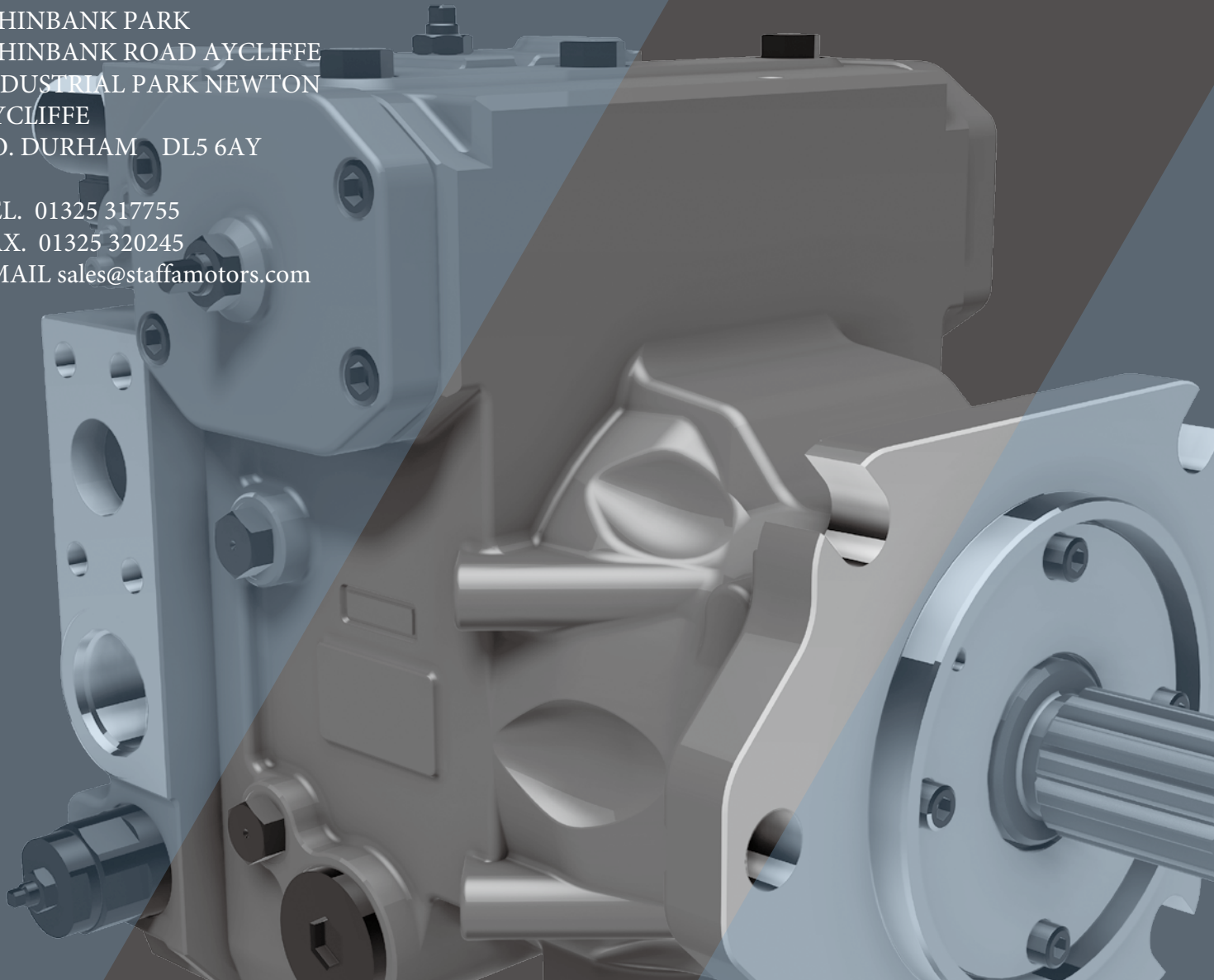


Closed Loop Swash-plate Axial Piston Pump K8V Series Capability Brochure

Quality
Hydraulics Limited

QUALITY HYDRAULICS LTD
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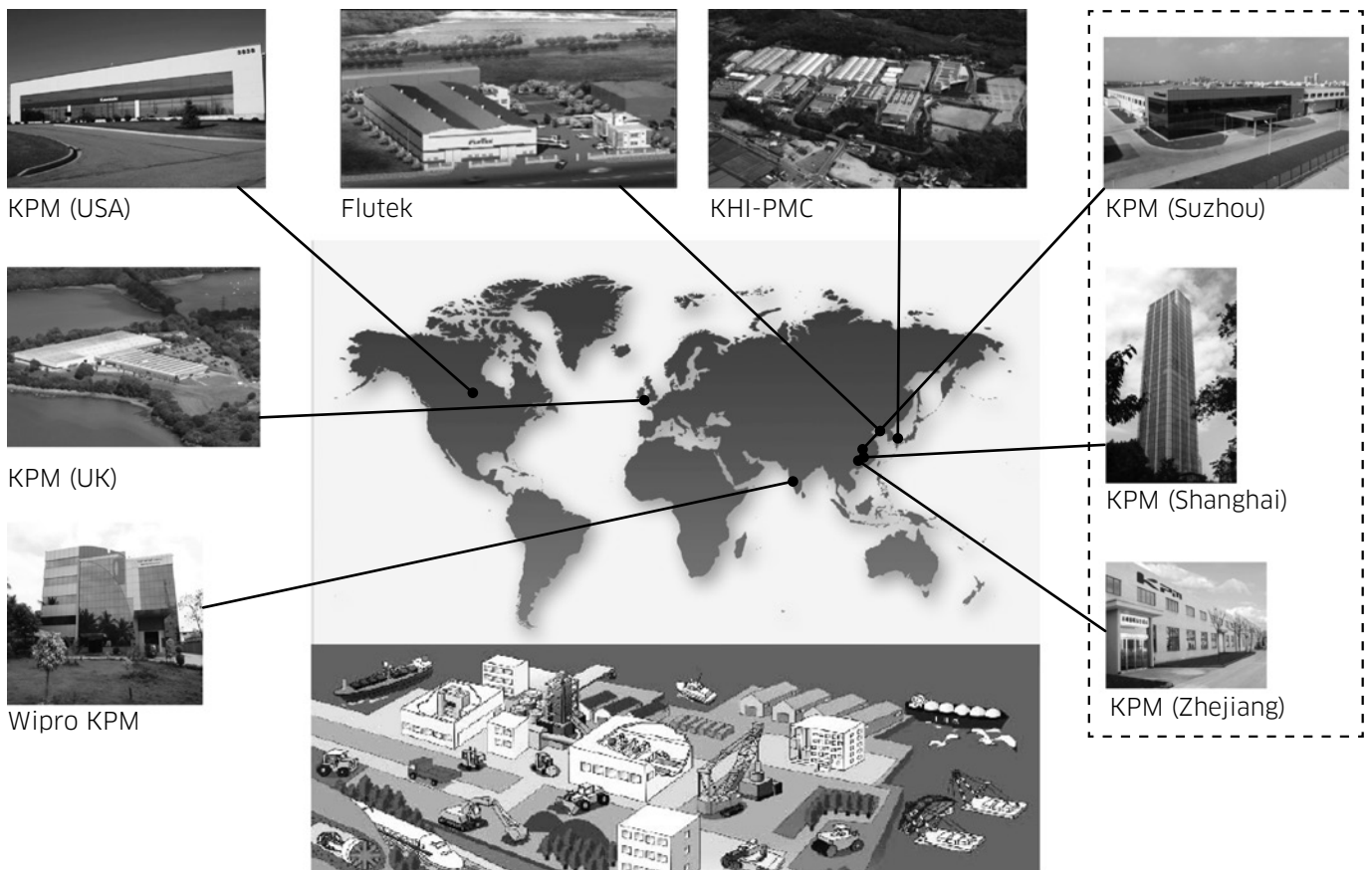
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KPM Group



1 Introduction

Kawasaki Precision Machinery Company is a division of the Kawasaki Heavy Industries Corporation who manufacture important hydraulic components and equipment used on construction machines as well as industrial machinery and marine equipment. Our pumps, motors, valves, and other hydraulic components, as well as our assembled hydraulic systems, serve to drive and control a wide range of machinery and equipment.

Leading the hydraulics industry in scale and production facilities, we manufacture a wide range of products, from hydraulic pumps, motors, actuators, valves and other hydraulic components, to hydraulic systems for machines and plants of all kinds, as well as hydraulic deck machinery, electro-hydraulic steering gear, hydraulic fishing machinery, and various other applications.

We have manufacturing facilities in Japan, England, China, India and Korea, and sales and services offices in Japan, England, the U.S., China and Korea, where we market hydraulic machinery and systems to the world under the KPM brand.

With our corporate team of researchers and laboratory facilities, we are also always engaged in developing new technologies and products, and strive to improve quality and stabilize product supply.

Important amongst these is this K8V series of high pressure transmission axial piston pumps designed and developed to match the increasing global need for efficient, reliable and responsive closed loop solutions.

Based on over 100 years experience and knowledge Kawasaki has made its reputation for efficient, reliable and responsive axial piston pump offerings primarily for the mobile equipment market. This knowledge and technology has been utilised now in the development of this significant new closed loop transmission product.

2 Features & Benefits

Variety of Control Options

- Highly Responsive Controls
- Electric Displacement Control
- Hydraulic Piloted Displacement Control
- Automotive Control
- Others on Request

Stroke Adjustment

- Mechanical stroke limiter option

Global Standard Shaft & Mount

- Single & Tandem versions
- CW & CWW Rotation
- SAE 3/4 bolt mount
- SAE ANSI Standard Shafts
- Others on Request

Optimised Rotating Group

- “Best in Class” Mechanical & Volumetric Efficiency across a Wide Pressure Range
- Reduced Pulsation and consequent Airborne Noise Emissions

Trochoidal Charge Pump

- Improved Efficiency

Variety of Throughdrive Options

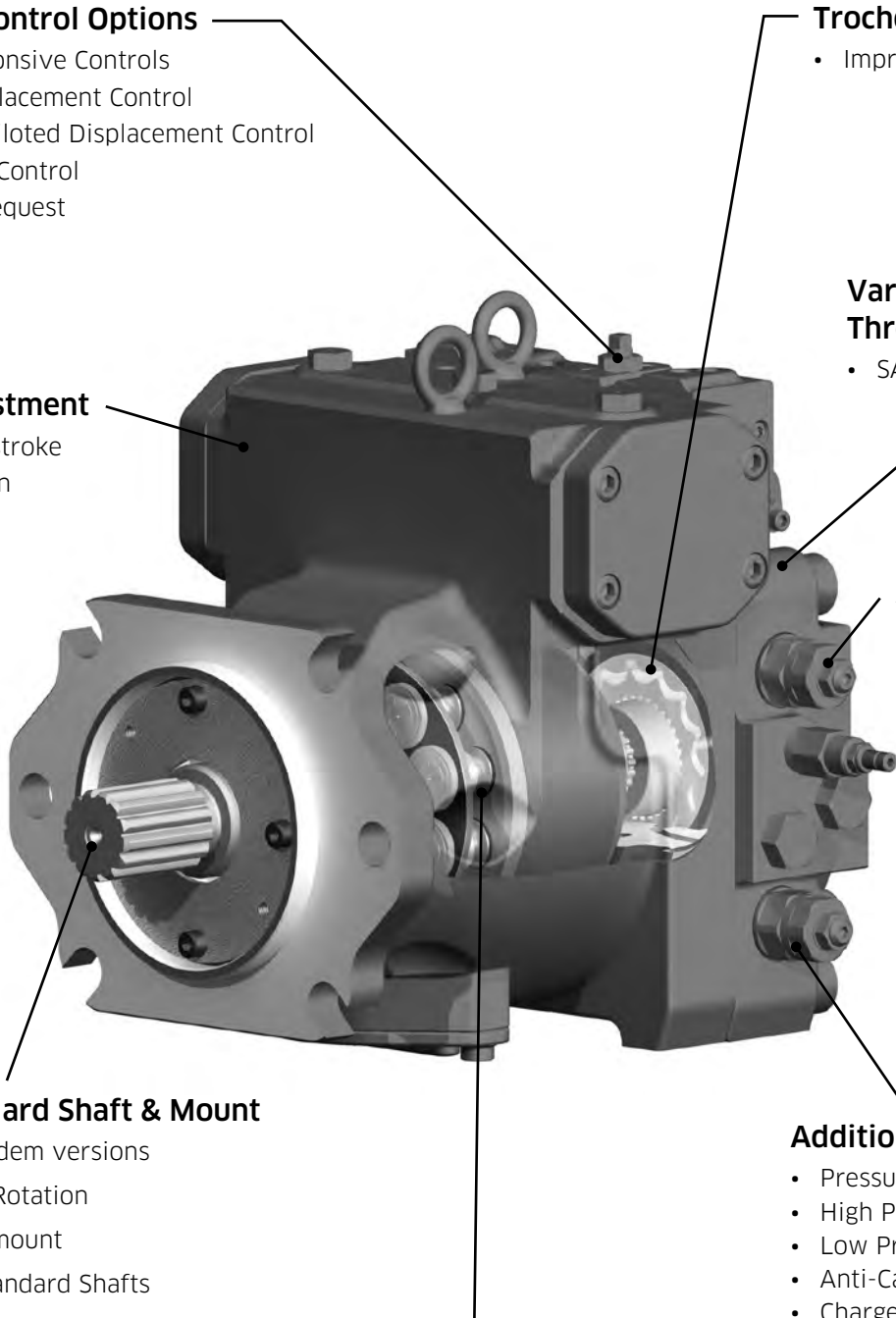
- SAE 'A', 'B', 'C' & 'D'

Additional Sensor Options

- Swivel Angle Sensor
- Speed Sensor

Additional Valving

- Pressure Cut-Off
- High Pressure Relief
- Low Pressure Relief
- Anti-Cavitation Checks
- Charge Filter Connection Port



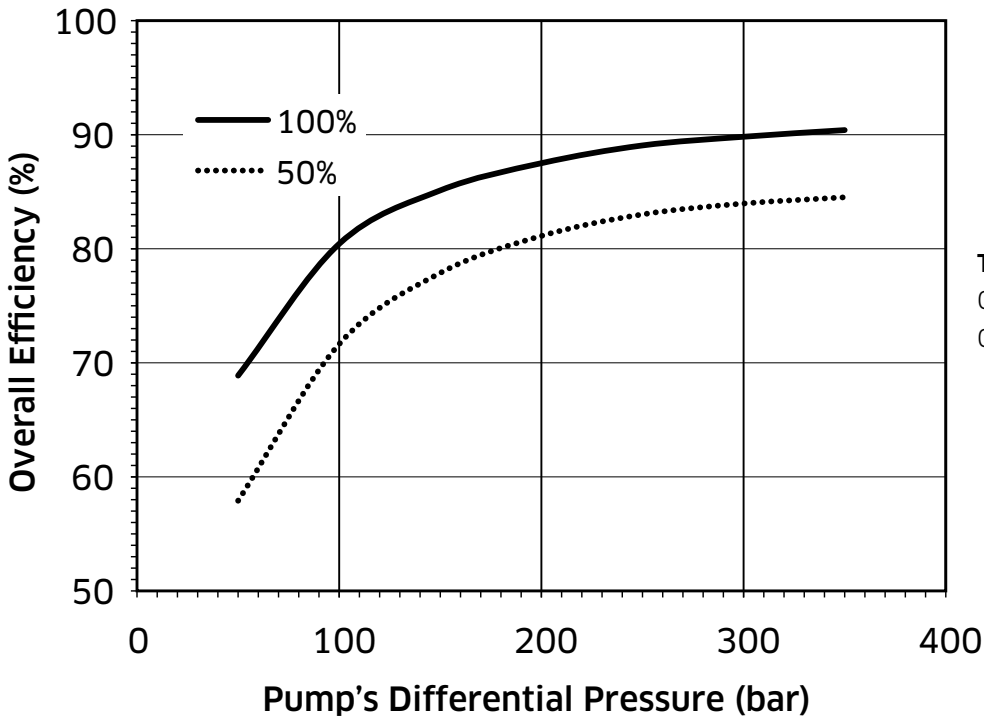
3 Specifications

			K8V125	K8V90		
Main pump	Pump Type		Single Tandem	Single & Tandem Axial Piston		
			Variable / Fixed		Variable Displacement	
			Closed / Open		Closed Loop Hydrostatic	Closed Loop Hydrostatic
	Pump Displacement		cm ³ /rev	130	90	
	Typical operating pressure range		bar	400	400	
	System peak pressure		bar	450	450	
	Case drain pressure		bar	Continuous: 0.2 Peak: 0.6	Continuous: 0.2 Peak: 0.6	
	Displacement Control Typev			Electric with Deutsch connector, 24 V or 12 V	Electric with Deutsch connector, 24 V or 12 V	
	Pump Rotation (Looking at shaft end)			CW	CW & CCW	
	Inlet shaft speed range		rpm	Max: 2,850	Max: 3,050	
	Oil temperature range (Inlet)	Operating	°C	Inlet temperature: -20°C to 95°C		
	Oil Type			ISO VG46		
	Oil viscosity range		cSt	10 to 1,000		
	Main Input	Spline shaft		SAE J744 D-13T ⁸ / ₁₆ DP (For single pump) SAE J744 F-15T ⁸ / ₁₆ DP (For tandem pump)	SAE J744 D-13T ⁸ / ₁₆ DP	
		Mounting		SAE J744 D ² / ₄ Bolt		
	Through Drive	Spline shaft		SAE A, B, C or D		
		Mounting		SAE A, B, C or D		
	Pressure port size			SAE J518, Code 62, 4-Bolt M14-19 Size: 32	SAE J518, Code 62, 4-Bolt M12-17 Size: 25	
Case drain size			SAE J1926-1 SAE 1"	SAE J1926-1 SAE ³ / ₄ "		
Gage Port size			SAE J1926-1 SAE ³ / ₈ "	SAE J1926-1 SAE ³ / ₈ "		
Charge pump	Type		Integrated into the main pump fixed displacement			
	Minimum required pressure	bar	20			
	Typical operating pressure	bar	25			
	System peak pressure	bar	40			
	Displacement	cm ³ /rev	28 pump without filter	20 pump without filter		
	Rotation (Looking at shaft end)		CW	CW & CCW		
	Mounting		Integrated	Integrated		
	Inlet port		SAE J1926-1 SAE 1- ¹ / ₄ "	SAE J1926-1 SAE 1"		

4

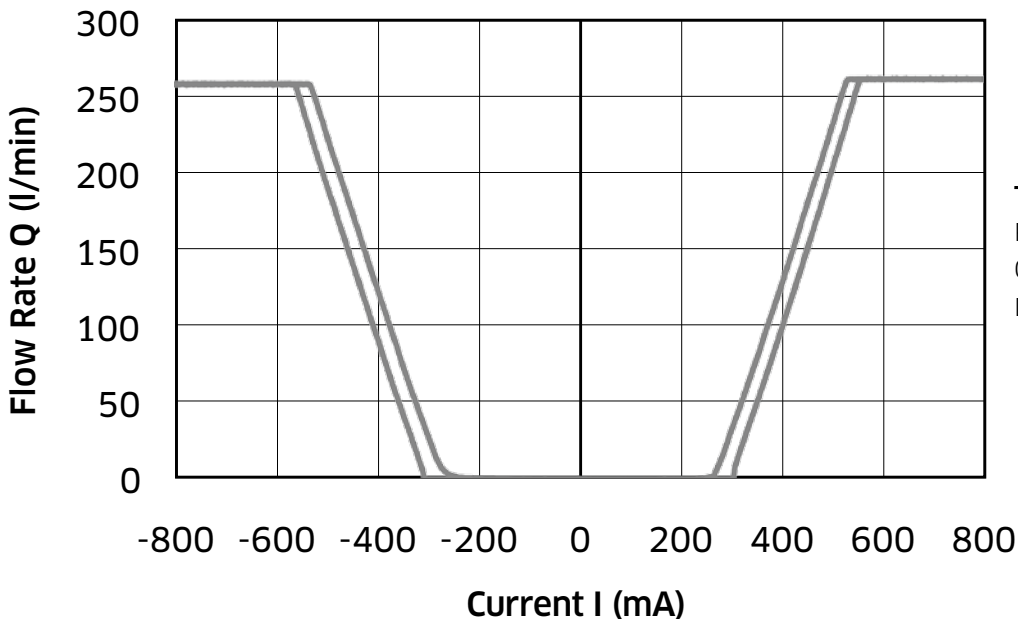
Performance Characteristics

◆ Pump Efficiency (%)



Test Condition
Operating Speed: 2,000 rpm
Oil Temperature: 50°C

◆ Displacement Control

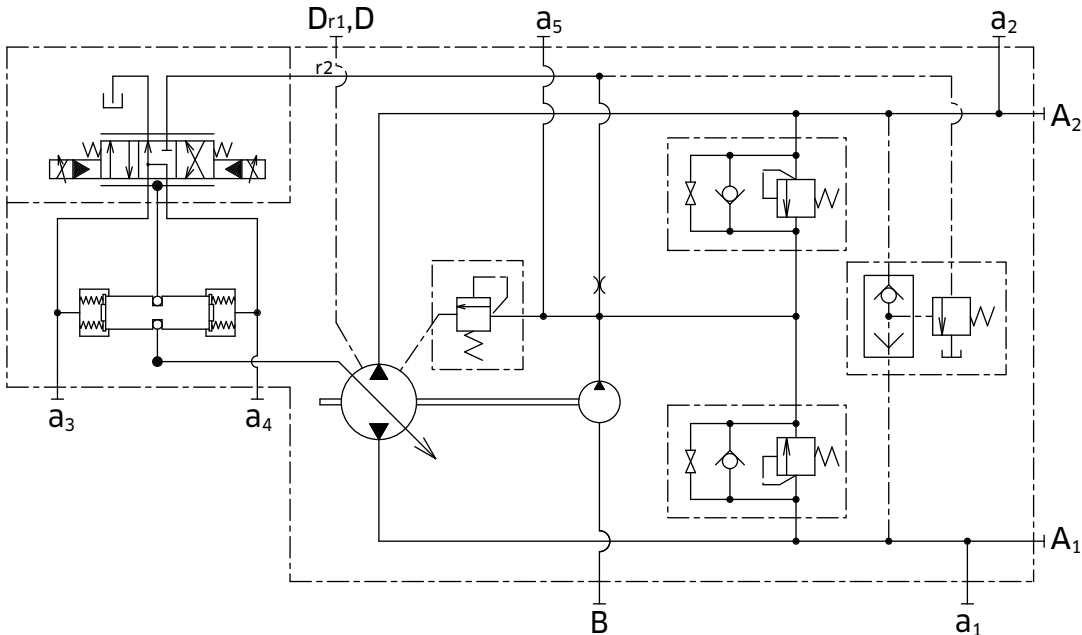


Test Condition
Pump Speed: 2,000 rpm
Oil Temperature: 50°C
Delivery Pressure: 100 bar

5

Circuitry & Installation

◆ Displacement Control Schematic



◆ K8V125 Installation

