

DIN EN 13023:2010-08 (E)

Noise measurement methods for printing, paper converting, paper making machines and auxiliary equipment - Accuracy grades 2 and 3 (includes Amendment A1:2010)

Contents		Page
Foreword		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	6
4	Description of machines	6
5	Emission sound pressure level determination	6
6	Sound power level determination	7
6.1	General method	7
6.2	Alternative method for large machines	7
7	Assembly and installation conditions	7
8	Operating conditions	7
9	Measurement uncertainty	8
10	Information to be recorded	8
11	Information to be reported	8
12	Declaration and verification of noise emission values	9
Annex A (normative) Machines for processing raw material		10
Annex B (normative) Machines for the preparation of wood pulp		11
Annex C (normative) Machines for the preparation of cellulose		12
Annex D (normative) Machines for the preparation of stock		13
D.1	Disintegrators	13
D.2	Pulpers	13
D.3	Refiners	14
D.4	Hydrocyclones	14
D.5	Vibration screens	15
D.6	Pressure screens	15
D.7	Chests	15
Annex E (normative) Paper, board and de-watering machines		16
Annex F (normative) Finishing machines		17
F.1	Winders and slitters	17
F.2	Sheeter-sorters, sheet cutters	17
F.3	Calenders	18

F.4	Coaters	19
F.5	Conditioners	19
F.6	Sheet packaging machines	19
F.7	Reel packaging machines	20
Annex G (normative) Machines for production of printing formes		21
Annex H (normative) Printing presses		22
H.1	Proofing presses	22
H.1.1	Offset proofing presses	22
H.1.2	Web-fed proofing presses for gravure and flexo-printing	22
H.2	Sheet-fed printing presses	23
H.2.1	Automatic platen machines	23
H.2.2	Sheet-fed rotary printing presses	23
H.2.3	Sheet-fed screen printing presses	23
H.3	Tube printing machines	24
H.4	Web-fed rotary printing presses	24
H.4.1	Web-fed rotary printing presses -- all printing methods (excluding: continuous form presses, combined label printing and punching machines)	24
H.4.2	Continuous form printing presses	25
H.4.3	Label printing and die cutting machines, combined	25
Annex J (normative) Paper converting machines		26
J.1	Bundling machines	26
J.2	Bending and folding machines	27
J.2.1	Bending, scoring and creasing machines rotary bending, grooving and buckling machines, scoring and creasing machines	27
J.2.2	Sheet-fed folding machines	27
J.2.3	Folding machines for sanitary items (web-fed)	29
J.3	Binding and finishing machines	29
J.3.1	Stitching, corner staying and inserting machines	29
J.3.2	Collating, web joining and inserting machines	30
J.4	Gluing machines and equipment	32
J.4.1	Gluing machines, gluing equipment and auxiliary equipment for paper converting	32
J.4.2	Gluing machines, gluing equipment and auxiliary equipment for cardboard processing ..	33
J.4.3	Gluing machines, gluing equipment and auxiliary equipment for book production	33
J.5	Paper bag, sack and envelope making machines for paper and foil	34
J.6	Presses	36
J.6.1	Presses for book binding	36
J.6.2	Forming presses for paper, board and foil	36
J.7	Cutting machines	37
J.7.1	Sheet-fed cutting machines	37
J.7.2	Rotary cutters	38
J.7.3	Toilet paper winding machine, tissue winding machine	38
J.7.4	Cutting machines for book making and paper, cardboard and foil processing	39
J.8	Punching machines	40
J.8.1	Punching machines for book production	40
J.8.2	Punching machines for paper and cardboard converting	40
J.9	Coating, finishing and drying equipment for paper, board and foil	47
J.9.1	Coating and finishing machines	47
J.9.2	Continuous flow dryers for paper, board and foil	48
J.10	Corrugated board production machines	49
J.11	Auxiliary equipment	50
J.11.1	Pile processing machines	50
J.11.2	Tube processing and finishing machines	50
J.11.3	Jogging machines	51
J.11.4	Bridging machines	51
J.11.5	Back rounding machines	52
J.11.6	Paper drills	52
J.12	Production lines and equipment for production of school and office stationery	53

J.12.1	Exercise book production lines	53
J.13	Shredders for paper and cardboard	53
Annex ZA (informative) "Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC"		54
Annex ZB (informative) "Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC"		55
Bibliography		56