

Gear Pumps



All of the pumps from 2cc (0.12in³) /rev are also available as motors and flow dividers.

We do *lots* of different shafts, flanges and bodies - European / American / some Japanese as well as specials for various tractor makes etc. (see example [John Deere Combine 955](#)).

Pump Range	cc/rev	in³/rev
M	0.33 to 1.33	0.02 to 0.08
LO	1 to 6.6	0.06 to 0.4
L	4 to 28	0.24 to 1.7
PLA	24 to 56	1.46 to 3.4
PLC	54 to 150	3.29 to 9.15
PNA(cast-iron)	24 to 73.3	1.46 to 4.46
PNC(cast-iron)	54 to 150	3.29 to 9.15

Pump Size	1M0.5	1M0.75	1M1	1M1.25	1M1.5	1M2
Displacement (in ³ /rev)	0.02	0.03	0.04	0.05	0.06	0.08
Displacement (cc/rev)	0.33	0.5	0.66	0.83	1.00	1.33
Cont. max. pressure (PSI)	3260					2540
Cont. max. pressure (bar)	225					175
Peak pressure (PSI)	3620					2900
Peak pressure (bar)	250					200
RPM at cont. pressure	5000			4000		3000
Max. RPM	10000			8000		6000

Pump Size	1LO1.5	1LO3	1LO5	1LO7.5	1LO10
Displacement (in ³ /rev)	0.06	0.12	0.20	0.30	0.40
Displacement (cc/rev)	1	2	3.3	5	6.6
Cont. max. pressure (PSI)	3990		3480	2680	1960
Cont. max. pressure (bar)	275		240	185	135
Peak pressure (PSI)	4350		3990	2900	2175
Peak pressure (bar)	300		275	200	150
RPM at cont. pressure	5000		4000	3000	
Max. RPM	6000		5000	4000	3000

Pump Size	1L6	1L9	1L12	1L16	1L22	1L27	1L35
Displacement (in ³ /rev)	0,24	0,37	0,49	0,65	0,89	1,10	1,42
Displacement (cc/rev)	4	6	8	10,6	14,6	18	23,3
Cont. max. pressure (PSI)	3930			3570		3214	2500
Cont. max. pressure (bar)	275			250		225	175
Peak pressure (PSI)	4230			3930		3570	2715
Peak pressure (bar)	300			275		250	190
RPM at cont. pressure	3500			3000	2500	2300	2000
Max. RPM	4000			3500		3200	3000

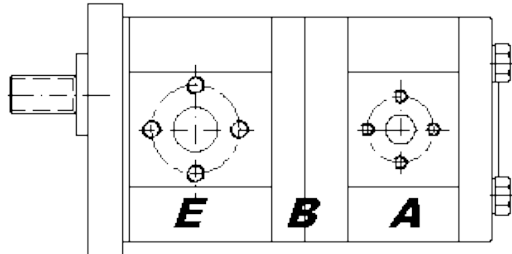
Pump Size	1PLA36	1PLA45	1PLA54	1PLA66	1PLA84
Displacement (in ³ /rev)	1.46	1.83	2.20	2.68	3.41
Displacement (cc/rev)	24	30	36	44	56
Cont. max. pressure (PSI)	3625		3260	2900	2535
Cont. max. pressure (bar)	250		225	200	175
Peak pressure (PSI)	3990		3625	3260	2900
Peak pressure (bar)	275		250	225	200
RPM at cont. pressure	2500		2300		2200
Max. RPM	3000		2800		2600

Pump Size	1PLC80	1PLC100	1PLC125	1PLC150	1PLC175	1PLC200	1PLC225
Displacement (in ³ /rev)	3.26	4.06	5.08	6.10	7.11	8.13	9.15
Displacement (cc/rev)	53.6	66.6	83.3	100	116.6	133.3	150
Cont. max. pressure (PSI)	3260				2900		2540
Cont. max. pressure (bar)	225				200		175
Peak pressure (PSI)	3620				3260		2900
Peak pressure (bar)	250				225		200
Max. RPM	3000				2500	2000	1850

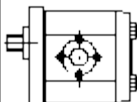
Double Pump

Double and multiple pumps are built and supplied by Roquet (and our distributors) as required. They can also be built from single pumps as follows:

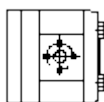
To build double pumps of the same frame size:




The easiest system is to take a standard single pump from stock and remove the rear cover (which can be used as a paper weight or to hold the door open) :

E	Type	Note
	LO	Special pump Add -SD to part number
	L	Standard pump
	PLA	
	PLC	

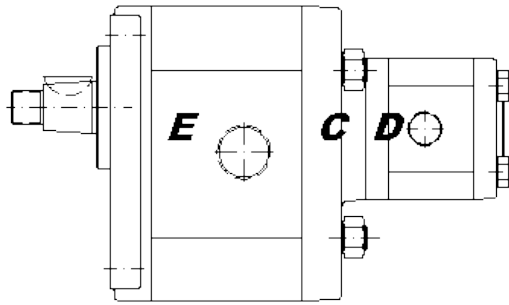
and take a rear pump with flange "26" and shaft "L" :

A	Part number	
LO	1LO**L26*	
L	1L**L26*	
PLA	1PLA**L26*	
PLC	1PLC**L26B	


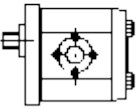
if you don't have a suitable "L26" rear pump, you can always take a standard single pump, a suitable "L" shaft and the following adaptor kit (which includes rear pump flange, intermediate flange, drive coupling and seals) :

B	Part number	
LQ (LO + LO)	N6411/213	
LM (L + L)	N6396/456	
PLL (PLA + PLA)	N6630/300	
PLJ (PLC + PLC)	N6785/247	


To build double pumps of **different frame sizes**:




The easiest system is to take a standard single pump from stock and remove the rear cover (which could even be used as a sinker for fishing - it's lead free) :

E	Type	Note
	LO	Special pump Add -SD to part number
	L PLA PLC	Standard pump

and adaptor flange (which includes a drive coupling and seals) :

C	Part number	
LP (LO + M)	N6411/309	
LS (L + LO)	N6396/457	
PLT (PLA + LO)	N6630/301	
PLD (PLA + L)	N6630/290	
PLZ (PLC + LO)	N6785/244	
PLH (PLC + L)	N6785/245	
PLK (PLC + PLA)	N6785/246	

and a rear pump :

D	Part number	
M	1M**B09*	
LO	1LO**B24*	
L (PLA + L)	1L**B40*	
L (PLC + L)	1L**B24*	
PLA	1PLA**B10*	

TORQUE LIMITS FOR ROQUET PUMP SHAFTS

We are often asked whether a specific duty is possible for a double or multiple pump. The limitation (other than the pressure limit for any individual pump) is due to the torque capacity of the drive, or intermediate, shafts.

The following formula gives the torque (in Nm) required to drive a pump:

$$T = \frac{D * P}{20 * \pi}$$

where :

T = Torque (Nm)
D = Displacement (cm³)
P = Pressure (bar)

The torque limits for the most common shafts are as follows:

Shaft	Maximum Shaft Torque (Nm)			
	L0	L	PLA	PLC
B, L & W	20	65	120	200
C	25	50	320	280 420*
E	40	250	530	800
G & K	-	100	310	700
J	50	220	750	1400

* = 50 mm key

To determine whether a shaft is suitable for a given duty, add the torques required for all pumps driven by that shaft and compare with table.

NB To avoid "fretting fatigue" problems with direct-driven splined shafts, it is essential to apply a suitable grease to the shaft.

John Deere 955 Gear Pump



John Deere 955 Gear Pump

Roquet Part No.	1L27IJ09T/RCE23-JD2
Max. Pressure	225 bar (3260 psi)
Displacement	18 cc/rev (1.1 cu. in. / rev)
Rotation	Counter-clockwise
Max. R.P.M.	2300 R.P.M.
Relief valve pressure setting	100 bar (1450 psi)
Priority Flow	12 l/min. (3.2 US gpm)

ORIGINAL PUMP REFERENCES :

John Deere : AZ 19692

Cessna : 200 100LB

APPLICATION :

John Deere Combine Harvester Model 955