

# "C & CG"

Bulletin 46000A

RECORD

## HEAVY-DUTY, 1100 TO 3000 PSI CONSTANT DELIVERY PUMPS

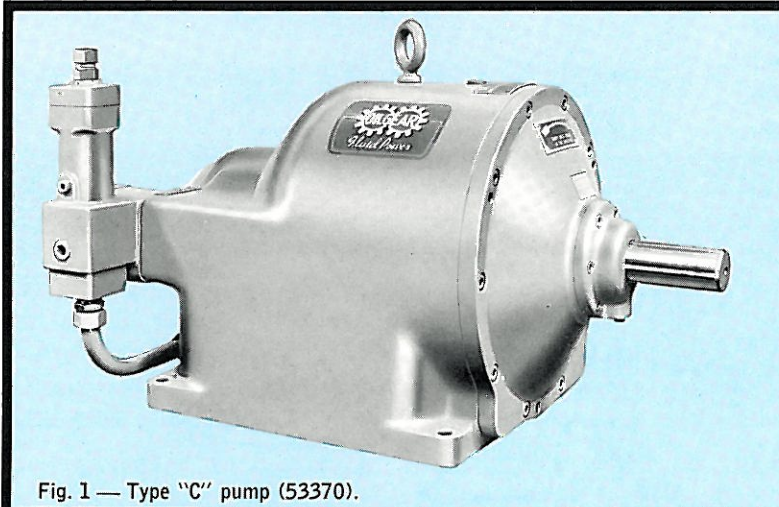


Fig. 1 — Type "C" pump (53370).

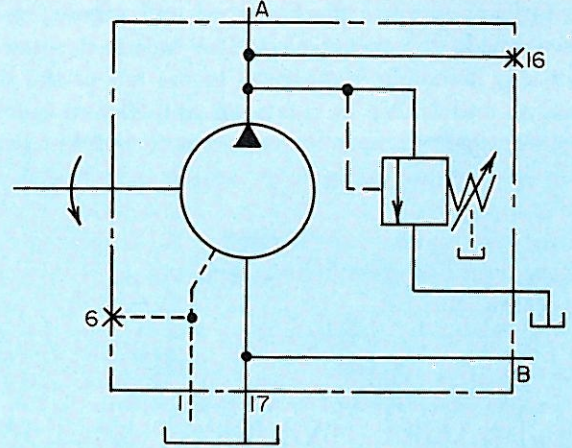


Fig. 2 — Graphical symbol of type "C" pump (5V-10399-L).

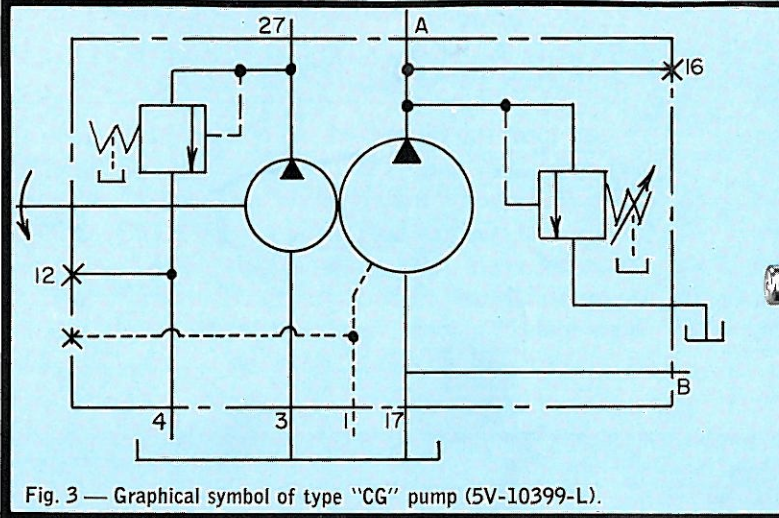


Fig. 3 — Graphical symbol of type "CG" pump (5V-10399-L).

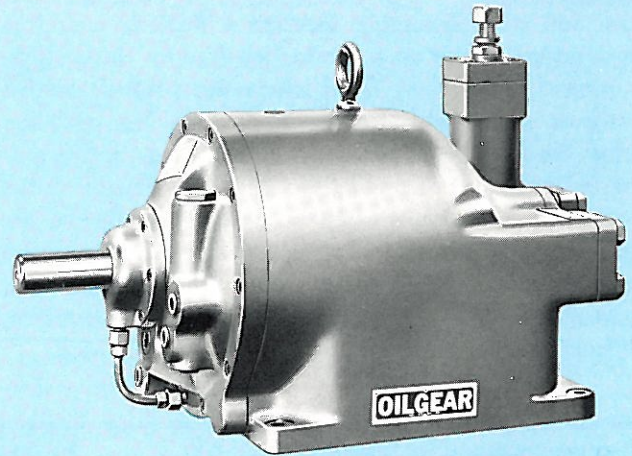


Fig. 4 — Type "CG" pump (52645).

### Over Twenty Sizes -- Up to 200 hp

Oilgear Type "C" Constant Delivery One-Way Pumps are radial rolling piston fixed stroke units for pressures up to 3000 psi. The volume of fluid delivered depends upon the size of unit, the pressure rating and drive shaft speed. Fluid is discharged in one direction only. Directional control valves can be used to reverse fluid flow. Flanged to each pump is an adjustable relief valve to protect fluid system against overload. Pumps are available for clockwise, counterclockwise or reversing input shaft rotation.

Oilgear Type "CG" Constant Delivery Pumps have the same radial rolling piston pumps, plus built-in gear pumps and relief valves for auxiliary or pilot valve operations. They're also available with suction, check

and back pressure relief valves for supercharge purposes.

On applications using repetitive constant speed cycles, these simple pumps will prove most economical. Where variable volume is essential and two or more pumps are needed for low cycle time, it's economical to use "C" or "CG" pumps with Oilgear variable delivery pumps. For example; hot plate presses often use high volume, 1100 psi, type "C" or "CG" pumps in combination with Oilgear low volume, 3000 psi, variable delivery pumps having automatic pressure unloading controls. All pumps deliver for fast closing and opening of press. The power saving controlled variable delivery pump maintains full static tonnage while the constant delivery pumps are bypassed or stopped.



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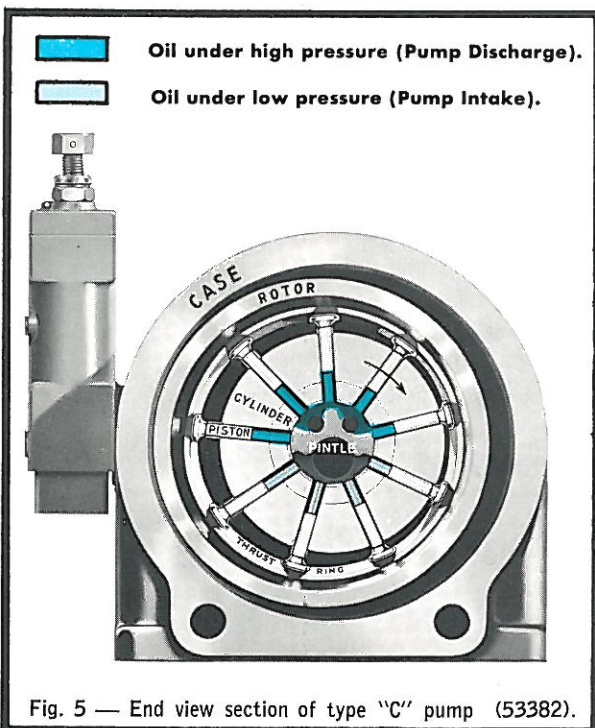
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## Proven Power Pump Design

The alloy iron cylinder, lined with anti-friction metal, rotates on a fluid film about the stationary alloy steel pintle pressed into the pump case. Ports and drilled passages in the pintle direct fluid to and from the cylinder bores. Exclusive, one piece, hardened and ground, alloy steel rolling pistons are closely fitted to radial bores in cylinder. A single spot of the lapped beveled surface on top of piston contacts the hardened and ground beveled surface inside the thrust ring. The balanced rotor and thrust ring assembly is mounted to the left of the pintle centerline and is free to rotate on anti-friction bearings. The drive shaft is mounted on two anti-friction bearings and direct connected to cylinder through a splined floating coupling. A smooth cast case and front housing enclose the operating mechanism. A relief valve is flanged to the pressure port. Four-bolt steel pipe tap or welded pipe flanges are provided.

## Smooth, Quiet, High Speed Operation

Power applied to the input shaft drives the cylinder, piston and rotor assembly through a floating coupling. The cylinder rotates on a lubrication film on the stationary pintle. Centrifugal force keeps the pistons against the thrust rings to rotate the rotor with the cylinder. During the lower half revolution, the pistons move outward to suck fluid through the pintle and fill the radial bores in cylinder. During the upper half revolution, the pistons move inward to discharge the fluid from the radial bores to pintle and the pressure line. Being small, light, pressure lubricated and free of mechanical attachments, the pistons move smoothly and quietly at high speeds.



## Exclusive Power Saver

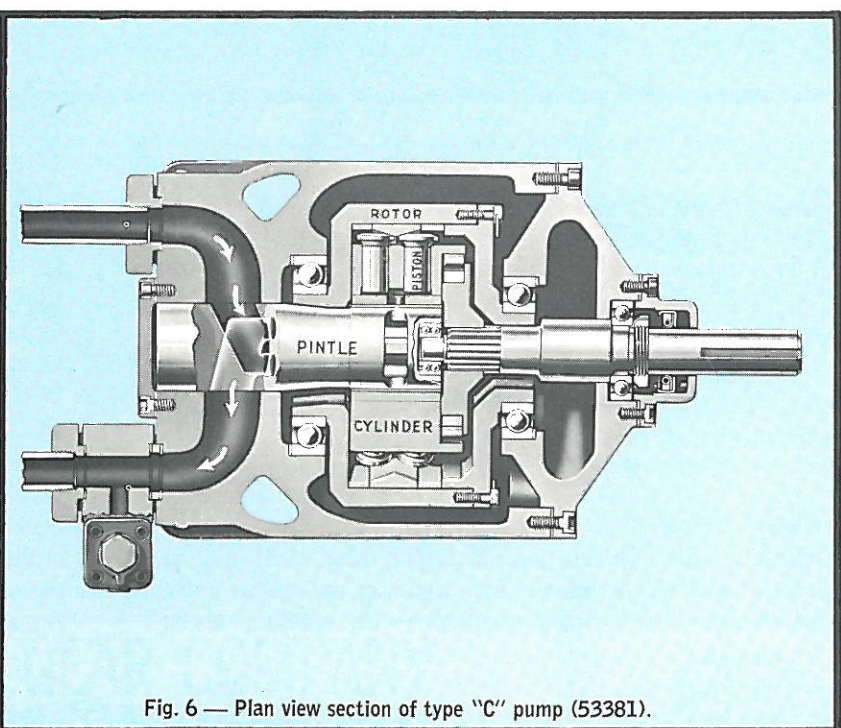
An automatic device is built into each size 100 and 150 pump to limit the fluid slip as the viscosity or pressure changes. It provides adequate running clearance between cylinder and pintle when starting cold and automatically reduces the clearance, when the viscosity decreases or pressure increases, to limit the slip, heat generation and power loss.

## Long Service Life

On legions of heavy-duty fluid power applications, requiring pressures up to 1350, 2050 and 3000 psi, Oilgear Type "C" and "CG" Constant Delivery Pumps have given many years of continuous service. Yes, where the going is tough on high speed metal briquetting presses, large metal extrusion presses, large hot plate presses, process hold-down systems and the like, Oilgear pumps have a reputation for long, dependable service; they keep rolling along . . . quietly.

## A Pump for Every Need

To best meet the diversified use of fluid power, each Oilgear type "C" and "CG" pump size is available with different capacity radial piston assemblies having continuous and peak ratings ranging from 1100 to 3000 psi. For many years 1100 psi series units have been in wide use on small and medium sized presses, drives and machine tools. To exert large forces with small cylinders on presses and machines, 2500 psi pumps are advan-



tageous. On large size drives, the 1700 psi units have proven practical. Auxiliary gear pumps in type "CG" pumps can be operated at pressures up to 300 psi.

Standard small reservoirs or large motor base reservoirs with fluid level gages, fluid filler stand pipes and strainers, air breathers, inspection covers and clean-out covers are available.

## Pump Pressure Rating in psi

Pressure Series Designation	DUTY IN TIME		
	Continuous 100%	Intermittent 50%	Peak 10%
11 = 1100 psi	1100	1225	1350
17 = 1700 psi	1700	1850	2050
25 = 2500 psi	2500	2750	3000

## Dimensions -- Type "C" and "CG" Pumps

(3V-10123-L)

Length Width Height	Unit Size and Overall Dimensions in Inches							
	4	8	12	20	35	60	100	150
A	21 $\frac{1}{16}$	22 $\frac{1}{16}$	24 $\frac{3}{16}$	28 $\frac{5}{8}$	35 $\frac{1}{16}$	40 $\frac{7}{8}$	48 $\frac{1}{8}$	50 $\frac{1}{2}$
B	11 $\frac{1}{2}$	13 $\frac{1}{16}$	14 $\frac{1}{2}$	14 $\frac{7}{8}$	19 $\frac{1}{16}$	22 $\frac{3}{16}$	23 $\frac{3}{8}$	24 $\frac{7}{8}$
C	12 $\frac{1}{2}$	14 $\frac{1}{16}$	15 $\frac{1}{16}$	16 $\frac{1}{16}$	20 $\frac{3}{16}$	22 $\frac{13}{16}$	25 $\frac{1}{2}$	27 $\frac{1}{2}$

(Write the Oilgear Company for complete dimension prints.)

C-Clockwise ..... DS-46100  
 C-Counterclockwise ..... DS-46101  
 CG-Clockwise ..... DS-46200  
 CG-Counterclockwise ..... DS-46201

CG-With suction valve ..... DS-46202  
 Large reservoir ..... DS-46901  
 Small reservoir ..... DS-46902

## Specifications -- Type "C" and "CG" Pumps. Capacity in cpm and gpm.

Size	Drive Speed rpm	Input hp (Approx.)	Pressure Series						Net Wt. Lbs.	Ship Wt. Lbs.
			11 = 1100 psi		17 = 1700 psi		25 = 2500 psi			
			cpm	gpm	cpm	gpm	cpm	gpm		
4	1750*	7.3	2380	10.3	1070	4.5	175	200		
	1450		1970	8.5					890	3.9
	1140		1550	6.7					700	3.0
	950		1290	5.6					584	2.5
	860		1170	5.1					528	2.3
8	1750*	13.4	4760	20.6	3060	13.3	2000	8.6	225	260
	1450		3940	17.1	2540	11.0	1650	7.2		
	1140		3100	13.4	2000	8.7	1300	5.6		
	950		2590	11.3	1660	7.2	1080	4.7		
	860		2340	10.1	1510	6.5	980	4.2		
12	1750*	22.1	8140	35.2	5370	23.3	3380	14.6	300	340
	1450		6750	29.2	4450	19.3	2800	12.1		
	1140		5300	22.9	3500	15.2	2200	9.5		
	950		4420	19.2	2920	12.6	1840	8.0		
	860		4000	17.3	2640	11.4	1660	7.2		
20	1750*	33.0	12300	53.3	8300	35.9	5200	22.6	410	470
	1450		10200	44.1	6880	29.8	4310	18.7		
	1140		8000	34.6	5400	23.4	3400	14.7		
	950		6660	28.8	4500	19.5	2830	12.3		
	860		6030	26.1	4080	17.7	2560	11.1		
35	1140*	46.6	17200	74.6	11300	48.8	7300	31.6	825	1000
	950		14400	64.4	9400	40.7	6080	26.3		
	860		13000	56.3	8500	36.8	5500	23.8		
	710		10700	46.4	7020	30.4	4550	19.7		
	1140*		83.0	31800	138.0	20500	89.0	13700		
950	25600	115.0		17100	74.1	11400	49.3			
860	24000	104.0		15500	67.2	10300	44.6			
710	19800	85.7		12800	55.5	8520	36.9			
950	147.0	43100		187.0	27600	120.0	18200	78.8	2000	2300
860	132.0	39000	169.0	25000	108.0	16500	71.4			
710	110.0	32200	140.0	20700	89.5	13600	59.0			
150	950	222				27600	120.0	3000	3500	
	860	201				25000	108.0			
	710	166				20700	89.7			

How to order . . . Specify letters and numbers covering pump type, size and pressure series. Also specify clockwise or counterclockwise rotation; input rpm; relief valve setting, if special; suction valve and small or large reservoir, when desired. Provide electric motor dimensions when ordering a large reservoir.

Example of Pump Designation

CG — 35 11  
 Pump Type — CG  
 C = Pump without gear pump, see cover  
 CG = Pump with gear pump, see cover  
 Pump Size, see table — 35  
 Pressure Series, see tables — 11

\*Pumps are rated at this speed for applications approved by The Oilgear Company.

Normal Pump Rating. Pumps will be stamped for this speed unless order specifies one of the other speeds.

†The 1100 psi, size 100 pump is limited to non-differential service only.

### IMPORTANT:

Output volumes given above are at the rated pressures and full load electric motor speeds specified. Volume losses due to slow-down of electric motors and slip of pumps have been deducted.

## Application Engineering

Guided by the ingenuity, initiative and courage of those who pioneered and developed Oilgear fluid power transmissions since 1921, The Oilgear Company has maintained a position of leadership in its field. All of our energies are devoted exclusively to the development, application and manufacture of Oilgear Fluid Power Pumps, Motors, Transmissions, Electro-hydraulic Servo Controls, Cylinders and Valves. By concentrating our entire engineering, research, sales and service staff on Oilgear Fluid Power Components and Systems, we can better assist you in solving straight-line or rotary power transmission problems and provide equipment to best meet your power transmission needs.

In designing fluid power systems and making auxiliary components, it's tempting to "Do it yourself." Some users have succeeded and others have not. Why risk delay, disappointment, malfunctioning or divided responsibility? Take advantage of Oilgear's background of specialized fluid power experience and realize the full values inherent in 100% Oilgear Power and Control Systems.

Detailed consideration of your straight-line or rotary power transmission problems, followed by specific recommendations and a quotation, will be given gladly by our nearest office.

Fig. 9 — Five Oilgear pumps (two "C-15025", two "C-6017" and one "DP-6025") direct connected to three electric motors (one 50 hp and two double-end 150 hp) are mounted with valves and piping on a 2200 gallon reservoir. This "Power-Pak" supplies fluid power for a 5000 ton hardboard press. Net weight 40,000 lbs. (53330).

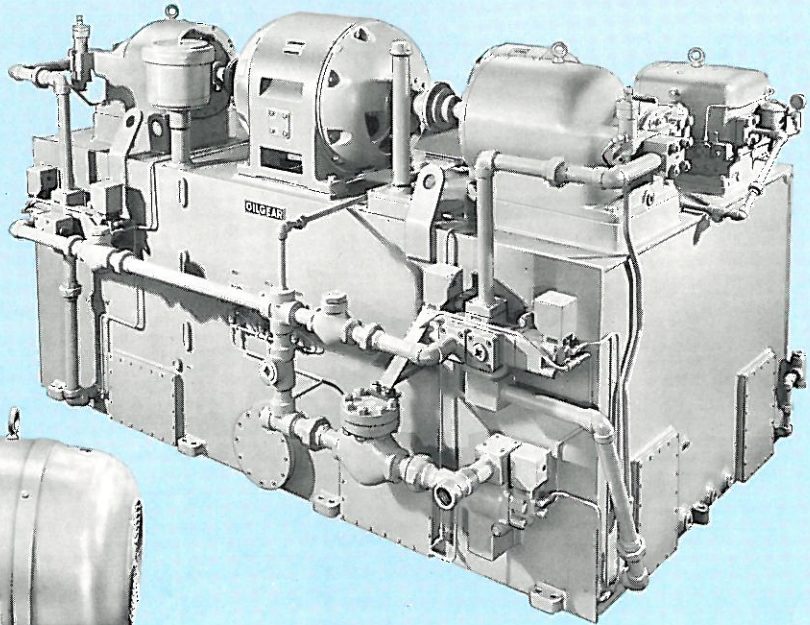


Fig. 8 — Type "CG" pump with electric motor and large reservoir base (53396).

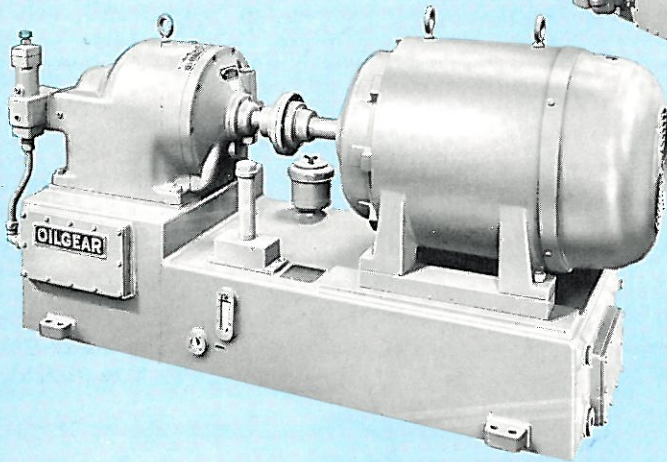
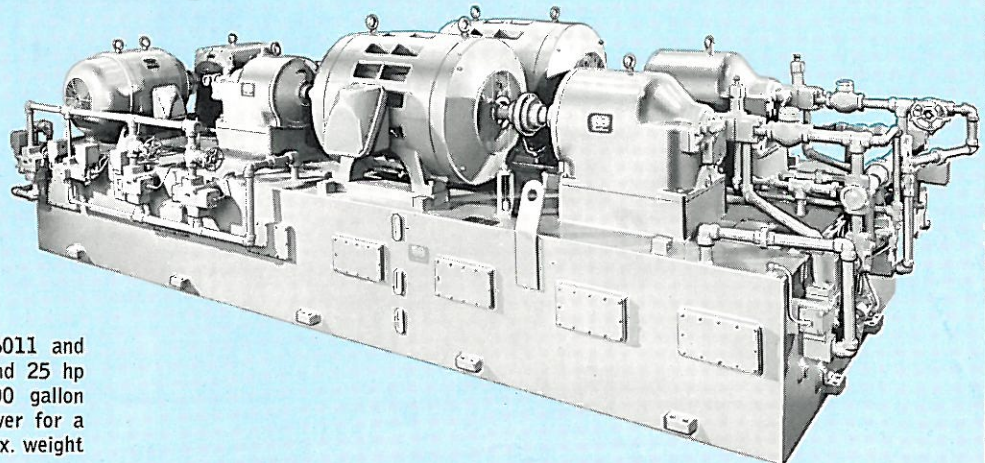


Fig. 7 — Oilgear types "C-10017, C-6011 and DXP-3525" pumps driven by 100 hp and 25 hp electric motors are mounted on a 1500 gallon reservoir. This system supplies fluid power for a remotely operated hardboard press. Approx. weight 19,800 lbs. (53344).



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