

# : UAT SERIES

OIL-PULSE TOOLS

## Revolutionizing Oil Pulse Tools UAT series Market Debut

NEW Products

5th Generation most-advanced Oil Pulse Tools, we URYU get afloat with pride as Power Tool's top manufacturer

UAT series, equipped with New mechanistic "Auto Relief" and "Triple-Chamber Motor\*\*", realized high-accuracy fastening like Nutrunner, keeping sound level, vibration level and reaction force unchanged, and permitted drastic improvement of durability.

**\*Triple-Chamber Motor adopted** For lower torque models (UAT40/40S and 50/50S series), we have adopted newly-developed Triple-Chamber Motor (Medium Speed & High Output Power) that achieves lowering the rotation speed and maintaining the output power equal with existing Dual-Chamber Motor to control the torque spike by the inertia generated along with the rotation speed of the motor.

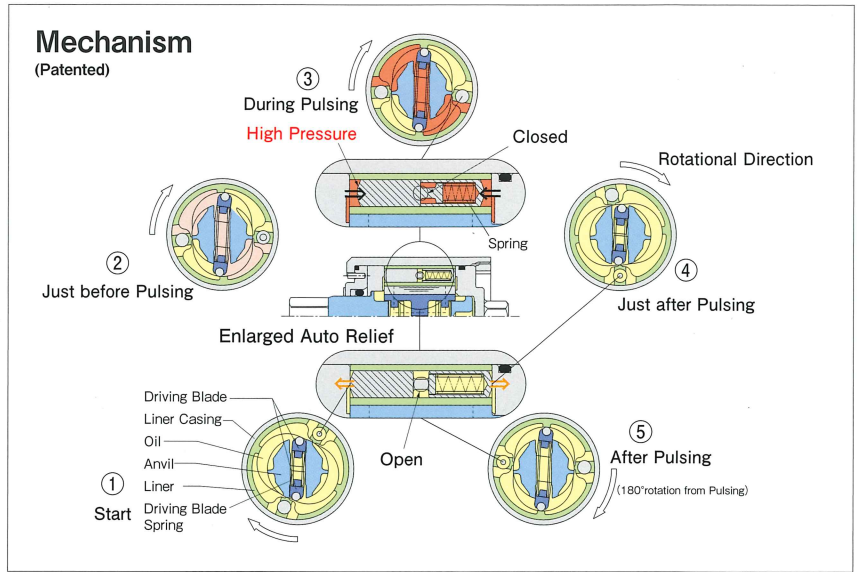
 **URYU SEISAKU, LTD.**  
Osaka, Japan

# URYU independent new technology "Auto Relief Function"

Relief Valve changes the area of bypass which plays its roles in transferring the oil pressure generated in pulse unit from high pressured area to low pressured area and adjusts the torque and number of blows depending on the target torque.

However, the area of bypass in the existing relief valve system is decided at a proper adjustment position of final target torque, thus it was not possible to change the area of bypass while fastening. Newly developed "Auto Relief Function" changes the area of bypass depending on the process of fastening, which the existing relief valve does not. This new function offers you more ideal fastening than the conventional relief valve.

Also, make the final target torque adjustment with Relief Valve as heretofore



## Realization of High Efficiency, High Accuracy and High Durability

### 3 Improvements

#### Fastening Side Working Efficiency Advancement

##### Improvement 1. Fastening Accuracy 30% UP<sup>\*1</sup>

→Applicable for any kind of fastening operation

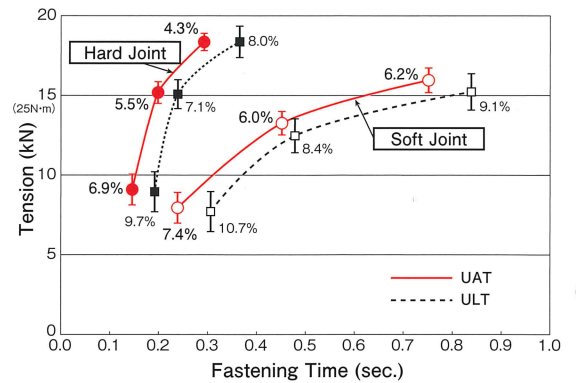
##### Improvement 2. Fastening Time 30% CUT<sup>\*2</sup>

→Contribution for Energy Saving

(\*1, \*2 According to the comparison under our factory check)

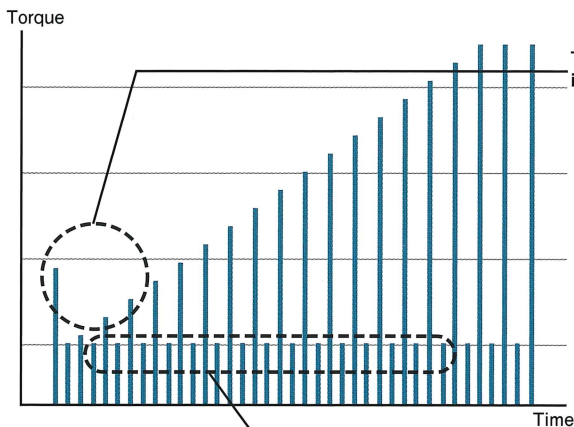
As auto-relief is fully opened when the bolt seats, torque spike is inhibited. UAT40 series and UAT50 series, we have adopted Triple-Chamber Motor, are more effective. As auto-relief is fully opened when not pulsing, resistance pulse, which is 180-degree opposite direction from rotation, gets smaller as well as oil-flow resistance. Because of this, the number of blow increases during the same time period. Reaching torque stability range earlier, the torque accuracy will be stable.

##### Fastening efficiency comparison (UAT vs ULT)



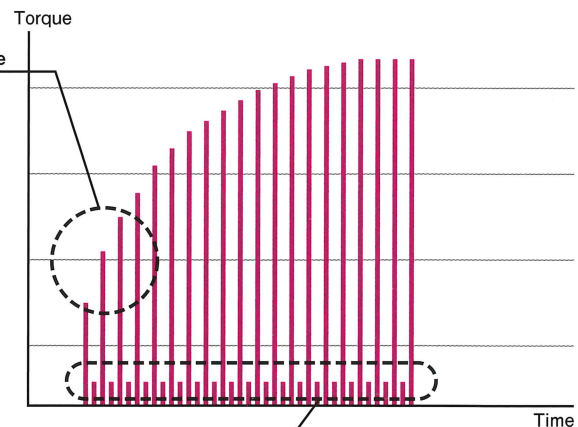
##### Conventional Relief Valve

Dimension of Bypass (fixed)



##### Auto-relief

Dimension of Bypass (changing)



Energy Loss decreasing

# Durability side Maintenance Cost Reduction

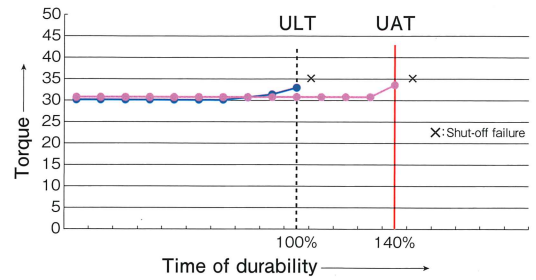
## Improvement 3. Durability 40% UP<sup>\*3</sup> → Maintenance Cost Reduction

<sup>\*3</sup> According to the comparison under our durability test

As resistance pulse and oil-flow resistance become smaller, the heat generation of pulse unit can be inhibited. As a result, the oil degradation becomes slow, and the durability will be improved.

As surge pressure generated when seating is absorbed by auto relief, rapid oil pressure to sealing part of anvil is reduced and the durability (oil leaking etc.) is improved.

■ Comparison of Durability



## Reliable capability taken over from ULT series

### ■ Reliable Torque Accuracy and Assured Shut-Off

- 1 Check Valve senses with accuracy the small volume of high-pressure oil from the Relief Valve section during operation. As soon as the target torque has been achieved, the shut-off valve disconnects the air supply to the tool.
- 2 We have added a Reset Spring to help the Operating Rod return back to the original position without fail every time. Therefore, the Operating Rod can consistently and accurately sense the load and shut off the tool even when operated at lower air pressure.

### ■ Improvement in Energy Efficiency and Maintenance Cost Reduction

- 3 Roller Blades (Driving Blade with Roller Pin) reduce the friction inside the pulse unit and improve the energy efficiency. The Roller Blades also create less frictional wear of Driving Blade, which will reduce maintenance cost.
- 4 Our original unique sealing SU-Ring increases the time between Maintenance Cycles compared to the conventional Pulse Tools.

### ■ Significant Load Reduction for Operators

- 5 Soft-touch trigger mechanism lightens the load imposed on the operator's fingers. In addition to the oil pulse mechanism offering low noise, low vibration and reduced reaction, the compact handgrip reduces the burden for operators. Thus, operators can work comfortably during repeated fastening.

### ■ In Consideration of Environment Aspect

- 6 Taking the environment into consideration, the UAT series are unpainted, utilizing a full-cover jacket supplied as standard equipment, protecting the work surface as well as the tool's body. Body Jacket is made of oil-proof rubber that is kind to the environment.



TM-type  
(Fastening check)  
With UTM-1500 Fastening Counter with Poka-Yoke (sold separately), fastening number control and double-fastening detection can be monitored.

## Plenty of models are on sale

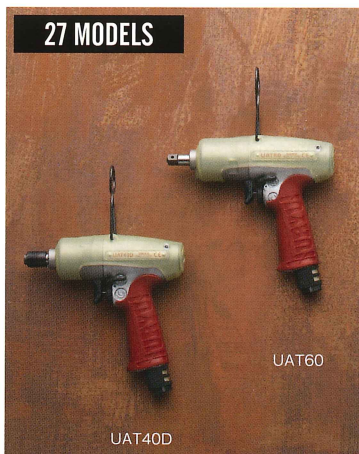
### UAT series Pistol Grip type



Standard Type

Low Pressure Type

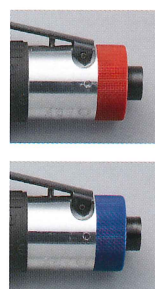
27 MODELS



UAT60

UAT40D

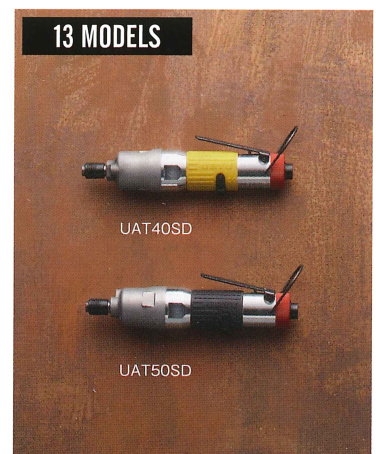
### UAT series Straight Handle type



Standard Type

Low Pressure Type

13 MODELS



UAT40SD

UAT50SD

# UAT SERIES

## SPECIFICATIONS

### UAT SERIES OIL PULSE TOOLS (SHUT-OFF TYPE)

Specification subject to change without prior notice

Model	Capacity (Nominal Bolt Size)		Torque Range				Free Speed (Approx.) rpm			Overall Length Socket or Bit (about)		Weight Socket or Bit (about)		From Center to Outside (about)		Sq Drive or Hex. Size		Average Air Consumption		Sound Pressure Level (LpA)	Sound Power Level (LWA)	Vibration Total Value (Ahd)	Vibration Uncertainty (K)
			0.4~0.5MPa		0.5~0.6MPa		0.4MPa	0.5MPa	0.6MPa	mm	in	kg	lb	mm	in	mm	in	m3/min	ft3/min				
	mm	in	Nm	ft-lbs	Nm	ft-lbs																	

### PISTOL TYPE

UAT40	5	13/64	4.5~8.0	3.3~5.9	4.5~8.0	3.3~5.9	3300	3600	3800	162	6 3/8	0.92	2.0	24.5	31/32	9.5	3/8	0.25	8.8	75	-	<2.5	0.54
UAT50	6~8	1/4-5/16	---	---	7.0~15.5	5.2~11.5	---	4400	4600	162	6 3/8	0.92	2.0	24.5	31/32	9.5	3/8	0.3	10.5	78	-	<2.5	0.55
UAT60	8	5/16	---	---	15.0~32.0	11.1~23.7	---	6300	6700	174	6 27/32	0.95	2.1	24.5	31/32	9.5	3/8	0.35	12.3	80	-	<2.5	0.58
UAT70	8~10	5/16-3/8	---	---	30.0~55.0	22.2~40.7	---	5700	6000	180	7 3/32	1.05	2.3	25.5	1	9.5	3/8	0.40	14.0	80	-	<2.5	0.59
UAT80	10~12	3/8-1/2	---	---	45.0~63.0	33.3~46.6	---	5300	5600	186	7 5/16	1.25	2.8	28.0	1 3/32	9.5	3/8	0.48	16.8	80	-	<2.5	0.63
UAT90	10~12	3/8-1/2	---	---	50.0~85.0	37.0~62.9	---	5400	5700	192	7 9/16	1.45	3.2	29.0	1 5/32	12.7	1/2	0.53	18.6	82	93	<2.5	0.6
UAT100	12	1/2	---	---	70.0~130.0	51.8~96.2	---	4900	5200	199	7 27/32	1.70	3.7	31.5	1 1/4	12.7	1/2	0.55	19.3	82	93	<2.5	0.6
UAT130	14	9/16	---	---	110.0~150.0	81.4~111.0	---	4300	4500	217	8 35/64	2.30	5.06	34.0	1 11/32	12.7	1/2	0.70	24.6	82	93	2.6	0.7
UAT150	16	5/8	---	---	140.0~210.0	103.6~155.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
UAT180	16~18	5/8-45/64	---	---	160.0~250.0	118.4~185.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
UAT200	18~20	45/64-3/4	---	---	200.0~400.0	148.0~296.0	---	2300	2400	279	10 63/64	5.80	12.76	49.5	1 31/32	19.0	3/4	1.00	35.2	85	96	2.8	0.7
UAT30D	4~5	5/32-13/64	2.5~5.5	1.85~4.07	2.5~5.5	1.85~4.07	3600	3800	4200	165	6 1/2	0.88	1.94	23.5	15/16	6.35Hex.	1/4	0.30	10.5	76	-	<2.5	0.6
UAT40D	5	13/64	4.5~8.0	3.3~5.9	4.5~8.0	3.3~5.9	3300	3600	3800	165	6 1/2	0.92	2.0	24.5	31/32	6.35Hex.	1/4 Hex	0.25	8.8	75	-	<2.5	0.59
UAT50D	6~8	1/4-5/16	---	---	7.0~15.5	5.2~11.5	---	4400	4600	165	6 1/2	0.92	2.0	24.5	31/32	6.35Hex.	1/4 Hex	0.3	10.5	78	-	<2.5	0.62
UAT60D	8	5/16	---	---	15.0~32.0	11.1~23.7	---	6300	6700	177	6 31/32	0.95	2.1	24.5	31/32	6.35Hex.	1/4 Hex	0.35	12.3	80	-	<2.5	0.6
UAT50L	6~8	1/4-5/16	7.0~15.5	5.2~11.5	---	---	4000	4300	---	162	6 3/8	0.92	2.0	24.5	31/32	9.5	3/8	0.25	8.8	75	-	<2.5	0.54
UAT60L	8	5/16	13.0~28.0	9.6~20.7	---	---	6000	6500	---	174	6 27/32	0.95	2.1	24.5	31/32	9.5	3/8	0.25	8.8	77	-	<2.5	0.57
UAT70L	8~10	5/16-3/8	25.0~48.0	18.5~35.5	---	---	5300	5600	---	180	7 3/32	1.05	2.3	25.5	1	9.5	3/8	0.30	10.5	78	-	<2.5	0.59
UAT80L	10~12	3/8-1/2	35.0~55.0	25.9~40.7	---	---	5000	5300	---	186	7 5/16	1.25	2.8	28.0	1 3/32	9.5	3/8	0.40	14.0	78	-	<2.5	0.62
UAT90L	10~12	3/8-1/2	45.0~75.0	33.3~55.5	---	---	5100	5600	---	192	7 9/16	1.45	3.2	29.0	1 5/32	12.7	1/2	0.45	15.8	79	-	<2.5	0.63
UAT100L	12	1/2	60.0~110.0	44.4~81.4	---	---	4800	5200	---	199	7 27/32	1.70	3.7	31.5	1 1/4	12.7	1/2	0.48	16.8	79	-	<2.5	0.6
UAT130L	12~14	1/2-9/16	80.0~125.0	59.2~92.5	---	---	4100	4400	---	217	8 35/64	2.30	5.06	34.0	1 11/32	12.7	1/2	0.50	17.6	79	-	<2.5	0.7
UAT150L	14~16	9/16-5/8	110.0~170.0	81.4~125.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
UAT180L	16	5/8	130.0~210.0	96.2~155.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
UAT200L	16~18	5/8-3/4	170.0~280.0	125.8~207.2	---	---	2200	2300	---	279	10 63/64	5.80	12.76	49.5	1 31/32	19.0	3/4	0.70	24.6	82	96	2.6	0.7
UAT50DL	6~8	1/4-5/16	7.0~15.5	5.2~11.5	---	---	4000	4300	---	165	6 1/2	0.92	2.0	24.5	31/32	6.35Hex.	1/4 Hex	0.25	8.8	75	-	<2.5	0.62
UAT60DL	8	5/16	13.0~28.0	9.6~20.7	---	---	6000	6500	---	177	6 31/32	0.95	2.1	24.5	31/32	6.35Hex.	1/4 Hex	0.25	8.8	77	-	<2.5	0.63

Air Consumption: under load at Air Pressure 0.6MPa and for L-type at Air Pressure 0.4MPa

Sound Level in accordance with ISO 15744

The uncertainty in the sound level is 3dB(A)

Vibration Level in accordance with ISO 26927-2

Air Inlet Thread : N.P.T. 1/4"

Air Hose Size : φ 10 × 6.5 × 5m for UAT30D, UAT40 series – UAT50 series

φ 12 × 8.0 × 5m for UAT60 series – UAT100 series

φ 16 × 11.0 × 5m for UAT100L, UAT130 series – UAT200 series

### STRAIGHT TYPE

Specification subject to change without prior notice

UAT40S	5	13/64	4.5~8.0	3.3~5.9	4.5~8.0	3.3~5.9	3000	3200	3300	224	8 13/16	0.85	1.9	22.5	7/8	9.5	3/8	0.20	7.0	70	-	<2.5	0.7
UAT50S	6~8	1/4-5/16	---	---	7.0~15.5	5.2~11.5	-	3700	3900	224	8 13/16	0.85	1.9	22.5	7/8	9.5	3/8	0.25	8.8	78	-	2.7	0.7
UAT60S	8	5/16	---	---	15.0~32.0	11.1~23.7	-	5400	5700	229	9	0.87	1.9	22.5	7/8	9.5	3/8	0.30	10.5	80	-	3.1	0.7
UAT70S	8~10	5/16-3/8	---	---	30.0~50.0	22.2~37.0	-	4400	4700	239	9 13/32	0.95	2.1	23.5	7/8	9.5	3/8	0.35	12.3	80	-	3.4	0.8
UAT30SD	4~5	5/32-13/64	2.5~5.5	1.85~4.07	2.5~5.5	1.85~4.07	3100	3300	3400	222	8 47/64	0.75	1.6	21.5	27/32	6.35Hex.	1/4	0.35	12.3	79	-	<2.5	0.6
UAT40SD	5	13/64	4.5~8.0	3.3~5.9	4.5~8.0	3.3~5.9	3000	3200	3300	227	8 15/16	0.85	1.9	22.5	7/8	6.35Hex.	1/4	0.20	7.0	70	-	2.7	0.7
UAT50SD	6~8	1/4-5/16	---	---	7.0~15.5	5.2~11.5	-	3700	3900	227	8 15/16	0.85	1.9	22.5	7/8	6.35Hex.	1/4	0.25	8.8	78	-	3.1	0.7
UAT60SD	8	5/16	---	---	15.0~32.0	11.1~23.7	-	5400	5700	232	9 1/8	0.87	1.9	22.5	7/8	6.35Hex.	1/4	0.30	10.5	80	-	3.5	0.8
UAT50SL	6~8	1/4-5/16	7.0~15.5	5.2~11.5	---	---	3800	4000	-	224	8 13/16	0.85	1.9	22.5	7/8	9.5	3/8	0.20	7.0	75	-	2.6	0.7
UAT60SL	8	5/16	13.0~28.0	9.6~20.7	---	---	5300	5600	-	229	9	0.87	1.9	22.5	7/8	9.5	3/8	0.25	8.8	77	-	3.0	0.7
UAT70SL	8~10	5/16-3/8	25.0~45.0	18.5~33.3	---	---	4400	4700	-	239	9 13/32	0.95	2.1	23.5	7/8	9.5	3/8	0.27	9.5	78	-	3.2	0.7
UAT50SDL	6~8	1/4-5/16	7.0~15.5	5.2~11.5	---	---	3800	4000	-	227	8 15/16	0.85	1.9	22.5	7/8	6.35Hex.	1/4	0.20	7.0	75	-	2.9	0.7
UAT60SDL	8	5/16	13.0~28.0	9.6~20.7	---	---	5300	5600	-	232	9 1/8	0.87	1.9	22.5	7/8	6.35Hex.	1/4	0.25	8.8	77	-	3.4	0.8

Air Consumption: under load at Air Pressure 0.6MPa and for L-type at Air Pressure 0.4MPa

Air Inlet Thread : N.P.T. 1/4"

Air Hose Size : φ 10 × 6.5 × 5m for UAT30SD, UAT40S series – UAT50S series

φ 12 × 8.0 × 5m for UAT60S series – UAT70S series

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