

SUNGMIN INSTRUMENTS

Precision Measuring & Control
Systems for
Wire & Cable Manufacturing



SMEM product on

GENERAL EXTRUDER LINE



Induction Preheater



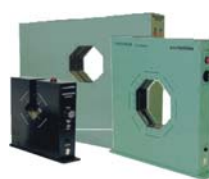
Corona Master



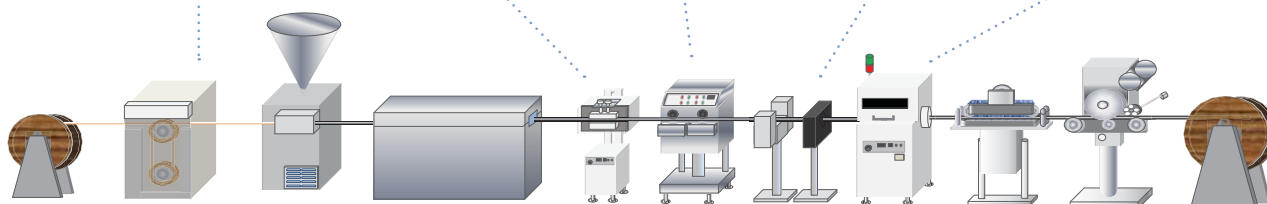
Cable Printer



Lump Neck Down Detector



HF Spark Tester



Talc Master



Laser Micrometer



Length Counter



Length Marking Machine



CONTENTS

06	AC Spark Tester	19	Talc Master
07	High Frequency Spark Tester	20	Graphite Master Machine
08	Laser Micrometer	21	AC-DC High Voltage Tester
09	Lump Neck Down Detector	22	Operating Information Management System
10	Cable Printer	23	Display Unit
11	Corona Master	24	C-Monitor
12	Length Measuring Counter	25	Suction Wiper / Management System
13	Length Marking Machine	26	Wire Stripping Machine
14	Induction Preheater	27	Multi Fire Resistance Tester
15	Inverter Preheater	28	Cable Fire Testers
16	High Frequency Induction Preheater	29	Enamel Pinhole Detect System
17	Position Sensor for CCV Line	30	Enamel Lump Detect System
18	CV Diameter Gauge		

SMEM product on

CV LINE >>



High Frequency Preheater



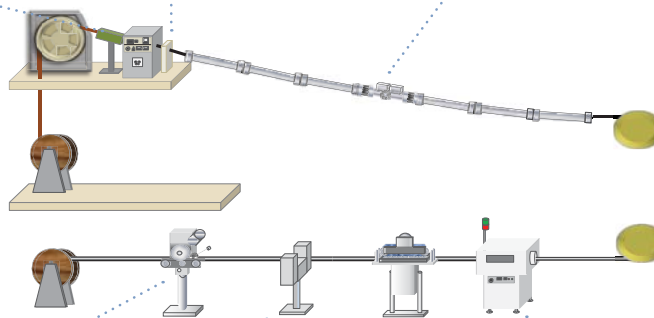
CV Diameter gauge



Position Sensor



Graphite Master



Length Marking Machine



Laser Micrometer



Length Counter



AC Spark Tester

“ SUNGMIN INSTRUMENTS is the biggest specialized company for manufacturing measuring test equipment and major facilities related with electric wires in the country and has concentrated its efforts on continuous research and development of key technologies since its establishment in 1988, and is a specialized company related with electric wires importing, localizing and supplying key equipment of each sector such as electric, electronic, precision instrument, electric wires industry sector.

With trust and pride, we have developed test equipment of an electric wire measurement and products for residential facilities and on the basis of endless improvement of product quality of products and trust acquired from quality developments,

SUNGMIN INSTRUMENTS has accomplished technological innovation for many years to give fruition of trust with efforts of endurance.

We can guarantee you that we'll achieve the growth of business with internal stability and conscientious and strong management as well as long-term appreciative eyes in rapidly changing world market. ”

Electro Equipments For The Cable Industry



• Production Line

Preheater



IP-220P20

HP-220P48

IP-300P30

Spark Tester



SM-15HF

SM-15ST40

SM-15ST120

SM-30ST180

Laser Micrometer



LDM-110

LDM-1000

LDM-1000EX

STANDARD

DUAL AXES

SWING TYPE

Lump Detector



TM-1003W

TM-3002W

TM-3004WA

TM-4002

Cable Printer



Single Head Type

Dual Head Type

Length Measuring Counter



LC-1000

LC-2600H

LC-5000H

• Extension Line

Corona Surface Treatment



Electro corona machine

Gas corona machine

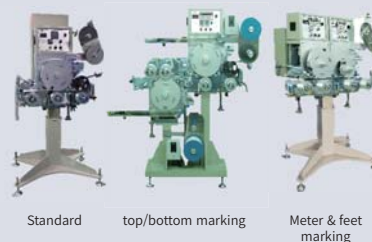
Powder Coating Machine



Talc machine

Graphite machine

Length Marking Machine



Standard

top/bottom marking

Meter & feet marking

Wire Stripping Machine



1-3milli stripper

5-100 milli cable stripper

Display Unit



DC-1204BSD

Cable counter
Line speed
Diameter

Memory Counter



Cable process and management

Specialized instruments above 200mm cable manufacturing



AC Spark Tester
SM-30ST350



Laser Micrometer
LM-200XY



Lump Detector
LD-1303



Length Counter
LC-5400H



Length Marking Machine
LM-T200D

Multi-Fire Resistance Tester



SM-600

IEEE 1202 / Smoke Density Tester



SM-VTFT1202

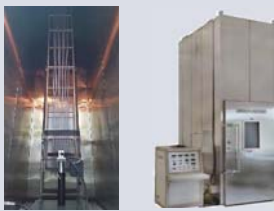
SM-SDT3000

BS 50399 / CPR Flame Tester



SM-VTFT3000

Vertical Tray Flame Tester



SM-850

Single Fire Resistance Tester



SM-851

Cable Endurance Tester



SM-314FST

Cable Banding Tester



SM-CDFL-03

Low temp, bending, shock, tensile



SM-LTB SE-PC

Parallel Plate Plastmeter



SM-PPT01

SM-PPT02

Tensile Testing Machine



SM-TTM100K-PC

Skiving Machine



SM-SK-01

Hot Press



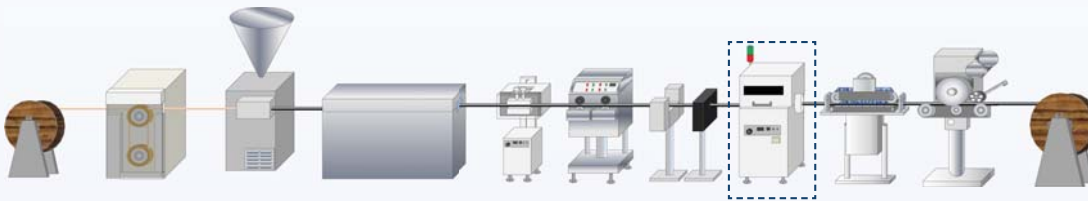
SM-HP-A

AC-DC 50/60Hz Spark Tester

Product Features

SMEM AC Spark Tester is a general device that detects the insulation defect at the cable manufacturing process. When the defect point as per international standards, like IEC, UL and other passes through the tester it can find the insulation defect point at Extruder or CV Line (bare wire, pin hole, dust, scar).

By various applications, SMEM offers Mains Frequency, High-Frequency spark testers. Typically they are installed at the end of the cooling trough in extrusion lines or in rewinding processes and detect the smallest defects and incomplete in the insulation or sheathing of electrical wires and cables.



Important Features

- Steady and durable structure
- Accurate, repeatable detection
- In compliance with standards
- Simple operation
- Available in all sizes

I Specification

MODEL	SIZE (W) × (D) × (H)mm	Diameter Range	Test Voltage	Electrode Length
SM-15ST40	500 × 300 × 1170	20mm	15KV 50/60Hz	350mm
SM-15ST120	600 × 480 × 1250	80mm	15KV 50/60Hz	250mm
SM-15ST180	600 × 480 × 1250	150mm	15KV 50/60Hz	250mm
SM-30ST120	600 × 480 × 1250	80mm	30KV 50/60Hz	240mm
SM-30ST180	800 × 600 × 1350	150mm	30KV 50/60Hz	240mm
SM-30ST250	800 × 650 × 1350	200mm	30KV 50/60Hz	250mm
SM-40ST180	800 × 650 × 1350	150mm	40KV 50/60Hz	220mm
SM-40ST250	800 × 650 × 1350	200mm	40KV 50/60Hz	250mm



High Frequency Spark Tester

Product Features

SMEM high frequency spark tester, provide High-Frequency (HF) with continuously adjustable voltage control under conforming test standards BS, EN, UL. SMEM HF series are a high-frequency high voltage spark tester, developed for the detection of faults in the insulation of cables such as automotive cables and building wires up to 1300mpm.

The sturdy electrode and electronic box of the spark testers form one integral unit or two separate for various installation environment. Included in the devices is a display, visualizing the selected test voltage and number of high voltage breakdowns.



SM-15HF-16 STAND TYPE



SM-15HFN ALL IN ONE TYPE

Specification

TYPE	SPECIFICATION
Output voltage	100~15000V
Output frequency	2500~3500Hz depending on load capacitance.
Load Current	Resistive 4mA, Capacitive 35mA
Voltage indication	4 Digits LED
Fault indication	5 Digits electrode mechanical counter.
Line speed	Max. 1300mpm
Fault indication	LED lamp and Optionally available, alarm unit.
Contact outputs	Spark faults relay 250V 5A, Excess faults relay 250V 5A
Interface	Available to adjust output voltage and reset from out of tester.
Data print	Be able to print out defect point, line speed, length by connecting length counter and also can be applied to production management
Input power	Transformer 200/220VAC 50/60Hz 1 Phase 200VA.
Weight	Control unit + Detector = 15.5kg
Detector Size	300×170×280
Cable diameter	0.5~16mm
Test type	bead chain

Laser Micrometer

Product Features

- A high precision Flens allows high linearity.
- Very small measuring error if the object is vibrating. No influence on the measured value by ambient light such as the sunlight, etc.
- Available to measure opaque/transparent object such as glass, plastic, etc.
- Maintenance free, calibration free.



LDM-130



STANDARD



DUAL AXES



SWING TYPE

SMEM Laser Micrometer offers solution to overcome raising material price and increasingly tighter tolerances by non-contacting laser technology. It is high-quality laser technology for efficient diameter measurement, meeting the increasing demands of the cable sector in regard to quality and productivity. non-contact laser measuring devices makes measure soft, delicate, brittle, hot, even radioactive parts with complete confidence.



Specifications

TYPE	MODEL	RANGE	ACCURACY	RESOLUTION
STANDARD	LDM-301H	0.02-1mm	$\pm 1\mu\text{m}$	$0.1\mu\text{m}$
	LDM-302H	0.05-5mm	$\pm 1\mu\text{m}$	$0.1\mu\text{m}$
	LDM-303H	0.3-30mm	$\pm 2\mu\text{m}$	$0.1\mu\text{m}$
	LDM-304H	0.5-90mm	$\pm 5\mu\text{m}$	$1\mu\text{m}$
	LDM-305H	1-180mm	$\pm 10\mu\text{m}$	$1\mu\text{m}$
	LDM-306H	2-300mm	$\pm 30\mu\text{m}$	$1\mu\text{m}$
SEPARATE	LDM-303H-SP	0.3-30mm	$\pm 2\mu\text{m}$	$0.1\mu\text{m}$
	LDM-304H-SP	0.5-90mm	$\pm 5\mu\text{m}$	$1\mu\text{m}$
	LDM-305H-SP	1-180mm	$\pm 10\mu\text{m}$	$1\mu\text{m}$
	LDM-306H-SP	2-300mm	$\pm 30\mu\text{m}$	$1\mu\text{m}$
DUAL AXIS	LDM-302H-XY	0.05-5mm	$\pm 1\mu\text{m}$	$0.1\mu\text{m}$
	LDM-303H-XY	0.3-30mm	$\pm 2\mu\text{m}$	$1\mu\text{m}$
	LDM-304H-XY	0.5-90mm	$\pm 5\mu\text{m}$	$1\mu\text{m}$
	LDM-305H-XY	1-180mm	$\pm 10\mu\text{m}$	$1\mu\text{m}$
	LDM-306H-XY	2-300mm	$\pm 30\mu\text{m}$	$1\mu\text{m}$
SWING TYPE	LDM-303H-SP LDM-703A	0.3-30mm	$\pm 2\mu\text{m}$	$0.1\mu\text{m}$
	LDM-304H LDM-704A	0.5-90mm	$\pm 5\mu\text{m}$	$1\mu\text{m}$
	LDM-305H LDM-705	1-180mm	$\pm 10\mu\text{m}$	$1\mu\text{m}$

Lump Neck Down Detector



TM-1003W

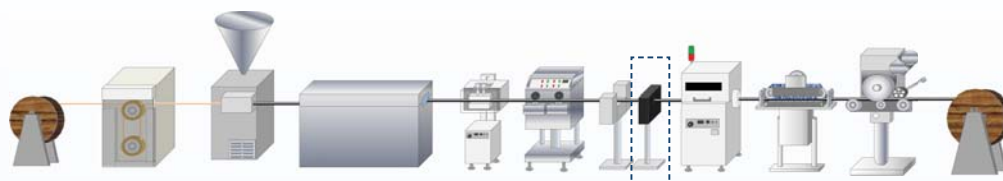


TM-3002W

SMEM lump neck down detectors were designed to monitor surface variations in an object by means of emitting light to the object and detecting a difference of interrupted light volume which is affected by the variation. Those TM-Series detectors can be used in the production line of all products, such as optical fibers, enamel, vinyl wires, communication and power cables, metal and glass rods, plastic tubes, pipes, hose, etc.

Product Features

- Non-contact, high-speed, and continuous detection.
- Free by vertical vibrations of the object being measured.
- The unevenness detection level by direct reading method.
- Multi-axis monitoring reduces the chance of missing irregularities.
- All kinds of irregularities ranging from 10μm to several millimeters or more.



Specifications

Composition	For fine wire/Cable			For middle dia. wire/cable				
Model	TM-1100XY	TM-1003W	TM-1104W	TM-3001W	TM-3002W	TM-3004W	TM-3008W	TM-3016W
Detecting direction	2	3	4	1	2	4	8	16
Measuring range	Ø0.02 ~ 5 mm			Ø0.1 ~ 35 mm				
Detecting sensitivity	0.01 ~ 1 mm			0.5 ~ 10 mm				
Slit length	18 mm	12 mm	18 mm	48 mm				
Slit width	0.5 mm			1 mm				
Line speed	1 m/min ~ 1500 m/min			1 m/min ~ 1500 m/min				
Alarm output	Red LED turns on, Relay contact			Red LED turns on, Relay contact output. (AC 250V 2A Resistance load)				
Alarm time	0.5 sec	0.05 sec	5 sec	0.05 sec				
Power supply	AC 100 V 50 / 60 Hz	DC ±15 V	AC 100 V 50 / 60 Hz	AC 100 V 50 / 60 Hz				
Outside dimension	260×265×60	150×140×40	350×280×55	260×90×41	260×260×60	370×335×60	370×335×120	370×335×240
Weight	2.5Kg	1Kg	5Kg	1.5Kg	3Kg	6Kg	12Kg	24Kg



TM-3004WA



TM-4004



TM-6004

Composition	For Large dia. wire/cable/pipe					For Extra. Large dia. wire/cable/pipe			
Model	TM-4001	TM-4002	TM-4004	TM-4008	TM-4016	TM-6004	TM-6008	TM-7003	TM-7009
Detecting direction	1	2	4	8	16	4	8	3	9
Measuring range	Ø0.1 ~ 60 mm					Ø1 ~ 80 mm		Ø1 ~ 130 mm	
Detecting sensitivity	0.15 ~ 10 mm					0.2 ~ 10 mm			
Slit length	70 mm					90 mm		140 mm	
Slit width	1.5 mm					2 mm			
Line speed	1 m/min ~ 1000 m/min					0.3 m/min ~ 500 m/min			
Alarm output	Yellow or Red LED turns on.(凹:Yellow, 凸:Red) Relay contact output.(AC 250V 2A Resistance load)					Yellow or Red LED turns on.(凹:Yellow, 凸:Red) Relay contact output. (AC 250V 2A Resistance load)			
Alarm time	0.5 sec					0.5 sec			
Power supply	AC 100 V 50 / 60 Hz					AC 100 V 50 / 60 Hz			
Outside dimension	540×160×100	630×560×160	807×674×136	807×674×272	807×680×424	720×660×1153	720×660×306	990×930×1125	990×930×375
Weight	7Kg	25Kg	38Kg	76Kg	152Kg	38Kg	76Kg	40Kg	120Kg

Cable Printer

Product Features



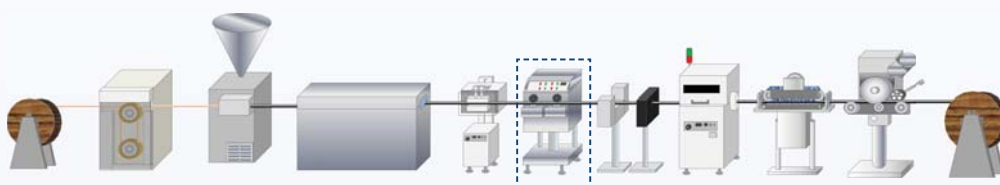
SMEM Cable Printer provide more cleaner work place by one touch ink tank system. User can feel more faster changing ink tank or changing color.



Auto Solvent Filler Device

SMEM Cable Printer optionally provide “Automatic solvent filler”. Automatic solvent filler can fill in the solvent keep the viscosity of ink and maintain the quality of printing.

SMEM cable printer includes gravure printing for the coding of hot or cold cable or conductor insulation with printing speeds of up to 1,000 m/minute. Exchangeable print wheels ensure the print quality of all text and figures. Single/Dual head devices and modular, exchangeable color supply systems additionally increase the performance and the operating comfort. Cable Printer can be equipped with various options, thus making them extremely flexible. In addition, the outstanding manufacturing quality ensures special reliability and a long lifecycle for each individual machine.



Printing wheel



PRT- SH500/1000



PRT-DH500/1000

Specifications

MODEL	PRT-SL35	PRT-DL35	PRT-SH500/1000	PRT-DH500/1000
Type	Middle speed printing		High speed printing	
Applicable(mm)	Ø3~35		Ø9mm below	
Max speed (m/m)	400		500/1000	
Line center(mm)	900~1100			
Print head	1 EA	2EA 1SET	1 EA	2EA 1SET
Roll drive	Non Servo		Non Servo/AC Servo motor Control	
Roll size (mm)	Ø100×10T			
Ink pump	Gear pump			
Ink Spray	Manual adjustment ink flow			
Pneumatic	3Kbf/cm² beyond			
Size (WxHxD)mm	700×1250×630	745×1430×570	700×1250×630	745×1430×570
Power supply	220VAC 50/60Hz			

Cable Surface Treatment Device

Product Features

SMEM Corona treatment device provides solutions against the certain main types of low material in the Cable industry, PE, XLPE, TEFLON and HDPE which share one basic characteristic—low surface energy, which makes it difficult for inks and coatings to adhere to the surface. Corona treatment solves this problem by increased surface energy and improved adhesion. The corona master operates by generating a powerful electro-magnetic field ionizing the air between the electrodes to produce electrically charged Plasma particles. This process, often referred to as Corona Discharge, acts on material surface. The treatment breaks molecular bonds and replaces them with polar bonds, effectively increasing the surface energy and drastically improving adhesion.



Corona Treatment



Specifications

Model	CM-300	CM-GAS
Output frequency	20 ~ 25KHz	Gas flame
Capacity	2 KVA	300°C~1000°C
Output voltage	5 ~ 20KV	
Electrode	220mm	260mm (Burner)
Size(WxHxD)mm	500x1425x620	600x1200x650
Power supply	220VAC 50/60Hz 1Phase	

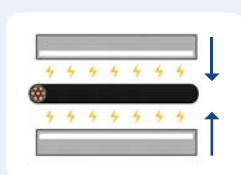


CM-300

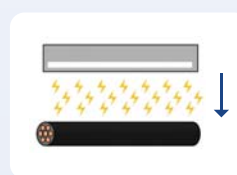
Electrode Type



Dual Electrode cable size
1~10mm



Single Electrode
cable size 10~250mm



CM-GAS

Product Features

- Built-in precision calibration to increase precision and meet measurement standards according to environmental changes.
- By selecting a precision high-resolution pulse method, inkjet marking as well as signal connection are wide.
- Various instruments can be selected depending on the linear speed, outer diameter, and material.



LC-1000



LC-2600H



LC-5000H



LC-5400H

I Specifications

MODEL	LC-1000	LC-2600H	LC-5000H	LC-5400H
Line center	1000±150mm	1000±160mm	1000±100mm	1000±100mm
Roller	Urethane coating	Belt	Belt	Belt
Measure	Digital pulse input			
Max.Diameter	Ø5~150mm	Ø5~80mm	Ø10~80mm	Ø10~400mm
Line Speed	100mpm	100mpm	100mpm	50mpm
Display	6Digit LED display			
Contact output	2 Preset contact 250V 5A resistive load			
Meter pulse out	1 pulse / meter			
Accuracy	±0.1%	±0.075%	±0.05%	±0.05%
Resolution	0.05%	0.03%	0.02%	0.02%
Power supply	220~240VAC 50/60Hz			

I Wheel Type



Wheel-Type

- Reasonable price with Simple structure
- Variety option for accuracy (encoder sensor, digital analog counter)
- Wide adjustable wheel distance range



Belt-Type

- Precise measuring by wide range of contact belt
- Wide contact prevent slip of cable
- Adjustable air pressure to press cable
- Very high accuracy

Product Features

- Electrically heated marking wheel for indenting cold material.
- Hot stamping of product length in meters/Feet and text.
- Automatic Reset marking head
- Accurate Encoder length measuring and wheel control



Jumbo Roll Payoff Device



- 



- 1 Type : Meter Counter/Feet Counter/Serial Counter
- 2 Digits : =9999m=, =9999M=, =9999FT (4Digits)
=99999m=, =99999M=, =99999FT (5 Digits)
- 3 Text Size : 2(w) x 2(h)mm - Minimum
10(w) x 6(h)mm - Maximum

Induction Preheater

Product Features

SMEM induction preheater provide optimum and repeatable conditions in order to produce valuable product at the highest speeds for extruder line and communication cable. The reliable technology induction preheating successfully preheating of the conductor by removing humidity and other residues are removed from the conductor and accurate electrical properties for uniform conductor temperature.

- Optimal preheater for any application copper
- Industrial long life design
- Durable - Compact
- Easy install into new lines and retrofitted into existing lines
- Perfect temperature control



IP-200P15



IP-220P30



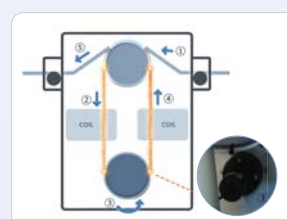
IP-300P30

I Specifications

Model	IP-200P15	IP-220P20	IP-220P30	IP-300P30
Wire Size	0.5~1.5mm	0.5~1.5/3mm	0.5~1.5/3mm	2~8mm
Temp Set	0 ~ 299°C			
Range				
KVA	15 KVA	20 KVA	30 KVA	30 KVA
	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Pulley	200mm×2	220mm×2	220mm×2	300mm×2
Material	CU			CU/ST
Line Speed	500m/m	750m/m	1000m/m	500m/m
Size (mm)	358x500x1260	600x750x1600		730x750x1600

I Operation Method

The wire to be heated is looped around the sheaves (pulleys) of the preheater and forms a resistive loop. Based on the resistance of the conductor material, on the line speed and on ambient and preheat temperature, a specific voltage is supplied to this loop by an inductor which induces a current. This heating current is induced inductively and without any contact to the product.



Inverter Preheater

Product Features

SMEM inverter preheater offers an innovative solution for a precise conductor preheating, the basis for high quality cable production, and thus, a reliable process control. Probably enough to control the out put power of a conductor preheating device only based on the conductor size and type, the line speed and the required temperature. Our smart inverter system can keep up temperature uniform with numerous kind of conductor materials (steel, aluminum)

- Suitable for high-resistance thin lines or high-speed wire extrusion.
- High preheating capacity even when preheating the wire before iron, nickel wire, or wire sheathing work.



HP-220P48



Specifications

MODEL	HP-220P48	HP-300P48
Pulley	220mm×2	300mm×2
Wire size	STEEL, CU, SOLID, STRAND	
	0.5 ~ 1.5/3mm	0.8 ~ 4.5mm
Wire temp. Setting range	0 ~ 299°C	
Capacity	220V 15KVA	220V 15KVA
Work frequency	1000Hz	
Work volt	0 ~ 48V	0 ~ 48V
Power supply	220/380VAC, 3Phase, 50/60Hz	
Steel/Line speed(mpm)	Steel/500	Steel/1000
	CU/1000	CU/2000
Size (mm)	600x750x1600	730x750x1600



HP-300P48

High Frequency Induction Preheater

Product Features

SMEM HF Preheater is highly effective in increasing quality and productivity through induction heating during iron or non-ferrous sheath extrusion, and is highly efficient and durable as a facility for induction heating and melting heat treatment.

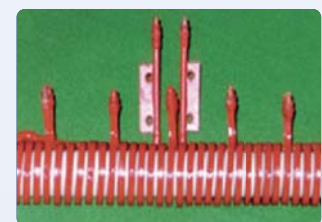
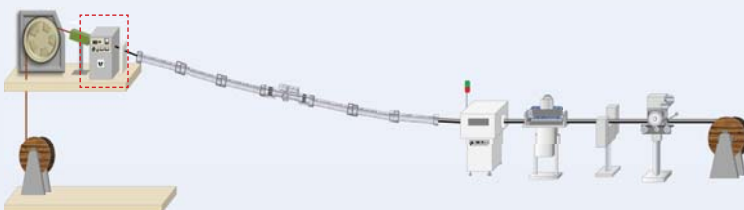
- Digital P.I.D Controller for accurate temperature control
- Various Frequency and Output selection
- Rapid heating and stable temperature
- Available and stable High temperature heating
- Simple preparation and not consumable products

I Specifications

Model	SM-HF75	SM-HF100	SM-HF150	SM-HF200
Type	IGBT type			
Output control	Voltage Control (Power control by S.C.R)			
Temp. control	Digital P.I.D Controller			
Input	85 KVA	110 KVA	170 KVA	230KVA
Output	75 KW	100 KW	150 KW	200KW
Frequency	5~10 KHz $\pm 10\%$			
System	-Transistor(I.G.B.T) Inverter(Power Generator) -H.F Current transformer -Water cooling cable / Cooling device -High Frequency Coil			
Input Power	AC 380V $\pm 10\%$ 60Hz 3Ph.			



SM-HF100



Work Coil

Position Sensor for CCV Line

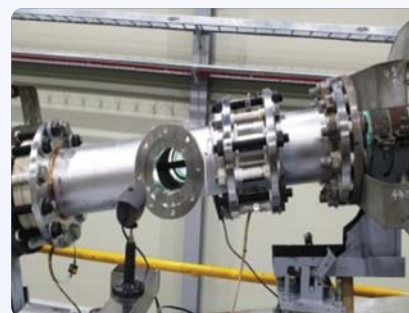
Product Features

SMEM position sensor is for CV-LINE and is designed to improve the productivity and quality of the product by measuring the position of the cable in a non-contact way.

- By installing this product, possible to measure the position of the cable inside the vulcanization tube.
- There are separate products in which the transmitter and the receiver are separated and integrated products in which the transmitter/receiver is attached.



Separate TYPE

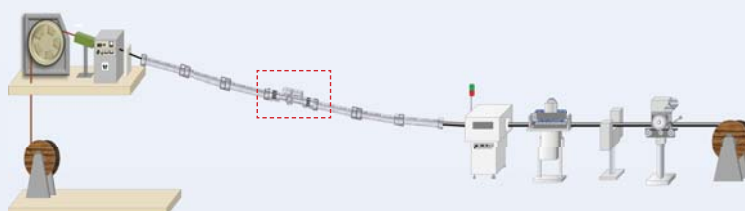
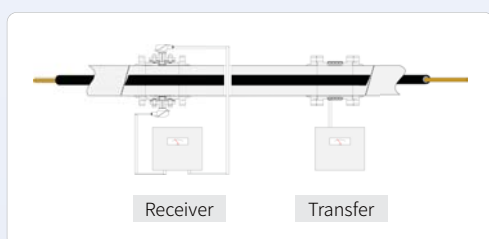


All-IN-ONE TYPE

I Specifications

Model	CVPOS-150	CVPOS-200	CVPOS-250
Measuring Method	Non Contact SAG Control Type		
Input Power	220V 50 / 60Hz 1Ph.		
Composition	Transfer, Receiver, Controller		
Output voltage	$\pm 5V \sim \pm 10V$		
Tube Diameter	160mm 7 inches	206mm 8 inches	260mm 9 inches

I Design Drawing



OD measuring instruments for CCV Line

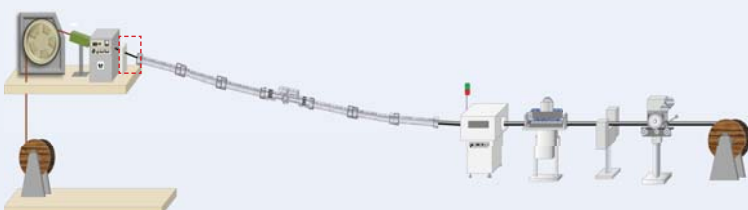
Product Features

SMEM DV Diameter Gauge is an external diameter measurement equipment for CV-LINE and is installed between the extruder and the pipe to accurately measure the external diameter in the pipe in a non-contact way.

- OD of the cable, can be measured inside the vulcanization tube.
- Installed between the extruder and the vulcanization pipe to check the amount of extrusion immediately.
- The outer diameter can be controlled during production.
- Easy to operate the equipment with the Touch Screen control.
- High-precision lenses with high linear characteristics are used.

Specifications

Type	DM-60CV	DM-90CV	DM-120CV
Measuring Method	Non contact HR-Light Scanning Method		
Heater	Heater(HR-Radiator)		
Measuring Range	2.0~30.00mm(Max)	2.0~50.00mm(Max)	5.0~70.00mm(Max)
Accuracy	±0.1mm	±0.1mm	±0.2mm
Scanning Direction	Single axis Type		
Heater cap.	200W×6EA(1.2kw)		
IR Current	50~130A(Max)		
Input Power	220VAC, 380VAC or 440VAC ±10% 50/60Hz 1Ph.		
Measuring Camera	Sight Range : 40mm Measuring : 2~30mm	Sight Range : 60mm Measuring : 2~50mm	Sight Range : 80mm Measuring : 5~70mm



CV Diameter



Program



Main monitor



Second monitor



Installation

Talc Powder Coating Machine

Product Features

SMEM Talc Master is the talcum powder coating machine which can provide thin and uniform coating performance for multi-core cable manufacturing line by powerful electrostatics coating and remove extra powder.

- Constant powder spaying
- Two-way dual spraying
- Powerful electrostatic coating
- Blower application anti-leakage system
- Built-in anti-scattering system with 2 circular filters.
- Extra powder circulation in the tank



TM-E40

I Specifications

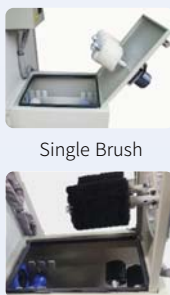
Model	TM-E40	TM-E40F
Type	Electrostatic powder application	
Wire size(mm)	Max. 70	Max. 150 flat
Fault alarm	Blower, electrostatic, powder low	
Talc powder control	Dosage controller	
Center high	950 ~ 1150mm	
Compressor air supply	4Kgf/cm ²	
Scattering check equip	Ring blower	
Heater	1.5KW Plate heater	
Size (HxWxD)mm	800×1850×1200	
Static electricity voltage	0 ~50/90KVDC	
Power supply	220VAC 50/60Hz 1Phase 3KW	



I Circular type



Talc Master For Circular cable



Dual Brush



Talc Master For Flat cable



Flat Brush

I Flat type



Swellable Powder Coating machine
TM-SPE40

Graphite Powder Coating Machine

Product Features

SMEM Graphite Master is a device for uniformly coating graphite to the surface of the cable outer shell. This graphite Master supplemented various problems of the existing simple mechanical applicator, the generation of large amounts of application and uncoated parts, powder aggregation due to moisture absorption, and powder scattering.

- Constant powder spaying
- Powerful electrostatic coating
- Blower application anti-leakage system
- Built-in anti-scattering system with 2 circular filters.
- Excellent removing extra powder.
- Extra powder circulation in the tank

I Specifications

MODEL	GM-E200	GM-E260
Type	Static Deposition Method Graphite Spreading	
Wire Size	150mm(Max)	200mm(Max)
Fault Alarm	Blower, Electrostatic, Powder Low	
Center Height	950~1150 mm	
Compressed Air Supply	4Kg/cm ²	
Powder Anti-scattering device	Circulation & Ring blower	
Heater	1.5KW Plate Heater	
Size (WxHxD)mm	760×1750×1015	
Static Voltage	0~50KVDC Manual Mode	
Power Supply	220V 50/60HZ 1Phase 3KW	



GM-E200



Polishing Part



Electrostatic Part



GM-E260

AC-DC High Voltage Tester

Product Features

SMEM High voltage tester is a check and test of the AC, DC voltage resistance quality and warranty instrument.

- We have many kinds from portable to big quantity control panels, voltage regulator, reactor, high volt trans.
- Compact, simple, convenient design.
- Safety, standardization, exchangeable.
- Several kinds model, easy modify



0.1 – 10 KVA

I Specifications

5kV	10kV	15kV	20kV	30kV	35kV	40kV	50kV
60kV	70kV	80kV	90kV	100kV	150kV	200kV	250kV
10mA	200mA	1A	2A	5A	10A	20A	
30A	40	50A	60A	70A	80A	90A	

SM - 10KV□ - 10A

NON	AC High voltage tester
DC	DC High voltage tester



25KVA

I Dimension drawing

Model type	Size(W×H×D)
SM-5KV-10mA	275×165×270
SM-5KV-5A	515×385×490
SM-10KV-10A	600×800×650
SM-60KV-100mA	727×1330×1185
SM-200KV-1A	2325×2173×3626



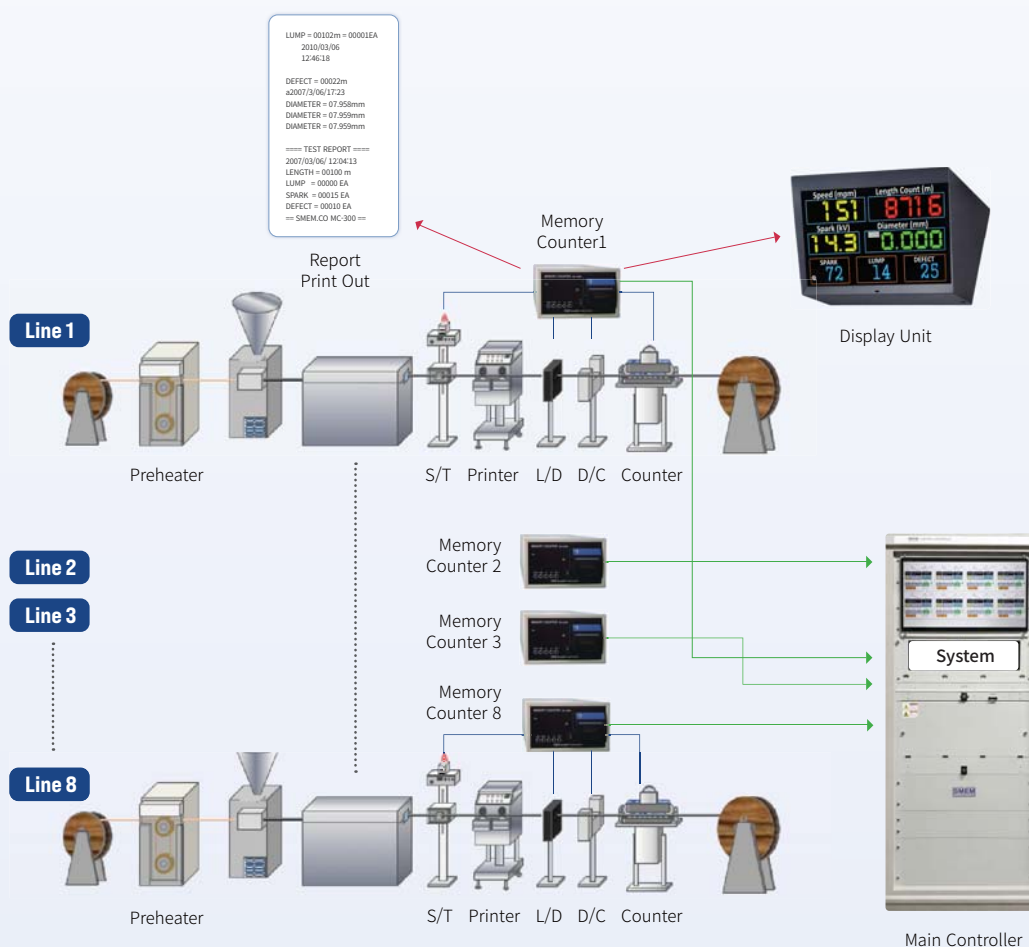
250KVA

Operating Information Management System

Product Features

- Information such as machine on/off status, line speed, defect status, thickness, and length for each line is collected/integrated and displayed in real time.
- The collected information is displayed numerically/graphed so that it can be viewed at a glance and can be checked remotely in real time.
- Since the production process for each line can be seen at a glance, the integrated management of each line is possible, making it easy to deal with and improve problems.

I Program



Display Unit

Product Features

SMEM Display unit is a device for watching the important numbers at even long distance. These numbers measured speed, rpm, diameter and temperature etc., which workers have to confirm very often and which are so useful for improving the performance and productivity.

- High brightness : very bright, distinct and clear even at long distance
- Easy to install and connect.
- Convenient to establish multi-step.
- Indicator accurate values by electro-communication
- Adaptation of input/output mode enable to operate HI/LOW input, set, output.

I Specifications

Model	DISPLAY FUNCTION	INPUT	SIZE (W×H×D) mm	SEGMENT LED(mm)
DMD-100	Communication display	RS-232C Communication	96×48×113	8×14.1
1204A	4inch 4. One-side Counter	Open collector, Pulse	490×170×180	60×100
1204B	4inch 4. Two-sides Counter	Open collector, Pulse	490×170×200	60×100
1204BS	4inch 4. Two-sides Speed meter	Open collector, Pulse	490×170×200	60×100
1204BT	4inch 4. Two-sides Temperature	Thermocouple K.J.R.F.T.S.N	490×170×200	60×100
1204BD	4inch 4. Two-sides Diameter	RS-232C Communication	490×170×200	60×100
1205BR	4inch 4. Two-sides RPM meter	Open collector, Pulse	490×170×200	60×100
1505A	6inch 5. One-sides Counter	Open collector, Pulse	780×355×200	80×120
1505B	6inch 4. Two-sides Counter	Open collector, Pulse	780×355×230	80×120
N1510 BCSD	Count, Speed, Temperature, Diameter, RPM		750×390×470	80×120



1204BC



1204BCS



1204BCSD



SM-DMD1000



Capacitance Measurer

Product Features

- The measurement is based on the unique and patented principle of the "active measuring tube". This system offers outstanding accuracy and stability. The measurement is not influenced by the water quality (pH value, etc.) or the line speed.
- This monitor can continuously measure capacitance of a covered cable in an on-line water bath, which is manufactured by continuous extruding machine.
- Cable capacitance control is available by outputting control voltage.
- Calibration for Cable Capacitance Monitor is available by Calibration Capacitor (Option).



Control



Output

I Specifications

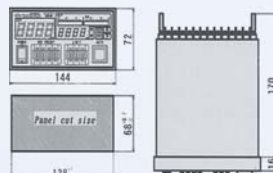
MODEL	CPM-401
Measuring range	0-400pF/m (Expansible by option)
Measuring accuracy	Either larger value of +/-0.2% of reading value or +/- 0.2pF/m
Resolution	0.1f/m Sampling time 500 times/sec
Capacitance display	4-digit 7-segment LED (Green)
Deviation display	4-digit 7-segment LED (Red) LED Bar-graph. (F.S.=selectable +/- 10 or 100pF/m)
Target value setting	4-digit digital switch
High/Low limit setting	3-digit digital switch
Average	Moving average(1 - 5000 times, 1/2/5 steps)
Zero adjustment	Push ZERO switch on front panel and adjust at automatic
Analog output	Output capacitor/deviation(selectable) within +/-10VDC, Selectable gain, Isolation type.
High/Low limit output	Display in Red LED, 1a-contact (AC250V resistance load 2A)
BCD output	Option
External communication	RS-232C interface
Control method	Proportional control
Control output	Max. +/-10VDC, Isolation type
Line speed	Max. 3000m/min
Power supply	AC100~240V 50/60Hz 10VA
Outside dimension	144x72x191 Weight : Approx. 1.7kg

I Output

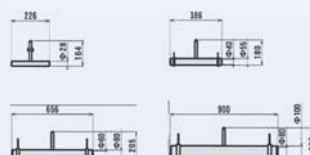
MODEL	Passing hole dia.	Outside dimension
CP-05	5mm	8mm
CP-09	9mm	15mm
CP-15	15mm	30mm
CP-26	26mm	50mm
Water conductivity	1mS/cm or less (It depends on water temperature and dissolved materials. Recommendable to use water with conductivity of 0.5mS/cm or less)	

I Dimension

- Controller (CPM-401)



- Detector



Suction Wiper / Cable Stripping Machine

Suction Wiper

Product Features



SM-1035

- For eliminate the water or humidity from the surface of the cable, installed front of printing machine.
- Compact Size, High performance
- Maximized the effectiveness by optimized air fluid design, same capa.
- No noise by optimized Air Circulation design.
- Top position suction by Air Jet Nozzle.
- Not worn by cable : ceramic coated at surface.
- Water separation by cyclone : air jet nozzle, water - bottom.

I Specifications

Model		Suction Wiper
Power		220VAC (14A) or 380VAC (8A) 3Ph 50/60Hz
Motor	Max. Vental.	6.1m3/min
	Max. output	5300mmAq
	Regular output	3000mmAq
	Output	3.7Kw
Humidity Control capa.		600mpm (Max.)

Stripping Machine

Product Features



SM-WSM02



SM-WSM05

- Strip the covering of cable and inner sheath by shape and size. Designed and manufactured for effective working
- control cutting depth by thickness and stripping equipment part
- Auto separate the conductor and suction material
- Easy to control, operate and effective work for a long time.
- Accurate speed control by inverter control
- Cable disconnect detect and stop function.

I Specifications

Model	SM-WSM02	SM-WSM05	SM-WSM07
TYPE	Medium	Large	Large
Material	PVC	PVC / XLPE	PVC / XLPE
Conductor Diameter(Ø)	1.0 ~ 1.5 1.8 ~ 3.0 2.4 ~ 3.7	1. Ø 5 ~ 100 mm 2. Ø 2 ~ 13mm	10 ~ 110mm Depth 43mm
Knife	2.4 ~ 3.7 67.5 ~ 69 3ea	Disc blade 1ea Furrow blade 1ea Fixed Blade 1ea	Disc blade 1 ea
Size (mm)	600 x 1760 x 200	900 x 1200 x 580	1200 x 1600 x 1000

Special Instruments



AC Spark Tester (SM-30ST250)

Test Voltage	200 - 30,000V
Test Type	Brush Detector
Test Diameter	Max. 250φ
Electrode Length	300mm
Power	220VAC 60Hz



Laser Micrometer (LM-250XY)

Range	5 - 200 mm
Accuracy	±20μm
Power	90 - 240VAC 50/60Hz
Communication	RS485 port
Scanning Speed	600time/s



Lump Neck Down Detector (LD-1303C)

Type	3 Axis, Infrared LED projection
Measuring Range	ø1 - 130mm
Detecting Sensitivity	0.2 - 10mm
Line Speed	0.3m/min - 500m/min
Alarm Time	0.5sec



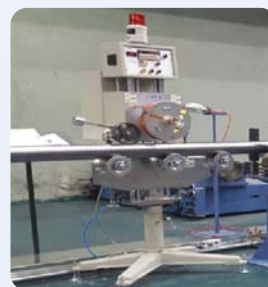
Length Counter (LC-5400H)

Line Speed	0 - 50m/Min
Cable Size	50 - 400φ(Max.)
Accuracy	0.05%
Output	1 Pulse/m X Open collector X 3
Maximum Count	999999.999m



Length Marking Machine (SM-LMT200 series)

Type	Heating Tape Stamp Marking
Driving Motor	220VAC 750W x 2
Line Speed	Max. 80m/Min
Marking Roll Drive	Servo motor drive type
Applicable	100 - 200φ(Max)



Multi Fire Resistance Tester



Fire resistance tester with water
BS 6387



Model	SM-752
Standards	BS, IEC
High volt	600, 1000V
Test current	0.25A
Fuse	2A / 3A
Sensor	Type-K temp. sensor Air/Gas flowmeter Timer



Fire resistance tester
BS 6387
IEC 60331



Fire resistance tester with water, shock
BS 6387
BS 8491 F30/60/120
BS 50200
BS 7846



Cable Fire Testers



Vertical Flame Resistance Tester IEEE 1202



Fire Resistance Tester
IEC 60332-1



Vertical Flame Resistance Tester
IEC 60332-3-10
IEC 60332-3-22



Cable Halogen, PH and Conductivity Tester
IEC 60754-1
IEC 60754-2



CPR Tester
BS 50399
IEC 60332-3-10
IEC 60332-3-22



Smoke Density Tester
IEC 61034



Oxygen Index Tester ISO 4589-2

Sungmin Instruments has manufactured various Fire Resistance Testers such as IEEE1202, Vertical Flame Resistance Tester, etc. to the major cable manufacturers over the last 10 years. On the basis of the experience and the steady development of technique, Sungmin Instruments as specialized in FIRE TEST will take the head in manufacturing FIRE TEST MACHINE

Enamel/Magnetic Wire Management System



Enamel Wire Pinhole Detector



Sheave Roller for 12 line



Control Unit



Sheave Roller

- Control type : Touch screen control
- Output volt./ampere : DC 350 ~ 3,000 -> 8 point setting
- 5 ~ 16 uA -> auto setting
- Function/display: Time and running time / The total length setting and display the length of section Set Fault / Fault section graph / ENX(fault section no.) ENM(fault sector) ENMM(fault length)
- Touch screen program control makes check/manage efficient and easy
- It is effective to manage the fault section as displaying graph
- Available sort each item like fault number, most fault sect or, length of fault
- The way of detecting is designed to accord with NEMA SPEC
- The management with PC Program is allowed to store and edit date easily and efficiently

Management Unit

Product Features

- In line Continuity Tester is the detecting system for insulation. The various settings and options allow high quality and the data after production is able to make the warranty and reliability high.



Continuity Pinhole Tester multi line



Memory Counter 1 Line

I Specifications

MODEL	Continuity Manager 20 Line	Continuity Manager 1 Line
Power	220VAC 50/60Hz 1phase	220VAC 50/60Hz 1phase
Output	2.5KVDC	2.5KVDC
Max. speed	MAX. 200m/min	MAX. 200m/min
Detect type	Electrode roller type	Bead Chain contact type
Setting	Print interval time Count/Speed/Date Volt. On/Off each line	Cycle time (1 - 99sec) Cycle length (99999m) Output voltage (500 - 2,900V) Count speed (MAX. 500cpm) Pin hole size
Display	-NG Counter -Fault No. each line -Alarm, LED on Fault -Voltage and Ampere	-Pinhole No. target -Pinhole No/1Cycle number -Alarm -LED light on fault

Magnetic Wire Lump Detect System

Detect type Non-contact type

double / triple axes

Apply diameter ϕ 0.02 ~ 30mm

Detect range 0.01 ~ 9.99mm Alarm time : 0.05sec

Touch screen

Printing fault count / date / time for each line

Display the graph for each line Alarm unit

Available external storage memory



LD-053C



LD-302C

Touch control program



Installation



Main products group of SungMin Instruments

Test & Quality check

- High Frequency Spark Tester (SM-HF Series)
High frequency sine wave spark tester, SM-15HF, accomplish considerable reliability in spite of high speed wire or very small defect.
- AC 50/60Hz Spark Tester (SM-ST Series)
This tester is general device that detect the insulation defect at cable manufacturing process. When the defect point(bare wire, pin-hole dust, scar)pass through the tester. it can find out insulation defect point.
- AC-DC High Voltage Tester (SM-PT, ADT, DPT Series)
Test equipment for development and quality assurance in cable industry
- Multi Spark Tester (SM-ST Series)
SM-3100ST, be suitable for communication cable standing machine, is used for detecting pin-hole. Broken wire in front of 100 or 200 pair of standing. This tester can check 100 or 200 lines Simultaneously and even only one line's defect is detected. alarm and stop line. After the line stop. Can repair the cable with local tester.
- Break Down Voltage Tester For Magnet Wire (SM-BDV)
Checking the break the down voltage of enamel wire and then testing insulating capacity.
- Continuity Tester (HD.CT2500)
Check the enamel wire wrapping stability or tubing by DC high voltage based on NEMA spec.(MW 1000 PART 3-3.8)
- In Line Continuity Tester (ICT Series)
In line continuity tester detects the scrap on insulated enamel wire. It is simultaneously testing several lines on in line condition against general testing method which is sampling pin-hole test it can prevent unknown produced scrap and guarantee the quality. Also it can meant the NEMA spec.
- Arrestor Tester (SM-ART Series)
Check the arrest
- Cable Endurance Tester (SM-ECT410-50)
Test the U band the standard test IEC60227 follow the SHOWA, DAIDEN
- Corona Master (CM Series)
This equipment is composed of the device generating high frequency and electrode unit. In electrode, high frequency high voltage generates corona discharge in contact with jacketed copper wire. So the surface of jacket(PE, PVC, TEFLON, HDPE, LDPE) is activated and the adhesion is strengthened in the second progress, stamping.
- Tensile Testing Tester (SM-652 Series)
- Twisting Endurance Tester (SM-216 Series)
Check and measure the all kinds of wire's twist for the piano wire and steel wire.
- Sen Tester (SM-SEN Series)
Check the enamel flexibility.
- Spring Back Tester (SBT Series)
We have two Kinds manual and auto type.
- DC High Volt / Megohm Meter (MD.SM-40DPT04ME)
- AC High Current Tester (CT Series)

Preheater

- Inverter Preheater (HP-P Series) /Induction Preheater (IP-P Series)
 - ▶ Preheater of SUNGMIN Instruments has wide application range.
 - The conductor should be preheated when the cable wire extruding is processing.
 - For AL strip annealing.
 - Before the process of the wire coating for wire-net
 - Attached communication-wire capstan.
 - ▶ It's very effective to marker high quality and productivity though the process of preheating the iron or nonferrous-metal.

Measurement & Scale

- Length Measuring Counter (LC Series)
LC-2500 satisfy the cable manufactures demand of pursuing accurate cable length. This tester variously applied to wide speed range and conductor diameter, have belt driving unit and here not any slippage. This tester is suitable device for demanding high performance and reliability at cable length measuring parts.
- Laser Micrometer (LDM Series)
Long life semiconductor laser lasting up to 100,000 hours equipped. A high precision lens allows high linearity. Very small measuring error if object is vibrating. No influence to the measured value by ambient light such as the sunlight, etc. Available to measure opaque/transparent object such as glass, plastic, etc. Maintenance free, calibration free.
- Wire Temperature
Check the current temperature of wire.
- Milli Ohm Meter
Check the resistance.
- Portable Wheatstone Bridge (SM-350)

Printing

- Tape Length Marking Machines (LM-T Series)
In extruding line. This equipment stamps length, company name, product name, etc on surface of the cables by heated marker.
- Cable Printer (PRT Series)
SMEM printer is an instrument of gravure direct printing which marks company name, product name, size, etc on the cable of PE, PVC, LDPE, TEFLON or the pipe. it is for high speed and low speed.

Other

- Joint Detector (ID Series)
Check the welding point or short the cable at extrusion process.
- Surface Variation Detector/Lump Detector (TM/LD Series)
We have two kinds touch and non touch type. This is a detect the surface of cable or wire lump. burr etc.
- Talc Master (TM-E Series)
Talc Master is a machine which can make an even application of the talc powder to the core wire for an easy separation from it's covering material. when necessary.
- Display unit (DMD-100, 1204, 1205, 1505 Series)
Display unit is a device for watching the important numbers at even long distance. These numbers are for count. speed, rpm, diameter and temperature etc. which workers have to confirm very often and which are so useful of improving the performance and productivity.
- Suction Wiper
Eliminate the cable surface humidity located the cooling tank back side or in front of the printer.
- Traverse Pitch Controller (TPC Series)
Pitch control center for the cable and wire arrange by AC servo motor.
- But Welding Machines (SM-BW Series)
- Memory Counter Printer (MC Series)
Display the detected error data which is connected the instruments of diameter. Lump detector, Spark tester, etc.
The displayed data are test voltage, error point, error time, etc.
- Sprayer
These instruments mark to cable/wire/pipe by elastic rubber or ink from spray at the time when alarm signal is received.
At present, elastoring marker is in patent application at home and abroad.



SMEM Products

1. Spark Tester
2. Laser Micrometer
3. Lump Detector
4. Cable Printer
5. Length Counter
6. Length Marking Machine
7. Preheater
8. Corona Master
9. Talc Master
10. Graphite Master
11. Position Sensor for CV Line
12. CV Diameter Gauge for CV Line
13. High Frequency Preheater
14. Powder Coating Machine
15. Multi-Display System
16. Capacitance Measurer
17. Cable High Voltage Tester
18. Operating Information Measurement System
19. Fire Resistance Tester
20. Enamel Wire Continuity Manager

SMEM
SUNGMIN
INSTRUMENTS

Electro Equipments for the Cable Industry

1322-28 Seohae-Ro, Paltan-Myeon,
Hwasung-Si Gyeonggi-Do. Korea

TEL 82-2-806-9556

FAX 82-2-893-9222

URL <http://www.smem.co.kr>

MAIL smem@smem.co.kr

