Sample Calibration Laboratory

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Calibration Certificate

Hydraulic pre-stress jack

SAMPLE

ISSUED TO

SAMPLE — not a customer
This document is a preview of your settings

CALIBRATION

Date	**2026-01-15**
Next due	2026-07-15
Location	Laboratory
Temperature	23.0 °C
Humidity	50 %rh

ITEM CALIBRATED

Description	**Hydraulic pre-stress jack (sample)**	Asset no.	SAMPLE-0001
Manufacturer	Sample	Plant no.	PLANT-01
Model	25T	Range	0 to 70 MPa
Serial no.	SAMPLE-001	Resolution	0.5 MPa
Gauge make	Sample Gauges	Gauge resolution	0.5 MPa
Gauge serial	G-SAMPLE	Gauge range	70 MPa
As received	Good	As returned	Good

METHOD

Australian Standard AS 2193-2005, Force Measuring Systems of Testing Machines.

7 calibration points were applied, with 3 ascending runs at each point.

The error shown is the calculated force minus the mean applied force, expressed as a percentage of the mean applied force.

The force table gives the force calculated from the fitted equation at each gauge reading from 10 to 68 MPa. It is calculated, not further measurements, and covers only the range that was measured.

REFERENCE STANDARDS USED

Description	Model	Serial no.	Certificate	Cal. due
Sample Reference load cell (sample)	SAMPLE	SAMPLE	SAMPLE	2027-06-01

TEST RESULTS

Reading	Run 1	Run 2	Run 3	Mean applied	Calculated	Error	Repeatability	Grade
MPa	kN	kN	kN	kN	kN	%	%	AS 2193
10.0	43.00	43.00	42.50	42.83	43.81	+2.28	1.17	No Grade
20.0	86.50	86.50	87.00	86.67	86.41	-0.30	0.58	C
30.0	129.50	129.50	129.00	129.33	129.00	-0.26	0.39	C
40.0	171.50	172.00	172.00	171.83	171.60	-0.14	0.29	C
50.0	215.00	215.50	215.50	215.33	214.19	-0.53	0.23	B
60.0	257.00	257.50	257.50	257.33	256.79	-0.21	0.19	B
68.0	289.00	289.50	289.50	289.33	290.87	+0.53	0.17	B

FORCE AT EACH GAUGE READING, FROM THE FITTED EQUATION

Gauge reading	Force	Gauge reading	Force	Gauge reading	Force
MPa	kN	MPa	kN	MPa	kN
10.0	43.81	29.5	126.87	49.0	209.93
10.5	45.94	30.0	129.00	49.5	212.06
11.0	48.07	30.5	131.13	50.0	214.19
11.5	50.20	31.0	133.26	50.5	216.32
12.0	52.33	31.5	135.39	51.0	218.45
12.5	54.46	32.0	137.52	51.5	220.58
13.0	56.59	32.5	139.65	52.0	222.71
13.5	58.72	33.0	141.78	52.5	224.84
14.0	60.85	33.5	143.91	53.0	226.97
14.5	62.98	34.0	146.04	53.5	229.10
15.0	65.11	34.5	148.17	54.0	231.23
15.5	67.24	35.0	150.30	54.5	233.36
16.0	69.37	35.5	152.43	55.0	235.49
16.5	71.50	36.0	154.56	55.5	237.62
17.0	73.63	36.5	156.69	56.0	239.75
17.5	75.76	37.0	158.82	56.5	241.88
18.0	77.89	37.5	160.95	57.0	244.01
18.5	80.02	38.0	163.08	57.5	246.14
19.0	82.15	38.5	165.21	58.0	248.27
19.5	84.28	39.0	167.34	58.5	250.40
20.0	86.41	39.5	169.47	59.0	252.53
20.5	88.54	40.0	171.60	59.5	254.66
21.0	90.66	40.5	173.73	60.0	256.79
21.5	92.79	41.0	175.86	60.5	258.92
22.0	94.92	41.5	177.99	61.0	261.05
22.5	97.05	42.0	180.12	61.5	263.18
23.0	99.18	42.5	182.25	62.0	265.31
23.5	101.31	43.0	184.38	62.5	267.44
24.0	103.44	43.5	186.51	63.0	269.57
24.5	105.57	44.0	188.64	63.5	271.70
25.0	107.70	44.5	190.77	64.0	273.83
25.5	109.83	45.0	192.90	64.5	275.96
26.0	111.96	45.5	195.03	65.0	278.09
26.5	114.09	46.0	197.16	65.5	280.22
27.0	116.22	46.5	199.29	66.0	282.35
27.5	118.35	47.0	201.42	66.5	284.48
28.0	120.48	47.5	203.55	67.0	286.61
28.5	122.61	48.0	205.68	67.5	288.74
29.0	124.74	48.5	207.80	68.0	290.87

To convert between the indicated value and the measured quantity, apply:

Force (kN) = (4.25964 × R) + 1.21256

Overall grade **No Grade**

Expanded uncertainty of measurement: ±1.5 kN at a confidence level of approximately 95%, using a coverage factor k = 2.00. The uncertainty was evaluated in accordance with JCGM 100 (GUM).

REMARKS

SAMPLE ONLY. This document previews how the laboratory’s certificates will read. It is not a certificate, records no calibration, and cannot be verified.

SEAL KIT REPLACED BEFORE THE TEST RUNS. (Your technician’s remark prints here exactly as it is typed.)

Overall grade No Grade, limited by readability at 10 MPa.

AS 2193-2005 Appendix G — errors determined at the actual applied force of each observation, the machine not permitting three observations at one selected force. A jack is held at a selected gauge pressure while the force that results varies between runs, so the applied force cannot be repeated exactly and Appendix G is the method that fits.

The measurements reported herein were made using reference standards whose calibration is traceable to national or international measurement standards. Details of the standards used, including their calibration status at the time of measurement, are listed above.

The results relate only to the item calibrated, as identified above, and to the conditions under which the measurements were made. This document may not be reproduced except in full without the written approval of the issuing laboratory.

The recommended date of next calibration is based on the interval agreed with the customer or on the manufacturer’s recommendation. Determining the suitability of the item for its intended use, and the interval appropriate to that use, remains the responsibility of the customer.

This calibration is traceable as described above. The issuing laboratory does not hold accreditation for this measurement.

Calibration performed by
A. Signatory

Technical Manager
A. Signatory
Issued 2026-01-15

Verify this certificate at https://example.invalid/this-is-a-sample

SAMPLE