

# Metrology and archaeology: the Doric capitals of Oria (Apulia region, Southern Italy)

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**Abstract - In the courtyard of the Episcopal palace Oria (a village located few kilometers at north-west of Brindisi) a Doric capital and a drum of the fifth century BC column (Classical period) from the ancient Acropolis Messapica are conserved.**

**Also in Oria in the early medieval church of Gallana, about three kilometers from the Acropolis, there are two other Doric capitals, this time dating back to the Hellenistic period (fourth and third centuries BC). Starting with the measures of the moldings detected on the site and using the form (that is, the lowest common denominator of the relative sizes of the various architectural elements of a temple of the classical era and later Hellenistic period), the remaining measures were obtained which, the height of the column, the diameter of the same lower end and the height of the entablature of the two religious buildings in Puglia aged messapica.**

## I. INTRODUCTION

In the courtyard of the episcopal palace houses in Oria, a Doric capital and a column of the fifth century BC (Classical period) from the ancient Acropolis Messapica is conserved. Also in Oria in the early medieval church of Gallana, about three kilometers from the Acropolis, there are two other Doric capitals, this time dating back to the Hellenistic period (fourth and third centuries BC). Starting from the moldings measurements taken at the scene using the form (that is, the lowest common denominator of the relative sizes of the various architectural elements of a temple of the classical era and later Hellenistic period), the remaining measures of the two religious buildings present in Puglia in messapian age have been converted.

## II. CAPITAL AND DRUM OF COLUMN

In the courtyard of the episcopal palace houses of Oria a Doric capital (Figure 1) and a drum of the fifth century

BC column (Classical period) from the ancient Acropolis Messapica. This capital and its drum column (Figure 2) were to be probably part of a temple or even the Palace of the classical age present in the Acropolis. From the remains of these architectural elements could be detected on the site the size of the moldings of the Doric capital, namely the height of the abacus in 16 cm. and its length 100 cm., the height echinus in 14 cm., the height of the collar in 12 cm (Table 1) and the diameter of the upper end column in 80 cm. Starting from the moldings measurements registered on the site through the module (that is, the lowest common denominator of the relative sizes of the various architectural elements of a temple of classical age), the remaining measures such as, the height of the column have been obtained, the diameter of the same lower end, ending with the height of the entablature of the building. The module, as a lowest common denominator of the relative size of the various elements, is identified in the Treaty of Vitruvius with the radius at the base of the shaft of the column (lower end). Although the form manifestation of a typical ordering mentality of the Hellenistic world, his fortune was enormous. As already known, it was revived in the Augustan Age by Vitruvius and recovered from the humanist and treatises of the sixteenth century and later by the neoclassical culture. The Doric order distinctive characters are clearly identifiable in the massive column, without base and crowned by a capital with essential and balanced shapes. Having to take such a Doric temple contemporary with that of Oria Acropolis, it is easier to compare with the temple of Zeus at Olympia, a peripteral hexastyle dating back to the early classicism, which fully expresses the high maturity reached by the architecture of the Doric Peloponnese during the first half of the fifth century, a period in just about recognized as the age of the maximum expression of the Doric. In this example examined are clearly identifiable the traditional components of the order. In fact, the column stands on a plinth of three steps and maintains the complete entablature of all the characteristic elements of the order.

Important to note that the parties' proportions are typical of the first half of the century and must be express modules, detects a height of the column of about nine modules and a half (or slightly less than five diameters) and a height of the entablature, together with the mum, of four modules, that is, two diameters. In addition, the entablature / Column ratio is equal to about 1 / 2, 4 and is among other things a distinctive feature of the Doric order of the fifth century B.C.

Finally, taking into account the measurements taken on the remains of the Doric capitals and column drum present in the courtyard of the Bishop of Oria and applying the form of five diameters for the height of the column and four modules for the height of the entablature He obtains a height of 513 cm. and the column of 216 cm. height of the entablature of the palace or temple of the Acropolis of Oria (Table 2).



Fig. 2 – Oria, courtyard of the Bishop's Palace: drum of the fifth century BC column.



Fig. 1 – Oria, courtyard of the Bishop's Palace: the fifth century BC capital.

architectural element	dimensions
<i>h</i> abacus	16 cm.
<i>h</i> echino	14 cm.
<i>h</i> neckband	12 cm.
<i>d</i> upper end	80 cm.
<i>l</i> abacus	100 cm.

Table 1 – Size of the capital of the Messapian acropolis.

architectural element	dimensions
<i>d</i> upper end	80 cm.
<i>d</i> lower end	108 cm.
<i>module</i> (1/2 diameter)	54 cm.
<i>h</i> column	513 cm.
<i>h</i> trabeation	216 cm.

Table 2 – Size of the temple or palace acropolis Messapian.

### III. TWO DORIC CAPITALS OF THE HELLENISTIC PERIOD.

In the early medieval church of Gallana, about three kilometers from Oria, near the consular road called Via Appia, are present, lying immediately after crossing the door of the church, two Doric capitals (Figure 3) from the Hellenistic period (fourth and third centuries B.C).

These two capitals should probably be part of a religious building. The size of the two Doric capitals (figure 4.5) of the Hellenistic period were considered to have both measures 13 cm. as it regards the height of the abacus, the measurement of 11 cm. for the echinus height, cm. 77 for the length of the abacus, and, finally, of 60 cm. for the diameter of the upper end (Tables 3,4). Even in this case, using the building module of a Hellenistic temple and precisely the measurement of the radius at the base of the shaft of the column (lower end), it was possible to reconstruct the size of the building column. In this case, namely the Hellenistic period, as a comparison with the temple present along the Via Appia in Oria was chosen the Temple of Athena Alea at Tegea of 360 BC The prospectus of the old Hellenistic temple was to be characterized by very slender columns, probably among the six seven diameters, post supporting an entablature rather light. Finally, in this case, using the form and the relative proportions of buildings of a Doric temple from the Hellenistic period, it was estimated the height of the temple in 468 cm column (Table 5).



*Fig. 3 – Oria, Gallana Church: two Doric capitals of the Hellenistic period.*



*Fig. 4 – Oria, Gallana Church: Doric capital to the left of the entrance.*



*Fig. 5 – Oria, Gallana Church: Doric capitals to the right of the entrance portal.*

architectural element	dimensions
<i>h</i> abacus	13 cm.
<i>h</i> echino	11 cm.
<i>d</i> upper end	60 cm.
<i>l</i> abacus	77 cm.

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*Table 3 – Left capital size (Gallana church).*

architectural element	dimensions
<i>h</i> abacus	13 cm.
<i>h</i> echino	11 cm.
<i>h</i> neckband	9 cm.
<i>d</i> upper end	60 cm.
<i>l</i> abacus	77 cm.

*Table 4 – Right capital size (Gallana church).*

architectural element	dimensions
<i>d</i> upper end	60 cm.
<i>d</i> lower end	78 cm.
<i>module</i> (1/2 diameter)	39 cm.
<i>h</i> column	468 cm.

*Table 5 – Size of the building of worship in the church of Gallana (Hellenistic period).*

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