

## Hydraulic cell for pile load test



### Description

We are providing model **ACH-400, 600, 800, 1000, 1200, 1500 single acting hydraulic cells, model ACD-400, 600, 800, 1000, 1200, 1500 double acting hydraulic cells,** and **hyd. pump unit** for pile load test.

We provide customized service for single acting and double acting hydraulic load cells which are for 400, 600, 1000, and ton.f(common pressure 1500bar)

These hydraulic cells are made by our vertical CNC lathe, including CNC milling center . Hyd. cells are including leak tightness preventers and super high pressured airtight design. Also, we take 100% load test for each cell in order to prevent any fault.

### Specification

[Single acting hyd. cell]

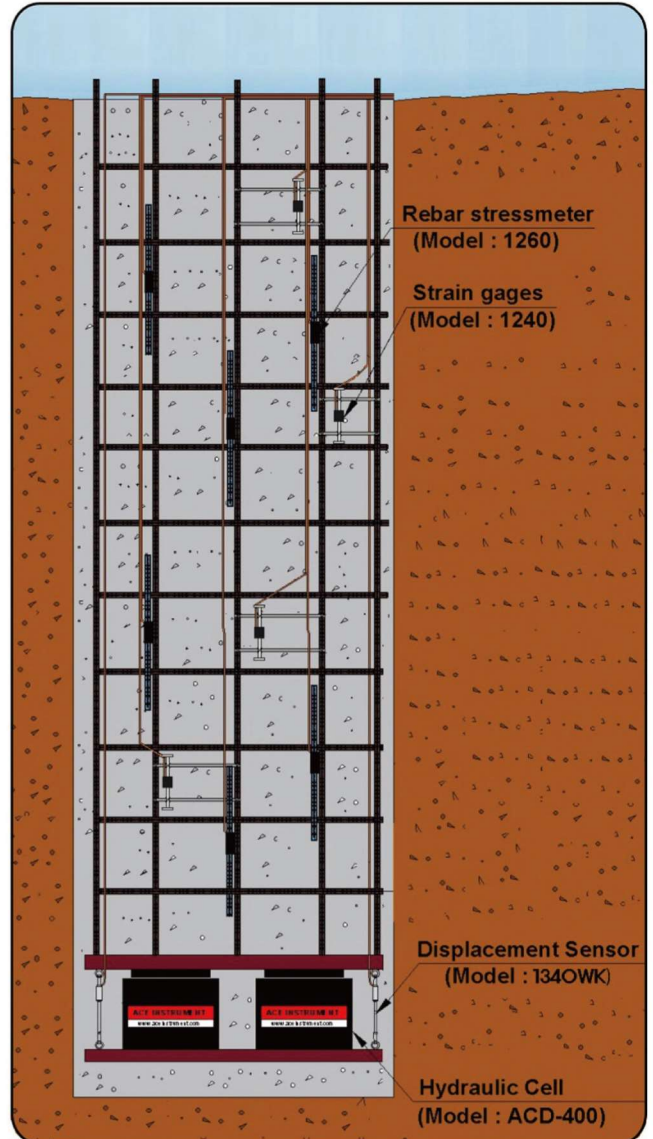
[Material:SCM steel]

Model	Load (ton · f)	Effective sectional area (cm <sup>2</sup> )	Working pressure (kg/cm <sup>2</sup> )	Max. pressure (kg/cm <sup>2</sup> )	Stroke (mm)	Weight (kg)
ACH-400	400	269				121
ACH-600	600	404				200
ACH-800	800	538	1500	2000	150	271
ACH-1000	1000	673				351
ACH-1200	1200	808				428
ACH-1500	1500	1010				563

[Double acting hyd. cell]

[Material:SCM steel]

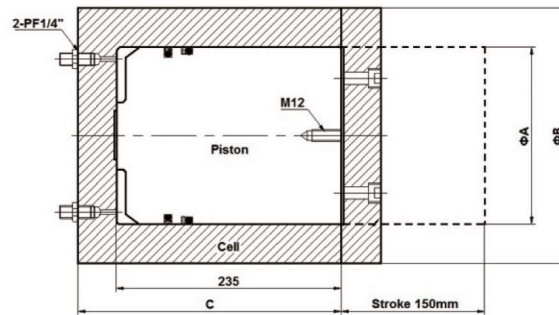
Model	Load (ton · f)	Effective sectional area (cm <sup>2</sup> )	Working pressure (kg/cm <sup>2</sup> )	Max. pressure (kg/cm <sup>2</sup> )	Stroke (mm)	Weight (kg)
ACD-400	400	269				210
ACD-600	600	404				319
ACD-800	800	538	1500	2000	150	428
ACD-1000	1000	673				549
ACD-1200	1200	808				660
ACD-1500	1500	1010				847



[Picture of manufacturing hyd. cell]

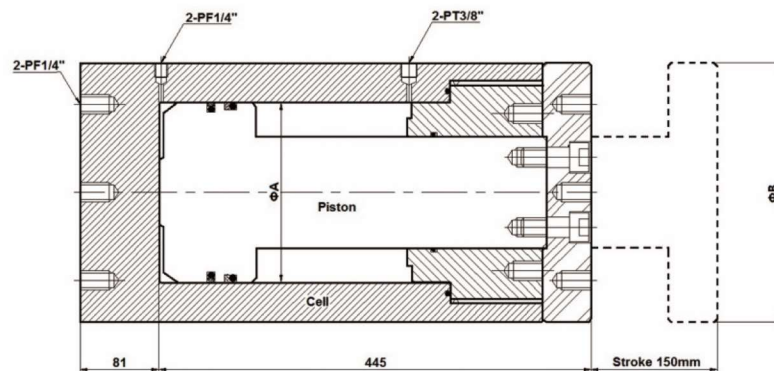
## Hydraulic cell for pile load test

### Dimensions



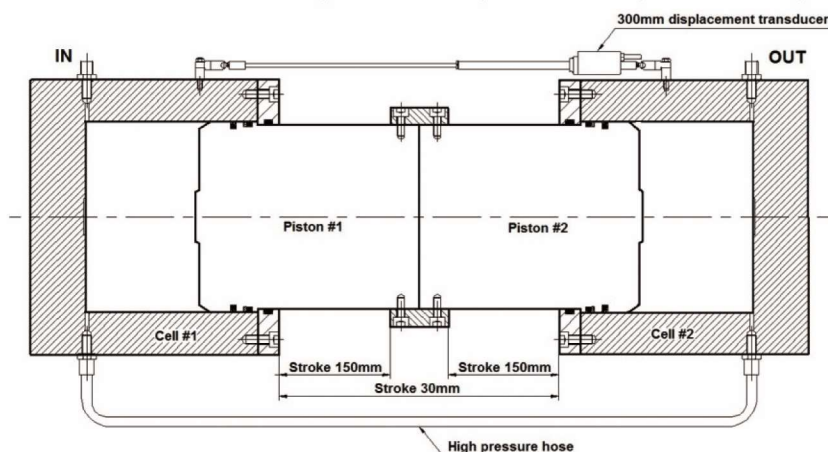
[Single acting hyd. cell]

Model	Working load (ton · f)	Efficiency area (cm <sup>2</sup> )	Working pressure (kg/cm <sup>2</sup> )	Max. pressure (kg/cm <sup>2</sup> )	Dimension(mm)		
					ØA	ØB	ØC
ACH-400	400	269	1500	2000	185	267	275
ACH-600	600	404	1500	2000	227	327	304
ACH-800	800	538	1500	2000	262	377	310
ACH-1000	1000	673	1500	2000	293	425	316
ACH-1200	1200	808	1500	2000	320	465	322
ACH-1500	1500	1010	1500	2000	358	525	332



[Double acting hyd. cell]

Model	Working load (ton · f)	Efficiency area (cm <sup>2</sup> )	Working pressure (kg/cm <sup>2</sup> )	Max. pressure (kg/cm <sup>2</sup> )	Dimension(mm)		
					ØA	ØB	ØC
ACD-400	400	269	1500	2000	185	267	485
ACD-600	600	404	1500	2000	227	327	514
ACD-800	800	538	1500	2000	262	377	520
ACD-1000	1000	673	1500	2000	293	425	526
ACD-1200	1200	808	1500	2000	320	465	532
ACD-1500	1500	1010	1500	2000	358	525	542



By using 2set of single acting hydraulic cell, the stroke can be extended from 150mm to 300mm as shown in the figure.



## Hydraulic cell for pile load test

### 1. Measurement of concrete displacement

To install 2~3 nos of VW embedment strain gages (model 1240) in each one section belong to drawing of installation.



#### Specification

Model	1240
Applied sensor	VW type
Range	3000 micro strain
Resolution	0.5 micro strain
Accuracy	±0.1% FSR
Non linearity	±0.5% FSR

### 2. Measurement of rebar stress

To install 2~3nos of VW rebar streemeters (model 1260 : D25) in each one section belong to drawing of installation.



#### Specification

Model	1260
Applied sensor	VW type
Range	3000 micro strain
Resolution	0.025 micro strain
Accuracy	±0.1% FSR
Non linearity	±0.5% FSR

### 3. Measurement of hyd. cell displacement

To attach VW crackmeters (model 1340WK : 25bar) on the cage which is an attachment for hyd. cell it is for measuring the displacement of cell's ram.



#### Specification

Model	1340WK
Range	100mm (150~200mm optional)
Resolution	0.025%FSR
Accuracy	±0.1% FSR
Non linearity	±0.5% FSR
Waterproof	25bar

#### [Hyd. pump unit]



#### Specification

Model	KHB-300T
Manufacturer	Korea hydraulic co.
Working pressure	300~2100
Max. flow	0.63L/min
Driven air	1~10.3

## Hydraulic cell for pile load test

[Several type kit of installed the top and bottom cages]



The size of the top and bottom reaction plate is decided in consideration of the total size of appearance of pile, the size of the reload, the storage capacity of the hydraulic cell, and the number of installed hydraulic hose discharge plan of the hydraulic cell.

The design reflects the sensor cable discharge plan and the hydraulic hose discharge plan of the hydraulic cell. Then the reaction plate of the hydraulic cell is welded to the upper reaction plate and the outside of the cell of the hydraulic cell is partially welded to the bottom reaction plate to be integrated.

After the reaction plate is installed at the depth of excavation together with the wire mesh, it prevents the concrete from entering the piston of the hydraulic cell and helps the distributed load of the concrete act.

The thickness of the reaction plate is about 50mm in total. In order not to interfere with the process and installation, unnecessary parts are cut out and worked.



[1500 ton load tester]