



TRISTONE



## Annex 1-1: Global Supplier Packaging Catalogue

Revision 1.0

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## Pallets&Covers



### Europe

Pallet type	Picture	Type	Used for transport type:	Length (mm)	Width (mm)	Height (mm)	Payload (kg)
Wooden		EURO pallet	Road	1200	800	144	1500
		One way	Road	800	600	144	500
		One way	Road	1200	800	144	1500
		One way	Road	1000	1200	144	1500
		CP1	Road	1000	1200	138	1000
		CP2	Road	800	1200	138	1000
		CP3	Road	1140	1140	138	1000
		VDA LT1108	Overseas	1140	790	134	500
		VDA LT1110	Overseas	1140	980	134	500
		ISO pallet	Overseas-North America	1016	1219	140	n/a
		ISO pallet	Overseas-North America/Asia	1067	1067	140	n/a
		ISO pallet	Overseas-Asia	1000	1200	140	n/a
		ISO pallet	Overseas-Asia	1100	1100	140	n/a
		ISO pallet	Overseas-Australia	1165	1165	140	n/a
Plastic		Light 6080	Road	800	600	145	500
		Medium 6080	Road	800	600	167	2000
		Light 1208	Road	1200	800	145	2500
		Medium 1208	Road	1200	800	150	3000
		Heavy 1208	Road	1200	800	150	4000
		Light 1210	Road	1200	1000	147	1500
		Medium 1210	Road	1200	800	155	4500
		ESD 1208	Road	1200	800	152	4000
		ESD 1210	Road	1200	1000	152	4000
		D 0806	Road	808	608	40	n/a
Pallet Cover		A 1208 black	Road	1230	817	87	n/a
		VDA 1208 blue	Road	1208	808	94	n/a
		A 1210 black	Road	1229	1030	84	n/a
		VDA 1210 blue	Road	1229	1030	84	n/a
		ESD cover 1208	Road	1210	810	84	n/a
		ESD cover 1210	Road	1210	1010	84	n/a
		Frame 1208	Road	1200	800	200	n/a

### North America

Pallet type	Picture	Type	Used for transport type:	Length (in)	Width (in)	Height (in)	Payload (lbs)
Wooden		One way	Road	48	45	5	>1102
		One way	Road	36	32	5	>1102
		One way	Road	32	30	5	>1102
Plywood		Expak frame pallet	Overseas	1200	800	870	n/a

### China

Pallet type	Picture	Type	Used for transport type:	Length (mm)	Width (mm)	Height (mm)	Payload (kg)
Wooden		12MM Thick	Overseas/ Warehouse	1200	1000	150	500
		12MM Thick	Overseas/ Warehouse	1000	800	150	500
		12MM Thick	Overseas/ Warehouse	1200	1100	150	500
Plywood		15MM Thick	Domestic	1000	800	150	500
		12MM Thick	Domestic	1600	1150	150	800
		15MM Thick	Domestic	1200	800	150	600
		15MM Thick	Domestic	1000	800	150	600
		15MM Thick	Domestic	1200	1100	150	600



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## Wooden Pallet General information

**Material:**

Solid timber

**Structure:**

Four-way pallet (with forklift pockets on 4 sides), minimum of 3 runners

Use of a Full Perimeter Pallet must be agreed bilaterally, as these cannot be picked up with hand lift trucks and thus cannot be used universally

The use of form-pressed chipboard pallets is not admissible (spot loads on stacking).

**Load-bearing capacity:**

Load-bearing capacity with large-area loading min. 500 kg (1102 lbs) per pallet

Load-bearing capacity with large-area loading static min. 2000 kg (4409 lbs) in stack

Load-bearing capacity with large-area loading during transport min. 1000 kg (2204 lbs.) in stack.

Suitable for high-rack storage with strip load min. 500 kg (1102 lbs)

(Pallet supplier must provide written confirmation/certification of the minimum pallet load-bearing capacity).

**Board thickness and Spacing:**

Minimum thickness of used boards is 18 mm (0,71 in).

Gaps between the deck boards shall not exceed double size of board thickness, e.g. thickness = 18 mm (0,71 in) --> gap max. 36 mm (1.42 in).

Except of VDA LT1108 and LT1110 pallets.

**Unless otherwise stated, all pallets must be subject to standards:**

1. UIC 435-2, 435-5, 435-6 (Europe,Asia, Oversea)
2. ASTM D1185 (North America, Oversea)
3. VDA 4525 (Oversea)

Exceptions from these standards must be confirmed by Tristone Flowtech.

Pallet is considered as damaged and prohibited to use when the following conditions are met:

1. Missing board:



2. Twisted inner/outer blocks must not exceed more than 10 mm



3. Inner/outer block is missing or split



4. The board is broken longitudinally or transversely



5. Board is split so that more than one nail shank is visible



Also the following needs to be considered:

6. Load capacity cannot be guaranteed (rotten, heavily chipped or damaged reinforcement board).
7. The pallet is so heavily soiled that contamination of the load could occur.
8. A strong split is evident on several blocks.
9. It is obvious that unacceptable parts have been used (e.g. boards are too thin, blocks are too small).

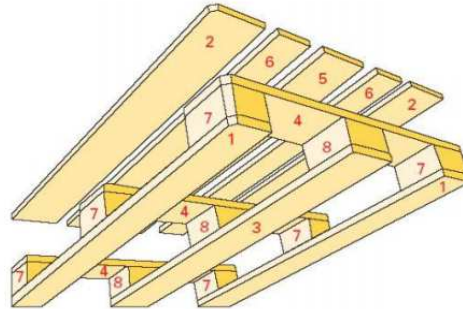
**Health and Safety:**

To avoid injuries by manual handling:

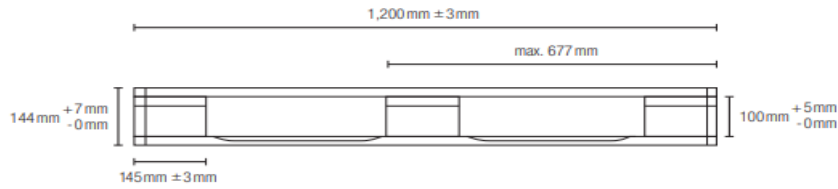
1. Protruding nails on blocks or boards are not permitted.
2. No splinters caused by using are permitted.

Basic construction of standard pallet - 1200x800x144 mm (31.5x47.24 inx5.71 in)

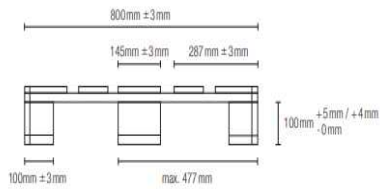
Part	Construction part description	Qty of parts	Length (mm)	Width (mm)	Thickness (mm)
1	Floor board	2	1200 +3/-0	100 +3/-3	22 +2/-0
2	Side top board	2	1200 +3/-0	145 +5/-3	22 +2/-0
3	Middle floor board	1	1200 +3/-0	145 +5/-3	22 +2/-0
4	Reinforcement	3	800 +3/-0	145 +5/-3	22 +3/-0
5	Middle top board	1	1200 +3/-0	145 +5/-3	22 +2/-0
6	Inner top board	2	1200 +3/-0	100 +3/-3	22 +2/-0
7	Outer block	6	145 +5/-3	100 +3/-3	78 +1/-0
8	Inner block	3	145 +5/-3	145 +5/-3	78 +1/-0



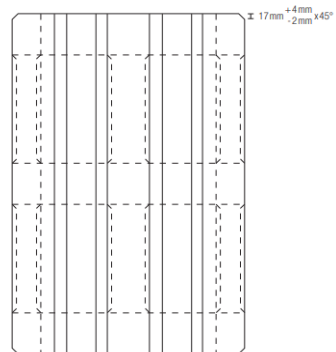
1200 mm side:



800 mm side:



Top view:

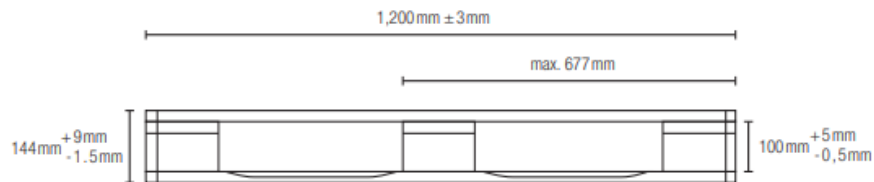


Basic construction of standard pallet - 1000x1200x144 mm (39.37x47.24x5.67 in)

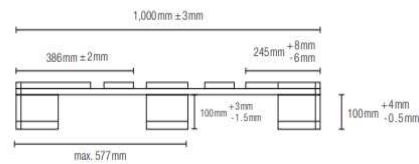
Part	Construction part description	Qty of parts	Length (mm)	Width (mm)	Thickness (mm)
1	Floor board	2	1200 +3/-0	100 +3/-3	22 +2/-0
2	Side top board	2	1200 +3/-0	145 +5/-3	22 +2/-0
3	Middle floor board	1	1200 +3/-0	145 +5/-3	22 +2/-0
4	Reinforcement	3	1000 +3/-0	145 +5/-3	22 +3/-0
5	Middle top board	1	1200 +3/-0	145 +5/-3	22 +2/-0
6	Inner top board	4	1200 +3/-0	100 +3/-3	22 +2/-0
7	Outer block	6	145 +5/-3	100 +3/-3	78 +1/-0
8	Inner block	3	145 +5/-3	145 +5/-3	78 +1/-0



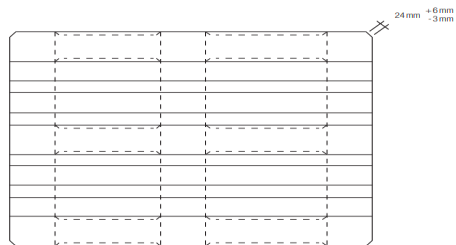
1200 mm side:



1000 mm side:



Top view:

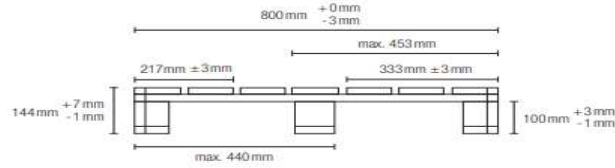


Basic construction of standard pallet - 800x600x144 mm (31.5x23.62x5.67 in)

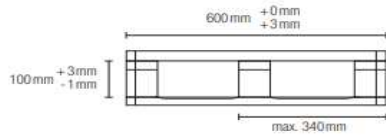
Part	Construction part description	Qty of parts	Length (mm)	Width (mm)	Thickness (mm)
1	Floor board	2	600 +3/-0	80 +3/-3	22 +2/-0
2	Side top board	2	600 +3/-0	100 +3/-3	22 +2/-0
3	Middle floor board	1	600 +3/-0	80 +3/-3	22 +2/-0
4	Reinforcement	3	800 +3/-0	80 +3/-3	22 +3/-0
5	Middle top board	1	600 +3/-0	100 +3/-3	22 +2/-0
6	Inner top board	4	600 +3/-0	100 +3/-3	22 +2/-0
7	Outer block	6	80 +3/-3	80 +3/-3	78 +1/-0
8	Inner block	3	80 +3/-3	80 +3/-3	78 +1/-0



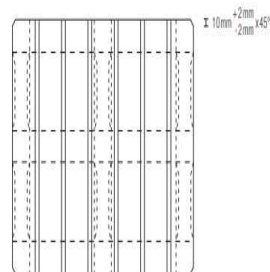
800 mm side:



600 mm side:

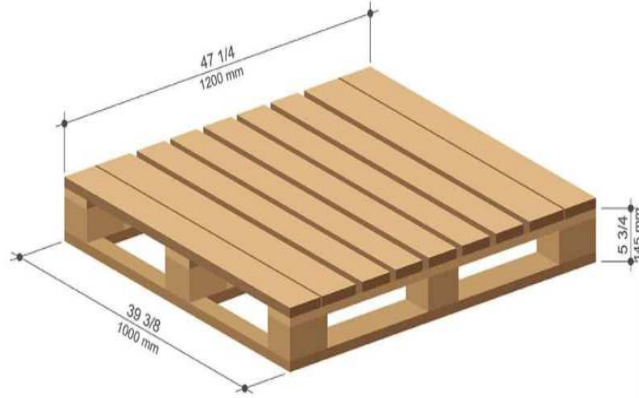


Top view:

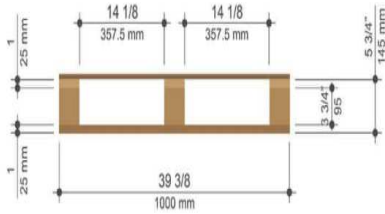


Basic construction of standard pallet - 1200x1000x162 mm (47.24x39.37x6.38 in)

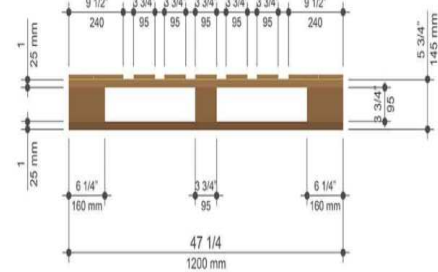
Part	Construction part description	Qty of parts	Length (mm)	Width (mm)	Thickness (mm)
1	Floor board	2	1000 +3/-0	110 +3/-3	22 +2/-0
2	Side top board	2	1000 +3/-0	110 +3/-3	22 +2/-0
3	Middle floor board	3	980 +3/-0	95 +3/-3	22 +2/-0
4	Reinforcement	3	1200 +3/-0	95 +3/-3	22 +3/-0
5	Middle top board	5	1000 +3/-0	95 +3/-3	22 +2/-0
6	Inner top board	2	1000 +3/-0	130 +3/-3	22 +2/-0
7	Outer block	6	145 +5/-3	95 +3/-3	95 +1/-0
8	Inner block	3	145 +5/-3	95 +5/-3	95 +1/-0



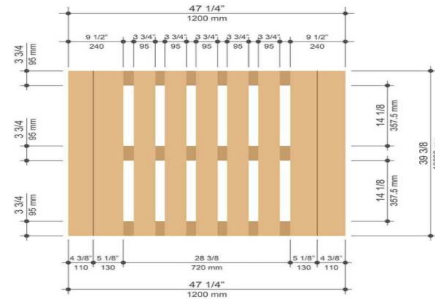
1000 mm side:



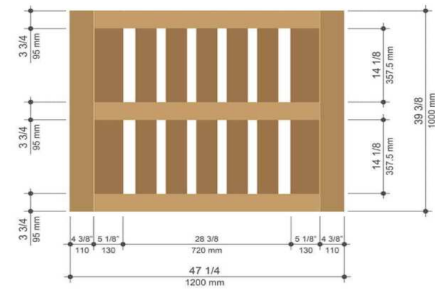
1200 mm side:



Top view:



Bottom view:



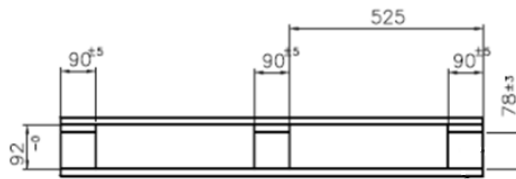


Basic construction of oversea pallet VDA LT1108 - 1140x790x132 mm (44.89x31.1x5.2 in)

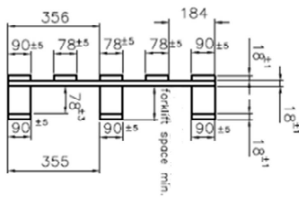
Part	Construction part description	Qty of parts	Length (mm)	Width (mm)	Thickness (mm)
1	Floor board	2	1140 +3/-0	90 +3/-3	18 +2/-0
2	Side top board	2	1140 +3/-0	90 +3/-3	18 +2/-0
3	Middle floor board	1	1140 +3/-0	90 +3/-3	18 +2/-0
4	Reinforcement	3	790 +3/-0	90 +5/-3	18 +2/-0
5	Middle top board	1	1140 +3/-0	78 +3/-3	18 +2/-0
6	Inner top board	2	1140 +3/-0	78 +3/-3	18 +2/-0
7	Outer block	6	90 +5/-3	90 +3/-3	78 +1/-0
8	Inner block	3	90 +5/-3	90 +5/-3	78 +1/-0



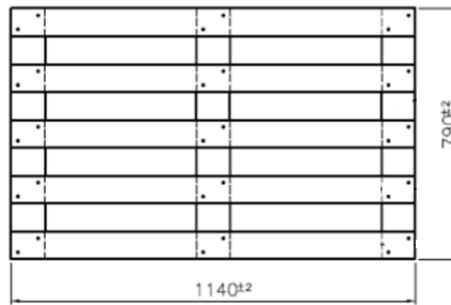
1140 mm side:



790 mm side:



Top view:

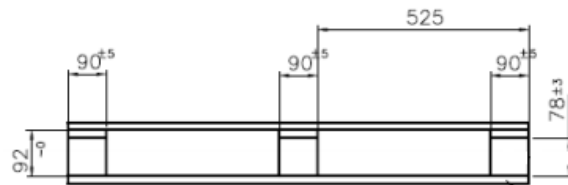


Basic construction of oversea pallet VDA LT1110 - 1140x980x132 mm (44.89x38.58x5.2 in)

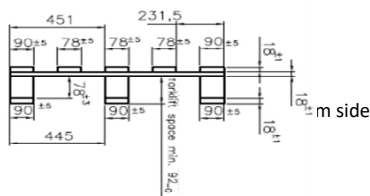
Part	Construction part description	Qty of parts	Length (mm)	Width (mm)	Thickness (mm)
1	Floor board	2	1140 +3/-0	90 +3/-3	18 +2/-0
2	Side top board	2	1140 +3/-0	90 +3/-3	18 +2/-0
3	Middle floor board	1	1140 +3/-0	90 +3/-3	18 +2/-0
4	Reinforcement	3	980+3/-0	90 +5/-3	18 +2/-0
5	Middle top board	1	1140 +3/-0	78 +3/-3	18 +2/-0
6	Inner top board	2	1140 +3/-0	78 +3/-3	18 +2/-0
7	Outer block	6	90 +5/-3	90 +3/-3	78 +1/-0
8	Inner block	3	90 +5/-3	90 +5/-3	78 +1/-0



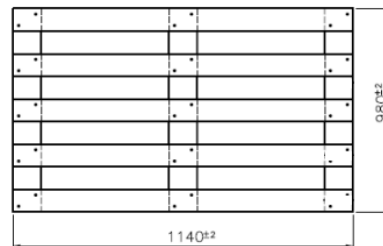
1140 mm side:



980 mm side:



Top view:





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## Returnables

### Europe

Returnable packaging type	Picture	Type	Outer length (mm)	Outer width (mm)	Outer height (mm)	Outer height - collapsed (mm)	Inner length (mm)	Inner width (mm)	Inner height (mm)	Weight (kg)	Capacity (litre)		
KLT		RL-KLT 3147	300	200	147	n/a	243	162	130	0,57	5,1		
		RL-KLT 4147	400	300	147	n/a	346	260	130	1,08	11,8		
		RL-KLT 4213	400	300	213	n/a	346	260	196	1,42	17,9		
		RL-KLT 4280	400	300	280	n/a	346	260	262	1,7	24,1		
		RL-KLT 6147	600	400	147	n/a	544	359	130	1,82	25,3		
		RL-KLT 6213	600	400	213	n/a	544	359	176	2,27	38,9		
		RL-KLT 6280	600	400	280	n/a	544	359	262	2,67	51,9		
		R-KLT 3215	300	200	147	n/a	243	162		0,57	5,3		
		R-KLT 4315	400	300	147	n/a	346	265	110	1,29	10,1		
		R-KLT 4322	400	300	213	n/a	346	265	176	1,61	16,2		
		R-KLT 4329	400	300	280	n/a	346	265	242	1,88	22,3		
		R-KLT 6415	600	400	147	n/a	544	364	110	2,1	21,7		
		R-KLT 6422	600	400	213	n/a	544	364	176	2,6	34,9		
		R-KLT 6429	600	400	280	n/a	544	364	242	2,97	48		
Eurobox		Euro2145	200	150	145	n/a	160	110	140	0,275	3		
		Euro 3212	300	200	120	n/a	257	158	107	0,46	4		
		Euro 3215	300	200	145	n/a	260	155	134	0,54	5		
		Euro 4375	400	300	75	n/a	355	255	65	0,48	6		
		Euro 4312	400	300	120	n/a	356	256	115	0,78	9		
		Euro 4317	400	300	175	n/a	356	256	170	0,93	15		
		Euro 4323	400	300	235	n/a	356	256	222	1,16	20		
		Euro 6475	600	400	75	n/a	556	356	62	1,16	12		
		Euro 6412	600	400	120	n/a	556	356	107	1,43	21		
		Euro 6417	600	400	175	n/a	556	356	162	1,65	32		
		Euro 6423	600	400	235	n/a	556	356	222	1,95	45		
		Euro 6432	600	400	320	n/a	556	356	307	2,75	61		
		Euro 6441	600	400	410	n/a	556	356	397	3,65	80		
		Euro 8420	800	400	200	n/a	760	360	196	2,66	54		
		Euro 8620	800	600	200	n/a	750	550	195	4,15	76		
		Euro 1042	1000	400	214	n/a	947	350	197	4,1	67		
ESD KLT		ESD RL-KLT 3215	300	200	150	n/a	243	162	130	0,57	5,1		
		ESD RL-KLT 4315	400	300	150	n/a	346	260	130	1,08	11,8		
		ESD RL-KLT 4328	400	300	290	n/a	346	260	262	1,7	24,1		
		ESD RL-KLT 6415	600	400	150	n/a	544	359	130	1,82	25,3		
		ESD RL-KLT 6428	600	400	290	n/a	544	359	262	2,67	51,9		
		ESD RL-KLT 8622	800	600	220	n/a	739	556	200	4,52	79		
		ESD RL-KLT 1242	1200	400	147	n/a	1142	360	145	4,32	60,3		
		ESD R-KLT 3215	300	200	150	n/a	243	162	130	0,57	5,3		
		ESD R-KLT 4315	400	300	150	n/a	346	265	110	1,29	10,1		
		ESD R-KLT 432 9	400	300	290	n/a	346	265	242	1,88	22,3		
		ESD R-KLT 6415	600	400	150	n/a	544	364	110	2,1	21,7		
		ESD R-KLT 6429	600	400	290	n/a	544	364	242	2,97	48		
		Magnum		MO 595	1200	1000	595	295	1140	940	410	36	439
				MO 750	1200	1000	750	295	1140	940	565	42	605
SH 835 HD	800			600	835	295	740	540	705	24	274		
MO 870	1200			1000	870	295	1140	940	685	45	734		
CE 950 S	1200			800	950	295	1120	720	765	54	620		
OI 975 S	1200			1000	975	295	1140	940	790	51	847		
MO 1000	1200			1000	1000	295	1140	940	815	52	873		
KTP		800	600	710	200	745	546	525	15	214			
		800	600	750	200	772	572	560	15	248			
		1200	1000	990	200	1140	940	815	39	874			
		1230	830	945	200	1170	770	755	36	681			
		1600	1200	750	200	1540	1140	560	57	984			
		1600	1200	980	200	1540	1140	790	58	1387			
		1230	830	955	250	1175	775	760	44,5	693			
		1230	1020	990	250	1175	965	795	52,5	902			
		1230	1230	985	250	1175	1175	780	58	1077			

### North America

Returnable packaging type	Picture	Type	Outer length (in)	Outer width (in)	Outer height (in)	Outer height - collapsed (in)	Inner length (in)	Inner width (in)	Inner height (in)	Weight (lbs)	Capacity (cubic ft)
Totes		Tote 1207-05	12	7	5	n/a	9,4	5,5	4,5	1,3	0,1
		Tote 1215-04	12	15	4	n/a	9,4	13	2,9	1,7	0,2
		Tote 2415-05	24	15	5	n/a	21,5	13,1	4,4	3,2	0,7
		Tote 2415-07	24	15	7,4	n/a	21,5	13,1	6,8	4	1,1
		Tote 2415-11	24	15	10,8	n/a	21,5	13,1	10,2	5	1,7
		Tote 2415-14	24	15	14,5	n/a	21,5	13,1	13,9	6	2,3
		Tote 2422-07	24	22	7,4	n/a	21,5	20,6	6,8	5,3	1,7
		Tote 2422-11	24	22	10,8	n/a	21,5	20,6	10,2	6,5	2,6
		Tote 2422-14	24	22	14,5	n/a	21,5	20,6	13,9	7,7	3,5
Bulk Containers		BC3230-25	32	30	25	12,6	29,5	27,5	19,3	50	9,1
		BC3230-34	32	30	34	12,6	29,5	27,5	28,3	62	13,3
		BC4548-25	45	48	25	12,5	41,5	45	19,2	99	20,8
		BC4548-34	45	48	34	12,7	41,5	44,3	28,5	121	30,8
		BC4845-42	48	45	42	20,8	44,2	41,2	34,3	142	37,2

### China

Returnable packaging type	Picture	Type	Outer length (mm)	Outer width (mm)	Outer height (mm)	Outer height - collapsed (mm)	Inner length (mm)	Inner width (mm)	Inner height (mm)	Weight (kg)	Capacity (litre)
Small box		Plastic box type 1	1200	400	230	n/a	1170	370	210	4,15	90,9
		Plastic box type2	1000	400	280	n/a	947	350	260	4,1	86,2
		Plastic box type 3	1200	400	180	n/a	1160	370	140	4	60,1
		Plastic box type 4	900	400	360	n/a	880	380	340	3	113,7
Bulk Containers		EPP	1000	600	400	n/a	970	570	360	4,5	199



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### Expendables

#### Europe

Box type	Picture	Outer length (mm)	Outer width (mm)	Outer height (mm)	Inner length (mm)	Inner width (mm)	Inner height (mm)	Capacity (litre)
Single wall	<p>Single Wall (Double Face) Corrugated</p>	200	200	150	194	194	138	5,19
		300	200	100	289	189	92	5,03
		300	200	150	289	189	140	7,65
		300	200	200	294	194	188	10,72
		400	200	100	390	189	92	6,78
		400	300	100	394	294	88	10,2
		400	300	150	389	289	140	15,7
		400	300	200	394	294	188	21,8
		400	300	300	381	276	272	28,6
		500	300	200	494	294	188	27,3
		500	400	200	494	394	188	36,6
		500	400	300	494	394	288	56,1
		600	200	150	582	185	138	14,9
		600	400	200	582	377	184	40,4
		600	400	300	582	377	285	62,5
		600	400	400	586	386	372	84,1
Double wall	<p>Double Wall Corrugated</p>	300	200	150	286	193	132	7,3
		300	200	200	286	186	174	9,3
		400	300	200	386	286	174	19,2
		400	300	300	386	286	274	30,2
		600	400	200	586	386	174	39,4
		600	400	300	586	386	274	62,0
		600	400	400	586	386	372	84,1
		600	500	400	586	486	374	106,5
		800	400	400	775	370	370	106,1
		800	600	400	775	570	370	163,4
		800	600	600	780	570	550	244,5
		1200	800	800	1180	780	750	690,3

#### North America

Box type	Picture	Outer length (in)	Outer width (in)	Outer height (in)	Inner length (in)	Inner width (in)	Inner height (in)	Capacity (cubic ft)
Regular Slotted Cartons (RSC)		12	7,5	3,75	11,6	7,1	3,1	0,15
		15	12	3,75	14,6	11,6	3,1	0,31
		15	12	7,5	14,6	11,6	6,9	0,68
		24	15	3,75	23,6	14,6	3,1	0,63
		24	15	7,5	23,6	14,6	6,9	1,38
		24	15	11,25	23,6	14,6	10,6	2,13
		24	15	14,5	23,6	14,6	13,9	2,78
		24	22,5	7,5	23,6	22,1	6,9	2,08
		24	22,5	11,25	23,6	22,1	10,6	3,22
		24	22,5	14,5	23,6	22,1	13,9	4,20
Half Slotted Cartons (HSC)		11,7	7,4	3,7	11,2	7,0	3,1	0,14
		14,9	11,6	3,7	14,4	11,2	3,1	0,29
		14,9	11,7	7,4	14,4	11,2	6,8	0,77
		23,4	14,9	3,7	23,0	14,4	3,1	0,59
		23,4	14,9	7,4	23,0	14,4	6,8	1,30
		23,4	14,9	11,0	23,0	14,4	10,4	1,99
		23,4	14,9	10,8	23,0	14,4	14,1	2,70
		23,4	22,3	7,4	23,0	21,8	6,8	1,97
		23,4	22,3	11,0	23,0	21,8	10,4	3,02
		23,4	22,3	14,8	23,0	21,8	14,1	4,09
HSC Layer Covers		12,81	7,81	2,00	11,7	7,4	2,0	n/a
		16,00	12,06	2,00	14,9	11,6	2,0	n/a
		24,81	15,25	2	23,4	14,9	2,0	n/a
		24,81	22,69	2,00	23,4	22,3	2,0	n/a

#### China

Box type	Picture	Outer length (mm)	Outer width (mm)	Outer height (mm)	Inner length (mm)	Inner width (mm)	Inner height (mm)	Capacity (litre)
Single wall		870	510	280	860	500	270	116,1
		820	410	340	800	390	320	99,84
		890	580	330	870	560	310	151,03
Double wall		770	490	470	760	480	460	167,8
		1140	980	700	1120	960	680	731,1



### Oversea Packaging

Box type	Description	Nominal dimensions (mm)			External dimensions (mm)			Internal dimensions (mm)			Design (options)	Drawing strength of shipping unit (N) (DTC/D2N)	Thickness of cardboard (mm)	ECT (MN/m)	Puncture resistance (J)	Wet bursting strength (kPa)	Max. gross weight per shipping unit (kg)	Max. superimposed load per shipping unit (kg)
		L	W	H	L	W	H	L	W	H								
Bulk box cover	Cover	1140	790	80	1140	790	87	1128	765	80	FEFCO 0457	n/a	7	34.0	15	800	n/a	n/a
		1140	980	80	1140	980	87	1128	955	80								
Bulk box light duty	Folding box	1140	790	900	1125	765	900	1095	735	900	FEFCO 0200 with loading flaps (1)	16800	12.5	18.0	22	1200	<240 kg	240 *
		600	616	586		586												
		300	323	293		293												
	Ring/Frame	1140	790	900	1125	765	900	1095	735	900	FEFCO 0501 with loading flaps (1)	16800	12.5	18.0	22	1200	<240 kg	240 *
		600	600	586		586												
		300	307	293		293												
	Folding box	1140	980	900	1125	955	900	1095	925	900	FEFCO 0200 with loading flaps (1)	21000	12.5	18.0	22	1200	<300 kg	300 *
		600	616	586		586												
		300	323	293		293												
	Ring/Frame	1140	980	900	1125	955	900	1095	925	900	FEFCO 0501 with loading flaps (1)	21000	12.5	18.0	22	1200	<300 kg	300 *
		600	600	586		586												
		300	307	293		293												
Bulk box heavy duty	Folding box	1140	790	900	1125	765	900	1095	735	900	FEFCO 0200 with loading flaps (1)	22500	12.5	24.0	30	1800	<360 kg	360 *
		600	616	586		586												
		300	323	293		293												
	Ring/Frame	1140	790	900	1125	765	900	1095	735	900	FEFCO 0501 with loading flaps (1)	22500	12.5	24.0	30	1800	<360 kg	360 *
		600	600	586		586												
		300	307	293		293												
	Folding box	1140	980	900	1125	955	900	1095	925	900	FEFCO 0200 with loading flaps (1)	31500	12.5	24.0	30	1800	<450 kg	450 *
		600	616	586		586												
		300	323	293		293												
	Ring/Frame	1140	980	900	1125	955	900	1095	925	900	FEFCO 0501 with loading flaps (1)	31500	12.5	24.0	30	1800	<450 kg	450 *
		600	600	586		586												
		300	307	293		293												

\*Shipping units with this height can only be stacked 1+1 inside the container. Therefore only the superimposed load of one shipping unit has to be guaranteed (at all times a safety factor 2.5 has to be guaranteed).

[1] Loading flap at one long side, 750mm widthwise and a height of 440mm. Crease line only 750mm widthwise, not over the complete length of the box. Cuttings of the loading flap have to be glued with reinforced adhesive tape!

### Packaging unit

Box type	Description	Nominal dimensions (mm)			External dimensions (mm)			Internal dimensions (mm)			Design (recommended variants) (D)	BCT min (kg) (DTC/D2N)	Thickness of cardboard (mm)	ECT (MN/m)	Puncture resistance (J)	Bursting strength (kPa)	Max. gross weight per shipping unit (kg)	Max. superimposed load per shipping unit (kg)	
		L	W	H	L	W	H	L	W	H									
																			Design (recommended variants) (D)
Pallet Cover	Pallet Cover	1140	790	80	1140	790	87	1128	765	80	FEFCO 0457	n/a	7	34.0	15	800	n/a	n/a	
		1140	980	80	1140	980	87	1128	955	80									
Packaging Unit 81	Cardboard box	570	380	280	564	376	276	550	362	262*	FEFCO 0200	8500	7						
	Cardboard box	570	380	140	564	376	144	550	362	130*	FEFCO 0200 with slot snap lock bottom	8500	7						
	Cover, single wall	570	380	50	570	380	52	564	377	50	FEFCO 0450, FEFCO 0453	n/a	1.5	5.5	4.5	1350			
	Cardboard box	380	285	280	374	282	276	360	268	262*	FEFCO 0200	4250	7						
	Cardboard box	380	285	140	374	282	144	360	268	130*	FEFCO 0200 with slot snap lock bottom FEFCO 0700 (1)	4250	7						
	Cover, single wall	380	285	50	380	285	52	374	262	50	FEFCO 0450, FEFCO 0453	n/a	1.5	5.5	4.5	1350	Pallet1108-240kg Pallet1110-600kg	Pallet1108-480kg Pallet1110-600kg	
	Cardboard box	285	190	140	277	185	144	263	171	130*	FEFCO 0200, FEFCO 0700 (1)	2125	7						
	Cover, single wall	285	190	50	283	188	52	277	185	50	FEFCO 0450, FEFCO 0453	n/a	1.5	5.5	4.5	1350			
	Layer slip, double wall	1140	790	55	1140	774	55	1130	754	50	FEFCO 0451	n/a	5	7.0	6.5	1100			
	Layer slip, double wall	1140	980	55	1140	963	55	1130	941	50	FEFCO 0452	n/a	5	7	6.5	1100			
	Packaging Unit 82	Cardboard box	540	360	295	533	357	291	519	343	277*	FEFCO 0200	n/a	7	8.0	7.5	1350		
		Cardboard box	240	360	146	533	357	144	519	343	130*	FEFCO 0200 with slot snap lock bottom	n/a	7	8.0	7.5	1350		
Cover, single wall		540	360	60	540	360	60	534	357	58	FEFCO 0450, FEFCO 0453	n/a	1.5	5.5	4.5	1350			
Cardboard box		360	270	295	353	267	291	339	253	277* (287*)	FEFCO 0200	n/a	7	8.0	7.5	1350			
Cardboard box		360	270	146	353	267	144	339	253	130* (134*)	FEFCO 0200 with slot snap lock bottom FEFCO 0700 (1)	n/a	7	8.0	7.5	1350			
Cover, single wall		360	270	60	360	270	60	354	267	58	FEFCO 0450, FEFCO 0453	n/a	1.5	5.5	4.5	1350			
Cardboard box		270	180	146	263	177	144	253	167	134*	FEFCO 0200, FEFCO 0700 (1)	n/a	5	8.0	7.5	1350			
Cover, single wall		270	180	60	270	180	60	264	177	58	FEFCO 0450, FEFCO 0453	n/a	1.5	5.5	4.5	1350			
Layer slip, double wall		1140	790	60	1076	724	62	1073	718	60	FEFCO 0451	n/a	1.5	5.5	4.5	1350			
Layer slip, double wall		1140	980	60	1076	904	62	1073	898	60	FEFCO 0452	n/a	1.5	5.5	4.5	1350			
Packaging Unit 83		Cardboard box	530	350	237	524	347	235	510	333	221*	FEFCO 0200	n/a	7	8	7.5	1350		
		Cardboard box	530	350	104	524	347	102	510	333	88*	FEFCO 0200 with slot snap lock bottom	n/a	7	8	7.5	1350		
	Cover, single wall	530	350	60	530	350	60	524	347	58	FEFCO 0450, FEFCO 0453	n/a	1.5	5.5	4.5	1350			
	Cardboard box	346	258	237	340	255	235	336	241	221* (225*)	FEFCO 0200	n/a	7	8	7.5	1350			
	Cardboard box	346	258	104	340	255	102	326	241	88* (92*)	FEFCO 0200 with slot snap lock bottom FEFCO 0700 (1)	n/a	7	8	7.5	1350			
	Cover, single wall	346	258	60	346	258	60	340	255	58	FEFCO 0450, FEFCO 0453	n/a	1.5	5.5	4.5	1350			
	Cardboard box	244	180	124	238	157	122	228	147	112*	FEFCO 0200, FEFCO 0700 (1)	n/a	5	8	7.5	1350			
	Cover, single wall	244	180	60	244	180	60	238	157	58	FEFCO 0450, FEFCO 0453	n/a	1.5	5.5	4.5	1350			
	Layer slip, double wall	1140	790	60	1058	704	62	1055	698	60	FEFCO 0451	n/a	1.5	5.5	4.5	1350			
	Layer slip, double wall	1140	980	60	1058	889	62	1055	883	60	FEFCO 0452	n/a	1.5	5.5	4.5	1350			

\* Depending on design of the bottom

[1] For bulk goods a closed flat bottom similar to FEFCO 0700 or an additional inlet is advisable.

[2] Every chosen design has to be checked regarding applicability for the chosen application. Recommended design variants should facilitate selection.

