INTERNATIONAL STANDARD

IEC 62317-8

First edition
2006-08

Ferrite cores – Dimensions –

Part 8: E-cores

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CONTENTS

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FERRITE CORES – DIMENSIONS –

Part 8: E-cores

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards. Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62317-8 has been prepared IEC technical committee 51: Magnetic components and ferrite materials.

This standard cancels and replaces IEC 61246 published in 1994, its amendment 1 (2002) and replaces Table A.1 and Table B.1 of IEC 62358:2004. New rectangular centre leg E-cores, which have been developed in the industry, were introduced in IEC 62358, and are in widespread use. This standard has been revised to specify dimensions and effective parameters for these newer rectangular centre leg E-cores.

The text of this standard is based on the following documents:

FDIS	Report on voting
51/864/FDIS	51/872/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 62317 consists of the following parts, under the general title *Ferrite cores – Dimensions*:

Part 1: General specification (under consideration)

Part 2: Pot cores (under consideration, currently available as IEC 60133: Dimensions of pot-cores made of magnetic oxides and associated parts)

Part 3: Half pot cores (under consideration, currently available as IEC 62323: Dimensions of half pot-cores made of ferrite for inductive proximity switches)

Part 4: RM-cores and associated parts

Part 5: EP-cores (under consideration, currently available as IEC 61596: Magnetic oxide EP-cores and associated parts for use in inductors and transformers – Dimensions)

Part 6: ETD-cores (under consideration, currently available as IEC 61185: Ferrite cores (ETD-cores) intended for use in power supply applications – Dimensions)

Part 7: EER-cores

Part 8: E-cores

Part 9: Planar cores

Part 10: PM-cores (under consideration, currently available as IEC 61247: PM-cores made of magnetic oxides and associated parts – Dimensions)

Part 11: EC-cores (under consideration, currently available as IEC 60647: Dimensions for magnetic oxide cores intended for use in power supplies (EC-cores))

Part 12: Uncoated ring cores (under consideration, currently available as IEC TR 61604: Dimensions of uncoated ring cores of magnetic oxides)

Part 13: PQ-cores (under consideration)

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

FERRITE CORES – DIMENSIONS –

Part 8: E-cores

1 Scope

This part of IEC 62317 specifies the dimensions that are of importance for mechanical interchangeability for E-cores with rectangular cross-section made of ferrite, the dimensions of coil formers to be used with them, and the effective parameter values to be used in calculations involving them.

The selecting core sizes to this standard is based on the philosophy of including those sizes, which are industrial standards, either by inclusion in national standards, or by broad-based use in industry. See IEC 62317-1 for more detail concerning the philosophy of selecting core sizes to be included.

NOTE Cores covered by this standard are intended for general applications at both low and high flux densities, but they also find uses in special applications such as pulse transformers. They are generally used in pairs.

Whilst the main application of this standard is expected to be for ferrite cores, its validity for iron powder cores should not be overlooked.

Coil formers are not specified for E-cores smaller than E 8/2, which are also used in SMD assemblies.

The use of “derived” standards, which give a more detailed specification of component parts whilst still permitting compliance with this standard, is discussed in Annex A.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60205:2006, *Calculation of the effective parameters of magnetic piece parts*

3 Primary standards

Compliance with the following requirements ensures mechanical interchangeability of complete assemblies and coil formers.

3.1 Dimensions of E-cores with rectangular cross-section

3.1.1 Main dimensions

The main dimensions of E-cores with rectangular cross-section shall be as given in Table 1.

NOTE The dimensions of the cores may be checked by means of gauges, an example of which is given in Annex B. In order to facilitate production it may be necessary to use gauges having dimensions differing from those given in Annex B, although no relaxation of the requirements for the dimensions of the cores given in Table 1 is thereby permitted.

3.1.2 Effective parameter and A_{min} values

The effective parameter and A_{min} values of a pair of cores whose dimensions comply with 3.1.1 shall be as given in Table 2 (see IEC 60205, for the definitions of these parameters and their calculation; and 2.2 of IEC 60205, for the definition of A_{min}).

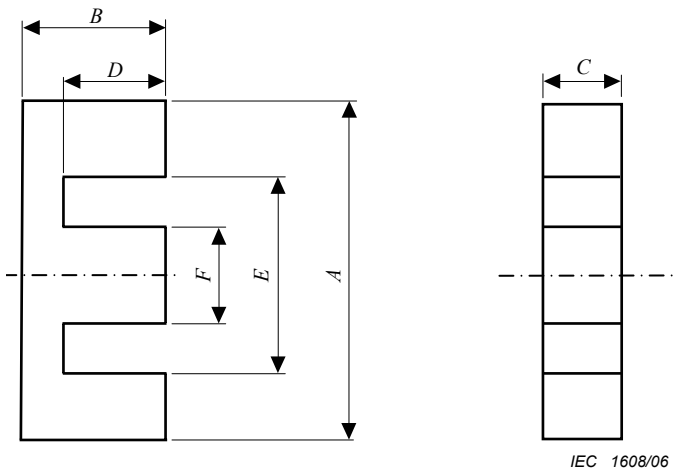


Figure 1 – Dimensions of E-cores with rectangular cross-section

Table 1 – Dimensions of E-cores with rectangular cross-section

Size	*A* mm		*B* mm		*C* mm		*D* mm		*E* mm		*F* mm		Old edition IEC references (IEC 61246)	Industrial references
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		
E5,3/2	5,15	5,35	2,57	2,73	1,90	2,00	1,92	2,08	3,80	4,00	1,30	1,40	E5,3/2	FEE5,25 EE5
E6,3/2	6,05	6,30	2,80	2,90	1,90	2,00	1,85	2,05	3,60	3,80	1,30	1,40	E6,3/2	FEE6,18
E8/2	7,85	8,15	3,95	4,05	2,30	2,40	2,85	2,95	5,60	5,80	2,30	2,40	E8/2	FEE8
E8,3/4	8,10	8,60	3,90	4,10	3,40	3,80	2,90	3,10	6,10	6,50	1,60	2,00		FEE8,3 EE8
E8,8/2	8,60	9,40	3,85	4,15	1,78	2,02	2,03	2,40	5,07	5,33	1,78	2,02	E8,8/2	FEE9
E10/3	9,80	10,2	4,88	5,00	2,88	3,00	3,50	3,62	7,00	7,30	2,88	3,00	E10/3	FEE10
E10,2/5	10,0	10,5	5,35	5,65	4,50	4,90	4,05	4,35	7,60	8,00	2,20	2,60		FEE10,2 EE10/11
E13/4	12,2	13,1	6,30	6,50	3,40	3,70	4,50	4,80	8,90	9,50	3,40	3,70	E13/4	FEE12,7A EF12,6
E13/6	12,8	13,2	5,85	6,15	6,00	6,30	4,50	4,70	10,0	10,4	2,60	2,90		EE13
E16/4,8	15,7	16,3	7,00	7,30	4,60	5,00	5,00	5,40	11,7	12,3	3,80	4,20		FEE16A EE16

Table 1 (*continued*)

Size	*A* mm		*B* mm		*C* mm		*D* mm		*E* mm		*F* mm		Old edition IEC references (IEC 61246)	Industrial references
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		
E16/5	15,5	16,7	7,90	8,20	4,30	4,70	5,70	6,10	11,3	11,9	4,40	4,70	E16/5	FEE16,1 EF16
E19/5	18,6	19,4	7,80	8,20	4,80	5,20	5,40	5,80	14,2	14,8	4,30	4,70		FEE19A EE19
E19,3/4,8	18,97	19,61	7,92	8,28	4,63	4,88	5,59	5,84	14,05	14,7	4,67	4,83		EE-187 EE19/16
E20/6	19,4	20,8	9,80	10,2	5,40	5,90	7,00	7,40	14,1	14,7	5,50	5,90	E20/6	FEE20,1 EF20
E25/7	24,3	25,8	12,3	12,8	6,90	7,50	8,70	9,20	17,5	18,3	7,00	7,50	E25/7	FEE25,1 EF25
E25,4/6	24,9	25,9	9,30	9,70	6,05	6,65	6,20	6,60	18,6	19,4	6,05	6,65		FEE25,4A
E25,4/6,3	24,9	25,9	9,27	9,65	6,10	6,48	6,22	6,60	18,55	19,81	6,10	6,60		EE24/25 EE25/19
E30/11	29,5	30,6	12,9	13,5	10,4	11,0	7,90	8,50	19,5	20,5	10,4	11,0		FEE30A EE30
E32/9	31,3	32,9	15,8	16,4	8,80	9,50	11,2	11,8	22,7	23,7	8,90	9,50	E32/9	FEE32,1 EF32
E33/13	32,5	33,9	13,5	14,1	12,4	13,0	9,00	9,60	23,1	24,1	9,40	10,0		FEE33A EE33
E34,6/9	33,9	35,3	13,9	14,64	8,90	9,72	9,51	10,05	25,0	26,2	9,10	9,70		EE375 EE35/28B
E35/10	34,5	35,7	15,2	15,8	9,70	10,3	9,20	9,80	24,5	25,5	9,70	10,3		FEE35A EE35
E40/11	39,5	40,7	16,7	17,3	10,4	11,0	10,0	10,6	27,5	28,5	9,70	11,0		FEE40A EE40
E41/13	40,27	41,87	16,38	17,18	12,19	12,95	10,08	10,68	28,55	29,59	12,19	13,1		EE21 EE41/33C
E42/15	41,3	43,0	20,8	21,2	14,7	15,2	14,8	15,5	29,5	30,7	11,7	12,2	E42/15	FEE42A
E42/20	41,3	43,0	20,8	21,2	19,2	20,0	14,8	15,5	29,5	30,7	11,7	12,2	E42/20	FEE42B
E47/16	46,1	47,88	19,4	19,83	15,35	15,87	12,07	12,5	31,72	32,56	15,35	15,87		EE625 EE47/39
E50/15	49,3	51,0	21,0	21,6	14,2	15,0	12,5	13,1	34,3	35,7	14,2	15,0		EE50A EE50
E55/21	54,1	56,2	27,2	27,8	20,4	21,0	18,5	19,3	37,5	38,7	16,7	17,2	E55/21	FEE55,2A
E55/25	54,1	56,2	27,2	27,8	24,2	25,0	18,5	19,3	37,5	38,7	16,7	17,2	E55/25	FEE55,2B
E60/16	59,2	61,1	22,0	22,6	15,2	16,0	13,7	14,0	43,7	45,3	15,2	16,0		FEE60A EE60
E65/27	63,8	66,5	32,2	32,8	26,6	27,4	22,2	23,0	44,2	45,7	19,3	20,0	E65/27	FEE65,2

Table 2 – Effective parameter and A_{min} values

Size[a]	C_1 mm^{-1}	C_2 mm^{-3}	l_e mm	A_e mm^2	V_e mm^3	A_{min}[b] mm^2	Old edition IEC references (IEC 61246)	Industrial references
E5,3/2	4,850 4	1,863 0	12,6	2,60	32,9	2,54 B		
E6,3/2	3,764 6	1,148 7	12,3	3,28	40,4	2,63 C	E6,3/2	FEE6,18
E8/2	3,439 7	0,639 76	18,5	5,38	99,4	5,17 B	E8/2	FEE8
E8,3/4	2,800 3	0,401 68	19,5	6,97	136	6,48 C		FEE8,3 EE8
E8,8/2	3,154 0	0,635 22	15,7	4,97	77,8	3,61 C	E8,8/2	FEE9
E10/3	2,726 6	0,324 93	22,9	8,4	192	8,11 B	E10/3	FEE10
E10,2/5	2,250 3	0,193 83	26,1	11,6	303	11,3 C		FEE10,2 EE10/11
E13/4	2,394 6	0,192 77	29,7	12,4	369	12,2 L	E13/4	FEE12,7A EF12,6
E13/6	1,766 3	0,103 21	30,2	17,1	517	16,9 C		EE13
E16/4,8	1,837 9	9,651 2 $\times 10^{-2}$	35,0	19,0	667	18,7 B		FEE16A EE16
E16/5	1,872 4	9,333 3 $\times 10^{-2}$	37,6	20,1	754	19,4 B	E16/5	FEE16,1 EF16
E19/5	1,726 4	7,512 0 $\times 10^{-2}$	39,7	23,0	912	22,5 C		FEE19A EE19
E19,3/4,8	1,751 0	7,661 8 $\times 10^{-2}$	40,0	22,9	914	22,6 C		EE-187 EE19/16
E20/6	1,447 3	4,516 8 $\times 10^{-2}$	46,4	32,0	1 490	31,6 B	E20/6	FEE20,1 EF20
E25/7	1,114 2	2,149 5 $\times 10^{-2}$	57,8	51,8	2 990	51,5 L	E25/7	FEE25,1 EF25
E25,4/6	1,198 6	2,984 8 $\times 10^{-2}$	48,1	40,2	1 930	39,4 B		FEE25,4A
E25,4/6,3	1,232 8	3,153 8 $\times 10^{-2}$	74,2	39,1	1 880	38,4 B		EE24/25 EE25/19
E30/11	0,529 47	4,828 8 $\times 10^{-3}$	58,1	110	6 370	107 B		FEE30A EE30
E32/9	0,893 64	10,746 $\times 10^{-3}$	74,3	83,2	6 180	81,4 L	E32/9	FEE32,1 EF32
E33/13	0,548 84	4,585 3 $\times 10^{-3}$	65,7	120	7 860	114 B		FEE33A EE33
E34,6/9	0,819 44	9,651 6 $\times 10^{-3}$	69,5	84,9	5 910	83,6 B		EE375 EE35/28B
E35/10	0,660 20	6,229 0 $\times 10^{-3}$	70,0	106	7 420	100 C		FEE35A EE35
E40/11	0,606 50	4,749 4 $\times 10^{-3}$	77,5	128	9 890	114 C		FEE40A EE40
E41/13	0,495 37	3,161 1 $\times 10^{-3}$	77,6	157	12 200	151 L		EE21 EE41/33C

Table 2 *(continued)*

Size[a]	C_1 mm^{-1}	C_2 mm^{-3}	l_e mm	A_e mm^2	V_e mm^3	A_{min}[b] mm^2	Old edition IEC references (IEC 61246)	Industrial references
E42/15	0,546 63	3,069 3 × 10^{-3}	97,4	178	17 300	175 B	E42/15	FEE42A
E42/20	0,416 95	1,785 7 × 10^{-3}	97,4	233	22 700	229 B	E42/20	FEE42B
E47/16	0,379 69	1,618 1 × 10^{-3}	89,1	235	20 900	229 B		EE625 EE47/39
E50/15	0,425 62	1,880 2 × 10^{-3}	96,3	226	21 800	213 C		EE50A EE50
E55/21	0,350 12	9,917 4 × 10^{-4}	124	353	43 600	350 C	E55/21	FEE55,2A
E55/25	0,294 62	7,022 1 × 10^{-4}	124	420	51 900	417 C	E55/25	FEE55,2B
E60/16	0,441 67	17,708 × 10^{-4}	110	249	27 300	243 C		FEE60A EE60
E65/27	0,273 57	5,095 4 × 10^{-4}	147	537	78 900	530 C	E65/27	FEE65,2

[a] The core size designation contains a combination of two numbers; the first one indicates the length A of the core and the second one its thickness C (see Table 1).

[b] See 2.2 of IEC 60205 for definition of A_{min}. The letters after the A_{min} values give the location of A_{min}: C is centre leg, L is outer leg, B is back wall.

NOTE 1 The manufacturers may indicate in their catalogues more precise values than those given in Table 2.

NOTE 2 The above values have been calculated using the method given in 3.4 of IEC 60205.

3.2 Dimensional limits for coil formers

The dimensional limits for coil formers suitable for use with a pair of E-cores of size greater than E 8/2 shall be as given in Table 3.

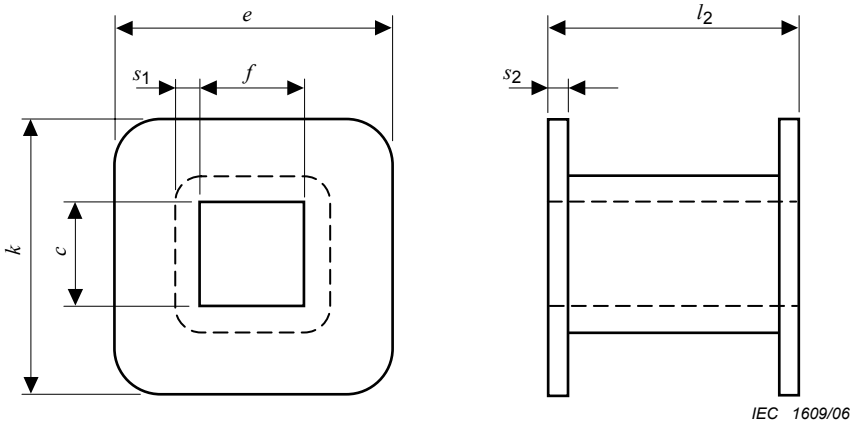


Figure 2 – Main dimensions of coil formers

Table 3 – Main dimensions of coil formers

Size	c mm	e mm	f mm	k mm	l_2 mm	s_1 mm	s_2 mm	Old edition IEC references (IEC 61246)	Industrial references
	Min.	**Max.**	**Min.**	**Min.**	**Max.**	**Min.**	**Min.**		
E8/2	2,55	5,40	2,55	5,40	5,50	0,35	0,4	E8/2	FEE8
E8,3/4	3,95	5,90	2,15	5,90	5,60	0,35	0,4		FEE8,3 EE8
E8,8/2	2,17	4,87	2,17	4,87	3,86	0,35	0,4	E8,8/2	FEE9
E10/3	3,15	6,80	3,15	6,80	6,80	0,4	0,4	E10/3	FEE10
E10,2/5	5,05	7,40	2,75	7,40	7,90	0,4	0,5		FEE10,2 EE10/11
E13/4	3,90	8,70	3,90	8,70	8,80	0,5	0,5	E13/4	FEE12,7A EF12,6
E13/6	6,45	9,80	3,05	9,80	8,80	0,4	0,5		EE13

Table 3 (*continued*)

Size	c mm	e mm	f mm	k mm	l_2 mm	s_1 mm	s_2 mm	Old edition IEC references (IEC 61246)	Industrial references
	Min.	**Max.**	**Min.**	**Min.**	**Max.**	**Min.**	**Min.**		
E16/4,8	5,15	11,5	4,35	11,5	9,80	0,5	0,5		FEE16A EE16
E16/5	4,90	11,1	4,90	11,1	11,2	0,5	0,5	E16/5	FEE16,1 EF16
E19/5	5,35	14,0	4,85	14,0	10,6	0,8	0,8		FEE19A EE19
E19,3/4,8	5,98	13,85	5,98	13,85	11,0	0,8	0,8		EE-187 EE19/16
E20/6	6,10	13,9	6,10	13,9	13,8	0,5	0,6	E20/6	FEE20,1 EF20
E25/7	7,70	17,3	7,70	17,3	17,2	0,6	0,7	E25/7	FEE25,1 EF25
E25,4/6	6,80	18,4	6,80	18,4	12,2	0,8	0,8		FEE25,4A
E25,4/6,3	6,63	18,35	6,75	18,35	12,2	0,8	0,8		EE24/25 EE25/19
E30/11	11,2	19,3	11,2	19,3	15,6	0,8	0,8		FEE30A EE30
E32/9	9,80	22,4	9,80	22,4	22,1	0,7	0,8	E32/9	FEE32,1 EF32
E33/13	13,2	22,9	10,2	22,9	17,7	0,8	0,8		FEE33A EE33
E34,6/9	9,95	24,8	9,90	24,8	18,7	0,8	0,8		EE375 EE35/28B
E35/10	10,5	24,3	10,5	24,3	18,1	0,8	0,8		FEE35A EE35
E40/11	11,3	27,3	11,3	27,3	19,7	0,8	0,8		FEE40A EE40
E41/13	13,3	28,3	13,4	28,3	19,9	0,8	0,8		EE21 EE41/33C
E42/15	15,7	29,2	12,6	29,2	29,3	0,9	1,0	E42/15	FEE42A
E42/20	20,5	29,2	12,6	29,2	29,3	0,9	1,0	E42/20	FEE42B
E47/16	16,2	31,4	16,2	31,4	23,8	0,8	0,8		EE625 EE47/39
E50/15	15,3	34,0	15,3	34,0	24,7	0,8	0,8		EE50A EE50
E55/21	21,7	37,1	17,6	37,1	36,7	1,0	1,0	E55/21	FEE55,2A
E55/25	25,7	37,1	17,6	37,1	36,7	1,0	1,0	E55/25	FEE55,2B
E60/16	16,3	43,3	16,3	43,3	27,1	0,8	0,8		FEE60A EE60
E65/27	27,8	43,7	20,5	43,7	44,1	1,0	1,0	E65/27	FEE65,2

Annex A
(normative)

Derived standards

The primary standard given in the main text establishes values for the main dimensions of E-cores and coil formers and enables full interchangeability to be achieved for components complying with that standard.

Parties interested in making or using E-cores may find it desirable to lay down local standards for everyday use, which show the dimensions and tolerances in greater detail than Clause 3, and which correspond to the state of the art in that area. These are known as derived standards. When doing so, care should be taken not to exclude any other type of E-core meeting the IEC primary standard, which would also satisfy the performance specification valid for a specific case.

It should be noted that whilst a component complying with a derived standard will comply with the requirements of Clause 3 for the primary standard and therefore permit core assemblies and coil formers to be freely interchanged, the parts thereof may not necessarily be interchangeable.

When requirements would lead to the establishing of a national standard, the relevant national standardization body is strongly requested to insert a note in such a national standard that:

a) the standard is in accordance with the dimensional requirements of this standard, but that more details are given in order to promote the practical use of the standard;

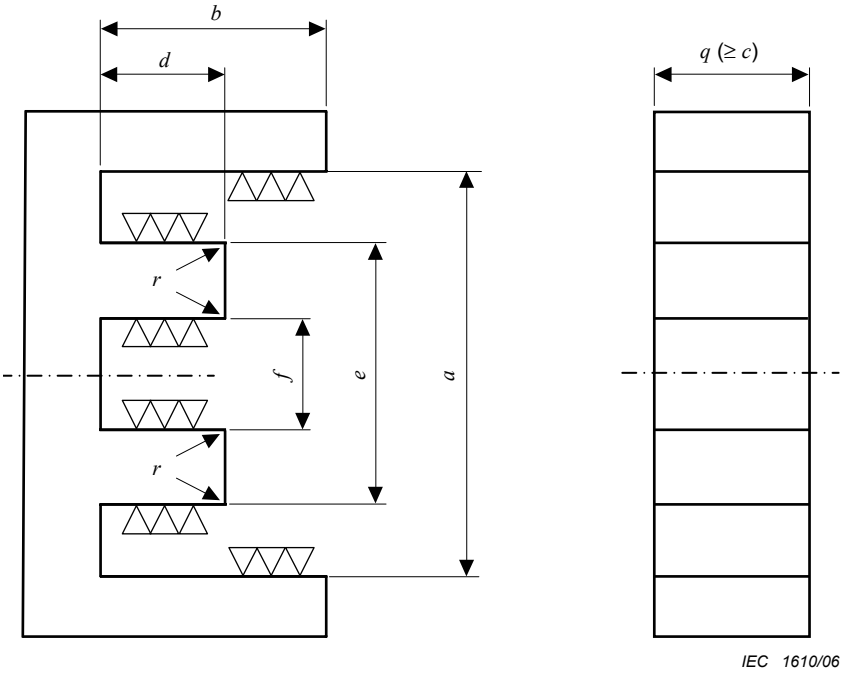
b) other solutions are possible within the framework of this IEC standard, and should not be excluded if the resulting cores and coil formers are functionally interchangeable with those according to the national standard.

Annex B
(normative)

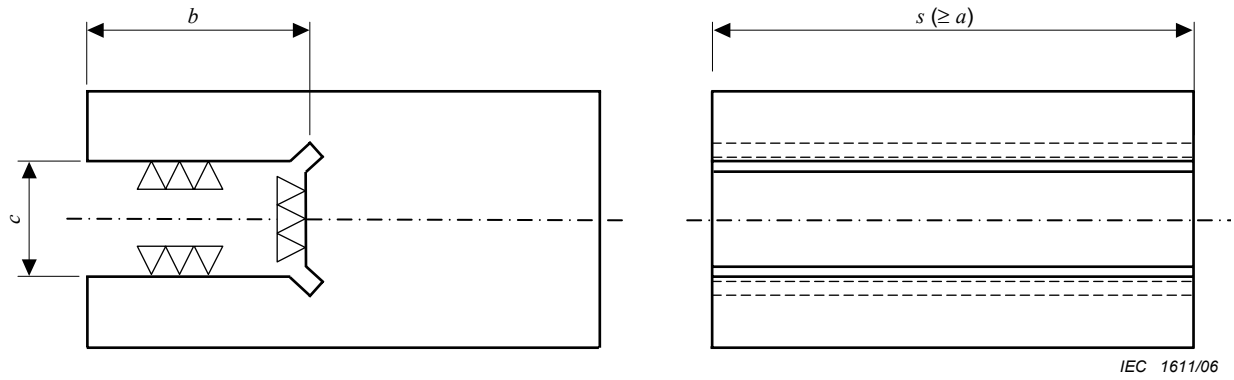
An example of a gauge to check the dimensions of E-cores meeting the IEC primary standard

B.1 General

The gauges shall be in accordance with Figure B.1, Table B.1 and its associated figure.



(Gauge to check the dimensions of limbs and the height)



(Gauge to check the dimensions of width)

Figure B.1 – Gauge dimensions

Table B.1 – Gauge dimensions

Size	*a* mm		*b* mm	*c* mm		*d* mm		*e* mm		*f* mm		*r* mm	Old edition IEC references (IEC 61246)	Industrial references
	Min.	Max.	Min.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
E8/2	8,155	8,165	5,0	2,405	2,415	2,85	2,86	5,585	5,595	2,405	2,415	0,5	E8/2	FEE8
E8,3/4	8,605	8,615	5,0	3,805	3,815	2,90	2,91	6,085	6,095	2,405	2,415	0,5		FEE8,3 EE8
E8,8/2	9,405	9,415	5,0	2,025	2,035	2,03	2,04	5,055	5,065	2,025	2,035	0,5	E8,8/2	FEE9
E10/3	10,205	10,215	6,0	3,005	3,015	3,50	3,51	6,985	6,995	3,005	3,015	0,5	E10/3	FEE10
E10,2/5	10,505	10,515	6,0	4,905	4,915	4,05	4,06	7,585	7,595	2,605	2,615	0,5		FEE10,2 EE10/11
E13/4	13,105	13,115	7,0	3,705	3,715	4,50	4,51	8,885	8,895	3,705	3,715	0,5	E13/4	FEE12,7A EF12,6
E13/6	13,205	13,215	7,0	6,305	6,315	4,50	4,51	9,985	9,995	2,905	2,915	0,5		EE13
E16/4,8	16,305	16,315	8,0	5,005	5,015	5,00	5,01	11,685	11,695	4,205	4,215	0,5		FEE16A EE16
E16/5	16,705	16,715	9,0	4,705	4,715	5,70	5,71	11,285	11,295	4,705	4,715	0,5	E16/5	FEE16,1 EF16
E19/5	19,405	19,415	9,0	5,205	5,215	5,40	5,41	14,185	14,195	4,705	4,715	0,5		FEE19A EE19
E19,3/4,8	19,615	19,625	9,0	4,885	4,895	5,59	5,60	14,035	14,045	4,835	4,845	0,5		EE-187 EE19/16
E20/6	20,805	20,815	11,0	5,905	5,915	7,00	7,01	14,085	14,095	5,905	5,915	0,7	E20/6	FEE20,1 EF20
E25/7	25,805	25,815	13,0	7,505	7,515	8,70	8,71	17,485	17,495	7,505	7,515	0,8	E25/7	FEE25,1 EF25
E25,4/6	25,905	25,915	11,0	6,655	6,665	6,20	6,21	18,585	18,595	6,655	6,665	0,8		FEE25,4A
E25,4/6,3	25,905	25,915	11,0	6,485	6,495	6,22	6,23	18,535	18,545	6,605	6,615	0,8		EE24/25 EE25/19
E30/11	30,605	30,615	14,0	11,005	11,015	7,90	7,91	19,485	19,495	11,005	11,015	0,8		FEE30A EE30
E32/9	32,905	32,915	17,0	9,505	9,515	11,20	11,21	22,685	22,695	9,505	9,515	1,0	E32/9	FEE32,1 EF32
E33/13	33,905	33,915	15,0	13,005	13,015	9,00	9,01	23,085	23,095	10,005	10,015	1,0		FEE33A EE33
E34,6/9	35,305	35,315	15,0	9,725	9,735	9,51	9,52	24,985	24,995	9,705	9,715	1,0		EE375 EE35/28B
E35/10	35,705	35,715	17,0	10,305	10,315	9,20	9,21	24,485	24,495	10,305	10,315	1,0		FEE35A EE35
E40/11	41,875	41,885	18,0	11,005	11,015	10,00	10,01	27,485	27,495	11,005	11,015	1,0		FEE40A EE40
E41/13	41,875	41,885	18,0	12,955	12,965	10,08	10,09	28,535	28,545	13,105	13,115	1,0		EE21 EE41/33C
E42/15	43,005	43,015	22,0	15,205	15,215	14,80	14,81	29,485	29,495	12,205	12,215	1,0	E42/15	FEE42A

Table B.1 *(continued)*

Size	*a* mm		*b* mm	*c* mm		*d* mm		*e* mm		*f* mm		*r* mm	Old edition IEC references (IEC 61246)	Industrial references
	Min.	Max.	Min.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
E42/20	43,005	43,015	22,0	20,005	20,015	14,80	14,81	29,485	29,495	12,205	12,215	1,0	E42/20	FEE42B
E47/16	47,885	47,895	20,0	15,875	15,885	12,07	12,08	31,705	31,715	15,875	15,885	1,0		EE625 EE47/39
E50/15	51,005	51,015	22,0	15,005	15,015	12,50	12,51	34,285	34,295	15,005	15,015	1,0		EE50A EE50
E55/21	56,205	56,215	28,0	21,005	21,015	18,50	18,51	37,485	37,495	17,205	17,215	1,0	E55/21	FEE55,2A
E55/25	56,205	56,215	28,0	25,005	25,015	18,50	18,51	37,485	37,495	17,205	17,215	1,0	E55/25	FEE55,2B
E60/16	61,105	61,115	23,0	16,005	16,015	13,70	13,71	43,685	43,695	16,005	16,015	1,0		FEE60A EE60
E65/27	66,505	66,515	33,0	27,405	27,415	22,20	22,21	44,185	44,195	20,005	20,015	1,5	E65/27	FEE65,2
NOTE The manufactures may use more precise gauges or gauges for more precise core tolerances.														

B.2 Procedure and requirements

To check the winding space, the gauge shall be fully inserted into the core without forcing; when fully inserted, the gauge shall meet the pole faces of the outer legs.

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