

## Mechanical Pinch Gauge



0.9 kg / 2 lb (12-0202)    4.5 kg / 10 lb (12-0203)    14 kg / 30 lb (12-0200)    27 kg / 60 lb (12-0201)

### INSTRUCTIONS

- The Baseline<sup>®</sup> mechanical pinch gauge uses a mechanical measurement system 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 output indicator reading remains until the unit is reset using the reset knob.
- The strength reading can be viewed as pounds or kilograms.
- Portable measuring unit comes with rugged carrying case.
- Available in 0.9 and 4.5 kg capacities for weak or damaged hands, and 14 and 27 kg capacities for orthopedic or sports medicine use.
- 2-year manufacturers warranty; CE listed.



### Quick Operating Guide

#### 1) SET UP GAUGE BEFORE OPERATION

- Hold unit in one hand from bottom of frame.
- Turn outside dial to set zero inline with black indicator needle.
- Turn reset knob to turn red maximum output indicator until it's one measure in front of the black indicator.

Repeat these steps after each test to reset the maximum output indicator

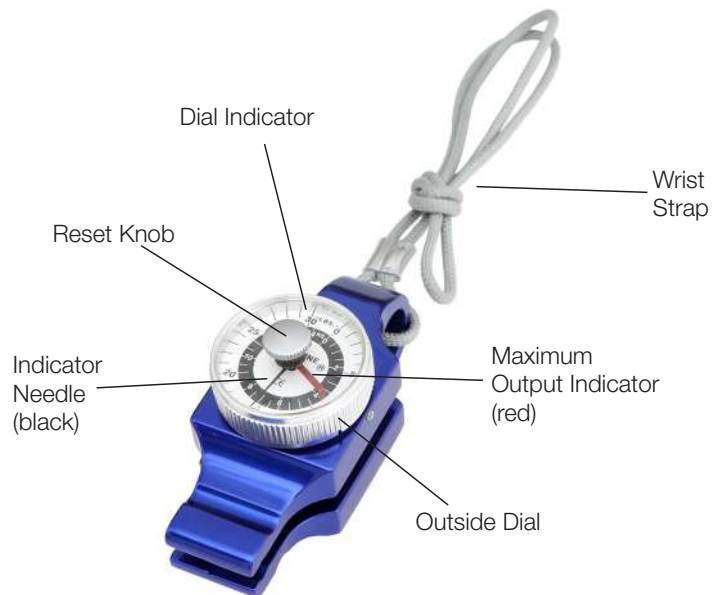


#### 2) OPERATING MECHANICAL PINCH GAUGE

- Allow patient to pinch down on Mechanical Pinch Gauge.
- If black indicator goes all the way around past max readings, use next strength gauge.



### Parts / Specifications



### Testing Protocol: Mechanical Pinch Gauge

The Mechanical Pinch Gauge is 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.

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



Tip (pulp pinch)



Key (lateral pinch)



Palmer (chuck pinch)

	PATIENT START POSITION	PLACEMENT OF PINCH GAUGE	POSITION OF THERAPIST	TEST
<b>TIP (PULP) PINCH (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.
<b>KEY (LATERAL) 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>PALMER (CHUCK) PINCH (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.

# TIP PINCH NORMS

NORMS FOR ADULT PINCH STRENGTH							
Tip Pinch strength performance of all subjects (kilograms)							
		men			women		
age	hand	mean	SD	low-high	mean	SD	low-high
20-24	dominant	8.16	1.36	4.9 - 10.4	5.03	0.95	3.6 - 7.2
	non-dominant	7.71	1.04	5.4 - 14.9	4.76	0.77	3.6 - 6.3
25-29	dominant	8.30	2.00	4.5 - 15.4	5.40	0.82	3.6 - 7.2
	non-dominant	7.94	2.36	5.4 - 16.3	5.13	0.82	4.0 - 8.1
30-34	dominant	7.89	3.04	5.4 - 11.3	5.72	1.36	3.6 - 9.0
	non-dominant	7.98	2.18	4.5 - 12.2	5.31	1.27	3.1 - 7.7
35-39	dominant	8.16	1.63	5.4 - 12.2	5.26	1.13	3.6 - 8.6
	non-dominant	8.03	1.72	4.5 - 10.8	5.40	1.09	3.6 - 7.2
40-44	dominant	8.07	1.81	4.9 - 11.3	5.22	1.22	2.2 - 6.8
	non-dominant	8.03	1.59	5.4 - 11.3	5.03	1.36	2.7 - 7.7
45-49	dominant	8.48	2.22	5.4 - 13.6	5.99	1.36	4.0 - 8.6
	non-dominant	7.98	1.86	5.4 - 12.7	5.49	1.22	3.1 - 8.1
50-54	dominant	8.30	1.81	4.9 - 10.8	5.67	1.00	4.0 - 8.1
	non-dominant	8.07	1.77	5.4 - 11.7	5.17	1.09	3.1 - 7.2
55-59	dominant	7.53	1.50	4.9 - 10.8	5.31	0.77	4.0 - 7.2
	non-dominant	6.80	1.68	4.5 - 11.7	4.72	0.64	3.6 - 5.8
60-64	dominant	7.17	1.77	4.0 - 9.97	4.58	0.95	3.1 - 7.7
	non-dominant	6.94	1.68	4.0 - 10.4	4.49	0.91	2.7 - 6.8
65-69	dominant	7.71	1.91	4.9 - 12.2	4.81	0.91	3.1 - 6.8
	non-dominant	6.99	1.32	4.5 - 9.52	4.76	1.09	3.1 - 7.7
70-75	dominant	6.26	1.18	4.9 - 9.52	4.58	1.18	3.1 - 6.8
	non-dominant	6.03	1.18	4.5 - 9.52	4.45	1.04	2.7 - 7.7
75+	dominant	6.35	1.54	3.1 - 9.52	4.35	1.27	1.8 - 7.2
	non-dominant	6.30	1.68	3.6 - 11.3	4.22	1.09	1.8 - 5.8
ALL	dominant	7.71	1.86	3.2 - 15.4	5.13	1.18	1.8 - 9.1
	non-dominant	7.44	1.81	3.6 - 16.3	4.90	1.09	1.8 - 8.2

# KEY PINCH NORMS

NORMS FOR ADULT PINCH STRENGTH							
Key Pinch strength performance of all subjects (kilograms)							
		men			women		
age	hand	mean	SD	low-high	mean	SD	low-high
20-24	dominant	11.79	1.59	9.5 - 15.4	7.98	0.91	6.4 - 10.4
	non-dominant	11.25	1.54	8.6 - 14.1	7.35	0.95	5.9 - 10.4
25-29	dominant	12.11	2.22	8.6 - 18.6	8.03	0.95	6.4 - 10.0
	non-dominant	11.34	2.13	8.6 - 17.7	7.53	0.95	5.9 - 10.0
30-34	dominant	11.97	2.18	9.1 - 16.3	8.48	1.36	5.9 - 11.3
	non-dominant	11.88	2.31	7.7 - 16.3	8.07	1.63	5.4 - 11.8
35-39	dominant	11.84	1.45	9.5 - 14.5	7.53	0.91	5.4 - 9.5
	non-dominant	11.61	1.77	8.2 - 14.5	7.26	1.22	5.4 - 10.0
40-44	dominant	11.61	1.18	9.5 - 14.1	7.57	1.41	4.5 - 10.9
	non-dominant	11.39	1.81	8.6 - 14.1	7.17	1.41	3.6 - 10.0
45-49	dominant	11.70	1.77	8.6 - 15.9	7.98	1.45	5.9 - 10.9
	non-dominant	11.25	2.00	8.2 - 19.1	7.53	1.32	5.4 - 10.9
50-54	dominant	12.11	2.00	9.1 - 15.4	7.57	1.13	5.4 - 10.0
	non-dominant	11.84	1.91	9.1 - 16.8	7.30	1.22	5.4 - 10.0
55-59	dominant	10.98	1.91	8.2 - 15.4	7.12	1.13	5.0 - 9.5
	non-dominant	10.43	2.13	5.9 - 14.1	6.67	1.00	5.4 - 8.6
60-64	dominant	10.52	2.45	6.4 - 16.8	7.03	1.22	4.5 - 9.1
	non-dominant	10.07	1.86	7.3 - 15.0	6.40	1.13	4.5 - 8.6
65-69	dominant	10.61	1.77	7.7 - 14.5	6.80	1.18	4.5 - 9.5
	non-dominant	9.98	1.63	7.7 - 12.7	6.49	1.27	4.5 - 9.1
70-75	dominant	8.75	1.09	7.3 - 11.3	6.58	1.32	3.6 - 10.0
	non-dominant	8.71	1.36	5.9 - 12.7	6.26	1.36	4.1 - 10.0
75+	dominant	9.30	2.09	4.1 - 14.1	5.72	1.04	3.6 - 7.7
	non-dominant	8.66	1.36	5.9 - 10.9	5.17	1.18	3.2 - 7.3
ALL	dominant	11.11	2.09	4.1 - 18.6	7.35	1.36	3.6 - 11.3
	non-dominant	10.70	2.09	5.0 - 19.1	6.94	1.41	3.2 - 11.8

# PALMER PINCH NORMS

NORMS FOR ADULT PINCH STRENGTH							
Palmar Pinch strength performance of all subjects (kilograms)							
		men			women		
age	hand	mean	SD	low-high	mean	SD	low-high
20-24	dominant	12.07	2.40	8.2 - 20.4	7.80	1.04	6.4 - 10.4
	non-dominant	11.66	2.63	6.8 - 19.1	7.39	1.27	5.0 - 10.9
25-29	dominant	11.79	1.95	8.6 - 15.9	8.03	1.45	5.9 - 13.2
	non-dominant	11.39	1.91	8.6 - 16.3	7.71	1.36	5.9 - 11.8
30-34	dominant	11.20	2.13	7.3 - 15.4	8.75	2.27	5.4 - 15.4
	non-dominant	11.52	2.59	6.8 - 16.8	8.21	2.18	5.4 - 14.5
35-39	dominant	11.88	1.86	8.6 - 16.3	7.94	1.91	5.9 - 13.2
	non-dominant	11.75	2.45	6.4 - 18.1	7.76	1.54	5.4 - 10.9
40-44	dominant	11.11	1.95	7.7 - 16.8	7.71	1.41	4.5 - 10.4
	non-dominant	11.25	2.22	6.8 - 16.8	7.53	1.59	6.4 - 11.3
45-49	dominant	10.89	1.50	8.6 - 15.0	8.12	1.36	5.4 - 12.2
	non-dominant	10.75	1.72	3.6 - 15.0	7.94	1.27	5.4 - 10.9
50-54	dominant	10.80	2.45	6.8 - 16.3	7.85	1.41	5.4 - 10.4
	non-dominant	10.89	2.63	7.3 - 16.3	7.44	1.32	5.4 - 10.0
55-59	dominant	10.75	2.18	7.3 - 15.4	7.26	1.41	5.0 - 11.8
	non-dominant	9.66	2.04	5.4 - 11.3	6.99	1.36	5.0 - 9.5
60-64	dominant	9.89	1.50	7.3 - 12.7	6.71	1.41	4.5 - 9.1
	non-dominant	9.62	1.45	6.8 - 12.2	6.49	1.22	4.5 - 9.1
65-69	dominant	9.71	1.36	6.8 - 11.3	6.44	1.41	3.6 - 9.1
	non-dominant	9.62	1.86	6.4 - 13.6	6.21	1.54	3.6 - 10.0
70-75	dominant	8.21	1.54	6.4 - 12.2	6.53	1.18	4.1 - 8.6
	non-dominant	8.53	1.50	5.9 - 12.2	6.35	0.86	4.5 - 7.7
75+	dominant	8.48	1.91	4.1 - 11.8	5.44	1.18	3.6 - 7.7
	non-dominant	8.30	1.72	4.5 - 11.8	5.22	1.18	2.7 - 7.3
ALL	dominant	10.61	2.27	4.1 - 20.4	7.39	1.72	3.6 - 15.4
	non-dominant	10.43	2.40	4.5 - 19.1	7.12	1.63	2.7 - 14.5




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