

# YOKOTA IMPULSE WRENCHES

*Speed · Precision · Quality*



PNEUMATIC  
SYSTEM &  
IMPULSE  
WRENCHES



CORDLESS  
SYSTEM &  
IMPULSE  
WRENCHES



ELECTRIC  
SYSTEM  
WRENCHES

# YOKOTA IMPULSE WRENCHES

## *Intelligent Assembly Solutions*

Yokota International is a leading manufacturer of impulse based assembly tools for high-end production facilities. Yokota developed the first impulse air tools over 45 years ago and the benefits of impulse based assembly tools are well-known all over the world these days: fast, light and with the highest clamping force, free from reaction forces. As an expert in the development, design and manufacturing of assembly tools, Yokota also embraces the opportunities of battery technology and has developed a wide range of intelligent electrical and battery system wrenches with Torque & Angle Control.

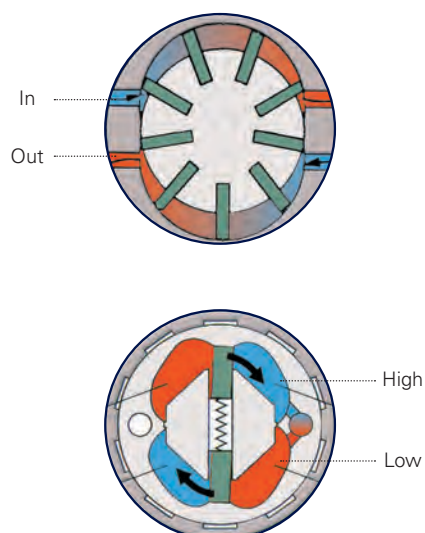
### **FASTER**

YOKOTA impulse wrenches are widely used for tightening jobs in the assembly industry, where accurate torque tolerances are necessary. Impulse tools are light, powerful, small and very importantly, have no kick-back. The YOKOTA range of impulse tools is increasing fast, starting at 6 Nm to tighten small joints, and goes up to 600 Nm. Evaluation of tightening processes in car assembly shows that tightening joints uses 10% of the total assembly time. Working with faster tools therefore can speed up assembly lines substantially.



### **DOUBLE CHAMBER AIR MOTOR**

The YOKOTA Y, YLa, YLT, YED and TKa Series impulse wrenches with double chamber air motor reach the required torque very quickly. The tools have a high number of impulses per second, and therefore very accurate torques can be realized, resulting in increased production speed. The twin blade impulse unit is patented. YOKOTA's unique impulse mechanism reduces noise and vibration!



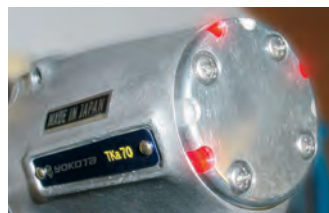
# SYSTEM WRENCHES



## Control Units

Yokota developed its first system wrench more than 30 years ago. The purpose being the tightening of threaded fasteners at a high speed and accuracy, with the possibility of counting bolts in a group, detecting errors during tightening and interacting with the production line control systems, including the exchange of tightening data for traceability purposes. The latest developments are not only with a torque transducer on the main shaft but also with an angle encoder. By controlling the torque and monitoring angle, all errors that can occur during tightening are detected and can be acted upon.

### OPTIONAL ON TKA SYSTEM WRENCHES:



Red = NOK



Green = OK

Visible from every angle: left, right, from the top and behind.

### HIGH ACCURACY

Product liability is essential to car manufacture. All tightened joints have to be correct. For this reason critical joints must be counted, documented and, of course, tightened with the right clamp force. In order to do this, you need an impulse wrench (with a built-in transducer) connected to a controller. This system ensures that only OK joints are counted resulting in "Zero Fault Production". This fail-safe system fits perfectly in the Poka Yoke strategy.

### TRANSDUCER FOR THE YEX, YED AND TKA SERIES



### TRANSDUCER FOR THE YEX, YED AND TKA SERIES

The strain gauges are positioned on the main shaft, picking up the twisting torque on the main shaft at each impulse as close as possible to the socket. The electric signals are transmitted by induction through the internal and external coils. Due to this principle the YOKOTA transducer is very reliable, accurate and without wear. The angle sensor is also mounted on the main shaft.

### CHARACTERISTICS

- Easy to program, according to application specifications
- Torque calculation over several impulses
- Compensation impulses to compensate the relaxation (soft joint)
- Poka Yoke proof, line management
- 2-step tightening optional
- 8 setting programs
- 2-way communication through RS-232
- Automatic program change (sequence programmable)
- Build-in timer for group control
- Several input signals
- Several output signals
- Statistics inside CP / CPK
- Memory for 10.000 cycles
- Transducer integrated, direct measurement
- Compact angle encoder
- Torque transducer non - contact type
- Torque and angle curve on PC
- Easy torque adjustment on the tool
- LED or acoustic signal on the tool
- High efficiency air motor
- Shut-off by external solenoid valve

### POSSIBLE ERROR DETECTIONS

- Detection insufficient torque and over torque
- Detection friction out of tolerances
- Detection of too long / too short bolt
- Detection of cross threaded threads
- Detection of crooked threads
- Detection of damaged threads
- Detection of double tightening
- Detection of blind holes

# SYSTEM WRENCHES

*TKa Series: Electronic torque control & Angle monitoring*



Type	Square / Hex drive	Bolt capacity mm	RPM	Torque Nm*	Load aircons. l/s	No-load aircons. l/s	Weight kg	Dimensions A mm	B mm	Vibration m/s <sup>2</sup>	Noise-level dB(A)
TKa600A	1/4" Hex	6	6.000	11-16	4,5	5,1	1,34	189	21	2,1	71
TKa600	3/8" Sq.	6	6.000	14-20	4,5	5,1	1,34	189	21	2,1	71
TKa700A	1/4" Hex	6-8	7.000	24-33	5,3	6,9	1,34	189	21	2,1	75
TKa700	3/8" Sq.	6-8	7.000	24-33	5,3	6,9	1,34	189	21	2,1	75
TKa800	3/8" Sq.	8	7.000	32-46	5,3	7,1	1,34	196	22	2,1	75
TKa900	3/8" Sq.	8-10	6.500	47-60	6,8	10,5	1,50	204	23	2,1	78
TKa1110	1/2" Sq.	10-12	5.500	65-95	8,8	13,5	1,97	220	25,5	2,2	80
TKa1200	1/2" Sq.	12	5.900	85-130	10	17,2	2,4	223	28	2,2	82
TKa1400	1/2" Sq.	14	5.200	100-160	13	19	3,00	246	29	2,2	84
TKa1500	1/2" Sq.	14-16	4.200	150-220	13,2	18,1	3,4	242	32	2,4	84

## SYSTEM CONFIGURATION



### YETC-230ER

- Torque control
- Angle monitoring version
- One channel controller
- LAN version optional



### YETC-330ER2-L

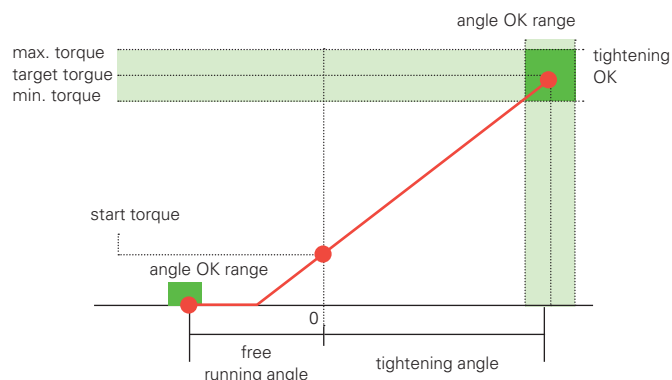
- Torque control
- Angle monitoring version
- Two channel controller
- Two tools can be operated simultaneously
- LAN standard, two IP addresses

## ANALYSING SOFTWARE



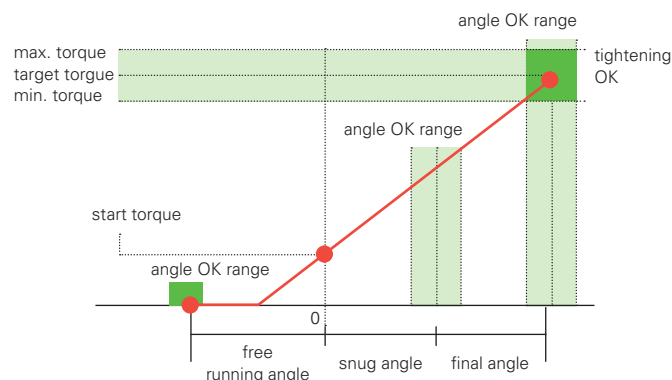
### YETC-230ER

Torque control & angle monitoring



### YETC-330ER2-L

Torque control & angle monitoring (including snug torque)



# SYSTEM WRENCHES

*TKa/YED Series: Torque controlled*



## Pistol type



Type	Square / Hex drive	Bolt capacity mm	RPM	Torque Nm*	Load aircons. l/s	No-load aircons. l/s	Weight kg	Inlet thread	Hose diameter mm	Dimensions A mm	B mm	Vibration m/s <sup>2</sup>	Noise-level dB(A)
TKa60A	1/4" Hex	6	6.000	11 - 16	4,5	5,1	1,3	PT 1/4"	6,5	179	22	2,1	71
TKa70A	1/4" Hex	6 - 8	7.000	20 - 27	5,3	6,9	1,3	PT 1/4"	6,5	179	22	2,1	75
TKa80A	1/4" Hex	8	7.000	24 - 33	5,3	7,1	1,3	PT 1/4"	6,5	186	22	2,1	73
TKa60	3/8" Sq.	6	6.000	14 - 20	4,5	5,1	1,3	PT 1/4"	6,5	179	22	2,1	71
TKa70	3/8" Sq.	6 - 8	7.000	20 - 35	5,3	6,9	1,3	PT 1/4"	6,5	179	22	2,1	75
TKa80	3/8" Sq.	8	7.000	32 - 46	5,3	7,1	1,3	PT 1/4"	6,5	186	22	2,1	73
TKa90	3/8" Sq.	8 - 10	6.500	47 - 70	6,8	10,5	1,5	PT 1/4"	9,5	195	24	2,1	78
TKa111	1/2" Sq.	10 - 12	6.000	65 - 105	8,8	13,5	1,9	PT 1/4"	9,5	210	26	2,2	80
TKa120	1/2" Sq.	12	5.900	85 - 130	10,0	17,2	2,4	PT 1/4"	9,5	223	28	2,2	82
TKa140	1/2" Sq.	14	5.200	100 - 160	13,0	19,0	2,9	PT 1/4"	9,5	235	30	2,2	84
TKa150	1/2" Sq.	14 - 16	4.200	150 - 220	13,2	18,1	3,4	PT 1/4"	9,5	242	32	2,4	84
YED-200	3/4" Sq.	20	3.400	155 - 360	18,3	32,2	6,8	PT 1/2"	12,7	309	40	4,2	86

## Straight type



Type	Square / Hex drive	Bolt capacity mm	RPM	Torque Nm*	Load aircons. l/s	No-load aircons. l/s	Weight kg	Inlet thread	Hose diameter mm	Dimensions A mm	B mm	Vibration m/s <sup>2</sup>	Noise-level dB(A)
YED-240S	1" Sq.	24	3,000	250-600	28,3	52,2	11,2	PT 1/2"	12,7	452	52,5	15,0	92

\* Torque specifications

All specified torques are measured on the YOKOTA testers, Series YET, at a dynamic airpressure of 0.63MPa. The YOKOTA testers have a static transducer, the specified torques are therefore to be used as a guidance only. In general the torque range will be lower in case of using lower airpressure, extension bars, torx or hexagon inset sockets, soft joints, etc.

## MULTI FASTENING CONTROLLER FOR THE TKA, YED, YEX SERIES



**YETC-230EA**  
One channel controller



**YETC-230EA4**  
Four channel controller,  
several tools can be used at one time



**YETC-330EA2**  
Two channel controller,  
two tools can be operated simultaneously



# SYSTEM WRENCHES

## YEX Series: Torque controlled

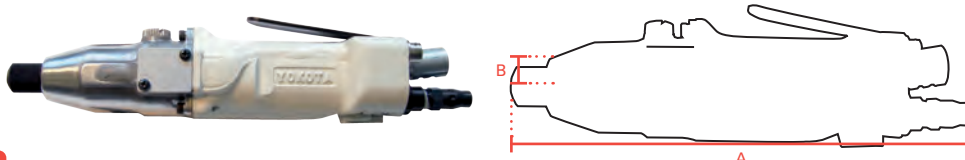


### Pistol type



Type	Square / Hex drive	Bolt capacity mm	RPM	Torque Nm*	Load aircons. l/s	No-load aircons. l/s	Weight kg	Inlet thread	Hose diameter mm	Dimensions A mm	B mm	Vibration m/s <sup>2</sup>	Noise-level dB(A)
YEX-120	3/8" Sq.	4 - 5	9.000	13 - 17	4,2	5	1,43	PT 1/4"	6,5	222	23	3	72
YEX-120A	1/4" Hex	4 - 5	9.000	11 - 15	4,2	5	1,43	PT 1/4"	6,5	223	23	3	72
YEX-150	3/8" Sq.	5 - 6	9.000	19 - 27	4,2	7,8	1,43	PT 1/4"	6,5	222	23	3	72
YEX-150A	1/4" Hex	5 - 6	9.000	14 - 22	4,2	7,8	1,43	PT 1/4"	6,5	223	23	3	72
YEX-501	3/8" Sq.	6 - 8	8.200	25 - 52	5,3	9,6	2,0	PT 1/4"	9,5	234	26,5	1,6	68
YEX-501A	1/4" Hex	6 - 8	8.200	23 - 49	5,3	9,6	2,0	PT 1/4"	9,5	227	26,5	1,6	68
YEX-701	3/8" Sq.	8 - 10	8.000	45 - 75	6,7	13,5	2,2	PT 1/4"	9,5	246	26,5	1,6	71
YEX-901	1/2" Sq.	10	6.100	61 - 104	6,7	12,5	2,7	PT 1/4"	9,5	257	33,5	2,3	73
YEX-1400	1/2" Sq.	10 - 12	5.900	92 - 142	8,3	16,5	3,5	PT 1/4"	9,5	266	34	3	80
YEX-1900	1/2" Sq.	12	5.800	115 - 183	8,3	16,5	4,1	PT 1/4"	9,5	277	39	3	80
YEX-3000	3/4" Sq.	16	4.000	186 - 284	10,0	20,5	6,4	PT 1/4"	12,7	309	40	4	82

### Straight type



YEX-100SA YEX-150S YEX-300S YEX-500S  
YEX-120SA YEX-150SA YEX-300SA YEX-500SA YEX-700S

Type	Square / Hex drive	Bolt capacity mm	RPM	Torque Nm*	Load aircons. l/s	No-load aircons. l/s	Weight kg	Inlet thread	Hose diameter mm	Dimensions A mm	B mm	Vibration m/s <sup>2</sup>	Noise-level dB(A)
YEX-100SA	1/4" Hex	5	8.000	4,3 - 12	3,6	4,4	1,2	PT 1/4"	6,5	285	23	3	77
YEX-120SA	1/4" Hex	4 - 5	7.000	11 - 15	4,2	5	1,38	PT 1/4"	6,5	279	23	3	72
YEX-150S	3/8" Sq.	5 - 6	8.000	19 - 27	4,2	7,8	1,35	PT 1/4"	6,5	275	23	3,3	73
YEX-150SA	1/4" Hex	5 - 6	8.000	14 - 22	4,2	7,8	1,35	PT 1/4"	6,5	276	23	3,3	73
YEX-300S	3/8" Sq.	6	8.000	25 - 33	5,0	9,1	1,8	PT 1/4"	6,5	312	27	5,3	71
YEX-300SA	1/4" Hex	6	8.000	21 - 29	5,0	9,1	1,8	PT 1/4"	6,5	313	27	5,3	71
YEX-500S	3/8" Sq.	6 - 8	7.800	23 - 49	5,0	9,1	2,1	PT 1/4"	9,5	333	27	6,6	71
YEX-500SA	1/4" Hex	6 - 8	7.800	21 - 47	5,0	9,1	2,1	PT 1/4"	9,5	334	27	6,6	71
YEX-700S	3/8" Sq.	8	7.500	33 - 61	5,8	11,2	2,3	PT 1/4"	9,5	333	27	6,6	72

\* Torque specifications: All specified torques are measured on the YOKOTA testers, Series YET, at a dynamic airpressure of 0.63MPa. The YOKOTA testers have a static transducer, the specified torques are therefore to be used as a guidance only. In general the torque range will be lower in case of using lower airpressure, extension bars, torx or hexagon inset sockets, soft joints, etc.

#### FOR A SYSTEM YEX, YED OR TKa YOU NEED:

1 x Controller YETC-230 or YETC-330, 1 x Impulse wrench YEX, YED or TKa [& 1 Solenoid valve YETC-2 SVD and 1 Tool cable which you can find on pages 18 and 63]

# SYSTEM WRENCHES

## *E-M Series, Electric*



The YOKOTA electric system wrenches with integrated torque transducer and angle sensor offer a large reduction of energy consumption, a high degree of speed, accuracy and fantastic work efficiency.

### ELECTRIC DRIVE

- Reduction of energy consumption Lean and Green.
- No need for pneumatic installation with compressor, air piping, hose and solenoid valves.
- No need for lubrication of the tool. Good for the working environment, especially near paint shops.
- Due to the newly developed outer rotor servo motor and the composite body, the YOKOTA system e-wrench has the lightest weight in its class.

### RELIABLE AND ACCURATE TIGHTENING

- Faulty tightening detection with maximum accuracy due to the use of an integrated torque transducer and also an integrated angle sensor.
- During the tightening process, four different variables are measured and monitored:  
Torque - Angle - Time - N°. of Impulses.
- Torque transducer and angle sensor located directly at the front of the main shaft, giving the best accuracy of measurement.
- Torque transducer measures directly and transmits the signals contactless.
- The angle sensor is an extremely compact (PAT) rotary encoder that detects both angle as well as direction by 1 degree, signal transmission contactless.
- Detects cross threads, double hits, contamination, etc.

### DURABILITY

- The impulse unit is supported on both ends by ball bearings (PAT.P).
- The impulse unit has a check valve mechanism (PAT.P) to reduce the oil pressure on the main shaft.
- For heat suppression of the impulse unit it is equipped with a separate cooling fan.
- For heat suppression of the motor it is equipped with a cooling fan that reduces motor size (and weight at the same time).

### OPERATOR COMFORTABILITY

- The reaction forces are close to zero due to the use of the oil impulse mechanism, even at high torque bolt tightening. Compared with older models, the number of bolt tightening is improved to 20 bolts/minute.
- Special feature to prevent cross threaded tightening: reversely rotating a bolt to a preset angle at the start of tightening.
- High speeds: Free speed (bolt run down) of 4800 RPM.
- High intensity LED light to project on the bolt.
- Combinations of buzzers and LED (Green / Red) for operator feedback on OK / NOK tightenings.
- Motor speed freely adjustable in the controller. For three different speed stages:  
Start of trigger / Run down / Final tightening.

### CONTROLLER FEATURES

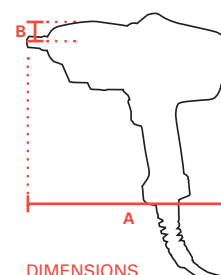
- 20 different parameter settings possible, for a variety of different work pieces.
- Touch screen LCD color display, showing graphs, torque, angle, impulses and more.
- Group management function (counting).
- Result of tightening output through various interfaces: USB, RS-232C, I/O and Ethernet connector.
- Simultaneous use of two tools on one controller is possible.



New developed outer rotor motor



Type	Square / Hex drive	Bolt capacity mm	RPM	Torque Nm	Weight kg	Noise level dB(A)	Dimensions	
							A mm	B mm
E-M500	3/8" Sq.	M5 - M6	300-4.800	3 - 10	2,10	75	236	32,5
E-M700	3/8" Sq.	M6 - M8	300-4.800	7,5 - 35	2,18	75	236	32,5
E-M900	3/8" Sq.	M8 - M10	300-4.800	30 - 60	2,25	78	236	32,5
E-M1100	1/2" Sq.	M10 - M12	300-4.800	50 - 90	2,52	80	248	32,5



# SYSTEM WRENCHES

## YETC-500 controller



For electric system wrenches with built-in angle and torque sensor. Also available with **open protocol**, **profinet** and **ethernet-IP** communication and others upon request. Please contact us for details.



**CONTROLLER**  
One channel controller



**CONTROLLER FRONT PANEL**  
1 Touch panel type LCD  
2 RS-232C serial connector  
3 USB connector



**CONTROLLER BACK PANEL**  
1. Ethernet connector (option)  
2. I/O terminal board  
3. Tool connector 1  
4. Tool connector 2

CONTROLLER

Description	Order number
LAN Ethernet-Version	YETC-500-10SL
Serial communication	YETC-500-10SO

AMPLIFIER

Order number
E-PDA-4

EXTENSION TOOLCABLE

Length	Order number
5m	7906-1591-00-01
10m	7906-1591-00-02

CONTROLLER LINK UP CABLE

Length	Order number
30cm	7906-1592-00-01



# SYSTEM WRENCHES

## YS-e Series: cordless



Cordless  
System  
Wrenches

Yokota cordless impulse wrenches are powerful, very accurate and have no kick-back. With a battery power source the tool allows for the highest operational flexibility. This cordless impulse wrench has a built-in torque transducer and angle-sensor on the main shaft and a wireless connection to its controller. Each controller can connect with up to 4 operating cordless system wrenches. The Yokota cordless system wrench is the perfect solution for applications where cables or hoses are disruptive yet still all tightening data requires documentation and traceability.

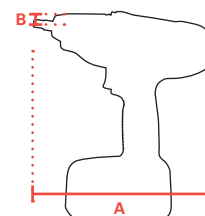
### CHARACTERISTICS

- One controller connects 4 tools
- Complete freedom of movement by use of batteries
- Very low weight / torque ratio
- High speed fastening
- Acoustic and LED signals for tightening status indication
- No kick-back
- Electric (brushless) servo drive, freely RPM adjustable
- Hybrid technology
- 100% check on tightening abnormalities like cross thread, double hit, etc.



**IBT EPR**  
Intelligent Bolting Technology Efficient Power Regulation

Type	Volt. V	Battery type	Square / Hex drive	Bolt capacity mm	RPM	Torque Nm	Weight (inclu. battery) kg	Vibration m/s <sup>2</sup>	Noise level dB(A)	Dimensions A mm	B mm
YS-e600	18 V	Li-ion 2 AH	3/8" Sq.	6	1.200-4.800	7-20	1,75	<2,5	72	214	26
YS-e800	18 V	Li-ion 2 AH	3/8" Sq.	8	1.200-4.800	15-35	1,80	<2,5	76	214	26
YS-e900	18 V	Li-ion 2 AH	3/8" Sq.	8-10	1.200-4.800	30-50	1,90	<2,5	78	226	26
YS-e950	18 V	Li-ion 2 AH	3/8" Sq.	10	1.200-4.800	40-60	1,94	<2,5	78	226	26



DIMENSIONS

\* Battery and charger have to be ordered separately.

### ACCESSORIES



Wireless unit



Programming console



Li-ion-battery  
18V/2.0 Ah



Display



Charger  
AC100~240 Volt ±10%  
50/60Hz

Type	
Wireless unit	WU-1
Display	DS-1
Programming console	PC-1
Li-Ion-Battery (0,41 kg) 18V 2 Ah	BPL1820
Charger 18 Volt (40 Min.)	BC0075G

Rubber protection covers

YOKOTA rubber protection covers that are supplied as standard but can also be ordered separately.

Rubber protection cover		
	YS-e600	0444-0029-00-00
	YS-e800	0445-0029-00-00
	YS-e900	0446-0029-00-00
	YS-e950	0447-0029-00-00
	for battery	0446-0029-00-01

# SYSTEM WRENCHES

## YS-e Series: cordless



Cordless  
System  
Wrenches

### SYSTEM CONFIGURATION

- Possible to connect 4 tools with the wireless unit
- WLAN communication between tool and controller
- Poka Yoke compatible
- Traceability tightening data
- LAN and RS 232 interface
- I/O terminal for input and output signals



### WIRELESS UNIT WU-1

- Parameter input with PC-1 or computer
- USB: setting data back up and restore, memory read out.
- Memory for 10.000 cycles per tool
- Tightening results on DS-1 and/or PC-1
- 4 display connection
- Optional: open protocol



### DISPLAY DS-1

- Display shows: tool number, program, torque, OK/NOK, angle, number of pulses, remaining tightenings.



### PROGRAMMING CONSOL PC-1

- Display shows: tool number, program, torque, OK/NOK, angle, number of pulses, remaining tightenings.



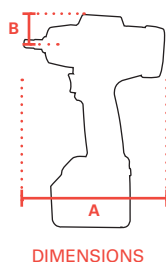
# SHUT OFF IMPULSE WRENCHES

## YZ-T Series: cordless

YOKOTA YZ-T cordless impulse wrenches with shut-off are powerful, very accurate and most important, have no kick-back. The very compact design offers great accessibility to the joint. Tightening bolts with torque levels up to 60 Nm with very high speed and remarkably low reaction forces. Adjusting the tool settings for the specific bolted joint is done by Programming Console PC-1-YZ-T and cable CC-1. Auditory and visual feedback on the result of the screwing process.

### CHARACTERISTICS

- With built-in retention in the square drive
- No kickback
- High speed fastening
- Hybrid technology
- Servo drive brushless motor



Type	Square Drive / Hexagon	Bolt capacity mm	Speed 1 RPM <sup>(1)</sup>	Speed 2 RPM <sup>(2)</sup>	Speed 3 RPM <sup>(3)</sup>	Torque Nm	Weight with battery	Dimensions A mm	Dimensions B mm	Vibration m/s <sup>2</sup>	Noise level dB(A)
YZ-T600A	1/4" Hex	6	1.200 - 1.500	1.500 - 3.000	1.500 - 4.800	5 - 18	1,4	161	29,5	<2,5	67
YZ-T600E	3/8" Sq.	6	1.200 - 1.500	1.500 - 3.000	2.000 - 4.800	7 - 20	1,4	161	29,5	<2,5	67
YZ-T800A	1/4" Hex	6 - 8	1.200 - 1.500	1.500 - 3.000	2.000 - 4.800	10 - 30	1,5	166	29,5	<2,5	68
YZ-T600E	3/8" Sq.	6 - 8	1.200 - 1.500	1.500 - 3.000	2.000 - 4.800	15 - 35	1,5	166	29,5	<2,5	68
YZ-T900E	3/8" Sq.	8 - 10	1.200 - 1.500	1.500 - 3.000	2.000 - 4.800	30 - 50	1,6	173	29,5	<2,5	69
YZ-T950E	3/8" Sq.	8 - 10	1.200 - 1.500	1.500 - 3.000	2.000 - 4.800	40 - 60	1,65	173	29,5	<2,5	70

<sup>(1)</sup> From the first stage of the trigger <sup>(2)</sup> From the second stage of the trigger <sup>(3)</sup> From shifting level

### ACCESSORIES

Delivery is including battery and excluding charger



Li-Ion-battery  
18 V/2.0 Ah



Charger  
AC100~240 Volt ±10%  
50/60Hz



Programming console



Cable

Type	Order number
Li-Ion-Battery (0,41 kg) 18V 2 Ah	BPL-1820
Charger 18 Volt (40 Min.)	BC0075G

Type	Order number
Programming console	PC-1-YZ-T
Cable (2mtr)	CC-1

# NON SHUT OFF IMPULSE WRENCHES



Battery  
Impulse  
Wrenches

## YZ-N Series: cordless

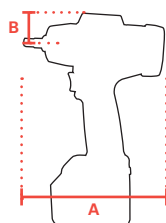
YOKOTA cordless non shut-off impulse wrenches are powerful, very accurate and most important, have no kick-back. The very compact design offers great accessibility to the joint. Tightening bolts M6 up to M10 with torque levels up to 65 Nm with very high speed and remarkably low reaction forces. The combination of adjustment of the relief valve and speed setting of the motor gives a great fit-for-purpose adaptation to the specific bolted joint.

### CHARACTERISTICS

- No kick-back
- High speed fastening
- Hybrid technology
- Servo drive brushless motor
- Torque adjustment
- Mechanical relief valve adjustment
- 4 RPM settings, 2000/3000/4000/
- 4800 RPM, to be set according application/joint conditions



\*Battery and charger have to be ordered separately



DIMENSIONS



Type	Volt. V	Battery type	Square / Hex drive	Bolt capacity mm	RPM	Torque Nm	Weight kg without battery	Weight kg with battery	Vibration m/s <sup>2</sup>	Noise level dB(A)	Dimensions A mm	Dimensions B mm
YZ-N600A	18 V	Li-ion 2 AH	1/4 Hex	6	2000-4.800	7-20	1	1,41	<2,5	72	152	29,5
YZ-N600E	18 V	Li-ion 2 AH	3/8" Sq.	6	2000-4.800	8-25	1	1,41	<2,5	72	152	29,5
YZ-N800A	18 V	Li-ion 2 AH	1/4 Hex	6-8	2000-4.800	7-30	1,05	1,46	<2,5	75	157	29,5
YZ-N800E	18 V	Li-ion 2 AH	3/8" Sq.	6-8	2000-4.800	9-35	1,05	1,46	<2,5	75	157	29,5
YZ-N900E	18 V	Li-ion 2 AH	3/8" Sq.	8-10	2000-4.800	16-60	1,20	1,61	<2,5	77	164	29,5
YZ-N950E	18 V	Li-ion 2 AH	3/8" Sq.	8-10	2000-4.800	20-65	1,25	1,66	<2,5	78	164	29,5

### ACCESSORIES



Li-ion-battery  
18 V/2.0 Ah



Charger  
AC100~240 Volt ±10%  
50/60Hz

Type	Order number
Li-ion-Battery (0,41 kg) 18V 2 Ah	BPL-1820
Charger 18 Volt (40 Min.)	BC0075G

### RUBBER PROTECTION COVERS

YOKOTA offers a seamless integration in the 'anti-scratch' policy with rubber protection covers that are supplied as standard but can also be ordered separately.

Type	Order number
YZ-N600A	0454-0029-00-00
YZ-N600	0454-0029-00-00
YZ-N800A	0455-0029-00-00
YZ-N800	0455-0029-00-00
YZ-N900	0456-0029-00-00
YZ-N950	0457-0029-00-00



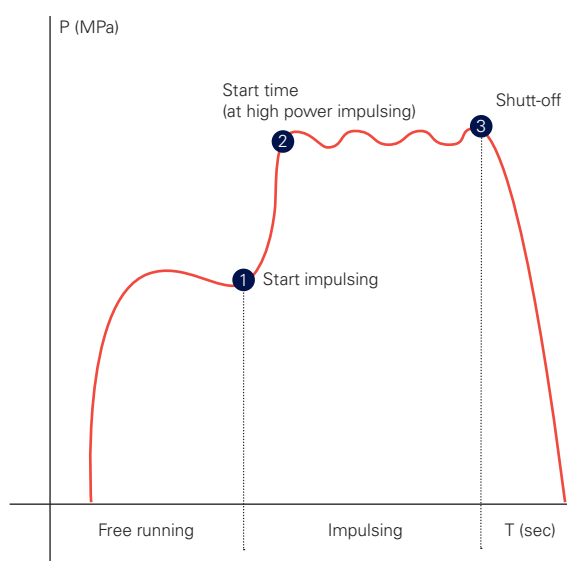
# POKA YOKE<sup>+</sup>SYSTEM

*YLa-JQ & Y-JQ Series*



## POKA YOKE<sup>+</sup>: FUNCTIONING PRINCIPLE

The system is controlled by measuring the air pressure at the inlet side of the air motor. This air pressure varies from free running to impulsing. By this measured air pressure the controller detects contact of the bolt head (point 2). Upon contact, the adjustable timer gives the shut-off signal (point 3). Adjustability of the timer takes care of adoption to either hard or soft joints. Similar, the controller detects double hits and trigger release before shut-off.



The system is more accurate than shut-off or standard impulse wrenches.

## SUPERIOR CLAMP FORCES

In conventional shut-off tools point 2 is the shut-off point. Due to the above mentioned principle of the Poka Yoke+ controller, the relaxation is minimized and the correct torque and clampforce are achieved. This system is more accurate than shut-off or standard impuls wrenches. The torque is adjusted at the impulse mechanism. In combination with the parameters in the controller YTC-3, the most reliable shut-off is achieved.

## CONTROLLER YTC-3



- Power supply: 100 - 240V AC
- Input: 8
- Relay output: 4 opening and shutting capacity: Max. DC-48W, AC-220VA)
- Output for solenoid valve: 1(DC24V 2W)

## SYSTEM FEATURES



- Group control
- Controlled shut-off
- Double tightening detection
- Interlock with assembly line
- Error judgement on trigger release
- Teach-in mode for programming
- Oil deterioration indication



# POKA YOKE<sup>+</sup>SYSTEM

## YLa-JQ & Y-JQ Series



Pneumatic  
Impulse  
Wrenches

### Lightweight YLa-JQ series



**IBT**  
Intelligent Bolting Technology

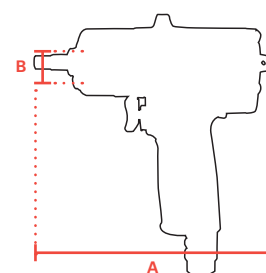
Type	Square/ Hex drive	Bolt capacity mm	RPM	Torque Nm*	Load aircons. l/s	No-load aircons. l/s	Weight kg	Inlet thread	Hose diameter mm	Dimensions A mm	Dimensions B mm	Vibration m/s <sup>2</sup>	Noise- level dB(A)
YLa60A-JQ	1/4" Hex	6	4.000	11-20	5,0	5,5	0,78	PT 1/4"	6,5	130	22	1,4	71
YLa60E-JQ	3/8" Sq.	6	4.000	13-22	5,0	5,5	0,78	PT 1/4"	6,6	130	22	1,4	71
YLa70A-JQ	1/4" Hex	6 - 8	7.000	20-28	5,5	6,1	0,80	PT 1/4"	6,5	132	22	1,4	74
YLa70E-JQ	3/8" Sq.	6 - 8	7.000	20-35	5,5	6,1	0,80	PT 1/4"	6,5	132	22	1,4	74
YLa80A-JQ	1/4" Hex	8	7.000	24-35	5,8	9,0	0,90	PT 1/4"	6,5	139	22	1,2	75
YLa80E-JQ	3/8" Sq.	8	7.000	33-50	5,8	9,0	0,90	PT 1/4"	6,5	139	22	1,2	75
YLa90E-JQ	3/8" Sq.	8 - 10	6.500	47-70	6,7	11,8	1,00	PT 1/4"	10	148	24	1,2	78
YLa110E-JQ	1/2" Sq.	10 - 12	6.000	65-105	9,6	13,1	1,40	PT 1/4"	10	164	26	1,8	81
YLa120E-JQ	1/2" Sq.	12	6.600	80-130	10,0	15,6	1,80	PT 1/4"	10	172	28	2,2	82
YLa140E-JQ	1/2" Sq.	14	6.000	100-160	13,0	18,9	2,20	PT 1/4"	10	190	30	2,4	84

### Y-JQ SERIES

Type	Square/ Hex drive	Bolt capacity mm	RPM	Torque Nm*	Load aircons. l/s	No-load aircons. l/s	Weight kg	Inlet thread	Hose diameter mm	Dimensions A mm	Dimensions B mm	Vibration m/s <sup>2</sup>	Noise- level dB(A)
Y-41A-JQ	1/4" Hex	4 - 6	9.300	6-12	5,0	8,8	0,73	PT 1/4"	6,5	141	17	2,1	72
Y-46E-JQ	3/8" Sq.	5 - 6	8.000	16-30	5,8	9,6	0,87	PT 1/4"	6,5	158	18	1,0	80
Y-140JQ	3/4" Sq.	16	3.300	160-270	13,1	18,4	3,20	PT 1/4"	13	226	36	3,3	82

\* Torque specifications: All specified torques are measured on the YOKOTA testers, Series YET, at a dynamic airpressure of 0.63MPa. The YOKOTA testers have a static transducer, the specified torques are therefore to be used as a guidance only. In general the torque range will be lower in case of using lower airpressure, extension bars, torx or hexagon inset sockets, soft joints, etc.

Rubber protection covers for YLa-JQ and Y-JQ impulse wrenches are included in the box.  
Accessories for impulse wrenches on pages 61-65.



DIMENSIONS

# SHUT OFF IMPULSE WRENCHES

## YLTX-Series



### 0,5-0,6 MPA SERIES

Type	Square/ hex drive	Bolt capacity mm	RPM	Torque Nm* 0,5-0,6 MPA	Load aircons. l/s	No-load aircons. l/s	Inlet- thread	Weight kg	Hose diameter mm	Dimensions A mm B mm	Vibration m/s <sup>2</sup>	Noise level dB(A)
YLTX50A	1/4" Hex	5	4.300	4,5-8	4,2	4,6	PT 1/4"	0,95	6,5	164 22,5	1,1	70
YLTX60A	1/4" Hex	6	5.300	6-13	5,5	5,6	PT 1/4"	0,95	6,5	164 22,5	1,4	72
YLTX70A	1/4" Hex	6-8	6.800	13-28	6,0	8,8	PT 1/4"	1,01	6,5	177 23	1,8	74
YLTX50E	3/8" Sq.	5	4.300	4,5-8	4,2	4,6	PT 1/4"	0,95	6,5	164 22,5	1,1	72
YLTX60E	3/8" Sq.	6	5.300	7-15,5	5,5	5,6	PT 1/4"	0,95	6,5	164 22,5	1,4	72
YLTX70E	3/8" Sq.	6-8	6.800	15-32	6,0	8,8	PT 1/4"	1,01	6,5	177 23	1,8	74
YLTX80E	3/8" Sq.	8	6.800	30-55	7,3	9,2	PT 1/4"	1,12	9,5	187 24,5	1,9	78
YLTX110E	1/2" Sq.	10-12	5.800	50-85	8,3	13,5	PT 1/4"	1,51	9,5	194 28,5	1,8	81
YLTX120E	1/2" Sq.	12	5.400	70-115	8,6	14,6	PT 1/4"	1,79	9,5	201 31	2,2	83
YLTX140E	1/2" Sq.	14	5.200	110-150	11,8	16,6	PT 1/4"	2,08	9,5	214 32,5	5,2	85
YLTX150	3/4" Sq.	16	4.400	140-210	11,8	17	PT 1/4"	2,95	9,5	237 38,5	5,3	84

### 0,4-0,5 MPA SERIES

Type	Square/ hex drive	Bolt capacity mm	RPM	Torque Nm* 0,4-0,5 MPA	Load aircons. l/s	No-load aircons. l/s	Inlet- thread	Weight kg	Hose diameter mm	Dimensions A mm B mm	Vibration m/s <sup>2</sup>	Noise level dB(A)
YLT60AL	1/4" Hex	6	4.500	5-11,5	5,5	4,8	PT 1/4"	0,95	6,5	164 22,5	1,4	72
YLT70AL	1/4" Hex	6-8	6.300	11-25	6,0	7,8	PT 1/4"	1,01	6,5	177 23	1,8	74
YLT60EL	3/8" Sq.	6	4.500	6-13,5	5,5	4,8	PT 1/4"	0,95	6,5	164 22,5	1,4	72
YLT70EL	3/8" Sq.	6-8	6.300	13-28	6,0	7,8	PT 1/4"	1,01	6,5	177 23	1,8	74
YLT80EL	3/8" Sq.	8	6.600	25-48	7,3	8	PT 1/4"	1,12	9,5	187 24,5	1,9	78
YLT110EL	1/2" Sq.	10-12	5.600	45-75	8,3	11,8	PT 1/4"	1,51	9,5	194 28,5	1,8	81
YLT120EL	1/2" Sq.	12	5.200	60-100	8,6	12,3	PT 1/4"	1,79	9,5	201 31	2,2	83
YLT140EL	1/2" Sq.	14	4.900	80-125	11,8	14,1	PT 1/4"	2,08	9,5	214 32,5	5,2	85

\* Note: Torque values are to be used as guidance only.

### FEATURES

- Maximum accuracy: extremely accurate and fast
- Maximum ergonomics: ergo touch / ergo grip / ergo trigger / low noise / low vibration
- Minimal environmental impact: reduction of CO2 emission
- Double chamber air motor: compact high efficiency
- Oil-free: can be used with non lubricated air

\* Rubber protection covers for all YLT-series impulse wrenches are included in the box.

### YLTX-J



All YLTX models are also available as J-version: signal hose for detecting shut-off, to connect to counting systems (PLC), line control etc.

# NON SHUT OFF IMPULSE WRENCHES

## YLa-Series



Type	Square/ Hex drive	Bolt capacity mm	RPM	Torque Nm*	Load aircons. l/s	No-load aircons. l/s	Weight kg	Inlet thread	Hose diameter mm	Dimensions		Vibration m/s <sup>2</sup>	Noise- level dB(A)
										A mm	B mm		
YLa60A	1/4" Hex	6	4.000	9-20	5	5,5	0,78	PT 1/4"	6,5	130	22	1,4	71
YLa70A	1/4" Hex	6 - 8	7.000	20-28	5,5	6,1	0,8	PT 1/4"	6,5	132	22	1,4	74
YLa80A	1/4" Hex	8	7.000	24-35	5,8	9	0,9	PT 1/4"	6,5	139	22	1,2	75
YLa60E	3/8" Sq.	6	4.000	13-22	5	5,5	0,78	PT 1/4"	6,5	130	22	1,4	71
YLa70E	3/8" Sq.	6 - 8	7.000	20-35	5,5	6,1	0,8	PT 1/4"	6,5	132	22	1,4	74
YLa80E	3/8" Sq.	8	7.000	33-50	5,8	9	0,9	PT 1/4"	6,5	139	22	1,2	75
YLa90E	3/8" Sq.	8 - 10	6.500	47-70	6,7	11,8	1,0	PT 1/4"	9,5	148	24	1,2	78
YLa110E	1/2" Sq.	10 - 12	6.000	65-105	9,6	13,1	1,4	PT 1/4"	9,5	164	26	1,8	81
YLa120E	1/2" Sq.	12	6.600	80-130	10	15,6	1,8	PT 1/4"	9,5	172	28	2,2	82
YLa140E	1/2" Sq.	14	6.000	100-160	13	18,9	2,2	PT 1/4"	9,5	190	30	2,4	84

\* Note: Torque values are to be used as guidance only.

### FEATURES

- Maximum accuracy: extremely accurate and fast
- Maximum ergonomics: ergo touch / ergo grip / ergo trigger / low noise / low vibration
- Minimal environmental impact: reduction of CO2 emission
- Double chamber air motor: compact high efficiency
- Oil-free: can be used with non lubricated air

\* Rubber protection covers for all YLa-series impulse wrenches are included in the box.

### CUSTOM MADE IMPULSE WRENCHES



For any application where access to the joint is difficult, we are able to provide tailor made impulse wrenches.

Contact us for more information.

# NON SHUT OFF IMPULSE WRENCHES



*Y-Series, YX-Series*



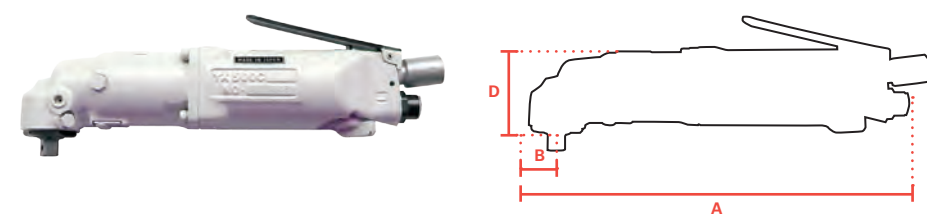
DIMENSIONS

Type	Square/ hex drive	Bolt capacity mm	RPM	Torque Nm*	Load aircons. l/s	No-load aircons. l/s	Weight kg	Inlet- thread	Hose diameter mm	Dimensions		Vibration m/s <sup>2</sup>	Noise level dB(A)
										A mm	B mm		
Y-40SA <sup>1)</sup>	1/4" Hex	4 - 6	10.000	6 - 12	5,0	7,6	0,84	PT 1/4"	6,5	229	17	4,6	69
Y-41A	1/4" Hex	4 - 6	9.300	6 - 12	5,0	8,8	0,73	PT 1/4"	6,5	141	17	2,1	72
Y-46E	3/8" Sq.	5 - 6	8.000	16 - 30	5,8	9,6	0,87	PT 1/4"	6,5	158	18	1,0	80
Y-46A	1/4" Hex	5 - 6	8.000	16 - 26	5,8	9,6	0,87	PT 1/4"	6,5	158	18	1,0	80
Y-140	3/4" Sq.	16	3.300	160 - 270	13,1	18,4	3,20	PT 1/4"	12,7	226	36	3,3	82

1) The Y-40SA is a straight model, all other types are pistol models.

\* Torque specifications

All specified torques are measured on the YOKOTA testers, Series YET, at a dynamic airpressure of 0.63MPa. The YOKOTA testers have a static transducer, the specified torques are therefore to be used as a guidance only. In general the torque range will be lower in case of using lower airpressure, extension bars, torx or hexagon inset sockets, soft joints, etc.



DIMENSIONS

## ANGLE MODELS

Type	Square / Hex drive	Bolt capacity mm	RPM	Torque Nm*	Load aircons. l/s	No-load aircons. l/s	Weight kg	Inlet thread	Hose diameter mm	Dimensions			Vibration m/s <sup>2</sup>	Noise- level dB(A)
										A mm	B mm	D mm		
YX-280C	3/8" Hex	4 - 6	10.000	15 - 24	5,0	7,8	1,40	PT 1/4"	6,5	257	16	50	4	83
YX-500C	3/8" Hex	6 - 8	7.500	30 - 45	5,0	8,6	1,50	PT 1/4"	6,5	266	18	66	10	73
YX-700C	3/8" Hex	8 - 10	5.000	36 - 50	5,8	10,8	1,80	PT 1/4"	6,5	289	18	70	8,6	72

\* Torque specifications

All specified torques are measured on the YOKOTA testers, Series YET, at a dynamic airpressure of 0.63MPa. The YOKOTA testers have a static transducer, the specified torques are therefore to be used as a guidance only. In general the torque range will be lower in case of using lower airpressure, extension bars, torx or hexagon inset sockets, soft joints, etc.

# NON SHUT OFF IMPULSE WRENCHES

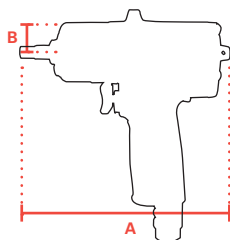


## YX-Series



YX-3000

YX-4500



DIMENSIONS

### PISTOL MODELS

Type	Square/ Hex drive	Bolt capacity mm	RPM	Torque Nm*	Load aircons. l/s	No-load aircons. l/s	Weight kg	Inlet thread	Hose diameter mm	Dimensions A mm	B mm	Vibration m/s <sup>2</sup>	Noise- level dB(A)
YX-3000	3/4" Sq.	16 - 18	4.700	200 - 304	10,0	20,5	4,60	PT 1/4"	12,7	246	40,0	3,9	80
YX-4500	3/4" Sq.	18 - 20	3.400	392 - 490	11,6	24,0	9,80	PT 3/8"	12,7	300	65,0	3,9	87

\* Torque specifications

All specified torques are measured on the YOKOTA testers, Series YET, at a dynamic airpressure of 0.63MPa. The YOKOTA testers have a static transducer, the specified torques are therefore to be used as a guidance only. In general the torque range will be lower in case of using lower airpressure, extension bars, torx or hexagon inset sockets, soft joints, etc.



YX-180SE

YX-180SA

YX-280SE

YX-280SA

YX-380SE

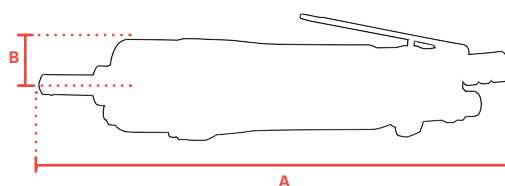
YX-380SA



YX-500SE



YX-700SE



DIMENSIONS

### STRAIGHT MODELS

Type	Square/ Hex drive	Bolt capacity mm	RPM	Torque Nm*	Load aircons. l/s	No-load aircons. l/s	Weight kg	Inlet thread	Hose diameter mm	Dimensions A mm	B mm	Vibration m/s <sup>2</sup>	Noise- level dB(A)
YX-180SE	3/8" Sq.	4 - 6	10.500	19 - 31	4,2	7,8	0,96	PT 1/4"	6,5	220	23	3,3	73
YX-180SA	1/4" Hex	4 - 6	10.500	18 - 30	4,2	7,8	0,96	PT 1/4"	6,5	220	23	3,3	73
YX-280SE	3/8" Sq.	6 - 8	10.500	25 - 38	5,0	9,1	1,02	PT 1/4"	6,5	232	23	4	73
YX-280SA	1/4" Hex	6	10.500	20 - 34	5,0	9,1	1,02	PT 1/4"	6,5	232	23	4	73
YX-380SE	3/8" Sq.	8	10.000	32 - 47	5,0	9,1	1,18	PT 1/4"	6,5	232	25,5	3,3	75
YX-380SA	1/4" Hex	6 - 8	10.000	29 - 44	5,0	9,1	1,18	PT 1/4"	6,5	232	25,5	3,3	75
YX-500SE	3/8" Sq.	8 - 10	7.500	31 - 55	5,0	11,2	1,25	PT 1/4"	6,5	241	25,5	6,6	74
YX-700SE	3/8" Sq.	8 - 10	5.000	35 - 62	5,8	13,5	1,50	PT 1/4"	6,5	262	26,5	6,6	72

\* Torque specifications

All specified torques are measured on the YOKOTA testers, Series YET, at a dynamic airpressure of 0.63MPa. The YOKOTA testers have a static transducer, the specified torques are therefore to be used as a guidance only. In general the torque range will be lower in case of using lower airpressure, extension bars, torx or hexagon inset sockets, soft joints, etc.