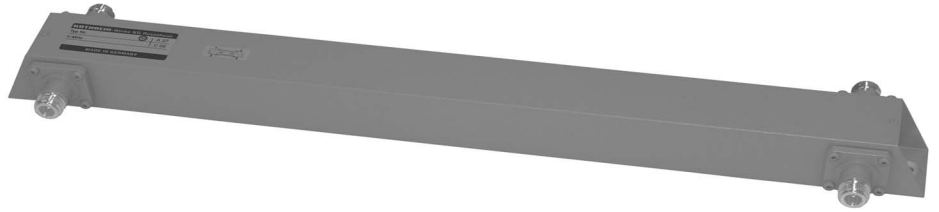


# 3-dB Coupler (90° Hybrid) 100 – 150 MHz

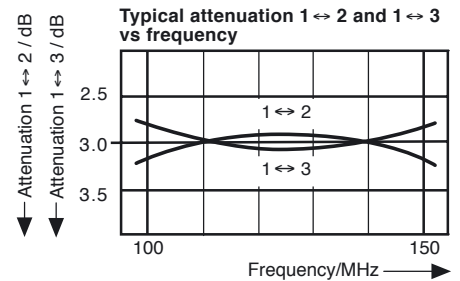
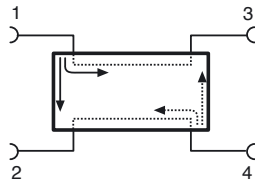
## The 3-dB coupler can be used:

- as decoupled power splitter with a ratio of 1:1,
- for the decoupled combining of two transmitters with arbitrarily low frequency spacing (at 3-dB loss),
- for the decoupled combining of two receivers with arbitrarily low frequency spacing,
- for the decoupled combining of two transmitter/receiver units, whose integrated duplexers are within the same frequency range, as a frequency independent 90° phase shifter,
- as a component to form combiners.



## Design and function:

The 3-dB coupler has four ports, two of which are decoupled from each other. For example effective power entering into port 1 is distributed into ports 2 and 3. Port 4 is decoupled and without power if ports 2 and 3 are ideally matched. In practice an absorber of suitable power is to be planned for according to the mismatch of ports 2 and 3.



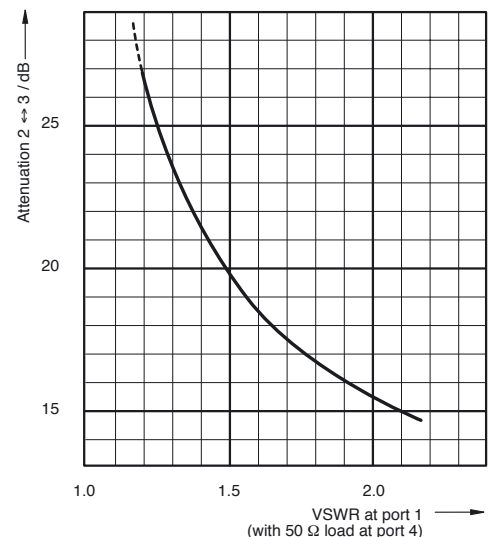
## Custom versions:

On request couplers with a coupling attenuation between 3 dB and 10 dB are available.

## Technical Data

Type No.	K 62 70 31
Connectors	N female
Frequency range	100 – 150 MHz
Attenuation 1 ↔ 2 / 1 ↔ 3	3 ± 0.4 dB
Attenuation 2 ↔ 3	See diagram
Directivity	> 35 dB
VSWR	< 1.06
Impedance	50 Ω
Max. power	500 W
Material	Brass, silver-plated
Colour	Grey
Installation	With 2 screws (max. 6 mm diameter)
Weight	1.6 kg
Packing size	931 mm x 54 mm x 126 mm
Dimensions (w x h x d)	625 mm x 40 mm x 95 mm (incl. connectors)

**Attenuation 2 ↔ 3 vs VSWR at port 1**



Note: VSWR and attenuation are measured when the remaining ports are terminated with 50-Ω loads.