Calmex Company Ltd.

Calmex is situated in North India. It specializes in manufacturing overhead water tanks. The management of Calmex has identified a niche market in certain Southern cities that need a particular size of a water tank, not currently manufactured by the company. The company is therefore thinking of producing a new type of overhead water tank. The survey of the company's marketing department reveals that the company could sell 120,000 tanks each year for six years at a price of Rs.700 each. The company's current facilities cannot be used to manufacture the new-size tanks. Therefore, it will have to buy new machinery. A manufacturer has offered two options to the company. The first option is that the company could buy four small machines with the capacity of manufacturing 30,000 tanks each at Rs.15 million each. The machine operation and manufacturing cost of each tank will be Rs.535. Alternatively, Calmex can buy a larger machine with a capacity or 120,000 units per annum for Rs.90 milion. The machine operation and manufacturing costs for each tank will be Rs.475. The company has a required rate of return of 12%. Assume that the company does not pay any taxes.

pmt	120000	*	700	84000000	
nper	6				

Option1		
Machine	Cost of each machine	Total
4	15000000	60000000
Manuf.cost	535	each tank
Capacity	30000	120000
Machines	4	
ROR	0.12	
cash outflow		64200000
cash inflow		84000000
net cashflow		19800000
nper		6
investment		60000000
npv		₹ 8,14,05,865.01
npv		₹ 2,14,05,865.01

Option2		
Machine	Cost of each Machine	Total
1	90000000	90000000
Manuf.cost	475	each tank
Capacity	120000	120000
Machines	1	
ROR	0.12	
cash outflow		57000000
cash inflow		84000000
net cashflow		27000000
nper		6
investment		90000000
npv		₹ 11,10,07,997.74
npv		₹ 2,10,07,997.74

Option 1 is more beneficial rather option B