

LN Series



Complete weighing solution with wide range and much applications

Statistic function for quality control use

Comfortable operation in quick response and stable indication

For laboratory, light&heavy industry, jewelry shops, etc...



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ISO 14001:2004
ER-00130

SHINKO DENSHI CO., LTD.

PRECISION TUNIG-FORK BALANCES

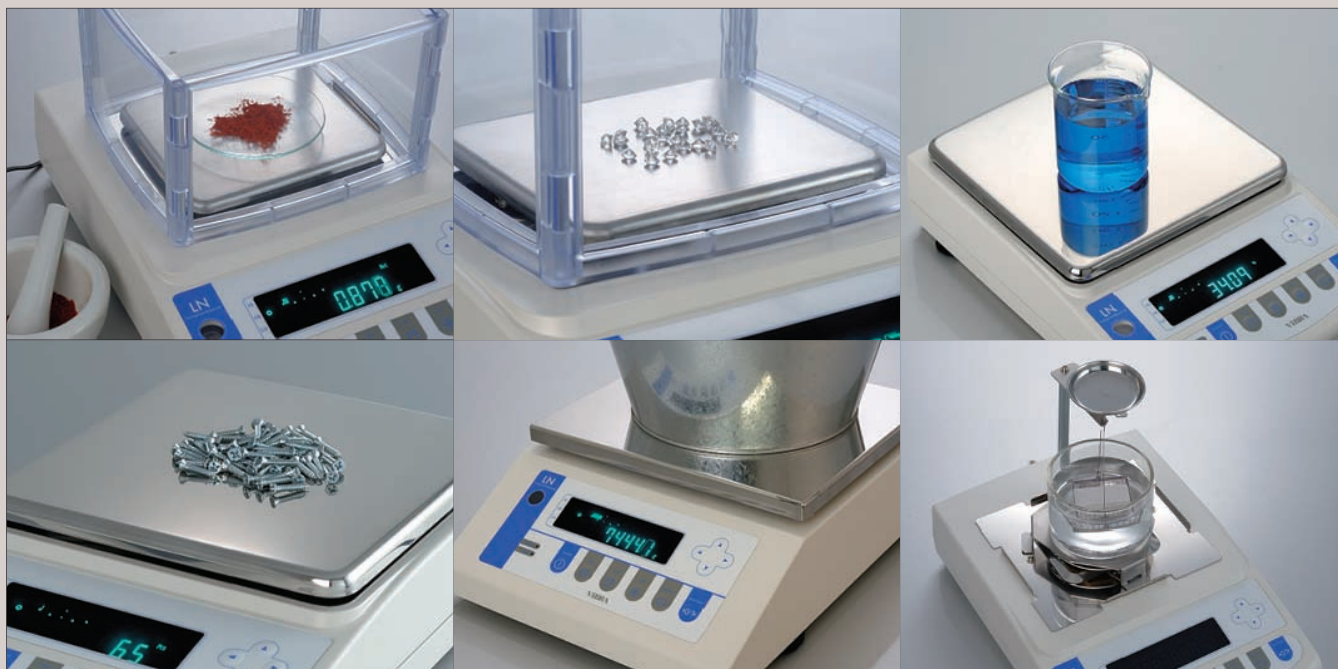
LN Series



Sophisticated Balance, the Professional's Choice

ViBRA LN series always offers you the complete weighing solution. The capacity ranges from 220g to 31kg, the readability from 1mg to 0.1g. The advantages like quick response, clear

fluorescent display, tough housing, stylish design... ViBRA LN series can be suitable for every occasions from laboratory, light&heavy industry, and jewelers.



Statistic function for QC & etc...

$$Q_n = \frac{s}{\sqrt{n}} \cdot t(1-a)$$

ViBRA LN series has the function to automatically calculate the various statistical data from the measurement results. This data can be useful for the quality control in the assembling line and the statistical checks of prepackaged products. The data can be output to the printer and PC.

Fluorescent display, clearly visible

The large fluorescent display is clearly visible. It can make it easy to operate the balance even in the dark location.



Quick response and stable indication

The quick response and the stable indication are important for almost all the weighing operations. ViBRA LN series promises you the quickness and stableness so that it can make the measurement works much more efficient and less time-consuming.



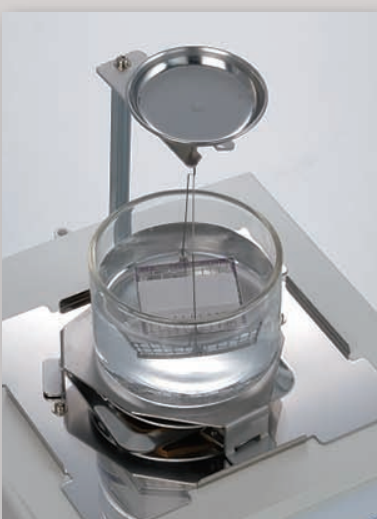
Accurate measurement by appropriate calibration

It is highly important to keep the accuracy of the balance by calibration. The procedure of the calibration is sometimes bothering, but in ViBRA LN series, you can adjust the balance with one-touch of CAL key (internal weight model only).

Density measurement mode

To measure the density of the object is one of the most typical applications for the precision balance. ViBRA LN series offers you the function to easily calculate the density from the measurement results.

* the density measurement kit in the image is option.



Connection to the outside devices

ViBRA LN series has RS232C as standard (two outputs) and can be easily connected to the printer, PC. You can keep the weighing results in the printed and/or electric forms.

Specifications

INTERNAL WEIGHT MODELS

| Model | LN 223RCE | LN 323RCE | LN 423RCE | LN 623RCE | LN 1202RCE | LN 2202RCE | LN 3202RCE | LN 4202RCE |
|---------------------|--------------------------------------|-----------|-----------|-----------|---------------|------------|------------|------------|
| Capacity | 220g | 320g | 420g | 620g | 1200g | 2200g | 3200g | 4200g |
| Read-out(d) | 0.001g | | | | 0.01g | | | |
| Verification(e) | 0.01g | | | | 0.1g | | | |
| Repeatability(s) | 0.001g | | | | 0.01g | | | |
| Non-Libearity(typ.) | ±0.001g | | | | ±0.01g | | | |
| Pan size | 120×140mm | | | | 200×200mm | | | |
| Calibration | with internal and external weight | | | | | | | |
| Dimensions | 330×220×190mm (including windshield) | | | | 333×220×88mm | | | |
| Weights | Approx. 3.5kg | | | | Approx. 4.0kg | | | |

EXTERNAL WEIGHT MODELS

| Model | LN 223CE | LN 323CE | LN 423CE | LN 623CE | LN 1202CE | LN 2202CE | LN 3202CE | LN 4202CE | LN 6202CE | LN 8201CE | LN 12001CE | LN 15001CE | LN 21001CE | LN 31001CE |
|---------------------|--------------------------------------|----------|----------|----------|---------------|-----------|-----------|-----------|---------------|-----------|---------------|------------|---------------|------------|
| Capacity | 220g | 320g | 420g | 620g | 1200g | 2200g | 3200g | 4200g | 6200g | 8200g | 12000g | 15000g | 21000g | 31000g |
| Read-out(d) | 0.001g | | | | 0.01g | | | | 0.1g | | | | | |
| Verification(e) | 0.01g | | | | 0.1g | | | | 1g | | | | | |
| Repeatability(s) | 0.001g | | | | 0.01g | | | | 0.1g | | | | | |
| Non-Libearity(typ.) | ±0.001g | | | | ±0.01g | | | | ±0.1g | | | | | |
| Pan size | 120×140mm | | | | 200×200mm | | | | 200×200mm | | 220×250mm | | | |
| Calibration | with external weight only | | | | | | | | | | | | | |
| Dimensions | 330×220×190mm (including windshield) | | | | 333×220×88mm | | | | 330×220×88mm | | 330×220×111mm | | | |
| Weights | Approx. 3.5kg | | | | Approx. 4.0kg | | | | Approx. 4.0kg | | Approx. 8.5kg | | Approx. 9.5kg | |

Options

| | |
|-------|-------------------------|
| LNBT | Rechargeable battery |
| LNLM | Relay contact |
| LNUIH | Under weighing hook |
| LNBZ | Buzzer output |
| LNR4 | RS422A output |
| LNDK | Density measurement kit |

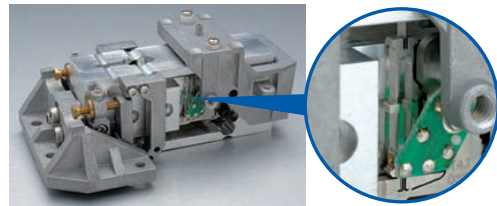
Common Specification

| | |
|------------------|---------------------------------------|
| Power source | : AC120/230V, DC12V |
| Output | : RS232C (2 outputs) |
| Measuring system | : Tuning-fork frequency system |
| Tare | : Full weighing range |
| Display | : Fluorescent display |
| Weighing units | : g, kg, ct |
| EC type approval | : available for all models (I & II) |

What makes the tuning-fork sensor so precise?

The tuning-fork sensor measures force or mass by gauging changes in oscillation frequency when a load is applied to a long, narrow vibrator, and it digitally outputs the readings.

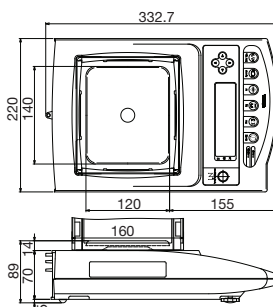
Unlike load cell or electromagnetic systems, the tuning-fork sensor does not rely on material distortion, electromagnetic force, heavy power consumption, or A/D converters, so its inherent margin of error is extremely small, and its high precision can be maintained for a long time.



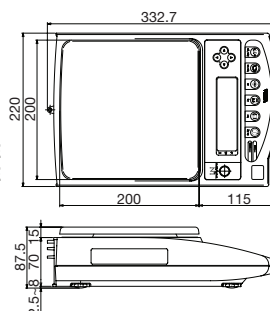
Double-Ended tuning fork (DEF) vibrator

Dimensions

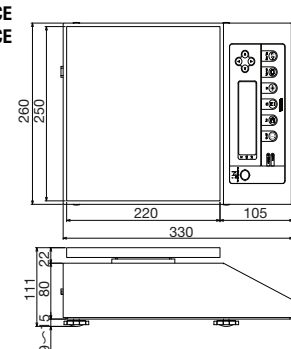
■ LN 223(R)CE
LN 323(R)CE
LN 423(R)CE
LN 623(R)CE



■ LN 1202(R)CE
LN 2202(R)CE
LN 3202(R)CE
LN 4202(R)CE
LN 6202(R)CE
LN 8201(R)CE
LN 12001(R)CE
LN 15001(R)CE



■ LN 21001(R)CE
LN 31001(R)CE



The contents of this catalogue are subject to change due to modifications and/or other reasons.

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