

# Enerpac Bolting Tools

**ENERPAC's Bolting Solutions cater to the complete bolting work-flow, ensuring joint integrity in a variety of applications throughout the industry:**

## Joint Assembly

From simple pipe alignment to complex joint positioning of large structural assemblies, our comprehensive line of joint assembly products range from hydraulic and mechanical alignment tools to PLC-controlled multi-point positioning systems.

## Controlled Tightening

Enerpac offers a variety of controlled tightening options to best meet the requirements of your application. From mechanical torque multipliers to hydraulically driven square drive wrenches and from low profile torque wrenches to inter-connectable bolt tensioning tools; we offer the products you need for accurate and simultaneous tightening of multiple bolts.

## Joint Separation

Enerpac also provides hydraulic nut splitters and a variety of mechanical and hydraulic spreading tools for joint separation during inspection, maintenance and decommissioning operations.

High quality bolting solutions from the brand you can trust. See how Enerpac can make your bolting work-flow more accurate, safer and efficient.



### Bolting Integrity Software

Visit [www.enerpac.com](http://www.enerpac.com) to access our free on-line bolting software application and obtain information on tool selection, bolt load calculations and tool pressure settings. A combined application data sheet and joint completion report is also available.

















### Torque Tightening

See our 'Yellow Pages' for information on torque tightening.



# Bolting Tools & Pumps Section Overview

	Capacity	Tool type and functions	Series	Page	
Controlled Tightening and Loosening	1015 - 10.845 Nm 750 - 8000 Ft.lbs	Manual Torque Multipliers	E		▶
	1898 - 34.079 Nm 1400 - 25.140 Ft.lbs	Square Drive Hydraulic Torque Wrenches Rigid steel design & maximum versatility	S		▶
	19 - 155 mm 3/4 - 6 1/8 inch	Heavy-Duty Impact Sockets Square drive	BSH		▶
	2712 - 20.337 Nm 2000 - 15.000 Ft.lbs	Hexagon Hydraulic Torque Wrenches Rigid steel design & low profile	W		▶
		Selection Matrix Torque Wrenches - Pumps - Hoses			▶
	Flow: 0,34 l/min Power: 0,37 kW	Portable Electric Torque Wrench Pumps Compact Economy	PMU		▶
	Flow: 0,90 l/min Power: 1,25 kW	Portable Electric Torque Wrench Pumps Z-Class innovation	ZU4T		▶
	Flow: 0,82-1,64 l/min Power: 1,1 - 2,2 kW	Electric Torque Wrench Pumps Z-Class innovation	ZE4T ZE5T		▶
	Flow: 0,33 l/min Air: 1130 l/min	Air Driven Torque Wrench Pumps Portable and Compact	PTA		▶
	Flow: 0,90 l/min Air: 2840 l/min	Air Driven Torque Wrench Pumps Z-Class innovation	ZA4T		▶
Joint Assembly and Joint Separation	0,3 - 0,5 ton (3 - 45 kN)	Flange Alignment Tools Mechanical and Hydraulic	ATM		▶
	8 - 14 ton (72 - 125 kN)	Step-type Industrial Spreaders Mechanical and Hydraulic	FSH FSM		▶
	5 - 10 ton (45 - 101 kN)	Pin-type Hydraulic Flange Spreaders	FS		▶
	10 - 75 mm hex. 70 - 130 mm hex.	Hydraulic Nut Cutters Hydraulic Nut Splitters	NC NS		▶ ▶

# E-Series, Manual Torque Multipliers

▼ Shown from left to right: E291, E393, E494



- High-efficiency planetary gear sets achieve high output torque from low input torque
- Operator protected by anti-backlash device
- Torque multiplier accuracy  $\pm 5\%$
- Reversible, tighten or loosen bolts
- Reaction bar or reaction plate style
- Angle-of-turn protractor standard on E300-Series models
- Reaction plate models offer increased versatility with reaction point locations
- E300 and E400-Series have replaceable shear drives, providing overload protection of internal power train
- One replacement shear drive is included with each E300 and E400-Series models.



◀ Enerpac Reaction Bar Torque Multiplier E393 used to manually torque bolts up to 4300 Nm.

## Accurate, Efficient Torque Multiplication

When accurate make-up or break-out of stubborn fasteners requires high torque



### Typical Torque Multiplier Applications

- Locomotives
- Power plants
- Pulp and paper mills
- Refineries
- Chemical plants
- Mining and construction
- Off-road equipment
- Shipyards
- Cranes.



### MTW-250 Manual Torque Wrench

Available to power manual torque multipliers.

Technical information:

- 1/2" Square Drive
- 60-330 Nm (45-250 Ft.lbs)

### ▼ SELECTION CHART

Torque Multiplier Type	Output Torque Capacity		Model Number
	(Nm)	(Ft.lbs)	
Reaction Bar Multiplier	1015	750	E290PLUS
	1355	1000	E291
	1625	1200	E391
	2980	2200	E392
	4340	3200	E393
Reaction Plate Multiplier	2980	2200	E492
	4340	3200	E493
	6780	5000	E494
	10845	8000	E495



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# Manual Torque Multipliers



## Manual Torque Multipliers

Enerpac manual torque multipliers provide efficient torque multiplication in wide clearance applications and when external power sources are not available. Manual torque multipliers are used in most industrial, construction, and equipment maintenance applications. Hydraulic torque wrenches are better suited for tight tolerance, flange and repetitious bolting applications.

## Use Reaction Bar Models:

- where space is limited,
- where multiple reaction points are available,
- when portability is desirable.

## Use Reaction Plate Models:

- above 4300 Nm output torque,
- on flanges and applications where neighbouring bolt or nut is available to react against
- when extreme reaction forces are generated.

## E Series



Maximum Output Torque:

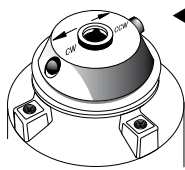
**1015 - 10.845 Nm**

Torque Ratio:

**3,3:1 - 52:1**

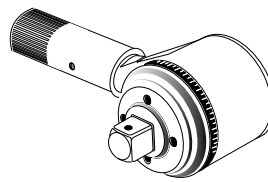
Output Ratio Accuracy:

**± 5 %**



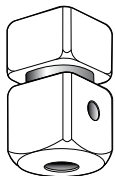
### Selector Pawl

Models with anti-backlash protection have directional selector pawls. Set the pawl for clockwise or counter-clockwise rotation.



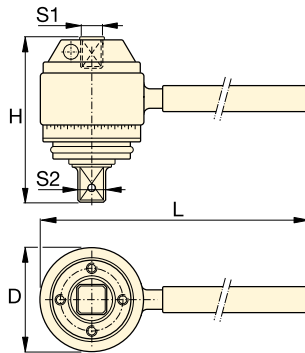
### Angle-of-Turn Protractor

E391, E392 and E393 models include an angle-of-turn protractor (scale) to tighten fasteners using a "torque turn" method. Allows accurate measuring a specific number of degrees of rotation.

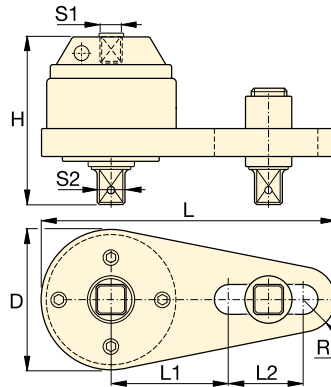


### Shearable Square Drive

Provides overload protection on E300- and E400-series multiplier's power train by shearing at 103-110% of rated capacity. Internal shear pin prevents tool from falling off bolt.



Reaction Bar Type <sup>1)</sup>



Reaction Plate Type <sup>1)</sup>



### CAUTION!

Never use impact air tools for power driving torque multipliers. Torque multiplier drive train damage will occur.



### Hydraulic Torque Wrenches

Enerpac offers a complete range of square drive and hexagon cassette torque wrenches.



### BSH-Series Sockets

Heavy-Duty Impact Sockets for power driven torquing equipment.

Input Torque <sup>2)</sup>	Torque Ratio	Input Female Square Drive S1 (inch)	Output Male Square Drive S2 (inch)	Replaceable Shear Drive Model Nr.	Over-load protection	Anti-Back-lash	Dimensions (mm)						(kg)	Model Number
							D	H	L	L1	L2	R		
308 (Nm)   227 (Ft.lbs)	3,3 : 1	1/2	3/4	—	No	No	71	84	218	—	—	—	1,8	E290PLUS
411 (Nm)   303 (Ft.lbs)	3,3 : 1	1/2	3/4	—	No	No	71	84	442	—	—	—	2,5	E291
271 (Nm)   200 (Ft.lbs)	6 : 1	1/2	3/4	E391SDK	Yes	No	100	102	498	—	—	—	4,1	E391
219 (Nm)   162 (Ft.lbs)	13,6 : 1	1/2	1	E392SDK	Yes	Yes	103	146	498	—	—	—	6,9	E392
234 (Nm)   173 (Ft.lbs)	18,5 : 1	1/2	1	E393SDK	Yes	Yes	103	165	498	—	—	—	8,3	E393
219 (Nm)   162 (Ft.lbs)	13,6 : 1	1/2	1	E392SDK	Yes	Yes	124	140	356	140	124	32	7,8	E492
234 (Nm)   173 (Ft.lbs)	18,5 : 1	1/2	1	E393SDK	Yes	Yes	124	163	356	140	124	32	8,8	E493
256 (Nm)   189 (Ft.lbs)	26,5 : 1	1/2	1 1/2	E494SDK	Yes	Yes	143	222	378	178	89	42	15,4	E494
208 (Nm)   154 (Ft.lbs)	52 : 1	1/2	1 1/2	E495SDK	Yes	Yes	148	273	386	178	89	48	22,8	E495

<sup>1)</sup> E200 and E400-series do not have an Angle-of-Turn Protractor (scale).

<sup>2)</sup> User must verify manual torque wrench accuracy prior to use to ensure accurate final output torque.





# Square Drive Hydraulic Torque Wrenches

▼ From left to right: S3000, S6000, S1500



## Simplicity

- 360° click-on, multi-position reaction arm
- Push button square drive release to quickly reverse the square drive for tightening or loosening
- Fine tooth ratchet prevents tool “lock-on”
- Single 360° hydraulic swivel manifold, complete with screw lock couplings, increases wrench and hose manoeuvrability.

## Design

- Compact, high strength uni-body construction for a small operating radius
- Robust design with minimal parts enables easy on-site maintenance without special tools
- Lightweight, ergonomic design for easy handling and an easy fit, even in applications where access is limited
- Optimised strength-to-weight ratio
- Fast operation due to the large nut rotation per wrench cycle (35 degree rotation angle) and rapid return stroke.

## Reliability

- All wrenches are nickel-plated for excellent corrosion protection and improved durability in harsh environments.

## Accuracy

- Constant torque output provides high accuracy across the full stroke
- Uni-body construction ensures accuracy by reducing internal deflections.

## Rigid Steel Design

## The *Professional* Square Drive Solution



### S-Series, Square Drive Wrenches

This product range has been designed using state-of-the-art CAD techniques to bring you the most advanced square drive torque wrench on the market.

To ensure that the tools you buy meet our own exacting requirements, during the design process every prototype was put through finite element stress analysis, photo-elastic modelling, rigorous cyclic testing and strain gauging.



### TSP - Pro Series Swivel

Featuring Tilt & Swivel technology the TSP provides 360° X-axis rotation and 160° Y-axis rotation.

#### How to Order:

Order as an accessory which can be fitted to existing S-Series wrenches.

Factory fitted to new S-Series wrenches: Add suffix “P” to the torque wrench model number. Example: **S1500-P**.



### Torque Wrench Hoses

Use Enerpac THQ-700 Series torque wrench hoses with S-Series torque wrenches to ensure the integrity of your hydraulic system.

6 m long, 2 hoses

**THQ-706T**

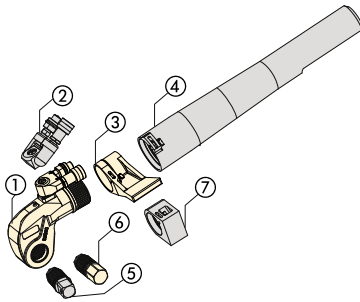
12 m long, 2 hoses

**THQ-712T**



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# Double-acting Square Drive Hydraulic Torque Wrenches



- ① Drive Unit
- ② Pro Series Swivel (page 191)
- ③ Reaction Arm (page 191)
- ④ Extended Reaction Arm (page 191)



## Use only Heavy Duty Impact Sockets

For power driven torquing equipment, according to ISO2725 and ISO1174;

DIN 3129 and DIN 3121 or ASME-B107.2/1995.

Page: 192

- ⑤ Square Drive
- ⑥ Allen Drive (page 190)
- ⑦ Short Reaction Arm (page 190)

## S Series



Maximum Torque at 700 bar:

**34.079 Nm**

Square Drive Range:

**3/4 - 2 1/2 inch**

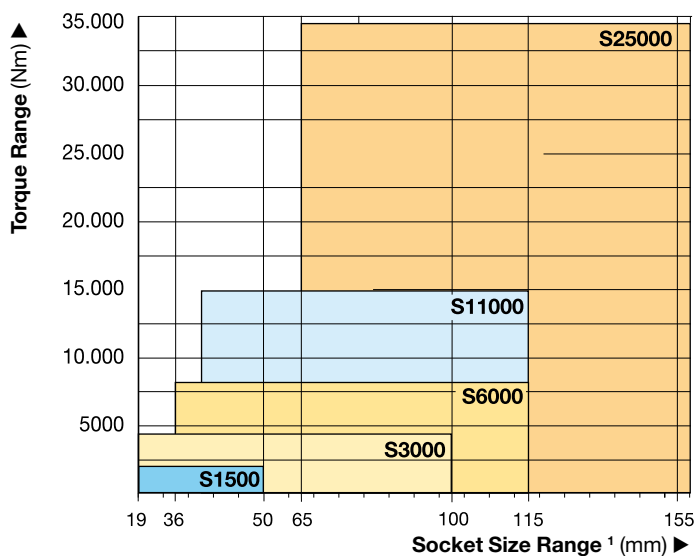
Nose Radius:

**25,0 - 63,5 mm**

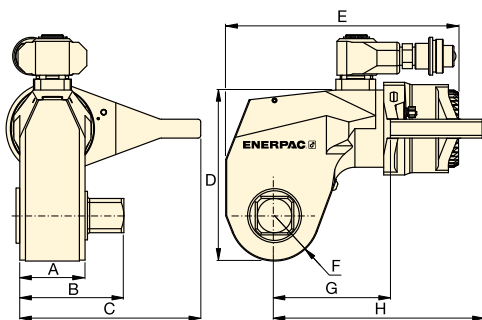
Maximum Operating Pressure:

**700 bar**

## TORQUE WRENCH SELECTION (based on socket size range <sup>1)</sup>)



<sup>1)</sup> See page 254 for table of hexagon sizes of bolts, nuts and related thread diameters.





The rigid steel design of S-Series torque wrenches guarantee durability, reliability and safety. These wrenches can be powered by the portable ZU4T-Series pumps.



## Torque Wrench Pump Selection Matrix

For optimum speed and performance see the torque wrench and pump matrix.



Maximum Torque at 700 bar		Square Drive		Torque Wrench Model Number *	Dimensions (mm)								(kg)
		Size (inch)	Model Nr. (included with wrench)		A	B	C	D	E	F	G	H	
(Nm)	(Ft.lbs)												
1898	1400	3/4	SD15-012	<b>S1500</b>	39	63	110	95	136	25,0	69	119	2,7
4339	3200	1	SD30-100	<b>S3000</b>	48	77	134	126	172	33,0	90	159	5,0
8144	6010	1 1/2	SD60-108	<b>S6000</b>	57	90	179	162	201	42,0	112	187	8,5
14.914	11.000	1 1/2	SD110-108	<b>S11000</b>	71	111	196	185	226	49,5	132	227	15,0
34.079	25.140	2 1/2	SD250-208	<b>S25000</b>	87	143	244	240	292	63,5	182	292	31,0

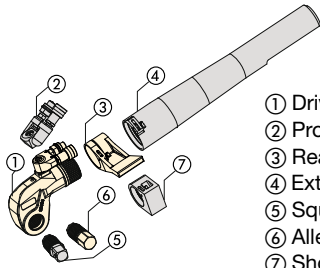
See "Yellow Pages" section for torque conversions.

\* To order a S-series wrench fitted with the TSP swivel, add suffix "P" to the model number. Example: **S1500-P**.



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# SDA-Series, Allen Drives



- ① Drive Unit
- ② Pro Series Swivel
- ③ Reaction Arm
- ④ Extended Reaction Arm
- ⑤ Square Drive
- ⑥ Allen Drive
- ⑦ Short Reaction Arm

Maximum Torque at 700 bar:

**34.079 Nm**

Hexagon Size Allen Drive:




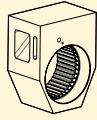
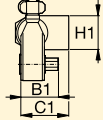
**1/2 - 2 1/4 inch**

Hexagon Size Allen Drive:

**14 - 85 mm**

**For  
S  
Series**



Torque Wrench	Optional Allen Drives, Imperial				Optional Allen Drives, Metric				Short Reaction Arm for Allen Drives		
											
Model Number	Hexagon Size <sup>1)</sup> (inch)	Maximum Torque (Nm)	Model Number	Dim. B1 (mm)	Hexagon Size <sup>1)</sup> (mm)	Maximum Torque (Nm)	Model Number	Dim. B1 (mm)	Model Number	Dimensions (mm)	
<b>S1500 (1898 Nm)</b>	1/2	481	<b>SDA15-008</b>	66	<b>14</b>	644	<b>SDA15-14</b>	66	<b>SRA15</b>	67,5	65
	5/8	935	<b>SDA15-010</b>	67	<b>17</b>	1152	<b>SDA15-17</b>	68			
	3/4	1619	<b>SDA15-012</b>	71	<b>19</b>	1606	<b>SDA15-19</b>	70			
	7/8	1897	<b>SDA15-014</b>	74	<b>22</b>	1897	<b>SDA15-22</b>	73			
	1	1897	<b>SDA15-100</b>	77	<b>24</b>	1897	<b>SDA15-24</b>	74			
<b>S3000 (4339 Nm)</b>	5/8	935	<b>SDA30-010</b>	77	<b>17</b>	1152	<b>SDA30-17</b>	77	<b>SRA30</b>	80,0	74
	3/4	1619	<b>SDA30-012</b>	80	<b>19</b>	1606	<b>SDA30-19</b>	79			
	7/8	2568	<b>SDA30-014</b>	83	<b>22</b>	2486	<b>SDA30-22</b>	82			
	1	3828	<b>SDA30-100</b>	86	<b>24</b>	3232	<b>SDA30-24</b>	84			
	1 1/8	4336	<b>SDA30-102</b>	88	<b>27</b>	4336	<b>SDA30-27</b>	85			
	1 1/4	4336	<b>SDA30-104</b>	89	<b>30</b>	4336	<b>SDA30-30</b>	87			
	–	–	–	–	<b>32</b>	4336	<b>SDA30-32</b>	88			
<b>S6000 (8144 Nm)</b>	5/8	935	<b>SDA60-010</b>	85	<b>17</b>	1152	<b>SDA60-17</b>	86	<b>SRA60</b>	91,5	89
	3/4	1619	<b>SDA60-012</b>	89	<b>19</b>	1606	<b>SDA60-19</b>	88			
	7/8	2568	<b>SDA60-014</b>	92	<b>22</b>	2486	<b>SDA60-22</b>	91			
	1	3828	<b>SDA60-100</b>	95	<b>24</b>	3232	<b>SDA60-24</b>	93			
	1 1/8	5454	<b>SDA60-102</b>	97	<b>27</b>	4600	<b>SDA60-27</b>	94			
	1 1/4	7480	<b>SDA60-104</b>	98	<b>30</b>	6308	<b>SDA60-30</b>	96			
	–	–	–	–	<b>32</b>	7656	<b>SDA60-32</b>	97			
<b>S11000 (14.911 Nm)</b>	1 1/4	7480	<b>SDA110-104</b>	115	<b>30</b>	6308	<b>SDA110-30</b>	112	<b>SRA110</b>	127,5	106
	1 3/8	9953	<b>SDA110-106</b>	117	<b>32</b>	7656	<b>SDA110-32</b>	114			
	1 1/2	12.920	<b>SDA110-108</b>	118	<b>36</b>	10.894	<b>SDA110-36</b>	117			
	1 5/8	14.905	<b>SDA110-110</b>	122	<b>41</b>	14.905	<b>SDA110-41</b>	121			
	1 3/4	14.905	<b>SDA110-112</b>	125	<b>46</b>	14.905	<b>SDA110-46</b>	127			
<b>S25000 (34.079 Nm)</b>	1 1/2	12.920	<b>SDA250-108</b>	141	<b>36</b>	10.894	<b>SDA250-36</b>	140	<b>SRA250</b>	158,5	135
	1 5/8	16.423	<b>SDA250-110</b>	145	<b>41</b>	16.098	<b>SDA250-41</b>	144			
	1 3/4	20.508	<b>SDA250-112</b>	148	<b>46</b>	22.730	<b>SDA250-46</b>	148			
	1 7/8	25.230	<b>SDA250-114</b>	149	<b>50</b>	29.194	<b>SDA250-50</b>	151			
	2	30.617	<b>SDA250-200</b>	151	<b>55</b>	34.079	<b>SDA250-55</b>	154			
	2 1/4	34.079	<b>SDA250-204</b>	154	<b>60</b>	34.079	<b>SDA250-60</b>	158			
	–	–	–	–	<b>65</b>	34.079	<b>SDA250-65</b>	161			
	–	–	–	–	<b>70</b>	34.079	<b>SDA250-70</b>	164			
	–	–	–	–	<b>75</b>	34.079	<b>SDA250-75</b>	168			
	–	–	–	–	<b>85</b>	34.079	<b>SDA250-85</b>	175			

<sup>1)</sup> See page 254 for table of hexagon sizes of bolts, nuts and related thread diameters.



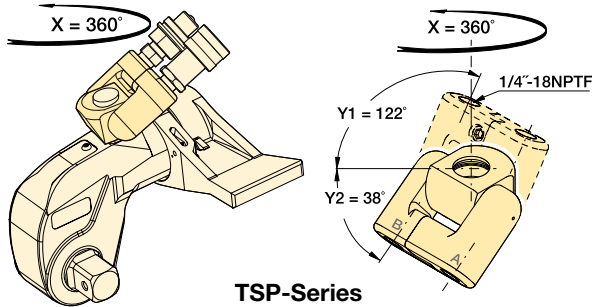
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# Accessories for S-Series Torque Wrenches


## TSP-Series, Pro Series Swivels

- Featuring Tilt and Swivel technology
- 360° X-axis and 160° Y-axis rotation
- Increases tool fit in restricted access areas
- Simplifies hose placement.

**TSP  
RTE  
SRS  
Series**

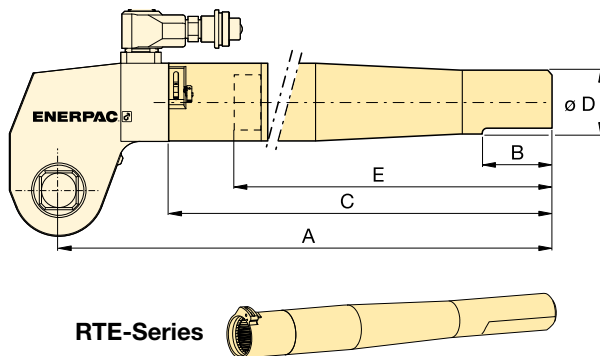


TSP-Series

For Torque Wrench Model Number	Model Number	Maximum Pressure (bar)	 (kg)
S1500, S3000	<b>TSP100</b>	700	0,2
S6000, S11000, S25000	<b>TSP200</b>	700	0,2


To order an S-series wrench fitted with the TSP swivel, add suffix "P" to the model number. Example: **S1500-P**.

## RTE-Series, Reaction Tube Extensions



RTE-Series

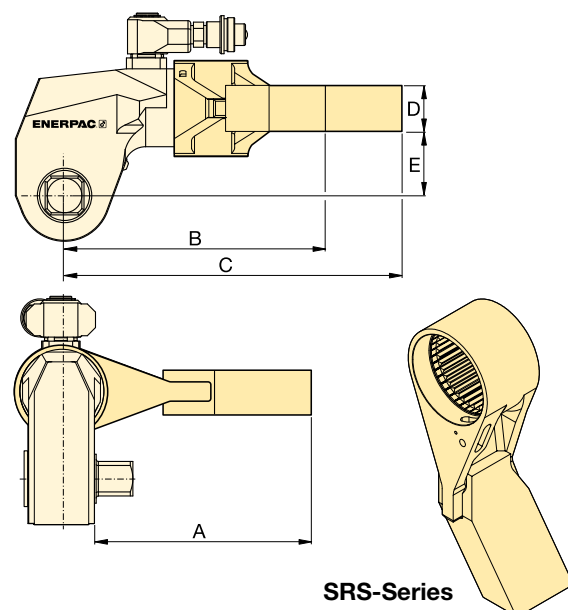
- Full torque rated
- Increases tool fit in restricted access areas.

For Torque Wrench Model Number	Model Number	Dimensions (mm)					 (kg)*
		A	B	C	D	E	
S1500	<b>RTE15</b>	706	152	636	58	600	4,6
S3000	<b>RTE30</b>	733	152	647	57	600	5,5
S6000	<b>RTE60</b>	747	152	659	65	600	7,7
S11000	<b>RTE110</b>	769	152	675	76	600	11,2
S25000	<b>RTE250</b>	813	152	685	100	600	17,3


\* Weights indicated are for the accessories only and do not include the wrench.

## SRS-Series, Extended Reaction Arms

- Lightweight interchangeable design.



SRS-Series

For Wrench Model	Max. Torque (Nm)	Model Number	Dimensions (mm)					 (kg)*
			A	B	C	D	E	
S1500	1800	<b>SRS151</b>	97	87	128	24	34	0,8
	1640	<b>SRS152</b>	122	98	139	24	34	1,0
	1533	<b>SRS153</b>	147	109	150	24	34	1,2
S3000	3918	<b>SRS301</b>	111	104	170	34	48	1,6
	3712	<b>SRS302</b>	137	119	185	34	48	2,0
	3574	<b>SRS303</b>	162	133	200	34	48	2,5
S6000	7842	<b>SRS601</b>	148	134	198	39	62	2,3
	7454	<b>SRS602</b>	173	149	213	39	62	2,7
	7175	<b>SRS603</b>	198	163	228	39	62	3,4
S11000	14650	<b>SRS1101</b>	151	158	233	46	76	4,4
	13957	<b>SRS1102</b>	176	173	248	46	76	5,1
	13391	<b>SRS1103</b>	201	187	262	46	76	5,8
S25000	33538	<b>SRS2501</b>	183	225	314	50	100	7,6
	32049	<b>SRS2502</b>	208	240	329	50	100	8,4
	30750	<b>SRS2503</b>	233	254	344	50	100	10,0

\* Weights indicated are for the accessories only and do not include the wrench.



# BSH-Series, Heavy-Duty Sockets

- Heavy-duty impact sockets
- Supplied with "Pin and Ring"

## METRIC SOCKETS

3/4" Square Drive		1" Square Drive		1 1/2" Square Drive		2 1/2" Square Drive	
Model Number	A/F (mm)	Model Number	A/F (mm)	Model Number	A/F (mm)	Model Number	A/F (mm)
BSH7519	19	BSH1019	19	BSH1536	36	BSH2565	65
BSH7524	24	BSH1024	24	BSH15163	41	BSH2570	70
BSH7527	27	BSH1027	27	BSH1546	46	BSH2575	75
BSH7530	30	BSH1030	30	BSH1550	50	BSH2580	80
BSH7532	32	BSH1032	32	BSH1555	55	BSH2585	85
BSH7536	36	BSH1036	36	BSH1560	60	BSH2590	90
BSH75163	41	BSH10163	41	BSH1565	65	BSH2595	95
BSH7546	46	BSH1046	46	BSH1570	70	BSH25100	100
BSH7550	50	BSH1050	50	BSH1575	75	BSH25105	105
-	-	BSH1055	55	BSH1580	80	BSH25110	110
-	-	BSH1060	60	BSH1585	85	BSH25115	115
-	-	BSH1065	65	BSH1590	90	BSH25120	120
-	-	BSH1070	70	BSH1595	95	BSH25125	125
-	-	BSH1075	75	BSH15100	100	BSH25135	135
-	-	BSH1080	80	BSH15105	105	BSH25140	140
-	-	BSH1085	85	BSH15110	110	BSH25145	145
-	-	BSH1090	90	BSH15115	115	BSH25150	150
-	-	BSH1095	95	-	-	BSH25155	155
-	-	BSH10100	100	-	-	-	-

## BSH Series



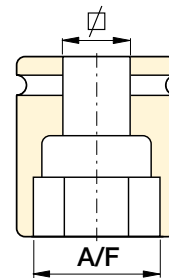
Hexagon Size:

**19 - 155 mm | 3/4" - 6 1/8"**



### Select the Right Torque

Choose your Enerpac Torque Wrench using the untightening rule of thumb:  
Loosening torque equals about 250% of tightening torque.



### Hexagon Bolt and Nut Sizes

See the table of hexagon sizes of bolts, nuts and related thread diameters.

## IMPERIAL SOCKETS

3/4" Square Drive		1" Square Drive		1 1/2" Square Drive		2 1/2" Square Drive	
Model Number	A/F (inch)	Model Number	A/F (inch)	Model Number	A/F (inch)	Model Number	A/F (inch)
BSH7519	3/4"	BSH1019	3/4"	BSH10231	2 5/16"	BSH15144	1 7/16"
BSH75088	7/8"	BSH10088	7/8"	BSH10238	2 3/8"	BSH1538	1 1/2"
BSH75094	15/16"	BSH10094	15/16"	BSH10244	2 7/16"	BSH15156	1 9/16"
BSH7527	1 1/16"	BSH1027	1 1/16"	BSH10250	2 1/2"	BSH15163	1 5/8"
BSH7530	1 3/16"	BSH1030	1 3/16"	BSH1065	2 9/16"	BSH1543	1 11/16"
BSH75125	1 1/4"	BSH10125	1 1/4"	BSH10263	2 5/8"	BSH15175	1 3/4"
BSH75131	1 5/16"	BSH10131	1 5/16"	BSH10269	2 11/16"	BSH1546	1 13/16"
BSH7535	1 3/8"	BSH1035	1 3/8"	BSH1070	2 3/4"	BSH15188	1 7/8"
BSH75144	1 7/16"	BSH10144	1 7/16"	BSH10281	2 13/16"	BSH15194	1 15/16"
BSH7538	1 1/2"	BSH1038	1 1/2"	BSH10288	2 7/8"	BSH15200	2"
BSH75156	1 9/16"	BSH10156	1 9/16"	BSH1075	2 15/16"	BSH15206	2 1/16"
BSH75163	1 5/8"	BSH10163	1 5/8"	BSH10300	3"	BSH15213	2 1/8"
BSH7543	1 11/16"	BSH1043	1 11/16"	BSH10306	3 1/16"	BSH15219	2 3/16"
BSH75175	1 3/4"	BSH10175	1 3/4"	BSH10313	3 1/8"	BSH15225	2 1/4"
BSH7546	1 3/16"	BSH1046	1 13/16"	BSH10319	3 3/16"	BSH15231	2 5/16"
BSH75188	1 7/8"	BSH10188	1 7/8"	BSH10325	3 1/4"	BSH15238	2 3/8"
BSH75194	1 15/16"	BSH10194	1 15/16"	BSH10338	3 3/8"	BSH15244	2 7/16"
BSH75200	2"	BSH10200	2"	BSH10350	3 1/2"	BSH15250	2 1/2"
-	-	BSH10206	2 1/16"	BSH10363	3 5/8"	BSH1565	2 9/16"
-	-	BSH10213	2 1/8"	BSH1095	3 3/4"	BSH15263	2 5/8"
-	-	BSH10219	2 3/16"	BSH10388	3 7/8"	BSH15269	2 11/16"
-	-	BSH10225	2 1/4"	-	-	BSH1570	2 3/4"
						BSH15306	3 1/16"
						BSH15313	3 1/8"
						BSH15319	3 3/16"
						BSH15325	3 1/4"
						BSH15338	3 3/8"
						BSH15350	3 1/2"
						BSH15363	3 5/8"
						BSH15388	3 7/8"
						BSH15100	3 15/16"
						BSH15400	4"
						BSH15105	4 1/8"
						BSH15419	4 3/16"
						BSH15425	4 1/4"
						BSH15110	4 5/16"
						BSH15438	4 3/8"
						BSH15450	4 1/2"
						BSH15463	4 5/8"
						BSH25244	2 7/16"
						BSH25250	2 1/2"
						BSH2565	2 13/16"
						BSH25263	2 5/8"
						BSH25269	2 11/16"
						BSH2570	2 3/4"
						BSH25281	2 11/16"
						BSH25288	2 7/8"
						BSH2575	2 15/16"
						BSH25300	3"
						BSH25306	3 1/16"
						BSH25313	3 1/8"
						BSH25319	3 3/16"
						BSH25325	3 1/4"
						BSH25338	3 3/8"
						BSH25350	3 1/2"
						BSH25363	3 5/8"
						BSH2595	3 3/4"
						BSH25388	3 7/8"
						BSH25100	3 15/16"
						BSH25400	4"
						BSH25105	4 1/8"
						BSH25419	4 13/16"
						BSH25425	4 1/4"
						BSH25110	4 5/16"
						BSH25438	4 3/8"
						BSH25450	4 1/2"
						BSH25463	4 5/8"
						BSH25475	4 3/4"
						BSH25488	4 7/8"
						BSH25500	5"
						BSH25513	5 1/8"
						BSH25519	5 3/16"
						BSH25525	5 1/4"
						BSH25538	5 3/8"
						BSH25140	5 1/2"
						BSH25575	5 3/4"
						BSH25150	5 7/8"
						BSH25600	6"
						BSH25613	6 1/8"

<sup>1)</sup> See page 254 for table of hexagon sizes of bolts, nuts and related thread diameters.



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# Bolting Application Ideas

Enerpac professional series steel torque wrenches provide reliable controlled tightening solutions across the industry.

## **S3000 Square Drive Torque Wrench on Wind Tower erection and maintenance ►**

S3000 used to connect wind tower segments during assembly and maintenance. A robust but compact solution is required for tightening of bolts on wind tower sections. Large numbers of fasteners require precise application of torque to ensure joint integrity is achieved and maintained.

The Enerpac S-Series wrench was selected as it offers simple and reliable operation while providing accurate and repeatable results.



## **◀ W4000 Low Profile Torque Wrench on an ANSI Pipe Flange**

Throughout the Oil and Gas, Petrochemical and Processing Industries, pipeline joints, valves, pumps and machinery present challenges for controlled bolting.

The restricted access on this pipeline elbow was easily overcome by the selection of an Enerpac W-Series Torque Wrench.

The W-Series Wrenches offer reliability and control resulting in even and consistent torque being applied to all bolts.

## **S6000 on a High Volume Pump Unit ►**

High vibration requires long studs to be accurately tightened to the calculated preload.

During maintenance quick turnaround times are essential; S Series wrenches are chosen as they provide a large angle of nut rotation per stroke, offering speed and accuracy in a compact ergonomic tool.



# W-Series, Low Profile Hexagon Wrenches

▼ Shown: Drive units with interchangeable cassettes



## Simplicity

- No tools are needed for changing the hexagon cassettes
- Innovative, pinless wrench construction incorporates quick release cylinder and automatic crank engagement
- Single 360° hydraulic swivel manifold complete with screw lock couplings increases wrench and hose manoeuvrability.

## Design

- Cylinders and low profile cassettes have been engineered to give ultra slim, compact low clearance tooling with a small nose radius
- Robust design with minimal parts enables easy on-site maintenance without special tools
- Nut sizes covered range from 30 - 115 mm (1 1/8 - 4 5/8 inch)
- Optimized strength-to-weight ratio
- Fast operation due to the large nut rotation per wrench cycle (30 degree rotation angle) and rapid return stroke.

## Reliability

- All wrenches are nickel-plated for excellent corrosion protection and improved durability in harsh environments
- All wrenches are fitted with bronze bushings to ensure the ratchet will never seize in the sideplates, thus eliminating costly repairs.

## Accuracy

- Constant torque output provides high accuracy across the full stroke
- In-line reaction foot ensures accuracy by reducing internal deflections.

## Rigid Steel Design

## The *Professional* Low Profile Solution



### W-Series, Low Profile Torque Wrenches

This product range has been designed using state-of-the art

CAD techniques to bring you the most advanced low profile torque wrench on the market. Safety, quality, toughness and reliability are built in.

During the design process every prototype was put through finite element stress analysis, photo-elastic modelling, rigorous cyclic testing and strain gauging.



### TSP - Pro Series Swivel

Featuring Tilt and Swivel technology the TSP provides 360° X-axis rotation and 160° Y-axis rotation.

### How to Order

Order as an accessory which can be fitted to existing W-Series wrenches.

Factory fitted to new W-Series wrenches: Suffix the wrench model number with "P" e.g.: **W2000-P**.



### Torque Wrench Hoses

Use Enerpac THQ-700 Series hoses with W-Series torque wrenches to ensure the integrity of your hydraulic system.

6 m long, 2 hoses

**THQ-706T**

12 m long, 2 hoses

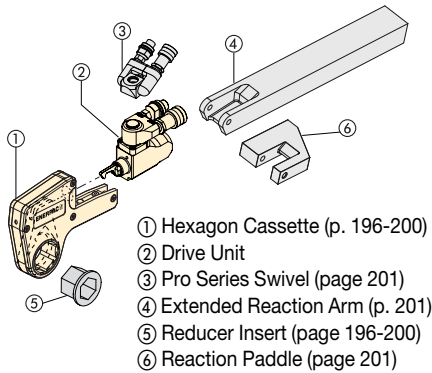
**THQ-712T**



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# Double-Acting Hydraulic Hexagon Torque Wrenches



## Hexagon Cassettes and Reducer Inserts

Maximum versatility with the full range of interchangeable hexagon cassettes and hexagon reducing inserts is available in metric and inch sizes.

Page: 196

## W Series



Maximum Torque at 700 bar:

**20.337 Nm**

Hexagon Range:

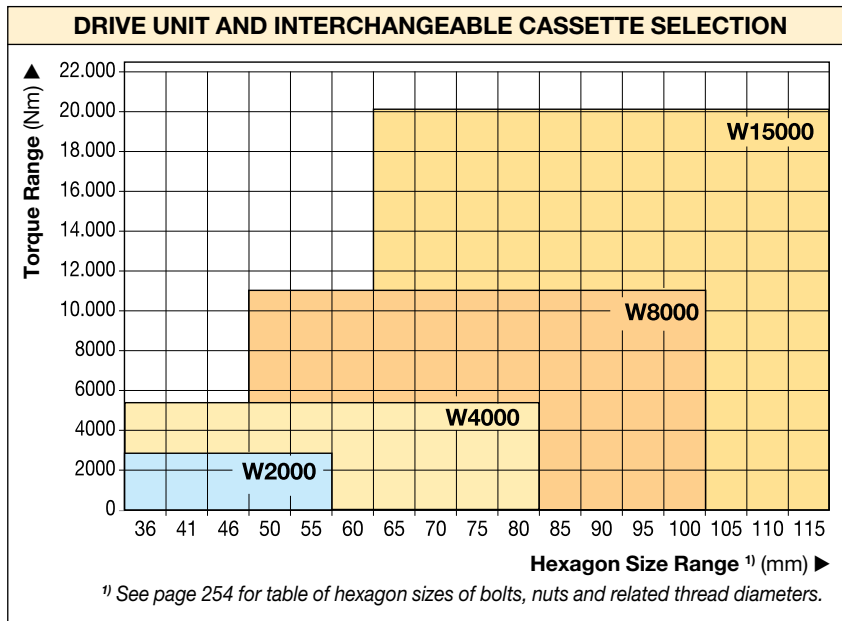
**30 - 115 mm**

Nose Radius:

**31 - 87,5 mm**

Maximum Operating Pressure:

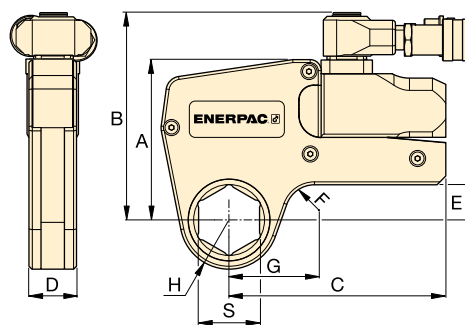
**700 bar**





## Torque Wrench Pump Selection Matrix

For optimum speed and performance see the torque wrench and pump matrix.

▼ These rigid steel wrenches with low profile interchangeable hexagon cassettes guarantee durability and maximum versatility in bolting applications.



## ▼ SELECTION CHART

Hexagon Range *		Maximum Torque at 700 bar		Drive Unit Model Number **	Minimum Torque		Dimensions (mm) (see pages 196-200 for dimensions H, G and S)						Weight (drive unit without hexagon cassette)
	Page: 196	(Nm)	(Ft.lbs)		(Nm)	(Ft.lbs)	A	B	C	D	E	F	(kg)
30 - 60	1 1/8 - 2 3/8	2712	2000	W2000	271	200	109	141	148	32	24	20	1,4
36 - 85	1 5/16 - 3 3/8	5423	4000	W4000	542	400	136	167	178	41	33	20	2,0
50 - 105	1 7/8 - 4 1/8	10.846	8000	W8000	1084	800	172	205	208	53	42	25	3,0
65 - 115	2 7/16 - 4 5/8	20.337	15.000	W15000	2033	1500	207	240	253	63	50	20	5,0

\* With in-line reaction foot.

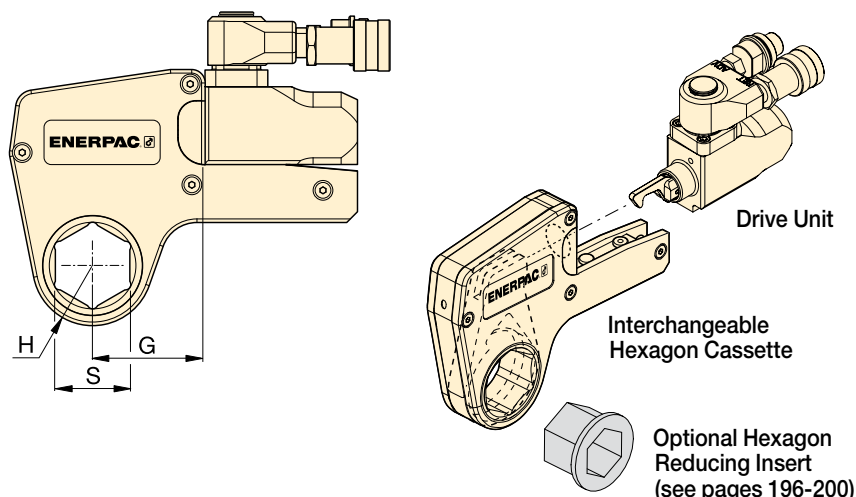
\*\* To order a W-series wrench fitted with the TSP swivel, suffix the model number with "-P". Example: W2000-P.



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# W2000, Inch-Cassettes & Reducer Inserts



## W Series



Maximum Torque at 700 bar:

**2712 Nm**

Hexagon Range:

**1 1/8 - 2 3/8 inch**

Maximum Operating Pressure:

**700 bar**

### Metric Sizes

For metric sizes of hexagon cassettes and reducer inserts see:

### Hexagon Bolt and Nut Sizes

See the table for hexagon sizes of bolts, nuts and related thread diameters.

## ▼ SELECTION CHART

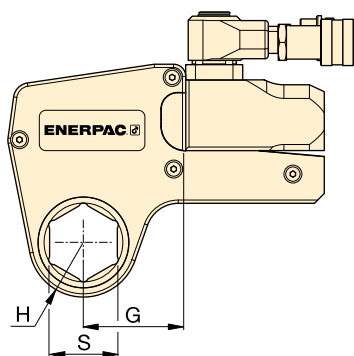
Drive Unit Model Number	Hexagon Size <sup>1)</sup>	Nose Radius	Dim.	Model Number		Hexagon Reducer		Hexagon Reducer		Hexagon Reducer	
						Hexagon Reducer (inch)	Model Number	Hexagon Reducer (inch)	Model Number	Hexagon Reducer (inch)	Model Number
W2000	1 1/8	31	54	W2102	2,1	—	—	—	—	—	—
	1 3/16	31	54	W2103	2,1	—	—	—	—	—	—
	1 1/4	31	54	W2104	2,1	—	—	—	—	—	—
	1 5/16	31	54	W2105	2,1	—	—	—	—	—	—
	1 3/8	31	54	W2106	2,1	—	—	—	—	—	—
	1 7/16	31	54	W2107	2,1	1 7/16 - 1 1/8	W2107R102	—	—	—	—
	1 1/2	34	58	W2108	2,2	—	—	—	—	—	—
	1 9/16	34	58	W2109	2,2	—	—	—	—	—	—
	1 5/8	34	58	W2110	2,2	1 5/8 - 1 1/4	W2110R104	1 5/8 - 1 3/16	W2110R103	—	—
	1 11/16	37	61	W2111	2,2	—	—	—	—	—	—
	1 3/4	37	61	W2112	2,2	—	—	—	—	—	—
	1 13/16	37	61	W2113	2,2	1 13/16 - 1 7/16	W2113R107	1 13/16 - 1 1/4	W2113R104	—	—
	1 7/8	39	63	W2114	2,2	—	—	—	—	—	—
	1 5/8	39	63	W2115	2,2	—	—	—	—	—	—
	2	39	63	W2200	2,2	2 - 1 5/8	W2200R110	2 - 1 7/16	W2200R107	—	—
	2 1/16	42	69	W2201	2,3	—	—	—	—	—	—
	2 1/8	42	69	W2202	2,3	—	—	—	—	—	—
	2 3/16	42	69	W2203	2,3	2 3/16 - 1 13/16	W2203R113	2 3/16 - 1 5/8	W2203R110	2 3/16 - 1 7/16	W2203R107
	—	—	—	—	—	—	—	—	—	—	—
	2 1/4	45	65	W2204	2,2	—	—	—	—	—	—
	2 5/16	45	65	W2205	2,2	—	—	—	—	—	—
	2 3/8	45	65	W2206	2,2	2 3/8 - 2	W2206R200	2 3/8 - 1 7/8	W2206R114	2 3/8 - 1 13/16	W2206R113
	—	—	—	—	—	2 3/8 - 1 1/2	W2206R108	2 3/8 - 1 7/16	W2206R107	—	—

<sup>1)</sup> See page 254 for table of hexagon sizes of bolts, nuts and related thread diameters.



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# W4000-Series, Inch-Cassettes & Reducer Inserts



Maximum Torque at 700 bar:

**5423 Nm**

Hexagon Range:

**1<sup>5</sup>/<sub>16</sub> - 3<sup>3</sup>/<sub>8</sub> inch**

Maximum Operating Pressure:

**700 bar**

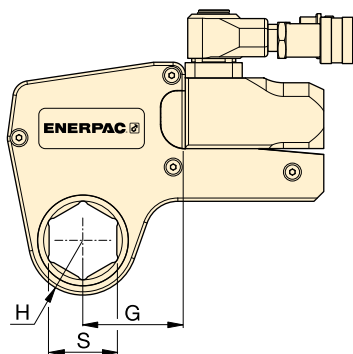
**W**  
Series



Drive Unit Model Number	Hexagon Size <sup>1)</sup>	Nose Radius	Dim.	Model Number							
						Hexagon Reducer	Model Number	Hexagon Reducer	Model Number	Hexagon Reducer	Model Number
	S (inch)	H (mm)	G (mm)		(kg)	(inch)		(inch)		(inch)	
W4000	1 <sup>5</sup> / <sub>16</sub>	37	61	W4105	3,7	—	—	—	—	—	—
	1 <sup>3</sup> / <sub>8</sub>	37	61	W4106	3,7	—	—	—	—	—	—
	1 <sup>7</sup> / <sub>16</sub>	37	61	W4107	3,7	—	—	—	—	—	—
	1 <sup>1</sup> / <sub>2</sub>	37	61	W4108	3,7	—	—	—	—	—	—
	1 <sup>9</sup> / <sub>16</sub>	37	61	W4109	3,7	—	—	—	—	—	—
	1 <sup>5</sup> / <sub>8</sub>	37	61	W4110	3,7	—	—	—	—	—	—
	1 <sup>11</sup> / <sub>16</sub>	40	64	W4111	3,8	—	—	—	—	—	—
	1 <sup>3</sup> / <sub>4</sub>	40	64	W4112	3,8	—	—	—	—	—	—
	1 <sup>13</sup> / <sub>16</sub>	40	64	W4113	3,8	—	—	—	—	—	—
	1 <sup>7</sup> / <sub>8</sub>	42	67	W4114	3,9	—	—	—	—	—	—
	1 <sup>15</sup> / <sub>16</sub>	42	67	W4115	3,9	—	—	—	—	—	—
	2	42	67	W4200	3,9	2 - 1 <sup>7</sup> / <sub>8</sub>	W4200R107	—	—	—	—
	2 <sup>1</sup> / <sub>16</sub>	44	73	W4201	4,0	—	—	—	—	—	—
	2 <sup>1</sup> / <sub>8</sub>	44	73	W4202	4,0	—	—	—	—	—	—
	2 <sup>3</sup> / <sub>16</sub>	44	73	W4203	4,0	2 <sup>3</sup> / <sub>16</sub> - 1 <sup>5</sup> / <sub>8</sub>	W4203R110	2 <sup>3</sup> / <sub>16</sub> - 1 <sup>7</sup> / <sub>16</sub>	W4203R107	2 <sup>3</sup> / <sub>16</sub> - 1 <sup>1</sup> / <sub>4</sub>	W4203R104
	2 <sup>1</sup> / <sub>4</sub>	47	71	W4204	4,1	—	—	—	—	—	—
	2 <sup>5</sup> / <sub>16</sub>	47	71	W4205	4,1	—	—	—	—	—	—
	2 <sup>3</sup> / <sub>8</sub>	47	71	W4206	4,1	2 <sup>3</sup> / <sub>8</sub> - 2	W4206R200	2 <sup>3</sup> / <sub>8</sub> - 1 <sup>13</sup> / <sub>16</sub>	W4206R113	2 <sup>3</sup> / <sub>8</sub> - 1 <sup>7</sup> / <sub>16</sub>	W4206R107
	—	—	—	—	—	2 <sup>3</sup> / <sub>8</sub> - 1 <sup>3</sup> / <sub>8</sub>	R4206R106	—	—	—	—
	2 <sup>7</sup> / <sub>16</sub>	50	76	W4207	4,1	2 <sup>7</sup> / <sub>16</sub> - 2	W4207R200	—	—	—	—
	2 <sup>1</sup> / <sub>2</sub>	50	76	W4208	4,1	2 <sup>1</sup> / <sub>2</sub> - 2	W4208R200	2 <sup>1</sup> / <sub>2</sub> - 1 <sup>7</sup> / <sub>16</sub>	W4208R113	—	—
	2 <sup>9</sup> / <sub>16</sub>	50	76	W4209	4,1	2 <sup>9</sup> / <sub>16</sub> - 2 <sup>3</sup> / <sub>16</sub>	W4209R203	2 <sup>9</sup> / <sub>16</sub> - 2 <sup>1</sup> / <sub>8</sub>	W4209R202	2 <sup>9</sup> / <sub>16</sub> - 2 <sup>1</sup> / <sub>16</sub>	W4208R201
	—	—	—	—	—	2 <sup>9</sup> / <sub>16</sub> - 2	W4209R200	2 <sup>9</sup> / <sub>16</sub> - 2 <sup>13</sup> / <sub>16</sub>	W4209R113	—	—
	2 <sup>5</sup> / <sub>8</sub>	53	78	W4210	4,2	—	—	—	—	—	—
	2 <sup>11</sup> / <sub>16</sub>	53	78	W4211	4,2	—	—	—	—	—	—
	2 <sup>3</sup> / <sub>4</sub>	53	78	W4212	4,2	2 <sup>3</sup> / <sub>4</sub> - 2 <sup>3</sup> / <sub>8</sub>	W4212R206	2 <sup>3</sup> / <sub>4</sub> - 2 <sup>3</sup> / <sub>16</sub>	W4212R203	2 <sup>3</sup> / <sub>4</sub> - 2 <sup>1</sup> / <sub>8</sub>	W4212R202
	2 <sup>13</sup> / <sub>16</sub>	55	82	W4213	4,3	—	—	—	—	—	—
	2 <sup>7</sup> / <sub>8</sub>	55	82	W4214	4,3	—	—	—	—	—	—
	2 <sup>15</sup> / <sub>16</sub>	55	82	W4215	4,3	2 <sup>15</sup> / <sub>16</sub> - 2 <sup>9</sup> / <sub>16</sub>	W4215R209	2 <sup>15</sup> / <sub>16</sub> - 2 <sup>3</sup> / <sub>8</sub>	W4215R206	2 <sup>15</sup> / <sub>16</sub> - 2 <sup>3</sup> / <sub>16</sub>	W4215R203
	—	—	—	—	—	2 <sup>15</sup> / <sub>16</sub> - 2	W4215R200	—	—	—	—
	3	59	84	W4300	4,4	3 - 2 <sup>3</sup> / <sub>16</sub>	W4300R203	—	—	—	—
	3 <sup>1</sup> / <sub>16</sub>	59	84	W4301	4,4	—	—	—	—	—	—
	3 <sup>1</sup> / <sub>8</sub>	59	84	W4302	4,4	3 <sup>1</sup> / <sub>8</sub> - 2 <sup>3</sup> / <sub>4</sub>	W4302R212	3 <sup>1</sup> / <sub>8</sub> - 2 <sup>9</sup> / <sub>16</sub>	W4302R209	3 <sup>1</sup> / <sub>8</sub> - 2 <sup>3</sup> / <sub>8</sub>	W4302R206
	—	—	—	—	—	3 <sup>1</sup> / <sub>8</sub> - 2 <sup>5</sup> / <sub>16</sub>	W4302R205	3 <sup>1</sup> / <sub>8</sub> - 2 <sup>1</sup> / <sub>4</sub>	W4302R204	3 <sup>1</sup> / <sub>8</sub> - 2 <sup>3</sup> / <sub>16</sub>	W4302R203
	—	—	—	—	—	3 <sup>1</sup> / <sub>8</sub> - 2 <sup>1</sup> / <sub>8</sub>	W4302R202	3 <sup>1</sup> / <sub>8</sub> - 2	W4302R200	—	—
	3 <sup>3</sup> / <sub>16</sub>	62	86	W4303	4,5	—	—	—	—	—	—
	3 <sup>1</sup> / <sub>4</sub>	62	86	W4304	4,5	—	—	—	—	—	—
	3 <sup>5</sup> / <sub>16</sub>	62	86	W4305	4,5	—	—	—	—	—	—
	3 <sup>3</sup> / <sub>8</sub>	62	86	W4306	4,5	—	—	—	—	—	—

<sup>1)</sup> See page 254 for table of hexagon sizes of bolts, nuts and related thread diameters.

# W8000-Series, Inch-Cassettes & Reducers



Maximum Torque at 700 bar:

**10.846 Nm**

Hexagon Range:

**1 $\frac{7}{8}$  - 4 $\frac{1}{8}$  inch**

Maximum Operating Pressure:

**700 bar**

**W**  
Series



## ▼ SELECTION CHART

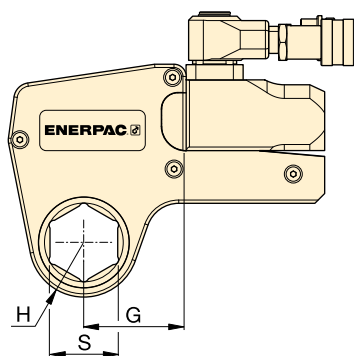
Drive Unit Model Number	Hexagon Size <sup>1)</sup>	Nose Radius	Dim.	Model Number							
						Hexagon Reducer (inch)	Model Number	Hexagon Reducer (inch)	Model Number	Hexagon Reducer (inch)	Model Number
W8000	S (inch)	H (mm)	G (mm)		(kg)						
	1 $\frac{7}{8}$	45	78	W8114	8,1	—	—	—	—	—	—
	1 $\frac{15}{16}$	45	78	W8115	8,1	—	—	—	—	—	—
	2	45	78	W8200	8,1	—	—	—	—	—	—
	2 $\frac{1}{16}$	48	80	W8201	8,1	—	—	—	—	—	—
	2 $\frac{1}{8}$	48	80	W8202	8,1	—	—	—	—	—	—
	2 $\frac{3}{16}$	48	80	W8203	8,1	—	—	—	—	—	—
	2 $\frac{1}{4}$	51	83	W8204	8,1	—	—	—	—	—	—
	2 $\frac{5}{16}$	51	83	W8205	8,1	—	—	—	—	—	—
	2 $\frac{3}{8}$	51	83	W8206	8,1	—	—	—	—	—	—
	2 $\frac{7}{16}$	53	86	W8207	8,1	—	—	—	—	—	—
	2 $\frac{1}{2}$	53	86	W8208	8,1	—	—	—	—	—	—
	2 $\frac{9}{16}$	53	86	W8209	8,1	2 $\frac{9}{16}$ - 2	W8209R200	—	—	—	—
	2 $\frac{5}{8}$	56	85	W8210	8,1	—	—	—	—	—	—
	2 $\frac{11}{16}$	56	85	W8211	7,9	—	—	—	—	—	—
	2 $\frac{3}{4}$	56	85	W8212	7,9	2 $\frac{3}{4}$ - 2 $\frac{3}{16}$	W8212R203	—	—	—	—
	2 $\frac{13}{16}$	58	85	W8213	7,9	—	—	—	—	—	—
	2 $\frac{7}{8}$	58	85	W8214	7,9	—	—	—	—	—	—
	2 $\frac{15}{16}$	58	85	W8215	7,9	2 $\frac{15}{16}$ - 2 $\frac{3}{8}$	W8215R206	2 $\frac{15}{16}$ - 2 $\frac{3}{16}$	W8215R203	—	—
	3	61	90	W8300	8,0	—	—	—	—	—	—
	3 $\frac{1}{16}$	61	90	W8301	8,0	—	—	—	—	—	—
	3 $\frac{1}{8}$	61	90	W8302	8,0	3 $\frac{1}{8}$ - 2 $\frac{3}{16}$	W8302R209	3 $\frac{1}{8}$ - 2 $\frac{3}{8}$	W8302R206	3 $\frac{1}{8}$ - 2 $\frac{3}{16}$	W8302R203
	—	—	—	—	—	3 $\frac{1}{8}$ - 2	W8302R200	—	—	—	—
	3 $\frac{3}{16}$	66	92	W8303	8,2	—	—	—	—	—	—
	3 $\frac{1}{4}$	66	92	W8304	8,2	—	—	—	—	—	—
	3 $\frac{5}{16}$	66	92	W8305	8,2	—	—	—	—	—	—
	3 $\frac{3}{8}$	66	92	W8306	8,2	—	—	—	—	—	—
	3 $\frac{7}{16}$	66	92	W8307I	8,2	—	—	—	—	—	—
	3 $\frac{1}{2}$	66	92	W8308	8,2	3 $\frac{1}{2}$ - 3	W8308R300	3 $\frac{1}{2}$ - 2 $\frac{15}{16}$	W8308R215	3 $\frac{1}{2}$ - 2 $\frac{3}{4}$	W8308R212
	3 $\frac{9}{16}$	74	103	W8309	8,8	—	—	—	—	—	—
	3 $\frac{5}{8}$	74	103	W8310	8,8	—	—	—	—	—	—
	3 $\frac{11}{16}$	74	103	W8311	8,8	—	—	—	—	—	—
	3 $\frac{3}{4}$	74	103	W8312	8,8	3 $\frac{3}{4}$ - 3 $\frac{1}{8}$	W8312R302	3 $\frac{3}{4}$ - 2 $\frac{15}{16}$	W8312R215	3 $\frac{3}{4}$ - 2 $\frac{3}{4}$	W8312R212
	3 $\frac{13}{16}$	74	103	W8313	8,8	—	—	—	—	—	—
	3 $\frac{7}{8}$	74	103	W8314	8,8	3 $\frac{7}{8}$ - 3 $\frac{1}{8}$	W8314R302	3 $\frac{7}{8}$ - 2 $\frac{15}{16}$	W8314R215	—	—
	3 $\frac{15}{16}$	80	110	W8315	9,3	—	—	—	—	—	—
	4	80	110	W8400	9,3	—	—	—	—	—	—
	4 $\frac{1}{16}$	80	110	W8401I	9,3	—	—	—	—	—	—
	4 $\frac{1}{8}$	80	110	W8402	9,3	—	—	—	—	—	—

<sup>1)</sup> See page 254 for table of hexagon sizes of bolts, nuts and related thread diameters.



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# W15000-Series, Inch-Cassettes & Reducer Inserts



Maximum Torque at 700 bar:

**20.337 Nm**

Hexagon Range:

**2<sup>7</sup>/<sub>16</sub> - 4<sup>5</sup>/<sub>8</sub> inch**

Maximum Operating Pressure:

**700 bar**

**W**  
Series



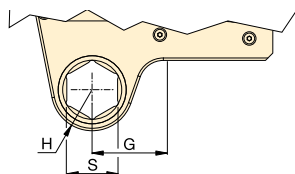
## ▼ SELECTION CHART

Drive Unit Model Number	Hexagon Size <sup>1)</sup>	Nose Radius	Dim.	Model Number							
						Hexagon Reducer (inch)	Model Number	Hexagon Reducer (inch)	Model Number	Hexagon Reducer (inch)	Model Number
<b>W15000</b>	<b>S</b> (inch)	<b>H</b> (mm)	<b>G</b> (mm)		(kg)						
	2 <sup>7</sup> / <sub>16</sub>	59	89	W15207	13,6	–	–	–	–	–	–
	2 <sup>1</sup> / <sub>2</sub>	59	89	W15208	13,6	–	–	–	–	–	–
	2 <sup>9</sup> / <sub>16</sub>	59	89	W15209	13,6	–	–	–	–	–	–
	2 <sup>5</sup> / <sub>8</sub>	59	89	W15210	13,6	–	–	–	–	–	–
	2 <sup>11</sup> / <sub>16</sub>	59	89	W15211	13,6	–	–	–	–	–	–
	2 <sup>3</sup> / <sub>4</sub>	59	89	W15212	13,6	–	–	–	–	–	–
	2 <sup>13</sup> / <sub>16</sub>	62	91	W15213	13,7	–	–	–	–	–	–
	2 <sup>7</sup> / <sub>8</sub>	62	91	W15214	13,7	–	–	–	–	–	–
	2 <sup>15</sup> / <sub>16</sub>	62	91	W15215	13,7	–	–	–	–	–	–
	3	65	93	W15300	13,8	3 - 2 <sup>1</sup> / <sub>8</sub>	W15300R202	–	–	–	–
	3 <sup>1</sup> / <sub>16</sub>	65	93	W15301	13,8	–	–	–	–	–	–
	3 <sup>1</sup> / <sub>8</sub>	65	93	W15302	13,8	3 <sup>1</sup> / <sub>8</sub> - 2 <sup>9</sup> / <sub>16</sub>	W15302R209	–	–	–	–
	3 <sup>3</sup> / <sub>16</sub>	70	97	W15303	14,1	–	–	–	–	–	–
	3 <sup>1</sup> / <sub>4</sub>	70	97	W15304	14,1	–	–	–	–	–	–
	3 <sup>5</sup> / <sub>16</sub>	70	97	W15305	14,1	–	–	–	–	–	–
	3 <sup>3</sup> / <sub>8</sub>	70	97	W15306	14,1	–	–	–	–	–	–
	3 <sup>7</sup> / <sub>16</sub>	70	97	W15307I	14,1	–	–	–	–	–	–
	3 <sup>1</sup> / <sub>2</sub>	70	97	W15308	14,1	3 <sup>1</sup> / <sub>2</sub> - 2 <sup>15</sup> / <sub>16</sub>	W15308R215	3 <sup>1</sup> / <sub>2</sub> - 2 <sup>3</sup> / <sub>4</sub>	W15308R212	–	–
	3 <sup>9</sup> / <sub>16</sub>	75	102	W15309	14,6	–	–	–	–	–	–
	3 <sup>5</sup> / <sub>8</sub>	75	102	W15310	14,6	–	–	–	–	–	–
	3 <sup>11</sup> / <sub>16</sub>	75	102	W15311	14,6	–	–	–	–	–	–
	3 <sup>3</sup> / <sub>4</sub>	75	102	W15312	14,6	3 <sup>3</sup> / <sub>4</sub> - 3 <sup>1</sup> / <sub>8</sub>	W15312R302	3 <sup>3</sup> / <sub>4</sub> - 2 <sup>15</sup> / <sub>16</sub>	W15312R215	–	–
	3 <sup>13</sup> / <sub>16</sub>	75	102	W15313	14,5	–	–	–	–	–	–
	3 <sup>7</sup> / <sub>8</sub>	75	102	W15314	14,5	3 <sup>7</sup> / <sub>8</sub> - 3 <sup>1</sup> / <sub>8</sub>	W15314R302	3 <sup>7</sup> / <sub>8</sub> - 2 <sup>15</sup> / <sub>16</sub>	W15314R215	–	–
	3 <sup>15</sup> / <sub>16</sub>	81	103	W15315	14,8	–	–	–	–	–	–
	4	81	103	W15400	14,8	–	–	–	–	–	–
	4 <sup>1</sup> / <sub>16</sub>	81	103	W15401I	14,8	–	–	–	–	–	–
	4 <sup>1</sup> / <sub>8</sub>	81	103	W15402	14,8	4 <sup>1</sup> / <sub>8</sub> - 3 <sup>1</sup> / <sub>2</sub>	W15402R308	4 <sup>1</sup> / <sub>8</sub> - 3 <sup>5</sup> / <sub>16</sub>	W15402R305	4 <sup>1</sup> / <sub>8</sub> - 3 <sup>1</sup> / <sub>4</sub>	W15402R304
	4 <sup>3</sup> / <sub>16</sub>	81	103	W15403I	14,8	–	–	–	–	–	–
	4 <sup>1</sup> / <sub>4</sub>	81	103	W15404	14,8	4 <sup>1</sup> / <sub>4</sub> - 3 <sup>1</sup> / <sub>2</sub>	W15404R308	4 <sup>1</sup> / <sub>4</sub> - 3 <sup>1</sup> / <sub>8</sub>	W15404R302	–	–
	4 <sup>5</sup> / <sub>16</sub>	88	115	W15405	15,1	–	–	–	–	–	–
	4 <sup>3</sup> / <sub>8</sub>	88	115	W15406	15,1	–	–	–	–	–	–
	4 <sup>7</sup> / <sub>16</sub>	88	115	W15407	15,1	–	–	–	–	–	–
	4 <sup>1</sup> / <sub>2</sub>	88	115	W15408I	15,1	–	–	–	–	–	–
	4 <sup>9</sup> / <sub>16</sub>	88	115	W15409I	15,1	–	–	–	–	–	–
	4 <sup>5</sup> / <sub>8</sub>	88	115	W15410I	15,1	4 <sup>5</sup> / <sub>8</sub> - 3 <sup>15</sup> / <sub>16</sub>	W15410R315	4 <sup>5</sup> / <sub>8</sub> - 3 <sup>7</sup> / <sub>8</sub>	W15410R314	4 <sup>5</sup> / <sub>8</sub> - 3 <sup>3</sup> / <sub>4</sub>	W15410R312
	–	–	–	–	–	4 <sup>5</sup> / <sub>8</sub> - 3 <sup>1</sup> / <sub>2</sub>	W15410R308	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–

<sup>1)</sup> See page 254 for table of hexagon sizes of bolts, nuts and related thread diameters.



# W-Series, Metric Cassettes and Reducers



Hexagon Range:

**30 - 115 mm**

Maximum Operating Pressure:

**700 bar**

**W  
Series**



## ▼ SELECTION CHART

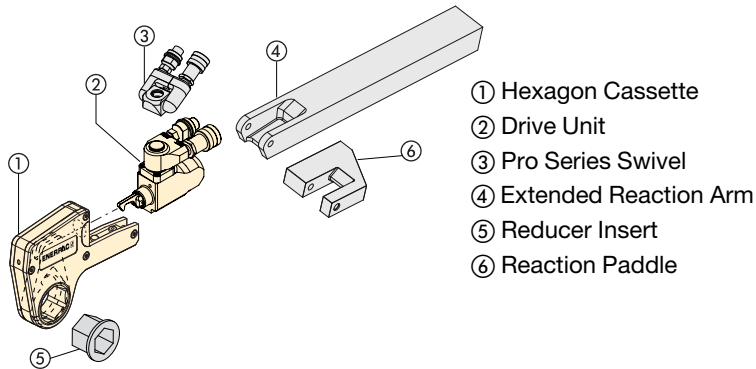
Drive Unit Model Number	Hexagon Size <sup>1)</sup>	Nose Radius	Dim.	Model Number							
						Hexagon Reducer (mm)	Model Number	Hexagon Reducer (mm)	Model Number	Hexagon Reducer (mm)	Model Number
<b>W2000</b>	30	31	54	W2103	2,1	—	—	—	—	—	—
	32	31	54	W2104	2,1	—	—	—	—	—	—
	36	31	54	W2107	2,1	—	—	—	—	—	—
	38	34	58	W2108	2,2	—	—	—	—	—	—
	41	34	58	W2110	2,2	41 - 32	W2110R104	41 - 30	W2110R103	41 - 24	W2110R024M
	46	34	61	W2113	2,2	46 - 36	W2113R107	46 - 32	W2113R104	—	—
	50	39	63	W2200	2,2	50 - 41	W2200R110	50 - 36	W2200R107	—	—
	55	42	69	W2203	2,3	55 - 46	W2203R113	55 - 41	W2203R110	55 - 36	W2203R107
	60	45	65	W2206	2,2	60 - 50	W2206R200	60 - 46	W2206R113	60 - 41	W2206R110
	—	—	—	—	—	60 - 36	W2206R107	—	—	—	—
<b>W4000</b>	36	37	61	W4107	3,7	—	—	—	—	—	—
	41	37	61	W4110	3,7	—	—	—	—	—	—
	46	40	64	W4113	3,8	—	—	—	—	—	—
	50	42	67	W4200	3,9	50 - 36	W4200R107	—	—	—	—
	55	44	73	W4203	4,0	55 - 41	W4203R110	55 - 36	W4203R107	55 - 32	W4203R104
	60	47	71	W4206	4,1	60 - 50	W4206R200	60 - 46	W4206R113	60 - 36	W4206R107
	65	50	76	W4209	4,1	65 - 55	W4209R203	65 - 50	W4209R200	65 - 46	W4209R113
	70	53	78	W4212	4,2	70 - 60	W4212R206	70 - 55	W4212R203	—	—
	75	55	82	W4215	4,3	75 - 65	W4215R209	75 - 60	W4215R206	—	—
	—	—	—	W4215	—	75 - 55	W4215R203	75 - 50	W4215R200	—	—
	80	59	84	W4302	4,4	80 - 75	W4302R215	80 - 70	W4302R212	80 - 65	W4302R209
	—	—	—	W4302	—	80 - 55	W4302R203	80 - 50	W4302R200	—	—
	85	62	86	W4085M	4,5	—	—	—	—	—	—
	50	45	78	W8200	8,1	—	—	—	—	—	—
	55	48	80	W8203	8,1	—	—	—	—	—	—
<b>W8000</b>	60	51	83	W8206	8,1	—	—	—	—	—	—
	65	56	85	W8209	8,1	65 - 50	W8209R200	—	—	—	—
	70	56	85	W8212	7,9	70 - 55	W8212R203	—	—	—	—
	75	58	85	W8215	7,9	75 - 60	W8215R206	75 - 55	W8215R203	—	—
	80	61	90	W8302	8	80 - 65	W8302R209	80 - 60	W8302R206	80 - 55	W8302R203
	—	—	—	—	—	80 - 50	W8302R200	—	—	—	—
	85	66	92	W8085M	8,2	85 - 70	W8085R070M	85 - 65	W8085R065M	85 - 60	W8085R060M
	—	—	—	—	—	85 - 55	W8085R055M	—	—	—	—
	90	74	103	W8090M	8,8	90 - 75	W8090R075M	—	—	—	—
	95	74	103	W8312	8,8	95 - 80	W8312R302	95 - 75	W8312R215	—	—
	100	80	110	W8315	9,3	—	—	—	—	—	—
	105	80	110	W8402	9,3	—	—	—	—	—	—
	65	59	89	W15209	13,6	—	—	—	—	—	—
	70	59	89	W15212	13,6	—	—	—	—	—	—
	75	62	91	W15215	13,7	—	—	—	—	—	—
<b>W15000</b>	80	65	93	W15302	13,8	80 - 65	W15302R209	—	—	—	—
	85	70	97	W15085M	14,1	85 - 70	W15085R070M	—	—	—	—
	90	75	102	W15090M	14,5	90 - 75	W15090R75M	—	—	—	—
	95	75	102	W15312	14,6	95 - 80	W15312R302	95 - 75	W15312R215	—	—
	100	81	103	W15315	14,8	—	—	—	—	—	—
	105	81	103	W15402	14,8	105 - 90	W15402R090M	—	—	—	—
	110	88	115	W15405	15,1	110 - 95	W15110R095M	—	—	—	—
	115	88	115	W15115M	15,1	115 - 100	W15115R100M	—	—	—	—

<sup>1)</sup> See page 254 for table of hexagon sizes of bolts, nuts and related thread diameters.



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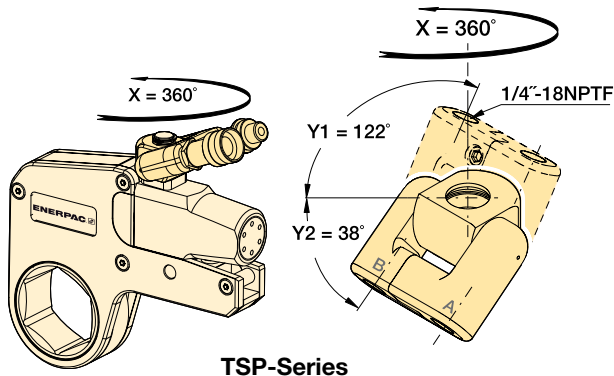
# Accessories for W-Series Torque Wrenches




## TSP WTE WRP Series



### TSP-Series, Pro Series Swivels

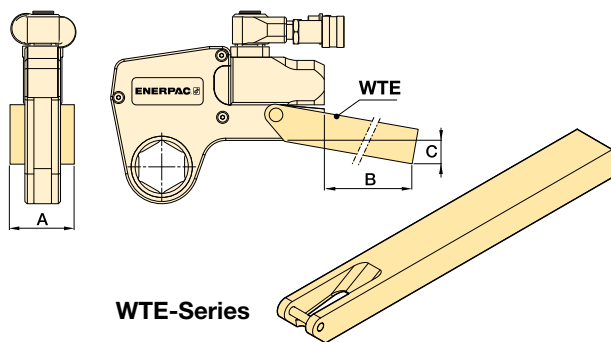


- Featuring Tilt and Swivel technology
- 360° X-axis and 160° Y-axis rotation
- Increases tool fit in restricted access areas
- Simplifies hose placement.


For Torque Wrench Model Number	Model Number	Maximum Pressure (bar)	 (kg)
W2000, W4000	<b>TSP100</b>	700	0,2
W8000, W15000	<b>TSP200</b>	700	0,2

To order a W-series wrench fitted with the TSP swivel, add suffix "P" to the model number. Example: **W2000-P**.

### WTE-Series, Extended Reaction Arm

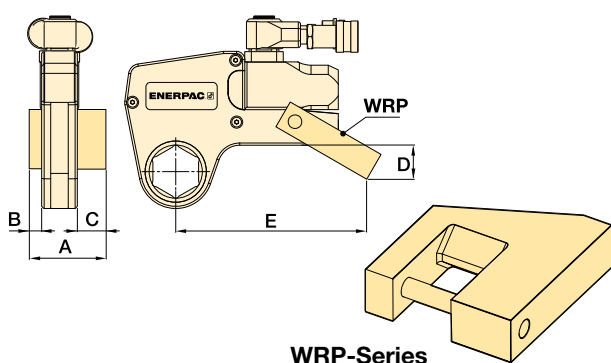


- Full torque rated
- Increases tool fit in restricted access areas.


For Torque Wrench Model Number	Model Number	Dimensions (mm)			 (kg)*
		A	B	C	
W2000	<b>WTE20</b>	56	398	76	2,6
W4000	<b>WTE40</b>	66	436	74	4,6
W8000	<b>WTE80</b>	85	449	66	7,6
W15000	<b>WTE150</b>	102	498	72	12,0

\* Weights indicated are for the accessories only and do not include the wrench.

### WRP-Series, Low Profile Reaction Paddles



- Lightweight interchangeable design
- Allows for offset reaction when in-line reaction is not available.

For Torque Wrench Model Nr.	Model Number	Dimensions (mm)					 (kg)*
		A	B	C	D	E	
W2000	<b>WRP20</b>	84	16	35	45	148	0,4
W4000	<b>WRP40</b>	109	21	47	59	190	0,8
W8000	<b>WRP80</b>	137	26	57	69	223	2,0
W15000	<b>WRP150</b>	165	32	69	87	257	3,9














\* Weights indicated are for the accessories only and do not include the wrench.



# Selection Matrix

## Optimum Torque Wrench and Pump Combinations

For optimum speed and performance Enerpac recommends the following system set-up with wrench-pump-hose combinations.

For optimum speed and performance Enerpac recommends the following system set-up with wrench-pump-hose combinations.		ELECTRIC PUMPS			AIR DRIVEN PUMPS		TWIN HOSES	
		PMU-Series		ZU4T-Series	ZE4T, ZE5T-Series	PTA-Series	ZA4T-Series	THQ-Series
								
								
700 bar Torque Wrenches Model Number		Flow at rated pressure: 0,33 l/min 115V, 1 ph	Flow at rated pressure: 0,33 l/min 230V, 1 ph	Flow at rated pressure: 1,0 l/min 115V, 1 ph 230V, 1 ph	Flow at rated pressure: 0,82-1,64 l/min 115V, 1ph 230V, 1 or 3 ph	Flow at rated pressure: 0,33 l/min	Flow at rated pressure: 1,0 l/min	
 188		S1500 S3000 S6000 S1100 S25000	PMU-10427-Q PMU-10422-Q	Any ZU4T-Series pump may be used.	Any ZE-Series pump may be used.	PTA-1404-Q	Any ZA4T-Series pump may be used.	THQ-706T (6m) THQ-712T (12m)
 194		W2000 W4000 W8000 W15000	PMU-10427-Q PMU-10422-Q			PTA-1404-Q		



### ZU4T-Series Electric Torque Wrench Pump

Utilizing a universal motor, the ZU4T-Series has excellent low voltage characteristics. It works well with long extension cords or generator driven electrical power supplies. A field proven, efficient design ensures this pump is dependable and will draw less current — lowering your operating costs.

The ZU4T-Series pumps are available in **Pro** and **Classic** formats.

**ZU4T Pro** pumps have an LCD feature to display torque or pressure, selectable torque wrench, and self diagnostics – premium features not available on any other pump.

**ZU4T Classic** pumps feature an analog gauge and a basic electrical package to deliver durable, safe and efficient hydraulic power.

### ZE4T and ZE5T-Series Electric Torque Wrench Pump

The ZE-Series features premium options, such as the LCD to display torque or pressure values, and self diagnostics. These pumps utilize an induction motor, making the ZE-Series the coolest and quietest pumps in their class.

### ZA4T-Series Air Torque Wrench Pump

Utilizing the highly efficient design of the Z-Class pumping element, this air driven pump is best suited to power medium to large size torque wrenches.



### 800 bar Torque Wrench Pumps

Pumps are available for higher pressure wrenches. See pump product pages.



### IMPORTANT!

Always make sure that the torque scale on the pump matches the torque size for accurate torque settings. Valid only for PMU, PTA and ZA4T-Series torque wrench pumps.



### Torque Wrench Couplers

See the “System Components” in this catalogue for ordering couplers for hydraulic torque wrenches.



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