

Hydraulic Pumps Index



Pumps

The Global Industry Leader in Hydraulic Pumps

Bosch Rexroth is the global leader in hydraulic pump design, manufacturing and leading-edge pump innovation. Rexroth's complete line of hydraulic pumps serve virtually every industry in manufacturing and technology applications such as railway engineering; chemical process plants; power and environmental engineering; automotive engineering; plastics processing machinery; paper industry; presses; test rigs and simulation systems; marine/offshore engineering; special projects; and civil/ water engineering; transportation technology; and machine tools.

To go directly to a specific type click on one of the titles below.



Axial Piston – Bent Axis



Axial Piston – Swashplate



Gear



Vane



Radial Piston



General Information

Hydraulic Pumps






Axial Piston – Bent Axis Hydraulic Pumps

Proven, Cost-Effective Solutions

Offering high power density, compact design, and a cost-effective, proven set of designs, Rexroth bent axis hydraulic pumps provide excellent solutions for fixed and variable bent axis hydraulic pump applications.

Click the data sheet numbers to open the PDF file.

Axial Piston – Bent Axis Pumps				
Product Photo	Model	Description	Size	Data Sheet
	AA2FO	Fixed Displacement Bent Axis Pump Hydraulics Application: Open circuit	Sizes 5 to 1,000	RA 91 401
	A2VK A7VK	Variable Bent Axis for Polyurethane and Chemical Components Hydraulics Application: Handwheel control with position indicator	Sizes 12...107 Size 12, 28	RE 94 001 RE 94 010
	A7VO	Variable Displacement Bent Axis Pump Open circuit operation	Size 28-160 Size 250 - 1000	RE 92 202 RE 92 203

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Axial Piston – Swashplate Hydraulic Pumps - Variable and Fixed Displacement

Swashplate hydraulic pumps have a rotating cylinder containing pistons. A spring pushes the pistons against a stationary swash plate, which sits at an angle to the cylinder. The pistons suck in fluid during half a revolution and push fluid out during the other half. The greater the slant the further the pump pistons move and the more fluid they transfer.

Click the data sheet numbers to open the PDF file.

Axial Piston – Variable and Fixed Displacement Swashplate Pumps				
Product Photo	Model	Description	Size	Data Sheet
	A4FO	Swashplate Pump Hydraulics Application: Fixed displacement, open circuit operation	Sizes 16 to 500	RE 91 455
	AA4VG	Swashplate Pump Hydraulics Application: Variable displacement, closed circuit operation	Sizes 28 to 250	RA 92 003
	AA4VSO	Swashplate Pump Hydraulic Application: Variable displacement, open circuit	Sizes 40 to 1,000	RA 92 050
	A4VSO	HFC fluids (water-glycol)	125 - 355	RA 92 053
	A4VBO	Swashplate Pump Variable displacement, high pressure, open circuit	Sizes 71, 125, 450	RE 92 122
	A4VSG	Swashplate Pump Hydraulics Application: Variable displacement, closed loop operation	Sizes 40 to 1,000	RA 92 100

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Axial Piston – Variable and Fixed Displacement Swashplate Pumps – continued				
Product Photo	Model	Description	Size	Data Sheet
	AA4CSG A4CSG	Axial Piston Swashplate Unit Hydraulics Application: Variable displacement, axial piston, closed circuit	Sizes 250 to 750	RA 92 105
	AA11V(L)O	Swashplate Pump Hydraulics Application: Variable displacement, open circuit	Sizes 40 to 260	RA 92 500
	A10VO/ 52/53	Axial Piston Swashplate Pump (Series 52) Hydraulics Application: Variable displacement, open circuit	Sizes 10 to 85	RA 92 703
	AA10VSO/3	Axial Piston Swashplate Pump (Series 31) Hydraulics Application: Variable displacement, open circuit	Sizes 18 to 140	RA 92 711
	A10VSO A10VSNO	Axial Piston Swashplate Pump (Series 32) Hydraulics Application: Variable displacement, open circuit	Sizes 71 to 140 Size 63	RA 92 714 RE 92 740
	A15VSO	Axial Piston Swashplate Pump	Size 280	RE 92 800
	SYDFE (A10VSO)	Axial Piston Swashplate Pump Hydraulics Application: Variable Displacement, open circuit Electronic flow, pressure and power control	SYDFE1 SYDFEE SYDZ VT-DFP VT-5041 VT-SWA-1	RA 30 024 RE 30 030 RE 29 255 RE 29 016 RE 30 241 RE 30 268

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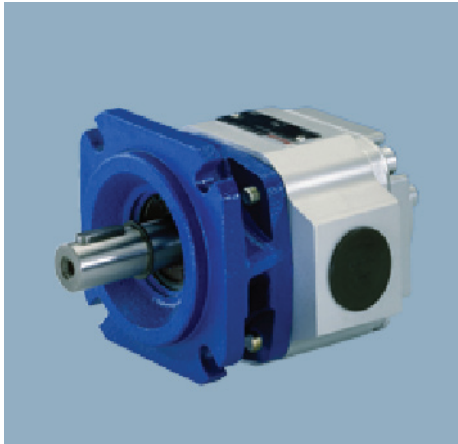
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Axial Piston – Variable and Fixed Displacement Swashplate Pumps – continued				
Product Photo	Model	Description	Size	Data Sheet
	SYHDFEE (A4VSO)	Axial Piston Swashplate Pump Hydraulic Application: Variable displacement, open circuit Electronic flow, pressure and power control	Sizes 125 to 355	RE 30 035
	AA4VS A4VS Controls	Flow/Pressure Controls Power Controls Handwheel and Electric Motor Control Hydraulic Pilot Control	DR, DP, FR and DFR LR2, LR3 and LR2N ME, EM HD	RA 92 060 RA 92 064 RE 92 072 RA 92 080
	AA4VSO A4VSH AA4VSG AA4CSG	Electrohydraulic Controls Control systems HM, HS, HS4 and EO for variable displacement pumps	Sizes 40...1,000	RA 92 076
	A4CSG AA4VSG	Electrohydraulic Controls Electrohydraulic control with proportional solenoid	EP	RA 92 084
	A4VSO DFE1	Electrohydraulic Controls Electronic flow and pressure control	Sizes 125...355	RE 92 088
	A10VO, Series 3X, 5X	Electrohydraulic Controls Proportional pressure control	ED, ER	RE 92 707
	A10VO, Series 5X	Electrohydraulic Controls Proportional flow control	EP, EK	RE 92 708

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Gear Pumps

Reliable Hydraulics Performance for Industrial Applications

Gear pumps are extremely simple and reliable, engineered by Bosch Rexroth to deliver the reliable hydraulics performance today's manufacturers and OEMs demand. Depending on the number of teeth, the "idler" gear might be driven directly by the "drive" gear. The teeth on Gear Pumps can be spur (straight), helical (slanted), herringbone, etc. Rexroth offers multiple gear pump models and variations, all exhibiting different effects on the efficiency, strength, smoothness and other areas of hydraulics system operation. Two pairs of valves can be added to make this a Reversing Gear Pump, which pumps in the same direction regardless of which direction the gears rotate.

Click the data sheet numbers to open the PDF file.

Gear Pumps				
Product Photo	Model	Description	Size	Data Sheet
	B, F, N, G	AZ External Gear Pumps	4 to 63 cm ³ Program Info.	RA 10 097 RA 98 241
	AZPF	External Gear Pump, Series F	4 to 28 cm ³	RE 10 089
	PGF	Gear Pump Hydraulics Application: Internal Gear pump, fixed displacement	Sizes 1.7 to 40	RE 10 213
	PGH	Gear Pump Hydraulics Application: Internal Gear pump, fixed displacement	2X 3X	RE 10 223 RE 10 227
	PGP	Gear Pump Hydraulics Application: Internal Gear pump, fixed displacement	Sizes 6.3 to 32	RE 10 231
	PGZ	Gerotor Pump Fixed displacement volume	1X	RE 10 545

Hydraulic Pumps







Hydraulic Vane Pumps

Pump Technology for Demanding Automotive Applications

Often used in hydraulic power steering units and automatic transmissions, Rexroth has made major investments in refining vane pump technology to meet the demanding requirements of the global automotive industry. The vanes are in slots in the rotor. When the rotor spins, centrifugal force pushes the vanes out to touch the casing, where they trap and propel fluid. Sometimes springs also push the vanes outward. When the vanes reach the return side they are pushed back into the rotor by the casing. Fluid escapes through a channel or groove cut into the casing. Vane pumps can be designed in balanced configurations where there are two inlet and two outlet ports, similar to balanced gear pumps.

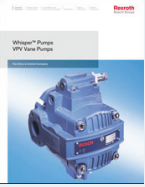
Click the data sheet numbers to open the PDF file.

Vane Pumps				
Product Photo	Model	Description	Size	Data Sheet
	PVV, PVQ	Fixed Vane Pumps Hydraulics Application: Fixed Displacement operations	Sizes 18 to 193	RE 10 335
	PVC	Variable Vane Pump Hydraulics Application: Subplate and Flange Mounted operation		RA 10 336
	PV7	Variable Vane Pump Hydraulics Application: Variable displacement, pilot operated	Sizes 14 to 150	RE 10 515
	PV7	Variable Vane Pump Hydraulics Application: Variable displacement, direct operated	Sizes 10 to 25	RE 10 522

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Vane Pump Catalog and Guides				
Product Photo	Model	Description		Catalog
	16, 25, 32, 45, 63, 80, 100, 130, 164	Variable Vane Pumps Get all the information you need on Whisper™ Vane Pumps with the VPV Whisper Catalog.	VPV Catalog VPV SAE Guide VPV Metric Guide	9 535 233 724 9 535 233 782 9 535 233 785
	VPV	Controls		9 535 233 922
	VPV	Service Guide		9 535 233 872

Engineering Data		
Model	Description	Data Sheet
SV-10 and SV-15	Variable Volume Vane Pumps Engineering Data	9 535 233 084
SV-20 and SV-25	Variable Volume Vane Pumps Engineering Data	9 535 233 089
SV-40	Variable Volume Vane Pumps Engineering Data	9 535 233 090
SV-80 and SV-100	Variable Volume Vane Pumps Engineering Data	9 535 233 091

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Hydraulic Pumps



Hydraulic Radial Piston Pumps *High Pressure Capacity Pumps*

Available in multiple piston variations, Bosch Rexroth fixed displacement radial piston pumps offer high pressure capability, in excess of 9,000psi/600 bar. Single bank piston arrangements are possible for (3) and (5) pistons models, while a “double bank” version incorporates (10) pistons. Outlet ports for the radial piston pumps can be combined or individual, permitting greater flexibility in separating functions from a single pump source. Displacements begin at 1.5cc/rev with 14 models spanning displacement up to 19.4cc/rev. The fixed displacement radial piston pump from Bosch Rexroth provides the perfect solution for applications where high pressure is the criteria.

Click the data sheet numbers to open the PDF file.

Radial Piston Pumps				
Product Photo	Model	Description	Size	Data Sheet
	R4	Mini Radial Piston Pump Hydraulic Application: Fixed Displacement operation	Sizes 0.4 to 2.0	RA 11 260
	PR4	Radial Piston Pump Hydraulic Application: Fixed Displacement operation	Sizes 1.6 to 20.0	RA 11 263

Engineering Data		
Model	Description	Data Sheet
80L, 80M, 80H	Radial Piston Pumps Hydraulic Application: Fixed Displacement operation	9 535 233 077
EO55	Radial Piston Pumps Hydraulic Application: Fixed Displacement operation	9 535 233 080
20L, 20H	Radial Piston Pumps Hydraulic Application: Fixed Displacement operation	9 535 233 081

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General Information

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General Information	
Description	Data Sheet
Petroleum oil based fluids for use with pumps and motors	RE 07 075
General operating notes for external gear units	RE 07 012-B1
Hydraulic fluid on a petroleum oil base for axial piston units	RE 90 220
Hydraulic fluids on a mineral oil basis for axial piston units	RE 90 220-1
Environmentally acceptable hydraulic fluids HETG, HEPG, HEE for axial piston units	RE 90 221
Water-based and synthetic fire resistant fluids for axial piston units	RE 90 223
Installation notes for axial piston units (Hydromatik products)	RA 90 270
Installation notes for axial piston units (Brueninghaus products)	RA 90 400
Rexroth Hydraulics Warranty policy and procedures	RA 09 637

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