

# SELECTING THE RIGHT HAMMERHEAD

## GUIDANCE NOTES



### ABEL HAMMER COMPANY

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the world's finest pianos

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**Seiler**

**Wilh. Steinberg**

**Steinway & Sons**

**Charles Walter**

**Young Chang**

**and others**

# 1) NEW HAMMERS

from the **ABEL** hammer catalogue  
with standard boring

**NATURAL FELT available (see attachment)**

About 110 different hammerheads are listed in the **ABEL** hammer catalogue.  
Check our website ([www.abel-pianoparts.com](http://www.abel-pianoparts.com)) for **ABEL** hammer catalogue.  
All hammers can be ordered unbored or bored.

Upright hammers are delivered with a 5.60mm bore diameter as standard.  
Grand hammers are delivered with 5.40mm bore diameter as standard.

## How to read the catalogue and price list:

Item number	Brand	Total length bass/treble in mm	Wood	Underfelt	additional specifications	Numbers in bass	hammerwidth (bass/treble) mm	bored length (bass/treble) mm	drilling Ø in mm
200/0		88/80	hornbeam	green		27	10,5/11		
200/1-40		88/80	hornbeam	green		27	10,5/11	64/56	5,40

**Item number** : 200/**0** means that this set is not bored (.../**0**)  
200/1-**40** means that this set is bored with diameter 5,**40**mm

**Brand** : If hammers are made according to the specification of a particular brand it is mentioned here.

**Total length (Lt)** : First number describes the total length of the bass hammers  
Second number describes the total length of the treble hammers

**Wood** : Four different kinds of wood are available for hammers:  
hornbeam, mahogany, walnut and maple

**Underfelt** : The colour of the underfelt is shown here.  
If no underfelt is listed the hammers do not have any underfelt.

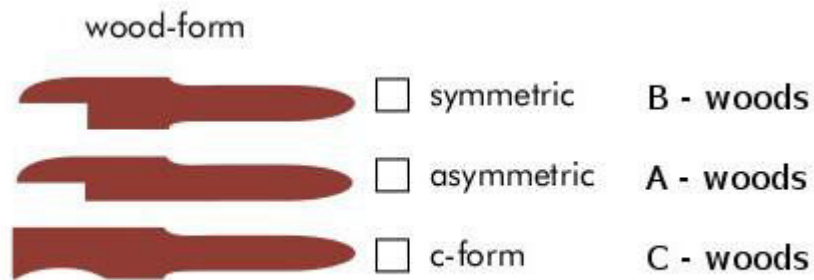
**Additional specifications:** Any extra specifications are listed here.

bass hammers cut : Both sides of the felt are trimmed  
impregnated : or reinforced means that the area around the pinning is treated with a hardener + colour to make this area harder.  
The effect is that these hammers are more resistant to humidity.

straight strung : Bass and treble hammers have the same total length.  
All horizontal angles are straight

light-weight : Hammers with lighter felt

- asymmetric : The shape of the wood is not parallel (see wood form on order-form)
- tapered (Sb) : The hammer woods are trimmed on both sides, starting from the underfelt & tapering down to the end of the hammer tail.
- tails rounded : The A- & B-woods are pre-curved (tailed) on both bored and unbored hammers.  
The C-wood is pre-curved (tailed) on bored hammers, but not on unbored hammers.

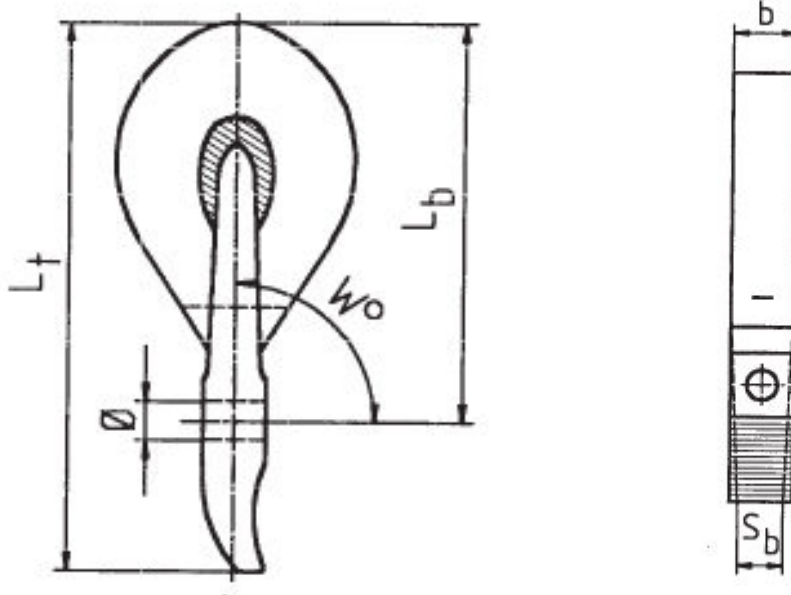


**Numbers in bass** : Describes the quantity of bass hammers.  
Extra hammers can be added in the bass section, please ask.

**Hammer width (b)** : Describes the width of the hammers

**Bored length (Lb)** : Describes the distance from top of the hammer to the centre of the drilled hole.

**Drilling Ø** : The hole is measured in mm.



## 2) NEW HAMMERS

from the **ABEL** hammer catalogue  
with custom boring

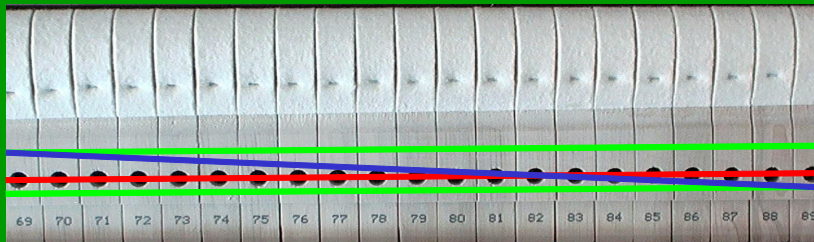
NATURAL FELT available (see attachment)

If there is a hammer in the **ABEL** hammer catalogue which matches your requirements other than for the boring, you can order those same hammers custom bored to your specification **without surcharge**.

This means that you can choose your own drilling specifications for a set of standard hammers which differs from the standard..

### Bored length (Lb)

Green : corridor  
Red : standard  
Blue : possible drilling



### Rake angle

Rake angle  
(Degree based on 360° circle)

- Upright hammers
  - standard 87,5 °
  - possible 82 ° – 90 °
- Grand hammers
  - standard 91 °
  - possible 88 ° – 93 °

Horizontal angles (standard)  
Gon (Degree based on 400° circle)

**Important: We also accept Horizontal Angles measured in degree based on 360° circle.**

## Horizontal Angle (Gon) Upright hammers

	Bass	Treble					
Gon	27	113	110	107,5	105	102,5	100
piece	all	5	5	5	5	5	rest

## Horizontal Angle (Gon) Grand hammers

	Bass	Treble					
Gon	13	113	110	107,5	105	102,5	100
Piece	all	5	5	5	5	5	rest

### Drilling Ø

Upright hammers (standard): 5,60mm

Grand hammers (standard): 5,40mm

Possible diameter is from 4,50mm up to 6,00mm

### 3) CUSTOM-MADE HAMMERS

- according to samples, drawings or dimensions

NATURAL FELT available (see attachment)

Custom-made hammers are a copy from the original. The new hammers will be made as close as possible to the original having regard to available possibilities.

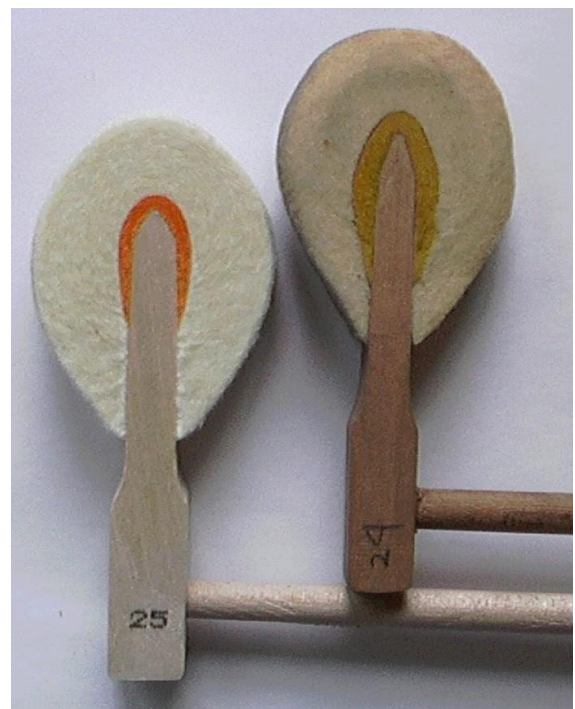
Custom-made hammers can be ordered by:

- sending samples (minimum: first and last hammer with shank from each section)
- using the **ABEL** order-form (see form at the end of these guidance notes)
- sending drawings with specifications

Square Piano Hammers  
sample                  new hammer



New hammers made to samples





## 4) PRE-HANGING SERVICE

Grand hammers + shanks according to samples +  
hanging and glueing

NATURAL FELT available (see attachment)

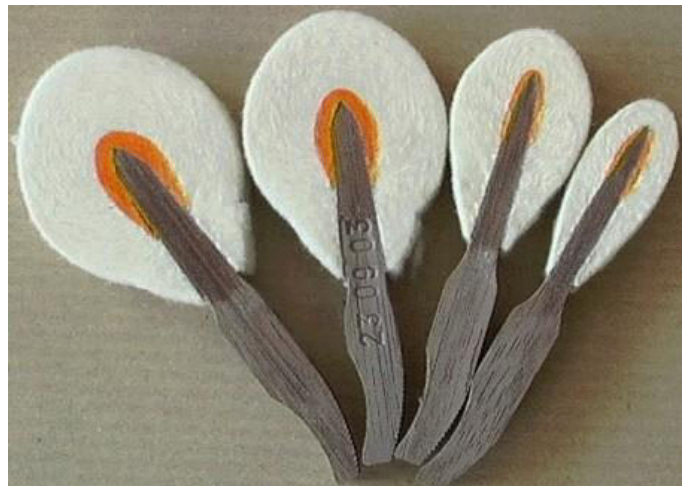
Advice for sending samples

Minimum: first and last hammer with shanks from each section

**ABEL** can make a custom-made set of hammers according to your samples.

**ABEL** Grand shanks are available for major brands. If necessary it will be possible to make a custom-made set of shanks.

After hanging the hammers the tails will be filed and sanded.



## 5) RECOVERING HAMMERS

- New felt on old hammers
- Repairing worn action parts

**NATURAL FELT available (see attachment)**

Recovering Grand and Upright hammerheads is an **ABEL – SPECIALITY**.

We use original felts in a soft, medium or hard pressure according to the wishes of our customers. Production time is about 2-3 weeks.

**When sending hammerheads for recover please note the following steps:**

1. All hammerheads must be sent with fitted shanks.
2. The hammerheads must be packed into a stable box.
3. Send all boxes by postal service (air mail) to Germany or to Heckscher in London.
4. Import taxes and other expenses have to be paid by sender.
5. Shipments from outside the EUROPEAN COMMUNITY have to include a PROFORMA-INVOICE showing the following details:

**Piano hammers without piano value: EUR 20,00**

The PROFORMA-INVOICE is necessary to guarantee a successful custom-clearance.

When sending the hammers for recovering it would be easy to understand your order if you use our REPAIR-FORM (see form at the end of this guidance)

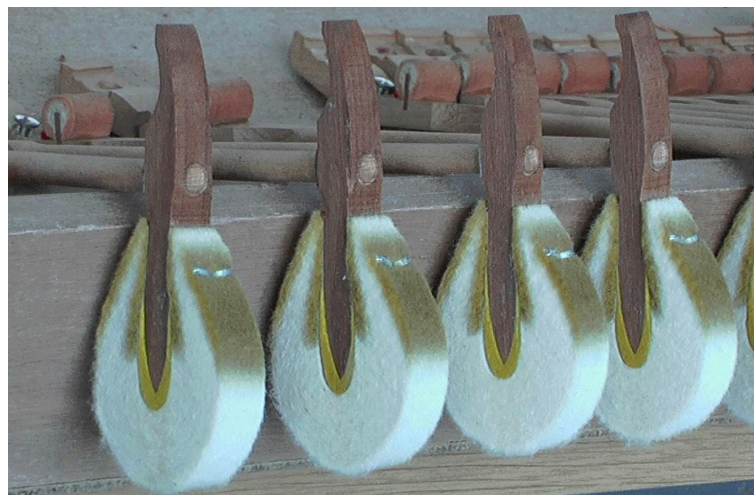
**Important: Square Piano Hammers cannot be recovered!!!**

### Steinway hammer-recovering including impregnation

before



after recovering







# ABEL NATURAL FELT

## BIOFELT PROJECT

The **ABEL HAMMER COMPANY** has established a strong presence in the piano industry even amidst a difficult market environment. Our success is in part due to our corporate philosophy to focus on the quality of our hammers, with felt as the main component.

From 2003-2006 General Managers Frank and Norbert Abel were selected to participate in the BIOFELT PROJECT. The European Union funded this initiative including several renowned European felt manufacturers and felt processing companies, collaborating with two research institutes to intensively research the making of felt.

The aim of the BIOFELT PROJECT was:

- to determine the actual qualities of felt
- to reduce the damage to wool fibers during processing
- to develop new and better felt qualities using eco-friendly methods

Research and techniques discovered during the BIOFELT PROJECT, led to the development of the **ABEL NATURAL FELT** which uses the highest quality merino wool fibers and eco-friendly methods in contrast to previous production, where a series of acid baths called carbonization was used to remove raw wool impurities, resulting in a very clean, white appearance of the felt, but was discovered to remove most of the natural lanolin (wool grease).

**ABEL NATURAL FELT** uses the highest quality merino wool fibers and a newly developed felt process that does not use carbonization washes or acid baths. The result is a hammer with special characteristics. Its appearance is more natural, with a slightly yellowish color and more visible natural impurities. This appearance is an indication of the high content of natural lanolin. This lanolin gives the **ABEL NATURAL FELT** a smooth, elegant character and increased resilience when the wool fibers are placed in the manufacture of the hammer head under strong tension. In the instrument **ABEL NATURAL FELT** creates an optimal and full sound that is easily voiced up or down.

With our process we can produce **ABEL NATURAL FELT** hammers in soft, medium hard or hard pressure - according to the wishes of each client.

**ABEL NATURAL FELT** is available to our customers for new hammers and for hammer recovering service - more and more piano manufacturers and piano technicians have access to the aural improvement seen on instruments with this new felt.

## ABEL HAMMER COMPANY

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## **Order for Repair-Service**

An **ABEL**-Speciality is to recover  
Grand and Upright hammerheads

When sending hammerheads for recover please note the following steps:

1. All Hammerheads must be sent with fitted shanks
2. The hammerheads must be packed into a stable package
3. Take care of the springs
4. Hammers for Uprights, please send without flanges,  
except the ones with fixed flanges.

We only use original felts in a soft - medium- hard pressure to the wishes of the customers.  
It takes about 2 -3 weeks for recovering.

Your address:

Telefon:

FAX:

E-Mail:

Date:

Thank you for your order!



**Remarks**

## REPAIRSERVICE FOR UPRIGHTS

Brand:

Model/Year:

Commission:

☐

### Recover Upright hammers and T-rivet

Compression : ☐ soft ☐ medium ☐ hard ☐ natural felt

☐

325 repin hammer centers

☐

326 rebush and repin hammer centers

☐

327 replace balance hammer leathers

☐

331 replace tie-tapes

☐

332 replace tie-tapes leather

☐

333 replace butt cushion felt

☐

335 replace butt notsch leathers and cloths

☐

336 replace hammer butt strings (Tensionsprings)

☐

337 replace hammer butt strings (Compressionsprings)

☐

320 Upright-dampers recover ( to sample)

repair / replace parts:

## REPAIRSERVICE FOR GRANDS

Brand:

Model/Year:

Commission:

☐

### Recover Grand hammers and T-rivet

Compression : ☐ soft ☐ medium ☐ hard ☐ natural felt

☐

325 repin hammer centers

☐

326 rebush and repin hammer centers

☐

328 new rollers ( to samples)

☐

338 replace Erard-back stop leather

☐

321 Grand-dampers recover ( to sample)

### Keys Upright / Grands

☐

350 Renew Keys (plexiglas), cleaning,  
sanding the Front

☐

355 rebush key button

☐

356 rebush keys

☐

357 replace balance hammer leathers

repair / replace parts: