

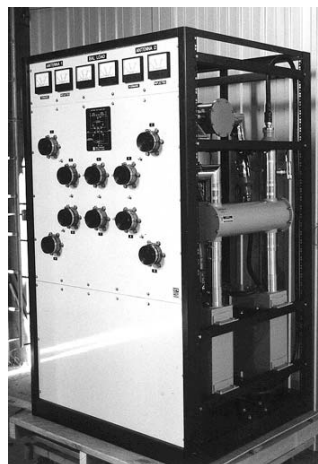
Rigid Line Components

RFS produces a range of 50 ohm rigid line components. Items for both unpressurized (indoor) systems and pressurized, flanged (outdoor) systems are available

in 7/8", 1 5/8", 3 1/8", 4 1/2", 4 7/8" and 6 1/8" sizes. All components are manufactured to the most exacting tolerances.

Features

- **High Conductivity Copper Lines:**
Line inner and outer tubing is of high conductivity, hard-drawn, copper, milled to exact dimensions. Unflanged components for indoor use are polished and sprayed with a clear lacquer to maintain a high luster finish
- **Welded Construction:**
Flanges and mitered elbow joints are TIG welded for maximum strength
- **Low Loss PTFE Dielectric:**
Captive PTFE dielectric insulators are used exclusively in lines and elbows to ensure precision mating and stability of components after assembly
- **Silver Plated Contacts:**
All inner conductor connectors are silver plated
- **Standard Sizes:**
All components conform to the relevant EIA or IEC standards



Switch frame without U-Links



Commutating line combiner

Rigid Line Components

RIGID LINE COMPONENTRY	7/8"	1 5/8"	3 1/8"	4 1/2"	4 7/8"	6 1/8"
Rigid Line 6m Lengths ,Unflanged	(3m length)	•	•	•	•	•
Flanged	-	•	•	•	•	•
90° Elbows Plug with Coupling Sleeves & Inner Connectors	•	•	•	•	•	•
90° Elbow Socket, Swivel Flanges	•	•	•	•	•	•
Flange Adapters with Hose Clamps	•	•	•	•	•	•
Flange Adapters, Hard Solder	-	•	•	•	•	•
Straight Coupling Complete	•	•	•	•	•	•
Rapid Release U-Links	(manual)	•	•	•	•	•
Tee, Plug with Couplings	•	•	•	•	•	•
Inner Joining Kits with Insulator, Bullet O Ring Bolts, etc.	•	•	•	•	•	•
End Seals/Witches Hats	•	•	•	•	•	•
Rigid Line Power divider hanger	-	•	•	•	•	•
1m Allthread Susp. hangers	-	•	•	•	•	•

Notes:

1. Rigid lines are available in standard lengths of 6 meters. Shorter lengths are also available - exact length must be specified.

2. Unflanged elbows, tees, etc., can be converted to socket (female) outputs, upon request.

• = available

ADAPTERS	6 1/8"	4 7/8"	4 1/2"	3 1/8"	1 5/8"	6 1/8"	4 7/8"	4 1/2"	3 1/8"	1 5/8"	7/8"
	UNFLANGED						FLANGED				
'N' Socket	•	•	•	•	•	•	•	•	•	•	•
7/8" flanged	•	•	•	•	•	•	•	•	•	•	•
1 5/8" flanged	•	•	•	•	•	•	•	•	•	•	•
3 1/8" flanged	•	•	•	•	•	•	•	•	•	•	•
4 1/2" flanged	•	•	•	•	•	•	•	•	•	•	•
4 7/8" flanged	•	•	•	•	•	•	•	•	•	•	•
6 1/8" flanged	•	•	•	•	•	•	•	•	•	•	•
1 5/8" unflanged	•	•	•	•	•	•	•	•	•	•	•
3 1/8" unflanged	•	•	•	•	•	•	•	•	•	•	•
4 1/2" unflanged	•	•	•	•	•	•	•	•	•	•	•
4 7/8" flanged	•	•	•	•	•	•	•	•	•	•	•

•For special adapters (4 1/16", AWA/Marconi, NEC, etc) please enquire.

•Premium VSWR adapters (typically 1.02:1) available on request.

LINE DIMENSIONS (METRIC)	1 5/8"	3 1/8"	4 1/2"	4 7/8"	6 1/8"
Outer conductor (OD)	41.3	79.4	106	123.2	155.6
(ID)	38.8	76.8	103	120	151.9
Inner conductor (OD)	16.9	33.4	44.8	52.1	66
(ID)	15	31.3	42.8	50.1	64
Flange weight (2 required)(kg)	0.3	1	1.5	1.5	1.7
Weight (kg/m)	1.75	3.6	5.5	7.1	10
Flange (OD)	*70	132	160	177	205
Bolt circle Ø	71.4	111.1	140	156	187.3
Bolt quantity	4	6	8	8	12
Bolt diameter	8	10	10	10	10

MAXIMUM SUPPORT DISTANCE BETWEEN CLAMPS

In free air ie. open to high winds (m)	1	1.1	1.2	1.2	1.3
In protected space ie. where high winds are not present (m)	1.2	1.5	2	2	2

Notes:

1. All dimensions in mm.

* Square flange standard.

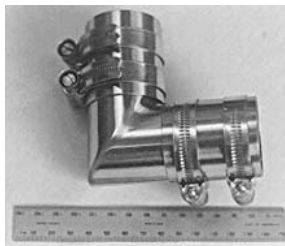
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Straight Coupling



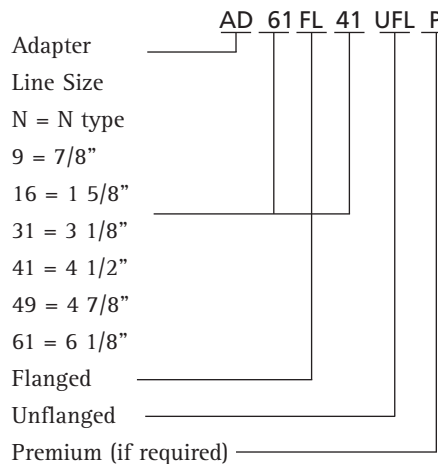
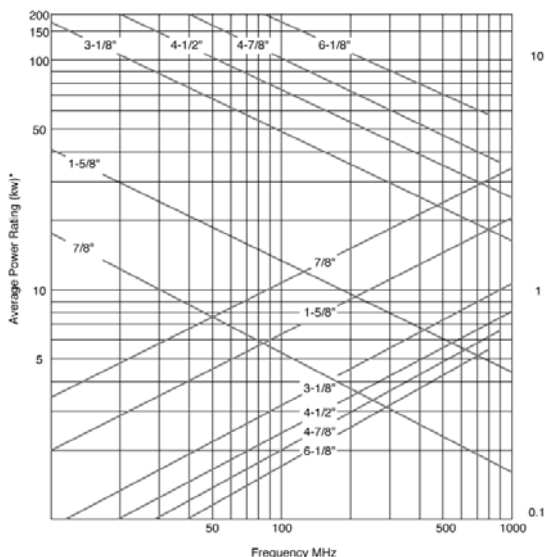
Inner and outer and hose clamps.

90° Elbow



Male with coupling sleeves.

EIA Flange Adapter, Hard Solder



Rigid Line Ratings*

*Average power ratings are based upon an ambient temperature of 40°C, unity VSWR termination, and free air circulation.

Inner conductor temperature rise 62°C.

Outer conductor temperature rise 23°C

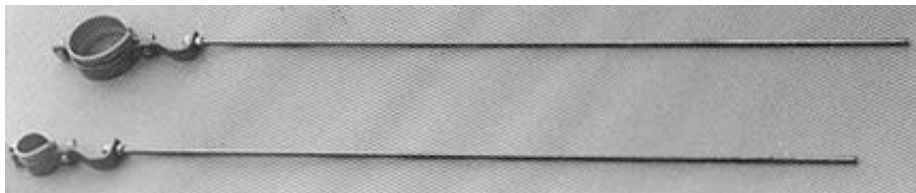
Linearly derate to 0.5 for 80°C ambient temperature.



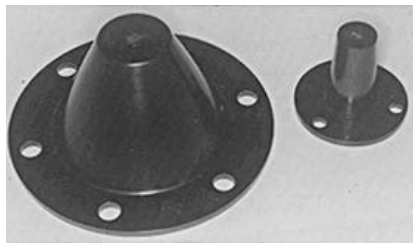
1 5/8" EIA to 'N' Type Socket Adapter



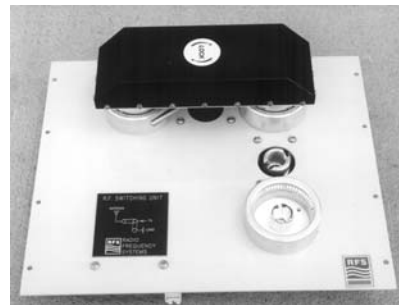
EIA Flange Adapter, Hose Clamp



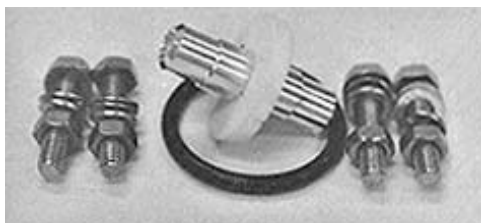
Rigid Line Suspension Hangers: Complete with "all thread" 1 metre rod



End Cap Seals (Witch's Hats) .
Inner bullet, PTFE insulator
'O' Ring, stainless hardware



Three Port 'U' Link Panel



EIA Inner Joining Kit



7/8" 'U' Link Panel