

Vardakis L, Michailidis Y, Mandroukas A, Mavrommatis G, Christoulas K, Metaxas T. 2019. Analysis of the running performance of elite soccer players depending on position in the 1-4-3-3 formation. German Journal of Exercise and Sport Research. doi: 10.1007/s12662-019-00639-5

## **Abstract**

The aim of this study was to define the match running performance profile of elite soccer players, the effect of position, and the reduction in match running performance between halves in the 1-4-3-3 formation. The professional players participated in championship matches and the sample size was 172 observations/datasets ( $n = 172$ ). The players were divided into five playing positions: central defenders (CD), side defenders (SD), midfielders (M), side midfielders (SM), and forwards (F). The players' movement pattern was captured using a GPS device and categorized into five velocity zones (first: 6–11.8 km/h, second: 11.9–15.7 km/h, third: 15.8–19.7 km/h, fourth: 19.8–24 km/h, fifth: >24 km/h). SD and SM covered greater distances than CD, M, and F in the fourth and fifth zones. M covered greater distances in the first, second, and third zones in both halves. All the players covered smaller distances in the second half compared with the first half ( $p < 0.001$ ). Players who retained their running performance were: M: first zone; F second and fourth zones; CD: third zone; SM: third and fourth zones; SD: fourth zone. Finally, in the fifth zone, none of the players reduced match running performance except SD ( $p = 0.038$ ). The results of this research demonstrate the differences in match running distance depending on playing position in the 1-4-3-3 formation. It is suggested to practice in separate groups, depending on playing position, to improve soccer fitness.

## **Keywords**

Activity profile, Physical condition, Performance, GPS tracking