



Please dispose of packaging for the product in a responsible manner. It is suitable for recycling. Help to protect the environment, take the packaging to the local amenity tip and place into the appropriate recycling bin.



# 1/4" Die Grinder



06713

FOR HELP OR ADVISE ON THIS PRODUCT PLEASE CONTACT YOUR DISTRIBUTOR, OR SIP  
DIRECTLY ON:  
TEL: 01 509500400  
EMAIL: [sales@sip-group.com](mailto:sales@sip-group.com) or [technical@sip-group.com](mailto:technical@sip-group.com)  
[www.sip-group.com](http://www.sip-group.com)

Ref: 240113

Please read and fully understand the instructions in  
this manual before operation. Keep this manual  
safe for future reference

## SAFETY INSTRUCTIONS

- These air tools are designed to be used as a hand held, hand controlled tools.
- **DO NOT** use the air tool for any other purpose than that for which it was designed.
- **DO NOT** modify the air tool in any way.
- **DO** ensure that only compressed air is used to supply the air tool.
- The compressed air supply **MUST** be at a suitable regulated pressure. Pipe work, regulators. Hoses, isolation valves and connection devices **MUST** be suitable for the intended application correctly installed and maintained in good condition by a competent person.
- Appropriate Personal protective equipment **MUST** be worn and **MUST** be designed to protect against all hazards created. Severe permanent injury can result from using inappropriate or insufficient protective equipment - Eyes in particular are at risk.
- Long hair **MUST** be tied back; loose clothing **MUST NOT** be worn. There is a severe risk of these being drawn in or trapped by the moving parts of the air tool.
- Open or damaged compressed air lines present a significant 'whip' hazard.
- This air tool is electrically conductive **DO NOT** allow them to come into contact with any source of electrical supply.
- After use wait for the air tool to **STOP** completely before putting it aside.
- When putting the air tool aside you **MUST** ensure that it placed in a stable position. To avoid inadvertent operation **DO NOT** place the air tool where it can be knocked or moved accidental either directly or by the air connection hose.
- If the air tool is not required or the air supply is interrupted, disconnect the air tool from the air supply and place in a secure storage to prevent unauthorised use.
- Ensure the air valve (or trigger) is in the "off" position before connecting to the air supply.
- Disconnect the grinder from the air supply before changing stones etc. and before servicing the tool.
- Always keep your air tool clean and lubricated. Daily lubrication is essential to avoid internal corrosion and possible failure.
- Do not overload the tool. Allow the tool to operate at its optimum speed for maximum efficiency.
- Do not increase the air pressure above the manufacturers recommended level, as excessive pressure can cause the tool casing to split. Also this creates excessive wear on moving parts and possible failure
- Always ensure that the work piece is firmly secured leaving both hands free to control the tool.
- Always wear safety goggles or glasses during operation.
- Do not wear watches, rings bracelets or loose clothing when using air tools.
- Using as light weight a hose as possible from the tool to the wall or compressor coupling.
- In the interests of safety and possible damage to the machine/operator, always ensure that the machine has stopped before putting it down after use.
- Always ensure that the accessories such as stones etc. are rated / designed for use

## DECLARATION OF CONFORMITY

### Declaration of Conformity

We

SIP (Industrial Products) Ltd  
Gelders Hall Road  
Shepshed  
Loughborough  
Leicestershire  
LE12 9NH  
England

As the manufacturer's authorised representative within the EC  
declare that the

1/4" Die Grinder - SIP Pt. No. 06713  
Suppliers Part No. RP7314

**Conforms to the requirements of the following directive(s), as indicated.**

2006/42/EC          Machinery Directive



Signed: .....

Mr P. Ippaso - Managing Director - SIP (Industrial Products) Ltd  
Date: 23/12/2009.



## PARTS LIST

No.	Description	SIP Part No.	No.	Description	SIP Part No.
1	Housing	AI05-00001	20	Pin 6×6	AI05-00020
2	Valve Bushing	AI05-00002	21	Rotor	AI05-00021
3	Trigger	AI05-00003	22	Rotor Blade	AI05-00022
4	Trigger Pin	AI05-00004	23	Cylinder	AI05-00023
5	Spring	AI05-00005	24	Bushing	AI05-00024
6	Pin 2×18	AI05-00006	25	Washer	AI05-00025
7	Pin 3×24	AI05-00007	26	Steel ball	AI05-00026
8	O-ring 4.8×1.6	AI05-00008	27	Front plate	AI05-00027
9	O-ring 5.6×2	AI05-00009	28	Bearing	AI05-00028
10	Valve stem	AI05-00010	29	Collect holder	AI05-00029
11	Spring	AI05-00011	30	Retainer Ring	AI05-00030
12	Air regulator	AI05-00012	31	Front cover	AI05-00031
13	O-ring 7×2	AI05-00013	32	Collet	AI05-00032
14	O-ring 12×3	AI05-00014	33	Collet nut	AI05-00033
15	Screw cap	AI05-00015	34	Wrench	AI05-00034
16	Muffle cover	AI05-00016	N/A	Sanding roll	06741
17	Air inlet	AI05-00017	N/A	10pc Stone kit	06731
18	Bearing	AI05-00018			
19	End Plate	AI05-00019			

## SAFETY INSTRUCTIONS...cont

with this grinder, and are correctly and securely fastened before connecting the tool to the air supply.

- When grinding, sanding or cutting always wear an appropriate face mask or respiratory equipment.
- Do not use this product in wet or damp conditions.
- Do not carry air tools by its air hose.
- This air tool is designed to be used as a hand held, hand controlled grinder for the purpose of grinding metals, plastics and various other materials.
- All abrasive stones must be the correct size and the correct type and grade for the application.
- Grinding stones must not be used for cutting.
- Sparks and particles resulting from grinding present a hazard make yourself and bystanders aware of this hazard.
- When grinding, sanding or cutting always wear an appropriate face mask or respiratory equipment.



**CAUTION:** The warnings and cautions mentioned in this user manual can not cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be applied.



Always wear eye protection when using or maintaining any air tool.



We recommend wearing a face mask or respiratory equipment when using any air tool; particularly during sanding, grinding, sawing or other operations likely to cause airborne particles.



We recommend wearing ear protection - particularly during extended periods of operation.

## CONTENTS AND ACCESSORIES

Die Grinder  
1/8" Collet  
2 x Wrenches

Instruction Manual  
1/4" Collet (fitted)

Quick Coupler (Euro type)  
Small Bottle of Oil

## GUARANTEE

### Guarantee:

This SIP air tool is covered by a 12 month parts and labour warranty covering failure due to manufacturers defects. This does not cover failure due to misuse or operating the machine outside the scope of this manual. This guarantee does not cover consumables such as stones, bits etc.

In the unlikely event of warranty claims, contact your distributor as soon as possible. Proof of purchase will be required before any warranty can be honoured.

Failure to lubricate your air tool will shorten its working life and reduce performance. Also note the warranty does not cover rusting air tools and tools failed due to the lack of lubrication.



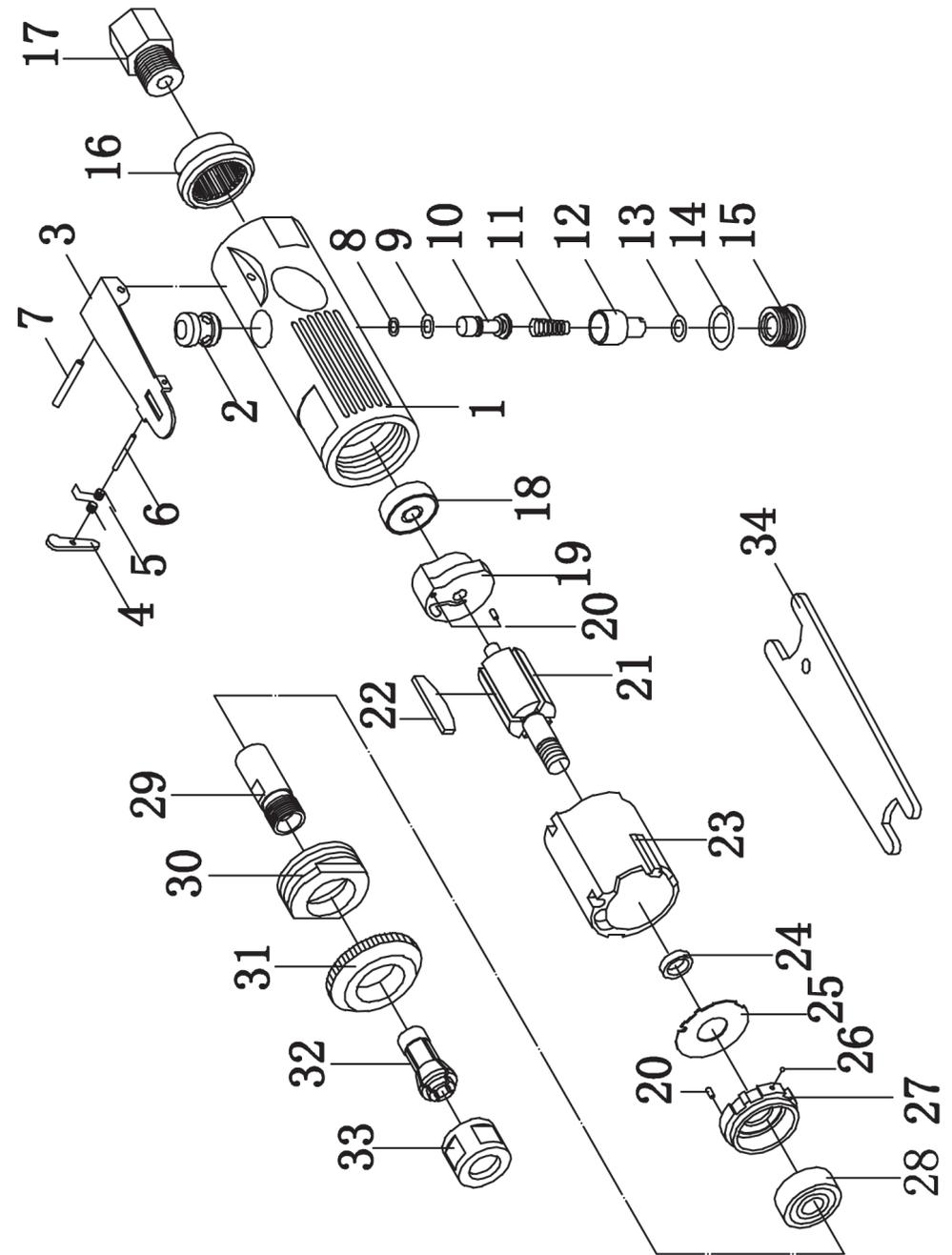
**Note:** Proof of purchase will be required before any warranty can be honoured.

## TECHNICAL SPECIFICATIONS

<b>Grinder Shank Capacity</b>	1/4"
<b>No Load Speed</b>	22,000 rpm
<b>Average Air Consumption</b>	4 cfm (115 l/min)
<b>Operating Pressure</b>	6.3 bar (90 psi)
<b>Air Inlet</b>	1/4" bsp
<b>Sound Pressure (LpA)</b>	83 dB(A)
<b>Sound Power (LwA)</b>	94 dB(A)
<b>Vibration</b>	2.064 m/s <sup>2</sup>

\*Tested according to ISO 15744; 3 dB uncertainty  
\*\*Tested according to ISO 28927-12; 0.699 m/s<sup>2</sup> uncertainty

## EXPLODED DRAWING



## TROUBLE SHOOTING

The following form lists the common operating system with problem and solutions. Please read the form carefully and follow it.



**Caution:** If any of the following symptoms appears during operation, stop using the tool immediately - serious personal injury could result. Only qualified persons or an authorised service centre should perform repairs.

PROBLEMS	POSSIBLE CAUSES	REMEDIES
Tool runs at normal speed but struggles under load.	<ul style="list-style-type: none"> <li>Motor parts worn.</li> <li>Cam clutch worn or sticking due to lack of lubricant.</li> </ul>	<ul style="list-style-type: none"> <li>Lubricating clutch housing.</li> <li>Check for excess clutch oil. Clutch cases need only be half full. Overfilling can cause drag on high speed clutch parts, ie. a typical oiled/lubricated die grinder requires 1/2 ounce of oil.</li> </ul> <p><b>NOTE:</b> Heat usually indicates insufficient grease in chamber. Severe operating conditions may require more frequent lubrication.</p>
Tool runs slowly. Air flows slightly from exhaust.	<ul style="list-style-type: none"> <li>Motor parts jammed with dirt particles.</li> <li>Power regulator in closed position.</li> <li>Air flow blocked by dirt.</li> </ul>	<ul style="list-style-type: none"> <li>Check air inlet filter for blockage.</li> <li>Pour air tool lubricating oil into air inlet as per instructions.</li> <li>Operate tool in short bursts quickly reversing rotation back and forth where applicable.</li> <li>Repeat above as needed. If this fails return to service center.</li> </ul>
Tools will not run. Air flows freely from exhaust.	<ul style="list-style-type: none"> <li>One or more motor vanes stuck due to material build up.</li> </ul>	<ul style="list-style-type: none"> <li>Pour air tool lubricating tool into air inlet.</li> <li>Operate tool in short bursts of forward and/or reverse rotation where applicable.</li> <li>Tap motor housing gently with plastic mallet.</li> <li>Disconnect supply. Free motor by rotating drive shank manually where applicable</li> <li>If tool remains jammed return to service center.</li> </ul>
Tool will not shut off.	<ul style="list-style-type: none"> <li>'O' rings throttle valve dislodged from seat inlet valve.</li> </ul>	<ul style="list-style-type: none"> <li>Replace 'O' ring or return to service center.</li> </ul>

## GETTING TO KNOW YOUR DIE GRINDER



Ref No.	Description	Ref. No.	Description
1.	Collet	5.	Air Inlet
2.	Collet Nut A	6.	Throttle Lever
3.	Collet Nut B	7.	Throttle Lock
4.	Rubber Grip		

## OPERATING INSTRUCTIONS

### Air Supply:

- Ensure the throttle lever is not depressed before connecting to the air supply.
- You will require an air pressure of 90psi, and an air flow according to specification.



**Warning:** Ensure the air supply is clean and does not exceed 90psi while operating the grinder. Too high an air pressure and / or unclean air will shorten the product life due to excessive wear, and may be dangerous causing damage and / or personal injury.

- Recommended hook-up procedure is shown in fig 1 (on page 6).
- Line pressure should be increased to compensate for unusually long air hoses, (over 8 metres) but not more than 90 psi at the tool.
- The minimum hose diameter should be 1/4" I.D. and fittings must have at least the same inside dimensions.
- Keep the hose away from heat, oil and sharp edges.
- Make certain that all connections are secure and air tight.

## OPERATING INSTRUCTIONS...cont

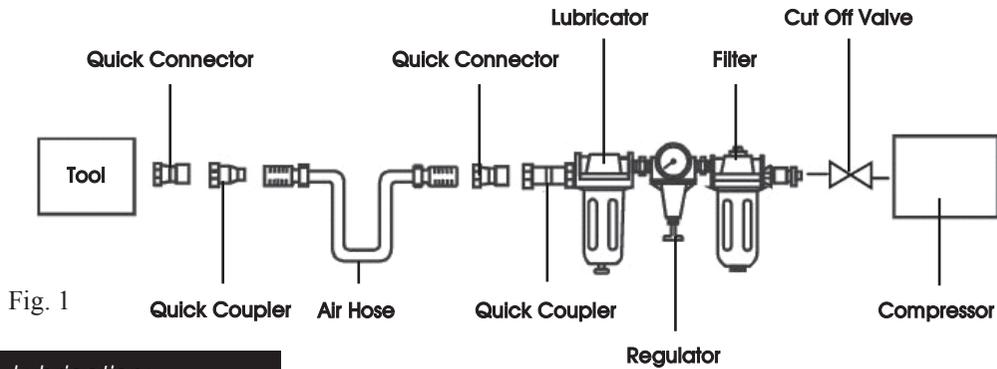


Fig. 1

### Lubrication:

- An automatic in-line filter-regulator-lubricator is recommended (as shown in Fig1) as this increases tool life and keeps the tool in sustained operation.
- The in-line lubricator should be regularly checked and filled with air tool oil.
- Proper adjustment of the in-line lubricator is performed by placing a sheet of paper next to the exhaust port of the tool and holding the throttle open for approximately 30 seconds. The lubricator is properly set when a light stain of oil collects on the paper.
- Excessive amounts of oil should be avoided.
- It is most important that the tool be properly lubricated by keeping the air line lubricator filled and correctly adjusted. Without proper lubrication the tool will not work correctly and parts will wear prematurely.
- Use the proper lubricant in the air line lubricator.
- Use only recommended lubricants, specially made for pneumatic applications.
- Substitutes may harm the rubber compounds in the tools O-rings and other rubber parts.



**Caution:** If a filter/regulator/lubricator is not installed on the air system, air operated tools should be lubricated at least once a day or after 2 hours work with 2 to 6 drops of oil, depending on the work environment, directly through the male air inlet fitting (3) in the tool housing.



**Caution:** Disconnect the air tool from air supply before changing accessories or drill bits etc.

## OPERATING INSTRUCTIONS...cont

### Fitting A Stone:

- Loosen / remove the collet nut A (2) with the supplied wrench by holding the shaft still with the 2nd wrench on collet nut B (3).
- Ensure that the correct collet is fitted (1/4" or 1/8").
- Slide the desired stone into the collet (1).
- Tighten / refit the collet nut (33) and fully secure.

### Operating The Grinder:

Once the stone is fitted and secure:

- Connect the grinder to the air supply.
- Slide the throttle lock (7) towards the front of the grinder whilst pressing down on the throttle lever (6) and the grinder will operate.
- Release the throttle lever (6) and the grinder will stop.

## MAINTENANCE

- Drain the air tank / receiver of the compressor daily. Water in the air line will damage the drill.
- Clean air inlet filter weekly.
- Check hose and fittings for wear or damage before each use.
- In the event that it becomes necessary to store the tool for an extended period of time (overnight, weekend, etc.), it should receive a generous amount of lubrication at that time. The tool should be run for approximately 30 seconds to ensure oil has been evenly distributed throughout the tool.
- The tool should be stored in a clean and dry environment.