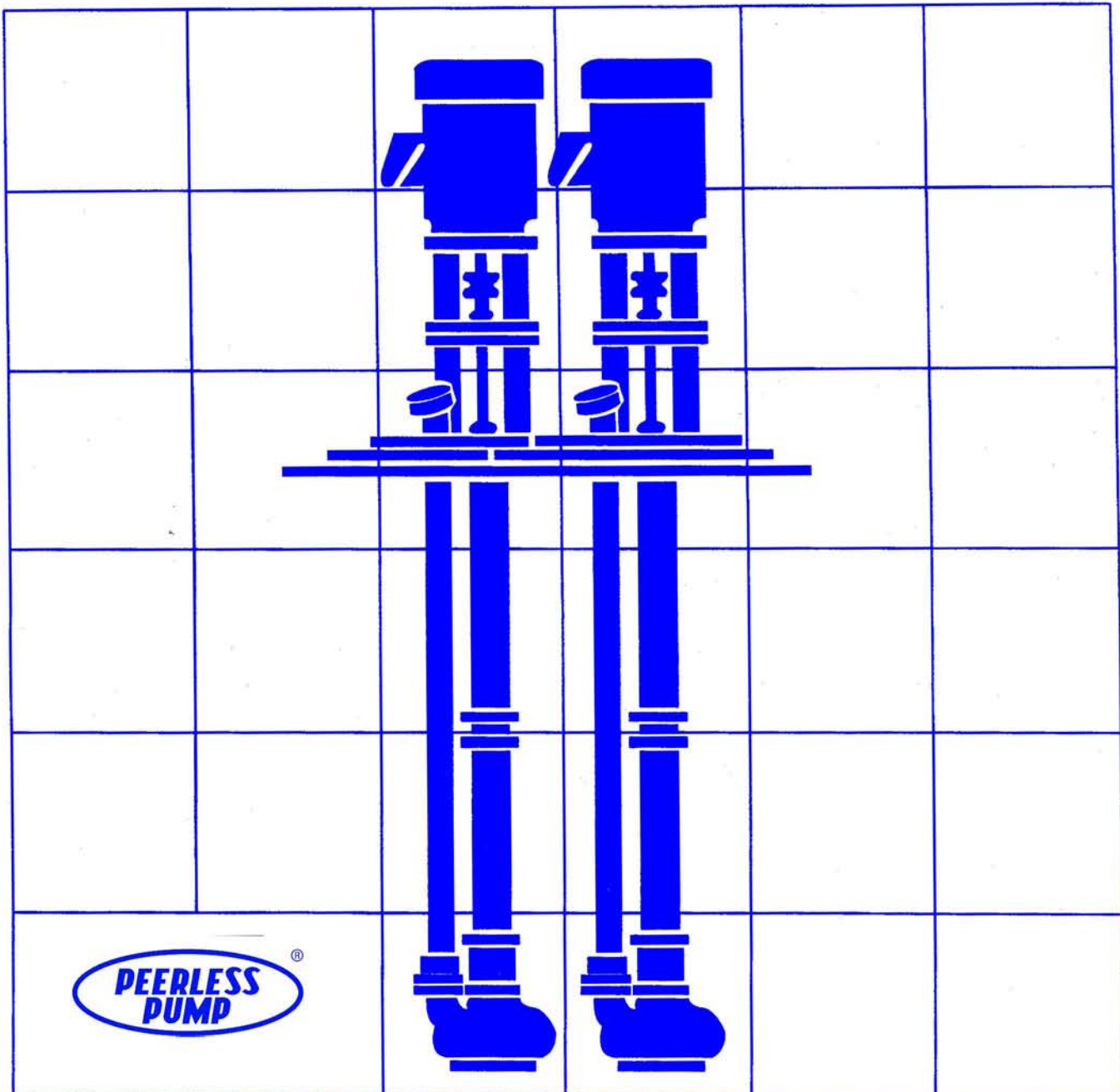


Peerless Pump Company

NON-CLOG SEWAGE PUMPS

Type VCS



Peerless Non-Clog Sewage Pumps

Rates of Flow: from 50 to 800 gpm.

Heads: to 105 feet.

Peerless vertical Type VCS enclosed shaft sewage pumps feature open (no strainer) suction and non-clog impellers. Recommended for pumping water-borne sewage, trash and wastes, they are suitable for applications in:

Commercial Buildings Motels, Office Buildings, Trailer & Mobile Home Parks.

Public Buildings Hospitals, Educational & Institutional Buildings, Parks & Playgrounds, Sewage & Water Treatment Plants.

Industrial Plants Food Processing Plants, Manufacturing Plants, Service Buildings.

The design features of the Peerless Type VCS non-clog pumps which contribute to their unsurpassed quality and value are:

- Registered fits at every joint to assure and hold straight shaft alignment.
- Heavy duty sleeve-type shaft bearings and bearing housings for tough, rugged construction.
- Expansion joints at critical locations to eliminate mechanical binding as a result of temperature changes.
- Many options — accessories and materials of construction — to assure the ideal pump for your application.

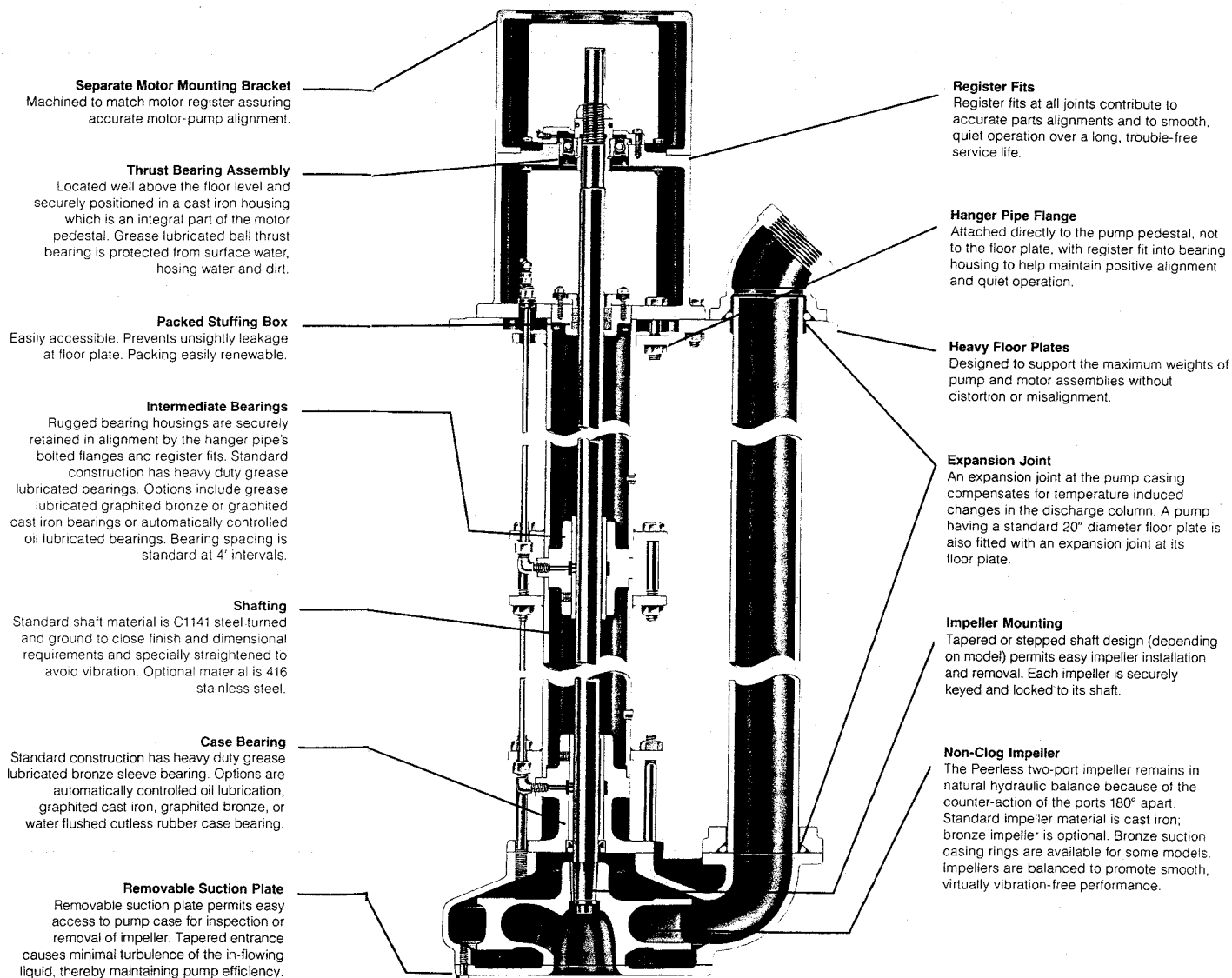
Duplex Pumps Recommended

Two complete pumps with automatic alternation installed in one basin permit the removal of one for servicing with continuing complete protection. In an emergency, the second pump will operate automatically, increasing the flow. By alternating the pumps every use cycle, both pumps are kept in operating condition and wear on the moving parts is equalized.

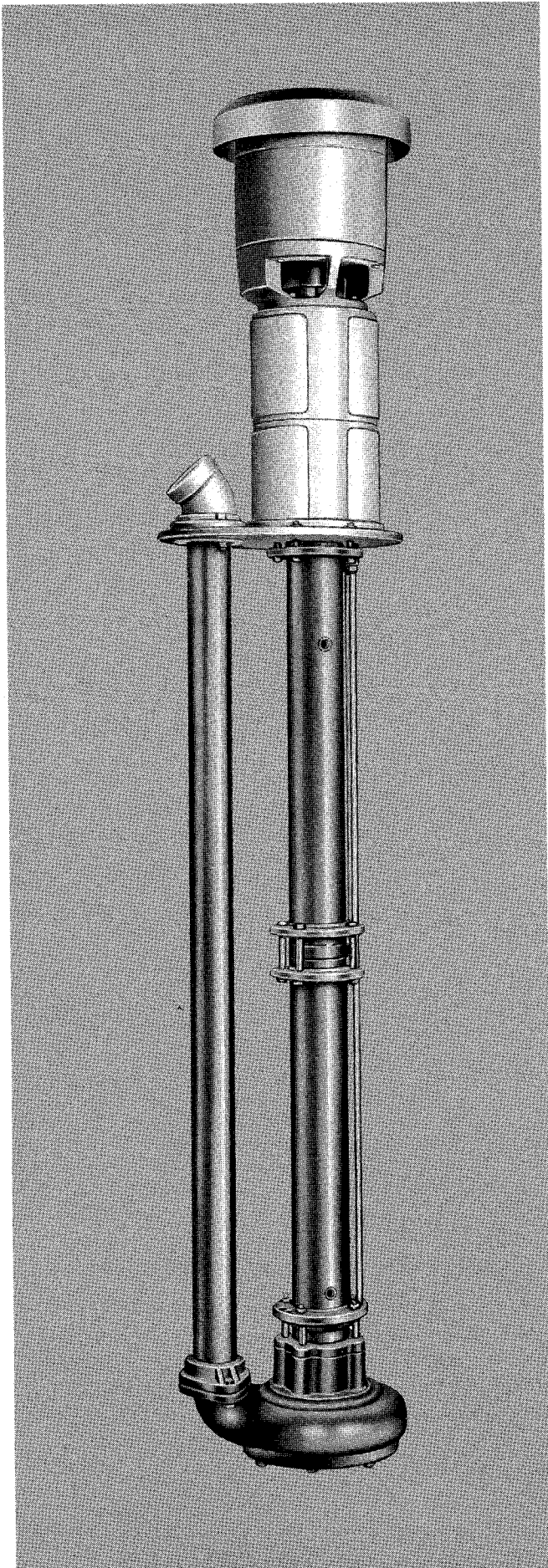
Service Limitations

VCS pumps are designed primarily for sewage lift applications for transferring sanitary liquid wastes and liquid wastes with solids to sewers. Liquids being pumped are limited to those which are compatible with their standard or optional materials of construction. Up to 180°F maximum liquid temperature. Pumping element of the unit must be submerged at all operating conditions.

Peerless Type VCS Pumps Construction Details



How to Determine Sewage Pump Flows



Industrial Plants

Add together the maximum sanitary waste and the total process waste handled by the pump.

Sanitary Waste

- A. *Average* daily inflow equals the number of persons on the largest shift times 40 gallons.
- B. *Maximum* daily inflow equals average daily inflow times 2.
- C. For sanitary loads only, the pump flow in gpm = $2 \times (\text{people on largest shift}) \times (40 \text{ gallons}) \div (\text{minutes per shift})$.

Process Waste

The plant engineer will probably know the amount of wastes discharged. If this value is in gallons per eight hour shift, divide by 480 to derive gallons per minute.

EXAMPLE

A factory having 800 people on its largest eight hour shift and process wastes of 125 gpm will require a pump flow calculated as follows:

Sanitary wastes:	$\frac{800 \times 40 \times 2}{480}$	=	134 gpm
Process wastes:			125 gpm
Required pump flow:			259 gpm

Outlying Lift Stations

- A. *Average* daily inflow equals the total population times 100 gallons per day. If only the number of homes is known, assume an average of four persons per home.

B. Required pump flow, in gpm =

$$\frac{(\text{Average daily inflow}) \times 2}{1440 \text{ minutes per day}}$$

Building Installations

Apartments • Hotels • Schools • Hospitals • Offices
For the discussion which follows, refer to Table 1, Fixture Flow Units, and Table 2, Estimated Flow to Basin, on page 5. Determine the total estimated flow to the basin as follows:

- A. List the total number of each type of fixture.
- B. From Table 1, find the applicable flow units under the Occupancy column.
- C. Multiply the number of fixtures of each type by the applicable Flow Units value.
- D. Add together the fixture flow units. From Table 2, find the larger "Inflow to Basin gpm" nearest the "Total Fixture Flow Units" value.

EXAMPLE

- Assume a public building with the following fixtures:
- A. 30 water closets, public occupancy, flush valve operated.
 - B. 10 water closets, restricted occupancy (employees only), flush valve operated.
 - C. 60 lavatories (public).
 - D. 4 service slop sinks.
 - E. 9 urinals, public occupancy, flush valve operated.
- The total fixture units are:

Fixture	Number	Flow Units Fixtures	Total Flow Units
A	30	10	300
B	10	8	80
C	60	2	120
D	4	4	16
E	9	5	45
Total			561

From Table 2, it may be seen that 561 Total Fixture Flow Units are larger than 500 and smaller than 630. Thus, the pump flow nearest to but larger than the 561 Total Fixture Flow Units is 160 gpm.

How to Determine Pump Discharge Heads

Pump Discharge Head

Total pump discharge head is equal to the system static head plus system friction head plus, if applicable, the back pressure in the system into which the pump discharges.

Static Head

Static head is the elevation distance, in feet, from the bottom of the sump to the highest point of discharge.

Friction Head

Friction head, expressed in feet, is the term applied to the additional power required by the pump to push the liquid through the discharge line from the pump to its connection with the sewer.

System Back Pressure

The pressure in feet of head in the sewer main into which the pump discharge is connected (usually not more than 12 feet).

EXAMPLE

(To determine friction losses through the pipe and fittings at various flows, appropriate charts, such as those in *Cameron Hydraulic Data* or *Peerless Brochure EM-77*, are required.) Assume the pump produces 200 gpm which is discharged through a 4" pipe with fittings as follows:

Pipe/Fitting	Quantity	Friction Loss, Feet
Pipe	50'	50
45° ell	2	10
90° ell	2	22
Check valve	1	25
Gate valve	1	2
Total equivalent feet of pipe=		109

From an appropriate chart, it can be determined that the friction loss of 200 gpm through the equivalent of 109 feet of pipe is about 4½ feet. By adding the 4½ feet of friction head to the application's static head, the total head and the capacity (as determined on page 4) enables the selection of the proper pump from the selection charts on pages 6 and 7.

TABLE NO. 1 FIXTURE FLOW UNITS

TYPE OF FIXTURE		OCCUPANCY		
		Public	*Restricted	Residential
WATER CLOSET	FLUSH VALVE	10	8	6
	FLUSH TANK	5	4	3
URINALS	FLUSH VALVE	5	4	
	FLUSH TANK	3	2	
SHOWER HEAD	MIXING VALVE	4	3	2
KITCHEN SINK	RESTAURANT	4		
	DOMESTIC			2
LAVATORY		2		1
BATHTUB		4		2
SERVICE SINK		4		
BATHROOM GROUP†	FLUSH VALVE			8
	FLUSH TANK			6
LAUNDRY TRAY				3

*Not Used by General Public.
†Consists of Water Closet, Lavatory, Bathtub or Shower.

TABLE NO. 2 ESTIMATED FLOW TO BASIN

Total Fixture Flow Units	Inflow to Basin GPM	Total Fixture Flow Units	Inflow to Basin GPM
150	80	2650	400
250	100	3000	440
370	120	3400	480
500	140	3800	520
630	160	4250	560
775	180	4700	600
920	200	5100	640
1070	220	5600	680
1225	240	6050	720
1550	280	6550	760
1900	320	7050	800
2250	360		

The above values in both tables are based on Survey reports by the bureau of standards published in the ASHRAE Guide.

VCS Selection Tables

870 RPM Head in feet

Gallons per minute	Head in feet			
	10	15	20	25
50	LMC4B ¾	LMC4B 1	LMC4B 1½	
75	LMC4B ¾	LMC4B 1	LMC4B 1½	
100	LMC4B ¾	LMC4B 1	LLC4B 1½	LLC4B 1½
125	LMC4B ¾	LMC4B 1	LLC4B 1½	LLC4B 1½
150	LMC4B 1	LMC4B 1½	LLC4B 1½	LLC4B 2
175	LMC4B 1	LMC4B 1½	LLC4B 1½	
200	LMC4B 1	LMC4B 1½	LLC4B 2	
225	LMC4B 1½	LMC4B 1½	LLC4B 2	
250	LMC4B 1½	LLC4B 2	OM4B 3	
275	LMC4B 1½	OM4B 2	OM4B 3	
300	LMC4B 1½	OM4B 2	OM4B 3	
325	LMC4B 1½	OM4B 3		
350	OM4B 2	OM4B 3		
375	OM4B 2	OM4B 3		
400	OM4B 2	OM4B 3		
450	OM4B 2	OM4B 3		
500	OM4B 3			
550				
600		Column figures represent pump models (LMC4B) above and horsepower of recommended motor sizes (¾) below.		
700				
800				

1150 RPM

Head in feet

Gallons per minute	Head in feet										
	10	15	20	25	30	35	40	45	50	55	
50	NSC4A ½	NSC4A ½	NSC4A ¾	LMC4B 1½	LLC4B 1½	LLC4B 2	LLC4B 2	LLC4B 3	LLC4B 3	LLC4B 3	
75	NSC4A ½	NSC4A ¾	LLC4B 1	LLC4B 1½	LLC4B 2	LLC4B 2	LLC4B 2	LLC4B 3	LLC4B 3	LLC4B 5	
100	NSC4A ¾	LMC4B 1	LMC4B 1½	LLC4B 1½	LLC4B 2	LLC4B 2	LLC4B 3	LLC4B 3	LLC4B 3		
125	NSC4A ¾	LMC4B 1	LMC4B 1½	LMC4B 2	LMC4B 3	LLC4B 3	LLC4B 3	LLC4B 5	LLC4B 5		
150	NSC4A 1	LMC4B 1½	LMC4B 1½	LMC4B 3	LMC4B 3	LLC4B 3	LLC4B 3	LLC4B 5	LLC4B 5		
175	LMC4B 1	LMC4B 1½	LMC4B 2	LMC4B 3	LMC4B 3	LLC4B 3	LLC4B 5	LLC4B 5			
200	LMC4B 1	LMC4B 1½	LMC4B 2	LMC4B 3	LMC4B 3	LLC4B 3	LLC4B 5	LLC4B 5			
225	LMC4B 1	LMC4B 1½	LMC4B 2	LMC4B 3	LMC4B 5	LLC4B 5	LLC4B 5	OM4B 7½			
250	LMC4B 1½	LMC4B 2	LMC4B 3	LMC4B 3	LLC4B 5	LLC4B 5	LLC4B 5				
275	LMC4B 1½	LMC4B 2	LMC4B 3	LMC4B 5	LLC4B 5	LLC4B 5	OM4B 7½				
300		LMC4B 2	LMC4B 3	LMC4B 5	LLC4B 5	LLC4B 5					
325		LMC4B 3	LMC4B 3	LMC4B 5	LLC4B 5	OM4B 5					
350		LMC4B 3	LLC4B 5	LLC4B 5	LLC4B 5	OM4B 7½					
375		LMC4B 3	LMC4B 5	LLC4B 5	OM4B 5	OM4B 7½					
400			LMC4B 5	OM4B 5	OM4B 7½	OM4B 7½					
425			OM4B 5	OM4B 5	OM4B 7½						
450			OM4B 5	OM4B 5	OM4B 7½						
475		OM4B 5	OM4B 5	OM4B 5	OM4B 7½						
500		OM4B 5	OM4B 5	OM4B 7½	OM4B 7½						
525		OMC5B 5	OMC5B 5	OMC5B 7½	OMC5B 7½			Column figures represent pump models (NSC4A) above and horsepower of recommended motor sizes (½) below.			
550		OMC5B 5	OMC5B 5	OMC5B 7½							
575		OMC5B 5	OMC5B 5	OMC5B 7½							
600		OMC5B 5	OMC5B 7½	OMC5B 7½							
700			OMC5B 7½								

NOTE: All selection tables are based on approximately 5" drop in discharge head without using the motor service factor.

This color  indicates that these pumps are available in duplex Series P Flush Kleen® systems.

These pump selection tables are based upon motor speed, pump capacity in U.S. GPM, pump discharge head in feet and specific gravity of 1.0.

Recommended pump model for each condition listed is the most economical and efficient for that particular speed.

Motor HP is selected on the basis of a permissible drop in head of at least five feet from the design point without overloading the standard open motor.

The top number indicates the pump selection by model number and the lower figure the recommended motor size.

1750 RPM

Head in feet

Gallons per minute

	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
50		NSC4A 1/2	NSC4A 3/4	NSC4A 1	NSC4A 1	NSC4A 1 1/2	NSC4A 1 1/2	NSC4A 2	NSC4A 2										
60		NSC4A 1/2	NSC4A 3/4	NSC4A 1	NSC4A 1 1/2	NSC4A 1 1/2	NSC4A 2	NSC4A 2											
75	NSC4A 1/2	NSC4A 3/4	NSC4A 3/4	NSC4A 1	NSC4A 1 1/2	NSC4A 1 1/2	NSC4A 2	NSC4A 2	LLC4B 3	LLC4B 3	LLC4B 5	LLC4B 5	LLC4B 5	LLC4B 5	LLC4B 5	LLC4B 5	LLC4B 7 1/2	LLC4B 7 1/2	LLC4B* 7 1/2
100	NSC4A 3/4	NSC4A 1	NSC4A 1	NSC4A 1 1/2	NSC4A 1 1/2	NSC4A 2	NSC4A 2	NSC4A 3	LMC4B 5	LMC4B 5	LMC4B 5	LLC4B 5	LLC4B 5	LLC4B 5	LLC4B 7 1/2	LLC4B 7 1/2	LLC4B 7 1/2	LLC4B 7 1/2	LLC4B* 7 1/2
125	NSC4A 3/4	NSC4A 1	NSC4A 1 1/2	NSC4A 1 1/2	NSC4A 2	NSC4A 2	NSC4A 3	LMC4B 5	LMC4B 5	LMC4B 5	LLC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LLC4B 7 1/2	LLC4B 7 1/2	LLC4B 7 1/2	LLC4B 7 1/2
150	NSC4A 3/4	NSC4A 1 1/2	NSC4A 1 1/2	NSC4A 2	NSC4A 3	NSC4A 3	NSC4A 3	LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LLC4B 7 1/2	LLC4B 7 1/2	LLC4B 7 1/2	LLC4B 10
175	NSC4A 1	NSC4A 1 1/2	NSC4A 2	NSC4A 2	NSC4A 3	NSC4A 3	LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LLC4B 7 1/2	LLC4B 7 1/2	LLC4B 7 1/2	LLC4B 10
200	LMBC4A 1 1/2	NSC4A 2	NSC4A 2	NSC4A 3	NSC4A 3	NSC4A 3	LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LLC4B 7 1/2	LMC4B 7 1/2	LLC4B 7 1/2	LLC4B 7 1/2	LLC4B 10	LLC4B 10	LLC4B 10
225		NSC4A 2	NSC4A 3	NSC4A 3	NSC4A 3	LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LLC4B 7 1/2	LMC4B 10	LLC4B 10	LLC4B 10	LLC4B 10	LLC4B 10	LLC4B 10
250		NSC4A 3	NSC4A 3	NSC4A 3	NSC4A 5	LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 10	LMC4B 10	LLC4B 10	LLC4B 10	LLC4B 10	LLC4B 10	
275		NSC4A 3	NSC4A 3	NSC4A 5	LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 10	LMC4B 10	LLC4B 10	LLC4B 10	LLC4B 10	LLC4B 10	LLC4B 15	OM4B 20
300			LMC4B 3	LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 10	LMC4B 10	LLC4B 10	OM4B 15	OM4B 15	OM4B 15	OM4B 20	OM4B 20
325			LMC4B 3	LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 10	LMC4B 10	LMC4B 10	LLC4B 10	OM4B 15	OM4B 15	OM4B 20	OM4B 20	OM4B 20
350			LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 10	LMC4B 10	LMC4B 10	OM4B 15	OM4B 15	OM4B 15	OM4B 20	OM4B 20	OM4B 20
375			LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 10	LMC4B 10	LMC4B 10	LLC4B 15	OM4B 15	OM4B 15	OM4B 20	OM4B 20	OM4B 20	OM4B 20
400			LMC4B 5	LMC4B 5	LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 10	LMC4B 10	LMC4B 10	LMC4B 10	LLC4B 15	OM4B 15	OM4B 15	OM4B 20	OM4B 20	OM4B 20	OM4B 20
425				LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 10	LMC4B 10	LMC4B 10	LMC4B 15	OM4B 15	OM4B 15	OM4B 20	OM4B 20	OM4B 20	OM4B 20	
450				LMC4B 5	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 10	LMC4B 10	LMC4B 10	LMC4B 15	LLC4B 15	OM4B 15	OM4B 20	OM4B 20	OM4B 20	OM4B 20	OM4B 20	
475				LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 10	LMC4B 10	LMC4B 10	LMC4B 15	LMC4B 15	LMC4B 15	OM4B 15	OM4B 20	OM4B 20	OM4B 20	OM4B 20	OM4B 20	
500				LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 7 1/2	LMC4B 10	LMC4B 10	LMC4B 10	LMC4B 10	LMC4B 15	OM4B 15	OM4B 20	OM4B 20	OM4B 20	OM4B 20	OM4B 20	OM4B 20	
525					LMC4B 7 1/2	LMC4B 10	LMC4B 10	LMC4B 15	LMC4B 15	LMC4B 15	OMC5B 15	OMC5B 15	OMC5B 20	OMC5B 20	OMC5B 20	OMC5B 20	OMC5B 20		
550	Column figures represent pump models (NSC4A) above and horsepower of recommended motor sizes (1/2) below.					LMC4B 10	LMC4B 10	LMC4B 15	LMC4B 15	LMC4B 15	OMC5B 15	OMC5B 15	OMC5B 20	OMC5B 20	OMC5B 20	OMC5B 20	OMC5B 20		
575							LMC4B 10	LMC4B 15	LMC4B 15	LMC4B 15	OMC5B 15	OMC5B 15	OMC5B 20	OMC5B 20	OMC5B 20				
600								OMC5B 15	OMC5B 15	OMC5B 15	OMC5B 15	OMC5B 20	OMC5B 20	OMC5B 20	OMC5B 20				
700										OMC5B 15	OMC5B 15	OMC5B 15	OMC5B 15	OMC5B 20	OMC5B 20	OMC5B 20	OMC5B 20		

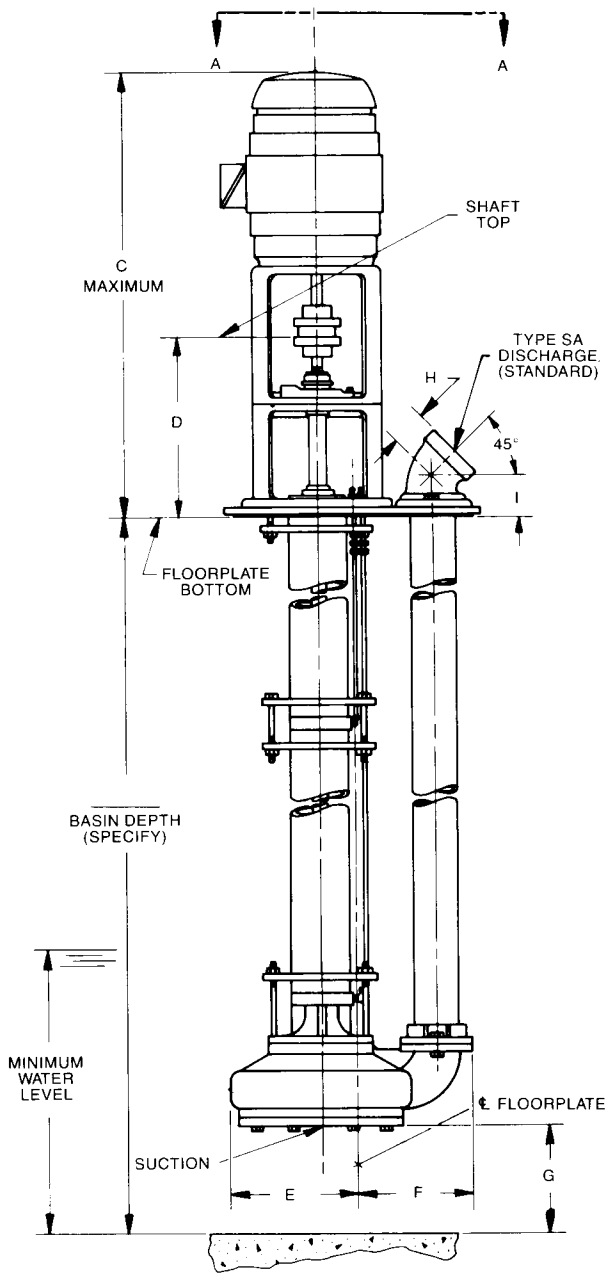
*These pumps and motor sizes also available in capacity range indicated at maximum head of 105 feet.

This color

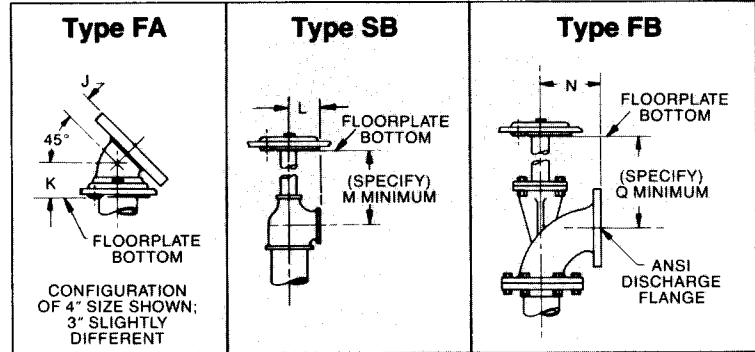


indicates that these pumps are available in duplex Series P Flush Kleen® systems.

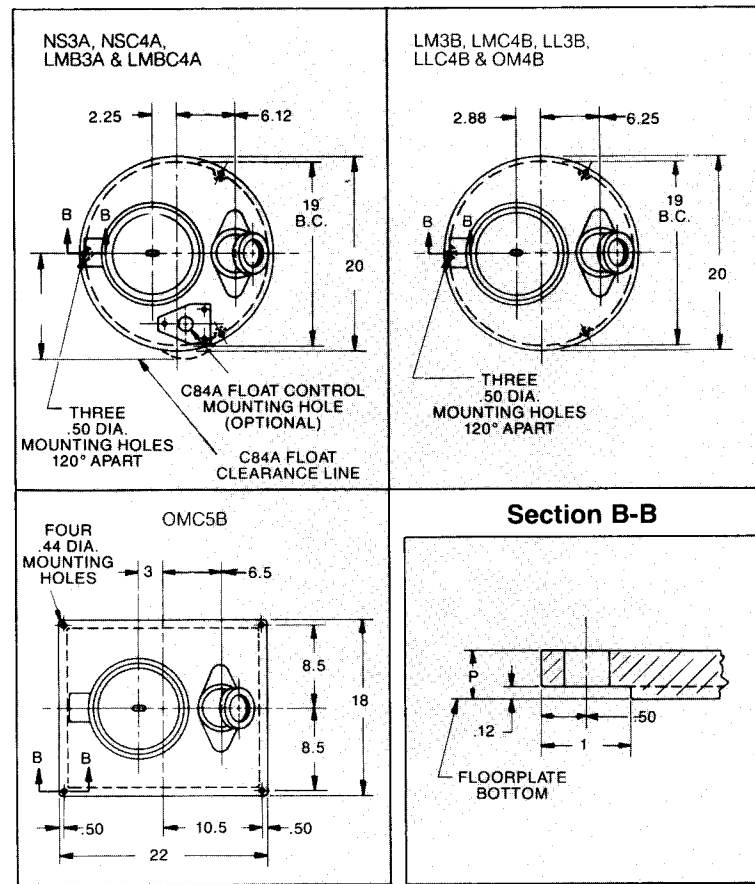
Dimensions for VCS Pumps and Single Pump Sumps



Optional Discharge Types



View A-A: Floorplate Dimensions

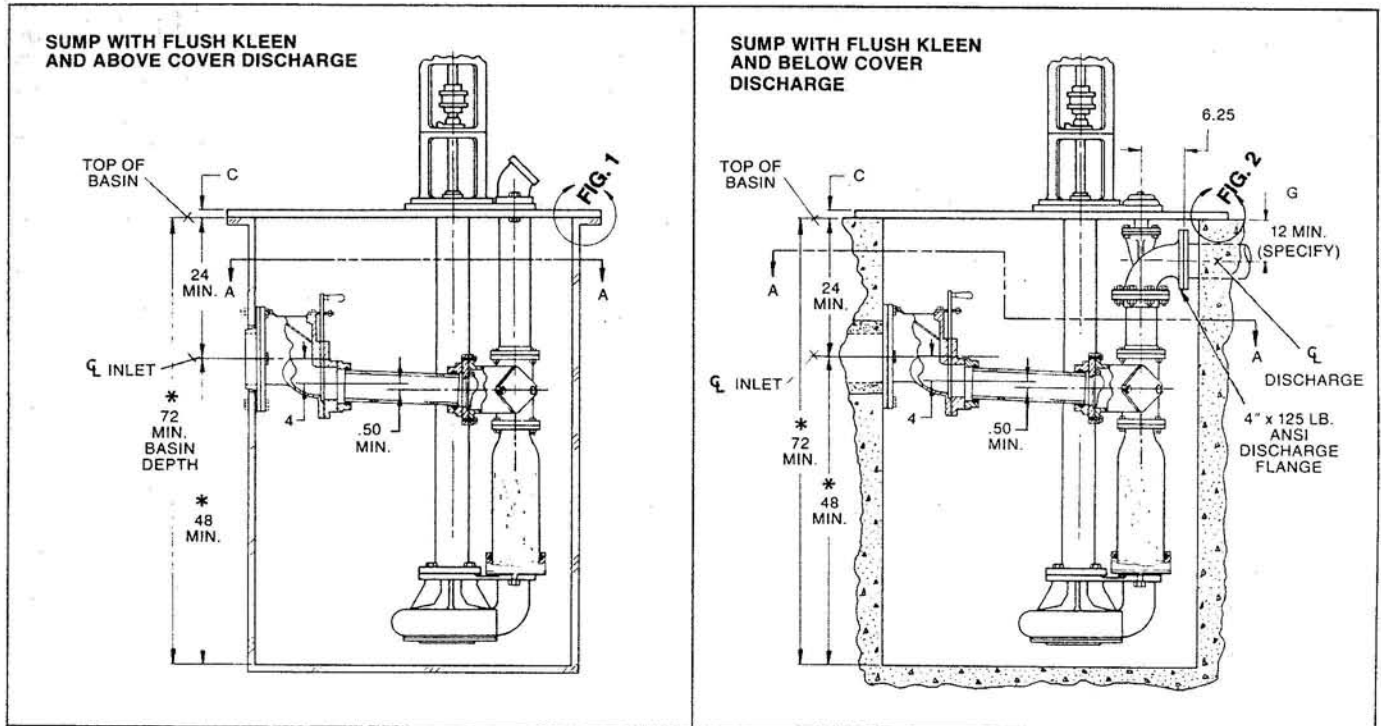


Pump dimensions and sump dimensions for single pump installations

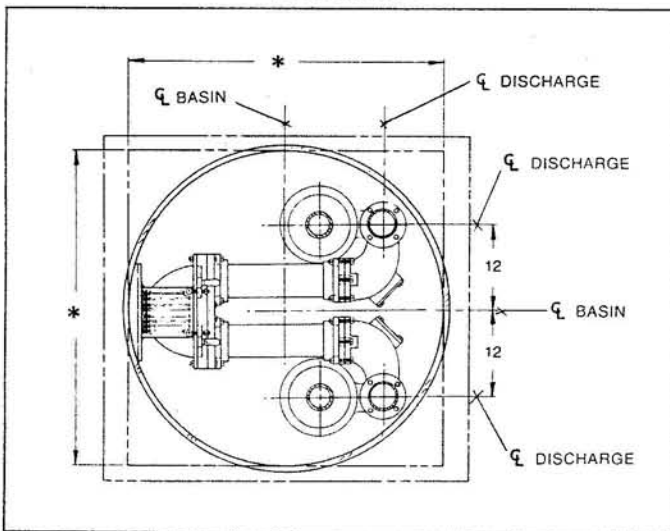
All dimensions are in inches not certified. Certified dimension prints furnished on request.

VCS PUMP MODEL	C MAX.	D	E	F	G	P	MIN. WATER LEVEL	PIPE SIZE	DISCHARGE CONNECTION INFORMATION								MINIMUM INSIDE DIMS. FOR SUMPS			
									TYPE SA H	TYPE SA I	TYPE FA J	TYPE FA K	TYPE SB L	TYPE SB M	TYPE FB N	TYPE FB Q	DISCH. ABOVE FLOOR DIA. OR SQUARE	DISCH. ABOVE FLOOR DEPTH	DISCH. BELOW FLOOR DIA. OR SQUARE	DISCH. BELOW FLOOR DEPTH
NS3A NSC4A	38	14.92	7.35	9.12	5.09	0.75	11	3" 4"	2.38	3.62	2.56	3.62 3.31	3.12 n.a.	10 n.a.	n.a. 6.50	n.a. 12	30	36	48	54
LMB3A LMBC4A	38	15.00	8.15	9.12	3.68	0.75	11	3" 4"	2.38	3.62	2.56	3.62 3.31	3.12 n.a.	10 n.a.	n.a. 6.50	n.a. 12				
LM3B LMC4B	44	15.13	9.35	9.25	5.75	0.88	12.5	3" 4"	2.38	3.75	4	2.56 3.44	3.75 3.12	10 n.a.	n.a. 6.50	n.a. 12	30	48	48	54
LL3B LLC4B	44	15.30	9.31	9.25	5.62	0.88	12.5	3" 4"	2.38	3.75	4	2.56 3.44	3.75 3.12	10 n.a.	n.a. 6.50	n.a. 12				
OM4B	47	15.15	10.84	9.25	6.00	0.88	12.5	4"	2.38	3.75	2.56	3.44	n.a.	n.a.	6.50	12	60	72	72	72
OMC5B	47	15.00	11.06	10.00	6.00	0.75	12.5	5"	2.75	3.88	n.a.	n.a.	n.a.	n.a.	7.50	14				

Minimum Sump Dimensions for Duplex VCS Pumps



Section A-A

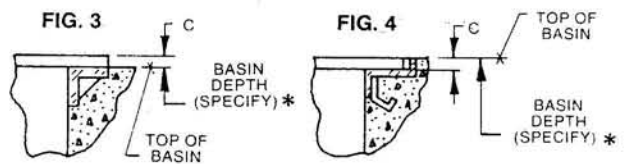


Discharge Information

For duplex units without Flush Kleen, the standard and optional discharge information on page 8 applies.

When Flush Kleen strainers are used, the standard discharge is Type SA, 4 inch size. Type FA, 4 inch size, is optional. For dimensions, see "Discharge Connection Information" table on page 8. For under cover discharge information, see above.

Mounting Cover Types



* Consult your Peerless representative for assistance with basin dimensions, types, etc.

Minimum sump dimensions for duplex pumps

All dimensions are in inches; not certified. Certified dimension prints furnished on request.

Mounting cover information

VCS PUMP MODEL	DUPLEX PUMPS WITH FLUSH KLEEN		DUPLEX PUMPS WITHOUT FLUSH KLEEN		BASIN TYPE	FIG. NO.	TYPE COVER MOUNTING	COVER MATERIAL	C COVER THICKNESS	G DISCH. SPECIFY						
	DISCH. ABOVE FLOORPLATE	DISCH. BELOW FLOORPLATE	DISCH. ABOVE FLOORPLATE	DISCH. BELOW FLOORPLATE												
NS3A	+	+	+	+	Concrete, no curb ring	1	Top of basin	Cast iron	1.25	n.a.						
NSC4A	48	72	60	48												
LMB3A	+	+	+	+							Concrete with Cast iron curb ring	3	Cast iron	1.25		
LMBC4A	48	72	60	48												
LM3B	+	+	+	+							Steel	1	Steel	0.44	n.a.	
LMC4B	48	72	60	48												
LL3B	+	+	+	+							Fiberglass	1	Steel	0.44	n.a.	
LLC4B	48	72	60	72												
OM4B (1750 RPM)	+	+	+	+							Concrete, with steel curb ring	4	Flush with floor	Steel	0.44	
OM4B (1150 RPM)	48	72	60	48												
OMC5B	+	+	+	+												

+ Not used with Flush Kleen

**Pump speeds
Impeller diameters
Sphere sizes**

VCS Pump Model	Maximum Impeller Dia., Inch	Maximum Sphere Size, Inch	Maximum Pump RPM
NS3A, NSC4A	7	2	1750
LMB3A, LMBC4A	7	2½	1750
LM3B, LMC4B	9	2½	1750
LL3B	9 11	2 2	1750 1150
LLC4B	10 11	2 2	1750 1150
OM4B, OMC5B	10 11	3 3	1750 1150

The Peerless Pump Flush-Kleen® System

VCS pumps, when used with the Flush Kleen system, provide a non-clog pumping system.

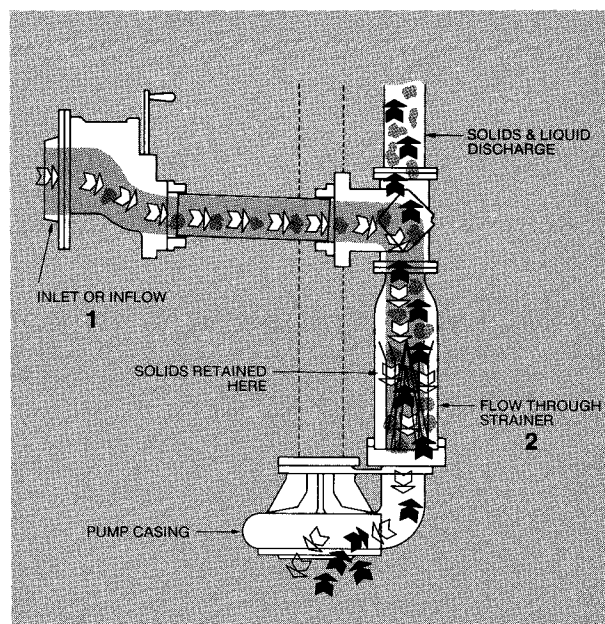
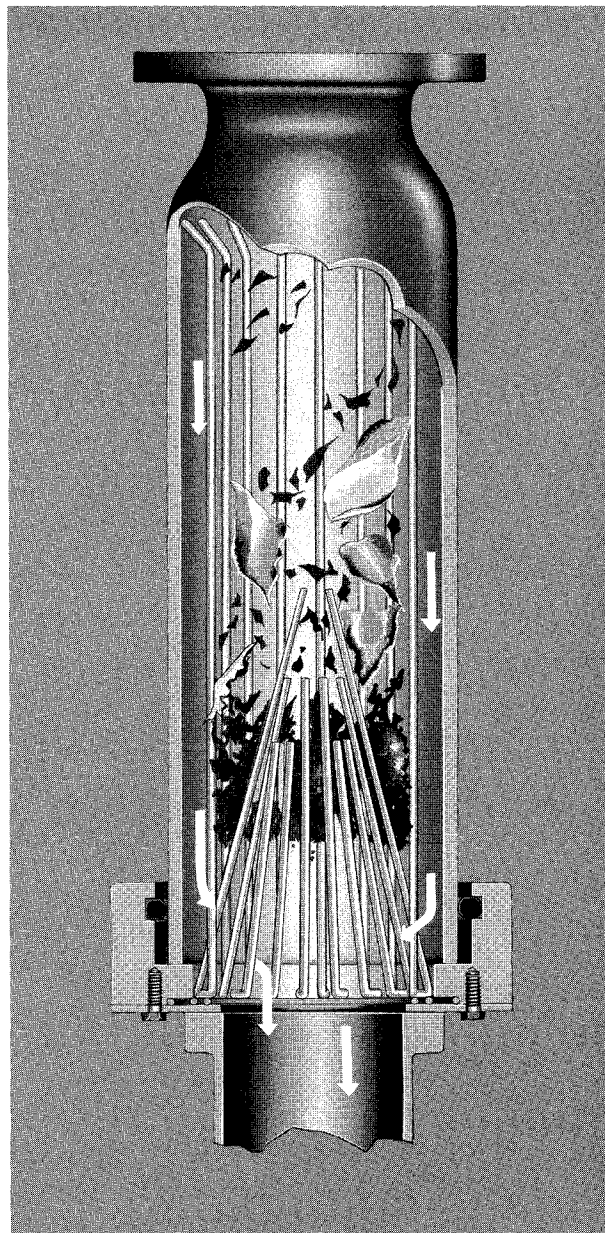
The system will successfully handle rags, solids and high wet strength paper products.

A self-cleaning flow through strainer, an integral part of the pump discharge, permits only strained liquid to pass through the impeller into the pit. As the pump is activated, the strained liquid is pumped up and through the strainer, flushing the solids retained in the strainer housing up and out into the sewer line.

Here's how it works

1. Sewage enters through the inlet, through the flow-through strainer, through the pump casing and into the wet well.
All solids are held back by the strainer. As the liquid reaches a predetermined level, the pump is activated.
2. When the pump starts pumping, a check valve in the inlet line closes, permitting the liquid from the wet well to be pumped to the sewer. As the liquid passes through the high velocity area of the strainer, all accumulated solids, rags, paper, etc. are discharged to the sewer.

For sump dimensions and ordering specifications, contact your Sterling representative.



Optional Equipment

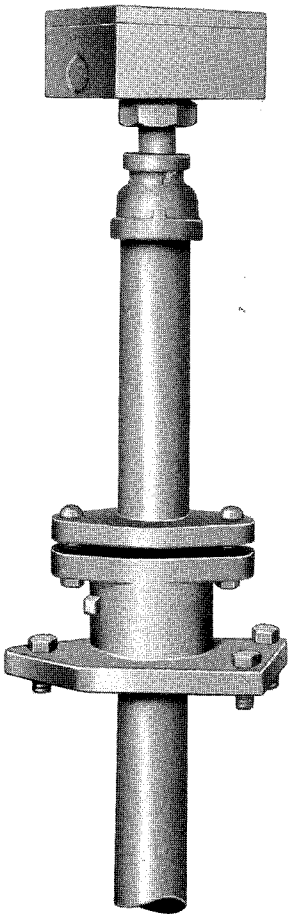
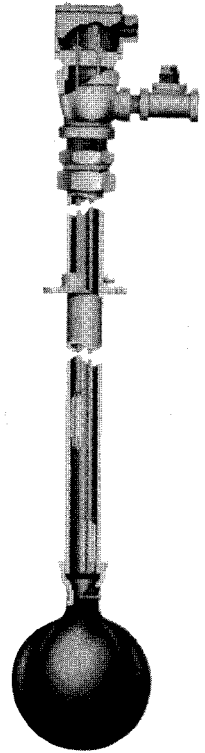
The Peerless Pump Series P Sealtrode®

The Sealtrode Sealed Electrode Floatless Pump Controller is a device for controlling the operation of one or more pumps. The electrodes are completely sealed, never encountering sludge, oil, soap, grease, paper, twigs, rags or corrosive material. The electrodes never become fouled. As the liquid level rises in the wet well it exerts a hydrostatic pressure on a flexible bulb filled with an electrolytic solution. This pressure squeezes the bulb, causing the displaced electrolytic solution to rise in the support pipe. As the liquid within the support pipe rises and falls, electrodes make and break electrical circuits, activating the pump starters.

Many various Sealtrode models are available which include standard and optional features such as...

- Electrodes for turning one or two pumps on and off.
- Manual switch for pump lead/lag priority.
- Automatic motor-driven switch which reverses pump lead/lag priority after each operation cycle. Keeps pumps "exercised" and equalizes wear.
- Contacts for high water alarms.
- Control panels with various standard and optional features, as described below.

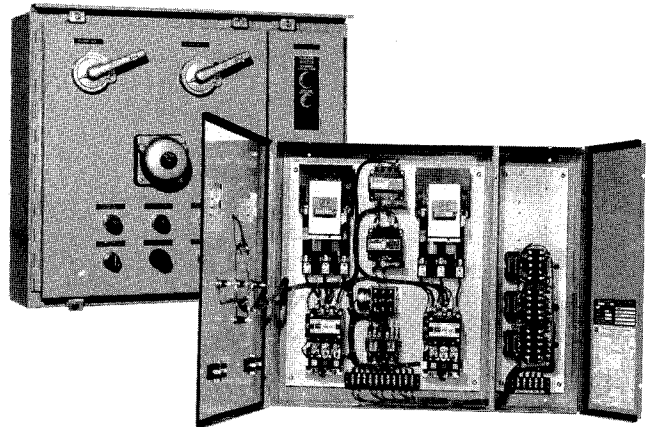
For additional Sealtrode information, refer to brochure B-6610.



High Water Alarm

The high water alarm is activated by a pressure switch which is actuated by the compression of air in a pressure pipe when high water occurs. The liquid level at which the alarm is activated may be pre-selected from the range of settings available on each control unit. When the alarm is activated at this high water setting, it indicates either sump inflow rates in excess of the pumps' capacities or a failure of one or both pumps to operate.

Sealtrode Control Panels



For installations where control panels are desired, panels are available with the equipment listed below. In addition, optional features such as HAND-OFF-AUTO selector switches, three leg overload protection, floor mounting stands and NEMA-1 enclosures or NEMA-7 enclosures with intrinsically safe switches are also available.

- Magnetic Starters
- Fused Disconnect Switches
- Electric Alternator
- Green Pump Running Lights
- Red Light (Visible Alarm)
- 4" Bell (Audible Alarm)
- Bell Silencing Button