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AMENDMENT 4
2007-07-01

Series 1 freight containers — Handling and securing

AMENDMENT 4: 45 ft containers

Conteneurs de la série 1 — Manutention et fixation

AMENDEMENT 4: Conteneurs de 45 ft



Reference number
ISO 3874:1997/Amd.4:2007(E)

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

Amendment 4 to ISO 3874:1997 was prepared by Technical Committee ISO/TC 104, *Freight containers*, Subcommittee SC 1, *General purpose containers*.

The purpose of this amendment is to include 45 foot containers in ISO 3874:1997.

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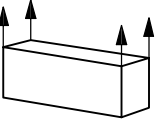
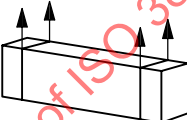
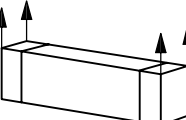
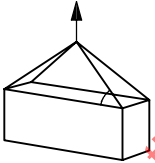
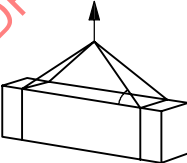
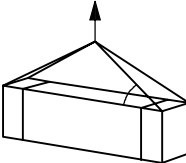
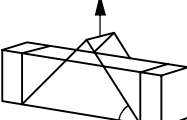
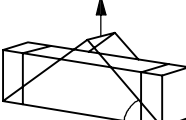
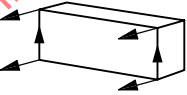
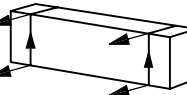
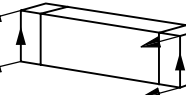
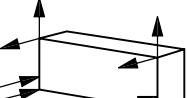
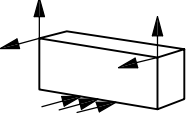
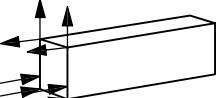
Series 1 freight containers — Handling and securing

AMENDMENT 4: 45 ft containers

Page 5

Replace Table 1 with the following:

Table 1 — Summary of specified lifting methods

Subclause	Description	Container types A, B, C and D	Container type E at 40 ft position	Container type E at 45 ft position
6.2	Top lift spreader			
6.3	Top lift sling			
6.4	Bottom lift sling			
6.5	Side lift: method 1			
6.6	Side lift: method 2			
6.7	Side lift: method 3		Not applicable to type E (45 ft) containers	Not applicable to type E (45 ft) containers
8	End lift: method 1		Not applicable to type E (45 ft) containers	Not applicable to type E (45 ft) containers
6.9	End lift: method 2		Not applicable to type E (45 ft) containers	Not applicable to type E (45 ft) containers
6.10	Fork-lift		Not applicable to type E (45 ft) containers	Not applicable to type E (45 ft) containers

Replace the existing Table 2 by the following, which includes container types 1EE and 1EEE:

Table 2 — Size designation referred to in Tables 3 to 12

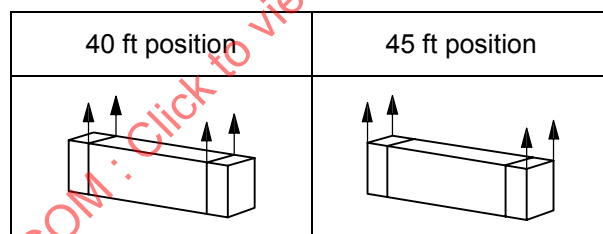
Nominal length		External height			
m	ft	< 2 438 mm (8 ft 0 in)	2 438 mm (8 ft 0 in)	2 591 mm (8 ft 6 in)	2 896 mm (9 ft 6 in)
13,716	45	—	—	1EE	1EEE
12	40	1AX	1A	1AA	1AAA
9	30	1BX	1B	1BB	1BBB
6	20	1CX	1C	1CC	—
3	10	1DX	1D	—	—
NOTE All units have a nominal width of 2 438 mm (8 ft 0 in).					

6.2 Top lift spreader

Make the existing Figure 2 into Figure 2a) with the caption:

a) Lifting containers other than type E

Add a new part b) to Figure 2:



b) Lifting type E containers

Figure 2 — Lifting by means of a top lift spreader

Replace the existing subclause 6.2.2 by the following:

6.2.2 Lifting devices shall be properly engaged. Gathering devices shall impinge on corner or intermediate fittings only.

Replace the existing Table 3 by the following, which includes container types EEE and EE.

Table 3 — Applicability of top lift spreaders

Key:  Allowed  Not allowed (or not applicable)

Empty container													Container type	ISO 6346	Loaded container																	
EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX			D	DX	EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX	D	DX	
															General purpose	GP,VN																
															Open top	UT																
															Bulk: non-pressurized/box	BU																
															Thermal	RE,RT RS																
															Tank for liquids and gases	TN,RT TG																
															Bulk: non-pressurized/hopper pressurized	BK																
															Platform	PL					1)				1)			1)		1)		
														Platform -based	complete and fixed ends	PF																
															fixed free-standing posts	PF																
															complete and folding ends, erected condition	PC																
															folding free-standing posts, erected condition	PC																
															complete and folding ends, folded condition	PC																
															folding free-standing posts, folded condition	PC																
														Platform-based with complete superstructure and open-sided	PS																	

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1) Top lift possible with extensions only.

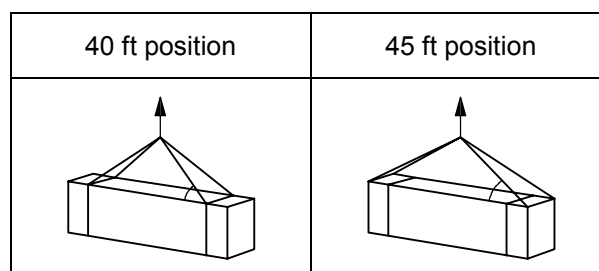
1) Top lift possible with extensions only.

6.3 Top lift sling

Make the existing Figure 3 into Figure 3a) with the caption:

a) Lifting containers other than type E

Add a new part b) to Figure 3:



b) Lifting type E containers

Figure 3 — Lifting by means of a top lift sling

Replace the existing subclause 6.3.1 by the following (to include "intermediate"):

6.3.1 The container is lifted by all four top corner or intermediate fittings with forces applied other than vertically.

Page 8, Table 4

Replace the existing Table 4 by the following, which includes container types EEE and EE:

Table 4 — Applicability of top slings

Key: ☐ Allowed ☒ Not allowed (or not applicable)

Empty container													Container type	ISO 6346	Loaded container																	
EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX			D	DX	EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX	D	DX	
															General purpose	GP, VN															2)	
															Open top	UT															2)	2)
															Bulk: non-pressurized/box	BU															2)	2)
1)	1)	1)	1)	1)		1)	1)	1)		1)	1)		1)		Thermal	RE, RT RS															2)	
															Tank for liquids and gases	TN, RT TG															2)	2)
															Bulk: non-pressurized/hopper pressurized	BK															2)	2)
															Platform	PL																
															complete and fixed ends	PF																
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															complete and folding ends, folded condition	PC																
															folding free-standing posts, folded condition	PC																
															Platform-based with complete superstructure and open-sided	PS																
1) Centre of gravity may be eccentric.																																
2) For 1D and 1DX containers, the lifting forces shall be applied at an angle not less than 60° to the horizontal, see Figure 4.																																
NOTE Centre of gravity may be mobile, e.g. liquid, bulk or hanging loads.																																

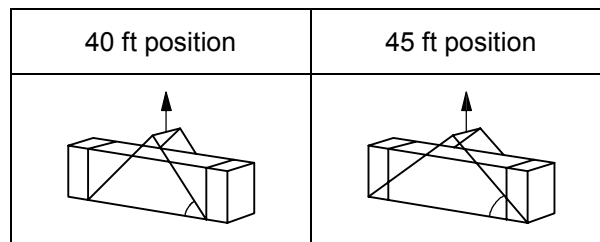
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6.4 Bottom lift sling

Make the existing Figure 5 into Figure 5a) with the caption:

a) Lifting containers other than type E

Add a new part b) to Figure 5:



b) Lifting type E containers

Figure 5 — Lifting by means of a bottom lift sling

Replace the existing subclause 6.4.1 by the following (to include "intermediate"):

6.4.1 The container is lifted from side apertures of four bottom corner or intermediate fittings by means of slings. The bottom sling attachment shall bear on the corner or intermediate fittings only and should be such to exert lifting forces not more than 38 mm away from the outer face of the corner fittings (see Figure 6).

Page 10, Table 5

Replace the existing Table 5 by the following, which includes container types EEE and EE:

Table 5 — Applicability of bottom lift slings

Key: ☐ Allowed ☒ Not allowed (or not applicable)

Empty container													Container type		ISO 6346	Loaded container																
EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX				D	DX	EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX	D	DX
														General purpose	GP,VN																	
														Open top	UT																	
														Bulk: non-pressurized/box	BU	2)	2)	2)	2)	2)	2)	2)	2)	2)	2)	2)	2)	2)	2)	2)	2)	
1)	1)	1)	1)	1)		1)	1)	1)		1)	1)		1)	Thermal	RE,RT RS	1) 2)	1) 2)	1) 2)	1) 2)	1) 2)		1) 2)	1) 2)	1) 2)		1) 2)	1) 2)	1) 2)	1) 2)			
														Tank for liquids and gases	TN,RT TG																	
														Bulk: non-pressurized/hopper pressurized	BK																	
														Platform	PL																	
													Platform -based	complete and fixed ends	PF																	
														fixed free-standing posts	PF																	
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														complete and folding ends, folded condition	PC																	
														folding free-standing posts, folded condition	PC																	
													Platform-based with complete superstructure and open-sided	PS																		
1) Centre of gravity may be eccentric.																																
2) Centre of gravity may be mobile, e.g. liquid, bulk or hanging load.																																

Page 10, Table 6

Replace the existing Table 6 by the following, which includes container types 1EEE and 1EE:

Table 6 — Lifting angles for loaded containers

Container size designation	Lifting angle, α , min.
1AAA ; 1AA ; 1A ; 1AX ; 1EEE ; 1EE	30°
1BBB; 1BB; 1B; 1BX	37°
1CC; 1C; 1CX	45°
1D; 1DX	60°

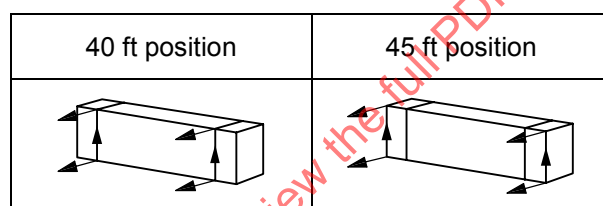
Pages 10 and 11

6.5 Side lift: Method 1

Make the existing Figure 7 into Figure 7a) with the caption:

a) Lifting containers other than type E

Add a new part b) to Figure 7:



b) Lifting type E containers

Figure 7 — Lifting by means of a side lift (method 1)

Replace the existing subclause 6.5.1 by the following (to include "intermediate"):

6.5.1 The container is lifted by means of a side lift frame designed to lift a container by the two bottom corner or intermediate fittings of one side and to restrain it by the two top corner or intermediate fittings of the same side.

Page 11, Table 7

Replace the existing Table 7 by the following, which includes container types EEE and EE:

Table 7 — Applicability of side lift (method 1)Key: ☐ Allowed ☒ Not allowed (or not applicable)

Empty container													Container type	ISO 6346	Loaded container																	
EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX			D	DX	EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX	D	DX	
															General purpose	GP, VN																
															Open top	UT																
															Bulk: non-pressurized/box	BU											2)	2)	2)	2)	2)	
1)	1)	1)	1)	1)		1)	1)	1)		1)	1)	1)			Thermal	RE, RT RS											2)	2)		2)	2)	
															Tank for liquids and gases	TN, RT TG											2)	2)	2)	2)	2)	
															Bulk: non-pressurized/hopper pressurized	BK											2)	2)	2)	2)	2)	
															Platform	PL																
														Platform based	complete and fixed ends	PF																
															fixed free-standing posts	PF																
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															complete and folding ends, folded condition	PC																
															folding free-standing posts, folded condition	PC																
														Platform-based with complete superstructure and open-sided	PS																	

1) Centre of gravity may be eccentric.

2) Centre of gravity may be mobile, e.g. liquid, bulk or hanging load.

1) Centre of gravity may be eccentric.

2) Centre of gravity may be mobile, e.g. liquid, bulk or hanging load.

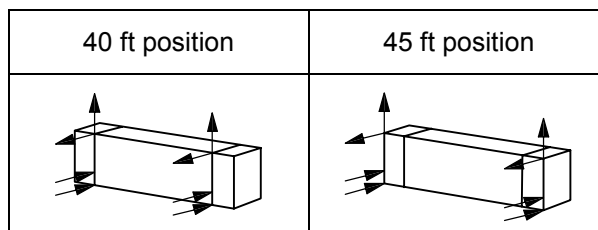
Pages 11 and 12

6.6 Side lift: Method 2

Make the existing Figure 8 into Figure 8a) with the caption:

a) Lifting containers other than type E

Add a new part b) to Figure 8:

**b) Lifting type E containers****Figure 8 — Lifting by means of a side lift (method 2)**

Replace the existing subclause 6.6.1 by the following (to include "intermediate"):

6.6.1 The container is lifted by means of a side lift frame designed to lift a container by the two top corner or intermediate fittings of one side and to take the reaction forces on the bottom corner or intermediate fittings of the same side or on suitable corner post areas above those corner fittings (see Figure 9).

Page 12, Table 8

Replace the existing Table 8 by the following, which includes container types EEE and EE:

Table 8 — Applicability of side lift (method 2)

Key: ☐ Allowed ☐ Not allowed (or not applicable)

Empty container													Container type	ISO 6346	Loaded container																	
EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX			D	DX	EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX	D	DX	
															General purpose	GP, VN																
															Open top	UT																
															Bulk: non-pressurized/box	BU										2)	2)	2)	2)	2)		
1)	1)	1)	1)	1)		1)	1)	1)		1)	1)		1)		Thermal	RE, RT RS											2)	2)		2)		
															Tank for liquids and gases	TN, RT TG											2)	2)	2)	2)	2)	
															Bulk: non-pressurized/hopper pressurized	BK											2)	2)	2)	2)	2)	
															Platform	PL																
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														Platform-based with complete superstructure and open-sided	PS																	
1) Centre of gravity may be eccentric.																																
2) Centre of gravity may be mobile, e.g. liquid, bulk or hanging loads.																																
NOTE When using this method, care should be taken to ensure that under dynamic conditions the container is not subjected to undue deflection or damage.																																

Page 13

6.7 Side lift: Method 3

Insert a new paragraph in 6.7.1:

Side lift (method 3) is not allowed for EE and EEE containers.

Replace the existing Table 9 by the following, which includes container types EEE and EE:

Table 9 — Applicability of side lift (method 3)

Key:  Allowed  Not allowed (or not applicable)

Empty container													Container type	ISO 6346	Loaded container																	
EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX			D	DX	EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX	D	DX	
															General purpose	GP,VN																
															Open top	UT																
															Bulk: non-pressurized/box	BU																
		1)	1)	1)		1)	1)	1)		1)	1)	1)			Thermal	RE,RT RS																
															Tank for liquids and gases	TN,RT TG																
															Bulk: non-pressurized/hopper pressurized	BK																
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															complete and folding ends, folded condition	PC																
															folding free-standing posts, folded condition	PC																
														Platform-based with complete superstructure and open-sided	PS																	
1) Centre of gravity may be eccentric.																																
Side lift (method 3) is not allowed for EE and EEE containers.																																
NOTE The use of piggybackers has never been recognized by ISO and may cause damage due to excessive stresses to containers operated in such a way.																																

6.8 End lift: Method 1

Insert a new paragraph in 6.8.1:

End lift (method 1) is not allowed for EE and EEE containers.

Replace the existing Table 10 by the following, which includes container types EEE and EE:

Table 10 — Applicability of end lift (method 1)

Key:



Allowed



Not allowed (or not applicable)

Empty container													Container type	ISO 6346	Loaded container															
EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX			D	DX	EEE	EE	AAA	AA	A	AX	BBB	BB	B	BX	CC	C	CX	D
														General purpose	GP, VN															
														Open top	UT															
														Bulk: non-pressurized/box	BU															
														Thermal	RE, RT RS															
														Tank for liquids and gases	TN, RT TG															
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														folding free-standing posts, erected condition	PC															
														complete and folding ends, folded condition	PC															
														folding free-standing posts, folded condition	PC															
													Platform-based with complete superstructure and open-sided	PS																
End lift (method 1) is not allowed for EE and EEE containers.																														
NOTE When using this method, care should be taken to ensure that under dynamic conditions the container is not subjected to undue deflection or damage.																														

6.9 End lift: Method 2

Insert a new paragraph in 6.9.1:

End lift (method 2) is not allowed for EE and EEE containers.