

IN-TANK TECHNOLOGY

**Bulletin 24** 

## FLO KING "MAGNUM" REUSABLE FILTER MEDIA



Standard Magnum reusable filter cartridges (front row) can be used on Flo King pumps or in filter chambers. Permacore-style cartridges (back row) are often preferred for mounting to Flo King pump.



CUTS COSTS AND DISPOSAL PROBLEMS ASSOCIATED WITH CONVENTIONAL DISPOSABLE CARTRIDGES

- CLEAN AND USE IT AGAIN AND AGAIN—UP TO 100 TIMES FOR MANY APPLICATIONS
- MINIMIZE THE VOLUME OF WASTE YOU SHIP TO LANDFILL
- CHOOSE FROM FIVE MICRON RATINGS TO MEET SPECIFIC FILTRATION NEEDS
- COMPATIBLE WITH WIDE RANGE OF PROCESS BATHS, ACIDS, BASES, PRE- AND POST-TREATMENT FORMULATIONS

(Photo at Right) Optional **Permacore Magnum** features firm polypropylene head for easy mounting to Flo King pump. It also prevents wear and tear on filter blanket from thumbscrews that fasten pump to filter cartridge.

Standard Magnum reusable cartridges and Poly-Spun disposables (Bulletin 26) can be mounted directly to pump, without Permacore head.

(Left) Reusable filter blanket is unrolled, cleaned, then rewrapped around cartridge core—ready for reuse! With aid of two plastic shoehorn-like devices called "loading slats," a plastic webbing material slides over Magnum blanket to hold assembly together.



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## FLO KING "MAGNUM" REUSABLE FILTER MEDIA

With the increasing costs and problems associated with filter consumption and disposal, Magnum reusable filter cartridges make more economic and environmental sense every day. Magnum filter blankets can often be cleaned and reused 10, 20, 50 ... even 100 times or more, depending on the type of solution being filtered, the nature of the material being removed from solution, and how well the filters are taken care of. The Magnum polypropylene cartridge core is not disposed of—it can be used indefinitely. Just replace the Magnum filter blankets as required.

The reusable filters are available in **five micron ratings**. Our original Magnum material comes in three micron ratings— the popular **10 micron (MCA material)** for general-purpose filtration, the **5 micron (MCB material)** for finer filtration, and the **1 micron (MCC material)** for extra-fine filtration. Magnum filter blankets are made entirely of thermally bonded polypropylene fibers with high retention and flow properties using a proprietary continuous extrusion process.

The two other reusables are classified as <u>SUPER MAGNUM</u> materials— the *coarse* **MCXC (75 micron)** and the *finer* **MCXF (30 micron)**. Super Magnum is a modified acrylic (non-polypropylene) material that consistently withstands most hard chromium plating solutions and other chromic-acid-containing baths, even at elevated temperature. Super Magnum is also used in mild, low-temperature cleaners, iron phosphating, and other solutions containing large amounts of solids. (Note: Super Magnum does not withstand high-temperature alkaline cleaners and other agressive caustic solutions.)

<u>Cleaning the Filter Blanket</u>. When the filter blanket needs cleaning, the blanket is unrolled from the cartridge core. Many users then lay the blanket on a piece of metal or plastic grating over a suitable tank, drum or other reservoir. Using an ordinary hose and spray nozzle, the filter blanket is sprayed on both sides with tap or deionized water. Then, while still wet, the blanket is re-rolled around the cartridge core ... ready for reuse!

## EXAMPLE OF FILTER COSTS FOR A 400-GALLON (1500 LITER) NICKEL PLATING TANK USED 8 HOURS A DAY, 5 DAYS A WEEK

Flow rates obtained using FLO KING 1/12th-hp (60-watt) BX1200 pump and 10-micron filter cartridges

Filter Cartridge Type	Flow Rate, GPH (LPH)	Daily Tank Turnover	Weekly Tank Turnovers	Weekly Turnovers Gallons (Liters)	Cost Per Week
String wound	400 (1500)	8	40	16,000 (61,000)	\$1.89
Poly-Spun	970 (3700)	19.4	97	38,000 (144,000)	.60
MAGNUM	1285 (4900)	25	128.5	51,400 (195,000)	.06

## Conclusions

One string-wound, depth-tube filter cartridge a week costs \$98.28 per year, plus the cost of disposing 52 filter cartridges.

One Poly-Spun filter cartridge will last five weeks. The yearly cost is \$31.25 a year, plus the cost of disposing 11 filter cartridges.

One Magnum filter cartridge will last 10 weeks and it can be cleaned and reused 100 times or more. This amounts to five or six cleanings a year (about 10 minutes per cleaning). At this rate, a Magnum could last about three years, with no filter cartridges to dispose of. ... It's your choice!