

Hook/ Skid tracking technology summary

Hooks with holes

(Cheapest and oldest technology)

Advantages	Disadvantages
No additional hardware costs	Must drill/ machine the holes
Will work even when hooks are cleaned, dropped bashed etc.	Limited number of ID <10,000
Low operating costs	Requires time to read and accurate positioning of hook.
Works with Metal and plastic	
Simple reading technology	
High reliability	

Generic short-distance RFID system with maximum transmission distance of 100 mm. eg OMRON V600

(used in automotive manufacturing, robotic assembly lines, computerised manufacturing, automated warehouses, etc)
(medium cost)

Advantages	Disadvantages
Well know and well used technology in other industries	Mounting the tag
Unlimited number of IDs	Chemical and vibration resist but will fail with damage
Works with Metal and plastic	Consumable costs for replacement tags
Quick reads	Cannot tell if working or not working without a reader. Eg must read before being used.
	Cost per tag

New or specialised RFID system mould in plastic hooks (low Frequency [most common for meat industry], high frequency [most common for non-meat industry] and dual frequency) (High cost)

Advantages	Disadvantages
Tag moulded in hook	Must replace all hooks
Not easily susceptible to damage	Chemical and vibration resist but will fail with damage
Unlimited number of IDs	Consumable costs for replacement hooks
Quick reads	Cannot tell if working or not working without a reader. Eg must read before being used.
	Only plastic hooks

Retro fit existing hook RFID system (low Frequency [most common for meat industry], high frequency [most common for non-meat industry] and dual frequency) (High cost)

Advantages	Disadvantages
Uses existing hooks. Works with metal hooks and plastic skids.	Must retro fit all hooks. Must be done very well as poor quality will result in mechanical failure. (This is a common problem.)
Not easily susceptible to damage	Chemical and vibration resist but will fail with damage and abuse.
Unlimited number of IDs	Consumable costs for fixing fail hooks
Quick reads	Cannot tell if working or not working without a reader. Eg must read before being used.

Barcode on hook (low cost technology)

Advantages	Disadvantages
No additional hardware costs	Must mark all hooks – Need to be QR code or other 2D code.
Will work even when hooks are cleaned, dropped bashed etc.	Very Chemical and vibration resist but will fail with damage of bar code area
Low operating costs	Requires high contrast to work reliably.
Works with Metal and plastic	Cannot tell if working or not working without a reader. Eg must read before being used.
Simple reading technology	
High reliability	

Beef and Veal Carcass Hook Tracking System

Automated Carcass tracking by use of RFID

