SERFILCO®

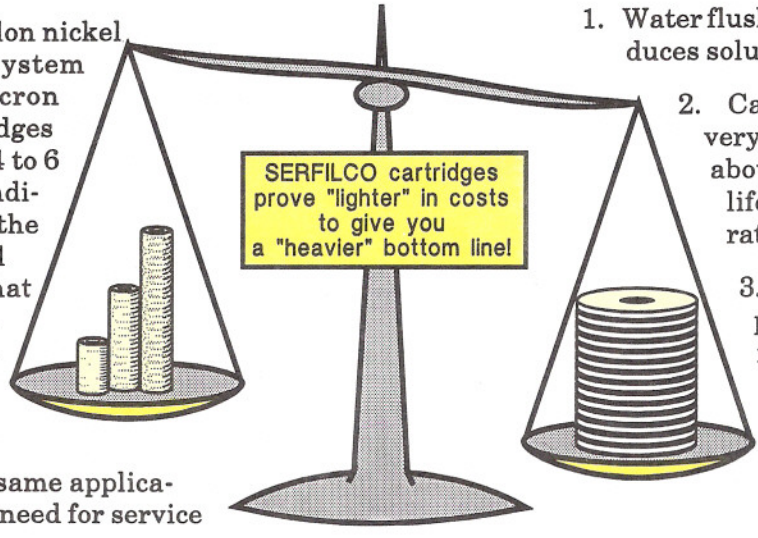
CARTRIDGES VS. DISCS

TECHNICAL BULLETIN TM-108

How to determine your true filtering costs and still get "QUALITY" plating

In today's climate of increasingly restrictive environmental and quality control consciousness, it pays to know what your operating costs are.

On a typical 2,000 gallon nickel tank, a cartridge filter system using 48 ten inch, 15 micron depth wound filter cartridges will have a service life of 4 to 6 weeks. When flow rates indicate service is necessary, the cartridges can be replaced with cleaned cartridges that have been recycled. In actual use, many platers report 3 or 4 more reruns after acid soaking and detergent wash. Users of disc filter systems on the same application commonly report the need for service once a week.



In addition to the cost savings estimated below, wound depth cartridges offer other advantages that help to increase your bottom line.

1. Water flushing prior to disposal reduces solution loss.
2. Cartridges operate with very little pressure drop for about 85% of their service life, providing higher flow rates and greater agitation.
3. Use of high flow pumps provide higher turnover rates and faster particle removal, while allowing use of coarser filter cartridges with inherently higher dirt holding capacity.

Annual costs of servicing and disposal

For comparison of costs, consider a typical 2,000 gallon nickel plating tank with a 5,000 GPH filtration system using 50 sq. ft. of discs versus 48 ten inch cartridges (168 sq. ft. equivalent surface area).

CARTRIDGES (48 TEN INCH)	versus	DISCS (50 SQ. FT.)
LABOR: 1 hr. every 4 weeks (13 hrs.) @ $10 / hr. = $130		**LABOR:** 1 hr. x 52 weeks @ $10 / hr. = $520
CARTRIDGES: (12 week life) 48 cartridges @ $1 / cart. x 4.3 changes per year = $312		**DISCS:** $ 13 / week x 52 weeks = $676
DISPOSAL COSTS: 208 cartridges totalling 8.6 cu. ft. @ $70 / cu. ft. = $602		**DISPOSAL COSTS:** assume 1/16" cake @ 50 sq. ft. .26 cu. ft. / week x 52 weeks = 13.5 cu. ft. 13.5 cu. ft. x $ 70 / cu. ft. = $945
TOTAL ANNUAL COSTS: $ 1,044		**TOTAL ANNUAL COSTS:** $ 2,141

It makes good "cents" to compare dollars spent!

✔ CHECK THE ADVANTAGES OF FILTERING WITH DEPTH CARTRIDGES AS OPPOSED TO DISCS IN THE PLATING INDUSTRY!

DEPTH CARTRIDGE FILTRATION	DISC
☑ **HIGH FLOWS** No need for extra agitation. *Contaminants filtered as fast as they occur*	**LOW FLOWS**
☑ **HIGH LOAD CAPACITY** 3.5 sq. ft. per 10" cartridge *Common changes required 4 to 8 weeks* *Less labor intensive*	**DAILY TO MINIMUM WEEKLY CHANGES**
☑ **MINIMUM WASTE TREATMENT** Only disposal is of spent cartridge *No need to rehandle* *No mess* *Less labor cost* *No backwash of toxic heavy metal sludge*	**DISPOSAL REQUIRED OF DISCS** Also diatomaceous earth and / or carbon mud disposal needed Additional treatment required prior to disposal: *Compaction of sludge* *Possible further treatment of sludge*
☑ **COMPACT / MINIMAL USE OF FLOOR SPACE** Depth cartridge gives the highest sq. ft. filtration in the least amount of space	**FREQUENTLY NEEDS BLOCK & TACKLE TO CHANGE FILTERS**
☑ **CONSISTENT FILTER EFFICIENCY**	**REDUCTION IN FILTER CAPACITY AS PRESSURE DROPS QUICKLY**
☑ **VERSATILE** Carbon treat separately	**CARBON and DIATOMACEOUS EARTH USED TOGETHER IS *MESSY, MESSY!***

Conclusion: The **ULTIMATE FILTER EFFICIENCY** for the **LOWEST OVERALL COST** when using **DEPTH CARTRIDGE FILTRATION** to achieve **HIGHER QUALITY PLATING.**

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