

IMPACT WRENCHES

Optimal Torque of Bolt

The optimal torque of bolt is based on the clamp force achieved. The clamp force applied to bolt should not exceed 70% of the proof load of bolt and the optimal torque applied to bolt should be as much as 60% of the proof load. See the following equation to calculate the optimal torque.

$$T = k \cdot D \cdot N \quad \text{Torque} = \text{Coefficient of friction} \times \text{Nominal Diameter} \times \text{Clamp Force (Tension)}$$

Property Class	4.8		5.8		6.8		8.8		10.9		12.9	
Nominal Diameter	Torque (Nm)	Proof Load (N)	Torque (Nm)	Proof Load (N)	Torque (Nm)	Proof Load (N)	Torque (Nm)	Proof Load (N)	Torque (Nm)	Proof Load (N)	Torque (Nm)	Proof Load (N)
M3	0.6	1560	0.8	1910	0.9	2210	1.2	2920	1.7	4180	2.0	4880
M4	1.4	2720	1.8	3340	2.0	3860	2.7	5100	4.0	7290	4.6	8520
M5	2.9	4400	3.6	5400	4.1	6250	5.5	8230	8.0	11800	9.4	13800
M6	4.9	6230	6.1	7640	7.0	8840	9.3	11600	13.6	16700	15.9	19500
M8	12.0	11400	14.8	13900	16.9	16100	22.5	21200	33.0	30400	38.7	35500
M10	23.7	18000	29.2	22000	33.4	25500	44.6	33700	65.4	48100	76.6	56300
M12	41.3	26100	51.0	32000	58.3	37100	77.7	48900	114.1	70000	133.5	81800
M14	65.7	35600	81.2	43700	92.7	50600	123.7	66700	181.6	95500	212.5	112000
M16	102.5	48700	126.6	59700	144.7	69100	192.9	91000	283.4	130000	331.6	152000
M18	141.0	59500	174.2	73000	199.1	84500	273.7	115000	389.8	159000	456.2	186000
M20	199.9	76000	247.0	93100	282.2	108000	388.1	147000	552.7	203000	646.8	238000
M22	272.0	93900	336.0	115000	384.0	133000	528.0	182000	751.9	252000	879.9	294000
M24	345.7	109000	427.0	134000	488.0	155000	671.0	212000	955.7	293000	1118.3	342000
M27	505.6	142000	624.6	174000	713.8	202000	981.5	275000	1397.9	381000	1635.9	445000
M30	686.7	174000	848.2	213000	969.4	247000	1332.9	337000	1898.4	466000	2221.6	544000
M33	934.4	215000	1154.3	264000	1319.2	305000	1813.8	416000	2583.4	576000	3023.1	673000

The torque values listed are based on the clamp force (tension) applied to hexagon metric coarse thread bolt and coefficient of friction 0.2 (guidance only). Select the best tool for your application.

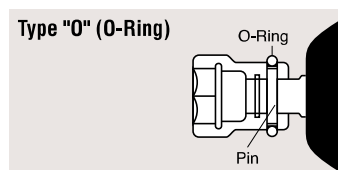
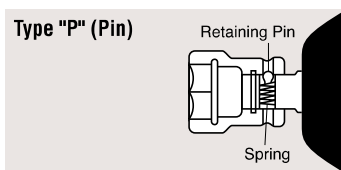
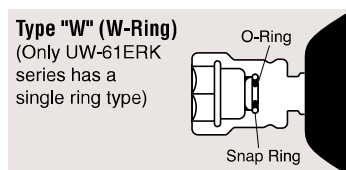
Model name of Impact Wrenches

Example	UW	-	6SH	L	K
			6SH (pistol grip for 6mm bolt*)	L (long anvil)	K (light weight)
			6SSH (straight handle)	R (rear exhaust)	DK (driver type anvil • light weight)
			6CSH (angle head)		
			6AS (45 degree angle head)		
			ST (for stud bolt)		
			P (pistol grip only for UW-140 • 220 • 381 series)		

*Exception: UW-140 series = 14mm bolt, UW-220 series = 22mm, UW-381 series = 38mm, UW-401 series = 40mm and UW-550 = 55 mm

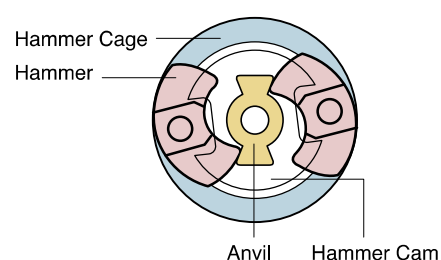
Socket Retaining Methods

Please specify the type of Anvil when ordering.



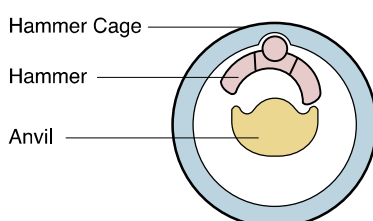
Double-Hammer mechanism

Powerful & fast assembly for highest productivity with well-balanced hammer mechanism and less torque reaction to operator. Recommended for general high-volume assembly such as motor vehicles, appliances, machinery and so forth.



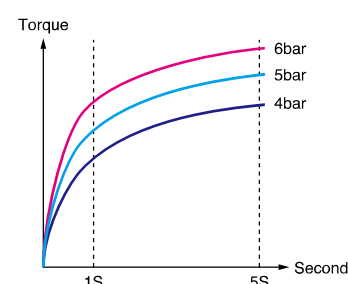
Swing-Hammer mechanism

Powerful & durable impacting mechanism with one piece Hammer-Hammer pin. Recommended to steel erection, refineries, mines, heavy motor vehicle industries and etc. (UW-140P, 220P, 251P, and 381 series)



TORQUE CHART

To avoid excess wear of the parts, the tightening time is recommended not to exceed 5 seconds.



RECOMMENDED TORQUE CHART OF THE IMPACT WRENCHES

Fastening force of the impact wrenches changes in accordance to the fastening time and the bolt size.

This table shows various common fastening torque. Please use this table as just guide line when selecting the model.

Pistol type



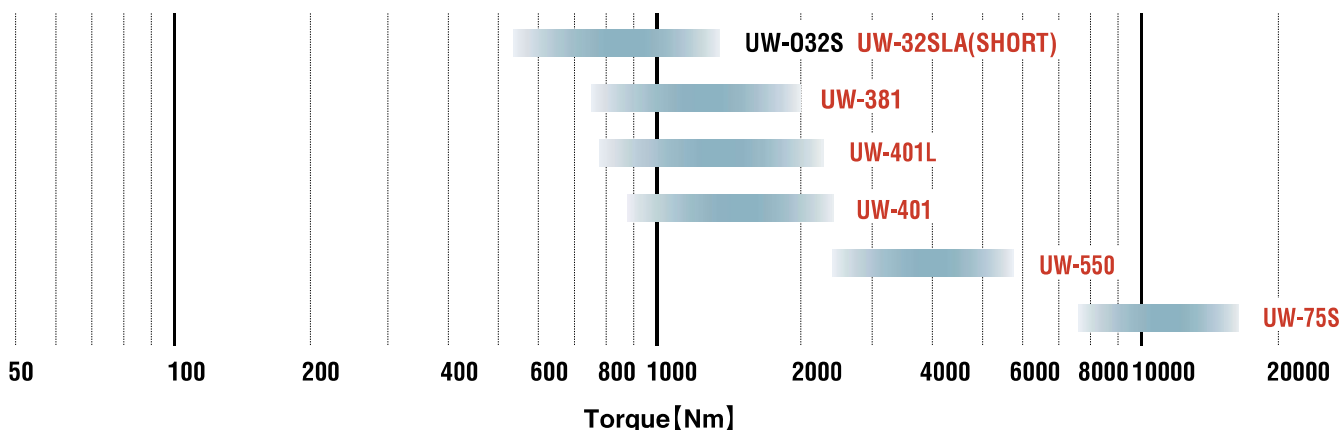
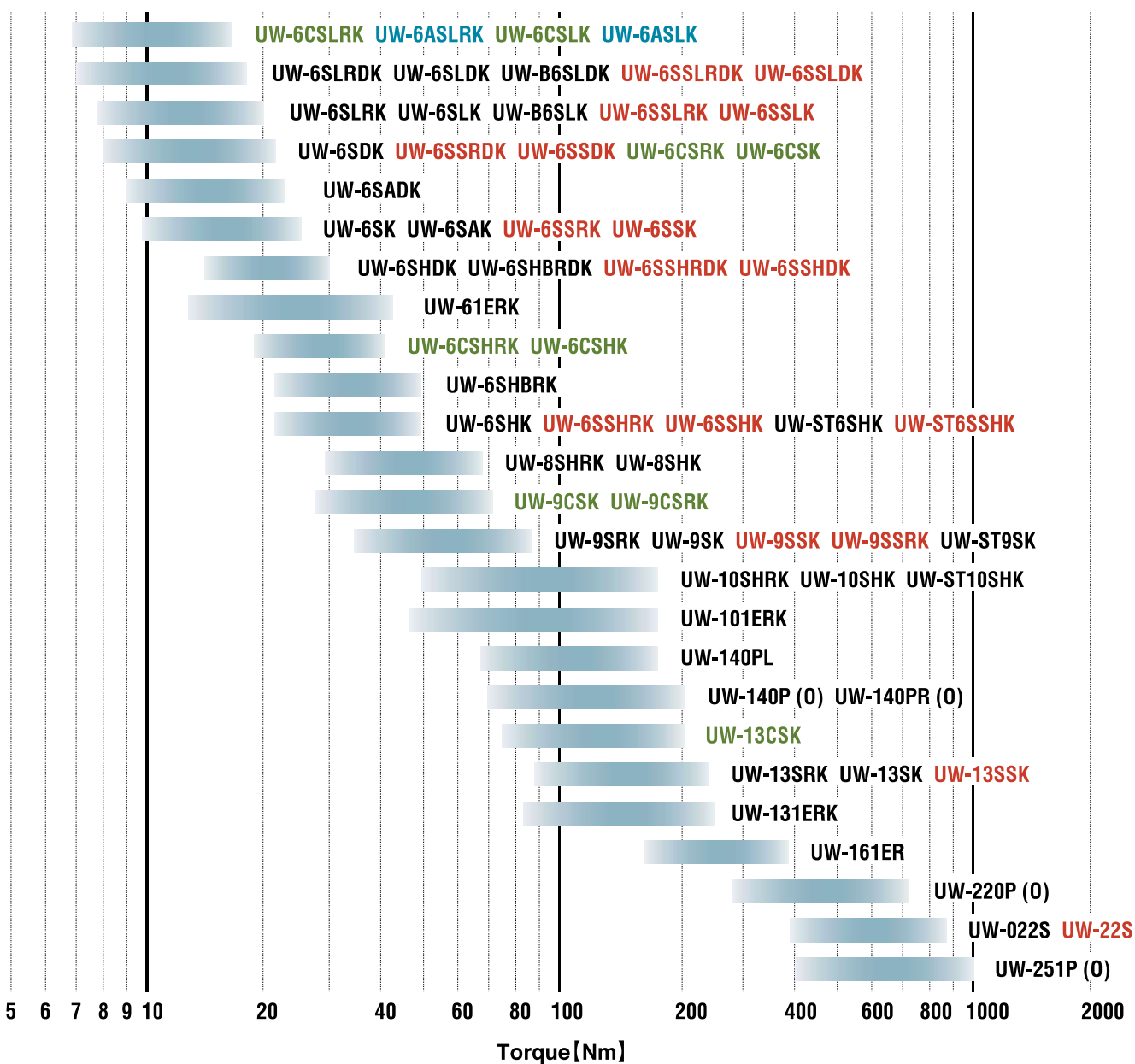
Straight type



Corner type



Angle type



IMPACT WRENCHES

The widest range of URYU Impact Wrenches offer fast, powerful and economical operation in high-volume heavy assembly applications.



UW-6SLRK



UW-61ERK



UW-101ERK



UW-161ER



UW-6SHBRK



UW-B6SLK



UW-8SHRK



UW-10SHRK



UW-9SRK



UW-13SRK

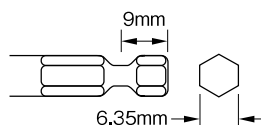


Front exhaust type (model which does not have "R" in model name.)



Quick-change driver anvil type

On pulling the sleeve, insert or take off the bit.



Please add "D" to each model name like UW-6SDK when ordering.

Built-in AIR REGULATOR FOR UW-61ERK,101ERK,131ERK, AND UW-161ER

Set "4" at the arrow mark for strongest and "1" for weakest.



SPECIFICATIONS

Recommended Air Pressure : 0.6MPa (85psi)

Model	Capacity (Nominal Bolt Size)		Free Speed (about)	Overall Length less Socket or Bit (about)		Weight less Socket or Bit (about)		From Center to Outside (about)		Sq. Drive or Hex. Size		Average Air Consumption	
	mm	in		mm	in	kg	lb	mm	in	mm	in	m ³ /min	ft ³ /min
UW-6SLRK	6	1/4	8500	175	6 57/64	0.97	2.13	31.0	1 7/32	9.5	3/8	0.35	12.4
UW-6SHBRK	8	5/16	7300	154	6 1/16	1.36	2.99	28.0	1 7/64	9.5	3/8	0.35	12.4
UW-6SLK	6	1/4	8500	175	6 57/64	0.97	2.13	31.0	1 7/32	9.5	3/8	0.30	10.5
UW-B6SLK	6	1/4	8500	166	6 17/32	0.97	2.13	31.0	1 7/32	9.5	3/8	0.30	10.5
UW-6SK	6	1/4	7500	170	6 11/16	1.22	2.68	27.5	1 5/64	9.5	3/8	0.30	10.5
UW-6SAK	6	1/4	7500	134	5 9/32	1.10	2.47	27.5	1 5/64	9.5	3/8	0.30	10.5
UW-6SHK	8	5/16	7500	173	6 51/64	1.41	3.10	28.0	1 7/64	9.5	3/8	0.35	12.4
UW-8SHRK	8	5/16	7300	172	6 49/64	1.55	3.41	31.0	1 7/32	12.7	1/2	0.40	14.0
UW-9SRK	10	3/8	7000	178	7 1/64	1.79	3.93	34.0	1 11/32	12.7	1/2	0.45	16.0
UW-10SHRK	10-12	3/8-1/2	6000	183	7 13/64	2.13	4.68	35.0	1 3/8	12.7	1/2	0.45	16.0
UW-13SRK	13	1/2	6000	215	8 15/32	2.61	5.74	37.5	1 15/32	12.7	1/2	0.45	16.0
UW-8SHK	8	5/16	7500	172	6 49/64	1.55	3.41	31.0	1 7/32	12.7	1/2	0.40	14.0
UW-9SK	10	3/8	7000	178	7 1/64	1.84	4.04	34.0	1 11/32	12.7	1/2	0.50	17.6
UW-10SHK	10-12	3/8-1/2	6500	183	7 13/64	2.13	4.68	35.0	1 3/8	12.7	1/2	0.45	16.0
UW-13SK	13	1/2	6500	215	8 15/32	2.61	5.74	37.5	1 15/32	12.7	1/2	0.55	19.4

Air Hose Size (Inside Diameter) : 9.5mm (3/8")

Air Inlet Thread : NPT1/4"

SPECIFICATIONS

Recommended Air Pressure:0.6MPa(85psi)

Model	Capacity (Nominal Bolt Size)		Free Speed (about)	Overall Length less Socket (about)		Weight less Socket (about)		From Center to Outside (about)		Sq. Drive Shank		Average Air Consumption	
	mm	in		mm	in	kg	lb	mm	in	mm	in	m ³ /min	ft ³ /min
UW-61ERK	8	5/16	7300	150	5 29/32	1.51	3.32	29.5	1 5/32	9.5	3/8	0.35	12.4
UW-101ERK	10	3/8	5500	179	7 3/64	2.27	4.99	36.0	1 27/64	12.7	1/2	0.45	16.0
UW-131ERK	13	1/2	5500	205	8 5/64	2.97	6.53	37.5	1 15/32	12.7	1/2	0.55	19.4
UW-161ER	16	5/8	3800	217	8 35/64	4.10	9.00	41.5	1 41/64	19.0	3/4	0.65	23.0

Air Hose Size (Inside Diameter) : 12.7mm (1/2") for UW-161ER 9.5mm (3/8") for UW-61ERK, 101ERK & 131ERK series
Air Inlet Thread (Pipe Tap) : NPT 3/8" for 161ER NPT 1/4" for UW-61ERK, 101ERK & 131ERK series



UW-6SSLRK



UW-32SLA (OUT-SHORT)



UW-401L (OUT-1)



UW-22S (SHORT)



UW-6SSHRK



UW-9SSK



UW-6CSHRK



UW-6CSLRK

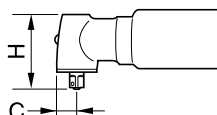


UW-6ASLRK



UW-13CSK

Head Sizes



Model	C		H	
	mm	in	mm	in
UW-6CSLRK	13.5	17/32	59.5	2 11/32
UW-6CSRK	15.0	19/32	60.0	2 23/64
UW-6CSHRK	17.5	11/16	65.0	2 9/16
UW-6CSLK	13.5	17/32	59.5	2 11/32

Model	C		H	
	mm	in	mm	in
UW-6CSK	15.0	19/32	60.0	2 23/64
UW-6CSHK	17.5	11/16	65.0	2 9/16
UW-9CS(R)K	22.0	7/8	85.0	3 11/32
UW-13CSK	26.0	11/32	102.0	4 7/32

SPECIFICATIONS

Recommended Air Pressure : 0.6MPa (85psi)

Model	Capacity (Nominal Bolt Size)		Free Speed (about)	Overall Length less Socket or Bit (about)		Weight less Socket or Bit (about)		From Center to Outside (about)		Sq. Drive or Hex. Size		Average Air Consumption	
	mm	in		mm	in	kg	lb	mm	in	mm	in	m ³ /min	ft ³ /min
UW-6SSLRK	6	1/4	8500	239	9 13/32	0.87	1.91	31.0	1 7/32	9.5	3/8	0.30	10.5
UW-6SSRK	6	1/4	7500	225	8 55/64	0.97	2.13	29.5	1 5/32	9.5	3/8	0.30	10.5
UW-6SSHRK	8	5/16	7300	249	9 51/64	1.26	2.77	27.5	1 5/64	9.5	3/8	0.35	12.4
UW-6SSLK	6	1/4	8500	197	7 3/4	0.87	1.91	31.0	1 7/32	9.5	3/8	0.30	10.5
UW-6SSK	6	1/4	7500	184	7 1/4	0.97	2.13	28.0	1 7/64	9.5	3/8	0.30	10.5
UW-6SSHK	8	5/16	7500	203	7 63/64	1.21	2.66	27.5	1 5/64	9.5	3/8	0.35	12.4
UW-6CSLRK	6	1/4	8000	258	10 5/32	1.17	2.57	31.0	1 7/32	9.5	3/8	0.30	10.5
UW-6CSRK	6	1/4	7300	257	10 1/8	1.42	3.12	29.5	1 5/32	9.5	3/8	0.30	10.5
UW-6CSHRK	8	5/16	7300	282	11 7/64	1.71	3.76	27.5	1 5/64	9.5	3/8	0.30	10.5
UW-6ASLRK	6	1/4	6500	277	10 29/32	1.14	2.50	31.0	1 7/32	9.5	3/8	0.30	10.5
UW-6CSLK	6	1/4	8000	217	8 35/64	1.17	2.57	31.0	1 7/32	9.5	3/8	0.30	10.5
UW-6CSK	6	1/4	7500	218	8 37/64	1.42	3.12	28.0	1 7/64	9.5	3/8	0.30	10.5
UW-6CSHK	8	5/16	7500	238	9 3/8	1.71	3.76	27.5	1 5/64	9.5	3/8	0.35	12.4
UW-6ASLK	6	1/4	6500	235	9 1/4	1.14	2.50	31.0	1 7/32	9.5	3/8	0.30	10.5
UW-9SSK	10	3/8	7000	290	11 27/64	2.10	4.62	34.0	1 11/32	12.7	1/2	0.45	16.0
UW-9SSRK	10	3/8	7000	320	12 19/32	2.10	4.62	34.0	1 11/32	12.7	1/2	0.45	16.0
UW-13SSK	13	1/2	6300	281	11 1/16	3.17	6.97	39.0	1 17/32	12.7	1/2	0.55	19.4
UW-9CSK	10	3/8	7000	337	13 17/64	2.78	6.11	34.0	1 11/32	12.7	1/2	0.35	12.4
UW-9CSRK	10	3/8	7000	359	14 9/64	2.78	6.11	34.0	1 11/32	12.7	1/2	0.35	12.4
UW-13CSK	13	1/2	6500	374	14 23/32	5.17	11.37	39.0	1 17/32	12.7	1/2	0.75	26.5

Air Hose Size (Inside Diameter) : 9.5mm (3/8")

Air Inlet Thread : NPT1/4"

SPECIFICATIONS

Recommended Air Pressure : 0.6MPa (85psi)

Model	Capacity (Nominal Bolt Size)		Free Speed (about)	Overall Length less Socket (about)		Weight less Socket (about)		From Center to Outside (about)		Sq. Drive Shank		Average Air Consumption	
	mm	in		mm	in	kg	lb	mm	in	mm	in	m ³ /min	ft ³ /min
UW-22S	22	7/8	4000	395	15 35/64	7.90	17.41	50.0	1 31/32	19.0	3/4	0.75	26.5
UW-22S(L)	22	7/8	4000	518	20 25/64	8.30	18.30	50.0	1 31/32	19.0	3/4	0.75	26.5
UW-O22S	22	7/8	3800	257	10 1/8	7.65	16.80	50.0	1 31/32	19.0	3/4	0.75	26.5
UW-O32S	32	1 1/4	3500	304	11 31/32	11.60	25.50	61.0	2 13/32	25.4	1	1.15	40.6
UW-32SLA	32	1 1/4	3500	438	17 1/4	11.70	25.74	62.5	2 29/64	25.4	1	0.90	32.0
UW-32SLA(L)	32	1 1/4	3500	583	22 61/64	12.50	27.50	62.5	2 29/64	25.4	1	0.90	32.0
UW-401	38	1 1/2	3200	494	19 29/64	15.10	33.22	62.5	2 29/64	25.4	1	1.20	42.4
UW-401L	38	1 1/2	3200	654	25 3/4	16.50	36.30	62.5	2 29/64	25.4	1	1.20	42.4

Air Hose Size (Inside Diameter) : 12.7mm (1/2")

Air Inlet Thread : NPT3/8" for UW-22S, UW-O22S & UW-O32S NPT1/2" for UW-32SLA & UW-401

IMPACT WRENCHES

SWING HAMMER SERIES



UW-140PR



UW-140P



UW-220P



UW-251P



UW-381



Suffix "L" to Model Name.

Head Sizes

Model	L		Model	L	
	mm	in		mm	in
UW-140PL	68.5	2 45/64	UW-381L	200.0	7 7/8
UW-220PL	150.0	5 29/32	UW-381PL	200.0	7 7/8
UW-251PL	151.0	5 15/16	UW-401L	199.5	7 55/64

SPECIFICATIONS

Recommended Air Pressure : 0.6MPa (85psi)

Model	Capacity (Nominal Bolt Size)		Free Speed (about)	Overall Length less Socket (about)		Weight less Socket (about)		From Center to Outside (about)		Sq. Drive Shank		Average Air Consumption	
	mm	in		mm	in	kg	lb	mm	in	mm	in	m ³ /min	ft ³ /min
UW-140P, -140PR	12	1/2	6500	200	7 7/8	2.70	5.90	33.0	1 19/64	12.7	1/2	0.70	25.0
UW-140PL, -140PRL	12	1/2	6800	244	9 39/64	2.80	6.10	33.0	1 19/64	12.7	1/2	0.70	25.0
UW-220P	22	7/8	5500	230	9 1/16	4.40	9.60	42.0	1 21/32	19.0	3/4	0.70	25.0
UW-220PL	22	7/8	5500	350	13 25/32	4.70	10.30	42.0	1 21/32	19.0	3/4	0.70	25.0
UW-251P	25	1	5500	276	10 55/64	8.00	17.60	51.5	2 1/32	25.4	1	0.80	28.0
UW-251PL	25	1	5500	395	15 35/64	8.80	19.40	51.5	2 1/32	25.4	1	0.80	28.0
UW-381	38	1 1/2	4700	395	15 35/64	9.50	20.90	58.5	2 19/64	25.4	1	0.90	31.5
UW-381L	38	1 1/2	4700	543	21 3/8	10.00	22.00	58.5	2 19/64	25.4	1	0.90	31.5
UW-381P	38	1 1/2	4700	276	10 55/64	9.50	20.90	58.5	2 19/64	25.4	1	0.90	31.5
UW-381PL	38	1 1/2	4700	425	16 47/64	10.00	22.00	58.5	2 19/64	25.4	1	0.90	31.5

Air Hose Size (Inside Diameter) : 9.5mm(3/8") for UW-140P Series, 12.7mm (1/2") for other models above

Air Inlet Thread : NPT 1/4" for UW-140P series

NPT 3/8" for UW-220P, UW-251P Series

NPT 1/2" for UW-381 Series

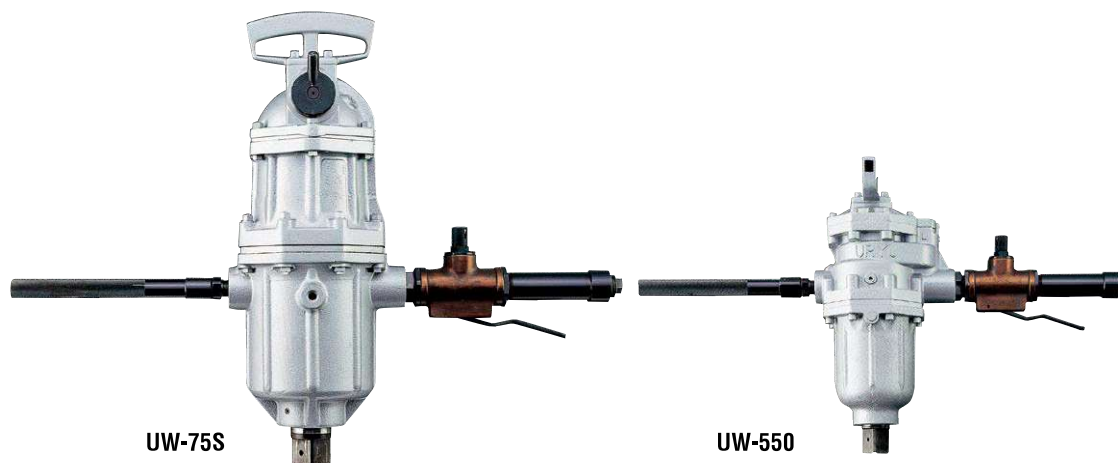
UW-140P Series combine compact size and light weight with torque, 70 – 200 Nm to meet a wide range of applications. Recommendable for overall automotive service, body shop etc.

UW-220P Series are recommendable for various popular fastening joints in general industry. (300-700Nm)

UW-251P Series are recommendable for heavy industrial production work such as engine work, truck springs, tractor pads, off-road equipment and heavy duty farm equipment.(600 – 1000Nm)

UW-381 Series are powerful, light-weight impact wrenches that are ideal for wide applications (1400 - 2000 Nm) in steel erection refineries, petrochemical plants, mines, steel mills and heavy motor vehicle plants.

JUMBO TYPE IMPACT WRENCHES



Built-In Air Regulator

Pull up the spring loaded knob and turn clockwise to lower the power and anticlockwise to increase it, then reset.



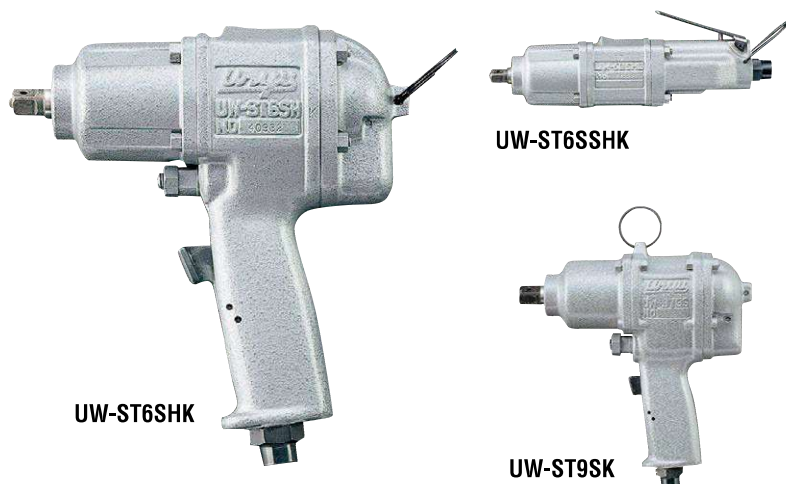
SPECIFICATIONS

Recommended Air Pressure : 0.6MPa (85psi)

Model	Capacity (Nominal Bolt Size)		Free Speed (about)	Overall Length less Socket (about)		Weight less Socket (about)		From Center to Outside (about)		Sq. Drive Shank		Average Air Consumption	
	mm	in	rpm	mm	in	kg	lb	mm	in	mm	in	m³/min	ft³/min
UW-550	55	2 1/4	3500	525	20 43/64	36.0	79.2	78.0	3 5/64	38.1	1 1/2	2.20	79
UW-75S	75	3	1400	670	26 3/8	56.0	123.0	96.0	3 25/32	44.4	1 3/4	3.20	114
UW-75S (1 1/2)	76	3	1400	670	26 3/8	56.0	123.0	96.0	3 25/32	38.1	1 1/2	3.20	114

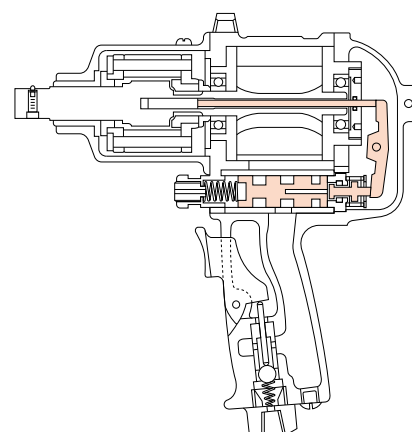
Air Hose Size (Inside Diameter) : 19.0 mm (3/4")
Air Inlet Thread : NPT1"

STUD BOLT WRENCHES



FEATURES

Double-Hammer Auto-Reversing for Stud Bolt Driving



These unique Auto-Reversing tools simply stud-bolt driving (frequent reversing) job considerably for less operator's fatigue & high productivity. Push the tool forward to the work for driving and simply pull it back.

SPECIFICATIONS

Recommended Air Pressure : 0.6MPa (85psi)

Model	Capacity (Nominal Bolt Size)		Free Speed (about)	Overall Length less Socket (about)		Weight less Socket (about)		From Center to Outside (about)		Sq. Drive Shank		Average Air Consumption	
	mm	in	rpm	mm	in	kg	lb	mm	in	mm	in	m³/min	ft³/min
UW-ST6SHK	8	5/16	6500	171	6 47/64	1.70	3.74	28.5	1 1/8	9.5	3/8	0.40	14.0
UW-ST9SK	10	3/8	6300	192	7 9/16	2.35	5.06	33.5	1 5/16	12.7	1/2	0.50	17.6
UW-ST10SHK	10-12	3/8-1/2	6300	194	7 41/64	2.60	5.72	33.5	1 5/16	12.7	1/2	0.50	17.6
UW-ST6SSHK	6-8	1/4-5/16	6500	235	9 1/4	1.35	2.97	28.5	1 1/8	9.5	3/8	0.40	14.0

Air Hose Size (Inside Diameter) : 9.5mm (3/8")
Air Inlet Thread : NPT1/4"