

Steelmax®

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OPERATOR'S MANUAL

APB32 Pro

PORTABLE BEVELING MACHINE



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Specifications

1. Portable Automatic Pipe Beveling Machine APB 32 Pro

Automatic Pipe Beveling machine	APB32-Pro
Work scope (Diameter)	10" ~ 32"
Thickness of pipes	Less than 20mm
Chamfering width (max) (B)	21 mm
Chamfering thickness (45°) (max) (A)	15 mm
Adjustable operation angle	0° ~ 45°
Weight (Bracket+Auto carrier+Beveler)	8.2+17.7+9.7Kg
Projected length of pipe to be beveled	Minimum length 400mm
Work space of the pipe beveling	Minimum width of work space 350mm

2. Portable Automatic Beveling Machine with Optional Attachment SM-PB-AP1020

Automatic Pipe Beveling machine	SM-PB-AP1020-00
Work scope (Thickness)	5 ~ 40mm
Chamfering width (max) (B)	21mm
Chamfering thickness (45°) (max) (A)	15mm
Adjustable operation angle	0° ~ 45°
Weight (Bracket+Auto carrier+Beveler)	13.5+17.7+9.7Kg
Minimum width of plate to be beveled	Minimum width of the workpiece 160mm
Work space of the plate beveling	Minimum width of work space 400mm
Height of the plate to be beveled	Minimum 250mm from the bottom
Work scope (Diameter)	More than 32"

3. Power Unit of Automatic Carrier (SM- PB-AP1020-BD)

- a. Manufacturer : SPG Co., Ltd. (www.spg.co.kr)
- b. Product Name : Brushless DC Motor Control unit XWD
- c. Control unit coding No. : XWD90A(for 120V) XWD90B(for 230V)
- d. Motor coding No. : XWM990G
- e. Please refer to the User Manual provided separately by the Manufacturer.

Components Included

1. APB32-Pro

* APB32-Pro is composed of SM-PB-AP1020-BD, SM-PB-AP1020-SD and SM-CP2100.



- SM-PB-AP1020-BD : Automatic Carrier
- SM-PB-AP1020-SD : Pipe Attachment (10" ~ 32")
- SM-PB-ACP2100 : Chamfer-Pro 2100 (Max. 21mm bevel width)

* APB32 Pro With optional Large Diameter Attachment

* SM-PB-AP1020-00 is composed of SM-PB-AP1020-BD, SM-PB-AP1020-LD and SM-PB-CP2100.

- SM-PB-AP1020-BD : Automatic Carrier
- SM-PB-AP1020-LD : Pipe and Plate Attachment (more than 32" for pipes, 5~40t for plates)
- SM-PB-CP2100 : Chamfer-Pro 2100 (Max. 21mm bevel width)

Safety Precautions

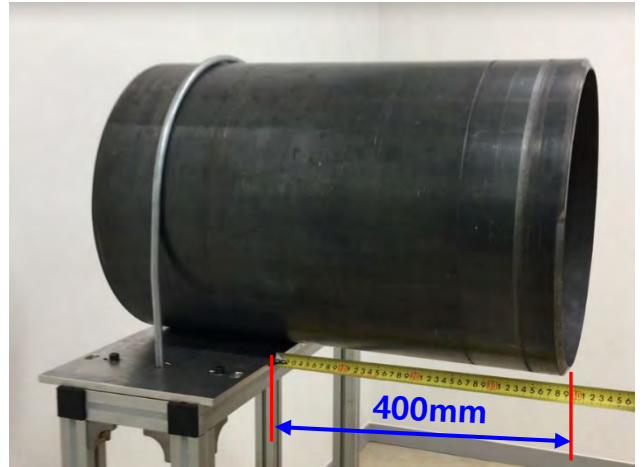
1. This machine is not waterproof. Work in damp condition may cause injuries or damages to machines. Electrical safety cautions should be kept at all times.
2. When connecting the power cord, be sure to set the switch at "OFF" position.
3. When the machine is at operation, do not leave the work area and pay attention to the machine.
4. When the machine is at operation, do not stand or walk underneath the machine.
5. Be sure to wear safety goggles and ear protection kits at work.  

CAUTION
Loud noise hazard. Ear protection must be worn.
6. Do not operate the machine nearby inflammable materials since hot particles scattering may cause fire.
7. Connect the electric source in accordance with local electricity regulations.
8. When you install SM-PB-CP2100 to Pipe or Plate Attachment, the level of chamfering depth should always be set at below zero (0) level.

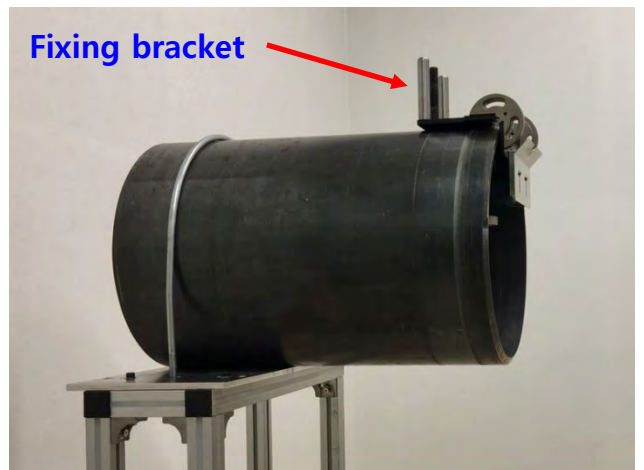
9. When you start the machine after installation, turn on the switch of the motor of SM-PB-CP2100 and set the beveling value first. After that, turn on the switch of the Automatic Carrier.
10. When you stop the machine, do it the other way round. Turn off the switch of Automatic Carrier first and then turn off the switch of the motor of SM-PB-CP2100.
11. When you would like to use this machine, be sure to read the User's Manual of Portable Chamfering Machine Chamfer-Pro and understand it fully before you start using this machine.
12. Before you start the chamfering work with this machine, be sure to confirm whether enough work space for the chamfering work is secured first.
13. This machine should be used under the work scope suggested by the specifications.
14. This machine should be used only by workers who have read this User's Manual and understand these safety cautions.
15. Safety cautions should be kept at all times during daily works.
The operator should be in attention for controlling all the work procedures.
16. This machine should be used in the ambient air temperature from 5°C to 40°C.

Order and Procedure of Installation to the Pipes APB32-PRO

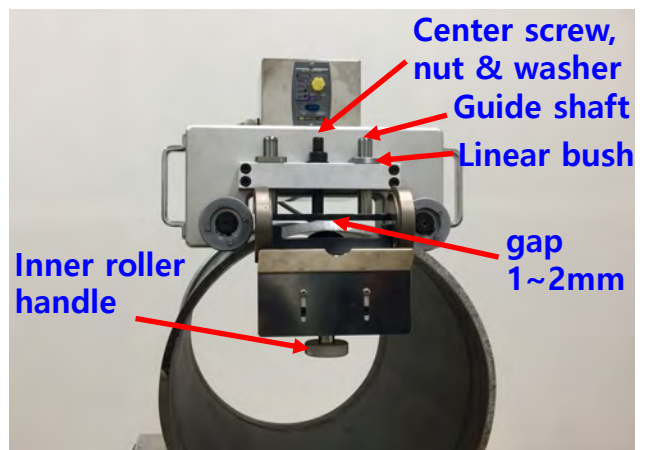
1. After installation of the Automatic Pipe Beveling Machine, confirm whether minimum pipe length projected is more than 400mm so that the machine could be rotated along the pipe and the work space is secured as more than 350mm first.
2. First of all, after sticking the fixing bracket to the upper side of the pipe, turn the handle of the inner roller (List No. 17) clockwise and tighten it. At this time, tighten lightly until the end with your hand.



(Before you insert the fixing bracket into the pipe, please check whether Inner Roller Adjustment Handle (List No. 17) is appropriately loosened to secure enough gap so that Inner Roller (List No. 22) could be inserted into the pipe.)



3. Insert Linear Bush (List No. 6-1) of Main Automatic Carrier into Fixing Bracket Guide Shaft (List No. 6).
4. Assemble center washer (List No. 8) and Nut (List No. 7-1) with Center Screw (List No. 7).
5. Tighten the Nut (List No. 7-1) using 24mm socket wrench provided. At this time, tighten strongly by reaching 180 degrees, tighten 4-6 times. (The number of tightening could be different as per the tightness of the Adjustment Handle (List No. 17) explained in the item 2 above.)

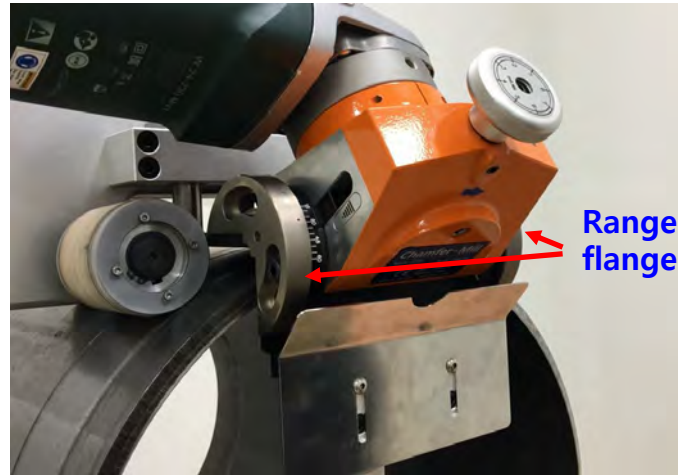


6. After tightening strongly, be sure to check whether the gap between the surface of the workpiece and lower portion of X-Plate (List No. 9) is around 1-2mm apart. In case the gap is not wide enough, adjust the gap by tightening the Nut (List No. 7-1) a little bit more.

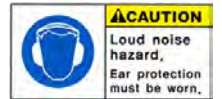
7. Turn the Value Adjustment

Handle (Chamfer-Pro List No. 16) and set the beveling value to be below zero (0) level. After that, install the machine between the Range Flange (List No. 11) on both sides and match the angle. Tighten 4 units of M8 x 30 Screws (provided parts).

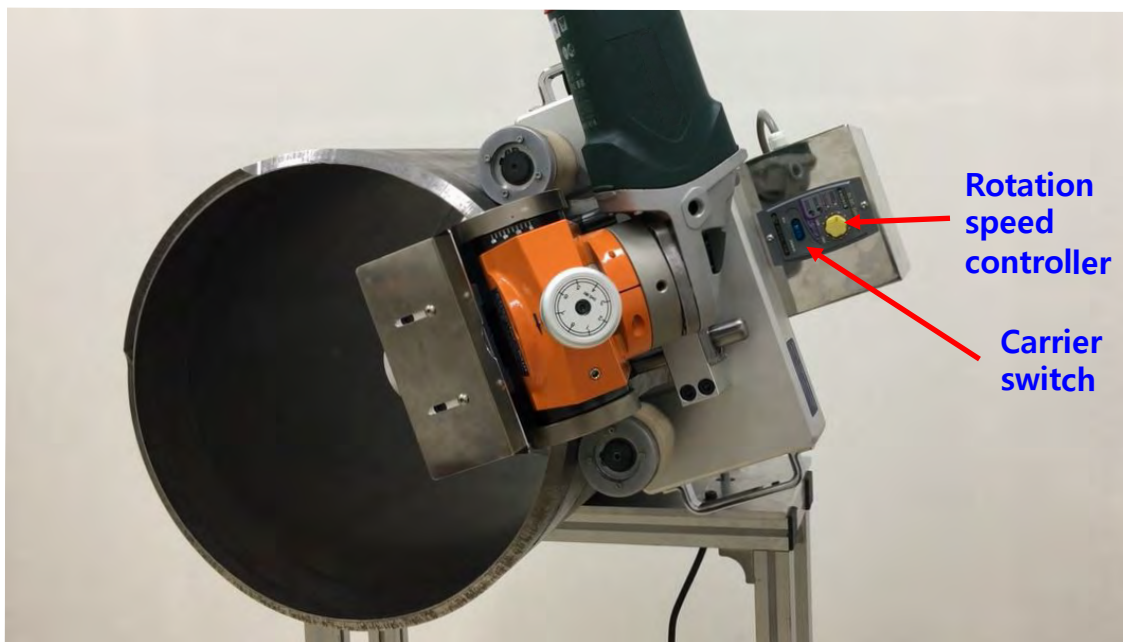
(At this time, if the beveling value is not set at under zero (0) level, it may cause damages on the machine and installation could be difficult.)



8. Before activation, after moving the two (2) electric wires to the rotational direction so that the wires are not twisted even after activation, wear the protective kit and then turn on the switch of the motor of the chamfering machine first and adjust the intended beveling value by turning the Beveling Value Adjustment Handle (Chamfer-Pro List No. 16). (Actual beveling work is started from this point on at a standstill state.)



9. After the beveling value is set, turn on the switch of Automatic Carrier in the Control Box (List No. 3). From this point on, the machine starts rotating clockwise and chamfering work begins.



10. Adjust the rotation speed of the Automatic Carrier. (You need to adjust the speed according to the beveling quantity, materials and the state of the insert tips.)
11. After the beveling work is finished, turn off the switch of the Automatic Carrier first and then turn off the switch of the motor. (Be sure not to reverse the order of turning off the switches.)
12. Set the beveling value at below zero (0) level for safe beveling work next time. Separation is the inverse order of the installation.

Differences of Chamfering Quantity as per the Installation Method

The actual chamfering value could be different according to the changes of the gap (1-2 mm) between the surface of the workpiece and the lower portion of X-Plate explained in item 6 of "Order and Procedure of Installation to the Pipe". That is to say, even if you set the value by Beveling Value Adjustment Handle to be the same, the result of actual beveling value will be different by the 1mm difference of the height of X-Plate between 1mm gap case and 2mm gap case of the X-Plate. Moreover, even in cases of the gaps to be the same 1mm, according to the beveling angle, the beveling value will be different.

(Please refer to item 2 of "Chamfering Depth Adjustment" of the User's Manual of Chamfer-Pro.) Therefore, it is desirable to make the gap under the lower portion of the X-Plate to be constant at the time of installation.

Troubleshooting

Troubles	Causes	Solutions
Even if the chamfering is normal but the wearing rate of inserts are faster than normal.	The feeding speed of Automatic Carrier is slow compared with the beveling quantity.	Increase the speed of Automatic Carrier.
	The RPM is too high compared with the beveling quantity.	Decrease the RPM by using the Speed Controller.
Actual result of beveling quantity is less than intended beveling depth set on the machine.	Less beveling quantity caused by the wearing of insert tips.	Replace the worn insert tips.
	The feeding speed of Automatic Carrier is fast compared with the beveling quantity.	Decrease the speed of Automatic Carrier.

Tools and Parts Provided

- | | |
|-------------------------------------|------|
| 1. 2.5mm Hexagonal T Handle Wrench | 1 EA |
| 2. 5mm Ball L Wrench (Allen Wrench) | 1 EA |
| 3. 24mm × ½" Long Hand Socket(12P) | 1 EA |
| 4. Ratchet Handle ½" | 1 EA |
| 5, M8 × 30 Screw | 4 EA |

Application of SM-PB-AP1020-LD

1. SM-PB-AP1020-LD (Device) is applicable to pipes with diameters more than 32 inches and is applicable to very large plates too.
2. To use SM-PB-AP1020-LD, you should select either one of the Inner Roller Screws with different lengths (List No. 16) according to the diameter of the pipe and thickness of the plate. The scope of applications are specified in the below table.

Classification	Length of List No. 16, Inner Roller Screw	
	Short One	Long One
Pipe	32" ~ 59" (800A ~ 1500A)	Over 47" (Over 1200A)
Plate	Applicable to thicknesses of 15 ~ 40mm	Applicable to thicknesses of 5 ~ 30mm

3. In case the diameter of the pipe is very big and the height of the upper portion of the pipe is very high, it could be difficult to install the fixing bracket on the top. In this case, it is possible to install the fixing bracket on the side of the pipe at the workable height.
4. At this time, the machine should be installed on the left-hand side, not on the right-hand side of the pipe. When you install the fixing bracket and Main Automatic Carrier at this position, the gap between the lower portion of the X-Plate (List No. 9) and the pipe should be around 1-2mm.
5. When you change List No. 16 part, Inner Roller Screws with different lengths, at the time of separating the Block Guide (List No. 21) from the Support Block (List No. 18) and reassembling them again, it should be positioned so that the white point marked on the Block Guide could be seen from outside.

Application of Plate Beveling and Outside Diameters Beveling of Short Pipes

1. If you purchase these models, all the parts of List No. 26-30 of APB32-Pro model are included as standard items and you can do the plate beveling manually too.
2. If you follow the instructions explained in "How to chamfer Outside Diameters of Pipes" in the User's Manual of Chamfer-Pro, you can do the pipe beveling of outside diameters of short pipes with length of more than 6 inches manually.

7. WARRANTY CARD**WARRANTY CARD No.....**

..... in the name of Manufacturer warrants

1. The manufacturer provides a one (1) year warranty of the products from the date of purchase. (To be proved by invoice or delivery note)
2. Even within the 1 year warranty period, consumable (wearable) parts, overload, improper use, damages caused by excessive power and unauthorized modifications will be excluded from the warranty.
3. This warranty is applicable to the users only who used the products in accordance with the instructions and intended usages presented in this User's Manual.
4. In case it is proven that the defects are caused by defective materials or poor workmanship of the manufacturing, repair or replacement of defective parts will be provided free of charge by this warranty.

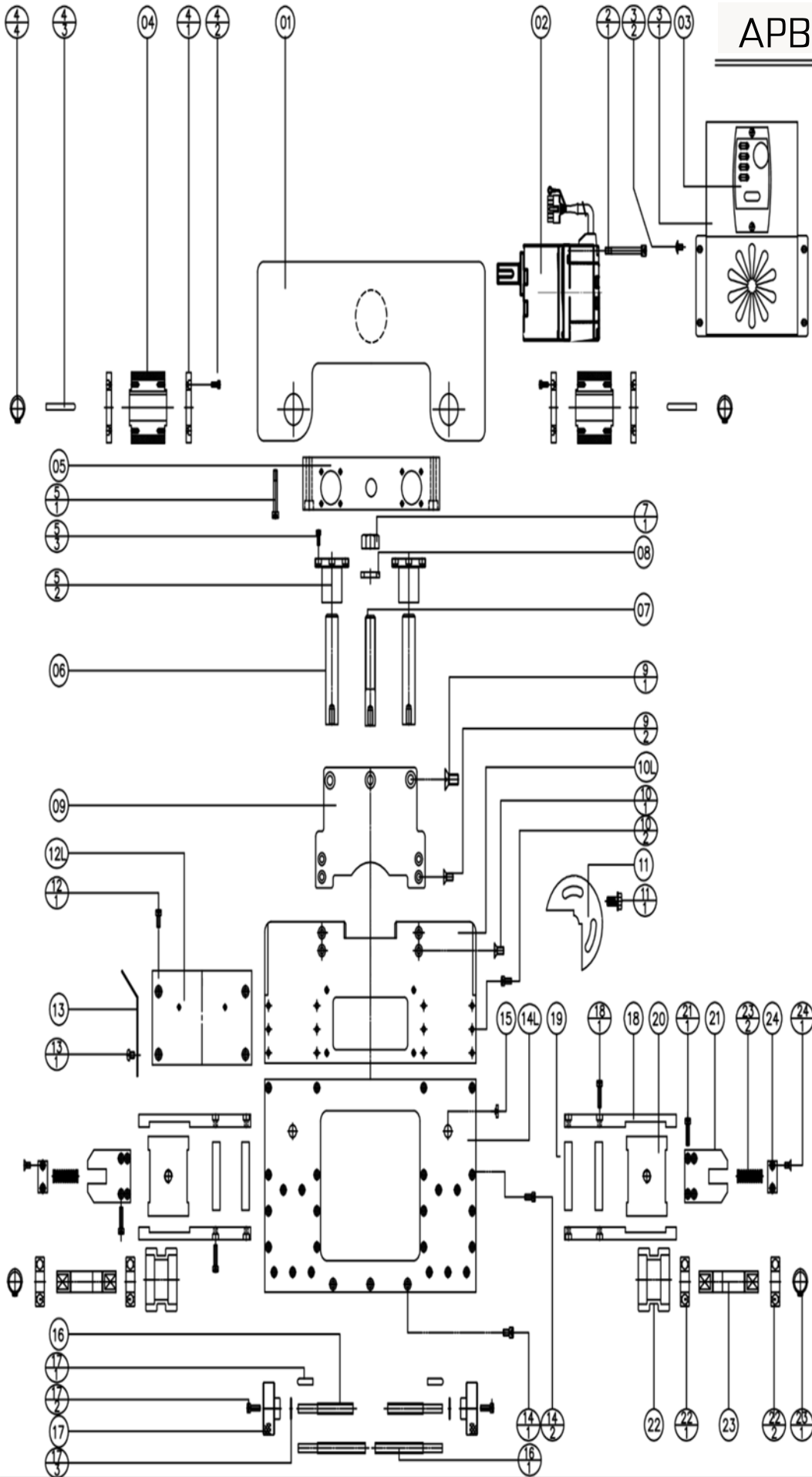
Serial number.....

Date of sale

Signature of seller

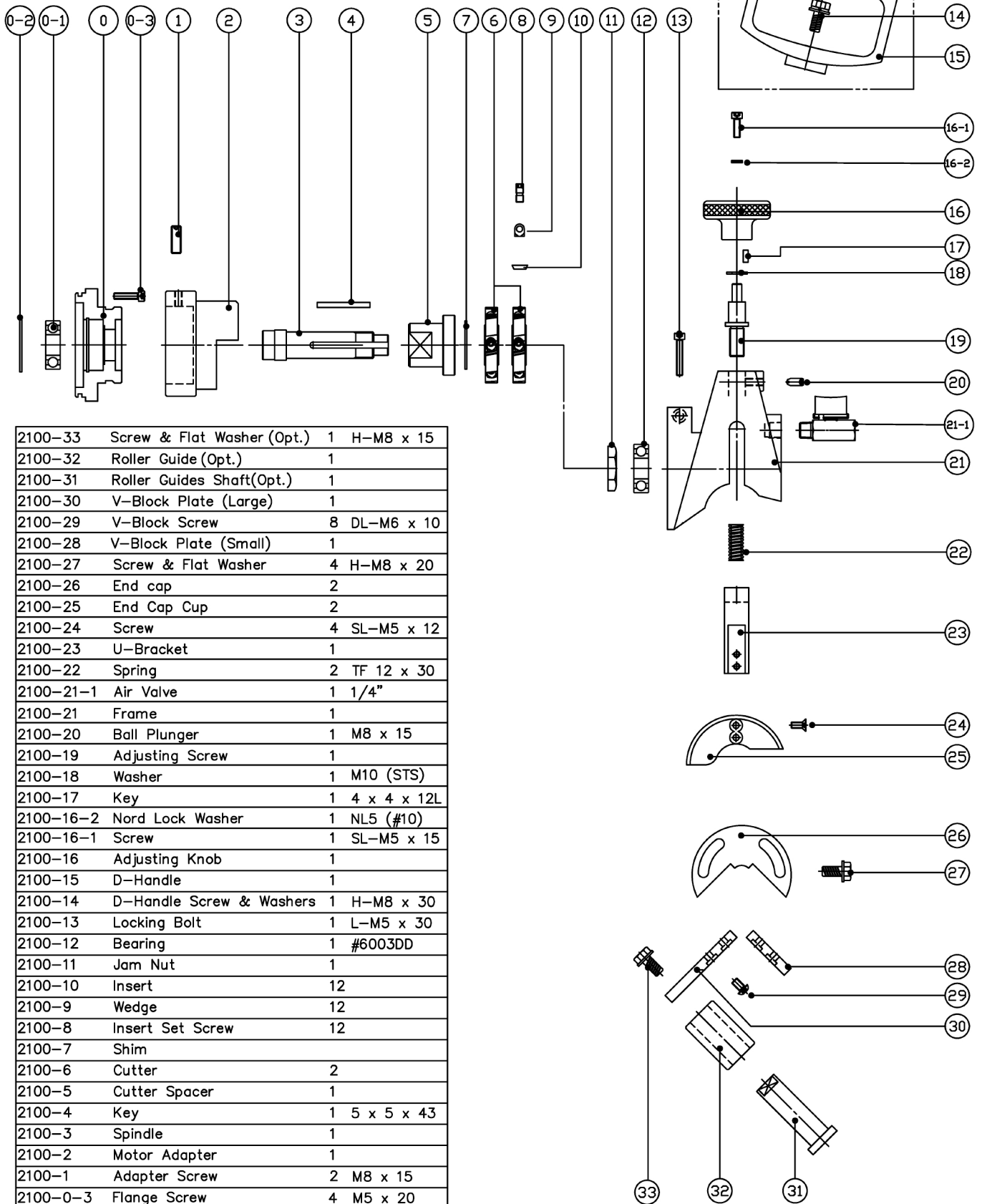
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APB32-PRO BD & SD Parts List



24-1	SCREW	8	M4 x 10
24	SPRING FIX PLATE	4	
23-2	SPRING	4	TB 12x25
23-1	SNAP RING	4	S20
23	ROLLER SHAFT	2	
22-2	CLUTCH BEARING	2	BB20
22-1	BALL BEARING	2	#6204
22	INNER ROLLER	2	
21-1	SCREW	16	M5 x 20
21	ROLLER BLOCK	4	
20	PLATE	2	
19	SUPPORT PLATE	4	
18-1	SCREW	16	M5 x 15
18	SUPPORT BLOCK	4	
17-3	WASHER	2	M8
17-2	SCREW	2	M4 x 15
17-1	KEY	2	3x3x12
17	HANDLE	2	
16-1	INNER ROLLER SCREW(LONG)	2	
16	INNER ROLLER SCREW(SHORT)	2	
15	BUSH	2	
14-2	SCREW	26	M5x15
14-1	SCREW	3	M6x15
14L	PLATE	1	
13-1	SCREW	2	M5x10
13	COVER	1	
12-1	SCREW	4	M6x15
12L	COVER ADAPTER	1	
11-1	SCREW & FLAT WASHER	4	M8x30
11	RANGE FLANGE	2	
10-2	SCREW	12	M5x15
10-1	SCREW	4	M6x12
10L	Y-PLATE	1	
9-2	SCREW	4	M6x12
9-1	SCREW	3	M8x20
09	X-PLATE	1	
08	CENTER WASHER	1	
7-1	NUT	1	M16
07	CENTER SCREW	1	
06	GUIDE SHAFT	2	
5-3	SCREW	8	M5 x 12
5-2	LINEAR BUSH	2	LMK20
5-1	SCREW	4	M8 x 50
05	SUPPORT BLOCK	1	
4-4	SNAP RING	2	S25
4-3	KEY	2	6x6x55
4-2	SCREW	16	M4 x 10
4-1	ROLLER SIDE RING	4	
04	OUTER RUBBER ROLLER	2	
3-2	SCREW	4	M5 x 10
3-1	CONTROL BOX	1	
03	CONTROL UNIT [XWD90A(B)]	1	
2-1	SCREW & SPRING WASHER	4	M8 x 80
02	BLDC GEARD MOTOR [1/100]	1	
01	REDUCER GEAR BOX	1	
NO	Description	Q'ty	Spec

APB32 PRO PARTS LIST



2100-33	Screw & Flat Washer (Opt.)	1	H-M8 x 15
2100-32	Roller Guide (Opt.)	1	
2100-31	Roller Guides Shaft (Opt.)	1	
2100-30	V-Block Plate (Large)	1	
2100-29	V-Block Screw	8	DL-M6 x 10
2100-28	V-Block Plate (Small)	1	
2100-27	Screw & Flat Washer	4	H-M8 x 20
2100-26	End cap	2	
2100-25	End Cap Cup	2	
2100-24	Screw	4	SL-M5 x 12
2100-23	U-Bracket	1	
2100-22	Spring	2	TF 12 x 30
2100-21-1	Air Valve	1	1/4"
2100-21	Frame	1	
2100-20	Ball Plunger	1	M8 x 15
2100-19	Adjusting Screw	1	
2100-18	Washer	1	M10 (STS)
2100-17	Key	1	4 x 4 x 12L
2100-16-2	Nord Lock Washer	1	NL5 (#10)
2100-16-1	Screw	1	SL-M5 x 15
2100-16	Adjusting Knob	1	
2100-15	D-Handle	1	
2100-14	D-Handle Screw & Washers	1	H-M8 x 30
2100-13	Locking Bolt	1	L-M5 x 30
2100-12	Bearing	1	#6003DD
2100-11	Jam Nut	1	
2100-10	Insert	12	
2100-9	Wedge	12	
2100-8	Insert Set Screw	12	
2100-7	Shim		
2100-6	Cutter	2	
2100-5	Cutter Spacer	1	
2100-4	Key	1	5 x 5 x 43
2100-3	Spindle	1	
2100-2	Motor Adapter	1	
2100-1	Adapter Screw	2	M8 x 15
2100-0-3	Flange Screw	4	M5 x 20
2100-0-2	Snap ring	1	R42
2100-0-1	Bearing	1	#6004DD
2100-0	Flange cover	1	
Part Number	Description	Q'ty	Spec

APB\MPB Pro Motor

