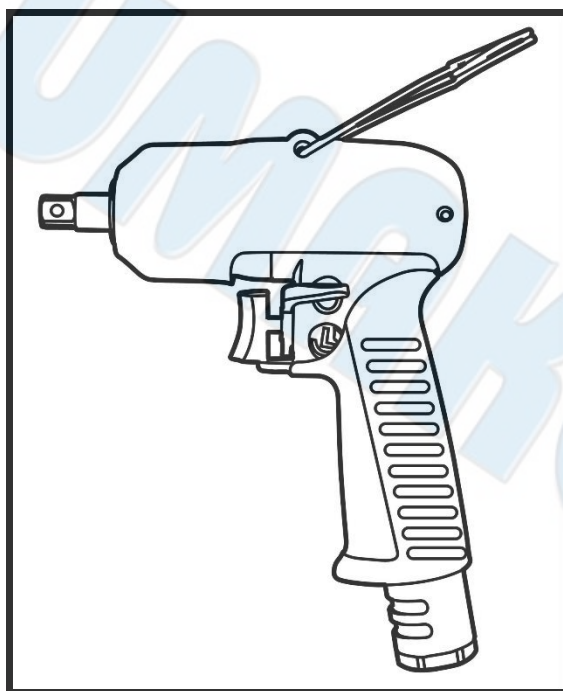




# SUMAKE PNEUMATIC TOOLS



## 1/2" Square Drive Non Shut Off Oil Pulse Wrench (Pistol Type) IPW-24160PN

### Specification:

|                 |                             |
|-----------------|-----------------------------|
| Free Speed      | 4,400 r/min                 |
| Square          | 1/2                         |
| Bolt Capacity   | M14                         |
| Torque          | 120~165Nm (88.8~122.1ft-lb) |
| Overall Length  | 7-2/7" (185mm)              |
| Air Consumption | 23 CFM (650 L/min)          |
| Air Inlet (PT)  | 1/4" (6.35 mm)              |
| Air Hose (I.D.) | 12.7 mm                     |
| Air Pressure    | 72.5~87 psi (5~6 bar)       |
| Net Weight      | 5.07lbs (2.3kgs)            |

### Noise and Vibration:

| Vibration<br>EN ISO 28927-2                                                 | Noise<br>EN ISO 15744                  | Remark                                                                                                                       |
|-----------------------------------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Load:<br>3.3 m/s <sup>2</sup><br><br>Uncertainty<br>K= 1.5 m/s <sup>2</sup> | Sound Pressure Level<br>load: 83 dB(A) | Please always<br>wear ear<br>protector at<br>environment<br>noise level > 80<br>dB(A) due to<br>risk of impaired<br>hearing! |
|                                                                             | Sound power level<br>load: 94 dB(A)    |                                                                                                                              |
|                                                                             | Uncertainty<br>K= 3dB                  |                                                                                                                              |

# SUMAKE®

## OIL PULSE TOOL



IPS(W)-I-1709D-C5

## OIL PULSE TOOL &amp; TORQUE MEASUREMENT EQUIPMENT

**WARNING**

Read and carefully observe these operating instructions before unpacking and operating the tool! The tool must be operated, maintained and repaired exclusively by persons familiar with the operating instructions. Local safety regulations regarding installation and maintenance must be followed.

**INSTALLING TOOL**

- For safety, performance and durability of parts, operate this tool at 90psi ( 6.3kg/cm<sup>2</sup> ) maximum air pre-sure at inlet with 3/8" ( 10mm ) inside diameter air supply hose.
- For safety reasons, the tool must always be disconnected from the air supply during connection and adjustment work.
- Do not use damaged, frayed air hoses and fittings.
- Before sure all hoses and fitting are the correct size and are tightly secured.
- Always use clean, dry air at 90psi ( 6.3kg/cm<sup>2</sup> ) maximum air pressure. moisture can ruin the motor of an air tool.
- Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel.
- Do not remove any labels, replace Any damaged label.

**USING THE TOOL**

- Never work without protective goggles
- Always wear hearing protection when operating this tool.
- Be aware of the direction of rotation when operating the throttle.
- Keep hands, loose clothing and long hair away from rotating end of tool.
- Keep body stay balanced and firm. Do not over reach when operating this tool. High reaction torque can be occur at or below the recommended air pressure.
- Use power sockets only, For safe and economic use-replace worn sockets.
- This tool, together with any attachments and accessories, must never be used for anything other than the designed purpose.

**SYMBOLS**

|                                                                                                                                |                                                                                                                                                        |                                                                             |                                                                                  |                                                          |                                                        |
|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
|                                                                                                                                | <b>Caution</b>                                                                                                                                         |                                                                             |                                                                                  |                                                          |                                                        |
| This symbol identifies the potential for a hazardous situation. If this warning is not followed, a serious injury could occur. | This symbol identifies the potential for a damaging situation. If a caution note is not followed, the product or parts of the product could be damaged | Avoid direct skin contact when working with oil to prevent skin irritations | Always wear eye protection when operating or performing maintenance on this tool | Always wear hearing protection when operating this tool. | Recycling raw materials instead of disposing as waste. |

## OIL PULSE TOOL &amp; TORQUE MEASUREMENT EQUIPMENT

## NOTICE

The use of other than genuine replacement parts may result in safety hazards, decreased tool performance, and increased maintenance, and may invalidate all warranties.

Repairs should be made only by authorized trained personnel.

For parts and service information, contact your local distributors.

## PRODUCT DESCRIPTION

The pulse tool is a similar design to impact wrench, however with a integrated hydraulic oil pressure unit. Combination of torque control, forward/reverse operation. Low noise and low vibration.

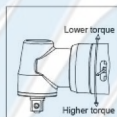
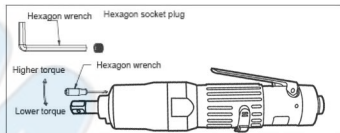
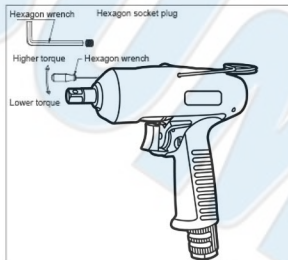
## TORQUE ADJUSTMENT

To adjust the torque on oil pulse tool, proceed as follows :

1. The cold weather could influence pulse oil quality. please reheat fastener 10-15times to warm up the oil then adjust torque screw.
2. Remove the adjustment hole plug.
3. Rotate the drive shaft until the torque adjustment screw is visible in the opening.
4. Use a hex wrench, rotate the adjustment crew clockwise to increase the torque output and counterclockwise to decrease the torque output. Do not rotate the oil plug. (with about 3-4 turns, set the desired torque)

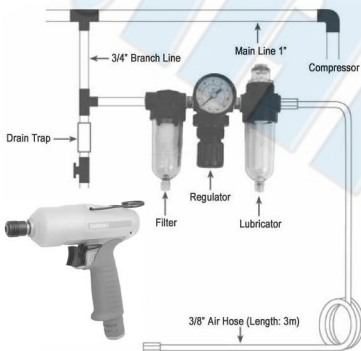
## NOTICE

PLEASE USE TORQUE TESTER FOR CALIBRATION AFTER TORQUE ADJUSTMENT



## OIL PULSE TOOL & TORQUE MEASUREMENT EQUIPMENT

### COMPRESSED AIR SCHEMATIC



**RECOMMENDED COMPRESSED AIR SYSTEM**

#### Caution



#### Lubrication

While installing air compressor system, be sure to have filters, separators for oil and water, regulators, and lubricators to increase work efficiency, prolong the life of air tools and reduce maintenance cost.

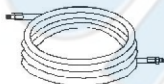
#### Suggestion air hose size :

Main Line : 3 times air tool inlet size

Branch Line : 2 times air tool inlet size

To keep the best performance of tool, please install the air hose size correctly

#### NOTICE



3/8" I.D. Hose

Ideal for increasing working distance in high CFM applications.

#### Q&A

**Q :** What is the air pressure and air hose size that I should use with pulse tool ?

**A :** The tools should be run at 90psi dynamic ( This means that the air pressure should be checked with the tool running free speed ). The inside diameter of your air hose should be one size larger than the size of the air inlet of the tool.

Example : 1/4" NPT air inlet should be run on a 3/8" inside diameter air hose.

## OIL PULSE TOOL & TORQUE MEASUREMENT EQUIPMENT

### INSPECTION AND MAINTENANCE

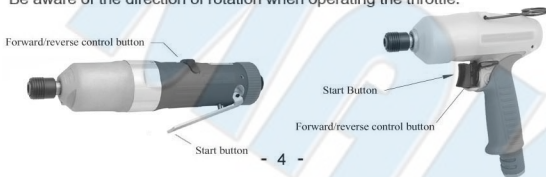
#### Placing tool in service :

1. Please install line with R.F.L unit ( R-REGULATOR, F-Filter, L-Lubricator )
2. Air hose must be 3/8" inside diameter, don't use coil hose, it may affect torque stability.
3. Please check the air pressure before using. The air pressure should be 90psi in dynamic.
4. Ensure the air supply is clean and does not exceed 90psi during operation. Too high an air pressure and unclean air will shorten the product life due to excessive wear, and may be dangerous causing damage and/or personal injury.
5. Please check compressed air system everyday and keep it clean and dry.
6. Use proper connector, coupling, coupling, threaded connections and accessories.

#### Using tool in service :



1. Please lubricate tool daily to avoid wearing and rustiness. Running tool for 2-3 seconds after lubrication.
2. Always wear eye and ears protection when operating the tool
3. the bearing needs to be lubricated with LDS18 every 3 months.
4. Please follow the instruction for assembly or disassembly this tool
5. Please do not make any adjustment during operation. Please disconnect the air hose from air supply.
6. The use of other than genuine replacement parts may cause the damage of the tools.
7. Ues only impact socket and accessories. Do not use hand ( chrome ) sockets or accessories.
8. Be aware of the direction of rotation when operating the throttle.





## OIL PULSE TOOL & TORQUE MEASUREMENT EQUIPMENT

### FLUID CHANGE

In order to avoid the costs of malfunction or maintenance increase, routine inspections are necessary.

When tighten fasteners, used in different ways can cause the time of change oil difference, so we recommend that user should assess the self-condition to adjust the time of change oil.

For example: Tighten hard joint fasteners about spending 0.5~1 second (pulse), tighten soft joint fasteners exceeds more than 1 second (pulse), the time of change oil will be different.

Pulse number: It means when the screws are exposed to tighten the object surface, the number of strokes that driven by hydraulic cylinder.

When tool spends less time to tighten the object; quickly achieve the required torque, the time of change oil (number) will be extended.

When tool spends more time to tighten the object; to reach the required torque, the time of change oil (number) will be increased.

When tool is used for high torque (less number of pulses), the time of change oil will be extended.

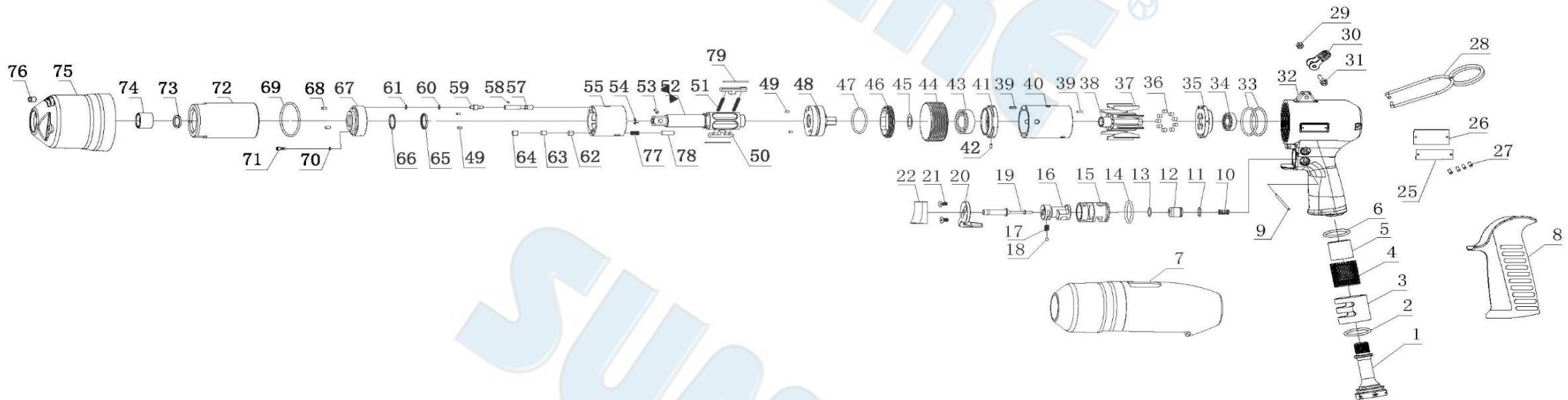
When tool is used for low torque (more number of pulses), the time of change oil will be increased.

#### NOTICE

On the narrative, we reserve the right to change, without prior notice.

# IPW-24160PN

## 1/2" SQUARE DRIVE NON SHUT OFF OIL PULSE WRENCH (PISTOL TYPE)





# IPW-24160PN

## 1/2" SQUARE DRIVE NON SHUT OFF OIL PULSE WRENCH (PISTOL TYPE)

### PARTS LIST

| No. | Parts No.     | Description             | Q'ty |
|-----|---------------|-------------------------|------|
| 1   | IP35691370030 | Exharst Body 19npt      | 1    |
|     | IP35691380030 | Exharst Body 18npt      | 1    |
| 2   | IP40300108010 | O-Ring                  | 1    |
| 3   | IP35690790030 | Exhaust Block Set       | 1    |
| 4   | IP35690810000 | Exhaust Nets            | 1    |
| 5   | IP35690820000 | Muffler                 | 1    |
| 6   | IP40300109010 | O-Ring                  | 1    |
| 7   | IP35682500000 | A Gun Shaped Body       | 1    |
| 8   | IP35681810010 | Rubber Grip             | 1    |
| 9   | IP41320280030 | Pin                     | 1    |
| 10  | IP35720680000 | Spring                  | 1    |
| 11  | IP40300119010 | O-Ring                  | 1    |
| 12  | IP35720670000 | Valve Cap Of The Switch | 1    |
| 13  | IP40310003010 | O-Ring                  | 1    |
| 14  | IP40300108010 | O-Ring                  | 1    |
| 15  | IP35720630030 | Lever Bushing           | 1    |
| 16  | IP35720620030 | Reverse Valve           | 1    |
| 17  | IP35600710000 | Spring                  | 1    |
| 18  | IP40503000000 | Ball                    | 1    |
| 19  | IP35720720030 | Valve Rod               | 1    |
| 20  | IP35720730030 | R.L Lever               | 1    |
| 21  | IP40103080030 | Screw                   | 2    |
| 22  | IP35720690000 | Throttle Grip           | 1    |
| 25  | IP35082410000 | The Positive Plate      | 1    |
| 26  | IP35682420000 | The Negative Plate      | 1    |
| 27  | IP42117001000 | Rivet                   | 4    |
| 28  | IP35652370030 | After The Rings         | 1    |
| 29  | IP42111001030 | Screw Cap               | 1    |
| 30  | IP31000440000 | Suspension Loop         | 1    |
| 31  | IP40104250030 | Screw                   | 1    |
| 32  | IP35680180220 | Pistol Housing          | 1    |
| 33  | IP40300128010 | O-Ring                  | 2    |
| 34  | IP40800049000 | Bearing                 | 1    |
| 35  | IP35680500110 | Front Plate             | 1    |
| 36  | IP35631680000 | Rubber Plug             | 9    |
| 37  | IP35690490000 | Rotor Blade             | 9    |
| 38  | IP35660560000 | Rotor                   | 1    |
| 39  | IP41230060030 | Pin                     | 2    |
| 40  | IP35660550110 | Cylinder                | 1    |

| No. | Parts No.     | Description                 | Q'ty |
|-----|---------------|-----------------------------|------|
| 41  | IP35660430110 | Rear Plate                  | 1    |
| 42  | IP41220040030 | Pin                         | 1    |
| 43  | IP40800023000 | Bearing                     | 1    |
| 44  | IP35660390030 | Connexion Sets              | 1    |
| 45  | IP35662430000 | Driving Seat Gasket         | 1    |
| 46  | IP35660350030 | Pressure Plate              | 1    |
| 47  | IP40330012010 | O-Ring                      | 1    |
| 48  | IP35680340000 | Transmission Plate          | 1    |
| 49  | IP41329060031 | Pin                         | 4    |
| 50  | IP35660320000 | Drive Blade                 | 2    |
| 51  | IP30380330000 | Blade Spring                | 2    |
| 52  | IP35660310000 | Main Shaft-D                | 1    |
| 53  | IP31061150030 | Pin                         | 1    |
| 54  | IP31061160030 | Spring                      | 1    |
| 55  | IP35660290000 | Oil Hydraulic Cylinder      | 1    |
| 57  | IP35681080000 | Control Core                | 1    |
| 58  | IP41320058000 | Pin                         | 1    |
| 59  | IP35721220030 | Adjust Screw                | 1    |
| 60  | IP40300050010 | O-Ring                      | 1    |
| 61  | IP35721330000 | Spacer Sleeve               | 1    |
| 62  | IP35692710000 | Pressure Relief Valve Two   | 1    |
| 63  | IP35692700000 | Pressure Relief Valve       | 1    |
| 64  | IP35693410000 | Jam                         | 1    |
| 65  | IP30881250000 | XO-Ring                     | 1    |
| 66  | IP30301260210 | XO-Washer                   | 1    |
| 67  | IP35660280000 | Liner Plate                 | 1    |
| 68  | IP41330060000 | Pin                         | 2    |
| 69  | IP40330012010 | O-Ring                      | 1    |
| 70  | IP40300029010 | O-Ring                      | 1    |
| 71  | IP30401210030 | Oil Screw                   | 1    |
| 72  | IP35660260030 | Linet Casing                | 1    |
| 73  | IP31060360000 | Washer                      | 1    |
| 74  | IP35600090000 | Bushing                     | 1    |
| 75  | IP35660020220 | Front Casing                | 1    |
| 76  | IP40116280030 | Screw                       | 1    |
| 77  | IP35692470000 | The Pressure Relief Spring  | 1    |
| 78  | IP35692720000 | Pressure Relief Valve Three | 1    |
| 79  | IP35661110000 | Pin                         | 2    |



## EC DECLARATION OF CONFORMITY

We: **SUMAKE INDUSTRIAL CO., LTD.**

**4F, No. 351, Yangguang St., Neihu District, Taipei City, Taiwan**

declare in sole responsibility that the equipment

Equipment : **1/2" SQUARE DRIVE NON SHUT OFF OIL PULSE WRENCH (PISTOL TYPE)**

Model/ Serial No. : **IPW-24160PN**

to which this declaration applies, complies with these normative documents:

- Machinery Directive: 2006/42/EC

and conforms to the following EN standard,

- EN ISO 12100: 2010
- EN ISO 11148-6:2012

Name and Signature/Position

Mike Su – Managing Director

Date and Place

2022/6/6

Taipei, Taiwan



**NOTE**

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