
FleXicut – Waterjet cutting

Post & Pre Rigor value added portioning

Marel and Waterjets



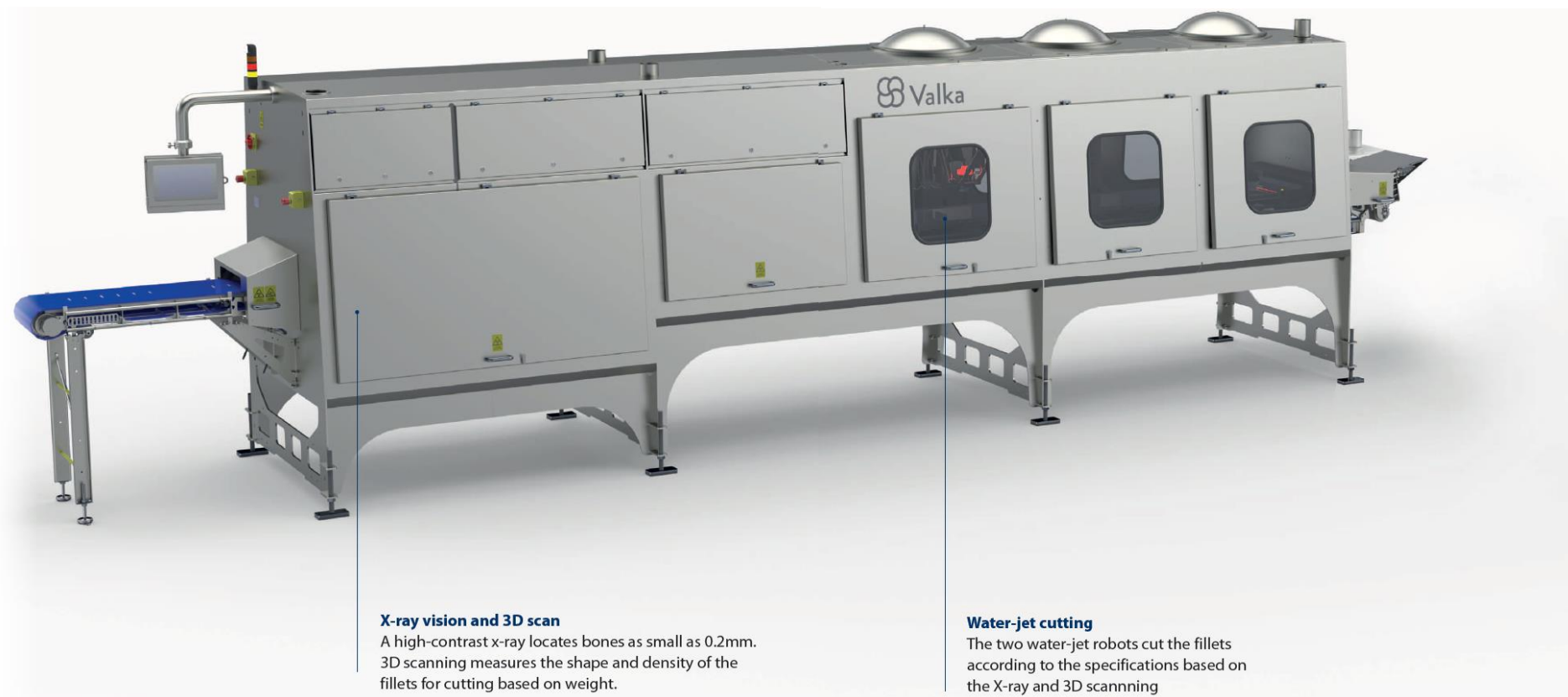
X-ray vision

A high-speed, high-definition x-ray locates cones as small as 0.2mm. X-ray also records the weight and shape of individual fillets

Precision cutting

Water-jet robots cutters cut desired portions according to defined cutting pattern

Two Platforms



X-ray vision and 3D scan

A high-contrast x-ray locates bones as small as 0.2mm. 3D scanning measures the shape and density of the fillets for cutting based on weight.

Water-jet cutting

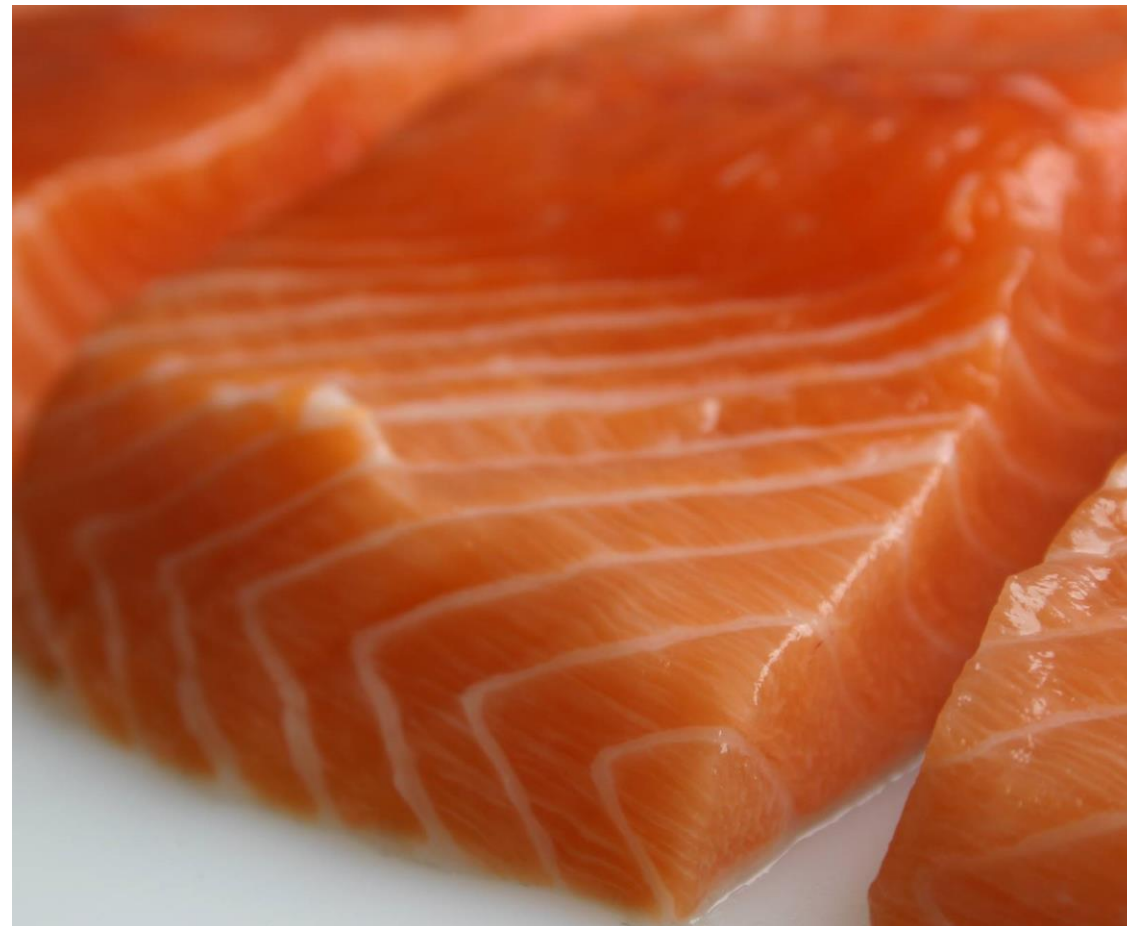
The two water-jet robots cut the fillets according to the specifications based on the X-ray and 3D scanning

Two Applications

- **Pre-Rigor**
- Cut bones out
- Cutting out bones and make products like the Whitefish Industry has done
- Splitting up the fillet into different portions

Or

- **Post-Rigor**
- Pull out bones via pin-boning
- Either Trim or Portion fillet according to pre-defined cutting profiles

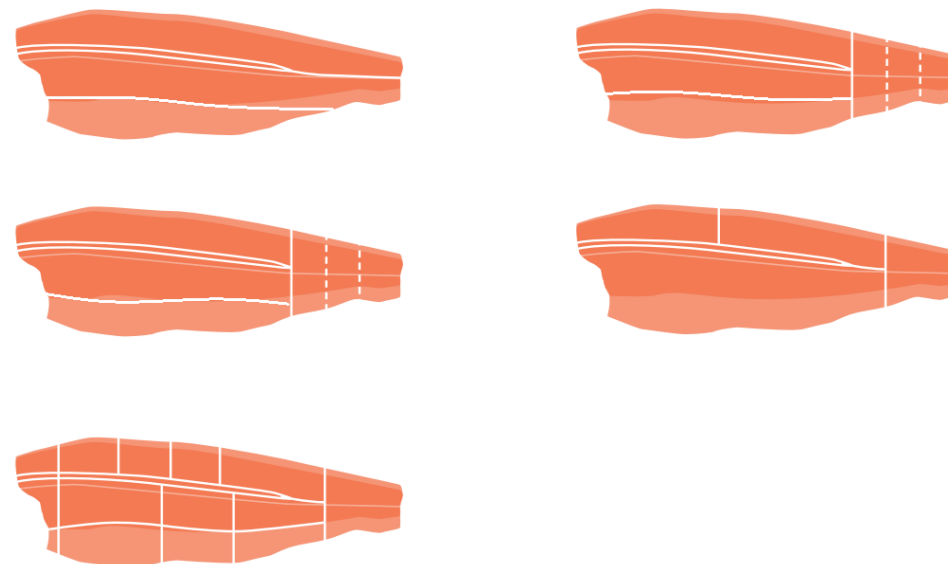


Pre-Rigor



Pre-Rigor

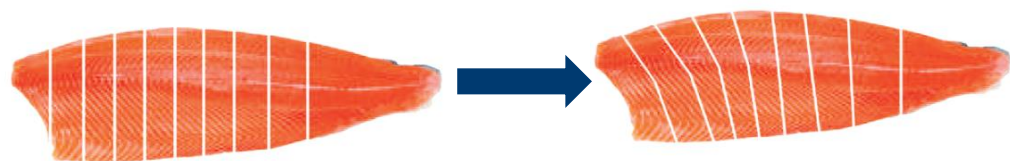
- Ultra Fresh
 - Straight from harvest to retail ready product
 - No waiting for Rigor to pass
- Higher value premium product need to make up for yield loss
- Opportunity to grow bigger salmon ?



Example of products



Post-Rigor Portioning

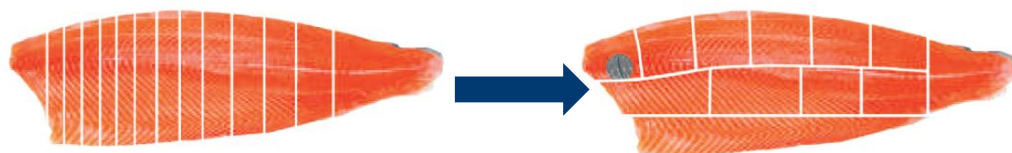


Traditional cuts

Product waste due to head trim

New possibilities

Head trim eliminated to increase high-value product



Traditional cuts

Thin portions can be difficult to pack and give inconsistent retail presentation

Innovative cuts

Alternative loins or belly portions can be used for innovate products



Precision and flexibility in portion patterns
Increases yield with high-value products
Detection and removal of 0.2 mm bones
Reduces dependency on manual labor

Post-Rigor Trimming

- Combination of:
 - Xray
 - Color Camera
 - Waterjet robots



Neckbone & Belly trim

Reduce manual labor and cut-off waste with precision neckbone removal and belly trim

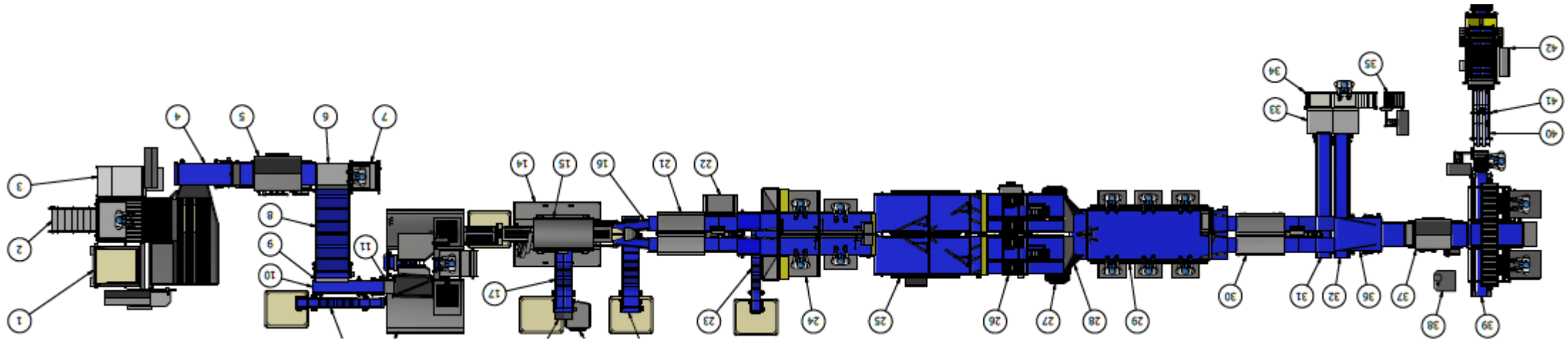


Neckbone, belly & back trim

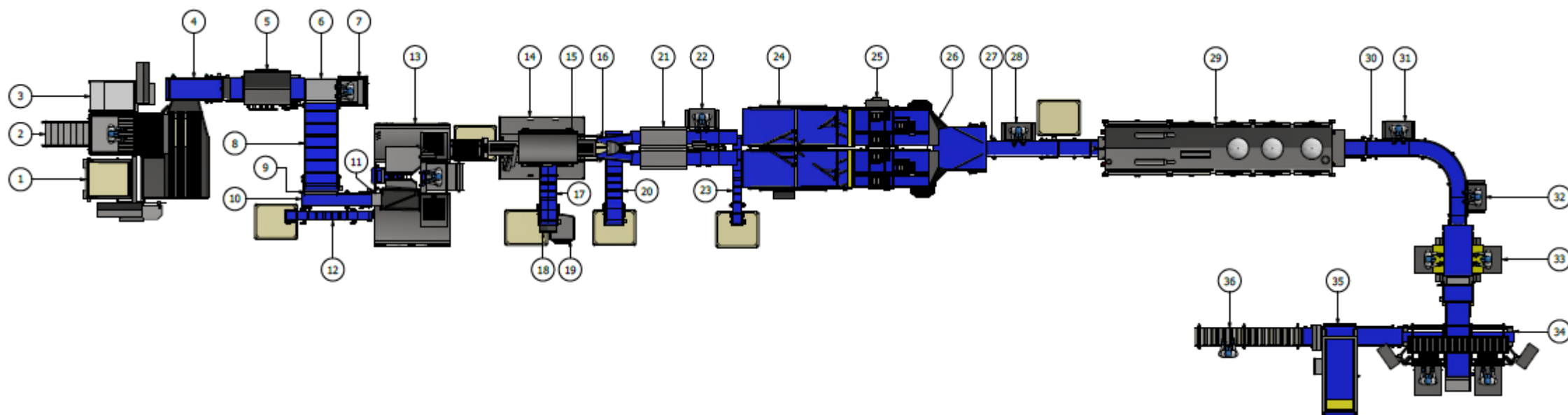
Precise neckbone removal with belly and back trim



Line Comparisons



Line Comparisons



Thank you

