Haglöf Increment Borers

Haglöf Sweden manufactures the world's largest assortment of increment borer brands, models and sizes. Haglöf Sweden increment borers have blue handles in grip friendly plastic material and a metallic lock. The borer bits are made from hardened steel with PTFE-coating for protection and reduced friction. The extractors are produced in stainless steel with metallic head and special shaped tip for easy extraction of the wood core.

- **LENGTHS are available from 100mm or 4" up to 1000mm or 39". To obtain optimal penetration depth, the borer bit should be approximately half to three quarter of the tree diameter.**
- **CORE DIAMETERS: Haglöf standard core diameters are 4.3mm and 5.15mm (0.169" and 0.200"). 10 and 12mm diameter borers are available in assorted lengths. These borers are often used to measure wood fibre lengths and quantitative analyses where large samples are necessary.**
- **THREADING: Most Haglöf borers are available with either 2- or 3-threads on the borer bit. 2-threaded borers are suitable for hardwood as they penetrate the tree with less friction. 3-threaded borers engage the wood faster. 3-threaded borers are the most common threading option.**
- **SPECIAL coating is available for selected borer bits in lengths 100mm/4", 150mm/6", 200mm/8" and 250mm/10".**
- **A COMPLETE increment borer includes handle, borer bit and extractor in selected length and model. Borer bits and extractors can be purchased separately.**

Haglöf Sweden borers are optimized for growth and quality control in trees and used in management, planning and for scientific studies, such as:

- **Average age of a stand or exact age of individual trees**
- **Forest health and to predict future growth**
- **Calculate site index of a stand**
- **Environmental control, soil fertility and fertilization effects**
- **Disease, insect attacks, and the structural condition of the tree**
- **Quality control by examining wood density**
- **Control of the environment outside the tree, such as water and soil quality through laboratory analysis of the tree core**
- **Chemical studies to determine suitability for different purposes and to check impregnation depth**

To study an extracted core gives access to valuable inside information about age, increment, quality and condition without damaging to the tree.

When boring a tree, the core sample and bit should be removed from the tree as soon as possible. The tree instantly starts a process to close the hole in the stem. **The wood will expand if left inside the borer bit.**

Clean your borer, and especially the threading of the borer bit and the extractor regularly, and preferably after each working day. Use thin oil to clean and a clean tissue or rag. *Be careful since the edges are sharp.*

Useful tips:

- **Never store your increment borer wet and dirty.**
- **Never drill with the extractor inserted in the borer bit. The extractor should be inserted when you are ready with the drilling.**
- **If you suspect that a tree may contain nails or other metallic parts, if the tree is rotten, decayed or contains dead wood, it is recommended not to use the increment borer in this tree.**
- **Apply some beeswax on the borer bit tip for next use - this can improve and make the drilling easier.**

Do not attempt to extend the borer handle with a stick or other tools, or to use a drilling machine or other equipment together with the increment borer or parts of it. Doing so will make all product warranties void.

Increment borers are precision instruments and crafted for manual operation. The borer is adjusted to fit exactly in its handle and extractor, with all proportions optimized for this purpose.

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Haglöf Increment Borers

SPECIFICATION HAGLÖF INCREMENT BORERS

Art.No	Description Complete Borer, Borer bit and Extractor
10-100-1001	Complete borer 100 mm/4", 4.3/0,169" core diam. 2-thr . **10-101-1001** Borer bit. **10-102-1101** Extractor
10-100-1002	Complete borer 100 mm/4", 4.3/0,169" core diam. 3-thr. **10-101-1002** Borer bit. **10-102-110 1** Extractor
10-100-1003	Complete borer 100 mm/4", 5.15/0,200" core diam. 2-thr. **10-101-1003** Borer bit. **10-102-1102** Extractor
10-100-1004	Complete borer 100 mm/4", 5.15/0,200" core diam. 3-thr. **10-101-1004** Borer bit. **10-102-1102** Extractor
10-100-1005	Complete borer 150 mm/6", 4.3/0,169" core diam. 2-thr. **10-101-1005** Borer bit. **10-102-1103** Extractor
10-100-1006	Complete borer 150 mm/6", 4.3/0,169" core diam. 3-thr. **10-101-1006** Borer bit. **10-102-1106**3Extractor
10-100-1007	Complete borer 150 mm/6", 5.15/0,200" core diam. 2-thr. **10-101-1007** Borer bit. **10-102-1104** Extractor
10-100-1008	Complete borer 150 mm/6", 5.15/0,200" core diam. 3-thr. **10-101-1008** Borer bit. **10-102-1104** Extractor
10-100-1009	Complete borer 200 mm/8", 4.3/0,169" core diam. 2-thr. **10-101-1009** Borer bit. **10-102-1105** Extractor
10-100-1010	Complete borer 200 mm/8", 4.3/0,169" core diam. 3-thr. **10-101-1010** Borer bit. **10-102-1105** Extractor
10-100-1011	Complete borer 200 mm/8", 5.15/0,200" core diam. 2-thr. **10-101-1011** Borer bit. **10-102-1106** Extractor
10-100-1012	Complete borer 200 mm/8", 5.15/0,200" core diam. 3-thr. **10-101-1012** Borer bit. **10-102-1106** Extractor
10-100-1013	Complete borer 250 mm/10", 4.3/0,169" core diam. 2-thr. **10-101-1013** Borer bit. **10-102-1107** Extractor
10-100-1014	Complete borer 250 mm/10", 4.3/0,169" core diam. 3-thr. **10-101-1014** Borer bit. **10-102-1107** Extractor
10-100-1015	Complete borer 250 mm/10", 5.15/0,200" core diam. 2-thr. **10-101-1015** Borer bit. **10-102-1108** Extractor
10-100-1016	Complete borer 250 mm/10", 5.15/0,200" core diam. 3-thr. **10-101-1016** Borer bit. **10-102-1108** Extractor
10-100-1017	Complete borer 300 mm/12", 4.3/0,169" core diam. 2-thr. **10-101-1017** Borer bit. **10-102-1109** Extractor
10-100-1018	Complete borer 300 mm/12", 4.3/0,169" core diam. 3-thr. **10-101-1018** Borer bit. **10-102-1109** Extractor
10-100-1019	Complete borer 300 mm/12", 5.15/0,200" core diam. 2-thr. **10-101-1019** Borer bit. **10-102-1110** Extractor
10-100-1020	Complete borer 300 mm/12", 5.15/0,200" core diam. 3-thr. **10-101-1020** Borer bit. **10-102-1110** Extractor
10-100-1021	Complete borer 350 mm/14", 4.3/0,169" core diam. 2-thr. **10-101-1021** Borer bit. **10-102-1111** Extractor
10-100-1022	Complete borer 350 mm/14", 4.3/0,169" core diam. 3-thr. **10-101-1022** Borer bit. **10-102-1111** Extractor
10-100-1023	Complete borer 350 mm/12", 5.15/0,200" core diam. 2-thr. **10-101-1023** Borer bit. **10-102-1112** Extractor
10-100-1024	Complete borer 350 mm/14", 5.15/0,200" core diam. 3-thr. **10-101-1024** Borer bit. **10-102-1112** Extractor
10-100-1025	Complete borer 400 mm/16", 4.3/0,169" core diam. 2-thr. **10-101-1025** Borer bit. **10-102-1113** Extractor
10-100-1026	Complete borer 400 mm/16", 4.3/0,169" core diam. 3-thr **10-101-1026** Borer bit. **10-102-1113** Extractor
10-100-1027	Complete borer 400 mm/16", 5.15/0,200" core diam. 2-thr **10-101-1027** Borer bit. **10-102-1114** Extractor
10-100-1028	Complete borer 400 mm/16", 5.15/0.200" core diam.3-thr **10-101-1028** Borer bit. **10-102-1114** Extractor
10-100-1029	Complete borer 450 mm/18", 4.3/0,169" core diam. 2-thr **10-101-1029** Borer bit. **10-102-1115** Extractor
10-100-1030	Complete borer 450 mm/18", 4.3/0,169" core diam. 3-thr **10-101-1030** Borer bit. **10-102-1115** Extractor
10-100-1031	Complete borer 450 mm/18", 5.15/0,200" core diam. 2-thr **10-101-1031** Borer bit. **10-102-1116** Extractor
10-100-1032	Complete borer 450 mm/18", 5.15/0,200" core diam. 3-thr **10-101-1032** Borer bit. **10-102-1116** Extractor
10-100-1033	Complete borer 500 mm/20", 4.3/0,169" core diam. 2-thr **10-101-1033** Borer bit. **10-102-1117** Extractor
10-100-1034	Complete borer 500 mm/20", 4.3/0,169" core diam. 3-thr **10-101-1034** Borer bit. **10-102-1117** Extractor
10-100-1035	Complete borer 500 mm/20", 5.15/0,200" core diam. 2-thr **10-101-1035** Borer bit. **10-102-1118** Extractor
10-100-1036	Complete borer 500 mm/20", 5.15/0,200" core diam. 3-thr **10-101-1036** Borer bit. **10-102-1118** Extractor
10-100-1037	Complete borer 600 mm/24", 5.15/0,200" core diam. 2-thr **10-101-1037** Borer bit. **10-102-1119** Extractor
10-100-1038	Complete borer 600 mm/24", 5.15/0,200" core diam. 3-thr **10-101-1038** Borer bit. **10-102-1119** Extractor
10-100-1039	Complete borer 700 mm/28", 5.15/0,200" core diam. 2-thr **10-101-1039** Borer bit. **10-102-1120** Extractor
10-100-1040	Complete borer 700 mm/28", 5.15/0,200" core diam. 3-thr **10-101-1040** Borer bit. **10-102-1120** Extractor
10-100-1041	Complete borer 800 mm/32", 5.15/0,200" core diam. 2-thr **10-101-1041** Borer bit. **10-102-1121** Extractor
10-100-1042	Complete borer 800 mm/32", 5.15/0,200" core diam. 3-thr **10-101-1042** Borer bit. **10-102-1121** Extractor
10-100-1043	Complete borer 1000 mm/39", 5.15/0,200" core diam. 2-thr **10-101-1043** Borer bit. **10-102-1122** Extractor
10-100-1044	Complete borer 1000 mm/39", 5.15/0,200" core diam. 3-thr **10-101-1044** Borer bit. **10-102-1122** Extractor
10-100-1045	Large Core, complete borer 300 mm/12", 12mm/0,500" core diam. 2-thr **10-101-1045** Borer bit. **10-102-1023** Extractor
10-100-1046	Large Core, complete borer 450 mm/18", 12mm/0,500" core diam. 2-thr **10-101-1046** Borer bit. **10-102-1024** Extractor
10-100-1047	Large Core, complete borer 800 mm/32", 12mm/0,500" core diam. 2-thr **10-101-1047** Borer bit. **10-102-1025** Extractor
10-100-1048	Large Core, complete borer 300 mm/12", 10mm/0,400" core diam. 2-thr **10-101-1056** Borer bit. **10-102-1026** Extractor
10-100-1049	Large Core, complete borer 400 mm/16", 10mm/0,400" core diam. 2-thr **10-101-1057** Borer bit. **10-102-1027** Extractor
10-100-1050	Large Core, complete borer 500 mm/20", 10mm/0,400" core diam. 2-thr **10-101-1058** Borer bit. **10-102-1028** Extractor
10-100-1051	Large Core, complete borer 1000 mm/39", 10mm/0,400" core diam. 2-thr **10-101-1059** Borer bit. **10-102-1029** Extractor

SPECIFICATION HARDENED STEEL BORER BITS

10-101-1048	Hardened steel borer bit 100 mm/4", 5.15mm/0,200" core diameter, 3-thr
10-101-1049	Hardened steel borer bit 150 mm/6", 5.15mm/0,200" core diameter, 3-thr
10-101-1050	Hardened steel borer bit 200 mm/8", 5.15mm/0,200" core diameter, 3-thr
10-101-1051	Hardened steel borer bit 250 mm/10", 5.15mm/0,200" core diameter, 3-thr

Press the borer tip to the stem in a **straight 90° angle.** *To get an accurate age of any tree, the rings should be counted near the tree base or the ground.* Turn the handle and press the borer firmly to the stem and turn at the same time. *It is important to keep a straight angle and to avoid putting weight onto the handle while drilling.* It is recommended to **use a borer starter to get a straight angle** when drilling into the wood.

When the borer has penetrated the tree stem with the approximate depth of 2-4 cm or 0.8-1.5", it is recommended to stop putting pressure and simply **turn the handle in full circles, palms open,** until the borer has reached the required total depth (normally the centre of the tree stem). *Remember to maintain a straight line throughout the process!*

When the required depth is reached - usually the pith of the tree, insert the **extractor upside down into the borer bit.** The edges on the extractor should be facing downwards. Press the extractor inside the borer core tube. Turn the borer handle half a turn counterclockwise. By doing this half turn back, the tree core breaks off, and the extractor edges are now facing upwards. Pull the extractor out, with the core securely kept in place by the toothed end of the extractor. To avoid decay in the trunk, it is recommended to bore a tree only every five or six years and to resinsert the core in the hole after reading.

Haglöf Sweden produces many accessories for increment borers that will improve and simplify your work. See separate information material for Borer Starter, Borer Holsters, Sharpening Kit, Tree Ring Measurer and more!

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