

## SF-08 X-ray radiography pipeline crawler



### Main feature

#### 1. Advanced control technology

Industrial grade microcomputer control, more accurate and reliable.

The integrated design of the crawler controller and the X-ray machine controller effectively reduces the occurrence of machine failures.

#### 2. New high-efficiency batteries and Material

Due to the use of international famous brand power lithium cell, making the crawler smaller, lighter weight, more reliable performance.

The entire shell is made of 304 stainless steel, durable.

#### 3. Adopt magnetic control and video double positioning.

To meet users' requirements for higher positioning accuracy

With language broadcast function, you can grasp the working status of the crawler in real time

#### 4. Automatic machine training; Automatic inspect the energy.

#### 5. Exposure when proceed forward and positioning, and no exposure during retract;

6. During operation and exposure process, fault detection functions are available (for water, obstruction, power supply fault, over-current or over-voltage, over-heating of components, under-current, etc.). If any fault is detected, it will immediately retract to realize real-time protection for the crawler, and it even can be controlled to retract under fault;

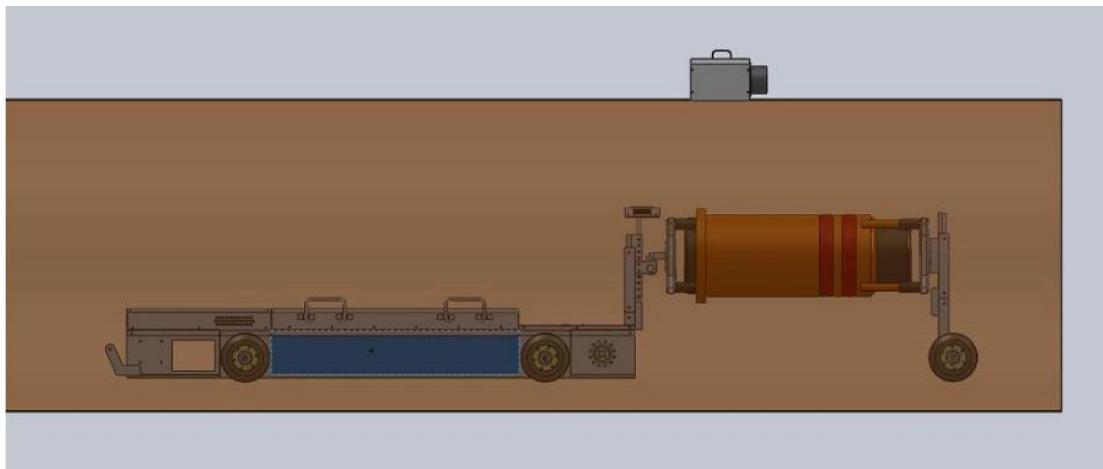
**The crawler has six working states in the pipeline: rest state, signal receiving state, exposure preparation state, exposure state, forward state, and backward state.**

### Main technical specification

| Model Specification                    |       | SF-08-D300                              | SF-08-D300-4WD                          |
|--|-------|---|---|
| <b>Applicable pipe inner diameter</b>  | mm    | Ø290~ Ø1400                             | Ø290~ Ø1400                             |
| <b>Turning radius</b>                  | ≥     | 5D                                      | 5D                                      |
| <b>Position error value</b>            | mm    | ±5                                      | ±5                                      |
| <b>Maximum climbing degree of pipe</b> | °     | 20°                                     | 30°                                     |
| <b>Crawling speed</b>                  | m/min | High Speed 23m/min<br>Low Speed 11m/min | High Speed 23m/min<br>Low Speed 11m/min |
| <b>Crawling Distance</b>               | km    | ≥6                                      | ≥6                                      |
| <b>Max Transilluminated thickness</b>  | mm    | 20~40mm(depending generator)            | 20~40mm(depending generator)            |
| <b>Total Exposure Time</b>             | min   | ≥100                                    | ≥100                                    |
| <b>Crawler Length</b>                  | mm    | 1250                                    | 1350                                    |
| <b>Net weight</b>                      | kg    | 43                                      | 45                                      |
| <b>Supply Voltage</b>                  | V     | DC120V                                  | DC120V                                  |
| <b>Battery Capacity</b>                | AH    | 20                                      | 20                                      |
| <b>Applicable Temperature range</b>    | °C    | -15°C~ 55°C                             | -15°C~ 55°C                             |



SF08-D300



## System Components

The crawler is mainly composed of several parts, such as the body, drive and drive mechanism, magnetic control controller, microwave controller, battery pack, X-ray generator, signal receiving device, charger, etc.

Body: the carrier of the crawler components

Drive and transmission mechanism: It consists of motor and reducer

Controller: to control the crawler to complete various functions

Battery pack: to provide power for the crawler to work

X-ray generator: X-ray generating device for exposure of pipeline welds

Signal receiving device: to receive external pipeline command source and microwave signal

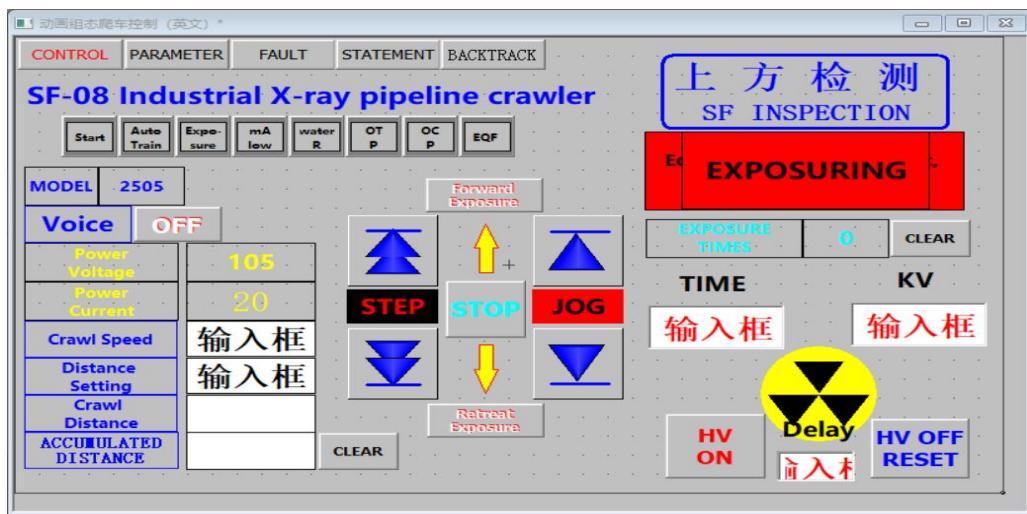
Charger: to charge the battery pack and the magnetic-controlled and microwave control box

## Remote Control of Microwave Video

1. Turn on the power of the crawler and turn on the power of the remote control box at the same time.
2. When the screen shows the "Welcome" interface, press the "ENTER MASTER" button, the Chinese operation interface will appear, press the "ENTER MASTER" button, the English operation interface will appear. Follow the prompts on the operation interface for operation.



3. The screen will display the X-ray head model and battery voltage after entering the working screen. Be sure that the battery is fully charged before entering the pipe to work.
4. Enter the appropriate exposure time and exposure voltage in the time input box and kV input box according to the pipe diameter and thickness.



**SF-08-D300 Packing List**

|   |                  |
|---|------------------|
| 1. Pipeline crawler   | 1 unit           |
| 2. X ray Flaw generator   | Optional item    |
| 3. 120V20AH Battery set   | 1 unit           |
| 4. microcomputer controller   | 1 unit           |
| 5. Magnetic Media Command Transmitter                               | 1 unit           |
| 6. Magnetic Media Command Receiver                                  | 1 unit           |
| 7. 134.4V5A battery charger   | 1 unit           |
| 8. 12.6V2A charger  | 1 unit           |
| 9. extension shaft  | 1 set            |
| 10. Crawler shaft 4pcs (250 with Dia 150MM,200 with Dia 125MM)      |                  |
| 11. X ray Generator wheel   | 2 pcs            |
| 12. X ray Generator support   | 1 set (12 pcs)   |
| 13. M6*20 screw   | 32 pcs           |
| 14. M8*16 screw   | 10 pcs           |
| 15. Allen key   | 1 set            |
| 16. Camera  | 1 set with power |
| 17. Cable.<br>(computer cable, magnetron cable and generator cable) | 1set             |
| 18. Accessories storage box   | 1 pc             |
| 19. Manual and packing list   | 1 pc             |

