apital			
Capital	Input	Competition	Toyoda
Machine Model	Name		
Machine cost (each)		225000	300000
No. of Machines Required	Hours	0.98	0.89
Total Machine Cost		\$225,000	\$300,000
Machine Shipping		10000	10000
Total Machine Shipping		\$10,000	\$10,000
Rigging Foundation Set Up		15000	15000
Total Rigging Foundation Set Up		\$15,000	\$15,000
Fixture Costs Per Machine	40000	\$40,000	\$40,000
Durable Tooling Cost Per Machine	20000	\$20,000	\$20,000
One Full Set of Perishable Tooling Cost per Machine	0	\$0	\$0
Total Initial Investment		\$310,000	\$385,000

Expense	Input	Competition	1	Toyoda	
Operator Hourly Rate	30	\$ \$175,926		\$159,933	
Estimated Yearly Maintenance Cost as a Percent of Machine Cost		2	%	1	%
otal Maintenance Costs		\$4,500		\$3,000	
Perishable Tooling Cost Per Machine (Sets Consumed Per Year)	3	\$31,350		\$28,500	
Jtilities per Machine	3000	\$3,000		\$3,000	
unnual Energy Consumption (see energy savings box)		\$15,200		\$8,700	
Utilities per Machine Annual Energy Consumption (see energy savings box) Annual Operating Costs	3000	. ,			

 Hourly Wages
 Year
 Month

 Hours Discrepancy at 1 Man Per Machine
 533.11
 44.43

 Rate/Hour
 \$30
 \$30

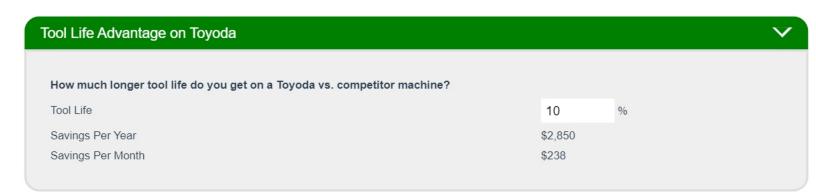
 Savings
 \$15,993.30
 \$1,332.90

inergy Savings	Ann	Annual cost above Toyoda: \$6,499.60		
3 Phase Power Calculations	Input	Competitive Machine	Toyoda Machin	
Total KVA		54	34	
3-phase Voltage		208	208	
3-phase Full Load Current (A)		149.89	94.37	
Full Load Power Consumption kW (assume 0.8 P.F.)		43.20	27.20	
Average Machining Current (A) (60% of full load assumed)		89.93	56.62	
Average Power Consumption kW (assume 0.8 P.F., 60% of full load assumed)		25.92	16.32	
Annual Production Hours		5,864.20	5,331.09	
Cost Per kW/hour	0.1	0.100	0.100	
Annual Cost To Run Equipment Per Machine		\$15,199.86	\$8,700.25	
Monthly Cost To Run Equipment		\$1,266.65	\$725.02	

Simple Loan Calculator **Loan Calculator** Interest Rate 3.95 % Initial Investment Competition \$310000 Toyoda \$385000 **Loan Duration** Competition PMT Delta Toyoda 72 \$4842.95 \$6014.63 \$1171.68 (Months)

Production					~
Production	Input	Unit	Competition	Toyoda	
Annual Production Volume	9500	PPY	9,500	9,500	
Assumed Cycle Time Per Part on a Toyoda	30	Minute	33	30	
Scrap Rate		Percentage	1 %	1	%
Available Machining Hours Per Year	6000				
Required Hours per Year		Hours	5,278	4,798	
Machine Uptime Percentage			90	90	
Gross Production Hours Required		Hours	5,864	5,331	
Number of Machines Required (Rounds up to the whole machine when calculating)		Hours	0.98	0.89	

Cycle Time Advantage on Toyoda			~
How much faster is the time you get on a Toyoda vs. competitor machine?			
Cycle Time	10	%	
Min Per Part	3.00		



Cost of Ownership	Competition	Toyoda	
otal Initial Investment	\$310,000	\$385,000	
Annual Operating Costs	\$229,976	\$203,133	
1st Year	\$539,976	\$588,133	
2nd Year	\$769,952	\$791,266	
3rd Year	\$999,928	\$994,399	
4th Year	\$1,229,904	\$1,197,532	
5th Year	\$1,459,880	\$1,400,665	
6th Year	\$1,689,856	\$1,603,798	
7th Year	\$1,919,832	\$1,806,931	
8th Year	\$2,149,808	\$2,010,064	
9th Year	\$2,379,784	\$2,213,197	
10th Year	\$2,609,760	\$2,416,330	

Total Cost of Ownership

