

calibration certificate

AC10CFIIP.C19489 / 002

Cone number AC10CFIIP.C19489
Kind of cone Compression
Calibration date 31-Mar-2025

Client WSP New Zealand Ltd - Hamilton Laboratory
4 Fox Street
3216 Hamilton
New Zealand

Channel 1			Channel 2			Channel 3		
Cone resistance (q_c)			Local sleeve friction (f_s)			Pore pressure (u)		
$q_c = Q_c / A_c$			$f_s = F_s / A_s$					
Range 0 ... 100 kN			Range 0 ... 22.5 kN			Range 0 ... 50 bar		
A_c 1000 mm ²			A_s 15000 mm ²					
Zero load reading 213 mV			Zero load reading 233 mV			Zero load reading 200 mV		
a-factor 0.8			b-factor 0					
Offset 80 mm								
Q_c Load (kN)	Eqv. q_c (MPa)	Output (mV)	F_s Load (kN)	Eqv. f_s (MPa)	Output (mV)	Pressure (bar)	Eqv. u (MPa)	Output (mV)
0	0	0	0.00	0.00	0	0	0.0	0
10	10	845	2.25	0.15	877	5	0.5	822
20	20	1692	4.50	0.30	1750	10	1.0	1649
30	30	2539	6.75	0.45	2613	15	1.5	2474
40	40	3382	9.00	0.60	3478	20	2.0	3301
50	50	4228	11.25	0.75	4349	25	2.5	4126
60	60	5070	13.50	0.90	5213	30	3.0	4950
70	70	5912	18.00	1.20	6954	35	3.5	5773
80	80	6752	20.25	1.35	7819	40	4.0	6594
90	90	7591	22.50	1.50	8681	45	4.5	7414
100	100	8432	20.25	1.35	7826	50	5.0	8239
90	90	7594	18.00	1.20	6959			
80	80	6756	13.50	0.90	5227			
70	70	5911	11.25	0.75	4357			
60	60	5073	9.00	0.60	3487			
50	50	4233	6.75	0.45	2624			
40	40	3385	4.50	0.30	1749			
30	30	2543	2.25	0.15	878			
20	20	1696	0.00	0.00	-1			
10	10	846						
0	0	0						
Zero load error 0.00 %			Zero load error 0.01 %			Zero load error 0.00 %		
Max. linearity 0.11 %			Max. linearity 0.12 %			Max. linearity 0.05 %		
Max. hysteresis 0.06 %			Max. hysteresis 0.16 %					

[illegible]

Calibration instrument(s)
TAG155 - 822097019 C18 200KN

Certificate number(s)
3797754.00501.1

Date(s)
19-Apr-2024

Remark

Date 31-Mar-2025
Calibrated by S. van Luijn

Date 01-Jan-0001
Approved by R. Duarte

Signature

Signature

calibration certificate

AC10CFIIP.C21082 / 005

Cone number AC10CFIIP.C21082
Kind of cone Compression
Calibration date 30-Jul-2025

Client

WSP New Zealand Ltd - Hamilton Laboratory
4 Fox Street
3216 Hamilton
New Zealand

Channel 1			Channel 2			Channel 3		
Cone resistance (q_c)			Local sleeve friction (f_s)			Pore pressure (u)		
$q_c = Q_c / A_c$			$f_s = F_s / A_s$					
Range 0 ... 100 kN			Range 0 ... 22.5 kN			Range 0 ... 50 bar		
A_c 1000 mm ²			A_s 15000 mm ²					
Zero load reading 189 mV			Zero load reading 231 mV			Zero load reading 245 mV		
a-factor 0.8			b-factor 0					
Offset 80 mm								
Q_c Load (kN)	Eqv. q_c (MPa)	Output (mV)	F_s Load (kN)	Eqv. f_s (MPa)	Output (mV)	Pressure (bar)	Eqv. u (MPa)	Output (mV)
0	0	0	0.00	0.00	0	0	0.0	0
10	10	856	2.25	0.15	892	5	0.5	812
20	20	1714	4.50	0.30	1760	10	1.0	1619
30	30	2569	6.75	0.45	2623	15	1.5	2422
40	40	3428	9.00	0.60	3478	20	2.0	3225
50	50	4283	11.25	0.75	4337	25	2.5	4027
60	60	5137	13.50	0.90	5192	30	3.0	4827
70	70	5994	18.00	1.20	6897	35	3.5	5620
80	80	6845	20.25	1.35	7744	40	4.0	6409
90	90	7697	22.50	1.50	8597	45	4.5	7195
100	100	8545	20.25	1.35	7750	50	5.0	7982
90	90	7696	18.00	1.20	6911			
80	80	6850	13.50	0.90	5210			
70	70	5992	11.25	0.75	4355			
60	60	5143	9.00	0.60	3500			
50	50	4288	6.75	0.45	2647			
40	40	3425	4.50	0.30	1782			
30	30	2576	2.25	0.15	916			
20	20	1718	0.00	0.00	-3			
10	10	857						
0	0	-1						
Zero load error 0.01 %			Zero load error 0.04 %			Zero load error 0.00 %		
Max. linearity 0.13 %			Max. linearity 0.53 %			Max. linearity 0.30 %		
Max. hysteresis 0.08 %			Max. hysteresis 0.28 %					

[illegible]

Calibration instrument(s)
TAG88 - 822078632 C18 200KN

Certificate number(s)
3852229.00501.1

Date(s)
22-Aug-2024

Remark

We declare that the electrical cone with serial number AC10CFIIP.C21082 has been calibrated and that the specifications are according to the ISO 22476-1:2012/Cor 1:2013 (Geotechnical investigation and testing – Field testing - Part 1: Electrical cone and piezocone penetration test). The calibrations are traceable to national and international standards.

Date 30-Jul-2025
Calibrated by S. van Luijn

Date 31-Jul-2025
Approved by A. Duarte

Signature

Signature

calibration certificate

AC10CFIIP.C21109 / 002

Cone number AC10CFIIP.C21109
Kind of cone Compression
Calibration date 27-Feb-2023

Client WSP New Zealand Ltd - Hamilton Laboratory
4 Fox Street
3216 Hamilton
New Zealand

Channel 1			Channel 2			Channel 3		
Cone resistance (q_c)			Local sleeve friction (f_s)			Pore pressure (u)		
$q_c = Q_c / A_c$			$f_s = F_s / A_s$					
Range 0 ... 100 kN			Range 0 ... 22.5 kN			Range 0 ... 50 bar		
A_c 1000 mm ²			A_s 15000 mm ²					
Zero load reading 221 mV			Zero load reading 214 mV			Zero load reading 206 mV		
a-factor 0.8			b-factor 0					
Offset 80 mm								
Q_c Load (kN)	Eqv. q_c (MPa)	Output (mV)	F_s Load (kN)	Eqv. f_s (MPa)	Output (mV)	Pressure (bar)	Eqv. u (MPa)	Output (mV)
0	0	0	0.00	0.00	0	0	0.0	0
10	10	839	2.25	0.15	787	5	0.5	785
20	20	1681	4.50	0.30	1588	10	1.0	1577
30	30	2520	6.75	0.45	2348	15	1.5	2369
40	40	3366	9.00	0.60	3131	20	2.0	3158
50	50	4201	11.25	0.75	3922	25	2.5	3946
60	60	5038	13.50	0.90	4720	30	3.0	4729
70	70	5878	18.00	1.20	6259	35	3.5	5514
80	80	6715	20.25	1.35	7057	40	4.0	6302
90	90	7548	22.50	1.50	7842	45	4.5	7090
100	100	8388	20.25	1.35	7059	50	5.0	7865
90	90	7551	18.00	1.20	6282			
80	80	6716	13.50	0.90	4753			
70	70	5879	11.25	0.75	3959			
60	60	5042	9.00	0.60	3176			
50	50	4204	6.75	0.45	2408			
40	40	3367	4.50	0.30	1632			
30	30	2526	2.25	0.15	828			
20	20	1682	0.00	0.00	0			
10	10	843						
0	0	0						
Zero load error 0.00 %			Zero load error 0.00 %			Zero load error 0.01 %		
Max. linearity 0.14 %			Max. linearity 0.81 %			Max. linearity 0.17 %		
Max. hysteresis 0.07 %			Max. hysteresis 0.77 %					

Channel 4	Inclination X	Channel 5	Inclination Y	Channel 6	None
Range	-20 ... 20 °	Range	-20 ... 20 °		
Angle (°)	Output (mV)	Angle (°)	Output (mV)		
-20	2544	-20	2501		
-15	2611	-15	2575		
-10	2692	-10	2643		
-5	2763	-5	2720		
0	2845	0	2788		
5	2919	5	2864		
10	2989	10	2939		
15	3068	15	3012		
20	3134	20	3076		

Calibration instrument(s)
GCU1000/170214-011/2 50KN

Certificate number(s)
3558533.00501.1

Date(s)
25-Aug-2022

Remark

We declare that the electrical cone with serial number AC10CFIIP.C21109 has been calibrated and that the specifications are according to the ISO 22476-1:2012/Cor 1:2013 (Geotechnical investigation and testing – Field testing - Part 1: Electrical cone and piezocone penetration test). The calibrations are traceable to national and international standards.

Date 27-Feb-2023
Calibrated by N. van Herwaarde

Date 27-Feb-2023
Approved by Y. Slieker

Signature

Signature