



The Blackfast Process



Challenge Inc.

Blackening

Blackfast

A uniform black finish on steel components is extremely popular, adding considerably to the perceived value of the product.

- Blackening at 70°F
- No heat distortion
- Protection Against Oxidation
- Easy to Control
- Low capital setup cost
- Convenient to set up an in-house system
- Throughput time reduced by 90%
- No disposal issues



Room temperature blackening process is a simple dip operation that blackens without materially effecting dimensions. Uniform coloring over machines surfaces, threads and blind holes make it a must for any precision engineer.

Hot blackening converts the metal surface into an iron oxide with no oil absorption properties, while Blackfast provides an oil-absorbing surface.

Substrate Finish

- ◆ Blackens cast iron without turning it red/brown as with hot blackening
- ◆ Excellent matte finish
- ◆ Dark grey appearance when dried without an oil
- ◆ Consistent surface finish. Works on materials of varying degrees of hardness

- ⇒ **Environmental Benefits**
 - Able to recycle 90% of water
 - No hazardous waste disposal required as filtration and replenishment is carried out daily
- ⇒ **Health & Safety**
 - Low Temperature = Safer Environment
 - Cleaner working environment
- ⇒ **Cost**
 - Eliminates the need for post heat treatment
 - Low temp process = Energy savings
 - Lower energy than hot blackening process,

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Blackfast Products

ANTIQUING

Blackfast 55 I
Conditioner

Blackfast 181
Pweter, Nickel

Blackfast 183
Copper, Brass
Silver

Blackfast 133
Zinc

Blackfast 48 I
Aluminum

ENVIRONMENTAL PROTECTION

Blackfast rinse water recycle system allows the process line to stand alone in isolation from the drainage network.

The rinse waters are recycled in a closed loop through filter media which removes dissolved ions, surfactants, solid particles and returns the purified water to the rinse tank.