat Outlet	all	0		Quad	0
	Collant Cell	all	0			
	Open slots in reactor		304			
Heat Vent		Initial heat reduction	Upgraded heat reduction	Heat reduction in reactor		
	Basic	4	5,120	0		
	Advanced	300	384,000	0		
	Super	22,500	28,800,000	0		
	Wondrous	1,687,000	2,159,360,000	0		
	Ultimate	126,500,000	161,920,000,000	0		
				0		
Reactor Plating		Initial plating	Upgraded plating	Plating in reactor	Heat reduction by plating	
	Basic	100	614,400	0	-	
	Advanced	14,000	86,016,000	0	-	
	Super	1,960,000	12,042,240,000	0	-	
	Wondrous	274,400,000	1,685,913,600,000	0	-	
	Ultimate	38,416,000,000	236,027,904,000,000	0	-	
	Reactor plating [14]	1,000	-	1,000	-	
				1,000	0	
Capacitor		Initial capacity	Upgraded capacity	Capacity in reactor		
	Basic	100	614,400	0	-	
	Advanced	14000	86,016,000	0	-	
	Super	1,960,000	12,042,240,000	0	-	
	Wondrous	274,400,000	1,685,913,600,000	0	-	
	Ultimate	38,416,000,000	236,027,904,000,000	0	-	
	Reactor Capacity [15]	100	-	100	-	
				100		
		Power reduction by single component				
	Basic	110,592				
	Advanced	15,482,880				
	Super	2,167,603,200				
	Wondrous	303,464,448,000				
	Ultimate	42,485,022,720,000				
		Venting effect	Venting effect in reactor			
	Basic	1	0			
	Advanced	2	0			
	Super	3	0			
	Wondrous	4	0			

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Heat generation total [6]	0	0	0	Power generation total [7]	0	0			
Heat reduction total [8]	0	0	0	Power reduction total [9]	18	18			
Reactor plating	1,000	1K		Power capacity	100	100			
Ultimate	5	0	0						
			0						
Power Cell	Quality	Initial power	Upgraded power	Power in generator [16]	Initial heat	Upgraded heat	Heat in generator [17]		
Uranium	Single	1	576	0	1	64	0		
	Double	4	2,304	0	8	512	0		
	Quad	12	6,912	0	36	2,304	0		
Plutonium	Single	150	67,200	0	150	9,600	0		
	Double	600	268,800	0	1,200	76,800	0		
	Quad	1,800	806,400	0	5,400	345,600	0		
Thorium	Single	7,400	3,315,200	0	7,400	473,600	0		
	Double	29,600	13,260,800	0	59,200	3,788,800	0		
	Quad	88,800	39,782,400	0	266,400	17,049,600	0		
Seaborgium	Single	1,582,000	911,232,000	0	1,582,000	101,248,000	0		
	Double	6,328,000	3,644,928,000	0	12,656,000	809,984,000	0		
	Quad	18,984,000	10,934,784,000	0	56,952,000	3,644,928,000	0		
Dolorium	Single	226,996,000	145,277,440,000	0	226,996,000	14,527,744,000	0		
	Double	907,984,000	581,109,760,000	0	1,815,968,000	116,221,952,000	0		
	Quad	2,723,952,000	1,743,329,280,000	0	8,171,856,000	522,998,784,000	0		
Nefastium	Single	51,871,000,000	36,517,184,000,000	0	51,871,000,000	3,319,744,000,000	0		
	Double	207,484,000,000	146,068,736,000,000	0	414,968,000,000	26,557,952,000,000	0		
	Quad	622,452,000,000	438,206,208,000,000	0	1,867,356,000,000	119,510,784,000,000	0		
Protium	Single	1,250,000,000,000	1,680,000,000,000,000	0	1,250,000,000,000	80,000,000,000,000	0		
	Double	5,000,000,000,000	6,720,000,000,000,000	0	10,000,000,000,000	640,000,000,000,000	0		
	Quad	15,000,000,000,000	20,160,000,000,000,000	0	45,000,000,000,000	2,880,000,000,000,000	0		
Numbers ^^	#	Scientific	Symbol	Number					
	1	1.00E+03	K	1,000					
	2	1.00E+06	M	1,000,000					
	3	1.00E+09	B	1,000,000,000					
	4	1.00E+12	T	1,000,000,000,000					
	5	1.00E+15	Qa	1,000,000,000,000,000					
	6	1.00E+18	Qi	1,000,000,000,000,000,000					
	7	1.00E+21	Sx	1,000,000,000,000,000,000,000					
	8	1.00E+24	Sp						
	9	1.00E+27	Oc						
	10	1.00E+30	N						
	11	1.00E+33	Dc						
	12	1.00E+36	Ud						
	13	1.00E+39	Dd						
	14	1.00E+42	Td						
	15	1.00E+45	Qua						
	16	1.00E+48	Qui						
	17	1.00E+51	Sd						
	18	1.00E+54	St						
	19	1.00E+57	Od						
	20	1.00E+60	Nd						
	21	1.00E+63	Vi						
	22	1.00E+66	Ct						

[1] use the multiplier, when you're using the placement multiple times in your reactor (i.e. 20 x neighbouring double nefastium cells)

[2] The modifier can be used to manually change the heat generation.
I don't know why, but the spreadsheet rounds the values when adding them to the totals...

[3] The modifier can be used to manually change the power generation.
I don't know why, but the spreadsheet rounds the values when adding them to the totals...

[4] Forceful fission is calculated to the power generation of each cell and not the total power. It can happen that fission has no effect on weak cells (i.e. single uranium).

[5] Tests have shown, that you need at least 1k+1 (1,001) to get the bonus from forceful fission.

[6] Cells and modifier

[7] Cells and modifier

[8] Vents, plating and modifier

[9] Capacity reduction

[10] The level when hovering over the upgrade is used!

[11] single +1, double +2, quad +4

Not really an upgrade, but it fits here nicely

[12] Effects starts at reactor heat of 1001

[13] Initial 10% + upgrade

[14] Reactor plating at the beginning of the game

[15] Reactor capacity at the beginning of the game

[16] without neighboring cell effect

[17] without neighboring cell effect