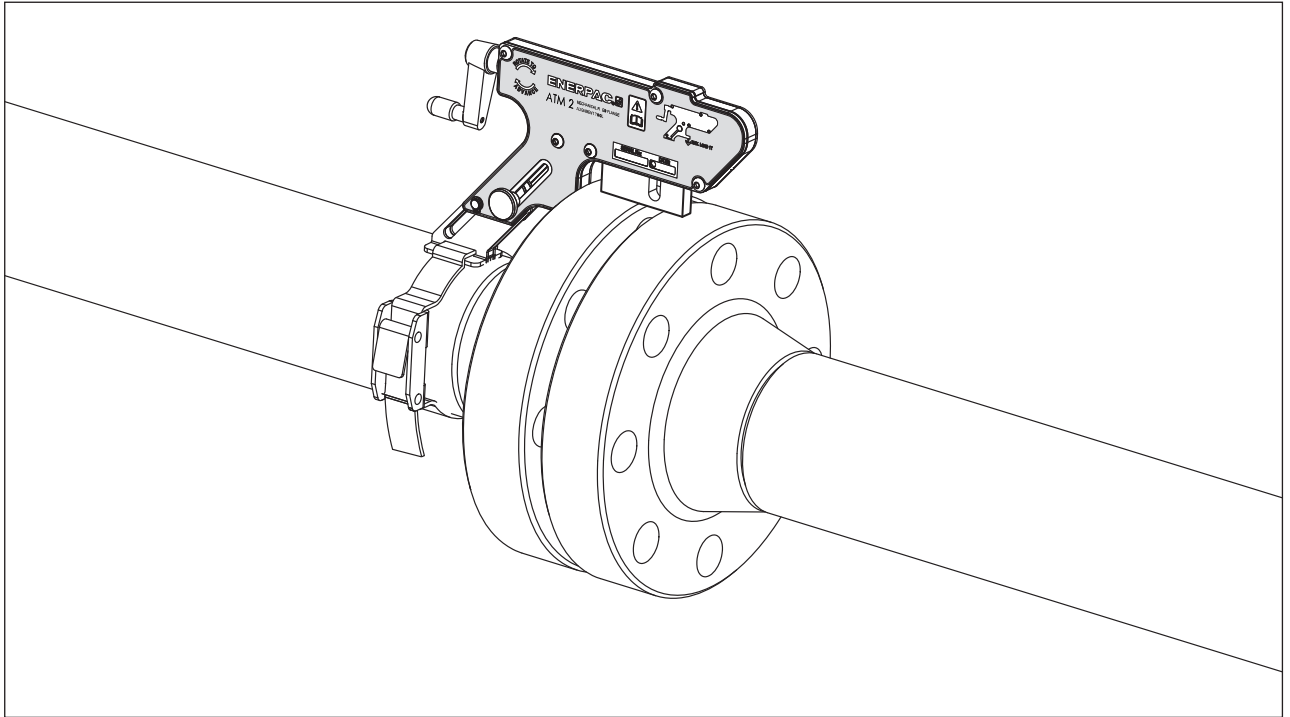


L4060

Rev. C

09/19



Paragraph

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Para outros idiomas consulte www.enerpac.com.

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1.0 RECEIVING INSTRUCTIONS

Visually inspect all components for shipping damage. Shipping damage is not covered by warranty. If shipping damage is found notify carrier at once. The carrier is responsible for all repair and replacement costs resulting from damage in shipment.

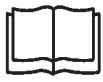
SAFETY FIRST

Read all instructions, warnings and cautions carefully. Follow all safety precautions to avoid personal injury or property damage during system operation. Enerpac cannot be responsible for damage or injury resulting from unsafe product use, lack of maintenance or incorrect product and/or system operation. Contact Enerpac when in doubt as to the safety precautions and applications.

A **CAUTION** is used to indicate correct operating or maintenance procedures and practices to prevent damage to, or destruction of equipment or other property

A **WARNING** indicates a potential danger that requires correct procedures or practices to avoid personal injury.

2.0 SAFETY ISSUES



Failure to comply with the following cautions and warnings could cause equipment damage and personal injury.



IMPORTANT: Minimum age of the operator must be 18 years. The operator must have read and understood all instructions, safety issues, cautions and warnings before starting to operate the Enerpac equipment. The operator is responsible for this activity towards other persons.



CAUTION: Make sure that all system components are protected from external sources of damage, such as excessive heat, flame, moving machine parts, sharp edges and corrosive chemicals.



WARNING: Immediately replace worn or damaged parts with genuine Enerpac parts. Enerpac parts are designed to fit properly and withstand rated loads.



WARNING: Always wear safety glasses. The operator must take precaution against injury due to failure of the tool or workpiece



We recommend the use of special loosening liquids or sprays. Enerpac hydraulic torque wrenches offer both square and hexagon drive units to loosen or tighten bolts and nuts. Enerpac offers nut splitters in case a nut can not be removed.

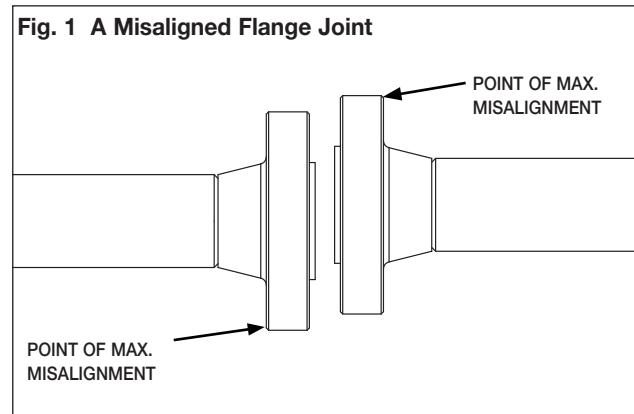


WARNING: Never attach the ATM-2 to a joint until after the flange bolts have been loosened and removed. Overloading may occur if bolts are removed while the tool is installed, and the resulting force is greater than the safe working load of the tool.

3.0 PRODUCT DESCRIPTION

The ATM-2 Alignment Tool has been developed as the simple solution to small, low-pressure flange misalignment.

Misalignment of flange joints often occurs when they are broken-down for testing, routine maintenance, or during shutdowns. Also during a construction phase when new pipe is being installed, final alignment may be required. Current methods of flange manipulation tend to be dangerous involving a high degree of manual lifting and can damage the bolt holes.

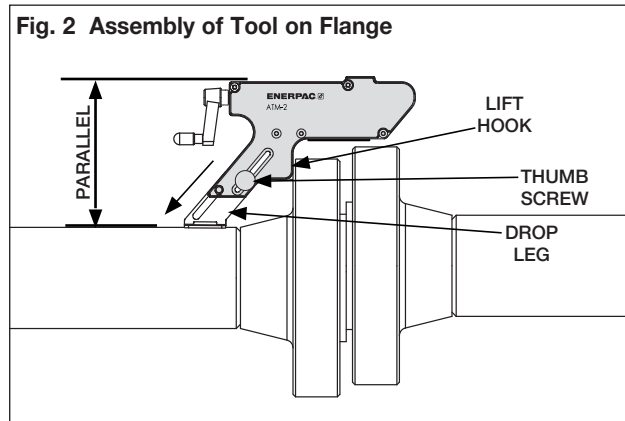


The Enerpac ATM-2 Alignment Tool has been designed as the simple solution. It is:

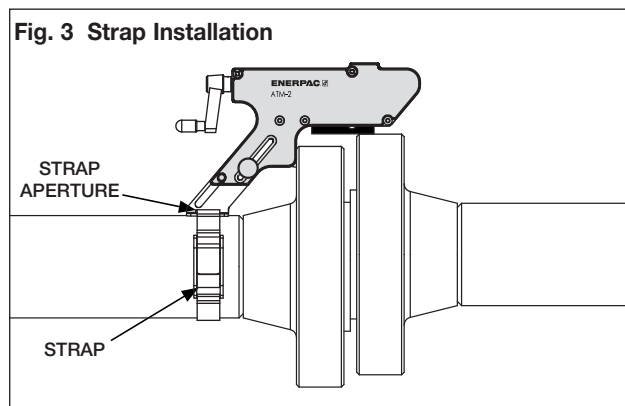
- Safe
- Easy to use
- Will not cause damage
- Capable of supplying a 1 ton [10 kN] load
- Can be used on many popular flange sizes

4.0 OPERATING INSTRUCTIONS

1. Determine the maximum point of misalignment.
2. Guide the lift hook of the tool into the bolt hole at the maximum point of misalignment. The drop leg should be released and lowered onto the pipe while the hook is held level in the bolt hole. It then must be secured in position by tightening the thumb screw. See Fig. 2.



3. Rotate the screw handle clockwise until the driven wedge makes contact with the opposite flange. Thread the strap through the aperture on the base of the drop leg, feed the end of the strap through the buckle, and close the clasp. See Fig. 3.

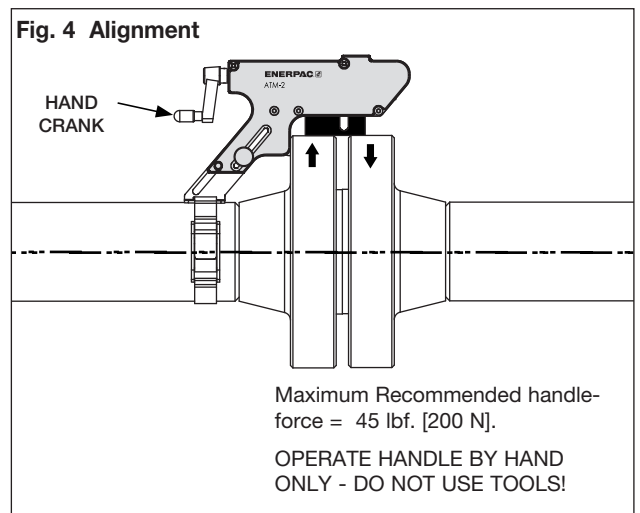


4. Rotate the screw handle clockwise until alignment is achieved. See Fig. 4.



WARNING: Do not exceed 45 lbf. [200 N] hand pressure on the screw handle. Handle may break if greater force is exerted. Never use tools to turn the handle.

5. When alignment is completed, the flange bolts may be inserted and tightened. After replacing all of the bolts in all open bolt holes (except for the bolt hole in which the tool lift hook is inserted), remove the tool by reversing steps 1 through 4.



6. After removing the tool from the flange, install the last flange bolt in the remaining bolt hole.

5.0 EXAMINATION - MAINTENANCE

- After finishing the job and before the tool is placed back into service, the completeness of the ATM-2 tool must be established and items examined to ensure that they are serviceable.
- Any missing or damaged items are to be replaced as soon as possible and prior to the tool being used again.
- Grease all moving parts regularly with Mobilgrease XHP™ 222 Special grease. Refer to Section 6.0.
- Return all items to the carrying case when not in use.

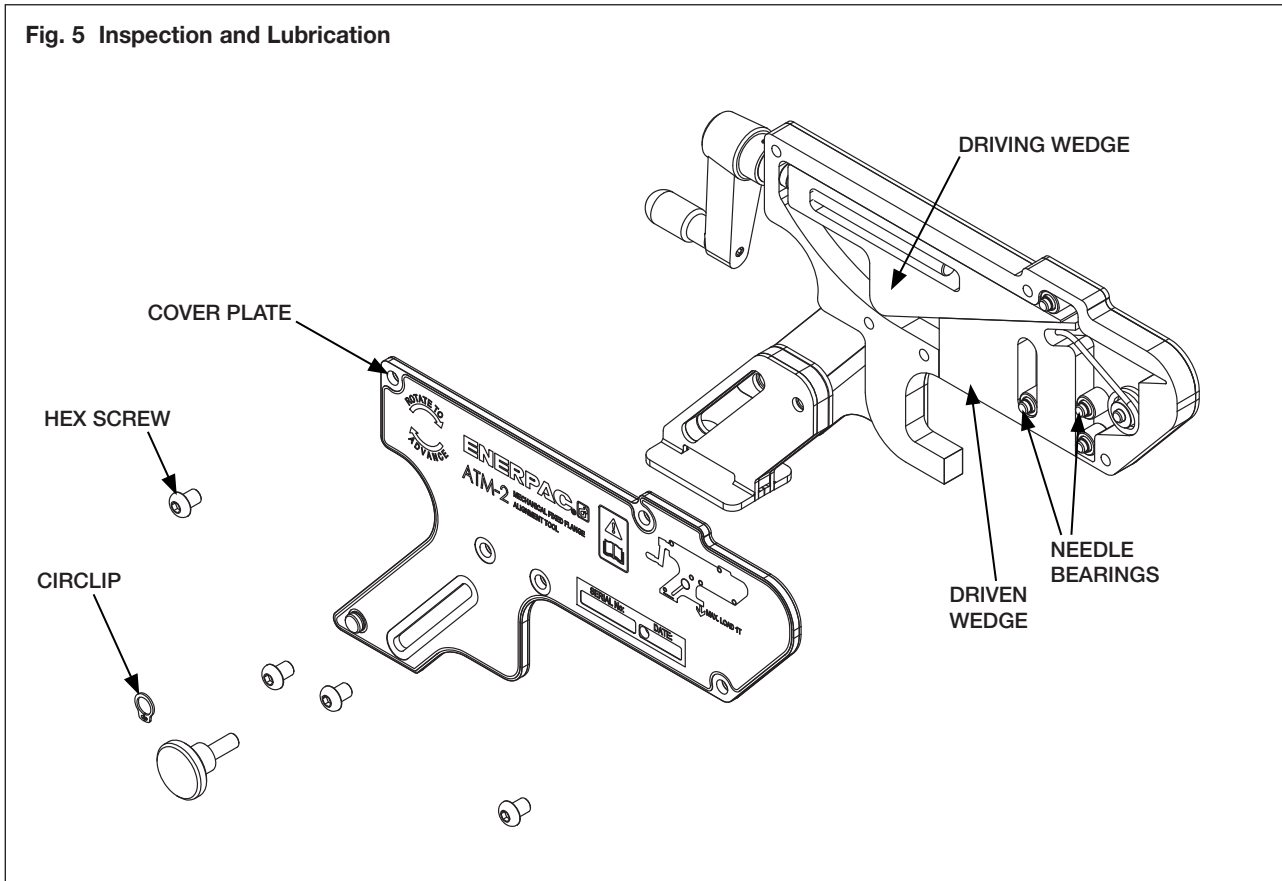
6.0 INSPECTION AND LUBRICATION

(See Fig. 5 on next page)

- STEP 1. Place tool flat on work bench.
- STEP 2. Using a small, flat screwdriver, remove circlip. Then, remove five 4mm hex screws.
- STEP 3. Remove cover plate and remove any dirt or corrosion from moving parts.
- STEP 4. Inspect components for wear and damage. Replace as required. If no damage is present, then grease and reassemble parts by reversing steps 1 through 4.

Note: Use Mobilgrease XHP™ 222 Special grease or an equivalent good quality high load bearing grease.

Fig. 5 Inspection and Lubrication



7.0 TROUBLESHOOTING

PROBLEM: THE TOOL IS ATTACHED AND APPEARS TO BE FUNCTIONING PROPERLY, BUT THE JOINT WILL NOT ALIGN.

CAUSE: Hidden obstruction on the joint or surrounding pipe or the load required to align the joint is greater than that of the ATM-2 (i.e. 1 Ton [10 kN]).

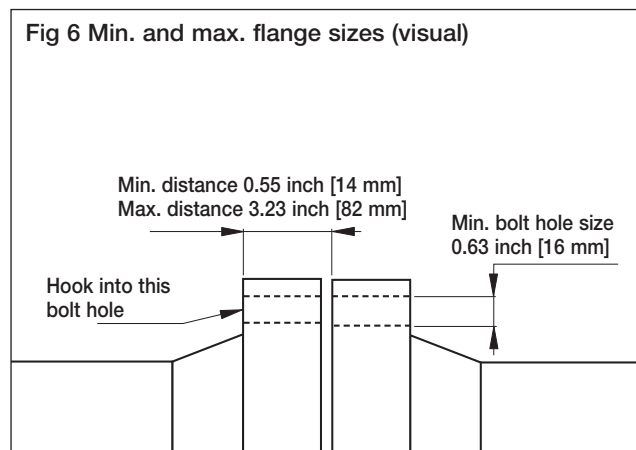
SOLUTION:

- Check the area around the joint for obstructions.
- It may be that the required pressure to align the joint is greater than the 1 ton [10 kN] capacity of the tool. In this instance another method to align the joint should be adopted.

8.0 STORAGE

- The ATM-2 should be stored in a cool dry place.
- Machined surfaces are to be smeared with Mobilgrease XHP™ 222 Special grease or an equivalent good quality high load bearing grease.

9.0 APPLICATION DIMENSIONS



10.0 RANGE OF APPLICATION TABLES

10.1 BS10 Flange Range of Application

CLASS A	NPS	3 1/2"	4"	5"	6"	7"	8"	9"	10"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	26"	27"	29"	30"	33"	35"	36"	39"	42"	45"	48"	54"	60"	66"	72"				
CLASS D	TOOL	ATM-2																																							
CLASS D	NPS	4"	5"	6"	7"	8"	9"	10"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	29"	30"	33"	35"	36"	39"	42"	45"	48"	54"	60"	66"	72"	78"	84"	96"	108"	120"		
CLASS E	TOOL	ATM-2																																							
CLASS E	NPS	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	7"	8"	9"	10"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	27"	29"	30"	33"	35"	36"	39"	42"	45"	48"				
CLASS F	TOOL	ATM-2																																							
CLASS F	NPS	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	7"	8"	9"	10"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	27"	29"	30"	33"	35"	36"	39"	42"	45"	48"				
CLASS H	TOOL	ATM-2																																							
CLASS H	NPS	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	7"	8"	9"	10"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	27"	29"	30"	33"	35"	36"	39"	42"	45"	48"				
CLASS J	TOOL	ATM-2																																							
CLASS J	NPS	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	7"	8"	9"	10"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	27"	29"	30"	33"	35"	36"	39"	42"	45"	48"				
CLASS K	TOOL	ATM-2																																							
CLASS K	NPS	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	7"	8"	9"	10"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	27"	29"	30"	33"	35"	36"	39"	42"	45"	48"			
CLASS R	TOOL	ATM-2																																							
CLASS R	NPS	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	7"	8"	9"	10"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	27"	29"	30"	33"	35"	36"	39"	42"	45"	48"			
CLASS S	TOOL	ATM-2																																							
CLASS S	NPS	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	7"	8"	9"	10"	11"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	27"	29"	30"	33"	35"	36"	39"	42"	45"	48"
CLASS T	TOOL	ATM-2																																							
CLASS T	NPS	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	7"	8"	9"	10"	11"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	27"	29"	30"	33"	35"	36"	39"	42"	45"	48"
CLASS T	TOOL	ATM-2																																							

SUITABLE FOR ENERPAC ATM-2 TOOL
SUITABLE FOR ENERPAC ATM-4 TOOL
SUITABLE FOR ENERPAC ATM-9 TOOL
NOT SUITABLE FOR ANY ENERPAC ATM TOOL

Note: Models ATM-4 and ATM-9 shown for reference purposes only.

10.2 API6BX Weld Neck Flange Range of Application

CLASS 2K	NPS	1 1/3-16"	2 1-16"	2 9-16"	3 1-8"	4 1-16"	5 1-8"	7 1-16"	9"	11"	13 5-8"	16 3-4"	
CLASS 2K	TOOL	ATM-2											
CLASS 3K	NPS	1 1/3-16"	2 1-16"	2 9-16"	3 1-8"	4 1-16"	5 1-8"	7 1-16"	9"	11"	13 5-8"	16 3-4"	
CLASS 3K	TOOL	ATM-2											
CLASS 6K	NPS	1 1/3-16"	2 1-16"	2 9-16"	3 1-8"	4 1-16"	5 1-8"	7 1-16"	9"	11"	13 5-8"	16 3-4"	
CLASS 6K	TOOL	ATM-4											

10.3 API6B Weld Neck Flange Range of Application

CLASS 2K	NPS	2 1-16"	2 9-16"	3 1-8"	4 1-16"	5 1-8"	7 1-16"	9"	11"	13 5-8"	16 3-4"	21 1-4"	
CLASS 2K	TOOL	ATM-2											
CLASS 3K	NPS	2 1-16"	2 9-16"	3 1-8"	4 1-16"	5 1-8"	7 1-16"	9"	11"	13 5-8"	16 3-4"	21 1-4"	
CLASS 3K	TOOL	ATM-2											
CLASS 6K	NPS	2 1-16"	2 9-16"	3 1-8"	4 1-16"	5 1-8"	7 1-16"	9"	11"	13 5-8"	16 3-4"	21 1-4"	
CLASS 6K	TOOL	ATM-2											

10.0 RANGE OF APPLICATION TABLES (Continued)

10.4 ASME B16.5 Flange Range of Application

CLASS 150	NPS	3/4"	1"	1 1/4"	1 1/2"	2"	3"	3 1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
	TOOL	ATM-2																	
CLASS 300	NPS	3/4"	1"	1 1/4"	1 1/2"	2"	3"	3 1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
	TOOL	ATM-2																	
CLASS 400	NPS	3/4"	1"	1 1/4"	1 1/2"	2"	3"	3 1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
	TOOL	ATM-2																	
CLASS 600	NPS	3/4"	1"	1 1/4"	1 1/2"	2"	3"	3 1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
	TOOL	ATM-2																	
CLASS 900	NPS	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
	TOOL	ATM-4																	
CLASS 1500	NPS	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
	TOOL	ATM-4																	
CLASS 2500	NPS	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
	TOOL	ATM-4																	

10.6 ASME B16.47 Flange Range of Application

CLASS 150	NPS	22"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
	TOOL	ATM-4												
CLASS 300	NPS	22"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
	TOOL	ATM-4												
CLASS 400	NPS	22"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
	TOOL	ATM-4												
CLASS 600	NPS	22"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
	TOOL	ATM-4												
CLASS 900	NPS	22"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
	TOOL	ATM-9												

10.5 DIN Weld Neck Flange Range of Application

CLASS PN16	NPS	1 1/2"	2"	3"	4"	5"	6"	7"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	40"	48"	56"	72"	80"	
	TOOL	ATM-2																							
CLASS PN25	NPS	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	3"	4"	5"	6"	7"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	40"	
	TOOL	ATM-2																							
CLASS PN40	NPS	1 1/2"	2"	3"	4"	5"	6"	7"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	40"	48"	56"	72"	80"	
	TOOL	ATM-2																							
CLASS PN54	NPS	3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	7"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	40"	48"	56"	72"
	TOOL	ATM-2																							
CLASS PN100	NPS	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	7"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	40"	48"	
	TOOL	ATM-2																							
CLASS PN160	NPS	3/8"	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	7"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	40"	
	TOOL	ATM-2																							

	SUITABLE FOR ENERPAC ATM-2 TOOL
	SUITABLE FOR ENERPAC ATM-4 TOOL
	SUITABLE FOR ENERPAC ATM-9 TOOL
	NOT SUITABLE FOR ANY ENERPAC ATM TOOL

Note: Models ATM-4 and ATM-9 shown for reference purposes only.

10.0 RANGE OF APPLICATION TABLES (Continued)

10.7 SPO Flange Range of Application

CLASS	TOOL/NIPS	2 1/2"	3	3 1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
CLASS 150	TOOL	ATM-2												ATM-4														
CLASS 300	TOOL/NIPS	2 1/2"	3	3 1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
CLASS 600	TOOL	ATM-2												ATM-9														
CLASS 900	TOOL/NIPS	2 1/2"	3	3 1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
CLASS 1500	TOOL	ATM-4												ATM-9														
CLASS 2500	TOOL/NIPS	2 1/2"	3	3 1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
CLASS 5000	TOOL	ATM-4												ATM-9														
CLASS 7500	TOOL/NIPS	2 1/2"	3	3 1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
CLASS 10000	TOOL	ATM-4												ATM-9														
CLASS 15000	TOOL/NIPS	2 1/2"	3	3 1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"
CLASS 15000	TOOL	ATM-4												ATM-9														

	SUITABLE FOR ENERPAC ATM-2 TOOL
	SUITABLE FOR ENERPAC ATM-4 TOOL
	SUITABLE FOR ENERPAC ATM-9 TOOL
	NOT SUITABLE FOR ANY ENERPAC ATM TOOL

Note: Models ATM-4 and ATM-9 shown for reference purposes only.

11.0 WEIGHTS AND DIMENSIONS

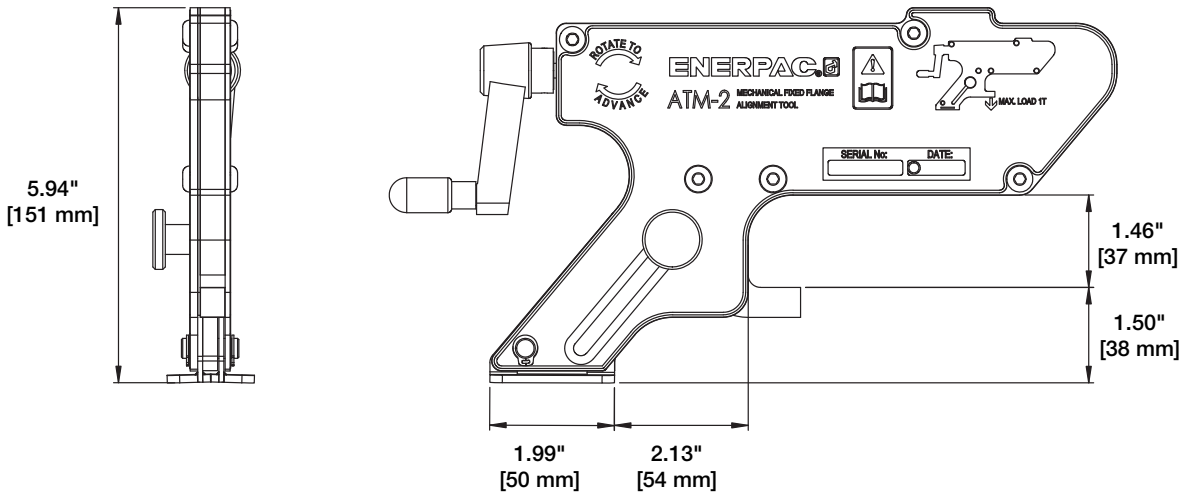
WEIGHTS

Note: Weights shown are approximate.

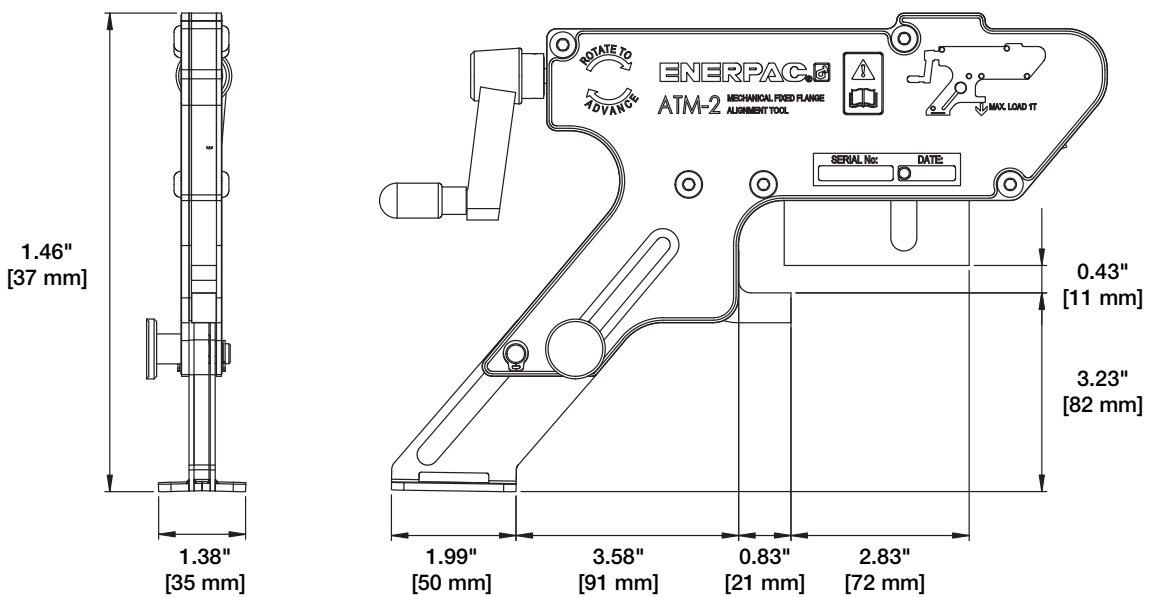
Tool, ratchet and strap	4.4 lbs [2,0 kg]
Box, packing and instruction manual	0.9 lbs [0,4 kg]

DIMENSIONS

Minimum Extension



Maximum Extension



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