

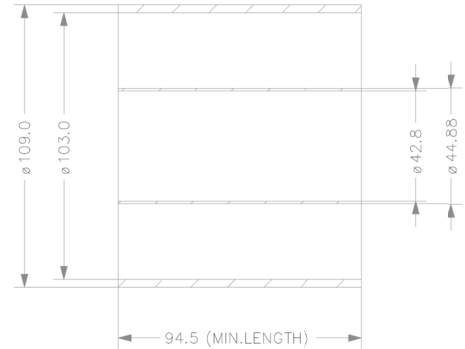
RYMSA RF supplies 50 Ohm unflanged 4 1/2" rigid line sections for indoor applications. The inner conductor is made in copper, and the outer conductor is made in aluminium. Crossed isolators made of two PTFE rods are available to achieve the alignment between the two conductors, ensuring minimum VSWR contribution to the line performance by applying the relative spacing directions supplied below.

RYMSA RF also manufactures the related rigid coaxial accessories such as rigid line coupling elements, devoted to enable the connection between sections of unflanged rigid line, PTFE cross isolators, coupling elements, unflanged elbows, inner and adapters.

Both the rigid line and the corresponding accessories are manufactured optimizing the VSWR and insertion loss values.

### Rigid line conductors

Frequency range	DC-1226 MHz				
Impedance	50 Ohm				
Maximum power handling <sup>(1)</sup>	70 MHz	100 MHz	200 MHz	500 MHz	800 MHz
	105 kW	87.8 kW	62.1 kW	39.3 kW	31.0 kW
RF Peak Voltage at sea level	12.5 KV				
Insertion loss (dB/100m) <sup>(2)</sup>	70 MHz	100 MHz	200 MHz	500 MHz	800 MHz
	0.19	0.23	0.33	0.52	0.65
Maximum Length section	5 m				
Materials	Outer conductor	Aluminium			
	Inner conductor	Copper			
Temperature range	-10°C to +50°C				



Line Size	Conductor	Material	Reference
4 1/2"	Inner	Copper	1123114120
4 1/2"	Outer	Aluminium	1253111300

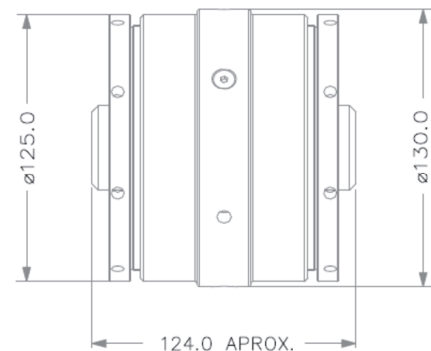
<sup>(1)</sup> This value is referred to ambient temperature of +40°C and VSWR 1.0

<sup>(2)</sup> This value is referred to ambient temperature of +20°C

### Unflanged Coupling Elements

These elements enable the connection between two straight unflanged rigid line sections

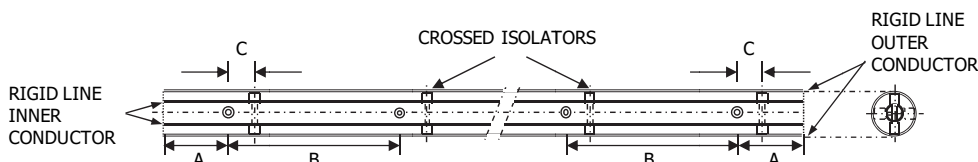
Model	Description
LR30-570	4 1/2" unflanged inner coupling element



### Crossed Isolators

These elements enable the alignment between the two conductors ensuring minimum VSWR

Model LR30-090	VHF (BI/II/III)	500 MHz	600 MHz	700 MHz	800 MHz
A	500	500	500	500	500
B	2000	2000	2000	2000	2000
C	100	150	125	107	94

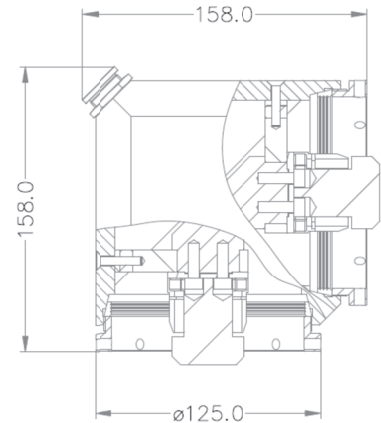


NOTE: INNER CONDUCTOR HAS TO BE DRILLED WITH THE TOOL COMPOSED BY THE PIECES CQ 3036 003 0 AND CQ 3036 004 0

## Unflanged elbow

This element enables a direct connection to the rigid line conductor without using additional coupling elements

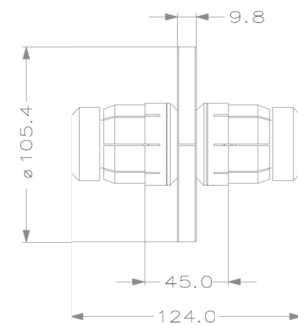
<b>Model</b>	<b>CD30-010</b>	
Frequency range	DC-862 MHz	
Impedance	50 Ohm	
VSWR	<1.03:1	
Insertion loss	Negligible	
Max. Power and voltage	According to line size	
Materials	Outer conductor	Aluminium
	Inner conductor	Brass
	Isolator	PTFE
	Finishing	Chromatized aluminium
Temperature range	-10°C to +50°C	



## Inner connector

This element enables the connection between two standard EIA flanged coaxial transmission line terminations

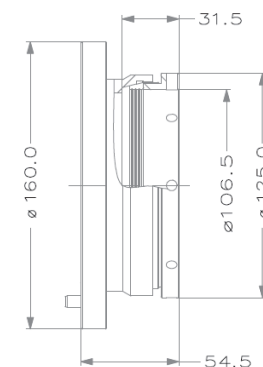
<b>Model</b>	<b>LR30-600</b>	
Max. Power and voltage	According to line size	
Materials	Conductor	Brass
	Isolator	PTFE
	Finishing	White brass
Temperature range	-10°C to +50°C	



## Unflanged to flange adaptor

This element provides a standard flanged EIA termination to an unflanged rigid line section

<b>Model</b>	<b>TR30-131</b>	
Frequency range	DC-862 MHz	
Impedance	50 Ohm	
VSWR	<1.03:1	
Insertion loss	Negligible	
Max. Power and voltage	According to line size	
Materials	Outer Conductor	Aluminium
	Finishing	Chromatized plating
Temperature range	-10°C to +50°C	



## Assembling diagram for 4 1/2" elements

LR30-600

TR30-131

LR 4 1/2"

LR30-700

LR 4 1/2"

CD30-010

