



OPERATION AND MAINTENANCE MANUAL

BSD-9300L

BSD-9400L

BSD-9500L

BSD-9300LF

BSD-9400LF

BSD-9300P

BSD-9400P

BSD-9500P

BSD-9300PF

BSD-9400PF

**LOW VOLTAGE
METAL ASSEMBLY SCREWDRIVER**

KILEWS INDUSTRIAL CO., LTD.

<http://www.kilews.com.tw>

NOTICE

Metal Assembly Screwdrivers are designed for installing threaded fasteners in light industrial and appliance manufacturing applications.

KILEWS is not responsible for customer modification of tools for applications on which KILEWS was not consulted.

WARNING

Important safety information enclosed.

Read all these instructions before placing tool in service or operation this tool and save these instructions. It is the responsibility of the employer to place the information in this manual into the hands of the operator. Failure to observe the following warnings could result in injury. When using electric tools. Basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following:

1. General Safety Rules

2. Operations Cautions

3. Specifications

4. Description Of Operation

5. Torque Adjustment Operation

6. Accessories

7. Servicing

1. General Safety Rules

WARNING! Read all instructions Failure to follow all instructions listed below may result in electric shock fire and/or serious injury. The term “power tool” in all of the warning listed below refer to your mains operated (corded) power tool or battery operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

1) Electrical Safety

- a) **Keep work area clean and well lit.** Cluttered and dark areas invite accidents.
- b) **Do not operate power tools in explosive atmosphere, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust of fumes.
- c) **Keep children, and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2) Electrical Safety

- a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- c) **Don't expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d) **Do not abuse the cord. Never use the cord to carry, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of cord suitable for outdoor use reduces the risk of electric shock.

3) Personal Safety

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use power tool while you are tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- b) **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c) **Avoid accidental starting. Ensure the switch is in the off position before plugging in.** Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
- d) **Remove any adjusting keys or wrench before turning the power tool on.** A wrench or a key that is left attached to a rotating part of the power tool may result in personal injury.
- e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f) **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
- g) **Secure work.** Use clamps or a vice to hold the work. It is safer than using your hand and frees both hands to operate the tool.
- h) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust related hazards.
- i) **Use a safety device.** Wear protective earmuffs to reduce personal injury.

Noise:

The typical A-weighted noise level acc. To EN62841-2-2

. Sound pressure level (LpA): 53.6 dB(A)

. Sound power level (LwA): 64.6 dB(A)

Vibration:

The vibration total value acc. EN62841-2-2

. Vibration emission value ah (m/s²): 0.17 m/s²

. Uncertainty K (m/s²): 0.02 m/s²

4) Power tool Use and Care

- a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- b) **Do not use power tool if switch does not turn it on or off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c) **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.

- d) **Store idle power tools out of reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) **Use the power tools, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from intended could result in a hazardous situation.

5) SERVICE

- a) **Have your power tool serviced by qualified repair person using only identical replacement parts,** this will ensure that the safety of the power tool is maintained.

Additional information shall be provided.

- a) Instruction for putting into use.
 1. Setting-up or fixing power tool in a stable position as appropriate for power tools which can be mounted on a support.
 2. Assembly.
 3. Connection to power supply, cabling, fusing, socket type and earthing requirements.
 4. Illustrated description of functions.
 5. Limitations on ambient conditions.
 6. List of contents.
- b) Operating Instructions.
 1. Setting and testing.
 2. Tool changing.
 3. Clamping of work.
 4. Limits on size of work piece.
 5. General instructions for use.
- c) Maintenance and servicing.
 1. Regular cleaning, maintenance, and lubrication.
 2. Servicing by manufacture or agent, list of addresses.
 3. List of user-replaceable parts.
 4. Special tools which may be required.

6) Clamp fixed position for 3cm Nylon Fixed-Wire

The clamp fixed position for 3cm Nylon Fixed-Wire is at 390mm start count from the top of the screwdriver flat surface (for Iron ring socket type), as shown in Figure 3

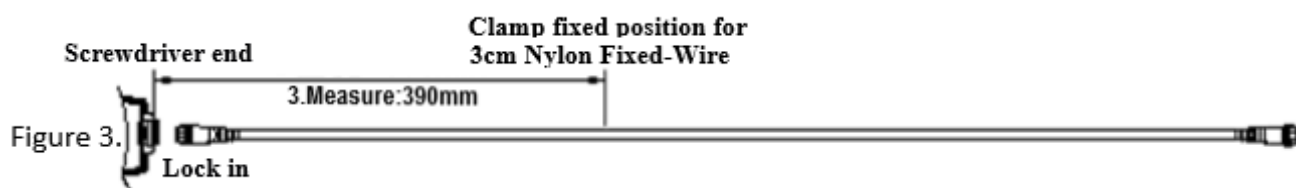


Figure 3.

2. Operations Cautions

- 1) Whenever changing a bit, make certain the Forward / Reverse Switch is in the “OFF” position and tool is unplugged.
- 2) Do not allow chemicals such as acetone, benzene, thinner, trichloroethylene ketone, or other similar chemicals to come in contact with the screwdriver housing as damage will result.
- 3) Do not drop or abuse the screwdriver.
- 4) Do not adjust the torque setting higher than 8 on the torque scale.
- 5) There should be a tool rest interval when cycles three seconds or longer. This tool is intended for a duty cycle of 0.8 sec on, 2.4 sec off.
- 6) Do not use this screwdriver for tightening wood screws. This is “Metal Assembly Screwdriver”.
- 7) Do not operate the Forward / Reverse Switch the motor is running.
- 8) Whenever a tool is not being used, move the Forward / Reverse Switch to the “OFF” position and unplug the screwdriver.

CAUTION

- Do not drop or abuse the tool.
- Whenever a tool is not being used, position the Power Switch to the “OFF” position and unplug the power cord.


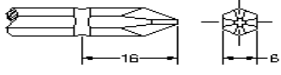
3. Specifications

REQUIREMENTS

This tool requires an power controller :

BSP-32HL-60W(input : 100-240VAC 50/60Hz output : 24/32VDC)

BSP-32VR-60W(input : 100-240VAC 50/60Hz output : 24-32VDC)

MODEL		BSD-9300L/P	BSD-9400L/P	BSD-9500L/P	BSD-9300LF/PF	BSD-9400LF/PF
Input voltage (DC)		24/32VDC or 24-32VDC				
Rated input		55W				
Bit torque	(kgf.cm)	6-22	10-30	15-45	5-12	10-30
	(Lbf.in)	5.22-19.12	8.67-26.02	13.0-39.02	4.34-10.44	8.67-26.02
	(N.m)	0.59-2.16	0.98-2.94	1.47-4.41	0.49-1.18	0.98-2.94
Torque Accuracy (%)		±3%				
Torque Adjustment		Stepless				
Unloaded Rotation Speed (R.p.m) ±10%	HI	1000	750	530	2000	1000
	LO	700	520	350	-	-
Metal assembly screw	Machine screw(mm)	2.6-4.0	3.0-5.0	4.0-6.0	2.0-3.0	3.0-5.0
	Tapping screw(mm)	2.0-3.5	2.6-4.0	3.0-5.0	2.0-2.6	2.6-4.0
Weight (g)		700				
Length (mm)		260				
Model of Torque Fixing Ring		KC-1				
Power controller		BSP-32HL-60W ; BSP-32VR-60W				
Model of Suspension Rack		KH-3 (KC & KH-1)				
Bit Type						
		HEX 5mm			HEX 6.35mm	

* 1N.m=10.2Kgf.cm 1N.m=8.85Lbf.in

4. Description of Operation

Attaching / detaching bit and bit type

Push up the holder clamp by fingertip, and it will be unlocked. Thus, the bit can be freely attached and detached (single finger notion type) select such a bit whose shank is equal to the size shown below.

- Insert the power plug into a receptacle and set the changeover switch to “**F**” position.
- Apply the bit to the screw head and press the lever or push main body to, then the switch will be turned ON to start the motor running.
- When the screw is tighten and reach the torque that you had set. The tool will stop automatically.
- To reset the tool by releasing the lever to the original position or releasing the bit From the screw head.
- To return the screw, set the changeover switch to “**R**” position.

5. Torque Adjustment Operation

To adjust the torque on these screwdrivers. Proceed as follows:

1. Determine the torque output of the tool by checking a tightened Fastener with a torque wrench.
2. Increase or decrease the torque by rotating the Spring Adjusting Ring. Rotating the Ring clockwise to a higher number on the torque Scale increase torque output while rotating the Ring counterclockwise to a lower number decreases the torque output.
3. Check the adjustment with a torque wrench. A number of factors will affect torque output from one job to another. Final torque adjustment should be made at the job through a of series of gradual increase. Always start below the desired torque and work upward.
4. Adjust the bit torque by changing the driving in length of the adjust ring at the end.
5. The relationship between torque scale and bit torque is as shown Ring, in the torque diagram. The figures of torque scale do not indicate bit torque values. However, the clamping torque of screw itself is different form type, size, material of the screw and the material of its mating part. Use it as standard to obtain an appropriate clamping torque.
6. The (Return torque method) in which once-clamped screw is returned with torque wrench or the like is available as one of torque control methods, however, note that the measured values by the return torque method generally appear in 10%~30% lower than they actually clamping torque.
7. The torque checker measures the torque of screwdriver. The clamping torque of screw itself is different from the clamped conditions. Understand the correlation between clamping torque values and the torque checker values perform the torque control properly.

CAUTION

1. Also in reverse rotation, the clutch is turned off in such manner as in normal rotation, stopping the motor running. Accordingly, when the screw tightened at a large torque, set it to a higher torque scale.
2. The number from zero to eight on the Torque Scale are reference number only and not an indication of actual torque output.

6. Accessories

1. BIT Type :
 - No. 00 Bit use in dia 1.3-1.8mm screw
 - No. 0 Bit use in dia 1.6-2.0mm screw
 - No. 1 Bit use in dia 2.0-2.6mm screw
 - No. 2 Bit use in dia 3.0-4.0mm screw

BSD-9300L/P	with BIT	1# & 2#	1 Pce. Each
BSD-9400L/P	with BIT	2#	2 Pce.
BSD-9500L/P	with BIT	2#	2 Pce.
BSD-9300LF/PF	with BIT	1# & 2#	1 Pce. Each
BSD-9400LF/PF	with BIT	2#	2 Pce.

2. Carbon Brush :2 Pcs, those 2 Pcs brush are spare parts.
3. Suspension rack and Torque fixing ring acceptable for use with the tool are available from KILEWS catalogue.

7. Servicing

Maintenance and Inspection:

1. The screwdriver must be operated in top condition, one day working hour must be not more than eight hours. Cording to operating frequency and torque loaded, we suggest adding lubricating oils in clutch per 3-6 months, and kindly contact with distributor when product's maintenance.
2. Periodically check for wear of motor carbon brush, one day for eight hours use is normal, replace it after every five to six months.
3. Please note don't let the motor get over heated, every minute use 10~15 screws to operate.
4. The frequency use of this electric screwdriver is over than eight hours a day, still it needs periodically testing and treatment. Every 5-6 months.
5. Inspect tool cords periodically and if damaged, have them repaired by an authorized service facility. Inspect extension cords periodically and replace if damaged.
6. Do not remove any labels. Replace any damaged label.

CAUTION

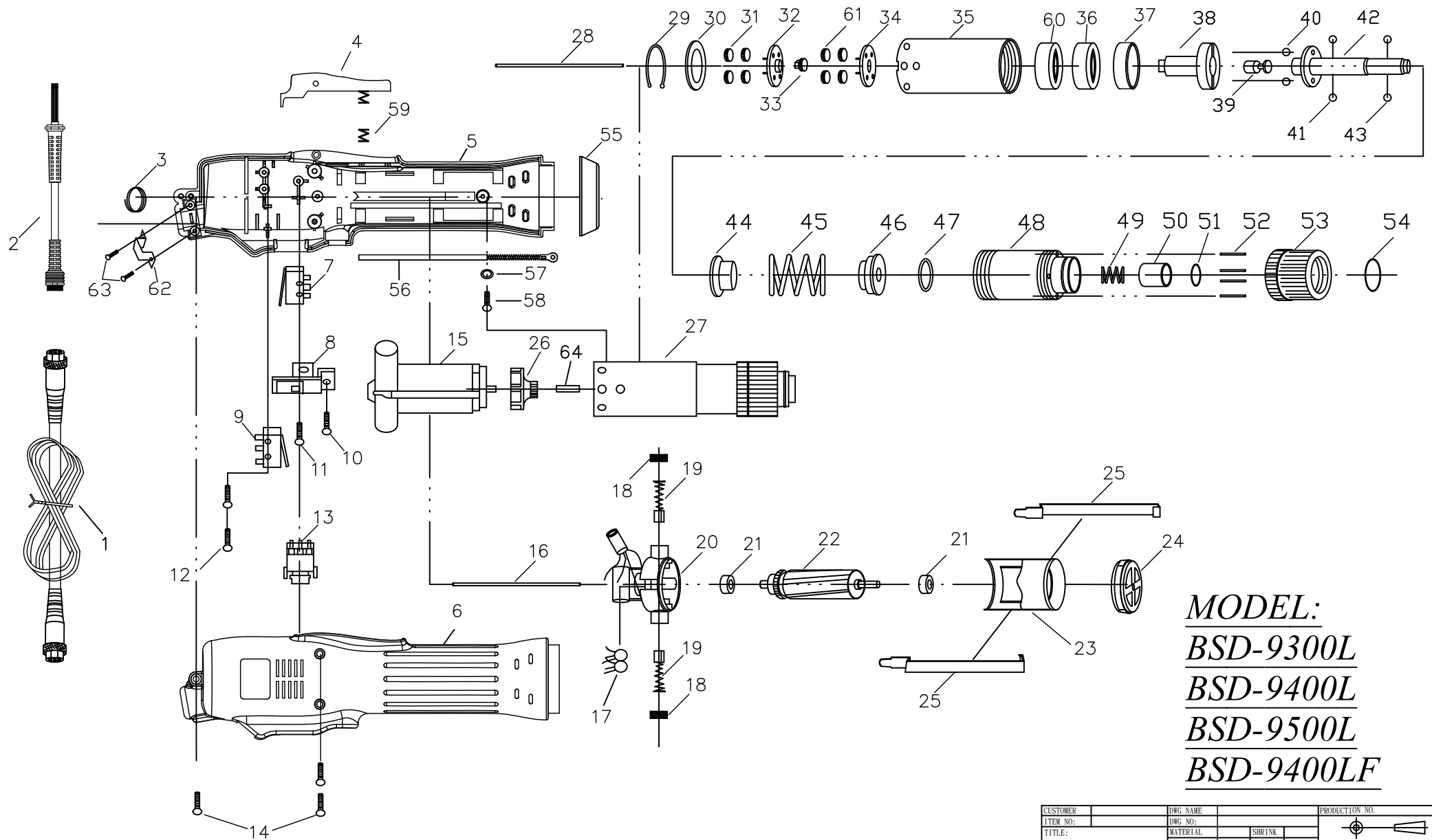
1. The use of other than genuine KILEWS replacement parts may Result in decreased tool performance and increased maintenance and may invalidate all warranties.
2. All repairs and maintenance of this tool and its word must be performed by an authorized service center.
3. KILEWS is not responsible for customer modification of tools for applications on which KILEWS was not consulted.
4. Repairs should be made only by authorized, trained personnel. Consult your nearest KILEWS authorized service center.
5. It is the responsibility of the employer to place the information in this manual into the hands of the operator.

**DO NOT ATTEMPT TO REPAIR THIS
ELECTRIC SCREWDRIVER**

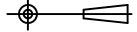
CAUTION

**SAVE THESE INSTRUCTIONS
DO NOT DESTROY**

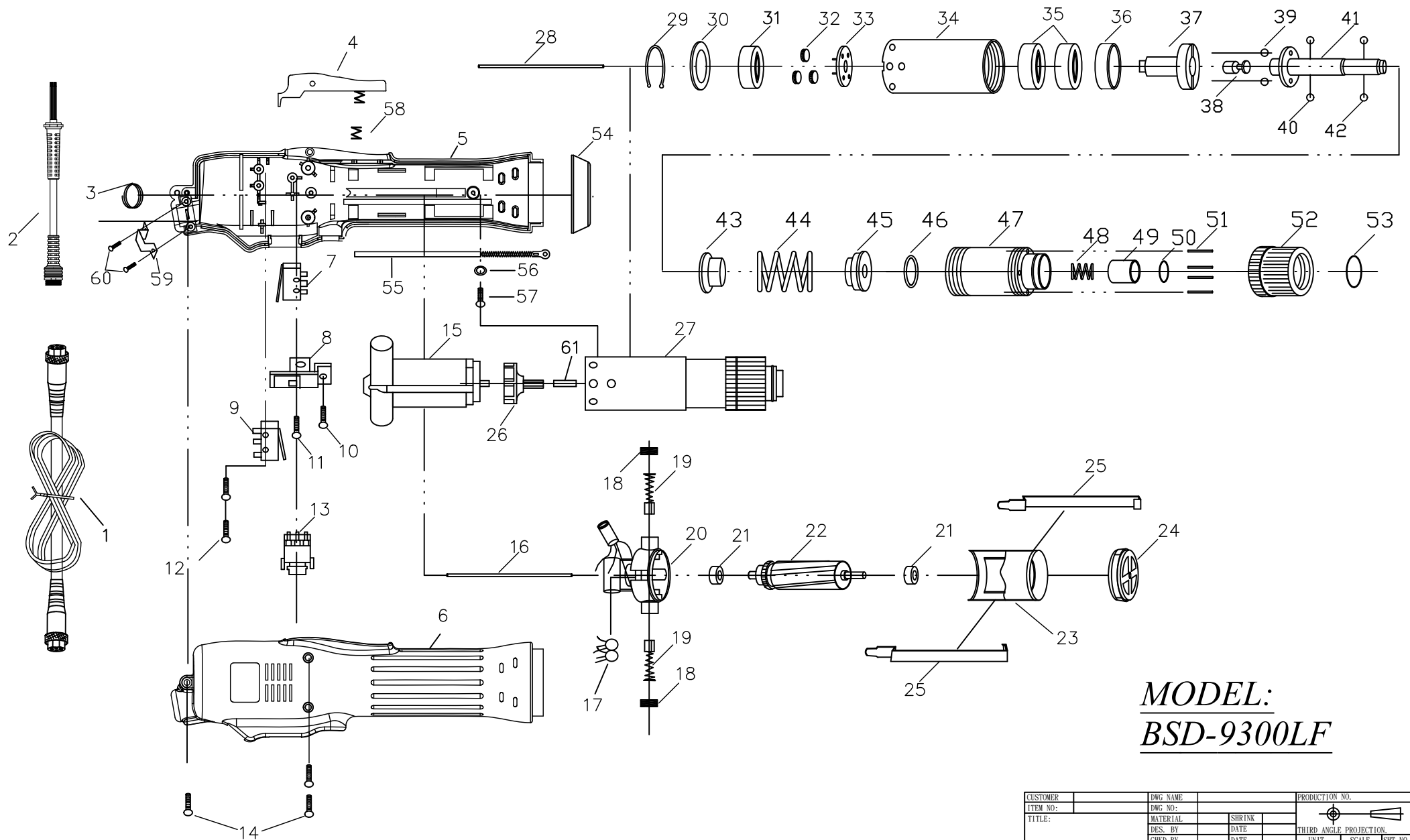
**Our company reserves the right to modify
the product without prior notice.**



MODEL:
BSD-9300L
BSD-9400L
BSD-9500L
BSD-9400LF

CUSTOMER	DWG. NAME	PRODUCTION NO.				
ITEM NO:	DWG. NO:	 THIRD ANGLE PROJECTION				
TITLE:	MATERIAL				SHRINK	
	DES. BY				DATE	
	CHKD. BY				DATE	
	APPD. BY				DATE	
		UNIT	SCALE	SHT NO.		
				OF SHTS.		

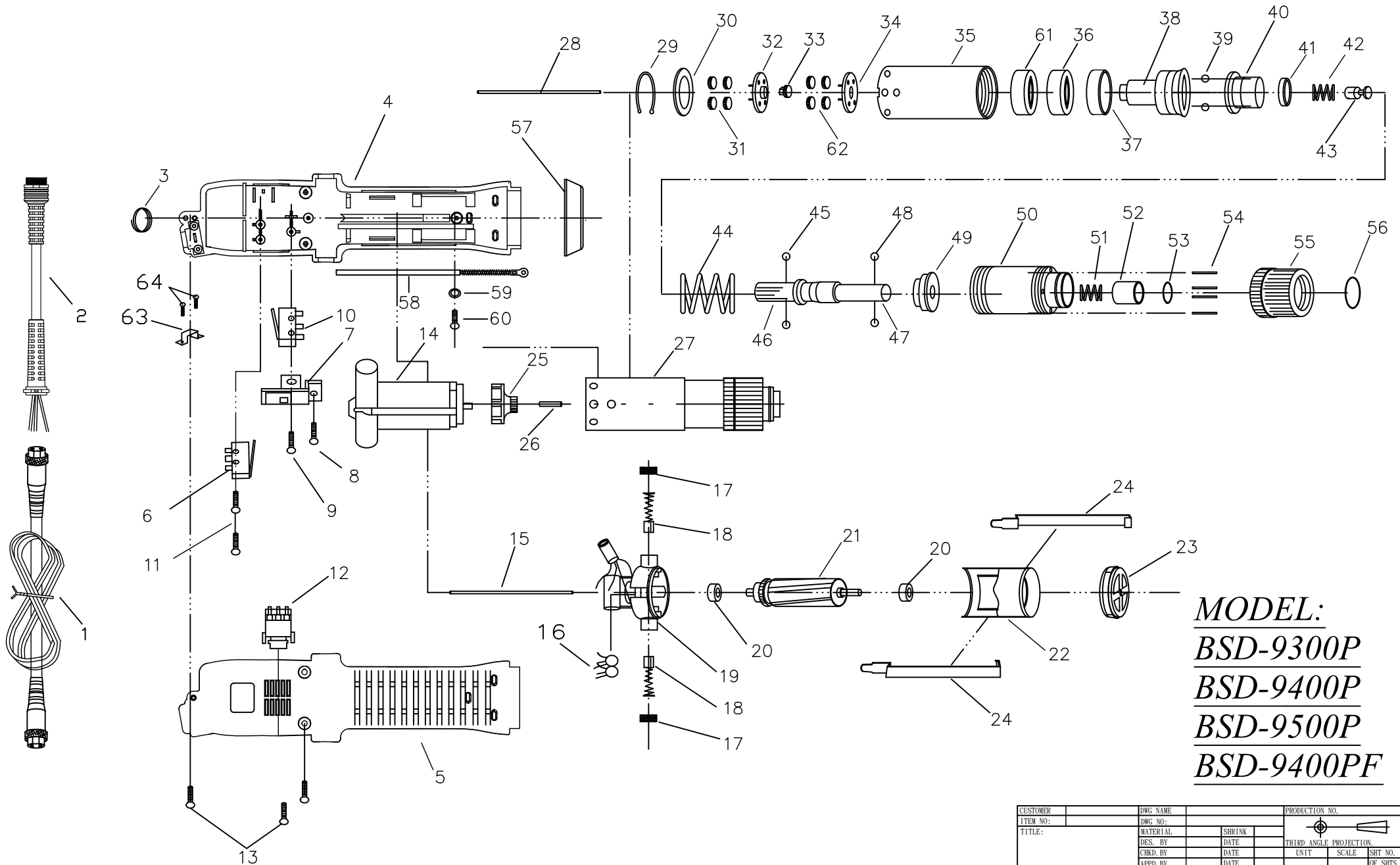
NO	PARTS NO	PARTS NAME-E	PARTS NAME-C	Q'ty	NO	PARTS NO	PARTS NAME-E	PARTS NAME-C	Q'ty
1	AA50001-63	CORD ASSEMBLY	電源線	1		GH21221-2	IDLE GEAR FOR "9400LF"	遊星齒輪(9400LF)	4
2	AA50001-57N	CONNECTOR	檔尾電源線	1	32	GG21231	GEAR SEAT FOR "9300L"	上齒盤(9300L)	1
3	CJ20011	SUSPENSION RING	起子吊環	1		GG91242-1	GEAR SEAT FOR "9400L"	上齒盤(9400L)	1
4	CC21011-5	TRIGGER ASSEMBLY	手按開關半成品	1		GG92241-1	GEAR SEAT FOR "9500L"	上齒盤(9500L)	1
5	CB91022-1	HOUSING-UNDERSIDE-ORANGE	外殼下蓋-橙	1		GG20271	GEAR SEAT FOR "9400LF"	上齒盤(9400LF)	1
	CB91182-6	HOUSING-UNDERSIDE (ESD)	外殼下蓋 (ESD)	1	33	G20102	CENTRAL GEAR FOR "9300L" ONLY	中心齒(9300L)	1
6	CA91182-1	HOUSING-UPSIDE-ORANGE	外殼上蓋-橙	1		G20104	CENTRAL GEAR FOR "9400LF" ONLY	中心齒(9400LF)	1
	CA91182-6	HOUSING-UPSIDE (ESD)	外殼上蓋 (ESD)	1	34	GG21231	GEAR SEAT FOR "9300L"	下齒盤(9300L)	1
7	HB91061	SHUT OFF SWITCH	剎車開關	1		GG91272-1	GEAR SEAT FOR "9400L"	下齒盤(9400L)	1
8	CE90101-1	SWITCH BASE	三合一開關架	1		GG92271-1	GEAR SEAT FOR "9500L"	下齒盤(9500L)	1
9	H10201	START SWITCH	啟動開關	1		GG20271	GEAR SEAT FOR "9400LF"	下齒盤(9400LF)	1
10	CH90121	SCREW	螺絲	1	35	GA91281	GEAR CASE FOR "9300L"	上離合器筒(9300L)	1
11	CH90131	SCREW	螺絲	1		GA91282	GEAR CASE FOR "9400L、9500L"	上離合器筒(9400L、9500L)	1
12	CH90151-1	SCREW	螺絲	2		GA91282-1	GEAR CASE FOR "9400LF"	上離合器筒(9400LF)	1
13	HA91041F	CHANGEVER SWITCH FOR 9300L	正反開關(9300L)	1	36	GN21251	MAIN BEARING 9300L,9400L,9500L	離合器主軸承 9300L,9400L,9500L	1
	HA91042F	CHANGEVER SWITCH FOR 9400L,9400LF	正反開關(9400L,9400LF)	1		GN21251	MAIN BEARING 9400LF	離合器主軸承 9400LF	2
	HA92051F	CHANGEVER SWITCH FOR 9500L	正反開關(9500L)	1	37	GW21531	IRON RING	鐵墊圈	1
14	CH20102	SCREW	螺絲	3	38	GC90302-1	CAM	上離合器頭	1
15	MO80081	MOTOR ASSEMBLY-9300L	馬達整組-9300L	1	39	GU30371	STOP PILOT	酒杯	1
	MO80081-2	MOTOR ASSEMBLY-9400L	馬達整組-9400L	1	40	GP30361	STELL BALLS(5mm)	跳脫鋼珠(5mm)	3
	MO80081-3	MOTOR ASSEMBLY-9500L	馬達整組-9500L	1	41	GP30351	STELL BALLS(4mm)	酒杯鋼珠(4mm)	2
	MO80081-7	MOTOR ASSEMBLY-9400LF	馬達整組-9400LF	1	42	GD91408-2	SHAFT FOR HEX 5.0mm	傳動軸A頭用	1
16	MI31611-1	PILOT ROD	開關引導棒	1		GD91404-4	SHAFT FOR HEX 6.35mm	傳動軸B頭用	1
17	EB33610-2	CERAMICS CAPACITOR	陶瓷電容	1	43	GP21291A	BIT PILOT FOR HEX 5.0mm(3mm)	起子頭帽鋼珠A頭用(3mm)	2
18	MD91531	BRUSH CAP	碳刷蓋	2		GP21291B	BIT PILOT FOR HEX 6.35mm(2.5mm)	起子頭帽鋼珠B頭用(2.5mm)	2
19	MC71411	CAPBON BRUSH	碳刷	2	44	GF90324	WARING PLATE	扭力推盤	1
20	ML80531F	MOTOR TOP COVER	碳刷座半成品	1	45	GE80351-9	WARING SPRING FOR "9300L"	扭力彈簧(9300L)	1
21	ME21481	BALL BEARING	軸承	2		GE80351-10	WARING SPRING FOR "9400,9400LF"	扭力彈簧(9400,9400LF)	1
22	MH81581-1	ARMATURE-9300L,9400L,9500L	電樞-9300L,9400L,9500L	1		GE80351-11	WARING SPRING FOR "9500L"	扭力彈簧(9500L)	1
	MH81581-2	ARMATURE-9400LF	電樞-9400LF	1	46	GY21321	WARING SPRING BASE	止推盤	1
23	MJ91621PF	MOTOR YOKE ASSEMBLY	鐵圈連磁鐵	1	47	GK20231B	"C"RING	傳動軸固定C環	1
24	MB91641A	MOTOR END COVER	馬達前蓋	1	48	GB21331-1	CLUTCH CASE	下離合器筒半成品	1
25	MA91611B	ASSEMBLING SPRING	馬達固定片	2	49	GO21341	BIT SPRING	起子頭帽彈簧	1
26	MK21111	FAN FOR "9300L"	風扇(9300L)	1	50	GJ21351	BIT SLEEVE	起子頭帽	1
	MK91091	FAN FOR "9400L"	風扇(9400L)	1	51	GQ21361	"C"RING	起子頭帽C環	1
	MK92091	FAN FOR "9500L"	風扇(9500L)	1	52	GL21371	TORQUE ADJUSTING PINS	扭力調整棒	4
	MK21112	FAN FOR "9400FL"	風扇(9400LF)	1	53	GM21381	TORQUE ADJUSTING RING	扭力調整環	1
27	GZ81081LA	CLUTCH ASSEMBLY FOR "9300LA"	離合器整組(9300LA)	1	54	GS21391	"C"RING	扭力環C環	1
	GZ81081LB	CLUTCH ASSEMBLY FOR "9300LB"	離合器整組(9300LB)	1	55	CD91031-1	COUPLER	前鎖環	1
	GZ81082LA	CLUTCH ASSEMBLY FOR "9400LA"	離合器整組(9400LA)	1		CD91031-4	COUPLER (ESD)	前鎖環 (ESD)	1
	GZ81082LB	CLUTCH ASSEMBLY FOR "9400LB"	離合器整組(9400LB)	1	56	CH30681	GROUNDING MEANS	接地線	1
	GZ81083LA	CLUTCH ASSEMBLY FOR "9500LA"	離合器整組(9500LA)	1	57	CH20102-10	WASHER	墊片	1
	GZ81083LB	CLUTCH ASSEMBLY FOR "9500LB"	離合器整組(9500LB)	1	58	CH20102-11	SCREW	螺絲	1
	GZ81082LAF	CLUTCH ASSEMBLY FOR "9400LFA"	離合器整組(9400LFA)	1	59	CK28031-1	TRIGGER SPRING	壓板彈簧	1
	GZ81082LBF	CLUTCH ASSEMBLY FOR "9400LFB"	離合器整組(9400LFB)	1	60	GN30442	MAIN BEARING 9300L,9400L,9500L	離合器主軸承 9300L,9400L,9500L	1
28	MI31221	PILOT ROD	開關引導棒	1	61	GH20241	IDLE GEAR FOR "9300L"	遊星齒輪(9300L)	3
29	GK91211	"C"RING	齒輪固定C環	1		GH91232-1	IDLE GEAR FOR "9400L"	遊星齒輪(9400L)	3
30	GI28444-1	IRON WASHER FOR 9300L	齒輪固定片 9300L	1		GH92231-1	IDLE GEAR FOR "9500L"	遊星齒輪(9500L)	4
	GI28444	IRON WASHER FOR 9400L,9500L,9400LF	齒輪固定片 9400L,9500L,9400LF	1		GH21221-2	IDLE GEAR FOR "9400LF"	遊星齒輪(9400LF)	4
31	GH20241	IDLE GEAR FOR "9300L"	遊星齒輪(9300L)	3	62	CH20102-1	LINE CARD	線夾	1
	GH91232	IDLE GEAR FOR "9400L"	遊星齒輪(9400L)	3	63	CH20102-3	SCREW	螺絲	2
	GH92231	IDLE GEAR FOR "9500L"	遊星齒輪(9500L)	4	64	MG91081	PILOT ROD	陶瓷棒	1



MODEL:
BSD-9300LF

CUSTOMER	DWG NAME	PRODUCTION NO.		
ITEM NO.	DWG NO.			
TITLE:	MATERIAL	SHRINK	THIRD ANGLE PROJECTION	
	DES. BY	DATE	UNIT	SCALE
	CHKD. BY	DATE		SHT NO.
	APPD. BY	DATE		OF SHTS.

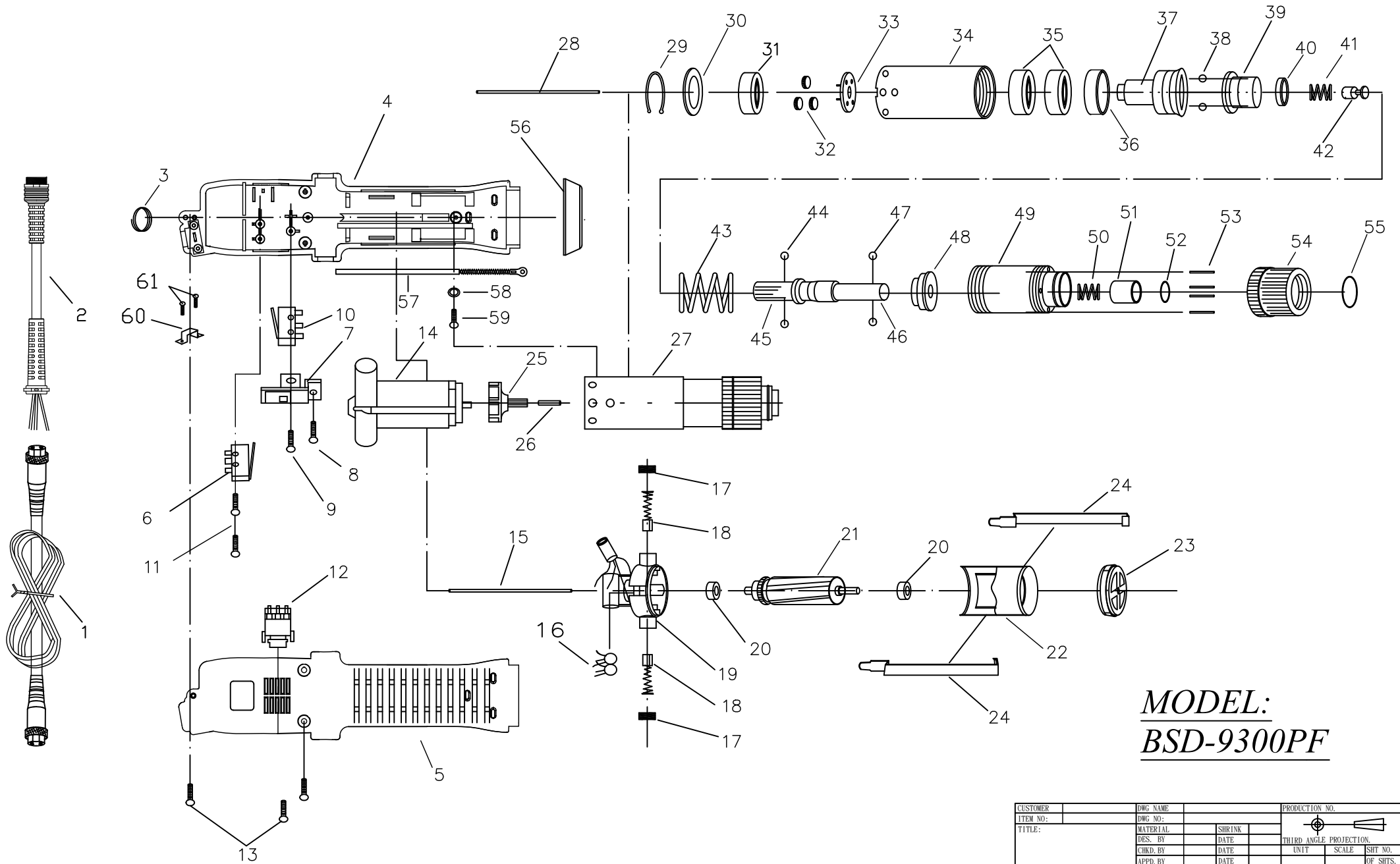
NO	PARTS NO	PARTS NAME-E	PARTS NAME-C	Qty	NO	PARTS NO	PARTS NAME-E	PARTS NAME-C	Qty
1	AA50001-63	CORD ASSEMBLY	電源線	1	31	G21301	WASHER,HIGH SPEED	快速齒輪墊圈	1
2	AA50001-57N	CONNECTOR	檔尾電源線	1	32	GH21221-1	IDLE GEAR	遊星齒輪	3
3	CJ20011	SUSPENSION RING	起子吊環	1	33	GG21231-1	GEAR SEAT	下齒盤	1
4	CC70012	TRIGGER ASSEMBLY	手按開關半成品	1	34	GA91281	GEAR CASE	上離合器筒	1
	CC70013	TRIGGER ASSEMBLY (ESD)	手按開關半成品(ESD)	1	35	GN21251	MAIN BEARING	離合器主軸承	2
5	CB91022-1	HOUSING-UNDERSIDE-ORANGE	外殼下蓋-橙	1	36	GW21531	IRON RING	鐵墊圈	1
	CB91182-6	HOUSING-UNDERSIDE (ESD)	外殼下蓋 (ESD)	1	37	GC90302-1	CAM	上離合器頭	1
6	CA91182-1	HOUSING-UPSIDE-ORANGE	外殼上蓋-橙	1	38	GU30371	STOP PILOT	酒杯	1
	CA91182-6	HOUSING-UPSIDE (ESD)	外殼上蓋 (ESD)	1	39	GP30361	STELL BALLS(5mm)	跳脫鋼珠(5mm)	3
7	HB91061	SHUT OFF SWITCH	剎車開關	1	40	GP30351	STELL BALLS(4mm)	酒杯鋼珠(4mm)	2
8	CE90101-1	SWITCH BASE	三合一開關架	1	41	GD91408-2	SHAFT FOR HEX 5.0mm	傳動軸A 頭用	1
9	HB50061	START SWITCH	啟動開關	1		GD91404-4	SHAFT FOR HEX 6.35mm	傳動軸B 頭用	1
10	CH90121	SCREW	螺絲	1	42	GP21291A	BIT PILOT FOR HEX 5.0mm(3mm)	起子頭帽鋼珠A頭用(3mm)	2
11	CH90131	SCREW	螺絲	1		GP21291B	BIT PILOT FOR HEX 6.35mm(2.5mm)	起子頭帽鋼珠B頭用(2.5mm)	2
12	CH90151-1	SCREW	螺絲	2	43	GF90324	WARING PLATE	扭力推盤	1
13	HA91041F	CHANGEOVER SWITCH	正反開關	1	44	GE80351-9	WARING SPRING	扭力彈簧	1
14	CH20102	SCREW	螺絲	3	45	GY21321	WARING SPRING BASE	止推盤	1
15	MO80081-4	MOTOR ASSEMBLY	馬達整組	1	46	GK20231B	"C"RING	傳動軸固定C環	1
16	MI31611-1	PILOT ROD	開關引導棒	1	47	GB21331-1	CLUTCH CASE	下離合器筒半成品	1
17	EB33610-2	CERAMICS CAPACITOR	陶瓷電容	1	48	GO21341	BIT SPRING	起子頭帽彈簧	1
18	MD91531	BRUSH CAP	碳刷蓋	2	49	GJ21351	BIT SLEEVE	起子頭帽	1
19	MC71411	CAPBON BRUSH	碳刷	2	50	GQ21361	"C"RING	起子頭帽C環	1
20	ML80531F	MOTOR TOP COVER	碳刷座半成品	1	51	GL21371	TORQUE ADJUSTING PINS	扭力調整棒	4
21	ME21481	BALL BEARING	軸承	2	52	GM21381	TORQUE ADJUSTING RING	扭力調整環	1
22	MH81581-1	ARMATURE	電樞	1	53	GS21391	"C"RING	扭力環C環	1
23	MJ91621PF	MOTOR YOKE ASSEMBLY	鐵圈連磁鐵	1	54	CD91031-1	COUPLER	前鎖環	1
24	MB91641A	MOTOR END COVER	馬達前蓋	1		CD91031-4	COUPLER (ESD)	前鎖環 (ESD)	1
25	MA91611B	ASSEMBLING SPRING	馬達固定片	2	55	CH30681	GROUNDING MEANS	接地線	1
26	MK21111PF	FAN	風扇	1	56	CH20102-10	WASHER	墊片	1
27	GZ81081LAF	CLUTCH ASSEMBLY FOR "9300LFA"	離合器整組(9300LFA)	1	57	CH20102-11	SCREW	螺絲	1
	GZ81081LBF	CLUTCH ASSEMBLY FOR "9300LFB"	離合器整組(9300LFB)	1	58	CK28031-1	TRIGGER SPRING	壓板彈簧	1
28	MI31221	PILOT ROD	開關引導棒	1	59	CH20102-1	LINE CARD	線夾	1
29	GK91211	"C"RING	齒輪固定C環	1	60	CH20102-3	SCREW	螺絲	2
30	GI28444-1	IRON WASHER	齒輪固定片	1	61	MG30081-1	PILOT ROD	陶瓷棒	1



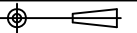
MODEL:
BSD-9300P
BSD-9400P
BSD-9500P
BSD-9400PF

CUSTOMER	DWG NAME	PRODUCTION NO.		
ITEM NO:	DWG NO:			
TITLE:	MATERIAL	SHRINK	THIRD ANGLE PROJECTION.	
	DES. BY	DATE	UNIT	SCALE
	CHKD. BY	DATE	SCALE	SHFT NO.
	APPD. BY	DATE	SCALE	OF SHTS.

NO	PARTS NO	PARTS NAME-E	PARTS NAME-C	Qty	NO	PARTS NO	PARTS NAME-E	PARTS NAME-C	Qty
1	AA50001-63	CORD ASSEMBLY	電源線	1	32	GG21231	GEAR SEAT FOR "9300P"	上齒盤(9300P)	1
2	AA50001-57N	CONNECTOR	檔尾電源線	1		GG20271	GEAR SEAT FOR "9400PF"	上齒盤(9400PF)	1
3	CJ20011	SUSPENSION RING	起子吊環	1		GG91242-1	GEAR SEAT FOR "9400P"	上齒盤含中心齒(9400P)	1
4	CB91021-1A	HOUSING-UNDERSIDE	外殼下蓋	1		GG92241-1	GEAR SEAT FOR "9500P"	上齒盤含中心齒(9500P)	1
	WCB91021-5	HOUSING-UNDERSIDE (ESD)	外殼下蓋(ESD)	1	33	G20102	CENTRAL GEAR FORN "9300P" ONLY	中心齒(9300P)	1
5	CA91181-1A	HOUSING-UPSIDE	外殼上蓋	1		G20104	CENTRAL GEAR FORN "9400PF" ONLY	中心齒(9400PF)	1
	WCA91181-5	HOUSING-UPSIDE (ESD)	外殼上蓋(ESD)	1	34	GG21231	GEAR SEAT FOR "9300P"	下齒盤(9300P)	1
6	H10201	SHUT OFF SWITCH	剎車開關	1		GG91272-1	GEAR SEAT FOR "9400P"	下齒盤(9400P)	1
7	CE90101-1	SWITCH BASE	三合一開關架	1		GG92271-1	GEAR SEAT FOR "9500P"	下齒盤(9500P)	1
8	CH90121	SCREW	螺絲	1		GG20271	GEAR SEAT FOR "9400PF"	下齒盤(9400PF)	1
9	CH90131	SCREW	螺絲	1	35	GA91281	GEAR CASE FOR "9300P"	上離合器筒(9300P)	1
10	H10201	START SWITCH	啟動開關	1		GA91282	GEAR CASE FOR "9400P、9500P"	上離合器筒(9400P、9500P)	1
11	CH90151-1	SCREW	螺絲	2		GA91282-1	GEAR CASE FOR "9400PF"	上離合器筒(9400PF)	1
12	HA91041F	CHANGEVER SWITCH (9300P)	正反開關(9300P)	1	36	GN21251	MAIN BEARING 9300P,9400P,9500P	離合器主軸承 9300P,9400P,9500P	1
	HA91042F	CHANGEVER SWITCH (9400P,9400PF)	正反開關(9400P,9400PF)	2		GN21251	MAIN BEARING 9400PF	離合器主軸承 9400PF	2
	HA92051F	CHANGEVER SWITCH (9500P)	正反開關(9500P)	3	37	GW21532	IRON RING	鐵墊圈	1
13	CH20102	SCREW	螺絲	3	38	GX90302-1	SHAFT GUIDE	上離合器頭	1
14	MO80081	MOTOR ASSEMBLY-9300P	馬達整組-9300P	1	39	GP30361	STELL BALLS	跳脫鋼珠	3
	MO80081-2	MOTOR ASSEMBLY-9400P	馬達整組-9400P	1	40	GF90322	WARING PLATE	扭力推盤	1
	MO80081-3	MOTOR ASSEMBLY-9500P	馬達整組-9500P	1	41	GV90331	INNER SPRING CAP	下壓式內彈簧蓋	1
	MO80081-7	MOTOR ASSEMBLY-9400PF	馬達整組-9400PF	1	42	GO90341	INNER SPRING	下壓式內彈簧	1
15	MI90481	PILOT ROD	開關引導棒	1	43	GU30361	STOP PILOT	酒杯	1
16	EB33610-2	CERAMICS CAPACITOR	陶瓷電容	1	44	GE80361-13	WARING SPRING FOR "9300P"	扭力彈簧(9300P)	1
17	MD91531	BRUSH CAP	碳刷蓋	2		GE80361-14	WARING SPRING FOR "9400P,9400PF"	扭力彈簧(9400P,9400PF)	1
18	MC71411	CAPBON BRUSH	碳刷	2		GE80361-6	WARING SPRING FOR "9500P"	扭力彈簧(9500P)	1
19	ML80531F	MOTOR TOP COVER	碳刷座半成品	1	45	GP30351	STELL BALLS	酒杯鋼珠	2
20	ME21481	BALL BEARING	軸承	2	46	GD91402-1	SHAFT -9300,9400P,9400PF	六角軸(9300,9400P,9400PF)	1
21	MH81581-1	ARMATURE-9300P,9400P,9500P	電樞-9300P,9400P,9500P	1		GD91402A	SHAFT FOR -9500PA	傳動軸(9500PA)	1
	MH81581-2	ARMATURE-9400PF	電樞-9400PF	1		GD91402B	SHAFT FOR -9500PB	傳動軸(9500PB)	1
22	MJ91621PF	MOTOR YOKE ASSEMBLY	鐵圈連磁鐵	1	47	GT91401A-1	BIT HOLDER FOR "A"TYPE	起子頭 5.0mm	1
23	MB91641A	MOTOR END COVER	馬達前蓋	1		GT91401C-1	BIT HOLDER FOR "B"TYPE	起子頭 6.35mm	1
24	MA91611B	ASSEMBLING SPRING	馬達固定片	2	48	GP21291A	BIT PILOT FOR HEX 5.0mm	起子頭帽鋼珠A頭用	2
25	MK21111	FAN FOR "9300P"	風扇(9300P)	1		GP21291B	BIT PILOT FOR HEX 6.35mm	起子頭帽鋼珠B頭用	2
	MK91091	FAN FOR "9400P"	風扇(9400P)	1	49	GY21321	WARING SPRING BASE	止推盤	1
	MK92091	FAN FOR "9500P"	風扇(9500P)	1	50	GB21331-1	CLUTCH CASE	下離合器筒	1
	MK21112	FAN FOR "9400PF"	風扇(9400PF)	1	51	GO21341	BIT SPRING	起子頭帽彈簧	1
26	MG91081	PILOT ROD	陶瓷棒	1	52	GJ21351	BIT SLEEVE	起子頭帽	1
27	GZ81081PA	CLUTCH ASSEMBLY FOR "9300PA"	離合器整組(9300PA)	1	53	GQ21361	"C"RING	起子頭帽C環	1
	GZ81081PB	CLUTCH ASSEMBLY FOR "9300PB"	離合器整組(9300PB)	1	54	GL21371	TORQUE ADJUSTING PINS	扭力調整棒	4
	GZ81082PA	CLUTCH ASSEMBLY FOR "9400PA"	離合器整組(9400PA)	1	55	GM21381	TORQUE ADJUSTING RING	扭力調整環	1
	GZ81082PB	CLUTCH ASSEMBLY FOR "9400PB"	離合器整組(9400PB)	1	56	GS21391	"C"RING	扭力環C環	1
	GZ81083PA	CLUTCH ASSEMBLY FOR "9500PA"	離合器整組(9500PA)	1	57	CD91031-1	COUPLER	前鎖環	1
	GZ81083PB	CLUTCH ASSEMBLY FOR "9500PB"	離合器整組(9500PB)	1		CD91031-4	COUPLER (ESD)	前鎖環 (ESD)	1
	GZ81082PAF	CLUTCH ASSEMBLY FOR "9400PFA"	離合器整組(9400PFA)	1	58	CH30681	GROUNDING MEANS	接地線	1
	GZ81082PBF	CLUTCH ASSEMBLY FOR "9400PFB"	離合器整組(9400PFB)	1	59	CH20102-10	WASHER	墊片	1
28	MI90201	PILOT ROD	開關引導棒	1	60	CH20102-11	SCREW	螺絲	1
29	GK91211	"C"RING	齒輪固定C環	1	61	GN30442	MAIN BEARING 9300P,9400P,9500P	離合器主軸承 9300P,9400P,9500P	1
30	GI28444-1	IRON WASHER FOR 9300P	齒輪固定片 9300P	1	62	GH20241	IDLE GEAR FOR "9300P"	遊星齒輪(9300P)	3
	GI28444	IRON WASHER FOR 9400P,9500P,9400PF	齒輪固定片 9400P,9500P,9400PF	1		GH91232-1	IDLE GEAR FOR "9400P"	遊星齒輪(9400P)	3
31	GH20241	IDLE GEAR FOR "9300P"	遊星齒輪(9300P)	3		GH92231-1	IDLE GEAR FOR "9500P"	遊星齒輪(9500P)	4
	GH91232	IDLE GEAR FOR "9400P"	遊星齒輪(9400P)	3		GH21221-2	IDLE GEAR FOR "9400PF"	遊星齒輪(9400PF)	4
	GH92231	IDLE GEAR FOR "9500P"	遊星齒輪(9500P)	4	63	CH20102-1	LINE CARD	線夾	1
	GH21221-2	IDLE GEAR FOR "9400PF"	遊星齒輪(9400PF)	4	64	CH20102-3	SCREW	螺絲	2



MODEL:
BSD-9300PF

CUSTOMER	DWG NAME	PRODUCTION NO.		
ITEM NO:	DWG NO:	 THIRD ANGLE PROJECTION		
TITLE:	MATERIAL			
	DES. BY	DATE	UNIT	SCALE
	CHKD. BY	DATE		SHT NO.
	APPD. BY	DATE		OF SHTS.

NO	PARTS NO	PARTS NAME-E	PARTS NAME-C	Q'ty	NO	PARTS NO	PARTS NAME-E	PARTS NAME-C	Q'ty
1	AA50001-63	CORD ASSEMBLY	電源線	1	32	GH21221-1	IDLE GEAR	遊星齒輪	3
2	AA50001-57N	CONNECTOR	檔尾電源線	1	33	GG21231-1	GEAR SEAT	下齒盤	1
3	CJ20011	SUSPENSION RING	起子吊環	1	34	GA91281	GEAR CASE	上離合器筒	1
4	CB91021-1A	HOUSING-UNDERSIDE	外殼下蓋	1	35	GN21251	MAIN BEARING	離合器主軸承	2
	WCB91021-5	HOUSING-UNDERSIDE (ESD)	外殼下蓋(ESD)	1	36	GW21532	IRON RING	鐵墊圈	1
5	CA91181-1A	HOUSING-UPSIDE	外殼上蓋	1	37	GX90302-1	SHAFT GUIDE	上離合器頭	1
	WCA91181-5	HOUSING-UPSIDE (ESD)	外殼上蓋(ESD)	1	38	GP30361	STELL BALLS	跳脫鋼珠	3
6	H10201	SHUT OFF SWITCH	剎車開關	1	39	GF90322	WARING PLATE	扭力推盤	1
7	CE90101-1	SWITCH BASE	三合一開關架	1	40	GV90331	INNER SPRING CAP	下壓式內彈簧蓋	1
8	CH90121	SCREW	螺絲	1	41	GO90341	INNER SPRING	下壓式內彈簧	1
9	CH90131	SCREW	螺絲	1	42	GU30361	STOP PILOT	酒杯	1
10	H10201	START SWITCH	啟動開關	1	43	GE80361-7	WARING SPRING	扭力彈簧	1
11	CH90151-1	SCREW	螺絲	2	44	GP30351	STELL BALLS	酒杯鋼珠	2
12	HA91041F	CHANGEVER SWITCH	正反開關	1	45	GD91402-1	SHAFT	六角軸	1
13	CH20102	SCREW	螺絲	3	46	GT91401A-1	BIT HOLDER FOR "A"TYPE	起子頭 5.0mm	1
14	MO80081-4	MOTOR ASSEMBLY	馬達整組	1		GT91401C-1	BIT HOLDER FOR "B"TYPE	起子頭 6.35mm	1
15	MI90481	PILOT ROD	開關引導棒	1	47	GP21291A	BIT PILOT FOR HEX 5.0mm	起子頭帽鋼珠A頭用	2
16	EB33610-2	CERAMICS CAPACITOR	陶瓷電容	1		GP21291B	BIT PILOT FOR HEX 6.35mm	起子頭帽鋼珠B頭用	2
17	MD91531	BRUSH CAP	碳刷蓋	2	48	GY21321	WARING SPRING BASE	止推盤	1
18	MC71411	CAPBON BRUSH	碳刷	2	49	GB21331-1	CLUTCH CASE	下離合器筒	1
19	ML80531F	MOTOR TOP COVER	碳刷座半成品	1	50	GO21341	BIT SPRING	起子頭帽彈簧	1
20	ME21481	BALL BEARING	軸承	2	51	GJ21351	BIT SLEEVE	起子頭帽	1
21	MH81581-1	ARMATURE	電樞	1	52	GQ21361	"C"RING	起子頭帽C環	1
22	MJ91621PF	MOTOR YOKE ASSEMBLY	鐵圈連磁鐵	1	53	GL21371	TORQUE ADJUSTING PINS	扭力調整棒	4
23	MB91641A	MOTOR END COVER	馬達前蓋	1	54	GM21381	TORQUE ADJUSTING RING	扭力調整環	1
24	MA91611B	ASSEMBLING SPRING	馬達固定片	2	55	GS21391	"C"RING	扭力環C環	1
25	MK21111PF	FAN	風扇	1	56	CD91031-1	COUPLER	前鎖環	1
26	MG30081-1	PILOT ROD	陶瓷棒	1		CD91031-4	COUPLER (ESD)	前鎖環 (ESD)	1
27	GZ81081PAF	CLUTCH ASSEMBLY FOR "9300PFA"	離合器整組(9300PFA)	1	57	CH30681	GROUNDING MEANS	接地線	1
	GZ81081PBF	CLUTCH ASSEMBLY FOR "9300PFB"	離合器整組(9300PFB)	1	58	CH20102-10	WASHER	墊片	1
28	MI90201	PILOT ROD	開關引導棒	1	59	CH20102-11	SCREW	螺絲	1
29	GK91211	"C"RING	齒輪固定C環	1	60	CH20102-1	LINE CARD	線夾	1
30	GI28444-1	IRON WASHER	齒輪固定片	1	61	CH20102-3	SCREW	螺絲	2
31	G21301	WASHER,HIGH SPEED	快速齒輪墊圈	1					