

Blackmer Cylinder Filling Pump

LGFI FILL STATION PUMP

Excellent for small fill stations, vaporizer installations, and low-capacity transfer.

- Two pump capacities available
 - 10GPM or 15GPM
- Complete kit includes explosion proof motor & switch
- Integral bypass valve and safety relief valve (circulates back to pump inlet)

LGFI-1HP

8-gallon capacity is best suited for cylinder and small motor fuel fill systems

LGFI-1.5HP

13-gallon capacity is excellent for motor fuel fill systems

RMI Part No.		Capacity (GPM)		Inlet/Outlet	Motor & Electrical Service*	Bypass Valve
Pump, Moto & Switch Assembly	Pump Only	50lb Diff.	100lb Diff.			
LGFI-1HP	LGFI	8	4.4	1"	1HP, 115/230V, 1PH	Built-In
LGFI-1.5HP	LGFI	13	8	1"	1.5HP, 115/230V, 1PH	Built-In
LGFI-1HPV**	LGFI	8	4.4	1"	1HP, 115/230V, 1PH	Built-In
LGFI-1.5HPV**	LGFI	13	8	1"	1.5HP, 115/230V, 1PH	Built-In

* Other motor services available

** "V" designates motor equipped with condensation drain



LGFI SERIES

LGRLF FILL STATION PUMP

Economical large capacity flange-mounted pump assembly for motor fuel and large cylinder fill operation. Provides greater flow capacity while maintaining high differential pressure. Features removable cavitation suppression liner for longer pump life.

RMI Part No.			Inlet/Outlet	HP	Service	Capacity (GPM)		Max. Diff. Pr.
Pump Only	Motor*	Bypass				50lb	100lb	
LGRLF-1-1/4	EMC-2	BV-3/4	1-1/4"	2"	115/230 1PH	16	14	80#
	EMCT-2			2"	230/460 3PH	16	14	80#
	EMC-1.5**			1-1/2"	115/230 1PH	15	12.5	50#
	VXM051542			1-1/2"	230/460 3PH	15	12.5	50#

* See Motors & Starters on pages 191-192 for switches and overload starters

** Can be ordered with condensation drain



LGRLF-1-14

LGL & LGLF MEDIUM CAPACITY PUMP AND BASE ASSEMBLY

Excellent for small transfer jobs and multiple scale fill operations.

- Integral safety relief valve (circulates back to pump inlet)
- Assembly includes pump, mounting base, coupling, and guard (everything but the motor & switch)
- Cavitation suppression liner

Must specify motor frame size when ordering

RMI Part No.		Inlet/Outlet	Motor Size *	Capacity (GPM)		Approx. Max Diff. (lbs.)
Base & Pump Assembly	Pump Only			50lb	100lb	
LGL-1-1/4 -DM	LGL-1-1/4	1-1/4"	2 HP	21	18	60
			3 HP	21	18	120
LGL-1-1/2-DM	LGL-1-1/2	1-1/2"	3 HP	33	29	80

* See Motors & Starters on pages 191-192 for proper motor, switch, and bypass valve part numbers



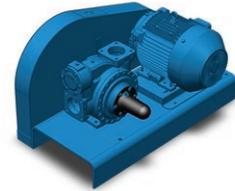
LGL-1-14-DM

Blackmer Bulk Plant Pumps & Compressors

LGL LARGE FILL SYSTEM PUMPS

High-capacity pumps for large multiple scale systems and medium liquid transfer systems for loading transports and delivery trucks.

- Integral safety relief valve
- Replaceable cylinder liner & end disc for inexpensive rebuilding
- Assemblies include pump mounting base, v-belts, guards, and sheaves (everything but motor)
- Motors available - size determined by pressure differential and GPM requirements. Sheave sizes are determined by RPM requirements.
- Cavitation suppression liner



LGL-V SERIES



LGL2 SERIES

RMI Part No.		Inlet*	Outlet*	Drive	Capacity @ 640 RPM	100lb Dif.
Pump, Base & Drive Assembly	Pump Only				50lb Dif.	
LGL2-VB	LGLD2E	2" NPT	2" NPT	V-Belt	67 GPM	157 GPM
LGL3-VB	LGLD3E	3" NPT	3" NPT	V-Belt	133 GPM	112 GPM
LGLD4B- VB	LGL4	4" WELD	3" WELD	V-Belt	270 GPM	220 GPM

*Weld connection optional

EBSRAY REGENERATIVE TURBINE PUMPS

The Ebsray RC Series Regenerative Turbine Pumps are designed and precision built for high-pressure transfer of LPG, Autogas, propane, and butane. The secret to the success of these pumps is the innovative impeller design, which optimizes hydraulic performance resulting in high differential pressures even at low flow rates, a critical consideration for Autogas applications.



RC20 SERIES

RMI Part No.	Flow Rate (GPM)	Max Differential Pressure	Hose Qty	Inlet	Outlet
RC20	16	203	1	DN 25/1" NPT (F)	DN 25/1" NPT (F)
RC25	28	203	2	DN 25/1" NPT (F)	DN 25/1" NPT (F)
RC40	53	203		1-1/2" NPT Flanged to suit 1-1/2" ANSI Class 300 and DN40 DIN PN40	1" NPT Flanged to suit 1" ANSI Class 300 and DN25 DIN PN40

OIL-FREE GAS COMPRESSORS

High performance for liquid transfer and vapor recovery of propane, butane, and other liquefied gases.

- Design improvements promote longer service life and efficient performance
- Vapor recovery from unloading operation provides significant savings
- Durable construction and simplified parts installation make compressor field serviceable



LB SERIES

RMI Part No.		Capacity Range (GPM)	Motor Horse Power	Typical Pipe Size	
Complete Compressor Transfer Unit*	Compressor & Flywheel Only			Vapor	Liquid
LB161-LU	LB161-CO	45-95	3 - 7.5	1-1/4"	2"
LB361-LU	LB361-CO	115-205	7.5 - 15	2"	3"
LB601-LU	LB601-CO	240-365	15 - 25	2-1/2"	4"
LB942-LU	LB942-CO	360-650	20 - 50	3"	6"

*Transfer unit includes compressor, gauges, base, piping, strainer, 4-way valve, liquid trap, belt guards, and sliding base (motor not included)

COMPRESSOR REPAIR KITS

Compressor Model No.	RMI Part No.	
	Kit Top End	Kit Intermediate
LB161-LU	792229	792230
LB361-LU	793229	793230
LB601-LU	794237	794238



Blackmer Pumps for Mobile Applications

LGL SERIES TRUCK PUMPS

Excellent pump for bobtails and transports, the standard workhorse pump.

- LGLD2E has double shaft extension permitting left- or right-hand PTO
- LGLD3E has been engineered for a high flow and increased durability
- Integral safety relief valves
- Replaceable cylinder liner and end disc for fast and inexpensive rebuilding
- Cavitation suppression liner

RMI Part No.	Inlet/Outlet	Capacity - 640 RPM		Capacity - 700 RPM	
		50 lb Dif.	100 lb Dif	50 lb Dif.	100 lb Dif.
LGLD2E	2" WELD/NPT	67 GPM	57 GPM	-	-
LGLD3E	3" WELD/NPT	133 GPM	112 GPM	160 GPM	150 GPM
LGLD4B	4" WELD/NPT	284 GPM	238 GPM	317 GPM	269 GPM



LGLD3 SERIES

TLGLF3 TRUCK PUMP

Excellent pump for the modern large capacity bobtail truck.

- 3" Direct Flange Mounting
- Double shaft extension is suitable for right- or left-hand PTO
- Pump has auxiliary 2" intake for emergency pumping
- Cavitation suppression liner

RMI Part No.	Intake	Auxiliary		Capacity, 650 RPM		Capacity, 870 RPM	
		Intake	Outlet	50 lb Dif.	100 lb Dif.	50 lb Dif.	100 lb Dif.
TLGLF3	3" Flange	2" NPT	2" NPT	93 gpm	83 gpm	120 gpm	129 gpm
300/0300	3" Flange Mounting Gasket for TGLF3						



TLGF3 SERIES

TLGLF4B TRANSPORT TRUCK PUMP

The most common transport pump on the road, ideal intake condition assures maximum pumping rate.

- 4" Direct flange mounting
- Auxiliary 3" intake for emergency unloading of another tank or truck
- Rated up to 380GPM
- Integral safety relief valve
- Double shaft extension is suitable for right or left hand
- Cavitation suppression liner

RMI Part No.	Intake	Auxiliary		Capacity, 650 RPM		Capacity, 870 RPM	
		Intake	Outlet	50 lb Dif.	100 lb Dif.	50 lb Dif.	100 lb Dif.
TLGLF4B	4" Flange	3" NPT	2" NPT	250 gpm	245 gpm	380 gpm	350 gpm
300/0400	4" Flange Mounting Gasket for TGLF3						

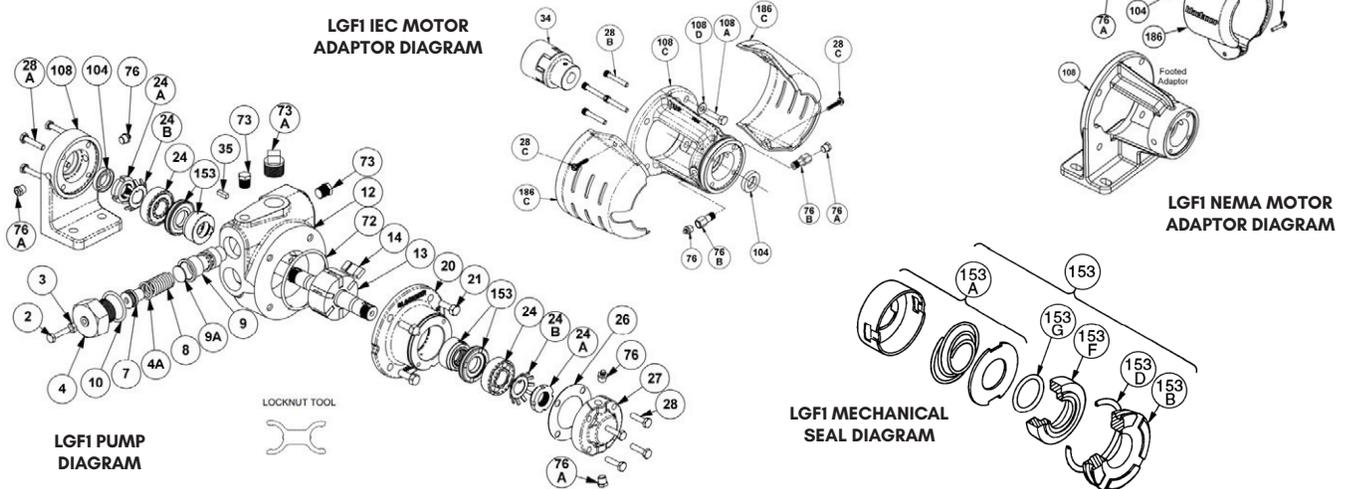


TLGLF4 SERIES



Blackmer Repair Parts

PARTS LIST FOR PUMP MODELS: LGFI, LGFIE, LGB1E, LGFIE, LGB1PE



Ref No.	Description	Parts Per Pump	Part No.	Ref No.	Description	Parts Per Pump	Part No.
PUMP				MECHANICAL SEAL			
2	Adjusting Screw- Relief Valve	1	2 433905	153	Mechanical Seal Assembly	2	1 332920
3	Locknut - Adjusting Screw	1	2 922825	153A**	Jacket Assembly - Seal	2	**
4	Cover-R/V	1	412901	153B**	Stationary Seat (Steel)	2	**
4A	O-Ring - Spring Guide	1	1,2 711940	153D	O-Ring - Stationary Seat (Buna-N)	2	711916
7	Spring Guide R/V	1	2 422901	153F**	Seal Face (Carbon)	2	**
8	Spring - R/V	1	2 472901	153G	O-Ring - Rotating (Buna-N)	2	711939
9	Valve - R/V	1	2 452901	NEMA C-FACED MOTOR ADAPTORS			
9A	Disc - R/V	1	2 442901	28B	Motor Adaptor Mounting Screws	4	920101
10	O-Ring - R/V Cover	1	1,2 701965	28C	Guard Screw	1	920026
12	Cylinder -LGFI, LGB1	1	022914	34	Coupling Half - Pump	1	906150
	Cylinder - LGFIP, LGBIP		022915		Coupling Half - Motor 56C		906151
	Rotor & Shaft Assembly, Six Vane (includes Ref. Nos 24A & 24B)	1	262907		Coupling Half - Motor 143/145TC, 184C		906147
	Vane - Duravane (Std)	6	1,2 092913		Coupling Spider		906155
20	Head	1	032905	108	Motor Adaptor - Unfooted	1	832912
21	Capscrews -Head	4	920178	Motor Adaptor - Footed	833000		
24	Ball Bearing	2	1 903405	108A	Capscrew - Motor Adaptor	4	920331
24A	Locknut - Bearing	2	903531	186	Guard	1	804120
24B	Lockwasher - Bearing	2	1 903532	IEC MOTOR ADAPTORS			
26	Gasket - Bearing Cover	1	1 383075	28B	Motor Adaptor Mounting Screws	4	920101
27	Bearing Cover	1	043071	28C	Guard Screw	2	920026
28	Capscrews - Bearing Cover	4	920080	34	Coupling Half - Pump	1	906183
28A	Bracket Mounting Screws	4	920090		Coupling Spider		906176
35	Key - Shaft	1	1 909152		Coupling Half - Motor (IEC 90)		906186
72	O-Ring - Head	1	1 711941	76	Grease Fitting	1	317815
73	Gage Plug (1/4")	2	908198	76A	Grease Relief Fitting	1	701992
73A	Gage Plug (3/4")	1	908225	76B	Extension Coupling	2	701905
76	Grease Fitting	2	317815	104	Grease Seal	1	331934
76A	Grease Relief Fitting	2	701992	108A	Capscrew - Motor Adaptor to Motor	4	920043
104	Grease Seal	1	1 331934	108C	"Motor Adaptor (IEC90 B14A) Includes Ref. Nos. 76, 76A, & 76B"	1	832920
108	Mounting Foot - LGBI(P/E)	1	832913	108D	Washer	4	792094
	Tool - Locknut		903090	186C	Guard Half	2	804196
	Kit - RV Maintenance		899094				
	Kit - Maintenance (6-Vane)		898994				

1 Included in Maintenance Kit, 2 Included in RV Kit, ** Not available as separate repair parts

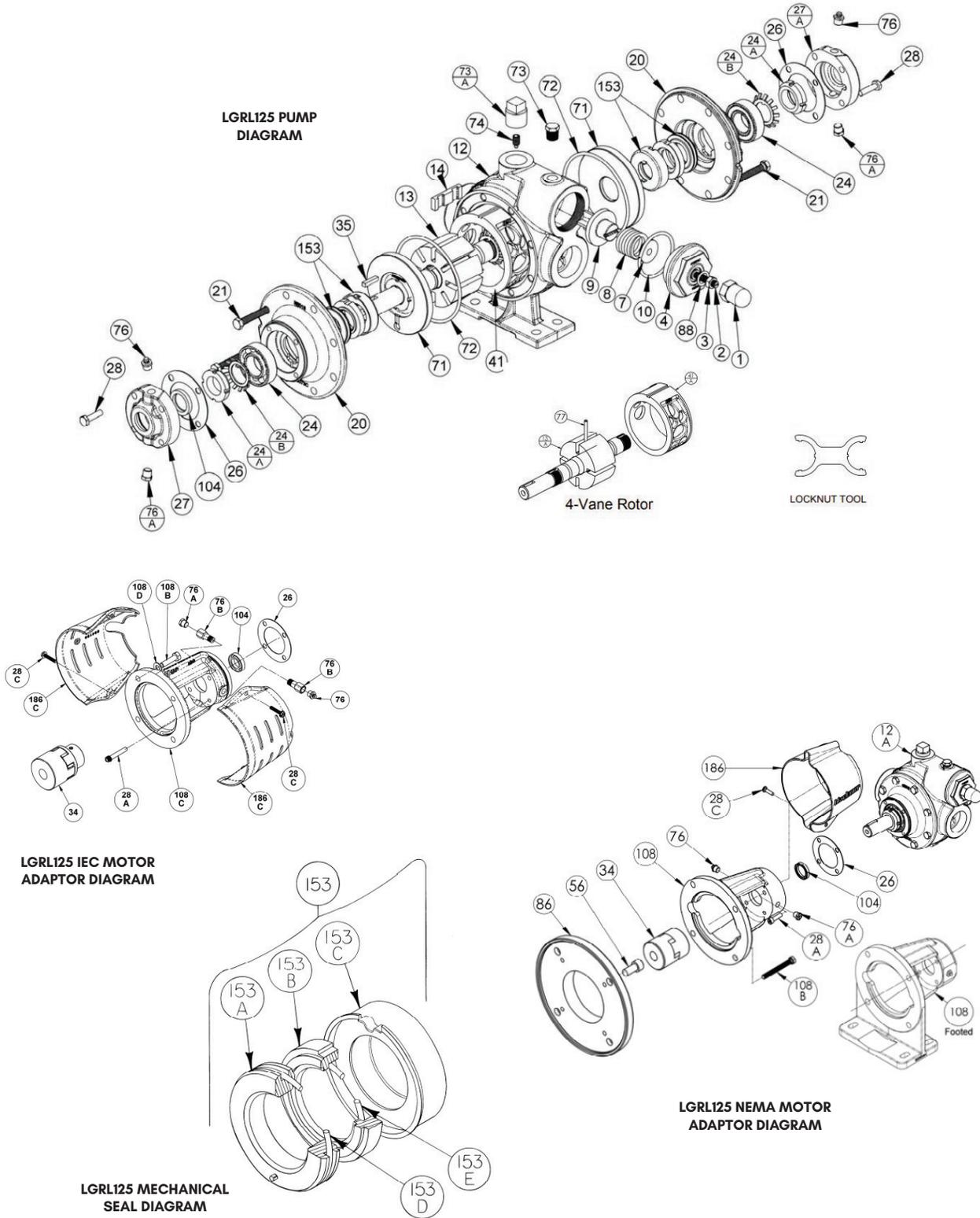


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Blackmer Repair Parts

PARTS FOR PUMP MODELS: LGRL1.25, LGL1.25, LGL1.5, LGRLF1.25A, LGLF1.25A, LGLF1.5A



Ref No.	Description	Parts Per Pump	Part No.	Ref No.	Description	Parts Per Pump	Part No.
PUMP				NEMA C FACE MOTOR ADAPTER			
1	Cap-Relief Valve R/V	1	413200	12A	Casing without Feet - LG@LF1.25	1	013077
2	Adjusting Screw - R/V	1	433909		Casing without Feet - LGLF1.5		013577
3	Locknut-Adjusting Screw	1	922923	26	Gasket - Bearing Cover	1	383075
4	Cover- R/V	1	413076	28A	Motor Adaptor Mounting Screws	4	920101
7	Spring Guide-R/V	1	423955	28C	Guard Screw	1	920026
8	Spring-R/V (81-125 PSI)	1	471428	34	Coupling Half - Pump	1	906147
9	Valve-R/V	1	453077		Coupling Spider		906155
10	O-Ring-R/V Cover	1	1 711924		Coupling Half - Motor (56C)		906151
12	Casing with feet (1.25)	1	013075		Coupling Half - Motor (143TC, 145TC, 184C)		906147
	Casing with feet (1.5)		013376		Coupling Half - Motor (182TC, 184TC, 215C)		906146
13	Rotor and Shaft Assembly, Eight Vane (with Ref. Nos 24A & 24B)	1	2 262300	56	Capscrews - Adapter Ring Mounting	4	920480
14	Vane-Duravane	8	1 093088	76	Grease Fitting	1	317815
20	Head	2	033073	76A	Grease Relief Fitting	1	701992
21	Cap screws-Head	16	920276	86	Motor Adaptor Ring (182TC, 184TC, 215C)	1	832914
24	Ball Bearing	2	1 903114	104	Grease Seal	1	331927
24A	Locknut-Bearing	2	2 903554	108	Motor Adaptor - Unfooted (Includes Ref. 76 & 76A)	1	832912
24B	Lock washer-Bearing	2	1 903553		Motor Adaptor - Footed (Includes Ref. 76 & 76A)		833000
26	Gasket-Bearing Cover	2	1 383075	108B	Capscrews - Motor Adaptor	4	920331
27	Bearing Cover-Inboard	0-1	043070	186	Guard	1	804120
27A	Bearing Cover-Outboard	1	043071	IEC FLANGED FACE MOTOR ADAPTOR			
28	Cap screws-Bearing Cover	8	920080	26	Gasket - Bearing Cover	1	383075
35	Shaft Key	1	1 909152	28A	Motor Adaptor Mounting Screws	4	920101
41	Liner - LGRL(F)1.25 (8 Vane Only)	1	2 183019	28C	Guard Screw	2	920026
	Liner - LGL(F)1.25 (8Vane Only)		2 183020	34	Coupling Half - Pump (for IEC100/112)	1	906182
	Liner - LGL(F)1.5 (8 Vane Only)		2 183310		Coupling Spider (for IEC100/112)		906178
71	Disc	2	1 063075		Coupling Half - Motor (IEC100/112)		906180
72	O-Ring-Head	2	1 701918	76	Grease Fitting	1	317815
73	Gage Plug (1/4")	1	908198	76A	Grease Relief Fitting	1	701992
73A	Gage Plug (3/4")	1	3 908225	76B	Extension Coupling	2	701905
74	Setscrew-Liner	1	922088	104	Grease Seal	1	331927
76	Grease Fitting	2	317815	108B	Capscrew - Motor Adaptor to Motor	4	920044
76A	Grease Relief Fitting	2	701992	108C	Motor Adaptor (IEC 100/112 B14A) Includes Ref. Nos. 76, 76A, & 76B)	1	832930
88	O-Ring-R/V Cap	1	1 701949	108D	Washer	4	792094
104	Grease seal	1	1 331927	186C	Guard Half	2	804198
	Tool -Locknut		903090	MECHANICAL SEAL			
	Kit- Maintenance		898976	153	Mechanical Seal Assembly	2	333045
	Kit-Rebuild LGRL(F)1.25(A) (8 Vane)		899076	153A	Stationary Seat (Hardened Steel)	2	**
	Kit-Rebuild LGL(F)1.25(A) (8 Vane)		899077	153B	Seal Face (Carbon)	2	**
	Kit-Rebuild LGLR(F)1.5(A) (8 Vane)		899078	153C	Jacket Assembly	2	**
4-Vane Rotor/Shaft Parts				153D	O-Ring - Stationary (Buna-N)	2	711916
13A	Rotor & Shaft Assembly, Four Vane (Includes Ref. Nos. 24A & 24B)	1	263076	153E	O-Ring - Rotating (Buna-N)	2	711915
14	Vane - Duravane	4	093088	2	Adjusting Screw- Relief Valve	1	2 433905
41A	Liner - LGRL(F)1.25 (4-Vane Only)	1	183003				
	Liner - LGL(F)1.25 (4-Vane Only)		183004				
	Liner - LGL(F)1.5 (4-Vane Only)		183301				
77	Push Rod - LGRL(F)1.25	2	123004				
	Push Rod - LGL(F)1.25		123076				
	Push Rod - LGL(F)1.5		123401				
	Maintenance Kit - LGRL(F)1.25A (4-Vane)		898917				
	Maintenance Kit - LGL(F)1.25(A) (4-Vane)		898918				
	Maintenance Kit - LGL(F)1.5(A) (4-Vane)		898919				
	Rebuild Kit - LGRL(F)1.25A (4-Vane)		899017				
	Rebuild Kit - LGL(F)1.25(A) (4-Vane)		899018				
	Rebuild Kit - LGL(F)1.5(A) (4-Vane)		899019				

¹ Included in Maintenance Kits & Rebuild Kits

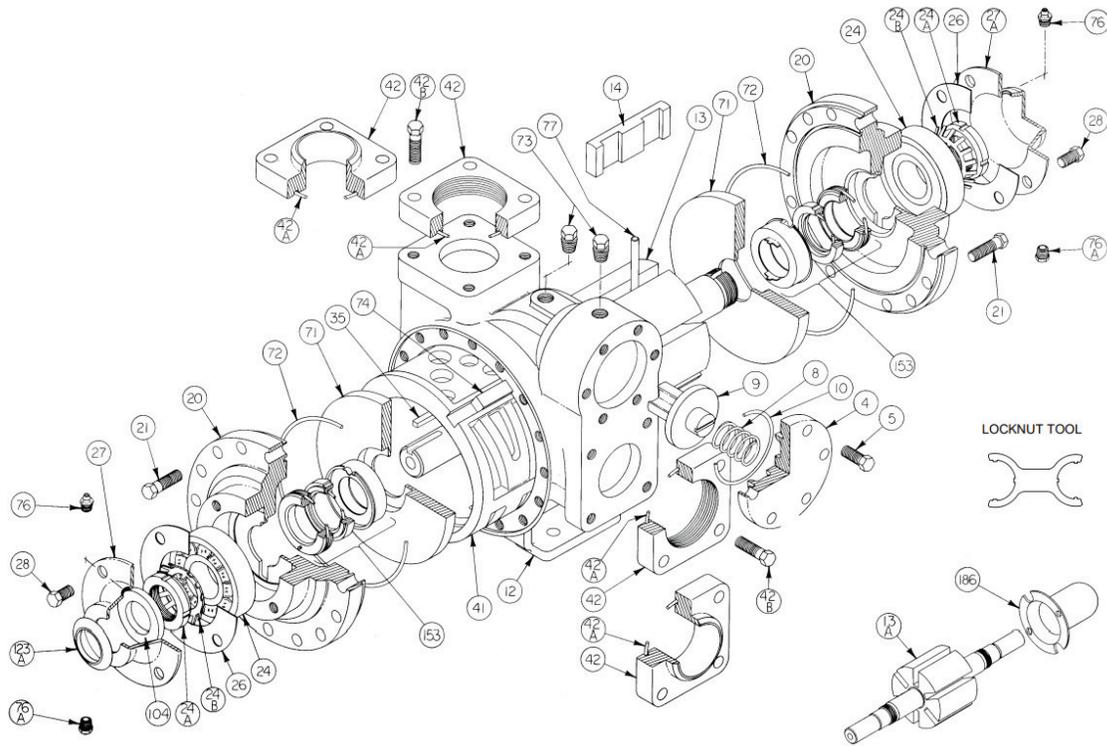
² Included in Rebuild Kits

³ Ref. No. 73A: Older pumps may use a 1/4" plug (908198) or 1/2" plug (908215)

** Not available as separate replacement part

Blackmer Repair Parts

PARTS FOR MODELS LGLD2E, LGL2E, LGLD3F, LGL3F, LGLD3E, LGL3E



Ref. No.	Description	Parts per Pump	LGL2 Part No.	LGL3 Part No.
4	Cover-Relief Valve (R/V)	1	414401	415113
5	Capscrews-R/V Cover	6	920331	920331
8	Spring-R/V	1	1 471423	1 475135
9	Valve-R/V	1	454405	455129
10	O-Ring - R/V Cover	1	1 701919	1 701925
12	Casing	1	014405	015127
13	Rotor & Shaft Asy. LGL (Includes Ref. Nos. 24A & 24B)	1	264443	265149
13A	Rotor & Shaft Asy. LGLD ⁵ (Includes Ref. Nos. 24A & 24B)	1	2 264445	2 265148
14	Vane - Duravane (Std)	6	1 091419	1 095131
20	Head	2	034416	035128
21	Capscrews-Head (Size 2)	32	920351	-
	Capscrews-Head (Size 3)	40	-	920369
24	Ball Bearing	2	1 903156	1 903166
24A	Lock-Nut Bearing	2	2 903521	2 903523
24B	Lockwasher-Bearing	2	1 903522	1 903524
26	Gasket-Bearing Cover	2	1 383940	1 385125
27	Bearing Cover (Inboard) ³	1	041431	041815
27A	Bearing Cover (Outboard) ⁴	1	041433	041817
28	Capscrews-Bearing Cover	8-12	920285	920285

Ref. No.	Description	Parts per Pump	LGL2 Part No.	LGL3 Part No.
35	Key-Shaft, 1/4" Square	1	1,7 909209	1,7 909209
41	Liner	1	2 184405	2 185111
42	Flange - NPT	2	654401	655112
	Flange - Weld		654405	655102
42A	O-Ring-Flange	2	1 702004	1 702002
42B	Capscrew-NPT Flange	8	920384	920547
	Capscrew-Weld Flange		920351	920510
71	Disc	2	1 064412	1 065112
72	O-Ring-Head	2	1 702022	1 702041
73	Gauge Plug	2	908198	908198
74	Key-Liner	1	2,8 183991	2 185191
76	Grease Fitting	2	317815	317815
76A	Grease Relief Fitting	2	701992	701992
77	Push Rod	3	1,6 123909	1,6 125110
104	Grease Seal	1	1,3 331918	1,3 331908
123A	Dirt Shield	1	1,3 701480	-
186	Shaft Protector (LGLD Models Only)	1	341601	341801
	Tool - Locknut		903091	903091
	Kit - Maintenance		898979	898981
	Kit - Rebuild		899079	899081

¹ Included in Maintenance Kit and Rebuild Kit.

² Included in Rebuild Kit

The following Applies to Double end Shaft Pumps (LGLD):

³ Use two,

⁴ Use none

⁵ Double-Ended Rotor & Shaft

⁶ 2" Push Rod is Metal 3" Is Composite

⁷ Pumps before April 2008 used Woodruff Key 909130, included in maintenance kits.

⁸ Pumps before 1995 require liner key 184407

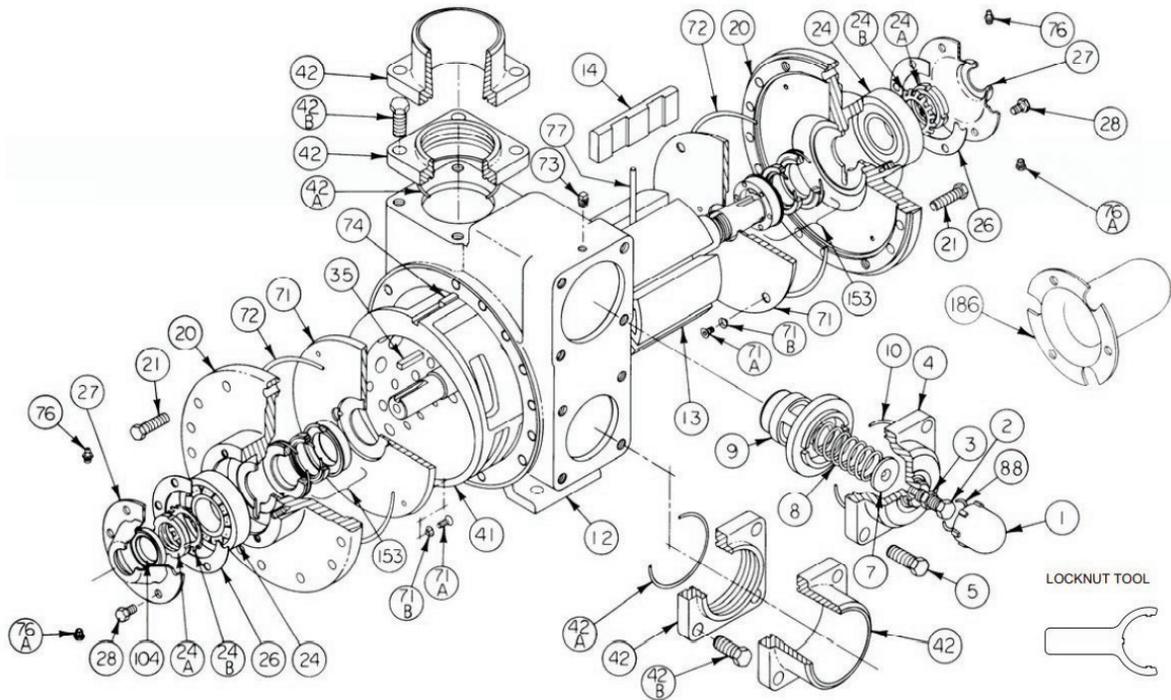


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Blackmer Repair Parts

PARTS FOR MODEL LGLD4B



Ref. No.	Description	Parts Per Pump	Part No.
1	Cap-Relief Valve (R/V)	1	413957
2	Adjusting Screw - R/V	1	436310
3	Locknut-Adjusting Screw	1	432039
4	Cover- (R/V)	1	412001
5	Capscrews-R/V Cover	4	920663
7	Spring Guide-R/V	1	426355
8	Spring - R/V	1	472039
9	Valve-R/V	1	452001
10	O-Ring-R/V Cover	1	701946
12	Casing	1	012019
13	Rotor and Shaft Assembly, Dbl. End (Includes Ref. No. 24A & 24B)	1	262041
14	Vane-Duravane	6	092019
20	Head	2	032041
21	Capscrews-Head	28	920532
24	Ball Bearing	2	903166
24A	Locknut-Bearing	2	903541
24B	Lockwasher-Bearing	2	903542
26	Gasket - Bearing Cover	2	385125
27	Bearing Cover-LGLD4B	2	041815
28	Capscrews-Bearing Cover	12	920285
35	Key-Shaft	1	909183

Ref. No.	Description	Parts Per Pump	Part No.
41	Liner	1	2182000
42	Flange-3" NPT	1-2	652012
42	Flange-3" Weld		652007
42	Flange-4" Weld		652005
42A	O-Ring- NPT, Weld Flange	2	701937
42B	Capscrew-NPT Flange	8	920663
42B	Capscrew-weld Flange		920640
71	Disc	2	062039
71A	Machine Screw-Disc	8	920015
71B	Lock washer-Machine Screw	8	909634
72	O-Ring - Head	2	702039
73	Gauge Plug	2	908198
74	Key - Liner	1	2182040
76	Grease Fitting	2	317815
76A	Grease Relief Fitting	2	701992
77	Push Rod - Composite - LGLD4B	3	122009
88	O-Ring - R/V Cap	1	701926
104	Grease Seal - LGLD4B	2	331908
186	Shaft Protector	1	341801
	Tool-Locknut		903092
	Kit-Maintenance		898922
	Kit-Rebuild		899022

¹ Included in Maintenance Kit and Rebuild Kit

² Included in Rebuild Kit

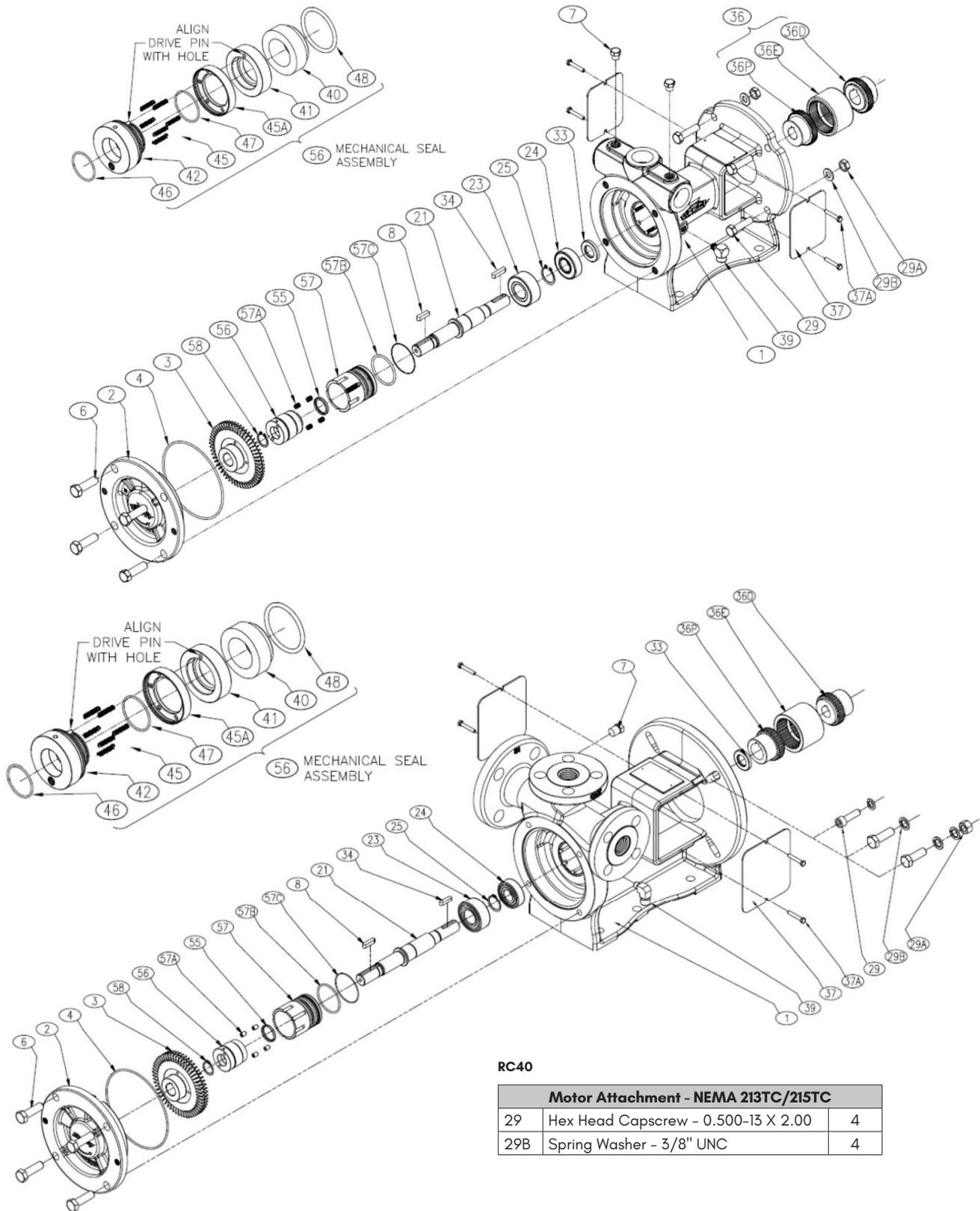


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Blackmer Repair Parts

PARTS LIST - EBSRAY MODELS: RC20, RC25 & RC40



RC40

Motor Attachment - NEMA 213TC/215TC			
29	Hex Head Capscrew - 0.500-13 X 2.00		4
29B	Spring Washer - 3/8" UNC		4

Blackmer Repair Parts

PARTS LIST - EBSRAY MODELS: RC20, RC25 & RC40

Ref.No	Description	Parts Per Pump	RC20	RC25	RC40
1	Body-Nema	1	EBSC317002-1031	EBSC3160031031	EBSC319001-1037
2	Cover	1	EBSc317200-1031	EBSC316200-1031	EBSC319200-1037
3	Impeller	1	EBSC317301-1042	EBSC316301-1042	EBSC319301-1042
4	O-Ring - Cover	1	1 EBSD249-4029		2 EBSD252-4029
6	Hex Head Capscrew, M12-1.75X40	4	BLK908198		
7	Plug - Guage Tap	2			
8	Key - Impeller End, Steel 6X6X20	1			
21	Shaft	1	2 EBSC316350-2152	2 EBSC319350-2152	
23	Ball Bearing - Impeller End	1	2 EBSB072		
24	Ball Bearing - Motor Head	1	2 EBSB073		
25	Circlip - Bearing	1	2 EBS8177-025S		
35	Dust Seal - Bearing	1	EBSZ044-4011		
34	Key- Pump Shaft, Steel 6X6X20	1			
36	Coupling Assembly-0.875 Motor Shaft, NEMA 140TC, 184C	1	EBSL575-028-019-087		
	Coupling Assembly-1.125 Motor Shaft, Nema 180TC, 215C	1	EBSL575-028-019-306		EBSL575-038-019-306
	Coupling Assembly-1.375 Motor Shaft, NEMA 213TC, 215TC	1			EBSL575-038-019-297
	#36D Half Coupling-0.875 Motor Shaft	0-1			
	#36D Half Coupling-1.125 Motor Shaft	0-1			
	#36D Half Coupling-1.375 Motor Shaft	0-1			
	#36E Coupling Element	1			
#36P Half Coupling-Pump	1				
37	Coupling Guard	2	EBSC316700-3081		EBSC319700-3081
37A	Hex Head Capscrew-Coupling Guard, M5-0.8X30	4			
39	Seal Drain Elbow	1	EBS-8312-012S		
55	Lip Seal - Secondary Seal	1	2 EBSZ043-4015		
56	Mechanical Seal Assembly	1	1,2 EBSL756-28-111-05		
40	Seal Seat	1	EBSC316610-4114		
41	Rotating Seal Face	1	EBSC316626-4036		
42	Seal Sleeve	1	EBSC316651-2162		
45	Seal Spring	6	EBSC753001-2223		
45A	Spring Retainer	1	EBSC316690-2162		
46	O-Ring - Shaft	1	EBSD020-4029		
47	O-Ring - Seal Sleeve	1	EBSD020-4029		
48	O-Ring - Seal Seat	1	EBSD218-4029		
57	Cartridge - Mechanical Seal	1	2 EBSC316676-1035		
57A	Oval Point Setscrew, 1/4-28x0.375	4			
57B	O-Ring - Cartridge Primary	1	1,2 EBSD224-4029		
57C	O-Ring - Cartridge Secondary	1	1,2 EBSD032-4029		
58	Circlip - Mechanical Seal	1	2 EBS8177-020S		
	Mechanical Seal Kit, Repair (Marked by 1)	1	EBSK756-28-111		
	Quill Assembly, (Marked by 2)	1	EBSL316378		EBSL319378

*When ordering spare parts, **Always** quote the pump Serial Number located on the nameplate of the pump.

1 Included in Maintenance Kit and Rebuild Kit.

2 Included in Rebuild Kit

RC20/RC25

Motor Attachment - NEMA 140TC, 184C		
29	Hex Head Capscrew-0.375-16 X 1.50	4
29B	Spring Lock Washer - 0.375	4
Motor Attachment - NEMA 180TC, 215C		
29	Hex Head Capscrew - 0.500-13 X 2.00	4
29B	Spring Washer =, 3/8" UNC	4

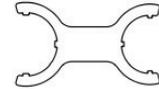
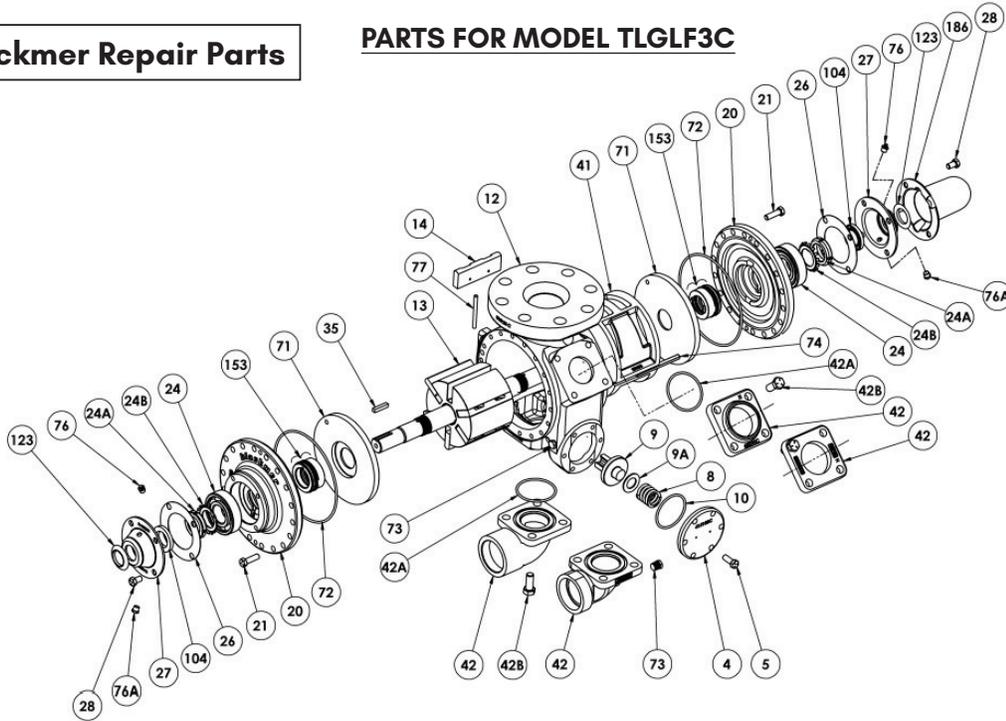


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Blackmer Repair Parts

PARTS FOR MODEL TLGLF3C



Ref. No.	Description	Parts Per Pump	Part No.
4	Cover-Relief Valve (R/V)	1	415108
5	Capscrew-R/V Cover	6	920331
8	Spring-R/V	1	1 471428
9	Valve-R/V	1	4 451460
9A	Relief Valve Shim, .035"	0-1	332907
	Relief Valve Shim, .075"		332937
10	O-Ring - R/V Cover	1	1 701919
12	Casing	1	015128
13	Rotor & Shaft Assembly ⁵	1	2 265147
14	Vane - Duravane	6	1 095132
20	Head	2	035132
21	Capscrew-Head	36	920351
24	Ball Bearing	2	1 903156
24A	Locknut-Bearing	2	2 903521
24B	Lockwasher -Bearing	2	1 903522
26	Gasket-Bearing Cover	2	1 383940
27	Bearing Cover	2	041431
28	Capscrews-Bearing Cover	8	920285
35	Key - Shaft Current, .25 Sq.	1	1 909209
	Key - Shaft Obs, Woodruff		1 909130
41	Liner	1	2 185101
42	Flange - 2" NPT	1-2	652010
	Flange -2" Slip-on Weld		652024
	Flange Elbow - 2" NPT		6 655100
	Flange Elbow - 2" Socket Weld		6 655109
	Blank Flange for Auxiliary Inlet		652036
	Flange - 2" NPT Stainless		655200
	Flange - 2" Socket Weld EL Stainless		6 655209
Flange - 2" Slip-on Weld Stainless	655224		

Ref. No.	Description	Parts Per Pump	Part No.
42A	O-Ring-Flange 2-5/8" x 2-7/8" (current)	2	1,3 702004
	O-Ring-Flange 2-1/2" x 2-3/4" (older pumps)		1 701919
42B	Capscrews - Flanges	4-8	920491
	Socket Capscrew - Elbow Flanges		920494
71	Disc.	2	1 065121
72	O-Ring -Head	2	1 711923
73	Gauge Plug	2	908198
74	Key-Liner	1	2 185193
76	Grease Fitting	2	317815
76A	Grease Relief Fitting	2	701992
77	Push Rod	3	1 121608
104	Grease Seal	2	1 331918
123	Dirt Shield	2	1 701480
186	Shaft Protector	1	341601
	Tool - Locknut		903091
	Kit - Maintenance		898980
	Kit - Maintenance with R/V		899225
	Kit - Rebuild		899080
	Kit - Rebuild with R/V		899125

¹ Included in Maintenance Kit and Rebuild Kit
² Included in Rebuild Kit
³ Larger O-Ring introduced October 2002

⁴ Additional parts included in kits with R/V
⁵ Includes Ref. No. 24A & 24B
⁶ Socket Head Capscrew Specific

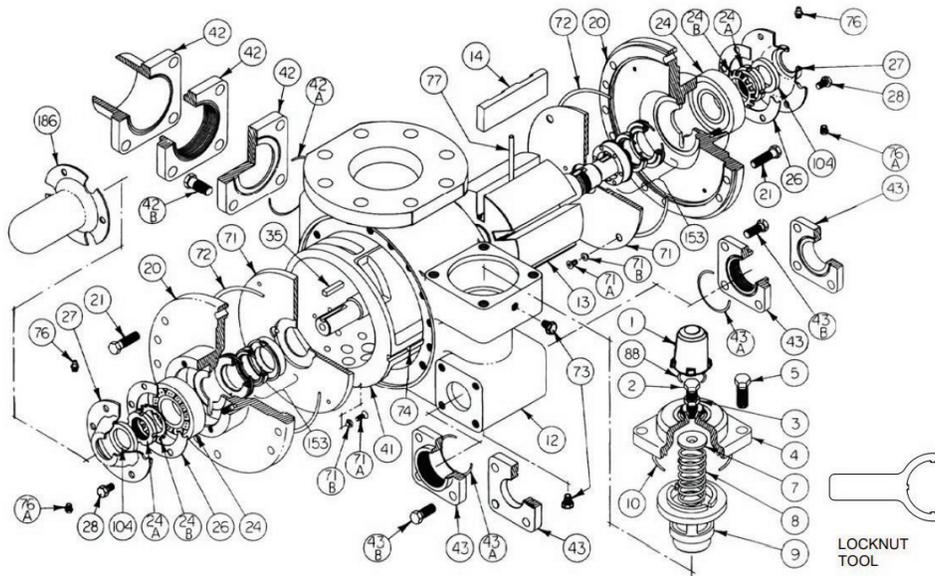


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Blackmer Repair Parts

PARTS FOR MODEL TLGLF4B



Ref. No.	Description	Parts Per Pump	Part No.
1	Cap-Relief Valve (R/V)	1	413957
2	Adjusting Screw - R/V	1	436310
3	Locknut- Adjusting Screw	1	432039
4	Cover-(R/V)	1	412001
5	Capscrews-R/V Cover	4	920663
7	Spring Guide-R/V	1	426355
8	Spring - R/V	1	472039
9	Valve-R/V	1	452001
10	O-Ring-R/V Cover	1	701946
12	Casing	1	012041
13	Rotor & Shaft Assembly (Includes Ref. No. 24A & 24B)	1	262041
14	Vane - Duravane	6	092019
20	Head	2	032041
21	Capscrews-Head	28	920532
24	Ball Bearing	2	903166
24A	Locknut-Bearing	2	903541
24B	Lockwasher-Bearing	2	903542
26	Gasket-Bearing Cover	2	385125
27	Bearing Cover	2	041815
28	Capscrews-Bearing Cover	12	920285
35	Key-Shaft	1	909183
41	Liner	1	182000
Auxiliary Inlet Options			
42	Flange - 3" NPT	1	652012
	Flange - 3" Weld		652030
	Flange - 4" Weld		652005
	Flange - 3" Weld		652007
	Flange - Blank		652000
42A	O-Ring Aux. Inlet Flanges	1	701937
42B	Capscrew - 2", 3" NPT Flange	4	920663
	Capscrew - 3", 4" Weld Flange; Blank Flange		920640

Ref. No.	Description	Parts Per Pump	Part No.
Twin Discharge Port Options			
43	Flange - 2" NPT	2	652010
	Flange - 2" Slip-on Weld		652024
43A	O-Ring - 2" Discharge Flanges	2	702004
43B	Capscrews - Discharge Flange	8	920491
71	Disc	2	062039
71A	Machine Screw - Disc	8	920015
71B	Lock washer-Machine screw	8	909634
72	O-Ring - Head	2	702039
73	Gauge Plug	2	908198
74	Key - Liner	1	182040
76	Grease Fitting	2	317815
76A	Grease Relief Fitting	2	701992
77	Push Rod - Composite	3	122009
88	O-Ring-R/V Cap	1	701926
104	Grease Seal	2	331908
186	Shaft Protector	1	341801
	Tool - Locknut		903092
	Kit - Maintenance		898922
	Kit - Rebuild		899022

¹ Included in Maintenance and Rebuild Kit
² Included in Rebuild Kit



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Corken Cylinder Filling Pumps

CORO-FLO CYLINDER FILLING PUMPS

Regenerative turbine pumps. Ductile Iron casing, balance type mechanical seal, and free floating bronze impeller provide years of service and quiet operation

C Model Close Coupled Series

- C10 Pump - is ideal for the one scale bottle filling operation. Fills 20# cylinder in 30 seconds Fills 100# cylinder in 2.5 minutes, and fuels through a meter at 7 GPM.
- C12 Pump - is for those who want to do it faster. Especially recommended for motor fueling and "batch" fork lift filling. Fills 20# cylinder in 15 seconds, 100# cylinders in 2 minutes. Perfect for motor fueling through a meter at 15 GPM.

C MODEL CLOSE COUPLED SERIES

RMI Part No.		Capacity- GPM		Inlet	Outlet	Max PSID	H.P. Rating	Motor Phase
Pump, Starter & Bypass	Pump & Starter	50 PSID	75 PSID					
C10JD-SM-B	C10JD-SM	6.5	2.5	1-1/4"	1"	75	2	1
C12JD-SM-B	C12JD-SM	15	11	1-1/2"	1"	85	2	1
C13JD-SM-B	C13JD-SM	22	17	1-1/2"	1"	100	2	1
C14HD*		32	25	1-1/2"	1"	100	3	1

*Starter Not Included

F SERIES CORO-FLO CYLINDER FILLING PUMP

RMI Part No.		Capacity- GPM		Inlet	Outlet	Max PSID
Pump, Baseplate & Coupling	Pump Only	50 PSID	75 PSID			
F10CD-101	F10CD	6.5 W/ 1HP	2.5 W/ 1 HP	1-1/4"	1"	90
F12CD-101	F12CD	15 W/ 2HP	11 W/ 2 HP	1-1/2"	1"	115
F14CD-101	F14CD	31 W/ 3HP	25 W/ 3 HP	1-1/2"	1"	125
F13CD-101	F13CD	21 W/ 3HP	17 W/ 3HP	1-1/2"	1"	125



C SERIES



F SERIES



HDPFF150

Corken Autogas Pumps

AUTOGAS PUMPS

The Corken AutoGas pump achieves new levels of performance with higher flow at high differential pressures, non-pulsating and quiet transfer longer pump life and a design that is easy to repair. The pump is also versatile enough to be used in applications such as cylinder filling, vaporizer feeding, or bulk transfer.

- Ideal for dual hose dispensers and multiple dispensers
- ANSI Flanges 1-1/2" inlet x 1" outlet
- Continuous Duty Capacity
- Self-aligning, free-floating impeller

High Differential Pressure Packages

Prepackaged pump assemblies with motor and bypass valve

Options

TECH TIP: Variable frequency drives allow the use of 3-phase motors on single phase electric service. Can also be used instead of a starter with 3-phase service.

PUMP PACKAGES

RMI Part No.		GPM	Diff. Pressure	Motor HP
Pump on Base	Pump Only			
FF075CD6A-101-215T	FF075CD6A	22.5	145	7.5
FF150CD6A-101-215T	FF150CD6A	33.8	145*	10

*200psig maximum differential pressure with 20HP motor

HIGH DIFFERENTIAL PRESSURE PACKAGES

RMI Part No.	Description
HDPFF075-3P75	Pump, Base Plate, Bypass, and 7.5HP 3PH MOTOR
HDPFF150-3P10	Pump, Base Plate, Bypass, and 10HP 3PH MOTOR

OPTIONS

RMI Part No.	Description
4204-1	10HP Variable Frequency Drive for use with 5HP motor
4204	15HP Variable Frequency Drive for use with 7.5HP motor
4204-2	20HP Variable Frequency Drive for use with 10HP motor



Corken Bulk Plant & Truck Pumps

CORO-VANE BULK FILL PUMPS

- Sliding vane design with internal safety valve
- Large diameter non-metallic pins are not speed sensitive to allow for higher RPM operation
- High Tech materials used on cam and blades to extend life of pump
- Easy maintenance



Z3500-103

RMI Part No.		Inlet/Outlet	Capacity @ 50 PSID	
Pump & Base	Pump Only		GPM @ 640 RPM	GPM @ 780 RPM
Z2000-103	Z2000	2" NPT	69	82
Z3500-103	Z3500*	3" NPT	143	177
Z4500-103	Z4500	4" x 3" FLNG	309	382

*Easy retrofit with 1021 or other 3" pump

CORO-VANE FLANGE MOUNTED TRUCK AND TRANSPORT PUMPS

- Reversible side plates
- Anti-cavitation cam
- Low impact high strength drivers
- Needle roller bearing rated for up to 4,000 lbs.

RMI Part No.	Inlet	Outlet	Capacity @ 50 PSIG	
			GPM @ 640 RPM	GPM @ 780 RPM
Z3200	3" Flange	2" NPT	95	112
Z4200	4" Flange	Dual 2"	278	369

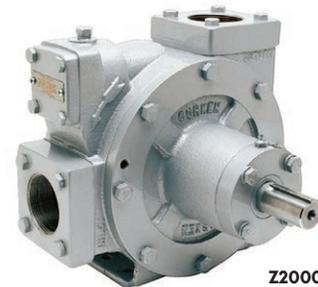


Z SERIES
FLANGE MOUNT

CORO-VANE BASE MOUNTED TRUCK PUMP

- Double Shaft Extension for LH or RH PTO
- Hydraulic Actuated Blades

RMI Part No.	Inlet	Outlet	Capacity @ 50 PSIG
Z2000	2" NPT Flange	2"	40-85 GPM



Z2000

DRY CYLINDER COMPRESSORS

- Designed for liquid transfer and residual vapor recovery
- Contamination-free, oil-free delivery
- Fully engineered design

RMI Part No.		Capacity		Motor HP	RPM	Standard Pipe Size	
Complete Bulk Plant Transfer Unit*	Compressor & Fly Wheel Only	GPM	CFM			Vapor	Liquid
91M3FBA-107	91M3FBA	50	8.3	5	600	1"	1-1/4"
291M3FBA-107	291M3FBA	88	16	7.5	780	1-1/4"	2"
491M3FBA-107	491M3FBA	198	36	15	825	2"	3"
691M3FBA-107	691M3FBA	330	60	25	822	3"	4"

*Transfer unit includes compressor, gauges, base, piping, strainer, 4-way valve, liquid trap, belt guards, and sliding base. Motor is not included



COMPRESSOR

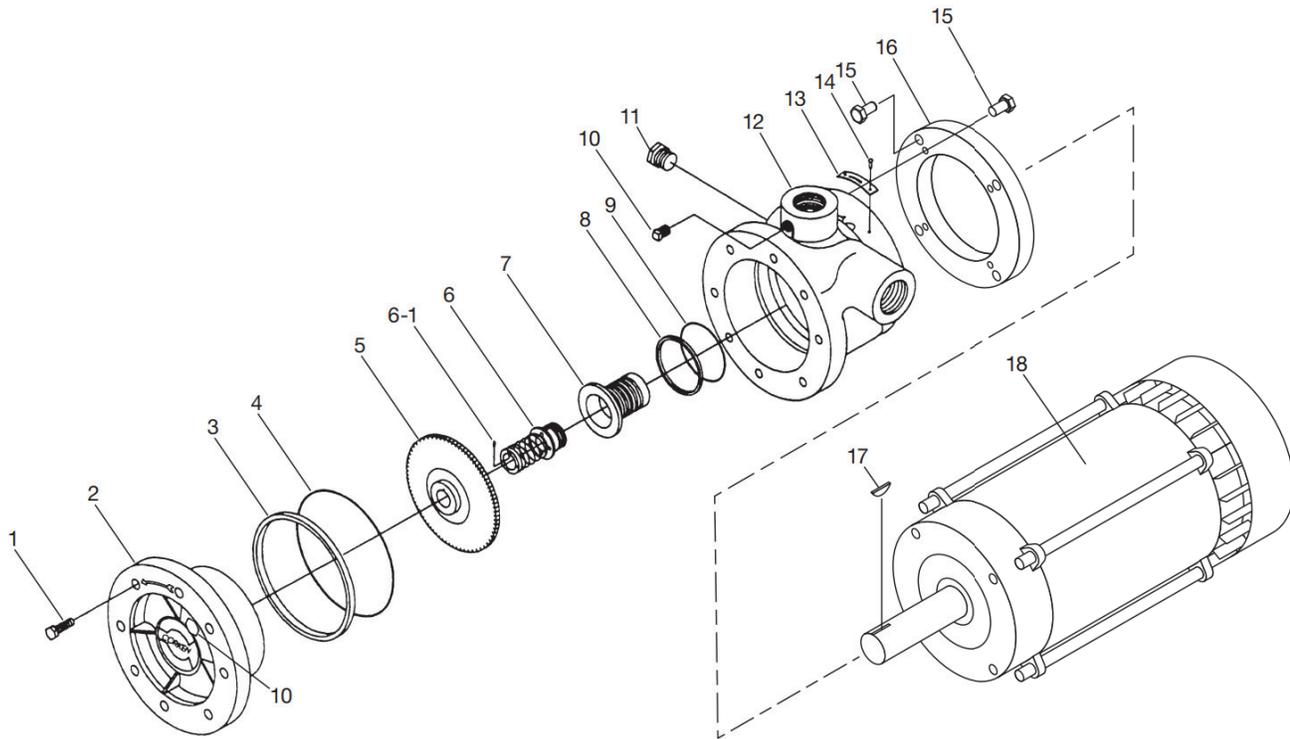


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Corken Repair Parts

PARTS FOR C10, C12, C13, C14, & C16 MODEL PUMPS



Ref No.	RMI Part No.	Description	Qty.
1	7001-03INC100A	Hex Head Cap Screw	8
2	1001-0	Cover - Model 10	1
	1001-2	Cover - Model 12	1
	1001-3	Cover - Model 13	1
	1001-4	Cover - Model 14	1
	1001-6	Cover - Model 16	1
3	1014 ¹	Case clearance shim (.002" red)	As Req.
	1014-1 ₁	Case clearance shim (.003" green)	As Req.
4	2-246A ₁	Case O-Ring (non-teflon)	1
5	1003-0 ₂	Impeller, Bronze - Model 10	1
	1003-2 ₂	Impeller, Bronze - Model 12	1
	1003-3 ₂	Impeller, Bronze - Model 13	1
	1003-4 ₂	Impeller, Bronze - Model 14	1
	1003-6 ₂	Impeller, Bronze - Model 16	1
6	113-CXA6	Seal Assembly (Buna-N O-Rings)	1
6-1	1009 ₁	Seal Pin	1
7	1004-1 ₃	Seal Housing without Pin (steel)	1
	1004-1X ₄	Seal Housing with Pin (steel)	1
8	1013	Housing Adjustment Shim (.010")	As Req.
	1013-1	Housing Adjustment Shim (.020")	As Req.
9	2-224A ₁	Housing O-Ring (Buna-N)	1

Ref No.	RMI Part No.	Description	Qty.
10	3442	Pipe Plug, 1/4" NPT	1
11	3444	Pipe Plug, 3/4" NPT	1
12	1002-0	Case - Model 10	1
	1002-2	Case - Model 12	1
	1002-3	Case - Model 13	1
	1002-4	Case - Model 14	1
	1002-6	Case - Model 16	1
13	1914-1	Nameplate	1
14	7012-006SF019E	Phillips Head Screw 6-32 X 1/4"	2
15	7002-037NC087A	Socket Head Cap Screw	8
16	1015	Adapter Ring	1
17	2497 ₁	Woodruff Key, Steel	1
	2497-1 ₁	Woodruff Key, Stainless Steel	1
18	2557	Motor, 3HP - Models 14 & 16 (3 Phase)	1
	4261	Motor, 2HP - Models 10, 12, & 13	1
	4261-1	Motor, 1HP - Models 10 & 12	1
	4885	Motor, 3HP - Models 14 & 16 (Single Phase)	1

¹ Included with seal assembly/repair kit 113-CXA6
² For a ductile iron impeller, add a 1 to the end of the part number
³ Pin is not required for Buna-N, Neoprene, and Viton O-Rings
⁴ Pin is required for PTFE and Kalrez O-Rings

CAUTION: Always relieve pressure in the unit before attempting any repairs.

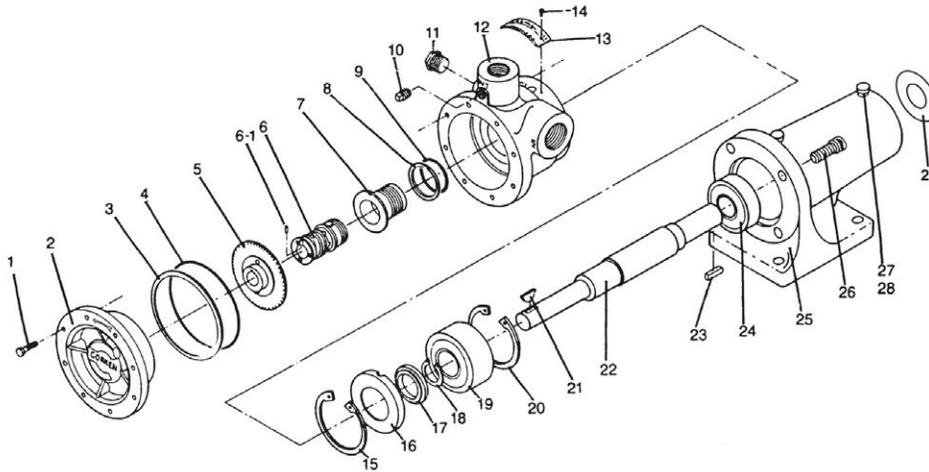


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Corken Repair Parts

PARTS FOR F10, F12, F13, F14, F16, F17, F18, & F19 MODEL PUMPS



MATERIAL CODE

A	Buna-N
B	Neoprene
D	Viton
E	PTFE
G	Ethylene Propylene
K	Kalrez

Ref No.	RMI Part No.	Description	Qty.
1	7001-03INC100A	Hex Head Cap Screw	8
2	1001-0	Cover - model 10	1
	1001-2	Cover - model 12	1
	1001-3	Cover - model 13	1
	1001-4	Cover - model 14	1
	1001-6	Cover - model 16	1
	1001-7	Cover - model 17	1
	1001-8	Cover - model 18	1
	1001-9	Cover - model 19	1
3	1014 ₂	Case Clearance Shim (.002" red)	As Req.
	1014-1 ₂	Case Clearance Shim (.003" green)	As Req.
4	2-246 _{1 2}	Case O-Ring (non-PTFE)	1
	2-247E ₂	Case O-Ring PTFE	1
5	1003-0 ₃	Impeller, bronze - model 10	1
	1003-2 ₃	Impeller, bronze - model 12	1
	1003-3 ₃	Impeller, bronze - model 13	1
	1003-4 ₃	Impeller, bronze - model 14	1
	1003-61	Impeller, ductile iron - models 16 & 17	1
	1003-81	Impeller, ductile iron - model 18	1
	1003-91	Impeller, ductile iron - model 19	1
6	113-CX _{6 1}	Seal Assembly, aluminum sleeve	1
	113CX _{6A 1}	Seal Assembly, stainless steel sleeve	1
6-1	1009 ₂	Seal Pin	1
7	1004-1 ₄	Seal Housing, no pin, steel	1
	1004-11 ₄	Seal Housing, no pin, stainless steel	1
	1004-1X ₅	Seal Housing, with pin, steel (Kalrez)	1
	1004-11X ₅	Seal Housing, with pin, stainless steel (Kalrez)	1
	1004-21X ₅	Seal Housing, with pin, stainless steel (PTFE)	1
8	1013	Housing Adjustment Shim (.010")	As Req.
	1013-1	Housing Adjustment Shim (.020")	As Req.

Ref No.	RMI Part No.	Description	Qty.
9	2-224 _{1 2}	Housing O-Ring	1
10	3442	Pipe Plug, 1/4" NPT	1
11	3444	Pipe Plug, 3/4" NPT	1
12	1002-0	Case - model 10	1
	1002-2	Case - model 12	1
	1002-3	Case - model 13	1
	1002-4	Case - model 14	1
	1002-6	Case - model 16	1
	1002-7	Case - model 17	1
	1002-8	Case - model 18	1
	1002-9	Case - model 19	1
	13	1914-1	Nameplate
14	7012-006SF019E	Phillips Head Screw 6-32 X 1/4"	2
15	5002-281	Bearing Retainer Ring	1
16	1238	Bearing Cap	1
17	1006	Grease Seal	1
18	5102-118	Bearing Retainer Ring	1
19	2758	Ball Bearing	1
20	5000-281	Bearing Retainer Ring	1
21	2497 ₂	#5 Woodruff Key, steel	1
	2497-1 ₂	#5 Woodruff Key, stainless steel	1
	1234	Shaft, steel	1
22	1234-X ₆	Shaft Assembly, steel	1
	1234-1	Shaft, stainless steel	1
	1234-1X ₆	Shaft Assembly, stainless steel	1
23	3226 ₂	Key	1
24	2759	Ball Bearing	1
25	1010-2	Frame	1
26	7002-037NC087A	Socket Head Screw	4
27	2158	Grease Zerk	2
28	2159	Lubricap	2
29	3227	Bearing Plate	1

¹ _ denotes material code. See material code chart for details
² Included with seal assembly/repair kit
³ Add a 1 to the part number for ductile iron or a 2 for stainless steel

⁴ Pin is not required for Buna-N, Neoprene, or Viton O-rings
⁵ Pin is required for PTFE and Kalrez O-Rings
⁶ Shaft assembly comes with bearing pressed on the shaft and includes part numbers 2758, 2759, & 5102-118

CAUTION: Always relieve pressure in the unit before attempting any repairs.

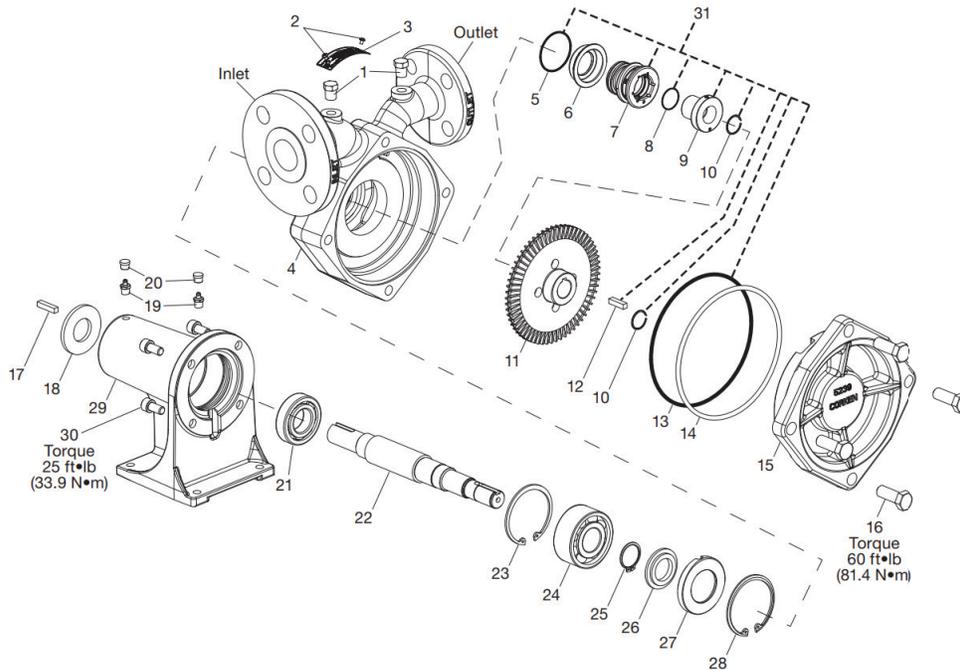


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Corken Repair Parts

PARTS FOR FF060, FF075, & FF150 MODEL CORO-FLO PUMPS



Ref No.	RMI Part No.	Description	Qty.
1	3442	1/4" Pipe Plug	2
2	7012-0065F019E	Nameplate Screw	2
3	1914-1	Nameplate	1
4	5238-060	060 Case - ANSI Flange (FF)	1
	5238-75	075 Case - ANSI Flange (FF)	1
	5238	150 Case - ANSI Flange (FF)	1
	5238-061	060 Case - DIN Flange (FD)	1
	5238-751	075 Case - DIN Flange (FD)	1
	5238-1	150 Case - DIN Flange (FD)	1
5	2-133_1 2	Seal Housing O-Ring	1
6	5244-1X	Seal Housing Assembly	1
7	Not Sold Separately 2	Seal Sub Assembly	1
8	2-108_1 2	Seal Sleeve O-Ring	1
9	Not Sold Separately 2	Seal Sleeve Assembly	1
10	2760-883	7/8" Retainer Ring	1
11	5240-060	060 Impeller (Bronze)	1
	5240-75	075 Impeller (Bronze)	1
	5240	150 Impeller (Bronze)	1
	5240-061	060 Impeller (Stainless Steel)	1
	5240-751	075 Impeller (Stainless Steel)	1
	5240-1	150 Impeller (Stainless Steel)	1
	5240-062	060 Impeller (Steel)	1
	5240-752	075 Impeller (Steel)	1
	5240-2	150 Impeller (Steel)	1

Ref No.	RMI Part No.	Description	Qty.
12	42443	Impeller Key	1
13	2-260_1 2	Case O-Ring	1
14	5248 3	Case Clearance Shim	1
15	5239-060	060-Cover	1
	5239-75	075-Cover	1
	5239	150-Cover	1
16	7301-140MC040A	M14-2 X 40mm Hex Head Bolt	4
17	3226	Shaft Key	1
18	3227	Bearing Plate	1
19	2158	Grease Zerk	2
20	2159	Lubricap	2
21	2759	Single Row Ball Bearing	1
22	5241-1	Shaft	1
23	5000-281	Retainer Ring	1
24	2758	Double Row Ball Bearing	1
25	5102-118	Retainer Ring	1
26	1006	Grease Seal	1
27	1238	Bearing Cap	1
28	5002-281	Retainer Ring	1
29	1010-3	Mounting Frame	1
30	7302-100MC020A	M10-1.5 X 22mm Allen Head Bolt	4
31	3189-1X_6 1	Seal Assembly	1

MATERIAL CODE

A	Buna-N
B	Neoprene
D	Viton
G	Ethylene Propylene
K	Kalrez

1 _ denotes material code

2 Included in seal assembly 3189-1X_6 1

3 Only required for models prior to serial number prefix YU

CAUTION: Always relieve pressure in the unit before attempting any repairs.

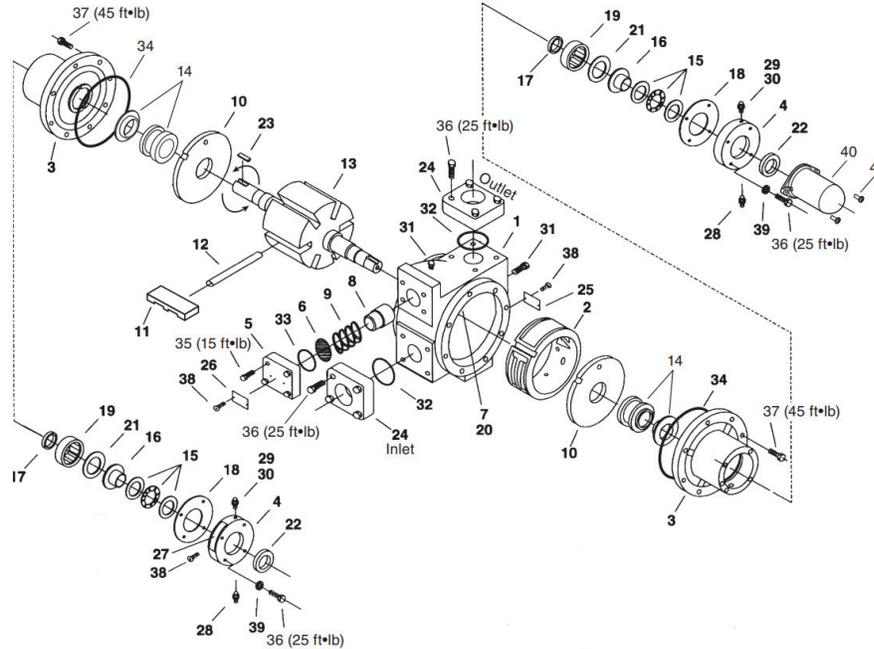


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Corken Repair Parts

PARTS FOR Z2000 MODEL PUMPS



MATERIAL CODE

A	Buna-N
B	Neoprene
D	Viton
E	Teflon

Ref No.	RMI Part No.	Description	Qty.
1	4413	Case	1
2	4414 ₂	Cam	1
3	4416	Head	2
4	4417	Bearing Cap	2
5	1174-3	Relief Valve Cap	1
6	4282	Shim (Z2000, ZH2000)	1
7	4424	Cam Key	1
8	4425	Relief Valve	1
9	4426	Relief Valve Spring (Z2000, ZH2000)	1
10	4427 ₂	Sideplate	1
11	4428 _{1 2 3}	Vane	6
12	4262-X _{1 2}	Vane Driver (Push Rod)	3
13	4430-X2R	Rotor-Shaft Assembly	1
14	4431-X _{2 1 2 4}	Mechanical Seal Assembly - cast iron	2
	4431-X _{6 4}	Mechanical Seal Assembly - silicon carbide	2
15	4432 _{1 2}	Thrust Bearing Assembly	2
16	4435 _{1 2}	Bearing Race Mounting Ring	2
17	4438	Grease Seal	2
18	4439 _{1 2}	Bearing Cap Shim (.002) Red	As Req.
	4439-1 _{1 2}	Bearing Cap Shim (.010) Brown	As Req.
	4439-2 _{1 2}	Bearing Cap Shim (.020) Yellow	As Req.
19	2754-X _{1 2}	Bearing	2
20	3253	Cam Key Pin	2

Ref No.	RMI Part No.	Description	Qty.
21	2760-244	Retainer Ring	2
22	4441 _{1 2}	Grease Seal	2
23	2270 _{1 2}	Shaft Key- 1/4" X 9/16"	2
24	4479-2	Flange -2" NPT	2
	4479-2S	Flange -2" Welded	2
25	2649	Nameplate	1
26	4248	Relief Valve Nameplate (Z2000, ZH2000)	1
27	1359	Lubrication Instructions Plate	2
28	1343	1/8" NPT Relief Fitting	4
29	2158	1/8" NPT Grease Zerk	2
30	2159	Lubricap	2
31	3442	1/4" NPT Pipe Plug	2
32	2-231 _{1 2 4}	O-Ring - Flange	2
33	2-224 _{1 2 4}	O-Ring - Relief Valve Cap	1
34	2-261 ₄	O-Ring Case	2
35	7001-031-NC125A	Bolt - Hexagon Head	4
36	7001-037-NC150A	Bolt - Hexagon Head	16
37	7001-043-NC125A	Bolt - Hexagon Head	16
38	7012-006-SF025E	Screw	8
39	7206-037A	Lockwasher	8
40	4985	Shaft Protector	1
41	7012-010SF050E	Screw	2
	3193-X16	Repair Kit	1
	3194-X16	Rebuild Kit	1

¹ Included in repair kit

² Included in rebuild kit

³ Slots in vanes must face TOWARDS the direction of rotation

⁴ _ denotes material code

CAUTION: Always relieve pressure in the unit before attempting any repairs.

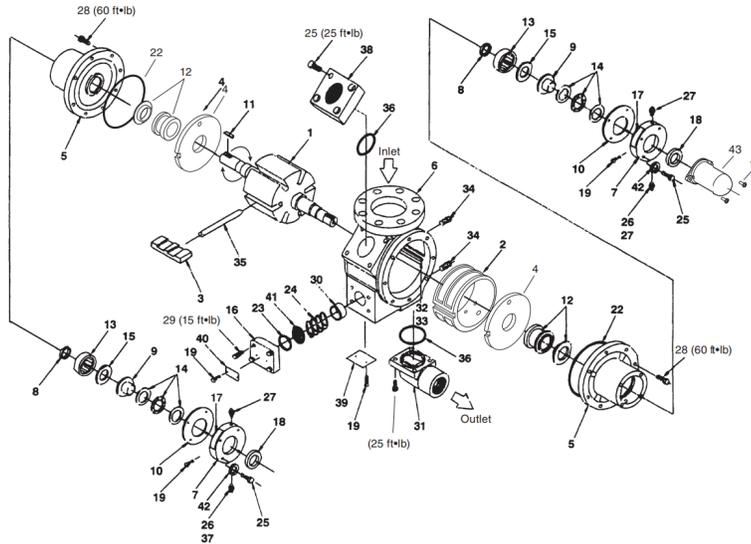


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Corken Repair Parts

PARTS FOR Z3200 MODEL PUMPS



MATERIAL CODE

A	Buna-N
B	Neoprene
D	Viton
E	Teflon

Ref No.	RMI Part No.	Description	Qty.
1	4995-X2R	Rotor Shaft Assembly	1
2	4242 ₂	Cam	1
3	4232 _{1 2 4}	Vane	6
2	4231 ₂	Sideplate	2
5	4488	Head	2
6	4239	Case	1
7	4417	Bearing Cap	2
8	4438	Grease Seal	2
9	4435 _{1 2}	Mounting Ring	2
10	4439 _{1 2}	Bearing Shim (.002) Red	As Req.
	4439-1 _{1 2}	Bearing Shim (.010) Brown	As Req.
	4439-2 _{1 2}	Bearing Shim (.020) Yellow	As Req.
11	2270 _{1 2}	Shaft Key	2
12	4431-X _{2 1 2 3}	Mechanical Seal Assy - cast iron	2
	4431-X ₆	Mechanical Seal Assy - silicon carbide	2
13	2754 ₂	Bearing Outer Race	2
14	4432 _{1 2}	Thrust Bearing Assembly	2
15	2760-244	Retainer Ring	2
16	1174-2	Relief Valve Cap	1
17	1359	Lubrication Instruction Plate	2
18	4441 _{1 2}	Grease Seal	2
19	7012-006SF019E	Screw	8
22	2-262 ₃	O-Ring - Case	2
23	2-224 _{1 2 3}	O-Ring - Relief Valve Cap	1
24	1240	Relief Valve Spring	1
25	7001-037NC150A	Bolt 3/8" X 1-1/2" Hex Head	16
26	2158	1/8" NPT Grease Zerk	2
27	1343	1/8" NPT Relief Fitting	4
28	7001-050NC150A	Bolt - 1/2"-13 X 1-1/2" Hex Head	16

Ref No.	RMI Part No.	Description	Qty.
29	7001-031INC125A	Bolt - 5/16" -16 X 1-1/4" Hex Head	4
30	1241	Relief Valve	1
31	1172-1.5	Outlet Flange - 1.5" NPT	1
	1172-1.5S	Outlet Flange - 1.5" WF	1
	1172-2	Outlet Flange - 2" NPT	1
	1172-2S	Outlet Flange - 2" WF	1
	1947	Outlet Flange - 1.5" NPT ELL	1
	4243	Outlet Flange - 2" NPT ELL	1
	5520	Outlet Flange - 2" steel WF	1
32	4241	Cam Key	1
33	3253	Cam Key Pin	1
34	3442	1/4" NPT Pipe Plug	1
35	4262-X _{1 2}	Vane Driver	3
36	2-234 _{1 2 3}	O-Ring-Flange	1
37	2159	Lubricap	2
38	1172-1.5	Aux. Inlet Flange -1.5" NPT	1
	1172 - 1.5S	Aux. Inlet Flange -1.5" WF	1
	1172-2	Aux. Inlet Flange -2" NPT	1
	1172-2S	Aux. Inlet Flange -2" WF	1
	1920-3	Aux. Inlet Flange - Blind	1
	4243	Aux. Inlet Flange -2 NPT ELL	1
39	2649	Nameplate	1
40	4248	Relief Valve Nameplate	1
41	4242	Relief Valve Shim	As Req.
42	7206-037A	3/8" Lockwasher	8
43	4985	Shaft Protector	1
44	7012-010SF050E	Screw	2
	3195-X16	Repair Kit	1
	3196-X16	Rebuild Kit	1

₁ Included in repair kit
₂ Included in rebuild kit
₃ _ denotes material code

₄ Slots in vanes must face
TOWARDS the direction of
rotation

CAUTION: Always relieve pressure in the unit before attempting any repairs.

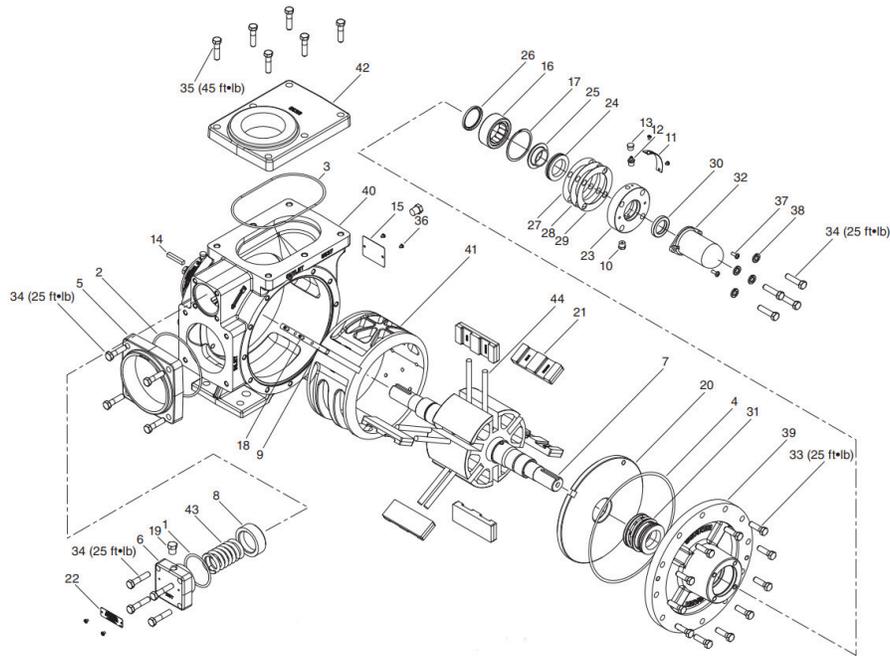


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Corken Repair Parts

PARTS FOR Z3500 MODEL PUMPS



MATERIAL CODE

A	Buna-N
B	Neoprene
D	Viton
E	Teflon

Ref No.	RMI Part No.	Description	Qty.
1	2-228_1 2 3	O-Ring	1
2	2-245_3	O-Ring	1
3	2-259_3	O-Ring	1
4	2-268_3	O-Ring	2
5	1206-3	Inlet Flange - 3" NPT	1
	1206-4	Inlet Flange - 4" NPT	1
	1206-3S	Inlet Flange - 3" WF	1
	1206-4S	Inlet Flange - 4" WF	1
6	1207-2	Relief Valve Cap	1
7	1208-1X6R	Rotor Shaft Assembly	1
8	1224	Relief Valve	1
9	1309	Cam Key	1
10	1343	Grease Relief Fitting	4
11	1359	Lubrication Plate	2
12	2158	Grease Zerk	2
13	2159	Lubricap	2
14	2270_1 2	Shaft Key - 1/4"	1
15	2649	Nameplate	1
16	2754-X_2	Roller Bearing	2
17	2760-244	Retainer Ring	2
18	3253	Cam Key Pin	2
19	3442	Pipe Plug - 1/4" NPT	2
20	3935_2	Sideplate	2
21	3936_1 2 4	Vane	6
22	4248	Relief Valve Warning Tag	1
23	4417	Bearing Cap	2
24	4432_1 2	Thrust Bearing Assembly	2

Ref No.	RMI Part No.	Description	Qty.
25	4435_1 2	Thrust Bearing Mounting Ring	2
26	4438	Grease Seal/Oil Seal	2
27	4439_1 2	Bearing Cap Shim - 0.002"	2
28	4439-1_1 2	Bearing Cap Shim - 0.010"	2
29	4439-2_1 2	Bearing Cap Shim - 0.020"	2
30	4441_1 2	Grease Seal	2
31	6660-X_2_3	Mechanical Seal Assembly - Cast Iron	2
	6660-X_6_3	Mechanical Seal Assembly - Silicon Carbide	2
32	4985	Coro-Vane Shaft Cover	1
33	7001-037NC125A	Hex Head Bolt	24
34	7001-037NC150A	Hex Head Bolt	16
35	7001-043NC150A	Hex Head Bolt	6
36	7012-006SF019E	Screw	9
37	7012-010SF050E	Screw	2
38	7206-037A	Lockwasher - 0.375"	8
39	5534	Head	2
40	5537	Case	1
41	5539_2	Cam	1
	5538	Outlet Flange - 3" NPT Elongated	1
42	5538-3S	Outlet Flange - 3" WF Elongated	1
43	5548	Spring	1
44	5554-X_1 2	Vane Driver	6
	3195-X26	Repair Kit	1
	3196-X26	Rebuild Kit	1

¹ Included in repair kit

² Included in rebuild kit

³ _ denotes material code

⁴ Slots in vanes must face TOWARDS the direction of rotation

CAUTION: Always relieve pressure in the unit before attempting any repairs.

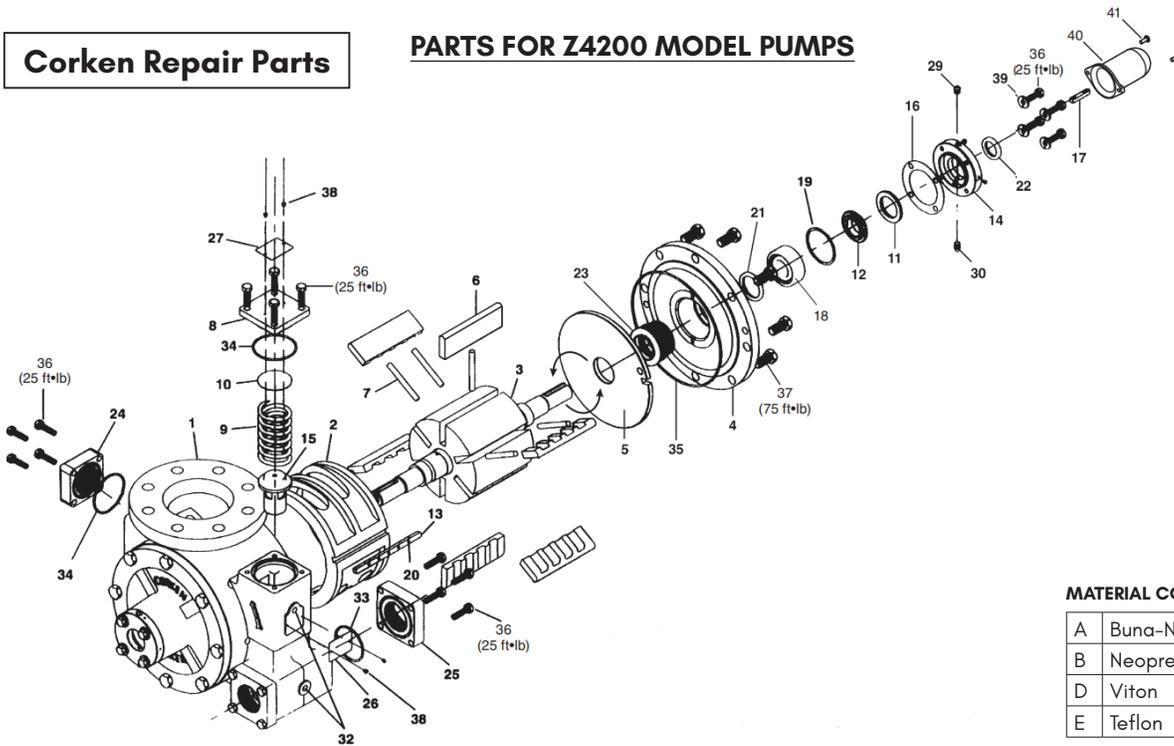


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Corken Repair Parts

PARTS FOR Z4200 MODEL PUMPS



MATERIAL CODE

A	Buna-N
B	Neoprene
D	Viton
E	Teflon

Ref No.	RMI Part No.	Description	Qty.
1	4442	Case	1
2	4443 ₂	Cam	1
3	4444-X2R	Rotor-Shaft Assembly	1
4	4445	Head	2
5	4446 ₂	Sideplate	2
6	4448 _{1 2 4}	Vane	6
7	4449-X _{1 2}	Vane Driver	5
8	4450	Relief Valve Cap	1
9	4451	Relief Valve Spring	1
10	4452	Shim	1
11	4453 _{1 2}	Thrust Bearing Assembly	2
12	4454 _{1 2}	Bearing Race Mounting Ring	2
13	4455	Cam Key	1
14	4456	Bearing Cap	2
15	4457	Relief Valve	1
	4458	Bearing Cap Shim (.002) Red	As Req.
16	4458-1 _{1 2}	Bearing Cap Shim (.010) Brown	
	4458-2 _{1 2}	Bearing Cap Shim (.020) Yellow	
17	4459 _{1 2}	Shaft Key - 5/16 x 1-3/4	1
18	4460-X _{1 2}	Roller Bearing	2
19	2760-283	Retainer Ring	2
20	3253	Cam Key Pin	5
21	4462	Grease Seal	2
22	4463 _{1 2}	Grease Seal	2
23	4464-X _{2 1 2 3}	Mechanical Seal Assy - Cast Iron	2
	4464-X ₆	Mechanical Seal Assy - Silicon Carbide	2
24	1172-2	Aux. Inlet Flange - 2" NPT	1
	1172-2S	Aux. Inlet Flange - 2" WF	1
	1920-3	Aux. Inlet Flange - Blind	1

Ref No.	RMI Part No.	Description	Qty.
25	4479-2 ₅	Discharge Flange - 2" NPT	2
	4981-2	Discharge Flange - 2" NPT	2
26	2649	Nameplate	1
27	4248	Relief Valve Nameplate	1
28	1359	Lubrication Instruction Plate	2
29	1343	1/8" NPT Relief Fitting	2
30	2158	1/8" NPT Grease Zerk	2
31	2159	Lubricap	2
32	3442	1/4" NPT Pipe Plug	2
33	2-231 _{1 2 3}	O-Ring - Discharge Flange	2
34	2-234 _{1 2 3}	O-Ring - Aux. Inlet Flange	1
35	2-270 ₃	O-Ring - Case	2
36	7001-037NC150A	Bolt - Hex Head	24
37	7001-062NC125A	Bolt - Hex Head	16
38	7012-006SF019E	Screw	8
39	7206-037A	Lockwasher	8
40	4985	Shaft Protector	1
41	7012-010SF050E	Screw	2
	3197-X16	Repair Kit	1
	3198-X16	Rebuild Kit	1

- ¹ Included in repair kit
- ² Included in rebuild kit
- ³ _ denotes material code
- ⁴ Slots in vanes must face TOWARDS the direction of rotation
- ⁵ For units built prior to January 1998

CAUTION: Always relieve pressure in the unit before attempting any repairs.

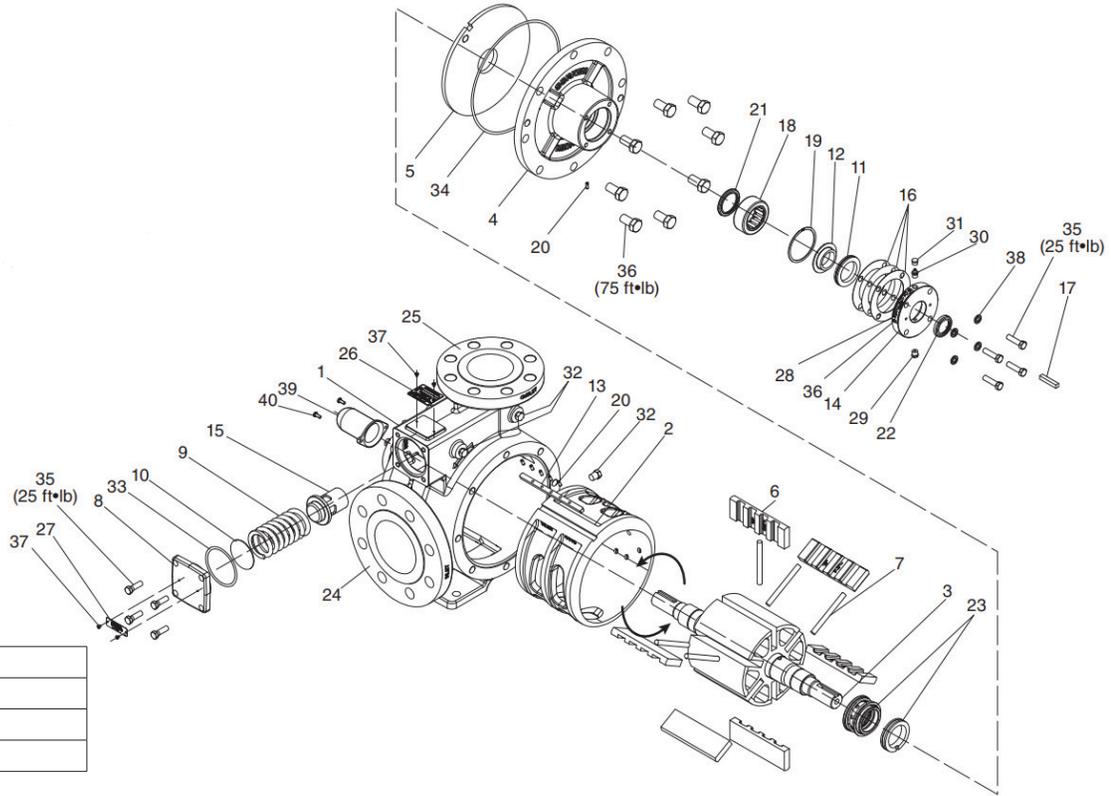


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Corken Repair Parts

PARTS FOR Z4500 MODEL PUMPS



MATERIAL CODE

A	Buna-N
B	Neoprene
D	Viton
E	Teflon

Ref No.	RMI Part No.	Description	Q	Ref No.	RMI Part No.	Description	Qty.
1	5522	Case	1	23	4464-X_2_3	Mechanical Seal Assy - Cast Iron	2
2	4443_1_2	Cam	1	23	4464-X_6_1_3	Mechanical Seal Assy - Silicon Carbide	2
3	4444-X2R	Rotor-Shaft Assembly	1				
4	4445	Head	2	24	----	Inlet Flange - 4" ANSI	1
5	4446_1_2	Sideplate	2	25	----	Outlet Flange - 3" ANSI	1
6	4448_1_4	Vane	6	26	2649	Nameplate	1
7	4449-X_1	Vane Driver	5	27	4248	Relief Valve Nameplate	1
8	4450	Relief Valve Cap	1	28	1359	Lubrication Instruction Plate	2
9	4451	Relief Valve Spring	1	29	1343	1/8" NPT Relief Fitting	2
10	4452	Shim	1	30	2158	1/8" NPT Grease Zerk	2
11	4453_1	Thrust Bearing Assembly	2	31	2159	Lubricap	2
12	4454_1	Bearing Race Mounting Ring	2	32	3442	1/4" NPT Pipe Plug	2
13	4455	Cam Key	1	33	2-234_1_3	O-Ring - Relief Valve	1
14	4456	Bearing Cap	2	34	2-270_3	O-Ring - Case	2
15	4457	Relief Valve	1	35	7001-037NC150A	Bolt - Hex Head	16
16	4458_1	Bearing Cap Shim (.002) Red	As Req	36	7001-062NC125A	Bolt - Hex Head	16
	4458-1_1	Bearing Cap Shim (.010) Brown		37	7012-006SF019E	Screw	8
	4458-2_1	Bearing Cap Ship (.020) Yellow		38	7206-037A	Lockwasher	8
17	4459_1	Shaft Key - 5/16 x 1-3/4	1	39	4985	Shaft Cover	1
18	4460-X_1	Roller Bearing	2	40	7012-010SF050E	Screw	2
19	2760-283	Retainer Ring	2		3197-X16	Repair Kit	1
20	3253	Cam Key Pin	5		3198-X16	Rebuild Kit	1
21	4462	Grease Seal	2				
22	4463_1	Grease Seal	2				

¹ Included in repair kit

² Included in rebuild kit

³ _ denotes material code

⁴ Slots in vanes must face TOWARDS the direction of rotation

CAUTION: Always relieve pressure in the unit before attempting any repairs.



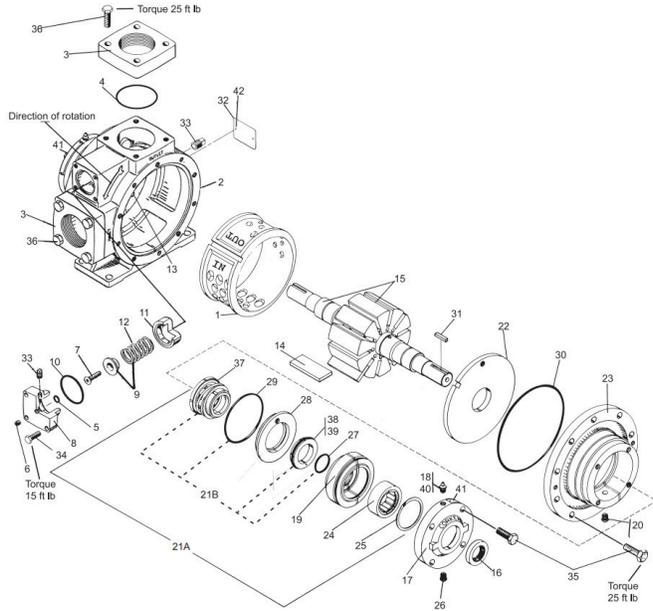
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Corken Repair Parts

PARTS FOR FF060, FF075, & FF150 MODEL CORO-FLO PUMPS

Ref No.	RMI Part No.	Description	Qty.
1	1162-2	Cam (521)	1
1	1201-2	Cam (1021)	1
2	2832	Case (521)	1
	2841	Case (1021)	1
3	1172-2.5	Flange - 2-1/2" (521)	1
	1172-2	Flange - 2" (521)	1
	1206-34	Flange - 3" (1021)	2
4	2-234_1 3	Flange O-Ring (521)	2
	2-245_2 3	Flange O-Ring - 3" (1021)	2
5	2-112_1 2 3	Adjusting Screw O-Ring	1
6	2590	Flush Plug - 1/8" NPT	1
7	2252	Relief Valve Adjusting Screw	1
8	1174	Valve Cap (521)	1
	1207	Valve Cap (1021)	1
9	1242-X	Relief Valve Spring & Guide (521)	1
	1227	Relief Valve Spring & Guide (1021)	1
10	2-224_1 3	Relief Valve Cap O-Ring (521)	1
	2-228_2 3	Relief Valve Cap O-Ring (1021)	1
11	1241	Relief Valve (521)	1
	1224	Relief Valve (1021)	1
12	1242	Relief Valve Spring (521)	1
	1226	Relief Valve Spring (1021)	1
13	1170	Cam Key (521)	1
	1309	Cam Key (1021)	1
14	1168-7_1	Blade (521)	10
	1308-9_2	Blade (1021)	10
15	1166-1X1R	Rotor & Shaft Assy (521)	1
	1208-1X1R	Rotor & Shaft Assy (1021)	1
16	1358_2	Grease Seal	2
17	1164-1	Bearing Cap	2
18	2158	Grease Zerk - 1/8" NPT	2
19	1769	Bearing Housing	2
20	1343	Seal Vent Relief Fitting - 1/8" NPT	2
21A	1769-X_6 3 4	Complete Seal Assy Kit	2
21B	1769-XR_6 1 2 3 5	Seal Assy Field Repl Kit	2
22	1163-2_1	Sideplate (521)	2
	1209-1_2	Sideplate (1021)	2
23	1161-4	Head (521)	2
	1205-4	Head (1021)	2
24	2754-X_1 2	Roller Bearing - Complete	2
	2755	Bearing Inner Race	2
	2754	Bearing Outer Race	2
25	2760-244	Retainer Ring	2
26	1343	Grease Relief Fitting - 1/8" NPT	2
27	2-128A	Shaft O-Ring - Buna-N	2
28	1882	Seat Adapter Plate	2



Ref No.	RMI Part No.	Description	Qty.
29	2-240_3	Adapter Plate O-Ring	2
30	2-261_1 3	Case O-Ring (521)	2
	2-268_2 3	Case O-Ring (1021)	2
31	2270	Key - 1/4"	2
32	2949	Nameplate	1
33	3442	Plug - 1/4" NPT	1
34	7001-031NC125A	Hex Head Bolt - 5/16-18 x 1-1/4 (521)	4
	7001-037NC125A	Hex Head Bolt - 3/8-16 x 1-1/4 (1021)	4
35	7001-037NC125A	Hex Head Bolt - 3/8-16 x 1-1/4 (521)	28
	7001-037NC125A	Hex Head Bolt - 3/8-16 x 1-1/4 (1021)	32
36	7001-037NC150A	Hex Head Bolt - 3/8-16 x 1-1/2	8
37	---- 6	Retainer	2
38	---- 6	Seal Seat	2
39	2-227_1 3	Seal Seat O-Ring	2
40	2159	Lubricap #2	2
41	1359	Lubrication Instruction Tag	2
42	7003-004DR0198	Round Head Drive Screw - 4 x 3/16	2
	2904-X26	Repair Kit (521)	1
	2906-X26	Repair kit (1021)	1

- ¹ Included in 521 repair kit
- ² Included in 1021 repair kit
- ³ _ denotes material code
- ⁴ Includes Bearing Housing, Seat Adaptor Plate, Bearings, Retainer Rings, Seal, & O-Rings
- ⁵ Includes Seal & O-Rings
- ⁶ Not sold separately. Included in 1769-X_6 & 1769-XR_6

MATERIAL CODE

A	Buna-N
B	Neoprene
D	Viton
E	Teflon

CAUTION: Always relieve pressure in the unit before attempting any repairs.



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Smith Pumps

SMITH D SERIES CYLINDER FILLING PUMPS

Economical pump for low-volume filling applications.

- Built-in bypass (set @ 90PSID)
- Built-in strainer
- Superseal mechanical seal



D SERIES

RMI Part No.			Capacity		Inlet / Outlet	Motor
Pump Motor, & Switch	Pump Only	Motor Only	40 PSID	70 PSID		
DWIZM-3	DW-IZ	EM-1-3	8.5	7	3/4"	1HP, 1PH 115/230V
DWHZM-5	DW-HZ	EM- 1.5-3	13.5	12	1"	1.5HP, 1PH 115/230V

SMITH E SERIES PUMPS

Economical cylinder pump for low-volume liquid transfer. Can be used with internal combustion engines for portable liquid transfer applications. Can be used with built-in bypass or utilize separate external bypass.

- Built-in Bypass (Set @ 90PSID)
- Built-in Strainer
- Superseal Mechanical Seal

RMI Part No.			Capacity		Inlet / Outlet	Motor
Pump, Motor, & Switch	Pump Only	Motor Only	40 PSID	70 PSID		
EGIZM-1-3DR	EG-IZ	EM-1-3B	8.5	7	3/4"	1HP 1PH
EGIZ-7H	EG-IZ	GAS-7H	8.5	7	3/4"	3.5HP Honda
ECHZM-5DR	EC-HZ	EM-5B	13.5	12	1"	1.5HP 1PH
ECHZ-5	EC-HZ	EM-1.5-3	13.5	12	1"	3.5HP Honda



E SERIES

SMITH MEDIUM & LARGE CAPACITY PUMPS

Higher capacity pumps for multiple cylinder or truck filling applications.

- Balanced 3-Gear Design
- Superseal Technology
- No Lubrication Required
- Direct Coupled - No Belts

RMI Part No.		Capacity		Inlet / Outlet	Motor
Pump & Baseplate	Pump Only	40 PSID	70 PSID		
MC1044Z-B	MC1044Z	17	14	1-1/2"	2 HP
MC1044HZ-B	MC1044HZ	30	25	1-1/2"	3 HP
MC2Z-B	MC2Z	42	35	2-1/2"	5 HP
MC2QZ-B	MC2QZ	48	38	2-1/2"	7.5 HP
MC3Z-B	MC3Z	84	70	2-1/2"	7.5 HP



MC SERIES

SMITH AUTOGAS PUMPS

- Developed for Autogas vehicles requiring higher than normal differential pressure
- Balanced loading design with hardened gears
- Superseal is standard
- 3/4" inlet and outlet allows for economical installation
- 1HP and 1.5HP motors only require single phase power

RMI Part No.		Capacity		Inlet / Outlet	Motor
Pump Only	Motor Only	40 PSID	70 PSID		
GC-IZL	EM-1.5-3B	8.5	7	3/4"	1.5HP 1PH



GC SERIES

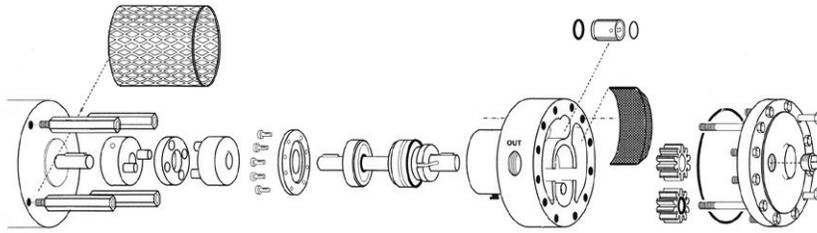


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SPARE PARTS

**Must specify serial number when ordering parts*



Description	Pump Model						
	DW-1Z	DW-HZ	EG-1Z	EC-HZ	GC-1ZL	MC-1044Z	MC-1044HZ
Shaft Seal Assembly	E-100Z	E-100HZ	E-100Z	E-100HZ	MC-100Z	MC-101Z	MC-101Z
Drive Gear	EG-5	EC-5H	EG-5	EG-5H	649-5LZ	1044-89-8	1044-89-6
Idler Gear W/Bushing	EG-6	EC-6H	EG-6H	EG-6H	649-6LZ	1044-90-8	T-6
By-Pass Valve Cartridge	E-20 ASSY	E-20 ASSY	E-20 ASSY	E-20 ASSY	-	-	-
Strainer Screen	D-21	D-21	E-21	E-22	-	-	-
Cover O-Ring	6230-14	6230-14	6230-28	6230-28	-	-	-
Shaft Bushing	-	-	-	-	649-11	TS-11	TS-11
O-Ring for Shaft Bearing	-	-	-	-	-	6227-19	6227-19
Complete Drive Coupling*	VC-20	VC-20	VC-20	VC-30	VC-20	-	-
Coupling Insert	FD-20	FD-20	FD-20	FD-30	FD-20	-	-

**Must provide bore size.*

SMITH PUMP & SEAL ASSEMBLY EXCHANGE PROGRAM

Contact RMI Customer Service for details on our exchange program for Smith pumps and seal assemblies. When replacing a Smith pump, you may return the old unit for credit against a factory rebuilt unit with one (1) year warranty.

Order the Following	Return the Following for Credit
Exchange Pump Part Number	Core Part Number
DW1Z-EX (DW-1Z)	DW1Z-RTV
DW1Z-EX (DW-HZ)	DW1Z-RTV
EG1Z-EX (EG-1Z)	EG1Z-RTV
ECHZ-EX (EC-HZ)	ECHZ-RTV
MC1044Z-EX (MC-1044Z)	MC1044Z-RTV
MC1044HZ-EX (MC-1044HZ)	MC1044HZ-RTV
MC2Z-EX (MC27)	MC2Z-RTV
MC2QZ-EX (MC2QZ)	MC2QZ-RTV
MC3Z-EX (MC3Z)	MC3Z-RTV
MCAT3R-EX (MCAT3XR)	MCAT3R-RTV
MCAT3L-EX (MCAT-3LX)	MCAT3L-RTV
Seal Kits	
E100Z-EX	E100Z-RTV
E100HZ-EX	E100HZ-RTV

Liquefied Gas Pump Design and Manufacture

cylinder filling, autogas, bulk transfer, and general plant operations

smithpumps.com

UL Listed, EU/UK Compliant, ISO 9001 QMS certified

SERVING THE WORLD SINCE 1938

Motors & Starters

VARIABLE FREQUENCY DRIVES

A variable frequency drive (VFD) is a type of motor controller that drives an electric motor by varying the frequency and voltage of its power supply. The VFD also has the capacity to control ramp-up and ramp-down of the motor during start or stop, respectively. If you currently have single phase power, using a VFD gives the option to purchase a three phase motor which is considerably less cost than a single phase motor.

- Converts single phase power to three phase power
- Takes the place of a manual or magnetic starter for the pump
- Improves the efficiency of the motor and reduces power use
- Slows motor start-up, preventing surges and prolonging motor life
- Provides overload protection for the motor



VFD

RMI Part No.	Description
4204-2	20HP VFD for 10 HP 1 Phase Motor
4204-6X1	VFD 3HP 230V W/NEMA 3R

EXPLOSION PROOF SWITCHES & STARTERS FOR PROPANE INSTALLATIONS

Starter choice must be matched to motor horsepower, voltage, and power phase.

- **Standard on-off switch** with explosion proof box for motors with low ampere electric service (does not provide over-load protection)
- **Manual starter** provides overload starter protection, explosion proof enclosure with lever lock and pad lock feature. Economical control for medium ampere electrical service range
- **Magnetic starter** provides starter protection, explosion proof enclosure and magnetic circuit contacts. Excellent control for larger motor

SINGLE PHASE SERVICE

Motor HP	Switch, On-Off		Manual Starter		Magnetic Starter	
	115V	230V	115V	230V	115V	230V
1	XS-52C	XS-52C	609-AHX	609-AHX	509-AHXD	509-AHXA
1.5	-	-	609-BHX	609-AHX	509-BHXD	509-AHXA
2	-	-	609-BHX	609-AHX	509-BHXD	509-AHXA
3	-	-	609-XHX	609-BHX	509-XHXD	509-BHXA
5	-	-	-	609-XHX	-	509-XHXA



XS-52C

THREE PHASE SERVICE

Motor HP	Switch, On-Off		Manual Starter		Magnetic Starter	
	230V	460V	230V	460V	230V	460V
1-1.5	XS-58C	XS-52C	-	-	-	-
2	-	-	609-AHW	609-AHW	509-AHA	509-AHB
3	-	-	609-AHW	609-AHW	509-AHA	509-AHB
5	-	-	609-BHW	609-AHW	509-BHA	509-AHB
7.5	-	-	609-BHW	609-BHW	509-BHA	509-BHB
10	-	-	-	609-BHW	509-CHA	509-BHB
15	-	-	-	-	509-CHA	509-CHB



Motors & Starters

MOTORS

1 PHASE - C FACE 1725 RPM

RMI Part No.	HP	Frame Size	Shaft	Voltage	AMP Rating	
					115V	230V
EMC-1	1	56C	5/8"	115/230	11.2	5.6
EMC-1.5	1.5	56C	5/8"	115/230	12	6
EMC-2	2	184C	7/8"	115-208/230	22	11.6
EMC-3	3	215C	1-1/8"	115/230	30	15
EMSC-5	5	184TC	1-1/8"	230		21

3 PHASE - C FACE 1725 RPM

RMI Part No.	HP	Frame Size	Shaft	Voltage	AMP Rating	
					115V	230V
EMCT-1	1	56C	5/8"	208-230/460	3.6	1.8
VXM051542	1.5	56C	5/8"	208-230/460	4.6	2.3
EMCT-2	2	56C	5/8"	230/460	6	3
EMCT-3	3	182TC	1-1/8"	230/460	8.2	4.1
EMC-5	5	184TC	1-1/8"	230/460	13.6	6.8
EMCT-7.5	7.5	213TC	1-3/8"	203/460	20.2	10
EMCT-10	10	215TC	1-3/8"	230/460	26	13

C FACE 3600 RPM FOR CORKEN C MODEL PUMPS

RMI Part No.	HP	Frame Size	Shaft	Voltage	AMP Rating	
					115V	230V
2556	1	C10/C12	1	208-230/460	12	6
42361	1.5	C12/C13	1	208-230/460	20	10
2557	2	C14	1	230/460	4	8

1 PHASE RIGID BASE 1725 RPM

RMI Part No.	HP	Frame Size	Shaft	Voltage	AMP Rating	
					115V	230V
EMS-1	1	143T	5/8"	115/230	14	7
EMS-1.5	1.5	184	7/8"	115/230	19	9.5
EMS-2	2	182T	1-1/8"	115/230	22	11
EMS-3	3	215	1-1/8"	115/230	30	15
EMS-5	5	215	1-1/8"	115/230		26

1 PHASE RIGID BASE 3450 RPM

RMI Part No.	HP	Frame Size	Shaft	Voltage	AMP Rating	
					115V	230V
EMSF-1	1	56	5/8"	115/230	12	6
EMSF-1.5	1.5	145T	7/8"	115-208/230	23	11.5
EMSF-2	2	184T	1-1/8"	115/230	29	14.5
EMSF-3	3	184T	1-1/8"	230	30	28

3 PHASE RIGID BASE 1725 RPM

RMI Part No.	HP	Frame Size	Shaft	Voltage	AMP Rating	
					115V	230V
EM-1	1	143T	5/8"	208-230/460	3.6	1.8
EM-1.5	1.5	145T	7/8"	230/460	4.4	2.2
EM-2	2	145T	7/8"	230/460	5.8	2.9
EM-3	3	182T	1-1/8"	230/460	8.4	4.2
EM-5	5	184T	1-1/8"	230/460	13.4	6.7
EM-7.5	7.5	213T	1-3/8"	230/460	17.2	8.6
EM-10	10	215T	1-3/8"	230/460	24	12
EM-15	15	254T	1-5/8"	230/460	36	18
EM-20	20	256T	1-5/8"	230/460	48	24
EM-25	25	284T	1-7/8"	230/460	61	30.5
EM-30	30	286T	1-7/8"	230/460	72	36

3 PHASE RIGID BASE 3600 RPM

RMI Part No.	HP	Frame Size	Shaft	Voltage	AMP Rating	
					115V	230V
EMF-1	1	143T	5/8"	208-230/460	3.6	1.8
EMF-2	2	145T	7/8"	230/460	4.8	2.4
EMF-3	3	145T	7/8"	230/460	7.2	3.6
EMF-5	5	184T	1-1/8"	230/460	11.8	5.9
EMF-7.5	7.5	213T	1-1/8"	230/460	16.8	8.4
EMF-10	10	215T	1-3/8"	230/460	23.6	11.8



C FACE



RIGID BASE

Bypass Valves

BLACKMER BYPASS VALVES

Blackmer® BV Series bypass valves have no small, easily plugged, sensing passages; and with only two moving parts, their operation is simple and reliable. They open precisely at the pre-set spring pressure, and they close smoothly and quietly.

In operation, Blackmer valves provide exceptionally close pressure control, even under widely varying bypass flow conditions. The Blackmer valve maintains a virtually constant pressure of 100 psi (6.89 bar) even as the volume being bypassed rises from 10 GPM to 100 GPM.



BV SERIES

RMI Part No.	Body Size	Pump Size	PSI Setting*	PSI Range*	Cap. (GPM)
BV-3/4	3/4" NPT	1-1/4" to 1-1/2"	95	70-100	50
BV-1	1" NPT	1-1/4" to 1-1/2"	95	70-100	50
BV-1-1/4	1-1/4" NPT	1-1/2" to 2"	115	90-125	125
BV- 1-1/2	1-1/2" NPT	2" to 3"	115	90-125	125
BV-2	2" NPT	3" to 4"	95	90-125	225

*Other pressure ranges and settings are available

CORKEN BYPASS VALVES

Dual purpose automatic priming and differential bypass valve. Allows vapor to return to the tank, keeping the line primed.

RMI Part No.	Description	Cap. (GPM)	Standard Spring Setting
B166-.75	3/4" Bypass Valve	30	50-150 PSI
B166-1	1" Bypass Valve	40	50-150 PSI
T166-1.25	1-1/4" Bypass Valve	80	50-150 PSI
T166-1.5	1-1/2" Bypass Valve	100	50-150 PSI



B166

CORKEN 2" HIGH CAPACITY BYPASS VALVE

A low-pressure build-up bypass valve designed for applications that require protection for positive displacement pumps. It is ideal for capacities up to 250 gpm (56.8 m³/hr). The model ZV200 has a continuous internal bleed that helps operate systems containing an "air" or "electric" operated internal valve.

RMI Part No.	Description	Cap. (GPM)	Standard Spring Setting
ZV200	2" Bypass	180-250	91-125 PSI



ZV200

SMITH BYPASS VALVES

Chatter-free due to unique guide-piston design. Stainless steel piston and spring. All valves have 25-125 PSIG range.

RMI Part No.	Inlet / Outlet	Capacity (GPM)
WW-120	1/2"	10
WW-340	3/4"	15
WW-100	1"	35
WW-114	1-1/4"	50
WW-112	1-1/2"	100
WW-200	2"	150
WW-212	2-1/2"	250



SMITH BYPASS VALVES



Non-stock/special order items are not cancellable or returnable

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Bypass Valves

FISHER N110 SERIES STRAIGHT BYPASS VALVES FOR SMALL PUMPS

Intended for bypass service on smaller pumps (5 to 40 GPM) used on stationary tanks or delivery trucks.

RMI Part No.	Pump Size	Pressure Setting, PSI	Pressure Range, PSI
N110-06-1	3/4"	50	25-75
N110-06-2	3/4"	115	75-150
N110-08-1	1"	50	25-75
N110-08-2	1"	115	75-150



FISHER N100 SERIES ANGLE BYPASS VALVES FOR LARGE PUMPS

Gives rapid, stable liquid transfer and reduces dangerous pressure pulsations. Includes 1/4" tapping for gauge or relief valve.

RMI Part No.	Pump Size	Pressure Setting, PSI	Pressure Range, PSI
N100A-08-2	1"	115	50-150
N100A-10-2	1-1/4"	115	50-150
N100A-12-2	1-1/2"	115	50-150
N100-16-1	2"	50	25-75
N100-16-2	2"	115	50-150



FISHER N120 SERIES BACK PRESSURE VALVES

Valve is installed after the meter and remains closed until vapor is forced back to the tank through the vapor eliminator so that vapor cannot form within the meter during liquid delivery. Intended for smaller pumps used for cylinder filling installations.

RMI Part No.	Size	Diff. Press. Setting, (PSI)	Diff. Press. Range (PSI)
N120-06-3	3/4"	12	10-20
N120-08-3	1"	12	10-20



FISHER MR98H RELIEF VALVES FOR LIQUID SERVICE

The MR98H is a self-operated relief valve for use on relief and back pressure applications involving large liquid propane pumping systems and vaporizers. Internal pressure registration eliminates the need for a control line.

RMI Part No.	Body Size	Relief Setting Range	Relief Pressure Setting
MR98H-17*	1/2" FNPT	25-75 PSIG	50 PSIG
MR98H-18*	1/2" FNPT	70-140 PSIG	100 PSIG
MR98H-22**	3/4" FNPT	70-140 PSIG	100 PSIG
MR98H-30**	1" FNPT	70-140 PSIG	100 PSIG

* Metal diaphragm & seat

** Composition diaphragm & seat



Bypass Valves

MARSHALL EXCELSIOR BYPASS VALVES FOR DISPENSING APPLICATIONS

Intended for use in small cylinder filling applications as a bypass and primer valve for turbine style dispensing pumps. These bypass valves feature a special "check ball" mechanism that helps eliminate vapor from liquid while keeping the pump flooded and properly primed.

RMI Part No.	Description	Standard Spring Setting
ME840-6-150	3/4" FNPT High Flow Bypass Valve	50-150 PSI
ME840-6-225	3/4" FNPT High Flow Bypass Valve	100-225 PSI
ME840-8-150	1" FNPT High Flow Bypass Valve	50-150 PSI
ME840-8-225	1" FNPT High Flow Bypass Valve	100-225 PSI

*Alternate Spring Ranges Available



ME840-6-150

MARSHALL EXCELSIOR HIGH FLOW 3" BYPASS VALVES FOR PLANT APPLICATIONS

Specifically designed for plant systems where maximum bypass flow is necessary to protect the pump from rapid pressure changes or over pressurization. Perfectly suited for 4" base mount pumps or larger pump applications.

RMI Part No.	Description	Standard Spring Setting
ME840-24-100	3" FNPT High Flow Bypass Valve	50-100 PSI
ME840-24-200	3" FNPT High Flow Bypass Valve	100-200 PSI
ME840-24-3F-100	3" - 300# Flanged High Flow Bypass Valve	50-100 PSI
ME840-24-3F-200	3" - 300# Flanged High Flow Bypass Valve	100-200 PSI

*Alternate Spring Ranges Available



ME840-24-3F

MARSHALL EXCELSIOR HIGH FLOW BYPASS VALVES FOR BOBTAIL & PLANT APPLICATIONS

These bypass valves are specifically designed to protect truck and plant pumps from damage due to excessive pressure. They feature wide open flow channels with an orifice weep hole chamber to prevent the valve from slamming open/closed. The weep hole chamber also helps prevent valve seat chatter by allowing constant pressure communication between both the upstream and downstream side of the seat.

BYPASS VALVES - NPT FLANGE CONFIGURATION

RMI Part No.		Description	Standard Spring Range	Flange Type
WCC A216 Steel	CF8M Stainless Steel			
ME840-10-125	ME840SS-10-125	1 1/4" FNPT High Flow Bypass Valve	90-125 PSI	O-Ring Seal
ME840C-10-125	ME840SSC-10-125	1 1/4" FNPT Classic Flow Bypass Valve		
MW840-12-125	ME840SS-12-125	1 1/2" FNPT High Flow Bypass Valve	90-125 PSI	O-Ring Seal
ME840C-12-125	ME840SSC-12-125	1 1/2" FNPT Classic Flow Bypass Valve		
ME840-16-125	ME840SS-16-125	2" FNPT High Flow Bypass Valve	90-125 PSI	O-Ring Seal
ME840C-16-125	ME840SSC-16-125	2" FNPT Classic Flow Bypass Valve		
ME840-125	ME840SS-125	1 1/4" - 2" Universal High Flow Bypass w/o Flanges	90-125 PSI	Flat Face
ME840C-125	ME840SSC-125	1 1/4" - 2" Universal High Flow w/o Flanges		

*Alternate Spring Ranges Available



ME840-16-125

BYPASS VALVES - SOCKET WELD FLANGE CONFIGURATION

RMI Part No.		Description	Standard Spring Range	Flange Type
WCC A216 Steel	CF8M Stainless Steel			
ME841-10-125	ME841SS-10-125	1 1/4" Weld Flange High Flow Bypass Valve	90-125 PSI	O-Ring Seal
ME841C-10-125	ME841SSC-10-125	1 1/4" Weld Flange Classic Flow Bypass Valve		
ME841-12-125	ME841SSC-12-125	1 1/2" Weld Flange High Flow Bypass Valve	90-125 PSI	O-Ring Seal
ME841C-12-125	ME841SSC-12-125	1 1/2" Weld Flange Classic Flow Bypass Valve		
ME841-16-125	ME841SS-16-125	2" Weld Flange High Flow Bypass Valve	90-125 PSI	O-Ring Seal
ME841C-16-125	ME841SSC-16-125	2" Weld Flange Classic Flow Bypass		

*Alternate Spring Ranges Available

FLANGE KITS

RMI Part No.	Description
ME841-10F	1 1/4" Socket Weld Flange Kit
MEP840-10	1 1/4" Threaded 90° Flange Kit
MEP841-10	1 1/4" Socket Weld 90° Flange
MEP841-12F	1 1/2" Socket Weld Flange Kit
MEP840-12	1 1/2" Threaded 90° Flange Kit
MEP841-12F	1 1/2" Socket Weld 90° Flange
ME841-16F	2" Socket Weld Flange Kit
MEP840-16	2" Threaded 90° Flange Kit
MEP841-16	2" Socket weld 90° Flange



Non-stock/special order items are not cancellable or returnable

Shop online at www.raymurray.com or call 800-628-5044

Bypass Valves

MARSHALL EXCELSIOR VERSA-FILL HIGH FLOW BYPASS VALVES FOR BOBTAIL APPLICATIONS

Versa-Fill bypass valves are designed to protect pumps from damage due to excessive pressure while providing flow, adjustability, versatility and performance of the pumping system.

Versa-Fill has three settings and functions: normal bypass, auxiliary suction evacuation/self-load and small cylinder/forklift-filling.

VERSA-FILL™ BYPASS VALVES - NPT FLANGE CONFIGURATIONS

RMI Part No.		Description	Poppet Type	Standard Spring Range
WCC A216 Steel	CF8M Stainless Steel			
ME845-125	ME845SS-125	1-1/4" - 2" Versa-Fill Bypass Valve w/0 Flnges	Standard/High Flow	90-125 PSI
ME845C-125	ME845SSC-125		Classic Flow	
ME845-10-125	ME845SS-10-125	1-1/4" FNPT Versa-Fill Bypass Valve	Standard/High Flow	
ME845C-10-125	ME845SSC-10-125		Classic Flow	
ME845-12-125	ME845SS-12-125	1-1/2" FNPT Versa-Fill Bypass Valve	Standard/High Flow	
ME845C-12-125	ME845SSC-12-125		Classic Flow	
ME845-16-125	ME845SS-16-125	2" FNPT Versa-Fill Bypass Valve	Standard/High Flow	
ME845C-16-125	ME845SSC-16-125		Classic Flow	

*Alternate Spring Ranges Available

VERSA-FILL™ BYPASS VALVES - WELD FLANGE CONFIGURATIONS

RMI Part No.		Description	Standard Spring Range
WCC A216 Steel	CF8M Stainless Steel		
ME846-10-125	ME846SS-10-125	1-1/4" Weld Flange High Flow Versa-Fill Bypass Valve	90-125 PSI
ME846-12-125	ME846SS-12-125	1-1/2" Weld Flange High Flow Versa-Fill Bypass Valve	
ME846-16-125	ME846SS-16-125	2" Weld Flange High Flow Versa-Fill Bypass Valve	
ME846C-10-125	ME846SSC-10-125	1-1/4" Weld Flange Classic Flow Versa-Fill Bypass Valve	
ME846C-12-125	ME846SSC-12-125	1-1/2" Weld Flange High Flow Versa-Fill Bypass Valve	
ME846C-16-125	ME846SSC-16-125	2" Weld Flange High Flow Versa-Fill Bypass Valve	



ME845 SERIES

*Alternate Spring Ranges Available

MARSHALL EXCELSIOR BACKPRESSURE REGULATORS/RELIEF VALVES

Marshall Excelsior liquid service valves are direct operated relief valves for use on relief and backpressure applications involving large LPG pumping systems and vaporizers.

RMI Part No.	Inlet / Outlet Size	Outlet Range (PSIG)	Relief Pressure Setting (PSIG)	Relief Capacity	
				10 PSI Over Set Point	50 PSI Over Set Point
MEGR-198H/22	3/4"	70-140	100	49	93
MEGR-198H/30	1"	70-140	100	49	93
MEGR-198H-31	1"	130-200	175	52	109



MEGR-198H