



Specification

**Heating and
Ventilating
Contractors'
Association**

**For Plastics
Ductwork**



DW/154

Specification **for Plastics Ductwork**

DW/154

ACKNOWLEDGEMENTS

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FOREWORD



David Summerfield, *President* Heating and Ventilating Contractors' Association

During the years which have passed since DW/151 was first published 1974, it has taken its rightful place as the industry standard by which the manufacture and installation of plastics ductwork can be judged. However, advances in both plastics technology and good working practices during recent years have determined the necessity for a revised specification.

Accordingly, the HVCA Ductwork Group, Technical Sub-Committee, invited members of specialist plastic ductwork manufacturers and installers to form a Drafting Panel, for the purpose of producing a radically revised specification incorporating the latest working practices and setting new standards of quality which our 21st Century clients are entitled to expect.

In drawing up this new specification, the drafting panel has tried wherever possible, to use the layout and terminology of the widely acclaimed DW/144, thereby making reference easier for all concerned. During the drafting process, the panel has consulted with specialist material manufacturers, individuals and organisations throughout the industry in order to ensure that, as far as possible, all standards reflect 'up to the minute' knowledge and best practices.

I firmly believe that this effort has resulted in a new specification that clearly demonstrates the high standards of workmanship and professionalism found within the ductwork industry and I take this opportunity of thanking all those who have contributed to its production.

A handwritten signature in black ink, appearing to read 'David Summerfield'.

David Summerfield, *President*
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PART 1

Technical information to be provided by the designer to the plastics ductwork contractor

1 INTRODUCTION

1.1 This specification relates to the manufacture and installation of rectangular and circular ductwork constructed from plastics. The selection of construction methods is at the discretion of the manufacturer to conform with the performance requirements of the specified ductwork classification. Sections 2-4 below define the information to be provided by the designer.

2 STANDARDS

2.1 Pressure classification (*Table 1*)

2.2 Leakage classification (*Table 1*)

2.3 Positive and Negative pressures (*Table 1*)

2.4 Materials (*Part 2 Section 7*)

2.5 Any special system requirements

3 COMPONENTS

3.1 Access and drainage points

Number and location of access doors and drainage points.

3.2 Regulating dampers

Specification, location and mode of operation of all regulating dampers.

3.3 Fire stops

Stops to meet the requirements of the Authority directly responsible for fire protection.

3.4 Flexible joint connections

Specification and location of any flexible connections e.g. plant or building expansion joints.

4 PARTICULAR REQUIREMENTS

4.1 Plastics material

Type of plastics material from which the ductwork is to be manufactured, and details of ductwork to special requirements not within this specification.

4.2 Environmental

Environmental conditions, inside and surrounding the ductwork.

4.3 Airflow

Design airflow volume for all main ducts, branches and air terminals.

4.4 Pressure/velocities

Design air velocities and pressures for all main ducts, principal branches and terminals.

4.5 External thermal/acoustic insulation

The extent and type of insulation to be provided by others should be stated, including full specification for application and installation.

4.6 Spark testing

If spark testing is required, the designer shall identify land marks in the contract programme for testing to be undertaken i.e. manufacture/installation, commissioning.

4.7 Air leakage testing

The extent of any air leakage testing if required. While it shall be mandatory for high-pressure ductwork (as defined in this specification) to be tested for air leakage in accordance with the procedure set out in DW/143, "A Practical Guide to Ductwork Leakage Testing", no such testing of low-or medium-pressure ductwork is required.

4.8 Identification

Details of colour coding or identification, if required. For further information see HVCA publication DW/144 Appendix B.

4.9 Solvents/fumes

Details of design criteria used or adopted to avoid the trapping and discharge of liquids, solvent fumes or gases.