

▼ 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*	Set Model Number						Number of Attachment Components	
ton (kN)								(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



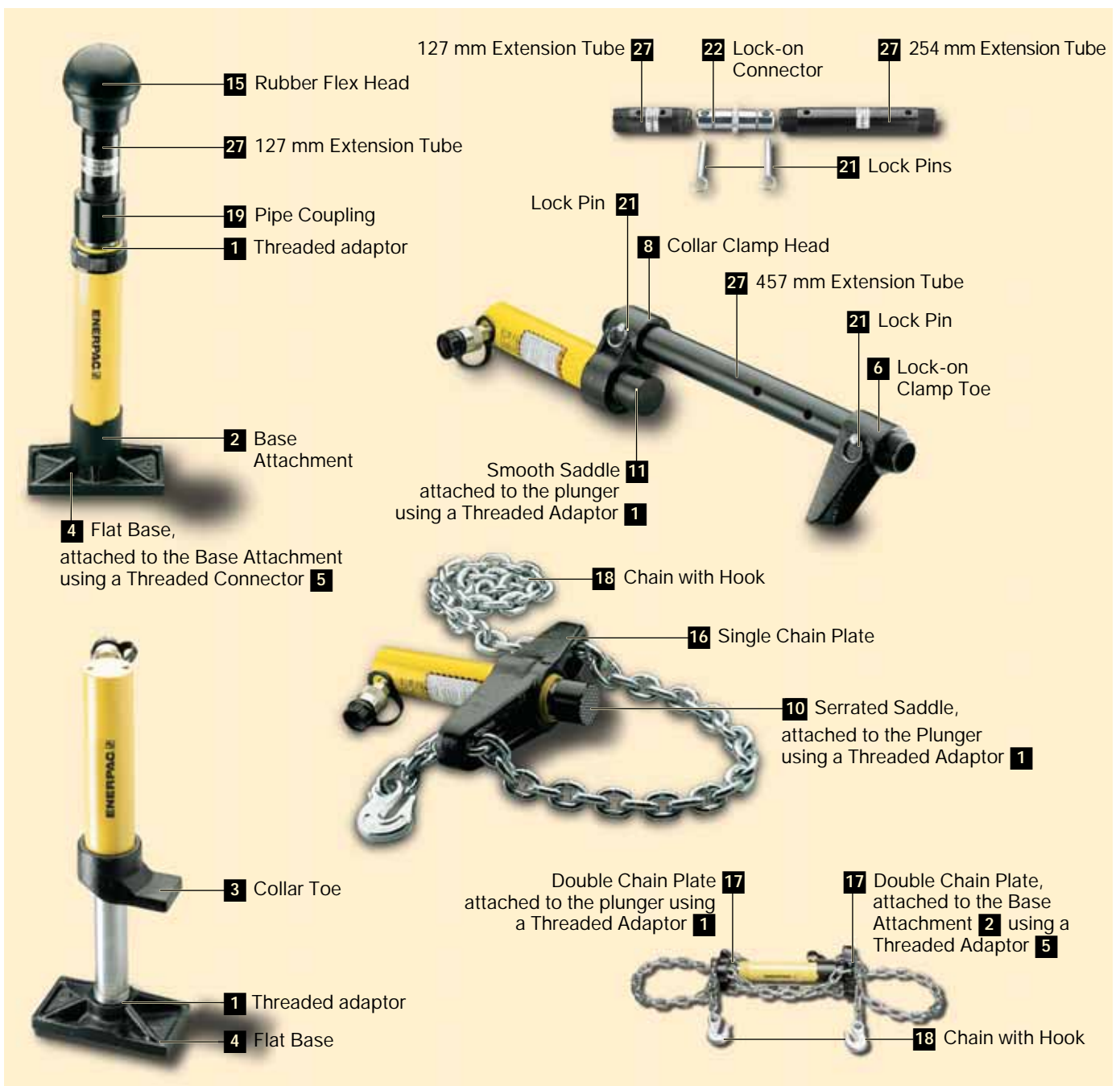
Capacity (using attachments):

**2,5 - 12,5 ton**

Maximum Operating Pressure:

**350 bar**

### ▼ APPLICATION EXAMPLES



# MS-Series, Maintenance Sets



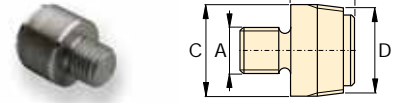
**CAUTION!** When cylinders are used with maintenance set attachments or components, the maximum system pressure must be limited to half the rated pressure (350 bar).

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	
<b>1</b>	A-23	A-23	A-13	A-13	A-28	A-13 / A-28	
<b>2</b>	A-25	A-25	A-21	A-21	A-27	A-21 / A-27	
<b>3</b>	A-1034	A-1034	A-20	A-20	A-595	A-20 / A-595	
<b>4</b>	MZ-4010	MZ-4010	A-14	A-14	A-243	A-14 / A-243	
<b>5</b>	A-545	A-545	A-10	A-10	—	A-10 (2x)	
<b>6</b>	—	—	—	A-8	—	A-8	
<b>7</b>	A-530	A-530	A-6	A-6	—	A-6	
<b>8</b>	MZ-4011	—	—	A-192	—	A-192	
<b>9</b>	—	—	—	A-305	—	A-305	
<b>10</b>	A-531	A-531	A-18	A-18	—	A-18	
<b>11</b>	—	—	—	A-185	—	A-185	
<b>12</b>	A-532	A-532	A-15	A-15	—	A-15	
<b>13</b>	—	—	—	—	A-607	A-607	
<b>14</b>	A-629	A-629	A-129	A-129	—	A-129	
<b>15</b>	A-539	A-539	A-128	A-128	—	A-128	
Chains and Attach- ments for Pulling	2,5 tons	2,5 tons	5,0 tons	5,0 tons	12,5 tons	5-12,5 tons	
<b>16</b>	A-558	—	—	A-132	A-238	A-132, -238	
<b>17</b>	—	—	—	A-5 (2x)	—	A-5 (2x)	
<b>18</b>	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	
<b>19</b>	A-544	—	—	A-19(2x)	A-242(2x)	A-19 (2x) / A-242 (2x)	
<b>20</b>	WR-5	WR-5	WR-5	A-92	—	A-92	
<b>21</b>	MZ-4013(4x)	MZ-4013 (4x)	A-16(4x)	A-16(4x)	—	A-16(4x)	
<b>22</b>	MZ-4007(3x)	MZ-4007(3x)	MZ-1050(2x)	MZ-1050 (2x)	—	MZ-1050 (3x)	
<b>23</b>	MZ-4008(2x)	—	—	MZ-1051	—	MZ-1051 (2x)	
<b>24</b>	MZ-4009	MZ-4009	MZ-1052	MZ-1052	—	MZ-1052	
<b>25</b>	—	—	—	A-285	—	A-285	
<b>26</b>	A-650	—	—	—	—	—	
<b>27</b> Length: 76mm	MZ-4002	MZ-4002	—	—	—	—	
 Ø 42,5 mm	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) and A-241
<b>28</b> 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	

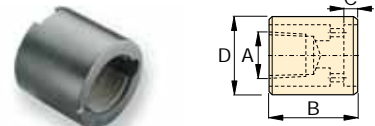
## Base/Collar/Plunger Attachments

### 1 Threaded Adaptor



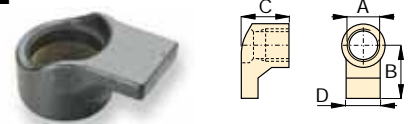
ton	Model Nr.	A	B	C	D
2,5	A-23	3/4" - 16 UN	28	26	3/4" - 14 NPT
5,0	A-13	1" - 8 UN	31	42	1 1/4" - 11 1/2 NPT
12,5	A-28	1 1/2" - 16 UN	47	69	2" - 11 1/2 NPT

### 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

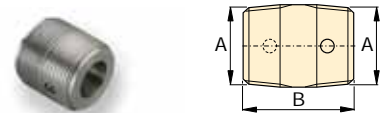
### 4 Flat Base



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

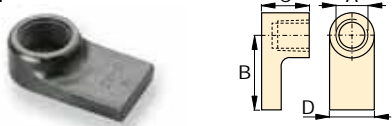
### 6 Lock-on Clamp Toe



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

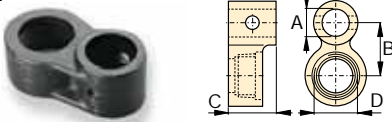
# Universal Maintenance Sets, MS-Series

**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**



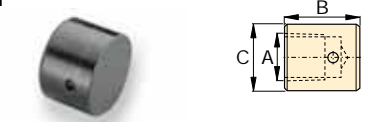
ton	Model Nr.	A	B	C	D
5,0	A-305	1 1/4" - 11 1/2 NPT	114	25	50

**10 Serrated Saddle**



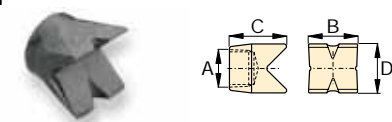
ton	Model Nr.	A	B	C
2,5	A-531	3/4" - 14 NPT	27	31
5,0	A-18	1 1/4" - 11 1/2 NPT	38	50

**11 Smooth Saddle**



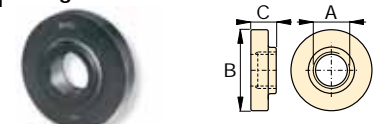
ton	Model Nr.	A	B	C
5,0	A-185	1 1/4" - 11 1/2 NPT	38	50

**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**



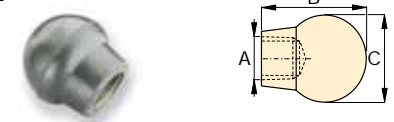
ton	Model Nr.	A	B	C
12,5	A-607	2" - 11 1/2 NPT	166	38

**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

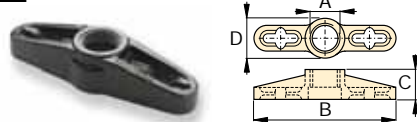
**15 Rubber Flex-Head**



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

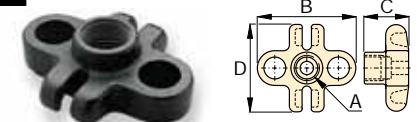
## Chains and Attachments for Pulling

**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

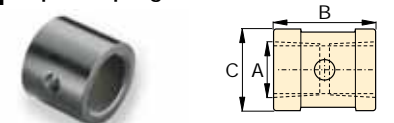
**18 Chain with Hook**



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

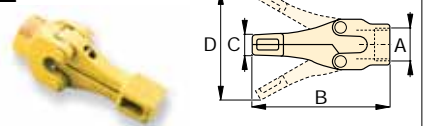
## Tubes, Connectors and Adaptors

**19 Pipe Coupling**



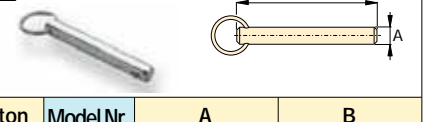
ton	Model Nr.	A	B	C
2,5	A-544	3/4" - 14 NPT	42	33
5,0	A-19	1 1/4" - 11 1/2 NPT	49	54
12,5	A-242	2" - 11 1/2 NPT	88	82

**20 Spreader**



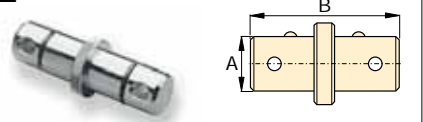
ton	Model Nr.	A	B	C	D
1,0	WR-5	—	223	12,8	94
1,0	A-92	2 1/4" - 14 UN	244	35	158

**21 Lock Pin**



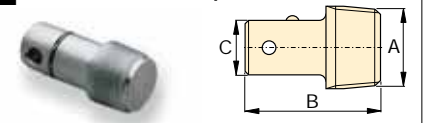
ton	Model Nr.	A	B
2,5	MZ-4013	7,9	41
5,0	A-16	11,2	82

**22 Lock-on Connector**



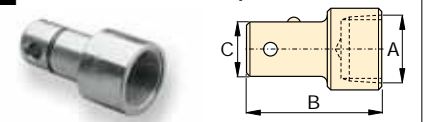
ton	Model Nr.	A	B
2,5	MZ-4007	19	79
5,0	MZ-1050	33	127

**23 Male Lock-on Adaptor**



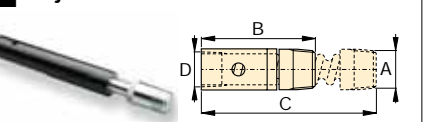
ton	Model Nr.	A	B	C
2,5	MZ-4008	3/4" - 14 NPT	60	19
5,0	MZ-1051	1 1/4" - 11 1/2 NPT	90	33

**24 Female Lock-on Adaptor**



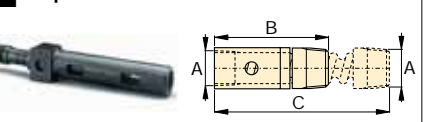
ton	Model Nr.	A	B	C
2,5	MZ-4009	3/4" - 14 NPT	65	19
5,0	MZ-1052	1 1/4" - 11 1/2 NPT	96	33

**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