



How to Calculate Your Pool Turnover Rate

What is turnover rate? The amount of time it takes for all of the water in your pool to be circulated through the pump/filter system. If the water is circulated twice a day then the turnover rate is 12 hours. If the water is circulated 4 times a day then the turnover rate is 6 hours. Use your total pool gallons and your gallons per minute (GPM) from the flowmeter to determine your pool turnover rate.

$$\text{Turnover Rate in Minutes} = \frac{\text{(Pool Gallons)}}{\text{GPM}}$$

$$\text{Turnover Rate in Hours} = \frac{\text{(Turnover Rate in Minutes)}}{(60)}$$

Example:

We want to know the turnover rate in our 25,000 gallon pool if our flowmeter reads 70 GPM.

$$(25,000 \text{ gallons}) / (70 \text{ GPM}) = 357 \text{ minutes,}$$

$$(357 \text{ minutes}) / (60) = 5.95 \text{ hours}$$

The turnover rate in this 25,000 gallon pool is approximately 6 hours.

What if required turnover rate?

- If your pool was built **before 4/12/90**, the turnover rate must be at least **once every 12 hours**.
- If your pool was built **after 4/12/90**, the turnover rate must be at least **once every 6 hours**.

How do you calculate your required GPM to achieve proper turnover rate?

$$\text{GPM} = \frac{\text{(Pool Gallons)}}{\text{(Turnover in Minutes)}}$$

$$\text{Turnover in Minutes} = (\text{Turnover in hours}) \times (60)$$

Example:

We want turnover in our 25,000 gallon pool to be 6 hours

(6 hours) x (60) = 360 minutes

(25,000 gallons)/(360) = 69 GPM

So we should have approximately 70 gallons going through the pump/filter every minute to achieve a turnover rate of 6 hours

Calculate your own required GPM:

First determine what your required turnover rate should be (6 or 12 hours). Now fill in the blanks below.

$$\text{GPM} = \frac{\text{Pool Gallons}}{\text{Turnover in Minutes}}$$

Hint: 6 hours = 360 minutes, 12 hours = 720 minutes