

Instruction manual & spare parts list

DG-PRO 18

DG-PRO 22

DG-PRO SERIES
AIR DRIVEN DIE
GRINDERS

1. General Safety and Operation Instruction

1. Unpacking

When unpacking this product, carefully inspect for any damage that may have occurred during transit. Make sure any loose fittings, bolts, etc, are tightened before putting this product into service.

2. This product is a part of a high pressure system and the following safety precautions must be followed at all times along with any other existing safety rules.
3. Read all manuals included with this product carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
4. Only persons well acquainted with these rules of safe operation should be allowed to use the air tool.

**Do not exceed maximum operation pressure of the air tool (6.2BAR/90 PSI).
The air tool could explode and result in death or serious personal injury.**

5. Do not exceed any pressure rating of any component in the system.
6. Disconnect the air tool from air supply before changing tools or attachments, servicing and during non-operation.
7. Always wear safety glasses during operation.
8. Do not wear loose fitting clothing, scarves, or neck ties. Loose clothing may become caught in moving parts and result serious personal injury.
9. Do not wear jewelry when operation any tool. Jewelry may become caught in moving parts and result in serious personal injury.
10. Do not depress trigger when connecting the air supply hose.
11. Always use attachments designed for use with air powered tools.
Do not use damaged or worn attachments.
12. Never trigger the tool when not applied to a work object. Attachments must be securely attached. Loose attachments can cause serious injury.
13. Protect air lines from damage or puncture.
14. Never point an air tool at oneself or any other person. Serious injury could occur.
15. Check air hoses for weak or worn condition before each use. Make sure all connections are secured.

Release all pressure from the system before attempting to install, service, relocate or performs any maintenance.

16. Keep all nuts, bolts and screws tight and ensure equipment is in safe working condition.

17. Do not put hands near or under moving parts.

18. Air Hose

It is not recommended to install a quick coupler between the hammer and leader (whip) hose. Using fittings or air hoses which are too small can create a pressure drop and reduce the power of the tool. For most of the hammers, using 9.525 mm (3/8") I.D. fittings with 6.35 mm (1/4") NPT threads are recommended. For the others hammer, using 12.7 mm (1/2") I.D. with 9.525 mm(3/8") NPT threads are recommended. Most compressors are shipped with a short, 6.35 mm (1/4") I.D. hose. For proper performance and more convenience, use a 9.525 mm (3/8") I.D. hose. Hoses longer than 15.24 m (50 feet) should have a 12.7 mm (1/2") I.D.

Never carry a tool by the hose or pull the hose to move the tool or a compressor. Keep hoses away from heat, oil and sharp edges. Replace any hose that is damaged, weak or worn.

19. Storage

The scaling hammer must be lubricated before storing. Follow the air cylinder lubrication instructions with an exception to step 4. Only run the scaling hammer for 2 to 3 seconds instead of 20 to 30 seconds because more oil needs to remain in the scaling hammer when storing.

2. Particular Safety Instruction

1. Information of Noise Level

(1)The noise level at the operator's position is about:

Model No.:	A-weighted sound pressure level (L _{pf})	A-weighted sound power level (L _w)	Uncertainty K _{wA}
DG-PRO 18	95.5(dB)	105.6(dB)	3(dB)
DG-PRO 22	93.2(dB)	103.3(dB)	3(dB)

(2)Reference standard :ISO 15744.

(3)Always wear ear protectors during operation.

2. Information of Vibration Level

(1)The vibration level at the handle is about :

Model No.:	Vibration Level (m/s ²)	Uncertainty K (m/s ²)
DG-PRO 18	2.1	0.20
DG-PRO 22	2.5	0.30

(2)Reference standard: EN 28927-12.

3. Safety Information

The rated no-load speed :

Model No.:	DG-PRO 18	DG-PRO 22
Free speed	18,000 rpm	22,000 rpm

4. Warnings





- (1) Make sure that only permitted insert tools of the correct shaft diameter are used.
- (2) Cutting-off wheels and routing cutter wheels should not be used.
- (3) Check that allowed speed of the insert tool is higher than the speed of the die grinder.
- (4) Pay particular attention to the fact that allowed speed of the mounted point is lowered because of increase of the length of the shaft between the end of the collet and the mounted point(overhang). Make sure that the minimum gripping length of 10 mm is observed.
- (5) Pay attention to the risk of mismatching the diameter of the shaft of mounted points and the collet.

- (6) Respond appropriately to excessive vibration levels due to improper mounting or damaged insert tool.
- (7) Pay particular attention to that the maximum permissible pressure is not exceeded.
Preferably use a pressure regulator to control the pressure of the air being fed before the power tool.
- (8) Pay attention to that there is a running-on-time of the rotary insert tool after the start and stop device has been released.
- (9) Warning of drawing in of long hair, loose clothing.
- (10) The stored gas or fluid energy may cause a hazard.
- (11) Pay attention to the risk of a whipping compressed air hose.

5. Instructions

- (1) Only lubricants recommended by the manufacturer I be used.
- (2) The start and stop device shall be released in case of a energy failure.

6. Explanations of warning Signs Used For This Tool

			
The operator's Instruction must be read before work starts	Hearing protection must be worn	Eye protection must be used or safety glasses worn	Direction of rotation Reverse function

7. Application

Power tool driving a rotating spindle on which a bonded abrasive product is mounted.

8. The weight of this tools:

Model No.:	DG-PRO 18	DG-PRO 22
Weight	0.56 kg	1.42 kg

Note : If the weight of this tool exceeds 15 Kgs, the following attention shall be paid to :

- (1) Be sure that you can afford the weight.
- (2) Be sure to wear foot protection, to prevent the risk of impact due to the drop of tool.

3. Maintenance Instruction

1. Lubrication

Proper lubrication is the owner's responsibility. Failure to lubricate the air tool properly will dramatically shorten the life of the tool and will void the warranty.

This die grinder requires lubrication before the initial use and before and after each additional use.

2. Die grinder require lubrication throughout the life of the tool and must be lubricated in two separate areas : the air motor and the impacting mechanism. Follow the outlined procedures.

3. Air Motor Lubrication

The motor must be lubricated daily. An air motor cannot be oiled too often.

Disconnect the die grinder from the air supply before lubricating.

1. Disconnect the die grinder from the air supply.
2. Turn the die grinder upside down.
3. Simultaneously (at the same time), pull the trigger and pour a teaspoon of oil in the air inlet. Then, push the forward and reverse button in both directions.

After an air tool has been lubricated, oil will discharge through the exhaust port during the first few seconds of operation. Thus, the exhaust port must be covered with a towel before applying air pressure. Failure to cover the exhaust port can result in serious injury.

4. Connect the die grinder to the air supply and cover the exhaust port with a towel. Run the die grinder and oil will discharge from the exhaust port when air pressure is applied.

5. Grinding mechanism lubrication

The die grinder should be lubricated monthly.

Check the speed and make a simple check of the vibration level after each service.

Take special care when assembling the speed governor or any other protective device.

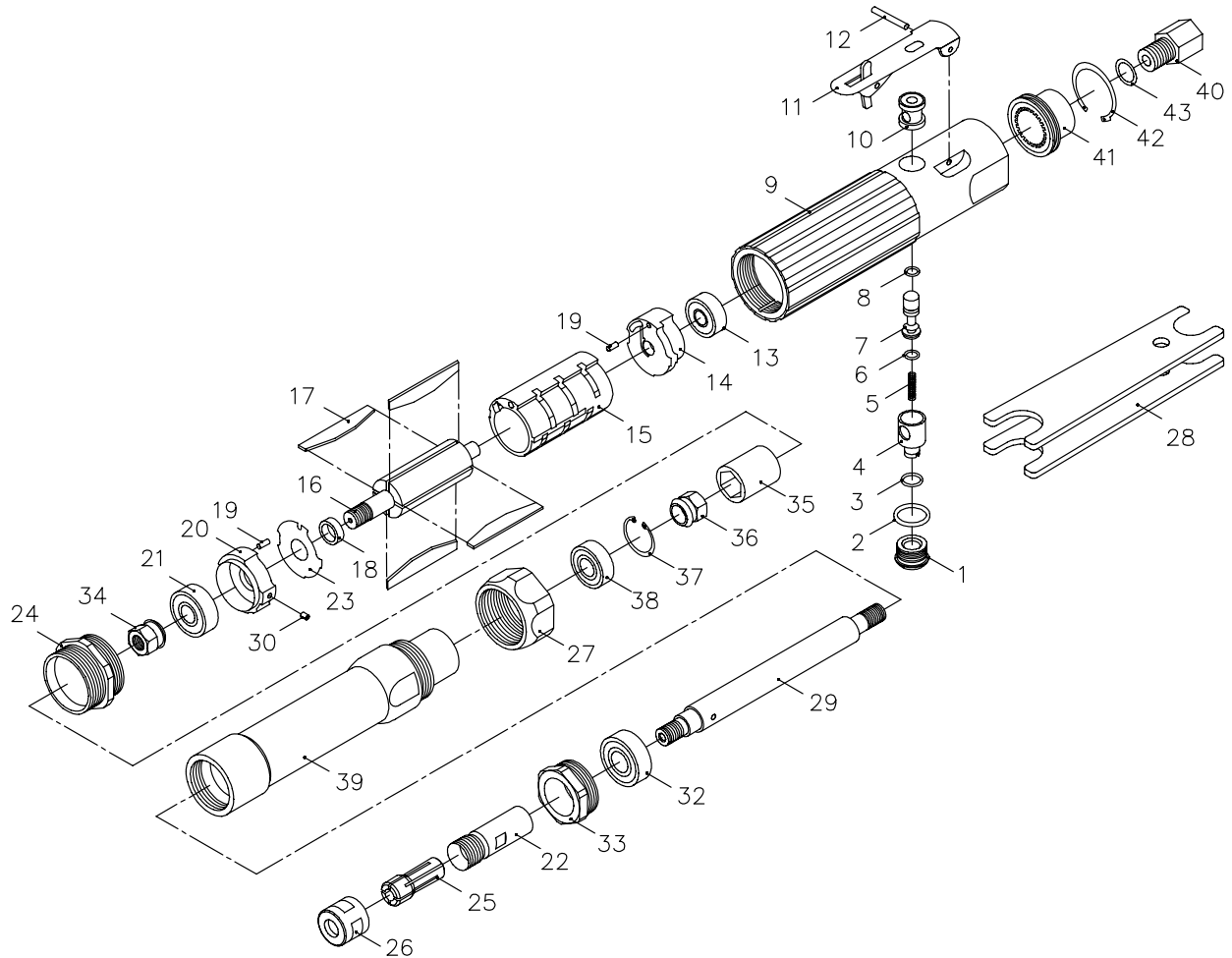
Check the speed regularly.

6.

General Trouble shooting Guide

Svmptom	Possible Cause(s)	Corrective Action
Tool runs slowly or will not operate	<p>1: Grit or gum in tool</p> <p>2 No oil in tool.</p> <p>3 Low air pressure</p> <p>4 Air hose leaks</p> <p>5 Pressure drops</p> <p>6 Worn ball bearing in motor</p>	<p>1.Flush the tool with air tool oil, gum solvent, or an equal mixture of SAE # 10 motor 011 and kerosene. Lubricate the tool after cleaning.</p> <p>2.Lubricate the tool according to the lubrication instructions in this manual.</p> <p>3.Adjust the compressor regulator to tool maximum while the tool is running free.</p> <p>4.Tighten and seal hose fittings if leaks are found.</p> <p>5-1.Be sure the hose is the proper size. Long hoses or tools using large volumes of air may require a hose with an I.D. of 12.7 mm (1/2") or larger depending on the total length of the hose.</p> <p>5-2.Do not use a multiple number of hoses connected together with quick connect fittings. This causes additional pressure drops and reduces the tool power Directly connect the hoses together.</p> <p>6.Remove and inspect bearing for rust, dirt and grit or worn race. Clean and regress bearing with bearing grease.</p>
Moisture blowing out of tool	<p>1.Water in tank.</p> <p>2.Water in the air lines/hoses.</p>	<p>1.Drain tank. (See air compressor manual). Oil tool and run until no water is evident. Oil tool again and run 1-2 seconds.</p> <p>2-1.Install a water separator/filter. Note: Separators only work properly when the air passing through the separator is cool Locate the separator/filter as far as possible from the compressor</p> <p>2-2.Install an air dryer.</p>

UNITOR DG-PRO 18



SPECIFICATIONS :

* COLLET SIZE ----- 6MM
 * AIR PRESSURE ----- 90 PSI
 * AIR INLET ----- 1/4" PT(NPT)

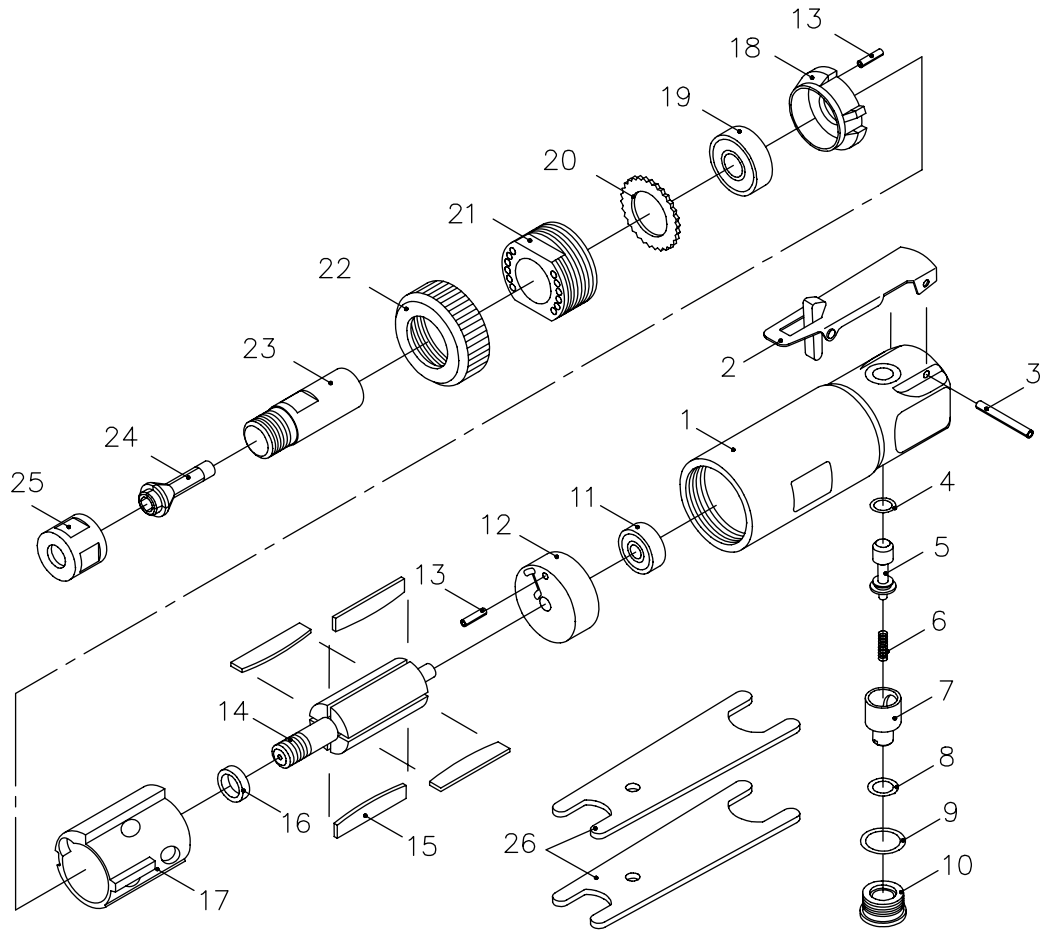
* FREE SPEED ----- 18,000 RPM
 * HOSE SIZE ----- 3/8" ID

REF NO.	PARTS NO.	DESCRIPTION	Q'TY	REF NO.	PARTS NO.	DESCRIPTION	Q'TY
1	752791	PLUG	1	24	752814	LOCK RING	1
2	752792	"O" RING (d11.8xW2.4)	1	25	752815	COLLET (6 MM)	1
3	752793	"O" RING (d6.8xW1.9)	1	26	752816	COLLET NUT	1
4	752794	AIR REGULATOR	1	27	752817	HOUSING CAP	1
5	752795	SPRING	1	28	752818	WRENCH (14mmx19mm)	2
6	752796	"O" RING (d4.0xW2.3)	1	29	752819	SPINDLE	1
7	752797	VALVE STEM	1	30	752820	LOCATING PIN	1
8	752798	"O" RING (d3.8xW1.9)	1	32	752821	BALL BEARING (6001 ZZ)	1
9	752799	MOTOR HOUSING	1	33	752822	SPINDLE NUT	1
10	752800	VALVE BUSHING	1	34	752823	COUPLING NUT	1
11	752801	LEVER	1	35	752824	COUPLING	1
12	752802	LEVER PIN (Ø3x24.5L)	1	36	752825	COUPLING NUT	1
13	752803	BALL BEARING (608 ZZ)	1	37	752826	HOUSING CAP	1
14	752804	BEARING PLATE	1	38	752827	BALL BEARING (R6 ZZ)	1
15	752805	CYLINDER	1	39	752828	SPINDLE HOUSING	1
16	752806	ROTOR	1	40	752829	AIR INLET	1
17	752807	ROTOR BLADE	4	41	752830	MUFFLER	1
18	752808	ROTOR COLLAR	1	42	752831	RETAINING RING (R-33)	1
19	752809	LOCATING PIN (Ø2.5x5L)	2	43	752832	"O" RING (d9.8xW1.9)	1
20	752810	BEARING PLATE	1	**K01	722777	AIR MOTOR OVERHAUL KIT : (13, 17, 21, 23)	1SET
21	752811	BALL BEARING (6000 ZZ)	1	**K02	722785	VALVE OVERHAUL KIT : (1, 2, 3, 4, 5, 6, 7, 8, 11, 12)	1SET
22	752812	CHUCK BODY	1				
23	752813	STEEL PLATE	1				

Optional Parts

402 722009

UNITOR DG-PRO 22



SPECIFICATION:

* COLLET SIZE ----- 6 MM
 * AIR PRESSURE ----- 90 PSI
 * AIR INLET ----- 1/4" PT(NPT)

* FREE SPEED ----- 22,000 RPM
 * HOSE SIZE ----- 3/8" ID

REF NO.	PARTS NO.	DESCRIPTION	Q'TY	REF NO.	PARTS NO.	DESCRIPTION	Q'TY
1	752833	MOTOR HOUSING	1	14	752846	ROTOR	1
2	752834	THROTTLE LEVER ②	1	15	752847	VANE PACKET ①	4
3	752835	SPRING PIN (Ø3x24.5L) ②	1	16	752848	SPACER ①	1
4	752836	"O" RING (d5.0xW2.0) ②	1	17	752849	CYLINDER ①	1
5	752837	THROTTLE VALVE ②	1	18	752850	FRONT END PLATE ①	1
6	752838	THROTTLE VALVE SPRING ②	1	19	752851	BALL BEARING (6000 ZZ) ①	1
7	752839	AIR REGULATOR ②	1	20	752852	EXHAUST DEFLECTOR	1
8	752840	"O" RING (d7.8xW2.0) ②	1	21	752853	MOTOR CLAMP	1
9	752841	"O" RING (d10.8xW1.9) ②	1	22	752854	HOUSING CAP	1
10	752842	THROTTLE VALVE CAP ②	1	23	752855	COLLET BODY ③	1
11	752843	BALL BEARING (626 ZZ) ①	1	24	752856	COLLET (6 MM) ③	1
12	752844	REAR END PLATE ①	1	25	752857	COLLET NUT ③	1
13	752845	SPRING PIN (Ø2.5x5L) ①	2	26	752858	COLLET WRENCH	2

Optional Parts

402 722017

To get maximum performance and life of your tool, replace the whole set of parts included in the Spare part kits:

- ① Air motor overhaul kit 722777
- ② Valve overhaul kit 722785
- ③ Collet overhaul kit 722793

Instruction manual & spare parts list

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