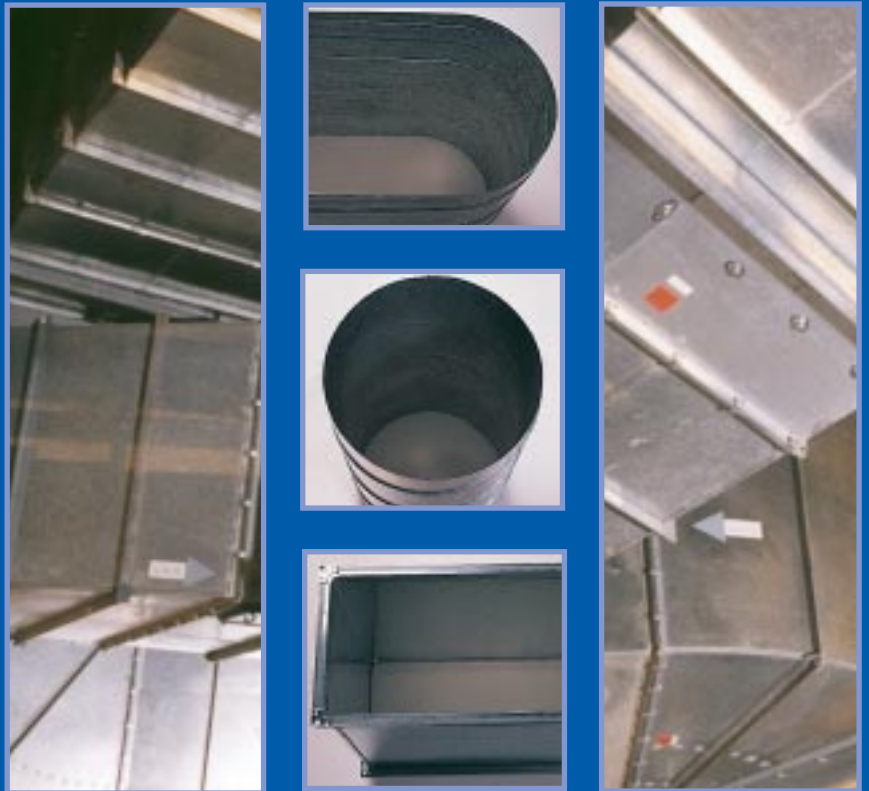




Specification for

**Heating and
Ventilating
Contractors'
Association**

Sheet Metal Ductwork



DW/144



DW/144

Specification for Sheet Metal Ductwork

*Low, medium and high
pressure/velocity air systems*

1998

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THE INDUSTRY STANDARD



Ken Parslow
Chairman
Executive Committee
Ductwork Group
1996-98

For more than a decade-and-a-half, the DW/142 *Specification for Sheet Metal Ductwork* published by the Heating and Ventilating Contractors' Association has gained national and international recognition as the industry standard against which the quality of ductwork manufacture and installation can be judged.

In recent years, however, it has become increasingly evident to the members of the HVCA Ductwork Group that the developments in technology and working practices which have taken place since the drafting of DW/142 have rendered obsolete significant parts of the document.

It was an acknowledgement of this state of affairs which led the Technical Sub-Committee of the Ductwork Group, ably chaired by Edgar Poppleton, to undertake the task of producing a radically revised specification which would promote best practice and quality standards well into the next Millennium.

This new publication — designated DW/144 — represents the direct result of that initiative.

The new specification recognises the computer age — with special reference to CAD/CAM procedures and techniques — and the international performance standards established by the Committee for European Normalisation (CEN), as well as the need to update and consolidate much of the information contained in the original DW/142 publication and its *Addendum A* companion volume.

During the drafting process, the Technical Sub-Committee has consulted widely with individuals and organisations throughout the building services and construction sectors in order to ensure that the new specification fully reflected the current the “state-of-the-art” in terms both of technical expertise and industry best practice.

I firmly believe that this process has resulted in a publication which clearly demonstrates the high level of professionalism which exists within the ductwork community — and I take this opportunity of thanking all those who have contributed to its production.

In particular, my thanks go to Edgar Poppleton and his colleagues on the Technical Sub-Committee, to Keith Elphick for the provision of invaluable technical consultancy, and to Ductwork Group secretary Gareth Keller for overseeing the project as a whole.



MAINTAINING QUALITY

Like most industries, the ductwork sector must be prepared continually to innovate in order to survive and prosper.

A key element in that innovation process is the timely review and updating of quality standards to ensure that they continue to offer realistic benchmarks to which all professional individuals and organisations can perform.

The development of this new *Specification for Sheet Metal Ductwork* — designated DW/144 — has been carried out with that objective in mind.

In the 16 years since the publication of its predecessor, DW/142 — and in the ten years since the supplementary volume *Addendum A* appeared — many technical advances, changes in working practices and regulatory introductions and amendments have taken place.

The common performance standards for ductwork being developed by the Committee for European Normalisation (CEN), for example, had to be taken fully into account during the drafting process. Similarly, notice had to be given to the provisions of the Control of Substances Hazardous to Health (COSHH) and Construction (Design and Management) Regulations, neither of which had been issued when DW/142 was published.

It is not possible — nor, I think, desirable — to include in this foreword an exhaustive catalogue of the points of difference between this specification and its predecessor. These will clearly emerge from a detailed reading of the text.

I should, however, like to take the opportunity to highlight a few topics which I believe to be of particular significance. They are:

- the omission of high-pressure Class D (in order to conform to European practice);
- the highlighting of information to be provided by the designer;
- the end-sealing of ducts and explosion risks;
- the removal of standard sizes of rectangular ducts;
- the omission of cleated joints;
- the acceptance of proprietary flanges certificated to DW/TM1 no longer illustrated in detail;
- the consolidation into the document of coverage of hangers and supports;
- the addition of a note on linings, along with their cleaning considerations;
- the consolidated graphical representation of



Edgar Poppleton
*Chairman
Technical
Sub-Committee
Ductwork Group*

Class A, B and C air leakage characteristics, mandatory testing Class C only;

- updated appendices on galvanising after manufacture, stainless steel, pre-coated steel, aluminium, Eurovent and galvanised material, plus a bibliography;
- transport, handling, storage and interface with *DW/TM2 Guide to Good Practice — Internal Cleanliness of New Ductwork Installations*;
- an overview of fire-rated ductwork;
- a new appendix on inspection, servicing and cleaning access openings (the default inclusion of Level 1 should be noted);
- a new section on standard component drawings — incorporating a framework of nomenclature, and a description of drawing symbols, abbreviations and rules — which is intended to reduce ambiguity and promote common understanding;
- a rewritten description of all forms of dampers, for which I am indebted to Bill Clark and John Mawdsley of the HEVAC Association.

I take this opportunity to acknowledge the permission granted by the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) of the USA for the use of its tie rod specification (designer approval required).

And I also include a plea on behalf of ductwork constructors to be allowed to make the final choice of components and techniques within the parameters set by the designer, and allowed within this specification to satisfy performance characteristics.

It will, of course, be clear to anyone who has ever taken on such a task that the production of this specification has involved a colossal input in terms of industry consultation and from a wide variety of individuals, a number of whom I should like to identify for special mention.

They are: former Technical Sub-Committee members Keith Waldron and the late Keith Angood; current members Chris Collins, Stuart Howard, Brian James and — last but by no means least — Jim Murray; technical consultant Keith Elphick; and Ductwork Group secretary Gareth Keller.

Finally, may I remind readers of the crucial importance of ensuring that all ductwork is manufactured and installed in a manner which is safe, efficient, effective and free of risk.

The publication of DW/144 is intended to assist significantly in the achievement of this objective.





Acknowledgements

The HVCA wishes to record its sincere thanks to the following members — past and present — of the Technical Sub-Committee of the Ductwork Group, who contributed their time, knowledge and experience to the production of this document

Edgar Poppleton (chairman)

Keith Angood

Chris Collins

Stuart Howard

Brian James

Jim Murray

Keith Waldron

Technical Consultant:

Keith Elphick

Ductwork Group Secretary:

Gareth Keller



Other Ductwork-Related Publications

DW/143	A Practical Guide to Ductwork Leakage Testing
DW/151	Specification for Plastic Ductwork
DW/171	Guide to Good Practice for Kitchen Ventilation Systems
DW/191	Guide to Good Practice: Glass Fibre Ductwork
DW/TM1	Acceptance Scheme for New Products: Rectangular Cross Joint Classification
DW/TM2	Guide to Good Practice: Internal Cleanliness of New Ductwork Installations
DW/TM3	Guide to Good Practice for the Design for the Installation of Fire and Smoke Dampers
TR/17	Guide to Good Practice: Cleanliness of Ventilation Systems

Copies of the above publications are available from:

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Previous Sheet Metal Ductwork Specifications

—	Ductwork Specification for High-Velocity Air Systems (Circular)	1963
—	Standard Range of Rectangular Ducting	1967
DW/131	Sheet Metal Ductwork Specification for High-Velocity Air Systems (Rectangular)	1968
DW/121	Specification for Sheet Metal Ductwork (Low-Velocity Low-Pressure Air Systems) (Rectangular and Circular) — Metric	1969
DW/122B	Specification for Sheet Metal Ductwork (Low-Velocity Low-Pressure Air Systems) (Rectangular and Circular) — British	1969
DW/112	Standard Range of Rectangular Ducts and Fittings — Metric and British Units	1970
DW/132	Specification for Sheet Metal Ductwork (High-Velocity High-Pressure Air Systems) (Rectangular, Circular and Flat Oval) — Metric	1970
DW/141	Specification for Sheet Metal Ductwork (Low and High-Velocity/Pressure Air Systems) (Rectangular, Circular and Flat Oval) — Metric	1977
DW/142	Specification for Sheet Metal Ductwork (Low, Medium and High Pressure/Velocity Air Systems)	1982
DW/142	Specification for Sheet Metal Ductwork Addendum A (Low, Medium and High Pressure/Velocity Air Systems)	1988

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