

# OWNER'S MANUAL

## ACE-SD SERIES End Suction Centrifugal Pump (Electric Motor Driven)



### SAFETY WARNINGS



**BEFORE OPERATING OR INSTALLING THIS PUMP, READ THIS MANUAL AND FOLLOW ALL SAFETY RULES AND OPERATING INSTRUCTIONS.**

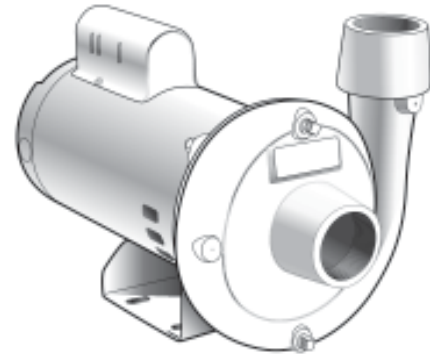
**SAFETY** CAREFULLY READ THESE SAFETY MESSAGES IN THIS MANUAL AND ON PUMP.

### CAUTION

- **DO NOT OPERATE THIS PUMP DRY!**
- Review instructions before operating.

### WARNING - ELECTRICAL PRECAUTIONS

All wiring, electrical connections, and system grounding must comply with the National Electrical Code (NEC) and with any local codes and ordinances. Employ a licensed electrician. For non-thermally protected motors use with approved motor control that matches motor input in full load amperes with overload element(s) selected or adjusted in accordance with control instructions.



### WARNING - RISK OF ELECTRICAL SHOCK

- Have an electrician provide electrical power to motor.
- All wiring and electrical connections should comply with the National Electrical Code (NEC) and with local codes and ordinances.
- A ground fault interrupter (GFI) protected circuit is recommended for use with any electrical device operating near water.

## APPLICATION

These pumps are suitable for installations where the vertical distance from the pump to the water level does not exceed 25 ft.

(7.5m), including drawdown. In all installations friction losses in the piping must be taken into consideration.

## PERFORMANCE

Pump Model	Total Head in Feet										
	20	30	40	50	60	70	80	100	120	140	150
	Capacity in U.S. Gallons per Minute										
ACE-S33SD	44	38	33	26	18	5	-	-	-	-	-
ACE-S50SD	46	40	37	30	22	12	-	-	-	-	-
ACE-S75SD	56	52	47	42	36	29	19	-	-	-	-
ACE-S100SD	61	57	54	49	44	39	32	12	-	-	-
ACE-S150SD	69	67	63	59	54	49	43	24	-	-	-
ACE-S200SD	90	89	87	83	79	72	63	42	11	-	-
ACE-300SD	140	140	132	124	116	107	98	78	38	-	-
ACE-500SD	152	152	152	152	152	150	141	120	96	67	40

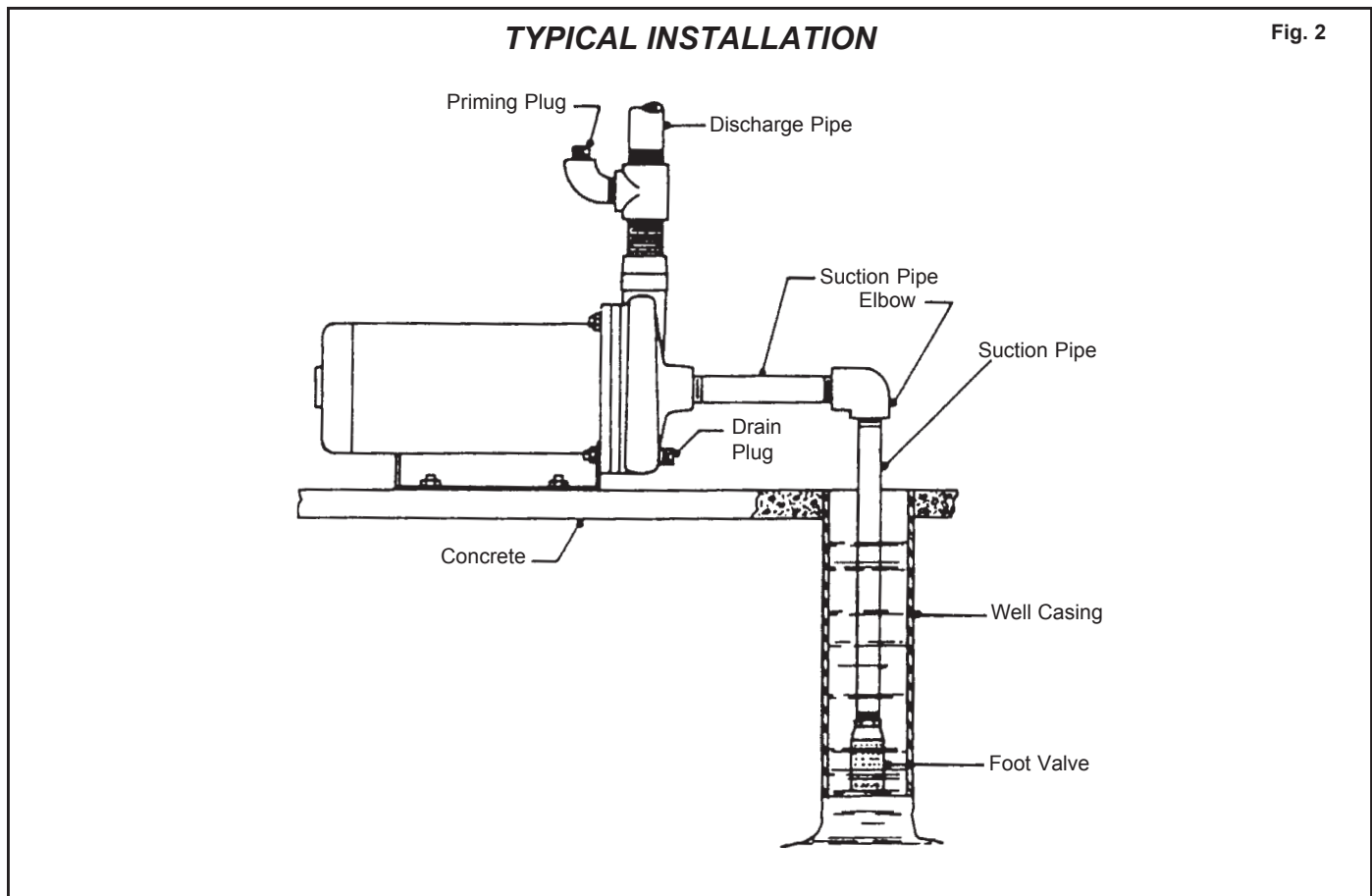
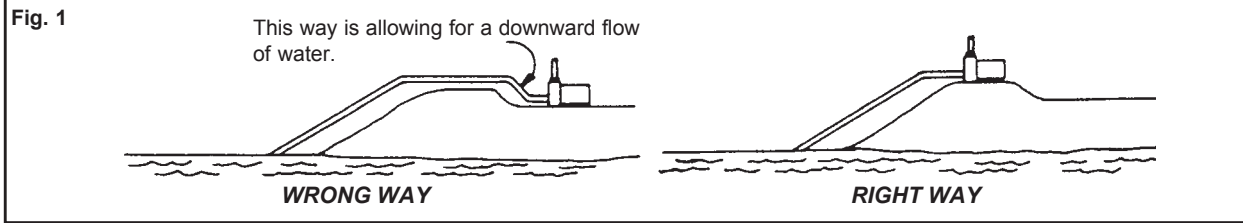
## INSTALLATION

**a) PUMP LOCATION:** The pump should be installed in a clean, dry and ventilated location. Provisions should be accommodated for adequate drainage, room for servicing, and protection from freezing temperatures. The unit should be bolted down evenly on a good foundation, preferably concrete, to prevent the development of unnecessary stresses. Locating the pump as close as possible to the source of water supply reduces the friction losses in the suction pipe and provides maximum capacities.

**b) SUCTION LINE:** Before installing the suction line, check the pump rotation as outlined below. It is recommended that only new, clean pipe or suction hose be used and the size be the same as that of the pump suction tapping. If the pump is installed any appreciable distance away from the source of water supply, the suction pipe should be increased by one size. The suction pipe should never allow a downward water flow in its connections from water supply to the pump (see Fig. 1). A foot valve must be connected to the bottom of the suction line and should be clear of any possible obstructions. These valves

are available from your pump supplier. It must be ensured that the foot valve remains well submerged at all times. If large debris is present at the suction point, install a filtration device to prevent the debris from entering the pump. Thread compound should be

used on all pipe joints. All connections should be thoroughly tightened. A leak in the suction line may prevent a complete prime and will reduce pump operating performance. Figure 2 shows a typical pump installation.



c) **DISCHARGE LINE:** A priming plug should be installed as shown in Figure 2. Long hose or pipe lengths add resistance to water flow which therefore reduces pumping capacity. Use standard approved pipe or hose suitable for the pumping pressures which develop and use lengths only as necessary to reach the discharge point. Avoid using nozzles or reducing fittings on the discharge line if they are not required in your application. The discharge pipe or hose should be at least as large as the discharge thread opening on the pump casing. If long line lengths are required, increase pipe/hose size accordingly. Avoid unnecessary bends in lines. Proper installation will enable efficient service from your pump.

d) **WIRING:** All wiring, electrical connections, and system grounding must comply with the National Electrical Code (NEC) and with any local codes and ordinances. Employ a licensed electrician. It is recommended that a separate circuit be led from the distribution panel to the pump unit. A proper fused disconnect switch is to be installed in the line, making sure that the correct gauge of cable is used to carry the load. Very long leads will require a larger cable. For all 3-Phase motors a separate manual thermal overload switch or a magnetic starter having the proper size heater elements must be installed. An electrician should be employed to do the wiring. After wiring is complete check the impeller rotation by switching the motor on for one second only.

## OPERATION - PRIMING THE PUMP

**⚠ WARNING: DO NOT RUN THE PUMP BEFORE PRIMING IT, SINCE THE SEAL AND IMPELLER COULD BE PERMANENTLY DAMAGED.**

- a) **PRIMING:** These pumps are not self-priming. For best priming, fill the pump casing and the suction line full with water.  
To prime the casing – Remove the priming plug and the drain plug (See Figure 2). Pour clean water into the priming hole. Replace the drain plug. Fill the pump casing full. Rotate the motor shaft manually from the back of the motor to release internal air pockets inside the casing. Refill, if necessary at the priming hole. Replace the priming plug.
- b) **STARTUP:** Dry operation may damage the water lubricated seal inside the pump. If the pump does not deliver water within seconds after startup, stop the motor and repeat the priming operation. Several starting attempts may be necessary to expel all of the air from the pump and suction lines.
- c) **CONTINUOUS OPERATION:** Check the pump periodically for loose or rubbing parts. Service the pump immediately if any unusual noise, leaks or vibrations develop.
- d) **DRAINING:** Should the pump be subject to freezing temperatures, it will be necessary to completely drain the fluid from the pump and lines. To drain the pump casing, remove the drain plug and the priming plug. Disconnect the suction line at a connection close to the pump casing and allow the water to drain from the suction line. Operate the pump for a few seconds only to clear water from the impeller. Replace the suction line carefully cleaning the threads and applying fresh thread compound.
- e) **ROTATION:** The arrow on the front of the pump casing indicates the correct rotation of the impeller during operation. Wire the motor as described above. If it is not turning in the proper direction refer to the motor wiring instructions.

## MAINTENANCE

### **⚠ WARNING - ELECTRICAL PRECAUTIONS**

All wiring, electrical connections, and system grounding must comply with the National Electrical Code (NEC) and with any local codes and ordinances. Employ a licensed electrician.

### **⚠ WARNING - RISK OF ELECTRICAL SHOCK**

Before servicing motor operated equipment, shut off the power at the main electrical panel and disconnect the power supply from the motor and the accessories. Use safe working practices during servicing of equipment.

- a) **LUBRICATION:** The pump itself does not need lubrication. Refer to instructions provided with the motor for motor lubrication and maintenance.
- b) **REPLACEMENT OF SEAL:** If available, refer to the repair parts list illustration showing the relative location and names of all components to assist you while following these instructions.

#### **Disassembly:**

- 1) Disconnect piping and wiring.
- 2) Remove the four nuts to dismount the pump casing from the motor housing.
- 3) Remove motor's end cover (if required).
- 4) Secure motor's shaft end with screwdriver and remove impeller by turning it counter-clockwise.
- 5) Remove the spring seal from the shaft and slide the seal plate off.
- 6) Remove the ceramic seat and its rubber housing from the seal plate.

#### **Reassembly:**

- 1) Clean all parts thoroughly. Inspect for damage or wear.
- 2) Liquid soap the rubber only of the stationary seal seat. Use clean thumbs only to press seat into seal plate. Make sure that seat is fully seated and wipe clean.
- 3) Slide the seal plate onto the shaft being careful not to damage the ceramic seat.
- 4) Lightly soap the internal rubber ring of the rotary spring seal assembly and slip in onto the motor shaft with the shiny side of the ring towards the ceramic seat.
- 5) Reassemble the impeller onto the shaft. Tighten "hand tight" only.
- 6) Place a new gasket onto the seal plate.
- 7) Place the casing into position and attach the motor using new spring washers and existing bolts. Use thread locking/sealing compound on casing to prevent leaks. Do not over-tighten the bolts.
- 8) Check that the impeller is not rubbing with the pump casing by rotating the motor shaft by hand.
- 9) Replace motor's end cover (if required).
- 10) Reconnect piping and wiring.
- 11) Reprime pump system.

## PRECAUTIONS

- a) Whenever reassembly of pump is involved, check to see that the impeller rotates freely within the casing.
- b) Never remove the water flinger from the motor shaft unless replacing a damaged flinger. Be sure the motor has a flinger installed at all times.

## TROUBLESHOOTING GUIDE

- a) **Pump fails to deliver water:**
  - 1) Pump is not properly primed.
  - 2) Impeller does not rotate freely within the casing.
  - 3) Suction lift is too great.
  - 4) Foot valve is either not submerged, buried in mud, or is blocked.
  - 5) Suction line is completely choked.
- b) **Pump delivers water but not at rated capacity:**
  - 1) Leaks in suction or discharge line.
  - 2) Foot valve, suction line or impeller are partially plugged.
  - 3) Suction lift is greater than recommended.
  - 4) Improper impeller rotation.
- c) **Pump loses prime:**
  - 1) Air leaks in suction line or foot valve.
  - 2) Well drawdown too great.
  - 3) Faulty foot valve.
- d) **Motor will not start:**
  - 1) No power due to blown fuses, open switches or loose connections.

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[www.monarchindustries.com](http://www.monarchindustries.com)

### LIMITED MONARCH INDUSTRIES WARRANTY

For one year from date of purchase, Monarch Industries will replace or repair for the original purchaser, free of charge, any part or parts, found upon examination by any Monarch Industries Authorized Service Depot or by the Monarch factory, to be defective in material or workmanship or both. Equipment and accessories not manufactured by Monarch Industries are warranted only to the extent of the original manufacturer's warranty. All transportation charges on parts submitted for replacement or repair under this warranty must be borne by the purchaser. For warranty service see your nearest Monarch Industries Authorized Service Depot. THERE IS NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO ONE YEAR FROM PURCHASE AND TO THE EXTENT PERMITTED BY LAW. LIABILITY FOR CONSEQUENTIAL DAMAGES UNDER ANY AND ALL WARRANTIES ARE EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW. This warranty is an addition to any statutory warranty.

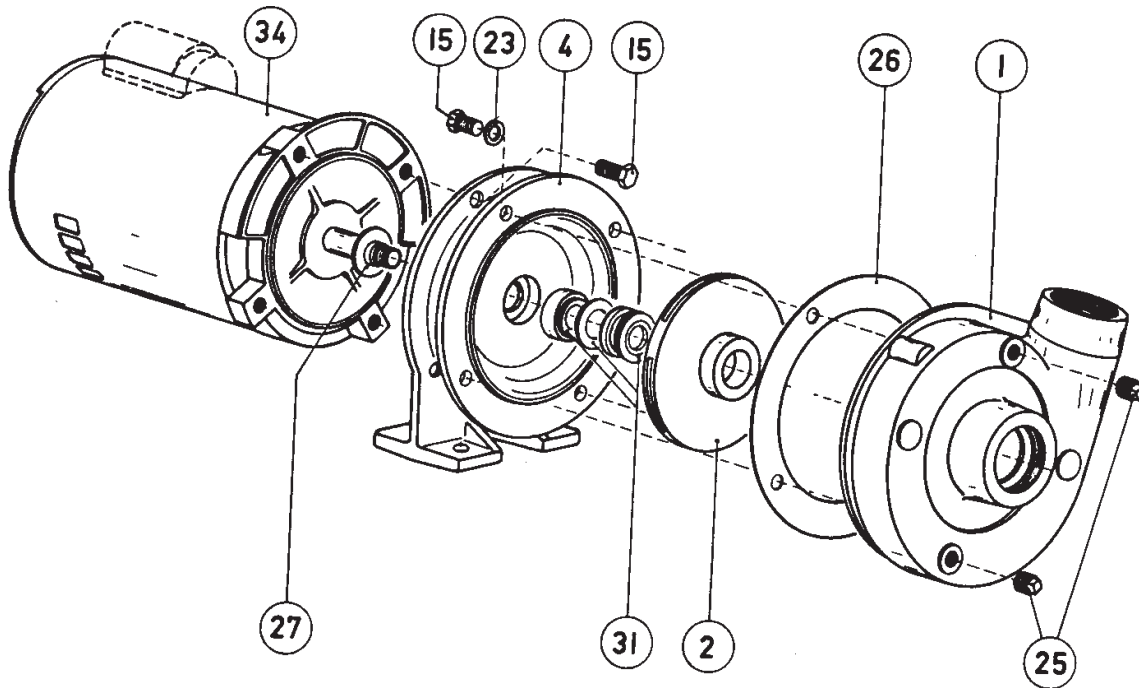
# MONARCH INDUSTRIES

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IN  
CANADA

**REPAIR  
PARTS LIST**

**ACE SERIES**  
Straight Centrifugal Pumps  
(C face)

Bulletin No. 05.2F4-0  
Supersedes: NEW



Ref.#	Code #	Pump Model No.	Qty.	Description
1	437710	ACE-33, ACE-50	1	Casing
1	437720	ACE-75, ACE-100	1	Casing
1	437730	ACE-150, ACE-200	1	Casing
2	437750	ACE-33	1	Impeller
2	437760	ACE-50	1	Impeller
2	437770	ACE-75	1	Impeller
2	437780	ACE-100	1	Impeller
2	437790	ACE-150	1	Impeller
2	437800	ACE-200	1	Impeller
4	437880	All Models, except ACE-150 & ACE-200	1	Electric Adapter
4	437900	ACE-150, ACE-200	1	Electric Adapter
7	422790	Where applicable	1	Wear Ring
15	119990	All Models	8	Hex. Hd. Bolt 3/8
23*	175500	All Models	4	Aluminum Washer
25	185620	All Models	2	Pipe Plug 1/4 NPT
26*	193900	All Models, except ACE-150 & ACE-200	1	Gasket
26*	193910	ACE-150, ACE-200	1	Gasket
27	191790	All Models	1	Flinger
31*	240250	All Models	1	Seal 5/8 Ø, Type 6
34	204070	ACE-33	1	Motor, 1/3 HP, 115 V
34	204110	ACE-50	1	Motor, 1/2 HP, 115 V
34	204140	ACE-75	1	Motor, 3/4 HP, 115/230 V
34	204160	ACE-100	1	Motor, 1 HP, 115/230 V
34	204180	ACE-150	1	Motor, 1-1/2 HP, 115/230 V
34	204190	ACE-200	1	Motor, 2 hp, 115/230 V

\* Suggest parts to stock.

**IMPORTANT:** When ordering parts specify the model, code number and part description.

When ordering motors, specify model, type, make, code no., voltage, horsepower and phase.

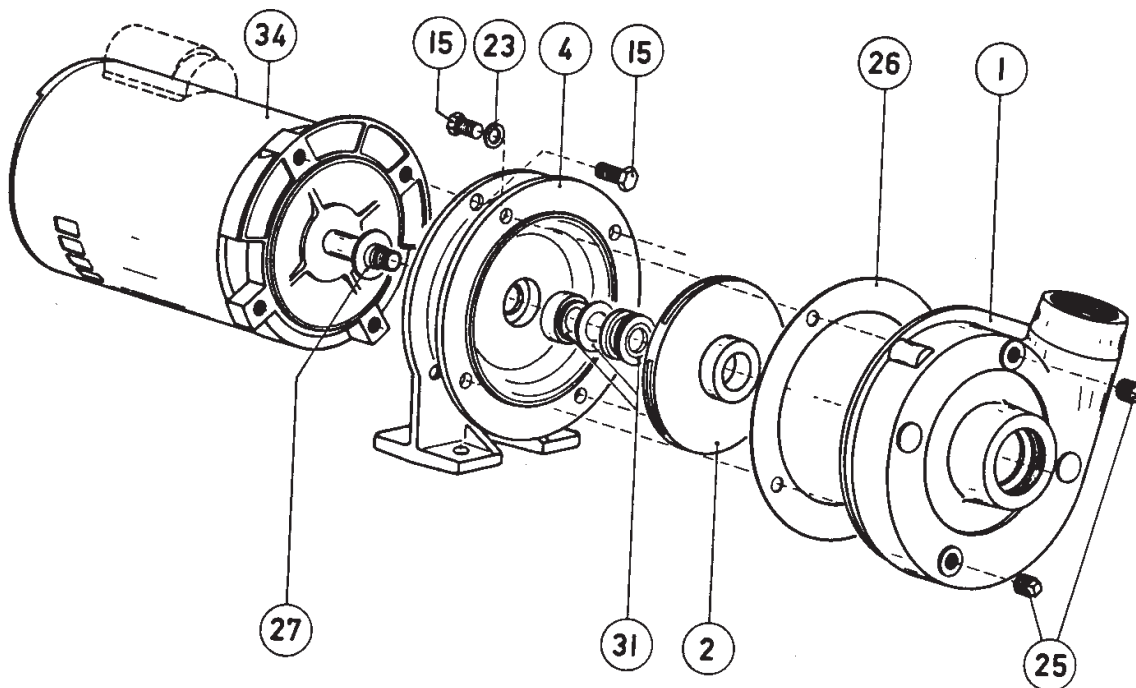
# PIÈCES DE RECHANGE

## SÉRIE ACE

Pompe Centrifuges à aspiration Axiale  
(Cface)

Bulletin No: 05.2F4-0

Remplace: nouveau



Ref.#	Code #	Pump Model No.	Qty.	Description
1	437710	ACE-33, ACE-50	1	Boîtier
1	437720	ACE-75, ACE-100	1	Boîtier
1	437730	ACE-150, ACE-200	1	Boîtier
2	437750	ACE-33	1	Roue de turbine
2	437760	ACE-50	1	Roue de turbine
2	437770	ACE-75	1	Roue de turbine
2	437780	ACE-100	1	Roue de turbine
2	437790	ACE-150	1	Roue de turbine
2	437800	ACE-200	1	Roue de turbine
4	437880	All Models, except ACE-150 & ACE-200	1	Adaptateur électrique
4	437900	ACE-150, ACE-200	1	Adaptateur électrique
7	422790	Where applicable	1	Anneau d'usage
15	119990	All Models	8	Boulon Hex. Hd 3/8
23*	175500	All Models	4	Rondelle de aluminium
25	185620	All Models	2	Bouchon de tuyau
26*	193900	All Models, except ACE-150 & ACE-200	1	Joint d'étanchéité
26*	193910	ACE-150, ACE-200	1	Joint d'étanchéité
27	191790	All Models	1	Cavalier
31*	240250	All Models	1	Joint 5/8 Ø, Type 6
34	204070	ACE-33	1	Moteur, 1/3 CV, 115V
34	204110	ACE-50	1	Moteur, 1/5 CV, 115V
34	204140	ACE-75	1	Moteur, 3/4 CV, 115/230V
34	204160	ACE-100	1	Moteur, 1 CV, 115/230V
34	204180	ACE-150	1	Moteur, 1-1/2 CV, 115/230V
34	204190	ACE-200	1	Moteur, 2 CV, 115/230V

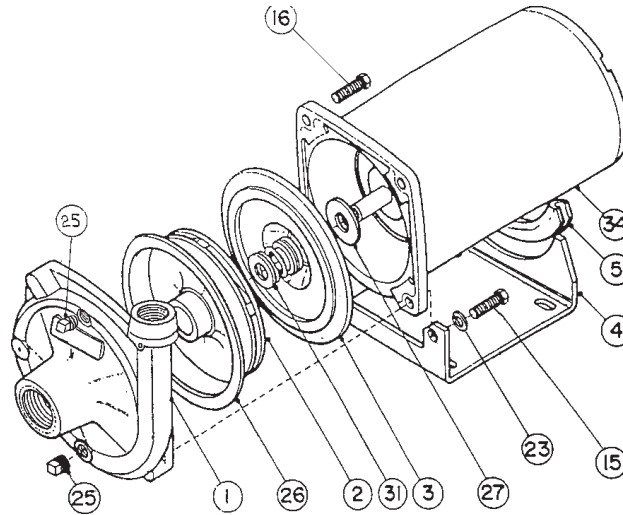
\* Pièces de rechange à conserver en stock.

**IMPORTANT:** Lorsque vous commandez des pièces spécifier le modèle, numéro de cône et description de la pièce. Lorsque vous commandez des moteur spécifier le modèle, numéro de cône et description de la pièce, tension, chevaux, phase.

# REPAIR PARTS LIST

## ACE-SD SERIES

Side Discharge Centrifugal Pump  
1/3 TO 2 HP ACE-S33SD to ACE-S200SD



Ref. #	Code #	ACE-SD SERIES						Description
		S33SD	S50SD	S75SD	S100SD	S150SD	S200SD	
1	437835	1	1	1	1	1		Casing
1	437836						1	Casing
1	437832							Casing
2	433105	1						Impeller
2	433106		1					Impeller
2	433107			1				Impeller
2	433125				1			Impeller
2	433126					1		Impeller
2	433127						1	Impeller
2	433134							Impeller
3	437808	1	1	1	1	1		Seal Plate
3	437809						1	Seal Plate
3	437796							Seal Plate
4	438245	1	1	1	1	1	1	Bracket
4	438250							Bracket
5	246800	1	1	1	1	1	1	Trimming 5"
15	120030	2	2	2	2	2	4	Bolt 3/8" x 1 1/2"
16	120020	2	2	2	2	2		Bolt 3/8" x 1 1/4"
23	176540	4	4	4	4	4	4	Spring Washer 3/8"
25	185620	2	2	2	2	2	2	Pipe Plug 1/4" NPT Zinc Plated
26*	193914	1	1	1	1	1		Gasket
26*	193915						1	Gasket
27*	191790	1	1	1	1	1	1	Flinger
31*	240250	1	1	1	1	1	1	Mech. Seal MS-16
34	204071	1						Motor 1/3HP 1Ø 115V
34	204073		1					Motor 1/2HP 1Ø 115/230V
34	204125			1				Motor 3/4HP 1Ø 115/230V
34	204154				1			Motor 1HP 1Ø 115/230V
34	204179					1		Motor 1-1/2HP 1Ø 115/230V
34	204178						1	Motor 2HP 1Ø 115/230V
34	204177							Motor 3HP 1Ø 230V

\* Suggest parts to stock.

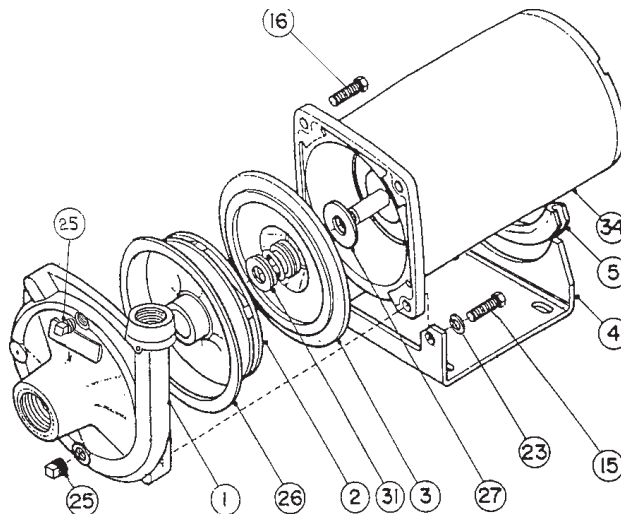
**IMPORTANT:** When ordering parts specify the model, code number and part description. When ordering motors, specify model, type, make, code no., voltage, horsepower and phase.

**LISTE DE PIÈCES  
DE RECHANGE**

**LISTA DE PIEZAS  
DE REPARACIONES**

**SÉRIE ACE-SD**

Pompe centrifuge à refoulement latéral  
Bomba centrífuga de descarga lateral  
1/3 - 2 CV/HP  
ACE-S33SD - ACE-S200SD



Réf. # Ref. #	Code # Código #	SÉRIE ACE-SD						Description	Descripción
		S33SD	S50SD	S75SD	S100SD	S150SD	S200SD		
1	437835	1	1	1	1	1	1	Boîtier	Casco
1	437836						1	Boîtier	Casco
1	437832							Boîtier	Casco
2	433105	1						Roue de Turbine	Propulsor
2	433106		1					Roue de Turbine	Propulsor
2	433107			1				Roue de Turbine	Propulsor
2	433125				1			Roue de Turbine	Propulsor
2	433126					1		Roue de Turbine	Propulsor
2	433127						1	Roue de Turbine	Propulsor
2	433134							Roue de Turbine	Propulsor
3	437808	1	1	1	1	1		Plaque de Joint	Plancha selladora
3	437809						1	Plaque de Joint	Plancha selladora
3	437796							Plaque de Joint	Plancha selladora
4	438245	1	1	1	1	1	1	Roulement	Abrazadera
4	438250							Roulement	Abrazadera
5	246800	1	1	1	1	1	1	Moulures (5 po.)	Recorte (5 po.)
15	120030	2	2	2	2	2	4	Bouton 3/8" x 1 1/2"	Perno 3/8" x 1 1/2"
16	120020	2	2	2	2	2		Bouton 3/8 x 1 1/4"	Perno 3/8" x 1 1/4"
23	176540	4	4	4	4	4	4	Rondelle de Ressort 3/8 po.	Arandela de resorte
25	185620	2	2	2	2	2	2	Bouchon de tuyau 1/4 po. NPT plaqué zinc	Tapón de tubería de 1/4 NPT cubierto con zinc
26*	193914	1	1	1	1	1		Joint d'etanchiètte	Junta
26*	193915						1	Joint d'etanchiètte	Junta
27	191790	1	1	1	1	1	1	Cavalier	Anillo de goma
31*	240250	1	1	1	1	1	1	Joint Mécanique MS-16	Sello mecánico MS-16
34	204071	1						Moteur 1/3 CV 1Ø 115V	Motor 1/3 CV 1Ø 115V
34	204073		1					Moteur 1/2 CV 1Ø 115/230V	Motor 1/2 CV 1Ø 115/230V
34	204125			1				Moteur 3/4 CV 1Ø 115/230V	Motor 3/4 CV 1Ø 115/230V
34	204154				1			Moteur 1 CV 1Ø 115/230V	Motor 1 CV 1Ø 115/230V
34	204179					1		Moteur 1-1/2 CV 1Ø 115/230V	Motor 1-1/2 CV 1Ø 115/230V
34	204178						1	Moteur 2 CV 1Ø 115/230V	Motor 2 CV 1Ø 115/230V
34	204177							Moteur 3 CV 1Ø 230V	Motor 3 CV 1Ø 230V

\* Pièces de rechange à conserver en stock.

**IMPORTANT:** Lorsque vous commandez des pièces spécifiez le modèle, numéro de code et description de la pièce. Lorsque vous commandez des moteurs spécifiez le modèle, numéro de code, tension, force et phase.

\*Piezas que se recomienda tener en inventario.

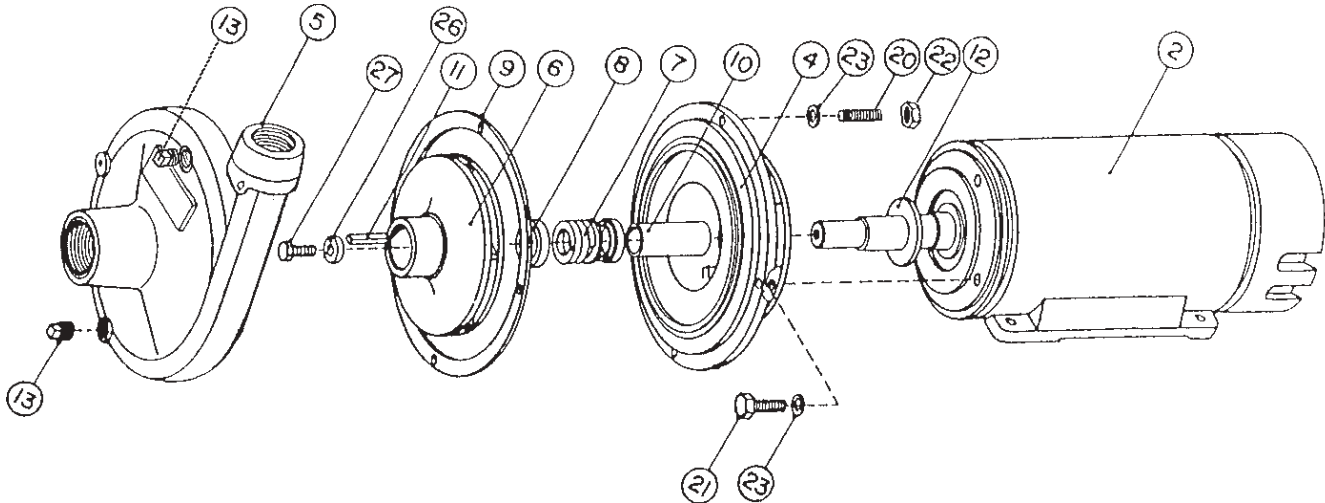
**IMPORTANTE:** Cuando pida las piezas especifique el modelo, número de código y descripción de la pieza. Cuando pida motores, especifique el modelo, tipo, número de código, voltaje, potencia y número de fases.



# REPAIR PARTS LIST

# ACE-SD SERIES

Side Discharge Centrifugal Pump  
 ACE-300B-3SD & ACE-300B-5SD (Type A)  
 ACE-500SD & ACE-500-3SD (Type A & B)



A- ACE-300SD    B- ACE-300B-5SD    C- ACE-300B-3SD    D- ACE-500SD    E- ACE-500-3SD

Ref. #	Code #	Quantity					Description
		A	B	C	D	E	
2	218705				1		Motor, 5HP Single Ph., 230V
2	218707					1	Motor, 5HP 3 Ph., 208-230/460V
2	218700	1					Motor, 3HP Single Ph., 115/230V
2	218702			1			Motor, 3HP 3 Ph., 208-230/460V
2	218704		1				Motor, 3HP 3 Ph., 575V
4	437811	1	1	1	1	1	Adapter
5	437832	1	1	1	1	1	Casing
6	433158				1	1	Impeller
6	433129	1	1	1			Impeller
7*	240070	1	1	1	1	1	Seal MS-7
8*	240071	1	1	1	1	1	Spring Holder
9*	198995	1	1	1	1	1	'O' Ring
10*	414144	1	1	1	1	1	Sleeve
11*	432020	1	1		1	1	Key
12*	190848				1	1	Flinger
13	185620	2	2	2	2	2	1/4" NPT Pipe Plug Zinc Plated
20	164620	4	4	4	4	4	Stud 3/8" x 1-1/4"
21	120010	4	4	4	4	4	Bolt 3/8" x 1"
22	128230	4	4	4	4	4	Nut Hex 3/8"
23	176540	8	8	8	8	8	Spring Washer
26	416720				1	1	Collar
26	416721	1	1	1			Collar
27	124191	1	1	1	1	1	Bolt 3/8" UNC x 3/4" SST

\* Suggest parts to stock.

**IMPORTANT:** When ordering parts specify the model, code number and part description.  
 When ordering motors, specify model, type, make, code no., voltage, horsepower and phase.

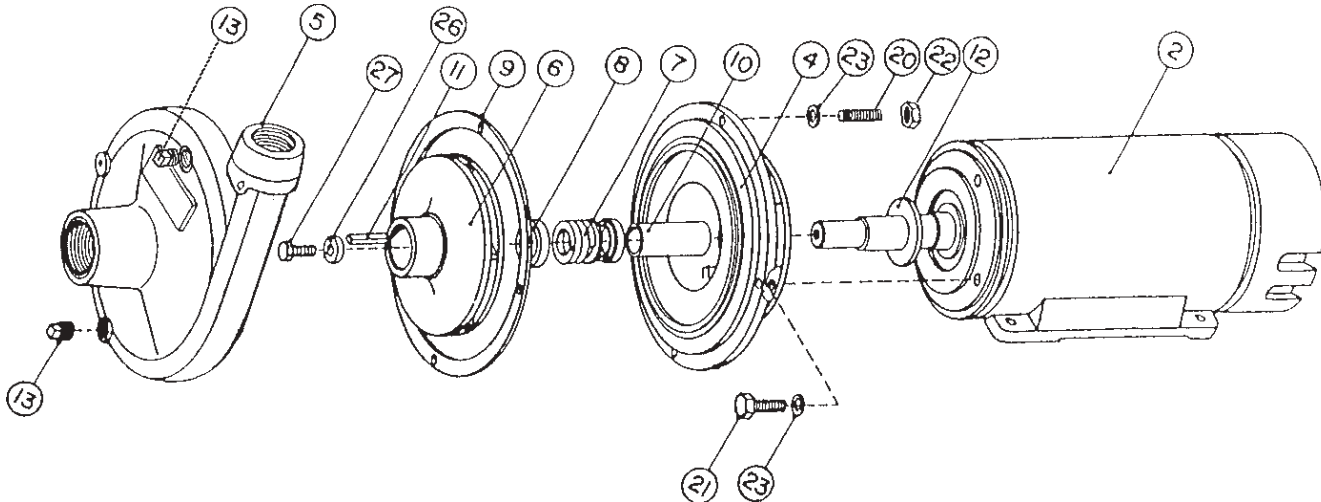
**LISTE DE PIÈCES  
DE RECHANGE**

**LISTA DE PIEZAS  
DE REPARACIONES**

**SÉRIE ACE-SD**

Pompe centrifuge à refoulement latéral  
Bomba centrífuga de descarga lateral

ACE-300B-SD & ACE-300B-5SD (Type/Tipo A)  
ACE-500SD & ACE-500-3SD (Type/Tipo A & B)



**A- ACE-300SD**

**B- ACE-300B-5SD**

**C- ACE-300B-3SD**

**D- ACE-500SD**

**E- ACE-500-3SD**

Réf. # Ref. #	Code # Código #	Quantité/Cantidad					Description	Descripción
		A	B	C	D	E		
2	218705				1		Moteur, 5CV seul Ph., 230V	Motor, 5CV Monofásico, 230V
2	218707					1	Moteur, 5CV 3 Ph., 208-230/460V	Motor, 5CV Trifásico, 208-230/460V
2	218700	1					Moteur, 3CV seul Ph., 115/230V	Motor, 3CV Monofásico, 115/230V
2	218702			1			Moteur, 3CV 3 Ph., 208-230/460V	Motor, 3CV Trifásico, 208-230/460V
2	218704		1				Moteur, 3CV 3 Ph., 575V	Motor, 3CV Trifásico, 575V
4	437811	1	1	1	1	1	Adapteur	Adaptador
5	437832	1	1	1	1	1	Boitier	Cuerpo
6	433158				1	1	Roue de turbine	Propulsor
6	433129	1	1	1			Roue de turbine	Propulsor
7*	240070	1	1	1	1	1	Joint MS-7	Sello MS-7
8*	240071	1	1	1	1	1	Rossort collier	Sujetador de resorte
9*	198995	1	1	1	1	1	Joint torique	Cuerpo
10*	414144	1	1	1	1	1	Manchon	Manga
11*	432020	1	1	1	1	1	Clavette	Llave
12*	190848				1	1	Cavalier	Anillo de goma
13	185620	2	2	2	2	2	Bouchon de tuyau de 1/4 po NPT plaqué zinc	Tapón de tubería de 1/4 NPT cubierto con zinc
20	164620	4	4	4	4	4	Bouton 3/8" x 1-1/4"	Passador 3/8" x 1-1/4"
21	120010	4	4	4	4	4	Bouton 3/8" x 1"	Perno 3/8" x 1"
22	128230	4	4	4	4	4	Écrou 3/8"	Tuerca 3/8"
23	176540	8	8	8	8	8	Rondelle de ressort	Arandela de resorte
26	416720				1	1	Collier	Collarín
26	416721	1	1	1			Collier	Collarín
27	124191	1	1	1	1	1	Bouton 3/8 UNC x 3/4 SST	Perno de 3/8 UNC x 3/4 SST

\* Pièces de rechange à conserver en stock.

**IMPORTANT:** Lorsque vous commandez des pièces spécifiez le modèle, numéro de code et description de la pièce. Lorsque vous commandez des moteurs spécifiez le modèle, numéro de code, tension, force et phase.

\*Piezas que se recomienda tener en inventario.

**IMPORTANTE:** Cuando pida las piezas especifique el modelo, número de código y descripción de la pieza. Cuando pida motores, especifique el modelo, tipo, número de código, voltaje, potencia y número de fases.