

Survival Guide for Fresh-Cut Processing Equipment

CHANNELIZED
integrated solutions

Sanitary Operational Performance		PASS	*FAIL	*CORRECTIVE ACTION/COMMENTS
1	Food contact materials meet the FDA criteria for surfaces that are non-reactive, non corrosive, non-contaminating, non-absorbent and cleanable.			
2	A risk assessment has been completed for this piece of equipment and/or processing line.			
3	Design concerns (maintenance and/or sanitation) have been communicated to the supplier in order to make changes on future designs.			
4	An SSOP have been written and validated for this piece of equipment.			
5	All removable components/covers have a designated place for cleaning and sanitizing.			
6	Open frame Channelized™ design allows for line-of-sight access and inspection.			
7	All stainless surfaces have undergone a passivation process.			
8	Equipment design provides 18" clearance to the floor for FC surfaces.			
9	Equipment is self-draining. Flat surface areas are pitched a minimum slope of 15% or more if necessary to achieve drainage.			
10	Moisture does not drip, drain, drawn, or diffuse onto product zone areas.			
11	Dead end corners can be opened for drainage and rinse-out.			
12	A sanitation guide such as a Sanitation Passport™ has been written as part of equipment documentation.			
13	The manufacturers' mark and serial number on equipment can be easily wiped clean. No cut-outs, laminations, or rivets are present.			
14	The equipment can be dismantled and reassembled using little or no hand tools for sanitation and/or maintenance purposes.			
15	No use of unfiltered/compressed air is directly applied onto product or Zone 1 surfaces that is not filtered to a minimum of 0.3 micron.			
16	There is no use of mechanical scrapers on Zone 1 surfaces. (metal on metal)			
17	Air knife manifolds, and hose/ducting interiors are accessible without tools for sanitation and inspection.			
Drive Components		PASS	*FAIL	*CORRECTIVE ACTION/COMMENTS
18	Gear boxes are located away from the product zone and have catch pans with clear hoses to the floor.			
19	All motors, bearings and drive components mounted on cleanable supports.			
20	All exposed components (machine, electrical, hydraulic, pneumatic, etc.) are made of corrosion resistant materials and wash-down rated.			
21	All faceplates on gauges/sensors/sight glasses are made of shatterproof material.			
22	All lubricants meet the FDA criteria for incidental food contact.			
23	IP69K rated drive components are used, with Viton seals and O-Rings.			
24	All motors, drives, control boxes, and other sensitive pieces of equipment are of wash down duty and are made of non-coated material. Appropriate drainage is in place to account for condensation.			
25	Components will not corrode if coatings/plating's are violated (scrapped, chipped or worn), exposing substrate.			
26	No bearings are located in the Zone 1 area.			
27	Zone 2 bearings are sealed or capped and mounted on stand offs.			
28	Solid conveyor belting material is used, no cloth-backed belting or lacing is present.			
29	If the equipment has belts, the belting material can be effectively cleaned.			
30	If the equipment has belts, the belts can be easily tracked, centered, and adjusted.			
31	If the equipment has belts, quick release mechanisms and belt lifters are provided for improved sanitation access. (One belt lifter per 6ft.)			
32	All air, vacuum, and product hoses are transparent or opaque, and meet product surface guidelines.			
33	Non-removable safety covers provide access for wash through and inspection.			
34	The equipment free of metal to metal moving parts (i.e.: scrapers)			
35	Carry and return rollers on conveyers are solid or slides rather than hollow tube rollers.			
36	Gaskets, seals and fittings are approved for food contact.			
Component Fasteners		PASS	*FAIL	*CORRECTIVE ACTION/COMMENTS
37	The product zone is free of bolts, nuts, or other fasteners that may become loose and present a physical hazard.			
38	Horizontal surfaces are free of recessed fasteners (e.g. Allen heads, Phillips screw heads, etc.).			
39	Nuts (cap, wing or other) are not mounted on the Zone 1 surfaces.			
40	All exposed threads in potential product zones are covered with sealed cap nuts.			
41	Loctite and Anti-Seize products meet applicable approval standards depending on installation zone.			

Fabricated Weldments		PASS	*FAIL	*CORRECTIVE ACTION/COMMENTS
42	All fabricated components are paint free.			
43	Zone 1 joints and welds are smooth and free of pits, cracks and corrosion. A cotton ball is a good reference to detect weld smoothness.			
44	Zone 2-4 welds are structurally sound and are smooth in finish.			
45	Zone 1 stainless surfaces are equivalent to a 2B mill-rolled finish, non-grained.			
46	Zone 1 internal corners are formed (non-welded) with a large radius to facilitate cleaning. (3/16" minimum, 1" preferred)			
47	Frame components are free of skip welds and/or laminations.			
48	All welds wrap completely around edges and corners and blend into the next weld to provide a continuous hermetic seal.			
49	All weldments/fabrication zones/repairs have been passivated prior to use.			
50	Piano hinges, knurling, braided covers, and socket head cap screws are not used.			
51	Equipment legs are designed so there are no areas for moisture or debris to collect.			
52	Leg and framework supports either tubular (round) or square and turned 45 degrees to provide a diamond shape, where applicable.			
53	Tubular members are only used where structurally necessary. Solid structures are used wherever possible.			
54	Tubular frame members are sealed with no open holes.			
55	The equipment is free of internal hidden ledges.			
56	Equipment legs are designed so there are no areas for moisture or debris to collect and are easy to clean around.			
57	Supports / gussets are fully welded and stood off (scalloped) to minimize inside corners and blind areas.			
58	Surfaces affected by fabrication/shipping/installation that introduce ferrous contamination (scratches, dents, abrasions) are to be repaired and re-passivated prior to being in service.			
Process Piping		PASS	*FAIL	*CORRECTIVE ACTION/COMMENTS
59	The piping system is free of dead legs greater than two pipe diameters.			
60	New stainless steel pipelines have undergone a passivation process.			
61	All process piping is purge-welded and provides line-of-site of cleaning access.			
62	A clear, 12" section of piping has been installed in order to ensure cleanliness is maintained.			
63	Piping is affixed to equipment and other piping via tri-clover clamps and gaskets.			
64	All sections of piping can be disassembled without tools into discrete sections that allow line-of-sight sanitation/inspection.			
65	A CIP process has been developed and validated for the process piping.			
66	Piping has minimal use of threaded connections/adapters or slip connections with external hose clamps.			
67	There are designated areas to store/sanitize fittings/clamps/gaskets/hoses during sanitation.			
Air/Pneumatics		PASS	*FAIL	*CORRECTIVE ACTION/COMMENTS
68	All air cylinders are made of compatible materials and intended for the application they are installed.			
69	Air connected to the cylinder has been filtered, at a minimum, at the site of the plant air compressor.			
70	Food grade oil is used in the cylinder.			
71	Exhaust is routed as a means to reduce any potential contamination.			
Motor Controls and Electrical		PASS	*FAIL	*CORRECTIVE ACTION/COMMENTS
72	Slope-top enclosures, NEMA 4X, are stand-off mounted with cable penetrations from bottom of panel.			
73	Control panels are mounted on support posts, framework or standoffs with space behind them (1-2 inches) for adequate cleaning?			
74	Control boxes, switch boxes and other hinged doors are free of piano hinges.			
75	Motors and gearboxes are mounted out of the product zone.			
76	All motors, bearings and drive components are mounted on easily cleaned supports.			
77	Wire is routed and mounted using sanitary stand-off wire routing looms and allow flushing/sanitation of lines without removal.			
78	All zip-ties are metal detectable and are applied in a sanitary manner.			
79	Sensors and their connectors are IP69K. Connectors are outside of the Zone 1 area.			
80	Sensors are mounted with the correct provisions/hardware per zone definition.			

Equipment Installation		PASS	*FAIL	*CORRECTIVE ACTION/COMMENTS
81	Contractors are trained on GMP policy and installation expectations.			
82	Sanitation and swabbing requirements prior to installation have been defined and clearly communicated to the installers.			
83	An appropriate pathway for contractors and employees to enter the building is designated on the production floor or via a map.			
84	Equipment is not installed over a drain, limiting access to cleanability.			
85	Conduit, cabling, and process piping is mounted via sanitary stand-offs and is routed to avoid drip, drain, or diffuse onto Zone 1 surfaces.			
86	Design of personnel access platforms and landings to equipment prevents Zone 1 cross-contamination.			
87	Equipment is located 30" from overhead structures and 36" from the nearest stationary object.			
88	The equipment, as installed, is compliant with OSHA regulations.			
89	Carts, shelves, etc. have been provided to store removable parts during cleaning and sanitation.			
90	There is adequate space (six inches minimum) between the floor and the body of the equipment for adequate cleaning. (Evaluate on a case-by-case basis.)			
91	Grouted foot pads, whether epoxy or urethane are sealed from the floor to the edge of foot.			
92	Contractor tools requirements in specific zoning have been defined and communicated.			
QA/Food Safety/Sanitation		PASS	*FAIL	*CORRECTIVE ACTION/COMMENTS
93	Swab sites have been defined based on risk assessment.			
94	Sanitation crew has been trained on how to clean and verify equipment.			
95	The QA inspectors have been trained on how to inspect equipment post sanitation. (What to look for---welds, belt condition, cleanliness, etc.)			
96	The manufacturers sanitation guide has been incorporated into the equipment SSOP.			
97	A maintenance procedure and schedule has been written according to manufacturer recommendations.			
98	The equipment and surrounding infrastructure has been added in the internal inspection procedure.			
99	A quarantine process has been developed for new/used equipment integration into the processing facility.			
100	A pre-installation sanitation and swabbing plan has been developed and has been communicated to the install team.			