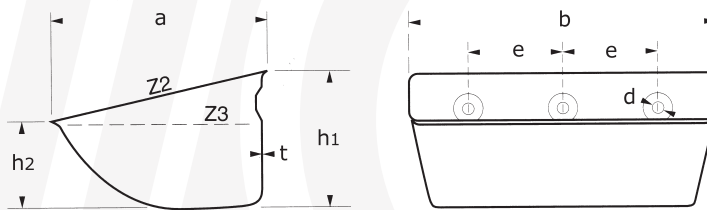




# Claus elevator buckets

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

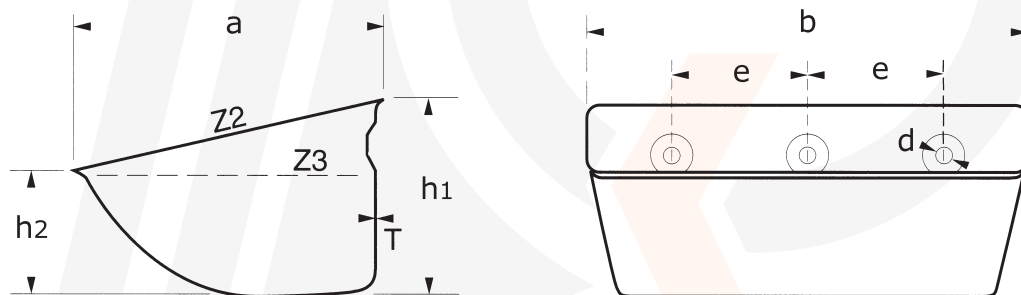
$Z_2$  = gross volume in liters,  $Z_3$  = net volume in liters.

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.



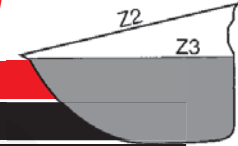
Claus elevator buckets made of plastic (parameters in mm)

Type	Size/weight					Volume Kg <sup>PE</sup>	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)

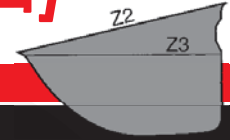


Net capacity table for steel Claus in m<sup>3</sup>/h (Z3)

Type	Pro-jection	Bucket volume	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	0,19 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)

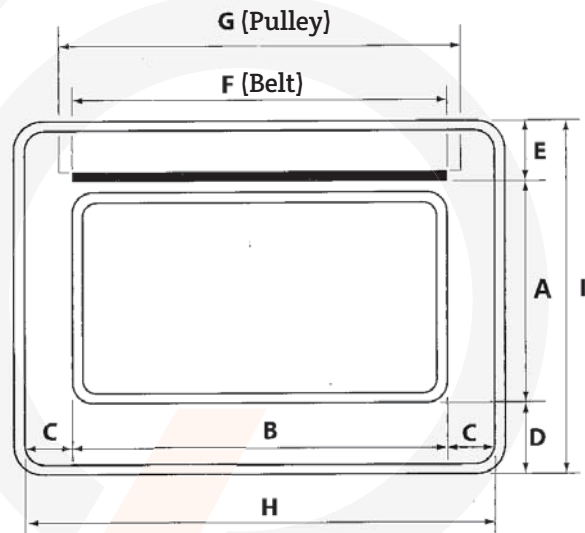


Gross capacity table for steel Claus in m<sup>3</sup>/h [Z2]

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

# 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

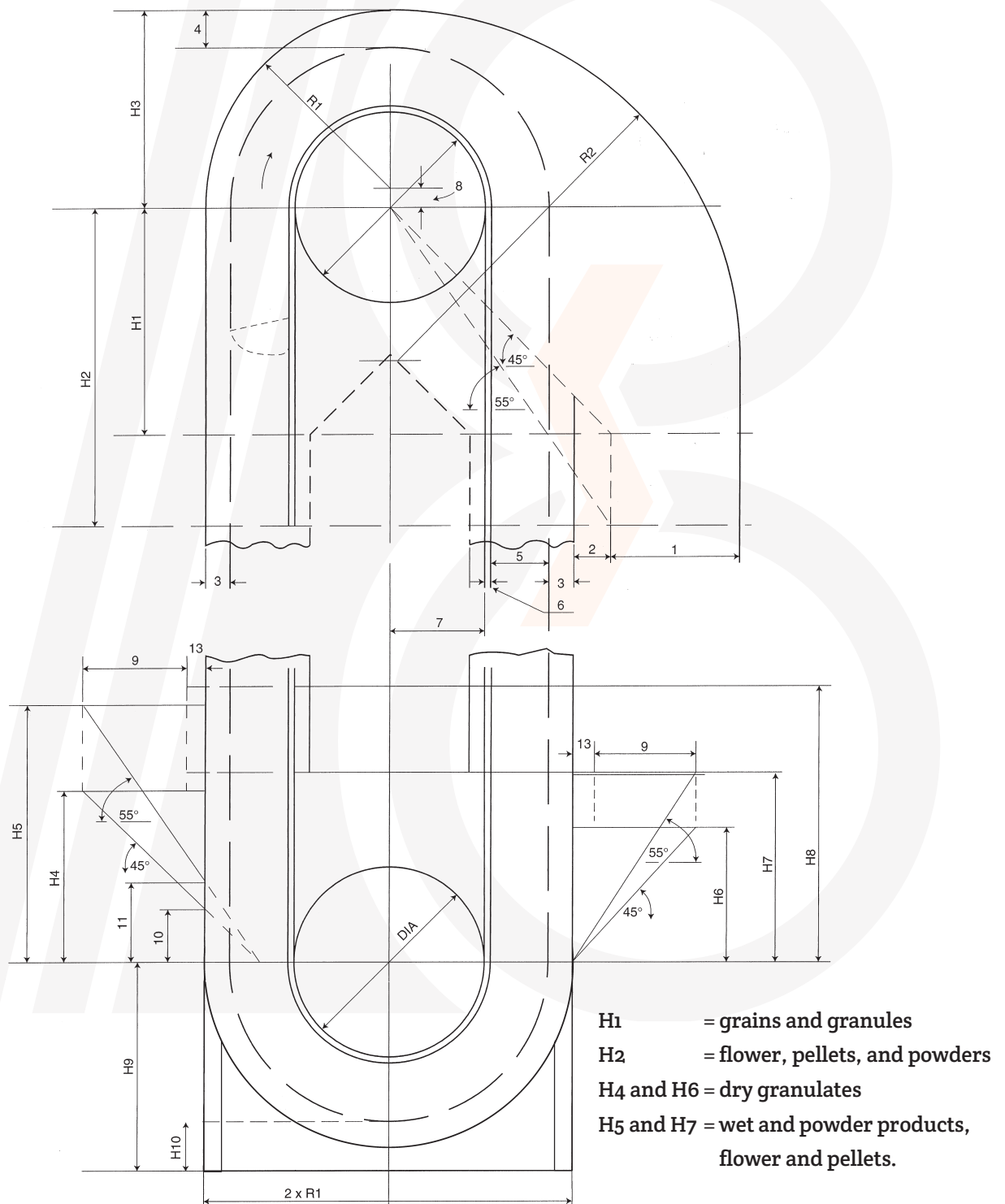
\*These are guidelines for a steel Starco elevator bucket including intermediate dimensions.

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.



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## 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

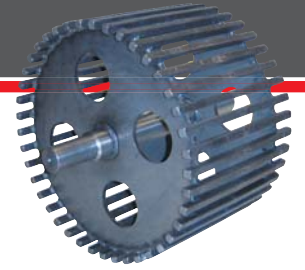
### Sizes of the elevator head and foot for steel elevator buckets (parameters in mm)

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

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# 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

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