Instruction Manual

REF
12-0240 Standard
12-0241 LiTE™
12-0221 HD™
12-0243 HiRes™
12-0246 ER™ HiRes™

LiTE™ Hydraulic Hand Dynamometer
(12-0241)

Manufacturer and Master Distributor of Physical Therapy and Rehabilitation Products
**Parts/Specifications**

- **Reset Knob**
- **Indicator Needle**
- **5 Level Adjustment**
- **Handle Clamp**
- **Maximum Output Indicator**
- **Zero Adjustment Pin**

**Specifications**

- **200 lb / 90 kg capacity**
- **Grip adjust range**: 1.35 in / 3.35 in
- **Weight**: 22.6 oz / 638 gm
Usage
Set handle to comfortable grip for patient. Re-set max indicator to zero. Have patient squeeze with maximum force, note reading. Re-set to zero for next test.

Calibration
The Baseline® hand dynamometer is a sealed unit and calibrated at the factory. However, if indicator needle is out of “zero-range” it may be reset. Remove the clear cover by turning counter clockwise. Adjustment pin located by 90 Kg marking. Turn pink to reset to zero.
If unit is leaking hydraulic fluid it should be returned to the factory for repair and recalibration.

Components
- Machined aluminum handle, post and body
- Bronze bellows
- Stainless steel hydraulic tubing
- Teflon bushings
- Non-toxic mechanical hydraulic pump fluid
- Gauge- Bourdon tube element with spring suspended movement. Constructed to ASME B 40.1 standards. Accuracy better the 98%.

Data
The Baseline® hand dynamometer can utilize the large amount of data pertaining to the Jamar® hand dynamometer. The Internal Workings of both are hydraulic and bellows operated.
Norms for Adult Grip Strength

A recent study by Dr. Virgil Mathiowetz indicates that “...individuals using the Baseline® dynamometer are justified in using the normative data collected with the Jamar® dynamometer...”

For each test of grip strength, the subject was seated with shoulder adducted and neutrally rotated, elbow between 0° and 15° ulnar deviation.

The standard test protocol used the mean of three strength tests as a resultant score. A score was taken with both the dominant (right) and non-dominant (left) hands.

The rest results show a relationship between:
- hand strength vs. age
- hand strength vs. hand strength of women
- dominant hand strength vs. non dominate hand strength

| Average Performance of all Subjects on Grip Strength (pounds) - Test results
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References:
Grip Strength (Dominant Hand)

Grip Strength Difference Between Dominant and Non-Dominant Hand

* charts generated from data published in Mathiowetz's article "Grip and Pinch Strength: Normative Data for Adults", Archives of Physical Medicine and Rehabilitation 66: 69-74, 1985
March 18, 1993

Mr. Elliott Goldberg,
Marketing Director
Fabrication Enterprises Inc.
Trent Building
South Buckout Street
Irvington, NY 10533

Dear Mr. Goldberg,

Recently, I completed the study to determine whether the Baseline and Jamar hydraulic dynamometers can be used interchangeable. A draft of the report has been completed and sent to you. In the summary, I concluded that, "The data from this study suggest that the Jamar and Baseline hydraulic hand dynamometers measure equivalently for practical purposes. As a result, individuals using the Baseline Dynamometer are justified in using the normative data, which was collected with the Jamar dynamometer (Mathiowetz et al., 1985; 1986)." This conclusion assumes that the same standard procedures are followed as were used in the original normative data studies.

Sincerely,

Virgil Mathiowetz, PhD, OTR
Associate Professor & Research Consultant
Hydraulic Hand Dynamometer

WARRANTY

The Baseline® LiTE™ Hydraulic Hand Dynamometer is warranted for 1 (one) full year (parts and labor), The Baseline® Standard Hydraulic Hand Dynamometer is warranted for 2 (two) full years (parts and labor), The Baseline® HD™ Hydraulic Hand Dynamometer is warranted for 5 (five) full years (parts and labor), The Baseline® HiRes™ Hydraulic Hand Dynamometer is warranted for 2 (two) full years (parts and labor) and The Baseline® ER™ HiRes™ Hydraulic Hand Dynamometer is warranted for 2 (two) full years (parts and labor) from date of purchase. If unit needs repair contact your local dealer or Fabrication Enterprises, Inc.:

Fabrication Enterprises, Inc.
3 Westchester Plaza STE 111
Elmsford, NY 10523

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