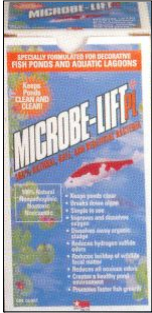


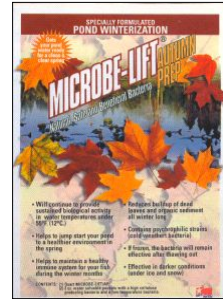
SECTION III: POND SUPPLIES

Algae Control



Microbe-lift PL Bacterial inoculant helps break down organic waste and competes with algae for nutrients.

Microbe-lift Application Rates			
Pond Size (gallons)	1st Application	Next 4 Weeks (once per week)	Maintenance (once per month)
80-200	8 oz.	2 oz.	2 oz.
201-500	10 oz.	3 oz.	2 oz.
501-1000	12 oz.	4 oz.	4 oz.
1001-5000	16 oz.	6 oz.	6 oz.



Microbe-lift Autumn Blend Special bacterial & enzymatic formula helps reduce the buildup of organic waste during the winter.

Black Pond Dye Dragonfly Landing Dye shades water thus reducing algae growth. Makes water reflect like a mirror—ideal for exceptional waterlily photos!



Hakko Aeration Pumps



Hakko Diaphragm Pumps
Very quiet and low energy pumps designed for trout ponds and professional use.



Air Diffusers
Membrane, airstone, & venturi diffusers provide excellent pond aeration while maximizing pump efficiency.

Pond Vacuum



Basin Vac
Just attach to the garden hose. Handy for small pond cleanups. 6' handle also available for hard to reach locations (sold separately).

Pond Netting



Pond Netting
Catches the leaves before they add organic matter to your pond in fall.

Pots, Soil & Fertilizer



Waterlily Tubs
14"W x 10"H
Heavy duty black nursery pots. Just the right volume to allow waterlilies lots of room to grow.



Marginal Plant Tubs
12"W x 8"H
Wide, low black nursery pots with drainage holes.

Pea Gravel
Red Deer River pea gravel. Great for top dressing pots.

Bearberry Creek Water Plant Soil
Special blend of clay-loam with loose beach sand. The standard mix used at Bearberry Creek.



Pondtabbs 10-14-8 Fertilizer
These little blue tablets are designed to gradually release nutrients without contaminating water. The extra high phosphorus level in the formula ensures adequate amounts are available even in hard soil & water conditions common in the west.

Calculations & Conversions

Pond Volume

[Length (ft.) x width (ft.) x depth (ft.)] x 7.5 = gallons
 e.g. [8' x 4' x 2'] x 7.5 = 480 gallons

Pond Liner Size

Length of pond + (Depth x 2) + 2 ft. = Liner Length
 Width of pond + (Depth x 2) + 2 ft. = Liner Width

Pump Size

As a rule of thumb, we try to circulate the pond water once every two hours.

Pond Volume (gallons) ÷ 2 = Pump Size (GPH)

It is usually best to choose a pump with a slightly larger rating since losses occur due to friction, curves in the plumbing, height the water must be raised, filter resistance, etc.

Reservoir Size

When building a stream or waterfall it is recommended to have a minimum of 2 to 3 times as much water in it versus that which is in the stream or waterfall.

Electrical Conversions

Amps x Volts = Watts
 e.g. 110 V x 5 A = 550 W

Watts ÷ Volts = Amps
 e.g. 550 W ÷ 110 V = 5 A

Tubing Flow Rates

Tubing Size Inside Diameter (inches)	Maximum Flow	
	Gallons per hour (GPH)	Gallons per minute (GPM)
1/2"	300	5
3/4"	720	12
1"	1200	20
1 1/2"	3000	50
2"	4800	80
2 1/2"	6000	100
3"	9000	150
4"	12000	200

Area Conversions

1 acre = 43,560 sq. ft. = .405 hectares
 (4052 sq. m.)

1 foot = .305 meters

Volume Conversions

1 gallon = 3.785 liters

1 fluid ounce = 29.57 milliliters

1 Imperial gallon = liters x 0.22

1 US gallon = liters x 0.26

Water Relationships

1 gallon of water = 8.345 pounds

1 liter of water = 1000 grams

1 metric ton of water = 1000 liters

1 metric ton of water = 1 m³

1 metric ton of water = 264 gallons

1 cubic foot of water = 7.48 gallons

Parts per Million Calculations

1 PPM =

1 milligram/liter

1 milligram/kilogram

1 gram/metric ton

3.78 milligrams/gallon

Waterfall Flow Rates

Width of	Waterfall Water Thickness			
	1/4"	1/2"	3/4"	1"
	GPH	GPH	GPH	GPH
1'	240	780	1440	2160
2'	540	1560	2820	4380
3'	780	2340	4260	6540
4'	1080	3060	5640	8700
5'	1380	3840	7080	10860
6'	1620	4620	8520	13080
7'	1920	5400	9900	15240
8'	2160	6180	11280	17460

Little Giant Pumps

PUMP	GPH	Max. Lift	Amps	Watts	Outlet Size	Tubing	Cord Length
PES-70-PW 566602	70	2.3'	0.1	6	Non-threaded	1/2" or 3/8"	6'
PE-A-PW 566607	80	4.5'	0.3	17	1/8" MNPT	3/8 ID	6'
PE-1F-PW 566631	170	7.0	0.3	36	1/4" MNPT	1/2" ID	15'
PE-2F-PW 566632	300	12.2	0.4	47	1/4" MNPT	1/2" ID	15'
PE-2.5F-PW 566633	475	13.4	0.7	80	1/2" MNPT	3/4" ID	15'
3E-12N-WG 503375	500	17.3	3.2	200	1/2" MNPT	3/4" ID	15'
5-MSPR-WG 505325	1200	26.3	5.0	380	1" MNPT	1" ID	25'
WGP-65-PW 566065	1900 dual	20	2.1	230	1 1/4" FNPT	1 1/2" ID 2" ID	20'
6E-CIM-25 506775	3000	20	8.0	620	1 1/2" FNPT	1 1/2" ID 2" ID	25'
WGP-95-PW 566095	4280 dual	30	6.3	700	1 1/4" FNPT	1 1/2" ID 2" ID	16'



PES-70-PW



PE-A-PW



PE-1F-PW



PE-2F-PW



3E-12N-WG



5-MSP-WG



6E-CIM-25



PE-2.5F-PW



WGP-65-PW



WGP-95-PW



Water Level
Automatic Shut-off



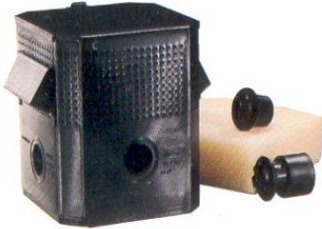
PF-WG Intake Filter



Replacement Foam
(for PF-WG & PF-AD)



PF-AD-PW Dual Intake Filter



FBK Filter Box



AK-5
Dual FBK Filter
Adapter for 5-MSP
Pump



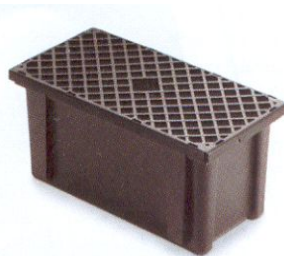
Replacement Foam
(for FBK)



Custom Cut Filter Foam
(Fine & Coarse)



SBF-1-PW Low Profile Filter



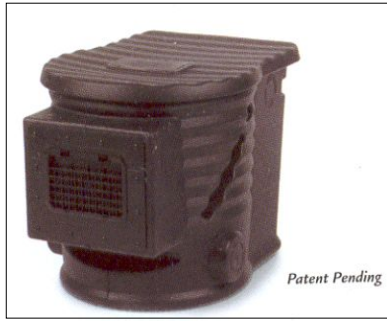
FB-PW Filter Box



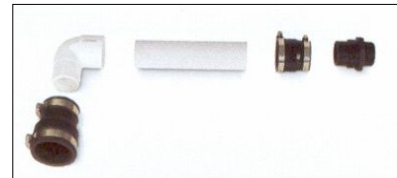
Replacement Foam



S1000 Skimmer



S5000 Skimmer



DK-B Discharge Kit
























































F 1000 Biofilter



F5000 Biofilter

Little Giant Fountains



Gallons per Hour		70	80	170	300	475	500	1200	1900	3000	4280			
Fountain Head		PE5-70-PW	PE-A-PW	PE-1F-PW	PE-2F-PW	PE-2.5F-PW	3E-12N-W/G	5-MSP-W/G	W/GP-65-PW	6E-QIM-25	W/GP-95-PW			
Turtle, Frog, Fish Other statuary		✓	✓	✓	✓									
Daisy, Waterbell, Tulip (small)	FHK-1 570615			✓	✓									
Jet, Tulip (medium)	FH-1180 570560			✓	✓	✓	✓							
Fountain Ring (small)	FR-1				✓	✓	✓							
2 tier Brass (medium)	FH-3 570005			✓	✓	✓	✓							
3 tier (small)	FH-1070 570400			✓										
(medium)	FH-1090 570410			✓	✓	✓	✓							
(large)	FH-21 566221								✓	✓	✓			
Bubbler (small)	FH-1170 570420			✓	✓	✓	✓							
(medium)	FH-1151 570580							✓	✓	✓				
(large)	FH-23 566223								✓	✓	✓			
Waterbell (medium)	FH-1280 570560			✓	✓	✓	✓							
(large)	FH-22 566222								✓	✓	✓			
Tulip (medium)	FH-1161 570590							✓	✓	✓				
(large)	FH-20 566220								✓	✓	✓			
Waterfalls & streams							✓	✓	✓	✓	✓			



FHK-1

FH-1180

3 tier

Bubbler

Water Bell

Tulip

Little Giant Pond Deicer



Pond Deicer
1250 watts. Operates from 32° to 35°F. Helps to keep a hole open in ice, allowing gases to escape during winter months.

Fountain Head Extensions



Waterfall Tubing



Flow Controls & Diverters



Gallons per Hour		70	80	170	300	475	500	1200	1900	3000	4280
		PE-70-PW	PE-A-PW	PE-1F-PW	PE-2F-PW	PE-2.5F-PW	3E-1.2N-W/G	5-MSP-W/G	WGP-65-PW	6E-CIM-25	WGP-95-PW
Restrictor Clamp	C-2 599032	✓	✓	✓	✓						
1/4" Control for Tubing	FC-1/4 599045		✓	✓							
1/4" Control for 1/4" MNPT	GF-3/4 599024		✓	✓							
1/2" Control & Diverter	FHV-2549 570442			✓	✓	✓	✓				
1/2" Control & Diverter	FHV-2550 570440			✓	✓	✓	✓				
1" Control & Diverter	FHV-2551 570445							✓			
1 1/4" Control & Diverter	FHVT-35 566235								✓		✓
Gate Valve (plastic or brass)	Local hardware store							✓	✓	✓	✓



GF-3/4



FHV-2549



FHV-2550

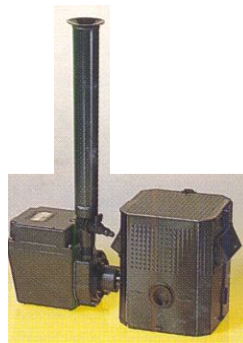


FHV-2551

Pump and Fountain Kits

Small Fountain Kit

includes: 170 gph pump, filter and FHK-1 fountain



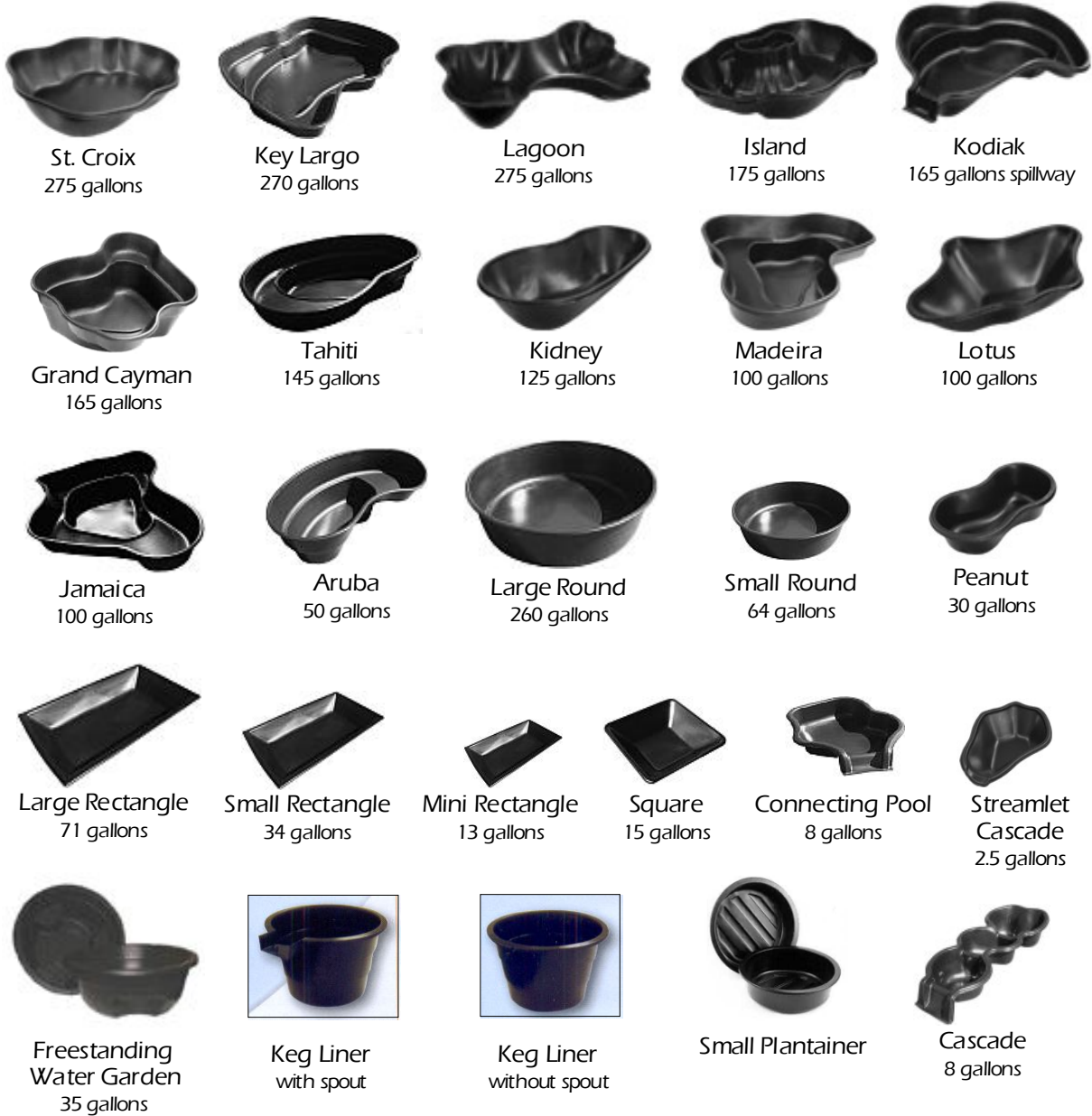
Medium Fountain Kit

includes: 500 gph pump, FBK filter and fountain head and FHV-2550 control



FHVT-35

Preformed Ponds



Pond Liners



EPDM Rubber (45 mil)
and PVC (20 mil)



EPDM Repair Tape

Geotextile



Heavy duty underlay/
overlay for liner protection

Tubing Connectors



Plastic Bushings



Garden Hose Adapters



Cam-Lock Couplers



Waterfall Stone Sealant



Clothing



T-shirts & Caps



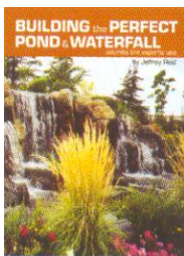
Long-sleeved Gloves

Underwater Lighting

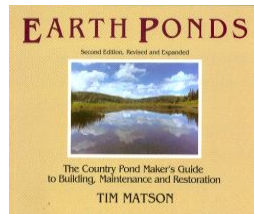


LVLTL Light Kit

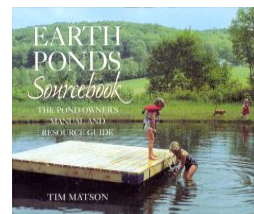
Books



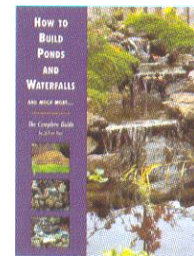
Building the Perfect Pond & Waterfall



Earth Ponds



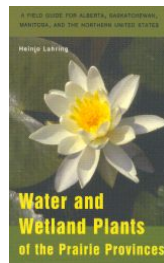
Earth Ponds II: Sourcebook



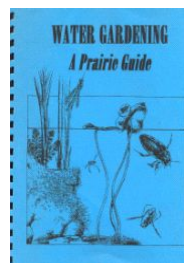
How to Build Ponds and Waterfalls



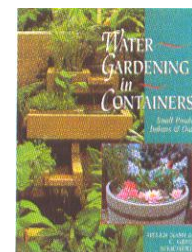
The Prairie Water Garden



Water & Wetland Plants Field Guide



Water Gardening Guide



Water Gardening in Containers