# **Shipping & Drum Information**

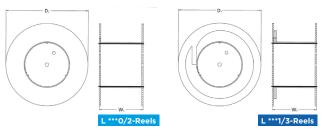
# RFS offers L, A and H drums to accommodate your shipping and packing requirements.

Radio Frequency Systems (RFS) carefully selects proper reel sizes based on the length and overall diameter of the cable to be wound. A reel not matched to the weight of the cable could be damaged during shipment. Additionally, all cable has a minimum safe bending radius. If it is subjected to bends sharper than the minimum radius, damage to the material is likely. L, A & H drum types enhanced outdoor storage capabilities for typically > 6 months.

## L drums

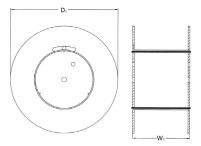
Former Drum Type	Drum Type	Dimensions D1 x W1 (mm)	Core Diameter (mm)	Weight (Kg)
L 0636	06-042-X *	600 x 420	356	7
L 0890 / 0880	08-053-X	850 x 527	400	27
L 0891 / 0881	08-053-S	850 x 527	400	33
L 1192 / 1180	11-077-X	1120 x 770	485	52
L 1193 / 1181	11-077-S	1120 x 770	485	55
L 1196	11-076-X	1120 x 760	400	28
L 1391 / 1381	13-073-S	1350 x 722	800	91
L 1591 / 1581	15-097-S	1500 x 964	800	120
L 1890 / 1880	18-111-X	1800 x 1088	1000	170





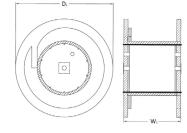
#### A drums

Former Drum Type	Drum Type	Dimensions D1 x W1 (mm)	Core Diameter (mm)	Weight (Kg)
A 1290 / 1280	12-070-M	1250 x 692	800	65
A 1350 / 1383	13-070-M	1350 x 692	800	73
A 1551 / 1589	15-108-M	1500 x 1072	1000	96
A 1552 / 1583	15-097-M	1500 x 948	800	92
A 1710 / 1780	17-109-M	1700 x 1088	1000	145
A 1850 / 1883	18-066-M	1800 x 638	1250	154
A 2010 / 2080	20-109-M	2000 x 1088	1000	214
A 2150 / 2180	21-114-M	2140 x 1120	1250	229
A 2157 / 2187	21-115-M	2150 x 1136	1500	226
A 2159 / 2189	21-195-M	2150 x 1946	1500	329
A 2253 / 2283	22-138-M	2240 x 1373	1700	366
A 2550 / 2580	25-141-M	2500 x 1405	1800	537
A 2551 / 2581	25-143-M	2500 x 1430	1700	535



# H drums

Former Drum Type	Drum Type	Dimensions D1 x W1 (mm)	Core Diameter	Weight (Kg)
H 2173 / 2181	21-114-S	2140 x 1136	1250	358
H 2572 / 2582	25-141-S	2500 x 1405	1800	554
H 2576 / 2586	25-156-S	2500 x 1560	1600	541
H 3272	32-157-S	3150 x 1570	2000	845
H 3672	36-165-S	3600 x 1650	2400	1362
H 3972	39-235-X	3900 x 2350	3000	1587
H 4272	42-235-S	4200 x 2350	3000	1765







### **CELLFLEX RF Feeder Cable**

The CELLFLEX® (copper outer conductor) and CELLFLEX® Lite (aluminum outer conductor) duo make up the largest corrugated transmission line portfolio in the wireless infrastructure industry. The foam dielectric cables combine flexibility with high strength and superior electrical performance.

24 different CELLFLEX types, ranging from 1/4" to 1-5/8", provide users with a perfect match for the most complicated and demanding applications. Every cable comes with a guarantee of reliability, performance, and cost-effectiveness from the most experienced and innovative cable manufacturer in the world – RFS. Today, RFS' premium attenuation, low-loss CELLFLEX cable continues to be the industry leader in electrical performance.

		SCF1	4-50	LCF1	4-50	SCF3	8-50	LCF3	8-50	SCF1	2-50	LCF1	2-50	LCF7	8-50	LCFS1	14-50	LCF158-50	
Minim	num Core Diameter	300	mm	300r	mm	300r	mm	300mm		350r	nm	350mm		500mm		800mm		1000	mm
	Carton	160	)m	160m		100m		100m		100m		100m		60m					
Former Drum Type	Drum Type	Not terminated Terminated		Not terminated	Terminated	Not terminated Terminated		Not terminated Terminated		Not terminated	Terminated	Not terminated	Terminated						
L0636	06-042-X	500m		500m		500m		450m		275m		240m							
L0890/0880	08-053-X	2505m		1490m		1441m		1150m		825m		570m							
L0891/0881	08-053-S		2040m		1165m		1145m		890m		555m		430m						
L1192/1180	11-077-X			4200m		2100m				2325m		1675m		550m	85m				
L1193/1181	11-077-S										1775m		1340m		365m				
L 1196 US	11-076-X											2015m							
A1350/1383	13-070-M											1755m				290m	75m		
L1391/1381	13-073-S														380m		180m		
A1551/1589	15-108-M																	195m	
A1552/1583	15-097-M											3100m		1190m		585m			
L1591/1581	15-097-S														890m		390m		
L1890/1880	18-111-X													1760m		920m		550m	115m
A2150/2180	21-114-M													2530m		1240m		630m	
H2572/2582	25-141-S																		550m
H2576/2586	25-156-S																	1070m	

The standard cable drum provided is typically the smallest possible size based on cable capacity. Please ensure that the drum size is suitable for your specific cutting length requirements.



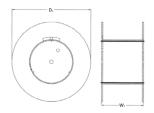
## RFS Standard Drums - packing and handling requirements

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#### **CELLFLEX RF Feeder Cable**

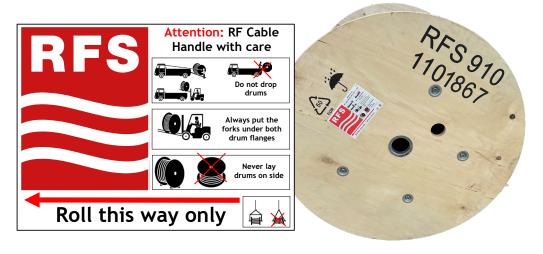
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Drum Type	Dimensions D1 x W1 (mm)	Core Diameter	Drum Weight (Kg)	Cable Type	Quantity Drum	Total Weight Drum (Kg)	
P5	700 x 530	350	17	SCF12-50J-3-500 SCF12-50JFN-3-500	500	105	
P6	750 x 590	350	19	LCF12-50J-3-500 LCF12-50JFN-3-500	500	130	
P7	1120 x 710	1120 x 710 500		LCF78-50JA-3-500 LCF78-50JFNA-3-500	500	265	

All values are nominal unless tolerances are provided.



#### THE FOLLOWING ITEMS SHOULD BE NOTED

during the transportation, storage and recycling of cables/packaging:

#### HANDLING INSTRUCTIONS



Keep Dry | Goods marked in this way must be shielded from excessive humidity and should therefore be stored under cover. If particularly heavy or bulky packages cannot be stored indoors, they must be carefully covered.



**Transport the drum properly**, ensuring it is not dropped or rolled off trucks or down steps etc..



Always put the forks under both drum flanges.



Ensure during transportation, storage, and installation that **the drum remains upright** at all times and must not be laid on its side.



Ensure the drum is rolled in the specified direction, as indicated on the drum plate.

Prevent high temperature and spark from approaching.

Prevent moisture entering the cable.

Prevent serious bending and extrusion deformation.

#### **RECYCLING CODES**



PET/PETE 01
Polyethylenterephthalat



PP 05 Polypropylen

FOR 50 Wood







RFS RADIAFLEX® radiating cable is the world's leading "leaky feeder" cable solution. It is designed to deliver contoured indoor RF coverage with radio signals leaked from the apertures on the radiating cable's outer conductor. This allows network operators to provide scalable and practical broadband wireless services for confined areas, such as tunnels, mines and large building complexes.

RFS advanced radiating cables allows for ultra-broadband wireless communication networks. RFS RADIAFLEX cables are designed to achieve optimized performance at highest frequency bands which are critical from a system design perspective as well as regarding total cost of solution. The broadband feature enables cables to work on different bands in one single coverage system, thereby supporting multiple carriers and multiple standards. RADIAFLEX cables feature the patented RFS radiating cable design techniques. This unique design allows RFS to offer cables that support current and future indoor commercial and private radio services from 30 MHz to 6000 MHz — including mission critical and 4G / 5G commercial radio in all bands — for valuable cost savings and outstanding product performance.

		RSI	F12	RCF	38	RCI	F12	RCI	<del>-</del> 78	RLK	(*12	RLK*78	/ RAY78	RLK*114 /	RAY114	RLKX114-50B		RLK*158 / RAYA158		RAY158 / RAYS158	
Minin	num Core Diameter	375	mm	300n	nm	375n	nm	750n	nm	800n	nm	800r	mm	1000r	nm	1500r	mm	1500ı	mm	1700n	mm
	Carton	100	)m	100m		100m		60m		100m											
Former Drum Type	Drum Type	Not terminated	Terminated	Not terminated	Terminated	Not terminated	Terminated	Not terminated	Terminated	Not terminated	Terminated	Not terminated	Terminated	Not terminated	Terminated						
L0890/0880	08-053-X	825m		1150m		595m															
L0891/0881	08-053-S		555m		890m		430m														
L1192/1180	11-077-X	2325m				1675m															
L1193/1181	11-077-S		1775m																		
A1290/1280	12-070-M									1100m		370m									
A1350/1383	13-070-M							565m	110m	1100m		500m									
L1391/1381	13-073-S								380m		1100m		360m								
A1552/1583	15-097-M							1190m		1100m		1000m									
L1591/1581	15-097-S												770m								
A1710/1780	17-109-M													690m							
A1850/1883	18-066-M											540m									
A2010/2080	20-109-M													1100m							
A2150/2180	21-114-M							2530m				1000m									
A2157/2187	21-115-M															810m		540m			
A2159/2189	21-195-M															1100m		1000m			
A2253/2283	22-138-M															920m		595m		595m	
A2551/2581	25-143-M													1100m		1100m		1100m		1100m	
H2572/2582	25-141-S														1100m		1100m		575m		575m

The standard cable drum provided is typically the smallest possible size based on cable capacity. Please ensure that the drum size is suitable for your specific cutting length requirements.





# **HELIFLEX High Power RF Air Dielectric Cables**

HELIFLEX® is a high-performance cable with a design that offers the lowest possible attenuation and signal distortion. This allows HELIFLEX solutions to have a higher power rating compared to foam dielectric cables of the same dimension, making it ideal for broadcast applications needing to transport high-power signals from the transmitter to the antenna. As the flexible cable can be shipped as long single pieces, the installation process is streamlined. The cable is simple for field engineers to deploy, and the potential infrastructure weaknesses that come from cable joins are removed. The flexibility of the solution also allows longer pieces to be wound onto a drum. This facilitates easier and more compact transportation for lower cost and lower environmental impact. The solution is designed for outside deployment and to withstand severe weather conditions. HELIFLEX can be deployed on-site for decades without deterioration in performance.

		HCA7	<b>78-50</b>	HCA1	18-50	HCA1	58-50	HCA30	00-50	HCA4	00-50	HCA4	95-50	HCA5	50-50	НСА6	18-50
Minimu	um Core Diameter	500	mm	800r	800mm		mm	1500r	mm	1700	mm	2400mm		3000mm		3000mm	
	Carton	60	60m														
Former Drum Type	Drum Type	Not terminated	Terminated	Not terminated	Terminated	Not terminated	Terminated	Not terminated	Terminated	Not terminated	Terminated	Not terminated	Terminated	Not terminated	Terminated	Not terminated	Terminated
L1192/1180	11-077-X	530m	80m														
L1193/1181	11-077-S	505m	365m														
A1290/1280	12-070-M			185m	90m												
A1350/1383	13-070-M	565m		245m	80m												
L1391/1381	13-073-S	530	385m		175m												
A1552/1583	15-097-M	1050m		530m													
L1591/1581	15-097-S				420m												
A1850/1883	18-066-M					160m											
L1890/1880	18-111-X			920m													
A2150/2180	21-114-M			1105m		635m											
A2157/2187	21-115-M							120m	120m								
A2159/2189	21-195-M					750m		235m	235m								
H2173/2181	21-114-S					595m	400m										
A2253/2283	22-138-M							170m									
A2550/2580	25-141-M					770m		285m		250m							
H2572/2582	25-141-S					705m	550m	265m	170m	145m	145m						
H2576/2586	25-156-S					1115m		380m									
H3272	32-157-S							690m	560m	505m	375m						
H3672	36-165-S							805m		715m	430m	350m	220m				
H3972	39-235-X									865m		470m	310m	255m	120m	220m	100m
H4272	42-235-S											660m	460m	380m	230m	350m	195m

The standard cable drum provided is typically the smallest possible size based on cable capacity. Please ensure that the drum size is suitable for your specific cutting length requirements. Measurement protocols for the delivered cable length are only available on S drums.



# FLEXWELL Waveguide

RFS is the original innovator of continuous seam welded corrugated transmission lines. FLEXWELL® products have been used in thousands of successful installations worldwide. They are the highest quality, best performing, and most reliable elliptical waveguides in the industry. For more than 40 years, FLEXWELL elliptical waveguides have successfully supplemented traditional rigid rectangular and circular waveguide configurations for the transmission of RF energy at microwave frequencies.

Available in a wide variety of premium and standard models, FLEXWELL is constructed of a highly conductive copper tube with a continuous longitudinal seam weld, corrugated, and precision formed into an elliptical cross-section. It is manufactured in continuous lengths using a special seam welding process developed exclusively by RFS.

		E3	0	ES-	ES46		E60		55	E7	78	E10	00	E1:	E130		50	E185		E220		E300		E380	
Minim	um Core Diameter	1400	mm	300mm		600mm		600mm		500mm		400n	400mm		300mm		300mm		nm	300mm		300mm		300mm	
	Carton									40m	36m	50r	m	50r	m	501	m	61r	n	69m	65m	73	5m	95	5m
Former Drum Type	Drum Type	Not terminated	Terminated																						
L0636	06-042-X													on request											
L0890/0880	08-053-X											160m		250m		350m				735m	65m	730m		1440m	
L0891/0881	08-053-S											145m	120m	235m	190m	330m	255m	505m	410m	680m	565m	685m	610m	1330m	1190m
L1192/1180	11-077-X									310m		495m		790m		1015m									
L1193/1181	11-077-S											465m	355m	755m	590m	820m	820m								
A1350/1383	13-070-M					185m		240m		325m				720m											
L1391/1381	13-073-S					165m	135m	220m		300m	255m		395m	745m	650m	900m									
A1552/1583	15-097-M			285m		370m		480m		710m		1010m													
L1591/1581	15-097-S					345m	345m	450m	450m	675m	565m	930m	835m												
L1890/1880	18-111-X			430m		665m		825m		1145m															
A2150/2180	21-114-M			595m		890m		1205m																	
H2173/2181	21-114-S					830m		1030m																	
H2572/2582	25-141-S		105m		500m																				
H2576/2586	25-156-S			615m																					
H3272	32-157-S	445m	445m																						

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