

# BASILINE<sup>®</sup> EVALUATION INSTRUMENTS

www.BaselineProducts.net

## The Most Extensive Instrument Range for Measuring Progress in Physical Therapy

- **Baseline** Measure strength, range-of-motion, and more
- **Baseline** Lightweight and portable
- **Baseline** Inexpensive and cost effective
- **Baseline** Accepted by physical and occupational therapists for over 25 years



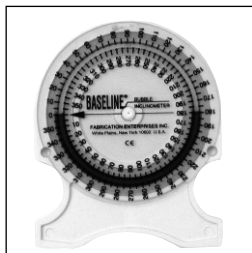
wrist dynamometer



back-leg-chest dynamometer



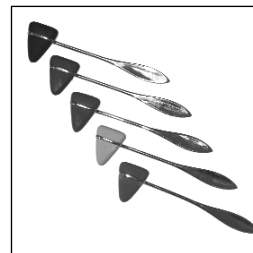
pinch gauges



bubble inclinometer



hand evaluation set



taylor hammers



goniometers

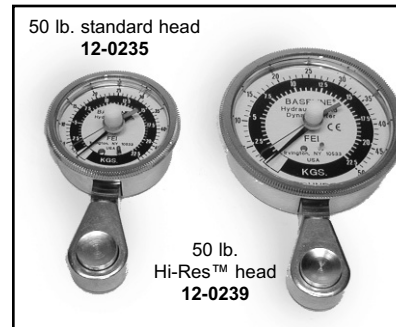


wrist inclinometers

For complete line of Baseline products, see pages 56-87 in the 2008 FEI catalog or view online at [www.FabricationEnterprises.com](http://www.FabricationEnterprises.com)

# BASILINE<sup>®</sup> EVALUATION INSTRUMENTS

## PINCH GAUGE INSTRUCTIONS



12-0232 case for standard head  
12-0234 case for Hi-Res™ head

### MECHANICAL

Measure tip, key and palmer pinch strength in both pounds and kilograms. Measurements are accurate and repeatable. Results are consistent with published Markowitz studies. Indicator remains at the maximum reading until reset. Comes with or without protective case.

#### orthopedic & sports medicine

- 12-0200 30 lb. with case, blue
- 12-0205 30 lb. without case, blue
- 12-0201 60 lb. with case, red
- 12-0206 60 lb. without case, red

#### weak and damaged hand

- 12-0203 10 lb. with case, silver
- 12-0208 10 lb. without case, silver
- 12-0202 2 lb. with case, gold
- 12-0207 2 lb. without case, gold

#### case for all mechanical pinch gauges

- 12-0209 case for all pinch gauges

### HYDRAULIC

- The Baseline<sup>®</sup> hydraulic pinch gauge uses the hydraulic system of the hand dynamometer to assure convenience, product reliability and measurement accuracy and repeatability.
- The therapist can support the pinch gauge during testing. This yields a more accurate result for all pinch tests including tip, key and palmer.
- The results are consistent with published Baseline<sup>®</sup> and Jamar<sup>®</sup> studies.
- Maximum reading remains until the unit is reset.
- The strength reading can be viewed as pounds or kilograms.
- Portable measuring unit comes with rugged carrying case.
- 1-year manufacturer's warrantee.
- CE certified.



Manufacturer and Master Distributor of Physical Therapy and Rehabilitation Products

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**Mechanical Pinch Gauge** – The finger pinch gauge can be used to measure pinch strength. It is calibrated in pounds and kilograms of force. Apply pinch force at the pinch groove while holding the pinch gauge between your thumb and finger(s). When force is applied further toward the tip the reading will be slightly higher. When force is applied further toward the rear the reading will be slightly lower.

The gauge must be “zeroed” before each pinch test. Grasp the knurled ring of the dial indicator and rotate it until the zero on the dial indicator is directly under the black pointer.

The red maximum pointer must be reset before each pinch test. Rotate the small knurled knob on top of the dial indicator in a counterclockwise direction until it rests against the black pointer at the zero marking. The red maximum pointer will remain at the subject’s maximum reading until it is reset.

Use the pinch gauge to perform the three basic pinch tests:

- Tip Pinch (thumb-index pulp pinch) - thumb tip to index fingertip
- Key Pinch (lateral pinch) - thumb pad to lateral aspect of middle phalanx of index finger
- Palmer Pinch (chuck pinch) - thumb pad to pads of the index and middle fingers

NORMS FOR ADULT GRIP STRENGTH performance of all subjects (pounds)							
age	hand	men mean	SD	low-high	women mean	SD	low-high
20-24	dominant	121.0	20.6	91-167	70.4	14.5	46-95
	non-dominant	104.5	21.8	71-150	61.0	13.1	33-88
25-29	dominant	120.8	23.0	78-158	74.5	13.9	48-97
	non-dominant	110.5	16.2	77-139	63.5	12.2	48-97
30-34	dominant	121.8	22.4	70-170	78.7	19.2	46-137
	non-dominant	110.4	21.7	64-145	68.0	17.7	36-115
35-39	dominant	119.7	24.0	76-176	74.1	10.8	50-99
	non-dominant	112.9	21.7	73-157	66.3	11.7	49-91
40-44	dominant	116.8	20.7	84-165	70.4	13.5	38-103
	non-dominant	112.8	18.7	73-157	62.3	13.8	35-94
45-49	dominant	109.9	23.0	65-155	62.2	15.1	39-100
	non-dominant	100.8	22.8	58-160	56.0	12.7	37-83
50-54	dominant	113.6	18.1	79-151	65.8	11.6	38-87
	non-dominant	101.9	17.0	70-143	57.3	10.7	35-76
55-59	dominant	101.1	26.7	59-154	57.3	12.5	33-86
	non-dominant	83.2	23.4	43-128	47.3	11.9	31-76
60-64	dominant	89.7	20.4	51-137	55.1	10.1	37-77
	non-dominant	76.8	20.3	27-116	45.7	10.1	29-66
65-69	dominant	91.1	20.6	56-131	49.6	9.7	35-74
	non-dominant	76.8	19.8	43-117	41.0	8.2	29-63
70-75	dominant	75.3	21.5	32-108	49.6	11.7	33-78
	non-dominant	64.8	18.1	32-93	41.5	10.2	23-67
75+	dominant	65.7	21.1	40-135	42.6	11.0	25-65
	non-dominant	55.0	17.0	31-119	37.6	8.9	24-61
ALL	dominant	104.3	28.3	32-176	62.8	17.0	25-137
	non-dominant	93.1	27.6	27-160	53.9	15.7	23-115

## Testing Protocol: Pinch

### Mechanical Pinch Gauges



Palmer (chuck pinch)

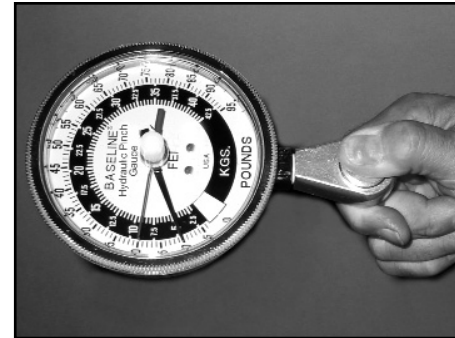


Tip (pulp pinch)

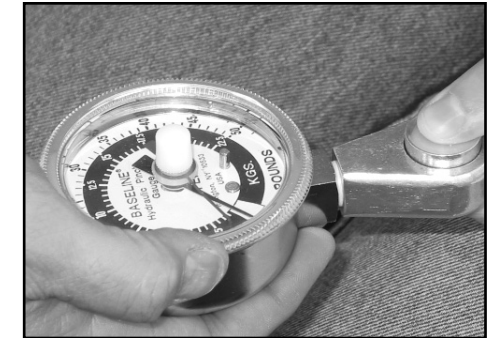


Key (lateral pinch)

### Hydraulic Pinch Gauges



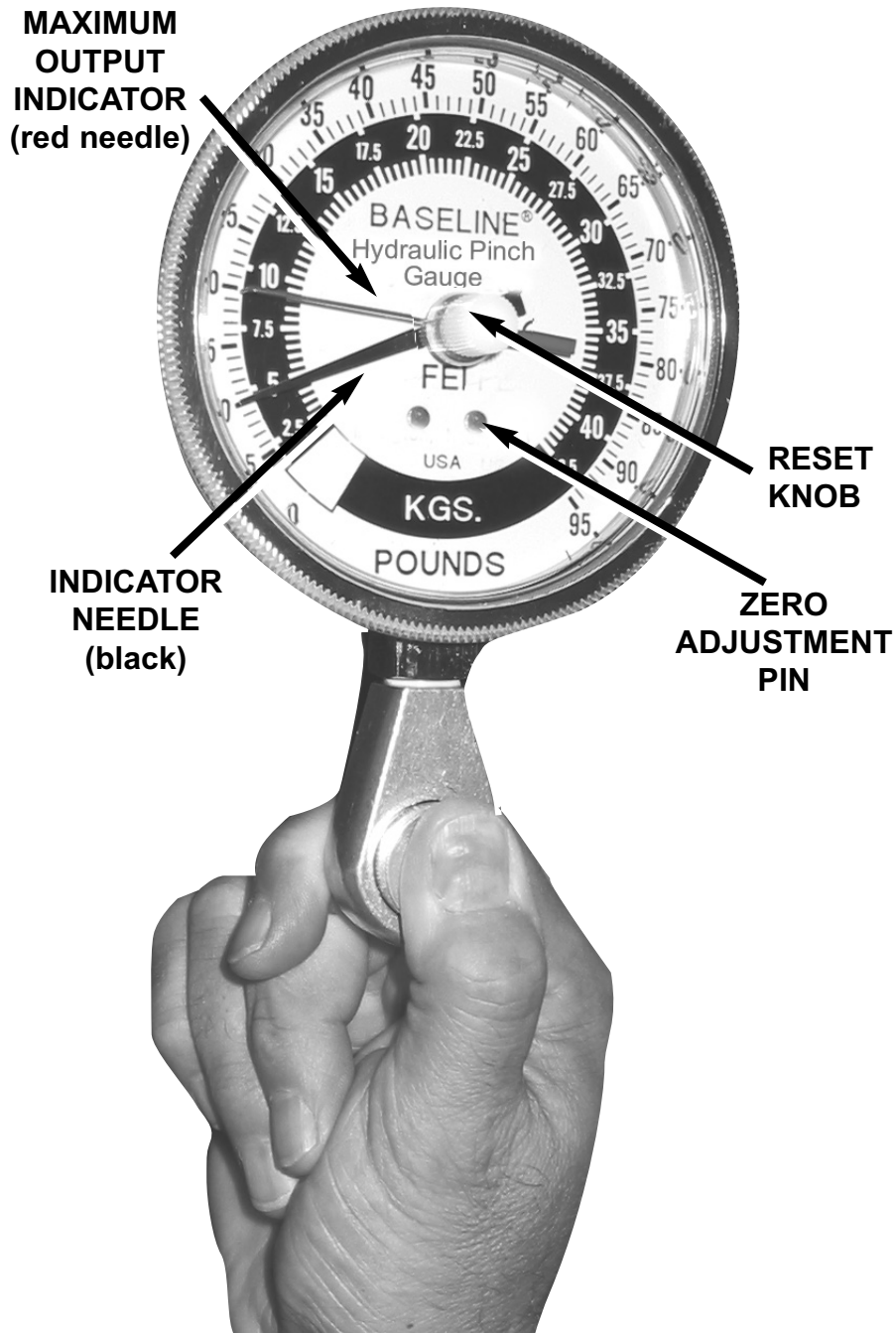
Key (lateral pinch)



Tip (pulp pinch)

	PATIENT START POSITION	PLACEMENT OF PINCH GAUGE	POSITION OF THERAPIST	TEST
<b>LATERAL (KEY) PINCH (RIGHT/LEFT)</b>	- seated or upright - test arm at side with elbow flexed 90° - palm facing inward	Pinch gauge between flexed PIP joint of index finger and thumb.	In front of patient, to the side, stabilizing pinch gauge.	Have patient squeeze, hold and release.
<b>CHUCK PINCH (PALMER) (RIGHT/LEFT)</b>	- seated or upright - test arm at side with elbow flexed 90° - palm facing down	Pinch gauge between thumb and the index and middle fingers.	In front of patient, to the side, stabilizing pinch gauge.	Have patient squeeze, hold and release.
<b>PULP PINCH (TIP) (RIGHT/LEFT ON EACH FINGER)</b>	- seated or upright - test arm at side with elbow flexed 90° - palm facing down - test finger on button	Pinch gauge between thumb and test finger (make sure other fingers do not interfere).	In front of patient, to the side, stabilizing pinch gauge.	Have patient squeeze, hold and release.

## PARTS / SPECIFICATIONS HYDRAULIC PINCH GAUGE



NORMS FOR ADULT PINCH STRENGTH - Tip Pinch strength performance of all subjects (pounds)							
age	hand	men mean	SD	low-high	women mean	SD	low-high
20-24	dominant	18.0	3.0	11-23	11.1	2.1	8-16
	non-dominant	17.0	2.3	12-33	10.5	1.7	8-14
25-29	dominant	18.3	4.4	10-34	11.9	1.8	8-16
	non-dominant	17.5	5.2	12-36	11.3	1.8	9-18
30-34	dominant	17.4	6.7	12-25	12.6	3.0	8-20
	non-dominant	17.6	4.8	10-27	11.7	2.8	7-17
35-39	dominant	18.0	3.6	12-27	11.6	2.5	8-19
	non-dominant	17.7	3.8	10-24	11.9	2.4	8-16
40-44	dominant	17.8	4.0	11-25	11.5	2.7	5-15
	non-dominant	17.7	3.5	12-25	11.1	3.0	6-17
45-49	dominant	18.7	4.9	12-30	13.2	3.0	9-19
	non-dominant	17.6	4.1	12-28	12.1	2.7	7-18
50-54	dominant	18.3	4.0	11-24	12.5	2.2	9-18
	non-dominant	17.8	3.9	12-26	11.4	2.4	7-16
55-59	dominant	16.6	3.3	11-24	11.7	1.7	9-16
	non-dominant	15.0	3.7	10-26	10.4	1.4	8-13
60-64	dominant	15.8	3.9	9-22	10.1	2.1	7-17
	non-dominant	15.3	3.7	9-23	9.9	2.0	6-15
65-69	dominant	17.0	4.2	11-27	10.6	2.0	7-15
	non-dominant	15.4	2.9	10-21	10.5	2.4	7-17
70-75	dominant	13.8	2.6	11-21	10.1	2.6	7-15
	non-dominant	13.3	2.6	10-21	9.8	2.3	6-17
75+	dominant	14.0	3.4	7-21	9.6	2.8	4-16
	non-dominant	13.9	3.7	8-25	9.3	2.4	4-13
ALL	dominant						
	non-dominant						

NORMS FOR ADULT PINCH STRENGTH - Key Pinch strength performance of all subjects (pounds)							
age	hand	men mean	SD	low-high	women mean	SD	low-high
20-24	dominant	26.0	3.5	21-34	17.6	2.0	14-23
	non-dominant	24.8	3.4	19-31	16.2	2.1	13-23
25-29	dominant	26.7	4.9	19-41	17.7	2.1	14-22
	non-dominant	25.0	4.7	19-39	16.6	2.1	13-22
30-34	dominant	26.4	4.8	20-36	18.7	3.0	13-25
	non-dominant	26.2	5.1	17-36	17.8	3.6	12-26
35-39	dominant	26.1	3.2	21-32	16.6	2.0	12-21
	non-dominant	25.6	3.9	18-32	16.0	2.7	12-22
40-44	dominant	25.6	2.6	21-31	16.7	3.1	10-24
	non-dominant	25.1	4.0	19-31	15.8	3.1	8-22
45-49	dominant	25.8	3.9	19-35	17.6	3.2	13-24
	non-dominant	24.8	4.4	18-42	16.6	2.9	12-24
50-54	dominant	26.7	4.4	20-34	16.7	2.5	12-22
	non-dominant	26.1	4.2	20-37	16.1	2.7	12-22
55-59	dominant	24.2	4.2	18-34	15.7	2.5	11-21
	non-dominant	23.0	4.7	13-31	14.7	2.2	12-19
60-64	dominant	23.2	5.4	14-37	15.5	2.7	10-20
	non-dominant	22.2	4.1	16-33	14.1	2.5	10-19
65-69	dominant	23.4	3.9	17-32	15.0	2.6	10-21
	non-dominant	22.0	3.6	17-28	14.3	2.8	10-20
70-75	dominant	19.3	2.4	16-25	14.5	2.9	8-22
	non-dominant	19.2	3.0	13-28	13.8	3.0	9-22
75+	dominant	20.5	4.6	9-31	12.6	2.3	8-17
	non-dominant	19.1	3.0	13-24	11.4	2.6	7-16
ALL	dominant	24.5	4.6	9-41	16.2	3.0	8-25
	non-dominant	23.6	4.6	11-42	15.3	3.1	7-26

NORMS FOR ADULT PINCH STRENGTH - Palmer Pinch strength performance of all subjects (pounds)							
age	hand	men mean	SD	low-high	women mean	SD	low-high
20-24	dominant	26.6	5.3	18-45	17.2	2.3	14-23
	non-dominant	25.7	5.8	15-42	16.3	2.8	11-24
25-29	dominant	26.0	4.3	19-35	17.7	3.2	13-29
	non-dominant	25.1	4.2	19-36	17.0	3.0	13-26
30-34	dominant	24.7	4.7	16-34	19.3	5.0	12-34
	non-dominant	25.4	5.7	15-37	18.1	4.8	12-32
35-39	dominant	26.2	4.1	19-36	17.5	4.2	13-29
	non-dominant	25.9	5.4	14-40	17.1	3.4	12-24
40-44	dominant	24.5	4.3	17-37	17.0	3.1	10-23
	non-dominant	24.8	4.9	15-37	16.6	3.5	14-25
45-49	dominant	24.0	3.3	19-33	17.9	3.0	12-27
	non-dominant	23.7	3.8	8-33	17.5	2.8	12-24
50-54	dominant	23.8	5.4	15-36	17.3	3.1	12-23
	non-dominant	24.0	5.8	16-36	16.4	2.9	12-22
55-59	dominant	23.7	4.8	16-34	16.0	3.1	11-26
	non-dominant	21.3	4.5	12-25	15.4	3.0	11-21
60-64	dominant	21.8	3.3	16-28	14.8	3.1	10-20
	non-dominant	21.2	3.2	15-27	14.3	2.7	10-20
65-69	dominant	21.4	3.0	15-25	14.2	3.1	8-20
	non-dominant	21.2	4.1	14-30	13.7	3.4	8-22
70-75	dominant	18.1	3.4	14-27	14.4	2.6	9-19
	non-dominant	18.8	3.3	13-27	14.0	1.9	10-17
75+	dominant	18.7	4.2	9-26	12.0	2.6	8-17
	non-dominant	18.3	3.8	10-26	11.5	2.6	6-16
ALL	dominant	23.4	5.0	9-45	16.3	3.8	8-34
	non-dominant	23.0	5.3	10-42	15.7	3.6	6-32