



BY TIMKEN

EDT HAS BEARINGS
FOR ALL AREAS OF
PORK PROCESSING

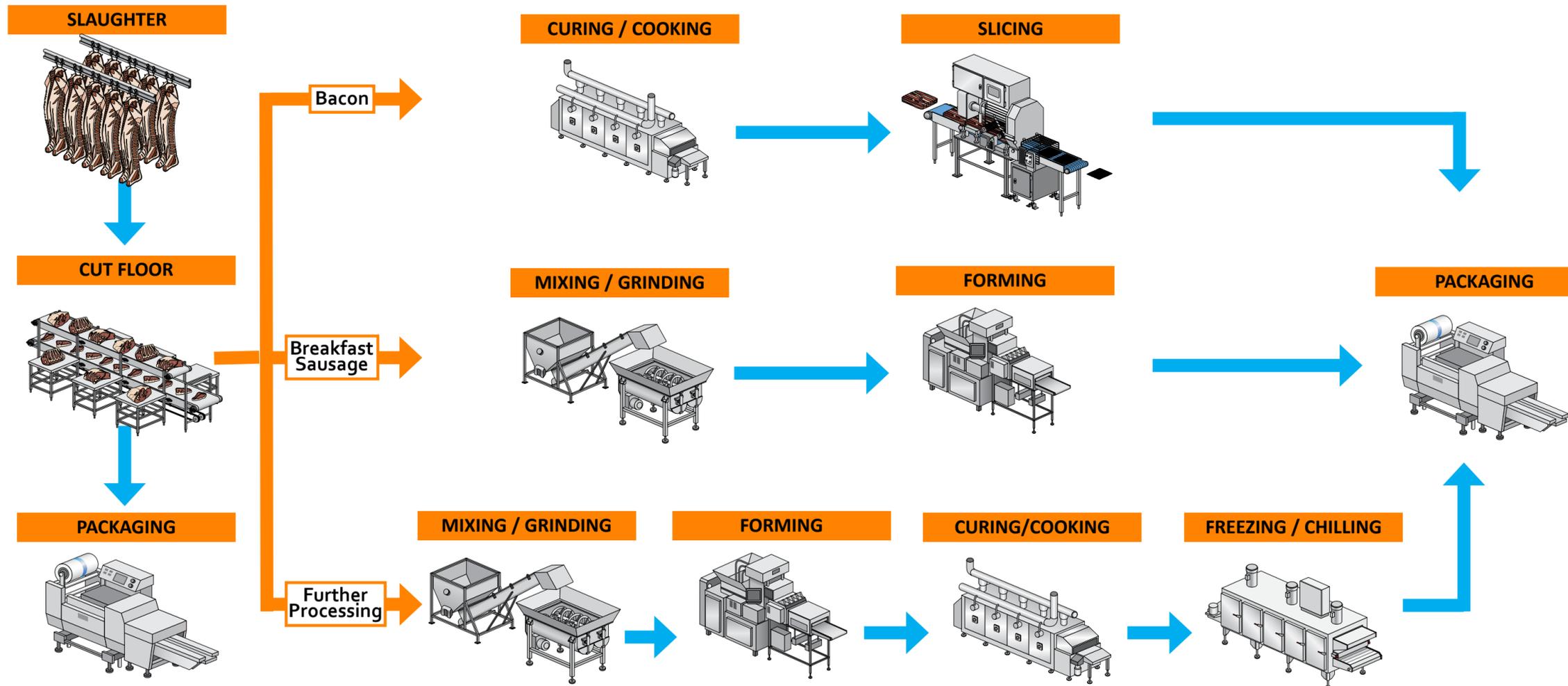
PORK



From receiving to shipping, EDT bearings contribute to:

- Improved Food Safety
- Longer Life
- Lower Maintenance

SLAUGHTER	CUT FLOOR	MIXING / GRINDING	FORMING	SLICING	CURING / COOKING	FREEZING / CHILLING	PACKAGING
Snout pullers Hog polishers Offals	Saws Modular plastic belt conveyors Flat rubber belts Metal detectors Unsupported drive bearings Sprocket driven urethane belts Belly flatteners	Ribbon screw mixers/blenders Screw conveyors Metal detectors Dumpers	Grinders Metal detectors Stuffers Linkers Process equipment: unmounted bearings Loaders	Modular plastic belt conveyors Slicers Round urethane belt conveyors Process equipment: unmounted bearings Wire belt conveyors Sprocket driven urethane belts Metal detectors	Continuous cookers Smokehouses Microwave ovens Ovens Caramelizing tables Cooling conveyors	Nitrogen freezers Spiral freezers / chillers Sprocket driven urethane belts Modular plastic belt conveyors Metal detectors	Scales Modular plastic belt conveyors Packaging machines Tray packaging machines Shrink wrap tunnels Baggers Metal detectors



In all areas of pork processing, EDT bearings improve operations AND help the bottom line

Maintenance Issues		
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

Applications / Machinery	Issues	EDT Product Solution
Slaughter		
Snout pullers	1,2,3,4	All-Round® Solution®
Hog polishers	1,2,4,5	Solid lubricated eccentric ball bearings or QF Poly-Round® bearings
Offal	2	Type E on screw conveyors
Cut Floor		
Saws	2,3	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)
Modular plastic belt conveyors	1,2,3,4,5	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)
Flat rubber belts	1,2,4,5	Solid lubricated eccentric ball bearings
Metal detectors	1,2,3,4	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)
Unsupported drive bearings	1,2,4,5	Solid lubricated eccentric ball bearings
Sprocket driven urethane belts	1,2,3,4,5	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)
Belly flatteners	2,3,5	
Mixing/Grinding		
Ribbon screw mixer/blender	2,3,4	Type E Solution® (one piece or split) or Poly-Round® Solution®
Screw conveyors	2,3,4	
Metal detectors	1,2,3,4	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)
Dumpers	1,2,3,4	Poly-Round® Solution® or block bearings
Forming		
Grinders	2,3,4	Type E Solution® (one piece or split)
Metal detectors	1,2,3,4	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)
Stuffers	1,2,3,4	Solid lubricated radial ball bearings
Linkers	1,2,3,4	Poly-Round® Solution® or solid lubricated eccentric ball bearings
Process equipment unmounted bearings	1,2,3,4	RPR and solid lubricated radial ball bearings
Loaders	1,2,3,4	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)

Applications / Machinery	Issues	EDT Product Solution
Slicing		
Modular plastic belt conveyors	1,2,3,4,5	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)
Slicers	1,2,4,5	Solid lubricated eccentric ball bearings and solid lubricated radial ball bearings
Round urethane belt conveyors	1, 2, 3, 4, 5	Solid lubricated eccentric ball bearings
Process equipment unmounted bearings	1,2,3,4	RPR and solid lubricated radial ball bearings
Wire belt conveyors	1,2,3,4,5	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)
Sprocket driven urethane belts	1,2,3,4,5	
Metal detectors	1,2,3,4	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)
Curing / Cooking		
Continuous cookers/smokehouses	1,2,3,4,5,6	Poly-Round® Solution® (with fixed or floating options) or solid lubricated ball bearings
Microwave ovens	1,2,3,4,5,6	
Ovens	1,2,3,4,5,6	
Caramelizing tables	1,2,3,4,5,6	Poly-Round® Solution®, solid lubricated radial ball bearings or RPR
Cooling conveyors	1,2,3,4,5	Poly-Round® Solution®; solid lubricated radial ball bearings
Freezing / Chilling		
Nitrogen freezers	1,2	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)
Spiral freezers	1,2,3,4	
Sprocket driven urethane belts	1,2,3,4,5	
Modular plastic belt conveyors	1,2,3,4,5	
Metal detectors	1,2,3,4	
Packaging		
Scales	2,3	RPR® or solid lubricated radial ball bearings; scale links
Check weighers	1,2,3,5	
Modular plastic belt conveyors	1,2,3,4,5	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)
Packaging machines	1,2,3,4	
Tray packaging machines	1,3,4	Solid lubricated radial ball bearings
Shrink wrap tunnels	1,2,3,4	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)
Baggers	1,3,4	Solid lubricated radial ball bearings or 316 radial ball bearings
Metal detectors	1,2,3,4	Poly-Round® Solution® or solid lubricated ball bearings (consider eccentric)

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 grease, zero rust
- Variety of polymer inserts, including metal detectable
- 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

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

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

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.

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

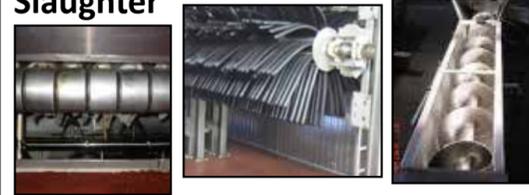
Scale Links



Non-corrosive and metal detectable components

Applications

Slaughter



EDT greaseless bearings reduce maintenance in the challenging slaughter environment. Here: EDT bearings on hog table, hide washer and offal auger.

Cut Floor



On tension devices (flat belts, overhung loads) and high speed saws (hock cutters and others), EDT mounted ball bearings with solid lubrication in non-corrosive housings elevate food safety and extend up-time.

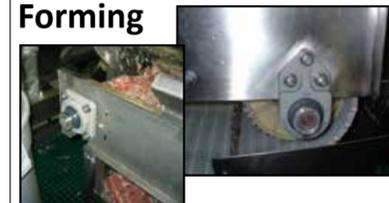
On sprocket-driven conveyors, Poly-Round® bearings are ideal in direct food contact areas because they operate 100% greaseless and rust free.

Mixing/Grinding



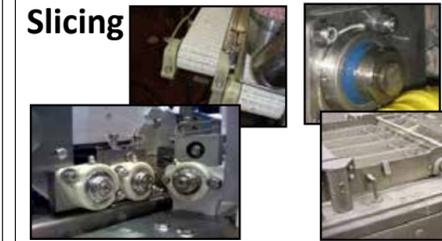
Type E Solution® bearings for large shafts (to 5" / 127mm), and Poly-Round® bearings for standard shafts (1/2" to 3" / 12.7mm to 76.2mm), are the most sanitary bearings available: no contamination, no corrosion, and no need to re-grease after washdown.

Forming



The only USDA-accepted bearings on the market, EDT's Poly-Round® and Type E Solution® bearings are a smart choice on grinders, linkers, injectors, and loaders running modular plastic or wire belts. On tensioned drives, and for unmounted bearing needs, EDT offers solid lubricated ball bearings.

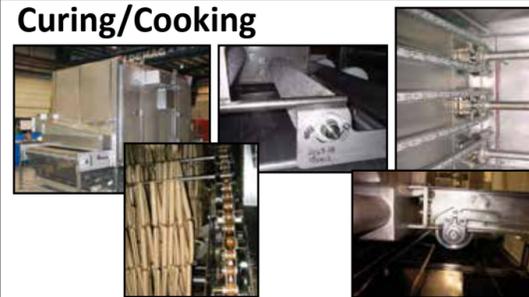
Slicing



From slicing bacon to dicing ham, bearings need to operate at high speed and tight tolerances. Ball bearings are essential. Solid lubricant alleviates issues associated with grease. EDT has good stock of most popular sizes and styles.

On sprocket-driven equipment, Poly-Round® bearings are guaranteed for 1 year of zero maintenance life.

Curing/Cooking



On sprocket-driven equipment operating at temperatures over 180°F (82°C) like continuous cookers, smokehouses, microwave and standard ovens, Poly-Round® bearings eliminate grease melting out of ball bearings. On belt washers, greaseless Poly-Round® bearings are also ideal.

Freezing/Chilling



Avoid problems with grease congealing in low temperature applications with Poly-Round® inserts (low temperature styles available for below 32°F / 0°C). 1 year life is GUARANTEED on sprocket-driven plastic, wire or urethane conveyors.

On flat belts, ice rakes, or spiral conveyors, ball bearings with low temperature solid lubricant extend service life with zero product contamination.

Packaging



Unmounted bearings subject to wash down and in direct food contact can be replaced with Radial Poly-Round® (RPR) bearings, especially when there is incomplete rotation. Avoid maintenance issues with Poly-Round® bearings on any sprocket-driven conveyors. If ball bearings are preferred, choose ones with solid lubricant.



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