

**Test Report No. S08MEC04708-5-CLC**  
dated 28 NOV 2008



PSB Singapore

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**SUBJECT:**

Testing of conduit box

Check certainty  
Add value.

**TESTED FOR:**

Wanco Electric & Machinery Pte Ltd  
11 Kian Teck Crescent  
Singapore 628877

Attn: Mr. Anthony Loh

**SAMPLE SUBMISSION DATE**

30 Oct 2008

**TEST METHOD:**

BS 4568 : PART 2 : 1970  
Steel conduits and fittings with metric threads of ISO form for electrical installations  
Part 2. Fitting and components

**CLASSIFICATION:**

Class 4 – Heavy protection both inside and outside

**SAMPLE DESCRIPTION:**

One type of Conduit Box nominal size (Dia 20mm) and (Dia 25mm) with "WANCO" brand  
(refer to Appendix 1) were submitted for the following tests:

1. Dimensional measurements
2. Durability & legality of marking
3. Construction check
4. Mechanical test
5. Resistance to corrosion (refer to report S08MEC04708-5-EKH)

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*Cheng*



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Your Peace of Mind

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**TEST RESULTS:**

(1) Dimensional Measurements

Sample Reference	"WANCO Brand" Conduit box (Type: Through)							
Nominal size (Ø20mm)	BS 4568: Pt. 2: 1970 Requirements (Standard Sheet 4) Metric Dimensions (mm)							
	A	B	C	D	E	F	G	H
	Approx.51.5	Min.23.2	Min.15.0 Max.17.0	Min.19.0	Min.25.0	Nom.13.0	Min.2.0	Min.2.8
Sample 1	53.7	25.5	16.6	21.0	25.6	13.0	2.7	3.0
Sample 2	53.8	25.3	16.5	21.0	25.7	13.2	2.6	3.0
Sample 3	53.5	25.5	16.3	21.0	25.5	13.1	2.7	3.0

Sample Reference	"WANCO Brand" Conduit box (Type: Through)							
Nominal size (Ø25mm)	BS 4568: Pt. 2: 1970 Requirements (Standard Sheet 4) Metric Dimensions (mm)							
	A	B	C	D	E	F	G	H
	Approx.54.5	Min.28.4	Min.18.0 Max.20.0	Min.22.0	Min.28.0	Nom.15.8	Min.2.0	Min.2.8
Sample 1	55.0	30.6	18.3	23.5	28.5	15.3	2.7	3.0
Sample 2	55.1	30.5	18.5	23.4	28.6	15.5	2.7	3.0
Sample 3	55.0	30.0	18.6	23.4	28.3	15.4	2.8	3.0

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**TEST RESULTS: (Cont'd)**

**(2) Durability & Legality Of Marking**

Sample Reference	"WANCO Brand" Conduit Box (Type: Through)	BS 4568: Pt. 2: 1970 Requirements (Appendix A-A.1)
Nominal size (Ø20mm)	Results of observation	
Sample 1	Passed	Durability shall be checked by rubbing the marking by hand for 15 seconds with a piece of cloth soaked with water and again for 15 seconds with a piece of cloth soaked with petroleum spirit. After the test the marking shall remain legible.
Sample 2	Passed	
Sample 3	Passed	

Sample Reference	"WANCO Brand" Conduit Box (Type: Through)	BS 4568: Pt. 2: 1970 Requirements (Appendix A-A.1)
Nominal size (Ø25mm)	Results of observation	
Sample 1	Passed	Durability shall be checked by rubbing the marking by hand for 15 seconds with a piece of cloth soaked with water and again for 15 seconds with a piece of cloth soaked with petroleum spirit. After the test the marking shall remain legible.
Sample 2	Passed	
Sample 3	Passed	

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TEST RESULTS: (Cont'd)

(3) Visual Inspection on Construction

Sample Reference	"WANCO Brand" Conduit Box (Type: Through)	BS 4568: Pt. 2: 1970 Requirements (Clause 7.3)
Nominal size (Ø20mm)	Results of observation	
Sample 1	Passed	The interior and ends of fittings shall be free from burrs, fins and the like. Surfaces and edges over which cables are likely to be drawn shall be smooth and well rounded.
Sample 2	Passed	
Sample 3	Passed	

Sample Reference	"WANCO Brand" Conduit Box (Type: Through)	BS 4568: Pt. 2: 1970 Requirements (Clause 7.3)
Nominal size (Ø25mm)	Results of observation	
Sample 1	Passed	The interior and ends of fittings shall be free from burrs, fins and the like. Surfaces and edges over which cables are likely to be drawn shall be smooth and well rounded.
Sample 2	Passed	
Sample 3	Passed	

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TEST RESULTS: (Cont'd)

(4a) Mechanical Properties of Fittings

Sample Reference	"WANCO Brand" Conduit Box (Type: Through)	BS 4568: Pt. 2: 1970 Requirements (Appendix A-A.2.1)
Nominal size (Ø20mm)	Results of observation	
Sample 1	Passed	The test sample shall be capable of being pressed flat without showing signs of cracking when compressed diametrically between two smooth parallel faces having a width not less than half the original circumference of the specimen and a length not less than the length of the specimen.
Sample 2	Passed	
Sample 3	Passed	

Sample Reference	"WANCO Brand" Conduit Box (Type: Through)	BS 4568: Pt. 2: 1970 Requirements (Appendix A-A.2.1)
Nominal size (Ø25mm)	Results of observation	
Sample 1	Passed	The test sample shall be capable of being pressed flat without showing signs of cracking when compressed diametrically between two smooth parallel faces having a width not less than half the original circumference of the specimen and a length not less than the length of the specimen.
Sample 2	Passed	
Sample 3	Passed	

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TEST RESULTS: (Cont'd)

(4b) Mechanical Properties of Fittings

Sample Reference	"WANCO Brand" Conduit Box (Type: Through)	BS 4568: Pt. 2: 1970 Requirements (Appendix A-A.2.2)
Nominal size (Ø20mm)	Results of observation	
Sample 1	Passed	The box shall be undamaged at the completion of the test.
Sample 2	Passed	
Sample 3	Passed	

Sample Reference	"WANCO Brand" Conduit Box (Type: Through)	BS 4568: Pt. 2: 1970 Requirements (Appendix A-A.2.2)
Nominal size (Ø25mm)	Results of observation	
Sample 1	Passed	The box shall be undamaged at the completion of the test.
Sample 2	Passed	
Sample 3	Passed	

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**TEST RESULTS: (Cont'd)**

**(4c) Mechanical Properties of Fittings**


Sample Reference	"WANCO Brand" Conduit Box (Type: Through)	BS 4568: Pt. 2: 1970 Requirements (Appendix A-A.2.3)
Nominal size (Ø20mm)	Results of observation	
Sample 1	Passed	The hook shall show no sign of deformation at the completion of the test.
Sample 2	Passed	
Sample 3	Passed	

Sample Reference	"WANCO Brand" Conduit Box (Type: Through)	BS 4568: Pt. 2: 1970 Requirements (Appendix A-A.2.3)
Nominal size (Ø25mm)	Results of observation	
Sample 1	Passed	The hook shall show no sign of deformation at the completion of the test.
Sample 2	Passed	
Sample 3	Passed	

**Note:**

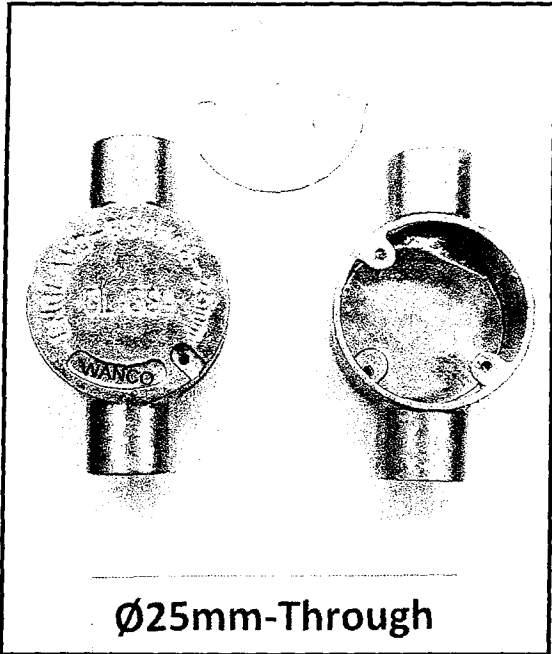
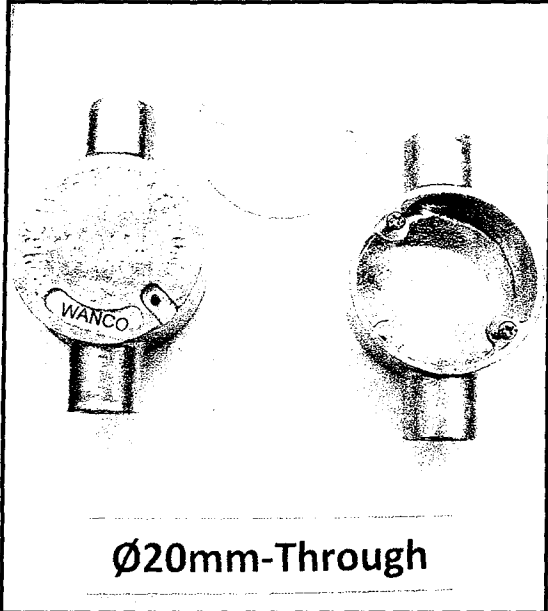
The above tests meet the requirements of BS 4568 Part 2: 1970 specification.

  
Chua Lee Choong  
Associate Engineer

  
Chua Peck Cheong  
Product Manager  
Building & Industrial Products  
Testing Services



Appendix 1



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**Test Report No. S08MEC04708-5-CLC**  
dated 28 NOV 2008



PSB Singapore

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January 2008