

# the Protector

PROTECTOR SERIES: CONDENSATE, BOILER FEED, AND TRANSFER SYSTEMS



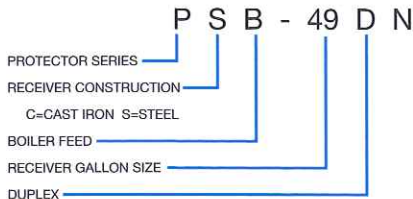
**Skidmore**  
A Swan Group Company

See inside for  
expanded capacities.

## DESCRIPTION

The Protector Series condensate and boiler feed units are capable of handling hot (210°F) or cold water. The series is available in simplex or duplex; either condensate return or boiler feed. Many units have low profiles for low headroom applications.

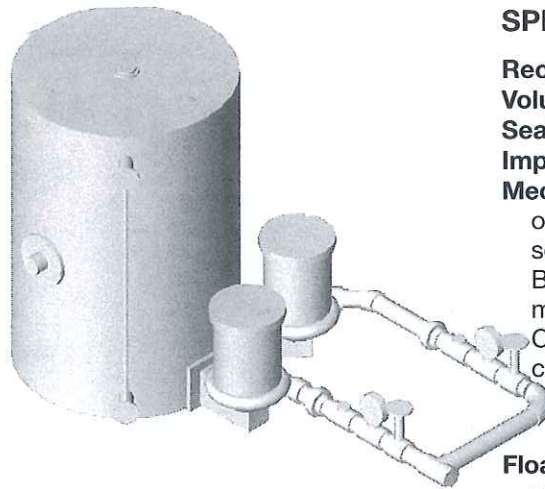
## TYPICAL CATALOGUE CODE



## COMPARISON GUIDE

GPM	HOFFMAN
"PROTECTOR"	"WATCHMAN"
<b>CONDENSATE UNITS</b>	
PC-6N	WC-6-20B
PC-15N	WC-12-20B
PC-15DN	WCD-12-20BMA
PC-21N	
PC-21DN	
PS-10N	WCS-8-20B
PS-20N	
PS-20DN	
<b>BOILER FEED UNITS RECTANGLE</b>	
PSB-20N	
PSB-20DN	
<b>BOILER FEED UNITS HORIZONTAL</b>	
PSB-49N	
PSB-49DN	
PSB-71N	
PSB-71DN	
PSB-117DN	
PSB-150N	
PSB-150DN	
<b>BOILER FEED UNITS VERTICAL</b>	
VPSB-49N	50VBFS-B
VPSB-49DN	50VBFD-B
VPSB-71N	
VPSB-71DN	
VPSB-117N	100VBFS-B
VPSB-117DN	100VBFD-B
VPSB-110N	
VPSB-110DN	
•VPSB-211J	200VBF-S
•VPSB-211JD	200VBF-D

\*NOTE: Pump capacity 30 gpm at 20 psi discharge 3/4 hp. All boiler feed systems simplex and duplex with makeup valve and sight glass.



## SPECIFICATIONS

**Receiver:** steel or cast iron

**Volute:** cast iron

**Seal Plate:** cast iron

**Impeller:** non-ferrous material

**Mechanical Seal:** John Crane type 6 or equal, ceramic and Crane-Carb seal faces, neoprene, EPT and Buna-N elastomers, stainless steel metal parts (Crane Packing Co. CraneCarb is a phenolic bonded carbon graphite)

**Float Switch:** simplex units normally open contacts which energize pump on demand (liquid rise)

**Mechanical Alternator:** duplex unit equalizes running time between two pumps and provides emergency backup in case of excessive liquid return or pump failure

**3/8" Make-Up Valve:** maximum inlet psa 80 (boiler feed operation)

**Casing Gasket:** cellulose fiber chloroprene

**Water Slinger:** neoprene

**Hardware:** stainless steel, brass (cadmium plated)

**Maximum Limits:** liquid temperature 210°F, ph range 4-9

**Close Coupled Motor:** square flange, 1/3 hp, 115/230 ODP, 3450 RPM, permanently grease lubricated shielded ball bearings, threaded stainless steel shaft. Capacitor start, induction run, built-in thermal overload protection with automatic reset.

**Suction Isolation Valve:** optional

## PUMP CHARACTERISTICS

GPM	PSI	NPSHR
10	25	2'
20	20	2'
30	15	2'
40	10	3.5'

## APPLICATIONS

- Boiler feed
- Condensate transfer
- Air conditioning
- Heating
- Liquid transfer
- Residential effluent
- Remote liquid transfer
- Assembly line drainage

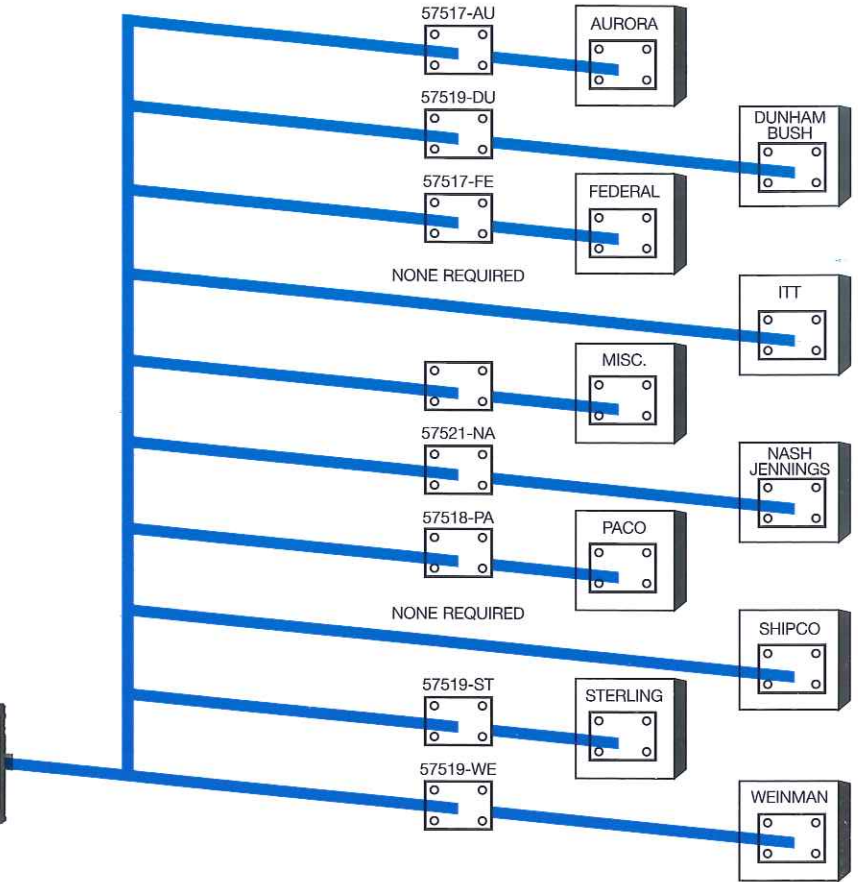
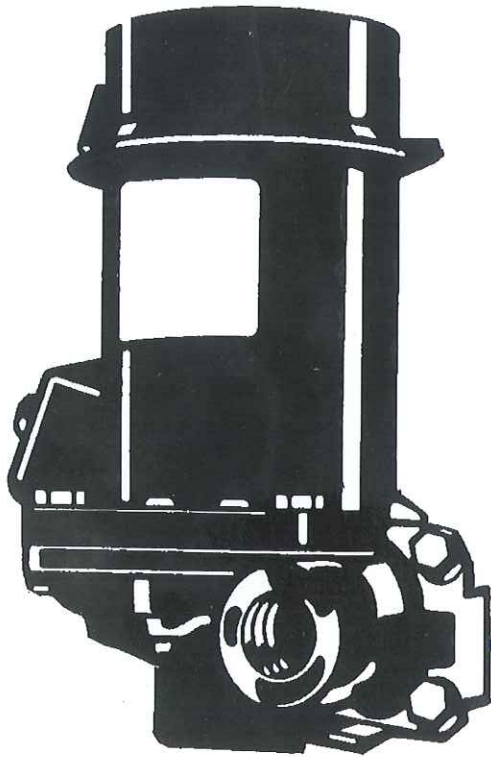
## FEATURES

- Low NPSHR requirements
- Multiple profiles for specific applications
- Expertly designed for maneuverability
- Simplicity in field hook up
- Versatile compatibility of handling 210°F water
- Competitively priced
- Manufactured in the US by a team of professional craftsmen
- Industry leader in prompt delivery
- Largest selection to fit many different applications
- Simplex units equipped for future second pump (except PC-6N and PS-10N)

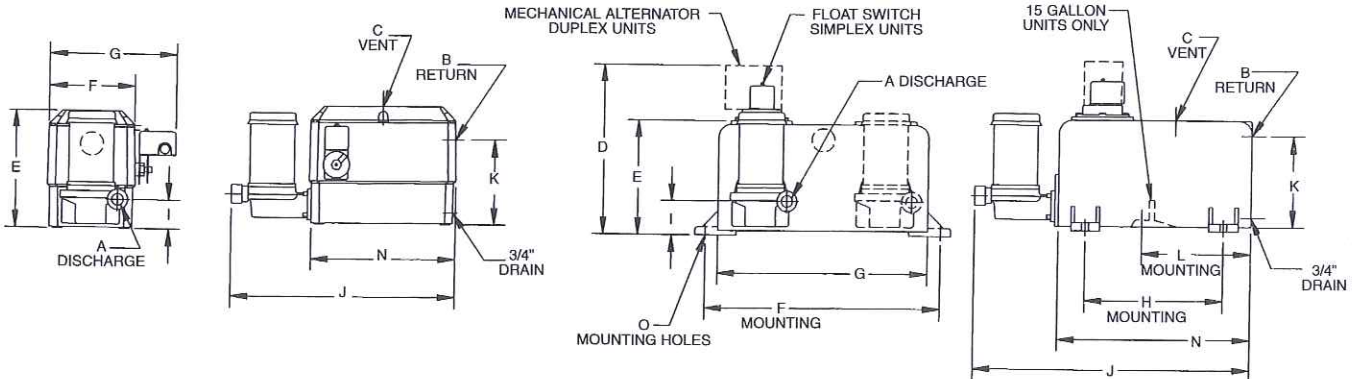


# COMPLETE PUMP AND MOTOR ASSEMBLY

## Interchangeability



## STOCK PUMP ASSEMBLY



End View  
cast iron 6 gallon  
simplex unit

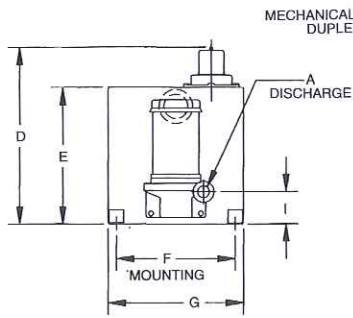
Side View  
cast iron 6 gallon  
simplex unit

End View  
cast iron 15 and 21 gallon  
simplex and duplex units

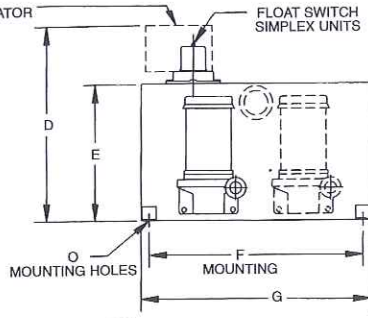
Side View  
cast iron 15 and 21 gallon  
simplex and duplex units

NOTE: All dimensions are approximate

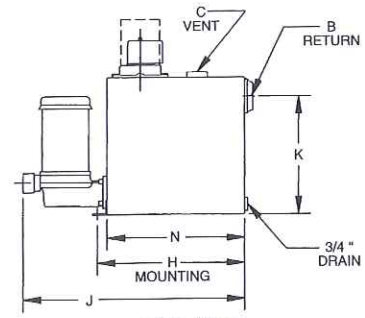
MODEL	UNIT STYLE	A	B	C	D	E	F	G	H	I	J	K	L	N	O
PC6N	simplex 6 gallon	1	2	1	-	12.8	9.2	14.2	-	3.3	26	9.1	-	15.7	-
PC15N	simplex 15 gallon	1	2	1	19.8	15.6	19.8	17.6	-	3.3	26.5	13.3	9.3	15.5	.6
PC15DN	duplex 15 gallon	1	2	1	22.1	15.6	19.8	17.6	-	3.3	26.5	13.3	9.3	15.5	.6
PC21N	simplex 21 gallon	1	2	1.2	17.5	12.7	25.5	22.7	14.9	4.1	31.8	10.2	-	20.7	.6
PC21DN	duplex 21 gallon	1	2	1.2	19.8	12.7	25.5	22.7	14.9	4.1	31.8	10.2	-	20.7	.6



**End View**  
steel 10 gallon simplex unit



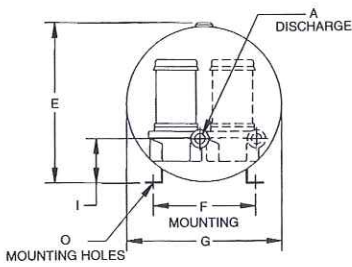
**End View**  
steel 20 gallon simplex and duplex units



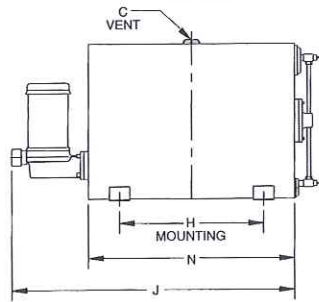
**Side View**  
steel 10 and 20 gallon simplex and duplex units

NOTE: All dimensions are approximate

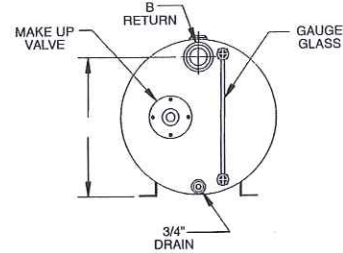
MODEL	UNIT STYLE	A	B	C	D	E	F	G	H	I	J	K	N	O
PS10N	simplex 10 gallon	1	2	1	18.5	14.2	12.5	14.3	15.2	3.3	25	12.2	14	.6
PS20N	simplex 20 gallon	1	2	1	18.5	14.2	22.5	24.3	15.2	3.3	25	12.2	14	.6
PS20DN	duplex 20 gallon	1	2	1	20.8	14.2	22.5	24.3	15.2	3.3	25	12.2	14	.6



**Front View**



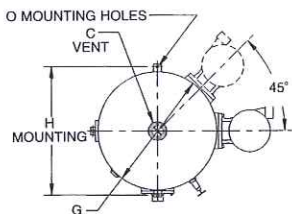
**Side View**



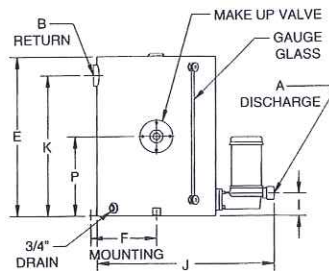
**Back View**

NOTE: All dimensions are approximate

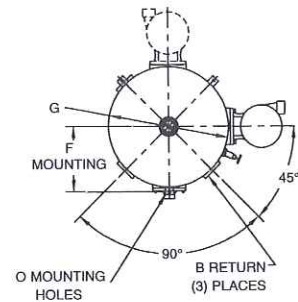
SIMPLEX	DUPLEX	UNIT STYLE	A	B	C	E	F	G	H	I	J	K	N	O
PSB49N	PSB49DN	49 gallon	1	2.5	1.2	23	15	22	21	6	40.5	20.1	30	.6
PSB71N	PSB71DN	71 gallon	1	3	1.5	25.4	15	24	21	5.8	46.5	21.5	36	.6
PSB117N	PSB117DN	117 gallon	1	4	2	25.4	15	24	30	5.8	70.5	21.2	60	.6
PSB150N	PSB150DN	150 gallon	1	4	2	32.5	28	30	24	5.8	58.5	28.5	48	.6



**Top View**  
49, 71, and 117 gallon



**Side View**



**Top View**  
110 and 211 gallon

NOTE: All dimensions are approximate

SIMPLEX	DUPLEX	UNIT STYLE	A	B	C	E	F	G	H	I	J	K	O	P
VPSB49N	VPSB49DN	49 gallon	1	2.5	1.2	30	12	22	24	3.8	32.5	26.5	.6	15
VPSB71N	VPSB71DN	71 gallon	1	3	1.5	36	13	24	26	3.8	34.5	32.5	.6	18
VPSB110N	VPSB110DN	110 gallon	1	2	2	36	16.4	30	-	3.8	40.5	33.7	.6	18
VPSB117N	VPSB117DN	117 gallon	1	4	2	60	13	24	26	3.8	34.5	56.5	.6	30
VPSB150J	VPSB150JN	150 gallon	1.25	2	2	48	19	36	-	3.8	46.5	45.7	.6	24