

Dimension

FIELD	RANGE	BRANCH	SCOPE
DIMENSION – LABORATORY			
Gauge Block	0 ~ 250 mm 0 ~ 4 inch	Selangor	ISO/IEC 17025
Precision Caliper	0 ~ 300 mm 0 ~ 600 mm 0 ~ 1000 mm	Perak Penang Selangor	
Depth Micrometer / Gauge	0 ~ 300 mm	Selangor	
External Micrometer	0 ~ 150 mm 0 ~ 300 mm 0 ~ 300 mm	Penang Selangor Perak	
Internal Micrometer	0 ~ 500 mm	Selangor	
Micrometer Head & Calibration Tester Minimum resolution 0.1µm	0 ~ 50 mm	Selangor	
Dial Thickness Gauge	0 ~ 20 mm	Selangor	
Dial Gauge	0 ~ 100 mm	Selangor	
Height Gauge	0 ~ 600 mm 0 ~ 1000 mm	Penang Selangor	
Rulers, Metal ruler	0 ~ 2000 mm	Selangor	
Steel tape, Textile tape, All Type	0 ~ 100 m	Selangor	
Dial Test Indicator	0.14 ~ 1 mm	Selangor	
Square, L-Square	0 ~ 400 mm	Selangor	
Angle (Angle Block, Protractor)	0 ~ 180 °	Selangor	
Test Sieve	0.032 ~ 125 mm	Selangor	
Precision Level / Spirit Level / Water Level	0.02 mm/m 0.05 mm/m 0.1 mm/m	Selangor	
Glass Scale / Peak Lupe Scale	0 ~ 1000 mm	Selangor	
Snap Micrometer - Micrometer Range - Indicator Range	0 ~ 125 mm 0 ~ 0.15 mm	Selangor	
Non – metallic Thickness Foil	0 ~ 2.5 mm	Selangor	
Setting Rod	25 ~ 600 mm	Selangor	

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FIELD	RANGE	BRANCH	SCOPE
DIMENSION – LABORATORY			
Digital Indicator	0 ~ 50 mm	Selangor	ISO/IEC 17025
Electrical Comparator / MU checker	0 ~ 2000 μ m	Selangor	
Feeler Gauge	0.01 ~ 3 mm	Selangor	
Pin Gauge / Plain Plug (Diameter Only)	Up to 50 mm	Selangor	
External Parallel Screw Thread Gauge	2 ~ 50 mm	Selangor	
Dial Bore Tester / Gauge	18 ~ 100mm	Selangor	
Micro indicator	\pm 25 ~ 100 μ m	Selangor	
Vee Block	up to 150 mm x 150 mm x 65 mm	Selangor	
Three-Point Internal Micrometer (Holtest)	0 ~ 100 mm	Selangor	
Plain Ring Gauge, go and no go	0.15 ~ 50 mm	Selangor	
Thread Ring Gauge, go and no go	6 ~ 30 mm	Selangor	
Pitch Gauge	0.35 ~ 7 mm 4 ~ 70 TPI	Selangor	
Radius Gauge, per set	ALL	Selangor	
Fixture Length Gauge / Limit Height Gauge	50 mm	Selangor	
Caliper Checker	600 mm	Selangor	
Inside Micrometer Checker	Max: 600 mm	Selangor	
Inside Caliper	600 mm	Selangor	
Depth Micro Checker	300 mm	Selangor	
Height Master	300 mm	Selangor	
Laser Distance Meter	0.1 ~ 30 m	Selangor	
Length Counter	0 ~ 10000 mm	Selangor	
Snap Gauge	300 mm	Selangor	
Welding Gauge	Length and Angle	Selangor	
Linear Gauge	10 μ m	Selangor	
Hex Gauge	Diameter	Selangor	
Taper Gauge	Length	Selangor	

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FIELD	RANGE	BRANCH	SCOPE
DIMENSION – LABORATORY			
Wet Thickness Gauge	ALL	Selangor	ISO Traceable
Penetration Gauge / Penetrometer	50 mm	Selangor	
Straight Edge	Parallelism and Flatness	Selangor	
Optical Flat / Parallel	Flatness	Selangor	
Standard Glass Disc	Diameter	Selangor	
Rim Hole Checker	Diameter	Selangor	
Jigs	Length	Selangor	
Combination Set	Angle, Length & Flatness	Selangor	
Coordinate Measuring Machine (CMM)	Angle & Length	Selangor	
Laser Scan Micrometer	Diameter	Selangor	
Roughness Measuring Machine / Tester	Roughness	Selangor	
Displacement Sensor	Length	Selangor	
Roundness Measuring Machine / Tester	Roundness	Selangor	

FIELD	RANGE	BRANCH	SCOPE
DIMENSION – FIELD SERVICE			
Profile Projector Individual Axis	0 ~ 300 mm 0 ~ 140 mm	Selangor Penang	ISO/IEC 17025
Surface Plate (Granite & Cast iron)	Maximum (1000 x 1000) mm ² Maximum (2500 x 1600) mm ²	Selangor Penang	
Toolmaker's Microscope	0 ~ 140 mm	Penang	

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Temperature & Humidity

FIELD	RANGE	BRANCH	SCOPE
TEMPERATURE – LABORATORY			
Liquid-In-Glass Thermometer	-40 ~ 400 °C -15 ~ 400 °C	Selangor Penang	ISO/IEC 17025
Temperature Sensor Thermocouple (K, J, T, E, R, S, N, B) RTD, Pt 100, JPt 100 Temperature Gauge Thermistor	-40 ~ 1300 °C -15 ~ 400 °C 0 ~ 400 °C	Selangor Penang Perak	
Temperature Calibrator (Simulation) K, J, E, R, S, T, B, N, Pt 100	-270 ~ 1820 °C -270 ~ 1300 °C	Selangor Perak	
Temperature Calibrator (Measurement) K, J, E, R, S, T, B, N, Pt 100	-200 ~ 1820 °C	Selangor	
Temperature Recorder/Indicator (Simulation) K, J, E, R, S, T, B, N, Pt 100	-200 ~ 1820 °C -270 ~ 1370 °C	Selangor Penang	
Temperature & Humidity Indicator or Recorder Thermohygrograph, Thermohygrometer, Data Logger	10 ~ 60 °C 10 ~ 90 %RH	Selangor	
Temperature Block Calibrator Dry Block	-40 ~ 1300 °C	Selangor	
Infrared Thermometer	-40 ~ 1000 °C	Selangor	

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TEMPERATURE – FIELD SERVICE			
Temperature Sensor Thermocouple (K, J, T, E, R, S, N, B) Pt 100, JPt 100 Thermistor Temperature Gauge	-20 ~ 400 °C 30 ~ 400 °C 0 ~ 400 °C	Selangor Penang Perak	ISO/IEC 17025
Thermometer Recorder/Indicator (Simulation) K, J, E, R, S, T, B, N, Pt 100	-270 ~ 1820 °C -270 ~ 1370 °C -200 ~ 1300 °C	Selangor Penang Perak	
Temperature Controlled Enclosure Oven, Furnace, Incubator, Freezer, Autoclave	-80 ~ 1300 °C -30 ~ 1300 °C -40 ~ 1300	Selangor, Perak Penang	
Temperature Block Calibrator Dry Block	-40 ~ 1300 °C	Selangor	
Temperature Liquid Bath Water Bath, Oil Bath	-40 ~ 250 °C	Selangor	
Humidity Chamber	5 ~ 60 °C , 20 ~ 95 %RH 5 ~ 60 °C , 30 ~ 95 %RH 30 ~ 95 %RH	Selangor Penang, Perak	
	10 ~ 20 %RH 10 ~ 30 %RH	Selangor Penang, Perak	ISO Traceable
Infrared Thermometer	-30 ~ 500 °C	Selangor	

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PYROMETRO

Scope of Calibration



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Mass

FIELD	RANGE	BRANCH	SCOPE
MASS – LABORATORY			
Mass Measurement Standard Weight / Dead Weight	1 mg ~ 30 kg 2 kg ~ 20 kg	Selangor Penang	ISO/IEC 17025

FIELD	RANGE	BRANCH	SCOPE
MASS – FIELD SERVICE			
Balance Analytical Balance, Triple Beam	0 ~ 100 kg 1 mg ~ 200 kg 0 ~ 1000 kg	Penang Perak Selangor	ISO/IEC 17025
Weighing Scale / Hanging	0 ~ 100 kg 1 mg ~ 200 kg Up ~ 1000 kg	Penang Perak Selangor	
Standard Weight (Dead Weight)	1 kg ~ 30 kg	Selangor	
Tank ~ Liquid Weighing, Volume	1 ton 10000 liter	Selangor	ISO Traceable

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Force			
FIELD	RANGE	BRANCH	SCOPE
FORCE – LABORATORY			
Load Cell Proving Ring, Force Gauge, Tension Gauge, Belt Tension, Hanging Scale	30 tf	Selangor	ISO/IEC 17025
Hand Torque Tools Torque Wrench, Torque Gun, Screwdriver	0 ~ 1500 Nm	Selangor	
Torque Meter / Calibrator	0 ~ 1500 Nm	Selangor	
Hardness Durometer (Type A, B, C, D, E, O, DO, OO)	0 to 100 shore hardness index	Selangor	
Adhesion Tester	0 ~ 10 tf	Selangor	ISO Traceable
Elmendorf Tearing Tester	0 ~ 100 scale	Selangor	
Rockwell Hardness Tester	HRA, HRB, HRC	Selangor	
FORCE – FIELD SERVICE			
Compress / Tensile Testing Machine	980 N ~ 980 kN up to 10000 kgf	Selangor Penang	ISO/IEC 17025

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Pressure

FIELD	RANGE	BRANCH	SCOPE
PRESSURE – LABORATORY			
Pressure Measuring Device Pressure Gauge, Pressure Recorder, Pressure Transducer, Test Gauge, Safety Valve, Barometer, Oxygen Gauge	Up to 2812 kgf/cm ² (Up to 40000 psi) 0 ~ 700 bar 0 ~ 700 bar	Selangor Penang Perak	ISO/IEC 17025
Manometer	0 ~ 0.7 kgf/cm ²	Selangor	
Vacuum Measuring Device	-1 ~ 0 kgf/cm ²	Selangor	
Deadweight Tester Hydraulic, Pneumatic	-14 ~ 16000 psi	Selangor	ISO Traceable
PRESSURE – FIELD SERVICE			
Pressure Measuring Device Pressure Gauge, Pressure Recorder, Pressure Transducer, Test Gauge, Safety Valve, Barometer	Up to 2812 kgf/cm ² (Up to 40000 psi) 0 ~ 700 bar 0 ~ 700 bar	Selangor Penang Perak	ISO/IEC 17025
Manometer	0 ~ 0.7 kgf/cm ²	Selangor	
Vacuum Measuring Device	-1 ~ 0 kgf/cm ² -0.9 ~ 0 bar -0.9 ~ 0 bar	Selangor, Penang, Perak	

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Volumetric

FIELD	RANGE	BRANCH	SCOPE
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VOLUMETRIC – LABORATORY

Burette	10 ~ 100 ml	Selangor	ISO/IEC 17025
Dispenser / Digital Burette	1 ~ 100 ml	Selangor	
Measuring Cylinder	10 ~ 2000 ml	Selangor	
One Mark Volumetric Flask	10 ~ 2000 ml	Selangor	
POVA – Pipette / Micropipette	0 μ l ~ 10 μ l (Non Accredited) 10 μ l ~ 10 ml	Selangor	
Graduated Pipette	1 ~ 25 ml	Selangor	
One Mark Pipette	0.5 ~ 50 ml	Selangor	
Zahn Cup	Cup 2, 3, 4	Selangor	
Ford Cup	Cup 3, 4, 5	Selangor	
Refractometer : Sucrose Mass Fraction Refractive Index	0% - 50% 1.333 – 1.420	Selangor	
Beaker, Pitcher	0 ~ 2000 ml	Selangor	ISO Traceable
Dispenser	100 ~ 2000 ml	Selangor	

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Electrical

FIELD	RANGE	BRANCH	SCOPE
ELECTRICAL – LABORATORY			
Measuring Instrument DC Voltage DC Current AC Voltage AC Current Resistance Capacitance Frequency	0 ~ 900 V 0 ~ 11 A 1 mV ~ 1000 V, 45 ~ 500 kHz 33 μ A ~ 11A, 1 ~ 10 kHz 0 ~ 290 M Ω 50 Hz ~ 1000 Hz, 0.33 nF ~ 109.999 nF 0.1 Hz ~ 100 kHz	Selangor	ISO/IEC 17025
Oscilloscope: Vertical Deflection (50 Ω Termination) a. DC Voltage b. Square Wave Horizontal Deflection (50 Ω Termination) Time Maker Frequency Response (50 Ω Termination) (5 mV ~ 5.5 V)	0 ~ 2.2 V 1.8 mV ~ 2.2 V p-p, 10 Hz ~ 10 kHz 2 ns ~ 5 s 50 kHz ~ 300 MHz	Selangor	
Generating / Sourcing Instrument DC Voltage DC Current AC Voltage AC Current Resistance Frequency	0 ~ 1000 V 0 ~ 3 A 0 ~ 750 V, 3Hz ~ 1 MHz 0 ~ 3 A, 3Hz ~ 5 kHz 0 ~ 100 M Ω 3 Hz ~ 1 kHz	Selangor	
Clamp Meter DC Current (50 turn coil) AC Current (50 turn coil)	0 ~ 550 A 0 ~ 550 A, 45 Hz ~ 440 Hz	Selangor	

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ELECTRICAL – FIELD			
Measuring Instrument:			Selangor
DC Voltage	0 ~ 900 V		
DC Current	0 ~ 11 A		
AC Voltage	1 mV ~ 1000 V, 45 ~ 500 kHz		
AC Current	33 μ A ~ 11A, 1 ~ 10 kHz		
Resistance	0 ~ 290 M Ω		
Capacitance	50 Hz ~ 1000 Hz, 0.33 nF ~ 109.999 nF		
Generating / Sourcing Instrument			Selangor
DC Voltage	0 ~ 1000 V		
DC Current	0 ~ 3 A		
AC Voltage	0 ~ 750 V, 3Hz ~ 1 MHz		
AC Current	0 ~ 3 A, 3Hz ~ 5 kHz		
Resistance	0 ~ 100 M Ω		

Miscellaneous

FIELD	RANGE	BRANCH	SCOPE
TIME AND FREQUENCY - LABORATORY			
Tachometer			Selangor
a) Angular Velocity -Non contact/Contac	60 ~ 40000 rpm		
b) Linear Velocity -Contact	3 ~ 100 cm/sec		
Stopwatch Max 1/100 s	0 ~ 3 hours		Selangor
Timer (max 1/100 s) (relay/countup/countdown)	0 ~ 3 hours		Selangor
TIME AND FREQUENCY – FIELD SERVICE			
RPM Measuring Instrument Contact, Non-Contact	60 ~ 40000 rpm		Selangor
Stopwatch Max 1/100 s	0 ~ 3 hours		Selangor
Timer (max 1/100 s) (relay/countup/countdown)	0 ~ 3 hours		Selangor

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AIR VELOCITY			
Anemometer Vane, Hot Wire, Pitot	0 ~ 20 m/s	Selangor	ISO Traceable
Laminar Flow	0.5 m/s	Selangor	
Fume Hood	0.5 m/s	Selangor	
pH			
pH Meter	pH 4 ~ 10	Selangor	ISO Traceable
CONDUCTIVITY			
Conductivity Meter	0.05 ~ 12880 μ S/cm	Selangor	ISO Traceable
PHOTOMETRIC			
Lux Meter, Light Meter	0 ~ 1000 Lux	Selangor	ISO Traceable
ACOUSTICS			
Sound Level Meter, Sound Level Calibrator, Noise Dosimeter	94 & 114 dB	Selangor	ISO Traceable
MOISTURE			
Moisture Meter	6 ~ 27% MC	Selangor	ISO Traceable
FLOW			
Flowmeter, Rotameter ~ Liquid Flowrate, Totalizer	0 ~ 200 L/min	Selangor	ISO Traceable
Ultrasonic Flowmeter ~ Liquid Pipe size 1~15" inch diameter	All range	Selangor	
DISSOLVED OXYGEN			
Dissolved Oxygen Meter	0 ~ 7.5 mg/L	Selangor	ISO Traceable
GLOSS			
Gloss Meter	20°, 60°, 85°	Selangor	ISO Traceable

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FIELD	RANGE	BRANCH	SCOPE
GAS			
Gas Detector	nitrogen (N ₂) : 100 % oxygen (O ₂) : 20.9 % carbon dioxide (CO ₂) : 10 % or 100 000 ppm methane (CH ₄) : 0.1 % or 1000 ppm	Selangor	ISO Traceable
VIBRATION			
Vibration Meter -Velocity -Acceleration	up to 30 mms ⁻¹ up to 30 ms ⁻²	Selangor	ISO Traceable

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