

HST-RCP630 RCP Fast Crack Propagation Testing Machine



Picture just for reference

Application:

The testing machine is used to determine the rapid crack growth (RCP) resistance of thermoplastic pipe for fluid transportation under the small size steady state test (S4 test). Used to evaluate the performance of thermoplastic pipes for transporting gas or liquids (where air may be present).

Equipment composition: Rapid crack growth resistance test host, low temperature state adjustment box, sample transfer machine, pipe clamp system.

Extended host

- 1) Applicable test pipe diameter: $\Phi 63\text{mm} \sim \Phi 630\text{mm}$;
- 2) Impact blade impact speed: $5\text{m/s} \sim 20\text{m/s}$ (adjustable);
- 3) Maximum impact speed deviation: $\pm 1.0\text{m/s}$;
- 4) Test pressure control range: $0 \sim 2.5\text{MPa}$;
- 5) Pressure display resolution: 0.01MPa ;
- 6) Power supply: $220\text{VAC } 50\text{Hz } 1.0\text{kW}$;
- 7) Operation language: Chinese and English

Low temperature state adjustment box

- 1) Number of workstations: 1 workstation
- 3) Pipe adaptation range: $\leq 630\text{mm}$
- 4) Temperature control range: $0^{\circ}\text{C} \sim -30^{\circ}\text{C}$
- 5) Display accuracy: 0.1°C
- 6) Power supply: $(380-15\% \sim 380+10\%)\text{VAC } 50\text{Hz } 5\text{kVA}$ three-phase five-wire

Sample pick-up and delivery moving machine

- 1) Control mode: touch screen display, PLC control
- 2) Number of workstations: 1 station
- 3) Sample transmission: pneumatic and electric combination
- 4) Sample delivery displacement (automatic): $> 3400\text{mm}$
- 7) Air source pressure: $< 0.8\text{Mpa}$ (user-provided)
- 8) Power supply: $(220-15\% \sim 220+10\%) \text{VAC } 50\text{Hz}$

Carbon steel fixture system:

$\Phi 32, \Phi 110, \Phi 140, \Phi 160, \Phi 180, \Phi 225, \Phi 250, \Phi 280, \Phi 315, \Phi 355, \Phi 400, \Phi 450, \Phi 500, \Phi 560, \Phi 630$, one set each.

1. Test technical indicators:

1.1 Specimen/Test Equipment

Theoretical diameter (mm)	Sample length (mm)	Wall thickness value min~max(mm)	Test device weight (Approx. Kg)
63 ^{0.6} -SDR11	500-5	5.5~5.8	26
110 ¹ -SDR11	820-5	9.6~10.1	35
160 ^{1.5} -SDR11	1160-5	14.0~14.7	85
250 ^{2.3} -SDR11	1800-5	21.8~22.9	112
315 ^{2.9} -SDR11	2240-5	27.3~28.7	140
400 ^{3.6} -SDR11	2732-5	34.7~36.5	185
500 ^{4.5} -SDR11	3440-5	43.4~45.6	210
4"- SDR11	870-5	10.39~11.636	
6"- SDR11	1205-5	15.29~17.119	
8"- SDR11	1555-5	19.94~22.328	

1.2 Low temperature control box

1.2.1 Dimensions/specifications

	External dimensions	Inner Dimensions
Length	6000mm	5700mm
Width	2300mm	2000mm
Height	2300mm	2000mm

1.2.2 Main parameter indicators

Temperature range	-30℃~RT 22F~32F
Control accuracy	According to the standard (+0℃~-2℃)
Electrical data	Customized
Power	4KW
Voltage	220/380 V 50Hz (Standard)

Current	16A
Cooling power	15kW

1.3 Control box specifications

Length	920mm
Width	715mm
Height	1140mm

1.3.1 Main parameter indicators

1.3.1.1 Desktop computer (can be customized according to customer needs)	
1.3.1.2 Electrical data control box	
Voltage	220 (Standard)
Frequency	50 Hz
Rated power	2 kVA
Protection level	IP 44
Fuse specifications (side)	230/400 V50 Hz: 16A (Standard)
1.3.1.3 Specifications of air pressurization device	
Main function	Filtration (5μm), drying
Pressure requirements	5-10bar
Connection requirements	φ 12PU pipe
Recommended oil	Special oil for compressed air, viscosity grade VG21, viscosity 100 cST at 20℃
1.3.1.4 Test pressure requirements	
Medium	Nitrogen
Main function	Filtered (5μm), dried
Test sample pressure requirements	Maximum 40 bar
Test sample connection hose requirements	High-pressure hose
Initial pressure range	Minimum 0.5 bar, maximum 5 bar
Test pressure range	Maximum 25 bar

Clamp connection requirements	Quick-change connector connection
Noise damage during the test	120~135 dB(A)