Hydraulic and Mechanical Pullers

ENERPAC Hydraulic Technology Worldwide

ENERPAC offers a complete line of pullers with the widest range of sizes, capacities and styles. Whether your application requires mechanical, hydraulic or the patented Posi Lock® system, Enerpac can satisfy your requirements.

Made of high strength steel alloys, you can depend on Enerpac pullers to provide years of trouble-free operation, even in the harshest environments.

Hydraulic Pullers

These hydraulic pullers eliminate time-consuming and unsafe hammering, heating or prying. Damage to parts is minimized through the use of controlled hydraulic power.

Posi Lock® Pullers

The puller that meets the safety challenge. A control cage holds the pulling jaws securely in working position. This patented feature reduces the possibility of the puller jaws slipping off the work surface, thereby increasing productivity and tool life and reducing dangerous situations for the user. The Posi Lock® feature is available in a mechanical or hydraulic version.

WARNING
Do not exceed 50% of the rated puller capacity when using a double crosshead (2 griparms) or when using puller legs in combination with bearing puller attachment.

Always wear Safety Goggles while using pullers.

Puller Section Overview

When selecting a puller it is important to consider 3 basic specifications:

1. The Capacity:

is the amount of force the puller is capable of producing.
Typically, the capacity required for a job can be determined by using the shaft diameter of the part being pulled.
For manual pullers, the center bolt diameter of the puller should be at least half the diameter of the shaft being pulled from.
For hydraulic pullers, the capacity in tons should be 0,28 to 0,4 times the shaft diameter in mm. Use the following chart:

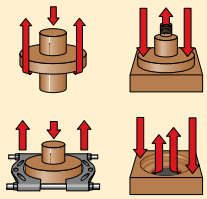
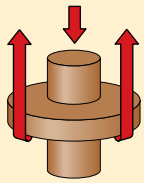
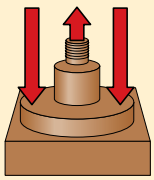
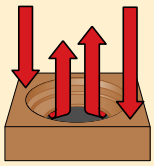
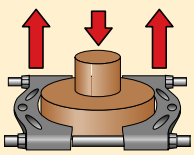
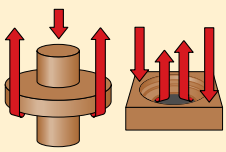
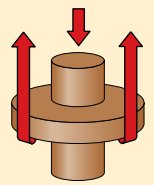
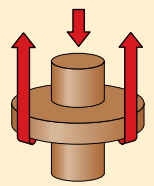
Shaft Diameter	Puller Capacity
0 - 25 mm	10 ton
25 - 50 mm	20 ton
50 - 89 mm	30 ton
89 - 140 mm	50 ton

2. The Reach:

is the distance between the bottom of the base and the jaw flats. The puller's reach must equal or exceed the same distance of the part being pulled.

3. The Spread:

is the distance between the jaws. The puller's spread needs to be greater than the width of the part being pulled.

Puller Function	Capacity ton	Puller Type	Series	Page
	8-50	**Master Puller Sets** Max. Reach: 252 - 700 mm Max. Spread: 250 - 1100 mm	BHP	 152 ▶
	8-50	**Grip Puller Sets** Max. Reach: 249 - 700 mm Max. Spread: 50 - 580 mm	BHP	 153 ▶
	8-50	**Cross Bearing Puller Sets** Max. Reach: 354 - 863 mm Max. Spread: 266 - 570 mm	BHP	 154 ▶
	8-50	**Bearing Cup Pullers** Max. Reach: 110 - 145 mm Max. Spread: 26 - 359 mm	BHP	 155 ▶
	8-50	**Bearing Pullers** Max. Width: 110 - 264 mm Max. Spread: 10 - 245 mm	BHP	 155 ▶
	2-40	**Posi Lock® Mechanical Pullers** Max. Reach: 101 - 355 mm Max. Spread: 12 - 635 mm	EP EPP EPX EPPMI	 156 ▶
	10-50	**Posi Lock® Hydraulic Pullers** Max. Reach: 203 - 355 mm Max. Spread: 304 - 635 mm	EPH EPHR EPHS	 160 ▶
	100	**Posi Lock® Hydraulic Pullers** Max. Reach: 1219 mm Max. Spread: 190 - 1778 mm	EPH	 163 ▶

BHP-Series, Master Puller Sets

ENERPAC Hydraulic Technology Worldwide

▼ Shown: **Master Puller Set BHP-3751G**

Multi Purpose Puller Set

WARNING
Do not exceed 50% of the rated puller capacity when using a double crosshead (2 griparms) or when using puller legs in combination with bearing puller attachment.

Visit the **Products** section of our web site for more information and product selection charts regarding puller sets and individual puller component parts.
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- **Supplied with a full hydraulic set including pump, hose, cylinder, gauge, gauge adaptor and wooden case**
- **All Master Puller Sets include a Grip Puller, a Cross Bearing Puller, a Bearing Cup Puller and a Bearing Puller Attachment**
- **High quality, forged steel components provide superior reliability and service**
- **Sets include speed crank and adjusting screw for fast contact to work before hydraulics are applied**

Maintenance engineers throughout the industry greatly appreciate the Enerpac Master Puller sets ▶

▼ **SELECTION CHART**

Master Puller Set Capacity *	**8 ton**	**20 ton**	**30 ton**	**50 ton**	**Page:**
Model Number ▶	**BHP-1752 [1)]**	**BHP-2751G**	**BHP-3751G**	**BHP-5751G**	
Included Hydraulics **Set Weight ▶**	37 kg	90 kg	172 kg	298 kg	
• Hand Pump	P-142	P-392	P-392	P-80	**68-71 ▶**
• Cylinder	RWH-121	RCH-202	RCH-302	RCH-603	**28 ▶**
• Saddle	–	HP-2015	HP-3015	HP-5016	**29 ▶**
• Hose	HB-7206QB	HC-7206	HC-7206	HC-7206	**120 ▶**
• Gauge	GF-120B	GF-813B	GF-813B	GF-813B	**126 ▶**
• Gauge Adaptor	GA-4	GA-3	GA-3	GA-3	**132 ▶**
Included Pullers					
10 Grip Puller	BHP-1762	BHP-252	BHP-352	BHP-552	**153 ▶**
20 Cross Bearing Puller	BHP-1772	BHP-262	BHP-362	BHP-562	**154 ▶**
30 Bearing Cup Puller	BHP-180	BHP-280	BHP-380	BHP-580	**155 ▶**
40 Bearing Puller	BHP-181	BHP-282	BHP-382	BHP-582	**155 ▶**
• Case	CM-6	CW-350	CW-350	CW-750	

[1)] Includes Adaptor FZ-1630.
* See warning on this page.

Grip Puller Sets

▼ Shown: **Grip Puller Set BHP-351G**

BHP Series

Capacity:
8, 20, 30 and 50 ton

Reach:
252- 700 mm

Spread:
249- 1100 mm

Maximum Operating Pressure:
700 bar

- **Precise hydraulic control allows fast, efficient and safe pulling**
- **High quality, forged steel components provide superior reliability and service**
- **Available with and without full hydraulic set**

Ordering Example

Model Number BHP-251G:
includes Grip Puller BHP-252 and a full hydraulic set. (Hand pump, cylinder, saddle, hose, gauge and gauge adaptor).

Model Number BHP-252:
includes Grip Puller mechanical parts **only,** for use with your existing hydraulics.

▼ **SELECTION CHART**

Grip Puller Set Capacity**		8 ton	20 ton	30 ton	50 ton
	Model Number ▶	BHP-152 [1)]	BHP-251G	BHP-351G	BHP-551G
Included Hydraulics	Set Weight ▶	22 kg	56 kg	91 kg	160 kg
• Hand Pump		P-142	P-392	P-392	P-80
• Cylinder		RWH-121	RCH-202	RCH-302	RCH-603
• Saddle		–	HP-2015	HP-3015	HP-5016
• Hose		HB-7206QB	HC-7206	HC-7206	HC-7206
• Gauge		GF-120B	GF-813B	GF-813B	GF-813B
• Gauge Adaptor		GA-4	GA-3	GA-3	GA-3
10 Grip Puller	Model Number ▶	BHP-1762*	BHP-252*	BHP-352*	BHP-552*
Maximum Spread (mm)	2-jaw	249	400	593	899
	3-jaw	249	499	800	1100
Maximum Reach (mm)	2-jaw	252	300	387	700
	3-jaw	252	300	387	700
Jaw (mm)	Thickness	15	20	24	30
	Width	23	27	38	39
Adjusting Screw (mm)	Thread	3/4"- 16 UNF	1"- 8 UNC	1 1/4"- 7 UNC	1 5/8"- 5.5 UNC
	Length	400	675	795	975

[1)] Includes Adaptor FZ-1630.
* Grip Puller order number without hydraulics.
** See warning on page 152.

Cross Bearing Puller Sets

ENERPAC Hydraulic Technology Worldwide

▼ Shown: **Cross Bearing Puller Set BHP-361G**

- **Precise hydraulic control allows fast, efficient and safe pulling**
- **High quality, forged steel components provide superior reliability and service**

BHP Series

Capacity:
8, 20, 30 and 50 ton

Reach:
354- 863 mm

Spread:
266 - 570 mm

Maximum Operating Pressure:
700 bar

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▼ SELECTION CHART

Cross Bearing Puller Set Capacity		8 ton	20 ton	30 ton	50 ton
	Model Number ▶	BHP-162 [1]	BHP-261G	BHP-361G	BHP-561G
Included Hydraulics	Set Weight ▶	26 kg	62 kg	121 kg	185 kg
• Hand Pump		P-142	P-392	P-392	P-80
• Cylinder		RWH-121	RCH-202	RCH-302	RCH-603
• Saddle		–	HP-2015	HP-3015	HP-5016
• Hose		HB-7206QB	HC-7206	HC-7206	HC-7206
• Gauge		GF-120B	GF-813B	GF-813B	GF-813B
• Gauge Adaptor		GA-4	GA-3	GA-3	GA-3
20 Cross Bearing Puller [2]	Model Number ▶	BHP-1772	BHP-262	BHP-362	BHP-562
Spread (mm)	Maximum	266	351	454	570
	Minimum	106	139	179	220
Reach (mm)	Maximum	462	571	711	863
Adjusting Screw (mm)	Diameter	3/4"- 16 UNF	1"- 8 UNC	1 1/4"- 7 UNC	1 5/8"- 5.5 UNS
	Length	400	675	795	975
Leg (mm)	Length	105	239	203	609
	Length	354	419	457	863
	Length	–	571	711	–
	Length	–	114	–	–
Upper Leg Ends (mm)	Thread	3/4"- 16 x 25	3/4"- 16 x 25	1-14 x 35	1 1/4"- 12 x 38
Lower Leg Ends (mm)	Thread	5/8"- 18 x 25	5/8"- 18 x 25	1-14 x 27	1 1/4"- 12 x 38
30 Bearing Cup Puller [2]	Model Number ▶	BHP-180	BHP-280	BHP-380	BHP-580
40 Bearing Puller [2]	Model Number ▶	BHP-181	BHP-282	BHP-382	BHP-582
• Wooden Case		CW-166	CW-166	CW-350	CW-750

[1] Includes Adaptor FZ-1630.
[2] Can be ordered separately without hydraulic components, see next page.

Bearing Cup and Bearing Pullers

▼ Shown: **BHP-380**

Bearing Cup Puller

- **Made of high strength steel alloy**
- **Easily adapted to Cross Bearing Pullers for fast and efficient removal of the most difficult parts**
- **Adjustable to fit a variety of bearings and seals**

BHP Series

Capacity:
8, 20, 30 and 50 ton

Maximum Reach:
110 - 145 mm

Spread Range:
110 - 359 mm

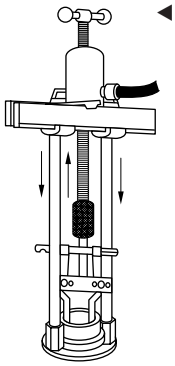
Maximum Operating Pressure:
700 bar

▼ **SELECTION CHART**

Capacity *		8 ton	20 ton	30 ton	50 ton
30 Bearing Cup Puller					
Model Number		**BHP-180**	**BHP-280**	**BHP-380**	**BHP-580**
Spread**	Max.	110	220	359	359
	Min.	26	25	50	50
Reach**	Max.	110	140	145	145
Center Screw	Thread	3/4"- 16 UNF	1"- 8 UNC	1 1/4"- 7 UNC	1 5/8"- 5.5

* See warning on this page.

WARNING
Do not exceed 50% of the rated puller capacity when using a double crosshead (2 griparms) or when using puller legs in combination with bearing puller attachment.

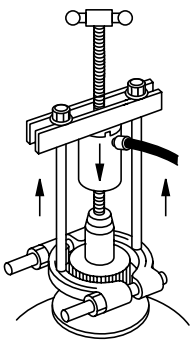


◀ *Bearing Cup Puller shown with Crosshead Puller Attachment.*

▼ Shown: **BHP-382**

Bearing Puller

- **Made of high strength steel alloy**
- **Wedge-shaped edges allow removal of the most hard-to-grip components**
- **Easily adapted to Cross Bearing Pullers for fast and efficient removal of the most difficult parts**



Bearing Puller shown with Crosshead Puller Attachment. ▶

▼ **SELECTION CHART**

Capacity*		8 ton	20 ton	30 ton	50 ton
40 Bearing Puller					
Model Number		**BHP-181**	**BHP-282**	**BHP-382**	**BHP-582**
Spread**	Max.	104	130	245	245
	Min.	25	9	17	17
Width**		126	150	264	264
Thread		5/8"-18 UNF	5/8"- 18 UNF	1"- 14 UNS	1 1/4"- 12 UNF

* Read warning on this page
** Dimensions are in mm.

Bearing Puller
Bearing Puller has wedge shaped edges for placing puller behind hard to reach bearings, gears, etc., where clearance prevents direct application of grip puller arms.
The Bearing Puller can be used with the Cross Bearing Puller or the Grip Puller.

EP-Series, Posi Lock® Mechanical Pullers

ENERPAC Hydraulic Technology Worldwide

▼ Shown from left to right: **EP-206, EP-108**

For Safer and Faster Pulling

- **Patented 'Safety Cage' jaw retention system**
- **Roll threaded shafts for less effort when applying high torque**
- **Slim tapered jaws for improved gripping in tight spots**
- **Available in 2 and 3 jaw design and inside and outside pulling configuration**
- **More efficient pulling, as one man can do the job where manual pullers often require two operators**

Long Jaws

Long Jaws are used to increase the reach and spread of manual pullers. They maintain the same pulling capacity as the standard jaws, but reduce clamping force to 25%.

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Shaft Attachments

Shaft protectors and extenders are live centers that fit over the standard puller shaft for tip protection and additional reach.

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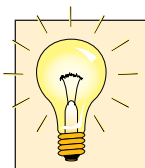


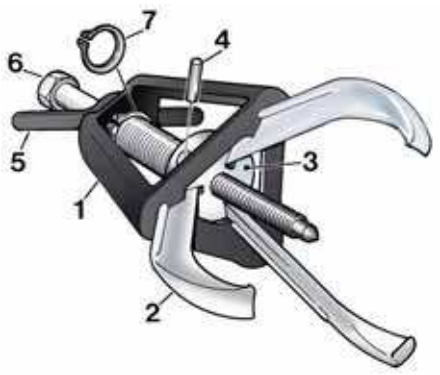
Application Tip

Because of the unique safety cage design, Posi Lock® pullers will grip on surfaces where normal pullers would slip off; e.g. tapered bearings.

◀ *Positioning an EP-104 3-jaw puller on the accessory drive of a diesel engine.*

Posi Lock® Mechanical Grip Pullers

Posi Lock® Pullers



1 Patented 'Safety Cage' guides jaws, holding them securely onto the part.
2 Durable forged jaws provide positive grip.
3 Jaw head provides pivot and reaction point for jaws.
4 Pin, for easy jaw removal and replacement.
5 T-handle provides control of the puller jaws.
6 Drive bolt with rolled threads for increased force with reduced input torque.
7 Snap-ring retains cage to drive bolt and provides quick removal for easy service.

EP EPPMI Series

Capacity:
2 - 40 ton

Maximum Reach:
101- 355 mm

Spread Range:
12- 635 mm

▼ QUICK SELECTION CHART EXTERNAL PULLERS

For quick technical information see next page.

Number of Jaws	Maximum Reach (mm)	Spread (mm) min. - max.	Capacity ton (kN)	Model Number	Center Bolt Diameter (mm)	(kg)
2	101	12 - 127	**2** (17)	**EP-204**	14	1,4
3	101	12 - 127	**5** (45)	**EP-104**	14	1,8
2	152	12 - 178	**6** (53)	**EP-206**	16	3,2
3	152	12 - 178	**10** (89)	**EP-106**	16	3,6
2	203	19 - 304	**12** (106)	**EP-208**	20	5,4
3	203	19 - 304	**17** (151)	**EP-108**	20	6,4
2	245	25 - 381	**14** (124)	**EP-210**	20	5,9
3	245	25 - 381	**20** (178)	**EP-110**	20	7,3
2	304	63 - 457	**25** (222)	**EP-213**	29	17,2
3	304	63 - 457	**30** (267)	**EP-113**	29	20,0
2	355	76 - 635	**35** (311)	**EP-216**	31	25,8
3	355	76 - 635	**40** (356)	**EP-116**	31	30,8

Always wear Safety Goggles while using pullers.

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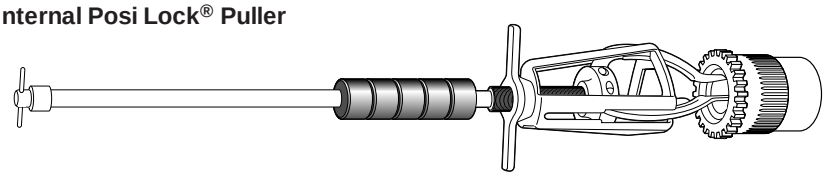
Application Tip

In determining the correct manual puller capacity for your application, use the folllowing rule:
The center bolt diameter of the puller should be at least 1/2 the diameter of the shaft being pulled on.

Example:

A part being pulled from a shaft with a diameter of 38 mm would require a puller with a center bolt diameter of at least 19 mm.

Internal Posi Lock® Puller



▼ QUICK SELECTION CHART INTERNAL PULLERS

Number of Jaws	Maximum Reach (mm)	Spread (mm) min. - max.	Jaw Style	Model Number	Jaw Length (mm)	(kg)
3	168	14 - 101	Standard	**EPPMI-6**	168	3,9
	218	25 - 133	Long		218	3,9

EP-Series, Posi Lock® Mechanical Pullers

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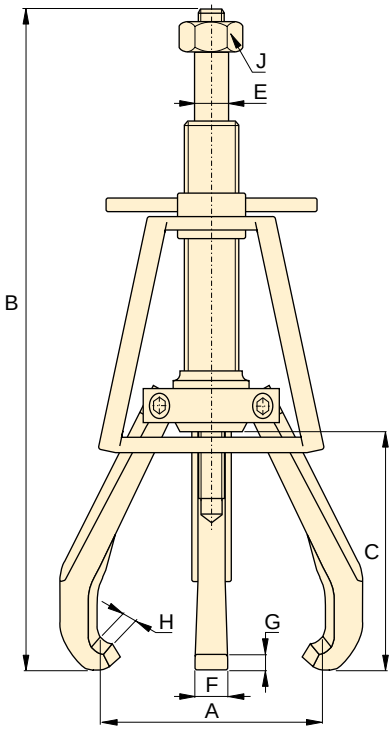
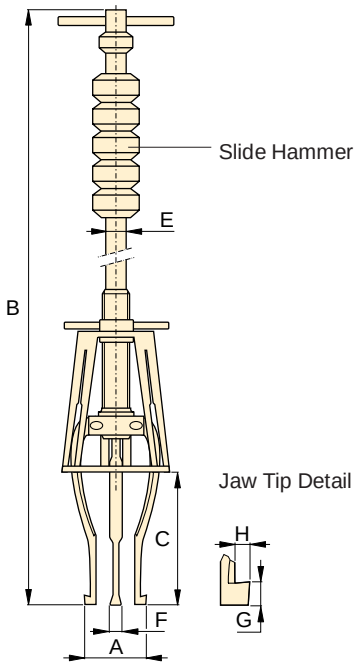
▲ *EP-204 2 jaw puller positioned to pull a water pump.*



2 and 3 Jaw External Puller
EP-Series



Internal Puller
EPPMI-6

▼ QUICK SELECTION CHART EXTERNAL PULLERS

Number of Jaws	Maximum Reach (mm)	Spread (mm) min. - max.	Capacity ton (kN)	Model Number	Center Bolt Diameter (mm)	Maximum Torque (Nm)
2	101	12 - 127	**2** (17)	**EP-204**	14	27
3	101	12 - 127	**5** (45)	**EP-104**	14	54
2	152	12 - 178	**6** (53)	**EP-206**	16	102
3	152	12 - 178	**10** (89)	**EP-106**	16	176
2	203	19 - 304	**12** (106)	**EP-208**	20	203
3	203	19 - 304	**17** (151)	**EP-108**	20	298
2	245	25 - 381	**14** (124)	**EP-210**	20	237
3	245	25 - 381	**20** (178)	**EP-110**	20	373
2	304	63 - 457	**25** (222)	**EP-213**	29	644
3	304	63 - 457	**30** (267)	**EP-113**	29	814
2	355	76 - 635	**35** (311)	**EP-216**	31	1085
3	355	76 - 635	**40** (356)	**EP-116**	31	1153

▼ QUICK SELECTION CHART INTERNAL PULLERS

Number of Jaws	Maximum Reach (mm)	Spread (mm) min. - max.	Jaw Style	Model Number	Jaw Length (mm)	Slide-Hammer weight (kg)
3	168	14 - 101	Standard	**EPPMI-6**	168	1,1
	218	25 - 133	Long		218	1,1

Posi Lock® Mechanical Grip Pullers

Shaft Attachments

Shaft protectors and extenders are live centers that fit over the standard puller shaft for tip protection and additional reach.

Long Jaws

Long Jaws are used to increase the reach and spread of pullers. They maintain the same pulling capacity as the standard jaws, but reduce clamping force to 25% of rating.

EP EPPMI Series

Capacity:
2 - 40 ton

Maximum Reach:
101- 355 mm

Spread Range:
12- 635 mm

Length (mm)	Dia-meter (mm)	Increases Center Bolt Length (mm)	Order: Model Number
25	19	9	**EPP-4**
50	19	38	**EPX-4**
31	22	12	**EPP-6**
50	22	38	**EPX-6**
31	25	12	**EPP-10**
50	25	38	**EPX-10**
50	35	21	**EPP-1316**

Spread (mm) min. - max.	Max. Reach (mm)	Order: Model Number
57 - 381	245	**EP-11054**
38 - 558	400	**EP-11054L**
38 - 762	508	**EP-11354L**
50 - 965	635	**EP-11654L**
25 - 133	218	**EP-10554L***

* for EPPMI-6 only

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Dimensions (mm)								Model Number	Optional accessories		
Spread min. - max. A	Overall Length B	Max. Reach C	Center Bolt Diam. E	Jaw Width F	Tip Clearance G	Tip Depth H	Hex Socket Size (inch) J		Shaft Protectors	Shaft Extenders	Long Jaws
12 - 127	245 - 323	101	14	15	4,1	4,6	7/8"	**EP-204**	EPP-4	EPX-4	–
12 - 127	245 - 323	101	14	15	4,1	4,6	7/8"	**EP-104**	EPP-4	EPX-4	–
12 - 178	323 - 476	152	16	19	8,1	6,1	1 1/16"	**EP-206**	EPP-6	EPX-6	–
12 - 178	323 - 476	152	16	19	8,1	6,1	1 1/16"	**EP-106**	EPP-6	EPX-6	–
19 - 304	412 - 615	203	20	22	6,4	9,1	1 1/8"	**EP-208**	EPP-10	EPX-10	EP-11054
19 - 304	412 - 615	203	20	22	6,4	9,1	1 1/8"	**EP-108**	EPP-10	EPX-10	EP-11054
25 - 381	489 - 736	245	20	25	6,4	9,1	1 1/8"	**EP-210**	EPP-10	EPX-10	EP-11054L
25 - 381	489 - 736	245	20	25	6,4	9,1	1 1/8"	**EP-110**	EPP-10	EPX-10	EP-11054L
63 - 457	660 - 965	304	29	31	12,7	9,7	1 11/16"	**EP-213**	EPP-1316	–	EP-11354L
63 - 457	660 - 965	304	29	31	12,7	9,7	1 11/16"	**EP-113**	EPP-1316	–	EP-11354L
76 - 635	800 - 1155	355	31	36	13,5	11,7	1 13/16"	**EP-216**	EPP-1316	–	EP-11654L
76 - 635	800 - 1155	355	31	36	13,5	11,7	1 13/16"	**EP-116**	EPP-1316	–	EP-11654L

Note: Overall length (B) is dependent on position of center bolt.

Dimensions (mm)							Model Number
Spread min. - max. A	Overall Length B	Max. Reach C	Slide Rod Dia. E	Jaw Width F	Tip Clearance G	Tip Depth H	
14 - 101	736	168	14,2	8	3,0	1,5	**EPPMI-6**
25 - 133	787	218	14,2	8	7,6	4,6	

Always wear Safety Goggles while using pullers.

EPH-Series, Posi Lock® Hydraulic Pullers

ENERPAC Hydraulic Technology Worldwide

▼ Shown: **EPHR-110**

- **Patented 'Safety Cage' jaw retention system**
- **High force hydraulic system for effortless pulling of large components**
- **Slim tapered jaws for better gripping in tight spots**
- **Available in 2 and 3 jaw design**
- **More efficient pulling, as one man can do the job where manual pullers often require two operators**

◀ *An EPHR-116, 50 ton hydraulic Posi Lock® puller easily removes the main drive gear from this metal forming brake press.*

High-Tech Pulling

Transport and Store
Conveniently stores and transports hydraulic pullers and accessories.
Order the **EPT-2550** Storage Cart and make your job easier to do!

Long Jaws
Used to increase the reach and spread of pullers. They maintain the same pulling capacity as the standard jaws, but reduce clamping force to 25%.
Page: **161**

Application Tip
Because of the unique safety cage design, Posi Lock® pullers will grip on surfaces where normal pullers would slip off; e.g. tapered bearings.

Visit the **Products** section of our web site for more information and product selection charts regarding puller sets and individual puller component parts.
www.enerpac.com

Number of Jaws	Maximum Spread (mm)	Capacity ton (kN)	Model Number*
2	304	**10** (101)	**EPH-208**
3	304		**EPH-108**
2	381	**15** (142)	**EPH-210**
3	381		**EPH-110**
2	457	**25** (232)	**EPH-213**
3	457		**EPH-113**
2	635	**50** (498)	**EPH-216**
3	635		**EPH-116**

* Cylinder is not included.

Posi Lock® Hydraulic Grip Pullers

▼ SETS SELECTION CHART

Style	Capacity (ton)	Basic Puller	Cylinder	Stroke (mm)	Pump Set	Set Model Number*	(kg)
2 Jaw Puller	**10**	EPH-208	RC-106	152	–	**EPHR208**	10
	10	EPH-208	RC-106	152	EP-1E	**EPHS208E**	27
	15	EPH-210	RC-1510	254	–	**EPHR210**	22
	15	EPH-210	RC-1510	254	EP-1E	**EPHS210E**	38
	25	EPH-213	RC-2514	362	–	**EPHR213**	44
	25	EPH-213	RC-2514	362	EP-1E	**EPHS213E**	53
	50	EPH-216	RC-5013	336	–	**EPHR216**	87
	50	EPH-216	RC-5013	336	EP-2E	**EPHS216E**	123
3 Jaw Puller	**10**	EPH-108	RC-106	152	–	**EPHR108**	11
	10	EPH-108	RC-106	152	EP-1E	**EPHS108E**	28
	15	EPH-110	RC-1510	254	–	**EPHR110**	23
	15	EPH-110	RC-1510	254	EP-1E	**EPHS110E**	39
	25	EPH-113	RC-2514	362	–	**EPHR113**	48
	25	EPH-113	RC-2514	362	EP-1E	**EPHS113E**	57
	50	EPH-116	RC-5013	336	–	**EPHR116**	91
	50	EPH-116	RC-5013	336	EP-2E	**EPHS116E**	127

* Standard set EPHS models shipped with 230 VAC pump.

EPH Series

Capacity:
10 - 50 ton

Maximum Reach:
203 - 355 mm

Spread Range:
19 - 635 mm

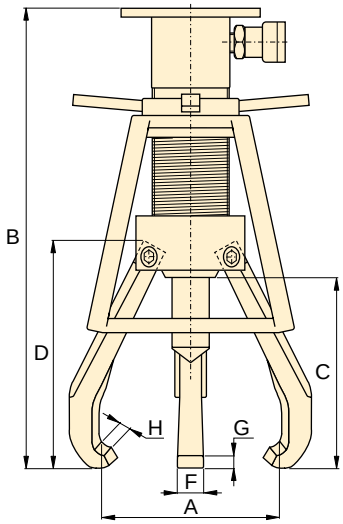
Maximum Operating Pressure:
700 bar

Pump Sets

All Posi Lock Hydraulic Puller Sets that include 230 VAC pumps, will feature the following components:

	EP-1E Pump Set	EP-2E Pump Set
Pump	PUJ-1200E	ZE4210ME
Hose	HC-7210	HC-7210
Gauge	G-2536L	G-2536L
Adaptor	–	GA-3

Components for 115 VAC pumps are available on request.



Dimensions (mm)									Accessories [1]		
									Standard included	Standard included	Optional
Spread min. - max. A	Overall Length B	Maximum Reach C	Jaw Length D	Jaw Width F	Tip Clearance G	Tip Depth H	(kg)	Model Number*			
									Ram Point Sets	Lift Plates	Long Jaws
19 - 304	498	203	237	22	7,4	6,9	6,4	**EPH-208**	EPH-155	EPH-11052	EPH-11054
19 - 304	498	203	237	22	7,4	6,9	7,3	**EPH-108**	EPH-155	EPH-11052	EPH-11054
25 - 381	665	245	270	25	11,2	9,1	10,0	**EPH-210**	EPH-155	EPH-11052	EPH-11054L
25 - 381	665	245	270	25	11,2	9,1	11,3	**EPH-110**	EPH-155	EPH-11052	EPH-11054L
63 - 457	846	304	348	31	12,9	9,7	21,3	**EPH-213**	EPH-257	EPH-11352	EPH-11354L
63 - 457	846	304	348	31	12,9	9,7	25,0	**EPH-113**	EPH-257	EPH-11352	EPH-11354L
76 - 635	919	355	413	36	15,0	11,7	40,8	**EPH-216**	EPH-508	EPH-11652	EPH-21654L
76 - 635	919	355	413	36	15,0	11,7	45,4	**EPH-116**	EPH-508	EPH-11652	EPH-11654L

[1] See next page for details.

Posi Lock® Hydraulic Puller Accessories

ENERPAC Hydraulic Technology Worldwide

▼ RAM POINT SETS SELECTION CHART

Fits Puller Set Model Number	EPH-208, EPH-210 EPH-108, EPH-110	EPH-213 EPH-113	EPH-216 EPH-116
			
Ram Point Set [1] Model Number	**EPH-155**	**EPH-257**	**EPH-508**
Ram Points Included:	**Ram Point Dimensions** Diameter x Length (mm)		
Flat Ram Points	ø25 x 25	ø38 x 57	ø51 x 76
	ø25 x 76	ø51 x 57	ø70 x 76
	–	ø51 x 102	ø70 x 127
Tapered Ram Points	ø25 x 38	ø38 x 64	ø51 x 95
	ø25 x 89	ø51 x 64	ø51 x 95
	–	ø51 x 114	ø70 x 140
Ram Point Adaptor	–	–	ø70 x 57

[1] Standard included in EPH-Series Posi Lock Pullers.

Always wear Safety Goggles while using pullers.

Visit the **Products** section of our web site for more information and product selection charts regarding puller sets and individual puller component parts.
www.enerpac.com

◄ EPHR-116 used to remove electric motor pullies. Puller is positioned using the Lift Plate.

▼ LIFT PLATE SELECTION CHART

Fits Puller Set Model Number	Model Number *	Thick-ness (mm)	Dia-meter (mm)
EPH-208	**EPH-11052**	6,4	ø153
EPH-108	**EPH-11052**	6,4	ø153
EPH-210	**EPH-11052**	6,4	ø153
EPH-110	**EPH-11052**	6,4	ø153
EPH-213	**EPH-11352**	9,7	ø203
EPH-113	**EPH-11352**	9,7	ø203
EPH-216	**EPH-11652**	9,7	ø254
EPH-116	**EPH-11652**	9,7	ø254

* Mounting screws included. Lifting plates are standard included with EPH-Series Pullers.

▼ LONG JAW SELECTION CHART

Fits Puller Set Model Number	Model Number	Number of Jaws required	Spread (mm)	Reach (mm)	(kg)
EPH-208	**EPH-11054**	2	57 - 381	246	1,1
EPH-108	**EPH-11054**	3	57 - 381	246	1,1
EPH-210	**EPH-11054L**	2	38 - 559	401	2,5
EPH-110	**EPH-11054L**	3	38 - 559	401	2,5
EPH-213	**EPH-11354L**	2	38 - 762	508	4,8
EPH-113	**EPH-11354L**	3	38 - 762	508	4,8
EPH-216	**EPH-11654L**	2	50 - 965	635	7,5
EPH-116	**EPH-11654L**	3	50 - 965	635	7,5

Long Jaws are optional accessories and used for added reach and spread. They have the same load capacity as standard jaws with 25% of the clamping force.

Posi Lock® 100 Ton Hydraulic Grip Pullers

▼ **EPH-1003E**

EPH Series

Capacity:
100 ton

Maximum Reach:
1219 mm

Spread Range:
190-1778 mm

Maximum Operating Pressure:
700 bar

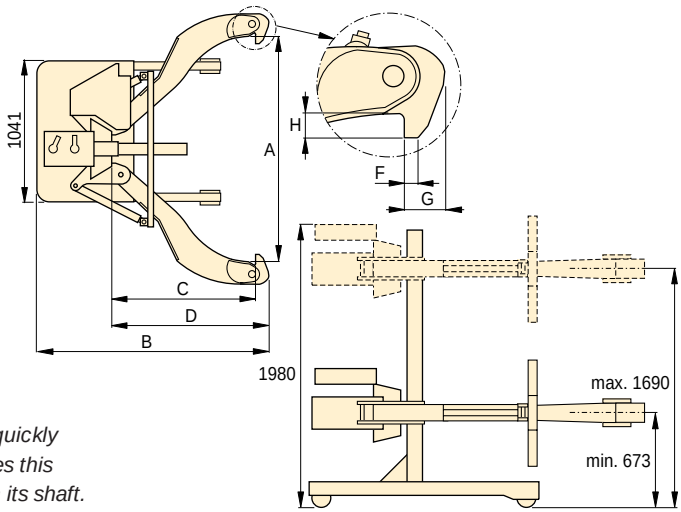
- **Roller cart with power lift**
- **Hydraulically actuated lift cylinder on cart extends puller from ground to a height of 1,7 m**
- **Adjustable jaw tips**
- **Puller easily detaches from cart**
- **Includes electric two stage pump with remote jog switch for fingertip control of the removal process**
- **Puller height range 673 to 1690 mm**
- **Multiple pushing adaptors included**

Pushing Adaptors

All Posi Lock® 100 Ton Hydraulic Pullers include following pushing adaptors.

Diameter (mm)	Length (mm)	Model Number
89	737	**EPHT-1162**
89	483	**EPHT-1163**
89	229	**EPHT-1164**

◀ *The EPH-1003E quickly and easily removes this drive sheave from its shaft.*



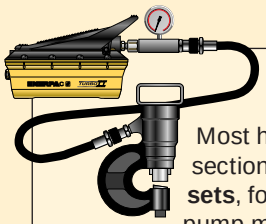
Number of Jaws	Spread Range (mm)	Capacity ton (kN)	Model Number	Spread A (mm)	Overall Length B (mm)	Reach C (mm)	Jaw Length D (mm)	Jaw Width F (mm)	Tip Clearance G (mm)	Tip Depth H (mm)	(kg)
2	190 - 1778	**100** (890)	**EPH-1002E**	190 - 1778	1955	1219	1346	76	89	89	771
3	190 - 1778	**100** (890)	**EPH-1003E**	190 - 1778	1955	1219	1346	76	89	89	907

Enerpac Hydraulic Tools

ENERPAC offers an extensive range of dedicated tools for a variety of specific and flexible applications.

Whatever your requirement… cutting, punching, spreading or bending… you can be sure that Enerpac has the correct tool to do your job safely and efficiently.

Featuring maintenance sets, machine lifts and load skates, as well as hole punches, pipe benders and cable cutters, Enerpac has the tools to ensure that even your most demanding applications can be undertaken with the highest degree of safety and accuracy.



Pump and Tool Sets

Most hydraulic tools in this section are available in **sets**, for a perfect tool-pump match.

Hydraulic System Set-up

Check out our 'Yellow Pages' section for help on system set-ups and valving configurations.

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Bolting Tools

More Enerpac Tools you will find in our Bolting Tools section in this catalogue.

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Hydraulic Tool Section Overview

Capacity ton (kN)	Tool type and functions	Series	Page
2,5- 12,5 (22 - 116)	**Maintenance Sets**	**MS**	 **166** ▶
35 (311)	**Punch** **Punch-Pump Sets**	**MSP, SP, STP**	 **170** ▶
16 (157)	**Lifting Wedge**	**LW**	 **172** ▶
8,5 - 20 (75 - 178)	**Machine Lifts**	**SOH**	 **173** ▶
1- 80 (8,9 - 712)	**Load Skates**	**ER, ES, ELP**	 **174** ▶
19-453 litres	**Industrial Storage Cases**	**CM**	 **176** ▶
0,75 - 1,00 (6 - 8,9)	**Hydraulic Wedgie** **Spread Cylinders**	**A, WR**	 **177** ▶
3 - 20 (26 - 178)	**Hydraulic Cutterheads** **Cutterhead-Pump Sets**	**WHC, WHR, STC**	 **178** ▶
3 - 20 (26 - 178)	**Self-Contained Hydraulic Cutters**	**WMC**	 **179** ▶
Nominal Bore **1/2 - 4 inch**	**Pipe Benders**	**STB**	 **180** ▶
Strand Diameter **3/8 - 0,6 inch**	**Post Tensioning Tools**	**DPT, PT**	 **182** ▶

MS-Series, Maintenance Sets

ENERPAC Hydraulic Technology Worldwide

▼ Shown: **MS2-10**

The Universal Hydraulic Tool Box

Maintenance Sets

Enerpac Maintenance sets are a complete assortment of hydraulic powered tools. Using these sets allows you to quickly configure a unique tool to meet your most difficult jobs. Built around the Enerpac lightweight hand pump, hose and cylinder, these sets enable you to push, pull, lift, press, straighten, spread and clamp with forces up to 12,5 ton.

- **All sets include Enerpac pump, hose, cylinder and gauge**
- **Lock-on or threaded connectors**
- **Complete maintenance set for almost every maintenance application**

More Information

For detailed information on all included attachments, see the next pages.

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◀ *Clamping a workpiece is just one of the many applications for the Enerpac maintenance sets.*

▼ QUICK SELECTION CHART

Capacity using attachments* **ton** (kN)	Set Model Number						Number of Attachment Components	(kg)
2,5 (22)	**MS2-4**	**P-142**	**HC-7206**	**RC-55**	**GP-10S**	**GA-2**	35	26
2,5 (22)	**MSFP-5**	**P-142**	**HC-7206**	**RC-55**	**G2535L**	**GA-3**	24	20
5,0 (50)	**MSFP-10**	**P-392**	**HC-7206**	**RC-106**	**G2535L**	**GA-3**	22	48
5,0 (50)	**MS2-10**	**P-392**	**HC-7206**	**RC-106**	**GP-10S**	**GA-2**	40	63
12,5 (116)	**MS2-20**	**P-392**	**HC-7206**	**RC-256**	**GP-10S**	**GA-2**	19	95
5,0-12,5 (50-116)	**MS2-1020**	**P-392**	**HC-7206**	**RC-102, -106, -256**	**GP-10S**	**GA-2**	59	158

* If no attachments are being used, capacity is double these values. Maximum operating pressure is then 700 bar.

Universal Maintenance Sets

CAUTION!
When cylinders are used with maintenance set attachments or components, the maximum system pressure must be limited to half the rated pressure (350 bar).

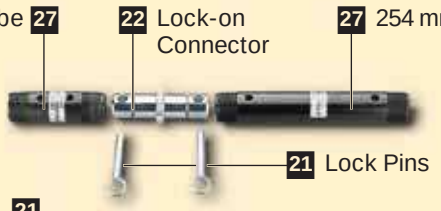
WARNING!
Only use attachments provided with set. Non-Enerpac attachments and longer extension tubes will reduce column strength.

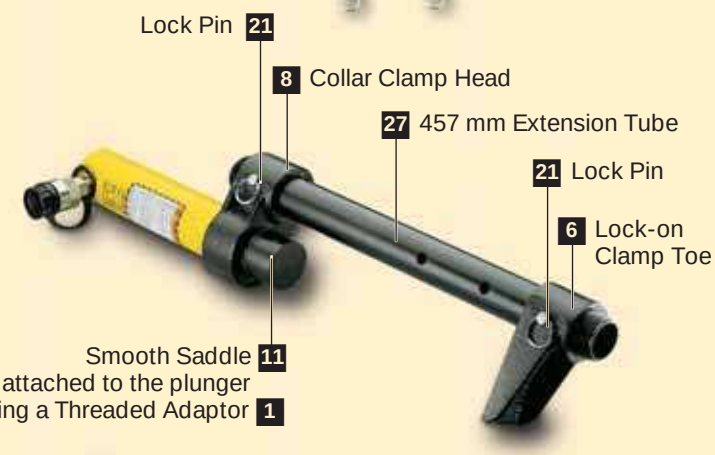
MS Series

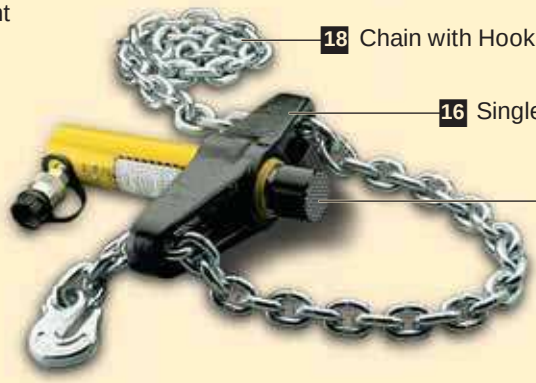
Capacity (using attachments):
2,5 - 12,5 ton

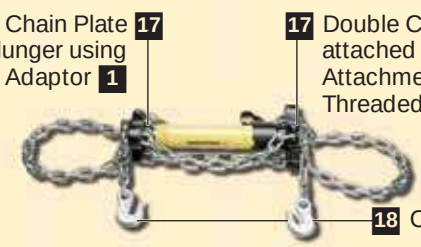
Maximum Operating Pressure:
350 bar

▼ APPLICATION EXAMPLES









MS-Series, Maintenance Sets

ENERPAC Hydraulic Technology Worldwide

max. 50%

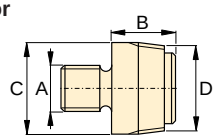
CAUTION! When cylinders are used with maintenance set attachments or components, the maximum system pressure must be limited to half the rated pressure (350 bar).

Note: All dimensions in millimetres.

Set Model Number	MS2-4	MSFP-5	MSFP-10	MS2-10	MS2-20	MS2-1020
Base/Collar/ Plunger Attachments	2,5 tons	2,5 tons	5,0 tons	5,0 tons	12,5 tons	5-12,5 tons
1	A-23	A-23	A-13	A-13	A-28	A-13 / A-28
2	A-25	A-25	A-21	A-21	A-27	A-21 / A-27
3	A-1034	A-1034	A-20	A-20	A-595	A-20 / A-595
4	MZ-4010	MZ-4010	A-14	A-14	A-243	A-14 / A-243
5	A-545	A-545	A-10	A-10	—	A-10 (2x)
6	—	—	—	A-8	—	A-8
7	A-530	A-530	A-6	A-6	—	A-6
8	MZ-4011	—	—	A-192	—	A-192
9	—	—	—	A-305	—	A-305
10	A-531	A-531	A-18	A-18	—	A-18
11	—	—	—	A-185	—	A-185
12	A-532	A-532	A-15	A-15	—	A-15
13	—	—	—	—	A-607	A-607
14	A-629	A-629	A-129	A-129	—	A-129
15	A-539	A-539	A-128	A-128	—	A-128
Chains and Attachments for Pulling	2,5 tons	2,5 tons	5,0 tons	5,0 tons	12,5 tons	5-12,5 tons
16	A-558	—	—	A-132	A-238	A-132, -238
17	—	—	—	A-5 (2x)	—	A-5 (2x)
18	A-557(2x)	—	—	A-141(2x)	A-218(2x)	A-141 (2x) /
						A-218 (2x)
Tubes, Connectors and Adaptors	2,5 tons	2,5 tons	5,0 tons	5,0 tons	12,5 tons	5-12,5 tons
19	A-544			A-19(2x)	A-242(2x)	A-19 (2x) /
						A-242 (2x)
20	WR-5	WR-5	WR-5	A-92	—	A-92
21	MZ-4013(4x)	MZ-4013 (4x)	A-16(4x)	A-16(4x)	—	A-16(4x)
22	MZ-4007(3x)	MZ-4007(3x)	MZ-1050(2x)	MZ-1050 (2x)	—	MZ-1050 (3x)
23	MZ-4008(2x)	—	—	MZ-1051	—	MZ-1051 (2x)
24	MZ-4009	MZ-4009	MZ-1052	MZ-1052	—	MZ-1052
25	—	—	—	A-285	—	A-285
26	A-650	—	—	—	—	—
27 Length: 76mm	MZ-4002	MZ-4002	—	—	—	
127mm	MZ-4003	MZ-4003	MZ-1002	MZ-1002	—	MZ-1002
254mm	MZ-4004	MZ-4004	MZ-1003	MZ-1003	A-239	MZ-1003
						and A-239
457mm	MZ-4005(2x)	MZ-4005	MZ-1004	MZ-1004	A-240	MZ-1004 (2x)
						and A-240
584mm	MZ-4006(2x)	MZ-4006	—	—	—	—
762mm	—	—	MZ-1005	MZ-1005	A-241	MZ-1005 (2x)
Ø 42,5 mm						and A-241
28 Case	CW-350	CW-350	CW-350	CW-350	CW-350	CW-350
Weight	26 kg	20 kg	48 kg	63 kg	95 kg	158 kg

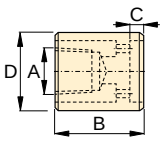
Base/Collar/Plunger Attachments

1 Threaded Adaptor



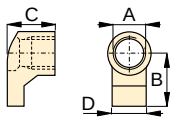
ton	Model Nr.	A	B	C	D
2,5	A-23	3/4"- 16 UN	28	26	3/4"- 14 NPT
5,0	A-13	1"- 8 UN	31	42	1 1/4"- 11 1/2 NPT
12,5	A-28	1 1/2"- 16 UN	47	69	2"- 11 1/2 NPT

2 Base Attachment



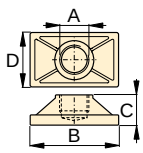
ton	Model Nr.	A	B	C	D
2,5	A-25	3/4"- 14 NPT	50	12	44
5,0	A-21	1 1/4"- 11 1/2 NPT	57	12	65
12,5	A-27	2"- 11 1/2 NPT	63	12	98

3 Collar Toe



ton	Model Nr.	A	B	C	D
2,5	A-1034	1 1/2"- 16 UN	54	50	31
5,0	A-20	2 1/4"- 14 UN	80	57	57
12,5	A-595	3 5/16"- 12 UN	103	51	80

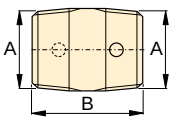
4 Flat Base



ton	Model Nr.	A	B	C	D
2,5	MZ-4010	3/4"- 14 NPT	114	31	63
5,0	A-14	1 1/4"-11 1/2 NPT	165	35	88
12,5	A-243*	2"- 11 1/2 NPT	165	58	165

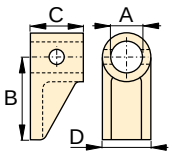
* A-243 is a round base model

5 Threaded Connector



ton	Model Nr.	A	B
2,5	A-545	3/4"- 14 NPT	35
5,0	A-10	1 1/4"- 14 NPT	41

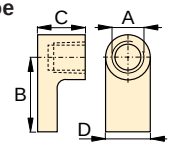
6 Lock-on Clamp Toe



ton	Model Nr.	A	B	C	D
5,0	A-8	43	105	50	57

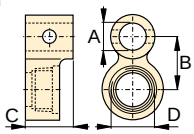
Universal Maintenance Sets, MS-Series

7 Threaded Plunger Toe

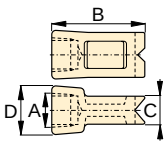
ton	Model Nr.	A	B	C	D
2,5	A-530	3/4"- 14 NPT	57	25	33
5,0	A-6	1 1/4"- 11 1/2 NPT	28	31	57

8 Collar Clamp Head

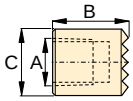
ton	Model Nr.	A	B	C	D
2,5	MZ-4011	3/4"- 14 NPT	49	76	1 1/2"- 16 UN
5,0	A-192	42	63	50	2 1/4"- 14 UN

9 Spreader Toe

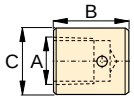
ton	Model Nr.	A	B	C	D
5,0	A-305	1 1/4"- 11 1/2 NPT	114	25	50

10 Serrated Saddle

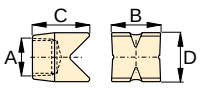
ton	Model Nr.	A	B	C
2,5	A-531	3/4"- 14 NPT	27	31
5,0	A-18	1 1/4"- 11 1/2 NPT	38	50

11 Smooth Saddle

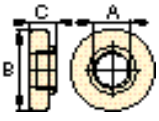
ton	Model Nr.	A	B	C
5,0	A-185	1 1/4"- 11 1/2 NPT	38	50

12 90°V-Base

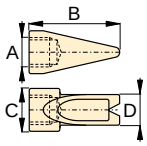
ton	Model Nr.	A	B	C	D
2,5	A-532	3/4"- 14 NPT	38	47	25
5,0	A-15	1 1/4"- 11 1/2 NPT	54	57	54

13 Plunger Base

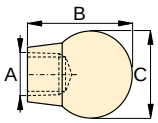
ton	Model Nr.	A	B	C
12,5	A-607	2"- 11 1/2 NPT	166	38

14 Wedge Head

ton	Model Nr.	A	B	C	D
2,5	A-629	3/4"- 14 NPT	69	33	28
5,0	A-129	1 1/4"- 11 1/2 NPT	101	50	44

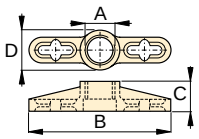
15 Rubber Flex-Head

ton	Model Nr.	A	B	C
2,5	A-539	3/4"- 14 NPT	44	69
5,0	A-128	1 1/4"- 11 1/2 NPT	86	86

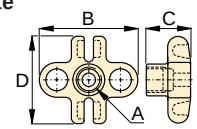
Chains and Attachments for Pulling

16 Single Chain Plate

ton	Model Nr.	A	B	C	D
2,5	A-558	1 1/2"- 16 UN	196	39	44
5,0	A-132	2 1/4"- 14 UN	307	63	79
12,5	A-238	3 5/16"- 12 UN	450	102	125

17 Double Chain Plate

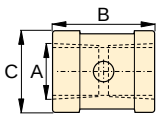
ton	Model Nr.	A	B	C	D
5,0	A-5	1 1/4"- 11 1/2 NPT	130	50	126

18 Chain with Hook

ton	Model Nr.	Chain Length
2,5	A-557	1,5 metres
5,0	A-141	1,8 metres
12,5	A-218	2,4 metres

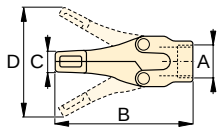
Tubes, Connectors and Adaptors

19 Pipe Coupling

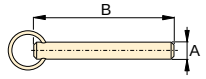
ton	Model Nr.	A	B	C
2,5	A-544	3/4"- 14 NPT	42	33
5,0	A-19	1 1/4"- 11 1/2 NPT	49	54
12,5	A-242	2"- 11 1/2 NPT	88	82

20 Spreader

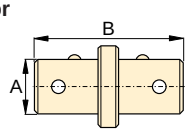
ton	Model Nr.	A	B	C	D
1,0	WR-5	—	223	12,8	94
1,0	A-92	2 1/4"- 14 UN	244	35	158

21 Lock Pin

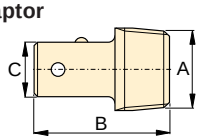
ton	Model Nr.	A	B
2,5	MZ-4013	7,9	41
5,0	A-16	11,2	82

22 Lock-on Connector

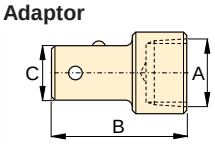
ton	Model Nr.	A	B
2,5	MZ-4007	19	79
5,0	MZ-1050	33	127

23 Male Lock-on Adaptor

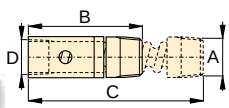
ton	Model Nr.	A	B	C
2,5	MZ-4008	3/4"- 14 NPT	60	19
5,0	MZ-1051	1 1/4"- 11 1/2 NPT	90	33

24 Female Lock-on Adaptor

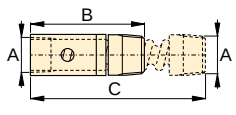
ton	Model Nr.	A	B	C
2,5	MZ-4009	3/4"- 14 NPT	65	19
5,0	MZ-1052	1 1/4"- 11 1/2 NPT	96	33

25 Adjustable Extension

ton	Model Nr.	A	B	C	D
5,0	A-285	1 1/4"- 11 1/2 NPT	335	441	33

26 Slip-Lock Extension

ton	Model Nr.	A	B	C
2,5	A-650	3/4"- 14 NPT	200	365

SP-Series, Lightweight Hydraulic Punch

ENERPAC Hydraulic Technology Worldwide

▼ Shown: **SP-35S**

- **12,7 mm thick capacity through mild steel**
- **Round, oblong and square punches and dies are available to solve your punching applications**
- **Long life Enerpac single-acting, spring return design**
- **Durable steel case keeps tools and dies together and provides for easy carrying and storage**
- **CR-400 coupler included**

◀ *This PUD-1100E Economy Electric Pump is available as a matched set with the 35 ton punch.*

Much Faster than Drilling

Tool Kit SPK-10

Included with all 35 Ton punches, this tool kit is used to remove and install the punch into the head.

Can be ordered as a replacement under model number **SPK-10**.

Ordering Information

The 35 ton hydraulic Punch may be ordered by itself or as a set, including a pump. A punch or die may also be ordered separately or as a matched set. Please refer to the Quick Selection Chart information on top of the next page.

▼ STANDARD PUNCHES AND DIES SELECTION CHART

Hole Shape	Imperial**		Metric**	
	Hole Size (inch)	Bolt Size (inch)	Hole Size (mm)	Bolt Size (mm)
●	0,31	1/4	7,9	–
●	0,38	5/16	9,5	M8
●	0,44	3/8	11,1	M10
●	0,53	7/16	13,5	M12
●	0,56	1/2	14,3	–
●	0,69	5/8	17,5	M16
●	0,78	–	19,8	M18
●	0,81	3/4	20,6	–
■	0,31	1/4	7,9	–
■	0,38	5/16	9,5	M8
■	0,44	3/8	11,1	M10
■	0,50	7/16	12,7	M12
▬	0,31x0,75	1/4	7,9x19	–
▬	0,38x0,75	5/16	9,5x19	M8
▬	0,44x0,75	3/8	11,1x19	M10
▬	0,50x0,75	7/16	12,7x19	M12

** Material thickness should **not** exceed hole diameter

Single-Acting, Spring Return Hydraulic Punch

▼ QUICK SELECTION CHART

Included						Model Number	
*	Punch & Die Set	Pump	Hose	Gauge	Gauge Adaptor		(kg)
SP-35	Standard**	P-392	HC-7206	GP-10S	GA-2	**STP-35H**	25
SP-35	Standard**	PATG-1102N	HC-7206	GP-10S	GA-2	**STP-35A**	29
SP-35	–	–	–	–	–	**SP-35**	16
SP-35	Standard**	–	–	–	–	**SP-35S**	18
SP-35	Standard**	PUD-1100E	HC-7206	–	–	**SP-35SPE**	29
SP-35	Metric***	–	–	–	–	**MSP-351**	21
SP-35	Metric***	PUD-1100E	HC-7206	–	–	**MSP-351PE**	32

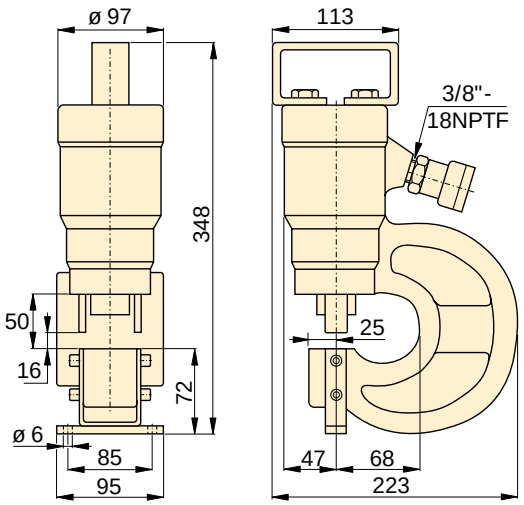
* Punch oil capacity: 76 cm^3
Includes the following punch and die sets:
** SPD-438, SPD-688, SPD-563 and SPD-813
*** SPD-375, SPD-531, SPD-438 and SPD-688

MSP, SP, STP Series

Capacity:
35 ton

Hole Sizes:
7,9 - 20,6 mm

Maximum Operating Pressure:
700 bar



CAUTION!
The chart below is for reference only! Maximum allowable material thickness to be punched varies with set wear.

Standard Punch & Die Set	Maximum allowable material thickness to be punched (mm)										
Model Numbers	1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)
SPD-313	7,9	7,9	6,4	6,4	6,4	6,4	3,3	4,8	6,4	6,4	6,4
SPD-375	9,7	9,7	7,9	7,9	7,9	7,9	4,8	6,4	7,9	7,9	7,9
SPD-438	11,2	11,2	9,7	9,7	9,7	7,9	4,8	7,9	7,9	7,9	7,9
SPD-531	12,7	12,7	11,2	11,2	11,2	9,7	6,4	7,9	9,7	9,7	9,7
SPD-563	12,7	12,7	12,7	11,2	12,7	11,2	6,4	9,7	11,2	11,2	11,2
SPD-688	12,7	12,7	12,7	11,2	12,7	10,2	6,4	7,9	10,2	10,2	10,2
SPD-781	12,7	12,7	12,7	11,2	12,7	9,7	6,4	7,9	9,7	9,9	9,7
SPD-813	12,7	12,7	12,7	11,2	12,7	7,9	4,8	7,9	7,9	7,9	7,9
SPD-458	7,9	7,9	6,4	6,4	6,4	6,4	3,3	4,8	6,4	6,4	6,4
SPD-549	9,7	9,7	7,9	7,9	7,9	7,9	4,8	6,4	7,9	7,9	7,9
SPD-639	11,2	11,2	9,7	9,7	9,7	7,9	4,8	7,9	7,9	7,9	7,9
SPD-728	12,7	12,7	11,2	11,2	11,2	9,7	6,4	7,9	9,7	9,7	8,6
SPD-106	7,9	7,9	6,4	6,4	6,4	6,4	3,3	4,8	6,4	6,4	6,4
SPD-125	9,7	9,7	7,9	7,9	7,9	7,9	4,8	6,4	7,9	7,9	7,9
SPD-188	11,2	11,2	9,7	9,7	9,7	7,9	4,8	7,9	7,9	7,9	7,9
SPD-250	12,7	12,7	11,2	11,2	11,2	9,7	6,4	7,9	9,7	9,7	9,7

Steel Qualities (see table):

1) Mild A-7
2) Boiler Plate
3) Structural A-36
4) Struct Corten (ASTM A242)
5) Cold Rolled C-1018
6) Hot Rolled C-1050
7) Hot Rolled C-1095
8) Hot Rolled C-1095 Annealed
9) Stainless Annealed
10) Stainless 304 Hot Rolled
11) Stainless 316 Cold Rolled

Hydraulic Vertical Lifting Wedge

ENERPAC Hydraulic Technology Worldwide

▼ **LW-16 with SB-2 and optional LWB-1**

LW Series

Maximum Lifting Force:
16 ton

Lifting Stoke:
21 mm

Tip Clearance / Maximum Spread*:
10 mm / 81,5 mm

Maximum Operating Pressure:
700 bar

Split-Flow Manifolds

Split Flow Valves to control two or four lifting wedges simultaneously.

AM-21 with 3 ports 3/8" NPTF
AM-41 with 5 ports 3/8" NPTF.

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Best Match Hand Pump

To power your Enerpac Lifting Wedge, the Enerpac **P-392** Hand Pump or **P-392FP** Foot Pump is an ideal choice.

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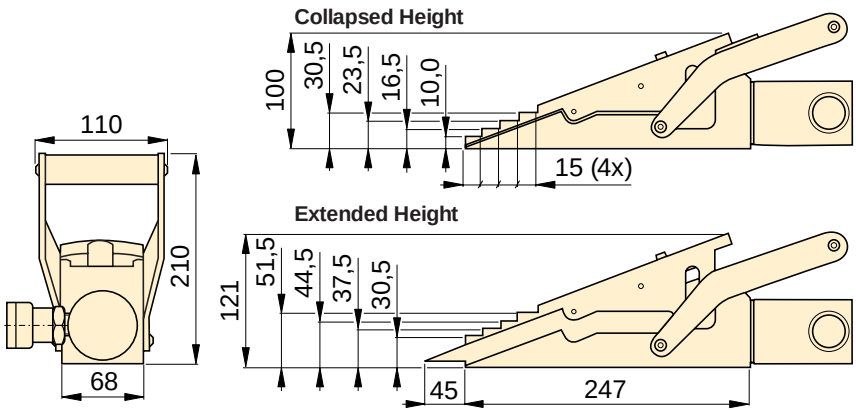
- **Requires very small access gap of only 10 mm**
- **Lifting force 16 ton at 700 bar hydraulic pressure**
- **Each step can spread under full load**
- **Straight vertical lifting**
- **Unique interlocking wedge design: no first step bending and risk of slipping out**
- **Single-acting, spring return cylinder**
- **Lifting wedge LW-16 includes safety block SB-2**
- **Includes RC-Series Cylinder with CR-400 coupler**

▼ *For lifting heavy equipment with minimum floor clearance the LW-16 is the ideal tool.*



Maximum Lifting Force ton (kN)	Lifting Stroke (mm)	Model Number	Tip Clearance (mm)	Maximum Operating Pressure (bar)	Oil Capacity (cm^3)	(kg)
16 (157)	21	**LW-16**	10	700	78	9,0

Use optional stepped block **LWB-1** to increase wedge lifting height by 30 mm.
* Using LWB-1.

▼Shown: **SOH-10-6**

SOH
Series

Lifting Capacity:
8,5 - 20 ton

Stroke:
136-157 mm

Toe Clearance:
20 mm

Maximum Operating Pressure:
700 bar

Load Skates
In combination with the Enerpac Machine Lifts we recommend Load Skates for moving heavy loads.

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Best Match Hand Pump
To power your Enerpac Machine Lift, the Enerpac **P-392** hand pump is an ideal choice.

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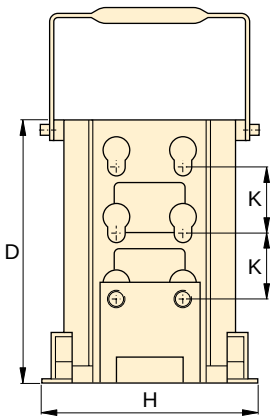
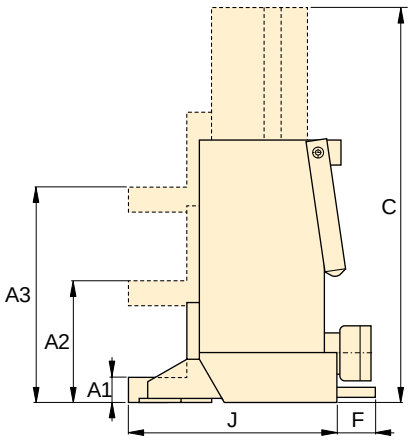
- **For lifting heavy equipment with minimum available access**
- **Separate hydraulic pump enhances safety**
- **Low height lifting toe**
- **Precision guided to reduce friction and isolate cylinder from side-loads**
- **Two extendible support feet provide extra stability**
- **Includes RC-Series Cylinder with CR-400 coupler**





Capacity ton (kN)	Toe Clearance (mm) Minimum A1	Central A2	Maximum A3	Stroke (mm)	Model Number	Oil Capacity (cm^3)	Dimensions (mm) Total Ext. Height C	Total Body Height D	F	H	J	K	(kg)
8,5 (75)	20	95	169	136	**SOH-10-6**	224	430	294	–	190	214	74	26
20 (178)	30	110	190	157	**SOH-23-6**	525	472	320	65	265	250	80	45

ER-Series, Heavy Duty Load Skates

ENERPAC Hydraulic Technology Worldwide

▼Shown: **Set ER-20**

Move Heavy Loads Easily and Safely

- **Rugged and sturdy construction for long life**
- **Low profile construction for increased stability**
- **Low rolling-resistance allows for easy transportation**
- **Attachable load leveling plates and swivel turntables for turning corners**

Sets (see table) include all components necessary to handle a variety of applications.
Two **ELB-1** link-up bars, two **ERH-1** handles (880 mm long) and one **EMB-1** metal box are included.

Optional long handle **ERH-2** (1295 mm) available for 60 and 80 ton only.

Lifting Wedge and Machine Lifts

To place the Load Skates, the load must first be lifted. This can be done easily and safely using the Enerpac Lifting Wedge or Machine Lifts.

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▼**Load Skates may be ordered separately or as a matched set.**

Set Capacity* ton (kN)	Set Model Number	Load Skates (4)	Turntable Swivels (2)	Leveling Plates (2)	Weight Including handles and metal box (kg)
					
20 (178)	**ERS-20**	ER-10	ES-10	ELP-10	49
30 (267)	**ERS-30**	ER-15	ES-15	ELP-15	55
60 (533)	**ERS-60**	ER-30	ES-30	ELP-30	75

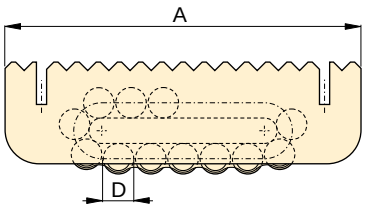
* Sets are designed to enable two skates to take full load for extra safety on uneven floor surfaces

◀ *Heavy transport using Load Skates. The machine is first lifted, using SOH-Series Enerpac Machine Lifts.*

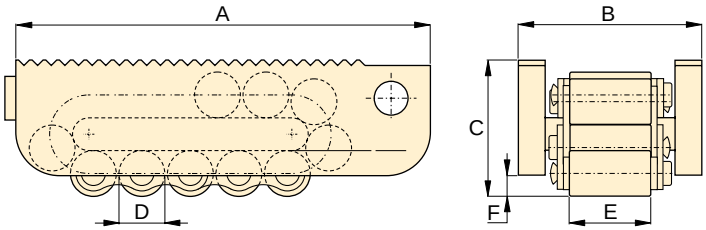
Heavy Duty Load Skates

EL/ ER/ ES Series

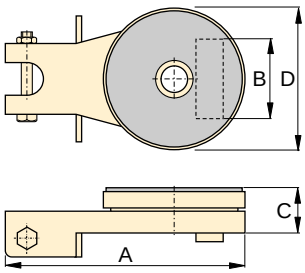
Maximum Carrying Capacity:
80 ton



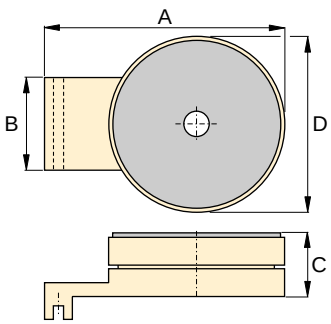
ER-1, ER-10, ER-15, ER-30



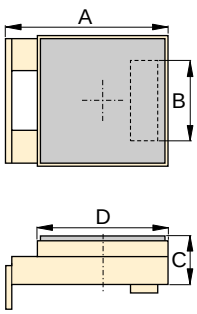
ER-60, ER-80



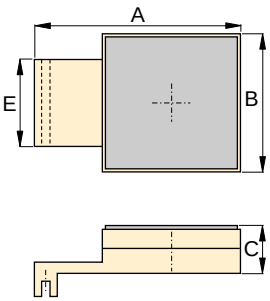
Turntable Swivel
ES-1, ES-10, ES-15, ES-30



Turntable Swivel
ES-60, ES-80



Leveling Plate
ELP-10
ELP-15
ELP-30



Leveling Plate
ELP-60
ELP-80

	Capacity* ton (kN)	Model Number	Dimensions (mm) A	B	C	D	E	F	Contact Rolls per Skate	Rollers per Skate	(kg)
Load Skates 	**1** (8,9)	**ER-1**	160	100	65	18	51	4	4	11	3,8
	10 (89)	**ER-10**	210	100	66	18	51	6	5	15	5,2
	15 (133)	**ER-15**	220	113	75	24	60	10	4	13	7,3
	30 (267)	**ER-30**	270	130	92	30	68	10	4	13	13,0
	60 (533)	**ER-60**	380	168	125	42	76	16	4	13	31,9
	80 (711)	**ER-80**	530	182	145	50	86	19	6	17	60,9
Turntable Swivel 	**1** (8,9)	**ES-1**	207	86	26	90	–	–	–	–	1,1
	10 (89)	**ES-10**	220	73	42	130	–	–	–	–	3,7
	15 (133)	**ES-15**	220	86	42	130	–	–	–	–	3,7
	30 (267)	**ES-30**	250	96	48	150	–	–	–	–	5,3
	60 (533)	**ES-60**	275	114	61	190	–	–	–	–	13,7
	80 (711)	**ES-80**	360	128	61	220	–	–	–	–	18,9
Leveling Plate 	**10** (89)	**ELP-10**	149	73	42	120	–	–	–	–	3,7
	15 (133)	**ELP-15**	149	86	42	120	–	–	–	–	3,7
	30 (267)	**ELP-30**	178	96	48	130	–	–	–	–	5,3
	60 (533)	**ELP-60**	270	114	61	180	–	–	–	–	13,8
	80 (711)	**ELP-80**	350	128	61	200	–	–	–	–	18,8

Industrial Storage Cases

ENERPAC Hydraulic Technology Worldwide

▼ **CM-16**

CM Series

Case Size:
19 - 453 litres

Protect your Equipment

- **Protect your equipment from dust, water, grease and dirt**
- **Reduce losses on the jobsite, maintenance area or shop**
- **Durable steel, painted with rust-resistant primer and finished in durable enamel**
- **Heavy duty hinges and lifting handles**

▼ *When not storing the lifting system, this heavy-duty storage case doubles as a work station.*

Case Size (litres)	Model Number	Dimensions L x W x H (mm)	Thickness (mm)	(kg)
19	**CM-6**	597 x 178 x 178	0,9	7
32	**CM-1**	635 x 292 x 168	0,9	8
127	**CM-4**	787 x 457 x 355	1,5	16
212	**CM-7**	1206 x 381 x 457	1,9	57
453	**CM-16**	1219 x 609 x 609	1,5	55

Hydraulic Wedgie and Spread Cylinders

▼Shown from top to bottom: **WR-15, A-92, WR-5**

A, WR Series

Capacity:
0,75-1 ton

Tip Clearance:
12,8-35 mm

Maximum Spread:
292 mm

Maximum Operating Pressure:
700 bar

- **WR-5: For use in very confined work areas**
- **WR-15: For long stroke spreading applications**
- **Single-acting, spring return**
- **A-92: Spreader attachment; threads on RC-Series 10 ton cylinders (except RC-101)**

RC-Series Cylinders
10 ton RC-Series cylinders (except RC-101) fit into A-92 Spreader Attachment.

Page: 8

Best Match Hand Pump
To power your Wedgie and Spreader Attachment the **P-392** hand pump is an ideal choice.

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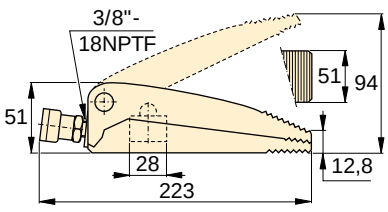
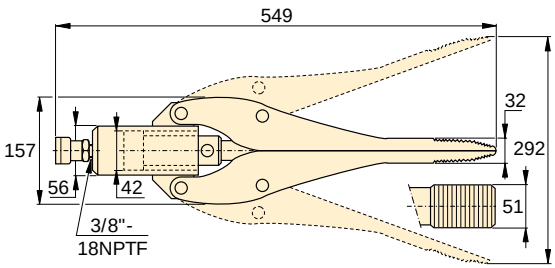
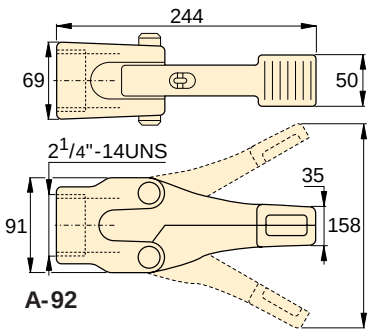


WR-5



WR-15



A-92

Cylinder Capacity ton (kN)	Tip Clearance mm	Model Number	Maximum Spread (mm)	Cylinder Effective Area (cm^2)	Oil Capacity (cm^3)	(kg)
1 (8,9)	12,8	**WR-5**	94	6,5	10,0	2,3
0,75 (6)	32	**WR-15**	292	14,5	64,1	11,3
1 (8,9)	35	**A-92**	158	–	–	3,6

A WR-5 wedgie cylinder is used to position a concrete block on a construction site. ▶

Hydraulic Cutterheads

ENERPAC Hydraulic Technology Worldwide

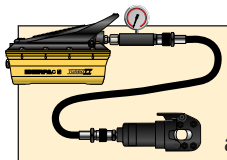
▼Shown from left to right: **WHC-4000, WHC-750**

WHC, WHR, STC Series

Capacity:
3 - 20 ton

Cutting Capacity:
12 - 101 mm

Maximum Operating Pressure:
700 bar



Tool Sets

Cutterheads marked with an * are available as **sets** (pump, tool, gauge, couplers and hose) for your ordering convenience.

Cutterhead Modelnr.	Pump Modelnr.	Set Model Number
WHC-750	P-392	**STC-750H**
WHC-750	P-392FP	**STC-750FP**
WHC-750	PATG-1102N	**STC-750A**
WHC-1250	P-392	**STC-1250H**
WHC-1250	P-392FP	**STC-1250FP**
WHC-1250	PATG-1102N	**STC-1250A**

- **Single-acting, spring return on all models, except WHR-1250**
- **Guillotine action for easy operation**
- **Lifting handles on larger models for easy transport**
- **Carrying bag included for easy carrying and tool protection**
- **Ideal for use with most Enerpac pumps featuring 3-way valve or dump valve and 700 bar pressure rating (except WHR-1250, which requires 4-way valve)**
- **CR-400 coupler and dust cap included on all models**

▼ *Steel rope is easily cut with the smooth guillotine action of an Enerpac cutterhead.*

▼ **Selection Chart Maximum Cutting Capacities** (ø in mm)

Cutter Head Operation	Capacity (ton)	Model Number	Oil Capacity (cm^3)	Length (mm)	Steel Wire Rope, Hemp-core or IWRC 6x7 6x12 6x19	Round Bar: Copper Wire or Bar	Round Bar: Aluminium Wire or Bar	Round Bar: Soft Steel Bolts	Round Bar: Reinforcing Bar	Wire Strand: Bare Copper Wire Strands	Wire Strand: Bare Aluminium Wire Strands 6x7	Wire Strand: ACSR	Wire Strand: Guy Steel Wire Strands 1x7 1x19	Cable: Telephone Cable CPP	Cable: Underground Cable (Power)	(kg)	Replacement Blades
Single-Acting	**4**	**WHC-750***	19,7	127	19	19	19	19	12	19	19	19	16	☆	☆	3,2	**WCB-750**
	20	**WHC-1250***	134,4	279	31	28	31	28	25	31	31	31	22	☆	☆	11,3	**WCB-1250**
	13	**WHC-2000**	119,6	381	25	31	31	22	☆	50	50	50	19	☆	50	10,4	**WCB-2000**
	3	**WHC-3380**	65,5	482	☆	☆	☆	☆	☆	41	42	☆	☆	85	85	9,1	**WCB-3380**
	8	**WHC-4000**	137,7	609	☆	☆	☆	☆	☆	☆	☆	☆	☆	101	101	14,5	**WCB-4000**
Dbl.-Act.	**20**	**WHR-1250**	122,9	419	31	31	31	28	25	31	31	31	22	☆	☆	11,8	**WCB-1250**

* Available in sets with P-392 Hand Pump, P-392FP Foot Pump or PATG-1102N Turbo Air Pump.

☆ Will not cut designated material

Self-Contained Hydraulic Cutters

▼Shown from left to right: **WMC-2000, WMC-750**

WMC Series

Capacity:
3 - 20 ton

Cutting Capacity:
14 - 85 mm

Maximum Operating Pressure:
700 bar

Replacement Blades
60-62HRc hardened replacement blades.

For Cutter Model Number	Order Blades Model Number
WMC-580	**WCB-580**
WMC-750	**WCB-750**
WMC-1000	**WCB-1000**
WMC-1250	**WCB-1250**
WMC-1580	**WCB-1580**
WMC-2000	**WCB-2000**
WMC -3380	**WCB-3380**

- **Rotating heads for operator convenience**
- **Guillotine action for easy operation**
- **Carrying bag included for easy carrying and tool protection**
- **Velcro straps to secure handles on larger models for easy carry**
- **Spring return for easy operation**
- **Light weight self-contained tool, can be used anywhere**

CAUTION!: A "☆" in the charts on these pages means that this hydraulic cutter is not designed to cut this size or type of material. Any attempt to do so may result in personal injury and damage to the unit and will void the warranty.

▼ **Selection Chart Maximum Cutting Capacities** (ø in mm)

Capacity ton	Model Number	Length (mm)	Steel Wire Rope, Hemp-core or IWRC 6x7 6x12 6x19	Round Bar				Wire Strand					Cable		(kg)
				Copper Wire or Bar	Aluminium Wire or Bar	Soft Steel Bolts	Reinforcing Bar	Bare Copper Wire Strands	Bare Aluminium Wire Strands 6x7	ACSR Wire Strands	Guy Steel Wire Strands 1x7	Guy Steel Wire Strands 1x19	Telephone Cable CPP	Underground Cable (Power)	
4	**WMC-580**	381	16	16	16	16	☆	16	16	16	14	14	☆	16	3,6
4	**WMC-750**	381	19	17	17	17	☆	19	19	19	14	14	☆	17	3,6
20	**WMC-1000***	679	☆	19	19	19	19	☆	☆	☆	☆	☆	☆	☆	11,3
20	**WMC-1250**	679	31	28	31	31	22	31	31	31	22	25	☆	☆	10,4
6	**WMC-1580**	558	19	19	19	19	☆	38	41	41	16	16	☆	41	6,8
13	**WMC-2000**	628	25	31	31	22	☆	50	50	50	19	19	☆	50	10,9
3	**WMC-3380**	660	☆	☆	☆	☆	☆	46	42	☆	☆	☆	85	85	10,0

* Cuts 12 mm alloy chain grade 70 (type G7 transport or tie-down) or grade 80 (for overhead lifting applications)

☆ Will not cut designated material

STB-Series, Pipe Bender Sets

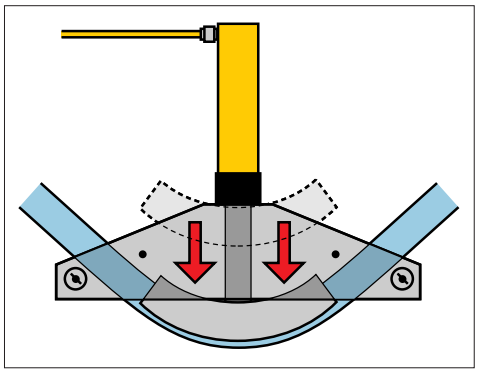
ENERPAC Hydraulic Technology Worldwide

▼ Shown: **STB-101H**

Quick, Safe and Wrinkle-free Bending

'One Shot' and 'Sweep'
One shot shoes give up to a 90° bend without resetting.
Sweep shoes are used where increasing radii are required for multiple parallel pipe installations.

- **Makes smooth, wrinkle-free bends**
- **Sets include genuine Enerpac cylinder, hose and manual, air or electric pump**
- **Sets are also available without hydraulics**
- **Bending shoes and bending frame are lightweight, heat-treated aluminium**
- **All sets include sturdy steel storage case**
- **All sets include BZ-12091 angle indicator for accurate bending**
- **BZ-12377 Shoe Lock Pin included in every set**
- **Eject-O-Matic™ benders (STB-202 models) have double-acting cylinder to eject pipe from the bending shoe**



▲ *Typical one shot bending operation.*

▼ SELECTION CHART

Pipe Range Nominal Size (inch) One Shot	Pipe Range Nominal Size (inch) Sweep	Set Model Number	Hand Pump*	Air Pump*	Electric Pump*	Electric Pump*	Cylinder*	Hose*	Saddle*	(kg)
1/2 - 2	–	STB-101X	–	–	–	–	–	-	A-12	40
		STB-101N	–	–	–	–	RC-1010	HC-7206	A-12	48
		STB-101H	P-392	–	–	–	RC-1010	HC-7206	A-12	52
		STB-101A	–	PATG-1102N	–	–	RC-1010	HC-7206	A-12	54
		STB-101E	–	–	PUJ-1200E 2)	–	RC-1010	HC-7206	A-12	57
1 - 2	2 1/2 - 4	STB-221X	–	–	–	–	–	-	A-29	104
		STB-221N	–	–	–	–	RC-2510	HC-7206	A-29	119
		STB-221H	P-80	–	–	–	RC-2510	HC-7206	A-29	130
1 1/4 - 4	–	STB-202X 1)	–	–	–	–	–	-	A-29	143
		STB-202N 1)	–	–	–	–	RR-3014	HC-7206 (2x)	A-29	174
		STB-202E 1)	–	–	–	ZU4408SE 2)	RR-3014	HC-7206 (2x)	A-29	212

* See corresponding sections in this catalog for more detailed specifications.
1) Eject-O-Matic™ 2) For 115 volt applications replace the last digit of Set Model Number and pump from 'E' to 'B'.

Pipe Bender Sets

Nominal Pipe Size (inch)	Wall Thick-ness (mm)	Sche-dule Pipe *	Pipe Bend Inside Radius (inch)	STB-101 ø 1/2 - 2 One Shot	STB-221 ø 1 - 2 One Shot ø2 1/4 - 4 Sweep	STB-202 ø 1 1/4 - 4 One Shot	One Shot Bending Shoe Model Number	Sweep Bending Shoe Model Number
1/2	2,8	40	2 7/8	Yes	Yes	WS	BZ-12011	–
	3,7	80		Yes	Yes	WS		
	4,7	160		WS	WS	WS		
	7,5	DEH		WS	WS	WS		
3/4	2,9	40	4	Yes	Yes	WS	BZ-12021	–
	3,9	80		Yes	Yes	WS		
	5,5	160		WS	WS	WS		
	7,8	DEH		WS	WS	WS		
1	3,4	40	5 1/8	Yes	Yes	WS	BZ-12031	–
	4,5	80		Yes	Yes	WS		
	6,4	160		WS	WS	WS		
	9,1	DEH		–	WS	WS		
1 1/4	3,6	40	6 7/16	Yes	Yes	Yes	BZ-12041	–
	4,9	80		Yes	Yes	Yes		
	6,4	160		WS	WS	Yes		
	8,7	DEH		–	WS	WS		
1 1/2	3,7	40	7 5/16	Yes	Yes	Yes	BZ-12051	–
	5,1	80		Yes	Yes	Yes		
	7,1	160		WS	WS	Yes		
	10,2	DEH		–	WS	WS		
2	3,9	40	8 5/16	Yes	Yes	Yes	BZ-12061	–
	5,5	80		Yes	Yes	Yes		
	8,7	160		–	WS	Yes		
2 1/2	5,2	40	9 1/2	–	Yes	Yes	BZ-12341	BZ-12382
	7,0	80		–	WS	Yes		
	9,5	160		–	WS	Yes		
3	5,5	40	11 1/4	–	Yes	Yes	BZ-12351	BZ-12383
	7,6	80		–	WS	Yes		
3 1/2	5,7	40	15 1/2	–	Yes	Yes	BZ-12391	BZ-12384
	8,1	80		–	WS	Yes		
4	6,0	40	17 3/4	–	Yes	Yes	BZ-12392	BZ-12385
	8,6	80		–	–	Yes		

***Schedule Pipe: 40** = Standard; **80** = Extra Heavy; **160** = Double Extra Heavy;
DEH = Double Extra Heavy (slightly thicker than 160);
WS = Can be bent using wider spacing for swivel shoes.

STB Series

Nominal Pipe Size:
1/2 - 4 inch

Maximum Bending:
90°

Maximum Operating Pressure:
700 bar

▲ *Steel pipe is quickly and safely bent up to 90°using the STB-101H Pipe Bender Set.*

Frame Assembly	Pivot Pin	Pivot Shoes	Bending Shoes included (Shoes with 3) are Sweep, all other shoes are One Shot)								Set Model Number
BZ-12371	BZ-12375	BZ-12071	BZ-12011	BZ-12021	BZ-12031	BZ-12041	BZ-12051	BZ-12061	–	–	STB-101X STB-101N STB-101H STB-101A STB-101E
BZ-12372	BZ-12376	BZ-13401	BZ-12031	BZ-12041	BZ-12051	BZ-12061	BZ-12382 3)	BZ-12383 3)	BZ-12384 3)	BZ-12385 3)	STB-221X STB-221N STB-221H
BZ-12374	BZ-12376	BZ-13401	-	BZ-12041	BZ-12051	BZ-12061	BZ-12341	BZ-12351	BZ-12391	BZ-12392	STB-202X 1) STB-202N 1) STB-202E 1)

Post Tensioning Tools for Mono-Strands

ENERPAC Hydraulic Technology Worldwide

▼ Shown: **PT20-5SS, DPT20-5PS**

Field-proven Tools feature “soft-grip” handles

ZU4-Series Electric Pumps
Specifically designed to operate with the most popular lines of stressing jacks, the ZU4-Series Pumps have the features, performance and options that are required for use in post-tensioning markets.

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- **"Soft-grip", durable, field-proven designs, with ergonomic handles to help reduce operator fatigue**
- **Single-acting *PT* models, with spring-seating and optional power-seating are equipped with the new Enerpac *RC* Post-tensioning cylinders with a 254 mm stroke; ideal for slab-on-grade applications**
- **Double-acting *DPT* models have an 216 mm stroke and are machined from a steel billet; feature standard power-seating and “gun-drilled” internal hydraulic passages**
- **All jacks have a standard 3" nose assembly; 6" nose assemblies are available as accessories for all models**
- **A full line of grippers is available to tension 3/8”, 7/16", 1/2" and .6" strand diameters**
- **Complete offering of Enerpac parts and soft kits allow quick and easy service**

▼ *Designed to be tough, the ZU4-Series with steel reservoirs will take the abuse of today’s construction sites.The ZU4908JE is the ideal pump for post tensioning applications.*

▼ **SELECTION CHART**

Strand Diameter Range (inch)	Tensioning Capacity at 700 bar ton (kN)	Stroke (mm)	Hydraulic Tool Operation	Model Number	Seater Type	Oil Capacity (cm^3)	Tool Effective Area (cm^2)	(kg)
3/8 - 1/2	**20** [201]	254	Single-Acting	**PT20-5SS**	Spring	743	28,9	25
		254	Single-Acting	**PT20-5PS**	Power	743	28,9	25
		216	Double-Acting	**DPT20-5PS**	Power	869	34,2	19
3/8 - .60	**30** [295]	254	Single-Acting	**PT30-6SS**	Spring	1029	40,5	34
		254	Single-Acting	**PT30-6PS**	Power	1029	40,5	34
		216	Double-Acting	**DPT30-6PS**	Power	1108	51,3	24

Post Tensioning Tools for Mono-Strands

PT, DPT Series

Tensioning Capacity:
20 - 30 ton

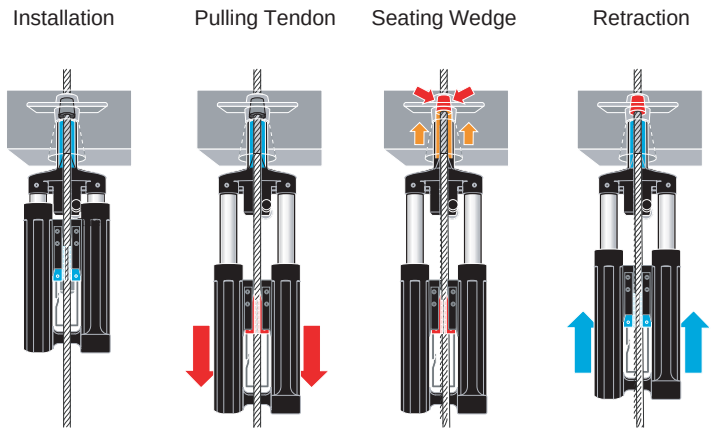
Strand Diameters:
3/8 - 7/16 - 1/2 - .60 inch

Stroke:
216 - 254 mm

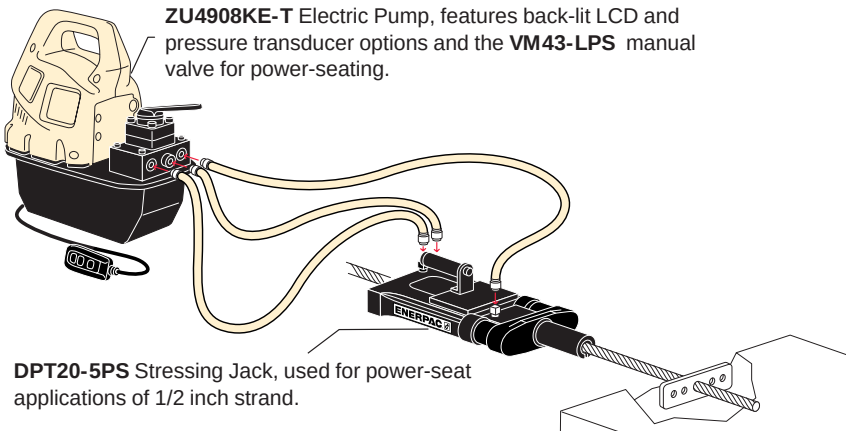
Maximum Operating Pressure:
700 bar

Mono-Strand Tensioning Tool Operational Sequence

This diagram shows the sequence of operation for the DPT20-5PS tool. The operation of the single-acting, spring-seat models is very similar.



Typical Mono-Strand system set-up



ZU4908KE-T Electric Pump, features back-lit LCD and pressure transducer options and the **VM43-LPS** manual valve for power-seating.

DPT20-5PS Stressing Jack, used for power-seat applications of 1/2 inch strand.

Hoses

Enerpac offers a complete line of high quality hydraulic hoses. To ensure the integrity of your system, specify only Enerpac hydraulic hoses.

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Gauges

Minimize the risk of overloading and ensure long, dependable service from your equipment. Refer to the System Components Section for a full range of gauges..

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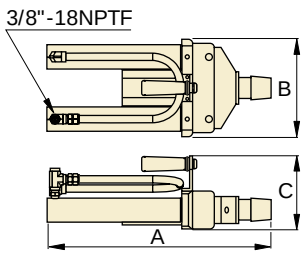
Dimensions (mm)			
Model Nr.	A	B	C
PT20-5SS	533	228	165
PT20-5PS	533	228	165
DPT20-5PS	469	190	165
PT30-6SS	558	259	177
PT30-6PS	558	259	177
DPT30-6PS	469	215	165



▼ Optional and Replacement Accessories Selection Chart

Used with Jack	3" Nose	3" Wedge Seater	6" Nose	6" Wedge Seater	3/8" Dia. Gripper Set	7/16" Dia. Gripper Set	1/2" Dia. Gripper Set	.6" Dia. Gripper Set	Gripper Handle	Gripper Plate	Handle
											
PT20-5SS	PT-NP3	PT-WS3	PT-NP6	PT-WS6	PT-GS375	PT-GS438	PT-GS500	–	PT-RGH	PT-GRP	PT-HG
PT20-5PS	PT-NP3	PT-WS3	PT-NP6	PT-WS6	PT-GS375	PT-GS438	PT-GS500	–	PT-RGH	PT-GRP	PT-HG
DPT20-5PS	DPT-5NP3	DPT-5WS3	DPT-5NP6	DPT-5WS6	DPT-5GS375	DPT-5GS438	DPT-5GS500	–	DPT-RGH	DPT-GRP	PT-HG
PT30-6SS	PT-NP3	PT-WS3	PT-NP6	PT-WS6	PT-GS375	PT-GS438	PT-GS500	PT-GS594	PT-RGH	PT-GRP	PT-HG
PT30-6PS	PT-NP3	PT-WS3	PT-NP6	PT-WS6	PT-GS375	PT-GS438	PT-GS500	PT-GS594	PT-RGH	PT-GRP	PT-HG
DPT30-6PS	DPT-6NP3	DPT-6WS3	DPT-6NP6	DPT-6WS6	DPT-6GS375	–	DPT-6GS500	DPT-6GS594	DPT-RGH	DPT-GRP	PT-HG

Enerpac Bolting Tools

ENERPAC Hydraulic Technology Worldwide

ENERPAC offers a comprehensive range of bolting tools suited to a wide variety of industries and applications.

Rigid steel and lightweight aluminium hydraulic torque wrenches and torque wrench pumps, nut splitters, flange spreaders and alignment tools… Enerpac has the professional tools to complete your most difficult bolting jobs with the degree of safety and accuracy demanded in today's work environment.

Torque Wrench Pump Selection Matrix

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

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Torque Wrench Hoses

Use Enerpac THQ- and THC-Series hoses with double-acting torque wrenches to ensure the integrity of your hydraulic system.

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Hexagon Bolt and Nut Sizes

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

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Bolting Tools & Pumps Section Overview

Capacity ton (kN)	Tool type and functions	Series		Page
5 - 90 (45-801)	**Hydraulic Nut Splitters** **Nut Splitter-Pump Sets**	**NC** **STN**		**186** ▶
5 - 10 (45-101)	**Hydraulic Flange Spreaders** **Flange Spreader-Pump Sets**	**FS** **STF**		**187** ▶
14 (125) **8** (72)	**Hydraulic Wedge Spreaders and Sets** **Mechanical Wedge Spreaders**	**FSH, FSM** **STF**		**188** ▶
0,3 - 3,0 (3-27)	**Flange Alignment Tools** Mechanical & hydraulic	**ATM**		**189** ▶
1898 - 34.079 Nm **1400 - 25.150 Ft.lbs**	**Square Drive Torque Wrenches** Rigid steel design & maximum versatility	**S**		**190** ▶
2350 - 27.000 Nm **1735 - 19.875 Ft.lbs**	**Square Drive Torque Wrenches** Lightweight aluminium power wrench	**SQD**		**194** ▶
2712 - 20.337 Nm **2000 - 15.000 Ft.lbs**	**Hexagon Torque Wrenches** Rigid steel design & low profile	**W**		**198** ▶
3290 - 24.210 Nm **2425 - 17.860 Ft.lbs**	**Hexagon Cassette Torque Wrenches** Lightweight aluminium & low profile	**HXD, CC**		**202** ▶

Torque Wrench Pumps — Selection Matrix — 206 ▶

Power Source	HydraulicTorque Wrench Pumps	Maximum Reservoir Size	Oil Flow at maximum pressure	Power Consumption	Pump Series		
Electric	**Compact Economy** Portable	**3,0** (litres)	**0,34** (l/min)	**0,37** (kW)	**PME, PMU**		**208** ▶
	Submerged motor Portable	**3,8** (litres)	**0,70** (l/min)	**1,80** (kW)	**PTE**		**209** ▶
	Z-Class innovation Tough, dependable, innovative	**8,0** (litres)	**0,90** (l/min)	**1,25** (kW)	**ZU4T**		**210** ▶
Air Driven	**Portable**	**8** (litres)	**0,33** (l/min)	**1130** (l/min air)	**PTA**		**214** ▶
	High Flow	**8** (litres)	**1,80** (l/min)	**3900** (l/min air)	**PMA**		**215** ▶

Hydraulic Nut Splitters

ENERPAC Hydraulic Technology Worldwide

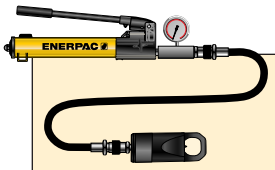
▼ Shown from left to right: **NC-3241, NC-1319, NC-1924**

NC, STN Series

Capacity:
5 - 90 ton

Bolt Range:
M6 - M48

Maximum Operating Pressure:
700 bar



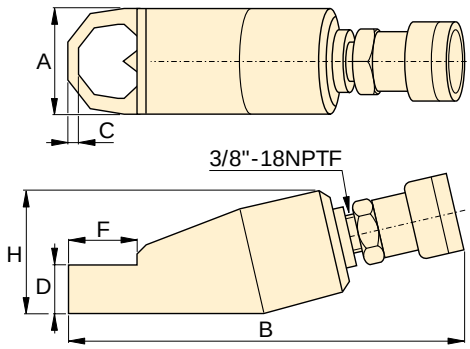
Tool and Pump Sets

Hydraulic Nut Splitters are available as **sets** (pump, tool, gauge, gauge adaptor, couplers and hose) for your ordering convenience.

Nut Splitter Modelnr.	Handpump Modelnr.	Set Model Number
NC-1924	P-392	**STN-1924H**
NC-2432	P-392	**STN-2432H**
NC-3241	P-392	**STN-3241H**

- **Compact and ergonomic design, easy to use**
- **Unique angled head design**
- **Single-acting, spring return cylinder**
- **Heavy duty chisels can be reground**
- **Applications include service trucks, piping industry, tank cleaning, petrochemical, steel construction, mining, etc.**

◀ *Easily removing rusty nuts during railroad construction is just one of many application examples for the Enerpac Nut Splitter.*



Nut Splitters include a spare chisel, a spare set screw and the wrench used to secure the chisel. A CR-400 coupler is standard.

Bolt Range (mm)	Hexagon Nut Range (mm)	Capacity ton	Oil Capacity (cm^3)	Model Number	Dimensions (mm) A	B	C	D	F	H	(kg)	Replacement Chisel Model Number
M6-M12	10 - 19	5	15	**NC-1319**	40	170	7	19	28	48	1,2	**NCB-1319**
M12-M16	19 - 24	10	20	**NC-1924***	54	191	10	26	40	62	2,0	**NCB-1924**
M16-M22	24 - 32	15	60	**NC-2432***	64	222	13	29	51	72	3,0	**NCB-2432**
M22-M27	32 - 41	20	80	**NC-3241***	75	244	17	36	66	88	4,4	**NCB-3241**
M27-M33	41 - 50	35	155	**NC-4150**	94	288	21	45	74	105	8,2	**NCB-4150**
M33-M39	50 - 60	50	240	**NC-5060**	106	318	23	54	90	128	11,8	**NCB-5060**
M39-M48	60 - 75	90	492	**NC-6075**	156	393	26	72	110	181	34,1	**NCB-6075**

* Available as Tool-Pump Set, see note on this page.
Ordering Notes: Maximum allowable hardness to split is HRc-44. Not to be used on square nuts.

Hydraulic Flange Spreaders

▼ Shown: **FS-56**

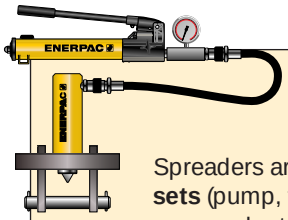
FS, STF Series

Capacity:
5 - 10 ton

Spread:
70 - 216 mm

Maximum Operating Pressure:
700 bar

- **Lightweight, ergonomic design for ease of use**
- **Adjustable jaw widths from 70 mm to 216 mm for a wide range of applications**
- **Single-acting, spring return RC-Series cylinders for fast trouble-free operation**



Tool and Pump Sets

Both Flange Spreaders are available as **sets** (pump, tool, gauge, gauge adaptor, couplers and hose) for your ordering convenience.

Spreader Modelnr.	Pump Modelnr.	Set Model Number
FS-56	P-392	**STF-56H**
FS-109	P-392	**STF-109H**
FS-109	PATG-1102N	**STF-109A**

Wedge Spreaders

Friction-free, smooth and parallel wedge movement with unique interlock wedge design. Eliminates flange damage and risk of spreading arm failure.

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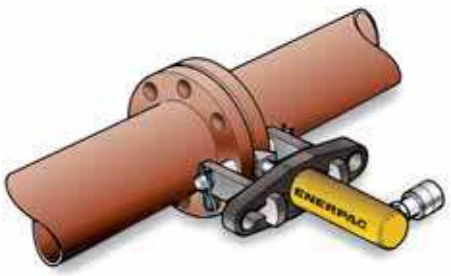

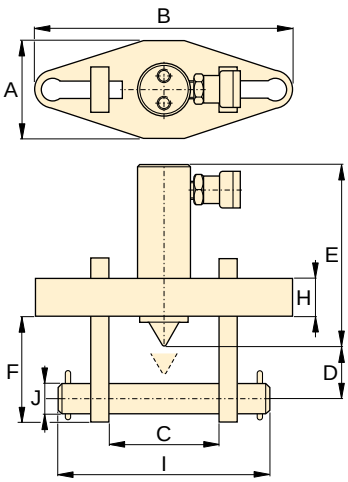

Flange Spreader Matching Chart

ASA Rating (bar)	Pipe Size (mm)	
	FS-56	FS-109
10	127 - 508	558 - 1066
20	63 - 355	406 - 711
27	63 - 304	355 - 609
35	63 - 254	304 - 508
62	12 - 152	203 - 406
103	12 - 88	101 - 203
172	12 - 63	76 - 101

Maximum Flange Thickness (mm)	Stud Size (mm)	Standard Wedge (mm)	Capacity ton	Stroke (mm)	Oil Capacity (cm^3)	Model Number	Dimensions (mm)										Weight (kg)
							A	B	C Min.	C Max.	D	E	F	H	I	J	
2 x 57	19 - 28	3 - 28	5	38	24,6	**FS-56***	76	209	70	155	32	196	88	25	206	19	11,5
2 x 92	31 - 41	3 - 28	10	54	78,7	**FS-109***	108	279	104	216	50	152	114	38	273	31	18,1

* Available as Tool-Pump Set, see note on this page.

Hydraulic and mechanical Wedge Spreaders

ENERPAC Hydraulic Technology Worldwide

▼ **FSH-14 and FSM-8 with safety blocks SB-1**

FSH, FSM, STF Series

Tip Clearance / Maximum Spread*:
6 mm / 81 mm

Maximum Spread Force:
8 - 14 ton

Maximum Operating Pressure:
700 bar (FSH-14)

Stepped Blocks FSB-1

Use stepped blocks to increase wedge opening upto 81 mm. Fits both FSH-14 and FSM-8.

Split-Flow Manifolds

For simultaneously and even spreading of flange joints, 180° apart with FSH-14.

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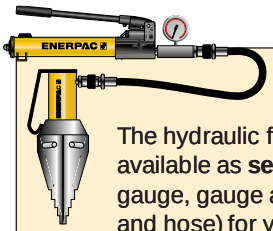


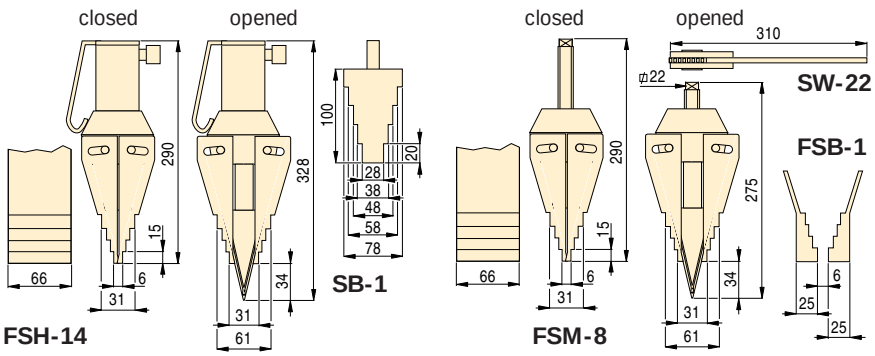
Tool and Pump Sets

The hydraulic flange spreader is available as **set** (pump, tool, gauge, gauge adaptor, couplers and hose) for your ordering convenience.

Spreader Modelnr.	Handpump Modelnr.	Set Model Number
FSH-14	P-392	**STF-14H**

- **For maintenance, commissioning, shutdowns, testing and valve change outs**
- **No need for hammers, chisels, slings or chainblocks**
- **Integrated wedge concept: Friction-free, smooth and parallel wedge movement eliminates flange damage and risk of spreading arm failure**
- **Unique interlocking wedge design - no first step bending and risk of slipping out of joint**
- **Requires very small access gap of only 6 mm**
- **Stepped spreader arm design - each step can spread under full load**
- **Few moving parts mean durability and low maintenance**
- **Safety block SB-1 and ratchet spanner SW-22 included with FSM-8 mechanical wedge spreader**
- **Safety block SB-1 and Enerpac RC-102 single-acting cylinder included with FSH-14 hydraulic wedge spreader**

▼ *Two FSH-14 spreaders used simultaneously with Enerpac handpump, hoses and AM-21 split-flow manifold.*



Maximum Spreading Force ton (kN)	Model Number	Tip Clearance (mm)	Maximum Spread [1] (mm)	Spreader Type	Oil Capacity (cm^3)	(kg)
14 (125)	**FSH-14***	6	81	Hydraulic	78	7,1
8 (72)	**FSM-8**	6	81	Mechanical	–	6,5

[1] Using stepped blocks FSB-1

* Available as pump-tool set, see note on this page.

Hydraulic and mechanical Flange Alignment Tools

▼ From left to right: **ATM-3, ATM-1, ATM-5** (shown without pump and hose)

ATM Series

Minimum Bolt Hole Size:
17 mm 11/16”

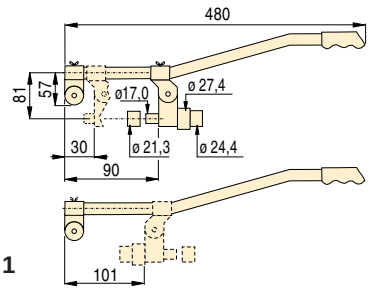
Flange Wall Thickness:
17 - 203 mm 11/16 - 8”

Maximum Lifting Force:
0,3 - 5 ton

Adjustable reach on ATM-3
The highly adjustable reach of the wing, the reversable lift hook and manual torque wrench **TW-22** allow precise alignment.

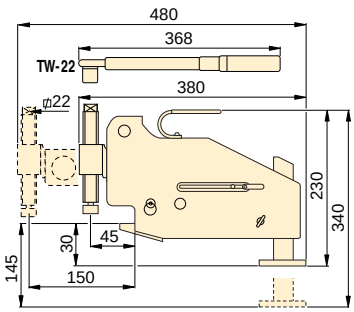
ATM-5 including hydraulics
Including 700 bar hydraulics: RC-53 single-acting cylinder, P-142 two-speed hand pump and 1,8 meters long safety hose (HC-7206C).

- **Rectifies twist and rotational misalignment without additional stress in pipe lines**
- **For most commonly used ANSI, API, BS and DIN flanges**
- **No slings, hooks, or lifting gear. Extremely safe, high precision**
- **ATM-1 supplied with three bushings for different bolt hole sizes. Can be used in reversed position**
- **ATM-3 fits on the following flanges:**
  – Ring Type Joints: flange wall thickness min 30 - max 100mm
  – Gasket Type Joints: flange wall thickness min 25 - max 115mm
- **ATM-5 Fits when flange joint is:**
  - between 93 - 228 mm [3.75 - 9 inch] apart and
  – bolt hole size 31,5 mm [1.25 inch] or greater
- **Can be installed and used in any position and any location**
- **Stays stable in position under full load**

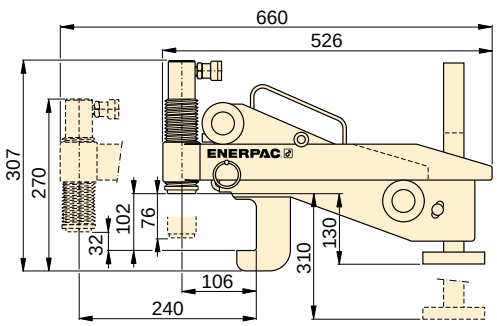


ATM-1

▼ *The Enerpac ATM-3 used to align a large ANSI flange.*



ATM-3



ATM-5

Maximum Lifting Force ton (kN)	Model Number	Bolt Hole Range (mm)	Bolt Hole Range (inch)	Flange Wall Thickness (mm)	Flange Wall Thickness (inch)	(kg)
0,3 (3)	**ATM-1**	17 - 27,2	11/16 - 1 1/8	17 - 50	11/16 - 2	2,0
3,0 (27)	**ATM-3**	25 - 54	1 - 2 1/8	30 - 115	1 3/16 - 4 1/2	9,7
5,0 (45)	**ATM-5 ***	≥ 31,5	≥ 1 1/4	80-203	3 1/8 - 8	16,2

* At 700 bar maximum operating pressure.
ATM-5 weight including hydraulic cylinder. Total set weight 28,2 kg.

Square Drive Hydraulic Torque Wrenches

ENERPAC Hydraulic Technology Worldwide

▼ From left to right: **S3000, S6000, S1500**

Rigid Steel Design

The *Professional* Square Drive Solution

Simplicity

- **360° click-on, multi-position reaction arm**
- **Push button square drive release for quickly reversing 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 manoeuverability.**

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.**

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.

Special design service

Should you have an application where it is not possible to use the standard range of tools, then we invite you to draw on our extensive experience in providing tailor-made solutions to problems involving bolted joints.

Optional Direct Allen-key Drives

Expanded versatility with a wide range of metric and imperial Allen-key drives for hexagon socket head cap screws.

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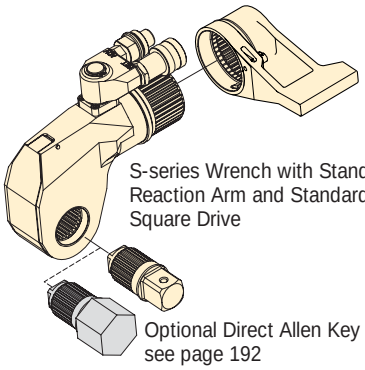
Torque Wrench Hoses

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**

Double-acting Square Drive Hydraulic Torque Wrenches



S-series Wrench with Standard Reaction Arm and Standard Square Drive

Optional Direct Allen Key Drive, see page 192

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.

S Series

Maximum Torque at 700 bar/10.000 psi:
34.079 Nm / 25.150 Ft.lbs

Square Drive Range:
3/4 - 2 1/2 inch

Nose Radius:
25,0 - 63,5 mm

Maximum Operating Pressure:
700 bar / 10.000 psi

Torque Wrench Pump Selection Matrix

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

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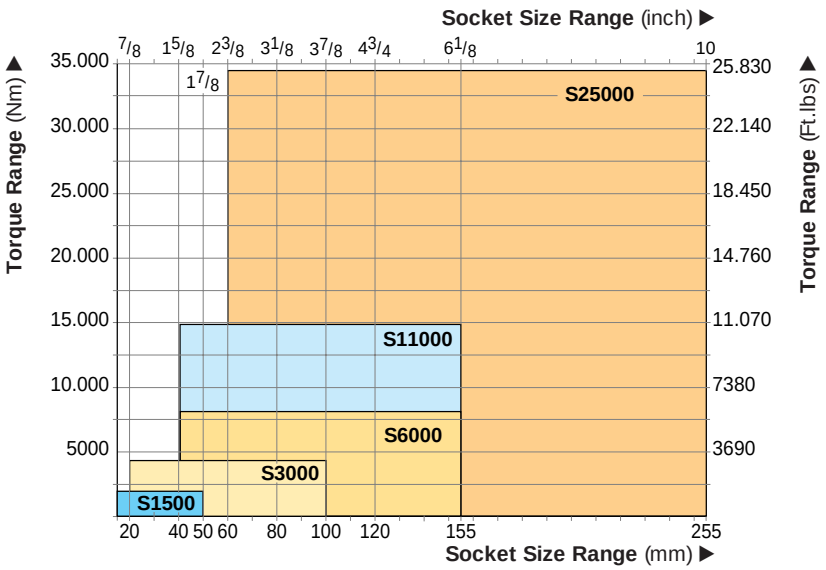
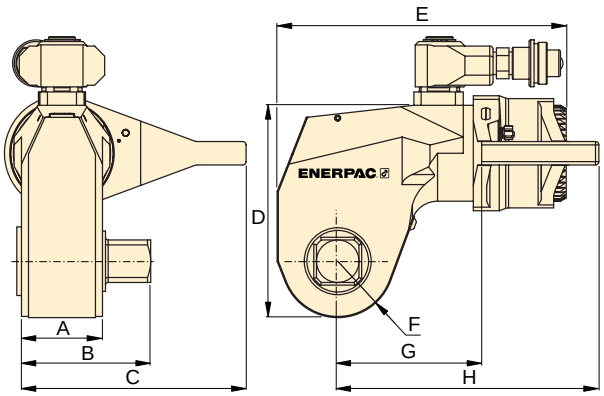
TORQUE WRENCH SELECTION (based on socket size range)





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. ▶

Typical Socket Size Range		Square Drive Size (inch)	Square Drive Model Nr. (included with wrench)	Maximum Torque [1] at 700 bar		Torque Wrench Model Nr.	Dimensions (mm)								Weight
(mm)	(inch)			(Nm)	(Ft.lbs)		A	B	C	D	E	F	G	H	(kg)
15 - 50	5/8 - 1 7/8"	3/4"	SD15-012	1898	1400	S1500	39	63	110	95	136	25,0	69	119	2,7
20 - 100	7/8 - 3 7/8"	1"	SD30-100	4339	3200	S3000	48	77	134	126	172	33,0	90	159	5,0
41 - 155	1 5/8 - 6 1/4"	1 1/2"	SD60-108	8144	6010	S6000	57	90	179	162	201	42,0	112	187	8,5
41 - 155	1 5/8 - 6 1/4"	1 1/2"	SD110-108	14.914	11.000	S11000	71	111	196	185	226	49,5	132	227	15,0
60 - 255	2 3/8 - 10"	2 1/2"	SD250-208	34.079	25.140	S25000	87	143	244	240	292	63,5	182	292	31,0

[1] Determine maximum torque according to the bolt (nut) size and grade.

SDA-Series, Allen-Key Drives – Metric

ENERPAC Hydraulic Technology Worldwide

Optional Allen-Key Drives and Reaction Arm

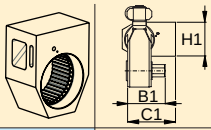
The SRA-Series Reaction Arm for Allen-Key drives must be used instead of standard reaction arm for square drives.

For **S** Series

Maximum Torque at 700 bar:
34.079 Nm

Hexagon Size Allen Drive:
14 - 85 mm

▼ SELECTION CHART

TORQUE WRENCH	OPTIONAL ALLEN-KEY DRIVES, METRIC				SHORT REACTION ARM FOR ALLEN DRIVES		
							
Model Number	Hexagon Size (mm)	Maximum Torque [1] (Nm)	Model Number	Dimension B1 (mm)	Model Number	Dimensions (mm) C1	H1
S1500 (1898 Nm)	14	644	SDA15-14	66	SRA15	67,5	65
	17	1152	SDA15-17	68			
	19	1606	SDA15-19	70			
	22	1897	SDA15-22	73			
	24	1897	SDA15-24	74			
S3000 (4339 Nm)	17	1152	SDA30-17	77	SRA30	80,0	74
	19	1606	SDA30-19	79			
	22	2486	SDA30-22	82			
	24	3232	SDA30-24	84			
	27	4336	SDA30-27	85			
	30	4336	SDA30-30	87			
	32	4336	SDA30-32	88			
S6000 (8144 Nm)	17	1152	SDA60-17	86	SRA60	91,5	89
	19	1606	SDA60-19	88			
	22	2486	SDA60-22	91			
	24	3232	SDA60-24	93			
	27	4600	SDA60-27	94			
	30	6308	SDA60-30	96			
	32	7656	SDA60-32	97			
S11000 (14.911 Nm)	30	6308	SDA110-30	112	SRA110	127,5	106
	32	7656	SDA110-32	114			
	36	10.894	SDA110-36	117			
	41	14.905	SDA110-41	121			
	46	14.905	SDA110-46	127			
S25000 (34.079 Nm)	36	10.894	SDA250-36	140	SRA250	158,5	135
	41	16.098	SDA250-41	144			
	46	22.730	SDA250-46	148			
	50	29.194	SDA250-50	151			
	55	34.079	SDA250-55	154			
	60	34.079	SDA250-60	158			
	65	34.079	SDA250-65	161			
	70	34.079	SDA250-70	164			
	75	34.079	SDA250-75	168			
	85	34.079	SDA250-85	175			

[1] Determine maximum torque according to the bolt size and grade.

Select the Right Torque

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

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Wedge Spreaders

Friction-free, smooth and parallel wedge movement with unique interlock wedge design. Eliminates flange damage and risk of spreading arm failure.

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ATM-Series Alignment Tools

Rectifies twist and rotational misalignment without additional stress in pipelines.

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SDA-Series, Allen-Key Drives – Imperial

Optional Allen-Key Drives and Reaction Arm

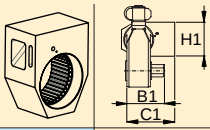
The SRA-Series Reaction Arm for Allen-Key drives must be used instead of standard reaction arm for square drives.

For **S** Series

Maximum Torque at 700 bar/10.000 psi:
34.079 Nm / 25.150 Ft.lbs

Hexagon Size Allen Drive:
1/2 - 21/4 inch

▼ SELECTION CHART

TORQUE WRENCH	OPTIONAL ALLEN-KEY DRIVES, IMPERIAL				SHORT REACTION ARM FOR ALLEN DRIVES		
							
Model Number	Hexagon Size (inch)	Maximum Torque [1] (Nm)	Model Number	Dimension B1 (mm)	Model Number	Dimensions (mm) C1	H1
S1500 (1898 Nm)	1/2"	481	SDA15-008	66	SRA15	67,5	65
	5/8"	935	SDA15-010	67			
	3/4"	1619	SDA15-012	71			
	7/8"	1897	SDA15-014	74			
	1"	1897	SDA15-100	77			
S3000 (4339 Nm)	5/8"	935	SDA30-010	77	SRA30	80,0	74
	3/4"	1619	SDA30-012	80			
	7/8"	2568	SDA30-014	83			
	1"	3828	SDA30-100	86			
	1 1/8"	5454	SDA30-102	88			
	1 1/4"	7480	SDA30-104	89			
	–	–	–	–			
S6000 (8144 Nm)	5/8"	935	SDA60-010	85	SRA60	91,5	89
	3/4"	1619	SDA60-012	89			
	7/8"	2568	SDA60-014	92			
	1"	3828	SDA60-100	95			
	1 1/8"	5454	SDA60-102	97			
	1 1/4"	7480	SDA60-104	98			
	–	–	–	–			
S11000 (14.911 Nm)	1 1/4"	7480	SDA110-104	115	SRA110	127,5	106
	1 3/8"	9953	SDA110-106	117			
	1 1/2"	12.920	SDA110-108	118			
	1 5/8"	14.905	SDA110-110	122			
	1 3/4"	14.905	SDA110-112	125			
S25000 (34.079 Nm)	1 1/2"	12.920	SDA250-108	141	SRA250	158,5	135
	1 5/8"	16.423	SDA250-110	145			
	1 3/4"	20.508	SDA250-112	148			
	1 7/8"	25.230	SDA250-114	149			
	2"	30.617	SDA250-200	151			
	2 1/4"	34.079	SDA250-204	154			
	–	–	–	–			
	–	–	–	–			
	–	–	–	–			
	–	–	–	–			

[1] Determine maximum torque according to the bolt size and grade.

Nut Splitters

Remove rusted or corroded nuts easily with Enerpac Nut Splitters. Capacities up to 75 mm hexagon nut.

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Torque Wrench Pump Selection Matrix

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

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Hexagon Bolt and Nut Sizes

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

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SQD-Series, Square Drive Torque Wrenches

ENERPAC Hydraulic Technology Worldwide

▼ Shown: **SQD-100-I**

Aluminium High Power Wrenches for Sockets or Allen-Keys

- **Very high torque-to-weight ratio**
- **High speed, double-acting operation**
- **High degree of rotation angle for increased productivity**
- **Never-jam mechanism**
- **High repeatability, with accuracy ± 3%**
- **Slim nose radius and 360° swivel hose connection allow easier positioning in confined areas**
- **Few moving parts means durability and low maintenance**
- **Push-button drive release; no tools needed to reverse square or Allen-key drives for tightening or loosening**
- **Lock-ring couplers are standard**
- **Fully corrosion resistant material**
- **Storage case (included) protects from damage, water and dirt**

Swivel Hose Connection

All Enerpac torque wrenches feature lock-ring couplers with a 360° swivel connection to allow easy access in all positions.

Select the Right Torque

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

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Optional Allen-Key Drives

Expanded versatility with a wide range of metric and imperial Allen-key drives for hexagon socket head cap screws.

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Carrying Handle CH-100

For easy transport to distant jobs. Makes handling and positioning easier, reduces operator fatique. Optional for SQD-75-I to SQD-160-I, standard on the SQD-270-I.

◀ *Easy and reliable service in the field using Enerpac SQD-series torque wrenches powered by the portable PTE-3404W electric torque wrench pump.*

Double-Acting Square Drive Torque Wrenches

◀ *All torque wrenches come standard with swivel connection, lock-ring couplers, square drive and reaction arm for square drive.*

SQD Series

Maximum Torque:
27.000 Nm

Square Drive Range:
3/4 - 2 1/2 inch

Maximum Operating Pressure:
800 bar

Use only Heavy Duty Impact Sockets for power driven torquing equipment, according to ISO 2725 and ISO 1174; DIN 3129 and DIN 3121 or ASME-B107.2/1995.

Torque Wrench Pumps and Hoses

Enerpac system matched air and electric torque wrench pumps provide control to operate hydraulic torque wrenches.

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Hexagon Bolt and Nut Sizes

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

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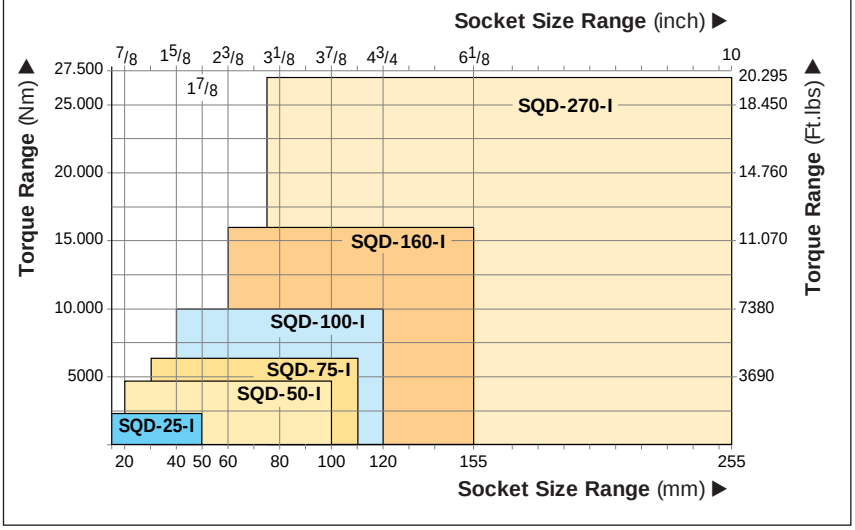
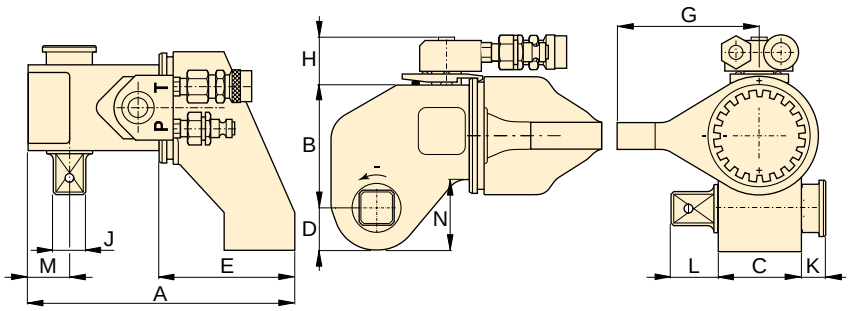
TORQUE WRENCH SELECTION (based on socket size range)





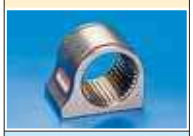
Typical Socket Size Range [1] (mm)	Typical Socket Size Range [1] (inch)	Square Drive Size J (inch)	Square Drive Model Nr. (square drive included with wrench)	Maximum Torque [2] at 800 bar (Nm)	Maximum Torque [2] at 800 bar (Ft.lbs)	Torque Wrench Model Nr.	Dimensions (mm) A	B	C	D	E	G	H	K	L	M	N	[3] (kg)
15 - 50	11/16 - 1 7/8"	3/4"	25S-075	2350	1735	SQD-25-I	167	72	53	24	108	95	35	6	28	27	36	2,5
20 - 100	7/8 - 3 7/8"	1"	50S-100	4800	3550	SQD-50-I	204	92	68	31	135	115	35	15	33	34	52	4,3
30 - 110	1 1/8 - 4 3/8"	1 1/2"	75S-150	7560	5570	SQD-75-I	226	107	76	36	153	122	35	12	43	39	64	6,7
40 - 120	1 5/8 - 4 3/4"	1 1/2"	100S-150	10.000	7360	SQD-100-I	253	115	84	39	164	130	35	13	39	43	68	8,0
60 - 155	2 3/8 - 6 1/8"	1 1/2"	160S-150	16.000	11.835	SQD-160-I	272	134	100	48	178	150	50	11	45	54	81	12,0
80 - 255	3 1/8 - 10"	2 1/2"	270S-250	27.000	19.875	SQD-270-I	342	164	119	59	218	200	50	18	76	63	99	24,5

[1] Contact ENERPAC for socket specifications.
[2] Determine maximum torque according to the bolt (nut) size and grade.
[3] including reaction arm and square drive.

SQD-Series, Metric Allen-Key Drives

ENERPAC Hydraulic Technology Worldwide

▼ SELECTION CHART

TORQUE WRENCH	OPTIONAL ALLEN-KEY DRIVES, METRIC			REACTION ARM FOR ALLEN KEY DRIVE
				
Model Number	Hexagon Size (mm)	Maximum Torque [1] (Nm)	Model Number	Model Number
SQD-25-I (2350 Nm)	14	750	25A-14	RAH-25
	17	1300	25A-17	
	19	1800	25A-19	
	22	2350	25A-22	
	24	2350	25A-24	
SQD-50-I (4800 Nm)	17	1300	50A-17	RAH-50
	19	1800	50A-19	
	22	2800	50A-22	
	24	3500	50A-24	
	27	4800	50A-27	
	30	4800	50A-30	
	32	4800	50A-32	
SQD-75-I (7560 Nm)	17	1300	75A-17	RAH-75
	19	1800	75A-19	
	22	2800	75A-22	
	24	3500	75A-24	
	27	5000	75A-27	
	30	7000	75A-30	
	32	7560	75A-32	
SQD-100-I (10.000 Nm)	22	2800	100A-22	RAH-100
	24	3500	100A-24	
	27	5000	100A-27	
	30	7000	100A-30	
	32	8500	100A-32	
	36	10.000	100A-36	
SQD-160-I (16.000 Nm)	30	7000	160A-30	RAH-160
	32	8500	160A-32	
	36	12.000	160A-36	
	41	16.000	160A-41	
	46	16.000	160A-46	
SQD-270-I (27.000 Nm)	36	12.000	270A-36	RAH-270
	41	18.000	270A-41	
	46	25.000	270A-46	
	50	27.000	270A-50	
	55	27.000	270A-55	
	60	27.000	270A-60	
	65	27.000	270A-65	
	70	27.000	270A-70	

[1] Determine maximum torque according to the bolt size and grade.

For **SQD Series**

Maximum Torque at 800 bar:
27.000 Nm

Allen-Key Drive Range:
14 - 70 mm

Optional Allen-key Drives and Reaction Arm

The RAH-Reaction Arm for allen-key drives must be used instead of reaction arm for square drives.

Torque Wrench Pumps and Hoses

Enerpac system matched air and electric torque wrench pumps provide control to operate hydraulic torque wrenches.

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Flange Spreaders

Separates pipe flanges with ease, enabling efficient maintenance tasks.

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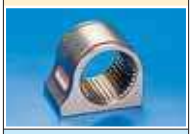
▼ *SQD-50-I with 50A-22 Allen-key drive with RAH-50 Reaction Arm for Allen-key drives.*

SQD-Series, Imperial Allen-Key Drives

▼ SELECTION CHART

TORQUE WRENCH	OPTIONAL ALLEN-KEY DRIVES, IMPERIAL			REACTION ARM FOR ALLEN KEY DRIVE
				
Model Number	Hexagon Size (inch)	Maximum Torque [1] (Nm)	Model Number	Model Number
SQD-25-I (2350 Nm)	1/2"	530	25A-050	RAH-25
	5/8"	1000	25A-063	
	3/4"	1800	25A-075	
	7/8"	2350	25A-088	
	1"	2350	25A-100	
SQD-50-I (4800 Nm)	5/8"	1000	50A-063	RAH-50
	3/4"	1800	50A-075	
	7/8"	2800	50A-088	
	1"	4200	50A-100	
	1 1/8"	4800	50A-113	
	1 1/4"	4800	50A-125	
	–	–	–	
SQD-75-I (7560 Nm)	5/8"	1000	75A-063	RAH-75
	3/4"	1800	75A-075	
	7/8"	2800	75A-088	
	1"	4200	75A-100	
	1 1/8"	5900	75A-113	
	1 1/4"	7560	75A-125	
	–	–	–	
SQD-100-I (10.000 Nm)	7/8"	2800	100A-088	RAH-100
	1"	4200	100A-100	
	1 1/8"	5900	100A-113	
	1 1/4"	8500	100A-125	
	1 3/8"	10.000	100A-138	
	1 1/2"	10.000	100A-150	
SQD-160-I (16.000 Nm)	1 1/4"	8500	160A-125	RAH-160
	1 3/8"	10.500	160A-138	
	1 1/2"	14.000	160A-150	
	1 5/8"	16.000	160A-163	
	1 3/4"	16.000	160A-175	
SQD-270-I (27.000 Nm)	1 1/2"	14.000	270A-150	RAH-270
	1 5/8"	18.000	270A-163	
	1 3/4"	22.000	270A-175	
	1 7/8"	27.000	270A-188	
	2"	27.000	270A-200	
	2 1/4"	27.000	270A-225	
	–	–	–	
	–	–	–	

[1] Determine maximum torque according to the bolt size and grade.

For **SQD Series**

Maximum Torque at 800 bar/ 11.600 psi:
27.000 Nm / 19.900 Ft.lbs

Allen-Key Drive Range:
1/2 - 21/4 inch

Select the Right Torque
Choose your Enerpac Torque Wrench using the untightening rule of thumb: Loosening torque equals about 250% of tightening torque.
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Nut Splitters
Remove rusted or corroded nuts easily with Enerpac Nut Splitters. Capacities up to 75 mm hexagon nut.
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Hexagon Bolt and Nut Sizes
See the table for hexagon sizes of bolts, nuts and related thread diameters.
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▼ *SQD-100-I with RAH-100 Reaction Arm and Allen-key drive used for loosening hexagon socket head cap screws.*

W-Series, Low Profile Hexagon Wrenches

ENERPAC Hydraulic Technology Worldwide

▼ 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 $1^{1/4}$ - $4^{5/8}$ inch AF (30 – 115 mm)
- 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.

Special Design Service

Should you have an application where it is not possible to use the standard range of tools, then we invite you to draw on our extensive experience in providing tailor-made solutions to problems involving bolted joints.

Versatility

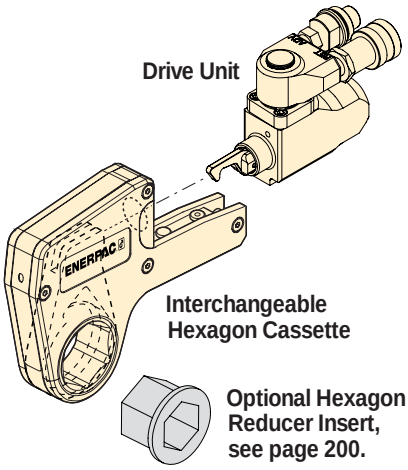
- Quick Release interchangeable low profile hexagon cassettes
- One drive unit per size range) can be used to drive any hexagon within that range.

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**

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: 200

W Series

Maximum Torque at 700 bar / 10.000 psi:
20.337 Nm/15.000 Ft.lbs

Hexagon Range:
30-115 mm/1 1/4 - 4 5/8 inch

Nose Radius:
31,0 - 87,5 mm

Maximum Operating Pressure:
700 bar / 10.000 psi

Torque Wrench Pump Selection Matrix

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

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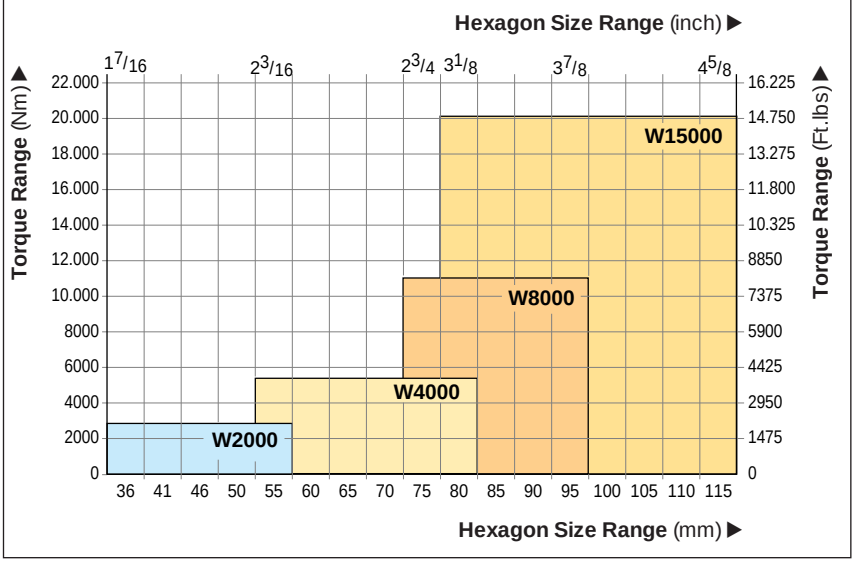
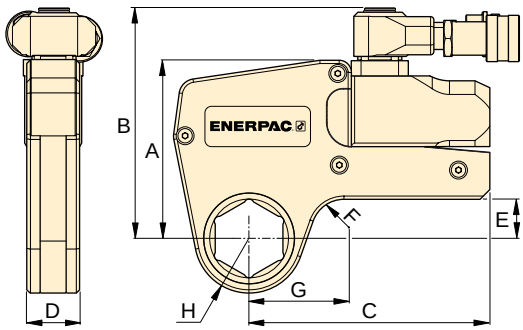
DRIVE UNIT AND INTERCHANGEABLE CASSETTE SELECTION



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



▼ **SELECTION CHART**

Hexagon Range *  200		Maximum Torque at 700 bar (10.000 psi)		Drive Unit Model Number 	Minimum Torque		Dimensions (mm)						Drive unit without hexagon cassette
(mm)	(inch)	(Nm)	(Ft.lbs)		(Nm)	(Ft.lbs)	A	B	C	D	E	F	(kg)
36 - 55	1 7/16 - 2 3/8	2712	2000	**W2000**	271	200	109	141	148	32,0	24,0	20	1,4
55 - 80	1 5/8 - 3 1/8	5423	4000	**W4000**	542	400	136	167	178	41,0	32,8	20	2,0
70 - 95	2 3/16 - 3 7/8	10.846	8000	**W8000**	1084	800	172	205	208	52,5	41,9	25	3,0
80 - 115	2 9/16 - 5	20.337	15.000	**W15000**	2033	1500	207	240	253	63,0	50,0	20	5,0

* With in-line reaction foot.

See pages 200-201 for dimensions H and G.

Metric Hexagon Cassettes and Reducer Inserts

ENERPAC Hydraulic Technology Worldwide

Torque Wrench Pump Selection Matrix

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

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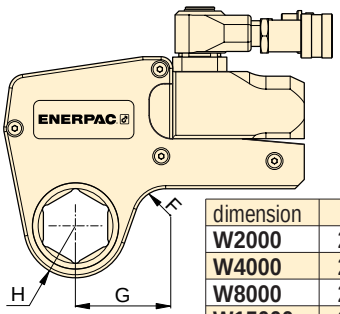
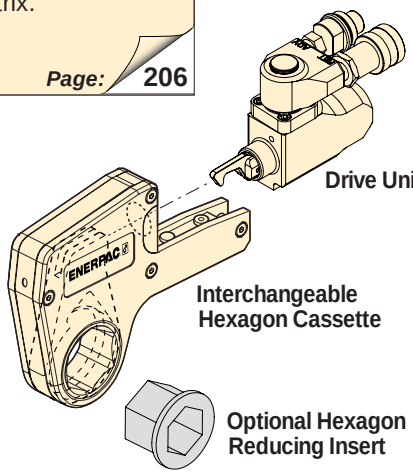


dimension	F
W2000	20
W4000	20
W8000	25
W15000	20



W Series

Maximum Torque at 700 bar:
20.337 Nm

Hexagon Range:
30 - 115 mm

Maximum Operating Pressure:
700 bar

▼ SELECTION CHART

Drive Unit Model Nr.	HEXAGON CASSETTES – METRIC											
	Hexagon Size (mm)	Nose Radius H (mm)	Model Number	G (mm)	(kg)	Hexagon Reducer Size (mm)	Hexagon Reducer Insert Model Number	Hexagon Reducer Size (mm)	Hexagon Reducer Insert Model Number	Hexagon Reducer Size (mm)	Hexagon Reducer Insert Model Number	
W2000 (2712Nm)	36	31,0	W2107	53,7	1,9	–	–	–	–	–	–	
	38	33,5	W2108	58,2	2,0	–	–	–	–	–	–	
	41	33,5	W2110	58,2	2,0	41/36	W2110R107	41/32	W2110R104	41/30	W2110R030M	
	46	36,5	W2113	60,5	2,0	46/41	W2113R110	46/36	W2113R107	46/32	W2113R104	
	50	39,0	W2200	63,1	2,0	50/46	W2200R113	50/41	W2200R110	50/36	W2200R107	
	55	41,8	W2203	68,6	2,1	55/50	W2203R200	55/46	W2203R113	55/41	W2203R110	
	60	44,5	W2206	64,8	2,2	60/55	W2206R203	60/50	W2206R200	60/46	W2206R113	
	–	–	–	–	–	–		–	–	–	–	
W4000 (5423Nm)	55	44,0	W4203	73,4	3,8	55/50	W4203R200	55/46	W4203R113	55/41	W4203R110	
	60	46,5	W4206	70,6	3,9	60/55	W4206R203	60/50	W4206R200	60/46	W4206R113	
	63	49,5	W4208	76,2	3,9	63/55	W4208R203	63/50	W4208R200	63/46	W4208R113	
	65	49,5	W4209	76,2	3,9	65/60	W4209R206	65/55	W4209R203	65/50	W4209R200	
	70	52,5	W4212	78,3	4,0	70/65	W4212R209	70/60	W4212R206	70/55	W4212R203	
	75	55,5	W4215	81,6	4,1	75/70	W4215R212	75/65	W4215R209	75/60	W4215R206	1)
	80	58,5	W4302	83,5	4,2	80/75	W4302R215	80/70	W4302R212	80/65	W4302R209	
	–	–	–	–	–	–	–	–	–	–	–	
W8000 (10.846Nm)	65	56,0	W8209	84,8	7,8	65/60	W8209R206	65/55	W8209R203	65/50	W8209R200	
	70	56,0	W8212	84,8	7,8	70/65	W8212R209	70/60	W8212R206	70/55	W8212R203	
	75	58,0	W8215	85,0	7,8	75/70	W8215R212	75/65	W8215R209	75/60	W8215R206	2)
	80	60,5	W8302	89,5	7,9	80/75	W8302R215	80/70	W8302R212	80/65	W8302R209	
	85	66,0	W8085M	92,2	8,1	85/80	W8085R080M	85/75	W8085R075M	85/70	W8085R070M	
	90	74,0	W8090M	102,9	8,7	90/85	W8090R085M	90/80	W8090R080M	90/75	W8090R075M	
	95	74,0	W8312	102,9	8,8	95/90	W8312R090M	95/85	W8312R085M	95/80	W8312R302	3)
	–	–	–	–	–	–	–	–	–	–		
W15000 (20.337Nm)	80	64,5	W15302	92,9	13,7	80/75	W15302R215	80/70	W15302R212	80/65	W15302R209	
	85	69,5	W15085M	96,6	14,0	85/80	W15085R080M	85/75	W15085R075M	85/70	W15085R070M	
	90	75,0	W15090M	101,8	14,4	90/85	W15090R085M	90/80	W15090R080M	90/75	W15090R075M	
	95	75,0	W15312	101,8	14,5	95/90	W15312R090M	95/85	W15312R085M	95/80	W15312R302	4)
	105	80,5	W15402	103,1	14,7	105/100	W15402R100M	105/95	W15402R312	105/90	W15402R090M	
	110	87,5	W15110M	114,8	15,0	110/105	W15110R105M	110/100	W15110R100M	110/95	W15110R095M	
	115	87,5	W15115M	114,8	15,3	115/110	W15115R110M	115/105	W15115R105M	115/100	W15115R100M	
	–	–	–	–	–	–	–	–	–	–	–	

1) Additional Reducer Insert is hexagon size 75/55 mm, Modelnr. **W4215R203**, fits in **W4215** hexagon cassette.
2) Additional Reducer Insert is hexagon size 75/55 mm, Modelnr. **W8215R203**, fits in **W8215** hexagon cassette.
3) Additional Reducer Insert is hexagon size 95/75 mm, Modelnr. **W8312R215**, fits in **W8312** hexagon cassette.
4) Additional Reducer Insert is hexagon size 95/75 mm, Modelnr. **W15312R215**, fits in **W15312** hexagon cassette.

Imperial Hexagon Cassettes and Reducer Inserts

Torque Wrench Pump Selection Matrix

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

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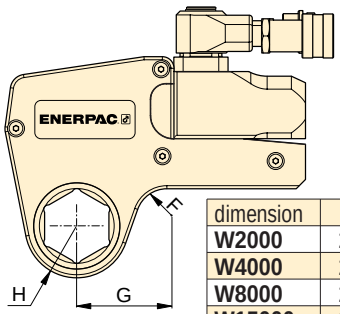
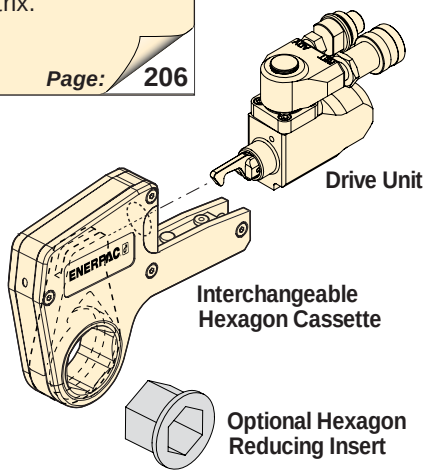


dimension	F
W2000	20
W4000	20
W8000	25
W15000	20



W Series

Maximum Torque at 700 bar/10.000 psi:
20.337 Nm/15.000 Ft.lbs

Hexagon Range:
$1^{1}/_{4}$ - $4^{5}/_{8}$ inch

Maximum Operating Pressure:
700 bar / 10.000 psi

▼ SELECTION CHART

Drive Unit Model Nr.	HEXAGON CASSETTES – INCHES											
	Hexagon Size (inch)	Nose Radius H (mm)	Model Number	G (mm)	(kg)	Hexagon Reducer Size (inch)	Hexagon Reducer Insert Model Nr.	Hexagon Reducer Size (inch)	Hexagon Reducer Insert Model Nr.	Hexagon Reducer Size (inch)	Hexagon Reducer Insert Model Nr.	
W2000 (2712Nm)	$1^{7}/_{16}$	31,0	W2107	53,7	1,9	–	–	–	–	–	–	
	$1^{1}/_{2}$	33,5	W2108	58,2	2,0	–	–	–	–	–	–	
	$1^{5}/_{8}$	33,5	W2110	58,2	2,0	$1^{5}/_{8}$ - $1^{7}/_{16}$	W2110R107	$1^{5}/_{8}$ - $1^{1}/_{4}$	W2110R104	–	–	
	$1^{13}/_{16}$	36,5	W2113	60,5	2,0	$1^{13}/_{16}$ - $1^{5}/_{8}$	W2113R110	$1^{13}/_{16}$ - $1^{7}/_{16}$	W2113R107	$1^{13}/_{16}$ - $1^{1}/_{4}$	W2113R104	
	2	39,0	W2200	63,1	2,0	2 - $1^{13}/_{16}$	W2200R113	2 - $1^{5}/_{8}$	W2200R110	2 - $1^{7}/_{16}$	W2200R107	
	$2^{3}/_{16}$	41,8	W2203	68,6	2,1	$2^{3}/_{16}$ - 2	W2203R200	$2^{3}/_{16}$ - $1^{13}/_{16}$	W2203R113	$2^{3}/_{16}$ - $1^{5}/_{8}$	W2203R110	
	$2^{3}/_{8}$	44,5	W2206	64,8	2,2	$2^{3}/_{8}$ - $2^{3}/_{16}$	W2206R203	$2^{3}/_{8}$ - 2	W2206R200	$2^{3}/_{8}$ - $1^{13}/_{16}$	W2206R113	
	–	–	–	–	–	–		–	–	–	–	
W4000 (5423Nm)	$2^{3}/_{16}$	44,0	W4203	73,4	3,8	$2^{3}/_{16}$ - 2	W4203R200	$2^{3}/_{16}$ - $1^{13}/_{16}$	W4203R113	$2^{3}/_{16}$ - $1^{5}/_{8}$	W4203R110	
	$2^{3}/_{8}$	46,5	W4206	70,6	3,9	$2^{3}/_{8}$ - $2^{3}/_{16}$	W4206R203	$2^{3}/_{8}$ - 2	W4206R200	$2^{3}/_{8}$ - $1^{13}/_{16}$	W4206R113	
	$2^{1}/_{2}$	49,5	W4208	76,2	3,9	$2^{1}/_{2}$ - $2^{3}/_{16}$	W4208R203	$2^{1}/_{2}$ - 2	W4208R200	$2^{1}/_{2}$ - $1^{13}/_{16}$	W4208R113	
	$2^{9}/_{16}$	49,5	W4209	76,2	3,9	$2^{9}/_{16}$ - $2^{3}/_{8}$	W4209R206	$2^{9}/_{16}$ - $2^{3}/_{16}$	W4209R203	$2^{9}/_{16}$ - 2	W4209R200	
	$2^{3}/_{4}$	52,5	W4212	78,3	4,0	$2^{3}/_{4}$ - $2^{9}/_{16}$	W4212R209	$2^{3}/_{4}$ - $2^{3}/_{8}$	W4212R206	$2^{3}/_{4}$ - $2^{3}/_{16}$	W4212R203	
	$2^{15}/_{16}$	55,5	W4215	81,6	4,1	$2^{15}/_{16}$ - $2^{3}/_{4}$	W4215R212	$2^{15}/_{16}$ - $2^{9}/_{16}$	W4215R209	$2^{15}/_{16}$ - $2^{3}/_{8}$	W4215R206	1)
	$3^{1}/_{8}$	58,5	W4302	83,5	4,2	$3^{1}/_{8}$ - $2^{15}/_{16}$	W4302R215	$3^{1}/_{8}$ - $2^{3}/_{4}$	W4302R212	$3^{1}/_{8}$ - $2^{9}/_{16}$	W4302R209	
	–	–	–	–	–	–	–	–	–	–	–	
W8000 (10.846Nm)	$2^{9}/_{16}$	56,0	W8209	84,8	7,8	$2^{9}/_{16}$ - $2^{3}/_{8}$	W8209R206	$2^{9}/_{16}$ - $2^{3}/_{16}$	W8209R203	$2^{9}/_{16}$ - 2	W8209R200	
	$2^{3}/_{4}$	56,0	W8212	84,8	7,8	$2^{3}/_{4}$ - $2^{9}/_{16}$	W8212R209	$2^{3}/_{4}$ - $2^{3}/_{8}$	W8212R206	$2^{3}/_{4}$ - $2^{3}/_{16}$	W8212R203	
	$2^{15}/_{16}$	58,0	W8215	85,0	7,8	$2^{15}/_{16}$ - $2^{3}/_{4}$	W8215R212	$2^{15}/_{16}$ - $2^{9}/_{16}$	W8215R209	$2^{15}/_{16}$ - $2^{3}/_{8}$	W8215R206	2)
	$3^{1}/_{8}$	60,5	W8302	89,5	7,9	$3^{1}/_{8}$ - $2^{15}/_{16}$	W8302R215	$3^{1}/_{8}$ - $2^{3}/_{4}$	W8302R212	$3^{1}/_{8}$ - $2^{9}/_{16}$	W8302R209	
	$3^{1}/_{2}$	66,0	W8308	92,2	8,1	$3^{1}/_{2}$ - $3^{1}/_{8}$	W8308R302	$3^{1}/_{2}$ - $2^{15}/_{16}$	W8308R215	$3^{1}/_{2}$ - $2^{3}/_{4}$	W8308R212	
	$3^{3}/_{4}$	74,0	W8312	102,9	8,7	$3^{3}/_{4}$ - $3^{1}/_{2}$	W8312R308	$3^{3}/_{4}$ - $3^{1}/_{8}$	W8312R302	$3^{3}/_{4}$ - $2^{15}/_{16}$	W8312R215	3)
	$3^{7}/_{8}$	74,0	W8314	102,9	8,8	$3^{7}/_{8}$ - $3^{1}/_{2}$	W8314R308	$3^{7}/_{8}$ - $3^{1}/_{8}$	W8314R302	$3^{7}/_{8}$ - $2^{15}/_{16}$	W8314R215	
	–	–	–	–	–	–	–	–	–	–	–	
W15000 (20.337Nm)	$3^{1}/_{8}$	64,5	W15302	92,9	13,7	$3^{1}/_{8}$ - $2^{15}/_{16}$	W15302R215	$3^{1}/_{8}$ - $2^{3}/_{4}$	W15302R212	$3^{1}/_{8}$ - $2^{9}/_{16}$	W15302R209	
	$3^{1}/_{2}$	69,5	W15308	96,6	14,0	$3^{1}/_{2}$ - $3^{1}/_{8}$	W15308R302	$3^{1}/_{2}$ - $2^{15}/_{16}$	W15308R215	$3^{1}/_{2}$ - $2^{3}/_{4}$	W15308R212	
	$3^{3}/_{4}$	75,0	W15312	101,8	14,5	$3^{3}/_{4}$ - $3^{1}/_{2}$	W15312R308	$3^{3}/_{4}$ - $3^{1}/_{8}$	W15312R302	$3^{3}/_{4}$ - $2^{15}/_{16}$	W15312R215	
	$3^{7}/_{8}$	75,0	W15314	101,8	14,5	$3^{7}/_{8}$ - $3^{1}/_{2}$	W15314R308	$3^{7}/_{8}$ - $3^{1}/_{8}$	W15314R302	$3^{7}/_{8}$ - $2^{15}/_{16}$	W15314R215	
	$4^{1}/_{8}$	80,5	W15402	103,1	14,7	$4^{1}/_{8}$ - $3^{7}/_{8}$	W15402R314	$4^{1}/_{8}$ - $3^{3}/_{4}$	W15402R312	$4^{1}/_{8}$ - $3^{1}/_{2}$	W15402R308	
	$4^{1}/_{4}$	80,5	W15404	103,1	14,7	$4^{1}/_{4}$ - $3^{7}/_{8}$	W15404R314	$4^{1}/_{4}$ - $3^{1}/_{2}$	W15404R308	$4^{1}/_{4}$ - $3^{1}/_{8}$	W15404R302	
	$4^{5}/_{8}$	87,5	W15410I	114,8	15,3	$4^{5}/_{8}$ - $4^{1}/_{4}$	W15410R404	$4^{5}/_{8}$ - $3^{7}/_{8}$	W15410R314	$4^{5}/_{8}$ - $3^{1}/_{2}$	W15410R308	
	–		–	–	–	–	–	–	–	–	–	

1) Additional Reducer Insert is hexagon size $2^{15}/_{16}$ - $2^{3}/_{16}$ inch, Modelnr. **W4215R203**, fits in **W4215** hexagon cassette.
2) Additional Reducer Insert is hexagon size $2^{15}/_{16}$ - $2^{3}/_{16}$ inch Modelnr. **W8215R203**, fits in **W8215** hexagon cassette.
3) Additional Reducer Insert is hexagon size $3^{3}/_{4}$ - $2^{3}/_{4}$ inch Modelnr. **W8312R212**, fits in **W8312** hexagon cassette.

See the table of hexagon bolt and nut sizes and related thread diameters on page 216.

HXD-Series, Hexagon Cassette Wrenches

ENERPAC Hydraulic Technology Worldwide

▼ Shown from left to right: **HXD-60 with CC-680, HXD-30 with CC-360**

Aluminium Design, Low Profile and Slim Nose Radius

- **High torque-to-weight ratio, slim nose radius and flat design**
- **High speed, high degree of rotation angle, double-acting**
- **Snap in, interchangeable cassettes, no tools required**
- **360° swivel hose connection allows easier positioning in confined areas**
- **Lock-ring couplers are standard**
- **High repeatability, with accuracy ± 3%**
- **Strong unibody design, integrated reaction arm and few moving parts make wrenches durable and reliable**
- **Extensive range of metric and imperial hexagon cassettes and reducers**
- **Fully corrosion resistant material**
- **Drive unit and cassette come in storage case to protect from damage, water and dirt**

Select the Right Torque

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

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Hexagon Bolt and Nut Sizes

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

Page: 216

Nut Splitters

Remove rusted or corroded nuts easily with Enerpac Nut Splitters. Capacities up to 75 mm hexagon nut.

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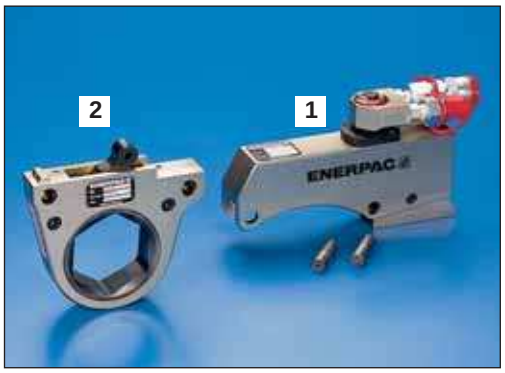
▼ *The HXD-30 drive unit combined with cassette CC-360 is the best solution for this turbine application. The slim nose radius and swivel couplers allow easy access in all positions.*

▼ *An Enerpac hydraulic wrench brings safety and economy to all kinds of maintenance jobs.*

Double-Acting Hydraulic Torque Wrenches

▼ Shown from left to right: **CC-360, HXD-30**



TORQUE WRENCH SELECTION IN 2 STEPS:

1 **DRIVE UNIT**
Select the HXD-Drive Unit using the quick selection chart below.

2 **CASSETTE**
Select the appropriate CC-Cassette from the pages 204 and 205.

HXD Series

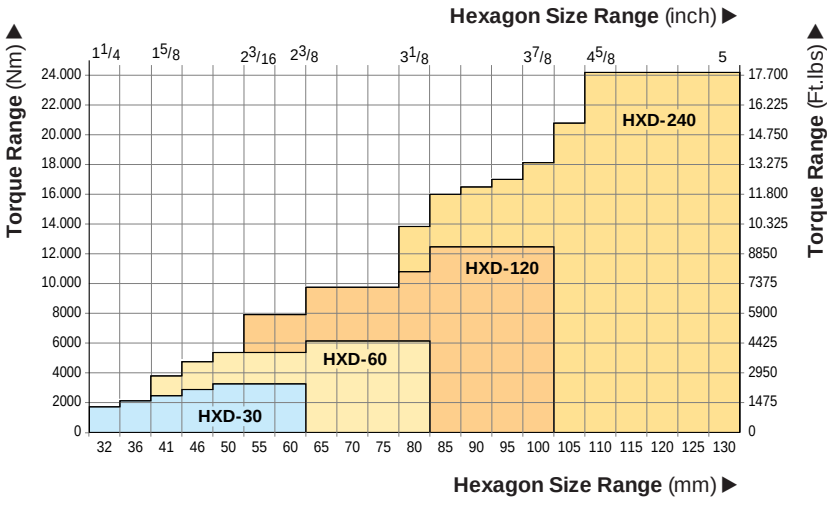
Maximum Torque:
24.210 Nm

Hexagon Range:
30 - 130 mm

Nose Radius:
28,5 - 96,0 mm

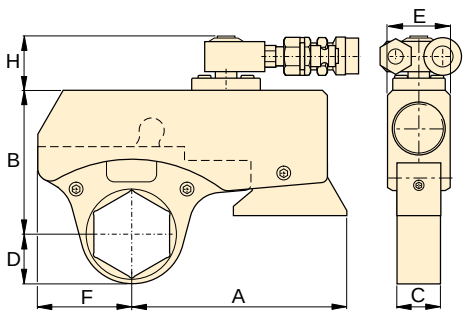
Maximum Operating Pressure:
800 bar

DRIVE UNIT AND INTERCHANGEABLE CASSETTE SELECTION



Reducer Inserts
Expanded versatility with the full range of metric and imperial Reducer Inserts and Holding Rings.
Page: 204

Torque Wrench Pump Selection Matrix
For optimum speed and performance see the torque wrench and pump matrix.
Page: 206



▼ QUICK SELECTION CHART

Hex Cassette & Reducer Range		Maximum Torque		Drive Unit * Model Number	Drive Unit and Cassette Dimensions (mm)							
 *Page:* 204		at 800 bar	at 11.600 psi									
(mm)	(inch)	(Nm)	(Ft.lbs)		A	B	C	D	E	F	H	(kg)
32 - 60	$1^1/_4$ - $2^3/_8$	3290	2425	**HXD-30**	135	91 - 103	28	28,5 - 47,5	40	60	38	1,6
41 - 80	$1^5/_8$ - $3^1/_8$	6190	4565	**HXD-60**	156	115 - 130	35	34,5 - 60,5	50	75	38	2,5
55 - 100	$2^3/_{16}$ - $3^7/_8$	12.500	9220	**HXD-120**	200	141 - 156	47	46,5 - 73,5	65	96	38	4,8
65 - 130	$2^9/_{16}$ - 5	24.210	17.860	**HXD-240**	259	182 - 202	56	62,0 - 96,0	82	125	50	8,2

* With integrated reaction arm.

HXD-Series, Metric Cassettes and Inserts

ENERPAC Hydraulic Technology Worldwide

The optional Reducer Insert must be secured in the Cassette with a Holding Ring. ▶

Maximum Torque at 800 bar:
24.210 Nm

Hexagon Range:
30 - 130 mm

Maximum Operating Pressure:
800 bar

CC IN HR Series

▼ SELECTION CHART

DRIVE UNIT	INTERCHANGEABLE CASSETTES, METRIC					OPTIONAL ADD-ON REDUCER INSERTS, METRIC						HOLDING RINGS
												
Model Number	Max. Torque[1] (Nm)	Hex. Size [2] (mm)	Nose Radius D (mm)	Model Number	(kg)	Hexagon Size (mm)	Model Number	Hexagon Size (mm)	Model Number	Hexagon Size (mm)	Model Number	Model Number
HXD-30 (3290 Nm)	1700	32	28,5	CC-332	0,6	–	–	–	–	–	–	–
	2100	36	31,5	CC-336	0,7	–	–	–	–	–	–	–
	2500	41	34,5	CC-341	0,7	41/36	IN3-4136	41/32	IN3-4132	41/30	IN3-4130	HR-41
	2890	46	38,5	CC-346	0,8	46/41	IN3-4641	46/36	IN3-4636	46/32	IN3-4632	HR-46
	3290	50	42,0	CC-350	0,9	50/46	IN3-5046	50/41	IN3-5041	50/36	IN3-5036	HR-50
		55	45,0	CC-355	1,0	55/50	IN3-5550	55/46	IN3-5546	55/41	IN3-5541	HR-55
		60	47,5	CC-360	1,1	60/55	IN3-6055	60/50	IN3-6050	60/46	IN3-6046	HR-60
HXD-60 (6190 Nm)	3840	41	34,5	CC-641	1,2	41/36	IN6-4136	–	–	–	–	HR-41
	4805	46	39,5	CC-646	1,3	–	–	–	–	–	–	–
	5410	50	43,5	CC-650	1,4	50/46	IN6-5046	50/41	IN6-5041	50/36	IN6-5036	HR-50
		55	46,5	CC-655	1,5	55/50	IN6-5550	55/46	IN6-5546	55/41	IN6-5541	HR-55
		60	48,5	CC-660	1,6	60/55	IN6-6055	60/50	IN6-6050	60/46	IN6-6046	HR-60
	6190	65	52,5	CC-665	1,8	65/60	IN6-6560	65/55	IN6-6555	65/50	IN6-6550	HR-65
		70	55,5	CC-670	1,9	70/65	IN6-7065	70/60	IN6-7060	70/55	IN6-7055	HR-70
		75	57,5	CC-675	2,0	75/70	IN6-7570	75/65	IN6-7565	75/60	IN6-7560	HR-75
		80	60,5	CC-680	2,1	80/75	IN6-8075	80/70	IN6-8070	80/65	IN6-8065	HR-80
HXD-120 (12500 Nm)	8000	55	46,5	CC-1255	2,6	55/50	IN12-5550	55/46	IN12-5546	55/41	IN12-5541	HR-55
		60	48,5	CC-1260	2,7	60/55	IN12-6055	60/50	IN12-6050	60/46	IN12-6046	HR-60
	9800	65	52,5	CC-1265	2,7	65/60	IN12-6560	65/55	IN12-6555	65/50	IN12-6550	HR-65
		70	55,5	CC-1270	2,8	70/65	IN12-7065	70/60	IN12-7060	70/55	IN12-7055	HR-70
		75	57,5	CC-1275	2,9	75/70	IN12-7570	75/65	IN12-7565	75/60	IN12-7560	HR-75
		–	–	–	–	–	–	–	–	–	–	–
	10.860	80	60,5	CC-1280	3,0	80/75	IN12-8075	80/70	IN12-8070	80/65	IN12-8065	HR-80
	12.500	85	64,5	CC-1285	3,5	85/80	IN12-8580	85/75	IN12-8575	85/70	IN12-8570	HR-85
		90	67,5	CC-1290	3,6	90/85	IN12-9085	90/80	IN12-9080	90/75	IN12-9075	HR-90
		95	70,5	CC-1295	3,7	95/90	IN12-9590	95/85	IN12-9585	95/80	IN12-9580	HR-95
		100	73,5	CC-12100	3,8	100/95	IN12-10095	100/90	IN12-10090	100/85	IN12-10085	HR-100
HXD-240 (24.210 Nm)	13.890	80	62,0	CC-2480	5,1	80/75	IN24-8075	80/70	IN24-8070	80/65	IN24-8065	HR-80
	16.030	85	66,0	CC-2485	5,2	85/80	IN24-8580	85/75	IN24-8575	85/70	IN24-8570	HR-85
	16.560	90	69,0	CC-2490	5,2	90/85	IN24-9085	90/80	IN24-9080	90/75	IN24-9075	HR-90
	17.100	95	72,0	CC-2495	5,4	95/90	IN24-9590	95/85	IN24-9585	95/80	IN24-9580	HR-95
	18.170	100	76,0	CC-24100	5,6	100/95	IN24-10095	100/90	IN24-10090	100/85	IN24-10085	HR-100
	20.840	105	80,0	CC-24105	5,7	105/100	IN24-105100	105/95	IN24-10595	105/90	IN24-10590	HR-105
	24.210	110	84,0	CC-24110	5,8	110/105	IN24-110105	110/100	IN24-110100	110/95	IN24-11095	HR-110
		115	87,0	CC-24115	7,1	115/110	IN24-115110	115/105	IN24-115105	115/100	IN24-115100	HR-115
		120	90,0	CC-24120	7,3	120/115	IN24-120115	120/110	IN24-120110	120/105	IN24-120105	HR-120
		125	93,0	CC-24125	7,3	125/120	IN24-125120	125/115	IN24-125115	125/110	IN24-125110	HR-125
		130	96,0	CC-24130	7,4	130/125	IN24-130125	130/120	IN24-130120	130/115	IN24-130115	HR-130

[1] Determine maximum torque according to the bolt (nut) size and grade.
[2] See the table of hexagon bolt and nut sizes and related thread diameters on page 216.

HXD-Series, Imperial Cassettes and Reducer Inserts

The optional Reducer Insert ▶ must be secured in the Cassette with a Holding Ring.

Maximum Torque at 800 bar:
24.210 Nm (17860 Ft.lbs)

Hexagon Range:
1 1/4 - 5 inch

Maximum Operating Pressure:
800 bar

CC
IN
HR
Series

▼ SELECTION CHART

DRIVE UNIT	INTERCHANGEABLE CASSETTES, IMPERIAL					OPTIONAL ADD-ON REDUCER INSERTS, IMPERIAL				HOLDING RINGS
			D							
Model Number	Max. Torque[1] (Nm)	Hex. Size[2] (inch)	Nose Radius D (mm)	Model Number	(kg)	Hexagon Size (inch)	Model Number	Hexagon Size (inch)	Model Number	Model Number
HXD-30 (3290 Nm)	1700	1 1/4"	28,5	CC-3125	0,6	–	–	–	–	–
	2100	1 7/16"	31,5	CC-3144	0,7	1 7/16" - 1 1/4"	IN3144-125	–	–	HR-36
	2500	1 5/8"	34,5	CC-3163	0,7	1 5/8" - 1 7/16"	IN3163-144	1 5/8" - 1 1/4"	IN3163-125	HR-41
	2890	1 13/16"	38,5	CC-3181	0,8	1 13/16" - 1 5/8"	IN3181-163	1 13/16" - 1 7/16"	IN3181-144	HR-46
	3290	2"	42,0	CC-3200	0,9	2" - 1 13/16"	IN3200-181	2" - 1 5/8"	IN3200-163	HR-50
		2 3/16"	45,0	CC-3219	1,0	2 3/16" - 2"	IN3219-200	2 3/16" - 1 13/16"	IN3219-181	HR-55
		2 3/8"	47,5	CC-3238	1,1	2 3/8" - 2 3/16"	IN3238-219	2 3/8" - 2"	IN3238-200	HR-60
HXD-60 (6190 Nm)	3840	1 5/8"	34,5	CC-6163	1,2	–	–	–	–	–
	4805	1 13/16"	39,5	CC-6181	1,3	1 13/16" - 1 5/8"	IN6181-163	–	–	HR-46
	5410	2"	43,5	CC-6200	1,4	2" - 1 13/16"	IN6200-181	2" - 1 5/8"	IN6200-163	HR-50
		2 3/16"	46,5	CC-6219	1,5	2 3/16" - 2"	IN6219-200	2 3/16" - 1 13/16"	IN6219-181	HR-55
		2 3/8"	48,5	CC-6238	1,6	2 3/8" - 2 3/16"	IN6238-219	2 3/8" - 2"	IN6238-200	HR-60
	6190	2 9/16"	52,5	CC-6256	1,8	2 9/16" - 2 3/8"	IN6256-238	2 9/16" - 2 3/16"	IN6256-219	HR-65
		2 3/4"	55,5	CC-6275	1,9	2 3/4" - 2 9/16"	IN6275-256	2 3/4" - 2 3/8"	IN6275-238	HR-70
		2 15/16"	57,5	CC-6293	2,0	2 15/16" - 2 3/4"	IN6293-275	2 15/16" - 2 9/16"	IN6293-256	HR-75
		3 1/8"	60,5	CC-6313	2,1	3 1/8" - 2 15/16"	IN6313-293	3 1/8" - 2 3/4"	IN6313-275	HR-80
HXD-120 (12500 Nm)	8000	2 3/16"	46,5	CC-12219	2,6	2 3/16" - 2"	IN12219-200	2 3/16" - 1 13/16"	IN12219-181	HR-55
		2 3/8"	48,5	CC-12238	2,7	2 3/8" - 2 3/16"	IN12238-219	2 3/8" - 2"	IN12238-200	HR-60
	9800	2 9/16"	52,5	CC-12256	2,7	2 9/16" - 2 3/8"	IN12256-238	2 9/16" - 2 3/16"	IN12256-219	HR-65
		2 3/4"	55,5	CC-12275	2,8	2 3/4" - 2 9/16"	IN12275-256	2 3/4" - 2 3/8"	IN12275-238	HR-70
		2 15/16"	57,5	CC-12293	2,9	2 15/16" - 2 3/4"	IN12293-275	2 15/16" - 2 9/16"	IN12293-256	HR-75
		3"	57,5	CC-12300	2,9	3" - 2 3/4"	IN12300-275	3" - 2 9/16"	IN12300-256	HR-75
	10.860	3 1/8"	60,5	CC-12313	3,0	3 1/8" - 2 15/16"	IN12313-293	3 1/8" - 2 3/4"	IN12313-275	HR-80
	12.500	3 3/8"	64,5	CC-12338	3,5	3 3/8" - 3"	IN12338-300	3 3/8" - 2 15/16"	IN12338-293	HR-85
		3 1/2"	67,5	CC-12350	3,6	3 1/2" - 3 1/8"	IN12350-313	3 1/2" - 3"	IN12350-300	HR-90
		3 3/4"	70,5	CC-12375	3,7	3 3/4" - 3 1/2"	IN12375-350	3 3/4" - 3 3/8"	IN12375-338	HR-95
		3 7/8"	73,5	CC-12388	3,8	3 7/8" - 3 1/2"	IN12388-350	3 7/8" - 3 3/8"	IN12388-338	HR-100
HXD-240 (24.210 Nm)	14.000	3 1/8"	62,0	CC-24313[3]	5,1	3 1/8" - 2 15/16"	IN24313-293	3 1/8" - 2 3/4"	IN24313-275[3]	HR-80
	15.840	3 3/8"	66,0	CC-24338	5,2	3 3/8" - 3 1/8"	IN24338-313	3 3/8" - 3"	IN24338-300	HR-85
	16.570	3 1/2"	69,0	CC-24350	5,2	3 1/2" - 3 1/8"	IN24350-313	3 1/2" - 3"	IN24350-300	HR-90
	17.320	3 3/4"	72,0	CC-24375	5,4	3 3/4" - 3 1/2"	IN24375-350	3 3/4" - 3 3/8"	IN24375-338	HR-95
	18.050	3 7/8"	76,0	CC-24388[4]	5,6	3 7/8" - 3 1/2"	IN24388-350	3 7/8" - 3 3/8"	IN24388-338[4]	HR-100
	21.000	4 1/8"	80,0	CC-24413	5,7	4 1/8" - 3 7/8"	IN24413-388	4 1/8" - 3 3/4"	IN24413-375	HR-105
	24.210	4 1/4"	84,0	CC-24425	6,8	4 1/4" - 3 7/8"	IN24425-388	4 1/4" - 3 3/4"	IN24425-375	HR-110
		4 5/8"	90,0	CC-24463	7,3	4 5/8" - 4 1/4"	IN24463-425	4 5/8" - 4 1/8"	IN24463-413	HR-120
		5"	96,0	CC-24500	7,4	5" - 4 5/8"	IN24500-463	5" - 4 1/4"	IN24500-425	HR-130
	–	–		–	–	–	–	–	–	–
		–		–	–	–	–	–	–	–

1) Determine maximum torque according to the bolt (nut) size and grade.
2) See the table of hexagon bolt and nut sizes and related thread diameters on page 216.
3) Additional imperial Reducer Insert is 3 1/8" - 2 9/16" **IN24313-256** fits **CC-24313** Cassette, use **HR-80** Holding Ring.
4) Additional imperial Reducer Insert is 3 3/4" - 2 9/16" **IN24375-313** fits **CC-24388** Cassette, use **HR-100** Holding Ring.

Optimum Torque Wrench & Pump Combinations

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

NOTE: For other combinations, consult your Enerpac bolting expert or your authorized Enerpac distributor.

Enerpac Torque Wrenches		Any brand of wrench matching the torque indicated below		ELECTRIC PUMPS				
				PMU-Series		PTE-Series		
								
				Page: 208		Page: 209		
700 bar Torque Wrenches	Model Nr.	Maximum Torque Nm	Ft.lbs	Flow at rated pressure: 0,34 l/min 115V, 1 ph	Flow at rated pressure: 0,34 l/min 230V, 1 ph	Flow at rated pressure: 0,9 l/min 230V, 1 ph	Flow at rated pressure: 0,7 /min 230V, 3 ph	Flow at rated pressure: 0,9 l/min 400V, 3 ph
 190	S1500	1898	1400	PMU-10427-Q	PMU-10422-Q	–	–	–
	S3000	4339	3200					
	S6000	8144	6010	–	–	PTE-3404E-Q	PTE-3404T-Q	PTE-3404W-Q
	S11000	14.914	11.000					
	S25000	34.079	25.150					
 198	W2000	2712	2000	PMU-10427-Q	PMU-10422-Q	–	–	–
	W4000	5423	4000			PTE-3404E-Q	PTE-3404T-Q	PTE-3404W-Q
	W8000	10.846	8000	–	–			
	W15000	20.337	15.000					
800 bar Torque Wrenches	Model Nr.							
 194	SQD-25-I	2350	1735	PMU-10427	PMU-10422	–	–	–
	SQD-50-I	4800	3550					
	SQD-75-I	7560	5570	–	–	PTE-3404E	PTE-3404T	PTE-3404W
	SQD-100-I	10.000	7360					
	SQD-160-I	16.000	11.835					
	SQD-270-I	27.000	19.875			–	–	–
 202	HXD-30	3290	2425	PMU-10427	PMU-10422	–	–	–
	HXD-60	6190	4565			PTE-3404E	PTE-3404T	PTE-3404W
	HXD-120	12.500	9220	–	–			
	HXD-240	24.210	17.860					

Select the right torque

Choose your Enerpac torque wrench using the untightening rule of thumb:

- Be aware that when loosening a nut or bolt more torque is usually required than when tightening.
- Do not apply more than 75% of the maximum torque when loosening nuts or bolts.

Conditions of bolted joints

- For fully threaded UNC nuts and bolts do not exceed **1 1/2 times** nominal torque for a friction coefficient of 0,1.
- Humidity corrosion (rust) requires up to **2 times** the torque required for tightening.
- Sea water and chemical corrosion requires up to **2 1/2 times** the torque required for tightening.
- Heat corrosion requires up to **3 times** the torque required for tightening.

Torque Wrench, Pump & Hose Selection

ELECTRIC PUMPS		AIR DRIVEN PUMPS			TWIN HOSES	
ZU4T-Series		PTA-Series		PMA-Series	THQ-Series THC-Series	
						
Page: 210		Page: 214	Page: 214	Page: 215		
Flow at rated pressure: 0,9 - 1,0 l/min 115V, 1 ph	Flow at rated pressure: 0,9 - 1,0 l/min 230V, 1 ph	Flow at reated pressure: 0,33 l/min	Flow at reated pressure: 0,50 l/min	Flow at reated pressure: 1,8 l/min		700 bar Torque Wrench Model Nr.
–	–	PTA-1404-Q	–	–	THQ-706T (6m) THQ-712T (12m)	S1500
ZU4208TB-Q	ZU4208TE-Q	–	PTA-3408-Q	PMA-62480-Q		S3000 S6000 S11000 S25000
–	–	PTA-1404-Q	–	–	THQ-706T (6m) THQ-712T (12m)	W2000
ZU4208TB-Q	ZU4208TE-Q	–	PTA-3408-Q	PMA-62480-Q		W4000 W8000 W15000
						800 bar Torque Wrench
–	–	PTA-1404	–	–	THC-7062 (6m) THC-7122 (12m)	SQD-25-I
ZU4208TB-E	ZU4208TE-E	–	PTA-3408	PMA-62480		SQD-50-I SQD-75-I SQD-100-I SQD-160-I SQD-270-I
–	–	PTA-1404	–	–	THC-7062 (6m) THC-7122 (12m)	HXD-30
ZU4208TB-E	ZU4208TB-E	–	PTA-3408	PMA-62480		HXD-60 HXD-120 HXD-240

Torque Wrench Couplers

Refer to the System Components section for ordering couplers for torque wrenches.

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IMPORTANT!

Always make sure that the torque scale on the pump matches the torque wrench size for accurate torque settings.

Portable Electric Torque Wrench Pumps

ENERPAC Hydraulic Technology Worldwide

▼ **PMU-10422**

PME, PMU Series

Reservoir Capacity:
3,0 litres

Flow at Rated Pressure:
0,34 l/min

Motor Size:
0,37 kW

Maximum Operating Pressure:
700 and 800 bar

- **Powerful two-speed pump is lightweight and easy to carry**
- **Standard heat exchanger package on PMU-Series keeps the oil cool under extreme use**
- **Glycerine filled gauge with scale reading in bar and psi**
- **Transparent overlays in Nm and Ft.lbs for Enerpac torque wrenches provide a quick torque reference**
- **Universal motor for a high power-to-weight ratio;**
- **Adjustable pressure relief valve for accurate torque adjustments and precise repeatability.**

▼ *The lightweight PMU-10422 makes work on remote locations easy.*

Oil Flow Rate (l/min)		Maximum Pressure Rating (bar)		Model Number	Model Number with Heat Exchanger [1]	Usable Oil Capacity	Motor Electrical Specifications	Motor Size	Outside Dimensions L x W x H	
1st stage	2nd stage	1st stage	2nd stage			(litres)	(Amps-Volts-Ph-Hz)	(kW)	(mm)	(kg)
3,3	0,34	50	**700**	**PME-10422-Q**	**PMU-10422-Q**	2,8	9-230-1-50/60	0,37	250x250x360	17
3,3	0,34	50	**700**	**PME-10427-Q**	**PMU-10427-Q**	2,8	9-115-1-50/60	0,37	432x280x381	17
3,3	0,34	50	**800**	**PME-10422**	**PMU-10422**	2,8	9-230-1-50/60	0,37	250x250x360	17
3,3	0,34	50	**800**	**PME-10427**	**PMU-10427**	2,8	9-115-1-50/60	0,37	432x280x381	17

[1] PMU pump with heat exchanger weights 24 kg.

Portable Electric Torque Wrench Pumps

▼ **PTE-3404W**

PTE Series

Reservoir Capacity:
3,8 litres

Flow at Rated Pressure:
0,7 - 0,9 l/min

Motor Size:
1,5 - 1,8 kW

Maximum Operating Pressure:
700 and 800 bar

- **Two stage pump with automatic integrated bypass for faster torque cycles**
- **Submerged motor for low noise and reduced heat build up**
- **Glycerine-filled pressure gauge with scale reading in bar/psi**
- **Transparent overlays in Nm and Ft.lbs, included for Enerpac torque wrenches produce accurate torque settings and precise repeatability**
- **Customer adjustable pressure relief valve**
- **Integrated motor disconnect switch and compact ergonomic design.**

Torque Wrench Pump Selection Matrix

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

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Transparent Overlays

Transparent torque overlays in Nm and Ft.lbs for Enerpac torque wrenches are included with most Enerpac torque wrench pumps.

Oil Flow Rate (l/min) 1st stage	Oil Flow Rate (l/min) 2nd stage	Maximum Pressure Rating (bar) 1st stage	Maximum Pressure Rating (bar) 2nd stage	Model Number	Usable Oil Capacity (litres)	Motor Electrical Specifications (Amps-Volts-Ph-Hz)	Motor Size (kW)	Outside Dimensions L x W x H (mm)	(kg)
7,0	0,9	145	**700**	**PTE-3404W-Q**	1,1	5-400-3-50	1,5	622x202x443	29
5,4	0,9	145	**700**	**PTE-3404E-Q**	1,7	14-230-1-50	1,8	622x202x443	31
5,0 *	0,7 *	145	**700**	**PTE-3404T-Q**	1,7	7-230-3-50/60 *	1,8	622x202x443	31
7,0	0,9	145	**800**	**PTE-3404W**	1,1	5-400-3-50	1,5	622x202x443	29
5,4	0,9	145	**800**	**PTE-3404E**	1,7	14-230-1-50	1,8	622x202x443	31
5,0 *	0,7 *	145	**800**	**PTE-3404T**	1,7	7-230-3-50/60 *	1,8	622x202x443	31

Operating temperature: 5 - 65 Celsius.
* Flow rate shown at 50Hz. At 60 Hz the flow will be 6/5 higher.

▼ *The portable PTE-3404W pump used to power a SQD-Series aluminium torque wrench.*

ZU4T-Series, Electric Torque Wrench Pumps

ENERPAC Hydraulic Technology Worldwide

▼ **ZU4204TE-EHK** (shown with optional heat exchanger and skidbar)

- **Can be used with any brand of 700 or 800 bar single- and double-acting hydraulic torque wrenches**
- **LCD provides self test, diagnostic and read-out capabilities**
- **Auto cycle feature provides continuous cycle operation as long as the advance button is pressed (pump can be used with or without auto cycle feature)**
- **Available with 4-wrench manifold for simultaneous operation of multiple torque wrenches**
- **Powerful 1,25 kW universal electric motor provides high power-to-weight ratio**
- **High-strength, moulded composite shroud protects motor and electronics, while providing an ergonomic, non-conductive handle for easy transport**

ZU4 CLASS

Tough, Dependable and Innovative

Back-lit LCD and Pressure Transducer

- Digital read-out and "Autocycle" setting
- Pump usage information, hour and cycle counts
- Low-voltage warning and recording
- Self-test and diagnostic capabilities
- Information can be displayed in English, French, German, Italian, Spanish and Portuguese
- Pressure transducer is more accurate and durable than analog gauges
- Easy-viewing variable rate display
- Display pressure in bar, MPa or psi.

▼ *Any brand of hydraulic torque wrench can be powered by the portable ZU4T-Series torque wrench pump.*

Hydraulic Torque Wrench Pumps

ZU4T-Series Pump Applications

The ZU4T-Series pump is best suited to power medium to large size torque wrenches or hydraulic tools, or wherever high speed, intermittent duty cycle is needed.

Patent-pending ***Z-Class*** technology provides high by-pass pressures for increased productivity. Its high power to weight ratio and compact design make it ideal for applications which require easy transport of the pump. It utilizes a universal motor which will work well on long extension cords or generator driven electrical power supplies.

For further application assistance contact your local Enerpac office.

ZU4T Series

Reservoir Capacity:
4 and 8 litres

Flow at Rated Pressure:
0,9 - 1,0 l/min

Motor Size:
1,25 kW

Maximum Operating Pressure:
700 and 800 bar

Torque Wrench Pump Selection Matrix

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

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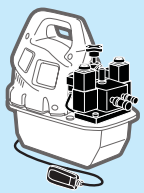
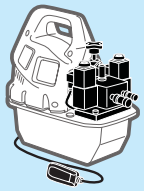
▼ SELECTION CHART

BASIC PUMP TYPES For technical information see options and specifications: *Page:* 212	Pump Type	Maximum Operating Pressure (bar)	Motor Voltage (1,25 kW)	Usable Oil Capacity (litres)	Model Number [1]	[2] (kg)
800 bar Pumps for Enerpac SQD and HXD-Series torque wrenches • Ideal for bolting applications that require remote pump and valve operation. • Motor on/off and valve control in pendant. Pressing up arrow advances wrench, releasing up arrow retracts wrench (auto cycle off). • Low-voltage control pendant with 6m cord for remote motor and valve operation.		**800**	115 V / 1ph	4,0	**ZU4204TB-E**	32
		800	115 V / 1ph	8,0	**ZU4208TB-E**	36
		800	230 V / 1ph	4,0	**ZU4204TE-E**	32
		800	230 V / 1ph	8,0	**ZU4208TE-E**	36
700 bar Pumps for all Enerpac S and W-Series and other brands of torque wrenches • Ideal for bolting applications that require remote pump and valve operation. • Motor on/off and valve control in pendant. Pressing up arrow advances wrench, releasing up arrow retracts wrench (auto cycle off). • Low-voltage control pendant with 6m cord for remote motor and valve operation.		**700**	115 V / 1ph	4,0	**ZU4204TB-Q**	32
		700	115 V / 1ph	8,0	**ZU4208TB-Q**	36
		700	230 V / 1ph	4,0	**ZU4204TE-Q**	32
		700	230 V / 1ph	8,0	**ZU4208TE-Q**	36

[1] All models meet CE safety requirements and all CSA requirements.
[2] Subtract 1 kg per litre oil for competitive weight comparison.

ZU4T-Series, Torque Wrench Pump Options

ENERPAC Hydraulic Technology Worldwide

Skidbar

- **Provides greater pump stability on soft or uneven surfaces, and easy two-hand lift.**

Accessory Kit Nr. *	Can be used on ZU4T-Series torque wrench pumps
SBZ-4	4 and 8 litres reservoir

* Add suffix **K** for factory installation. Skidbar weight 2,2 kg.

4-Wrench Manifold

- **For simultaneous operation of multiple torque wrenches**
- **Can be factory installed or ordered separately.**

Accessory Kit Nr. *	Can be used on ZU4T-Series torque wrench pumps
ZTM-UE	for 800 bar torque wrenches
ZTM-U4Q	for 700 bar torque wrenches

* Add suffix **M** for factory installation.

Heat Exchanger [2)]

- **Removes heat from the bypass oil to provide cooler operation**
- **Stabilizes oil viscosity, increasing oil life and reduces wear of pump and other hydraulic components.**

[2)] Add suffix **H** for factory installation. Heat Exchanger adds 4,1 kg to pump weight.

Thermal Transfer *		Max. pressure	Max. oil flow	Voltage
Btu/h	kJoule	(bar)	(l/min)	(VDC)
900	950	20,7	26,5	12

* At 1,9 l/min at 21 ℃ ambient temperature.

Do not exceed maximum oil flow and pressure ratings. Heat exchanger is not suitable for water-glycol or high water based fluids.

◀ *Any hydraulic torque wrench can be powered by the Enerpac ZU4T-Series torque wrench pump.*

ZU4T-Series, Ordering Matrix & Pump Specifications

▼ **This is how a ZU4T-Series pump model number is built up:**

Z	U	4	2	08	T	E	-	Q	H	M
1 Product Type	2 Motor Type	3 Flow Group	4 Valve Type	5 Reservoir Size	6 Valve Operation	7 Voltage		8 Factory installed features and options		

1 Product Type
Z = Pump Class

2 Prime Mover
U = Universal electric motor

3 Flow Group
4 = 1,0 l/min @700 bar
0,9 l/min @800 bar

4 Valve Type
2 = Torque wrench valve

5 Reservoir Size
04 = 4 litres useable oil
08 = 8 litres useable oil

6 Valve Operation
T = Solenoid valve with pendant and LCD Electric.

7 Voltage
B = 115V, 1 phase, 50/60 Hz
E [2] = 208-240V, 1 phase, 50/60 Hz (with European plug EMC)
[2] E-voltage meet all CE requirements.

8 Factory installed features & options
E 800 bar coupler for use with HXD-, SQD-Series or other wrenches
Q 700 bar coupler for use with S- and W-Series or other wrenches
H Heat exchanger
K Skidbar
M 4-wrench manifold.

ZU4T Series

Reservoir Capacity:
4 and 8 litres

Flow at Rated Pressure:
0,9 - 1,0 l/min

Motor Size:
1,25 kW

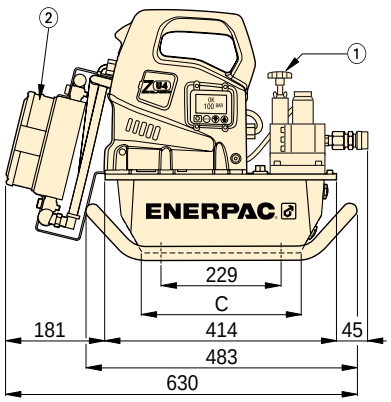
Maximum Operating Pressure:
700 and 800 bar

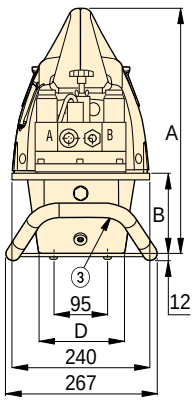
▼ **PERFORMANCE CHART**

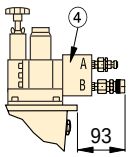
ZU4T-Series Hydraulic Torque Wrench Pumps

Motor Size (kW)	Output Flow Rate (l/min) 7 bar	50 bar	350 bar	700 bar	800 bar	Relief Valve Adjustment Range (bar)	Pump Suffix	Motor [1] Electrical Specification (Volts-ph-Hz)	Current Draw (A)
1,25	11,5	8,8	1,2	1,0	–	**70-700**	**Q**	115-1-50/60 230-1-50/60	21 11
1,25	11,5	8,8	1,2	1,0	0,9	**70-800**	**E**	115-1-50/60 230-1-50/60	24 11

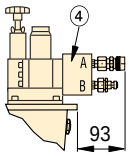
[1] Isolation- and protectionclassification IPX4 / NEMA 3R.
Sound Level 85-90 dBA.







700 bar 4-wrench manifold (Q)



800 bar 4-wrench manifold (E)

ZU4T-Series Torque Wrench Pumps

Reservoir Size (useable litres)	A	B	C	D
4,0	432	142	279	152
8,0	495	203	287	167

① User adjustable relief valve.
② Heat Exchanger.
③ Skidbar.
④ 4-wrench manifold.

How to order your ZU4T-Series torque wrench pump

Ordering Example 1
Model Nr. ZU4204TE-EHK
800 bar pump for use with Enerpac HXD and SQD-Series or other 800 bar torque wrenches, 230V motor, 4 litres reservoir, optional heat exchanger and skidbar.

Ordering Example 2
Model Nr. ZU4208TB-QMHK
700 bar pump for use with Enerpac S and W-Series and other 700 bar torque wrenches, 115V motor, 8 litres reservoir, 4 wrench manifold, heat exchanger and skidbar.

Refer to the torque wrench pump selection matrix for optimum wrench, pump and hose combinations.

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Air Driven Torque Wrench Pumps

ENERPAC Hydraulic Technology Worldwide

▼ PTA-1404

PTA Series

Reservoir Capacity:
3,8 - 8,0 litres

Flow at Rated Pressure:
0,3 - 0,5 l/min

Air Consumption:
1130 - 1840 l/min

Maximum Operating Pressure:
700 and 800 bar

- **Two-stage pump with automatic bypass for faster torque cycles**
- **Remote pendant with safety button for one-man operation**
- **Adjustable pressure relief valve for accurate torque adjustment and precise repeatability**
- **Transparent overlays in Nm and Ft.lbs, included for Enerpac torque wrenches produce accurate torque settings and precise repeatability**
- **Glycerine filled pressure gauge with scale reading in bar/psi**
- **Regulator-Filter-Lubricator provides clean, lubricated air and allows for air pressure adjustment. Steel bowl guards are standard**
- **4,5 m air pendant enables easy manoeuvering at the job site**
- **With carrying handle for easy portability.**

▼ *Enerpac PTA-3408 Torque Wrench Pump and the aluminium HXD-120 torque wrench are used to perform maintenance on an injection moulding press.*

Oil Flow Rate (l/min)		Maximum Pressure Rating (bar)		Model Number	Usable Oil Capacity	Air Consumption at 7 bar air @3000 RPM	Air Pressure Range	Motor Size	Outside Dimensions L x W x H	
1st stage	2nd stage	1st stage	2nd stage		(litres)	(l/min)	(bar)	(kW)	(mm)	(kg)
3,30	0,33	120	**700**	**PTA-1404-Q**	2,0	1130	3,4 -7,0	1,1	496 x 310 x 449	24
9,83	0,50	70	**700**	**PTA-3408-Q**	7,2	1840	3,4 -7,0	3,0	897 x 318 x 589	57
3,30	0,33	120	**800**	**PTA-1404**	2,0	1130	3,4 -7,0	1,1	496 x 310 x 449	24
9,83	0,50	70	**800**	**PTA-3408**	7,2	1840	3,4 -7,0	3,0	897 x 318 x 589	57

High Flow Air Driven Torque Wrench Pump

▼ **PMA-62480**

PMA Series

Reservoir Capacity:
8 litres

Flow at Rated Pressure:
1,8 l/min

Air Consumption:
3900 l/min

Maximum Operating Pressure:
700 and 800 bar

- **High-output air driven two-stage pump**
- **For hazardous environments where explosion proof pumps are required**
- **Adjustable pressure relief valve for accurate torque adjustment and precise repeatability**
- **Internal safety relief valve prevents accidental over-pressurization**
- **Glycerine filled pressure gauge with scale reading in bar/psi**
- **Air operated valve with remote control pendant**
- **With carrying handles for easy portability**
- **Heavy duty heat exchanger available; contact Enerpac**

Torque Wrench Pump Selection Matrix

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

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For hazardous environments where explosion proof pumps are required the air driven PMA-Series torque wrench pumps is the solution. ▶

Oil Flow Rate (l/min) 1st stage	Oil Flow Rate (l/min) 2nd stage	Maximum Pressure Rating (bar) 1st stage	Maximum Pressure Rating (bar) 2nd stage	Model Number	Usable Oil Capacity (litres)	Air Consumption at 8 bar air @3000 RPM (l/min)	Air Pressure Range (bar)	Motor Size (kW)	Outside Dimensions L x W x H (mm)	(kg)
11,0	1,8	145	**700**	**PMA-62480-Q**	7,5	3900	4 - 7	3,0	305x205x330	38
11,0	1,8	145	**800**	**PMA-62480**	7,5	3900	4 - 7	3,0	305x205x330	38

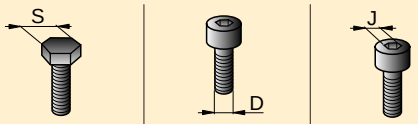
Hexagon Bolt and Nut Sizes

Determine the maximum torque according to the bolt (nut) size and grade. Always consult the manufacturers instructions or engineering recommendations when making bolted connections.

IMPORTANT

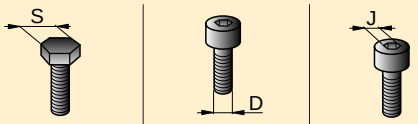
The hexagon sizes shown in the tables below should be used as a guide only. Individual sizes should be checked before specifying any equipment.

METRIC SIZES



Hexagon Size S (mm)	Thread Size D (mm)	Hexagon Size J (mm)
17	M 10	8
19	M 12	10
22	M 14	12
24	M 16	14
27	M 18	14
30	M 20	17
32	M 22	17
36	M 24	19
41	M 27	19
46	M 30	22
50	M 33	24
55	M 36	27
60	M 39	27 (30)
65	M 42	32
70	M 45	-
75	M 48	36
80	M 52	36
85	M 56	41
90	M 60	46
95	M 64	46
100	M 68	50
105	M 72	55
110	M 76	60
115	M 80	65
120	M 85	70
130	M 90	70 (75)
135	M 95	-
145	M 100	85
150	M 105	-
155	M 110	-
165	M 115	-
170	M 120	-
180	M 125	-
185	M 130	-
200	M 140	-
210	M 150	-

IMPERIAL SIZES



Hexagon Size S (inch)	Thread Size D (inch)	Hexagon Size J (inch)
$1\frac{1}{16}$”	$\frac{5}{8}$”	$\frac{1}{2}$”
$1\frac{1}{4}$”	$\frac{3}{4}$”	$\frac{5}{8}$”
$1\frac{7}{16}$”	$\frac{7}{8}$”	$\frac{3}{4}$”
$1\frac{5}{8}$”	1”	$\frac{3}{4}$”
$1\frac{13}{16}$”	$1\frac{1}{8}$”	$\frac{7}{8}$”
2”	$1\frac{1}{4}$”	$\frac{7}{8}$”
$2\frac{3}{16}$”	$1\frac{3}{8}$”	1”
$2\frac{3}{8}$”	$1\frac{1}{2}$”	1”
$2\frac{9}{16}$”	$1\frac{5}{8}$”	-
$2\frac{3}{4}$”	$1\frac{3}{4}$”	$1\frac{1}{4}$”
$2\frac{15}{16}$”	$1\frac{7}{8}$”	$1\frac{3}{8}$”
3”	2”	$1\frac{1}{2}$”
$3\frac{1}{8}$”	2”	$1\frac{5}{8}$”
$3\frac{3}{8}$”	$2\frac{1}{4}$”	$1\frac{3}{4}$”
$3\frac{1}{2}$”	$2\frac{1}{4}$”	$1\frac{3}{4}$”
$3\frac{3}{4}$”	$2\frac{1}{2}$”	$1\frac{3}{4}$”
$3\frac{7}{8}$”	$2\frac{1}{2}$”	$1\frac{7}{8}$”
$4\frac{1}{8}$”	$2\frac{3}{4}$”	2”
$4\frac{1}{4}$”	$2\frac{3}{4}$”	2”
$4\frac{5}{8}$”	3”	$2\frac{1}{4}$”
5”	$3\frac{1}{4}$”	$2\frac{1}{4}$”

Use only Heavy Duty Impact Sockets for power driven torquing equipment, according to ISO 2725 and ISO 1174; DIN 3129 and DIN 3121 or ASME-B107.2/1995.

Always make sure that the gauge template on the pump matches the torque wrench for accurate torque settings.

Torque Wrench Pump Selection Matrix

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

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