



BY TIMKEN

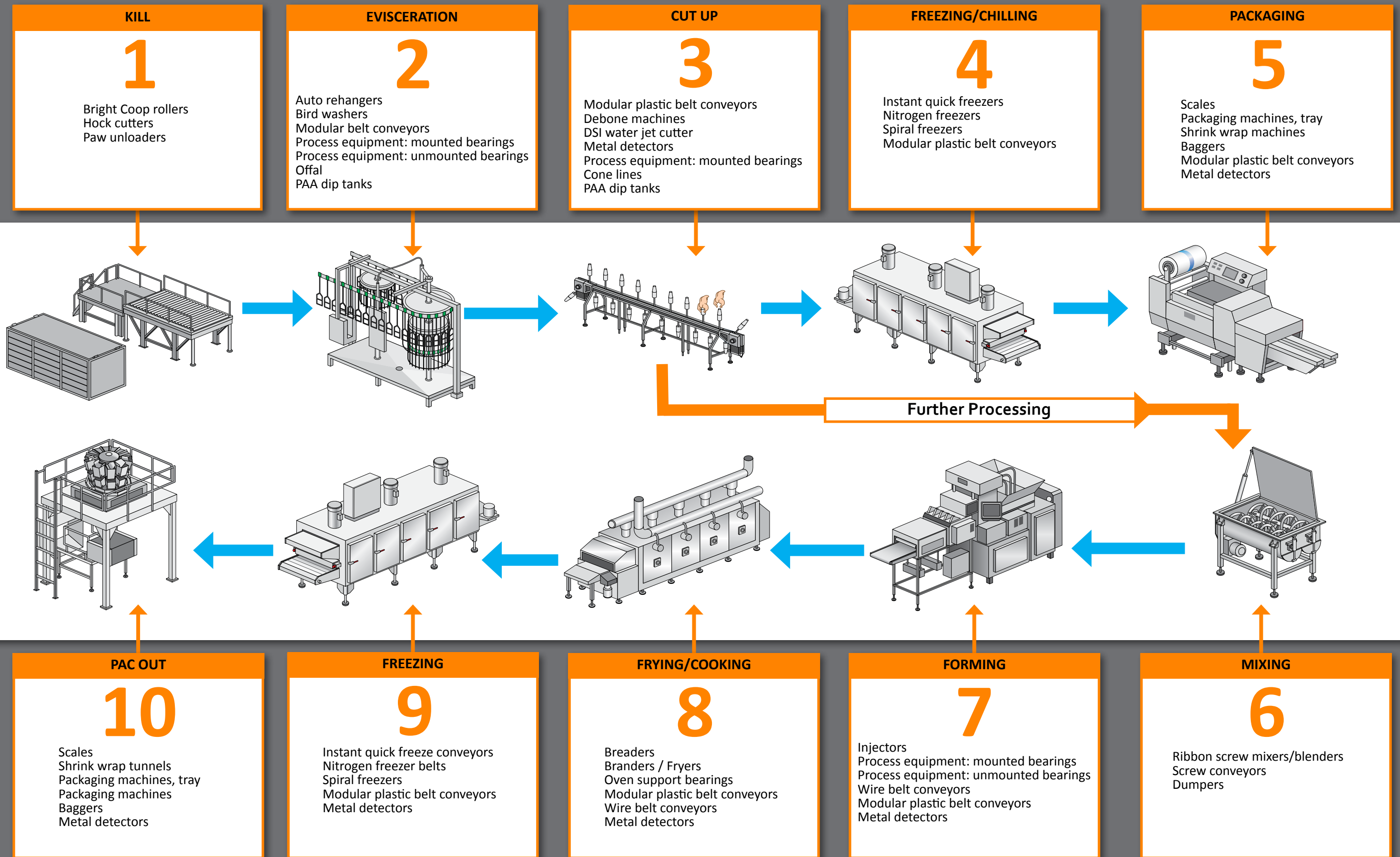
EDT HAS BEARINGS
FOR ALL AREAS OF
POULTRY PROCESSING



POULTRY

From receiving to shipping, EDT bearings contribute:

- Food Safety
- Longer Life
- Lower Maintenance



EDT has bearings for all areas of poultry processing

From receiving through shipping, EDT bearings improve reliability and food safety AND help the bottom line

Poultry processing maintenance issues that decrease bearing life		
Reference No.	Issues	Causes
1	Frequent bearing replacement	Heavy contamination with insufficient bearing lubrication
2	Proper lubrication requires considerable maintenance time	Heavy wash down and process moisture
3	Product contamination concerns from rusting bearings, housings	Heavy wash down, high process moisture, grease protects bearings from rust but style or location prohibits re-lubricating ball bearings
4	Catastrophic bearing failure can halt production	Load too high for stainless bearing
5	Set screws back out, over-tightening causes cracked inner rings and broken bearings	Stainless set screws in stainless housings don't seat, vibrate loose; over-tightening is typical response and brittle 440C rings crack
6	Extreme temperature (<32°F or >200°F) affects lubricant to detriment of production	Low temperature congeals grease; high temperature liquefies grease and balls have insufficient lubrication

Processing flow reasons for challenges and EDT bearing Solution*			
Basic Processing		Further Processing	
Station	Applications / Machinery	Issues	EDT Product Solution
1	Kill		
	Bright Coop rollers	1, 2	Block bearing Poly-Round® bearings, Solid lubricated ball bearings
	Hock cutter	1, 4, 5	Eccentric solid lubricated ball bearings
	Paw unloader	3	Stainless take-up frame with polymer block bearings
2	Evis		
	Auto rehangar	3, 4	Radial Poly-Round® (RPR) bearings
	Birdwasher	3, 4	Radial Poly-Round® (RPR) bearings
	Modular belt conveyors	1, 2, 3, 4	Poly-Round® Solution® or solid lubricated ball bearings
	Process equipment, mounted bearings	4, 5	Solution® eccentric solid lubricated ball bearings
	Process equipment, unmounted bearings	4, 5	Radial Poly-Round® and solid lubricated radial ball bearings
	Offal	2	Poly-Round® Solution® or Type E Solution® bearings
3	Cut up		
	Modular plastic belt conveyors	1, 2, 3, 4	Poly-Round® Solution® or solid lubricated ball bearings
	Debone machines	1, 3, 4	Unmounted bearings: RPR® and solid lubricated radial ball bearings
	DSI water jet cutter	1, 3	Solution® eccentric or setscrew solid lubricated ball bearings
	Metal detectors	1, 2, 3, 4	Poly-Round® Solution® or solid lubricated ball bearings
	Process equipment mounted bearings	4, 5	Mounted ball bearings: eccentric solid lubricated inserts
	Cone Lines	1, 2, 3, 4	Poly-Round® Solution® or solid lubricated ball bearings
4	Freezing/Chilling		
	Instant quick freezers	1, 2, 3, 4	Poly-Round® Solution® or solid lubricated ball bearings
	Nitrogen freezers	1, 2	
	Spiral freezers	1, 2, 3, 4	
Modular plastic belt conveyors	1, 2, 3, 4		
5	Packaging		
	Scales	2, 3	Radial Poly-Round® and solid lubricated radial ball bearings, and scale links
	Packaging machines, tray	1, 3, 4	Radial ball bearings with solid lubrication
	Shrink wrap machines	1, 2, 3, 4	Poly-Round® Solution® or solid lubricated ball bearings
	Baggers	1, 3, 4	Radial ball bearings with solid lubrication
	Modular plastic belt conveyors	1, 2, 3, 4	Poly-Round® Solution® or solid lubricated ball bearings
	Metal detectors	1, 2, 3, 4	Poly-Round® Solution® or solid lubricated ball bearings
6	Mixing		
	Ribbon screw mixer/blender	2, 3, 4	Type E Solution® and RPB (split) interchanges
	Screw conveyors	2, 3, 4	Type E Solution®, RPB Solution® and RPB (split) interchanges
7	Forming		
	Injectors	1, 2, 3, 4	Poly-Round® Solution® or solid lubricated ball bearings
	Process equipment: mounted bearings	5	Solution® eccentric solid lubricated ball bearings
8	Frying/Cooking		
	Breaders	1, 2, 3, 4	Solution® solid lubricated ball bearings
	Branders	1, 2, 6	High temp Poly-Round® Solution®
9	Freezing		
	Oven support bearings	1, 2, 6	High temp Poly-Round® Solution® or solid lubricated ball bearings
	Modular plastic belt conveyors	1, 2, 3, 4	Poly-Round® Solution® or solid lubricated ball bearings
Wire belt conveyors	1, 2, 3, 4		
Metal detectors	1, 2, 3, 4		
10	Pac Out		
	Scales	2, 3	Radial Poly-Round® and solid lubricated radial ball bearings, and scale links
	Shrink wrap tunnels	1, 2, 3, 4	Poly-Round® Solution® or solid lubricated ball bearings
	Packaging machines: tray	1, 3, 4	Radial ball bearings with solid lubrication
	Packaging machines	1, 3, 4	Radial ball bearings with food grade grease or solid lubrication
	Baggers	1, 3, 4	Radial ball bearings with solid lubrication
	Metal detectors	1, 2, 3, 4	Poly-Round® Solution® or solid lubricated ball bearings

EDT Products

Poly-Round® bearings



EDT polymer plane bearings are the most efficient and effective way to eliminate lubricants when grease is a problem. Wash down, extreme temperatures, chemicals, incomplete rotation, and abrasives degrade ball bearings; Poly-Round® inserts of the appropriate material for the application can withstand these environments.

- USDA accepted
- 100% grease-less; zero rust
- Variety of polymer inserts, including metal detectable
- Optically detectable blue housings available
- Long and predictable operation can be extended with 180° rotation of the insert when worn too far in one direction
- Fully split units available
- Shaft sizes 1/2" to 4" (12.7mm to 101.6mm); all housing styles in stainless or exclusive 'KG' polymer

Mounted ball bearings



Stainless steel or 'KG' polymer material bearing housings with a wide selection of ball bearing inserts to choose from.

- Stainless steel or other material
- Set screw locking or eccentric
- Value, Classic or Choice inserts
- Greased or solid lubricated
- Available for every shaft size from 1/2" to 3-7/16" (15 mm to 90 mm)
- Good stock
- Custom housings are available
- Blue optically detectable polymer housings available

High temp bearings



Wide selection of Poly-Round® and stainless ball bearings for high temp applications

- 100% grease-less
- Bearings available:
 - Poly-Round® inserts for temperatures up to 1000°F/ 540°C
 - Fixed and floating to accommodate thermal expansion
 - Ball bearings with solid lubricants; various to 650°F/343°C
- Housings available:
 - Machined stainless (optional split)
 - Cast stainless
 - Mild steel

Type E Solution® bearings



EDT's Type E Solution® bearings are designed to operate where tapered roller bearings do not perform adequately, often subjected to process or wash down moisture or where food safety is a concern.

- USDA/NSF accepted
- Housing and bearings 100% rust free
- Maintenance free: 100% grease-less
- Can be mounted directly over the food product zone
- Available in pillow block, 4-bolt, and piloted styles
- Split units available

Solid lubrication



With increasingly stringent food safety mandates, solid lubricants can be effective alternatives to grease. Solid lubes help exclude contaminants from interfering with rolling activity by filling the area around the balls. They eliminate issues of over-greasing, using the wrong kind of grease, or a lack of grease.

Options for polymer-based (EPL) and graphite-based (EGL) solid lubricants with:

- Food grade and non-food formulations
- Capacity for operating in temperatures from -250°F to +650°F (-157°C to 343°C)
- Seals and/or flingers are reinstalled, but bearings can also be provided with the solid lubricant open for visual inspection and maximum content

Choose lube based on operating environment; consider moisture, contamination, temperature, requirement for low friction, vacuum, or other circumstances.

Radial Poly-Round® bearings



EDT Radial Poly-Round® bearings (RPR's) are manufactured from bearing grade polymers and 316 stainless components, and are designed to directly retrofit deep groove ball bearings and other styles of radial bearings.

- USDA accepted
- 100% non-corrosive, zero rust
- Well-suited to HACCP/HARPC programs
- Choice of polymers depending on the application
- Available in most radial bearing sizes
- Custom configurations available

Applications



'QF' Poly-Round™ submerged on an offal auger



'NA' Poly-Round™ Solution on idle end of breast incline



'NA' Poly-Round™ Solution located directly over a food product zone



Low temperature solid lube allows ball bearing to operate reliably in freezers



Radial Poly-Round® (RPR) bearings retrofit radial ball bearings and eliminate rust on weigh scale buckets



'NA' Poly-Round™ in SS EDT take-up frame (and other locations) on shrink wrap tunnels



'FA' Poly-Round™ Solution on horizontal mixer



Type E Solution™ bearings on mixers/blenders



'NA' Poly-Round™ Solution on wire belt sifter conveyors



'NA' Poly-Round™ on a continuous cooker



Solid lubricated ball bearings in stainless QuiKlean® with a back seal work well as EDT Breeder Bearings

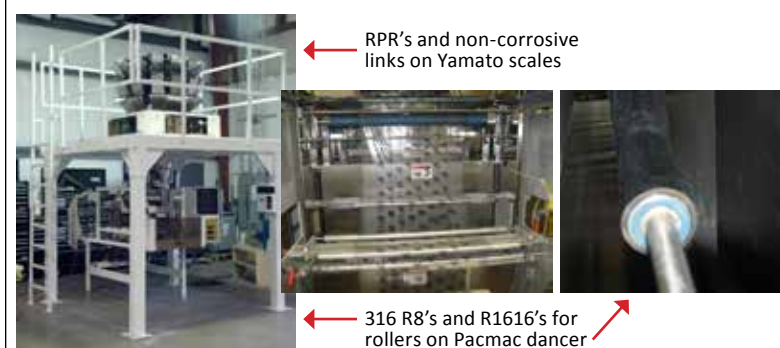


'NA' or 'FA' bearing on fryer infeed and outfeed belts (depending on temperature at bearing)



'QF' bearings on Fessman ovens

10 EDT bearings run cleaner and last longer than original equipment bearings on weigh scales and packaging machines



RPR's and non-corrosive links on Yamato scales

316 R8's and R1616's for rollers on Pacmac dancer bars are 100% non-rusting



'ON' Poly-Round™ is detectable 3 ways: metal, x-ray and optically



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