

# Technical Catalogue



**UNIVERSAL  
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South Asia  
ISO 9001 : 2015  
Certificate No. 99 100 22850

# Rectangular Ducts

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# FACTORY FABRICATED RECTANGULAR DUCT



## **Introduction :**

*Rectangular duct is a type of sheet metal duct that supplies air for ventilation in various applications. It can be adapted to fit in tight spaces and building height restrictions. It is usually made of galvanized steel and has interconnecting ends that lock together with brackets. UI are experts in custom fabrication with all the duct support, duct reinforcement, and duct connectors needed for your job. Ductwork and fittings can be with beading or without beading with connections such as S & D, TDF and MS Flanges. Accessories, such as TDF Cleats, gaskets, nuts and bolts, will be supplied for all duct work at the customer's request.*



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# *FACTORY FABRICATED RECTANGULAR DUCT*

## **Why UNIVERSAL INDUSTRIES :**

*UNIVERSAL INDUSTRIES is a leading designer, fabricator of sheet metal ducting. We UI committed to deliver a wide range of sheet metal work solutions across the world. UI has been serving the needs of HVAC Systems, and Sheet Metal Fabrication services. Our industrial facilities are situated in Chennai City (Tamil Nadu – India). We are qualified professionals who are fully dedicated to serve our clients. UI assure high quality standard and committed to maintain an effective Quality Assurance System complying with International Standard ISO9001-2015 (Quality Systems), that will sustain the company's reputation and achieve customer satisfaction. The certificates that UI holds, is a proof of how serious we are emerging to reach an international standard that we are proud of and keep us on top of the industry in the region. UI product designs are always based on the relevant international standards and codes to produce cost effective solutions to ensure products reliability followed by continuous development to fulfil our customer satisfaction. All rectangular duct and fittings are fabricated from hot-dipped galvanized steel in gauges that meet or exceed SMACNA standards for rectangular ducts for the appropriate connection types listed below*

- Multiple Connections: Slip & Drive, MS Flanged, Slip on Flanged, TDF or Welded*
- Offer the best choice where physical space limitations are a prime consideration*
- Manufacture any type of transition and fitting with best quality*
- Do highest air carrying capacity for any given width and height of application*
- Automated Design-to-Coil-Line AutoCAD eliminates labour intensive manual drafting.*



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# FACTORY FABRICATED RECTANGULAR DUCT

## **TDF FLANGED CONNECTION**

*Transverse Duct Flange is a 4 bolt duct connection system that eliminates time and waste, rather than using separate connectors to assemble your system, TDF flanges are roll-formed onto duct during the manufacturing process. This connection minimizes leakage and installation costs. They can be made of galvanized steel (26 G to 18 G), Stainless Steel (26 G & 24 G), or Aluminium (22 G to 18 G).*

## **SLIP & DRIVE CONNECTION**

*We manufacture the slip and drive connectors, to meet your specifications. Connectors can be shipped cut-to-length at your request to minimize field assembly time.*

## **PLENUM BOXES**

*Plenums can be custom fabricated to meet most any insulation requirement and delivery schedule. We shall manufacture, Diffuser Plenum Boxes, Spill Air Boxes & Cross Talk Silencer as per the request.*





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# FACTORY FABRICATED RECTANGULAR DUCT



Smacna - 2005							IS 655 1963 & 2006			
Duct Sizes mm	Operation Pressure Pa						Low Pressure	Medium Pressure		
	250		500		1000					
-	Gauge	Connector Type	Gauge	Connector Type	Gauge	Connector Type	Gauge	Connector Type	Gauge	Connector Type
0-450	26	C&S/TDF	26	TDF	26	TDF	26	C&S	22	TDF
451-750	26	C&S/TDF	26	TDF	24	TDF	24	C&S / TDF	20	TDF
751-900	26	TDF	24	TDF	22	TDF - JTR	22	C&S / TDF	20	TDF
901-1000	26	TDF	24	TDF	20	TDF - JTR	22	C&S / TDF	20	TDF
1001-1200	24	TDF	22	TDF	18	MS Angle	22	TDF	20	TDF
1201-1300	24	TDF	20	TDF	18	MS Angle	22	TDF	18	TDF
1301-1500	24	TDF - JTR	18	TDF			22	TDF	18	TDF
1501-1800	22	TDF - JTR	18	TDF - JTR			20	TDF	18	TDF
1801-2100	20	TDF - JTR	18	TDF - JTR			20	TDF	18	TDF
2101-2200	18	TDF - JTR	18	TDF - JTR			20	TDF	18	TDF
2201-2400	18	MS Angle	18	MS Angle			18	MS Angle	18	MS Angle
2401-2700	18	MS Angle					18	MS Angle	18	MS Angle



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**CPWD APPROVED  
RECTANGULAR DUCT**

	भारत सरकार GOVERNMENT OF INDIA केंद्रीय लोक निर्माण विभाग CENTRAL PUBLIC WORKS DEPARTMENT e-mail: kereesm1-ppz@cpwd.gov.in	
कार्यपालक अभियंता और वरिष्ठ प्रबंधक (विद्युत)-1 का कार्यालय पालक्काड परियोजना क्षेत्र, आ.पी.सं. कैम्पस पश्चिम कन्निककोट, पालक्काड - 678 623		OFFICE OF THE EXECUTIVE ENGINEER & SENIOR MANAGER (ELECTRICAL)-I PALAKKAD PROJECT ZONE, IIT CAMPUS KANJIKODE WEST, PALAKKAD - 678 623
No.23(5)/E/EE&SM(E)-I/PPZ/2021/388		Dated: 15/09/2021

To  
The Project Manager,  
M/s Shapoorji Pallonji and Company Private Limited,  
C/o IIT Palakkad Permanent Campus,  
Malampuzha Road, Near Gramalakshmi Mudralayam,  
Pudussery Village, Kanjikode West  
Palakkad, Kerala-678 623.

Name of the Work: Construction of Permanent Campus for Indian Institute of Technology Palakkad Phase I A (Package I) at Pudussery Village, Kanjikode West, District Palakkad, Kerala.  
Agt. No. 02/CE&ED/EE&SM(C)-I/PPZ/2019-20.

Subject: Submission of Technical Data Sheet of HVAC Duct & Solar hot water system-for additional make approval-Reg.  
Ref 1: - SPCL Letter No. SPCPL/CHN/IIT-PKD-IA/CPWD/2021-22/456 Dt: 26/08/2021  
Ref 2: - SPCL Letter No. SPCPL/CHN/IIT-PKD-IA/CPWD/2021-22/464 Dt: 04/09/2021

Sir,  
With reference to the above subject, the Technical Data Sheet of the subject items are duly verified and hereby approved for work at IIT Palakkad Project subject to agreement conditions and comments.

SL NO	ITEM DESCRIPTION	MAKE
1	HVAC Duct	Universal Industries
2	Solar Hot Water System	V Guard

Comments  
1. Detailed technical specification shall be got approved separately before procurement.

Yours Faithfully  
  
(Manu Varkey)  
Executive Engineer & Senior Manager (E) - I

**CIPET  
TEST CERTIFICATE**

रिपोर्ट : इंस्टिट्यूट ऑफ प्लास्टिक्स टेक्नोलॉजी  
(नवम एवं अठारह वयस, नगर कालोनी)  
गिन्दी, चेन्नई - 600 032  
फोन : 91-44-2225 4701-6 फैक्स : 91-44-22254707  
ई-मेल : cthenai@cipet.gov.in वेबसाइट : www.cipet.gov.in

**CIPET : INSTITUTE OF PLASTICS TECHNOLOGY**  
(Ministry of Chemicals & Fertilizers, Govt. of India)  
Guindy, Chennai - 600 032.  
Tel : 91-44-2225 4701-6 Fax : 91 - 44 - 22254707  
E-mail : cthenai@cipet.gov.in Website : www.cipet.gov.in

परीक्षण रिपोर्ट / TEST REPORT  
रिपोर्ट सं / REPORT NO. : 69320  
दिनांक / Date : 11-05-2022  
भाग - ग / PART - C  
क्र.सं / Sl. No. 29246

Test Duration: 27-04-2022 To 11-05-2022

S.no.	Test Name	Test Method / Standard	Unit	Test Value Obtained
1	Compression strength at 10% deformation	IS: 11239 Part 11	MPa	0.162
2	Density	IS: 11239 Part 12	kg/m <sup>3</sup>	46.0

REMARKS  
1. This Test report/Certificate is issued only for the samples submitted to CIPET.  
2. The Results stated above related only to the items tested.  
3. The Quality of the subsequent production lot has to be ensured by the purchaser.  
4. This report, in full or part, shall not be reproduced, published, advertised, used for any legal action, Unless prior permission has been secured.  
5. Selection of samples for individual test has been done in accordance with respective clauses of IS.  
6. Details of test sub-contracted: Nil.

\*\*\*\*End Of Report\*\*\*\*

AUTHORISED SIGNATORY

**CERTIFICATE**

The Certification Body  
of TÜV SÜD South Asia Private Limited  
certifies that



**Universal Industries**  
DP-58, 1st Main Road, SIDCO Industrial Estate,  
Kattur, Thirumullaivoyal, Chennai - 600062, Tamil Nadu, India

has implemented Quality Management System  
in accordance with ISO 9001:2015  
for the scope of

Manufacture and Supply of  
HVAC Ducts, Grilles & Diffusers, Pre Insulated Pipes & Accessories

The certificate is valid from 2022-12-12 until 2025-12-11  
Subject to successful completion of annual periodic audits  
The present status of this certificate can be obtained through TÜV SÜD website by scanning below QR code and by  
entering the certificate number (without spaces) on web page. Further clarifications regarding the status & scope of  
this certificate may be obtained by consulting the certification body at [south.asia@tuv-sud.com](mailto:south.asia@tuv-sud.com)

Certificate Registration No. 99 100 22850  
Date of Initial certification: 2022-12-12  
Issue Date: 2022-12-12 Rev. 00



*Rathul Kale*

Head of Certification Body  
of TÜV SÜD South Asia Private Limited,  
Mumbai  
Member of TÜV SÜD Group



TÜV SÜD South Asia Pvt. Ltd. • TÜV SÜD House • Sakinaka • Andheri (East) • Mumbai - 400072 • Maharashtra • India

**For Enquires Contact :**  
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[factory@universalac.in](mailto:factory@universalac.in)

**Factory : DP-58, 1st Main Road, Sidco  
Industrial Estate, Kattur,  
Thirumullaivoyal, Chennai - 600 062**

**Chennai : 93840 59697  
Hyderabad : 98403 98484  
Bangalore : 98410 16272  
Cochin : 73056 91444**