


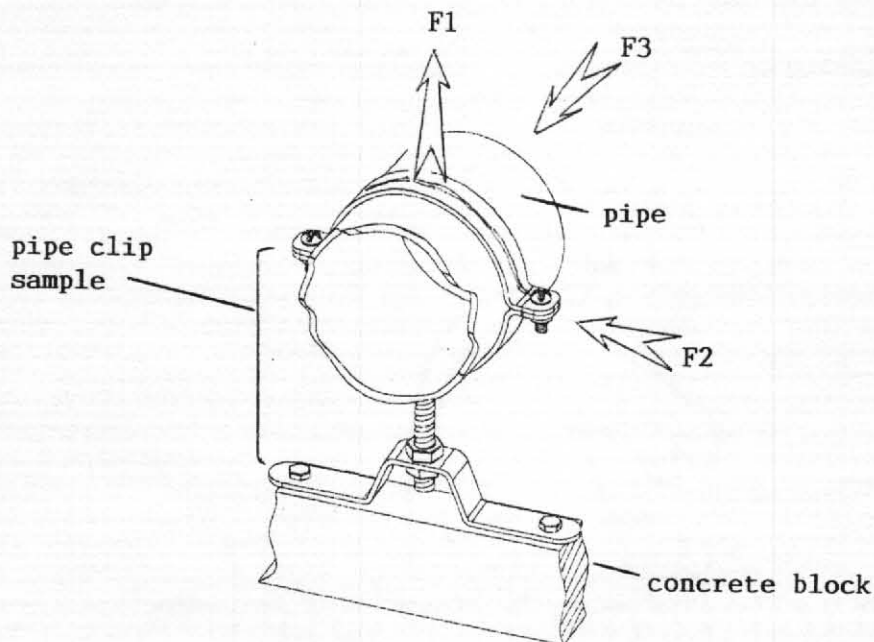


TEST REPORT

TITLE : Testing of Pipe Clip
OUR REFERENCE NO. : J8861-31
DESCRIPTION OF SAMPLE : Ø100mm (4") Stainless steel pipe clip with Ø3/8" screwed support stem electrically welded onto the 19mm width x 3mm thick ring ; with 165mm x 25mm x 3mm supporting strip and two 5/16" ANCHORZINC; with 1/4" x 3/4" screws and nuts; for BS4514 uPVC/plastic drain pipe
SAMPLE SUBMITTED BY : Cheung's Engineering Co.
G/F., 90 Tak Cheong Street,
Kowloon, Hong Kong.
MANUFACTURER : Cheung's Engineering Co.
BRAND / LOGO :  Pipe Clips-
COUNTRY OF ORIGIN : China
TEST REQUIRED : Loading test
PERIOD OF TESTS : 20th to 24th January 2003

RESULTS: - LOADING TEST

1. A concrete block made of concrete mix grade 30D10 (cement to BS12: 1978 and Aggregate to BS882: 1973) was prepared and used for the loading test.






TEST REPORT

OUR REFERENCE NO.J8861-31 (P.2)

- The concrete block was secured to the loading test frame. Two holes were drilled on the concrete block; the pipe clip's supporting strip were fixed to the block by anchor bolts. An uPVC pipe of BS4514 was connected to the pipe clip.
 - The vertical pulling force **F1** applied to detach the pipe clip from the concrete block was measured.
 - Steps 1 to 2 were repeated. A horizontal force **F2** applied to the pipe clip (perpendicular to the pipe axis) to result in a 20mm horizontal deflection was measured.
 - Steps 1 to 2 were repeated. A horizontal force **F3** acting on the pipe along its longitudinal axis to slip the pipe from the pipe clip by 20mm was measured.
6. Result :

Vertical force F1 to detach the pipe clip from the concrete block (kgf)	Horizontal force F2 to result in a 20mm horizontal deflection (kgf)	Horizontal force F3 to slip the pipe by 20mm (kgf)
614	127	90

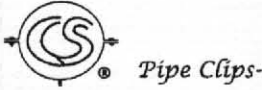
Date : 18th February 2003 Authorized signature : 

Samson W.K. Yiu
(Director)

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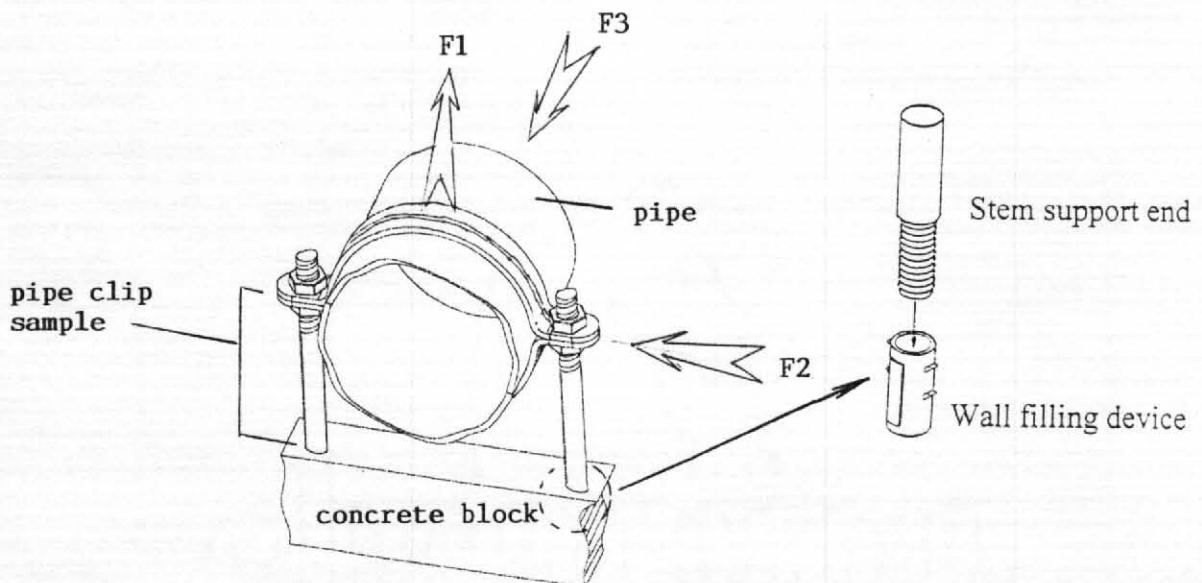


TEST REPORT

TITLE : Testing of Pipe Clip
OUR REFERENCE NO. : J8861-32
DESCRIPTION OF SAMPLE : Ø100mm (4") Stainless steel pipe clip with two screwed end Ø3/8" supporting stems; with 19mm width x 3mm thick ring; supplied with plastic wall filling device; for BS4514 uPVC/plastic drain pipe
SAMPLE SUBMITTED BY : Cheung's Engineering Co.
G/F., 90 Tak Cheong Street,
Kowloon, Hong Kong.
MANUFACTURER : Cheung's Engineering Co.
BRAND / LOGO : 
COUNTRY OF ORIGIN : China
TEST REQUIRED : Loading test
PERIOD OF TESTS : 20th to 24th January 2003

RESULTS: - LOADING TEST

1. A concrete block made of concrete mix grade 30D10 (cement to BS12: 1978 and Aggregate to BS882: 1973) was prepared and used for the loading test.
2. The plastic wall filling device was connected to the end of a new pipe clip's each support stem.



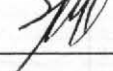


TEST REPORT

OUR REFERENCE NO. J8861-32 (P.2)

- The concrete block was secured to the loading test frame. Two holes were drilled on the concrete block; the pipe clip's two supporting stems were hammered into the two holes respectively. An uPVC pipe of BS4514 was connected to the pipe clip.
 - The vertical pulling force **F1** applied to detach the pipe clip from the concrete block was measured.
 - Steps 1 to 2 were repeated. A horizontal force **F2** applied to the pipe clip (perpendicular to the pipe axis) to result in a 20mm horizontal deflection was measured.
 - Steps 1 to 2 were repeated. A horizontal force **F3** acting on the pipe along its longitudinal axis to slip the pipe from the pipe clip by 20mm was measured.
6. Result :

Vertical force F1 to detach the pipe clip from the concrete block (kgf)	Horizontal force F2 to result in a 20mm horizontal deflection (kgf)	Horizontal force F3 to slip the pipe by 20mm (kgf)
737	368	243

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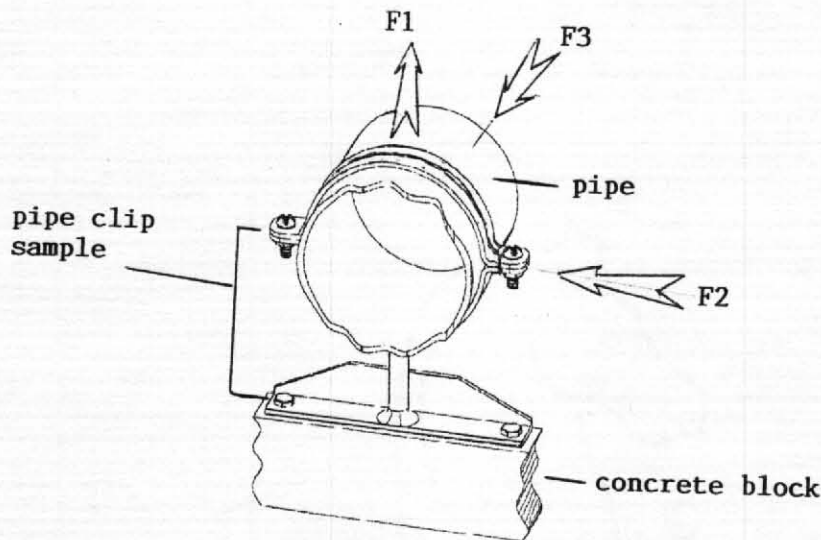


TEST REPORT

TITLE : Testing of Pipe Clip
OUR REFERENCE NO. : J8861-33
DESCRIPTION OF SAMPLE : Ø100mm (4") Stainless steel pipe clip with Ø12mm support stem electrically welded onto the 19mm width x 3mm thick ring; with 165mm x 28mm x 3mm supporting angle strip and two 5/16" ANCHORZINC; with 1/4" x 3/4" screws and nuts; for BS4514 uPVC/plastic drain pipe
SAMPLE SUBMITTED BY : Cheung's Engineering Co.
G/F., 90 Tak Cheong Street,
Kowloon, Hong Kong.
MANUFACTURER : Cheung's Engineering Co.
BRAND / LOGO : 
COUNTRY OF ORIGIN : China
TEST REQUIRED : Loading test
PERIOD OF TESTS : 20th to 24th January 2003

RESULTS: - LOADING TEST

1. A concrete block made of concrete mix grade 30D10 (cement to BS12: 1978 and Aggregate to BS882: 1973) was prepared and used for the loading test.






TEST REPORT

OUR REFERENCE NO. J8861-33 (P.2)

2. The concrete block was secured to the loading test frame. Two holes were drilled on the concrete block; the pipe clip's supporting strip was fixed to the block by anchor bolts. An uPVC pipe of BS4514 was connected to the pipe clip.
3. The vertical pulling force **F1** applied to detach the pipe clip from the concrete block was measured.
4. Steps 1 to 2 were repeated. A horizontal force **F2** applied to the pipe clip (perpendicular to the pipe axis) to result in a 20mm horizontal deflection was measured.
5. Steps 1 to 2 were repeated. A horizontal force **F3** acting on the pipe along its longitudinal axis to slip the pipe from the pipe clip by 20mm was measured.
6. Result :

Vertical force F1 to detach the pipe clip from the concrete block (kgf)	Horizontal force F2 to result in a 20mm horizontal deflection (kgf)	Horizontal force F3 to slip the pipe by 20mm (kgf)
1428	121	167


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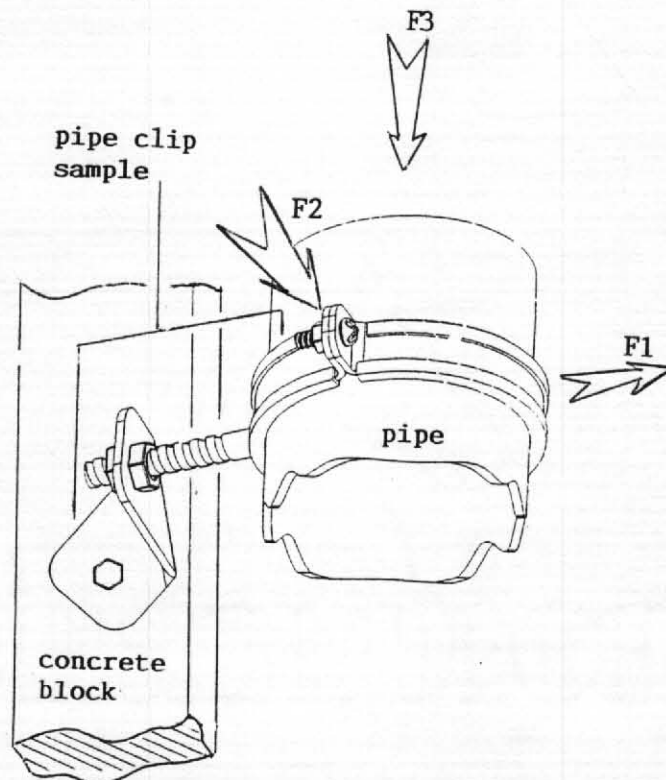


TEST REPORT

TITLE : Testing of Pipe Clip
OUR REFERENCE NO. : J8861-34
DESCRIPTION OF SAMPLE : Ø100mm (4") Stainless steel pipe clip with Ø3/8" screwed support stem electrically welded onto the 19mm width x 3mm thick ring; with supporting angle strip and two 5/16" ANCHORZINC; for BS4514 uPVC/plastic drain pipe
SAMPLE SUBMITTED BY : Cheung's Engineering Co.
G/F., 90 Tak Cheong Street,
Kowloon, Hong Kong.
MANUFACTURER : Cheung's Engineering Co.
BRAND / LOGO :  *Pipe Clips*
COUNTRY OF ORIGIN : China
TEST REQUIRED : Loading test
PERIOD OF TESTS : 20th to 24th January 2003

RESULTS: - LOADING TEST

1. A concrete block made of concrete mix grade 30D10 (cement to BS12: 1978 and Aggregate to BS882: 1973) was prepared and used for the loading test.






TEST REPORT

OUR REFERENCE NO. J8861-34 (P.2)

2. The concrete block was secured to the loading test frame. One hole was drilled on the concrete block; the pipe clip's supporting strip was fixed to the block by anchor bolt. An uPVC pipe of BS4514 was connected to the pipe clip.
3. The vertical pulling force **F1** applied to detach the pipe clip from the concrete block was measured.
4. Steps 1 to 2 were repeated. A horizontal force **F2** applied to the pipe clip (perpendicular to the pipe axis) to result in a 20mm horizontal deflection was measured.
5. Steps 1 to 2 were repeated. A horizontal force **F3** acting on the pipe along its longitudinal axis to slip the pipe from the pipe clip by 20mm was measured.
6. Result :

Vertical force F1 to detach the pipe clip from the concrete block (kgf)	Horizontal force F2 to result in a 20mm horizontal deflection (kgf)	Horizontal force F3 to slip the pipe by 20mm (kgf)
430	90	106

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