

TORERO®

OIL PULSE TOOLS &
TORQUE MEASUREMENT EQUIPMENT



TORERO®

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TORERO®

TORERO TOOLS' SUCESS - YOUR PROSPECTS

Chu Dai Industrial Co., Ltd. is the leading and first manufacturer of oil-pulse tools in Taiwan . Since its establishment in 1997, Chu Dai has been investing intensive endeavors into providing advanced machinery technology for a better tomorrow. We provide the world with quality oil-pulse torque tools, clutch type tools, grinding tools and torque measuring equipment. Our brand is "TORERO". Our tools are available for automobile industry, home electric appliance , energy, building construction , aviation and shipbuilding industry.

Our factory have intensive R&D and technology to create high precision tools for industry market. We are still continuously developing feature TORERO brand tools for industry market . We have designed and improved a number of patents, especially oil-pulse tools enjoy high reputation in the field of manufacturing.

Chu Dai is an ISO-9001 quality control manufacturer. Products are also own CE certificate. Our oil-pulse tools are the best choice of professional tightening tools, automobile assembly factories and production lines. " Integrity , Quality , Innovation , Unceasing improvements , Customer first , Continuous growth" are the very core values and cornerstones where Chu Dai's crew-build up prosperity and pride. Working with us multiplies your performance.

Our business philosophy

"Honest , Innovation, Cooperation and Concern"

TORERO®

THE SPIRIT OF TORERO

Create international brand • Provide customers with honest service • Adhere to concept of precise R&D • Innovate product•Expand market • Cooperate with partners •Sustainable product management • Sincerely concern customers



READING GIDE

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Patent Diagrammatic

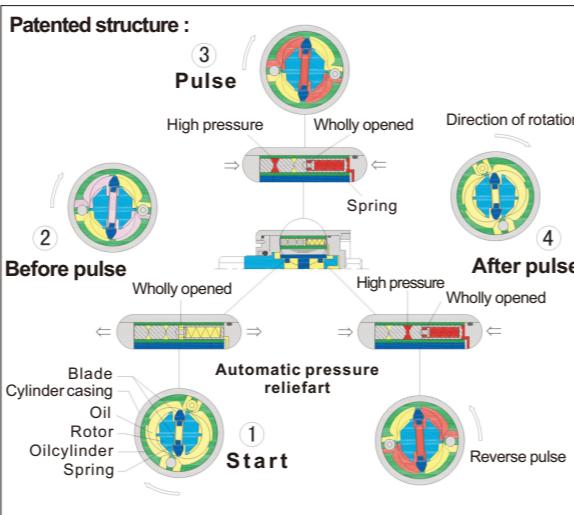
Our tools have been registered invention patents at multiple countries. You will touch on our patents even if your tools are improved. We would pursue legal responsibility if you copy our tools.

1. OBT series oil-pulse tools :

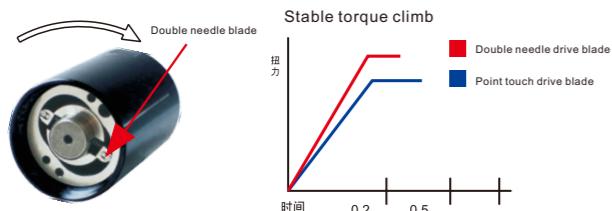
Our company has unique and new technology of "automatic pressure relief function".

Old type oil-pulse tools : Oil routing size depend on target torque when high-pressure oil region flow to low-pressure oil region in tightening process and pulsing unit. It make speed climbing slowly and torque unstably during tightening process.

New type oil-pulse tools : These tools use unique and patented technology of "automatic pressure relief function". This new technology make oil pass "pressure relief device" when high-pressure oil region flow to low-pressure oil region. This new device will automatically adjust flowing oil size in tightening process and pulsing unit . It will effectively improve tightening and make torque stably. This new technology improve fastening requirement more ideal. In addition, the target torque will be the same as old types with this new device.

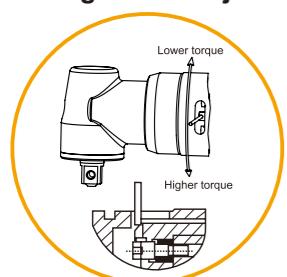


2. Double Needle Roller Illustration



Aiming at the torque climbing speed and the automatic air cut-off stability, the accuracy can be quickly exerted in the case of high and low air pressure

3. Angle tool adjusting torque device :



It is convenient for fast mini-adjustment and correction to use rotary adjusting torque device.

4. Automatic pressure relief device :

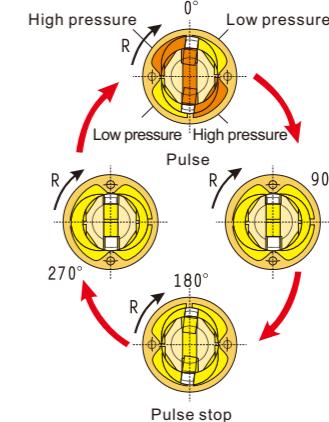


This device make pulse more smoother, torque climbing faster and efficient.

Features of oil-pulse tool

► Double-blade pulsing unit

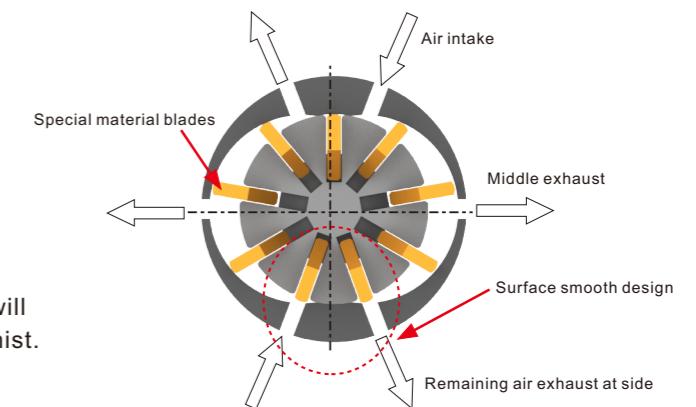
Oil-pulse tool is almost no reaction force at handle due to pulsing cycle is very short. This is different from impact wrenches. Oil-pulse tool won't have metal-to-metal collision. It offer stable pulse. This can reduce vibration , noise and make tool have long life . All of our oil-pulse tools are combination of double-blade pulsing unit and double cylinder rotor. It can increase 50% weight power ratio. It react speed fast when it tighten. It performed more excellently at soft joint.



► Double cylinder rotor

High efficient rotor

- New design and energy-saving type air rotor
- Special coated rotating blades
- Middle exhaust
- Surface smooth design
- Drain away excess air



Low oil mist

We use self-lubricating blades and cylinder. It will reduce the problem of more lubricants and oil mist.

New series appearance of oil-pulse tools

1 The grip is ergonomic. There are more spaces for fingers. Fingers feel more comfortable.



3 Handle grip is oval shape which meet ergonomic. It reduce sliding at tightening process. It can resist reaction-force



5 Standard trigger is as art shown.



2 The top handle area is smaller now. It make pressing trigger will be more flexible.



4 It don't need to use special tool for maintenance and adjusting inside parts. It can use general open-end wrench for maintenance and adjusting inside parts.

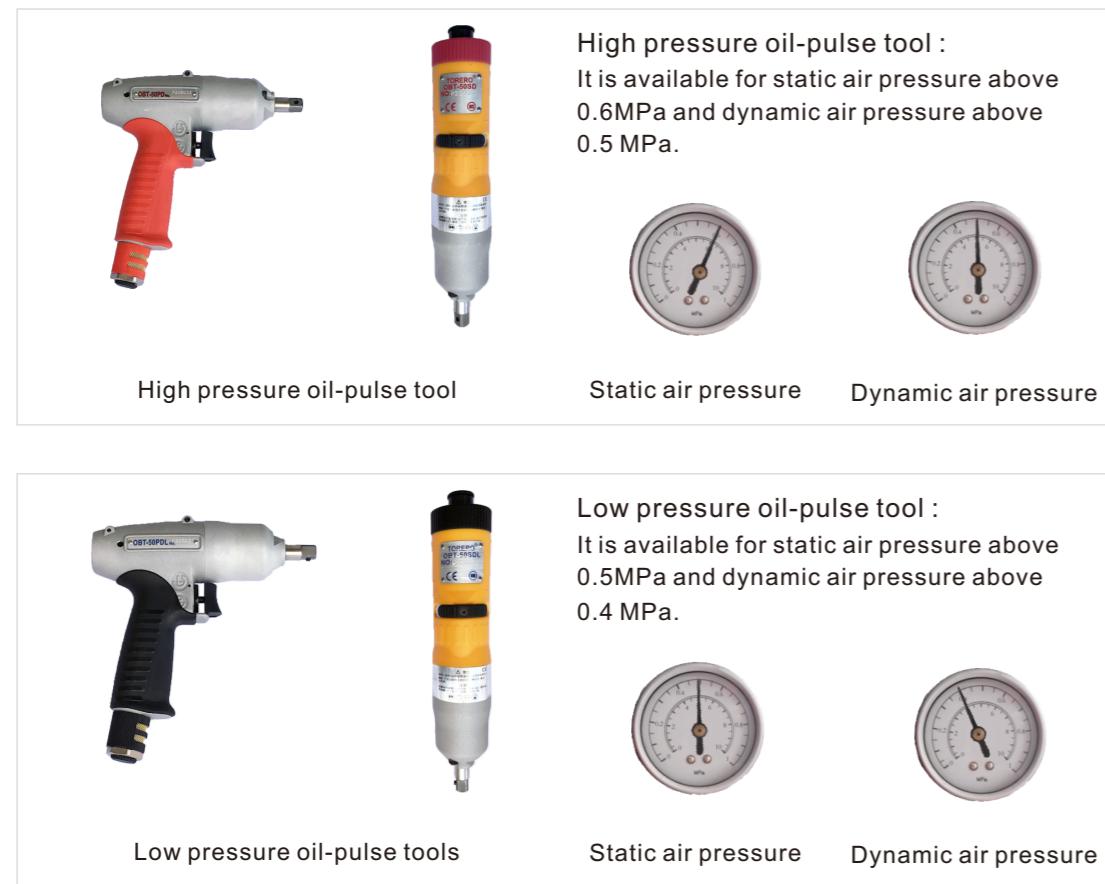


The extended trigger is only suitable for below series :
OBT-180PD
OBT-150PD
OBT-130PD



Choosing description of high and low pressure oil-pulse tool

The air source conditions differently will influence tools' ability、shut off speed and life. Model OBT oil-pulse series tool are divided into high and low pressure series tool for fulfilling high quality tightening. Please kindly chose low pressure oil-pulse tool if air pressure isn't stable or use extended socket.(It means air source instability when air pressure drop to 1Kg/cm²=14.2psi=0.98bar.)



Tool head type : Touch pin type and through pin type

Tool head is square. Head has touch pin type and through pin type for choosing(We normally provide touch pin type if you don't specify any type.)



Through-pin type :
It use through-pin and o-ring to fix socket.
It use for changing socket infrequently (It need to buy.)
O-ring and through pin are packaged in the box.

Touch-pin type :
It use touch-pin to fix socket. It use for changing socket frequently.
The spring and touch-pin are already installed on tool when export.

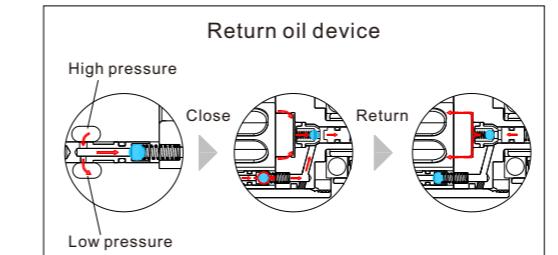
Principle of OBT series tool

The high-precision automatic shut off oil-pulse tools are with high precision , high efficiency and excellent durability at highest tightening peak.

Features :

Reliable torque precision and fast shut off efficiency

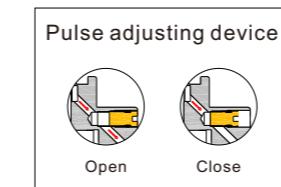
1. **Automatic relief device(PAT.P) :**
Reference the first one on catalogue page 1 .
2. **Return oil valve device(PAT.P) :**
New R & D patent(Return oil valve- fast return oil system) can reach more accurately repetitive torque. It can effectively solve torque error in each tightening process and greatly improving torque accuracy.



3. **We offer various return- springs for choosing to satisfy customers at different air source environment.**
The new R&D various return- springs can quickly shut off even at the lowest air pressure 0.35Mpa.

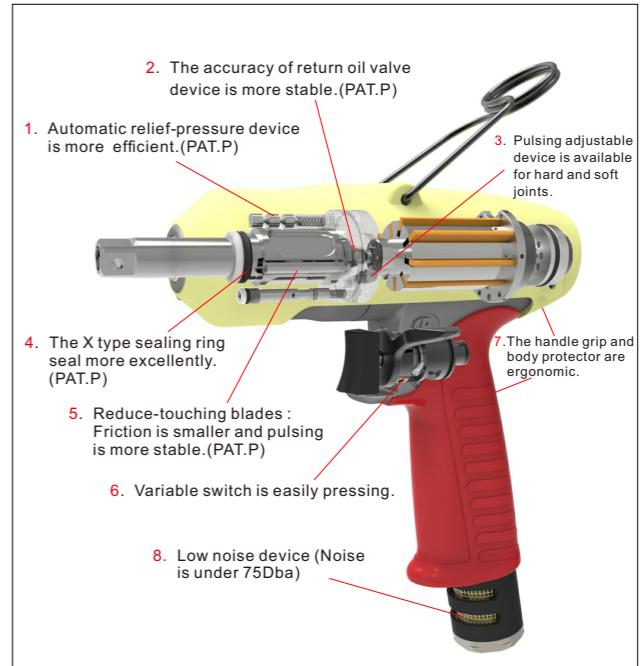
Raise effectively and reduce costs :

4. **Pulse adjusting device(PAT.P) :**
This adjusting device is for satisfying soft and hard joint requirement. It also can switch shut-off and non shut-off.

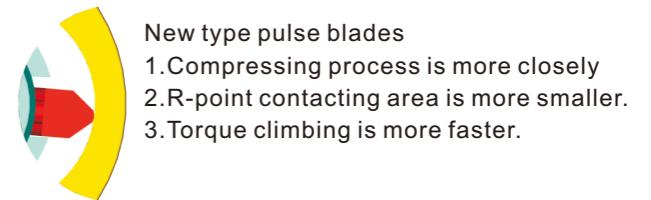


5. **X-type sealing ring(PAT.P) :**
Pulse unit have dozens of times pulse/ per second under high pressure environment. This is a big challenge for pulse unit's sealing . We already have accumulated technology and researched for many years. The new developed X-type sealing ring have excellent effect of sealing and long life.

6. **Reduced touch blades(PAT.P) :**
The new type reduced touch oil-pulse blades contact cylinder's R-point is more smaller. We use fine surface grinding technology for these blades . Blades will be more durable and sealing excellently. Every pulse strike will be more stable. This fine surface grinding technology also can reduce cost of maintenance blades.



New pulse blades type sectional view :



Reduce labor strength of operator

7. **Variable switch(PAT.P) :**
Variable switch make operator feel comfortable in any pressure environment. Operator won't have the pressure of pressing trigger in continuous using.

Contribution of environmental protection

8. **The new type product bodies are ergonomic.**
These tools are low noise and low vibration. They are also with small reaction force oil-pulse device. The small handle design reduce burden of hand、finger and wrist. Tools don't paint and change to sand blasting for environment protecting. We use green material for handle grip and body protector.

9. **Low noise device :**
New developed low noise device can be friendly for operator and environment.

Oil-pulse tool



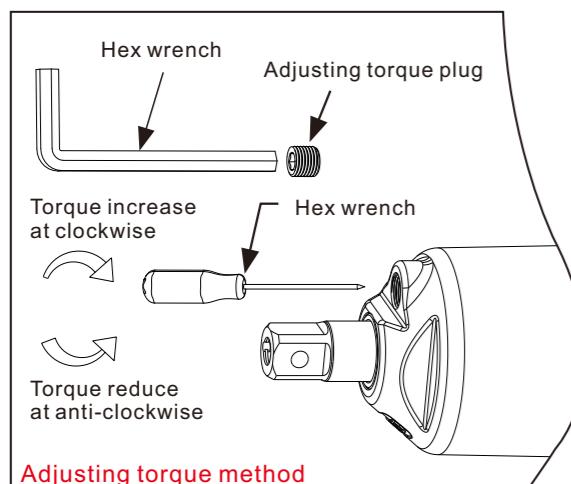
Pistol shut-off oil-pulse wrench(High pressure tool)



Oil-pulse tool choosing guide

- It need to understand air pressure、bolt size 、material 、torque requirement and joint situation when choose an oil-pulse tool. (It will lose torque when use long socket or universal socket. It would choose a larger oil-pulse tool when use long socket and universal socket.)
- It don't suit to use shut-off oil-pulse tool when use long socket or universal socket.

Oil-pulse tool adjust torque diagram (Pistol and straight type)



- Remove hex bolt on front end plate with a hex wrench.
- Turn anvil by hand until hex. nut hole on front end pate is visible adjusting screw.
- Hex screwdriver turn bolt toward clockwise is increasing torque. Hex screwdriver turn bolt toward anti-clockwise is reducing torque.
- Tighten hex screws after adjusting torque.

Pistol high pressure oil-pulse tool (Suit for pressure 0.5-0.6MPa = 72.5 - 87 psi)

Model	Bolt size	Torque range Nm	Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level	
				0.4MPa	0.5MPa	0.6MPa							
OBT-40PD	5	4-12	3/8	-	3700	4000	160.5	0.92	PT 1/4	6.5	0.2	75	
OBT-50PD	5-6	7-16	3/8	-	4200	4500	160.5	0.92	PT 1/4	6.5	0.25	78	
OBT-60PD	8	16-32	3/8	-	5700	6000	170	0.95	PT 1/4	6.5	0.35	80	
OBT-70PD	8-10	30-50	3/8	-	5700	6000	183	1.05	PT 1/4	8.0	0.4	80	
OBT-80PD	8-10	40-65	3/8	-	5500	5800	187	1.25	PT 1/4	8.0	0.48	80	
OBT-81PD	10	40-65	1/2	-	5500	5800	192	1.25	PT 1/4	8.0	0.48	80	
OBT-90PD	10-12	42-85	1/2	-	4700	5000	192	1.45	PT 1/4	8.0	0.53	82	
OBT-100PD	12	75-130	1/2	-	4200	4500	198	1.7	PT 1/4	8.0	0.55	82	
OBT-130PD	12-14	110-150	1/2	-	4200	4500	215	2.3	PT 1/4	12.7	0.7	82	
OBT-150PD	14-16	130-210	3/4	-	3600	3900	243.5	2.9	PT 1/4	12.7	0.7	82	
OBT-180PD	16-18	165-260	3/4	-	2800	3000	262	3.7	PT 3/8	12.7	0.7	82	
Model	Bolt size	Torque range Nm	Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level	
				0.4MPa	0.5MPa	0.6MPa							
OBT-250PD	16-20	250-450	3/4	-	-	-	3600	221	4.2	PT 3/8	13	1.4	85

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

Pistol shut-off oil-pulse screwdriver(High pressure tool)



OBT-40PH

OBT-50PH

OBT-60PH

OBT-70PH

OBT-80PH

Pistol shut-off oil-pulse wrench(Low pressure tool)



OBT-50PDL

OBT-60PDL

OBT-70PDL



OBT-80PDL

OBT-81PDL

OBT-90PDL

OBT-100PDL

Pistol high pressure oil-pulse tool (Suit for pressure 0.5-0.6MPa = 72.5 - 87 psi)

Model	Bolt size	Torque range Nm	Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level		
				0.4MPa	0.5MPa	0.6MPa								
OBT-40PH	5	0.5-0.6MPa	mm	4-12	1/4	-	3700	4000	161	0.92	PT 1/4	6.5	0.2	75
OBT-50PH	5-6	0.5-0.6MPa	mm	7-16	1/4	-	4200	4500	161	0.92	PT 1/4	6.5	0.25	78
OBT-60PH	6-8	0.5-0.6MPa	mm	14-30	1/4	-	5700	6000	171	0.95	PT 1/4	6.5	0.35	80
OBT-70PH	8	0.5-0.6MPa	mm	22-35	1/4	-	5700	6000	183	1.05	PT 1/4	8.0	0.4	80
OBT-80PH	8-10	0.5-0.6MPa	mm	32-45	1/4	-	5500	5800	191	1.26	PT 1/4	8.0	0.48	80

Pistol shut-off oil-pulse screwdriver(Low pressure tool)



OBT-50PHL

OBT-60PHL

OBT-70PHL

OBT-80PHL



OBT-130PDL

OBT-150PDL

OBT-180PDL

Pistol low pressure oil-pulse tool (Suit for pressure 0.4-0.5MPa = 58 - 72.5 psi)

Model	Bolt size	Torque range Nm	Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level		
				0.4MPa	0.5MPa	0.6MPa								
OBT-50PHL	5-6	0.4-0.5MPa	mm	7-16	1/4	3900	4200	-	161	0.92	PT 1/4	6.5	0.2	75
OBT-60PHL	6-8	0.4-0.5MPa	mm	10-24	1/4	5400	5700	-	171	0.95	PT 1/4	6.5	0.25	77
OBT-70PHL	8	0.4-0.5MPa	mm	14-30	1/4	5300	5600	-	183	1.05	PT 1/4	8.0	0.4	78
OBT-80PHL	8-10	0.4-0.5MPa	mm	25-40	1/4	5300	5600	-	191	1.26	PT 1/4	8.0	0.48	80

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

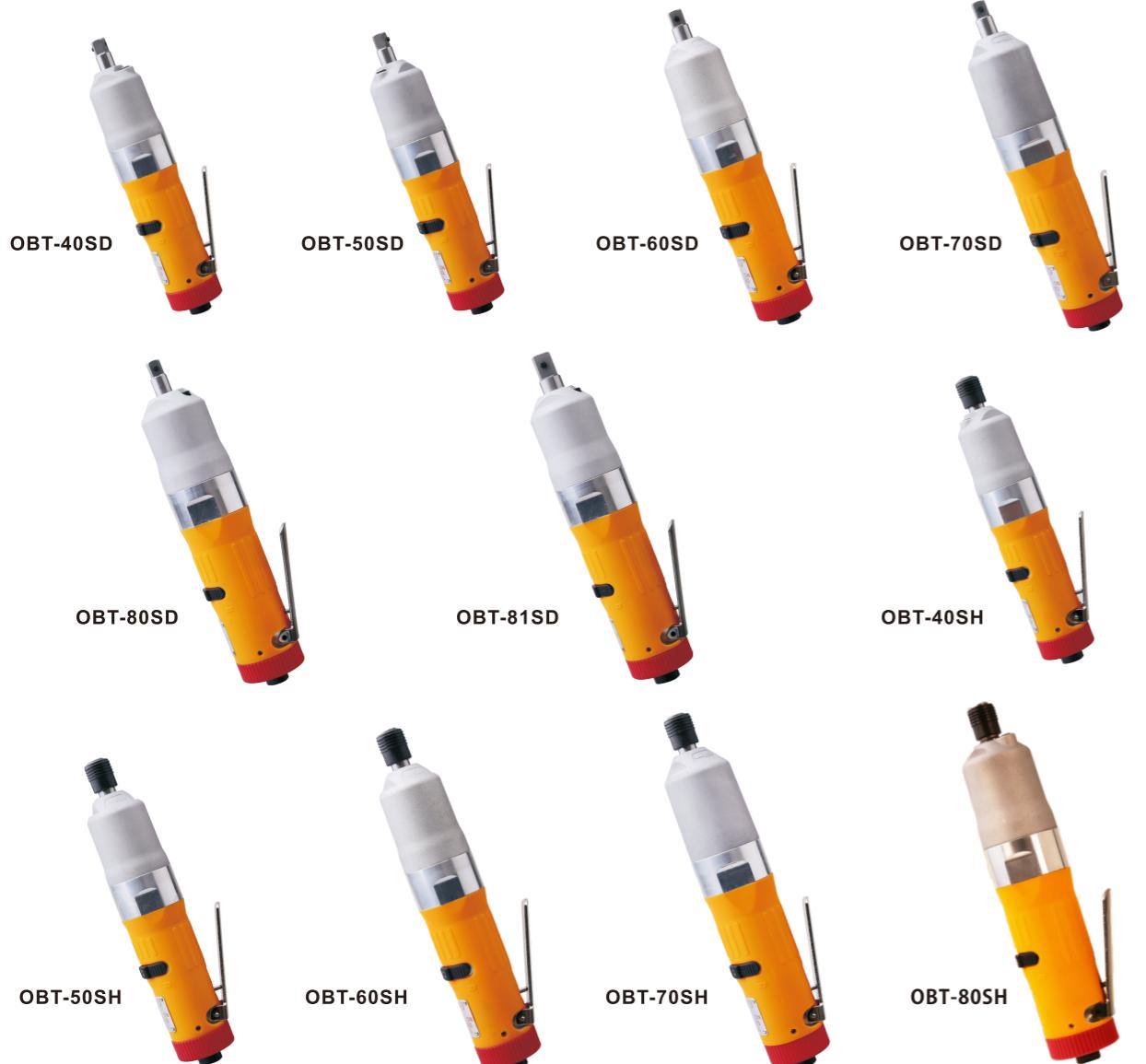
Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

Model	Bolt size	Torque range Nm	Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level		
				0.4MPa	0.5MPa	0.6MPa								
OBT-50PDL	5-6	0.4-0.5MPa	mm	7-16	1/4	3900	4200	-	160.5	0.92	PT 1/4	6.5	0.2	75
OBT-60PDL	8	0.4-0.5MPa	mm	14-32	3/8	5400	5700	-	170	0.95	PT 1/4	6.5	0.25	77
OBT-70PDL	8-10	0.4-0.5MPa	mm	25-45	3/8	5400	5700	-	183	1.05	PT 1/4	8.0	0.3	78
OBT-80PDL	8-10	0.4-0.5MPa	mm	35-55	3/8	5300	5600	-	187	1.25	PT 1/4	8.0	0.4	78
OBT-81PDL	10	0.4-0.5MPa	mm	35-58	1/2	5300	5600	-	192	1.25	PT 1/4	8.0	0.4	78
OBT-90PDL	10	0.4-0.5MPa	mm	40-80	1/2	4400	4700	-	192	1.45	PT 1/4	8.0	0.45	79
OBT-100PDL	10-12	0.4-0.5MPa	mm	65-105	1/2	3900	4200	-	198	1.7	PT 1/4	8.0	0.48	79
OBT-130PDL	12	0.4-0.5MPa	mm	85-120	1/2	3900	4200	-	215	2.3	PT 1/4	12.7	0.5	79
OBT-150PDL	12-14	0.4-0.5MPa	mm	105-165	3/4	3600	3800	-	243.5	2.9	PT 1/4	12.7	0.5	79
OBT-180PDL	14-16	0.4-0.5MPa	mm	125-205	3/4	2600	2800	-	262	3.7	PT 3/8	12.7	0.5	80

Straight shut-off oil-pulse wrench/screwdriver(High pressure tool)



Straight high pressure oil-pulse tool (Suit for pressure 0.5-0.6MPa = 72.5 - 87 psi)

Model	Bolt size	Torque range		Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
		Nm	0.4-0.5MPa		0.4MPa	0.5MPa	0.6MPa						
		mm	0.5-0.6MPa		in								
OBT-40SD	5	4-12	3/8	-	4700	5000	218	0.83	PT 1/4	6.5	0.2	70	
OBT-50SD	5-6	7-16	3/8	-	5600	6000	218	0.83	PT 1/4	6.5	0.25	78	
OBT-60SD	8	16-35	3/8	-	5800	6200	228	0.87	PT 1/4	6.5	0.3	80	
OBT-70SD	8-10	30-48	3/8	-	5400	5800	240.5	0.95	PT 1/4	8.0	0.35	80	
OBT-80SD	8-10	35-60	3/8	-	6100	6500	246.5	1.2	PT 1/4	8.0	0.48	80	
OBT-81SD	10	35-60	1/2	-	6100	6500	251.5	1.25	PT 1/4	8.0	0.48	80	
OBT-40SH	5	4-12	1/4	-	4700	5000	220.5	0.83	PT 1/4	6.5	0.2	70	
OBT-50SH	5-6	7-16	1/4	-	5600	6000	220.5	0.83	PT 1/4	6.5	0.25	78	
OBT-60SH	6-8	16-32	1/4	-	5800	6200	230.5	0.87	PT 1/4	6.5	0.3	80	
OBT-70SH	8	22-35	1/4	-	5400	5800	240.5	0.95	PT 1/4	8.0	0.4	80	
OBT-80SH	8-10	28-43	1/4	-	6100	6500	230.5	0.87	PT 1/4	8.0	0.48	80	

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

Straight shut-off oil-pulse wrench/screwdriver(Low pressure tool)



Straight low pressure oil-pulse tool (Suit for pressure 0.4-0.5MPa = 58 - 72.5 psi)

Model	Bolt size	Torque range		Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
		mm	Nm		0.4-0.5MPa	0.4MPa	0.5MPa						
OBT-50SDL	5-6	7-16	3/8	-	5200	5700	-	218	0.83	PT 1/4	6.5	0.2	75
OBT-60SDL	8	12-28	3/8	-	5400	5800	-	228	0.87	PT 1/4	6.5	0.25	77
OBT-70SDL	8-10	25-40	3/8	-	5000	5500	-	240.5	0.95	PT 1/4	8.0	0.27	78
OBT-80SDL	8-10	35-55	3/8	-	5800	6200	-	246.5	1.2	PT 1/4	8.0	0.40	78
OBT-81SDL	10	40-60	1/2	-	5800	6200	-	251.5	1.25	PT 1/4	8.0	0.40	78
OBT-30SHL	4-5	3-6	1/4	-	5600	5800	-	219	0.72	PT 1/4	5.0	0.2	65
OBT-50SHL	5-6	7-16	1/4	-	5200	5700	-	220.5	0.83	PT 1/4	6.5	0.2	75
OBT-60SHL	6-8	8-22	1/4	-	5400	5800	-	230.5	0.87	PT 1/4	6.5	0.2	77
OBT-70SHL	8	22-32	1/4	-	5000	5500	-	240.5	0.95	PT 1/4	8.0	0.25	77
OBT-80SHL	8-10	28-35	1/4	-	5800	6200	-	250	1.25	PT 1/4	8.0	0.40	78

Pistol non shut-off oil-pulse screwdriver



Model	Bolt size	Torque range		Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
		mm	Nm		0.4-0.5MPa	0.4MPa	0.5MPa						
OBN-30PH	5-6	6-12	1/4	-	3700	4000	131	0.7	PT 1/4	6.5	0.2	75	
OBN-40PH	6	11-20	1/4	-	3700	4000	131	0.7	PT 1/4	6.5	0.2	75	
OBN-50PH	6-8	22-35	1/4	-	5700	6000	134	0.77	PT 1/4	6.5	0.25	78	
OBN-60PH	8	30-40	1/4	-	6200	6500	142	0.82	PT 1/4	8.0	0.4	80	
OBN-70PH	8-10	35-45	1/4	-	6200	6500	155	0.95	PT 1/4	8.0	0.45	80	
OBN-80PH	8-10	42-62	1/4	-	6500	6800	170	1.18	PT 1/4	8.0	0.48	80	

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

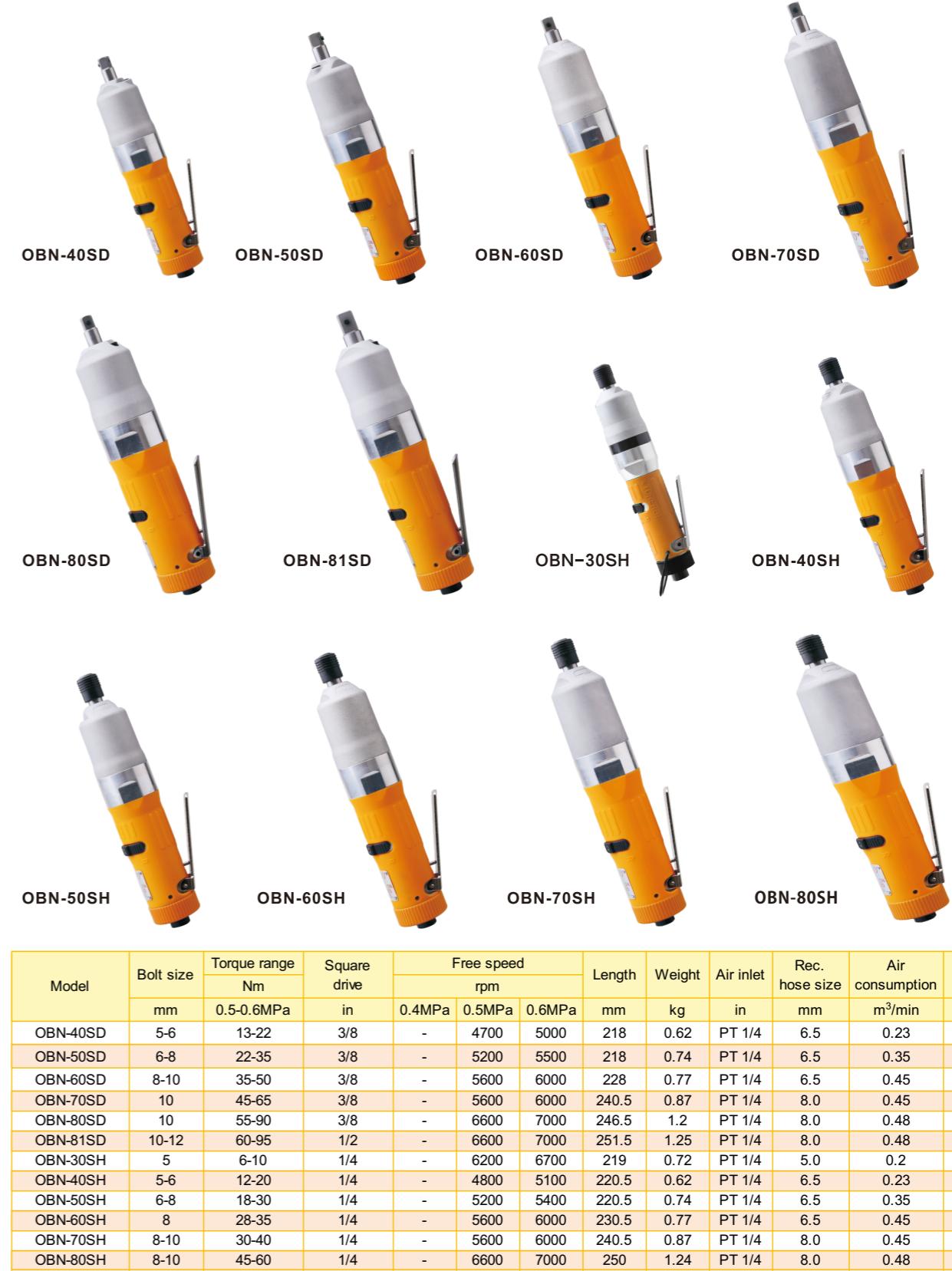
Soft joint application : The minimum of the torque in the catalogue.

Pistol non shut-off oil-pulse wrench



Model	Bolt size	Torque range Nm	Square drive	Free speed rpm			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
				0.4MPa	0.5MPa	0.6MPa						
OBN-30PD	5-6	6-12	3/8	-	3700	4000	131	0.7	PT 1/4	6.5	0.2	75
OBN-40PD	6	13-22	3/8	-	3700	4000	131	0.7	PT 1/4	6.5	0.2	75
OBN-50PD	6-8	22-35	3/8	-	5700	6000	134	0.77	PT 1/4	6.5	0.25	78
OBN-60PD	8-10	35-50	3/8	-	6200	6500	141	0.82	PT 1/4	6.5	0.4	80
OBN-70PD	10	50-70	3/8	-	6200	6500	155	0.95	PT 1/4	8.0	0.45	80
OBN-80PD	10	60-95	3/8	-	6500	6800	161.5	1.15	PT 1/4	8.0	0.48	80
OBN-81PD	10-12	65-100	1/2	-	6500	6800	166.5	1.17	PT 1/4	8.0	0.48	80
OBN-90PD	12	90-110	1/2	-	5200	5500	165	1.3	PT 1/4	8.0	0.53	82
OBN-100PD	12-14	105-140	1/2	-	4200	4500	172	1.66	PT 1/4	8.0	0.58	80
OBN-130PD	14	110-170	1/2	-	4000	4200	185	2.3	PT 1/4	12.7	0.65	82
OBN-150PD	14-16	160-240	3/4	-	4000	4200	213.5	2.5	PT 1/4	12.7	0.7	82
OBN-180PD	16-18	200-280	3/4	-	3300	3500	226.5	3.0	PT 3/8	12.7	0.7	82

Straight non shut-off oil-pulse wrench/screwdriver



Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

Cordless clutch torque screwdriver tool(Power-off)

Main feature



- Especially suitable for workstations with operational flexibility and torque range control
- Applicable to work areas where pneumatic and electrical tools cannot be used with air pipes and cable
- Suitable for automotive interior assembly
- Compliance with ISO 5393
- CMK≥1.67 at±10%

Display and keys on the rear of the tool for programming functions



- Tightening speed setting • Tool information inquiry
- Batch count settings • Light switch settings
- Tightening record inquiry • Thread speed setting
- Power display

Display light description

- Low Power
- The green light is on to indicate that the tightening is OK, and the set torque value is reached; Steady green light accompanied by three beeps, indicating that the normal number of locks has reached the batch countnumber to set the number.
- The red light is on with three beeps, indicating that the locking is abnormal and the set torque has not been reached. the tightening operation needs to be performed again
- The traffic lights flash alternately to indicate that the tool is in the reverse state

Pistol type rechargeable

Model	Torque Range		Square Drive	Free Speed r/min	Weight (kg) No Battery	Length mm	Voltage V	Battery
	Nm							
LTV-40PH-2L	0.8-2.5		1/4	400	1	220	18	Li-ion
LTV-40PH-2	0.8-2.5		1/4	1500	1	220	18	Li-ion
LTV-40PH-6	2.0-6.0		1/4	1000	1	220	18	Li-ion
LTV-40PH-8	3.0-8.0		1/4	800	1	220	18	Li-ion
LTV-40PH-12	5.0-12.0		1/4	600	1	220	18	Li-ion

► Accessories



Lithium battery (thin)

Model	BL-18
Voltage	18V
capacity	2.5Ah
Weight	0.43Kg
Order Number	3P212600000



Lithium battery (thick)

Model	BL-18-A
Voltage	18V
capacity	5.0Ah
Weight	0.68Kg
Order Number	3P212590000



Charger

Model	BL-18V
Power	AC100V-AC240V
Output Voltage	18V
Weight	0.5Kg
Order Number	3P212630000



Jacket

Order Number	3P212500000
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Color Ring

Model	Color Ring
LTV-40PH-2L	White
LTV-40PH-2	Red
LTV-40PH-6	Orang
LTV-40PH-8	Green
LTV-40PH-12	Blue
Order Number	3P217830000



Tool Ring

Order Number	3P210440030
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Angle shut-off oil-pulse wrench(High pressure tool)



The head can be installed in any direction 360°



Angle series high pressure oil-pulse tool (Suit for pressure 0.5-0.6MPa = 72.5 - 87 psi)

Model	Bolt size	Torque range Nm	Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
				mm	0.4MPa	0.5MPa	0.6MPa					
OBT-50SC	5-6	6-15	3/8	-	4500	4700	258.0	1.28	PT 1/4	6.5	0.25	75
OBT-60SC	6-8	13-25	3/8	-	5500	5800	270.0	1.35	PT 1/4	6.5	0.30	75
OBT-70SC	8-10	27-45	3/8	-	3900	4200	289.0	1.63	PT 1/4	8.0	0.35	78
OBT-70SC-1	8	30-50	1/2	-	3900	4200	289.0	1.64	PT 1/4	8.0	0.35	78
OBT-75SC	10	26-50	1/2	-	3800	4000	290.0	1.83	PT 1/4	8.0	0.35	78
OBT-80SC	10	28-60	1/2	-	4300	4500	295.0	2.00	PT 1/4	8.0	0.35	80
OBT-80SC-1	10	35-62	1/2	-	4200	4400	295.0	2.00	PT 1/4	8.0	0.35	80

Angle shut-off oil-pulse screwdriver(High pressure tool)



Angle series high pressure oil-pulse tool (Suit for pressure 0.5-0.6MPa = 72.5 - 87 psi)

Model	Bolt size	Torque range Nm	Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
				mm	0.4MPa	0.5MPa						
OBT-50SCH	5-6	13-18	1/4	-	4500	4700	259.0	1.27	PT 1/4	6.5	0.25	75
OBT-60SCH	6-8	16-23	1/4	-	5500	5800	270.0	1.32	PT 1/4	6.5	0.30	75
OBT-70SCH	8	18-25	1/4	-	5000	5300	281.0	1.42	PT 1/4	6.5	0.35	78

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

Angle shut-off oil-pulse wrench(Low pressure tool)



Angle non shut-off oil-pulse wrench



Angle low pressure oil-pulse tool (Suit for pressure 0.4-0.5MPa = 58 - 72.5 psi)

Model	Bolt size	Torque range Nm	Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level						
				rpm														
				0.4MPa	0.5MPa	0.6MPa												
OBT-50SCL	6-8	7-14	3/8	4100	4500	-	258.0	1.35	PT 1/4	6.5	0.20	75						
OBT-60SCL	8	12-22	3/8	4400	4800	-	270.0	1.45	PT 1/4	6.5	0.25	75						
OBT-70SCL	8	20-35	3/8	3600	4000	-	289.0	1.64	PT 1/4	8.0	0.27	75						
OBT-70SCL-1	8	28-45	1/2	3600	4000	-	289.0	1.64	PT 1/4	8.0	0.27	75						
OBT-75SCL	8-10	40-50	1/2	3600	4000	-	290.0	1.83	PT 1/4	8.0	0.27	75						
OBT-80SCL	10	30-50	1/2	2400	2800	-	305.5	2.12	PT 1/4	8.0	0.27	75						
OBT-80SCL-1	8-10	42-60	1/2	3900	4300	-	295.0	2.00	PT 1/4	8.0	0.27	75						

Model	Bolt size	Torque range Nm	Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level						
				rpm														
				0.5-0.6MPa	in	0.4MPa 0.5MPa 0.6MPa												
OBN-50SC	6-8	18-25	3/8	-	-	4800 5200	261.5	1.35	PT 1/4	6.5	0.40	75						
OBN-60SC	8	25-35	3/8	-	-	5700 6000	269.5	1.45	PT 1/4	6.5	0.43	75						
OBN-70SC	8-10	40-55	3/8	-	-	3600 4000	285.0	1.60	PT 1/4	8.0	0.45	78						
OBN-70SC-1	8-10	45-60	1/2	-	-	3600 4000	285.0	1.62	PT 1/4	8.0	0.45	78						
OBN-75SC	10	50-70	1/2	-	-	3400 3800	290.0	1.82	PT 1/4	8.0	0.45	78						
OBN-80SC	10-12	60-90	1/2	-	-	3200 3500	305.5	1.85	PT 1/4	8.0	0.50	80						
OBN-80SC-1	10	55-80	1/2	-	-	4700 5000	294.0	1.97	PT 1/4	8.0	0.50	78						

Angle shut-off oil-pulse screwdriver(Low pressure tool)



Angle non shut-off oil-pulse screwdriver



Angle low pressure oil-pulse tool (Suit for pressure 0.4-0.5MPa = 58 - 72.5 psi)

Model	Bolt size	Torque range Nm	Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level						
				rpm														
				0.4-0.5MPa	in	0.4MPa 0.5MPa 0.6MPa												
OBT-50SCHL	5-6	6-12	1/4	5100	5500	-	259.0	1.27	PT 1/4	6.5	0.20	75						
OBT-60SCHL	6	11-16	1/4	4800	5200	-	270.0	1.32	PT 1/4	6.5	0.25	75						
OBT-70SCHL	8	14-22	1/4	4400	4800	-	281.0	1.42	PT 1/4	6.5	0.27	75						

Model	Bolt size	Torque range Nm	Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level						
				rpm														
				0.5-0.6MPa	in	0.4MPa 0.5MPa 0.6MPa												
OBN-50SCH	6	14-20	1/4	-	-	4000 4200	256.0	1.22	PT 1/4	6.5	0.40	75						
OBN-60SCH	6-8	18-26	1/4	-	-	5400 5800	264.0	1.26	PT 1/4	6.5	0.43	75						
OBN-70SCH	8	22-30	1/4	-	-	4800 5200	277.0	1.40	PT 1/4	8.0	0.45	75						

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

Oil-pulse double fixed torque wrench



OBT-80PN



OBT-90PN

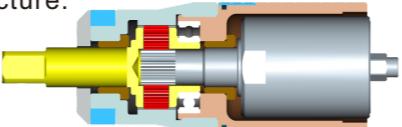


OBT-100PN



OBT-130PN

Patent structure:



The arm can be customized according to customer needs.
oil pressure components enlarge torque and reduce reaction force. Planetary gear sets magnify torque reduce rotational speed. This structure is very suitable for soft connection. (PAT.)

Product advantages: specially designed for bicycle shaft fixed torque wrench for ultra soft connection 360 degree design

Model	Torque range	Square drive	Free speed rpm	Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
	Nm	mm							
OBT-80PN	90-100(25-50)	1/2	0. 5MPa~0. 6MPa	242	1. 83	PT 1/4	8. 0	0. 4	78
OBT-90PN	110-120(45-75)	1/2	1200-1300	244	1. 95	PT 1/4	8. 0	0. 45	79
OBT-100PN	140-160(98-112)	1/2	1100-1200	260	2. 44	PT 1/4	8. 0	0. 48	79
OBT-130PN	190-220(133-154)	1/2	1000-1100	280	3. 04	PT 1/4	12. 7	0. 5	79

Unique reverse torsion function

Model	Torque range	Square drive	Free speed rpm	Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
	Nm	mm							
OBT-80PN-1	90-100(25-50)	1/2	1400-1500	242	1. 83	PT 1/4	8. 0	0. 4	78
OBT-90PN-1	110-120(45-75)	1/2	1200-1300	244	1. 95	PT 1/4	8. 0	0. 45	79
OBT-100PN-1	140-160(98-112)	1/2	1100-1200	260	2. 44	PT 1/4	8. 0	0. 48	79
OBT-130PN-1	190-220(133-154)	1/2	1000-1100	280	3. 04	PT 1/4	12. 7	0. 5	79

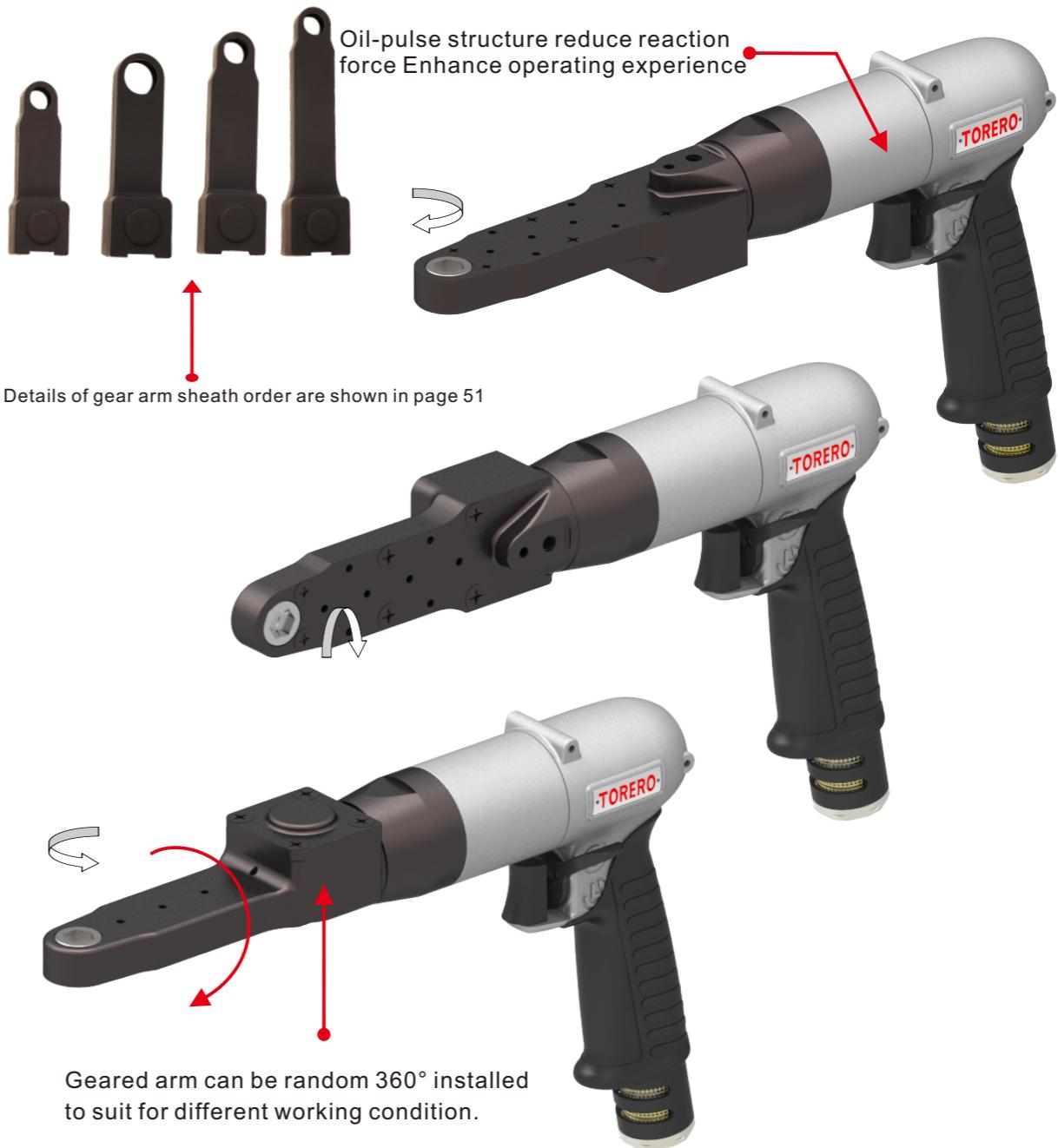
Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

Non shut-off geared oil-pulse tool(Close-end)

Close-end geared oil-pulse tool is available for small spaces. Especially the wrench head with angle can finish job at very difficult areas . These areas are hard finished by ordinary tools. Products with oil-pulse construction reduce reaction force. Operator use oil-pulse tool will feel more comfortable.



Pre-tighten geared wrench

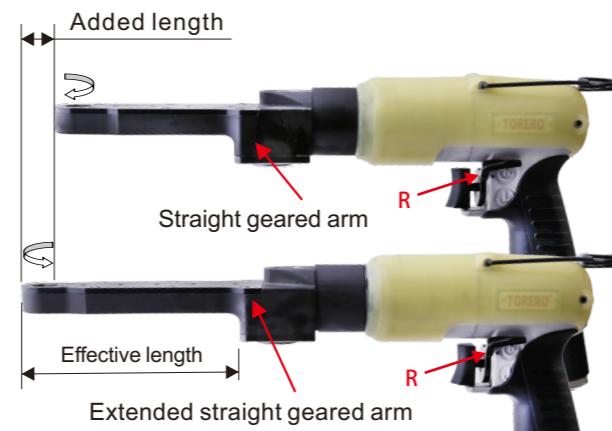
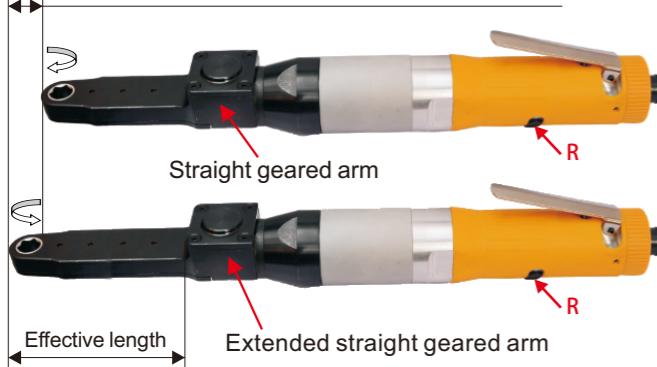
Note: the gear arm will change the tightening direction due to different installation directions.

Non shut-off geared oil-pulse tool(Close-end)

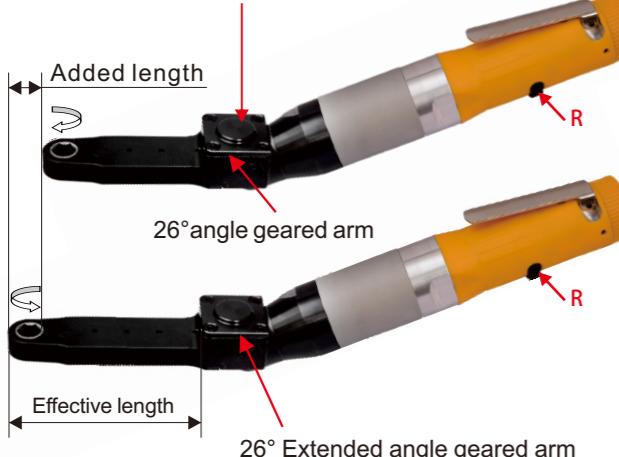
We offer various geared arms which include straight geared arm, 26° geared arm and extended 26° geared arm. These geared arms have different lengths and shapes to suit for various working environments.

The extended arm is more a gear than standard geared arm. The socket turn to opposite direction if geared arm and tool installed direction not change.

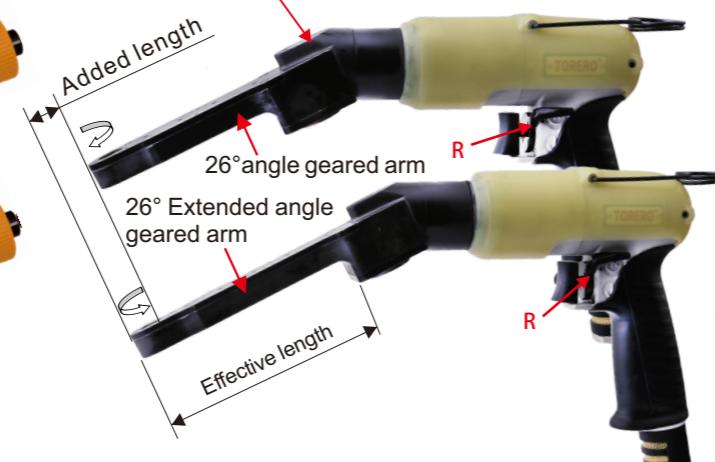
Extra add a gear in the geared arm. Geared arm will increase effective length. Turning to the contrary when installed same direction



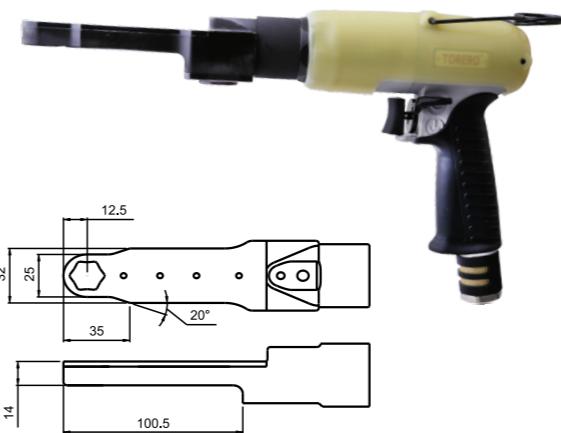
Geared arm can be 360° random installed



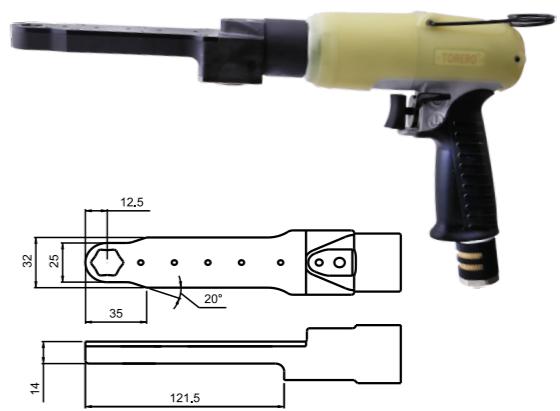
Geared arm can be 360° random installed



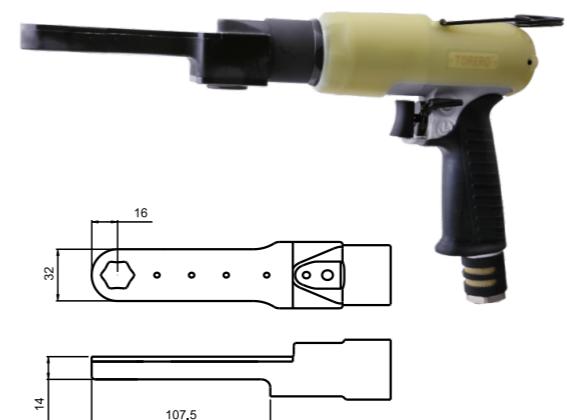
Pistol non shut-off geared oil-pulse tool(Close-end)



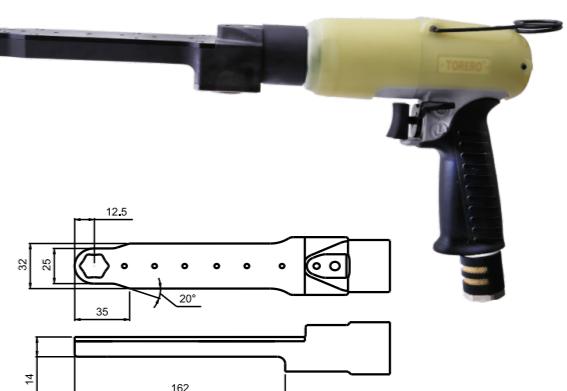
OBN-50PR OBN-60PR OBN-70PR



OBN-60PR-1 OBN-70PR-1



OBN-70PR-2



OBN-70PR-3

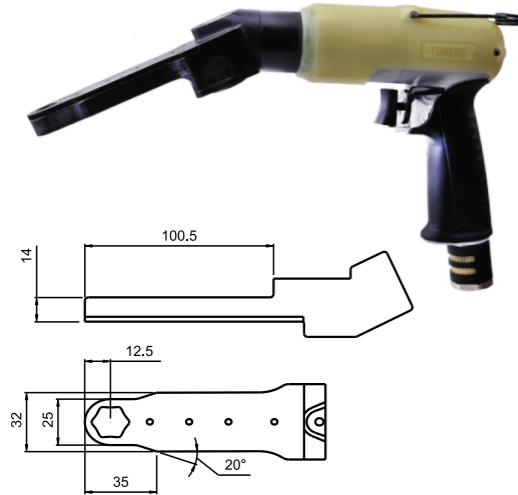
Model	Opposing edge size of socket gear		Torque range Nm	Free speed rpm	Length mm	Weight kg	Air inlet in	Rec. hose size mm	Air consumption m³/min	Noise level dB
	mm	in								
OBN-50PR	8, 10, 11, 12, 13	3/8"、7/16"	15-25	2100	286	1.58	PT 1/4	6.5	0.37	80
OBN-60PR	8, 10, 11, 12, 13	3/8"、7/16"	22-32	3000	289	1.66	PT 1/4	6.5	0.4	80
OBN-70PR	8, 10, 11, 12, 13	3/8"、7/16"	25-35	3200	303.4	1.79	PT 1/4	8.0	0.45	80
OBN-60PR-1	8, 10, 11, 12, 13	3/8"、7/16"	20-30	3000	309.7	1.69	PT 1/4	6.5	0.4	80
OBN-70PR-1	8, 10, 11, 12, 13	3/8"、7/16"	25-33	3200	324.4	1.86	PT 1/4	8.0	0.45	80
OBN-70PR-2	12, 13, 14, 16, 17	9/16"、5/8"	25-40	3200	310.4	1.76	PT 1/4	8.0	0.45	80
OBN-70PR-3	8, 10, 11, 12, 13	3/8"、7/16"	25-30	3000	372.2	2.37	PT 1/4	8.0	0.45	80
OBN-80PR	16, 17, 18	9/16"、5/8"	45-60	3000	459	2.92	PT 1/4	8.0	0.47	80
OBN-80PR-1	19, 21, 22, 24	3/8"、7/16"	45-60	3000	466	2.95	PT 1/4	8.0	0.47	80

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

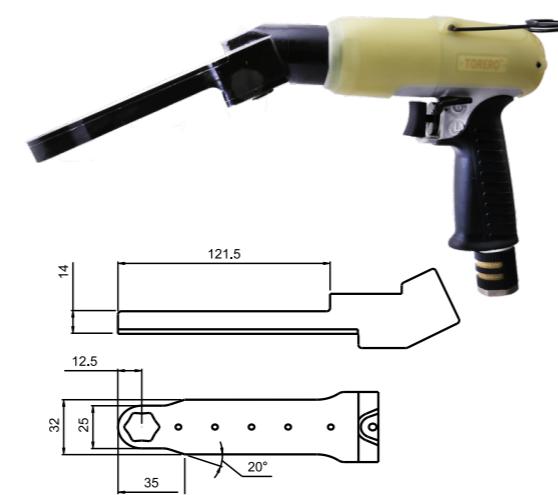
Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

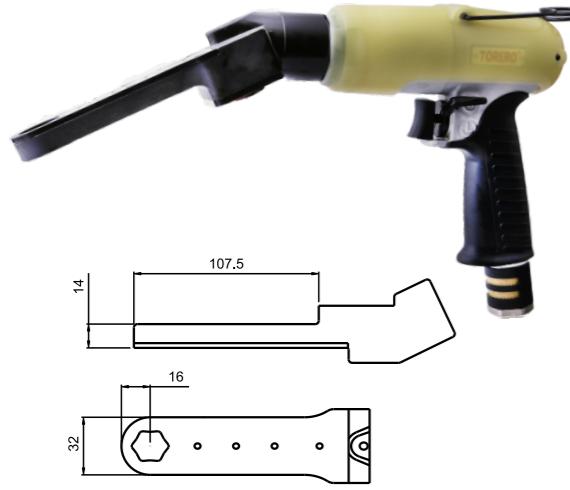
Pistol 26°angle non shut-off geared oil-pulse tool(Close-end)



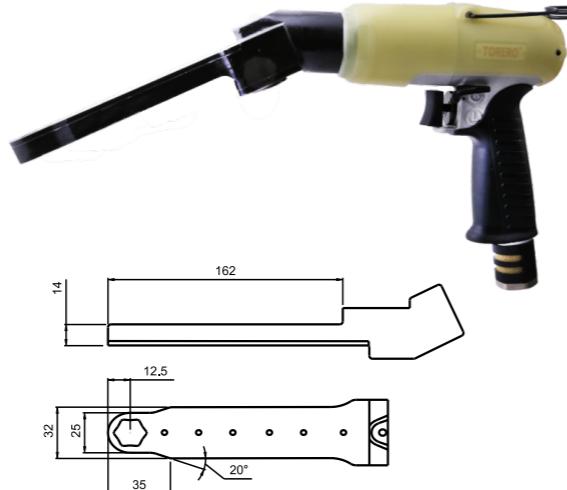
OBN-50PA OBN-60PA OBN-70PA



OBN-60PA-1 OBN-70PA-1

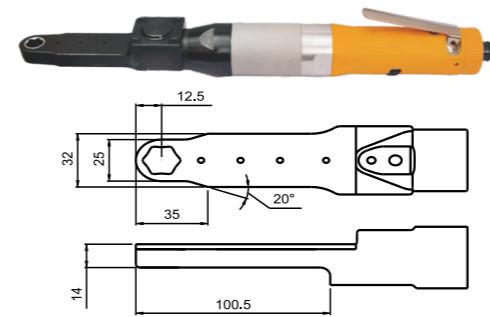


OBN-70PA-2

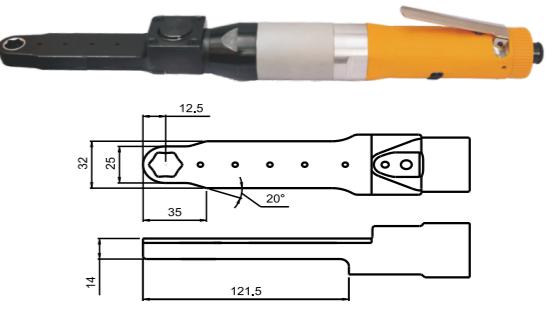


OBN-70PA-3

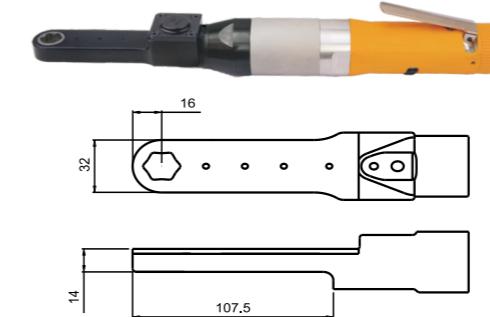
Straight non shut-off geared oil-pulse wrench(Close-end)



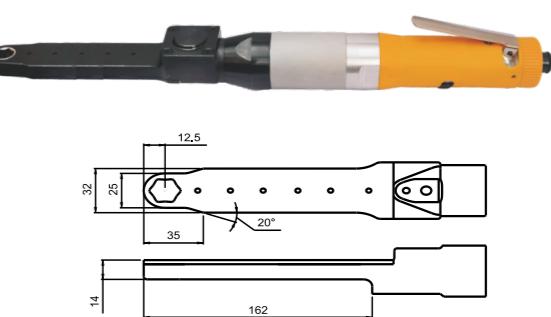
OBN-50SR OBN-60SR OBN-70SR



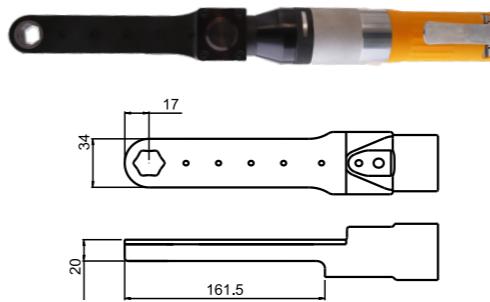
OBN-60SR-1 OBN-70SR-1



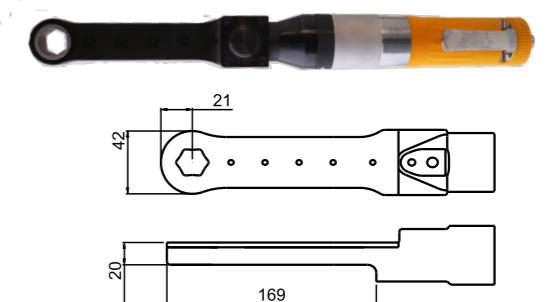
OBN-70SR-2



OBN-70SR-3



OBN-80SR



OBN-80SR-1

Model	Opposing edge size of socket gear		Torque range Nm	Free speed rpm	Length mm	Weight kg	Air inlet	Rec. hose size in	Air consumption m³/min	Noise level dB
	mm	in								
OBN-50PA	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa 15-25	2100	281	1.58	PT 1/4	6.5	0.37	80
OBN-60PA	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa 22-32	3000	284	1.66	PT 1/4	6.5	0.4	80
OBN-70PA	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa 25-35	3200	298.7	1.79	PT 1/4	8.0	0.45	80
OBN-60PA-1	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa 20-30	3000	302.9	1.69	PT 1/4	6.5	0.4	80
OBN-70PA-1	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa 25-33	3200	317.6	1.86	PT 1/4	8.0	0.45	80
OBN-70PA-2	12、13、14、16、17	9/16"、5/8"	0.5-0.6MPa 25-40	3200	301.9	1.78	PT 1/4	8.0	0.45	80
OBN-70PA-3	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa 25-30	3000	365	2.41	PT 1/4	8.0	0.45	80
OBN-80PA	16、17、18	9/16"、5/8"	0.5-0.6MPa 45-60	3000	459	2.92	PT 1/4	8.0	0.47	80
OBN-80PA-1	19、21、22、24	3/8"、7/16"	0.5-0.6MPa 45-60	3000	466	2.95	PT 1/4	8.0	0.47	80

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

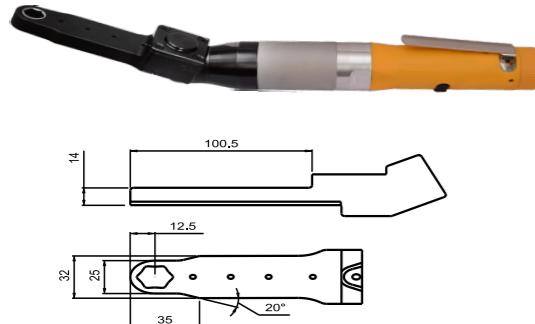
Model	Opposing edge size of socket gear		Torque range Nm	Free speed rpm	Length mm	Weight kg	Air inlet	Rec. hose size in	Air consumption m³/min	Noise level dB
	mm	in								
OBN-50SR	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa 15-25	2100	363	1.72	PT 1/4	6.5	0.37	80
OBN-60SR	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa 22-32	3000	370	1.78	PT 1/4	6.5	0.4	80
OBN-70SR	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa 25-35	3200	384.4	1.85	PT 1/4	8.0	0.45	80
OBN-60SR-1	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa 20-30	3000	379.3	1.74	PT 1/4	6.5	0.4	80
OBN-70SR-1	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa 25-33	3200	405.4	1.9	PT 1/4	8.0	0.45	80
OBN-70SR-2	12、13、14、16、17	9/16"、5/8"	0.5-0.6MPa 25-40	3200	391.4	1.95	PT 1/4	8.0	0.45	80
OBN-70SR-3	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa 25-30	3000	453.2	2.25	PT 1/4	8.0	0.45	80
OBN-80SR	16、17、18	9/16"、5/8"	0.5-0.6MPa 45-60	3000	462	2.85	PT 1/4	8.0	0.47	80
OBN-80SR-1	19、21、22、24	3/4"、7/8"	0.5-0.6MPa 45-60	3000	459	2.9	PT 1/4	8.0	0.47	80

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

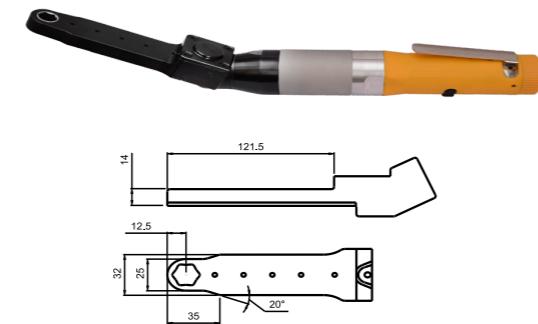
Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

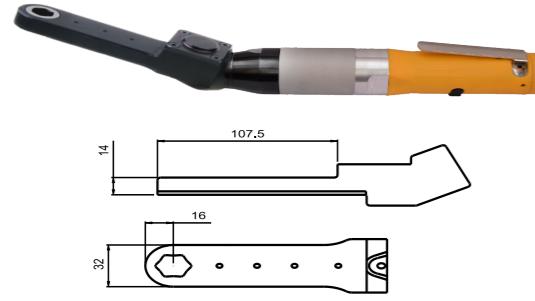
Straight 26°angle non shut-off geared oil-pulse wrench(Close-end)



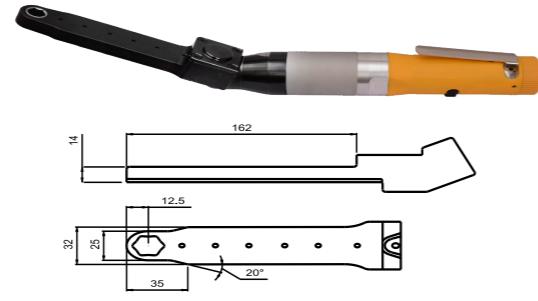
OBN-50SA OBN-60SA OBN-70SA



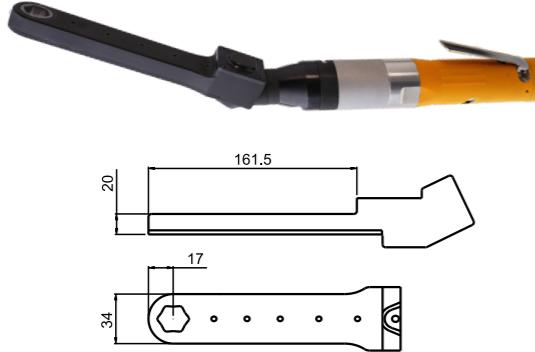
OBN-60SA-1 OBN-70SA-1



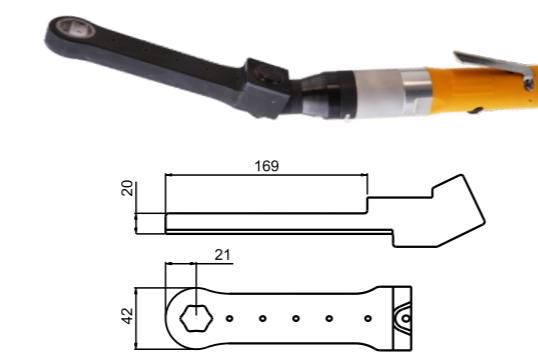
OBN-70SA-2



OBN-70SA-3



OBN-80SA



OBN-80SA-1

Model	Opposing edge size of socket gear		Torque range Nm	Free speed rpm	Length mm	Weight kg	Air inlet in	Rec. hose size mm	Air consumption m³/min	Noise level dB	
	mm	in									
OBN-50SA	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa	15-25	2100	358	1.67	PT 1/4	6.5	0.37	80
OBN-60SA	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa	22-32	3000	365	1.74	PT 1/4	6.5	0.4	80
OBN-70SA	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa	25-35	3200	379.7	1.85	PT 1/4	8.0	0.45	80
OBN-60SA-1	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa	20-30	3000	372.5	1.74	PT 1/4	6.5	0.4	80
OBN-70SA-1	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa	25-33	3200	398.6	1.9	PT 1/4	8.0	0.45	80
OBN-70SA-2	12、13、14、16、17	9/16"、5/8"	0.5-0.6MPa	25-40	3200	382.9	1.95	PT 1/4	8.0	0.45	80
OBN-70SA-3	8、10、11、12、13	3/8"、7/16"	0.5-0.6MPa	25-30	3000	446	2.29	PT 1/4	8.0	0.45	80
OBN-80SA	16、17、18	9/16"、5/8"	0.5-0.6MPa	45-60	3000	459	2.92	PT 1/4	8.0	0.47	80
OBN-80SA-1	19、21、22、24	3/8"、7/16"	0.5-0.6MPa	45-60	3000	466	2.95	PT 1/4	8.0	0.47	80

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

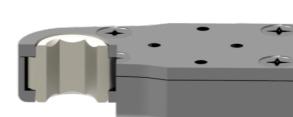
Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

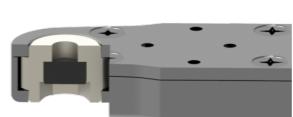
Socket geared type

Socket gear has three options :

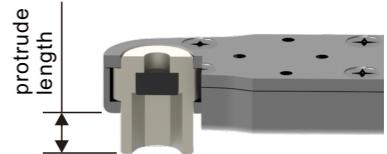
1. Through hole type 2. Magnetic type 3. Extended magnetic type



Through hole type



magnetic type



Extended magnetic type

1. Through hole type :

Hex is through hole type. The center of socket gear is fitted with a retaining ring.

2. Magnetic type :

Socket is provided with magnet . The other side is hex. Socket gear install on geared arm don't protrude geared arm outside.

3. Extended magnetic type :

Extended magnetic gear socket's length is on magnetic type basis to increase length. It make socket gear protrude geared arm outside after installing tool.(The length can be customized by customer. But the length couldn't protrude over 10mm.)

Socket gear choosing table

Model	Through hole type specification	Magnetic type specification	Extended magnetic type specification
OBN-50PR	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-60PR	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-70PR	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-60PR-1	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-70PR-1	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-70PR-2	12、13、14、16、17	None	None
OBN-70PR-3	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-80PR	16、17、18	None	None
OBN-80PR-1	19、21、22、24	None	None
OBN-50PA	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-60PA	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-70PA	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-60PA-1	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-70PA-1	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-70PA-2	12、13、14、16、17	None	None
OBN-70PA-3	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-80PA	16、17、18	None	None
OBN-80PA-1	19、21、22、24	None	None
OBN-50SR	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-60SR	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-70SR	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-60SR-1	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-70SR-1	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-70SR-2	12、13、14、16、17	None	None
OBN-70SR-3	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-80SR	16、17、18	None	None
OBN-80SR-1	19、21、22、24	None	None
OBN-50SA	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-60SA	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-70SA	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-60SA-1	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-70SA-1	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-70SA-2	12、13、14、16、17	None	None
OBN-70SA-3	8、10、11、12、13	8、10、11、12、13	8、10、11、12、13
OBN-80SA	16、17、18	None	None
OBN-80SA-1	19、21、22、24	None	None

Please kindly verify us which type you need to order. We generally install non-magnetic socket on tool.

Straight non shut-off gear tool(Open-end)

Half-press trigger is automatically resetting.
Total-press trigger is tightened.



There are various hex sockets for choose. Customized is according to customer's requirement.

Geared arm can be 360° random installed.
A variety of general gear arms can be replaced according to requirements.

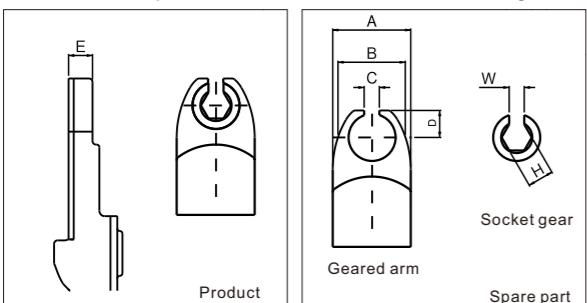


Light weight, small vibration and thinner.

12 or 6 angles Through hole type Blind hole lengthening
Through hole type: The hexagon is a through hole .Positive and opposite sides are the same.
Blind hole type: One side is the same as through-hole type
Another side is blind hole with U-shaped incision

Geared wrench open-end size

Product's front end consist of geared arm and socket gear. Same model tool is with same geared arm. It can be replaced with different size of socket gear.



Specification :
The open-end size C on geared arm is larger than open-end size W of all socket gears that can be mounted on this part.
It only need oil tube's diameter is smaller than open-end size W of socket gear when choose socket gear.
The size H and W of socket gear can be customized by customer. But size W can't bigger than size C.

Product geared arm size :

Gear arm number	A	B	C	D	E
5	36	31	8.2	11.6	12
6	41	36.5	15	15.3	12
5-1	36	30.4	7	11	14
5-2	41	35.4	12	13	14
6-1	50	41.9	15	15	20
6-N	50	36.5	15	15	20
7-1	58.5	50.5	20	19	20
7-2	71	60.2	25	22	20

Socket gear open-end size :

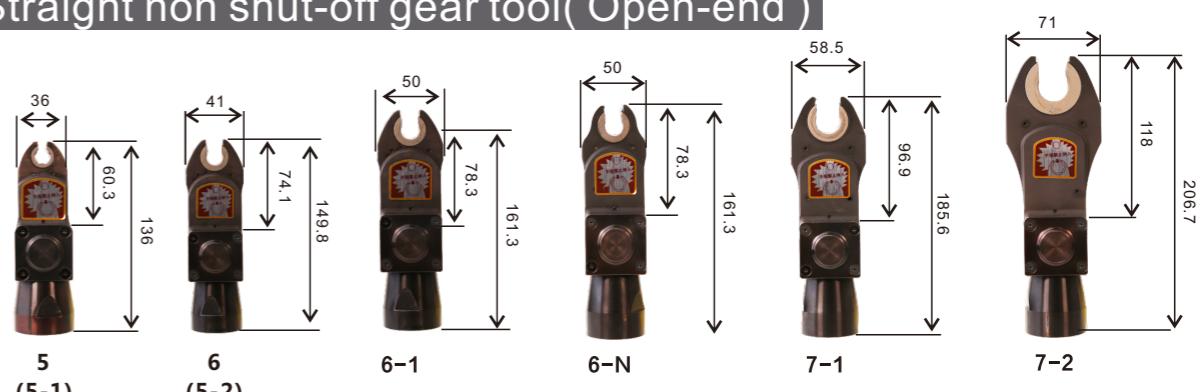
Opposing edge size(H)	mm												in												
	8	9	10	12	13	14	15	16	17	18	19	21	23	24	25	26	27	28	30	3/8	7/16	9/16	3/4	7/8	1 (1/8)
Opening size(W)	8	8	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	8	8	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	12	13	13	13	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5-1	5	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	-	-	-	-	-	-	-
5-2	-	-	8	9	10	10	10	11	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	-
6-1	-	-	-	-	-	13	13	13	13	-	-	-	-	-	-	-	-	-	13	-	-	-	-	-	-
6-N	-	-	-	-	-	13	13	13	13	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-
7-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	15	-	-	-	-
7-2	-	-	-	-	-	-	-	-	-	-	-	-	21	21	21	21	23	-	-	-	-	-	-	-	22

ORDER METHOD

It need to note opposing edge size of socket gear after choosing a model.
For example :

Model	Opposing edge size of socket gear
OBN-50SW	8 or 9 or 10

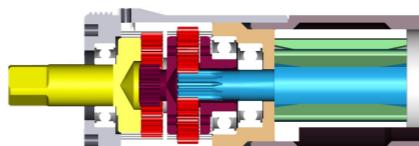
Straight non shut-off gear tool(Open-end)



Model	Opposing edge size of socket gear		Torque range Nm	Free speed rpm	Length mm	Weight kg	Air inlet in	Rec. hose size mm	Air consumption m³/min	Noise level dB	Gear arm number
	mm	in									
OBN-50SW	8, 9, 10	3/8" , 7/16"	0.5-0.6MPa	10-18	400-430	302	1.7	PT 1/4	6.5	0.35	76
OBN-50SW-6	12, 13, 14, 15, 16, 17	9/16"	0.5-0.6MPa	17-22	320-350	316	1.77	PT 1/4	6.5	0.35	76
OBN-50SW-5-1	8, 9, 10	3/8" , 7/16"	0.5-0.6MPa	10-18	400-430	302	1.7	PT 1/4	6.5	0.35	76
OBN-50SW-5-2	12, 13, 14, 15, 16, 17	9/16"	0.5-0.6MPa	17-22	320-350	316	1.77	PT 1/4	6.5	0.35	76
OBN-50SW-6-1	16, 17, 18	9/16"	0.5-0.6MPa	13-18	370-400	329	2.2	PT 1/4	6.5	0.35	76
OBN-50SW-6-N	16, 17, 18	9/16"	0.5-0.6MPa	13-18	370-400	329	2.18	PT 1/4	6.5	0.35	76
OBN-50SW-7-1	19, 20, 21, 22, 23, 24	3/4" , 7/8"	0.5-0.6MPa	16-25	280-310	347	2.32	PT 1/4	6.5	0.35	76
OBN-50SW-7-2	25, 26, 27, 28, 29, 30	1(1/8)"	0.5-0.6MPa	25-30	220-240	369	2.63	PT 1/4	6.5	0.35	76



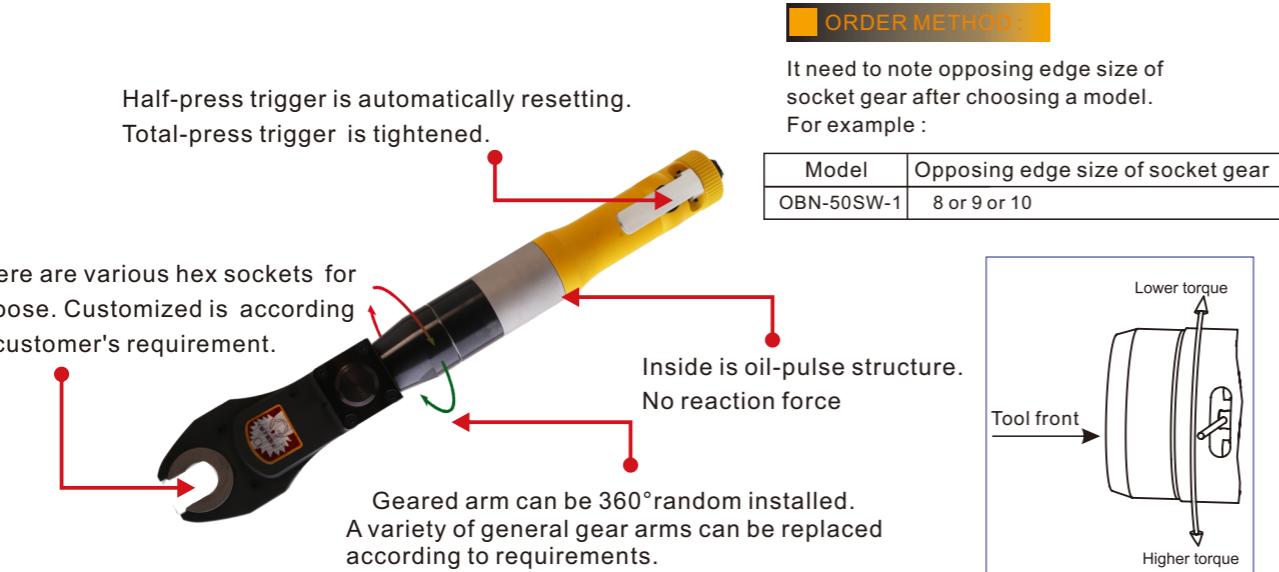
Structure diagram:



Model	Opposing edge size of socket gear		Torque range Nm	Free speed rpm	Length mm	Weight kg	Air inlet in	Rec. hose size mm	Air consumption m³/min	Noise level dB	Gear arm number
	mm	in									
OBN-60SW	12, 13, 14, 15, 16, 17	9/16"	0.5-0.6MPa	17-25	300-320	323	1.8	PT 1/4	6.5	0.38	76
OBN-60SW-5	8, 9, 10	3/8" , 7/16"	0.5-0.6MPa	13-20	360-380	310	1.75	PT 1/4	6.5	0.38	76
OBN-60SW-5-1	8, 9, 10	3/8" , 7/16"	0.5-0.6MPa	13-20	360-380	310	1.75	PT 1/4	6.5	0.38	76
OBN-60SW-5-2	12, 13, 14, 15, 16, 17	9/16"	0.5-0.6MPa	17-25	300-320	323	1.8	PT 1/4	6.5	0.38	76
OBN-60SW-6-1	16, 17, 18	9/16"	0.5-0.6MPa	14-20	340-360	335	2.24	PT 1/4	6.5	0.38	76
OBN-											

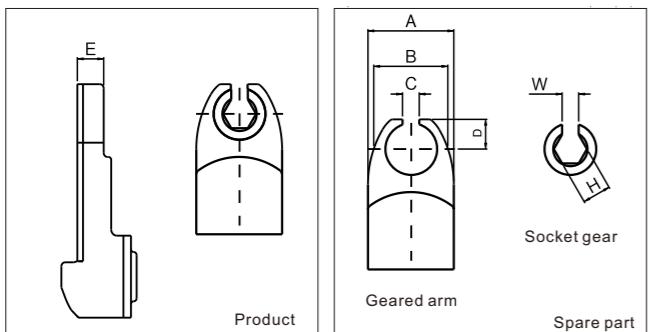
Straight non shut-off geared oil-pulse tool(Open-end)

Open-end tool suit for quickly fastening the nuts of tube.

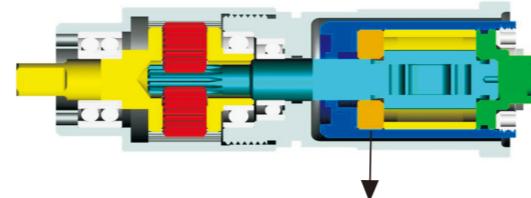


Geared wrench open-end size

Product's front end consist of geared arm and socket gear. Same model tool is with same geared arm. It can be replaced with different size of socket gear.



Specification :
The open-end size C on geared arm is larger than open-end size W of all socket gears that can be mounted on this part.
It only need oil tube's diameter is smaller than open-end size W of socket gear when choose socket gear.
The size H and W of socket gear can be customized by customer. But size W can't bigger than size C.



The front gear of oil pulse sets is driving by rotor. Oil pulse start-up assistance when tool is subjected by a torque. It can quickly increase tighten due to oil pulse compress. This structure emphasize no reaction force. (PAT.)

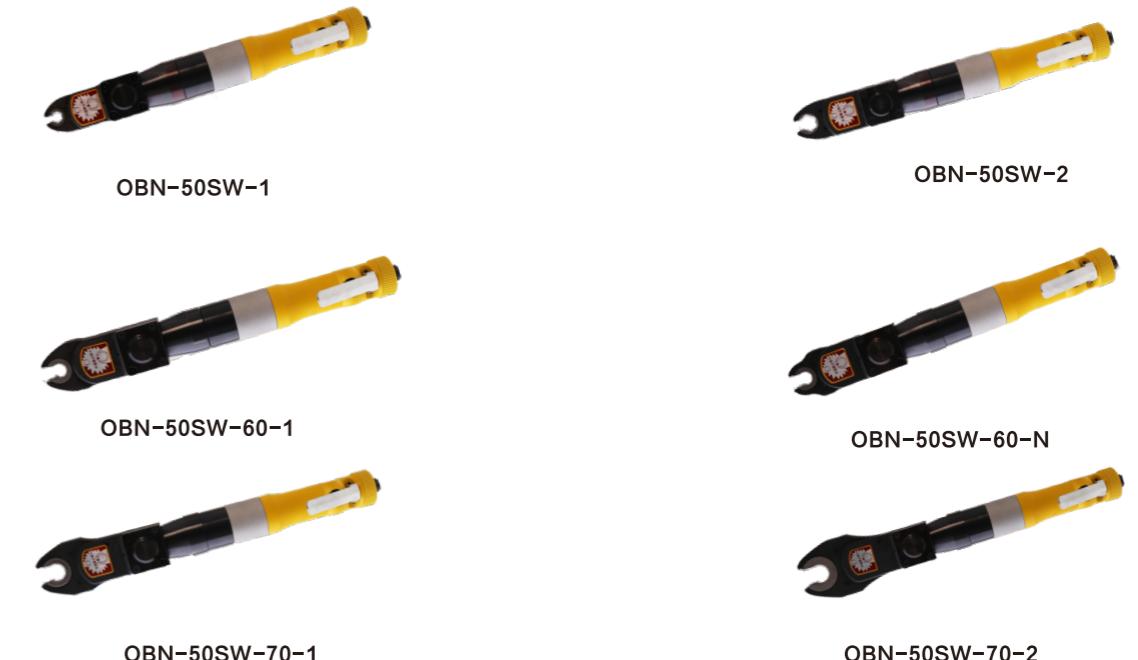
Product geared arm size :

Gear arm number	A	B	C	D	E
50-1	36	30.4	7	11	14
50-2	41	35.4	12	13	14
60-1	50	41.9	15	15	20
60-N	50	36.5	15	15	20
70-1	58.5	50.5	20	19	20
70-2	71	60.2	25	22	20

Socket gear open-end size :

Opening size(W) Gear arm number	mm															in								
	8	9	10	12	13	14	15	16	17	18	19	21	23	24	25	26	27	28	30	3/8	7/16	9/16	3/4	7/8
50-1	5	6	6	-	-	-	-	-	-	-	-	-	-	-	-	6	6	-	-	-	-	-	-	
50-2	-	-	8	9	10	10	10	11	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	
60-1	-	-	-	-	-	-	13	13	13	13	-	-	-	-	-	-	13	-	-	-	-	-	-	
60-N	-	-	-	-	-	-	13	13	13	13	-	-	-	-	-	-	15	-	-	-	-	-	-	
70-1	-	-	-	-	-	-	-	-	-	15	18	18	-	-	-	-	-	15	15	-	-	-	-	
70-2	-	-	-	-	-	-	-	-	-	-	21	21	21	21	23	-	-	-	-	-	-	-	22	

Straight non shut-off geared oil-pulse tool(Open-end)



Model	Opposing edge size of socket gear		Torque range Nm	Free speed rpm	Length mm	Weight kg	Air inlet in	Rec. hose size mm	Air consumption m³/min	Noise level dB	Gear arm number	
	mm	in										
OBN-50SW-1	8, 9, 10	3/8".7/16"	0.5-0.6MPa	12-18	400-430	350	1.9	PT 1/4	6.5	0.4	75	50-1
OBN-50SW-2	12.13.14.15.16.17	9/16"	0.5-0.6MPa	12-18	300-350	364	1.98	PT 1/4	6.5	0.4	75	50-2
OBN-50SW-60-1	16, 17, 18	9/16"	0.5-0.6MPa	16-24	350-400	376	2.36	PT 1/4	6.5	0.4	75	60-1
OBN-50SW-60-N	16, 17, 18	9/16"	0.5-0.6MPa	16-24	350-400	376	2.36	PT 1/4	6.5	0.4	75	60-N
OBN-50SW-70-1	19, 20, 21, 22, 23, 24	3/4", 7/8"	0.5-0.6MPa	20-28	270-300	394	2.49	PT 1/4	6.5	0.4	75	70-1
OBN-50SW-70-2	25, 26, 27, 28, 29, 30	1(1/8)"	0.5-0.6MPa	25-40	220-250	416	2.79	PT 1/4	6.5	0.4	75	70-2

Socket geared type



Through hole type: The hexagon is a through hole .Positive and opposite sides are the same.

Gear arm number	Socket gear type
50	through hole type
60	through hole type
50-1 (5-1)	through hole type、through hole lengthening
50-2 (5-2)	through hole type、through hole lengthening
60-1 (6-1)	through hole type
60-N (6-N)	through hole type
70-1(7-1)	through hole type
70-2(7-2)	through hole type

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

Straight non shut-off geared oil-pulse tool(Open-end)



OBN-60SW-1



OBN-60SW-N



OBN-60SW-50-1



OBN-60SW-50-2



OBN-60SW-70-1



OBN-60SW-70-2

Model	Opposing edge size of socket gear		Torque range	Free speed	Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level	Gear arm number
	mm	in	Nm	0.5-0.6MPa	rpm	mm	kg	in	mm	m³/min	
OBN-60SW-1	16, 17, 18	9/16"	40-55	430-480	383	2.37	PT 1/4	6.5	0.43	76	60-1
OBN-60SW-N	16, 17, 18	9/16"	40-55	430-480	383	2.37	PT 1/4	6.5	0.43	76	60-N
OBN-60SW-50-1	8, 9, 10	3/8,7/16	18-25	470-520	350	1.94	PT 1/4	6.5	0.43	76	50-1
OBN-60SW-50-2	12, 13, 14, 15, 16, 17	9/16"	32-42	380-400	372	2.0	PT 1/4	6.5	0.43	76	50-2
OBN-60SW-70-1	19, 20, 21, 22, 23, 24	3/4", 7/8"	45-60	330-360	402	2.53	PT 1/4	6.5	0.45	76	70-1
OBN-60SW-70-2	25, 26, 27, 28, 29, 30	1(1/8)"	55-75	270-290	423	2.83	PT 1/4	6.5	0.45	76	70-2



OBN-70SW-1



OBN-70SW-2



OBN-70SW-60-1



OBN-70SW-60-N

Model	Opposing edge size of socket gear		Torque range	Free speed	Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level	Gear arm number
	mm	in	Nm	0.5-0.6MPa	rpm	mm	kg	in	mm	m³/min	
OBN-70SW-1	19, 20, 21, 22, 23, 24	3/4", 7/8"	60(50)-72(78)	370-400	416	2.8	PT 1/4	6.5	0.45	76	70-1
OBN-70SW-2	25, 26, 27, 28, 29, 30	1(1/8)"	82(65)-(82)105	290-320	437	3.1	PT 1/4	6.5	0.45	76	70-2
OBN-70SW-60-1	16, 17, 18	9/16"	45-60	470-530	397	2.64	PT 1/4	6.5	0.45	76	60-1
OBN-70SW-60-N	16, 17, 18	9/16"	45-60	470-530	397	2.64	PT 1/4	6.5	0.45	76	60-N

Straight reverse torque shut-off oil-pulse tool



Reverse torque oil-pulse tool is available for reverse bolt.



Straight reverse low pressure shut-off oil-pulse tool (Suit for pressure 0.4-0.5MPa = 58 - 72.5 psi)

Model	Bolt size	Torque range	Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
		Nm		0.4-0.5MPa	in	0.4MPa						
OBT-50SDL-1	5-6	7-16	3/8	-	4700	-	218.0	0.83	PT 1/4	6.5	0.20	75
OBT-60SDL-1	8	14-28	3/8	-	5700	-	228.0	0.87	PT 1/4	6.5	0.25	77
OBT-70SDL-1	8-10	20-45	3/8	-	5600	-	240.5	0.95	PT 1/4	8.0	0.27	78
OBT-80SDL-1	8-10	35-55	3/8	-	5600	-	246.5	1.20	PT 1/4	8.0	0.40	78
OBT-81SDL-1	10	40-60	1/2	-	5600	-	251.5	1.25	PT 1/4	8.0	0.40	78

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

Pistol reverse torque shut-off oil-pulse tool

OBT-40PDL-1



OBT-50PDL-1



OBT-60PDL-1



OBT-70PDL-1



OBT-80PDL-1



OBT-81PDL-1



OBT-90PDL-1



OBT-100PDL-1



OBT-130PDL-1

Pistol reverse low pressure shut-off oil-pulse tool (Suit for pressure 0.4-0.5MPa = 58 - 72.5 psi)

Model	Bolt size	Torque range Nm	Square drive	Free speed rpm			Length mm	Weight kg	Air inlet	Rec. hose size in	Air consumption m³/min	Noise level
				0.4MPa	0.5MPa	0.6MPa						
OBT-40PDL-1	5	5-9	3/8	3200	3500	3800	160.5	0.92	PT 1/4	6.5	0.20	75
OBT-50PDL-1	5-6	7-16	3/8	-	4500	-	160.5	0.92	PT 1/4	6.5	0.20	75
OBT-60PDL-1	8	14-28	3/8	-	5700	-	170	0.95	PT 1/4	6.5	0.25	77
OBT-70PDL-1	8-10	25-45	3/8	-	5600	-	183	1.05	PT 1/4	8.0	0.30	78
OBT-80PDL-1	8-10	35-55	3/8	-	5700	-	187	1.25	PT 1/4	8.0	0.40	78
OBT-81PDL-1	10	40-60	1/2	-	5700	-	192	1.25	PT 1/4	8.0	0.40	78
OBT-90PDL-1	10	50-75	1/2	-	4600	-	192	1.45	PT 1/4	8.0	0.45	79
OBT-100PDL-1	10-12	55-95	1/2	-	4200	-	198	1.70	PT 1/4	8.0	0.48	79
OBT-130PDL-1	12	80-125	1/2	-	3600	-	215	2.30	PT 1/4	12.7	0.50	79

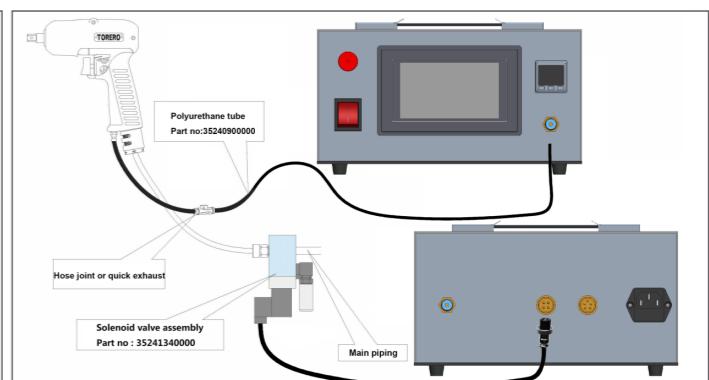
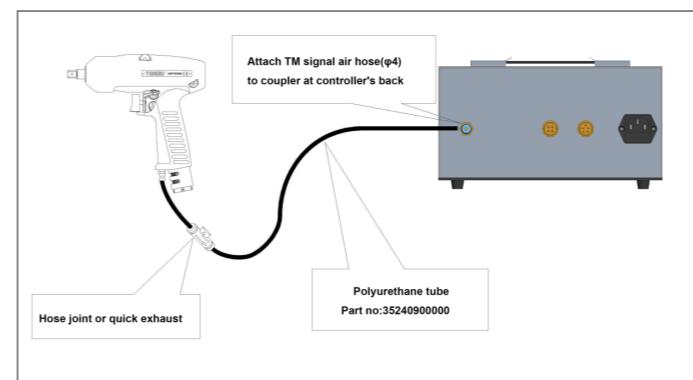
Unlock-prevent controlled tool

It can use controller to avoid no-locking screw . Tool has a small tube connect with controller. Tool will be from differential pressure during in tightening process to tell controller calculating the amount of differential pressure. One differential pressure is one screw.



Order description : RE series can use different brand controllers.

Art specification :



Screw locking counter



Pistol shut-off oil-pulse tool with a signal tube



Pistol high pressure shut-off oil-pulse tool

Pistol low pressure shut-off oil-pulse tool

Features:

The software interface is in Chinese and English.

Touch LCD display large screen, display tightening result and function parameter setting

Through display, sound, signal lamp post (optional) three ways to remind the status

Password protection important Settings to prevent false changes

Controller	
Status bar: Sample Message	
Batch time (s)	9999. 9
Batch quantity	99
Locking quantity	88888
Positive count	Cleared
Alarm release	Parameter

Function:

1. Batch count
2. Batch quantity and production time setting
3. Slip thread status alert
4. Quantity automatic cycle
5. Tool maintenance times setting

Pistol high pressure shut-off oil-pulse tool

Model	Bolt size	Torque range		Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noiselevel
		Nm	mm		0.4MPa	0.5MPa	0.6MPa						
OBT-40PD-RE	5	4-12	3/8	-	3700	4000	160.5	0.92	PT 1/4	6.5	0.2	75	
OBT-50PD-RE	5-6	7-16	3/8	-	4200	4500	160.5	0.92	PT 1/4	6.5	0.25	78	
OBT-60PD-RE	8	16-32	3/8	-	5700	6000	170	0.95	PT 1/4	6.5	0.35	80	
OBT-70PD-RE	8-10	30-50	3/8	-	5700	6000	183	1.05	PT 1/4	8.0	0.4	80	
OBT-80PD-RE	8-10	40-65	3/8	-	5500	5800	187	1.25	PT 1/4	8.0	0.48	80	
OBT-81PD-RE	10	40-65	1/2	-	5500	5800	192	1.25	PT 1/4	8.0	0.48	80	
OBT-90PD-RE	10-12	42-85	1/2	-	4700	5000	192	1.45	PT 1/4	8.0	0.53	82	
OBT-100PD-RE	12	75-130	1/2	-	4200	4500	198	1.7	PT 1/4	8.0	0.55	82	
OBT-130PD-RE	12-14	110-150	1/2	-	4200	4500	215	2.3	PT 1/4	12.7	0.7	82	
OBT-150PD-RE	14-16	130-210	3/4	-	3600	3900	243.5	2.9	PT 1/4	12.7	0.7	82	
OBT-180PD-RE	16-18	165-260	3/4	-	2800	3000	262	3.7	PT 3/8	12.7	0.7	82	
OBT-250PD-RE	16-20	225-450	3/4	-	3600	221	4.2	PT 3/8	13	1.4	85		
OBT-40PH-RE	5	4-12	1/4	-	3700	4000	161	0.92	PT 1/4	6.5	0.2	75	
OBT-50PH-RE	5-6	7-16	1/4	-	4200	4500	161	0.92	PT 1/4	6.5	0.25	78	
OBT-60PH-RE	6-8	14-30	1/4	-	5700	6000	171	0.95	PT 1/4	6.5	0.35	80	
OBT-70PH-RE	8	22-35	1/4	-	5700	6000	183	1.05	PT 1/4	8.0	0.4	80	
OBT-80PH-RE	8-10	32-45	1/4	-	5500	5800	191	1.26	PT 1/4	8.0	0.48	80	

Model	Bolt size	Torque range		Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noiselevel
		Nm	mm		0.4MPa	0.5MPa	0.6MPa						
OBT-250PD-RE	16-20	225-450	3/4	-	3300	221	4.2	PT 3/8	13	1.4	85		

Pistol low pressure shut-off oil-pulse tool

Model	Bolt size	Torque range		Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noiselevel
		Nm	mm		0.4MPa	0.5MPa	0.6MPa						
OBT-50PDL-RE	5-6	7-16	3/8	-	4500	-	160.5	0.92	PT 1/4	6.5	0.2	75	
OBT-60PDL-RE	8	14-32	3/8	-	5700	-	170	0.95	PT 1/4	6.5	0.25	77	
OBT-70PDL-RE	8-10	25-45	3/8	-	5600	-	183	1.05	PT 1/4	8.0	0.3	78	
OBT-80PDL-RE	8-10	35-55	3/8	-	5700	-	187	1.25	PT 1/4	8.0	0.4	78	
OBT-81PDL-RE	10	35-58	1/2	-	5700	-	192	1.25	PT 1/4	8.0	0.4	78	
OBT-90PDL-RE	10	40-80	1/2	-	4600	-	192	1.45	PT 1/4	8.0	0.45	79	
OBT-100PDL-RE	10-12	65-105	1/2	-	4200	-	198	1.7	PT 1/4	8.0	0.48	79	
OBT-130PDL-RE	12	85-120	1/2	-	3600	-	215	2.3	PT 1/4	12.7	0.5	79	
OBT-150PDL-RE	12-14	105-165	3/4	-	3200	-	243.5	2.9	PT 1/4	12.7	0.5	79	
OBT-180PDL-RE	14-16	125-205	3/4	-	3000	-	262	3.7	PT 3/8	12.7	0.5	80	
OBT-50PHL-RE	5-6	7-16	1/4	3900	4200	-	161	0.92	PT 1/4	6.5	0.2	75	
OBT-60PHL-RE	6-8	10-24	1/4	5400	5700	-	171	0.95	PT 1/4	6.5	0.25	77	
OBT-70PHL-RE	8	14-30	1/4	5300	5600	-	183	1.05	PT 1/4	8.0	0.4	77	
OBT-80PHL-RE	8-10	25-40	1/4	5300	5600	-	191	1.26	PT 1/4	8.0	0.48	80	

Straight shut-off oil-pulse tool with a signal tube



Straight high pressure shut-off oil-pulse tool

Straight high pressure shut-off oil-pulse tool

Model	Bolt size	Torque range		Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level	
		Nm	0.5-0.6MPa		in	0.4MPa	0.5MPa							
		mm	0.5-0.6MPa		in	0.4MPa	0.5MPa							
OBT-40SD-RE	5	4-12	3/8	-	4700	5000	218	0.83	PT 1/4	6.5	0.2	70		
OBT-50SD-RE	5-6	7-16	3/8	-	5600	6000	218	0.83	PT 1/4	6.5	0.25	78		
OBT-60SD-RE	8	16-35	3/8	-	5800	6200	228	0.87	PT 1/4	6.5	0.3	80		
OBT-70SD-RE	8-10	30-48	3/8	-	5400	5800	240.5	0.95	PT 1/4	8.0	0.35	80		
OBT-80SD-RE	8-10	35-60	3/8	-	6100	6500	246.5	1.2	PT 1/4	8.0	0.48	80		
OBT-81SD-RE	10	35-60	1/2	-	6100	6500	251.5	1.25	PT 1/4	8.0	0.48	80		
OBT-40SH-RE	5	4-12	1/4	-	4700	5000	220.5	0.83	PT 1/4	6.5	0.2	70		
OBT-50SH-RE	5-6	7-16	1/4	-	5600	6000	220.5	0.83	PT 1/4	6.5	0.25	78		
OBT-60SH-RE	6-8	16-32	1/4	-	5800	6200	230.5	0.87	PT 1/4	6.5	0.3	80		
OBT-70SH-RE	8	22-35	1/4	-	5400	5800	240.5	0.95	PT 1/4	8.0	0.4	80		
OBT-80SH-RE	8-10	28-43	1/4	-	6100	6500	230.5	0.87	PT 1/4	8.0	0.48	80		

Straight low pressure shut-off oil-pulse tool

Straight low pressure shut-off oil-pulse tool

Model	Bolt size	Torque range		Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noiselevel	
		Nm	0.4-0.5MPa		in	0.4MPa	0.5MPa							
		mm	0.4-0.5MPa		in	0.4MPa	0.5MPa							
OBT-50SDL-RE	5-6	7-16	3/8	-	5200	5700	-	218	0.83	PT 1/4	6.5	0.2	75	
OBT-60SDL-RE	8	12-28	3/8	-	5400	5800	-	228	0.87	PT 1/4	6.5	0.25	77	
OBT-70SDL-RE	8-10	25-40	3/8	-	5000	5500	-	240.5	0.95	PT 1/4	8.0	0.27	78	
OBT-80SDL-RE	8-10	35-55	3/8	-	5800	6200	-	246.5	1.2	PT 1/4	8.0	0.40	78	
OBT-81SDL-RE	10	40-60	1/2	-	5800	6200	-	251.5	1.25	PT 1/4	8.0	0.40	78	
OBT-50SHL-RE	5-6	7-16	1/4	-	5200	5700	-	220.5	0.83	PT 1/4	6.5	0.2	75	
OBT-60SHL-RE	6-8	14-28	1/4	-	5400	5800	-	230.5	0.87	PT 1/4	6.5	0.2	77	
OBT-70SHL-RE	8	22-32	1/4	-	5000	5500	-	240.5	0.95	PT 1/4	8.0	0.25	77	
OBT-80SHL-RE	8-10	28-35	1/4	-	5800	6200	-	250	1.25	PT 1/4	8.0	0.40	78	

Angle high pressure shut-off oil-pulse tool

Model	Bolt size	Torque range		Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
		mm	0.5-0.6MPa		in	0.4MPa	0.5MPa						
OBT-50SC-RE	5-6	7-15	3/8	-	4500	4700	258	1.28	PT 1/4	6.5	0.25	75	
OBT-60SC-RE	6-8	13-28	3/8	-	5500	5800	270	1.35	PT 1/4	6.5	0.3	75	
OBT-70SC-RE	8-10	27-45	3/8	-	3900	4200	289	1.63	PT 1/4	8.0	0.35	78	
OBT-50SCH-RE	5-6	13-18	1/4	-	4500	5800	270	1.32	PT 1/4	6.5	0.3	75	
OBT-60SCH-RE	6-8	16-23	1/4	-	5500	5800	270	1.32	PT 1/4	6.5	0.35	78	
OBT-70SCH-RE	8	18-25	1/4	-	5000	5300	281	1.42	PT 1/4	6.5	0.35	78	
OBT-70SC-1-RE	8	30-50	1/2	-	3900	4200	289	1.64	PT 1/4	8.0	0.35	78	
OBT-75SC-RE	10	26-50	1/2	-	3800	4000	290	1.83	PT 1/4	8.0	0.35	78	
OBT-80SC-RE	10	48-68	1/2	-	4300	4500	295	2.0	PT 1/4	8.0	0.35	80	
OBT-80SC-1-RE	10	45-65	1/2	-	4200	4400	295	2.0	PT 1/4	8.0	0.35	80	

Angle low pressure shut-off oil-pulse tool

Model	Bolt size	Torque range		Square drive	Free speed			Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
		mm	0.4-0.5MPa		in	0.4MPa	0.5MPa						
OBT-50SCL-RE	5-8	7-14	3/8	-	4500	4700	258	1.28	PT 1/4	6.5	0.4	75	
OBT-60SCL-RE	6-8	10-25	3/8	-	5500	5800	270	1.35	PT 1/4	6			

Pistol、straight and angle non shut-off oil-pulse tool with a signal tube



Pistol non shut-off oil-pulse tool Straight non shut-off oil-pulse tool Angle non shut-off oil-pulse tool

Pistol non shut-off oil-pulse tool

Model	Bolt size	Torque range Nm		Square drive	Free speed rpm			Length mm	Weight kg	Air inlet	Rec. hose size mm	Air consumption m³/min	Noise level dB
		mm	0.5-0.6MPa		in	0.4MPa	0.5MPa						
OBN-30PD-RE	5-6	6-12	3/8	-	3700	4000	131	0.7	PT 1/4	6.5	0.2	75	
OBN-40PD-RE	6	13-22	3/8	-	3700	4000	131	0.7	PT 1/4	6.5	0.2	75	
OBN-50PD-RE	6-8	22-35	3/8	-	5700	6000	134	0.77	PT 1/4	6.5	0.25	78	
OBN-60PD-RE	8-10	35-50	3/8	-	6200	6500	141	0.82	PT 1/4	6.5	0.4	80	
OBN-70PD-RE	10	50-70	3/8	-	6200	6500	155	0.95	PT 1/4	8.0	0.45	80	
OBN-80PD-RE	10	60-95	3/8	-	6500	6800	161.5	1.15	PT 1/4	8.0	0.48	80	
OBN-81PD-RE	10-12	65-100	1/2	-	6500	6800	166.5	1.17	PT 1/4	8.0	0.48	80	
OBN-90PD-RE	12	90-110	1/2	-	5200	5500	165	1.3	PT 1/4	8.0	0.53	82	
OBN-100PD-RE	12-14	105-140	1/2	-	4200	4500	172	1.66	PT 1/4	8.0	0.58	80	
OBN-130PD-RE	14	110-170	1/2	-	4000	4200	185	2.3	PT 1/4	12.7	0.65	82	
OBN-150PD-RE	14-16	160-240	3/4	-	4000	4200	213.5	2.5	PT 1/4	12.7	0.7	82	
OBN-180PD-RE	16-18	200-280	3/4	-	3300	3500	226.5	3.0	PT 3/8	12.7	0.7	82	
OBN-30PH-RE	5-6	6-12	1/4	-	3700	4000	131	0.7	PT 1/4	6.5	0.2	75	
OBN-40PH-RE	6	13-20	1/4	-	3700	4000	131	0.7	PT 1/4	6.5	0.2	75	
OBN-50PH-RE	6-8	22-35	1/4	-	6200	6000	134	0.77	PT 1/4	6.5	0.25	78	
OBN-60PH-RE	8	30-40	1/4	-	6200	6500	142	0.82	PT 1/4	8.0	0.4	80	
OBN-70PH-RE	8-10	35-45	1/4	-	6200	6500	155	0.95	PT 1/4	8.0	0.45	80	
OBN-80PH-RE	8-10	42-62	1/4	-	6500	6800	170	1.18	PT 1/4	8.0	0.48	80	

Straight non shut-off oil-pulse tool

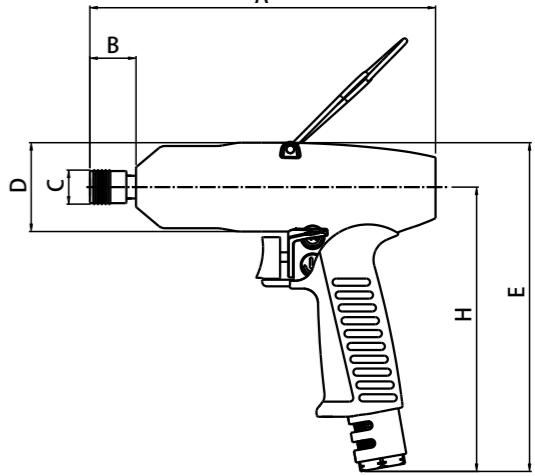
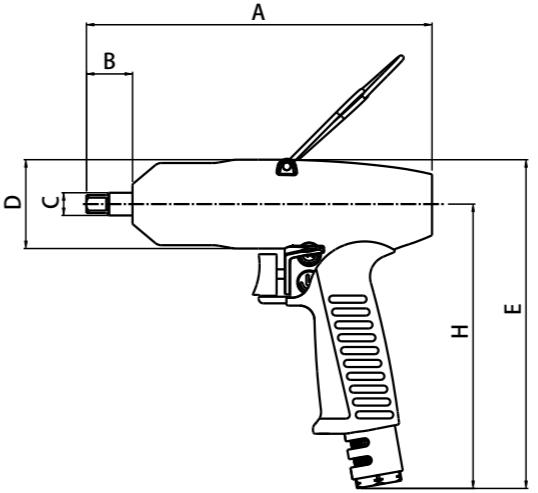
Model	Bolt size	Torque range Nm		Square drive	Free speed rpm			Length mm	Weight kg	Air inlet	Rec. hose size mm	Air consumption m³/min	Noise level dB
		mm	0.5-0.6MPa		in	0.4MPa	0.5MPa						
OBN-40SD-RE	5-6	13-22	3/8	-	4700	5000	218	0.62	PT 1/4	6.5	0.23	75	
OBN-50SD-RE	6-8	22-35	3/8	-	5200	5500	218	0.74	PT 1/4	6.5	0.35	78	
OBN-60SD-RE	8-10	35-50	3/8	-	5600	6000	228	0.77	PT 1/4	6.5	0.45	80	
OBN-70SD-RE	10	45-65	3/8	-	5600	6000	240.5	0.87	PT 1/4	8.0	0.45	84	
OBN-80SD-RE	10	55-90	3/8	-	6600	7000	246.5	1.2	PT 1/4	8.0	0.48	80	
OBN-81SD-RE	10-12	60-95	1/2	-	6600	7000	251.5	1.25	PT 1/4	8.0	0.48	80	
OBN-40SH-RE	5-6	12-20	1/4	-	4800	5100	220.5	0.62	PT 1/4	6.5	0.23	75	
OBN-50SH-RE	6-8	18-30	1/4	-	5200	5400	220.5	0.74	PT 1/4	6.5	0.35	78	
OBN-60SH-RE	8	28-35	1/4	-	5600	6000	230.5	0.77	PT 1/4	6.5	0.45	80	
OBN-70SH-RE	8-10	30-40	1/4	-	5600	6000	240.5	0.87	PT 1/4	8.0	0.45	84	
OBN-80SH-RE	8-10	45-60	1/4	-	6600	7000	250	1.24	PT 1/4	8.0	0.48	80	

Angle non shut-off oil-pulse tool

Model	Bolt size	Torque range Nm		Square drive	Free speed rpm			Length mm	Weight kg	Air inlet	Rec. hose size mm	Air consumption m³/min	Noise level dB
		mm	0.5-0.6MPa		in	0.4MPa	0.5MPa						
OBN-50SC-RE	5-6	15-22	3/8	-	4500	4700	256	1.22	PT 1/4	6.5	0.4	75	
OBN-60SC-RE	6-8	20-30	3/8	-	5500	5800	264	1.27	PT 1/4	6.5	0.43	75	
OBN-70SC-RE	8-10	37-55	3/8	-	5000	5300	285	1.6	PT 1/4	8.0	0.45	75	
OBN-70SC-1-RE	10	40-58	1/2	-	5000	5300	285	1.62	PT 1/4	8.0	0.45	75	
OBN-75SC-RE	10	45-62	1/2	-	3700	4000	290	1.82	PT 1/4	8.0	0.45	75	
OBN-80SC-RE	10-12	60-85	1/2	-	3200	3505	1.85	PT 1/4	8.0	0.5	75		
OBN-80SC-1-RE	10	56-80	1/2	-	4300	4500	294	1.97	PT 1/4	8.0	0.5	75	
OBN-50SCH-RE	5-6	10-18	1/4	-	4500	4700	256	1.2	PT 1/4	6.5	0.4	75	
OBN-60SCH-RE	6-8	17-25	1/4	-	5500	5800	264	1.26	PT 1/4	6.5	0.43	75	
OBN-70SCH-RE	8	18-29	1/4	-	5000	5300	277	1.4	PT 1/4	6.5	0.45	75	

OBT and OBN series pistol sizes

Description : The shape size of OBT high pressure and low pressure oil-pulse tool series are same.



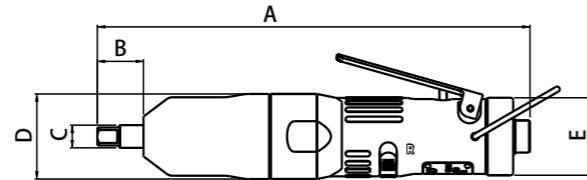
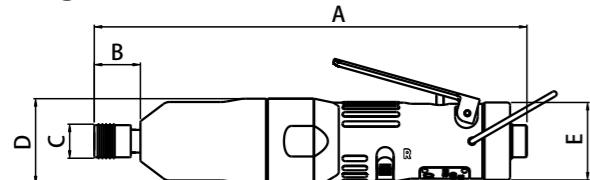
Unit: mm

Model</th

OBT & OBN series straight and angle sizes

Description : The shape size of OBT high pressure and low pressure oil-pulse tool series are same.

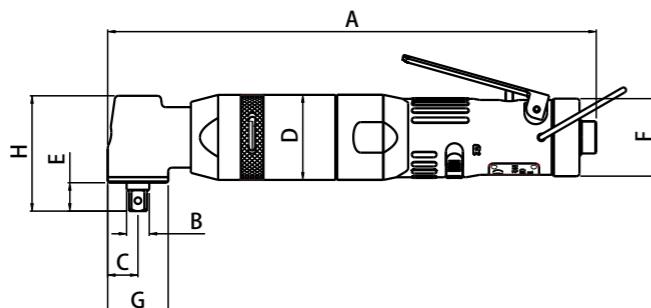
Straight size of OBT and OBN series:



Unit: mm

Model	A	B	C	D	E
OBT- 40SD	218	23	12	45	41
OBT- 50SD	218	23	12	45	41
OBT- 60SD	228	21.5	12	45	41
OBT- 70SD	240.5	24	12	47	41
OBT- 80SD	246.5	26	12	52	47.5
OBT- 81SD	251.5	31	16	52	47.5
OBT- 40SH	220.5	25.5	18	45	41
OBT- 50SH	220.5	25.5	18	45	41
OBT- 60SH	230.5	24	18	45	41
OBT- 70SH	240.5	24	18	47	41
OBT- 80SH	246.5	26	18.5	52	47.5
OBN- 40SD	218	23	12	45	41
OBN- 50SD	215	23	12	45	41
OBN- 60SD	228	21.5	12	45	41
OBN- 70SD	240.5	24	12	47	41
OBN- 80SD	246.5	26	12	52	47.5
OBN- 81SD	251.5	31	16	52	47.5
OBN- 40SH	220.5	25.5	18	45	41
OBN- 50SH	217.5	25.5	18	45	41
OBN- 60SH	230.5	24	18	45	41
OBN- 70SH	240.5	24	18	47	41
OBN- 80SH	246.5	26	18.5	52	47.5

Angle size of OBT & OBN series:



Unit: mm

Model	A	B	C	D	E	H	F	G
OBT- 50SC	258.5	12	16	45	15	61	41	32
OBT- 60SC	269.5	12	16	45	15	61	41	32
OBT- 70SC	285	12	18	47	15.5	70	41	36
OBT- 70SC- 1	285	16	18	52	20.5	70	41	36
OBT- 75SC	289	16	18	52	20.5	75	41	36
OBT- 80SC	305.5	16	22.5	52	20	78	47.5	45
OBT- 80SC- 1	310	16	18	52	20.5	75	47.5	36
OBN- 50SC	261.5	12	16	45	15	61	41	32
OBN- 60SC	269.5	12	16	45	15	61	41	32
OBN- 70SC	285	12	16	47	15.5	70	41	36
OBN- 70SC- 1	285	16	18	47	20.5	75	41	36
OBN- 75SC	289	16	18	52	20.5	75	41	36
OBN- 80SC	305.5	16	22.5	52	20	78	47.5	45
OBN- 80SC- 1	310	16	18	52	20.5	75	47.5	36

Straight shut-off clutch screwdriver tool



LTR

Order accessories
Order no. : 37513880030
 1/8" to 1/4" adapter



LTU

The tool air inlet thread PF 1/8 is G 1/8. You can purchase 1/8" to 1/4" adapter if you need to turn air inlet to PT 1/4.

Touch trigger clutch tool

Model	Torque range	Square drive	Free speed	Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
	Nm	in	rpm	mm	kg	in	mm	m³/min	dB
LTR-12SH-1	0.6-1.6	1/4	1900	195	0.55	PF 1/8	6	0.27	75
LTR-12SH-2	0.4-2.3	1/4	1450	195	0.55	PF 1/8	6	0.27	75
LTR-12SH-3	0.4-3.2	1/4	1000	195	0.55	PF 1/8	6	0.27	75
LTR-12SH-4	0.4-4.2	1/4	750	195	0.55	PF 1/8	6	0.27	75
LTR-12SH-5	0.4-5.0	1/4	450	195	0.55	PF 1/8	6	0.27	75
LTR-12SH-6	0.4-1.0	1/4	1900	195	0.55	PF 1/8	6	0.27	75

Safety trigger clutch tool

Model	Torque range	Square drive	Free speed	Length	Weight	Air inlet	Rec. hose size	Air consumption	Noise level
	Nm	in	rpm	mm	kg	in	mm	m³/min	dB
LTU-12SH-1	0.6-1.8	1/4	2200	217	0.6	PF 1/8	6	0.36	75
LTU-12SH-2	0.5-2.5	1/4	1700	217	0.6	PF 1/8	6	0.36	75
LTU-12SH-3	0.4-3.5	1/4	1200	217	0.6	PF 1/8	6	0.36	75
LTU-12SH-4	0.4-4.5	1/4	850	217	0.6	PF 1/8	6	0.36	75
LTU-12SH-5	0.4-1.0	1/4	2200	217	0.6	PF 1/8	6	0.36	75
LTU-12SH-6	0.4-2.0	1/4	2200	217	0.6	PF 1/8	6	0.36	75
LTU-12SH-7	0.4-2.8	1/4	1700	217	0.6	PF 1/8	6	0.36	75

Note : Oil-pulse tool can reach torque will be slightly different as actual tightening torque. It will depend on condition of working area and joint situation. Testing the selected model in actual condition is advised. Please reference the following :

Hard joint application : 70% of the maximum torque range in the catalogue.

Soft joint application : The minimum of the torque in the catalogue.

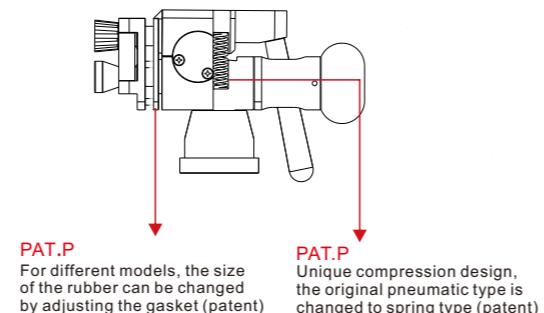
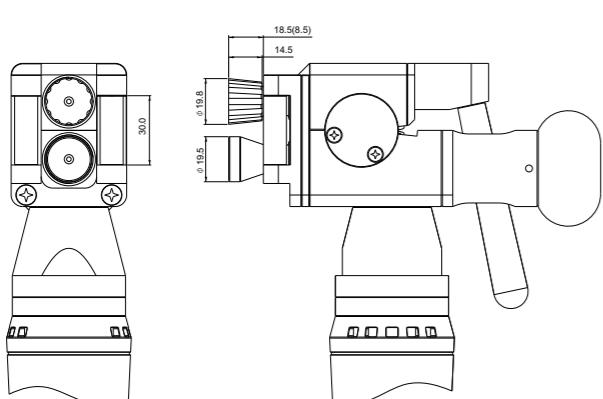
Cordless Caulking Gun



360° flexible use in any direction



Model: ATV-100SR Automobile sealing strip rolling device



annex	Thickness of gasket
	1mm
	2mm
	3mm
	4mm

Tool head selection



SR001



SR002



SR003



SR004



SR005

Accessories



Battery



Charger

Model	Free speed r/min	Weight(kg) no battery	Length(mm) no battery	Height(mm)	Voltage	Battery
					v	
ATV-100SR	1200	1.95	320	165	12	Li-ion

Model	TL-71
Voltage	12V
Capacitance	2.0Ah
Weight	0.179Kg
Order number	38325630000

Model	TL-12V
Voltage	220-240V
Capacitance	12V
Weight	0.502Kg
Order number	38325640000

Impact Caulking Gun



Gear position indicator:
five-level pulse frequency

Power indicator:
four green lights and one red light from the left indicate the power.
When only the red light is on, it means the power is exhausted and
needs to be charged



Model	Pulse frequency	Weight(kg)	Length(mm)	Height(mm)	Voltage	Battery
	r/min	no battery	no battery		V	
ATV-101PK	1500-3250	0.943	230	220	24	Li-ion

Accessories



Battery



Charger

Model	TL-72
Voltage	24V
Capacitance	2.4Ah
Weight	0.412Kg
Order number	38325650000

Model	TL-24V
Voltage	100-240V
Capacitance	24V
Weight	0.329Kg
Order number	38325660000

Tool head selection

Pk001	Pk002	Pk003

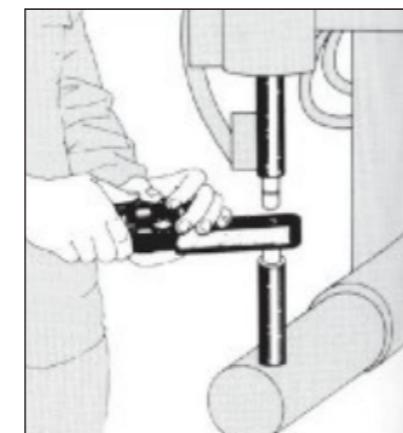
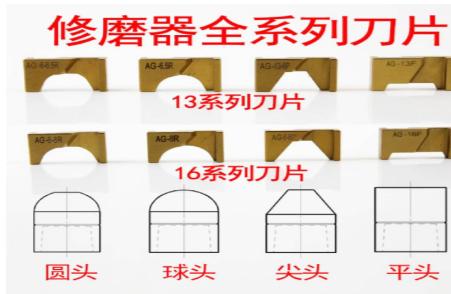
Pneumatic welding copper electrode dressing machine
(suitable for dressing electrode tips)



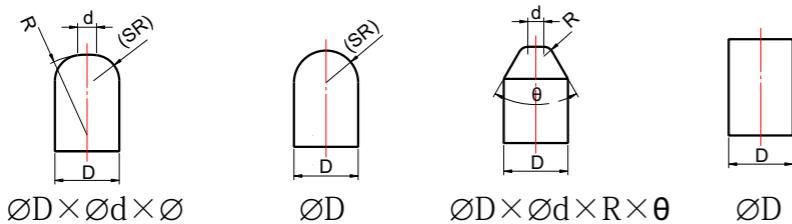
TW-2100

Milling insert

According to the size and shape of the electrode tip to be ground, the correct blade model is selected:



Please provide dimensions according to the following view instructions:



Model	Welding head diameter	Speed	Weight	Air pressure	Installation model	Pipe diameter
TW-2100	8-18MM	1300RPM	1.5KG	5-7kg/cm	PT-1/4	8-10MM

Air pencil grinder tool

It is applicable to die grinding and other operations.



SG-01



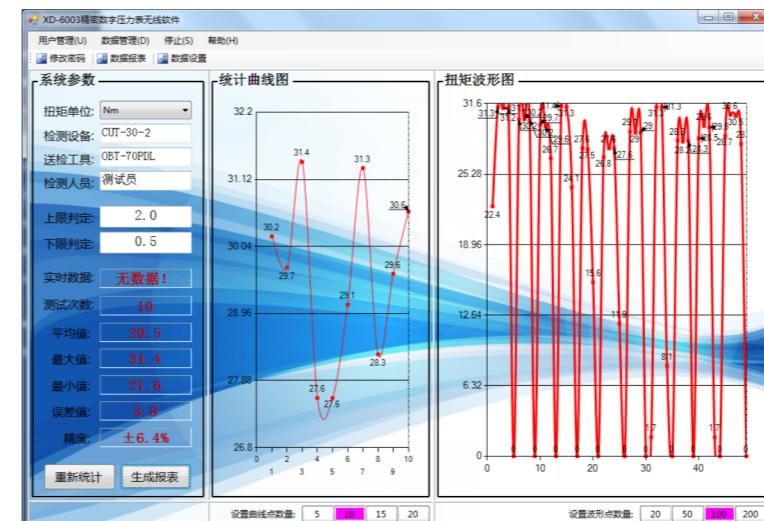
SG-02

Model	Chuck size		Free speed	Length	Weight	Air pressure	Air inlet	Air consumption	Noise level
	mm	inch							
SG-01	3	1/8	60000	160	0.21	90	1/4	8	82
SG-02	3	1/8	60000	145	0.25	90	1/4	8	82

TORERO digital torque tester

It is a torque tester for factory. It has 7 units - Ncm , Nm, kgf.cm, kgf.m, lbf.in, lbf.ft and Mpa. It can imitate soft and hard joint situation. It include battery box. It can easily move. It can connect computer with dedicated software . It can wirelessly transmit data. The transmission distance is 50 meter.

Tester include professional software. You can display testing data curve and automatically calculate accuracy of tool in the computer at any time. You also can print testing reports by one key and export testing data to save.

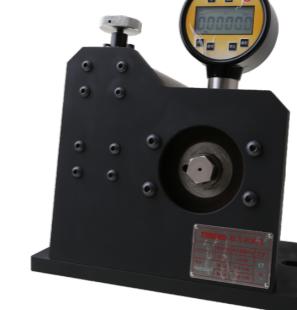


工具测试报告	
检测设备：CUT-30-2	送检工具：OBT-70PDL
序号	扭力值
1	30.2Nm
2	29.7Nm
3	31.4Nm
4	27.6Nm
5	27.6Nm
6	29.1Nm
7	31.3Nm
8	28.3Nm
9	29.6Nm
10	30.6Nm
检测项目	检测数据
测试次数	10
最大扭矩	31.4Nm
最小扭矩	27.6Nm
平均扭矩	29.5Nm
误差范围	3.8Nm
误差率	± 6.4%
测试人：测试员	日期：2016-07-25

Software interface



CUT-20-2



CUT-30-2



CUT-40-2

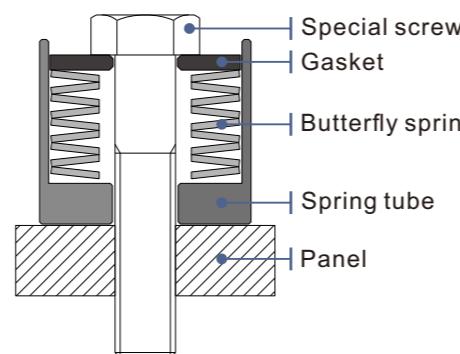
CUT-20-2		
Bolt	Torque range	Weight(kg)
M6	5-15	
M8	15-35	8.3
M10	35-54	
AC	110-220	

CUT-30-2		
Bolt	Torque range	Weight(kg)
M12	54-88	
M14	88-148	17
M16	148-190	
AC	110-220	

CUT-40-2		
Bolt	Torque range	Weight(kg)
M18	190-290	
M20	290-440	112
M24	440-680	
AC	110-220	

Soft joint tester

1. It can accurately imitate threaded connection of soft joint.
2. It can test the performance of electric servo、clutch、oil-pulse tools at soft joint.
3. It can be used with dynamic sensor.
4. Each bolt has both 360° and 720° testers of soft-joint.



Please be according to below table providing number to order accessories.

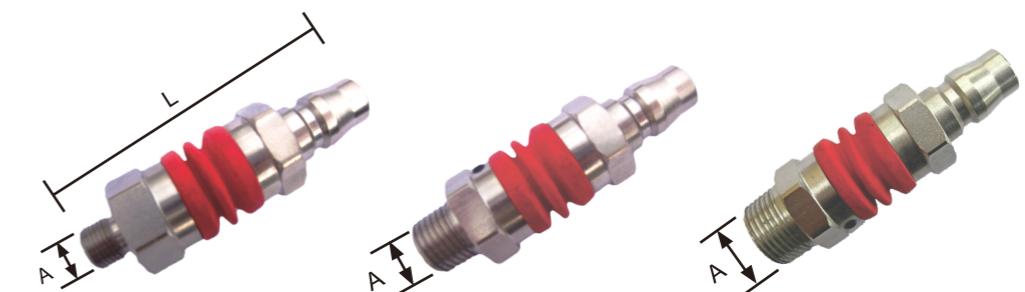


MN014



MN020

Model	Bolt diameter	Spring tube Order no.	Butterfly spring Order no.	Gasket Order no.	Special screw Order no.
MN014	M8	33073370030M8	42115005000	33074270030M8	33073110110M8
	M10	33073370030M10	42115006000	33074270030M10	33073110110M10
	M12	33073370030M12	42115007000	33074270030M12	33073110110M12
	M14	33073370030M14	42115008000	33074270030M14	33073110110M14
MN020	M16	33083370030M16	42115011000 42115009000	33084270030M16	33073110110M16
	M18	33083370030M18	42115010000	33084270030M18	33073110110M18
	M20	33083370030M20	42115010000	33084270030M20	33073110110M20

360°swirl coupler**Tube teeth quickly removal type**

Model	A	Specification	L
MS-01	1/8	Japan	57 mm
PT-04	1/4	Japan	64 mm
PT-07	3/8	Japan	64 mm

Composite coupler

Model	Specification
T-20SM	1/4
T-30SM	3/8
T-40SM	1/2

Model	Specification
T-20SF	1/4
T-30SF	3/8

Model	Specification
T-20SP	548
T-30SP	6.5410

Model	Specification
T-20SH	5/16"
T-30SH	3/8

Special oil for oil-pulse tool and vacuum oiling machine

Model no. : 70700020000(1L)
70700020000(20L)



Air rotor : Lubricated and cleaned oil

Model no. : 70700006000(1L)
70700006000(20L)



Cylinder : Oil-pulse pressure special oil

Model no. : 70700017000
Vacuum oiling machine

Model no. : 70700005000
Vacuum can



Vacuum oiling machine

Oil-pulse tool protective sheath

OBT, OBN series sheath can be purchased separately. Please refer to the form below for order number.



Body sheath



Handle sheath



Gear arm sheath

OBT series high pressure tool

Model	Handle sheath	Body sheath
	Order No.	Order No.
OBT-40PD	35241810160	35122500000
OBT-40PH	35241810160	35122500000
OBT-50PD	35241810160	35122500000
OBT-50PH	35241810160	35122500000
OBT-60PD	35241810160	35242500000
OBT-60PH	35241810160	35242500000
OBT-70PD	35241810160	35362500000
OBT-70PH	35241810160	35362500000
OBT-80PD	35241810160	35482500000
OBT-81PD	35241810160	35482500000
OBT-90PD	35601810160	35602500000
OBT-100PD	35601810160	35632500000
OBT-130PD	35691810160	35662500000
OBT-150PD	35691810160	35692500000
OBT-180PD	35721810160	35722500000
OBT-250PD	35971810160	35972500000

OBT series low pressure tool

Model	Handle sheath	Body sheath
	Order No.	Order No.
OBT-40PDL	35251810010	35122500000
OBT-40PHL	35251810010	35122500000
OBT-50PDL	35251810010	35122500000
OBT-50PHL	35251810010	35122500000
OBT-60PDL	35251810010	35242500000
OBT-60PHL	35251810010	35242500000
OBT-70PDL	35251810010	35362500000
OBT-70PHL	35251810010	35362500000
OBT-80PDL	35251810010	35482500000
OBT-81PDL	35251810010	35482500000
OBT-90PDL	35611810010	35602500000
OBT-100PDL	35611810010	35632500000
OBT-130PDL	35701810010	35662500000
OBT-150PDL	35701810010	35692500000
OBT-180PDL	35731810010	35722500000

OBN series tool

Model	Handle sheath	Body sheath
	Order No.	Order No.
OBN-30PD	35081810010	35082500000
OBN-30PH	35081810010	35082500000
OBN-40PD	35081810010	35082500000
OBN-40PH	35081810010	35082500000
OBN-50PD	35081810010	35202500000
OBN-50PH	35081810010	35202500000
OBN-60PD	35081810010	35322500000
OBN-60PH	35081810010	35322500000
OBN-70PD	35441810010	35442500000
OBN-70PH	35441810010	35442500000
OBN-80PD	35441810010	35562500000
OBN-81PD	35441810010	35562500000
OBN-90PD	35621810010	35622500000
OBN-100PD	35621810010	35652500000
OBN-130PD	35681810010	35682500000

OBN series gear wrench

Model	Handle sheath	Body sheath
	Order No.	Order No.
OBN-50PR	35081810010	35202500000
OBN-60PR	35081810010	35322500000
OBN-70PR	35441810010	35442500000
OBN-60PR-1	35081810010	35322500000
OBN-70PR-1	35441810010	35442500000
OBN-70PR-2	35441810010	35362500000
OBN-70PR-3	35441810010	35442500000
OBN-50PA	35081810010	35202500000
OBN-60PA	35081810010	35322500000
OBN-70PA	35441810010	35442500000
OBN-60PA-1	35081810010	35322500000
OBN-70PA-1	35441810010	35442500000
OBN-70PA-2	35441810010	35362500000
OBN-70PA-3	35441810010	35442500000

Gear arm sheath

Model	Gear arm sheath
	Order No.
LTV-15SR	36501790000
LTV-15SA	36501790000
LTV-30SR-2	36541790000
LTV-30SA-2	36541790000
OBN-50PR	36501790000
OBN-60PR	36501790000
OBN-70PR	36501790000
OBN-60PR-1	36521790000
OBN-70PR-1	36521790000
OBN-70PR-2	36541790000
OBN-70PR-3	36551790000
OBN-50PA	36501790000
OBN-60PA	36501790000
OBN-70PA	36501790000
OBN-60PA-1	36521790000
OBN-70PA-1	36521790000
OBN-70PA-2	36541790000
OBN-70PA-3	36551790000

Tool repair fixture**Air motor fixture :**

It is a connected set which use for removing and assembling straight and pistol type tool.

It is used for maintenance rotor set.

**Oil-pulse cylinder pressing plate fixture :**

It is used for removing and assembling oil-pulse cylinder pressing plate of oil-pulse cylinder set.

It is used for maintenance Oil-pulse cylinder set.

**Rear end plate fixture :**

It is used for removing and assembling rear end plate of OBT pistol type tool.

It is used for maintenance balanced switch set.

Tool repair fixture

The following sub-categories are with same model. Fixture is same. Below table only list one.

For example: OBT-60PD	High pressure tool
OBT-60PD-RE	With signal tube tool
OBT-60PDL	Low pressure tool
OBT-60PDL-RE	Low pressure with signal tube tool
OBT-60PD-1	Reverse shut-off tool

Table 1-1 OUN , OUT series straight oil pulse tool

Model				Air motor set fixture Order no.	Hydraulic cylinder pressing plate fixture(Available for Pistol Shut-off) Order no.
Straight Non shut-off	Pistol Non shut-off	Straight Shut-off	Pistol Shut-off		
OUN-221SH		OUT-221SH		70500020000	70500019000
OUN-331SH	OUN-331PH	OUT-331SH	OUT-331PH	70500006000	70500018000
OUN-331SD	OUN-331PD	OUT-331SD	OUT-331PD		
OUN-441SH	OUN-441PH	OUT-441SH	OUT-441PH		
OUN-441SD	OUN-441PD	OUT-441SD	OUT-441PD		
	OUN-551PH				
	OUN-551PD				
	OUN-661PH				
	OUN-661PD				
OUN-551SH		OUT-551SH	OUT-551PH		
OUN-551SD		OUT-551SD	OUT-551PD	70500016000	70500017000
OUN-661SH		OUT-661SH	OUT-661PH		
OUN-661SD		OUT-661SD	OUT-661PD		
OUN-771SH	OUN-771PH	OUT-771SH	OUT-771PH		
OUN-771SD	OUN-771PD	OUT-771SD	OUT-771PD		
OUN-881SD	OUN-881PD	OUT-881SD	OUT-881PD		
	OUN-991PD		OUT-991PD		
	OUN-1001PD		OUT-1001PD		
	OUN-1301PD		OUT-1301PD		

Table 1-2 OBN , OBT series straight and pistol oil-pulse tools

Model				Air motor set fixture Order no.	Hydraulic cylinder pressing plate fixture Order no.	Rear end plate fixture(Pistol) Order no.
Straight Non shut-off	Pistol Non shut-off	Straight Shut-off	Pistol Shut-off			
OBN-30SH	OBN-30PH			70500006000	35242650030	35242670030
OBN-30SD	OBN-30PD					
OBN-40SH	OBN-40PH	OBT-40SH	OBT-40PH			
OBN-40SD	OBN-40PD	OBT-40SD	OBT-40PD			
OBN-50SH	OBN-50PH	OBT-50SH	OBT-50PH			
OBN-50SD	OBN-50PD	OBT-50SD	OBT-50PD			
OBN-60SH	OBN-60PH	OBT-60SH	OBT-60PH			
OBN-60SD	OBN-60PD	OBT-60SD	OBT-60PD			
OBN-70SH	OBN-70PH	OBT-70SH	OBT-70PH			
OBN-70SD	OBN-70PD	OBT-70SD	OBT-70PD			
OBN-80SD	OBN-80PD	OBT-80SD	OBT-80PD	35362660030	35362650030	35362670030
OBN-81SD	OBN-81PD	OBT-81SD	OBT-81PD			
	OBN-90PD		OBT-90PD			
	OBN-100PD		OBT-100PD			
	OBN-130PD		OBT-130PD			
	OBN-150PD		OBT-150PD	35722660030	35692660030	35692670030
	OBN-180PD		OBT-180PD			

Oil-pulse tool special repair kit

Oil-pulse tool special repair kit include easily broken spare parts : Rotor blades , Rotor blade spring , XO-ring , Base O-ring , Anvil base O-ring , Valve O-ring , Oil-pulse cylinder mandrel O-ring , Torque screw O-ring , Oiling screw O-ring , Pulse screw O-ring....and so on.

OBT series oil-pulse tool :

Model						Repair kit Order No.	
High pressure tool			Low pressure tool		Reverse torque series		
Pistol	Straight	Angle	Pistol	Straight	Angle	Pistol type	Straight type
OBT-40PH	OBT-40SH					OBT-40PD-1	
OBT-40PD	OBT-40SD						
OBT-50PH	OBT-50SH	OBT-50SC	OBT-50PHL	OBT-50SHL	OBT-50SCL	OBT-50PDL-1	OBT-50SDL-1
OBT-50PD	OBT-50SD		OBT-50PDL	OBT-50SDL			
OBT-60PH	OBT-60SH	OBT-60SC	OBT-60PHL	OBT-60SHL	OBT-60SCL	OBT-60PDL-1	OBT-60SDL-1
OBT-60PD	OBT-60SD		OBT-60PDL	OBT-60SDL			
OBT-70PH	OBT-70SH	OBT-70SC	OBT-70PHL	OBT-70SHL	OBT-70SCL	OBT-70PDL-1	OBT-70SDL-1
OBT-70PD	OBT-70SD		OBT-70PDL	OBT-70SDL			
OBT-80PH	OBT-80SD					OBT-80PDL-1	OBT-80SDL-1
OBT-81PD	OBT-81SD					OBT-81PDL-1	OBT-81SDL-1
OBT-90PD						OBT-90PDL-1	
OBT-100PD						OBT-100PDL-1	
OBT-130PD						OBT-130PDL-1	
OBT-150PD						OBT-150PDL-1	
OBT-180PD						OBT-180PDL	
OBT-250PD							

OBT series oil-pulse with a signal tube tool:

Model						Repair kit Order No.
High pressure with a signal tube			Low pressure with a signal tube		Angle	
Pistol	Straight	Angle	Pistol	Straight	Angle	
OBT-40PH-RE	OBT-40SH-RE					704500010
OBT-40PD-RE	OBT-40SD-RE					
OBT-50PH-RE	OBT-50SH-RE	OBT-50SC-RE	OBT-50PHL-RE	OBT-50SHL-RE	OBT-50SCL-RE	
OBT-50PD-RE	OBT-50SD-RE		OBT-50PDL-RE	OBT-50SDL-RE		
OBT-60PH-RE	OBT-60SH-RE	OBT-60SC-RE	OBT-60PHL-RE	OBT-60SHL-RE	OBT-60SCL-RE	
OBT-60PD-RE	OBT-60SD-RE		OBT-60PDL-RE	OBT-60SDL-RE		
OBT-70PH-RE	OBT-70SH-RE	OBT-70SC-RE	OBT-70PHL-RE	OBT-70SHL-RE	OBT-70SCL-RE	
OBT-70PD-RE	OBT-70SD-RE		OBT-70PDL-RE	OBT-70SDL-RE		
OBT-80PD-RE	OBT-80SD-RE	OBT-80SC-RE	OBT-80PHL-RE	OBT-80SHL-RE	OBT-80SCL-RE	
OBT-81PD-RE	OBT-81SD-RE		OBT-81PHL-RE	OBT-81SHL-RE	OBT-81SCL-RE	
OBT-90PD-RE						704548010
OBT-100PD-RE						704563010
OBT-130PD-RE						704566010
OBT-150PD-RE						704569010
OBT-180PD-RE						704572010

OBN series oil-pulse with a signal tube tool:

Model			Repair kit Order No.

What is torque

Torque is distance x force or anvil rotary force .

Torque unit : kg-cm , lb-in , N-m

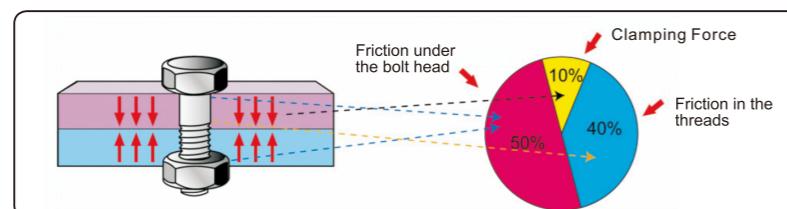
It need to think over below elements before testing torque.

1. Material :

Materials will decide bolts type, tighten tool and tighten size of force. The commonly used materials are iron, aluminum, plastic and wood...and so on.

2. Friction :

In order to ensure working quality of assembly line and be controlled to achieve consistency. It need to think over the influence of frictional force generated by the joint surface. Such as frictional force are created by screw bearing surface, bolt thread and gasket. It generally will loss 90% torque by friction in screw tightening process. It only 10% torque is used to tighten screws.



Concept of torque control

The industrial assembling lines' engineers are still looking for suitable solution of efficient controlled torque today. They are very important elements from selecting tools to producing line design. It can effectively reduce labor costs and improve product quality if concept of torque control can be implemented in produced department. This is industrial upgrading must be implemented policy.

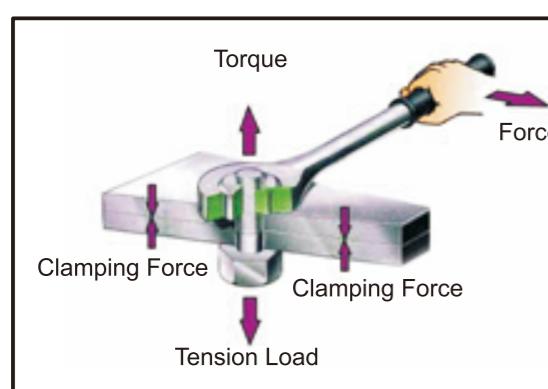
Assembling screw is an important process at assembling production line. Its mainly analysis point is using how many "clamping force" in locking operation. The traditional pneumatic tools couldn't meet assembling market demand in the international standardization coming today. How to select "correct" tool. It will be the key to improve industrial competition.

The concept of tighten screw :

It's still very common that screws (nuts, bolts and so on) are used in professional assembling process. It must think don't hurt main parts and bolt threads in process to use screws assembling , tighten or loosen.

Three elements of mainly affect screw assembling process:

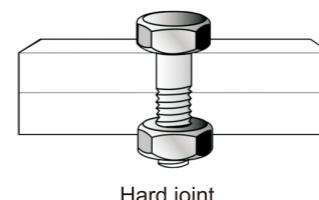
Screws , joint material , tool type



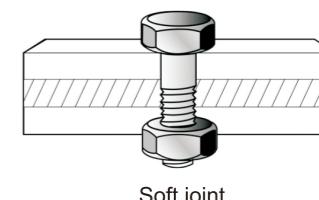
P.S. Clamping force : Two same or different materials closely bind together force.

Joint material type

1. Hard joint type : It use screws to tighten hard materials. This connected method more don't affect the setting of tightening torque.
2. Soft joint type : It use screws to tighten more soft materials. It need to turn one more circle to tighten materials . It need to properly increase the torque value for tightening.

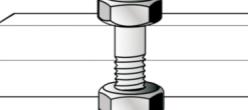
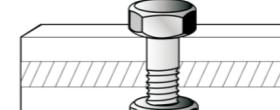


Hard joint



Soft joint

Tool selection and scope

Applicability	Applicability Statement
Hard joint	 <ul style="list-style-type: none"> 1. Hard joint : Metal to metal directly connect. 2. Tighten process : Light torque screwed into and fast tighten. 3. Applicability : It is very suitable for using oil-pulse tools
Soft joint	 <ul style="list-style-type: none"> 1. Soft joint : Between metals connect washer or metal connect with soft material. 2. Tighten process : Light torque screwed into and gradually tighten. 3. Applicability : It suit for using oil-pulse tools. It will increase times of maintenance. (oil change) if soft joint compare with hard joint.
Mechanical tooth screws	Best
Triangle screws Self-locking Self-attack	Good
Self-attack/Drilling screws/ Wood working screws	Poor : These screw threads are less suitable for oil-pulse tools.

Application and comparison of oil-pulse tool

TORERO SHUT-OFF SERIES AND NON SHUT-OFF SERIES

Available for non shut-off oil-pulse tools' conditions :

1. Hard joint and soft joint bolts combined sets.
2. The extended couplers , larger tolerances of sockets or universal socket are less suitable for shut-off oil-pulse tools.(Torque transmission will be affected.)
3. The assembling lines' assembly space or operator have the lightest weight required.
4. Assemblies require accuracy and tolerances that can accept non shut-off oil-pulse tools' accuracy.
5. Budget consideration.

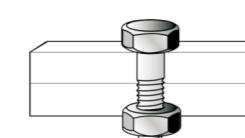
Available for shut-off oil-pulse tools' conditions :

1. Specified by Engineers.
2. he connected materials of soft joint don't beyond 180° which will be more available for shut-off tools.
3. It reduce training operators and related influence.

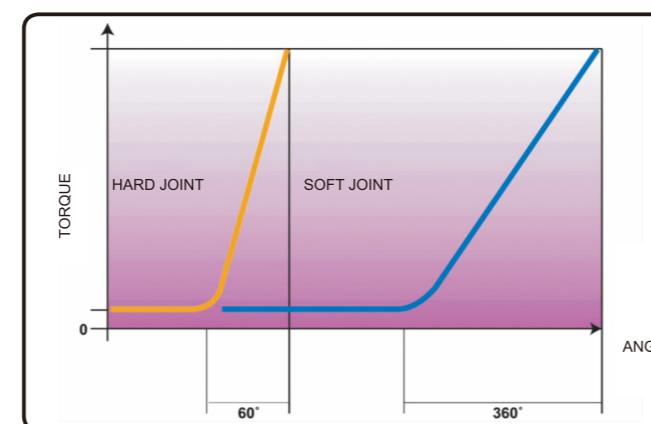
HARD JOINT AND SOFT JOINT

1. Hard joint : It mean that both screw shaft surface and object surface connect each other by the "snag torque of pre-tightening. The torque applied is satisfied until object is tightened. The screw rotating degree is under or equal to 60° .
2. Soft joint : It mean that both screw shaft surface and object surface connect each other by the "snag torque of pre-tightening. The torque applied is satisfied until object is tightened. The screw rotating degree is larger than 360° or equal to 360°.
3. Snag torque : It mean that the torque beyond the bolt thread and object surfaces' friction to make bolts start to create axis force to connect objects.

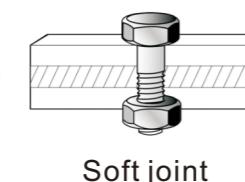
It is best effective when use hard joint.



Hard joint



Please don't beyond 360° when use on soft joint. Otherwise the tools' efficiency will become worse. It had better choose a larger torque tool for soft joint.



Soft joint

Specification

Model :

Please kindly verify model no. when you order.

Bolt diameter (Reference) :

If actual torque value isn't clear when choose tool. Please kindly refer bolt diameter for choosing correct model. Please refer this page - standard bolt-tightening torque list for applicable torque value of each bolt diameter.

Torque range :

The torque value is testing at standard environment and on torque testing machine.

Socket or bit :

It is the shape and size of output shaft.

Socket gear opposing size :

It means that can correspond to both faces' width for hex. socket of gear wrench. This tool type is equipped with a tightening hexagonal socket. It need to specify size if you order.

No load speed :

No load speed is numbers of turning per minute. The testing standard is 0.63 Mpa(6.3 bar , 90 psi) at no load situation.

Working pressure :

It means the best pressure for tool working.

Standard bolt -- Tighten torque list :

Bolt level specification	3.6	4.6	4.8	5.8	8.8	10.9	12.9	M18	103	121	172	275	386	463
M2	0.10	0.13	0.17	0.22	0.35	0.49	0.58	M20	144	170	240	385	541	649
M3	0.35	0.46	0.61	0.77	1.20	1.70	2.10	M22	194	230	324	518	728	874
M4	0.81	1.10	1.40	1.80	2.90	4.00	4.90	M24	249	295	416	665	935	1120
M5	0.60	2.20	2.95	3.60	5.70	8.10	9.70	M27	360	435	600	961	1350	1620
M6	2.80	3.70	4.90	6.10	9.80	14.0	17.0	M30	492	590	819	1310	1840	2210
M8	8.9	10.5	15	24	33	40	M36	855	1030	1420	2280	3210	3850	
M10	17	21	29	47	65	79	M42	1360	2270	3640	5110	6140		
M12	30	36	51	81	114	136	M45	1690	2820	4510	6340	7610		
M14	48	58	80	128	181	217	M48	2040	3400	5450	7660	9190		
M16	74	88	123	197	277	333								

Unit transformed table

Torque :

UNIT	Ncm	Nm	kgf.cm	kgf.m	lbf.in	lbf.ft
Ncm	1	0.01	0.102	0.00102	0.008851	0.007376
Nm	100	1	10.2	0.102	8.8	0.74
kgf.cm	9.807	0.09807	1	0.01	0.868	0.07233
kgf.m	980.7	9.807	100	1	86.8	7.233
lbf.in	11.3	0.113	1.152	0.01152	1	0.08333
lbf.ft	135.6	1.356	13.83	0.1383	12	1

Air pressure :

UNIT	Mpa	Bar	kgf/cm²	psi
Mpa	1	10	10.2	145
Bar	10	1	1.02	14.5
kgf/cm²	0.09807	0.9807	1	14.22
psi	0.006895	0.06895	0.07031	1

Power :

UNIT	kw	kgf m/s	PS	HP
kw	1	102	1.36	1.341
kgf m/s	0.009807	1	0.01333	0.01313
PS	0.7355	75	1	0.9863
HP	0.7457	76.04	1.014	1

TORERO®

