

Row #	Max Relationship Value in Row	Relative Weight	Weight / Importance	Quality Characteristics (a.k.a. "Functional Requirements" or "Hows")	Max Measurable cutting force	Max withstandable RPM	Time to attach to machine	Time for user to process data	Delay from data capture to viewing	Wireless data transmission range	Measurement Accuracy	Lifespan	Device stiffness	Sampling Rate
1	9	15.5	9.0	Capture forces on the cutting tool in 3 dimensions	⊖	⊖	○	▲		⊖	▲		○	
2	9	5.2	3.0	Wirelessly transmits data					⊖	⊖	▲			⊖
3	9	1.7	1.0	Enables data to be viewed and captured in real time				▲	⊖	⊖	○	▲		⊖
4	9	15.5	9.0	Can interface with the Bridgeport milling machine in the ME machine shop	⊖	⊖	○				▲		⊖	
5	9	5.2	3.0	Has a high repeatability during normal use conditions	⊖	⊖	▲	▲	▲	▲	○	○	○	▲
6	9	5.2	3.0	Will remain in working condition for a long period of time				▲		▲	○	⊖	▲	
7	9	15.5	9.0	Utilizes strain gauges to collect measurements	⊖	⊖					○			○
8	3	15.5	9.0	Can be used safely and has safeguards in place for failure			○					○		
9	9	15.5	9.0	Comes with detailed user instructions for set-up, use, and tear-down			⊖							
10	9	5.2	3.0	Is easy to attach and detach from the machines			⊖		▲			▲		
Target or Limit Value					Newton s	RPM	Seconds	Minutes	Seconds	Feet	% Error	Hours	Newton s/Meter	Hertz
Difficulty (0=Easy to Accomplish, 10=Extremely Difficult)					7	7	5	3	7	5	7	9		
Max Relationship Value in Column					9	9	9	1	9	9	3	9	9	9
Weight / Importance					465.5	465.5	331.0	27.6	72.4	212.1	119.0	115.5	206.9	113.8
Relative Weight					21.9	21.9	15.5	1.3	3.4	10.0	5.6	5.4	9.7	5.3