



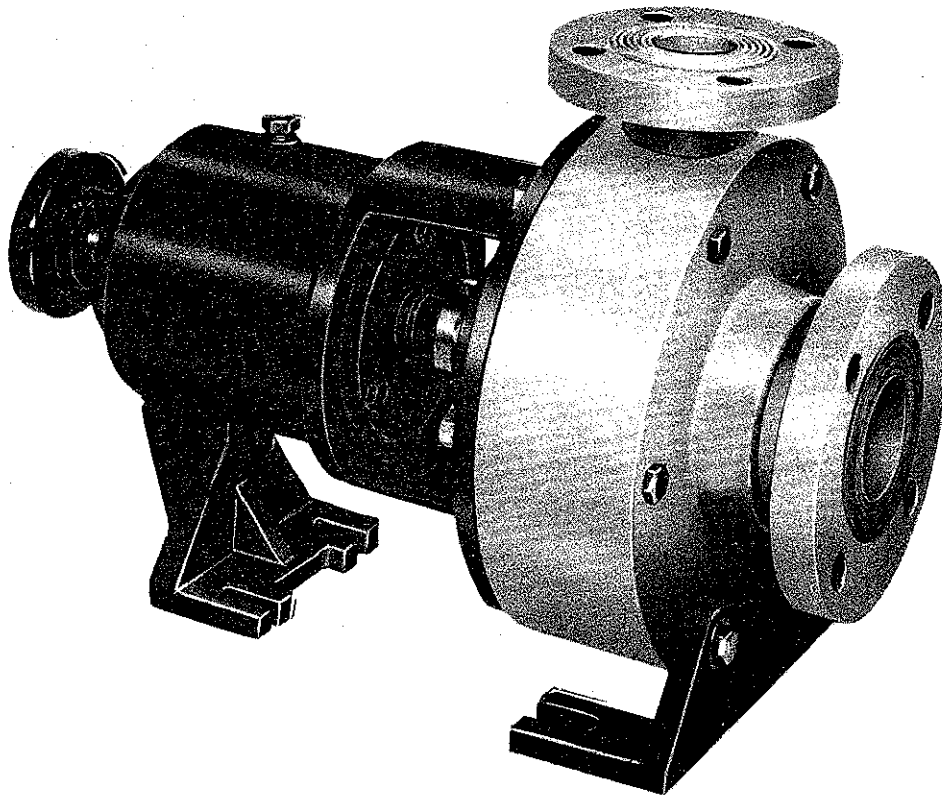
Sethco Division

SUPERSEDES PD 321-01, REV. 12/1/78

PD 321-01A
**PARTS LIST FOR
HORIZONTAL
CENTRIFUGAL PUMPS**
BD AND CD PUMP SERIES

DATE 10/1/73, REVISED 3/1/83

OPERATION and MAINTENANCE INSTRUCTIONS



CASING ASSEMBLY

BDC & CDC (Fig. 2) BDT & CDT (Fig. 4)

ITEM	DESCRIPTION	MATERIAL	REQ'D	PART NUMBER	PART NUMBER
1	Impeller Nut	CPVC	1	120P04131-551	120P04131-551
2	Gasket-Impeller	Hypalon	1	330P041-341	330P041-341
3	Casing	CPVC	1	133P10525-551	133P10526-551
5	Gasket-Shaft	Hypalon	1	330P061-341	330P061-341
6	Impeller-Note 1	CPVC	1	430P505-551	430P605-551
8	O-Ring	Viton	1	590P2363-830	590P2363-830

NOTES:

1. Impeller diameter varies. Always specify diameter required when ordering new impellers.
2. For Motor Frame 56C, use 4 Item 37 bolts. Does not require Items 38, 39 or 40.
3. For CDC Pumps only with Motor Frame 143TC, 145TC, 182C or 184C, use 4 Item 37B bolts and 1 Item 38 spacer. Does not require Items 39 or 40.
4. For CDT Pumps only with Motor Frame 143TC, 145TC, 182C or 184C, use 4 Item 37A bolts and 1 Item 38A spacer. Does not require Items 39 or 40.
5. For Motor Frame 182TC or 184TC, use 4 Item 37 bolts, 4 Item 39 cap screws, and 1 Item 40 adapter. Does not require Item 38 spacer.
6. For Motor Frame 213TC or 215TC, use 4 Item 37B bolts, 1 Item 38 spacer, 4 Item 39 cap screws and 1 Item 40 adapter.
7. Coupling sets vary with motor frame, pump side is always 7/8". Advise motor shaft diameter when ordering.

STUFFING BOX ASSEMBLY — ROTT SINGLE SEAL WITH QUENCH (Fig. 5)

ITEM	DESCRIPTION	MATERIAL	REQ'D	PART NUMBER	PART NUMBER
9	Stuffing Box Cover	CPVC	1	881P7104-551	881P7106-551
10	Washer	Stainless Steel	4	990P0205-680	990P0205-680
11	Bolt	Stainless Steel	4	790P0220106-680	790P02202-680
13	Seal Assembly Ceramic	Graphite-Teflon	1	760P07-184	760P101-184
15	Gland Ring	CPVC	1	350P3061021-551	350P3061011-551

STUFFING BOX ASSEMBLY — ROTT SINGLE SEAL WITH FACE FLUSH (Fig. 7)

ITEM	DESCRIPTION	MATERIAL	REQ'D	PART NUMBER	PART NUMBER
9	Stuffing Box Cover	CPVC	1	881P7104-551	881P7106-551
10	Washer	Stainless Steel	4	990P0205-680	990P0205-680
11	Bolt	Stainless Steel	4	790P0220106-680	790P02202-680
13A	Seal Assembly Ceramic	Graphite-Teflon	1	760P071-184	760P1011-184
15A	Gland Ring	CPVC	1	350P3061021-551	350P3061011-551

STUFFING BOX ASSEMBLY — CRO DOUBLE SEAL (Fig. 6)

ITEM	DESCRIPTION	MATERIAL	REQ'D	PART NUMBER	PART NUMBER
9	Stuffing Box Cover	CPVC	1	881P7104-551	881P7107-551
10	Washer	Stainless Steel	4	990P0205-680	990P0205-680
12	Bolt	Stainless Steel	4	790P0220206-680	790P02203-680
14	Seal Assembly Viton	Ceramic-Graphite	1	760P072-181	760P1012-181
16	Gland Ring	CPVC	1	350P306204-551	350P306206-551

STUFFING BOX ASSEMBLY — CM, HM, MC, MH SEAL (Fig. 8)

ITEM	DESCRIPTION	MATERIAL	REQ'D	PART NUMBER	PART NUMBER
9	Stuffing Box Cover	CPVC	1	881P71061-551	881P71061-551
13	Seal Assembly, CM	Cer-graph-buna N	1	760P101-180	760P101-180
13A	Seal Assembly, HM	hastC-graph-buna N	1	760P101-350	760P101-350
13B	Seal Assembly, MC	cer-graph-viton	1	760P101-181	760P101-181
13C	Seal Assembly, MH	hastC-graph-viton	1	760P101-351	760P101-351
41	Spacer	Stainless Steel	1	770P101105-680	770P101105-680
42	Retaining Ring	Stainless Steel	1	700P5100112-670	700P5100112-670

SEE BACK PAGE FOR MAINTENANCE INSTRUCTIONS AND START-UP PROCEDURE

CONSULT FACTORY OR YOUR DISTRIBUTOR FOR PRICES

FRAME ASSEMBLY — BD (Fig. 1)

BDC

BDT

ITEM	DESCRIPTION	MATERIAL	REQ'D	PART NUMBER	PART NUMBER
17	Bolt	Stainless Steel	4	790P03164-680	790P03164-680
18	Bolt	Stainless Steel	2	790P0316404-680	790P0316404-680
19	Support Leg-Casing	Cast Iron	1	530P2207705-160	530P2207705-160
20	Key	Stainless Steel	1	420P31606-680	420P31606-680
21	Sleeve	Ceramic	1	840P0507-150	840P071C1-150
21A	Sleeve	Hast-"C"	1	840P0507-340	840P071C1-340
22	Nut	Stainless Steel	6	610P0316-680	610P0316-680
23	Slinger	Neoprene	1	860P07205-510	860P07205-510
24	Bearing Cap	Cast Iron	1	150P401102-160	150P401102-160
25	Bolt	Stainless Steel	3	790P022006-680	790P02206-680
26	Ball Bearing	Steel	2	080P6306-720	080P6306-720
27	Frame	Cast Iron	1	291P9906-160	291P9906-160
28	Shaft (for Rott/CRO seals)	Stainless Steel	1	850P050714-680	850P051C114-680
28A	Shaft (for CM, HM, MC, MH seals)	Stainless Steel	1	850P0710114-680	850P0710114-680
29	Key	Stainless Steel	1	420P316102-680	420P316102-680
30	Washer	Stainless Steel	1	990P0407-680	990P0407-680
31	Bolt	Stainless Steel	1	790P04131-680	790P04131-680
32	Support-Frame	Cast Iron	1	880P2075-160	880P2075-160
33	Coupling set (not shown)	Zinc-rubber	1	Various, see note 7	various, see note 7
35	washer	Stainless Steel	6	990P0307-680	990P0307-680
41	Vent	Monel	1	940P02-460	940P02-460
43	Pin	Stainless Steel	1	682P01906-680	682P01906-680

CLOSE COUPLED ASSEMBLY — CD SERIES (Fig. 3)

CDC

CDT

ITEM	DESCRIPTION	MATERIAL	REQ'D	PART NUMBER	PART NUMBER
17	Bolt	Stainless Steel	6	790P03164-680	790P03164-680
20	Key	Stainless Steel	1	420P31606-680	420P31606-680
21	Sleeve	Ceramic	1	840P0507-150	840P071C1-150
21A	Sleeve	Hast-"C"	1	840P0507-340	840P071C1-340
22	Nut	Stainless Steel	6	610P0316-680	610P0316-680
34	Frame	Cast Iron	1	291P94516-160	291P94516-160
35	Washer	Stainless Steel	10	990P0307-680	990P0307-680
36	Set Screw-Use with Shaft #33,33A	Steel	2	800P022002-720	800P022002-720
36A	Set Screw-Use with Shaft #33B,33C	Steel	2	800P031604-720	800P031604-720
37	Bolt - Notes 2 & 5	Stainless Steel	4	790P03161-680	790P03161-680
37A	Bolt-Note 4	Stainless Steel	4	790P03162-680	790P03162-680
37B	Bolt-Notes 3 & 6	Stainless Steel	4	790P0316106-680	790P0316106-680
38	Spacer-Adapter-Notes 3 & 6	PVC	1	770P1-550	770P1-550
38A	Spacer-Adapter-Note 4	PVC	1	770P102-550	770P102-550
39	Socket Head Cap Screw	Steel	4	790P041311-720	790P041311-720
40	Frame-Adapter-Notes 5&6	Cast Iron	1	010P213-160	010P213-160
43	Pin	Stainless Steel	1	682P01916-680	682P01916-680

SHAFTS, CLOSE COUPLED PUMP, CDC, CDT — STAINLESS STEEL (FIG. 3)

ITEM	DESCRIPTION	REQ'D	CDC	CDT
33	Shaft, FR56C (ROTT/CRO seal)	1	850P0505-680	850P0705-680
	Shaft, FR56C (CM/MC/HM/MH seal)	1	850P07051-680	850P07051-680
33A	Shaft, FR143TC/145TC (ROTT/CRO seal)	1	850P0507-680	850P0707-680
	Shaft, FR143TC/145TC (CM/MC/HM/MH seal)	1	850P07071-680	850P07071-680
33B	Shaft, FR182TC/184TC (ROTT/CRO seal)	1	850P05101-680	850P07101-680
	Shaft, FR182TC/184TC (CM/MC/HM/MH seal)	1	850P071011-680	850P071011-680
33C	Shaft, FR213TC/215TC (ROTT/CRO seal)	1	-	850P07103-680
	Shaft, FR213TC/215TC (CM/MC/HM/MH seal)	1	-	850P071031-680

FIG. 5 STUFFING BOX ASS "ROTT" SINGLE SEAL WITH QUENCH

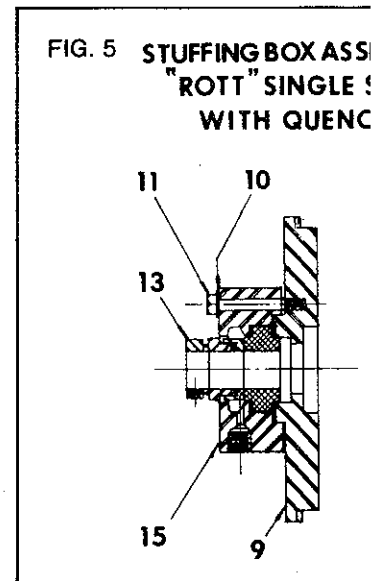


FIG. 1 FRAME ASSEMBLY BD SERIES

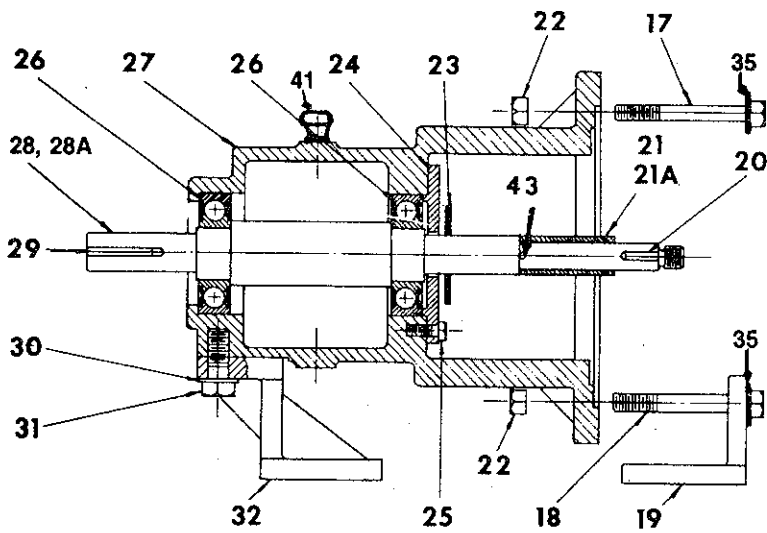


FIG. 2 CASING ASSEMBLY BDC & CDC SERIES

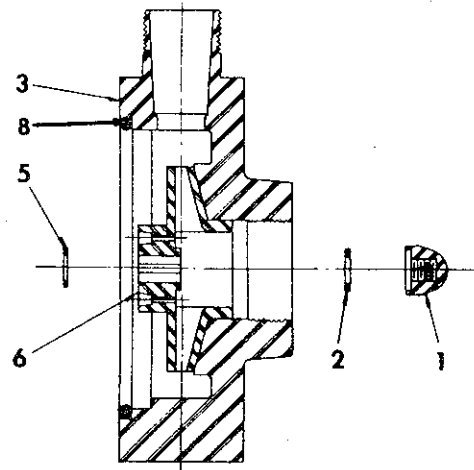


FIG. 3 CLOSE COUPLED ASSEMBLY CD SERIES

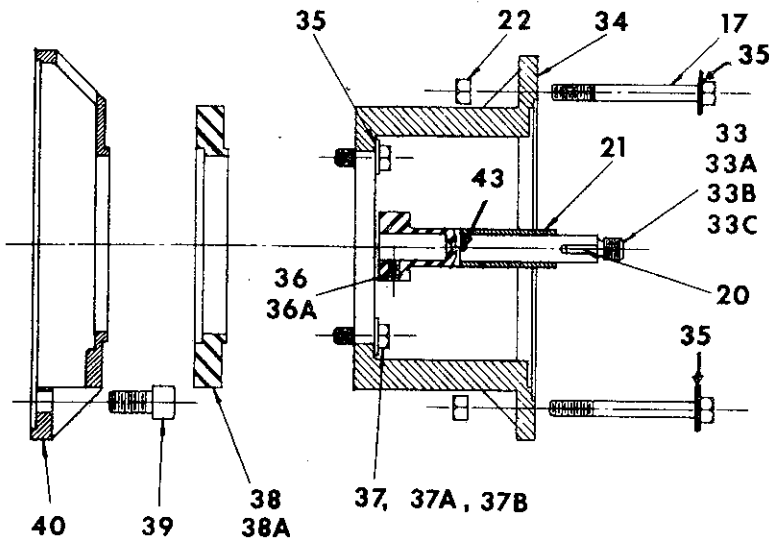


FIG. 4 CASING ASSEMBLY BDT & CDT SERIES

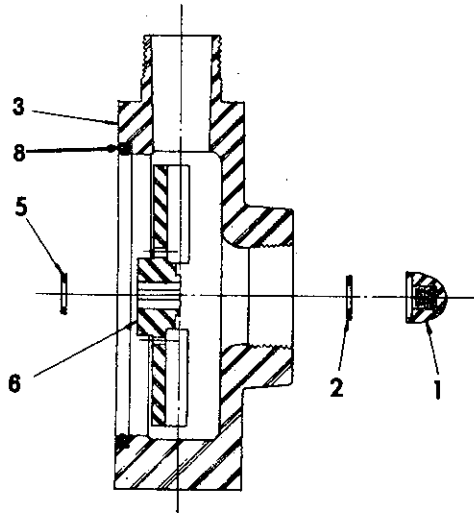


FIG. 6 STUFFING BOX ASSEMBLY "CRO" DOUBLE SEAL

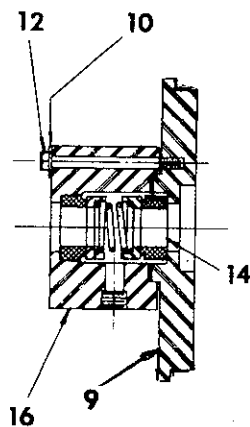


FIG. 7 STUFFING BOX ASSEMBLY "ROTT" SINGLE SEAL WITH FACE FLUSH

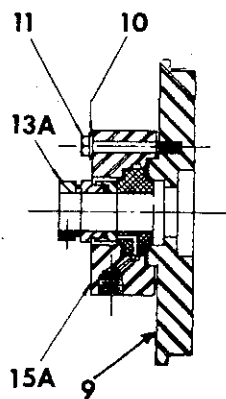
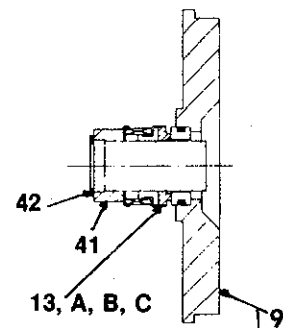


FIG. 8 STUFFING BOX ASSEMBLY CM, HM, MC, MH SEALS



ALWAYS SPECIFY MODEL, SERIAL NUMBER, NAME, PART NUMBER AND THIS DRAWING NUMBER WHEN ORDERING.

70 ARKAY DRIVE • P.O. BOX 416 • HAUPPAUGE, N.Y. 11788 • (516) 435-0530 • ANAHEIM, CALIF. (714) 991-0270 • ZION, ILL. (312) 872-7360

START-UP INSTRUCTIONS: Read Operation Manual completely before start-up to insure proper installation procedures are followed.

MAINTENANCE INSTRUCTIONS

CAUTION: Before starting disassembly, disconnect unit from electrical power supply. Be sure both inlet and discharge valves are closed and pump is drained. Disconnect flush or quench lines to the seal. On units with single ROTT seals, loosen set screws on rotating member and slide back rotating member.

1. To remove the pump without disconnecting the inlet or discharge lines, proceed as follows:
 - a. Be sure inlet and discharge lines are secured. If not, block up casing so that casing will not drop.
 - b. On BD Series, remove coupling guard, loosen coupling flanges and remove coupling insert. Remove mounting bolts on support leg (32).
 - c. On CD Series, remove mounting bolts from motor base.
 - d. Remove 6 casing bolts (17) and pull back frame with stuffing box and seal from casing. Pump is now ready for maintenance overhaul.

2. To replace seal or impeller, proceed as follows:
 - a. Remove impeller nut (1) and gasket (2). Slide impeller (6 or 7) off shaft. Remove gasket (5). (If replacing impeller only, do not proceed any further. Reverse steps to reassemble unit.)
 - b. Slide stuffing box assembly off sleeve (21). Care should be taken not to hit the seal on the shaft end. This could cause chipping of the stationary seat.
 - c. Remove 4 bolts (11 or 12) and washers (10). Lift off gland ring (15 or 16).
 - d. On single ROTT seal, stationary seat can be lifted off stuffing box cover (9) with gaskets. Slide off rotary member from shaft.
 - e. On double CRO seal, push out stationary seats. Remove "O" rings.
 - f. Check sleeve for scoring. If severely damaged, replace sleeve. If sleeve is lightly marred, remove sleeve and polish with fine emery.
 - g. Replace worn parts as needed and reassemble unit. (Reverse steps to reassemble.)

3. To replace shaft or bearings, proceed as follows:
 - a. On the close-coupled unit, it is only necessary to loosen two set screws (36) to remove shaft (33).
 - b. On the frame-mounted unit, remove 3 bearing cap bolts (25). Remove slinger (23) and bearing cap (24).
 - c. Press out shaft (28) and bearing (26) assembly from frame (27).
 - d. Press bearings (26) off shaft (28).
 - e. If shaft and sleeve are in good condition, polish sleeve and install new bearings. If sleeve is damaged, replace with new sleeve and bearings.
 - f. To reassemble, reverse steps above.

4. When reassembling the CD Units, set the impeller (6) approximately 1/16" from the stuffing box cover (9) before tightening shaft set screws (36).



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