

BULLETIN No. 32



ADVANCE PUMPS

ADVANTAGES



Pistons always "full stroke"; clearance reduced to minimum; no racing or pounding should suction become broken; higher efficiency and longer life than other pumps. Our pumps carry ample metal, properly distributed, for duties greater than maximum pressure.

GENERAL SERVICE PISTON PATTERN
For Boiler Feeding, Elevator and Fire Service
For Pressures to 150 Pounds

All water cylinders are lined with brass; the seats, stems and springs are of bronze; the water valves have ample areas to accomplish the work the pump is designed for. The steam

valves are of special construction, passing all steam through drilled ports before entering the cylinders.

TABLE OF SIZES

Diameter Steam Cylinder Inches	Diameter Water Cylinder Inches	Length of Stroke Inches	Gallons per Stroke One Side	Proper Strokes per Min. of one Piston varying with kind of work and pressure	Sizes of Pipe for Short Lengths to be Increased as length Increases				Telegraphic Code Word		
					Steam Pipe Inches	Exhaust Pipe Inches	Suction Pipe Inches	Discharge Pipe Inches	Standard Fitted	Brass Fitted	
12	6½	12	1.79	80	100	2½	3	6	5	Ajax	Alkeli
12	7	12	1.99	80	100	2½	3	6	5	Adrian	Alma
12	8	12	2.61	80	100	2½	3	6	5	Adain	Almot
12	8½	12	2.94	80	100	2½	3	6	5	Agnes	Alton
14	7	12	1.99	80	100	2½	3	6	5	Aikin	Anaconda
14	8	12	2.61	80	100	2½	3	6	5	Aikon	Anovex
14	8½	12	2.94	80	100	2½	3	6	5	Ainger	Andover
14	10	12	4.08	80	100	2½	3	8	7	Akron	Ansonia
16	10	12	4.08	80	100	2½	3	8	7	Anemore	Andrus
16	12	12	5.87	80	100	2½	3	10	8	Angel	Alanson
18	10	12	4.08	80	100	3	4	8	7	Angelina	Antioch
18	12	12	5.87	80	100	3	4	10	8	Angelton	Antwerp
18	14	12	7.99	80	100	3	4	12	10	Anise	Apollo
20	10	12	4.08	80	100	4	5	8	7	Ankona	Apperson
20	12	12	5.87	80	100	4	5	10	8	Anna	Applegate
20	14	12	7.99	80	100	4	5	12	10	Annapolis	Appleton

Standard fitted pumps are always furnished with steel piston rods. Bronze Rods at extra price. Base Plates or Drip Pans at extra price. For General Boiler Feed Pumps see next page.

ADVANCE PUMPS

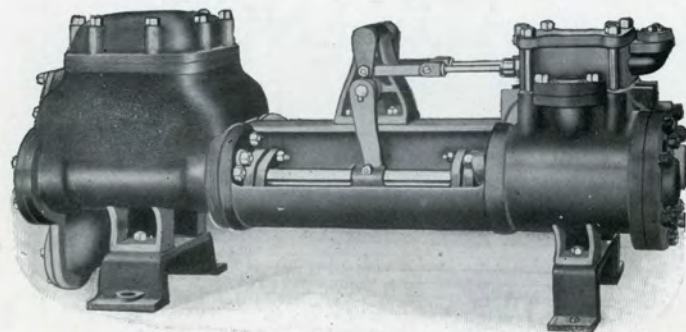


Fig. H100.
STANDARD BOILER FEED PUMP.
8x5x10 Size. For 150 Pounds Pressure.

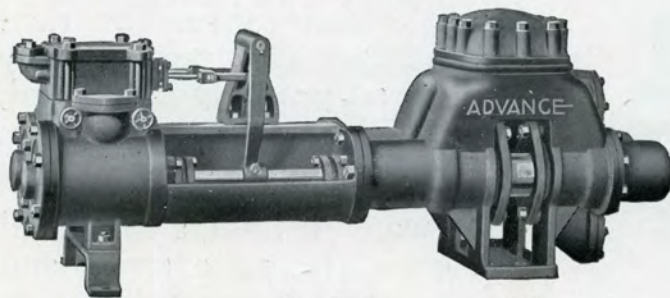


Fig. K102.
Size 10x6x10.
OUTSIDE CENTER PACKED PLUNGER PUMP.
VALVE PLATE TYPE
For 250 Pounds Pressure.

The plunger stuffing boxes are externally packed and are readily accessible so they may be looked after from the outside. They are constructed with all valves above the plungers, the discharge valves being placed upon a valve plate as in the valve plate type of piston packed pumps.

We offer this type of pump for general water supply for pumping water from mines and for boiler feeding when properly fitted for hot water. If proper attention is given the packing of these machines they will be more efficient in point of leaking or slippage than the piston packed type.

List of sizes opposite.

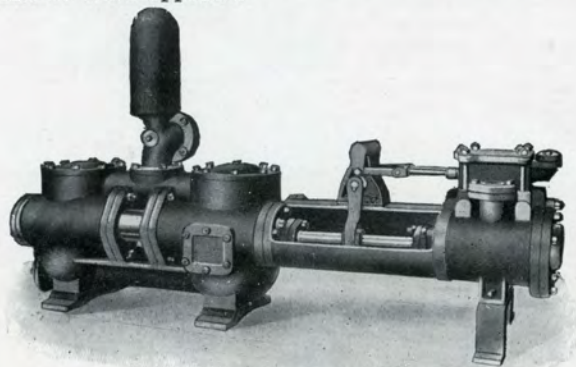


Fig. CK100.
OUTSIDE CENTER PACKED PLUNGER PUMP.
Turret Type.
10x6x10 Size. For 250 Pounds Pressure.

Particular attention has been given to the construction of all parts for taking care of increased pressures. These machines, as well as our valve plate type, are fitted for pumping water containing more gritty substances than can ordinarily be handled by piston packed pumps.

List of sizes opposite.

BOILER FEED PUMPS

Regular Pattern

The designs of these Pumps are of the latest and most approved patterns based on years of pump experience. They will be found heavier than usual, simple, practical and made of the best material and workmanship.

Table of sizes, etc., opposite.

OUTSIDE CENTER PACKED PUMP

Valve Plate Type

The type of pump illustrated on this bulletin has been designed to meet the demand for a pump less liable to wear when handling muddy and gritty liquids. It is also constructed much heavier and will withstand higher pressure than the piston type described in other bulletins.

They make excellent boiler feed pumps; the one important feature being the fact that the slippage of water is detected immediately, the pressure is always out and as soon as drippage occurs, it can be noticed and the trouble remedied while the pump is in operation. With this design the packing can never disintegrate and be forced through the valves and pipe connections.

OUTSIDE CENTER PACKED PUMPS

Turret Type

Our turret type plunger pump as illustrated in this bulletin, is a repetition of the valve plate type with the exception that the water cylinders are some heavier and constructed with the suction valves below and the discharge valves above the plungers. These are reached through hand holes and by removing the cover from the force chamber. The higher pressures used on modern boilers, call for a pump of ample strength to meet any emergency. The production of this type which can easily handle from 150 pounds up, is considered by the best engineering experts as the best design for heavy pressure boiler feeding.

LIST BOILER FEED PUMPS

REGULAR PATTERN

Diameter Steam Cylinder Inches	Diameter Water Cylinder Inches	Length of Stroke Inches	Gallons per Stroke One Side	H. P. of Boilers Pump will Supply at an Easy Speed		Sizes of Pipes for Short Lengths to be increased as Length increases				Telegraphic Code Word	
						Steam Pipe Inches	Exhaust Pipe Inches	Suction Pipe Inches	Disch'ge Pipe Inches	Standard Fitted	Brass Fitted
3	1½	3	.02	15	30			1½	1	Achilles	Adepose
3	2	3	.04	40	60			1¾	1	Abner	Angola
4½	2½	4	.08	75	125			2	1½	Actor	Abode
4½	2¾	4	.10	100	150			2	1½	Arthur	Abilene
5¼	3½	5	.20	200	300	1	1½	2½	1½	Abraham	Africa
6	3½	6	.25	275	350	1	1½	3	2	Adair	Asbury
6	4	6	.33	350	475	1	1½	3	2	Adams	Alaska
7	4	8	.43	500	600	1½	1½	4	3	Adelaid	Alger
7	4½	8	.55	600	700	1½	1½	4	3	Addison	Albany
8	4½	10	.68	700	800	1½	2	4	3	Alander	Algeron
8	5	10	.85	800	1000	1½	2	4	3	Adeline	Albion
10	5½	10	1.02	1000	1200	2	2½	5	4	Adago	Alboned
10	6	10	1.22	1200	1500	2	2½	5	4	Adolph	Algoma
12	7	12	1.99	1500	2000	2½	3	6	5	Adenda	Alimo

Outside Center Packed Pumps

VALVE PLATE TYPE

Following is a list of the standard sizes which may be fitted with either brass or cast iron plungers, when so desired. No packing furnished with these pumps.

Diameter Steam Cylinder Inches	Diameter Water Cylinder Inches	Length of Stroke Inches	Gallons per Stroke One Side	Proper Strokes per Min. of one Plunger varying with kind of work and pressure		Sizes of Pipe for Short Lengths to be Increased as length Increases				Telegraphic Code Word	
						Steam Pipe Inches	Exhaust Pipe Inches	Suction Pipe Inches	Disch'ge Pipe Inches	Standard Fitted	Brass Fitted
5¼	3½	5	.20	100	140	1	1½	2½	1½	Cad	Cag
6	3	6	.18	100	140	1	1½	3	2	Cdae	Cagle
6	4	6	.33	100	140	1	1½	3	2	Cadet	Calico
7	4	8	.43	100	130	1½	1½	4	3	Calif	Calade
7	4½	8	.55	100	130	1½	1½	4	3	Calcar	Calque
8	4½	10	.68	100	120	1½	2	4	3	Calex	Calash
8	5	10	.85	100	120	1½	2	4	3	Cojole	Caison
10	5½	10	1.02	100	120	2	2½	5	4	Cairn	Cahier
10	6	10	1.22	100	120	2	2½	5	4	Cage	Caffine
12	7	12	1.99	80	100	2½	3	6	5	Coney	Coaxing

Outside Center Packed Plunger Pumps

TURRET TYPE

Diameter Steam Cylinder Inches	Diameter Water Cylinder Inches	Length of Stroke Inches	Gallons per Stroke One Side	Proper Strokes per Min. of one Plunger varying with kind of work and pressure		Sizes of Pipe for Short Lengths to be Increased as length Increases				Telegraphic Code Word	
						Steam Pipe Inches	Exhaust Pipe Inches	Suction Pipe Inches	Disch'ge Pipe Inches	Standard Fitted	Brass Fitted
6	3	6	.18	100	140	1	1½	3	2	Cabaret	Cablet
6	4	6	.33	100	140	1	1½	3	2	Champion	Columbus
7	4½	8	.55	100	130	1½	1½	4	3	Cortez	Cobb
8	4½	10	.68	100	120	1½	2	5	4	Cacao	Cadaver
8	5	10	.85	100	120	1½	2	5	4	Charles	Colorado
10	5½	10	1.02	100	120	2	2½	5	4	Caddy	Cadent
10	6	10	1.22	100	120	2	2½	5	4	Caroline	Connecticut

The brass fittings on these pumps are the same as for standard fitted pumps with the exception that the plungers are furnished of bronze if especially ordered. We furnish no packing for these pumps unless especially ordered.

Advance Duplex Tank or Low Service Pumps

PISTON PATTERN FOR PRESSURE TO 75 POUNDS

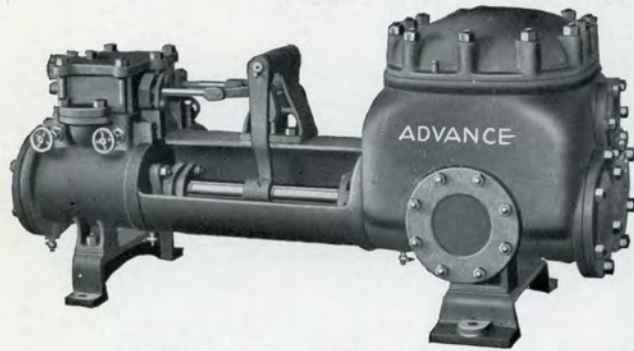


Fig. DJ101—Illustrating Size 8x8x10 Lower Service or Tank Pump

Tank or low service work, where ordinary steam pressure is used, does not require cylinders with as high a ratio as the boiler feed type of pump, therefore we recommend the use of pumps where steam and water cylinders are nearer the same diameter.

Pumps built in this way and used on this service are more economical and effective. They combine large pumping capacities with small expenditure of steam, the cylinders being proportioned accordingly. They cover a large range of service such as refineries, distilleries, irrigation work and so forth.

These pumps are usually furnished with soft rubber valves but may be furnished with brass or hard rubber, if so desired. The water cylinders are lined with brass. The valve seats, stems and springs are of bronze.

You will find the general type of these pumps illustrated in this bulletin. The weights are somewhat lighter than the regular type of boiler feed and general service pumps, as the duty for which they are designed does not demand the same weight of material.

An additional charge is made when pumps are fitted with brass pistons and bronze piston rods. Hydraulic packing is regularly furnished with these pumps.

Diameter Steam Cylinder Inches	Diameter Water Cylinder Inches	Length of Stroke. Inches	Gallons per Stroke One Side	Proper Strokes per Min. of one Piston varying with kind of work and pressure	Sizes of Pipe for Short Lengths to be Increased as length Increases				Telegraphic Code Word		
					Steam Pipe Inches	Exhaust Pipe Inches	Suction Pipe Inches	Discharge Pipe Inches	Standard Fitted	Brass Fitted	
4	3	4	.12	100	150	1 1/2	1 1/2	2 1/2	2	David	Dayton
4 1/2	3 3/4	4	.19	100	150	1 1/2	1 1/2	2 1/2	2	Daniel	Dabroyd
5 1/4	4 1/4	5	.38	100	140	1	1 1/2	3	2 1/2	Danex	Daboid
6	5	6	.51	100	140	1	1 1/2	4	3	Daisy	Daleville
6	5 3/4	6	.67	100	140	1	1 1/2	4	3	Dexter	Damonia
7	6	8	.97	100	130	1 1/2	1 1/2	5	4	Denver	Danville
7	6 3/4	8	1.23	100	130	1 1/2	1 1/2	5	4	Dabin	Dabaret
7	8	10	2.17	100	120	1 1/2	2	6	5	Demon	Danex
7 1/2	5 1/2	10	1.02	100	120	1 1/2	2	5	4	Debort	Debom
7 1/2	6	10	1.22	100	120	1 1/2	2	5	4	Debile	Deceit
8	7	10	1.66	100	120	1 1/2	2	6	5	Debrile	Decox
8	7 1/2	10	1.91	100	120	1 1/2	2	6	5	Delzell	Davlin
8	8	10	2.17	100	120	1 1/2	2	6	5	Delz	Davel
10	7	10	1.66	100	120	2	2 1/2	6	5	Delet	Daro
10	7 1/2	10	1.91	100	120	2	2 1/2	6	5	Dato	Dato
10	8	10	2.17	100	120	2	2 1/2	6	5	Dexo	Dasex
10	9	10	2.75	100	120	2	2 1/2	8	6	Dea	Davon
10	10	10	3.4	100	120	2	2 1/2	8	6		

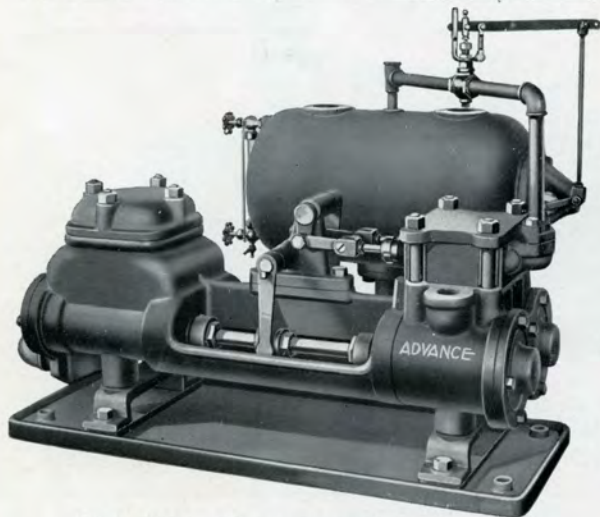


Fig. F100—Illustrating Size 5 1/4 x 3 1/2 x 5.

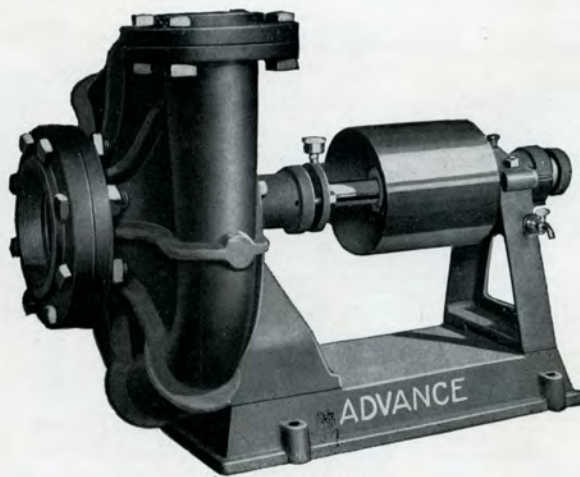


Fig. 6—Style B.

PUMP WITH AUTOMATIC RECEIVER
Adapted to collect condensation from dry kilns, steam heat systems or any place where it is desired to return water back to boiler.

We are prepared to furnish a full line of centrifugal pumping machines for all purposes—belt, direct engine or motor driven. Ask us about bark and sand pumps for cleaning out log ponds.