



Manufacturer's Preface.....

SWPI have been engaged in manufacturing exclusively Weights since 1961.

The scenario of the world is changing very rapidly due to revolutionary development in the field of Science & Technology. It has brought a marked change in the requirement of quality weights of various specifications, shapes, sizes, designs, accuracy class etc.

OIML - the apex body of Weights & Measures - had issued its first Int'l Recommendation for weights vide IR No. 1 & 2 in 1968 and SWPI started manufacturing weights according to the said Recommendation in 1972. The sample of their weights were submitted to the OIML, who appreciated the same vide their message dated 3rd August, 1973.

Not only that, OIML have also recognised SWPI as one of the suppliers of Cast Iron Weights and had published their name under the heading of suppliers of Cast Iron Weights of OIML (or other) specifications in their Guides issued in mars, 1987 (page 55 of FOURNISSEURS d' EQUIPMENT de CERTIFICATION).

SWPI's metric weights have traceability with BIPM, Paris (France).

The photographs shown in this catalogue are only of those weights which are in our regular range of production but we have the capacity to manufacture weights ranging from 50g to 1000kg and 4 oz to 2000 lb a piece of any specification.

Due to consistent quality and performance, SWPI has been honoured at many occasions at the Zonal, National & International Levels.

Our article "Suggestions to improve iron weights of OIML R 47 and R 52" has been published in OIML Bulletin Volume XLIX, Numbers 2-3, July - October 2008.

In the 44th CIML Meeting held in Mombassa, Kenya from 26th - 31st October, 2009, in recognition of our excellent contribution to Legal Metrology in the developing country, the OIML has issued a Letter of Appreciation.

Accuracy in Weighing Systems throughout the world is SWPI's Moto.

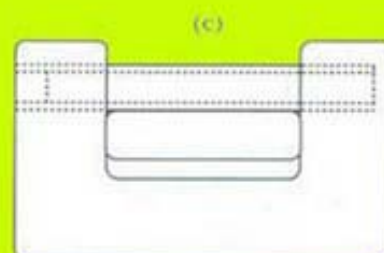
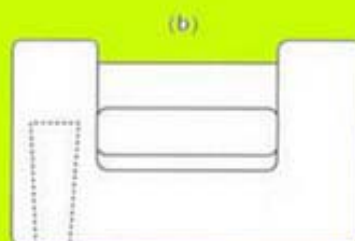
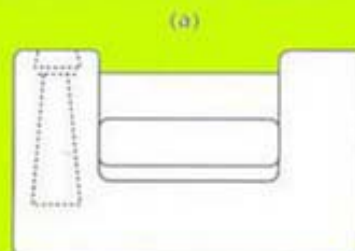
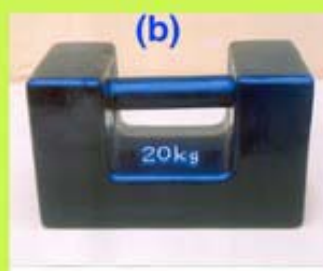
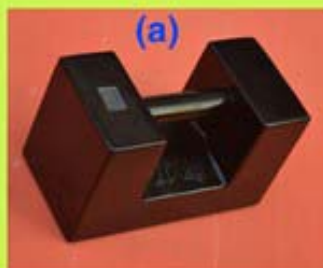
**Thank You,
14th May, 2013**



Model No. SWPI : 1 - 4

Test Weight - Medium Accuracy Class Cast Iron Rectangular

SWPI's Cast Iron Test Weights are intended for use in the Verification or Calibration of Weights and for use with weighing instruments of medium accuracy class or ordinary class. They are manufactured from high quality cast iron to give a high quality smooth surface finish and are free of cracks and pits. Weights with nominal values from 5kg to 50kg have the shape of rectangular parallelepiped with rounded edges and a rigid mild steel handle. There is an adjusting cavity placed as per drawing. Lead is used for the adjustment of the accuracy of mass. Weights are protected by a durable coat of paint - generally black colour to protect the casting from rusting.



Specification :	OIML R - 111 (Part - 1)				
Denomination :	50kg	20kg	10kg	5kg	
Max. Error					
Class	M1	2500	1000	500	250 mg
	M2	8000	3000	1600	800 mg
	M3	25000	10000	5000	2500 mg
Material :	Cast Iron				
Finish :	Laquered with black PU paint				
Shape :	Parallelepipedic				
Adjusting Cavity	a) At upper surface of one of the arms of the Weight duly closed by steel plate & sealed by lead plug. b) At bottom surface c) Inside the tubular handle duly closed by iron disc & sealed by lead plug.				
Marking	Denomination - English /Hindu-Arabic /Arabic Logo - English				

www.weights-swpi.com



Model No. SWPI : 1-4 (a)

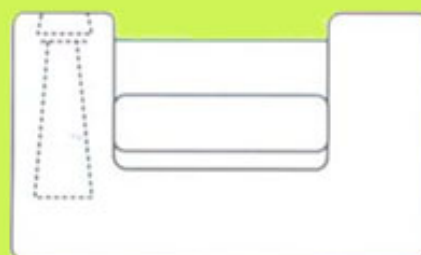
CALIBRATION WEIGHTS

OIML R 111 - 1 (Part 1)

SWPI's Cast Iron Test Weights are intended for use in the Verification or Calibration of Weights and for use with weighing instruments of medium accuracy class or ordinary class. They are manufactured from high quality cast iron to give a high quality smooth surface finish and are free of cracks and pits. Weights with nominal values from 5kg to 50kg have the shape of rectangular parallelepiped with rounded edges and a rigid mild steel handle. There is an adjusting cavity placed as per drawing. Lead is used for the adjustment of the accuracy of mass. Weights are protected by a durable coat of paint - generally black colour to protect the casting from rusting.



Figure A.3 (type 2)



Specification : OIML R - 111 (Part-1)

Denomination : 50kg 20kg 10kg 5kg

Max. Error :
Class :

M1	2500	1000	500	250 mg
M2	8000	3000	1600	800 mg
M3	25000	10000	5000	2500 mg

Material : Cast Iron

Finish : Laquered with black PU paint

Shape : Parallelepipedic

Adjusting Cavity : At the upper surface of one of the arms of the weight duly closed by steel late & sealed using lead plug.

www.weights-swpi.com



Model No. SWPI : 1-4 (b)

CALIBRATION WEIGHTS

SABS

SWPI's Cast Iron Test Weights are intended for use in the Verification or Calibration of Weights and for use with weighing instruments of medium accuracy class or ordinary class. They are manufactured from high quality cast iron to give a high quality smooth surface finish and are free of cracks and pits. Weights with nominal values from 5kg to 50kg have the shape of rectangular parallelepiped with rounded edges and a rigid mild steel handle. There is an adjusting cavity placed as per drawing. Lead is used for the adjustment of the accuracy of mass. Weights are protected by a durable coat of paint - generally black colour to protect the casting from rusting.



Specification : SABS

Denomination : 50kg 20kg 10kg 5kg

Max. Error :

Class	M1	2500	1000	500	250 mg
	M2	8000	3000	1600	800 mg
	M3	25000	10000	5000	2500 mg

Material : Cast Iron

Finish : Laquered with black PU paint

Shape : Parallelepipedic

Adjusting Cavity : At the bottom surface of the weight

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Model No. SWPI : 1-4 (c)

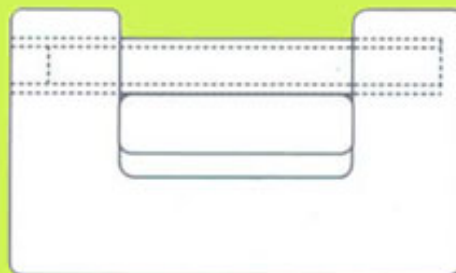
CALIBRATION WEIGHTS

OIML R 111 - 1 (Part 1)

SWPI's Cast Iron Test Weights are intended for use in the Verification or Calibration of Weights and for use with weighing instruments of medium accuracy class or ordinary class. They are manufactured from high quality cast iron to give a high quality smooth surface finish and are free of cracks and pits. Weights with nominal values from 5kg to 50kg have the shape of rectangular parallelepiped with rounded edges and a rigid mild steel handle. There is an adjusting cavity placed as per drawing. Lead is used for the adjustment of the accuracy of mass. Weights are protected by a durable coat of paint - generally black colour to protect the casting from rusting.



**Figure A.2 (type 1)
Variant 1**



Specification :	OIML R - 111 (Part-1)				
Denomination :	50kg	20kg	10kg	5kg	
Max. Error					
Class	M1	2500	1000	500	250 mg
	M2	8000	3000	1600	800 mg
	M3	25000	10000	5000	2500 mg
Material	: Cast Iron				
Finish	: Laquered with black PU paint				
Shape	: Parallelepipedic				
Adjusting Cavity	: Inside the tubular handle duly closed by iron disc & sealed by lead plug				



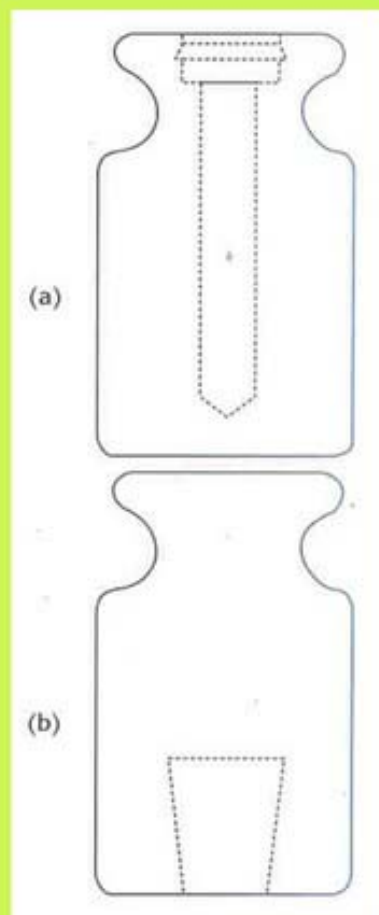
Model No. SWPI : 5 -17

**Test Weight - Medium Accuracy Class
Cast Iron Cylindrical**

SWPI's Cast Iron Test Weights are intended for use in the Verification or Calibration of Weights and for use with weighing instruments of medium accuracy class or ordinary class. They are manufactured from high quality cast iron to give a high quality smooth surface finish and are free of cracks and pits. Weights with nominal values from 100g to 10kg have the shape of cylindrical with knob rounded edges. There is an adjusting cavity placed as per drawing.

Lead is used for the adjustment of the accuracy of mass.

Weights are protected by a durable coat of paint - generally black colour to protect the casting from rusting.



Specification : OIML R - 111 (Part - 1)

Denomination: 10kg 5kg 2kg 1kg 500g 200g 100g

Max. Error

Class	:	M1	500	250	100	50	25	10	5 mg
		M2	1600	800	300	160	80	30	16 mg

Material : Cast Iron

Finish : Laquered with black P U Paint

Shape : Cylindrical with knob

Adjusting

Cavity : a) At upper centre of the Weight duly closed by iron disc & sealed by lead plug

b) At the centre of the bottom surface of the Weight

Marking

: Denomination - English/Hindu-Arabic/Arabic
Logo - English

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Model No. SWPI : 18 - 20

COMMERCIAL WEIGHTS



Specification	:	British Board of Trade		
Denomination	:	20kg	10kg	5kg
Max. Error	:	+ 3200	1600	800 mg
Material	:	Cast Iron		
Shape	:	Rectangular		
Finish	:	Laquered with P U black paint		
Adjusting Cavity	:	Rectangular shape on the under surface		

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Model No. SWPI : 21 - 25

COMMERCIAL WEIGHTS



**Specification : National Standards Commission
British Board of Trade**

Denomination : 2kg 1kg 500g 200g 100g

Max. Error NSC :	+	1300	760	540	340	240 mg
BOT :	+	400	200	100	50	30 mg

Material : Cast Iron

Shape : Truncated Hexagonal Pyramid

Finish : Laquered with P U black paint

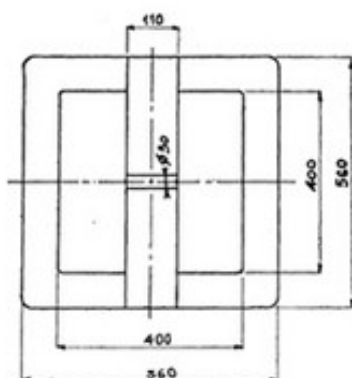
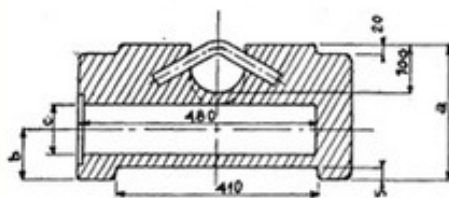
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Model No. SWPI : 26 -27 (a)

STANDARD WEIGHTS - Rectangular for Testing of High Capacity Weighing Machines

RECTANGULAR STANDARD WEIGHTS
500 kg and 1 000 kg
SUITABLE FOR STACKING
dimensions (mm)



	a	b	c
500 kg	273	100	Ø 100
1 000 kg	504	120	Ø 140



Standard Weights as per OIML R 47 are used for testing (and adjusting) of high capacity weighing machines in accuracy classes of medium and ordinary. SWPI's Standard Weights are made of high quality cast iron and free from sharp edges and corners. There is a rigid mild steel handle and an adjusting cavity and its closures are watertight and airtight. Weights are protected by a durable coat of paint. These are suitable for stacking.

Specification	: OIML R 47			
Denomination	: 100kg	200kg	500kg	1000kg
Max. Error				
0.5/10 000	5	10	25	50 g
1/10 000	10	20	50	100 g
1.7/10 000	17	33	85	170 g
3.3/10 000	33	66	170	330 g
Material	: Cast Iron			
Shape	: Rectangular			
Finish	: Laquered with black P U paint			
Adjusting cavity	: Sealed with lead plate over mild steel plate in such a way to make it water-tight and air-tight			
Markings	: Denomination , Logo and Identification number			

www.weights-swpi.com



Model No. SWPI : 26 - 27 (b)

**Test Weight - High Denominational
Cast Iron Cylindrical with handle**

SWPI's Test Weights of high denomination are intended for use in the Verification or Calibration of Weights and for use with weighing instruments of medium accuracy class or ordinary class. They are manufactured from high quality cast iron to give a high quality smooth surface finish and are free of cracks and pits.

Weights with nominal values from 100kg to 1000kg have the shape of cylindrical with rounded edges and a rigid mild steel handle. Weights are protected by a durable coat of paint - generally black colour. These weights are suitable for rolling, stacking and lifting.



Denomination	:	1000kg	500kg	200kg	100kg
Max. Error Class	:	M1 50	25	10	- g
		M1-2 100	50	20	10 g
		M2 160	80	30	15 g
		M2-3 300	160	60	30 g
		M3 500	250	100	50 g
Material	:	Cast Iron			
Shape	:	Cylindrical suitable for Rolling, Stacking & Lifting.			
Adjusting cavity	:	At the bottom surface. Another small cavity for the control mark at the top.			
Lifting	:	Lifting handle at the top of the Weight			
Finish	:	Laquered with black P U Paint			
Markings	:	Denomination			
		Manufacturer's logo (buyer's choice)			
		Identification Number (buyer's choice)			

www.weights-swpi.com



Model No. SWPI : 26 - 27 (c)

**Test Weight - High Denominational
Cast Iron I - shaped**

SWPI's Test Weights of high denomination are intended for use in the Verification or Calibration of Weights and for use with weighing instruments of medium accuracy class or ordinary class. They are manufactured from high quality cast iron to give a high quality smooth surface finish and are free of cracks and pits. Weights with nominal values from 100kg to 1000kg have the shape of I - shaped with rounded edges and a rigid mild steel handle. Weights are protected by a durable coat of paint - generally black colour.

These weights are suitable for stacking and lifting by crane or forklift.



Denomination	:	1000kg	500kg	200kg	100kg
Max. Error Class	:	M1 50	25	10	- g
		M1-2 100	50	20	10 g
		M2 160	80	30	15 g
		M2-3 300	160	60	30 g
		M3 500	250	100	50 g
Material	:	Cast Iron			
Shape	:	I - shaped suitable for stacking and lifting by crane or forklift.			
Adjusting cavity	:	Specially designed cavity sealed by alien scrow. The adjustment is made by lead (in molten & sheet form) and a few iron balls, which can be pulled out by a magnetic pencil, if need.			
Finish	:	Laquered with black P U paint			
Markings	:	As desired by buyer			

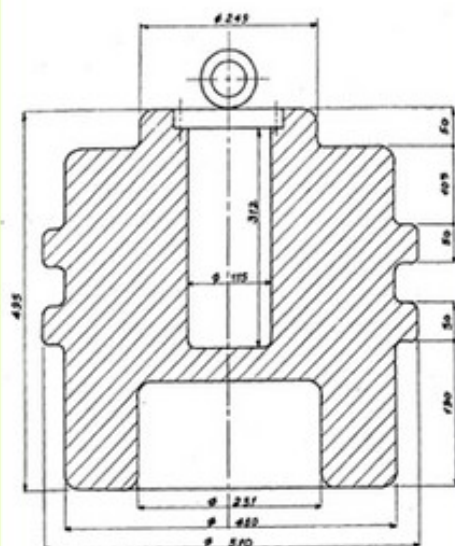
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Model No. SWPI : 26 - 27 (d)

STANDARD WEIGHTS - CYLINDRICAL
for Testing of High Capacity Weighing Machine
SUITABLE FOR STACKING AND ROLLING

CYLINDRICAL STANDARD WEIGHTS
 500 kg and 1 000 kg
 SUITABLE FOR STACKING AND ROLLING
 Dimensions (mm) for 500 kg weight



r = 10
 R = 20



Standard Weights as per OIML R 47 are used for testing (and adjusting) of high capacity weighing machines in accuracy classes of medium and ordinary. SWPI's Standard Weights are made of high quality cast iron and are free from sharp edges and corners. The closures of adjusting cavity are watertight and airtight. Weights are protected by a durable coat of paint - generally black. These weights are suitable for stacking and rolling.

Specification	: OIML R 47			
Denomination	: 100kg	200kg	500kg	1000kg
Max. Error				
0.5/10 000	5	10	25	50 g
1/10 000	10	20	50	100 g
1.7/10 000	17	33	85	170 g
3.3/10 000	33	66	170	330 g
Material	: Cast Iron			
Shape	: Cylindrical			
Finish	: Laquered with black P U paint			
Adjusting cavity	: Sealed with lead plate over mild steel plate in such a way to make it water-tight and air-tight			
Markings	: Denomination , Logo and Identification number			

www.weights-swpi.com



Model No. SWPI : 47

BELL WEIGHTS SET (METRIC)



Specification : British Standards 4960 - 1986

Denomination : 500g 200g 100g 50g 20g 10g 5g

Max. Error : 5 2 1 0.5 0.5 0.5 0.5g

Material : Brass

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Model No. SWPI : 48 - 51

COMMERCIAL WEIGHTS

Commercial Weights of 50kg down to and including 5kg are made of high quality cast iron to give a high quality smooth

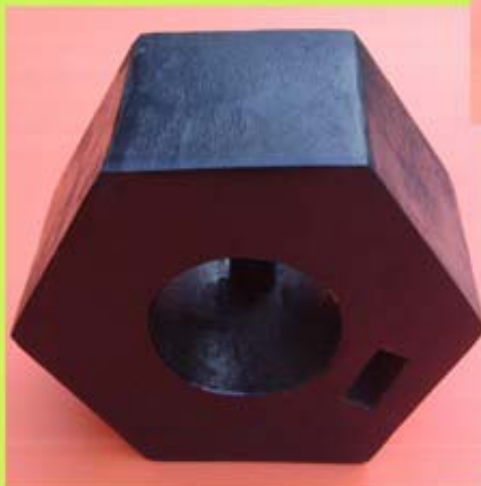
surface finish.

Weights are free from cracks, pits, blow - holes, and other defects.

Shape is hexagonal tapered upward. Weights have one rectangular loading hole on the under surface, tapering outwards along the width.

Weights have cast-in-handle made of mild steel.

Only lead is used in the loading hole so that it may not come out easily. They are protected by a corrosion resistant paint of black colour. The error in excess permissible for adjusted new weights shall not exceed its limits



Specification : Bureau of Indian Standards
GCC Countries

Denomination : 50kg 20kg 10kg 5kg

Max. Error : + 7500 3000 1500 750 mg

Material : Cast Iron

Shape : Hexagonal

Finish : Laquered with corrosion resistant paint

Marking : Denomination- English/Hindu-Arabic/Arabic
Logo - English

www.weights-swpi.com



Model No. SWPI : 52 - 56

COMMERCIAL WEIGHTS

Commercial Weights of 2kg down to and including 50g are made of high quality cast iron to give a high quality smooth surface finish. Weights are free from cracks, pits, blow - holes, and other defects. Shape is hexagonal tapered downward. While nesting, weights of denomination of 2kg down to and including 50g have one rounded loading hole tapering outside in the underside. Weights are protected by a corrosion resistant paint of black colour. The error in excess permissible for adjusted new weights shall not exceed its limits



Specification : Bureau of Indian Standards
GCC Countries

Denomination : 2kg 1kg 500g 200g 100g 50g

Max. Error : + 300 150 75 30 15 10 mg

Material : Cast Iron

Shape : Hexagonal

Finish : Laquered with corrosion resistant paint

Marking : Denomination- English/Hindu-Arabic/Arabic
Logo - English

www.weights-swpi.com



Model No. SWPI : 60 - 63

AVOIRDUPOIS WEIGHTS



Specification : BS : 1986 No. 1683

Denomination : 7 Lb 10 Lb 14 Lb 20 Lb 28 Lb 50 Lb 56 Lb

Max. Error : + 560 750 1000 1500 2000 3600 4000 mg

Material : Cast Iron

Shape : Rectangular

Finish : Laquered with P U black paint

**Adjusting
Cavity : Rectangular shape on the under surface**

www.weights-swpi.com



Model No. SWPI : 87 - 93

SLOTTED WEIGHT

Newton Weight

Slotted Weights are used in a variety of applications such as pressure, torque and tensile strength testing. These are typically used with a hanger that also has its weight calibrated so the hanger can be used as part of the overall weight under test.

Several Slotted Weights may be used together to build up from a minimum weight to maximum test load. The hanger weights will be able to accommodate the total load needed. SWPI's Cast Iron Slotted

Weights are manufactured from high quality cast iron to give a smooth surface finish and are free of cracks, pits and sharp edges. There is adjusting cavity in each weight adjusted with lead on the underside of the weight. Weights are protected by a durable coat of paint generally black paint to protect the casting from rusting. Weights 5kg and above are provided with under cut on opposite ends to aid in lifting



Slotted Weight

Hanger

Denomination : 100kg 50kg 20kg 10kg 5kg 2kg 1kg 500g

200N 100N 50N 20N 10N 5N

Max. Error : 1% to 0.005% as desired by buyer

Material : Slotted Weight - Cast Iron
Hanger - Mild Steel Rod with Mild Steel Plate or Cast Iron Plate

Adjusting Cavity : Adjusting Cavity at the bottom surface and adjusted with lead

Finish : Laquered with P U black paint

Shape : Round Slotted Interlocking

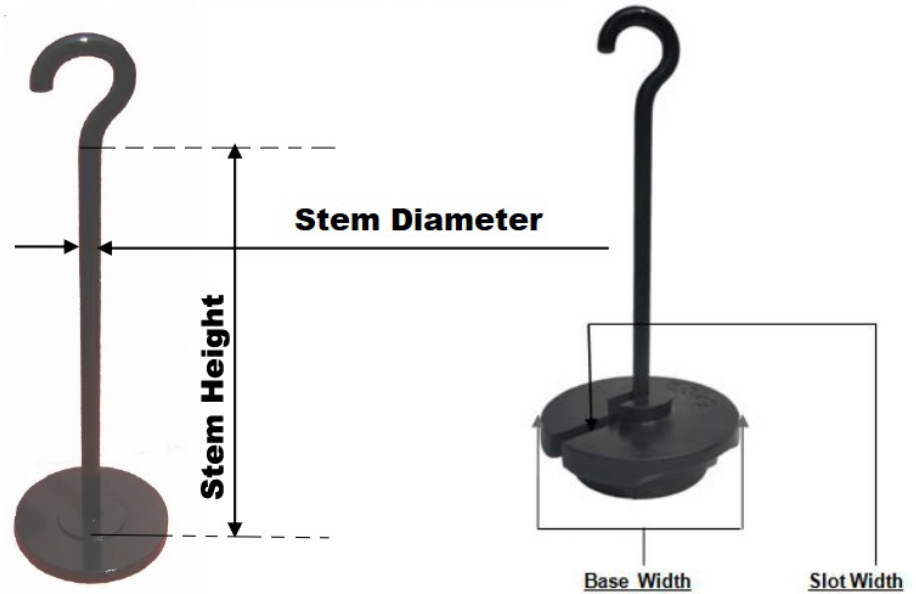
www.weights-swpi.com

Model No. SWPI : H1 - H4

HANGER FOR SLOTTED WEIGHT

Slotted weights are used in a variety of applications such as pressure torque and tensile strength testing. These slotted weights are used with hangers that also has its weight calibrated so that the hanger can be used as part of the overall weight under test.

There may be adjusting cavity in each hanger weight to be adjusted with lead on the underside of the weight.



Denomination	500 g	1 kg	2 kg	5 kg	5 N	10 N	20 N	50 N
Max Error	1 % to 0.1 % as desired by buyer							
Material	Mild Steel Rod with Mild steel plate or Cast Iron Plate							
Adjusting Cavity	Adjusting cavity may be at the bottom surface adjusted with Lead							
Finish	Good quality finish laquered with PU black paint							

Slotted Weights and Hanger for Slotted Weights Projections

	Denomination	Part. No.	Base Width Diameter (mm)	Slot Width (mm)	Stem Diameter (mm)	Stem Height (mm)	Hanger Capacity
Slotted Weights	100 g	SWPI : 87	52	20			
	200 g	SWPI : 88	52	20			
	500 g	SWPI : 89	100	20			
	1 kg	SWPI : 90	120	20			
	2 kg	SWPI : 91	130	20			
	5 kg	SWPI : 92	160	20			
	10 kg	SWPI : 93	225	20			
	20 kg	SWPI : 94	280	20			
Hanger for Slotted Weights	500 g	SWPI : H1			10	225	30 kg
	1 kg	SWPI : H2			12	350	50 kg
	2 kg	SWPI : H3			16	450	80 kg
	5 kg	SWPI : H4			16	550	120 kg



Model No. SWPI : 125 - 133

AVOIRDUPOIS WEIGHTS



Specification : BS : 1986 No. 1683

Denomination : 4 lb 2 lb 1 lb 8 oz 4 oz 2 oz 1 oz 1/2 oz 1/4 oz

Max. Error : 360 180 100 60 35 30 25 20 15 mg

**Material : 4 oz and above - Cast Iron
2 oz and below - Brass**

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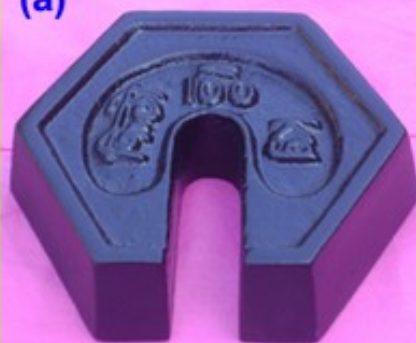


Model No. SWPI : 136

PROPORTIONAL WEIGHTS HANGER WEIGHTS

Proportional
Weights and
Hanger Weights
are generally to
be used as
counterpoise in
Platform Weighing
Machines. These
are manufactured
from high quality
Cast Iron and have
a slot of suitable
size to allow them
being placed on the
counter balance.
Hexagonal Weights
have one
rectangular and
Round Weights
have one round
loading hole
undercut or
tapering outwards
so as to hold lead
securely for
adjustment.
They are protected
by a corrosion
resistant paint of
black colour.

(a)

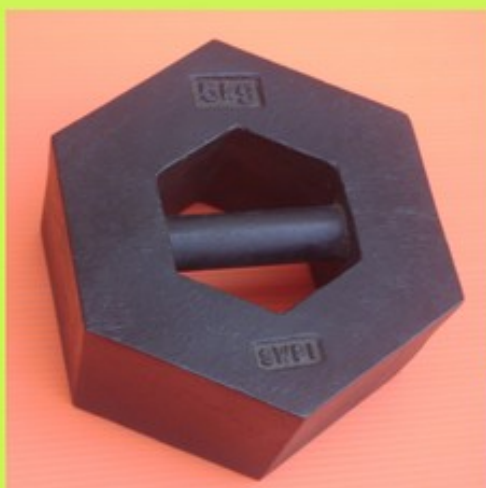


Denomination	:	200kg	100kg	50kg	
		25kg	20kg	10kg	5kg
Ratio	:	100	:	1	
		50	:	1	
Material	:	Cast Iron			
Shape	:	Hexagonal or Round			
Finish	:	Laquered with black paint			
Adjusting Cavity	:	Hexagonal - Rectangular Round - Round			



Model No. SWPI : 137-145

ORDINARY ACCURACY CLASS WEIGHTS



Specification : OIML R 52

Denomination : 50kg 20kg 10kg 5kg 2kg 1kg 500g 200g 100g

Max. Error : + 25 10 5.0 2.5 1.0 0.5 0.25 0.10 0.05 g

Material : Cast Iron

Shape : Hexagonal

Finish : Laquered with P U black paint

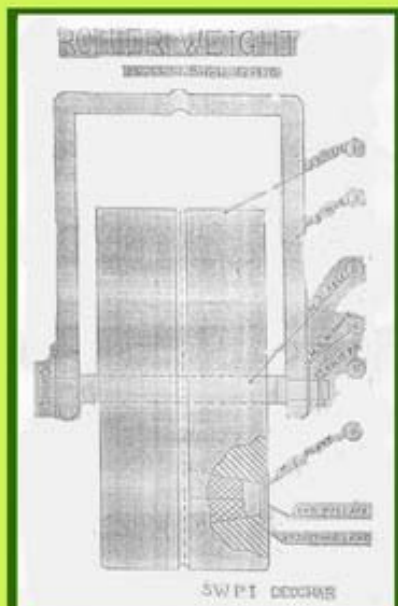
**Adjusting
Cavity : On the under surface**

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Model No. SWPI : 168 - 170

ROLLER WEIGHTS



SWPI's Roller Weights are manufactured from high quality cast iron. The surface is smooth free from cracks, pits, blow-holes and other defects with rounded edges. They are fitted with mild steel handle suitable for rolling and lifting. Adjusting cavity is sealed by a lead plug. Weights are protected by a corrosion resistant coat of black colour paint.



Denomination	:	500kg	250kg	200kg
Max. Error	:	160	80	60g
Material	:	Cast Iron		
Finish	:	Smooth surface laquered with corrosion resistant paint		
Markings	:	Denomination, Manufacturer's logo Identification serial number		

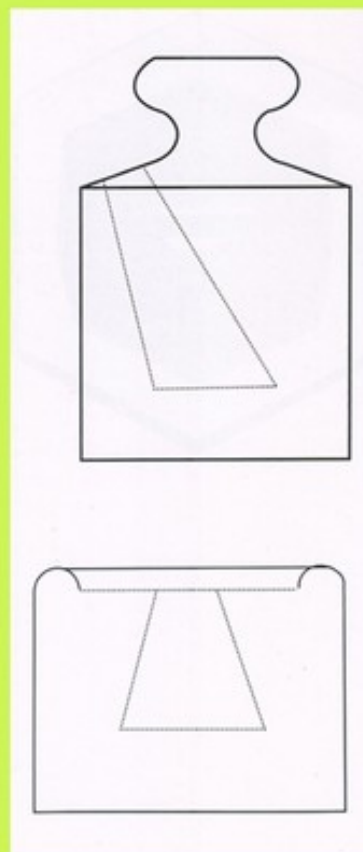
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Model No. SWPI: 171 - 176

Test Weights

cylindrical cast iron



Specification : SCHENGENER STATES

Denominaion : 5kg 2kg 1kg 500g 200g 100g

Max. Error : M1 250 100 50 25 10 5 mg

M2 800 300 160 80 30 16 mg

M3 2500 1000 500 250 100 50 mg

Material : Cast Iron

Shape : 500g & above : cylindrical with knob

200g & below : cylindrical with flat surface

Finish : laquered with P U black paint

www.weights-swpi.com



Model No. SWPI : 181 -183

**Test Weight - High Denomination
Rectangular fitted with Channel**

SWPI's Test Weights are intended for use in the Verification or Calibration of Weights and for use with weighing instruments of medium accuracy class or ordinary class. They are manufactured from mild steel fabricated body filled with molten cast iron, which gives smooth surface and good finish.

Weights with nominal values from 100kg to 1000kg have the shape of rectangular fitted by welding with channel and lifting pin suitable for lifting by fork lift & crane. A specially designed adjusting cavity sealed by alien screw, which has room to accommodate an additional 500g to allow for wear and loss of mass in use. Weights are protected by durable coat of paint - generally black which make rust resistant.



Denomination	:	1000kg	500kg	200kg	100kg
Max. Error Class	:	M1 50	25	10	- g
	:	M1-2 100	50	20	10 g
	:	M2 160	80	30	15 g
	:	M2-3 300	160	60	30 g
	:	M3 500	250	100	50 g
Material	:	Cast Iron sheathed with Mild Steel Sheet			
Shape	:	Rectangular welded with channel and lifting pin for lifting by forklift & crane			
Adjusting cavity	:	Specially designed cavity sealed by alien scw. The adjustment is made by lead (in molten & shett form) and a few iron balls, which can be pulled out by a magnetic pencil, if need.			
Finish	:	Laquered with black P U paint			
Markings	:	As desired by buyer by white paint			

www.weights-swpi.com



Model No. SWPI : 187

**Test Weight - High Denominational
Cast Iron Rectangular
suitable for lifting & stacking**

SWPI's Test Weights of high denomination are intended for use in the Verification or Calibration of Weights and for use with weighing instruments of medium accuracy class or ordinary class. They are manufactured from high quality cast iron to give a high quality smooth surface finish and are free of cracks and pits. Weights with nominal values from 500kg to 1000kg have the shape of rectangular with rounded edges and a rigid mild steel handle. Weights are protected by a durable coat of paint - generally black colour. These weights are suitable for lifting & stacking. Rectangular adjusting cavity is covered by mild steel plate affixed with threaded rod.



Denomination	:	1000kg	500kg
Max. Error Class	:	M1 50	25 g
		M1-2 100	50 g
		M2 160	80 g
		M2-3 300	160 g
		M3 500	250 g
Material	:	Cast Iron	
Shape	:	Rectangular suitable for lifting & Stacking.	
Adjusting Cavity	:	Rectangular covered by Mild Steel Plate tied with threaded Rod. The adjustment is made by lead.	
Finish	:	Laquered with black P U Paint	
Markings	:	As desired by buyers	

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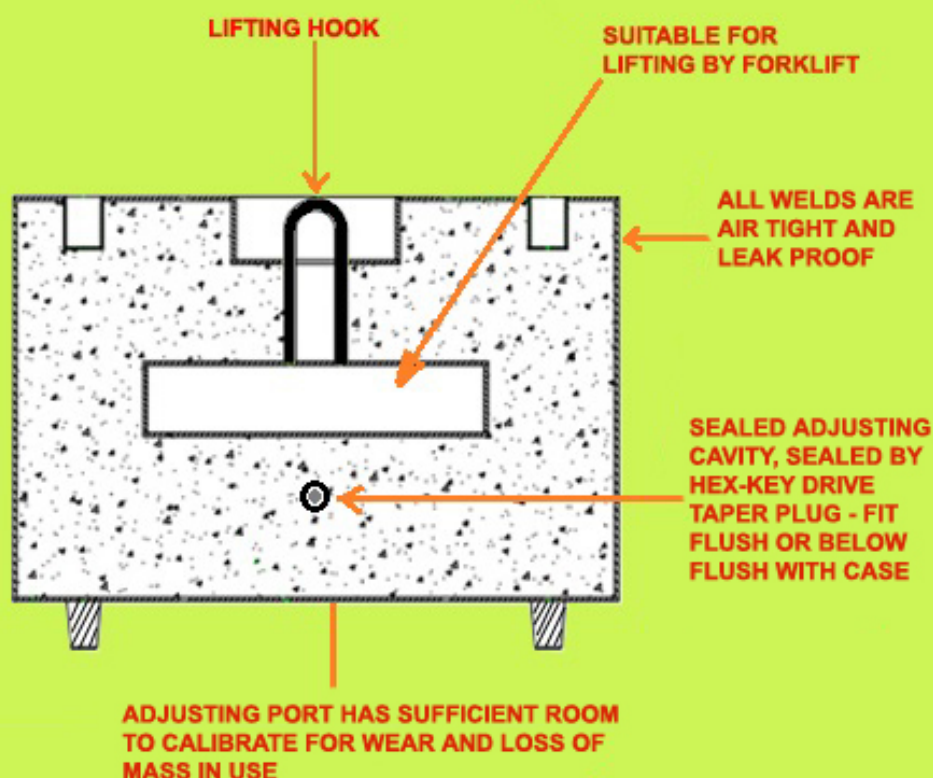
Model No. SWPI : 189

Fabricated Standard Weights

SWPI's Test Weights are intended for use in the Verification or Calibration of Weights and for use with weighing instruments of medium accuracy class or ordinary class. They are manufactured from mild steel fabricated body filled with molten cast iron, which gives smooth surface and good finish.

Weights with nominal values from 100kg to 1000kg have the shape of rectangular fitted by welding with channel and lifting pin suitable for lifting by fork lift & crane.

A specially designed adjusting cavity sealed by alien screw, which has room to accommodate an additional 500g to allow for wear and loss of mass in use. Weights are protected by durable coat of paint - generally black which make rust resistant.



Denomination	:	1000kg	500kg	200kg	100kg
Max. Error Class	:	M1 50	25	10	- g
	:	M1-2 100	50	20	10 g
	:	M2 160	80	30	15 g
	:	M2-3 300	160	60	30 g
	:	M3 500	250	100	50 g
Material	:	Cast Iron sheathed with Mild Steel Sheet			
Shape	:	Rectangular			
Adjusting cavity	:	Specially designed cavity sealed by alien scw. The adjustment is made by lead (in molten & shett form) and a few iron balls, which can be pulled out by a magnetic pencil, if need.			
Finish	:	Laquered with black P U paint			
Markings	:	As desired by buyer by white paint			

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Table 1 Maximum permissible errors for weights ($\pm \delta m$ in mg)

Nominal value*	Class E ₁	Class E ₂	Class F ₁	Class F ₂	Class M ₁	Class M ₁₋₂	Class M ₂	Class M ₂₋₃	Class M ₃
5 000 kg			25 000	80 000	250 000	500 000	800 000	1 600 000	2 500 000
2 000 kg			10 000	30 000	100 000	200 000	300 000	600 000	1 000 000
1 000 kg		1 600	5 000	16 000	50 000	100 000	160 000	300 000	500 000
500 kg		800	2 500	8 000	25 000	50 000	80 000	160 000	250 000
200 kg		300	1 000	3 000	10 000	20 000	30 000	60 000	100 000
100 kg		160	500	1 600	5 000	10 000	16 000	30 000	50 000
50 kg	25	80	250	800	2 500	5 000	8 000	16 000	25 000
20 kg	10	30	100	300	1 000		3 000		10 000
10 kg	5.0	16	50	160	500		1 600		5 000
5 kg	2.5	8.0	25	80	250		800		2 500
2 kg	1.0	3.0	10	30	100		300		1 000
1 kg	0.5	1.6	5.0	16	50		160		500
500 g	0.25	0.8	2.5	8.0	25		80		250
200 g	0.10	0.3	1.0	3.0	10		30		100
100 g	0.05	0.16	0.5	1.6	5.0		16		50
50 g	0.03	0.10	0.3	1.0	3.0		10		30
20 g	0.025	0.08	0.25	0.8	2.5		8.0		25
10 g	0.020	0.06	0.20	0.6	2.0		6.0		20
5 g	0.016	0.05	0.16	0.5	1.6		5.0		16
2 g	0.012	0.04	0.12	0.4	1.2		4.0		12
1 g	0.010	0.03	0.10	0.3	1.0		3.0		10
500 mg	0.008	0.025	0.08	0.25	0.8		2.5		
200 mg	0.006	0.020	0.06	0.20	0.6		2.0		
100 mg	0.005	0.016	0.05	0.16	0.5		1.6		
50 mg	0.004	0.012	0.04	0.12	0.4				
20 mg	0.003	0.010	0.03	0.10	0.3				
10 mg	0.003	0.008	0.025	0.08	0.25				
5 mg	0.003	0.006	0.020	0.06	0.20				
2 mg	0.003	0.006	0.020	0.06	0.20				
1 mg	0.003	0.006	0.020	0.06	0.20				

* The nominal weight values in Table 1 specify the smallest and largest weight permitted in any class of R 111 and the maximum permissible errors and denominations shall not be extrapolated to higher or lower values. For example, the smallest nominal value for a weight in class M₂ is 100 mg while the largest is 5 000 kg. A 50 mg weight would not be accepted as an R 111 class M₂ weight and instead should meet class M₁ maximum permissible errors and other requirements (e.g. shape or markings) for that class of weight. Otherwise the weight cannot be described as complying with R 111.

