

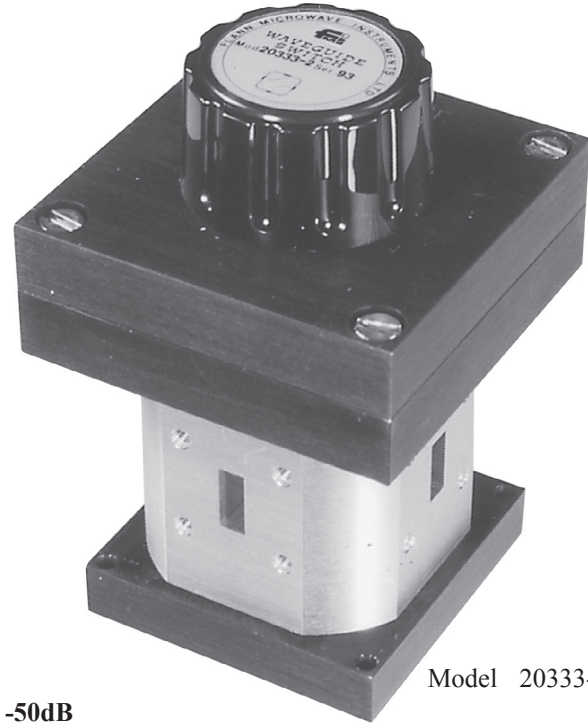
# Manual Waveguide Switches Series 333

## Features

- **Models up to 330 GHz**
- **High Accuracy**
- **High Repeatability**
- **2 or 3-Channel Rotor**
- **High Isolation**

The Flann range of Manual Waveguide Switches, Series 333, are 4 port devices and are optionally available with 2 or 3-channel rotor. Efficient choke design ensures a high RF isolation between non-coupled ports.

Accurate channel to port alignment and excellent repeatability are achieved by a light yet positive rotor indexing mechanism. The well proven design ensures long reliable service without deterioration in performance.



Model 20333-2

**Specification: Isolation (minimum): 75 dB Repeatability better than -50dB**

Model	Frequency Range (GHz)	Waveguide			VSWR (max)	Insertion Loss (dB)	Dimensions (mm)**							Weight (kg)	Model
		WG	R	WR			A	B	C	D	E	F	G		
15333-*	6.58 - 10.0	15	84	112	1.10	0.15	Dimensions available on request								15333-*
16333-*	8.2 - 12.5	16	100	90	1.10	0.15									16333-*
17333-*	9.84 - 15.0	17	120	75	1.10	0.2									17333-*
18333-*	11.9 - 18.0	18	140	62	1.10	0.2									18333-*
19333-*	14.5 - 22.0	19	180	51	1.10	0.2	55	29	71	92	50	60	56	0.95	19333-*
20333-*	17.6 - 26.7	20	220	42	1.10	0.3	44	30	73	94	45	60	50	0.8	20333-*
21333-*	21.7 - 33.0	21	260	34	1.10	0.3	44	30	73	94	45	60	50	0.55	21333-*
22333-*	26.4 - 40.1	22	320	28	1.10	0.3	44	28	69	90	45	60	50	0.7	22333-*
23333-*	33.0 - 50.1	23	400	22	1.10	0.3	47	28	69	90	45	60	50	0.7	23333-*
24333-*	39.3 - 59.7	24	500	19	1.10	0.4	47	28	69	90	45	60	50	0.7	24333-*
25333-*	49.9 - 75.8	25	620	15	1.10	0.5	44	28	69	90	45	60	50	0.6	25333-*
26333-*	60.5 - 92.0	26	740	12	1.10	0.5	44	28	69	90	45	60	50	0.6	26333-*
27333-*	73.8 - 112	27	900	10	1.10	0.6	44	28	69	90	45	60	50	0.6	27333-*
28333-*	93.2 - 140	28	1200	8	1.15	0.8	44	28	69	90	45	60	50	0.6	28333-*
29333-*	114 - 173	29	1400	6	1.20	1.3	44	28	69	90	45	60	50	0.6	29333-*

The suffix "-2" denotes a 2-channel rotor whilst "-3" denotes a 3-channel rotor.

\*\* These dimensions refer to 2-channel rotor switches only; for 3-channel rotor switch dimensions consult our Sales Team.

2-Channel Rotor Type 2

3-Channel Rotor Type 3

**ORDERING INFORMATION**  
 Model: Rotor Type; Description  
 Example: Model 22333-2 Manual waveguide switch 2-Channel Rotor

Series 333

# Motorised Waveguide Switches

## Series 333-\*E

### Features

- Models up to 330 GHz
- High Accuracy
- High Repeatability
- 2 or 3-Channel Rotor
- High Isolation

### Specification:

Isolation (minimum): 75 dB  
 Repeatability better than -50 dB



Model 27333-3E

Model	Frequency Range (GHz)	Waveguide			VSWR (Max)	Insertion Loss Max (dB)	Dimensions			Model
		WG	R	WR			A (mm)	B (mm)	C (mm)	
15333-*E	6.58 - 10.0	15	84	112	Specification/dimensions available on request				15333-*E	
16333-*E	8.2 - 12.5	16	100	90						
17333-*E	9.84 - 15.0	17	120	75	1.10	0.2	56.0	152	34.8	17333-*E
18333-*E	11.9 - 18.0	18	140	62	1.10	0.2	50.0	147	32.2	18333-*E
19333-*E	14.5 - 22.0	19	180	51	1.10	0.3	55.0	140	29	19333-*E
20333-*E	17.6 - 26.7	20	220	42	1.10	0.3	44.0	140	29.7	20333-*E
21333-*E	21.7 - 33.0	21	260	34	1.10	0.4	44.0	140	30	21333-*E
22333-*E	26.4 - 40.1	22	320	28	1.10	0.4	44.0	137	28	22333-*E
23333-*E	33.0 - 50.1	23	400	22	1.10	0.4	47.0	137	28	23333-*E
24333-*E	39.3 - 59.7	24	500	19	1.10	0.5	47.0	137	28	24333-*E
25333-*E	49.9 - 75.8	25	620	15	1.10	0.6	44.0	137	28	25333-*E
26333-*E	60.5 - 92.0	26	740	12	1.10	0.8	44.0	137	28	26333-*E
27333-*E	73.8 - 112	27	900	10	1.10	1.0	44.0	137	28	27333-*E
28333-*E	92.3 - 140	28	120	8	1.15	1.2	44.0	137	28	28333-*E

The suffix "-2E" denotes a 2-channel rotor whilst "-3E" denotes a 3-channel rotor.

\*\* These dimensions refer to 2-channel rotor switches only; for 3-channel rotor switch dimensions consult our Sales Team.

2-Channel Rotor Type 2

3-Channel Rotor Type 3

**ORDERING INFORMATION**  
 Model: rotor type, E; description  
 Example: Model 22333-2E Motorised waveguide switch, 2-channel rotor

Our range of waveguide switches is subject to continual development and additional models, not detailed in this catalogue, may be available to special order. Please consult our sales office for information.

**A Flann switch driver is essential for driving any of the electrically operated switches listed. Please see page 82 for details.**

Series 333-\*E

For standard flange types and recommendations see pages 118 onwards