

Choose the right pond pump

① Calculate the required flow

As a rough guide you will need a flow of about 500 litres (110 gallons)/hour for a 1m (40") high tiered fountain plus about 1000 litres (220 gallons)/hour to give a reasonable waterfall for every 10cm (4") of waterfall width. If using a **FISH MATE** filter, the required flow through the filter should be approximately 50% of your pond volume every hour (subject to the maximum flow rating of the filter). Once you have calculated the flow as above we recommend you multiply this as follows to compensate for losses.

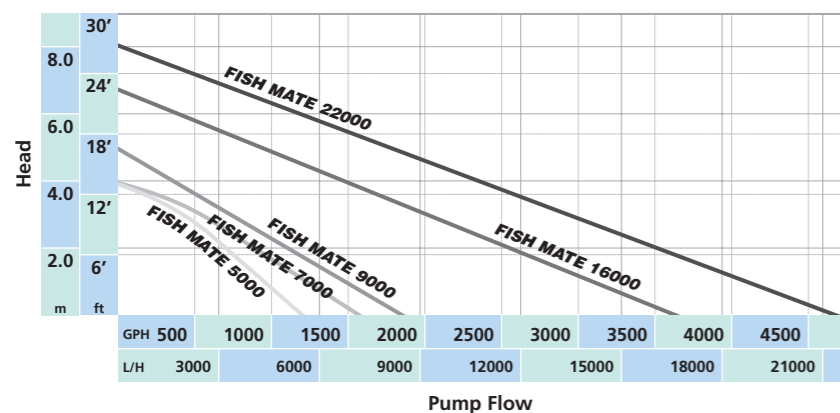
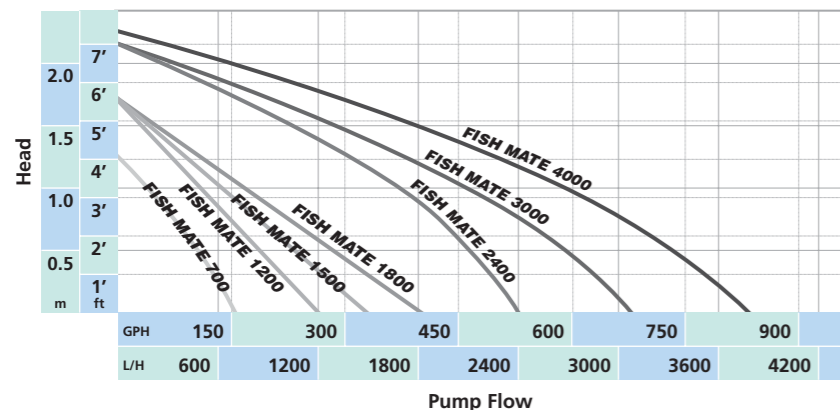
- Hose runs under 6m (20') : x 1.25
- Hose runs over 6m (20') : x 1.5
- Filter losses : x 1.5 (average)

② Calculate the required "head"

As a reasonable approximation to calculate the required head (pressure), measure the height of the highest outlet above the pond surface.

③ Consult the Pump Selection Charts






Find the point on the charts below, where your figures for flow and head meet. To achieve the flow at that head you will need a pump whose line is above this point.



Example:

You require a 25cm (10") wide waterfall and a small fountain. The waterfall starts 1m (40") above the pond surface.

- 500L/h for fountain + (2.5 x 1000)L/h for waterfall = 3000L/h. Multiply by 1.25 to allow for pipe losses etc. gives 3750L/h required flow.
- Required "head" = 1m (40")
- First consult the top flow chart, (Head 1m, Flow 3750L/h). From the chart the **FISH MATE 4000** pump would not quite have sufficient power and therefore we must consult the flow chart below from which it is clear that the **FISH MATE 5000** would be the preferred choice.

FISH MATE® POND PUMPS		700	1200	1500	1800	2400	3000	4000	5000	7000	9000	16000	22000
Ref.		344	390	391	392	247	248	249	277	278	379	326	327
Performance	Max. flow rate	700 LPH (154 GPH)	1200LPH (265 GPH)	1500LPH (330 GPH)	1800 LPH (400 GPH)	2400 LPH (530 GPH)	3100 LPH (680 GPH)	3800 LPH (835 GPH)	5500 LPH (1210 GPH)	7100 LPH (1560 GPH)	8500 LPH (1870 GPH)	16200 LPH (3565 GPH)	21500 LPH (4730 GPH)
	Max. Head	1.2m (4' 0")	1.7m (5' 7")	1.7m (5' 7")	1.7m (5' 7")	2.1m (7' 0")	2.1m (7' 0")	2.2m (7' 2")	4.0m (13' 2")	4.0m (13' 2")	5.0m (16' 5")	6.8m (22' 4")	8.1m (26' 7")
	Power Consumption	9 Watts	11 Watts	25 Watts	25 Watts	27 Watts	28 Watts	29 Watts	75 Watts	80 Watts	85 Watts	295 Watts	445 Watts
Accessories	Outlet Size	13mm (1/2")	12mm (1/2"), 19mm (3/4")	12mm (1/2"), 19mm (3/4")		12mm (1/2"), 19mm (3/4"), 25mm (1"), 32mm (1 1/4")			19mm (3/4"), 25mm (1"), 32mm (1 1/4")		19mm (3/4"), 25mm (1"), 32mm (1 1/4")	19mm (3/4"), 25mm (1"), 32mm (1 1/4"), 38mm (1 1/2")	
	Fountain Set (No. of options)	4	4	4	4	4	4	4	4	4	4	3	3
	Aerated Plume Fountain max. Diameter x Height	-	-	-	-	-	-	-	-	-	-	1.0m (3' 3") x 2.0m (6' 7")	1.0m (3' 3") x 2.0m (6' 7")
	Bell Fountain max. Diameter	0.2m (0' 8")	0.4m (1' 4")	0.5m (1' 8")	0.5m (1' 8")	0.6m (2' 0")	0.6m (2' 0")	0.6m (2' 0")	0.8m (2' 8")	0.8m (2' 8")	0.8m (2' 8")	-	-
	Column Fountain max. Diameter x Height	0.6m (2' 0") x 0.6m (2' 0")	0.2m (0' 8") x 0.9m (2' 11")	0.3m (1' 0") x 1.1m (3' 7")	0.3m (1' 0") x 1.1m (3' 7")	0.6m (2' 0") x 1.4m (4' 7")	0.6m (2' 0") x 1.4m (4' 7")	0.6m (2' 0") x 1.4m (4' 7")	0.8m (2' 8") x 1.9m (6' 3")	0.8m (2' 8") x 1.9m (6' 3")	0.8m (2' 8") x 1.9m (6' 3")	-	-
	Plume Fountain max. Diameter x Height	0.15m (0' 6") x 0.15m (0' 6")	0.1m (0' 4") x 0.5m (1' 8")	0.1m (0' 4") x 0.6m (2' 0")	0.1m (0' 4") x 0.6m (2' 0")	0.2m (0' 8") x 0.7m (2' 4")	0.2m (0' 8") x 0.7m (2' 4")	0.2m (0' 8") x 0.7m (2' 4")	0.4m (1' 4") x 1.3m (4' 3")	0.4m (1' 4") x 1.3m (4' 3")	0.4m (1' 4") x 1.3m (4' 3")	1.0m (3' 3") x 1.5m (4' 11")	1.0m (3' 3") x 1.5m (4' 11")
	Tiered Fountain max. Diameter x Height	0.6m (2' 0") x 0.6m (2' 0")	0.3m (1' 0") x 1.0m (3' 3")	0.4m (1' 4") x 1.2m (3' 11")	0.4m (1' 4") x 1.2m (3' 11")	0.7m (2' 4") x 1.5m (4' 11")	0.7m (2' 4") x 1.5m (4' 11")	0.7m (2' 4") x 1.5m (4' 11")	1.0m (3' 3") x 2.0m (6' 7")	1.0m (3' 3") x 2.0m (6' 7")	1.0m (3' 3") x 2.0m (6' 7")	1.9m (6' 3") x 3.9m (12' 10")	1.9m (6' 3") x 3.9m (12' 10")
	2 Way Outlet with Flow Adjuster	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Vertical & Horizontal Outlet	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor and Shaft/Bearings	Power Cable Length	10m (33')	10m (33')	10m (33')	10m (33')	10m (33')	10m (33')	10m (33')	10m (33')	10m (33')	10m (33')	10m (33')	10m (33')
	Ceramic Bearings	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Solids-Handling	Pond-life Friendly Strainer Filter	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
	Optional Fountain Filter Foam	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
	Anti-clog Open Impeller	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Solids-Handling	-	-	-	-	5mm (3/16")	5mm (3/16")	5mm (3/16")	6mm (1/4")	6mm (1/4")	8mm (5/8")	12mm (1/2")	12mm (1/2")
Dimensions	Length x Width x Height	143mm (5 5/8") x 54mm (2 1/8") x 75mm (3")	131mm (5 1/8") x 72mm (2 7/8") x 81mm (3 1/8")	160mm (6 1/4") x 65mm (2 5/8") x 90mm (3 1/2")		200mm (7 3/4") x 150mm (5 3/4") x 100mm (4")			250mm (9 7/8") x 175mm (6 7/8") x 135mm (5 3/8")		245mm (9 5/8") x 121mm (4 3/4") x 131mm (5 1/4")	422mm (16 3/4") x 192mm (7 1/2") x 198mm (7 3/4")	
Safety	Fully Encapsulated Electrical Parts	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Thermal Cutout	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Guarantee		3 Years	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years