Measuring the outlet size of pumps

How to identify and measure the discharge outlet on common pumps

WaterNSW authorises pumps by diameter. The relevant measurement is the size of the pump outlet, also called the discharge, where water leaves the pump.

A wide range of water pumps are used across residential, agricultural, industrial, and remote applications, with each pump type designed to suit specific water sources, such as tanks, rivers, bores, and dams, as well as varying flow and pressure requirements.

Common pump types used for irrigation and water supply include centrifugal pumps**,** mono (progressive cavity) pumps**,** submersible pumps, and jet pumps. Each offers different performance characteristics and is selected based on factors such as water source, pumping head, required flow rate, and operating conditions.

If you are measuring an outlet for water licensing or metering purposes, the relevant measurement is usually the internal diameter of the discharge pipe, rather than the external dimensions of fittings or threads. By accurately identifying the outlet size, you will be able to determine the pumps capacity and ensures compliance with licensing, metering and operation requirements.

> ### Measure the internal diameter
>
> Measure the clear opening inside the discharge outlet or discharge pipe. Do not measure across the outside of the fitting.

How to measure

1	2	3
Find the outlet	**Measure inside**	**Record the size**
Locate the point where water exits the pump.	Measure straight across the clear internal opening.	Record the diameter in millimetres and take a clear photo.

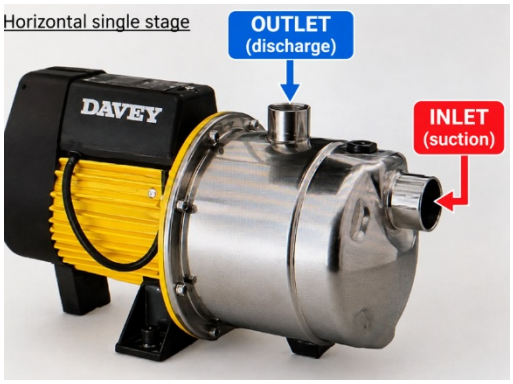
Tip: If the outlet is connected to pipework, measure the internal diameter of the discharge pipe as close to the pump as practical.

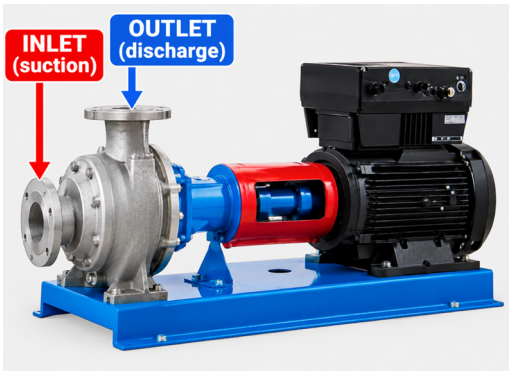
Common pump types

The outlet location varies with the pump design. Use the examples below to help identify the correct point to measure.

Centrifugal pumps

Centrifugal pumps are among the most widely used pumps for irrigation and water transfer. They operate by using a rotating impeller to draw water into the pump and discharge it under pressure. Centrifugal pumps are well suited to applications requiring moderate to high flow rates and are commonly used to extract water from rivers, dams, tanks, and channels for irrigation, stock watering, and domestic water supply. They are valued for their simple design, reliability, and ease of maintenance.

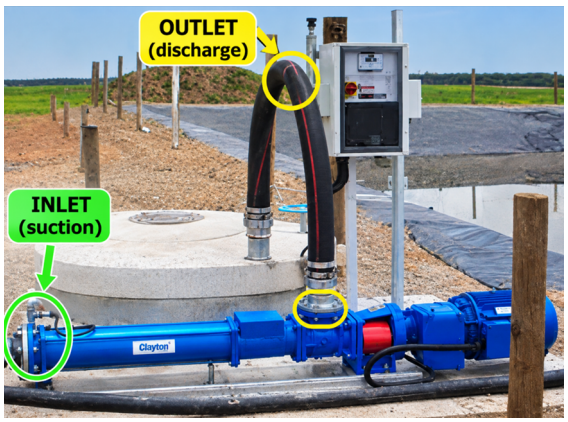






Mono pumps

Mono pumps, also known as progressive cavity pumps, use a rotating rotor to move water at a steady flow rate. They are commonly used for bore extraction and applications involving sandy or sediment-laden water, where consistent flow and high pressure are required.



Submersible pumps are designed to operate while fully submerged in water. They are commonly used in bores, wells, tanks, and dams, and are valued for their efficiency, quiet operation, and ability to pump water from significant depths.

PTO (Power Take-Off) tractor-driven pumps are powered directly by a tractor's PTO shaft. They are commonly used for irrigation, water transfer, and stock watering applications where a portable, high-capacity pumping system is required and access to electricity is limited.



Before you submit a measurement

- Check that the photo clearly shows the pump and the measured outlet
- Include the measurement in millimeters
- Note any reducers, adaptors or pipework fitted between the pump and the discharge pipe

Need help?

If you need more information, please contact our Customer Service Centre on 1300 662 077, Monday to Friday between 8am-5pm or email Customer.Helpdesk@waternsw.com.au