VESSEL

AIR IMPACT WRENCH GT-3800PX

Instruction Manual

VESSEL CO., INC.

For Safe Use

Thank you very much for having purchased the "VESSEL Air Impact Wrench GT-3800PX."

Please be sure to carefully read this manual before use and fully understand the contents for the safe and correct use of the air tool.

Warning: Read these instructions carefully before operating, maintaining or servicing this tool. Please keep these instructions in a safe accessible place.

Read to fully understand and observe the following safety precautions and warnings. Careless or improper use of tool may cause serious or fatal injury.

⚠ Warning Indicates instant possibility of severe personal injury or loss of

life, if instructions are not followed.

Always were eye, head and ear protectors when using this tool.

Due to misuse of the tool, there is the possibility that users may suffer disturbance and damage may occur only to the object.

* Depending on the situation, even items described in the "Caution" sections may have serious consequences.

Please safely store this manual in an easily accessible location so that it may be used by users at any time.

When the warning labels attached to this manual and product are lost or stained, promptly obtain a replacement from our company or the store from where the product was purchased and safely store or replace the label.

Please send this manual together with the product when it is transferred to another location or lent out.

If you have any questions about this product or manual, please contact our company or the store from where the product was purchased.

⚠ Warning For the correct use of the tool, please be sure to carefully read this manual before use and fully understand the contents.

∆Warning

The work environment for the air tool.

Use tools at an appropriate air pressure.

Since using more than the specified air pressure may cause damage to the product and accidents, set the pressure gauge and reduction valve, etc., and use tools at an appropriate air pressure (Air pressure by hand).

Do not use power sources other than the air compressor.

The power source for the air tool is compressed air from an air compressor.

There is a risk of explosion when high-pressure gases (oxygen/acetylene/propane, etc.) other than compressed air are used.

Use a proper air hose.

Use an oil-resistant air hose with the abrasion-resistant external, which is appropriate for the air pressure of work for the recommended inner diameter or more. Additionally, do not use hoses that are old or too long.

Install the air hose installation parts securely.

It is very dangerous if the air hose detaches due to poor installation because the high-pressure air will cause the air hose to fly around. Install the air hose installation parts in the air hose and air tool securely.

⚠ Warning

Work environment

Keep the work area clean and brightly lit.

Dark or disorderly work environments can lead to accidents. Provide proper lighting and keep the area clean and tidy.

Do not use the air tool in areas where there is a danger of explosion.

Never use the air tool in areas where there is a fear of fire or explosion because it is extremely dangerous.

⚠ Warning

Working clothes during work

Wear working clothes at work.

Do not wear baggy clothes, accessories such as necklaces etc. Wear only attire suited for working. Tuck long hair under

a hat or take other measures to prevent entanglement in tools.

Wear protective gear.

Wear protective gear suitable for work including a helmet, protective goggles, earplugs, dust mask, gloves insulated against vibration and safety shoes, etc.

⚠ Warning ■Using the Air Tool

Avoid abusing by damaging, dropping or hitting.

Take utmost care of handling from parts damaged and caused for defective or accidental non-function.

Do not place your hands or cloth, etc. close to moving parts.

Never bring your hands or cloth, etc. close to moving parts while in use because it is very dangerous.

It is dangerous to work in awkward positions.

Hold the air tool securely and guard against any unusual movements. Conduct all work with a stable work posture.

Avoid starting the tool suddenly.

Confirm whether the start switch is in the stop position when connecting the air hose. When carrying the air tool, do not put your hand on the start switch.

Hang securely.

When hanging the tool with balancers etc., check whether the hanging tool such as balancers etc., is securely installed. Periodically check that there is not any damage to the hanging tool and replace it if necessary.

Do not allow the tool to come in contact with electricity. Since the air tool is not insulated against electricity, please take care to use the tool in way that ensures it does not come in contact with electricity.

Immediately stop using the tool when you notice any of irregular operation and situation.

Immediately stop using the tool when you notice any trouble

and request a maintenance inspection and repairs.

⚠ Warning

Others

Do not use the tool except for the specified application.

Be sure to never use the tool for work other than the specified application as it could lead to accidents.

Never modify the tool.

Be sure to never use a modified tool as it could lead to accidents.

Do not remove any parts.

Be sure to never use a tool with parts and screws that have been removed as it could lead to accidents.

When there is a chance of danger, stop the supply of air and remove the air hose from the air tool.

When not using the tool, conducting a maintenance inspection, replacing the tip of the tool, and when there is a chance of danger, stop the supply of air and remove the air hose from the air tool.

⚠ Caution

Basic cautions for using the air tool.

Work very carefully.

Since working carelessly and thoughtlessly or using the tool when tired could lead to injury or accidents, be alert and work carefully.

Do not allow access by anyone else to the work area to those who are not involved in the work.

Do not allow access by anyone else to the work area to those who are not involved in the work. It is especially dangerous for children.

Do not use the tool for unreasonable purposes.

Since improper use in overload could lead to damage and malfunction of the air tool, only use the tool within the specified range of applications.

Be aware of the direction of the exhaust.

Since it could lead to accidents and illness, please note the direction of the exhaust in order to avoid getting exhaust

directly in the eyes or ears.

Handle the air tool carefully.

Since handling the tool roughly could lead to accidents or malfunction of the tool, do not jar the air tool by throwing or dropping it.

Handle the air hose carefully.

Do not use the air hose to hold or to raise and lower the air tool. Damage to the air hose could lead to accidents.

Be careful not to drop the air tool when working in high places.

To prevent accident caused by dropping air tools, take measures to prevent fall of the tool by using safety wire etc., when working in high places.

Be sure to store the tool safely.

When not in use, care for the tool adequately, keep it out of the reach of children and keep it in a dry place.

Be aware of laws regarding noise.

There are national legislation and restrictions set by each prefecture regarding noise. It is necessary to operate the tool below the noise regulation limit so as not to disturb those in the surrounding environment. Setup a sound insulation wall etc., if necessary.

Take breaks as required.

Since continuous work for extended periods of time could lead to illness etc., take breaks as required. If you feel abnormalities such as pain etc., immediately stop using the tool and consult a physician.

⚠ Caution

Regarding maintenance, inspections and repairs Check before use.

Be sure to check for loose screws and damaged parts etc. before use. Loose screws and damaged parts not only cause a decrease in performance and malfunction but there is also a risk of danger.

For Safe Use

Conduct maintenance and inspections.

To work safely and efficiently do not neglect maintenance or inspections.

Contact our company or a service factory (assigned) approved by our company for repairs.

Contact our company or a service factory (assigned) approved by our company for repairs through the store or agency etc. from where you purchased the tool. Please be aware beforehand we do not accept responsibility for accidents and problems caused by the improper treatment of the tool by customers.

Prior to Use

- · After opening the package, confirm that the correct accessories are included.
- •Be sure to read the instruction manual and do not handle the product or exchange the tips of the tool without sufficiently understanding the details.
- · Always keep the instruction manual nearby. Be sure to check the manual when there is something you don't understand.
- ·Keep the instruction manual in a safe place so as not to lose it. If you lose the manual, be sure to order a new manual.

Applications

- This product is an air tool that has been designed and developed for "Tightening and loosening bolts/nuts by compressed air with an air compressor as the power source."
 - Do not use the air tool in the following situations.
- * Do not use for more or less work than shown in the specifications.
- * Do not use this product after modifications or welding.
- * Do not use with power sources other than compressed air (oxygen, acetylene, and propane, etc.).
- * Do not use in water or an ignitable atmosphere.
- * Do not use in other unexpected, different applications.

- · For handling and operation, be sure to follow the procedures in the instruction manual.
- The following uses are prohibited.
- * When the sockets or bits are incorrectly installed nor fit properly in size.
- *When the work stance is unstable or when the tool is not properly held and cannot be operated.
- * The work environment is slippery or unstable.
- * Use in work other than tightening and loosening screws.
- * When it has been remodeled and the parts are inadequate.
- * Use with more air pressure than shown in the specifications.
- *Use in conditions that exceed the recommended load of this product.
- ·When not in use or in the absence of the operator, stop the air supply and remove it from the pipe.

Preparation before work

Confirmation of air pressure

The air pressure of this product is 0.6MPa. Be sure not to use air pressure exceeding the specifications since it influences performance, lifespan and safety.

Removal of the drain

When impurities such as moisture and rust in the pipes enter this product, it could lead to a malfunction. Clean the drain in the compressor before use. To supply normal dry air to this product, be sure to install the air filter and remove any moisture or dirt.

Selection of hoses

Refer to the specifications for the size of the air hose for the air supply. When the internal diameter of the air hose is too small, sufficient power cannot be exerted due to a drop in pressure. Note a similar pressure drop is also generated if the hose is too long.

Air coupling

When using the attached air coupling, purchase a compatible hose and connect. When installing a hose directly in this product, purchase a hose connection coupling separately. In both cases, confirm the size of the

connected hoses.

Turning the tool on for the first time following purchase

When first installing this device after purchase or when changing the hoses, blow out any dirt in pipes and hose before installation. Also, it is necessary to idle the device for a few seconds because oil in this tool is expelled with the exhaust.

Lubrication

Lubricate for the lubrication of the motor and exhaust impurities. It is easy to supply lubricant if the lubricator is installed in the piping because the lubricator will automatically drip lubricant in the tool. Or, you can lubricate manually from the air supply port before or after use. (Oil: ISO VG10 or equivalent hydraulic oil.)

Tool Tips (Sockets/bits/extension bars, etc.)

When using the tip of the tool for manual operation there is a risk of accident as the tip of the tool may become damaged and shatter, etc. Be sure to use power tools for this device.

Tightening bolts/nuts

To tighten bolts/nuts, first tighten bolts/nuts by hand for 1-2 revolutions or a couple of thread pitches. After tightening is complete, immediately let the lever released and stop the tool. By continuing to tighten further, bolts could be broken and wear / tear on parts of the hammer will accelerate.

When bolts/nuts do not loosen

When bolts/nuts do not loosen or when the torque does not tighten as expected, an impact wrench with greater power is necessary.

Using for unintended purposes

Do not throw or beat on the tool because it causes damage to the unit. Be aware that dripping the tool in the organic solvents will deform the tool.

Use in cold areas

Moisture collected internally may freeze in winter. Be sure to oil following use and store in a safe place after removing any moisture.

Starting and stopping

- 1. Connecting the air coupling.
- 2 . Supply air with the compressor.
- When the start lever is pulled or pushed, the function starts.
- 4. When the start lever is released (disengaged), the function stops.
- 5. When the start lever is pulled (pushed) fully, it rotates at a high speed and when it is pulled (pushed)slightly it rotates at a low speed.



When the right/left switch lever is set to "R," it rotates clockwise.

When it is set to "L," it rotates counter clockwise.

Do not operate the rotation switch while pressing the start lever.

Adjusting the torque.

Torque adjustment is possible by aligning the right/left switch lever mark with the numbers. "1" is the minimum and "3" is the maximum.

Installing sockets.

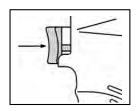
There is a pinhole on the point of the anvil (

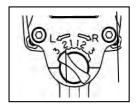
drive part). Align the pinhole of the socket and attach the socket with the pin and O-Ring. Install as shown in the figure.

* It is very dangerous because if it is not securely attached, the socket may detach and fly off. Do not attach the socket when the tool is idling.

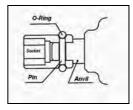
About handling

- * Do not touch any rotating parts. It is very dangerous and could lead to injury.
- * Do not idle the tool with the tip of the tool without a load.









- * Start the product after confirming the rotation direction.
- * When work is discontinued or finished, be sure to turn off the air.
- * Do not point the exhaust towards people or fire. The exhaust is dangerous since it contains oil.
- * Do not touch the tip tool and screws immediately after the work because they became hot from friction during work.
- * When there is any abnormal operation, immediately turn off the air and stop working.

Maintenance / Repairs

- We recommend periodic inspections for safe, worry free use. If inspections are neglected, it may affect the performance, lifespan and safety of the product.
- · Inspection (maintenance) should be conducted only by those who carefully read and fully understood the instruction manual for this product.
- Contact the store from where the product was purchased for repairs. Do not repair by yourself.

Inspection coverage of the product

When conducting inspections, be sure to remove the hose coupling and do not supply any air.

Anvil (□ drive part on the tip)

Worn out ...It will deteriorate the performance and decrease efficiency.

Early exchanging of parts is recommended.

CracksDiscontinue use and request repairs since there is a risk of breaking and it is dangerous.

Socket

Worn out square and hexagonal heads

...It may deteriorate the performance and the socket may detach from the anvil.

Worn out pinholes ...It may disable the fixing of the socket and the socket may detach from the anvil.

Cracks ... Discontinue use and replace with new parts since there is a risk of damage and shattered fragments.

Hose couplings

Loose screws ... Re-tighten since it is dangerous if the hose comes off.

Worn out ... Replace with new parts since the coupling may come off if the connection is loose.

Maintenance / Repairs

Start lever

Return condition ... Confirm whether the lever returns correctly. It is very dangerous to use the tool continuously in the situation where the lever does not return correctly because the tool will start suddenly after connected. If the lever does not correctly return, please request repairs.

Bolts for each part

Loose bolts It may lead to air leaks and malfunctions. Please re-tighten the bolts.

Surface damage

Cracks Discontinue use and request repairs since there is a risk of damage and shattered fragments.

Troubleshooting

Air tool troubleshooting

Symptom	Cause	Remedies
	Air is not provided.	Turn on the air.
	The hose is twisted.	Straighten the hose.
	Air pressure is low.	Adjust the air pressure.
1. No rotation	Parts are rusted due to a lack of lubrication.	Lubricate/disassemble and adjust.
	Dirt contamination.	Disassemble and adjust.
	Malfunction (worn out/damaged, etc.) on motor and hammer.	Replace parts.
O. Datatian in	Rate of air flow is inadequate.	Confirm air flow rate.
2. Rotation is uneven.	Air pressure is low.	Adjust air pressure.
uneven.	Parts are rusted due to a lack of lubrication.	Lubricate/disassemble and adjust.
	Change of shape of the start lever pin.	Replace parts.
3. Rotation does	Change of shape of the throttle valve.	Replace parts.
not stop.	Damage to throttle valve and valve base.	Replace parts.
	Contamination by a foreign substance in the throttle valve.	Disassemble and adjust.
4. Switch lever or the adjustment dial cannot be set.	Stop spring is worn out, damaged or rusted (Stop ball does not come out).	Install new parts.
5. Cannot adjust with the switch lever or adjust dial.	Rust and dirt contamination.	Disassemble and adjust.
6. The socket cannot be fastened.	Socket pin damage.	Replace parts.

Troubleshooting

7. Air is leaking.	Trouble with the valve (O-ring damage, ball rust, or worn-out, damaged and rusted springs) etc.	Replace parts.
8 . Abnormal noise is generated.	Bolts came loose.	Install new parts.
	Worn out and damaged bearings.	Replace parts.
	Damage to the hammer case and impact part.	Replace parts.
	Worn out and damaged rotor blade.	Install new parts.
	The rotor blade does not come out at rotating.	Install new parts.
	Run out of lubrication and grease.	Lubricate/disassemble and adjust.
9. It rotates without a load but with a load it does not rotate and the power decreases.	Parts of the hammer are damaged.	Replace parts.
10. Water comes out.	The drain is clogged.	Clean the drain.

Request repairs immediately when the tool is in a defective and abnormal condition, etc., since it could lead to a product malfunction and accident. Please consult with the store from which it was purchased for repairs.

Storage

Please store in a safe location and be aware of dust, humidity, dew and freezing.

Exploded diagram drawing & Parts list

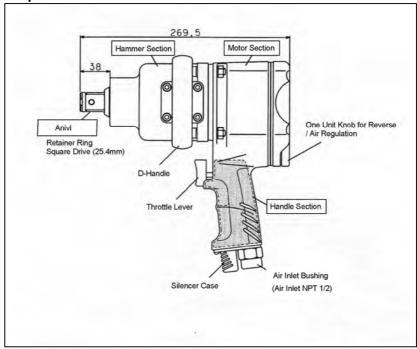
Specifications

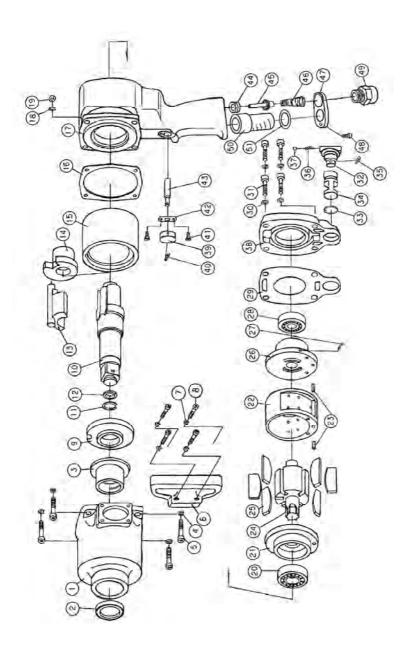
Square Drive Size	25.4mm
Capacity(Bolt Dia.)	39mm
Working Torque Range	353-1607Nm
Weight	8.9kg
Overall Length	269.5mm
Free Load	4100rpm
Working Air Pressure	0.6Mpa
Air Consumption	0.7 m³/min
Air Compressor	3.75kw or bigger
Air Hose Inner Dia.	12.7mm

Accessories

VESSEL Air Coupling (BPB-4)	1pc
"L" Wrench (A/F 5mm)	1pc

Description





Exploded diagram drawing & Parts list

Parts List

Index No	Description	Size	Number Required per unit
1	Hammer Housing Complete		1
<2>	Oil Seal	VB40525 (Installed No. 1)	1
<3>	Pressed In Bushing	(Installed No. 1)	1
4	Washer, Spring	M8	4
5	Hex Cap Bolt	M8 × 37	4
6	D- Handle		1
7	Washer, Spring	M6	4
8	Hex Cap Bolt	M6 × 18	4
9	Bushing Anvil		1
10	Retainer Ring Anvil CP		1
<11>	Ring, Retainer	(Installed No. 10)	1
<12>	O- Ring, Retainer Ring	NOKCO0414A (Installed No. 10)	1
13	Hammer		1
14	Driver		1
15	Frame, Hammer		1
16	Front Gasket, Motor Housing		1
17	Motor Housing, Complete		1
18	Washer, Spring	M8	4
19	Hex Nut	M8	4
<20>	Bearing	6205Z(Installed No.21)	1
<21>	Endplate Complete, Front	(Installed No.17)	1
<22>	Cylinder Complete	(Installed No.17)	1
<23>	Pin, Cylinder	SP6 x 14 (Installed No.22)	2
24	Rotor		1
25	Blade, Rotor		6
26	Endplate Complete, Rear		1
<27>	Pin, Endplate	SP4 x 10 (Installed No.26)	1
<28>	Bearing	6204 (Installed No.26)	1
29	Rear Gasket, Motor Housing		1
30	Washer, Spring	M8	4
31	Hex Cap Bolt	M8 × 25	4
32	Reverse /Regulator Lever, Complete		1
33	O-Ring, Reverse Valve	P16	1
34	Valve, Reverse		1
35	Stopper, Reverse Valve Retainer	SP4 x 18	1
36	Spring, Reverse Lever Retainer		1
37	Ball, Reverse Lever Retainer	4 Steel Ball	1
38	Case Cover		1
39	Throttle Lever		1
40	Screw, Throttle Lever Retainer	M4 × 5 Flat Sq.	1
41	Fixing Pin, Plate	M4 × 8 Dish Screw, Cross Hollow	2
42	Throttle Plate	ME A O DIGIT COTEW, G1033 FIGHOW	1
43	Pin, Throttle		1
<44>	Bush, Throttle Valve	(Installed No.17)	1

Exploded diagram drawing & Parts list

Index No.	Description	Size	Number Required per Unit
45	Valve, Throttle		1
46	Spring, Throttle		1
47	Handle Cap		1
48	Screw, Handle Cap Retainer	M4x 12 Pan Screw, Cross Hollow	1
49	Inlet Bushing		1
50	Case, Silencer		1
51	O-Ring, Silencer Case	N18	1

Parts with < > marked shall not be supplied individually even if ordered since it is an integrated component.

•The contents of this manual are subject to be changed without previous notice.

We, VESSEL CO., INC., OSAKA JAPAN, declare under our sole responsibility that the products to which this declaration relates is in conformity with the following Machinery Directive and Standard: Machinery Directive 89/392/EEC, 91/368/EEC, 00/44/EEC 93/68/EEC

Model / Modele / Modell / Madela / Modello / Modelo / Model / Model / Typ / Model / Maili / Mavtéka

GT-3800PX

Nous, VESSEL CO., INC. OSAKA JAPAN, declarons sous notre responsabilité exclusive que le produit si-dessous: est en conformité avec les exigences dels déclarations communautaires concernant le rapprochement des législations des états membres relatives aux: Directives Machines 89/392/EEC, 91/368/EEC 11/44/FEC. 93/88/EEC

Wir. VESSEL CO., INC. OSAKA JAPAN, erklaren hiermit unter alleiniger Verentwortung, daß das Produkt, auf das sich diese Erklärung bezieht, den Anforderungen der folgenden Maschinennichtlinien und Standards entspricht chtlinie 69/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC

Nosotros, VESSEL CO., INC. OSAKA JAPAN, declaramos pajo nuestra som responsabilidad, que el producto: al que se reliere enta declaración, astá en conformidad con las siguientes Directivas y Standard de Maquinaria: Directiva Minquinaria 69/3/82/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC.

No. VESSEL CO., INC. OSAKA JAPAN, dichianamo sotto la nostra unical responsabilità che il prodotto: cui questa dichiarazione si rifensce, è conforme a sequenti Direttive: Direttiva Macchine 89/392/EEC, 91/368/EEC, 93/44/EEC.

Nos. VESSEL CO., INC. OSAKA JAPAN, declaramos sob nossa exclusiva responsabilidade que os produtos: a que se refere esta declaração está em conformidade com os requisitos e padrões da Directiva de Maguinaria: Directiva de Maguinaria 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC,

Wij. VESSEL CO., INC. OSAKA JAPAN. verkisren onder onze exclusiove verantwoordelijkheid dat de artikelen op dewelke deze verklaring betrekking heelt. in overeenstemming zyn met volgende Machine Direktieven en Standaarden Maintenery Directive 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC

Vi, VESSEL CO., INC. OSAKA JAPAN, deklarerer under eneansvar at lelgende produkter; som denne erklæring omhandler, er i overensstemmelse med følg Maskin direktiv og standard: Machinery Directive 89/392/EEC. 91/368/EEC. 93/44/EEC, 93/68/EEC

VI. VESSEL CO., INC. OSAKA JAPAN. deklarerar under eget artsvar aff. produkten fill vilken denna deklaration relaterar sig år i överensstammelse med de kray som finns i Rådets directiv 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC

VI. VESSEL CO., INC. OSAKA JAPAN, deklarerer under eget ansvar at telgende produkter som denne erklæring omhandler, er i overens med folgende Maskindirektiv og standard: Machinery Directive 89/392/EEC 01/368/EEC 93/44/EEC 93/68/EEC



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Kenneth W.Ishihara, Director

Signature of issuer / Signature de l'emelleur / Unterschrift des Erstellers / Firma del expedidor / Firma del dichiarante / Assinatura do emissor / Handtekening van de uitgever / Udsteder, underskrift / Utsteders signatur / Utfardarens namnteckning illmeituksen antajan allekirjoitus / Υπογραφή εκδότη





CERTIFICATE OF INSPECTION

MODEL GT-3800PX

We hereby certify that before shipment, above tool has been carefully inspected according to our factory engineering standard and the result has come out in satisfactory data. In order to maintain the best conditions of this tool, please be sure to take a few minutes to read through the instruction manuals and operate as recommended.

DATE

CHIEF INSPECTOR

SERIAL NO.

T. Murakami

MANUFACTURED BY **VESSEL CO., INC.** OSAKA JAPAN

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