

CENTRAL DEFENDER:

RELATIONSHIP BETWEEN THE CONDITIONAL
PROFILE AND DEFENSIVE EFFORTS OF
CENTRAL DEFENDERS ACCORDING TO
PLAYING STYLE
(POSSESSION AND DEFENSIVE BLOCK)



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TABLE OF CONTENTS

GLOSSARY	
I. GAME INTELLIGENCE	5
2. SUMMARY	5
3. INTRODUCTION	5
4. FIRST STUDY	
5. SECOND STUDY	8
6. THIRD STUDY	10
7. GENERAL CONCLUSIÓN OF THE STUDY	13

RELATIONSHIP BETWEEN THE CONDITIONAL PROFILE AND DEFENSIVE EFFORTS OF CENTRAL DEFENDERS ACCORDING TO PLAYING STYLE (POSSESSION AND DEFENSIVE BLOCK)

GLOSSARY

- ➤ High Intensity Distance (HI): Distance covered above 20 km/h.
- Sprinting Distance: Distance covered above 25 km/h.

Analysis and Playing Style Terms.

- > TIP / OTIP: A metric that measures Team Possession Time (TIP) and the opponent's Time Out of Possession (OTIP).
- > Defensive Block: A style of defensive organization evaluated based on the percentage of time the team spends in a high, mid, or low block
- > Pressure: A single defender applies direct pressure (moves forward or sideways towards the player in possession of the ball).
- > High Block: Accumulating players to defend in the opponent's first third or in advanced positions.
- Mid Block: The opponent is in possession of the ball in the middle or attacking third, and the average position of our 3 defenders is >26.5m from our goal line.
- Low Block: The opponent is in possession of the ball in the middle or attacking third, and the average position of our 3 defenders is <26.5m from our goal line.

Types of Defensive Efforts

- > Efforts towards the ball: Defensive actions in which a player from the team without possession influences the player in possession of the ball, either by applying direct pressure on them or delaying and controlling their movement.
- Pressure efforts: A player performs a defensive action on the ball carrier individually and without being part of a pressing chain.
- Recovery efforts backwards: Defensive actions in which the player runs backward toward the ball carrier.



GAME INTELLIGENCE

In modern football, data analysis has become a key tool to understand the game in depth and optimize collective and individual performance. Game Intelligence allows breaking down tactical complexity into objective metrics that can or help reveal behavioral patterns, facilitating strategic decision-making. This study focuses on how data can help differentiate the performance and functions of full-backs and wing-backs, two positions that, although they may seem similar, present very distinct dynamics depending on the tactical system and the playing style applied.

These metrics not only help identify offensive and defensive patterns, but also allow evaluating the conditional load of each position: distances covered, number of sprints, high-intensity efforts, and variability in speed, among other factors. Furthermore, this study goes a step further by analyzing the types of runs most used according to the position, such as overlaps, runs ahead, support runs, or movements behind the defense, and breaking down their conditional components, like the distance covered, the speed reached, or the frequency with which they are performed. This approach reveals how the tactical context conditions the player's physical behavior and allows understanding which types of runs demand greater physical wear or generate more offensive danger, thus facilitating the adaptation of profiles according to the specific demands of each system.

In this analysis, the combination of positional data and conditional metrics provides key information to understand how the physical and technical characteristics of full-backs and wing-backs should be adjusted based on the role they perform. In this way, it facilitates the identification of more suitable profiles for each system, allowing coaches and analysts to optimize the tactical structure and the overall performance of the team.

2. SUMMARY

This study analyzes the different behaviors of central defenders in relation to their conditional performance and the defensive efforts they make during competition. The main objective is to understand how the physical and defensive demands on the center-back vary depending on the tactical context of their team.

Furthermore, it examines the possible relationship between the time teams spend in possession or out of possession of the ball and the predominant defensive block they adopt. To this end, the total distance covered by the players is analyzed, as well as the speed and intensity at which these movements are made, depending on the defensive block used. In a complementary manner, the study delves into the relationship between the different types of defensive efforts and the defensive block employed by the team, allowing for the identification of defensive behavior patterns associated with different tactical styles.

Keywords: Defenders, center-backs, Defensive blocks, In possession, Out of possession, Tactical styles, Conditional performance, Defensive efforts, Types of pressure.

3. INTRODUCTION

In this study, we seek to establish a relationship between different team styles based on their possession time, measured through the TIP/OTIP metrics (time in possession / time out of possession), and their type of defensive block, evaluated by the percentage of time in a high, medium, or low block. The objective is to identify which teams spend more time attacking or defending and within the time they defend, in which type of block they usually defend more.

The data comes from SkillCorner and corresponds to the 2024/2025 season, from both the Spanish First Division and the Premier League. Within this type of data, we will work with conditional data and Game Intelligence data related to the team (TIP / OTIP, % of time in defensive block) and players (types of defensive efforts).

In the first part of the analysis, we classify teams according to the aforementioned metrics, distinguishing between those with a greater tendency towards a high block and high possession time, such as FC Barcelona, Manchester City, Liverpool FC, and Chelsea, and those with the opposite tendency, characterized by low blocks and less possession, like Brentford FC, Real Valladolid, Nottingham Forest, Ipswich Town, and RCD Espanyol.





Illustration 1: High block teams in relation to possession time

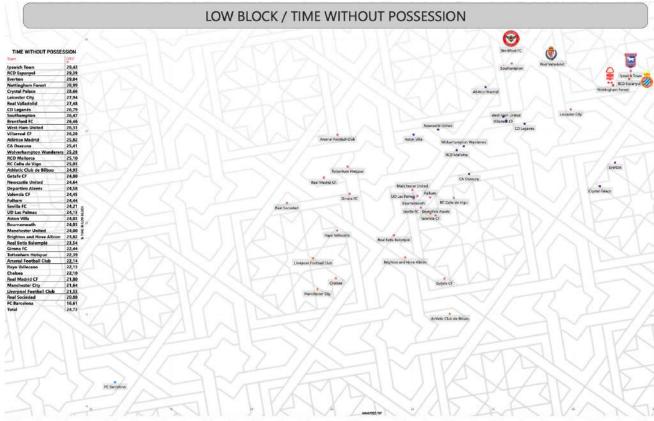


Illustration 2: Low block teams in relation to possession time



4. FIRST STUDY

Based on this foundation, the first analysis focuses on identifying the conditional and technical behaviors of central defenders according to the team's playing style. The first analysis, called "Conditional profile of central defenders according to teams' possession time," compares the physical performance of central defenders from the five teams with the highest possession time (HIGH TIP) and the five with the lowest possession time (HIGH OTIP), considering the rest as the middle group.

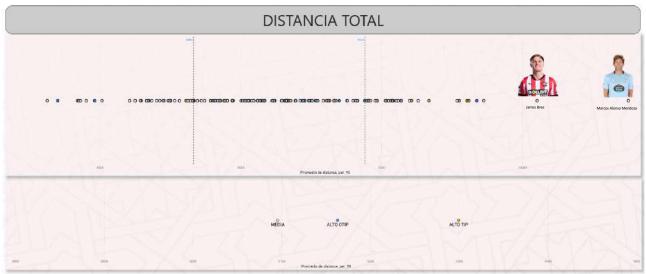


Illustration 3: Total distance of defenders with respect to TIP

Regarding total distance covered, central defenders from teams with less possession tend to record less total distance than those from teams with more possession. However, both teams with high and low possession show values above the average.



Illustration 4: High intensity (HI) distance with respect to TIP

A similar pattern is observed in high-intensity (HI) distance, where both groups separate even further from the average teams, with teams with higher possession time maintaining the advantage.



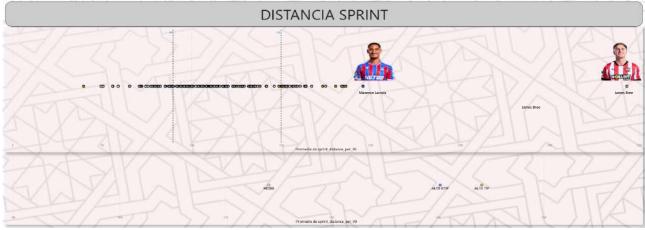


Illustration 5: Sprint distance of defenders with respect to TIP

Finally, in sprint distance, teams with HIGH TIP also register more meters covered, positioning themselves, like those with HIGH OTIP, above the middle group.

In summary, the results suggest that central defenders from teams with higher possession time present a higher conditional load, covering more total distance, at high intensity, and in sprint. Nevertheless, central defenders from teams with lower possession also maintain high levels in these variables, indicating that both styles, both ball-dominant and reactive, demand high physical requirements, albeit from different tactical dynamics.

5. SECOND STUDY

In this second study, using the clusters defined previously, we analyze the teams with the highest percentage of high block, FC Barcelona, Manchester City, Liverpool FC, and Chelsea (called HIGH BLOCK), the teams with the highest percentage of low block, Brentford FC, Real Valladolid, Southampton, Ipswich Town, and RCD Espanyol (called LOW BLOCK), and those with medium block RCD Español, Crystal Palace, Getafe CF, Everton, and Athletic Club de Bilbao (called MEDIUM BLOCK). The objective was to compare, as in the previous study, the differences in the competitive profile of central defenders based on the type of defensive block used by their teams.

BLOQUE ALTO		BLOQUE MEDIO		BLOQUE BAJO	
Team	%BLOQUE ALTO	Team	%BLOQUE MEDIO	Team	968LOQUE BAJO
Manchester City	26.51	RCD Espanyol	45,82	Brentford FC	29.6
FC Barcelona	22,93	Crystal Palace	44,63	Real Valladolid	28.8
Chelsea	22,74	Getafe CF	44,13	Southampton	28.6
Brighton and Hove Albion	22,23	Everton	43,83	Ipswich Town	28,2
Liverpool Football Club	20,96	Athletic Club de Bilbao	43,75	RCD Espanyol	27,83
Athletic Club de Bilbao	20,53	Deportivo Alavés	43.59	Nottingham Forest	27,49
Arsenal Football Club	20,36	RCD Mallorca	43.57	Atlético Madrid	27,3
Bournemouth	19.54	Sevilla FC	43,52	Leicester City	26,1
RC Celta de Vigo	18,91	Valencia CF	43,27	Villarreal CF	25.78
Tottenham Hotspur	18.31	Real Valladolid	43,15	West Ham United	25.55
Real Madrid CF	18,09	UD Las Palmas	43,15	CD Leganés	25,39
Real Betis Balompié	17.97	Nottingham Forest	42,93	Newcastle United	25,0
Newcastle United	17.93	Fulham	42,91	Aston Villa	24,80
Girona FC	17,68	CA Osasuna	42,63	Arsenal Football Club	24,79
Ipswich Town	17.21	Villarreal CF	42,43	Wolverhampton Wanderers	24,16
Brentford FC	16.71	CD Leganés	42,41	RCD Mallorca	23.95
Rayo Vallecano	16,36	Atlético Madrid	41,48	Everton	23,2
West Ham United	16.26	Real Betis Balompié	41,38	Tottenham Hotspur	23,0
Manchester United	16,12	Aston Villa	41,04	CA Osasuna	22,65
Real Sociedad	16,04	RC Celta de Vigo	40.79	Real Madrid CF	22,46
Wolverhampton Wanderers	16,04	Girona FC	39,81	Crystal Palace	21,99
Southampton	15,67	Leicester City	39,75	Manchester United	21,78
Everton	15,66	Manchester United	39,47	Girona FC	21,5
Sevilla FC	15,42	Real Madrid CF	39,31	UD Las Palmas	21.45
Valencia CF	15.30	Wolverhampton Wanderers	39,05	Fulham	21,38
CA Osasuna	15,14	Liverpool Football Club	38,11	RC Celta de Vigo	21,30
Fulham	14,96	Rayo Vallecano	38.09	Bournemouth	21,32
Getafe CF	14,86	Brighton and Hove Albion	38,08	Real Sociedad	21,0
Leicester City	14,63	Chelsea	37,59	Sevilla FC	20,8
Crystal Palace	14,34	Ipswich Town	36,99	Valencia CF	20,50
Atlético Madrid	14,06	West Ham United	36,78	Deportivo Alavés	20.40
Aston Villa	13,90	Real Sociedad	36,61	Rayo Vallecano	19.5
Villarreal CF	13,86	Southampton	36,43	Real Betis Balompié	19,32
Deportivo Alavés	13,74	Manchester City	36,21	Brighton and Hove Albion	18,1
UD Las Palmas	13,48	Newcastle United	34,83	Liverpool Football Club	18,0
RCD Mallorca	11,93	Bournemouth	34,51	Chelsea	16,9
Nottingham Forest	11,76	FC Barcelona	33,82	Getate CF	16,9
CD Leganés	11,25	Tottenham Hotspur	33,61	Manchester City	16,38
Real Valladolid	10,38	Arsenal Football Club	33,22	Athletic Club de Bilbao	15.03
RCD Espanyol	9,71	Brentford FC	30.86	FC Barcelona	11,3

Illustration 6: Teams regarding types of blocks



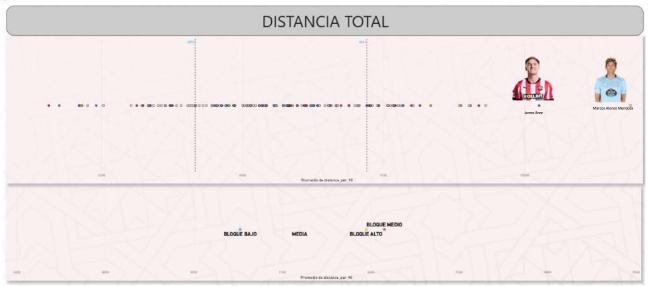


Illustration 7: Total distance covered by defenders in relation to block type

Regarding total distance covered, central defenders from teams with a low block cover the least distance, while those from medium-block teams present the highest values, although with very little difference from high-block teams.



Illustration 8: High intensity distance covered by defenders in relation to block type

On the contrary, in high-intensity (HI) distance, teams with a high block show a notably superior difference (reaching a value very close to P80 in this metric) compared to the others, followed by medium-block teams, which are positioned in an intermediate zone between low and high block teams.



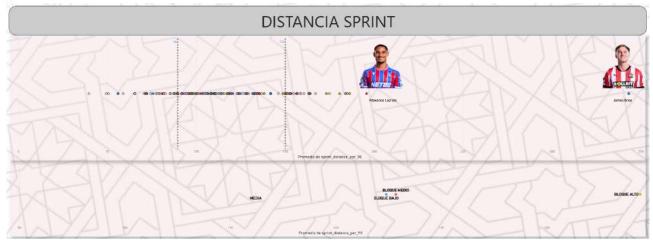


Illustration 9: Sprint distance covered by defenders in relation to block type

Finally, in sprint distance, central defenders from high-block teams reach values close to the 80th percentile, clearly surpassing those from medium and low blocks (with very similar values).

It is noteworthy that the remaining teams (those that do not have a very high percentage of block in any of the three) are the ones that cover the least distance at high intensity and in sprint.

The results show that the type of defensive block clearly influences the physical and competitive profile of central defenders. Players from high-block teams stand out for performing greater high-intensity and sprint efforts, reflecting the physical demand associated with an advanced defensive style and constant pressure.

On the other hand, central defenders from medium-block teams present a balance between total volume and effort intensity, suggesting a mixed adaptation to both pressing and retreat contexts. In contrast, central defenders from low-block teams cover less total and high-intensity distance, which could be due to their more conservative positioning and less exposure to explosive actions in the opponent's half.

6. THIRD STUDY

In this third analysis, using the clusters defined in the previous study (Low Block, Medium, and High), the different types of defensive efforts of their central defenders, recorded in the SkillCorner database, were examined, with the objective of identifying relationships between the type of defensive block and the nature of these efforts in players of this position.

Defensive efforts were classified into three categories:

- > Efforts towards the ball: include all movements made by the player towards the opponent in possession of the ball (total number of defensive efforts).
- > Defensive pressure efforts: encompass pressing actions directed directly at the player with the ball.
- > Defensive backward run efforts: comprise actions where the defender runs towards their own goal in the direction of the player in possession of the ball.





Illustration 10: Defensive efforts towards the ball by defenders in relation to block type

Based on the analysis, it is observed that central defenders from high-block teams perform the highest total number of defensive efforts, followed by those from low-block teams, while those from medium-block teams present clearly lower values.



Illustration 11: Pressure efforts by defenders in relation to block type

Regarding pressure efforts, central defenders from high-block teams notably stand out, recording figures much higher than the other groups, while those from medium and low-block teams show similar values to each other, but considerably lower.





Illustration 12: Defensive backward run efforts by defenders in relation to block type

Finally, when analyzing defensive backward runs, a significant difference is maintained between central defenders from highblock teams and the others, with those from medium-block teams performing the fewest efforts of this type.

The results confirm that the type of defensive block clearly conditions the pattern and intensity of the defensive efforts of central defenders. Central defenders from squads with a high block show greater overall activity, excelling both in pressing actions towards the player in possession and in defensive backward runs, which reflects a proactive defensive model, oriented towards early ball recovery and typical of structures with advanced defensive lines.

On their part, central defenders from teams with a low block present a higher defensive load than those from medium-block teams, while medium-block squads are, by far, the ones that record the lowest volume of defensive efforts, reflecting a more balanced and less extreme behavior in their out-of-possession phases.



7. GENERAL CONCLUSION OF THE STUDY

Undoubtedly, when carrying out a scouting process or even training for central defenders, it is essential to consider the conditional demands and the type of efforts associated with both the team's defensive block and its playing style regarding ball possession (more or less time in possession). These variables largely determine the physical and competitive profile that a central defender must possess to successfully adapt to a specific tactical context.

- > Teams with low possession: They are not necessarily the ones with the greatest conditional requirements. In fact, central defenders from these teams are surpassed by those from teams with high possession, both in total distance covered and in high-intensity efforts. However, they show values superior to teams with intermediate possession, reflecting a high physical load from defending for longer periods.
- > Teams with a medium block: Central defenders from these teams present intermediate conditional demands, positioned between low and high block profiles. They represent a more balanced model, with moderate efforts and variable demands depending on the moment of the game.
- > Teams with a high block and high possession: They are, without a doubt, the ones that require the most demanding physical profile. Their central defenders must respond to high levels of intensity and sprint capacity, as they operate in contexts of an advanced block and rapid defensive transitions. Furthermore, they perform the most defensive efforts, both in pressing actions and backward runs, which evidences the need for powerful, fast central defenders with good spatial awareness.
- > Teams with a low block and medium possession: They are positioned at the opposite extreme, being the ones with the lowest conditional needs. Their central defenders cover less distance at high intensity and perform fewer sprints, although they do maintain a considerable defensive volume in terms of containment actions, slightly inferior to that of high-block teams. They do not stand out for pressure actions or long defensive runs, suggesting a more positional and reactive style.

In synthesis, the conditional profile and types of efforts of the central defender largely depend on the team's playing model (in the case of this study, the % of possession and the type of block most used defensively).

While central defenders from teams with a high block and high possession must master a greater number of intense efforts and the management of space behind, those from teams with a low or medium block require a lower load in these types of aspects, with differences between them depending on whether they have more or less possession.

Therefore, conditional and defensive effort analysis must be a key tool within scouting and tactical planning, allowing the identification of central defenders whose physical and behavioral profile aligns with the real demands of the team's playing context.

