



ANVÄNDAR INSTRUKTION SNUG II-serien Precisionsvågar

SNUG II -serien för vägning av allt som kräver hög noggrannhet och små vikter. Har även räkne och %-funktion.

FÖRDELAR

- Batteridrift.
- RS-232C
- Rostfri vågplatta.
- Nollföljning.
- Automatisk avstängning vid batteridrift.
- 150 g / 0.005g - 3000 g / 0.1g
- Option: Dubbel display (Dual).

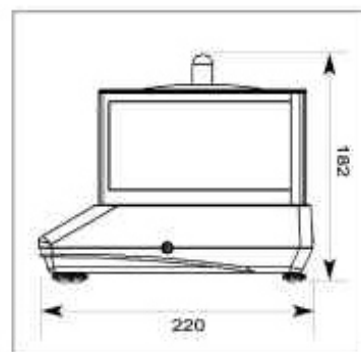
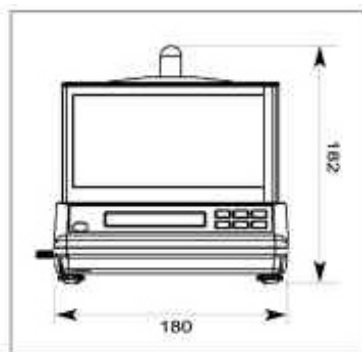
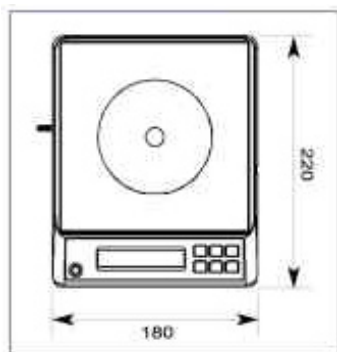


De 2 första sidorna är det som normalt behövs för att använda vågen.

Sidorna 3-12 (på engelska) är för mer avancerat bruk.

SPECIFIKATIONER

Typ		SNUG II-150	SNUG II-300	SNUG II-600	SNUG II-1500	SNUG II-3000
Kapacitet / Gradering	Gram	150x0.005	300x0.01	600x0.02	1500x0.05	3000x0.1
	Carat	750x0.02	1500x0.05	3000x0.1	7500x0.2	15000x0.5
Storlek vågplatta		Diam 125mm	145 x125 mm			
Display	LCD med bakgrundsbelysning					
Utgång	RS 232C, baud rate 4800 or 9600, selectable					
Matning	6V/300mA AC/DC +center - 220 VAC +/- 10%, 50/60Hz eller 4 st UM-2 batterier.					
Arbets temp.	0°CXC ~40°CXC (32°CXF ~ 104°CXF)					
Max. fuktighet	85% relativ fuktighet, icke kondenserande.					



Allmänt

1. Vågen bör alltid användas i en miljö som är så fri som möjligt från temperaturvariationer, damm, vibrationer, drag, fukt eller i korrosiv miljö. Dessa faktorer påverkar hållbarhet och tillförlitlighet.
2. För kontinuerlig drift anslut vågen till nätet med väggadaptorn, 6V/300mA +center.
3. Vi rekommenderar att inte maskiner, t.ex. bormaskiner, används på samma säkring.
4. För högsta noggrannhet bör vågen stå på 15 minuter innan den används. Används vågen ofta rekommenderar vi att vågen står inkopplad hela tiden.
5. På vågens sida sitter ett transportskydd. Vrid moturs för vägningsläge och medurs om vågen ska transporteras.
6. Justera fötterna så att vågen står plant.
7. Vid dammig och dragig miljö bör vågens skyddshuv användas.

Tryckknappar

ON/OFF

Till / Från. Vågplattan ska vara obelastad när vågen startas.

ZERO

Nollställning av vågen när vågplattan är obelastad.

TARE

Nollställning av vågen när vågplattan är belastad (tarering)

MODE

Växlar mellan funktionerna: Normal vägning, Räkning (PCS) och Procentvägning (%).

UNIT

Växlar mellan olika enheter. Normalläget är g (gram).

SMPL

Vid normal vägning kopplas bakgrundsbelysningen till eller ifrån.
I Räkнемode väljer man antalet povvikter.

Enkel räknefunktion

Räkning av små saker (>vågens gradering. T.ex. 10 mg för SNUG II-300)

1. Tryck **MODE** tills displayen visar 0 pcs.
2. Välj provantal med **SMPL** (20, 50 eller 100 st)

3. Lägg det antalet provvikter på vågplattan och tryck **SMPL**.
4. Vågen är klar att räkna.

INTRODUCTION

SNUG II precision balance series contains five models ---- SNUG II -150,300, 600, 1500 and 3000 with weighing capacities of 150g, 300g, 600g, 1500g and 3000g respectively. The display resolution is 1/30,000 and internal resolution is 1/150,000.

SNUG II series contains 13 selectable weighing units ---- Gram, Carat, Pound(avoir), Ounce, Dram (avoir), Grain, Troy Ounce, Pennyweight, Momme, Hong Kong Jewelry Tael, Taiwan Tael, Hong Kong Tael and Tola (India).

Three operation modes --- Normal Weighing, Piece Counting and Percentage Weighing mode --- are provided and it can be powered by a 6V/300 mA AC/DC adapter or four size-C (UM-2) dry batteries. The LCD is incorporated with backlight function for easy read in dark environment.

SNUG II series also can transmit data to a personal computer or printer via its standard RS-232C interface on the rear side.

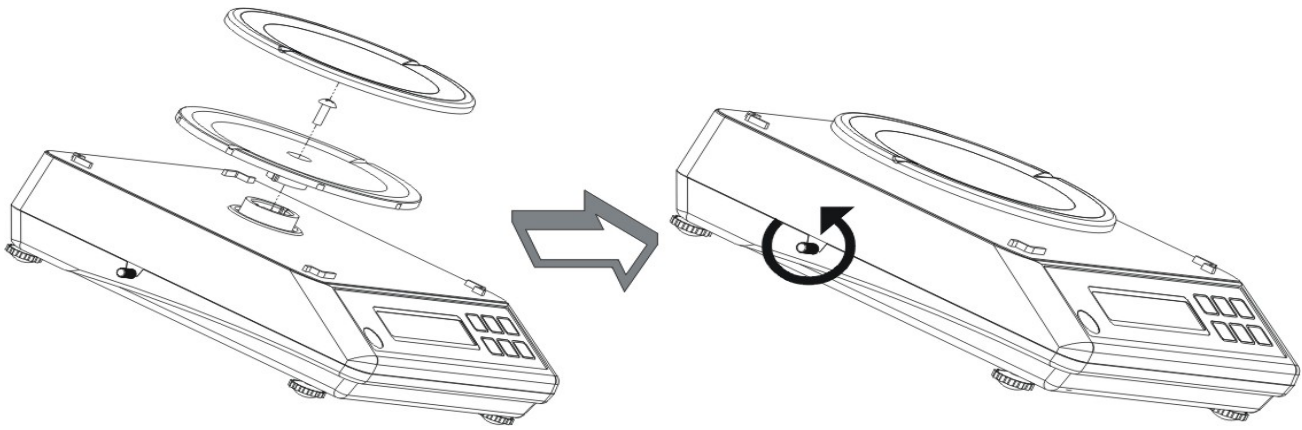
INSTALLATION

UNPACKING

When unpacking the carton you will find the following items:

- SNUG II balance
- One plastic weighing pan with stainless steel plate
- One set of draft shield and top cover
- One 6V/300mA +center AC/DC adapter
- Operation Manual

TO MOUNT THE WEIGHING PAN



To mount the weighing pan, tighten fixing screw at the center of the plastic weighing pan.

Afterwards, release the transportation protection device at the lateral side of the balance.

!!! UNLOCK / LOCK TRANSPORTATION PROTECTION DEVICE !!!

At the lateral side of the balance, there is a shaft that is transportation protection device.

Remember to turn counter-clockwise to release the protection device before use.

Push and turn clockwise to lock the protection device before transportation.

LEVELING THE BALANCE

The balance is equipped with four adjustable leveling feet and a level indicator in the front panel. Adjust the leveling feet until the bubble appears in the center of the indicator.

DUST/DRAFT SHIELD

The anti-dust/draft cover should be assembled and be put onto the top of the balance.

POWER

Use either the 6V/300mA AC/DC adapter or four size-C (UM-2 / R14) batteries as power supply. The adapter connector is on the right side of the balance and battery box is in the rear bottom side.

It could be dangerous by using improper battery or wrong connection of battery.

KEYS

SNUG II Precision Balance is software controlled device with a variety of user-programmable features. These features can be programmed by the six keys on the front panel:



: This key switches the unit between power on and off modes.



: This key returns the display to ZERO when the pan is empty.

The ZERO range is within +/-1.5% of the maximum capacity. A ZERO sign, **0**, will be shown in the upper-left of the display window when the balance is stable in the ZERO range.



: This key stores the TARE weight into memory and sets ZERO to the display. The maximum TARE value is the maximum capacity. A TARE sign will be shown in the lower-left of the display window when the balance is in the TARE mode.



: This key switches the balance among **Normal Weighing**, **Piece Counting** and **Percentage Weighing** modes with revolving order.



: This key switches the weighing units in revolving order among those units already chosen in the Weighing Units Setup of POWER ON SETUP.



: In Normal Weighing mode, this key is used to enable/disable backlight. In Piece Counting and Percentage Weighing modes, this key is used to choose the sampling amount being as 20pcs(%) 50pcs(%) or 100pcs(%).

MAXIMUM DISPLAY & DISPLAY RESOLUTION


MODEL	SNUG II-150	SNUG II-300	SNUG II-600	SNUG II-1500	SNUG II-3000
Gram	150×0.005	300×0.01	600×0.02	1500×0.05	3000×0.1
Carat	750×0.02	1500×0.05	3000×0.1	7500×0.2	15000×0.05
Pound (Avoir)	0.3×0.00002	0.6×0.00005	1.3×0.0001	3.3×0.0002	6.6×0.0005
Ounce (Avoir)	5×0.0002	10.5×0.0005	21×0.001	52×0.002	105×0.005
Dram (Avoir)	80×0.005	160×0.01	330×0.02	840×0.05	1690×0.1
Grain	2300×0.1	4600×0.2	9200×0.5	23100×1	46200×2
Ounce (Troy)	4.8×0.0002	9.6×0.0005	19×0.001	48×0.002	96×0.005
Pennyweight	96×0.005	190×0.01	380×0.02	960×0.05	1900×0.1
Momme	40×0.002	80×0.005	160×0.01	400×0.02	800×0.05
Tael (Hong Kong Jewelry)	4×0.0002	8×0.0005	16×0.001	40×0.002	80×0.005
Tael (Taiwan)	4×0.0002	8×0.0005	16×0.001	40×0.002	80×0.005
Tael (Hong Kong)	3.9×0.0002	7.9×0.0005	15.8×0.001	39×0.002	79×0.005
Tola (India)	12.8×0.0005	25×0.001	51×0.002	128×0.005	257×0.01

REMARK:

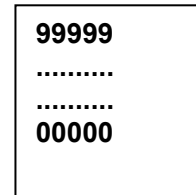
1. Maximum Display = Maximum Capacity + (9 x Display Resolution)
2. Conversion Factors for Weights - - - -

1 ct (Carat)	= 0.1999694 g
1 lb (Avoirdupois Pound)	= 453.59237 g
1 oz (Avoirdupois Ounce)	= 28.349523125 g
1 dr (Avoirdupois Dram)	= 1.7718451 g
1 GN (Grain)	= 0.06479891 g
1 ozt (Troy Ounce)	= 31.1034768 g
1 dwt (Pennyweight)	= 1.55517384 g
1 MM (Momme)	= 3.749996 g
1 tl.J (Tael, Hong Kong Jewelry)	= 37.4290018 g
1 tl.T (Tael, Taiwan)	= 37.49995 g
1 tl.H (Tael, Hong Kong)	= 37.799375 g
1 t (Tola, India)	= 11.6638038 g

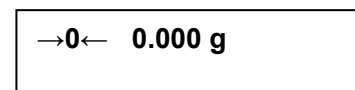
TURN ON THE BALANCE

With no load on the pan, turn on the balance by pressing the  key.

The whole display of the LCD will be shown (as listed below) with backlight, then the balance will count down from 9 to 0.



After the balance is stable, the zero sign, zero value and the weighing unit (the power on weighing unit) will be displayed.



NOTE: WARM UP THE BALANCE

In order to warm up the balance and get accurate weight, please use the balance or execute the calibration **15 minutes** after the balance has been powered on.

BATTERY STATUS INDICATION

This balance can be operated continuously 50 to 60 hours with manganese batteries and 90 to 100 hours with alkaline batteries (depend on the application status, e.g., the backlight is enabled or not, and different brands of batteries) before the dry battery sign starts blinking on the upper-right of the display window to indicate the low battery status.

Replace the batteries within **5 hours** since the battery sign starts blinking, otherwise, the balance probably will not work properly after that period.

POWER ON SETUP (POS)

SNUG II Precision Balance is software managed device with a variety of user- programmable features. These features are easily achieved through the software using the front panel buttons and display.

These features include Count Value Display, ZERO and SPAN Calibration, Weighing Units Setup, Initial Unit Setup, Software Version, Automatic Power-off, Baud Rate Setup and Zero Band.

The POS procedure is as follows:

1. Press **UNIT** **Unit** is shown on the display. The display will show the unit ---gram --- with its previous set status.

Unit

2. Press **SMPL** gram being **ON** or **OFF**. When **ON** is chosen, gram will be available in the normal weighing mode. If **OFF** is chosen, gram will not be available in the normal weighing mode.

On g

OFF g

3 Press **UNIT** to next unit for setup.

4 Repeat step 2 and 3 until the required status for each unit is set, then press to **MODE** plete and leave Weighing Units Setup.

INITIAL UNIT SETUP

One of the weighing units which have been enabled in Weighing Units Setup can be set as the power on weighing unit. Once set, that unit will be the weighing unit each time when the balance is powered on.

1. Press when **UNIT** **U** is displayed, the display will show **Init**
= (the first enabled unit in Weighing Units Setup).

Init =g

2. Press repeatedly **UNIT** until the desired unit is shown on the display.

3. Press to **MODE** plete and leave Initial Unit Setup.

SOFTWARE VERSION

Press **UNIT** **VER** is displayed, display will show **d1 X.X**, X.X represents the software version. Check the software version whenever it is necessary for maintenance.

AUTOMATIC POWER-OFF

This feature is provided for power-saving purpose when SNUG II is operated by batteries, once enabled, the balance will be automatically turned off **5 minutes** after there is no load on the pan.

1. Press to enter **UNIT** e setup of automatic power-off function when **Auto** is shown. The display will show the status set last time.

Auto NO

2. Press to enter **UNIT** (YES) or disable (NO) this function.

Auto YES

3. Press to complete the setup when the desired status is displayed.
The display will show **Auto** again.

BAUD RATE SETUP

Use this function to set the transmission rate of the RS-232C interface as 4800 or 9600.

1. Press to set **UNIT** the baud rate when **bAud** is shown,
the previously set baud rate will be shown

bAud

2. Press again **UNIT** baud rate will be changed to another one.

4800

3. Press to complete the setup when desired baud rate is shown and **bAud** will
be shown again.

ZERO BAND

Input the weight range where the balance will display zero. The weight range is in terms of number of display divisions set for both positive and negative directions.

1. Press to enter **UNIT** setup of ZERO BAND when **Zero** is
shown. The display will then show the current setup.

Zero

2. Press repeat **UNIT** until the desired number of divisions is
displayed. There are six choices, 0d(d 0), 1d(d 1), 2d(d 2), 3d(d 3),
4d(d 4), 5d(d 5).

d 1

3. Press to complete the setup of ZERO BAND when desired weight range is
displayed.

After all the status have been set in each function, press to complete **SMPL** save the POS. The balance will then
enter into normal weighing mode and you can start using the balance with all the features you have setup.


PIECE COUNTING

In the piece counting mode, the balance calculates the quantity of the parts based on the average weight of a single
piece got from the sampling procedure.

The procedure for piece counting mode is as follows:

1. Press  until **MODE** is displayed.

0 pcs

2. Press  until the desired sampling amount for single piece weight calculation is shown on the display.

S = 50 pcs

Three categories-20, 50 and 100 pcs are available.

3. Put the parts for sampling on the pan when the desired amount is shown on the display. The display will show the number of the sampled parts and the alarm will sound a beep when sampling procedure is completed.
4. Take away the sampling parts and then put on the parts desired for quantity calculation, the display will show the calculated quantity when the **pcs** sign stop blinking.


PERCENTAGE WEIGHING

Percentage Weighing allows you to set a reference weight displayed as 20,50 or 100%, then the balance can measure and display other loads as a percentage weight based on the reference weight.

The procedure for percentage weighing mode is as follows:

1. Press  until **MODE%** is displayed.

0.0%

2. Press  until desired sampling percent for reference weight is shown on the display. Three categories-20, 50 and 100% are available.

S = 100%

3. Put the reference weight on the pan when the desired percentage is shown on the display. The display will show the percentage of the sampled weight and the alarm will sound a beep when sampling procedure is completed.
4. Take away the reference weight and then put on the material desired for weighing, the display will show the measured weight as a percentage based on the reference weight when the percentage sign stop blinking.

RS-232C INTERFACE

The **SNUG II** precision balance is equipped with an **uni-directional** RS-232C interface for output of data to printers

