

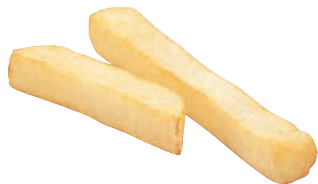
# ADR<sup>®</sup> 4 Automatic Defect Removal System



In 1983, [Key Technology](#) revolutionized the french-fry industry with the first-generation ADR<sup>®</sup>1 automatic defect removal system – and ADRs now process over 95 percent of the world's frozen french fries. Key's new [ADR<sup>®</sup>4](#) improves cutting accuracy and good-product recovery, simplifies maintenance, and provides exceptional defect detection, with significant advances for peel-on product.

## Benefits

- Enhanced defect detection for peel-on products
- Flexibility for varied product specifications
- Better recovery of good product
- Higher capacity
- Optimal performance for a variety of products
- Quick, easy changeover from one product to another
- Economical – simple, fast sanitation and maintenance



## Image Sensor

- Detects both visible and infrared light – identifies peel, good flesh, and defects, all at the same time
  - For peel-on product, recognizes peel as good product
  - For peeled product, recognizes peel as defect

## Illumination

- All solid-state – stable and reliable
  - No calibration
  - No bulbs
  - Inspection not compromised by aging emitters

## “Smart” Cutting

- Selectively cuts for length, and at the same time removes defects, at lower capacities
  - Ignore internal minor defects if cutting would create shorts
  - Halves over-long fries to control size reduction and grade
- Reduces downstream breakage of overlength fries
- Allows for product pre-grading to blend with higher percentages of short cuts

## Iso-Flo<sup>®</sup> Alignment Conveyor and Infeed Lining Conveyor

- Alignment and singulation enhance detection and cutting
- Higher capacity with more lanes
- Easy access for sanitation and maintenance



Key Technology

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## Cutterwheel System

- Pneumatically actuated knives improve accuracy and reliability
- Can throw a single knife for smart cutting

## Nubbin Remover Option

- Combines Key Iso-Flo and Farmco Rotary Size Graders
  - Higher efficiency
  - Greater recovery
  - Smaller footprint

## Solutions That Make Sense

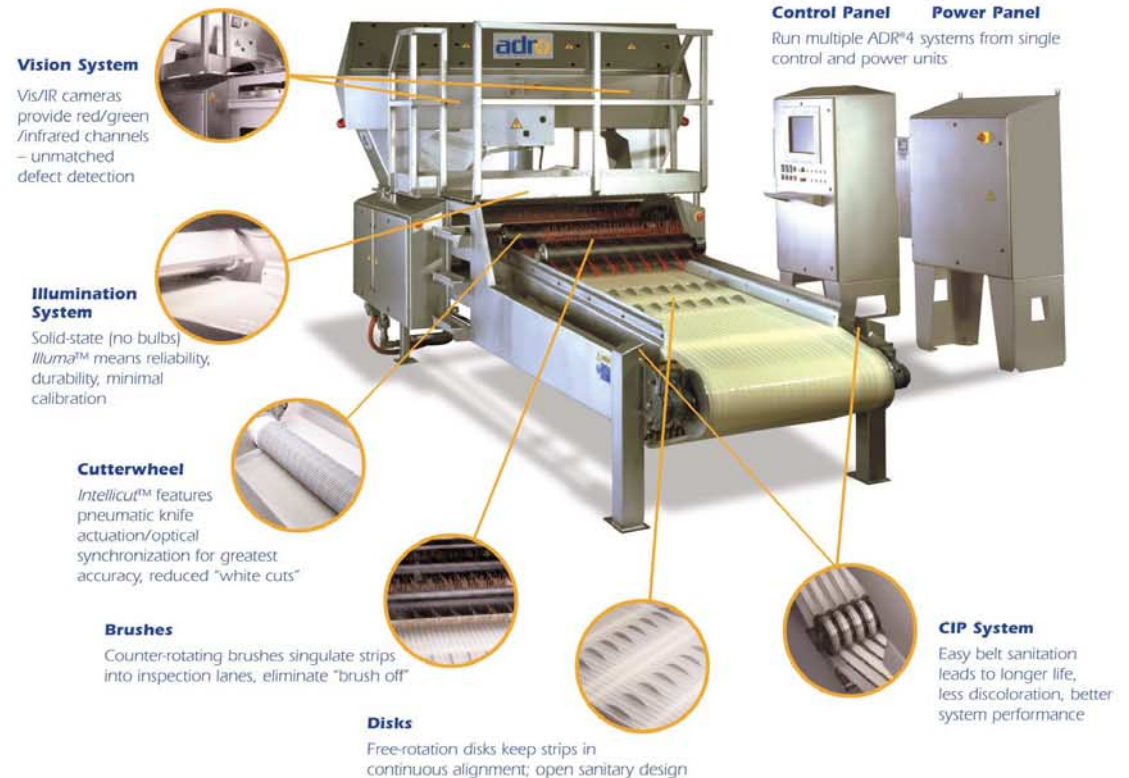
Key knows that, at the end of your day, you measure your investment's value by your bottom-line results. The ADR4 enhances your profitability through increased productivity, more consistent quality, improved yield, and reduced costs. Can you afford not to have ADR4?

The Next Level: Look at the strength you add when you move up to ADR4...

FEATURE	ADR <sup>4</sup>	ADR <sup>III</sup>	ADR <sup>II</sup>	ADR <sup>I</sup>
Intellicut <sup>TM</sup> Cutterwheel Assembly	Yes			
* Length Grading/"Smart Cutting"	Yes			
Pneumatic Knife Actuation	Yes			
Illuma <sup>TM</sup> Solid State Vis/IR Lighting	Yes	Upgrade	Upgrade	
Tri-chromatic (Vis/IR) Cameras	Yes			
Tegra <sup>®</sup> -like Operating System	Yes			
Iso-Flo <sup>®</sup> Infeed Conveyors/ New Design	Yes			
Six Added Lanes	Yes			
Product Analysis and Reporting (KeyDM)	Option			
Free-Rotation Alignment Disks	Yes			
Counter-Rotating Brushes	Yes			
Belt CIP System	Yes			
Belt-driven Cutterwheel	Yes			
Single control/power panels operate two ADR <sup>4</sup> s	Yes			
Opto Sensor Index	Yes			
Cutterwheel CIP System	Yes	Yes	Upgrade	Upgrade
Plastic Spacing Shims	Yes	Yes	Upgrade	Upgrade
Color Touch-Screen Control	Yes	Yes	Upgrade	
Training/ Operation and Maintenance	Yes	Yes	Yes	
VHO Fluorescent Lamps		Yes	Yes	Upgrade
Water-Actuated Knives		Yes	Yes	Yes
Colorsort <sup>®</sup> -like Operating System		Yes	Upgrade	
Bi-chromatic Cameras (Vis/IR)		Option	Upgrade	



Accuracy,  
Length-Optimization,  
Good Product Recovery



\* Length control at lower capacities only