

▼ 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
- 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.

## 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.



### BUS-Series, Back-Up Spanners

To be used to stop the back nut from turning during make up or break out. Two hexagon sizes in one tool.

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### ▼ SELECTION CHART

Torque Multiplier Type	Nominal Torque Output		Model Number
	(Ft.lbs)	(Nm)	
Reaction Bar Multiplier	750	1020	E290PLUS
	1000	1358	E291
	1200	1627	E391
	2,200	2983	E392
	3,200	4340	E393
Reaction Plate Multiplier	2,200	2983	E492
	3,200	4339	E493
	5,000	6779	E494
	8,000	10,846	E495



◀ Enerpac Reaction Bar Torque Multiplier E393 used to manually torque bolts up to 3170 Ft.lbs

# 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 repetitive 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 3170 Ft.lbs output torque,
- On flanges and applications where neighbouring bolt or nut is available to react against
- When extreme reaction forces are generated.

## E Series

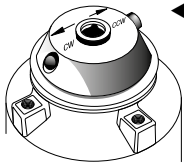


Nominal Torque Output:

**750 - 8,000 Ft.lbs**

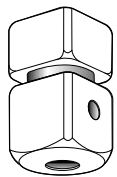
Torque Ratio:

**3:1 - 52:1**



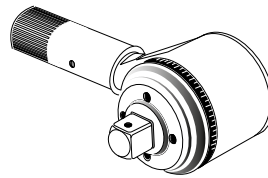
### Selector Pawl

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



### Shearable Square Drive

Provides overload protection on E300- and E400-Series multiplier's power train by shearing when the rated capacity of the tool is exceeded. Internal shear pin prevents tool from falling off bolt.



### 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.



### CAUTION!

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



### Battery-powered, hydraulic and pneumatic Torque Wrenches

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

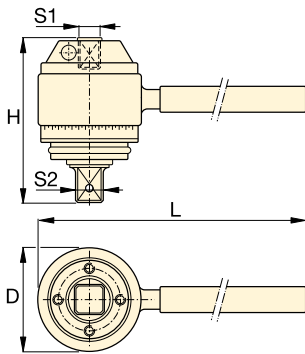
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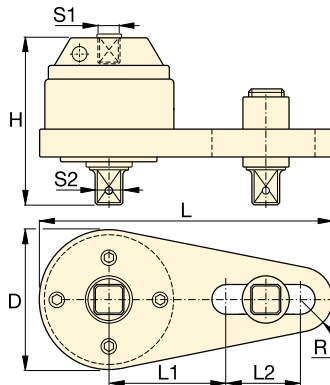
### BSH-Series, Sockets

Heavy-Duty Impact Sockets for power driven torqueing equipment.

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



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

Input Torque <sup>2)</sup>		Torque Ratio (estimate)	Input Female Square Drive S1 (in)	Output Male Square Drive S2 (in)	Replaceable Shear Drive Model Nr.	Over-load protection	Anti-Backlash	Dimensions (in)						(lbs)	Model Number
(Ft.lbs)	(Nm)							D	H	L	L1	L2	R		
250	339	3 : 1	1/2	3/4	—	No	No	2.8	3.3	8.5	—	—	—	4.0	<b>E290PLUS</b>
333	452	3 : 1	1/2	3/4	—	No	No	2.8	3.3	17.4	—	—	—	5.5	<b>E291</b>
200	271	6 : 1	1/2	3/4	E391SDK	Yes	No	3.9	4.0	19.6	—	—	—	9.0	<b>E391</b>
162	220	13,6 : 1	1/2	1	E392SDK	Yes	Yes	4.1	5.7	19.6	—	—	—	15.2	<b>E392</b>
173	235	18,5 : 1	1/2	1	E393SDK	Yes	Yes	4.1	6.5	19.6	—	—	—	18.3	<b>E393</b>
162	219	13,6 : 1	1/2	1	E392SDK	Yes	Yes	4.9	5.5	14.0	5.5	4.9	1.3	17.2	<b>E492</b>
173	234	18,5 : 1	1/2	1	E393SDK	Yes	Yes	4.9	6.4	14.0	5.5	4.9	1.3	19.6	<b>E493</b>
189	256	26,5 : 1	1/2	1 1/2	E494SDK	Yes	Yes	5.6	8.7	14.9	7.0	3.5	1.7	34.0	<b>E494</b>
154	209	52 : 1	1/2	1 1/2	E495SDK	Yes	Yes	5.8	10.7	15.2	7.0	3.5	1.9	50.3	<b>E495</b>

<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.