



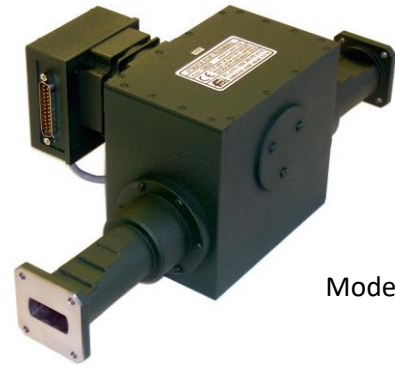
Features

- Models from 3.22 GHz to 330 GHz
- IEEE-488.2 (GPIB) and USB control interfaces
- Full waveguide frequency ranges
- High accuracy
- High repeatability
- Proven reliability and performance
- No momentary loss of signal during repositioning

- 0 dB to 60 dB continuously variable attenuators – up to 85 dB in Steps Mode
- Direct dB scale read-out with manual control option
- Low Phase change variation with attenuation
- Attenuation increments of 0.1 dB or better



Model 23621



Model 15620

Applications

- Automated test & measurement systems (ATE)
- Remote control systems
- Automated production testing of microwave radios
 - Fade margin
 - Bit error rate (BER)
 - Gain control

High Speed Operation

Programmable Rotary Attenuators are fitted with a high-speed drive motor capable of repositioning the attenuator from 0 dB to 60 dB in less than 1.1 seconds when driven by our dedicated Control Processors



Specifications

	WG10 to WG29	WG30	WG31	WG32	(260-400)	(325-500)
Attenuation accuracy	0 dB to 60 dB	0 dB to 50 dB	0 dB to 45 dB	0 dB to 40 dB	0 dB to 35 dB	0 dB to 30 dB
	0.1 dB or 1% whichever is greater	0.15 dB or 1.2% whichever is greater	0.2 dB or 1.5% whichever is greater	0.3 dB or 2% whichever is greater	0.4 dB or 2.5% whichever is greater	0.5 dB or 3% whichever is greater

Operating temperature range: +5°C to +35°C (Refer to Flann for wider temperature range consideration)

Note 1: Customised models with extended attenuation ranges can be supplied. Please contact our Sales Team for further details.

Model Series 620 or 621	Frequency Range (GHz)	Waveguide				VSWR (better than)	Max Insertion Loss (dB)	Max Power (Watts)
		WG	WM	R	WR			
11A620/11A621	3.22 - 4.90	11A	-	40	229	1.15	0.25	10.0
12620/12621	3.94 - 5.99	12	-	48	187	1.15	0.25	10.0
13620/13621	4.64 - 7.05	13	-	58	159	1.15	0.25	9.0
14620/14621	5.38 - 8.18	14	-	70	137	1.15	0.25	8.0
15620/15621	6.58 - 10.0	15	-	84	112	1.15	0.25	6.0
16620/16621	8.20 - 12.5	16	-	100	90	1.15	0.25	4.0
17620/17621	9.84 - 15.0	17	-	120	75	1.15	0.25	3.0
18620/18621	11.9 - 18.0	18	-	140	62	1.15	0.3	2.0
19620/19621	14.5 - 22.0	19	-	180	51	1.15	0.4	1.5
20620/20621	17.6 - 26.7	20	-	220	42	1.15	0.6	1.0
21620/21621	21.7 - 33.0	21	-	260	34	1.15	0.8	0.75
22620/22621	26.4 - 40.1	22	-	320	28	1.15	0.9	0.5
23620/23621	33.0 - 50.1	23	-	400	22	1.15	1.0	0.3
24620/24621	39.3 - 59.7	24	-	500	19	1.15	1.0	0.25
25620/25621	49.9 - 75.8	25	-	620	15	1.15	1.0	0.15
26620/26621	60.5 - 92.0	26	-	740	12	1.15	1.3	0.1
27620/27621	73.8 - 112.0	27	-	900	10	1.15	1.5	0.07
28620/28621	92.3 - 140	28	-	1200	8	1.20	1.8	0.05
29620/29621	114 - 173	29	-	1400	6	1.25	2.2	0.035
30620/30621	145 - 220	30	-	1800	5	1.30	2.7	0.02
31620/31621	172 - 261	31	-	2200	4	1.40	3.0	0.015
32620/32621	217 - 330	32	-	2600	3	1.55	3.5	0.01
710620/710621	260 - 400	-	710	-	'2.8'	1.75	4.0	0.007
570620/570621	330 - 500	-	570	-	'2.2'	2.20	4.5	0.005

ORDERING INFORMATION

Model: Description

Example: Model 19620 or 19621 Programmable Rotary Vane Attenuator

Outline dimensions available on request.

Series 620/621

FLANN MICROWAVE LTD.

Dunmere Road
Bodmin
Cornwall
PL31 2QL

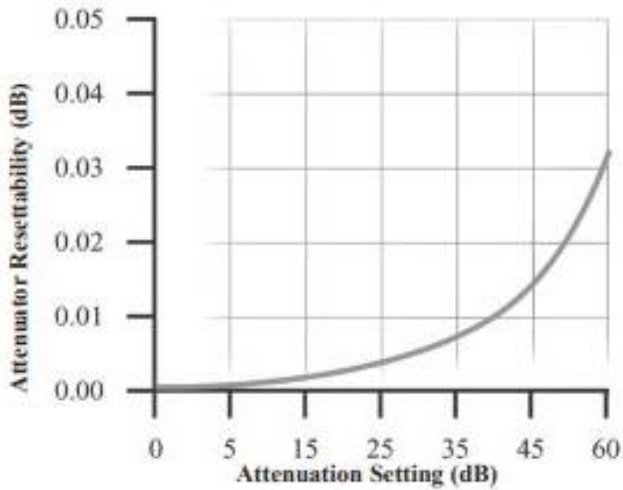
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sales@flann.com
www.flann.com

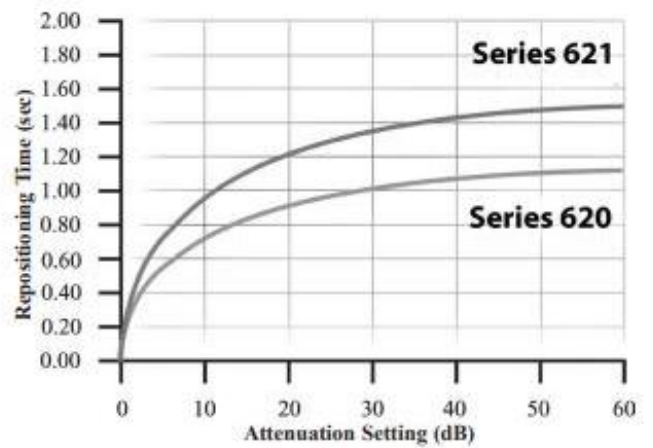


The Graphs below illustrate the repositioning and resettability performance for the Series 620 and 621 Programmable Rotary Vane Attenuators

Attenuator Resettability



Attenuator Repositioning Time (secs)



Please note:

The programmable attenuators can be used with either the previous series of CP92 and CP2021 control processors or the current series CP2021; an adaptor cable must be specified with order when using the CP92 versions of Control Processor.

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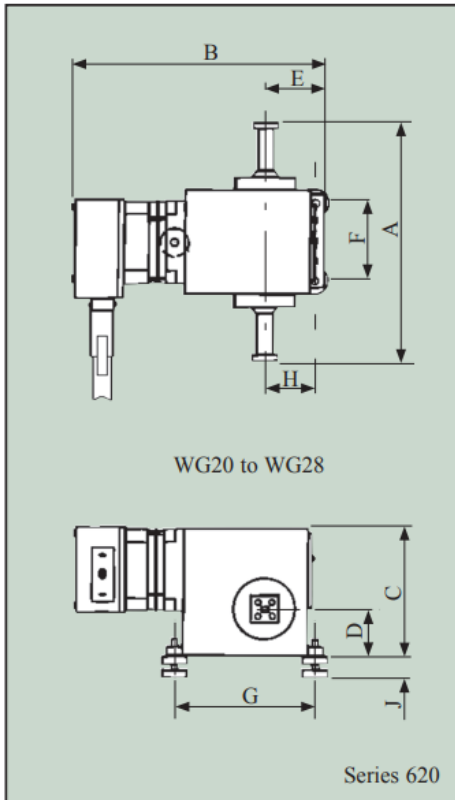
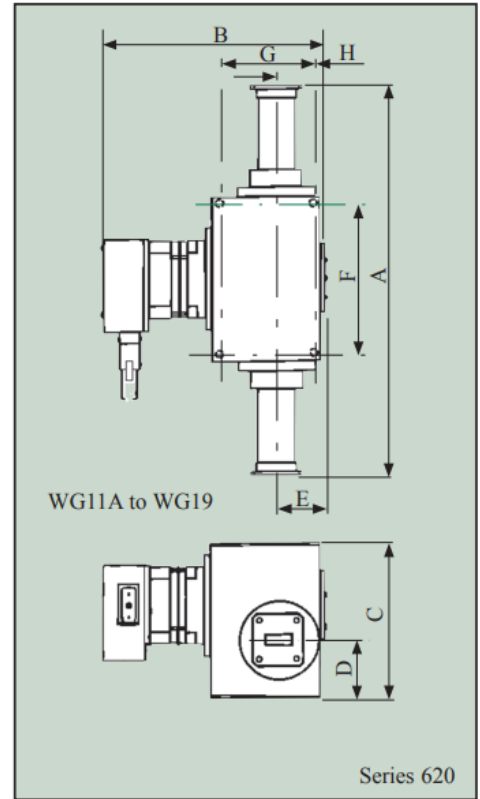
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Outline Dimensions for Series 620

Model	Series 620 WG 11A-WG19							
	Dimensions (mm)							
	A	B	C	D	E	F	G	H
11A620	687	206.8	166	66	64	110	110	54
12620	560	196	155	55	63.8	110	92	51.3
13620	520	196	155	55	63.8	110	92	51.3
14620	420	196	155	55	63.8	110	92	51.3
15620	340	173	120	43	40.9	116	73	30.9
16620	300	173	120	43	40.9	116	73	30.9
17620	276	173	120	43	40.9	116	73	30.9
18620	250	173	120	43	40.9	116	73	30.9
19620	250	173	120	43	40.9	116	73	30.9



Model	Series 620 WG20 - WG32								
	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
20620	250	173.5	94	35	43	95	100	37	13/21
21620	225	173.5	94	35	43	95	100	37	13/21
22620	174	173.5	95.5	35	43	56	100	37	13/21
23620	140	173.5	95.5	35	43	50	100	37	13/21
24620	134	173.5	95.5	35	43	50	100	37	13/21
25620	100	181.5	95.5	35	46.7	56	103	41.7	13/21
26620	89	181.5	95.5	35	46.7	56	103	41.7	13/21
27620	89	181.5	95.5	35	46.7	56	103	41.7	13/21
28620	89	181.5	95.5	35	46.7	56	103	41.7	13/21
29620	Dimensions available on request								
30620									
31620									
32620									

Customised systems are available to suit special applications. Please contact our sales team for full details.

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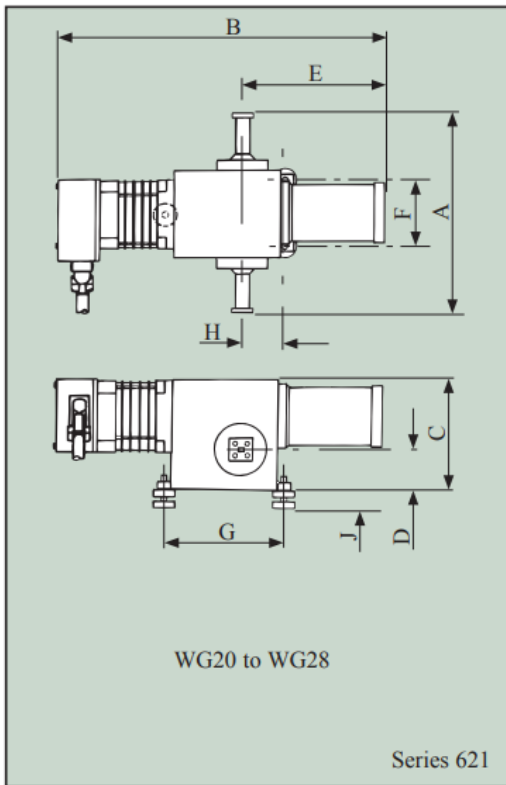
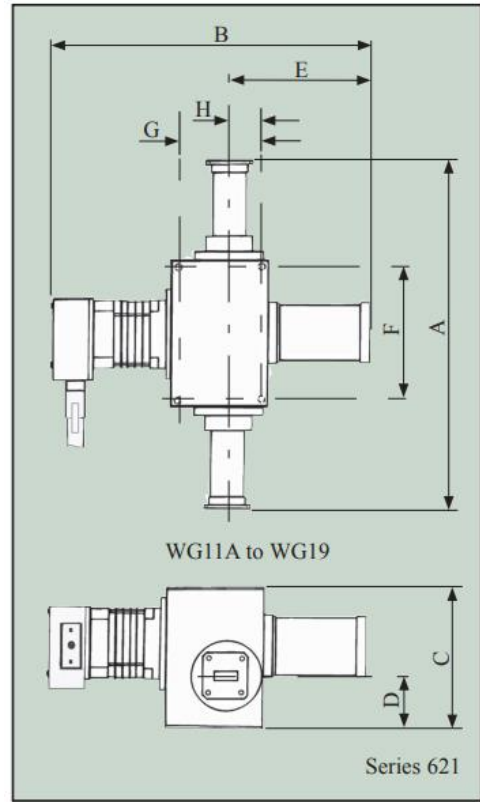
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Outline Dimensions for Series 621

	Series 621 WG11A -WG19							
	Dimensions (mm)							
	A	B	C	D	E	F	G	H
11A621	687	311	166	66	148.5	110	110	54.0
12621	560	296	155	55	145.8	110	92	51.3
13621	520	296	155	55	145.8	110	92	51.3
14621	420	296	155	55	145.8	110	92	51.3
15621	340	273	120	43	122.9	116	73	32.9
16621	300	273	120	43	122.9	116	73	32.9
17621	276	273	120	43	122.9	116	73	32.9
18621	250	273	120	43	122.9	116	73	32.9
19621	250	273	120	43	122.9	116	73	32.9



Model	Series 621 WG20 -WG32								
	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
20621	250	273.5	95.5	35	118.7	95	100	37	13/21
21621	225	273.5	95.5	35	118.7	95	100	37	13/21
22621	174	274.5	95.5	35	118.7	56	100	37	13/21
23621	140	274.5	95.5	35	118.7	50	100	37	13/21
24621	134	274.5	95.5	35	118.7	50	100	37	13/21
25621	100	281.5	95.5	35	125.7	56	103	41.7	13/21
26621	89	281.5	95.5	35	125.7	56	103	41.7	13/21
27621	89	281.5	95.5	35	125.7	56	103	41.7	13/21
28621	89	281.5	95.5	35	125.7	56	103	41.7	13/21
29621	Dimensions available on request								
30621									
31621									
32621									

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