

Leybold
D2A thru D90A
Exploded View

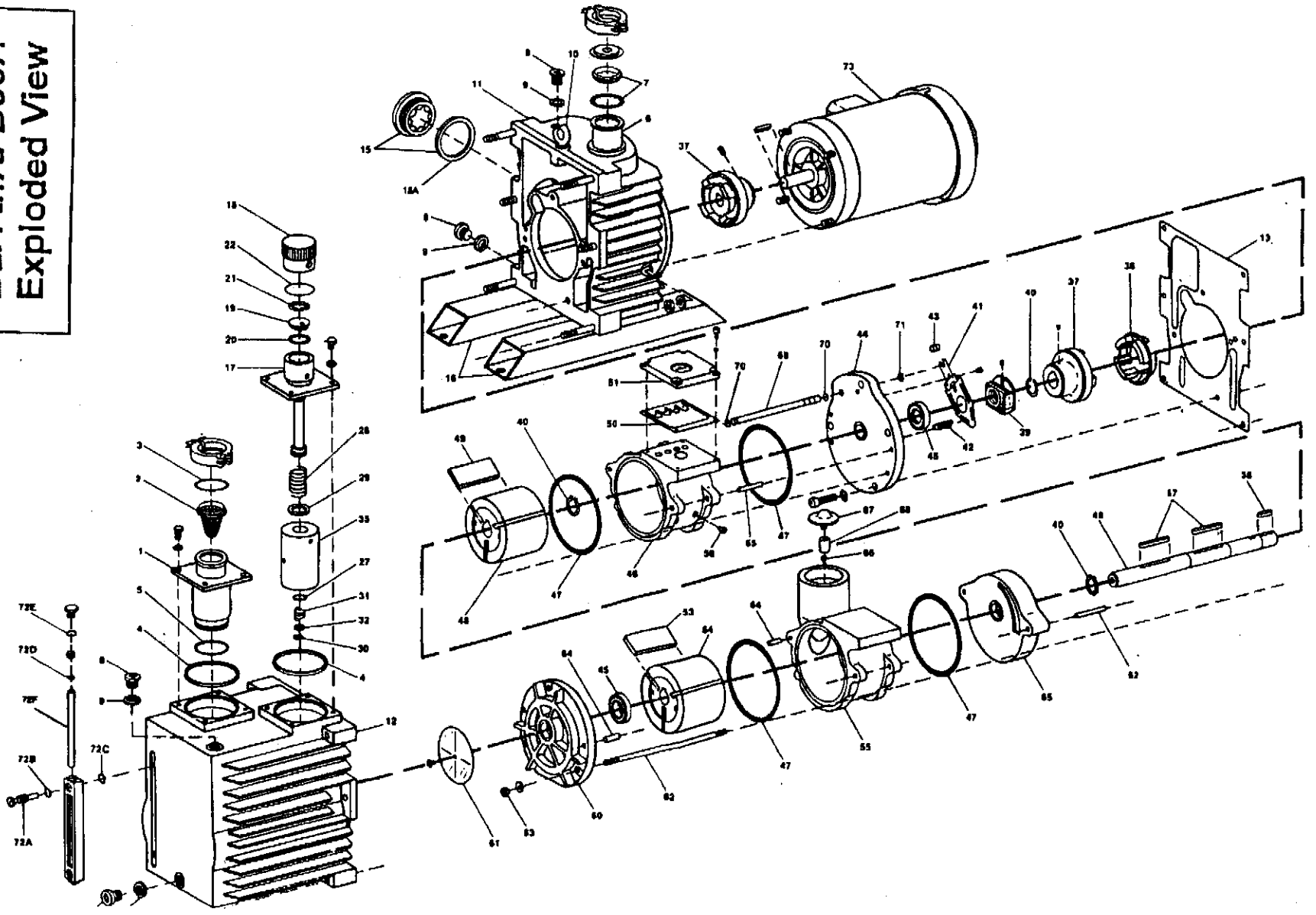


TABLE 7-1—SPARE MODULES, GASKET SETS, AND REPAIR KITS

Number Required Per Unit						Part Name	Catalog No.	Remarks
Pump Model								
D2A	D4A	D8A	D16A	D30A	D60A/ D90A			
1						Module, standard	89650	The module is made up of all parts listed with an "*" beside its catalog number in Table 7-2. For extreme-corrosive service pump modules, contact the main office.
1						Module, corrosive series	10166C	
	1					Module, standard	89651	
	1					Module, corrosive series	10167C	
		1				Module, standard	89652	
		1				Module, corrosive series	10168C	
			1			Module, standard	89653	
			1			Module, corrosive series	10169C	
				1		Module, standard	89654	
				1		Module, corrosive series	10170C	
					1	Module, standard	89655	
					1	Module, corrosive series	10171C	
1	1					Universal gasket set	19102B2	The gasket set is made up of all parts listed with a "+ +" beside its catalog number in Table 7-2. The gasket set can be used for standard, corrosive, and extreme-corrosive service pumps.
		1	1			Universal gasket set	19104B2	
				1	1	Universal gasket set	19106B2	
1						Module repair kit	10166-K	The repair kit is made up of all parts listed with a "+ +" or "+ +" beside its catalog number in Table 7-2. For corrosive application series pumps, the catalog No. of the kit is the same except the "K" is replaced by "CK".
	1					Module repair kit	10167-K	
		1				Module repair kit	10168-K	
			1			Module repair kit	10169-K	
				1		Module repair kit	10170-K	
					1	Module repair kit	10171-K	
1	1					Oil Filter (demister)	390 26 121	Item 35
		1	1			Oil Filter (demister)	390 26 117	Item 35
1	1					Anti-suckback modification kit ‡	720-24-003	120V, 60 Hz
1	1					Anti-suckback modification kit ‡	720-24-002	208/240/480V, 60 Hz
		1	1			Anti-suckback modification kit ‡	720-24-005	120V, 60 Hz
		1	1			Anti-suckback modification kit ‡	720-24-004	208/240/480V, 60 Hz
				1	1	Anti-suckback modification kit ‡	720-24-001	208/240/480V, 60 Hz

‡ This kit must be installed before pumping toxic, pyrophoric, or hazardous gases. See the supplemental instructions that come with the kits and with the TRIVAC AC pumps for the part numbers of each item in the kit.

TABLE 7-2—COMPLETE LIST OF PARTS

Position No. on Figs.	Number Required per Unit						Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model										
	D2A	D4A	D8A	D16A	D30A	D60A/D90A					
1	1	1					INTAKE TUBE ASSEMBLY				
			1	1			Intake tube	433 60 118	KF16	Al-aly	
					1	1	Intake tube	433 60 119	KF25x71	Al-aly	
							Intake tube	431 65 116	KF40x107	Al-aly	
2	1	1					Dirt trap with centering ring	411 70 122	KF16	Steel	
			1	1			Dirt trap & centering ring	411 70 206	KF25	Steel	
					1	1	Dirt trap with centering ring	411 70 121	KF40	Steel	
3	2	2					O-ring	239 70 176++	D18x5	Viton	One of the O-rings goes on the intake centering ring; the other goes on the exhaust centering ring.
			2	2			O-ring	239 70 506++	D28x5	Viton	
					2	2	O-ring	239 70 516	D42x5	Viton	
4	2	2					Flat gasket	238 20 147++	D38x44	It-200	One of the flat gaskets fits under the intake tube; the other fits under the gas ballast valve.
			2	2			Flat gasket	238 20 156++	D55x63	It-200	
					2	2	Flat gasket	238 20 158++	D75x84	It-200	
5	1	1					O-ring	239 70 410++	D22x3	Viton	
			1	1			O-ring	239 70 117++	D29x3	Viton	
					1	1	O-ring	239 70 304++	D45x3	Viton	
6	1	1					EXHAUST PORT ASSEMBLY				
			1	1			Exhaust port	433 60 113	KF16	Al-aly	
					1	1	Exhaust port	433 60 117	KF25x42	Al-aly	
							Exhaust port	433 60 115	KF40x63	Al-aly	

++Included in universal gasket set and module repair kit (see page 57 of parts list).

KF — Leybold-Heraeus quick assembly clamp ring diameter
 D — diameter
 Al-aly — aluminum alloy
 Viton — heat resistant synthetic rubber
 It-200 — asbestos gasket fiber

Position No. on Figs.	Number Required per Unit						Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model										
	D2A	D4A	D8A	D16A	D30A	D60A/D90A					
7	1	1					EXHAUST PORT ASSY. (Cont'd.) Centering ring with O-ring	88346	KF16	SS, Viton	
7			1	1			Centering ring with O-ring	88347	KF25	SS, Viton	
7					1	1	Centering ring with O-ring	88348	KF40	SS, Viton	
8	3	4	4	4	4	4	PUMP HOUSING ASSEMBLY Plug screw	201 27 105 ++	D16x1.5	Stl	DIN 908, Isometric, Straight
9	3	4	4	4	4	4	Flat gasket	239 55 165 ++	D22x15.1x2	Viton	
10					1	1	Eye bolt	431 31 137	M8	Stl	Not shown in Figs.
11	1	1					Coupling housing	720 00 001	228x140x185	C Al-aly	
11			1	1			Coupling housing	720 00 003	265x172.5x216.5	C Al-aly	
11					1		Coupling housing	720 00 019	149x242x272.5	Cast iron	
11						1	Coupling housing	720 00 021	164x242x272.5	Cast iron	
12	1						Oil casing	720 00 005	127.5x135x162	C Al-aly	
12		1					Oil casing	720 00 007	162.5x135x162	C Al-aly	
12			1				Oil casing	720 00 009	158x172.5x192.5	C Al-aly	
12				1			Oil casing	720 00 011	200.5x172.5x192.5	C Al-aly	
12					1		Oil casing	720 00 015	246.5x242x279.5	Al-aly	
12						1	Oil casing	720 00 017	321.5x242x279.5	Al-aly	
13	1	1					Seal	238 11 123 ++	136x162x1	It	
13			1	1			Seal	238 11 126 ++	172x190x1	It	
13					1	1	Seal	238 11 142 ++	242x270x1	Westit	

++Included in universal gasket set and module repair kit (see page 57 of parts list).

SS—Stainless Steel
 KF—Leybold-Heraeus quick assembly clamp ring diameter
 D—Diameter
 Stl—steel
 Viton—heat resistant synthetic rubber
 C Al-aly—cast aluminum alloy
 Al-aly—aluminum alloy
 Westit—asbestos neoprene with silicone bead
 It—asbestos gasket fiber
 Buna-N—synthetic rubber
 Al—Aluminum

Position No. on Figs.	Number Required per Unit						Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model										
	D2A	D4A	D8A	D16A	D30A	D60A/D90A					
14	1	1					PUMP HOUSING ASSY. (Conf'd.)				
14			1	1			Handle	283 02 106	100x86x28	Black plastic	
15	1	1					Handle	283 02 107	106x120x32	Black plastic	
15			1	1	1	1	Oil level glass	520 40 124	M50x1.5	Glass, Viton	Includes flat gasket (Item 15A)
15A	1	1					Oil level glass	520 40 125	M60x2	Glass, Viton	
15A			1	1	1	1	Flat gasket	239 55 172 ++	48x56x2	Viton	
16	4	4	4	4			Flat gasket	239 55 171 ++	60x68x2	Viton	
16					2	2	Rubber foot	279 80 308	D20x16	Buna-N	
					4	4	Support	461 75 107	410	Stl	Not shown in Figs.
							Vibration pad	99 274 005		Buna-S	
	1	1					GAS BALLAST VALVE ASSEMBLY				The assy. includes Pos. Nos. 17 thru 34.
			1	1			Gas ballast valve assy.	720 00 077			
					1	1	Gas ballast valve assy.	720 00 079			
17	1	1					Gas ballast valve assy.	720 00 080			
17			1	1			Gas ballast valve stem	‡	43x109	Al-aly, Stl	
17					1	1	Gas ballast valve stem	‡	65x113.5	Al-aly-Stl	
							Gas ballast valve stem	‡	85x85x67	Al-aly, Stl	
							Flat gasket				See Position No. 4.
18	1	1					Cap	349 75 102	D22x24	Buna-N	
18			1	1	1	1	Cap	349 75 105	D50x40	Buna-N	
19			1	1	1	1	Valve	350 20 158	D31.7x6	Thermoplastic	See Fig. 5-10A.
20			1	1	1	1	O-ring	239 70 436 + +	D27x2.5	Viton	See Fig. 5-10A.
21			1	1	1	1	Retaining washer	221 49 207	D19.5x33x0.9	Steel	See Fig. 5-10A.
22	1	1					Stiffening disk	222 04 104	D15x3	Brass	
22			1	1	1	1	Stiffening disk	222 04 107	D40x0.5	Bronze	
23	1	1					Nonreturn valve	350 20 126	D16x26	Steel	
24	1	1					Flat gasket	239 73 133 + +	19x6x1	Viton	
25	1	1					Spring	451 74 424 + +	19x0.1	Steel	
26	1	1					Strengthening piece	451 74 425 + +	6x7x0.1	Steel	

+ + Included in universal gasket set and module repair kit (see page 57 of parts list).

‡ Must be purchased as gas ballast assembly.

Buna-N—synthetic rubber
 Stl—steel
 Al-aly—aluminum alloy
 D—diameter
 Viton—heat resistant synthetic rubber

Position No. on Figs.	Number Required per Unit						Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model										
	D2A	D4A	D8A	D16A	D30A	D60A/D90A					
27	1	1	1	1			GAS BALLAST VALVE ASSEMBLY (Cont'd.)				
27					1	1	O-ring	239 70 148++	D5x2	Viton	
28	1	1					O-ring	239 70 147++	D16x2.5	Viton	
28			1	1			Spring (filter)	221 62 144	D14.5x12x1.25	Steel	
28					1	1	Spring (filter)	221 62 143	D20x35	Steel	
28							Spring (filter)	221 62 142	D25.2x38	Steel	
29	1	1					Flat gasket	239 25 227++	D18x10x1	Viton	
29			1	1			Flat gasket	239 25 226++	D30x16x1	Viton	
29					1	1	Flat gasket	239 25 225++	D30x18x1	Viton	
30					1	1	Retainer ring	231 04 104	D15x1	Steel	See Fig. 5-10B.
31					1	1	Spring (gas ballast)	221 62 140	D15x11.5	Steel	See Fig. 5-10B.
32					1	1	Valve plate	401 64 117++	D14.8x0.2	Steel	See Fig. 5-10B.
33			1	1			Cover	341 01 109	D48x5	Steel	Not shown in Figs.
34			1	1			Retainer ring	231 03 106	17x1	Steel	Not shown in Figs.
35	1	1					Oil filter	390 26 121+	D36x55	Stl, fiber	
35			1	1			Oil filter	390 26 117+	D42x55	Stl, fiber	
35					1	1	Oil separator	411 12 108	D58x90	Steel	See Fig. 5-10B.
							Oil filter spring				See position 28
36	1	1	1	1			COUPLING ASSEMBLY				
36					1	1	Elastic element	701 00 147*++	41x15	Buna-N	
37	1	1					Coupling ring	701 00 196*++	D80x21	Vulkollan	See Fig. 5-11.
37			1	1			Coupling, complete	570 42 130*	D58x60		Includes pump-side and motor-side coupling and Pos. No. 36.
37					1		Coupling, complete	570 42 134*	D58x61		
37							Coupling, complete	570 42 132*	D85x85	Cast iron	
37						1	Coupling, complete	570 42 133*	D85x85	Cast iron	

*Included in module (see page 57 of parts list).
+Included in module repair kit (see page 57 of parts list).
++Included in universal gasket set and module repair kit (see page 57 of parts list).

Stl - steel
Vulkollan - vulcanized rubber
Buna:N - synthetic rubber
Viton - heat resistant synthetic rubber
D - diameter

Position No. on Figs.	Number Required per Unit						Part Name	Catalog No.	Dimensions (mm)	Material	Remarks				
	Pump Model														
	D2A	D4A	D8A	D16A	D30A	D60A/D90A									
38	1	1					COUPLING ASSEMBLY (Cont'd.)								
												Key (coupling)	221 16 065*	4x4x18	Steel
									1	1			Key (coupling)	221 16 151*	5x5x18
38					1	1			Key (coupling)	221 16 179*	6x6x22	Steel			
39	1	1					CENTRIFUGAL SWITCH AND RETAINER RING								
												Centrifugal switch	500 36 123*	D60x23	Brs, Stl
									1	1			Centrifugal switch	500 36 128*	D70x27
39						1	1			Centrifugal switch	500 36 147*	D60x23	Brs, Stl		
40	1	1								Retainer ring	231 03 101*	D12x1	Steel		
40										Retainer ring	231 03 104*	D15x1	Steel		
40						3	3			Retainer ring	231 03 111*	D22x1.2	Steel	The 2 additional rings fit onto the shaft on both sides of the second stage rotor.	
41	1	1					LEVER ASSEMBLY								
												Lever	281 53 130*	73x36	Steel
									1	1			Lever	281 53 102*	88x40x1
41						1	1			Lever	281 53 101*	109x40x1	Steel		
42	1	1								Spring (lever)	221 61 199*	D5.8x18x0.4	Steel		
42										Spring (lever)	221 62 141*	D8.5x23	Steel		
43	1	1	1	1	1	1				Seal (lever)	239 73 131*++	D9x11	Buna-N		
44	1	1					SECOND STAGE ASSEMBLY								
												Front end plate	301 51 138*	D12x18	Cl, Brz
									1	1			Front end plate	301 51 137*	D15x23
44						1	1			Front end plate	301 51 140*	D40x27	Cl		
45	2	2								Radial shaft seal	239 53 124*++	D12x28x7	Viton	One of the seals fits into the front end plate; the other fits into the rear end plate.	
45									Radial shaft seal	239 53 142*++	D15x32x7	Viton			
45						2	2			Radial shaft seal	239 53 110*++	D22x40x7	Viton		

*Included in module (see Page 57 of parts list).
 ++Included in universal gasket set and module repair kit (see page 57 of parts list).

Stl – steel
 Cl – cast iron
 Viton – heat resistant synthetic rubber

D – diameter
 Brs – brass
 Brz – bronze

Position No. on Figs.	Number Required per Unit						Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model										
	D2A	D4A	D8A	D16A	D30A	D60A/D90A					
46	1	1					SECOND STAGE ASSEMBLY (Cont'd.) Second stage pump cylinder	231 58 117*	D54.8x35	CI	
46			1	1			Second stage pump cylinder	231 58 124*	D79x45	CI	
46					1	1	Second stage pump cylinder	231 58 122*	D118.5x75	CI	
47	4	4					O-ring	239 70 409*++	D60x2	Viton	Two of these O-rings go on the second stage pump cylinder; the other two go on the high vacuum stage pump cylinder.
47			4	4			O-ring	239 70 156*++	D86x2	Viton	
47					4	4	O-ring	239 70 411*++	D122x3	Viton	
							Oil nozzle				See Position No. 56.
48	1						Rotor with shaft	481 21 242*	D48x151	CI, Stl	
48		1					Rotor with shaft	481 21 243*	D48x186	CI, Stl	
48			1				Rotor with shaft	481 21 238*	D68x183	CI, Stl	
48				1			Rotor with shaft	481 21 239*	D68x228	CI, Stl	
48					1		Rotor with shaft ‡	481 21 240*	D101x290	CI, Stl	‡
48						1	Rotor with shaft ‡	481 21 241*	D101x365	CI, Stl	
49	3	3					Vane	411 55 112*+	14x35x4.5	Duroplast	
49			3	3			Vane	411 55 155*+	22x45x4.5	Duroplast	
49					3	3	Vane	411 55 116*+	32.5x75x4.5	Duroplast	

*Included in module (see page 57 of parts list).

+Included in module repair kit (see page 57 of parts list).

++Included in universal gasket set and module repair kit (see page 57 of parts list).

‡ The part numbers (48) listed above are for the rotor/shaft assembly. The P/N for the D30A, D60A, or D90A rotor is 321 66 119. The P/N for the D30A shaft is 401 57 294; the P/N for the D60A/D90A shaft is 401 57 296.

Stl – steel

CI – cast iron

Viton – heat resistant synthetic rubber

D – diameter

Duroplast – durable thermoplastic

Position No. on Figs.	Number Required per Unit						Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model										
	D2A	D4A	D8A	D16A	D30A	D60A/D90A					
50	1	1					SECOND STAGE ASSEMBLY (Cont'd.) Valve plate (standard)	401 64 109*+	45x35x0.1	Stl	For strd. series pumps. For strd. series pumps. For strd. series pumps.
50			1	1		Valve plate (standard)	401 64 116*+	63x45x0.1	Stl		
50					1	1	Valve plate (standard)	401 64 114*+	75x82x0.2	Stl	
50	1	1					Valve plate (corrosive)	401 64 121*+	45x35x0.1	Gold plated	For corr. series pumps. For corr. series pumps. For corr. series pumps.
50			1	1			Valve plate (corrosive)	401 64 125*+	63x45x0.1	Gold plated	
50					1	1	Valve plate (corrosive)	401 64 124*+	75x82x0.2	Gold plated	
51	1	1					Valve stop	373 58 103*	34.6x45x10	Black plastic	The valve stop in the Figures is made of black plastic.
51			1	1			Valve stop	373 58 107*	63x45x9	Black plastic	
51					1	1	Valve stop	373 58 106*	80x74.5x12	Al-aly	
52	1	1					Center bearing	261 51 132*	D12x15	Cast iron	
52			1	1			Center bearing	261 51 131*	D15x15	Cast iron	
52					1	1	Intermediate plate	261 51 135*	D30x30	Cast iron	
53	3						HIGH VACUUM STAGE ASSEMBLY Vane	411 55 112*+	14x35x4.5	Duroplast	
53		3					Vane	411 55 113*+	14x70x4.5	Duroplast	
53			3				Vane	411 55 155*+	22x45x4.5	Duroplast	
53				3			Vane	411 55 154*+	22x90x4.5	Duroplast	
53					3		Vane	411 55 116*+	32.5x75x4.5	Duroplast	
53						3	Vane	411 55 115*+	32.5x150x4.5	Duroplast	

*Included in module (see page 57 of parts list).

+Included in module repair kit (see page 57 of parts list).

D – diameter

Duroplast – durable thermoplastic

Al-aly – aluminum alloy

Position No. on Figs.	Number Required per Unit						Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model										
	D2A	D4A	D8A	D16A	D30A	D60A/D90A					
54	1						HIGH VACUUM STAGE ASSEMBLY (Cont'd.)				
54		1					Rotor, HV stage	321 66 126*	D48x35	Cast iron	
54			1				Rotor, HV stage	321 66 125*	D48x70	Cast iron	
54				1			Rotor, HV stage	321 66 123*	D68x45	Cast iron	
54					1		Rotor, HV stage	321 66 122*	D68x90	Cast iron	
54						1	Rotor, ‡	321 66 119*	D101x75	Cast iron	‡
54						1	Rotor, HV stage	321 66 120*	D101x150	Cast iron	
55	1						Pump cylinder, HV stage	231 65 117*	D54.8x35	Cast iron	
55		1					Pump cylinder, HV stage	231 65 116*	D54.8x70	Cast iron	
55			1				Pump cylinder, HV stage	231 65 121*	D79x45	Cast iron	
55				1			Pump cylinder, HV stage	231 65 122*	D79x90	Cast iron	
55					1		Pump cylinder, HV stage	231 65 118*	D118.5x75	Cast iron	
55						1	Pump cylinder, HV stage	231 65 107*	D118.5x150	Cast iron	
							O-rings				See position 47.
56	1	1					Oil nozzle	392 25 107*	0.5	Brass	The oil nozzle is located in the second stage pump cylinder.
56			1	1			Oil nozzle	392 25 113*	0.8	Brass	
56					2	2	Oil nozzle	392 25 124*	1.5	Brass	
							Radial shaft seal				See position 45.
57	1	1					Key (rotor)	221 16 070*	4x4x28	Stl	See Fig. 5-9.
57			1	1			Key (rotor)	221 16 156*	5x5x28	Stl	See Fig. 5-9.
57					1	1	Key (rotor)	221 16 188*	6x6x50	Stl	See Fig. 5-9.
58		1		1			Valve plate	400 50 135*++	16x16x5	Stl, Viton	See Fig. 5-13.
58						2	Valve plate	400 50 138*++	25x25x5	Stl, Viton	See Fig. 5-13.

*Included in module (see page 57 of parts list).

++Included in universal gasket set and module repair kit (see page 57 of parts list).

‡ Both rotors are the same part number on the D30A pump model.

D – diameter

Stl – steel

Viton – heat resistant synthetic rubber

HV – high vacuum

Position No. on Figs.	Number Required per Unit						Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model										
	D2A	D4A	D8A	D16A	D30A	D60A/D90A					
59		1					HIGH VACUUM STAGE ASSEMBLY (Cont'd.)				See Fig. 5-13. See Fig. 5-13. See Fig. 5-13.
59			1			Retaining bracket	491 60 109*	40x8x4	Steel		
59						Retaining bracket	491 60 107*	40x10x8	Steel		
60	1	1					Retaining bracket	491 60 111*	52x4x4	Steel	
60			1	1			Rear end plate	351 55 131*	D12x16	Cast iron	
60					1	1	Rear end plate	351 55 130*	D15x18	Cast iron	
60							Rear end plate	351 55 132*	D40x28	Cast iron	
61	1	1	1	1	1	1	Disk (oil slinger)	451 74 335*	D85x2.1	Steel	
62	3						MODULE STUDS AND PINS				
62		3					Threaded stud	201 52 104*	D6x107	Steel	
62			4				Threaded stud	201 52 103*	D6x142	Steel	
62				4			Threaded stud	201 52 109*	D6x133	Steel	
62					3		Threaded stud	201 52 110*	D6x178	Steel	
62						3	Threaded stud	201 52 106*	D8x218	Steel	
62							Threaded stud	201 52 108*	D8x293	Steel	
63	3	3	4	4			Hexagon nut	211 01 312*	D6	Steel	
63					3	3	Hexagon nut	211 01 314*	D8x8		
64	4	4	4	4			Cylindrical pin	241 03 585*	D8x20	Steel	
64					2	2	Cylindrical pin	241 03 586*	D8x24		For rear end plate
64					2	2	Cylindrical pin	241 03 590*	D8x40	Steel	For front end plate
65	2	2	2	2			Cylindrical pin	241 03 590*	D8x40	Steel	
65					2	2	Cylindrical pin	241 03 593*	D8x60		

*Included in module (see page 57 of parts list).

D – Diameter

Position No. on Figs.	Number Required per Unit						Part Name	Catalog No.	Dimensions (mm)	Material	Remarks
	Pump Model										
	D2A	D4A	D8A	D16A	D30A	D60A/D90A					
							ANTI-SUCK BACK ASSEMBLY				
							Centrifugal switch				See position 39.
							Lever				See position 41.
							Spring (lever)				See position 42.
							Seal (lever)				See position 43.
66					1	1	Air nozzle	392 25 204	0.36	Brass	Not shown in Figures
67	1	1					Valve disk	400 50 136*++	D20	Stl, Viton	
67			1	1			Valve disk	400 50 139*++	D32	Stl, Viton	
67					1	1	Valve disk	400 50 137*++	D45	Stl, Viton	
68	1	1					Piston	321 06 130*	D14x26	Brass	
68			1	1			Piston	321 06 104*	D12x30	Brass	
68					1	1	Piston	321 06 131*	D12x22	Brass	
69	1	1					Air inlet tube	431 31 161*	D8x79	Steel	
69			1	1			Air inlet tube	431 31 177*	D8x92.5	Steel	
69					1	1	Air inlet tube	431 31 174*	D8x144	Steel	
70	2	2	2	2	2	2	O-ring	239 70 148*++	D5x2	Viton	
71	1	1					Retainer disk	231 05 107*	D5	Steel	
71			1	1	1	1	Retainer disk	231 05 108*	D6	Steel	
72	1	1					OIL SIGHT GAUGE ASSEMBLIES	720 00 113	5 11/32"x5/8"	Aluminum	
72			1	1				720 00 114	5 11/32"x5/8"	Aluminum	
72					1	1		720 00 115	6 13/16"x5/8"	Aluminum	
72A	2	2	2	2	2	2	Mounting bolt	720 00 129	5/16-24 UNF-2A		A mounting bolt with 2 flat gaskets (72B) is available under Part No. 720 00 118
72B	2	2	2	2	2	2	Flat gasket	725 90 001++		Viton	A seal kit containing these 4 seals is available under Part No. 720 00 116
72C	2	2	2	2	2	2	O-ring	725 91 001++		Viton	
72D	2	2	2	2	2	2	Flat gasket	725 90 000++		Viton	
72E	2	2	2	2	2	2	O-ring	725 91 000++		Viton	
72F	1	1	1	1			Sight tube	722 11 003		Glass	
					1	1	Sight tube	722 11 004		Glass	

*Included in module (see page 57 of parts list)
++Included in module repair kit and universal gasket set
(see page 57 of parts list)

D - Diameter
C al-aly - cast aluminum alloy
M - motor side adapter flange
P - pump side adapter flange
Viton - heat resistant synthetic rubber
Al - aluminum

Position No. on Figs.	Number Required per Unit						Part Name	Motor Specifications	Motor Part No.
	Pump Model								
	D2A	D4A	D8A	D16A	D30A	D60A			
73	1	1					Motor *	1/3 hp, TEFC, 1 ph 115/208-230V, 60 Hz, 1725 rpm 115/208-230V, 50 Hz, 1500 rpm Wired for 115V	722-60-066*
73			1				Motor*	1 hp, TEFC, 1 ph 115/208-230V wired for 115V 50/60 Hz, 1500/1725 rpm	722-60-069*

* This motor has an automatic resetting thermal overload.

hp—horsepower

kw—kilowatt

V—voltage

VAC—voltage, alternating current

ph—phase

Hz—hertz

TEFC—totally enclosed fan cooled

rpm—revolutions per minute

Position No. on Figs.	Number Required per Unit						Part Name	Motor Specifications	Motor Part No.
	Pump Model								
	D2A	D4A	D8A	D16A	D30A	D60A			
73			1	1			Motor	2 hp, 1 ph, TEFC 115/208 -230V, wired for 230V 50/60 Hz, 1500/1725 rpm	722-60-005†
73			1	1			Motor	1 hp, TEFC, 3 ph 208/230/460V, 60 Hz, 1725 rpm 200/220/380V, 50 Hz, 1500 rpm	722-60-070
73					1		Motor	1-1/2 hp, 208/230/460V, 3 ph, 60 Hz, TEFC, 1725 rpm	722-60-076*
73					1		Motor	1½ hp, 1 ph, TEFC, 208-230V, wired for 208V, 60 Hz, 1725 rpm	722-60-077†

* This motor has a rotational lock bearing.

† This motor has an automatic resetting thermal overload.

hp – horsepower

kw – kilowatt

V – voltage

VAC – voltage, alternating current

ph – phase

Hz – hertz

TEFC – totally enclosed fan cooled

rpm – revolutions per minute

Position No. on Figs.	Number Required per Unit							Part Name	Motor Specifications	Motor Part No.††
	Pump Model									
	D2A	D4A	D8A	D16A	D30A	D60A	D90A			
73					1			Motor	1-1/2 hp, 220/380V, 3 ph, 50 Hz, 1500 rpm	722-60-015
73						1		Motor	2 hp, 208V, 3 ph, 60 Hz, TEFC, 1150 rpm	99-215-133M
73						1		Motor	2 hp, 230/460V, 3 ph, 60 Hz, TEFC, 1150 rpm	99-215-123M
73						1		Motor	3 hp, 220/380V, 3 ph, 50 Hz, 1500 rpm	722-60-014
73						1		Motor (2 speed)	3/1.5 hp, 230V, 3 ph, 60 Hz, TEFC, 1800/900 rpm	99-215-135M
73						1		Motor (2 speed)	3/1.5 hp, 208V, 3 ph, 60 Hz, TEFC, 1800/900 rpm	99-215-134M
73						1		Motor (2 speed)	3/1.5 hp, 460V, 3 ph, 60 Hz, TEFC, 1800/900 rpm	99-215-136M
73							1	Motor	3 hp, 208/230/460V, 3 ph, 60 Hz, TEFC, 1725 rpm	722-60-013

†† A rotational lock bearing has been installed on all motors listed on this page.

hp -- horsepower
kw -- kilowatt
V -- voltage
VAC -- voltage, alternating current
ph -- phase
Hz -- hertz
TEFC -- totally enclosed fan cooled
rpm -- revolutions per minute