

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 injure. 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 jewellery. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewellery, or long hair can be caught in moving parts
- g) **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.

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 manufacturer or agent, list of addresses.
 - 3. List of user-replaceable parts.
 - 4. Special tools which may be required.

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.


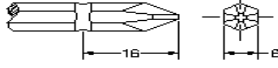
3. Specifications

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 the 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.
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.

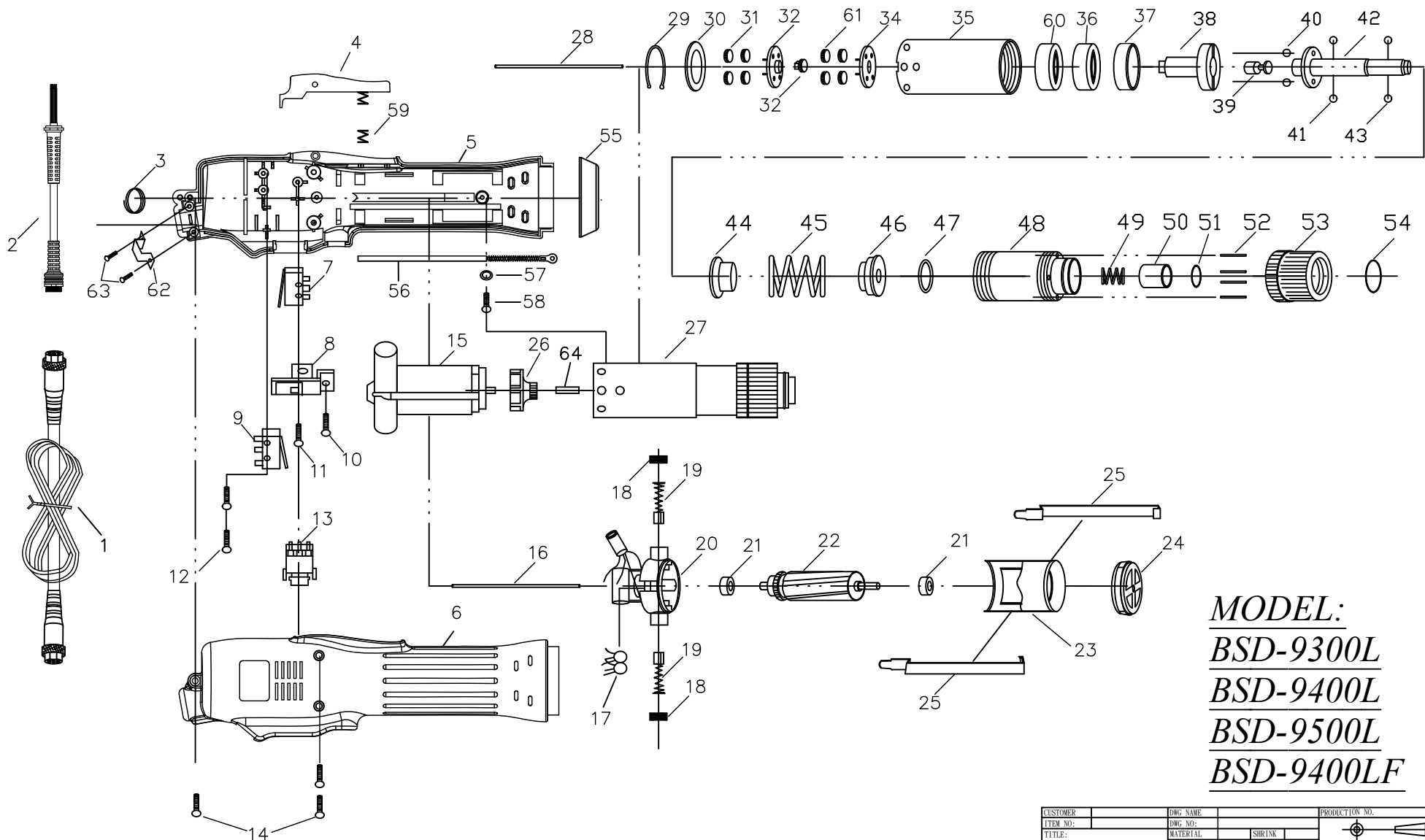
CAUTION

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

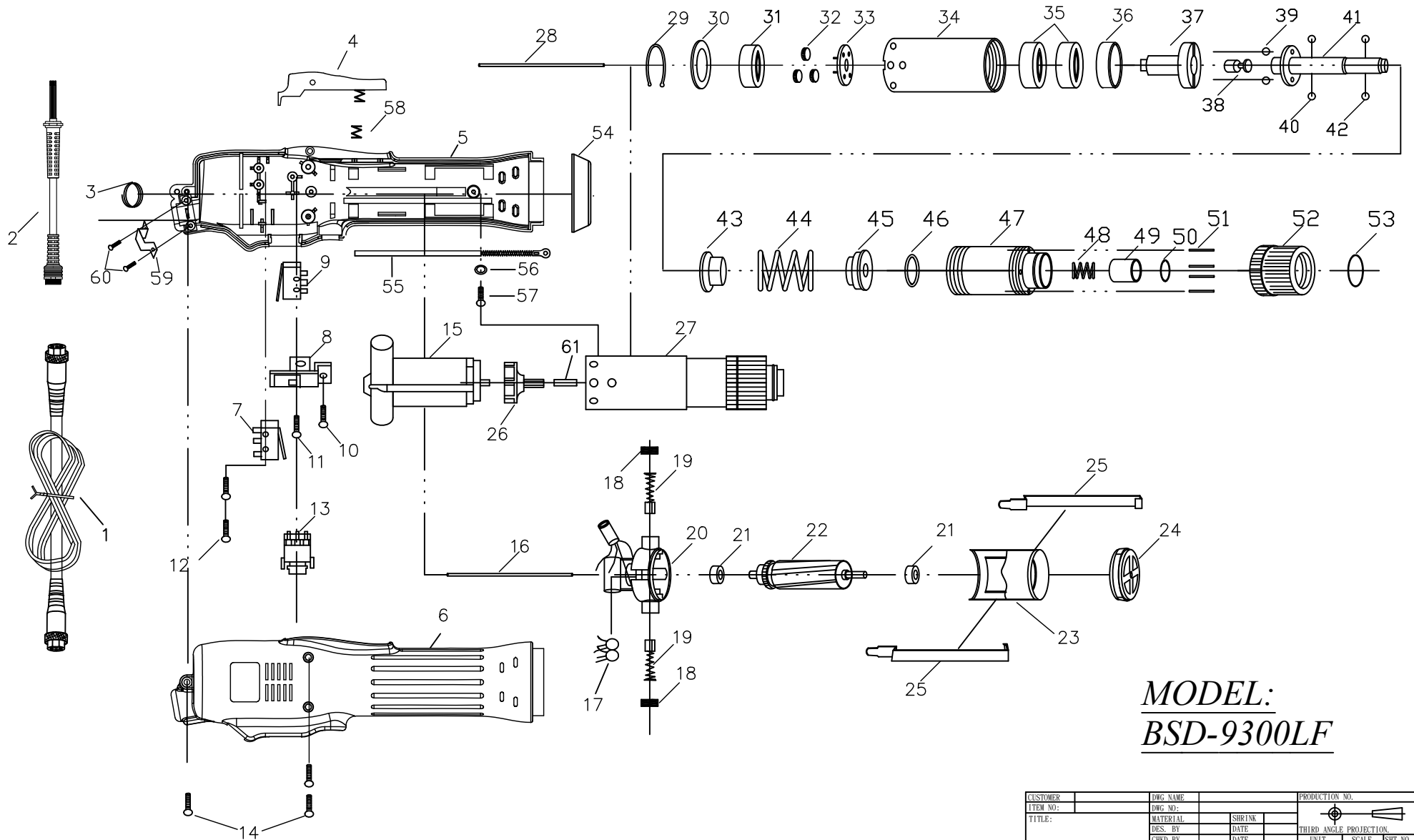
**SAVE THESE INSTRUCTIONS
DO NOT DESTROY**



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	UNIT
	CHKD. BY	DATE	SCALE
	APPD. BY	DATE	SHT NO. OF SHTS.

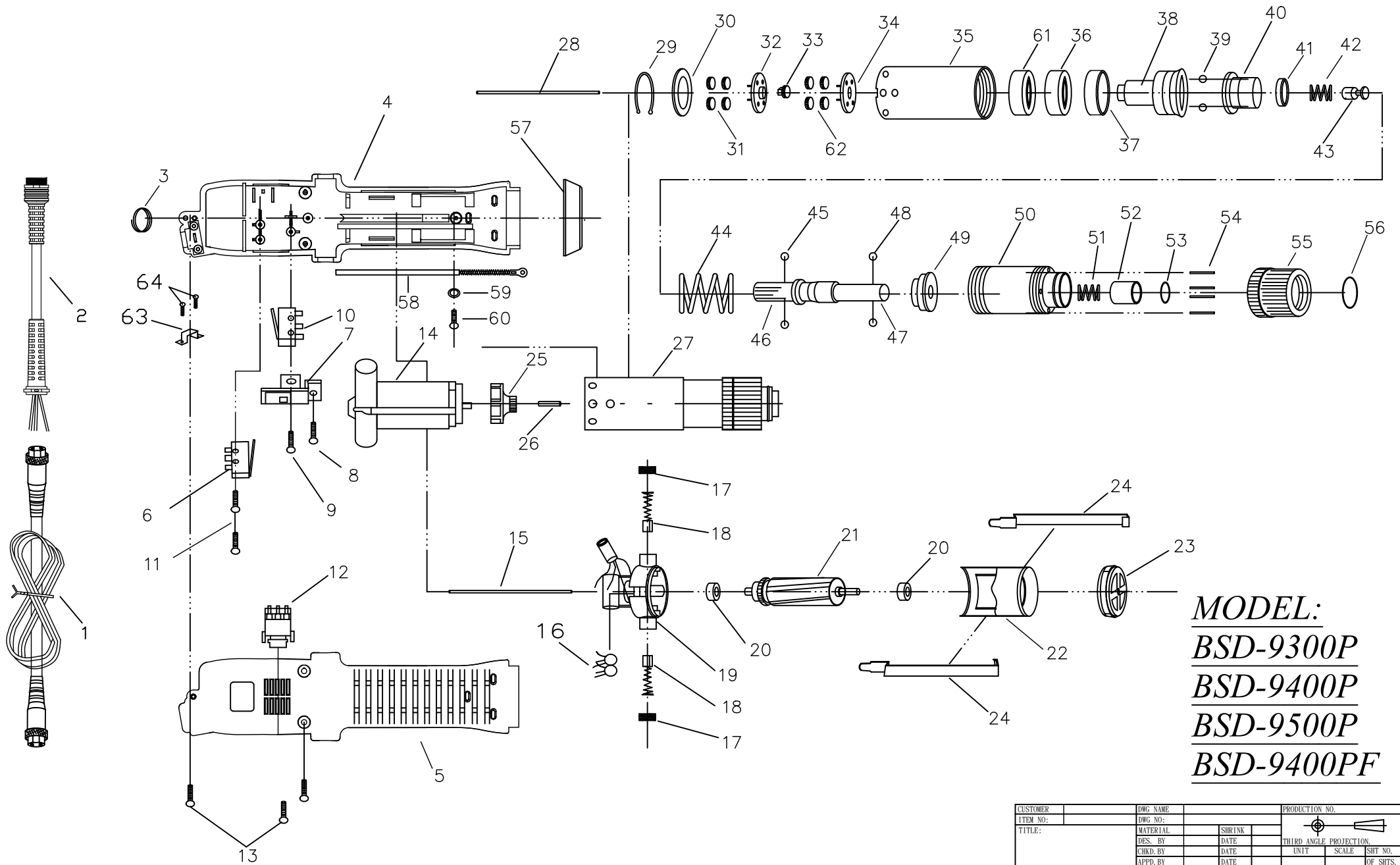
NO	PARTS NO	PARTS NAME-E	Q'ty	NO	PARTS NO	PARTS NAME-E	Q'ty
1	AA50001-63N	CORD ASSEMBLY	1		GH21221-2	IDLE GEAR FOR "9400LF"	4
2	AA50001-57N	CONNECTOR	1	32	GG21231	GEAR SEAT FOR "9300L"	1
3	CJ20011	SUSPENSION RING	1		GG91242-1	GEAR SEAT FOR "9400L"	1
4	CC21011-5	TRIGGER ASSEMBLY	1		GG92241-1	GEAR SEAT FOR "9500L"	1
5	CB91022-1	HOUSING-UNDERSIDE-ORANGE	1		GG20271	GEAR SEAT FOR "9400LF"	1
	CB91182-6	HOUSING-UNDERSIDE (ESD)	1	33	G20102	CENTRAL GEAR FOR "9300L" ONLY	1
6	CA91182-1	HOUSING-UPSIDE-ORANGE	1		G20104	CENTRAL GEAR FOR "9400FL" ONLY	1
	CA91182-6	HOUSING-UPSIDE (ESD)	1	34	GG21231	GEAR SEAT FOR "9300L"	1
7	HB91061	SHUT OFF SWITCH	1		GG91272-1	GEAR SEAT FOR "9400L"	1
8	CE90101-1	SWITCH BASE	1		GG92271-1	GEAR SEAT FOR "9500L"	1
9	H10201	START SWITCH	1		GG20271	GEAR SEAT FOR "9400LF"	1
10	CH90121	SCREW	1	35	GA91281	GEAR CASE FOR "9300L"	1
11	CH90131	SCREW	1		GA91282	GEAR CASE FOR "9400L、9500L"	1
12	CH90151-1	SCREW	2		GA91282-1	GEAR CASE FOR "9400LF"	1
13	HA91041F	CHANGEOVER SWITCH FOR 9300L	1	36	GN21251	MAIN BEARING 9300L,9400L,9500L	1
	HA91042F	CHANGEOVER SWITCH FOR 9400L,9400LF	1		GN21251	MAIN BEARING 9400LF	2
	HA92051F	CHANGEOVER SWITCH FOR 9500L	1	37	GW21531	IRON RING	1
14	CH20102	SCREW	3	38	GC90302-1	CAM	1
15	MO80081	MOTOR ASSEMBLY-9300L	1	39	GU30371	STOP PILOT	1
	MO80081-2	MOTOR ASSEMBLY-9400L	1	40	GP30361	STELL BALLS(5mm)	3
	MO80081-3	MOTOR ASSEMBLY-9500L	1	41	GP30351	STELL BALLS(4mm)	2
	MO80081-7	MOTOR ASSEMBLY-9400LF	1	42	GD91408-2	SHAFT FOR HEX 5.0mm	1
16	MI31611-1	PILOT ROD	1		GD91404-4	SHAFT FOR HEX 6.35mm	1
17	EB33610-2	CERAMICS CAPACITOR	1	43	GP21291A	BIT PILOT FOR HEX 5.0mm(3mm)	2
18	MD91531	BRUSH CAP	2		GP21291B	BIT PILOT FOR HEX 6.35mm(2.5mm)	2
19	MC71411	CARBON BRUSH	2	44	GF90324	WARING PLATE	1
20	ML80531F	MOTOR TOP COVER	1	45	GE80351-9	WARING SPRING FOR "9300L"	1
21	ME21481	BALL BEARING	2		GE80351-10	WARING SPRING FOR "9400,9400LF"	1
22	MH81581-1	ARMATURE-9300L,9400L,9500L	1		GE80351-11	WARING SPRING FOR "9500L"	1
	MH81581-2	ARMATURE-9400LF	1	46	GY21321	WARING SPRING BASE	1
23	MJ91621PF	MOTOR YOKE ASSEMBLY	1	47	GK20231B	"C"RING	1
24	MB91641A	MOTOR END COVER	1	48	GB21331-1	CLUTCH CASE	1
25	MA91611B	ASSEMBLING SPRING	2	49	GO21341	BIT SPRING	1
26	MK21111	FAN FOR "9300L"	1	50	GJ21351	BIT SLEEVE	1
	MK91091	FAN FOR "9400L"	1	51	GQ21361	"C"RING	1
	MK92091	FAN FOR "9500L"	1	52	GL21371	TORQUE ADJUSTING PINS	4
	MK21112	FAN FOR "9400FL"	1	53	GM21381	TORQUE ADJUSTING RING	1
27	GZ81081LA	CLUTCH ASSEMBLY FOR "9300LA"	1	54	GS21391	"C"RING	1
	GZ81081LB	CLUTCH ASSEMBLY FOR "9300LB"	1	55	CD91031-1	COUPLER	1
	GZ81082LA	CLUTCH ASSEMBLY FOR "9400LA"	1		CD91031-4	COUPLER (ESD)	1
	GZ81082LB	CLUTCH ASSEMBLY FOR "9400LB"	1	56	CH30681	GROUNDING MEANS	1
	GZ81083LA	CLUTCH ASSEMBLY FOR "9500LA"	1	57	CH20102-10	WASHER	1
	GZ81083LB	CLUTCH ASSEMBLY FOR "9500LB"	1	58	CH20102-11	SCREW	1
	GZ81082LAF	CLUTCH ASSEMBLY FOR "9400LFA"	1	59	CK28031-1	TRIGGER SPRING	1
	GZ81082LBF	CLUTCH ASSEMBLY FOR "9400LFB"	1	60	GN30442	MAIN BEARING 9300L,9400L,9500L	1
28	MI31221	PILOT ROD	1	61	GH20241	IDLE GEAR FOR "9300L"	3
29	GK91211	"C"RING	1		GH91232-1	IDLE GEAR FOR "9400L"	3
30	GI28444-1	IRON WASHER FOR 9300L	1		GH92231-1	IDLE GEAR FOR "9500L"	4
	GI28444	IRON WASHER FOR 9400L,9500L,9400LF	1		GH21221-2	IDLE GEAR FOR "9400LF"	4
31	GH20241	IDLE GEAR FOR "9300L"	3	62	CH20102-1	LINE CARD	1
	GH91232	IDLE GEAR FOR "9400L"	3	63	CH20102-3	SCREW	2
	GH92231	IDLE GEAR FOR "9500L"	4	64	MG91081	PILOT ROD	1



MODEL:
BSD-9300LF

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

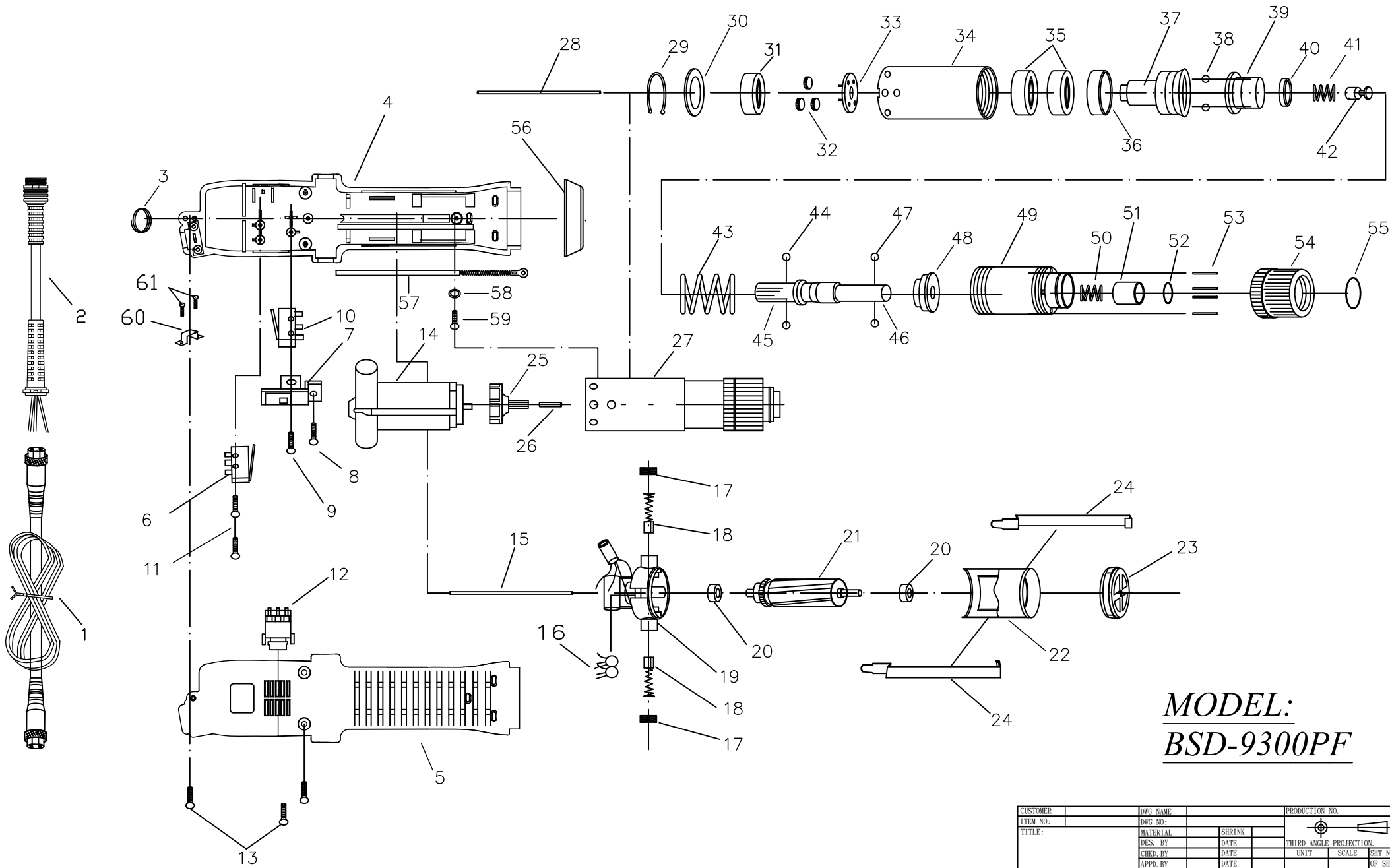
NO	PARTS NO	PARTS NAME-E	Q'ty	NO	PARTS NO	PARTS NAME-E	Q'ty
1	AA50001-63N	CORD ASSEMBLY	1	31	G21301	WASHER,HIGH SPEED	1
2	AA50001-57N	CONNECTOR	1	32	GH21221-1	IDLE GEAR	3
3	CJ20011	SUSPENSION RING	1	33	GG21231-1	GEAR SEAT	1
4	CC70012	TRIGGER ASSEMBLY	1	34	GA91281	GEAR CASE	1
	CC70013	TRIGGER ASSEMBLY (ESD)	1	35	GN21251	MAIN BEARING	2
5	CB91022-1	HOUSING-UNDERSIDE-ORANGE	1	36	GW21531	IRON RING	1
	CB91182-6	HOUSING-UNDERSIDE (ESD)	1	37	GC90302-1	CAM	1
6	CA91182-1	HOUSING-UPSIDE-ORANGE	1	38	GU30371	STOP PILOT	1
	CA91182-6	HOUSING-UPSIDE (ESD)	1	39	GP30361	STELL BALLS(5mm)	3
7	HB91061	SHUT OFF SWITCH	1	40	GP30351	STELL BALLS(4mm)	2
8	CE90101-1	SWITCH BASE	1	41	GD91408-2	SHAFT FOR HEX 5.0mm	1
9	HB50061	START SWITCH	1		GD91404-4	SHAFT FOR HEX 6.35mm	1
10	CH90121	SCREW	1	42	GP21291A	BIT PILOT FOR HEX 5.0mm(3mm)	2
11	CH90131	SCREW	1		GP21291B	BIT PILOT FOR HEX 6.35mm(2.5mm)	2
12	CH90151-1	SCREW	2	43	GF90324	WARING PLATE	1
13	HA91041F	CHANGEOVER SWITCH	1	44	GE80351-9	WARING SPRING	1
14	CH20102	SCREW	3	45	GY21321	WARING SPRING BASE	1
15	MO80081-4	MOTOR ASSEMBLY	1	46	GK20231B	"C"RING	1
16	MI31611-1	PILOT ROD	1	47	GB21331-1	CLUTCH CASE	1
17	EB33610-2	CERAMICS CAPACITOR	1	48	GO21341	BIT SPRING	1
18	MD91531	BRUSH CAP	2	49	GJ21351	BIT SLEEVE	1
19	MC71411	CAPBON BRUSH	2	50	GQ21361	"C"RING	1
20	ML80531F	MOTOR TOP COVER	1	51	GL21371	TORQUE ADJUSTING PINS	4
21	ME21481	BALL BEARING	2	52	GM21381	TORQUE ADJUSTING RING	1
22	MH81581-1	ARMATURE	1	53	GS21391	"C"RING	1
23	MJ91621PF	MOTOR YOKE ASSEMBLY	1	54	CD91031-1	COUPLER	1
24	MB91641A	MOTOR END COVER	1		CD91031-4	COUPLER (ESD)	1
25	MA91611B	ASSEMBLING SPRING	2	55	CH30681	GROUNDING MEANS	1
26	MK21111PF	FAN	1	56	CH20102-10	WASHER	1
27	GZ81081LAF	CLUTCH ASSEMBLY FOR "9300LFA"	1	57	CH20102-11	SCREW	1
	GZ81081LBF	CLUTCH ASSEMBLY FOR "9300LFB"	1	58	CK28031-1	TRIGGER SPRING	1
28	MI31221	PILOT ROD	1	59	CH20102-1	LINE CARD	1
29	GK91211	"C"RING	1	60	CH20102-3	SCREW	2
30	GI28444-1	IRON WASHER	1	61	MG30081-1	PILOT ROD	1



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

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

NO	PARTS NO	PARTS NAME-E	Q'ty	NO	PARTS NO	PARTS NAME-E	Q'ty
1	AA50001-63N	CORD ASSEMBLY	1	32	GG21231	GEAR SEAT FOR "9300P"	1
2	AA50001-57N	CONNECTOR	1		GG20271	GEAR SEAT FOR "9400PF"	1
3	CJ20011	SUSPENSION RING	1		GG91242-1	GEAR SEAT FOR "9400P"	1
4	CB91021-1A	HOUSING-UNDERSIDE-ORANGE	1		GG92241-1	GEAR SEAT FOR "9500P"	1
	WCB91021-5	HOUSING-UNDERSIDE (ESD)	1	33	G20102	CENTRAL GEAR FORN "9300P" ONLY	1
5	CA91181-1A	HOUSING-UPSIDE-ORANGE	1		G20104	CENTRAL GEAR FORN "9400PF" ONLY	1
	WCA91181-5	HOUSING-UPSIDE (ESD)	1	34	GG21231	GEAR SEAT FOR "9300P"	1
6	H10201	SHUT OFF SWITCH	1		GG91272-1	GEAR SEAT FOR "9400P"	1
7	CE90101-1	SWITCH BASE	1		GG92271-1	GEAR SEAT FOR "9500P"	1
8	CH90121	SCREW	1		GG20271	GEAR SEAT FOR "9400PF"	1
9	CH90131	SCREW	1	35	GA91281	GEAR CASE FOR "9300P"	1
10	H10201	START SWITCH	1		GA91282	GEAR CASE FOR "9400P、9500P"	1
11	CH90151-1	SCREW	2		GA91282-1	GEAR CASE FOR "9400PF"	1
12	HA91041F	CHANGEOVER SWITCH (9300P)	1	36	GN21251	MAIN BEARING 9300P,9400P,9500P	1
	HA91042F	CHANGEOVER SWITCH (9400P,9400PF)	2		GN21251	MAIN BEARING 9400PF	2
	HA92051F	CHANGEOVER SWITCH (9500P)	3	37	GW21532	IRON RING	1
13	CH20102	SCREW	3	38	GX90302-1	SHAFT GUIDE	1
14	MO80081	MOTOR ASSEMBLY-9300P	1	39	GP30361	STELL BALLS	3
	MO80081-2	MOTOR ASSEMBLY-9400P	1	40	GF90322	WARING PLATE	1
	MO80081-3	MOTOR ASSEMBLY-9500P	1	41	GV90331	INNER SPRING CAP	1
	MO80081-7	MOTOR ASSEMBLY-9400PF	1	42	GO90341	INNER SPRING	1
15	MI90481	PILOT ROD	1	43	GU30361	STOP PILOT	1
16	EB33610-2	CERAMICS CAPACITOR	1	44	GE80361-13	WARING SPRING FOR "9300P"	1
17	MD91531	BRUSH CAP	2		GE80361-14	WARING SPRING FOR "9400P,9400PF"	1
18	MC71411	CAPBON BRUSH	2		GE80361-6	WARING SPRING FOR "9500P"	1
19	ML80531F	MOTOR TOP COVER	1	45	GP30351	STELL BALLS	2
20	ME21481	BALL BEARING	2	46	GD91402-1	SHAFT -9300,9400P,9400PF	1
21	MH81581-1	ARMATURE-9300P,9400P,9500P	1		GD91402A	SHAFT FOR -9500PA	1
	MH81581-2	ARMATURE-9400PF	1		GD91402B	SHAFT FOR -9500PB	1
22	MJ91621PF	MOTOR YOKE ASSEMBLY	1	47	GT91401A-1	BIT HOLDER FOR "A"TYPE	1
23	MB91641A	MOTOR END COVER	1		GT91401C-1	BIT HOLDER FOR "B"TYPE	1
24	MA91611B	ASSEMBLING SPRING	2	48	GP21291A	BIT PILOT FOR HEX 5.0mm	2
25	MK21111	FAN FOR "9300P"	1		GP21291B	BIT PILOT FOR HEX 6.35mm	2
	MK91091	FAN FOR "9400P"	1	49	GY21321	WARING SPRING BASE	1
	MK92091	FAN FOR "9500P"	1	50	GB21331-1	CLUTCH CASE	1
	MK21112	FAN FOR "9400PF"	1	51	GO21341	BIT SPRING	1
26	MG91081	PILOT ROD	1	52	GJ21351	BIT SLEEVE	1
27	GZ81081PA	CLUTCH ASSEMBLY FOR "9300PA"	1	53	GQ21361	"C"RING	1
	GZ81081PB	CLUTCH ASSEMBLY FOR "9300PB"	1	54	GL21371	TORQUE ADJUSTING PINS	4
	GZ81082PA	CLUTCH ASSEMBLY FOR "9400PA"	1	55	GM21381	TORQUE ADJUSTING RING	1
	GZ81082PB	CLUTCH ASSEMBLY FOR "9400PB"	1	56	GS21391	"C"RING	1
	GZ81083PA	CLUTCH ASSEMBLY FOR "9500PA"	1	57	CD91031-1	COUPLER	1
	GZ81083PB	CLUTCH ASSEMBLY FOR "9500PB"	1		CD91031-4	COUPLER (ESD)	1
	GZ81082PAF	CLUTCH ASSEMBLY FOR "9400PFA"	1	58	CH30681	GROUNDING MEANS	1
	GZ81082PBF	CLUTCH ASSEMBLY FOR "9400PFB"	1	59	CH20102-10	WASHER	1
28	MI90201	PILOT ROD	1	60	CH20102-11	SCREW	1
29	GK91211	"C"RING	1	61	GN30442	MAIN BEARING 9300P,9400P,9500P	1
30	GI28444-1	IRON WASHER FOR 9300P	1	62	GH20241	IDLE GEAR FOR "9300P"	3
	GI28444	IRON WASHER FOR 9400P,9500P,9400PF	1		GH91232-1	IDLE GEAR FOR "9400P"	3
31	GH20241	IDLE GEAR FOR "9300P"	3		GH92231-1	IDLE GEAR FOR "9500P"	4
	GH91232	IDLE GEAR FOR "9400P"	3		GH21221-2	IDLE GEAR FOR "9400PF"	4
	GH92231	IDLE GEAR FOR "9500P"	4	63	CH20102-1	LINE CARD	1
	GH21221-2	IDLE GEAR FOR "9400PF"	4	64	CH20102-3	SCREW	2



MODEL:
BSD-9300PF

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	Q'ty	NO	PARTS NO	PARTS NAME-E	Q'ty
1	AA50001-63N	CORD ASSEMBLY	1	32	GH21221-1	IDLE GEAR	3
2	AA50001-57N	CONNECTOR	1	33	GG21231-1	GEAR SEAT	1
3	CJ20011	SUSPENSION RING	1	34	GA91281	GEAR CASE	1
4	CB91021-1A	HOUSING-UNDERSIDE-ORANGE	1	35	GN21251	MAIN BEARING	2
	WCB91021-5	HOUSING-UNDERSIDE (ESD)	1	36	GW21532	IRON RING	1
5	CA91181-1A	HOUSING-UPSIDE-ORANGE	1	37	GX90302-1	SHAFT GUIDE	1
	WCA91181-5	HOUSING-UPSIDE (ESD)	1	38	GP30361	STELL BALLS	3
6	H10201	SHUT OFF SWITCH	1	39	GF90322	WARING PLATE	1
7	CE90101-1	SWITCH BASE	1	40	GV90331	INNER SPRING CAP	1
8	CH90121	SCREW	1	41	GO90341	INNER SPRING	1
9	CH90131	SCREW	1	42	GU30361	STOP PILOT	1
10	H10201	START SWITCH	1	43	GE80361-7	WARING SPRING	1
11	CH90151-1	SCREW	2	44	GP30351	STELL BALLS	2
12	HA91041F	CHANGEOVER SWITCH	1	45	GD91402-1	SHAFT	1
13	CH20102	SCREW	3	46	GT91401A-1	BIT HOLDER FOR "A"TYPE	1
14	MO80081-4	MOTOR ASSEMBLY	1		GT91401C-1	BIT HOLDER FOR "B"TYPE	1
15	MI90481	PILOT ROD	1	47	GP21291A	BIT PILOT FOR HEX 5.0mm	2
16	EB33610-2	CERAMICS CAPACITOR	1		GP21291B	BIT PILOT FOR HEX 6.35mm	2
17	MD91531	BRUSH CAP	2	48	GY21321	WARING SPRING BASE	1
18	MC71411	CAPBON BRUSH	2	49	GB21331-1	CLUTCH CASE	1
19	ML80531F	MOTOR TOP COVER	1	50	GO21341	BIT SPRING	1
20	ME21481	BALL BEARING	2	51	GJ21351	BIT SLEEVE	1
21	MH81581-1	ARMATURE	1	52	GQ21361	"C"RING	1
22	MJ91621PF	MOTOR YOKE ASSEMBLY	1	53	GL21371	TORQUE ADJUSTING PINS	4
23	MB91641A	MOTOR END COVER	1	54	GM21381	TORQUE ADJUSTING RING	1
24	MA91611B	ASSEMBLING SPRING	2	55	GS21391	"C"RING	1
25	MK21111PF	FAN	1	56	CD91031-1	COUPLER	1
26	MG30081-1	PILOT ROD	1		CD91031-4	COUPLER (ESD)	1
27	GZ81081PAF	CLUTCH ASSEMBLY FOR "9300PFA"	1	57	CH30681	GROUNDING MEANS	1
	GZ81081PBF	CLUTCH ASSEMBLY FOR "9300PFB"	1	58	CH20102-10	WASHER	1
28	MI90201	PILOT ROD	1	59	CH20102-11	SCREW	1
29	GK91211	"C"RING	1	60	CH20102-1	LINE CARD	1
30	GI28444-1	IRON WASHER	1	61	CH20102-3	SCREW	2
31	G21301	WASHER,HIGH SPEED	1				

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