

Comparative measurements (in mm)					
Type of keyboard	N Euro standard	GCNA standard	K 2000	WCF standard 2006	K2000 Eijsbouts
center-to-center spacing of natural manual keys [A]	46	50,8	46	46	46
projection length of natural manual keys [B]	142	184,15	181	181	181
projection length of sharp manual keys [C]	82	114,3	108	108	108
difference in length of natural and sharp manual keys [D]	60	69,85	73	73	73
playing length of natural manual keys [E]	142	85,72	86	110	100 (2005: 100/130)
playing length of sharp manual keys [F]	82	85,72	86	110	100
manual key diameter, tapering from first number to second [G]	20>15 (24>16)	19,05>13,81	20>16	20>16	24>16
cross section of manual key behind playing length [H]	25 (24,5)	25,4	25	25	25
manual keyfall measured at face of key spreader [I]	55 (variable)	50,8	variable	variable (40 - 55)	45 (50)
height difference between natural and sharp manual keys [J]	100	96,84	97	97	97
pedal/manual axis [K]	c1 under c2 (b1 under g3)	b1 under d3	b1 under d3	b1 under d3	b1 under d3
front/back relation of manual keys to pedals (from tips of keys) [L]	minus 28	plus 49,21	plus 51	plus 51	plus 51
distance from top of natural manual keys to top of natural pedals [M]	760	779,5	difference 'comb' point: 102 mm 801,5	difference 'comb' point: 102 mm 801,5 at pedal/manual axis	801,5 (Zwolle, Den Bosch: 760)
center-to-center spacing of natural pedals [N]	85	88,9	85	85	85
concavity of pedals [O]	no	yes: 73	yes: 71	see chart in Attachment 2	yes: 71
radius of natural pedals to playing end [O]	no	yes	yes: R = 5057	yes: R = 5057	yes: R = 5057
radius of sharp pedals to playing end [O]	no	yes	yes: R = 4267	yes: R = 4267	yes: R = 4267
projection length of natural pedals [P]	170 (constant)	230,19 min/max?	232 (center) - 283 (ends)	232 at pedal/manual axis	232 (center) - 287 (ends)
projection length of sharp pedals [Q]	100	113,3	118	118 at pedal/manual axis	118
difference in length of natural and sharp pedals [R]	70	114,3	114	114	114
playing length of natural pedals [S]	70 (120)	120,65	129	129	125
playing length of sharp pedals [T]	not defined (90)	107,95	not defined	110	108
width of pedals [U]	30 (29,5)	30,16	30	30	30
pedal keyfall measured at end of key [V]	55 (58,4)	50,8	not defined	To match manual keyfall	45 (50)
height difference between natural/sharp pedals [W]	80 (95,90)	76,2	76	76	76
angle of manual keys/pedals from horizontal at rest [X]	3,583° (2,9°/3,5°)	2°/2°	not defined	2° (variable)	3°
total length of natural manual keys, pivot point to end [Y]	582	609,6	not defined	619, or as determined by designer	619
total length of pedals, pivot point to end [Z]	610	varies	568 (center) - 619 (ends)	see chart in attachment 2	568 (center) - 628,5 (ends)
length from playing end of natural manual key to attachment point [AA]	not defined (272)	292,1	not defined	291, or as determined by designer	

Comparative measurements (in mm)						
Type of keyboard	Alverca	K 2000 Petit and Fritsen	K 2000 Paccard	Zutphen,Lochem Nijmegen	Oude Kerk	Olympic
center-to-center spacing of natural manual keys [A]	46	46	46	46	48	47.625
projection length of natural manual keys [B]	184	181	181	184	184	187.325
projection length of sharp manual keys [C]	114	108	108	114	114	111.125
difference in length of natural and sharp manual keys [D]	70	73	73	70	70	76.2
playing length of natural manual keys [E]	85	91	181	114	86	90/110
playing length of sharp manual keys [F]	85	91	108	84	86	90/110
manual key diameter, tapering from first number to second [G]	18	20>16	24>16	18	?	21>15 (elliptical)
cross section of manual key behind playing length [H]	24	24	25	24	25	25.4
manual keyfall measured at face of key spreader [I]	45	variable (customer specified)	45	45	45	var. to max 54.0/current 44.5
height difference between natural and sharp manual keys [J]	97	94	94	97	92	95
pedal/manual axis [K]	c1 under c2	b1 under d3	b1 under d3 (Chambéry a1 under d3)	c1 under g1	c1 under f#1 (b1 under g3)	a#1 under c#3 (b1 under d3)
front/back relation of manual keys to pedals (from tips of keys) [L]	plus 38	50.8	67	plus 37	plus 35	plus 10 to 60
distance from top of natural manual keys to top of natural pedals [M]	790	variable	784	790	ca. 748	762
center-to-center spacing of natural pedals [N]	85	85.2	85	80	88.9	85
concavity of pedals [O]	yes: 85.5	yes: 71	yes: 71	yes: 69	yes	yes: 76.2
radius of natural pedals to playing end [O]	yes: R = 5800	yes: R = 5014,56	yes: R = 5057	yes	yes	yes: R variable
radius of sharp pedals to playing end [O]	yes: R = 6175	yes: R = 4361,93	yes: R = 4267	yes	yes	yes: R variable
projection length of natural pedals [P]	225 (center)	232 (center) - 283 (ends)	232 (center) - 284 (ends)	225	175,5	222,3 (center) - 276,2 (ends)
projection length of sharp pedals [Q]	105	min. 118 to max. 160	118	105	104	min. at a#1: 111,1; max. at f#0: 173,5
difference in length of natural and sharp pedals [R]	120	114,5	114	120	70	114
playing length of natural pedals [S]	125	90	129	120	125	approx. 124; pedal covers all 89
playing length of sharp pedals [T]	100	90	variable	105	94	(not defined) ; pedal covers all 89
width of pedals [U]	30	30	30	30	?	30
pedal keyfall measured at end of key [V]	45 (32)	variable	variable	45	ca. 35	not defined
height difference between natural/sharp pedals [W]	76	67	?	76	76	76.2
angle of manual keys/pedals from horizontal at rest [X]	2°	variable	variable	2°	2°	
total length of natural manual keys, pivot point to end [Y]	599	585	610	599		610
total length of pedals, pivot point to end [Z]	560 - 620	568,3 (center) - 628,7 (ends)	variable	562 (center) - 620,5 (ends)	580	558,8 (center) - 615,9 (ends)
length from playing end of natural manual key to attachment point [AA]		285	305		350	not defined; naturals 307, sharps 231