Axial Piston Pumps, Variable Displacement, for Closed Circuit, Series 24 3

With integrated valve technique for the closed circuit, preferably used for mobile drives

Nominal size	50/40	63/40	100/40
Capacity, cm^3	42.1	70.7	100.2
Maximum operating pressure, bar	400	400	400
Maximum speed, r.p.m.	3400	3200	2500

- Servocontrol mechanism with mechanical, hydraulic or electrohydraulic control
- Optional with internal or flanged gear pump, also without gear pump (for external supply)
- Direction of rotation anticlockwise or clockwise
- SAE-flanged ports

Axial Piston Pumps, Variable Displacement, for Open Circuit, Series 24 3

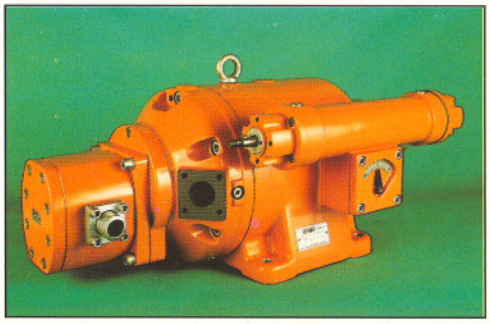
Nominal size	50/40	63/40	100/40
Capacity, cm^3	47.1	70.7	100.2
Maximum operating pressure, bar	400	400	400
Maximum speed, r.p.m.			
• self-priming	2000	1800	1600
• with upstream pressure	3400	2900	2500

- Servocontrol mechanisms with mechanical, hydraulic or electrohydraulic control
- Two-position control mechanism: hydraulic or electrohydraulic control via directional control valve
- Pressure constant regulator as well as torque constant regulator
- Optional with one or two flanged gear pumps
- Direction of rotation anticlockwise or clockwise
- SAE-flanged ports

Axial Piston Pumps, Variable Displacement, for Open and Closed Circuit Series 21 3

Nominal size	200/20	500/16	800/16
Capacity, cm^3	184	460	730
Maximum operating pressure, bar	250	200	200
Maximum speed, r.p.m.			
• self-priming	1100	950	–
• with upstream pressure	1500	1200	1100

- Mechanical and hydraulic control mechanisms, servocontrol mechanism with hydraulic control, pressure control unit with steep pressure compensation characteristic
- Optional with one or two flanged gear pumps, gear pump on side A or B
- Shaft end on side A or B
- Direction of rotation anticlockwise or clockwise



Radial Piston Pumps with One Flow Variable Displacement for Open and Closed Circuit – Slipper Version 3

Nominal Size	50/35	80/35	110/25
Capacity, cm^3	50	80	110
Maximum operating pressure, bar	350	350	250
Speed, r.p.m.			
• minimum	500	500	500
• maximum	1800	1800	1800

- Mechanical, electromechanical, hydraulic and electrohydraulic control mechanisms
- Servocontrol mechanisms, pressure control units, fixed setting
- Drive bearing with optionally up to two gear pumps
- Pressure relief valve for low pressure
- Foot or flange mounting
- Flanged pumps also as combination with intermediate flange and electric motor
- Direction of rotation anticlockwise or clockwise

Radial Piston Pumps with One Flow, Variable Displacement, for Open and Closed Circuit 3

Nominal size	12.5/16	32/16	80/16	125/16	5/32	12.5/32	32/32	80/32
Capacity, cm^3	11.6	29.1	72.5	116.0	4.8	12.2	30.6	76.6
Maximum operating pressure, bar	200	200	200	200	400	400	350	350
Speed, r.p.m.								
• minimum	500	500	500	500	500	500	500	500
• maximum	2000	2000	2000	1500	2000	2000	2000	1500

- Mechanical, electromechanical, hydraulic and electrohydraulic control mechanisms
- Servocontrol mechanisms, pressure control units, fixed setting
- Drive bearings with optionally up to two gear pumps
- Pressure relief valve for low pressure
- Foot or flange mounting
- Flanged pumps also as combination with intermediate flange and electric motor
- Direction of rotation anticlockwise or clockwise

Radial Piston Pumps with Two Flows, Variable Displacement for Open and Closed Circuit 3

Nominal size	5–5/16	32–32/16	125–125/16	160–160/10
Capacity, cm^3	each 5	each 30	each 112	each 160
Maximum operating pressure, bar	200	200	200	160
Speed, r.p.m.				
• minimum	500	500	500	500
• maximum	1500	1500	1500	1000

- Both the flow rates can be controlled independent of each other or synchronously
- Mechanical, electromechanical, hydraulic and electrohydraulic control mechanisms
- Servocontrol mechanisms, pressure control units, fixed setting
- Pressure relief valve for low pressure
- Drive bearings with optionally up two gear pumps
- Construction as single pump or as combination with intermediate flange and electric motor
- Direction of rotation anticlockwise or clockwise

Radial Piston Pumps with Two Flows, Fixed Displacement 3

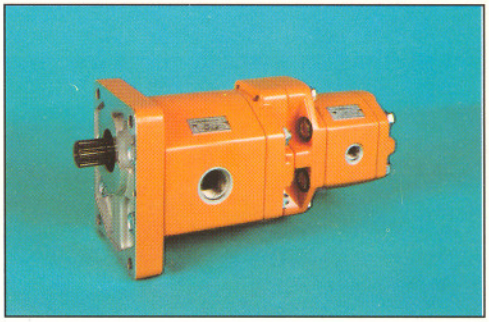
Self-priming pump, especially suited for agricultural machinery industry and tractor building

Nominal size	8–40/16
Capacity, cm^3	8 and 32
Maximum operating pressure, bar	160
Speed, r.p.m.	
• minimum	500
• maximum	1700

- Direction of rotation, clockwise

Gear Pumps, Single-Flow and Multi-Flow Types, Series 15

3



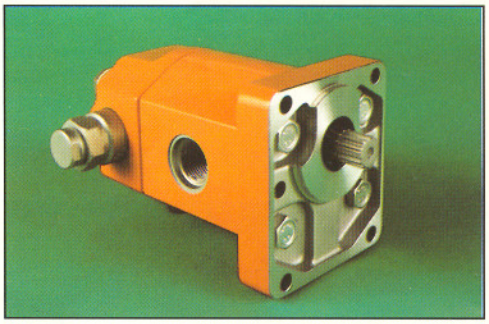
Size	Nominal Size	Capacity cm^3	Maximum Operating Pressure bar	Speed Range[1] r.p.m.
	1/20	1	250	960–4000
1	1.6/20	1.6	250	960–4000
	2.5/20	2.5	250	960–4000
	4/16	4	200	960–4000
	4/20	4	250	600–4000
	6.3/20	6.3	250	600–4000
2	10/20	10	250	600–4000
	12/20	12.5	210	600–4000
	16/16	16	170	600–4000
	12.5/20	12.5	250	600–3000
	16/20	16	250	600–3000
3	20/20	20	250	600–3000
	25/20	25	250	600–3000
	32/20	32	210	600–3000
	33/20	33	250	480–2400
	40/20	40	250	480–2400
4	50/20	50	250	480–2400
	63/20	63	210	480–2400
	80/16	80[2]	170	480–2400

1) Maximum speed of multi-flow pumps is 80 % of the stated value
2) Not as multi-flow pump

- Completion with intermediate flange, flexible gear rim coupling and electric motor
- Series with internationally usual connecting dimensions
  - Series T: port system – formerly TGL 37069
  - Series C: German port system – screwing-through mounting
  - Series D: German port system – flange mounting
  - Series E: English port system – flange mounting
  - Series A: SAE-port system
- Delivery of front or intermediate bearings as accessory
- Direction of rotation anticlockwise or clockwise
- Gear motors, reversible direction of rotation, can be used as pumps for alternating direction of rotation (restricted operating conditions)

Gear Pumps with Built-In Valve, with Limited Flow and Pressure, Series 15

3



Gear pump – combined with pressure-compensated flow control – pressure relief valve for the achieving of a speed-independent flow rate and pressure limitation in the operating system – especially suited for steering hydraulics

Nominal size	16/16.8	16/16.12	20/16.12
Capacity, cm^3	16	16	20
Output flow rate, metered, dm^3/min	16	16	16
Setting pressure, bar	80	120	120
Speed, r.p.m.			
• minimum	500	500	500
• maximum	3200	3200	2500
Metering range, r.p.m.	1200 to 3200	1200 to 3200	1000 to 2500

- Further nominal sizes and valve assignments are possible
- Port systems according to our gear pumps series 15 as well as dimensions for steering hydraulics usual in Europe
- Delivery of front and intermediate bearings as accessory

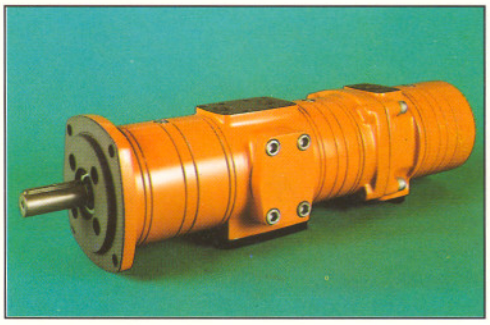
Gear Pumps with Built-In Valve, with Limited Flow (IWKN 07159)

3

Nominal size	16/16.01–120
Capacity, cm^3	16
Max. setting, pressure, bar	170
Speed range, r.p.m.	600 to 2500

- Further nominal sizes and valve assignments are possible
- Port systems according to our gear pumps series 15
- Delivery of front and intermediate bearings as accessory

Cam Rotor Pumps



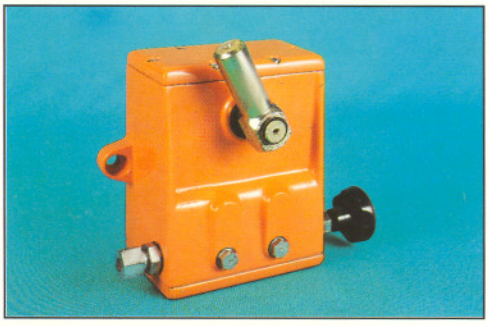
Cam Rotor Pumps, Single-Flow and Multi-Flow Types 3

Self-priming, near-silent hydraulic pump with constant, low-pulsating rate of flow

Nominal sizes	6.3; 8; 10; 12.5; 16; 20; 25; 32; 40; 50
Capacity, cm^3	≙ nominal size
Maximum operating pressure, bar	230
Speed, r.p.m.	
• minimum	700
• maximum	2500
Loadability in dynamic pressure (number of the pressure loadings/min)	≦ 120

- Single-flow and double-flow type cam rotor pumps can be delivered combined with gear pumps of smaller capacity
- Construction as single unit or as combination with coupling flange and electric motor
- Anticlockwise direction of rotation
- SAE-flanged ports

Hand Piston Pumps



Piston Pumps 5

Single-Stage Design

Rated pressure (nominal size)	63; 160; 320; 630 bar
Capacity	63; 25; 10; 4 cm^3/double stroke

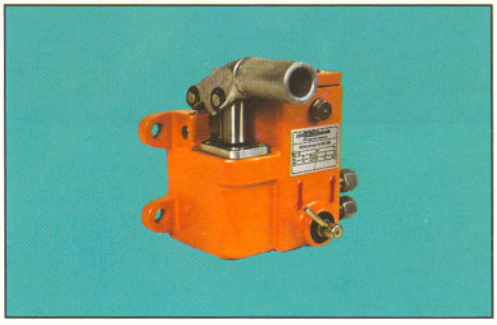
Two-Stage Design

Rated pressure (nominal size)	63/160; 63/320; 63/630 bar
Capacity	63/25; 63/10; 63/4 cm^3/double stroke

- Completable with reservoir (pump unit)

Piston Pumps 16

Rated pressure	160 bar
Capacity	10 cm^3/double stroke
Container contents	0.5 dm^3



Piston Pumps (light-weight construction) 5

Single-stage design (HA)

Rated pressure (nominal size)	63; 160; 320 bar
Capacity	32; 12.5; 6.3 cm^3/double stroke

Two-stage design (HB)

Rated pressure (nominal size)	63/160; 63/320; 63/630 bar
Capacity	40/12.5; 40/6.3; 32/1.6 cm^3/double stroke

- Completable with reservoir (pump unit)