201609 中国 上海市 奉贤区庄北路350号 上海轶峰新材料股份有限公司 XIAOYAN JIANG



XIAOYAN JIANG SHANGHAI YIFENG NEW MATERIALS CO LTD 350 ZHUANGBEI RD, FENGXIAN DISTRICT SHANGHAI 201415 CHINA

Subscriber: 100549870
PartySite: 644457
File No: E492635
Project No: 4787957430

Date: 2017/09/06

PD No: 17040566 Type: R

PO Number:

Subject: Initial Production Inspection

PLEASE NOTE: YOU ARE NOT AUTHORIZED TO SHIP ANY PRODUCTS BEARING ANY UL MARKS UNTIL THE INITIAL PRODUCTION INSPECTION HAS BEEN SUCCESSFULLY CONDUCTED BY THE UL FIELD REPRESENTATIVE.

An Initial Production Inspection (IPI) is an inspection that must be conducted prior to the first shipment of products bearing the UL Mark. This is to ensure that products being manufactured are in accordance with UL's requirements including the Follow-Up Service Procedure. After the UL Representative has verified compliance of your product(s), authorization will be granted for shipment of product(s) bearing the appropriate UL Marks as denoted in the Procedure.

Building 9, No.68 Huatuo Road, Zhangjiang Hi-teck Park, Pudong New Area, Shanghai 201203,

China. Email: UL.InspectionCenter749@ul.com, Phone: +86-21-6364-6538, +86-21-6364-6538

Marks as needed may be obtained from Building 9, No.68 Huatuo Road, Zhangjiang Hiteck Park, Pudong New Area, Shanghai 201203, China. Email: shic@ccicshanghai.com, Phone: +86-21-6364-6538, +86-21-6364-6538

Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

Please review this material and report any inaccuracies to UL's Customer Service Professionals. Contact information for all of UL's global offices can be found at http://ul.com/aboutul/locations.

If you'd like to receive updated materials FASTER, UL offers electronic access and/or delivery of this material. For more details, contact UL's Customer Service Professionals as shown above., referring to the above Project and/or PD Numbers.

This material is provided on behalf of UL LLC(UL) or any authorized licensee of UL.

SUZ File

UL INSPECTION CENTER 749

Production Date: UNKNOWN

Contact: MS. XIAOYAN JIANG Phone: 86 13916217418 EMail: SH\_YIFENG@126.COM

# ADDENDUM TO TRANSMITTAL LETTER

XIAOYAN JIANG SHANGHAI YIFENG NEW MATERIALS CO LTD 350 ZHUANGBEI RD, FENGXIAN DISTRICT SHANGHAI

 SHANGHAI
 Date:
 2017/09/06

 201415 CHINA
 Subscriber:
 100549870

 PartySite:
 644457

 File No:
 E492635

 Project No:
 4787957430

PD No: 17040566

Type: R

PO Number:

Subject: Initial Production Inspection

The following material resulting from the investigation under the above numbers is enclosed.

## Issue

Date Vo	1	Sec	Pages	Revised Date
2017/09/01	1	1	Cert of Compliance	
2017/09/01	1	1	Add New Volume	
2017/09/02	1	2	Cert of Compliance	
2017/09/02	1	2	Add New Proc/Report Sect	
***				

If there are illegible images in this package, legible images may be found online via MyHome@UL under My UL Reports/CDA.

# Follow-Up Service Procedure

# DO NOT DISCARD THIS PAGE

It is important to keep UL Procedures and Test Reports up-to-date as new or revised pages are received. Correct maintenance will decrease the amount of time the UL Representative spends when visiting your facility.

UL LLC offers MyHome @UL, a dedicated website providing secure access to online tools and databases that can help simplify your compliance activities. You can customize your personal MyHome @UL page to include the content needed most, including timely information about certification updates and links to other Web sites you visit regularly. Visit <a href="http://my.home.ul.com/">http://my.home.ul.com/</a> to sign up today!

PAGES (in content order)	FUNCTION	HOW TO UPDATE
Authorization Page	Displays the Product Category, the type of Follow-Up Service (Type R=Reexamination / Type L=Label), the File Number and the Volume Number associated with each Applicant's, Manufacturer's and Listee's company name and address.	Replace existing page by matching the UL File Number and Volume Number. Discard the older page (refer to "Issued" or "Revised" date).
Addendum to Authorization Page*	Lists the additional names and addresses of manufacturing locations, when multiple locations exist	Replace existing page by matching the UL File Number and Volume Number. Discard the older page (refer to "Issued" or "Revised" date).
Listing Mark Data (LMD), Classification Mark Data (CMD) or Recognized Component Mark Data (RCMD) Pages #	Used only for products covered under Type R Service. Displays the correct LMD, CMD, or RCMD Mark, the Control Number for Listed and Classified categories and additional information regarding minimum size, application, procurement, and any other optional markings, in addition to the UL Mark.	Replace existing page by matching the UL File Number and Volume Number. Discard the older page (refer to "Issued" or "Revised" date).
Multiple Listing (ML) Correlation Sheet	Correlates product model numbers between those products made by a Manufacturer for the Basic Applicant and those supplied to another company, the Multiple Listee.	Replace, add or delete page(s) with most current "Issued" or "Revised" date.
Index*	Catalogs the contents of the Procedure by some logical means, i.e. Section Number, Report Reference Number, or Issue Date.	Replace present page by matching the UL File Number, Volume Number, Page Number and most current "Revised" date.
Appendices <sup>*#</sup> (App.)	Contains instructions for the Manufacturer and UL Representative concerning specific responsibilities and required periodic tests. May also outline tests to be conducted on samples to be forwarded to UL's facilities.	Replace present page by matching the UL File Number, Volume Number, Appendix letter (eg. App. A), Page Number and most current "Revised" date.
,	Standardized Appendix Pages are the same for all manufacturers within a particular product category.	Replace present page by matching the Appendix letter (eg. App. A), Page Number and most current "Revised" date.
Follow-Up Inspection Instructions (FUII) Pages	Contains information similar to that in the Appendices. FUII Pages are issued as part of the Procedure when a UL Standard is used in conjunction with the Procedure, and are the same for all manufacturers within a particular category.	Replace present pages by matching the Page Number and most current "Issued" or "Revised" date.
Section General <sup>*</sup> (Sec. Gen.)	Contains description, requirements, identifications and/or specifications that are common to all products covered by the entire volume and supplements the information provided in the Description Section.	Replace present page by matching the UL File Number, Volume Number, Page Number and most current "Revised" date.
Description, or Section (Sec.)	Contains the specific description of one or more products or systems. This includes written text supplemented by photographs, drawings, etc., as necessary, to define features that affect compliance with the applicable requirements.	Replace present page by matching the UL File Number, Volume Number, Section Number, Page Number and most current "Issued" date.

<sup>\*</sup> The above page(s) may not appear in all UL Follow-Up Service Procedures; UL's Conformity Assessment Services staff determines their inclusion. # These pages are combined in the **Generic Inspection Instructions** for International Style Reports, identified, as example by Vol. X1, X2, etc.

PLEASE NOTIFY YOUR LOCAL UL OFFICE OF ANY CHANGES IN CONTACT NAME, COMPANY NAME OR ADDRESS, SO THIS MATERIAL AND IMPORTANT INFORMATION CONTINUES TO BE DELIVERED TO YOUR FACILITY WITHOUT INTERRUPTION.



File E492635 Vol 1 Auth. Page 1 Issued: 2017-09-05 Revised: 2017-09-05

FOLLOW-UP SERVICE PROCEDURE (TYPE R)

COMPONENT - POSITIONING DEVICES (ZODZ2)

Manufacturer: SEE ADDENDUM FOR MANUFACTURER LOCATIONS

644457 (Party Site)

Applicant: Shanghai Yifeng New Materials Co Ltd (100549-870) 350 Zhuangbei Rd, Fengxian District

Shanghai 201415 CHINA

644457 (Party Site)

Recognized Company: SAME AS APPLICANT

(100549-870)

This Follow-Up Service Procedure authorizes the above Manufacturer(s) to use the marking specified by UL LLC, or any authorized licensee of UL LLC, including the UL Contracting Party, only on products when constructed, tested and found to be in compliance with the requirements of this Follow-Up Service Procedure and in accordance with the terms of the applicable service agreement with UL Contracting Party and any applicable Service Terms. The UL Contracting Party for Follow-Up Services is listed on addendum to this Follow-Up Service Procedure ("UL Contracting Party"). UL Contracting Party and UL LLC are referred to jointly herein as "UL."

UL further defines responsibilities, duties and requirements for both Manufacturers and UL representatives in the document titled, "UL Mark Surveillance Requirements" that can be located at the following web-site: <a href="http://www.ul.com/fus">http://www.ul.com/fus</a> and in the document titled "UL and Subscriber Responsibilities" that can be located at the following website: <a href="http://www.ul.com/responsibilities">http://www.ul.com/responsibilities</a>. Manufacturers without Internet access may obtain the current version of these documents from their local UL customer service representative or UL field representative. For assistance, or to obtain a paper copy of these documents or the applicable Service Terms, please contact UL's Customer Service at <a href="http://ul.com/aboutul/locations/">http://ul.com/aboutul/locations/</a>, select a location and enter your request, or call the number listed for that location.

The Applicant, the specified Manufacturer(s) and any Recognized Company in this Follow-Up Service Procedure must agree to receive Follow-Up Services from UL Contracting Party. If your applicable agreement is a Global Services Agreement ("GSA") with an effective date of January 1, 2012 or later and this Follow-Up Service Procedure is issued on or after that effective date, the Applicant, the specified Manufacturer(s) and any Recognized Company will be bound to a Service Agreement for Follow-Up Services upon the earliest by any Subscriber of use of the prescribed UL Mark, acceptance of the factory inspection, or payment of the Follow-Up Service fees which will incorporate such GSA, this Follow-Up Service Procedure and the Follow-Up Service Terms which can be accessed by clicking here:

http://www.ul.com/contracts/Terms-After-12-31-2011. In all other events, Follow-Up Services will be governed by and incorporate the terms of your applicable service agreement and this Follow-Up Service Procedure.

File E492635 Vol 1 Auth. Page 2 Issued: 2017-09-05 Revised: 2017-09-05

It is the responsibility of the Recognized Company to make sure that only the products meeting the aforementioned requirements bear the authorized Marks of UL LLC, or any authorized licensee of UL LLC.

This Follow-Up Service Procedure contains information for the use of the above Manufacturer(s) and representatives of UL and is not to be used for any other purpose. It is provided to the Manufacturer with the understanding that it will be returned upon request and is not to be copied in whole or in part.

This Follow-Up Service Procedure, and any subsequent revisions, is the property of UL and is not transferable. This Follow-Up Service Procedure contains confidential information for use only by the above named Manufacturer(s) and representatives of UL and is not to be used for any other purpose. It is provided to the Subscribers with the understanding that it is not to be copied, either wholly or in part unless specifically allowed, and that it will be returned to UL, upon request.

Capitalized terms used but not defined herein have the meanings set forth in the GSA and the applicable Service Terms or any other applicable UL service agreement.

UL shall not incur any obligation or liability for any loss, expense or damages, including incidental, consequential or punitive damages arising out of or in connection with the use or reliance upon this Follow-Up Service Procedure to anyone other than the above Manufacturer(s) as provided in the agreement between UL LLC or an authorized licensee of UL LLC, including UL Contracting Party, and the Manufacturer(s).

UL LLC has signed below solely in its capacity as the accredited entity to indicate that this Follow-Up Service Procedure is in compliance with the accreditation requirements.

Bruce A. Mahrenholz Director North American Certification Program File E492635 Vol 1 Addendum To Page 1 Issued: 2017-09-05 Authorization Page Revised: 2017-09-05

LOCATION

644457 (Party Site)

(100549-870) Shanghai Yifeng New Materials Co Ltd

350 Zhuangbei Rd, Fengxian District

Shanghai

201415 CHINA

Factory ID: None

UL Contracting Party for above site is: UL AG

## Recognized Component Marking Data Page (RCMDP)

(FILE IMMEDIATELY AFTER AUTHORIZATION PAGE)

#### RECOGNIZED COMPONENT MARKING

Products Recognized under UL's Component Recognition Service are identified by marking elements consisting of:

- The Recognized Company's identification specified in this document.
- 2. A catalog, model or other applicable product designation specified in the descriptive sections of this document.
- 3. The UL Recognized Component Mark shown below.

Only those components, which actually bear the Marking, should be considered as being covered under the Recognition Program. The UL Listing or Classification Mark is not authorized for use on or in connection with Recognized Components.

# Recognized Component Mark



Minimum size of the Recognized Component Mark is not specified as long as it is legible. Minimum height of the registered symbol \$ shall be 3/64 inch but may be omitted if it is out of proportion to the Recognized Component Mark or not legible to the naked eye.

The manufacturer may reproduce the Mark electronically. Any decision regarding the acceptability of the manufacturer's Mark reproduction will be made at the Reviewing Office.

File E492635 Vol. 1 Index Page 1 Issued: 2017-09-01

# INDEX

Product	Section
Cable Ducts - Catalog Numbers:	<u>1</u>
N-VD-15X20, N-VD-25X25, N-VD-25X30, N-VD-35X30, N-VD-35X35,	_
N-VD-50X35, N-VD-25X40, N-VD-40X40, N-VD-60X40, N-VD-33X45,	
N-VD-45X45, N-VD-25X50, N-VD-35X50, N-VD-50X50, N-VD-60X50,	
N-VD-80X50, N-VD-25X60, N-VD-40X60, N-VD-60X60, N-VD-80X60,	
N-VD-33X65, N-VD-45X65, N-VD-65X65, N-VD-25X80, N-VD-35X80,	
N-VD-40X80, N-VD-45X80, N-VD-50X80, N-VD-60X80, N-VD-80X80,	
N-VD-100X80, N-VD-120X80, N-VD-25X100, N-VD-33X100,	
N-VD-35X100, N-VD-40X100, N-VD-50X100, N-VD-60X100,	
N-VD-80X100;	
N-UD-50X60, N-UD-60X60, N-UD-80X60, N-UD-33X65, N-UD-45X65,	
N-UD-65X65, N-UD-25X80, N-UD-35X80, N-UD-40X80, N-UD-45X80,	
N-UD-50X80, N-UD-60X80, N-UD-80X80, N-UD-100X80, N-UD-120X80,	
N-UD-40X100, N-UD-50X100, N-UD-60X100, N-UD-80X100,	
N-UD-100X100, N-UD-75X120;	
N-UFD-40X80, N-UFD-60X80, N-UFD-80X80, N-UFD-40X100,	
N-UFD-50X100, N-UFD-60X100, N-UFD-80X100, N-UFD-100X100,	
N-UFD-75X120	
Cable Ducts - Catalog Numbers:	<u>2</u>
L-VD/R-37.5X75, L-VD/R-50X75, L-VD/R-75X75, L-VD/R-100X75,	_
L-VD/R-25X75	

File E492635 Vol. 1 App. A Page 1 Issued: 2017-09-01

Positioning Devices (ZODZ2)

UL REPRESENTATIVE'S DUTIES AND INSTRUCTIONS FOR EXAMINATION OF THE PRODUCT

#### UL REPRESENTATIVE'S RESPONSIBILITIES:

The UL Representative's responsibilities include, but are not limited to:

Examine the construction of production bearing, intended to bear the UL Mark or Marking to determine compliance with the description of the product and any other requirements expressed in this Procedure.

Where so specified by Appendix B, select samples to be forwarded to the appropriate UL Testing Laboratory for Follow-Up Tests. The packaging and shipment of samples are the responsibility of the manufacturer.

Report to the manufacturer and the UL Reviewing Office by means of a Variation Notice (VN) if:

- a. Variations in construction are found,
- b. The records maintained by the manufacturer are not as described,
- c. The manufacturer's inspection program is not being performed as described.

Explain to the manufacturer that a VN is a means of communication with the manufacturer and forms a record of those items where nonconformance with the Procedure has been found.

File E492635 Vol. 1 App. A Page 2 Issued: 2017-09-01

#### PROCEDURE IN THE EVENT OF NONCONFORMANCE:

When a product does not comply with the Follow-Up Services Procedure require that the manufacturer shall either:

- a Remove any markings referencing UL from the product, or obliterate these markings where the marking is imprinted, diestamped, molded, etc., or
- b Suitably modify all products that do not comply with the Follow-Up Service Procedure, or
- c Hold shipment pending further instructions from UL, or
- d. Demonstrate that one of the conditions shown below exist and be able to provide any of the referenced information or documentation. Under the following conditions, variations from Procedure described constructions shall be noted on a Variation Notice, but the manufacturer is not required to remove UL markings, rework the product or hold shipment. The options to not remove Marks, or rework, or hold shipment when these conditions are encountered can only be authorized through CAS at the Responsible Reviewing Office.
  - 1) A part is called out as Listed and the manufacturer or part number is not as described and the alternate part being used is Listed and all other attributes for the part are met.
  - 2) A part is called out as a Recognized Component (R/C) and the manufacturer or part number is not as described and the alternate part being used is Recognized under the described category and all other attributes as shown in the Recognized Component Directory for the part are met.

It is the manufacturer's responsibility to forward a copy of the Variation Notice to the Applicant. If the rejection of the product is questioned by the manufacturer and Applicant, the material may be held at the point of inspection, typically at the factory, pending an appeal. The manufacturer has the right to appeal a decision with which they disagree. Provide the name of the FOM, or the CAS Section at the reviewing office responsible for the category, to whom the appeal is to be made. To resolve issues involving variations in construction, the manufacturer and Applicant may also be offered the option of contacting their New Work assignment engineer. Held shipment appeals involving Follow-Up Services issues (e.g. - improper labeling, etc.) should be directed to an appropriate staff member designated by the Reviewing Office. Should UL grant temporary authorization for the continued use of the UL Mark, such temporary authorization shall only be for the time needed to review and/or process the Procedure revisions, or as otherwise specified to cover a particular lot or production run. The manufacturer shall satisfy the UL Representative that all marks referencing UL are removed from the rejected material. Those marks referencing UL not destroyed during their removal from the product shall be turned over to the UL Representative for destruction.

File E492635 Vol. 1 App. A Page 3 Issued: 2017-09-01

#### GENERAL INSTRUCTIONS FOR INSPECTION OF THE PRODUCT:

At each inspection, samples of current production and/or stock shall be examined for compliance with the applicable descriptions and requirements contained in this Procedure.

For the purpose of this inspection, the following definitions apply:

AIR HANDLING SPACES - Ducts or plenums used for environmental air and other spaces used for environmental air, such as above hung ceilings or below raised floors. This does not include plenums used for the removal of dust, loose stock, or vapor, or for ventilation of commercial-type cooking equipment.

CLAMP - A device, other than a tie, used for positioning or to a limited extent supporting wire, cable, conduit or tubing, or binding groups of wires or cables by gripping them together. A clamp is also capable of securing or positioning the bound wires or cables to a surface or frame.

COMPOSITE DEVICE - A device comprised of both metallic and non-metallic materials.

CONVENTIONAL TIE - A cable tie where the strap passes through the head at a nominal 90 degree angle. A hook and loop type tie is considered to be a conventional tie. See Figure 1 - Split Mandrel Construction and Positioning of the Tie.

DUCT - A non-raceway device, that typically consists of a main channel body and closure lid, that provides continuous support for wire or cable, and that is intended to be contained within another enclosure.

LIMITED SUPPORT - Able to provide support for a non-flexible conduit or tubing only up to the maximum load rating indicated (per device). The devices are not intended to provide primary support for non-flexible conduit or tubing at the maximum spacing intervals specified in the National Electrical Code (NFPA 70) and the Canadian Electrical Code, Part 1.

LOW PROFILE TIE - A cable tie where the strap is inserted parallel to the head. See Figure 1 - Split Mandrel Construction and Positioning of the Tie.

MOUNTING BLOCK OR BRACKET - A device intended to mechanically couple ties to a mounting surface.

TIE - A band or length of material, commonly referred to as a cable tie, usually employing a ratchet or other mechanism for tightening, used for bundling or tying groups of wires or cables together, securing, and/or supporting the wires or cables.

File E492635 Vol. 1 App. A Page 4 Issued: 2017-09-01

#### TESTS/EXAMINATIONS TO BE WITNESSED BY UL REPRESENTATIVE

The UL Representative shall select 20 samples of a lot of the positioning devices in the Procedure.

The positioning devices in the Procedure shall comply with the dimensional requirements detailed in this Appendix and the procedure.

The measurements shall be made by a caliper or a machinist's inside micrometer that is equipped with a ratchet. The calibration of the scale is to facilitate estimation of each measurement to 0.0001 in. (0.002 mm).

While measurements are being made, the positioning devices, the air around it, and the measuring instrument shall be in thermal equilibrium with one another at a temperature of 23.0  $\pm$  2.0 °C (73.4  $\pm$  3.6 °F).

Compliance Criteria - The lot shall be rejected when any of the features described above is not as specified in the Procedure.

Resubmittal of Rejected Lots - The manufacturer may elect to screen all positioning devices in the rejected lot and resubmit it. The UL Representative shall then select two additional samples for the inspection. If any one of the samples of the resubmitted lot is not in compliance with the criteria stated above, the lot shall be rejected and may not bear the Listing Mark.

File E492635 Vol. 1 App. B Page 1 Issued: 2017-09-01

Positioning Devices (ZODZ2)

INSTRUCTIONS FOR UL REPRESENTATIVE'S SAMPLE SELECTION

UL REPRESENTATIVE

Reserved for future use.

File E492635 Vol. 1 App. C Page 1 Issued: 2017-09-01

Positioning Devices (ZODZ2)

INSTRUCTIONS FOR FOLLOW-UP TESTS AT UL

Reserved for future use.

File E492635 Vol. 1 App. D Page 1 Issued: 2017-09-01

Positioning Devices (ZODZ2)

MANUFACTURER' S RESPONSIBILITIES, AND CONSTRUCTION CONSIDERATIONS

MANUFACTURER'S RESPONSIBILITIES

The manufacturer's responsibilities include, but are not limited to:

Control of the UL Mark - Restrict the use of markings that reference UL (either directly by use of the name, an abbreviation of it, or the UL symbol, Classification Mark or Recognized Component Mark, or indirectly by means of agreed-upon markings that are understood to indicate acceptance by UL) to those products that are found by the manufacturer's own inspection to comply with the Follow-Up Service Procedure description. Use of such markings is further limited by the agreements that have been executed by the Subscriber and UL. Confine the markings referencing UL to the location or locations authorized in these Appendix Pages or the Follow-Up Service Procedure.

Access to Factory - During hours in which the factory is in operation, provide the UL Representative with free access to any portion of the premises where the product or components thereof are being fabricated, processed, finished or stored, and to the test area assigned for the UL Representative's use. The UL Representative shall be permitted to inspect and subject to prescribed tests, prior to shipment, any product bearing or intended to bear markings referencing UL.

File E492635 Vol. 1 Sec. Gen. Page 1 Issued: 2017-09-01

GENERAL

PRODUCT COVERED: Component - Positioning Devices

FACTORY LOCATION AND IDENTIFICATION:

When more than one manufacturing location is indicated on the Authorization Page Addendum for the Procedure Volume, a factory code is necessary. The factory identification and associated manufacturing location are as follows:

Corporation Factory

ID Location Identification

(644457) Shanghai Yifeng New Materials Co Ltd

350 Zhuangbei Rd, Fengxian Distric N/A

Shanghai, 201415, China

MARKING:

See Section General for Markings.

GENERAL CONSTRUCTION:

This product shall comply with the Standard of Underwriters Laboratories Inc. for Positioning Devices, UL 1565 and with the applicable description, if any, given elsewhere in this procedure.

File E492635 Vol. 1 Sec. 1 Page 1 Issued: 2017-09-01 and Report

DESCRIPTION

Component - Positioning Devices

#### PRODUCT COVERED:

USR Component - Cable Ducts, rated for 50°C - Catalog Numbers: N-VD-15X20, N-VD-25X25, N-VD-25X30, N-VD-35X30, N-VD-35X35, N-VD-50X35, N-VD-25X40, N-VD-40X40, N-VD-60X40, N-VD-33X45, N-VD-45X45, N-VD-25X50, N-VD-35X50, N-VD-50X50, N-VD-60X50, N-VD-80X50, N-VD-25X60, N-VD-40X60, N-VD-60X60, N-VD-80X60, N-VD-33X65, N-VD-45X65, N-VD-65X65, N-VD-25X80, N-VD-35X80, N-VD-40X80, N-VD-45X80, N-VD-50X80, N-VD-60X80, N-VD-80X80, N-VD-100X80, N-VD-120X80, N-VD-25X100, N-VD-33X100, N-VD-35X100, N-VD-40X100, N-VD-50X100, N-VD-60X100, N-VD-80X100, N-UD-50X60, N-UD-60X60, N-UD-80X60, N-UD-33X65, N-UD-45X65, N-UD-65X65, N-UD-25X80, N-UD-35X80, N-UD-35X80, N-UD-40X80, N-UD-50X80, N-UD-60X80, N-UD-80X80, N-UD-100X80, N-UD-120X80, N-UD-40X100, N-UD-50X100, N-UD-60X100, N-UD-80X100, N-UD-100X100, N-UD-75X120, N-UD-40X80, N-UFD-60X80, N-UFD-80X80, N-UFD-40X100, N-UFD-50X100, N-UFD-75X120

#### GENERAL DESCRIPTION OF PRODUCT:

These devices are molded PVC thermoplastic ducts and slotted side channels, manufactured in different lengths and widths, intended to be mounted vertically within equipment to route single or multiple units such as electric wires, cables, flexible tubing, etc. Covers are provided with a lip to snap over a flange in the top of the duct channel wall.

#### GENERAL DESCRIPTION OF INVESTIAGTION (NOT FOR FIELD REPRESNTATIVE'S USE):

Representative sample of these devices did not show signs of softening, yielding, shrinkage or warpage which release wires when handled and examined before and after oven conditioning when mounted horizontally on a vertical surface and loaded with the maximum fill of 14 AWG wire as recommended by the manufacturer. Samples were conditioned at 70C for 7 hours.

File E492635 Vol. 1 Sec. 1 Page 2 Issued: 2017-09-01 and Report

# TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE USE):

Products designated USR have been investigated using requirements contained in the Standard for Positioning Devices, UL 1565.

#### Conditions of Acceptability -

Use - For use only in products where the acceptability of the combination is determined by Underwriters Laboratories Inc.

- 1. The end-use application shall also be examined to insure that the ducts maintain the wires and/or cables in place and do not cause undue compression or tension.
- 2. The maximum number of wires are to coincide with the limits established for the individual cable duct.
- 3. These cable ducts have been investigated as a constructional and mechanical feature only. No tests have been conducted to verify its suitability or unsuitability for use as electrical insulation.
- 4. These cable ducts are intended for factory installation only. They are suitable for indoor use within enclosures only at temperatures not exceeding 50°C. Outdoor use has not been investigated.
- 5. Reference should be made to the end-product standards and most current guides to the use of plastics (such as Subject 746) with regard to other requirements, which should be considered in judging the suitability of these materials in end-products.
- 6. The suitability for use when exposed to oil, chemicals, refrigerant, soap, x-rays, ultraviolet light, etc. have not been determined by this investigation unless otherwise indicated. The environmental conditions and maximum use temperatures are indicated in above.
- 7. Suitability of any type of mounting means such as the optional fixing slots or holes, or the use of bolts, screws, brackets, adhesive, etc. has not been determined by this investigation. The samples were tested while mounted horizontally to a vertical surface as specified by client.
- 8. These devices have been investigated with the manufacturer's maximum recommended loading of solid 14 AWG, 27 39 mil insulated wire as noted under Ill. 1. The suitability of loading with any other wire types or additional wires, or loading with other than wire shall be investigated in the end-product.
- 9. The devices are molded from compounds meeting 94 V-0 flammability requirements. Flame tests were not conducted on the devices themselves.

File E492635 Vol. 1 Sec. 1 Page 3 Issued: 2017-09-01 and Report

#### RATINGS:

All cable ducts covered by this Report are rated  $50^{\circ}\text{C}$ .

## MARKING:

The product or the smallest unit package in which the product is shipped is to be marked with the following:

- a. Recognized Company name and Catalog Number.
- b. "For use within enclosures only" or an equivalent wording or the UR Recognized Component Mark.
- c. Maximum wire fill capacity on the duct, smallest unit package or in the installation instructions shipped with the product.

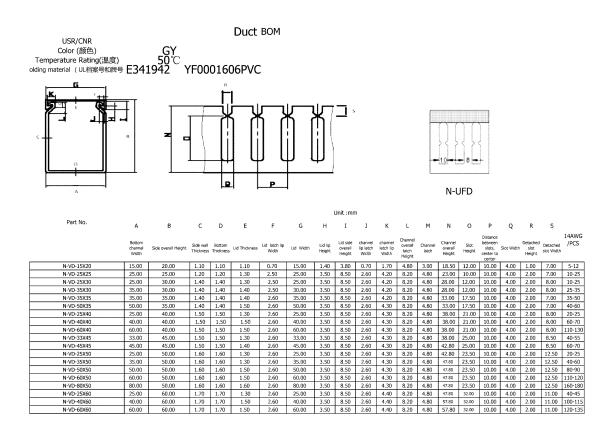
File E492635 Vol. 1 Sec. 1 Page 4 Issued: 2017-09-01 and Report

# CONSTRUCTION DETAILS:

All Cat. Nos. shall be constructed as follows:

Material Composition: Recognize Component - Plastic (QMFZ2), File E341942, Polyvinyl Chloride (PVC) material designated YF0001606PVC-A, manufactured by SHANGHAI YIFENG NEW MATERIALS CO LTD, GY color only.

Reference	Details:
Illustration	
1	Duct construction, slot size, critical dimensions and maximum
1	14 AWG wire fill capacity for all cable ducts



N171667131

File E492635 Vol. 1 Sec. 1 ILL-1(Page 2)Issued: 2017-09-01 And Report

N-VD-80X60	80.00	60.00	1.70	1.70	1.50	2.60	80.00	3.50	8.50	2.60	4.40	8.20	4.80	57.80	32.00	10.00	4.00	2.00	11.00 180-210
N-VD-33X65	33.00	65.00	1.70	1.70	1.30	2.60	33.00	3.50	8.50	2.60	4.40	8.20	4.80	62.80	36.00	10.00	4.00	2.00	12.00 40-75
N-VD-45X65	45.00	65.00	1.70	1.70	1.40	2.60	45.00	3.50	8.50	2.60	4.40	8.20	4.80	62.80	36.00	10.00	4.00	2.00	12.00 110-120
N-VD-65X65	65.00	65.00	1.70	1.70	1.60	2.60	65.00	3.50	8.50	2.60	4.40	8.20	4.80	62.80	36.00	10.00	4.00	2.00	12.00 180-200
N-VD-25X80	25.00	80.00	1.75	1.75	1.30	2.60	25.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 100-120
N-VD-35X80	35.00	80.00	1.75	1.75	1.30	2.60	35.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 110-130
N-VD-40X80	40.00	80.00	1.80	1.80	1.50	2.60	40.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 140-160
N-VD-45X80	45.00	80.00	1.80	1.80	1.40	2.60	45.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 140-165
N-VD-50X80	50.00	80.00	1.80	1.80	1.50	2.60	50.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 160-180
N-VD-60X80	60.00	80.00	1.80	1.80	1.50	2.60	60.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 180-210
N-VD-80X80	80.00	80.00	1.80	1.80	1.60	2.60	80.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 240-290
N-VD-100X80	100.00	80.00	1.80	1.80	1.80	2.60	100.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 260-350
N-VD-120X80	120.00	80.00	1.85	1.85	1.80	2.60	120.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 280-380
N-VD-25X100	25.00	100.00	2.00	2.00	1.30	2.60	25.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 120-150
N-VD-33X100	33.00	100.00	2.00	2.00	1.30	2.60	33.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 130-165
N-VD-35x100	35.00	100.00	2.00	2.00	1.30	2.60	35.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 130-165
N-VD-40X100	40.00	100.00	2.10	2.10	1.50	2.60	40.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 130-175
N-VD-50X100	50.00	100.00	2.10	2.10	1.50	2.60	50.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 220-250
N-VD-60X100	60.00	100.00	2.10	2.10	1.50	2.60	60.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 240-290
N-VD-80X100	80.00	100.00	2.20	2.20	1.60	2.60	80.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 260-350
N-UD-50X60	50.00	60.00	1.70	1.70	1.50	2.60	50.00	3.50	8.50	2.60	4.40	8.20	4.80	57.80	32.00	18.00	8.00	2.00	11.00 100-125
N-UD-60X60	60.00	60.00	1.70	1.70	1.50	2.60	60.00	3.50	8.50	2.60	4.40	8.20	4.80	57.80	32.00	18.00	8.00	2.00	11.00 120-135
N-UD-80X60	80.00	60.00	1.70	1.70	1.50	2.60	80.00	3.50	8.50	2.60	4.40	8.20	4.80	57.80	32.00	18.00	8.00	2.00	11.00 180-210
N-UD-33X65	33.00	65.00	1.70	1.70	1.30	2.60	33.00	3.50	8.50	2.60	4.40	8.20	4.80	62.80	37.00	18.00	8.00	2.00	11.00 40-75
N-UD-45X65	45.00	65.00	1.70	1.70	1.40	2.60	45.00	3.50	8.50	2.60	4,40	8.20	4.80	62.80	37.00	18.00	8.00	2.00	11.00 110-120
N-UD-65X65	65.00	65.00	1.70	1.70	1.60	2.60	65.00	3.50	8.50	2.60	4.40	8.20	4.80	62.80	37.00	18.00	8.00	2.00	11.00 180-200
N-UD-25X80	25.00	80.00	1.75	1.75	1.30	2.60	25.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 100-120
N-UD-35X80	35.00	80.00	1.75	1.75	1.30	2.60	35.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 110-130
N-UD-40X80	40.00	80.00	1.80	1.80	1.50	2.60	40.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 140-160
N-UD-45X80	45.00	80.00	1.80	1.80	1.40	2.60	45.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 140-165
N-UD-50X80	50.00	80.00	1.80	1.80	1.50	2.60	50.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 160-180
N-UD-60X80	60.00	80.00	1.80	1.80	1.50	2.60	60.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 180-210
N-UD-80X80	80.00	80.00	1.80	1.80	1.60	2.60	80.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 240-290
N-UD-100X80	100.00	80.00	1.80	1.80	1.80	2.60	100.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 260-350
N-UD-120X80	120.00	80.00	1.85	1.85	1.80	2.60	120.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 280-380
N-UD-40X100	40.00	100.00	2.10	2.10	1.50	2.60	40.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 130-175
N-UD-50X100	50.00	100.00	2.10	2.10	1.50	2.60	50.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 220-250
N-UD-60X100	60.00	100.00	2.10	2.10	1.50	2.60	60.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 240-290
N-UD-80X100	80.00	100.00	2.20	2.20	1.60	2.60	80.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 260-350
N-UD-100X100	100.00	100.00	2.30	2.30	1.80	2.60	100.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 300-400
N-UD-75X120	75.00	120.00	2.10	2.10	1.60	2.60	75.00	3.50	8.50	2.60	4.60	8.20	4.80	117.70	99.00	18.00	8.00	2.00	13.00 270-360
N-UFD-40X80	40.00	80.00	1.80	1.80	1.50	2.60	40.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 140-160
N-UFD-60X80	60.00	80.00	1.80	1.80	1.50	2.60	60.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 180-210
N-UFD-80X80	80.00	80.00	1.80	1.80	1.60	2.60	80.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 240-290
N-UFD-40X100	40.00	100.00	2.10	2.10	1.50	2.60	40.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 130-175
N-UFD-50X100	50.00	100.00	2.10	2.10	1.50	2.60	50.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 220-250
N-UFD-60X100	60.00	100.00	2.10	2.10	1.50	2.60	60.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 240-290
N-UFD-80X100	80.00	100.00	2.20	2.20	1.60	2.60	80.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 260-350
N-UFD-100X100	100.00	100.00	2.30	2.30	1.80	2.60	100.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 300-400
N-UFD-75X120	75.00	120.00	2.10	2.10	1.60	2.60	75.00	3.50	8.50	2.60	4.60	8.20	4.80	117.70	99.00	18.00	8.00	2.00	13.00 270-360
	100																	,	12 12:1000

N171667131

File E492635 Vol. 1 Sec. 2 Page 1 Issued: 2017-09-02 and Report

#### DESCRIPTION

Component - Positioning Devices

## PRODUCT COVERED:

USR Component - Cable Ducts, rated for  $60^{\circ}$ C - Catalog Numbers: L-VD/R-37.5X75, L-VD/R-50X75, L-VD/R-75X75, L-VD/R-100X75, L-VD/R-25X75

#### GENERAL DESCRIPTION OF PRODUCT:

These devices are molded PC/ABS thermoplastic ducts and slotted side channels, manufactured in different lengths and widths, intended to be mounted vertically within equipment to route single or multiple units such as electric wires, cables, flexible tubing, etc. Covers are provided with a lip to snap over a flange in the top of the duct channel wall.

# GENERAL DESCRIPTION OF INVESTIAGTION (NOT FOR FIELD REPRESNTATIVE'S USE):

Representative sample of these devices did not show signs of softening, yielding, shrinkage or warpage which release wires when handled and examined before and after oven conditioning when mounted horizontally on a vertical surface and loaded with the maximum fill of 14 AWG wire as recommended by the manufacturer. Samples were conditioned at 70C for 7 hours.

File E492635 Vol. 1 Sec. 2 Page 2 Issued: 2017-09-02 and Report

## TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE USE):

Products designated USR have been investigated using requirements contained in the Standard for Positioning Devices, UL 1565.

#### Conditions of Acceptability -

Use - For use only in products where the acceptability of the combination is determined by Underwriters Laboratories Inc.

- 1. The end-use application shall also be examined to insure that the ducts maintain the wires and/or cables in place and do not cause undue compression or tension.
- 2. The maximum number of wires are to coincide with the limits established for the individual cable duct.
- 3. These cable ducts have been investigated as a constructional and mechanical feature only. No tests have been conducted to verify its suitability or unsuitability for use as electrical insulation.
- 4. These cable ducts are intended for factory installation only. They are suitable for indoor use within enclosures only at temperatures not exceeding 60°C. Outdoor use has not been investigated.
- 5. Reference should be made to the end-product standards and most current guides to the use of plastics (such as Subject 746) with regard to other requirements, which should be considered in judging the suitability of these materials in end-products.
- 6. The suitability for use when exposed to oil, chemicals, refrigerant, soap, x-rays, ultraviolet light, etc. have not been determined by this investigation unless otherwise indicated. The environmental conditions and maximum use temperatures are indicated in above.
- 7. Suitability of any type of mounting means such as the optional fixing slots or holes, or the use of bolts, screws, brackets, adhesive, etc. has not been determined by this investigation. The samples were tested while mounted horizontally to a vertical surface as specified by client.
- 8. These devices have been investigated with the manufacturer's maximum recommended loading of solid 14 AWG, 27 39 mil insulated wire as noted under Ill. 1. The suitability of loading with any other wire types or additional wires, or loading with other than wire shall be investigated in the end-product.
- 9. The devices are molded from compounds meeting 94V-0 flammability requirements. Flame tests were not conducted on the devices themselves.

File E492635 Vol. 1 Sec. 2 Page 3 Issued: 2017-09-02 and Report

#### RATINGS:

All cable ducts covered by this Report are rated  $60^{\circ}\text{C}$ .

## MARKING:

The product or the smallest unit package in which the product is shipped is to be marked with the following:

- a. Recognized Company name and Catalog Number.
- b. "For use within enclosures only" or an equivalent wording or the UR Recognized Component Mark.
- c. Maximum wire fill capacity on the duct, smallest unit package or in the installation instructions shipped with the product.

File E492635 Vol. 1 Sec. 2 Page 4 Issued: 2017-09-02 and Report

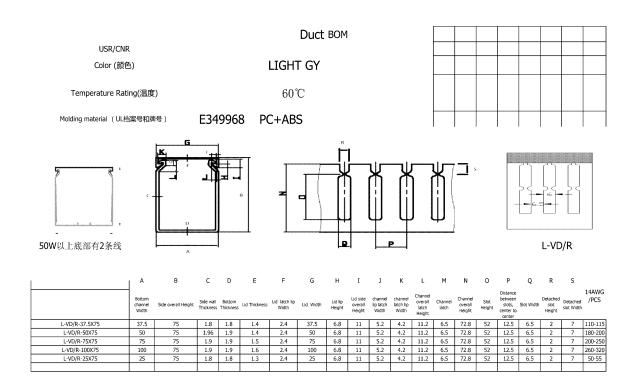
# CONSTRUCTION DETAILS:

All Cat. Nos. shall be constructed as follows:

Material Composition: Recognize Component - Plastic (QMFZ2), File E349968, Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) material designated Autron504, manufactured by SUZHOU BOILN PLASTICS CO LTD, Light GY color only.

Reference	Details:
Illustration	
1	Duct construction, slot size, critical dimensions and maximum
1	14 AWG wire fill capacity for all cable ducts

And Report



N171667132

# CERTIFICATE OF COMPLIANCE

 Certificate Number
 20170906-E492635

 Report Reference
 E492635-20170901

 Issue Date
 2017-SEPTEMBER-06

Issued to: Shanghai Yifeng New Materials Co Ltd

350 Zhuangbei Rd, Fengxian District

Shanghai

201415 CHINA

This is to certify that representative samples of

**COMPONENT - POSITIONING DEVICES** 

For Models Refer Addendum Page

Have been investigated by UL in accordance with the

Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 1565 - Positioning Devices

Additional Information: See the UL Online Certifications Directory at

www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

The UL Recognized Component Mark generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark: Mark be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.

Bambles

Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, pleas contact a local UL Customer Service Representative at <a href="http://ul.com/aboutul/locations/">http://ul.com/aboutul/locations/</a>



# CERTIFICATE OF COMPLIANCE

 Certificate Number
 20170906-E492635

 Report Reference
 E492635-20170901

 Issue Date
 2017-SEPTEMBER-06

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

# Models;

USR Component – Cable Ducts, rated for 50°C - Catalog Numbers: N-VD-15X20, N-VD-25X25, N-VD-25X30, N-VD-35X30, N-VD-35X35, N-VD-50X35, N-VD-25X40, N-VD-40X40, N-VD-60X40, N-VD-33X45, N-VD-45X45, N-VD-25X50, N-VD-35X50, N-VD-50X50, N-VD-60X50, N-VD-80X50, N-VD-25X60, N-VD-40X60, N-VD-60X60, N-VD-80X60, N-VD-33X65, N-VD-45X65, N-VD-65X65, N-VD-25X80, N-VD-35X80, N-VD-40X80, N-VD-45X80, N-VD-50X80, N-VD-60X80, N-VD-80X80, N-VD-120X80, N-VD-25X100, N-VD-33X100, N-VD-35X100, N-VD-40X100, N-VD-50X100, N-VD-60X100, N-VD-80X100, N-UD-50X60, N-UD-60X60, N-UD-80X60, N-UD-33X65, N-UD-45X65, N-UD-65X65, N-UD-25X80, N-UD-35X80, N-UD-40X80, N-UD-50X80, N-UD-50X80, N-UD-60X80, N-UD-80X80, N-UD-60X100, N-UD-80X100, N-UD-80X100, N-UD-80X100, N-UD-50X100, N-UD-80X100, N-UD-50X100, N-UD-50X100, N-UFD-60X100, N-UFD-50X100, N-UFD-60X100, N-UFD-50X100, N-UFD-60X100, N-UFD-50X100, N-UFD-50X100,



Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <a href="http://ul.com/aboutul/locations/">http://ul.com/aboutul/locations/</a>



File E492635 Project 4787957430

September 1, 2017

REPORT

on

COMPONENT - WIRE POSITIONING DEVICES

Shanghai Yifeng New Materials Co Ltd Shanghai, 201415, China

Copyright © 2017 UL LLC

UL LLC authorizes the above named company to reproduce this Report only for purposes as described in the Conclusion. The Report should be reproduced in its entirety; however to protect confidential product information, the Construction Details Descriptive pages may be excluded.

File E492635 Vol. 1 Sec. 1 Page 1 Issued: 2017-09-01 and Report

DESCRIPTION

Component - Positioning Devices

#### PRODUCT COVERED:

USR Component - Cable Ducts, rated for 50°C - Catalog Numbers: N-VD-15X20, N-VD-25X25, N-VD-25X30, N-VD-35X30, N-VD-35X35, N-VD-50X35, N-VD-25X40, N-VD-40X40, N-VD-60X40, N-VD-33X45, N-VD-45X45, N-VD-25X50, N-VD-35X50, N-VD-50X50, N-VD-60X50, N-VD-80X50, N-VD-25X60, N-VD-40X60, N-VD-60X60, N-VD-80X60, N-VD-33X65, N-VD-45X65, N-VD-65X65, N-VD-25X80, N-VD-35X80, N-VD-40X80, N-VD-45X80, N-VD-50X80, N-VD-60X80, N-VD-80X80, N-VD-100X80, N-VD-120X80, N-VD-25X100, N-VD-33X100, N-VD-35X100, N-VD-40X100, N-VD-50X100, N-VD-60X100, N-VD-80X100, N-UD-50X60, N-UD-60X60, N-UD-80X60, N-UD-33X65, N-UD-45X65, N-UD-65X65, N-UD-25X80, N-UD-35X80, N-UD-35X80, N-UD-40X80, N-UD-50X80, N-UD-60X80, N-UD-80X80, N-UD-100X80, N-UD-120X80, N-UD-40X100, N-UD-50X100, N-UD-60X100, N-UD-80X100, N-UD-100X100, N-UD-75X120, N-UD-40X80, N-UFD-60X80, N-UFD-80X80, N-UFD-40X100, N-UFD-50X100, N-UFD-75X120

#### GENERAL DESCRIPTION OF PRODUCT:

These devices are molded PVC thermoplastic ducts and slotted side channels, manufactured in different lengths and widths, intended to be mounted vertically within equipment to route single or multiple units such as electric wires, cables, flexible tubing, etc. Covers are provided with a lip to snap over a flange in the top of the duct channel wall.

#### GENERAL DESCRIPTION OF INVESTIAGTION (NOT FOR FIELD REPRESNTATIVE'S USE):

Representative sample of these devices did not show signs of softening, yielding, shrinkage or warpage which release wires when handled and examined before and after oven conditioning when mounted horizontally on a vertical surface and loaded with the maximum fill of 14 AWG wire as recommended by the manufacturer. Samples were conditioned at 70C for 7 hours.

File E492635 Vol. 1 Sec. 1 Page 2 Issued: 2017-09-01 and Report

# TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE USE):

Products designated USR have been investigated using requirements contained in the Standard for Positioning Devices, UL 1565.

#### Conditions of Acceptability -

Use - For use only in products where the acceptability of the combination is determined by Underwriters Laboratories Inc.

- 1. The end-use application shall also be examined to insure that the ducts maintain the wires and/or cables in place and do not cause undue compression or tension.
- 2. The maximum number of wires are to coincide with the limits established for the individual cable duct.
- 3. These cable ducts have been investigated as a constructional and mechanical feature only. No tests have been conducted to verify its suitability or unsuitability for use as electrical insulation.
- 4. These cable ducts are intended for factory installation only. They are suitable for indoor use within enclosures only at temperatures not exceeding 50°C. Outdoor use has not been investigated.
- 5. Reference should be made to the end-product standards and most current guides to the use of plastics (such as Subject 746) with regard to other requirements, which should be considered in judging the suitability of these materials in end-products.
- 6. The suitability for use when exposed to oil, chemicals, refrigerant, soap, x-rays, ultraviolet light, etc. have not been determined by this investigation unless otherwise indicated. The environmental conditions and maximum use temperatures are indicated in above.
- 7. Suitability of any type of mounting means such as the optional fixing slots or holes, or the use of bolts, screws, brackets, adhesive, etc. has not been determined by this investigation. The samples were tested while mounted horizontally to a vertical surface as specified by client.
- 8. These devices have been investigated with the manufacturer's maximum recommended loading of solid 14 AWG, 27 39 mil insulated wire as noted under Ill. 1. The suitability of loading with any other wire types or additional wires, or loading with other than wire shall be investigated in the end-product.
- 9. The devices are molded from compounds meeting 94 V-0 flammability requirements. Flame tests were not conducted on the devices themselves.

File E492635 Vol. 1 Sec. 1 Page 3 Issued: 2017-09-01 and Report

#### RATINGS:

All cable ducts covered by this Report are rated  $50^{\circ}\text{C}$ .

## MARKING:

The product or the smallest unit package in which the product is shipped is to be marked with the following:

- a. Recognized Company name and Catalog Number.
- b. "For use within enclosures only" or an equivalent wording or the UR Recognized Component Mark.
- c. Maximum wire fill capacity on the duct, smallest unit package or in the installation instructions shipped with the product.

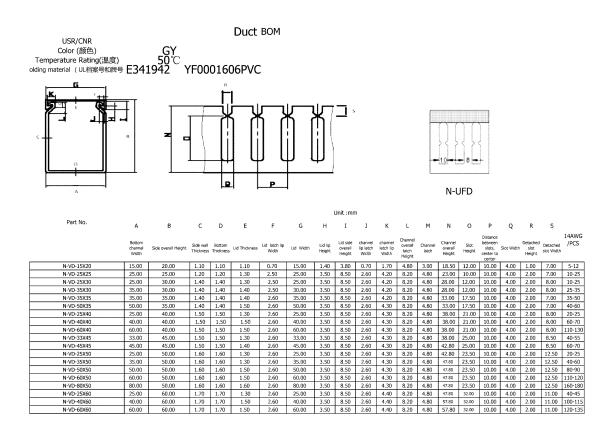
File E492635 Vol. 1 Sec. 1 Page 4 Issued: 2017-09-01 and Report

# CONSTRUCTION DETAILS:

All Cat. Nos. shall be constructed as follows:

Material Composition: Recognize Component - Plastic (QMFZ2), File E341942, Polyvinyl Chloride (PVC) material designated YF0001606PVC-A, manufactured by SHANGHAI YIFENG NEW MATERIALS CO LTD, GY color only.

Reference	Details:
Illustration	
1	Duct construction, slot size, critical dimensions and maximum
1	14 AWG wire fill capacity for all cable ducts



N171667131

File E492635 Vol. 1 Sec. 1 ILL-1(Page 2)Issued: 2017-09-01 And Report

N-VD-80X60	80.00	60.00	1.70	1.70	1.50	2.60	80.00	3.50	8.50	2.60	4.40	8.20	4.80	57.80	32.00	10.00	4.00	2.00	11.00 180-210
N-VD-33X65	33.00	65.00	1.70	1.70	1.30	2.60	33.00	3.50	8.50	2.60	4.40	8.20	4.80	62.80	36.00	10.00	4.00	2.00	12.00 40-75
N-VD-45X65	45.00	65.00	1.70	1.70	1.40	2.60	45.00	3.50	8.50	2.60	4.40	8.20	4.80	62.80	36.00	10.00	4.00	2.00	12.00 110-120
N-VD-65X65	65.00	65.00	1.70	1.70	1.60	2.60	65.00	3.50	8.50	2.60	4.40	8.20	4.80	62.80	36.00	10.00	4.00	2.00	12.00 180-200
N-VD-25X80	25.00	80.00	1.75	1.75	1.30	2.60	25.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 100-120
N-VD-35X80	35.00	80.00	1.75	1.75	1.30	2.60	35.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 110-130
N-VD-40X80	40.00	80.00	1.80	1.80	1.50	2.60	40.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 140-160
N-VD-45X80	45.00	80.00	1.80	1.80	1.40	2.60	45.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 140-165
N-VD-50X80	50.00	80.00	1.80	1.80	1.50	2.60	50.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 160-180
N-VD-60X80	60.00	80.00	1.80	1.80	1.50	2.60	60.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 180-210
N-VD-80X80	80.00	80.00	1.80	1.80	1.60	2.60	80.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 240-290
N-VD-100X80	100.00	80.00	1.80	1.80	1.80	2.60	100.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 260-350
N-VD-120X80	120.00	80.00	1.85	1.85	1.80	2.60	120.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	10.00	4.00	2.00	11.00 280-380
N-VD-25X100	25.00	100.00	2.00	2.00	1.30	2.60	25.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 120-150
N-VD-33X100	33.00	100.00	2.00	2.00	1.30	2.60	33.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 130-165
N-VD-35x100	35.00	100.00	2.00	2.00	1.30	2.60	35.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 130-165
N-VD-40X100	40.00	100.00	2.10	2.10	1.50	2.60	40.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 130-175
N-VD-50X100	50.00	100.00	2.10	2.10	1.50	2.60	50.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 220-250
N-VD-60X100	60.00	100.00	2.10	2.10	1.50	2.60	60.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 240-290
N-VD-80X100	80.00	100.00	2.20	2.20	1.60	2.60	80.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	65.00	10.00	4.00	2.00	11.00 260-350
N-UD-50X60	50.00	60.00	1.70	1.70	1.50	2.60	50.00	3.50	8.50	2.60	4.40	8.20	4.80	57.80	32.00	18.00	8.00	2.00	11.00 100-125
N-UD-60X60	60.00	60.00	1.70	1.70	1.50	2.60	60.00	3.50	8.50	2.60	4.40	8.20	4.80	57.80	32.00	18.00	8.00	2.00	11.00 120-135
N-UD-80X60	80.00	60.00	1.70	1.70	1.50	2.60	80.00	3.50	8.50	2.60	4.40	8.20	4.80	57.80	32.00	18.00	8.00	2.00	11.00 180-210
N-UD-33X65	33.00	65.00	1.70	1.70	1.30	2.60	33.00	3.50	8.50	2.60	4.40	8.20	4.80	62.80	37.00	18.00	8.00	2.00	11.00 40-75
N-UD-45X65	45.00	65.00	1.70	1.70	1.40	2.60	45.00	3.50	8.50	2.60	4,40	8.20	4.80	62.80	37.00	18.00	8.00	2.00	11.00 110-120
N-UD-65X65	65.00	65.00	1.70	1.70	1.60	2.60	65.00	3.50	8.50	2.60	4.40	8.20	4.80	62.80	37.00	18.00	8.00	2.00	11.00 180-200
N-UD-25X80	25.00	80.00	1.75	1.75	1.30	2.60	25.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 100-120
N-UD-35X80	35.00	80.00	1.75	1.75	1.30	2.60	35.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 110-130
N-UD-40X80	40.00	80.00	1.80	1.80	1.50	2.60	40.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 140-160
N-UD-45X80	45.00	80.00	1.80	1.80	1.40	2.60	45.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 140-165
N-UD-50X80	50.00	80.00	1.80	1.80	1.50	2.60	50.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 160-180
N-UD-60X80	60.00	80.00	1.80	1.80	1.50	2.60	60.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 180-210
N-UD-80X80	80.00	80.00	1.80	1.80	1.60	2.60	80.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 240-290
N-UD-100X80	100.00	80.00	1.80	1.80	1.80	2.60	100.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 260-350
N-UD-120X80	120.00	80.00	1.85	1.85	1.80	2.60	120.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 280-380
N-UD-40X100	40.00	100.00	2.10	2.10	1.50	2.60	40.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 130-175
N-UD-50X100	50.00	100.00	2.10	2.10	1.50	2.60	50.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 220-250
N-UD-60X100	60.00	100.00	2.10	2.10	1.50	2.60	60.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 240-290
N-UD-80X100	80.00	100.00	2.20	2.20	1.60	2.60	80.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 260-350
N-UD-100X100	100.00	100.00	2.30	2.30	1.80	2.60	100.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 300-400
N-UD-75X120	75.00	120.00	2.10	2.10	1.60	2.60	75.00	3.50	8.50	2.60	4.60	8.20	4.80	117.70	99.00	18.00	8.00	2.00	13.00 270-360
N-UFD-40X80	40.00	80.00	1.80	1.80	1.50	2.60	40.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 140-160
N-UFD-60X80	60.00	80.00	1.80	1.80	1.50	2.60	60.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 180-210
N-UFD-80X80	80.00	80.00	1.80	1.80	1.60	2.60	80.00	3.50	8.50	2.60	4.50	8.20	4.80	77.80	50.00	18.00	8.00	2.00	10.00 240-290
N-UFD-40X100	40.00	100.00	2.10	2.10	1.50	2.60	40.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 130-175
N-UFD-50X100	50.00	100.00	2.10	2.10	1.50	2.60	50.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 220-250
N-UFD-60X100	60.00	100.00	2.10	2.10	1.50	2.60	60.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 240-290
N-UFD-80X100	80.00	100.00	2.20	2.20	1.60	2.60	80.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 260-350
N-UFD-100X100	100.00	100.00	2.30	2.30	1.80	2.60	100.00	3.50	8.50	2.60	4.60	8.20	4.80	97.70	70.00	18.00	8.00	2.00	12.00 300-400
N-UFD-75X120	75.00	120.00	2.10	2.10	1.60	2.60	75.00	3.50	8.50	2.60	4.60	8.20	4.80	117.70	99.00	18.00	8.00	2.00	13.00 270-360
	100																	,	12 12:1000

N171667131

File E492635 Page T1-1 of 3 Issued: 2017-09-01

TEST RECORD NO. 1

### SAMPLES:

Samples of the wiring ducts as indicated below and constructed as described herein, were submitted by the manufacturer, Shanghai Yifeng New Materials Co Ltd, for examination and test.

The Models N-VD-15X20, N-VD-65X65, N-VD-25X80, N-VD-40X80, N-VD-80X80, N-VD-120X80, N-UD-33X65, N-UD-45X65, N-UD-65X65, N-UD-25X80, N-UD-80X80, N-UD-100X100, molded by Recognize Component - Plastic (QMFZ2), Polyvinyl Chloride (PVC) material designated YF0001606PVC-A, manufactured by SHANGHAI YIFENG NEW MATERIALS CO LTD (E341942), gray color, were used for investigation purposes.

		Type E		
Model number	Duct Size(mm)	Max. Number of 14AWG	Material	Max operating Temp., C
N-VD-15X20	15X20	12	(QMFZ2), File	50
N-VD-25X25	25X25	25	E341942, Polyvinyl	
N-VD-25X30	25X30	25	Chloride (PVC)	
N-VD-35X30	35X30	35	material designated	
N-VD-35X35	35X35	50	YF0001606PVC-A,	
N-VD-50X35	50X35	60	manufactured by	
N-VD-25X40	25X40	25	SHANGHAI YIFENG NEW	
N-VD-40X40	40X40	70	MATERIALS CO LTD, GY	
N-VD-60X40	60X40	130	color only	
N-VD-33X45	33X45	55		
N-VD-45X45	45X45	70		
N-VD-25X50	25X50	25		
N-VD-35X50	35X50	60		
N-VD-50X50	50X50	90		
N-VD-60X50	60X50	120		
N-VD-80X50	80X50	180		
N-VD-25X60	25X60	45		
N-VD-40X60	40X60	115		
N-VD-60X60	60X60	135		
N-VD-80X60	80X60	210		
N-VD-33X65	33X65	75		
N-VD-45X65	45X65	120		
N-VD-65X65	65X65	200		
N-VD-25X80	25X80	120		
N-VD-35X80	35X80	130		
N-VD-40X80	40X80	160		
N-VD-45X80	45X80	165		
N-VD-50X80	50X80	180		
N-VD-60X80	60X80	210		

		Type E		
Model number	Duct Size(mm)	Max. Number of 14AWG	Material	Max operating
				Temp., C
N-VD-80X80	80X80	290	(QMFZ2), File	50
N-VD-100X80	100X80	350	E341942, Polyvinyl	
N-VD-120X80	120X80	380	Chloride (PVC)	
N-VD-25X100	25X100	150	material designated	
N-VD-33X100	33X100	165	YF0001606PVC-A,	
N-VD-35x100	35X100	165	manufactured by	
N-VD-40X100	40X100	175	SHANGHAI YIFENG NEW	
N-VD-50X100	50X100	250	MATERIALS CO LTD, GY	
N-VD-60X100	60X100	290	color only	
N-VD-80X100	80X100	350		
N-UD-50X60	50X60	125		
N-UD-60X60	60X60	135		
N-UD-80X60	80X60	210		
N-UD-33X65	33X65	75		
N-UD-45X65	45X65	120		
N-UD-65X65	65X65	200		
N-UD-25X80	25X80	120		
N-UD-35X80	35X80	130		
N-UD-40X80	40X80	160		
N-UD-45X80	45X80	165		
N-UD-50X80	50X80	180		
N-UD-60X80	60X80	210		
N-UD-80X80	80X80	290		
N-UD-100X80	100X80	350		
N-UD-120X80	120X80	380		
N-UD-40X100	40X100	175		
N-UD-50X100	50X100	250		
N-UD-60X100	60X100	290		
N-UD-80X100	80X100	350		
N-UD-100X100	100X100	400		
N-UD-75X120	75X120	360		
N-UFD-40X80	40X80	160		
N-UFD-60X80	60X80	210		
N-UFD-80X80	80X80	290		
N-UFD-40X100	40X100	175		
N-UFD-50X100	50X100	250		
N-UFD-60X100	60X100	290		
N-UFD-80X100	80X100	350		
N-UFD-100X100	100X100	400		
N-UFD-75X120	75X120	360		

File E492635 Page T1-3 of 3 Issued: 2017-09-01

## GENERAL:

Test results relate only to the items tested. The following tests were conducted.

Mechanical Strength / Elevated Temperature Test -	UL 1565 section 15
Ducts	OT 1303 SECCION 13

## Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL 1565, Positioning Devices, Fifth Edition, latest revision dated May 05, 2017, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

### CONCLUSION

Samples of the components covered by this Report have been found to comply with the requirements covering the category and the components are found to comply with UL's applicable requirements. The description and test result in this Report are only applicable to the sample(s) investigated by UL and does not signify the products described as being covered under UL's Follow-Up Service Program. When covered under UL's Follow-Up Service Program, the manufacturer is authorized to use the Recognized Marking on such products which comply with UL's Follow-Up Service Procedure and any other applicable requirements of Underwriters Laboratories Inc. The Recognized Component Mark of Underwriters Laboratories Inc. on the product, or the Recognized Marking symbol on the product and the Recognized Component Mark on the smallest unit container in which the product is packaged, is the only method to identify products investigated by UL to published requirements and manufactured under UL's Recognition and Follow-Up Service.

This Report is intended solely for the use of UL and the Applicant for establishment of UL certification coverage of the product under UL's Follow-Up Service. Any use of the Report other than to indicate that the samples of the product covered by the Report has been found to comply with UL's applicable requirements is not authorized and renders the Report null and void. UL shall not incur any obligation or liability for any loss, expense, or punitive damages, arising out of or in connection with the use or reliance upon the contents of this Report to anyone other than the Applicant as provided in the agreement between UL and Applicant. Any use or reference to UL's name or certification mark(s) by anyone other than the Applicant in accordance with the agreement is prohibited without the express written approval of UL. Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Report by: Reviewed by:

LYNN ZHANG TERESA TANG
Associate Project Engineer Project Engineer

## CERTIFICATE OF COMPLIANCE

Certificate Number 20170906-E492635

Report Reference E492635-20170902

Issue Date 2017-SEPTEMBER-06

Issued to: Shanghai Yifeng New Materials Co Ltd

350 Zhuangbei Rd, Fengxian District

Shanghai

201415 CHINA

This is to certify that representative samples of

**COMPONENT - POSITIONING DEVICES** 

For Models Refer Addendum Page

Have been investigated by UL in accordance with the

Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 1565 - Positioning Devices

Additional Information: See the UL Online Certifications Directory at

www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

The UL Recognized Component Mark generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark: May be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.

Barrelly

Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <a href="http://ul.com/aboutul/locations/">http://ul.com/aboutul/locations/</a>



# CERTIFICATE OF COMPLIANCE

20170906-E492635 **Certificate Number** E492635-20170902 **Report Reference** 2017-SEPTEMBER-06 **Issue Date** 

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

## Models

USR Component - Cable Ducts, rated for 60°C - Catalog Numbers: L-VD/R-37.5X75, L-VD/R-50X75, L-VD/R-75X75, L-VD/R-100X75, L-VD/R-25X75



Bruce Mahrenholz, Director North American Certification Program

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, product a local UL Customer Service Representative at <a href="http://ul.com/aboutul/locations/">http://ul.com/aboutul/locations/</a>



File E492635 Project 4787957430

September 2, 2017

REPORT

on

COMPONENT - WIRE POSITIONING DEVICES

Shanghai Yifeng New Materials Co Ltd Shanghai, 201415, China

Copyright © 2017 UL LLC

UL LLC authorizes the above named company to reproduce this Report only for purposes as described in the Conclusion. The Report should be reproduced in its entirety; however to protect confidential product information, the Construction Details Descriptive pages may be excluded.

File E492635 Vol. 1 Sec. 2 Page 1 Issued: 2017-09-02 and Report

## DESCRIPTION

Component - Positioning Devices

## PRODUCT COVERED:

USR Component - Cable Ducts, rated for  $60^{\circ}$ C - Catalog Numbers: L-VD/R-37.5X75, L-VD/R-50X75, L-VD/R-75X75, L-VD/R-100X75, L-VD/R-25X75

### GENERAL DESCRIPTION OF PRODUCT:

These devices are molded PC/ABS thermoplastic ducts and slotted side channels, manufactured in different lengths and widths, intended to be mounted vertically within equipment to route single or multiple units such as electric wires, cables, flexible tubing, etc. Covers are provided with a lip to snap over a flange in the top of the duct channel wall.

## GENERAL DESCRIPTION OF INVESTIAGTION (NOT FOR FIELD REPRESNTATIVE'S USE):

Representative sample of these devices did not show signs of softening, yielding, shrinkage or warpage which release wires when handled and examined before and after oven conditioning when mounted horizontally on a vertical surface and loaded with the maximum fill of 14 AWG wire as recommended by the manufacturer. Samples were conditioned at 70C for 7 hours.

File E492635 Vol. 1 Sec. 2 Page 2 Issued: 2017-09-02 and Report

## TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE USE):

Products designated USR have been investigated using requirements contained in the Standard for Positioning Devices, UL 1565.

## Conditions of Acceptability -

Use - For use only in products where the acceptability of the combination is determined by Underwriters Laboratories Inc.

- 1. The end-use application shall also be examined to insure that the ducts maintain the wires and/or cables in place and do not cause undue compression or tension.
- 2. The maximum number of wires are to coincide with the limits established for the individual cable duct.
- 3. These cable ducts have been investigated as a constructional and mechanical feature only. No tests have been conducted to verify its suitability or unsuitability for use as electrical insulation.
- 4. These cable ducts are intended for factory installation only. They are suitable for indoor use within enclosures only at temperatures not exceeding 60°C. Outdoor use has not been investigated.
- 5. Reference should be made to the end-product standards and most current guides to the use of plastics (such as Subject 746) with regard to other requirements, which should be considered in judging the suitability of these materials in end-products.
- 6. The suitability for use when exposed to oil, chemicals, refrigerant, soap, x-rays, ultraviolet light, etc. have not been determined by this investigation unless otherwise indicated. The environmental conditions and maximum use temperatures are indicated in above.
- 7. Suitability of any type of mounting means such as the optional fixing slots or holes, or the use of bolts, screws, brackets, adhesive, etc. has not been determined by this investigation. The samples were tested while mounted horizontally to a vertical surface as specified by client.
- 8. These devices have been investigated with the manufacturer's maximum recommended loading of solid 14 AWG, 27 39 mil insulated wire as noted under Ill. 1. The suitability of loading with any other wire types or additional wires, or loading with other than wire shall be investigated in the end-product.
- 9. The devices are molded from compounds meeting 94V-0 flammability requirements. Flame tests were not conducted on the devices themselves.

File E492635 Vol. 1 Sec. 2 Page 3 Issued: 2017-09-02 and Report

## RATINGS:

All cable ducts covered by this Report are rated  $60^{\circ}\text{C}$ .

## MARKING:

The product or the smallest unit package in which the product is shipped is to be marked with the following:

- a. Recognized Company name and Catalog Number.
- b. "For use within enclosures only" or an equivalent wording or the UR Recognized Component Mark.
- c. Maximum wire fill capacity on the duct, smallest unit package or in the installation instructions shipped with the product.

File E492635 Vol. 1 Sec. 2 Page 4 Issued: 2017-09-02 and Report

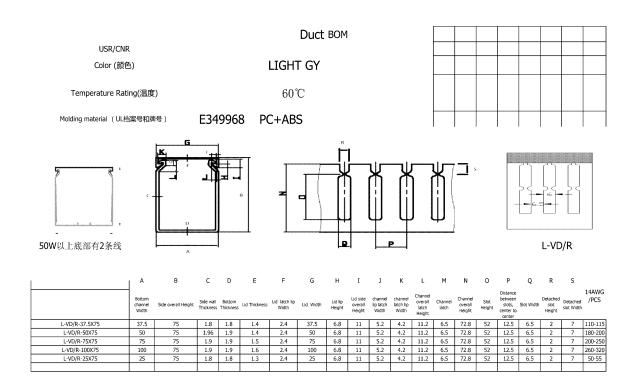
## CONSTRUCTION DETAILS:

All Cat. Nos. shall be constructed as follows:

Material Composition: Recognize Component - Plastic (QMFZ2), File E349968, Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) material designated Autron504, manufactured by SUZHOU BOILN PLASTICS CO LTD, Light GY color only.

Reference	Details:
Illustration	
1	Duct construction, slot size, critical dimensions and maximum
1	14 AWG wire fill capacity for all cable ducts

And Report



N171667132

File E492635 Page T1-1 of 1 Issued: 2017-09-02

TEST RECORD NO. 1

#### SAMPLES:

Samples of the wiring ducts as indicated below and constructed as described herein, were submitted by the manufacturer, Shanghai Yifeng New Materials Co Ltd, for examination and test.

The Models L-VD/R-37.5X75, L-VD/R-75X75, L-VD/R-100X75, L-VD/R-25X75, molded by Recognize Component - Plastic (QMFZ2), Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) material designated Autron504, manufactured by SUZHOU BOILN PLASTICS CO LTD (E349968), light gray color, were used for investigation purposes.

Type E							
Model number	Duct Size(mm	Max. Number of 14AWG	Material	Max oper atin g Temp			
L-VD/R-37.5X75	37.5X75	115	(QMFZ2), File E349968,	60			
L-VD/R-50X75	50X75	200	Polycarbonate/Acrylonitrile Butadiene				
L-VD/R-75X75	75x75	250	Styrene (PC/ABS) material designated				
L-VD/R-100X75	100X75	320	Autron504, manufactured by SUZHOU BOILN				
L-VD/R-25X75	25x75	55	PLASTICS CO LTD, light gray color only				

## GENERAL:

Test results relate only to the items tested. The following tests were conducted.

Mechanical Strength	/ Elevated Temperature Test -	UL 1565 section 15
Ducts		OL 1303 SECCION 13

## Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL 1565, Positioning Devices, Fifth Edition, latest revision dated May 05, 2017, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

### CONCLUSION

Samples of the components covered by this Report have been found to comply with the requirements covering the category and the components are found to comply with UL's applicable requirements. The description and test result in this Report are only applicable to the sample(s) investigated by UL and does not signify the products described as being covered under UL's Follow-Up Service Program. When covered under UL's Follow-Up Service Program, the manufacturer is authorized to use the Recognized Marking on such products which comply with UL's Follow-Up Service Procedure and any other applicable requirements of Underwriters Laboratories Inc. The Recognized Component Mark of Underwriters Laboratories Inc. on the product, or the Recognized Marking symbol on the product and the Recognized Component Mark on the smallest unit container in which the product is packaged, is the only method to identify products investigated by UL to published requirements and manufactured under UL's Recognition and Follow-Up Service.

This Report is intended solely for the use of UL and the Applicant for establishment of UL certification coverage of the product under UL's Follow-Up Service. Any use of the Report other than to indicate that the samples of the product covered by the Report has been found to comply with UL's applicable requirements is not authorized and renders the Report null and void. UL shall not incur any obligation or liability for any loss, expense, or punitive damages, arising out of or in connection with the use or reliance upon the contents of this Report to anyone other than the Applicant as provided in the agreement between UL and Applicant. Any use or reference to UL's name or certification mark(s) by anyone other than the Applicant in accordance with the agreement is prohibited without the express written approval of UL. Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Report by: Reviewed by:

LYNN ZHANG TERESA TANG
Associate Project Engineer Project Engineer