

## FLO KING IN-TANK FLOATING SKIMMER

The In-Tank Floating Skimmer augments the Flo King filter system by skimming the solution surface and trapping submerged debris through slots on the Skimmer Trash Trap (canister that fits over the filter cartridge). The Skimmer is easily adjustable and 100% polypropylene for maximum durability. It can be used safely in many metal finishing solutions at temperatures to 180° F (85° C).

Because efficiency of the skimmer depends on flow rate of the filter system, several factors that affect flow rate must be considered—micron size of the filter cartridge; elbows and other restrictions on the discharge port of the pump; viscosity of the solution; and cleanliness of the filter cartridge.

The higher the flow rate, the more solution drawn through the skimmer. As the filter cartridge clogs, the flow rate decreases and so does the volume of solution going through the skimmer. The Weir Slots on the Skimmer Head are designed for maximum flow rate using the Flo King filter cartridges listed below. Using powerful vacuum-side filtration and the appropriate reusable or disposable filter cartridges, both large and small particles can be removed from solution.

- \* MCA Magnum reusable filter cartridge (nominal rating: 10 micron)
- \* MCXF Super Magnum reusable filter cartridge (nominal rating: 30 micron)
- \* MCXC Super Magnum Reusable Filter Cartridge (nominal rating: 75 micron)
- \* FK75 Poly-Spun Disposable Filter Cartridge (nominal rating: 75 micron)
- \* FK50 Poly-Spun Disposable Filter Cartridge (nominal rating: 50 micron)

**CAUTION:** Use of a very tightly wound, fine-micron filter cartridge in baths containing oil and large solids may result in rapid clogging of cartridges, as well as loss of flow rate and agitation.

### INSTRUCTIONS FOR USING THE FLOATING SKIMMER

1. Skimmer is delivered almost totally preassembled. Just assemble Cross Pipe and Stand Pipe as shown in illustration on Page 2. Then attach Skimmer to pump as shown on Page 3, 4 or 5, depending on which Skimmer you have purchased. After installing pump and Skimmer in tank, make sure Skimmer Head is floating and that Stand Pipe is at least 1-1/2" (4 cm) inside Skimmer Slide Body. For best results, position Skimmer Head where oil or other floating debris accumulates in tank. Direct solution flow by turning elbow on pump Discharge Port to enhance capture of floating debris by Skimmer Head.

2. Turn pump on and adjust position of Weir Slots by loosening Adjustment Collar Thumbscrew one-quarter turn. Then rotate Skimmer Head until reaching Preferred Liquid Level, as shown in sketch on Page 2.

3. When skimmer is working satisfactorily, tighten Thumbscrew snugly. Do not overtighten.

4. Once Skimmer Head has been adjusted, it should not need to be changed unless used in another solution with different specific gravity.

**Important!** Skimmer works best when liquid level is on lower part of Weir Slots, as shown on sketch. If too much liquid enters Skimmer Head, excess air will be expelled from pump Discharge Port.

**Swivel Feature:** The Skimmer assembly can easily be adjusted 360° for different tank configurations. Just loosen the pump Filter Screws (thumbscrews) and swivel Skimmer assembly as desired.

**Cross Pipe:** Standard Cross Pipe is 4" (10 cm) long. However, longer Cross Pipe can be used to place unit in more convenient location. Cross Pipe is 3/4" diameter (1.9 cm).

### OPTIONAL SKIMMER USE: VACUUM CLEANING THE TANK BOTTOM

During nights, weekends or downtime, the Flo King skimmer can easily be converted into a vacuum-cleaning system to remove sludge and trash from the tank bottom.

Simply remove the Skimmer Head and swivel the Stand Pipe to the bottom of the tank. The aggressive agitation from the pump Discharge Port will stir the bottom of the tank, allowing the vacuum tube to suck the trash, sludge and other debris off the tank bottom.

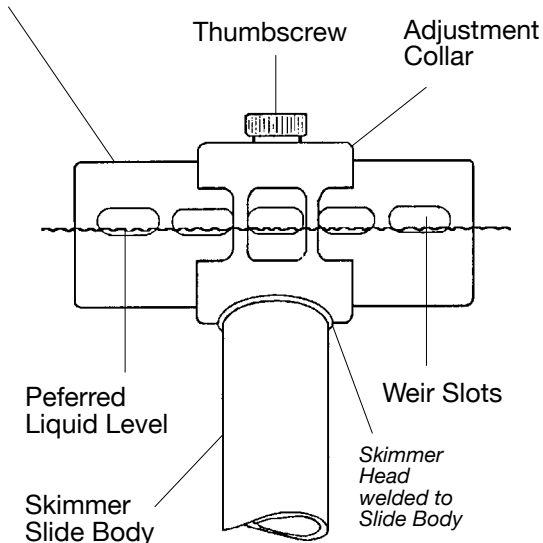


# ILLUSTRATIONS OF FLO KING IN-TANK FLOATING SKIMMER

Note: Single Skimmer Trash Trap is shown below with BX1200 unit for general illustration purposes only. Basic arrangement is similar for other systems with Double and Quad Skimmer Trash Trap (see Pages 4 and 5, respectively).

### Skimmer Head

4-1/4" (10 cm) x 3-3/8" (9 cm) diameter, including Adjustment Collar



### Skimmer Head

Welded to Skimmer Slide Body

### Skimmer Slide Body

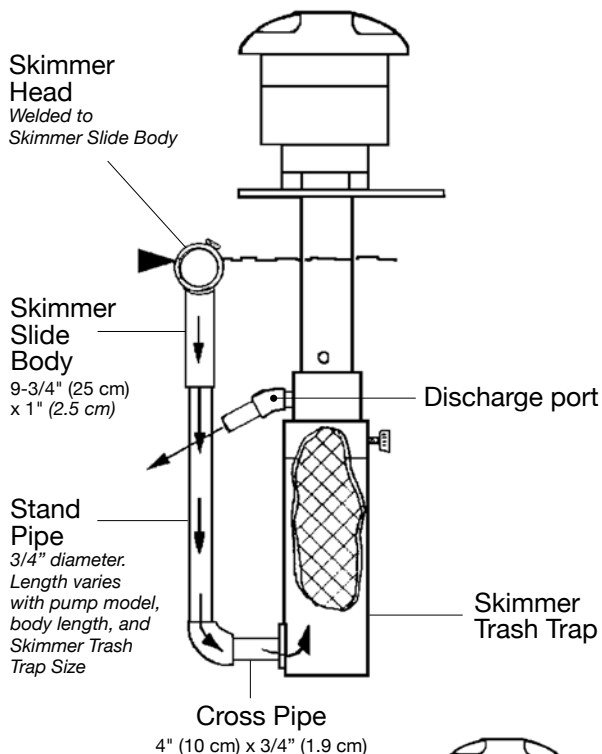
9-3/4" (25 cm) x 1" (2.5 cm)

### Stand Pipe

3/4" diameter. Length varies with pump model, body length, and Skimmer Trash Trap Size

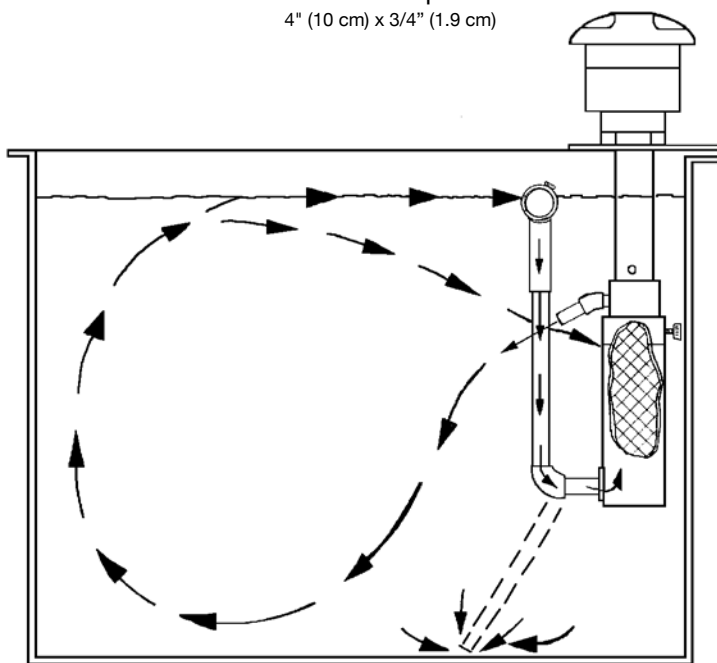
### Cross Pipe

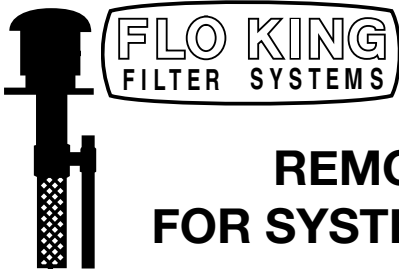
4" (10 cm) x 3/4" (1.9 cm)



## OPTIONAL VACUUM CLEANER ARRANGEMENT

In this configuration, the Skimmer Head is removed. The Stand Pipe is then lowered to clean the tank bottom during downtime to help remove oil and particulates throughout solution. The Skimmer Trash Trap does not lose its capability to capture submerged solids. For deep tanks, a Stand Pipe extension or longer Stand Pipe is required.





# REMOVAL AND CLEANING INSTRUCTIONS FOR SYSTEMS WITH SINGLE SKIMMER TRASH TRAP

**Follow all safety procedures to prevent injury to personnel or damage to the environment. Always wear proper protective gear such as gloves, aprons and goggles!**

The instructions on this page apply to BX1200 and BX650 systems used with the In-Tank Floating Skimmer and Single Skimmer Trash Trap.

### WHEN TO CLEAN FILTER CARTRIDGE

Observing the skimming action of the Skimmer Head is a good way to determine if the filter cartridge inside the Skimmer Trash Trap is clogged. When the Skimmer Head is no longer skimming, the filter cartridge needs to be changed.

### REMOVING SINGLE SKIMMER FROM TANK AND CLEANING FILTER

1. Turn BX1200 pump off and wait 15 seconds before slowly withdrawing pump and Skimmer from solution.\* Slow removal will help minimize loss of particulates (solids) that adhere to Skimmer Trash Trap or emerge from Solution Entry Slots.

2. Place BX1200 pump, with Skimmer still attached, in bucket.

3. Loosen Filter Screws (thumbscrews) on BX1200 and remove pump from Skimmer.

4. Remove Skimmer Head from Stand Pipe.

5. Remove Core (Inner Element) by removing Nut from threaded end. Then lift Top Plate and place Core in receptacle to drain. *Caution: When Core is removed, solution will pour out from bottom of Skimmer Trash Trap. Before removing Core, make sure Skimmer Trash Trap is in bucket or other suitable receptacle, then allow to drain.*

6. Remove dirty filter cartridge and leave in suitable container to drain.

7. Empty any remaining solution from Skimmer Trash Trap. If particulates have accumulated in solution, slowly and carefully return liquid to process tank or pour into another container, then dispose of sediment in accordance with environmental regulations. Rinse Skimmer Trash Trap with water.

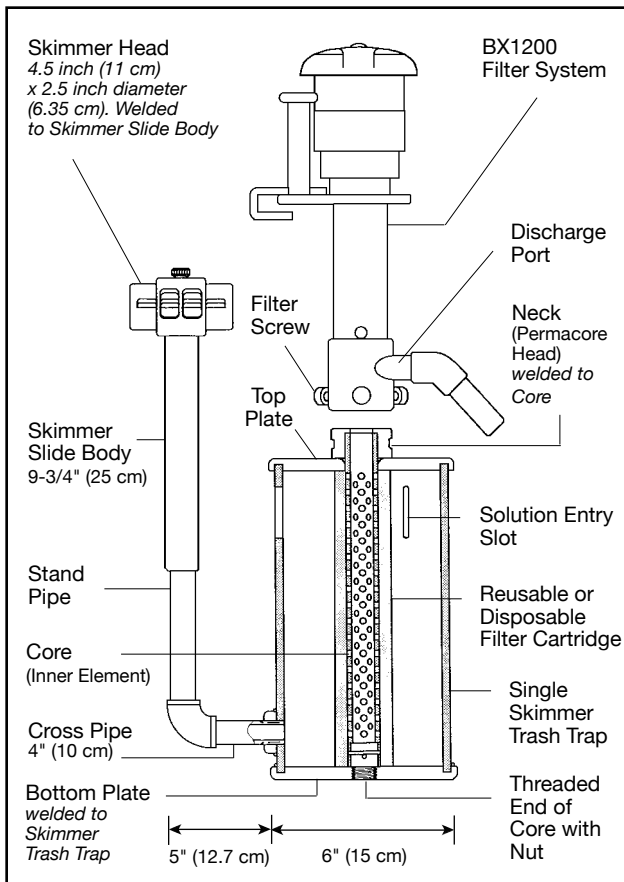
8. Slide Core through Top Plate. Then insert Filter Cartridge onto Core.

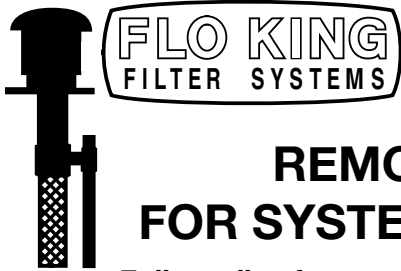
9. If using disposable cartridge, install onto Core. If using reusable filter blanket, follow cleaning instructions on Page 6 and then reinstall cartridge onto Core. Make sure to center cartridge over hole at bottom of Skimmer Trash Trap. Note: Because Single Skimmer Trash Trap already has a Neck (Permacore Head) for attachment to BX1200 or BX650 pump, Permacore Magnum Reusable Filter Cartridges cannot be used. Re-order only standard Magnum reusable filter cartridges, replacement filter blankets or Poly-Spun disposable filter cartridges.

10. Install Top Plate, Core and Cartridge, then tighten Nut to threaded end of Core.

11. Attach Skimmer Trash Trap to pump by tightening Filter Screws on pump. Install Skimmer Head, place unit in tank, and resume operation.

\* If you are using SIFCA accessory (Slide-In Filter Cartridge Adapter) it is not necessary to remove pump from tank. See Bulletin 19 in our catalog for SIFCA details.





# REMOVAL AND CLEANING INSTRUCTIONS FOR SYSTEMS WITH DOUBLE SKIMMER TRASH TRAP

Follow all safety procedures to prevent injury to personnel or damage to the environment. Always wear proper protective gear such as gloves, aprons and goggles!

The instructions on this page apply to the BX1200, BX3000, BX5000, BXL2500 and BXL5000 systems used with the In-Tank Floating Skimmer and Double Skimmer Trash Trap.

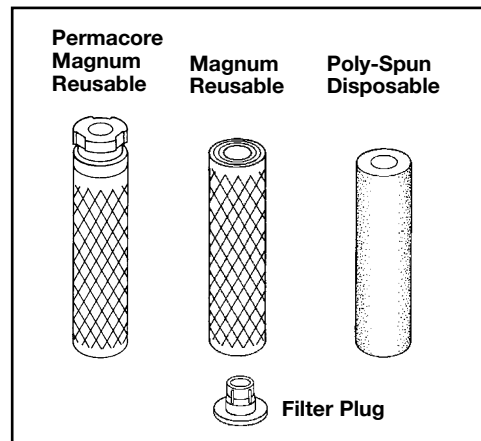
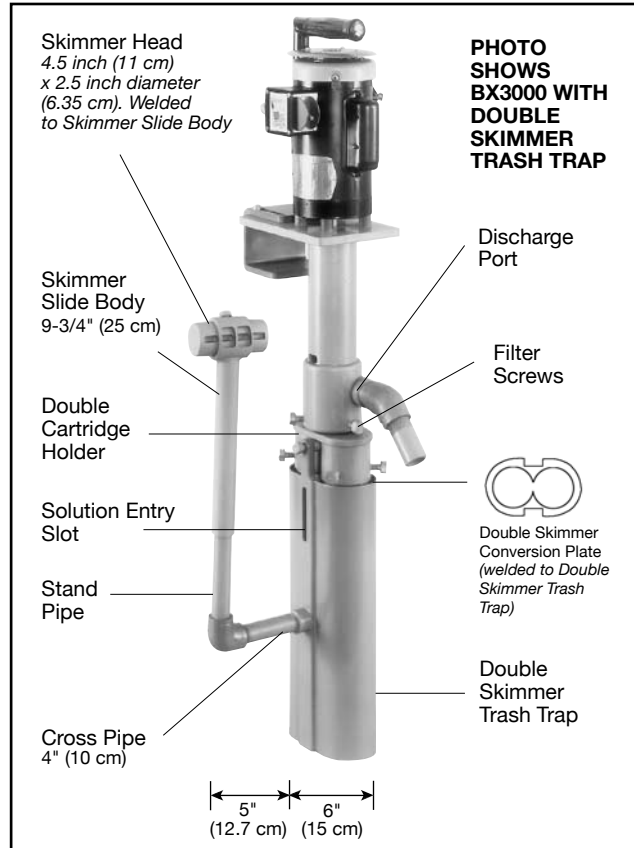
### WHEN TO CLEAN FILTER CARTRIDGE

Observing the skimming action of the Skimmer Head is a good way to determine if the filter cartridges inside the Skimmer Trash Trap are clogged. When the Skimmer Head is no longer skimming, the filter cartridges need to be changed.

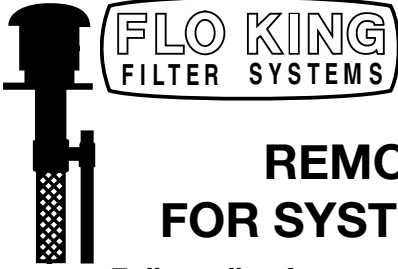
### REMOVING SKIMMER FROM TANK AND CHANGING FILTERS

1. Turn pump off and wait 15 seconds before removing Skimmer Head from Stand Pipe.
2. Slowly withdraw Flo King pump and Skimmer assembly from solution.\* Slow removal will help minimize loss of any particles (solids) that adhere to Skimmer Trash Trap or emerge from Solution Entry Slots.
3. With Skimmer still attached, place pump in bucket for drainage.
4. Loosen Filter Screws (thumbscrews) that hold Skimmer Trash Trap to Double Cartridge Holder. Next, lift pump, Double Cartridge Holder and filter cartridges to separate from Double Skimmer Trash Trap.
5. Loosen Filter Screws and remove filter cartridges from Double Cartridge Holder.
6. If using disposable filter cartridges, insert new cartridges into Double Cartridge Holder. If using reusable filter cartridges, follow cleaning instructions on Page 6 and then install cartridges into Double Cartridge Holder.
7. Insert Filter Plugs into bottom of filter cartridges. If you do not, solution will bypass the cartridges and there will be no filtration.
8. Reassemble skimmer components, attach to pump, and resume operation.

\* If you are using SIFCA accessory (Slide-In Filter Cartridge Adapter) it is not necessary to remove pump from tank. See Bulletin 19 in our catalog for SIFCA details.



No matter which cartridge is used, Filter Plug must be inserted at bottom!



# REMOVAL AND CLEANING INSTRUCTIONS FOR SYSTEMS WITH QUAD SKIMMER TRASH TRAP

**Follow all safety procedures to prevent injury to personnel or damage to the environment. Always wear proper protective gear such as gloves, aprons and goggles!**

The instructions on this page apply to the BX3000 and BX5000 systems used with the In-Tank Floating Skimmer and Quad Skimmer Trash Trap.\*

### WHEN TO CLEAN FILTER CARTRIDGE

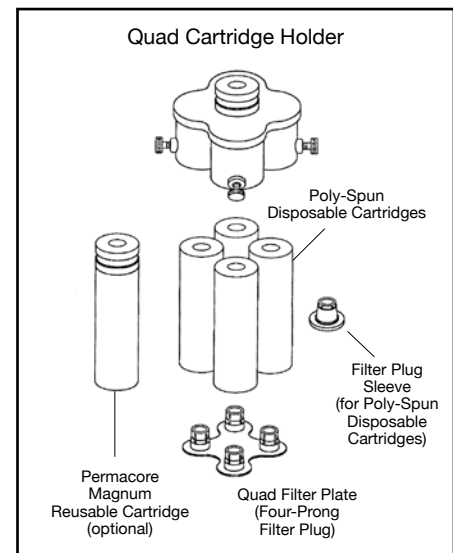
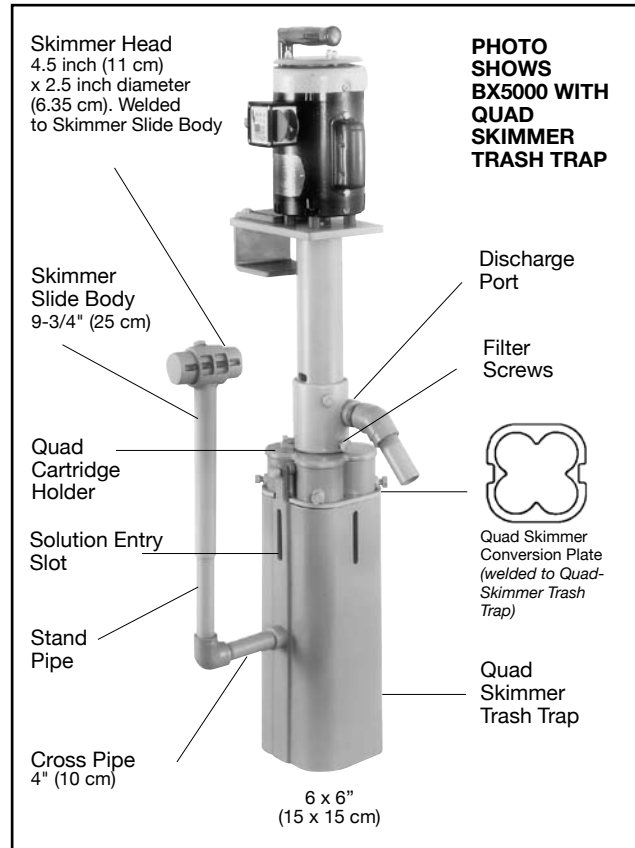
Observing the skimming action of the Skimmer Head is a good way to determine if the filter cartridge inside the Skimmer Trash Trap is clogged. When the Skimmer Head is no longer skimming, the filter cartridge needs to be changed.

### REMOVING SKIMMER FROM TANK AND CHANGING FILTERS

1. Turn pump off and wait 15 seconds before removing Skimmer Head from Stand Pipe.
2. Slowly withdraw Flo King pump and Skimmer assembly from solution.\*\* Slow removal will help minimize loss of any particles (solids) that adhere to Skimmer Trash Trap or emerge from Solution Entry Slots.
3. With Skimmer still attached, place pump in bucket for drainage.
4. Loosen Filter Screws (thumbscrews) that hold Skimmer Trash Trap to Quad Cartridge Holder. Next, lift pump, Quad Cartridge Holder and filter cartridges to separate from Quad Skimmer Trash Trap.
5. Loosen Filter Screws and remove filter cartridges from Quad Cartridge Holder.
6. If using disposable filter cartridges, insert new cartridges into Quad Cartridge Holder. If using reusable filter cartridges, follow cleaning instructions on Page 6 and then install cartridges into Quad Cartridge Holder.
7. If using disposable filter cartridges, install four Filter Plug Sleeves over prongs on Quad Filter Plate. If using reusable filter cartridges, insert cartridges directly into Quad Filter Plate. If you do not install Quad Filter Plate and Filter Plugs, solution will bypass the cartridges and there will be no filtration.
8. Reassemble skimmer components, attach to pump, and resume operation.

\* Quad Skimmer Trash Trap can also be used with Low-Profile BXL2500 and BXL5000 systems, but a special "S" Attachment is required. See Bulletin 32 in catalog.

\*\* If you are using SIFCA accessory (Slide-In Filter Cartridge Adapter) it is not necessary to remove pump from tank. See Bulletin 19 in catalog.





## “MAGNUM” REUSABLE FILTER CLEANING & ASSEMBLY INSTRUCTIONS

**Follow All Required Safety Procedures To Prevent Injury to Personnel or Damage to the Environment!**

1. Remove Magnum filter cartridge from pump Impeller Housing. Let drain and/or place in container.
2. Remove outside plastic web. Stand cartridge assembly on flat surface in upright position. Grasp with both hands and slide web down about 2 or 3 inches (5 or 10 cm). Hold on to exposed filter blanket with one hand and pull web off Magnum assembly with twisting motion. (NOTE: If web is “locked on” with sludge, it may be necessary to spray outside of Magnum with water to “unlock” web.)
3. Unroll filter blanket from filter core. Most users then lay blanket on piece of grating over suitable tank, drum, reservoir or wastewater treatment pit and spray each side using an ordinary hose and spray nozzle (or, if available, pressure spray washer). Normally, this is sufficient for cleaning; however, some contaminants may build up and not flush out completely. In many applications, these contaminants can be removed easily by placing Magnum blanket in an appropriate chemical solution.

**CAUTION: Never mix cyanide-laden materials with acids; this combination produces hydrogen cyanide gas, which is lethal if inhaled! The process solution to which the Magnum has been exposed must be compatible with the acid from a SAFETY and USE standpoint.**

4. To wrap Magnum blanket around filter Core, lay blanket on flat surface. Blanket can be rolled while wet. Place core on blanket, making sure that top of blanket is even with core, and roll as tight as possible. (Note: If using PERMACORE filter element, allow PERMACORE head to lay off edge of flat surface while rolling blanket.)
5. Rest Magnum assembly in one plastic loading slat and place other loading slat on opposite side of Magnum filter to form a tube. Make sure plastic loading slats extend 2 inches (5 cm) beyond one end of Magnum.
6. Grasp Magnum about 4 inches (10 cm) from extended end. Slip plastic web over loading slats and pull down to end of assembly. Remove loading slats. Magnum is now ready to be used again.



Clean blanket.



Re-roll blanket around core.



(L-r) Place plastic loading slats over filter. Then slide web over slats and pull down. Remove slats and cartridge is ready to reuse.