Microwave Components and Assemblies
GRUPPO PASQUALI IS:

Microwave components manufacturing and mechanical design
Over than 60 years’ experience

EM Design and RF Test
Ex spin-off company of university of Pisa

Metal finishing and painting
Over 40 years’ experience

The companies operate in synergy joining their specialized and complementary skills for the production of top-quality microwave devices and subassemblies up to 100 Ghz.

Gruppo Pasquali’s Quality System is ISO 9001:2008 certified, the group operates in commercial and defence markets according to ISO and MIL standards. Pasquali Microwave Systems is also UNI EN 9100:2009 certified.
"Our mission is to develop and produce high quality custom microwave devices and subassemblies that satisfy special system requirements in terms of reliability, size and cost, on time and for customer satisfaction."

Gruppo Pasquali supplies unbeatable turnkey solutions to meet specific needs of customers
"Pasquali Microwave Systems is a long-established Italian microwave product manufacturer located in Florence.

In the latter years, Pasquali Microwave Systems capabilities have been enhanced by including an R&D team with high specialized skills in microwave engineering: RTW, that provides EM design and RF test services as well as technical advice in microwave product development.

Gruppo Pasquali facilities in Florence and Pisa contain state-of-art technologies and equipment for development, engineering and production, including plating and metal finishing and RF qualification tests on all products. All necessary activities are carried on in-house with short lead times and full quality control providing both standard and custom products.

Development and production is supported by CAD/CAM systems with highly automated production equipment for low as well as for large quantity production.

Gruppo Pasquali ensures high quality in microwave products
MAIN PRODUCTION LINES

Below a list of Gruppo Pasquali’s main microwave product lines:

Ferrite devices
- Circulators
- Switches
- Faraday Rotators
- Isolators

Rotary Joints
- Single-channel / multi-channel waveguide (I, L, U type) RJ
- Single channel coaxial RJ
- Multichannels Waveguide (I, L, U type) and Coaxial RJ
- RJ integrated with Slip rings

Solid State TR Limiters with STC
- Ka-band
- X-band
- C-band
- S-band

Passive waveguide components
- Bends
- Adaptors, transitions
- Couplers
- Power dividers, splitters, combiners
- Twists
- Filters
- Orthomode Transducers (OMT)
MAIN PRODUCTION LINES

Below a list of Gruppo Pasquali’s main microwave product lines:

**Absorbing Loads**
- Waveguide terminations
- Large area cryogenic loads (down to 4°K) for radiometric reference

**Complex waveguide assemblies**

**Monopulse comparators**

**Antennas**
- Horns
- Slotted waveguide (length up to 6 meters)
- Slotted array
- Planar/printed antennas

**Waveguide path installation (including design, manufacturing, testing, repair and maintenance) for:**
- Naval units (ships, submarines)
- Aircrafts
- Buildings
- Land vehicles

**Millimeterwave components in electroformed copper and/or silver**
NEW OFFICES & MACHINERY
Capabilities: product testing

All microwave products are object of dimensional control, visual inspection and RF tests. Test equipment is maintained in-house, so that intermediate as well as final tests are performed on all products.

**Dimensional tests:**
Are performed through high accuracy Coordinate Measuring Machine.
Capabilities: plating and finishing

Galvanica Pasquali provides the following surface finishing services:

- Silver plating
- Gold plating 18K and 24K
- Nickel plating
- Tin plating
- Copper plating
- Passivation
- Chemical conversion coating
- Electroless Nickel
- Iridite
- Painting

Measurement capability of galvanic treatment thickness by X-Ray certified instrument
Custom-designed product references
Rotary Joints

2 Channels X-Band Rotary Joint

1 Channel Coaxial Rotary Joint

3 Channels Ku-Band Rotary Joint

WR112 (L - I - U style) Rotary Joint

4 channels X-Band Rotary Joint
Capabilities: product testing

RF test: are performed through Scalar and/or Network Analysers.

NETWORK ANALYZER:
- The 8510 VNA network analyzer provides the comprehensive measurement capability frequency up to 50 GHz.

NETWORK ANALYZER:
- The E5071C ENA network analyzer provides the comprehensive measurement capability frequency up to 20 GHz.

VISUAL INSPECTION:
- Videoscope OLYMPUS IPLEX
Custom-designed product references

Rotary Joints

- 2 Channels X-Band Rotary Joint
- 2 Channels L-Band Rotary Joint
- 2 Channels S-Band Rotary Joint
- 3 Channels L-Band Rotary Joint
- 3 Channels L-X-Band Rotary Joint
- 2 Channels C-Band Rotary Joint
- 2 Channels X-Band Rotary Joint
- 2 Channels C-Band Rotary Joint
- 6 Channels L-X-Band Rotary Joint
- 1 Channel S-Band Rotary Joint
Custom-designed product references
Orthomode Transducer (OMT)

OMT X-Band

OMT W-Band

Slip ring
Custom-designed product references
Ferrite Components
Custom-designed product references
Solid State TR Limiter with STC & integrated LNA

X-Band TR Limiter
Custom-designed product references
Miscellaneous waveguide components

WR284
Combiner S-Band

Jacketed Flex
L-Band

Flex WR187

Jacketed Flex
S-Band

WG WR28
Custom-designed product references
Waveguide Couplers

- Dual Cross Coupler X-Band
- Dual Loop Coupler X-Band
- Fourth Coupler X-Band
- Coupler C-Band
- High Precision Triple Directional Coupler X-Band
- Dual Coupler S-Band
- Directional Coupler C-Band
Custom-designed product references

- Planar Horn
- Pressure Inlet S-Band
- Filter X-Band
- Pressure Window
- High Power Load
Custom-designed product references

MagicT

WR90RH MagicT

WR51 MagicT

WR159 MagicT

WR112 MagicT
Custom-designed product references
Waveguide Comparator

X-Band - 6 ports Comparator with Feed Horns

X-Band 4 ports Monopulse Comparators

X-Band 4 ports Monopulse Comparators

X-Band - 8 ports Comparator
Custom-designed product references
Waveguide Comparator

- X-Band 8 ports Monopulse Comparators
- C-Band 4 port Comparator
- X-Band 4 ports Comparator with Feed Horns
- X-Band 4 ports Monopulse Comparators with Antenna
- X-Band - 4 ports Comparator
Custom-designed product references

- Horn Double Ridge
- Horn Ka-Band
- X-Band Horn
- X-Band Antenna
- Horn Double Ridge C-Band
- Horn C-Band
- Horn Ku Band
- Horn X-Band
- X-Band Antenna
- X-Band Antenna
Custom-designed product references

Electroformed millimeterwave waveguide components
(30 GHz and 44 GHz)

Electroformed millimeterwave corrugated horn (30 GHz)
Custom-designed product references
Electroformed feed polarizer
Custom-designed product references

Electroformed waveguides for satellite application
Custom-designed product references

Large area cryogenic absorbing assemblies for radiometric reference
Custom-designed product references

Special absorbing terminations: flight model on board calibration target, criogenic loads for radiometric reference.
Custom-designed product references

Lightweight Waveguides for Space Application

- **WR75 straight rigid aluminium WG with alodine**
- **WR75 rigid-flex aluminium bended WG with silver plating**
- **WR75 rigid-flex aluminium bended WG with silver plating + alodine**
- **Wr51 rigid-aluminium bended WG with silver plating and space painting**
- **WR75 straight flex aluminium WG with silver plating**
Pasquali Microwave Systems is also UNI EN 9100:2009 certified.

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