

▼ Shown: **MS210**



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



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

## 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 tons.



### More Information

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

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### MRO Wheeled Toolbox Sets

Designed to enhance job-site performance. Provides a convenient and portable solution for all your lifting, pushing or pulling requirements up to 5 - 20 tons.

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### ▼ QUICK SELECTION CHART

Capacity using attachments* (tons)	Set Model Number						Number of Attachment Components	 (lbs)
2.5	<b>MS24</b>	P142	HC7206	RC55	GP10S	GA4	33	59
2.5	<b>MSFP5</b>	P142	HC7206	RC55	GP10S	GA4	24	44
5.0	<b>MSFP10</b>	P392	HC7206	RC106	G2535L	GA3	23	105
5.0	<b>MS210</b>	P392	HC7206	RC106	GP10S	GA2	35	140
12.5	<b>MS220</b>	P392	HC7206	RC256	GP10S	GA2	13	210
5.0 - 12.5	<b>MS21020</b>	P392	HC7206	RC102, 106, 256	GP10S	GA2	53	350

\* If no attachments are being used, capacity is double these values. Maximum operating pressure is then 10,000 psi.

# 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 (5,000 psi).



## WARNING!

Only use attachments provided with set. Non-Enerpac attachments and longer extension tubes will reduce column strength, potentially creating unsafe conditions.

## MS Series



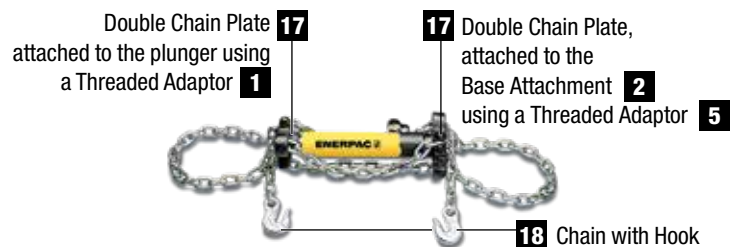
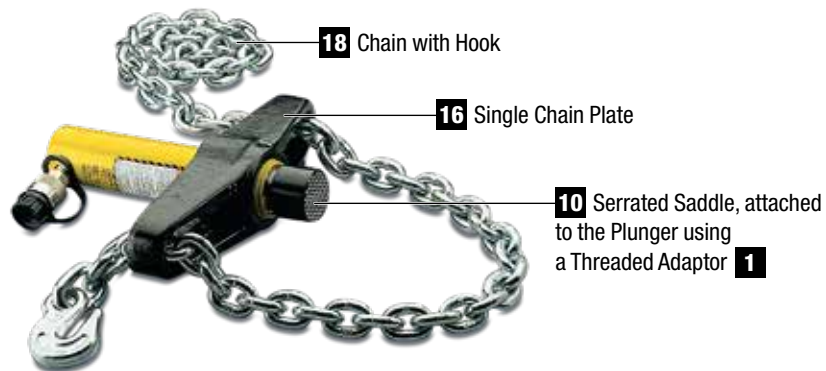
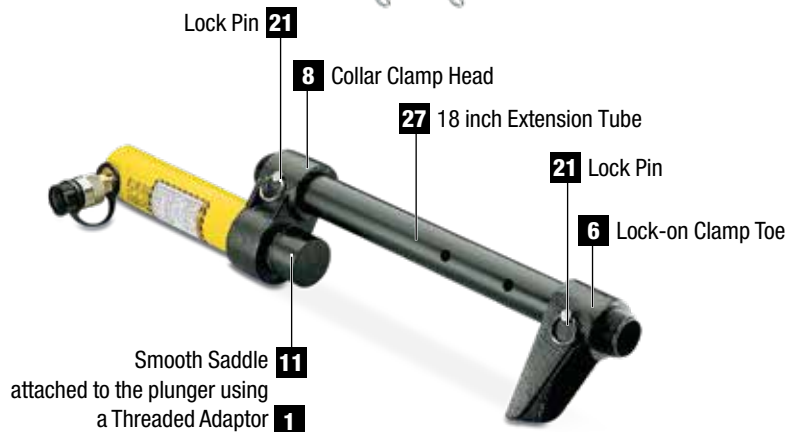
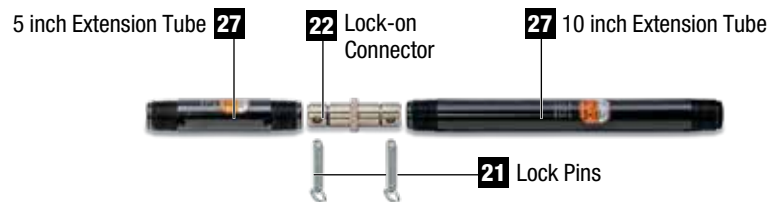
Capacity (using attachments):

**2.5 - 12.5 tons**

Maximum Operating Pressure:

**5,000 psi**

### ▼ APPLICATION EXAMPLES



# MS-Series, Maintenance Sets

**ENERPAC** 



**CAUTION!** When cylinders are used with maintenance set attachments or components, the maximum system pressure must be limited to half the rated pressure (5,000 psi).

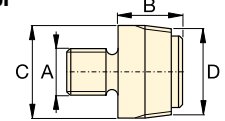
Note: All dimensions in inches.

Set Model Number	MS24	MSFP5	MSFP10	MS210	MS220	MS21020
Base, Collar and Plunger Attachments	2.5 tons	2.5 tons	5.0 tons	5.0 tons	12.5 tons	5.0 - 12.5 tons
Cylinder Model(s)	RC55	RC55	RC106	RC106	RC256	RC102, 106, 256
<b>1</b>	A23	A23	A13	A13	A28	A13, A28
<b>2</b>	A25	A25	A21	A21	A27	A21, A27
<b>3</b>	A1034	A1034	A20	A20	A595	A20, A595
<b>4</b>	MZ4010	MZ4010	A14	A14	A243	A14, A243
<b>5</b>	A545	A545	A10	A10	—	A10 (2x)
<b>6</b>	—	—	—	A8	—	A8
<b>7</b>	A530	A530	A6	A6	—	A6
<b>8</b>	MZ4011	—	—	A192	—	A192
<b>9</b>	—	—	—	A305	—	A305
<b>10</b>	A531	A531	A18	A18	—	A18
<b>11</b>	—	—	—	A185	—	A185
<b>12</b>	A532	A532	A15	A15	—	A15
<b>13</b>	—	—	—	—	A607	A607
<b>14</b>	A629	A629	A129	A129	—	A129
<b>15</b>	A539	A539	A128	A128	—	A128
Chains and Attachments for Pulling Applications	2.5 tons	2.5 tons	5.0 tons	5.0 tons	12.5 tons	5.0 - 12.5 tons
<b>16</b>	A558	—	—	A132	A238	A132, A238
<b>17</b>	—	—	—	A5 (2x)	—	A5 (2x)
<b>18</b>	A557 (2x)	—	—	A141 (2x)	A218 (2x)	A141 (2x) A18 (2x)
Extension Tubes, Connectors and Adaptors	2.5 tons	2.5 tons	5.0 tons	5.0 tons	12.5 tons	5.0 - 12.5 tons
<b>19</b>	A544	—	—	A19 (2x)	A242 (2x)	A19 (2x) A242 (2x)
<b>20</b>	WR5	WR5	WR5	A92	—	A92
<b>21</b>	MZ4013 (4x)	MZ4013 (4x)	A16 (4x)	A16 (4x)	—	A16 (4x)
<b>22</b>	MZ4007 (3x)	MZ4007 (3x)	MZ1050 (3x)	MZ1050 (2x)	—	MZ1050 (3x)
<b>23</b>	MZ4008 (2x)	—	—	MZ1051	—	MZ1051 (2x)
<b>24</b>	MZ4009	MZ4009	MZ1052	MZ1052	—	MZ1052
<b>25</b>	—	—	—	A285	—	A285
<b>26</b>	A650	—	—	—	—	—
<b>27</b> Length (inch)	3"	MZ4002	MZ4002	—	—	—
	5"	MZ4003	MZ4003	MZ1002	MZ1002	—
	10"	MZ4004	MZ4004	MZ1003	MZ1003	A239
	10"	—	—	—	—	A239
	18"	MZ4005 (2x)	MZ4005	MZ1004	A240	MZ1004 (2x)
	18"	—	—	—	—	A240
	23"	MZ4006	MZ4006	—	—	—
	30"	—	—	MZ1005	MZ1005	A241
	30"	—	—	—	—	A241
<b>28</b> Storage Case	CM6	CM6	CW166	CW166	CW166	CW750
Set Weight (lbs)	59	44	105	140	210	350



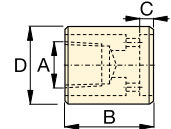
## Base, Collar and Plunger Attachments

### 1 Threaded Adaptor



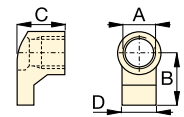
tons	Model No.	A	B	C	D
2.5	<b>A23</b>	3/4" - 16 UN	1.13	1.05	3/4" - 14 NPT
5.0	<b>A13</b>	1" - 8 UN	1.25	2.19	1 1/4" - 11 1/2 NPT
12.5	<b>A28</b>	1 1/2" - 16 UN	1.87	2.75	2" - 11 1/2 NPT

### 2 Base Attachment



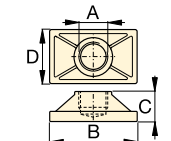
tons	Model No.	A	B	C	D
2.5	<b>A25</b>	3/4" - 14 NPT	2.00	0.50	1.75
5.0	<b>A21</b>	1 1/4" - 11 1/2 NPT	2.25	0.50	2.56
12.5	<b>A27</b>	2" - 11 1/2 NPT	2.50	0.50	3.88

### 3 Collar Toe



tons	Model No.	A	B	C	D
2.5	<b>A1034</b>	1 1/2" - 16 UN	2.13	1.97	1.25
5.0	<b>A20</b>	2 1/4" - 14 UN	3.16	2.25	2.25
12.5	<b>A595</b>	3 5/16" - 12 UN	4.06	2.03	3.18

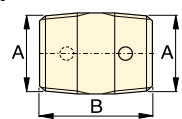
### 4 Flat Base



tons	Model No.	A	B	C	D
2.5	<b>MZ4010</b>	3/4" - 14 NPT	4.50	1.25	2.50
5.0	<b>A14</b>	1 1/4" - 11 1/2 NPT	6.50	1.38	3.50
12.5	<b>A243 *</b>	2" - 11 1/2 NPT	6.50	2.31	6.50

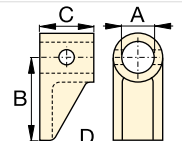
\* A243 is a round base model.

### 5 Threaded Connector



tons	Model No.	A	B
2.5	<b>A545</b>	3/4" - 14 NPT	1.38
5.0	<b>A10</b>	1 1/4" - 11 1/2 NPT	1.63

### 6 Lock-on Clamp Toe



tons	Model No.	A	B	C	D
5.0	<b>A8</b>	1.69	4.13	2.00	2.25

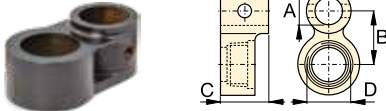
# Universal Maintenance Sets, MS-Series

## 7 Threaded Plunger Toe



tons	Model No.	A	B	C	D
2.5	<b>A530</b>	¾" - 14 NPT	2.25	1.00	1.33
5.0	<b>A6</b>	1¼" - 11½ NPT	3.12	1.25	2.25

## 8 Collar Clamp Head



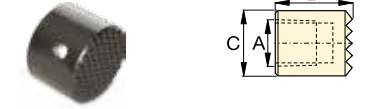
tons	Model No.	A	B	C	D
2.5	<b>MZ4011</b>	¾" - 14 NPT	1.95	3.00	1½" - 16 UN
5.0	<b>A192</b>	42	2.50	2.00	2¼" - 14 UN

## 9 Spreader Toe



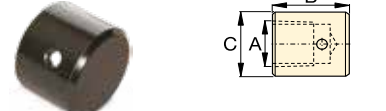
tons	Model No.	A	B	C	D
5.0	<b>A305</b>	1¼" - 11½ NPT	4.50	1.00	2.00

## 10 Serrated Saddle



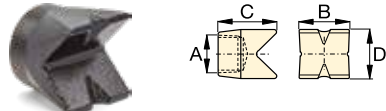
tons	Model No.	A	B	C
2.5	<b>A531</b>	¾" - 14 NPT	1.25	1.09
5.0	<b>A18</b>	1¼" - 11½ NPT	1.50	2.00

## 11 Smooth Saddle



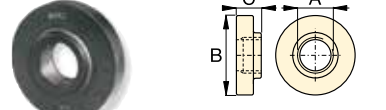
tons	Model No.	A	B	C
5.0	<b>A185</b>	1¼" - 11½ NPT	1.50	2.00

## 12 90° V-Base



tons	Model No.	A	B	C	D
2.5	<b>A532</b>	¾" - 14 NPT	1.50	1.88	1.00
5.0	<b>A15</b>	1¼" - 11½ NPT	2.13	2.25	2.13

## 13 Plunger Base



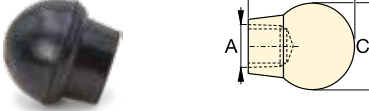
tons	Model No.	A	B	C
12.5	<b>A607</b>	2" - 11½ NPT	6.56	1.53

## 14 Wedge Head



tons	Model No.	A	B	C	D
2.5	<b>A629</b>	¾" - 14 NPT	2.75	1.31	1.13
5.0	<b>A129</b>	1¼" - 11½ NPT	4.00	2.00	1.75

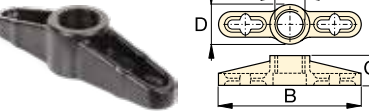
## 15 Rubber Flex Head



tons	Model No.	A	B	C
2.5	<b>A539</b>	¾" - 14 NPT	1.75	2.75
5.0	<b>A128</b>	1¼" - 11½ NPT	3.40	3.40

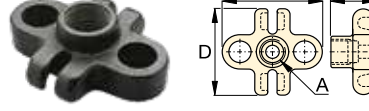
## Chains and Attachments for Pulling

### 16 Single Chain Plate



tons	Model No.	A	B	C	D
2.5	<b>A558</b>	1½" - 16 UN	7.75	1.56	1.75
5.0	<b>A132</b>	2¼" - 14 UN	12.12	2.50	3.12
12.5	<b>A238</b>	3⅝" - 12 UN	17.75	4.03	4.93

### 17 Double Chain Plate



tons	Model No.	A	B	C	D
5.0	<b>A5</b>	1¼" - 11½ NPT	6.18	2.00	4.96

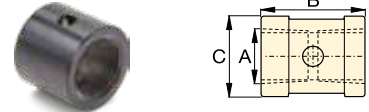
### 18 Chain with Hook



tons	Model No.	Chain Length
2.5	<b>A557</b>	5 feet
5.0	<b>A141</b>	6 feet
12.5	<b>A218</b>	8 feet

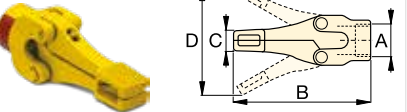
## Tubes, Connectors and Adaptors

### 19 Pipe Coupling



tons	Model No.	A	B	C
2.5	<b>A544</b>	¾" - 14 NPT	1.69	1.31
5.0	<b>A19</b>	1¼" - 11½ NPT	1.94	2.15
12.5	<b>A242</b>	2" - 11½ NPT	3.50	3.25

## 20 Spreader



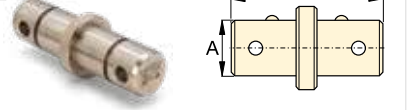
tons	Model No.	A	B	C	D
1.0	<b>WR5</b>	—	8.78	0.50	3.70
1.0	<b>A92</b>	2¼" - 14 UN	9.63	1.38	6.25

## 21 Lock Pin



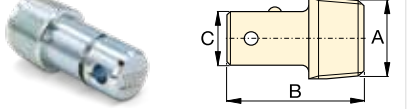
tons	Model No.	A	B
2.5	<b>MZ4013</b>	0.25	2.38
5.0	<b>A16</b>	0.44	3.25

## 22 Lock-on Connector



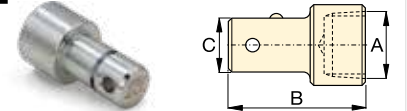
tons	Model No.	A	B
2.5	<b>MZ4007</b>	0.75	3.12
5.0	<b>MZ1050</b>	1.31	5.00

## 23 Male Lock-on Adaptor



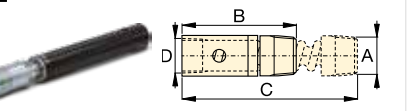
tons	Model No.	A	B	C
2.5	<b>MZ4008</b>	¾" - 14 NPT	2.38	0.75
5.0	<b>MZ1051</b>	1¼" - 11½ NPT	3.56	1.31

## 24 Female Lock-on Adaptor



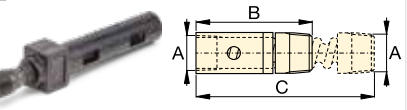
tons	Model No.	A	B	C
2.5	<b>MZ4009</b>	¾" - 14 NPT	2.56	0.75
5.0	<b>MZ1052</b>	1¼" - 11½ NPT	3.81	1.31

## 25 Adjustable Extension



tons	Model No.	A	B	C	D
5.0	<b>A285</b>	1¼" - 11½ NPT	13.20	17.37	1.30

## 26 Slip-on Extension



tons	Model No.	A	B	C
2.5	<b>A650</b>	¾" - 14 NPT	7.88	14.37