

ATCH DIVISION

Casing dimensions

The drawing illustrates the dimensions of a watch casing. The side view at the top shows a mineral glass crystal with a minimum thickness of 0.550 mm. The case has a back cover with a thickness of 2.300 mm (stem height) and a total height of 3.900 mm (movt thickness). The case diameter is specified as $\phi 25.600^{+0.20}_{-0.53}$ mm for the inner diameter and $\phi 26.200^{+0.00}_{-0.30}$ mm for the outer diameter. The top view shows a circular case with a diameter of 6.900 mm. It features a 24-hour hand at a distance of 6.660 mm from the center, a day hand at 7.870 mm, and a stem removal point at $\phi 0.710$ mm. A battery is located at a distance of 1.150 mm from the center. The case is secured with a screw of size M0.900 x P0.225. The stem travel is 0.780 mm. The overall length of the case is $L \pm 150$ mm.

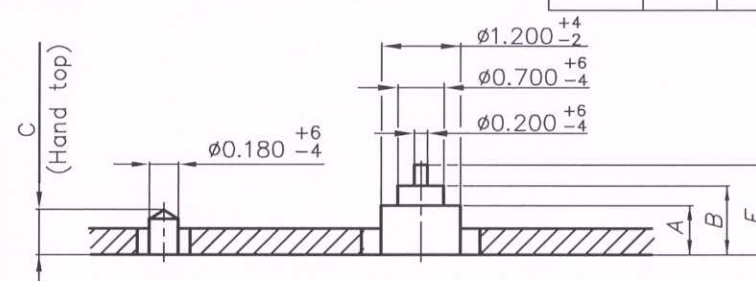
Stem	L(mm)	Stem(ref) length(mm)	Stem thread length from crown fitting side	Stock
STD	21.800	18.620	12.400	2704
L1	23.150	20.000	8.000	2704
L2	27.150	24.000	12.010	2704
L3	28.150	25.000	13.010	2704

Stem	L(mm)	Stem(ref) length(mm)	Stem thread length from crown fitting side	Stock No
STD	21.800	18.620	12.400	2704153
L1	23.150	20.000	8.000	2704161
L2	27.150	24.000	12.010	2704162
L3	28.150	25.000	13.010	2704173

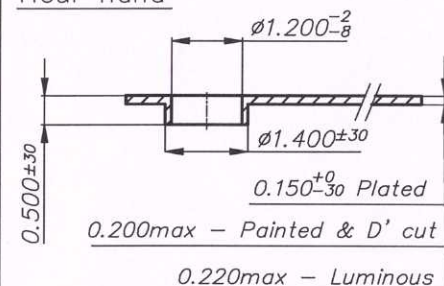
Technical drawing of a circular sundial face. The drawing includes the following dimensions and labels:

- Top Section:** A horizontal bar with a central hole. Dimensions: 2.600 ± 100 (left), 0.750^{+20}_0 (hole diameter), 0.400 ± 20 (right).
- Main Circular Face:**
 - Horizontal radius: 11.600 ± 10 (twice, from center to edges).
 - Vertical radius: 3.780 ± 10 (from center to top edge).
 - Center label: XII
 - Left side label: 24HOUR
 - Right side label: DAY
 - Bottom center label: 3H
- Internal Features:**
 - Three small circles on the horizontal axis with diameters: $\phi 0.900^{+40}_0$, $\phi 1.800^{+40}_0$, and $\phi 0.900^{+40}_0$.
 - Horizontal distances from the center: 6.900 ± 10 (to the left circle) and 6.750 ± 10 (to the right circle).
 - Bottom center feature: A rectangular block with a height of 2.70 and a width of $=2.00=$.
- Other Labels:** F1, F2, and 10.450 (total vertical dimension from the bottom of the circular face to the top of the horizontal bar).

Calibre	A	B	C	E
STD	1.200	1.600	0.750	1.920
H1	1.650	2.100	1.000	2.540



Hour hand



Technical drawing of a cross-section of a road surface. The drawing shows a central hatched area representing the road surface, flanked by two layers labeled $\phi 0.700^{-4}_{-10}$ and $\phi 0.900 \pm 30$. Below these layers is a layer labeled $0.150^{+0}_{-30} - \text{Plated}$. The total thickness of the road surface is indicated as 0.250 ± 20 . Below the road surface, there are two more layers: $0.200\text{max} - \text{Painted \& D' cut}$ and $0.220\text{max} - \text{Luminous}$.

0.200_{max}
 $\varnothing 0.200_{-0.006}^{-2}$
 0.500 ± 0.030
 $\varnothing 0.370 \pm 0.030$
 0.120_{max} - Plated
 0.150_{max} - Painted

Technical drawing of a tube with a plug. The drawing shows a side view of the tube with a plug inserted. The tube has an outer diameter of $\phi 0.370 \pm 30$ and an inner diameter of $\phi 0.180^{+2}_{-6}$. The plug has a diameter of $\phi 0.180^{+2}_{-6}$. The tube length is 0.120max (Plated) and 0.150max (Painted). The plug length is 0.20max . The tube is labeled "Tube ht" and "G ± 30 ".

<i>Calibre</i>	G
<i>STD</i>	0.500
<i>H1</i>	0.750

<i>Movement size</i>	11 1/2''' (25.60 mm)
Functions	3 hands + 2 eyes + Date (24Hr at 9H/Day at 3H/Date at 6H)
Thickness	3.90 mm (including battery)
Stem height	2.30 mm
No. of jewels	01
Type of IC	C-MOS-LSI
Quartz frequency	32,768 Hz
Accuracy	±20 sec/month
Pulse rate	1 pulse per Second.
Coil resistance	2.90 k Ω
Current consumption	0.81uA(Typ) ~ 1.05uA(max)
Torque at Second hand	3.5 μ Nm(min) – 6.0 μ Nm(typ)

Effective temperature range	0 to +55°C
Shock resistance	As per NIHS 91/10
Resistance to magnetic field	As per NIHS 90/10

POWER CELL	Type	SR920SW
	Size	Ø9.5 x 2.1 mm
	Voltage	1.55 V
	Capacity	45 mAh
	Life (theoretical)	60 months
	Battery clamping	Positive (top clamp)

HANDS	DESCRIPTION		MINUTE HAND	SECOND HAND	DAY HAND 24Hr HAND
	Imbalance mg.mm		60	15	6
	Inertia mg.mm ²		500	250	90
	Weight mg (max).		12	7	4.5
	Length mm(max)	Brass	13	15	3.5
		Dural	18	20	3.5

Note: 1) All dimensions are in mm.
2) Tolerances in μm .
3) Quick setting is provided for the Day & Date.
4) Jewel Support should be provided for center
5) Reset function available & Crown spacer to be used

Ind	Alterations	Date	Sign
c	Counter hand dial thick 0.600 was 0.400	18.06.19	RTMK
	Hand fixing ht 1.000 was 0.750mm for H1		

	Prepared	Checked	Approved
Name			
Date	8/6/19	8/6/19	

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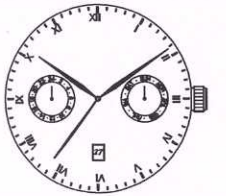
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WATCH DIVISION

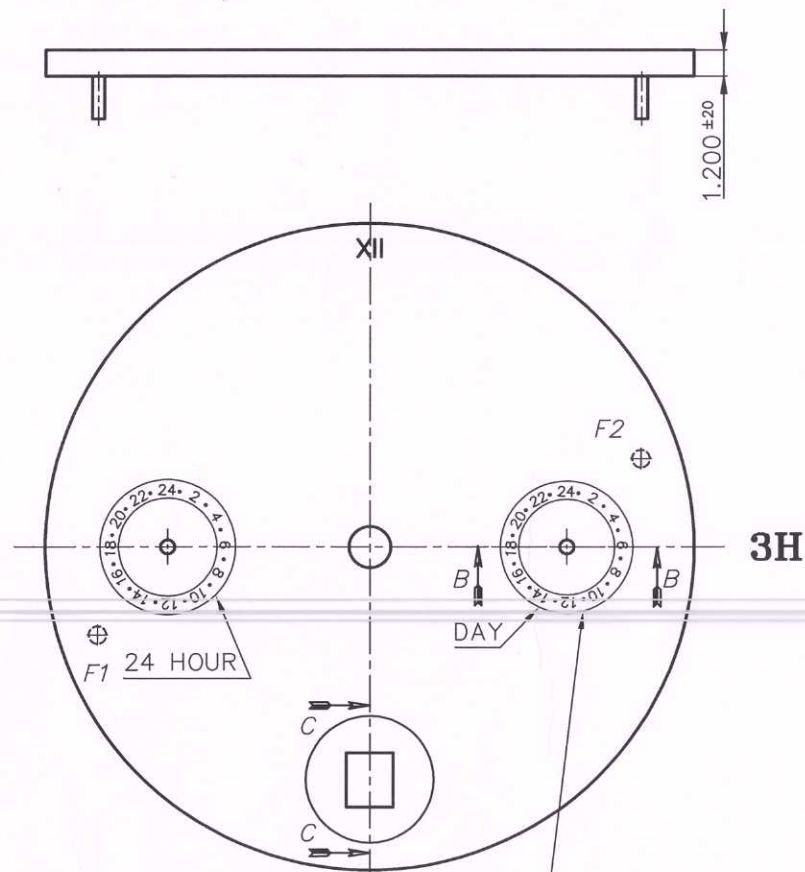
TECHNICAL DATA FOR MULTIFUNCTION MOVEMENT – CAL.7M12



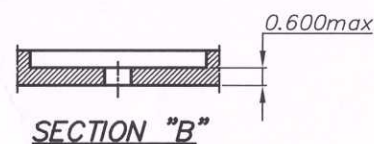
Dial details

* For other details refer dial type A

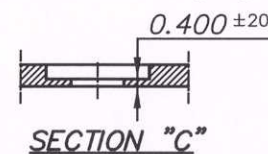
TYPE B (HIGH VERSION)



Diameter to be considered 0.500mm more than the Hand/Disc diameter for all eyes



(section B is applicable for Day eye & 24 Hour eye)



Dial thickness should be 0.400mm at date window area.
This is to have better readability of date.

*NOTE:

1. Cal.7M12 High (H1) is for Embossed/Hybrid dial of 1.200mm(max.) thickness.
2. Stem height in case design to be followed according to the dial thickness.

Index	Alterations	Date	Sign
Prepared		Checked	Approved
Name			
Date			

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C

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