

Capping Top 10+ Considerations
Low Reject Rate= Less Rework , Less Waste, More Uptime, More Productivity

#	Item	Description
Configuration		
1	Today's Needs & Future Needs	Where do you envision your business being in 5 years from now and will the equipment you buy today fit with your future needs? In five years, will you require more stringent reject rates? Is speed adequate to meet your future demands? Is your capper modular and able to adapt to future needs?
2	In-Line vs. Monobloc	Though the topic today is capping, one might consider taking a look at the complete process. In general, a Monobloc takes up a much smaller footprint but the change parts are more expensive. In-line equipment probably will take up more space but the change parts are much more affordable. In-line equipment can handle containers larger than one liter and are more flexible should your requirements change over time.
3	Range of Caps & Containers	<ul style="list-style-type: none"> - No doubt the needs vary greatly from a line dedicated to one container and one cap to a contract packager who handles an exceptionally wide range of packaging. Simply put, not all cappers can handle all caps and containers. - Include in your consideration range of large to small, speed (throughput) needs for each, and specialty applications such as: CRC, CT , Snap Cap, Rotary Shaker, Eye droppers, delicate, and any orientation requirements. - Flexibility and modularity is the name of the game if you are a contract packager. You don't need to buy all the capabilities upfront if the capper can be upgraded when you have the need.
4	Container & Cap Tolerances	An important consideration often overlooked is cap and container quality including out-of-round, warped or oval caps, falling liner, inconsistent bottle wall thickness, and sharp edges on threads from a worn mold. It is imperative that your capper manufacturer thoroughly evaluate and test as needed to ensure the capper will produce as quoted. Often automating a process which was done manually sheds light on other component issues where the automation solution is less tolerant to.
5	Torque Control	<ul style="list-style-type: none"> - The needs of torquing range from "I need it tight" to "All torques need to be tracked and stored". - Does the manufacturer offer the choice of mechanical clutch and servo as well as options for torque data management? - Servo torque application is the most accurate means to control application torque. Constant monitoring of applied torque can prevent loose caps from going downstream. Can the capper guarantee no loose caps escaping the system?
6	Degree of Automation (modern or dated design)	<ul style="list-style-type: none"> - How modern is the capper you're considering? - Is it outdated and prone to mechanical breakdowns and repairs or incorporates new technology with off-the-shelf components? - Is remote servicing and programming offered? - Is the capper supplied with PLC, touchscreen, job storage & retrieval? - One very powerful feature you should look for is does the capper provide self-diagnostics? If the operator forgot to replace the worn chuck, gripper, or to set air clamp pressure, will the capper alert the operator that you are not getting the desired torque repeatedly and intervention is needed?
7	Range of Options Available Customization Footprint Expandability	<ul style="list-style-type: none"> - Why pay for a feature that is not relevant to your operation. Does your manufacturer have the experience and range of options available to tailor a machine to your specific needs? Needs of the manufacturer vary such as for different locations or different markets such as food, chemical, or pharmaceuticals. What is the manufacturer's capabilities for items including: Sanitary, Wash down, or Class 1 Div 1? - Specialized features could be geared towards wash down or hazardous environments. Do you need your capper to be mobile? Can your supplier reduce the footprint of the capper? - What space is available and in what configuration? - Can the equipment be easily enhanced or expanded with additional features down the road or to increase productivity?

Capping Top 10+ Considerations
Low Reject Rate= Less Rework , Less Waste, More Uptime, More Productivity

#	Item	Description
8	Integration Into Existing Line	<p>How will the capper fit in to your existing operation:</p> <ul style="list-style-type: none"> - Stand-alone design for easy integration into the line - Gating options including choice of feedscrew - Interfacing with existing equipment - How disruptive will the addition of a new capper be to your line? - Can the capper be installed on an existing conveyor? - Is it equipped with product handling which is compatible with your line?
Operation		
1	Job Storage & Retrieval	<ul style="list-style-type: none"> - Is job storage included? - How many jobs can be saved for retrieval? - Which machine settings are automatically set up? - Can you save recipes of previously run product? How many recipes? Are the setup parameters intuitive and easy to understand?
2	Automation & Scaled Settings Set-up & Changeover Ease of Adjustment & Operation	<ul style="list-style-type: none"> - Which adjustments are motorized? - Which adjustments are manual? - Are scales provided? - What indicators are included? - Overall, how long does it take to set up a job? - Overall, how easy is it to set up a job? - How much waste of product, caps, or containers is there during set up? - How many adjustments are there? - Does the capper require ongoing adjustments during the run? - Are the adjustments conveniently located? - Are the adjustments easy to understand & use? - Set-up repeatability is key - how long will it take an operator to change over the machine and reach "steady-state" operation?
Price		
1	Initial Price	<p>So this is the other part of <i>How fast & how much?</i>" we're commonly asked. Truth be told it is a hard question to answer considering we have sold cappers ranging from \$20,000 to over \$500,000. Key to answering this question are the many considerations outlined in this document including current vs. future needs, features, the level of automation required, and total cost of ownership (TCO).</p>
2	Consumables	<p>Certain parts will wear with time, in particular, those in contact with the cap or container. Consider how many parts wear, estimate on how often to be changed, and cost.</p> <p>By example, we have eliminated the cap trap gasket on some models using bombay doors that will last for years.</p> <p>An important concept is (TCO) - Total Cost of Ownership. This is a means to evaluate the cost of an asset not only on the initial purchase price but considering cost of operating the asset during its lifespan.</p>

Capping Top 10+ Considerations
Low Reject Rate= Less Rework , Less Waste, More Uptime, More Productivity

#	Item	Description
3	Container & Cap Designs in the Future	Suffice it to say that no one can predict what will be in style in years to come. Some industries, such as cosmetics and personal care, are subject to ongoing changes in cap and container design. Regardless of the industry you are in, consider the flexibility of the capper you are considering for future needs. Think of the benefits of a capper that is flexible and able to configure to your future needs. Consider the payback of an asset which will not become obsolete due to your changing needs.
4	Delivery	Does the delivery time frame quoted meet with your needs? Does the supplier carry stock machines and be able to respond to your delivery needs quickly?
Productivity		
1	Speed But More Importantly Throughput Rework or Disposal Costs	In a perfect world, the capper you buy would have no rejects. Perhaps some day but for now, the take away here is that the higher the reject rate, the longer it takes to fill a customer order. Running @ 60 cpm for 24 hours: 0% Rejects = 86,400 throughput 3% Rejects = 83,808 = -2,592 = 45 Min. Add'l. Run Time 5% Rejects = 82,080 = -4,320 = 76 Min. Add'l. Run Time 10% Rejects = 77,760 = -8,640 = 160 Min. Add'l. Run Time This item probably merits a spot on the Top 10 but is often overlooked or just plain forgotten about - rework or disposal costs which can be a truly hidden cost. Simply put, all cappers will have rejects, principally from three main factors: - Mechanical considerations of the capper - Issues with containers or caps - Operator issues Beyond the extra run time needed to make-up for the rejected containers, consider the costs associated with reworking or disposal of the product, caps, containers, and so on in addition to labor and administrative factors.
2	Reject Rate	Speed (Throughput) above dealt with the extra time to run a job. On a higher level, beyond all the costs associated with rejects, what is the impact of higher reject rates on your operation? Are rejected containers reworked or discarded? If discarded, what is the cost? If reworked, again what will be the cost? Are you introducing more labor to remedy failures of a poor automation solution? On numerous occasions we have seen operators placed after cappers to correct every container exiting the capper. - What features does the capper have to minimize rejects? By example, does the capper have a sensor to detect a missing or cross-threaded cap which will prevent torquing in the second station that otherwise could lead to a jam-up? - Perfect Position of the Cap + Perfect Torque Control = Perfect Induction Sealing
3	Self Diagnostics	Does the capper have self diagnostics to assist in troubleshooting in the event of a fault?
4	Spares and Wears	-How do spare parts fit in with your operation? - What is the impact of excessive downtime on your operation? - Does the capper manufacturer offer a consumables kit & spare parts kits with the equipment quote?
Service		

Capping Top 10+ Considerations
Low Reject Rate= Less Rework , Less Waste, More Uptime, More Productivity

#	Item	Description
1	Reputation of the Capper Manufacturer	<ul style="list-style-type: none"> - What experience does the manufacturer have with cappers in general? - Range of capper models offered? - What role do cappers play in the manufacturers business - are they an integral part? - Do they make their own cappers? - How long have they been making cappers? - What reputation does the manufacturer have in the industry including What they say and What they do?
2	Reputation of the Capper	<ul style="list-style-type: none"> - Can the manufacturer give you references for the capper you are considering? Is this capper a prototype? Can you see videos of it running similar product?
3	Support Without a Service Call Warranty	<ul style="list-style-type: none"> - Is remote servicing and programming offered? - What is the warranty with regards to industry norms? - Does the supplier offer: <ul style="list-style-type: none"> Preventative Maintenance Program Training for Life Regional Service Visits
4	Static or Dynamic manufacturer?	Where was this manufacturer five years ago, where are they today, and what is there vision for the future?
Your Point-of-View		
1	Past Experience	<ul style="list-style-type: none"> - What experiences have you had with the different capping methods? - Are you familiar with new technologies with cappers? - Is it time to learn about new choices available?
2	Financial Restraints	<ul style="list-style-type: none"> - What are your capital budget limitations with respect to your needs? - Which is more important - initial price or shorter ROI time frame? - Does the supplier offer financing on flexible terms?
3	Workforce	Operator skill level, availability, technology, manual to automatic operation
Last Updated: May 10, 2016		