



***FerrX5000***  
MAGNETIC SEPARATOR

# FerrX 5000

## The Best Solution to Paint Finish Defects

ASSEMBLY PLANTS HAVE LIVED WITH THE NAGGING PROBLEM OF paint defects caused by weld balls and other ferrous metal. To date, the most effective method of dealing with this quality control problem is to manually sand out the defects and repaint the units. Multiply the labor and paint cost by the thousands of units produced each day, and the expense easily skyrockets to hundreds of thousands of dollars lost each year.

Finally, there's an innovative way to solve this problem. The *FerrX 5000* removes virtually all ferrite particles that pass through it. By strategically placing one or more units into the phosphate pre-treat system, a significant amount of ferrous debris can be removed so that it doesn't ruin paint finishes.

### Introducing the *FerrX 5000*

The *FerrX 5000* is specifically designed to remove ferrous materials from the effluents used to clean and rinse the surface of automotive and other welded body units, prior to the paint application. By positioning powerful rare earth magnets in the effluent stream, *FerrX 5000* suspends and traps ferrous particles. The self-cleaning cycle automatically purges these particles into a waste stream. No disassembly or daily attendance by plant personnel needed.

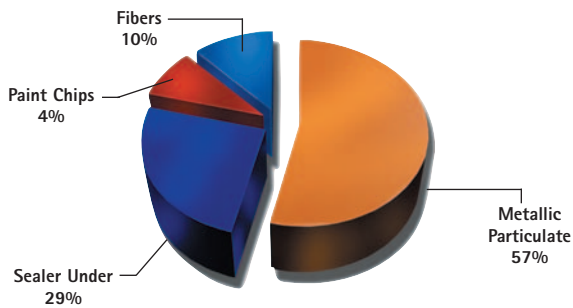


## Debris Steals Time and Money

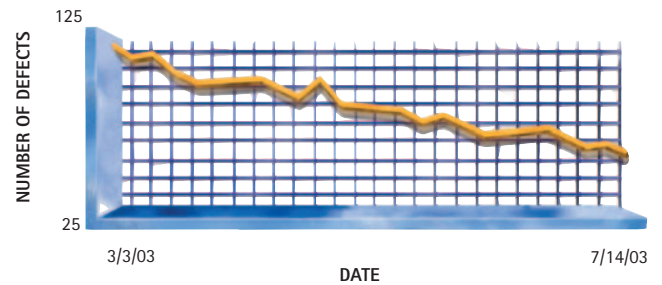
Tiny weld balls and other ferrous debris are the biggest single cause of E-coat paint defects, responsible for more than half of paint surface quality problems. E-coat defects reduce productivity and takes a large toll on profitability. Studies show that hundreds of thousands of dollars in production costs are lost due to painted surface re-work.

**FerrX 5000 Pays  
for itself in  
12 to 24 Weeks**

### E-COAT DEFECTS



### METAL PARTICULATE DEFECTS IN E-COAT



Ferrous metal represents a major portion of particulate defects in the electrodeposition surface.

Lowering the concentration of ferrous metal in the phosphate cleaning stages can reduce the number of defects in the electrodeposition surface.

## FerrX 5000 Cuts Defects in Half

Field trials prove that the *FerrX 5000* can remove more than 50 pounds of ferrous material per day from the pre-clean phosphate tanks; dramatically reducing paint finish defects caused by weld balls and other ferrous metals. A single unit installed in the phosphate pre-clean process has been proven to eliminate more than 50 percent of the metal particulate defects in a cured electrodeposition surface. Adding a second unit to the deluge stage of the phosphate process can yield even greater success. **Other methods can't compete.**

The expected long-term benefits for assembly plants include improved productivity and quality, reduced labor costs and hundreds of thousands of dollars in savings.

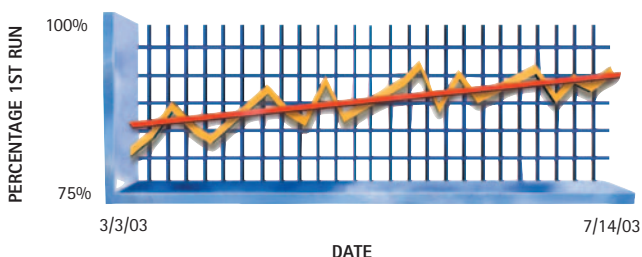
## Installation Location

Correct placement of the *FerrX 5000*, in the phosphate process, is the key to maximum ferrous material reduction. FSI engineers work directly with plant engineers to determine the optimum location and installation arrangement to produce the greatest results.

## Increase Productivity

The *FerrX 5000* increases first run capability and saves the plant hundreds of thousands of dollars. While many other products have been designed to fix the industry's weld ball dilemma, none have succeeded in significantly reducing ferrous metals in the paint finish.

### PLANT FIRST-RUN CAPABILITY



A reduction in paint defects increases the potential for first-run capability improvement.

### RECOMMENDED INSTALLATION LOCATIONS FOR THE *FerrX 5000* MAGNETIC SEPARATOR



*FerrX 5000*

#### APPLICATION

- 1 Deluge or High Pressure Spray Wash
- 2 Spray or Immersion Wash
- 3 Water Rinse
- 4 Water Rinse
- 5 Rinse Conditioner
- 6 Phosphate Application
- 7 Water Rinse
- 8 Water Rinse
- 9 Spray Seal
- 10 DI Water Immersion Rinse
- 11 DI Water Spray Rinse

## The benefits of using the *FerrX 5000*

- Pays for itself in 12 to 24 weeks
- Increases first-run capabilities
- Saves time and resources
- Has a low installation cost
- Is very durable
- Saves hundreds of thousands of dollars in production costs
- Removes an average of 98 percent of all ferrous particles that pass through it

### Save Time and Money

For a relatively small investment, the *FerrX 5000* will increase first-run capability and reduce time and labor related to rework. *FerrX 5000* significantly improves paint process productivity and annual savings.

*FerrX 5000* has been selected as a finalist in the 2003 Plant Engineering Product of the Year and the 2004 PACE Award competitions.

*FerrX 5000* is the latest in a long line of innovative products produced by FSI. Since 1972, the company has stood as an industry leader, holding more than 100 patents, trademarks and trademark applications. In addition to the *FerrX 5000*, FSI offers a wide range of liquid filtration bags, cartridges, drums, vessels and accessory products to a variety of industries.

To receive a catalog of the complete line of innovative products from FSI, call **800.348.3205**



# *FerrX5000*

## MAGNETIC SEPARATOR

### SPECIFICATIONS

#### Construction

The *FerrX 5000* is constructed entirely of stainless steel with the exception of the cart and a small portion of the self-cleaning cartridge. It is recommended that the customer not install the equipment in processes that circulate zinc oxide and/or phosphoric solutions.

#### Maintenance

The *FerrX 5000* has been specifically designed to be low maintenance. It is designed as a cartridge module that can be removed, inspected, rinsed and replaced if no wear is apparent. The *FerrX 5000* is automated and self-cleaning. Therefore, it does not require the daily involvement of plant personnel. Field tests have shown that the unit collects only ferrous materials and trace amounts of agglomerated oil, yet very little of any other substance, including body shop sealers and adhesives. It is recommended that the plant perform an inspection of the cartridge module once per year. If the unit requires repair, the module can be exchanged for a nominal cost. FSI has even designed a custom container to protect the module while in transit.

#### Impact on the Phosphate Process

FSI recommends that the *FerrX 5000* be installed independent of the existing plant pumps and piping in either the deluge, high-pressure wash or rinse stages of the phosphate pre-cleaning process. The supply piping should access the most metal-laden effluent existing in the process. No chemicals, electrical charge or heat come into contact with the process effluent resulting in the equipment having little effect on the process except for the removal of ferrous material. Shutting the system down is as simple as pushing a button.



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