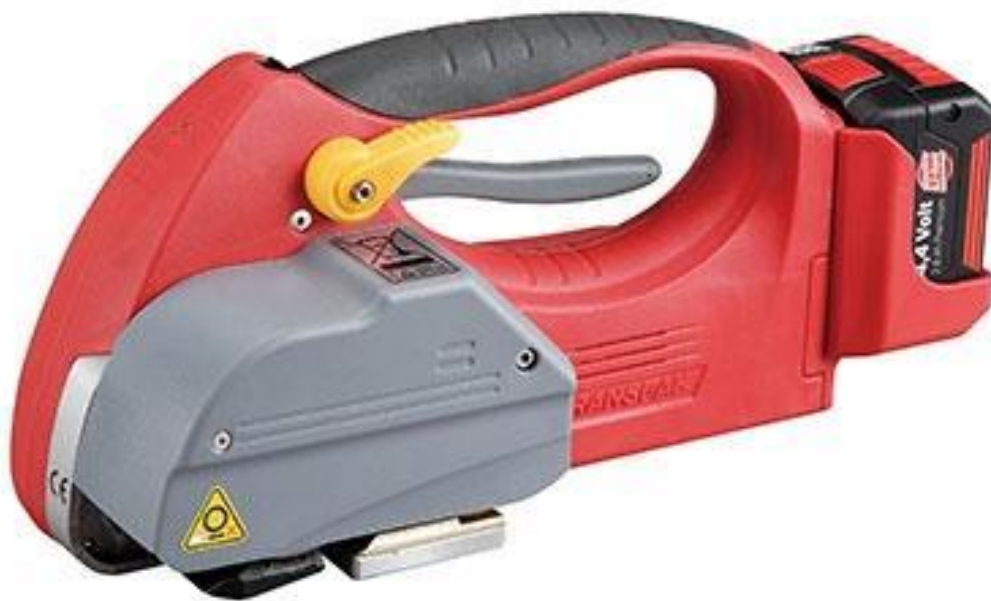


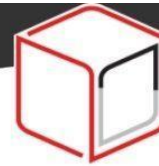


# STEP H-45L HELIOS BATTERY TOOL (Manual)



41211010 Manual UK 030622  
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## COMPANY INTRODUCES

"We believe packaging solutions for our customers should be simple, easy to use, ergonomic and sustainable.

We offer a wide range of packaging products and solutions, and web design and engineer production lines specifically built to your needs.

Our motto is simple: Sal-Tech Easy Packaging makes your life simpler through engineering and good design, and your job less stressful. We Keep Things Together."

Gunnar Salbæk  
Owner/CEO

## About Sal-Tech

Sal-Tech Easy Packaging offers a wide range of solutions for simple and reliable packaging of your products.

If it is a standard or a special solution that's needed for your assignment, we have a creative input to solve your needs, securing you an up to date packaging application.

Sal-Tech Easy Packaging is 100% owned by Gunnar Salbæk,

CVR no.: DK18429098 Salbæk Easy Packaging v/Gunnar Bjørn Salbæk.

Our team works together on a 100% virtual platform and therefore please forward all correspondence and invoices to e-mail til [invoice@sal-tech.com](mailto:invoice@sal-tech.com).

Bank connection: Nordea Denmark.





## PART I

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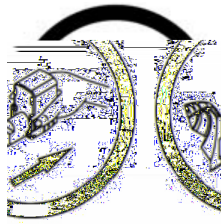


## 1. Safety Instructions

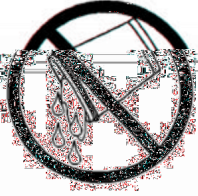
### Operation with Battery



50°C.

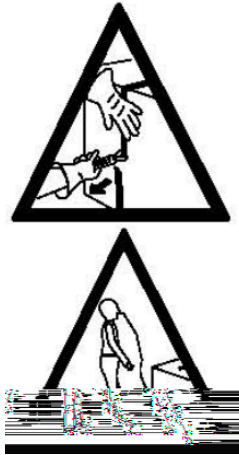


### Operation



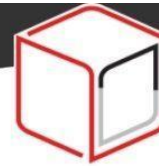
## Strap Breakage Hazard



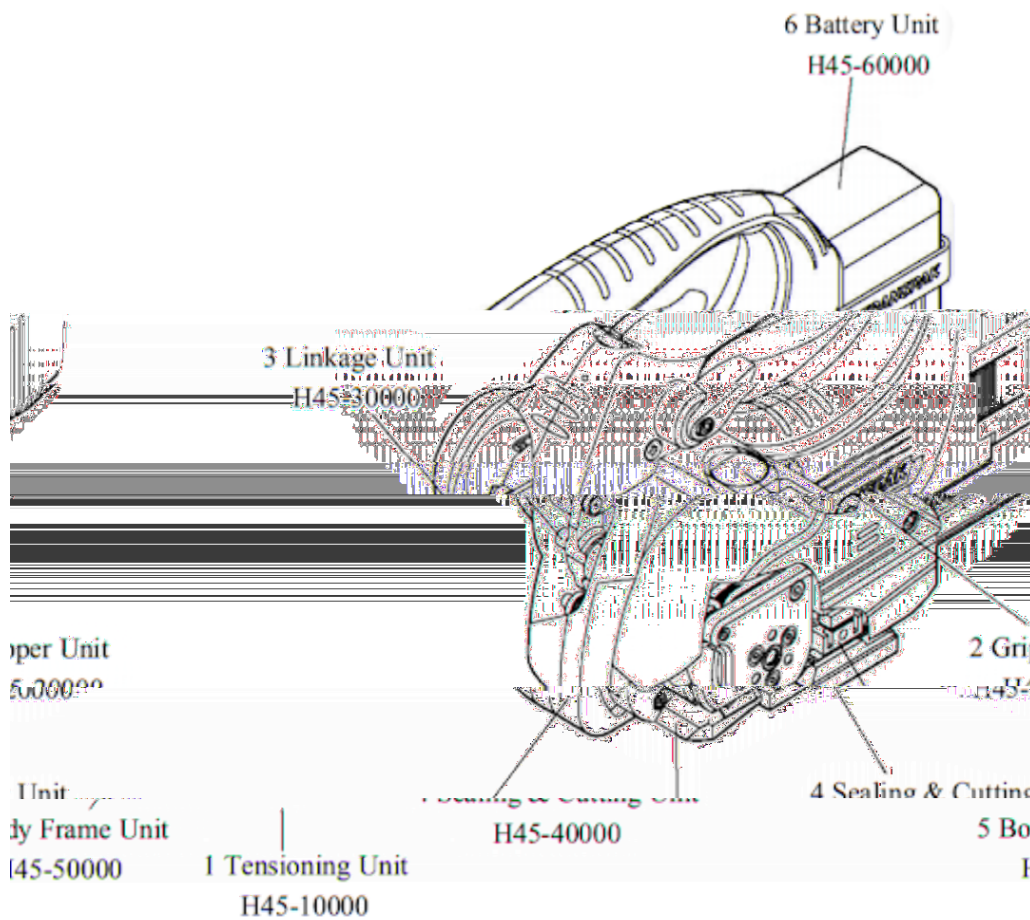


## Tool Hazards





## 2. Functional Unit





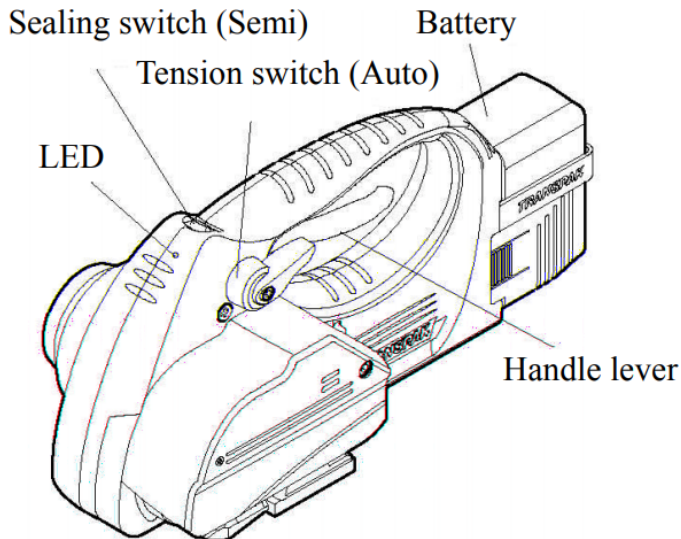
### 3. Technical Data

Battery	BOSCH Ni-MH , 14.4VDC , 2.6Ah	
Charge Time	approx. 25 minutes	
Strapping Speed	3 sec/cycle (Auto)	
Strap Width	9mm, 12mm, 16mm	
Strap Type	PET, PP	
Strap Thickness	PET : 0.4mm-1.05mm ..... PP : 0.55mm-1.05mm	
Sealing Joint	friction weld	
Tension (max)	220 kg (485 lbs)	
Dimensions (L) x (W) x (H)	360mm x 157mm x 160mm	
Weight	4.5 kg (10 lbs)	
145°C	Working Temperature	The ambient temperature should be between 5°C and (41°F and 113°F)
20°C		The best performance is achieved between 15°C and (59°F and 68°F)

Remarks:



## 4. Operation Elements



LED	
Red	Charge the battery
Yellow	Cooling time is running
Green	Strapping finish

LED Flash	
Green	Over Current
Green/Red	Over Heat

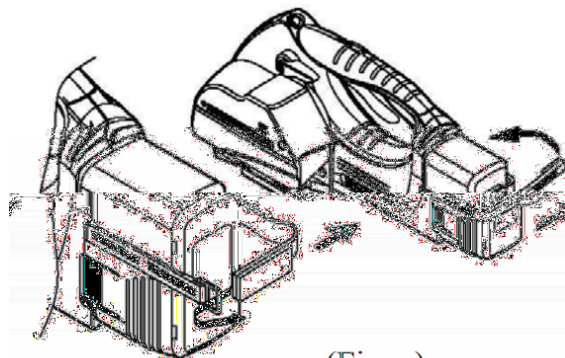
## 5. Operation

### (1) Installation

#### Putting on the Battery

( 45-60261)

( . . )



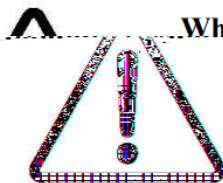
(Fig. a)

## Removing the Empty Battery

( 45-60261)

### (1) Adjusting the Welding Pressure

( )



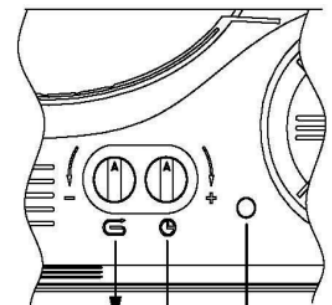
**When adjusting the welding pressure, the shim must be inserted into "steel insert".**

**Disregarding this regulation will cause considerable trouble.**

ap im(S)	H45-40270	Steel Insert	strap thickness	smooth strap	emboss strap
				quantity for shim(S)	quantity for shim(S)
3			0.4~0.6 mm	2	
	2		0.7~0.8 mm		1
	1		0.9~1.05 mm		0

### (2) Adjustments

( ) Preselecting of Strap Tension and Tensioning Speed



Adjusting knob tensioning force

Adjusting knob sealing time

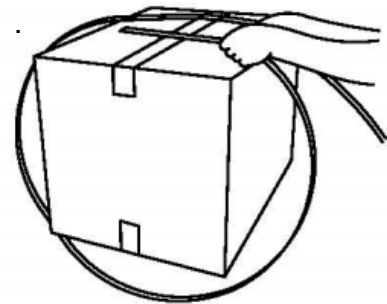
Protection cover



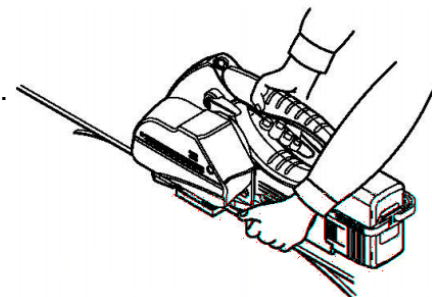
0.55 0.7  
45-100 0 ( )  
(  
)

### ( ) Adjusting the Sealing Time

#### (1) Feeding the Strap Around the Package

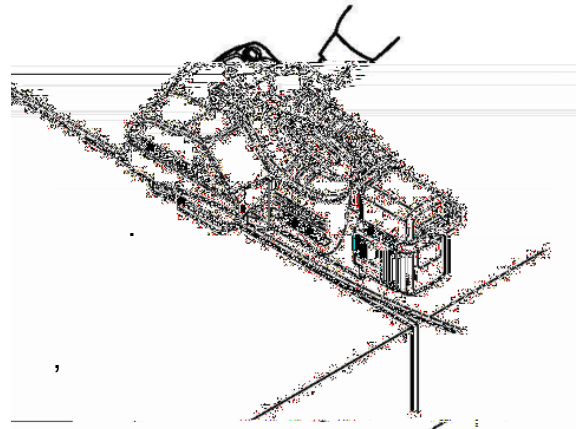


#### (2) Inserting the Strap

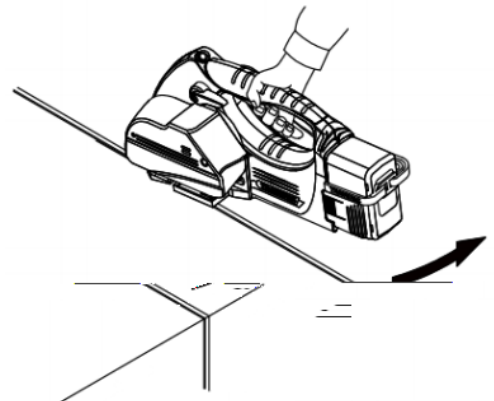




### (3) Tensioning and Sealing the Straps

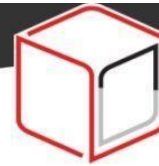


#### (1) Removing the Tool



#### (2) Seal – Control

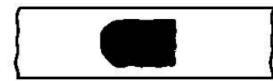




**Correct Seal**



**Welding Time Too Short**



**Welding Time Too Long**



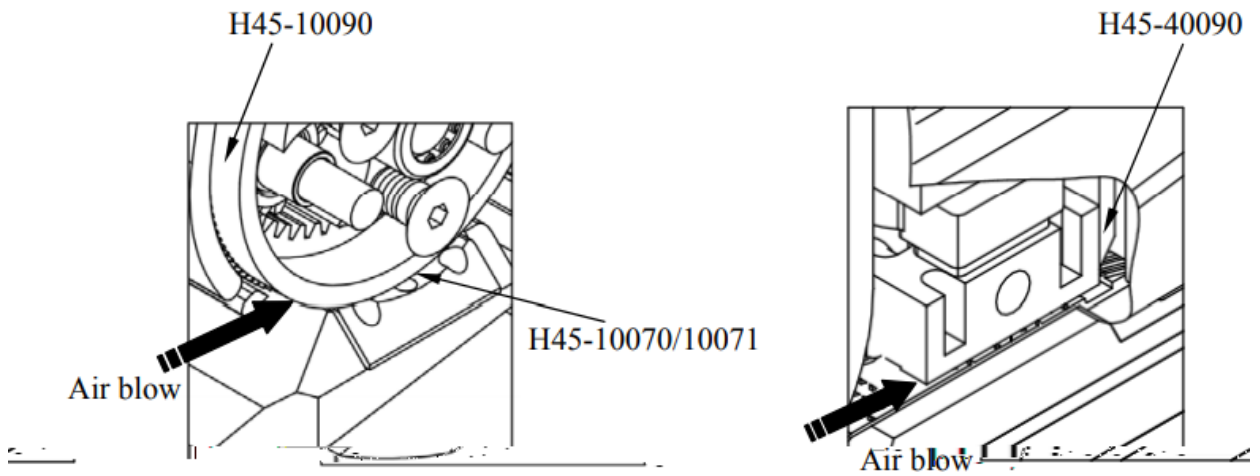
## 6. Maintenance

**Please take off the battery before doing maintenance.**

(1)  
( 45-10070/ 45-10071)

( 45-100 0)  
( 45-400 0)

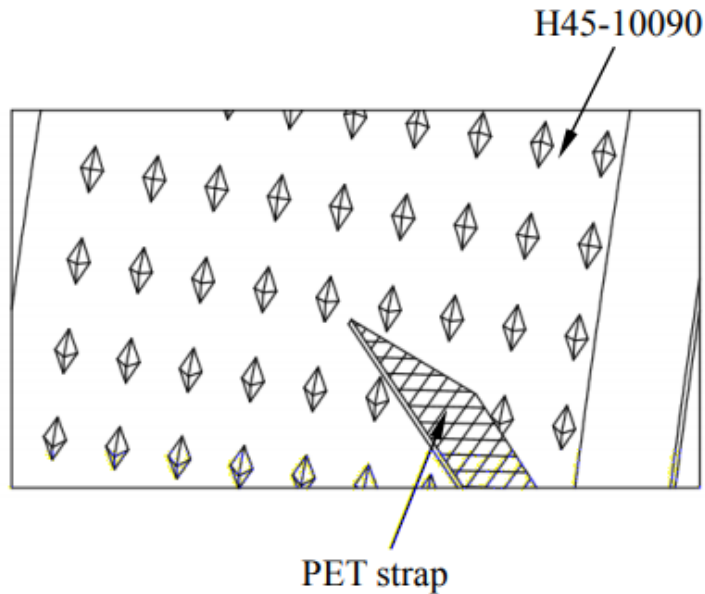




(2)  
( H45-10090 ), ( )

## 7. Troubleshooting

(1) The strap slips while tensioning



(2)  
( .6 ).





(3)  
( 45-100 0) ( 45-10070)  
(4) ( 45-102 0/ 45-102 1) . (  
. ( 45-102 0)

(5) ( 45-100 0)





( ) ( 45-60143)

- ( / ) ( )

) 1 2

( 45-200 0)

( 45-200 0)

( 0305) 2 ( 45-20060) 2

' ( 45-20120)

11

( 45-20110) ( 45-50010)

' ( 45-20110)

( 45-20050) ( 45-20040)

' ( 45-20110)

( 45-40270)

( 45-20110). 5

( 45-20070)

' ( 45-20110)

( 45-40160)

( ) ( 45-60143)

( / ).

- 1 3

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( 45-40270)

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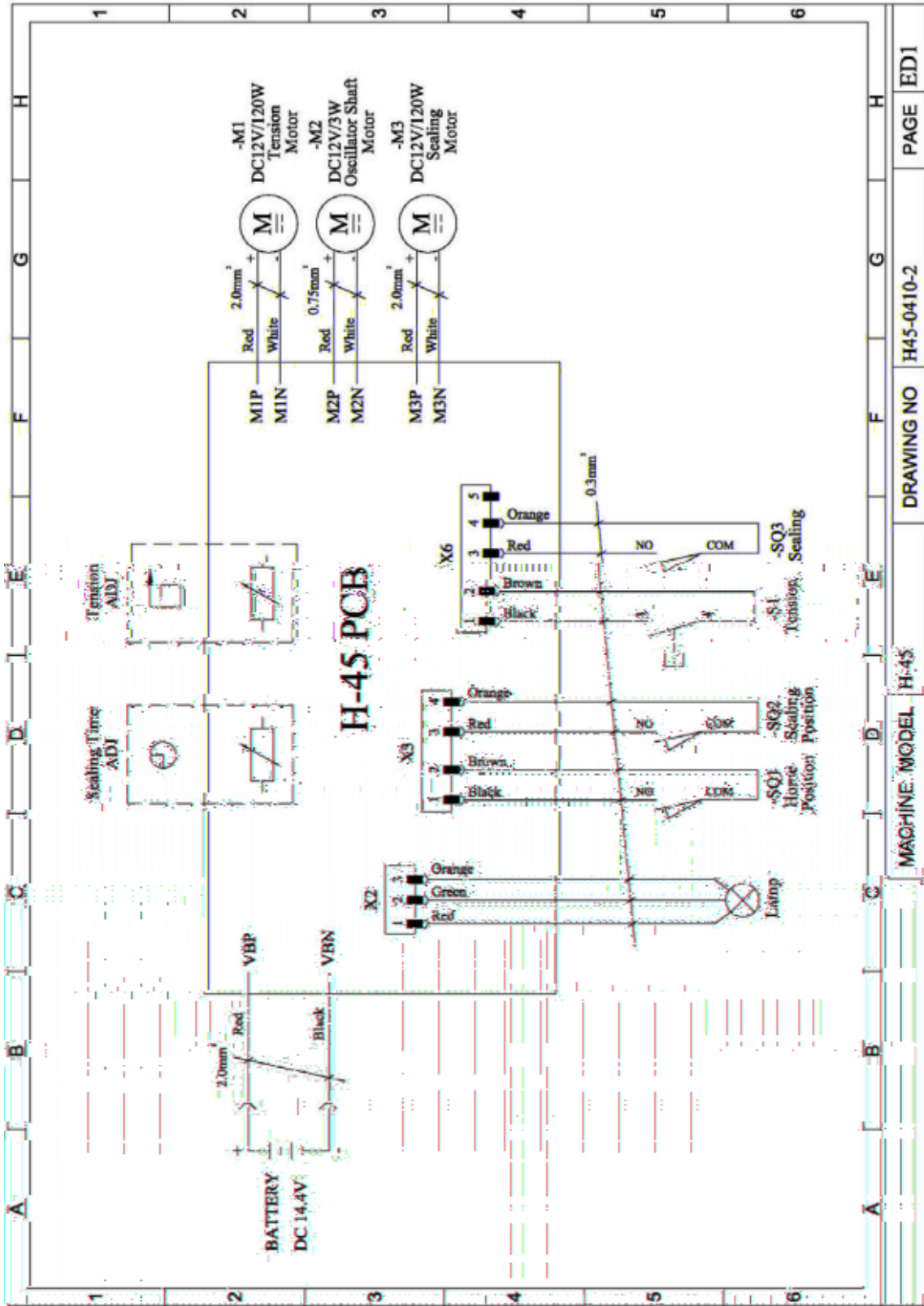
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( ) ( 45-60143)

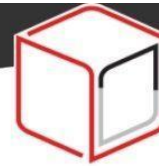




### 8. Wiring Diagram



DRAWING NO	H45-0410-2	PAGE	ED1
MACHINE MODEL	H-45		



description	shape	classification	shape	classification
		HBS		SR
		TMS		SP
		PMS		BR
single cover		FMS		BK
		HB		KT
L one way		THS		HF
L		HSS		TA
B		CAP		ME
A		HN		KY
B		WN		KY
C		FLG		KY
W		NTE		HB
A φ0.4~0.6t 0.8~1.5t		PN		PW φ8×φ12~φ16 φ6×φ13~φ40
B ×1.3~1.5t ×1.0~1.5t		PW		PW φ8×φ14~φ16 φ6×φ15~φ16
C 23×2.0t 19×2.0t		SW		PW φ8×φ20~φ φ6×φ16~φ
		TW		DS
P		BWW		TT
P		ER		FT
S		RR		FH





## PART II

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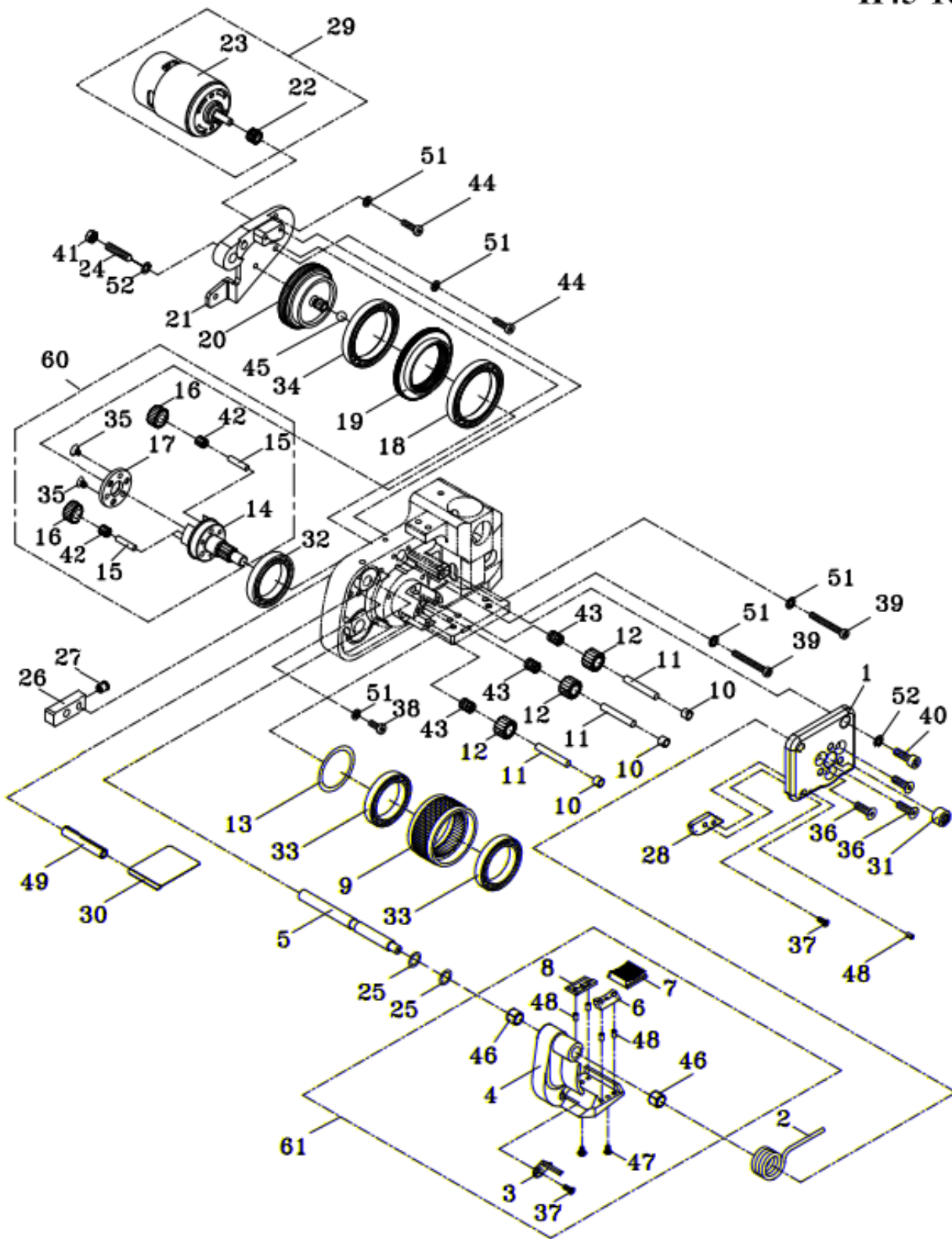
1.		2
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5.		12
6.		14





# TENSIONING UNIT

H45-10001  
H45-10002





## TENSIONING UNIT

H45-10001  
H45-10002

REF. NO.	PART NO.	DESCRIPTION	QTY	REMARKS
	H45-10001	Tensioning Unit (For 12mm)	1	
	H45-10002	Tensioning Unit (For 16mm)	1	
	H45-10003	Tensioning Unit (For 9mm)	1	
1	H45-10010	End Cover	1	
2	H45-10020	Torsion Spring	1	
3	H45-10030	Strap Stop (For 16mm)	1	
	H45-10031	Strap Stop (For 9mm, 12mm)	1	
4	H45-10040	Tensioning Body	1	
5	H45-10050	Swivel Shaft	1	
6	H45-10060	Holder	1	
7	H45-10070	Gripper (For 16mm)	1	
	H45-10071	Gripper (For 9mm, 12mm)	1	
8	H45-10080	Holder (For 16mm)	1	
	H45-10081	Holder (For 9mm, 12mm)	1	
9	H45-10090	Tensioning Wheel	1	
10	H45-10100	Dowel	3	
11	H45-10110	Parallel Pin	3	
12	H45-10120	Idler Gear	3	
13	H45-10130	Washer	1	
14	H45-10140	Tensioning Wheel Shaft	1	
15	H45-10150	Parallel Pin	3	
16	H45-10160	Idler Gear	3	
17	H45-10170	Cover	1	
18	H45-10180	Bearing	1	
19	H45-10190	Tension Gear	1	
20	H45-10200	Spur Wheel	1	
21	H45-10210	M: Motor Support	1	
22	H45-10220	M: Motor Pinion	1	
23	H45-10230	Motor (M:)	1	
24	H45-10240	Screw	1	
25	H45-10250	Washer	2	
26	H45-10260	Tube	1	
27	H45-10270	Set Ball	1	
28	H45-10280	Strap Stop (For 12mm, 16mm)	1	
	H45-10281	Strap Stop (For 9mm)	1	
29	H45-10290	M: Motor Ass'y	1	





## TENSIONING UNIT

H45-10001

H45-10002

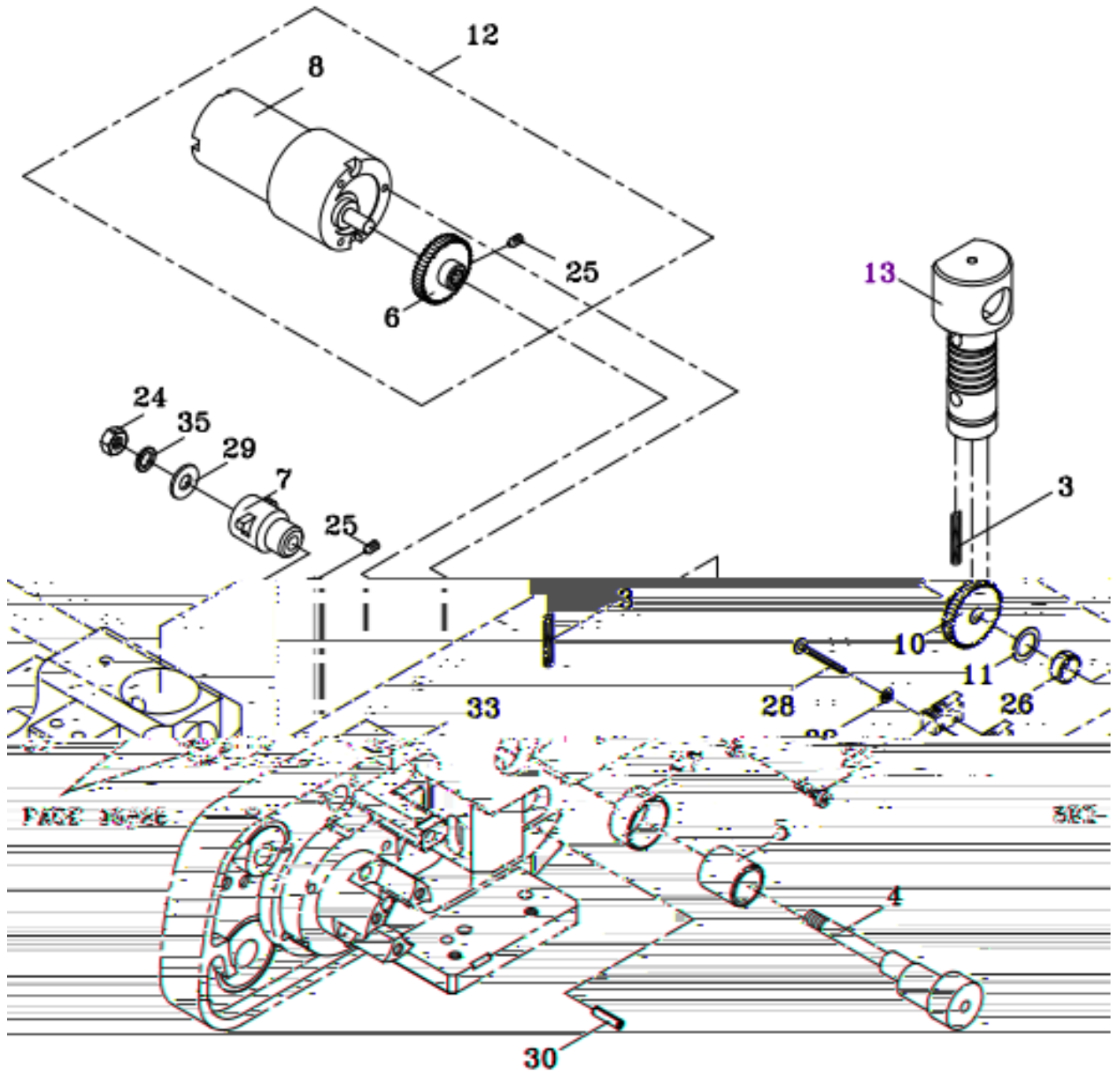
REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
30	H45-10300	Cover	1	
31	BK0808Z	Needle Bearing, 0808Z	1	
32	BR6806	Bearing, 6806	1	
33	BR6806Z	Bearing, 6806Z	2	
34	BR6808Z	Bearing, 6808Z	1	
35	FHS0410N	FHS, M4×10 (N)	3	
36	FHS0514N	FHS, M5×14 (N)	3	
37	FHS0308N	FHS, M3×8 (N)	2	
38	HBS0410N	HBS, M4×10 (N)	2	
39	HBS0430HN	HBS, M4×30 (H)(N)	2	
40	HBS0516N	HBS, M5×16 (N)	1	
41	HN05	HN, M5	1	
42	KT-477N	Needle Bearing, 477N	3	
43	KT-5810N	Needle Bearing, 5810N	3	
44	HBS0412N	HBS, M4×12 (N)	2	
45	SB04	Ball, Ø4	1	
46	MB0815	Metal Bush, 0815	2	
47	FHS0306N	FHS, M3×6 (N)	2	
48	SP0306	Spring Pin, 3×6	5	
49	SP0432	Spring Pin, 4×32	1	
51	SW04	SW, M4	6	
52	SW05	SW, M5	2	
60	H45-10600	Tensioning Wheel Shaft Ass'y	1	
61	H45-10700	Tensioning Body Ass'y (For 16mm)	1	
	H45-10701	Tensioning Body Ass'y (For 9mm, 12mm)	1	





# GRIPPER UNIT

H45-20000





## GRIPPER UNIT

H45-2000

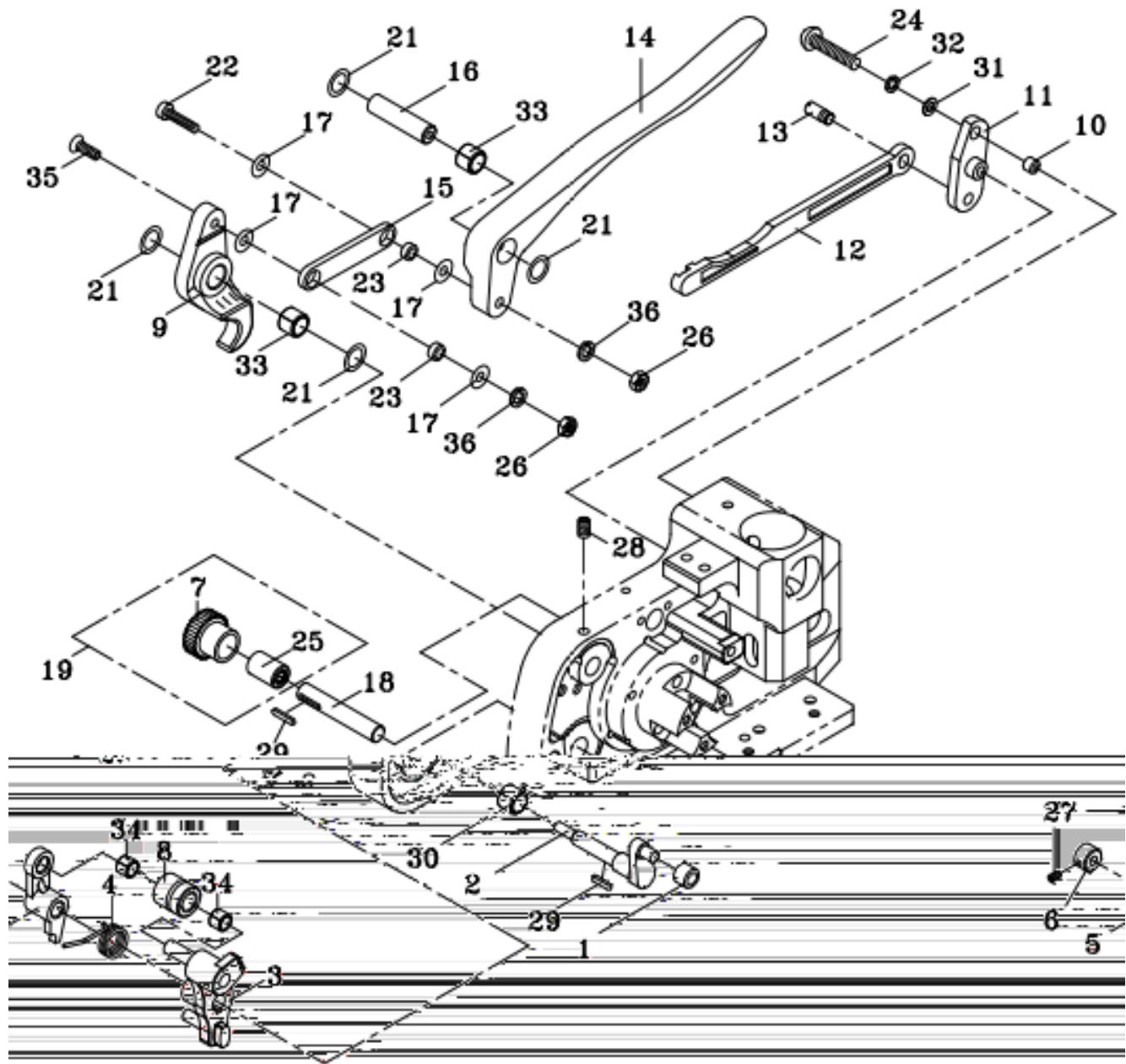
REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
3	H45-20030	Spring	2	
4	H45-20040	Eccentric Shaft	1	
5	H45-20050	Inner Raceway	1	
6	H45-20060	M2 Motor Gear	1	
7	H45-20071	Switch Rocker	1	
8	H45-20080	M2 Motor	1	
10	H45-20100	Eccentric Shaft Gear	1	
11	H45-10250	Washer	1	
12	H45-20120	M2 Motor Ass'y	1	
13	H45-20110	Spring Slide Ass'y	1	
23	HBS0320N	HBS, M3×20 (N)	1	
24	HN05	HN, M5	1	
25	HSS0305	HSS, M3×5	4	
26	MB0805	Metal Bush, 0805	1	
27	MB1709	Metal Bush, 1709	1	
28	PMS0218	PMS, M2×18	2	
29	PW05B	PW, M5 (B) Ø13	1	
30	SP0310	Spring Pin, 3×10	1	
32	SW02	SW, M2	2	
33	SW03	SW, M3	1	
35	SW05	SW, M5	1	





# LINKAGE UNIT

H45-30000





## LINKAGE UNIT

H45-30000

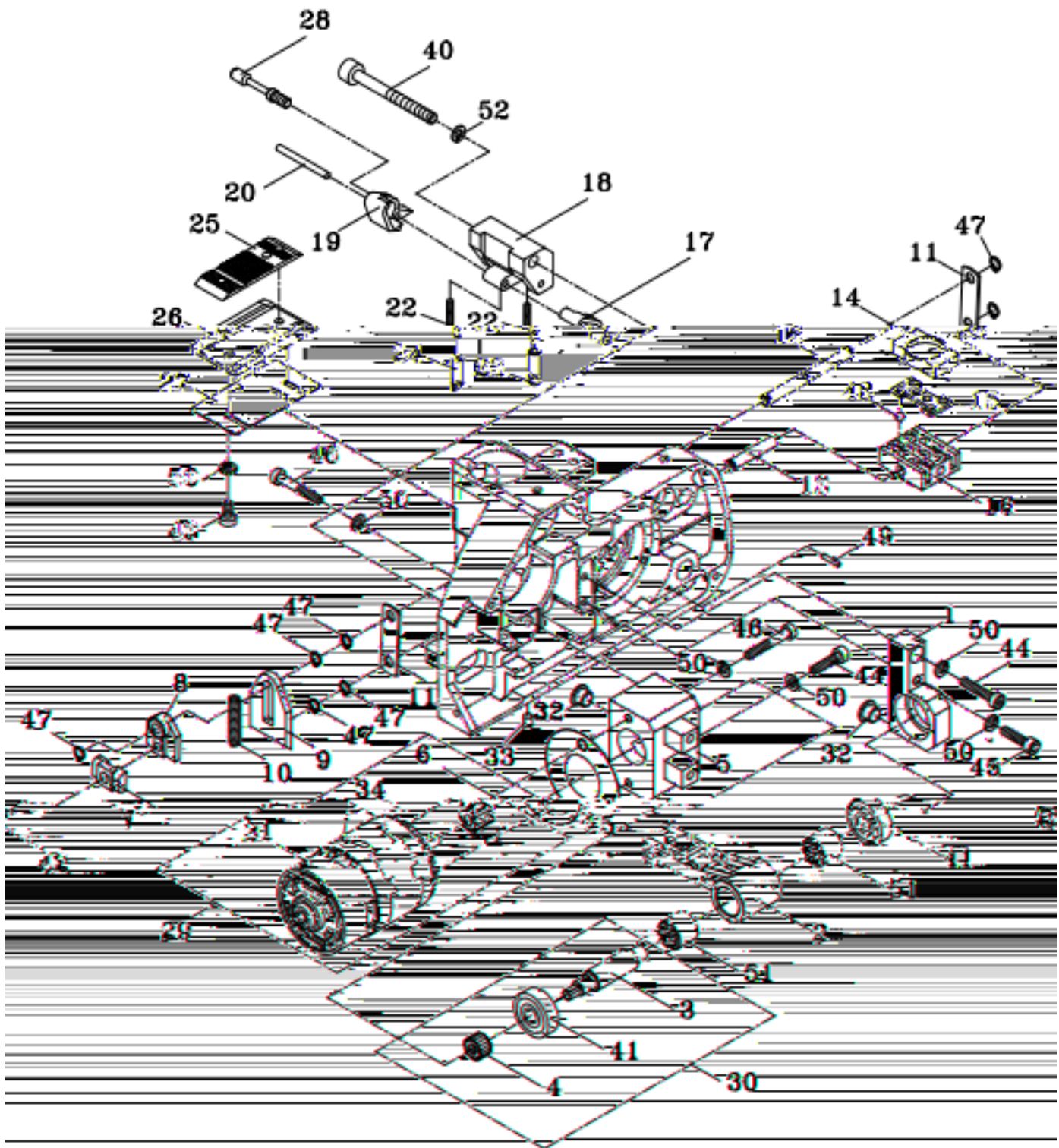
REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	H45-30010	Pressure Roller	1	
2	H45-30020	Front Toggle Link	1	
3	H45-30030	Lever	1	
4	H45-30040	Torsion Spring	1	
5	H45-30050	Stanchion	1	
6	H45-30060	Collar	1	
7	H45-30070	Spur Wheel	1	
8	H45-30080	Collar	1	
9	H45-30090	Handle Arm	1	
10	H45-30100	Collar	1	
11	H45-30110	Arm	1	
12	H45-30120	Coupler	1	
13	H45-30130	Coupler Shaft	1	
14	H45-30140	Handle Lever	1	
15	H45-30150	Connector	1	
16	H45-30160	Handle Shaft	1	
17	H45-30170	Washer	4	
18	H45-30180	Shaft	1	
19	H45-30190	Spur Wheel Ass'y	1	
21	H45-10250	Washer	4	
22	HBS0420N	HBS, M4×20 (N)	1	
23	H45-30230	Collar	2	
24	PMS0312	PMS, M3×12	1	
25	HFL0615	Bearing, 6×10×15	1	
26	NTE04	NTE, M4	2	
27	HSS0305	HSS, M3×5	1	
28	HSS0508G	HSS, M5×8 (G)	2	
29	KYA020210	Key, 2×2×10	2	
30	MB0810	Metal Bush, 0810	1	
31	PW03	PW, M3	2	
32	SW03	SW, M3	1	
33	MB0812	Metal Bush, 0812	2	
34	MB0606	Metal Bush, 0606	2	
35	FMS0420	FMS, M4×20	1	
36	SW04	SW, M4	2	





# SEALING & CUTTING UNIT

H45-40001  
H45-40002





## SEALING & CUTTING UNIT

H45-40001

H45-40002

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
	H45-40001	Sealing & Cutting Unit (For 12mm)	1	
	H45-40002	Sealing & Cutting Unit (For 16mm)	1	
	H45-40003	Sealing & Cutting Unit (For 9mm)	1	
1	H45-40011	Bearing Support	1	
2	H45-40020	Rocker	1	
3	H45-40030	Welding Excentric	1	
4	H45-40040	Pinion	1	
5	H45-40051	M3 Motor Support	1	
6	H45-40060	M3 Motor Pinion	1	
7	H45-40070	Thrust Piece	1	
8	H45-40080	Coupler	1	
9	H45-40090	Cutter	1	
10	H45-40100	Pressure Spring	1	
11	H45-40110	Driver	2	
12	H45-40120	Driver Pin	1	
13	H45-40130	Bolt	1	
14	H45-40140	Thrust Piece	1	
15	H45-40150	Ball Cage	1	
16	H45-40160	Welding Gripper	1	
17	H45-40170	Seesaw Lever (In Side)	1	
18	H45-40180	Guide Case	1	
19	H45-40190	Seesaw Lever (Out Side)	1	
20	H45-40200	Parallel Pin	1	
22	H45-40220	Pressure Spring	2	
23	H45-40230	Guide Pin (For 16mm)	1	
	H45-40231	Guide Pin (For 9mm, 12mm)	1	
24	H45-40240	Guide Pin (For 12mm, 16mm)	1	
	H45-40231	Guide Pin (For 9mm)	1	
25	H45-40250	Welding Stop Gripper	1	
26	H45-40260	Steel Insert	1	
27	H45-40270	Shim		
		Strap Thickness 0.4~0.6mm	2	
		Strap Thickness 0.7~0.8mm	1	
		Strap Thickness 0.9~1.05mm	0	
28	H45-40280	Shaft	1	





## SEALING & CUTTING UNIT

H45-40001  
H45-40002

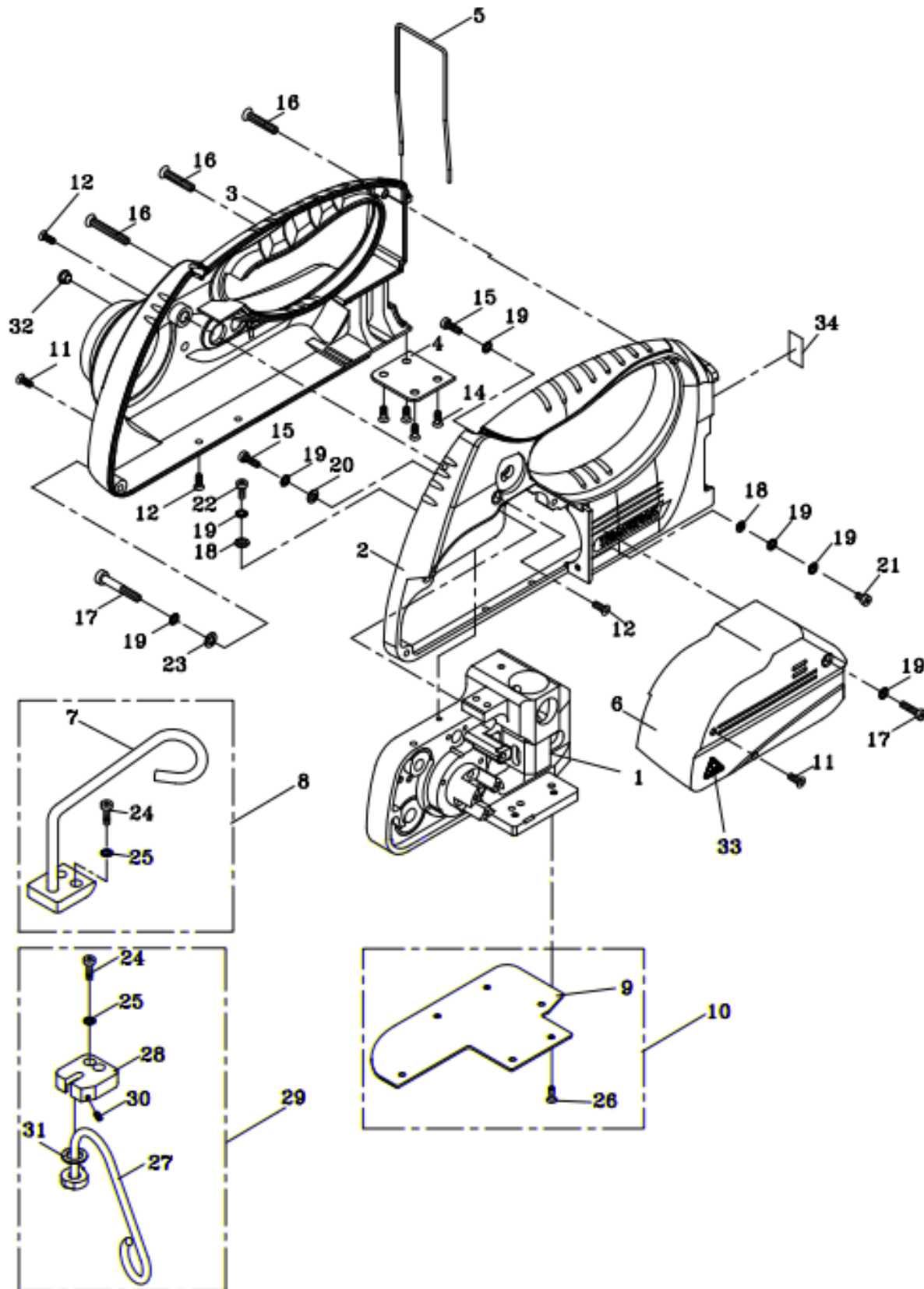
REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
29	H45-40290	M3 Motor Ass'y	1	
30	H45-40300	Welding Excentric Ass'y	1	
31	H45-10230	M1/M3 Motor	1	
32	T7-5-20210	Grommet	2	
33	H44-10710	Lock Pin, 4×8	1	
34	H45-40330	Cover	2	
35	H45-40340	Cover	1	
40	HBS0545HN	HBS, M5×45 (H)(N)	1	
41	BR627ZZ	Bearing, 627ZZ	2	
42	TMS0408	TMS, M4×8	1	
43	HBS0408N	HBS, M4×8 (N)	2	
44	HBS0416N	HBS, M4×16 (N)	2	
45	HBS0420N	HBS, M4×20 (N)	1	
46	HBS0425N	HBS, M4×25 (N)	3	
47	SR05	Snap Ring, S-5	7	
48	SB04	Ball, Ø4	6	
49	SP0318	Spring Pin 3×18	1	
50	SW04	SW, M4	8	
51	TAL1012	Needle Bearing, 1012	2	
52	SW05	SW, M5	1	





# BODY FRAME UNIT

H45-50000





**BODY FRAME UNIT**

**H45-50000**

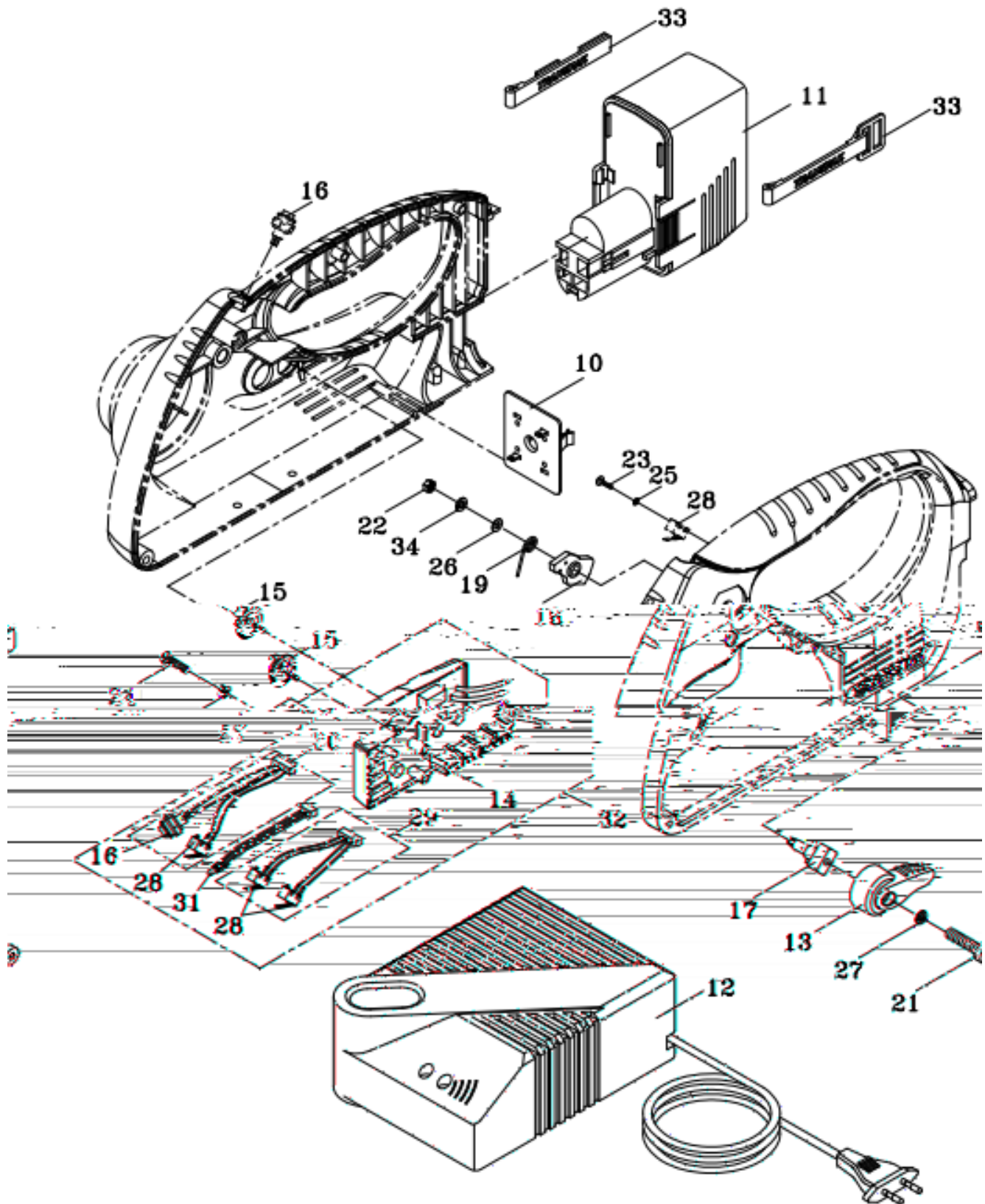
REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	H45-50010	Body Frame	1	
2	H45-50021	Cover Front	1	
3	H45-50030	Cover Rear	1	
4	H45-50040	Plate	1	
5	H45-50050	Battery Lock Pin	1	
6	H45-50060	Cover	1	
7	H45-50070	Stiff Suspension Bracket (Option)	1	
8	H45-50080	Stiff Suspension Bracket Set (Option)	1	
9	H45-50090	Bottom Base Wearing Protection Plate (Option)	1	
10	H45-50100	Bottom Base Wearing Protection Plate Set (Option)	1	
11	FHS0310N	FHS, M3×10 (N)	2	
12	FHS0408N	FHS, M4×8 (N)	6	
14	FTP0410BN	FTP, M4×10 (B)(N)	4	
15	HBS0416N	HBS, M4×16 (N)	2	
16	TTP0420BN	TTP, M4×20 (B)(N)	3	
17	HBS0440HN	HBS, M4×40 (H)(N)	2	
18	PW04	PW, M4	2	
19	SW04	SW, M4	7	
20	H45-50160	Washer(M4× $\phi$ 8×0.8t)	1	
21	HBS0410N	HBS, M4×10 (N)	1	
22	HBS0410N	HBS, M4×10 (N)	1	
23	PW05	PW, M5	1	
24	HBS0516N	HBS, M5×16 (N) (Option)	4	
25	SW05	SW, M5 (Option)	4	
26	FHS0410N	FHS, M4×10 (N)	6	
27	H45-50110	Turnable Suspension Bracket (Option)	1	
28	H45-50140	Block	1	
29	H45-50150	Turnable Suspension Bracket Set (Option)	1	
30	HSS0410GN	HSS, M4×10 (G)(N)	1	
31	AD-2-20181	Washer	1	
32	T7-5-20210	Grommet	1	
33	LA-40010	Label	1	
34	LA-50008	Label	1	

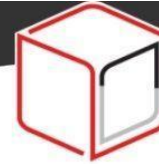




# BATTERY UNIT

H45-60000  
H45-60001





### BATTERY UNIT

H45-60000

H45-60001

REF. NO.	PART NO.	DESCRIPTION	QTY	REMARKS
	H45-60000	Battery Unit (For 230V/220V/240V)	1	
	H45-60001	Battery Unit (For 110V)	1	
10	H45-60100	Connecting Plate	1	
11	H45-60110	Battery	1	
12	H45-60120	Charger (For 110V)	1	
	H45-60121	Charger (For 220V/230V/240V)	1	
13	H45-60130	Terminal Box (Ass'y)	1	
14	H45-60141	Control Box (PCB)	1	
15	H45-60150	Knob	2	
16	H45-60160	Sealing Switch (Semi)	1	
17	H45-60171	Lock	1	
18	H45-60181	Cam	1	
19	H45-60190	Spring	1	
21	HBS0412N	HBS, M4×12 (N)	1	
22	HN05	HN, M5	1	
23	TTP0305	TTP, M3×5	2	
24	PMS0430	PMS, M4×30	2	
25	PW03	PW, M3	2	
26	PW05	PW, M5	1	
27	SW04	SW, M4	3	
28	H45-20090	Micro Switch	3	
29	H45-60210	Position Wires Ass'y	1	
30	H45-60220	Start/Sealing Wires Ass'y	1	
31	H45-60230	LED Wire	1	
32	H45-60240	Electric Control Group	1	
33	H45-60261	Battery Fastener	1	
34	SW05	SW, M5	1	