



# **RAPID FACER**

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## **RF1000 Bedknife Front Facing Device**



## **User Guide & Instruction Manual**

Please read this manual carefully before using the Rapid Facer.  
This manual should be kept in a safe place for future reference.



# RAPID FACER

## RF1000 Bedknife Front Facing Device

Welcome to the Bernhard Rapid Facer (RF1000). If cared for and operated correctly this machine will give you years of good service.

This manual will enable you to obtain the best results from your Rapid Facer so please read it thoroughly before using your machine.

If you have any service or operational issues please contact your distributor or phone our technical support hotline

**Technical Helpline (USA only) 1-888 474 6348**

**Rest of World: UK Head Office, England (+44) 1788 811600**

**Email: [support@bernhard.co.uk](mailto:support@bernhard.co.uk)**

Technical FAQs can be found on our web site: **[www.bernhard.co.uk](http://www.bernhard.co.uk)**

When ordering spare parts please quote the machine type and serial number.

THE MANUFACTURERS ACCEPT NO RESPONSIBILITY FOR ANY SITUATION ARISING FROM THE FITTING AND/OR USE OF NON-ORIGINAL SPARE PARTS.

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Please quote this serial number on all correspondence:

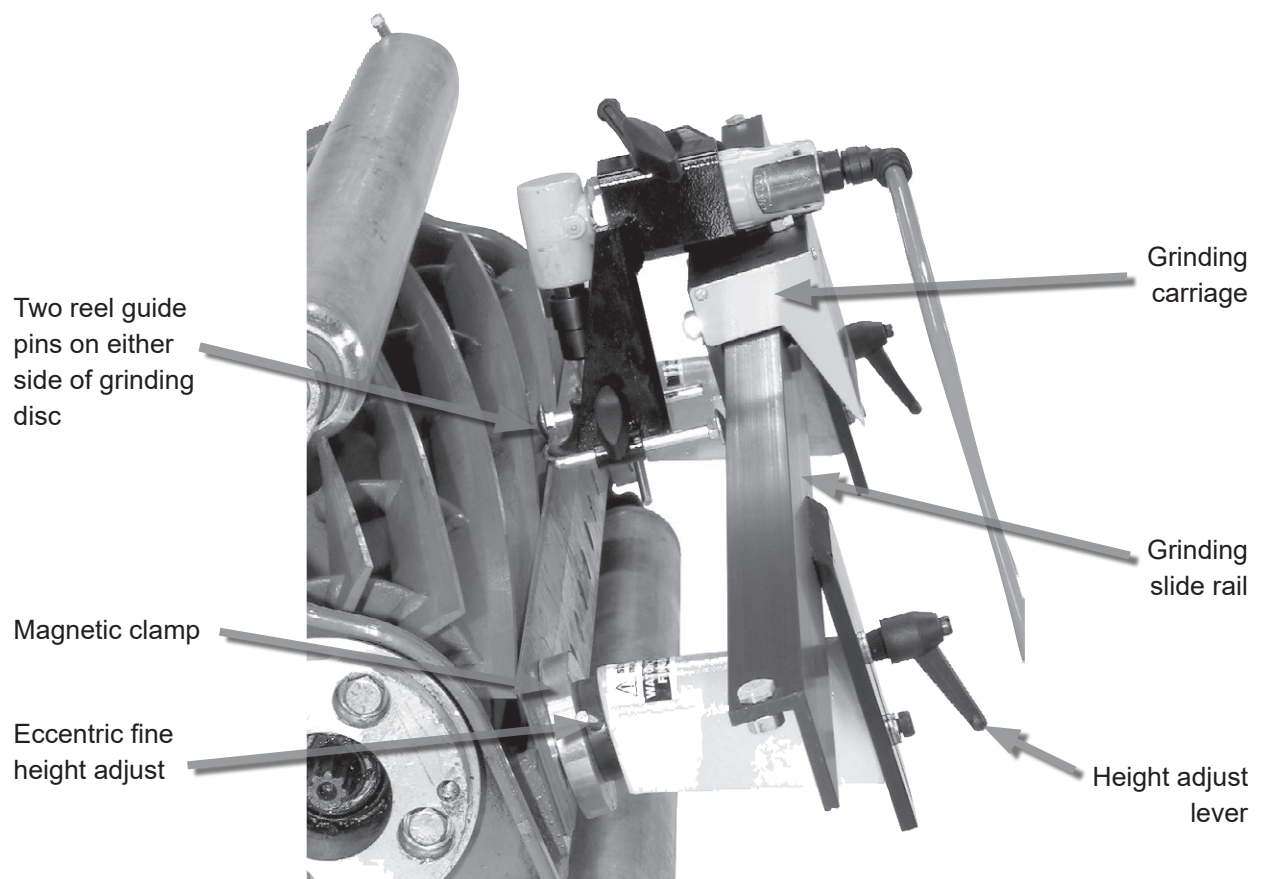
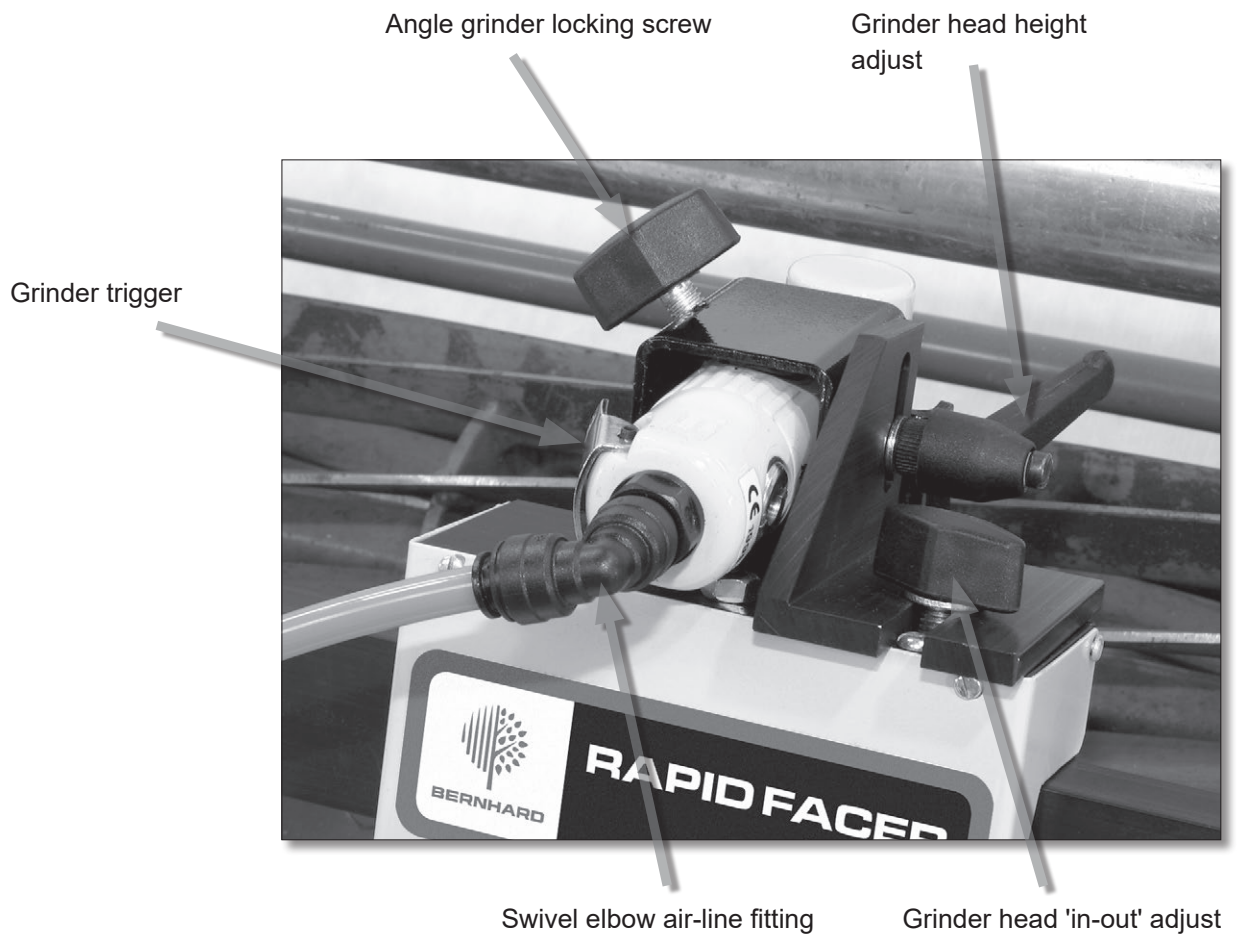
Serial #:

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# 1. Safety

## 1.1 **IMPORTANT**

The air supply must NOT be connected when:

- a) attaching the Rapid Facer RF1000 to the bedknife
- b) setting up the Rapid Facer RF1000
- c) removing the Rapid Facer RF1000 from the bedknife.

## **WARNING: THE MAGNETS ARE VERY POWERFUL**

- 1.2 Always support the angle grinder carriage whilst carrying the Rapid Facer RF1000.

Do NOT hold the Rapid Facer RF1000 by the magnets when attaching the machine to the bedknife.

- 1.3 Always wear eye protection when operating the Rapid Facer RF1000

- 1.4 When operating the Rapid Facer RF1000 never:

- a) leave rags or tools on the machine
- b) wear loose clothing that could become caught in the grinding disc or chuck.  
Always keep long hair tied back.

- 1.5 The disc causes hot sparks. Make sure no flammable materials are close.

- 1.6 Never use the machine for any purpose other than that for which it is designed.

- 1.7 Always use the correct grinding discs.

- 1.8 Never fit a disc while the air line is connected.

- 1.9 Never use the Rapid Facer RF1000 when the cutting unit is set up on a Reel Grinder.

- 1.10 We advise the wearing of ear defenders.

- 1.11 Keep your fingers clear of the reel blades when operating the Rapid Facer RF1000.

- 1.12 The air grinder must not be removed from and used independently of the tool holder.



## 2. Description

- 2.1 The Rapid Facer RF1000 consists of an air driven angle grinder attached to an accurate slide rail. This is fixed to the base of a bedknife by two powerful magnets. It is used to grind the front face of the blade to sharpen it.
- 2.2 The angle grinder carriage is attached to the slide rail supported on rollers. These are adjustable to reduce backlash to a minimum. The rollers also allow the grinding head to traverse along the rail. The grinding head produces an accurately ground cutting edge on the bedknife. This cutting edge will also be parallel to the rotational axis of cutting reel.
- 2.3 The adjustable handle (part 15) allows the grinding disc to be set for a wide choice of clearance angles on the front face of the bedknife.
- 2.4 Two reel pins (part 39) are attached to the grinder carriage. These deflect the reel blades and allow the disc to sharpen the bedknife without damaging the reel blades.
- 2.5 As with other Bernhard reel and bedknife grinding machines this grinding action takes place where the grass is cut. This is the key to the excellent results produced by our equipment.

## 3. On-Site / Workshop Requirements

### 3.1 AIR SUPPLY

Consistent with industry 'Best Practice', Bernhard recommend that the air supply for ALL air powered tool is fitted with:

- An in-line air filter and water separator
- An in-line lubricator

for trouble-free service life of the Rapid Facer.

If water gets into the tool and it will lay there whilst the tool is not in use, and may result in corrosion which may cause seizure. This may invalidate your warranty.

It should be supplied to the air motor by a securely attached flexible hose which allows free movement of the grinding head along the slide rail.

### 3.2 AIR FLOW RATE

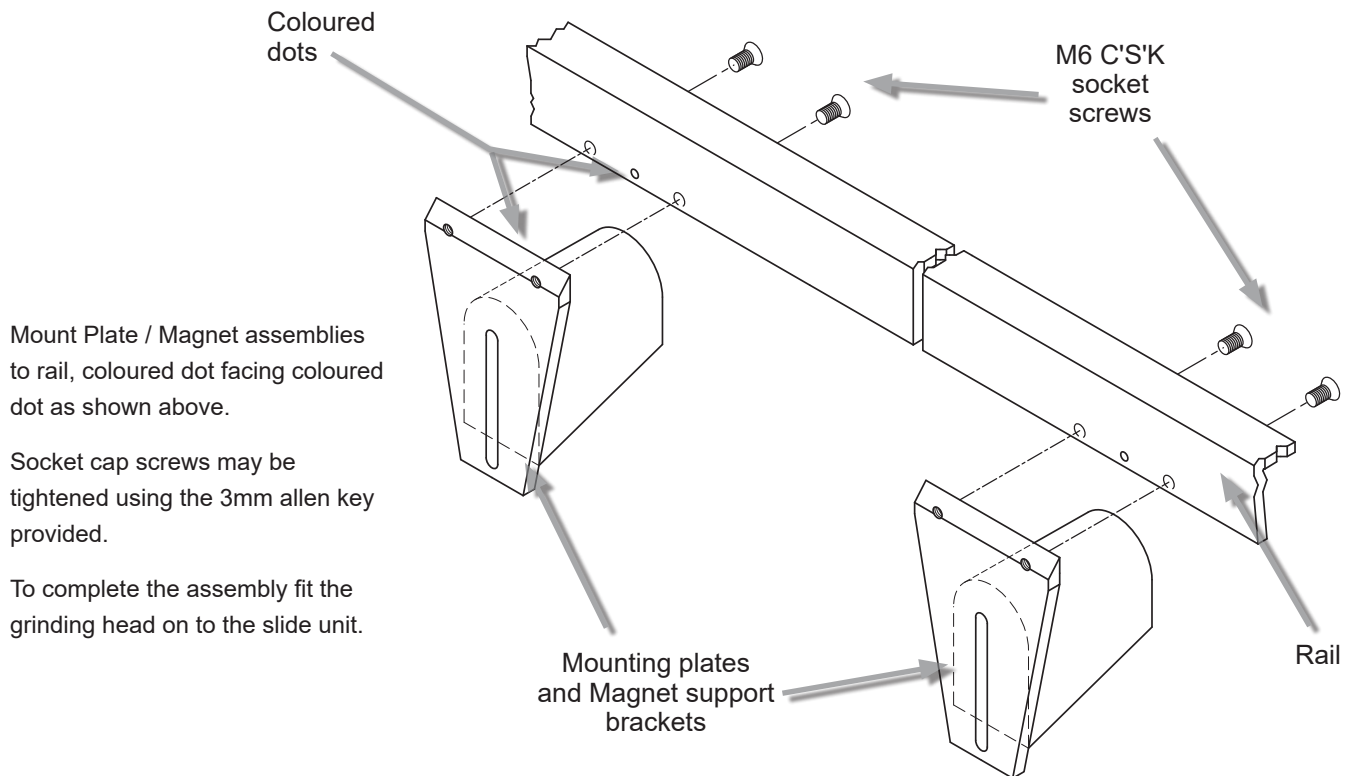
The air motor operates best on an airflow rate of 9 cubic feet/min. (0.25 cubic metres/min). The air motor is designed for a maximum air pressure of 6 bar (90 psi).

- 3.3 An isolating valve must be available to cut off the air supply to the machine. This must be sited close to the machine.
- 3.4 It is useful to have a pressure regulator in the air line.



## 4. Setting Up

4.1 NOTE: The Rapid Facer RF1000 as shipped will need some minimal assembly before use.



### 4.2 PRELIMINARY CHECKS

- 4.2.1 Ensure that the air supply is not attached to the angle grinder motor.
- 4.2.2 Ensure that the eccentric pillars (parts 23 & 24) are correctly adjusted. They are set to reduce backlash and allow free movement of the grinding head along the rail. These are preset on new machines.
- 4.2.3 Ensure that the correct grade and size of grinding disc (part 42) is fitted to the angle grinder. This is factory supplied.
- 4.2.4 Ensure that the grinding disc (part 42) is concentric with the disc holder (part 41). This is factory set.
- 4.2.5 Ensure that the grinding disc (part 42) is securely attached and that neither the disc nor the disc holder (part 41) are damaged.
- 4.2.6 Ensure that the angle grinder (part 40) is securely attached to the carriage. Check that the disc is set between the reel pins (part 39) and is free to rotate.





## **SAFETY PRECAUTION**

4.2.7 To avoid trapped fingers do **NOT** hold the RF1000 by the magnets.

Ensure that the two magnets (part 12) are securely attached to the slide rail (part 1).

4.2.8 Ensure that the carriage end stops are secure.

Ensure that the carriage runs smoothly back and forth along the rail.

4.2.9 Ensure that the specified air supply is available. Check that the flexible hose and push in connector are correctly assembled.

**NOTE:** The air supply should have an isolating valve near the Rapid Facer RF1000.

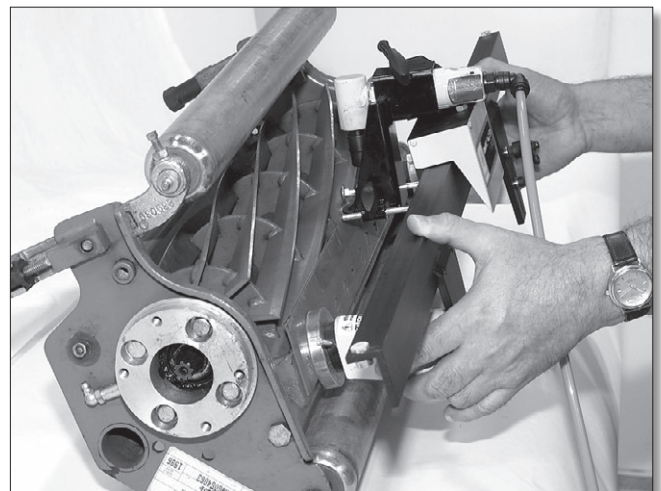
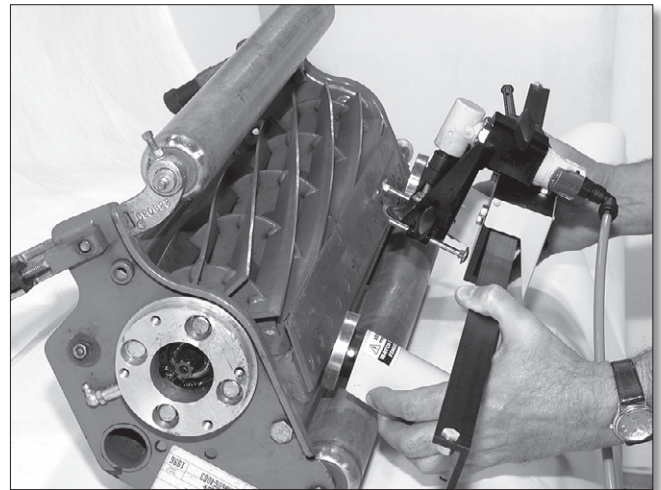
## **4.3 PREPARING THE RF1000 FOR WORK**

### **SAFETY WARNING**

Ensure that the power / drive to the reel is disconnected.

To avoid pinching your fingers do **NOT** hold the Rapid Facer RF1000 by the magnets.

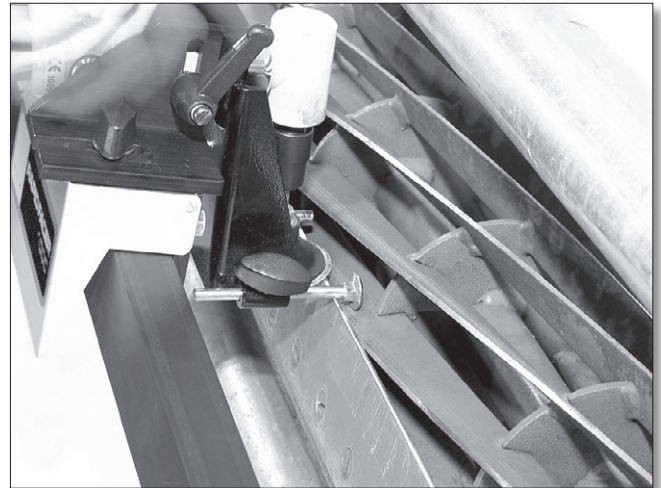
Carefully attach the Rapid Facer RF1000 to the bottom of the bedknife by the magnets. Adjust the position of each magnet in turn so that the disc is just clear of the top of the cutting edge of the bedknife at each end.



It may be necessary to slacken the locking screw (part 36) and slide the angle grinder in or out to get the right amount of grinding disc over the bedknife. Ensure that the disc is level with the edge of the blade and re-tighten the locking screw.

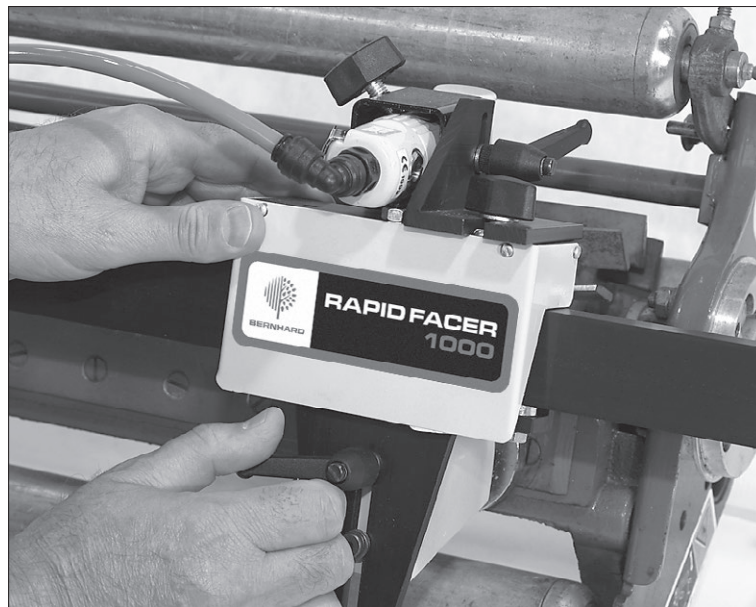


- 4.3.1 Two reel guide pins are attached to the grinder carriage. These allow the disc to sharpen the bedknife without damaging the reel blades. When hand traversing the grinding head the reel pins rotate the reel blades clear of the grinding disc.



- 4.3.2 Slide the carriage to the left until the grinding disc is over the left end of the bedknife. Turn the left adjustment spindle to lower the disc until it just lightly touches the bedknife.

Slide the carriage to the right until the disc is over the right end of the bedknife. Turn the right hand adjustment spindle to lower the disc until it just lightly touches the bedknife.



Traverse the carriage along the rail and observe:

- a) that the disc rubs lightly all along the top edge of the bedknife.
- b) that the reel pins rotate the reel blade clear of the disc.
- c) **HYDRAULIC DRIVES**

When grinding with the mower fully assembled it may be necessary to back off the reel, if the reel pins are unable to turn the reel against the hydraulic pressure.





## 5. Operation

- 5.1 Wear safety goggles.
- 5.2.1 Attach the air line and turn on the air.
- 5.2.2 Position the grinding disc at the left end of the bedknife.
- 5.2.3 Start the air motor by depressing the throttle button. Hand traverse the carriage back and forward along the rail to the right and the left.



Light sparking all along shows that the grinder disc is set correctly to cut parallel to the bedknife.



Witness marks on the front face demonstrate whether the disc is set to grind the correct clearance angle. The adjustable lever (part 15) allows the angle to be changed.

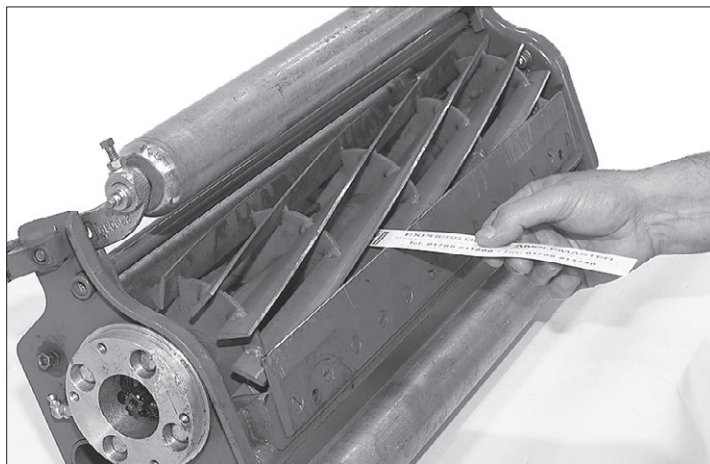


- 5.2.4 To increase the cut rotate the eccentric adjustment lever (item 10) on each magnet assembly by a few degrees clockwise.



- 5.2.5 If the grinding disc is not in contact with the front face everywhere, a further movement of the lever will be necessary. Finish off with a light cut.
- 5.2.6 **NOTE:** Regularly maintained blades will need very few cuts. Damaged blades will need more.
- 5.2.7 Turn off the air and disconnect the air line.
- 5.2.8 Check that the ground finish on the bedknife edge is satisfactory.
- 5.2.9 Remove the Rapid Facer from the bedknife.
- 5.2.10 Rotate the reel and check that the cutting clearance is correct all along the full length of each blade.

**NOTE:** Set the reel to cut paper at between .002" and .004" (.05mm-.1mm) clearance.



For best results trap one Bernhard Cutting Strip between reel and bedknife.



## 6. Maintenance

- 6.1 Cleanliness is important for correct operation and long life.  
After each operation wipe all dust and abrasive materials from the slide rail and bearings. Occasionally the feed slide face will need cleaning.
- 6.2 The air motor and gear box should be oiled each day of use and prior to being stored away.
- 6.3 The machine relies on the disc holder rubber to maintain a steady pressure for the grinding cut. If it is cracked or weakened it should be replaced.

## 7. Repairs

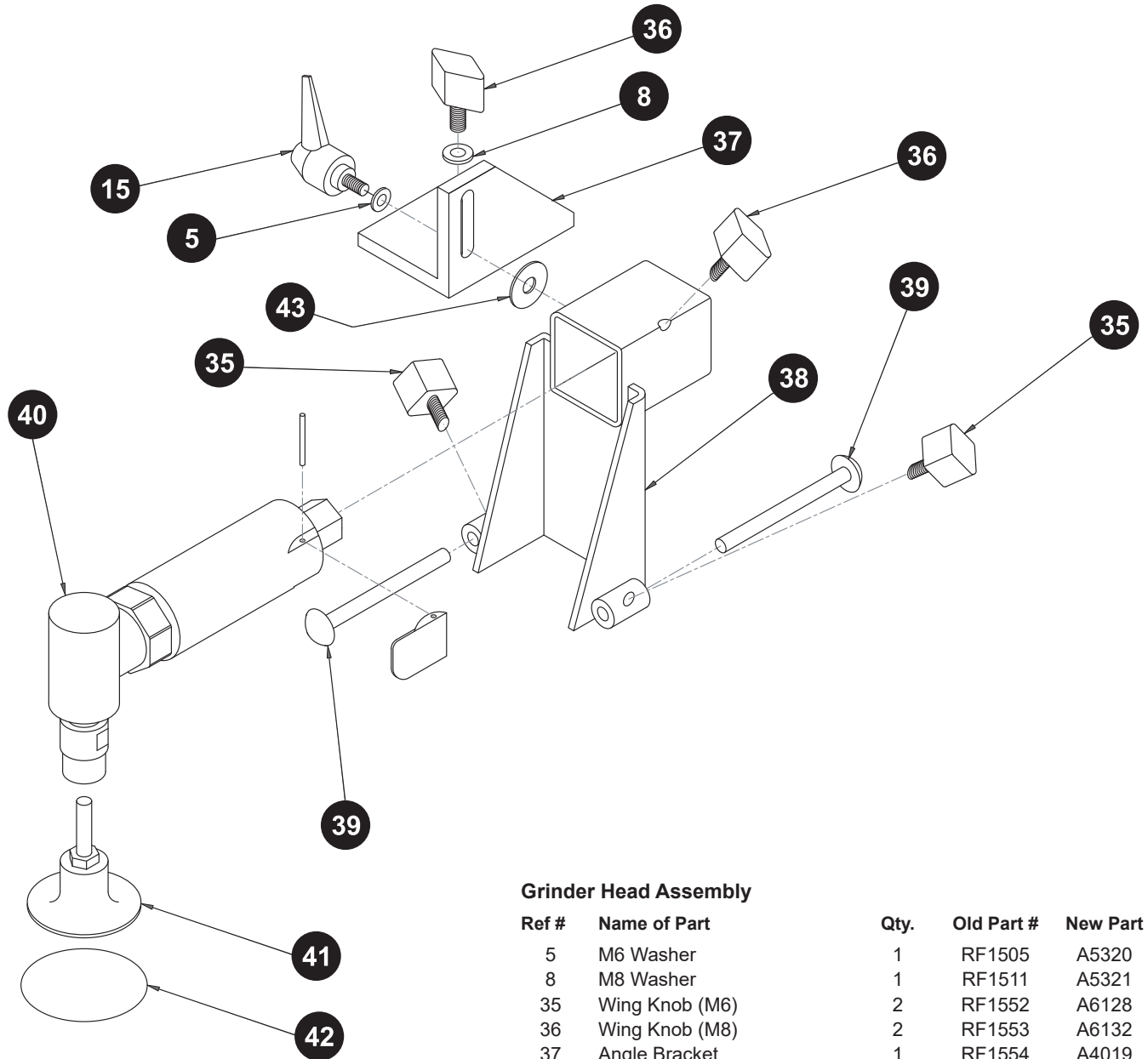
- 7.1 All components are readily available from your distributor.  
In case of difficulty do not hesitate to call us Toll free **1-888 GRIND IT (1-888 474 6348)**.
- 7.2 A perfectly straight slide is crucial to the successful operation of this machine. A bent or damaged rail must be replaced.
- 7.3 Worn pillars and bearings are easily replaced.
- 7.4 The angle grinder is not prone to problems but if in difficulty call our technical helpline.



## 8. Parts List

Ref #	Name of Part	Qty.	Old Part #	New Part #
<b>Rail Assembly</b>				
1	Rail.....	1	RF1501	A3000
2	Front Plate .....	2	RF1502	A4057
3	M6 x 12 Hex Hd Bolt.....	2	RF1503	A5718
4	M6 Nut .....	2	RF1504	A5516
5	M6 Washer .....	2	RF1505	A5320
6	M5 x 10 Csk Bolt.....	4	RF1506	A5130
<b>Support Bracket Assembly</b>				
5	M6 Washer .....	10	RF1505	A5320
7	Support Brkt (casting).....	2	RF1510	A4135
8	M8 Washer .....	2	RF1511	A5321
9	Belleville Spring .....	2	RF1506	A5307
10	Eccentric Disc + Lever.....	2	RF1515	A9033
11	M6 x 10 x 5 Shoulder Screw.....	2		A5144
12	Magnet.....	2	RF1512	A6754
13	M6 x 40 Cap Screw .....	2	RF1513	A5154
14	M6 Nylock Nut .....	4	RF1514	A5517
15	Adjustable Kip Lever .....	2	RF1519	A6124
<b>Saddle Assembly</b>				
4	M6 Nut .....	6	RF1504	A5516
5	M6 Washer .....	7	RF1505	A5320
16	No 4 Self Tap Screw .....	4	RF1518	A5418
17	Saddle.....	1	RF1530	A4118
18	Bearing .....	9	RF1536	A7708
19	Horiz. Pillar Spacer (short).....	1	RF1601	A9022
20	M6 x 8 C/sunk Screw.....	1	RF1571	A5159
21	Horiz. Pillar Spacer (long).....	2	RF1600	A3011
22	Vertical Pillar .....	2	RF1534	A9021
23	Horizontal Eccentric.....	1	RF1533	A9020
24	Vertical Eccentric.....	1	RF1535	A9124
25	Hex. Head Bolt M6 x 40.....	2	RF1573	A5722
26	Hex. Head Bolt M6 x 35.....	2	RF1572	A5721
27	Hex. Head Bolt M6 x 12.....	1	RF1503	A5718
28	Horizontal Pillar.....	2	RF1532	A9123
29	Saddle Guard (Name Plate) .....	1	RF1537	A6610
30	(only on Rapid Relief unit)			
<b>Grinder Head Assembly</b>				
5	M6 Washer .....	1	RF1505	A5320
8	M8 Washer .....	1	RF1511	A5321
35	Wing Knob (M6).....	2	RF1552	A6128
36	Wing Knob (M8) .....	2	RF1553	A6132
37	Angle Bracket .....	1	RF1554	A4019
38	Tool Support.....	1	RF1550	A4140
39	Reel Pin .....	2	RF1551	A3036
40	Angle Grinder.....	1	RF1560	A6749
41	Disc Holder .....	1	RF1561	A3021
42	60 grit Disc Pack.....	25	RF1010	A6503
	35 grit Disc Pack.....	25	RF1011	A6502
43	Grip Washer.....	1	RF1556	A5308
47	1/4 BSP x 6mm Elbow .....	1	RF1566	A6708
48	1/4 BSP x 6mm Stud .....	1	RF1567	A6709
49	6mm Poly-Nylon Hose.....	1	RF1568	A6703

## Reference Diagram • **Rapid Facer Grinder Head Assembly**



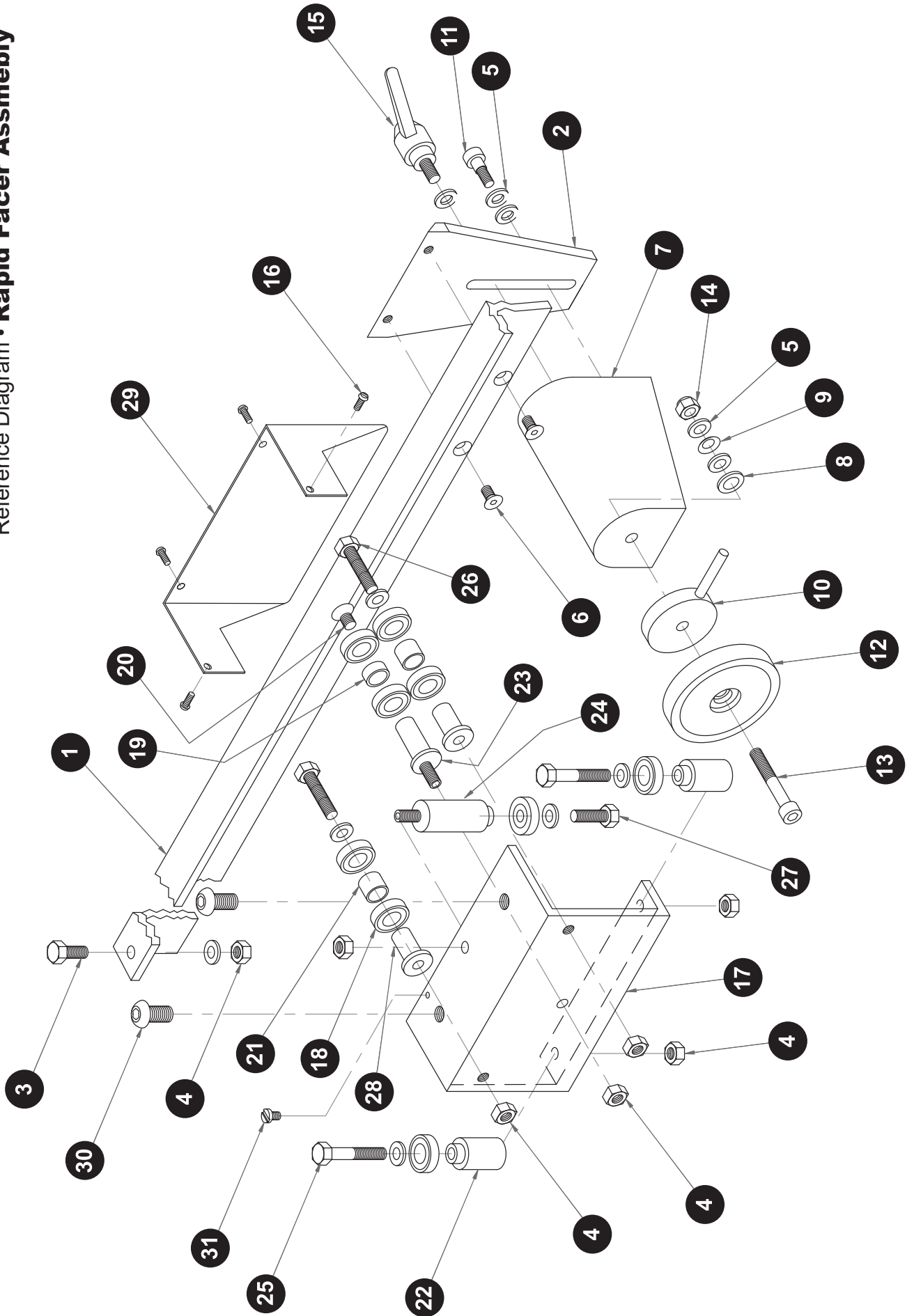
### Grinder Head Assembly

Ref #	Name of Part	Qty.	Old Part #	New Part
5	M6 Washer	1	RF1505	A5320
8	M8 Washer	1	RF1511	A5321
35	Wing Knob (M6)	2	RF1552	A6128
36	Wing Knob (M8)	2	RF1553	A6132
37	Angle Bracket	1	RF1554	A4019
38	Tool Support	1	RF1550	A4140
39	Reel Pin	2	RF1551	A3036
40	Angle Grinder	1	RF1560	A6749
41	Disc Holder	1	RF1561	A3021
42	60 grit Disc Pack	25	RF1010	A6503
	35 grit Disc Pack	25	RF1011	A6502
43	Grip Washer	1	RF1556	A5308
47	1/4 BSP x 6mm Elbow	1	RF1566	A6708
48	1/4 BSP x 6mm Stud	1	RF1567	A6709
49	6mm Poly-Nylon Hose	1	RF1568	A6703





Reference Diagram • Rapid Facer Assembly





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