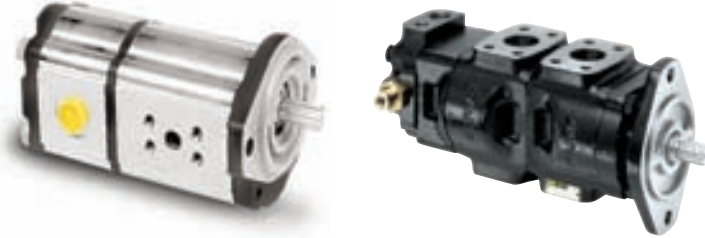


Pumps - Fixed Displacement

Gear

PGP 500, 600



- Superior performance
- High efficiency
- Low noise operation at high operating pressures
- International mounts and connections
- Integrated valve capabilities
- Common inlet multiple pump configurations



Frame size PGP 505	0030	0040	0060	0080	0100	0120
Displacement (cm ³ /rev)	3	4	6	8	10	12
Max cont pressure (bar)	275	275	275	275	250	220
Max operating speed (rpm)	4000	4000	3600	3000	2800	2400
Input power (kW)	2.3	3.0	4.5	6.0	6.9	7.5
Weight (kg)	2.22	2.27	2.38	2.48	2.58	2.68

Frame size PGP 511	0060	0080	0100	0110	0140	0160	0190	0230	0270	0310	0330
Displacement (cm ³ /rev)	6	8	10	11	14	16	19	23	27	31	33
Max cont pressure (bar)	250	250	250	250	250	250	250	225	190	165	155
Max operating speed (rpm)	3500	3500	3500	3500	3500	3500	3250	2750	2350	2100	2000
Input power (kW)	4.5	6.0	7.5	8.3	10.5	12.0	14.3	14.7	14.9	16.7	17.3
Weight (kg)	3.40	3.47	3.55	3.57	3.71	3.79	3.91	4.06	4.21	4.37	4.45

Frame size PGP 517	0140	0160	0190	0230	0250	0280	0330	0380	0440	0520	0700
Displacement (cm ³ /rev)	14	16	19	23	25	28	33	38	44	52	70
Max cont pressure (bar)	250	250	250	250	250	250	250	250	220	200	160
Max operating speed (rpm)	3400	3400	3300	3300	3100	3100	3000	3000	2800	2700	2400
Input power (kW)	9.6	11.0	13.1	15.8	17.2	19.3	22.7	26.1	27.0	28.6	31.2
Weight (kg)	7.92	8.00	8.12	8.29	8.37	8.50	8.70	8.91	9.16	9.49	10.24

Frame size PGP 620	0160	0190	0210	0230	0260	0290	0330	0360	0410	0440	0460	0500	0520
Displacement (cm ³ /rev)	16.0	19.0	21.0	23.0	26.0	29.0	33.0	36.0	41.0	44.0	46.0	50.0	52.0
Max cont pressure (bar)	275	275	275	275	275	275	275	250	220	210	210	210	210
Max operating speed [rpm]	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3000	3000
Weight (kg)	12.0	12.1	12.1	12.2	12.3	12.6	12.7	12.8	13.0	13.1	13.2	13.3	13.4

Frame size PGP 640	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Displacement (cm ³ /rev)	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0
Max cont pressure (bar)	310	310	310	310	310	310	290	265	245	225	210
Max operating speed [rpm]	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Weight (kg)	21.0	21.0	22.0	22.0	23.0	23.0	24.0	24.0	25.0	25.0	25.0

Pumps - Fixed Displacement

Gear

GPA



- Low noise
- High efficiency
- Bi-rotational
- Compact design
- Low weight / Aluminium body
- Pressure and suction connection in the rear and on the side



Frame Size GPA	008	012	016	019
Displacement (cm ³ /rev)	8	12	16	19
Max cont pressure (bar)	250	250	250	230
Max operating speed (rpm)	2000	2000	2000	2000
Weight (kg)	4.6	4.8	5.1	5.3

GP1



- Low noise
- High efficiency
- Bi-rotational
- Exceptional durability
- Compact design
- Low weight
- Pressure and suction connection in the rear or on the side



Frame Size GP1	016	019	023	029	036	041	046
Displacement (cm ³ /rev)	16	19	23	29	36	41	46
Max cont pressure (bar)	270	260	250	240	230	210	200
Max operating speed (rpm)	2000	2000	2000	2000	2000	2000	2000
Weight (kg)	6.0	6.3	6.7	7.1	7.5	7.8	8.1

Pumps - Fixed Displacement

Vane – SAE

Single



- 275 bar max pressure for T6CM. 240 bar for T6DM & T6EM
- Silent technology even under high pressure
- Wide range of displacements
- User friendly = easy conversions & evolutions
- Wide number of shafts available (SAE, ISO & specials)
- Double shaft seal option possible (T6CP, T6DP & T6EP)
- Rear drive train options available (SAE A, SAE B or SAE C)

DENISON®



Frame size TB	003	004	005	006	008	009	011	012
Displacement (cm ³ /rev)	8.8	12.8	16.0	20.7	26.1	31.5	35.6	39.7
Max cont pressure (bar)	175	175	175	175	175	175	175	175
Max operating speed ¹ (rpm)	3500	3500	3400	3400	3300	3300	3200	3200
Input power ² (kW)	3.3	5.8	7.2	9.2	11.5	13.9	15.7	17.5
Weight (kg)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0

Frame size T6CM	B03	B05	B06	B08	B10	B12	B14	B17	B20	B22	B25	B28	B31
Displacement (cm ³ /rev)	10.8	17.2	21.3	26.4	34.1	37.1	46.0	58.3	63.8	70.3	79.3	88.8	100.0
Max cont pressure (bar)	240	240	240	240	240	240	240	240	240	240	240	160	160
Max operating speed ¹ (rpm)	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2500	2500	2500
Input power ² (kW)	5.3 ³	12.2	14.7	17.7	22.3	24.1	29.5	36.9	40.2	44.1	49.5	48.5 ⁴	54.4 ⁴
Weight (kg)	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7

Frame size T6DM	B14	B17	B20	B24	B28	B31	B35	B38	B42	B45	B50
Displacement (cm ³ /rev)	47.6	58.2	66.0	79.5	89.7	98.3	111.0	120.3	136.0	145.7	158.0
Max cont pressure (bar)	210	210	210	210	210	210	210	210	210	210	160
Max operating speed ¹ (rpm)	2500	2500	2500	2500	2500	2500	2500	2500	2200	2200	2200
Input power ² (kW)	30.6	37.0	41.7	49.8	55.9	61.0	68.7	74.3	83.7	89.5	85.0 ⁴
Weight (kg)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0

Frame size T6EM	042	045	050	052	054	057	062	066	072
Displacement (cm ³ /rev)	132.3	142.4	158.5	164.8	171.0	183.3	196.7	213.3	227.1
Max cont pressure (bar)	210	210	210	210	210	210	210	210	210
Max operating speed ¹ (rpm)	2200	2200	2200	2200	2200	2200	2200	2200	2200
Input power ² (kW)	82.6	88.7	98.3	102.1	105.8	113.2	121.3	131.2	139.5
Weight (kg)	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3

1) Shaft speed for petroleum based fluids. For higher speeds, please contact Parker

2) 1500 rpm at 240 bar (except TB at 175 bar)

3) 140 bar

4) 210 bar max

Double



- Very low noise
- SAE or ISO standards
- One piece shaft (no internal torque limitations)
- Single common inlet
- 32 porting orientations available, 16 different double pump frames
- 819 displacement possibility (from 10.8 to 227.1 cm³/rev) with a max displacement of 454.2 cm³/rev
- Displacement combinations with above T6CM – T6DM & T6EM
- High power to weight ratio
- Wide range of options available = different shafts, threads, pilots
- Double shaft seal option available (T6CCP, T6DCP, T6ECP & T6EDP)
- Special shafts for tractors (J718c) T6CCMW, T6DCMW, T6ECM & T6EDM)

Triple



- Very low noise
- Single common inlet
- 128 porting orientations available
- 6766 displacement combinations (from 10.8 to 227.1 cm³/rev) with a max displacement of 552 cm³/rev
- One piece shaft (no internal torque limitation)
- High power to weight ratio
- 15 different triple pump frames available



Pumps - Fixed Displacement

Vane

Single & Double



- Special PTO shaft DIN 5462
- Silent technology
- Designed for radial load capability
- Flexibility in the porting
- Two pilot options = 4 bolts Ø 80.0 or 3 bolts Ø 52.0
- Maximum working pressure 275 bar
- Double pump available (T6GCC)

DENISON®



Frame size T6GC - T6ZC	B03	B05	B06	B08	B10	B12	B14	B17	B20	B22	B25	B28	B31
Displacement (cm ³ /rev)	10.8	17.2	21.3	26.4	34.1	37.1	46.0	58.3	63.8	70.3	79.3	88.8	100.0
Max cont pressure (bar)	240	240	240	240	240	240	240	240	240	240	240	160	160
Max operating speed ¹ (rpm)	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2500	2500	2500
Max input power ² (kW)	-	12.2	14.7	17.7	22.3	24.1	29.5	36.9	40.2	44.1	49.5	48.5	54.4
Weight (kg)				T6GC = 18.0			T6ZC = 14.0			T6GCC = 27.2			

1) Shaft speed for petroleum based fluids. For higher speeds, please contact Parker Denison

2) 1500 rpm at 240 bar

Vane – Cardan Shaft

Double – T6CCZ



- High radial & axial loads capabilities
- 3 different keyed shafts available
- One inlet
- Displacements = on P1 from 10 to 100 cm³/rev & P2 from 10 to 100 cm³/rev
- Pressure: up to 275 bar on P1 & P2

Axial Piston & Fixed Vane Combination

Double & Triple



- Variable piston & vane pump combination
- Wide range of displacements:
 - Variable piston unit of 42 cm³/rev (SAE B) or 62 cm³/rev (SAE C)
 - Vane unit from 6 cm³/rev to 158 cm³/rev
- One inlet, one shaft (no internal torque limitations)
- Pressure controls (standard, ventable & ventable by electronic valve, load sensing)
- Very compact unit
- Splined & keyed shafts available
- 10 frame size available

Pumps

Motors

Valves

Actuators

Accumulators

Filtration

Fluid Analysis

Compact Hydraulics

Fluid Connectors



Pumps - Fixed Displacement

Axial Piston

F1



- Intermittent pressures up to 400 bar
- High power capability
- High shaft speed
- Low weight
- Bi-directional
- Volumetric efficiency 98 %
- Also SAE-B available sizes 25 up to 61



Frame size F1	25	41	51	61	81	101
Displacement (cm ³ /rev)	25.6	40.9	51.1	59.5	81.6	102.9
Max cont pressure (bar)	350	350	350	350	350	350
Max operating speed* (rpm)	2700	2700	2700	2700	2300	2300
Max operating speed** (rpm)	2600	2400	2200	2200	2000	1800
Input torque at 350 bar (Nm)	142	227	284	331	453	572
Max cont input power (kW)	31	46	52	61	76	86
Weight (kg)	8.5	8.5	8.5	8.5	12.5	12.5

* Unloaded pump (BPV)

** In service 350 bar

F2



- Twin Flow / Dual displacement
- High power capability
- High shaft speed
- Easy to install
- Smart System Solutions
- Proven reliability



Frame size F2	42/42	55/28	53/53	70/35	70/70
Displacement (cm ³ /rev)	43/41	54/52	55/28	69/36	68/68
Max cont pressure (bar)	350	350	350	350	300
Max operating speed* (rpm)	2550	2550	2550	2550	2550
Max operating speed** (rpm)	1800	1800	1800	1800	1650
Input torque at 350 bar (Nm)	467	461	589	583	648
Max cont input power (kW)	88	88	110	110	112
Weight (kg)	19	19	19	19	19

* Unloaded pump (BPV)

** In service 350 bar

T1



- Pressures up to 350 bar
- Shaft speed to 2300 rpm
- High overall efficiency
- Bi-directional
- Proven reliability



Frame size T1	51	81	121
Displacement (cm ³ /rev)	50.0	81.5	118.5
Max cont pressure (bar)	200	200	200
Max operating speed* (rpm)	2300	2300	2300
Max operating speed** (rpm)	2100	2000	1600
Input torque at 200 bar (Nm)	158	258	375
Max cont input power (kW)	27	54	71
Weight (kg)	7.2	8.5	12.5

* Unloaded pump (BPV)

** In service 350 bar

Pumps - Fixed Displacement

Axial Piston

F11



- Pressures up to 420 bar
- High overall efficiency (low losses)
- Accept high external shaft loads
- Good resistance to vibrations and temperature shocks
- Proven reliability
- Easy to service
- CETOP, ISO and SAE versions available



Frame size* F11	05	10	12	14	19	150	250
Displacement (cm ³ /rev)	4.9	9.8	12.5	14.3	19.0	150.0	242.0
Max cont pressure (bar)	350	350	350	350	350	350	350
Max operating speed (rpm)	4600	4200	4000	3900	3500	1700	1500
Weight (kg)	5	7.5	8.2	8.3	11	70	77

* Use F12 for medium range displacement

F12



- Pressures up to 480 bar
- Very high power capability
- High overall efficiency
- Small envelope size
- ISO, SAE and cartridge versions available
- Proven reliability
- Easy to service



Frame size F12	30	40	60	80	90	110	125
Displacement (cm ³ /rev)	30.0	40.0	59.8	80.4	93.0	110.1	125
Max cont pressure (bar)	420	420	420	420	350	420	420
Max operating speed (rpm)	3150	2870	2500	2300	2300	2200	2100
Weight (kg)	12	16.5	21	26	26	36	36

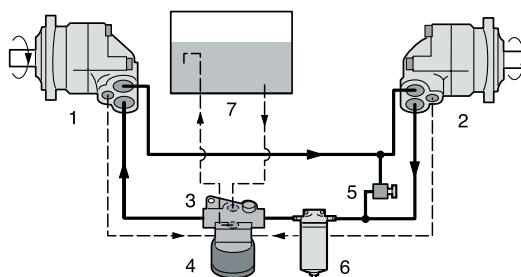
Boost Unit

BLA



The boost unit provides filtration and make-up fluid to replace pump and motor volumetric losses, while maintaining sufficient pump inlet pressure to avoid cavitation. The semi-closed system could be built with a smaller and lighter reservoir at the same time as, the pump speed is possible to increase. The Boost Units BLA are available in two different sizes:

BLA 4 for flow 25–160 litres per minute,
BLA 6 for flow 150–400 litres per minute.



1. Pump
2. Motor
3. Boost unit (with injector and nozzle)
4. Filter cartridge
5. Pressure relief valve
6. Full-flow filter (when required)
7. Reservoir

Pumps - Variable Displacement

Axial Piston

VP1 – Truck



- Intermittent pressure up to 400 bar
- Suitable for all load-sensing systems
- Splined shaft DIN 5462
- Light and compact
- Mounting flange and shaft meet the ISO Standard
- Strong and reliable
- Less energy – less fuel – less heat



Frame size* VP1	45	75	95	120
Displacement (cm ³ /rev)	45	75	95	120
Max cont pressure (bar)	350	350	400	360
Max operating speed (rpm)	2400*	2200*	2200**	1900*
Input power (kW)	63	96	139	137
Weight (kg)	27	27	27	27

* 2 1/2" suction line ** 3" suction line

P2 / P3



- Designed for mobile applications
- High self priming speed
- Unique port layout
- Quiet operation
- Reduced flow and pressure ripple
- Easy to install
- Service friendly



Frame size P2	060	075	105	145		P3	105	145
Displacement (cm ³ /rev)	60	75	105	145			105	145
Max cont pressure (bar)	320	320	320	320			320	320
Max operating speed (rpm)	2800	2500	2300	2200			2600	2500
Weight (kg)	37	44	63	78			62	76

PV



- High strength cast iron housing
- Modular controls concepts
- Large servo pistons for fast response
- Thru-drive for 100 % nominal torque
- 9 piston design
- Multiple pressure control
- SAE and metric mounting features
- Reduced flow and pressure ripple
- Service-friendly



Frame size PV	16	20	23	28	32	40	46	63	80	92	140	180	270
Displacement (cm ³ /rev)	16	20	23	28	32	40	46	63	80	92	140	180	270
Max cont pressure (bar)	350	350	350	350	350	350	350	350	350	350	350	350	350
Max operating speed (rpm)	3000	3000	3000	3000	2800	2800	2800	2800	2500	2300	2400	2200	1800
Input power (kW)	15.5	19.5	22.5	24.5	31	39	45	61.5	78	89.5	136	175	263
Weight (kg)	19	19	19	19	30	30	30	60	60	60	90	90	172

P1



- Compact overall package size for easy installation
- Quiet operation
- High flexibility by various thru drive and remote control options
- Easy to service



Frame size P1	060	075	100	140
Displacement (cm ³ /rev)	60	75	100	140
Max cont pressure (bar)	280	280	280	280
Max operating speed (rpm)	2400	2300	2100	2000
Weight (kg)	30	31	55	67