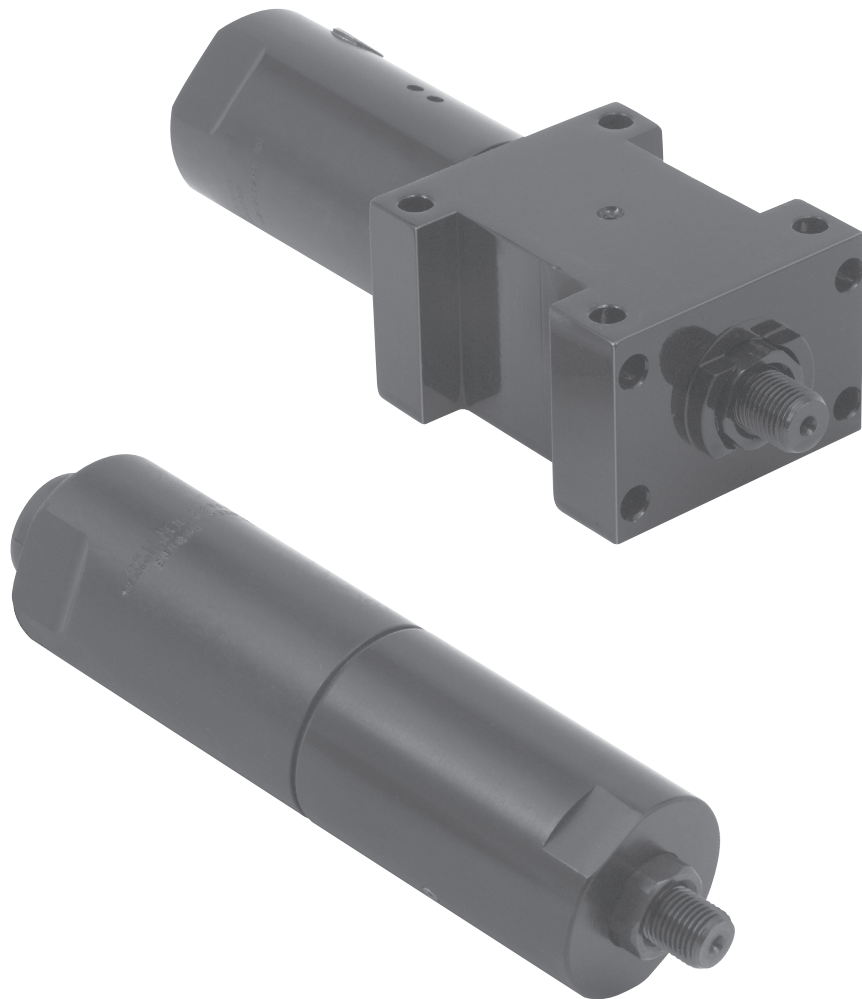


Parts Manual
45-8062EN
07/23/2010

Cleco®

22 Series
Double Reduction Rotary Vane Power Motors



For additional product information visit our website at <http://www.apextoolgroup.com>

Cleco®
22 Series Rotary Vane Motors

Model Nomenclature:

Rotation Direction	Housing Style	Output Speed - RPM			Exhaust
		430	640	940	
Right	Round	22-5000	22-5001	22-5002	Side
		22-5040	22-5041	22-5042	Rear
	Mounting	22M5000	22M5001	22M5002	Side
		22M5040	22M5041	22M5042	Rear
Left	Round	22D5000	22D5001	22D5002	Side
		22D5040	22D5041	22D5042	Rear
	Mounting	22V5000	22V5001	22V5002	Side
		22V5040	22V5041	22V5042	Rear

General Safety and Operation:

About this parts manual:

This parts manual is the -- original parts manual -- and is intended for all persons who service or repair these 21 series rotary vane pneumatic power motors.

This parts manual does the following:

- It provides component part numbers for ordering of replacement parts.
- When applicable, it provides tightening specifications for fasteners used in the assembly of this product.

Workplace safety symbols:



This warning sign identifies all references to safe work practices in this parts manual, alerting to hazards to life and health of personnel. Observe these notes and proceed with special care in the situations described. Pass all safety instructions on to other operators. In addition to the safety instructions in this parts manual, all local safety and accident prevention rules must be observed.

NOTE



This "Note" symbol identifies the portions of this parts manual requiring special attention to ensure that guidelines, rules, hints and correct procedures are observed and to prevent damage to or destruction of the machine and/or parts.

Intended use:

This air motor is intended to be used as a power source only built into another machine. Other uses are not intended and can damage function leading to injury or destruction of the power motor. *Example: Do not use as a hand held assembly tool.*

If there is any doubt regarding the safe operation of this air motor, consult your Apex Tool Group representative before implementation.

Disclaimer:

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General Safety Instruction:

These safety instructions must be accessible to the operator at all times. They must be shown and made available to personnel involved in the use or repair of the equipment.

These safety instructions are not intended to be all inclusive. It is mandatory that national, state and local safety standards be followed during installation. These standards take precedence over any information in this section.

Eye and Ear Protection:



Impact resistant eye protection must be worn while operating or working near this power motor.

Hearing protection is recommended in high noise areas, 85 dBA or greater. The operation of other tools and equipment in the area, reflective surfaces, process noises and resonant structures can substantially contribute to and increase the noise level in the work area.

Connect the power motor to an air line with a maximum pressure of 6.2 bar (90 psig).



Always disconnect the tool from the air supply before adjusting or repairing.



Immediately shut off the tool in the case of unusual sound or vibration. Have a qualified person check and repair the tool before placing back into operation.

Do not modify this power motor, any guard or accessory unless approved in writing by Apex Tool Group.

Implement and follow a Safety Maintenance Program to provide inspection and maintenance of all phases of tool operation and air supply equipment.

Specifications:

Fastener Torque Specifications: Basic engineering practice should be used when assembling threaded components. When applicable, tightening torque values are shown on the exploded views as a guide for disassembly and re-assembly. A "Hand" image indicates "Hand Tighten".

Physical Dimensions: Refer to the power motor catalog for dimensional information.

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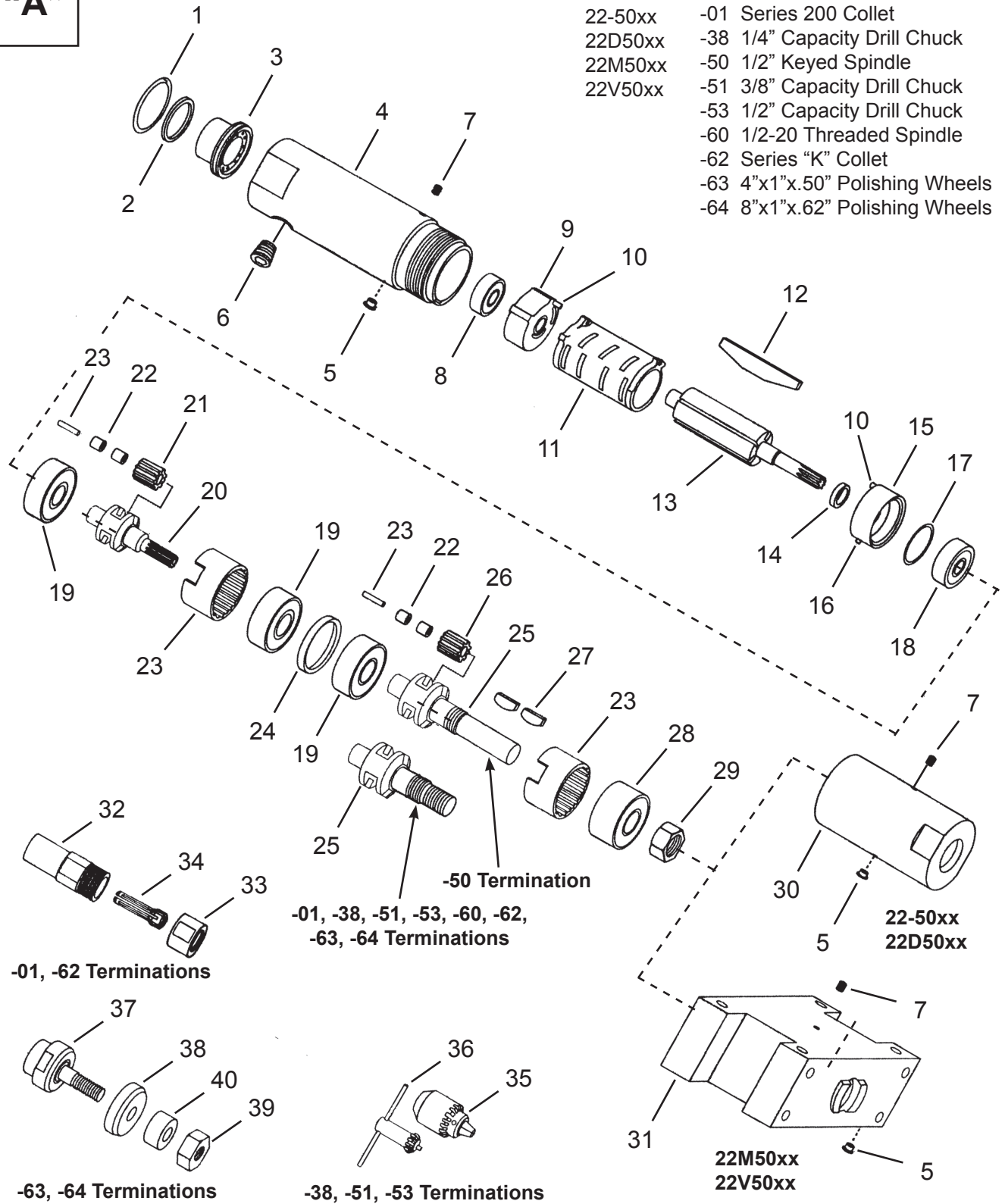
“A”

Models

- 22-50xx
- 22D50xx
- 22M50xx
- 22V50xx

Terminations

- 01 Series 200 Collet
- 38 1/4" Capacity Drill Chuck
- 50 1/2" Keyed Spindle
- 51 3/8" Capacity Drill Chuck
- 53 1/2" Capacity Drill Chuck
- 60 1/2-20 Threaded Spindle
- 62 Series "K" Collet
- 63 4"x1"x.50" Polishing Wheels
- 64 8"x1"x.62" Polishing Wheels



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Illustration "A"

Ref	Number	#	X	EN
				Description
1	2690	1	3	Retaining Ring (Rear Exhaust)
2	1838	1	3	O-Ring (Rear Exhaust)
3	2685	1	3	Muffler (Rear Exhaust)
4	2896	1		Motor Housing (Side Exhaust) (Includes 1 Ref. 5)
	2897	1		Motor Housing (Rear Exhaust) (Includes 1 Ref. 5)
5	1664	2	4	Grease Fitting
6	2957	1	2	Pipe Plug
7	2831	2	4	Set Screw
8	538	1	2	Ball Bearing
9	Tables "A & B"	1		Bearing Plate (Includes 1 Ref. 10)
10	1041	1	2	Pin (Side Exhaust)
	1041	2	4	Pin (Rear Exhaust)
11	Tables "A & B"	1		Cylinder
12	2253	4	8	Rotor Blade
13	Tables "A & B"	1		Rotor (Includes Ref. 14)
14	2017	1	2	Spacer
15	2508	1		Bearing Plate (Side Exhaust)
	Table "B"	1		Bearing Plate (Rear Exhaust) (Includes 1 each Ref. 10 & 16)
16	2964	1	2	Pin (Rear Exhaust)
17	2488	1	2	Shim Packet
18	500	1	2	Ball Bearing
19	556	3	6	Ball Bearing
20	Tables "A & B"	1		Planetary Carrier
21	Tables "A & B"	2	4	Spur Gear (Includes 2 Ref. 22)
22	1464	8	16	Needle Bearing
23	2509A	4	8	Spur Gear Shaft
23	2533	2		Ring Gear
24	2830	1		Spacer
25	2927	1		Planetary Carrier (-50 Termination)
	2513	1		Planetary Carrier (-01, -62 Terminations)
	2864	1		Planetary Carrier (-38, -51, -53, -60, -63, -64 Terminations)
26	Tables "A & B"	2	4	Spur Gear (Includes 2 Ref. 22)
27	613	2	4	Key (-50 Termination)
28	557	1	2	Ball Bearing
29	2958	1	2	Lock Nut (-38, -50, -51, -53, -60, -63, -64 Terminations)
30	2893	1		Round Housing (22- and 22D Models)
31	2819	1		Mounting Housing (22M and 22V Models)
32	2801	1		Chuck Body (-01 Termination)
	14-2254	1		Chuck Body (-62 Termination)
33	2058	1		Cap (-01 Termination)
	4255	1		Cap (-62 Termination)
34	208	1		1/4" Collet (-01 Termination)
	124	1		3/8" Collet (-62 Termination)
35	14-2545	1	1	1/4" Chuck (-38 Termination)
	14-2546	1	1	3/8" Chuck (-51 Termination)
	14-2547	1	1	1/2" Chuck (-53 Termination)
36	14-2548	1	1	1/4" Chuck Key (-38 Termination)
	14-2169	1	1	3/8" Chuck Key (-51 Termination)
	14-2549	1	1	1/2" Chuck Key (-53 Termination)
37	14-2216	1	1	Wheel Adapter (-63 Termination)
	14-2212	1	1	Wheel Adapter (-64 Termination)
38	14-4072	1	1	Wheel Flange (-63 Termination)
	14-4045	1	1	Wheel Flange (-64 Termination)
39	14-4073	1	1	Hex Nut (-63 Termination)
	14-4037	1	1	Hex Nut (-64 Termination)
40	14-4082	1	1	Spacer (-63 Termination)
	14-4009	1	1	Spacer (-64 Termination)
Not Shown				
	14-0809	1		9/16" Wrench (-01 Termination)
	14-0812	1		3/4" Wrench (-01, -60 Terminations)
	14-0814	1		7/8" Wrench (-62, -63 Terminations)
	14-0815	1		15/16" Wrench (-64 Termination)
	14-0818	1		1-1/8" Wrench (-62 Termination)
	14-0836	1		1-3/8" Wrench (-63, -64 Terminations)

(#) Quantity
(X) Recommended Spare Parts

22 Series Rotary Vane Motors

Table "A" - Side Exhaust Models

Ref.	Description	#	22-5000 22M5000	#	22-5001 22M5001	#	22-5002 22M5002	#	22D5000 22V5000	#	22D5001 22V5001	#	22D5002 22V5002
9	Bearing Plate	1	7404	1	7404	1	7404	1	7194	1	7194	1	7194
11	Cylinder	1	2255A	1	2255A	1	2255A	1	2519	1	2519	1	2519
13	Rotor	1	7656	1	7656	1	7658	1	7656	1	7656	1	7658
20	Planetary Carrier	1	2851	1	2848	1	2848	1	2851	1	2848	1	2848
21	Spur Gear	2	2809 (17T)	2	2809 (17T)	2	2956 (15T)	2	2809 (17T)	2	2809 (17T)	2	2956 (15T)
26	Spur Gear	2	2809 (17T)	2	2956 (15T)	2	2956 (15T)	2	2809 (17T)	2	2956 (15T)	2	2956 (15T)

(T) Teeth

Table "B" - Rear Exhaust Models

Ref.	Description	#	22-5040 22M5040	#	22-5041 22M5041	#	22-5042 22M5042	#	22D5040 22V5040	#	22D5041 22V5041	#	22D5042 22V5042
9	Bearing Plate	1	7013	1	7013	1	7013	1	7198	1	7198	1	7198
11	Cylinder	1	2255A	1	2255A	1	2255A	1	2519	1	2519	1	2519
13	Rotor	1	7656	1	7656	1	7658	1	7656	1	7656	1	7658
15	Bearing Plate	1	2959	1	2959	1	2959	1	2424	1	2424	1	2424
20	Planetary Carrier	1	2851	1	2848	1	2848	1	2851	1	2848	1	2848
21	Spur Gear	2	2809 (17T)	2	2809 (17T)	2	2956 (15T)	2	2809 (17T)	2	2809 (17T)	2	2956 (15T)
26	Spur Gear	2	2809 (17T)	2	2956 (15T)	2	2956 (15T)	2	2809 (17T)	2	2956 (15T)	2	2956 (15T)

(T) Teeth

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Sales & Service Centers

Note: All locations may not service all products. Please contact the nearest Sales & Service Center for the appropriate facility to handle your service requirements.

Dallas, TX
**Apex Tool Group
Sales & Service Center**
1470 Post & Paddock
Grand Prairie, TX 75050
Tel: 972-641-9563
Fax: 972-641-9674

Lexington, SC
**Apex Tool Group
Sales & Service Center**
670 Industrial Drive
Lexington, SC 29072
Tel: 800-845-5629
Tel: 803-359-1200
Fax: 803-358-7681

York, PA
**Apex Tool Group
Sales & Service Center**
3990 East Market Street
York, PA 17402
Tel: 717-755-2933
Fax: 717-757-5063

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Apex Tool Group
Postfach 30
D-73461 Westhausen
Germany
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Fax: +49 (0) 73 63/ 81-222

Detroit, MI
**Apex Tool Group
Sales & Service Center**
2630 Superior Court
Auburn Hills, MI 48326
Tel: 248-391-3700
Fax: 248-391-7824

Los Angeles, CA
**Apex Tool Group
Sales & Service Center**
15503 Blackburn Avenue
Norwalk, CA 90650
Tel: 562-926-0810
Fax: 562-802-1718

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**Apex Tool Group
Sales & Service Center**
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Mississauga, Ont. L5R 1B8
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Fax: 905-501-4786

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Fax: 713-849-2047

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**Apex Tool Group
Sales & Service Center**
2865 152nd Avenue N.E.
Redmond, WA 98052
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