

A close-up, grayscale photograph of an elevator bucket and pulley system. The bucket is a large, curved metal structure with a textured surface. It is supported by a pulley system consisting of a large wheel and a smaller wheel. The background is dark and out of focus.

B|E|C|H|T|E|L

Elevator parts

Bechtel supplies various components for elevators:

- ✓ Elevator belting made of rubber or PVC
- ✓ Bucket bolts (DIN 15237)
- ✓ Pulleys
- ✓ Belt fasteners and belt clamps
- ✓ Various types of elevator buckets

Besides, our expertise in this field is available to you. The technicians at Bechtel are happy to advise you about your capacity calculations.

**Supplier of spare parts for the international
bulkhandling industry**



SBR elevator belting

SBR elevator belts are anti-static. The plies are polyester interwoven with nylon layers. The belt is made out of SBR (Styrene Butadiene Rubber).

The covers make it possible that the elevator bolt head will fit and countersunk perfectly. These belts are available in several breaking loads and thicknesses.

SBR (Styrene Butadiene Rubber) covers are high abrasion resistant. This belt quality is suitable to transport products with a low fat, oil and acid content.

Ideal for industrial purposes such as: sand, gravel, glass cullets and dry bulk powders. Also for agro bulk industry. For example grain and cereals.

In addition, there are special temperature resistant elevator belts suitable for temperatures up to a maximum of 180 °C. Also flame retardant belts in accordance with DIN 22103 are available on demand.

Belts are cut and punched according to customers specifications.

Technical specifications

SBR	
Production requirement acc.	DIN 22102 & 22104
Anti-static acc.	ISO 284
Pre stretched plies	Nylon / Polyester
Maximum elongation	1,5%
Covers	SBR 60 ± 5° Shore A
Breaking load covers	≥ 20 N/mm
Abrasion	≤ 150 mm ³
Density of covers	1,20 +/- 0,3 gram/cm ³
Temperature resistance	-25 till +70 °C

SBR elevator belting

Type of belt	Breaking load	Nr. of inserts	Covers	Thickness	Weight/m ²	Pulley Ø *
400/3	400 kg/cm ²	3	1+1 mm	5 mm	6,6 kg	315 mm
400/3	400 kg/cm ²	3	2+2 mm	7 mm	7,8 kg	315 mm
500/4	500 kg/cm ²	4	1+1 mm	6 mm	7,8 kg	400 mm
500/4	500 kg/cm ²	4	2+2 mm	8 mm	9,0 kg	400 mm
630/4	630 kg/cm ²	4	1+1 mm	7 mm	9,0 kg	500 mm
630/4	630 kg/cm ²	4	2+2 mm	9 mm	10,2 kg	500 mm
800/5	800 kg/cm ²	5	1+1 mm	8 mm	10,8 kg	630 mm
800/5	800 kg/cm ²	5	2+2 mm	10 mm	11,4 kg	630 mm
1000/5	1.000 kg/cm ²	5	1+1 mm	8 mm	12,0 kg	800 mm
1000/5	1.000 kg/cm ²	5	2+2 mm	10 mm	12,6 kg	800 mm
1250/5	1.250 kg/cm ²	5	2+2 mm	12 mm	14,4 kg	1.000 mm

* Recommended minimal pulley diameter (60 - 100% use of breaking load).



NBR elevator belting

NBR elevator belts are anti-static. The plies are polyester interwoven with nylon layers. The belt is made out of NBR (Nitrile Butadiene Rubber). The covers make it possible that the elevator bolt head will fit and countersunk perfectly. These belts are available in several breaking loads and thicknesses.

NBR (Nitrile Butadiene Rubber) covers are suitable for transporting products with a higher fat, oil content and a limited acid content.

Ideal for the feedmill industry and raw materials intake such as sunflower seeds, fish meal, tapioca and mais. But also for polluted glass cullets.

Belts are cut and punched according to customers specifications.

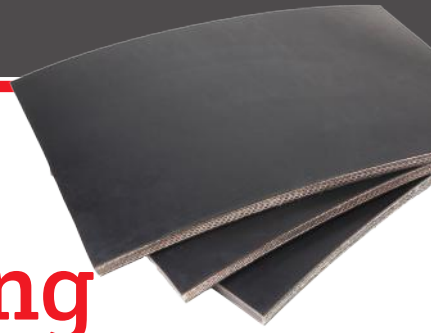
Technical specifications

NBR	
Production requirement acc. DIN 22102 and 22104	
Anti-static acc.	ISO 284
Pre stretched plies	Nylon / Polyester
Maximum elongation	1,5%
Covers	NBR 60 ± 5° Shore A
Breaking load covers	≥ 15 N/mm
Abrasion	≤ 180 mm ³
Density of covers	1,20 +/- 0,3 gram/cm ³
Temperature resistance	-25 till +100 peak 120 °C

NBR elevator belting

Type of belt	Breaking load	Nr. of inserts	Covers	Thickness	Weight/m ²	Pulley Ø *
400/3	400 kg/cm ²	3	1+1 mm	5 mm	6,6 kg	315 mm
400/3	400 kg/cm ²	3	2+2 mm	7 mm	7,8 kg	315 mm
500/4	500 kg/cm ²	4	1+1 mm	6 mm	7,8 kg	400 mm
500/4	500 kg/cm ²	4	2+2 mm	8 mm	9,0 kg	400 mm
630/4	630 kg/cm ²	4	1+1 mm	7 mm	9,0 kg	500 mm
630/4	630 kg/cm ²	4	1,5+1,5 mm	7 mm	9,5 kg	500 mm
630/4	630 kg/cm ²	4	2+2 mm	9 mm	10,2 kg	500 mm
800/4	800 kg/cm ²	4	2+2 mm	8 mm	11,0 kg	630 mm
800/5	800 kg/cm ²	5	1+1 mm	8 mm	10,8 kg	630 mm
800/5	800 kg/cm ²	5	2+2 mm	10 mm	11,4 kg	630 mm
1000/5	1.000 kg/cm ²	5	1+1 mm	8 mm	12,0 kg	800 mm
1000/5	1.000 kg/cm ²	5	2+2 mm	10 mm	12,6 kg	800 mm
1250/5	1.250 kg/cm ²	5	2+2 mm	12 mm	14,4 kg	1.000 mm

* Recommended minimal pulley diameter (60 - 100% use of breaking load).



NBR-ACN elevator belting

NBR-ACN elevator belts are anti-static. The plies are polyester interwoven with nylon layers. The belt is made out of NBR, (Nitrile Butadiene Rubber) with a high content of ACN (ACryl-Nitril).

The covers make it possible that the elevator belt head will fit and countersunk perfectly. These belts are available in several breaking loads and thicknesses.

NBR (Nitrile Butadiene Rubber) with a high content of Acryl-Nitril covers are suitable for transporting products with a higher fat, oil and acid content. Often used in feedmill industry where hot oil products and molasses are processed.

Belts are cut and punched according to customers specifications.

Technical specifications

NBR-ACN	
Production requirement acc. DIN 22102 and 22104	
Anti-static acc.	ISO 284
Pre stretched plies	Nylon / Polyester
Maximum elongation	1,5%
Covers	NBR-ACN 60 ± 5° Shore A
Breaking load covers	>= 12 N/mm
Abrasion	<= 200 mm ³
Density of covers	1,20 +/- 0,3 gram/cm ³
Temperature resistance	-25 till +100 peak 120 °C
Swelling	Max 3% (IRM903 oil, 20 °C, 21 days)

NBR-ACN elevator belting

Type of belt	Breaking load	Nr. of inserts	Covers	Thickness	Weight/m ²	Pulley Ø *
630/4	630 kg/cm ²	4	2+2 mm	9 mm	10,2 kg	500 mm
800/5	800 kg/cm ²	5	2+2 mm	10 mm	11,4 kg	630 mm
1000/5	1.000 kg/cm ²	5	2+2 mm	10 mm	12,6 kg	800 mm

* Recommended minimal pulley diameter (60 - 100% use of breaking load).

K-Atex flame retardent

K-Atex elevator belts are similar to NBR belting but flame retardent according to ISO 340. The plies are polyester interwoven with Nylon layers. The belt is made out of NBR (Nitrile Butadiene Rubber) and is anti static according to DIN284.

Thanks to a special addition in the rubber, this belt is also flame-retardant (ISO 340). The covers make it possible that the elevator bolt head will fit and countersunk perfectly. These belts are available in several breaking loads and thicknesses.

NBR (Nitrile Butadiene Rubber) covers are suitable for transporting products with a higher fat, oil content and a limited acid content. Ideal for the feedmill industry and raw materials intake such as sunflower seeds, fish meal, tapioca and mais. But also for polluted glass cullets.

Belts are cut and punched according to customers specifications.

Technical specifications

K-Atex flame retardent (ISO 340)

Production requirement acc. DIN 22102 and 22104

Anti-static acc. ISO 284

K-Atex flame retardent acc. ISO 340

Pre stretched plies Nylon / Polyester

Elongation max. 1,5%

Covers NBR K-Atex 65 ± 5° Shore A

Breaking load covers >= 15 N/mm

Abrasion <= 180 mm³

Density of covers 1,20 +/- 0,3 g/cm³

Temp.resistance -25 till +100 peak 120 °C

K-Atex flame retardent

Type of belt	Breaking load	Nr. of inserts	Covers	Thickness	Weight/m ²	Pulley Ø *
630/4	630 kg/cm ²	4	2+2 mm	9 mm	10,2 kg	500 mm
800/5	800 kg/cm ²	5	2+2 mm	10 mm	11,4 kg	630 mm

* Recommended minimal pulley diameter (60 - 100% use of breaking load).



FDA rubber elevator belting

FDA white rubber elevator belts are anti-static. The plies are polyester interwoven with nylon layers. The belt is made out of FDA white rubber, according to ISO284.

The covers make it possible that the elevator bolt head will fit and countersunk perfectly. These belts are available in several breaking loads and thicknesses.

FDA white rubber covers are oil and fat resistant and suitable for the food industry.

Belts are cut and punched according to customers specifications.

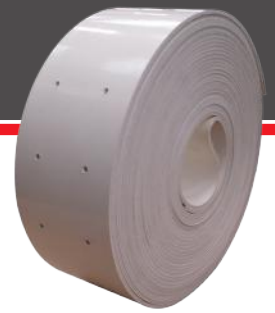
Technical specifications

FDA	
Production requirement acc. DIN 22102 and 22104	
Anti-static acc.	ISO 284
Pre stretched plies	Nylon / Polyester
Maximum elongation	1,5%
Covers	FDA 70 ± 5° Shore A
Breaking load covers	>= 11 N/mm
Abrasion	<= 200 mm ³
Density of covers	1,20 +/- 0,3 gram/cm ³
Temperature resistance	-25 till +80 °C

FDA Elevator belting

Type of belt	Breaking load	Nr. of inserts	Covers	Thickness	Weight/m ²	Pulley Ø *
500/4	500 kg/cm ²	4	1,5+1,5 mm	7 mm	8,4 kg	400 mm
630/4	630 kg/cm ²	4	1,5+1,5 mm	8 mm	9,6 kg	500 mm
800/4	800 kg/cm ²	4	2 + 2 mm	9 mm	13,5 kg	630 mm

* Recommended minimal pulley diameter (60 - 100% use of breaking load).



PVC elevator belting

PVC elevator belts are anti-static. This belt is fully synthetic and suitable for the food industry according to FDA-EU standards.

These belts are available in different kinds of breaking loads and thicknesses.

PVC (PolyVinylChloride) elevator belts are oil and fat resistant and suitable for the food industry. Belts are cut and punched according to customer specifications.

Technical specifications

PVC

Production requirement acc. FDA-EU standards

Anti-static acc. ISO 284

Pre stretched plies Polyester

Elongation max. 1,5%

Covers PVC 73 ± 5° Shore A

Density of covers 1,20 ± 0,3 gram/cm³

Temperature resistance -15 till +80 peak 100 °C

PVC elevator belting

Type of belt	Breaking load	Nr. of inserts	Covers	Thickness	Weight/m ²	Pulley Ø *
315/3	300kg/cm ²	3	1,5+0,7 mm	5,2 mm	7,7 kg	250 mm
650/3	650 kg/cm ²	3	1,5+0,7 mm	6,8 mm	9,6 kg	400 mm
900/3	900 kg/cm ²	3	1,5+0,7 mm	8,7 mm	11,2 kg	500 mm

* Recommended minimal pulley diameter (60 - 100% use of breaking load).

Bucket bolts



DIN 15237 bucket bolts

Elevator bucket bolts in accordance to DIN 15237 are available in M7, M8, M10, and M12, zinc plated or in stainless steel (A2/A4).

Bucket bolts in accordance to DIN 15237 (in mm)

Bolt-Ø	Length	Head -Ø
M 7	20 - 25 - 30 - 35	24
M 8	20 - 25 - 30 - 35 - 40 - 45 - 50 - 60 - 70	28
M 10	25 - 30 - 35 - 40 - 45 - 50 - 55 - 60 - 70	35
M 12	25 - 30 - 35 - 40 - 45 - 50 - 55 - 60 - 65 - 70	42

Elevator bucket bolts

Small head bucket bolts are available in M6, M7, and M8, zinc plated or in stainless steel.

Small head bucket bolts (in mm)

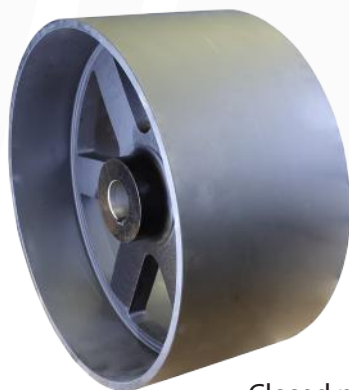
Bolt-Ø	Length	Head -Ø
M 6	15 - 20 - 25 - 30	18
M 7	15 - 17 - 20 - 25 - 30 - 35	21
M 8	20 - 25 - 30 - 35	24



Besides, both versions are standard available in material 4.6, with standard nuts, (nyloc) locknuts, flat or domed washers. Material 6.8 and 8.8 are also available on your request. Special version like Allen key, "Fang" or "Norway" bolts are also available.

Belt pulley

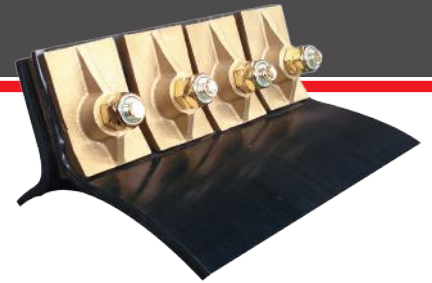
Bechtel supplies both closed and open pulleys, according to your specifications. Made from cast iron or steel. These pulleys are shaped in accordance with DIN 111, for better alignment of your elevator belt. In addition, the pulleys can also be provided with a diamond-shaped rubber lagging, for a better adhesion of the elevator belt.



Closed pulley



Open pulley



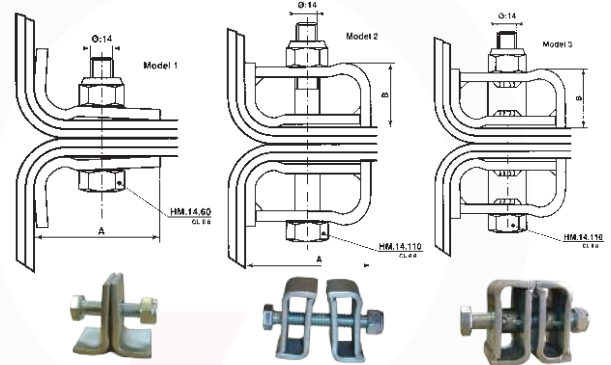
Belt fasteners

Bechtel also supplies the necessary belt fasteners for the assembly of the elevator belts. In various different versions, suitable for all kinds of belts.

Belt fastener models 1, 2 and 3

Parameters models 1, 2 and 3 (in mm)

	A	B	max. belt load
Model 1	62	32	400 kg/cm
Model 2	68	32	800 kg/cm
Model 3	68	32	1.250 kg/cm



Belt fasteners, Speedy model

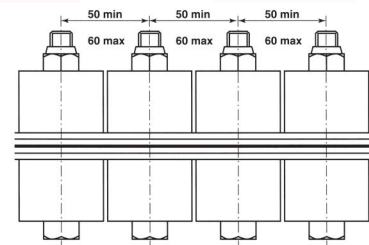
3-part belt fastener made of cast iron or bronze, standard width 50 mm, suitable for maximum belt loads of 800 kg/cm.



Speedy type belt fasteners

Assembly

Example of the assembly of 4 belt fasteners for belt widths between 200 and 230 mm. The distance between the belt fasteners may be somewhere between 0 and 10 mm.



Belt clamps

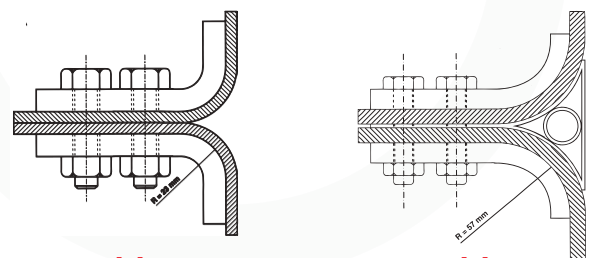
Belt clamps offer an alternative to the belt fasteners. They are manufactured to your specifications. Two models are available.

Model A:

For light to average applications.

Model B:

Belt clamps with a wedge-shaped adaptor to guide the belt over the pulley in conjunction with more demanding applications.



Model A

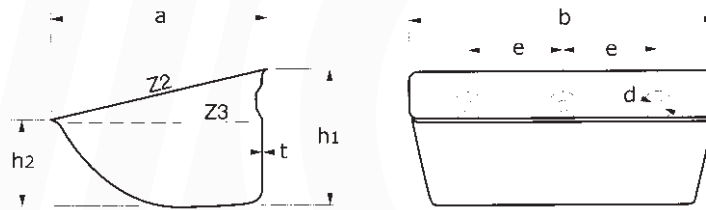
Model B





Claus elevator buckets

Claus elevator buckets made of pressed steel (ST37 or stainless steel) are suitable for a variety of different products. The relatively low rear height (h_1) of the buckets allows a considerable bucket density (buckets per meter). The low rear height and the relatively large projection guarantee that the Claus bucket easily ejects its product even at high belt speeds. This makes it possible to attain a higher capacity.



Claus elevator buckets made of steel/stainless steel (parameters in mm)

Type	Size/weight					Volume	Holes		Max.			
	b	a	h_1	h_2	t		Kg	Z ₂		Z ₃	d	e
C100	106	89	62	36	0,9	0,12	0,29	0,19	8,5	50	2	15,00
C120	126	100	72	49	0,9	0,21	0,55	0,40	8,5	67	2	13,00
C130	138	114	80	54	1,5	0,35	0,61	0,46	8,5	70	2	12,00
C140	145	115	86	49	1,5	0,37	0,85	0,65	9,0	86	2	11,00
C160	165	125	90	59	1,5	0,50	1,15	0,85	8,5	101	2	10,50
C180	185	140	92	56	1,5	0,53	1,29	0,90	8,5	100	2	10,50
C200	205	140	100	67	1,5	0,71	1,75	1,25	11,0	131	2	9,50
C230	238	165	108	68	2,0	1,01	2,25	1,80	11,0	120	2	9,00
C250	255	151	107	70	2,0	1,14	2,60	1,95	11,0	77	3	9,00
C280	289	165	108	68	2,0	1,32	2,91	2,30	11,0	80	3	9,00
C300 x 190	308	190	129	68	2,0	1,43	4,46	3,00	11,0	100	3	7,50
C300 x 215	310	217	140	86	2,0	2,05	5,50	4,00	11,0	100	3	7,14
C330	340	214	130	81	2,0	2,09	5,51	3,92	11,0	120	3	7,14
C350	360	188	134	87	2,0	2,25	5,75	4,40	11,0	90	4	7,14
C370	381	214	130	82	2,0	2,38	6,18	5,10	11,0	90	4	7,14
C400	410	198	142	93	2,0	2,58	7,00	5,00	13,0	100	4	7,00
C450	464	214	130	82	2,5	3,40	8,00	5,59	11,0	90	5	7,14
C500	512	223	160	104	2,5	3,78	11,00	8,00	13,0	100	5	6,00

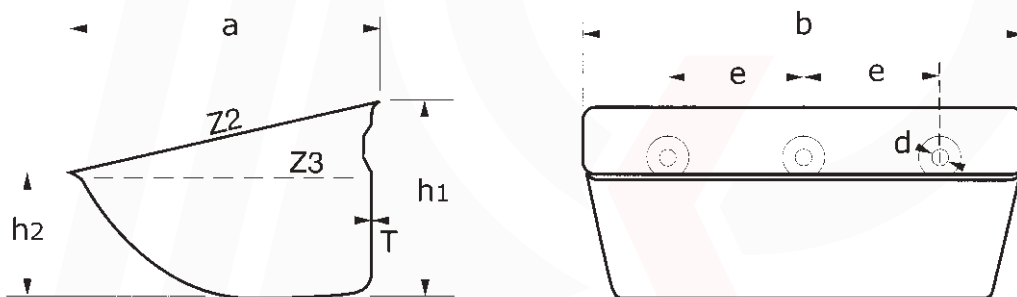
Z₂ = gross volume in liters, Z₃ = net volume in liters.

Claus elevator buckets are also available in thicknesses (t) of 2.5 and 3.0 mm.



Plastic Claus buckets

Bechtel supplies plastic Claus elevator buckets made of PEHD or nylon ex stock. Besides, PU and zytel are also available. Plastic elevator buckets lend themselves particularly well to the transport of wet, sticky or fatty products. Another advantage is that plastic elevator buckets do not strike a spark even if the belt is misaligned. The PEHD is temperature resistant up to 70 °C. Nylon elevator bucket is temperature resistant up to 90 °C.



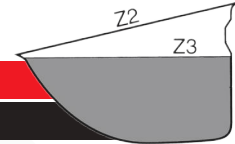
Claus elevator buckets made of plastic (parameters in mm)

Type	Size/weight					Volume Kg ^{PE}	Volume		Holes			Max. bckts/m
	b	a	h1	h2	t		Z2	Z3	d	e	no.	
C100 x 90 HDP	109	90	62	39	4,0	0,06	0,30	0,20	8,5	50	2	14,28
C130 x 120 HDP	140	121	81	54	4,7	0,13	0,65	0,50	8,5	70	2	11,11
C150 x 110 HDP	159	113	78	51	5,2	0,17	0,66	0,51	9,0	89	2	12,00
C180 x 140 HDP	190	146	94	56	6,0	0,22	1,25	0,96	9,0	100	2	10,50
C225 x 140 HDP	235	140	94	60	6,0	0,34	1,68	1,29	9,0	120	2	10,50
C230 x 170 HDP	240	173	110	70	6,0	0,43	2,43	1,83	11,0	120	2	9,00
C280 x 170 HDP	290	173	113	72	6,0	0,50	3,00	2,30	11,0	80	3	9,00
C300 x 180 HDP	314	181	124	81	6,0	0,58	4,25	3,15	9,0	100	3	8,13
C330 x 215 HDP	342	220	141	92	8,5	0,93	5,60	4,43	11,0	120	3	7,14
C350 x 180 HDP	367	181	130	85	7,0	0,79	5,00	3,65	9,0	90	4	8,13
C370 x 215 HDP	380	218	141	90	9,0	1,07	5,84	4,24	11,0	90	4	7,14

Z2 = gross volume in liters, Z3 = net volume in liters.



Claus capacity table (Z3)

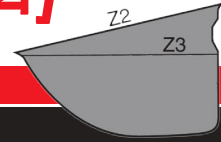


Net capacity table for steel Claus in m³/h (Z3)

Type	Pro-jection	Bucket volume	Number	Belt speed in m/sec								
				1,00	1,50	1,70	1,90	2,20	2,50	2,80	3,15	3,50
C100	88	0,19 L	10	6,84	10,26	11,63	13,00	15,05	17,10	19,15	21,55	23,94
			15	10,26	15,39	17,44	19,49	22,57	25,65	28,73	32,32	35,91
C120	100	0,40 L	9	12,96	19,44	22,03	24,62	28,51	32,40	36,29	40,82	45,36
			13	18,72	28,08	31,82	35,57	41,18	46,80	52,42	58,97	65,52
C130	114	0,46 L	9	14,90	22,36	25,34	28,32	32,79	37,26	41,73	46,95	52,16
			12	19,87	29,81	33,78	37,76	43,72	49,68	55,64	62,60	69,55
C140	115	0,65 L	8	18,72	28,08	31,82	35,57	41,18	46,80	52,42	58,97	65,52
			12	28,08	42,12	47,74	53,35	61,78	70,20	78,62	88,45	98,28
C160	125	0,85 L	8	24,48	36,72	41,62	46,51	53,86	61,20	68,54	77,11	85,68
			10,5	32,13	48,20	54,62	61,05	70,69	80,33	89,96	101,21	112,46
C180	140	0,90 L	8	25,92	38,88	44,06	49,25	57,02	64,80	72,58	81,65	90,72
			10,5	34,02	51,03	57,83	64,64	74,84	85,05	95,26	107,16	119,07
C200	140	1,25 L	6	27,00	40,50	45,90	51,30	59,40	67,50	75,60	85,05	94,50
			9,5	42,75	64,13	72,68	81,23	94,05	106,88	119,70	134,66	149,63
C230	165	1,80 L	6	38,88	58,32	66,10	73,87	85,54	97,20	108,86	122,47	136,08
			9	58,32	87,48	99,14	110,81	128,30	145,80	163,30	183,71	204,12
C250	151	1,95 L	6	42,12	63,18	71,60	80,03	92,66	105,30	117,94	132,68	147,42
			9	63,18	94,77	107,41	120,04	139,00	157,95	176,90	199,02	221,13
C280	165	2,30 L	6	49,68	74,52	84,46	94,39	109,30	124,20	139,10	156,49	173,88
			9	74,52	111,78	126,68	141,59	163,94	186,30	208,66	234,74	260,82
C300	190	3,00 L	6	64,80	97,20	110,16	123,12	142,56	162,00	181,44	204,12	226,80
			8,13	87,80	131,71	149,27	166,83	193,17	219,51	245,85	276,58	307,31
C300	217	4,00 L	6	86,40	129,60	146,88	164,16	190,08	216,00	241,92	272,16	302,40
			7,14	102,82	154,22	174,79	195,35	226,20	257,04	287,88	323,87	359,86
C330	214	3,92 L	4	56,45	84,67	95,96	107,25	124,19	141,12	158,05	177,81	197,57
			7,14	100,76	151,14	171,29	191,44	221,67	251,90	282,13	317,39	352,66
C350	188	4,40 L	5	79,20	118,80	134,64	150,48	174,24	198,00	221,76	249,48	277,20
			7,14	113,10	169,65	192,27	214,89	248,81	282,74	316,67	356,26	395,84
C370	214	5,10 L	4	73,44	110,16	124,85	139,54	161,57	183,60	205,63	231,34	257,04
			7,14	131,09	196,64	222,85	249,07	288,40	327,73	367,05	412,93	458,82
C400	198	5,00 L	5	90,00	135,00	153,00	171,00	198,00	225,00	252,00	283,50	315,00
			7	126,00	189,00	214,20	239,40	277,20	315,00	352,80	396,90	441,00
C450	214	5,59 L	4	80,50	120,74	136,84	152,94	177,09	201,24	225,39	253,56	281,74
			7,14	143,69	215,53	244,27	273,00	316,11	359,21	402,32	452,61	502,90
C500	223	8,00 L	4	115,20	172,80	195,84	218,88	253,44	288,00	322,56	362,88	403,20
			6	172,80	259,20	293,76	328,32	380,16	432,00	483,84	544,32	604,80



Claus capacity table (Z2)



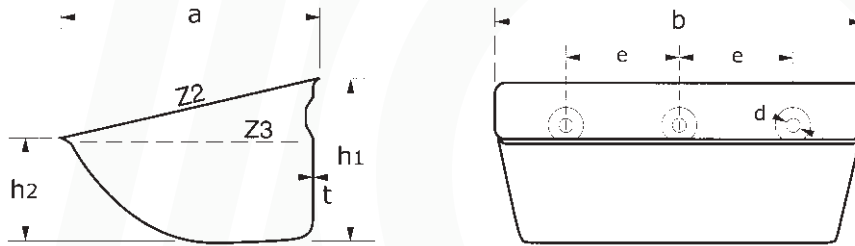
Gross capacity table for steel Claus in m³/h (Z2)

Type	Pro-jection	Bucket vol. (L)	Number bckts/m	Belt speed in m/sec								
				1,00	1,50	1,70	1,90	2,20	2,50	2,80	3,15	3,50
C100	88	0,29	10	10,44	15,66	17,75	19,84	22,97	26,10	29,23	32,89	36,54
			15	15,66	23,49	26,62	29,75	34,45	39,15	43,85	49,33	54,81
C120	100	0,55	9	17,82	26,73	30,29	33,86	39,20	44,55	49,90	56,13	62,37
			13	25,74	38,61	43,76	48,91	56,63	64,35	72,07	81,08	90,09
C130	114	0,61	9	19,76	29,65	33,60	37,55	43,48	49,41	55,34	62,26	69,17
			12	26,35	39,53	44,80	50,07	57,97	65,88	73,79	83,01	92,23
C140	115	0,85	8	24,48	36,72	41,62	46,51	53,86	61,20	68,54	77,11	85,68
			12	36,72	55,08	62,42	69,77	80,78	91,80	102,82	115,67	128,52
C160	125	1,15	8	33,12	49,68	56,30	62,93	72,86	82,80	92,74	104,33	115,92
			10,5	43,47	65,21	73,90	82,59	95,63	108,68	121,72	136,93	152,15
C180	140	1,29	8	37,15	55,73	63,16	70,59	81,73	92,88	104,03	117,03	130,03
			10,5	48,76	73,14	82,90	92,65	107,28	121,91	136,53	153,60	170,67
C200	140	1,75	6	37,80	56,70	64,26	71,82	83,16	94,50	105,84	119,07	132,30
			9,5	59,85	89,78	101,75	113,72	131,67	149,63	167,58	188,53	209,48
C230	165	2,25	6	48,60	72,90	82,62	92,34	106,92	121,50	136,08	153,09	170,10
			9	72,90	109,35	123,93	138,51	160,38	182,25	204,12	229,64	255,15
C250	151	2,60	6	56,16	84,24	95,47	106,70	123,55	140,40	157,25	176,90	196,56
			9	84,24	126,36	143,21	160,06	185,33	210,60	235,87	265,36	294,84
C280	165	2,91	6	62,86	94,28	106,86	119,43	138,28	157,14	176,00	198,00	220,00
			9	94,28	141,43	160,28	179,14	207,42	235,71	264,00	296,99	329,99
C300	190	4,46	6	96,34	144,50	163,77	183,04	211,94	240,84	269,74	303,46	337,18
			8,13	130,54	195,80	221,91	248,02	287,18	326,34	365,50	411,19	456,87
C300	217	5,50	6	118,80	178,20	201,96	225,72	261,36	297,00	332,64	374,22	415,80
			7,14	141,37	212,06	240,33	268,61	311,02	353,43	395,84	445,32	494,80
C330	214	5,51	4	79,34	119,02	134,88	150,75	174,56	198,36	222,16	249,93	277,70
			7,14	141,63	212,44	240,77	269,10	311,58	354,07	396,56	446,13	495,70
C350	188	5,75	5	103,50	155,25	175,95	196,65	227,70	258,75	289,80	326,03	362,25
			7,14	147,80	221,70	251,26	280,82	325,16	369,50	413,83	465,56	517,29
C370	214	6,18	4	88,99	133,49	151,29	169,08	195,78	222,48	249,18	280,32	311,47
			7,14	158,85	238,28	270,05	301,82	349,47	397,13	444,78	500,38	555,98
C400	198	7,00	5	126,00	189,00	214,20	239,40	277,20	315,00	352,80	396,90	441,00
			7	176,40	264,60	299,88	335,16	388,08	441,00	493,92	555,66	617,40
C450	214	8,00	4	115,20	172,80	195,84	218,88	253,44	288,00	322,56	362,88	403,20
			7,14	205,63	308,45	349,57	390,70	452,39	514,08	575,77	647,74	719,71
C500	223	11,00	4	158,40	237,60	269,28	300,96	348,48	396,00	443,52	498,96	554,40
			6	237,60	356,40	403,92	451,44	522,72	594,00	665,28	748,44	831,60



Super Claus plastic

The Super Claus buckets are deeper than the 'regular' Claus buckets, although they are equally suitable for elevators with higher belt speeds. This elevator bucket lends itself particularly well to light-weight and/or wet materials. Bechtel supplies the Super Claus in pressed mild steel, stainless steel, PEHD or Nylon. Materials PU and Zytel or with a customized hole pattern are available on request. The PHED is temperature resistant up to 70 °C. Nylon elevator bucket is temperature resistant up to 90 °C.



Super Claus elevator buckets made of plastic PEHD/Nylon (parameters in mm)

Type	Size /Weight					PE kg	Nylon kg	Volume		Holes			Max. Bckt/m
	b	a	h1	h2	t			Z2	Z3	dØ	e	Nr	
SPC80 x 80	90	85	63	43	4	0,08	0,09	0,24	0,18	9,0	43	2	15,00
SPC100 x 90	110	100	67	44	5	0,11	0,13	0,38	0,29	9,0	50	2	14,00
SPC120 x 100	129	110	80	55	5	0,15	0,18	0,59	0,46	9,0	67	2	12,00
SPC130 x 120	135	120	85	57	5	0,19	0,23	0,70	0,54	9,0	70	2	11,00
SPC130 x 130	146	130	90	60	5	0,21	0,25	0,87	0,65	9,0	70	2	10,80
SPC140 x 120	145	120	90	62	5	0,18	0,22	0,80	0,61	8,5	70	2	10,80
SPC160 x 140	172	152	113	78	6	0,34	0,40	1,58	1,22	9,0	100	2	8,60
SPC180 x 140	187	150	112	77	6	0,30	0,36	1,75	1,37	9,0	100	2	8,60
SPC200 x 150	205	150	112	75	6	0,35	0,42	1,82	1,39	9,0	100	2	8,60
SPC200 x 160	210	158	115	79	7	0,39	0,46	2,09	1,61	9,0	100	2	8,50
SPC230 x 170	240	175	138	93	7	0,61	0,73	3,06	2,40	11,0	120	2	7,00
SPC240 x 165	250	170	132	93	7	0,54	0,64	3,10	2,40	11,0	120	2	7,40
SPC280 x 165	293	170	132	95	7	0,67	0,79	3,75	3,00	11,0	80	3	7,40
SPC280 x 170	282	175	138	97	7	0,67	0,80	3,76	2,96	11,0	80	3	7,00
SPC280 x 180	290	185	140	97	7	0,84	1,00	4,20	3,30	11,0	80	3	7,00
SPC300 x 150	305	152	115	80	7	0,65	0,77	2,89	2,24	9,0	102	3	8,50
SPC300 x 180	316	185	140	97	8	0,85	1,01	4,60	3,60	11,0	100	3	7,00
SPC300 x 215	318	220	168	117	9	1,18	1,40	6,60	5,20	11,0	100	3	5,88
SPC330 x 180	347	185	140	97	8	0,90	1,07	5,00	4,00	11,0	120	3	7,00
SPC330 x 215	343	220	168	117	9	1,30	1,55	7,10	5,73	11,0	120	3	5,88
SPC350 x 180	367	186	140	97	9	1,12	1,33	5,25	4,10	11,0	120	3	7,00
SPC350 x 215	368	220	168	117	9	1,38	1,64	7,75	6,12	11,0	120	3	5,88
SPC370 x 215	390	220	168	117	9	1,45	1,72	8,15	6,42	11,0	90	4	5,88
SPC400 x 215	420	220	168	117	9	1,54	1,83	8,80	7,00	11,0	100	4	5,88
SPC450 x 215	470	220	165	115	9	1,56	2,06	9,70	7,70	11,0	90	5	5,88
SPC500 x 215	525	220	168	117	9	1,84	2,19	11,25	9,00	11,0	100	5	5,88

Z2 = gross volume in liters, Z3 = net volume in liters.



Super Claus Stahl

Super Starco elevator buckets in mild steel/stainless steel (parameters in mm)

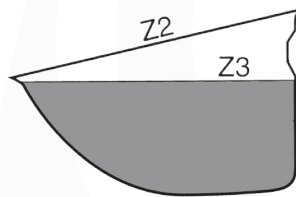
Type	Size / Weight					Volume [L]		Holes			Max. Bckts/m	
	b	a	h ₁	h ₂	t	Kg	Z ₂	Z ₃	d	e		Nr
SPC80 x 80	85	80	58	39	1,0	0,11	0,21	0,18	8,0	43	2	15,00
SPC100 x 90	106	89	66	45	1,0	0,12	0,33	0,25	8,5	50	2	14,00
SPC100 x 100	105	97	78	46	1,0	0,18	0,42	0,29	8,5	50	2	12,00
SPC120 x 100	125	105	77	53	1,0	0,22	0,58	0,44	8,0	67	2	12,00
SPC130 x 120	138	120	90	62	1,2	0,30	0,83	0,65	8,5	70	2	10,50
SPC140 x 110	146	112	91	40	1,5	0,43	0,76	0,41	8,5	70	2	10,50
SPC140 x 120	146	120	90	62	1,5	0,40	0,87	0,65	8,5	70	2	10,50
SPC160 x 125	166	125	112	78	1,5	0,55	1,44	1,20	8,5	100	2	8,60
SPC180 x 140	187	147	112	78	1,5	0,61	1,75	1,35	8,5	100	2	8,60
SPC200 x 150	205	150	112	77	1,5	0,77	2,00	1,53	9,0	100	2	8,60
SPC200 x 180	204	182	140	98	2,0	1,28	2,84	2,17	11,0	110	2	7,00
SPC230 x 160B	233	160	122	85	1,5	0,86	2,72	2,05	10,5	120	2	8,00
SPC230 x 170	235	170	132	93	2,0	1,40	3,09	2,40	11,0	120	2	7,00
SPC240 x 160C	247	165	130	92	2,0	1,35	3,03	2,37	10,5	120	2	7,40
SPC250 x 215	257	215	162	113	2,0	1,86	5,30	4,10	11,0	85	3	5,88
SPC260 x 165	262	165	130	92	2,0	1,38	3,28	2,55	10,5	77	3	7,40
SPC260 x 180	270	188	140	96	2,0	2,00	4,10	3,20	11,0	80	3	7,00
SPC280 x 165	289	167	132	93	2,0	1,55	3,78	2,95	10,5	80	3	7,40
SPC280 x 180	290	185	140	97	2,0	1,70	4,40	3,30	11,0	80	3	7,00
SPC280 x 215	294	215	163	114	2,0	2,18	6,04	4,70	11,0	80	3	5,88
SPC300 x 165B	308	165	135	94	2,0	1,65	3,88	2,90	11,0	100	3	7,20
SPC300 x 180B	308	182	140	95	2,0	1,80	4,50	3,50	11,0	100	3	7,00
SPC300 x 215	310	220	163	112	2,0	2,32	6,70	5,20	11,0	100	3	5,88
SPC330 x 165	340	165	135	97	2,0	1,90	4,40	3,50	11,0	120	3	7,20
SPC330 x 180	340	182	140	98	2,0	2,00	5,20	4,00	11,0	120	3	7,00
SPC330 x 215	340	215	163	112	2,5	2,97	7,20	5,65	11,0	120	3	5,88
SPC350 x 165B	360	165	135	94	2,0	2,12	4,50	3,65	11,0	120	3	7,20
SPC350 x 180	362	182	140	98	2,0	2,10	5,40	4,20	11,0	120	3	7,00
SPC350 x 215	362	215	163	112	2,5	3,23	7,60	5,86	11,0	120	3	5,88
SPC370 x 180	385	195	140	95	2,5	2,80	6,40	4,90	11,0	90	4	7,00
SPC370 x 215	381	215	163	112	2,5	3,32	8,10	6,30	11,0	90	4	5,88
SPC440 x 215	450	225	165	113	2,5	3,92	9,83	7,44	11,0	110	4	5,88
SPC450 x 215	464	215	163	113	2,5	4,00	9,95	7,90	11,0	90	5	5,88
SPC470 x 215	480	225	165	113	2,5	4,14	10,56	8,06	11,0	120	4	5,88
SPC500 x 215	515	215	163	113	2,5	4,28	11,25	8,80	11,0	100	5	5,88
SPC630 x 215	640	220	164	113	3,0	7,40	14,29	10,92	11,0	90	7	5,88

Z₂ = gross volume in liters, Z₃ = net volume in liters.



Super Starco capacity table (Z3)

The following capacity table is based on the maximum number of buckets per meter and a net volume in liters of the elevator bucket, resulting in a capacity in m³ per hour.



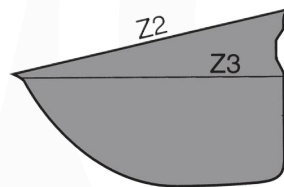
Net Starco capacity table in m³/hour (Z3)

Type	Number bckts/m	Net (Z3) volume	Belt speed in m/sec.					
			1	1,9	2,2	2,5	2,8	3,3
SPC100 x 90	14,00	0,25 L	12,60	23,94	27,72	31,50	35,28	41,58
SPC130 x 120	10,50	0,65 L	24,57	46,68	54,05	61,43	68,80	81,08
SPC160 x 125	8,60	1,20 L	37,15	70,59	81,73	92,88	104,03	122,60
SPC180 x 140	8,60	1,35 L	41,80	79,41	91,95	104,49	117,03	137,93
SPC200 x 150	8,60	1,53 L	47,37	90,00	104,21	118,42	132,63	156,32
SPC230 x 160	8,00	2,05 L	59,04	112,18	129,89	147,60	165,31	194,83
SPC240 x 160	7,40	2,37 L	63,14	119,96	138,90	157,84	176,78	208,35
SPC260 x 165	7,40	2,55 L	67,93	129,07	149,45	169,83	190,21	224,18
SPC280 x 165	7,40	2,95 L	78,59	149,32	172,89	196,47	220,05	259,34
SPC300 x 165	7,20	2,90 L	75,17	142,82	165,37	187,92	210,47	248,05
SPC300 x 180	7,00	3,50 L	88,20	167,58	194,04	220,50	246,96	291,06
SPC300 x 215	5,88	5,20 L	110,07	209,14	242,16	275,18	308,21	363,24
SPC330 x 215	5,88	5,65 L	119,60	227,24	263,12	299,00	334,88	394,68
SPC350 x 165	7,20	3,65 L	94,61	179,76	208,14	236,52	264,90	312,21
SPC370 x 215	5,88	6,30 L	133,36	253,38	293,39	333,40	373,40	440,08
SPC450 x 215	5,88	7,90 L	167,23	317,73	367,90	418,07	468,24	551,85
SPC500 x 215	5,88	8,80 L	186,28	353,93	409,81	465,70	521,58	614,72



Super Starco capacity table (Z2)

The following capacity table is based on the maximum number of buckets per meter and a gross volume in liters of the elevator bucket, resulting in a capacity in m³ per hour.

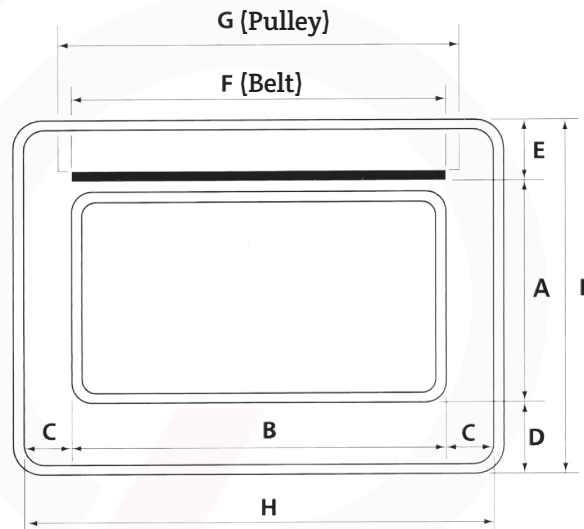


Gross Super Starco capacity table (Zone 2)

Type	number buckets/m	gross(Z2) volume	Belt speed in m/sec.					
			1	1,9	2,2	2,5	2,8	3,3
SPC100 x 90	14,00	0,33 L	16,63	31,60	36,59	41,58	46,57	54,89
SPC130 x 120	10,50	0,83 L	31,37	59,61	69,02	78,44	87,85	103,53
SPC160 x 125	8,60	1,44 L	44,58	84,71	98,08	111,46	124,83	147,12
SPC180 x 140	8,60	1,75 L	54,18	102,94	119,20	135,45	151,70	178,79
SPC200 x 150	8,60	2,00 L	61,92	117,65	136,22	154,80	173,38	204,34
SPC230 x 160	8,00	2,72 L	78,34	148,84	172,34	195,84	219,34	258,51
SPC240 x 160	7,40	3,03 L	80,72	153,37	177,58	201,80	226,01	266,37
SPC260 x 165	7,40	3,28 L	87,38	166,02	192,23	218,45	244,66	288,35
SPC280 x 165	7,40	3,78 L	100,70	191,33	221,54	251,75	281,96	332,31
SPC300 x 165	7,20	3,88 L	100,57	191,08	221,25	251,42	281,59	331,88
SPC300 x 180	7,00	4,50 L	113,40	215,46	249,48	283,50	317,52	374,22
SPC300 x 215	5,88	6,70 L	141,83	269,47	312,02	354,56	397,11	468,02
SPC330 x 215	5,88	7,20 L	152,41	289,58	335,30	381,02	426,75	502,95
SPC350 x 165	7,20	4,50 L	116,64	221,62	256,61	291,60	326,59	384,91
SPC370 x 215	5,88	8,10 L	171,46	325,78	377,21	428,65	480,09	565,82
SPC450 x 215	5,88	9,95 L	210,62	400,18	463,37	526,55	589,74	695,05
SPC500 x 215	5,88	11,25 L	238,14	452,47	523,91	595,35	666,79	785,86

Basic size Claus

The following tables show the basic sizes of elevators with Claus resp. Super Claus elevator buckets. These sizes are minimum parameters.



Elevator shaft sizes for steel Starco elevator buckets*

Type	A	B	C	D	E	F	G	H	I
100	89	106	40	35	40	120	140	200	163
120	100	126	40	40	42	140	160	220	182
130	114	138	40	40	45	150	170	230	199
140	115	145	40	40	45	160	180	240	200
160	125	165	40	40	45	180	200	245	210
180	140	185	40	40	45	200	220	280	235
200	140	205	40	40	55	220	240	300	235
230	165	238	45	50	55	250	270	340	270
250	151	255	45	50	55	270	290	3.60	256
280	165	289	45	50	55	300	320	390	270
300	190	310	45	50	55	320	340	430	295
330	214	340	70	70	70	350	420	490	354
350	188	360	70	70	70	380	450	520	328
370	214	381	70	70	70	400	470	540	354
400	198	410	70	70	70	450	500	590	338
450	214	464	70	70	70	500	570	640	354

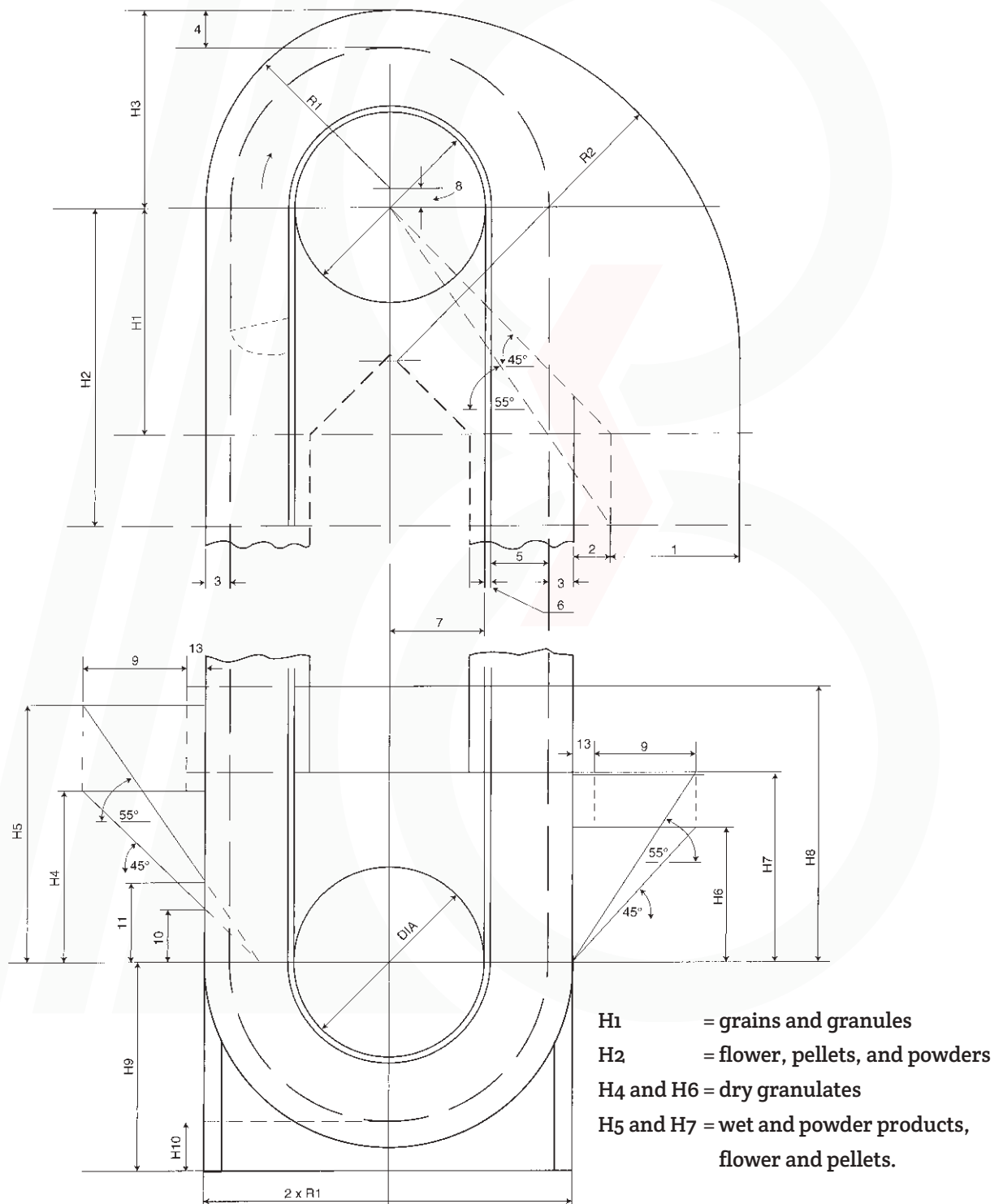
*These are guidelines for a steel Starco elevator bucket including intermediate dimensions.

The sizes C to F can also be used for plastic Starco and / or Super Starco elevator buckets.

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Basic size Claus

Basic parameters of an elevator with Claus resp. Super Claus elevator buckets. The elevator head and foot sizes may be calculated using the mentioned equations and tables. For lifting heights between 31 and 70 meters, parameter 3 must be increased by 1/3.



All information is subject to printing and typing errors and act as a guideline. Therefore no rights can be derived from this.

Basic size Claus

The elevator head and foot sizes may be calculated using the following equations. The next page shows the corresponding elevator drawing.

Basic sizes for the elevator head and foot with Claus resp. Super Claus elevator buckets

Elevator head sizes			
7	=	$\frac{\text{Pulley diameter}}{2}$	
R1	=	3 + 5 + 6 + 7	
R2	=	R1 + 1 + 2	
H1	=	R1 + 2	
H2	=	1,43 x (R1 + 2)	
8	=	7 + 6 + 5 + 4 - R1	
H3	=	8 + R1	
		H4 =	9 + 13 + 10
		H5 =	1,43 x (9 + 13) + 11
		H6 =	9 + 13
		H7 =	1,43 x (9 + 13)
		H8 = 1)	50 mm + H4 or H5
		2)	7 + 2/3 of the pulley diameter + 25mm
			(The highest number of 1 or 2 is to be used)
		H9 =	50 mm + 7 + 6 + 5 + 1/3 of the pulley diameter to be added
		H10 =	50 mm + 1/3 pulley diameter under

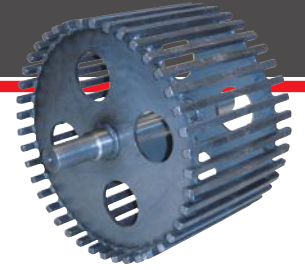
Sizes of the elevator head and foot for steel elevator buckets (parameters in mm)

Steel	1	2	3	4	5	6	9	10	11	12	13
C100-90	250	100	40	100	89	8	200	85	110	40	50
C130-120	250	100	40	100	120	8	200	100	125	45	50
C140-120	300	100	40	100	120	8	250	100	125	45	50
C160-140	350	100	45	100	147	8	300	115	140	45	50
C180-140	400	100	45	100	147	8	350	115	140	45	50
C200-150	400	100	50	125	150	8	350	125	150	55	50
C230-160	450	100	50	125	165	10	400	130	160	55	50
C240-160	450	125	50	125	165	10	400	130	160	55	50
C260-165	500	125	50	130	165	10	450	130	160	55	50
C280-165	500	125	50	130	165	10	450	130	160	55	50
C300-165	500	125	50	150	165	10	450	130	160	55	50
C350-165	500	125	50	150	165	10	450	130	160	55	50
C300-180	550	125	50	150	182	10	500	140	170	55	50
C300-215	700	150	70	180	215	10	650	170	200	70	50
C330-215	700	150	70	180	215	10	650	170	200	70	60
C350-215	700	150	70	180	215	10	650	170	200	70	60
C370-215	750	150	70	180	215	10	700	170	200	70	60
C450-215	850	150	70	180	215	10	800	170	200	70	60

Sizes of the elevator head and foot for plastic elevator buckets (parameters in mm)

Plastic	1	2	3	4	5	6	9	10	11	12	13
C100-90	250	100	40	100	90	8	200	85	110	45	50
C130-120	250	100	40	100	121	8	200	100	125	45	50
C140-120	300	100	40	100	120	8	250	100	125	45	50
C150-110	350	100	45	100	113	8	300	115	140	45	50
C180-140	400	100	45	100	146	8	350	115	140	45	50
CPC200-150	400	100	50	125	150	8	350	125	150	55	50
C225-140	450	100	50	125	140	10	400	115	140	55	50
C230-170	450	100	50	125	173	10	400	130	160	55	50
C280-170	500	100	50	130	173	10	450	130	160	55	50
C300-180	550	125	50	150	181	10	500	140	170	55	50
C350-180	600	125	50	150	181	10	550	140	170	55	50
C330-215	700	150	70	180	222	10	650	170	200	70	60
C370-215	750	150	70	180	218	10	700	170	200	70	60

All information is subject to printing and typing errors and act as a guideline. Therefore no rights can be derived from this.



Pulleys for Claus

The following table shows the pulley diameters for the Claus bucket type. The table also lists the corresponding minimum and maximum belt speeds for Claus buckets.

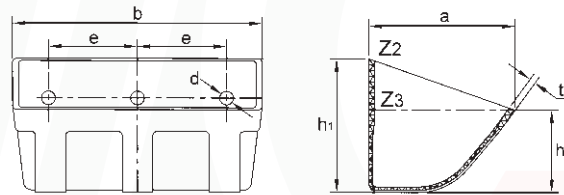
Pulleys for Claus elevator buckets (parameters in mm)			
Type Claus	Pulley diameter	Minimum speed (m/s)	Maximum speed (m/s)
C100 - C120	250	1,45	3,05
	300	1,58	3,32
C130 - C140	300	1,42	3,00
	400	1,61	3,39
C160 - C200	400	1,50	3,15
	500	1,62	3,41
	630	1,76	3,70
	750	1,86	3,91
	800	1,89	3,98
	900	1,96	4,11
C230 - C300	1.000	2,00	4,21
	500	1,53	3,22
	630	1,67	3,52
	750	1,77	3,73
	800	1,80	3,80
	900	1,88	3,94
	1.000	1,92	4,04
	1.250	2,03	4,27
C330 - C370	1.500	2,12	4,45
	1.800	2,20	4,60
	630	1,53	3,22
	750	1,64	3,44
	800	1,67	3,52
	900	1,75	3,68
	1.000	1,80	3,80
	1.250	1,93	4,05
C330 - C630	1.500	2,00	4,24
	1.800	2,10	4,40
	2.000	2,14	4,50
	800	1,56	3,28
	900	1,63	3,43
	1.000	1,70	3,57
	1.250	1,82	3,84
	1.500	1,92	4,04
	1.800	2,00	4,23
	2.000	2,06	4,33
	2.500	2,15	4,52

All information is subject to printing and typing errors and act as a guideline. Therefore no rights can be derived from this.



D type plastic buckets

This durable elevator bucket has standard reinforcements on front lip and side walls. This version also has a large volume. The D-type buckets are robust and thus highly suitable for raw materials as well as other industrial applications. Available in HDPE and nylon.



Plastic elevator buckets type D (parameters in mm)

Type	Size/weight	Size/weight					Kg ^{PE}	Volume		Max. bckts/m
		b	a	h ₁	h ₂	t		Z ₂	Z ₃	
D	4 x 3	107	81	75	51	5,00	0,078	0,32	0,25	10,0
D	5 x 4	133	113	106	65	6,50	0,165	0,85	0,59	7,0
D	6 x 4	159	108	103	67	6,50	0,185	0,87	0,65	7,2
D	7 x 4	184	108	103	67	6,50	0,205	1,04	0,75	7,2
D	6 x 5	168	140	130	80	6,50	0,320	1,48	1,10	5,7
D	7 x 5	192	140	130	80	6,50	0,355	1,73	1,20	5,7
D	8 x 5	211	140	130	80	6,50	0,385	1,92	1,41	5,7
D	8 x 6	211	168	154	95	7,50	0,530	2,83	2,08	4,9
D	9 x 5	237	140	130	80	7,00	0,475	2,41	1,75	5,7
D	9 x 6	237	168	154	95	7,25	0,560	3,23	2,34	4,9
D	10 x 6	266	168	154	95	7,25	0,588	3,62	2,58	4,9
D	11 x 5	289	140	130	80	7,00	0,540	2,75	2,01	5,7
D	11 x 6	287	168	154	95	7,25	0,645	4,01	2,83	4,9
D	12 x 6	313	168	154	95	7,50	0,760	4,44	3,16	4,9
D	13 x 6	338	168	154	95	7,25	0,735	4,74	3,44	4,9
D	11 x 7	287	197	180	114	8,00	0,935	5,39	3,95	4,2
D	12 x 7	326	197	180	127	8,00	1,010	5,81	4,35	4,2
D	13 x 7	343	197	180	127	8,00	1,130	6,52	5,07	4,2
D	14 x 7	373	197	180	114	8,00	1,110	6,90	5,22	4,2
D	15 x 7	392	197	180	127	9,00	1,305	7,61	6,07	4,2
D	16 x 7	427	197	180	127	9,00	1,230	7,94	6,32	4,2
D	12 x 8	331	222	206	143	10,00	1,445	7,45	5,77	3,6
D	14 x 8	378	222	206	143	10,00	1,550	8,76	6,87	3,6
D	15 x 8	392	222	206	143	10,00	1,555	9,47	7,94	3,6
D	16 x 8	434	222	206	143	10,00	1,740	10,38	8,10	3,6
D	18 x 8	473	222	206	143	10,00	1,895	11,50	9,07	3,6
D	20 x 8	520	225	210	150	10,50	2,230	13,11	10,60	3,6

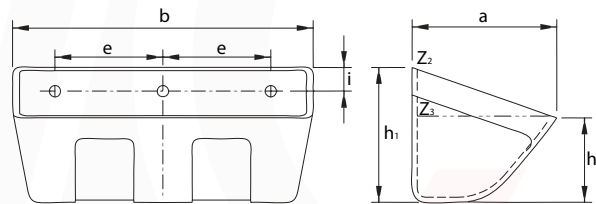
Z₂ = gross volume in liters, Z₃ = net volume in liters.

These elevator buckets have no holes, but those may be drilled according to the client's specifications.



M type plastic buckets

This durable elevator bucket has standard reinforcements on front lip and side walls. This version also has a large volume. The M-type buckets have an optimum discharge level and larger capacity. Ideal for agricultural use. Available in HDPE and nylon.



Plastic elevator buckets type D (parameters in mm)

Type	Size/weight						Volume		Max.
	b	a	h ₁	h ₂	t	Kg ^{PE}	Z ₂	Z ₃	bckts/m
M4 x 3	105	95	67	45	5	0,080	0,33	0,25	14,00
M5 x 4	138	120	90	52	6	0,160	0,70	0,50	11,00
M7 x 5	186	150	110	85	6	0,290	1,75	1,35	8,60
M8 x 5	215	155	110	80	6	0,310	1,98	1,58	8,60
M9 x 6	250	168	132	93	7	0,500	3,00	2,30	7,40
M11 x 5	285	150	110	85	7	0,440	2,60	2,20	8,60
M11 x 6	290	168	132	100	7	0,630	3,50	2,70	7,40
M12 x 8	315	225	168	125	8	1,000	6,50	5,00	5,88
M13 x 8	340	225	168	125	8	1,050	7,10	5,40	5,88
M15 x 8	384	225	168	125	9	1,310	8,10	6,20	5,88
M18 x 8	458	225	168	125	9	1,495	9,80	7,50	5,88
M20 x 8	519	225	168	125	9	1,785	10,76	8,60	5,88

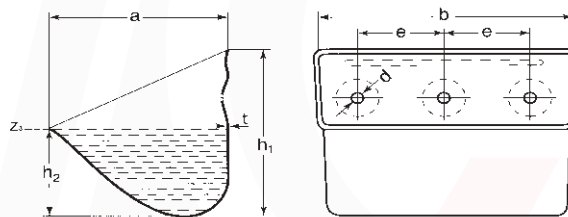
Z₂ = gross volume in liters, Z₃ = net volume in liters.

These elevator buckets have no holes, but those may be drilled according to the client's specifications.



Steel Columbus buckets

The steel Columbus buckets (comparable to DIN15232) are pressed out of one piece, seamless, and are available in ST 37 as well as stainless steel. These buckets are normally equipped with recessed holes. Buckets with other types of holes, or without any holes, are available on demand.



Steel Columbus elevator buckets (parameters in mm)

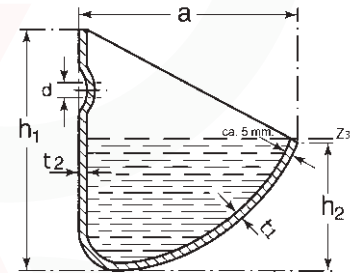
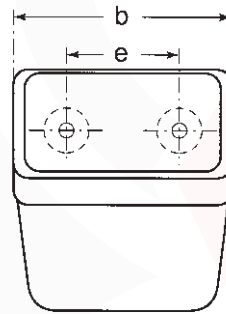
Type	Size/weight					Volume Kg	Z ₃	Holes			Max. bckts/m
	b	a	h ₁	h ₂	t			d	e	no.	
Columbus 80 x 1	80	75	80	40	1,0	0,125	0,16	8,0	43	2	10,00
Columbus 90 x 1	90	80	85	45	1,0	0,155	0,22	8,0	46	2	9,00
Columbus 100 x 1	100	90	91	48	1,0	0,180	0,27	8,0	58	2	8,50
Columbus 110 x 1	110	95	95	50	1,0	0,210	0,32	8,0	64	2	8,00
Columbus 120 x 1	120	100	105	55	1,0	0,250	0,42	8,0	67	2	8,00
Columbus 130 x 1	130	105	110	58	1,0	0,300	0,50	8,0	78	2	7,00
Columbus 140 x 1	140	115	117	63	1,0	0,330	0,63	8,0	86	2	6,50
Columbus 150 x 1	150	125	123	66	1,0	0,360	0,77	8,0	87	2	6,00
Columbus 160 x 1,5	160	125	126	70	1,5	0,570	0,89	8,0	101	2	5,50
Columbus 180 x 1,5	180	130	130	76	1,5	0,670	1,05	9,0	110	2	5,50
Columbus 200 x 1,5	200	140	145	88	1,5	0,840	1,45	9,0	131	2	5,00
Columbus 225 x 1,5	225	145	153	90	1,5	1,010	1,83	9,0	70	3	5,00
Columbus 225 x 2	225	145	153	90	2,0	1,300	1,83	9,0	70	3	5,00
Columbus 250 x 1,5	250	150	158	92	1,5	1,120	2,11	9,0	77	3	5,00
Columbus 250 x 2	250	150	158	92	2,0	1,460	2,11	9,0	77	3	5,00
Columbus 300 x 1,5	300	155	160	95	1,5	1,350	2,84	9,0	104	3	4,50
Columbus 300 x 2	300	155	160	95	2,0	1,740	2,84	9,0	104	3	4,50
Columbus 350 x 1,5	350	180	190	100	1,5	2,000	4,03	11,0	90	4	4,00
Columbus 350 x 2	350	180	190	100	2,0	2,350	4,03	11,0	90	4	4,00
Columbus 400 x 2	400	200	212	112	2,0	3,350	5,60	11,0	100	4	3,00
Columbus 500 x 3	500	224	236	125	3,0	7,200	9,00	14,0	100	5	3,00

Z₃ = net volume in liters



Plastic Columbus buckets

Plastic Columbus elevator buckets, suitable for the transport of wet and sticky materials, are available in two varieties. The white polypropylene version is temperature resistant up to 60 °C. The green nylon plastic Columbus elevator bucket is temperature resistant up to 90 °C. The following table shows the standard sizes of plastic Columbus elevator buckets.



Polypropylene (white) Columbus elevator buckets (parameters in mm)

Type	Size/weight					Kg ^{PP}	Volume	Holes		Max.	
	b	a	h ₁	h ₂	t ₁ - t ₂			Z ₃	d		e no.
Columbus 80	85	78	79	42	2,0 - 2,0	0,032	0,13	8,0	45	2	10,00
Columbus 100	106	93	96	50	2,0 - 2,0	0,058	0,25	8,0	48	2	8,00
Columbus 120	120	106	104	50	2,5 - 2,5	0,082	0,35	8,0	63	2	8,00
Columbus 140	145	115	120	60	2,5 - 2,5	0,116	0,55	8,0	80	2	6,50
Columbus 160	170	130	135	75	3,0 - 3,0	0,158	0,85	8,0	96	2	5,50
Columbus 180	190	135	140	75	3,0 - 3,0	0,194	1,10	8,0	104	2	5,50
Columbus 200	215	145	145	75	3,0 - 4,0	0,250	1,25	10,0	118	2	5,00
Columbus 250	265	170	168	80	3,5 - 4,0	0,368	2,10	10,0	77	3	4,00
Columbus 315	327	193	196	104	4,0 - 5,0	0,628	3,35	11,0	110	3	4,00

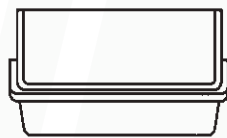
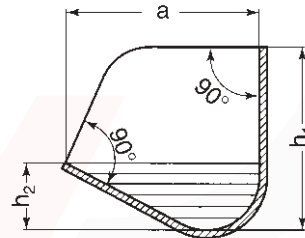
Z₃ = net volume in liters



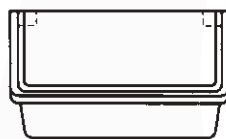
Plate steel elevator buckets

The plate steel elevator buckets come either in a deep or a shallow version. Completely in accordance with DIN 15231, 15232, 15233, and 15234. The correct bucket is selected depending on the product, fine or crude material. These buckets are available in a pressed or welded version and feature recessed holes. Bechtel offers you a selection of various different materials, such as: S235JR, S355J2G3, Hardox 400/500, Creusabro 4800 / 1.3401, Stainless steel 1.4301 / 1.4404 / 1.4571.

The net volumes listed in the tables correspond to the shaded areas in the drawing, if the backside is vertical.



Bucket with front lip reinforcement



Bucket with trilateral edge reinforcement

Plate steel elevator buckets may be strengthened even further with a welded edge reinforcement. Options include a front lip reinforcement or a trilateral edge reinforcement.



Plate steel elevator buckets

DIN 15231

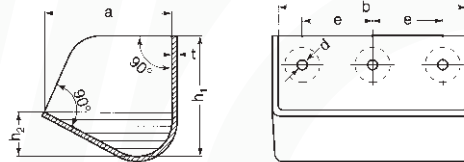


Plate steel elevator buckets in a welded version in accordance with DIN 15231 (parameters in mm)

Shallow buckets, suitable for light-weight goods, such as flower etc.

Type	Size/weight					Volume Kg	Z ₃	Holes			Max. bckts/m
	b	a	h ₁	h ₂	t*			d	e	no.	
80 x t	80	75	67	24	1,5	0,22	0,10	7,0	40	2	8,00
100 x t	100	90	80	28	1,5	0,33	0,16	7,0	50	2	6,50
125 x t	125	106	95	34	1,5	0,48	0,28	9,5	63	2	5,50
160 x t	160	125	112	40	1,5	0,70	0,50	9,5	80	2	4,50
180 x t	180	135	120	42	1,5	0,80	0,65	11,5	125	2	4,50
200 x t	200	140	125	45	1,5	0,95	0,80	11,5	125	2	4,00
250 x t	250	160	140	50	1,5	1,30	1,25	11,5	80	3	4,00
315 x t	315	180	160	56	1,5	1,80	1,93	11,5	112	3	3,00
400 x t	400	200	180	63	2,0	3,25	3,15	11,5	100	4	3,00
500 x t	500	224	200	71	3,0	6,60	4,84	14,0	100	5	3,00

Z₃ = net volume in liters

t* = various different plate thicknesses are possible.

DIN 15232

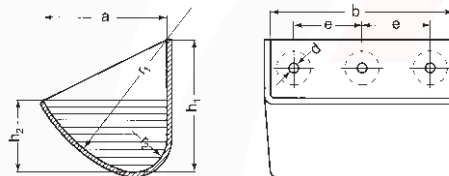


Plate steel elevator buckets in a welded version in accordance with DIN 15232 (parameters in mm)

Deep buckets, suitable for grainy goods, such as grains and seeds, etc.

Type	Size/weight					Volume Kg	Z ₃	Holes			Max. bckts/m
	b	a	h ₁	h ₂	t*			d	e	no.	
80 x 1	80	75	80	43	1,5	0,24	0,17	7,0	40	2	10,00
100 x t	100	90	95	50	1,5	0,36	0,30	7,0	50	2	8,50
125 x t	125	106	112	60	1,5	0,51	0,53	9,5	63	2	7,00
160 x t	160	125	132	71	1,5	0,75	0,90	9,5	80	2	5,50
180 x t	180	130	140	75	1,5	1,00	1,14	11,5	125	2	5,00
200 x t	200	140	150	80	1,5	1,20	1,40	11,5	125	2	5,00
250 x t	250	160	170	90	1,5	1,40	2,24	11,5	80	3	5,00
315 x t	315	180	190	100	2,0	2,60	3,55	11,5	112	3	4,00
400 x t	400	200	212	112	2,0	3,55	5,60	11,5	100	4	3,00
500 x t	500	224	236	125	3,0	7,20	9,00	14,0	100	5	3,00
630 x t	630	250	265	140	3,0	13,00	14,00	14,0	100	6	2,50
800 x 4	800	280	300	160	4,0	22,20	23,30	14,0	200	7	2,50

Z₃ = net volume in liters

t* = various different plate thicknesses are possible.



Plate steel elevator buckets

DIN 15233

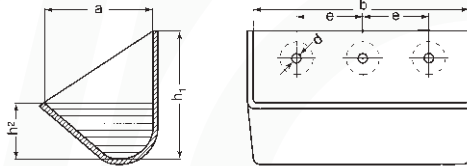


Plate steel elevator buckets in a welded or a pressed version in accordance with DIN 15233 (parameters in mm)

Medium deep buckets, suitable for sticky goods, such as sugar, etc.

Type	Size/weight					Volume Kg	Holes Z ₃	Holes		Max. bckts/m	
	b	a	h ₁	h ₂	t*			d	e no.		
160 x 140 x t	160	140	160	63	2,0	1,23	0,95	9,5	80	2	4,50
160 x 160 x t	160	160	180	71	2,0	1,44	1,20	9,5	80	2	4,00
200 x 160 x t	200	160	180	71	2,0	1,65	1,50	11,5	125	2	4,00
250 x 180 x t	250	180	200	80	2,0	2,25	2,40	11,5	80	3	4,00
250 x 200 x t	250	200	224	90	2,0	2,63	3,00	11,5	80	3	3,50
315 x 200 x t	315	200	224	90	3,0	4,55	3,75	11,5	112	3	3,50
400 x 224 x t	400	224	250	100	3,0	6,10	5,90	11,5	100	4	3,00
500 x 250 x t	500	250	280	112	4,0	11,50	9,30	14,0	100	5	3,00
630 x 280 x t	630	280	315	125	4,0	16,10	14,60	14,0	100	6	2,50
800 x 315 x t	800	315	355	140	5,0	27,50	23,30	14,0	200	7	2,50
1000 x 355 x t	1000	355	400	160	5,0	38,20	37,60	14,0	200	9	2,00

Z₃ = net volume in liters

t* = various different plate thicknesses are possible.

DIN 15234

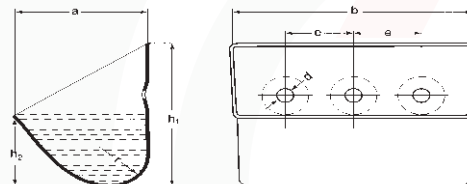


Plate steel elevator buckets in a welded version in accordance with DIN 15234 (parameters in mm)

Deep buckets, suitable for heavy goods, such as cokes, sand, glass, etc.

Type	Size/weight					Volume Kg	Holes Z ₃	Holes		Max. bckts/m	
	b	a	h ₁	h ₂	t*			d	e no.		
160 x 140 x t	160	140	180	95	2,0	1,38	1,50	9,5	80	2	4,00
160 x 160 x t	160	160	200	106	2,0	1,59	1,90	9,5	80	2	4,00
200 x 160 x t	200	160	200	106	2,0	1,85	2,40	11,5	125	2	4,00
250 x 180 x t	250	180	224	118	2,0	2,49	3,70	11,5	80	3	3,50
250 x 200 x t	250	200	250	132	3,0	4,36	4,60	11,5	80	3	3,00
315 x 200 x t	315	200	250	132	3,0	5,09	5,80	11,5	112	3	3,00
400 x 224 x t	400	224	280	150	3,0	7,03	9,40	11,5	100	4	3,00
500 x 250 x t	500	250	315	170	4,0	12,80	14,90	14,0	100	5	2,50
630 x 280 x t	630	280	355	190	4,0	17,60	23,50	14,0	100	6	2,50
800 x 315 x t	800	315	400	212	5,0	30,60	37,30	14,0	200	7	2,00
1.000 x 355 x t	1.000	355	450	236	5,0	42,00	58,30	14,0	200	9	2,00

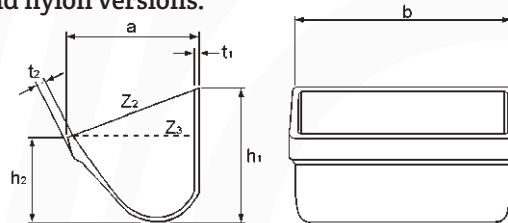
Z₃ = net volume in liters

t* = various different plate thicknesses are possible.



CC-S elevator buckets

The CC-S type is a high-capacity elevator bucket. This bucket, with its extra-thick walls, is exceptionally durable. Available in HDPE and nylon versions.



CC-S elevator buckets (parameters in mm)

Type	Size/weight							Volume		Max. bckts/m
	b	a	h ₁	h ₂	t	t ₂	Kg	Z ₂	Z ₃	
CC-S 3x2	85	64	53	35	4,5	6,0	0,05	0,15	0,11	15,75
CC-S 4x3	112	89	78	54	5,0	7,0	0,11	0,39	0,31	11,25
CC-S 5x4	135	115	103	72	5,0	7,5	0,20	0,80	0,58	8,75
CC-S 6x4	161	115	103	72	5,0	7,5	0,23	0,96	0,74	8,75
CC-S 7x4	186	115	103	72	5,0	7,5	0,26	1,13	0,87	8,75
CC-S 6x5	163	141	131	93	6,0	10,5	0,37	1,48	1,15	7,15
CC-S 7x5	189	141	131	93	6,0	10,5	0,41	1,74	1,35	7,15
CC-S 8x5	214	141	131	93	6,0	10,5	0,45	2,00	1,56	7,15
CC-S 9x5	240	141	131	93	6,0	10,5	0,50	2,22	1,71	7,15
CC-S 10x5	265	141	131	93	6,0	10,5	0,54	2,53	1,97	7,15
CC-S 11x5	290	141	131	93	6,0	10,5	0,59	2,78	2,17	7,15
CC-S 12x5	316	141	131	93	6,0	10,5	0,62	3,05	2,38	7,15
CC-S 8x6	213	169	154	109	6,0	12,5	0,56	2,76	2,10	6,00
CC-S 9x6	239	169	154	109	6,0	12,5	0,64	2,95	2,35	6,00
CC-S 10x6	264	169	154	109	6,0	12,5	0,68	3,38	2,75	6,00
CC-S 11x6	289	169	154	109	6,0	12,5	0,72	3,85	3,10	6,00
CC-S 12x6	315	169	154	109	6,0	12,5	0,78	4,30	3,30	6,00
CC-S 13x6	340	169	154	109	6,0	12,5	0,84	4,60	3,60	6,00
CC-S 14x6	365	169	154	109	6,0	12,5	0,90	5,05	3,95	6,00
CC-S 10x7	273	200	180	127	8,0	14,0	1,05	5,12	3,96	5,25
CC-S 11x7	299	200	180	127	8,0	14,0	1,10	5,50	4,30	5,15
CC-S 12x7	324	200	180	127	8,0	14,0	1,20	6,18	4,79	5,25
CC-S 13x7	350	200	180	127	8,0	14,0	1,28	6,71	5,20	5,25
CC-S 14x7	375	200	180	127	8,0	14,0	1,37	7,25	5,62	5,25
CC-S 15x7	400	200	180	127	8,6	14,0	1,45	7,76	6,03	5,25
CC-S 16x7	426	200	180	127	8,0	14,0	1,53	8,30	6,44	5,25
CC-S 10x8	275	228	210	149	10,0	15,0	1,44	6,66	5,19	4,60
CC-S 11x8	300	228	210	149	10,0	15,0	1,55	7,35	5,73	4,60
CC-S 12x8	326	228	210	149	10,0	15,0	1,66	8,07	6,29	4,60
CC-S 13x8	351	228	210	149	10,0	15,0	1,76	8,75	6,83	4,60
CC-S 14x8	377	228	210	149	10,0	15,0	1,88	9,47	7,40	4,60
CC-S 15x8	402	228	210	149	10,0	15,0	1,97	10,16	7,94	4,60
CC-S 16x8	427	228	210	149	10,0	15,0	2,05	10,85	8,48	4,60
CC-S 18x8	479	228	210	149	10,0	15,0	2,30	12,28	9,61	4,60
CC-S 20x8	529	228	210	149	10,0	15,0	2,50	13,65	10,70	4,60

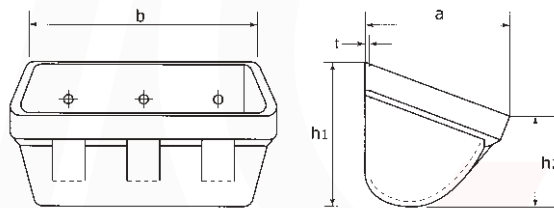
Z₂ = gross volume in liters, Z₃ = net volume in liters.

These elevator buckets have no holes, but those may be drilled according to the client's specifications.



Atlas elevator buckets

The Atlas industrial elevator buckets, injected into a mold, are made of a very tough and non-abrasive nylon. These buckets are temperature resistant between - 40 °C and + 110 °C. Besides, the Atlas elevator buckets have a trilateral edge reinforcement.



Atlas elevator buckets (parameters in mm)

Type	Size/weight						Volume		Max.
	b	a	h1	h2	t	Kg	Z2	Z3	bckts/m
AA54TN	134	105	105	74	7,0	0,23	0,74	0,57	7,0
AA64TN	160	105	105	74	7,0	0,27	0,89	0,68	7,0
AA74TN	184	105	105	74	7,0	0,30	1,07	0,84	7,0
AA75TN	180	130	134	93	8,0	0,44	1,55	1,26	5,7
AA85TN	206	130	134	93	8,0	0,50	1,83	1,47	5,7
AA95TN	232	130	134	93	8,0	0,54	2,00	1,66	5,7
AA96TN	238	156	156	108	8,5	0,67	2,80	2,17	5,0
AA106TN	264	156	156	108	8,5	0,73	3,14	2,43	5,0
AA116TN	290	156	156	108	8,5	0,77	3,43	2,68	5,0
AA126TN	320	165	160	108	8,5	0,95	4,10	3,08	5,0
AA127TN/S	305	178	178	98	7,0	0,92	4,10	2,95	4,5
AA127TN	314	180	180	125	9,0	1,13	5,25	4,00	4,5
AA147TN	365	180	180	125	9,0	1,25	6,30	4,89	4,5
AA148TN	365	206	206	142	11,0	1,94	7,60	5,76	4,0
AA168TN	416	206	206	142	12,5	2,10	8,85	6,66	4,0
AA188TN	460	206	206	142	12,5	2,38	10,15	7,66	4,0
AA1810TN	460	258	258	168	12,5	3,60	14,80	11,0	3,0

Atlas elevator buckets black nylon (parameters in mm)

AD300	361	202	215	111	14,0	1,70	6,75	4,13	3,8
AD400	424	247	286	156	11,0	2,75	14,33	9,00	3,0
AD500	524	274	321	176	12,0	5,03	23,20	15,70	2,7
AD630	654	306	363	198	12,0	8,25	36,00	23,40	2,5

Z2 = gross volume in liters, Z3 = net volume in liters.

The material thickness "t" was measured on the backside of the bucket.

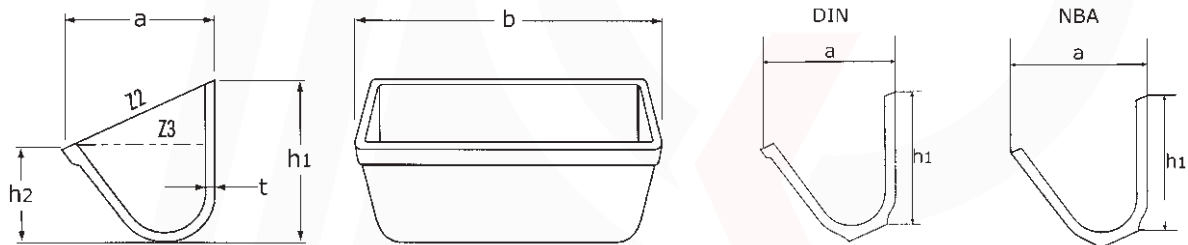
These elevator buckets have no holes, but holes may be drilled according to the customer's specifications.



Monocast GSM buckets

Monocast GSM elevator buckets are nylon cast, also containing molybdenum disulfide as an additive. The deep elevator bucket lends itself perfectly to the upward conveyance of glass, shards of glass, cement, sand, and other abrasive products. Two types of these abrasion-resistant elevator buckets are available:

- ✓ NBA series without edge reinforcement
- ✓ DIN series with edge reinforcement, in accordance with DIN 15234.



Monocast GSM elevator buckets NBA series (parameters in mm)

Type	Size/weight					KG	Volume		Max. bckts/m
	b	a	h1	h2	t		Z2	Z3	
NBA 8	206	111	127	73	8,0	0,59	1,20	0,98	5,6
NBA 10	254	123	141	82	8,0	0,79	1,85	1,44	5,2
NBA 12	318	167	164	93	8,0	1,13	4,50	2,70	5,0
NBA 14	362	179	190	109	8,0	1,53	6,10	4,00	4,1
NBA 15	370	206	223	131	8,0	1,80	8,57	5,76	3,6
NBA 16	413	210	203	113	8,0	1,81	9,30	5,60	4,0
NBA 18	457	198	229	143	8,0	2,50	11,10	7,50	3,5

Monocast GSM elevator buckets DIN series (parameters in mm)

Type	Size/weight					KG	Volume		Max. bckts/m
	B	A	H1	H2	T		Z2	Z3	
DIN 200/160	224	178	209	109	8,0	1,25	3,65	2,23	4,0
DIN 250/180	274	199	233	121	8,0	1,59	5,60	3,54	3,6
DIN 315/200	339	219	260	135	8,0	2,38	9,90	5,39	3,3
DIN 400/225	426	244	291	153	8,0	3,18	15,20	9,05	3,0
DIN 500/250	526	269	328	176	8,0	4,20	23,92	14,38	2,7
DIN 630/280	656	301	364	193	8,0	5,44	37,20	22,70	2,5
DIN 800/315	830	330	400	212	8,0	9,20	59,00	38,00	2,2
DIN1000/355	1.035	375	450	236	8,0	15,00	95,00	60,00	2,0

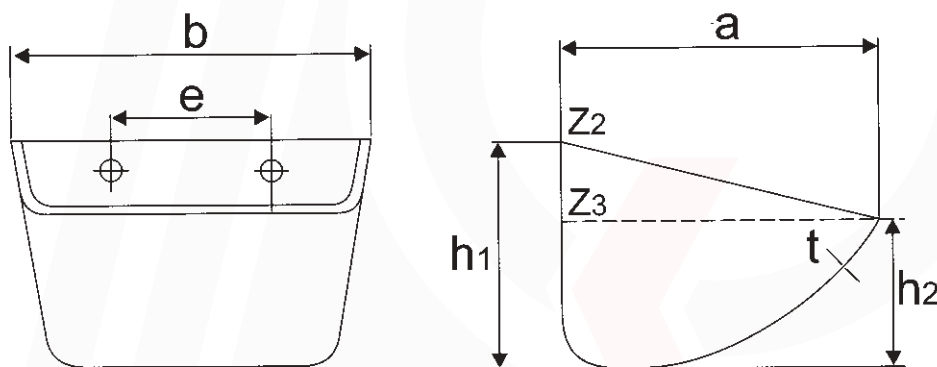
Z2 = gross volume in liters, Z3 = net volume in liters.

These elevator buckets have no holes, but those may be drilled according to the client's specifications.



BE type plastic buckets

This durable medium-deep elevator bucket has a large volume and considerable projection. This gives the BE elevator bucket a high capacity. The plastic BE elevator buckets are available in HDPE and nylon.



BE type plastic elevator buckets (parameters in mm)

Type	Size/weight		Volume					Holes		Max. bckts/m		
	b	a	h ₁	h ₂	t	Kg	Z ₂	Z ₃	d		e	no.
BE130 x 120	138	120	91	59	3,9	0,104	0,80	0,61	7,0	60	2	8,0
BE190 x 140	190	145	115	66	5,8	0,285	1,60	1,20	9,0	100	2	6,0
BE230 x 140	235	140	110	78	6,5	0,335	1,90	1,49	9,0	120	2	6,0
BE240 x 170	248	178	120	82	7,0	0,480	2,60	2,18	9,0	120	2	7,0
BE260 x 160	260	167	144	56	6,0	0,510	2,20	1,25	9,0	80	3	7,0
BE280 x 140	286	140	103	50	6,0	0,373	2,05	1,32	9,0	90	3	8,0
BE280 x 160	290	167	108	55	6,0	0,440	2,50	1,38	9,0	90	3	8,0
BE280 x 170	290	178	120	78	6,0	0,460	3,35	2,50	9,0	90	3	7,0
BE280 x 240	289	244	166	120	6,0	1,020	6,40	5,60	9,0	100	3	4,0
BE330 x 250	339	259	170	110	7,5	1,160	8,50	6,55	9,0	85	4	5,0
BE380 x 230	382	230	165	110	7,6	1,120	8,00	6,00	9,0	100	4	5,0
BE390 x 170	393	170	130	80	7,0	0,750	5,00	3,25	9,0	100	4	6,0
BE440 x 230	447	230	165	110	8,7	1,455	9,20	7,30	9,0	90	5	5,0
BE470 x 230	475	230	164	110	8,3	1,405	10,00	8,10	9,0	95	5	5,0
BE470 x 260	470	260	170	113	9,5	1,710	11,50	9,40	9,0	95	5	5,0
BE560 x 260	569	260	170	114	8,5	1,970	15,00	11,75	11,0	115	5	5,0

Z₂ = gross volume in liters, Z₃ = net volume in liters.

Elevator calculations



Elevator calculations

Belt speed in m/sec (v)

$$v = \frac{\text{Diameter pulley (m)} \times 3,14 \times \text{Rotations per minute}}{60}$$

v = belt speed in m per sec

Elevator calculations

Capacity in kg per hour (Q)

$$Q = a \times V \times \text{sg} \times v \times 3600 \text{ sec.}$$

Q = capacity in kg per hour

a = buckets per meter

V = bucket volume in liters

sg = specific weight of the material (see table)

v = belt speed in m per sec (see above equation)



Elevator calculations

Power in Kw (P)

$$P = \frac{Q \times H \times 9,81}{3600 \text{ sec.}}$$

P = power in Kw

Q = capacity in 1000 kg per hour

H = conveying height in meters

g = gravity 9.81 m/sec²

