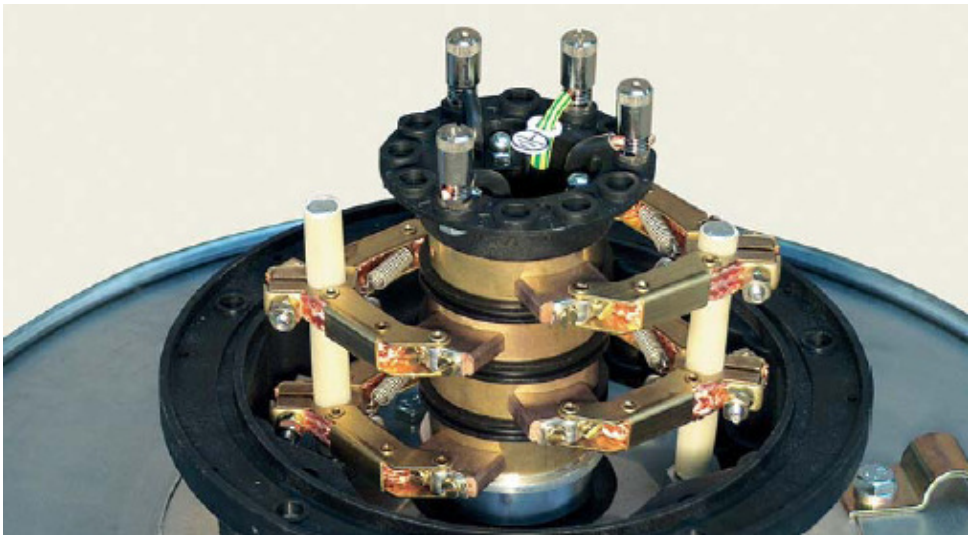
Cable Reeling Drums

Spring and motor driven



Modular Spring driven cable reels

CLT MODULAR SYSTEM

The concept of the Cavotec Alfo CLT reels is to provide a modular system that retains all the quality and reliability of a standard spring driven cable reel. To guarantee the above, all assembly will take place at Cavotec Alfo by our specially trained and experienced staff. Only when requested will we ship the separete components of the CLT reels unassembled. In this case the modular design allows for easy storage and thanks to the innovative design of the reels, replacing just one part is extremely easy.

The photographs on right show the different packages that can be ordered from Cavotec Alfo. Please refer to the code-tables on the following pages to ascertain the correct codes for your specific CLT reel.

Side plates

Mounting flange

Slipring collector

Spring body

Application type Cases

Case 1 & 2
Horizontal mobile application
The cable is unreeled on a flat and continuous surface. The cable is unreeled horizontally in either travelling directions.

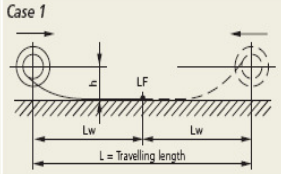
Case 3 & 4
Horizontal mobile application
The cable is reeled out on supports (L1 < 1m) or on rollers or rounded smooth supports (L1 = 1 to 3 m, depending on the cable size). The cable is unreeled horizontally in either travelling directions.

Case 5
Stationary application
The cable is unreeled horizontally in either travelling directions through support rollers (L1 = 1 to 3 m, depending on the cable size). *This type of application is not recommended.*

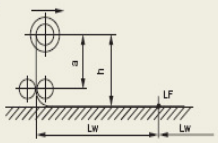
Case 6 & 7
Horizontal mobile application
The cable is unreeled horizontally, above the ground and without support, in either travelling directions. The catenerary f1 must be calculated accurately. As a rule the value of fmax is approximately 10% of L.

Case 8 & 9
Vertical application
The cable is unreeled vertically downwards (downward inclination). Alternatively the cable is unreeled vertically upwards (upward inclination).

Case 1

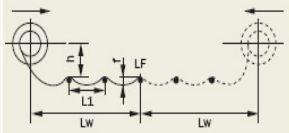


Case 2

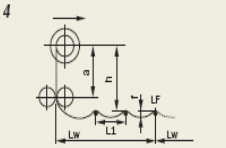


At high h - please note deviation angle <

Case 3

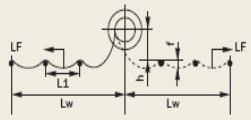


Case 4

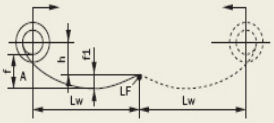


At high h - please note deviation angle <

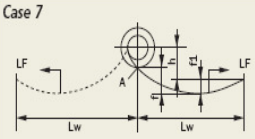
Case 5



Case 6

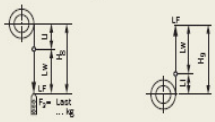


Case 7

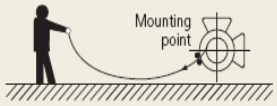


Stationary

***Case 8** - Vertical application – reel on top*
***Case 9** - Vertical application – reel at bottom*

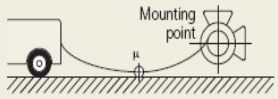


Case 10 - Manual operation



Stationary reel, manually operated

Case 11 - Automatic operation



Stationary reel, automatic unreeling. Please give type of ground surface or the surface friction (μ).

*Explanation of the symbols (case 1 to 7): **Lw**= maximum reeling cable length [m], (reeling length for reels travelling in both directions = one-half of the total travelling length); **h**= (installation height) distance between cable deposit plane and drum centre [m]; **LF**= cable feeding point; **f**= maximum cable sag [m], in case 6 and 7 related to position A in drawing; **f1**= maximum cable sag [m], related to cable feeding point LF; **L1**= roller or support distance [m]*

Calculation formula $f/f1\ (m) \sim \frac{10 \times L^2 \times g}{8 \times F}$

***L**= support distance [m]; **g**= cable weight [kg/m]; **F**= pulling force [Newton]*

*Explanation of the symbols (case 8 and 9): **Lw**= maximum reeling cable length [m]; **H8/9**= maximum cable length hanging down from the drum [m]. The drum is selected according to the total cable weight of the hanging cable. Additional weight (F3) must be considered and added to the cable weight.*

Reeling drums Questionaire

Please copy and complete this page and fax or E-Mail

To:	**From:**
Quesco cc	
Burt Klopper	
Fax 0866946194	
ask@webmail.co.za	

QUESTIONNAIRE

1. For what type of moving equipment is the reel? _____

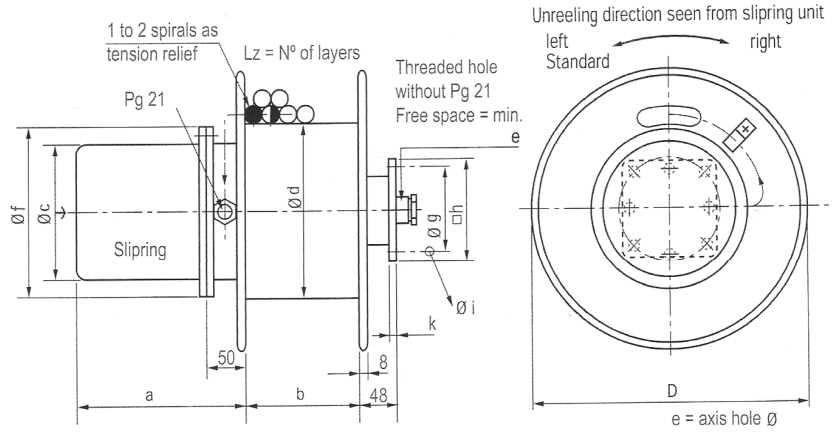
A rough sketch based on the typical applications shown above is extremely valuable.

2. Reel installation height h=_____m
3. Travel distance of equipment _____ m
4. Cable payout from centre ☐ from one end ☐
5. What is the max cable length on the reel =_____m
6. Type of cable _____
   number of conductors times wire size _____
   weight _____kg/m
   outside dia. _____mm
7. Electrical load _____kw
   ..or amperes at _____ volts _____A
8. Duty cycle (time on) full load? _____%
9. Number of collector rings required? _____ pcs
10. Type of application? (see above) No_____
11. How many movements per hour? _____times
12. Operating hours per day? _____hours
13. Maximum travel/lift speed? _____m/min
14. Acceleration 0 to full in _____sec
    ...or acceleration rate _____m/sec

Other data: _____

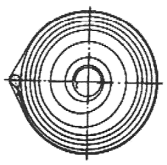
Or Sketch

4.1 SPRING DRIVEN CABLE REELS



REEL TYPE*	DRUM DIM						FLANGE DIM					WEIGHT Kg
	Ød	ØD	b	a	~c	f	e	Øg	Øh	Øi	k	
SCD190	190	360	136	130	140	180	15	100/125	120	4x13/Ø100	11	13.7
										4x11/Ø125		
SCD220	220	360	136	130	140	180	15	100/125	120	4x13/Ø100	11	15
										4x11/Ø125		
SCD280	280	430	180	150	140/205	180/205	20	100/125	120	4x13/Ø100	12	28
										4x11/Ø125		
SCD400	400	710	280	205		205/360	30	140	160	4xM17	18	72
SCD500	500	800	280	205		205/360	30	140	160	4xM17	18	80

1. Basic weight (slipring assy 3 + earth) without springs.
   Total weight = basic weight plus weight of springs (see below)

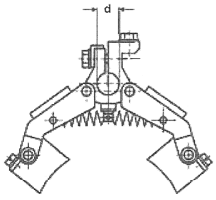


Type	Weight kg	Hub mm	OD mm	Width
08	0.550	35	126	18
910	0.550	25	114	18
931	2.200	35	160	25
951	3.100	35	190	30
991	3.100	35	190	30
952	6.000	45	280	45
972	9.000	45	280	45
992	7.000	45	315	45
903	6.500	50	400	60
953	12.000	60	400	60
983	9.000	60	315	60
914	9.000	50	315	60
924	12.000	50	315	60
15	11.000	50	315	60
925	14.500	50	315	60
965	11.000	65	315	60
975	18.000	65	315	60
985	16.000	85	450	60
986	25.000	85	450	60

Springs	
AA1-A-AA-0000	Spring AA
AA1-A-AB-0000	Spring AB
AA1-A-BA-0000	Spring BA
AA1-A-BC-0000	Spring BC
AA1-A-DA-0000	Spring DA
AA1-A-DB-0000	Spring DB
AA1-A-DC-0000	Spring DC
AA1-A-EA-0000	Spring EA
AA1-A-EB-0000	Spring EB
AA1-A-HA-0000	Spring HA
AA1-A-SA-0000	Spring SA
AA1-A-TA-0000	Spring TA
AA1-A-UA-0000	Spring UA
AA1-A-UB-0000	Spring UB

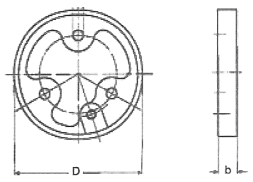
4.1 SPRING DRIVEN CABLE REELS

REEL TYPE	MASS kg	AMP	SUITABLE FOR HORIZONTAL CABLE Ø PAYOUT		SUITABLE FOR VERTICAL CABLE Ø PAYOUT	
19361420BA-4504	axis hole =15mm Ø	25	12	19	12	12
			14	17 21	14	12
4-SCD190-2-BA-4-25	13.7 kg	max 2.5 mm²	16.5	12 20		
			18	8		
22361420DC-4504	axis hole =15mm Ø	25	16.5 8-10	22 22	12	20 22
			18 10-12	22 22	14	20 13
4-SCD220-2-DC-4-40	15 kg	max 2.5 mm²	20 12-14	17 20	20	20 8
			21.5 14-16	14 17		17
28431820HA-4704	axis hole =20mm Ø	50	12 8-10	36 24	14	23 22
			14 10-12	38 24	20	23 19
4-SCD280-2-HA-4-40	32 kg	max 6 mm²	18 12-14	32 26	21	24 18
			20 14-16	32 25		25
			21 16-18	28 25		24
			25.5 18-20	18		20
40712820TA-0204	axis hole =30mm Ø	50	12 16-18	60	20	19
			14 18-20	60	21	18
4-SCD400-2-TA-4-60	72 kg	max 10 mm²	18 20-22	58	25.5	10
			20 22-24	68 49		
			21 24-26	60 50		
			21.5 26-28	35 53		
			27.5 28-30	33 50		
40712820TA-0604	72	200	12 22-24	52 49	20	25
		max 35 mm²	14 24-26	56 50	21	22
4-SCD400-2-TA-4-25			18 26-28	52 53	25.5	15
			20 28-30	58 50	30.5	10



BRUSH ASSEMBLIES

AMPS	DIMENSIONS d(mm)		PART NUMBER	
	PHASE	EARTH	PHASE	EARTH
40	10	8	4-BA/40-P	4-BA/40-E
60	13	12	4-BA/60-P	4-BA/60-E
150	16	15	4-BA/150-P	4-BA/150-E
220	17	16	4-BA/220-P	4-BA/220-E



COLLECTOR RINGS

AMPS	DIMENSIONS d(mm)				PART NUMBER	
	D	d		b		
	mm	Ph	E	mm	PHASE	EARTH
40	50	8.5	5.5	10	4-CR/40-P	4-CR/40-E
60	80	11.5	6.5	12	4-CR/60-P	4-CR/60-E
150	130	12.5	8.5	15	4-CR/150-P	4-CR/150-E
220	130	12.5	8.5	20	4-BA/220-P	4-CR/220-E