

Pro**Meister**



User Guide

Produced in Taiwan for Bileko

Bileko

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Air Angle Die Grinder

Druckluft-Winkelschleifmaschine

Filmaskin Mini

Slipemaskin


Slibemaskine

Suorahiomakone, Taitettu

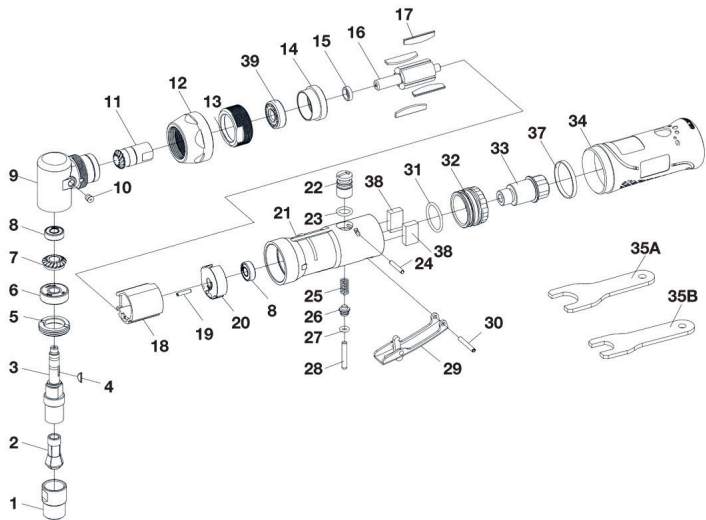
Art. Nr: PT6614

RVNR-01

Product Specifications

 Read and understand the user guide and labels affixed to the tool. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.

AIR ANGLE DIE GRINDER



| INDEX NO. | DESCRIPTION | REQ'D QTY. | INDEX NO. | DESCRIPTION | REQ'D QTY. |
|-----------|--------------------|------------|-----------|----------------|------------|
| 1 | Collet Nut | 1 | 20 | Rear End Plate | 1 |
| 2 | 1/4" Collet | 1 | 21 | Motor Housing | 1 |
| | 6mm Collet | | 22 | Air Regulator | 1 |
| 3 | Spindle | 1 | 23 | O-Ring | 1 |
| 4 | Woodruff Key | 1 | 24 | Spring Pin | 1 |
| 5 | Clamp Nut | 1 | 25 | Valve Spring | 1 |
| 6 | Ball Bearing | 1 | 26 | Throttle Valve | 1 |
| 7 | Spindle Gear | 1 | 27 | O-Ring | 1 |
| 8 | Ball Bearing | 2 | 28 | Valve Shaft | 1 |
| 9 | Angle Head Housing | 1 | 29 | Safety Level | 1 |
| 10 | Grease Fitting | 1 | 30 | Spring Pin | 1 |
| 11 | Pinion | 1 | 31 | O-Ring | 1 |
| 12 | Coupling Nut | 1 | 32 | Exhaust Sleeve | 1 |
| 13 | Lock Ring | 1 | 33 | Inlet Bushing | 1 |
| 14 | Front End Plate | 1 | 34 | Housing Cover | 1 |
| 15 | Bearing Spacer | 1 | 35A | #17mm Spanner | 1 |
| 16 | Rotor | 1 | 35B | #11mm Spanner | 1 |
| 17 | Rotor Blade | 4 | 37 | Rubber Band | 1 |
| 18 | Cylinder | 1 | 38 | Muffler | 2 |
| 19 | Spring Pin | 1 | 39 | Ball Bearing | 1 |

EC Declaration of Conformity

We,

Bileko Car Parts AB
P.O. Box 542,
S-645 25 Strängnäs,
Sweden

Herewith declare that the following machine complies with the appropriate basic safety and health requirements of the EC Directive based on its design and type, as brought into circulation by us.

In case of alteration of the machine, not agreed upon by us, this declaration will lose its validity:

Description: Heavy Duty Air Angle Die Grinder
Type: Art nr: PT6614
Applicable EC Directives: EC Machinery Safety Directives (2006/42/EC)
Applicable Harmonized Standards: ISO 12100 (Risk Assessment & Risk Reduction)
ISO 11148-9 (Safety Requirements)
ISO 15744 (Noise Level)
ISO 28927-12 (Vibration Level)

Date / Authorized Signature:

2018-08-17

Title of Signatory:

Albin Karlsson
Purchasing & Category Manager
Business area: Workshop equipment, Consumables & Tools



Operation Guides



Read and understand the user guide and labels affixed to the tool. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.

1. TIPS FOR USE
(Safety Regulations while using ProMeister brand air tools)

- 1.1. AIR PRESSURE

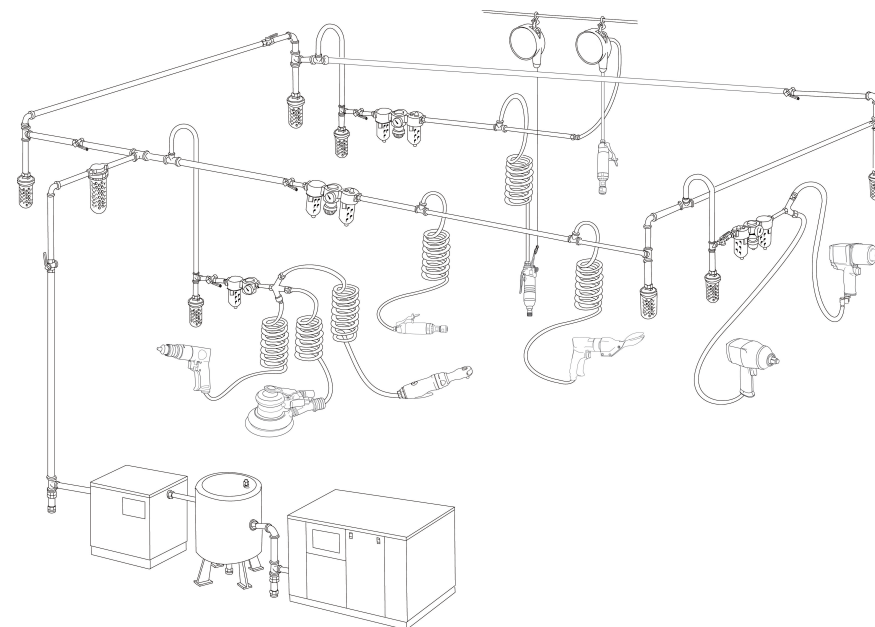
Always use the clean and dry air to operate the tool at 90 psi (6.2 bar) & do not operate exceed maximum working air pressure at 90 psi (6.2 bar) as recommended.

- 1.2. AIR LINE

Use a fitting air hose for connection between the compressor & tools. The compressed air is cooled and its water content would be sorted when the air blow out from the compressor. Part of the water could be compressed in the pipe and could permeate into the tool's mechanism to cause mechanical failures. It would be strongly recommended to install an air filter, moisture separator, regulator and lubricator among the air supply and the air tools.

- 1.3. AIR HOSE

Before connecting the hose to air tools, please clean firstly the hoses with a blowout of compressed air. This will prevent both moisture and dust contented within the hose from entering the tools and causing the possible rust and malfunction.



| Art. Nr | COLLET SIZE | FREE SPEED | OVERALL LENGTH | | AIR INLET | AIR HOSE I.D. | AVERAGE AIR CONSUMPTION | | NET WEIGHT | |
|---------|-------------|------------|----------------|-----|-----------|---------------|-------------------------|-------|------------|------|
| | inch (mm) | rpm | inch | mm | inch | inch | cfm | L/min | lb | kg |
| PT6614 | 1/4 (6) | 22,000 | 6.2 | 158 | 1/4 | 3/8 | 2.7 | 76 | 1.19 | 0.54 |

| Sound | | | | Vib. | |
|----------|-------|----------|------|------|------|
| Pressure | Power | Pressure | K | M/S² | K |
| db(A) | db(A) | db(C) | (DB) | | |
| 84.9 | 95.9 | 101 | 3 | 2.06 | 1.12 |

Operation Guides



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2. INSERTER TOOLS

Any other use is prohibited. In addition, use only abrasive product which are in good condition and are intended for use with power tools. Before each use check abrasive product for condition. If worn or damaged replace immediately.

3. PERSONAL PROTECTING DEVICES

It is necessary to wear a approved eye and hearing protector, mouth-muffle and safety gloves when operating the tools.

4. WHEN OPERATING THE TOOL

Choose a fixed footing position to grip the tool sufficiently to overcome any incoming reaction forces that may occurred from the tool during operation. Do not over grip the tool.

5. If the tool is to be used with a balancer or other suspension devise ensure that the tool is firmly attached to the suspension/support device.

6. To turn off the air supply to the tool and press the on/off valve to exhaust the air from the feed hose before installing, removing or adjusting any accessory on this tool.

7. Be aware of entanglement of the moving parts of he tool with clothing neckties, long hair, jewelry, watches and etc. This could cause the body or parts of the body to be drawn toward and in contact with the moving parts and may be very dangerous.

8. Be aware of the exhaust air does not point toward to any other person or material that could be contaminated by oil droplets.

9. This tool is not electrically insulated Never use the tool if there is any opportunity or any coming into contact with live electricity.

10. Do not lay down the tool until the working attachment has stopped moving completely.

11. The working places shall keep ventilating.

12. If any air supply break down then relieve the on-off device.

13. Use only the lubricant which recommended by the original manufacturer.

14. It is possible to attach a second handle on the tool to fix the tool to a suspension device, even if it is not delivered with tool. Please contact the sale agent for details.

Operational Methods

1. The on/off device is designed inside or outside of the grip. It is a "plug-and-run" type device. This tool will stop operation/rotation in a few seconds after relieving the level control.

2. Use accessories recommended by ProMeister. To use the accessories other than recommended by ProMeister may cause safety risk, decrease of tool performance.

3. The speed set up device is indicated by an arrow mark and intergraded with an indication either marked by "H"(high) and "L"(low) or by "+"(high) and "-"(low) rotating the knob to desired speed.

4. Always make sure collet size match shank size of accessory.

5. The cutting-off wheels and routing cutter wheels shall not be used.

6. Do not use any burr, wheel or other accessory of which maximum operating speed, defined by its manufacturer, is less than the rated speed of the tool.

7. To prevent excessive overhang, the mandrel shall be inserted to the full depth of the gripping jaws of the collet and the resulting overhung length shall be no greater than the inserted depth. Make sure that the minimum gripping length of 10 mm is observed.

8. Do not use this tool on materials of which dust or fumes can cause a potentially explosive environment.

9. Remove flammable objects from the working area to ensure that sparks and debris do not create a hazard when using this tool.

10. Do not use an accessory that is chipped, cracked, non-concentric, excessively worn or otherwise damaged.


11. Inspect collet, threads and nut if any damage and wear occurred before mounting this accessory to the tool.

12. Thread-on collets shall be securely seated against the driving member.

13. Stop immediately if considerable vibration or other defects are detected. Shut off the air supply and determine the cause.


14. Improper mounting or damaged insert tool may cause excessive vibration.

Warning

 Read and understand the user guide and labels affixed to the tool. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.

76. If you experience numbness, tingling, pain or whitening of the skin in your fingers or hands, stop using the die grinder, tell your employer and consult a physician.
77. Operate and maintain the die grinder as recommended in the instruction handbook, to prevent an unnecessary increase in vibration levels.
78. Select, maintain and replace the consumable/inserted tool as recommended in the instruction handbook, to prevent an unnecessary increase in vibration levels.
79. Support the weight of the tool in a stand, tensioner or balancer, if possible.
80. Hold the tool with a light but safe grip, taking account of the required hand reaction forces, because the risk from vibration is generally greater when the grip force is higher.
81. An improperly mounted or damaged inserted tool can cause excessive vibration levels.
82. Always shut off air supply, drain hose of air pressure and disconnect tool from air supply when not in use, before changing accessories or when making repairs.
83. Never direct air at yourself or anyone else.
84. Whipping hoses can cause severe injury. Always check for damaged or loose hoses and fittings.
85. Whenever universal twist couplings (claw couplings) are used, lock pins shall be installed and whipcheck safety cables shall be used to safeguard against possible hose-to-tool connection failure.
86. Do not exceed the maximum air pressure stated on the tool.
87. Never carry an air tool by the hose.
88. Setting up or fixing the grinder in a stable position as appropriate for grinders which can be mounted in a support.
89. Keep the die grinders safe by regular preventative maintenance.
90. Check the free speed of the Grinder before inserting an accessory, after all tool repairs, before each job and after every 8 hours of use.
91. Keep work area clean, uncluttered, ventilated and illuminated.

Operational Methods

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15. Tool and/or accessories may briefly continue their motion after start and stop device has been released.
16. Check the speed and make a simple check of the vibration level after each service.
17. Do not use this tool if the actual free speed exceeds the rated speed.
18. Take special care when assembling the speed governor or any other protective device.
19. Check the free speed of the tool before each job.

Maintenance

1. **LUBRICATION**
Before connecting the air hose, it should apply 4 to 5 drops of #60 spindle oil at air inlet. The repeat oiling after 3 to 4 hours operation will be necessary.
2. **FASTENING OF PARTS**
Do the regular check if all the connecting parts are fastened securely properly. It is necessary to go through this check daily before starting your work.
3. **CLEANNESS**
Dusty and oiling surface on the handle will infected the grip which caused to the reaction torque. Clean the handle with dry clothing is strongly recommended before operation this tool.
4. **STORAGE**
Put the tool in dry and clean environment. If the tool shall not to be used for a period of time, the residual moisture inside of the instrument could cause the rust. Before storing, oil the instrument at air inlet with spindle oil and operate it for a short period is strongly recommended.

Repairs

Do make use of the spare parts for all the maintenance and repairing job.
Do not invent or make any unnecessary temporary repairs. Major service of maintenance and repairs should be only carried out by well-trained persons or ProMeister of its own authorized service representatives.
Make sure the free speed after each service.

Disposal

Following is the national legislation of waste disposal. Never dispose of the air tool into fire. Separate collection!! This product must not be disposed with normal household waste.

Warranty

All of ProMeister serial pneumatic tools are provided with complete after service and product warranty to the product that Bileko Car Parts AB which were produced in Taiwan.
ProMeister professional air tools, unless otherwise specified are unconditionally guaranteed against defects in materials and workmanship for the life of tool, excluding any other inappropriate operation, modification or repair.
ProMeister will repair or replace the tool that fails to give satisfaction service on the condition that tool has not been abused or modified and that it is returned to authorized warranty ProMeister dealer.
If there is a defective product claim of ProMeister, please contact the ProMeister's authorized sales/service representatives.



Warning



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1. Extended exposure to vibration caused the injury.
2. The power tools shall not be operating in explosive atmospheres unless it is specially designed for this purpose.
3. Disconnecting the air hose before changing or adjusting any inserted tools.
4. Before operating the instrument, Be sure of all couplings and plugs are tightly secured.
5. Be aware of the danger of crushing by torque between a reaction bar and the working piece.
6. Avoid any loose baggy clothing, long hair or any other personal accessories that too close to the moving part to minimum the risk of being caught, trapped or drawn down into rotating devices.
7. Never in contact the trigger when connecting the air supply hose.
8. Never point an air tool at oneself or any other person. It could cause a serious injury.
9. Any unexpected high pressure which exceed the maximum pressure could cause the injury to the user.
10. To keep body stance balanced and firm, it is always wear safety gloves to minimum the risk of crushing which caused by torque between handle and work piece.
11. Be sure of the rotating direction before operating the instrument to minimum the hazardous situation for any unexpected rotating direction.
12. Always wear eye and face protection devices could prevent the danger to the person from high speed splinters being emitted from the tool in cause of inserted tool malfunction.
13. Always put breathing protection device could avoid any inhaling dust or handling debris during work that could be harmful to the health.
14. Always put hearing protection during operation. High sound level can cause permanent hearing loss.
15. Never operate the tool after work, it may cause the attachment of to the instrument thrown out from the tool to cause serious injury.
16. Be sure of the working environment is clear enough that to perform the work safely. Any unexpected slip, trip and fall are the major reason of serious injury. Especially be aware of excess hose left on the working or work surface. Be aware of the whipping compressed air hose.
17. Never attempt to modify the instrument for other uses.
18. The power tool is not electronically insulated for coming into contact with electric power source.
19. Keep the power tools away from the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
20. Read and understand the safety instructions before installing, operating, repairing, maintaining, changing accessories on, or working near the die grinder. Failure to do so can result in serious bodily injury.
21. Only qualified and trained operators should install, adjust or use the die grinder.
22. Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel.
23. Do not modify this die grinder. Modifications can reduce the effectiveness of safety measures and increase the risks to the operator.
24. Do not discard the safety instructions; give them to the operator.
25. Do not use the die grinder if it has been damaged.
26. Employer/user shall contact the manufacturer to obtain replacement marking labels when necessary.
27. Be aware that the failure of the workpiece, or accessories, or even of the inserted tool itself can generate high-velocity projectiles.
28. Always wear impact-resistant eye protection during the operation of the die grinder or when changing accessories on the tool. The grade of protection required should be assessed for each use.
29. Ensure that the workpiece is securely fixed.
30. Check regularly that the speed of the die grinder is not higher than that marked on it.
31. These speed checks shall be carried out without the abrasive product mounted and in accordance with the instructions given by the manufacturer.
32. Ensure that sparks and debris resulting from use do not create a hazard.
33. Disconnect the grinder from the energy supply before changing abrasive product and servicing.
34. Avoid contact with the rotating spindle and inserted tool to prevent cutting of hands and other body parts.
35. Use of the tool can expose the operator's hands to hazards, including cuts, abrasions and heat. Wear suitable gloves to protect hands.
36. Operators and maintenance personnel shall be physically able to handle the bulk, weight and power of the tool.
37. Hold the tool correctly; be ready to counteract normal or sudden movements and have both hands available.
38. Maintain a balanced body position and secure footing.
39. Release the lever in the case of an interruption of the energy supply.
40. A rotary file shall not be operated at a speed exceeding the rated speed.

Warning



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41. For overhead work, wear a safety helmet.
42. Be aware that there is a running-on of the rotary inserted tool after the lever has been released.
43. To prevent excessive overhang, the mandrel shall be inserted to the full depth of the gripping jaws of the collet and the resulting overhang length shall be no greater than the inserted depth.
44. When using a die grinder to perform work-related activities, the operator can experience discomfort in the hands, arms, shoulders, neck or other parts of the body.
45. While using a die grinder, the operator should adopt a comfortable posture whilst maintaining secure footing and avoiding awkward or off-balanced postures.
46. The operator should change posture during extended tasks, this can help avoid discomfort and fatigue.
47. If the operator experiences symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensations or stiffness, these warning signs should not be ignored. The operator should tell the employer and consult a qualified health professional.
48. Use only sizes and types of accessories and consumables that are recommended by the die grinder manufacturer, do not use other types or sizes of accessories or consumables.
49. Do not use this tool if the actual free speed exceeds the rated rpm.
50. Avoid direct contact with the inserted tool during and after use, as it can be hot or sharp.
51. The maximum operating speed of the inserted tool shall equal or exceed the rated speed marked on the tool.
52. Never mount a grinding wheel, cut-off wheel or router cutter on a die grinder. A grinding wheel that bursts can cause very serious injury or death.
53. Do not use mounted wheels which are chipped or cracked or which could have been dropped.
54. Use only permitted inserted tools of the correct shaft diameter.
55. Be aware of the risk of mismatching the diameter of the shaft of the mounted point and that of the collet.
56. Slips, trips and falls are major causes of workplace injury. Be aware of slippery surfaces caused by the use of the tool and also of trip hazards caused by the air line.
57. Proceed with care in unfamiliar surroundings. There can be hidden hazards, such as electricity or other utility lines.
58. Ensure that there are no electrical cables, gas pipes, etc., which can cause a hazard if damaged by use of the tool.
59. Dust and fumes generated when using die grinders can cause ill health (for example, cancer, birth defects, asthma and/or dermatitis); risk assessment and implementation of appropriate controls for these hazards are essential.
60. Risk assessment should include dust created by the use of the tool and the potential for disturbing existing dust.
61. Operate and maintain the die grinder as recommended in these instructions, to minimize dust or fume emissions.
62. Direct the exhaust so as to minimize disturbance of dust in a dust-filled environment.
63. Where dust or fumes are created, the priority shall be to control them at the point of emission.
64. All integral features or accessories for the collection, extraction or suppression of airborne dust or fumes should be correctly used and maintained in accordance with the manufacturer's instructions.
65. Select, maintain and replace the consumable/inserted tool as recommended in the instructions, to prevent an unnecessary increase in dust or fumes.
66. Use respiratory protection in accordance with employer's instructions and as required by occupational health and safety regulations.
67. Working in certain materials creates emission of dust and fumes, causing a potentially explosive environment.
68. Exposure to high noise levels can cause permanent, disabling hearing loss and other problems, such as tinnitus (ringing, buzzing, whistling or humming in the ears). Therefore, risk assessment and implementation of appropriate controls for these hazards are essential.
69. Appropriate controls to reduce the risk may include actions such as damping materials to prevent work pieces from "ringing".
70. Use hearing protection in accordance with employer's instructions and as required by occupational health and safety regulations.
71. Operate and maintain the die grinder as recommended in the instruction handbook, to prevent an unnecessary increase in noise levels.
72. Select, maintain and replace the consumable/inserted tool as recommended in the instruction handbook, to prevent an unnecessary increase in noise.
73. If the die grinder has a silencer, always ensure that it is in place and in good working order when the die grinder is being operated.
74. Exposure to vibration can cause disabling damage to the nerves and blood supply of the hands and arms.
75. Wear warm clothing when working in cold conditions and keep your hands warm and dry.