

The Goulds Manufacturing Company

PUMP MAKERS SINCE 1848

BRANCHES

Atlanta Boston
New York Philadelphia

MAIN OFFICE AND WORKS

SENECA FALLS
New York

BRANCHES

Chicago Pittsburgh
Houston Washington, D. C.

GOULDS PUMPS have been made for every service for more than three-quarters of a century and have an established reputation for reliable service, economy in operation, and conservative rating. Bulletins on power pumps give complete specifications of the standard types as follows:

- No. 100. Double-Acting, Single Cylinder Piston Pumps.
No. 101. Single-Acting Triplex Plunger Pumps, Outside-Guided Type.
No. 103. Single-Acting Triplex Plunger Pumps, Large Capacity and High Pressure Types.

- No. 104. Double-Acting Triplex Piston Pumps, Vertical Type.
No. 105. Single Stage, Single Side Suction Centrifugal Pumps.
No. 106. Vacuum and Stuff Pumps.
No. 107. Deep Well Triplex Pumps.
No. 108. Deep Well Working Heads and Cylinders.

- No. 109. Portable Mine Pumps.

- No. 110. Single Stage, Double Suction Centrifugal Pumps.
No. 111. Centrifugal Pump Pumps.

- No. 112. Handry Data on Power Pumping.

- No. 113. Power Rotary Pumps.

- No. 115. Double-Acting Duplex and Triplex Plunger Pumps, Horizontal Type.

- No. 116. Single-Acting Triplex Pressure Pumps.

- No. 118. Centrifugal Fire Pumps.

- No. 119. Single Stage, Single Suction Centrifugal Pumps, Enclosed-Impeller Type.

- No. 120. Multi-Stage Centrifugal Pumps for General Service.

- No. 122. Centrifugal Pump Data.

- No. 124. Installation—Operation—Inspection, Goulds Centrifugal Pumps.

- No. 125. Single Stage, Double Suction Centrifugal Pumps.

Several units of interest to heating engineers and architects are shown here accompanied by data on capacity, speed, efficiency which will assist them in choosing the right Goulds pump for the service desired.

GOULDS DOUBLE SUCTION CENTRIFUGAL PUMPS are the result of over 12 years of research and progressive development and are of exceptionally high efficiencies.

CASING.—Close grained iron, divided horizontally, the two castings bolted together. The lower half of the bearing housings are cast integral with the lower half of casing. Casing is provided with air cocks, and with openings for priming and draining.

IMPELLER.—Cast iron, accurately machined and balanced.

BEARINGS.—Ring oiling type with split cast iron shells lined with babbit, supported in horizontally divided housings, securely locked against rotation or lateral motion. Shells are removable without disturbing rotating element.

THRUST BEARINGS.—All

pumps are provided with a self-aligning double-acting ball thrust bearing, running in an oil bath, which takes care of any unbalanced thrust due to uneven wear of sealing surfaces.

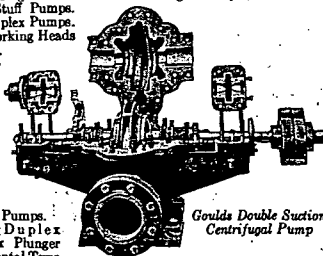
SHAFT.—Special alloy steel, heat treated, accurately machined to gauge.

STUFFING BOX.—Of extra long design with brass water seal ring and water seal piping.

GLANDS.—The glands are split horizontally, permitting the gland to be removed and affording maximum space for repacking. They are adjusted by screw bolts.

CASING WEARING RINGS.—Casing is equipped with bronze wearing rings, which can be renewed as required, thus keeping the clearances to a minimum.

IMPELLER WEARING RINGS.—Wearing rings on bronze impellers can be furnished as an extra.



Goulds Double Suction Centrifugal Pump

GOULDS CENTRIFUGAL PUMPS

CENTRIFUGAL PUMP DATA SHEET

Data Required for Customers

The conditions under which pumping units operate vary considerably. In order to make the most efficient use of the pump, the customer should specify the following information:

1. Quantity of liquid to be pumped, in gallons per minute, or in cubic feet per hour.

2. Head to be overcome, in feet, or in pounds per square foot.

3. Temperature of liquid, in degrees Fahrenheit.

4. Viscosity of liquid, in centipoises.

5. Nature of liquid, whether clean or dirty, and whether it contains solids.

6. Direction of rotation, clockwise or counter-clockwise.

7. Material of construction, cast iron, steel, bronze, etc.

8. Name of pump, and its capacity, in gallons per minute.

9. Name of pump, and its capacity, in cubic feet per hour.

10. Name of pump, and its capacity, in horsepower.

11. Name of pump, and its capacity, in kilowatts.

12. Name of pump, and its capacity, in metric horsepower.

13. Name of pump, and its capacity, in brake horsepower.

14. Name of pump, and its capacity, in shaft horsepower.

15. Name of pump, and its capacity, in input horsepower.

16. Name of pump, and its capacity, in output horsepower.

17. Name of pump, and its capacity, in net horsepower.

18. Name of pump, and its capacity, in gross horsepower.

19. Name of pump, and its capacity, in indicated horsepower.

20. Name of pump, and its capacity, in effective horsepower.

21. Name of pump, and its capacity, in useful horsepower.

22. Name of pump, and its capacity, in delivered horsepower.

23. Name of pump, and its capacity, in shaft input horsepower.

24. Name of pump, and its capacity, in brake input horsepower.

25. Name of pump, and its capacity, in input horsepower.

26. Name of pump, and its capacity, in output horsepower.

27. Name of pump, and its capacity, in net horsepower.

28. Name of pump, and its capacity, in gross horsepower.

29. Name of pump, and its capacity, in indicated horsepower.

30. Name of pump, and its capacity, in effective horsepower.

31. Name of pump, and its capacity, in useful horsepower.

32. Name of pump, and its capacity, in delivered horsepower.

33. Name of pump, and its capacity, in shaft input horsepower.

34. Name of pump, and its capacity, in brake input horsepower.

35. Name of pump, and its capacity, in input horsepower.

36. Name of pump, and its capacity, in output horsepower.

37. Name of pump, and its capacity, in net horsepower.

38. Name of pump, and its capacity, in gross horsepower.

39. Name of pump, and its capacity, in indicated horsepower.

40. Name of pump, and its capacity, in effective horsepower.

41. Name of pump, and its capacity, in useful horsepower.

42. Name of pump, and its capacity, in delivered horsepower.

43. Name of pump, and its capacity, in shaft input horsepower.

44. Name of pump, and its capacity, in brake input horsepower.

45. Name of pump, and its capacity, in input horsepower.

46. Name of pump, and its capacity, in output horsepower.

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65. Name of pump, and its capacity, in input horsepower.

Pump Data

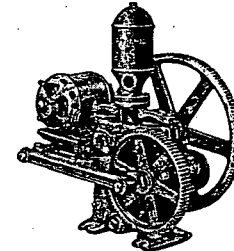
Figure No.	Pump No.	Pipe Sizes		Approx. Capacity Gals. per Min.		Standard Pulleys		Approx. Domestic Shipping Weight Lb.
		Discharge In.	Suction In.	Minimum	Maximum	Diameter In.	Face In.	
3065	5	5	6	400	800	8	8	1020
	6	6	8	600	1300	10	10	1325
	8	8	10	1000	2700	12	12	2100
3075	5	5	6	400	900	8	8	1275
	6	6	8	600	1500	10	10	1605
	8	8	10	1100	2900	12	12	2525
3085	3	3	4	150	350	6	6	950
	4	4	5	250	750	10	10	1270
	5	5	6	400	1000	10	10	1520
3095	6	6	8	800	1700	12	12	2400
	8	8	10	1300	3000	12	15	3425
	2	2	3	50	250	6	6	1020
3095	3	3	4	200	450	8	8	1120
	4	4	5	400	800	10	10	1585

†Weight includes either bedplate and coupling for direct connected drive, or bedplate, pulley, pulley shaft, coupling and two pedestal bearings for belt drive.

FLEXIBLE COUPLING: A flexible coupling of the pin-and-buffer type is provided to connect the pump to prime mover or belt pulley shaft.

BED PLATE: Pump and prime mover are mounted on a rugged cast iron bedplate of neat design, with a drip canal around the four sides.

Goulds "Pyramid" Double-Acting Piston Pump (Fig. 1678) is especially adapted for handling Condensation of Steam Heating Systems and for General Water Supply, Mine Service and Hot Water Pumping. Built in a single iron casting embodying the base, cylinder, bearings and one cylinder head, with the cylinder fitted with a renewable cast bronze lining and the piston fibrous packed, this pump is of strong and rigid construction.



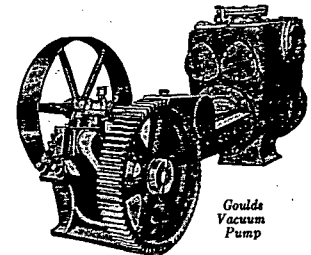
Goulds Pyramid Piston Pump

Dimensions, Speeds, Displacements, Goulds "Pyramid" Pump Ratings Based on Pumping Cold Water.

Pistons		Displ. per Rev. of Crank Shaft, Gal.	Usual Speed and Displacement per Min.		Horse Power at Catalog Rating	Horse Power for Vacuum Service	Horse Power for Heating Radiation	Size Pipe		Gears	Pulleys Tight and Loose	Index No. Regular Const.	Weight Lb.
Diam.	Stroke		Rev.	Gal.				Suction In.	Discharge In.				
2 1/4	4	130	39	5	.50	.50	700	1 1/4	1 1/4	5 to 1	8x2 1/2	167801	170
2 1/4	5	245	41	10	1.00	.50	1450	1 1/2	1 1/2	5 to 1	15x2 1/2	167802	295
3 1/4	5	465	39	18	1.50	1.00	2600	2	2	5 to 1	15x3	167803	340
4 1/4	5	741	38	28	3.00	1.00	4000	2 1/2	2 1/2	5 to 1	16x4	167804	525
5 1/4	6	1316	38	50	5.00	1.50	7000	3	3	5 to 1	20x4	167805	680

†Figures based on the condensation of one-third of a pound of steam per square foot of radiating surface per hour, which is a good average condition.

Goulds Double-Acting Piston Vacuum Pump (Fig. 1049) has a displacement of 10,200 gal. to 81,000 gal. per hr. The waterways are so constructed that the valves at both ends of the cylinder are always submerged. The frame is of cast iron in one piece bolted to the cylinder, supporting the bearings and crosshead guides. These pumps are designed for Suction Box on Paper Machines, Vacuum Pans, Surface Condensers, and Vacuum System of Steam Heating.



Goulds Vacuum Pump

Goulds Vacuum Pump—Dimensions and Displacements

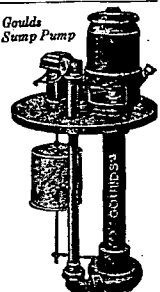
Gallons Displacement per Min.	Pistons		Displacement 1 Rev. of Crank Shaft	H. P. Required	Vacuum Steam Heating Systems	R. P. M.	Sizes of Pipes		Gears	Single Pulley In.	Index No.	
	Diam. In.	Stroke In.					Suction In.	Discharge In.			Regular Bronze Fitted	All Iron Fitted
170	8	10	4.28 gal.	3	24500	40	5	5	4 to 1	30x4	104901	104908
265	10	10	6.73 "	5	38000	40	5	5	4 to 1	30x5	104902	104909
385	12	10	9.72 "	5	55000	40	5	5	4 to 1	30x5	104903	104910
525	14	10	13.22 "	7 1/2	75500	40	6	6	4 to 1	30x5	104904	104911
700	14	14	18.51 "	10	100000	38	6	6	4 to 1	36x6	104905	104912
1000	16	16	27.62 "	10	144000	37	8	8	4 to 1	36x6	104906	104913
1350	18	18	39.31 "	15	194500	35	10	10	4 to 1	42x8	104907	104914

*Figures based on the condensation of one-third of a pound of steam per square foot of radiating surface per hour, which is a good average condition.

The Goulds Sump Pump (Fig. 3029) is a standardized outfit built in one size only according to the dimensions given below. When the sump is full the float rises and actuates the switch which in turn starts the motor. When sump is drained, the float falls and the motor is stopped. Electric current is used only when pump is running and the pump is always submerged ready to start work instantly.

Ratings—Fig. 3029 Sump Pump

with 1/4 H.P.—1725 R.P.M. Motor						with 1/2 H.P.—1450 R.P.M. Motor					
Gals. per Min.	10	15	20	25	30	35	12	15	20	25	30
Head in Ft.	24	22	20	18	16	13	15	14	13	11	8



Goulds Sump Pump