

PSS

Series 600 Pump



ENGINEERING EXCELLENCE

Series 600 Pump

The Series 600 power assisted steering pump has been developed for today's automotive industry. Constructed in cast iron and aluminium, the Series 600 is robust and durable. Inherently flexible, extremely compact and lightweight, the pump optimises performance for all types of commercial vehicles, from vans to heavy duty trucks, road trains, buses and coaches.

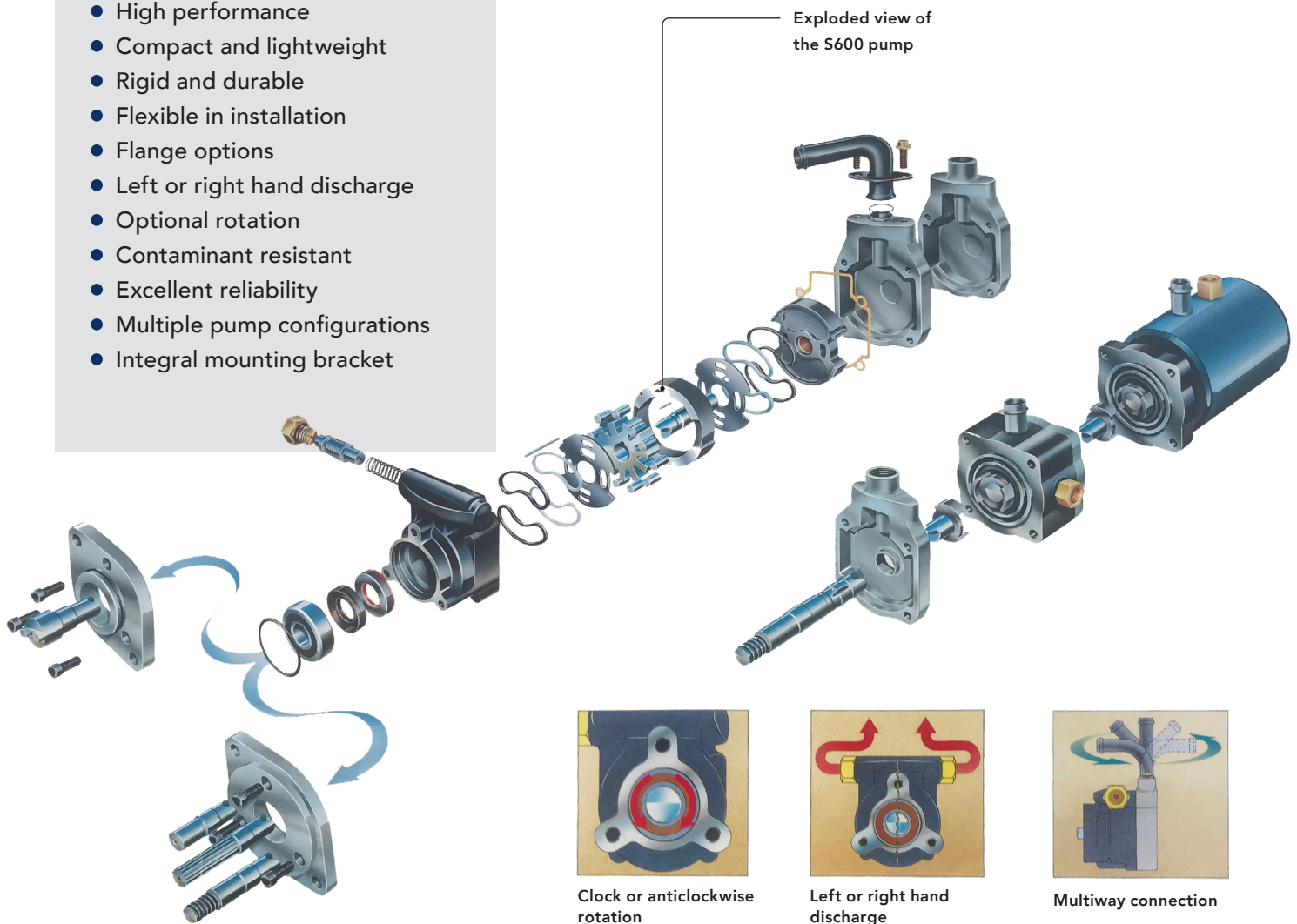
Modular in concept, the Series 600 is designed to meet the interface needs of both SAE and DIN specifications and can accommodate, with only minor modifications, non-standard mountings.

By innovative design, the rear cover of the pump can become an integral mounting bracket if required, ultimately reducing weight and saving on cost during the final installation. The Series 600 also has a unique feature. The drive shaft can be extended through the rear cover in order to drive further air, vacuum or hydraulic pumps – again minimising installation time and substantially reducing costs.

Weighing only 3.6kg with SAE flange, the cam and roll carrier of this roll vane pump can be sintered to size, making it contamination resistant and highly durable. The pump can be rotated either clockwise or counter clockwise, with left or right hand discharge as standard. The Series 600 can accommodate any combination of these features to meet a particular engine design specification.

Pumps are also available in tandem configuration to provide a compact space saving and more economical package. Any combination of pump capacity can be used. PSS should be consulted for additional assistance of the application to ensure that the maximum shaft load is not exceeded. It is often possible to have a common centre inlet for both pumps. Separate inlet port configurations are possible and are a benefit if different fluids are being used for each circuit. The performance data for each pump in the tandem pair would be the same as for any single pump.

- High performance
- Compact and lightweight
- Rigid and durable
- Flexible in installation
- Flange options
- Left or right hand discharge
- Optional rotation
- Contaminant resistant
- Excellent reliability
- Multiple pump configurations
- Integral mounting bracket



Series 600 Pump Technical Data

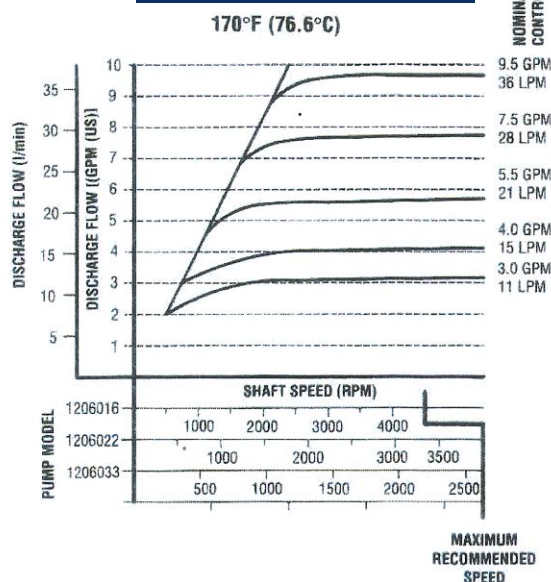
PRINCIPAL FEATURES

Pump Type:		1206016	1206022	1206025	1206033
Theoretical Volumetric Output cc/rev		16.4	22.1	25.2	33.6
Minimum flow (litres/min) at 82 bar 600rpm 77°C		6.8	10.2	12.0	17.0
Flow	Min (litres/min)	8	8	8	8
	Max (litres/min)	38	38	38	38
Max Pressure (bar)		200	200	200	200
Speed	Max (5 bar) rpm	4500	4000	3500	2750
	Min rpm	450	450	450	450
Temp.	Working	60/105°C			
	Minimum	-40°C			
	Maximum (peak)	150°C			
Approx. dry weight (lbs/kg)		8.4lbs/3.6kg			
Max. Static belt load (N)		2000	2000	2000	2000

(1) U.S. gpm = 3.79 Litres/min.
 (1) Imp. gpm = 4.55 Litres/min.
 (1) Psi. = 0.069 bar.
 (1) KPa = 0.010 bar.

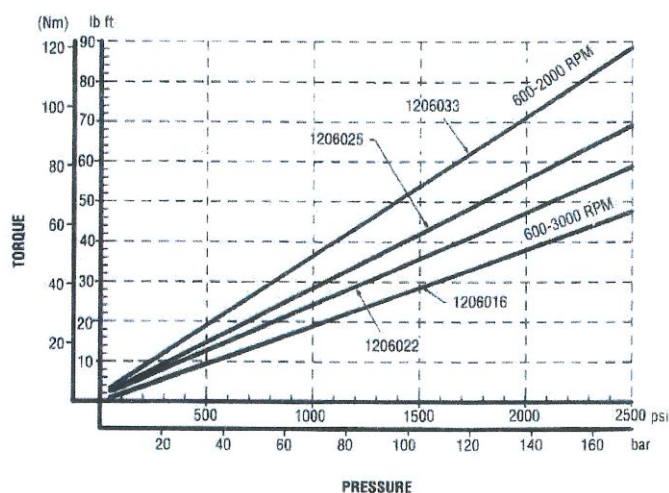
(1) In³ = 16.4 cc.
 (1) In. = 25.4mm
 (1) lb = 0.454 Kgs
 °F = 32 + 1.8°C

DISCHARGE FLOW VERSUS SHAFT SPEED

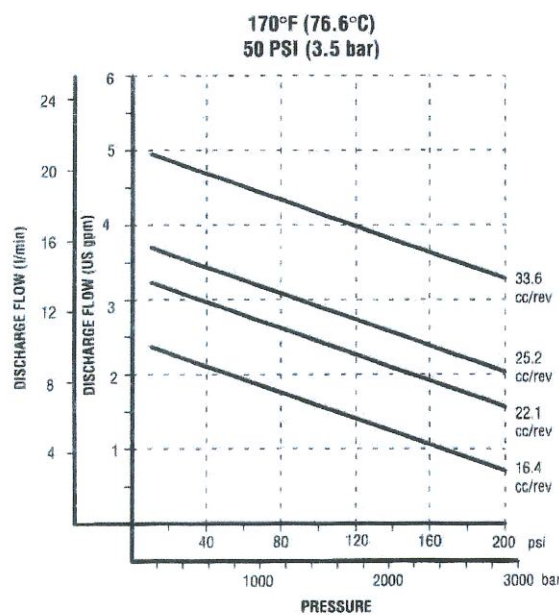


TORQUE VERSUS PRESSURE

MINIMUM FLOW AT 600 RPM



DISCHARGE FLOW VERSUS PRESSURE



RECOMMENDED OPERATING PARAMETERS

Intake Conditions

The intake should be as short as possible with the maximum practical head. The pipe or hose should be supported to prevent excessive loading on the pump intake connection, but must allow for engine/chassis relative movement. The diameter of the tube should be sufficient to give a minimum pressure of 12psi (0.83 bar) absolute at the pump intake at 70°F (21°C).

Filtration

It is strongly recommended that a full flow oil filter be fitted in the oil return line. This should provide a filtration level of Beta 10 = 5 with a back pressure of less than 3psi (0.2 bar).

Oil Types

An oil with good anti-foaming and boundary lubrication property such as ATF/Dexron fluid is recommended. Some engine oils may also be suitable. See PSS representative for list of approved fluids.

Series 600 Specification Matrix

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DISPLACEMENT		
in ³	CC	CODE
0.67	11	1
0.90	14	2
1.00	17	3
1.35	22	4
1.54	25	5
2.05	33	6

PUMP ROTATION/DISCHARGE*		
ROTATION	DISCHARGE	CODE
CW	RH	A
CW	LH	B
CCW	RH	C
CCW	LH	D

REAR COVER STYLE	
2 line tube inlet	1
2 line thread inlet	2
Integral res'r	3
3 line thread inlet	4

SHAFT STYLE	
11 Spline	A
Nut & Key	B
Tang(Din)	C
Taper	D
Bolt & Key	E

CONTROLLED FLOW	
8 lit./min.	A
10 lit./min.	B
12 lit./min.	C
14 lit./min.	D
16 lit./min.	E
18 lit./min.	F
20 lit./min.	G
22 lit./min.	H
24 lit./min.	J
26 lit./min.	K
28 lit./min.	L
30 lit./min.	M
32 lit./min.	N
34 lit./min.	P
36 lit./min.	Q

RELIEF VALVE	
50 bar	A
60 bar	B
70 bar	C
80 bar	D
90 bar	E
100 bar	F
110 bar	G
120 bar	H
130 bar	J
140 bar	K
150 bar	L
160 bar	M
170 bar	N
180 bar	P
190 bar	Q
200 bar	R

INLET-COVER 1	
½" @ 0°	A
½" @ 45°	B
½" @ 90°	C
½" @ 135°	D
¾" @ 0°	E
¾" @ 45°	F
¾" @ 90°	G
¾" @ 135°	H
¾" @ 0°	J
¾" @ 45°	K
¾" @ 90°	L
¾" @ 135°	M
1" @ 0°	N
1" @ 45°	P
1" @ 90°	Q
1" @ 135°	R

INLET-COVER 3	
½" @ 0°	A
½" @ 90°	B

INLET-COVER 2	
¾" x 16"	A
¾" x 18"	B
¾" x 18"	C
¾" x 18"	D
1½" x 18"	E
¾" x 18"	F
1½" x 12"	G
1½" x 12"	H
1½" x 12"	J
1½" x 12"	K
½" NTPF	L
¾" NTPF	M
1" NTPF	N
1¼" NTPF	P
M16-1.5	Q
M18-1.5	R
M20-1.5	S
M26-1.5	T
M27-2	U

INTEGRAL RESERVOIR	
1.5 Lit. Cap.	1

DISCHARGE THREAD	
¾" x 16 Female	A
¾" x 16 @ 0° Male	B
¾" x 16 @ 45° Male	C
¾" x 16 @ 90° Male	D
¾" x 18 Female	E
¾" x 18 Female	F
¾" x 18 Female	G
M16-1.5	H
M18-1.5	J
M20-1.5	K
M26-1.5	L

INLET-COVER 4	
¾" x 16	¾" x 16 A
¾" x 16	½" NTPF B
¾" x 16	1½" x 12 C

FLANGE ANGLE	
Set at 0°	A
Set at 15°	B
Set at 30°	C
Set at 45°	D
Set at 60°	E
Set at 75°	F
Set at 90°	G
Set at 105°	H
Set at 120°	J
Set at 135°	K
Set at 150°	L
Set at 165°	M

MOUNTING STYLE	
SAE 'A' - 2 hole	A
SAE 'B' - 2 hole	B
SAE 'C' - 2 hole	C
Direct Drive	Z
2-Bolt 'Din' Ø60	G
2-Bolt 'Din' Ø80	H
3-Bolt 'Din' Ø80	J
4-Bolt 'Din' Ø70	K