

# **IDP/IDE/IDB/IDM Series**

# **ID-Mounted Pipe Beveling Machine**

# **Operation manual**





Rev.3, Apr. 2021

Revision History:OriginalDec. 2007Revision 1Oct. 2010Revision 2Jun. 2019

Nodha Industrial Co., Ltd Nodha Industrial Technology (Wuxi) Co., Ltd

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## **PART 1 SAFTY INSTRUCTIONS & DECLARATION OF CONFORMITY**

We take great pride in manufacturing safe, quality products. Please comply with the following safety rules and instructions before operating the equipment.



### Read the following content before working

### READ THE OPERATION MANUAL

Before installing, you should read the manual, and make sure you understand all setup and operating instructions, it can help you save time and avoid injuring the operator and the machines

#### **INSPECT MACHINE & ACCESSORIES**

Before starting the machine, look for loose bolts or nuts, leaking lubricant, and any other physical conditions that may affect operation. Properly maintaining the machine can greatly decrease the chances for injury.

### ALWAYS READ SIGNS AND LABLES

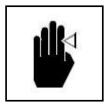
Please read the marks and signs. All the marks and signs should be clear and easy to read, and you should carefully to keep them.



### DANGER! ELECTRIC SHOCK

Always disconnect machine to power source before moving or removing motor

Security of the electricity.



#### **CAUTION INJURE HAND** Keep hands, arms and fingers clear of all moving parts



#### **WEAR SAFETY GOGGLE** Eye protection required. When using equipment, Please wear safety goggle. No goggle no work

# EC DECLARATION OF CONFORMITY

# WITH

# DIRECTIVE 2006/42/EC Machine & 2014/35/EU

Date of Issue:	August 04, 2016
Report No.:	20160292EM
Directive:	Machinery directive 2006/42/EC & 2014/35/EU
Conforming Machinery:	Pipe Beveling machine Model: IDE-XX Series IDE-80, IDE-120, IDE-252
Parameters:	Rated Voltage:220-240V~ Rated Input: 1200W Rated Frequency:50/60Hz
Manufacturer:	Nodha Industrial Technology Wuxi Co., Ltd 6 <sup>th</sup> Floor, 12 <sup>th</sup> Building, No.9 Xingyang Road Wuxi 214082, China
Authorized Representative:	Jeff Huang Director of International Sales and Services Nodha Industrial Technology Wuxi Co., Ltd 6 <sup>th</sup> Floor, 12 <sup>th</sup> Building, No.9 Xingyang Road Wuxi 214082, China
Harmonized Standards Referenced or Applied:	2006/42/EC Machine 2014/35/EU Low Voltage EN ISO12100:2010 EN 60204-12006+1:2009
	achinery described above conforms with the essential s of council directive 2006/42/EC.
Signed:	

Signaory:	Zhichao, Zhang
	Quality Manager
	Nodha Industrial Technology Wuxi Co., Ltd

# EC DECLARATION OF CONFORMITY

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Date of Issue:	August 04, 2016
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Directive:	Machinery directive 2006/42/EC
Conforming Machinery:	Pipe Beveling machine Model: IDP-XX, IDP-80, IDP-120, IDP-252
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Signed:	
Signaory:	Zhichao, Zhang Quality Manager Nodha Industrial Technology Wuxi Co., Ltd

# PART 2 EQIPMENT INTRODUCTION

### IDP/IDE/IDM series ID-Mounted Pipe Beveling Machine

We supply machines and equipment to diverse industries where process piping systems are essential to their operation but require divergent machine tool technology. From power and petrochemical to semiconductor, food and dairy, ours wide range of portable tools can be found on all pipe and tube types, sizes and wall thickness.

The ID mounted beveling operation utilizes an expandable mandrel which is slid into the open end of the pipe. A draw nut is tightened, which expands the mandrel blocks up a ramp and against the ID surface for positive mounting, self-centered and squared to the bore. As the tool bit is fed into the material from the end, a bevel is produced which conforms to the angle predetermined by the angle ground into the bit. Bits are available for practically any material or beveling angle required, and bits can be custom made for any form tooling operation.

### FEATURES:

#### FAST SETUP

- Set up and operate from storage case to pipe within 5 minutes
- Expanding nut makes the installation quickly
- One adjustment, universal three-leg chunk centering the machine in pipe I.D. automatically
- Install or adjust tool bits in seconds
- Can be installed any direction: horizontal, vertical or slant

#### EASY OPERATION

- The design of miniaturization is suitable for the homework place of low-clearance
- Ratchet wheel design makes tool feed easy, absorbs torque, reduces operator fatigue and increases safety
- In-feed structure with scale for precise measurement

#### **TYPICAL FUNCTION DESIGN**

- Adopts aluminum housing, light weight
- The equipment can machine V and U welding seam
- High strength mandrel and large-area expanding block mostly improve the rigidity
- Two bevel tools can be installed on cutter, pipe can be worked synchronously

#### PACKAGE

• The machine packaged into a portable plywood case or aluminum alloy case with expanding blocks, usual tool, beveling tools, operation manual and packing list.

## **PART 3 MACHINE SPECIFICATIONS**

### Pneumatic-Driven IDP SERIE

Model		IDP	IDP IDP			
IVIO	dei	80(A)	120	252		
Working Range	ID	28-76	40-112	80-240		
(mm)	OD	32-89	48-120	90-273		
No-Loading Rotat	e Speed (r/min)	55 42 35				
Air Pressure (Mpa	a)	0.6Mpa				
Air Consumption	(L/min)	900-1200L/Min				
Max. Tool Travel	(mm)	35 35 55				
Max. Beveling this	ckness (mm)	15 15 20				
Lateral Feed (mm	/r)	N/A N/A N/A				
Net Weight (KG)		8.15	8.15 18.5 37			

### Electric-Driven IDE SERIES

Model		IDE	IDE	IDE	
IVIO		80(A)	120	252	
Working Range	ID	28-76	40-112	80-240	
(mm)	OD	32-89	48-120	90-273	
Motor Power(W)		1200 1200 1500			
Power Supply		220-240V 1PH 50/60HZ			
No-Loading Rotate Speed (r/min)		50 38 21			
Max. Tool Travel	(mm)	35 35 55			
Max. Beveling Thickness (mm)		15 15 20			
Lateral Feed (mm/r)		N/A	N/A	N/A	
Net Weight (KG)		10	21	32	

### Electric-Driven IDM SERIE, German METABO motor

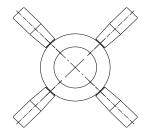
Model		IDM	IDM IDM		
WO		80(A)	120	252	
Working Range	ID	28-76	40-112	80-240	
(mm)	OD	32-89	48-120	90-273	
Motor Power(W)			1300W		
Power Supply		220-240V 1PH 50/60HZ			
No-Loading Rotat	e Speed (r/min)	50 38 21			
Max. Tool Travel	(mm)	35 35 55			
Max. Beveling Th	ickness (mm)	15 15 20			
Lateral Feed (mm/r) N/A		N/A	N/A		
Net Weight (KG)		10	21	32	

# PART 4 INSTALLATION AND OPERATION

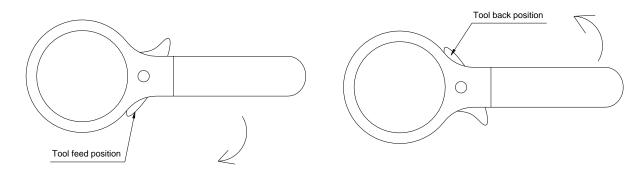
# **SECTION 1**

# **TOOL FEED / BACK INSTRUCTION**

 A. IDP/E/M 80 tool feed / back hand wheel See right figure
 Tool Feed: rotate clockwise
 Tool Back: rotate anticlockwise



 B. IDP/E/M 120 – 252 adopt tool feed/back ratchet spanner See below figure



Tool Feed: Press pawl clockwise, pull spanner clockwise Tool Back: Press pawl anticlockwise, pull spanner anticlockwise

# **OPERATION PROCEDURE**

- 1. Measure the ID of the pipe, and then choose the proper expanding block according to the diagram of expanding block (page 12 Part 7), or see the figure on the expanding block, choose the proper one, fixed them on the wedge block, and tighten them.
- Install the proper tool bit on the cutter. Make sure the tool bit in clockwise.
   Caution: The tool bit can not touch the spindles; otherwise may damage the machine
- 3. Back the travel of tool bit by tool feed hand wheel (tool feed/back ratchet spanner). Insert the expandable mandrel into the pipe, fasten the expansion nut **lightly**, shake the machine (in order to centering, and make the expanding block properly contact the ID pipe), the machine will be centering, and then fasten the expansion nut **tightly**, make sure the equipment and the pipe are integrated.

**Caution:** The expandable mandrel should not be inserted too deep, it's better to keep a 3-5mm distance between tool bit and pipe end high point.

4. Turn on the motor then turn off, turn on then turn off, let the cutter rotate 1 circle, in order to confirm the machine and tool bit installed correctly, turn on the motor, rotate the tool feed hand wheel (tool feed/back ratchet spanner) manually, the machine start working

#### **Explanation:**

Turn on the motor then turn off: Tool bit feed required from the high point of pipe end (rough end), this operation is to avoid tool bit not feed from pipe end high point. If the tool bit not feed from high point, will damage the tool bit and machine, also may cause danger.

### Caution:

4.1 Tool feed evenly, not fast, not slow.

4.2 Continue spray coolant (saponification oil) while working, make the beveling smoothly and prolong the tool bit life

4.3 If the tool bit becomes blunt, edge it or replace with a new one

4.4 While working, take care of electric, avoid scrap-iron goes into motor.

- 5. After beveling completed, back the travel of tool bit by tool feed hand wheel (tool feed/back ratchet spanner) firstly, then turn off the motor, loosen the expansion nut, and take off the machine.
  Caution: If not back the travel of tool firstly, the feed wheel may damage, result in expansion nut and feed wheel stuck, the machine can not work any more. Please repeat the above, if the machine is for continuous working, in order to make sure the machine normal operation.
- 6. After the tool bit installed ok, the machine can be moved and continue processing from one pipe to another same size pipe, no need adjust the tool bit again, only back the travel of tool bit. Loosen the expansion nut, and fix it on another pipe.

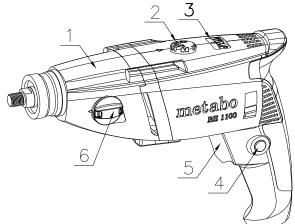
**Caution:** When loosen the expansion nut, and take the machine out or adjust the location of machine, do not make it slip into the pipe, damage the tool blade

# NOTES FOR IDP PNEUMATIC SERISE

- Compressed air required: Dehydration and filtrated air Required air treatment: air filter, regulator and atomized lubricator (FRL system) Air filter makes the compressed air dry and clean, avoid make air motor part rust and be jammed. Atomized lubricator makes the air motor parts lubricating
- 2. While working, if the tool feed speed too fast or low air pressure makes the cutter stop rotating, turn off the air valve, back the tool immediately, then can re-start working.

## **IDM Series METABO motor operation**

#### IDM-80 up to 252 adopts METABO motor BE1300



No.	Description
1	Motor Assembly
2	Speed governor
3	Signal lamp
4	Locking key
5	Switch
6	Speed Changer

Figure A: General View

## INSTRUCTIONS

#### 1. Motor Assembly

The motor adopts is German METOBA motor BE1300

#### 2. Speed governor:

Electronic speed governor, from A to G, speed from slow to fast, can adjust speed dynamically. (Adjust speed dynamically means can adjust the speed while machine working)

#### 3. Signal lamp:

METABO motor signal device, when using, should pay attention to.

If the yellow light flashing, show that the carbon brush wear almost completely, need to change the new one;

If the yellow light frequent flashing, indicates that the power poor contact;

If the yellow light always be on, show that motor overload, high temperature, motor will overload protection, as shown in figure B.

#### 4. Locking Key, METABO motor:

After switch on the motor, press the locking key, loose the switch, the motor will non-stop working; Press again, the motor switch off

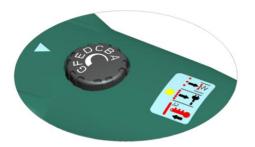


Figure B: Speed governor and Signal light



Figure C: Speed Changer

5. Switch

#### 6. Speed changer:

Mechanical speed change, speed ratio of 3.1. Can only change the speed statically. (Change speed statically means when change the speed grade, switch off the machine) Grade 1: Low speed, high torque output Grade 2: High speed, low torque output

Usually adopts low grade high speed, means "1-E", "1-F" or "1-G"

When working thin wall pipe, can adopt high grade low speed, means "2-A" or "2-B"

# PART 5 IMPORTANT NOTES

1. The carbon brush was adjusted before dispatch; they can feed automatically. Please do not adjust it once again;

**Note:** After 50 working hours, check the wear condition. Replace the carbon brush in time. If the carbon brush wear out, please turn off the machine immediately, otherwise the motor will be damaged. We suggest: when carbon brush wear 2/3, pay attention to replace the carbon brush, avoid that due to the carbon brush wear out, make the motor damage.

 If the tool bit blunt, bevel resistance increased, result in spline shaft, motor and reducer parts will be damaged. Please edge it or replace with a new one.

If you can edge the tool bit, one tool bit can be used times

If the tool bit blunt and tool feed too much, may cause the motor stop, please turn off the power immediately, otherwise the motor, machine will be damaged.

The way to check the tool bit blunt or not:

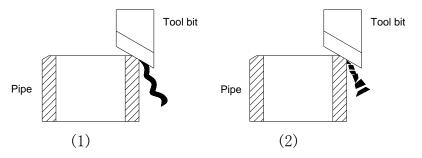


Figure 1: tool bit is sharp, scrap-iron is strip Figure 2: tool bit is blunt, scrap-iron is fragment

- 3. Continue spray coolant (saponification oil) while working, make the beveling smoothly and prolong the tool bit life
- 4. Before beveling, please remove the rough edge and other incidentals after flame cutting with hammer. If the pipe end surface is full of bumps and holes, the tool bit feed from the high point, and feed the tool bit carefully.
- 5. When work with small size tube, please use a bench clamp or other tool fix the tube
- 6. IDP/E 80– 252 adopt tool feed/back ratchet spanner, it is convenient for operator, but must control the feed speed. If feed too much, may damage machine.
- 7. Motor may stop caused by tool bit blunt or tool feed too much, cut-off the power supply immediately, otherwise will damage the motor or make electric motor burnt.
- 8. Operator must read this manual completely before operation, the damage caused by wrong operation out of warranty scope.

## PART 6 DIAGRAM OF BEVELING TOOL BIT

M42 Tooling Chart					
	Facing tools 平	口刀具			
Description	Part Number	Application	Sketch		
Facing tool Material: AISI M42 Width:22mm, Thk:8mm Step type	42F-0822S	80, 120, 252			
Facing tool Material: AISI M42 Width:22mm, Thk:8mm	42F-0822	80, 120, 252			
	Beveling tools	坡口刀具			
Beveling Tool	42B-0822S-30°				
Material: AISI M42 Width:22mm, Thk:8mm	42B-0822S-37.5°	80, 120, 252 a is beveling angle required			
Step type	42B-0822S-a				
Beveling Tool	42B-0822-30°				
Material: AISI M42	42B-0822-37.5°	80, 120, 252 a is beveling angle required			
Width:22mm, Thk:8mm	42B-0822-a				
	Inner Beveling tools	s 内坡口刀具			
Inner Beveling tool	42IB-0822S-12°				
Material: AISI M42 Width:22mm, Thk:8mm	42IB-0822S-15°	80, 120, 252 a is beveling angle required			
Step type	42IB-0822S-a				
Inner Beveling tool	42IB-0822-12°				
Material: AISI M42	42IB-0822-15°	80, 120, 252 a is beveling angle required			
Width:22mm, Thk:8mm	42IB-0822-a				

#### Note:

- \* Consult with us for special size and special application.
- \* Consult with us for Inconel, duplex beveling.

# PART 7 DIAGRAM OF THE EXPANDING BLOCK

Expanding block (extension legs)

Model	80	120	252
No-Block	¢ 28-36	¢ 40-49	¢ 80-100
306-1	¢ 36-44	⊄ 49-58	¢ 100-120
306-2	¢ 44-52	¢ 58-67	¢ 120-140
306-3	¢ 52-60	¢ 67-76	¢ 140-160
306-4	¢ 60-68	¢ 76-85	¢ 160-180
306-5	¢68-76	¢ 85-94	¢ 180-200
306-6		¢ 94-103	¢ 200-220
306-7		¢ 103-112	¢ 220-240
306-8			¢240-260
306-9			
306-10			

### Note:

Can supply stainless steel expanding block

# PART 8 TROUBLE SHOOTING

Trouble	Possible reason	Remedy	
Machine does not work	The cable is not connect well ; Air motor drive may have a entry problem	Check the cable and the air entry device to see if it is well installed	
Machine wave when working	The expansion structure is not fastened or the expanding block wrongly choose; Long time working, the screw loose	Check the expansion screw or change a proper expanding block Check the screw on the cutter	
Working face not good	The bevel tool bit is blunt or damaged	Edge the tool bit or replace with new tool bits	
Air Motor weak	The motor vane(blade) wear	Replace with new motor vane	
Air Motor does not work	Dirt jam; Parts rust	Clean the air motor and adopt the air treatment (filter / regulator / lubricator) for compressed air	
Electric motor abnormal sound	Check the carbon brush or the motor bearing 628Z	Replace with new carbon brush or bearing 628Z	
Electric motor burnt	scrap-iron or water goes into; unsteady power voltage; Tool bit blunt, result in high load;	Replace with new motor rotor or stator; Replace complete motor	

#### Note:

If a problem not listed in the chart, stop operation and contact us for additional instructions

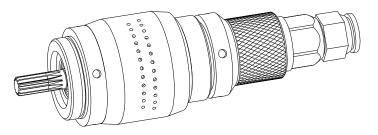
# PART 9 EXPLODED VIEWS AND PARTS LIST

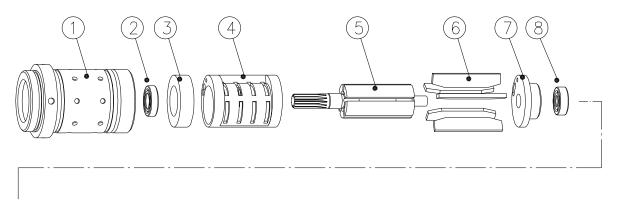
### Important Note:

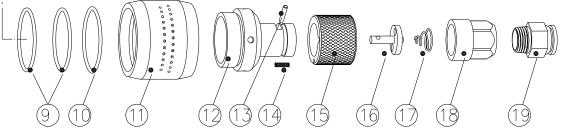
When need the replace part, please advise machine Model No. & Part No.

# IDP-80/120 Air Motor Assembly

Part No.: AMA136



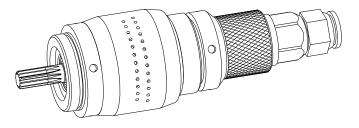


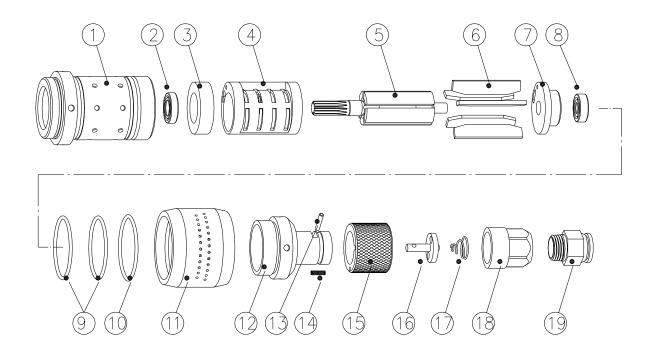


No.	Part No.	Description	Qty	No.	Part No.	Description	Qty
1	AMA13601	Housing	1	11	AMA13611	Exhaust cover	1
2	AMA13602	Deep groove ball bearing	1	12	AMA13612	Motor rear cover	1
3	AMA13603	Rotor front cover	1	13	AMA13613	Pin	1
4	AMA13604	Eccentric stator	1	14	AMA13614	Cylinder spring	1
5	AMA13605	Motor rotor	1	15	AMA13615	Rotation Switch	1
6	AMA13606	Blade	5	16	AMA13616	Valve element	1
7	AMA13607	Rotor rear cover	1	17	AMA13617	Taper spring	1
8	AMA13608	Deep groove ball bearing	1	18	AMA13618	Nut	1
9	AMA13609	O ring	2	19	AMA13619	Quick coupling	1
10	AMA13610	O ring	1				

# IDP-252 Air Motor Assembly

## Part No.: AMA8

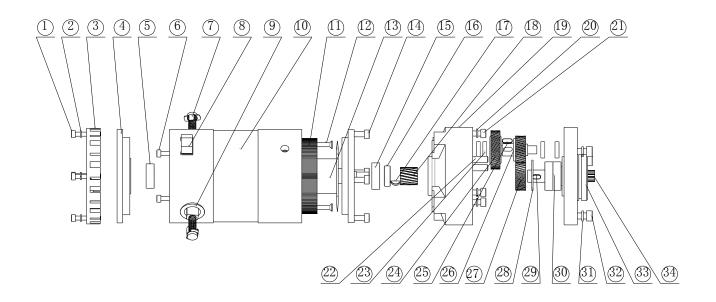




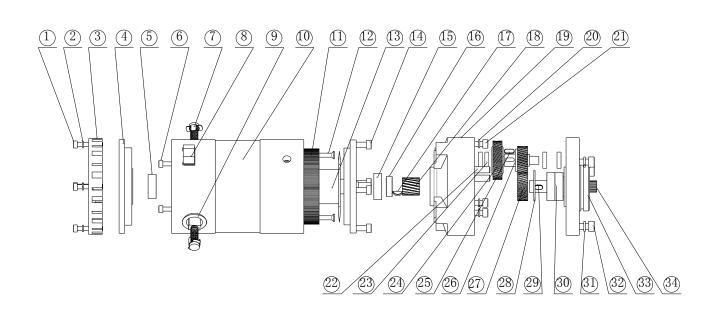
No.	Part No.	Description	Qty	No.	Part No.	Description	Qty
1	AMA801	Housing	1	11	AMA811	Exhaust cover	1
2	AMA802	Deep groove ball bearing	1	12	AMA812	Motor rear cover	1
3	AMA803	Rotor front cover	1	13	AMA813	Pin	1
4	AMA804	Eccentric stator	1	14	AMA814	Cylinder spring	1
5	AMA805	Motor rotor	1	15	AMA815	Rotation Switch	1
6	AMA806	Blade	5	16	AMA816	Valve element	1
7	AMA807	Rotor rear cover	1	17	AMA817	Taper spring	1
8	AMA808	Deep groove ball bearing	1	18	AMA818	Nut	1
9	AMA809	O ring	2	19	AMA819	Quick coupling	1
10	AMA810	O ring	1				

### **Electric Motor**

### IDE-80, Yellow Motor Assembly part No.: ED3



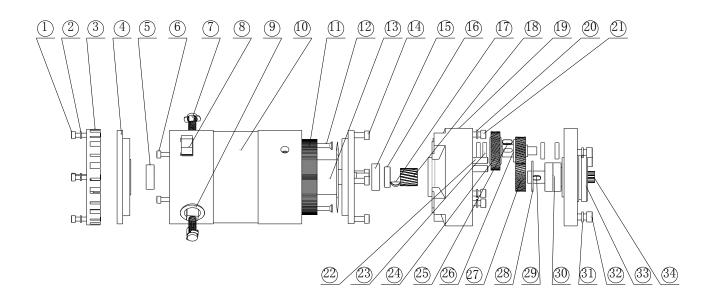
No	Part No.:	Description	Qty	No	Part No.:	Description	Qty
1	ED301	Screw M4X25	4	18	ED318	Rotor shaft gear	1
2	ED302	spring washer4	4	19	ED319	Reducer	1
3	ED303	ventilation cover	1	20	ED320	spring washer5	3
4	ED304	Motor cover	1	21	ED321	Screw M5X30	3
5	ED305	Bearing 628	1	22	ED322	Locating pin	2
6	ED306	Screw M4X10	2	23	ED323	Bearing618-8	4
7	ED307	Carbon brush	2	24	ED324	Motor input helical gear	1
8	ED308	Motor switch	1	25	ED325	Key4x10	1
9	ED309	Carbon brush holder	2	26	ED326	Motor output helical shaft	1
10	ED310	Electromotor shell	1	27	ED327	Motor output helical gear	1
11	ED311	Stator	1	28	ED328	Hole with ring28	1
12	ED312	Screw M4X40	2	29	ED329	Key4x8	1
13	ED313	Rotor	1	30	ED330	Bearing6001	2
14	ED314	Screw M5X16	4	31	ED331	spring washer6	3
15	ED315	Bearing629	1	32	ED332	Screw M6X20	3
16	ED316	BearingL-2090KKMTR	1	33	ED333	Bearing block	1
17	ED317	Woodruff key	1	34	ED334	Motor output shaft	1



### IDE-120, Yellow Motor Assembly part No.: ED4

No	Part No.:	Description	Qty	No	Part No.:	Description	Qty
1	ED401	Screw M4X25	4	18	ED418	Rotor shaft gear	1
2	ED402	spring washer4	4	19	ED419	Reducer	1
3	ED403	ventilation cover	1	20	ED420	spring washer5	3
4	ED404	Motor cover	1	21	ED421	Screw M5X30	3
5	ED405	Bearing 628	1	22	ED422	Locating pin	2
6	ED406	Screw M4X10	2	23	ED423	Bearing 618-8	4
7	ED407	Carbon brush	2	24	ED424	Motor input helical gear	1
8	ED408	Motor switch	1	25	ED425	Key4x10	1
9	ED409	Carbon brush holder	2	26	ED426	Motor output helical shaft	1
10	ED410	Electromotor shell	1	27	ED427	Motor output helical gear	1
11	ED411	Stator	1	28	ED428	Hole with ring28	1
12	ED412	Screw M4X40	2	29	ED429	Key4x8	1
13	ED413	Rotor	1	30	ED430	Baering6001	2
14	ED414	Screw M5X16	4	31	ED431	spring washer6	3
15	ED415	Bearing629	1	32	ED432	Screw M6X20	3
16	ED416	BearingL-2090KKMTR	1	33	ED433	Bearing block	1
17	ED417	Woodruff key	1	34	ED434	Motor output shaft	1

### IDE-252, Yellow Motor Assembly part No.: ED10



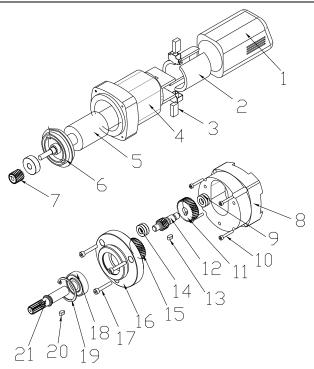
No.	Part No.:	Description	Qty	No.	Part No.:	Description	Qty
1	ED1001	Screw M4X25	4	18	ED1018	Rotor shaft gear	1
2	ED1002	spring washer4	4	19	ED1019	Reducer	1
3	ED1003	ventilation cover	1	20	ED1020	spring washer5	3
4	ED1004	Motor cover	1	21	ED1021	Screw M5X30	3
5	ED1005	Bearing 628	1	22	ED1022	Locating pin	2
6	ED1006	Screw M4X10	2	23	ED1023	Bearing618-8	4
7	ED1007	Carbon brush	2	24	ED1024	Motor input helical gear	1
8	ED1008	Motor switch	1	25	ED1025	Key4x10	1
9	ED1009	Carbon brush holder	2	26	ED1026	Motor output helical shaft	1
10	ED1010	Electromotor shell	1	27	ED1027	Motor output helical gear	1
11	ED1011	Stator	1	28	ED1028	Hole with ring28	1
12	ED1012	Screw M4X40	2	29	ED1029	Key4x8	1
13	ED1013	Rotor	1	30	ED1030	Bearing6001	2
14	ED1014	Screw M5X16	4	31	ED1031	spring washer6	3
15	ED1015	Bearing629	1	32	ED1032	Screw M6X20	3
16	ED1016	BearingL-2090KKMTR	1	33	ED1033	Bearing block	1
17	ED1017	Woodruff key	1	34	ED1034	Motor output shaft	1

## **Electric Motor Adaptor**

**IDE-80 Black motor** 

1-7 Assembly Part No. EA3 8-21 Assmbly Part No. V3EPC

IDB-80 BOSCH motor 1-7 Assembly Part No. EA3B 8-21 Assmbly Part No. V3BPC



### **IDE-80 Black Motor**

No.	Part No	Description	Qty	No.	Part No	Description	Qty
1	EA301	Shell back cover	1	12	EA312	Helical gear shaft	1
2	EA302	Stator	1	13	EA313	Flat key	1
3	EA303	Carbon brush	2	14	EA314	Bearing	2
4	EA304	Stator housing	1	15	EA315	Helical gear	1
5	EA305	Rotor	1	16	EA316	Reducer casing front cover	1
6	EA306	Bearing 628	1	17	EA317	Allen screw	3
7	EA307	Rotor helical gear	1	18	EA318	Bearing1	1
8	EA308	Reducer casing	1	19	EA319	Internal circlip	1
9	EA309	Bearing	2	20	EA320	Flat key	1
10	EA310	Allen screw	4	21	EA321	Straight gear shaft	1
11	EA311	Helical gear	1				

### **IDB-80 Bosch Motor**

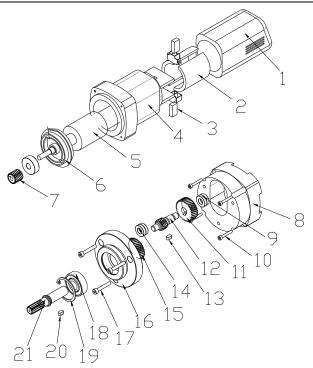
No.	Part No	Description	Qty	No.	Part No	Description	Qty
1	EA3B01	Shell back cover	1	12	EA3B12	Helical gear shaft	1
2	EA3B02	Stator	1	13	EA3B13	Flat key	1
3	EA3B03	Carbon brush	2	14	EA3B14	Bearing	2
4	EA3B04	Stator housing	1	15	EA3B15	Helical gear	1
5	EA3B05	Rotor	1	16	EA3B16	Reducer casing front cover	1
6	EA3B06	Bearing	1	17	EA3B17	Allen screw	3
7	EA3B07	Rotor helical gear	1	18	EA3B18	Bearing1	1
8	EA3B08	Reducer casing	1	19	EA3B19	Internal circlip	1
9	EA3B09	Bearing	2	20	EA3B20	Flat key	1
10	EA3B10	Allen screw	4	21	EA3B21	Straight gear shaft	1
11	EA3B11	Helical gear	1				

## **Electric Motor Adaptor**

**IDE-120 Black motor** 

1-7 Assembly Part No. EA6 8-21 Assmbly Part No. V6EPC

IDB-120 BOSCH motor 1-7 Assembly Part No. EA6B 8-21 Assmbly Part No. V6BPC



### **IDE-120 Black Motor**

No	Part No.:	Description	Qty	No	Part No.:	Description	Qty
1	EA601	Shell back cover	1	12	EA612	Helical gear shaft	1
2	EA602	Stator	1	13	EA613	Flat key	1
3	EA603	Carbon brush	2	14	EA614	Bearing	2
4	EA604	Stator housing	1	15	EA615	Helical gear	1
5	EA605	Rotor	1	16	EA616	Reducer casing front cover	1
6	EA606	Bearing	1	17	EA617	Allen screw	3
7	EA607	Rotor helical gear	1	18	EA618	Bearing1	1
8	EA608	Reducer casing	1	19	EA619	Internal circlip	1
9	EA609	Bearing3	2	20	EA620	Flat key	1
10	EA610	Allen screw	4	21	EA621	Straight gear shaft	1
11	EA611	Helical gear	1				

### **IDB-120 Bosch Motor**

No	Part No.:	Description	Qty	No	Part No.:	Description	Qty
1	EA6B01	Shell back cover	1	12	EA6B12	Helical gear shaft	1
2	EA6B02	Stator	1	13	EA6B13	Flat key	1
3	EA6B03	Carbon brush	2	14	EA6B14	Bearing	2
4	EA6B04	Stator housing	1	15	EA6B15	Helical gear	1
5	EA6B05	Rotor	1	16	EA6B16	Reducer casing front cover	1
6	EA6B06	Bearing	1	17	EA6B17	Allen screw	3
7	EA6B07	Rotor helical gear	1	18	EA6B18	Bearing1	1
8	EA6B08	Reducer casing	1	19	EA6B19	Internal circlip	1
9	EA6B09	Bearing3	2	20	EA6B20	Flat key	1
10	EA6B10	Allen screw	4	21	EA6B21	Straight gear shaft	1
11	EA6B11	Helical gear	1				

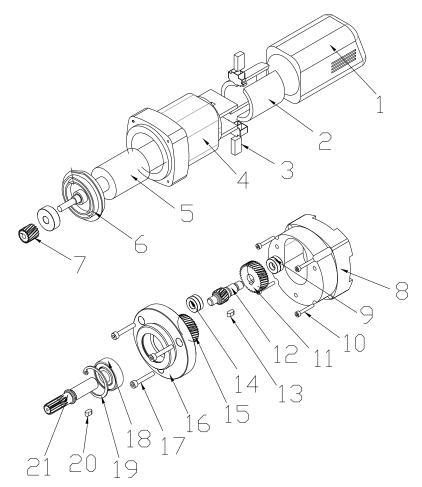
Followings are NODHA new electric motor assembly from 2020.(Green housing)

## **IDE-80**

IDE-80 2020 NEW MOTOR

1-21 Assembly Part No. ED320

### 8-21 Assembly Part No. V320EPC



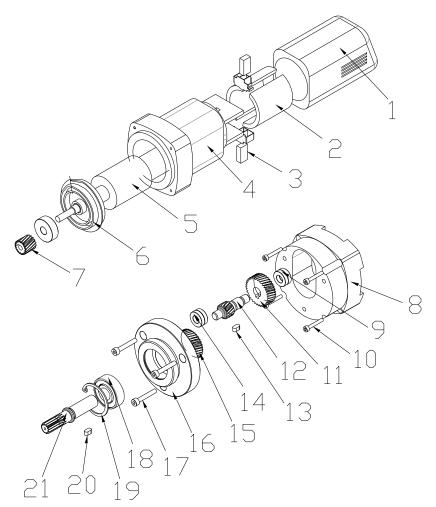
No.	Part No	Description	Qty	No.	Part No	Description	Qty
1	ED32001	Shell back cover	1	12	ED32012	Helical gear shaft	1
2	ED32002	Stator	1	13	ED32013	Flat key	1
3	ED32003	Carbon brush	2	14	ED32014	Bearing	2
4	ED32004	Stator housing	1	15	ED32015	Helical gear	1
5	ED32005	Rotor	1	16	ED32016	Reducer casing front cover	1
6	ED32006	Bearing	1	17	ED32017	Allen screw	3
7	ED32007	Rotor helical gear	1	18	ED32018	Bearing	1
8	ED32008	Reducer casing	1	19	ED32019	Internal circlip	1
9	ED32009	Bearing	2	20	ED32020	Flat key	1
10	ED32010	Allen screw	4	21	ED32021	Straight gear shaft	1
11	ED32011	Helical gear	1				

## IDE-120

### IDE-120 2020 NEW MOTOR

1-21 Assembly Part No. ED420

8-21 Assembly Part No. V420EPC

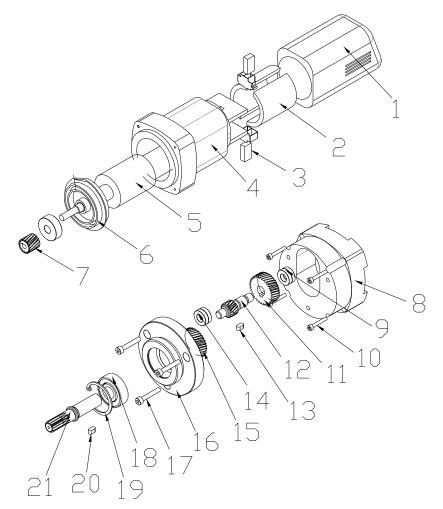


No	Part No.:	Description	Qty	No	Part No.:	Description	Qty
1	ED42001	Shell back cover	1	12	ED42012	Helical gear shaft	1
2	ED42002	Stator	1	13	ED42013	Flat key	1
3	ED42003	Carbon brush	2	14	ED42014	Bearing	2
4	ED42004	Stator housing	1	15	ED42015	Helical gear	1
5	ED42005	Rotor	1	16	ED42016	Reducer casing front cover	1
6	ED42006	Bearing	1	17	ED42017	Allen screw	3
7	ED42007	Rotor helical gear	1	18	ED42018	Bearing1	1
8	ED42008	Reducer casing	1	19	ED42019	Internal circlip	1
9	ED42009	Bearing3	2	20	ED42020	Flat key	1
10	ED42010	Allen screw	4	21	ED42021	Straight gear shaft	1
11	ED42011	Helical gear	1				

## IDE-252

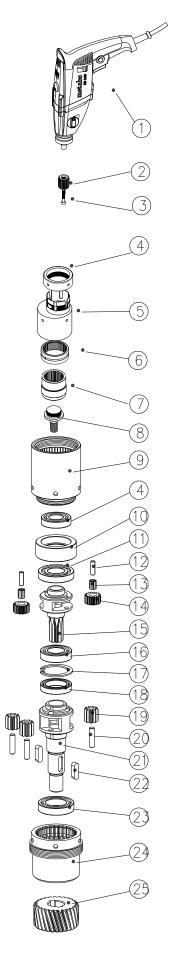
### IDE-252 2020 NEW MOTOR

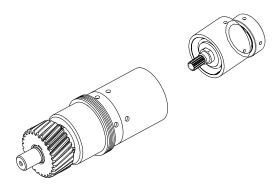
- 1-21 Assembly Part No. ED1020
- 8-21 Assembly Part No. V1020EPC



No	Part No.:	Description	Qty	No	Part No.:	Description	Qty
1	ED102001	Shell back cover	1	12	ED102012	Helical gear shaft	1
2	ED102002	Stator	1	13	ED102013	Flat key	1
3	ED102003	Carbon brush	2	14	ED102014	Bearing	2
4	ED102004	Stator housing	1	15	ED102015	Helical gear	1
5	ED102005	Rotor	1	16	ED102016	Reducer casing front cover	1
6	ED102006	Bearing	1	17	ED102017	Allen screw	3
7	ED102007	Rotor helical gear	1	18	ED102018	Bearing1	1
8	ED102008	Reducer casing	1	19	ED102019	Internal circlip	1
9	ED102009	Bearing3	2	20	ED102020	Flat key	1
10	ED102010	Allen screw	4	21	ED102021	Straight gear shaft	1
11	ED102011	Helical gear	1				

# IDM-252 Reducer Assembly

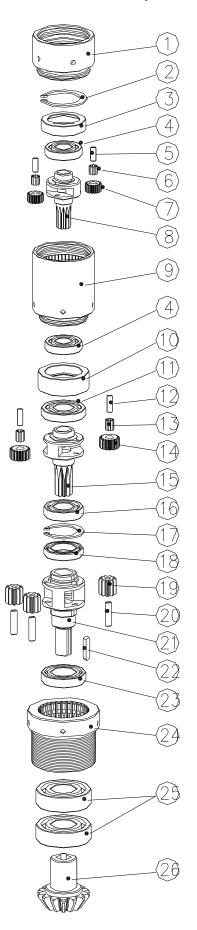


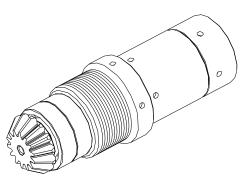


# Assembly Part No.: S10M

No.	Part No.	Description	Qty
1	S10M01	Metabo Motor BEV1300	1
2	S10M02	Driving gear	1
3	S10M03	Bolt	1
4	S10M04	Locking bush	1
5	S10M05	Eccentric shaft	1
6	S10M06	Bearing	1
7	S10M07	Gear ring	1
8	S10M08	Gear shaft	1
9	V8RA09	Secondary gear ring	1
10	V8RA10	Secondary bushing	1
11	V8RA11	Deep groove ball bearing	1
12	V8RA12	Cylindrical pin	2
13	V8RA13	Roller pin	24
14	V8RA14	Secondary planetary gear	2
15	V8RA15	Secondary planet carrier	1
16	V8RA16	Deep groove ball bearing	1
17	V8RA17	Internal circlip	1
18	V8RA18	Deep groove ball bearing	1
19	V8RA19	Third stage planetary gear	3
20	V8RA20	Cylindrical pin	3
21	V8RA21	Third stage planet carrier	1
22	V8RA22	Flat key	2
23	V8RA23	Deep groove ball bearing	1
24	V8RA24	Third stage gear ring	1
25	V8RA25E	Bevel pinion, Electric type	1
25	V8RA25P	Bevel pinion, Air type	1

# 80 Reducer Assembly

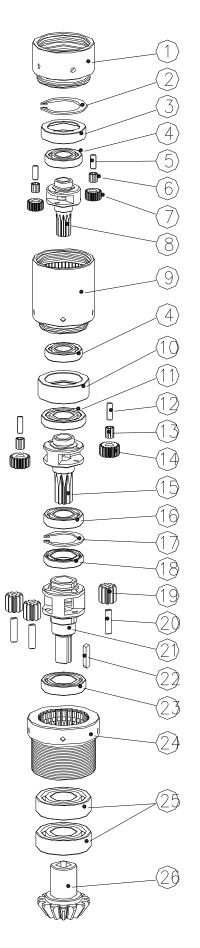


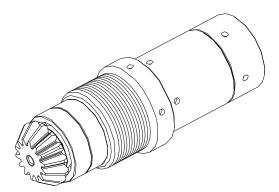


# Assembly Part No.: V13RA

No.	Part No.	Description	Qty
1	V13RA01	First stage gear ring	1
2	V13RA02	Internal circlip	1
3	V13RA03	First stage bushing	1
4	V13RA04	Deep groove ball bearing	2
5	V13RA05	Cylindrical pin	2
6	V13RA06	Roller pin	24
7	V13RA07	Primary planet gear	2
8	V13RA08	First stage planet carrier	1
9	V13RA09	Secondary gear ring	1
10	V13RA10	The secondary bushing	1
11	V13RA11	Deep groove ball bearing	1
12	V13RA12	Cylindrical pin	2
13	V13RA13	Roller pin	24
14	V13RA14	The secondary planetary gear	2
15	V13RA15	The secondary planet carrier	1
16	V13RA16	Deep groove ball bearing	1
17	V13RA17	Internal circlip	1
18	V13RA18	Deep groove ball bearing	1
19	V13RA19	Three stage planetary gear	2
20	V13RA20	Cylindrical pin	2
21	V13RA21	Third stage planet carrier	1
22	V13RA22	Flat key	1
23	V13RA23	Deep groove ball bearing	1
24	V13RA24	Third stage gear ring	1
25	V13RA25	Deep groove ball bearing	2
26	V13RA26	Bevel pinion	1

# 120 Reducer Assembly

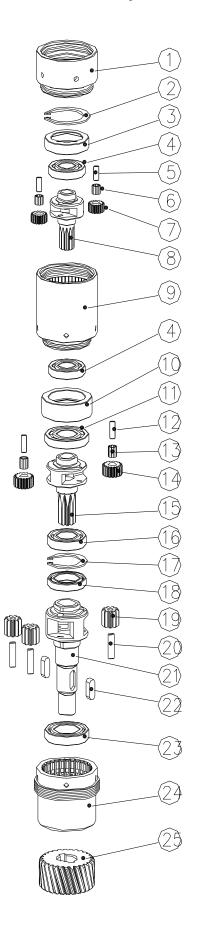


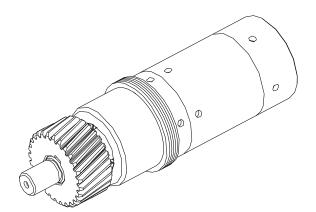


# Assembly Part No.: V6RA

No.	Part No.	Description	Qty
1	V6RA01	First stage gear ring	1
2	V6RA02	Internal circlip	1
3	V6RA03	First stage bushing	1
4	V6RA04	Deep groove ball bearing	2
5	V6RA05	Cylindrical pin	2
6	V6RA06	Roller pin	24
7	V6RA07	Primary planet gear	2
8	V6RA08	First stage planet carrier	1
9	V6RA09	Secondary gear ring	1
10	V6RA10	The secondary bushing	1
11	V6RA11	Deep groove ball bearing	1
12	V6RA12	Cylindrical pin	2
13	V6RA13	Roller pin	24
14	V6RA14	The secondary planetary gear	2
15	V6RA15	The secondary planet carrier	1
16	V6RA16	Deep groove ball bearing	1
17	V6RA17	Internal circlip	1
18	V6RA18	Deep groove ball bearing	1
19	V6RA19	Three stage planetary gear	3
20	V6RA20	Cylindrical pin	3
21	V6RA21	Third stage planet carrier	1
22	V6RA22	Flat key	1
23	V6RA23	Deep groove ball bearing	1
24	V6RA24	Third stage gear ring	1
25	V6RA25	Deep groove ball bearing	2
26	V6RA26	Bevel pinion	1

# 252 Reducer Assembly

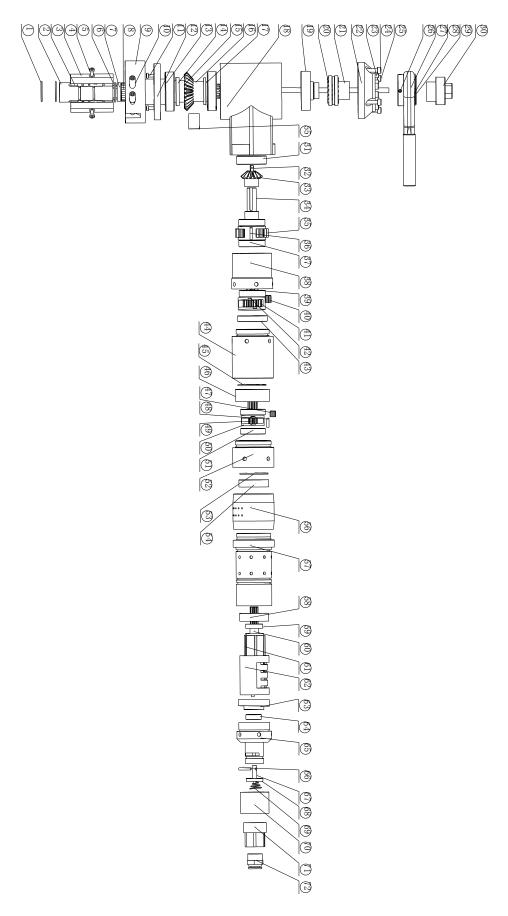




# Assembly Part No.: V8RA

No.	Part No.	Description	Qty
1	V8RA01	First stage gear ring	1
2	V8RA02	Internal circlip	1
3	V8RA03	First stage bushing	1
4	V8RA04	Deep groove ball bearing	2
5	V8RA05	Cylindrical pin	2
6	V8RA06	Roller pin	24
7	V8RA07	First stage planet gear	2
8	V8RA08	First stage planet carrier	1
9	V8RA09	Secondary gear ring	1
10	V8RA10	Secondary bushing	1
11	V8RA11	Deep groove ball bearing	1
12	V8RA12	Cylindrical pin	2
13	V8RA13	Roller pin	24
14	V8RA14	Secondary planetary gear	2
15	V8RA15	Secondary planet carrier	1
16	V8RA16	Deep groove ball bearing	1
17	V8RA17	Internal circlip	1
18	V8RA18	Deep groove ball bearing	1
19	V8RA19	Third stage planetary gear	3
20	V8RA20	Cylindrical pin	3
21	V8RA21	Third stage planet carrier	1
22	V8RA22	Flat key	2
23	V8RA23	Deep groove ball bearing	1
24	V8RA24	Third stage gear ring	1
25	V8RA25E	Bevel pinion, Electric type	1
25	V8RA25P	Bevel pinion, Air type	1

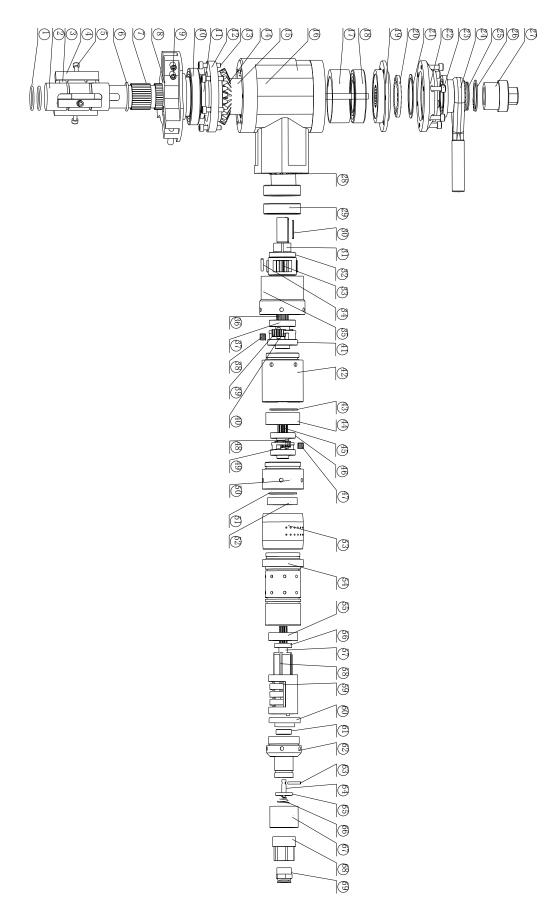
# **IDP-80 Beveling Machine**



Nodha Industrial Technology Wuxi Co., Ltd

No. 1 2 3 4 5 6	Part No.           RA3-001           RA3-002           RA3-003           RA3-004	Description Spring Pull rod	Qty 2	No. 37	Part No.	Desctription	Qty
2 3 4 5	RA3-002 RA3-003 RA3-004		-		RA3-037	Bearing 61904RZ	3
3 4 5	RA3-003 RA3-004		1	38	RA3-038	Third level gear ring	1
4	RA3-004	Wedge block	3	39	RA3-039	Second level planet carrier	1
5		Expanding block (5 sets)	3	40	RA3-040	Roller pin 1.5*18	26
-	RA3-005	Screw M4X8	3	41	RA3-041	Second level gear	2
	RA3-006	Circlip 26	1	42	RA3-042	Pin 5*16	2
7	RA3-007	Gasket	1	43	RA3-043	Bearing 16004	1
8	RA3-008	Needle bearing K20*26*20	1	44	RA3-044	Second level gear ring	1
9	RA3-009	Cutter Spindle	1	45	RA3-045	Circlip 42	1
10	RA3-010	Tool fix screw M8*25/16	1	46	RA3-046	Second level bushing	1
11	RA3-011	Screw M6*20	4	40	RA3-047	Roller pin 1.5*10	26
12	RA3-012	Lower cover	1	48	RA3-048	Pin 5*14	20
13	RA3-013	Bearing 6006	2	49	RA3-049	First level gear	2
14	RA3-014	Washer	1	50	RA3-050	First level planet carrier	1
15	RA3-015	Bevel gear wheel	1	51	RA3-051	Bearing 16003	2
16	RA3-016	Spline shaft	1	52	RA3-052	Circlip 37	1
17	RA3-017	Bearing bushing	1	53	RA3-052	First level bushing	1
18	RA3-018	Housing	1	54	RA3-054	First level gear ring	1
19	RA3-019	Splined hub	1	55	RA3-055	Copper bush	1
20	RA3-020	Plane bearing 51105	2	56	RA3-056	Silencer bushing	1
20	RA3-021	Feed sleeve	1	57	RA3-057	Air Motor housing	1
22	RA3-022	Upper cover	1	58	RA3-058	Front bearing pedestal	1
23	RA3-023	Screw M5*20	4	59	RA3-059	Bearing 6901	1
24	RA3-024	Screw M5*8	4	60	RA3-060	Air motor rotor	1
25	RA3-025	Screw M6*20	4	61	RA3-061	Air motor vane	1
26	RA3-026	Screw M5*20	1	62	RA3-062	Air motor stator	1
27	RA3-027	Tool feed/back ratchet spanner	1	63	RA3-063	Rear bearing pedestal	1
28	RA3-028	Tool feed/back wheel	1	64	RA3-064	Bear 608	1
29	RA3-029	Circlip 40	1	65	RA3-065	Connecting sleeve	1
30	RA3-030	Expansion nut	1	66	RA3-066	Stop pin	1
31	RA3-031	Bearing 6004RZ	2	67	RA3-067	Valve rod	1
32	RA3-032	Taper key	-	68	RA3-068	Intake valve slice	1
33	RA3-033	Driving bevel pinion	1	69	RA3-069	Conical spring	1
34	RA3-034	Third level planet carrier	1	70	RA3-070	Rotary switch	1
35	RA3-035	Third level gear	2	71	RA3-071	Intake sleeve	1
36	RA3-036	Pin 5*18	2	72	RA3-072	Quick coupling	1

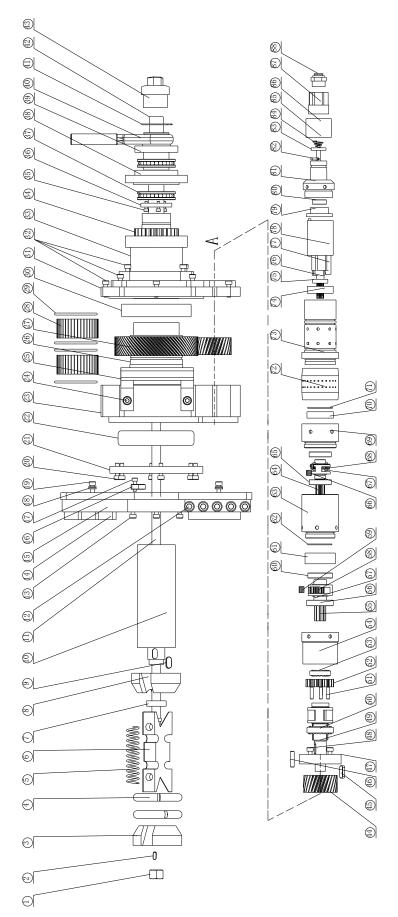
### **IDP-120 BEVELING MACHINE**



Nodha Industrial Technology Wuxi Co., Ltd

No.	Part No.	Description	Qty	No.	Part No.	Nodha Industrial Technology Wuxi Desctription	Qty
1	RA4-001	Spring	2	36	RA4-036	Second level planet carrier	1
2	RA4-002	Pull rod	1	37	RA4-037	Bearing 61904	1
3	RA4-003	Wedge block	3	38	RA4-038	Roller pin 1.5*18	26
4	RA4-004	Expanding block (9sets)	3	39	RA4-039	Second level gear	2
5	RA4-005	Screw M4X8	3	40	RA4-040	Pin 5*16	2
6	RA4-006	Spring 32	1	41	RA4-041	Bearing 16004	1
7	RA4-007	Needle bearing	2	42	RA4-042	Second level gear ring	1
8	RA4-008	Cutter spindle	1	43	RA4-043	Circlip	1
9	RA4-009	Tool fix screw M8*25	6	44	RA4-044	Second level bushing	1
10	RA4-010	Bearing 61911	1	45	RA4-045	First level planet carrier	1
11	RA4-011	Washer	1	46	RA4-046	Bearing 16003	2
12	RA4-012	Lower cover	1	47	RA4-047	Roller pin 1.5*10	26
13	RA4-013	Screw M6*25	6	48	RA4-048	Pin 5*14	2
14	RA4-014	Bevel gear wheel	1	49	RA4-049	First level gear wheel	2
15	RA4-015	Spline shaft	1	50	RA4-050	First level gear ring	1
16	RA4-016	Housing	1	51	RA4-051	Circlip 37	1
17	RA4-017	Copper bush	1	52	RA4-052	First level bushing	1
18	RA4-018	Bearing 6009	1	53	RA4-053	Silencer bushing	1
19	RA4-019	Splined hub	1	54	RA4-054	Air motor housing	1
20	RA4-020	Plane bearing	1	55	RA4-055	Front bearing pedestal	1
21	RA4-021	Spring washer	1	56	RA4-056	Bearing 6901	1
22	RA4-022	Upper cover	4	57	RA4-057	Air motor rotor	1
23	RA4-023	Screw M6*25	4	58	RA4-058	Air motor vane	1
24	RA4-024	Tool feed/back ratchet spanner	4	59	RA4-059	Air motor stator	1
25	RA4-025	Tool feed/back wheel	4	60	RA4-060	Rear bearing pedestal	1
26	RA4-026	Circlip 40	1	61	RA4-061	Bearing 608	1
27	RA4-027	Expansion nut	1	62	RA4-062	Connecting sleeve	1
28	RA4-028	Driving bevel pinion	1	63	RA4-063	Stop pin	1
29	RA4-029	Bearing 6205	2	64	RA4-064	Valve rod	1
30	RA4-030	Flat key 5*30	1	65	RA4-065	Intake valve slice	1
31	RA4-031	Third level planet carrier	1	66	RA4-066	Conical spring	1
32	RA4-032	Bearing 61805	2	67	RA4-067	Rotary switch	1
33	RA4-033	Third level gear	3	68	RA4-068	Intake sleeve	1
34	RA4-034	Pin 5*18	3	69	RA4-069	Quick coupling	1
35	RA4-035	Third level gear ring	1				

## **IDP-252 BEVELING MACHINE**



Nodha Industrial Technology Wuxi Co., Ltd

			-	1		Nodha Industrial Technology Wux	« Co., Lta
No.	Part No.	Desctription	Qty	No.	Part No.	Desctription	Qty
1	S10-001	Nut M14	1	45	S10-045	Key 5*20	1
2	S10-002	Flat key 5*12	1	46	S10-046	Location pin	2
3	S10-003	Lower expansion plate	1	47	S10-047	Connector cover	1
4	S10-004	Spring	2	48	S10-048	Screw M6*25	4
5	S10-005	Pressure spring	1	49	S10-049	Third level planet carrier	1
6	S10-006	Expanding block	3	50	S10-050	Bearing 16905	1
7	S10-007	Splindle cap	1	51	S10-051	Pin 5*18	3
8	S10-008	Upper expansion plate	1	52	S10-052	Third level planet gear	3
9	S10-009	Flat key 6*12	1	53	S10-053	Bearing 16805	1
10	S10-010	Spindle	1	54	S10-054	Third level gear ring	1
11	S10-011	Pull rod	1	55	S10-055	Second level planet carrier	1
12	S10-012	Screw M10*30	10	56	S10-056	Bearing 16004	1
13	S10-013	Screw M6*20	4	57	S10-057	Pin 5*16	3
14	S10-014	Tool holder	2	58	S10-058	Second level planet gear	3
15	S10-015	Cutter	1	59	S10-059	Roller pin 1.5*18	26
16	S10-016	Кеу	1	60	S10-060	Bearing 61904	1
17	S10-017	Screw M5*16	1	61	S10-061	Second level bushing	1
18	S10-018	Flat washer 6	4	62	S10-062	Circlip 42	1
19	S10-019	Screw M6*25	2	63	S10-063	Second level gear ring	1
20	S10-020	Screw M6*20	6	64	S10-064	First level planet carrier	1
21	S10-021	Lower cover	1	65	S10-065	Bearing 16003	2
22	S10-022	Bearing 32917	1	66	S10-066	Roller pin 1.5*10	26
23	S10-023	Lower housing	1	67	S10-067	Pin 5*14	3
24	S10-024	Screw M8*25	4	68	S10-068	First level planet gear	3
25	S10-025	Lift handle	2	69	S10-069	First level gear ring	1
26	S10-026	Spdindle bush	1	70	S10-070	First level bushing	1
27	S10-027	Bevel gear	1	71	S10-071	Circlip 37	1
28	S10-028	Needle bearing	2	72	S10-072	Silencer bushing	1
29	S10-029	Round wire snap rings for hole	4	73	S10-073	Air motor housing	1
30	S10-030	Bearing 60/72	1	74	S10-074	Front bearing pedestal	1
31	S10-031	Upper housing	1	75	S10-075	Bearing 6901	1
32	S10-032	Screw M6*25	13	76	S10-076	Air motor rotor	1
33	S10-033	Rack	1	77	S10-077	Air motor vane	1
34	S10-034	Feed gear	1	78	S10-078	Air motor stator	1
35	S10-035	Screw M4*12	3	79	S10-079	Rear bearing pedestal	1
36	S10-036	The ratchet spanner gland	1	80	S10-080	Bearing 608	1
37	S10-037	Plane thrust bearing 51108	2	81	S10-081	Connecting sleeving	1
38	S10-038	Bearing pedestal	1	82	S10-082	Stop pin	1
39	S10-039	Feed handwheel	1	83	S10-083	Valve rod	1
40	S10-040	Tool feed/back ratchet spanner	1	84	S10-084	Intake valve slice	1
41	S10-041	Shaft retaining ring 40	1	85	S10-085	Conical spring	1
42	S10-042	Screw	1	86	S10-086	Rotary switch	1
43	S10-043	Expanding nut	1	87	S10-087	Intake sleeve	1
44	S10-044	Driving gear wheel	1	88	S10-088	Quick coupling	1

## PART 10 ORDERING INFORMATION

#### **ORDERING OR MORE INFORMATION**

To place an order or get more detailed information:

Tel: 86 - 510 8580 8562 Fax: 86 - 510 8580 8563 Email: info@nodha.com Web: www.nodha.com

#### **ORDERING REPLACEMENT PARTS**

Please refer to parts lists provided in manual. Advise us part number and description of replacement parts to help expedite order and ensure proper parts are being ordered.

Or take photo for replacement parts, send email to us.

#### **REPAIR INFORMATION**

Please call Nodha Industrial Company prior to returning any equipment for repair. We will advise you of shipping and handling. Please enclose with machine to be repaired your name, address, phone number and a brief description of problem or work to be done or estimated.

All repair work done at our plant will be estimated and the customer advised of cost and time required to complete repair.

#### POSTAL ADDRESS

Nodha Industrial Technology (Wuxi) Co., Ltd

Add: 6<sup>th</sup> Floor, 12<sup>th</sup> Building, No.9 XingYang Road, Wuxi-214082, China Tel: 86 - 510 8580 8562 Fax: 86 - 510 8580 8563 Email: info@nodha.com Web: www.nodha.com

## **Quality Information Feedback**

Dear Users:

Thanks for choosing Nodha product!

In order to optimize our machines continuously and carry out the service commitment, please help finish the following content. Your precious suggestion will help us growth better.

The Model No. you bought:

What's your overall evaluation of Nodha product:

What's your suggestion and expectation for Nodha product:

Thanks for your support and cooperation, please post or email the sheet to us, we will embody it to our database.

Nodha Sales Department

#### Nodha Industrial Technology (Wuxi) Co., Ltd

Add: 6<sup>th</sup> Floor, 12<sup>th</sup> Building, No.9 XingYang Road, Wuxi-214082, China Tel: 86 - 510 8580 8562 Fax: 86 - 510 8580 8563 Email: info@nodha.com Web: www.nodha.com