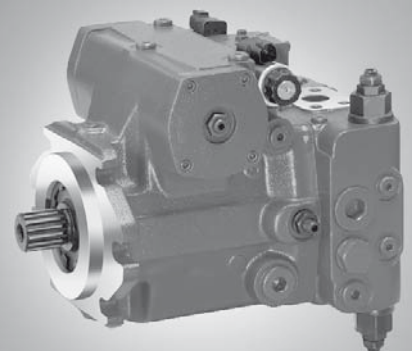


Axial Piston Variable Pump A4VG

RE 92003/06.09
Replaces: 03.09**1/64**

Data sheet

Series 32
Sizes 28...250
Nominal pressure 400 bar
Peak pressure 450 bar
Closed circuit



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Features

- Variable axial piston pump of swashplate design for hydrostatic closed circuit transmissions
- Flow is proportional to drive speed and displacement and is infinitely variable
- Output flow increases with the swivel angle of the swashplate from 0 to its maximum value
- Flow direction changes smoothly when the swashplate is moved through the neutral position
- A wide range of highly adaptable control devices is available for different control and regulating functions
- The pump is equipped with two pressure-relief valves on the high pressure ports to protect the hydrostatic transmission (pump and motor) from overload
- The high-pressure relief valves also function as boost valves
- The integrated boost pump acts as a feed and control oil pump
- The maximum boost pressure is limited by a built-in boost pressure relief valve
- The integral pressure cut-off is standard

Ordering Code / Standard Program

[illegible]

Axial piston unit

01	Variable swashplate design, nominal pressure 400 bar, peak pressure 450 bar	A4V
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Operation mode

02	Pump in closed circuit	G
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Size

03	$\approx$ Displacement $V_{q \max}$ in cm^3	28	40	56	71	90	125	180	250
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Control device

Control device			28	40	56	71	90	125	180	250			
04	Without control unit		●	●	●	●	●	●	●	NV			
	Hydraulic control	pilot-pressure related with supply filtration	●	●	●	●	●	●	●	●	HD3		
		mechanical servo	●	●	●	●	●	●	●	●	HW		
		direct operated	●	●	●	●	●	●	●	●	DG		
		speed related (Description DA control valve in Pos. 09)	U = 12 V DC	●	●	●	●	●	●	●	●	DA1	
			U = 24 V DC	●	●	●	●	●	●	●	●	DA2	
	Electric control	with proportional solenoid with supply filtration	U = 12 V DC	●	●	●	●	●	●	●	●	EP3	
			U = 24 V DC	●	●	●	●	●	●	●	●	EP4	
		with switching solenoid	U = 12 V DC	●	●	●	●	●	●	●	●	●	EZ1
			U = 24 V DC	●	●	●	●	●	●	●	●	●	EZ2

Pressure cut-off

[illegible]

Neutral position switch (only for HW)

[illegible]

Mechanical stroke limiter

	Mechanical stroke limiter	28	40	56	71	90	125	180	250
07	Without mechanical stroke limiter (without code)	●	●	●	●	●	●	●	
	With mechanical stroke limiter, external variable	●	●	●	●	●	●	●	M

Ports X_3 , X_4 for positioning pressure

[illegible]

DA control valve

DA control valve		NV	HD1	HW	DG	DA	EP	EZ	
09	Without DA control valve	●	●	●	●	–	●	●	1
	With DA control valve, fixed setting	–	●	●	●	●	●	–	2
	With DA control valve, mech. Actuating direction - clockwise	–	●	●	●	●	●	–	3R
	adjustable with position lever Actuating direction - counterclockwise	–	●	●	●	●	●	–	3L
	With DA control valve, fixed setting and hydraulic inch valve mounted, control with brake fluid according to ISO 4925, no mineral oil	–	–	–	–	●	–	–	4
	With DA control valve, fixed setting and ports for pilot control device	–	●	●	●	●	●	–	7
	With DA control valve, fixed setting and hydraulic inch valve mounted control with brake fluid based on mineral oil	–	–	–	–	●	–	–	8

Ordering Code / Standard Program

A4V	G			D					/	32		-	N										
01	02	03	04	05	06	07	08	09		10	11		12	13	14	15	16	17	18	19	20	21	22

Series

10	Series 3, Index 2	32
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Direction of rotation

11	Viewed from shaft end	clockwise	R
		counterclockwise	L

Seals

12	NBR (nitrile-caoutchouc), shaft seal ring in FKM (fluor-caoutchouc)	N
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Shaft end (permissible input torque see page 8)

Shaft end (permissible input torque see page 8)			28	40	56	71	90	125	180	250	
13	Splined shaft DIN 5480	for single pump	●	●	●	●	●	●	●	●	Z
		for combination pump - 1st pump	– 1)	●	●	●	●	●	– 1)	– 1)	A
	Splined shaft ANSI B92.1a–1976	for single pump	●	●	●	●	●	●	●	●	S
		for combination pump - 1st pump	– 2)	– 2)	●	●	– 2)	●	●	●	T
		only for combination pump - 2nd pump	–	●	–	–	●	–	–	–	U

Mounting flange

Mounting flange		28	40	56	71	90	125	180	250	
14	SAE J744 – 2-bolt	●	●	●	–	–	–	–	–	C
	SAE J744 – 4-bolt	–	–	–	–	–	–	●	●	D
	SAE J744 – 2+4-bolt	–	–	–	●	●	●	–	–	F

Service line ports (metric fixing thread)

Service line ports (metric fixing thread)			28	40...180	250
15	SAE flange ports		–	●	–
	A/B top and bottom		–	○	–
	right	suction port S bottom	●	–	●
	left	suction port S at top	○	–	○

Boost pump

[illegible]

Through drive (mounting options, see page 53)

17	Flange SAE J744 ³⁾	Hub for splined shaft		28	40	56	71	90	125	180	250	
	82-2 (A)	5/8 in	9T 16/32DP ⁴⁾	●	●	●	●	●	●	●	.01	
	101-2 (B)	7/8 in	13T 16/32DP ⁴⁾	●	●	●	●	●	●	●	.02	
		1 in	15T 16/32DP ⁴⁾	●	●	●	●	●	●	●	.04	
	127-2 (C)	1 in	15T 16/32DP ⁴⁾	—	●	—	—	—	—	—	.09	
		1 1/4 in	14T 12/24DP ⁴⁾	—	—	●	●	●	●	●	.07	
	152-2/4 (D)	W35	2x30x16x9g ⁵⁾	—	—	—	—	●	—	—	.73	
		1 3/4 in	13T 8/16DP ⁴⁾	—	—	—	—	—	●	●	●	.69
	165-4 (E)	1 3/4 in	13T 8/16DP ⁴⁾	—	—	—	—	—	—	●	●	.72

Ordering Code / Standard Program

A4V	G			D					/	32		-	N										
01	02	03	04	05	06	07	08	09		10	11		12	13	14	15	16	17	18	19	20	21	22

Valves		setting range Δp	28	40	56	71	90	125	180	250	
18	With high-pressure relief valve, pilot operated	100...420 bar with bypass	–	–	–	●	●	●	●	●	1
	With high-pressure relief valve, direct operated (fixed setting)	270...420 bar without bypass	●	●	●	–	–	–	–	–	3
		with bypass	●	●	●	–	–	–	–	–	5
		100...250 bar without bypass	●	●	●	–	–	–	–	–	4
	with bypass	●	●	●	–	–	–	–	–	6	

Filtration		28	40	56	71	90	125	180	250
19	Filtration in the suction line of boost pump (filter not included in supply)	●	●	●	●	●	●	●	S
	Filtration in pressure line of boost pump ports for external boost circuit filtration, (F _e and F _a)	●	●	●	●	●	●	●	D
	and cold start valve	–	●	●	●	●	●	●	K
	Filter mounted with cold start valve but without contamination indicator	–	●	●	●	●	●	●	F
	Filter mounted with cold start valve and window	–	●	●	●	●	●	●	P
	contamination indi- cator through: electr. signal - DEUTSCH connector	–	●	●	●	●	●	●	B
	External supply (version without integral boost pump - N00, K..)	●	●	●	●	●	●	●	E

	Swivel angle indicator	28	40	56	71	90	125	180	250
20	Without swivel angle indicator (without code)	●	●	●	●	●	●	●	
	Electric swivel angle sensor	●	●	●	●	●	●	●	R

[illegible]

Standard / special version ⁶⁾			
22	Standard version	without code	
		combined with attachment part or attachment pump	-K
	Special version		-S
		combined with attachment part or attachment pump	-SK

1) Standard for combination pump – 1st pump: shaft **Z**

²⁾ Standard for combination pump – 1st pump: shaft **S**

³⁾ 2 = 2-bolt; 4 = 4-bolt

⁴⁾ Hub for splined shaft acc. to ANSI B92.1a-1976 (splined shaft assigned acc. to SAE J744, see page 50-52)

⁵⁾ Hub for splined shaft acc. to DIN 5480

⁶⁾ Adjustment data are included in the material number

● = available ○ = on request – = not available

 = preferred program