

State of the art Manufacturing Facilities



Haridwar, Noida Ph-I & Noida Ph-II Plant



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HRC Fuse Links & Bases

## Application

C&S HRC fuse-links have been developed & designed to meet the requirements of modern industrial installations & available in breaking capacity which are sufficient enough to meet the highest short-circuit levels. Selected HRC Fuse Links should have current rating not less than the normal full load current of circuit. Class 'gG' Fuse Links provides complete protection of cables. Breaking capacity of fuse links is 80 kA at 415V & 500V AC.

## Current Limiting Effect

Graphs in subsequent pages show the current limiting effect of fuses. At high short-circuit currents, the fuse limits the current to a much lower value than would be reached without fuses. As a result, cables and apparatus will bear much lower short-circuit stresses.

## Salient Features DIN/BS Type

- Compliance to performance and dimensional requirement of Indian and International standard IS: 13703 - 1993. BS: 88 - (Part I & II) 1975 IEC - 269 - (Part I & II) 1986.
- Short circuit capacity at  $\geq 80$  kA, 415/500V AC 50 Hz
- Positive indication of the operation with red colour pop.
- Low power loss not only saves energy but also ensures cool running and longer life of equipment.
- Low cut-off current reduces electromagnetic stresses and damage to circuit & equipment.
- Low  $I^2t$  let through energy reduces thermal stresses, fire risks and damage to the equipments.
- Ideally suitable for back up protection to motor starters against short circuit faults.

## Mechanical Strength

- Body of high grade flame retardant non - hygroscopic phenolic moulding with a hard gloss surface in off white finish - having high electrical properties with high tracking resistance.
- Contact material is ETP grade copper which is silver plated and hence ensures low temperature rise.

## Longer Electrical Life

- Sufficient contact pressure is maintained by ring springs throughout life of the base which also does not allow temperature rise to exceed.

## Ratings

- Fuse bases are available for all rating of fuse links upto 630A & for voltages upto 500V, 50 Hz
- Fuse bases have been tested for compliance to IEC 269/IS : 13703.
- Fuse Holders have been tested at 415V to compliance IEC 269 / IS 13703 and also available in Busbar mounting Type.



## Fuse Links with Blade Contacts

	Type	IEC Size	Rating (A)	Product Reference
	DIN	00	6	CDFL 00 6
			10	CDFL 00 10
			16	CDFL 00 16
			20	CDFL 00 20
			25	CDFL 00 25
			32	CDFL 00 32
			35	CDFL 00 35
			40	CDFL 00 40
			50	CDFL 00 50
			63	CDFL 00 63
			80	CDFL 00 80
				DIN
125	CDFL 00 125			
160	CDFL 00 160			
200	CDFL 01 200			
250	CDFL 1 250			
32	CDFL01 32			
35	CDFL01 35			
50	CDFL01 50			
	DIN	2	63	CDFL01 63
			80	CDFL01 80
			100	CDFL01 100
			125	CDFL01 125
			160	CDFL01 160
			200	CDFL02 200
			250	CDFL02 250
			315	CDFL2 315
	DIN	3	400	CDFL2 400
			315	CDFL03 315
			400	CDFL03 400
			500	CDFL3 500
			630	CDFL3 630

## Fuse Bases for DIN Type Fuse Links

	DIN	00	160	CDFB 00-1-160
		1	250	CDFB1 250
		2	400	CDFB2 400
		3	630	CDFB3 630


## Solid Links

		00	-	CDSL 00
		1	-	CDSL 1
		2	-	CDSL 2
		3	-	CDSL 3



## Fuse Puller

	suitable for all sizes of fuse-links & solid links	CDFH003
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### CNS ( Off Set ) clip in Type

	IEC Size	Rating (A)	Product Reference
	F1	2, 4, 6, 8, 10, 12, 16, 20, 25 & 32	CNS*


### Off Set TAG Type

	A1	2, 4, 6, 8, 10, 12, 16, 20, 25, & 32	CNIT*
	A2	4, 6, 10, 16, 20, 25 & 32	CTIA*
	A3	32, 35, 40, 50 & 63	CTIS*
	A4	50	CTCP 50
63		CTCP 63	
80		CTCP 80	
100		CTCP 100	
125		CTCP 125	
125		CTFP 125	
	160	CTFP 160	
	200	CTFP 200	

### Central TAG ( 2 hole fixing ) Type


	B1	80	CTC 80
		100	CTC 100
		125	CTC 125
B2	125	CTF 125	
	160	CTF 160	
	200	CTF 200	
B3	250	CTKF 250	
	300	CTKF 300	
	315	CTKF 315	
B4	355	CTMF 355	
	400	CTMF 400	

### Central TAG ( 4 hole fixing ) Type


	C1	355	CTM 355
		400	CTM 400
C2	450	CTTM 450	
	500	CTTM 500	
	630	CTTM 630	
C3	670	CTLM 670	
	710	CTLM 710	
	750	CTLM 750	
	800	CTLM 800	

Note: Replace\* by required rated current.


### Fuse Holders for British Pattern Fuses Links

	IEC Size	Rating (A)	Product Reference
	F1	20	CNS20H
	A2	32	CSM32H
	A3	63	CSM63H
	A4	100	CSM100H
	A4	100	CSM100B*

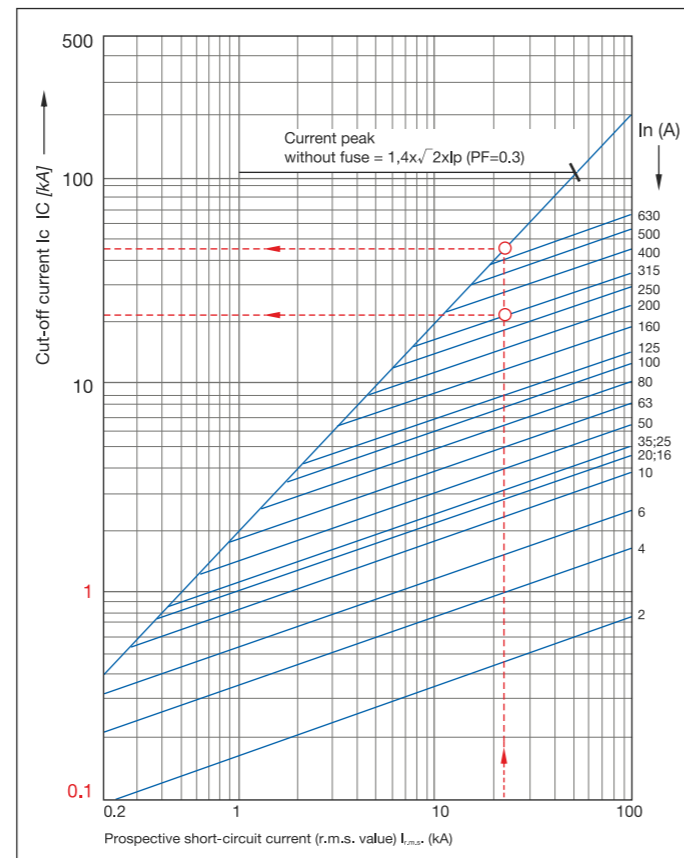
### Fuse Holders for Cylindrical HRC Fuse Links

	14 x 51	32	CHO32R
	14 x 51	63	CHC63R

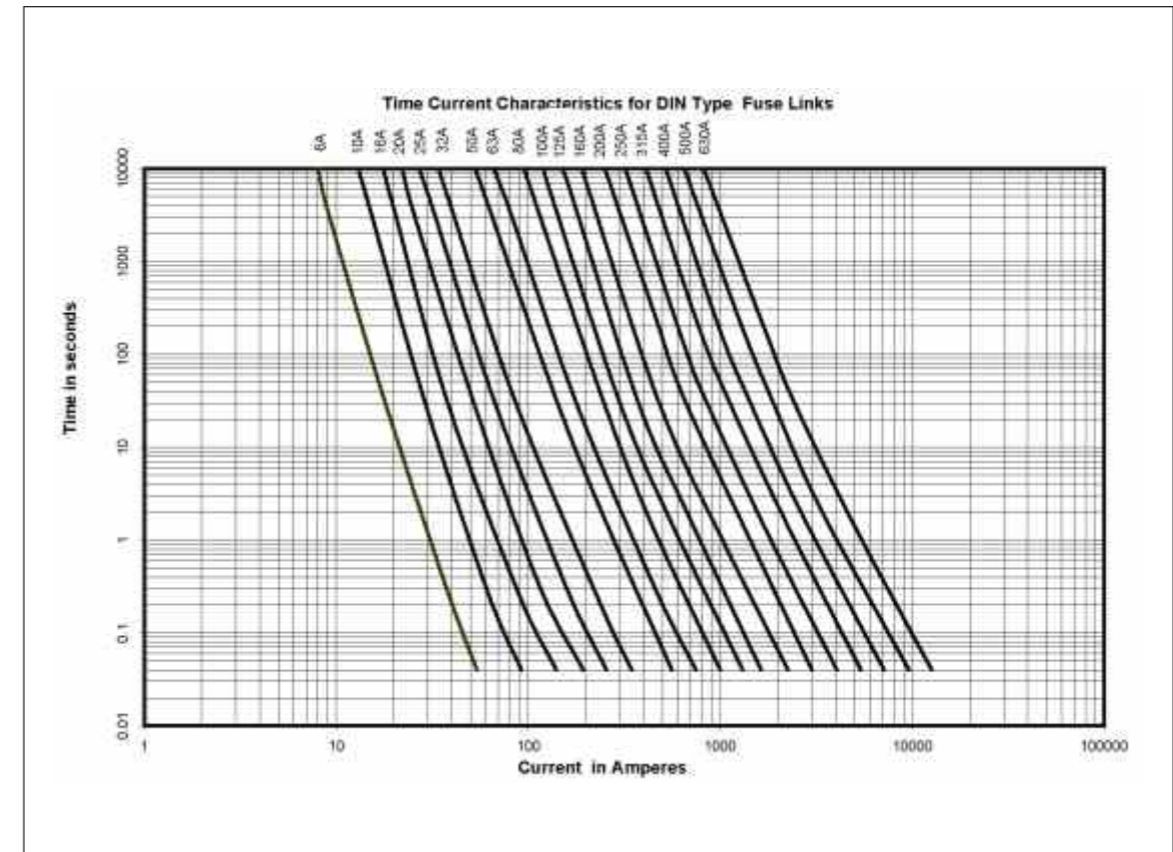
### Cylindrical Type Fuse Links

	(14*51)	2, 4, 6, 8 & 10	CHF*
		16, 20 & 25	
		32 & 40	
		50	
		63	
(10*38)	2, 4, 6, 8, 10 & 16	CGF*	
	20 & 25		
	32		

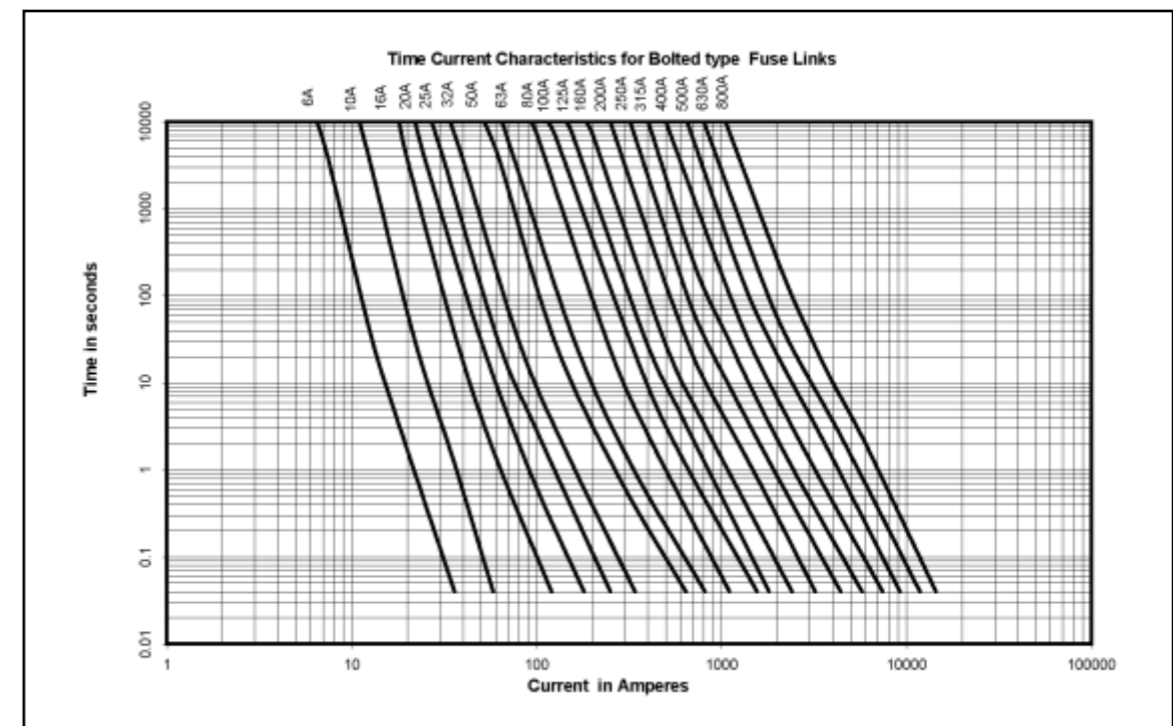
### Cut-off Characteristics



### DIN type Fuse Links



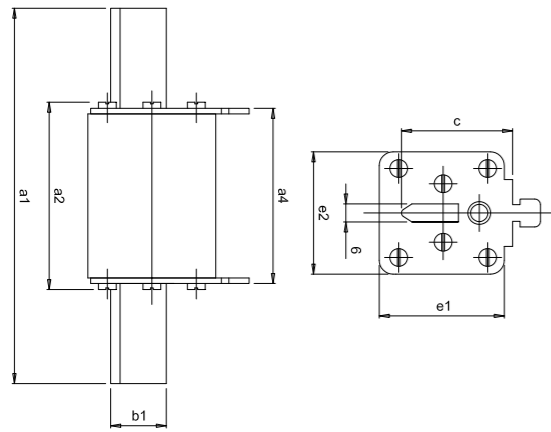
### Bolted type Fuse Links



# Dimensions

## DIN (Knife Edge) Fuse Links

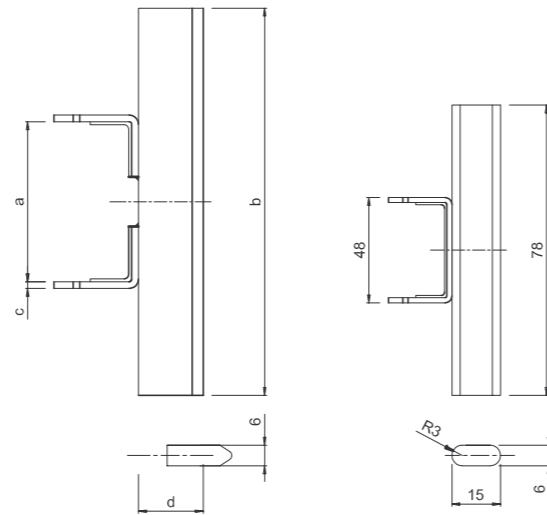
CDFL-00, 1, 2 & 3



Type	a1	a2	a4	b1	c	e1	e2
CDFL00	78.5	53	49	15	35	43	29
CDFL01	135	70	67	15	40	43	29
CDFL1	135	70	67	20	40	46	46
CDFL02	150	70	67	20	48	46	46
CDFL2	150	71	67	25	48	57	57
CDFL03	150	72	67	25	60	57	57
CDFL3	150	72	68	36	60	72	72

## Solid Links CDSL-1, 2 & 3

CDSL-00



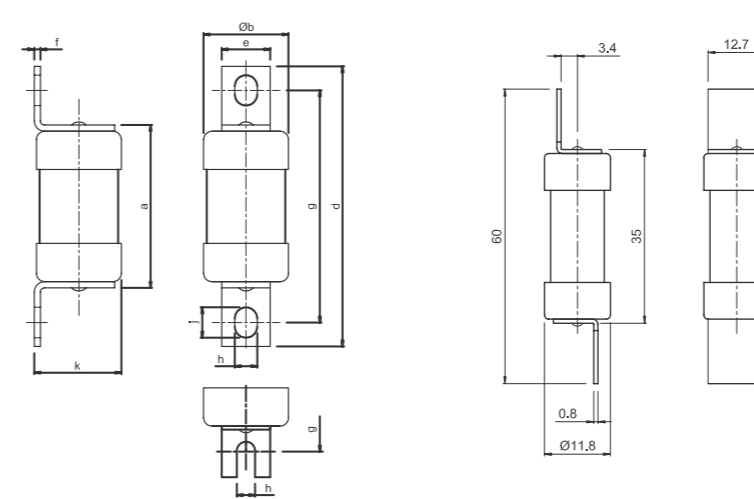
Type	a	b	c	d
CDSL1	62	135	2.6	20
CDSL2	62	150	2.6	25
CDSL3	62	150	2.6	36

# Dimensions

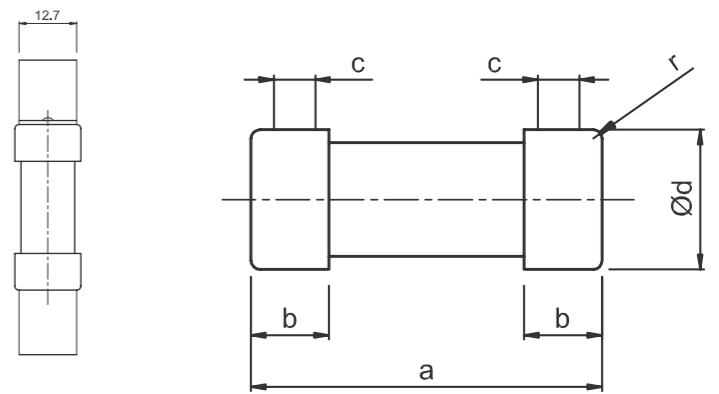
## Off Set Tag

## Off Set Tag (Clip in type)

## Cylindrical HRC Fuse Links



Type	Ref.	a	Øb	d	e	f	g	h	j	k
CNIT	A1	33.2	14.4	55	11.2	0.8	44.5	4.2	8.2	15.2
CTIA	A2	55	21.7	84	8.8	1.2	73	5.6	8	23.5
CTIS	A3	55	21.7	84	8.8	1.2	73	5.6	8	23.5
CTCP	A4	63.5	33.4	110	19.2	2.4	94	8.7	11.2	34.5
CTFP	-	75.5	39.8	111	20	2.4	94	8.7	11.9	42



Type	Ref.	a	Øb	c	d	r
CGF	10 X 38	38	9.6	6.5	10.3	1.2
CHF	14 X 51	51	9.8	8	14.3	1.5

## Fuse Bases

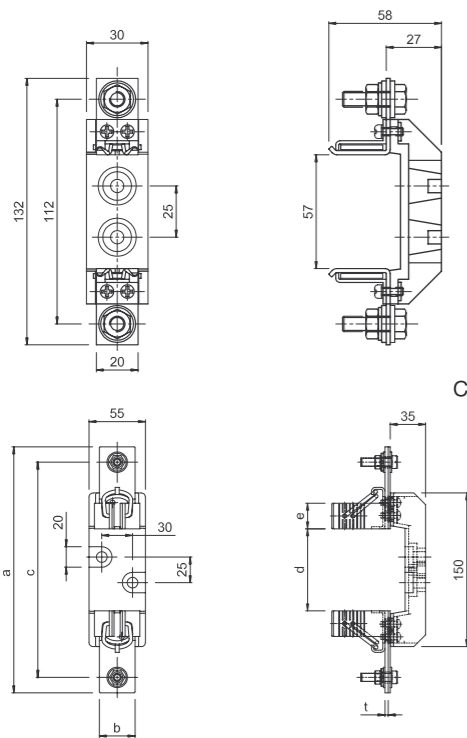
CDFB00-1

## Fuse Fittings

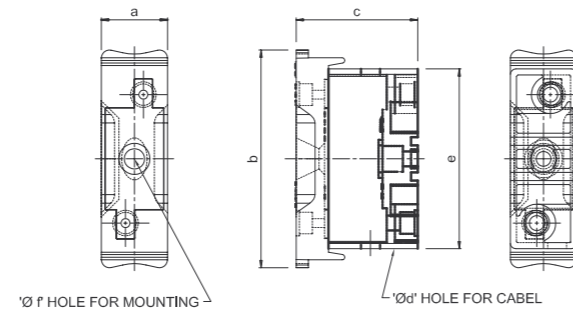
CNS 20H

## Central Tag (Two hole fixing)

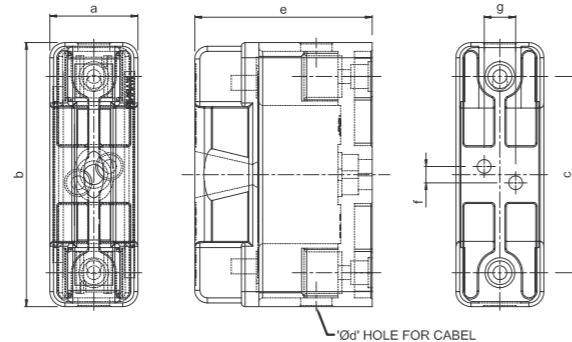
## Central Tag (Four hole fixing)



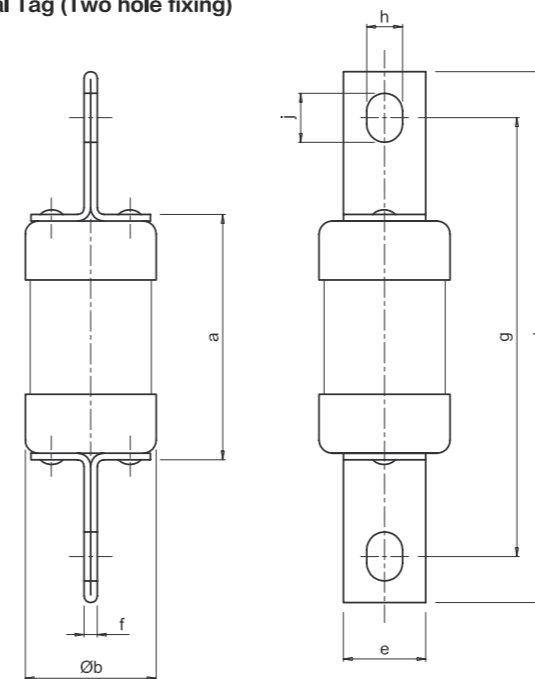
Type	a	b	c	d	e	t
CDFB1	200	25	175	80	15	2
CDFB2	225	30	200	80	18	2.5
CDFB3	240	35	210	80	25	3.2



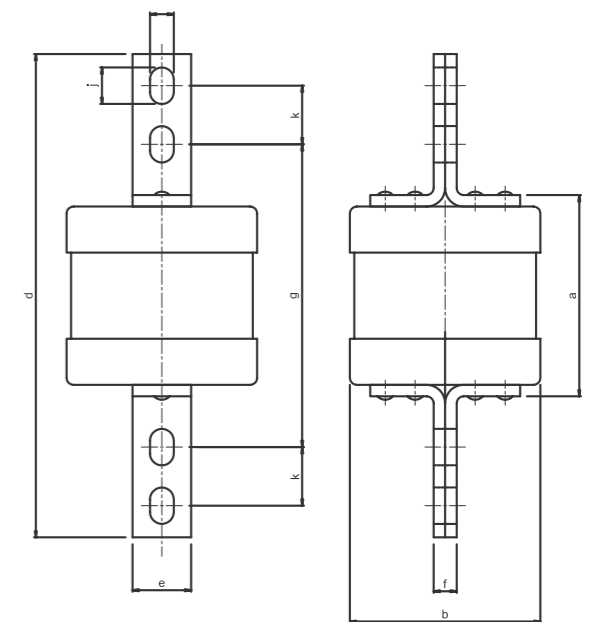
CSM 32~100H



Type	Rating (A)	a	b	c	Ød	e	f	g
CNS20H	20	24.5	80.5	44	7	66.5	5	-
CSM 32H	32	32	98	73	10	66	6.5	12.5
CSM 63H	63	35	105	78	12.5	72	6.5	12.5
CSM100H	100	47	130	93	16	91	22.5	21



Type	Ref.	a	Øb	d	e	f	g	h	j
CTC	B1	62.5	33.4	135	20	3.2	111	8.7	11.9
CTF	B2	73.2	39.8	136.5	20	3.2	111	8.7	11.9
CTKF	B3	73.2	52.6	136	25.4	3.2	111	8.7	11.9
CTMF	B4	79	60.3	132.5	25.4	6.4	111	8.7	11.9



Type	Ref.	a	Øb	d	e	f	g	h	j	k
CTM	C1	84.5	60.3	210	25.4	4.8	133	10.3	15.8	25.4
CTTM	C2	84.5	75.1	210	25.4	6.4	133	10.3	15.8	25.4
CTLM	C3	89.4	82.7	210	25.4	10	133	10.3	15.8	25.4

Product innovation is a continuous process, hence data given is subject to change without prior notice