

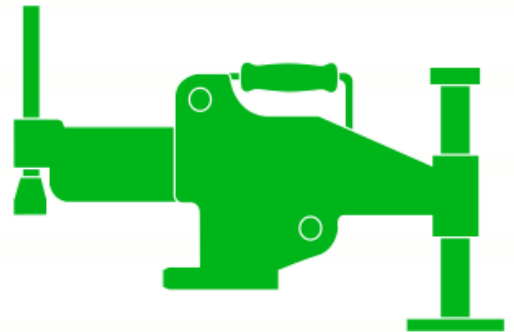


RenQuip

OPERATION MANUAL

FSW17P

**Hydraulic Flange
Spreading Wedge**



Engineered Energy Equipment

www.renquip.com



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1.0 Introduction

The RenQuip FSW range of Flange Spreading Wedges are designed to open flange joints with a minimum access gap of 6mm. The Jaws of the tools open in a parallel motion which maintains a safe, full step contact between the tool and the flange.

The parallel Jaw motion also ensures spreading forces are perpendicular to the flange face.

It is highly recommended that 2 or more Flange Spreading Wedges are used together to maintain a parallel Flange joint gap during spreading.

2.0 Safety Information

User Safety



1. The User must be competent in Operating High Pressure Hydraulic Equipment.
2. The User must read and understand the relevant Instruction Manual for the Equipment.
3. The User must wear the correct Personal Protective Equipment .
4. Do not lift or hold pressurised equipment

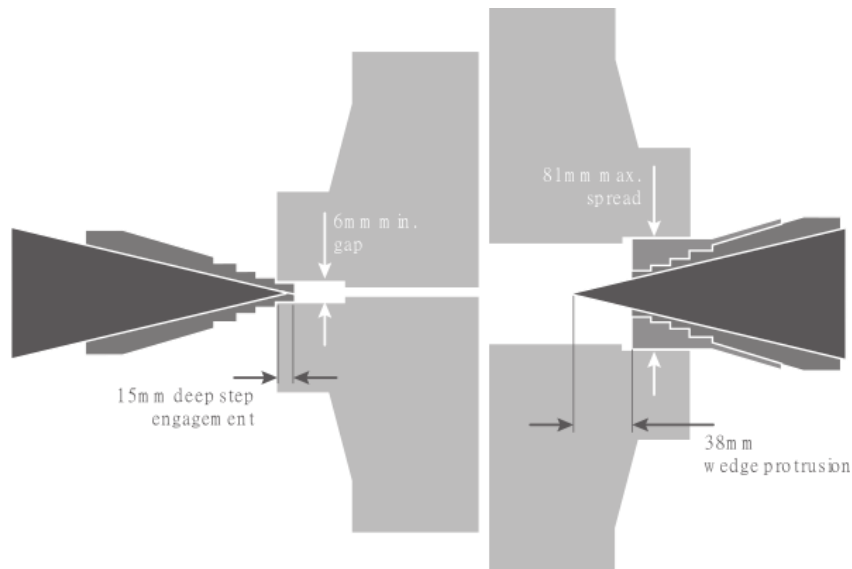
Equipment Safety



1. Inspect all equipment prior to use for any signs of damage or wear.
2. Ensure all components have a safe working pressure of 10,000psi (700Bar).
3. Do not pressurise equipment over its safe working pressure.
4. Never insert fingers or hands into an open flange joint.
5. Ensure the working area is free from hazards to the equipment such as sharp objects, heat sources , moving machinery or vehicles.
6. Carry / transport equipment by the handles / cases provided.
7. Store Equipment in a cool dry environment .
8. Ensure the correct oil is used in the hydraulic system and maintenance procedures are followed.

3.0 Technical Specification

Application Diagram



Max Spreading Force: 163Kn

Max working Pressure : 10,000psi / 700 Bar

Model : FSW17P

Kit weight: 13Kg

Kit Dims.: 580mm x 340mm x 180mm

Tool Weight: 8.5Kg

Tool Dims.: 76mm x 155mm x 440mm

Product ordering code: FSW17P

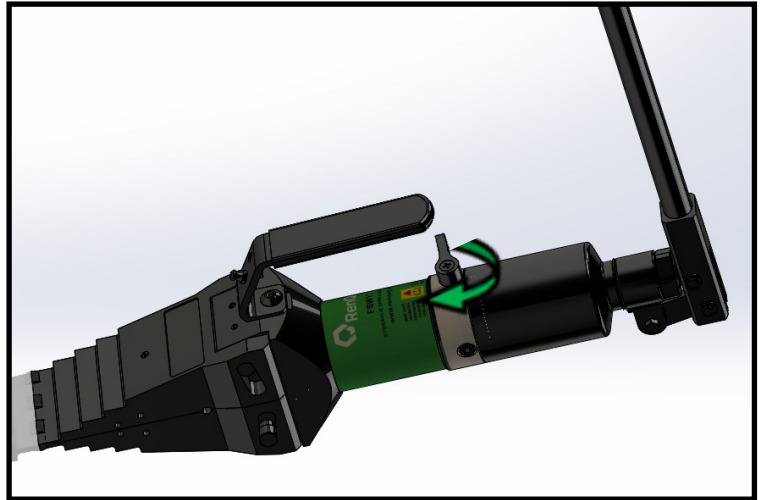
Kit Content

- 1 x FSW17P Tool with combined hydraulic cylinder and pump unit
- 1 x Pump Actuating Handle
- 1 x Safety Block
- 1 x Safety Lanyard
- 2x Stepped Blocks with securing screws and allen key
- 1 x Instruction Manual
- 1 x Robust moulded carry case

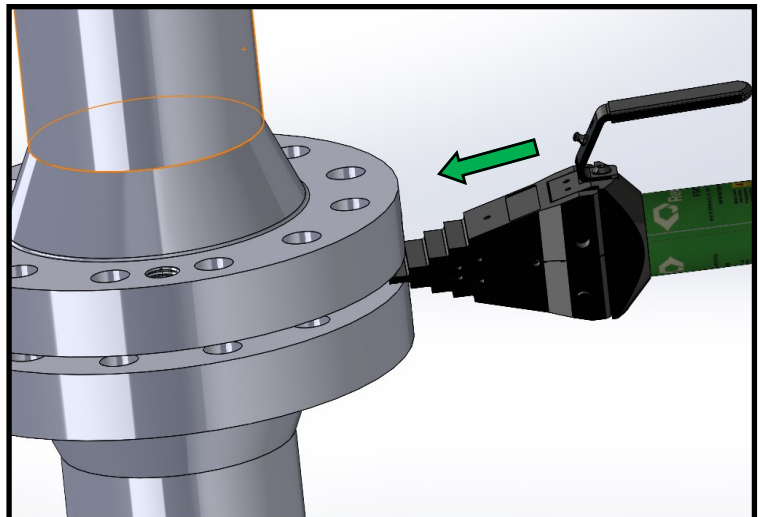


4.0 Operation of the FSW 17P Tool

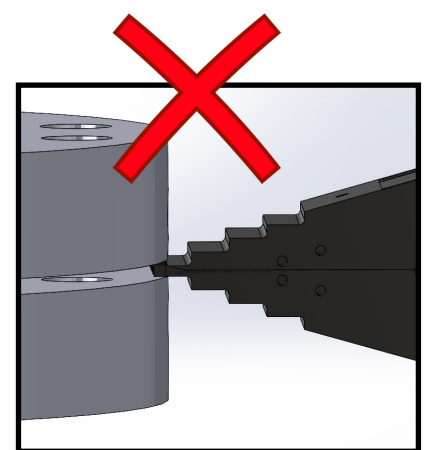
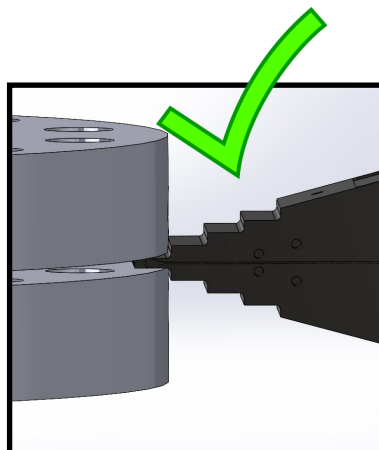
1. Close the pressure release valve on the tool.



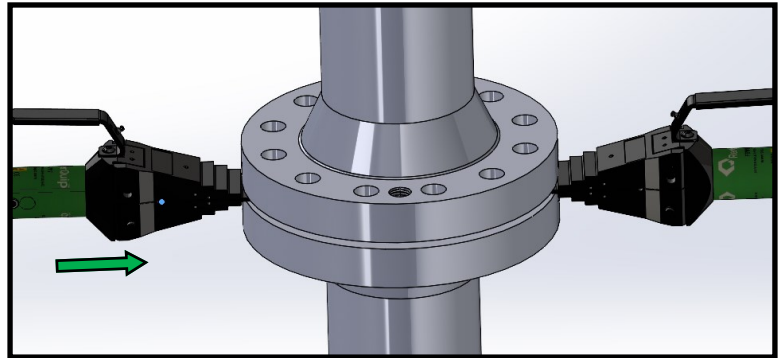
2. Insert the FSW17P in to the Flange Joint access gap.



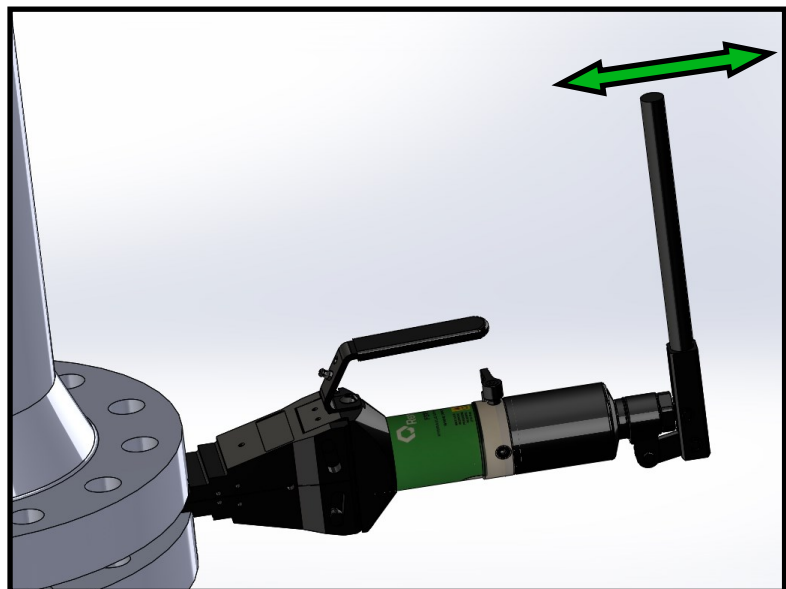
3. Fully Insert the tool on each step.



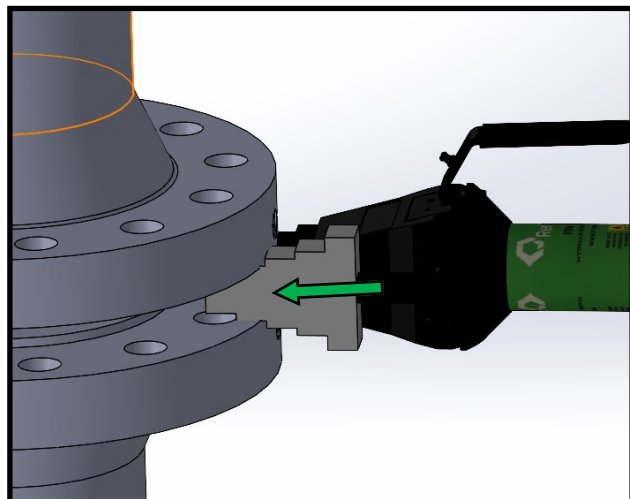
4. Insert the second FSW to create an even spreading force on the flanges.



5. Operate the pump handles to pressurise both tools and spread the flange maintaining a parallel flange gap.

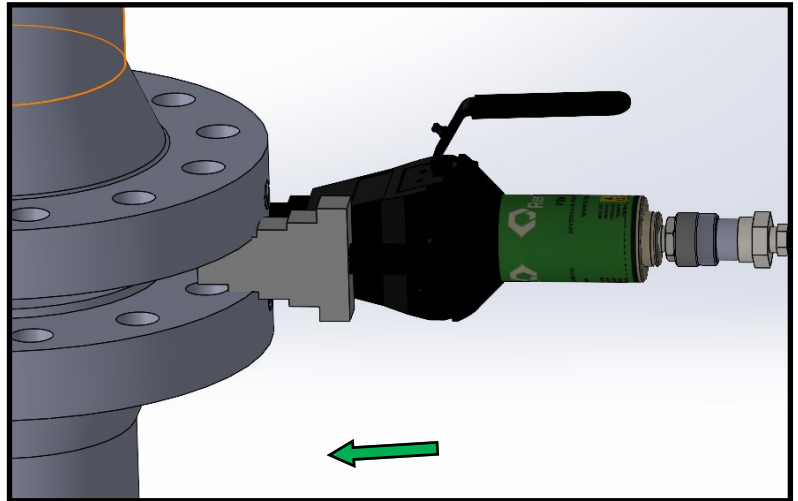


6. When the tool has reached its full stroke or the required flange gap is reached insert the safety block.

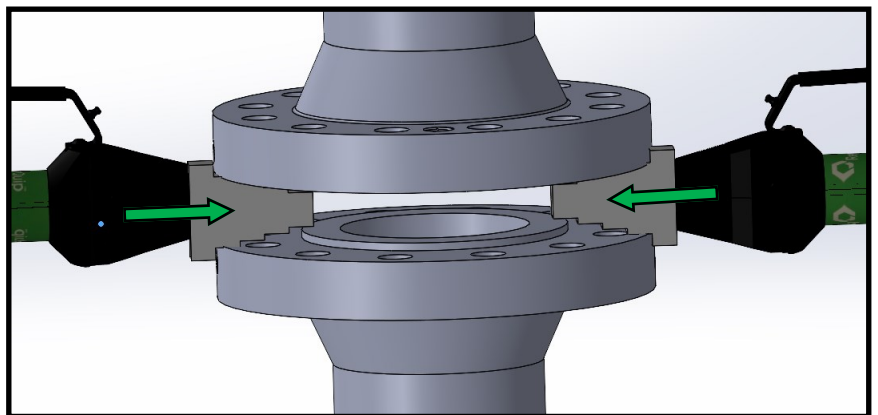


7. Open the release valve to release the pressure from the tool.

8. If a larger flange gap is required insert the FSW further into the Flange joint and repeat steps 4 to 6.



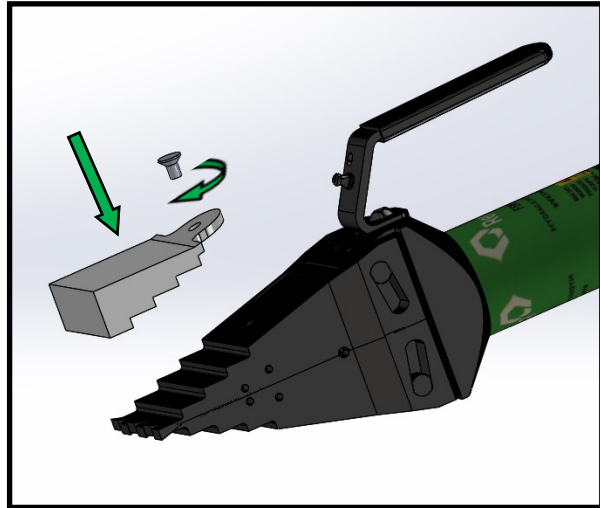
9. When the required Flange gap is achieved, fully insert the safety blocks. The pressure can then be released from the tools and the FSW tools removed before starting any flange works.



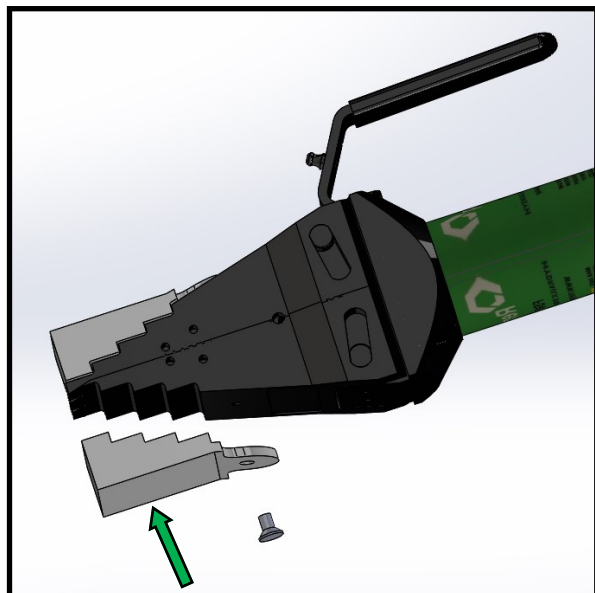
5.0 Stepped Block attachment

1. When required, a stepped block can be attached to the FSW to increase the spreading distance.

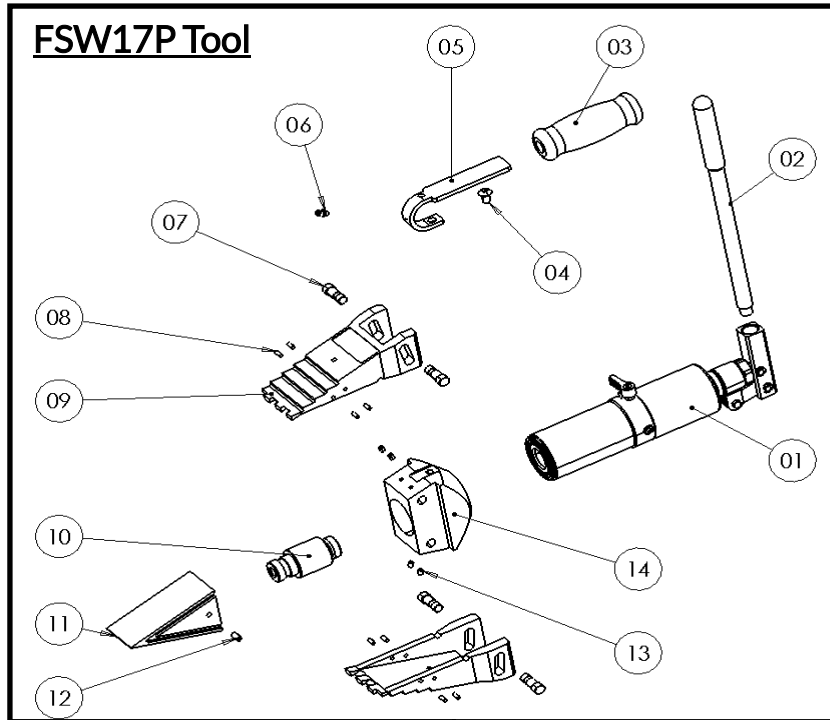
2. Use the retaining screw and hex key provided to attach the stepped block.



3. A second stepped block can be attached to increase the spreading distance to a maximum of 81mm (3.19").



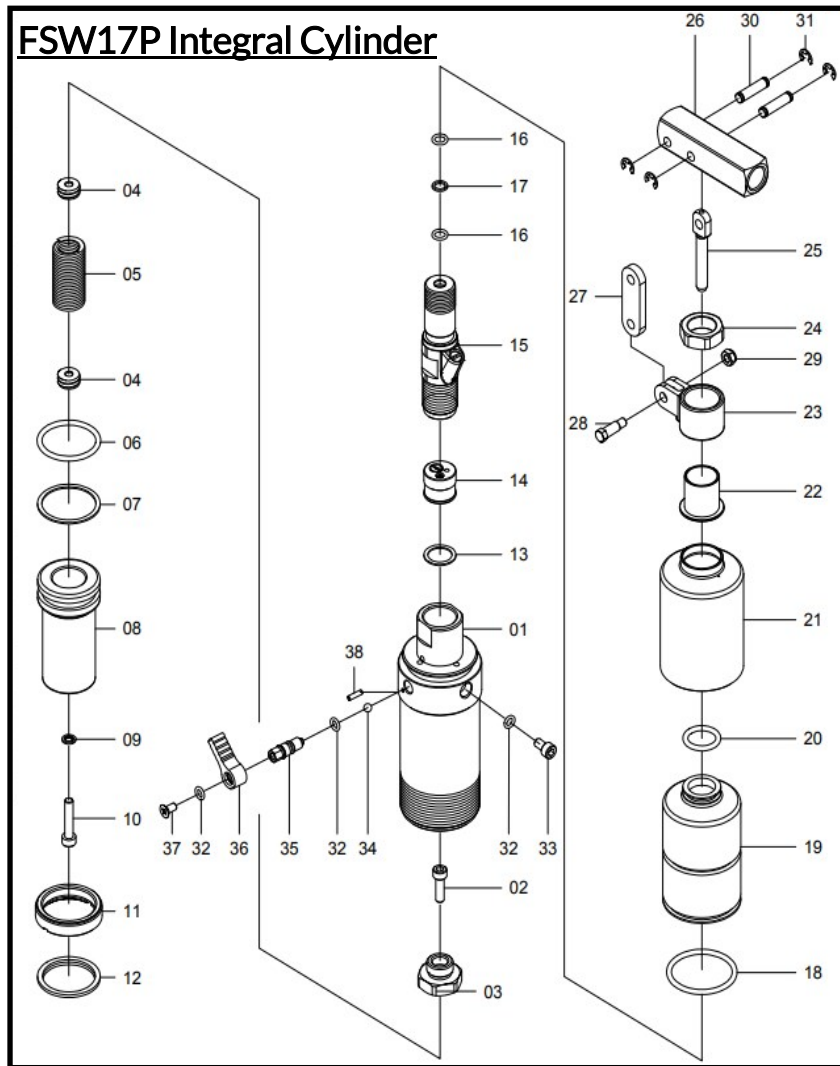
6.0 Parts Lists



Item No	Part No	Description	Qty
01	150410011	FSW17P Integral Cylinder	1
02	150410021	FSW17P Integral Cylinder Pump Handle	1
03	100500011	FSW17 Foam Handle Grip	1
04	100200021	Handle Retaining Screw	1
05	100500051	FSW Steel Profile Handle	1
06	100200121	Grease Nipple	1
07	150111031	FSW17 Slide Pin	4
08	100200041	FSW17 Jaw Retaining Roll Pin	8
09	150111011	FSW17 Jaw (complete with Jaw Retaining Roll Pins)	2
10	150110011	FSW17 Push Pin	1
11	150111021	FSW17 Driving Wedge	1
12	100200031	Driving Wedge retaining screw	1
13	100200141	Slide Pin Retaining Screw	4
14	N/A	FSW17 Main Body (not available as spare part)	1

FSW17P Accessories

Item No	Part No	Description	Qty
01	150200001	FSW17 Stepped block Kit (2 x Blocks + 2 x Retaining screws)	1
02	150300001	FSW17 Safety block	1
03	100310001	FSW17 Safety Lanyard	1
04	120700001	FSW17P Robust Single Tool Carry Case	1

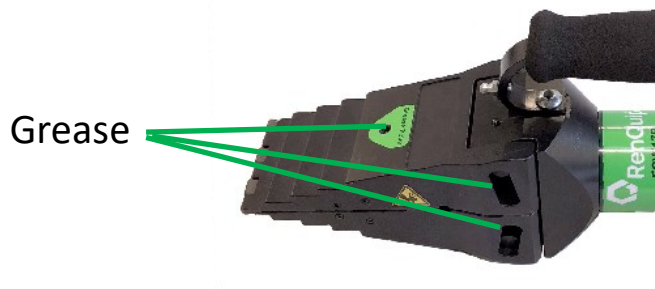


FSW17P Integral Cylinder Seal Repair Kit—pt no : 150411001

Item No	Part No	Description	Qty
06	Kit: 150411001	Piston Seal Ring	1
07	Kit: 150411001	Piston Back-Up Ring	1
09	Kit: 150411001	Spring Retaining Seal	1
12	Kit: 150411001	Wiper Seal	1
16	Kit: 150411001	Piston Rod Seal	2
17	Kit: 150411001	Piston Rod Back-Up Ring	1
18	Kit: 150411001	Reservoir Retaining Ring Large	1
19	Kit: 150411001	Reservoir	1
20	Kit: 150411001	Reservoir Retaining Ring Small	1
32	Kit: 150411001	Release Valve Seal	3

7.0 Maintenance

- Visually Inspect the FSW17P for any damage.
- Replace any worn or damaged parts.
- Clean and degrease surfaces , couplers and gauges.
- Grease tools with a quality High load bearing grease as indicated below.



- Top up hydraulic oil in the pump as required with a high quality 32cSt hydraulic oil.
- Store tools in a cool, dry, and low humidity location.

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