

Section 9: *ILLUSTRATED PARTS*

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Section 9: *ILLUSTRATED PARTS*

This section provides illustrations of Evolution RC assemblies and each illustration is keyed by item numbers to an accompanying parts list. The parts lists provide the part numbers and descriptions of each item that is called out on the illustrations. When ordering replacement parts, specify the part number and description, and the serial number of the centrifuge.

NOTE:

Tables throughout this section contain part numbers valid at the time of printing. All part numbers are subject to change without notice. Part numbers in **BOLD BLACK** type are currently stocked at our parts depot and are routinely available. Other parts listed in **RED** will be provided on a best effort basis.

**Replacement Parts List
Evolution RC**

Figure 9-1. Evolution RC Control Console

Item	Description	Part #
1	KNOB, CONTROL	72970
2	BATTERY BACKUP PC104 (4940BM)	73300
3	KIT PC-104/COMPACT FLASH	73340
4	CABLE RIBBON, IDE	73826
5	CONSOLE ASSY, REAR	72971
6	KNOB, CONSOLE PIVOT	92793
7	PLATE MOUNTING HARD DRIVE	73824
8	COMPACT FLASH MEMORY use KIT PC-104/COMPACT FLASH	73340
9	KIT, BUTTON DISPLAY BOARD	73337
9	KIT, KNOB DISPLAY BOARD	73338
10	OVERLAY ASSY, BUTTON	73443
10	OVERLAY ASSY, KNOB	73439
11	CONSOLE FRONT	72907
	Kit, Upgrade Knob Evolution RC AFM (LCD Module)	73889
	Kit, Upgrade Button Evolution RC AFM (LCD Module)	73891
	KIT, LCD ASSEMBLY	73341
	KIT, LCD TRANSITION BOARD	73343
	Low Voltage Power Supply Harness	72924

Figure 9-2. Evolution RC Top Deck & Door Assemblies

Item	Description	Part #
1	DECK, TOP FRONT ASSEMBLY	73408
2	DECK, TOP REAR	72904
3	DOOR HANDLE ASSEMBLY, EVOLUTION	73825
4	DOOR PLATE ASSEMBLY (Steel plate & top panel only)	72880
5	Kit, Roller Replacement	73869
	DOOR LATCH RAMP (does not include door magnets which must be ordered separately)	72943
	MAGNET, 0.250" DIAMETER, (4 Magnets needed for door latch ramp)	67653

Replacement Parts List Evolution RC

Figure 9-3. Evolution RC Main Assembly

Item No.	Description	Part No.
1	PANEL, FRONT, ASSEMBLY (Does not include decals)	72900
1	DECAL, EVOLUTION	72972
1	DECAL, KENDRO, LARGE	72973
2	GASKET, KSB PORT, EVOLUTION	72983
3	COVER, KSB, EXTERNAL	72899
4	PLUG, KSB, INTERNAL	72823
	HOLDER ASSEMBLY, TUBING (Tubing holder for TZ-28 rotor)	73486
5	SLIDER, EVAPORATOR SEAL, EVOLUTION (Beneathe Seal)	72963
6	SEAL, EVAPORATOR	72845
7	PANEL, BACK	72912
8	CORD ASSEMBLY, POWER, EVOLUTION RC (208 volt 60 Hz Centrifuges)	76178
8	CORD, POWER, BLACK, 4 CONDUCTOR (4940T) (Single Phase 50 Hz Centrifuges)	50585
8	CORD, POWER, 5 CONDUCTOR (2844) (Poly Phase 50 Hz Centrifuges)	50543

Figure 9-4. Evolution RC Door Rail Detail

Item No.	Description	Part No.
1	Kit, Door Repair (S/N 10200647 & Below)	73870
1	DOOR RAIL, LEFT (S/N 10200648 & Above)	73863
2	PULLEY, IDLER (Obsolete starting with 10200648, Use #73870 on machines S/N 10200647 & Below)	72962
3	DOOR STOP BUMPER	73861
4	REEL, RETRACTOR (Use on S/N 10200648 & below only)	72890
5	RAIL, DOOR, RIGHT (Obsolete use #72870 for S/N 10200647 & Below)	72876
5	RAIL, DOOR, RIGHT (Use on S/N 10200647 & above only)	73862
6	KIT, DOOR LATCH, EVOLUTION	73452
7	CABLE ASSEMBLY, DOOR SENSOR, INST	71719
8	KIT, DOOR LATCH SENSOR	73362

Figure 9-5. Evolution RC Rear View

Item No.	Description	Part No.
1	KIT, POWER SUPPLY	74777
2	RELAY SOLID STATE #1 CRYDOM #H (Refrigeration Relay)	68794
3	FAN, CONDENSER, EVOLUTION	72831
4	KIT, REFRIGERATION BOARD	73334
5	FILTER EMI 250/30A KK-1151	92005

**Replacement Parts List
Evolution RC**

Figure 9-6. Evolution RC Front View

Item No.	Description	Part No.
1	BREAKER, CIRCUIT (Single phase 30 amp)	92794
1	BREAKER, CIRCUIT 3 POLE (Poly Phase 30 amp)	92824
2	GASKET, CIRCUIT BREAKER	73409
3	PLENUM SUPPORT, MOTOR COOLING	72988
4	KIT, PCB MOTOR SENSOR, KE (S/N 10300735 & Below)	73333
5	TRANSFORMER ASSEMBLY, EVOLUTION	73467
6	FAN, 230V AXIAL COOLING (Motor cooling fan)	92921
6	Finger Guard, Fan	90392
7	LEVELING FOOT	72979

Figure 9-7. Evolution RC Drive Control Chassis

Item No.	Description	Part No.
1	CAPACITOR, PFC, 5700MFD 500VAC	72850
2	PFC / BRAKE FAN	69380
3	DRIVE CONTROL MODULE FAN	92921
4	KIT, DRIVE INTERFACE BOARD	73332
5	DRIVE CONTROL MODULE	72913
5	RECONDITIONED DRIVE CONTROL MODULE	R72913
6	PFC ASSEMBLY	72886
6	RECONDITIONED PFC ASSEMBLY	R72886
7	CALROD BRAKE RESISTOR	91046

**Replacement Parts List
Evolution RC**

Figure 9-8. Evolution RC Condenser Assembly

Item No.	Description	Part No.
1	KIT, FILTER DRIER, EVOLUTION	73328
2	KIT, EXPANSION VALVE, EVOLUTION	73458
3	COIL, SOLENOID, LIQUID LINE	92773
4	TRANSORB ASSEMBLY, SOLENOID (Surge Suppressor)	71704
5	CAPACITOR, RUN	92733
6	CAPACITOR, START (60 Hz centrifuges)	92734
6	CAPACITOR, START (50 Hz centrifuges)	91922
7	VARISTOR, POTENTIAL RELAY (4940BB)	71730
8	RELAY, POTENTIAL	92732
9	KIT, CONDENSER, EVOLUTION 60HZ	73326
9	KIT, CONDENSER, 50HZ EVOLUTION	73832
10	KIT, SUCTION LINE, EVOLUTION	73456
11	SEAL,TEFLON 5/8" X 3/4"	66952
12	SEAL,TEFLON FBR 7/8" ID X	61768
13	COIL, SOLENOID, HOT GAS	92774
14	TRANSORB ASSEMBLY, SOLENOID (Surge Suppressor)	71704

Figure 9-9. Evolution RC Motor / Gyro Assembly

Item No.	Description	Part No.
1	SPINDLE, ASSEMBLY EVOLUTION RC	59194
2	SCREW, SET, CUP PT M4 X 6MM	92815
3	SLINGER, GYRO, 26K	72863
4	KIT, TEMP SENSOR / GYRO BOOT	73360
5	INSULATION, GYRO BOOT	73430
6	INSULATION, BOOT, GYRO, LOWER	73316
7	RING, SPRING, CLAMP, OUTER	72871
8	KIT, IMBALANCE SENSOR	73358
9	KIT, GYRO, EVOLUTION	73446
10	KIT, GYRO SPRING, EVOLUTION	73833
11	KIT, VIBRATION DAMPING	73881
12	MOUNT, SHOCK	92786
13	Plate, Backing, Motor/Gyro	73853
14	RING, DAMPER, MOTOR	72839
15	BRACKET, MOUNT, MOTOR	72838
16	KIT, MOTOR COUPLING, EVOLUTION	73450
17	KIT, MOTOR, EVOLUTION	73448

Replacement Parts List
Evolution RC**Other Items (Not Illustrated)**

Item No.	Description	Part No.
	KIT, SOFTWARE UPGRADE, EVOLUTION	73339
	SERIAL CABLE, EVOLUTION (Null Modem Cable)	73827
	KIT ,ANTI STATIC, SERVICE	73369
	WRIST STRAP, ANTI STATIC	73370
	TEST BOARD, EVOLUTION (I2C Test board / calibration)	73373
	TEST CABLE, BUSS VOLT, EVOLUTION (PFC Test Cable)	73391
	GAUGE, GAP, EVOLUTION (Motor Coupling / Door Latch)	73492
	MANUAL, OPERATOR, EVOLUTION	72975
	MANUAL, EURO OPERATOR, EVOLUTION RC	73483
	KIT, BUTTON CONVERSION, EVOLUTION	73841
	KNOB CONVERSION KIT, EVOLUTION	73839
	ASSY CABLE I2C 39"	72986

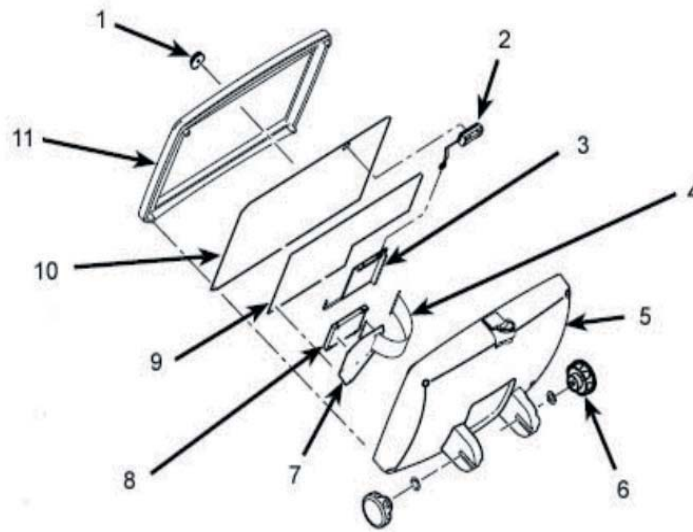


Figure 9-1. Evolution RC Control Console

Item	Description	Part #
1	KNOB, CONTROL	72970
2	BATTERY BACKUP PC104 (4940BM)	73300
3	KIT PC-104/COMPACT FLASH	73340
4	CABLE RIBBON, IDE	73826
5	CONSOLE ASSY, REAR	72971
6	KNOB, CONSOLE PIVOT	92793
7	PLATE MOUNTING HARD DRIVE	73824
8	COMPACT FLASH MEMORY use KIT PC-104/COMPACT FLASH	73340
9	KIT, BUTTON DISPLAY BOARD	73337
9	KIT, KNOB DISPLAY BOARD	73338
10	OVERLAY ASSY, BUTTON	73443
10	OVERLAY ASSY, KNOB	73439
11	CONSOLE FRONT	72907
	Kit, Upgrade Knob Evolution RC AFM (LCD Module)	73889
	Kit, Upgrade Button Evolution RC AFM (LCD Module)	73891
	KIT, LCD ASSEMBLY	73341
	KIT, LCD TRANSITION BOARD	73343
	Low Voltage Power Supply Harness	72924

Table 9-1. Evolution RC Control Console

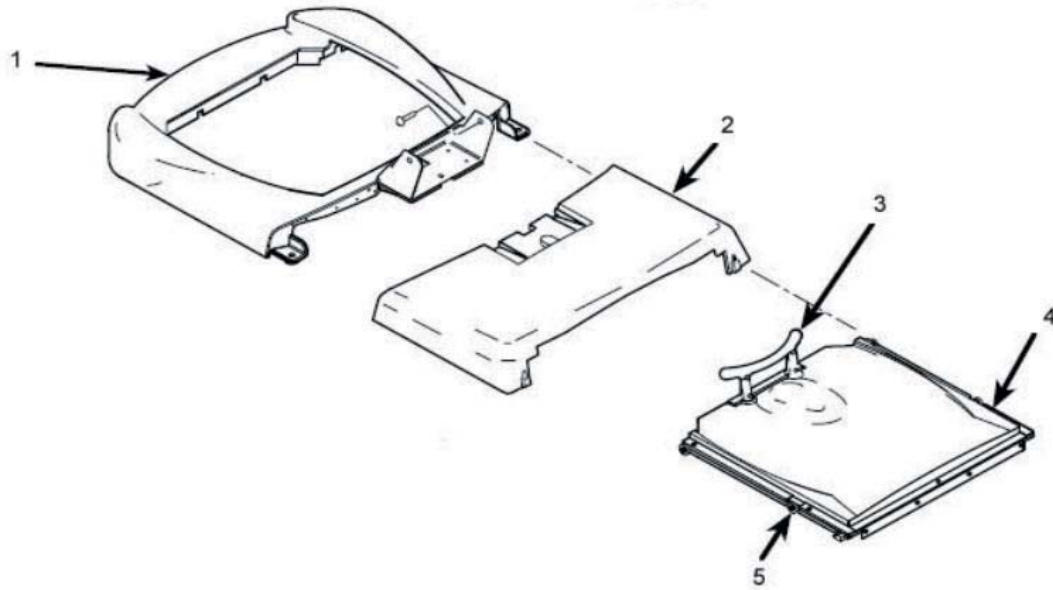


Figure 9-2. Evolution RC Top Deck & Door Assemblies

Item	Description	Part #
1	DECK, TOP FRONT ASSEMBLY	73408
2	DECK, TOP REAR	72904
3	DOOR HANDLE ASSEMBLY, EVOLUTION	73825
4	DOOR PLATE ASSEMBLY (Steel plate & top panel only)	72880
5	Kit, Roller Replacement	73869
	DOOR LATCH RAMP (does not include door magnets which must be ordered separately)	72943
	MAGNET, 0.250" DIAMETER, (4 Magnets needed for door latch ramp)	67653
	Kit, Door Repair (Door Upgrade Kit. Use on S/N 10200647 and below)	73870

Table 9-2. Evolution RC Top Deck & Door Assemblies

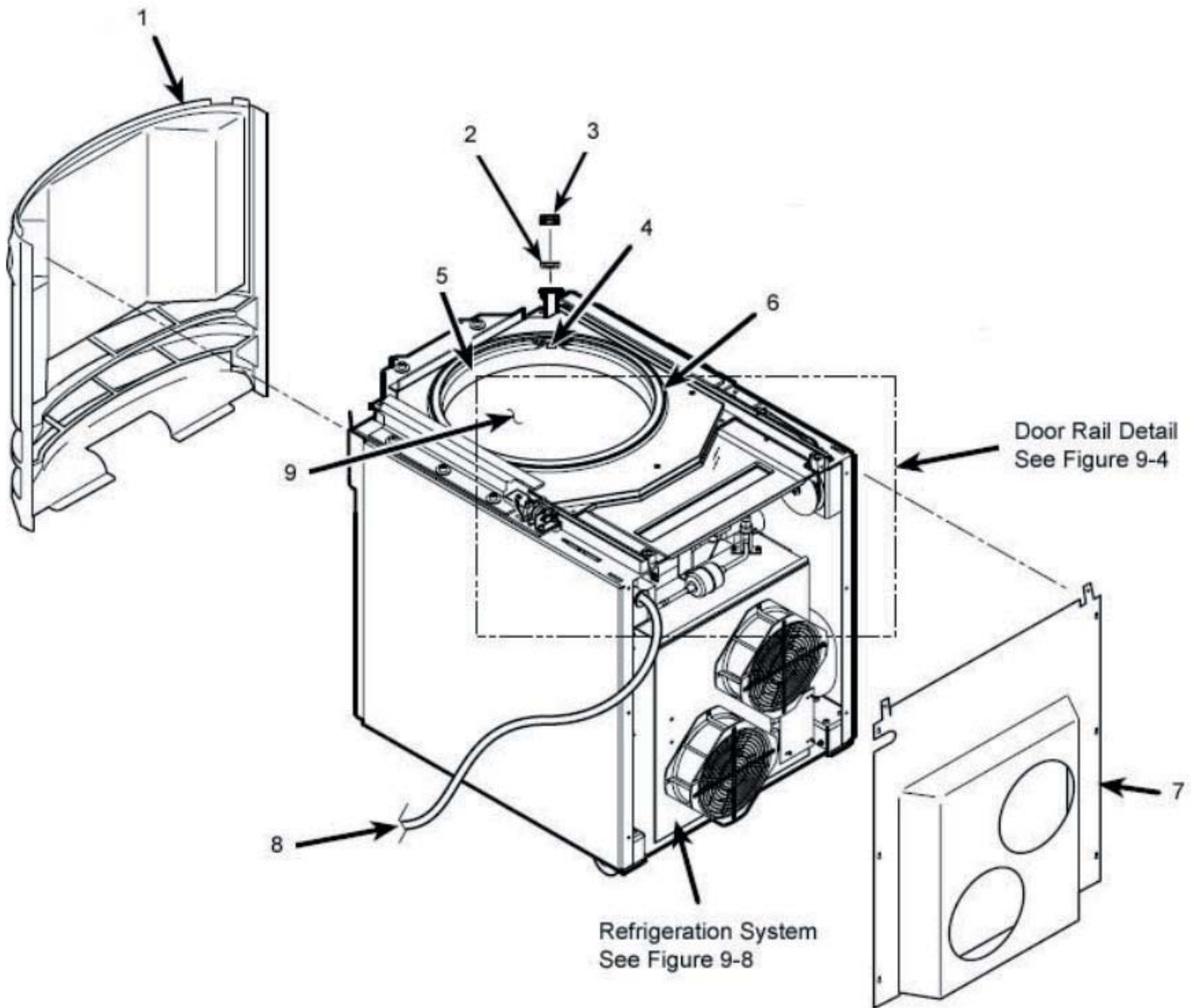


Figure 9-3. Evolution RC Main Assembly

Item No.	Description	Part No.
1	PANEL, FRONT, ASSEMBLY (Does not include decals)	72900
1	DECAL, EVOLUTION	72972
1	DECAL, KENDRO, LARGE	72973
2	GASKET, KSB PORT, EVOLUTION	72983
3	COVER, KSB, EXTERNAL	72899
4	PLUG, KSB, INTERNAL	72823
	HOLDER ASSEMBLY, TUBING (Tubing holder for TZ-28 rotor)	73486
5	SLIDER, EVAPORATOR SEAL, EVOLUTION (Beneathe Seal)	72963
6	SEAL, EVAPORATOR	72845
7	PANEL, BACK	72912
8	CORD ASSEMBLY, POWER, EVOLUTION RC (208 volt 60 Hz Centrifuges)	76178
8	CORD, POWER, BLACK, 4 CONDUCTOR (4940T) (Single Phase 50 Hz Centrifuges)	50585
8	CORD, POWER, 5 CONDUCTOR (2844) (Poly Phase 50 Hz Centrifuges)	50543
9	KIT, EVAPORATOR, EVOLUTION	73461

Table 9-3. Evolution RC Main Assembly

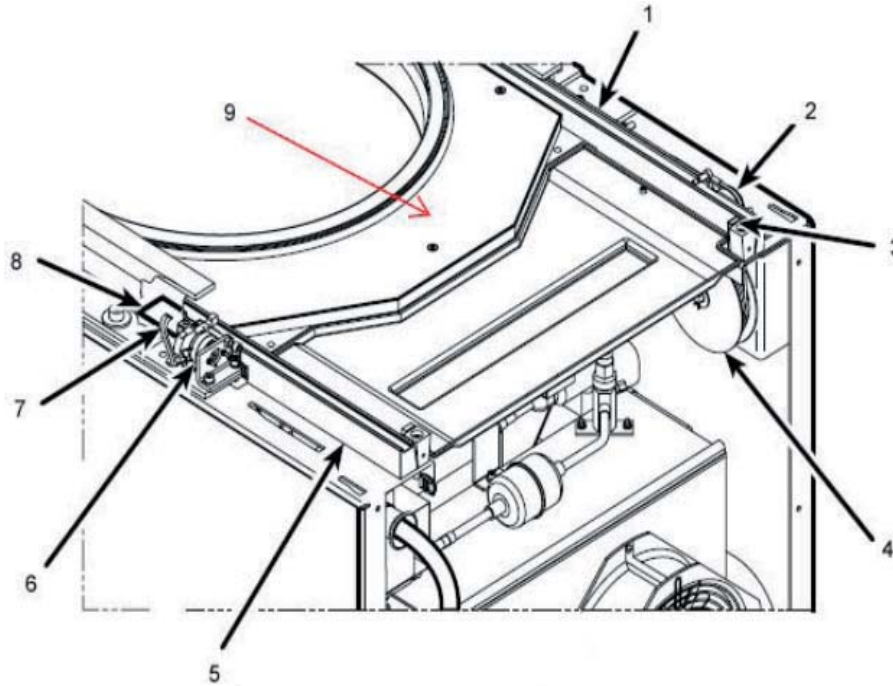


Figure 9-4. Evolution RC Door Rail Detail

Item No.	Description	Part No.
1	Kit, Door Repair (S/N 10200647 & Below)	73870
1	DOOR RAIL, LEFT (S/N 10200648 & Above)	73863
2	PULLEY, IDLER (Obsolete starting with 10200648, Use #73870 on machines S/N 10200647 & Below)	72962
3	DOOR STOP BUMPER	73861
4	REEL, RETRACTOR (Use on S/N 10200648 & below only)	72890
5	RAIL, DOOR, RIGHT (Obsolete use #72870 for S/N 10200647 & Below)	72876
5	RAIL, DOOR, RIGHT (Use on S/N 10200647 & above only)	73862
6	KIT, DOOR LATCH, EVOLUTION	73452
7	CABLE ASSEMBLY, DOOR SENSOR, INST	71719
8	KIT, DOOR LATCH SENSOR	73362
9	SUB DECK ASSEMBLY	72911

Table 9-4. Evolution RC Door Rail Detail

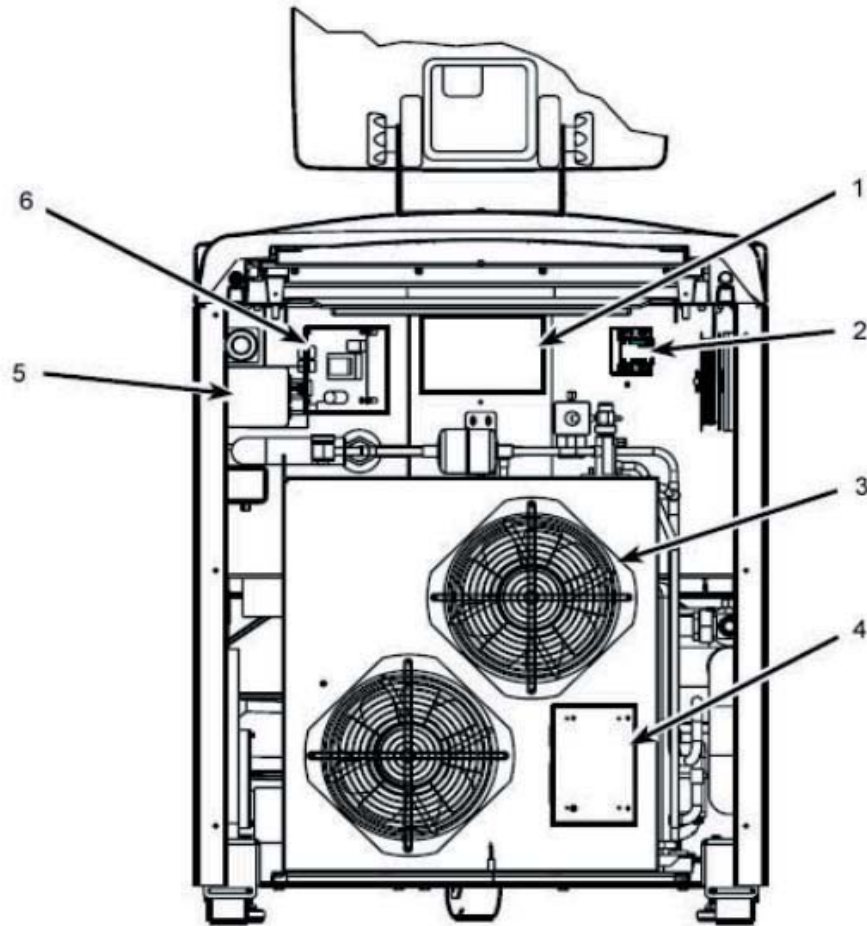


Figure 9-5. Evolution RC Rear View

Item No.	Description	Part No.
1	KIT, POWER SUPPLY	74777
2	RELAY SOLID STATE #1 CRYDOM #H (Refrigeration Relay)	68794
3	FAN, CONDENSER, EVOLUTION	72831
4	KIT, REFRIGERATION BOARD	73334
5	FILTER EMI 250/30A KK-1151	92005
6	KIT DOOR INTERLOCK BOARD, EVOLUTION	73336

Table 9-5. Evolution RC Rear View

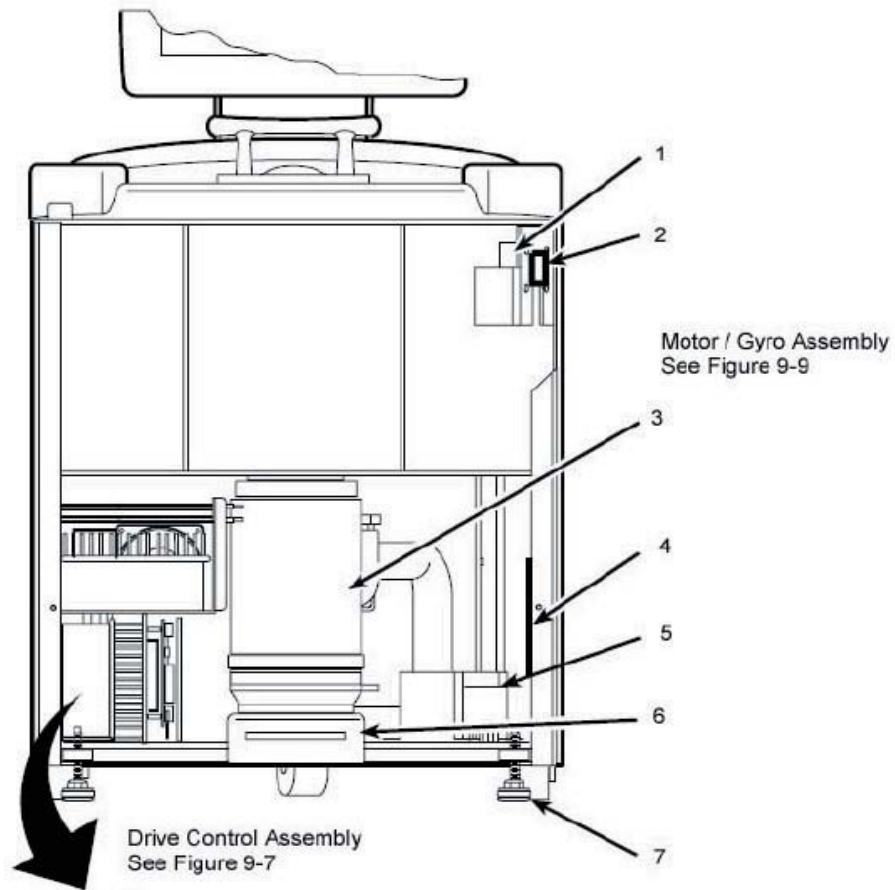


Figure 9-6. Evolution RC Front View

Item No.	Description	Part No.
1	BREAKER, CIRCUIT (Single phase 30 amp)	92794
1	BREAKER, CIRCUIT 3 POLE (Poly Phase 30 amp)	92824
2	GASKET, CIRCUIT BREAKER	73409
3	PLENUM SUPPORT, MOTOR COOLING	72988
4	KIT, PCB MOTOR SENSOR, KE (S/N 10300735 & Below)	73333
5	TRANSFORMER ASSEMBLY, EVOLUTION	73467
6	FAN, 230V AXIAL COOLING (Motor cooling fan)	92921
6	Finger Guard, Fan	90392
7	LEVELING FOOT	72979

Table 9-6. Evolution RC Front View

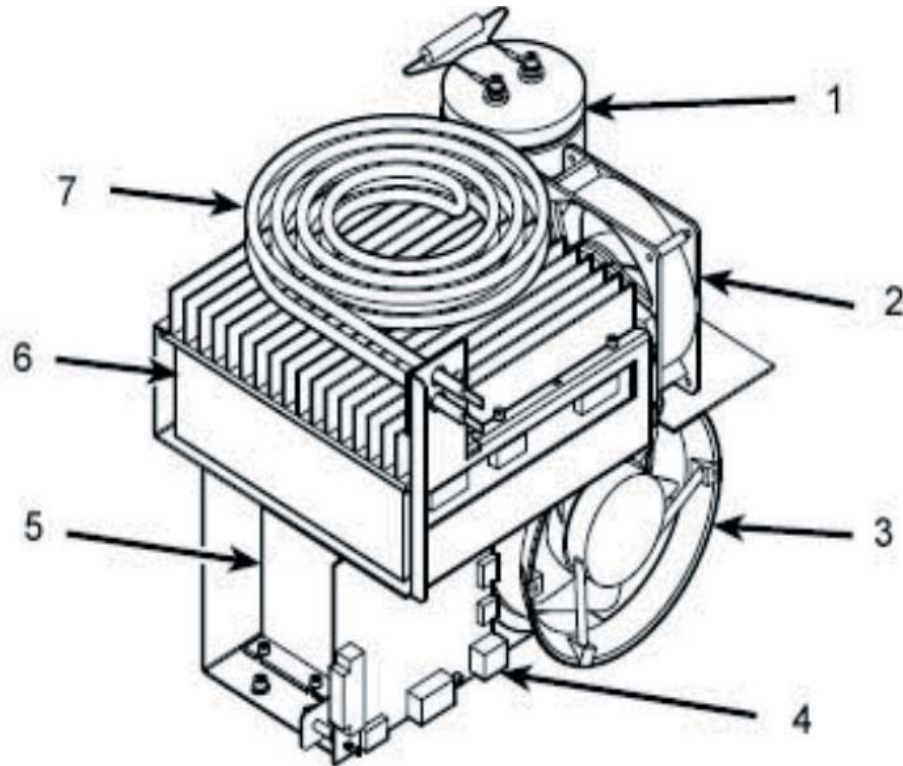


Figure 9-7. Evolution RC Drive Control Chassis

Item No.	Description	Part No.
1	CAPACITOR, PFC, 5700MFD 500VAC	72850
2	PFC / BRAKE FAN	69380
3	DRIVE CONTROL MODULE FAN	92921
4	KIT, DRIVE INTERFACE BOARD	73332
5	DRIVE CONTROL MODULE	72913
5	RECONDITIONED DRIVE CONTROL MODULE	R72913
6	PFC ASSEMBLY	72886
6	RECONDITIONED PFC ASSEMBLY	R72886
7	CALROD BRAKE RESISTOR	91046

Table 9-7. Evolution RC Drive Control Chassis

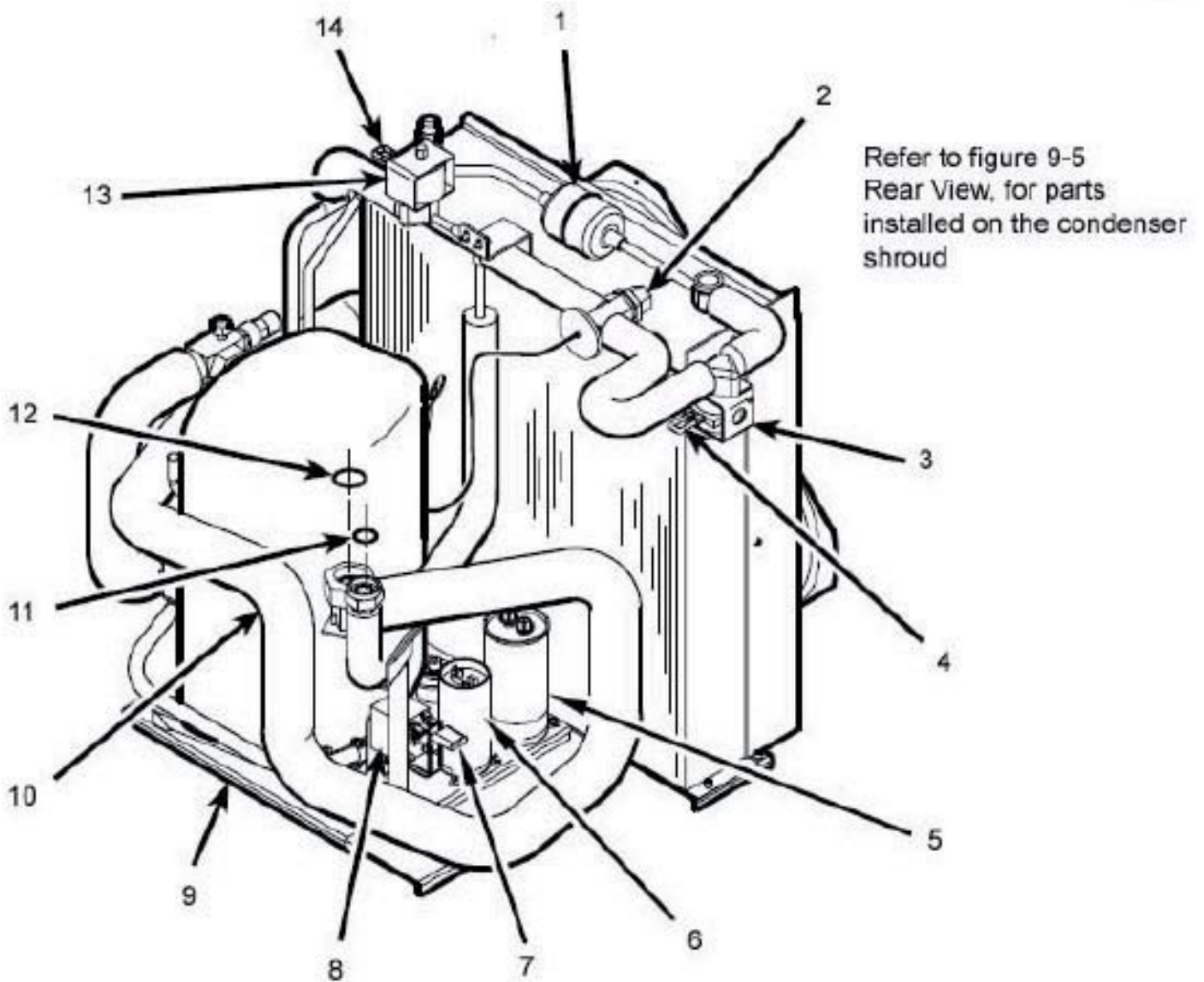


Figure 9-8. Evolution RC Condenser Assembly

NOTE: When replacing high side refrigeration components part number 72945 can be used. Cut the appropriate component from the assembly and connect to the system using Swagelock unions #67555.

Item No.	Description	Part No.
1	KIT, FILTER DRIER, EVOLUTION	73328
2	KIT, EXPANSION VALVE, EVOLUTION	73458
3	COIL, SOLENOID, LIQUID LINE	92773
4	TRANSORB ASSEMBLY, SOLENOID (Surge Suppressor)	71704
5	CAPACITOR, RUN	92733
6	CAPACITOR, START (60 Hz centrifuges)	92734
6	CAPACITOR, START (50 Hz centrifuges)	91922
7	VARISTOR, POTENTIAL RELAY (4940BB)	71730
8	RELAY, POTENTIAL	92732
9	KIT, CONDENSER, EVOLUTION 60HZ	73326
9	KIT, CONDENSER, 50HZ EVOLUTION	73832
10	KIT, SUCTION LINE, EVOLUTION	73456
11	SEAL,TEFLON 5/8" X 3/4"	66952
12	SEAL,TEFLON FBR 7/8" ID X	61768
13	COIL, SOLENOID, HOT GAS	92774
14	TRANSORB ASSEMBLY, SOLENOID (Surge Suppressor)	71704

Table 9-8. Evolution RC Condenser Assembly

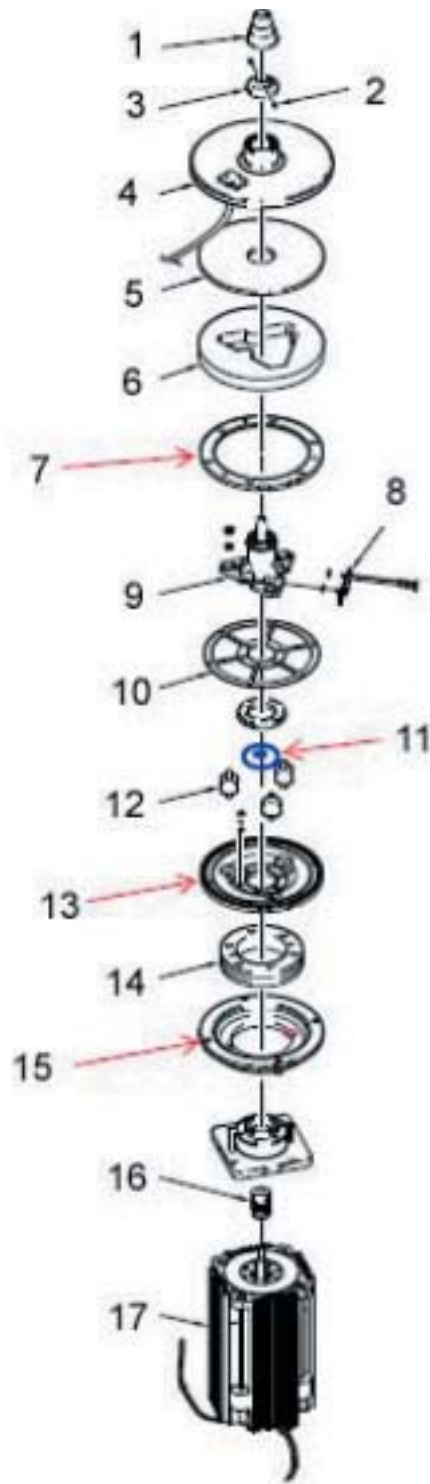


Figure 9-9. Evolution RC Motor / Gyro Assembly

Item No.	Description	Part No.
1	SPINDLE, ASSEMBLY EVOLUTION RC	59194
2	SCREW, SET, CUP PT M4 X 6MM	92815
3	SLINGER, GYRO, 26K	72863
4	KIT, TEMP SENSOR / GYRO BOOT	73360
5	INSULATION, GYRO BOOT	73430
6	INSULATION, BOOT, GYRO, LOWER	73316
7	RING, SPRING, CLAMP, OUTER	72871
8	KIT, IMBALANCE SENSOR	73358
9	KIT, GYRO, EVOLUTION	73446
10	KIT, GYRO SPRING, EVOLUTION	73833
11	KIT, VIBRATION DAMPING	73881
12	MOUNT, SHOCK	92786
13	Plate, Backing, Motor/Gyro	73853
14	RING, DAMPER, MOTOR	72839
15	BRACKET, MOUNT, MOTOR	72838
16	KIT, MOTOR COUPLING, EVOLUTION	73450
17	KIT, MOTOR, EVOLUTION	73448

Table 9-9. Evolution RC Motor / Gyro Assembly