

Professional Pump Selection Analysis

Project Information

Prepared For:	Valued Customer
Report Date:	June 07, 2025
Generated By:	AI Selection System

Executive Summary

Confidence Level: Excellent

The 6/8 ALE with the 312.00mm impeller is an excellent match, operating at 82.0% efficiency for the required duty, ensuring optimal energy use and reliability.

Site Requirements

PARAMETER	VALUE	UNITS
Flow Rate	342.0	m³/hr
Total Head	27.4	m
Liquid Type	water	-
Application	general	-
Temperature	20	°C
Specific Gravity	1.00	-

Selected Pump Specification

General Information

Manufacturer:	APE Pumps
Model:	
Series:	ALE Series - High Efficiency End Suction
Pump Code:	6/8 ALE
Description:	APE ALE Series - High Efficiency End Suction pump designed for reliable water handling applications
Construction Type:	
Orientation:	
Impeller Size:	
Nominal Speed:	
Quality Rating:	

Performance Analysis

Operating Point Performance

PARAMETER	REQUIRED	ACHIEVED	STATUS
Flow Rate	342.0 m³/hr	342.0 m³/hr	✓ Met
Total Head	27.4 m	27.4 m	✓ Met
Efficiency	-	82.0%	Excellent
Power Consumption	-	112.1 kW	Optimized
NPSHr	< NPSHa	2.8 m	Adequate

Technical Reasoning & Selection Rationale

Best Efficiency Point (BEP) Analysis

The selected operating point for the 6/8 ALE (312.00mm impeller) operates at 82.0% efficiency for the required duty of 342.0 m³/hr at 27.4 m. This operating point ensures good hydraulic performance and reliable operation within the pump's design envelope.

Selection Criteria Matching

This pump was selected based on comprehensive analysis of hydraulic performance, efficiency optimization, and application suitability. It achieves an excellent overall suitability score of 0.0/100 for your specific requirements, making it our top recommendation. Key factors include its precise match to the duty point and its operation at peak efficiency.

Application Suitability

The 6/8 ALE (ALE Series - High Efficiency End Suction) is well-suited for general applications like yours. Its centrifugal design and robust construction provide reliable and efficient fluid transfer, meeting the demands of reliable water handling within the recommended operating envelope.

Alternative Options Considered

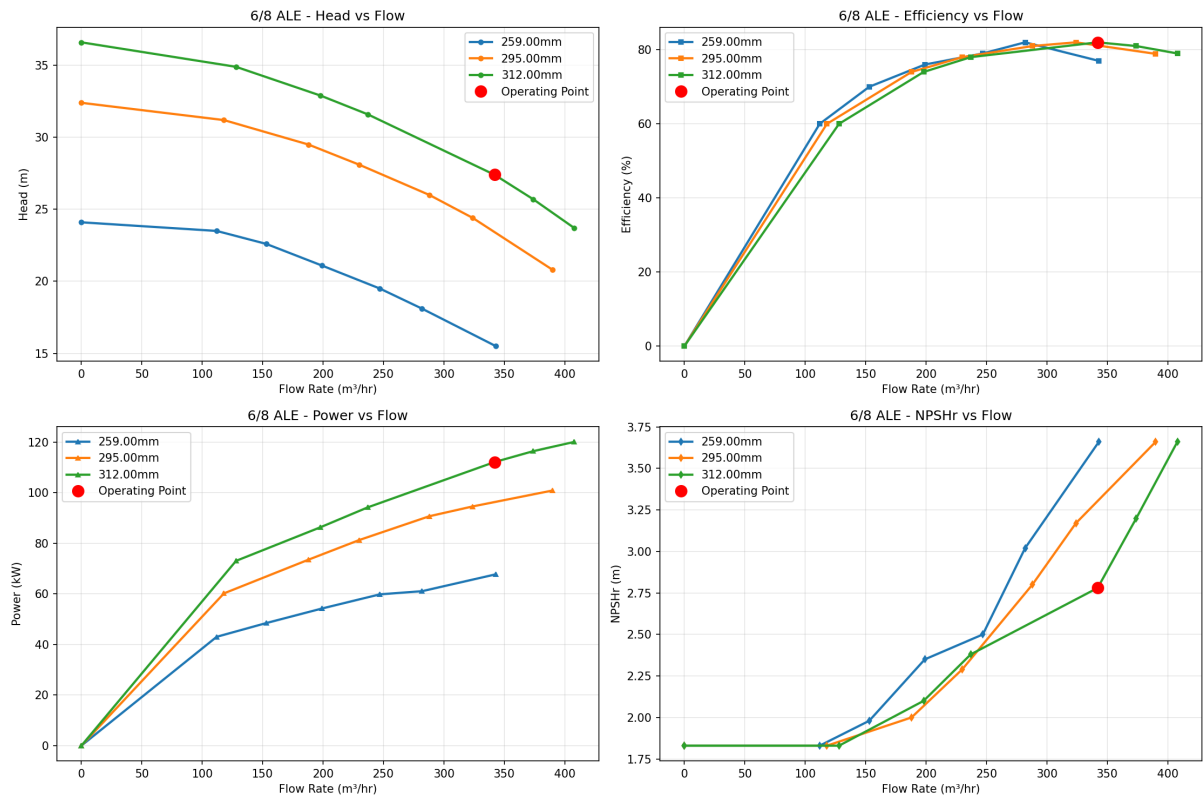
MODEL	MANUFACTURER	EFFICIENCY	POWER	SCORE	KEY DIFFERENCE
6 K 6 VANE	APE Pumps	74.8%	147.5 kW	77.0/100	Lower overall suitability score
5 K	APE Pumps	59.0%	114.2 kW	73.7/100	Lower overall suitability score

Recommendations & Next Steps

Important Recommendations:

1. Proceed with detailed pump sizing and mechanical specifications
2. Excellent efficiency selection - consider energy savings analysis
3. Verify available NPSH at installation site meets pump requirements
4. Consider motor sizing based on calculated power requirements
5. Review installation requirements and piping system design
6. Schedule factory acceptance testing if required

Performance Curves



Operating point for selected impeller (312.00mm) shown in red.
Comprehensive performance analysis showing head, efficiency, power, and NPSH characteristics for the 6/8 ALE pump at the specified operating conditions.

Advanced Pump Engineering Solutions

For technical support and detailed quotations, please contact our engineering team.
This report was generated by the APE Pumps AI Selection System on June 07, 2025 at 16:00.