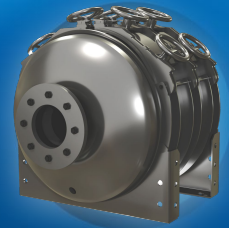


HP Strainer

A study on the efficiency of the HP Strainer versus a traditional pot strainer in a real-world large scale water system

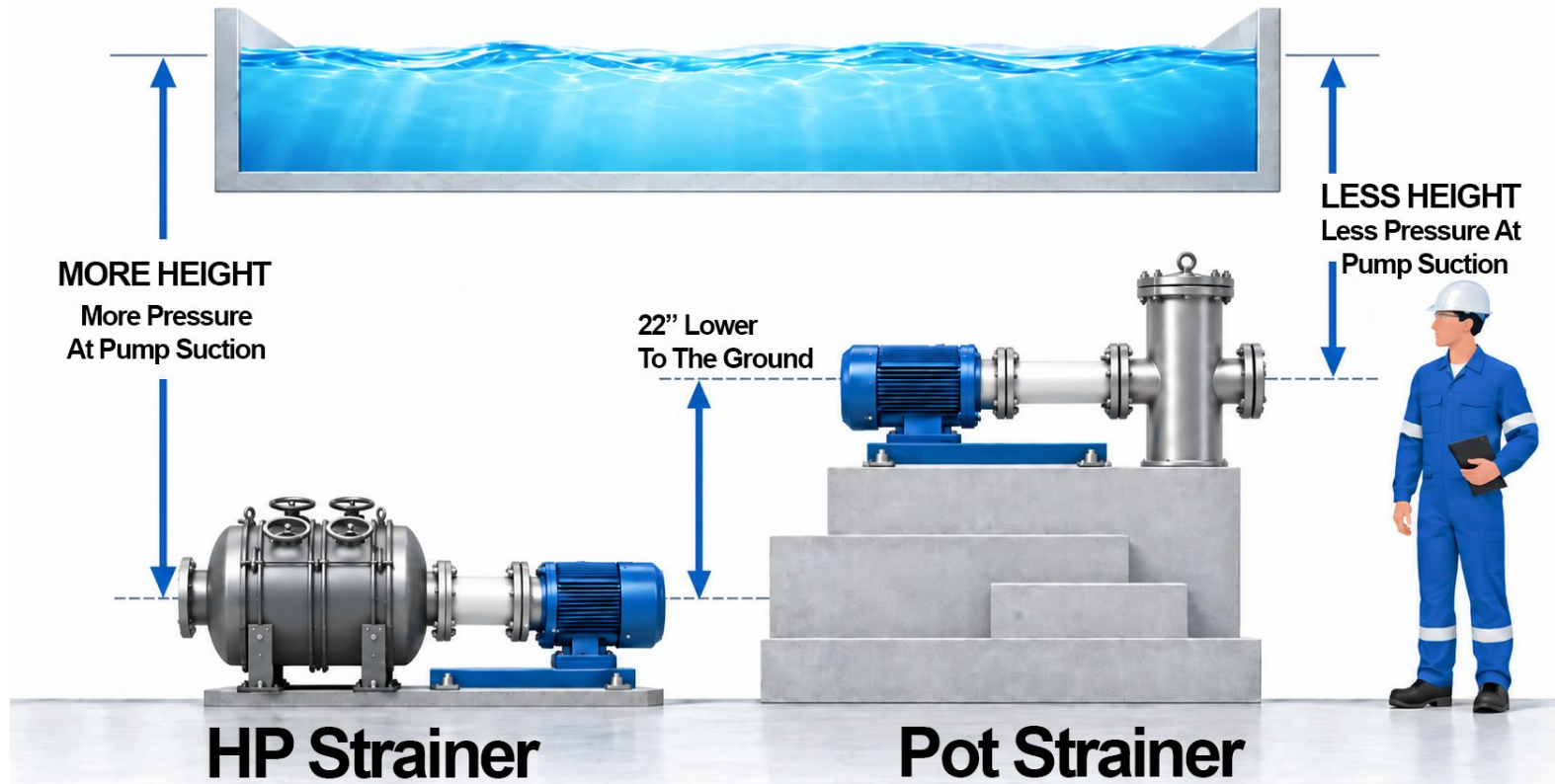
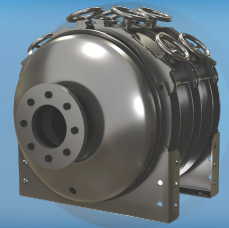


Energy Savings for 10 Pumps in favor of the HP Strainer vs. the OEM Strainer (\$0.10 per kWh)

Pump #	Flow (GPM)	Efficiency (GPM)	Pressure Drop Difference (%)	Energy savings 1 Year (\$)	Energy savings 20 Year (\$)
PP1	1150	0.86	25	690	13,800
PP2	150	0.78	17	20	330
PP3	1435	0.79	24	735	14,720
PP4	1150	0.86	25	690	13,770
PP5	2000	0.75	32	605	12,075
PP6	2000	0.75	32	605	12,075
PP7	132	0.71	20	10	215
PP8	385	0.77	24	115	2,310
PP9	800	0.80	24	320	6,390
PP10	600	0.78	24	140	2,815
Total				3,920	78,465

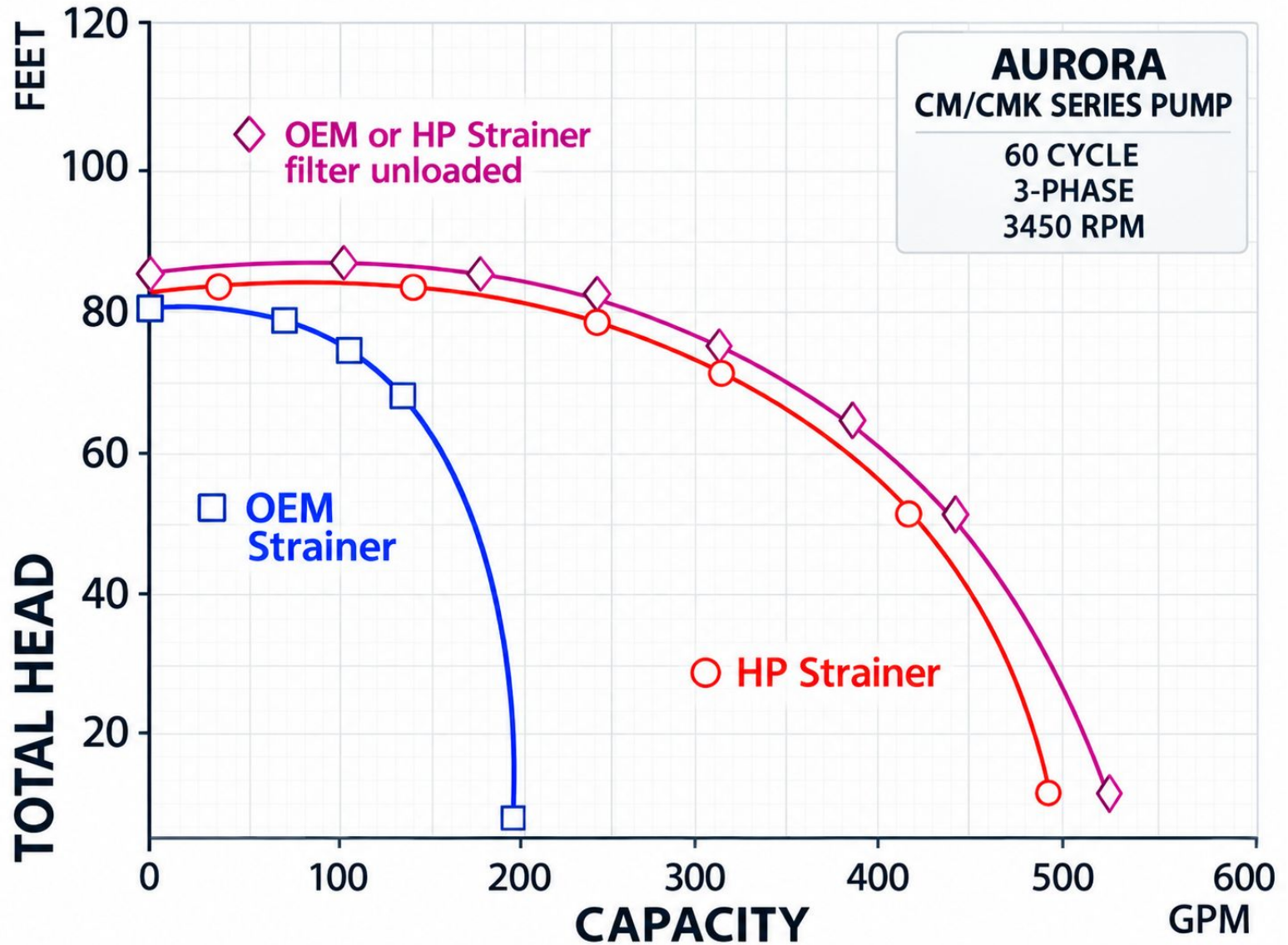
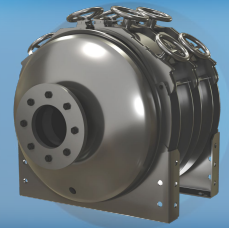
HP Strainer

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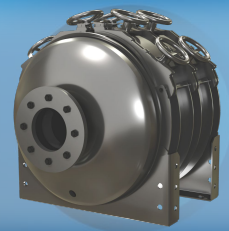
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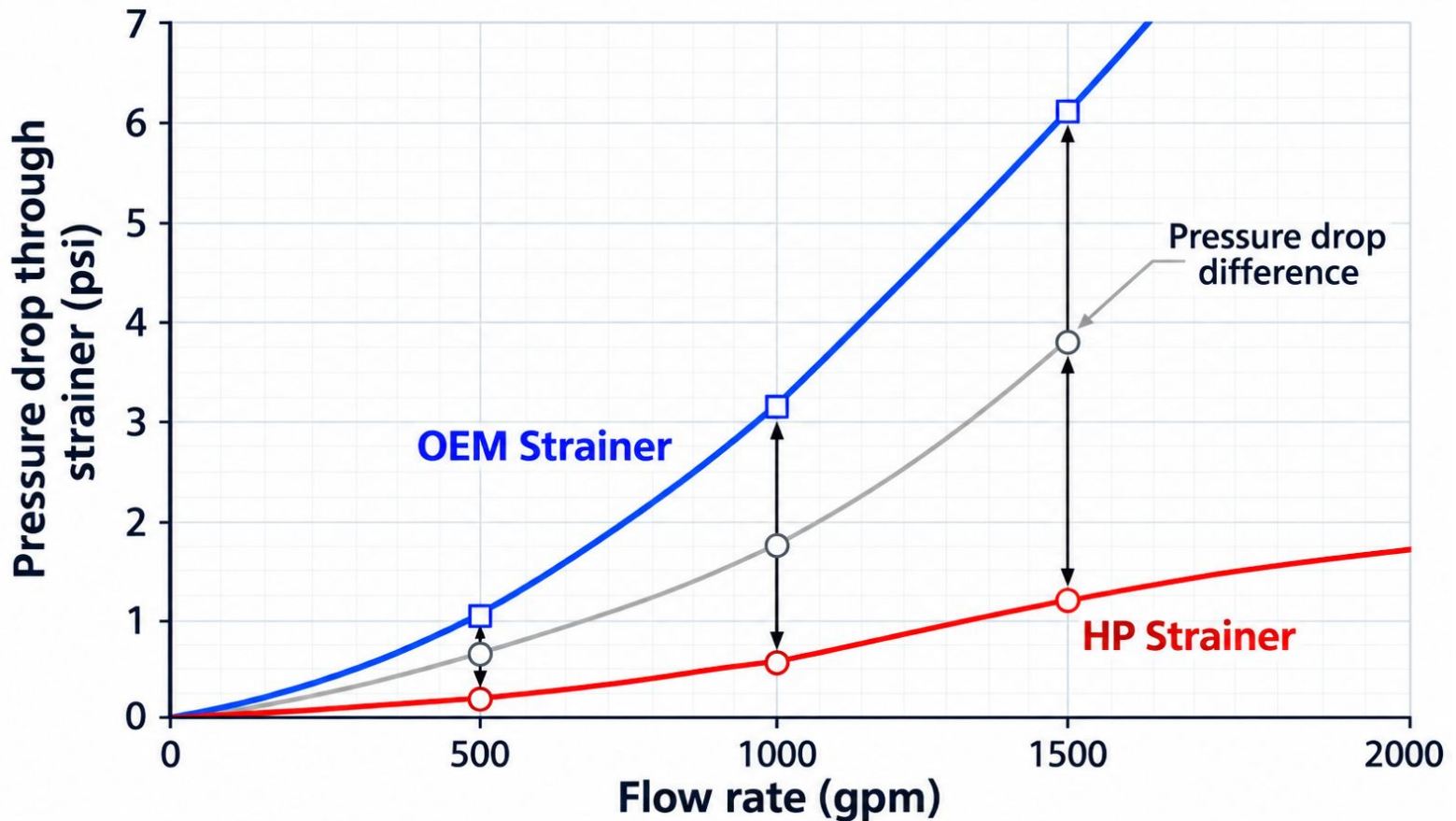


HP Strainer

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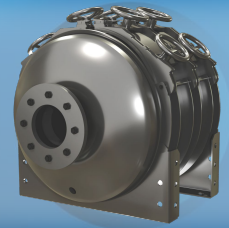
Pressure losses vs. Flow



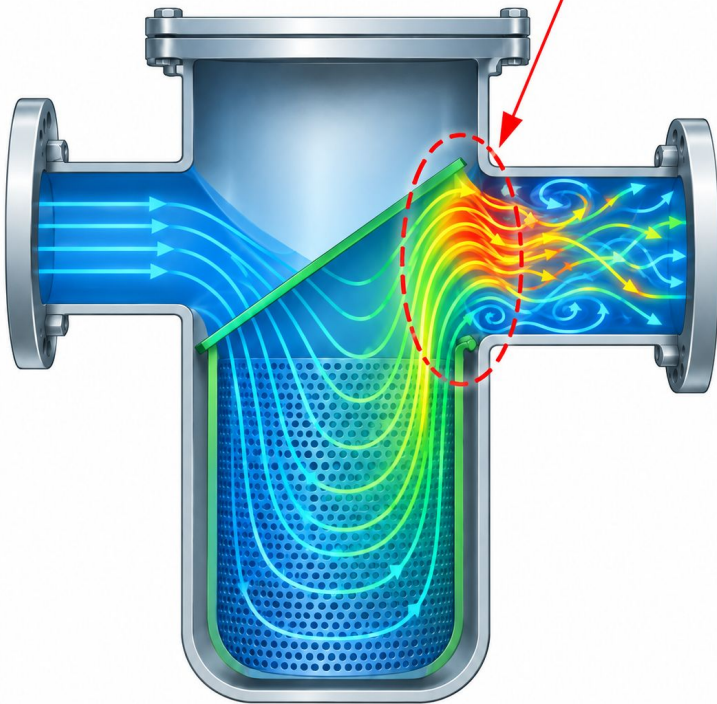
Flow (GPM)	Pressure Drop Difference (ft)	Energy savings 1 Year (\$)	Energy savings 20 Year (\$)
500	1.8	153	3,050
1000	5.7	950	19,000
1500	11	2,750	56,000

HP Strainer

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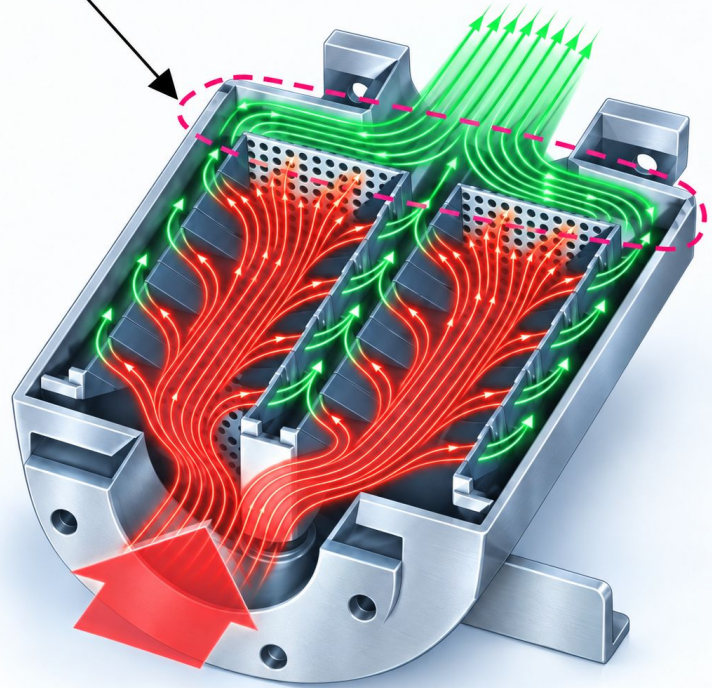


HIGH velocity in this section promotes UNEVEN flow distribution to the pump suction



Pot Strainer

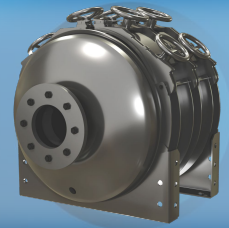
LOW velocity in this section promotes EVEN flow distribution to the pump suction



HP Strainer

HP Strainer

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Basket-Empty Pump Test

HP Strainer Flow at 80TDH:	318 GPM
OEM Strainer Flow at 80TDH:	285 GPM
Gallons pumped in a day:	432,000
Additional HP Strainer Flow at 300GPM:	33 GPM
Difference in flow percentage gain:	0.12

HP Strainer Flow Volume

HP Strainer Gallons Per Day:	457.920
HP Strainer Gallons Per Year:	167,255,280
HP Strainer Gallons Over 15 Years:	2,508,829,200

Pot Strainer Flow Volume

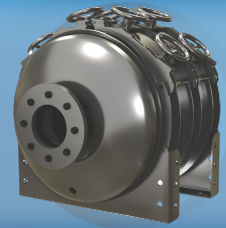
Pot Strainer Gallons Over 15 Years:	410,400
Pot Strainer Gallons Over 15 Years:	149,898,600
Pot Strainer Gallons Over 15 Years:	2,248,479,000

HP Strainer Additional Flow

Addtl. HP Strainer Gals Per Day:	47,520
Addtl. HP Strainer Gallons Per Year:	17,356,680
Addtl. HP Strainer Gallons / 15 Years:	260,350,200

HP Strainer

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Example Standard Pool

Standard Pool Length:	75 ft
Standard Pool Width:	42 ft
Standard Pool Depth:	4.5 ft

Pool Turnover Requirements

Required Turnovers Per Day:	4
Gallons Per Day When Turned Over 4 Times:	424,116
Gallons Per Day Used For Example:	432,000
Required flow to turn pool over 4x/day:	294.53 GPM

15-Year Pumping Requirement

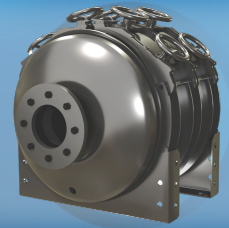
Total Number Of Days In 15 Years:	5,479
Total Gallons Through Pump In 15 Years:	2,366,820,000

Pot Strainer vs HP Strainer Operating Time

Pot Strainer Time Required To Pump Required Gallons:	5,767
HP Strainer Time Required To Pump Required Gallons:	5,169
Extra Pot Strainer Operating Time:	598 Days
Extra Pot Strainer Operating Time:	1.64 Years

HP Strainer

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Operating Cost Assumptions

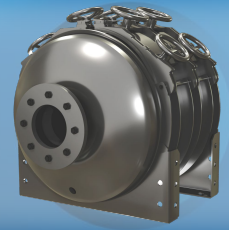
First Year Operating Cost:	\$7200
Annual Inflation:	4%

Year-By-Year Operating Cost

Year 1:	\$7,200.00
Year 2:	\$7,488.00
Year 3:	\$7,787.52
Year 4:	\$8,099.02
Year 5:	\$8,422.98
Year 6:	\$8,759.90
Year 7:	\$9,110.30
Year 8:	\$9,474.71
Year 9:	\$9,853.70
Year 10:	\$10,247.85
Year 11:	\$10,657.76
Year 12:	\$11,084.07
Year 13:	\$11,527.43
Year 14:	\$11,988.53
Year 15:	\$12,468.07

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15-Year Operating Cost

15-year operating cost at 4% inflation:	\$144,169.83
Rounded value shown in report:	\$144,170
HP Strainer 15-Year Operating Cost Percentage:	88%
HP Strainer 15-Year Operating Cost:	\$126,869

Cost Savings and ROI

15-year cost savings from using HP Strainer:	\$17,300
Initial Installed Investment:	\$5000
Return On Investment:	346%