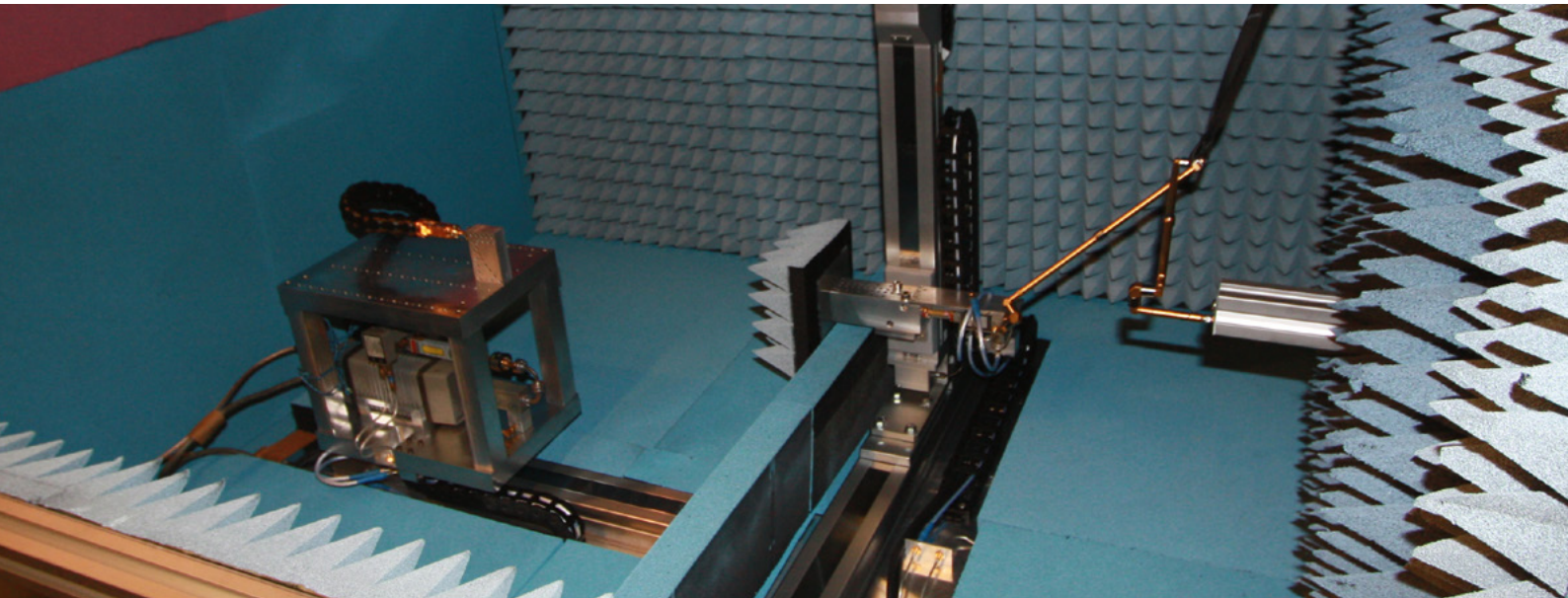


## Articulated Lines



**Articulated lines boast excellent RF properties and an extremely long service life. They are considerably more robust than ordinary test cables, lasting several times as long.**

### Features

- Extremely long life
  - 1 Million flex cycles guaranteed for articulated line (The rotary joints allow movements without stressing of the material by strain or torsion)
  - Worn-out port saver connectors (5000 matings guaranteed) can be easily replaced by customer
- Excellent amplitude and phase stability
  - Also during movement
  - Also with temperature drift
- Accurate and reproducible RF measurements
  - No need for adapters because 3.5 and N connectors are available as male and female
  - VNA calibration is not affected by movements
- Highly flexible
  - DUT ports in any orientation can be connected within a sphere 1 m in diameter (0.5 m for short line)
  - Rotation allowed
  - No mechanical stress introduced to DUT
- Ecofriendly
  - Long life
  - Repair-friendly
  - Recyclable

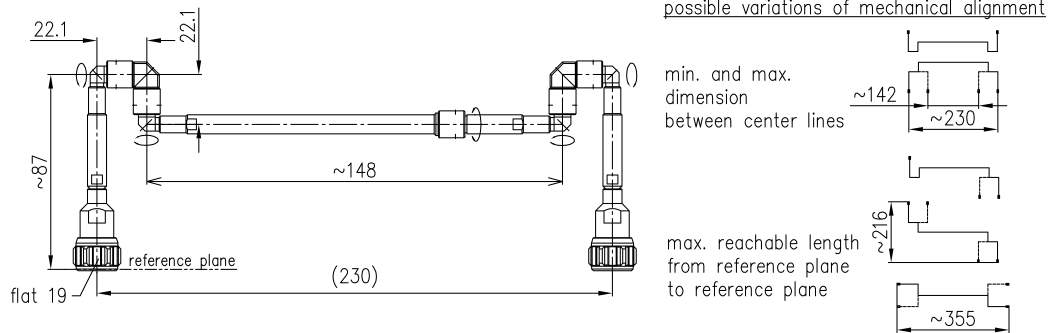
### Applications

- General test bench use
- Network analysis (S-parameter measurement)
- Robotic test setups
- Measurement of rotatable DUTs (e.g. rotary joints and rotating systems)



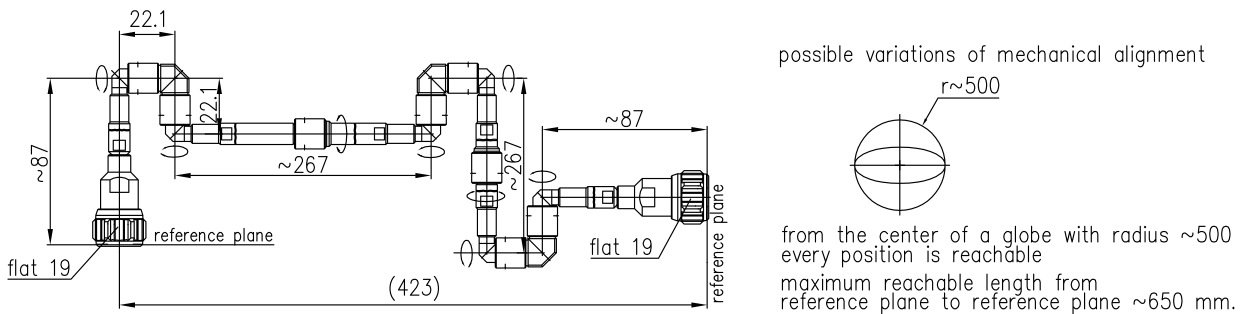
YouTube - Articulated Lines  
 SPINNER RF Articulated Lines  
 contra RF test cables

## DC to 18 GHz – 365 mm



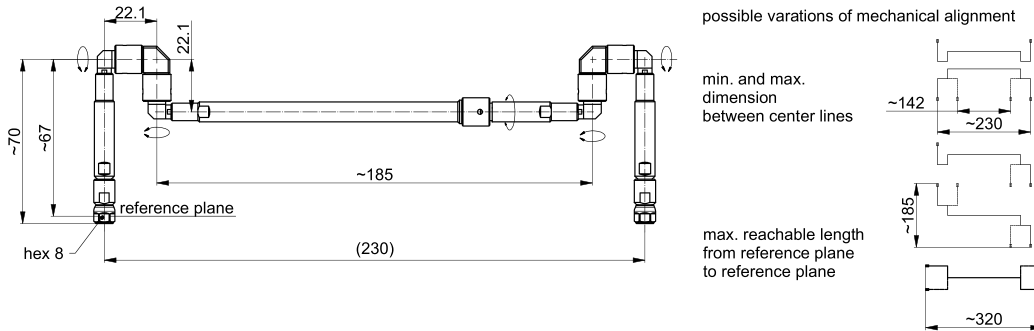
Part Number	Interface	Return Loss, min.	Insertion Loss, max.	Length (mm)	Quantity per Set
<a href="#">BN 533626C1010</a>	Type N male/male	DC to 4 GHz $\geq$ 26 dB 4 to 12 GHz $\geq$ 20 dB 12 to 18 GHz $\geq$ 15 dB	DC to 18 GHz $\leq$ 1.7 dB	365	1
<a href="#">BN 533626C2010</a>	Type N male/female				
<a href="#">BN 533626C3010</a>	Type N female/female				
<a href="#">BN 533626C1111</a>	Type N male/male				2
<a href="#">BN 533626C2211</a>	Type N male/female				
<a href="#">BN 533626C3311</a>	Type N female/female				

## DC to 18 GHz – 650 mm



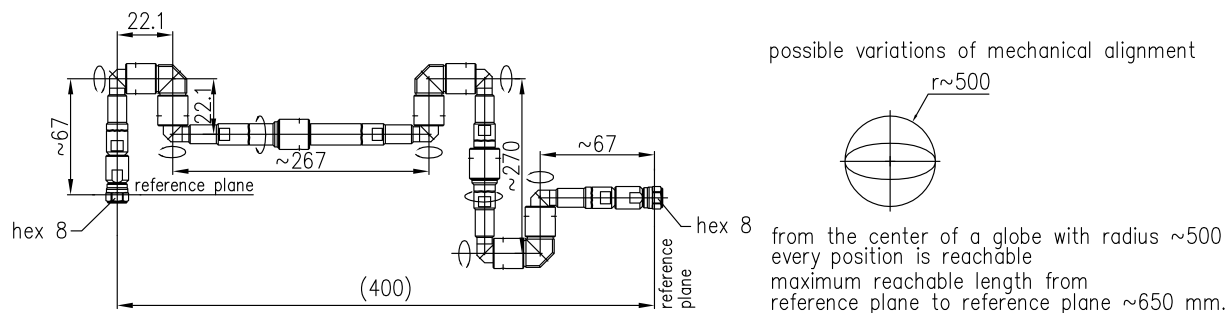
Part Number	Interface	Return Loss, min.	Insertion Loss, max.	Length (mm)	Quantity per Set
<a href="#">BN 533645C1010</a>	Type N male/male	DC to 4 GHz $\geq$ 26 dB 4 to 9 GHz $\geq$ 17 dB 9 to 18 GHz $\geq$ 15 dB	DC to 18 GHz $\leq$ 2.7 dB	650	1
<a href="#">BN 533645C2010</a>	Type N male/female				
<a href="#">BN 533645C3010</a>	Type N female/female				
<a href="#">BN 533645C1111</a>	Type N male/male				2
<a href="#">BN 533645C2211</a>	Type N male/female				
<a href="#">BN 533645C3311</a>	Type N female/female				

## DC to 32 GHz – 320 mm



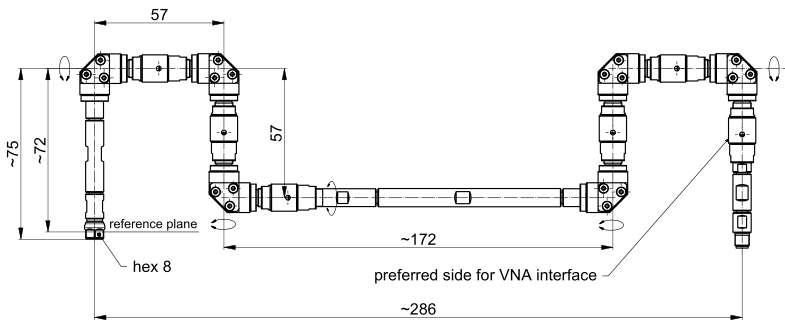
Part Number	Interface	Return Loss, min.	Insertion Loss, max.	Length (mm)	Quantity per Set
<a href="#">BN 533627C1010</a>	3.5 mm male/male	DC to 4 GHz ≥ 26 dB 4 to 12 GHz ≥ 20 dB 12 to 18 GHz ≥ 15 dB	DC to 18 GHz ≤ 1.7 dB 18 to 26.5 GHz ≤ 2.2 dB 26.5 to 32 GHz ≤ 3.0 dB	320	1
<a href="#">BN 533627C2010</a>	3.5 mm male/female				
<a href="#">BN 533627C3010</a>	3.5 mm female/female				
<a href="#">BN 533627C1111</a>	3.5 mm male/male				2
<a href="#">BN 533627C2211</a>	3.5 mm male/female				
<a href="#">BN 533627C3311</a>	3.5 mm female/female				

## DC to 32 GHz – 650 mm



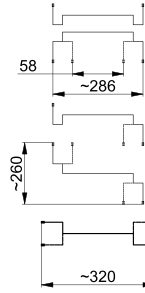
Part Number	Interface	Return Loss, min.	Insertion Loss, max.	Length (mm)	Quantity per Set
<a href="#">BN 533638C1010</a>	3.5 mm male/male	DC to 4 GHz ≤ 26 dB 4 to 9 GHz ≤ 17 dB 9 to 18 GHz ≤ 15 dB 18 to 26.5 GHz ≤ 12 dB 26.5 to 32 GHz ≤ 9 dB	DC to 18 GHz ≤ 2.7 dB 18 to 26.5 GHz ≤ 3.2 dB 26.5 to 32 GHz ≤ 3.4 dB	650	1
<a href="#">BN 533638C2010</a>	3.5 mm male/female				
<a href="#">BN 533638C3010</a>	3.5 mm female/female				
<a href="#">BN 533638C1111</a>	3.5 mm male/male				2
<a href="#">BN 533638C2211</a>	3.5 mm male/female				
<a href="#">BN 533638C3311</a>	3.5 mm female/female				

## DC to 40 GHz – 320 mm



possible variations of mechanical alignment

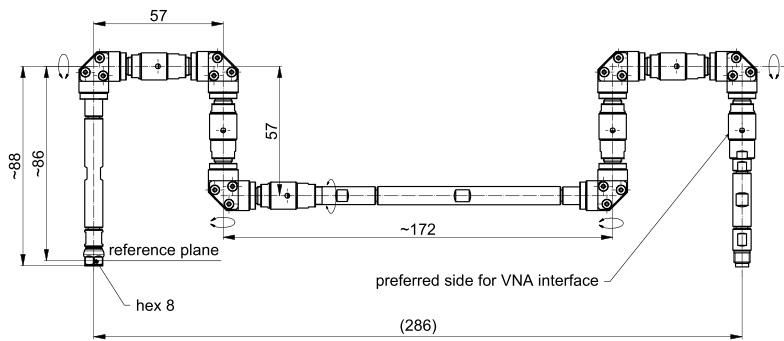
min. and max. dimension between center lines



max. reachable length from reference plane to reference plane

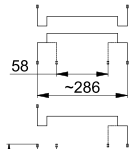
Part Number	Interface	Return Loss, min.	Insertion Loss, max.	Length (mm)	Quantity per Set
<a href="#">BN 533647C1010</a>	2.92 mm male/male	DC to 4 GHz ≤ 26 dB 4 to 9 GHz ≤ 20 dB 9 to 18 GHz ≤ 15 dB 18 to 26.5 GHz ≤ 12 dB 26.5 to 40 GHz ≤ 10 dB	DC to 18 GHz ≤ 2.3 dB 18 to 26.5 GHz ≤ 3.0 dB 26.5 to 40 GHz ≤ 4.0 dB	320	1
<a href="#">BN 533647C2010</a>	2.92 mm male/female				
<a href="#">BN 533647C3010</a>	2.92 mm female/female				
<a href="#">BN 533647C1111</a>	2.92 mm male/male				2
<a href="#">BN 533647C2211</a>	2.92 mm male/female				
<a href="#">BN 533647C3311</a>	2.92 mm female/female				

## DC to 50 GHz – 345 mm

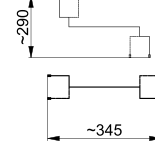


possible variations of mechanical alignment

min. and max. dimension between center lines

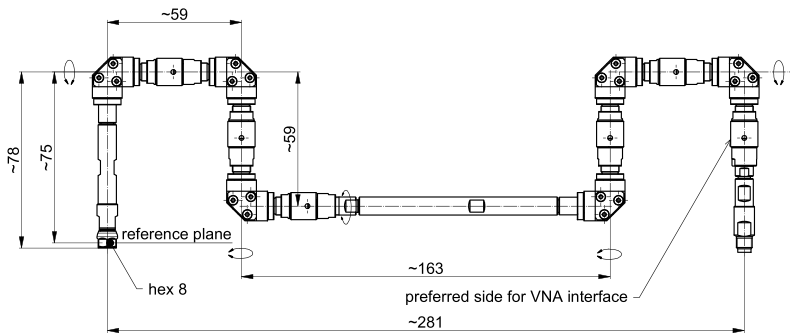


max. reachable length from reference plane to reference plane

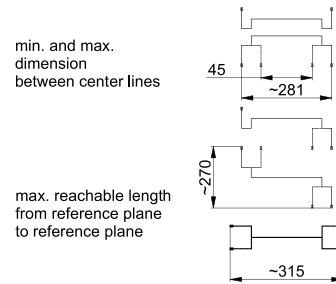


Part Number	Interface	Return Loss, min.	Insertion Loss, max.	Length (mm)	Quantity per Set
<a href="#">BN 533646C1010</a>	2.4 mm male/male	DC to 4 GHz ≤ 26 dB 4 to 9 GHz ≤ 20 dB 9 to 18 GHz ≤ 15 dB 18 to 26.5 GHz ≤ 12 dB 26.5 to 40 GHz ≤ 10 dB 40 to 50 GHz ≤ 8 dB	DC to 18 GHz ≤ 2.5 dB 18 to 26.5 GHz ≤ 3.5 dB 26.5 to 40 GHz ≤ 4.5 dB 40 to 50 GHz ≤ 5.5 dB	345	1
<a href="#">BN 533646C2010</a>	2.4 mm male/female				
<a href="#">BN 533646C3010</a>	2.4 mm female/female				
<a href="#">BN 533646C1111</a>	2.4 mm male/male				2
<a href="#">BN 533646C2211</a>	2.4 mm male/female				
<a href="#">BN 533646C3311</a>	2.4 mm female/female				

## DC to 67 GHz – 315 mm



possible variations of mechanical alignment



Part Number	Interface	Return Loss, min.	Insertion Loss, max.	Length (mm)	Quantity per Set
<a href="#">BN 533652C1010</a>	1.85 mm male/male	DC to 4 GHz ≤ 25 dB 4 to 6 GHz ≤ 20 dB 6 to 18 GHz ≤ 15 dB 18 to 26.5 GHz ≤ 12 dB 26.5 to 40 GHz ≤ 10 dB 40 to 67 GHz ≤ 8 dB	DC to 18 GHz ≤ 2.5 dB 18 to 26.5 GHz ≤ 3.5 dB 26.5 to 40 GHz ≤ 4.5 dB 40 to 50 GHz ≤ 5.5 dB 50 to 67 GHz ≤ 6.5 dB	315	1
<a href="#">BN 533652C2010</a>	1.85 mm male/female				
<a href="#">BN 533652C3010</a>	1.85mm female/female				
<a href="#">BN 533652C1111</a>	1.85 mm male/male				2
<a href="#">BN 533652C2211</a>	1.85 mm male/female				
<a href="#">BN 533652C3311</a>	1.85 mm female/female				