Price list

Mechanical Engineering Standards labortory (MEL)

ITEMS	PARAMETER	RANGE	ACCREDITATION	METHOD	PRICE	REMARK
MASS	BALANCE: Mechanical , Electronic					
	Condition: On-site charge per equipment 500.- but minimum charge 1000.-					
	Analytical balance	0 mg to 200 g readability 0.0001 g	1 mg to 200 g	CSIRO	3,000.-	
	precision balance	0 mg to 1 kg readability 0.001 g	1 mg to 1 kg	CSIRO	3,000.-	
		0 mg to 6 kg readability 0.01 g/ 0.1 g	1 mg to 6 kg	CSIRO	2,000.-	
		Not more than 30 kg	Not more than 30 kg	CSIRO	3,000.-	
		Not more than 100 kg	Not more than 100 kg	CSIRO	4,000.-	
		Not more than 150 kg	Not more than 150 kg	CSIRO	4,500.-	
	Scale , analog balance	Not more than 35 kg	Not more than 35 kg	CSIRO	1,500.-	
		Not more than 60 kg	Not more than 60 kg	CSIRO	2,000.-	
		Not more than 150 kg	Not more than 150 kg	CSIRO	3,000.-	
	Trip Balance	0 g to 200 g	N/A	CSIRO	3,500.-	
	Mass:Weight,deadweight					
	Condition: weight set if report per piece additional charge 200.- per report					
	Standard weight/ OIML	1 mg to 1 kg	1 mg to 1 kg	OIML- R111-1	400.-	
	Class F1,F2,M1	2 kg to 5 kg	2 kg to 5 kg	OIML- R111-1	600.-	
		10 kg to 20 kg	10 kg to 20 kg	OIML- R111-1	800.-	
	Precision weight/ OIML	1 mg to 1 kg	1 mg to 1 kg	OIML- R111-1	100.-	
	Class M2 ,M3	2 kg to 20 kg	2 kg to 20 kg	OIML- R111-1	300.-	
	Special Mass / Weights / ASTM SS ,	1 mg to 1 kg	1 mg to 1 kg	In-house based on OIML- R111-1	400.-	
	Brass(coating)	2 kg to 5 kg	2 kg to 5 kg	In-house based on OIML- R111-1	600.-	
		10 kg to 20 kg	10 kg to 20 kg	In-house based on OIML- R111-1	800.-	
	Special Mass / Weights / ASTM weight :	1 mg to 1 kg	1 mg to 1 kg	In-house based on OIML- R111-1	100.-	
	material ; Cast iron ,	2 kg to 5 kg	2 kg to 5 kg	In-house based on OIML- R111-1	300.-	
	Brass(non-coating)					
VOLUME	Condition: Accept only clean instrument					
	Volumetric Flasks	capacity 2 ~ 2000 cm^3	capacity 2 ~ 2000 cm^3	ASTM E 542	750.-	
	Volumetric Burettes	capacity 2 cm^3 ~ 100 cm^3	capacity 2 cm^3 ~ 100 cm^3	ASTM E 542	500.-/point	
	Volumetric Pipettes	capacity 0.5 cm^3~ 100 cm^3	capacity 0.5 cm^3~ 100 cm^3	ASTM E 542	1,000.-	
	Measuring Pipettes	capacity 0.1 cm^3 ~ 50 cm^3	capacity 0.1 cm^3 ~ 50 cm^3	ASTM E 542	500.-/point	
	Cylinders	capacity 5 cm^3~ 2000 cm^3	capacity 5 cm^3~ 2000 cm^3	ASTM E 542	500.-	minimum rate
	Piston Pipettes	capacity 20 µl ~ 5000 µl	capacity 20 µl ~ 5000 µl	ISO 8655-6	500.-/point	
	Standard Tanks				1,500.-	minimum rate
DENSITY	Hydrometer : calibration at main scale					
	Density hydrometer	0.600 g/cm^3~ 2.000 g/cm^3	0.600 g/cm^3~ 2.000 g/cm^3	Hydrostatic weighing	3,500.-	Three points

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ITEMS	PARAMETER	RANGE	ACCREDITATION	METHOD	PRICE	REMARK
	Specific gravity hydrometer	0.600 ~ 2.000	0.600 ~ 2.000	Hydrostatic weighing	3,500.-	Three points
	More than three pionts ; next point				500.-	
	Hydrometer : calibration media are mixed density solution					
	Density hydrometer	0.620 g/cm^3 ~1.700 g/cm^3 Subdivision ≥ 0.001 g/cm^3	0.620 g/cm^3~1.700 g/cm^3	Comparison	1,500.-	Three points
	Specific gravity hydrometer	0.620 ~1.700 Subdivision ≥ 0.001	0.620 ~1.700	Comparison	1,500.-	Three points
	API hydrometer	-1 API ~ 91 API	-1 API ~ 91 API	Comparison	2,000.-	Three points
	Baume hydrometer	0 Be ~ 70 Be	0 Be ~ 70 Be	Comparison	2,000.-	Three points
	More than three pionts ; next point				500.-	
	Surface tension measurement	Not prepare example (solution)	N/A	plate , ring	1,000.-	
		Prepare example (solution)	N/A	plate , ring	1,500.-	
Flow	Flowmeter : Gas media ; air or N_2					
	Master meter	10 ml/min ~ 500 l/m	N/A	Comparison	3,000.-	minimum
	Rotameter	10 ml/min ~ 500 l/m	N/A	Comparison	2,000.-	minimum
	Bubble flowmeter	10 ml/min ~ 20 l/m	N/A	Comparison	3,000.-	minimum
	Flowmeter : liquid media ; water					
	Master meter	not more than 40 l/m	N/A	Comparison	3,500.-	minimum
	Water meter	not more than 40 l/m	N/A	Comparison	2,500.-	minimum
	Rotameter	not more than 10 l/m	N/A	Comparison	2,500.-	minimum
Force	Force Gauge	capacity (max.) 10 tonf 0.05 %	N/A	Compression	4,000.-	
	Load cell and Indicator	capacity (max.) 10 tonf 0.05 %	N/A	ISO 376	5,000.-	Per range/mode
	Universal Testing Machine (included Tensile Testing machine and Compression Tester)	Tension mode : capacity up to 450 kN (depend on jig/adapter modification by customer) Compression mode : capacity up to 3.0 MN	capacity 0.1 kN to 450 kN	ISO 7500-1 ISO 7500-1		Condition: on-site fee 1,000.- per machine per day per group
	-Greater Bangkok Area (GBA)				2,500.-	per range/mode
	-Outside GBA				3,500.-	per range/mode

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Mechanical Engineering Standards labortory (MEL)

ITEMS	PARAMETER	RANGE	ACCREDITATION	METHOD	PRICE	REMARK
Force	-Outside GBA				5,000.-	Only 1 machine with 1 range/trip
	Force-Proving Standards	Tension mode: capacity up to 100 kN (depend on jig/adapter modification by customer)	N/A	ISO 376		per range
		Compression mode: capacity up to 100 kN	N/A	ISO 376		per range
	- Proving Ring / Loop Dynamometer	capacity 1 kN upto 100 kN	N/A	ISO 376	5,000.-	per range/mode
	- Loadcell with Indicator	capacity 1 kN upto 100 kN	N/A	ISO 376	5,000.-	per range/mode
	- Force Gauge	capacity 1 kN upto 100 kN	N/A	-	4,000.-	per range
	Force-proving instrument	capacity 1 kN upto 100 kN	N/A	ISO 376	5,000.-	per range/mode
	-Remark : special request added point				500.-	Per point
TORQUE	Torque Wrench	capacity 5 N m to 200 N m, 1000 N m	capacity 5 ~ 200 N m, 700 N m	ISO 6789	2,000.-	per one direction (Clockwise or Anti-clockwise)
	Hand torque tools	capacity 5 N m to 200 N m , 1000 N m	capacity 5 ~ 200 N m, 700 N m	ISO 6789	2,000.-	per one direction
	Torque Tester, Torque calibrator	capacity 5 N m to 50 N m	N/A	DKD R3-8	2,500.-	per one direction (Clockwise or Anti-clockwise)
		capacity 20 N m to 200 N m	N/A	DKD R3-8	2,500.-	
		capacity 100 N m to 1000 N m	N/A	DKD R3-8	2,500.-	
LENGTH & DIMENTIONAL	External Caliper : Vernier, Dial, Digital, Digimatic	0 mm to 200 mm	0 mm to 200 mm	In-house method : based on JIS B 7507:1993	500.-	
		0 mm to 300 mm	0 mm to 300 mm		700.-	
		0 mm to 450 mm	0 mm to 450 mm		800.-	
		0 mm to 600 mm	0 mm to 600 mm		1,000.-	
		0 mm to 1000 mm	0 mm to 1000 mm		1,500.-	
	Caliper for Hole Pitch : Vernier, Dial, Digital, Digimatic	0 mm to 200 mm	N/A	Comparison	800.-	

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Mechanical Engineering Standards labortory (MEL)

ITEMS	PARAMETER	RANGE	ACCREDITATION	METHOD	PRICE	REMARK
LENGTH & DIMENTIONAL	Outside Micrometer	0 mm to 25 mm	0 mm to 25 mm	JIS B 7502: 1994 excluding setting bar	600.-	
		25 mm to 50 mm	25 mm to 50 mm		700.-	
		0 mm to 50 mm (2 anvils)	0 mm to 50 mm (2 anvils)		800.-	
		0 mm to 100 mm (4 anvils)	0 mm to 100 mm (4 anvils)		900.-	
		0 mm to 150 mm (6 anvils)	0 mm to 150 mm (6 anvils)		1,100.-	
		50 mm to 150 mm (4 anvils)	50 mm to 150 mm (4 anvils)		1,200.-	
		100 mm to 200 mm (4 anvils)	100 mm to 200 mm (4 anvils)		1,300.-	
		200 mm to 300 mm (4 anvils)	200 mm to 300 mm (4 anvils)		1,500.-	
		150 mm to 300 mm (6 anvils)	150 mm to 300 mm (6 anvils)		1,800.-	
		50 mm to 75 mm	50 mm to 75 mm		900.-	
		75 mm to 100 mm	75 mm to 100 mm		900.-	
		100 mm to 125 mm	100 mm to 125 mm		1,000.-	
		125 mm to 150 mm	125 mm to 150 mm		1,000.-	
		150 mm to 175 mm	150 mm to 175 mm		1,100.-	
		175 mm to 200 mm	175 mm to 200 mm		1,100.-	
		200 mm to 225 mm	200 mm to 225 mm		1,200.-	
		225 mm to 250 mm	225 mm to 250 mm		1,200.-	
		3 inch to 4 inch	N/A		900.-	
		4 inch to 5 inch	N/A		1,000.-	
		5 inch to 6 inch	N/A		1,000.-	
	Depth micrometer	0 mm to~ 25 mm	0 mm to~ 25 mm	In - house method based on JIS B 7544: 1999	600.-	
		0 mm to 50 mm (2 anvils)	0 mm to 50 mm (2 anvils)		700.-	
		0 mm to 75 mm (3 anvils)	0 mm to 75 mm (3 anvils)		800.-	
		0 mm to 100 mm (4 anvils)	0 mm to 100 mm (4 anvils)		900.-	
		0 mm to 150 mm (6 anvils)	0 mm to 150 mm (6 anvils)		1,000.-	
		0 mm to 300 mm (12 anvils)	0 mm to 300 mm (12 anvils)		1,500.-	
	Internal micrometer	5 mm to 30 mm	5 mm to 30 mm	In - house method based on JIS B 7502: 1994	600.-	
		25 mm to 50 mm	25 mm to 50 mm		700.-	
		50 mm to 75 mm	50 mm to 75 mm		800.-	
		75 mm to 100 mm	75 mm to 100 mm		900.-	
		100 mm to 125 mm	100 mm to 125 mm		1,000.-	

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Mechanical Engineering Standards labortory (MEL)

ITEMS	PARAMETER	RANGE	ACCREDITATION	METHOD	PRICE	REMARK
LENGTH & DIMENTIONAL		125 mm to 150 mm	125 mm to 150 mm		1,000.-	
		150 mm to 175 mm	150 mm to 175 mm		1,100.-	
		175 mm to 200 mm	175 mm to 200 mm		1,100.-	
		200 mm to 225 mm	200 mm to 225 mm		1,200.-	
		225 mm to 250 mm	225 mm to 250 mm		1,200.-	
		250 mm to 275 mm	250 mm to 275 mm		1,300.-	
		275 mm to 300 mm	275 mm to 300 mm		1,300.-	
		50 mm to 150 mm (4 anvils)	50 mm to 150 mm (4 anvils)		1,500.-	
		50 mm to 200 mm (5 anvils)	50 mm to 200 mm (5 anvils)		1,700.-	
		50 mm to 300 mm (6 anvils)	50 mm to 300 mm (6 anvils)		1,800.-	
	Micrometer Rod	25 mm to 300 mm	N/A	Comparison	600-2,000.-	
	Feeler Gauge	10 blades/set	N/A	Direct measurement	500.-	
		20 blades/set	N/A		700.-	
		30 blades/set	N/A		900.-	
		40 blades/set	N/A		1,200.-	
	Indicator ; Dial, Digital, Digimatic	0 mm to 5 mm, 0 mm to 10 mm @ 0.01 mm	0 mm to 5 mm, 0 mm to 10 mm @ 0.01 mm	JIS B 7503: 1997	1,200.-	
		0 mm to 20 mm, 0 mm to 25 mm @ 0.01 mm	0 mm to 20 mm, 0 mm to 25 mm @ 0.01 mm		1,300.-	
		0 mm 1 mm @ 0.001 mm	0 mm 1 mm @ 0.001 mm		1,400.-	
		0 mm to 2 mm @ 0.001 mm	0 mm to 2 mm @ 0.001 mm		1,500.-	
		0 mm to 5 mm, 0 mm to 10 mm @ 0.001 mm	0 mm to 5 mm, 0 mm to 10 mm @ 0.001 mm		1,800.-	
		0 inch to 0.5 inch, 0 inch to 1 inch @ 0.001 inch	Accredited report : unit in mm and conversion to inch		800.-	
		0 inch to 0.5 inch, 0 inch to 1 inch @ 0.0005 inch			1,100.-	
		0 inch to 0.05 inch,0 inch to 0.3 inch, 0 inch to 0.5 inch @0.0001 inch			1,200.-	
	Calibration Tester	0 mm to 25 mm @ 0.001 mm	N/A	Comparison	3,000.-	
	Level	Spirit Level	Precision level/Spirit level	In-house method based on JIS B 7510:1993	500-1,500.-	
		Precision Level	0.02 mm/m		750-2,500.-	
		Electronic Level	0.05 mm/m		1,000-3,500.-	
		Precision Square Level	N/A		2,000-3,500.-	
	Gauge Block : single / set	shorter than 0.5 mm	N/A	JIS B7506: 2004	500+[250 x (n-1)]	n = number of gauge block
		0.5 mm to 100 mm	0.5 mm to 100 mm		500+[200 x (n-1)]	
		100 mm to 200 mm	N/A		600.-/piece	
		200 mm to 500 mm	N/A		800.-/piece	

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Mechanical Engineering Standards labortory (MEL)

ITEMS	PARAMETER	RANGE	ACCREDITATION	METHOD	PRICE	REMARK
LENGTH & DIMENTIONAL	Electronic gauge block comparator	single probe type : 0.5 mm to 500 mm	single probe type : 0.5 mm to 500 mm	In-house method	4500.-	
	Height Gauge	0 mm to 300 mm	N/A	Comparison	700.-	
		0 mm to 450 mm	N/A		800.-	
		0 mm to 600 mm	N/A		900.-	
	Profile Projector	0 mm to 50 mm	N/A	Comparison	1,500.- /Focus	on-site service 1000.-/day
	Toolmakers Microscope	0 mm to 50 mm	N/A	Comparison	2,000.- /Focus	
	Test Indicators ;Dial , Digital , Digimatic	0 mm to 0.5 mm @ 0.01 mm	N/A	Direct measurement	600.-/1,100.-	one/two-direction
		0 mm to 0.8 mm @ 0.01 mm	N/A		750.-/1,300.-	one/two-direction
		0 mm to 1 mm @ 0.01 mm			800.-/1,400.-	one/two-direction
		0 mm to 0.2 mm @ 0.002 mm	N/A		650.-/1.400.-	one/two-direction
	Thickness Gauge ; Dial , Digital , Digimatic	0 mm to 10 mm @ 0.01 mm	0 mm to 10 mm @ 0.01 mm	In - house method by comparison technique	600.-	one direction
		0 mm to 30 mm @ 0.01 mm	0 mm to 30 mm @ 0.01 mm		650.-	
		0 mm to 5 mm @ 0.001 mm	0 mm to 5 mm @ 0.001 mm		850.-	
		0 inch to 1 inch @ 0.001 inch	Accredited report : unit in mm and conversion to inch		500.-	
		0 inch to 1 Inch @ 0.0005 inch			650.-	
		0 inch to 0.05 inch, 0 inch to 0.3 inch, 0 inch to 0.5 inch @ 0.0001 inch			800.-	
	Pin gauge, Plug gauge: plain/limit	up to 5 mm	N/A	Direct measurement	300+[100 x (n-1)]	n = number of gauges
		5 mm to 100 mm	N/A		300+[200 x (n-1)]	
		100 mm to 200 mm	N/A	Comparison	500.-/piece	
	Ring gauge: plain/limit	up to 100 mm	N/A	Direct measurement	300+[200 x (n-1)]	n = number of gauges
		100 mm to 200 mm	N/A	Comparison	500.-/piece	
	Thickness plate/film	up to 1000 micrometer (mm)	N/A	Direct measurement	500.-/piece	
	Steel ruler	0 mm to 300 mm	0 mm to 300 mm	In-house method based on JIS B 7516 : 1987	500.-/piece	
		0 mm to 600 mm	0 mm to 600 mm		700.-/piece	
		0 mm to 1000 mm	0 mm to 1000 mm		1000.-/piece	

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ITEMS	PARAMETER	RANGE	ACCREDITATION	METHOD	PRICE	REMARK
PRESSURE	Pressure gauge	Pneumatic Test	Pneumatic Test			
		1 kPa to 160 kPa (Absolute pressure)	5 kPa to 130 kPa(Absolute pressure)	DKD R6-1	1,000.-	
		-95 kPa to 0 kPa (Gauge pressure)	-95 kPa to 0 kPa(Gauge pressure)	DKD R6-1	1,000.-	
		0 kPa to 7000 kPa (Gauge pressure)	0 kPa to 7000 kPa(Gauge pressure)	DKD R6-1	1,000.-	
		Hydraulic Test	Hydraulic Test			
		0 MPa to 100 MPa Gauge pressure)	0 MPa to 100 MPa(Gauge pressure)	DKD R6-1	1,000.-	
	Test gauge	Pneumatic Test	Pneumatic Test			
		1 kPa to 160 kPa(Absolute pressure)	5 kPa to 130 kPa(Absolute pressure)	DKD-R 6-1	1,500.-	
		-95 kPa to 0 kPa(Gauge pressure)	-95 kPa to 0 kPa(Gauge pressure)	DKD-R 6-1	1,500.-	
		0 kPa to 7000 kPa(Gauge pressure)	0 kPa to 7000 kPa(Gauge pressure)	DKD-R 6-1	1,500.-	
		Hydraulic Test	Hydraulic Test			
		0 MPa to 100 MPa(Gauge pressure)	0 MPa to 100 MPa(Gauge pressure)	DKD-R 6-1	1,500.-	
	Digital pressure gauge	Pneumatic Test	Pneumatic Test			
		1 kPa to 160 kPa(Absolute pressure)	5 kPa to 130 kPa(Absolute pressure)	DKD-R 6-1	3,000.-	
		-95 kPa to 0 kPa(Gauge pressure)	-95 kPa to 0 kPa(Gauge pressure)	DKD-R 6-1	3,000.-	
		0 kPa to 7000 kPa(Gauge pressure)	0 kPa to 7000 kPa(Gauge pressure)	DKD-R 6-1	3,000.-	
		Hydraulic Test	Hydraulic Test			
		0 MPa to 100 MPa(Gauge pressure)	0 MPa to 100 MPa(Gauge pressure)	DKD-R 6-1	3,000.-	
	Pressure Transmitter, Pressure Transducer	Pneumatic Test	Pneumatic Test			
		1 kPa to 160 kPa(Absolute pressure)	5 kPa to 130 kPa(Absolute pressure)	DKD-R 6-1	2,000.-	
		-95 kPa to 0 kPa(Gauge pressure)	-95 kPa to 0 kPa(Gauge pressure)	DKD-R 6-1	2,000.-	
		0 kPa to 7000 kPa(Gauge pressure	0 kPa to 7000 kPa(Gauge pressure	DKD-R 6-1	2,000.-	
		Hydraulic Test	Hydraulic Test			
		0 MPa to 100 MPa(Gauge pressure)	0 MPa to 100 MPa(Gauge pressure)	DKD-R 6-1	2,000.-	
	Deadweight Pressure Tester, Pressure Balances (cross-float Method A)	Pneumatic Test 0.5 kPa to 7000 kPa(Gauge pressure)	N/A	EA-4/7	8,000.- / 1 piston & cylinder	
		Hydraulic Test 0.1 MPa to 100 MPa(Gauge pressure)	N/A	EA-4/7	8,000.- / 1 piston & cylinder	
PRESSURE	(cross-float Method B)	Pneumatic Test 0.5 kPa to 7000 kPa(Gauge pressure)	N/A	EA-4/7	15,000.- / 1 piston & cylinder	Mass ≤ 15 pcs
		Hydraulic Test 0.1 MPa to 100 MPa(Gauge pressure)	N/A	EA-4/7	15,000.- / 1 piston & cylinder	Mass ≤ 15 pcs
	On-site: additional charge per day 1.000.-					
	Pressure gauge	Pneumatic Test -95 kPa to 0 kPa(Gauge pressure) 0 kPa to 3000 kPa(Gauge pressure)	Pneumatic Test -95 kPa to 0 kPa D221 (Gauge pressure) 0 kPa to 3000 kPa (Gauge pressure)	DKD-R 6-1	1,000.- 1,000.-	
		Hydraulic Test 0 MPa to 70 MPa(Gauge pressure)	N/A	DKD-R 6-1	1,000.-	
	Test gauge	Pneumatic Test -95 kPa to 0 kPa(Gauge pressure) 0 kPa to 3000 kPa(Gauge pressure)	Pneumatic Test -95 kPa to 0 kPa D218(Gauge pressure) 0 kPa to 3000 kPa (Gauge pressure)	DKD-R 6-1	1,500.- 1,500.-	
		Hydraulic Test 0 MPa to 70 MPa(Gauge pressure)	N/A	DKD-R 6-1	1,500.-	
	Pressure Transmitter, Pressure Transducer	Pneumatic Test 0 kPa to 3000 kPa(Gauge pressure)	N/A	DKD-R 6-1	2,000.-	