



Food Grade Construction is  
Required for Sanitary  
Applications

## Stainless Steel Screw Conveyor for Pulp Oil Extraction at Sun Orchard

### Introduction

Sun Orchard, based in Phoenix, AZ, is a leading producer of premium juice concentrates, purees, and citrus oils. To optimize their pulp oil extraction process, the facility required a custom-engineered screw conveyor capable of transporting fruit pulp efficiently while maintaining strict sanitary standards. KWS designed and manufactured a 304 stainless steel screw conveyor specifically for Sun Orchard's pulp oil recovery operation.

### Challenge

The pulp oil extraction process at Sun Orchard involves conveying high-moisture fruit pulp containing natural oils and acids. The previous conveying system suffered from corrosion, product buildup, and inefficient transfer due to excessive internal clearances. These issues led to reduced throughput, increased maintenance, and sanitation concerns. The plant needed a food-grade, corrosion-resistant conveyor that would improve material flow and maximize oil recovery efficiency.

### KWS Advantage

KWS engineers developed a precision-built 304 stainless steel screw conveyor featuring a tight-tolerance design that minimizes internal clearance between the screw and trough. This design improvement created a more efficient transfer of pulp and oil, reducing bulk material fallback and maximizing flow consistency. The result was a 30-percent increase in product yield during the pulp oil extraction process.

The screw conveyor was constructed from 304 stainless steel with continuous welds. A removable series of covers allowed for easy inspection and sanitation. Fabricated entirely in the US, the new screw conveyor integrated seamlessly with existing equipment to provide superior performance, durability, and hygiene for continuous-duty food processing environments.

### Cost Savings

Since installing the new KWS screw conveyor, Sun Orchard has experienced a measurable boost in production efficiency and product recovery. The increased yield translates to significant cost savings over time, while the corrosion-resistant design has drastically reduced cleaning and maintenance hours. With improved sanitation, reliability, and throughput, the new KWS screw conveyor continues to deliver consistent performance in one of the most demanding citrus processing applications.



#### KWS Manufacturing

3041 Conveyor Drive  
Burleson, Texas 76028

Toll Free: (800) 543-6558

Phone: (817) 295-2247

Fax: (817) 447-8528

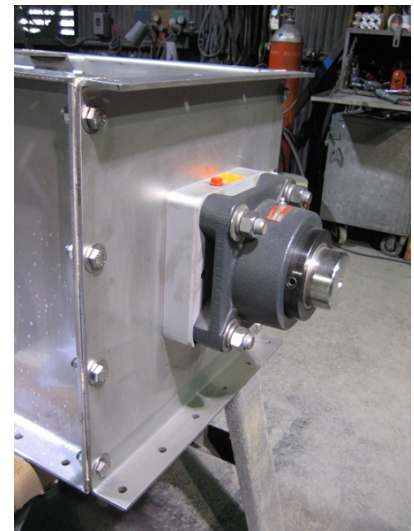
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# Made-To-Order Solutions



KWS 304 Stainless Steel Screw  
Conveyor Conveys Citrus Pulp



Special Shaft Seals Meet Food Grade  
Requirements



**KWS Manufacturing**  
3041 Conveyor Drive  
Burleson, Texas 76028

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Phone: (817) 295-2247  
Fax: (817) 447-8528

[www.kwsmfg.com](http://www.kwsmfg.com)