



MSI SV9 Monster Red Processing Data

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<https://www.infinityturbine.com/sv9-monster-red-processing-data-for-gold-mining-operations-by-infinity-turbine.html>

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This webpage QR code

PDF Version of the webpage (maximum 10 pages)

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From the MSI SV9 Monster Red page:

- Throughput: up to 450 tons per hour ([msi-mining.com][1])
- Water requirement: 3,000 to 3,500 gallons per minute ([msi-mining.com][1])
- Power requirement: 60 kilowatts ([msi-mining.com][1])

Water flow per tons per hour

Gallons per minute per ton per hour

Compute:

- Low end: 3,000 gpm / 450 tph = 6.67 gpm per tph
- High end: 3,500 gpm / 450 tph = 7.78 gpm per tph

So a practical sizing rule from this reference plant is:

- Water flow (gpm) = tons per hour multiplied by 6.7 to 7.8

Examples using that rule:

- 100 tph needs about 670 to 780 gpm
- 200 tph needs about 1,330 to 1,560 gpm
- 300 tph needs about 2,000 to 2,330 gpm

Gallons of water per ton of material

Because tph is tons per hour, convert gpm to gallons per hour and divide by tph:

- 3,000 gpm = 180,000 gallons per hour
180,000 / 450 = 400 gallons per ton
- 3,500 gpm = 210,000 gallons per hour
210,000 / 450 = 467 gallons per ton

So the SV9 reference implies:

- ~400 to 467 gallons of water per ton of material processed

Metric equivalents (useful for international specs):

- 400 to 467 gallons per short ton equals ~1,514 to 1,768 liters per short ton
- Per metric tonne (1,000 kg), that is approximately 441 to 515 gallons per metric tonne, or ~1,670 to 1,950 liters per metric tonne

Power per tons per hour

- 60 kW / 450 tph = 0.133 kW per tph ([msi-mining.com][1])

Interpreted as energy intensity:

- In one hour, 60 kW is 60 kWh.
- 60 kWh / 450 tons = 0.133 kWh per ton

What this means for your pump sizing work

If you size your disc-pump skid to a target wash-plant throughput, you can use MSI's SV9 as a solid typical large plant reference point:

- Required water flow (gpm) = tph multiplied by 6.7 to 7.8
- If you know your tph, I can translate that into:

- number of pump skids in parallel,
- likely discharge pressure bands for spray bars and manifolds,
- and a duty-point target for your 1 HP disc pump (or the horsepower needed per skid if you scale up).

If you share your intended wash-plant throughput (tph) and whether you're feeding spray bars, monitors, or just sluice water, I'll map the flow into a realistic pressure and hose diameter assumption
