



STATS SHEET TESTS SPRINT

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NAME	Mass (kg)	Physical qualities evaluated during the acceleration						Mechanical effectiveness			Performance parameters during the acceleration								
		Vmax theoretical V0 (m/s)	Fmax theoretical F0 (N)	Fmax theoretical F0 (N/kg)	Pmax (W)	Horizontal Power Pmax (W/kg)	Force-Velocity profile	mean RF on 10m	RFpeak	DRF	Time @ 5 m (s)	Time @ 10 m (s)	Time @ 15 m (s)	Time @ 20 m (s)	Time @ 25 m (s)	Time @ 30 m (s)	Time @ 40 m (s)	Distance in 2 s (m)	Distance in 4 s (m)
AdriaCami	64	9,36	439,47	6,87	1020,47	15,94	-46,96	0,32	0,47	-6,60%	1,41	2,16	2,80	3,42	4,02	4,59	5,72	8,74	24,76
AdriaSegura	50	8,88	330,88	6,62	730,18	14,60	-37,26	0,28	0,41	-6,92%	1,45	2,22	2,90	3,54	4,16	4,76	5,95	8,34	23,60
AdriaTorrent	54,5	9,72	384,60	7,06	928,33	17,03	-39,55	0,32	0,45	-6,60%	1,38	2,11	2,75	3,34	3,92	4,48	5,58	8,95	25,50
AitorCardito	48	8,98	365,84	7,62	815,67	16,99	-40,72	0,32	0,49	-7,61%	1,36	2,10	2,74	3,36	3,98	4,56	5,73	9,20	24,98
AleixPorras	60	10,23	457,25	7,62	1160,05	19,33	-44,69	0,35	0,51	-6,55%	1,33	2,02	2,63	3,21	3,74	4,28	5,34	9,68	27,22
ArnauRoig	65	9,20	449,36	6,91	1026,99	15,80	-48,82	0,31	0,47	-6,80%	1,41	2,16	2,82	3,44	4,04	4,61	5,72	8,71	24,61
ArnauSala	73	10,06	520,56	7,13	1299,57	17,80	-51,73	0,34	0,50	-6,27%	1,37	2,09	2,71	3,29	3,84	4,40	5,46	9,16	26,20
BernatCanet	71	9,94	580,22	8,17	1433,08	20,18	-58,39	0,34	0,48	-7,40%	1,29	1,99	2,59	3,16	3,72	4,25	5,32	9,95	27,49
EduardGuzman	55	8,50	357,90	6,51	755,53	13,74	-42,12	0,28	0,42	-7,10%	1,47	2,26	2,96	3,60	4,24	4,88	5,95	8,10	22,83
EloyRuiz	65,1	9,50	464,71	7,14	1095,47	16,83	-48,93	0,32	0,47	-6,76%	1,38	2,10	2,77	3,36	3,94	4,51	5,62	9,07	25,27
EloySantafe	62,3	9,45	493,70	7,92	1159,48	18,61	-52,23	0,33	0,48	-7,56%	1,33	2,04	2,66	3,25	3,83	4,40	5,51	9,60	26,37
GerardGallardo	55	8,86	373,88	6,80	822,82	14,96	-42,20	0,29	0,43	-7,08%	1,43	2,19	2,88	3,50	4,11	4,73	5,93	8,45	23,79
IkerMartin	67,7	9,49	500,98	7,40	1180,49	17,44	-52,78	0,33	0,49	-6,96%	1,37	2,09	2,71	3,31	3,91	4,46	5,61	9,19	25,73
IlliasEloubri	58	9,50	386,23	6,66	912,83	15,74	-40,64	0,29	0,40	-6,54%	1,41	2,18	2,82	3,44	4,01	4,59	5,72	8,62	24,65
IsaacBallesteros	40	8,08	282,10	7,05	566,13	14,15	-34,91	0,28	0,44	-8,05%	1,43	2,22	2,93	3,61	4,27	4,93	6,04	8,36	22,80
JavierAlmale	70	9,67	513,08	7,33	1232,78	17,61	-53,03	0,32	0,47	-6,84%	1,36	2,09	2,71	3,30	3,88	4,43	5,54	9,16	25,87
JoanMartinez	60	10,20	441,27	7,35	1117,38	18,62	-43,26	0,33	0,46	-6,51%	1,34	2,05	2,66	3,24	3,79	4,33	5,44	9,37	26,69
LidierMonje	58	9,74	399,49	6,89	966,87	16,67	-41,00	0,31	0,43	-6,50%	1,39	2,13	2,77	3,37	3,95	4,50	5,61	8,87	25,33
LluRodo	43	9,02	296,80	6,90	664,17	15,45	-32,91	0,30	0,45	-6,99%	1,41	2,18	2,84	3,48	4,08	4,67	5,85	8,61	24,17
MarioMontes	60	9,01	399,76	6,66	893,91	14,90	-44,39	0,30	0,44	-6,78%	1,44	2,21	2,87	3,51	4,11	4,70	5,90	8,50	23,80
MarioPerez	58	9,74	393,49	6,78	951,57	16,41	-40,40	0,31	0,43	-6,38%	1,40	2,15	2,79	3,39	3,96	4,52	5,63	8,89	25,11
MarioSanchez	54	8,85	367,13	6,80	806,67	14,94	-41,48	0,30	0,46	-7,00%	1,42	2,19	2,87	3,51	4,13	4,73	5,92	8,54	23,73
Osama	70	9,83	424,40	6,06	1035,82	14,80	-43,19	0,29	0,40	-5,71%	1,47	2,24	2,88	3,50	4,07	4,65	5,76	8,19	24,11
SergioSanfelix	71	9,87	528,88	7,45	1296,04	18,25	-53,61	0,33	0,47	-6,82%	1,34	2,05	2,69	3,26	3,82	4,37	5,46	9,35	26,38
TomasRevilla	65	9,55	386,42	5,94	917,60	14,12	-40,44	0,28	0,38	-5,82%	1,49	2,26	2,92	3,56	4,16	4,73	5,87	8,01	23,55
VictorFernandez	64	9,72	523,43	8,18	1262,68	19,73	-53,83	0,35	0,53	-7,37%	1,31	1,99	2,61	3,18	3,76	4,31	5,40	9,84	27,08
ZacariaCherkau	55	9,26	352,58	6,41	811,08	14,75	-38,06	0,29	0,42	-6,39%	1,46	2,22	2,89	3,50	4,12	4,70	5,85	8,36	23,92
59,87	9,42	422,76	7,05	994,95	16,50	-44,72	0,31	0,45	-0,07	1,39	2,14	2,78	3,39	3,98	4,56	5,68	6,88	8,88	25,02
8,48	0,52	75,28	0,56	215,07	1,83	6,51	0,02	0,04	0,01	0,05	0,08	0,10	0,13	0,15	0,18	0,19	0,53	0,84	1,34

Maximal power and force-velocity profile in sprint running

Performance during the sprint acceleration phase depends on the mechanical power in the horizontal direction an athlete is able to produce. Thus, the maximal power (Pmax) of the athlete is the main physical quality. However, power is the product of horizontal force applied onto the ground by the displacement velocity of the overall body. Mechanical power output depends on force capability (being able to develop very high levels of force, which is represented by the theoretical maximal force F0), and on the velocity capabilities (being able to keep on producing force as running velocity becomes higher and higher, which is represented by the theoretical maximal velocity V0). The latter variable V0 represents the sprint running velocity an athlete would be able to produce, should no external constraint (air friction for instance) applied to him. Force capabilities are very important in the first 10-15 m or the sprint, whereas velocity capabilities are essential between 25 and 40-m or more. Last, the force-velocity profile (which is represented by the absolute value of the slope of the linear force-velocity relationship) differs for each athlete, and allows to quantify and describe the balance between the two capabilities. The higher the absolute value of the slope, the more force-oriented the profile, and vice versa.

Position	Distance in 6 s (m)	Top speed (m/s)	Moment Top speed (m)	Pico Velocidad (m/s)
	42,31	8,91	49,15	10,00
	40,27	8,45	44,59	8,92
	43,65	9,23	53,28	9,94
		8,58	40,05	9,31
		9,65	42,87	10,58
		8,72	36,75	9,50
	45,01	9,53	46,63	10,86
	46,16	9,53	55,50	10,53
		8,05	33,01	8,81
	43,15	9,06	48,74	10,39
		9,04	43,19	10,08
	40,48	8,43	41,02	9,17
		9,03	39,84	10,22
	42,34	9,01	51,92	10,11
		7,70	31,28	8,44
		9,20	43,52	10,17
		9,56	39,57	10,42
	43,47	9,21	48,18	10,00
	41,10	8,57	48,40	9,61
	40,72	8,56	41,45	9,56
	43,20	9,17	43,59	9,72
	40,43	8,45	44,58	9,42
	42,11	9,27	53,13	10,17
		9,35	41,56	10,22
	41,06	9,02	53,31	9,69
		9,26	39,42	10,17
	40,94	8,79	55,52	9,64
	42,28	8,94	44,82	9,84
	1,74	0,47	6,48	0,58

