

International Journal of
EXERCISE SCIENCE*Supplemental Material****Efficiency of the Wilks and IPF Formulas at Comparing Maximal Strength Regardless of Bodyweight through Analysis of the Open Powerlifting Database*****Table 1.** Women's Classic Absolute Weight Lifted, Ratios and % of the Lift on the Total

Category		S (kg)	B (kg)	D (kg)	T (kg)	SR	BR	DR	TR	S%	B%	D%
-47kg n = 189	Max	142.5	82.5	182.5	397.5	3.2	1.8	4.1	9.0	43.6	29.8	54.4
	\bar{x}	87.9	51.8	112.6	252.3	1.9	1.1	2.4	5.5	34.8	20.5	44.7
	SD	19.0	12.7	22.3	49.8	0.4	0.3	0.5	1.1	2.7	2.6	3.1
	Min	40.0	22.5	65.0	132.5	0.9	0.5	1.4	2.8	26.2	11.9	34.0
-52kg n = 524	Max	152.5	105.0	185.0	407.5	3.0	2.1	3.6	8.0	43.2	29.0	54.3
	\bar{x}	96.3	55.1	120.0	271.3	1.9	1.1	2.4	5.3	35.5	20.2	44.3
	SD	19.1	12.8	21.8	49.2	0.4	0.3	0.4	1.0	2.6	2.4	3.0
	Min	45.0	25.0	50.0	125.0	0.9	0.5	1.0	2.6	27.7	13.0	36.0
-57kg n = 998	Max	172.5	102.5	207.5	453.0	3.1	1.8	3.7	8.0	51.7	34.2	58.2
	\bar{x}	102.3	58.7	126.9	287.8	1.8	1.1	2.3	5.2	35.4	20.4	44.2
	SD	21.1	12.8	22.6	51.5	0.4	0.2	0.4	0.9	2.8	2.5	3.2
	Min	35.0	30.0	25.0	132.5	0.7	0.5	0.4	2.4	20.9	12.8	17.2
-63kg n = 1585	Max	188.0	120.0	225.5	500.5	3.0	1.9	3.6	8.1	43.0	34.6	55.1
	\bar{x}	107.3	61.1	131.7	300.1	1.8	1.0	2.1	4.9	35.7	20.3	44.0
	SD	22.2	13.9	23.7	55.4	0.4	0.2	0.4	0.9	2.4	2.3	2.8
	Min	42.5	30.0	60.0	135.0	0.7	0.5	1.0	2.3	26.0	13.4	33.1
-72kg n = 2064	Max	203.0	125.0	242.5	540.0	2.8	1.8	3.5	7.8	48.4	42.1	58.0
	\bar{x}	113.9	64.1	138.2	316.2	1.7	0.9	2.0	4.6	35.9	20.3	43.8
	SD	24.1	14.4	25.6	59.3	0.3	0.2	0.4	0.8	2.7	2.4	2.9
	Min	15.9	22.7	52.2	90.7	0.2	0.3	0.8	1.3	17.5	13.6	26.9
-84kg n = 1421	Max	205.0	135.0	242.5	542.5	2.6	1.6	3.0	6.8	47.3	51.0	54.1
	\bar{x}	119.0	66.0	142.9	327.9	1.5	0.8	1.8	4.1	36.1	20.1	43.7
	SD	26.6	14.9	26.1	62.7	0.3	0.2	0.3	0.8	2.9	2.5	2.9
	Min	20.0	30.0	40.0	122.5	0.3	0.4	0.5	1.5	11.9	12.8	25.9
84+kg n = 1086	Max	255.0	132.5	251.0	611.0	2.4	1.4	2.5	6.1	46.7	33.9	55.6
	\bar{x}	130.1	71.5	149.8	351.4	1.3	0.7	1.5	3.5	36.7	20.4	42.9
	SD	34.0	17.8	29.0	75.2	0.3	0.2	0.3	0.7	3.3	2.5	3.2
	Min	25.0	31.8	55.0	157.5	0.2	0.3	0.6	1.3	13.9	12.4	33.3

S: Squat, B: Bench, D: Deadlift, T: Total, SR: Squat Ratio, BR: Bench Ratio, DR: Deadlift Ratio, TR: Total Ratio, S%: Squat percentage on the total, B%: Bench press percentage on the total, D%: Deadlift percentage on the total

Table 2. Women’s Classic Wilks and IPF Formula points

Category		SW	BW	DW	TW	SIPF	BIPF	DIPF	TIPF
-47kg n = 189	Max	200.3	111.9	256.6	558.9	847.1	755.3	839.9	845.5
	\bar{x}	120.0	70.8	153.7	344.5	501.4	498.1	497.3	502.5
	SD	25.7	17.2	30.2	67.1	109.4	107.3	103.7	108.8
-52kg n = 524	Min	53.9	30.3	90.2	178.6	223.1	247.6	277.8	237.1
	Max	193.3	133.5	232.2	514.2	811.7	906.7	796.6	791.6
	\bar{x}	122.1	69.8	152.2	344.1	518.6	504.0	509.6	515.7
-57kg n = 998	SD	24.0	16.2	27.4	61.8	99.0	102.8	97.2	100.1
	Min	59.2	31.2	65.8	164.5	251.7	260.8	200.1	218.8
	Max	201.4	119.8	244.5	525.7	851.3	844.5	867.7	831.9
-63kg n = 1585	\bar{x}	120.8	69.3	149.9	340.0	523.5	514.1	520.4	524.4
	SD	24.6	14.9	26.3	59.8	100.1	97.1	97.0	98.0
	Min	43.2	35.0	29.1	157.7	200.0	292.9	79.4	226.2
-72kg n = 2064	Max	204.7	129.1	245.4	544.8	872.3	933.8	908.2	881.7
	\bar{x}	117.7	67.0	144.5	329.2	522.9	513.6	521.0	523.7
	SD	24.0	15.0	25.6	59.7	96.7	100.7	98.0	99.1
-84kg n = 1421	Min	47.3	33.4	67.1	150.9	237.8	287.9	224.7	226.3
	Max	198.3	124.3	243.6	542.5	859.8	919.7	939.3	901.1
	\bar{x}	114.7	64.6	139.1	318.3	523.5	513.7	524.1	524.6
84+kg n = 1086	SD	23.7	14.3	25.1	58.1	94.7	98.7	100.6	98.2
	Min	16.0	22.9	52.7	91.5	130.8	227.6	181.5	144.3
	Max	187.7	121.4	221.9	496.4	821.5	934.8	890.5	844.6
84+kg n = 1086	\bar{x}	109.6	60.8	131.6	302.1	514.1	502.5	515.8	513.7
	SD	23.8	13.5	23.4	56.0	93.9	95.5	97.2	95.5
	Min	18.3	27.5	36.7	112.3	156.7	268.3	125.1	193.1
84+kg n = 1086	Max	201.5	107.5	197.8	482.0	813.2	837.8	787.4	793.8
	\bar{x}	108.5	59.6	125.0	293.1	507.2	497.6	497.9	501.5
	SD	27.2	14.3	23.3	59.9	99.2	99.3	97.3	97.9
	Min	20.6	26.3	46.1	132.2	184.0	264.2	169.1	236.8

SW: Squat Wilks Points, BW: Bench press Wilks Points, DW: Deadlift Wilks Points, SIPF: Squat IPF Points, BIPF: Bench press IPF Points, DIPF: Deadlift IPF Points, TIPF: Total IPF Points

Table 3. Women’s Equipped Absolute Weight Lifted, Ratios and % of the Lift on the Total

Category		S (kg)	B (kg)	D (kg)	T (kg)	SR	BR	DR	TR	S%	B%	D%
-47kg n = 66	Max	210.0	141.0	185.0	500.0	4.5	3.0	4.0	10.7	44.5	29.6	47.3
	\bar{x}	128.0	70.4	127.4	325.9	2.8	1.5	2.8	7.0	39.1	21.4	39.5
	SD	36.2	24.0	30.0	85.7	0.8	0.5	0.6	1.8	2.6	3.1	3.2
-52kg n = 137	Min	40.0	30.0	40.0	110.0	0.9	0.6	0.9	2.4	31.2	15.0	33.3
	Max	210.0	150.5	190.0	535.0	4.0	2.9	3.7	10.3	47.0	30.1	47.6
	\bar{x}	131.0	76.6	134.1	341.6	2.6	1.5	2.6	6.7	38.1	22.3	39.6
-57kg n = 198	SD	34.4	22.9	29.6	81.7	0.7	0.4	0.6	1.6	2.7	3.0	3.1
	Min	45.0	30.0	50.0	135.0	0.9	0.6	1.0	2.6	30.1	15.9	30.1
	Max	225.0	150.0	205.0	565.0	4.0	2.7	3.8	10.1	45.5	41.7	50.6
-63kg n = 231	\bar{x}	141.8	82.9	144.9	369.7	2.5	1.5	2.6	6.6	38.1	22.3	39.6
	SD	36.9	23.8	28.9	84.5	0.7	0.4	0.5	1.5	2.9	3.0	3.3
	Min	60.0	35.0	70.0	170.0	1.1	0.6	1.2	3.0	29.1	13.9	29.1
-72kg n = 266	Max	241.0	180.0	225.0	641.0	3.8	2.9	3.7	10.2	44.5	48.7	53.1
	\bar{x}	146.9	86.8	149.5	383.2	2.4	1.4	2.4	6.2	38.0	22.5	39.5
	SD	41.9	28.8	32.6	97.7	0.7	0.5	0.5	1.6	3.3	3.6	3.3
-84kg n = 164	Min	35.0	30.0	50.0	115.0	0.6	0.5	0.8	1.9	20.5	14.2	30.8
	Max	274.0	186.0	245.0	680.0	3.9	2.6	3.5	9.7	43.5	33.9	50.6
	\bar{x}	158.8	96.2	160.1	415.0	2.3	1.4	2.3	6.0	38.0	22.8	39.2
84+kg n = 120	SD	44.9	32.5	33.5	105.2	0.6	0.5	0.5	1.5	2.9	3.3	3.8
	Min	30.0	30.0	45.0	105.0	0.4	0.4	0.7	1.6	23.1	14.9	30.3
	Max	275.5	185.0	245.0	671.0	3.4	2.2	3.2	8.5	45.8	34.5	51.2
84+kg n = 120	\bar{x}	175.4	105.8	168.3	449.6	2.2	1.3	2.1	5.6	38.7	23.2	38.0
	SD	47.1	33.4	32.6	106.0	0.6	0.4	0.4	1.3	2.8	3.5	3.9
	Min	60.0	40.0	80.0	200.0	0.8	0.5	1.0	2.6	30.0	14.0	30.0
84+kg n = 120	Max	325.0	220.0	271.0	793.0	3.1	2.0	2.6	7.3	49.5	38.1	51.1
	\bar{x}	182.7	112.3	171.1	466.1	1.8	1.1	1.7	4.6	38.8	23.8	37.5
	SD	56.2	39.4	36.0	121.9	0.5	0.4	0.4	1.2	3.7	4.3	4.6
84+kg n = 120	Min	67.5	35.0	80.0	210.0	0.6	0.4	0.9	2.0	27.0	12.6	27.5

S: Squat, B: Bench, D: Deadlift, T: Total, SR: Squat Ratio, BR: Bench Ratio, DR: Deadlift Ratio, TR: Total Ratio, S%: Squat percentage on the total, B%: Bench press percentage on the total, D%: Deadlift percentage on the total

Table 4. Women’s Equipped Wilks and IPF Formula points

Category		SW	BW	DW	TW	SIPF	BIPF	DIPF	TIPF
-47kg n = 66	Max	283.5	190.9	249.8	675.0	847.1	854.6	839.9	754.8
	\bar{x}	174.0	95.7	173.1	442.8	511.7	506.1	499.6	528.9
	SD	48.9	32.4	40.6	115.8	111.5	108.9	105.3	112.4
-52kg n = 137	Max	54.3	40.5	54.3	149.3	223.1	247.6	184.2	244.1
	Max	262.0	188.0	240.3	667.5	811.7	906.7	796.6	759.0
	\bar{x}	165.2	96.6	169.2	430.9	520.0	509.7	510.0	524.7
-57kg n = 198	SD	42.9	28.6	36.9	101.8	99.1	101.8	98.7	100.4
	Min	56.6	37.7	63.9	169.8	251.7	260.8	200.1	268.4
	Max	264.2	176.1	246.1	663.4	851.3	844.5	867.7	766.6
-63kg n = 231	\bar{x}	166.7	97.5	170.4	434.6	525.5	517.8	522.4	537.6
	SD	43.0	27.7	33.8	98.4	100.4	96.5	97.6	98.6
	Min	69.9	41.1	81.6	198.1	200.0	292.9	79.4	301.9
-72kg n = 266	Max	258.9	193.3	249.6	688.5	872.3	933.8	908.2	811.6
	\bar{x}	160.6	94.9	163.5	419.0	523.5	515.8	522.4	532.4
	SD	45.2	31.1	35.0	105.0	98.3	100.9	99.5	107.8
-84kg n = 164	Min	38.5	32.3	53.8	126.6	235.2	287.9	193.5	233.6
	Max	272.6	183.3	239.1	676.6	859.8	919.7	939.3	816.3
	\bar{x}	159.1	96.4	160.6	416.1	524.7	516.6	526.4	542.0
84+kg n = 120	SD	44.4	32.2	33.4	104.1	96.5	99.6	101.7	109.3
	Min	30.6	30.6	45.9	107.1	130.8	227.6	171.2	217.8
	Max	248.2	165.4	231.2	619.6	821.5	934.8	890.5	769.2
84+kg n = 120	\bar{x}	160.8	97.0	154.4	412.1	517.3	506.7	519.0	548.3
	SD	41.9	29.9	29.0	93.9	95.5	96.3	97.9	100.8
	Min	58.3	38.1	72.3	189.7	156.7	268.3	125.1	311.9
84+kg n = 120	Max	254.6	173.8	216.0	621.3	813.2	837.8	787.4	736.0
	\bar{x}	152.2	93.4	142.6	388.2	508.3	500.2	499.5	519.7
	SD	45.7	31.9	29.0	98.2	100.3	99.1	97.8	101.9
84+kg n = 120	Min	54.9	30.9	69.0	181.1	184.0	264.2	169.1	303.3

SW: Squat Wilks Points, BW: Bench press Wilks Points, DW: Deadlift Wilks Points, SIPF: Squat IPF Points, BIPF: Bench press IPF Points, DIPF: Deadlift IPF Points, TIPF: Total IPF Points

Table 5. Men’s Classic Absolute Weight Lifted, Ratios and % of the Lift on the Total

Category		S (kg)	B (kg)	D (kg)	T (kg)	SR	BR	DR	TR	S%	B%	D%
-59kg n = 236	Max	245.0	150.0	255.0	570.0	4.2	2.6	4.4	9.7	43.4	59.1	54.1
	\bar{x}	141.6	97.5	175.5	414.7	2.5	1.7	3.0	7.2	33.9	23.6	42.5
	SD	31.7	20.6	31.7	75.5	0.5	0.3	0.5	1.2	3.2	3.6	3.4
	Min	34.0	37.5	45.0	152.0	0.7	0.6	0.8	3.1	19.2	16.1	21.6
-66kg n = 648	Max	255.5	175.5	282.5	663.0	3.9	2.7	4.3	10.2	42.0	42.9	53.2
	\bar{x}	160.7	110.1	195.5	466.3	2.5	1.7	3.0	7.2	34.4	23.6	42.0
	SD	29.3	20.1	30.7	72.2	0.4	0.3	0.5	1.1	2.4	2.6	2.7
	Min	40.0	35.0	70.3	155.0	0.7	0.6	1.1	2.6	21.9	16.6	28.6
-74kg n = 1723	Max	283.0	210.5	312.5	790.5	4.0	2.9	4.3	10.7	41.2	44.2	62.4
	\bar{x}	173.7	118.9	208.7	501.3	2.4	1.6	2.9	6.9	34.6	23.7	41.7
	SD	31.3	21.5	32.0	77.3	0.4	0.3	0.4	1.0	2.2	2.5	2.6
	Min	25.0	50.0	62.5	162.5	0.4	0.7	0.9	2.3	8.3	17.3	28.8
-83kg n = 3019	Max	313.0	215.0	340.0	833.0	3.8	2.7	4.1	10.1	52.1	56.8	52.4
	\bar{x}	187.9	127.5	221.5	536.9	2.3	1.6	2.7	6.6	34.9	23.8	41.3
	SD	32.7	22.6	33.8	81.2	0.4	0.3	0.4	1.0	2.1	2.5	2.5
	Min	25.0	25.0	45.4	95.3	0.3	0.3	0.6	1.2	20.1	7.5	20.7
-93kg n = 3531	Max	330.0	225.0	355.5	842.5	3.6	2.5	3.8	9.6	43.6	57.7	56.5
	\bar{x}	199.3	136.3	232.1	567.8	2.2	1.5	2.6	6.3	35.0	24.0	41.0
	SD	35.4	23.9	35.2	86.5	0.4	0.3	0.4	0.9	2.2	2.5	2.4
	Min	35.0	40.0	65.0	212.5	0.4	0.4	0.7	2.3	16.5	7.9	21.1
-105kg n = 2809	Max	331.5	253.0	365.0	890.0	3.4	2.4	3.6	8.7	42.4	45.7	60.1
	\bar{x}	213.8	145.8	243.8	603.5	2.1	1.4	2.4	6.0	35.4	24.2	40.5
	SD	37.7	26.5	36.5	92.2	0.4	0.3	0.4	0.9	2.2	2.3	2.4
	Min	25.0	60.0	65.0	195.0	0.3	0.6	0.7	2.0	6.5	16.2	27.1
-120kg n = 1512	Max	382.5	250.0	372.5	945.0	3.2	2.1	3.2	7.9	49.5	58.1	49.4
	\bar{x}	225.7	154.0	251.3	630.9	2.0	1.4	2.2	5.5	35.7	24.4	39.9
	SD	42.9	29.6	40.3	103.1	0.4	0.2	0.3	0.9	2.5	2.6	2.8
	Min	61.2	61.2	61.2	183.7	0.5	0.5	0.5	1.5	16.5	16.8	16.0
120+kg n = 1001	Max	490.0	277.5	417.5	1112.5	3.1	2.1	2.8	7.5	53.3	55.2	49.1
	\bar{x}	243.1	165.2	259.9	668.3	1.8	1.2	1.9	4.9	36.2	24.7	39.1
	SD	52.4	34.2	43.1	119.2	0.4	0.3	0.3	0.9	2.8	2.8	2.8
	Min	50.0	52.5	87.5	260.0	0.4	0.3	0.6	1.7	12.4	12.7	19.0

S: Squat, B: Bench, D: Deadlift, T: Total, SR: Squat Ratio, BR: Bench Ratio, DR: Deadlift Ratio, TR: Total Ratio, S%: Squat percentage on the total, B%: Bench press percentage on the total, D%: Deadlift percentage on the total

Table 6. Men’s Classic Wilks and IPF Formula points

Category		SW	BW	DW	TW	SIPF	BIPF	DIPF	TIPF
-59kg n = 236	Max	213.2	130.3	222.6	497.5	894.6	807.4	752.8	735.4
	\bar{x}	125.6	86.5	155.8	367.8	521.7	534.7	502.5	519.6
	SD	26.4	17.1	26.0	61.3	112.6	106.3	97.7	102.4
	Min	35.3	32.5	39.7	160.2	138.7	198.5	77.7	179.6
-66kg n = 648	Max	201.5	139.4	222.3	525.6	846.5	862.6	785.3	795.6
	\bar{x}	128.2	87.8	156.0	372.0	535.1	542.5	526.1	538.0
	SD	22.9	15.7	23.9	56.0	97.1	97.2	92.6	94.1
	Min	34.1	29.9	55.4	132.2	134.4	182.2	139.8	133.9
-74kg n = 1723	Max	208.1	152.5	225.3	570.0	874.5	939.7	823.6	881.7
	\bar{x}	126.9	86.9	152.5	366.2	529.7	534.8	529.3	535.3
	SD	22.4	15.4	22.9	55.0	94.6	95.1	91.8	93.4
	Min	18.6	37.2	46.9	121.9	71.0	228.3	107.9	121.0
-83kg n = 3019	Max	210.1	146.9	228.5	559.1	874.8	899.1	854.5	866.3
	\bar{x}	127.5	86.5	150.3	364.4	529.5	528.5	532.2	535.0
	SD	21.6	14.9	22.4	53.4	90.6	91.2	92.1	90.9
	Min	17.2	17.2	31.1	65.4	66.0	104.1	44.6	26.4
-93kg n = 3531	Max	207.8	142.4	223.8	541.4	852.2	857.1	844.9	835.0
	\bar{x}	127.2	87.0	148.1	362.2	521.8	523.8	528.8	529.3
	SD	22.1	15.0	22.0	53.9	91.2	89.7	91.7	91.1
	Min	22.2	25.6	40.8	135.0	87.4	153.8	82.1	144.0
-105kg n = 2809	Max	203.1	151.3	218.8	532.9	825.7	883.7	823.2	802.8
	\bar{x}	129.7	88.4	147.8	365.9	521.5	521.0	527.2	527.9
	SD	22.4	15.8	21.8	54.7	90.1	92.2	90.9	91.0
	Min	15.5	37.4	40.2	120.6	59.5	223.9	78.6	118.6
-120kg n = 1512	Max	220.6	144.1	214.9	543.6	852.7	811.4	793.9	794.0
	\bar{x}	131.5	89.7	146.4	367.6	512.9	511.9	513.8	516.5
	SD	24.6	17.0	23.2	58.9	94.8	95.3	95.7	95.0
	Min	35.2	35.2	35.2	105.6	133.7	198.3	49.3	86.0
120+kg n = 1001	Max	261.6	152.6	229.1	593.8	865.1	820.1	795.9	800.7
	\bar{x}	136.3	92.7	145.8	374.8	500.3	496.5	489.2	497.4
	SD	28.7	18.9	23.9	65.5	103.2	100.1	96.9	100.5
	Min	28.5	28.8	49.9	148.2	107.0	148.6	107.8	152.4

SW: Squat Wilks Points, BW: Bench press Wilks Points, DW: Deadlift Wilks Points, SIPF: Squat IPF Points, BIPF: Bench press IPF Points, DIPF: Deadlift IPF Points, TIPF: Total IPF Points

Table 7. Men’s Equipped Absolute Weight Lifted, Ratios and % of the Lift on the Total

Category		S (kg)	B (kg)	D (kg)	T (kg)	SR	BR	DR	TR	S%	B%	D%
-59kg n = 93	Max	295.0	200.0	270.0	765.0	5.1	3.4	4.6	13.2	48.4	60.1	46.5
	\bar{x}	197.9	134.1	196.9	528.9	3.4	2.3	3.4	9.1	37.2	25.5	37.3
	SD	48.7	32.3	42.5	112.9	0.8	0.5	0.7	1.9	3.6	4.6	3.7
	Min	50.0	50.0	70.0	225.0	0.9	0.9	1.2	4.1	16.6	11.4	23.3
-66kg n = 163	Max	320.0	221.5	300.0	815.5	4.9	3.4	4.6	12.4	42.0	50.0	51.2
	\bar{x}	209.6	144.5	211.7	565.7	3.2	2.2	3.3	8.7	36.7	25.5	37.9
	SD	54.6	37.2	39.7	123.6	0.8	0.6	0.6	1.8	3.2	3.3	3.4
	Min	55.0	50.0	95.0	215.0	0.9	0.8	1.5	3.6	25.0	18.5	25.0
-74kg n = 330	Max	355.0	245.5	322.5	882.5	4.9	3.3	4.4	12.0	41.9	70.8	51.4
	\bar{x}	229.2	158.6	230.5	618.4	3.1	2.2	3.2	8.5	36.8	25.7	37.5
	SD	51.1	35.8	39.9	116.2	0.7	0.5	0.5	1.5	2.8	3.8	3.1
	Min	45.0	42.5	50.0	180.0	0.6	0.6	0.7	2.5	14.6	15.9	14.6
-83kg n = 455	Max	380.0	305.5	342.5	955.0	4.6	3.7	4.2	11.6	45.9	50.0	55.1
	\bar{x}	241.4	166.9	241.4	649.8	3.0	2.1	3.0	8.0	36.9	25.6	37.5
	SD	58.1	43.4	42.5	131.2	0.7	0.5	0.5	1.5	3.1	3.8	3.7
	Min	75.0	55.0	90.0	250.0	0.9	0.7	1.1	3.3	16.6	11.9	25.0
-93kg n = 605	Max	395.5	301.5	357.5	1025.5	4.4	3.3	3.9	11.3	43.9	72.2	46.8
	\bar{x}	259.8	182.0	254.5	696.2	2.9	2.0	2.8	7.7	37.0	26.1	36.8
	SD	57.8	42.5	41.2	128.6	0.6	0.4	0.4	1.3	2.9	3.8	3.3
	Min	25.0	65.0	50.0	155.0	0.3	0.8	0.6	1.8	13.9	17.1	13.9
-105kg n = 594	Max	445.5	324.0	380.0	1092.5	4.2	3.1	3.7	10.5	44.3	61.8	45.7
	\bar{x}	276.0	195.8	266.8	738.7	2.7	1.9	2.6	7.3	37.2	26.4	36.4
	SD	59.3	45.4	42.2	133.7	0.6	0.4	0.4	1.3	2.7	3.5	3.2
	Min	50.0	50.0	50.0	150.0	0.5	0.5	0.5	1.6	19.1	15.7	19.1
-120kg n = 409	Max	425.0	330.0	420.0	1130.0	3.8	2.9	4.0	9.9	45.8	65.1	45.9
	\bar{x}	297.6	215.0	277.7	790.4	2.6	1.9	2.4	6.9	37.4	27.2	35.4
	SD	63.8	47.9	43.6	140.4	0.5	0.4	0.4	1.2	2.9	3.8	3.3
	Min	75.0	67.5	75.0	317.5	0.6	0.6	0.6	2.7	17.4	16.3	17.4
120+kg n = 295	Max	505.0	410.0	405.0	1272.5	3.5	2.6	3.0	9.0	48.4	50.9	47.1
	\bar{x}	311.2	226.6	281.1	819.0	2.3	1.7	2.1	6.0	37.9	27.5	34.7
	SD	71.4	60.7	50.5	167.4	0.5	0.4	0.4	1.2	2.9	3.7	3.7
	Min	83.9	65.8	62.5	260.8	0.5	0.4	0.5	1.6	17.5	18.4	13.4

S: Squat, B: Bench, D: Deadlift, T: Total, SR: Squat Ratio, BR: Bench Ratio, DR: Deadlift Ratio, TR: Total Ratio, S%: Squat percentage on the total, B%: Bench press percentage on the total, D%: Deadlift percentage on the total

Table 8. Men’s Equipped Wilks and IPF Formula points

Category		SW	BW	DW	TW	SIPF	BIPF	DIPF	TIPF
-59kg n = 93	Max	259.0	175.6	237.1	671.7	791.2	815.8	727.3	797.6
	\bar{x}	173.7	117.8	173.0	464.5	573.7	602.4	534.8	573.2
	SD	41.3	27.5	36.0	94.9	105.3	100.4	109.3	103.1
	Min	44.0	43.6	61.6	208.8	242.9	327.0	200.3	296.0
-66kg n = 163	Max	251.9	176.1	236.1	640.3	777.4	798.9	757.9	772.5
	\bar{x}	166.7	114.9	168.5	450.1	557.3	577.6	539.7	562.0
	SD	42.6	28.9	30.6	95.7	110.0	103.9	98.0	105.5
	Min	46.7	42.4	79.0	182.4	248.8	320.3	255.9	267.3
-74kg n = 330	Max	257.9	176.9	234.6	638.2	794.2	782.5	774.9	774.2
	\bar{x}	166.9	115.5	167.9	450.2	557.7	566.7	553.4	564.4
	SD	36.6	25.6	28.3	82.6	95.1	90.1	94.8	92.1
	Min	32.7	30.9	36.3	130.7	208.8	266.5	115.6	208.2
-83kg n = 455	Max	253.9	204.4	229.8	639.6	780.9	860.0	779.2	775.3
	\bar{x}	163.4	113.0	163.5	439.9	546.4	546.0	549.0	552.1
	SD	38.4	28.8	28.0	86.3	99.6	99.0	96.8	96.4
	Min	50.2	39.0	61.0	177.2	251.5	293.2	196.3	259.4
-93kg n = 605	Max	251.3	191.4	225.3	651.6	768.0	797.5	773.4	783.8
	\bar{x}	165.3	115.8	162.0	443.2	546.2	542.8	549.3	551.5
	SD	36.0	26.4	25.6	79.5	92.4	87.9	90.5	88.2
	Min	16.3	42.5	32.0	101.3	162.6	298.0	91.6	171.6
-105kg n = 594	Max	266.2	194.4	227.8	655.7	789.3	779.8	783.4	774.3
	\bar{x}	167.2	118.6	161.6	447.4	542.3	537.1	547.4	547.7
	SD	35.2	27.0	25.1	79.1	88.8	87.0	89.2	86.2
	Min	31.3	31.3	31.3	94.0	199.3	253.4	86.8	161.1
-120kg n = 409	Max	245.2	189.8	250.9	650.0	718.6	738.0	865.5	743.8
	\bar{x}	173.3	125.2	161.7	460.2	544.4	539.6	540.6	547.8
	SD	36.6	27.5	25.0	80.2	89.4	85.0	88.8	85.1
	Min	43.2	39.1	43.2	183.9	220.4	268.5	113.8	249.5
120+kg n = 295	Max	274.1	222.5	220.7	690.7	716.7	736.6	708.0	721.0
	\bar{x}	174.6	127.1	157.8	459.6	522.9	515.1	506.4	520.4
	SD	39.1	33.3	27.9	91.6	89.0	93.5	97.2	90.9
	Min	46.0	36.1	35.2	143.0	214.0	241.0	78.0	187.6

SW: Squat Wilks Points, BW: Bench press Wilks Points, DW: Deadlift Wilks Points, SIPF: Squat IPF Points, BIPF: Bench press IPF Points, DIPF: Deadlift IPF Points, TIPF: Total IPF Points