



## SMART SHIN GUARD RATING SYSTEM EXPLAINED

### #Overall score & Remarks



INSAIT JOY in total present 16 metrics of the matchday (or training). We further divide these metrics in 5 categories. Each category stands for an element of the game including Speed, Explosive Power, Stamina, Power and (foot) Balance. Each element is rated with certain standard. In the end, we give an overall score by the average of rating in 5 elements.

For example: the overall score 40 =  $(28+30+38+69+37) / 5$

We further give a remark of the score with S, A, B and C.

Remark	S	A+	A	B+	B	C+	C
Score	score≥95	95>score≥85	85>score≥75	75>score≥65	65>score≥55	55>score≥45	45>score

### #Rating standard

Each element is rated with 1-2 metric(s) with a certain standard. Not all metrics are considered in rating because some appear with randomness. For example, we do not consider jumps or sharp turns when it comes to Explosive Power, as counts on these events varies all the time according to the scenario. Sometimes you simply do not jump in a game when your team just keep the ball on the ground.

However, players coming from different age groups may not be rated with 1 single standard: the standard for adults are usually higher than teenagers. Now INSAIT JOY comes with 2 sets of rating standards:

- Age<16; and
- Age≥16

By selecting "birthday" in the profile the user is selecting the rating standard applied.

### Standard for Age<16

Element	Metric(s) considered	Calculation	Remarks	Example
Stamina	Distance per min	Top score 100 = 90m/min	If session time ≤10mins, top score is only 20 If session time >10mins, min score is 21	Played 90 mins and distance per min is 50m/min, so final score is 90/(100-20)*50=56
Speed	Highest speed	Top score 100 = 5m/s		
Explosive Power	Highest accl. speed	Top score 100 = 4m/s <sup>2</sup>		
Power	Max leg-swing power	Top score 100 = 500N		
Balance	Use of left & right foot	Top score 100 = difference between left & right foot usage is less than 20% (including 20%)	We applied same standard on Foot Balance for both age groups. For 0 score: difference is 100% or no touches at all with both feet	Use of left foot = 30%, use of right foot = 70% difference = 70%-30%=40% Final score = 100/80 * 40 = 50

### Standard for Age≥16

Element	Metric(s) considered	Calculation & standards	Remarks
Stamina	Distance per min	Top score 100 = 120m/min	If session time ≤10mins, top score is only 20 If session time >10mins, min score is 21
Speed	Highest speed	Top score 100 = 8m/s	
Explosive Power	Highest accl. speed	Top score 100 = 8m/s <sup>2</sup>	
Power	Max leg-swing power	Top score 100 = 3000N	
Balance	Use of left & right foot	same with Age<16	