

CASE STUDY PRODUCT:
DAVEY 5113HE FIREFIGHTER

DAVEY DEALER:
Great Northern Rural Services (GNRS)
31 Boyd St,
Geraldton WA 6530

Innovative Irrigation Solution for Commercial Cucumber Farm

Great Northern Rural Services (GNRS) is a trusted name in rural water management solutions, serving the region of Geraldton, Western Australia. The client, a local cucumber grower, faced a significant challenge when trying to irrigate multiple hot houses. The duty required to efficiently water the crops was beyond the capabilities of single-phase power, and the infrastructure available did not support a three-phase power supply.

The Challenge:

The commercial cucumber grower in Geraldton required a water pumping solution capable of delivering approximately 800 lpm at 300 kPa pressure. This high-capacity system was essential to supply water to several "hot houses" where cucumbers are grown on a commercial scale. However, the farm's infrastructure only supported single-phase power, severely limiting their options for high-capacity electric pumps.

Adding to the complexity, the hot, dry, and windy climate of Mid-West WA demanded a robust solution that could withstand these harsh outdoor conditions while maintaining consistent performance.

Our Solution

Great Northern Rural Services, a local Davey dealer, collaborated with Davey Water Products to think "outside the box" and develop an innovative solution. They recommended the Davey 5113HE FireFighter pump, a petrol-driven 13HP single impeller pump.

This creative approach allowed the farm to achieve the required water flow and pressure without the need for significant electrical infrastructure upgrades. The FireFighter pump's design makes it well-suited to handle the demanding outdoor conditions of the region.



Implementation:

The installation of the Davey 5113HE Firefighter pump resulted in:

- Meeting the farm's high-capacity irrigation needs (approximately 800 lpm @ 300 kPa)
- Avoiding costly electrical infrastructure upgrades
- Providing a robust solution capable of withstanding the harsh local climate

The customer gained the ability to service all their irrigation requirements without settling for lesser performance or investing in significant infrastructure changes.

Results

Since the installation of the Davey 5113HE, the system has performed flawlessly. The pump consistently provides the water pressure needed to irrigate the hot houses, ensuring that the cucumbers receive the appropriate amount of water daily. The grower has reported great satisfaction with the solution.

The collaboration between Davey and GNRS allowed the grower to avoid expensive infrastructure upgrades while achieving optimal irrigation performance. The grower now has a system that not only meets their current needs but also offers scalability for future growth.

- Innovative problem-solving: Davey and GNRS worked together to create a custom solution that bypassed infrastructure limitations, enabling effective irrigation with single-phase power.
- Cost-effective solution: Avoiding the need for three-phase power or costly infrastructure changes was crucial for the grower.
- Proven performance: The Davey 5113HE pump has delivered consistent and reliable performance, providing water for hours each day without issues.

This case study demonstrates how Davey products, paired with expert local knowledge from dealers like GNRS, can provide practical and innovative solutions to complex water challenges in rural agricultural settings.

