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AGING AND THERMAL EFFECTS ON THE PROPERTIES OF FLESHED AND DEFLESHED BONES

A Major Qualifying Project Report

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Abstract

Bone analysis is important in archaeology, forensics, and military science. The primary objective of this project was to examine the degradation of fleshed and defleshed bones using accelerated aging to simulate 1.25 years of burial in soil. Changes in mechanical properties, mass, width, color, and surface texture were documented. Fleshed bones had higher strength and hardness, brighter color, greasier feel, and less surface degradation than defleshed bones. These differences can be valuable for identification of remains and cause of death.

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1 Introduction

Bones are commonly excavated from archaeological sites and need to be analyzed for age, cause of death, and other factors. Crime scenes and accidents may also require forensic analysis to determine many of the same factors. The appearance, structure, and mechanical properties of bones can change drastically when a bone is exposed to high temperatures or buried for long periods of time. Analyzing these changes allows researchers to determine critical information such as burial time or the temperature of a fire. This work is greatly dependent on the availability and reliability of information regarding these changes.

Forensic anthropologists and archeologists have used many techniques to identify thermal and time dependent effects on bone. X-ray diffraction, thermogravametric analysis, hardness testing, microscopy (optical and SEM), and stress-strain measurements have all been performed on bone. However, there are two key areas with a definite lack of information.

First, few studies have performed more than three of the previously listed analysis techniques on the same bones. For example, the Thompson study analyzed the mass loss in bone at high temperatures, while the Launey study examined only the fracture mechanics of elk antlers. Therefore, while specific information may be obtained from various sources, very rarely has one source performed a complete study and analysis of bone changes. If all this information were available from one resource, researchers would be better able to properly identify what has happened to a bone.

Second, and perhaps most importantly, is the lack of information comparing bones that were buried or burned with flesh on as opposed to prior flesh removed. This distinction is highly important, as fleshed bones may be protected somewhat from the elements. This could, for example, cause a bone buried with flesh intact to retain more of its original mass or obtain a different color than a defleshed bone. Recording the differences between fleshed and defleshed bones is therefore critical for proper identification of remains.

The goal of this project is therefore to study the changes in properties of bone due to conditions such as temperature and time. This includes comparing the differences between fleshed and defleshed bones, as well as the differences between different types of animal bones. The findings from this study will then be compared to documented results from previous publications. The results of this study can be used for identification of remains and cause of death.

2 Literature Review

Archaeology and forensics both rely on the knowledge of the composition of bones, their properties, and how various environmental factors can affect them. There has been a substantial amount of work done to explore the composition of various types of bones as well as how these bones react to various environments. Before examining the mechanisms of bone degradation due to environmental and temperature factors, basic information about the structure and properties of bone will be provided.

2.1 Structure of Bone

2.1.1 Bone Composition

Bone is comprised of two main parts: the cells and intercellular matrix. As approximately 20% of bone is water, the remaining dry material consists of organic and inorganic substances. The organic parts, which make up approximately 35% of the dry material of bone, consist of collagen, proteins, and glycosaminoglycans (Pilitsis, 2003). The remaining 65% of the dry material of bone is the inorganic material, which largely consists of hydroxyapatite that contains calcium phosphate, calcium carbonate and traces of fluoride (Petchey). The cellular components of bone consist of osteoprogenitors, osteocytes, osteoblasts, and osteoclasts. A summary of the bone composition is found in Figure 1.

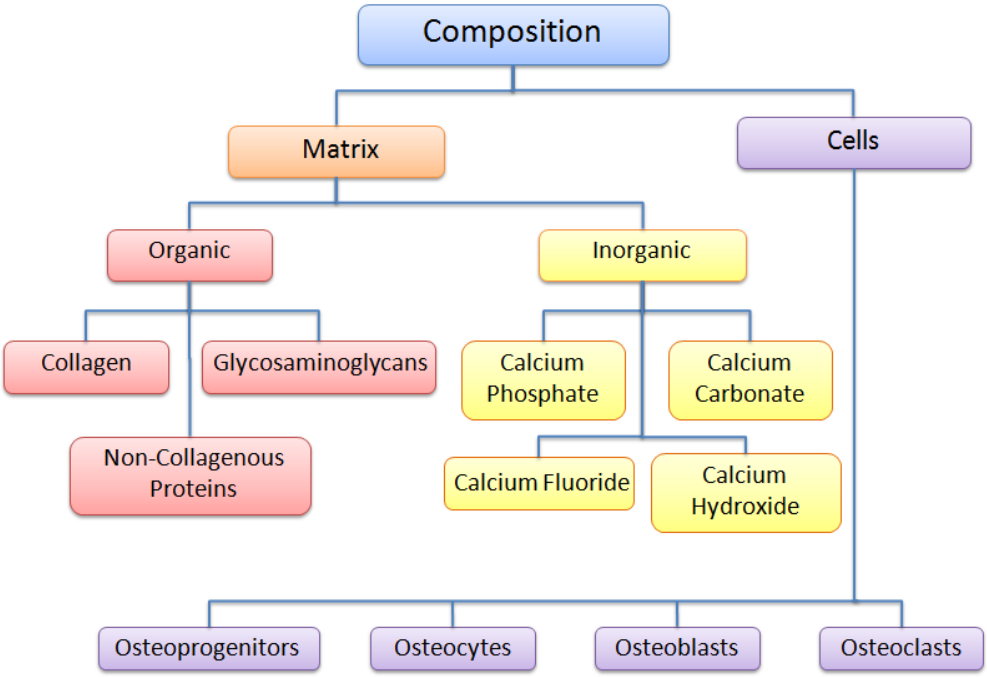


Figure 1: Composition of Mammal Bone
(Source: "File:Composition of bone.png", 2010)

2.1.2 Cortical and Cancellous Bones

In regards to the bone structure, there are two basic forms, which are the cortical bone and the cancellous (trabecular) bone. These two types of bones are identified by the orientation of the collagen fibers, lamellar structure corresponds to cortical bones and non-lamellar structures can be seen in cancellous bones. Cortical bone is often referred to as compact bone, and cancellous bones are commonly called spongy bone (Petchey, n.d.). The cortical bone forms the outer shell of bone, while the cancellous bone occupies the interior regions of bone, as shown in Figure 2.

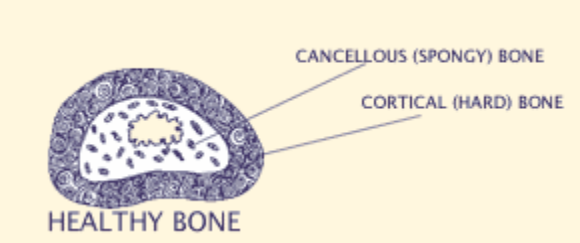


Figure 2: Structure of Bone
(Source: "PBS - Scientific American Frontier", 2010)

Cortical bone is the denser of the two types of bone, and has the main mechanical function to support the body and provide levers for movements. The main component that provides cortical bones with their strength is the osteon or Haversian system. Each osteon is oriented along the long axis of the bone, and are hollow pillars of bone matrix and referred to as the lamella. All collagen fibers in a lamella run in the same direction and the collagen fibers in adjacent lamella run in different directions to provide the bones with their strength. Through the center of each pillar is a system of small blood vessels and nerve fibers. Perpendicular to this system are small canals that connect the blood supply to the surrounding tissues (David, 2009).

All biological tissues have a hierarchical structure (Hollister, 2009). The structure of cortical bone can be found below in Table 1.

Table 1: Cortical Bone Structural Organization
(Source: Hollister, 2009)

Cortical Bone Structure			
Level	**Structure**	**Size Range**	**η**
0	Solid material	> 3,000 µm	-
1	Secondary Osteons Primary Osteons Plexiform Interstitial Bone	100-300 µm	< 0.1
2	Lamellae Lacunae Cement Lines	3-20 µm	< 0.1
3	Collagen- Mineral Composite	0.06-0.6 µm	< 0.1

These hierarchical structures help to differentiate that on the first and second organizational levels, different cortical bones can exist for different species and ages. In the first structural level, there are four different structures referred to as primary bone, secondary bone, woven bone, and plexiform bone. Primary bone tissue contains blood vessels and surrounds concentric rings in the structure;

secondary bone tissue serves an identical purpose. Primary and secondary bone tissue differs because of the process where the osteons are created. In primary bone tissue they are formed by mineralized cartilage, therefore not requiring a pre-existing bone to grow on, whereas secondary bone tissue is created in a process call remodeling in already existing bones (Hollister, 2009). Woven bone is differentiated because it does not have osteons and do not need to form on bone or cartilage tissue. This type of tissue only appears in humans in cases of disease or trauma such as fracture sites. Plexiform bone is similar to woven bone but must be able to offer high mechanical support. This bone is rarely seen in humans, but appears frequently in rapidly growing animals such as cows or sheep. It also contains a distinct brick like appearance, each brick is approximately 125 μm, and must be formed on already existing bone (Martin and Burr, 1989).

The second level includes the composition of osteons in primary and secondary bones and the brick structure of plexiform bone for species it is found in. Lamellae are layers of bone. They are organized into sections generally between 3-7 μm thick and are arranged around the Haversian canal in osteonal bone (Hollister, 2009). Osteonal bone is "bone tissues composed of tiny chalky tubes with an arteriole running down the middle and circular laminations of bone centric with an artery," (Elsevier, 2009). In Figure 3, the Haversian canals can be seen as black circles surrounded by osteons created by the lamellae.

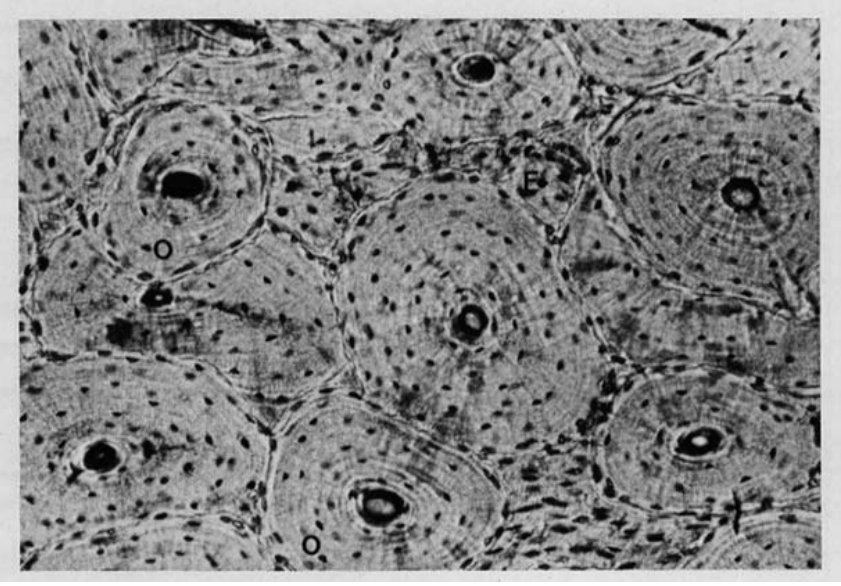


Figure 3: Haversian Canals in Cortical Bone
(Source: Newton, 1985)

At the second level of plexiform bones, layers of lamellae structures alternate with non-lamellar structures (Hollister, 2009).

As the levels increase the information becomes less qualitative because is become difficult to separate and measure properties at such a small level. The third structure consists of two basic structures, lamellar and woven. Both of these contain type I collagen, but the way the collagen is organized differentiates them. Woven bones have collagen fibers that are organized randomly and loosely packed. The collagen in lamellar bones has a distinct pattern, and provides more strength and requires a longer time to form (Hollister, 2009).

Finally in the fourth level of cortical bones the collagen fibrils are packed together. Between the packs of fibers often there are gaps. The purpose or orientation of these gaps is still up for debate. In these gaps it is known that mineral crystals form, which create mineral plates. The orientation of these plates is dependent entirely on the orientation of the fibers.

Trabecular bone, also referred to as cancellous or spongy bone, is found at the end of long bones, and inside vertebrae. The hierarchical structure of this bone can be found below in Table 2.

Table 2: Cancellous Bone Structure Organization
(Hollister, 2006)

Cancellous Bone Structure Organization			
Level	**Structure**	**Size Range**	**ŋ**
0	Solid material	> 3,000 µm	-
1	Secondary Trabeculae Primary Trabeculae Trabecular Packets	75-200 µm	< 0.1
2	Lamellae Lacunae Cement Lines Canaliculi	1-20 µm	< 0.1
3	Collagen- Mineral Composite	0.06-0.4 µm	< 0.1

Trabecular bones comprise only 20% of the human skeleton's weight, while cortical bone makes up the other 80% (Britannica, 2010). Trabecular bone however has a much larger surface area. This is due to the difference between the two types of bone in the first level structure where it can be seen that the trabecular bone is significantly more porous then cortical bone. Trabeculae form the base structure of trabecular bones. Trabeculae are rod-like structures, but unlike osteons they do not have a central canal (Hollister, 2009). Another formation that can be seen at this level is trabecular pockets. These are made of multiple lamellar layers that stack at different orientation (Jasiuk, 2004).

At the second level trabecular bone contains all the same components as cortical bones, except the arrangement of the lamellae are not the same. They are not arranged concentrically, but instead longitudinally within the pockets. The third level is also believed to be equivalent to that of cortical bone (Hollister, 2009).

2.1.3 Molecular Structure

Most mammalian bones are composed of 65-70% inorganic material and 30-35% organic material. The inorganic component is composed of hydroxyapatite, which contains calcium, phosphorous, oxygen, and hydrogen (Kaneda, 2002). The structure of hydroxyapatite is depicted in Figure 4.

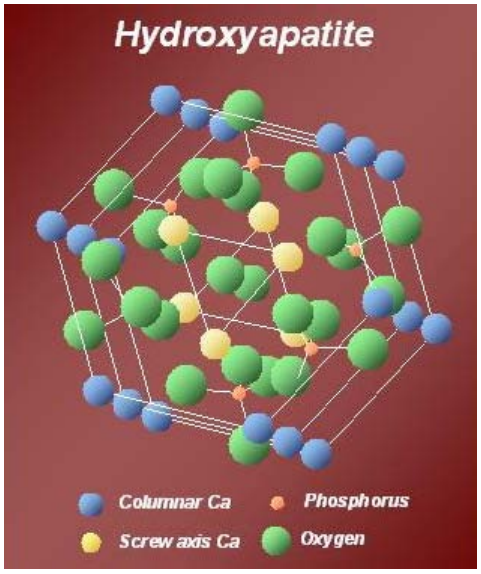


Figure 4: Hydroxyapatite Structure (Source: Kaneda, 2002)

The organic component is 95% collagen (Turek, 1985). Collagen is the fibrous protein that helps provide bones with strength and flexibility. It is also used an important component of many other tissues which can include skin and tissue. Their composition and structure of collagen fibers can be seen in Figure 5.

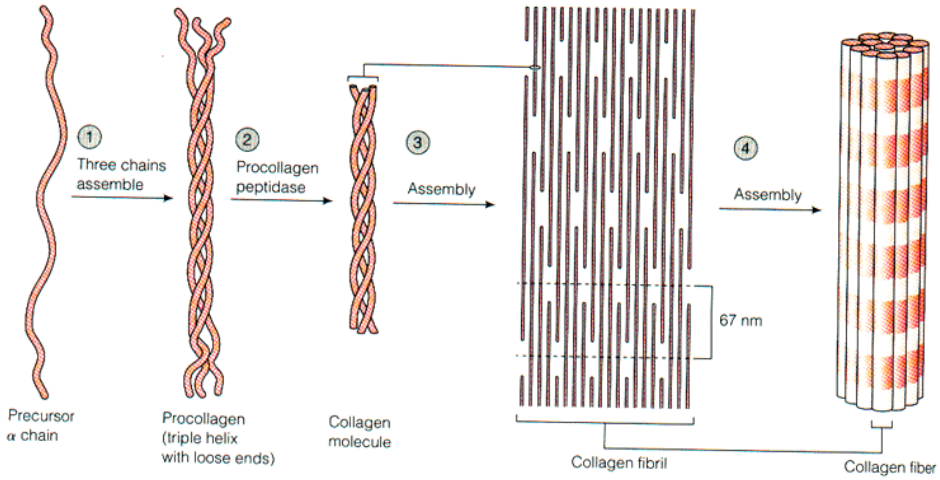


Figure 5: Composition and Structure of Collagen Fiber (Source: Berg, 2009)

2.1.4 Types and Compositions of Bones

2.1.4.1 Fish

Some of the differences that can be noted in fish bones from that of other animals are on a micro-molecular level. Fish bones contain osteoclasts that are functionally similar to mammals but they lack a ruffled border and were not multinucleated. The osteocytes of fish bones are not involved in demineralization unlike mammal bones (Weiss, 1979). Additionally, the chemical composition of fish bones varies depending on level of activity and location of habitat. Similar to that of other animals they are primarily composed of calcium, phosphorous, and collagen proteins, but some special carbohydrates and lipids can be found. Due to the high differences in lipid content it is hard to lump all fish into one category (Toppe, 2006).

2.1.4.2 Bird

Birds have lighter bones in comparison to mammals. They generally contain less compact bone, and the trabecular bone contains more air bubbles (Forrestt, 2008). Chemically the structure is the same as mammal bones but the structure is less dense. The outer shell of the bone, which is the compact bone, is thinner (Greiner, 2005).

2.1.4.3 Mammal

Most mammal bones are similar to one another. One of the only differences that can be seen from species to species is the presence of plexiform bone. The plexiform bone is created during the growth of large animals such as cows and sheep. Plexiform can be created quickly and hold a large mechanical load for a long amount of time (Hollister, 2009). The density is comparable in mammal bones, depending on location in the body and what percentage of the body weight the bones are bearing (Poumarat, 1992).

2.1.5 Mechanical Properties

The exact mechanical properties of bone is difficult to determine as these properties depend on the specimens' age, health, and whether the bone has been dried or kept wet. Also, cortical bone is an anisotropic material, which means that its mechanical properties vary depending on the direction of the loading conditions ("Mechanical Properties of Bone", n.d.).

There have been several studies conducted to determine the Modulus of Elasticity of bone, which were all conducted using different testing procedures, as mentioned in The Journal of Bone and Joint Surgery (Reilly & Burstein, 1974). The tests conducted used several different bone sample sizes and geometries, different type of loading and loading directions, and different types of bone taken from various parts of the body. Each test determined a different Modulus of Elasticity ranging from 6 GPa to 24.5 GPa for human, and 6.05 GPa to 24.5 GPa for bovine bone. Similarly, this article also discusses Poison's Ratio and the Shear Modulus, which ranged from 0.08-0.45 for human and 0.28-0.482 for bovine, and 0.31 GPa for human and 0.54 GPa for bovine bone, respectively. Although this article involves many factors in determining the mechanical properties of bone, the The Engineering Toolbox simply states that the Modulus of Elasticity and the Ultimate Tensile Strength for bone are 9 GPa and 170 MPa, respectively.

Another factor that the mechanical properties of bone depend on is age. In Figure 6, taken from the European and International Federation of Dental Technician Laboratory Owners website, the properties of several age ranges are shown.

	Age (years)						
Property	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80
Ultimate strength (MPa)							
Tension	114	123	120	112	93	86	86
Compression	-	167	167	161	155	145	-
Bending	151	173	173	162	154	139	139
Torsion	-	57	57	52	52	49	49
Ultimate strain (%)							
Tension	1.5	1.4	1.4	1.3	1.3	1.3	1.3
Compression	-	1.9	1.8	1.8	1.8	1.8	-
Torsion	-	2.8	2.8	2.5	2.5	2.7	2.7

Figure 6: Ultimate Strength and Ultimate Strain of Cortical Bone from the Human Femur as a Function of Age (Source: European and International Federation of Dental Technician Laboratory)

As displayed, the age for the peak Ultimate Strength of bone is during 20-30 years of age. After this age, the strength of bone decreases.

In human cortical bones it has been found that most cracks are loaded under what are defined as mixed mode conditions, which can be create by the shape of the bone, and the orientation of cracks with respect to the loads being applied. When a crack is created the application of mixed-mode loading that accumulates at the crack tip will affect the direction of the crack path. In anisotropic materials in particular, the crack movement results from competing between the path of maximum mechanical driving force and the path of least resistance (Zimmermann, 2007).

Crack configurations in bone originate due to its structure. Bone is a composite of collagen and hydroxyapatite which are oriented longitudinally as osteons. In human cortical bones, the preferred microstructural path is along the longitudinal direction. Microcracks occur frequently along the osteon boundaries which are oriented along the long axis of the bone (Zimmermann, 2007).

Launey's study on elk antlers also supports the results from the Zimmermann study. The microstructure of an elk's antler is comparable to that of a human humerus. It is a bone comprised of osteons surrounded by concentric bone lamellae (Launey et. al., 2009).

The antlers exhibited the highest toughness of any biological material to date, however when tested in their longitudinal directions they are significantly weaker. In all situations the antlers proved to be stoner than human cortical bones, but always reach steady state after a period of time. Both antler and cortical bones build toughness as cracks propagate by crack deflection/twisting and the crack bridging process. Both of these are caused by microcracking, which can be seen using ESEM techniques (Launey et. al., 2009). The microscopic cracks can be seen below in Figure 7.

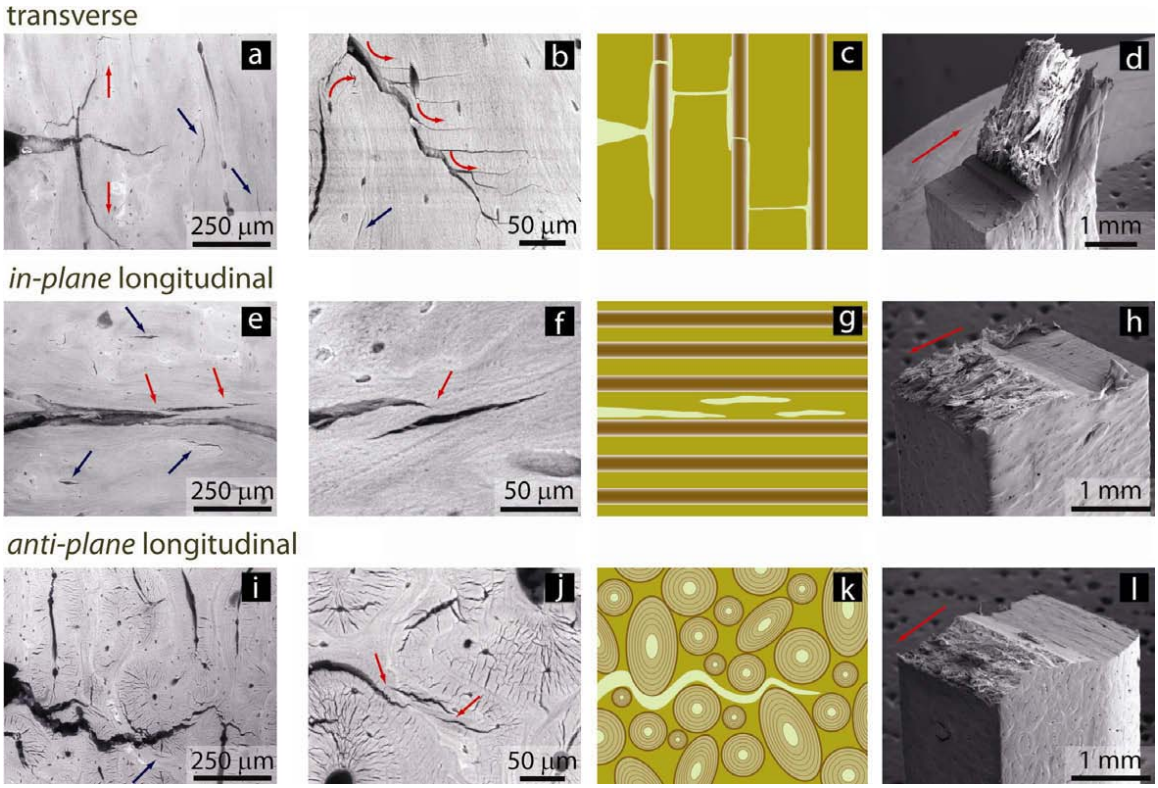


Figure 7: ESEM of Fracture in Bone
(Source: Launey, et al., 2009)

There are five different heat-induced fracture mechanisms in bone, including:

1. Patina fractures are surface fractures which do not penetrate to the cavity of the bone.

2. Longitudinal fractures follow the long axis of the bone and can penetrate to the marrow cavity.
3. Curvilinear fractures surround the long bone shaft and occur from one side of the bone to the other.
4. Transverse factures are perpendicular to the longitudinal fracture.
5. Delamination fractures manifest as the flaking or peeling of layers from the bone.

Any of a combination of these fractures can occur in bones that have been exposed to thermal stresses (Fairgrieve, 2008).

Hardness is a measure of the resistance of a material to being penetrated by an indenter (Rho, 2001). Vickers and Knoop microhardness testing are both commonly used for bone as well as materials designed to imitate bone (Dall'Ara, 2007, Boivin, 2008, Schulze 2003, Yin, 2009). According to Blau, Vickers hardness is more suitable because the symmetrical indenter is more suitable for multiple tests on a small sample, and smaller loads can be used because there is less elastic recovery with Vickers hardness than with Knoop hardness (1986).

Vickers hardness involves indenting a material with pyramid-shaped diamond. The Vickers hardness value (HV) is then calculated using Equation 1.

Equation 1: Vickers Hardness Formula

$$HV = \frac{KP}{L^2} \qquad (1)$$

The variable P is the applied load, L is the diagonal length of the indentation, and K is a constant equaling 1.854 (Rho, 2001). The applied load can range from less than 1 N to greater than 1000 N, and is chosen depending on the material being tested.

Dall'Ara evaluated several different conditions for measuring Vickers hardness of human femur bones (2007). Hardness values were measured and compared for wet, dry, and embedded bone. It was

found that hardness values were lowest for wet bone and highest for embedded bone. It was concluded that testing hardness under wet conditions best represents human cancellous bone.

In Dall'Ara's study, samples were initially polished with increasingly fine sandpaper, up to 2000 grit. They were then polished using "a napped cloth impregnated with diamond pastes" starting with 6μm and going down to 1μm. The load was applied for 15 seconds. Figure 8 shows indentations on the human cancellous bone after polishing in the Dall'Ara study. A 100 gf load is shown on the far left and a 10 gf load is shown on the right. A load of greater than or equal to 50 gf caused chipping of the bone in some tests. Dall'Ara therefore concluded that a load of 25 gf was most ideal for hardness testing of human cancellous femur bone. This load results in the largest indentation without any chipping. It is important to note, however, that this study involved human, not chicken or bovine, bone.

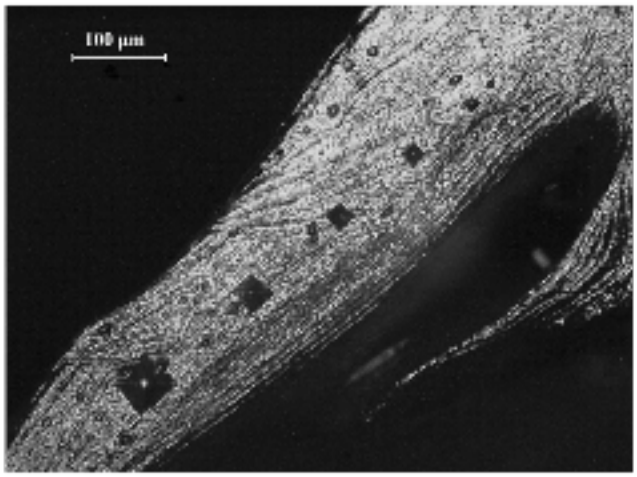


Figure 8: Vickers Indentations on Human Cancellous Bone, with Load Varying Between 100 gf (left) to 10 gf (right) (Source: Dall'Ara 2007)

From what can be seen in Figure 8, it does not appear that there are cracks radiating from the corners of the indentations. However, it is possible that this image does not show that area at a high enough magnification to see such small cracks.

The measured hardness values in Dall'Ara's study of human cancellous bone were 32.9 HV (wet), 35.1 HV (dry), 44.6 HV (embedded). Different animal sources would be expected to yield different hardness values. Additionally, hardness values should differ between cortical and cancellous bone.

Boivin also performed Vickers hardness tests on human bones (532). A Vickers indentation is shown in Figure 9, along with two Knoop indentations. Similarly to Dall'Ara, no radiating cracks can be seen originating from the Vickers indentation.

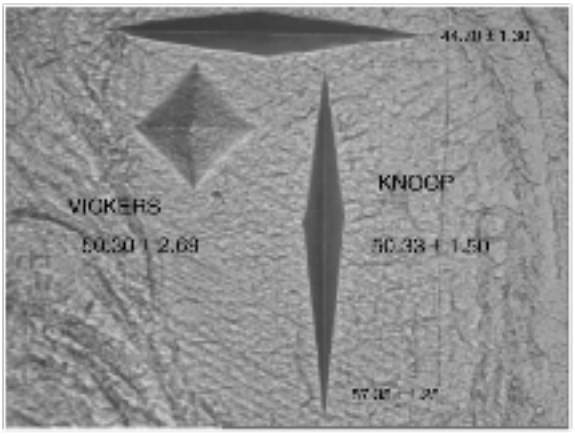


Figure 9: Human Bone Sample with Vickers and Knoop Hardness Impressions (Source: Boivin, 2008)

Schulze investigated the changes in microhardness of several dental composites that had undergone accelerated aging (2003). It was found that after accelerated aging, the Knoop hardness increased between 5% and 40%, depending on the composite. Because dental composites are designed to have similar properties to bone, and increase in hardness would also be expected with aged natural bone.

Wang discusses potential issues with traditional Vickers and Knoop microhardness testing. Most importantly, the traditional loads in Vickers microhardness testing (usually 10 to 500 g) can be too high for a brittle material cause chipping or fracture. If this is the case, nanoindentation can be beneficial, because the indentation is much smaller (2004).

Yin performed Vickers hardness testing with various loads on lamb femurs. It was found that the hardness value increased with the applied load when the load was between 0.245 N and 0.49 N. When the load was greater than 1.96 N, the hardness was not related to the load (2009). Therefore, it is important to use a standard indentation force for all samples so that hardness values may be directly compared.

Figure 10 shows a lamb femur with a 9.8 N Vickers indentation. There are no cracks radiating from the corners of the indentation.

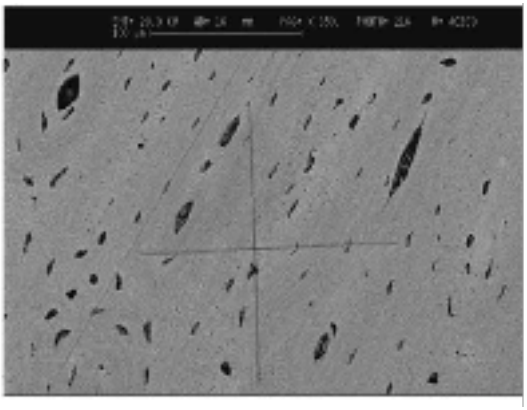


Figure 10: Indentation with 9.8 N Load. The shown Scale is 100 µm (Source: Yin 2009)

2.2 Thermal Effects

As bone is exposed to high temperatures, its composition is changed. The proteins in bone will undergo a process of denaturation (Fairgrieve, 2008). The higher the temperature, the more changes occur. A summary of the changes that occur can be found in Table 3.

Table 3: Summary of Heat Effects on the Structure of Bone
(Source: Fairgrieve, 2008)

Temperature (°C)	Effect on Bone
300-500	The water in the bone is removed, excluding the water found in apatite crystals
600-700	The carbon dioxide contained within the bone matrix is removed
> 700	Water is removed from apatite crystals, Carbon dioxide is formed
> 800	Bone shrinks by 30% due to recrystallization and crystal fusion

When the bone loses its water make-up, or becomes dehydrated, the mass of the bone decreases (Thompson, 2004). Another study that proved this concept was performed by Hiller et al. This experiment was performed by defleshing and heating sheep bone at temperatures ranging from 500°C to 900°C. It was found that the percent weight loss ranged from approximately 30% at 500°C to 50% at 900°C, when the bone was exposed for 15 minutes. This experiment also determined that the bone crystallites begin to alter during the first 15 minutes of heating the bone in the aforementioned temperature range (Hiller et al, 2003).

2.2.1 Physical Properties

Color has long been utilized to identify thermally modified bones from archaeological sites. Fresh bones generally profess from brown through to black, and then become grey blue white, and progress to white as the temperature increases. In archaeology the color changes could not be used to separate fleshed and defleshed remains however, as both turned white blue grey on calcination (Asmussen, 2009).

Color change can largely be attributed to a sequential decomposition of the organic and inorganic materials in bone as the temperature increases. The majority of defleshed bones directly

exposed to hearth fires in archaeology are found to display a more uniform color distribution (Asmussen, 2009). This is in agreement with the current findings in forensics. A recent experiment called attention to the fact that soft tissue can protect the bone and display a sequence of calcined, charred, border, and heat line zones which can help differentiate bones burned with flesh on and those burned as dry bones (Ubelaker, 2009).

Nicholson's experiments suggest that macroscopic changes happen in the bones. At 200°C the bones begin to show a greasy appearance and moving up to between 300°C and 500°C the bones begin to char and take on a tar like appearance. At 400°C the surfaces become flat and granular, and when the temperature is raised to between 500°C and 700°C the surfaces become powdery. Finally between 800°C and 900°C the bones become chalky and smooth (Nicholson, 2007). These surface changes combine with the color changes that occur to create distinctive phases between 200°C and 900°C (Fairgrieve, 2008).

In the study of forensic cremation it has been found that bones reach the color back around 300°C, and begins to lighten back to gray at 600°C. The color changes are indicators that the minerals are leaching out and when the bone returns to white again at 800°C it is the end point. At 800°C the structure of the lamellar structure is almost indistinguishable and the only thing to remain is hexagonal like crystals (Fairgrieve, 2008). Walker and Miller (1999) began to make associations between the amount of collagen content remaining. When bones have become completely white again this is known as the calcinated stage, which is the extreme of bone recrystallization (Fairgrieve, 2008).

2.2.2 Mechanical Properties

There have been many studies conducted relating the effects of temperature and the mechanical properties of bone. One such study examined both freezing and boiling of bovine bone. For the freezing bone experiments, bovine trabecular bone was frozen at temperatures of -20°C and -70°C for eight days, had eight consecutive freeze-thaw cycles at -20°C, and freeze dried. For the high

temperature experiments, the bovine bone samples were boiled for 30 minutes or autoclaved at 137°C for 10 minutes (Borcher et al, 1995). The results of the experiment indicated that freezing the bone had no significant changes to the mechanical properties. However, both boiling and autoclaving the bone samples decreased the mechanical integrity of the bones, as shown in the summary of results in Figure 11.

Property	Control ($n = 24$)	$-20°C$ ($n = 24$)	$-70°C$ ($n = 24$)	Freeze-dried ($n = 23$)	Repeat $-20°C$ ($n = 24$)	Boiled ($n = 24$)	Autoclaved ($n = 23$)
Modulus (MPa)	645(386)	784(567)	695(502)	596(422)	727(540)	486(322)	345(256)
Strength (MPa)	10.2(6.0)	10.1(6.5)	9.7(6.6)	10.2(6.6)	10.5(8.6)	6.9(4.4)	5.3(4.1)
Apparent density ($g\ cm^{-3}$)	0.48(0.13)	0.47(0.15)	0.44(0.14)	0.48(0.19)	0.48(0.17)	0.46(0.14)	0.50(0.19)

Figure 11: Results of Thermal Variables on the Mechanical Properties of Bone (Source: Borcher et al, 1995)

Another study conducted related the collagen denaturation to the thermal effects on the mechanical properties of bone. Twelve samples were heated at each interval up to 200°C and were tested to calculate its mechanical properties and collagen denaturation. It was found that the toughness and strength of the bone decreased as the temperature and collagen denaturation increased. It was also noted that the temperature and collagen denaturation had no significant effect on the elastic modulus of bone, as there was no clear trend to the data collected (Wang et al, 2001). A summary of the results is found in Table 4.

Table 4: Collagen Relation to the Thermal Effects of Mechanical Degradation of Bone (Source: X. Wang et al, 2001)

T (°C)	E (GPa)	σ_S (MPa)	σ_y (MPa)	W_f (N/mm)	W_{fe} (N/mm)	W_{fp} (N/mm)	DC (%)
37	11.2 ± 1.8	194 ± 21	154 ± 13	12.7 ± 3.2	2.74 ± 0.71	10.9 ± 3.4	8.8 ± 2.5
60	13.0 ± 2.4	203 ± 31	140 ± 17	14.1 ± 5.3	2.44 ± 0.42	11.7 ± 5.0	7.6 ± 2.3
90	13.1 ± 2.0	199 ± 28	146 ± 21	14.5 ± 3.2	2.64 ± 0.47	11.9 ± 2.8	8.8 ± 2.5
120	11.8 ± 2.0	209 ± 22	157 ± 17	14.7 ± 4.9	3.42 ± 0.63	11.3 ± 5.4	10.8 ± 2.6
160	11.3 ± 2.2	200 ± 29	159 ± 21	10.9 ± 2.6	3.57 ± 0.56	7.4 ± 2.3	53.5 ± 7.6
170	10.1 ± 1.8	157 ± 14	89 ± 7.0	7.9 ± 1.6	2.93 ± 0.288	5.0 ± 1.4	59.8 ± 4.8
180	11.5 ± 2.2	115 ± 17	85 ± 14	3.2 ± 0.7	1.22 ± 0.38	2.0 ± 0.9	82.8 ± 9.5
190	12.6 ± 1.1	71 ± 7.0	72 ± 7.0	0.6 ± 1.1	0.61 ± 1.1	0.0 ± 0.0	92.7 ± 4.6
200	9.1 ± 1.7	47 ± 4.0	47 ± 4.0	0.3 ± 0.1	0.3 ± 0.1	0.0 ± 0.0	95.0 ± 3.0

T: temperature; E: elastic modulus; σ_S: ultimate strength; σ_y: yield strength; W_f: work to fracture

W_{fe}: elastic portion of W_f; W_{fp}: post-yield portion of W_f; %DC: the percent of denatured collagen

From the studies conducted, it can be concluded that high temperatures have a significant effect on the mechanical integrity of bone, most notably, the strength of the bone.

2.3 Aging of Bone

2.3.1 Structure Change of Aged Bones

Figure 12 shows an image of a transverse section through a boiled sheep metacarpal that was buried in pH neutral soil for seven years in a study by Nicholson (1996). Figure 13 shows a boiled sheep metacarpal section that was buried in acidic soil (pH approximately 3.5 to 4.5) for the same amount of time. Clearly the burial environment has a large impact on the bone structure. The sample buried in an acidic environment shows large cracks around the osteons. According to Nicholson, the dark areas on Figure 12 indicate osteoporosis, and were not caused by the aging experiment.

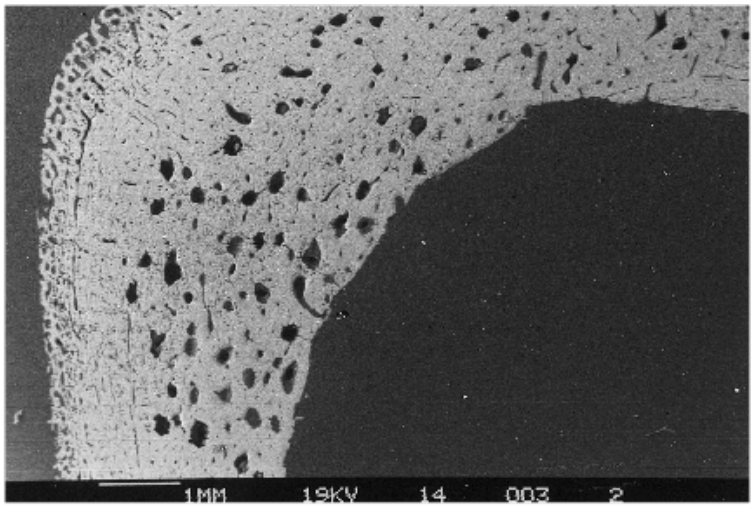


Figure 12: Sheep Metacarpal After Burial in pH Neutral Soil for Seven Years (Source: Nicholson, 1996)

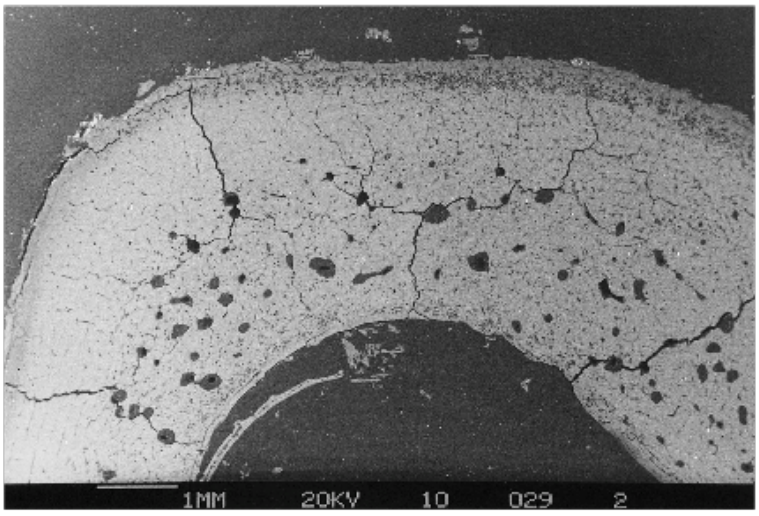


Figure 13: Sheep Metacarpal After Burial in Acidic Soil for Seven Years (Source: Nicholson, 1996)

In addition to sheep, the Nicholson study also included various parts of cattle, rats, pigeons, cod, plaice, herring, and whitefish. In neutral soil, the study found that pigeon buried with flesh (and feathers) intact was uneroded and greasy. At the same site, the cattle, sheep, and rat bones (buried with flesh intact) had significant bone loss. Nicholson explained this result by the differences in structure between mammals and birds; essentially a pigeon femur is almost completely composed cortical bone, while mammal bones contain more cancellous bone than bird bones. Nicholson hypothesized that the

porous structure of cancellous bone encouraged invasion by microorganisms such as fungi, which increase the rate of degradation.

Nicholson's study also evaluated differences between bones buried with flesh intact versus defleshed. In all but one of the types of fish, the defleshed bones degraded more rapidly than fleshed bones. Nicholson explained this result by presuming that micro-organisms had easier access to the bone when there was no flesh over it. According to Mant, similar results have been found in buried human corpses (1987).

2.3.2 Mechanical Properties of Aged Bones

A study by Wynnyckyj in 2009 compared collagen loss to mechanical properties of emu leg bones. As collagen makes up the majority of the organic matrix, collagen loss can represent bone degradation over time. Collagen loss up to 0.05 percent was obtained with a potassium hydroxide treatment over 14 days. CT analysis of the bones showed that cross sectional area of the cortical bone remained unchanged during collagen loss. However, as shown in Figure 14 and Figure 15, the modulus and strength in three-point bending both decreased as collagen was removed. Additionally, the toughness increased with collagen removal, as shown in Figure 16. It can be expected that similar results would be obtained with natural bone aging.

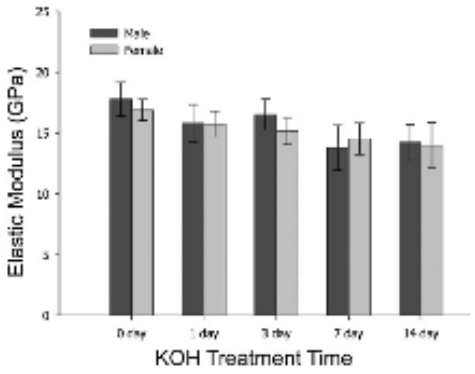


Figure 14: Elastic Modulus of Emu Legs Versus KOH Treatment Time (Increasing Collagen Loss) (Source: Wynnyckyj, 2009)

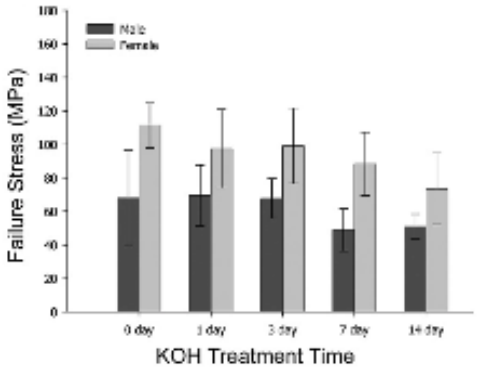


Figure 15: Failure Stress of Emu Legs Versus KOH Treatment Time (Increasing Collagen Loss) (Source: Wynnyckyj, 2009)

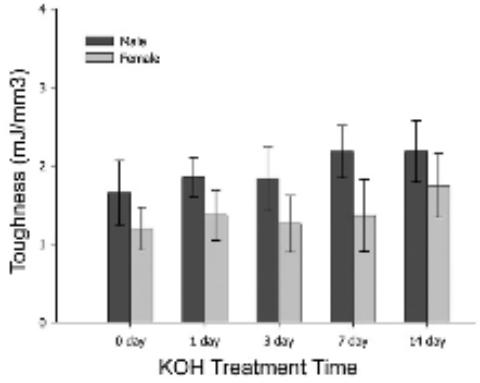


Figure 16: Toughness Of Emu Legs Versus KOH Treatment Time (Increasing Collagen Loss) (Source: Wynnyckyj, 2009)

2.4 Summary

As discussed in the previous sections, there have been many studies conducted regarding the aging and thermal effects on bone. It was found that the mechanical integrity and structural composition of bone changes with age, heat, and decomposition. There is considerable information available that focuses on a single species or property; however, there is an insufficient amount of information encompassing multiple concepts. Additionally, it was noted that the degradation characteristics of fleshed and defleshed bones has not been fully researched. This lack of information was addressed by this project.

3 Objectives

The following objectives have been defined for this project:

1. Study the effects of accelerated aging on the properties of bone including fracture mechanisms, color, flexural modulus and strength, hardness, and mass loss.
2. Compare the differences in property changes between fleshed and defleshed bones that have been aged under the same environmental conditions.
3. Compare the difference in property changes between bovine and chicken bones that have been aged under the same environmental conditions.
4. Use thermal induced color changes to show similar composition to other bones.
5. Compare findings with documented results from publications and studies.

4 Methodology

4.1 Overview

The experimental portion of this study spanned a fourteen week period. During this time, fourteen fleshed and fourteen defleshed bovine bones and chicken bones were buried in soil. In order to simulate approximately 1.25 years of burial, accelerated aging was used in this study due to time constraints. The system was heated and held at 65°C and 53°C for chicken and bovine respectively in closed convection ovens. At weekly intervals, one fleshed and one defleshed bone from each chicken and bovine was removed from the oven. The bones were then analyzed for color changes, crack propagation, and other mechanical or physical effects. The changes were summarized to develop relationships that will aid in predicting similar types of changes.

4.2 Bone Type

The types of bones chosen for use in this study were chicken legs and bovine ribs. Multiple sources have pointed toward bovine, sheep, and pig bones being the most suitable candidates for studies attempting to mimic the properties of human bone (Kaneda, 2002, Poumarat, 1992). For this study, size constraints and the desire to obtain scrap material from butchers at little or no cost were the driving factors for the decision to use bovine bones.

Initially, it was planned to use whole bones from the lower leg of a pig, as pig bones have been shown to be very similar to human bone (Mortensen, 2007). However, after contacting multiple slaughterhouses and butchers it became apparent that obtaining pig legs would be difficult and expensive.

It was then decided to use to use bovine shins. However, at approximately 16 inches long, the bones were significantly larger than the available ovens, which had a depth of only approximately 12 inches. Attempts were made to clean the bones of the residual flesh and then cut them into

manageable pieces that would fit within the ovens. The first two attempts to clean the bovine bones were unsuccessful and lab was not equipped to handle the bloody water and potential biohazards. A depiction of this issue is shown in Figure 17. This idea was discarded as unfeasible.

Figure 17: Soaking the bovine shins in warm water in an attempt to remove the flesh

Looking into bovine bones that were available on a regular basis from a local butcher it was decided ribs would be the best choice. The ribs were the appropriate size for the ovens considering the number of samples to be used. It was also decided to use chicken legs as a comparison. Chicken bones are not extremely similar in composition to human bones (Mortensen, 2007), but they allowed conclusions to be drawn about how composition affects bone property changes.

In order to more fully understand the degradation of bone, both fleshed and defleshed bones were used in this experiment. This enabled documentation of crack propagation in the specimens, and also allowed differences between the degradation patterns of fleshed and defleshed bone to be

observed and recorded. This will allow the data from this experiment to be used in a wide range of applications.

4.3 Bone Preparation

Twenty-eight bones of each chicken legs and bovine ribs that were roughly the same size were obtained. Fourteen of each type of bone was defleshed, and fourteen were left with flesh intact. For clarification, the bones used in this study are represented in Figure 18.

Figure 18: Types of Bones Used In Accelerated Aging Study

According to Rennick, cleaning bone samples with detergent has resulted in success in removing the greasy feel from the bone without changing color, damaging the DNA, or degrading the bone (2005). However, this method caused the flesh to become too slippery to grasp and was discarded as inefficient.

The bones were therefore defleshed using serrated knives to manually peel away the flesh and tendons from the bone. This removed the possibility of damage to the bones due to chemicals or heat. The bone marrow was not removed, as there was no way to do this without causing damage to the structure of the bones. One of each type of bone used in the study (fleshed and defleshed, chicken legs and bovine ribs) is shown in Figure 19 and Figure 20.

Figure 19: Example of Chicken Leg Bones Used In Accelerated Aging Experiment. Left: Fleshed; Right: Defleshed.

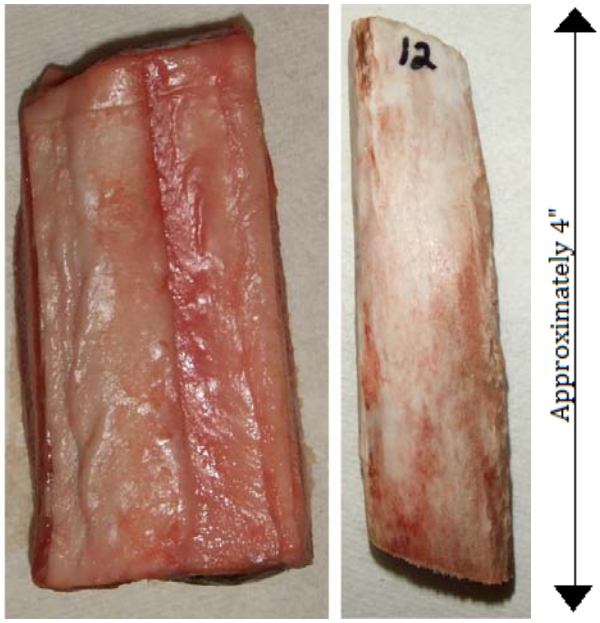


Figure 20: Example of Bovine Rib Bones Used In Accelerated Aging Experiment. Left: Fleshed; Right: Defleshed.

4.3.1 Initial Data Acquisition

Prior to burial the bones were examined for surface cracks, and the initial color was recorded with a camera. The mass of each bone (both fleshed and defleshed) was measured and recorded prior

to burial. The width of the defleshed bones was also recorded. The width measurement was made at approximately the narrowest section of the bones. This location of measurement was marked on the bone so that the change in width after burial could be consistently compared. An example of how the bones were marked for width measurements is shown in Figure 21.

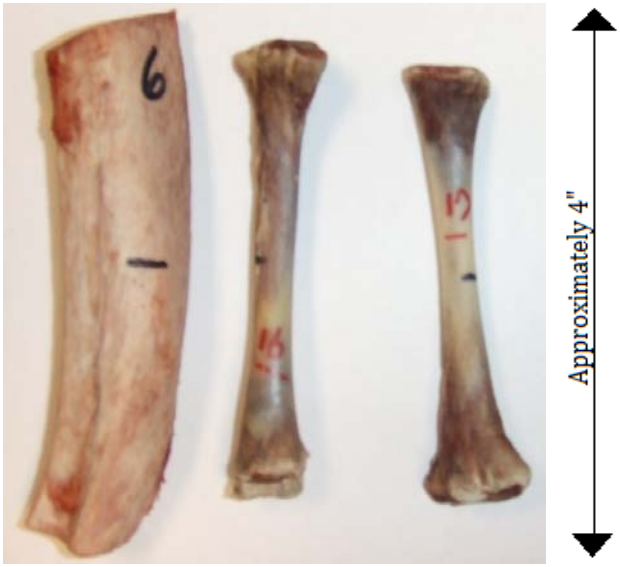


Figure 21: Markings on Bone to Ensure Consistency in Width Measurements

4.4 Accelerated Aging

4.4.1 Environment

Soil was brought in from West Brookfield, Massachusetts from a location where a tree had recently come down. This soil was rich in nutrients and had the minimal amount of clay. The acidity of the soil was measured using AccuGrow Soil Test Strips to ensure that the soil had a relatively neutral pH. The bones were buried in the dirt, keeping the fleshed and defleshed bones in separate containers to avoid contamination from the decomposing flesh. The bones were buried so that there is an equal amount of soil on top as on bottom, and spaced evenly apart in the pan. Aluminum baking pans were chosen because they optimized space and could withstand the environment within the convection oven for an extended period of time. The weeks that the bones were to be removed were indicated on the

outside rim of these pans with a permanent marker. The defleshed chicken bone pan is shown in Figure 22. This photograph was taken before the final layer of soil was placed over the bones.

Figure 22: Defleshed Chicken Leg Pan, Before Adding Top Layer of Soil

4.4.2 Arrhenius Equation

To calculate the time and temperature needed for the accelerated aging experiment, a modified Arrhenius equation was used. Originally, the Arrhenius equation relates the rate constant of a chemical reaction to its temperature and activation energy, as shown in Equation 2.

Equation 2: Arrhenius Equation

$$k = A \cdot e^{\frac{-Q}{R \cdot T}} \qquad (2)$$

- k, the rate constant (s-1)
- A, constant (s-1)
- Q, activation energy (kJ/mol)
- R, universal gas constant (8.314·10-3 kJ/mol·K)
- T, temperature (K)

However, this equation can be modified to determine the time required to conduct an accelerated aging experiment, as shown in Equation 3.

Equation 3: Modified Arrhenius Equation for Accelerated Aging

$$t_2 = t_1 \cdot e^{\left[\frac{Q}{R}\left(\frac{1}{T_2}-\frac{1}{T_1}\right)\right]} \quad (3)$$

- t2, accelerated aging time (s)
- t1, desired time (s)
- Q, activation energy (kJ/mol)
- R, universal gas constant (8.314·10-3 kJ/mol·K)
- T1, desired temperature (K)
- T2, accelerated aging temperature (K)

In order to calculate the required time for the accelerated aging experiment, the activation energy of chicken bone and bovine bone was first found. It was determined that the activation energy of chicken was approximately 32 kJ/mol (Mano, 2005) and is approximately 44.3 kJ/mol for bovine bone (Kirchner, 2005).

Next, the desired temperature (T_1) was chosen to be 25°C as it was assumed that the original aging of the bones was conducted at room temperature. An accelerated aging time of 14 weeks was chosen as this time spanned nearly half of the allotted time to conduct this experiment from start to finish.

Since micro-organisms play an important factor in decomposing bodies, and can live up to a temperature of 70°C (Aggie Horticulture), the accelerated temperature (T_2) was determined not to exceed 65°C in the hopes that micro-organisms would assist in the accelerated aging process. The accelerated aging time was then calculated. Using the activation energy of chicken, as its value is significantly lower than that of bovine bone, and the accelerated aging temperature of 65°C, this value was determined to be 1.25 years. After determining the t_1, t_2, T_1 values, the accelerated aging

temperature for the bovine bones was calculated, which resulted in a T_2 value of 53°C. A summary of the values required for the accelerated aging experiment are shown in Table 5.

Table 5: Summary of Accelerated Aging Variables

Arrhenius Equation Variable	Chicken Bone	Bovine Bone
t_2, Accelerated aging time	1.25 years	1.25 years
t_2, Desired time	14 weeks	14 weeks
Q, Activation Energy	32 kJ/mol	44.3 kJ/mol
T_1, Desired Temperature	25ºC	25ºC
T_2, Accelerated aging temp	65ºC	53ºC

4.4.3 Burial

At this point, two convection ovens from the lab were placed in a ventilated hood and set to 65°C for the chicken and 53°C for the ribs. The convection oven was chosen for its ability to maintain temperature, a relatively constant environment, and a lack of light or other influencing factors. When the oven reached the proper temperature the 5 pans were put inside. The oven setup for the chicken bones is shown in Figure 23, and the set up for the bovine ribs was similar. Both of the ovens were monitored with external thermometers as well as the digital readout or dial located on the front. Heat is very important to monitor during the experiment, if the temperature is not maintained the bones could experience thermal shock and the experiment would have to be restarted.

Figure 23: Chicken Leg Pans in Convection Oven

Every week one fleshed and one defleshed bone was removed from the oven. The container was not removed completely from the oven. In an attempt to both let out the smallest amount of heat possible and prevent thermal shock to the bones, the oven was opened and one group member wearing gloves would remove the bone and transfer it quickly to a separate furnace. The small furnace in the lab was heated to the temperature of the chicken convection oven. After the chicken was placed in the furnace, the furnace was turned off and the temperature would decrease slowly. When the furnace reached 53°C, the same temperature as the rib oven, the ribs would be removed from the convection oven and placed in the furnace. This allowed the bones to cool down slowly and bring the bones to room temperature with the smallest amount of thermal shock possible.

4.5 Post-Aging Testing

The bones were placed in plastic bags, labeled, and stored individually after they were removed from the soil. When all the bones were removed from the convection ovens, additional analysis, including Vickers hardness testing and high magnification optical microscopy, was performed. These results allowed us to present pictorial information that will be useful to a reader interested in forensics or other areas involving bone degradation.

4.5.1 Mass, Width, and Color Documentation

After the bones were cooled to room temperature, the mass of each bone as well as the width of the defleshed bones was recorded. The bones were then soaked in water overnight to rehydrate the bones to facilitate cleaning. Water was chosen for cleaning to impart the smallest amount of damage or color change to the bone. The bones were then cleaned by manually peeling away the flesh and using knives to pry off muscle lining where the flesh would not release from the bone. The cleaned bones were then placed in a vented hood to dry.

After cleaning, the bones were examined for cracks, color changes, and changes in other physical properties. The length of each bone was measured with a ruler as shown in Figure 24. The width at approximately the widest part of each crack was measured using the measuring feature of an optical microscope. Color changes were recorded with a camera.

Figure 24: Measuring the Length of a Crack

After these observations were made, the bones were not returned to the soil containers in the convection ovens. It is not possible to remove the flesh, examine the bones, and reattach the flesh in a manner that would not compromise the degradation properties of the bone. It is for this reason that it was chosen to remove bones weekly and study the progress in crack propagation.

4.5.2 Three-Point Bending Tests

One of the mechanical properties calculated for the accelerated aging bone samples was the flexural strength and flexural modulus. In order to calculate these values, a three-point bending test was performed with an Instron 5544 machine.

To conduct a three-point bending test, the Instron machine is set up with two supports and an indentation work piece that subjects the bone sample with a force, as shown in Figure 25.

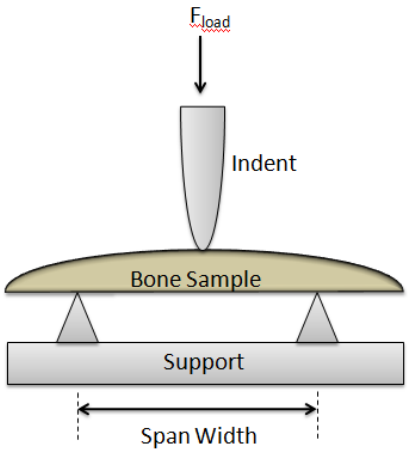


Figure 25: Three-Point Bending Setup

When setting the placement of the two supports on the Instron, the shortest bone was chosen to ensure that all the bones would fit properly on the supports. These were required to be equidistant from the indentation work piece. For both the rib and chicken samples, the support pieces were set 2.9 cm away from the indenter, for a total span width of 5.8 cm. A model of the testing setup with a chicken leg bone is shown in Figure 26.

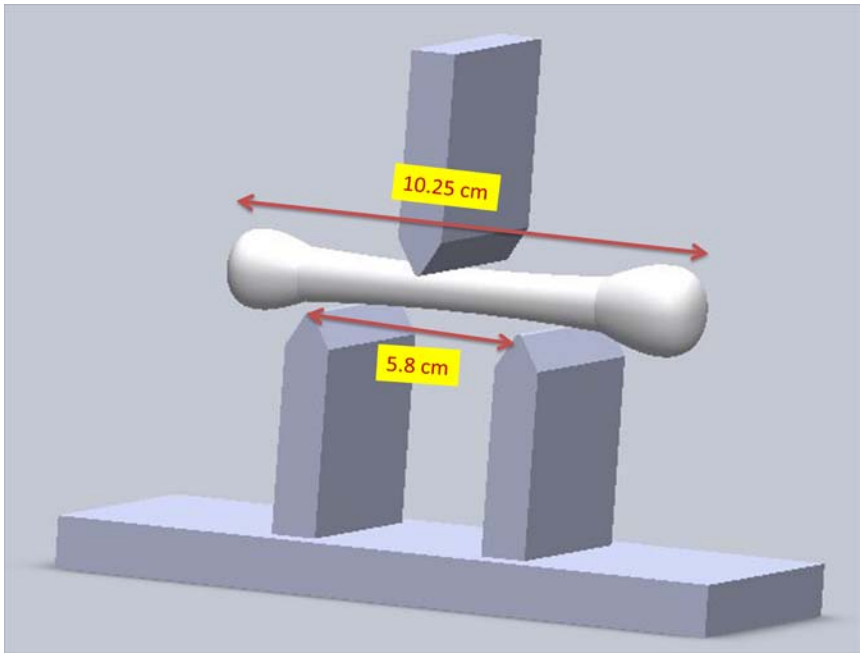


Figure 26: Instron Bending Test Setup Model with Chicken Leg Bone.

The dimensions of the bones were measured with digital calipers prior to placement into the Instron machine. The diameter of the chicken bones was measured approximately at the middle of the bone, to correspond to the location where force of the intender would be applied. Because the cross section of the ribs cannot be approximated as a circle, measurements of the thickness and width of the ribs were taken instead of diameter.

The program used to record the data was Instron Bluehill 2.14. The specific program for these measurements was written by Worcester Polytechnic Institute graduate student Edward Tacvorian, and measures the force used to break the bone versus the change in distance.

Once the bone was placed in the supports, the indentation work piece was jogged down to the bone sample until it almost made contact with the bone. At this point, the settings for force and distance were zeroed. The fine jog was then used to apply a small amount of force before starting the program which allowed the group to make sure the bone would not slide off the supports once the machine began to apply force. When running the bending test, a plastic guard was placed in front of the

machine to prevent injury due to fracture of the bones and potential projectile pieces. The Instron machine with the plastic shield in place is shown in Figure 27.

Figure 27: Instron machine with plastic safety shield. Red arrow indicates placement of bovine rib bone. Green arrow indicates the supports.

When running the Instron program, the bending piece applies force until the bone fractures. The machine then stops automatically. The strain rate for all trials was set to 20 mm/min. The maximum force of the Instron was 2000 N, which was not enough to fracture some of the bovine ribs. The data, however, was still recorded because the force and deflection was necessary for calculation of the flexural modulus. When each test was complete, the plastic shield was removed, the bender was jogged upwards, and the pieces were retrieved and returned to individual plastic bags.

This process was repeated until all 56 bones from the experiment were tested, along with 5 calibration ribs and 5 calibration chicken bones. Once the three-point bending tests were completed,

the Instron work pieces that came into contact with the bone were sterilized to prevent potential biohazards.

4.5.2.1 Flexural Modulus and Strength Calculations

All equations describe in this section are standard equations for the area moment of inertia, modulus, and strength in flexural testing. The equations come from a document by Elliot, last updated in 2009.

The chicken legs were approximated as a thick-walled cylinder, and moment of inertia (I) was calculated using Equation 4.

Equation 4: Moment of Inertia for a Thick-Walled Cylinder

$$I = \frac{\pi}{64}\left(D_o^4 - D_i^4\right) \qquad (4)$$

The variable D_o is the outer diameter of the chicken bone, and D_i is the inner diameter of the bone. The outer and inner diameters of the chicken bones were measured with standard dial calipers. The bovine rib bones were approximated as a rectangular cross section, and the moment of inertia was calculated using Equation 5.

Equation 5: Moment of Inertia for a Rectangular Cross Section

$$I = \frac{bh^3}{12} \qquad (5)$$

The variable b is the length of the base of the rectangular bone, and h is the height.

The output of the Instron Bluehill 2.14 program was a list with columns for extension (δ) and applied load (F). This data was plotted in Excel. The slope of the linear portion of the graph was then calculated in Excel, resulting in an F/d value. The standard equation is found in Equation 6.

Equation 6: Equation of Deflection

$$\delta = \frac{FL^3}{48EI} \qquad (6)$$

The variable F is the applied force, L is the distance between the supports, E is the modulus, and I is the area moment of inertia. This equation was modified to become Equation 7.

Equation 7: Equation for Elastic Modulus

$$E = \frac{F}{\delta}\left(\frac{L^3}{48I}\right) \quad (7)$$

The value F/δ comes from the data obtained during testing. This equation was used to calculate the flexural modulus.

The value for the force at fracture was obtained by finding the maximum applied load F_{max} in Excel. This value was used in the following equation to determine the flexural strength of the chicken (r_o and r_i are the outer and inner radii of the bone).

Equation 8: Flexural Strength for a Thick-Walled Cylinder

$$\sigma = \frac{F_{\max} L r_o}{\pi\left(r_o^4 - r_i^4\right)} \quad (8)$$

The flexural strength of the bovine ribs was not calculated because the maximum applied load of Instron 5544 machine was 2000 N, which was not enough to break most of the ribs.

4.5.3 Vickers Hardness Testing

Hardness testing was performed both to assess the difference between fleshed and defleshed bones as well as to study the change in hardness as the bones were aged. The samples were cold mounted in order to prevent thermal shock from affecting the bone. A section approximately one half inch thick was sliced from a bone using a Dremel. Bone sections were then individually mounted in Expoxide Resin, created by Buehler. A vacuum chamber was used to remove air bubbles from the mounted sample. After allowing a minimum of eight hours to set, the samples were removed from their plastic molds.

Prior to hardness testing, the samples were polished to provide a smooth, flat surface. The samples were sanded down using 60 grit sandpaper until bone was clearly exposed. The samples were manually polished using increasingly fine grit sandpaper up to 600 grit. This method is shown in Figure 28.

Figure 28: Manual Polishing Of Bone Samples

After this step, the samples were then placed on a Buehler Ecomet IV polishing machine, using 320, 400, and 600 grit paper, shown in Figure 29. This step ensured that the samples were acceptably flat for hardness testing.

Figure 29: Buehler Ecomet IV Polishing Machine

To produce the smoothest finish possible, the samples were precision polished with Buehler Micropolish II alumina with a one-micron particle size, shown in Figure 30. The polishing was performed on polishing wheels as shown in Figure 31. This created an acceptable finish for Vickers hardness testing. A polished sample is shown in Figure 32.

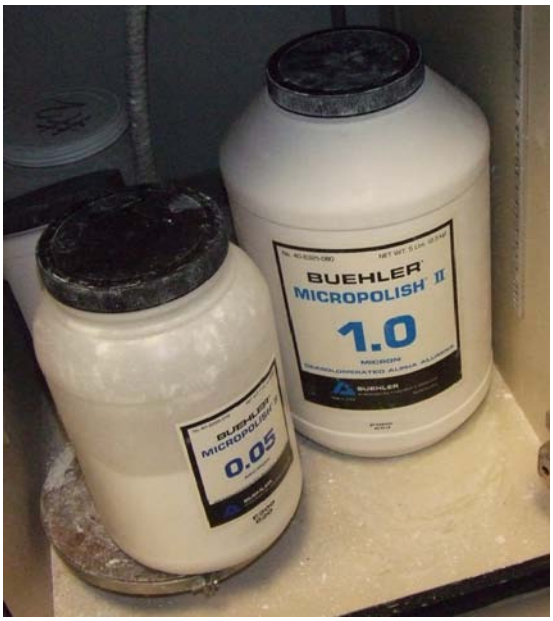


Figure 30: Buehler Micropolish II Alumina Used To Polish Samples

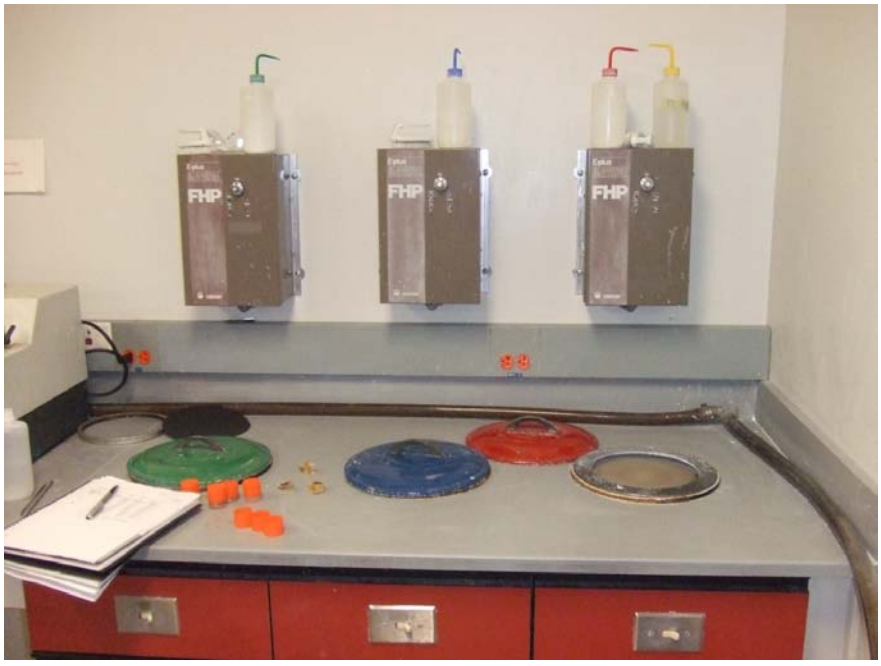


Figure 31: Polishing Wheels for Alumina Polishing

Figure 32: A Mounted, Polished Bovine Rib Sample

The bones were then tested on a Shimadzu HMV-2000 microhardness tester from Excel Technologies, Inc., which is shown in Figure 33. The applied load was set to 100 grams, and the indentation time was 5 seconds. The hardness was tested approximately 1 mm from the edge of the bone samples, and each sample was tested three times to ensure accuracy.

Figure 33: Shimadzu HMV-2000 Microhardness Tester

After removing the load, the lengths of the two diagonals of the diamond were measured using the microscope and equipment included in the Shimadzu HMV-2000 machine. The location of these measurements is shown in Figure 34. The Vickers hardness value can then be calculated using Equation 1. However, the Shimadzu HMV-2000 machine performed this calculation automatically.

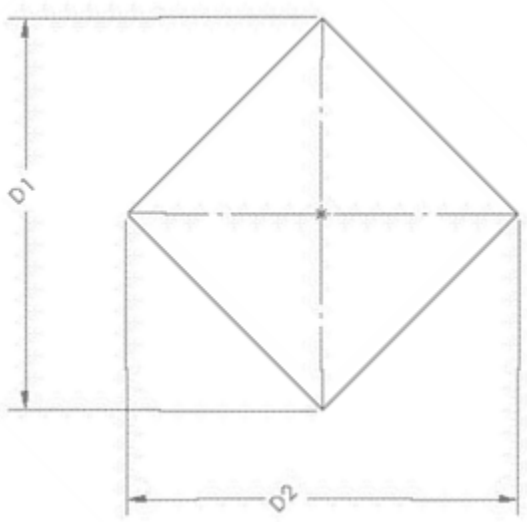


Figure 34: Diamond-Shaped Indentation from Vickers Hardness Test

4.6 High Temperature Study

Previous studies have shown that certain properties of bone change at specific temperature intervals. This includes the color changes. To prove that the bones used throughout our experiments have similar composition to ones used in prior studies, we conducted an experiment to compare the color changes that occur at various temperatures.

For this experiment, twenty-one chicken legs and seven bovine ribs were defleshed. The bones were divided into seven groups that each contained three chicken legs and seven bovine ribs. Each group represented the temperature to which the bones would be heated.

The width and mass of the bones were measured and recorded as following procedure used in the Arrhenius Equation methodology section. Photographs were taken to document the original color and appearance of the bones.

For the first group of bones, the Thermolyne 47900 Furnace was set to 100°C. A Fisher Scientific Traceable Expanded Range thermometer was inserted into the furnace to ensure accuracy of the temperature. When the furnace reached its desired temperature, the first group of bones was placed in the furnace for 30 minutes. The bones were then removed from the furnace and left to cool to room temperature. This process was then repeated six more times for temperatures of 200°C, 300°C, 400°C, 500°C, 600°C, and 700°C. After the bones had cooled, their mass and width were again measured and recorded. Photographs were also taken to document the color changes of the bones.

5 Results and Discussion

5.1 Bone Conditions Prior to Accelerated Aging Study

The appearance of the bones prior to burial is shown in Table 6. The fleshed bones are hydrated and covered completely with flesh. The chicken legs also have a layer of skin surrounding the flesh. Because these bones have not been aged, the structural integrity is intact. The color on the defleshed bones is slightly red due to the marrow contained within the bone.

Table 6: Bone Condition Prior To Accelerated Aging Study

Fleshed Chicken Leg  approximately 4 inches	**Fleshed Bovine Rib**  approximately 3 inches
Defleshed Chicken Leg  approximately 4 inches	**Defleshed Bovine Rib**  approximately 3.5 inches

5.2 Color Changes During Accelerated Aging

As the bone samples were aged for the 14 weeks, there weren't significant changes in color. For the defleshed chicken legs as shown in Figure 35, the change in color from week 1 to week 14 was minimal. The only significant change in the color is the week 14 sample appears to have a yellower hue than week 1, although this could be a result of the different lighting when the pictures were taken. The same results pertain to the fleshed chicken leg bones as shown in Figure 36.

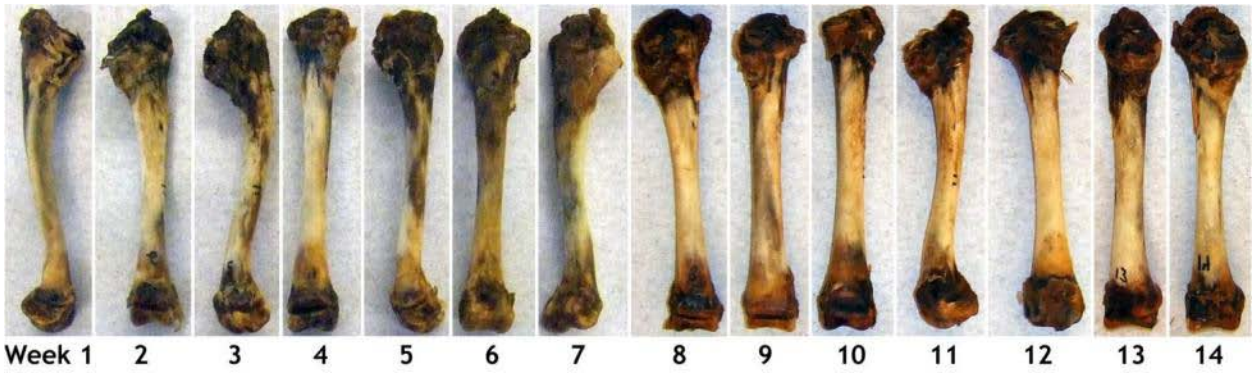


Figure 35: Defleshed Chicken Legs, Weeks 1 Through 14

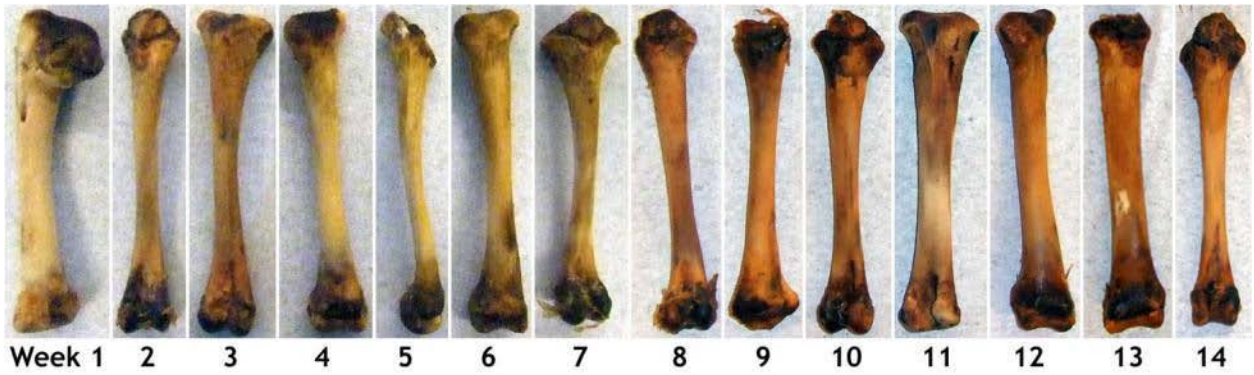


Figure 36: Fleshed Chicken Legs, Weeks 1 Through 14

Similar to the defleshed and fleshed chicken leg bones, there is no significant change in the coloring of the bovine ribs. The defleshed bovine ribs, as shown in Figure 37, all have the same coloring and all have the same type of blacker areas on the bone. It is hypothesized that these darker areas are a result of the marrow seeping through the bone and blackening due to the environment and elevated temperature.

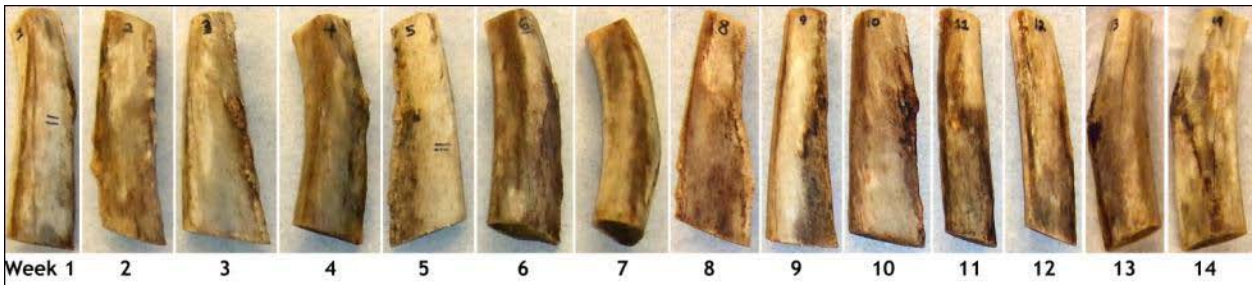


Figure 37: Defleshed Bovine Ribs, Weeks 1 Through 14

The fleshed bovine ribs have the same black spots as those of the defleshed ribs, as shown in Figure 38. It also appears that the color of the fleshed bovine ribs do indeed change as time advances. In comparison with the week 1 fleshed bovine rib, the week 14 rib appears more yellow; however, this could be a result of the lightening when the pictures were taken. Because of this, there is no definitive conclusion as to the color change of the bones as time proceeds.

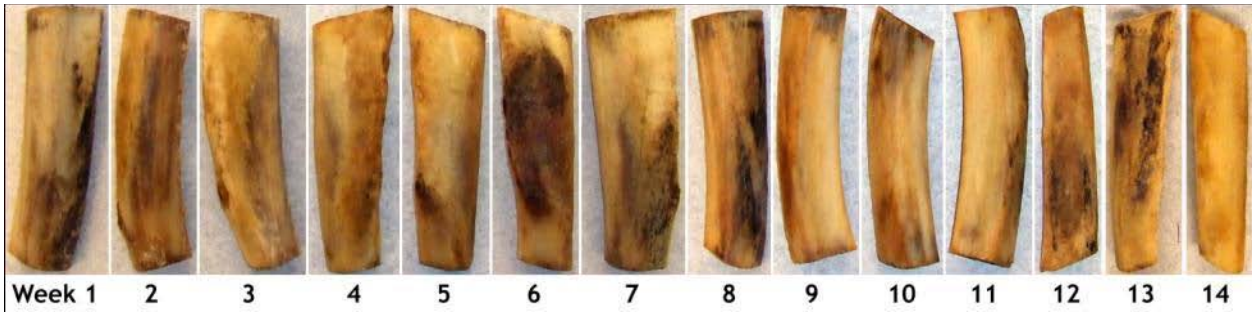


Figure 38: Fleshed Bovine Ribs, Weeks 1 Through 14

Despite having no significant changes to the color of the aged bones, there were notable differences in color between the fleshed and defleshed bones. As shown in Figure 39, the fleshed bones of both the chicken and bovine appear to more yellow in hue.

Figure 39: Defleshed vs. Fleshed Bone Color Changes

The fleshed bones also have less black marks on them, as opposed to the defleshed bone. As mentioned in the Surface Texture section, it is hypothesized that the flesh protects the bone from the environment. This would explain why the fleshed bones have a bolder color, and less black areas.

5.3 Surface Texture During Accelerated Aging Study

The surface texture of the bones changed during the accelerated aging study. In Figure 40, the surface of the week 1 defleshed chicken appears to have grooves, or surface striations. The surface of the week 8 defleshed chicken bone has deeper and more pronounced pores than that of week 1, as shown in Figure 41. Finally, the week 14 defleshed chicken bone has more defined surface striations than those of the previous weeks, as shown in Figure 42. In comparison to the week 14 defleshed chicken bone, the week 1 bone has a relatively smooth surface; meaning there aren't any deep pits as that of the week 14 defleshed chicken bone.

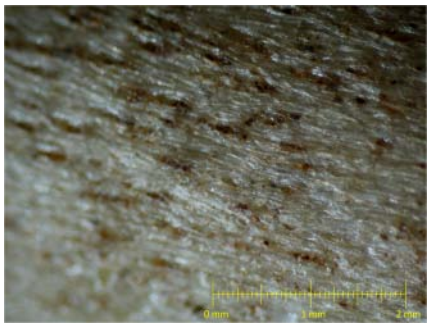


Figure 40: Defleshed Chicken Leg Week 1

Relatively smooth surface. Uniform grooves on surface of bone.

Figure 41: Defleshed Chicken Leg Week 8

Pits start forming as shown by red circle.

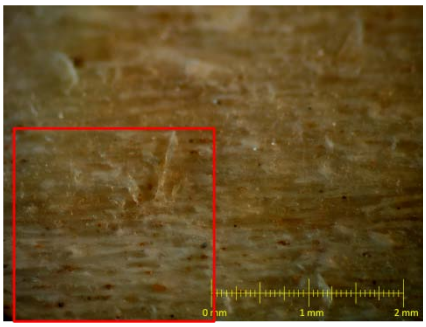


Figure 42: Defleshed Chicken Leg Week 14

Deeper grooves and pits, as indicated by red square.

Similarly, the same pattern appears in the fleshed chicken bones as well as the defleshed and fleshed bovine ribs, as shown in Figure 43 to Figure 51.

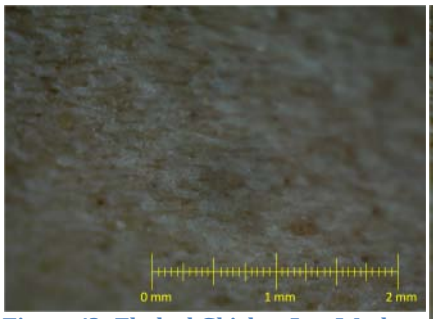


Figure 43: Fleshed Chicken Leg Week 1

Less ridged surface compared to later weeks.

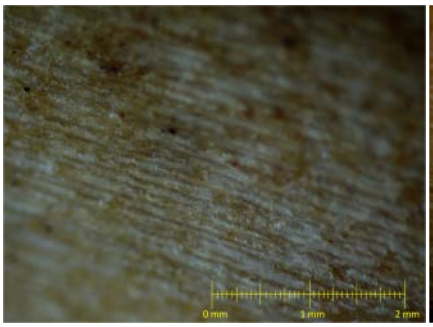


Figure 44: Fleshed Chicken Leg Week 7

More defined ridges and striations than Week 1.

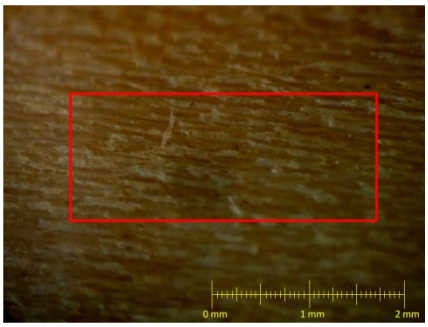


Figure 45: Fleshed Chicken Leg Week 14

Deeper ridges than Week 7. Striations breaking apart and becoming smaller.

Figure 46: Defleshed Bovine Rib Week 1

Although this sample contains a grooved texture, as indicated by the red square, its surface is less defined compared to later weeks.

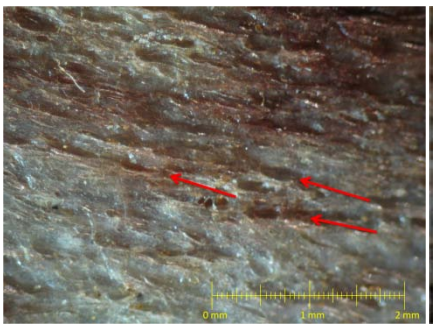


Figure 47: Defleshed Bovine Rib Week 8

The surface becomes more corrugated, as indicated by the deepening of the grooves and the formation of the pits; indicated by the red arrows.

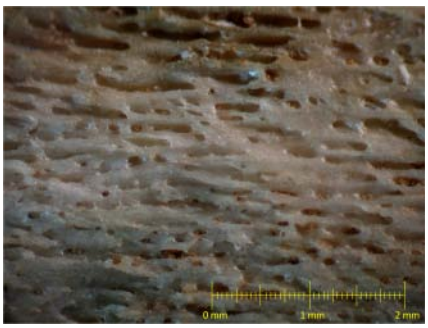


Figure 48: Defleshed Bovine Rib Week 14

As shown in the figure, the surface of the week 14 defleshed rib contains deep pits and presents a porous texture.

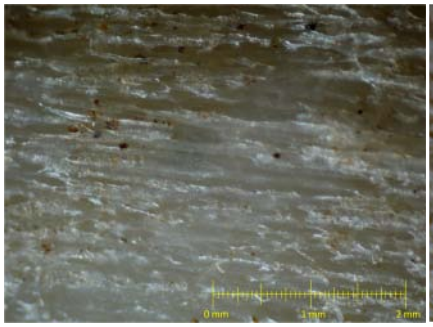


Figure 49: Fleshed Bovine Rib Week 1
The surface of this sample is rough; however, it does not contain pitting.

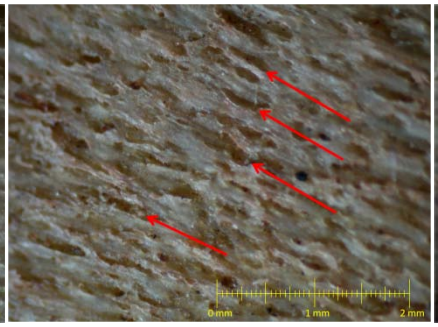


Figure 50: Fleshed Bovine Rib Week 7
Pitting of the surface is present in the week 7 Fleshed rib.

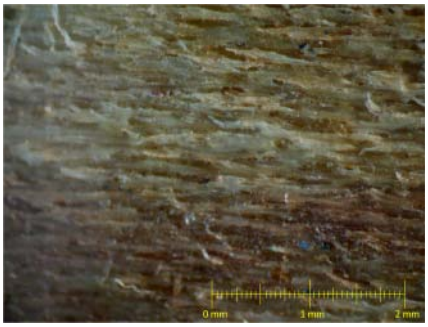
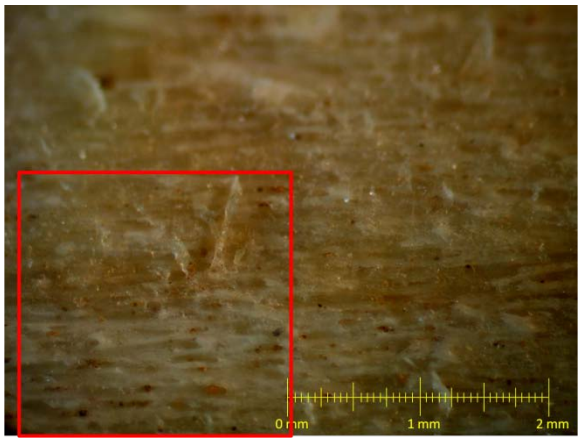


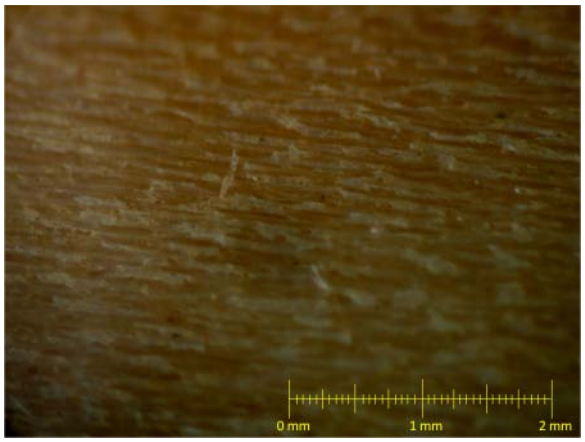
Figure 51: Fleshed Bovine Rib Week 13
The pits increase and become longer in shape, which results in a more ridged texture.

5.3.1 Comparison Between Fleshed and Defleshed Bone Surface Texture

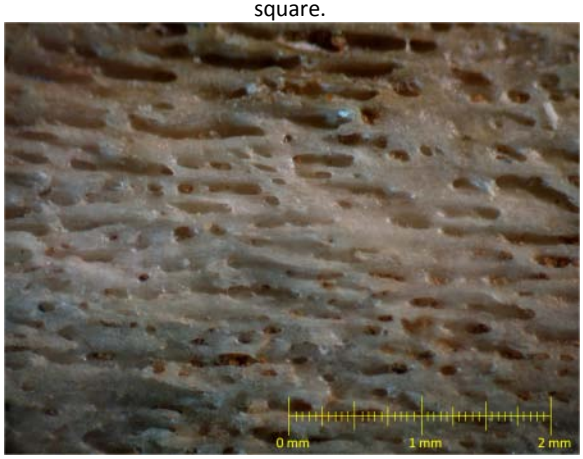
In both the chicken legs and bovine ribs, the defleshed bones appear to have experienced a higher level of degradation by the appearance of their surfaces. The defleshed bones have a more porous appearance than that of their fleshed counterpart, while the fleshed bone surfaces appear more like ridges, as shown in Figure 52.



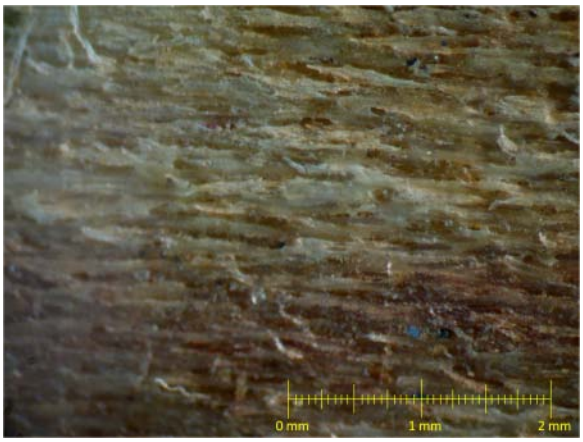
Defleshed Chicken Leg Week 14
Contains a porous texture with pitting, as shown in the square.



Fleshed Chicken Leg Week 14
No visible signs of a porous texture.



Defleshed Bovine Rib Week 14
As shown above, the surface has a porous texture.



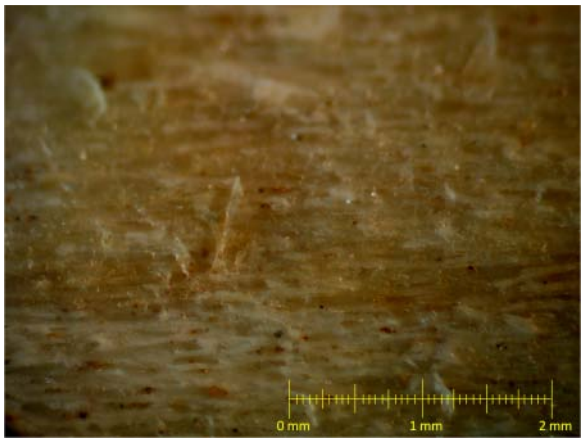
Fleshed Bovine Rib Week 13
The pits and pores are not as clearly defined as the defleshed rib.

Figure 52: Comparison Between the Surface Texture of Fleshed and Defleshed Bones

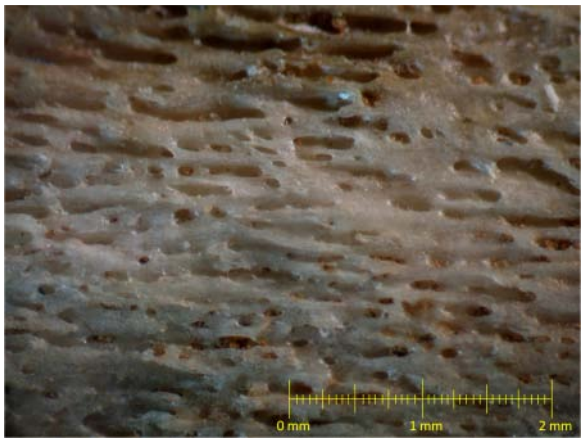
This data comparing the defleshed and fleshed bones produced similar results to a study conducted by Nicholson, which found that defleshed bones degrade at a faster rate than those with flesh intact (1996). Based on the differences in surface texture between fleshed and defleshed bones, the same conclusion can be drawn from this experiment

5.3.2 Comparison of Chicken Leg and Bovine Rib Bone Surface Texture

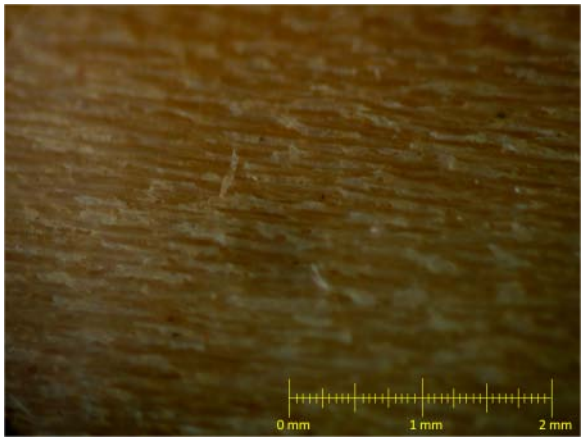
Regardless if the bones were defleshed or fleshed, the bovine rib surfaces have a more porous appearance than the chicken bones, as shown in Figure 53.



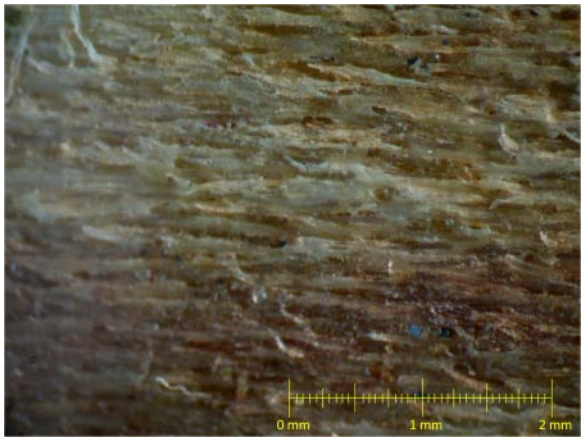
Defleshed Chicken Leg Week 14
Although pitting is visible, it is not very defined.



Defleshed Bovine Rib Week 14
Pitting is clearly visible.



Fleshed Chicken Leg Week 14
The fleshed chicken has a relatively smooth texture.



Fleshed Bovine Rib Week 13
Pitting is visible.

Figure 53: Comparison Between the Surface Texture of Chicken and Bovine Bones

5.4 Mass Loss in Accelerated Aging Study

The mass loss for the chicken legs over the 14 week accelerated aging study is shown in Figure 54. The average mass loss for the fleshed chicken was approximately 70 percent, and the average mass loss for the defleshed chicken was approximately 50 percent, with several outliers in the middle of the study.

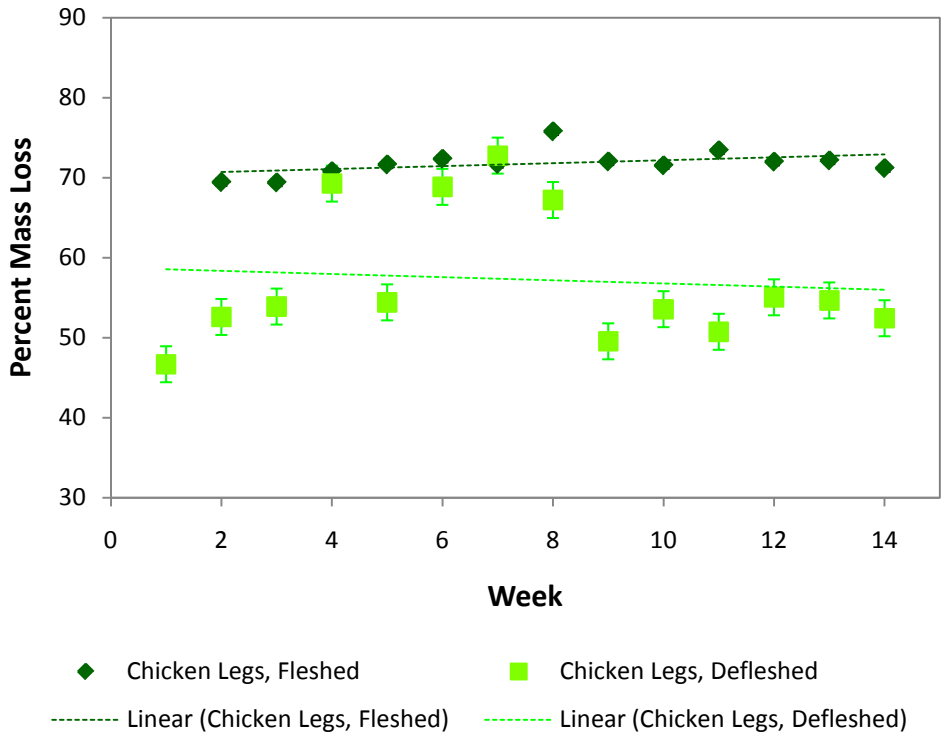


Figure 54: Chicken Leg Mass Loss Over the 14 Week Accelerated Study

As expected, the fleshed chicken lost more of its original mass than the defleshed chicken. Because the flesh surrounding the bone was included in the mass loss calculations, the mass loss for the fleshed chicken is not solely due to bone degradation. The flesh degraded much more completely than the bone, which explains the higher percent mass loss for the fleshed chicken.

Unfortunately, it was not possible to measure the mass of the bone within the fleshed chicken without removing the flesh. Therefore it was not possible to determine whether fleshed bone itself degrades at a different rate than defleshed bone, as the fleshed mass was also included in the measurements.

The defleshed chicken legs lost about 50 percent of their mass in the ovens. Bone is composed of approximately 52 percent hydroxyapatite, 28 percent collagen, and 20 percent water, by mass (Pilitsis, 2003). Therefore it appears that the collagen and the water were entirely removed from the

defleshed during the accelerated aging study. The fleshed chicken cannot be compared to these values to the mass loss including both flesh and bone in each sample.

Figure 55 shows the mass loss for the bovine ribs over the 14 week accelerated aging study. The average mass loss for the fleshed bovine ribs was approximately 50 percent, while the average mass loss for the defleshed ribs was approximately 20 percent. Similarly to the chicken, the fleshed ribs lost more mass than the defleshed ribs. This result can also be explained in the same manner: the flesh on the ribs degraded more quickly than the bone itself.

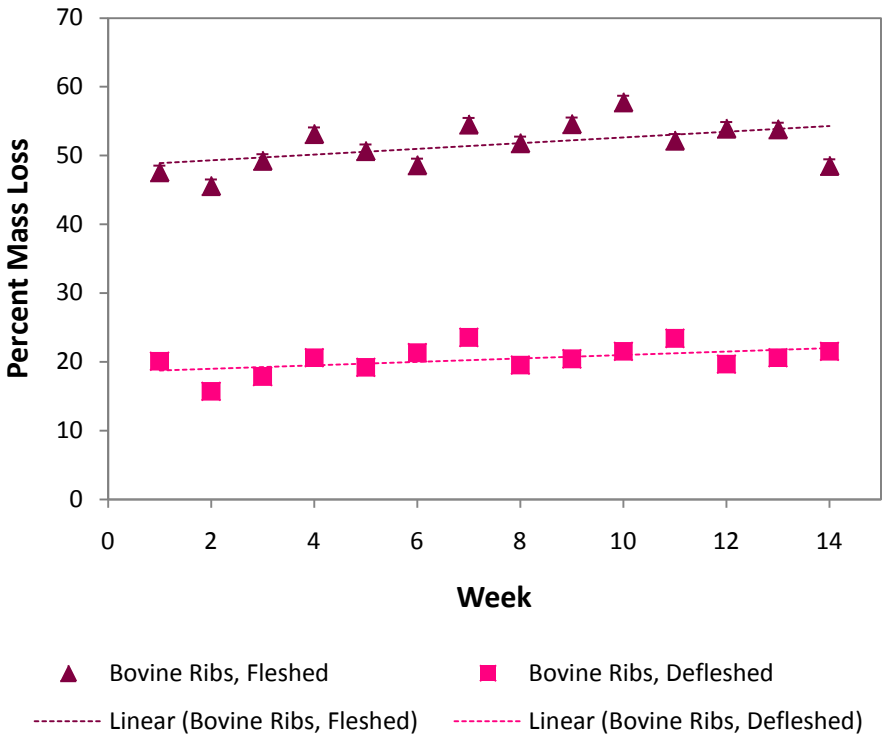


Figure 55: Bovine Rib Mass Loss Over the 14 Week Accelerated Aging Study

When comparing the mass loss of the chicken legs to the bovine ribs, it can be seen that the chicken legs in general lost more mass than the bovine ribs. This can be explained by the fact that chicken bones contain more marrow than bovine ribs. A cross section of chicken legs shows that about 60 percent is marrow, while bovine ribs have only about 30 percent marrow. These values were obtained by dividing the calculated cross sectional area of the marrow by the entire cross sectional area.

Because marrow degraded much more completely than bone in this study, the fact that chicken contains about twice as much marrow has significant affects on the total mass loss results.

The defleshed bovine ribs lost about 20 percent of their mass in the ovens. The mass of bones is composed of approximately 52 percent hydroxyapatite, 28 percent collagen, and 20 percent water, by mass (Pilitsis, 2003). Therefore it appears that less than 100 percent of the water and collagen were removed during burial. The fleshed rib cannot be compared to these values to the mass loss including both flesh and bone in each sample.

Table 7 shows the relationship between the amounts of marrow in each type of bone with the overall mass loss. The numbers are very approximate, but it can be seen that the amount of marrow has a strong correlation to the percent mass loss in the defleshed bones. The percent mass loss is slightly less than the percent marrow in the bone. The marrow did not completely disappear but was reduced in mass considerably; this prevented the percent mass loss from being even higher.

Table 7: Relationship Between Amount Of Marrow In The Bone And The Overall Mass Loss

	% Marrow	% Mass Loss
Defleshed Bovine Ribs	30	20
Defleshed Chicken Legs	60	50

It is of interest to note that the mass loss for each type of bone did not change between week 1 and week 14 of the accelerated aging study. All four types of bones did lose significant mass, but the loss occurred between week 0 (burial) and week 1 of the study, which corresponds to approximately one month of natural burial. The burial conditions in this study were very dry, and it is expected that the rapid mass loss during the first week is due to the bones losing almost all of their free water very rapidly. This phenomenon is shown in Figure 56. Therefore the mass loss of bones is not expected to be a good indicator of burial time. More frequent mass measurements during the first week of accelerated aging

burial could have potentially indicated a trend that would be useful in identifying the burial time of bones by their mass loss.

Figure 56: Pan for fleshed bovine ribs. Dark areas, as indicated by the blue arrow, correspond to the water loss and degradation of the bones. These areas occurred where the ribs were buried underneath, and had appeared by the first week of burial. The lighter areas, as indicated by the green arrow, are locations under which no bone had been buried.

5.5 Width Changes in Accelerated Aging Study

Figure 57 shows the width loss for the chicken legs and bovine ribs during the 14 week accelerated aging study. Aside from the first week, the change in width remained nearly constant for the entire study. It is therefore concluded that all of the change in width of the bones was obtained by the second week of the study.

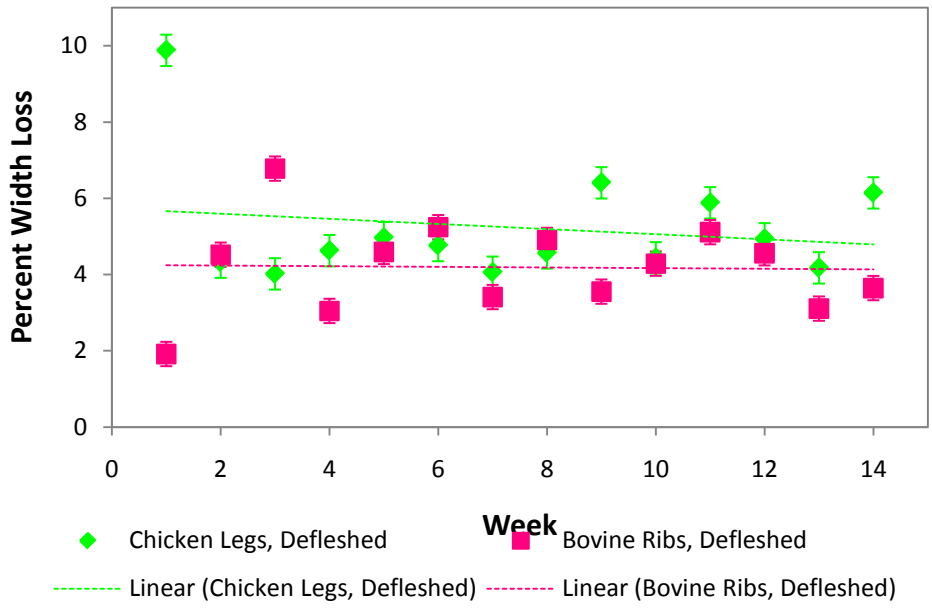


Figure 57: Bone Width Loss by Week in Accelerated Aging Study

The width loss for the week 1 defleshed chicken leg, at 10 percent, appears to be an outlier. It is not likely that the bones would lose 10 percent of their mass in the first week and gain mass back to have lost only about 5 percent for the rest of the weeks.

It is important to note that the percent width loss for the chicken legs and the bovine ribs was similar, ranging between 3 and 5 percent. The chicken leg bones contain more marrow than the rib bones, but the width loss was approximately the same as the bovine ribs. It is expected that water loss within the bone itself contributed to the majority of the width loss in the bones. The reduction in marrow within the bones did not appear to affect the outer width of the bones. Therefore the higher percent of marrow in chicken bones than bovine ribs did not affect the width loss in this study.

5.6 Mechanical Property Changes During Accelerated Aging Study

The following figures show the force-elongation curves in three-point bending for the four types of bones used in this study. For each bone type, week 1, 7, and 14 were selected to provide a

representation of the trend over time. A control chicken leg and bovine rib is included as a week 0 representation. These bones were defleshed and tested without being buried.

Figure 58 shows the force-elongation curves for the fleshed chicken legs. The control chicken had the most elongation prior to fracture, followed by week 1, week 7, and week 14. This same pattern is visible for the maximum applied force. As seen in the graph the lines are not smooth. This is caused by slipping of the bone during the three-point bending test.

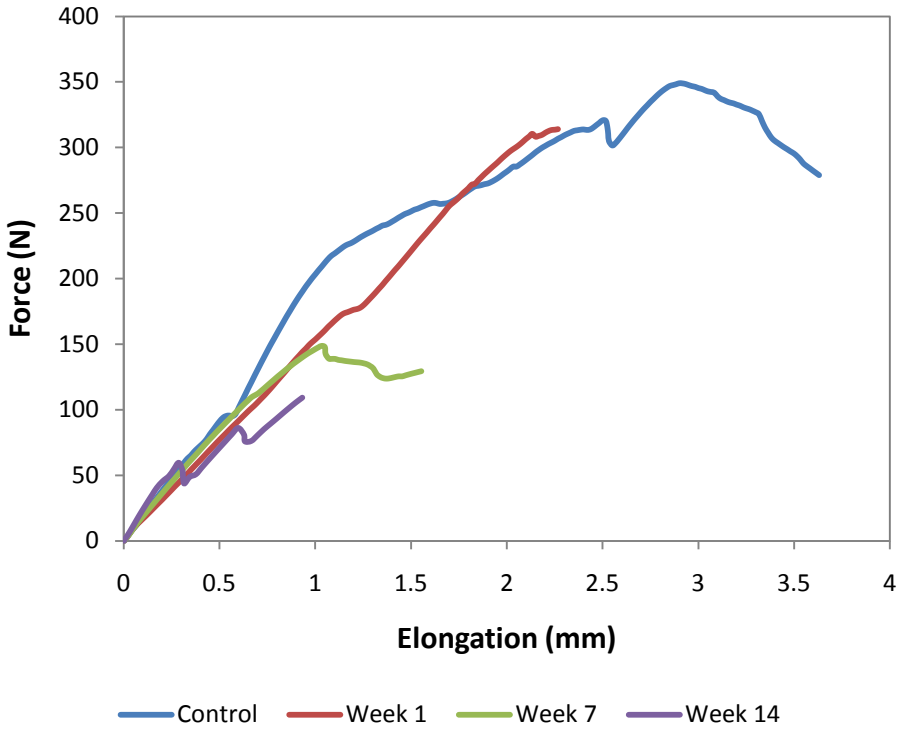


Figure 58: Force-elongation curves for fleshed chicken legs. Control value is average of five chicken bones that were not aged.

The force-elongation curves for the defleshed chicken legs are shown in Figure 59. Similarly to the fleshed chicken, the control chicken had the most elongation prior to fracture, followed by week 1, week 7, and week 14. This same pattern is also visible for the maximum applied force. As with the fleshed chicken, the lines are not smooth, which is caused by slipping of the bone during the bending test.

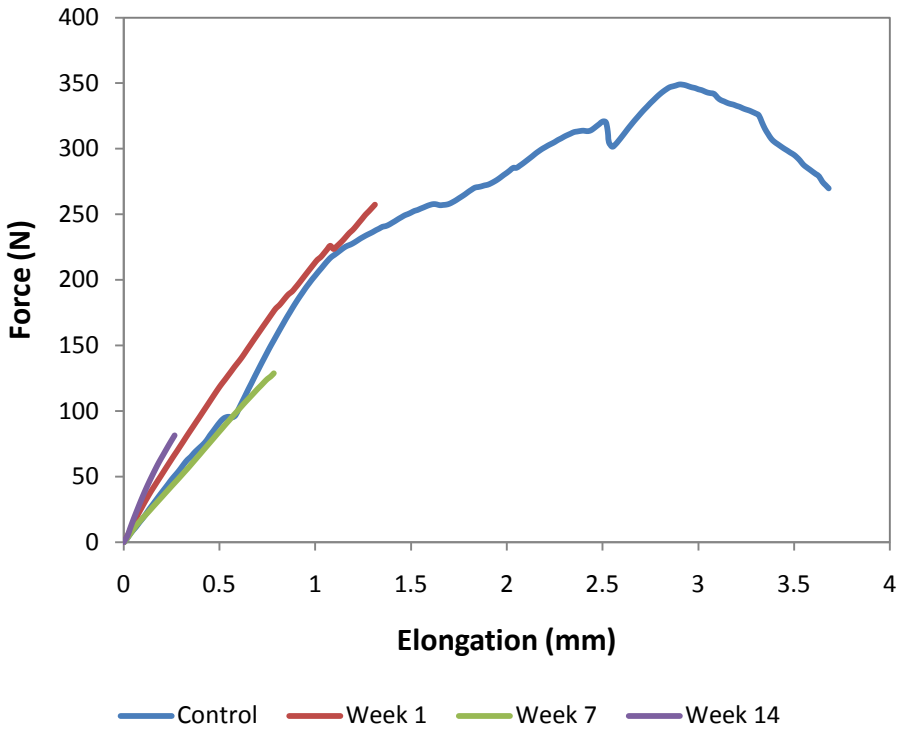


Figure 59: Force-elongation curves for defleshed chicken legs. Control value is average of five chicken bones that were not aged.

Figure 60 shows the force-elongation curves for fleshed bovine ribs. Because the Instron 5544 machine was not strong enough to break most of the ribs, neither the elongation prior to fracture nor the maximum applied force could be determined.

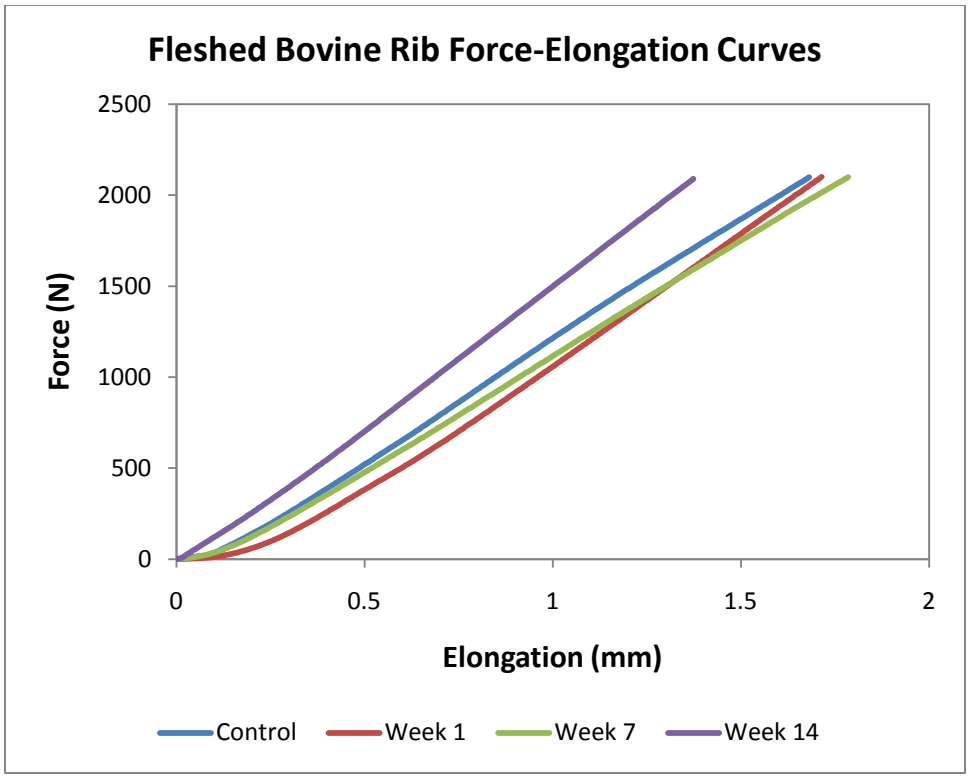


Figure 60: Force-elongation curves for fleshed bovine rib. Control value is average of five bovine rib bones that were not aged.

The force-elongation curves for defleshed bovine ribs are shown in Figure 61. Similarly to the fleshed bovine ribs, the Instron 5544 machine was not strong enough to break most of the ribs. Therefore, neither the elongation prior to fracture nor the maximum applied force can be compared. The defleshed rib at week 14, however, did fracture. This is consistent with the chicken legs, where the longest-aged bones had the most elongation as well as the lowest applied force.

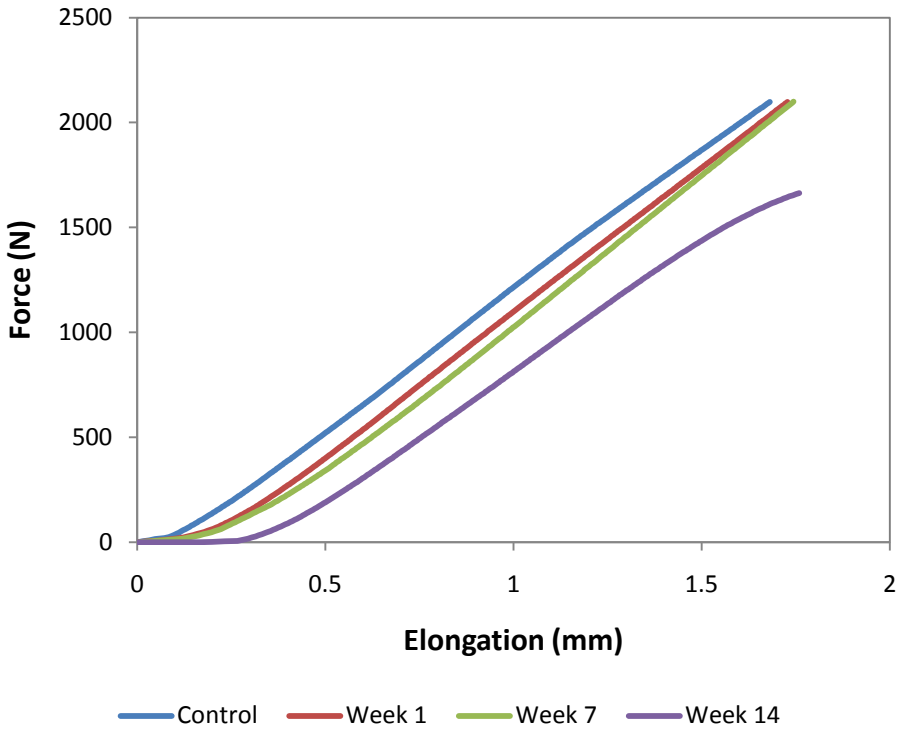


Figure 61: Force-elongation curves for defleshed bovine ribs. Control value is average of five bovine rib bones that were not aged.

For both the fleshed and defleshed bovine ribs, the initial slope of the graph appears almost horizontal when compared to the majority of the graph. In this area, the bones experience a larger amount of elongation for a given amount of force. It is expected that this is caused by the collagen molecules straightening from their otherwise entangled state.

5.6.1 Flexural Modulus Changes During Accelerated Aging Study

The flexural modulus was determined from the force-elongation curves, as described in Section 4.5.2.1 Flexural Modulus and Strength Calculations. Figure 62 shows the flexural modulus of chicken over the 14 week accelerated aging study, with standard error bars. The control value is the average flexural modulus from five chicken bones that were not aged. This value is consistent with the flexural modulus of both the fleshed and defleshed chicken legs at week 1. For comparison, a Wynnyckyj study found the elastic modulus of emu bones to be approximately 18 GPa. However, it is important to note

that most available data concerns the elastic modulus (tension), not the flexural modulus (bending). Human bone has an elastic modulus of approximately 12 GPa, and bovine has a modulus of approximately 10 GPa (Mortensen, 2007).

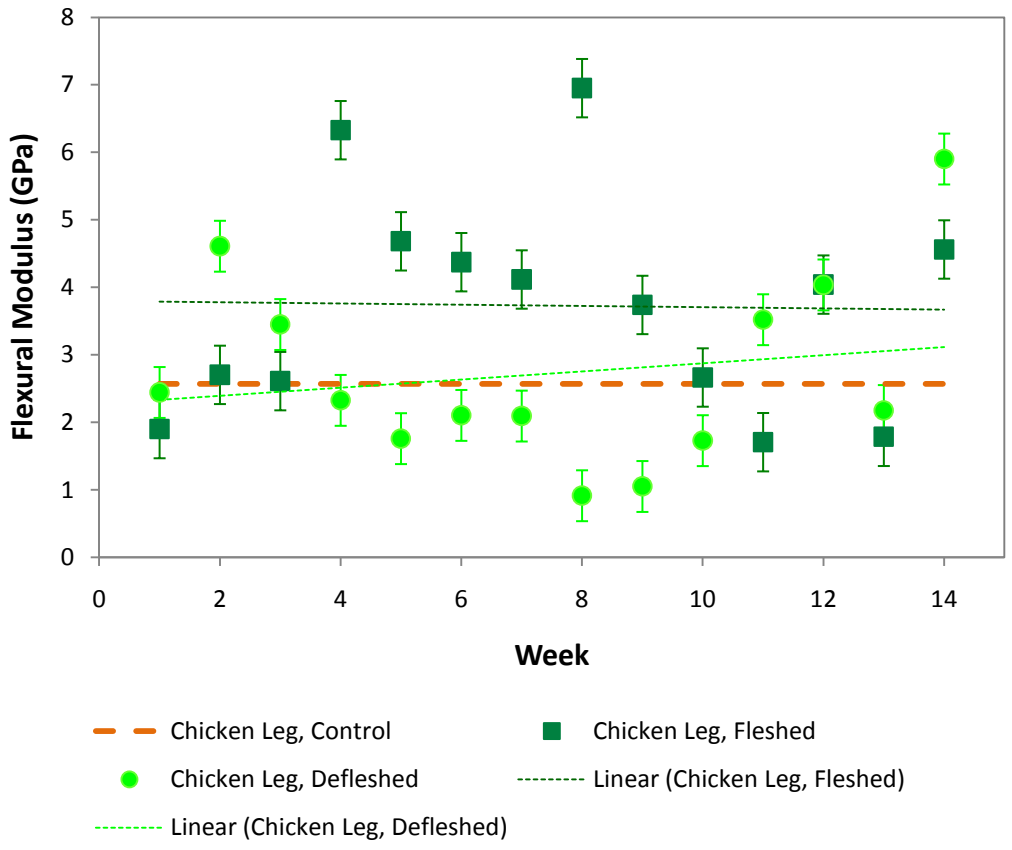


Figure 62: Chicken leg flexural modulus over the 14 week accelerated aging study. Control value is average of five chicken bones that were not aged.

For the majority of the study, the fleshed chicken leg had a higher flexural modulus, but for the first and last few weeks, the values were very similar. Unfortunately, because each week had only one data point, the flexural modulus values are quite varied over time. A larger number of data points may have been better suited to discerning a trend in flexural modulus with time.

Figure 63 shows the flexural modulus of bovine ribs over the 14 week accelerated aging study, with standard error bars. The control value is the average flexural modulus from five bovine rib bones that were not aged. The control value is about three times higher than the fleshed or defleshed rib at

week 1. This calls into question the validity of these values, because the control value would be expected to be similar to the values at week 1.

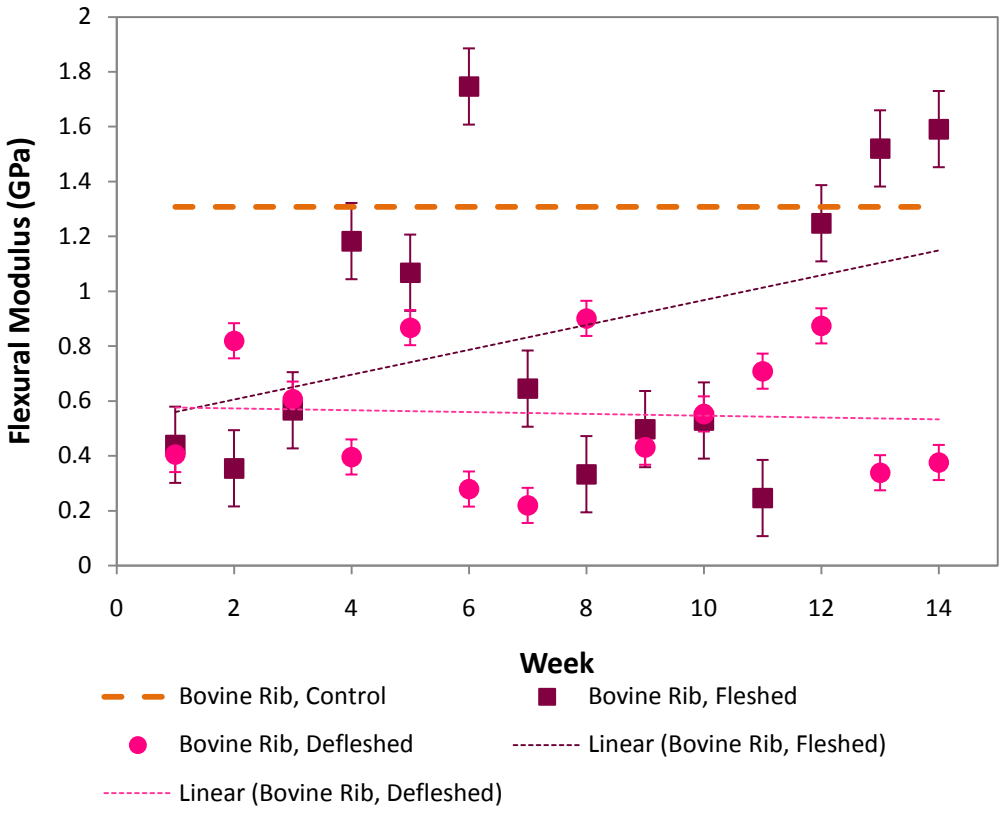


Figure 63: Bovine rib flexural modulus over the 14 week accelerated aging study. Control value is average of five bovine rib bones that were not aged.

Similarly to the chicken, the fleshed bovine ribs generally had a higher flexural modulus than the defleshed bovine ribs. The fleshed ribs also had more varied flexural modulus values than the defleshed ribs.

A study by X. Wang et al in 2001 also showed that neither temperature nor collagen denaturation had a significant effect on the elastic modulus of bone. Wang's conclusion is consistent with this study, in which no trend in the flexural modulus was seen as collagen is removed from the bone. A 2006 study by McNamara also found that the elastic modulus of untreated rat cortical bones did not change over 54 weeks. However, the study compared the *in vivo* elastic modulus, not during burial.

From this study, it was determined that chicken leg bones have a higher flexural modulus than bovine ribs. Chicken bones are hollow and need to be very rigid with just a small amount of material. Although chicken bones bear a smaller load than bovine bones, they need to bear a proportionally larger amount of stress. Therefore the flexural modulus for chicken legs is approximately three times higher than bovine ribs.

The fact that the fleshed bones (both chicken and bovine) had a higher flexural modulus than their defleshed counterparts can be explained by the flesh protection. The bones buried with flesh intact were protected from the soil by their flesh, preventing hydroxyapatite loss. Hydroxyapatite provides stiffness to bones, so fleshed bones should therefore have a higher flexural modulus than defleshed bones.

5.6.2 Flexural Strength Changes During Accelerated Aging Study

The flexural modulus in Figure 64 shows the chicken leg bones over the 14 week accelerated aging study. The control value is the average flexural strength from five chicken leg bones that were not aged. The control value corresponds well with the fleshed and defleshed strength value at week 1. For comparison, Mortensen (2007) gives a tensile strength of 113 MPa for human bones and 150 MPa for bovine bones, which is on the same order of magnitude as the following results.

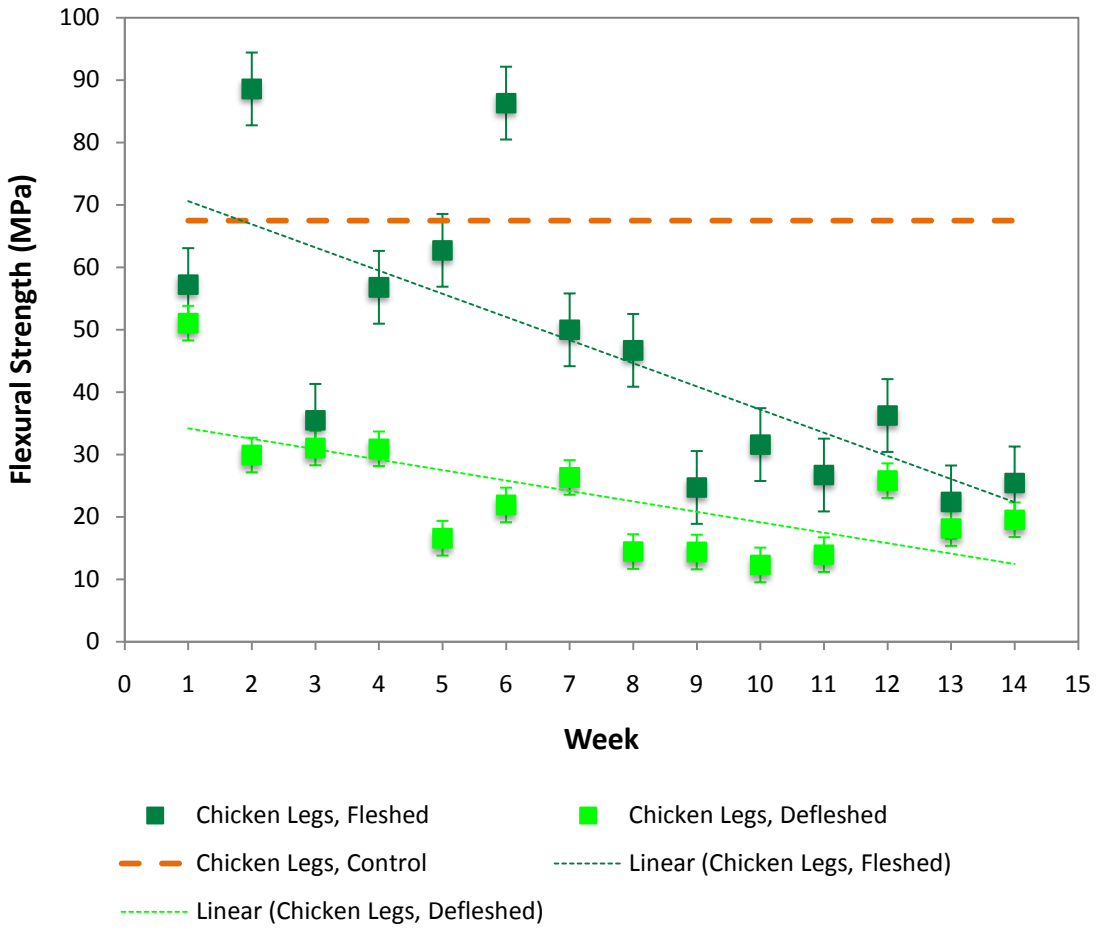


Figure 64: Chicken leg flexural strength during the 14 week accelerated aging study. Control value is average of five chicken bones that were not aged.

Figure 64 shows a clear decreasing trend in flexural strength for both fleshed and defleshed chicken. For both fleshed and defleshed chicken, the elastic modulus at 14 weeks (corresponding to 1.25 years) is only about 40 percent of the elastic modulus at week 1. The Wang study saw a clear decrease in strength of bone as temperature increased, corresponding to a loss in collagen. Although the accelerated aging study was not performed at high temperatures, both studies show a loss in collagen and a decrease in flexural strength.

Also, Figure 64 shows that the fleshed chicken generally has a higher flexural strength than the defleshed chicken. This can be explained by the flesh layer, which protects the bone from collagen loss. Collagen provides toughness to the bone and reduces brittleness, therefore increasing the flexural

strength. Because the fleshed bones have more collagen, the flexural strength is therefore higher than defleshed bones.

Unfortunately the Instron 5544 had a maximum force of 2000 N, which was not enough to break all of the bovine ribs. Therefore, the flexural strength for bovine ribs was not calculated.

5.6.3 Vickers Hardness Testing for the Accelerated Aging Study

In Figure 65 below the Vickers hardness values for bovine ribs in the 14 week accelerated aging study, with standard error bars shown. Due to time limitations, only three samples of each fleshed and defleshed rib were tested (week 1, 7, and 14). Sample precision was acceptable, with a standard deviation of less than 3 HV. Additionally, due to the small cross sectional area of the chicken leg bones, hardness testing was not performed on the chicken leg bones.

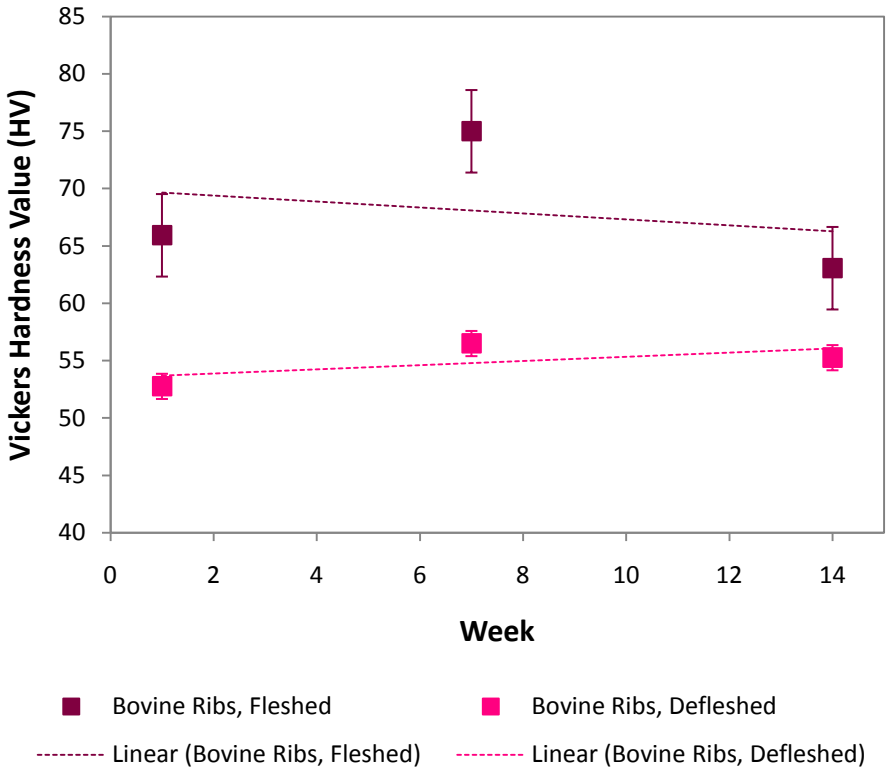


Figure 65: Bovine Rib Vickers Hardness for the 14 Week Accelerated Aging Study

Based on this information, there is no clear relationship between hardness and time. Because there is a lack of information about bone hardness changes during burial, it is difficult to compare this data to previous studies. The Schulze study in 2003 found that the Knoop hardness of dental composites increased between 4.8% and 32.1% after an unspecified amount of accelerated aging. While dental composites are designed to mimic human bones, this data does not specifically represent hardness trends of actual bone. A 2006 study by Senawongse et al did found conflicting trends between the age of dentine and the hardness. However, Senawongse compared hardness between dentine hardness in people of different ages, not prior- and post-burial.

It is, however, clear that the fleshed ribs had a higher hardness than the defleshed ribs. The average hardness value 68 HV for fleshed ribs and about 55 for defleshed ribs. Therefore the fleshed ribs are about 24 percent harder than the defleshed ribs. This is likely due to the flesh protecting the bone within from loss of minerals and overall structure. However, more samples should be tested to ensure accuracy of this statement.

The Dall'Ara study found Vickers hardness values for human cancellous bone to range between approximately 33 to 45 HV. This data is of the same magnitude as the results in this study, but clearly not directly comparable due to different animal type, bone type, and testing conditions.

5.7 Fracture Mechanics of the Accelerated Aging Study

There were two expectations regarding the total number of cracks that formed from the accelerated aging study. One was that the defleshed bones would have more cracks than the fleshed, and the second was that there would be an increase in the number of cracks over time. When exposed to heat, the bones experience water loss and the breakdown of hydroxyapatite. These losses result in cracks and fissures on the surface of the bones (Asmussen, 2009). Therefore, due to the flesh protecting the bones, it is expected that the fleshed bones would have fewer cracks than the defleshed bones. Looking at the graph in Figure 66 there does not appear to be any clear increasing trend in the total

number of cracks in either the fleshed or defleshed bones. It does appear that the expectation of the defleshed chicken having more cracks than the fleshed chicken was met, with the exception of week 14.

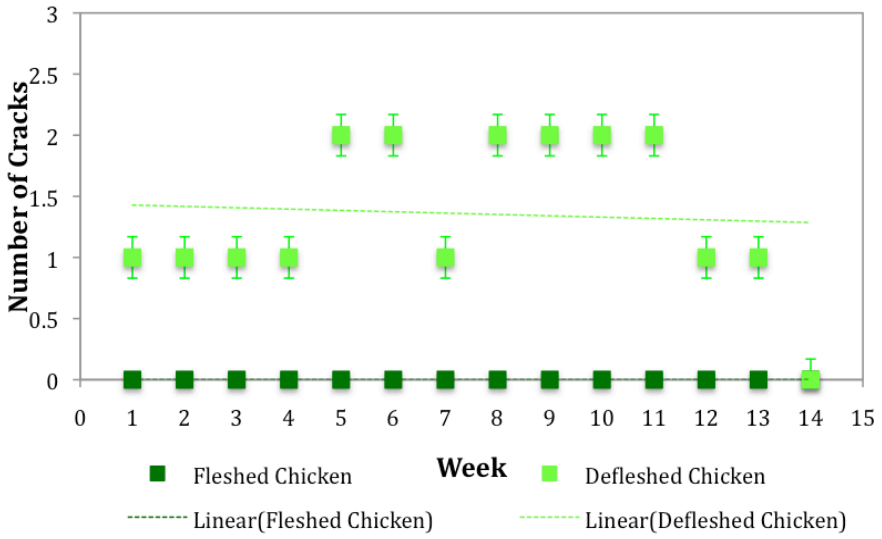


Figure 66: Number of Cracks by Week in Chicken

The ribs do not follow either of the expectations. This is seen in Figure 67 below.

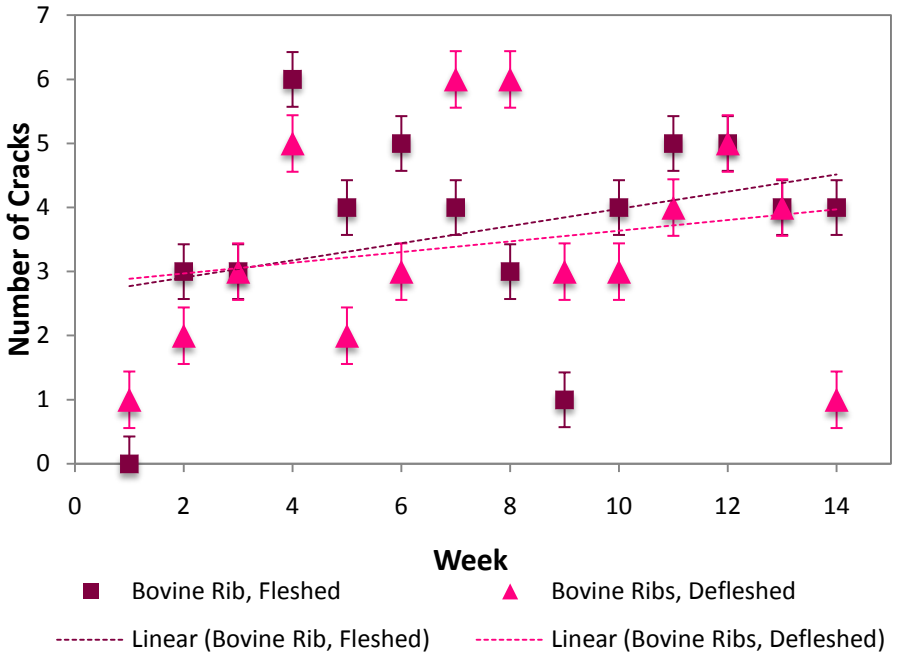


Figure 67: Number of Cracks by Week for Bovine Rib

Another set of data that was examined was the total crack area by week. Thermodynamic analysis of the cracks results in the conclusion that as bones are exposed to heat and then cooled, the surface cracks will expand as the bone constricts (Fairgrieve, 2008). Due to the reasoning given by the Asmussen study, as the number of cracks increase and are presumed to widen at cooling, then it is reasonable to assume that the crack area will increase. Yet again, the defleshed chicken can be seen to have more total crack area than the fleshed chicken, which was the expected outcome. The fleshed chicken has no cracks and therefore no crack area over the fourteen weeks. While the defleshed chicken does have consistently higher crack area, there is no increasing trend. The graph demonstrating these results can be seen in Figure 68.

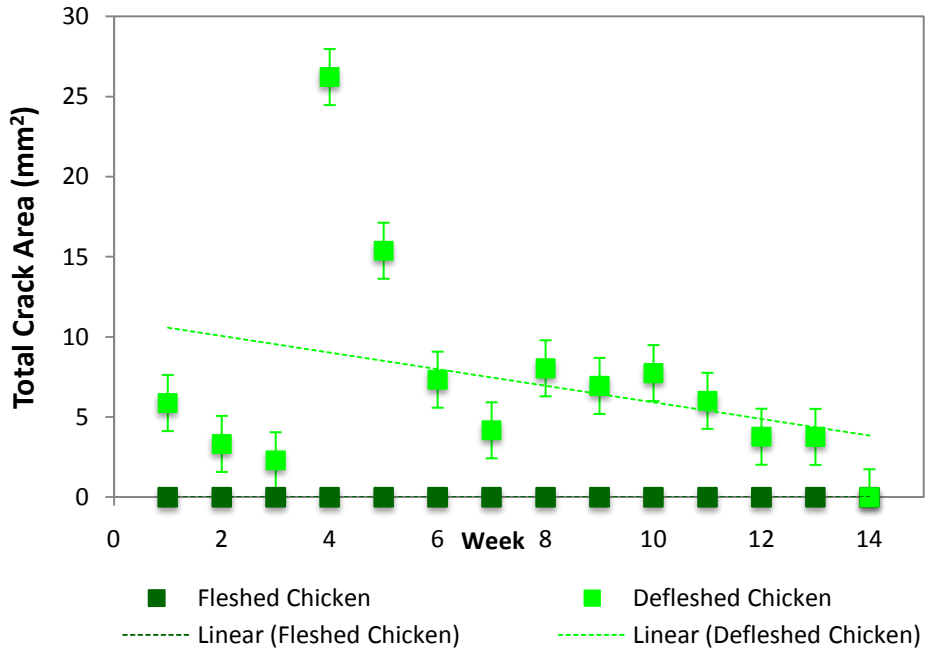


Figure 68: Total Crack Area by Week for Chicken

The bovine ribs, both fleshed and defleshed, produced very similar crack areas as seen in the graph in Figure 69. This implies that the temperature used to age the bones might not have been high enough. At week 7 there does appear to be an inexplicable peak. Due to the fact that there is only one

bone analyzed at each weekly interval, there are no other samples that it can be compared to in order to provide an explanation. If week 7 is removed from the graph as an outlier, a constant trend appears.

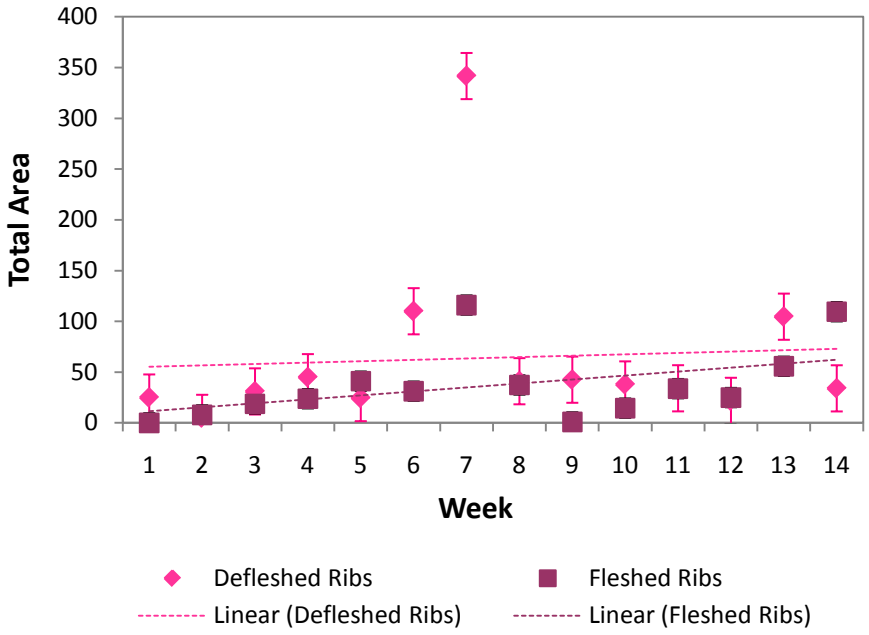


Figure 69: Total Crack Area by Week for Bovine Ribs

The bones in this experiment did not meet the expectations outlined in other recent studies. The bones did not have a constant increase in amount of cracks or area of these cracks. The trend in the graphs does appear to be constant. Given a higher temperature or a larger amount of samples it is more likely the results would begin to match those in the studies.

Due to the molecular structure of bone, the fracture mechanics are predictable. Fracture mechanics of an anisotropic material result from the competition between the path of the mechanical force and the path of least resistance in the microstructure (Zimmerman, 2009). In the case of this experiment the mechanical force is present in the form of thermal stresses. The composition of bone includes collagen fibers which are oriented randomly along the longitudinal direction of the bone (Hollister, 2009). Fractures originate from a high stress location on the bone most likely where many of these fibers meet. The bones will fracture along these fibers until a juncture with another fiber, where

the fracture will then begin to follow that path (Zimmerman, 2009). Figure 70 below shows one of these junctures, in a chicken bone from this study.

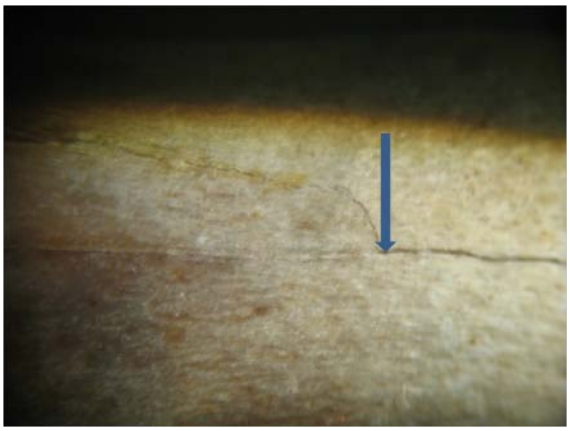


Figure 70: End of Fracture Splitting Into Two Microcracks, As Indicated By the Arrow

The fracture travels along the bone in the longitudinal direction until it hits a boundary of some kind. Then there appear to be two cracks that branch off that were not visible without the magnification. According to what is known about bone structure and fracture mechanics, the bones in this experiment are behaving as would be expected on a microscopic level.

The longitudinal direction is the widely preferred fracture path for stresses induced into cortical bone. Microcracking however, is commonly seen at the osteon boundaries or cement lines where the bones fracture (Zimmerman, 2009). Looking at Figure 71, the chicken bones do not contain these micro-fractures.

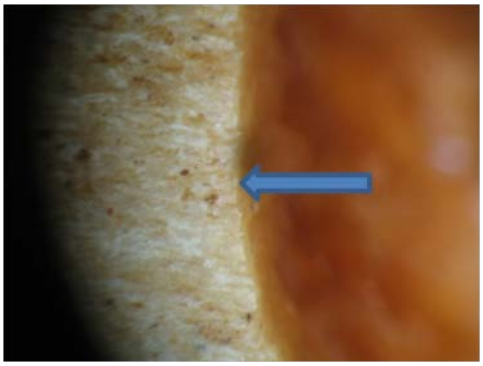


Figure 71: Edge of Fractured Chicken Bone, As Indicated By the Arrow

The edge of the fracture is indicated by a blue arrow. With a magnification of 320x, there are no visible presence micro-cracks. The rib fracture shown in Figure 72 also shows no sign of micro cracks at 256x magnification; the blue arrow again indicates the edge of the fracture

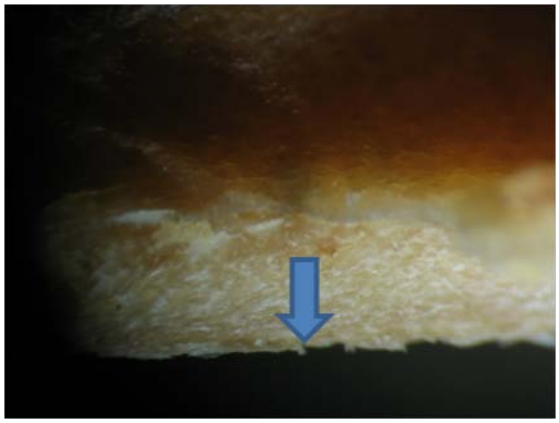


Figure 72: Edge of Fractured Rib Bone, As Indicated By the Arrow

The bone fracture patterns follow what is expected on a macro level; however, on a microscopic level it does not appear these bones follow the presumed patterns. It was expected that there would be microcracking at the fracture paths. This may mean that the bones that are being used fracture through the collagen fibers themselves, instead of along the osteon boundaries or cement lines. Looking at a higher magnification might have revealed a different result, but the microscopes that were used during this study could not focus appropriately on the bone samples. The number of cracks and crack area also did not predominantly act as anticipated. This problem could be fixed using more samples and a higher temperature. If the effects of thermal aging were increased significantly the results might be more definitive. Using more samples would also provide more opportunity to see trends.

5.8 Soil Nutrient Testing

The soil used to bury the bone samples was tested with regards to its pH, Nitrogen, Phosphorus, and Potassium levels. The results of the soil testing are shown in Table 8.

Table 8: Soil Nutrient Testing

	pH	Nitrogen	Phosphorus	Potassium
Prior to Burial	5	A	D	A
After Aged Experiment	5	B	D	C

These values were the same for both fleshed and defleshed chicken legs and bovine ribs. As a means of measurement, the AccuGrow Soil Test kit uses numbers to measure pH, and uses the letters A, B, C or D to measure the Nitrogen, Phosphorus, and Potassium levels. Level A is a low level of the nutrients, while level D is the highest value measured.

As shown in Table 8, the presence of both fleshed and defleshed bone had no effect on the pH or Phosphorus levels of the soil. However, the degradation process enriched the soil with nutrients, as shown by the increase in the Nitrogen and Potassium levels. It was expected that the bones would provide nutrients to the soil as it is known that decomposition of living organisms is what supplies the soil with its nutrients (Petrik Laboratories, 2010).

5.9 High Temperature Study

Color change and structural changes are used as good indicators with regards to the temperature that bones have been exposed to. Most color changes and structural changes happen between 0°C and 800°C. This experiment was performed to confirm that the bovine and chicken bones have similar structures to other bones, including human that have already been studied.

The first changes, which happen between 100°C and 200°C, include the bone becoming greasy and starting to slightly darken in appearance (Fairgrieve, 2008). The structure at this point has not been altered a great amount. There is some increase in crystallinity between 200°C and 700°C, but minimal surface texture changes are observed below 500°C (Ubelaker, 2009). Bones begin to dehydrate at this temperature but not enough to affect the macroscopic structure of the bones. The initial change in color at 100°C can be seen below in Figure 73. The effect is not significant yet, which complies with the information available.

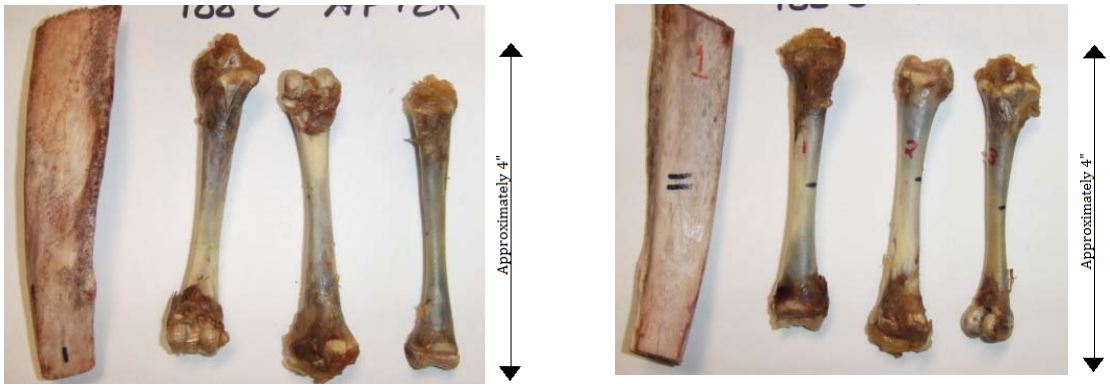


Figure 73: Chicken Bones after 100° C

The same can be said for 200°C. The bones appear slightly greasier and darker, but overall the change is insignificant. The changes are shown in the front and backs of the bones in Figure 74 and Figure 75.

Figure 74: Front of Ribs Before and After 200° C

Figure 75: Back of Ribs Before and After 200° C

The next set of changes occurs between 300°C and 500°C, which is where the bones began to blacken. This is found to comply with the research by Sillen and Hoering (2004) who found the bone chars between these temperatures. Usually it is described as a "tar-like" appearance. During the middle of this temperature change at 400°C, the bones are dehydrated and the structural appearance is flat and

granular (Fairgrieve, 2008). The pictures below in Figure 76 and Figure 77 show the changes in bones that have been exposed to 300°C.

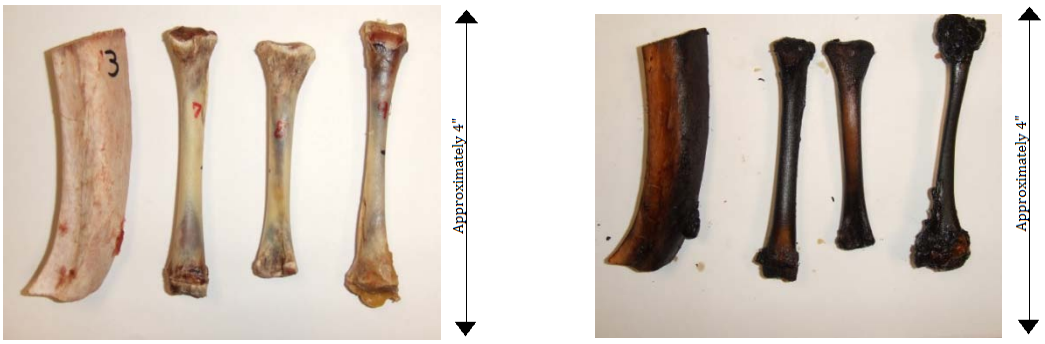


Figure 76: Front of Ribs Before and After 300° C

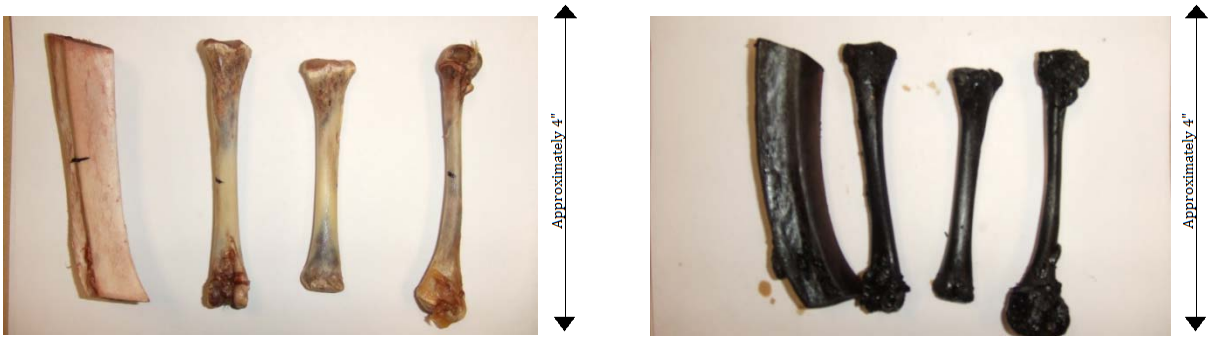


Figure 77: Back of Ribs Before and After 300° C

The bones appear almost entirely black. There is only a small amount of orange left on the front of the bones. They have a shine to them, and although these pictures were not able to capture it, there is an array of colors that appear on top of the black when the bones are moved under natural light. The bones exposed to 400° C can be seen below in Figure 78 and Figure 79.

Figure 78: Front of Bones Before and After 400° C

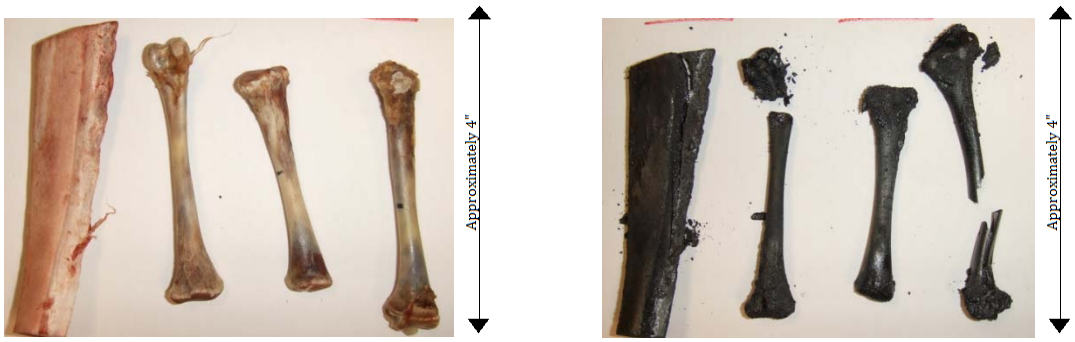


Figure 79: Back of Bones Before and After 400° C

At 400° C the bones have charred entirely and have begun to break apart. All the collagen has been taken from the bones at this point and all that remains is the ceramic matrix (Ubelaker, 2009). The ribs remain more intact then the chicken bone, this is most likely due to the density difference between bovine and chicken bones. Chicken bones contain more air and less compact bone than bovine bone making them more susceptible to fracture prior to exposure to high temperatures (Greiner, 2008).

From 500°C–700°C the bones transition from black to blue-gray and eventually back to white. The bones at this stage are powdery, and the minerals have leeched out of the bones. When the bones are completely white they have reached their calcinated stage. The carbon dioxide and water should be completely lost from the hydroxyapatite at this point in their exposure to high temperature (Fairgrieve, 2008). This stage is directly prior to the recrystallization of hydroxyapatite and fusion of crystals (Ubelaker, 2009). Color changes can be seen in Figure 80 and Figure 81.

Figure 80: Front of Bones Before and After 500° C

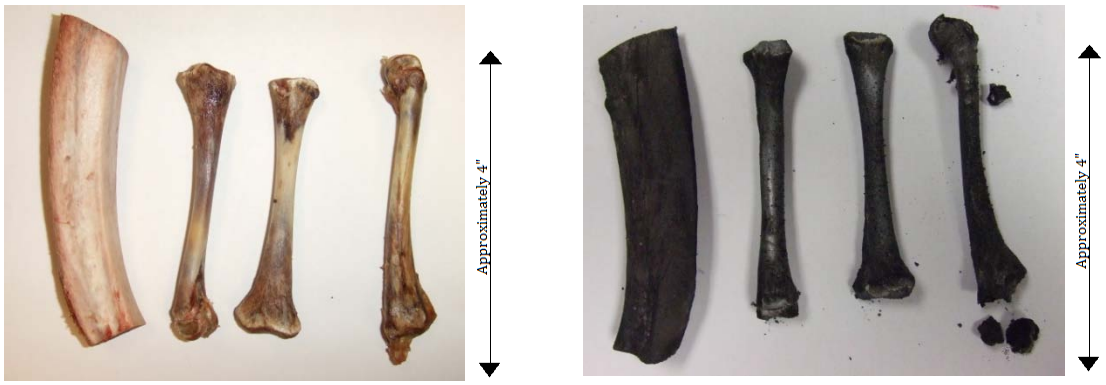


Figure 81: Back of Bones Before and After 500° C

At 500°C the bones are just beginning to transition into the next phase (Ubelaker, 2009). On the back of the chicken bones from the experiment, the beginning of the blue-grey phase change is starting which remains consistent with Ubelaker's findings as well as Fairgrieve. At 600°C the bone minerals begin to recrystallize (Ubelaker, 2009). Below in Figure 82 and Figure 83, at 600°C, the change to the blue-grey phase is more evident.

Figure 82: Front of Bones Before and After 600° C

Figure 83: Back of Bones Before and After 600 C

Finally, the transition to an almost calcinated bone can be seen at 700°C in Figure 84.

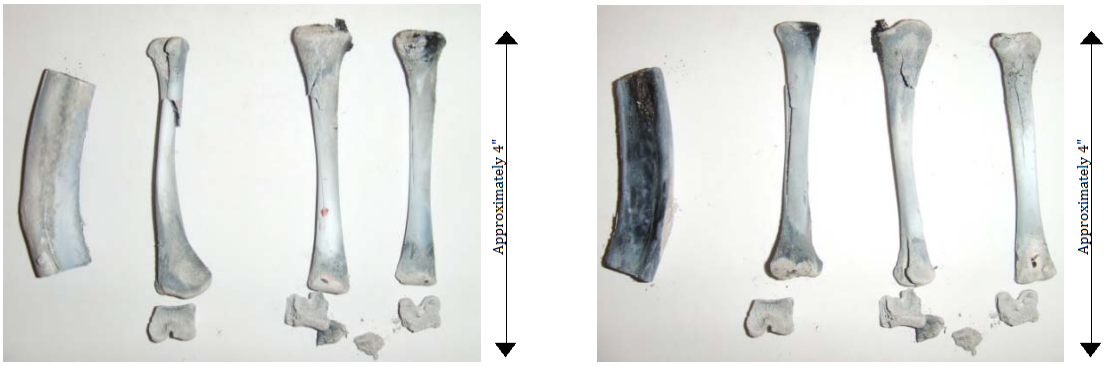
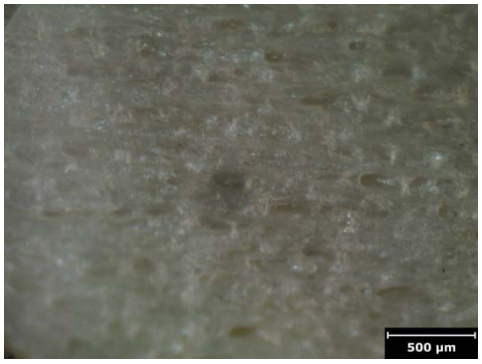
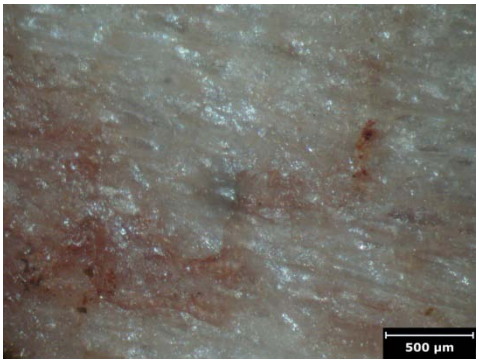


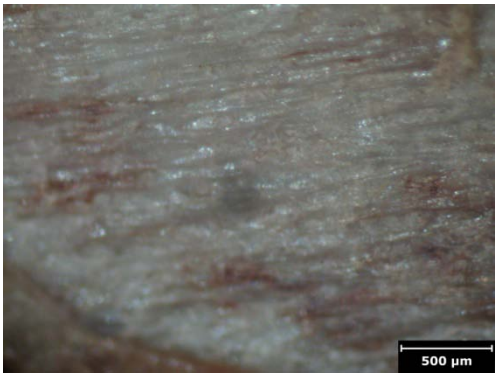
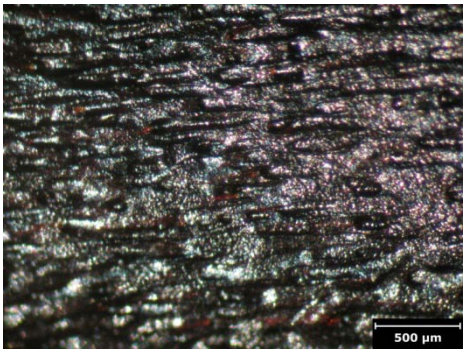
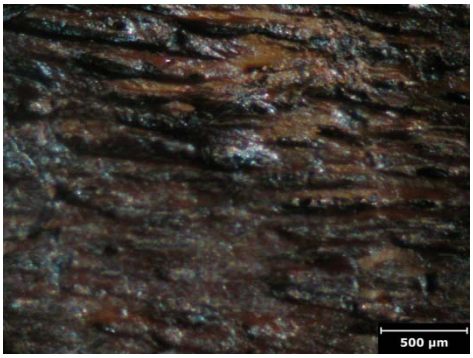
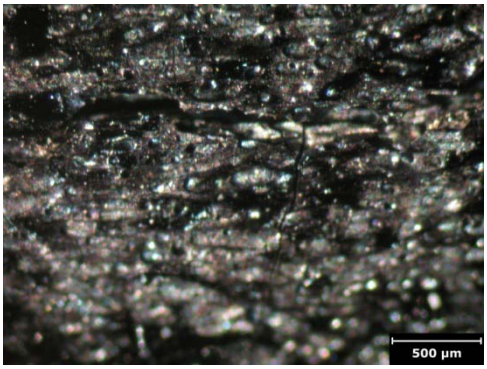
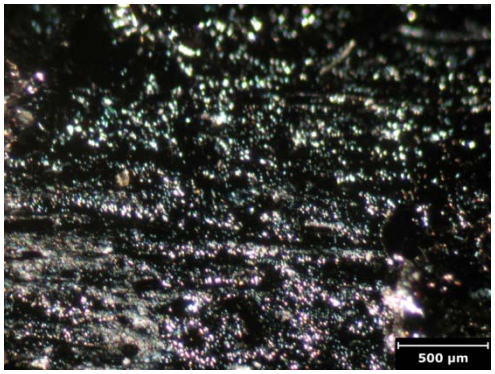
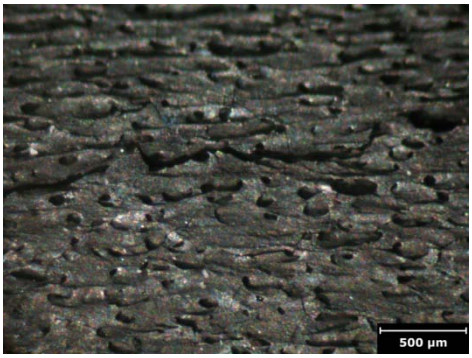
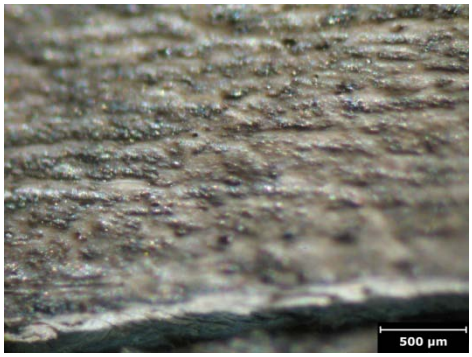
Figure 84: Front and Back of Bones Before and After 700°C

These bones have transitioned almost completely back to white, with the exception of the back of the rib bone and a few small pieces of the joints on the chicken. Beyond this we were expect to see a powdery appearance and the bones become completely white. The next transition would be at 1600°C where the bones begin to melt.

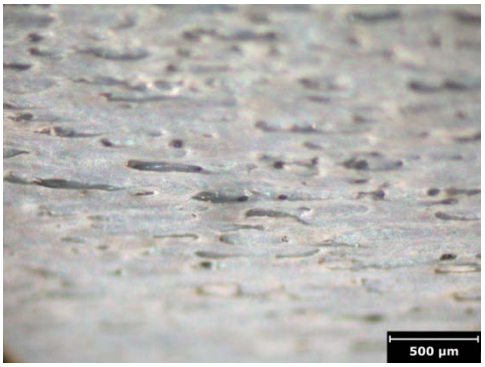
The structural change that the bones experience over the interval of 100°C to 700°C can be seen in Table 9. This can be seen in the microstructure as displayed in Table 9. There is a definitive change for both the bovine and chicken bones which continue to follow what would be expected. The expectation is to see the organic matter disappear from the bone entirely by 700°C and only see the remaining ceramic hydroxyapatite matrix (Ubelaker, 2009). The hydroxyapatite structure is not affected until beyond 800°C (Asmussen, 2009).

Table 9: Structural Changes in Chicken and Bovine Rib 100°C to 700°C

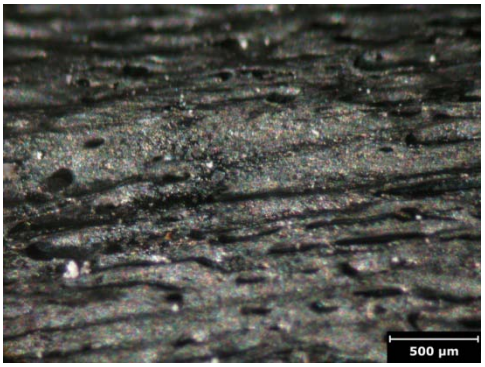
Chicken at 100°C	Bovine Rib at 100°C
	

Chicken at 200° C 	Bovine Rib at 200° C 
Chicken at 300° C 	Bovine Rib at 300° C 
Chicken at 400° C 	Bovine Rib at 400° C 
Chicken at 500° C 	Bovine Rib at 500° C 

Chicken at 600° C

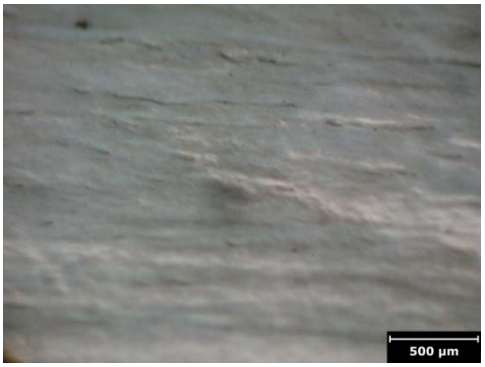


Bovine Rib at 600° C



Chicken at 700° C

Bovine Rib at 700° C



One point to note in the chicken changes in the chicken bone is all of the pictures were taken at the same magnification. These pictures show the pores becoming more and more evident. By the time the chicken has reached 700°C, all that remains to be seen is the matrix. The table below outlines the chemical changes that should be occurring at each temperature and causes the things that can be seen in the chicken and ribs in Table 10.

Table 10: Interpretation of Color Change
(Source: Fairgrieve, 2008)

Color	**Interpretation**
Brown	Hemoglobin, and/or soil discoloration
Black	Carbonized bone due to burning in O_2 starved context
Gray-blue, gray	Pyrolized organic components
White	Calcination, complete loss of organic portion and fusion of bone salts

The bones seen below in the ribs and above in the chicken follow this progression of structural changes as evidenced by their pictures. Especially about 600°C where most surface textures changes are observed (Ubelaker, 2009). It is at this temperature that the bones should begin to transition to blue-gray, and eventually to white (Fairgrieve, 2008).

The rib does not appear to be as affected as the chicken on a microscopic level. This is could be due to the fact that chicken bones are already significantly more porous then the rib before the high temperature treatment (Forrestt, 2008). Throughout the high temperature experiment the bones that were used exhibited all the same characteristics that have already been described in forensic and archaeological findings. From the results of this experiment the conclusion can be drawn that bovine and chicken bones have the same composition as human bones and will react similarly when introduced to the same environment.

5.10 High Temperature Mass Loss

The percent mass loss as a function of temperature is shown in Figure 85. It was found that the mass loss of both the chicken bones and bovine bones increased as the temperature increased.

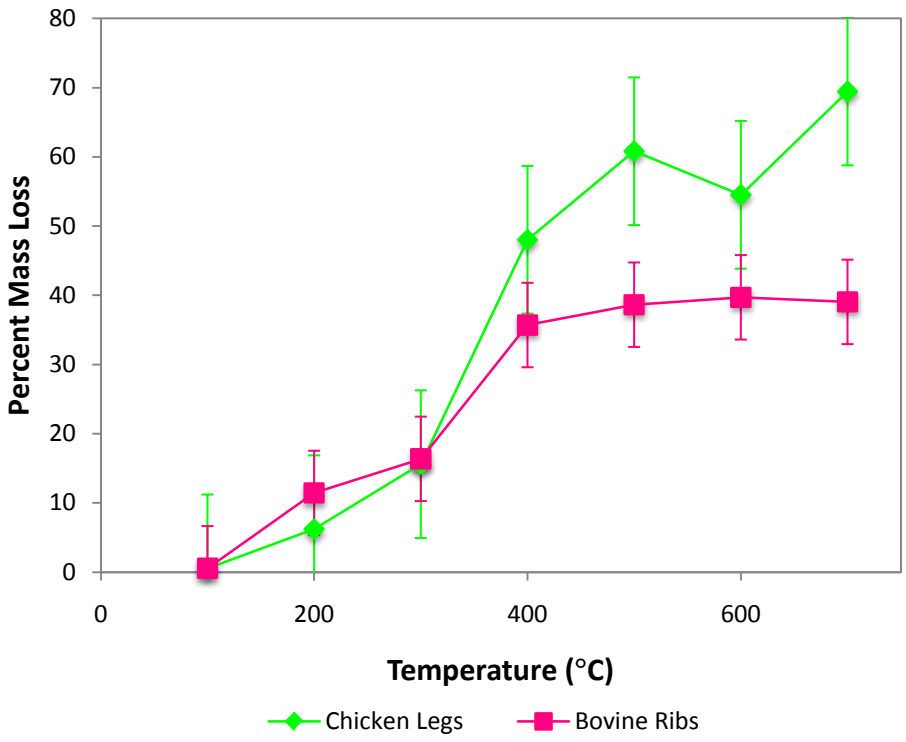


Figure 85: Mass Loss at High Temperatures

The chicken bones experienced more mass loss than the bovine ribs, up to a 70 percent mass loss when the temperature was 700°C. As chicken bone is less dense than bovine bone and contains more marrow as previously discussed in Section 5.4 Mass Loss in Accelerated Aging Study, the chicken bone would lose its mass more quickly than the bovine ribs since marrow degrades faster than bone.

It is noted that the mass loss in the bovine ribs plateaus at temperatures around 500°C. As a large amount of the water in bone is removed at temperatures between 300°C and 500°C, most of the water has been removed by 500°C. The change that occurs during 500°C and 700°C is that carbon dioxide is removed from the bone matrix (Fairgrieve, 2008). As the amount of carbon dioxide in bone is significantly less than water, the mass loss during the temperatures of 500°C to 700°C would be significantly less, which was proven during this study.

5.11 High Temperature Arrhenius Relation

The rate of mass loss of the bone samples used in the high temperature study was calculated to create an Arrhenius Plot. The purpose of the Arrhenius Plot was to analyze the effect of temperature on the bones and to calculate their activation energy (Q), as previously shown in Equation 2. The resulting plot is shown in Figure 86.

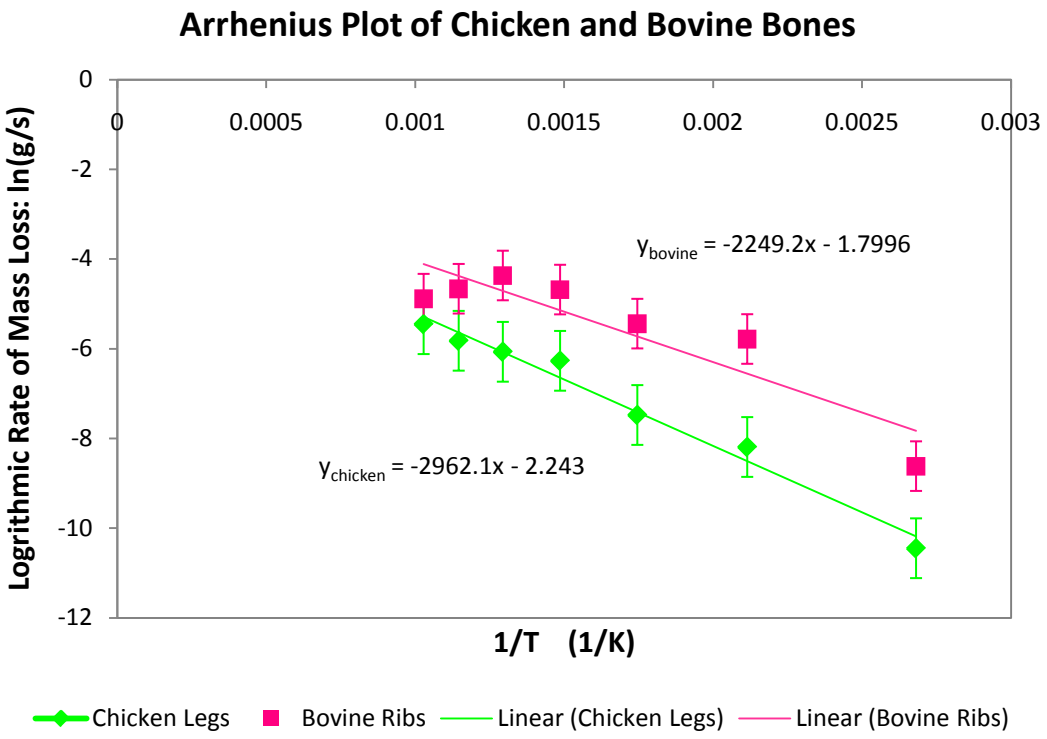


Figure 86: Arrhenius Plot of the High Temperature Decomposition of Bovine and Chicken Bones

The slope of the trend line that maps the data is equal to the negative activation energy (Q) divided by the gas constant (R), as shown in Equation 9.

Equation 9: Activation Energy Formula

$$slope = \frac{-Q}{R} \quad (9)$$

From this equation, the activation energy for the high temperature decomposition of chicken and bovine bones was calculated and is shown in Table 11.

Table 11: Activation Energy

	Calculated Activation Energy (kJ/mol)	Reference Activation Energy (kJ/mol)	Source of Reference Activation Energy
Bovine Ribs	18.7	44.3	Kirchner, 2005
Chicken Legs	24.6	32	Mano, 2005

In comparison with the reference activation energies, the calculated activation energies were fairly reasonable, as they were of the same magnitude as the reference activation energies, which were also calculated under different experimental means. Using these calculated activation energies in Equation 3: Modified Arrhenius Equation for Accelerated Aging, it was found that the bones in the accelerated aging study were aged for a longer period of time than originally anticipated. It was found that the 1.25 years of simulated aging occurred after only 5.6 weeks of burial for the bovine ribs and 9.8 weeks of burial for the chicken legs, as opposed to the original calculated value of 14 weeks. With these new values, it was found that the bovine bones were actually aged for a simulated time of 3.1 years, and the chicken bones were aged for a simulated time of 1.8 years.

6 Conclusions and Recommendations

Degradation by thermal means alone is less effective than degradation by environmental conditions. Many of the bones did not exhibit changes over time. Additionally, in cases of long-term degradation of remains, the initial condition of bones (fleshed or defleshed) can be determined. Differences in color, surface texture, and mechanical properties can all be used to help identify the conditions of bones prior to burial.

Chicken and bovine bones behave similarly to human bones when exposed to the same environment. The high temperature study showed color and structural changes that were consistent with what forensic scientists would expect to see in human bone. Although the structure of chicken bone is not identical to human bone, the chemical components are the same. Bovine ribs were found to contain similar structure and composition as human bones. Therefore, both chicken and bovine bones can be used to accurately predict the degradation of human bone.

It was shown that the surface texture became more porous and deeply grooved over time. The defleshed bones had more prominent ridges than the fleshed bones. As expected, the flesh was found to protect the bone from surface degradation. Additionally, the bovine bones experienced an increase in pore size, pitting, and roughness compared to the chicken bones.

Several mechanical properties did not change significantly either over time or between fleshed and defleshed bones. The flexural modulus was similar (approximately 0.8 GPa) for fleshed and defleshed bones, and did not change over time. The Vickers hardness of the bovine ribs was not shown to change over time. However, there were several observable trends in mechanical properties. The flexural strength of fleshed chicken legs was higher than the defleshed chicken legs. Additionally, the flexural strength was shown to decrease substantially over time (from approximately 60 MPa to approximately 20 MPa) for both fleshed and defleshed chicken.

Several recommendations are suggested for future studies of fleshed and defleshed bone. Simulating more realistic environmental conditions would be beneficial for accurate prediction of bone degradation. Micro-organism activity, temperature fluctuations (both daily and yearly), and changing soil conditions would likely increase the rate of bone degradation. Additionally, in order to obtain more bone degradation, a longer simulated burial time should be used. Finally, increasing the sample size for the study would provide more consistent and reliable results in the future.

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8 Appendices

8.1 Appendix A

Appendix A shows the mass before and after the accelerated aging study for all four types of bones. It also includesthe thickness before and after aging for the defleshed chicken legs and bovine ribs.

Bone #	Mass (g) Before	Mass (g) After	% Mass Remaining
1	124.9707	Not measured	Not calculated
2	137.1018	41.91	30.56852645
3	167.4139	51.2406	30.60713597
4	115.9837	33.8666	29.19944785
5	105.7373	29.9805	28.35375974
6	124.4607	34.4097	27.64704039
7	108.437	30.6831	28.29578465
8	119.8482	29.0138	24.20879079
9	149.8871	41.9373	27.97925906
10	183.7303	52.3018	28.46661656
11	183.0098	48.6475	26.58190982
12	199.8275	55.9619	28.0051044
13	237.0841	66.0291	27.85049693
14	171.7322	49.4786	28.81148672

Defleshed Chicken Legs						
	Before		After			
Bone #	Mass (g)	Thickness (in)	Mass (g)	Thickness (in)	% Mass Remaining	% Thickness Remaining
1	29.9094	0.425	15.9433	0.383	53.30531539	90.11764706
2	31.0479	0.393	14.7159	0.376	47.39740852	95.67430025
3	*43.2672*	*0.448*	*19.947*	*0.430*	46.10189705	95.98214286
4	26.2819	0.389	8.0782	0.371	30.73674278	95.37275064
5	37.5218	0.463	*17.1005*	*0.440*	45.57483916	95.03239741
6	33.3607	0.42	10.3912	0.400	31.14802747	95.23809524
7	29.8111	0.394	*8.1209*	0.378	27.24119539	95.93908629
8	37.8837	0.394	12.4222	0.376	32.79035575	95.43147208
9	25.3988	0.437	12.8116	0.409	50.44175315	93.59267735
10	31.6713	0.428	14.7041	0.409	46.42720697	95.56074766
11	36.1591	0.459	17.8089	0.432	49.25150239	94.11764706
12	34.6305	0.405	15.5646	0.385	44.94477412	95.0617284
13	34.2466	0.455	15.5254	0.436	45.33413536	95.82417582
14	34.8319	0.407	16.5656	0.382	47.55870337	93.85749386

Fleshed Bovine Ribs			
	Before	After	
Bone #	Mass (g)	Mass (g)	% Mass Remaining
1	116.5037	61.0236	52.37910899
2	121.4152	66.0403	54.39211894
3	133.4921	67.7036	50.71730837
4	137.7986	64.5238	46.82471375
5	141.6571	69.8402	49.30229406
6	131.715	67.6545	51.3643093
7	130.9315	59.4989	45.44276969
8	118.1266	56.8892	48.15951699
9	126.7664	57.5333	45.38529137
10	120.4583	50.8524	42.21577093
11	138.294	66.0872	47.78746728
12	119.8306	55.1705	46.04041038
13	120.1537	55.4383	46.13948634
14	125.2994	64.4769	51.45826716

Defleshed Bovine Ribs						
	Before		After			
Bone #	Mass (g)	Thickness (in)	Mass (g)	Thickness (in)	% Mass Remaining	% Thickness Remaining
1	69.9005	0.835	55.8525	0.819	79.90286193	98.0838323
2	61.3603	0.575	51.7244	0.549	84.29619803	95.4782609
3	71.52	0.649	58.7322	0.605	82.11996644	93.220339
4	66.6995	0.755	52.9504	0.732	79.38650215	96.9536424
5	64.6086	0.566	52.2098	0.540	80.80936594	95.4063604
6	74.337	0.782	58.4819	0.741	78.67132115	94.7570332
7	65.6002	0.821	50.1489	0.793	76.44626083	96.589525
8	63.4734	0.55	51.0776	0.523	80.47087441	95.0909091
9	73.2306	0.76	58.2627	0.733	79.56059352	96.4473684
10	67.9705	0.63	53.3286	0.603	78.45844889	95.7142857
11	54.9301	0.665	42.0666	0.631	76.5820561	94.887218
12	46.4799	0.636	37.3307	0.607	80.31579242	95.4402516
13	75.4872	0.708	59.9373	0.686	79.40061361	96.8926554
14	75.9137	0.768	59.5743	0.740	78.4763488	96.3541667

8.2 Appendix B

Appendix B describes the cracks in the bones after aging, including the number of cracks, crack area, crack length, and crack width for each type of bone.

Defleshed Chicken							
Week	# of Cracks	Total Crack Area	Average Crack Area	Total Crack Length (mm)	Average Crack Length (mm)	Total Crack Width	Average Crack Width
1	1	5.88	5.88	42	42	0.14	0.14
2	1	3.33	3.33	37	37	0.09	0.09
3	1	2.31	2.31	33	33	0.07	0.07
4	1	26.23	26.23	61	61	0.43	0.43
5	2	15.39	7.695	75	37.5	0.36	0.18
6	2	7.34	3.67	63	31.5	0.24	0.12
7	1	4.18	4.18	19	19	0.22	0.22
8	2	8.05	4.025	83	41.5	0.19	0.095
9	2	6.95	3.475	57	28.5	0.24	0.12
10	2	7.75	3.875	77	38.5	0.19	0.095
11	2	6.02	3.01	43	21.5	0.28	0.14
12	1	3.78	3.78	42	42	0.09	0.09
13	1	3.77	3.77	29	29	0.13	0.13
14	0	0	0	0	0	0	0

Fleshed Chicken							
Week	# of Cracks	Total Crack Area	Average Crack Area	Total Crack Length (mm)	Average Crack Length (mm)	Total Crack Width	Average Crack Width
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0

Defleshed Ribs							
Week	# of Cracks	Total Crack Area	Average Crack Area	Total Crack Length (mm)	Average Crack Length (mm)	Total Crack Width	Average Crack Width
1	1	24.96	24.96	104	104	0.24	0.24
2	2	4.92	2.46	81	40.5	0.13	0.065
3	3	30.96	10.32	112	37.33333333	0.66	0.22
4	5	44.98	8.996	160	32	0.95	0.19
5	2	24.41	12.205	113	56.5	0.39	0.195
6	3	109.94	36.64666667	255	85	1.14	0.38
7	6	341.6	56.93333333	308	51.33333333	4.41	0.735
8	6	41.02	6.836666667	267	44.5	0.95	0.158333333
9	3	42.52	14.17333333	169	56.33333333	0.77	0.256666667
10	3	37.84	12.61333333	198	66	0.63	0.21
11	4	34.06	8.515	265	66.25	0.55	0.1375
12	5	21.68	4.336	186	37.2	0.61	0.122
13	4	104.58	26.145	311	77.75	1.05	0.2625
14	1	34	34	68	68	0.5	0.5

Fleshed Ribs							
Week	# of Cracks	Total Crack Area	Average Crack Area	Total Crack Length (mm)	Average Crack Length (mm)	Total Crack Width	Average Crack Width
1	0	0	0	0	0	0	0
2	3	7.85	2.616666667	107	40.89171975	0.32	0.106666667
3	3	18.75	6.25	160	25.6	0.31	0.103333333
4	6	23.75	3.958333333	189	47.74736842	0.71	0.118333333
5	4	41.07	10.2675	289	28.14706598	0.48	0.12
6	5	31.22	6.244	173	27.70659833	0.81	0.162
7	4	116.02	29.005	242	8.343389071	1.48	0.37
8	3	37.32	12.44	173	13.90675241	0.61	0.203333333
9	1	0.91	0.91	13	14.28571429	0.07	0.07
10	4	14.49	3.6225	120	33.126294	0.49	0.1225
11	5	33.71	6.742	241	35.74606942	0.64	0.128
12	5	24.92	4.984	206	41.33226324	0.7	0.14
13	4	55.72	13.93	195	13.99856425	1.12	0.28
14	4	109.47	27.3675	213	7.782954234	1.77	0.4425

8.3 Appendix C

Appendix C includes the data obtained during the three-point bending tests. This data was used to plot force-elongation curves and calculate the flexural strength and modulus of the bones.

Chicken Fleshed 1	
Diameter	9.83 mm
Extension	Load
(mm)	(N)
-1.81229	-15.86173
-1.81666	-16.42255
-1.83437	-19.83252
-1.85583	-24.23615
-1.87562	-27.66426
-1.89354	-30.18302
-1.91146	-32.694
-1.92875	-35.11498
-1.94583	-37.59973
-1.9625	-40.05764
-1.97896	-42.48539
-1.99562	-44.93083
-2.0125	-47.36607
-2.02916	-49.89329
-2.04562	-52.34862
-2.0625	-54.9008
-2.07916	-57.45215
-2.09562	-59.8189
-2.1125	-62.32527
-2.12896	-64.82901
-2.14583	-67.35797
-2.1625	-70.01863
-2.17958	-72.62015
-2.19562	-75.08461
-2.21208	-77.54871
-2.22896	-80.18304
-2.24541	-82.76796
-2.26271	-85.46181
-2.27916	-87.98353
-2.29604	-90.58505
-2.31229	-93.02218
-2.32895	-95.48339
-2.34604	-97.9889
-2.3625	-100.45899
-2.37958	-102.93936
-2.39583	-105.22476
-2.41229	-107.56524
-2.42916	-110.04061
-2.44562	-112.41191
-2.4625	-114.84319
-2.47895	-117.08189
-2.49583	-119.31664
-2.5125	-121.77411
-2.52875	-124.25034
-2.54583	-126.783
-2.56229	-129.40247
-2.57916	-132.13746
-2.59604	-134.98673
-2.6125	-137.82662
-2.62937	-140.66149
-2.64562	-143.35182
-2.66229	-146.21069
-2.67895	-149.13061
-2.69562	-151.96127
-2.71229	-154.73372
-2.72895	-157.36264
-2.74583	-160.12795
-2.7627	-162.53595
-2.77937	-165.21275
-2.79583	-167.46393
-2.8127	-169.54315
-2.82937	-171.85058
-2.84604	-174.1343
-2.8627	-176.52664
-2.87937	-179.14042
-2.89604	-181.40899
-2.9125	-183.71686
-2.92895	-185.86467
-2.94562	-187.9086
-2.9625	-189.45751
-2.97916	-190.27628
-2.99604	-191.2306
-3.01291	-192.20726
-3.02916	-192.69137
-3.04583	-193.64814
-3.06229	-195.42071
-3.07895	-197.77806
-3.09625	-200.46885
-3.11229	-202.9216
-3.12895	-205.58037
-3.14541	-208.3264
-3.16229	-211.01443
-3.17937	-214.05965
-3.19583	-216.82194
-3.21291	-219.78977
-3.22895	-222.56817
-3.24562	-225.27803
-3.2627	-228.24527
-3.27874	-231.03598
-3.29583	-234.0187
-3.31249	-236.96209
-3.32937	-239.97451
-3.34604	-242.93156
-3.36208	-245.68027
-3.37916	-248.50917
-3.39562	-251.24416
-3.4127	-254.22633
-3.42937	-256.95062
-3.44583	-259.77018
-3.4627	-262.70157
-3.47916	-265.47107
-3.49583	-268.54408
-3.51229	-271.42635
-3.52916	-273.5396
-3.54562	-275.5357
-3.56249	-277.81725
-3.57916	-280.51627
-3.59562	-282.67619
-3.61229	-284.88651
-3.62916	-287.53901
-3.64604	-288.24818
-3.6627	-290.887
-3.67916	-293.24421
-3.69583	-295.64199
-3.71249	-297.83013
-3.72916	-300.03741
-3.74562	-302.14584
-3.7627	-304.33252
-3.77916	-306.64417
-3.79583	-308.86477
-3.81229	-310.93609
-3.82895	-312.95347

-3.84604	-314.71911
-3.86229	-316.28972
-3.87916	-318.15472
-3.89541	-320.17359
-3.91208	-322.37116
-3.92916	-324.31495
-3.94541	-326.33975
-3.96229	-324.11572
-3.97916	-324.75141
-3.99583	-325.51438
-4.01249	-327.0503
-4.02895	-328.32727
-4.04604	-329.24911
-4.0627	-329.45538
-4.07958	-329.88513
-4.09604	-330.13818
-4.11208	-330.04048
-4.12937	-330.55782
-4.14666	-323.50329
-4.14749	-315.39503
-4.14854	-303.6603
-4.14958	-289.42099
-4.15062	-273.43777
-4.15145	-256.10989
-4.15208	-237.88197
-4.15249	-219.21402
-4.15291	-200.42057
-4.15333	-181.73878

Chicken Fleshed 2	
Diameter	8.25 mm
Extension	Load
(mm)	(N)
-0.92187	-29.47003
-0.92604	-30.22124
-0.94229	-34.15162
-0.96	-39.21166
-0.9775	-44.28564
-0.99708	-49.34738
-1.01458	-53.53764
-1.03208	-57.45441
-1.04896	-61.3723
-1.06604	-65.30536
-1.08312	-68.96631
-1.09979	-72.74611
-1.11666	-76.56702
-1.13271	-80.14263
-1.14958	-83.72486
-1.16625	-87.17477
-1.18291	-90.49115
-1.19979	-93.7268
-1.21625	-96.67404
-1.23291	-99.19287
-1.24937	-100.73899
-1.26625	-103.01217
-1.28312	-105.70027
-1.29979	-108.37472
-1.31646	-110.84764
-1.33312	-113.02451
-1.35	-115.13833
-1.36646	-116.5693
-1.38291	-118.03105
-1.39979	-119.63689
-1.41625	-121.55316
-1.43291	-123.94845
-1.44937	-125.89642
-1.46625	-128.12696
-1.48312	-130.61103
-1.49979	-132.79241
-1.51666	-134.94626
-1.53312	-137.31998
-1.55	-139.66168
-1.56646	-141.66526
-1.58312	-143.65019
-1.59979	-145.36414
-1.61666	-147.44528
-1.63291	-149.61883
-1.64958	-151.79375
-1.66625	-154.09739
-1.68291	-156.37612
-1.69979	-158.58237
-1.71646	-160.64714
-1.73333	-162.54522
-1.74958	-164.68616
-1.76604	-167.08782
-1.78312	-169.7558
-1.79958	-172.31639
-1.81666	-175.14558
-1.83312	-177.98018
-1.84958	-180.55607
-1.86625	-183.38342
-1.8825	-186.04404
-1.89979	-188.83008
-1.91666	-191.55267
-1.93333	-194.20047
-1.95021	-197.00111
-1.96625	-199.52975
-1.98312	-202.08018
-1.99979	-204.4224
-2.01625	-206.44696
-2.03312	-208.43385
-2.04979	-210.20493
-2.06666	-212.35602
-2.08291	-214.41796
-2.09958	-216.80394
-2.11646	-219.30835
-2.13312	-221.42756
-2.1502	-223.96971
-2.16646	-226.13554
-2.18333	-228.37658
-2.19979	-230.46997
-2.21646	-232.68701
-2.23312	-234.88742
-2.24958	-236.78803
-2.26625	-238.58102
-2.28291	-240.37607
-2.29958	-242.40904
-2.31645	-244.75293
-2.33312	-246.83475
-2.34979	-248.95045
-2.36625	-251.08761
-2.38312	-253.56954
-2.39979	-256.16166
-2.41625	-258.58796
-2.43312	-261.1399
-2.45	-263.33913
-2.46625	-265.30457
-2.48291	-267.19445
-2.49979	-269.31682
-2.51604	-271.55051
-2.53312	-273.99552
-2.54958	-276.30052
-2.56666	-278.56773
-2.58312	-280.83983
-2.59937	-283.12805
-2.61625	-285.40069
-2.6327	-287.1426
-2.65	-288.95292
-2.66625	-290.85791
-2.68291	-292.624
-2.69958	-294.82535

-2.71604	-297.43999
-2.73312	-300.26907
-2.74958	-303.2113
-2.76666	-305.01539
-2.78333	-307.97511
-2.8	-310.70721
-2.81666	-313.36606
-2.83291	-315.99638
-2.84958	-318.58414
-2.86666	-321.26117
-2.88291	-323.51822
-2.9	-325.97119
-2.90458	-319.13579
-2.90541	-310.0718
-2.90645	-297.68512
-2.9075	-283.06475
-2.90833	-266.8305
-2.90916	-249.36824
-2.90979	-231.1423
-2.9102	-212.57457
-2.91062	-193.9401

Chicken Fleshed 3	
Diameter	9.58 mm
Extension	Load
(mm)	(N)
-0.11187	-12.72383
-0.11417	-13.04851
-0.13271	-17.60514
-0.14979	-22.68943
-0.17	-27.73859
-0.18833	-31.97185
-0.20583	-35.86265
-0.22312	-39.08956
-0.24021	-41.42199
-0.25708	-44.74363
-0.27437	-47.34977
-0.29083	-50.78601
-0.30708	-54.84701
-0.32396	-59.43681
-0.34021	-63.57316
-0.3575	-67.39768
-0.37396	-70.45161
-0.39062	-73.78902
-0.40708	-77.7041
-0.42375	-80.76007

-0.44083	-84.35699
-0.45687	-87.78544
-0.47417	-88.52684
-0.49062	-92.23162
-0.5075	-95.68515
-0.52417	-99.15248
-0.54042	-102.43193
-0.55708	-105.7367
-0.57396	-107.56965
-0.59062	-109.37659
-0.60729	-113.12023
-0.62354	-116.73033
-0.64062	-120.93226
-0.65729	-124.44101
-0.67417	-128.33165
-0.69083	-132.53321
-0.70729	-136.42927
-0.72396	-139.94536
-0.74062	-143.32473
-0.7575	-146.89161
-0.77417	-150.29058
-0.79083	-153.73856
-0.80729	-157.42284
-0.82375	-161.03551
-0.84062	-164.76655
-0.85729	-168.41397
-0.87375	-171.85155
-0.89062	-175.51385
-0.90771	-179.4792
-0.92396	-183.22842
-0.94042	-185.55813
-0.95708	-187.54101
-0.97354	-191.07789
-0.99083	-195.17002
-1.00812	-185.0404
-1.00875	-177.05603
-1.00958	-167.89868
-1.01	-157.80966
-1.01062	-147.07096
-1.01104	-135.97323
-1.01146	-124.72034
-1.01187	-113.46881

Chicken Fleshed 4	
Diameter	8.22 mm

Extension	Load
(mm)	(N)
-1.63291	-4.68256
-1.63521	-4.9204
-1.65271	-7.56889
-1.67521	-11.66875
-1.69521	-15.4874
-1.71396	-19.21718
-1.73166	-22.74149
-1.74896	-26.29385
-1.76562	-29.75017
-1.7825	-33.25446
-1.79916	-36.79333
-1.81604	-40.32532
-1.83291	-43.79436
-1.84916	-47.18097
-1.86583	-50.63386
-1.88208	-54.01016
-1.89937	-57.498
-1.91646	-60.98285
-1.93312	-64.2871
-1.94979	-67.64597
-1.96562	-70.76436
-1.98271	-74.01315
-1.99916	-77.19652
-2.01604	-80.3686
-2.03291	-83.59905
-2.04937	-86.76365
-2.06625	-90.06201
-2.0825	-93.1612
-2.09916	-96.39379
-2.11625	-99.69976
-2.13271	-102.58707
-2.14979	-105.83954
-2.16625	-108.83242
-2.18291	-112.06603
-2.19937	-115.17325
-2.21604	-118.28633
-2.23291	-121.33329
-2.24916	-124.31473
-2.26604	-127.39758
-2.2825	-130.37439
-2.29937	-132.79569
-2.31583	-135.62132
-2.3327	-138.63377
-2.34937	-141.62454
-2.36583	-144.52198

-2.3827	-147.58229
-2.39937	-150.5395
-2.41604	-153.39059
-2.43291	-156.3821
-2.44958	-159.26257
-2.46583	-162.19066
-2.4825	-165.07593
-2.49937	-167.98516
-2.51562	-170.74935
-2.5327	-173.54637
-2.54937	-176.27481
-2.56625	-178.9953
-2.58291	-181.74301
-2.59708	-175.62027
-2.59791	-167.75227
-2.59875	-158.58527
-2.59958	-149.09045
-2.6	-139.86228
-2.60062	-131.27279
-2.60125	-123.64209
-2.60187	-117.097
-2.6027	-111.61227
-2.60354	-107.21143

Chicken Fleshed 5	
Diameter	7.81 mm
Extension	Load
(mm)	(N)
-1.34041	-6.39415
-1.34396	-6.62054
-1.36458	-10.14486
-1.385	-13.45282
-1.40396	-16.39394
-1.42208	-19.06279
-1.43937	-21.73734
-1.45646	-24.56663
-1.47271	-27.28101
-1.49	-30.28564
-1.50646	-33.1509
-1.52312	-36.15824
-1.54021	-39.16768
-1.55666	-42.20662
-1.57354	-45.27395
-1.58958	-48.21751
-1.60646	-51.27882

-1.62333	-54.38773
-1.64	-57.41683
-1.65708	-60.38818
-1.67354	-63.28743
-1.69021	-66.26748
-1.70666	-69.1528
-1.72312	-71.89269
-1.74	-74.78321
-1.75666	-77.67607
-1.77333	-80.66564
-1.79	-83.59247
-1.80666	-86.54398
-1.82333	-89.4355
-1.83979	-92.28831
-1.85666	-95.12926
-1.87333	-97.85328
-1.89	-100.70601
-1.90646	-103.50516
-1.92333	-106.25965
-1.94	-108.99531
-1.95666	-111.64747
-1.97312	-114.30781
-1.99	-116.95566
-2.00666	-119.62225
-2.02312	-122.12172
-2.04	-124.75767
-2.05666	-127.28415
-2.07354	-129.86179
-2.09	-132.38555
-2.10646	-134.87063
-2.12312	-137.32268
-2.13958	-139.71125
-2.15666	-142.02081
-2.17312	-143.98152
-2.18979	-145.37758
-2.20645	-146.68846
-2.22291	-148.29341
-2.24	-150.04589
-2.25666	-151.65688
-2.27354	-152.95659
-2.29041	-154.36324
-2.30687	-155.67309
-2.32354	-157.16019
-2.33958	-158.74207
-2.35666	-160.36794
-2.37354	-162.23244
-2.39	-163.99646

-2.40687	-166.14974
-2.42291	-168.21274
-2.4402	-170.72842
-2.45666	-173.29779
-2.47333	-175.833
-2.49062	-178.50077
-2.50708	-180.92325
-2.52375	-183.42166
-2.54	-185.58954
-2.55645	-187.62529
-2.57333	-189.91356
-2.57854	-182.39622
-2.57916	-175.62503
-2.57979	-167.40057
-2.58041	-158.16264
-2.58104	-148.14818
-2.58145	-137.61339
-2.58187	-126.81977
-2.58229	-115.95032
-2.5825	-105.14568

Chicken Fleshed 6	
Diameter	8.13 mm
Extension	Load
(mm)	(N)
-2.03187	-0.93855
-2.03437	-1.08906
-2.05354	-3.33818
-2.075	-5.5814
-2.09458	-8.10087
-2.11312	-11.41816
-2.13083	-15.29803
-2.14791	-19.10202
-2.16437	-22.77884
-2.18146	-26.68834
-2.19791	-30.61143
-2.215	-34.63421
-2.23166	-38.64541
-2.24854	-42.68401
-2.265	-46.65976
-2.28145	-50.52423
-2.29812	-54.62797
-2.31479	-58.56917
-2.33145	-62.60325
-2.34812	-66.64883

-2.365	-70.70896
-2.38166	-74.76971
-2.39833	-78.74107
-2.41479	-82.71917
-2.43125	-86.64255
-2.44812	-90.59515
-2.46479	-94.54744
-2.48145	-98.3111
-2.49833	-102.21349
-2.51479	-105.9975
-2.53166	-109.72147
-2.54791	-113.33276
-2.565	-116.90347
-2.58145	-120.48594
-2.59812	-123.40714
-2.61479	-126.94402
-2.63166	-130.43573
-2.64833	-133.94651
-2.665	-137.34274
-2.68145	-140.78932
-2.69791	-144.17847
-2.71458	-147.6616
-2.73166	-151.03237
-2.7477	-153.31671
-2.76479	-156.5938
-2.78145	-160.16535
-2.79812	-163.74297
-2.815	-167.50781
-2.83125	-171.03241
-2.84854	-174.81065
-2.865	-178.48383
-2.88187	-182.13141
-2.89833	-185.62989
-2.91458	-188.93896
-2.93166	-192.46547
-2.94812	-195.82033
-2.965	-199.11391
-2.98166	-202.21204
-2.99812	-205.31584
-3.0152	-208.7978
-3.03125	-212.0855
-3.04854	-215.54101
-3.06541	-219.00263
-3.08187	-222.33337
-3.09833	-225.28979
-3.11458	-227.77569
-3.13145	-230.90966
-3.14833	-234.02716
-3.165	-237.07442
-3.18187	-240.23692
-3.19833	-243.15809
-3.21479	-245.86292
-3.23145	-248.3419
-3.24833	-250.95138
-3.2652	-252.8488
-3.28166	-254.02585
-3.29833	-255.80853
-3.31499	-257.92947
-3.33145	-260.42908
-3.34812	-262.87061
-3.36458	-265.75068
-3.38145	-268.42916
-3.39833	-271.42137
-3.41499	-274.20864
-3.43166	-277.24543
-3.44812	-280.34759
-3.46458	-283.41499
-3.48166	-286.66857
-3.49854	-289.86162
-3.5152	-292.91582
-3.53166	-295.4005
-3.54791	-297.90285
-3.56499	-300.46758
-3.57333	-293.68028
-3.57416	-284.79633
-3.5752	-273.0023
-3.57604	-259.26188
-3.57687	-244.08573
-3.5777	-227.83242
-3.57833	-210.9365
-3.57874	-193.76853
-3.57916	-176.57101

Chicken Fleshed 7	
Diameter	8.14 mm
Extension	Load
(mm)	(N)
-1.23458	-15.33733
-1.24146	-16.26027
-1.26	-19.6577
-1.28021	-23.87262
-1.29812	-27.4594
-1.31583	-30.82117
-1.33291	-33.87213
-1.35021	-36.87601
-1.3675	-39.88645
-1.38416	-42.79708
-1.40104	-45.74279
-1.4175	-48.63507
-1.43437	-51.56186
-1.45104	-54.45967
-1.46791	-57.3631
-1.48437	-60.13429
-1.50104	-62.92101
-1.51791	-65.79943
-1.53437	-68.5564
-1.55146	-71.38151
-1.56812	-74.1553
-1.58479	-76.89293
-1.60125	-79.47423
-1.61791	-82.1666
-1.63458	-84.93657
-1.65104	-87.64906
-1.66791	-90.35874
-1.68437	-92.99275
-1.70146	-95.58384
-1.71791	-98.2006
-1.73437	-100.6692
-1.75104	-103.11928
-1.7675	-105.58731
-1.78479	-108.15399
-1.80125	-110.59866
-1.81771	-113.00878
-1.83458	-115.50801
-1.85083	-117.86497
-1.86812	-120.36045
-1.88458	-122.58889
-1.90146	-124.86205
-1.91833	-126.32939
-1.93479	-127.68096
-1.95146	-129.68448
-1.96771	-131.69785
-1.98458	-133.8899
-2.00146	-136.05
-2.01791	-138.12366
-2.03479	-140.29142
-2.05083	-142.2312
-2.06791	-144.2772
-2.08479	-146.32578

-2.10146	-148.21018
-2.11854	-150.1945
-2.13479	-151.94207
-2.15146	-153.71257
-2.16791	-155.44364
-2.18458	-157.14112
-2.20145	-158.73913
-2.2177	-160.12703
-2.23458	-161.59077
-2.25125	-162.94953
-2.26791	-164.05876
-2.28479	-163.10504
-2.28833	-157.95989
-2.3052	-154.35028
-2.32145	-154.15077
-2.33833	-154.14241
-2.35479	-153.37393
-2.37145	-153.07392
-2.38812	-152.62815
-2.405	-152.30589
-2.42166	-152.02028
-2.43812	-151.72
-2.455	-151.53082
-2.47166	-151.26379
-2.48854	-150.72182
-2.50562	-149.98256
-2.52187	-148.655
-2.53854	-146.68059
-2.5552	-142.51003
-2.57208	-140.50575
-2.58833	-139.49589
-2.605	-139.08969
-2.62187	-139.32085
-2.63833	-139.83241
-2.655	-140.41358
-2.67166	-140.85481
-2.68812	-140.80298
-2.705	-141.54848
-2.72145	-142.22959
-2.73854	-142.90644
-2.7552	-143.50981
-2.77187	-144.14345
-2.78854	-144.7393
-2.80479	-144.63057
-2.82187	-145.32928
-2.8377	-139.05166
-2.83833	-133.61412
-2.83895	-127.14399
-2.83958	-119.9379
-2.8402	-112.16784
-2.84062	-104.03754
-2.84125	-95.74135
-2.84145	-87.4079
-2.84187	-79.1435

Chicken Fleshed 8	
Diameter	7.84 mm
Extension	Load
(mm)	(N)
-0.84354	-1.63207
-0.86396	-3.24695
-0.89958	-8.33184
-0.92521	-13.36159
-0.94812	-18.46245
-0.97104	-23.52547
-0.99208	-28.6243
-1.01479	-33.74585
-1.04271	-38.82998
-1.07271	-43.85955
-1.09625	-48.94967
-1.11854	-53.95943
-1.13937	-59.02844
-1.15937	-64.03251
-1.18	-69.12695
-1.20166	-74.15207
-1.22604	-79.2028
-1.24916	-84.28763
-1.27083	-89.40203
-1.29083	-94.42171
-1.31291	-99.53877
-1.33396	-104.65162
-1.35583	-109.6742
-1.38937	-107.32941
-1.40729	-112.35
-1.42854	-117.43449
-1.45083	-122.51499
-1.47375	-127.51643
-1.49708	-132.65094
-1.52104	-137.69998
-1.54	-130.7963
-1.54166	-121.16235
-1.5425	-115.7768
-1.54333	-110.20894
-1.54396	-104.5877
-1.54458	-98.99522
-1.54521	-93.5002
-1.54583	-88.1712
-1.54646	-83.06365
-1.54708	-78.21567

Chicken Fleshed 9	
Diameter	8.96 mm
Extension	Load
(mm)	(N)
-1.21166	-5.36885
-1.23062	-7.64012
-1.25771	-12.75688
-1.28521	-17.80729
-1.31104	-22.89344
-1.33666	-27.9511
-1.36187	-33.00276
-1.38646	-38.05429
-1.41146	-43.15479
-1.43646	-48.28952
-1.46083	-53.41832
-1.485	-58.56364
-1.51021	-63.5963
-1.53375	-68.64548
-1.55708	-73.73017
-1.57916	-78.76201
-1.60896	-83.8825
-1.63229	-88.92322
-1.65521	-94.04682
-1.67791	-99.16807
-1.70146	-104.23819
-1.725	-109.24447
-1.74833	-101.18288
-1.74916	-95.84824
-1.75	-90.00565
-1.75083	-83.80263
-1.75166	-77.40404
-1.7525	-70.93188
-1.75312	-64.47443

Chicken Fleshed 10

Diameter	10.26 mm
Extension	Load
(mm)	(N)
-0.83208	-25.53521
-0.84812	-28.01142
-0.86458	-33.0133
-0.87958	-38.09827
-0.895	-43.27295
-0.91187	-48.44521
-0.92917	-53.61316
-0.94646	-58.72777
-0.96562	-63.8761
-0.98396	-68.88568
-1.01833	-73.30579
-1.04021	-78.41156
-1.06125	-83.43671
-1.08229	-88.5836
-1.10229	-93.6544
-1.12375	-98.73796
-1.14375	-103.82831
-1.1625	-108.84082
-1.18375	-113.87183
-1.20479	-118.93082
-1.22771	-124.02691
-1.24812	-129.12136
-1.26854	-134.23543
-1.28937	-139.33666
-1.31104	-144.4325
-1.33271	-149.58175
-1.355	-154.65252
-1.37958	-159.73164
-1.40437	-164.8417
-1.42666	-169.8717
-1.45021	-174.91089
-1.47416	-180.02638
-1.49646	-185.11984
-1.51854	-190.14658
-1.54146	-195.26856
-1.565	-200.39035
-1.59062	-205.46478
-1.60083	-197.64955
-1.60187	-191.16975
-1.60312	-182.86511
-1.60416	-173.33792
-1.605	-162.89708
-1.60604	-151.78563
-1.60687	-140.29387
-1.60771	-128.66043
-1.60833	-117.0463

Chicken Fleshed 11	
Diameter	11.12 mm
Extension	Load
(mm)	(N)
-0.99292	-0.97877
-1.01354	-2.50344
-1.05208	-2.76272
-1.08875	-3.2805
-1.12416	-5.21012
-1.15812	-5.15912
-1.19229	-6.51261
-1.22541	-11.24484
-1.25896	-14.91482
-1.28312	-19.97604
-1.3075	-24.99128
-1.33312	-30.09898
-1.3625	-35.16852
-1.39146	-40.29647
-1.41604	-45.41456
-1.44021	-50.42738
-1.46541	-55.54809
-1.48875	-60.63677
-1.51146	-65.73084
-1.53458	-70.74922
-1.55583	-75.75727
-1.57708	-80.77967
-1.59896	-85.8205
-1.62146	-90.92116
-1.64354	-96.07402
-1.665	-101.1759
-1.68687	-106.26866
-1.72021	-109.84205
-1.74062	-114.94175
-1.76291	-120.04787
-1.78687	-125.15932
-1.81062	-130.29368
-1.84437	-134.57395
-1.86687	-139.61045
-1.89021	-144.62157
-1.92375	-148.08176
-1.95604	-153.13445
-1.98229	-158.26494
-2.00666	-163.27561
-2.03979	-166.41203
-2.06646	-171.51317
-2.09541	-176.5285
-2.1225	-181.56341
-2.14979	-186.63803
-2.17729	-191.65857
-2.2102	-195.81863
-2.24375	-198.12939
-2.27625	-203.23062
-2.30937	-207.98908
-2.34291	-211.97999
-2.3677	-217.04596
-2.3827	-207.05943
-2.38375	-198.69278
-2.385	-188.85963
-2.38583	-177.95967
-2.38687	-166.24783
-2.3877	-154.03432
-2.38854	-141.60275
-2.38916	-129.13848
-2.38979	-116.80265

Chicken Fleshed 12	
Diameter	10.27 mm
Extension	Load
(mm)	(N)
-0.89083	-1.91764
-0.90229	-3.43499
-0.92833	-8.54989
-0.94917	-13.64639
-0.96646	-18.72949
-0.98187	-23.75781
-0.9975	-28.89808
-1.01229	-33.96788
-1.02667	-39.04673
-1.04167	-44.22859
-1.05583	-49.25081
-1.07	-54.45147
-1.08458	-59.48884
-1.09875	-64.69083
-1.11291	-69.93672
-1.12708	-75.10529
-1.14062	-80.10584
-1.15437	-85.21479

-1.16791	-90.39542
-1.18104	-95.56352
-1.195	-100.79655
-1.20833	-105.87212
-1.22166	-111.04333
-1.23521	-116.14853
-1.24854	-121.3522
-1.26187	-126.47961
-1.27541	-131.59059
-1.28875	-136.78208
-1.30229	-142.00547
-1.31646	-147.21295
-1.33021	-152.35059
-1.34333	-157.50448
-1.3575	-162.73412
-1.37083	-167.80177
-1.38458	-172.98304
-1.41791	-174.33809
-1.43125	-179.46917
-1.44562	-184.60184
-1.4625	-189.70945
-1.47854	-194.81416
-1.49708	-199.99427
-1.53125	-203.67199
-1.54583	-208.89468
-1.56187	-213.90387
-1.57771	-218.9813
-1.59396	-223.99089
-1.61062	-229.08612
-1.62833	-234.2284
-1.65437	-239.29758
-1.66041	-233.41697
-1.66291	-228.27263
-1.66583	-222.94959
-1.69937	-226.29629
-1.70708	-214.9175
-1.70833	-205.94262
-1.70937	-195.52179
-1.71041	-184.02106
-1.71146	-171.71301
-1.7125	-158.92847
-1.71312	-145.94501
-1.71396	-132.94648
-1.71437	-120.10893

Chicken Fleshed 13	
Diameter	11.47 mm
Extension	Load
(mm)	(N)
-0.01583	-0.12937
-0.03896	-1.39916
-0.07687	-2.28604
-0.11229	-0.85395
-0.14708	-0.60826
-0.18146	1.06042
-0.21521	1.00913
-0.24854	1.00286
-0.28187	0.96014
-0.31542	-0.44628
-0.34854	-3.24431
-0.38146	-6.27419
-0.41437	-11.31656
-0.43937	-16.37042
-0.46125	-21.48107
-0.48208	-26.58359
-0.50125	-31.62577
-0.52062	-36.73731
-0.53854	-41.78118
-0.55771	-46.88397
-0.57667	-51.98169
-0.59542	-56.9906
-0.61375	-62.03827
-0.63229	-67.18422
-0.65021	-72.2235
-0.66854	-77.29311
-0.68729	-82.32713
-0.70625	-87.35398
-0.72604	-92.3742
-0.74521	-97.47948
-0.76521	-102.57039
-0.78458	-107.59229
-0.805	-112.76354
-0.82479	-117.92326
-0.84521	-122.95696
-0.865	-127.95849
-0.88521	-132.99508
-0.90583	-138.05664
-0.93021	-143.14631
-0.95229	-148.29752
-0.97458	-153.33018
-0.99958	-158.35154
-1.02354	-163.48898

-1.04625	-168.52795
-1.06896	-173.62756
-1.09125	-178.77199
-1.115	-183.89635
-1.14041	-188.96715
-1.16479	-194.01038
-1.19271	-199.0857
-1.22583	-202.35103
-1.25916	-203.8296
-1.26791	-198.75827
-1.27937	-193.68082
-1.31271	-193.92994
-1.32541	-188.07261
-1.3275	-181.50596
-1.32958	-174.50532
-1.33146	-168.0522
-1.33333	-162.69442
-1.33583	-157.49227
-1.36937	-158.12573
-1.40271	-162.58672
-1.43583	-166.71605
-1.46916	-168.85179
-1.48146	-162.44802
-1.48416	-156.45751
-1.48687	-151.26041
-1.49083	-146.13646
-1.52375	-149.10741
-1.55666	-153.43356
-1.58958	-156.50181
-1.62333	-159.8537
-1.65729	-162.60318
-1.67354	-157.19987
-1.67646	-151.59309
-1.67896	-146.54313
-1.68271	-141.18804
-1.71541	-141.62385
-1.74875	-145.78743
-1.78229	-149.83611
-1.81541	-153.4978
-1.84875	-156.39828
-1.86416	-150.78658
-1.87208	-145.69491
-1.90521	-145.60412
-1.93812	-148.41056
-1.97083	-151.16152
-2.00479	-153.32566
-2.02812	-148.29685

-2.06146	-145.98401
-2.095	-147.98169
-2.12854	-147.66514
-2.16166	-148.79864
-2.195	-150.66947
-2.22833	-152.02759
-2.26166	-153.59353
-2.2952	-154.79337
-2.32833	-155.81267
-2.36125	-156.13335
-2.39458	-157.30467
-2.42812	-158.26802
-2.46187	-157.88098
-2.4952	-158.65502
-2.52812	-159.19545
-2.55625	-152.45062
-2.55833	-145.26621
-2.55979	-140.25727
-2.56166	-133.141
-2.56354	-127.05536
-2.56625	-120.93373
-2.57041	-115.81324
-2.60375	-119.63141
-2.63708	-123.70416
-2.6702	-127.98172
-2.70375	-132.39507
-2.73708	-136.44131
-2.77	-140.10793
-2.80333	-143.74413
-2.83666	-145.31642
-2.87041	-148.71494
-2.90375	-152.1917
-2.93687	-155.63968
-2.97	-159.08076
-3.00354	-162.35311
-3.0225	-157.32162
-3.0552	-157.97855
-3.08854	-161.10596
-3.1225	-164.92257
-3.15583	-168.86778
-3.18875	-172.67466
-3.19333	-167.1593
-3.19541	-160.6566
-3.1975	-153.74736
-3.19916	-147.34906
-3.20104	-141.99476
-3.20354	-136.7273
-3.20958	-131.68555
-3.23458	-136.75404
-3.265	-141.84573
-3.29624	-146.95565
-3.32854	-151.96539
-3.36166	-156.96499
-3.39479	-161.57253
-3.4277	-165.92792
-3.46145	-170.13822
-3.49499	-174.23254
-3.52833	-178.17573
-3.56166	-182.1405
-3.59479	-186.15171
-3.62812	-190.16375
-3.66145	-186.67407
-3.69499	-188.36008
-3.72812	-192.28214
-3.76124	-196.6964
-3.79458	-199.11753
-3.79729	-189.65507
-3.79833	-182.68275
-3.79937	-174.51288
-3.8002	-165.46178
-3.80104	-155.73297
-3.80187	-145.58417
-3.8027	-135.26319
-3.80333	-124.9392
-3.80395	-114.74457
-0.30646	-60.74414
-0.32583	-55.13013
-0.32896	-50.0402
-0.33583	-44.81503
-0.36354	-49.83727
-0.39687	-51.95395
-0.42667	-56.99929
-0.45708	-62.03254
-0.48854	-67.13672
-0.52021	-72.22112
-0.55167	-77.23051
-0.58354	-82.32091
-0.6175	-87.22336
-0.64771	-82.01778
-0.65229	-76.97225
-0.68562	-77.3052
-0.71854	-81.63651
-0.75167	-86.21562
-0.78521	-90.32423
-0.81917	-94.49634
-0.85229	-98.65642
-0.88521	-102.68598
-0.91854	-106.63846
-0.95187	-110.27463
-0.98187	-100.7657
-0.98271	-93.31443
-0.98375	-84.67138
-0.98479	-75.10846
-0.98562	-64.91126

Chicken Fleshed 14	
Diameter	9.08 mm
Extension	Load
(mm)	(N)
-0.01979	-1.14392
-0.0425	-6.1216
-0.06354	-11.23613
-0.08333	-16.24313
-0.10354	-21.26139
-0.12521	-26.40268
-0.14708	-31.51654
-0.16937	-36.56457
-0.19208	-41.6261
-0.22292	-46.63022
-0.25625	-50.65941
-0.28125	-55.72217

Chicken Defleshed 1	
Diameter	9.96 mm
Extension	Load
(mm)	(N)
-1.82396	-46.66472
-1.83229	-48.40993
-1.84937	-53.4231
-1.86604	-58.46159
-1.8825	-63.53448
-1.89937	-68.22571
-1.91687	-72.86277
-1.93375	-77.38338
-1.95146	-81.8546
-1.96812	-85.92071
-1.985	-89.78216

-2.00166	-93.59944
-2.01833	-97.35978
-2.03521	-101.24122
-2.05146	-104.95478
-2.06833	-108.76395
-2.08521	-112.55878
-2.10208	-116.21962
-2.11875	-119.96178
-2.135	-123.56617
-2.15166	-127.34717
-2.16833	-131.03221
-2.1852	-134.702
-2.20187	-138.37714
-2.21812	-141.88898
-2.23541	-145.72199
-2.25208	-149.37942
-2.26875	-153.07134
-2.28562	-156.8232
-2.30208	-160.45657
-2.31854	-164.01826
-2.3352	-167.41063
-2.35187	-170.53325
-2.36854	-173.80665
-2.38541	-177.08607
-2.40187	-180.38884
-2.41833	-183.42859
-2.4352	-186.60268
-2.45187	-190.05682
-2.46833	-193.66859
-2.4852	-197.26065
-2.50229	-200.94095
-2.51833	-204.31525
-2.535	-207.82267
-2.55187	-211.39693
-2.56812	-214.77097
-2.58541	-218.39605
-2.60187	-221.82438
-2.61854	-225.10593
-2.6352	-227.30404
-2.65166	-230.13315
-2.66875	-233.25139
-2.6852	-235.92293
-2.70229	-237.79927
-2.71854	-240.59369
-2.7352	-243.55058
-2.75187	-246.69476
-2.76833	-249.83224
-2.7852	-253.00553
-2.80145	-256.04907
-2.81854	-259.21294
-2.8352	-262.15824
-2.85145	-264.00098
-2.86854	-266.93377
-2.885	-269.89225
-2.90208	-272.77812
-2.91875	-270.3011
-2.9352	-272.27989
-2.95229	-274.62217
-2.96854	-277.01667
-2.985	-279.75848
-3.00187	-282.53138
-3.01854	-284.72576
-3.0352	-287.46459
-3.05145	-290.37964
-3.06854	-293.36727
-3.08541	-296.42576
-3.10229	-298.91968
-3.11875	-301.52142
-3.1352	-304.13732
-3.14875	-294.67458
-3.14958	-287.0751
-3.1502	-278.23693
-3.15083	-268.42636
-3.15145	-257.8513
-3.15187	-246.82853
-3.15229	-235.66543
-3.1525	-224.55548
-3.15291	-213.6156
-3.15312	-202.94963
-3.15333	-192.66501
-3.15354	-182.86528
-3.15395	-173.63884

Chicken Defleshed 2	
Diameter	9.78 mm
Extension	Load
(mm)	(N)
-1.06646	-32.78301
-1.06917	-33.13386
-1.08458	-36.44052
-1.10271	-41.48284
-1.12083	-46.50114
-1.13937	-51.51819
-1.15771	-56.37552
-1.175	-60.78839
-1.19229	-65.06485
-1.20875	-69.01594
-1.22583	-72.98038
-1.24291	-76.82781
-1.25958	-80.49744
-1.27646	-84.12586
-1.29291	-87.63871
-1.30979	-91.153
-1.32646	-94.60538
-1.34333	-98.09525
-1.36	-101.49337
-1.37646	-104.75998
-1.39312	-108.29205
-1.40979	-111.6282
-1.42666	-115.03284
-1.44333	-118.41078
-1.45979	-120.42375
-1.47666	-122.55085
-1.49312	-125.59249
-1.50979	-129.01098
-1.52625	-132.23888
-1.54333	-135.48733
-1.55979	-138.73777
-1.57687	-142.04243
-1.59333	-145.26318
-1.60979	-148.24502
-1.62646	-151.41498
-1.64291	-154.03739
-1.65958	-146.70505
-1.66021	-140.28016
-1.66083	-132.92859
-1.66125	-124.87311
-1.66187	-116.31058
-1.66229	-107.46897
-1.66271	-98.5226
-1.66291	-89.58968

Chicken Defleshed 3	
Diameter	10.35 mm
Extension	Load
(mm)	(N)
-1.04292	-37.13627

-1.04896	-38.87601
-1.06187	-44.02003
-1.07229	-49.02565
-1.08354	-54.21114
-1.09375	-59.37304
-1.10416	-64.43968
-1.11437	-69.52377
-1.12541	-74.5472
-1.13646	-79.72085
-1.14687	-84.78064
-1.15812	-89.81541
-1.16979	-94.90234
-1.18104	-99.99248
-1.1925	-105.07116
-1.20458	-110.08744
-1.21708	-115.21335
-1.23041	-120.27115
-1.24583	-125.34198
-1.2625	-130.48044
-1.27541	-135.60086
-1.28896	-140.6019
-1.30271	-145.6546
-1.31666	-150.73249
-1.33375	-155.04947
-1.34708	-160.18011
-1.36104	-165.21932
-1.37521	-170.30255
-1.38937	-175.34581
-1.40666	-177.75626
-1.42104	-182.85294
-1.43708	-187.57783
-1.45229	-192.6766
-1.46791	-197.72543
-1.48375	-202.73489
-1.50083	-204.6645
-1.51729	-205.26713
-1.53437	-209.06146
-1.55104	-210.26564
-1.56771	-213.67751
-1.58416	-217.89207
-1.58979	-212.4005
-1.59104	-201.43893
-1.59146	-194.69102
-1.59208	-187.34233
-1.5925	-179.58717
-1.59291	-171.65332
-1.59333	-163.7138
-1.59375	-155.8708
-1.59416	-148.19838
-1.59437	-140.77188
-1.59479	-133.66881
-1.595	-126.95949

Chicken Defleshed 4	
Diameter	9.44 mm
Extension	Load
(mm)	(N)
-0.87104	-5.47885
-0.87333	-5.63622
-0.89187	-8.04092
-0.91396	-11.49859
-0.93354	-14.01421
-0.95167	-15.80179
-0.96937	-17.84902
-0.98687	-20.14371
-1.00396	-22.37013
-1.02104	-24.75016
-1.0375	-27.16924
-1.05396	-29.3659
-1.07062	-31.66167
-1.08729	-34.12088
-1.10437	-36.6994
-1.12083	-39.16928
-1.13729	-41.60486
-1.15396	-44.10454
-1.17041	-46.4756
-1.18771	-48.91655
-1.20437	-51.25217
-1.22125	-53.46678
-1.2375	-55.76682
-1.25396	-58.12571
-1.27083	-60.55665
-1.28708	-62.97395
-1.30416	-65.44518
-1.32062	-67.88713
-1.3375	-70.37056
-1.35437	-72.83591
-1.37041	-75.23336
-1.3875	-77.74411
-1.40396	-80.24325
-1.42104	-82.70623
-1.43771	-85.20719
-1.45458	-86.14455
-1.47104	-88.76453
-1.48729	-91.22396
-1.50416	-93.92285
-1.52104	-96.59725
-1.5375	-99.25045
-1.55416	-101.86755
-1.57062	-104.31738
-1.5875	-106.94493
-1.60396	-109.48644
-1.62083	-111.9006
-1.6375	-114.25696
-1.65396	-116.65238
-1.67062	-119.14987
-1.6875	-121.67893
-1.70416	-124.30434
-1.72083	-126.86244
-1.7375	-129.4139
-1.75396	-132.00736
-1.77083	-134.58543
-1.78729	-137.20527
-1.80396	-139.61914
-1.82062	-142.07597
-1.8375	-144.14564
-1.85437	-146.7025
-1.87083	-149.10963
-1.8875	-151.54898
-1.90375	-153.98619
-1.92041	-156.44027
-1.93312	-149.77536
-1.93396	-142.72222
-1.935	-134.8222
-1.93562	-126.85256
-1.93625	-119.21574
-1.93687	-112.21894
-1.9375	-106.09142
-1.93812	-100.88007
-1.93937	-94.75616
-1.93958	-93.15941

Chicken Defleshed 5	
Diameter	11.34 mm
Extension	Load
(mm)	(N)
-0.75833	-6.026

-0.76062	-6.24459
-0.77917	-9.40126
-0.80146	-14.06816
-0.82083	-17.11853
-0.83937	-19.65509
-0.85687	-21.83765
-0.87437	-24.13501
-0.89083	-26.27735
-0.90771	-28.61425
-0.92417	-31.24288
-0.94125	-34.07502
-0.95833	-36.78317
-0.97458	-39.36409
-0.99146	-41.93088
-1.00792	-44.6146
-1.025	-47.52184
-1.04167	-50.37144
-1.05792	-53.06827
-1.07479	-55.53484
-1.09104	-57.98621
-1.10791	-60.35103
-1.12458	-62.86108
-1.14104	-65.30707
-1.15833	-67.72524
-1.175	-70.19389
-1.19166	-72.65261
-1.20833	-75.12017
-1.225	-77.5765
-1.24146	-79.77869
-1.25812	-81.54137
-1.275	-83.86294
-1.29166	-86.02883
-1.30812	-88.10709
-1.32458	-89.92986
-1.34125	-91.88557
-1.35812	-93.70632
-1.37479	-95.66971
-1.39146	-97.57387
-1.40833	-98.76119
-1.42479	-100.33283
-1.44125	-101.93685
-1.45812	-102.10573
-1.47437	-100.76351
-1.49125	-101.17841
-1.50812	-102.96324
-1.52479	-104.58758
-1.53896	-99.20751
-1.54312	-94.04071
-1.55916	-95.15793
-1.57625	-97.25213
-1.59312	-99.36508
-1.60958	-101.20738
-1.62646	-102.96311
-1.64271	-104.65219
-1.65937	-106.4474
-1.67583	-108.22707
-1.69271	-109.57444
-1.70958	-111.13957
-1.72562	-112.59036
-1.74291	-114.21272
-1.75916	-115.25331
-1.77583	-116.44835
-1.79271	-117.64833
-1.80916	-119.01289
-1.82625	-119.40253
-1.84271	-120.29219
-1.85979	-120.39937
-1.87625	-121.74815
-1.89271	-122.44737
-1.90958	-123.1589
-1.92604	-123.76147
-1.94291	-124.85377
-1.95937	-124.92875
-1.97604	-121.54793
-1.99291	-122.56686
-2.01	-122.66103
-2.02646	-123.56666
-2.04271	-124.46866
-2.05958	-125.84114
-2.07625	-126.20018
-2.09291	-127.49147
-2.10979	-129.14923
-2.12625	-130.7987
-2.14271	-132.47383
-2.15937	-132.32067
-2.16062	-126.07101
-2.16166	-120.55511
-2.16229	-114.65495
-2.16312	-108.82743
-2.16375	-103.33768
-2.16458	-96.16759
-2.16583	-90.5103
-2.16729	-85.28975
-2.18312	-84.5006
-2.19979	-86.25963
-2.21646	-88.15911
-2.23312	-89.84152
-2.25021	-91.68472
-2.26666	-93.29832
-2.28312	-94.90646
-2.29958	-96.54272
-2.31625	-98.05544
-2.33354	-99.73168
-2.34979	-101.17286
-2.36645	-102.70601
-2.38312	-104.23033
-2.39916	-105.69882
-2.41666	-107.28559
-2.43312	-108.73756
-2.45	-110.20578
-2.46666	-111.64104
-2.48291	-112.92811
-2.5	-114.29074
-2.51625	-115.58371
-2.53312	-116.93015
-2.54958	-118.27145
-2.56666	-118.34063
-2.56916	-112.71712
-2.57187	-107.25885
-2.58833	-107.0786
-2.60458	-109.01916
-2.62166	-111.00591
-2.63791	-112.82057
-2.655	-114.71285
-2.67166	-116.42597
-2.68833	-118.16608
-2.705	-119.8471
-2.72125	-121.40614
-2.73812	-123.07689
-2.75437	-124.59721
-2.77145	-126.08869
-2.78187	-117.51943
-2.7825	-112.36931
-2.78291	-106.45504
-2.78354	-99.95706
-2.78395	-93.07206
-2.78437	-85.97355
-2.78479	-78.78502
-2.7852	-71.61239

Chicken Defleshed 6	
Diameter	10.49 mm
Extension	Load
(mm)	(N)
-1.28166	-10.48389
-1.28791	-11.28008
-1.30812	-15.95218
-1.3275	-20.30901
-1.34604	-23.7397
-1.36333	-26.86248
-1.38062	-30.16364
-1.3975	-33.34105
-1.41396	-36.37236
-1.43083	-39.33781
-1.4475	-42.25082
-1.46458	-45.26026
-1.48104	-48.18691
-1.4975	-51.15168
-1.51416	-54.05127
-1.53062	-56.68828
-1.54791	-59.17645
-1.56437	-61.42201
-1.58146	-63.84017
-1.59771	-66.34523
-1.61416	-68.44815
-1.63104	-69.96964
-1.6475	-72.45691
-1.66416	-74.7925
-1.68104	-77.41238
-1.69771	-79.86036
-1.71458	-81.71383
-1.73062	-83.73415
-1.74771	-85.95604
-1.76416	-84.74316
-1.78104	-83.77662
-1.79791	-85.27278
-1.81458	-87.5311
-1.83125	-89.77836
-1.8475	-91.8861
-1.86416	-94.08872
-1.88104	-96.21041
-1.8975	-98.17848
-1.91437	-100.09311
-1.93062	-101.87823
-1.9475	-103.77107
-1.96416	-105.63081
-1.98125	-107.50955
-1.99083	-101.83449
-1.99208	-96.71823
-1.99375	-91.33135
-1.99666	-86.12768
-2.01333	-87.34185
-2.02979	-89.23798
-2.04625	-91.01371
-2.06312	-92.76072
-2.07979	-94.3567
-2.09646	-96.05859
-2.11312	-97.61086
-2.12979	-99.06848
-2.14625	-100.57465
-2.1627	-101.97341
-2.17979	-103.2914
-2.19625	-104.87381
-2.21333	-106.56017
-2.22979	-108.17267
-2.24625	-109.0252
-2.26271	-110.54859
-2.27937	-112.07803
-2.29645	-113.5359
-2.3127	-114.96004
-2.32958	-116.05293
-2.34625	-117.30537
-2.3627	-118.73306
-2.37958	-120.25607
-2.39625	-121.63509
-2.41312	-122.99005
-2.43	-124.04933
-2.43604	-119.00027
-2.4525	-117.70232
-2.46895	-118.91377
-2.48541	-120.29262
-2.5025	-121.56272
-2.51875	-122.95043
-2.53583	-124.4311
-2.55229	-125.70871
-2.56895	-126.28172
-2.58583	-126.7968
-2.60208	-127.37128
-2.61937	-128.56489
-2.63604	-129.59333
-2.6527	-130.2695
-2.66916	-129.98517
-2.68541	-130.64843
-2.7025	-131.03083
-2.71875	-130.42304
-2.73583	-128.99856
-2.73875	-123.79335
-2.75562	-120.94188
-2.77166	-121.96802
-2.78854	-123.25038
-2.8052	-124.48673
-2.82187	-125.71365
-2.83895	-126.85898
-2.85562	-128.07195
-2.87187	-129.19043
-2.88854	-130.18872
-2.90541	-130.7229
-2.92229	-131.64277
-2.93875	-132.65987
-2.9552	-133.27034
-2.9725	-134.32591
-2.98875	-135.16058
-3.00562	-135.94899
-3.02208	-136.89229
-3.03854	-137.6963
-3.05562	-138.71823
-3.07229	-137.77833
-3.08895	-138.37042
-3.1052	-138.82427
-3.12208	-139.45438
-3.13875	-140.25919
-3.155	-140.99433
-3.17229	-141.77674
-3.18875	-142.72889
-3.20541	-143.59549
-3.22208	-144.48239
-3.23895	-145.25217
-3.25187	-140.17658
-3.26812	-140.45545
-3.28479	-141.43296
-3.30145	-142.49662
-3.3177	-143.397
-3.33479	-144.44046
-3.35124	-144.94304
-3.36645	-138.93883
-3.36749	-132.31975
-3.36833	-124.342
-3.36937	-115.82149
-3.36999	-107.4007
-3.37062	-99.48906
-3.37124	-92.37032

-3.37187	-86.1973

Chicken Defleshed 7	
Diameter	9.75 mm
Extension	Load
(mm)	(N)
-2.34812	-21.56519
-2.3525	-21.8694
-2.3727	-25.95177
-2.3927	-30.22145
-2.41208	-34.03924
-2.42958	-37.12291
-2.44729	-40.01513
-2.46395	-42.64979
-2.48104	-45.3604
-2.49791	-48.12995
-2.51458	-50.83317
-2.53166	-53.60695
-2.54833	-56.26363
-2.565	-59.00022
-2.58125	-61.60562
-2.59791	-64.30396
-2.61479	-66.98398
-2.63104	-69.5613
-2.64812	-72.33211
-2.66479	-75.04985
-2.68145	-77.7427
-2.69791	-80.50915
-2.71458	-83.34927
-2.73145	-86.20307
-2.74833	-89.06266
-2.76479	-91.9169
-2.78104	-94.65117
-2.79812	-97.56014
-2.81458	-100.35469
-2.83125	-103.21869
-2.8477	-105.99709
-2.86458	-108.82539
-2.88145	-111.71375
-2.89791	-114.40729
-2.915	-117.29589
-2.93125	-119.9242
-2.94791	-122.61432
-2.965	-125.44446
-2.98145	-128.1271
-2.99812	-130.70782
-3.01437	-133.23481
-3.03145	-135.92374
-3.04812	-138.5612
-3.06437	-140.93931
-3.08145	-143.573
-3.09791	-145.96984
-3.115	-147.83378
-3.13145	-150.28718
-3.13354	-142.05559
-3.13416	-136.87472
-3.13479	-130.96008
-3.1352	-124.47178
-3.13562	-117.56791
-3.13604	-110.44516
-3.13645	-103.25766
-3.13687	-96.10289
-3.13708	-89.06607

Chicken Defleshed 8	
Diameter	9.81 mm
Extension	Load
(mm)	(N)
-0.6875	-0.14861
-0.70208	-0.34895
-0.74292	-0.35949
-0.78146	-0.25567
-0.81771	-0.17472
-0.85187	-0.43094
-0.88604	-0.77365
-0.92	-1.65771
-0.95354	-2.37937
-0.98708	-4.65002
-1.02083	-7.61209
-1.05437	-10.85584
-1.08729	-14.30013
-1.12062	-17.98579
-1.15375	-21.72974
-1.18708	-25.29472
-1.22062	-29.03768
-1.25458	-32.53691
-1.28729	-36.19775
-1.32062	-32.09818
-1.35396	-35.50274
-1.38729	-39.32643
-1.42062	-42.95654
-1.45437	-45.70164
-1.4875	-48.83743
-1.52062	-51.74256
-1.55375	-52.00018
-1.58729	-55.16231
-1.62083	-58.20571
-1.65437	-61.15479
-1.6875	-62.27699
-1.72062	-65.27328
-1.75354	-64.08572
-1.78708	-66.81853
-1.82083	-68.65276
-1.85416	-71.28642
-1.88791	-73.94988
-1.92062	-72.68565
-1.95396	-74.75445
-1.98729	-77.30233
-2.02062	-79.53613
-2.05416	-78.67269
-2.08771	-77.73622
-2.12062	-79.47208
-2.15375	-81.57405
-2.16166	-76.29691
-2.16333	-69.01806
-2.165	-60.29176
-2.16666	-50.98557
-2.16729	-46.32645

Chicken Defleshed 9	
Diameter	10.95 mm
Extension	Load
(mm)	(N)
-0.95292	-4.9389
-0.96729	-6.34913
-1.0025	-11.39421
-1.04	-16.45351
-1.07625	-21.51376
-1.11146	-25.86928
-1.14583	-30.42234
-1.17958	-34.7712
-1.21312	-37.24225
-1.24687	-41.27025
-1.28062	-44.75684
-1.31375	-48.50291

-1.32375	-43.10427
-1.33104	-37.85931
-1.36458	-40.93855
-1.39791	-44.7492
-1.43125	-48.40337
-1.46479	-51.85423
-1.49791	-55.11215
-1.53104	-58.39849
-1.56437	-61.62595
-1.59791	-65.16603
-1.63125	-68.43798
-1.66479	-71.05562
-1.69812	-74.37775
-1.73104	-77.74616
-1.76396	-80.80962
-1.7975	-83.73672
-1.83104	-86.81963
-1.86479	-89.15268
-1.89812	-91.8154
-1.93146	-90.90462
-1.94125	-85.7619
-1.97458	-87.90588
-2.00812	-90.81583
-2.04083	-91.84524
-2.07479	-93.94287
-2.10833	-96.42503
-2.13083	-91.18283
-2.16375	-88.38028
-2.19708	-90.32526
-2.23041	-92.44853
-2.26395	-94.3629
-2.27083	-88.88906
-2.27791	-83.80426
-2.31166	-84.4485
-2.34479	-86.64896
-2.37791	-84.96704
-2.41083	-86.763
-2.43833	-81.07721
-2.44166	-76.05738
-2.44729	-70.92315
-2.48083	-72.31472
-2.51437	-74.53591
-2.5477	-75.50522
-2.5802	-76.54295
-2.61375	-78.32997
-2.64708	-79.86781
-2.6802	-79.32217

-2.70812	-74.20006
-2.71229	-69.11824
-2.7175	-63.86122
-2.75083	-61.78595
-2.78354	-60.01014
-2.81687	-61.91436
-2.85062	-64.21433
-2.88437	-66.22969
-2.91083	-60.41767
-2.91541	-54.83223
-2.94895	-53.93369
-2.98208	-56.52075
-3.01541	-59.19694
-3.04854	-61.71266
-3.08166	-64.21656
-3.1152	-66.66011
-3.14875	-69.07538
-3.18104	-71.56054
-3.215	-74.46565
-3.24833	-77.25435
-3.28187	-80.01208
-3.3152	-82.96736
-3.34895	-85.94482
-3.38187	-88.89865
-3.41499	-91.90655
-3.44833	-94.83116
-3.48166	-97.59821
-3.51458	-100.01222
-3.54874	-102.41865
-3.58249	-102.71224
-3.61541	-103.94637
-3.64854	-106.28673
-3.68166	-108.5381
-3.6977	-103.07162
-3.69958	-93.78229
-3.70041	-88.26935
-3.70124	-82.36949
-3.70208	-76.23825
-3.70291	-70.01023
-3.70354	-63.7772

Chicken Defleshed 10	
Diameter	10.45 mm
Extension	Load
(mm)	(N)

-0.80104	-7.48727
-0.82146	-10.10844
-0.845	-15.22425
-0.86687	-20.33326
-0.89354	-25.43909
-0.92812	-30.48591
-0.96083	-35.54105
-0.99354	-40.64854
-1.02458	-45.67916
-1.05521	-50.73601
-1.08458	-55.74568
-1.115	-60.85027
-1.14437	-65.95057
-1.175	-70.96568
-1.20854	-67.46934
-1.24146	-71.96869
-1.275	-72.3391
-1.30854	-71.44521
-1.34208	-73.98446
-1.37479	-74.85858
-1.40854	-76.67147
-1.44166	-78.44533
-1.475	-80.4912
-1.50833	-78.42395
-1.54187	-80.08806
-1.57521	-82.54742
-1.60833	-82.14399
-1.64146	-83.14306
-1.675	-85.05262
-1.69166	-78.31533
-1.69333	-70.36278
-1.695	-61.15706
-1.69646	-51.56361
-1.69708	-46.81204

Chicken Defleshed 11	
Diameter	11.20 mm
Extension	Load
(mm)	(N)
-0.59021	-3.86559
-0.60292	-5.19278
-0.63125	-10.2906
-0.65667	-15.35273
-0.67771	-20.38763
-0.69687	-25.47633

-0.71646	-30.55768
-0.73625	-35.73516
-0.75521	-40.80909
-0.77417	-45.80912
-0.79333	-50.95089
-0.81208	-56.06323
-0.83062	-61.15291
-0.84958	-66.30113
-0.86854	-71.45023
-0.8875	-76.54399
-0.90854	-81.60942
-0.92833	-86.70752
-0.94771	-91.88019
-0.9675	-96.90172
-0.98833	-101.95542
-1.01437	-107.06978
-1.02458	-101.6269
-1.02979	-96.55564
-1.06333	-101.32567
-1.07	-94.68438
-1.07146	-89.51738
-1.07271	-83.96699
-1.07396	-78.49128
-1.07542	-73.32889
-1.07729	-66.62041
-1.07917	-61.36071
-1.08104	-57.55037

Chicken Defleshed 12	
Diameter	9.89 mm
Extension	Load
(mm)	(N)
-1.00437	-4.58503
-1.02437	-6.50173
-1.06333	-10.13201
-1.1	-13.81613
-1.13521	-17.98646
-1.16979	-22.71374
-1.20104	-27.78483
-1.22854	-32.83525
-1.25396	-37.84272
-1.28	-42.91851
-1.30437	-47.9692
-1.32896	-53.07321
-1.35333	-58.20908

-1.3775	-63.31991
-1.40125	-68.38834
-1.42479	-73.43934
-1.44896	-78.5692
-1.47229	-83.59412
-1.49479	-88.6188
-1.52146	-93.69366
-1.54604	-98.81432
-1.56937	-103.93209
-1.59375	-109.00078
-1.6175	-114.05833
-1.64208	-119.14986
-1.66583	-124.1683
-1.69062	-129.2503
-1.71687	-134.2919
-1.74271	-139.36451
-1.74604	-134.27888
-1.74791	-123.54241
-1.74896	-116.85223
-1.74979	-109.56737
-1.75041	-101.87117
-1.75125	-93.96341
-1.75187	-85.98744
-1.7525	-78.04817

Chicken Defleshed 13	
Diameter	10.57 mm
Extension	Load
(mm)	(N)
-0.02833	-3.33993
-0.04854	-7.2315
-0.06417	-12.44826
-0.07979	-17.49661
-0.09646	-22.54595
-0.11458	-27.73324
-0.13458	-32.83659
-0.15667	-37.85322
-0.17833	-42.99076
-0.2	-48.11365
-0.22396	-53.14762
-0.25021	-58.21877
-0.2775	-63.3642
-0.30062	-68.37433
-0.32708	-73.3925
-0.35187	-78.51715

-0.37604	-83.56027
-0.40083	-88.57314
-0.43417	-91.93971
-0.4625	-97.0696
-0.49021	-102.10693
-0.52354	-106.27216
-0.55687	-107.57709
-0.59021	-105.16246
-0.61958	-110.22493
-0.64208	-115.26965
-0.665	-120.28446
-0.68854	-125.30285
-0.71292	-130.3167
-0.74062	-124.24989
-0.74167	-116.63299
-0.74271	-107.77187
-0.74375	-97.98425
-0.74458	-87.49775
-0.74542	-76.5903

Chicken Defleshed 14	
Diameter	8.67 mm
Extension	Load
(mm)	(N)
-0.02021	1.02093
-0.04	-3.98169
-0.05229	-9.04094
-0.065	-14.08811
-0.07854	-19.24209
-0.09229	-24.29145
-0.10604	-29.29956
-0.12042	-34.32252
-0.13583	-39.50395
-0.15187	-44.62164
-0.16875	-49.74813
-0.18625	-54.92681
-0.20458	-60.07843
-0.22458	-65.17267
-0.24437	-70.24791
-0.26479	-75.35402
-0.28583	-80.4119
-0.30875	-70.20443
-0.30979	-62.34786
-0.31062	-53.59607
-0.31167	-44.15886

Chicken Control 1	
Diameter	10.35 mm
Extension	Load
(mm)	(N)
-7.95457	-1.0988
-7.96186	-1.77161
-7.98165	-5.97434
-8.0004	-9.644
-8.01874	-12.76373
-8.03665	-16.25198
-8.05374	-19.31958
-8.07103	-22.72981
-8.08749	-26.24935
-8.10415	-29.52708
-8.12103	-32.82967
-8.1379	-36.15752
-8.15457	-39.37151
-8.17082	-42.43229
-8.1877	-45.65992
-8.20457	-48.97962
-8.22145	-51.90458
-8.23811	-54.73311
-8.25436	-57.82041
-8.27165	-61.26818
-8.2879	-64.08775
-8.30478	-66.28035
-8.32145	-69.14747
-8.3379	-71.51413
-8.35499	-73.80927
-8.37124	-76.06563
-8.38811	-78.96011
-8.40436	-82.55149
-8.42124	-85.78929
-8.43811	-89.17981
-8.45436	-92.25404
-8.47165	-94.99213
-8.48811	-96.39542
-8.50457	-96.75421
-8.52145	-96.28587
-8.53832	-97.96372
-8.55457	-102.74299
-8.57061	-107.49979
-8.5879	-112.60086
-8.60436	-117.56016
-8.62124	-122.38257
-8.63811	-127.36623
-8.65457	-132.07696
-8.67144	-136.91919
-8.6877	-141.44483
-8.70457	-146.16458
-8.72144	-150.78314
-8.7377	-154.98295
-8.75478	-159.47104
-8.77082	-163.63986
-8.7879	-168.00302
-8.80436	-172.22631
-8.82103	-176.24363
-8.83811	-180.39674
-8.85457	-184.23481
-8.87144	-188.00151
-8.88811	-191.52863
-8.90499	-195.14957
-8.92124	-198.30312
-8.9377	-201.49145
-8.95478	-204.50898
-8.97124	-207.49448
-8.9879	-210.33345
-9.00436	-213.27609
-9.02103	-216.08581
-9.0379	-218.55198
-9.05478	-220.26287
-9.07144	-222.1012
-9.0879	-223.932
-9.10478	-225.75599
-9.12144	-227.11734
-9.1379	-228.04683
-9.15457	-229.32965
-9.17144	-230.87037
-9.18811	-232.48425
-9.20436	-233.84701
-9.22124	-235.21776
-9.23749	-236.38725
-9.25457	-237.64768
-9.27165	-239.08821
-9.28832	-240.27601
-9.30519	-241.63228
-9.32124	-242.12053
-9.33769	-243.12611
-9.35457	-244.57332
-9.37144	-246.02769
-9.38832	-247.60956
-9.40457	-248.9762
-9.42165	-250.41291
-9.43769	-251.31768
-9.45436	-252.446
-9.47165	-253.72696
-9.48769	-254.42338
-9.50478	-255.51519
-9.52124	-256.48063
-9.53832	-257.55996
-9.55478	-258.40357
-9.57124	-258.9474
-9.58811	-258.72898
-9.60457	-258.07571
-9.62144	-258.28055
-9.63811	-258.5246
-9.65436	-259.17816
-9.67144	-260.42378
-9.68811	-261.79931
-9.70499	-263.42219
-9.72144	-264.94968
-9.73811	-266.60433
-9.75457	-268.39942
-9.77124	-270.01503
-9.78811	-271.50312
-9.80457	-271.93162
-9.82124	-272.45274
-9.83769	-273.19422
-9.85436	-273.68638
-9.87124	-274.7547
-9.88811	-276.07876
-9.90457	-277.53228
-9.92165	-279.30674
-9.93832	-281.17484
-9.95415	-282.76926
-9.97082	-284.66931
-9.9879	-286.59996
-10.00457	-286.57717
-10.02144	-288.17987
-10.0379	-289.86418
-10.05478	-291.74298
-10.07082	-293.55508
-10.0879	-295.49772
-10.10498	-297.56805
-10.12165	-299.32225
-10.13853	-301.00539
-10.15457	-302.3513
-10.17123	-303.77722

-10.1879	-304.99938
-10.20457	-306.29003
-10.22165	-307.852
-10.2379	-309.03807
-10.25498	-310.48262
-10.27103	-311.60754
-10.28769	-312.68531
-10.30478	-313.83654
-10.32123	-314.26203
-10.33832	-314.69318
-10.35457	-314.9257
-10.37144	-314.55767
-10.38832	-314.86681
-10.40457	-316.25837
-10.42144	-318.18914
-10.43769	-320.00834
-10.45457	-321.90478
-10.47123	-321.36732
-10.47936	-316.35305
-10.48332	-311.32409
-10.48728	-306.06472
-10.50457	-302.69262
-10.52082	-304.35729
-10.53748	-307.1855
-10.55394	-310.19428
-10.57061	-313.34093
-10.58728	-316.5504
-10.60394	-319.57015
-10.62082	-322.58064
-10.63728	-325.33553
-10.65394	-328.14988
-10.6704	-330.80605
-10.68707	-333.30998
-10.70373	-335.89491
-10.72061	-338.2746
-10.73728	-340.66913
-10.75415	-342.87846
-10.77061	-344.79839
-10.78707	-346.48848
-10.80415	-348.01739
-10.8204	-348.69805
-10.83728	-349.36202
-10.85436	-350.16239
-10.8704	-350.04506
-10.88728	-349.57325
-10.90353	-348.73697
-10.92061	-347.9538
-10.93769	-347.41896
-10.95415	-346.47635
-10.97144	-345.84609
-10.98748	-344.83635
-11.00394	-343.93185
-11.02082	-343.47889
-11.03728	-342.91112
-11.05436	-340.12052
-11.07082	-338.29352
-11.0879	-337.28409
-11.10394	-336.19004
-11.1204	-335.372
-11.13748	-334.78108
-11.15394	-333.83885
-11.17102	-333.0403
-11.18748	-331.90024
-11.20415	-331.01511
-11.22082	-330.24147
-11.23748	-329.15798
-11.25394	-328.05285
-11.27019	-326.5911
-11.28561	-321.50263
-11.30144	-316.47301
-11.31811	-312.42412
-11.33477	-308.74282
-11.35144	-306.36582
-11.36832	-304.64342
-11.38498	-302.926
-11.40165	-301.27215
-11.41832	-299.77992
-11.43477	-298.18502
-11.45165	-296.70715
-11.46832	-294.65064
-11.48477	-292.16745
-11.50123	-289.16603
-11.51811	-287.12577
-11.53477	-285.37601
-11.55144	-283.5525
-11.56811	-281.79941
-11.58436	-280.06238
-11.60165	-275.97433
-11.61811	-273.43705
-11.63477	-270.91417
-11.65123	-268.49684
-11.6679	-265.46615
-11.68477	-262.08439
-11.70123	-258.63871
-11.71811	-256.08847
-11.73457	-253.78707
-11.75123	-251.43257
-11.76811	-249.25897
-11.78457	-247.42413
-11.79602	-239.91659
-11.79686	-233.61693
-11.79748	-225.68607
-11.79832	-216.63727
-11.79894	-206.71879
-11.79957	-196.16532
-11.79998	-185.27494
-11.8004	-174.29234
-11.80082	-163.37344
-11.80102	-152.64526
-11.80123	-142.23574

Chicken Control 2	
Diameter	9.27 mm
Extension	Load
(mm)	(N)
-2.20708	-0.82172
-2.2127	-1.08288
-2.23312	-1.49343
-2.25312	-1.54596
-2.27125	-2.20554
-2.28895	-3.06492
-2.30604	-3.46798
-2.32354	-4.05699
-2.34	-2.86035
-2.35687	-1.14249
-2.37333	-0.3363
-2.38979	-1.42506
-2.40708	-2.11067
-2.42354	-2.09694
-2.44041	-2.75834
-2.45708	-2.65256
-2.47333	-3.80603
-2.4902	-5.01312
-2.50666	-6.05618
-2.52354	-7.25181
-2.54041	-8.79808
-2.55708	-10.26575
-2.57375	-11.61485
-2.58958	-12.77622

-2.60687	-14.36119
-2.62354	-14.33271
-2.64	-14.6831
-2.65708	-15.04242
-2.67375	-15.74294
-2.69062	-15.54224
-2.70687	-15.86233
-2.72333	-15.71374
-2.7402	-14.57418
-2.75687	-14.19125
-2.77375	-14.46869
-2.78979	-14.18056
-2.80666	-14.00551
-2.82354	-13.73597
-2.8402	-14.46446
-2.85729	-14.86253
-2.87375	-15.20387
-2.8902	-14.99865
-2.90687	-15.6932
-2.92375	-16.25039
-2.9402	-17.4809
-2.95687	-17.59966
-2.97375	-18.2346
-2.9902	-18.05683
-3.00666	-18.169
-3.02333	-17.70635
-3.04	-17.05771
-3.05687	-16.57889
-3.07416	-16.57128
-3.09041	-17.25906
-3.10625	-18.26914
-3.12333	-19.7488
-3.14	-21.75609
-3.15687	-23.70983
-3.17375	-25.35125
-3.19041	-26.71935
-3.20687	-27.89157
-3.22291	-28.99303
-3.24041	-30.33075
-3.25687	-30.85195
-3.27395	-29.01848
-3.29062	-27.79713
-3.30666	-28.05824
-3.32333	-28.54357
-3.33979	-28.77518
-3.35687	-27.88568
-3.37354	-24.01817

-3.38354	-18.99524
-3.40041	-14.91535
-3.41666	-11.11923
-3.43333	-9.41733
-3.45041	-10.04365
-3.46687	-10.78379
-3.48374	-9.95053
-3.5002	-8.568
-3.51708	-6.79785
-3.53395	-7.21733
-3.5502	-7.4594
-3.56687	-7.07837
-3.58333	-7.41432
-3.6002	-8.56988
-3.61687	-8.35334
-3.63354	-8.31859
-3.65062	-8.20654
-3.66708	-7.58245
-3.68374	-7.34521
-3.7002	-7.39414
-3.71708	-7.99836
-3.73374	-7.97613
-3.75041	-8.71532
-3.76708	-9.11839
-3.78354	-9.79339
-3.8002	-10.83343
-3.81666	-11.85677
-3.83333	-13.11555
-3.84999	-14.21871
-3.86687	-14.7352
-3.88354	-16.19776
-3.90041	-16.78906
-3.91708	-18.23365
-3.93333	-19.84251
-3.95041	-22.18879
-3.96645	-24.44827
-3.98354	-26.81016
-4.0002	-28.97679
-4.01645	-30.92534
-4.03333	-33.1878
-4.04958	-35.6184
-4.06687	-37.92038
-4.08395	-40.17209
-4.1002	-42.54446
-4.11729	-44.95599
-4.13333	-47.19013
-4.14999	-49.50649

-4.16687	-52.16328
-4.18333	-54.80603
-4.2002	-57.62568
-4.21687	-60.57867
-4.23374	-63.54108
-4.2502	-66.32246
-4.26645	-69.06129
-4.28354	-71.90628
-4.29999	-74.72325
-4.31708	-77.72064
-4.33354	-80.66828
-4.35041	-83.68329
-4.36687	-86.52535
-4.38354	-89.33938
-4.40041	-92.23011
-4.41687	-95.07318
-4.43333	-97.96455
-4.4502	-100.90125
-4.46687	-103.77511
-4.48333	-106.67952
-4.49999	-109.44329
-4.51666	-112.36843
-4.53333	-115.22756
-4.5502	-118.09105
-4.56666	-120.91143
-4.58333	-123.60714
-4.6002	-126.38944
-4.61687	-129.12855
-4.63333	-131.82235
-4.64978	-134.60018
-4.66687	-137.44001
-4.68333	-140.2255
-4.7002	-143.00759
-4.71666	-145.81013
-4.73333	-148.64899
-4.7502	-151.66819
-4.76687	-154.54616
-4.78333	-157.46623
-4.79978	-160.31864
-4.81687	-163.35794
-4.83333	-166.37115
-4.84999	-169.35787
-4.86666	-172.35155
-4.88312	-175.31057
-4.9002	-178.29074
-4.91687	-181.30204
-4.93353	-184.20096

-4.95041	-187.21104
-4.96687	-190.15516
-4.98374	-193.1641
-4.99999	-196.1616
-5.01645	-199.10246
-5.03353	-202.27884
-5.04999	-205.34383
-5.06687	-208.50518
-5.08312	-211.57137
-5.09999	-214.6914
-5.11708	-217.96666
-5.13333	-220.89897
-5.15062	-224.19582
-5.16708	-227.22526
-5.18374	-230.36095
-5.2002	-233.47889
-5.21666	-236.56733
-5.23353	-239.80848
-5.24978	-242.94746
-5.26687	-246.2675
-5.28374	-249.56974
-5.3002	-252.7768
-5.31708	-256.09803
-5.33333	-259.08741
-5.35041	-262.42864
-5.36687	-265.47298
-5.38374	-268.6016
-5.4002	-271.56344
-5.41666	-274.45975
-5.43333	-277.35838
-5.44999	-280.30196
-5.46645	-283.27021
-5.48333	-286.28898
-5.49999	-289.33957
-5.51687	-292.3981
-5.53374	-295.46309
-5.54999	-298.43497
-5.56666	-301.3553
-5.58353	-304.50034
-5.60041	-307.59242
-5.61707	-310.52473
-5.63332	-313.38829
-5.64999	-316.32635
-5.66687	-319.35173
-5.68332	-322.31995
-5.70041	-325.21877
-5.71666	-328.07449
-5.73353	-330.97467
-5.7502	-333.85992
-5.76666	-336.65535
-5.78374	-339.67465
-5.8002	-342.44391
-5.81707	-345.19646
-5.83332	-347.83691
-5.84999	-350.50416
-5.86687	-353.40244
-5.88312	-355.93891
-5.9002	-357.9565
-5.90187	-348.70136
-5.90291	-337.77985
-5.90395	-323.50844
-5.90499	-306.99441
-5.90603	-288.80677
-5.90687	-269.3769
-5.90749	-249.2266
-5.90791	-228.78519
-5.90832	-208.33327

Chicken Control 3	
Diameter	9.25 mm
Extension	Load
(mm)	(N)
-3.95354	-21.53868
-3.95583	-21.82664
-3.97124	-25.82871
-3.98624	-30.90821
-4.0027	-35.98376
-4.0227	-35.86885
-4.04145	-34.8484
-4.05833	-39.87585
-4.07541	-44.7906
-4.09229	-49.37886
-4.10958	-53.93007
-4.12624	-58.17067
-4.14312	-62.08793
-4.15958	-64.58857
-4.17604	-66.84326
-4.19312	-68.73082
-4.20979	-68.94009
-4.22645	-70.01268
-4.24312	-73.10928
-4.25958	-74.90478
-4.27645	-78.08557
-4.2927	-81.32819
-4.30958	-84.10509
-4.32624	-87.18911
-4.34291	-91.06922
-4.35979	-94.58764
-4.37624	-97.1359
-4.39333	-98.36136
-4.40978	-101.31008
-4.42478	-106.41444
-4.43937	-111.49627
-4.45395	-116.54937
-4.46895	-121.64636
-4.48333	-126.65787
-4.49916	-131.72045
-4.51437	-136.81391
-4.5302	-141.89281
-4.54603	-146.92898
-4.56208	-151.96072
-4.57833	-157.0197
-4.59437	-162.05657
-4.61041	-167.09827
-4.62624	-172.13175
-4.64166	-177.15809
-4.6577	-182.24697
-4.67312	-187.33625
-4.68874	-192.41779
-4.70458	-197.43308
-4.7202	-202.43578
-4.73645	-207.53671
-4.75166	-212.58548
-4.76749	-217.64119
-4.78353	-222.71042
-4.79958	-227.7959
-4.81541	-232.82029
-4.83103	-237.8663
-4.84708	-242.94478
-4.86291	-248.0285
-4.87895	-253.10376
-4.89499	-258.1369
-4.91103	-263.23372
-4.92708	-268.25517
-4.94333	-273.26611
-4.95978	-278.19902
-4.97687	-283.18575
-4.99312	-287.98547
-5.00978	-292.74762

-5.02666	-297.64771
-5.04333	-302.21713
-5.05999	-306.58725
-5.07666	-310.74983
-5.09312	-314.67751
-5.10958	-318.2587
-5.12624	-322.02473
-5.14353	-326.0918
-5.15999	-329.87711
-5.17666	-333.54068
-5.19353	-337.17141
-5.20978	-340.53862
-5.22666	-343.91317
-5.24333	-347.12854
-5.25999	-349.90206
-5.27666	-352.69883
-5.29333	-355.45439
-5.3102	-358.28453
-5.32645	-360.58751
-5.34332	-363.30622
-5.35978	-365.95851
-5.37666	-368.66316
-5.39353	-371.82817
-5.40999	-374.81123
-5.42645	-378.20706
-5.4427	-381.56766
-5.45978	-385.38876
-5.47666	-389.51433
-5.49332	-393.33349
-5.5102	-397.36161
-5.52645	-401.00771
-5.54332	-399.99571
-5.55228	-394.9365
-5.56853	-393.9127
-5.5852	-397.2621
-5.60187	-401.78999
-5.61812	-406.81639
-5.63353	-411.90052
-5.64916	-416.91431
-5.66499	-422.00518
-5.68103	-427.04475
-5.69749	-432.14276
-5.71312	-437.22048
-5.72916	-442.25737
-5.74541	-446.74909
-5.76187	-451.31695
-5.77895	-456.0256
-5.79562	-460.58702
-5.81249	-465.43425
-5.82895	-470.21949
-5.84562	-474.90609
-5.86228	-479.79909
-5.87853	-484.68295
-5.89541	-489.70398
-5.91187	-494.80167
-5.92832	-499.80223
-5.94416	-504.84061
-5.96062	-509.10652
-5.9777	-512.57545
-5.99416	-517.24774
-6.01103	-522.19778
-6.02812	-523.85783
-6.04457	-527.09752
-6.06124	-531.94273
-6.0777	-536.76057
-6.09416	-541.55171
-6.11041	-546.34196
-6.12728	-551.23991
-6.14374	-556.24592
-6.14749	-543.07181
-6.14895	-527.01789
-6.15062	-505.48738
-6.15187	-480.2871
-6.15312	-452.39794
-6.15416	-422.47504
-6.15499	-391.31409
-6.15562	-359.61777
-6.15582	-327.84903

Chicken Control 4	
Diameter	10.62 mm
Extension	Load
(mm)	(N)
-2.80041	-14.08844
-2.80875	-15.6625
-2.8275	-20.70045
-2.84458	-25.73932
-2.86187	-30.49797
-2.87958	-35.00894
-2.89687	-39.22824
-2.91437	-43.20083
-2.93125	-46.87148
-2.94791	-50.2887
-2.96479	-53.84566
-2.98145	-57.38621
-2.99833	-60.86761
-3.0152	-64.49609
-3.03208	-67.9054
-3.04854	-71.25928
-3.06437	-74.49695
-3.08145	-77.9245
-3.09812	-81.38119
-3.1152	-84.78328
-3.13187	-88.08452
-3.14854	-91.35295
-3.165	-94.61095
-3.18125	-97.82039
-3.19854	-101.20268
-3.2152	-104.43827
-3.23187	-107.53845
-3.24854	-110.53067
-3.265	-113.53711
-3.28166	-116.56877
-3.29812	-119.51072
-3.3152	-122.70395
-3.33145	-125.80714
-3.34833	-129.03008
-3.3652	-132.38479
-3.38124	-135.61268
-3.39812	-139.05989
-3.41499	-142.54978
-3.43166	-146.01864
-3.44854	-149.66537
-3.4652	-153.0991
-3.48187	-156.72514
-3.49833	-160.17957
-3.51479	-163.63183
-3.53166	-167.2305
-3.54833	-170.68708
-3.56499	-174.20955
-3.58145	-177.52542
-3.59833	-181.06408
-3.6152	-184.64194
-3.63187	-188.14722
-3.64854	-191.60168
-3.66499	-195.00555
-3.68166	-198.45665
-3.69854	-201.78276
-3.7152	-205.21232

-3.73187	-208.55892
-3.74833	-211.93899
-3.76499	-215.16581
-3.78166	-218.56856
-3.79812	-221.93426
-3.81479	-225.32339
-3.83166	-228.67487
-3.84833	-231.88037
-3.86541	-235.19279
-3.88166	-238.24239
-3.89833	-241.43028
-3.91479	-244.65077
-3.93145	-247.77247
-3.94874	-251.15693
-3.96499	-254.27637
-3.98166	-257.36988
-3.99812	-260.56182
-4.01437	-263.68821
-4.03249	-263.83775
-4.03374	-252.86233
-4.03458	-244.97658
-4.0352	-236.09769
-4.03583	-226.41161
-4.03645	-216.16693
-4.03687	-205.66779
-4.03729	-195.13914
-4.0377	-184.71737
-4.03791	-174.513
-4.03833	-164.63429
-4.03854	-155.17813

Chicken Control 5	
Diameter	9.96 mm
Extension	Load
(mm)	(N)
-3.60583	-0.00408
-3.61145	-0.00312
-3.63229	0.01259
-3.65249	0.01092
-3.67083	0.00005
-3.68833	0.00664
-3.70562	-0.00452
-3.72249	0.00535
-3.73874	0.00216
-3.75604	-0.00402
-3.77249	0.00067
-3.78937	0.01634
-3.80583	0.01694
-3.82229	0.01158
-3.83916	0.01588
-3.85562	-0.00926
-3.8727	0.00788
-3.88958	-0.00587
-3.90645	0.00165
-3.9227	0.00316
-3.93916	0.00504
-3.95624	0.0093
-3.97229	0.00518
-3.98958	0.00751
-4.00624	-0.0005
-4.02249	-0.0013
-4.03895	0.00139
-4.05541	0.00682
-4.0727	0.00843
-4.08958	0.00887
-4.10624	0.01401
-4.12312	-0.00279
-4.13916	0.0131
-4.15604	0.00373
-4.17249	0.00603
-4.18916	0.01601
-4.20624	-0.00148
-4.22291	-0.25891
-4.23958	-0.72977
-4.25583	-0.82538
-4.27249	-1.11764
-4.28916	-1.45702
-4.30624	-2.9524
-4.32312	-4.08769
-4.33958	-4.4637
-4.35624	-5.50618
-4.3727	-7.13364
-4.38937	-8.39561
-4.40583	-10.70026
-4.42249	-13.33551
-4.43937	-16.31074
-4.45583	-19.46865
-4.47249	-22.68774
-4.48916	-25.90636
-4.50583	-29.19841
-4.52249	-32.49376
-4.53916	-35.79578
-4.55603	-39.26511
-4.57228	-42.61902
-4.58916	-46.00625
-4.60603	-49.50416
-4.6227	-52.86187
-4.63895	-56.10908
-4.65603	-59.48148
-4.67249	-62.93583
-4.68895	-66.20608
-4.70603	-69.55691
-4.72249	-72.8111
-4.73937	-76.02779
-4.75624	-79.20568
-4.77249	-82.09523
-4.78895	-85.04038
-4.80562	-87.96015
-4.82249	-91.0188
-4.83916	-93.86609
-4.85583	-96.74191
-4.87228	-99.65786
-4.88895	-102.52283
-4.90603	-105.43265
-4.92249	-108.23758
-4.93937	-110.94046
-4.95603	-113.78896
-4.9727	-116.57795
-4.98958	-119.54807
-5.00583	-122.33851
-5.02249	-125.41062
-5.03937	-128.5006
-5.05583	-131.44596
-5.07291	-134.60699
-5.08874	-137.52948
-5.10603	-140.79304
-5.12291	-143.95341
-5.13937	-146.94576
-5.15645	-150.07739
-5.1727	-152.98283
-5.18916	-156.00444
-5.20583	-159.00671
-5.22249	-162.12419
-5.23916	-165.13677
-5.25583	-168.1087
-5.2727	-171.24951
-5.28916	-174.18166
-5.30583	-177.11538
-5.32249	-179.96438

-5.33916	-182.80065
-5.35624	-185.69115
-5.3727	-188.28686
-5.38937	-190.98805
-5.40562	-193.57717
-5.42249	-196.19614
-5.43916	-198.82432
-5.45583	-201.47006
-5.47249	-204.03343
-5.48937	-206.77468
-5.50582	-209.42342
-5.52249	-212.14479
-5.53937	-214.88449
-5.55582	-217.49808
-5.5727	-220.23386
-5.58957	-223.09381
-5.60603	-225.82081
-5.6227	-228.65471
-5.63916	-231.4395
-5.65582	-234.28831
-5.67249	-237.26349
-5.68916	-240.18531
-5.70582	-243.19293
-5.72228	-246.25517
-5.73957	-249.52342
-5.75582	-252.61292
-5.7727	-255.78102
-5.78957	-259.00283
-5.80582	-262.17109
-5.8227	-265.34227
-5.83895	-268.38088
-5.85582	-271.61133
-5.8727	-274.8782
-5.88895	-277.8897
-5.90582	-281.13186
-5.92207	-283.99435
-5.93937	-287.25466
-5.95603	-290.47671
-5.97291	-293.56852
-5.98978	-296.67181
-6.00603	-299.51984
-6.02291	-302.66681
-6.03895	-305.53201
-6.05582	-308.45356
-6.0727	-311.49295
-6.08895	-314.19933
-6.10603	-317.23735
-6.12228	-319.97108
-6.13895	-322.87744
-6.15582	-325.71638
-6.17228	-328.44985
-6.18978	-331.40913
-6.20624	-334.03781
-6.2227	-336.61857
-6.23895	-339.12468
-6.25582	-341.83782
-6.2727	-344.50743
-6.28916	-347.08861
-6.30582	-349.71586
-6.32249	-352.50065
-6.33895	-355.252
-6.35582	-358.12637
-6.37291	-361.20048
-6.38916	-364.07945
-6.39187	-357.36439
-6.39291	-347.92772
-6.39395	-334.59693
-6.3952	-318.61252
-6.39603	-300.75124
-6.39687	-281.44985
-6.39749	-261.21545
-6.39812	-240.55
-6.39853	-219.78705
-6.39874	-199.17966

Rib Fleshed 1	
Size (Length, Width) (mm)	
18.14	26.80
Extension	Load
(mm)	(N)
-0.555	-0.20485
-0.57542	-0.46035
-0.61417	-4.01215
-0.64229	-9.06674
-0.66146	-14.24912
-0.67667	-19.30676
-0.68979	-24.31968
-0.70208	-29.61444
-0.71312	-34.76419
-0.72271	-39.80289
-0.73208	-45.07503
-0.74083	-50.16992
-0.74896	-55.20028
-0.75687	-60.49362
-0.76458	-65.50234
-0.77167	-70.77189
-0.77917	-76.22132
-0.78562	-81.47509
-0.79229	-86.80841
-0.79896	-92.30668
-0.805	-97.36925
-0.81083	-102.50739
-0.81708	-107.7288
-0.82312	-113.29905
-0.82854	-118.47235
-0.83375	-123.67445
-0.83917	-128.88983
-0.84437	-134.29238
-0.84958	-139.77702
-0.855	-145.23451
-0.86042	-150.80139
-0.865	-155.8262
-0.86979	-160.95954
-0.87417	-166.10479
-0.87958	-171.7996
-0.88417	-176.82815
-0.88875	-181.9725
-0.89354	-187.17869
-0.89833	-192.49754
-0.90312	-197.89319
-0.90771	-203.2579
-0.91229	-208.60325
-0.91708	-214.0789
-0.92167	-219.63677
-0.92625	-225.18229
-0.93083	-230.64573
-0.93562	-236.09266
-0.94042	-241.64268
-0.945	-247.28748
-0.94958	-252.88892
-0.95417	-258.46264
-0.95875	-264.02748
-0.96333	-269.71263
-0.96812	-275.45458
-0.9725	-281.13106
-0.97771	-286.74793
-0.98187	-291.78679
-0.98604	-296.94739
-0.99	-302.13958

-0.99396	-307.27905
-0.99854	-313.04842
-1.00312	-318.68437
-1.0075	-324.3778
-1.01229	-329.98911
-1.01687	-335.58866
-1.02146	-341.19943
-1.02625	-346.82149
-1.03083	-352.57021
-1.03521	-358.34229
-1.04	-364.0129
-1.04458	-369.68541
-1.04917	-375.27165
-1.05396	-380.84182
-1.05875	-386.57352
-1.06292	-391.57924
-1.06771	-397.41078
-1.07167	-402.43179
-1.07562	-407.45509
-1.08021	-413.23283
-1.08458	-418.87197
-1.08937	-424.27006
-1.09417	-429.7795
-1.09875	-435.47082
-1.10354	-441.22291
-1.10833	-446.96879
-1.11291	-452.70246
-1.1175	-458.3247
-1.12208	-463.92199
-1.12666	-469.47265
-1.13125	-474.92787
-1.13604	-480.39341
-1.14083	-485.92129
-1.14562	-491.61562
-1.15021	-497.43435
-1.15416	-502.47401
-1.15896	-508.2739
-1.16312	-514.06991
-1.16791	-519.79226
-1.1725	-525.60604
-1.17666	-530.6223
-1.18062	-535.7089
-1.18479	-540.88074
-1.18896	-546.09555
-1.19291	-551.39285
-1.19687	-556.74249
-1.20083	-562.10458

-1.20479	-567.46697
-1.20875	-572.75683
-1.21291	-577.98499
-1.21687	-583.23193
-1.22083	-588.54496
-1.225	-593.87147
-1.22896	-599.14607
-1.23291	-604.38097
-1.23687	-609.60573
-1.24062	-614.88122
-1.24458	-620.14008
-1.24854	-625.38248
-1.25229	-630.59485
-1.25666	-635.72598
-1.26062	-641.00361
-1.26479	-646.49886
-1.26896	-652.1107
-1.27333	-657.803
-1.27729	-663.52427
-1.28104	-669.16901
-1.285	-674.71433
-1.28875	-680.2178
-1.29271	-685.63253
-1.29687	-691.0423
-1.30083	-696.58142
-1.305	-702.14957
-1.30916	-707.76695
-1.31312	-713.47946
-1.31729	-719.23184
-1.32083	-724.97767
-1.32479	-730.52347
-1.32854	-735.94397
-1.3325	-741.28252
-1.33666	-746.6588
-1.34041	-752.19226
-1.34458	-757.79104
-1.34875	-763.42201
-1.35271	-769.06538
-1.35687	-774.74004
-1.36062	-780.50148
-1.36458	-786.2438
-1.36833	-791.89134
-1.3725	-797.37949
-1.37646	-802.94627
-1.38041	-808.64161
-1.38458	-814.33016
-1.38875	-820.07372

-1.39271	-825.8794
-1.39687	-831.70891
-1.40062	-837.57532
-1.40458	-843.30672
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-1.90854	-1,574.00
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-1.98666	-1,688.43
-1.99062	-1,694.33
-1.99437	-1,700.25
-1.99833	-1,706.07
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-2.04229	-1,770.38
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-2.14687	-1,923.21
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-2.15437	-1,934.96
-2.15854	-1,940.60
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-2.17437	-1,963.09
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-2.18271	-1,974.66
-2.18666	-1,980.61
-2.19062	-1,986.59
-2.19458	-1,992.51
-2.19812	-1,998.25
-2.20208	-2,003.81
-2.20625	-2,009.30
-2.2102	-2,014.99
-2.21437	-2,020.87
-2.21854	-2,026.78
-2.2227	-2,032.69
-2.22687	-2,038.61
-2.2302	-2,043.62
-2.23333	-2,048.69
-2.23729	-2,054.65
-2.24104	-2,060.43
-2.245	-2,065.98
-2.24937	-2,071.58
-2.25312	-2,077.43
-2.25729	-2,083.33
-2.26145	-2,089.23
-2.26562	-2,095.14
-2.26895	-2,100.04

Rib Fleshed 2	
Size (Length, Width) (mm)	
19.61	27.57
Extension	Load
(mm)	(N)
-0.52396	-0.15816
-0.54604	-0.34689
-0.57958	-5.34805
-0.59854	-10.53048
-0.61062	-15.65835
-0.62	-20.82203
-0.62917	-26.06331
-0.63812	-31.43647
-0.64625	-36.81474
-0.65396	-42.03256
-0.66083	-47.23879
-0.66729	-52.28048
-0.67354	-57.58212
-0.67958	-63.04218
-0.68542	-68.62888
-0.69062	-73.69435
-0.69604	-78.82205
-0.70104	-83.97412
-0.70667	-89.1586
-0.71187	-94.61723
-0.71708	-100.14942
-0.72229	-105.75194
-0.7275	-111.44234
-0.73229	-116.56234
-0.73708	-121.82693
-0.74187	-127.22525
-0.74667	-132.68661
-0.75167	-138.19841
-0.75646	-143.79305
-0.76104	-149.37748
-0.76562	-154.85187
-0.77021	-160.2883
-0.775	-165.71559
-0.77958	-171.2205
-0.78437	-176.73793
-0.78917	-182.28893
-0.79396	-187.85645
-0.79854	-193.5363
-0.80312	-199.25974
-0.80771	-204.92899
-0.8125	-210.56814
-0.81729	-216.30348
-0.82208	-222.13468
-0.82625	-227.16299
-0.83021	-232.21511
-0.83437	-237.24759
-0.83833	-242.27728
-0.84208	-247.29113
-0.84667	-253.01427
-0.85125	-258.74865
-0.85542	-263.7558
-0.85937	-268.85203
-0.86354	-273.99087
-0.86771	-279.22481
-0.87187	-284.52149
-0.87583	-289.82112
-0.88	-295.09065
-0.88375	-300.32185
-0.88771	-305.45706
-0.89187	-310.54747
-0.89562	-315.73287
-0.89958	-320.94741
-0.90354	-326.13802
-0.90771	-331.31802
-0.91146	-336.50807
-0.91562	-341.68205
-0.91937	-346.87227
-0.92333	-352.0464
-0.92708	-357.20289
-0.93125	-362.35341
-0.93521	-367.58325
-0.93896	-372.88859
-0.94312	-378.13973
-0.94708	-383.41764
-0.95104	-388.74024
-0.95521	-394.09471
-0.95917	-399.55527
-0.96312	-404.96424
-0.96687	-410.2855
-0.97104	-415.5941
-0.97521	-421.05997
-0.97917	-426.66715
-0.98333	-432.25947
-0.98729	-437.81084
-0.99125	-443.32671
-0.99521	-448.84267
-0.99917	-454.37464
-1.00312	-459.87308
-1.00687	-465.28336
-1.01104	-470.57626
-1.01521	-475.9863
-1.01896	-481.58029
-1.02312	-487.1462
-1.02708	-492.75208
-1.03104	-498.40823
-1.03521	-504.01157
-1.03917	-509.59057
-1.04292	-515.17892

-1.04687	-520.79445
-1.05104	-526.39514
-1.055	-532.00734
-1.05896	-537.60087
-1.06292	-543.20419
-1.06708	-548.93047
-1.07125	-554.79586
-1.07521	-560.72533
-1.07937	-566.62875
-1.08333	-572.47925
-1.08729	-578.26787
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-1.11937	-625.14699
-1.12312	-630.93066
-1.12729	-636.55168
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-1.135	-648.02223
-1.13916	-653.7903
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-1.14687	-665.52329
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-1.16708	-695.02079
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-1.99604	-1,951.14
-2.00021	-1,957.04
-2.00416	-1,962.87
-2.00791	-1,968.81
-2.01208	-1,974.72
-2.01625	-1,980.63
-2.02021	-1,986.63
-2.02375	-1,991.64
-2.02708	-1,996.70
-2.03041	-2,001.80
-2.03375	-2,006.87
-2.03687	-2,011.89
-2.04104	-2,017.77
-2.045	-2,023.66
-2.04875	-2,029.57

-2.05291	-2,035.42
-2.05687	-2,041.36
-2.06083	-2,047.35
-2.065	-2,053.32
-2.06833	-2,058.36
-2.07166	-2,063.40
-2.075	-2,068.40
-2.07896	-2,074.36
-2.08312	-2,080.29
-2.08687	-2,086.27
-2.09083	-2,092.17
-2.095	-2,098.02
-2.09687	-2,100.99

Rib Fleshed 3	
Size (Length, Width) (mm)	
16.70	29.50
Extension	Load
(mm)	(N)
-0.8325	-1.55725
-0.84729	-5.20416
-0.85729	-10.45775
-0.86542	-15.7031
-0.87312	-21.15425
-0.87937	-26.44253
-0.88604	-32.05569
-0.89146	-37.33959
-0.89708	-42.88445
-0.90208	-48.66469
-0.9075	-54.45962
-0.91229	-59.46437
-0.91646	-64.60968
-0.92083	-69.75347
-0.92542	-74.92142
-0.92958	-80.18082
-0.93417	-85.51776
-0.93833	-90.94888
-0.94271	-96.40544
-0.94708	-101.83048
-0.95146	-107.29903
-0.95542	-112.84491
-0.95979	-118.42603
-0.96375	-124.02806
-0.96812	-129.61428
-0.97229	-135.20208
-0.97625	-140.83032
-0.98042	-146.50625
-0.98458	-152.25571
-0.98896	-158.03371
-0.99312	-163.87145
-0.99729	-169.7347
-1.00146	-175.56497
-1.00562	-181.49136
-1.00979	-187.45971
-1.01375	-193.45155
-1.01771	-199.37681
-1.02187	-205.18397
-1.02583	-210.94663
-1.03021	-216.7622
-1.03417	-222.70437
-1.03812	-228.68745
-1.04229	-234.62068
-1.04625	-240.54573
-1.05021	-246.43715
-1.05417	-252.34628
-1.05812	-258.31845
-1.06208	-264.29924
-1.06625	-270.1937
-1.07042	-276.0455
-1.07437	-282.00147
-1.07792	-287.03269
-1.08125	-292.10129
-1.08458	-297.19406
-1.08792	-302.25989
-1.09125	-307.28325
-1.09458	-312.32682
-1.09791	-317.38946
-1.10125	-322.42936
-1.10458	-327.45105
-1.10812	-332.4931
-1.11146	-337.57907
-1.11479	-342.6863
-1.11812	-347.74995
-1.12146	-352.83229
-1.12479	-357.92971
-1.12812	-362.98704
-1.13146	-368.0414
-1.13479	-373.12463
-1.13791	-378.21919
-1.14146	-383.27521
-1.14479	-388.32653
-1.14812	-393.41924
-1.15166	-398.57978
-1.155	-403.80445
-1.15833	-409.03664
-1.16166	-414.24927
-1.16479	-419.40558
-1.16812	-424.47129
-1.17146	-429.53521
-1.17458	-434.64503
-1.17791	-439.72549
-1.18125	-444.7366
-1.18458	-449.76965
-1.18812	-454.82656
-1.19146	-459.9368
-1.195	-465.14302
-1.19833	-470.39461
-1.20166	-475.67087
-1.205	-480.94055
-1.20833	-486.19092
-1.21166	-491.46464
-1.21479	-496.73173
-1.21833	-501.92589
-1.22166	-507.10797
-1.22479	-512.28833
-1.22812	-517.38858
-1.23166	-522.4756
-1.23479	-527.65083
-1.23833	-532.83387
-1.24146	-538.02484
-1.24458	-543.23083
-1.24791	-548.39063
-1.25125	-553.5323
-1.25416	-558.62808
-1.25833	-564.6255
-1.26166	-569.66162
-1.265	-574.76854
-1.26854	-579.93263
-1.27187	-585.20001
-1.27521	-590.52581
-1.27854	-595.82031
-1.28187	-601.08078
-1.28521	-606.32324
-1.28854	-611.54562
-1.29187	-616.83309
-1.29521	-622.18595
-1.29854	-627.52599
-1.30187	-632.85023
-1.30541	-638.16732

-1.30896	-643.5017
-1.31229	-648.88519
-1.31562	-654.3138
-1.31916	-659.76179
-1.32229	-665.19243
-1.32562	-670.55595
-1.32875	-675.84127
-1.33187	-681.0748
-1.33521	-686.28395
-1.33833	-691.50227
-1.34166	-696.7333
-1.34521	-702.00032
-1.34854	-707.3369
-1.35187	-712.74143
-1.35541	-718.16486
-1.35896	-723.60402
-1.36229	-729.1047
-1.36562	-734.64364
-1.36875	-740.16392
-1.37208	-745.64248
-1.37541	-751.06436
-1.37854	-756.4252
-1.38187	-761.75183
-1.38541	-767.0542
-1.38896	-772.434
-1.39229	-777.99594
-1.39562	-783.6073
-1.39916	-789.13057
-1.40271	-794.65783
-1.40583	-800.21125
-1.40916	-805.72599
-1.4125	-811.19871
-1.41541	-816.64723
-1.41875	-822.00801
-1.42187	-827.26026
-1.42541	-832.45903
-1.42896	-837.75014
-1.43208	-843.17464
-1.43541	-848.62649
-1.43896	-854.0808
-1.44229	-859.58773
-1.44562	-865.09079
-1.44896	-870.55135
-1.45208	-876.00666
-1.45521	-881.40833
-1.45833	-886.72477
-1.46166	-891.97469

-1.465	-897.19653
-1.46854	-902.43757
-1.47187	-907.80944
-1.47521	-913.27775
-1.47875	-918.76119
-1.48208	-924.28398
-1.48541	-929.84498
-1.48896	-935.42916
-1.49187	-941.02257
-1.49521	-946.49553
-1.49854	-951.84833
-1.50166	-957.18783
-1.50521	-962.49759
-1.50854	-967.89443
-1.51187	-973.42676
-1.51541	-978.97434
-1.51896	-984.51567
-1.52229	-990.08971
-1.52562	-995.6817
-1.52916	-1,001.29
-1.53229	-1,006.89
-1.53541	-1,012.41
-1.53854	-1,017.77
-1.54166	-1,022.97
-1.54521	-1,028.10
-1.54854	-1,033.36
-1.55187	-1,038.78
-1.55521	-1,044.19
-1.55875	-1,049.60
-1.56208	-1,055.06
-1.56562	-1,060.54
-1.56916	-1,066.07
-1.57229	-1,071.70
-1.57562	-1,077.33
-1.57875	-1,082.87
-1.58229	-1,088.31
-1.58562	-1,093.72
-1.58896	-1,099.17
-1.59208	-1,104.58
-1.59562	-1,109.91
-1.59916	-1,115.25
-1.60229	-1,120.72
-1.60583	-1,126.17
-1.60937	-1,131.60
-1.6125	-1,137.12
-1.61562	-1,142.64
-1.61896	-1,148.07

-1.62229	-1,153.42
-1.62562	-1,158.74
-1.62896	-1,164.12
-1.63229	-1,169.52
-1.63583	-1,174.90
-1.63916	-1,180.32
-1.64229	-1,185.77
-1.64583	-1,191.18
-1.64916	-1,196.62
-1.6525	-1,202.08
-1.65541	-1,207.47
-1.65875	-1,212.72
-1.66208	-1,217.88
-1.66541	-1,223.08
-1.66854	-1,228.34
-1.67187	-1,233.58
-1.67541	-1,238.83
-1.67875	-1,244.17
-1.68187	-1,249.55
-1.68541	-1,254.88
-1.68896	-1,260.23
-1.69229	-1,265.70
-1.69541	-1,271.18
-1.69875	-1,276.59
-1.70208	-1,281.90
-1.70541	-1,287.18
-1.70854	-1,292.50
-1.71187	-1,297.83
-1.71541	-1,303.14
-1.71875	-1,308.49
-1.72187	-1,313.88
-1.72541	-1,319.23
-1.72896	-1,324.59
-1.73208	-1,330.04
-1.73541	-1,335.48
-1.73854	-1,340.82
-1.74187	-1,346.04
-1.74521	-1,351.25
-1.74833	-1,356.53
-1.75166	-1,361.80
-1.75521	-1,367.05
-1.75854	-1,372.35
-1.76166	-1,377.69
-1.76521	-1,383.00
-1.76854	-1,388.33
-1.77187	-1,393.71
-1.775	-1,399.09

-1.77833	-1,404.43
-1.78166	-1,409.74
-1.785	-1,415.06
-1.78833	-1,420.41
-1.79166	-1,425.76
-1.795	-1,431.14
-1.79854	-1,436.56
-1.80187	-1,442.05
-1.80541	-1,447.56
-1.80875	-1,453.09
-1.81208	-1,458.59
-1.81541	-1,464.05
-1.81875	-1,469.46
-1.82229	-1,474.81
-1.82562	-1,480.20
-1.82854	-1,485.58
-1.83208	-1,490.81
-1.83541	-1,496.03
-1.83875	-1,501.33
-1.84208	-1,506.64
-1.84541	-1,511.97
-1.84875	-1,517.33
-1.85208	-1,522.67
-1.85541	-1,527.96
-1.85875	-1,533.22
-1.86229	-1,538.44
-1.86562	-1,543.75
-1.86854	-1,549.12
-1.87208	-1,554.39
-1.87541	-1,559.62
-1.87854	-1,564.90
-1.88208	-1,570.16
-1.88562	-1,575.45
-1.88875	-1,580.82
-1.89229	-1,586.19
-1.89541	-1,591.54
-1.89875	-1,596.82
-1.90229	-1,602.04
-1.90562	-1,607.32
-1.90854	-1,612.60
-1.91208	-1,617.77
-1.91521	-1,622.92
-1.91854	-1,628.11
-1.92187	-1,633.27
-1.92521	-1,638.48
-1.92854	-1,643.79
-1.93187	-1,649.12
-1.93521	-1,654.39
-1.93854	-1,659.66
-1.94208	-1,664.94
-1.94541	-1,670.28
-1.94854	-1,675.67
-1.95208	-1,680.99
-1.95541	-1,686.31
-1.95875	-1,691.66
-1.96208	-1,696.97
-1.96541	-1,702.27
-1.96854	-1,707.56
-1.97187	-1,712.78
-1.97521	-1,717.93
-1.97854	-1,723.09
-1.98187	-1,728.21
-1.98521	-1,733.37
-1.98854	-1,738.58
-1.99187	-1,743.78
-1.995	-1,748.94
-1.99833	-1,754.10
-2.00166	-1,759.30
-2.00521	-1,764.55
-2.00833	-1,769.85
-2.01166	-1,775.11
-2.01521	-1,780.36
-2.01854	-1,785.66
-2.02208	-1,791.01
-2.02562	-1,796.43
-2.02896	-1,801.89
-2.03229	-1,807.30
-2.03562	-1,812.67
-2.03896	-1,818.02
-2.04229	-1,823.30
-2.04562	-1,828.59
-2.04854	-1,833.86
-2.05208	-1,839.02
-2.05541	-1,844.15
-2.05854	-1,849.28
-2.06208	-1,854.36
-2.06541	-1,859.50
-2.06875	-1,864.71
-2.07187	-1,869.92
-2.07521	-1,875.12
-2.07833	-1,880.27
-2.08187	-1,885.36
-2.085	-1,890.53
-2.08833	-1,895.80
-2.09166	-1,901.02
-2.095	-1,906.22
-2.09833	-1,911.46
-2.10208	-1,916.75
-2.10541	-1,922.14
-2.10896	-1,927.58
-2.1125	-1,933.03
-2.11562	-1,938.52
-2.11875	-1,943.90
-2.12229	-1,949.11
-2.12541	-1,954.34
-2.12875	-1,959.60
-2.13208	-1,964.82
-2.13521	-1,970.03
-2.13854	-1,975.25
-2.14208	-1,980.45
-2.14562	-1,985.73
-2.14896	-1,991.07
-2.15229	-1,996.41
-2.15562	-2,001.76
-2.15875	-2,007.07
-2.16208	-2,012.34
-2.16521	-2,017.58
-2.16854	-2,022.75
-2.17166	-2,027.87
-2.175	-2,032.98
-2.17833	-2,038.08
-2.18187	-2,043.21
-2.1852	-2,048.46
-2.18875	-2,053.81
-2.19208	-2,059.17
-2.19541	-2,064.56
-2.19875	-2,069.97
-2.20208	-2,075.39
-2.20541	-2,080.81
-2.20854	-2,086.14
-2.21166	-2,091.34
-2.215	-2,096.43
-2.2177	-2,100.47

Rib Fleshed 4	
Size (Length, Width) (mm)	
12.85	27.52
Extension	Load
(mm)	(N)

-0.63708	-2.06187
-0.64854	-3.64838
-0.67	-8.78605
-0.68667	-14.08008
-0.69979	-19.23048
-0.71104	-24.29545
-0.72104	-29.4077
-0.73104	-34.69551
-0.73937	-39.72961
-0.74729	-44.99285
-0.75521	-50.31589
-0.76229	-55.47093
-0.76958	-60.87682
-0.77604	-65.9187
-0.7825	-71.16077
-0.78812	-76.17279
-0.79375	-81.2864
-0.79917	-86.36835
-0.80479	-91.3891
-0.81042	-96.62432
-0.81583	-102.13326
-0.82146	-107.57219
-0.82687	-112.94898
-0.83229	-118.49586
-0.83771	-124.18985
-0.84312	-129.81835
-0.84896	-135.40511
-0.85354	-140.55096
-0.85833	-145.80221
-0.86292	-151.08086
-0.86771	-156.31561
-0.8725	-161.55034
-0.87708	-166.84097
-0.88167	-172.16498
-0.88646	-177.52454
-0.89125	-182.9409
-0.89583	-188.4093
-0.90042	-193.94843
-0.90521	-199.53878
-0.90979	-205.06206
-0.91437	-210.46674
-0.91875	-215.86215
-0.92354	-221.27558
-0.92833	-226.85109
-0.93312	-232.56037
-0.93771	-238.30104
-0.9425	-244.09313

-0.94646	-249.10656
-0.95042	-254.15131
-0.95521	-259.95809
-0.95979	-265.66294
-0.96458	-271.36728
-0.96917	-277.19474
-0.97312	-282.27389
-0.97729	-287.31546
-0.98104	-292.33369
-0.98542	-298.06617
-0.99021	-303.7912
-0.99417	-308.82874
-0.99854	-314.62184
-1.00354	-320.28404
-1.00771	-325.30534
-1.01187	-330.53812
-1.01583	-335.90382
-1.01979	-341.26064
-1.02396	-346.53914
-1.02812	-351.80062
-1.03187	-357.12102
-1.03604	-362.42035
-1.03979	-367.659
-1.04396	-372.79564
-1.04792	-377.88892
-1.05187	-383.00923
-1.05583	-388.15999
-1.05979	-393.40082
-1.06375	-398.67768
-1.06792	-403.93135
-1.07167	-409.19
-1.07583	-414.42406
-1.07979	-419.71239
-1.08375	-425.04641
-1.08771	-430.35632
-1.09187	-435.62073
-1.09604	-440.86599
-1.09979	-446.19897
-1.10375	-451.60112
-1.10771	-457.03295
-1.11146	-462.40717
-1.11542	-467.61569
-1.11937	-472.76691
-1.12312	-477.95147
-1.1275	-483.15072
-1.13146	-488.54133
-1.13541	-494.00184

-1.13958	-499.42258
-1.14354	-504.87268
-1.1475	-510.3206
-1.15125	-515.79839
-1.15541	-521.23916
-1.15916	-526.65472
-1.16333	-532.00388
-1.1675	-537.3624
-1.17146	-542.84924
-1.17583	-548.40219
-1.17979	-554.01242
-1.18375	-559.59034
-1.18791	-565.12457
-1.19166	-570.68628
-1.19562	-576.25985
-1.19958	-581.82365
-1.20375	-587.31651
-1.20771	-592.76581
-1.21166	-598.17404
-1.21583	-603.56438
-1.21979	-609.04485
-1.22396	-614.62718
-1.22791	-620.28223
-1.23187	-625.91588
-1.23583	-631.45065
-1.23958	-636.93511
-1.24396	-642.40116
-1.24791	-648.01168
-1.25187	-653.65064
-1.25604	-659.15662
-1.26021	-664.67738
-1.26416	-670.27605
-1.26812	-675.97681
-1.27187	-681.69355
-1.27562	-687.24114
-1.27958	-692.6797
-1.28354	-698.07041
-1.28771	-703.58545
-1.29166	-709.33777
-1.29583	-715.11889
-1.29979	-720.86257
-1.30396	-726.50433
-1.30791	-732.17934
-1.31166	-737.9548
-1.31562	-743.71034
-1.31958	-749.40115
-1.32354	-754.98998

-1.3275	-760.59455
-1.33166	-766.24519
-1.33562	-771.93403
-1.33958	-777.69268
-1.34396	-783.42301
-1.34771	-789.15828
-1.35166	-794.86752
-1.35521	-800.49616
-1.35916	-806.03647
-1.36333	-811.54925
-1.36729	-817.17205
-1.37125	-822.81917
-1.37541	-828.42976
-1.37937	-834.14304
-1.38354	-839.95199
-1.3875	-845.80761
-1.39146	-851.64022
-1.39521	-857.31512
-1.39916	-862.81937
-1.40312	-868.36362
-1.40708	-874.01789
-1.41125	-879.72617
-1.41521	-885.45185
-1.41937	-891.2195
-1.42354	-896.99298
-1.4275	-902.85182
-1.43146	-908.72729
-1.43541	-914.5335
-1.43937	-920.23891
-1.44375	-925.86648
-1.44729	-931.65553
-1.45146	-937.44153
-1.45583	-943.21901
-1.45958	-949.08547
-1.46396	-954.86331
-1.46791	-960.65921
-1.47187	-966.49206
-1.47583	-972.29695
-1.47958	-977.96929
-1.48375	-983.54208
-1.4875	-989.17812
-1.49187	-994.80921
-1.49583	-1,000.54
-1.49958	-1,006.33
-1.50396	-1,012.03
-1.50791	-1,017.80
-1.51208	-1,023.59

-1.51583	-1,029.38
-1.51979	-1,035.09
-1.52375	-1,040.73
-1.5275	-1,046.37
-1.53166	-1,051.91
-1.53562	-1,057.51
-1.53958	-1,063.19
-1.54375	-1,068.88
-1.54791	-1,074.70
-1.55187	-1,080.57
-1.55583	-1,086.36
-1.55979	-1,092.11
-1.56375	-1,097.85
-1.5675	-1,103.53
-1.57166	-1,109.13
-1.57562	-1,114.75
-1.57958	-1,120.37
-1.58375	-1,125.95
-1.58771	-1,131.61
-1.59166	-1,137.35
-1.59562	-1,143.06
-1.59979	-1,148.77
-1.60354	-1,154.51
-1.6075	-1,160.20
-1.61146	-1,165.80
-1.61541	-1,171.45
-1.61937	-1,177.12
-1.62354	-1,182.72
-1.6275	-1,188.40
-1.63146	-1,194.07
-1.63562	-1,199.70
-1.63958	-1,205.40
-1.64354	-1,211.19
-1.6475	-1,216.97
-1.65166	-1,222.68
-1.65541	-1,228.42
-1.65958	-1,234.14
-1.66375	-1,239.90
-1.66771	-1,245.73
-1.67187	-1,251.54
-1.67583	-1,257.24
-1.68	-1,262.88
-1.68375	-1,268.60
-1.68771	-1,274.33
-1.69166	-1,279.98
-1.69562	-1,285.63
-1.69958	-1,291.25

-1.70354	-1,296.90
-1.7075	-1,302.57
-1.71146	-1,308.21
-1.71541	-1,313.83
-1.71958	-1,319.42
-1.72354	-1,325.08
-1.7275	-1,330.84
-1.73146	-1,336.57
-1.73541	-1,342.32
-1.73937	-1,348.07
-1.74354	-1,353.76
-1.74729	-1,359.43
-1.75146	-1,365.06
-1.75541	-1,370.68
-1.75979	-1,376.29
-1.76375	-1,382.08
-1.76771	-1,387.94
-1.77166	-1,393.71
-1.77562	-1,399.47
-1.77958	-1,405.17
-1.78375	-1,410.79
-1.7875	-1,416.46
-1.79166	-1,422.09
-1.79562	-1,427.71
-1.8	-1,433.39
-1.80375	-1,439.16
-1.80771	-1,444.90
-1.81166	-1,450.57
-1.81541	-1,456.19
-1.81937	-1,461.70
-1.82354	-1,467.26
-1.8275	-1,472.99
-1.83146	-1,478.70
-1.83521	-1,484.31
-1.83958	-1,489.82
-1.84375	-1,495.45
-1.8475	-1,501.22
-1.85146	-1,506.89
-1.85541	-1,512.52
-1.85937	-1,518.19
-1.86333	-1,523.82
-1.86729	-1,529.39
-1.87125	-1,534.92
-1.87521	-1,540.48
-1.87958	-1,546.05
-1.88354	-1,551.76
-1.8875	-1,557.49

-1.89166	-1,563.19
-1.89541	-1,568.98
-1.89958	-1,574.76
-1.90354	-1,580.52
-1.90729	-1,586.23
-1.91146	-1,591.82
-1.91541	-1,597.44
-1.91958	-1,603.11
-1.92333	-1,608.84
-1.9275	-1,614.55
-1.93146	-1,620.27
-1.93521	-1,625.94
-1.93958	-1,631.58
-1.94333	-1,637.41
-1.94729	-1,643.25
-1.95146	-1,649.00
-1.95521	-1,654.73
-1.95958	-1,660.39
-1.96354	-1,666.12
-1.96771	-1,671.92
-1.97166	-1,677.77
-1.97541	-1,683.54
-1.97937	-1,689.09
-1.98312	-1,694.62
-1.98708	-1,700.16
-1.99104	-1,705.69
-1.995	-1,711.30
-1.99916	-1,716.89
-2.00333	-1,722.52
-2.0075	-1,728.26
-2.01146	-1,734.02
-2.01541	-1,739.79
-2.01958	-1,745.62
-2.02333	-1,751.45
-2.02729	-1,757.13
-2.03125	-1,762.68
-2.03541	-1,768.28
-2.03937	-1,773.95
-2.04354	-1,779.72
-2.04771	-1,785.52
-2.05166	-1,791.32
-2.05583	-1,797.10
-2.05979	-1,802.88
-2.06333	-1,808.69
-2.0675	-1,814.36
-2.07125	-1,819.99
-2.07562	-1,825.52
-2.07979	-1,831.09
-2.08375	-1,836.86
-2.08812	-1,842.70
-2.09208	-1,848.58
-2.09625	-1,854.42
-2.1	-1,860.17
-2.10396	-1,865.86
-2.10771	-1,871.47
-2.11146	-1,876.98
-2.11583	-1,882.38
-2.11958	-1,887.92
-2.12375	-1,893.52
-2.12791	-1,899.15
-2.13187	-1,904.91
-2.13583	-1,910.67
-2.14	-1,916.35
-2.14354	-1,922.06
-2.14729	-1,927.59
-2.15104	-1,932.95
-2.155	-1,938.26
-2.15916	-1,943.71
-2.16291	-1,949.28
-2.16708	-1,954.82
-2.17125	-1,960.39
-2.175	-1,966.11
-2.17937	-1,971.81
-2.18333	-1,977.60
-2.18687	-1,983.37
-2.19083	-1,988.92
-2.195	-1,994.34
-2.19896	-1,999.87
-2.20291	-2,005.53
-2.20708	-2,011.17
-2.21125	-2,016.79
-2.2152	-2,022.45
-2.21916	-2,028.09
-2.22312	-2,033.74
-2.22687	-2,039.31
-2.23083	-2,044.78
-2.23479	-2,050.16
-2.23875	-2,055.59
-2.2427	-2,061.13
-2.24687	-2,066.65
-2.25083	-2,072.22
-2.2552	-2,077.88
-2.25958	-2,083.67
-2.26354	-2,089.64
-2.2675	-2,095.61
-2.27083	-2,100.48

Rib Fleshed 5	
Size (Length, Width) (mm)	
14.07	25.65
Extension	Load
(mm)	(N)
-0.97271	-4.00122
-0.98437	-5.15468
-1.01875	-10.18057
-1.05458	-15.25905
-1.08708	-20.2638
-1.11583	-25.31244
-1.14375	-30.32179
-1.17146	-35.38213
-1.2	-40.3939
-1.22583	-45.41685
-1.25729	-50.50965
-1.28521	-55.51302
-1.31562	-60.57859
-1.34854	-65.592
-1.37666	-70.6433
-1.40875	-75.72778
-1.43729	-80.80888
-1.46833	-85.87396
-1.49354	-91.01216
-1.51916	-96.02997
-1.54812	-101.08788
-1.57687	-106.13427
-1.60166	-111.19284
-1.62479	-116.25662
-1.65083	-121.31514
-1.68104	-126.42694
-1.7075	-131.47415
-1.73958	-136.49359
-1.76271	-141.52706
-1.78208	-146.55942
-1.80229	-151.67154
-1.82291	-156.73958
-1.84396	-161.89338
-1.86396	-167.02902
-1.87791	-172.21808
-1.88312	-177.68686
-1.88708	-182.79001

-1.89104	-188.36142
-1.89479	-194.23072
-1.89896	-200.10826
-1.90291	-205.92709
-1.90687	-211.60458
-1.91083	-217.11497
-1.91479	-222.56833
-1.91896	-228.04564
-1.92291	-233.69102
-1.92687	-239.36734
-1.93104	-244.98987
-1.93479	-250.60695
-1.93916	-256.2103
-1.94291	-261.92054
-1.94687	-267.64318
-1.95083	-273.27141
-1.95479	-278.80138
-1.95896	-284.35066
-1.96291	-290.05226
-1.96666	-295.80712
-1.97062	-301.50047
-1.97458	-307.12932
-1.97854	-312.71374
-1.98229	-318.34626
-1.98625	-324.02492
-1.99021	-329.73683
-1.99437	-335.48325
-1.99854	-341.30403
-2.00271	-347.258
-2.00604	-352.26536
-2.00937	-357.31536
-2.01271	-362.37645
-2.01666	-368.35706
-2.02062	-374.20452
-2.02437	-380.03358
-2.02833	-385.78525
-2.03229	-391.51996
-2.03625	-397.26686
-2.04041	-403.02035
-2.04437	-408.90214
-2.04854	-414.86457
-2.05166	-419.89669
-2.055	-424.94005
-2.05896	-430.9243
-2.0625	-436.81422
-2.06666	-442.57528
-2.07062	-448.41731

-2.07479	-454.37261
-2.07833	-459.41085
-2.08166	-464.55616
-2.085	-469.72817
-2.08854	-474.86278
-2.09166	-479.99457
-2.095	-485.0944
-2.09833	-490.17403
-2.10166	-495.24143
-2.10541	-501.2247
-2.10937	-507.08944
-2.11333	-512.90017
-2.1175	-518.74286
-2.12062	-523.74434
-2.12396	-528.79149
-2.1275	-533.83905
-2.13083	-538.9691
-2.13396	-544.11453
-2.13729	-549.17127
-2.14062	-554.22282
-2.14396	-559.34328
-2.14708	-564.45658
-2.15041	-569.51374
-2.15396	-574.56106
-2.15729	-579.67144
-2.16083	-584.85091
-2.16416	-590.05928
-2.1677	-595.28553
-2.17104	-600.5652
-2.17416	-605.84462
-2.1775	-611.03576
-2.18083	-616.18942
-2.18416	-621.34957
-2.1875	-626.48314
-2.19062	-631.60396
-2.19396	-636.6964
-2.1975	-641.81119
-2.20083	-647.0207
-2.20416	-652.24349
-2.20771	-657.42123
-2.21104	-662.63497
-2.21437	-667.89162
-2.2175	-673.16931
-2.22083	-678.41989
-2.22396	-683.60883
-2.22729	-688.69698
-2.23062	-693.74603

-2.23395	-698.78662
-2.2375	-703.88883
-2.24083	-709.10317
-2.24416	-714.41352
-2.2477	-719.77818
-2.25104	-725.16954
-2.25458	-730.56823
-2.25791	-735.97789
-2.26104	-741.377
-2.26416	-746.69272
-2.26729	-751.8726
-2.27062	-756.98346
-2.27416	-762.13378
-2.2775	-767.38989
-2.28083	-772.71914
-2.28437	-778.05656
-2.28791	-783.4788
-2.29125	-788.99992
-2.29479	-794.51758
-2.29812	-800.04215
-2.30145	-805.55016
-2.30458	-810.95833
-2.3077	-816.21957
-2.31125	-821.36583
-2.31458	-826.5323
-2.3177	-831.78812
-2.32083	-837.02135
-2.32416	-842.16481
-2.3275	-847.31054
-2.33062	-852.49579
-2.33416	-857.65773
-2.33729	-862.83833
-2.34062	-868.05606
-2.34375	-873.26545
-2.34687	-878.44503
-2.3502	-883.56984
-2.35375	-888.73369
-2.35729	-894.06401
-2.36041	-899.52129
-2.36395	-904.94716
-2.3675	-910.36099
-2.37083	-915.84754
-2.37437	-921.4021
-2.3777	-927.00279
-2.38104	-932.58166
-2.38416	-938.01618
-2.38729	-943.27486

-2.39062	-948.37952
-2.39395	-953.52161
-2.39729	-958.79138
-2.40041	-964.06722
-2.40395	-969.23763
-2.40708	-974.41477
-2.41041	-979.64573
-2.41395	-984.89362
-2.41729	-990.19742
-2.42041	-995.57364
-2.42375	-1,000.91
-2.42687	-1,006.18
-2.43	-1,011.36
-2.43375	-1,016.51
-2.43708	-1,021.84
-2.44041	-1,027.33
-2.44395	-1,032.79
-2.44729	-1,038.23
-2.45062	-1,043.66
-2.45395	-1,049.01
-2.4575	-1,054.36
-2.46041	-1,059.74
-2.46375	-1,065.04
-2.46687	-1,070.24
-2.47041	-1,075.39
-2.47375	-1,080.59
-2.47708	-1,085.93
-2.48062	-1,091.32
-2.48416	-1,096.76
-2.4877	-1,102.31
-2.49104	-1,107.90
-2.49458	-1,113.45
-2.49812	-1,118.99
-2.50145	-1,124.53
-2.50458	-1,130.00
-2.5077	-1,135.32
-2.51104	-1,140.46
-2.51437	-1,145.56
-2.5177	-1,150.76
-2.52083	-1,155.95
-2.52437	-1,161.11
-2.5277	-1,166.29
-2.53083	-1,171.51
-2.53437	-1,176.70
-2.5377	-1,181.89
-2.54104	-1,187.11
-2.54416	-1,192.37

-2.5475	-1,197.63
-2.55083	-1,202.85
-2.55416	-1,208.08
-2.55729	-1,213.32
-2.56083	-1,218.52
-2.56437	-1,223.76
-2.5675	-1,229.15
-2.57104	-1,234.57
-2.57458	-1,239.98
-2.57791	-1,245.39
-2.58104	-1,250.77
-2.58437	-1,256.07
-2.5875	-1,261.31
-2.59062	-1,266.43
-2.59416	-1,271.50
-2.59708	-1,276.61
-2.60041	-1,281.72
-2.60395	-1,286.82
-2.60708	-1,292.01
-2.61041	-1,297.24
-2.61395	-1,302.46
-2.6175	-1,307.74
-2.62062	-1,313.09
-2.62395	-1,318.39
-2.62708	-1,323.62
-2.63062	-1,328.76
-2.63395	-1,333.97
-2.63708	-1,339.26
-2.64041	-1,344.49
-2.64395	-1,349.69
-2.64729	-1,354.98
-2.65062	-1,360.33
-2.65416	-1,365.65
-2.6575	-1,371.01
-2.66083	-1,376.39
-2.66416	-1,381.71
-2.6675	-1,386.99
-2.67083	-1,392.22
-2.67416	-1,397.42
-2.67729	-1,402.58
-2.68062	-1,407.69
-2.68395	-1,412.78
-2.68729	-1,417.93
-2.69062	-1,423.11
-2.69416	-1,428.31
-2.6975	-1,433.58
-2.70083	-1,438.82

-2.70416	-1,444.03
-2.7075	-1,449.19
-2.71083	-1,454.35
-2.71416	-1,459.54
-2.71729	-1,464.70
-2.72062	-1,469.75
-2.72395	-1,474.83
-2.72729	-1,479.97
-2.73083	-1,485.13
-2.73416	-1,490.34
-2.7375	-1,495.59
-2.74083	-1,500.77
-2.74416	-1,505.88
-2.7475	-1,510.96
-2.75083	-1,516.06
-2.75416	-1,521.23
-2.75729	-1,526.40
-2.76041	-1,531.46
-2.76479	-1,537.43
-2.76791	-1,542.52
-2.77125	-1,547.61
-2.77479	-1,552.69
-2.77812	-1,557.86
-2.78145	-1,563.06
-2.78479	-1,568.20
-2.78833	-1,573.26
-2.79187	-1,578.34
-2.795	-1,583.51
-2.79833	-1,588.71
-2.80145	-1,593.83
-2.80479	-1,598.88
-2.80875	-1,604.86
-2.81291	-1,610.80
-2.81604	-1,615.83
-2.81937	-1,620.91
-2.82291	-1,625.98
-2.82604	-1,631.06
-2.82958	-1,636.10
-2.83291	-1,641.17
-2.83604	-1,646.31
-2.83937	-1,651.35
-2.84333	-1,657.33
-2.84625	-1,662.33
-2.85041	-1,668.25
-2.85458	-1,674.19
-2.8577	-1,679.23
-2.86166	-1,685.18

-2.86604	-1,691.14
-2.86937	-1,696.24
-2.8727	-1,701.41
-2.87583	-1,706.61
-2.87937	-1,711.72
-2.8825	-1,716.77
-2.88583	-1,721.78
-2.89	-1,727.79
-2.89333	-1,732.91
-2.89666	-1,738.10
-2.9	-1,743.24
-2.90354	-1,748.31
-2.90687	-1,753.38
-2.91041	-1,758.47
-2.91375	-1,763.61
-2.91687	-1,768.78
-2.9202	-1,773.83
-2.92416	-1,779.77
-2.92791	-1,785.63
-2.93208	-1,791.43
-2.93604	-1,797.32
-2.93937	-1,802.33
-2.9427	-1,807.38
-2.94604	-1,812.45
-2.94958	-1,817.45
-2.95354	-1,823.43
-2.9575	-1,829.37
-2.96145	-1,835.33
-2.9652	-1,841.31
-2.96937	-1,847.16
-2.97312	-1,853.04
-2.97708	-1,858.87
-2.98125	-1,864.63
-2.9852	-1,870.50
-2.98916	-1,876.32
-2.99354	-1,882.09
-2.9975	-1,887.95
-3.00145	-1,893.81
-3.00541	-1,899.61
-3.00958	-1,905.34
-3.01333	-1,911.08
-3.01729	-1,916.67
-3.02145	-1,922.09
-3.0252	-1,927.59
-3.02958	-1,933.07
-3.03375	-1,938.68
-3.03791	-1,944.32
-3.04166	-1,949.65
-3.04604	-1,955.14
-3.05666	-1,934.75
-3.06	-1,898.67
-3.06375	-1,847.20
-3.06791	-1,784.12
-3.07166	-1,710.32
-3.075	-1,627.03
-3.0777	-1,538.34
-3.07958	-1,448.34
-3.08083	-1,358.95
-3.08145	-1,270.86
-3.08145	-1,184.57
-3.08145	-1,100.80

Rib Fleshed 6	
Size (Length, Width) (mm)	
11.67	27.14
Extension	Load
(mm)	(N)
-0.15646	-18.87688
-0.16833	-24.25182
-0.17458	-29.34111
-0.18021	-34.61371
-0.185	-39.78287
-0.18979	-45.3799
-0.195	-51.28704
-0.19917	-56.39674
-0.20312	-61.57779
-0.2075	-66.72563
-0.21146	-71.85266
-0.21521	-76.92453
-0.21937	-81.93874
-0.22333	-87.00925
-0.22729	-92.21091
-0.23125	-97.51347
-0.23521	-102.82331
-0.23917	-108.08811
-0.24312	-113.33868
-0.24708	-118.57799
-0.25062	-123.83898
-0.25437	-129.10359
-0.25812	-134.33823
-0.26187	-139.53227
-0.26562	-144.67216
-0.26917	-149.80178
-0.27271	-154.92238
-0.27646	-160.0389
-0.28021	-165.20779
-0.28375	-170.40271
-0.28729	-175.5563
-0.29083	-180.62367
-0.295	-186.57154
-0.29917	-192.44434
-0.30354	-198.4081
-0.30729	-203.52846
-0.31083	-208.80356
-0.31417	-214.08263
-0.31792	-219.23198
-0.32146	-224.31982
-0.32479	-229.41528
-0.32833	-234.5157
-0.33187	-239.60719
-0.335	-244.64977
-0.33896	-250.54553
-0.34312	-256.28415
-0.34729	-262.10031
-0.35125	-268.04966
-0.35542	-274.02338
-0.35854	-279.02451
-0.36271	-284.9578
-0.36667	-290.78791
-0.37083	-296.59927
-0.37458	-302.45572
-0.37854	-308.34427
-0.3825	-314.21006
-0.38667	-320.08463
-0.39062	-325.98174
-0.39479	-331.9059
-0.39812	-336.91591
-0.40146	-341.97539
-0.405	-347.02137
-0.40833	-352.03493
-0.41229	-358.00987
-0.41604	-363.91878
-0.42	-369.79562
-0.42417	-375.69267
-0.4275	-380.70381
-0.43083	-385.75736
-0.43437	-390.77774
-0.43771	-395.79943
-0.44104	-400.83426

-0.44458	-405.87279
-0.44771	-410.97981
-0.45104	-416.11865
-0.45437	-421.20406
-0.45771	-426.22367
-0.46167	-432.15835
-0.46604	-438.09685
-0.46917	-443.20393
-0.4725	-448.39075
-0.47604	-453.55475
-0.47937	-458.6921
-0.48292	-463.78925
-0.48625	-468.88342
-0.48958	-474.04253
-0.49292	-479.21985
-0.49625	-484.34594
-0.49958	-489.4124
-0.50375	-495.40135
-0.50708	-500.42635
-0.51042	-505.50485
-0.51396	-510.60379
-0.51729	-515.76215
-0.52062	-520.95139
-0.52396	-526.12686
-0.5275	-531.26299
-0.53083	-536.37338
-0.53417	-541.47238
-0.53729	-546.58836
-0.54062	-551.67288
-0.54417	-556.73909
-0.54729	-561.82086
-0.55125	-567.78681
-0.55542	-573.67206
-0.55854	-578.69577
-0.56167	-583.7518
-0.56583	-589.74904
-0.56917	-594.7594
-0.57229	-599.77859
-0.57646	-605.73602
-0.58021	-611.73159
-0.58375	-616.75876
-0.58687	-621.82111
-0.59021	-626.89239
-0.59375	-631.94156
-0.59708	-637.03442
-0.60021	-642.17252
-0.60375	-647.33279

-0.60729	-652.57365
-0.61042	-657.89431
-0.61396	-663.18136
-0.61708	-668.41167
-0.62062	-673.60532
-0.62396	-678.80797
-0.62708	-684.04752
-0.63042	-689.27366
-0.63375	-694.45515
-0.63708	-699.66131
-0.64021	-704.87487
-0.64375	-710.01858
-0.64729	-715.18165
-0.65042	-720.46506
-0.65354	-725.73411
-0.65708	-730.88682
-0.66042	-736.03475
-0.66375	-741.24706
-0.66687	-746.50383
-0.67021	-751.70577
-0.67354	-756.87099
-0.67687	-762.1066
-0.68	-767.35866
-0.68333	-772.52489
-0.68667	-777.67831
-0.69	-782.83757
-0.69333	-787.97126
-0.69667	-793.14768
-0.70021	-798.38061
-0.70375	-803.70671
-0.70687	-809.12066
-0.71042	-814.5026
-0.71375	-819.85039
-0.71708	-825.20795
-0.72042	-830.54966
-0.72375	-835.88499
-0.72708	-841.2199
-0.73042	-846.49384
-0.73375	-851.68624
-0.73708	-856.87166
-0.74062	-862.08332
-0.74396	-867.37931
-0.74687	-872.72066
-0.75042	-877.96384
-0.75375	-883.15749
-0.75687	-888.35061
-0.76021	-893.50098

-0.76375	-898.66966
-0.76687	-903.91356
-0.77	-909.14804
-0.77333	-914.30014
-0.77667	-919.41893
-0.78021	-924.5376
-0.78375	-929.72565
-0.78667	-935.02265
-0.79021	-940.30035
-0.79354	-945.54108
-0.79667	-950.79559
-0.79979	-955.99163
-0.80333	-961.13205
-0.80667	-966.35246
-0.81	-971.63761
-0.81333	-976.90457
-0.81667	-982.15294
-0.82021	-987.38343
-0.82375	-992.66452
-0.82708	-998.02023
-0.83042	-1,003.37
-0.83375	-1,008.67
-0.83687	-1,013.97
-0.84021	-1,019.23
-0.84375	-1,024.46
-0.84687	-1,029.72
-0.85021	-1,034.95
-0.85354	-1,040.11
-0.85687	-1,045.28
-0.86042	-1,050.44
-0.86375	-1,055.63
-0.86687	-1,060.85
-0.87021	-1,066.01
-0.87354	-1,071.16
-0.87687	-1,076.37
-0.88021	-1,081.61
-0.88354	-1,086.88
-0.88687	-1,092.17
-0.89	-1,097.42
-0.89333	-1,102.58
-0.89687	-1,107.69
-0.90021	-1,112.80
-0.90375	-1,117.98
-0.90687	-1,123.24
-0.91042	-1,128.51
-0.91354	-1,133.77
-0.91667	-1,138.95

-0.92021	-1,144.02
-0.92333	-1,149.12
-0.92667	-1,154.30
-0.92979	-1,159.47
-0.93333	-1,164.58
-0.93667	-1,169.71
-0.94021	-1,174.89
-0.94375	-1,180.13
-0.94708	-1,185.40
-0.95062	-1,190.72
-0.95396	-1,196.12
-0.95729	-1,201.54
-0.96062	-1,206.89
-0.96396	-1,212.16
-0.96708	-1,217.35
-0.97042	-1,222.46
-0.97375	-1,227.53
-0.97687	-1,232.60
-0.98104	-1,238.59
-0.98437	-1,243.62
-0.98771	-1,248.74
-0.99104	-1,253.87
-0.99437	-1,259.02
-0.99771	-1,264.19
-1.00104	-1,269.37
-1.00417	-1,274.57
-1.0075	-1,279.73
-1.01062	-1,284.78
-1.01458	-1,290.71
-1.01875	-1,296.69
-1.02208	-1,301.80
-1.02521	-1,306.97
-1.02896	-1,312.09
-1.03229	-1,317.24
-1.03562	-1,322.48
-1.03875	-1,327.67
-1.04208	-1,332.81
-1.04542	-1,337.94
-1.04875	-1,343.07
-1.05208	-1,348.16
-1.05521	-1,353.25
-1.05875	-1,358.32
-1.06229	-1,363.43
-1.06562	-1,368.64
-1.06896	-1,373.87
-1.0725	-1,379.07
-1.07562	-1,384.24

-1.07896	-1,389.36
-1.08229	-1,394.46
-1.08542	-1,399.57
-1.08875	-1,404.65
-1.09208	-1,409.74
-1.09521	-1,414.81
-1.09958	-1,420.76
-1.10292	-1,425.79
-1.10646	-1,430.98
-1.11	-1,436.25
-1.11333	-1,441.59
-1.11666	-1,446.96
-1.12	-1,452.25
-1.12333	-1,457.44
-1.12646	-1,462.58
-1.12958	-1,467.65
-1.13291	-1,472.66
-1.13625	-1,477.67
-1.13979	-1,482.72
-1.14312	-1,487.84
-1.14666	-1,492.99
-1.15	-1,498.13
-1.15354	-1,503.29
-1.15687	-1,508.50
-1.16021	-1,513.73
-1.16333	-1,518.97
-1.16666	-1,524.11
-1.16979	-1,529.13
-1.17354	-1,535.01
-1.17771	-1,540.85
-1.18125	-1,545.88
-1.18437	-1,551.02
-1.18771	-1,556.09
-1.19125	-1,561.11
-1.19437	-1,566.16
-1.19791	-1,571.22
-1.20104	-1,576.32
-1.20416	-1,581.47
-1.20729	-1,586.55
-1.21104	-1,592.53
-1.21521	-1,598.37
-1.21937	-1,604.25
-1.22271	-1,609.35
-1.22604	-1,614.54
-1.22958	-1,619.74
-1.23291	-1,624.96
-1.23646	-1,630.15

-1.23979	-1,635.31
-1.24291	-1,640.51
-1.24625	-1,645.69
-1.24916	-1,650.77
-1.25312	-1,656.70
-1.25729	-1,662.50
-1.26125	-1,668.40
-1.26521	-1,674.38
-1.26875	-1,679.41
-1.27229	-1,684.58
-1.27583	-1,689.83
-1.27916	-1,695.12
-1.2825	-1,700.41
-1.28583	-1,705.65
-1.28875	-1,710.77
-1.29271	-1,716.68
-1.29687	-1,722.49
-1.30062	-1,728.45
-1.30396	-1,733.45
-1.30812	-1,739.44
-1.31146	-1,744.49
-1.31479	-1,749.58
-1.31854	-1,754.69
-1.32166	-1,759.89
-1.32479	-1,765.12
-1.32812	-1,770.25
-1.33125	-1,775.28
-1.33541	-1,781.19
-1.33937	-1,787.16
-1.34271	-1,792.22
-1.34625	-1,797.32
-1.34958	-1,802.47
-1.35312	-1,807.66
-1.35646	-1,812.84
-1.36	-1,818.01
-1.36333	-1,823.25
-1.36646	-1,828.46
-1.36979	-1,833.58
-1.37291	-1,838.61
-1.37708	-1,844.54
-1.38083	-1,850.51
-1.385	-1,856.50
-1.38854	-1,861.53
-1.39187	-1,866.64
-1.39521	-1,871.79
-1.39875	-1,876.95
-1.40187	-1,882.13

-1.40521	-1,887.27
-1.40833	-1,892.33
-1.41208	-1,898.29
-1.41604	-1,904.10
-1.42	-1,909.93
-1.42375	-1,915.80
-1.42812	-1,921.65
-1.43146	-1,926.69
-1.43479	-1,931.84
-1.43833	-1,936.98
-1.44187	-1,942.15
-1.44521	-1,947.37
-1.44833	-1,952.55
-1.45166	-1,957.67
-1.455	-1,962.69
-1.45833	-1,967.71
-1.46208	-1,973.69
-1.46625	-1,979.54
-1.47021	-1,985.48
-1.47354	-1,990.50
-1.47708	-1,995.51
-1.48062	-2,000.58
-1.48375	-2,005.76
-1.48687	-2,010.88
-1.49083	-2,016.86
-1.495	-2,022.79
-1.49812	-2,027.81
-1.50146	-2,032.81
-1.50562	-2,038.80
-1.50875	-2,043.81
-1.5125	-2,049.78
-1.51687	-2,055.63
-1.52062	-2,061.56
-1.52458	-2,067.50
-1.52875	-2,073.48
-1.53187	-2,078.54
-1.53541	-2,083.61
-1.53875	-2,088.72
-1.54208	-2,093.85
-1.54562	-2,098.93
-1.54687	-2,100.98

Rib Fleshed 7	
Size (Length, Width) (mm)	
14.84	29.44

Extension	Load
(mm)	(N)
-0.71917	-1.92662
-0.73229	-3.82222
-0.75271	-8.94047
-0.76979	-14.0684
-0.78354	-19.07176
-0.79542	-24.40284
-0.80542	-29.5782
-0.81417	-34.72033
-0.8225	-39.73779
-0.83062	-45.22737
-0.83792	-50.59429
-0.84458	-55.68741
-0.85062	-60.89207
-0.85708	-66.06778
-0.86312	-71.36283
-0.86937	-76.74294
-0.87562	-82.24823
-0.88167	-87.83859
-0.88771	-93.44292
-0.89292	-98.51341
-0.89854	-103.66794
-0.90396	-109.04656
-0.90958	-114.57644
-0.91521	-120.25062
-0.92021	-125.33142
-0.92479	-130.512
-0.92937	-135.6284
-0.93458	-141.33008
-0.93937	-146.33524
-0.94396	-151.49984
-0.94875	-156.73758
-0.95354	-161.94031
-0.95812	-167.11399
-0.96292	-172.33701
-0.9675	-177.64567
-0.97187	-182.97279
-0.97667	-188.16505
-0.98125	-193.29183
-0.98583	-198.50516
-0.99062	-203.86556
-0.99521	-209.34244
-1	-214.72545
-1.00458	-220.10542
-1.00937	-225.51224
-1.01396	-230.99682

-1.01896	-236.55054
-1.02354	-242.19052
-1.02854	-247.80932
-1.03333	-253.47647
-1.03812	-259.22462
-1.04292	-264.96822
-1.0475	-270.67566
-1.05208	-276.23734
-1.05687	-281.68142
-1.06146	-287.1848
-1.06604	-292.73611
-1.07083	-298.25664
-1.07542	-303.83703
-1.08	-309.35514
-1.08458	-314.86627
-1.08937	-320.39323
-1.09396	-325.93864
-1.09875	-331.52619
-1.10354	-337.17817
-1.10833	-342.87059
-1.11291	-348.67096
-1.11771	-354.47845
-1.1225	-360.2415
-1.12687	-365.94033
-1.13166	-371.52189
-1.13604	-377.10756
-1.14083	-382.71213
-1.14541	-388.33299
-1.15021	-393.92525
-1.15479	-399.63531
-1.15958	-405.36296
-1.16416	-411.11818
-1.16875	-416.84917
-1.17354	-422.49393
-1.17812	-428.20206
-1.18271	-434.00478
-1.1875	-439.72501
-1.19208	-445.44008
-1.19687	-451.16898
-1.20146	-456.95341
-1.20541	-461.9824
-1.21	-467.78458
-1.21479	-473.51101
-1.21937	-479.28056
-1.22396	-485.07255
-1.22854	-490.82127
-1.23333	-496.55858

-1.23791	-502.31791
-1.24271	-508.10617
-1.24729	-513.87721
-1.25187	-519.60325
-1.25687	-525.36589
-1.26062	-530.44558
-1.26479	-535.49373
-1.26937	-541.32324
-1.27416	-547.13237
-1.27875	-552.95527
-1.28271	-557.97136
-1.28729	-563.73519
-1.29187	-569.4164
-1.29687	-575.07306
-1.30104	-580.80429
-1.30583	-586.45457
-1.31041	-592.12285
-1.315	-597.80389
-1.31958	-603.4503
-1.32416	-609.19541
-1.32896	-614.9134
-1.33375	-620.60344
-1.33854	-626.38831
-1.34271	-631.46943
-1.34666	-636.56211
-1.35062	-641.66194
-1.35479	-646.7604
-1.35875	-651.85076
-1.36271	-656.95757
-1.36646	-661.98808
-1.37125	-667.72127
-1.37604	-673.46871
-1.38	-678.50345
-1.38396	-683.55733
-1.38791	-688.61794
-1.39166	-693.6748
-1.39583	-698.7136
-1.39979	-703.79353
-1.40354	-708.90379
-1.4075	-713.9039
-1.41229	-719.70803
-1.41646	-724.80118
-1.42041	-729.99114
-1.42437	-735.20285
-1.42833	-740.39197
-1.4325	-745.59605
-1.43646	-750.83309

-1.44041	-756.1
-1.44458	-761.37125
-1.44854	-766.63035
-1.45271	-771.88957
-1.45687	-777.14092
-1.46083	-782.39286
-1.46479	-787.56827
-1.46875	-792.7168
-1.4725	-797.82093
-1.47666	-802.89614
-1.48062	-808.02548
-1.48458	-813.1687
-1.48854	-818.30925
-1.49271	-823.45152
-1.49666	-828.5833
-1.50062	-833.73684
-1.50479	-838.90831
-1.50875	-844.14095
-1.51271	-849.36428
-1.51666	-854.53427
-1.52041	-859.71206
-1.52437	-864.82286
-1.52833	-869.89146
-1.53229	-874.9392
-1.53646	-880.01001
-1.54041	-885.15764
-1.54458	-890.30677
-1.54854	-895.4854
-1.5525	-900.67333
-1.55646	-905.82639
-1.56021	-911.02684
-1.56416	-916.15325
-1.56812	-921.23479
-1.57229	-926.33355
-1.57646	-931.48458
-1.58041	-936.76096
-1.58458	-942.06679
-1.58875	-947.37554
-1.5925	-952.67963
-1.59646	-957.91155
-1.60041	-963.14567
-1.60416	-968.35977
-1.60812	-973.47003
-1.61229	-978.57594
-1.61625	-983.77383
-1.62021	-989.01981
-1.62437	-994.24857

-1.62833	-999.49247
-1.6325	-1,004.77
-1.63625	-1,010.04
-1.64021	-1,015.26
-1.64416	-1,020.45
-1.64791	-1,025.64
-1.65229	-1,030.75
-1.65646	-1,035.98
-1.66041	-1,041.32
-1.66458	-1,046.59
-1.66875	-1,051.89
-1.67271	-1,057.24
-1.67666	-1,062.58
-1.68062	-1,067.90
-1.68458	-1,073.13
-1.68833	-1,078.29
-1.69271	-1,083.38
-1.69666	-1,088.58
-1.70041	-1,093.87
-1.70458	-1,099.07
-1.70854	-1,104.25
-1.71271	-1,109.39
-1.71625	-1,114.52
-1.72021	-1,119.60
-1.72396	-1,124.60
-1.72791	-1,129.61
-1.73271	-1,135.43
-1.73687	-1,140.56
-1.74083	-1,145.83
-1.745	-1,151.17
-1.74916	-1,156.52
-1.75333	-1,161.85
-1.75729	-1,167.18
-1.76104	-1,172.44
-1.765	-1,177.55
-1.76896	-1,182.67
-1.77312	-1,187.81
-1.77708	-1,193.04
-1.78104	-1,198.26
-1.78521	-1,203.45
-1.78916	-1,208.65
-1.79312	-1,213.81
-1.79708	-1,218.99
-1.80104	-1,224.10
-1.80458	-1,229.11
-1.80937	-1,234.83
-1.81375	-1,239.85

-1.81729	-1,245.10
-1.82166	-1,250.31
-1.82562	-1,255.49
-1.82979	-1,260.68
-1.83416	-1,265.87
-1.83812	-1,271.22
-1.84187	-1,276.61
-1.84583	-1,281.80
-1.85	-1,286.92
-1.85396	-1,292.08
-1.85812	-1,297.26
-1.86229	-1,302.47
-1.86625	-1,307.79
-1.87041	-1,313.06
-1.87437	-1,318.24
-1.87833	-1,323.40
-1.88208	-1,328.50
-1.88604	-1,333.52
-1.89062	-1,339.28
-1.89521	-1,345.05
-1.89916	-1,350.07
-1.90333	-1,355.13
-1.90729	-1,360.27
-1.91146	-1,365.42
-1.91541	-1,370.55
-1.91958	-1,375.67
-1.92333	-1,380.77
-1.92729	-1,385.83
-1.93125	-1,390.84
-1.93521	-1,395.89
-1.93916	-1,400.89
-1.94396	-1,406.70
-1.94791	-1,411.79
-1.95208	-1,416.87
-1.95604	-1,421.97
-1.96	-1,427.09
-1.96396	-1,432.18
-1.96854	-1,437.98
-1.97333	-1,443.76
-1.97708	-1,448.85
-1.98125	-1,453.87
-1.98521	-1,458.89
-1.98916	-1,463.98
-1.99333	-1,469.03
-1.99729	-1,474.09
-2.00125	-1,479.14
-2.00562	-1,484.95

-2.01041	-1,490.60
-2.01458	-1,496.35
-2.01958	-1,502.00
-2.02416	-1,507.76
-2.02812	-1,512.81
-2.0325	-1,517.86
-2.03625	-1,522.97
-2.04041	-1,528.04
-2.04437	-1,533.08
-2.04916	-1,538.90
-2.05354	-1,544.72
-2.05833	-1,550.54
-2.06291	-1,556.32
-2.06708	-1,561.33
-2.07125	-1,566.40
-2.07521	-1,571.57
-2.07937	-1,576.74
-2.08333	-1,581.87
-2.0875	-1,586.90
-2.09146	-1,591.94
-2.09521	-1,596.98
-2.1	-1,602.72
-2.10458	-1,608.53
-2.10937	-1,614.34
-2.11396	-1,620.14
-2.11791	-1,625.16
-2.12187	-1,630.16
-2.12666	-1,635.95
-2.13125	-1,641.75
-2.13562	-1,647.54
-2.14041	-1,653.23
-2.14479	-1,659.00
-2.14958	-1,664.73
-2.15416	-1,670.51
-2.15875	-1,676.32
-2.16333	-1,682.09
-2.16833	-1,687.80
-2.17229	-1,692.83
-2.17604	-1,697.96
-2.18083	-1,703.77
-2.18479	-1,708.78
-2.18895	-1,713.88
-2.19312	-1,719.01
-2.19729	-1,724.22
-2.20125	-1,729.43
-2.20541	-1,734.59
-2.20958	-1,739.74

-2.21333	-1,744.90
-2.21708	-1,749.90
-2.22187	-1,755.54
-2.22625	-1,761.16
-2.23104	-1,766.77
-2.23541	-1,772.52
-2.2402	-1,778.19
-2.245	-1,783.88
-2.24979	-1,789.70
-2.25375	-1,794.80
-2.2577	-1,799.90
-2.26166	-1,804.97
-2.26583	-1,810.03
-2.27	-1,815.09
-2.27375	-1,820.18
-2.27791	-1,825.23
-2.28187	-1,830.28
-2.28604	-1,835.34
-2.2902	-1,840.38
-2.29416	-1,845.49
-2.29791	-1,850.53
-2.3025	-1,856.31
-2.30708	-1,862.06
-2.31166	-1,867.83
-2.31645	-1,873.59
-2.32125	-1,879.38
-2.3252	-1,884.41
-2.32958	-1,889.46
-2.33333	-1,894.59
-2.33729	-1,899.63
-2.34187	-1,905.38
-2.34625	-1,911.11
-2.35104	-1,916.81
-2.35541	-1,922.58
-2.3602	-1,928.19
-2.36458	-1,933.77
-2.36958	-1,939.35
-2.37416	-1,945.03
-2.37895	-1,950.75
-2.38354	-1,956.46
-2.38812	-1,962.04
-2.3927	-1,967.58
-2.39729	-1,973.18
-2.40187	-1,978.82
-2.40687	-1,984.35
-2.41166	-1,989.92
-2.41645	-1,995.59

-2.42104	-2,001.31
-2.42583	-2,007.02
-2.43041	-2,012.70
-2.435	-2,018.32
-2.43958	-2,023.92
-2.44437	-2,029.52
-2.44916	-2,035.16
-2.45395	-2,040.87
-2.45875	-2,046.57
-2.46333	-2,052.33
-2.46812	-2,058.05
-2.4725	-2,063.73
-2.47729	-2,069.29
-2.48166	-2,074.78
-2.48666	-2,080.19
-2.49145	-2,085.82
-2.49625	-2,091.56
-2.50104	-2,097.34
-2.50375	-2,100.66

Rib Fleshed 8	
Size (Length, Width) (mm)	
19.81	26.35
Extension	Load
(mm)	(N)
-0.68417	-3.06008
-0.69917	-5.82392
-0.71521	-11.10466
-0.72875	-16.31344
-0.73937	-21.32122
-0.74937	-26.73326
-0.75917	-32.03974
-0.76896	-37.17015
-0.77917	-42.45558
-0.78937	-47.54399
-0.79917	-52.54962
-0.80937	-57.61997
-0.81937	-62.75718
-0.82833	-67.81842
-0.83729	-72.96086
-0.84583	-78.10304
-0.85354	-83.4099
-0.86042	-88.4646
-0.86708	-93.74013
-0.87375	-99.24847

-0.88062	-104.72192
-0.88708	-110.25956
-0.89333	-115.46826
-0.89937	-120.91478
-0.90521	-126.3524
-0.91083	-131.87797
-0.91625	-136.96249
-0.92167	-142.32743
-0.92708	-147.76599
-0.93292	-153.31389
-0.9375	-158.37525
-0.94229	-163.5357
-0.94708	-168.71621
-0.95167	-173.81482
-0.95625	-178.86055
-0.96083	-183.95184
-0.96562	-189.15197
-0.97021	-194.36879
-0.975	-199.57526
-0.97958	-204.7772
-0.98417	-210.08286
-0.98875	-215.48574
-0.99333	-220.79177
-0.99812	-226.04826
-1.00292	-231.50183
-1.00771	-237.1453
-1.0125	-242.83706
-1.01729	-248.49036
-1.02208	-254.08936
-1.02646	-259.71016
-1.03104	-265.28582
-1.03562	-270.80166
-1.04042	-276.27122
-1.045	-281.8259
-1.04979	-287.46381
-1.05458	-293.21989
-1.05937	-299.0388
-1.06417	-304.85424
-1.06854	-310.66871
-1.07312	-316.35681
-1.07771	-322.02291
-1.0825	-327.75745
-1.08708	-333.56524
-1.09125	-338.56949
-1.095	-343.63368
-1.09916	-348.67582
-1.10312	-353.72114

-1.10708	-358.75186
-1.11146	-364.53557
-1.11604	-370.18812
-1.12083	-375.86936
-1.12458	-380.91156
-1.12875	-385.95462
-1.13271	-390.99661
-1.13666	-396.08765
-1.14083	-401.21806
-1.14479	-406.46005
-1.14875	-411.6939
-1.1525	-416.83748
-1.15666	-421.92352
-1.16083	-427.10918
-1.16479	-432.45053
-1.16875	-437.79248
-1.17271	-443.05959
-1.17666	-448.31702
-1.18083	-453.61134
-1.18479	-458.95892
-1.18875	-464.29116
-1.1925	-469.52376
-1.19666	-474.59742
-1.20083	-479.76118
-1.20458	-485.16068
-1.20875	-490.57579
-1.21291	-495.97323
-1.21687	-501.40983
-1.22104	-506.79713
-1.225	-512.2419
-1.22896	-517.72177
-1.23291	-523.14806
-1.23687	-528.44208
-1.24083	-533.6296
-1.24437	-538.82194
-1.24854	-544.02751
-1.25271	-549.36934
-1.25666	-554.82846
-1.26083	-560.21148
-1.26479	-565.60087
-1.26896	-571.06239
-1.27291	-576.63685
-1.27708	-582.23987
-1.28104	-587.80992
-1.285	-593.30148
-1.28916	-598.71298
-1.29312	-604.22963

-1.29708	-609.82466
-1.30125	-615.40771
-1.305	-620.92113
-1.30916	-626.26839
-1.31291	-631.58351
-1.31708	-636.97904
-1.32083	-642.497
-1.32479	-647.98671
-1.32896	-653.43857
-1.33271	-658.93561
-1.33687	-664.40886
-1.34083	-669.96688
-1.34479	-675.62735
-1.34875	-681.2306
-1.35271	-686.76734
-1.35687	-692.23881
-1.36083	-697.77691
-1.36458	-703.40115
-1.36875	-708.97889
-1.37271	-714.56265
-1.37666	-720.1305
-1.38083	-725.64667
-1.38479	-731.27192
-1.38854	-736.94265
-1.39271	-742.52111
-1.39687	-748.05659
-1.40062	-753.66008
-1.40458	-759.19223
-1.40875	-764.73224
-1.41271	-770.4398
-1.41646	-776.14325
-1.42062	-781.75348
-1.42458	-787.39369
-1.42854	-793.03223
-1.43291	-798.64901
-1.43687	-804.32642
-1.44083	-810.06324
-1.44458	-815.73552
-1.44875	-821.30408
-1.45271	-826.91228
-1.45646	-832.48758
-1.46041	-837.95738
-1.46437	-843.42957
-1.46833	-848.96368
-1.47229	-854.46453
-1.47666	-859.97945
-1.48041	-865.72665

-1.48437	-871.46646
-1.48854	-877.11579
-1.4925	-882.81721
-1.49666	-888.52793
-1.50062	-894.27066
-1.50458	-900.02924
-1.50854	-905.69568
-1.51229	-911.26865
-1.51687	-916.77356
-1.52062	-922.47385
-1.52458	-928.24763
-1.52854	-933.9242
-1.5325	-939.605
-1.53625	-945.22154
-1.54041	-950.75756
-1.54437	-956.38072
-1.54812	-962.03655
-1.55229	-967.57442
-1.55666	-973.09983
-1.56062	-978.63233
-1.56437	-984.10106
-1.56875	-989.60221
-1.5725	-995.28146
-1.57666	-1,000.96
-1.58062	-1,006.59
-1.58437	-1,012.24
-1.58854	-1,017.85
-1.59271	-1,023.55
-1.59687	-1,029.38
-1.60062	-1,035.22
-1.60479	-1,040.88
-1.60854	-1,046.52
-1.6125	-1,052.23
-1.61625	-1,057.88
-1.62041	-1,063.43
-1.62416	-1,068.98
-1.62812	-1,074.48
-1.63229	-1,079.98
-1.63646	-1,085.65
-1.64041	-1,091.48
-1.64437	-1,097.27
-1.64833	-1,102.97
-1.6525	-1,108.66
-1.65666	-1,114.40
-1.66062	-1,120.25
-1.66437	-1,126.08
-1.66854	-1,131.78

-1.67271	-1,137.42
-1.67687	-1,143.07
-1.68083	-1,148.81
-1.68479	-1,154.57
-1.68875	-1,160.31
-1.69271	-1,166.00
-1.69687	-1,171.69
-1.70062	-1,177.42
-1.70479	-1,183.06
-1.70854	-1,188.69
-1.7125	-1,194.32
-1.71666	-1,199.89
-1.72062	-1,205.49
-1.72458	-1,211.15
-1.72854	-1,216.86
-1.73229	-1,222.51
-1.73646	-1,228.06
-1.74041	-1,233.71
-1.74416	-1,239.41
-1.74833	-1,245.03
-1.75208	-1,250.66
-1.75646	-1,256.27
-1.76062	-1,261.95
-1.76479	-1,267.74
-1.76875	-1,273.59
-1.77291	-1,279.44
-1.77687	-1,285.24
-1.78062	-1,290.88
-1.78458	-1,296.34
-1.78833	-1,301.73
-1.79229	-1,307.11
-1.79625	-1,312.46
-1.80041	-1,317.90
-1.80437	-1,323.41
-1.80833	-1,328.99
-1.8125	-1,334.62
-1.81625	-1,340.27
-1.82021	-1,345.89
-1.82396	-1,351.44
-1.82791	-1,356.94
-1.83208	-1,362.45
-1.83604	-1,368.04
-1.84021	-1,373.72
-1.84437	-1,379.40
-1.84854	-1,385.16
-1.85271	-1,390.98
-1.85666	-1,396.84

-1.86062	-1,402.66
-1.86458	-1,408.33
-1.86833	-1,413.95
-1.87271	-1,419.50
-1.87687	-1,425.16
-1.88062	-1,430.91
-1.88479	-1,436.57
-1.88896	-1,442.21
-1.89291	-1,447.86
-1.89687	-1,453.49
-1.90062	-1,459.12
-1.90458	-1,464.70
-1.90833	-1,470.17
-1.91271	-1,475.57
-1.91666	-1,481.13
-1.92041	-1,486.77
-1.92479	-1,492.34
-1.92875	-1,497.95
-1.93271	-1,503.58
-1.93666	-1,509.21
-1.94041	-1,514.81
-1.94437	-1,520.29
-1.94812	-1,525.72
-1.95229	-1,531.20
-1.95646	-1,536.85
-1.96041	-1,542.60
-1.96479	-1,548.29
-1.96875	-1,553.96
-1.97312	-1,559.65
-1.97708	-1,565.47
-1.98083	-1,571.34
-1.98479	-1,577.07
-1.98854	-1,582.61
-1.99291	-1,588.00
-1.99687	-1,593.58
-2.00083	-1,599.30
-2.00521	-1,604.96
-2.00916	-1,610.63
-2.01312	-1,616.27
-2.01708	-1,621.91
-2.02083	-1,627.52
-2.02458	-1,633.01
-2.02854	-1,638.33
-2.03271	-1,643.64
-2.03666	-1,649.16
-2.04062	-1,654.75
-2.045	-1,660.33
-2.04896	-1,665.72
-2.05333	-1,670.99
-2.05708	-1,676.40
-2.06104	-1,681.91
-2.06458	-1,687.39
-2.06854	-1,692.72
-2.07271	-1,698.08
-2.07646	-1,703.60
-2.08062	-1,709.07
-2.085	-1,714.61
-2.08896	-1,720.32
-2.09312	-1,726.01
-2.09708	-1,731.67
-2.10104	-1,737.28
-2.10458	-1,742.78
-2.10875	-1,748.10
-2.11291	-1,753.42
-2.11646	-1,758.86
-2.12083	-1,764.25
-2.12479	-1,769.73
-2.12875	-1,775.27
-2.13312	-1,780.77
-2.13687	-1,786.36
-2.14104	-1,791.89
-2.14479	-1,797.36
-2.14875	-1,802.75
-2.15271	-1,808.15
-2.15666	-1,813.64
-2.16083	-1,819.06
-2.16479	-1,824.47
-2.16875	-1,829.96
-2.17291	-1,835.46
-2.17687	-1,841.02
-2.18083	-1,846.58
-2.18458	-1,852.07
-2.18833	-1,857.37
-2.1925	-1,862.57
-2.19625	-1,867.91
-2.20041	-1,873.34
-2.20437	-1,878.83
-2.20833	-1,884.34
-2.2125	-1,889.77
-2.21666	-1,895.23
-2.22062	-1,900.79
-2.22437	-1,906.34
-2.22854	-1,911.80
-2.2325	-1,917.27
-2.23645	-1,922.75
-2.24062	-1,928.16
-2.24458	-1,933.60
-2.24854	-1,939.14
-2.2527	-1,944.65
-2.25666	-1,950.14
-2.26062	-1,955.59
-2.26458	-1,961.02
-2.26875	-1,966.44
-2.2725	-1,971.91
-2.27645	-1,977.37
-2.28041	-1,982.76
-2.28437	-1,988.15
-2.28854	-1,993.56
-2.2925	-1,999.08
-2.29666	-2,004.66
-2.30062	-2,010.24
-2.30458	-2,015.75
-2.30875	-2,021.16
-2.3125	-2,026.61
-2.31645	-2,032.12
-2.32041	-2,037.55
-2.32437	-2,042.90
-2.32854	-2,048.29
-2.3325	-2,053.70
-2.33666	-2,059.19
-2.34062	-2,064.74
-2.34458	-2,070.28
-2.34854	-2,075.75
-2.35229	-2,081.22
-2.35625	-2,086.64
-2.3602	-2,092.03
-2.36395	-2,097.56
-2.36604	-2,100.32

Rib Fleshed 9	
Size (Length, Width) (mm)	
17.93	26.52
Extension	Load
(mm)	(N)
-0.22271	-12.62304
-0.23479	-15.59372
-0.27583	-12.44076
-0.29979	-17.60458
-0.30917	-23.19376

-0.315	-28.90321
-0.32042	-34.04885
-0.32521	-39.05796
-0.33125	-44.67364
-0.33646	-49.74643
-0.34146	-54.96586
-0.34625	-60.16961
-0.35125	-65.38478
-0.35604	-70.78148
-0.36083	-76.36157
-0.36562	-82.01461
-0.37042	-87.6134
-0.37542	-93.24644
-0.38042	-99.08292
-0.38458	-104.28742
-0.38875	-109.5643
-0.39292	-114.83942
-0.39729	-120.101
-0.40146	-125.3964
-0.40542	-130.69937
-0.40958	-135.98263
-0.41375	-141.26718
-0.41792	-146.49726
-0.42187	-151.71826
-0.42604	-156.97131
-0.43021	-162.32415
-0.43437	-167.72196
-0.43833	-173.11418
-0.44229	-178.4765
-0.44646	-183.74892
-0.45021	-189.04923
-0.45437	-194.31034
-0.45833	-199.63261
-0.4625	-205.12292
-0.46646	-210.63803
-0.47042	-216.1756
-0.47437	-221.70863
-0.47833	-227.24308
-0.48229	-232.85931
-0.48625	-238.4271
-0.49021	-243.91635
-0.49417	-249.41312
-0.49833	-255.00745
-0.50229	-260.71355
-0.50646	-266.43664
-0.51042	-272.18008
-0.51437	-277.86747

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-0.52229	-289.20394
-0.52625	-294.86349
-0.53021	-300.49458
-0.53437	-306.1451
-0.53833	-311.84188
-0.5425	-317.64421
-0.54646	-323.51509
-0.55062	-329.4062
-0.55479	-335.25828
-0.55854	-341.12233
-0.5625	-346.98504
-0.56646	-352.82445
-0.57042	-358.64267
-0.57458	-364.44086
-0.57854	-370.33027
-0.5825	-376.27321
-0.58667	-382.21079
-0.59083	-388.21453
-0.59417	-393.27893
-0.59771	-398.34124
-0.60083	-403.40039
-0.60417	-408.41383
-0.60812	-414.36312
-0.61208	-420.25983
-0.61625	-426.19812
-0.61937	-431.2059
-0.62354	-437.18442
-0.6275	-443.13428
-0.63146	-449.0968
-0.63562	-455.09943
-0.63896	-460.19
-0.64208	-465.27886
-0.64542	-470.29373
-0.64937	-476.21661
-0.65333	-482.13467
-0.65667	-487.15329
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-0.66333	-497.28993
-0.66667	-502.33847
-0.67	-507.3666
-0.67333	-512.37094
-0.67667	-517.37726
-0.68	-522.40795
-0.68292	-527.41891
-0.68687	-533.328
-0.69083	-539.17116

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-0.69833	-550.19182
-0.70167	-555.28247
-0.70521	-560.3556
-0.70854	-565.46217
-0.71187	-570.60385
-0.71542	-575.74236
-0.71875	-580.9381
-0.72167	-586.11625
-0.725	-591.14558
-0.72896	-597.04238
-0.73292	-602.91278
-0.73708	-608.90299
-0.74021	-613.96039
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-0.74708	-624.10188
-0.75042	-629.23783
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-0.75729	-639.55081
-0.76042	-644.72806
-0.76375	-649.85609
-0.76687	-654.9294
-0.77104	-660.91377
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-0.77792	-671.09376
-0.78125	-676.28396
-0.78479	-681.48637
-0.78812	-686.76198
-0.79125	-692.03514
-0.79479	-697.22033
-0.79812	-702.3983
-0.80125	-707.56745
-0.80437	-712.67974
-0.80771	-717.72605
-0.81104	-722.75394
-0.81437	-727.81813
-0.8175	-732.98699
-0.82104	-738.14094
-0.82458	-743.28941
-0.82771	-748.52717
-0.83125	-753.77721
-0.83458	-759.00942
-0.83812	-764.30446
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-0.84792	-780.13819
-0.85125	-785.30699

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-0.87479	-821.45411
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-0.88479	-837.29333
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-0.89167	-847.91672
-0.895	-853.23399
-0.89812	-858.55401
-0.90167	-863.79832
-0.905	-869.04675
-0.90833	-874.34089
-0.91167	-879.58902
-0.91521	-884.77361
-0.91833	-890.01596
-0.92167	-895.27029
-0.925	-900.46591
-0.92812	-905.58618
-0.93146	-910.65001
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-0.94125	-925.98498
-0.94458	-931.0739
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-0.95458	-946.51163
-0.95792	-951.7138
-0.96125	-956.94584
-0.96437	-962.15183
-0.96792	-967.3115
-0.97125	-972.50819
-0.97458	-977.81616
-0.97771	-983.11573
-0.98125	-988.31576
-0.98458	-993.53993
-0.98792	-998.87884
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-0.99792	-1,014.63
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-1.00437	-1,025.04
-1.00812	-1,030.19

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-1.02792	-1,062.09
-1.03125	-1,067.36
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-1.03771	-1,077.82
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-1.04792	-1,093.32
-1.05125	-1,098.51
-1.05458	-1,103.80
-1.05771	-1,109.14
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-1.06437	-1,119.66
-1.0675	-1,124.87
-1.07083	-1,130.08
-1.07437	-1,135.29
-1.0775	-1,140.58
-1.08083	-1,145.90
-1.08417	-1,151.19
-1.08771	-1,156.50
-1.09104	-1,161.86
-1.09437	-1,167.24
-1.0975	-1,172.57
-1.10083	-1,177.83
-1.10416	-1,183.10
-1.10729	-1,188.39
-1.11083	-1,193.63
-1.11416	-1,198.87
-1.1175	-1,204.17
-1.12083	-1,209.44
-1.12416	-1,214.71
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-1.13812	-1,236.59
-1.14146	-1,242.03
-1.14479	-1,247.42
-1.14812	-1,252.80
-1.15146	-1,258.17
-1.15479	-1,263.53
-1.15791	-1,268.84
-1.16125	-1,274.02
-1.16458	-1,279.10

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-1.17458	-1,294.30
-1.17771	-1,299.51
-1.18125	-1,304.67
-1.18458	-1,309.88
-1.1875	-1,315.13
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-1.19437	-1,325.54
-1.1975	-1,330.83
-1.20083	-1,336.07
-1.20416	-1,341.29
-1.20771	-1,346.48
-1.21125	-1,351.68
-1.21458	-1,356.97
-1.21791	-1,362.33
-1.22125	-1,367.73
-1.22458	-1,373.17
-1.22791	-1,378.55
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-1.23771	-1,394.28
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-1.32083	-1,525.05

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-1.34437	-1,561.25
-1.34771	-1,566.54
-1.35125	-1,571.80
-1.35437	-1,577.12
-1.35771	-1,582.40
-1.36125	-1,587.66
-1.36437	-1,592.99
-1.36771	-1,598.28
-1.37146	-1,603.48
-1.37458	-1,608.69
-1.37791	-1,613.91
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-1.38437	-1,624.34
-1.38771	-1,629.52
-1.39083	-1,634.64
-1.39396	-1,639.67
-1.39812	-1,645.53
-1.40166	-1,651.44
-1.40583	-1,657.41
-1.40958	-1,662.46
-1.41291	-1,667.69
-1.41625	-1,672.98
-1.42	-1,678.22
-1.42333	-1,683.54
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-1.43021	-1,694.35
-1.43333	-1,699.75
-1.43646	-1,705.03
-1.43979	-1,710.13
-1.44354	-1,716.09
-1.44791	-1,722.02
-1.45125	-1,727.12
-1.45458	-1,732.35
-1.45812	-1,737.57
-1.46166	-1,742.82
-1.465	-1,748.06
-1.46833	-1,753.27
-1.47146	-1,758.45
-1.47458	-1,763.58
-1.47771	-1,768.60
-1.48166	-1,774.48
-1.48583	-1,780.31
-1.48979	-1,786.25
-1.49312	-1,791.27
-1.49646	-1,796.34
-1.5	-1,801.48
-1.50333	-1,806.67
-1.50666	-1,811.86
-1.51	-1,817.01
-1.51291	-1,822.09
-1.51687	-1,828.04
-1.52062	-1,833.91
-1.52479	-1,839.77
-1.52896	-1,845.77
-1.53229	-1,850.89
-1.53562	-1,855.98
-1.53896	-1,861.03
-1.5425	-1,866.09
-1.54583	-1,871.20
-1.54916	-1,876.39
-1.5525	-1,881.62
-1.55562	-1,886.73
-1.55937	-1,892.66
-1.56354	-1,898.45
-1.56771	-1,904.37
-1.57104	-1,909.52
-1.57458	-1,914.75
-1.57791	-1,919.95
-1.58125	-1,925.14
-1.58479	-1,930.28
-1.58833	-1,935.46
-1.59125	-1,940.71
-1.59458	-1,945.86
-1.59833	-1,951.81
-1.60187	-1,957.55
-1.60604	-1,963.10
-1.60979	-1,968.82
-1.61375	-1,974.61
-1.61791	-1,980.47
-1.62187	-1,986.47
-1.62541	-1,991.47
-1.62896	-1,996.54
-1.63208	-2,001.71
-1.63562	-2,006.90
-1.63854	-2,012.07
-1.64208	-2,017.14
-1.64562	-2,022.15
-1.64875	-2,027.28
-1.65208	-2,032.44
-1.65562	-2,037.53
-1.65916	-2,042.65
-1.66271	-2,047.88
-1.66625	-2,053.18
-1.66979	-2,058.54
-1.67312	-2,063.93
-1.67646	-2,069.24
-1.67958	-2,074.47
-1.68271	-2,079.55
-1.68708	-2,085.53
-1.69	-2,090.58
-1.69333	-2,095.61
-1.69687	-2,100.53

Rib Fleshed 10	
Size (Length, Width) (mm)	
18.50	24.13
Extension	Load
(mm)	(N)
-0.96917	-12.71554
-0.97958	-17.84918
-0.98708	-23.32349
-0.99396	-28.8678
-1.0025	-34.18127
-1.01167	-39.47809
-1.02083	-44.71618
-1.02958	-50.02502
-1.03812	-55.52828
-1.04583	-61.04669
-1.05292	-66.55583
-1.05875	-71.88914
-1.06479	-77.62101
-1.06979	-82.95596
-1.07479	-88.4722
-1.08	-94.12747
-1.08521	-99.96732
-1.08958	-105.13935
-1.09396	-110.39674
-1.09812	-115.69561
-1.1025	-120.96145
-1.10646	-126.20559
-1.11062	-131.45465
-1.11479	-136.76295
-1.11896	-142.16548

-1.12333	-147.59068
-1.12729	-153.10347
-1.13166	-158.62434
-1.13583	-164.15881
-1.14	-169.81588
-1.14416	-175.57345
-1.14812	-181.30694
-1.15208	-186.92063
-1.15625	-192.45593
-1.16041	-198.01155
-1.16437	-203.69314
-1.16854	-209.50465
-1.17271	-215.35115
-1.17687	-221.21066
-1.18104	-227.13593
-1.18437	-232.16434
-1.18771	-237.23561
-1.19104	-242.29987
-1.19437	-247.33502
-1.19854	-253.29298
-1.2025	-259.22394
-1.20583	-264.2355
-1.20916	-269.27575
-1.21271	-274.31905
-1.21604	-279.36777
-1.21937	-284.39113
-1.22271	-289.40809
-1.22604	-294.43818
-1.22979	-300.42943
-1.23375	-306.36641
-1.23791	-312.35969
-1.24125	-317.40826
-1.24458	-322.50157
-1.24791	-327.6225
-1.25125	-332.75607
-1.25458	-337.9342
-1.25791	-343.14689
-1.26146	-348.37514
-1.26479	-353.63162
-1.26791	-358.85864
-1.27104	-363.95553
-1.27437	-368.96515
-1.27791	-374.02341
-1.28125	-379.20848
-1.28458	-384.46647
-1.28791	-389.77283
-1.29125	-395.09141

-1.29479	-400.37903
-1.29812	-405.66024
-1.30166	-410.98347
-1.305	-416.38973
-1.30833	-421.84135
-1.31146	-427.22046
-1.31458	-432.44603
-1.31812	-437.50694
-1.32166	-442.61059
-1.32479	-447.89413
-1.32812	-453.26793
-1.33166	-458.64704
-1.335	-464.05306
-1.33833	-469.43554
-1.34166	-474.74921
-1.345	-480.07578
-1.34833	-485.42413
-1.35125	-490.74996
-1.35479	-496.00175
-1.35833	-501.22094
-1.36166	-506.57302
-1.36479	-512.012
-1.36833	-517.42256
-1.37187	-522.8706
-1.37521	-528.42271
-1.37854	-533.96088
-1.38187	-539.4277
-1.38521	-544.87288
-1.38833	-550.25506
-1.39166	-555.55701
-1.39479	-560.80526
-1.39812	-566.0032
-1.40166	-571.2558
-1.40479	-576.6288
-1.40812	-581.98094
-1.41166	-587.3031
-1.415	-592.73332
-1.41812	-598.19829
-1.42166	-603.59108
-1.425	-608.99872
-1.42833	-614.45439
-1.43146	-619.89343
-1.435	-625.26792
-1.43833	-630.62429
-1.44146	-636.0181
-1.44479	-641.40397
-1.44812	-646.78073

-1.45146	-652.18717
-1.45479	-657.62335
-1.45833	-663.0559
-1.46166	-668.49345
-1.465	-673.94996
-1.46833	-679.38304
-1.47166	-684.81845
-1.475	-690.28246
-1.47833	-695.76979
-1.48166	-701.29651
-1.48479	-706.82937
-1.48833	-712.29988
-1.49166	-717.80139
-1.49479	-723.36411
-1.49833	-728.88035
-1.50166	-734.38334
-1.505	-739.95948
-1.50833	-745.53573
-1.51166	-751.07181
-1.51479	-756.61969
-1.51812	-762.16394
-1.52146	-767.70627
-1.52437	-773.20296
-1.52791	-778.58198
-1.53104	-783.97632
-1.53437	-789.43884
-1.53771	-794.92414
-1.54104	-800.41367
-1.54437	-805.93693
-1.54771	-811.46938
-1.55104	-816.96182
-1.55458	-822.40647
-1.55812	-827.95459
-1.56125	-833.68284
-1.56437	-839.43295
-1.56791	-845.06565
-1.57125	-850.65991
-1.57437	-856.24331
-1.57791	-861.76771
-1.58125	-867.32775
-1.58458	-872.96659
-1.58791	-878.59303
-1.59125	-884.17435
-1.59479	-889.70959
-1.59833	-895.31827
-1.60125	-901.07191
-1.60479	-906.81821

-1.60833	-912.52571
-1.61146	-918.28805
-1.61479	-923.98304
-1.61812	-929.5547
-1.62146	-935.13328
-1.62479	-940.75507
-1.62791	-946.36464
-1.63146	-951.91389
-1.635	-957.43108
-1.63833	-963.03213
-1.64146	-968.73575
-1.64458	-974.38437
-1.64812	-979.9428
-1.65146	-985.55821
-1.65479	-991.23716
-1.65812	-996.89388
-1.66166	-1,002.56
-1.66479	-1,008.25
-1.66812	-1,013.85
-1.67146	-1,019.36
-1.675	-1,024.84
-1.67833	-1,030.39
-1.68166	-1,036.06
-1.68479	-1,041.73
-1.68812	-1,047.33
-1.69146	-1,052.90
-1.69458	-1,058.43
-1.69791	-1,063.83
-1.70125	-1,069.17
-1.70458	-1,074.62
-1.70791	-1,080.15
-1.71125	-1,085.67
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-1.76146	-1,169.51

-1.76479	-1,174.84
-1.76812	-1,180.18
-1.77125	-1,185.61
-1.77479	-1,191.07
-1.77812	-1,196.62
-1.78125	-1,202.23
-1.78458	-1,207.81
-1.78791	-1,213.30
-1.79104	-1,218.77
-1.79458	-1,224.22
-1.79812	-1,229.75
-1.80146	-1,235.40
-1.80479	-1,241.07
-1.80812	-1,246.76
-1.81125	-1,252.44
-1.81458	-1,258.05
-1.81791	-1,263.63
-1.82125	-1,269.23
-1.82458	-1,274.85
-1.82791	-1,280.44
-1.83125	-1,286.03
-1.83479	-1,291.62
-1.83833	-1,297.28
-1.84146	-1,303.01
-1.845	-1,308.70
-1.84833	-1,314.41
-1.85125	-1,320.10
-1.85458	-1,325.64
-1.85791	-1,331.10
-1.86104	-1,336.58
-1.86437	-1,342.02
-1.86771	-1,347.48
-1.87083	-1,352.97
-1.87458	-1,358.44
-1.87791	-1,364.00
-1.88125	-1,369.59
-1.88479	-1,375.02
-1.88812	-1,380.51
-1.89125	-1,386.09
-1.89479	-1,391.65
-1.89812	-1,397.25
-1.90104	-1,402.87
-1.90458	-1,408.37
-1.90791	-1,413.82
-1.91083	-1,419.34
-1.91458	-1,424.79
-1.91791	-1,430.28

-1.92125	-1,435.85
-1.92479	-1,441.40
-1.92812	-1,447.01
-1.93125	-1,452.67
-1.93479	-1,458.30
-1.93812	-1,463.94
-1.94125	-1,469.59
-1.94479	-1,475.17
-1.94812	-1,480.73
-1.95125	-1,486.29
-1.95479	-1,491.79
-1.95833	-1,497.30
-1.96146	-1,502.91
-1.965	-1,508.48
-1.96812	-1,514.00
-1.97146	-1,519.53
-1.97458	-1,525.03
-1.97791	-1,530.48
-1.98125	-1,535.92
-1.98416	-1,541.31
-1.9875	-1,546.61
-1.99104	-1,551.90
-1.99437	-1,557.27
-1.99771	-1,562.79
-2.00125	-1,568.37
-2.00479	-1,574.00
-2.00812	-1,579.72
-2.01166	-1,584.89
-2.01646	-1,578.79
-2.01854	-1,573.01
-2.02021	-1,567.62
-2.02333	-1,561.99
-2.03416	-1,567.24
-2.03833	-1,573.26
-2.04166	-1,579.21
-2.04437	-1,584.43
-2.04729	-1,589.89
-2.04979	-1,595.31
-2.0525	-1,600.35
-2.05583	-1,605.95
-2.05937	-1,611.87
-2.06333	-1,617.80
-2.06625	-1,623.23
-2.06937	-1,628.94
-2.07291	-1,634.54
-2.07625	-1,639.74
-2.08354	-1,634.21

-2.08646	-1,628.82
-2.10062	-1,634.19
-2.10458	-1,639.59
-2.10771	-1,644.73
-2.11104	-1,650.66
-2.11396	-1,655.77
-2.11666	-1,660.86
-2.11979	-1,666.63
-2.12396	-1,672.35
-2.1325	-1,658.49
-2.13521	-1,630.68
-2.13833	-1,591.22
-2.14146	-1,543.02
-2.14437	-1,486.54
-2.14708	-1,422.47
-2.14916	-1,353.95
-2.15062	-1,284.54
-2.15146	-1,216.01
-2.15208	-1,148.66
-2.15229	-1,082.38
-2.15229	-1,017.60
-2.15229	-955.80673

Rib Fleshed 11	
Size (Length, Width) (mm)	
22.29	27.64
Extension	Load
(mm)	(N)
-0.55104	-59.50599
-0.56229	-64.83789
-0.56875	-70.29756
-0.57333	-76.04762
-0.57812	-81.91184
-0.58187	-87.32601
-0.58562	-93.08424
-0.58979	-99.03576
-0.59396	-105.16591
-0.59708	-110.1692
-0.60021	-115.18618
-0.60437	-121.394
-0.60812	-127.53038
-0.61187	-133.58253
-0.61562	-139.51558
-0.61937	-145.33946
-0.62292	-151.05027
-0.62667	-156.57695
-0.63062	-161.92076
-0.63437	-167.18282
-0.63812	-172.38942
-0.64187	-177.50724
-0.64562	-182.54209
-0.65	-188.47641
-0.65437	-194.29505
-0.65854	-199.99343
-0.66292	-205.58406
-0.66729	-211.12351
-0.67187	-216.65545
-0.67604	-222.15784
-0.68062	-227.54306
-0.68479	-232.92035
-0.68896	-238.32692
-0.69312	-243.71797
-0.69708	-249.03725
-0.70125	-254.18809
-0.70542	-259.23017
-0.70979	-264.32171
-0.71396	-269.62456
-0.71812	-275.04942
-0.7225	-280.46748
-0.72667	-285.77635
-0.73083	-290.91802
-0.73479	-296.12556
-0.73896	-301.50437
-0.74292	-306.97232
-0.74708	-312.43378
-0.75146	-317.86773
-0.75542	-323.40243
-0.75979	-329.0481
-0.76396	-334.80603
-0.76792	-340.51627
-0.77208	-346.03962
-0.77583	-351.45691
-0.77979	-356.82228
-0.78375	-362.27828
-0.78792	-367.79594
-0.79187	-373.2712
-0.79583	-378.6048
-0.8	-383.88115
-0.80396	-389.38025
-0.80812	-395.03974
-0.81187	-400.69151
-0.81583	-406.19418
-0.81979	-411.55207
-0.82375	-417.00777
-0.82792	-422.61934
-0.83187	-428.27031
-0.83604	-433.8918
-0.84021	-439.48358
-0.84437	-445.05495
-0.84854	-450.69188
-0.8525	-456.49114
-0.85646	-462.39111
-0.86042	-468.20065
-0.86417	-473.87031
-0.86833	-479.40981
-0.87229	-485.08358
-0.87646	-490.93938
-0.88042	-496.83917
-0.88437	-502.65956
-0.88854	-508.39406
-0.89229	-514.16272
-0.89625	-519.95367
-0.90021	-525.77978
-0.90417	-531.57949
-0.90833	-537.33027
-0.91229	-543.1962
-0.91646	-549.06857
-0.92042	-554.97295
-0.92458	-560.94086
-0.92854	-566.8447
-0.9325	-572.65925
-0.93646	-578.36807
-0.94021	-584.00518
-0.94437	-589.57618
-0.94833	-595.21759
-0.9525	-600.94774
-0.95646	-606.67098
-0.96062	-612.36525
-0.96479	-618.03967
-0.96875	-623.73626
-0.97271	-629.43298
-0.97667	-634.89646
-0.98062	-640.28466
-0.98458	-645.69843
-0.98875	-651.22807
-0.99271	-656.94064
-0.99667	-662.76383
-1.00062	-668.68687
-1.00458	-674.67242

-1.00812	-679.69602
-1.01125	-684.82816
-1.01437	-689.97115
-1.0175	-695.00256
-1.02146	-700.95402
-1.02562	-706.96348
-1.02896	-712.09902
-1.03229	-717.32396
-1.03562	-722.56267
-1.03896	-727.77021
-1.04229	-732.97828
-1.04583	-738.17873
-1.04917	-743.42084
-1.0525	-748.76523
-1.05562	-754.12965
-1.05896	-759.39894
-1.06229	-764.57006
-1.06562	-769.69528
-1.06896	-774.88458
-1.07229	-780.16973
-1.07562	-785.49075
-1.07896	-790.80915
-1.08229	-796.14168
-1.08583	-801.4605
-1.08916	-806.74553
-1.09229	-811.99825
-1.09562	-817.20555
-1.09854	-822.38489
-1.10208	-827.48085
-1.10541	-832.59201
-1.10875	-837.82208
-1.11187	-843.08332
-1.11542	-848.30827
-1.11896	-853.5971
-1.12229	-858.98447
-1.12562	-864.39019
-1.12916	-869.80945
-1.1325	-875.24146
-1.13562	-880.59449
-1.13875	-885.84876
-1.14208	-891.00945
-1.14541	-896.15381
-1.14854	-901.32278
-1.15187	-906.45516
-1.15521	-911.51351
-1.15875	-916.62854
-1.16187	-921.85909

-1.16541	-927.13261
-1.16896	-932.46555
-1.17229	-937.87086
-1.17562	-943.25024
-1.17875	-948.60256
-1.18229	-953.92305
-1.18583	-959.28538
-1.18896	-964.73283
-1.19229	-970.13456
-1.19583	-975.48103
-1.19916	-980.86101
-1.20229	-986.22096
-1.20583	-991.49042
-1.20916	-996.77664
-1.2125	-1,002.09
-1.21583	-1,007.34
-1.21896	-1,012.56
-1.22229	-1,017.72
-1.22562	-1,022.86
-1.22896	-1,028.06
-1.23208	-1,033.27
-1.23562	-1,038.48
-1.23896	-1,043.75
-1.24208	-1,049.04
-1.24562	-1,054.29
-1.24896	-1,059.57
-1.25229	-1,064.92
-1.25583	-1,070.25
-1.25896	-1,075.55
-1.26229	-1,080.81
-1.26562	-1,086.05
-1.26875	-1,091.31
-1.27208	-1,096.50
-1.27562	-1,101.65
-1.27875	-1,106.90
-1.28208	-1,112.21
-1.28541	-1,117.49
-1.28875	-1,122.77
-1.29208	-1,128.11
-1.29541	-1,133.44
-1.29854	-1,138.69
-1.30229	-1,143.87
-1.30562	-1,149.16
-1.30875	-1,154.56
-1.31208	-1,159.91
-1.31562	-1,165.27
-1.31896	-1,170.73

-1.32229	-1,176.20
-1.32583	-1,181.60
-1.32916	-1,187.04
-1.3325	-1,192.51
-1.33583	-1,197.93
-1.33937	-1,203.31
-1.34271	-1,208.69
-1.34604	-1,214.10
-1.34916	-1,219.48
-1.3525	-1,224.74
-1.35583	-1,229.95
-1.35916	-1,235.24
-1.36229	-1,240.55
-1.36583	-1,245.78
-1.36916	-1,251.02
-1.37229	-1,256.28
-1.37562	-1,261.48
-1.37896	-1,266.64
-1.3825	-1,271.81
-1.38583	-1,277.14
-1.38896	-1,282.55
-1.3925	-1,287.87
-1.39583	-1,293.16
-1.39896	-1,298.46
-1.40229	-1,303.71
-1.40583	-1,308.98
-1.40896	-1,314.35
-1.41229	-1,319.69
-1.41541	-1,324.90
-1.41896	-1,330.01
-1.42229	-1,335.09
-1.42562	-1,340.30
-1.42875	-1,345.57
-1.43208	-1,350.77
-1.43562	-1,355.95
-1.43875	-1,361.25
-1.44187	-1,366.55
-1.44541	-1,371.74
-1.44854	-1,376.91
-1.45187	-1,382.07
-1.45521	-1,387.19
-1.45854	-1,392.25
-1.46208	-1,397.25
-1.46562	-1,402.35
-1.46875	-1,407.58
-1.47229	-1,412.74
-1.47562	-1,417.86

-1.47875	-1,422.96
-1.48208	-1,427.97
-1.48625	-1,433.95
-1.48958	-1,439.03
-1.49291	-1,444.13
-1.49625	-1,449.24
-1.49979	-1,454.36
-1.50333	-1,459.50
-1.50646	-1,464.68
-1.50958	-1,469.81
-1.51312	-1,474.85
-1.51646	-1,479.94
-1.51937	-1,485.07
-1.52291	-1,490.11
-1.52687	-1,496.07
-1.53041	-1,502.00
-1.53458	-1,507.84
-1.53854	-1,513.74
-1.54208	-1,518.76
-1.54541	-1,523.84
-1.54875	-1,528.98
-1.55208	-1,534.12
-1.55541	-1,539.24
-1.55875	-1,544.35
-1.56208	-1,549.50
-1.56541	-1,554.72
-1.56875	-1,559.97
-1.57229	-1,565.16
-1.57562	-1,570.32
-1.57916	-1,575.50
-1.5825	-1,580.71
-1.58583	-1,585.99
-1.58916	-1,591.28
-1.5925	-1,596.47
-1.59562	-1,601.54
-1.59916	-1,606.56
-1.6025	-1,611.58
-1.60562	-1,616.68
-1.60896	-1,621.82
-1.61229	-1,626.92
-1.61541	-1,631.99
-1.61958	-1,637.97
-1.62354	-1,643.91
-1.62687	-1,648.95
-1.63041	-1,654.03
-1.63354	-1,659.19
-1.63687	-1,664.42
-1.64021	-1,669.61
-1.64354	-1,674.75
-1.64666	-1,679.90
-1.65	-1,685.00
-1.65333	-1,690.05
-1.65646	-1,695.07
-1.66	-1,700.07
-1.66333	-1,705.13
-1.66666	-1,710.27
-1.67021	-1,715.43
-1.67375	-1,720.65
-1.67687	-1,725.99
-1.68021	-1,731.28
-1.68354	-1,736.48
-1.68687	-1,741.67
-1.69	-1,746.76
-1.69416	-1,752.71
-1.69791	-1,758.65
-1.70208	-1,764.60
-1.70625	-1,770.58
-1.70958	-1,775.63
-1.71291	-1,780.73
-1.71625	-1,785.87
-1.71958	-1,790.99
-1.72291	-1,796.07
-1.72604	-1,801.19
-1.72937	-1,806.28
-1.73271	-1,811.32
-1.73646	-1,817.31
-1.74083	-1,823.26
-1.74416	-1,828.33
-1.7475	-1,833.47
-1.75104	-1,838.59
-1.75437	-1,843.72
-1.75771	-1,848.88
-1.76125	-1,854.06
-1.76458	-1,859.29
-1.76771	-1,864.53
-1.77104	-1,869.71
-1.77416	-1,874.82
-1.77833	-1,880.79
-1.7825	-1,886.75
-1.78562	-1,891.84
-1.78916	-1,896.95
-1.79271	-1,902.09
-1.79604	-1,907.32
-1.79937	-1,912.53
-1.80271	-1,917.69
-1.80583	-1,922.82
-1.80916	-1,927.85
-1.81229	-1,932.85
-1.81604	-1,938.78
-1.82041	-1,944.61
-1.82375	-1,949.62
-1.82687	-1,954.75
-1.83041	-1,959.81
-1.83396	-1,964.90
-1.83687	-1,970.12
-1.84041	-1,975.28
-1.84375	-1,980.38
-1.84666	-1,985.46
-1.85062	-1,991.42
-1.85437	-1,997.26
-1.85854	-2,003.15
-1.86229	-2,008.24
-1.86541	-2,013.53
-1.86896	-2,018.84
-1.8725	-2,024.08
-1.87583	-2,029.33
-1.87937	-2,034.56
-1.8825	-2,039.83
-1.88562	-2,045.14
-1.88896	-2,050.30
-1.89208	-2,055.31
-1.89583	-2,061.13
-1.90021	-2,066.89
-1.90354	-2,071.94
-1.90666	-2,077.19
-1.91041	-2,082.41
-1.91375	-2,087.65
-1.91708	-2,092.93
-1.92062	-2,098.18
-1.92187	-2,100.29

Rib Fleshed 12	
Size (Length, Width) (mm)	
13.05	23.11
Extension	Load
(mm)	(N)
-0.72312	-3.54865
-0.73479	-6.76324
-0.74646	-11.84028

-0.75646	-16.85975
-0.76583	-22.12042
-0.77417	-27.50029
-0.78187	-33.03682
-0.78833	-38.72376
-0.79479	-44.40783
-0.80104	-49.76799
-0.80708	-55.36887
-0.8125	-60.58554
-0.81771	-65.72757
-0.82396	-71.07163
-0.82958	-76.33112
-0.83542	-82.002
-0.84042	-87.14928
-0.84604	-92.63885
-0.85167	-97.74815
-0.85708	-103.21749
-0.86229	-108.27956
-0.86708	-113.34401
-0.87271	-118.88064
-0.87812	-124.56723
-0.88292	-129.76258
-0.88771	-134.98536
-0.89229	-140.04368
-0.89792	-145.50257
-0.90354	-151.23588
-0.90833	-156.70939
-0.91333	-162.20386
-0.91792	-167.45362
-0.92292	-172.56901
-0.9275	-177.86363
-0.93229	-183.32322
-0.93708	-188.69205
-0.94187	-193.79348
-0.94708	-199.50555
-0.95187	-204.75638
-0.95646	-210.17507
-0.96104	-215.35249
-0.96625	-221.05372
-0.97104	-226.08055
-0.97583	-231.41392
-0.98083	-236.87641
-0.98562	-242.28942
-0.99042	-247.67433
-0.99521	-253.19338
-0.99979	-258.92183
-1.00458	-264.58964

-1.00896	-270.0049
-1.01375	-275.19917
-1.01833	-280.4867
-1.02312	-285.96747
-1.02792	-291.52367
-1.03271	-296.94244
-1.03729	-302.35189
-1.04187	-307.92195
-1.04646	-313.64197
-1.05125	-319.18961
-1.05583	-324.57191
-1.06042	-329.95644
-1.06521	-335.43441
-1.07	-341.05459
-1.07458	-346.7043
-1.07917	-352.24879
-1.08375	-357.81613
-1.08812	-363.49636
-1.09271	-369.12876
-1.09729	-374.63936
-1.10208	-380.02381
-1.10667	-385.5809
-1.11166	-391.39083
-1.11542	-396.45052
-1.12021	-402.16073
-1.12479	-407.81784
-1.12937	-413.5817
-1.13354	-418.61957
-1.13729	-423.75749
-1.14229	-429.55464
-1.14708	-435.33096
-1.15104	-440.38573
-1.15521	-445.52886
-1.15916	-450.74007
-1.16291	-455.87915
-1.1675	-461.69034
-1.17208	-467.44782
-1.17666	-473.26523
-1.18083	-478.34018
-1.18479	-483.50537
-1.18896	-488.5658
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-1.19729	-498.68315
-1.20125	-503.93182
-1.20521	-509.22889
-1.20916	-514.43499
-1.21291	-519.51855

-1.21791	-525.34133
-1.22187	-530.46644
-1.22583	-535.69746
-1.23021	-540.88551
-1.23416	-546.04095
-1.23833	-551.20146
-1.24229	-556.40435
-1.24625	-561.62512
-1.25	-566.78438
-1.25375	-571.8199
-1.25875	-577.54284
-1.2625	-582.55708
-1.26646	-587.63659
-1.27062	-592.7124
-1.27458	-597.85211
-1.27875	-603.01101
-1.28271	-608.12467
-1.28646	-613.16305
-1.29041	-618.17676
-1.29437	-623.23099
-1.29833	-628.31181
-1.30229	-633.39585
-1.30625	-638.4477
-1.31041	-643.4837
-1.31437	-648.56553
-1.31854	-653.69028
-1.3225	-658.85323
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-1.33937	-680.61167
-1.34333	-685.81808
-1.3475	-691.0373
-1.35146	-696.18398
-1.35562	-701.3669
-1.35958	-706.6502
-1.36354	-712.02505
-1.3675	-717.35907
-1.37125	-722.5436
-1.37541	-727.56654
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-1.39146	-748.52258
-1.39562	-753.79312
-1.39979	-759.04393
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-1.42333	-790.41719
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-1.45604	-832.91376
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-1.46812	-848.82438
-1.47187	-854.12443
-1.47604	-859.35926
-1.48	-864.56198
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-1.50791	-901.18802
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-1.53187	-932.82473
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-1.54354	-948.46147
-1.54771	-953.57251
-1.55166	-958.7394
-1.55562	-963.99111
-1.56	-969.30176
-1.56396	-974.69515
-1.56771	-980.05468
-1.57187	-985.34882
-1.57604	-990.64845
-1.57958	-995.97651
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-1.59146	-1,011.57

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-1.64396	-1,080.32
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-1.65604	-1,096.20
-1.65958	-1,101.54
-1.66375	-1,106.78
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-1.67583	-1,122.77
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-1.71562	-1,175.96
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-1.73146	-1,197.00
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-1.85958	-1,365.91
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-2.02771	-1,588.64
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-2.04729	-1,614.87
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-2.05583	-1,625.20
-2.05979	-1,630.62
-2.06416	-1,636.07
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-2.07625	-1,652.44
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-2.14854	-1,747.34
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-2.15666	-1,757.95
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-2.16437	-1,768.41
-2.16854	-1,773.51
-2.17271	-1,778.64
-2.17666	-1,783.92
-2.18062	-1,789.22
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-2.19291	-1,805.08
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-2.20458	-1,820.68
-2.20854	-1,825.73
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-2.21646	-1,836.08
-2.22062	-1,841.24
-2.22458	-1,846.38
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-2.23708	-1,862.42
-2.24104	-1,867.89
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-2.24916	-1,878.28
-2.25312	-1,883.46
-2.25708	-1,888.74
-2.26145	-1,893.99
-2.2652	-1,899.32
-2.26937	-1,904.55
-2.27354	-1,909.73
-2.2775	-1,915.04
-2.28145	-1,920.35
-2.2852	-1,925.50
-2.28979	-1,931.31
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-2.2975	-1,941.34
-2.30145	-1,946.44
-2.30541	-1,951.58
-2.30958	-1,956.65
-2.31375	-1,961.75
-2.3177	-1,967.00
-2.32166	-1,972.25
-2.32562	-1,977.45
-2.32958	-1,982.57
-2.33333	-1,987.71
-2.3375	-1,992.77
-2.34145	-1,997.80
-2.3452	-2,002.90
-2.34937	-2,007.97
-2.35375	-2,013.13
-2.3575	-2,018.43
-2.36166	-2,023.66
-2.36562	-2,028.85
-2.36979	-2,034.02
-2.37333	-2,039.25
-2.3775	-2,044.41
-2.38145	-2,049.49
-2.3852	-2,054.61
-2.38937	-2,059.69
-2.39375	-2,064.80
-2.3975	-2,070.06
-2.40145	-2,075.29
-2.40562	-2,080.41
-2.40958	-2,085.48
-2.41333	-2,090.61
-2.4175	-2,095.70
-2.42125	-2,100.77

Rib Fleshed 13	
Size (Length, Width) (mm)	
12.06	25.81
Extension	Load
(mm)	(N)
-0.01583	-5.68467
-0.02646	-10.93317
-0.03125	-16.17422
-0.03562	-22.01124
-0.03937	-27.53083
-0.04312	-33.4353
-0.04667	-39.48868
-0.05021	-45.44358
-0.05396	-51.22954
-0.05792	-56.93461
-0.06167	-62.68467
-0.06542	-68.46981
-0.06917	-74.22607
-0.07292	-79.97736
-0.07667	-85.70953
-0.08042	-91.44774
-0.08396	-97.1953
-0.0875	-102.90983
-0.09125	-108.59013
-0.095	-114.26851

-0.09854	-119.86128
-0.10229	-125.35065
-0.10583	-130.73094
-0.10958	-136.06484
-0.11292	-141.47006
-0.11667	-146.91319
-0.12021	-152.32687
-0.12354	-157.67154
-0.12708	-162.90225
-0.13062	-168.03811
-0.13396	-173.15125
-0.13771	-178.2717
-0.14146	-183.47314
-0.145	-188.7257
-0.14854	-193.95263
-0.15187	-199.10803
-0.15542	-204.1709
-0.15937	-210.14842
-0.16354	-216.1119
-0.1675	-222.0564
-0.17146	-227.87233
-0.17562	-233.54869
-0.17979	-239.22315
-0.18375	-244.98595
-0.18812	-250.8128
-0.19208	-256.69107
-0.19604	-262.53295
-0.20021	-268.2828
-0.20396	-273.95582
-0.20792	-279.53762
-0.21187	-285.08165
-0.21604	-290.65946
-0.22021	-296.25699
-0.22437	-301.90107
-0.22854	-307.58142
-0.23271	-313.34475
-0.23687	-319.16595
-0.24083	-325.02523
-0.24479	-330.85275
-0.24875	-336.55524
-0.25271	-342.15251
-0.25687	-347.70906
-0.26083	-353.32954
-0.265	-358.98703
-0.26917	-364.64646
-0.27312	-370.31648
-0.27708	-375.96682
-0.28104	-381.62822
-0.285	-387.34466
-0.28896	-393.06957
-0.29292	-398.75963
-0.29708	-404.35722
-0.30104	-409.99115
-0.305	-415.74368
-0.30917	-421.50712
-0.31312	-427.29905
-0.31687	-433.02992
-0.32104	-438.63502
-0.32479	-444.25687
-0.32896	-449.90909
-0.33271	-455.6078
-0.33708	-461.32934
-0.34104	-467.12586
-0.34542	-472.98533
-0.34958	-478.89167
-0.35292	-483.89551
-0.35625	-488.9141
-0.36021	-494.87746
-0.36396	-500.72682
-0.36771	-506.37639
-0.37187	-511.88141
-0.37562	-517.42655
-0.37979	-522.98981
-0.38375	-528.66167
-0.38771	-534.4016
-0.39187	-540.12805
-0.39583	-545.89474
-0.39958	-551.66459
-0.40354	-557.39474
-0.40729	-563.03883
-0.41146	-568.61424
-0.41542	-574.25463
-0.41937	-579.98168
-0.42354	-585.75261
-0.42771	-591.57842
-0.43187	-597.44364
-0.43583	-603.30129
-0.43979	-609.10213
-0.44354	-614.86036
-0.4475	-620.53877
-0.45146	-626.20139
-0.45562	-631.84822
-0.45979	-637.46428
-0.46375	-643.1058
-0.46792	-648.80353
-0.47208	-654.65409
-0.47625	-660.622
-0.48021	-666.59594
-0.48396	-672.41853
-0.48812	-678.05678
-0.49208	-683.71081
-0.49604	-689.4275
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-0.51229	-712.29619
-0.51646	-718.05799
-0.52021	-723.90199
-0.52417	-729.66468
-0.52792	-735.24481
-0.53187	-740.63981
-0.53604	-746.02222
-0.54	-751.70386
-0.54396	-757.56109
-0.54812	-763.39132
-0.55208	-769.17094
-0.55625	-774.86521
-0.56021	-780.57176
-0.56396	-786.29798
-0.56771	-791.94051
-0.57146	-797.48464
-0.57562	-802.88857
-0.57958	-808.36523
-0.58354	-813.97402
-0.5875	-819.6165
-0.59167	-825.28007
-0.59583	-830.94954
-0.59979	-836.63177
-0.60375	-842.30059
-0.60771	-847.99588
-0.61167	-853.71184
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-0.61958	-865.21679
-0.62375	-870.91929
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-0.63187	-882.33393
-0.63604	-888.06587
-0.64	-893.87709
-0.64396	-899.64926
-0.64792	-905.33614
-0.65208	-910.95299

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-1.13604	-1,583.73
-1.14	-1,589.17
-1.14375	-1,594.53
-1.14771	-1,599.83
-1.15166	-1,605.12
-1.15562	-1,610.46
-1.15937	-1,615.74
-1.16354	-1,620.97
-1.1675	-1,626.25
-1.17187	-1,631.60
-1.17583	-1,637.06
-1.18	-1,642.56
-1.18375	-1,648.00
-1.18771	-1,653.33
-1.19187	-1,658.55
-1.19562	-1,663.74
-1.20041	-1,669.16
-1.205	-1,674.37
-1.21	-1,679.82
-1.215	-1,685.63
-1.21896	-1,690.94

-1.24958	-1,696.21
-1.25416	-1,701.67
-1.25833	-1,706.80
-1.2625	-1,711.84
-1.26687	-1,717.39
-1.27229	-1,723.00
-1.27729	-1,728.20
-1.28271	-1,733.56
-1.28812	-1,739.00
-1.29354	-1,744.63
-1.29833	-1,750.19
-1.3025	-1,755.41
-1.30646	-1,760.71
-1.31041	-1,765.77
-1.31479	-1,771.42
-1.31937	-1,777.05
-1.32396	-1,782.87
-1.32896	-1,788.67
-1.33375	-1,794.45
-1.33791	-1,799.48
-1.34208	-1,804.57
-1.34583	-1,809.78
-1.34979	-1,814.81
-1.35437	-1,820.29
-1.35958	-1,825.74
-1.36666	-1,831.00
-1.37354	-1,836.10
-1.37979	-1,841.13
-1.38583	-1,846.80
-1.39062	-1,851.85
-1.395	-1,857.27
-1.39958	-1,862.54
-1.40416	-1,867.61
-1.40875	-1,872.74
-1.41354	-1,878.22
-1.41833	-1,883.89
-1.42312	-1,889.46
-1.42771	-1,895.05
-1.43208	-1,900.79
-1.43666	-1,906.53
-1.44104	-1,912.07
-1.44562	-1,917.32
-1.45041	-1,922.61
-1.45479	-1,928.27
-1.45979	-1,933.93
-1.46458	-1,939.66
-1.46958	-1,945.41
-1.47354	-1,950.41
-1.4775	-1,955.46
-1.48208	-1,961.17
-1.48687	-1,966.58
-1.49146	-1,971.92
-1.49625	-1,977.32
-1.50104	-1,982.85
-1.50583	-1,988.48
-1.51083	-1,994.04
-1.51521	-1,999.56
-1.51979	-2,005.01
-1.52416	-2,010.38
-1.52916	-2,015.65
-1.53354	-2,020.95
-1.53833	-2,026.18
-1.54312	-2,031.68
-1.54791	-2,037.44
-1.55229	-2,043.09
-1.55687	-2,048.36
-1.56104	-2,053.41
-1.56646	-2,059.10
-1.57062	-2,064.24
-1.57562	-2,069.37
-1.58041	-2,074.61
-1.585	-2,080.05
-1.59	-2,085.59
-1.59458	-2,091.41
-1.59937	-2,097.10
-1.60187	-2,100.22

Rib Fleshed 14	
Size (Length, Width) (mm)	
12.39	25.46
Extension	Load
(mm)	(N)
-0.02771	-10.5387
-0.03917	-16.01577
-0.04375	-21.08038
-0.04812	-26.33215
-0.0525	-32.02603
-0.05667	-38.0006
-0.06042	-43.02611
-0.06479	-48.96976
-0.06958	-54.79803
-0.07396	-60.64353
-0.07854	-66.58311
-0.0825	-71.63223
-0.08625	-76.75541
-0.09	-81.83489
-0.09437	-87.79607
-0.09875	-93.64098
-0.10312	-99.36509
-0.1075	-105.00901
-0.11187	-110.60128
-0.11625	-116.10957
-0.12062	-121.56008
-0.12479	-127.03958
-0.12917	-132.54191
-0.13354	-138.08654
-0.13771	-143.6688
-0.14187	-149.17336
-0.14625	-154.58883
-0.15042	-160.02619
-0.15458	-165.53698
-0.15875	-171.03513
-0.16292	-176.52631
-0.16708	-181.99766
-0.17125	-187.45871
-0.17521	-192.9308
-0.17937	-198.45222
-0.18333	-203.98208
-0.1875	-209.46121
-0.19167	-214.92426
-0.19583	-220.35295
-0.2	-225.83352
-0.20375	-231.45275
-0.20792	-237.07767
-0.21187	-242.6669
-0.21583	-248.21396
-0.22	-253.78346
-0.22417	-259.44188
-0.22854	-265.18828
-0.2325	-271.06678
-0.23667	-276.94094
-0.24083	-282.758
-0.24479	-288.56745
-0.24875	-294.3362
-0.25271	-300.09449
-0.25646	-305.81915
-0.26042	-311.40959
-0.26458	-316.92582
-0.26854	-322.50664

-0.27271	-328.24066
-0.27687	-334.1043
-0.28083	-340.05272
-0.28479	-346.00076
-0.28875	-351.83233
-0.29271	-357.60108
-0.29667	-363.37373
-0.30042	-369.09288
-0.30458	-374.7474
-0.30854	-380.39744
-0.3125	-386.11388
-0.31687	-391.90143
-0.32083	-397.80492
-0.325	-403.79289
-0.32896	-409.7665
-0.33292	-415.73951
-0.33667	-421.63518
-0.34083	-427.45522
-0.34479	-433.3564
-0.34896	-439.25974
-0.35292	-445.1468
-0.35708	-451.00415
-0.36104	-456.89988
-0.36458	-461.9244
-0.36792	-467.00984
-0.37104	-472.10827
-0.37437	-477.14391
-0.37833	-483.06504
-0.38229	-488.95133
-0.38625	-494.85439
-0.39042	-500.8623
-0.39354	-505.93889
-0.39708	-510.96201
-0.40042	-515.97524
-0.40375	-521.01618
-0.40708	-526.02381
-0.41021	-531.03709
-0.41333	-536.05646
-0.4175	-542.01084
-0.42125	-547.95367
-0.42542	-553.89148
-0.42958	-559.89182
-0.43292	-565.00113
-0.43646	-570.19693
-0.43979	-575.48749
-0.44312	-580.82139
-0.44646	-586.11953

-0.45	-591.37571
-0.45292	-596.61126
-0.45625	-601.76992
-0.45958	-606.85581
-0.46292	-611.95284
-0.46604	-617.01733
-0.47042	-622.98959
-0.47354	-628.04252
-0.47708	-633.19337
-0.48042	-638.39382
-0.48375	-643.62836
-0.48708	-648.87613
-0.49021	-654.1034
-0.49354	-659.29115
-0.49667	-664.43074
-0.5	-669.57062
-0.50333	-674.707
-0.50667	-679.84009
-0.51	-685.05299
-0.51333	-690.3075
-0.51667	-695.53548
-0.52021	-700.7736
-0.52354	-706.07424
-0.52687	-711.44319
-0.53021	-716.84521
-0.53333	-722.21768
-0.53667	-727.47093
-0.54	-732.64617
-0.54312	-737.85031
-0.54667	-743.09218
-0.55021	-748.43049
-0.55354	-753.8628
-0.55708	-759.30721
-0.56062	-764.75883
-0.56396	-770.2179
-0.56729	-775.70558
-0.57042	-781.21978
-0.57375	-786.65727
-0.57708	-791.97747
-0.58021	-797.24509
-0.58354	-802.41895
-0.58708	-807.57207
-0.59021	-812.83689
-0.59375	-818.13616
-0.59708	-823.44735
-0.60042	-828.79311
-0.60375	-834.11759

-0.60729	-839.4177
-0.61042	-844.76268
-0.61354	-850.10022
-0.61687	-855.34936
-0.62	-860.54975
-0.62333	-865.73803
-0.62687	-870.96262
-0.63021	-876.29908
-0.63354	-881.66505
-0.63687	-887.00926
-0.64021	-892.37046
-0.64375	-897.75586
-0.64708	-903.16951
-0.65042	-908.63061
-0.65333	-914.05261
-0.65667	-919.34657
-0.66	-924.50291
-0.66333	-929.64011
-0.66667	-934.83996
-0.67	-940.1269
-0.67312	-945.4304
-0.67667	-950.67424
-0.68	-955.90162
-0.68333	-961.17747
-0.68687	-966.51274
-0.69	-971.91679
-0.69312	-977.2957
-0.69646	-982.59604
-0.69979	-987.86503
-0.70333	-993.13062
-0.70667	-998.43282
-0.71	-1,003.80
-0.71333	-1,009.20
-0.71687	-1,014.61
-0.72021	-1,020.05
-0.72354	-1,025.50
-0.72708	-1,030.93
-0.73042	-1,036.38
-0.73375	-1,041.80
-0.73708	-1,047.15
-0.74021	-1,052.46
-0.74375	-1,057.76
-0.74708	-1,063.09
-0.75021	-1,068.44
-0.75375	-1,073.72
-0.75708	-1,078.98
-0.76042	-1,084.28

-0.76375	-1,089.57
-0.76729	-1,094.87
-0.77042	-1,100.24
-0.77375	-1,105.59
-0.77708	-1,110.92
-0.78042	-1,116.22
-0.78396	-1,121.47
-0.78708	-1,126.78
-0.79021	-1,132.11
-0.79396	-1,137.39
-0.79729	-1,142.73
-0.80021	-1,148.15
-0.80375	-1,153.44
-0.80708	-1,158.65
-0.81021	-1,163.87
-0.81354	-1,169.05
-0.81687	-1,174.20
-0.82	-1,179.41
-0.82354	-1,184.64
-0.82687	-1,189.92
-0.83	-1,195.25
-0.83354	-1,200.56
-0.83687	-1,205.91
-0.84021	-1,211.30
-0.84375	-1,216.66
-0.84708	-1,222.05
-0.85021	-1,227.44
-0.85354	-1,232.73
-0.85687	-1,237.97
-0.86021	-1,243.27
-0.86354	-1,248.60
-0.86687	-1,253.94
-0.87	-1,259.24
-0.87333	-1,264.45
-0.87687	-1,269.65
-0.87979	-1,274.94
-0.88333	-1,280.17
-0.88687	-1,285.38
-0.89	-1,290.70
-0.89312	-1,296.02
-0.89646	-1,301.22
-0.9	-1,306.36
-0.90333	-1,311.63
-0.90625	-1,317.02
-0.90979	-1,322.31
-0.91312	-1,327.58
-0.91646	-1,332.95

-0.91958	-1,338.31
-0.92333	-1,343.62
-0.92667	-1,348.97
-0.93	-1,354.37
-0.93354	-1,359.75
-0.93687	-1,365.18
-0.94021	-1,370.63
-0.94375	-1,376.09
-0.94687	-1,381.54
-0.95042	-1,386.91
-0.95375	-1,392.24
-0.95708	-1,397.60
-0.96042	-1,402.95
-0.96375	-1,408.28
-0.96708	-1,413.63
-0.97042	-1,418.95
-0.97375	-1,424.15
-0.97687	-1,429.26
-0.98021	-1,434.32
-0.98354	-1,439.41
-0.98687	-1,444.60
-0.99	-1,449.81
-0.99333	-1,455.00
-0.99667	-1,460.18
-1	-1,465.39
-1.00354	-1,470.64
-1.00667	-1,475.96
-1.01	-1,481.24
-1.01333	-1,486.46
-1.01667	-1,491.71
-1.02	-1,497.01
-1.02333	-1,502.31
-1.02646	-1,507.62
-1.02979	-1,512.89
-1.03312	-1,518.14
-1.03646	-1,523.36
-1.03958	-1,528.60
-1.04312	-1,533.84
-1.04646	-1,539.11
-1.04979	-1,544.43
-1.05333	-1,549.80
-1.05667	-1,555.21
-1.06021	-1,560.60
-1.06396	-1,566.03
-1.06708	-1,571.55
-1.07021	-1,577.03
-1.07375	-1,582.40

-1.07708	-1,587.75
-1.08021	-1,593.12
-1.08354	-1,598.42
-1.08687	-1,603.66
-1.09021	-1,608.91
-1.09354	-1,614.13
-1.09687	-1,619.34
-1.10042	-1,624.56
-1.10354	-1,629.86
-1.10667	-1,635.19
-1.10979	-1,640.40
-1.11333	-1,645.54
-1.11666	-1,650.74
-1.11979	-1,656.03
-1.12333	-1,661.35
-1.12666	-1,666.71
-1.12979	-1,672.10
-1.13333	-1,677.44
-1.13666	-1,682.77
-1.14021	-1,688.10
-1.14375	-1,693.46
-1.14687	-1,698.90
-1.15021	-1,704.33
-1.15354	-1,709.70
-1.15687	-1,715.08
-1.16021	-1,720.46
-1.16354	-1,725.79
-1.16666	-1,731.12
-1.16979	-1,736.36
-1.17333	-1,741.51
-1.17666	-1,746.71
-1.18021	-1,751.95
-1.18375	-1,757.25
-1.18708	-1,762.66
-1.19041	-1,768.12
-1.19375	-1,773.56
-1.19708	-1,778.98
-1.20041	-1,784.37
-1.20354	-1,789.73
-1.20666	-1,795.00
-1.21021	-1,800.15
-1.21354	-1,805.36
-1.21687	-1,810.65
-1.22021	-1,815.93
-1.22375	-1,821.24
-1.22687	-1,826.55
-1.23021	-1,831.82

-1.23354	-1,837.08
-1.23666	-1,842.33
-1.24021	-1,847.54
-1.24333	-1,852.80
-1.24646	-1,858.12
-1.25	-1,863.37
-1.25333	-1,868.62
-1.25666	-1,873.86
-1.26021	-1,879.03
-1.26375	-1,884.28
-1.26708	-1,889.65
-1.27041	-1,894.99
-1.27375	-1,900.24
-1.27687	-1,905.40
-1.28021	-1,910.48
-1.28354	-1,915.60
-1.28666	-1,920.80
-1.29	-1,925.96
-1.29333	-1,931.10
-1.29666	-1,936.29
-1.30021	-1,941.51
-1.30375	-1,946.79
-1.30708	-1,952.17
-1.31041	-1,957.62
-1.31375	-1,963.09
-1.31687	-1,968.51
-1.32021	-1,973.80
-1.32354	-1,979.02
-1.32666	-1,984.18
-1.33	-1,989.24
-1.33312	-1,994.34
-1.33646	-1,999.44
-1.34	-2,004.53
-1.34333	-2,009.72
-1.34666	-2,014.97
-1.35021	-2,020.20
-1.35354	-2,025.50
-1.35687	-2,030.84
-1.36021	-2,036.16
-1.36333	-2,041.44
-1.36666	-2,046.62
-1.37	-2,051.70
-1.37312	-2,056.80
-1.37666	-2,061.89
-1.38021	-2,067.05
-1.38375	-2,072.36
-1.38708	-2,077.75
-1.39062	-2,083.12
-1.39396	-2,088.48
-1.39729	-2,093.84
-1.40062	-2,099.18
-1.40125	-2,100.24

Rib Defleshed 1	
Size (Length, Width) (mm)	
20.85	18.40
Extension	Load
(mm)	(N)
-1.21916	-2.10827
-1.23666	-4.66524
-1.27291	-9.73492
-1.30291	-14.85952
-1.325	-19.86326
-1.34229	-24.93792
-1.35562	-29.96144
-1.36729	-35.05927
-1.37854	-40.40663
-1.38833	-45.45873
-1.39729	-50.53745
-1.40583	-55.89585
-1.41375	-61.08375
-1.42146	-66.14639
-1.42896	-71.59639
-1.43562	-76.85249
-1.44229	-82.35008
-1.44833	-87.37963
-1.45416	-92.57147
-1.46021	-97.84192
-1.46625	-103.23801
-1.47229	-108.72214
-1.47812	-114.31638
-1.48416	-119.93165
-1.48958	-125.02389
-1.49479	-130.31399
-1.50021	-135.70282
-1.50541	-141.16389
-1.51083	-146.59916
-1.51604	-152.10649
-1.52146	-157.69903
-1.52687	-163.34666
-1.53166	-168.41398
-1.53604	-173.65885
-1.54104	-178.97043
-1.54541	-184.34674
-1.55021	-189.66022
-1.55479	-194.94364
-1.55937	-200.259
-1.56396	-205.60761
-1.56875	-210.97606
-1.57312	-216.42546
-1.57791	-221.86799
-1.5825	-227.38422
-1.58729	-233.0209
-1.59208	-238.76801
-1.59666	-244.56736
-1.60125	-250.29793
-1.60604	-255.98833
-1.61062	-261.78405
-1.61458	-266.78455
-1.61896	-272.50811
-1.62354	-278.15521
-1.62812	-283.81073
-1.63291	-289.56068
-1.63687	-294.60087
-1.64083	-299.7053
-1.645	-304.80233
-1.64937	-309.9663
-1.65333	-315.33292
-1.65729	-320.70082
-1.66146	-325.9767
-1.66521	-331.23913
-1.66937	-336.39407
-1.67333	-341.57348
-1.67708	-346.85242
-1.68125	-352.07424
-1.68521	-357.28386
-1.68958	-362.52856
-1.69354	-367.88252
-1.6975	-373.30043
-1.70146	-378.73873
-1.70541	-384.17417
-1.70937	-389.50449
-1.71333	-394.75989
-1.71729	-400.05797
-1.72125	-405.34946
-1.72541	-410.60299
-1.72958	-415.91027
-1.73354	-421.32413
-1.7375	-426.76777

-1.74146	-432.22386
-1.74541	-437.65736
-1.74937	-443.01587
-1.75333	-448.37812
-1.75708	-453.72131
-1.76125	-459.00774
-1.76541	-464.36745
-1.76937	-469.82202
-1.77333	-475.3221
-1.7775	-480.78191
-1.78125	-486.23994
-1.78521	-491.69254
-1.78916	-497.11138
-1.79291	-502.51663
-1.79687	-507.88027
-1.80083	-513.20714
-1.805	-518.52965
-1.80916	-523.94044
-1.81312	-529.48493
-1.81729	-535.07137
-1.82125	-540.71939
-1.82521	-546.38439
-1.82937	-552.0159
-1.83333	-557.65873
-1.83729	-563.25954
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-1.86166	-597.2057
-1.86562	-602.95504
-1.86958	-608.64812
-1.87333	-614.3164
-1.87729	-619.87251
-1.88125	-625.39792
-1.885	-630.94068
-1.88916	-636.43879
-1.89312	-642.02994
-1.89729	-647.66955
-1.90104	-653.32937
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-1.90896	-664.48218
-1.9125	-670.07297
-1.91666	-675.63951
-1.92041	-681.20885
-1.92458	-686.81687

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-1.93687	-703.8877
-1.94083	-709.70559
-1.94479	-715.53963
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-1.95666	-732.77342
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-2.00916	-806.52714
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-2.08521	-913.6042
-2.08916	-919.20251
-2.09333	-924.84945
-2.0975	-930.51296
-2.10166	-936.26672
-2.10583	-942.05004
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-2.11354	-953.61781

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-2.53666	-1,537.81
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-2.54854	-1,553.98
-2.5525	-1,559.40
-2.55645	-1,564.74
-2.56083	-1,570.08
-2.56479	-1,575.56
-2.56875	-1,581.14
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-2.58125	-1,597.99
-2.58541	-1,603.63
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-2.60541	-1,631.55
-2.60916	-1,636.93
-2.61312	-1,642.15
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-2.62479	-1,657.60
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-2.66083	-1,707.05
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-2.66875	-1,717.92
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-2.67687	-1,728.58

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-2.69729	-1,756.47
-2.70125	-1,761.95
-2.7052	-1,767.50
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-2.71333	-1,778.47
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-2.83666	-1,948.04
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-2.84937	-1,964.69
-2.85333	-1,970.42
-2.8575	-1,976.20
-2.86145	-1,981.98
-2.86541	-1,987.77

-2.86937	-1,993.47
-2.87312	-1,999.04
-2.87729	-2,004.46
-2.88145	-2,009.92
-2.88541	-2,015.49
-2.88979	-2,021.02
-2.89375	-2,026.65
-2.89791	-2,032.29
-2.90187	-2,037.96
-2.90562	-2,043.60
-2.90958	-2,049.10
-2.91333	-2,054.56
-2.9175	-2,059.93
-2.92145	-2,065.30
-2.92541	-2,070.72
-2.92937	-2,076.11
-2.93333	-2,081.58
-2.93729	-2,087.04
-2.94125	-2,092.44
-2.94479	-2,097.86
-2.94687	-2,100.53

Rib Defleshed 2	
Size (Length, Width) (mm)	
14.13	29.68
Extension	Load
(mm)	(N)
-0.55479	-114.74504
-0.56437	-120.14674
-0.56979	-125.52992
-0.57479	-131.23344
-0.57917	-136.99761
-0.58312	-142.24079
-0.58687	-147.79378
-0.59062	-153.57277
-0.59458	-159.42957
-0.59875	-165.29122
-0.60271	-171.21485
-0.60625	-177.10538
-0.61	-182.85117
-0.61375	-188.53435
-0.6175	-194.2264
-0.62104	-199.90608
-0.62458	-205.50656
-0.62812	-211.01676
-0.63167	-216.45077
-0.63542	-221.80347
-0.63917	-227.12761
-0.64271	-232.5249
-0.64625	-237.95873
-0.64979	-243.39564
-0.65333	-248.82607
-0.65687	-254.1737
-0.66042	-259.46185
-0.66375	-264.79208
-0.66729	-270.14479
-0.67062	-275.48143
-0.67417	-280.75188
-0.67792	-285.94413
-0.68104	-291.12989
-0.68479	-296.28623
-0.68833	-301.45806
-0.69167	-306.74699
-0.695	-312.0743
-0.69854	-317.32219
-0.70187	-322.48098
-0.70521	-327.58415
-0.70854	-332.61463
-0.71187	-337.61472
-0.71542	-342.63736
-0.71875	-347.70131
-0.72208	-352.76645
-0.72562	-357.77363
-0.72979	-363.76575
-0.73312	-368.83768
-0.73646	-373.97099
-0.73979	-379.14231
-0.74312	-384.28563
-0.74646	-389.33557
-0.75062	-395.31019
-0.75479	-401.29259
-0.75812	-406.34048
-0.76167	-411.44603
-0.765	-416.54646
-0.76854	-421.59462
-0.7725	-427.57815
-0.77646	-433.49883
-0.78042	-439.42732
-0.78417	-445.33262
-0.78833	-451.09645
-0.79229	-456.82469
-0.79625	-462.56566
-0.80021	-468.35816
-0.80458	-474.25288
-0.80875	-480.25015
-0.81208	-485.30513
-0.81562	-490.31162
-0.81958	-496.25516
-0.82333	-502.17074
-0.82771	-507.99328
-0.83146	-513.83734
-0.83562	-519.63693
-0.83979	-525.37018
-0.84375	-531.09628
-0.84792	-536.85629
-0.85187	-542.68414
-0.85604	-548.47401
-0.86	-554.18563
-0.86396	-559.8051
-0.86792	-565.32133
-0.87187	-570.85657
-0.87625	-576.44349
-0.88021	-582.13913
-0.88437	-587.84217
-0.88833	-593.4568
-0.89229	-598.9809
-0.89625	-604.41524
-0.9	-609.88206
-0.90396	-615.27914
-0.90792	-620.57424
-0.91187	-625.82076
-0.91604	-631.12354
-0.92	-636.58804
-0.92417	-642.16363
-0.92833	-647.7685
-0.93229	-653.39994
-0.93646	-659.05488
-0.94021	-664.71559
-0.94417	-670.2736
-0.94792	-675.76247
-0.95187	-681.20009
-0.95625	-686.60688
-0.96021	-692.16907
-0.96437	-697.80672
-0.96854	-703.47357
-0.97271	-709.24932
-0.97687	-715.09945
-0.98083	-720.94005
-0.98479	-726.66639

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-1.00833	-759.52071
-1.01229	-764.90581
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-1.02	-775.82943
-1.02396	-781.33762
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-1.12791	-926.4521
-1.13208	-932.01828
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-1.77208	-1,831.23
-1.77583	-1,836.74
-1.77979	-1,842.16
-1.78375	-1,847.57
-1.78791	-1,852.91
-1.79208	-1,858.34
-1.79604	-1,863.95
-1.80021	-1,869.60
-1.80416	-1,875.31
-1.80833	-1,880.96
-1.81229	-1,886.55
-1.81604	-1,892.10
-1.82	-1,897.52
-1.82375	-1,902.92
-1.82791	-1,908.26
-1.83208	-1,913.73
-1.83604	-1,919.38
-1.84041	-1,925.00
-1.84437	-1,930.63
-1.84833	-1,936.29
-1.85208	-1,941.92
-1.85604	-1,947.41
-1.85958	-1,952.75
-1.86375	-1,957.92
-1.86771	-1,963.13
-1.87166	-1,968.56
-1.87562	-1,974.03
-1.87979	-1,979.45
-1.88396	-1,984.98
-1.88812	-1,990.58
-1.89208	-1,996.27
-1.89583	-2,001.96
-1.89979	-2,007.52
-1.90375	-2,012.96
-1.90812	-2,018.39
-1.91208	-2,024.03
-1.91625	-2,029.73
-1.92062	-2,035.40
-1.92458	-2,041.10
-1.92875	-2,046.80
-1.93229	-2,052.47
-1.93625	-2,057.92
-1.94	-2,063.17
-1.94396	-2,068.29
-1.94812	-2,073.44
-1.95208	-2,078.88
-1.95604	-2,084.40
-1.96041	-2,089.92
-1.96437	-2,095.57
-1.96812	-2,100.29

Rib Defleshed 3	
Size (Length, Width) (mm)	
15.54	31.07
Extension	Load
(mm)	(N)
-0.57042	-36.09467
-0.58167	-41.43362
-0.58812	-46.4886
-0.59375	-51.7021
-0.59958	-57.54953
-0.60437	-62.73267
-0.60937	-67.82506
-0.61542	-73.63807
-0.62125	-79.41613
-0.62708	-85.12869
-0.63271	-90.749
-0.63854	-96.25104
-0.64354	-101.5792
-0.65	-107.15129
-0.65604	-112.66662
-0.66146	-117.71273
-0.66687	-122.97528
-0.67229	-128.47482
-0.6775	-134.17038
-0.6825	-140.00142
-0.6875	-145.81871
-0.69271	-151.55669
-0.6975	-157.34141
-0.7025	-163.08698
-0.7075	-168.86152
-0.71167	-173.90035
-0.71583	-178.93645
-0.72062	-184.69037

-0.72521	-190.30714
-0.73021	-195.9161
-0.735	-201.71036
-0.73896	-206.71605
-0.74396	-212.50889
-0.74812	-217.51879
-0.7525	-222.55802
-0.75646	-227.73135
-0.76062	-232.96517
-0.76458	-238.09808
-0.76875	-243.12198
-0.77292	-248.14434
-0.77687	-253.18363
-0.78104	-258.20988
-0.78521	-263.32638
-0.78937	-268.48868
-0.79354	-273.60347
-0.7975	-278.74124
-0.80146	-283.87362
-0.80542	-289.02161
-0.80958	-294.16081
-0.81354	-299.34245
-0.8175	-304.52612
-0.82167	-309.74811
-0.82562	-315.07674
-0.82979	-320.44569
-0.83375	-325.84634
-0.83771	-331.21219
-0.84167	-336.51137
-0.84562	-341.80695
-0.84979	-347.13069
-0.85375	-352.51856
-0.85771	-357.89755
-0.86187	-363.23741
-0.86562	-368.6282
-0.86979	-374.04862
-0.87396	-379.55037
-0.87771	-385.10871
-0.88187	-390.55324
-0.88583	-395.95205
-0.89	-401.37494
-0.89375	-406.87296
-0.89792	-412.36717
-0.90208	-417.89719
-0.90604	-423.48099
-0.91	-429.00968
-0.91417	-434.53953

-0.91771	-440.07781
-0.92167	-445.47629
-0.92583	-450.78063
-0.92979	-456.17026
-0.93354	-461.59735
-0.93771	-466.97575
-0.94167	-472.40779
-0.94562	-477.90623
-0.94958	-483.4041
-0.95354	-488.92176
-0.95771	-494.42634
-0.96167	-499.93643
-0.96583	-505.47415
-0.97	-511.06173
-0.97375	-516.71284
-0.97771	-522.26925
-0.98187	-527.7549
-0.98562	-533.26523
-0.98979	-538.76311
-0.99375	-544.32923
-0.99771	-549.92676
-1.00167	-555.46868
-1.00604	-560.9681
-1.01	-566.57279
-1.01396	-572.31539
-1.01812	-578.01902
-1.02208	-583.63664
-1.02604	-589.18494
-1.03	-594.69962
-1.03396	-600.2959
-1.03771	-605.87943
-1.04187	-611.37938
-1.04604	-616.86444
-1.05	-622.4255
-1.05396	-628.05718
-1.05792	-633.72958
-1.06187	-639.45633
-1.06583	-645.20866
-1.06979	-650.8733
-1.07375	-656.45969
-1.07771	-662.05949
-1.08167	-667.67126
-1.08583	-673.31469
-1.09	-679.06505
-1.09396	-684.90362
-1.09812	-690.67693
-1.10187	-696.42329

-1.10583	-702.1479
-1.11	-707.87662
-1.11375	-713.6482
-1.11771	-719.32441
-1.12167	-724.89578
-1.12583	-730.52067
-1.12979	-736.2355
-1.13375	-742.03485
-1.13771	-747.85435
-1.14166	-753.63356
-1.14562	-759.33158
-1.14958	-765.00612
-1.15354	-770.73914
-1.1575	-776.48199
-1.16166	-782.22913
-1.16583	-788.0227
-1.17021	-793.89173
-1.17416	-799.87621
-1.17791	-805.84782
-1.18187	-811.69558
-1.18583	-817.43449
-1.18979	-823.11785
-1.19354	-828.77195
-1.1975	-834.34761
-1.20166	-839.93006
-1.20562	-845.67803
-1.21	-851.54682
-1.21396	-857.50407
-1.21812	-863.47324
-1.22125	-868.49159
-1.22479	-873.49331
-1.22875	-879.44615
-1.2325	-885.31822
-1.23646	-891.02542
-1.24041	-896.68256
-1.24437	-902.38982
-1.24833	-908.08773
-1.25229	-913.82027
-1.25625	-919.53593
-1.26	-925.28039
-1.26396	-930.97216
-1.26791	-936.6501
-1.27166	-942.40469
-1.27562	-948.0955
-1.27979	-953.72152
-1.28354	-959.39457
-1.28791	-965.11167

-1.29187	-970.96103
-1.29604	-976.88824
-1.3	-982.82707
-1.30375	-988.7023
-1.30812	-994.49229
-1.31208	-1,000.42
-1.31604	-1,006.41
-1.32	-1,012.33
-1.32416	-1,018.24
-1.32854	-1,024.18
-1.33187	-1,029.21
-1.33541	-1,034.28
-1.33875	-1,039.35
-1.34187	-1,044.38
-1.34604	-1,050.32
-1.34979	-1,056.28
-1.35375	-1,062.16
-1.35771	-1,067.87
-1.36146	-1,073.56
-1.36583	-1,079.21
-1.36979	-1,085.00
-1.37375	-1,090.91
-1.37791	-1,096.82
-1.38208	-1,102.80
-1.38604	-1,108.79
-1.39	-1,114.77
-1.39375	-1,120.73
-1.39771	-1,126.61
-1.40166	-1,132.46
-1.40583	-1,138.29
-1.40979	-1,144.16
-1.41416	-1,150.08
-1.41812	-1,156.06
-1.42166	-1,161.12
-1.425	-1,166.21
-1.42812	-1,171.28
-1.43208	-1,177.26
-1.43583	-1,183.09
-1.43958	-1,188.78
-1.44396	-1,194.42
-1.44791	-1,200.21
-1.45187	-1,206.10
-1.45604	-1,211.97
-1.46	-1,217.89
-1.46396	-1,223.86
-1.46791	-1,229.82
-1.47166	-1,235.75

-1.47541	-1,241.56
-1.47916	-1,247.22
-1.48333	-1,252.80
-1.48729	-1,258.55
-1.49146	-1,264.48
-1.49562	-1,270.48
-1.49896	-1,275.53
-1.5025	-1,280.62
-1.50604	-1,285.71
-1.50916	-1,290.85
-1.51229	-1,295.91
-1.51625	-1,301.77
-1.52021	-1,307.55
-1.52437	-1,313.33
-1.52833	-1,319.23
-1.5325	-1,325.19
-1.53666	-1,331.12
-1.54062	-1,337.09
-1.54479	-1,343.09
-1.54791	-1,348.14
-1.55125	-1,353.15
-1.55479	-1,359.00
-1.55875	-1,364.62
-1.56291	-1,370.17
-1.56687	-1,375.92
-1.57083	-1,381.80
-1.57521	-1,387.67
-1.57916	-1,393.63
-1.58333	-1,399.59
-1.5875	-1,405.57
-1.59062	-1,410.65
-1.59396	-1,415.70
-1.59771	-1,421.56
-1.60187	-1,427.21
-1.60583	-1,432.92
-1.60958	-1,438.67
-1.61396	-1,444.39
-1.61812	-1,450.31
-1.62146	-1,455.35
-1.62583	-1,461.34
-1.62916	-1,466.39
-1.63208	-1,471.42
-1.63604	-1,477.27
-1.63979	-1,482.93
-1.64396	-1,488.53
-1.64791	-1,494.24
-1.65187	-1,499.99

-1.65625	-1,505.72
-1.66	-1,511.58
-1.66416	-1,517.39
-1.66812	-1,523.20
-1.67187	-1,529.00
-1.67562	-1,534.73
-1.67958	-1,540.36
-1.68375	-1,545.98
-1.6875	-1,551.74
-1.69166	-1,557.46
-1.69583	-1,563.21
-1.69979	-1,569.10
-1.70396	-1,574.94
-1.70812	-1,580.82
-1.71187	-1,586.78
-1.71562	-1,592.61
-1.71958	-1,598.23
-1.72354	-1,603.77
-1.72729	-1,609.34
-1.73125	-1,614.85
-1.73562	-1,620.47
-1.73937	-1,626.31
-1.74354	-1,632.10
-1.74771	-1,637.91
-1.75166	-1,643.85
-1.75562	-1,649.78
-1.75958	-1,655.58
-1.76375	-1,661.30
-1.7675	-1,667.06
-1.77166	-1,672.70
-1.77562	-1,678.38
-1.77958	-1,684.18
-1.78375	-1,689.94
-1.78771	-1,695.70
-1.79166	-1,701.46
-1.79562	-1,707.18
-1.79979	-1,712.92
-1.80375	-1,718.73
-1.8075	-1,724.55
-1.81166	-1,730.24
-1.81562	-1,735.98
-1.81958	-1,741.75
-1.82375	-1,747.55
-1.82771	-1,753.39
-1.83187	-1,759.21
-1.83562	-1,764.97
-1.83979	-1,770.67

-1.84375	-1,776.46
-1.8475	-1,782.29
-1.85166	-1,787.96
-1.85562	-1,793.61
-1.85958	-1,799.29
-1.86375	-1,804.99
-1.86771	-1,810.83
-1.87166	-1,816.68
-1.87583	-1,822.48
-1.88	-1,828.22
-1.88396	-1,834.03
-1.88771	-1,839.86
-1.89187	-1,845.56
-1.89583	-1,851.30
-1.89958	-1,857.05
-1.90396	-1,862.68
-1.90791	-1,868.42
-1.91166	-1,874.22
-1.91583	-1,879.97
-1.92	-1,885.65
-1.92375	-1,891.36
-1.92771	-1,897.02
-1.93166	-1,902.62
-1.93562	-1,908.25
-1.93979	-1,913.95
-1.94375	-1,919.67
-1.94771	-1,925.43
-1.95187	-1,931.18
-1.95583	-1,936.91
-1.96021	-1,942.63
-1.96396	-1,948.43
-1.96791	-1,954.20
-1.97187	-1,959.82
-1.97562	-1,965.35
-1.97979	-1,970.85
-1.98375	-1,976.44
-1.98771	-1,982.14
-1.99166	-1,987.82
-1.99562	-1,993.45
-2	-1,999.05
-2.00396	-2,004.72
-2.00771	-2,010.42
-2.01166	-2,015.99
-2.01562	-2,021.55
-2.01937	-2,027.11
-2.02375	-2,032.65
-2.02771	-2,038.36
-2.03166	-2,044.09
-2.03562	-2,049.75
-2.04	-2,055.45
-2.04416	-2,061.32
-2.04812	-2,067.26
-2.05229	-2,073.16
-2.05604	-2,078.96
-2.06021	-2,084.66
-2.06396	-2,090.32
-2.06791	-2,095.91
-2.07125	-2,100.50

Rib Defleshed 4	
Size (Length, Width) (mm)	
18.36	28.97
Extension	Load
(mm)	(N)
-0.67562	-0.58897
-0.69	-1.84019
-0.72312	-6.91983
-0.74521	-11.95977
-0.76271	-17.09902
-0.77604	-22.39426
-0.78708	-27.62436
-0.79667	-32.84939
-0.80583	-38.1352
-0.81479	-43.50205
-0.8225	-48.57302
-0.83	-54.00409
-0.83708	-59.27579
-0.84333	-64.30399
-0.84937	-69.3756
-0.85542	-74.57794
-0.86146	-80.12363
-0.86687	-85.18989
-0.87229	-90.31849
-0.87771	-95.52059
-0.88292	-100.91268
-0.88812	-106.33439
-0.89354	-111.67928
-0.89896	-117.19624
-0.90375	-122.27035
-0.90833	-127.44045
-0.91312	-132.66711
-0.91792	-137.90414
-0.9225	-143.18022
-0.92708	-148.42574
-0.93146	-153.66073
-0.93646	-158.92445
-0.94104	-164.38782
-0.94583	-169.90474
-0.95062	-175.49995
-0.95521	-181.22205
-0.96	-186.9255
-0.96458	-192.57931
-0.96917	-198.1425
-0.97396	-203.70373
-0.97854	-209.48939
-0.98271	-214.5023
-0.98729	-220.32145
-0.99187	-226.14472
-0.99667	-231.98113
-1.00042	-237.02206
-1.00521	-242.82067
-1.00958	-248.57958
-1.01458	-254.35355
-1.01833	-259.44433
-1.0225	-264.59622
-1.02646	-269.79002
-1.03062	-275.03881
-1.03479	-280.31886
-1.03875	-285.67135
-1.04271	-291.00174
-1.04667	-296.25595
-1.05062	-301.45118
-1.05479	-306.69814
-1.05875	-312.06623
-1.06271	-317.46751
-1.06687	-322.90259
-1.07083	-328.39143
-1.07479	-333.82899
-1.07875	-339.22175
-1.08271	-344.60956
-1.08666	-349.93041
-1.09062	-355.16939
-1.09479	-360.47739
-1.09854	-365.92096
-1.10271	-371.36683
-1.10667	-376.85809
-1.11062	-382.30574
-1.11458	-387.6583
-1.11833	-393.05365

-1.1225	-398.38344
-1.12646	-403.66066
-1.13041	-408.97268
-1.13458	-414.31871
-1.13854	-419.77715
-1.1425	-425.21343
-1.14646	-430.62818
-1.15021	-436.08814
-1.15437	-441.52534
-1.15833	-447.04548
-1.16229	-452.59991
-1.16625	-458.08634
-1.17062	-463.56431
-1.17479	-469.17388
-1.17854	-474.91038
-1.18271	-480.56865
-1.18666	-486.17139
-1.19041	-491.73638
-1.19437	-497.18964
-1.19854	-502.64406
-1.20229	-508.1929
-1.20625	-513.67056
-1.21062	-519.09137
-1.21458	-524.68526
-1.21833	-530.36392
-1.2225	-535.99322
-1.22646	-541.6258
-1.23021	-547.22261
-1.23416	-552.7218
-1.23812	-558.18856
-1.24208	-563.69781
-1.24583	-569.17894
-1.25021	-574.62865
-1.25437	-580.24544
-1.25812	-586.05289
-1.2625	-591.78871
-1.26646	-597.50795
-1.27041	-603.25027
-1.27437	-608.98042
-1.27833	-614.70693
-1.28229	-620.37623
-1.28625	-625.98062
-1.29041	-631.56641
-1.29458	-637.25585
-1.29854	-643.07308
-1.30271	-648.94646
-1.30646	-654.83493

-1.31062	-660.62915
-1.31458	-666.38821
-1.31854	-672.19639
-1.32229	-678.05457
-1.32625	-683.81262
-1.33062	-689.51207
-1.33458	-695.34177
-1.33854	-701.2158
-1.34271	-707.12268
-1.34646	-713.10431
-1.35062	-718.96821
-1.35437	-724.72399
-1.35833	-730.4405
-1.36229	-736.09906
-1.36604	-741.73081
-1.37021	-747.41644
-1.37416	-753.15213
-1.37791	-758.79496
-1.38208	-764.3227
-1.38583	-769.96481
-1.39	-775.71243
-1.39416	-781.56298
-1.39791	-787.49526
-1.40208	-793.37054
-1.40604	-799.20757
-1.41021	-805.02754
-1.41437	-810.97817
-1.41812	-816.96647
-1.42229	-822.82394
-1.42604	-828.60851
-1.43021	-834.35482
-1.43416	-840.13033
-1.43791	-845.93666
-1.44187	-851.62395
-1.44604	-857.33593
-1.45021	-863.20019
-1.45437	-869.17162
-1.45771	-874.20642
-1.46104	-879.23282
-1.465	-885.20181
-1.46896	-891.12294
-1.47312	-897.02964
-1.47687	-902.9665
-1.48104	-908.8189
-1.485	-914.69061
-1.48916	-920.5904
-1.49312	-926.50676

-1.49708	-932.47473
-1.50104	-938.35694
-1.505	-944.17506
-1.50875	-949.94223
-1.51291	-955.64479
-1.51687	-961.48652
-1.52062	-967.37587
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-2.26562	-2,047.36
-2.26958	-2,053.11
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-2.28583	-2,075.62
-2.28979	-2,081.43
-2.29375	-2,087.19
-2.2977	-2,092.88
-2.30166	-2,098.53
-2.30291	-2,100.40

Rib Defleshed 5	
Size (Length, Width) (mm)	
14.13	27.83
Extension	Load
(mm)	(N)
-0.71917	-0.58353
-0.73104	-1.38556
-0.76521	-6.46964
-0.78583	-11.54212
-0.80167	-16.65012
-0.81562	-21.70305
-0.82854	-26.86987
-0.84208	-31.93862
-0.85646	-36.95631
-0.87104	-42.00693
-0.885	-47.2942
-0.89625	-52.34762
-0.90729	-57.55833
-0.91729	-62.78914
-0.92708	-67.83718
-0.93646	-72.99039
-0.94562	-78.0128
-0.95479	-83.06333
-0.96437	-88.45142
-0.97333	-93.72199
-0.98229	-99.08385
-0.99	-104.1534
-0.99854	-109.40525
-1.00687	-114.53627
-1.01521	-119.82732
-1.02354	-125.15765
-1.03083	-130.16938
-1.03854	-135.59674
-1.04646	-141.04241
-1.05375	-146.23362
-1.06104	-151.4554
-1.06812	-156.87291
-1.07458	-161.91554
-1.08146	-167.09875
-1.08833	-172.53307
-1.095	-178.01102
-1.10125	-183.07464
-1.10708	-188.30307
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-1.11854	-198.44677
-1.12479	-203.69571
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-1.13666	-214.77847
-1.14208	-219.8076
-1.1475	-224.93172
-1.1525	-230.01954
-1.15875	-235.5618
-1.16396	-240.71229
-1.16896	-245.91124
-1.17458	-251.0491
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-1.18541	-261.75642
-1.19062	-267.22696
-1.19604	-272.6737
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-1.22062	-298.59212
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-1.22979	-308.92715
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-1.23979	-319.64326
-1.24416	-324.74524
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-1.2675	-351.26904
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-1.27687	-361.86486
-1.28146	-367.18458
-1.28604	-372.55856
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-1.29562	-383.59019
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-1.32791	-422.27384
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-1.36875	-471.63159
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-2.54625	-2,094.07
-2.55041	-2,099.53
-2.55104	-2,100.45

Rib Defleshed 6	
Size (Length, Width) (mm)	
19.17	32.36
Extension	Load
(mm)	(N)
-0.44958	-6.32738
-0.46312	-11.5281

-0.47021	-16.55412
-0.47667	-21.87213
-0.48229	-26.93933
-0.48812	-32.25012
-0.49375	-37.60875
-0.49979	-42.9116
-0.50542	-48.13696
-0.51167	-53.62356
-0.51875	-59.10888
-0.52542	-64.34561
-0.53146	-69.53908
-0.5375	-75.24296
-0.54292	-80.45797
-0.54812	-85.79702
-0.55354	-91.20016
-0.55875	-96.66813
-0.56375	-102.14189
-0.56896	-107.4255
-0.57354	-112.59925
-0.57854	-117.69862
-0.58333	-122.90506
-0.58833	-128.22378
-0.59312	-133.56234
-0.59792	-138.9464
-0.60271	-144.39543
-0.60729	-149.84983
-0.61208	-155.25188
-0.61687	-160.64869
-0.62167	-166.11773
-0.62667	-171.68032
-0.63167	-177.31172
-0.63646	-183.01071
-0.64146	-188.71129
-0.64604	-194.48306
-0.65083	-200.24702
-0.65562	-205.97968
-0.66042	-211.73291
-0.66521	-217.54347
-0.67	-223.3444
-0.67479	-229.14606
-0.67937	-234.91244
-0.68396	-240.64682
-0.68854	-246.30427
-0.69312	-251.93983
-0.69812	-257.6727
-0.70208	-262.705
-0.70625	-267.75166

-0.71042	-272.80834
-0.71437	-277.91426
-0.71854	-283.01305
-0.7225	-288.14527
-0.72646	-293.21611
-0.73083	-298.96519
-0.73562	-304.6014
-0.74021	-310.33507
-0.74437	-315.36889
-0.74833	-320.43767
-0.7525	-325.5069
-0.75667	-330.585
-0.76062	-335.74697
-0.76479	-340.96199
-0.76875	-346.16914
-0.77271	-351.29669
-0.77687	-356.34366
-0.78083	-361.46671
-0.78458	-366.58114
-0.78875	-371.63273
-0.79271	-376.70276
-0.79729	-382.48891
-0.80208	-388.18645
-0.80583	-393.18711
-0.81021	-398.96461
-0.815	-404.62655
-0.81958	-410.32606
-0.82417	-416.09526
-0.82875	-421.92003
-0.83292	-426.96521
-0.83687	-432.03917
-0.84104	-437.10101
-0.84479	-442.10604
-0.84937	-447.86713
-0.85396	-453.64061
-0.85812	-458.68847
-0.86208	-463.83175
-0.86604	-468.94553
-0.87021	-474.0333
-0.87417	-479.21684
-0.87833	-484.49168
-0.88229	-489.77023
-0.88625	-494.91876
-0.89	-499.9294
-0.895	-505.72103
-0.89875	-510.83392
-0.90271	-516.03264

-0.90687	-521.19881
-0.91104	-526.36689
-0.915	-531.54594
-0.91896	-536.74006
-0.92292	-541.98402
-0.92687	-547.18155
-0.93083	-552.24127
-0.93562	-557.99419
-0.93917	-563.00211
-0.94333	-568.04204
-0.94771	-573.14831
-0.95146	-578.38631
-0.95562	-583.55612
-0.95979	-588.72718
-0.96375	-593.97858
-0.96771	-599.19566
-0.97167	-604.32994
-0.97583	-609.40194
-0.97958	-614.48592
-0.98375	-619.55488
-0.98792	-624.72779
-0.99167	-630.08028
-0.99583	-635.36185
-0.99979	-640.59556
-1.00375	-645.83641
-1.00771	-651.06177
-1.01167	-656.30072
-1.01583	-661.58068
-1.01958	-666.88389
-1.02375	-672.05912
-1.02771	-677.26892
-1.03167	-682.60396
-1.03562	-687.92725
-1.03958	-693.22294
-1.04354	-698.44806
-1.0475	-703.62663
-1.05167	-708.85885
-1.05583	-714.21111
-1.05937	-719.64949
-1.06354	-724.93261
-1.0675	-730.14283
-1.07125	-735.36223
-1.07521	-740.4983
-1.07937	-745.68492
-1.08333	-750.99337
-1.08729	-756.22374
-1.09167	-761.36959

-1.09562	-766.72041
-1.09958	-772.25256
-1.10375	-777.72486
-1.10771	-783.0888
-1.11146	-788.40172
-1.11562	-793.65396
-1.11958	-798.97749
-1.12333	-804.31479
-1.1275	-809.52322
-1.13166	-814.73643
-1.13562	-820.10895
-1.13958	-825.55032
-1.14354	-830.96147
-1.1475	-836.31581
-1.15125	-841.51673
-1.15521	-846.59803
-1.15916	-851.76831
-1.16312	-857.02896
-1.16708	-862.24282
-1.17125	-867.3811
-1.17541	-872.62833
-1.17916	-878.03632
-1.18354	-883.44461
-1.1875	-888.91077
-1.19146	-894.35977
-1.19541	-899.70279
-1.19937	-905.06572
-1.20333	-910.42566
-1.20729	-915.75646
-1.21146	-921.07886
-1.21562	-926.44358
-1.21937	-931.8493
-1.22354	-937.19715
-1.2275	-942.58821
-1.23125	-947.99846
-1.23541	-953.28611
-1.23937	-958.58669
-1.24312	-963.88632
-1.24729	-969.1186
-1.25146	-974.35784
-1.25562	-979.7079
-1.25958	-985.11422
-1.26354	-990.45008
-1.2675	-995.7937
-1.27146	-1,001.12
-1.27562	-1,006.47
-1.27937	-1,011.86

-1.28333	-1,017.14
-1.28729	-1,022.33
-1.29125	-1,027.53
-1.29521	-1,032.80
-1.29916	-1,038.11
-1.30312	-1,043.36
-1.30708	-1,048.59
-1.31125	-1,053.92
-1.31541	-1,059.34
-1.31937	-1,064.86
-1.32333	-1,070.36
-1.32729	-1,075.74
-1.33166	-1,081.13
-1.33562	-1,086.60
-1.33937	-1,092.05
-1.34354	-1,097.38
-1.34729	-1,102.68
-1.35146	-1,107.95
-1.35541	-1,113.29
-1.35937	-1,118.68
-1.36354	-1,124.01
-1.3675	-1,129.32
-1.37166	-1,134.63
-1.37562	-1,140.00
-1.37958	-1,145.37
-1.38354	-1,150.70
-1.3875	-1,155.95
-1.39146	-1,161.13
-1.39541	-1,166.41
-1.39937	-1,171.75
-1.40354	-1,177.04
-1.4075	-1,182.31
-1.41166	-1,187.57
-1.41562	-1,192.88
-1.41958	-1,198.24
-1.42354	-1,203.57
-1.4275	-1,208.88
-1.43146	-1,214.13
-1.43541	-1,219.40
-1.43916	-1,224.67
-1.44333	-1,229.83
-1.44708	-1,235.06
-1.45125	-1,240.27
-1.45541	-1,245.51
-1.45937	-1,250.83
-1.46354	-1,256.22
-1.4675	-1,261.70

-1.47146	-1,267.13
-1.47541	-1,272.52
-1.47937	-1,277.91
-1.48333	-1,283.21
-1.48729	-1,288.44
-1.49146	-1,293.68
-1.49541	-1,298.97
-1.49958	-1,304.30
-1.50375	-1,309.61
-1.50771	-1,314.95
-1.51166	-1,320.28
-1.51562	-1,325.63
-1.51937	-1,330.90
-1.52333	-1,336.07
-1.5275	-1,341.19
-1.53146	-1,346.37
-1.53541	-1,351.63
-1.53958	-1,356.92
-1.54375	-1,362.28
-1.54771	-1,367.68
-1.55166	-1,373.00
-1.55562	-1,378.28
-1.55958	-1,383.51
-1.56354	-1,388.73
-1.5675	-1,393.93
-1.57166	-1,399.13
-1.57562	-1,404.41
-1.57979	-1,409.65
-1.58396	-1,414.88
-1.58791	-1,420.21
-1.59187	-1,425.57
-1.59562	-1,430.88
-1.59958	-1,436.06
-1.60333	-1,441.16
-1.6075	-1,446.22
-1.61166	-1,451.38
-1.61562	-1,456.75
-1.61979	-1,462.09
-1.62375	-1,467.37
-1.62771	-1,472.62
-1.63166	-1,477.87
-1.63541	-1,483.13
-1.63916	-1,488.30
-1.64291	-1,493.33
-1.64771	-1,499.02
-1.65187	-1,504.08
-1.65583	-1,509.36

-1.66021	-1,514.64
-1.66437	-1,519.98
-1.66854	-1,525.38
-1.67271	-1,530.85
-1.67625	-1,536.33
-1.68021	-1,541.62
-1.68416	-1,546.77
-1.68812	-1,551.84
-1.69229	-1,556.94
-1.69604	-1,562.11
-1.70041	-1,567.23
-1.70437	-1,572.38
-1.70833	-1,577.56
-1.7125	-1,582.79
-1.71625	-1,588.07
-1.72	-1,593.23
-1.72396	-1,598.27
-1.72875	-1,604.11
-1.73271	-1,609.23
-1.73666	-1,614.43
-1.74083	-1,619.57
-1.74479	-1,624.77
-1.74916	-1,629.96
-1.75312	-1,635.24
-1.75687	-1,640.62
-1.76083	-1,645.83
-1.76541	-1,651.64
-1.77021	-1,657.44
-1.77396	-1,662.54
-1.77812	-1,667.65
-1.78229	-1,672.83
-1.78646	-1,678.08
-1.79062	-1,683.28
-1.79458	-1,688.53
-1.79854	-1,693.80
-1.80208	-1,698.98
-1.80708	-1,704.76
-1.81146	-1,710.55
-1.81604	-1,716.31
-1.82104	-1,722.12
-1.82479	-1,727.25
-1.82916	-1,732.29
-1.83312	-1,737.39
-1.83708	-1,742.57
-1.84083	-1,747.69
-1.845	-1,752.71
-1.84958	-1,758.48
-1.85354	-1,763.51
-1.85771	-1,768.55
-1.86166	-1,773.63
-1.86583	-1,778.73
-1.86979	-1,783.79
-1.87375	-1,788.88
-1.87771	-1,793.93
-1.88146	-1,798.96
-1.88625	-1,804.67
-1.89062	-1,810.39
-1.89521	-1,816.13
-1.9	-1,821.86
-1.90396	-1,826.87
-1.90896	-1,832.66
-1.91312	-1,837.70
-1.91687	-1,842.84
-1.92062	-1,847.85
-1.92541	-1,853.51
-1.93	-1,859.25
-1.93458	-1,864.97
-1.93937	-1,870.66
-1.94396	-1,876.49
-1.94812	-1,881.49
-1.95229	-1,886.55
-1.95646	-1,891.62
-1.96104	-1,897.43
-1.96562	-1,903.17
-1.97021	-1,908.92
-1.97479	-1,914.65
-1.97958	-1,920.31
-1.98396	-1,925.96
-1.98896	-1,931.55
-1.99354	-1,937.31
-1.99771	-1,942.32
-2.00229	-1,948.11
-2.00708	-1,953.79
-2.01146	-1,959.49
-2.01604	-1,965.11
-2.02062	-1,970.74
-2.02562	-1,976.38
-2.03021	-1,982.10
-2.035	-1,987.86
-2.03958	-1,993.61
-2.04437	-1,999.30
-2.04896	-2,004.99
-2.05333	-2,010.55
-2.05812	-2,015.97
-2.0625	-2,021.53
-2.0675	-2,027.09
-2.07208	-2,032.80
-2.07666	-2,038.48
-2.08146	-2,044.04
-2.08625	-2,049.63
-2.09083	-2,055.37
-2.09562	-2,061.03
-2.10021	-2,066.65
-2.105	-2,072.26
-2.10979	-2,077.92
-2.11437	-2,083.65
-2.11916	-2,089.26
-2.12375	-2,094.78
-2.12833	-2,100.31

Rib Defleshed 7	
Size (Length, Width) (mm)	
24.30	22.16
Extension	Load
(mm)	(N)
-0.92208	-1.04552
-0.93771	-2.49135
-0.97812	-7.39112
-1.01062	-12.40528
-1.04187	-17.51064
-1.05958	-22.57764
-1.07312	-27.68999
-1.08583	-32.72307
-1.0975	-37.93826
-1.10917	-43.13297
-1.11916	-48.16529
-1.12854	-53.19186
-1.13687	-58.32601
-1.14458	-63.62296
-1.15125	-68.88922
-1.15687	-73.90105
-1.16354	-79.38339
-1.16958	-84.39658
-1.17562	-89.64784
-1.18187	-95.00893
-1.18791	-100.45331
-1.19396	-105.99671
-1.19979	-111.51266
-1.20562	-116.79862

-1.2125	-122.32956
-1.21854	-127.52137
-1.22479	-132.97784
-1.23083	-138.49497
-1.23666	-144.00682
-1.24229	-149.2292
-1.24896	-154.50236
-1.25562	-159.86754
-1.26166	-165.07716
-1.2675	-170.61503
-1.27291	-175.70184
-1.27812	-180.9736
-1.28333	-186.38365
-1.28875	-191.87304
-1.29416	-197.48078
-1.29958	-203.11743
-1.305	-208.78096
-1.30979	-213.82441
-1.31458	-218.89745
-1.31896	-223.94896
-1.32437	-229.62704
-1.32896	-234.66113
-1.33375	-239.88032
-1.33854	-245.18308
-1.34333	-250.51418
-1.34812	-255.96046
-1.35291	-261.36979
-1.3575	-266.81143
-1.36208	-272.24037
-1.36666	-277.52981
-1.37146	-282.7391
-1.37604	-288.08668
-1.38083	-293.44827
-1.38521	-298.88466
-1.39	-304.32358
-1.39458	-309.79091
-1.39896	-315.14004
-1.40354	-320.39586
-1.40812	-325.78525
-1.41271	-331.29475
-1.4175	-336.83243
-1.42229	-342.45303
-1.42687	-348.27495
-1.43104	-353.37985
-1.43521	-358.59868
-1.43916	-363.86412
-1.44312	-369.10209

-1.44729	-374.29997
-1.45125	-379.49869
-1.45521	-384.70581
-1.45916	-389.84936
-1.46312	-394.99465
-1.46708	-400.11799
-1.47125	-405.13298
-1.47583	-410.952
-1.47979	-415.97721
-1.48437	-421.78318
-1.48916	-427.62107
-1.49271	-432.79406
-1.49687	-437.90069
-1.50083	-442.94503
-1.50458	-448.03864
-1.50875	-453.07118
-1.5125	-458.20504
-1.51646	-463.38814
-1.52062	-468.52002
-1.52458	-473.64435
-1.52896	-478.88908
-1.53271	-484.326
-1.53687	-489.77515
-1.54104	-495.22948
-1.545	-500.69916
-1.54896	-506.08587
-1.55312	-511.45309
-1.55708	-516.80398
-1.56104	-522.0533
-1.56521	-527.21262
-1.56916	-532.43095
-1.57291	-537.78827
-1.57708	-543.09607
-1.58104	-548.37567
-1.58479	-553.65646
-1.58896	-558.94953
-1.59291	-564.31627
-1.59666	-569.64999
-1.60062	-574.83447
-1.60479	-579.98455
-1.60896	-585.2052
-1.61271	-590.58827
-1.61666	-595.98118
-1.62083	-601.32986
-1.62458	-606.72116
-1.62875	-612.04761
-1.63291	-617.47336

-1.63666	-623.05158
-1.64041	-628.50726
-1.64479	-633.78632
-1.64896	-639.17679
-1.65291	-644.71793
-1.65708	-650.26975
-1.66083	-655.89178
-1.66479	-661.46666
-1.66896	-666.9153
-1.67271	-672.3913
-1.67666	-677.87862
-1.68062	-683.36576
-1.68479	-688.86364
-1.68875	-694.38523
-1.69271	-699.91219
-1.69666	-705.40571
-1.70062	-710.88588
-1.70437	-716.36963
-1.70833	-721.80545
-1.71229	-727.2895
-1.71625	-732.83833
-1.72021	-738.35081
-1.72458	-743.8885
-1.72875	-749.57341
-1.73271	-755.36394
-1.73687	-761.15149
-1.74062	-766.93237
-1.74479	-772.6739
-1.74896	-778.40185
-1.75271	-784.15024
-1.75666	-789.77209
-1.76083	-795.3189
-1.76479	-800.9358
-1.76896	-806.58466
-1.77312	-812.26057
-1.77708	-817.97004
-1.78104	-823.75288
-1.785	-829.56964
-1.78916	-835.32894
-1.79271	-841.00616
-1.79687	-846.52126
-1.80083	-852.01353
-1.80458	-857.54728
-1.80875	-863.11942
-1.81271	-868.74509
-1.81666	-874.336
-1.82062	-879.9426

-1.82458	-885.56808
-1.82854	-891.24113
-1.8325	-897.03619
-1.83666	-902.79508
-1.84062	-908.52326
-1.84458	-914.27571
-1.84875	-920.04526
-1.85291	-925.89563
-1.85687	-931.75238
-1.86083	-937.58547
-1.86458	-943.26884
-1.86875	-948.79633
-1.8725	-954.43511
-1.87646	-960.16192
-1.88041	-965.88153
-1.88458	-971.53962
-1.88875	-977.22459
-1.89271	-983.0482
-1.89687	-988.90775
-1.90104	-994.80617
-1.90479	-1,000.69
-1.90875	-1,006.42
-1.91271	-1,012.06
-1.91646	-1,017.65
-1.92041	-1,023.23
-1.92458	-1,028.85
-1.92875	-1,034.58
-1.93271	-1,040.40
-1.93687	-1,046.19
-1.94104	-1,052.03
-1.945	-1,058.00
-1.94833	-1,063.01
-1.95208	-1,068.95
-1.95604	-1,074.67
-1.96	-1,080.28
-1.96416	-1,085.96
-1.96812	-1,091.77
-1.97229	-1,097.66
-1.97625	-1,103.51
-1.98041	-1,109.30
-1.98437	-1,115.07
-1.98833	-1,120.91
-1.99187	-1,126.73
-1.99583	-1,132.43
-1.99979	-1,138.05
-2.00396	-1,143.63
-2.00791	-1,149.31

-2.01208	-1,155.12
-2.01625	-1,160.99
-2.02021	-1,166.91
-2.02437	-1,172.80
-2.02833	-1,178.71
-2.03208	-1,184.57
-2.03583	-1,190.27
-2.03979	-1,195.87
-2.04396	-1,201.53
-2.04791	-1,207.31
-2.05187	-1,213.12
-2.05604	-1,218.87
-2.05979	-1,224.61
-2.06396	-1,230.36
-2.06771	-1,236.18
-2.07146	-1,241.95
-2.07521	-1,247.49
-2.07896	-1,252.92
-2.08312	-1,258.38
-2.08729	-1,264.07
-2.09125	-1,269.94
-2.09562	-1,275.87
-2.09958	-1,281.83
-2.10375	-1,287.79
-2.10729	-1,292.80
-2.11021	-1,297.84
-2.11416	-1,303.73
-2.11791	-1,309.42
-2.12229	-1,314.98
-2.12625	-1,320.70
-2.13021	-1,326.61
-2.13458	-1,332.56
-2.13854	-1,338.55
-2.14291	-1,344.54
-2.14645	-1,349.55
-2.14979	-1,354.65
-2.15271	-1,359.74
-2.15666	-1,365.60
-2.16062	-1,371.24
-2.16479	-1,376.83
-2.16854	-1,382.55
-2.17271	-1,388.29
-2.17708	-1,394.17
-2.18041	-1,399.19
-2.18395	-1,404.20
-2.18791	-1,410.19
-2.19187	-1,416.14

-2.19562	-1,422.01
-2.19937	-1,427.75
-2.20375	-1,433.41
-2.20729	-1,439.16
-2.21166	-1,444.87
-2.21562	-1,450.62
-2.21958	-1,456.48
-2.22396	-1,462.35
-2.22791	-1,468.26
-2.23187	-1,474.17
-2.23562	-1,479.97
-2.23937	-1,485.60
-2.24333	-1,491.14
-2.24729	-1,496.75
-2.25104	-1,502.35
-2.2552	-1,507.90
-2.25916	-1,513.54
-2.26333	-1,519.26
-2.26729	-1,525.05
-2.27145	-1,530.92
-2.2752	-1,536.80
-2.27895	-1,542.56
-2.28312	-1,548.20
-2.28687	-1,553.93
-2.29104	-1,559.66
-2.295	-1,565.43
-2.29916	-1,571.23
-2.30333	-1,577.03
-2.3075	-1,582.94
-2.31104	-1,587.97
-2.31416	-1,593.00
-2.31812	-1,598.90
-2.32229	-1,604.65
-2.32604	-1,610.48
-2.32979	-1,616.24
-2.33395	-1,621.92
-2.33791	-1,627.68
-2.34187	-1,633.43
-2.34604	-1,639.11
-2.35	-1,644.91
-2.35416	-1,650.71
-2.35812	-1,656.49
-2.36208	-1,662.27
-2.36583	-1,668.06
-2.36979	-1,673.76
-2.37375	-1,679.40
-2.3777	-1,685.08

-2.38187	-1,690.73
-2.38583	-1,696.41
-2.38979	-1,702.19
-2.39395	-1,707.97
-2.39791	-1,713.72
-2.40208	-1,719.50
-2.40583	-1,725.38
-2.41	-1,731.19
-2.41395	-1,736.96
-2.41791	-1,742.73
-2.42208	-1,748.50
-2.42604	-1,754.33
-2.43	-1,760.16
-2.43395	-1,765.94
-2.43812	-1,771.64
-2.44208	-1,777.37
-2.44583	-1,783.16
-2.44979	-1,788.85
-2.45395	-1,794.49
-2.4577	-1,800.24
-2.46187	-1,805.91
-2.46604	-1,811.63
-2.47	-1,817.53
-2.47395	-1,823.45
-2.47812	-1,829.28
-2.48208	-1,835.14
-2.48604	-1,841.04
-2.49	-1,846.89
-2.49375	-1,852.66
-2.4977	-1,858.33
-2.50187	-1,863.96
-2.50583	-1,869.69
-2.51	-1,875.48
-2.51395	-1,881.29
-2.51812	-1,887.05
-2.52208	-1,892.81
-2.52562	-1,898.53
-2.52979	-1,904.07
-2.53354	-1,909.67
-2.5375	-1,915.37
-2.54145	-1,921.00
-2.54541	-1,926.56
-2.54958	-1,932.21
-2.55354	-1,937.96
-2.55791	-1,943.77
-2.56208	-1,949.69
-2.5652	-1,954.75
-2.56916	-1,960.68
-2.57333	-1,966.50
-2.57708	-1,972.34
-2.58104	-1,978.10
-2.585	-1,983.83
-2.58895	-1,989.57
-2.59312	-1,995.23
-2.59729	-2,000.94
-2.60166	-2,006.77
-2.60479	-2,011.82
-2.60812	-2,016.88
-2.61166	-2,021.88
-2.61562	-2,027.81
-2.61958	-2,033.64
-2.62354	-2,039.47
-2.62729	-2,045.26
-2.63145	-2,050.89
-2.6352	-2,056.48
-2.63937	-2,061.96
-2.64333	-2,067.47
-2.64708	-2,073.16
-2.65125	-2,078.86
-2.655	-2,084.62
-2.65916	-2,090.33
-2.66312	-2,096.12
-2.66583	-2,100.05

Rib Defleshed 8	
Size (Length, Width) (mm)	
13.18	28.43
Extension	Load
(mm)	(N)
-1.28521	-12.37092
-1.29854	-17.60691
-1.30562	-22.72359
-1.31208	-28.30141
-1.31812	-33.78571
-1.32396	-38.79786
-1.32958	-43.93173
-1.33541	-49.12355
-1.34125	-54.41128
-1.34708	-59.75247
-1.3525	-65.10839
-1.35812	-70.41427
-1.36396	-75.78816
-1.36916	-81.24195
-1.37479	-86.53088
-1.38	-91.75254
-1.38521	-96.97743
-1.39062	-102.18862
-1.39562	-107.40409
-1.40083	-112.56192
-1.40562	-117.70421
-1.41062	-122.74776
-1.41562	-127.75472
-1.42125	-133.45914
-1.42646	-139.13877
-1.43229	-144.77827
-1.43771	-150.47115
-1.44271	-155.53309
-1.44771	-160.68986
-1.4525	-165.86939
-1.4575	-171.03907
-1.4625	-176.21547
-1.46708	-181.45342
-1.47187	-186.62889
-1.47666	-191.76312
-1.48146	-196.88779
-1.48625	-202.10685
-1.49083	-207.39457
-1.49562	-212.63252
-1.50041	-217.80443
-1.505	-223.00215
-1.50979	-228.19792
-1.51437	-233.43115
-1.51916	-238.70699
-1.52396	-244.00593
-1.52875	-249.31349
-1.53354	-254.58634
-1.53812	-259.88463
-1.54291	-265.21063
-1.54729	-270.50525
-1.55187	-275.70024
-1.55687	-280.84871
-1.56166	-286.138
-1.56646	-291.60637
-1.57125	-297.10922
-1.57604	-302.60774
-1.58083	-308.09915
-1.58521	-313.56844
-1.58979	-318.94636
-1.59437	-324.22039

-1.59937	-329.41306
-1.60396	-334.74347
-1.60854	-340.12163
-1.61333	-345.5084
-1.61791	-350.88634
-1.6225	-356.2164
-1.62687	-361.51904
-1.63146	-366.77167
-1.63604	-372.02966
-1.64104	-377.33549
-1.64562	-382.79209
-1.65041	-388.2052
-1.65521	-393.664
-1.66021	-399.23045
-1.66479	-404.89441
-1.66916	-410.49019
-1.67396	-415.9143
-1.67854	-421.3343
-1.68312	-426.82299
-1.68791	-432.23453
-1.6925	-437.56598
-1.69729	-442.82821
-1.70187	-448.12438
-1.70625	-453.47849
-1.71083	-458.71755
-1.71541	-463.90724
-1.72021	-469.2021
-1.725	-474.62589
-1.72979	-480.12015
-1.73458	-485.6604
-1.73937	-491.18659
-1.74396	-496.76397
-1.74875	-502.32798
-1.75333	-507.83139
-1.75812	-513.26394
-1.7625	-518.78822
-1.7675	-524.21212
-1.77208	-529.64377
-1.77666	-535.08282
-1.78146	-540.49093
-1.78604	-545.95011
-1.79062	-551.40162
-1.79541	-556.77259
-1.8	-562.20454
-1.80458	-567.7228
-1.80958	-573.25274
-1.81416	-578.88764

-1.81896	-584.4717
-1.82354	-590.05356
-1.82812	-595.55846
-1.83271	-601.03261
-1.83729	-606.43452
-1.84208	-611.85515
-1.84646	-617.37311
-1.85125	-622.89852
-1.85583	-628.50934
-1.86062	-634.14699
-1.86521	-639.77975
-1.86979	-645.3886
-1.87458	-651.00342
-1.87916	-656.70544
-1.88396	-662.5067
-1.88875	-668.31332
-1.89333	-674.14016
-1.89812	-679.91608
-1.90271	-685.67336
-1.90708	-691.39725
-1.91166	-696.99895
-1.91625	-702.57473
-1.92083	-708.22805
-1.92541	-713.88149
-1.93021	-719.61194
-1.93416	-724.64716
-1.93916	-730.45802
-1.94312	-735.51661
-1.94708	-740.62061
-1.95125	-745.68391
-1.95541	-750.75823
-1.95916	-755.86098
-1.96333	-760.87695
-1.96771	-766.63685
-1.9725	-772.36801
-1.97729	-778.15551
-1.98125	-783.18936
-1.98604	-788.98686
-1.99083	-794.70962
-1.99562	-800.49825
-1.99937	-805.56071
-2.00354	-810.61387
-2.0075	-815.63967
-2.01146	-820.64527
-2.01625	-826.45756
-2.02	-831.49171
-2.02416	-836.49528

-2.02854	-842.2541
-2.03333	-847.9014
-2.03791	-853.6616
-2.04187	-858.72346
-2.04646	-864.51805
-2.05104	-870.3056
-2.05562	-875.98932
-2.06041	-881.67834
-2.06479	-887.50517
-2.06937	-893.28074
-2.07437	-898.97913
-2.07896	-904.79058
-2.08312	-909.84017
-2.08708	-914.94769
-2.09104	-920.07726
-2.09521	-925.1247
-2.09916	-930.13972
-2.10312	-935.1722
-2.10771	-940.96738
-2.1125	-946.76042
-2.11666	-951.80559
-2.12041	-956.85893
-2.125	-962.5833
-2.12958	-968.22894
-2.13396	-973.9449
-2.13875	-979.70283
-2.14333	-985.52102
-2.14791	-991.24634
-2.15271	-996.92076
-2.15771	-1,002.73
-2.16166	-1,007.89
-2.16562	-1,013.06
-2.16979	-1,018.16
-2.17396	-1,023.21
-2.17791	-1,028.34
-2.18166	-1,033.48
-2.18583	-1,038.53
-2.18979	-1,043.58
-2.19458	-1,049.36
-2.19937	-1,055.16
-2.20333	-1,060.18
-2.20729	-1,065.25
-2.21125	-1,070.32
-2.21604	-1,076.12
-2.22062	-1,081.92
-2.22541	-1,087.76
-2.22937	-1,092.84

-2.23354	-1,097.93
-2.2375	-1,103.03
-2.24166	-1,108.08
-2.24604	-1,113.89
-2.25062	-1,119.68
-2.2552	-1,125.44
-2.25958	-1,131.23
-2.26437	-1,136.83
-2.26875	-1,142.38
-2.27354	-1,148.02
-2.27833	-1,153.82
-2.28312	-1,159.65
-2.2877	-1,165.42
-2.29208	-1,171.13
-2.29687	-1,176.85
-2.30125	-1,182.66
-2.30604	-1,188.38
-2.31041	-1,194.08
-2.31562	-1,199.75
-2.31958	-1,204.83
-2.32375	-1,210.07
-2.32791	-1,215.32
-2.33187	-1,220.54
-2.33604	-1,225.69
-2.34	-1,230.82
-2.34395	-1,235.92
-2.34791	-1,241.02
-2.35208	-1,246.05
-2.35666	-1,251.87
-2.36145	-1,257.64
-2.36625	-1,263.40
-2.37083	-1,269.23
-2.37541	-1,275.02
-2.38	-1,280.74
-2.38458	-1,286.43
-2.38916	-1,292.13
-2.39395	-1,297.84
-2.39791	-1,302.84
-2.40291	-1,308.61
-2.4077	-1,314.38
-2.41166	-1,319.39
-2.41541	-1,324.43
-2.42	-1,330.22
-2.42437	-1,335.80
-2.42916	-1,341.21
-2.43375	-1,346.75
-2.43833	-1,352.52

-2.44333	-1,358.29
-2.44791	-1,364.01
-2.45291	-1,369.70
-2.45708	-1,375.49
-2.46187	-1,381.19
-2.46604	-1,386.81
-2.47104	-1,392.29
-2.47583	-1,397.89
-2.48062	-1,403.60
-2.4852	-1,409.33
-2.4902	-1,415.06
-2.49479	-1,420.80
-2.49895	-1,426.53
-2.50354	-1,432.07
-2.50791	-1,437.49
-2.5127	-1,442.83
-2.51729	-1,448.36
-2.52229	-1,453.94
-2.52687	-1,459.64
-2.53187	-1,465.44
-2.53583	-1,470.45
-2.54	-1,476.18
-2.54437	-1,481.65
-2.54916	-1,486.96
-2.55395	-1,492.38
-2.55854	-1,497.99
-2.56333	-1,503.59
-2.56812	-1,509.24
-2.57312	-1,514.92
-2.5777	-1,520.74
-2.58229	-1,526.47
-2.58687	-1,532.04
-2.59187	-1,537.62
-2.59625	-1,543.29
-2.60125	-1,548.90
-2.60604	-1,554.58
-2.61104	-1,560.33
-2.61562	-1,566.06
-2.6202	-1,571.70
-2.62458	-1,577.25
-2.62937	-1,582.65
-2.63395	-1,588.04
-2.63875	-1,593.46
-2.64354	-1,598.92
-2.64833	-1,604.54
-2.65312	-1,610.18
-2.65791	-1,615.82

-2.66229	-1,621.37
-2.66666	-1,626.73
-2.67145	-1,631.95
-2.67562	-1,637.23
-2.68062	-1,642.45
-2.685	-1,647.75
-2.69	-1,653.13
-2.69479	-1,658.63
-2.69937	-1,664.20
-2.70375	-1,669.69
-2.70854	-1,675.01
-2.71312	-1,680.33
-2.71791	-1,685.71
-2.7225	-1,691.12
-2.72708	-1,696.50
-2.73187	-1,701.75
-2.73666	-1,707.07
-2.74104	-1,712.45
-2.74562	-1,717.75
-2.75041	-1,723.01
-2.75479	-1,728.27
-2.75958	-1,733.45
-2.76416	-1,738.77
-2.76895	-1,744.10
-2.77375	-1,749.41
-2.77854	-1,754.78
-2.78312	-1,760.09
-2.7877	-1,765.36
-2.79229	-1,770.65
-2.79708	-1,775.87
-2.80166	-1,781.05
-2.80645	-1,786.25
-2.81145	-1,791.51
-2.81604	-1,796.83
-2.82083	-1,802.04
-2.82541	-1,807.16
-2.8302	-1,812.23
-2.83437	-1,817.28
-2.83979	-1,822.87
-2.845	-1,828.45
-2.85041	-1,834.10
-2.8552	-1,839.18
-2.86	-1,844.31
-2.86458	-1,849.44
-2.86937	-1,854.50
-2.87375	-1,859.63
-2.87854	-1,864.71

-2.88291	-1,869.81
-2.88791	-1,874.81
-2.89312	-1,880.49
-2.89791	-1,885.53
-2.9025	-1,890.60
-2.9075	-1,895.67
-2.91208	-1,900.80
-2.91666	-1,905.85
-2.92187	-1,911.58
-2.92645	-1,916.76
-2.93125	-1,921.90
-2.93583	-1,926.95
-2.94125	-1,932.51
-2.94666	-1,938.20
-2.95104	-1,943.36
-2.95583	-1,948.45
-2.96104	-1,954.15
-2.96625	-1,959.86
-2.97104	-1,964.95
-2.97541	-1,970.19
-2.9802	-1,975.36
-2.985	-1,980.52
-2.98979	-1,985.77
-2.99437	-1,991.24
-2.99895	-1,996.61
-3.00375	-2,001.89
-3.00833	-2,007.22
-3.01312	-2,012.67
-3.0177	-2,018.16
-3.0225	-2,023.61
-3.02729	-2,029.00
-3.03208	-2,034.38
-3.03666	-2,039.79
-3.04125	-2,045.22
-3.04583	-2,050.59
-3.05041	-2,055.88
-3.055	-2,061.15
-3.05979	-2,066.44
-3.06458	-2,071.82
-3.06937	-2,077.24
-3.07395	-2,082.69
-3.07875	-2,088.11
-3.08312	-2,093.52
-3.08791	-2,098.84
-3.08916	-2,100.38

Rib Defleshed 9	
Size (Length, Width) (mm)	
18.34	26.38
Extension	Load
(mm)	(N)
-0.81312	-1.42352
-0.83667	-2.4909
-0.86771	-7.64877
-0.88062	-12.95903
-0.89146	-18.13544
-0.90062	-23.29494
-0.90833	-28.32676
-0.91521	-33.48491
-0.92167	-38.66124
-0.92708	-43.70649
-0.93271	-48.96953
-0.93792	-54.30232
-0.94354	-59.68301
-0.94896	-65.34965
-0.95375	-70.53334
-0.95854	-75.78877
-0.96333	-81.07524
-0.96792	-86.36083
-0.9725	-91.73007
-0.97729	-97.10431
-0.98208	-102.40035
-0.98687	-107.72142
-0.99146	-113.2955
-0.99625	-119.01865
-1.00083	-124.76442
-1.00562	-130.33633
-1.01021	-135.89202
-1.015	-141.55829
-1.01937	-147.31534
-1.02437	-153.02791
-1.02875	-158.7632
-1.03375	-164.46131
-1.03833	-170.28755
-1.04229	-175.36312
-1.04625	-180.38845
-1.05083	-186.19251
-1.05521	-191.93242
-1.06	-197.68082
-1.06417	-202.72188
-1.06833	-207.76986
-1.07229	-212.78819
-1.07625	-217.82041

-1.08021	-222.93451
-1.08437	-228.15511
-1.08833	-233.44581
-1.09229	-238.6779
-1.09625	-243.74649
-1.10021	-248.75855
-1.10437	-253.85937
-1.10833	-259.06342
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-1.12416	-279.71736
-1.12812	-284.8554
-1.13208	-290.03772
-1.13604	-295.17642
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-1.14416	-305.41787
-1.14812	-310.70548
-1.15208	-316.04975
-1.15625	-321.37325
-1.16021	-326.77075
-1.16437	-332.16757
-1.16833	-337.57249
-1.17208	-342.97937
-1.17604	-348.31449
-1.18	-353.62881
-1.18416	-358.93989
-1.18812	-364.25558
-1.19229	-369.57541
-1.19625	-374.94844
-1.20021	-380.37735
-1.20416	-385.82703
-1.20833	-391.30333
-1.21229	-396.79351
-1.21625	-402.29514
-1.22041	-407.76974
-1.22458	-413.23552
-1.22854	-418.78107
-1.23271	-424.36135
-1.23666	-429.99563
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-1.24479	-441.13061
-1.24854	-446.67968
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-1.26437	-468.50815

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-1.30021	-517.72088
-1.30437	-523.29212
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-1.33229	-563.0753
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-1.39229	-646.88313
-1.39646	-652.7248
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-1.40791	-670.23802
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-1.51916	-830.66338
-1.52312	-836.65431
-1.52708	-842.5858
-1.53104	-848.46991
-1.53458	-854.30443
-1.53896	-859.99054
-1.54312	-865.72456
-1.54687	-871.56165
-1.55125	-877.34669
-1.55521	-883.20804
-1.55937	-889.19234
-1.56312	-895.17391
-1.56708	-901.05247
-1.57062	-906.76546
-1.57458	-912.31912
-1.57854	-917.84018
-1.58271	-923.53427
-1.58666	-929.33774
-1.59083	-935.13274
-1.595	-940.96607
-1.59896	-946.85006
-1.60291	-952.73268
-1.60666	-958.65083
-1.61062	-964.47557
-1.61437	-970.1156
-1.61854	-975.66217
-1.62271	-981.37051
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-1.63083	-993.25776
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-1.66208	-1,039.10
-1.66604	-1,044.89
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-1.68604	-1,074.55
-1.68979	-1,080.29
-1.69354	-1,085.94
-1.6975	-1,091.55
-1.70166	-1,097.19
-1.70541	-1,102.94
-1.70979	-1,108.65
-1.71375	-1,114.45
-1.71791	-1,120.34
-1.72208	-1,126.29
-1.72521	-1,131.32
-1.72916	-1,137.26
-1.73312	-1,143.06
-1.73729	-1,148.78
-1.74125	-1,154.61
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-1.74958	-1,166.52
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-1.75771	-1,178.43
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-1.77625	-1,205.86
-1.78062	-1,211.42
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-1.78854	-1,223.01
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-1.85604	-1,321.97
-1.86041	-1,327.72
-1.86396	-1,333.56
-1.86812	-1,339.30
-1.87208	-1,345.00
-1.87604	-1,350.74
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-1.88416	-1,362.37
-1.88812	-1,368.19
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-1.90791	-1,396.83
-1.91187	-1,402.59
-1.91583	-1,408.40
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-1.92416	-1,419.99
-1.92812	-1,425.90
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-1.93625	-1,437.65
-1.94	-1,443.41
-1.94396	-1,449.12
-1.94791	-1,454.82
-1.95187	-1,460.58
-1.95604	-1,466.38
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-1.96812	-1,483.76
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-1.99541	-1,523.94
-1.99937	-1,529.79
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-2.0075	-1,541.44
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-2.02354	-1,564.61
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-2.03146	-1,576.12
-2.03541	-1,581.78
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-2.04729	-1,599.01
-2.05125	-1,604.67
-2.05541	-1,610.30
-2.05958	-1,616.05
-2.06333	-1,621.94
-2.0675	-1,627.82
-2.07146	-1,633.70
-2.07541	-1,639.51
-2.07937	-1,645.24
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-2.08729	-1,656.79
-2.09146	-1,662.56
-2.09562	-1,668.34
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-2.11541	-1,697.05
-2.11958	-1,702.85
-2.12333	-1,708.75
-2.1275	-1,714.50
-2.13146	-1,720.21
-2.13583	-1,725.99
-2.13979	-1,731.89
-2.14354	-1,737.78
-2.14771	-1,743.47
-2.15166	-1,748.89
-2.15541	-1,754.32
-2.15958	-1,759.84
-2.16312	-1,765.45
-2.16729	-1,770.95
-2.17125	-1,776.41
-2.17541	-1,781.95
-2.17937	-1,787.66
-2.18333	-1,793.45
-2.18729	-1,799.21
-2.19125	-1,804.95
-2.19541	-1,810.70
-2.19937	-1,816.49
-2.20333	-1,822.35
-2.20729	-1,828.18
-2.21125	-1,833.98
-2.21562	-1,839.68
-2.21958	-1,845.40
-2.22375	-1,851.23
-2.2277	-1,857.13
-2.23145	-1,862.99
-2.23541	-1,868.64
-2.23916	-1,874.26
-2.24312	-1,879.84
-2.24708	-1,885.39
-2.25104	-1,891.01
-2.2552	-1,896.61
-2.25937	-1,902.29
-2.26354	-1,908.07
-2.2675	-1,913.92
-2.27125	-1,919.79
-2.27541	-1,925.54
-2.27916	-1,931.29
-2.28333	-1,936.97
-2.28729	-1,942.57
-2.29104	-1,948.20
-2.29541	-1,953.79
-2.29958	-1,959.54
-2.30354	-1,965.45
-2.3075	-1,971.32
-2.31145	-1,977.11
-2.31562	-1,982.85
-2.31937	-1,988.63
-2.32333	-1,994.33
-2.32729	-1,999.96
-2.33125	-2,005.59
-2.33541	-2,011.22
-2.33958	-2,016.97
-2.34375	-2,022.78
-2.3477	-2,028.65
-2.35145	-2,034.48
-2.35562	-2,040.17
-2.35937	-2,045.85
-2.36333	-2,051.49
-2.36729	-2,057.12
-2.37125	-2,062.77
-2.37562	-2,068.43
-2.37979	-2,074.29
-2.38375	-2,080.19
-2.38791	-2,086.00

-2.39187	-2,091.82
-2.39562	-2,097.59
-2.3975	-2,100.42

Rib Defleshed 10	
Size (Length, Width) (mm)	
15.42	33.31
Extension	Load
(mm)	(N)
-0.82062	-7.62892
-0.83354	-12.73522
-0.84167	-18.27996
-0.84792	-23.44267
-0.85458	-28.49668
-0.86208	-33.98371
-0.86875	-39.53644
-0.87437	-44.99119
-0.88	-50.40403
-0.88542	-55.45515
-0.89083	-60.5553
-0.89646	-66.20559
-0.90104	-71.36611
-0.90646	-77.15876
-0.91167	-82.63889
-0.91708	-88.20882
-0.92146	-93.33602
-0.92562	-98.74219
-0.93021	-104.09372
-0.93542	-109.88668
-0.94021	-115.37517
-0.94542	-121.17264
-0.94937	-126.64306
-0.95375	-132.11975
-0.95792	-137.17866
-0.96292	-142.65139
-0.96792	-148.38259
-0.97208	-153.87467
-0.97667	-159.49859
-0.98083	-164.79678
-0.98562	-170.51718
-0.99021	-176.2339
-0.99437	-181.43789
-0.99833	-186.84097
-1.00229	-192.08519
-1.00708	-197.72513
-1.01187	-203.26672
-1.01625	-208.43236
-1.02042	-214.01954
-1.02458	-219.59718
-1.02854	-224.85209
-1.03271	-229.86564
-1.03667	-235.06384
-1.04062	-240.54819
-1.04458	-246.01907
-1.04854	-251.26138
-1.05333	-257.05373
-1.05729	-262.0759
-1.06125	-267.35386
-1.06542	-272.87143
-1.06917	-278.38337
-1.07333	-283.58877
-1.07708	-288.60867
-1.08104	-293.69274
-1.085	-299.02658
-1.08896	-304.59568
-1.09333	-310.04953
-1.09729	-315.2276
-1.10125	-320.33643
-1.10541	-325.66869
-1.10937	-331.40075
-1.11354	-337.16276
-1.1175	-342.62678
-1.12146	-347.83906
-1.12562	-353.10391
-1.12958	-358.64434
-1.13375	-364.28356
-1.13791	-369.93799
-1.14187	-375.48169
-1.14604	-380.81601
-1.15	-386.07812
-1.15396	-391.48358
-1.15771	-397.09714
-1.16166	-402.66788
-1.16562	-407.91249
-1.16958	-413.00845
-1.17375	-418.21149
-1.17771	-423.71053
-1.18187	-429.40822
-1.18604	-435.02039
-1.19	-440.47013
-1.19416	-445.94735
-1.19791	-451.58982
-1.20208	-457.29354
-1.20583	-462.88848
-1.21	-468.23317
-1.21437	-473.50964
-1.21812	-479.04691
-1.22229	-484.70742
-1.22646	-490.39751
-1.23041	-496.14742
-1.23437	-501.71053
-1.23812	-507.05093
-1.24208	-512.46893
-1.24583	-518.06509
-1.25	-523.60559
-1.25416	-529.06531
-1.25791	-534.4708
-1.26229	-539.87491
-1.26604	-545.48246
-1.27021	-551.21952
-1.27416	-556.87773
-1.27771	-562.37686
-1.28187	-567.6586
-1.28541	-573.02076
-1.28958	-578.53878
-1.29375	-584.19317
-1.29771	-589.82003
-1.30187	-595.26002
-1.30604	-600.75372
-1.31021	-606.47845
-1.31437	-612.34993
-1.31791	-618.23559
-1.32208	-623.84081
-1.32562	-629.2907
-1.32979	-634.73314
-1.33396	-640.34361
-1.33791	-646.10982
-1.34187	-651.79706
-1.34604	-657.45854
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-1.35812	-674.84641
-1.36166	-680.56506
-1.36562	-686.08063
-1.36958	-691.55711
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-1.37771	-702.8138
-1.38166	-708.49961
-1.38583	-714.16068

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-1.39791	-731.58133
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-1.40562	-743.09146
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-1.41375	-754.4663
-1.41791	-760.23287
-1.42208	-766.02191
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-1.43021	-777.76879
-1.43437	-783.60933
-1.43833	-789.45547
-1.44208	-795.29709
-1.44604	-801.02432
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-1.45396	-812.24746
-1.45812	-817.8826
-1.46229	-823.59111
-1.46604	-829.40495
-1.47021	-835.17528
-1.47416	-840.9217
-1.47812	-846.61591
-1.48208	-852.23591
-1.48583	-857.85389
-1.49	-863.41029
-1.49375	-869.06213
-1.49791	-874.71795
-1.50187	-880.41669
-1.50583	-886.19339
-1.51	-891.92605
-1.51396	-897.64321
-1.51791	-903.36561
-1.52187	-909.06262
-1.52562	-914.72167
-1.52979	-920.33482
-1.53354	-926.02283
-1.5375	-931.67365
-1.54166	-937.27916
-1.54562	-942.97391
-1.54979	-948.74692
-1.55396	-954.6023
-1.55791	-960.51705
-1.56187	-966.37231
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-1.56979	-977.94634
-1.57375	-983.70141

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-1.59375	-1,012.30
-1.59771	-1,018.02
-1.60166	-1,023.66
-1.60562	-1,029.26
-1.60979	-1,034.88
-1.61354	-1,040.58
-1.6175	-1,046.27
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-1.62562	-1,057.77
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-1.63375	-1,069.43
-1.63791	-1,075.22
-1.64187	-1,080.76
-1.64604	-1,086.21
-1.65	-1,091.76
-1.65375	-1,097.46
-1.65791	-1,103.11
-1.66187	-1,108.79
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-1.66979	-1,120.25
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-1.67771	-1,131.81
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-1.71375	-1,183.62
-1.71771	-1,189.29
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-1.72562	-1,200.43
-1.72979	-1,206.08
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-1.73771	-1,217.63
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-1.76187	-1,251.94

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-1.78583	-1,286.46
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-1.80146	-1,308.63
-1.80562	-1,314.10
-1.80979	-1,319.66
-1.81354	-1,325.28
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-1.82166	-1,336.24
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-1.83979	-1,346.37
-1.84458	-1,351.94
-1.84875	-1,357.32
-1.85291	-1,363.20
-1.85625	-1,368.30
-1.85979	-1,373.42
-1.86354	-1,379.33
-1.86771	-1,384.88
-1.87146	-1,390.32
-1.87521	-1,395.84
-1.87916	-1,401.42
-1.88312	-1,406.96
-1.88729	-1,412.31
-1.89125	-1,417.61
-1.89521	-1,423.03
-1.89916	-1,428.68
-1.90312	-1,434.39
-1.90729	-1,439.87
-1.91166	-1,445.46
-1.91646	-1,450.75
-1.92104	-1,456.40
-1.92521	-1,461.50
-1.92937	-1,466.74
-1.93333	-1,472.04
-1.9375	-1,477.37
-1.94125	-1,482.87
-1.94521	-1,488.37
-1.94916	-1,493.79
-1.95312	-1,499.04
-1.95708	-1,504.18
-1.96104	-1,509.42

-1.96521	-1,514.81
-1.96937	-1,520.37
-1.97354	-1,525.98
-1.9775	-1,531.45
-1.98146	-1,536.78
-1.98521	-1,542.10
-1.98916	-1,547.46
-1.99291	-1,552.85
-1.99687	-1,558.08
-2.00083	-1,563.16
-2.005	-1,568.22
-2.00916	-1,573.45
-2.01312	-1,578.90
-2.01729	-1,584.42
-2.02125	-1,589.93
-2.02541	-1,595.35
-2.02937	-1,600.59
-2.03291	-1,605.76
-2.03687	-1,610.85
-2.04146	-1,616.64
-2.04646	-1,622.33
-2.05041	-1,627.37
-2.05479	-1,632.61
-2.05896	-1,638.03
-2.06312	-1,643.60
-2.06708	-1,649.15
-2.07104	-1,654.56
-2.075	-1,659.90
-2.07854	-1,665.18
-2.08291	-1,670.36
-2.08687	-1,675.51
-2.09083	-1,680.70
-2.095	-1,685.77
-2.09958	-1,691.44
-2.10396	-1,696.91
-2.10875	-1,702.26
-2.11312	-1,707.64
-2.1175	-1,713.01
-2.12229	-1,718.50
-2.12666	-1,723.51
-2.13041	-1,728.79
-2.13479	-1,733.95
-2.13896	-1,738.95
-2.14291	-1,743.99
-2.14708	-1,749.13
-2.15062	-1,754.38
-2.15458	-1,759.44
-2.17458	-1,764.99
-2.18	-1,770.52
-2.18479	-1,776.06
-2.18937	-1,781.86
-2.19312	-1,787.07
-2.19708	-1,792.11
-2.20145	-1,797.57
-2.20645	-1,802.82
-2.21104	-1,808.60
-2.2152	-1,813.90
-2.21916	-1,819.22
-2.22416	-1,824.81
-2.22854	-1,830.12
-2.23312	-1,835.67
-2.2375	-1,841.44
-2.2425	-1,847.17
-2.24729	-1,852.62
-2.25625	-1,842.74
-2.25916	-1,817.42
-2.26229	-1,778.85
-2.26583	-1,730.30
-2.26895	-1,673.27
-2.27187	-1,608.28
-2.27437	-1,537.77
-2.27625	-1,465.25
-2.2775	-1,392.86
-2.27812	-1,321.26
-2.27854	-1,250.77
-2.27854	-1,181.92
-2.27854	-1,115.62
-2.27854	-1,053.16

Rib Defleshed 11	
Size (Length, Width) (mm)	
16.15	23.99
Extension	Load
(mm)	(N)
-0.49271	-0.00525
-0.50729	-0.78801
-0.54833	-0.78617
-0.58646	-1.10814
-0.6225	-4.7502
-0.65729	-5.65564
-0.67354	-10.82493
-0.68667	-15.92954
-0.69896	-21.06679
-0.71	-26.13063
-0.72021	-31.2388
-0.72771	-36.41498
-0.73458	-41.43875
-0.74208	-46.81176
-0.74917	-52.23741
-0.75604	-57.46029
-0.7625	-62.90566
-0.76854	-67.91472
-0.77437	-73.29021
-0.78021	-78.76442
-0.78604	-84.01805
-0.79187	-89.36618
-0.79729	-94.52326
-0.8025	-99.99362
-0.80812	-105.38788
-0.81354	-110.81794
-0.81833	-115.81875
-0.82292	-121.05136
-0.8275	-126.27099
-0.83229	-131.37731
-0.83708	-136.49011
-0.84146	-141.76098
-0.84646	-147.03186
-0.85104	-152.41174
-0.85583	-157.74699
-0.86042	-163.02298
-0.86521	-168.44419
-0.86958	-174.0045
-0.87458	-179.49176
-0.87917	-185.00093
-0.88375	-190.52222
-0.88854	-196.19219
-0.8925	-201.24537
-0.89667	-206.28585
-0.90125	-212.04285
-0.90583	-217.68905
-0.91042	-223.323
-0.915	-229.06713
-0.91958	-234.88557
-0.92437	-240.58574
-0.92896	-246.35874
-0.93292	-251.45155
-0.93687	-256.55878
-0.94083	-261.65637
-0.94479	-266.69201

-0.94937	-272.46758
-0.95417	-278.24834
-0.95812	-283.40441
-0.96208	-288.62795
-0.96625	-293.81657
-0.97021	-299.09322
-0.97417	-304.36063
-0.97833	-309.58128
-0.98208	-314.91169
-0.98604	-320.23051
-0.99	-325.46338
-0.99437	-330.66776
-0.99792	-336.0005
-1.00208	-341.30859
-1.00604	-346.61338
-1.01	-351.97952
-1.01396	-357.29617
-1.01812	-362.60006
-1.02208	-367.9761
-1.02604	-373.35089
-1.03021	-378.67025
-1.03417	-384.04828
-1.03812	-389.48792
-1.04208	-394.86867
-1.04604	-400.2054
-1.04979	-405.49034
-1.05396	-410.72074
-1.05792	-416.01872
-1.06167	-421.36467
-1.06583	-426.66948
-1.07	-432.00296
-1.07396	-437.38121
-1.07812	-442.84382
-1.08208	-448.36596
-1.08625	-453.89321
-1.09021	-459.40655
-1.09417	-464.89212
-1.09812	-470.38242
-1.10187	-475.82582
-1.10604	-481.17945
-1.11	-486.554
-1.11416	-491.96205
-1.11812	-497.46895
-1.12208	-502.96777
-1.12604	-508.40628
-1.13	-513.87632
-1.13396	-519.36871

-1.13791	-524.88816
-1.14187	-530.38299
-1.14583	-535.83485
-1.14979	-541.27377
-1.15396	-546.72986
-1.15791	-552.338
-1.16208	-557.97553
-1.16604	-563.5854
-1.16979	-569.21309
-1.17396	-574.81122
-1.17791	-580.47545
-1.18166	-586.1299
-1.18583	-591.67737
-1.18979	-597.247
-1.19396	-602.85908
-1.19791	-608.52069
-1.20187	-614.19916
-1.20583	-619.89087
-1.20979	-625.56994
-1.21375	-631.2139
-1.21771	-636.93017
-1.22166	-642.62921
-1.22583	-648.31853
-1.23	-654.10125
-1.23416	-660.01278
-1.2375	-665.03245
-1.24083	-670.04013
-1.24458	-675.98581
-1.24854	-681.80948
-1.2525	-687.55907
-1.25625	-693.30931
-1.26021	-699.09126
-1.26416	-704.84662
-1.26833	-710.61456
-1.2725	-716.46321
-1.27666	-722.43708
-1.28021	-727.44536
-1.28354	-732.47665
-1.28666	-737.49691
-1.29083	-743.4327
-1.29479	-749.33922
-1.29854	-755.22417
-1.3025	-761.01273
-1.30646	-766.85876
-1.31041	-772.71366
-1.31437	-778.52064
-1.31833	-784.34843

-1.3225	-790.20709
-1.32625	-796.17405
-1.33021	-802.0938
-1.33416	-807.91783
-1.33771	-813.74866
-1.34187	-819.47935
-1.34583	-825.26153
-1.35	-831.13748
-1.35416	-837.0868
-1.3575	-842.10819
-1.36083	-847.11277
-1.36479	-853.11228
-1.36875	-859.10088
-1.37229	-864.10928
-1.37562	-869.19028
-1.37875	-874.27682
-1.38229	-879.28087
-1.38625	-885.22774
-1.39041	-891.20448
-1.39396	-896.26276
-1.39729	-901.41493
-1.40083	-906.60363
-1.40416	-911.79335
-1.40729	-916.92597
-1.41125	-922.88744
-1.415	-928.75284
-1.41896	-934.61895
-1.42271	-940.42766
-1.42687	-946.15078
-1.43104	-951.95788
-1.43437	-956.96199
-1.43771	-962.00544
-1.44125	-967.06992
-1.44458	-972.19688
-1.44791	-977.36001
-1.45125	-982.49578
-1.45458	-987.60849
-1.45771	-992.67811
-1.46166	-998.66003
-1.46562	-1,004.62
-1.46979	-1,010.58
-1.47333	-1,015.60
-1.47666	-1,020.70
-1.48021	-1,025.79
-1.48354	-1,030.88
-1.48687	-1,036.03
-1.49021	-1,041.17

-1.49354	-1,046.30
-1.49666	-1,051.34
-1.50041	-1,057.22
-1.50437	-1,063.00
-1.50854	-1,068.83
-1.51271	-1,074.76
-1.51583	-1,079.80
-1.51916	-1,084.80
-1.52333	-1,090.73
-1.52708	-1,096.69
-1.53104	-1,102.63
-1.53479	-1,108.59
-1.53875	-1,114.49
-1.54229	-1,120.28
-1.54646	-1,125.96
-1.55062	-1,131.69
-1.55458	-1,137.68
-1.55812	-1,142.77
-1.56166	-1,147.89
-1.565	-1,153.04
-1.56854	-1,158.16
-1.57187	-1,163.32
-1.575	-1,168.53
-1.57833	-1,173.67
-1.58146	-1,178.69
-1.58562	-1,184.57
-1.58979	-1,190.41
-1.59375	-1,196.39
-1.59708	-1,201.46
-1.60062	-1,206.57
-1.60416	-1,211.73
-1.6075	-1,216.89
-1.61104	-1,222.06
-1.61416	-1,227.22
-1.61729	-1,232.29
-1.62104	-1,238.15
-1.62479	-1,243.84
-1.62896	-1,249.48
-1.63291	-1,255.34
-1.63687	-1,261.34
-1.64104	-1,267.30
-1.64437	-1,272.31
-1.64791	-1,277.35
-1.65146	-1,282.46
-1.65479	-1,287.67
-1.65791	-1,292.86
-1.66125	-1,297.92

-1.66521	-1,303.85
-1.66916	-1,309.74
-1.67312	-1,315.71
-1.67729	-1,321.64
-1.68146	-1,327.61
-1.68479	-1,332.69
-1.68833	-1,337.78
-1.69166	-1,342.87
-1.695	-1,347.99
-1.69812	-1,353.08
-1.70208	-1,359.05
-1.70604	-1,364.90
-1.71021	-1,370.80
-1.71416	-1,376.76
-1.71833	-1,382.69
-1.72166	-1,387.70
-1.725	-1,392.78
-1.72833	-1,397.85
-1.73187	-1,402.89
-1.735	-1,407.94
-1.73896	-1,413.88
-1.7425	-1,419.70
-1.74666	-1,425.36
-1.75062	-1,431.09
-1.75437	-1,436.91
-1.75875	-1,442.72
-1.7625	-1,448.61
-1.76646	-1,454.44
-1.77062	-1,460.22
-1.77458	-1,466.14
-1.77833	-1,472.04
-1.78208	-1,477.79
-1.78625	-1,483.40
-1.79	-1,489.10
-1.79396	-1,494.90
-1.79812	-1,500.66
-1.80208	-1,506.50
-1.80604	-1,512.40
-1.81041	-1,518.33
-1.81375	-1,523.41
-1.81708	-1,528.56
-1.82021	-1,533.67
-1.82375	-1,538.67
-1.82771	-1,544.58
-1.83146	-1,550.46
-1.83562	-1,556.21
-1.83958	-1,562.00

-1.84354	-1,567.93
-1.84771	-1,573.85
-1.85166	-1,579.79
-1.85583	-1,585.74
-1.85979	-1,591.66
-1.86354	-1,597.56
-1.86771	-1,603.38
-1.87146	-1,609.22
-1.87562	-1,615.02
-1.87958	-1,620.85
-1.88354	-1,626.80
-1.88771	-1,632.79
-1.89166	-1,638.78
-1.89541	-1,644.66
-1.89937	-1,650.36
-1.90354	-1,656.05
-1.9075	-1,661.92
-1.91125	-1,667.91
-1.91562	-1,673.82
-1.91937	-1,679.74
-1.92354	-1,685.66
-1.92771	-1,691.61
-1.93104	-1,696.62
-1.93437	-1,701.65
-1.93833	-1,707.62
-1.9425	-1,713.52
-1.94666	-1,719.39
-1.95	-1,724.40
-1.95312	-1,729.44
-1.95729	-1,735.37
-1.96125	-1,741.27
-1.96541	-1,747.22
-1.96937	-1,753.15
-1.97333	-1,759.08
-1.9775	-1,765.02
-1.98146	-1,770.97
-1.98562	-1,776.83
-1.98958	-1,782.75
-1.99333	-1,788.61
-1.99729	-1,794.28
-2.00125	-1,799.94
-2.00521	-1,805.66
-2.00937	-1,811.39
-2.01333	-1,817.20
-2.01729	-1,823.02
-2.02125	-1,828.84
-2.02562	-1,834.69

-2.02958	-1,840.63
-2.03333	-1,846.31
-2.0375	-1,851.68
-2.04125	-1,857.13
-2.04541	-1,862.69
-2.04937	-1,868.37
-2.05312	-1,874.11
-2.05708	-1,879.80
-2.06104	-1,885.48
-2.06541	-1,891.22
-2.06937	-1,897.06
-2.07333	-1,902.96
-2.07708	-1,908.79
-2.08104	-1,914.54
-2.085	-1,920.29
-2.08916	-1,926.08
-2.09291	-1,931.90
-2.09687	-1,937.62
-2.10104	-1,943.31
-2.10521	-1,949.09
-2.10937	-1,955.04
-2.11271	-1,960.10
-2.11604	-1,965.12
-2.12	-1,971.09
-2.12396	-1,976.97
-2.12791	-1,982.82
-2.13166	-1,988.62
-2.13583	-1,994.28
-2.13958	-1,999.97
-2.14375	-2,005.66
-2.14771	-2,011.38
-2.15187	-2,017.18
-2.15583	-2,023.05
-2.15958	-2,029.00
-2.16375	-2,034.87
-2.1677	-2,040.70
-2.17145	-2,046.52
-2.17562	-2,052.19
-2.17958	-2,057.96
-2.18354	-2,063.73
-2.18791	-2,069.46
-2.19187	-2,075.33
-2.19583	-2,081.24
-2.19958	-2,087.08
-2.20354	-2,092.79
-2.2075	-2,098.47
-2.20895	-2,100.38

Rib Defleshed 12	
Size (Length, Width) (mm)	
15.25	23.31
Extension	Load
(mm)	(N)
-0.88687	-4.67461
-0.90104	-9.47639
-0.91021	-14.4953
-0.9175	-19.53394
-0.92437	-24.55165
-0.93104	-30.10299
-0.93667	-35.26415
-0.94187	-40.61691
-0.94729	-46.07429
-0.95271	-51.6239
-0.95812	-57.21754
-0.96333	-62.86386
-0.96896	-68.66876
-0.97333	-73.78791
-0.97771	-78.95674
-0.98208	-84.10054
-0.98646	-89.15464
-0.99083	-94.20351
-0.99521	-99.29406
-0.99958	-104.39258
-1.00396	-109.53831
-1.00833	-114.73706
-1.0125	-119.95862
-1.01687	-125.14932
-1.02083	-130.36564
-1.025	-135.55929
-1.02937	-140.74698
-1.03333	-145.94483
-1.03771	-151.12801
-1.04167	-156.36733
-1.04583	-161.61308
-1.05	-166.82053
-1.05396	-171.99099
-1.05812	-177.10726
-1.06208	-182.22551
-1.06625	-187.39133
-1.07021	-192.66611
-1.07416	-197.98067
-1.07833	-203.25172
-1.0825	-208.54254
-1.08646	-213.8298

-1.09062	-219.08884
-1.09458	-224.38537
-1.09875	-229.70669
-1.10271	-235.02861
-1.10667	-240.37133
-1.11062	-245.78808
-1.11479	-251.22347
-1.11875	-256.65501
-1.12271	-262.09828
-1.12687	-267.49384
-1.13083	-272.87984
-1.13479	-278.31814
-1.13875	-283.76758
-1.14291	-289.19044
-1.14708	-294.65276
-1.15083	-300.19963
-1.155	-305.67718
-1.15896	-311.17871
-1.16291	-316.74647
-1.16708	-322.25174
-1.17104	-327.72231
-1.17479	-333.15402
-1.17896	-338.53063
-1.18312	-343.94684
-1.18708	-349.49335
-1.19104	-355.1079
-1.19521	-360.72767
-1.19916	-366.37631
-1.20312	-372.06206
-1.20729	-377.75925
-1.21125	-383.45844
-1.21521	-389.07465
-1.21916	-394.60698
-1.22354	-400.11495
-1.2275	-405.77003
-1.23125	-411.54274
-1.23562	-417.26136
-1.23958	-423.00466
-1.24333	-428.74157
-1.2475	-434.42959
-1.25146	-440.16236
-1.25541	-445.85302
-1.25937	-451.43688
-1.26354	-457.00315
-1.26771	-462.69643
-1.27166	-468.54565
-1.27562	-474.40535

-1.27958	-480.22074
-1.28375	-485.94788
-1.2875	-491.63947
-1.29146	-497.35233
-1.29541	-503.07065
-1.29916	-508.70281
-1.30333	-514.17184
-1.3075	-519.74702
-1.31125	-525.47157
-1.31541	-531.19725
-1.31896	-537.00024
-1.32312	-542.71734
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-1.58896	-934.02278
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-1.59604	-944.22805
-1.59937	-949.37509
-1.60271	-954.56254
-1.60604	-959.72872
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-2.24708	-1,916.68
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-2.25458	-1,927.67
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-2.26583	-1,944.67
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-2.2777	-1,962.04
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-2.30125	-1,996.46
-2.30458	-2,001.54
-2.30791	-2,006.56
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-2.31979	-2,024.11
-2.32333	-2,030.04
-2.3277	-2,035.93
-2.33145	-2,041.83
-2.33562	-2,047.66
-2.33979	-2,053.48

-2.34375	-2,059.44
-2.34708	-2,064.45
-2.35041	-2,069.47
-2.35416	-2,075.44
-2.35833	-2,081.26
-2.36208	-2,087.11
-2.36604	-2,092.96
-2.37	-2,098.85
-2.37145	-2,100.84

Rib Defleshed 13	
Size (Length, Width) (mm)	
18.84	31.23
Extension	Load
(mm)	(N)
-0.02396	-4.58647
-0.03458	-9.72931
-0.04	-15.36371
-0.04437	-20.65441
-0.04875	-26.63299
-0.0525	-31.95249
-0.05646	-37.40232
-0.06042	-42.88638
-0.06437	-48.42615
-0.06833	-54.01818
-0.07208	-59.60118
-0.07604	-65.15373
-0.07979	-70.61815
-0.08354	-75.94761
-0.08708	-81.13791
-0.09062	-86.14852
-0.095	-91.95901
-0.09937	-97.64639
-0.10354	-103.16952
-0.10792	-108.52738
-0.11229	-113.80138
-0.11646	-119.07423
-0.12083	-124.40427
-0.125	-129.84329
-0.12917	-135.30472
-0.13333	-140.67069
-0.1375	-146.00143
-0.14187	-151.38632
-0.14604	-156.92465
-0.15042	-162.48928
-0.15458	-167.97639
-0.15875	-173.35111
-0.16271	-178.60538
-0.16667	-183.83214
-0.17083	-189.03619
-0.17479	-194.21896
-0.17875	-199.35144
-0.18292	-204.37512
-0.18687	-209.41521
-0.19104	-214.53105
-0.19521	-219.72522
-0.19937	-224.97889
-0.20333	-230.22611
-0.20729	-235.37904
-0.21146	-240.44284
-0.21542	-245.52047
-0.21958	-250.64674
-0.22354	-255.82844
-0.22771	-260.98108
-0.23187	-266.11567
-0.23604	-271.3151
-0.24	-276.61699
-0.24396	-281.94645
-0.24792	-287.16853
-0.25187	-292.27269
-0.25583	-297.37061
-0.26021	-302.52936
-0.26417	-307.84732
-0.26833	-313.22998
-0.2725	-318.54138
-0.27667	-323.85454
-0.28062	-329.20095
-0.28458	-334.56758
-0.28833	-339.82798
-0.2925	-344.93896
-0.29667	-350.05182
-0.30062	-355.2613
-0.30458	-360.5918
-0.30875	-365.96105
-0.31271	-371.28678
-0.31667	-376.52701
-0.32062	-381.71569
-0.32458	-386.95061
-0.32812	-392.20136
-0.33208	-397.35851
-0.33625	-402.44287
-0.34021	-407.58768
-0.34417	-412.87911
-0.34833	-418.2893
-0.35229	-423.77558
-0.35646	-429.26928
-0.36062	-434.69873
-0.36458	-440.12448
-0.36854	-445.57521
-0.37229	-451.0029
-0.37646	-456.33999
-0.38062	-461.67269
-0.38437	-467.071
-0.38854	-472.39393
-0.39271	-477.75665
-0.39667	-483.27801
-0.40062	-488.78908
-0.40458	-494.22923
-0.40854	-499.58092
-0.4125	-504.88657
-0.41646	-510.21433
-0.42062	-515.63239
-0.42458	-521.14004
-0.42854	-526.63904
-0.43271	-532.15027
-0.43667	-537.72134
-0.44062	-543.32757
-0.44458	-548.93148
-0.44854	-554.47191
-0.4525	-559.96442
-0.45646	-565.42742
-0.46042	-570.98061
-0.46437	-576.5838
-0.46854	-582.1898
-0.4725	-587.85516
-0.47667	-593.54883
-0.48083	-599.29901
-0.48479	-605.17198
-0.48896	-611.054
-0.4925	-616.83416
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-0.50062	-627.87849
-0.50437	-633.44103
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-0.52854	-667.34785

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-0.55229	-701.74801
-0.55625	-707.46815
-0.56021	-713.14722
-0.56417	-718.86307
-0.56812	-724.58017
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-0.57625	-736.15116
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-0.59229	-759.52619
-0.59625	-765.51515
-0.59979	-770.52522
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-0.60646	-780.54583
-0.61042	-786.48424
-0.61458	-792.39225
-0.61854	-798.36643
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-0.62625	-810.1297
-0.63021	-815.87905
-0.63396	-821.62118
-0.63812	-827.36987
-0.64229	-833.24808
-0.64625	-839.22762
-0.65042	-845.1848
-0.65458	-851.18741
-0.65792	-856.23348
-0.66104	-861.29332
-0.66479	-867.24234
-0.66896	-873.03293
-0.67292	-878.83788
-0.67687	-884.66233
-0.68104	-890.53851
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-1.24791	-1,728.83
-1.25166	-1,733.87
-1.255	-1,739.03
-1.25833	-1,744.37
-1.26166	-1,749.70
-1.26521	-1,755.01
-1.26854	-1,760.31
-1.27208	-1,765.57
-1.27521	-1,770.80
-1.27854	-1,775.98
-1.28187	-1,781.12
-1.28479	-1,786.20
-1.28896	-1,792.14
-1.29312	-1,798.12
-1.29625	-1,803.20
-1.29958	-1,808.26
-1.30333	-1,813.36
-1.30666	-1,818.65
-1.31	-1,823.98
-1.31354	-1,829.22
-1.31687	-1,834.45
-1.32	-1,839.64
-1.32312	-1,844.75
-1.32646	-1,849.78
-1.33041	-1,855.76
-1.33416	-1,861.74
-1.33812	-1,867.67
-1.34229	-1,873.58
-1.34562	-1,878.60
-1.34875	-1,883.69
-1.35208	-1,888.75
-1.35541	-1,893.79
-1.35875	-1,898.84
-1.36187	-1,903.91
-1.36521	-1,908.94
-1.36833	-1,913.96
-1.37229	-1,919.96
-1.37562	-1,925.00
-1.37896	-1,930.09
-1.3825	-1,935.19
-1.38583	-1,940.40
-1.38937	-1,945.66
-1.39291	-1,950.93
-1.39625	-1,956.26
-1.39958	-1,961.58
-1.40291	-1,966.85
-1.40604	-1,972.07
-1.40937	-1,977.16
-1.41271	-1,982.23
-1.41604	-1,987.36
-1.41937	-1,992.47
-1.42271	-1,997.54
-1.42604	-2,002.65
-1.42937	-2,007.81
-1.43291	-2,012.99
-1.43625	-2,018.24
-1.43958	-2,023.48
-1.44291	-2,028.64
-1.44604	-2,033.71
-1.44937	-2,038.74
-1.45271	-2,043.81
-1.45583	-2,048.89
-1.45916	-2,053.91
-1.4625	-2,058.92
-1.46562	-2,063.94
-1.47	-2,069.90
-1.47333	-2,074.94
-1.47646	-2,080.08
-1.48	-2,085.21
-1.48354	-2,090.37
-1.48666	-2,095.60
-1.49	-2,100.79

Rib Defleshed 14	
Size (Length, Width) (mm)	
17.46	31.22
Extension	Load
(mm)	(N)
-0.02021	-0.00127
-0.04104	-0.00067
-0.07979	0.01762
-0.11604	0.00622
-0.15104	0.00614
-0.18542	0.00827
-0.21896	-0.12068
-0.25271	-3.83918
-0.28625	-6.1033
-0.3025	-11.18844
-0.31396	-16.43469
-0.32458	-21.68436
-0.33437	-26.98982
-0.34354	-32.36984
-0.35208	-37.69629
-0.36	-43.09764

-0.3675	-48.15897
-0.37458	-53.33867
-0.38187	-58.83598
-0.38854	-63.84367
-0.39521	-68.84852
-0.40208	-74.21892
-0.40833	-79.40701
-0.41417	-84.49654
-0.42062	-90.04608
-0.42646	-95.27576
-0.43229	-100.61248
-0.43854	-105.78875
-0.44458	-111.30259
-0.45	-116.52813
-0.45521	-121.86535
-0.46042	-127.1002
-0.46583	-132.26232
-0.47083	-137.55564
-0.47625	-142.89553
-0.48146	-148.3309
-0.48708	-153.80663
-0.4925	-159.47768
-0.49708	-164.5968
-0.50187	-169.75699
-0.50625	-174.89338
-0.51083	-179.90883
-0.51625	-185.6163
-0.52104	-190.71174
-0.52583	-195.95456
-0.53062	-201.2563
-0.53521	-206.56815
-0.54	-211.93643
-0.54437	-217.32707
-0.54917	-222.6426
-0.55375	-227.86149
-0.55833	-233.07735
-0.56312	-238.34522
-0.56771	-243.72216
-0.5725	-249.11943
-0.57708	-254.55093
-0.58167	-259.9532
-0.58604	-265.31154
-0.59042	-270.596
-0.59521	-275.86317
-0.6	-281.27509
-0.60479	-286.76227
-0.60958	-292.37753

-0.61437	-298.11099
-0.61896	-303.92596
-0.62354	-309.67385
-0.62812	-315.33769
-0.63271	-320.90124
-0.63729	-326.46358
-0.64208	-332.05998
-0.64687	-337.69307
-0.65146	-343.3843
-0.65625	-349.16452
-0.66021	-354.18093
-0.66417	-359.18137
-0.66854	-364.91454
-0.67312	-370.5048
-0.6775	-376.12137
-0.6825	-381.74722
-0.68708	-387.55551
-0.69104	-392.58152
-0.69542	-397.60119
-0.69937	-402.73091
-0.70333	-407.94447
-0.70729	-413.15845
-0.71125	-418.32975
-0.71521	-423.43298
-0.71937	-428.48253
-0.72354	-433.57167
-0.7275	-438.74279
-0.73167	-443.92338
-0.73583	-449.09495
-0.74	-454.27927
-0.74375	-459.4886
-0.74771	-464.58358
-0.75167	-469.61248
-0.75562	-474.68048
-0.75979	-479.73239
-0.76375	-484.82394
-0.76771	-489.93155
-0.77187	-495.01589
-0.77562	-500.14257
-0.77979	-505.18763
-0.78375	-510.19508
-0.78812	-516.00373
-0.7925	-521.72673
-0.79708	-527.42201
-0.80208	-533.23323
-0.80583	-538.3724
-0.81	-543.4677

-0.81417	-548.56831
-0.81812	-553.74777
-0.82229	-558.94703
-0.82625	-564.20702
-0.83	-569.35567
-0.83437	-575.15424
-0.83937	-580.87224
-0.84333	-585.9375
-0.84729	-591.08979
-0.85146	-596.20321
-0.85542	-601.29941
-0.85958	-606.42821
-0.86354	-611.62561
-0.8675	-616.80597
-0.87125	-621.90068
-0.87604	-627.716
-0.88062	-633.52275
-0.88458	-638.59516
-0.88854	-643.66513
-0.8925	-648.67878
-0.89729	-654.49417
-0.90146	-659.51461
-0.90542	-664.66665
-0.90937	-669.86752
-0.91333	-675.00716
-0.9175	-680.07708
-0.92125	-685.20796
-0.92521	-690.35804
-0.92937	-695.46479
-0.93333	-700.53667
-0.93729	-705.56581
-0.94146	-710.5841
-0.94521	-715.62523
-0.94937	-720.67332
-0.95312	-725.77721
-0.9575	-730.8737
-0.96146	-736.06247
-0.96542	-741.33557
-0.96958	-746.58924
-0.97354	-751.86414
-0.9775	-757.09331
-0.98146	-762.29572
-0.98562	-767.4551
-0.98937	-772.58569
-0.99333	-777.70025
-0.99708	-782.77004
-1.00125	-787.83363

-1.00521	-792.98478
-1.00917	-798.14881
-1.01312	-803.30944
-1.01729	-808.47418
-1.02125	-813.68744
-1.02542	-818.93945
-1.02937	-824.15831
-1.03312	-829.34022
-1.03729	-834.38367
-1.04125	-839.51104
-1.04521	-844.78807
-1.04937	-850.07501
-1.05333	-855.37356
-1.05729	-860.61502
-1.06146	-865.82696
-1.06542	-871.06782
-1.06937	-876.29616
-1.07333	-881.47229
-1.07729	-886.5962
-1.08125	-891.73061
-1.08521	-896.86012
-1.08916	-902.01902
-1.09312	-907.21148
-1.09708	-912.38713
-1.10104	-917.54836
-1.10521	-922.68729
-1.10937	-927.87063
-1.11333	-933.12693
-1.1175	-938.43925
-1.12146	-943.80039
-1.12541	-949.05627
-1.12937	-954.20569
-1.13333	-959.33849
-1.13729	-964.5018
-1.14146	-969.70952
-1.14541	-974.87849
-1.14937	-979.97183
-1.15354	-985.02332
-1.1575	-990.17274
-1.16125	-995.46295
-1.16541	-1,000.69
-1.16958	-1,005.83
-1.17354	-1,011.05
-1.1775	-1,016.24
-1.18146	-1,021.39
-1.18541	-1,026.52
-1.18937	-1,031.60

-1.19333	-1,036.64
-1.19729	-1,041.65
-1.20104	-1,046.67
-1.20583	-1,052.49
-1.20958	-1,057.53
-1.21354	-1,062.59
-1.21771	-1,067.64
-1.22166	-1,072.82
-1.22562	-1,077.99
-1.22958	-1,083.13
-1.23375	-1,088.26
-1.23812	-1,093.47
-1.24187	-1,098.81
-1.24583	-1,104.02
-1.25	-1,109.14
-1.25396	-1,114.38
-1.25812	-1,119.64
-1.26208	-1,124.92
-1.26625	-1,130.17
-1.27021	-1,135.34
-1.27437	-1,140.45
-1.27833	-1,145.57
-1.28229	-1,150.72
-1.28625	-1,155.81
-1.29021	-1,160.90
-1.29416	-1,165.95
-1.29833	-1,171.01
-1.30187	-1,176.09
-1.30666	-1,181.86
-1.31125	-1,187.58
-1.31604	-1,193.26
-1.32062	-1,198.99
-1.325	-1,204.74
-1.32979	-1,210.46
-1.33375	-1,215.48
-1.33771	-1,220.56
-1.34166	-1,225.62
-1.34604	-1,230.66
-1.35	-1,235.76
-1.35416	-1,240.91
-1.35854	-1,246.09
-1.36229	-1,251.29
-1.36625	-1,256.30
-1.37083	-1,261.98
-1.37521	-1,267.58
-1.37979	-1,273.08
-1.38437	-1,278.56

-1.38896	-1,284.03
-1.39375	-1,289.50
-1.39854	-1,295.07
-1.40333	-1,300.72
-1.40791	-1,306.41
-1.41229	-1,312.08
-1.41708	-1,317.66
-1.42146	-1,323.25
-1.42646	-1,328.75
-1.43104	-1,334.35
-1.43604	-1,339.96
-1.44083	-1,345.65
-1.44562	-1,351.39
-1.45021	-1,357.12
-1.45479	-1,362.77
-1.45937	-1,368.29
-1.46416	-1,373.67
-1.46875	-1,379.03
-1.47354	-1,384.29
-1.47833	-1,389.50
-1.48291	-1,394.81
-1.4875	-1,400.03
-1.49208	-1,405.23
-1.49646	-1,410.40
-1.50104	-1,415.60
-1.50562	-1,420.73
-1.51041	-1,425.81
-1.51521	-1,430.97
-1.52021	-1,436.32
-1.525	-1,441.76
-1.52979	-1,447.18
-1.53416	-1,452.50
-1.53875	-1,457.61
-1.54396	-1,463.29
-1.54916	-1,468.90
-1.55479	-1,474.51
-1.55958	-1,479.54
-1.56458	-1,484.63
-1.56958	-1,489.77
-1.57416	-1,494.95
-1.57854	-1,499.96
-1.58396	-1,505.24
-1.58896	-1,510.42
-1.59458	-1,515.51
-1.59979	-1,520.74
-1.60541	-1,525.81
-1.61062	-1,530.94

-1.61666	-1,536.56
-1.62229	-1,542.06
-1.62812	-1,547.33
-1.63416	-1,552.64
-1.64	-1,558.08
-1.64625	-1,563.43
-1.65229	-1,568.79
-1.65812	-1,574.29
-1.66396	-1,579.58
-1.67062	-1,585.09
-1.67666	-1,590.16
-1.68291	-1,595.53
-1.68916	-1,600.81
-1.69521	-1,605.89
-1.70166	-1,611.18
-1.70812	-1,616.21
-1.71541	-1,621.42
-1.72291	-1,626.72
-1.73062	-1,632.10
-1.73791	-1,637.38
-1.745	-1,642.45
-1.75333	-1,647.64
-1.76208	-1,653.00
-1.77083	-1,658.28
-1.77979	-1,663.49
-1.78875	-1,668.66
-1.79937	-1,673.87
-1.81146	-1,679.14
-1.82354	-1,684.25
-1.83791	-1,689.27
-1.87146	-1,693.59
-1.89104	-1,688.32
-1.90062	-1,683.30
-1.90791	-1,677.81
-1.91396	-1,672.27
-1.91854	-1,667.08
-1.92291	-1,661.88
-1.92687	-1,655.95
-1.93041	-1,650.15
-1.93333	-1,644.78
-1.93604	-1,638.64
-1.93812	-1,633.43
-1.94041	-1,627.59
-1.9425	-1,620.99
-1.94458	-1,613.46
-1.94604	-1,607.82
-1.9475	-1,601.60
-1.94896	-1,594.69
-1.95041	-1,586.97
-1.95187	-1,578.26
-1.95333	-1,568.27
-1.95396	-1,562.65
-1.95479	-1,556.49
-1.95562	-1,549.55
-1.95666	-1,540.98
-1.95833	-1,527.91
-1.96104	-1,505.16
-1.96396	-1,468.58
-1.96708	-1,418.65
-1.97021	-1,358.67
-1.97333	-1,290.84
-1.97604	-1,216.25
-1.97833	-1,137.00
-1.98	-1,056.28
-1.98104	-976.64392

Rib Control 1	
Size (Length, Width) (mm)	
11.34	24.90
Extension	Load
(mm)	(N)
-0.25021	-2.01744
-0.265	-5.3353
-0.28271	-10.59785
-0.2975	-15.89952
-0.32271	-20.91844
-0.33417	-26.2145
-0.3425	-31.3587
-0.34917	-36.76131
-0.35562	-42.38408
-0.36125	-47.62532
-0.36708	-53.08934
-0.37292	-58.64878
-0.37875	-64.19117
-0.38437	-69.88325
-0.38958	-74.93107
-0.39417	-79.98257
-0.39979	-85.62222
-0.405	-91.30296
-0.41	-96.368
-0.41458	-101.54517
-0.41958	-106.67621
-0.42437	-111.8482
-0.42917	-117.1129
-0.43375	-122.43839
-0.43854	-127.62243
-0.44312	-132.67018
-0.44792	-137.76337
-0.45271	-143.02719
-0.45729	-148.40378
-0.46229	-153.71475
-0.46708	-159.04236
-0.47167	-164.44586
-0.47646	-169.91703
-0.48104	-175.40345
-0.48583	-180.79937
-0.49062	-186.17545
-0.49542	-191.66149
-0.50021	-197.23585
-0.505	-202.95504
-0.50979	-208.73956
-0.51437	-214.50442
-0.51917	-220.23888
-0.52354	-225.98678
-0.52854	-231.72119
-0.5325	-236.76774
-0.53625	-241.83451
-0.54125	-247.6383
-0.545	-252.70179
-0.54896	-257.79948
-0.55312	-262.92175
-0.55687	-268.07326
-0.56083	-273.15012
-0.565	-278.15425
-0.56917	-283.26455
-0.57312	-288.5482
-0.57729	-293.92001
-0.58125	-299.31372
-0.58521	-304.66342
-0.58937	-309.912
-0.59333	-315.14898
-0.59687	-320.37809
-0.60104	-325.51098
-0.605	-330.60208
-0.60896	-335.78584
-0.61292	-341.02428
-0.61708	-346.26833
-0.62104	-351.52602
-0.625	-356.76864

-0.62896	-362.01763
-0.63292	-367.24475
-0.63687	-372.43161
-0.64083	-377.61
-0.645	-382.76786
-0.64896	-388.03187
-0.65292	-393.37
-0.65708	-398.65744
-0.66104	-403.96073
-0.665	-409.24609
-0.66917	-414.50366
-0.67292	-419.82219
-0.67708	-425.13838
-0.68104	-430.44987
-0.685	-435.73025
-0.68917	-441.00147
-0.69292	-446.30948
-0.69708	-451.61575
-0.70104	-456.96461
-0.705	-462.29944
-0.70917	-467.57972
-0.71312	-472.82735
-0.71708	-478.09333
-0.72104	-483.44639
-0.72521	-488.84642
-0.72917	-494.27274
-0.73333	-499.64413
-0.73729	-504.97085
-0.74125	-510.35058
-0.74521	-515.72585
-0.74917	-521.02846
-0.75292	-526.23647
-0.75708	-531.35788
-0.76083	-536.51577
-0.765	-541.76337
-0.76896	-547.10662
-0.77292	-552.48922
-0.77708	-557.8739
-0.78083	-563.2382
-0.785	-568.53598
-0.78896	-573.87036
-0.79292	-579.23722
-0.79708	-584.57917
-0.80104	-589.9052
-0.805	-595.18552
-0.80896	-600.51417
-0.81271	-605.8526

-0.81687	-611.10091
-0.82083	-616.39547
-0.82479	-621.72037
-0.82896	-627.01303
-0.83292	-632.36982
-0.83687	-637.73507
-0.84083	-643.10098
-0.845	-648.4558
-0.84875	-653.84489
-0.85271	-659.17218
-0.85667	-664.45601
-0.86062	-669.79581
-0.86458	-675.17906
-0.86854	-680.55129
-0.8725	-685.86677
-0.87667	-691.16014
-0.88083	-696.51759
-0.88479	-702.043
-0.88896	-707.76916
-0.89292	-713.52714
-0.89708	-719.23268
-0.90104	-724.89214
-0.90521	-730.54469
-0.90917	-736.24194
-0.91312	-741.93043
-0.91708	-747.53994
-0.92125	-753.01814
-0.92542	-758.49104
-0.92917	-764.13274
-0.93312	-769.80919
-0.93708	-775.45017
-0.94104	-781.10278
-0.945	-786.69357
-0.94875	-792.22506
-0.95292	-797.78606
-0.95667	-803.41005
-0.96083	-808.98607
-0.965	-814.547
-0.96875	-820.18048
-0.97271	-825.80829
-0.97667	-831.46143
-0.98062	-837.14175
-0.98479	-842.75204
-0.98854	-848.3519
-0.99271	-853.9201
-0.99667	-859.52574
-1.00083	-865.17566

-1.005	-870.90427
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-1.01708	-888.37391
-1.02104	-894.09602
-1.02521	-899.80185
-1.02896	-905.51311
-1.03292	-911.09943
-1.03687	-916.56196
-1.04104	-922.09619
-1.045	-927.70356
-1.04875	-933.36433
-1.05271	-938.99763
-1.05667	-944.59963
-1.06083	-950.21749
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-1.07271	-967.40919
-1.07687	-973.06836
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-1.10083	-1,007.14
-1.10479	-1,012.77
-1.10875	-1,018.40
-1.11271	-1,024.01
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-1.12083	-1,035.27
-1.125	-1,040.92
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-1.14854	-1,074.99
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-1.16896	-1,103.12
-1.17312	-1,108.78
-1.17687	-1,114.41
-1.18083	-1,120.06
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-1.18854	-1,131.35

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-1.21708	-1,170.68
-1.22104	-1,176.32
-1.225	-1,181.92
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-1.23312	-1,193.10
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-1.24521	-1,209.63
-1.24916	-1,215.21
-1.25333	-1,220.87
-1.25708	-1,226.56
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-1.26479	-1,237.55
-1.26854	-1,242.88
-1.27271	-1,248.15
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-1.30479	-1,292.22
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-1.32083	-1,314.11
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-1.39666	-1,417.58
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-1.43687	-1,470.91
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-1.50229	-1,555.35
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-1.52625	-1,586.45
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-1.53437	-1,596.74
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-1.5425	-1,606.94
-1.54666	-1,612.15
-1.55062	-1,617.40
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-1.55833	-1,627.59
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-1.56687	-1,638.47

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-1.57521	-1,648.76
-1.57916	-1,653.94
-1.58312	-1,659.01
-1.58708	-1,664.03
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-1.59479	-1,674.17
-1.59854	-1,679.18
-1.60312	-1,684.88
-1.60791	-1,690.58
-1.61208	-1,695.59
-1.61604	-1,700.74
-1.62021	-1,705.94
-1.62416	-1,711.21
-1.62833	-1,716.46
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-1.63625	-1,726.84
-1.64041	-1,731.92
-1.64416	-1,737.09
-1.64833	-1,742.20
-1.65229	-1,747.26
-1.65646	-1,752.32
-1.66041	-1,757.42
-1.66437	-1,762.57
-1.66833	-1,767.70
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-1.67666	-1,778.45
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-1.68583	-1,789.77
-1.69041	-1,795.50
-1.69521	-1,801.23
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-1.70771	-1,816.69
-1.71166	-1,821.94
-1.71562	-1,827.23
-1.71979	-1,832.46
-1.72375	-1,837.64
-1.72771	-1,842.73
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-1.73562	-1,852.84
-1.73979	-1,857.88
-1.74375	-1,862.95
-1.74791	-1,867.95
-1.75166	-1,872.96
-1.75646	-1,878.79
-1.76041	-1,883.85

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-1.76896	-1,894.63
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-1.78541	-1,915.53
-1.79021	-1,921.35
-1.79396	-1,926.36
-1.79812	-1,931.36
-1.80187	-1,936.41
-1.80646	-1,942.19
-1.81125	-1,947.99
-1.81521	-1,953.09
-1.81937	-1,958.17
-1.82333	-1,963.31
-1.8275	-1,968.45
-1.83146	-1,973.60
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-1.83937	-1,983.86
-1.84333	-1,988.92
-1.84812	-1,994.72
-1.85208	-1,999.73
-1.85625	-2,004.81
-1.86021	-2,010.00
-1.86437	-2,015.22
-1.86854	-2,020.40
-1.8725	-2,025.55
-1.87666	-2,030.69
-1.88021	-2,035.86
-1.88416	-2,040.86
-1.88896	-2,046.60
-1.89333	-2,052.42
-1.89812	-2,058.20
-1.90187	-2,063.22
-1.90646	-2,069.02
-1.91146	-2,074.85
-1.91562	-2,080.00
-1.91958	-2,085.25
-1.92354	-2,090.54
-1.9275	-2,095.73
-1.93146	-2,100.82

Rib Control 2	
Size (Length, Width) (mm)	
12.29	22.94

Extension	Load
(mm)	(N)
-0.10583	-135.87065
-0.11708	-141.33878
-0.12208	-146.46551
-0.12667	-152.16264
-0.13062	-157.52478
-0.13479	-163.22982
-0.13875	-169.19412
-0.14271	-175.34499
-0.14687	-181.58546
-0.15	-186.61331
-0.15312	-191.62786
-0.15708	-197.8115
-0.16125	-203.85969
-0.165	-209.81552
-0.16896	-215.70577
-0.17292	-221.54914
-0.17708	-227.413
-0.18083	-233.3035
-0.18479	-239.15771
-0.18854	-244.93468
-0.19229	-250.60934
-0.19604	-256.21817
-0.19958	-261.81445
-0.20333	-267.34737
-0.20687	-272.77964
-0.21062	-278.11316
-0.21437	-283.38471
-0.21792	-288.61147
-0.22167	-293.7699
-0.22521	-298.9333
-0.22875	-304.09253
-0.23229	-309.21835
-0.23583	-314.31374
-0.23917	-319.34109
-0.24354	-325.25733
-0.24792	-331.18346
-0.25229	-337.14586
-0.25667	-343.11551
-0.26083	-349.08035
-0.26479	-355.01382
-0.26896	-360.83508
-0.27312	-366.57083
-0.27708	-372.24412
-0.28125	-377.77844
-0.28542	-383.22377
-0.28958	-388.67879
-0.29375	-394.16122
-0.29792	-399.70431
-0.30208	-405.2501
-0.30604	-410.77501
-0.31021	-416.20827
-0.31396	-421.55585
-0.31812	-426.8544
-0.32208	-432.14405
-0.32604	-437.4505
-0.33042	-442.74643
-0.33458	-448.07696
-0.33854	-453.45119
-0.34271	-458.80401
-0.34667	-464.19662
-0.35062	-469.55502
-0.35437	-474.796
-0.35833	-479.93279
-0.36229	-485.02716
-0.36625	-490.16929
-0.37042	-495.37024
-0.37437	-500.6659
-0.37854	-506.01482
-0.38292	-511.38401
-0.38687	-516.84916
-0.39083	-522.35037
-0.395	-527.8179
-0.39875	-533.23942
-0.40271	-538.48451
-0.40667	-543.65528
-0.41062	-548.84058
-0.41479	-554.07423
-0.41875	-559.41099
-0.42292	-564.78882
-0.42687	-570.20843
-0.43083	-575.65707
-0.43479	-581.09909
-0.43854	-586.47364
-0.44271	-591.77434
-0.44667	-597.14144
-0.45083	-602.51701
-0.45479	-607.91737
-0.45896	-613.39754
-0.46292	-618.8876
-0.46708	-624.37361
-0.47104	-629.8489
-0.47479	-635.28907

-0.47875	-640.62506
-0.48271	-645.86461
-0.48646	-651.10999
-0.49083	-656.38471
-0.495	-661.85617
-0.49896	-667.4363
-0.50312	-672.96922
-0.50729	-678.5118
-0.51125	-684.0989
-0.51479	-689.6596
-0.51896	-695.10514
-0.52292	-700.53053
-0.52667	-705.92183
-0.53104	-711.23064
-0.535	-716.69722
-0.53917	-722.30643
-0.54333	-727.90807
-0.54729	-733.52331
-0.55125	-739.12555
-0.555	-744.67313
-0.55896	-750.08607
-0.56292	-755.40692
-0.56687	-760.74082
-0.57125	-766.12699
-0.57521	-771.68691
-0.57917	-777.24612
-0.58333	-782.73177
-0.58729	-788.24949
-0.59146	-793.82443
-0.59521	-799.44742
-0.59917	-804.95596
-0.60312	-810.33212
-0.60708	-815.65875
-0.61125	-821.0445
-0.61521	-826.57826
-0.61917	-832.14861
-0.62333	-837.63999
-0.62729	-843.10561
-0.63125	-848.53572
-0.63479	-853.90383
-0.63875	-859.15679
-0.64271	-864.38417
-0.64646	-869.60828
-0.65062	-874.81612
-0.65458	-880.1052
-0.65875	-885.46348
-0.66292	-890.90526

-0.66687	-896.48664
-0.67104	-902.06075
-0.675	-907.60893
-0.67917	-913.09446
-0.68271	-918.50388
-0.68708	-923.8137
-0.69125	-929.2292
-0.695	-934.7955
-0.69937	-940.21553
-0.70333	-945.64348
-0.70729	-951.10208
-0.71146	-956.56288
-0.71542	-962.03363
-0.71917	-967.45652
-0.72312	-972.76884
-0.72708	-977.95337
-0.73104	-983.13189
-0.735	-988.40654
-0.73896	-993.72172
-0.74312	-999.09109
-0.74708	-1,004.47
-0.75104	-1,009.79
-0.755	-1,015.07
-0.75896	-1,020.43
-0.76292	-1,025.86
-0.76687	-1,031.22
-0.77083	-1,036.58
-0.775	-1,041.96
-0.77896	-1,047.33
-0.78292	-1,052.75
-0.78708	-1,058.20
-0.79125	-1,063.72
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-0.83125	-1,117.12
-0.83521	-1,122.56
-0.83917	-1,127.89
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-0.84687	-1,138.25
-0.85062	-1,143.44

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-1.30625	-1,735.31
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-1.31416	-1,745.49
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-1.55146	-2,043.41
-1.55562	-2,049.11
-1.56062	-2,054.63
-1.565	-2,060.28
-1.56979	-2,065.95
-1.57458	-2,071.70
-1.57854	-2,076.72
-1.58271	-2,081.76
-1.58646	-2,086.89
-1.59041	-2,091.94
-1.595	-2,097.72
-1.59666	-2,100.18

Rib Control 3	
Size (Length, Width) (mm)	
17.45	26.45

Extension	Load
(mm)	(N)
-0.03979	-68.68271
-0.04937	-74.11033
-0.05354	-79.42531
-0.05708	-85.11882
-0.06	-90.26878
-0.06312	-95.79338
-0.06604	-101.55518
-0.06917	-107.42488
-0.07208	-113.32076
-0.075	-119.22842
-0.07792	-125.1134
-0.08083	-131.00025
-0.08375	-136.90077
-0.08667	-142.74615
-0.08937	-148.50897
-0.09208	-154.13006
-0.09521	-159.587
-0.09812	-164.96725
-0.10104	-170.42243
-0.10417	-175.95468
-0.10708	-181.52955
-0.11	-187.18146
-0.11292	-192.87184
-0.11583	-198.52927
-0.11833	-204.0946
-0.12104	-209.50218
-0.12396	-214.76503
-0.12687	-219.95808
-0.12958	-225.1886
-0.13229	-230.45671
-0.13521	-235.7128
-0.13792	-240.94532
-0.14083	-246.15805
-0.14354	-251.33494
-0.14646	-256.4775
-0.14917	-261.62145
-0.15208	-266.79745
-0.15479	-272.01346
-0.15729	-277.2412
-0.16	-282.42886
-0.16271	-287.50941
-0.16625	-293.72129
-0.16979	-299.91102
-0.17312	-306.12767
-0.17604	-311.15896
-0.17875	-316.26743
-0.18167	-321.44871
-0.18437	-326.63012
-0.18729	-331.76026
-0.19	-336.83178
-0.19271	-341.84852
-0.19625	-348.05354
-0.19937	-354.23836
-0.20292	-360.42845
-0.20625	-366.61127
-0.20937	-372.73058
-0.21292	-378.71969
-0.21625	-384.64174
-0.21958	-390.6683
-0.22312	-396.77784
-0.22667	-402.91741
-0.23	-409.0881
-0.23333	-415.2317
-0.23687	-421.24036
-0.24	-427.17206
-0.24354	-433.09602
-0.24687	-439.10456
-0.25	-445.19639
-0.25354	-451.18162
-0.25687	-457.06132
-0.26021	-462.91912
-0.26354	-468.76839
-0.26708	-474.62919
-0.27042	-480.546
-0.27375	-486.43449
-0.27729	-492.30328
-0.28062	-498.25907
-0.28417	-504.26799
-0.2875	-510.23388
-0.29083	-516.13843
-0.29417	-521.9962
-0.2975	-527.86779
-0.30083	-533.76156
-0.30437	-539.5965
-0.30771	-545.38077
-0.31104	-551.17613
-0.31437	-556.96326
-0.31771	-562.72256
-0.32104	-568.44288
-0.32458	-574.20355
-0.32771	-580.13242
-0.33083	-585.79594
-0.33417	-591.10433
-0.33729	-596.32403
-0.34062	-601.78715
-0.34396	-607.49632
-0.34708	-613.26802
-0.35042	-618.96193
-0.35396	-624.32873
-0.35708	-629.53734
-0.36062	-634.96548
-0.36396	-640.76924
-0.36729	-646.81476
-0.37042	-652.76641
-0.37354	-658.2936
-0.37708	-663.56051
-0.38062	-668.96653
-0.38396	-674.71457
-0.38729	-680.69804
-0.39083	-686.6954
-0.39417	-692.61074
-0.3975	-698.33016
-0.40104	-703.8129
-0.40458	-709.24091
-0.40792	-714.96028
-0.41104	-720.9422
-0.41458	-726.91327
-0.41771	-732.70154
-0.42104	-738.20281
-0.42437	-743.44575
-0.42792	-748.69579
-0.43104	-754.21351
-0.43437	-759.93735
-0.43792	-765.7187
-0.44104	-771.41875
-0.44458	-776.91895
-0.44771	-782.37534
-0.45104	-787.78857
-0.45437	-793.16485
-0.4575	-798.61861
-0.46083	-804.12632
-0.46417	-809.62551
-0.4675	-815.11891
-0.47104	-820.59979
-0.47437	-826.15662
-0.47771	-831.82806
-0.48125	-837.56465
-0.48479	-843.31924
-0.48792	-849.024

-0.49125	-854.56616
-0.49458	-859.98172
-0.49792	-865.48305
-0.50125	-871.11193
-0.50458	-876.78462
-0.50792	-882.36487
-0.51125	-887.79461
-0.51458	-893.21136
-0.51792	-898.69148
-0.52146	-904.22708
-0.525	-909.7997
-0.52833	-915.39562
-0.53167	-920.95453
-0.53479	-926.5036
-0.53812	-932.01041
-0.54146	-937.4522
-0.54479	-942.89172
-0.54792	-948.34727
-0.55104	-953.78453
-0.55458	-959.13875
-0.55792	-964.46174
-0.56104	-969.73133
-0.56479	-974.99329
-0.56812	-980.50064
-0.57146	-986.22245
-0.57479	-991.91922
-0.57792	-997.46579
-0.58125	-1,002.81
-0.58458	-1,008.10
-0.58771	-1,013.57
-0.59125	-1,019.12
-0.59458	-1,024.66
-0.59771	-1,030.08
-0.60125	-1,035.37
-0.60458	-1,040.72
-0.60792	-1,046.28
-0.61125	-1,051.96
-0.61458	-1,057.61
-0.6175	-1,063.10
-0.62104	-1,068.39
-0.62437	-1,073.55
-0.62729	-1,078.81
-0.63083	-1,084.16
-0.63417	-1,089.62
-0.63729	-1,095.20
-0.64083	-1,100.76
-0.64437	-1,106.24

-0.64771	-1,111.73
-0.65125	-1,117.23
-0.65437	-1,122.80
-0.65771	-1,128.43
-0.66104	-1,134.01
-0.66417	-1,139.50
-0.66729	-1,144.80
-0.67062	-1,149.96
-0.67396	-1,155.20
-0.67729	-1,160.63
-0.68083	-1,166.15
-0.68437	-1,171.69
-0.6875	-1,177.19
-0.69104	-1,182.62
-0.69437	-1,188.01
-0.6975	-1,193.49
-0.70083	-1,199.04
-0.70417	-1,204.62
-0.70729	-1,210.14
-0.71062	-1,215.44
-0.71396	-1,220.60
-0.71708	-1,225.82
-0.72062	-1,231.14
-0.72417	-1,236.58
-0.72729	-1,242.20
-0.73083	-1,247.77
-0.73437	-1,253.26
-0.73771	-1,258.78
-0.74125	-1,264.36
-0.74437	-1,270.04
-0.74771	-1,275.74
-0.75104	-1,281.33
-0.75437	-1,286.85
-0.75771	-1,292.25
-0.76146	-1,297.59
-0.76479	-1,303.06
-0.76792	-1,308.62
-0.77146	-1,314.11
-0.77479	-1,319.63
-0.77812	-1,325.14
-0.78146	-1,330.54
-0.78479	-1,335.89
-0.78792	-1,341.21
-0.79125	-1,346.48
-0.79417	-1,351.80
-0.7975	-1,357.03
-0.80125	-1,362.19

-0.80458	-1,367.48
-0.80771	-1,372.88
-0.81125	-1,378.27
-0.81479	-1,383.70
-0.81812	-1,389.29
-0.82167	-1,394.93
-0.82479	-1,400.57
-0.82792	-1,406.12
-0.83125	-1,411.49
-0.83417	-1,416.70
-0.83771	-1,421.76
-0.84125	-1,426.86
-0.84437	-1,432.17
-0.8475	-1,437.54
-0.85104	-1,442.83
-0.85458	-1,448.15
-0.85792	-1,453.58
-0.86125	-1,459.06
-0.86437	-1,464.53
-0.86771	-1,469.95
-0.87104	-1,475.32
-0.87396	-1,480.63
-0.8775	-1,485.78
-0.88104	-1,490.95
-0.88396	-1,496.28
-0.88729	-1,501.63
-0.89083	-1,506.95
-0.89417	-1,512.35
-0.8975	-1,517.76
-0.90104	-1,523.10
-0.90417	-1,528.50
-0.9075	-1,533.88
-0.91083	-1,539.24
-0.91396	-1,544.60
-0.9175	-1,549.92
-0.92104	-1,555.25
-0.92437	-1,560.70
-0.92771	-1,566.17
-0.93146	-1,571.62
-0.93479	-1,577.17
-0.93833	-1,582.82
-0.94167	-1,588.45
-0.945	-1,594.06
-0.94812	-1,599.50
-0.95146	-1,604.75
-0.95479	-1,609.92
-0.95812	-1,615.10

-0.96146	-1,620.34
-0.96479	-1,625.66
-0.96833	-1,630.99
-0.97167	-1,636.36
-0.975	-1,641.75
-0.97854	-1,647.09
-0.98167	-1,652.42
-0.985	-1,657.74
-0.98833	-1,663.01
-0.99146	-1,668.25
-0.99458	-1,673.44
-0.99771	-1,678.47
-1.00167	-1,684.36
-1.00542	-1,690.30
-1.00875	-1,695.32
-1.01208	-1,700.40
-1.01542	-1,705.53
-1.01896	-1,710.66
-1.0225	-1,715.86
-1.02583	-1,721.21
-1.02917	-1,726.64
-1.0325	-1,732.08
-1.03562	-1,737.46
-1.03937	-1,742.72
-1.0425	-1,748.02
-1.04583	-1,753.31
-1.04937	-1,758.50
-1.0525	-1,763.69
-1.05583	-1,768.89
-1.05937	-1,774.07
-1.06271	-1,779.28
-1.06604	-1,784.52
-1.06917	-1,789.68
-1.07229	-1,794.71
-1.07625	-1,800.51
-1.08021	-1,806.34
-1.08312	-1,811.36
-1.08729	-1,817.30
-1.09146	-1,823.24
-1.09479	-1,828.31
-1.09833	-1,833.42
-1.10166	-1,838.65
-1.105	-1,844.02
-1.10854	-1,849.38
-1.11187	-1,854.70
-1.115	-1,859.91
-1.11854	-1,864.93

-1.12229	-1,870.94
-1.12562	-1,876.05
-1.12896	-1,881.21
-1.13229	-1,886.36
-1.13583	-1,891.45
-1.13916	-1,896.50
-1.14271	-1,901.61
-1.14604	-1,906.76
-1.14958	-1,911.98
-1.1525	-1,917.25
-1.15604	-1,922.41
-1.15937	-1,927.47
-1.1625	-1,932.53
-1.16604	-1,937.53
-1.16937	-1,942.55
-1.17271	-1,947.69
-1.17625	-1,952.90
-1.17979	-1,958.16
-1.18291	-1,963.44
-1.18646	-1,968.62
-1.18979	-1,973.75
-1.19271	-1,978.89
-1.19687	-1,984.87
-1.20062	-1,990.86
-1.20375	-1,995.87
-1.20771	-2,001.75
-1.21166	-2,007.58
-1.21562	-2,013.46
-1.21979	-2,019.37
-1.22354	-2,025.36
-1.22708	-2,030.37
-1.23041	-2,035.39
-1.23354	-2,040.43
-1.23708	-2,045.46
-1.24041	-2,050.58
-1.24333	-2,055.80
-1.24687	-2,060.90
-1.25021	-2,065.96
-1.25354	-2,071.05
-1.25708	-2,076.18
-1.26062	-2,081.44
-1.26396	-2,086.86
-1.26729	-2,092.31
-1.27083	-2,097.72
-1.27271	-2,100.94

Rib Control 4	
Size (Length, Width) (mm)	
12.96	24.03
Extension	Load
(mm)	(N)
-0.04312	-71.83918
-0.05375	-76.89277
-0.05875	-82.57965
-0.0625	-87.90101
-0.06625	-93.77848
-0.07021	-99.92659
-0.07333	-105.0159
-0.07667	-110.3132
-0.08	-115.76275
-0.08292	-121.32783
-0.08604	-126.89742
-0.08937	-132.3778
-0.09229	-137.79001
-0.09542	-143.15009
-0.09854	-148.4533
-0.10167	-153.72065
-0.10458	-158.97448
-0.10771	-164.18909
-0.11083	-169.36384
-0.11396	-174.5346
-0.11708	-179.71224
-0.12	-184.89
-0.12312	-190.05062
-0.12604	-195.19255
-0.12917	-200.32632
-0.13208	-205.46851
-0.135	-210.6162
-0.13812	-215.73909
-0.14083	-220.83278
-0.14375	-225.86921
-0.14729	-232.00643
-0.15083	-237.98537
-0.15458	-243.92135
-0.15833	-249.92149
-0.16167	-256.01912
-0.16521	-262.09116
-0.16875	-268.0611
-0.17229	-274.00735
-0.17583	-279.94847
-0.17937	-285.8496
-0.18271	-291.74286
-0.18625	-297.60402

-0.18958	-303.39929
-0.19312	-309.09255
-0.19667	-314.71366
-0.2	-320.39976
-0.20333	-326.18925
-0.20687	-332.00747
-0.21021	-337.84947
-0.21354	-343.67016
-0.21708	-349.41354
-0.22062	-355.13487
-0.22375	-360.78539
-0.22729	-366.34937
-0.23062	-371.94061
-0.23417	-377.60559
-0.23792	-383.3957
-0.24125	-389.17303
-0.24479	-394.79375
-0.24812	-400.34506
-0.25146	-406.01712
-0.255	-411.84273
-0.25833	-417.71179
-0.26167	-423.59352
-0.265	-429.24744
-0.26854	-434.6208
-0.27167	-440.08061
-0.27521	-445.57163
-0.27854	-451.12357
-0.28167	-456.72876
-0.285	-462.15937
-0.28833	-467.40004
-0.29167	-472.73242
-0.295	-478.29765
-0.29854	-484.01222
-0.30187	-489.79169
-0.30521	-495.47592
-0.30854	-500.96107
-0.31187	-506.3526
-0.31542	-511.76935
-0.31896	-517.35294
-0.32208	-523.03755
-0.32542	-528.65654
-0.32875	-534.14541
-0.33208	-539.5841
-0.33542	-545.03679
-0.33875	-550.54182
-0.34187	-556.06353
-0.34521	-561.41824

-0.34875	-566.73658
-0.35208	-572.23904
-0.35542	-577.79807
-0.35896	-583.2876
-0.3625	-588.7838
-0.36583	-594.35385
-0.36917	-599.96969
-0.3725	-605.57979
-0.37583	-611.18454
-0.37896	-616.76884
-0.3825	-622.23995
-0.38583	-627.58762
-0.38896	-632.91019
-0.39229	-638.26191
-0.39583	-643.67259
-0.39896	-649.15073
-0.40229	-654.63161
-0.40562	-659.98608
-0.40875	-665.23814
-0.41187	-670.44169
-0.41542	-675.64744
-0.41854	-681.0075
-0.42187	-686.4875
-0.42542	-691.98394
-0.42875	-697.54088
-0.43208	-703.12971
-0.43583	-708.64898
-0.43937	-714.18256
-0.44271	-719.82521
-0.44625	-725.54541
-0.44937	-731.28283
-0.45271	-736.92083
-0.45625	-742.378
-0.45917	-747.76024
-0.4625	-753.13163
-0.46604	-758.53795
-0.46937	-764.05531
-0.4725	-769.54746
-0.47604	-774.90652
-0.47958	-780.24566
-0.48292	-785.67719
-0.48604	-791.11648
-0.48937	-796.57191
-0.4925	-802.04237
-0.49583	-807.46847
-0.49875	-812.83647
-0.50208	-818.05861

-0.50542	-823.16118
-0.50875	-828.29511
-0.51187	-833.51272
-0.51542	-838.85312
-0.51896	-844.3532
-0.52229	-849.91336
-0.52583	-855.39389
-0.52917	-860.84855
-0.53229	-866.32729
-0.53583	-871.83714
-0.53896	-877.37751
-0.54208	-882.83443
-0.54562	-888.19116
-0.54896	-893.56816
-0.55229	-898.96119
-0.55604	-904.39332
-0.55937	-909.93798
-0.56271	-915.51024
-0.56625	-921.0481
-0.56979	-926.6023
-0.57312	-932.1695
-0.57625	-937.67053
-0.57937	-943.03954
-0.58271	-948.29249
-0.58583	-953.61912
-0.58917	-958.97329
-0.59271	-964.25307
-0.59604	-969.56843
-0.59937	-974.93792
-0.60271	-980.26705
-0.60604	-985.62425
-0.60937	-991.04708
-0.61271	-996.48649
-0.61604	-1,001.95
-0.61896	-1,007.37
-0.6225	-1,012.64
-0.62562	-1,017.85
-0.62896	-1,023.06
-0.6325	-1,028.30
-0.63604	-1,033.65
-0.63917	-1,039.14
-0.64271	-1,044.65
-0.64604	-1,050.12
-0.64958	-1,055.60
-0.65292	-1,061.08
-0.65625	-1,066.57
-0.65917	-1,072.06

-0.6625	-1,077.41
-0.66583	-1,082.65
-0.66875	-1,087.83
-0.67229	-1,092.97
-0.67583	-1,098.17
-0.67917	-1,103.56
-0.6825	-1,109.02
-0.68604	-1,114.45
-0.68937	-1,119.91
-0.69271	-1,125.37
-0.69604	-1,130.78
-0.69917	-1,136.12
-0.7025	-1,141.38
-0.70562	-1,146.60
-0.70875	-1,151.79
-0.71229	-1,156.91
-0.71562	-1,162.09
-0.71854	-1,167.33
-0.72208	-1,172.55
-0.72562	-1,177.81
-0.72896	-1,183.19
-0.7325	-1,188.60
-0.73583	-1,194.04
-0.73917	-1,199.49
-0.7425	-1,204.90
-0.74562	-1,210.29
-0.74917	-1,215.61
-0.7525	-1,220.90
-0.75583	-1,226.27
-0.75917	-1,231.64
-0.76271	-1,236.97
-0.76604	-1,242.30
-0.76958	-1,247.68
-0.77312	-1,253.13
-0.77646	-1,258.63
-0.77979	-1,264.10
-0.78312	-1,269.48
-0.78604	-1,274.79
-0.78958	-1,279.94
-0.79312	-1,285.04
-0.79625	-1,290.27
-0.79937	-1,295.51
-0.80312	-1,300.70
-0.80625	-1,305.94
-0.80958	-1,311.23
-0.81292	-1,316.47
-0.81625	-1,321.67

-0.81958	-1,326.84
-0.82271	-1,331.99
-0.82562	-1,337.09
-0.82958	-1,343.04
-0.83354	-1,348.91
-0.83729	-1,354.78
-0.84146	-1,360.60
-0.84479	-1,365.62
-0.84792	-1,370.77
-0.85146	-1,375.90
-0.855	-1,381.02
-0.85833	-1,386.25
-0.86167	-1,391.51
-0.865	-1,396.76
-0.86833	-1,402.03
-0.87167	-1,407.25
-0.875	-1,412.44
-0.87833	-1,417.56
-0.88187	-1,422.61
-0.88521	-1,427.72
-0.88833	-1,432.88
-0.89187	-1,437.98
-0.89542	-1,443.11
-0.89875	-1,448.34
-0.90208	-1,453.54
-0.90521	-1,458.62
-0.90917	-1,464.58
-0.91312	-1,470.53
-0.91687	-1,476.48
-0.92104	-1,482.33
-0.925	-1,488.22
-0.92875	-1,494.12
-0.93312	-1,499.99
-0.93646	-1,505.04
-0.94	-1,510.18
-0.94333	-1,515.30
-0.94646	-1,520.37
-0.95062	-1,526.35
-0.95437	-1,532.32
-0.95854	-1,538.21
-0.9625	-1,544.04
-0.96625	-1,549.91
-0.97062	-1,555.71
-0.97458	-1,561.57
-0.97854	-1,567.52
-0.9825	-1,573.47
-0.98646	-1,579.46

-0.99062	-1,585.41
-0.99458	-1,591.35
-0.99854	-1,597.18
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-1.00646	-1,608.82
-1.01062	-1,614.75
-1.01458	-1,620.69
-1.01854	-1,626.51
-1.02271	-1,632.18
-1.02646	-1,637.94
-1.03062	-1,643.71
-1.03437	-1,649.53
-1.03833	-1,655.32
-1.04229	-1,660.97
-1.04625	-1,666.56
-1.05042	-1,672.21
-1.05437	-1,678.01
-1.05833	-1,683.77
-1.0625	-1,689.45
-1.06646	-1,695.18
-1.07042	-1,700.89
-1.07416	-1,706.59
-1.07833	-1,712.24
-1.08229	-1,717.82
-1.08625	-1,723.46
-1.09062	-1,729.11
-1.09458	-1,734.91
-1.09875	-1,740.72
-1.10292	-1,746.50
-1.10687	-1,752.36
-1.11083	-1,758.13
-1.11458	-1,763.75
-1.11833	-1,769.18
-1.1225	-1,774.51
-1.12646	-1,779.99
-1.13041	-1,785.51
-1.13437	-1,791.09
-1.13833	-1,796.61
-1.1425	-1,802.04
-1.14646	-1,807.59
-1.15083	-1,813.24
-1.15458	-1,819.03
-1.15854	-1,824.71
-1.1625	-1,830.21
-1.16625	-1,835.63
-1.17041	-1,841.06
-1.17416	-1,846.65

-1.17833	-1,852.20
-1.18229	-1,857.62
-1.18625	-1,863.00
-1.19062	-1,868.37
-1.19458	-1,874.04
-1.19854	-1,879.80
-1.20271	-1,885.46
-1.20666	-1,891.04
-1.21083	-1,896.55
-1.21458	-1,902.11
-1.21875	-1,907.65
-1.22271	-1,913.23
-1.22666	-1,918.76
-1.23083	-1,924.17
-1.23479	-1,929.59
-1.23875	-1,934.98
-1.24271	-1,940.36
-1.24666	-1,945.80
-1.25062	-1,951.17
-1.25458	-1,956.54
-1.25854	-1,961.87
-1.2625	-1,967.26
-1.26646	-1,972.68
-1.27083	-1,978.08
-1.27479	-1,983.60
-1.27896	-1,989.14
-1.28291	-1,994.66
-1.28666	-2,000.15
-1.29083	-2,005.57
-1.29458	-2,011.01
-1.29854	-2,016.32
-1.30229	-2,021.50
-1.30646	-2,026.63
-1.31062	-2,031.89
-1.31458	-2,037.42
-1.31875	-2,043.01
-1.32271	-2,048.58
-1.32687	-2,054.05
-1.33083	-2,059.51
-1.33458	-2,064.95
-1.33875	-2,070.28
-1.34229	-2,075.60
-1.34666	-2,080.73
-1.35062	-2,085.87
-1.35458	-2,091.22
-1.35896	-2,096.61
-1.36146	-2,100.24

Rib Control 5	
Size (Length, Width) (mm)	
13.45	24.90
Extension	Load
(mm)	(N)
-0.02	0.91538
-0.03667	-4.24426
-0.04937	-9.33389
-0.06	-14.40846
-0.06958	-19.85005
-0.07687	-25.09803
-0.08396	-30.13133
-0.09083	-35.56899
-0.09646	-40.57364
-0.10229	-45.69348
-0.10812	-50.96532
-0.11354	-56.4043
-0.11937	-61.85019
-0.125	-67.29341
-0.13062	-72.93917
-0.13521	-77.98327
-0.14	-82.99522
-0.14542	-88.67639
-0.15042	-93.68613
-0.15521	-98.91719
-0.16021	-104.22787
-0.165	-109.57149
-0.17	-114.9512
-0.17479	-120.43779
-0.17937	-125.93105
-0.18437	-131.37358
-0.18896	-136.83814
-0.19375	-142.36499
-0.19875	-147.92651
-0.20333	-153.5491
-0.20833	-159.08079
-0.21292	-164.6128
-0.21771	-170.25767
-0.22229	-175.99739
-0.22687	-181.68445
-0.23146	-187.3264
-0.23604	-192.8575
-0.24083	-198.44924
-0.24542	-204.22675
-0.25021	-210.01129
-0.25479	-215.82414

-0.25958	-221.62737
-0.26375	-226.6919
-0.26771	-231.83973
-0.27167	-237.009
-0.27583	-242.1447
-0.27979	-247.27282
-0.28375	-252.38773
-0.28792	-257.5618
-0.29167	-262.80856
-0.29583	-268.00486
-0.29979	-273.1176
-0.30375	-278.18733
-0.30771	-283.26562
-0.31167	-288.4776
-0.31583	-293.75657
-0.32	-299.05635
-0.32375	-304.38438
-0.32812	-309.67796
-0.33208	-315.02464
-0.33583	-320.45498
-0.33979	-325.75145
-0.34396	-330.87224
-0.3475	-336.03692
-0.35146	-341.26022
-0.35562	-346.53604
-0.35937	-351.88848
-0.36354	-357.20235
-0.3675	-362.49784
-0.37167	-367.8689
-0.37562	-373.31825
-0.37979	-378.80352
-0.38396	-384.32276
-0.38792	-389.87711
-0.39208	-395.42764
-0.39604	-400.94975
-0.4	-406.4545
-0.40396	-411.91572
-0.40812	-417.34192
-0.41208	-422.73003
-0.41604	-428.10464
-0.41979	-433.49156
-0.42417	-438.85559
-0.42792	-444.30885
-0.43167	-449.82836
-0.43583	-455.23325
-0.44	-460.59763
-0.44396	-466.09381

-0.44792	-471.69018
-0.45187	-477.33891
-0.45604	-482.93054
-0.46	-488.44263
-0.46417	-493.91392
-0.46812	-499.48794
-0.47187	-505.14537
-0.47604	-510.69742
-0.48	-516.20615
-0.48375	-521.70819
-0.48792	-527.21173
-0.49187	-532.80568
-0.49562	-538.38277
-0.49979	-543.78051
-0.50375	-549.10231
-0.50792	-554.54153
-0.51187	-560.15342
-0.51583	-565.84489
-0.52	-571.51318
-0.52396	-577.10844
-0.52792	-582.6959
-0.53187	-588.32628
-0.53583	-593.92184
-0.53979	-599.44314
-0.54375	-604.9183
-0.54792	-610.36628
-0.55167	-615.84926
-0.55583	-621.38492
-0.55979	-627.038
-0.56375	-632.72601
-0.56771	-638.33618
-0.57167	-643.91553
-0.57562	-649.4869
-0.57979	-655.08801
-0.58396	-660.73513
-0.58792	-666.41951
-0.59187	-672.06335
-0.59583	-677.63692
-0.59979	-683.26443
-0.60375	-688.96234
-0.60771	-694.67103
-0.61167	-700.27333
-0.61562	-705.73604
-0.61979	-711.26515
-0.62396	-716.92026
-0.62792	-722.70435
-0.63208	-728.53005

-0.63604	-734.33542
-0.64	-740.11946
-0.64417	-745.89795
-0.64792	-751.74636
-0.65187	-757.59327
-0.65583	-763.3428
-0.65979	-769.03754
-0.66375	-774.66196
-0.66771	-780.36702
-0.67187	-786.16285
-0.67583	-792.02318
-0.67958	-797.86521
-0.68354	-803.52694
-0.6875	-809.18223
-0.69125	-814.97478
-0.69542	-820.7708
-0.69937	-826.63417
-0.70354	-832.53026
-0.7075	-838.38999
-0.71187	-844.29491
-0.71521	-849.31362
-0.71833	-854.39503
-0.72167	-859.41786
-0.72562	-865.33737
-0.72958	-871.19222
-0.73354	-876.99264
-0.7375	-882.83485
-0.74167	-888.73196
-0.74562	-894.66828
-0.74979	-900.60711
-0.75396	-906.53598
-0.75792	-912.53209
-0.76125	-917.59092
-0.76458	-922.64563
-0.7675	-927.67298
-0.77167	-933.55626
-0.77542	-939.35513
-0.77917	-945.11253
-0.78354	-950.82158
-0.7875	-956.69389
-0.79146	-962.65894
-0.79562	-968.5955
-0.79958	-974.58553
-0.80312	-979.64334
-0.80625	-984.75951
-0.80958	-989.87663
-0.81292	-994.94201

-0.81625	-999.9761
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-0.82437	-1,011.87
-0.82771	-1,016.92
-0.83125	-1,022.01
-0.83458	-1,027.10
-0.83812	-1,032.19
-0.84146	-1,037.29
-0.84479	-1,042.41
-0.84792	-1,047.51
-0.85187	-1,053.49
-0.85583	-1,059.47
-0.85979	-1,065.46
-0.86396	-1,071.46
-0.86729	-1,076.51
-0.87062	-1,081.56
-0.87417	-1,086.58
-0.8775	-1,091.64
-0.88104	-1,096.70
-0.88417	-1,101.78
-0.88729	-1,106.85
-0.89125	-1,112.81
-0.89479	-1,118.62
-0.89875	-1,124.29
-0.90271	-1,130.01
-0.90667	-1,135.83
-0.91083	-1,141.72
-0.91479	-1,147.64
-0.91896	-1,153.62
-0.9225	-1,158.67
-0.92583	-1,163.83
-0.92875	-1,169.01
-0.93208	-1,174.06
-0.93583	-1,179.96
-0.94	-1,185.78
-0.94396	-1,191.64
-0.94792	-1,197.58
-0.95208	-1,203.57
-0.95562	-1,208.60
-0.95896	-1,213.69
-0.96229	-1,218.81
-0.96562	-1,223.94
-0.96896	-1,229.08
-0.97208	-1,234.19
-0.97542	-1,239.21
-0.97958	-1,245.18
-0.98292	-1,250.18

-0.98625	-1,255.25
-0.98958	-1,260.32
-0.99312	-1,265.38
-0.99646	-1,270.47
-1	-1,275.56
-1.00333	-1,280.65
-1.00646	-1,285.72
-1.00979	-1,290.73
-1.01375	-1,296.71
-1.01771	-1,302.65
-1.02187	-1,308.55
-1.02562	-1,314.55
-1.02979	-1,320.54
-1.03333	-1,325.56
-1.03667	-1,330.67
-1.04	-1,335.77
-1.04333	-1,340.83
-1.04687	-1,345.86
-1.05	-1,350.88
-1.05375	-1,356.86
-1.05792	-1,362.68
-1.06167	-1,368.47
-1.06562	-1,374.35
-1.06979	-1,380.21
-1.07375	-1,386.10
-1.07792	-1,392.08
-1.08125	-1,397.09
-1.08458	-1,402.11
-1.08792	-1,407.12
-1.09167	-1,413.08
-1.09562	-1,418.95
-1.09958	-1,424.74
-1.10333	-1,430.50
-1.10729	-1,436.26
-1.11146	-1,442.07
-1.11542	-1,448.05
-1.11875	-1,453.05
-1.12291	-1,458.98
-1.12687	-1,464.98
-1.13021	-1,470.01
-1.13354	-1,475.02
-1.13729	-1,480.99
-1.14146	-1,486.92
-1.14521	-1,492.85
-1.14937	-1,498.75
-1.15333	-1,504.71
-1.15666	-1,509.72

-1.16083	-1,515.70
-1.16416	-1,520.71
-1.1675	-1,525.72
-1.17146	-1,531.66
-1.17521	-1,537.53
-1.17937	-1,543.36
-1.18312	-1,549.34
-1.18729	-1,555.32
-1.19146	-1,561.27
-1.19479	-1,566.29
-1.19812	-1,571.33
-1.20166	-1,576.35
-1.205	-1,581.39
-1.20833	-1,586.41
-1.21166	-1,591.44
-1.21479	-1,596.44
-1.21875	-1,602.30
-1.22271	-1,608.12
-1.22646	-1,613.99
-1.23041	-1,619.79
-1.23458	-1,625.60
-1.23875	-1,631.55
-1.24208	-1,636.59
-1.24541	-1,641.65
-1.24916	-1,646.70
-1.25229	-1,651.78
-1.25583	-1,656.86
-1.25916	-1,661.92
-1.26229	-1,666.94
-1.26604	-1,672.84
-1.27021	-1,678.60
-1.27396	-1,684.43
-1.27812	-1,690.30
-1.28208	-1,696.21
-1.28604	-1,702.09
-1.29021	-1,707.92
-1.29416	-1,713.87
-1.2975	-1,718.89
-1.30083	-1,723.92
-1.30416	-1,728.95
-1.30791	-1,734.87
-1.31208	-1,740.69
-1.31604	-1,746.55
-1.32	-1,752.48
-1.32396	-1,758.46
-1.32812	-1,764.40
-1.33208	-1,770.35

-1.33646	-1,776.30
-1.33979	-1,781.31
-1.34291	-1,786.44
-1.34625	-1,791.52
-1.34958	-1,796.53
-1.35291	-1,801.55
-1.35625	-1,806.56
-1.36041	-1,812.53
-1.36416	-1,818.52
-1.36833	-1,824.43
-1.37229	-1,830.30
-1.37625	-1,836.15
-1.38021	-1,842.02
-1.38416	-1,847.95
-1.38812	-1,853.84
-1.39208	-1,859.70
-1.39604	-1,865.63
-1.4	-1,871.61
-1.40333	-1,876.63
-1.40729	-1,882.61
-1.41125	-1,888.52
-1.41541	-1,894.37
-1.41958	-1,900.29
-1.42271	-1,905.30
-1.42687	-1,911.30
-1.43062	-1,917.27
-1.43479	-1,923.20
-1.43875	-1,929.17
-1.44208	-1,934.21
-1.44562	-1,939.26
-1.44896	-1,944.30
-1.45208	-1,949.33
-1.45625	-1,955.26
-1.46021	-1,961.19
-1.46416	-1,967.17
-1.46812	-1,973.11
-1.47208	-1,979.07
-1.47604	-1,985.03
-1.48	-1,990.99
-1.48333	-1,996.00
-1.48729	-2,001.96
-1.49125	-2,007.89
-1.49541	-2,013.80
-1.49958	-2,019.73
-1.50271	-2,024.77
-1.50625	-2,029.82
-1.50958	-2,034.88

-1.51291	-2,039.99
-1.51625	-2,045.05
-1.51937	-2,050.10
-1.52333	-2,056.06
-1.5275	-2,061.96
-1.53146	-2,067.93
-1.53541	-2,073.87
-1.53958	-2,079.81
-1.54291	-2,084.84
-1.54646	-2,089.91
-1.54979	-2,095.01
-1.55312	-2,100.12

8.4 Appendix D

Appendix D shows data from the Vickers microhardness tests on bovine rib bones. Each sample was measured three times, and the data was averaged to produce the graphs in this report.

	Hardness Values Initial Study					
Bovine Rib	Week	Trial 1 (HV)	Trial 2 (HV)	Trial 3 (HV)	Average (HV)	Standard Deviation
Defleshed	1	55.2	50	53.1	52.76667	2.615976554
Defleshed	7	54.3	57	58.2	56.5	1.997498436
Defleshed	14	56.3	54	55.5	55.26667	1.167618659
Fleshed	1	64.6	67.1	66.1	65.93333	1.258305739
Fleshed	7	76.7	76.4	71.9	75	2.688865932
Fleshed	14	59.1	60.5	69.6	63.06667	5.701169471

8.5 Appendix E

Appendix E gives the initial and final mass of the chicken and bovine bones during the high temperature study. Three chicken samples and one bovine sample were measured. From this data, the rate of mass loss was calculated and used in the Arrhenius equation to determine burial time.

Defleshed Chicken Legs					
Chicken Number	**Temp (°C)**	**Actual Temp (°C)**	**Initial Mass (g)**	**Final Mass (g)**	**Mass Loss Rate (g/s)**
1	100	96	10.6852	10.6172	3.77778E-05
2	100	96	10.2526	10.2023	2.79444E-05
3	100	96	7.599	7.5611	2.10556E-05
4	200	197	6.1986	5.7926	0.000225556
5	200	197	10.6294	9.9219	0.000393056
6	200	197	7.0308	6.6509	0.000211056
7	300	303	7.1934	5.9952	0.000665667
8	300	303	5.5958	4.832	0.000424333
9	300	303	6.5872	5.5008	0.000603556
13	400	399	6.5923	3.6645	0.001626556
14	400	399	5.6995	3.1187	0.001433778
15	400	399	8.6348	3.9376	0.002609556
16	500	570	6.585	2.7005	0.002158056
17	500	570	5.6688	2.4946	0.001763444
18	500	570	8.0313	2.6126	0.003010389
19	600	618	5.08059	3.7556	0.000736106
20	600	618	7.9034	2.5066	0.002998222
21	600	618	13.3469	4.1133	0.005129778
22	700	715	10.3005	3.3719	0.003849222
23	700	715	12.369	3.6625	0.004836944
24	700	715	10.5463	3.09	0.004142389

Defleshed Bovine Ribs					
Number	**Temp (°C)**	**Actual Temp (°C)**	**Initial Mass (g)**	**Final Mass (g)**	**Mass Loss Rate (g/s)**
1	100	96	58.579	58.2541	0.0001805
2	200	197	48.37	42.8379	0.00307339
3	300	303	47.6309	39.8358	0.00433061
5	400	399	46.6565	29.9976	0.00925494
6	500	570	59.0063	36.204	0.01266794
7	600	618	42.7399	25.7675	0.00942911
8	700	715	34.8283	21.2282	0.00755561