STEINWAY & SONS

STEINWAY & SONS SPIRIO AND SPIRIO | R SPECIFICATIONS

	SPIRIO | R MODEL D	**SPIRIO | R MODEL B**	**SPIRIO | R MODEL M**	**SPIRIO MODEL B**	**SPIRIO MODEL M**
AVAILABILITY	**Global**	**Global**	**North / Central / South America, Japan**	**Global**	**North / Central / South America, Japan**
LENGTH	8’ 11 3/4” (274 cm)	6’ 11” (211 cm)	5' 7" (170 cm)	6’ 11” (211 cm)	5' 7" (170 cm)
WIDTH	61 1/4” (156 cm)	58” (148 cm)	57 3/4" (147 cm)	58” (148 cm)	57 3/4" (147 cm)
NET WEIGHT	1125 pounds (510 kg)	860 pounds (390 kg)	660 pounds (300 kg)	860 pounds (390 kg)	660 pounds (300 kg)
SPIRIO TECHNOLOGY					
PLAYBACK PLAYING NOTES	88	88	88	88	88
PLAYBACK CAPACITY	High resolution	High resolution	High resolution	High resolution	High resolution
NOTE EXPRESSION	1020 levels	1020 levels	1020 levels	1020 levels	1020 levels
SAMPLE RATE	Up to 800/second	Up to 800/second	Up to 800/second	Up to 800/second (playback only)	Up to 800/second (playback only)
PROPORTIONAL PEDALING	256 positions	256 positions	256 positions	256 positions	256 positions
PEDAL SAMPLE RATE	Up to 100/second	Up to 100/second	Up to 100/second	Up to 100/second (playback only)	Up to 100/second (playback only)
PEDALS SUPPORTED	Sustain, Una Corda, Sostenuto (emulated)	Sustain, Una Corda, Sostenuto (emulated)	Sustain, Una Corda, Sostenuto (emulated)	Sustain, Una Corda, Sostenuto (emulated)	Sustain, Una Corda, Sostenuto (emulated)
SUPPLIED USER INTERFACE	Apple iPad Pro 12.9" 128GB	Apple iPad Pro 12.9" 128GB	Apple iPad Pro 12.9" 128GB	Apple iPad; 10.2", 256GB	Apple iPad; 10.2", 256GB
USER INTERFACE CONTROL METHOD	Wireless use via proprietary Spirio App	Wireless use via proprietary Spirio App	Wireless use via proprietary Spirio App	Wireless use via proprietary Spirio App	Wireless use via proprietary Spirio App
WIRELESS CONTROL COMMUNICATION	BLE (Bluetooth Low Energy; Bluetooth 4.0)	BLE (Bluetooth Low Energy; Bluetooth 4.0)	BLE (Bluetooth Low Energy; Bluetooth 4.0)	BLE (Bluetooth Low Energy; Bluetooth 4.0)	BLE (Bluetooth Low Energy; Bluetooth 4.0)
SPIRIO RECORD TECHNOLOGY					
POWER INPUT	100-240V AC, 50/60 Hz 600W	100-240V AC, 50/60 Hz 600W	100-240V AC, 50/60 Hz 600W	100-240V AC, 50/60 Hz 600W	100-240V AC, 50/60 Hz 600W
PIANO WIFI	802.11 a/b/g/n, dual antenna	802.11 a/b/g/n, dual antenna	802.11 a/b/g/n, dual antenna	802.11 a/b/g/n, dual antenna	802.11 a/b/g/n, dual antenna
COMPONENT INSTALLATION	All Spirio hardware components are installed at Steinway factories by skilled Steinway craftsman	All Spirio hardware components are installed at Steinway factories by skilled Steinway craftsman	All Spirio hardware components are installed at Steinway factories by skilled Steinway craftsman	All Spirio hardware components are installed at Steinway factories by skilled Steinway craftsman	All Spirio hardware components are installed at Steinway factories by skilled Steinway craftsman
AVAILABLE AS KIT	No	No	No	No	No
HARDWARE VISIBILITY	Power cord	Power cord	Power cord	Power cord	Power cord
QUIET PLAY	Yes	Yes	Yes	Yes	Yes
SOFT-PLAY AND REPETITION PLAYBACK	Yes	Yes	Yes	Yes	Yes
PROPRIETARY MUSIC CATALOG	Yes	Yes	Yes	Yes	Yes
MUSIC CATALOG SIZE	Approximately 4,700 tracks as of April, 2022	Approximately 4,700 tracks as of April, 2022	Approximately 4,700 tracks as of April, 2022	Approximately 4,700 tracks as of April, 2022	Approximately 4,700 tracks as of April, 2022
MUSIC STORAGE FILE TYPE	Proprietary file type	Proprietary file type	Proprietary file type	Proprietary file type	Proprietary file type
MUSIC STORAGE LOCATION	Piano-based hard drive	Piano-based hard drive	Piano-based hard drive	Piano-based hard drive	Piano-based hard drive
LOCAL STORAGE HARDDRIVE SIZE	500 GB	500GB	500GB	500GB	500GB
COST FOR MUSIC CATALOG ACCESS	Complimentary when purchased directly from Steinway, otherwise additional fees apply	Complimentary when purchased directly from Steinway, otherwise additional fees apply	Complimentary when purchased directly from Steinway, otherwise additional fees apply	Complimentary when purchased directly from Steinway, otherwise additional fees apply	Complimentary when purchased directly from Steinway, otherwise additional fees apply
NEW CATALOG RELEASE FREQUENCY	Monthly, approximately 3-4 hours and 1 video	Monthly, approximately 3-4 hours and 1 video	Monthly, approximately 3-4 hours and 1 video	Monthly, approximately 3-4 hours and 1 video	Monthly, approximately 3-4 hours and 1 video
MUSIC CATALOG ARTISTS	Steinway Artists	Steinway Artists	Steinway Artists	Steinway Artists	Steinway Artists
PRE-RECORDED SPIRIO SYNC VIDEOS	Yes	Yes	Yes	Yes	Yes
STEINWAY IMMORTAL PERFORMANCES	Yes	Yes	Yes	Yes	Yes
LIVE SPIRIOCAST EVENTS	Currently only North America, other major global markets likely Q4 2022	Currently only North America, other major global markets likely Q4 2022	Currently only North America, other major global markets likely Q4 2022	Availability TBD - likely 2023	Availability TBD - likely 2023
IN-APP HIGH RESOLUTION RECORDING	Yes	Yes	Yes	No	No
IN-APP HIGH RESOLUTION EDITING	Yes	Yes	Yes	Yes	Yes
LOCAL RECORDING STORAGE	Yes	Yes	Yes	Yes	Yes
CONVERT LOCAL RECORDING TO MP3	Yes	Yes	Yes	Yes	Yes
CONVERT LOCAL RECORDING TO MIDI	Yes	Yes	Yes	Yes	Yes
IMPORT MIDI (TYPE 0) FILES	Yes	Yes	Yes	Yes	Yes
EXPORT LOCAL RECORDINGS AS MIDI	Yes	Yes	Yes	Yes	Yes
EXPORT LOCAL RECORDINGS IN PROPRIETARY HIGH-RES FILE	Yes	Yes	Yes	Yes	Yes
SUPPORTED FILE TYPES FOR LOCAL RECORDING EXPORT	Spirio proprietary high-resolution, MIDI, mp3 high-quality sampled audio	Spirio proprietary high-resolution, MIDI, mp3 high-quality sampled audio	Spirio proprietary high-resolution, MIDI, mp3 high-quality sampled audio	Spirio proprietary high-resolution, MIDI, mp3 high-quality sampled audio	Spirio proprietary high-resolution, MIDI, mp3 high-quality sampled audio
BLE BLUETOOTH OUTPUT TO SPEAKERS/HEADPHONES	Potential future release	Potential future release	Potential future release	Potential future release	Potential future release
PIANO WI-FI AND ETHERNET CAPABILITY	Yes	Yes	Yes	Yes	Yes
POWERED USB PORT FOR EXTERNAL STORAGE, IPAD CHARGING	Yes	Yes	Yes	Yes	Yes
MIDI IN / MIDI OUT	Yes	Yes	Yes	No	No
HDMI VIDEO OUT PORT	Yes	Yes	Yes	Yes	Yes

	SPIRIO | R MODEL D	SPIRIO | R MODEL B	SPIRIO | R MODEL M	SPIRIO MODEL B	SPIRIO MODEL M
ENCASEMENT					
FURNITURE	Ebonized or Crown Jewel Collection Veneer	Ebonized or Crown Jewel Collection Veneer	Ebonized or Crown Jewel Collection Veneer	Ebonized or Crown Jewel Collection Veneer	Ebonized or Crown Jewel Collection Veneer
PANEL STOCK	Quarter-sawn poplar corewood cross banded and face veneered.	Quarter-sawn poplar corewood cross banded and face veneered.	Quarter-sawn poplar corewood cross banded and face veneered.	Quarter-sawn poplar corewood cross banded and face veneered.	Quarter-sawn poplar corewood cross banded and face veneered.
SOLIDS	Ebonized or veneered birch, mahogany, walnut.	Ebonized or veneered birch, mahogany, walnut.	Ebonized or veneered birch, mahogany, walnut.	Ebonized or veneered birch, mahogany, walnut.	Ebonized or veneered birch, mahogany, walnut.
LEGS	Ebonized or veneered birch. Sturdy locking mechanisms allow quick, damage-free removal.	Ebonized or veneered birch. Sturdy locking mechanisms allow quick, damage-free removal.	Ebonized or veneered birch. Sturdy locking mechanisms allow quick, damage-free removal.	Ebonized or veneered birch. Sturdy locking mechanisms allow quick, damage-free removal.	Ebonized or veneered birch. Sturdy locking mechanisms allow quick, damage-free removal.
FINISH	Heavy full-bodied black or clear lacquer (satin), hand-rubbed OR Heavy full-bodied black or clear polyester (high polish), hand-polished.	Heavy full-bodied black or clear lacquer (satin), hand-rubbed OR Heavy full-bodied black or clear polyester (high polish), hand-polished.	Heavy full-bodied black or clear lacquer (satin), hand-rubbed OR Heavy full-bodied black or clear polyester (high polish), hand-polished.	Heavy full-bodied black or clear lacquer (satin), hand-rubbed OR Heavy full-bodied black or clear polyester (high polish), hand-polished.	Heavy full-bodied black or clear lacquer (satin), hand-rubbed OR Heavy full-bodied black or clear polyester (high polish), hand-polished.
HARDWARE	Solid brass; polished & lacquered, or chrome or nickel plated.	Solid brass; polished & lacquered, or chrome or nickel plated.	Solid brass; polished & lacquered, or chrome or nickel plated.	Solid brass; polished & lacquered, or chrome or nickel plated.	Solid brass; polished & lacquered, or chrome or nickel plated.
INSTRUMENT					
RIM	Made entirely from hard rock maple; 17 laminations; continuous bent, both inner & outer form one single rim; unequaled strength and stability. Thickness: 3 1/4” (8.26 cm)	Made entirely from hard rock maple; 16 laminations; continous bent, both inner & outer form one single rim; unequaled strength and stability. Thickness: 2 3/4” (6.99 cm)	Made entirely from hard rock maple; 10 laminations; continuous bent, both inner & outer form one single rim; unequaled strength and stability. Thickness: 2 1/4” (5.72 cm)	Made entirely from hard rock maple; 16 laminations; continous bent, both inner & outer form one single rim; unequaled strength and stability. Thickness: 2 3/4” (6.99 cm)	Made entirely from hard rock maple; 10 laminations; continuous bent, both inner & outer form one single rim; unequaled strength and stability. Thickness: 2 1/4” (5.72 cm)
BRACES	5 solid spruce with a volume of 2,907 cu. In. (47,637cm3); Spruce provides tensile strength with less weight. Maple dowels fasten braces to rim producing a single homogenuos foundation upon which is built the entire tonal component. A cast iron treble bell, affixed to rim’s underside at treble bend, holds plate firmly in position by means of a steel bolt. The S & S iron wedge anchors brace ends securely to crossblock assuring permanent rim posture.	4 solid spruce with a volume of 1,995 cu. In. (32,686cm3); Spruce provides tensile strength with less weight. Maple dowels fasten braces to rim producing a single homogenuos foundation upon which is built the entire tonal component. A cast iron treble bell, affixed to rim’s underside at treble bend, holds plate firmly in position by means of a steel bolt. The S & S iron wedge anchors brace ends securely to crossblock assuring permanent rim posture.	3 solid spruce with a volume of 1,196 cu. In. (19,597cm3); Spruce provides tensile strength with less weight. Maple dowels fasten braces to rim & crossblock producing a single homogenous foundation upon which is built the tonal component. Note: Treble bell is not required in smaller grands of lesser tensions.	4 solid spruce with a volume of 1,995 cu. In. (32,686cm3); Spruce provides tensile strength with less weight. Maple dowels fasten braces to rim producing a single homogenuos foundation upon which is built the entire tonal component. A cast iron treble bell, affixed to rim’s underside at treble bend, holds plate firmly in position by means of a steel bolt. The S & S iron wedge anchors brace ends securely to crossblock assuring permanent rim posture.	3 solid spruce with a volume of 1,196 cu. In. (19,597cm3); Spruce provides tensile strength with less weight. Maple dowels fasten braces to rim & crossblock producing a single homogenous foundation upon which is built the tonal component. Note: Treble bell is not required in smaller grands of lesser tensions.
PINBLOCK	Hexagrip patented design; 7 laminations of quartered hardrock maple stock. Grain symmetically distributed at successive angles of 45°, 90°, employing grain direction uniformly around the circumference of the tuning pin to provide the ultimate in pin grippage. As a result of this exclusive design, the tuning pin has smoother movement under torque, a more uniform retaining action for solid setting, and a piano which will hold its tuning longer.	Hexagrip patented design; 7 laminations of quartered hardrock maple stock. Grain symmetically distributed at successive angles of 45°, 90°, employing grain direction uniformly around the circumference of the tuning pin to provide the ultimate in pin grippage. As a result of this exclusive design, the tuning pin has smoother movement under torque, a more uniform retaining action for solid setting, and a piano which will hold its tuning longer.	Hexagrip patented design; 7 laminations of quartered hardrock maple stock. Grain symmetically distributed at successive angles of 45°, 90°, employing grain direction uniformly around the circumference of the tuning pin to provide the ultimate in pin grippage. As a result of this exclusive design, the tuning pin has smoother movement under torque, a more uniform retaining action for solid setting, and a piano which will hold its tuning longer.	Hexagrip patented design; 7 laminations of quartered hardrock maple stock. Grain symmetically distributed at successive angles of 45°, 90°, employing grain direction uniformly around the circumference of the tuning pin to provide the ultimate in pin grippage. As a result of this exclusive design, the tuning pin has smoother movement under torque, a more uniform retaining action for solid setting, and a piano which will hold its tuning longer.	Hexagrip patented design; 7 laminations of quartered hardrock maple stock. Grain symmetically distributed at successive angles of 45°, 90°, employing grain direction uniformly around the circumference of the tuning pin to provide the ultimate in pin grippage. As a result of this exclusive design, the tuning pin has smoother movement under torque, a more uniform retaining action for solid setting, and a piano which will hold its tuning longer.
SOUNDBOARD	Created like the soundboard of violins to give a free and even response throughout the entire scale, it is so constructed as to be 9 mm thick in the center and tapered to 6 mm as it approaches the rim and outer case before being double crowned. This design permits complete freedom of movement, while acting as a homogenous unit to displace a greater amount of air, thereby creating a richer and more lasting tonal response. Close-grained, quarter-sawn Sitka spruce, a wood having unusual stability and vibrance under stress and vibration, is used exclusively for the soundboard.	Created like the soundboard of violins to give a free and even response throughout the entire scale, it is so constructed as to be 8 mm thick in the center and tapered to 5 mm as it approaches the rim and outer case before being double crowned. This design permits complete freedom of movement, while acting as a homogenous unit to displace a greater amount of air, thereby creating a richer and more lasting tonal response. Close-grained, quarter-sawn Sitka spruce, a wood having unusual stability and vibrance under stress and vibration, is used exclusively for the soundboard.	Created like the soundboard of violins to give a free and even response throughout the entire scale, it is so constructed as to be 8 mm thick in the center and tapered to 5 mm as it approaches the rim and outer case before being double crowned. This design permits complete freedom of movement, while acting as a homogenous unit to displace a greater amount of air, thereby creating a richer and more lasting tonal response. Close-grained, quarter-sawn Sitka spruce, a wood having unusual stability and vibrance under stress and vibration, is used exclusively for the soundboard.	Created like the soundboard of violins to give a free and even response throughout the entire scale, it is so constructed as to be 8 mm thick in the center and tapered to 5 mm as it approaches the rim and outer case before being double crowned. This design permits complete freedom of movement, while acting as a homogenous unit to displace a greater amount of air, thereby creating a richer and more lasting tonal response. Close-grained, quarter-sawn Sitka spruce, a wood having unusual stability and vibrance under stress and vibration, is used exclusively for the soundboard.	Created like the soundboard of violins to give a free and even response throughout the entire scale, it is so constructed as to be 8 mm thick in the center and tapered to 5 mm as it approaches the rim and outer case before being double crowned. This design permits complete freedom of movement, while acting as a homogenous unit to displace a greater amount of air, thereby creating a richer and more lasting tonal response. Close-grained, quarter-sawn Sitka spruce, a wood having unusual stability and vibrance under stress and vibration, is used exclusively for the soundboard.
RIBS	Made from durable, resinous sugar pine to assure strong and constant support of string down-bearing on the soundboard. Rib ends are hand-fitted into their mounting surfaces, virtually locking in the important soundboard crown.	Made from durable, resinous sugar pine to assure strong and constant support of string down-bearing on the soundboard. Rib ends are hand-fitted into their mounting surfaces, virtually locking in the important soundboard crown.	Made from durable, resinous sugar pine to assure strong and constant support of string down-bearing on the soundboard. Rib ends are hand-fitted into their mounting surfaces, virtually locking in the important soundboard crown.	Made from durable, resinous sugar pine to assure strong and constant support of string down-bearing on the soundboard. Rib ends are hand-fitted into their mounting surfaces, virtually locking in the important soundboard crown.	Made from durable, resinous sugar pine to assure strong and constant support of string down-bearing on the soundboard. Rib ends are hand-fitted into their mounting surfaces, virtually locking in the important soundboard crown.
BRIDGES	Treble: Hard rock maple vertical laminations capped with solid hard rock maple; planed to prescribed height, graphite coated, drilled, and notched by hand for precise individual string bearing. Design defies splitting. Bass: Continuous with treble. Maple doweled, glued, and screwed to soundboard.	Treble: Hard rock maple vertical laminations capped with solid hard rock maple; planed to prescribed height, graphite coated, drilled, and notched by hand for precise individual string bearing. Design defies splitting. Bass: Continuous with treble. Maple doweled, glued, and screwed to soundboard.	Treble: Hard rock maple vertical laminations capped with solid hard rock maple; planed to prescribed height, graphite coated, drilled, and notched by hand for precise individual string bearing. Design defies splitting. Bass: Solid rock maple mounted to cantilevered and splined base. Maple doweled, glued, and screwed to soundboard.	Treble: Hard rock maple vertical laminations capped with solid hard rock maple; planed to prescribed height, graphite coated, drilled, and notched by hand for precise individual string bearing. Design defies splitting. Bass: Continuous with treble. Maple doweled, glued, and screwed to soundboard.	Treble: Hard rock maple vertical laminations capped with solid hard rock maple; planed to prescribed height, graphite coated, drilled, and notched by hand for precise individual string bearing. Design defies splitting. Bass: Solid rock maple mounted to cantilevered and splined base. Maple doweled, glued, and screwed to soundboard.
SCALE	Overstrung; combination agraffe; Front AND rear duplex. Tension: 45,373 lbs. (20,418 kg)	Overstrung; combination agraffe; Front AND rear duplex. Tension: 39,047 lbs. (17,571 kg)	Overstrung; combination agraffe; Front AND rear duplex. Tension: 33,823 lbs. (15,040 kg)	Overstrung; combination agraffe; Front AND rear duplex. Tension: 39,047 lbs. (17,571 kg)	Overstrung; combination agraffe; Front AND rear duplex. Tension: 33,823 lbs. (15,040 kg)
PLATE	Sturdy gray iron; filled, CNC milled, and sealed; bronzed and lacquered.	Sturdy gray iron; filled, CNC milled, and sealed; bronzed and lacquered.	Sturdy gray iron; filled, CNC milled, and sealed; bronzed and lacquered.	Sturdy gray iron; filled, CNC milled, and sealed; bronzed and lacquered.	Sturdy gray iron; filled, CNC milled, and sealed; bronzed and lacquered.
TUNING PINS	Premium blued steel with rust-resistant, nickeled heads.	Premium blued steel with rust-resistant, nickeled heads.	Premium blued steel with rust-resistant, nickeled heads.	Premium blued steel with rust-resistant, nickeled heads.	Premium blued steel with rust-resistant, nickeled heads.
STRINGS	Treble: Twelve whole & one half sizes from high-tensile Swedish steel. Bass: Swedish steel core wire wound with pure copper. Longest, Agraffe to bridge: 79 1/4” (201 cm)	Treble: Twelve whole & one half sizes from high-tensile Swedish steel. Bass: Swedish steel core wire wound with pure copper. Longest, Agraffe/bridge: 59 1/4” (151 cm)	Treble: Eleven whole & onehalf sizes from high-tensile Swedish steel. Bass: Swedish steel core wire wound with pure copper. Longest, Agraffe/bridge: 49 1/4” (125 cm)	Treble: Twelve whole & one half sizes from high-tensile Swedish steel. Bass: Swedish steel core wire wound with pure copper. Longest, Agraffe/bridge: 59 1/4” (151 cm)	Treble: Eleven whole & onehalf sizes from high-tensile Swedish steel. Bass: Swedish steel core wire wound with pure copper. Longest, Agraffe/bridge: 49 1/4” (125 cm)
HAMMERS	Premium wool top felt over premium wool under felt; treated to resist insects and moisture. Compression-wired to retain permanent shape. Hard rock maple hammer moldings and shanks.	Premium wool top felt over premium wool under felt; treated to resist insects and moisture. Compression-wired to retain permanent shape. Hard rock maple hammer moldings and shanks.	Premium wool top felt over premium wool under felt; treated to resist insects and moisture. Compression-wired to retain permanent shape. Hard rock maple hammer moldings and shanks.	Premium wool top felt over premium wool under felt; treated to resist insects and moisture. Compression-wired to retain permanent shape. Hard rock maple hammer moldings and shanks.	Premium wool top felt over premium wool under felt; treated to resist insects and moisture. Compression-wired to retain permanent shape. Hard rock maple hammer moldings and shanks.
DAMPERS	Horizontal-cut premium wool for effective dampening. Maple heads for endurance.	Horizontal-cut premium wool for effective dampening. Maple heads for endurance.	Horizontal-cut premium wool for effective dampening. Maple heads for endurance.	Horizontal-cut premium wool for effective dampening. Maple heads for endurance.	Horizontal-cut premium wool for effective dampening. Maple heads for endurance.

	SPIRIO | R MODEL D	SPIRIO | R MODEL B	SPIRIO | R MODEL M	SPIRIO MODEL B	SPIRIO MODEL M
INSTRUMENT, CONT.					
ACTION	White, quartersawn hornbeam parts are bushed with specially treated wool action cloth for freedom from friction. Parts are anchored in hard maple dowels housed in inflexible seamless brass tubing to assure precise & stable regulation. Exclusive single, combination phosphor bronze repetition & fly spring provides constant, crisp touch response. Specially designed to respond 14% faster fortissimo & 6% faster pianissimo by using strategically placed key leads.	White, quartersawn hornbeam parts are bushed with specially treated wool action cloth for freedom from friction. Parts are anchored in hard maple dowels housed in inflexible seamless brass tubing to assure precise & stable regulation. Exclusive single, combination phosphor bronze repetition & fly spring provides constant, crisp touch response. Specially designed to respond 14% faster fortissimo & 6% faster pianissimo by using strategically placed key leads.	White, quartersawn hornbeam parts are bushed with specially treated wool action cloth for freedom from friction. Parts are anchored in hard maple dowels housed in inflexible seamless brass tubing to assure precise & stable regulation. Exclusive single, combination phosphor bronze repetition & fly spring provides constant, crisp touch response. Specially designed to respond 14% faster fortissimo & 6% faster pianissimo by using strategically placed key leads.	White, quartersawn hornbeam parts are bushed with specially treated wool action cloth for freedom from friction. Parts are anchored in hard maple dowels housed in inflexible seamless brass tubing to assure precise & stable regulation. Exclusive single, combination phosphor bronze repetition & fly spring provides constant, crisp touch response. Specially designed to respond 14% faster fortissimo & 6% faster pianissimo by using strategically placed key leads.	White, quartersawn hornbeam parts are bushed with specially treated wool action cloth for freedom from friction. Parts are anchored in hard maple dowels housed in inflexible seamless brass tubing to assure precise & stable regulation. Exclusive single, combination phosphor bronze repetition & fly spring provides constant, crisp touch response. Specially designed to respond 14% faster fortissimo & 6% faster pianissimo by using strategically placed key leads.
KEYS	European spruce, individually weighed-off. Chip-proof, stainresistant coverings for naturals; slipproof, delicately abraded ebonized sharps. Tough, durable Linden wood buttons reinforce keys over balance rail permitting maximum tonal power with every strike. Longest: 24 1/2” (62.2 cm)	European spruce, individually weighed-off. Chip-proof, stainresistant coverings for naturals; slipproof, delicately abraded ebonized sharps. Tough, durable Linden wood buttons reinforce keys over balance rail permitting maximum tonal power with every strike. Longest: 21” (53.3 cm)	European spruce, individually weighed-off. Chip-proof, stainresistant cover- ings for naturals; slip-proof, delicately abraded ebonized sharps. Tough, durable Linden wood buttons reinforce keys over balance rail permitting maximum tonal power with every strike. Longest: 19” (48.3 cm)	European spruce, individually weighed-off. Chip-proof, stainresistant coverings for naturals; slipproof, delicately abraded ebonized sharps. Tough, durable Linden wood buttons reinforce keys over balance rail permitting maximum tonal power with every strike. Longest: 21” (53.3 cm)	European spruce, individually weighed-off. Chip-proof, stainresistant cover- ings for naturals; slip-proof, delicately abraded ebonized sharps. Tough, durable Linden wood buttons reinforce keys over balance rail permitting maximum tonal power with every strike. Longest: 19” (48.3 cm)
KEYBED	Made from planks of stable, quartersawn spruce. Horizontal planks are freely mortised together, while their ends are permanently mortised into vertical planks made of birch, presenting a vented system for humidity escapement while allowing for necessary expansion and contraction. Front center is crowned contrasting the reverse-crowned action frame for snug fit. This design intensifies key movement and prevents “slapping” during heavy playing. Large maple dowel ends provide a solid mount for adjustable brass touch-regulating screws. Thickness: 1 3/4” (4.45 cm)	Made from planks of stable, quartersawn spruce. Horizontal planks are freely mortised together, while their ends are permanently mortised into vertical planks made of birch, presenting a vented system for humidity escapement while allowing for necessary expansion and contraction. Front center is crowned contrasting the reverse-crowned action frame for snug fit. This design intensifies key movement and prevents “slapping” during heavy playing. Large maple dowel ends provide a solid mount for adjustable brass touch-regulating screws. Thickness: 1 3/4” (4.45 cm)	Made from planks of stable, quartersawn spruce. Horizontal planks are freely mortised together, while their ends are permanently mortised into vertical planks made of birch, presenting a vented system for humidity escapement while allowing for necessary expansion and contraction. Front center is crowned contrasting the reverse-crowned action frame for snug fit. This design intensifies key movement and prevents “slapping” during heavy playing. Large maple dowel ends provide a solid mount for adjustable brass touch-regulating screws. Thickness: 1 3/4” (4.45 cm)	Made from planks of stable, quartersawn spruce. Horizontal planks are freely mortised together, while their ends are permanently mortised into vertical planks made of birch, presenting a vented system for humidity escapement while allowing for necessary expansion and contraction. Front center is crowned contrasting the reverse-crowned action frame for snug fit. This design intensifies key movement and prevents “slapping” during heavy playing. Large maple dowel ends provide a solid mount for adjustable brass touch-regulating screws. Thickness: 1 3/4” (4.45 cm)	Made from planks of stable, quartersawn spruce. Horizontal planks are freely mortised together, while their ends are permanently mortised into vertical planks made of birch, presenting a vented system for humidity escapement while allowing for necessary expansion and contraction. Front center is crowned contrasting the reverse-crowned action frame for snug fit. This design intensifies key movement and prevents “slapping” during heavy playing. Large maple dowel ends provide a solid mount for adjustable brass touch-regulating screws. Thickness: 1 3/4” (4.45 cm)
PEDALS	Heavy, solid brass. Soft, sustaining, and full sostenuto	Heavy, solid brass. Soft, sustaining, and full sostenuto	Heavy, solid brass. Soft, sustaining, and full sostenuto	Heavy, solid brass. Soft, sustaining, and full sostenuto	Heavy, solid brass. Soft, sustaining, and full sostenuto

Revised April, 2022