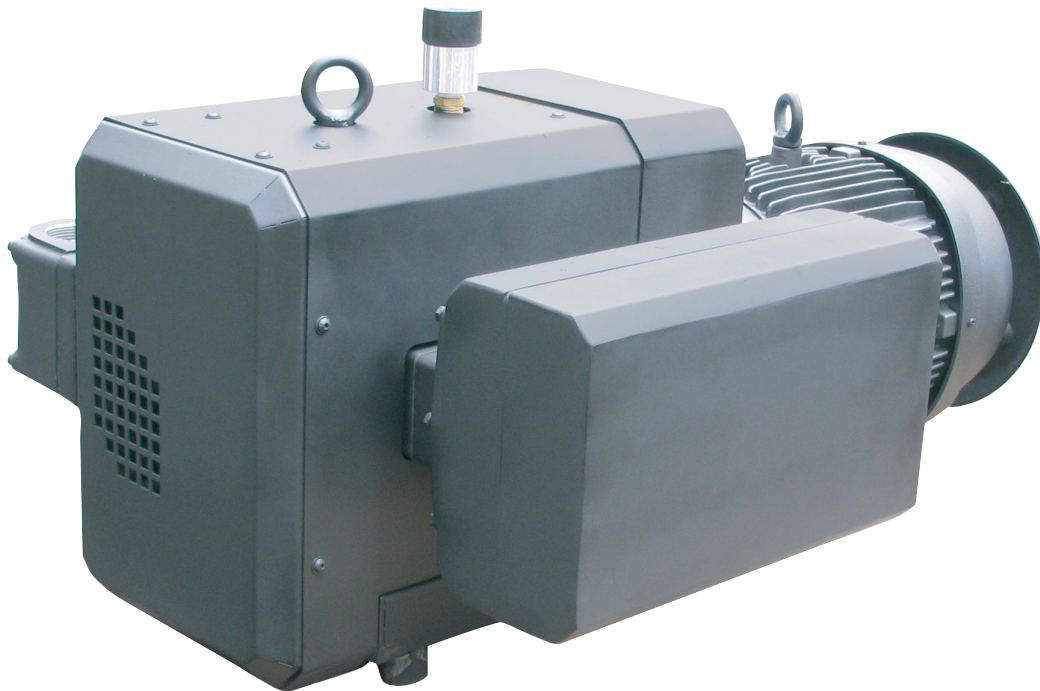


AIRTECH[®]

VACUUM

Operating and Maintenance Instructions

PCX ROTARY CLAW COMPRESSORS



INSTALLATION & OPERATING MANUAL

INSTALLATION & OPERATING MANUAL

PCX-SERIES ROTARY CLAW COMPRESSORS

Please read the manual before operating the compressor.

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INSTALLATION AND OPERATING MANUAL

This manual covers all models of the PCX rotary claw compressor. The model number is printed on the nameplate with the unit's serial number.

Please identify the model number and serial number when ordering parts.

1.0 INSTALLATION

1.1 General description

PCX compressors are dry and contactless machines enclosed in a fan-cooled, ventilated acoustic sound shield. The modular construction consists of two compartments separated by labyrinth seals: a pumping chamber and a gear chamber. In the compressor chamber, two rotary claws rotate in opposite directions. Air is pulled in, compressed, and discharged under pressure. The gear chamber contains lubricated gears for synchronization of the claw rotation. For noise reduction, an inlet silencer can be installed in the compressor's inlet side. For protection against overloads, a pressure safety valve or regulating valve is installed in the exhaust. The compressors are directly driven by a flanged motor via a coupling.

1.2 Unpacking

Inspect the box and compressor carefully for any signs of damage incurred in transit. Since all compressors are ordinarily shipped F. O. B. from Airtech's factory, such damage is the responsibility of the carrier and should be reported to them.

The compressor is bolted to the skid with studs that are connected through the rubber feet of the compressor. Remove the nuts from the underside of the crate and remove the unit from the skid. Unscrew the studs from the rubber feet.

The inlet and exhaust of the compressor are covered with plastic caps to prevent dirt and other foreign substances from entering the unit. Leave these caps in place until you are ready to pipe the unit to your equipment.

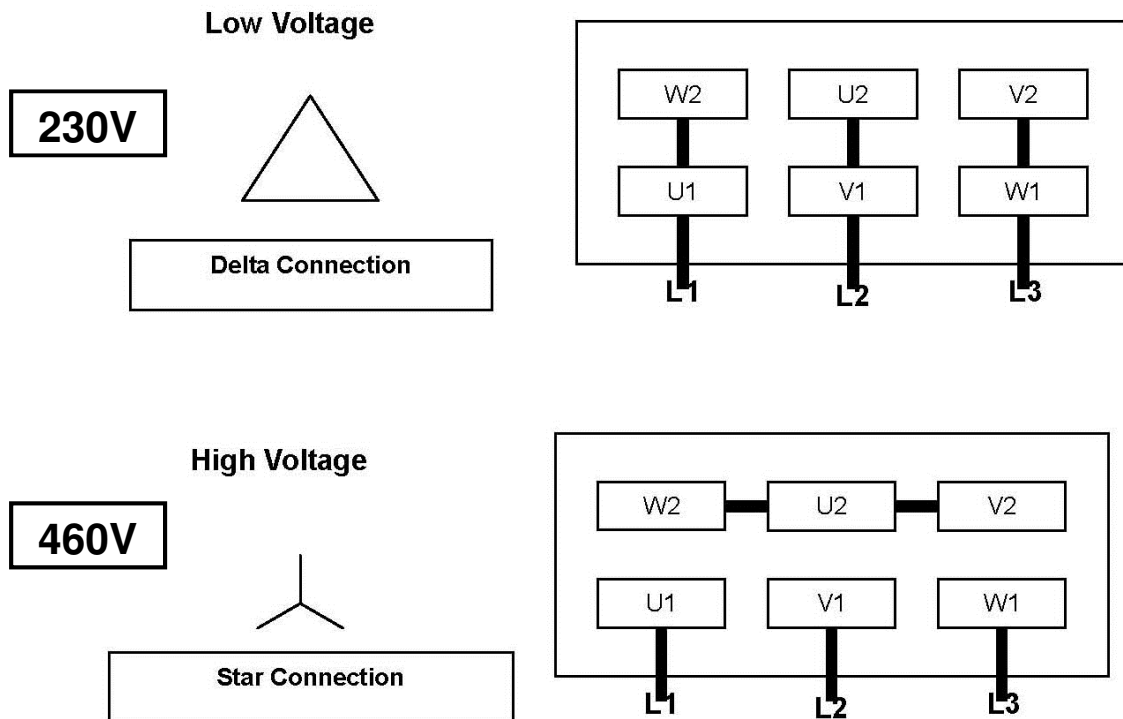
1.3 Location

Install the compressor in a horizontal position on a level surface in a well-ventilated area. Leave 12"-18" of access around the compressor to allow proper cooling. Allow access to the oil sight glass in order to inspect the oil level regularly, and the oil fill and oil drain port for easy service.

1.4 Power Requirements

A schematic diagram for the electrical motor terminal connections is located in the junction box of the motor or on the motor nameplate. Typical wirings for Three Phase Motors are as below:

Wiring Scheme- Three Phase Motor



The motor must be connected in accordance with electrical codes through a fused switch in order to protect the motor against electrical or mechanical overload conditions. The overload of the motor starter must be set at a level equal to the full load motor current listed on the motor nameplate.

If the compressor is supplied with a motor starter, it should be preset according to customer specifications. Please check that these settings are in line with the voltage at your location. If the voltage is different, please contact Airtech for motor and starter information.

Correct direction of rotation is marked by an arrow on the motor fan housing and is counterclockwise when looking at the motor from the motor's fan side.

After electrical connections have been made, the rotation of the motor should be checked. If it is backwards, reverse any two of the three leads at the power connection.

Warning: Motors should only be installed by a qualified electrician, who has experience in wiring three-phase motors. Improper electrical installation can cause injury or death.

Caution: PCX compressors must not be allowed to run backwards. The splash lubrication system is not designed for backward operation and this may result in premature failure of the rotary claw machine.

1.5 Pressure Connections

Use a pipe size that is at least the size of the compressor outlet connection. Smaller pipe lines result in reduced compressor capacity.

Compressors operating in parallel on a common main line should have a manual or automatic shut-off valve or positive action check valve installed in the pressure line. Remove the plastic protective cap from the exhaust port before connecting the compressor to the system.

Should process gas contain dust or other foreign particles, a suitable in line (inlet) filter should be connected to the inlet port. Contact Airtech for recommendations.

The following thread sizes are standard on the compressors (NPT thread is available upon request)

<u>Compressor Model</u>	<u>Inlet Size</u>	<u>Exhaust Size</u>
PCX 100/ 150	1-1/2"	1-1/2"
PCX 250 / 300	2"	2"
PCX 400 & 505	3"	3"

1.6 Oil Filling on Gear Box

After level installation and correct rotation has been established, fill the compressor with the recommended gear oil through the oil fill port if it is shipped without oil. Oil level should be at the 3/4 position on the oil sight glass, as shown on this label:



We recommend using **ATO-3000**, which is supplied by Airtech. The following table gives the approximate quantities of oil required for each model.

Compressor Model	Capacity (liter)
PCX 100/150	0.75
PCX 250/300	1.10
PCX 400/505	1.10

Do not add fill oil with compressor running! Do not overfill.

Caution: Running the compressor before adding oil to the gearbox could result in severe damage to the unit.

Caution: Use of oil that does not meet the recommended specification could result in damage to the unit and void the warranty.

1.7 Lubrication of the bearings (PCX 400/505 ONLY)

The bearings on the drive side of the compressor must be lubricated by gear oil using a splash lubrication principle. The bearings on the non-drive side need to be greased every 5,000 operating hours (see **Section 4.3** for the maintenance schedule). Airtech supplies grease specifically for this purpose: **Airtech Part Number ATG 5400.**

2.0 SAFETY

Please read the following safety notices carefully before operating the compressor.

2.1 General Notices

- Please read the entirety of this installation and operating manual before operating the compressor.
- Airtech shall assume no liability for any accident or failure associated with a failure to comply with instructions in this manual.
- Only a qualified technician should operate the compressor
- If the compressor is not working properly, it must be stopped immediately.

2.2 Warning labels and their explanations

Please check and make sure that the following warning labels are clearly visible on your PCX unit:



2.2.1 Read and Understand the manual:

Read and understand this manual before using the PCX

2.2.2 Burn Hazard:

Hot surface. Do not touch.

2.2.3 Loud noise Hazard

Ear protection must be worn.

2.2.4 Hazardous Voltage:

Disconnect power before opening. Contact causes severe electrical shock

2.3 Location of the labels

The warning labels shown above should be affixed on the top of the compressor's sound shield, except the "Hazardous Voltage" label, which should appear on the cover of motor's terminal box.

3.0 OPERATION

3.1 Start-up

Check rotation of the motor as described in **Section 1.4** (Power Requirements). Fill the compressor with oil as described in **Section 1.5** (Oil Filling).

Run the compressor for a few minutes and then shut down. Check the oil level again. The oil sight glass should appear ½ full.

Add oil through oil fill port if necessary. Compressor oil should only be added when the compressor is off.

3.2 Stopping the compressor

To stop the compressor, turn off the power.

3.3 Operating Conditions

The ambient and suction air temperature must be between 41 °F (5 °C) and 104 °F (40 °C). Standard PCX units must not be used in hazardous environments. Also, it is recommended that any personnel working near the unit wear ear protection.

Caution: Any non-compliance may lead to severe injury to persons or damage to the unit.

Caution: Do not run the compressor without a regulating valve or safety valve. Do not set the regulating valve or safety valve at over permissible pressure. This can cause severe damage to the compressor.

4.0 MAINTENANCE

PCX-Series compressors require very little maintenance. To ensure optimum performance, the following maintenance steps should be followed:

4.1 Compressor Lube Oil

4.1.1 Oil Level

Check the oil level on a monthly basis. Under normal circumstances it should not be necessary to add oil between oil changes. A significant drop in oil level could indicate an oil leak. If the compressor is leaking oil, please check the o-rings, drain plug or oil sight glass.

Check the oil level only when the compressor is shut off. Replenish oil if it drops below bottom position of the oil sight glass.

Caution: Do not add oil while the compressor is running. Hot oil can escape from the oil fill port.

4.1.2 Gear Oil Type and Quantity

Oil level should be at the 3/4 position on the oil sight glass. **We recommend using Airtech Part Number ATO-3000-01**, which is supplied by Airtech. The following table gives the approximate quantities of oil required for each model.

Pump Model	Capacity (liter)
PCX 100/150	0.75
PCX 250/300	1.10
PCX 400/505	1.10

Do not add fill oil with pump running! Do not overfill.

4.1.3 Gear Oil Change

Under normal ambient conditions with proper gear oil, oil needs to be changed every 5000 operating hours.

Caution: If different brand of oil is being filled, the old oil must be drained completely from the gear box.

4.1.4 Grease Supply on the bearings (Applies only to PCX 400/500)

Apply fresh grease (**Airtech Part Number ATG 5400**) to the bearings every 5000 operating hours, but check the condition of grease more frequently if the compressor is operating in an environment with an ambient temperature over 68° F (20° C) and add grease when necessary. Do not over-grease. About 30 grams of grease should be applied to each bearing. The grease can be applied with a grease gun by opening the front cover.

Caution: The interval of lubrication stated above is based on ambient temperature of 68° F (20°C). At 104° F (40°C) ambient temperature, the interval may be reduced to 2,500 operating hours.

4.2 Inline (Inlet) Filter

Check inline (inlet) filter on a weekly basis. The filter cartridge should be cleaned or replaced if it is dirty. Consult Airtech for replacement elements.

Caution: Depending on the mounting position of the filter, be careful not to allow accumulated foreign material to fall in the compressor suction inlet when removing the filter cartridge. Horizontal filter installation is recommended to prevent this.

4.3 Maintenance Chart

Weekly	Check inline inlet filter element. (this might need to be performed more often if there are high particulates in the inlet stream)
Monthly	Check the oil level and protective mesh.
Semi-Annually	Check fans and coupling
Annually	Check Bearings/ Shaft Seals, (this might need to be performed more often if the unit is operating at ambient temperature that exceeds 68° F (20° C).
Every 1500 operating hours	Check grease conditions and add additional grease if necessary, especially if the unit is being operated at an ambient temperature that exceeds 68° F (20° C).
Every 5000 operating hours	Change the gear oil.

5.0 Troubleshooting

Problem	Probable Cause	Remedy
Motor Starter Trips	Incorrect voltage (lower than required)	Check voltage at the motor and correct any sources of voltage drop in the system. Check wiring to ensure it is properly sized according to National Electrical Code requirements.
	Incorrect wiring of the motor.	Ensure the motor is wired according to the instructions contained in the motor junction box. Correct placement of the bridges is necessary to configure your motor for the proper voltage.
	Motor starter is not set correctly or is too small for the application.	Check to ensure the motor starter is set for the full load amps at the operating voltage as indicated on the motor nameplate. Be sure to multiply the full load amperage by any service factor that appears on the motor. If the current required is outside the range of adjustability of the starter, replace the starter with a properly sized starter.
	Motor starter trips too fast.	A motor starter with a high current trip delay should be used to avoid nuisance trips on startup.
Compressor does not reach Capacity	Inlet screen (mesh) of the inlet filter clogged with debris	Check inlet filter element and clean mesh with compressed air or wash with water.
	Pipe work is too long or too small	Use larger diameter pipe and shorten the line length if possible.

Insufficient Capacity (cont'd)	Obstruction in the inlet filter	A blocked air inlet filter will throttle the air on the PCX low pressure compressor. Check the filter to ensure it is clean and replace if necessary.
	Leaks in the air piping	Leaks downstream from the compressor will rob the process of capacity. Check for leaks using soapy water at all pipe joints. Only very large leaks are audible – a number of smaller leaks could result in underperformance and must be checked in a systematic manner
Compressor runs over set pressure	Pressure Regulator or safety valve set incorrectly, or is out of order	Set point again or replace regulator
Compressor does not reach set pressure	Leak in compressor or system	Check compressor and system for leaks
Compressor making too much noise	Contamination of the claws or chamber	Clean the pumping chamber and the claws
	Coupling insert is worn	Replace coupling insert in motor/compressor coupling
	Bearing is worn down	Replace bearings
	Failure of pressure regulator or safety valve	Replace pressure regulator or safety valve

Operating Temperature too High	Ambient temperature too high	Provide adequate ventilation for the installation area so that the ambient temperature never is above 104° F.
	Insufficient clearance around unit	If the clearance around the pump is too small, cooling air cannot flow and the discharge temperature will increase. Allow at least six inches around all surfaces of the pump for cooling air flow and ensure the installation area is properly ventilated.
	Dirty or Blocked Mesh	(See blocked inlet mesh above)
Compressor will not operate (seized up).	Rotary Claws, Bearings or Gears stuck	Call Airtech for service or exchange program (1-888-222-9940)
Compressor will not start	Improper or overloaded supply voltage. Motor starter overload settings are too low or improper, fuses are burned, wire size is too small or too long, causing voltage drop.	Check voltage supply, overload settings in motor starter for size and settings according to motor nameplate. Install proper size wire. If ambient temperature is high, use the next larger size overloads, or adjust settings 5% above motor nameplate value.

6.0 TECHNICAL DATA

Specification: Vacuum Application

Model	PCX 100	PCX 150	PCX 250	PCX 300	PCX 400	PCX 505
Capacity (CFM)	70.6	106	166	212	227	294
Ultimate Pressure (psig)	14.5/29/31.9	17.4/29	8.7/23.2/31.9	14.5/26.1/31.9	14.5/23/30	20.3/29
Motor Rating (HP)	7.5/10	10/15	15/20/25	20/25	20/25/30/40	30/40/50
Speed (RPM)	3450					
Voltage Available	208-230/460					
Avg. Noise Level dB(A)	83	83	85	85	85	85
Gear Box Oil Capacity (Quarts)	0.8	0.8	1.16	1.16	1.16	1.16
Inlet/Outlet connections	1.5"	1.5"	2"	2"	3"	3"
Weight (lbs.)	259/307/328	345/423	517/595/620	652/677/790	783/818/871	940/1044
Accessories	Pressure regulator, safety valve, inlet silencer, inlet filter					

7.0 Safety

7.1 Before repairs are attempted, be sure the power to the unit is off and locked out so accidental startup cannot occur during repairs or troubleshooting.

7.1 When lifting the PCX compressor, use proper and well maintained equipment to avoid injury.

7.3 Some surfaces on the PCX compressor can become too hot to touch during normal operation. Do not attempt to service the pump until it has cooled to room temperature.

7.4 Ensure the electrical installation is done by a qualified electrician in compliance with the National Electrical Code and all local laws and regulations. Failure to do so can cause extreme injury including death.

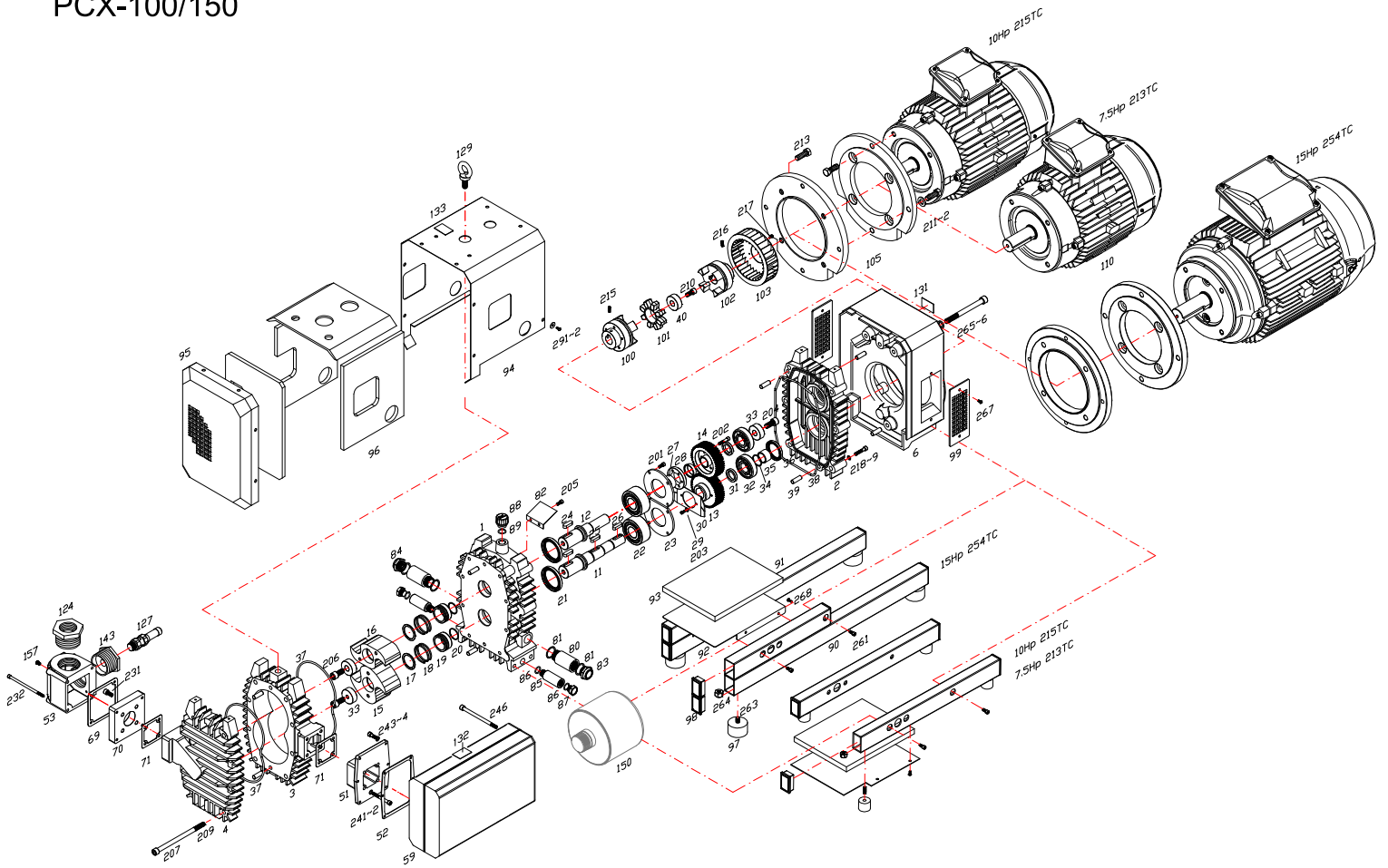
8.0 Storage

8.1 Store the unit in a clean dry place, using desiccant bags if excessive humidity is expected to avoid rusting of the internals of the machine. Rotation of the shaft by hand is recommended if storing for more than 6 months.

9.0 Disposal

9.1 Dispose of any waste oil in compliance with local codes and regulations.

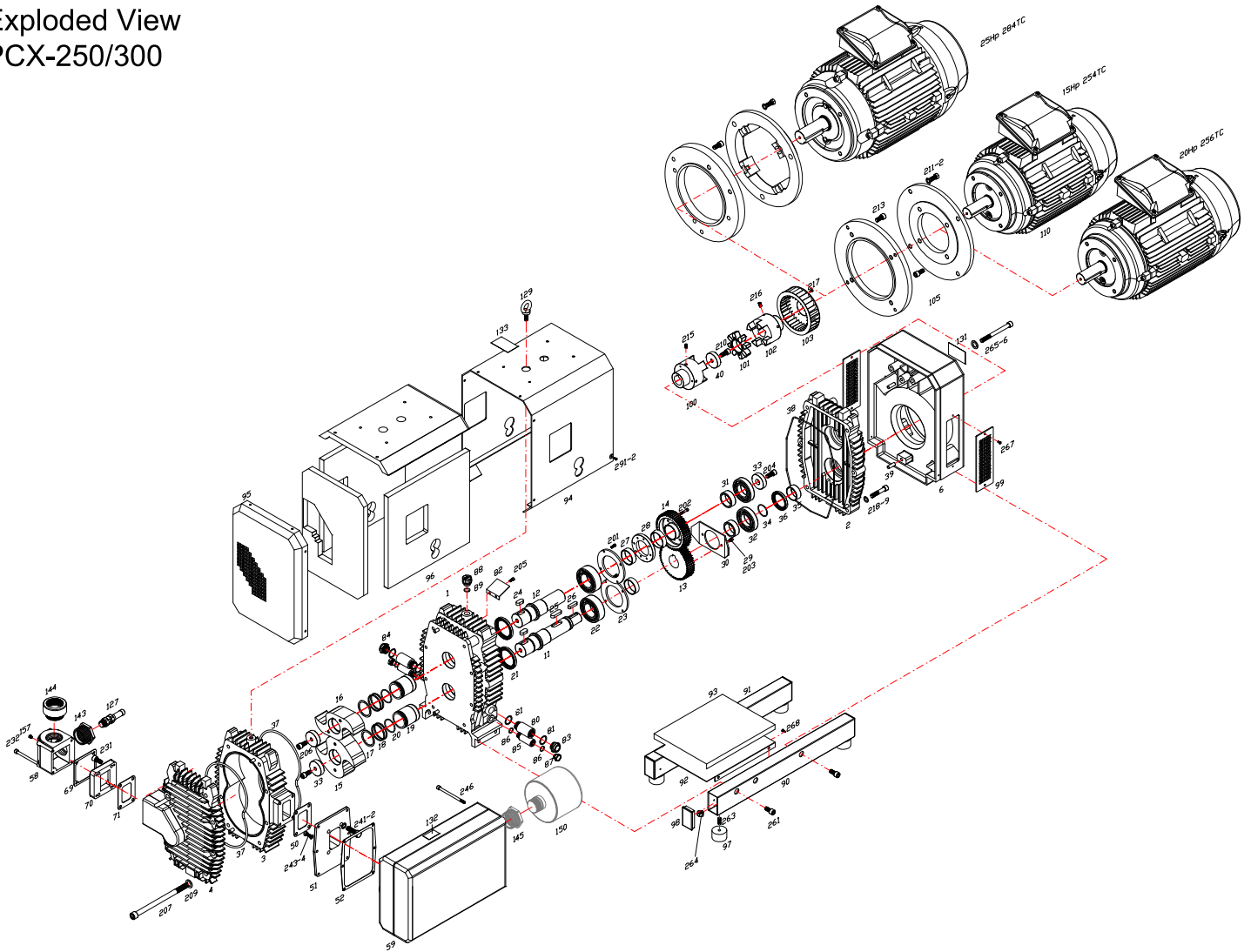
Exploded View
PCX-100/150



PCX 100/150 PARTS LIST

Pos. #	Description	Qty	Pos. #	Description	Qty	Pos. #	Description	Qty	Pos. #	Description	Qty
1	Gear Box Housing (NEW)	1	37	O-Ring, Compressor cover	2	100	Coupling, Pump Side	1	216	Set Screw / M8 x 10	2
2	Gear Box Cover (rear)	1	38	O-Ring, Gear Box cover	1	101	Insert, Coupling	1	217	Round Head Bolt / M5 x 12	5
3	Pump Housing	1	39	Dowel Pin	8	102	Coupling, Motor Side	1	218	Hex. Socket Head Cap Screw / M10 x 60	6
4	Pump Housing Cover 1 (End Plate)	1	40	Locking Disk	1	103	Fan, new, Plastic	1	219	Washer, Spring Lock, 10mm	6
6	Fan Housing	1	51	Flange, Inlet Silencer	1	105	Flange Adapter	1	231	Hex. Socket Head Cap Screw / M8 x 20	4
11	Shaft 1	1	52	Gasket, Exhaust Silencer	1	110	Motor	1	232	Hex. Socket Head Cap Screw / M6 x 80	4
12	Shaft 2	1	53	Exhaust Flange Housing	1	124	Bushing 2" x 1_1/2"	1	241	Hex. Socket Head Cap Screw / M8 x 60	4
13	Gear 1	1	59	Inlet Silencer assembly	1	127	Press Regulator (relief valve)	1	242	Washer, Spring Lock, 8 mm	4
14	Gear 2	1	69	Gasket, Exhaust Side	1	129	Eye Bolt	1	243	Hex. Socket Head Cap Screw / M6 x 25	6
15	Rotor 1	1	70	Flange Adapter, Exhaust	1	130	Label, Direction Arrow	1	244	Washer, Spring Lock, 6mm	6
16	Rotor 2	1	71	Gasket, Flange	2	131	Name Plate	1	246	Hex. Socket Head Cap Screw / M6 x 60	6
17	Spacer	2	80	Pipe, for Oil sight glass	2	132	Lable, Hot	1	261	Hex. Socket Head Cap Screw / M10 x 15	6
18	Piston Ring	4	81	Gasket, Oil Sight Glass	4	133	Lable, read manul	1	263	Set Screw / M8 x 20	4
19	Sleeve	2	82	Plate	1	143	Bushing 2" x 1/2"	1	264	Hexagon Nut / M8	4
20	O-Ring	2	83	Oil Sight Glass	1	150	Inlet Filter	1	265	Hex. Socket Head Cap Screw / M10 x 110	2
21	Shaft Seal,	2	84	Plug for oil Sight Glass	1	157	Plug 1/8"	1	266	Washer, Spring Lock, 10mm	2
22	Bearing,	2	85	Pipe, for Drain Pulg	2	201	Hex. Socket Head Cap Screw / M6 x 15	8	267	Round Head Bolt/ M5 x 10	4
23	Bearing cover	2	86	O-ring, Drain Plug	4	202	Hex. Socket Head Cap Screw / M6 x 25	6	268	Round Head Bolt / M5 x 10	4
24	Key, for Rotor	2	87	Drain Plug	2	203	Hex. Socket Head Cap Screw / M4 x 12	2	291	Round Head Bolt / M5 x 10	12
25	Key, for Gear	1	88	Oil filler Breather, Plastic	1	204	Hex. Socket Head Cap Screw / M8 x 25	1	292	Washer, Flat, 5mm	12
26	Key, for Coupling	1	89	O-Ring for Oil filler	1	205	Hex. Socket Head Cap Screw / M5 x 8	2			
27	Sleeve	2	90	Foot Mount, Right	1	206	Hex. Socket Head Cap Screw / M8 x 25	8			
28	Power Lock	1	91	Foot Mount, Left	1	207	Hex. Socket Head Cap Screw / M10 x 100	8			
29	Washer, Spring Lock, 6mm	2	92	Shield Cover, Bottom with mat for extended base	1	207	Hex. Socket Head Cap Screw / M10 x 130	8			
30	Flinger	1	93	Accoustic Mat for Shield Cover, Bottom	1	209	Washer, Spring Lock, 10mm	1			
31	Sleeve	2	94	Shield Cover, Side, with mat (NEW GB)	1	210	Hex. Socket Head Cap Screw / M8 x 25	1			
32	Bearing,	2	95	Shield Cover, Front with mat	1	211	Hexagon Bolt / M12 x 35	4			
33	Locking Disk	3	96	Accoustic Mat for Shield Cover, front and Side	1	212	Washer, Spring Lock, 12mm	4			
34	O-Ring	1	97	Foot, Rubber	4	213	Hexagon Bolt / M12 x 25	4			
35	Sleeve	1	98	Cover, Plastic Foot Mount	4	214	Hexagon Bolt / M12 x 45	2			
36	Shaft Seal,	1	99	Grill for Fan	2	215	Set Screw / M8 x 10	2			

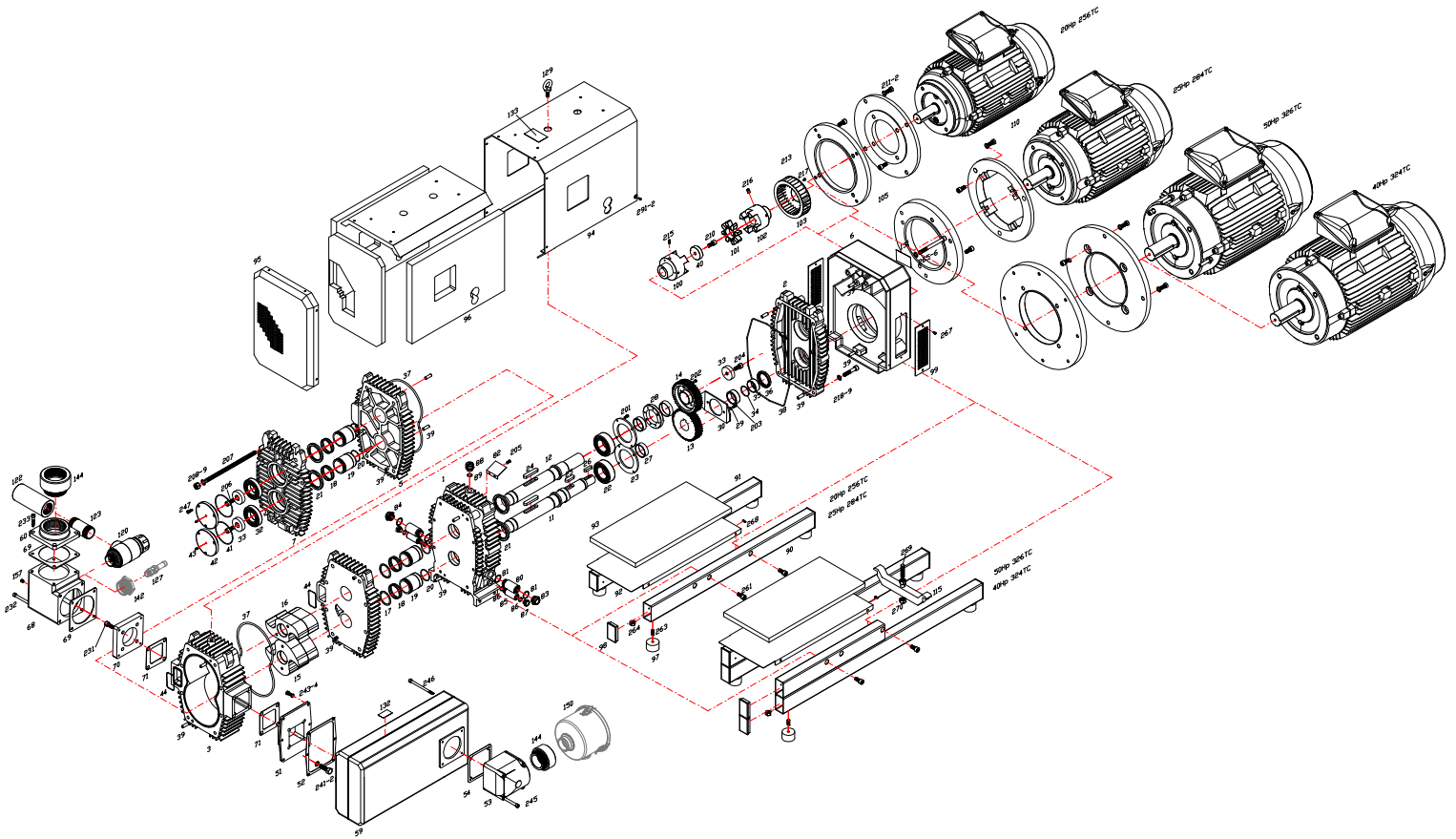
Exploded View
PCX-250/300



PCX 250/300 PARTS LIST

Pos. #	Description	Qty	Pos. #	Description	Qty	Pos. #	Description	Qty	Pos. #	Description	Qty
1	Gear Box Housing (NEW)	1	37	O-Ring, Compressor cover,	2	99	Grill for Fan	2	215	Set Screw / M8 x 15	2
2	Gear Box Cover (rear)	1	38	O-Ring, Gear Box cover,	1	100	Coupling, Pump Side	1	216	Set Screw / M8 x 15	2
3	Pump Housing	1	39	Dowel Pin	8	101	Insert, Coupling	1	217	Round Head Bolt / M5 x 10	5
4	Pump Housing Cover 1 (End Plate)	1	40	Locking Disk	1	102	Coupling, Motor Side	1	218	Hex. Socket Head Cap Screw / M12 x 60	6
6	Fan Housing	1	50	Gasket, Inlet Flange	1	103	Fan, new, Plastic	1	219	Washer, Spring Lock, 12mm	6
11	Shaft 1	1	51	Flange, Inlet Silencer	1	105	Flange Adapter	1	231	Hex. Socket Head Cap Screw / M12 x 25	4
12	Shaft 2	1	52	Gasket, Inlet Silencer	1	110	Motor	1	232	Hex. Socket Head Cap Screw / M6 x 120	4
13	Gear 1	1	58	Exhaust Connection housing	1	121		1	241	Hex. Socket Head Cap Screw / M12 x 70	4
14	Gear 2	1	59	Inlet Silencer assembly	1	127	Press Regulator (relief valve)	1	242	Washer, Spring Lock, 12mm	4
15	Rotor 1	1	69	Gasket, Inlet Connection Housing	1	129	Eye Bolt	1	243	Hex. Socket Head Cap Screw / M8 x 30	6
16	Rotor 2	1	70	Flange Adapter	1	130	Label, Direction Arrow	1	244	Washer, Spring Lock, 8mm	6
17	Spacer	2	71	Gasket, Flange	1	131	Name Plate	1	246	Hex. Socket Head Cap Screw / M8 x 90	9
18	Piston Ring	2	80	Pipe, for Oil sight glass	2	132	Lable, Hot	1	261	Hex. Socket Head Cap Screw / M12 x 25	6
19	Sleeve	2	81	Gasket, Oil Sight Glass	4	133	Lable, read manual	1	263	Set Screw / M10 x 20	4
20	O-Ring	2	82	Plate	1	143	Bushing, Exhaust 2" x 1/2"	1	264	Hexagon Nut / M10	4
21	Shaft Seal	2	83	Oil Sight Glass	1	144	Bushing 2"	1	265	Hex. Socket Head Cap Screw / M12 x 140	2
22	Bearing,	2	84	Plug for oil Sight Glass	1	145	Bushing 2"	1	266	Washer, Spring Lock, 12mm	2
23	Bearing cover	2	85	Pipe, for Drain Plug	2	150	Inlet Filter	1	267	Round Head Bolt/ M5 x 10	4
24	Key, for Rotor	2	86	O-ring, Drain Plug	4	157	Plug 1/8"	1	268	Round Head Bolt / M5 x 10	4
25	Key, for Gear	1	87	Drain Plug	2	201	Hex. Socket Head Cap Screw / M6 x 15	8	291	Round Head Bolt / M5 x 10	12
26	Key, for Coupling	1	88	Oil filler Breather, Plastic	1	202	Hex. Socket Head Cap Screw / M6 x 30	8	292	Washer, Flat, 5mm	12
27	Sleeve	2	89	O-Ring for Oil filler, for PN 100.088.01	1	203	Hex. Socket Head Cap Screw / M6 x 15	2			
28	Power Lock	1	90	Foot Mount, Right	1	204	Hex. Socket Head Cap Screw / M12 x 25	1			
29	Washer, Spring Lock, 6mm	2	91	Foot Mount, Left	1	205	Hex. Socket Head Cap Screw / M5 x 8	2			
30	Flinger	1	92	Shield Cover, Bottom, with mat	1	206	Hex. Socket Head Cap Screw / M12 x 25	2			
31	Sleeve	2	93	Accoustic Mat for Shield Cover, Bottom	1	207	Hex. Socket Head Cap Screw / M12 x 100 / 120	8			
32	Bearing,	2	94	Shield Cover, Side, with mat (NEW GB)	1	209	Washer, Spring Lock, 12mm	8			
33	Locking Disk	3	95	Shield Cover, Front with mat	1	210	Hex. Socket Head Cap Screw / M12 x 25	1			
34	O-Ring	1	96	Accoustic Mat for Shield Cover, Front & Side	1	211	Hexagon Bolt / M12 x 35	4			
35	Sleeve	1	97	Foot, Rubber	4	212	Washer, Spring Lock, 12mm	4			
36	Shaft Seal,	1	98	Cover, Plastic Foot Mount	4	213	Hexagon Bolt / M12 x 25	4			

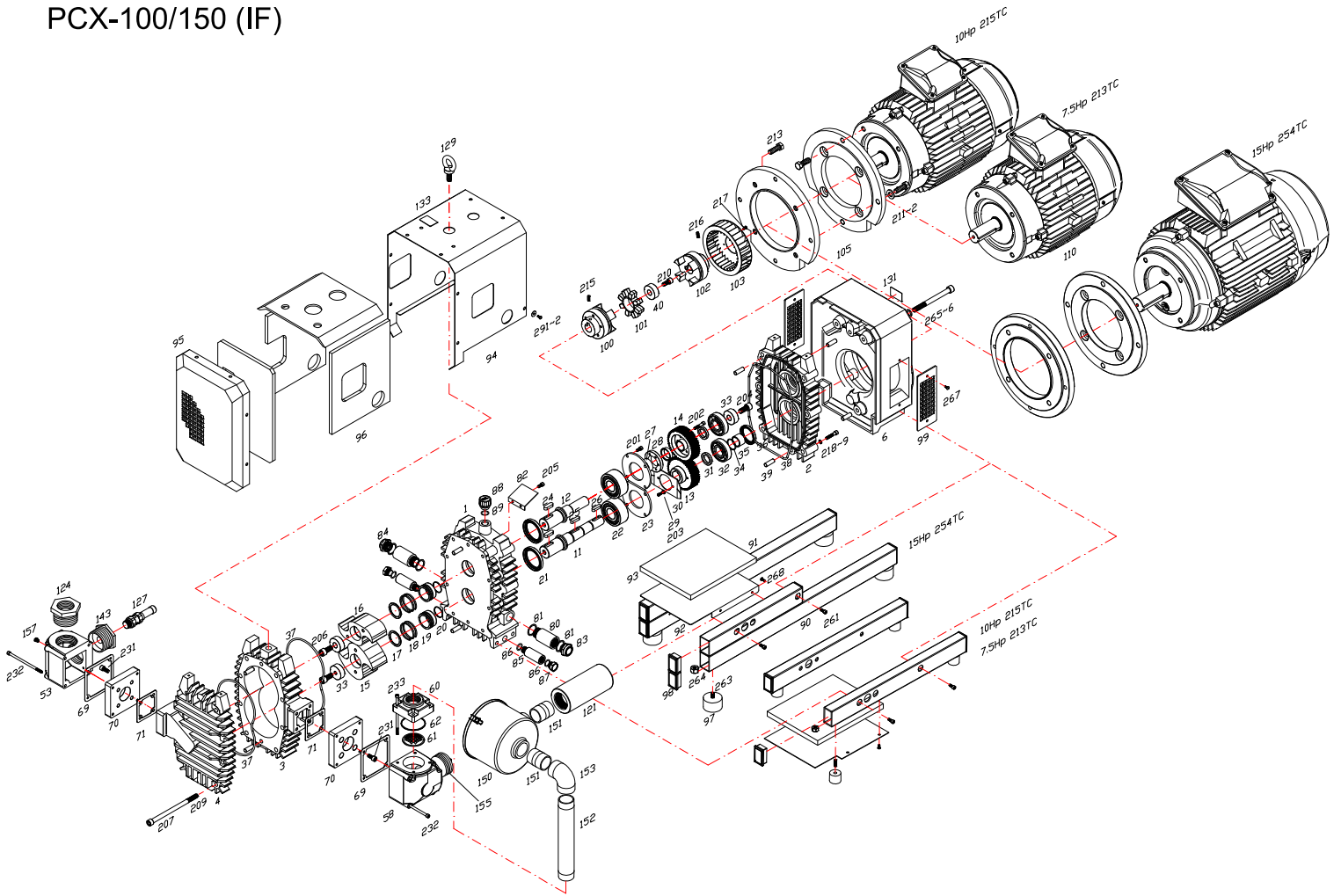
Exploded View
PCX-400/505



PCX 400/505 PARTS LIST

Pos. #	Description	Qty	Pos. #	Description	Qty	Pos. #	Description	Qty	Pos. #	Description	Qty
1	Gear Box Housing (NEW)	1	38	O-Ring, Gear Box cover,	1	96	Accoustic Mat for Shield Cover, Front & Side	1	211	Hexagon Bolt / M12 x 35	4
2	Gear Box Cover (rear)	1	39	Dowel Pin	12	97	Foot, Rubber	4	212	Washer, Spring Lock, 12mm	4
3	Pump Housing	1	40	Locking Disk	1	98	Cover, Plastic Foot Mount	4	213	Hexagon Bolt / M12 x 25	4
4	Pump Housing Cover 1 (End Plate)	1	41	O-ring, Bearing cover	2	99	Grill for Fan	2	215	Set Screw / M8 x 15	2
5	Pump Housing Cover 2 (End Plate)	1	42	Cover, Bearing	2	100	Coupling, Pump Side	1	216	Set Screw / M8 x 15	2
6	Fan Housing	1	43	Nipple set, grease	2	101	Insert, Coupling	1	217	Round Head Bolt / M5 x 12	5
7	Pump Housing Cover (front)	1	44	O-Ring	2	102	Coupling, Motor Side	1	218	Hex. Socket Head Cap Screw / M10 x 60	6
11	Shaft 1	1	51	Flange, Inlet Silencer	1	103	Fan, new, Plastic	1	219	Washer, Spring Lock, 10mm	6
12	Shaft 2	1	52	Gasket, Inlet Silencer, Side	1	105	Flange Adapter	1	231	Hex. Socket Head Cap Screw / M12 x 25	4
13	Gear 1	1	53	Inlet Silencer, Inlet Flange (Threaded)	1	110	Motor	1	232	Hex. Socket Head Cap Screw / M8 x 160	4
14	Gear 2	1	54	Gasket, IS Inlet Flange	1	115	Base W/Bolt, Nut for Motor	1	241	Hex. Socket Head Cap Screw / M12 x 70	4
15	Rotor 1	1	58	Exhaust Flange Housing	1	120	Press Regulator	1	242	Washer, Spring Lock, 12mm	4
16	Rotor 2	1	59	Inlet Silencer assembly	1	122	Silencer, exhaust	1	243	Hex. Socket Head Cap Screw / M8 x 30	6
17	Spacer	2	60	Exhaust Flange	1	123	Pipe, extension, medium 1_1/2"	1	244	Washer, Spring Lock, 8mm	6
18	Piston Ring	8	68	Exhaust Connection Housing	1	127	Press Regulator (relief valve)	1	245	Hex. Socket Head Cap Screw / M8 x 120	4
19	Sleeve	4	69	Gasket, Exhaust Connection Housing	2	129	Eye Bolt	1	246	Hex. Socket Head Cap Screw / M8 x 90	11
20	O-Ring	4	70	Flange Adapter, Exhaust	1	130	Label, Direction Arrow	1	247	Hex. Socket Head Cap Screw / M6 x 20	6
21	Shaft Seal	4	71	Gasket, Flange	2	131	Name Plate	1	261	Hex. Socket Head Cap Screw / M12 x 25	6
22	Bearing,	2	80	Pipe, for Oil sight glass	2	132	Lable, Hot	1	263	Set Screw / M12 x 30	4
23	Bearing cover	2	81	Gasket, Oil Sight Glass	4	133	Lable, read manul	1	264	Hexagon Nut / M12	4
24	Key, for Rotor	2	82	Plate	1	142	Bushing 1_1/2" x 1/2"	1	265	Hex. Socket Head Cap Screw / M12 x 140	2
25	Key, for Gear	1	83	Oil Sight Glass	1	144	Bushing 3"	2	266	Washer, Spring Lock, 12mm	2
26	Key, for Coupling	1	84	Plug for oil Sight Glass	1	150	Inlet Filter	1	267	Round Head Bolt/ M5 x 10	4
27	Sleeve	2	85	Pipe, for Drain Plug	2	157	Plug 1/8"	1	268	Round Head Bolt / M5 x 10	4
28	Power Lock	1	86	Gasket, Drain Plug	2	201	Hex. Socket Head Cap Screw / M6 x 15	8	269	Bolt / M14 x 130	1
29	Wahser, Spring	2	87	Drain Plug	2	202	Hex. Socket Head Cap Screw / M6 x 30	8	270	Hexagon Nut / M14	2
30	Flinger	1	88	Oil filler Breather, Plastic	1	203	Hex. Socket Head Cap Screw / M6 x 15	2	291	Round Head Bolt / M5 x 10	12
31	Sleeve,	1	89	O-Ring for Oil filler, for PN 100.088.00	1	204	Hex. Socket Head Cap Screw / M12 x25	1	292	Washer, Flat, 5mm	12
32	Bearing,	2	90	Foot Mount, Right	1	205	Hex. Socket Head Cap Screw / M5 x 8	2			
33	Locking Disk	3	91	Foot Mount, Left	1	206	Hex. Socket Head Cap Screw / M12 x25	2			
34	O-Ring	1	92	Shield Cover, Bottom, with mat	1	207	Stud Bolt / M12 x 275 / 290	8			
35	Sleeve,	1	93	Accoustic Mat for Shield Cover, Bottom	1	208	Hexagon Nut / M12	8			
36	Shaft Seal,	1	94	Shield Cover, Side, with mat (NEW GB)	1	209	Washer, Spring Lock, 12mm	8			
37	O-Ring, Compressor cover,	2	95	Shield Cover, Front with mat	1	210	Hex. Socket Head Cap Screw / M12 x 25	1			

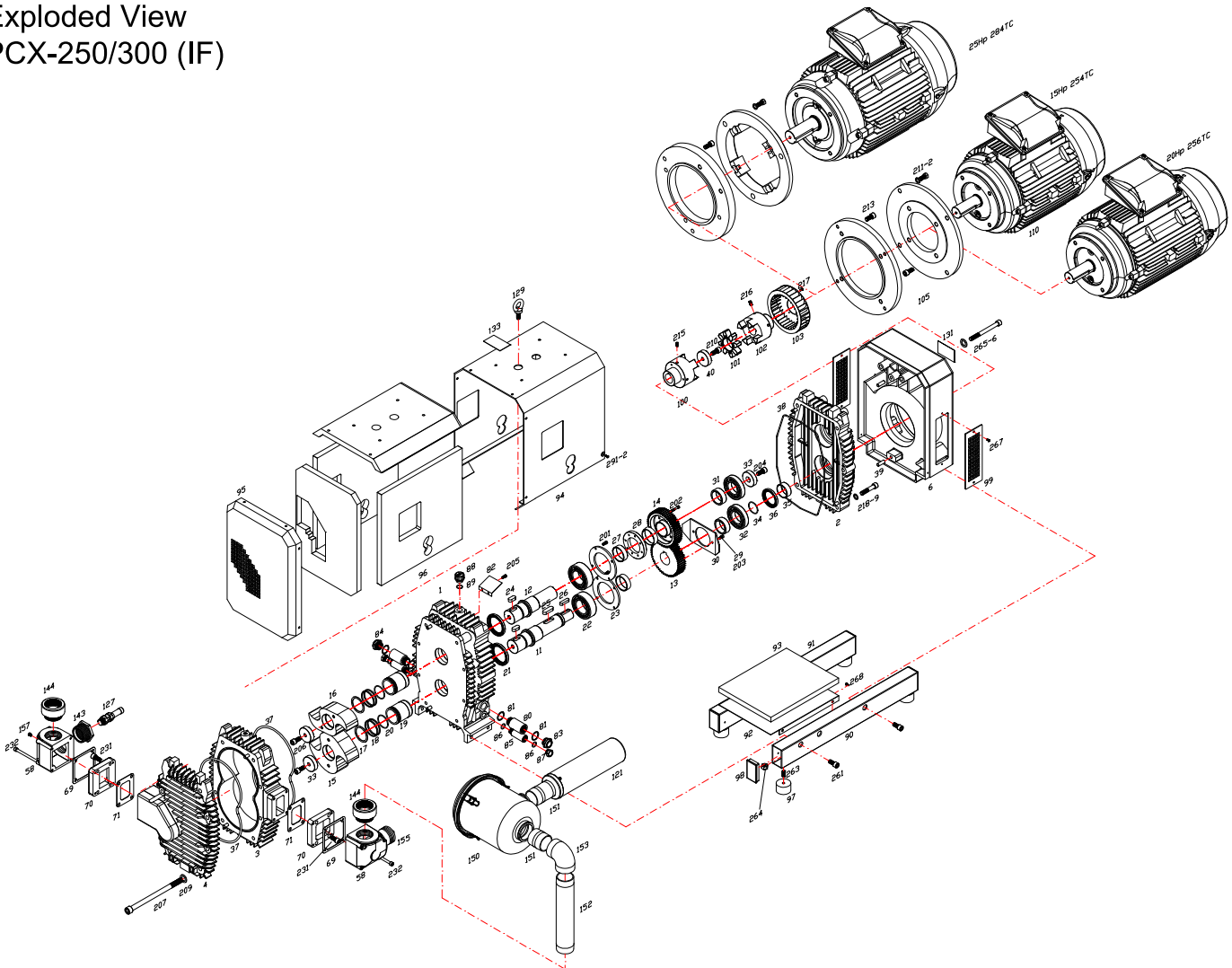
Exploded View
PCX-100/150 (IF)



PCX 100/150 IF PARTS LIST

Pos. #	Description	Qty	Pos. #	Description	Qty	Pos. #	Description	Qty	Pos. #	Description	Qty
1	Gear Box Housing (NEW)	1	37	O-Ring, Compressor cover	2	96	Acoustic Mat for Shield Cover, front and Side	1	207	Hex. Socket Head Cap Screw / M10 x 130	8
2	Gear Box Cover (rear)	1	38	O-Ring, Gear Box cover	1	97	Foot, Rubber	4	209	Washer, Spring Lock, 10mm	1
3	Pump Housing	1	39	Dowel Pin	8	98	Cover, Plastic Foot Mount	4	210	Hex. Socket Head Cap Screw / M8 x 25	1
4	Pump Housing Cover 1 (End Plate)	1	40	Locking Disk	1	99	Grill for Fan	2	211	Hexagon Bolt / M12 x 35	4
6	Fan Housing	1	51	Flange, Inlet Silencer	1	100	Coupling, Pump Side	1	212	Washer, Spring Lock, 12mm	4
11	Shaft 1	1	52	Gasket, Exhaust Silencer	1	101	Insert, Coupling	1	213	Hexagon Bolt / M12 x 25	4
12	Shaft 2	1	53	Exhaust Connection Housing	1	102	Coupling, Motor Side	1	214	Hexagon Bolt / M12 x 45	2
13	Gear 1	1	58	Inlet Connection Housing	1	103	Fan, new, Plastic	1	215	Set Screw / M8 x 10	2
14	Gear 2	1	59	Inlet Silencer assembly	1	105	Flange Adapter	1	216	Set Screw / M8 x 10	2
15	Rotor 1	1	60	Inlet flange, Upper Housing	1	110	Motor	1	217	Round Head Bolt / M5 x 12	5
16	Rotor 2	1	61	Inlet screen (Conical)	1	121	Silencer, Inlet	1	218	Hex. Socket Head Cap Screw / M10 x 60	6
17	Spacer	2	62	O-Ring, Inlet Flange, low and upper part	1	124	Bushing 2" x 1_1/2"	1	219	Washer, Spring Lock, 10mm	6
18	Piston Ring	4	69	Gasket, Connection Housing Side	2	127	Press Regulator (relief valve)	1	231	Hex. Socket Head Cap Screw / M8 x 20	8
19	Sleeve	2	70	Flange Adapter, Exhaust	2	129	Eye Bolt	1	232	Hex. Socket Head Cap Screw / M6 x 80	8
20	O-Ring	2	71	Gasket, Flange	2	130	Label, Direction Arrow	1	233	Hex. Socket Head Cap Screw / M6 x 65	4
21	Shaft Seal,	2	80	Pipe, for Oil sight glass	2	131	Name Plate	1	241	Hex. Socket Head Cap Screw / M8 x 60	4
22	Bearing,	2	81	Gasket, Oil Sight Glass	4	132	Lable, Hot	1	242	Washer, Spring Lock, 8 mm	4
23	Bearing cover	2	82	Plate	1	133	Lable, read manul	1	243	Hex. Socket Head Cap Screw / M6 x 25	6
24	Key, for Rotor	2	83	Oil Sight Glass	1	143	Bushing 2" x 1/2"	1	244	Washer, Spring Lock, 6mm	6
25	Key, for Gear	1	84	Plug for oil Sight Glass	1	151	Pipe, extension, Short, inlet 1_1/2"	2	246	Hex. Socket Head Cap Screw / M6 x 60	6
26	Key, for Coupling	1	85	Pipe, for Drain Pulg	2	152	Pipe, extension, inlet 1_1/2"	1	261	Hex. Socket Head Cap Screw / M10 x 15	6
27	Sleeve	2	86	O-ring, Drain Plug	4	153	Elbow, inlet 1_1/2"	1	263	Set Screw / M8 x 20	4
28	Power Lock	1	87	Drain Plug	2	155	Plug 1_1/2"	1	264	Hexagon Nut / M8	4
29	Washer, Spring Lock, 6mm	2	88	Oil filler Breather, Plastic	1	157	Plug 1/8"	1	265	Hex. Socket Head Cap Screw / M10 x 110	2
30	Flinger	1	89	O-Ring for Oil filler	1	201	Hex. Socket Head Cap Screw / M6 x 15	8	266	Washer, Spring Lock, 10mm	2
31	Sleeve	2	90	Foot Mount, Right	1	202	Hex. Socket Head Cap Screw / M6 x 25	6	267	Round Head Bolt/ M5 x 10	4
32	Bearing,	2	91	Foot Mount, Left	1	203	Hex. Socket Head Cap Screw / M4 x 12	2	268	Round Head Bolt / M5 x 10	4
33	Locking Disk	3	92	Shield Cover, Bottom with mat for extended base	1	204	Hex. Socket Head Cap Screw / M8 x 25	1	291	Round Head Bolt / M5 x 10	12
34	O-Ring	1	93	Acoustic Mat for Shield Cover, Bottom	1	205	Hex. Socket Head Cap Screw / M5 x 8	2	292	Washer, Flat, 5mm	12
35	Sleeve	1	94	Shield Cover, Side, with mat (NEW GB)	1	206	Hex. Socket Head Cap Screw / M8 x 25	8			
36	Shaft Seal,	1	95	Shield Cover, Front with mat	1	207	Hex. Socket Head Cap Screw / M10 x 100	8			

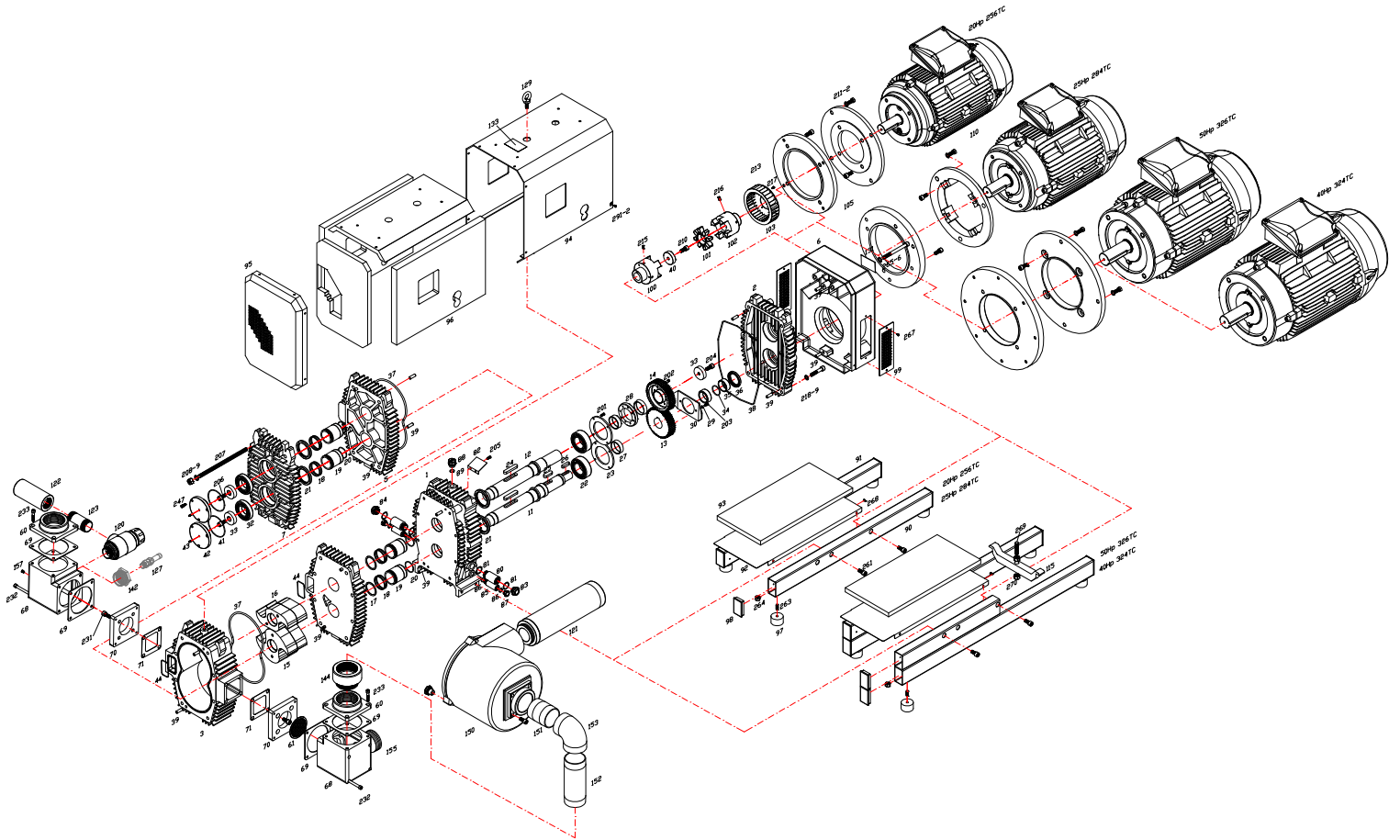
Exploded View
PCX-250/300 (IF)



PCX 250/300 IF PARTS LIST

Pos. #	Description	Qty	Pos. #	Description	Qty	Pos. #	Description	Qty	Pos. #	Description	Qty
1	Gear Box Housing (NEW)	1	37	O-Ring, Compressor cover,	2	103	Fan, new, Plastic	1	216	Set Screw / M8 x 15	2
2	Gear Box Cover (rear)	1	38	O-Ring, Gear Box cover,	1	105	Flange Adapter	1	217	Round Head Bolt / M5 x 10	5
3	Pump Housing	1	39	Dowel Pin	8	110	Motor	1	218	Hex. Socket Head Cap Screw / M12 x 60	6
4	Pump Housing Cover 1 (End Plate)	1	40	Locking Disk	1	121	Silencer, Inlet	1	219	Washer, Spring Lock, 12mm	6
6	Fan Housing	1	58	Connection Housing	2	127	Press Regulator (relief valve)	1	231	Hex. Socket Head Cap Screw / M12 x 25	4
11	Shaft 1	1	69	Gasket, Connection Housing	2	129	Eye Bolt	1	232	Hex. Socket Head Cap Screw / M6 x 120	8
12	Shaft 2	1	70	Flange Adapter	2	130	Label, Direction Arrow	1	261	Hex. Socket Head Cap Screw / M12 x 25	6
13	Gear 1	1	71	Gasket, Flange	2	131	Name Plate	1	263	Set Screw / M10 x 20	4
14	Gear 2	1	80	Pipe, for Oil sight glass	2	132	Lable, Hot	1	264	Hexagon Nut / M10	4
15	Rotor 1	1	81	Gasket, Oil Sight Glass	4	133	Lable, read manul	1	265	Hex. Socket Head Cap Screw / M12 x 140	2
16	Rotor 2	1	82	Plate	1	143	Bushing, Exhaust 2" x 1/2"	1	266	Washer, Spring Lock, 12mm	2
17	Spacer	2	83	Oil Sight Glass	1	144	Bushing 2"	2	267	Round Head Bolt/ M5 x 10	4
18	Piston Ring	2	84	Plug for oil Sight Glass	1	150	Inlet Filter	1	268	Round Head Bolt / M5 x 10	4
19	Sleeve	2	85	Pipe, for Drain Plug	2	151	Pipe, extension, Short, inlet 2"	2	291	Round Head Bolt / M5 x 10	12
20	O-Ring	2	86	O-ring, Drain Plug	4	152	Pipe, extension, inlet 2"	1	292	Washer, Flat, 5mm	12
21	Shaft Seal	2	87	Drain Plug	2	153	Elbow, inlet 2"	1			
22	Bearing,	2	88	Oil filler Breather, Plastic	1	155	Plug 1_1/2"	1			
23	Bearing cover	2	89	O-Ring for Oil filler, for PN 100.088.01	1	157	Plug 1/8"	1			
24	Key, for Rotor	2	90	Foot Mount, Right	1	201	Hex. Socket Head Cap Screw / M6 x 15	8			
25	Key, for Gear	1	91	Foot Mount, Left	1	202	Hex. Socket Head Cap Screw / M6 x 30	8			
26	Key, for Coupling	1	92	Shield Cover, Bottom, with mat	1	203	Hex. Socket Head Cap Screw / M6 x 15	2			
27	Sleeve	2	93	Accoustic Mat for Shield Cover, Bottom	1	204	Hex. Socket Head Cap Screw / M12 x 25	1			
28	Power Lock	1	94	Shield Cover, Side, with mat (NEW GB)	1	205	Hex. Socket Head Cap Screw / M5 x 8	2			
29	Washer, Spring Lock, 6mm	2	95	Shield Cover, Front with mat	1	206	Hex. Socket Head Cap Screw / M12 x 25	2			
30	Flinger	1	96	Accoustic Mat for Shield Cover, Front & Side	1	207	Hex. Socket Head Cap Screw / M12 x 100 / 120	8			
31	Sleeve	2	97	Foot, Rubber	4	209	Washer, Spring Lock, 12mm	8			
32	Bearing,	2	98	Cover, Plastic Foot Mount	4	210	Hex. Socket Head Cap Screw / M12 x 25	1			
33	Locking Disk	3	99	Grill for Fan	2	211	Hexagon Bolt / M12 x 35	4			
34	O-Ring	1	100	Coupling, Pump Side	1	212	Washer, Spring Lock, 12mm	4			
35	Sleeve	1	101	Insert, Coupling	1	213	Hexagon Bolt / M12 x 25	4			
36	Shaft Seal,	1	102	Coupling, Motor Side	1	215	Set Screw / M8 x 15	2			

Exploded View
PCX-400/505 (IF)



PCX 400/505 IF PARTS LIST

Pos. #	Description	Qty	Pos. #	Description	Qty	Pos. #	Description	Qty	Pos. #	Description	Qty
1	Gear Box Housing (NEW)	1	38	O-Ring, Gear Box cover,	1	100	Coupling, Pump Side	1	210	Hex. Socket Head Cap Screw / M12 x 25	1
2	Gear Box Cover (rear)	1	39	Dowel Pin	12	101	Insert, Coupling	1	211	Hexagon Bolt / M12 x 35	4
3	Pump Housing	1	40	Locking Disk	1	102	Coupling, Motor Side	1	212	Washer, Spring Lock, 12mm	4
4	Pump Housing Cover 1 (End Plate)	1	41	O-ring, Bearing cover	2	103	Fan, new, Plastic	1	213	Hexagon Bolt / M12 x 25	4
5	Pump Housing Cover 2 (End Plate)	1	42	Cover, Bearing	2	105	Flange Adapter	1	215	Set Screw / M8 x 15	2
6	Fan Housing	1	43	Nipple set, grease	2	110	Motor	1	216	Set Screw / M8 x 15	2
7	Pump Housing Cover (front)	1	44	O-Ring	2	115	Base W/Bolt, Nut for Motor	1	217	Round Head Bolt / M5 x 12	5
11	Shaft 1	1	50	Gasket, Discharge	1	120	Press Regulator	1	218	Hex. Socket Head Cap Screw / M10 x 60	6
12	Shaft 2	1	60	Inlet flange, Upper Housing (Threaded), G 3"	2	121	Silencer, Inlet	1	219	Washer, Spring Lock, 10mm	6
13	Gear 1	1	61	Inlet screen (Conical)	1	122	Silencer, exhaust	1	231	Hex. Socket Head Cap Screw / M12 x 25	4
14	Gear 2	1	68	Connection Housing	2	123	Pipe, extension, medium 1_1/2"	1	232	Hex. Socket Head Cap Screw / M8 x 160	4
15	Rotor 1	1	69	Gasket, Connection Housing	4	127	Press Regulator (relief valve)	1	247	Hex. Socket Head Cap Screw / M6 x 20	6
16	Rotor 2	1	70	Flange Adapter	2	129	Eye Bolt	1	261	Hex. Socket Head Cap Screw / M12 x 25	6
17	Spacer	2	71	Gasket, Flange	2	130	Label, Direction Arrow	1	263	Set Screw / M12 x 30	4
18	Piston Ring	8	80	Pipe, for Oil sight glass	2	131	Name Plate	1	264	Hexagon Nut / M12	4
19	Sleeve	4	81	Gasket, Oil Sight Glass	4	132	Lable, Hot	1	265	Hex. Socket Head Cap Screw / M12 x 140	2
20	O-Ring	4	82	Plate	1	133	Lable, read manul	1	266	Washer, Spring Lock, 12mm	2
21	Shaft Seal	4	83	Oil Sight Glass	1	142	Bushing 1_1/2" x 1/2"	1	267	Round Head Bolt/ M5 x 10	4
22	Bearing,	2	84	Plug for oil Sight Glass	1	144	Bushing 3"	1	268	Round Head Bolt / M5 x 10	4
23	Bearing cover	2	85	Pipe, for Drain Plug	2	150	Inlet Filter	1	269	Bolt / M14 x 130	1
24	Key, for Rotor	2	86	Gasket, Drain Plug	2	151	Pipe, extension, Short, inlet 3"	1	270	Hexagon Nut / M14	2
25	Key, for Gear	1	87	Drain Plug	2	152	Pipe, extension, inlet 3"	1	291	Round Head Bolt / M5 x 10	12
26	Key, for Coupling	1	88	Oil filler Breather, Plastic	1	153	Elbow 3"	1	292	Washer, Flat, 5mm	12
27	Sleeve	2	89	O-Ring for Oil filler, for PN 100.088.00	1	155	Plug 1_1/2"	1			
28	Power Lock	1	90	Foot Mount, Right	1	157	Plug 1/8"	1			
29	Wahser, Spring	2	91	Foot Mount, Left	1	201	Hex. Socket Head Cap Screw / M6 x 15	8			
30	Flinger	1	92	Shield Cover, Bottom, with mat	1	202	Hex. Socket Head Cap Screw / M6 x 30	8			
31	Sleeve,	1	93	Accoustic Mat for Shield Cover, Bottom	1	203	Hex. Socket Head Cap Screw / M6 x 15	2			
32	Bearing,	2	94	Shield Cover, Side, with mat (NEW GB)	1	204	Hex. Socket Head Cap Screw / M12 x25	1			
33	Locking Disk	3	95	Shield Cover, Front with mat	1	205	Hex. Socket Head Cap Screw / M5 x 8	2			
34	O-Ring	1	96	Accoustic Mat for Shield Cover, Front & Side	1	206	Hex. Socket Head Cap Screw / M12 x25	2			
35	Sleeve,	1	97	Foot, Rubber	4	207	Stud Bolt / M12 x 275 / 290	8			
36	Shaft Seal,	1	98	Cover, Plastic Foot Mount	4	208	Hexagon Nut / M12	8			
37	O-Ring, Compressor cover,	2	99	Grill for Fan	2	209	Washer, Spring Lock, 12mm	8			

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