



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 551
Conditioner

Blackfast 181
Pweter, Nickel

Blackfast 183
Copper, Brass
Silver

Blackfast 133
Zinc

Blackfast 481
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.