Building Engineering Services Association
Specification for:

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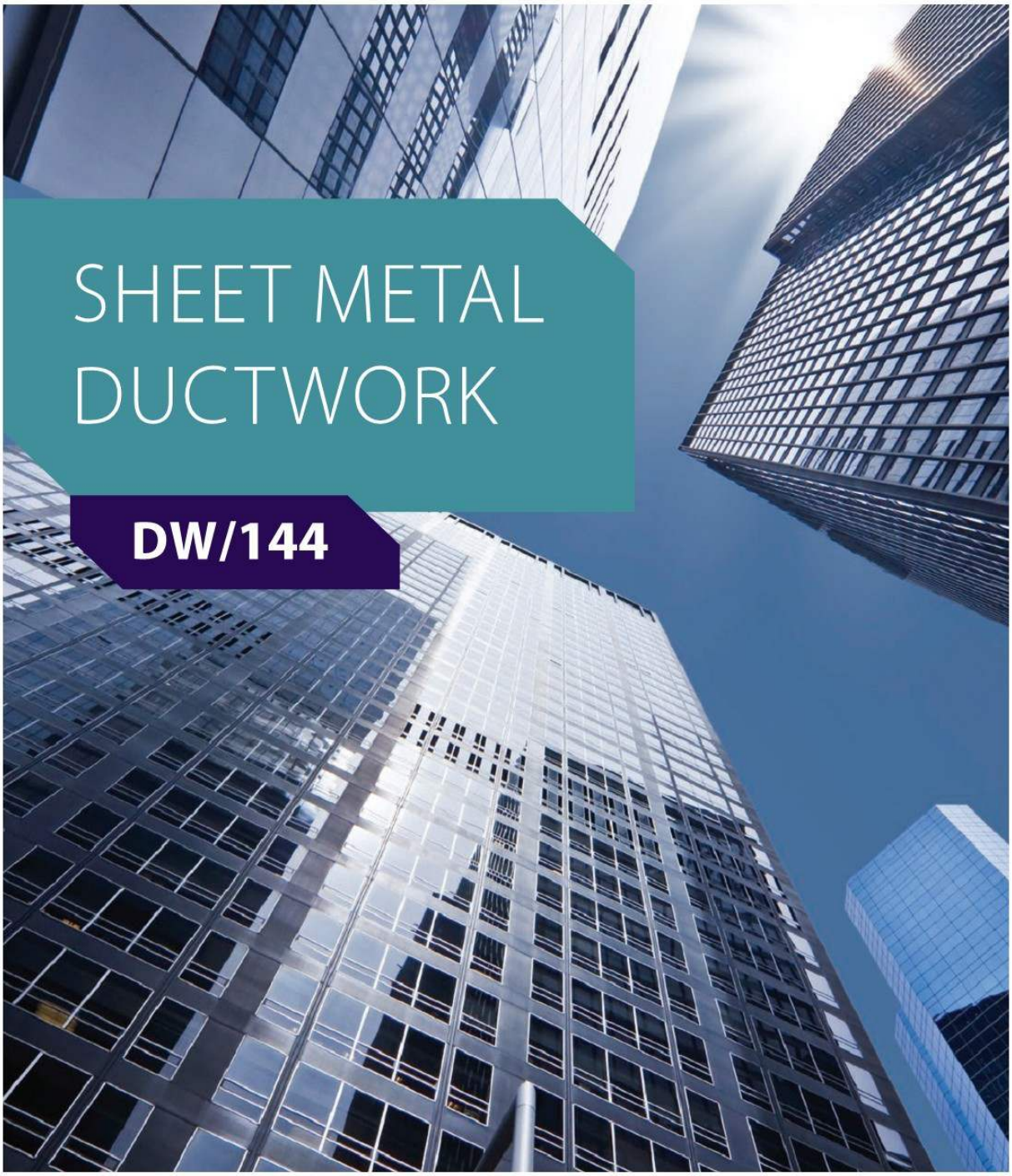

SHEET METAL DUCTWORK

DW/144

Third Edition 2016

www.theBESA.com

GARETH VAUGHAN

This publication is dedicated to the memory of Gareth Vaughan, who died in 2016. Gareth was a major figure in the ductwork industry. As well as being a dedicated and very long serving member of the BESA Ductwork Group, he rose to become President of the Association in 2008. His unstinting efforts and cheerful contributions were invaluable to the work carried out by both the Ductwork Group and the Association as a whole to improve professional standards and promote best practice.

Gareth joined the ductwork industry as an installation assistant in 1973, and rose through the ranks to become a managing director in 1989. He was chairman of what was then the HVCA's North West Region from 1994 to 1996, and became a member of the Council, and of the Executive Committee of the Ductwork Group, in 1997. He was chairman of the Ductwork Group for three years from 2000.

He is a much missed friend, colleague and inspiration to all in our sector.

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DW/144

Specification for Sheet Metal Ductwork Low, medium and high pressure/velocity air systems

2016

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FOREWORD

Tim Hopkinson
Chairman
Executive Committee
Ventilation Group

Revised DW/144 captures rising standards

The 2016 edition of the ductwork industry's 'bible' reflects the many legislative and technical changes that have affected the sector since DW/144 first appeared in 1998.

Since then, the Specification for Sheet Metal Ductwork has gained national and international recognition as the benchmark against which the quality of ductwork manufacture and installation can be measured.

This comprehensive reference work, which is recognised across the sector as the standard specification for the manufacture and installation of low, medium and high pressure/velocity sheet metal air systems, has had a thorough revamp and upgrade to make it more in tune with today's industry.

Developments in technology and working practices, along with the need to reflect a steady proliferation of European standards, make this a very different publication to its 1998 forerunner.

The tireless work of the BESA Ventilation Group Technical Sub-Committee, led by Peter Rogers, has also brought the industry's specification into the digital age by better reflecting modern working practices and aligning it with the emergence of Building Information Modelling (BIM).

DW/144

The new DW/144 includes provision for reducing the thickness of the sheet metal used in some sizes of rectangular ductwork. This will have a major impact, not just from an environmental and resource efficiency perspective, but also on the competitiveness of the product allowing ductwork specialists to meet ever higher performance standards without excessively inflating costs.

The VG Committee has representation on a number of European Standard committees ensuring that the revised DW/144 conforms to current European practices. In particular, developments relating to strength, construction, air leakage testing, cleaning and inspection have been taken into consideration in the revised specification.

Our close relationship with the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) also enables the BESA to share knowledge and technological advances to suit a worldwide market and environment.

A number of technical queries raised by the members of the Association and other industry bodies have been incorporated into the revised specification. Amongst other things these include ductwork components, supports, smoke and fire dampers, sheet metal gauges and air leakage testing.

The VG Committee witnessed first-hand a number of test procedures carried out on behalf of the BESA concerning panel/flange deflection, duct gauges and ductwork strength and air leakage testing.

We commend this thoroughly revised specification to the industry and extend our thanks to all those who have contributed to its production.

DW/144

ACKNOWLEDGEMENTS

BESA wishes to record its sincere thanks to the following Members of the Technical Committee of the Ventilation Group, who contributed their time, knowledge and experience to the production of this document.

Peter Rogers (Chairman)
Jim Murray
Mark Cain
Lee Hussey
Brian James
Bob Lane
Cameron Robertson
Mark Simpson

Ventilation Group Secretary:
Mark Oakes

BESA wishes to record its sincere thanks to particular organisations that have provided technical support to verify both existing and new information and these acknowledgements can be found both in the Chairman's Introduction (the industry standard) and, where appropriate, at the foot of each relevant section.

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OTHER DUCTWORK-RELATED PUBLICATIONS

DW/143	A Practical Guide to Ductwork Leakage Testing
DW/145	Guide to Good Practice for the Installation of Fire and Smoke Dampers
DW/154	Specification for Plastic Ductwork
DW/172	Specification for Kitchen Ventilation Systems
DW/191	Guide to Good Practice: Glass Fibre Ductwork
TR/19	Guide to Good Practice: Internal Cleanliness of Ventilation Systems (incorporating DW/TM2 and TR/17)
BESA	Working Together – Promoting understanding between mechanical services and ductwork contractors.

Copies of the above publications are available from:

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Previous Sheet Metal Ductwork Related 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
DW/144	Specification for Sheet Metal Ductwork (First Edition)	1998
DW/151	Specification for Plastic Ductwork	1974
DW/171	Standard for Kitchen Ventilation Systems	1999
DW/TM1	Acceptance Scheme for New Products: Rectangular Cross Joint Classification	1987
DW/TM2	Guide to Good Practice: Internal Cleanliness of New Ductwork Installations	1991
TR/17	Guide to Good Practice: Cleanliness of Ventilation Systems	2002
DW/144	Specification for Sheet Metal Ductwork (Second Edition)	2013

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