## 2. CONVENTIONAL TOOLS

# ADJUSTABLE WRENCHES, PIPE WRENCHES and GEAR **PULLERS**



CAUTION

#### Adjustable wrenches

etc.

- · Firmly adjust the mouth to the width of the bolts and nuts.
- Turn towards the lower jaw.
- Do not use by adding on pipes, etc.
  Do not use this tool as a hammer.
- · Do not apply strong impact on this tool by hitting it with a hammer,

#### Pipe wrenches

- Use this tool within the range of the outer diameter of the pipe being held.
   Firmly hold the wrench perpendicular to the pipe and hold firmly at the center.
  - Do not apply force sideways.
  - Do not use by adding on pipes, etc.
  - Do not use this tool as a hammer.
  - Do not apply strong impact on this tool by hitting it with a hammer, etc.
    Do not use when the teeth are chipped or worn, or when blocking has occurred.

ADJUSTABLE WRENCH





TCH FIRMLY THE DEEP END THE MOUTH

ADJUSTABLE WRENCH									
No.	Nominal	Opening	<b>T</b> 1	T <sub>2</sub>	в	L	▼g	₿	
WM-150	150	25	5.5	11	51.7	164.5	140	10	
-200	200	30	6.5	13	63.5	213	240	10	
-250	250	35	8.5	14.5	75	263	380	10	
-300	300	43	10	18.5	91.5	316	670	5	

### ADJUSTABLE WRENCH



No.	Nominal	Opening	T <sub>1</sub>	T <sub>2</sub>	L	▼g	E9
MWA-150	150	20	6.7	11	158	120	6
-200	200	24	7.5	12.9	208	235	6
-250	250	29	8.7	15.32	258	380	6
-300	300	34	10.2	18.24	308	590	6
-375	375	44	13.4	23.5	375	1,300	1
-450	450	55	14	25.6	450	2,200	1

#### 22°30' D Thin Style T<sub>2</sub> T<sub>1</sub> T Opening

No.	Nominal	Max. Dia. of Pipe	L	▼g	Ø	
PWA-150	150( 6″)	<sup>3</sup> ⁄ <sub>4</sub> ″(19)	150	185	6	
-200	200( 8″)	3⁄4″(20)	185	350	5	
-250	250(10")	1″ (26)	245	750	5	
-300	300(12")	11/4"(32)	300	1,100	5	
-350	350(14")	11/2"(38)	325	1,300	5	
-450	450(18″)	2″ (52)	410	2,100	5	
-600	600(24")	$2^{1}/2^{2}$ (65)	540	3,800	1	
-900	900(36")	33/4"(95)	780	7,300	1	

heat-treatment to enhance strength and endurance. Upper and lower jaws have well-engaging teeth and are processed with induction heat-treatment for superior strength.

PIPE WRENCH		PIPE WRENCH			
		No.	Nominal	Max. Dia. of Pipe	L
		PWA-150	150(6″)	<sup>3</sup> ⁄ <sub>4</sub> ″(19)	150
- ANN		-200	200(8″)	3⁄4″(20)	185
		-250	250(10")	1″ (26)	245
		-300	300(12~)	1 <sup>1</sup> / <sub>4</sub> "(32)	300
		-350	350(14")	1 <sup>1</sup> ⁄ <sub>2</sub> ″(38)	325
		-450	450(18")	2″ (52)	410
	Contraction of the	-600	600(24")	21/2"(65)	540
	×	-900 • Upper jaw screw heat-treatment t	900(36") ws have trapezo o enhance stren	3 <sup>3</sup> /4"(95)	780 re processed
	×		ws have trapezo o enhance stren er jaws have well perior strength.	3 <sup>3</sup> /4"(95)	re processed
LUMINUM PIPE WRENCH		<ul> <li>Upper jaw screwheat-treatment t</li> <li>Upper and lowetreatment for su</li> </ul>	ws have trapezo o enhance stren er jaws have well perior strength.	3 <sup>3</sup> /4"(95)	re processed
LUMINUM PIPE WRENCH		Upper jaw scree heat-treatment t Upper and lowe treatment for su	ws have trapezo o enhance stren r jaws have well perior strength. PE WRENCH	3 <sup>3</sup> / <sub>4</sub> "(95) idal shape and a ogth and enduran -engaging teeth Max. Dia. of	re processed
MINUM PIPE WRENCH		Upper jaw screy heat-treatment t Upper and lowe treatment for su	ws have trapezo o enhance stren r jaws have well perior strength. PE WRENCH Nominal	33/4"(95) idal shape and a ogth and enduran -engaging teeth Max. Dia. of Pipe	re processed ice. and are proce
NINUM PIPE WRENCH		Upper jaw scree heat-treatment to Upper and lowe treatment for su     ALUMINUM PI     No.     APWA -350	ws have trapezo o enhance strem perior strength. PE WRENCH Nominal 350(14~)	3 <sup>3</sup> / <sub>4</sub> "(95) idal shape and a ight and enduran -engaging teeth Max. Dia. of Pipe 1 <sup>1</sup> / <sub>2</sub> "(38)	re processed ice. and are proce L 325

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1,000 5

1.600 5

2,500

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