Forest & Field

Instruments & Applications

Haglöf
SWEDEN

Increment Borers

The largest selection of increment borer sizes and models

With the world's largest assortment of increment borer brands, models and sizes, you will find the borer you need! 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 in stainless steel and shaped to extract wood cores with greater ease.

- LENGTHS on Haglöf Sweden borers are available from 100 mm or 4" up to 1000 mm or 39".
- For optimal penetration depth, the borer bit should be approximately one half to three quarters of the tree's diameter.
- CORE DIAMETERS: Haglöf standard core diameters are 4.3 mm or 5.15 mm (0.169" and 0.200"). 10 and 12 mm diameter borers are available in assorted lengths and are mainly used for quantitative analyses where large samples are necessary.
- THREADING: Most Haglöf Sweden borers are available as either 2 or 3-threaded borer bit. 2-threaded borers are recommended for hardwood. 3-threaded borers are the most popular, since they will be easier to work with and engage faster in the wood.
- SPECIAL coating is available for borer bits in lengths 100 mm/4", 150 mm/6", 200 mm/8" and 250 mm/10".
- A COMPLETE increment borer includes the handle, a borer bit and an extractor in selected length and model. Borer bits and extractors can be purchased separately.
- Contact us for details on special borer models!

HAGLÖF SWEDEN®

INCREMENT BORERS, BORER BITS & EXTRACTORS

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. **10-102-1101** 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. **10-102-1103** Extractor
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. 2-thr. **10-101-1018** Borer bit. **10-102-1109** Extractor
10-100-1019	Complete borer 300 mm/12", 5.15/0,200"core diam. 3-thr. **10-101-1019** Borer bit. **10-102-1110** Extractor
10-100-1020	Complete borer 300 mm/12", 5.15/0,200" core diam. 2-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. 2-thr. **10-101-1022** Borer bit. **10-102-1111** Extractor
10-100-1023	Complete borer 350 mm/14", 5.15/0,200"core diam. 3-thr. **10-101-1023** Borer bit. **10-102-1112** Extractor
10-100-1024	Complete borer 350 mm/14", 5.15/0,200" core diam. 2-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 compl.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 compl. 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 compl. 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 compl. 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 compl. 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 compl. 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 compl. borer 1000 mm/39", 10mm/0,400" core diam. 2-thr **10-101-1059** Borer bit. **10-102-1029** Extractor

by Haglöf Sweden®

The Professional Choice

Access information on quality, age, growth, fertilization results, climate effects and more by studying the extracted wood core.

Haglöf Sweden's borers are used to determine increment, age and quality of trees. An extracted wood core offers inside details on tree age, increment, climate, fertilization, water supply, fires and damages in the past and diseases. The core is a valuable help both for research and in industrial production.

Tree Core Reader

The field adapted Tree Core Reader can be used to study extracted wood cores with accuracy and ease in the field. The Tree Core Reader allows for examination of wood cores up to 12cm/5" with core diameter up to 5.15mm/0.200". High quality optics with 6X magnifying glass.

Art no 10-500-1016 Tree Core Reader. Delivered in a plastic safety carrying case with cleansing cloth and user's guide included.

Walktax Thread Distance Measurer

- **Classic thread meter**
- **High quality counter**
- **Measuring accuracy approx. 0.5%**
- **Durable construction**
- **Belt clip for carrying**
- **Simple zero-setting**
- **Change thread reel with gloves on**
- **Built-in thread cutter**
- **Biodegradable cotton thread**

Wrap the thread four times around the measuring wheel, tie the end of the thread by the starting point, reset the counter and start walking!

Classic thread meter useful in various situations to measure distance in forest and field. Cotton thread spool containing 80g/2.8oz (approx.2500m/2700yds) biodegradable thread. Counter of high quality and durability with accuracy of approximately 0.5% in metric or feet. Instrument housing in durable polycarbonate plastic. Zero setting on top and belt clip for easy carrying.

The increased distance from the starting point is shown foot-by-foot or decimeter-by-decimeter in the viewing window. With smart and simple construction, the Walktax thread distance measurer is an indispensable instrument for landscape controls, road construction, in gardening and cruising.

WALKTAX

16-103-1002	Walktax metric thread Meter
16-103-1003	Walktax feet thread Meter
16-103-1005	Measuring thread, single roll
16-103-1006	Measuring thread 10-pack

Call 1-800-561-3600 or Email info@bapequipment.com for current pricing or to place an order

Field Equipment

The Professional Choice

The Borer Starter

Foldable borer starter for easier boring into the tree and to obtain quality cores in frozen wood and hardwood. The borer starter can prolong the lifetime of your borer bit by reducing the pressure on the bit.

Art. no 10-500-1005 Borer starter

Coretax Sharpening Kit

Sharpening kit with sharpening stone, whetstone, beeswax, oil and/ or sand. The wax can be used to protect the tip and for lubrication.

Art. no 10-500-1006 Sharpening kit

Soil Sampler

Haglöf Sweden soil samplers in solid steel available in two lengths.

Art. no 16-102-1006 Soil sampler 7 decimeter sampler length.
Art. no 16-102-1005. 9 decimeter sampler length.

Increment Borer Holster

Leather belt holster to keep your increment borer assembled, yet out of the way while you move in the forest. Specify length for 200mm/8", 300mm/12" or 400mm/16" borer.

Art. no 10-500-1002 Borer holster 200mm.
Art. no 10-500-1003 Borer holster 300mm.
Art. no 10-500-1004 Borer holster 400 mm.

Factor Gauge

Transparent plastic with beveled edges for optimal sighting and visibility. Practical grip for index finger and thumb. Beaded chain extending to 60cm/24". Factor Gauge factors: 0.5, 1, 2, 4 or 5, 10, 20 or 40 (English) with 2 factor columns per side. Specify model on order.

Art. no 15-102-1005 Factor Gauge

Bark Gauge and Increment Hammer

Small and convenient tools to measure bark thickness and last years' growth in trees. Bark gauge available in mm or inch graduation (specify on order).

Art. no 10-301-1002 Bark gauge inch.
Art. no 10-301-1003 Bark gauge mm.
Art. no 10-302-1001 Increment Hammer

Brush Axe

Useful for all types of outdoor work as trailblazing, pruning, and brush clearing. Exchangeable blades available in boxes of 10.

Art. no 16-101-1001 Brush Axe

Field Equipment

Count, measure and mark

TALLYTAX ELECTRONIC COUNTER

The pocketsize, digital Tallytax maintains thousands of registrations in six separate counters. Easy to use and reliable both for indoor and outdoor surroundings. Use the Tallytax when cruising forests, in inventories, production, planning, farming, gardening, tourism, traffic control etc. Operates with a 9V battery.

Art. no 15-107-1001 Tallytax

ENVIRO ROLL FLAGGING

100% biodegradable cellulose fiber in several different colors and combinations. Durable and resistant, yet safe for the environment and for industrial processes. Contact us for custom print on your Enviro flagging!

ENVIRO	ROLL FLAGGING
17-100-1001	Flagging blue/white
17-100-1002	Flagging red/white
17-100-1003	Flagging red/yellow
17-100-1004	Flagging yellow/blue
17-100-1005	Flagging blue
17-100-1006	Flagging green
17-100-1008	Flagging orange
17-100-1009	Flagging red
17-100-1010	Flagging white
17-100-1011	Flagging yellow
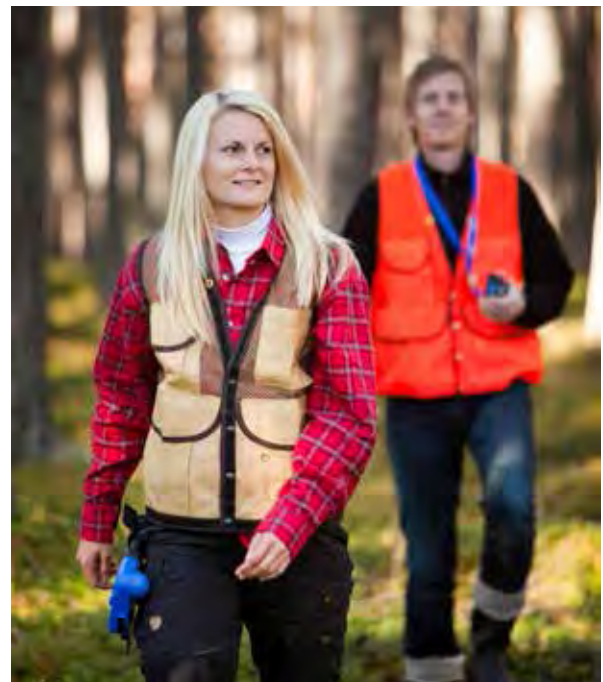
CRUISING VEST

Keep instruments and tools in the right place with the Haglöf Cruising Vest. Breathable all-season nylon mesh material in beige or orange colors. Outside pockets, inner pockets, snap front closure and pocket with roll flagging dispenser. Sizes M-XXL.

Art. no 17-104-1001 Cruising vest. Specify size/color on order.

LOG TAGS

Scan barcodes and use the DP Scanner module with your DP II caliper. Complete the log data with the caliper and keep track of the details with the barcode. Read more about the possibilities on www.haglofsweden.com and www.logtags.com. Contact us for your most efficient fieldwork system solution ever!

Call 1-800-561-3600 or Email info@bapequipment.com for current pricing or to place an order

Mantax Blue

Original diameter measurement

The CE-marked Mantax Blue calipers feature strong aluminum scales with clear, visible and durable print. This is a simple, smart, durable and economic choice of caliper!

Mantax Blue offers double-sided scale print, rugged construction and detachable jaws. Easy to follow instructions on how to assemble and adjust the jaws are included with each caliper.

Haglöf Sweden's calipers come in a large variety of models, scale graduations and lengths. Mantax calipers are proven functional and reliable and last for years in any type of tough use and environment. Tested and approved by independent test institutes and CE-marked. Ask us about custom printed scales!

Art. no 11-500-1001 Holster for carrying Mantax caliper in belt.

Marktax System

Marktax is a quick, easy and safe marking system with environmental concern.

The Marktax system design leaves the air free from toxic paint fumes that may cause damage to both people and to electronic equipment. Interchangeable parts include sponges, marking head, holders for caliper or hand holders and paint cartridges in boxes of 10 in 5 different bright and durable colors. Marktax holders can be used with Mantax caliper models.

- **Marktax marking system is an environmentally safe alternative with many interchangeable parts.**
- **Contains no hazardous spray.**
- **Economic and practical.**
- **Leaves small marks.**
- **International shipping of Marktax paint is restricted. Contact us for details.**

MANTAX	BLUE
Weight w carton:	500mm: 960g/38,4oz, 650mm: 1100g/44oz 800mm: 1200g/48oz, 950mm: 1400g/56oz, 1020mm: 1500g/60oz, 1270mm: 1800g/72oz, 800mm with meter marker 1300g/52oz. Carton weight 200-350g/8-14oz
Material Scale:	Alloy coated aluminum, non-reflective
Material Handle:	Armored glass fibre polycarbonate plastic
Jaws:	Detachable aluminum and steel
Classification:	CE/MID, FPA
Art no	Description
11-100-1101	Caliper 400 mm
11-100-1102	Caliper 500 mm
11-100-1139	Caliper 600 mm
11-100-1103	Caliper 650 mm
11-100-1104	Caliper 800 mm
11-100-1105	Caliper 950 mm
11-100-1138	Caliper 1000 mm
11-100-1106	Caliper 1020 mm
11-100-1107	Caliper 1270 mm
11-100-1110	Caliper 18"
11-100-1111	Caliper 24"
11-100-1112	Caliper 30"
11-100-1113	Caliper 36"
11-100-1114	Caliper 40"
11-100-1115	Caliper 50"
11-100-1116	Caliper 18" / 500 mm
11-100-1117	Caliper 24" / 650 mm
11-100-1118	Caliper 30" / 800 mm
11-100-1119	Caliper 36" / 950 mm
11-100-1123	Caliper 500 mm Triple French
11-100-1124	Caliper 650 mm Triple French
11-100-1125	Caliper 800 mm Triple French
11-100-1129	Caliper 800 mm Triple French and meter marker
11-100-1126	Caliper 950 mm Triple French
11-100-1127	Caliper 1020 mm Triple French
11-100-1128	Caliper 1270 mm Triple French
11-100-1037	Caliper 1100 mm short jaws
11-100-1140	Caliper 1250 mm 5-cm class on upper side
11-100-1052	Caliper 1520 mm short jaws
11-100-1137	Caliper 1800 mm short jaws
	Contact us for longer scales and special graduations!

MARKTAX SYSTEM

16-100-1001	Marktax cartridge holder caliper 400mm
16-100-1002	Marktax cartridge holder caliper 500mm
16-100-1003	Marktax cartridge holder caliper 650mm
16-100-1004	Marktax cartridge holder caliper 800mm
16-100-1005	Marktax cartridge holder caliper 950mm
16-100-1006	Marktax cartridge holder caliper 1020mm
16-100-1007	Marktax cartridge holder caliper 1270mm
16-100-1020	Paint cartridges 10-pack blue
16-100-1021	Paint cartridges 10-pack orange
16-100-1022	Paint cartridges 10-pack red
16-100-1023	Paint cartridges 10-pack yellow
16-100-1024	Paint cartridges 10-pack green
16-100-1040	Holder, hand Marktax
16-100-1041	Holder,hand with counter
16-100-1042	Holder foldable
16-100-1043	Holder foldable w counter
16-100-1044	Holder, hand Marktax
16-100-1045	Holder, hand Marktax
16-100-1046	Cartridge head
16-100-1047	Stamping pad 5-pack

Mantax Black

Patented functionality, solid quality

With patented foldable jaws and accessories such as the green Gator Eyes laser pointers, the Mantax Black precision caliper is an excellent choice for economic, quick and easy diameter measuring.

The Mantax Black calipers feature durable scale print on both sides with many optional configurations. The Mantax Black can be ordered with Gator Eyes Laser Pointers in selected models.

The Mantax Black calipers are CE-marked, rugged and made to last for many measuring seasons.

- **Patented technology for foldable jaws - only with Haglöf Sweden Calipers.**
- **Comfortable handle for all hand sizes.**
- **Approved and tested by independent institutes.**
- **CE-marked.**

Mantax Black and Gator Eyes

Aim the two perfectly aligned laser pointers as if you were actually at the stem – just pull the caliper jaws apart until the laser points are positioned where you need them to be. One inch or 2.54 cm should be added to the diameter scale result when measuring with the Gator Eyes.

MANTAX	BLACK
Sizes and graduations:	500mm; 650mm; 800mm; 950mm; 18"; 24"; 30", 36"; Triple French Graduation in mm lengths. Laser scale, see Gator Eyes
Weight:	705 g/28,2oz (500mm/18" scale)
Material Scale:	Alloy coated aluminum, non-reflecting
Material Handle:	Glass fiber polycarbonate plastic
Jaws:	Foldable aluminum and steel
Classification:	CE/MID, Patented. FPA
Art no	Description
11-200-1002	Mantax Black 500 mm
11-200-1003	Mantax Black 650 mm
11-200-1004	Mantax Black 800 mm
11-200-1005	Mantax Black 950 mm
11-200-1006	Mantax Black 1000 mm
11-200-1008	Mantax Black 18"
11-200-1009	Mantax Black 24"
11-200-1010	Mantax Black 30"
11-200-1011	Mantax Black 36"
11-200-2101	Mantax Black 500 mm green Gator Eyes Laser scale
11-200-2102	Mantax Black 650 mm green Gator Eyes Laser scale
11-200-2103	Mantax Black 800 mm green Gator Eyes Laser scale
11-200-2008	Mantax Black 18" green Gator Eyes
11-200-2009	Mantax Black 24" green Gator Eyes
11-200-2010	Mantax Black 30" green Gator Eyes

GATOR EYES

Size (laser only):	123x21x23.5mm/4.84"x0.83"x1.04" ea
Operation:	Pressure switch
Weight:	92g (incl. battery)/3.25 oz
Battery:	(2)CR2 3V Lithium Battery
Temperature:	Tested down to +5°C/41F
Wavelength:	532 nm
Housing:	Aluminum Alloy
Output:	<1mW
Dot size at 100 m/yd:	60mm/2.25"
Lens:	Multi-coated Optical Glass Lens
Laser:	Class II laser

The Gator Eyes laser pointers have visible beam and multi coated optical glass lens for a sharp dot at farther distances. Never point with laser at humans, animals or vehicles, and note that restrictions on the use of laser pointers should be considered by the operator before use. Picture shows Gator Eyes Laser pointers on DP II caliper.

Digital Clinometers

Electronic results, better precision

EC II-D *NEW!* EC II D-R *NEW!*

INCLINATION + HEIGHT + DISTANCE CALCULATION

INCLINATION + HEIGHT + DISTANCE CALCULATION + BASAL AREA + VOLUME + FORM FACTOR

Stand at a distance approximately as far away from the object and the object's height for best results. The reference height mark should be set at 2 meters/6feet.

The Haglöf EC II is an easy to use field instrument that offers accurate measuring results on inclination and heights of objects, usually trees. With the help of a reference height on the measuring object, the EC II-D can calculate the distance to the tree. With electronic presentation of precision results, the EC II offers accurate measurements without calibration or maintenance.

Art. no 15-102-1019 EC II-D Clinometer. Specify model on order as Feet/degrees; Feet/Percent; Meter/Degrees; Meter/Percent. Delivered with lanyard and instructions.

The EC II D-R is an electronic clinometer with factor gauge. Use the EC II D-R for height readings and estimates of basal area. The EC II D-R uses a reference height to calculate the distance to the object and has adjustable form factors from 0.10...0.95 (default 0.45). Use the built-in basal area functions to count number of stems with selected basal area factor (0.5,1,2,4 or 5,10,20,40). The EC II D-R will display a calculation of the basal area and a volume estimate based on dominant tree height or average height.

Art. no 15-102-1020 EC II D-R m/deg or m/%, ft/deg, ft/% (spec. unit on order). Delivered with lanyard and instructions.

EC II-D ELECTRONIC CLINOMETER

Size:	20 x 63 x 44 mm / 0,8 x 2,5 x 1,7 inch
Weight:	50 g/1,8 oz (incl. battery) EC__ D-R: 60g/2oz
Battery:	1 x 1,5 AA alkaline. Warning when low.
Temperature:	Min -15° Max 45° C / Min 5 Max 113 F
Display:	LCD, Backlit
Buzzer:	Yes
Consumption:	15mW
Height:	Min 0 Max 999 m/ft Resolution: 0,1 m/ft < 100m/ft or 1m/ft > 100m/ft
Angle:	%/ ° (degrees), -55 °< angle <+85 °. Resolution: 0,1° Accuracy: +-0.2°

EC II D-R

BAF:	0.5, 1, 2, 4 (m2/ha) or 5, 10, 20, 40 (Ft2/acre)
Factor:	0.10...0.95, default 0.45
Volume:	Height x form factor x basal area
Unit:	m3/ha or ft3/ac/1000
Chain:	Beaded metal extending to 60cm/24"

HCH

INCLINATION + HEIGHT + COMPASS

HCC

INCLINATION + COMPASS

C I

INCLINATION

The HCH Compass with height function offers readings on inclination and heights from optional distance and placing in relation to the object's position in the field. Azimuth compass 0-360° graduated in 1° increments with accuracy to <2.5°. Built-in magnetic declination.

Art. no 15-102-1014 HCH Height clinometer compass. Specify model on order as Metric or Feet for height readings.

Use the HCC to measure horizontal and vertical angles. Features azimuth compass 0-360° graduated in 1° increments, and accuracy to <2.5°. Built-in magnetic declination. The HCC Clinometer Compass measures in degrees.
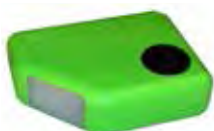
Art. no 15-102-1013 HCC Clinometer compass.

The blue C I is the ideal instrument to measure inclination of trees, buildings, walls, tunnels, roads, etc. Any field pro will appreciate the simplicity and accuracy of the C I. Simply aim and press the button, and the angle is presented to you.

Art. no 15-102-1012 C I Clinometer. Specify model on order as Degrees or Percent.

HAGLÖF HCC/HCH/CI

Size:	20 x 63 x 44 mm / 0,8 x 2,5 x 1,7 inch
Weight:	50 g/1,8 oz (incl. battery)
Battery:	1 x 1,5 AA alkaline. Warning when low.
Temperature:	Min -15° Max 45° C / Min 5 Max 113 F
Display:	LCD, Backlit
Buzzer:	Yes
Consump.:	15mW
Angles:	%/ ° (degrees), -55 °< angle <+85 °. Resolution: 0,1°. Accuracy: +-0,2° Typical.

Call 1-800-561-3600 or Email info@bapequipment.com for current pricing or to place an order
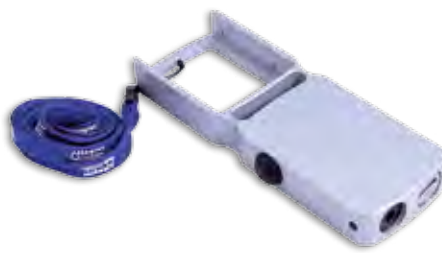
NEW!
Haglöf Laser TrailBlazer®

Find borders in the forest with less hassle and working with your standard compass. The Haglöf Laser TrailBlazer® is a smart instrument solution with a green laser pointer, built to fit leading instrument brands. Use high visibility green laser to locate borders and boundaries.

The Laser TrailBlazer® allows you to find borders and compass bearing in the forest in a simple and quick way, at a small investment and using your standard compass. Rugged, field adapted and with green laser that is visible also in sunny daylight. The Laser TrailBlazer has a high definition multi-coated optical glass lens, built to obtain reliable performance in different light conditions. For best performance, work in pair: One person wears the reflective vest and walks in the aiming direction in front of the second user, who carries and works with the TrailBlazer instrument. The laser point has long reach and is highly visible, especially when it hits the reflective aim point at the back of the vest. TrailBlazer has a balanced and rugged casing in anodized aluminum with a built-in standard 1/4" assembly point for monopod (if needed). Allen key to install your KB-14 or Silva Sightmaster compass and the fluorescent vest with reflective back aim point are included on delivery. Instrument includes a class 2 laser with on/off switch on the side.

- **Find your borders easy and with less hassle**
- **Work with your standard 360°/400° compass**
- **Fits leading instrument brands**
- **Rugged aluminum housing**
- **Built-in high visibility green laser pointer**
- **Includes reflective vest, lanyard and holster on delivery**
- **Quality manufacturing by Haglöf Sweden AB**

Fasten your compass in the aluminum TrailBlazer case (Allen key for assembly included on delivery). Push the button on the side of the TrailBlazer to activate the laser pointer. Aim with the green laser on the back aim point and read the compass bearing off your instrument. The Haglöf Laser TrailBlazer has a 1/4" standard assembly point for use with monopod if needed. Patent pending. Note that compass or monopod are not included.

The green laser pointer in the Haglöf Laser TrailBlazer includes a class II laser with 532nm wavelength with green laser with a bright and visible beam. Multi coated optical glass lens for a sharp dot at long distance. Tested in temperatures down to +5C/41F. Never point with laser at humans, animals or vehicles, and note that restrictions on the use of laser pointers should be considered by the operator before use.

LASER TRAILBLAZER

Size:	170 x 61 x 21mm/
Operation:	Pressure switch
Weight:	346g/12,2 oz incl battery. Weight with compass approx. 440g/15,5oz.
Battery:	1ea CR2 3V
Temperature:	Tested down to +5°C/41°F
Wavelength:	532 nm
Housing:	Aluminum Alloy
Output:	<1mW
Dot size at 100m/yd:	60mm/2.25"
Lens:	Multi-coated optical glass lens
Laser:	Class II laser. CW. Product complies with 21 CFR chapter 1, subchapter J and SS.EN 60825-1

Art. no 15-103-2001 Haglöf Laser TrailBlazer. Delivered with holster, lanyard, reflective vest (one-size), battery CR2 3V, safety/transport case.

DME

The original ultrasound system for sample plot survey

Pocketsize and rugged, the DME system is perfect to measure plot distance in the forest. The DME system offers quick and accurate readings even in difficult terrain with thick underbrush. Useful for example for forest inventory, road construction, building dimension, timber cruising and stakeouts. Get accurate distance readings in metric or Imperial units of up to 30m/98ft or more.

With the "Reverse Prism" function you can use the DME on point samples, sampling a full spectrum of basal area factors (BAF's). By selecting one of the built in BAF's, the DME will measure the tree's distance from the center-point, then calculate the minimum diameter for a tree to be included in your point sample. The DME instrument solution eliminates all of the limitations associated with traditional prism cruising, such as obscured views from the center.

- **DME works in dense vegetation**
- **Works when the view of plot center is blocked or obscured**
- **Offers quick, reliable and accurate results**
- **DME is easy to use and quick to learn**
- **Use two DME measuring instruments to measure road width, clearance distance, etc.**

Art.no 15-100-1001 DME complete 360° package/set incl. DME instrument, transponder T3, monopod, adapter.
Art.no 15-100-1003 DME instrument.
Art.no 15-100-1004 DME instruments in pair.
Transponder, monopod staff and adapter can be purchased separately. User instructions are included in aluminum transport/packing case but batteries may be removed due to shipping restrictions.

DME

Size:	30 x 40 x 125 mm / 1.2 x 1.6 x 4.9"
Weight:	90g/0.2 lb (incl. battery)
Battery:	1 x 9 Voltage alkaline. Current 7mA
Temperature:	Min -15° Max 45° C / Min 5° Max 113° F
Ultra sonic frequency:	25 kHz
Distance::	30 m/98 ft. With 360° adapter: 20 m/60 ft.
Resolution:	0.01 m / 0.1 ft
Accuracy:	1% or better
BAF factors:	0.5, 1 to 9 (m2/ha) or 5, 10, 15..to 50 (ft2/acre)

Vertex IV

Great results for distance, angle and heights

Vertex IV is many foresters' preferred choice of instrument to perform precision height, angle and distance measurements in the forest. The Vertex can be used in dense vegetation and undergrowth.

Unlike measuring tapes and laser instruments, ultrasound technology works also where the reference point is obscured by branches and leaves. A high-quality tilt sensor and the ultrasound distance measurement technology offer high precision height readings in any type of forests and terrain. The Vertex instrument has aluminum housing, sealed electronics and a large, easy-to-read alphanumerical display. Infrared or Bluetooth® transmitter enable direct transfer of results to peripheral devices. With the Vertex IV you can measure distances up to 30 meters, multiple heights per object and sample plot radii, limiting distances and diameters for BAF point samples.

VERTEX IV

Size:	80 x 50 x 30 mm / 3.2x2x1.2 Inch
Weight:	160 g / 5.6 oz (incl. battery)
Battery:	1 x 1,5 AA alkaline, Current 20mA with Bluetooth 150mA
Temperature:	Min -15° Max 45° C / Min 5 Max 113 F
Wireless interface:	Bluetooth, IR
Signal:	Built-in loud speaker
Ultra sonic frequency:	25 kHz
Height:	Min 0 Max 999 m/Yds Resolution: 0.1 m/ 0.1 ft
Angles:	-55° to 85° / -60° to 94° Resolution: 0.1°
Distance:	30 m / 98 ft with 360° adapter 20 m / 60 ft . Resolution: 0.01 m/ 0.1 ft Accuracy: 1%
BAF factors:	0.5, 1 to 9 (m2/ha) or 5, 10, 15..to 50 (ft2/acre)

Use the Transponder T3 with the DME, the Vertex IV and the VL instruments. T3 can be pinned directly on the tree stem or used with an adapter/spreader on the custom monopod staff.

- **Proven accurate & reliable.**
- **Aluminum housing, reinforced.**
- **Excellent to measure radius and heights in sample plots.**
- **Built-in point sampling functions.**
- **Slope to horizontal distance conversions, measure in steep terrain.**
- **Built-in Bluetooth® and IR.**
- **Sealed electronics.**
- **Foresters' preferred choice of tree height instrument.**
- **Reference users worldwide.**

TRANSPONDER T3

Size:	Diameter 70 mm/2,8"
Weight:	85 g/5 oz (Incl. Battery)
Battery:	1.5V AA alkaline
Consumption:	max 9mW

Art.no 15-105-1008 Vertex IV-360 compl. 360° package/set incl. Vertex IV instrument, transponder T3, monopod, adapter.
Art.no 15-105-1009 Vertex IV 60° package/set incl. Vertex IV instrument, transponder T3.
Art.no 15-105-1010 Vertex IV measuring instrument.
Transponder, monopod staff and adapter can be purchased separately. User instructions are included in aluminum transport/packing case but batteries may be removed due to shipping restrictions.

Call 1-800-561-3600 or Email info@bapequipment.com for current pricing or to place an order

Postex® Positioning

Positioning in permanent plots with ultrasound and laser

- **Use Postex® for individual positioning in coordinate systems.**
- **A Postex system can have different contents depending on user areas.**
- **For optimal efficiency, work with the DP Postex add-on or the Postex Laser measurement instrument and the DP II computer caliper with software Postax.**
- **Data can be exported as a CSV file and easily consumed for visualization and analysis in, for example, ArcGIS Online.**
- **The Postex® system allows you to gather more field data in less time and using reliable technology.**
- **Excellent for data collection for example in National Forest Inventories.**
- **Developed in collaboration with leading scientists and research institutes.**

The Postex® system is mainly used to position trees and objects in permanent sample plots. Individual positioning of trees with the Postex® is a proven reliable work method for moderate accuracy demands as when connecting "ground truth" measurements to aerial LiDAR surveys.

Postex® Laser is an excellent tool to follow up individual trees in long term study projects on permanent sample plots. One person can measure and electronically capture all tree/object data and position calculations.

The Postex® system has been developed in cooperation with leading scientists and foresters, and is based on proven durable instruments and functional software from Haglöf Sweden®.

The Postex Laser instrument includes both ultrasound and laser technology for easy and accurate height measuring of individual trees. It has a user friendly and rugged exterior combined with a smart interior and advanced functionality. With ultra–sound you will not be limited to line of sight measurements, and not bound to targets. Seedlings may not make for good laser targets, but with ultrasound, you can position them very accurately. One person can measure and electronically capture all tree data and position calculations.

POSTEX   LASER

Size:	93x63x72mm/3.7x2.5x2.8".
Weight:	243 g/8.6oz.
Battery & consumption:	Rechargeable Li-Ion 3.7V, built-in, approx. 9000 measurements. Charging time max 3.5h. USB mini B interface wall charger 110/220AC/5VDC; car charger adapter 12VDC. Cable Usb mini B Male/Usb Type A Male, 0.5m. Consumption max 0.9W.
Communication:	IR, Bluetooth® class 2, Spp (serial profile), pin-code 12345.
Temperature:	-20° to +45° C/ -4°F-113°F.
Height:	0-999 m/ft. Resolution height: 0.1 m/ft.
Angle:	-55° - 85°. Unit: Degrees 360^0, Grads 400^0 and %. Resolution: 0.1^0. Accuracy: 0.1^0.
ULTRASOUND:	Distance: 20m/60ft. Accuracy distance: 1% or better. Resolution distance: 0.01m/0.1ft.
LASER:	Distance: 46cm/1.5ft - 700m/2000ft depending on target. Accuracy: 4cm/0.1ft. Resolution: 0.1m/ft (0.01m/0.1ft in DME-mode).
Classification:	MIL-STD-810E. Housing frame material glass filled poly carbonate, IP67, NEMA6, Laser class 1, 7mm (FDA, CFR21) Class 1m (IEC 60825-1:2001).
Sight:	LED crosshairs 1 x magnification.
Display:	Graphic LCD 100x60pixles.
Dataformat:	Nmea or Ascii.
Other:	Aluminum transport/storing case. See user manual for more details.

Postex Laser is often used with Haglöf Sweden computer caliper such as the DP II or Digitech Professional. Postex Laser can also be used as a separate solution for positioning of individual objects in the field, and with different handheld computers.

Art. no 15-103-1040 Postex Laser
The art. no includes the Postex Laser measuring instrument, transponders A, B and C with Postex custom rack, adapters for the transponders and a spirit level (for alignment). Charging cable, charger and aluminum transport case also included on delivery. Details on the DP Postex module: see this catalog. Contact us for other system configurations of the Postex® system.

T3   TRANSPONDER FOR POSTEX

Size:	Diameter 70 mm/2.8" per transponder.
Weight:	85g/5oz (incl battery) per transponder.
Battery:	1.5V AA Alkaline per transponder.
Consumption:	max 9mW.
Rack:	Complete with adapters, approx. weight 4.85kg/194oz. Adapter/TRP at 115cm/44.85" from center, arm extending to 125cm/48.75". Rack expandable.

NEW!
Vertex Laser Geo

Foresters, surveyors, engineers, landscape architects, constructors...
Measure, map, process, store:

Tree heights, canopy, position, map area, trail, terrain slope, wood chip piles... Work wireless, open in Google Earth.

Heads-up display where results from your measurements are displayed in real-time and full USB connection for data transfer and customization of firmware.

The VERTEX LASER GEO SYSTEMS with unique capabilities will allow you to measure, map, process and store forest and field data in a way you didn't think was possible!

GPS and compass function incorporated in instrument with accuracy down to <1.5 degrees RSME (Root Mean Square Error) and heads–up display for real–time measurement update.

User specified applications are swiftly downloaded through standard USB from your PC to the Vertex Laser Geo. Versatility in your routines – added value for your investments!

- **Complete, compatible and communicative instrument systems for various measurement applications in forest and field.**
- **Long range measurement with high quality precision laser.**
- **Measure, map, process and store in the instrument.**
- **Built-in GPS and 5-position numeric ID attribute to tag important data with coordinates.**
- **Built-in compass sensor allowing for accurate 3D measurements.**
- **USB 2.0/SSD Disk, connectivity to any PC/Apple computer.**
- **Excellent customization possibilities.**
- **Reinforced, shock- and drop proof, brightly colored instruments.**
- **Angle compensated/horizontal distance value and tilt sensor.**
- **Bluetooth®, IR and USB 2.0.**
- **Heads-up display and external graphic display.**
- **Non-magnifying red dot aim for easy spotting of tree tops.**
- **Adjustable laser filter: closest-farthest-strongest.**
- **Rechargeable built-in Li-Ion battery.**
- **Easy operation field adapted keypad and step-through menu.**
- **Perfect in the forest, for logging, wood and timber industry, utility applications...**
- **Measure in dense forests with built-in proven reliable ultrasonic distance meter and tilt sensor (Vertex Laser Geo).**
- **Reverse prism factors (BAF-factors) 5-50 (English) / 0.5-9 (Metric).**
- **Accessories include transponder T3, monopod for transponder T3 (Vertex Laser Geo). Monopod with foot bracket (Vertex Laser Geo/Laser Geo).**

VERTEX LASER GEO

Size:	93x63x72mm/3.7x2.5x2.8".
Weight:	243 g/8.6oz.
Battery and consumption:	Rechargeable Li-Ion 3.7V, built-in, approx. 2000 measurements. Charging time max 3.5h. USB mini B interface wall charger 110/220AC/5VDC; car charger adapter 12VDC. Cable Usb mini B Male/Usb Type A Male, 0.5m. Consumption max 0.9W.
Communication:	IR, Bluetooth® class 2, Spp (serial profile), pin-code 1234, USB 2.0/SSD Disk.
Temperature:	-20° to +45° C/ -4°F-113°F.
Height:	0-999 m/ft. Resolution height: 0.1 m/ft.
Angle:	-90° - 90°. Unit: Degrees 360^0, Grads 400^0 and %. Resolution: 0.1^0. Accuracy: 0.1^0 typical.
VLGeo ULTRA-SOUND:	Distance: 30 m/98 ft. With 360° adapter: 20 m/60 ft. Accuracy distance: 1% or better typical. Resolution distance: 0.01m/0.1ft.
LASER:	Distance: 46cm/1.5ft - 700m/2000ft depending on target. Accuracy: 4cm/0.1ft typical. Resolution: 0.1m/ft (0.01m/0.1ft in DME-mode).
Areal	0<area<5000m2 or 0.5ha<area<10000ha 0<area<20000f2 or 0.5acre<area<10000acre
GPS	33-channel high sensitivity receiver. Supports GPS, Glonass, Galileo, QZSS. Built-in real tme correction w SBAS (EGNOS, WAAS, MSAS, GAGAN) Accuracy down to 2.5m/8.19ft in open terrain. Satellite position prediction for up to 3 days. Host Based multi-global navigation satellite system GPS(USA)/GLONASS(Russia)/Galileo(EU)/QZSS(JAPAN) SBAS Satellite-based augmentation systems: WAAS(US) EGNOS(EU) GAGAN (India) MSAS(Japan). Built-in self-generated orbit prediction (Faster TTFF up to 3 days), built-in jamming removing. Accuracy: Automatic position 2.5m CEP (circular error probable) (50% 24 hr static, -130dBm. Speed 0.1m/s (50%@30m/s.
Compass	Azimuth compass 0-360˚, resolution 0,1˚, accuracy <1.5 RSME˚.
Classification:	MIL-STD-810E. Housing frame material glass filled poly carbonate, IP67, NEMA6, Laser class 1, 7mm (FDA, CFR21) Class 1m (IEC 60825-1:2001).
Sight:	Red dot aim 1 x magnification.
Display:	External Graphic LCD 100x60pixles. Internal Heads-up display.
Dataformat:	Nmea or Ascii. IR, Bluetooth.
File Format:	CSV and KML Google Earth.
Memory:	2000 datasets, non-volatile.
Other information, details, accessories etc.	LGeo: Monopod staff with foot bracket for steady aim. VLGeo: Transponder T3 for ultrasound measuring (1 ea AA 1.5V alkaline battery necessary for T3, power consumption 9mW). Adapter and monopod staff, 4-parts (33-140cm) weight approx. 270g/9.5oz. LGeo & VLGeo: Aluminum transport/storing case. See user manual for more details.

Art. no 15-103-1101 Vertex Laser Geo 360° package/set incl. VL Geo instrument, transponder T3, plot center staff, adapter, and charging cable.
Art. no 15-103-1102 Vertex Laser Geo 60° package/set incl. VL Geo instrument, transponder T3, charging cable and adapter.
Art. no 15-103-1103 Vertex Laser Geo measuring instrument. Aluminum transport case. Built-in Li-Ion battery in measuring instrument. Transponder uses AA battery.
Art. no 15-103-1111 Laser Geo Laser package/set incl. instrument, charging cable with adapter. User instructions included. Aluminum transport case. Li-Ion battery built- in measuring instrument.

Original VL5 Vertex Laser

Classic Hybrid Technology and your perfect measuring companion in the forest!

With built-in BAF-factors, storing capacity and functions to instantly calculate mean height, the VL5 is an efficient and complete instrument solution in sample plots and reverse prism cruising.

Art. no15-103-1020 VL5 360° package/set incl. VL5 instrument, transponder T3, plot center staff, adapter, and charging cable.
Art. no15-103-1021 VL5 60° package/set incl. VL5 instrument, transponder T3, charging cable and adapter.
Art. no15-103-1022 VL5 measuring instrument only.
Art. no15-103-1030 L5 Laser package/set incl. L5 instrument, charging cable with adapter.
Art. no15-103-1032 L5 Custom Pile Control incl measuring instrument, charger and charging cable.
Art. no15-103-1033 L5Custom Gator Eye package/set incl. L5 instrument with Gator Eye laser pointer, charging cable with adapter, camera-type monopod with Radio Enter Button.
User instructions are included with instruments. Aluminum transport case. Li-Ion battery built-in measuring instrument; CR2 3V in Gator Eye, coin cell battery in Radio Enter button. Transponder uses AA battery.

The VL5 Vertex Laser is the complete solution for measurement work in the forest. With integrated tilt sensor and the unique combination of measurement technologies, the VL5 offers a variety of options for reliable results in all situations and surroundings. The VL5 has extra shockproof housing in high visibility orange color and built-in functions to determine hazard trees and delta height - plus instant results for mean tree height.

- **Ultrasound and laser combination technology**
- **Bluetooth® and IR communication**
- **Angle compensated/horizontal distance value and tilt sensor**
- **Features all advantages from the Vertex IV instrument for plot sample measurement and forest cruising**
- **Laser technique for range, height and angle measurements as 1, 2 or 3-point measuring, with or without reference**
- **Extended range measuring capacity from 0.5 m to 700 m**
- **Reverse prism factors (BAF-factors) 5-50 (English) / 0.5-9 (Metric)**
- **Data storage & processing capacity, mean height calculation**
- **Incorporated functions for borderline and hazard trees, safety distance, tree limit, line clearance, delta height calculation**
- **Red cross aim for easy spotting of tree tops & thin objects**
- **Adjustable laser filter**
- **Rechargeable built-in Li-Ion battery**
- **Easy operation with field adapted keypad and step-through menu**
- **Rugged, reinforced and shockproof housing**
- **Accessories include reflector/transponder T3, monopod for transponder T3, monopod with foot bracket.**

Original L5 Laser and L5 Custom: Great capacity and range!

L5 Laser Basic Model

The L5 Laser is great for long range measurement in open areas. Measure distances shorter than 0.5m/1.5ft up to 700 meters/2300ft with precision and speed. Typical work areas for the L5 is in forestry, utility industry, power line and maintenance work and accident prevention.

Built-in Li-Ion battery, illuminated red dot sight, rugged with a reinforced and balanced housing, IP67 water resistant, and user friendly interface. Fully integrated technology, and built-in mounting point for camera-type monopod. Built-in functions such as hazard tree and delta height measurements make the L5 one of the most versatile instrument systems on the market. Add to this the storing and processing capacity, a rugged and field adapted construction, easy operation and great functionality.

L5 Pile: Inventory made Easy

The L5 Pile is designed for quick inventory of timber piles or wood chip heaps. Measure distances from 0.5m or 1.5ft and get results without stepping, climbing and pacing in insecure areas. Set variables such as width (log length), assortment and volume factor in percentage. The instrument will store and process all data in the non-volatile memory for results on total volume, mean values for pile width, percentage of wood volume and more. Data on sections, heights and piles for up to 62 piles can be stored. The L5 Pile instrument is tested and approved and has been developed following industry standard.

L5 Gator Eye REb: Distance in the Dark

The L5 Gator Eye can be used to measure distance, angles and heights where daylight is limited and targets are difficult to see and/or hit. This instrument system is a great complement to theodolite stations for quick controls and instant results. The L5 Gator Eye is delivered with a high visibility green laser pointer installed on the L5 instrument, and a custom-built monopod with Radio Enter Button. Aim with the Gator Eye laser pointer at your target distance. Use the Radio Enter Button on the monopod to register results. L5 Gator Eye has been developed and manufactured in cooperation with industry and user specifications.

Custom Software

With the DP® II computer caliper and your custom software, you're all set to take on timber cruising, sample plot measurement, forest survey and inventory, to trace and track wood from field to factory and more. Save time, improve efficiency, and increase the accuracy of your forest measuring work.

We offer unique customisation solutions also for our hi-tech precision Vertex Laser Geo instrument systems. Work with the parameters and variables that you need and get complete alignment to your work routines. Measure, map, store, record, process and report - all with one instrument system - and get ready to put the right value to every tree!

Haglöf Sweden has produced computer calipers and forestry data applications for close to 30 years and in more than 20 different languages. We want to offer ways to make your job not only faster, but easier, better, and with higher precision results fpr your forest and field data. Many of our software applications are custom made – because we know that there are as many ways to evaluate trees as there are species in the forest.

Timber Cruising, Inventory Systems and Log Scaling: ready-to-use software applications or your custom system for standing trees, timber and logs

• The DP II Caliper and the right application, adapted for your methodology, will enable you to take the optimal decisions for your woodlands in a wide range of operational questions.

• Perform informed sylvicultural operations and check what you have in stock - collect and collate inventories effectively.

• Make sustainable management plans for your woodlands and forest properties.

• Benchmark data for ratio, proportions, species composition. Register diameter distribution and species diversity.

• Produce comprehensive analysis reports with the collected data from one single instrument system and your customized application.

• DP II Caliper Systems support our software run accessories and add-ons such as the Digitech Tape, Digitech Keyboard, DP DME, DP GPS, DP Postex and DP Scanner.

• Try the DP GPS to navigate to areas of interest for example for auditing work and sample plots!

• Use Haglöf Sweden height measuring instruments Vertex IV and Vertex Laser to measure tree heights and transfer to the DP II with IR or Bluetooth.

• Custom applications for your mensuration methodology and survey requirements can include mapping of areas and waypoints; control of shelter wood areas and marking out hazard trees and borderline trees, allocation of forest stands... and much more!

• Data output can be made to comply with your current system or in various common formats for example Excel spreadsheets.

• Contact us and let us know how you wish to work and what you need to measure with the DP II and professional laser instrument systems.

• Read more at www.haglofsweden.com and contact us for discussions!

MD II Mantax Digitech II

Digital Bluetooth® Caliper - Simple and super effective

- Bluetooth caliper for efficient data capture.
- Communicates with PC, handhelds, Smartphones, Tablets.
- Edit and input names for up to 100 different tree species.
- Classic menu icons for intuitive interpretation and use.
- Application available for PC communication with stand tables, lists and classifications.
- Custom Smartphone app for in-field wireless data transfer.
- Rugged, dependable and completely field adapted with patented and certified technology.
- Designed to improve accuracy and add value to investments in corporate management systems and field computers.
- Haglöf Sweden® Quality Craftsmanship - experience and know-how in every detail.

The MD II is a modern caliper hybrid, for efficient field data collection and wireless communication with Bluetooth® technology.

The MD II caliper is designed for speedy collection and safe storage of your tree data such as diameter, species and height.

Thousands of diameters can be stored in the non-volatile caliper memory. Data can also be transferred with built-in Bluetooth® to handheld computers, and Android mobiles or tablets. Or - you may prefer to use the MD II caliper as a virtual keyboard to send wireless data

to spreadsheets, e-mail or SMS. For convenient download of data to your office PC, the ruggedized MD II computer terminal can be detached from the measuring scale and connected with USB communication cable.

To get even more out from your MD II caliper, work with the MD II Com PC software to manage data from the forest in your PC.

The MD II caliper is designed for easy learning and simple use, regardless of your previous experience or measuring standards, language or forest type.

MD II

Memory capacity:	>10 000 registers
Processor:	Low power 32 bit Arm based processor.
Temperature:	Min -20° Max 60°C / Min -4° Max 140° F.
Battery:	Battery: Rechargeable Li-ion (1ea terminal +1 ea SmartScale, USB-interface charge. Consumption: One week/charge.
Buttons:	Execution Enter + Enter on Smart-Scale handle Navigation 4 arrow keys. Quick commands: Display light Turn off, Escape and Vertex/VL height input.
Measuring system:	500mm; 600mm, 650mm; 800mm; 950mm; 1000mm. 18"; 24"; 30"; 36".
Measuring range:	From 500mm/18" to 1000mm/36" (standard).
Weight:	Caliper and terminal: <1kg/2.20 lbs (500mm/18" standard). MD II Terminal only: 150g/6oz.
Display:	Graphic, 128 x 64 pixles backlit, graphic interface.
Communication:	USB 2.0 MSD; Bluetooth® (SPP, OPP) Keyboard, Vertex/VL IR receiver
Signal:	Built-in loudspeaker.
Classification:	IP67 Moist/dust resistant, CE, FCC, IC

Data can be stored in the non-volatile memory in the MD II or transferred with Bluetooth® to the MD II Com App for Android. Data is saved in XML format and can be shared over email, Google Drive, Dropbox or other. Heights can be measured with Vertex/Vertex Laser instruments and transferred to MD II with built-in IR.

Art no 14-430-3001--3006 MD II digital caliper in selected length/graduation (500mm, 600mm, 650mm; 800mm, 950mm, 1000mm; 18", 24", 30", 36"). Aluminum safety case, USB cable, USB adapter, USB car adapter.
Art. no 14-101-1007 MD II Com PC Communication program for PC.
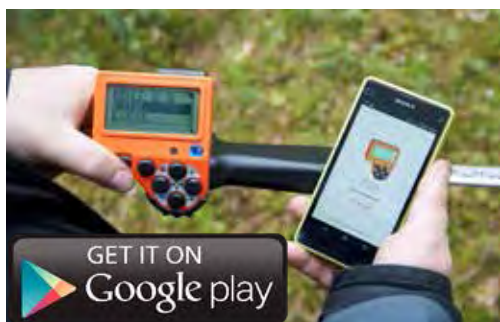MD II Com App for tablet/Smartphone: Download from Google® Play.

Call 1-800-561-3600 or Email info@bapequipment.com for current pricing or to place an order

Working with the MD II

Intuitive use and your preferred tree species

The MD II Caliper memory can hold thousands of captured tree diameters and heights. Name up to 100 individual tree species in a simple text file on your PC or in the MD II caliper. Use up to seven Roman letters to name each of your species. When in the forest, select species from the list, and proceed to measure and register the tree diameter with the MD II caliper. Complete your data input with height results transferred from the Vertex IV or Vertex Laser.

MD II can communicate with different types and brands of Bluetooth® computers, tablets and cellphones. The MD II Com app works with Android Smartphones and tablets. Download free from Google Play.

Work with the **MD II Com App**, a free application for mobile phones or tablets to transfer field data from the MD II caliper to your Bluetooth® Android device. Your data is saved in an XML-file format and can be shared via email, Google Drive, Dropbox, etc. You can synchronize your Bluetooth device with your office PC and make the field data available to colleagues in real time.

A list of tree species, assorted by name and with diameter, and tree heights (if input), is featured. Apply a simple form factor function for volume on your stands, as for the diameter assortment and a height curve.

You can also work with the **MD II Com PC** program to add more tree data, and for improved processing and reporting capacities. Name of tree species, cruising method and data interpretation from the MD II caliper can be defined in MD II Com. Field data can be added to an object, and complete cruising or sample plot survey can be selected Data can be exported to Excel as a tab-separated txt-file or printed out as a list of trees in 1-, 2- or 4-cm classes with sample trees and plot data.

Efficient fieldwork with the MD II caliper to measure and register tree diameters with direct transfer of results to handheld computer for extended data storing and processing capacities. The MD II caliper has patented foldable jaws that are designed for use in dense forests. You can select to cross scale stems, or set to display circumference instead of diameter results.

DP II Computer Caliper

First in function and flexibility

- Rugged and versatile with different operation modes
- Patented & certified technology
- Moisture & dirt protected, sealed & secure
- Great communication capacities
- Great customization possibilities
- Unique accessories for improved efficiency
- Haglöf Sweden® Quality Craftsmanship - experience and know-how in every detail

The DP II is a powerful and versatile computer caliper for timber cruising, log scaling, standing tree inventory and harvester calibration. With many attractive features and unique accessories, the DP II caliper offers a variety of optimized and customized solutions for diameter measuring work in forests and on industries.

The market leading DP II caliper has patented foldable, heavy-duty jaws and special features that allow for great reach and comfortable work in dense forests and timber piles. With factory installed Radio Enter Button, the DP data terminal and the SmartScale can work as stand-alone units, for even better reach.

The DP II communicates through a dirt & moist-proof comport and with built-in Bluetooth, IR and USB. It is designed with sturdy construction inside out, with reinforced housing, field adapted display and keyboard, rechargeable Li-Ion batteries and a patented measuring system in lengths from 500mm or 18" to 1020mm or 40".

A number of value-adding accessories and add-onse designed for use with the DP II will add even more value and use to your investment. These include the Gator Eyes laser pointers for diameter measuring on a distance, the Digitech® Tape for digital & automatic log lengths, the Digitech® Keyboard, the DP DME for distance measurement in plot surveys, the DP GPS for navigation, the DP Scanner to scan and register barcodes and the DP Postex for positioning work.

A large selection of software applications in various languages allows you to instantly start your measurement work with the DP II caliper in complex measuring operations.

You can also choose to work with your customized software application for complete alignment with your routines and organization.

Ask us for details and how to start with your most efficient digital forest cruise - ever!

The DP II Computer terminal as a stand-alone unit can be used for example when collecting and registering biotopes on plots. Work with designated software application and DP GPS add-on to register plot coordinates and other data.

Working with the DP II

Use the DP II for your planning and follow-up and to execute sustainable forestry management plans over large areas, with multiple plots and various variables. Analyze mixed species compositions, diversity and diameter distributions. Perform individual inventories per sector. Use the navigation and positioning capacities to revisit plots for your logging rotation. Generate standing timber volumes and support audit cruising. Track your trees from forest to factory. Maintain accurate inventories of what is in landings, and what you have in factory storage areas. Ensure all necessary data to make the comprehensive analysis you need for your optimal decision making. With the fully programmable DP II caliper, your custom software application and the unique add-ons, you're all set for success!

DP II Comport assembly point for software run DP Add-ons.

Haglöf Sweden computer calipers are quality tested and assured and come in many scale graduations and lengths. We offer a variety of ready-made software applications for inventory, scaling and cruising and the branch leading calibration system Skalman 7 with automatic length registration.

DP II   Bluetooth

Memory:	1GB Flash File System non-volatile high security. 1Mb high-speed ram.
Processor:	Low power 32 bit Arm based processor.
Temperature:	Min -20° Max 60° C/ Min -4° Max 140° F.
Energy:	Battery: Rechargeable Li-ion, USB-interface charge. Consumption: One week/charge/software depending.
Buttons:	Execution Enter + Enter on SmartScale handle Navigation 4 arrow keys. Quick commands: Display light Turn off, Escape and Vertex/VL5 height input.
Measuring system:	Technical: Non-contact, sealed. Scale: Aluminum, non-reflecting, clear digits. Jaws: Foldable aluminum.
Measuring range:	500mm; 650mm; 800mm; 950mm; 1020mm. 18"; 24"; 30"; 36", 40". (standard). Scale lengths German certification/classification: 500mm; 600mm; 800mm, 1000mm. For detailed specification on the SmartScale, see separate leaflet.
Weight:	Caliper and terminal: <1kg/2.20 lbs (500mm/18" standard). DP II Terminal only: 150g/6oz.
Display:	Graphic, 128 x 64 pixels backlit, graphic interface.
Communication:	USB 2.0 MSD; External serial port via adapter, USB (CDC) via adapter. Bluetooth® (SPP, OPP), Keyboard, IR receiver for Vertex/VL/L
Clock:	Real Time Clock with calendar and time.
Signal:	Built-in loudspeaker.
Classification:	PTB, FPA, IP67 Moist/dust resistant, CE, FCC, IC.

- **Multitasking capacity with functionality, reliability, integrated technology and added value to investments.**
- **Cruise, work in circular sample plots, measure large diameters, classify, coordinate properties and owners, capture, locate, position, revisit, log scale, measure diameters at a distance, determine increment, age and effects over time, compare stand areas and values.**
- **Contact us on how to improve efficiency and accuracy in your measurement work!**

Art. no 13-430-1001--1007 DP II Computer Caliper Basic Model
DP II Bluetooth® Caliper complete standard set incl. SmartScale caliper in specified scale length and configuration from 500mm to 1020mm/18"--36"; DP II computer terminal, aluminum safety case, USB cable, USB adapter, USB car adapter, AC/DC international charger.

Art. no 13-430-1201--1207 DP II Computer Caliper with Radio Enter Button
DP II Bluetooth® REb Caliper including Radio Enter Button SmartScale in specified scale length and configuration from 500mm to 1020mm/18"--36"; DP II computer terminal, aluminum safety case, USB cables, USB adapter, USB car adapter, AC/DC international charger. Wrist holder is included when ordering the DP II with Radio Enter Button.

Art. no 13-430-2011--2013 DP II Computer Caliper with Gator Eyes
DP II Bluetooth® Gator Eyes set including SmartScale with Gator Eyes laser pointers in specified length and configuration 500mm; 650 mm or 800 mm (18", 24", 30"), DP II computer terminal, aluminum safety case, USB cables, USB adapters, USB car adapter, AC/DC international charger.
Software is purchased separately.

DP Add-Ons

Seamless work - integrated technology

Software-run add-ons and accessories, designed to improve your accuracy, efficiency and versatility in the forest. These add-ons are easily installed on the DP computer com-port. Battery and display are supplied from the computer, giving you less things to worry about.

DP GPS — THE DP GPS - NAVIGATE, POSITION, REVISIT, STAY CONNECTED

Image shows DP GPS DME on DP II terminal.

The DP GPS module enables you to perform navigation and positioning work with the DP II computer caliper.

Use the DP GPS to revisit plots and measured areas. With the DP GPS on your DP II computer caliper and corresponding software, you can collect, register and connect coordinates. Have all tree data in one place, and find the correct object when you revisit. Your field data and positions can be transferred to the follow-up or cutting team, saving time and ensuring compliance for your organization. If you choose the combination module DP GPS DME, you also get a field adapted ultrasound distance measuring device on your DP II caliper, great to measure radius in sample plots - plus the great GPS function!

The DP GPS has a 33-channel high-sensitivity receiver that supports several satellite systems such as GPS, Glonass, Galileo and QZSS. The ability to use several satellites from different systems improves positioning in difficult terrain. Built-in real time correction with SBAS (EGNOS, WAAS, MSAS, GAGAN) allows for accuracy to 2.5m/8.19ft in open terrain.

Algorithms can predict satellite positions for up to 3 days, using data from last used satellite constellation saved for up to one month in the GPS with a built-in rechargeable battery.
The DP GPS module features host-based multi-global navigation satellite system: GPS(Usa)/GLONASS(Russia)/Galileo(EU)/QZSS(Japan) SBAS Satellite-based augmentation systems: WAAS(USA), EGNOS(EU), GAGAN(India), MSAS(Japan). Built in self-generated or-bit prediction (Faster TTFF up to 3days), Built in jamming removing. Accuracy: Automatic Position 2.5m CEP (circular error probable) (50% 24 hr static, -130dBm). Speed 0.1m/s, (50%@30m/s).

Art. no 13-600-1082 DP GPS DME compl set with transponder T3, monopod, adapter.
Art. no 13-600-1083 DP GPS module.
Art. no 13-600-1084 DP GPS DME module. For details on distance measuring device, see DP DME. Software and DP Caliper/terminal are ordered separately.

DP Postex® — THE UNIQUE POSTEX® SYSTEM FOR POSITIONING OF INDIVIDUAL OBJECTS - GREAT IN LONG-TERM STUDIES AND FOLLOW-UP WORK

Image shows DP Postex module on DP II terminal

The DP Postex module is recommended when you wish to work with the Postex® system, but prefer to position with and in your DP II caliper. Tree heights, if required, can be measured and input in the DP II program with the L5 Laser instrument or similar.

Use the DP Postex to measure the distance for the individual tree to the transponder and set the coordinates in the point. The DP II and software (for example the Postax application) will calculate and process your input field data.

When you do not require diameter data for your work, for example nurseries and for historic and archaeologic research, the DP Postex module can be used directly on the pocket-size and field adapted DP II terminal.

Contact us for more system configuration options with Haglöf Sweden instruments and software applications for navigation and positioning work!

Art. no 15-103-1047 DP Postex complete with transponders A, B and C with Postex custom rack, adapters for the transponders and a spirit level (for alignment).
Art. no 15-100-1005 DP Postex module. Image above shows DP Postex mounted on DP II caliper, rack and transponders. Software and DP Caliper/terminal are ordered separately.

DP Add-Ons

Add value to your investments in field equipment and systems!

DP DME
USE HAGLÖF SWEDEN'S® ULTRASOUND TECHNOLOGY PROVEN TO WORK FOR DISTANCE MEASURING IN THE FOREST! EXCELLENT FOR PLOT SURVEY.

Image shows DP DME module on DP II terminal

Position the T3 transponder in the center of the plot on the monopod staff. Walk around the plot anti-clockwise, measure diameters and the distance to the T3. The distance is monitored and registered as a compensated value - the center of the measured tree - for optimal accuracy.

Art. no 13-600-1064 DP DME complete set incl DP DME module, transponder T3, monopod, adapter. Art. no 13-600-1065 DP DME module. Software and DP Caliper/terminal are ordered separately.

- Is the tree within the limits of your sample plot? The DP DME delivers a distance reading from the tree center to the plot center.

The DP DME measures distances with Haglöf Sweden's classic ultrasound technology: tested and proven functional in instruments such as the VL5, the Vertex IV and the DME.
With the DP DME on the DP II, the distance to the plot center can be measured and registered for your border trees at the same time as you measure and register the tree diameter.

DP DME

Dimensions:	57x30x30mm, 2.28"x1.2"x1.2"
Weight:	25g, 1oz
Power supply:	3.3V external feed. Consum: 7mA
Ultras freq.:	25kHz
Unit:	cm / set in receiving software
Accuracy:	1% or better.
Distance:	0-30m (max); >20m w 360° adapter
Protocol:	NMEA
Interface:	RS232 19200,8,N,1
Accessories:	Transponder T3, monopod, adapter

DP SCANNER
THE DP SCANNER ENABLES YOU TO SCAN BARCODES WITH THE DP II COMPUTER CALIPER.

Image shows the DP Scanner attached on the DP II Terminal. Use the DP Scanner with the DP II and your log-tag systems. Mark the tree or log with a barcode printed log tag. Measure and register the data in the DP. Scan the barcode. The data is stored with the code and your measuring results are connected to the right object.

The DP Scanner is rugged and compact. The use of short wavelength red LED illumination enhances visibility when aiming.

The DP Scanner has a built-in decoder that enables the scan engine to decode barcodes after scanning and output the information via a serial communication interface. The 50-degree scan angle allows for high capacity reading of barcodes also in space-limited applications.

Art. no 13-600-1085 DP Scanner. The functions and functionality of the DP Scanner are run through the DP computer and application. Software and DP Caliper/terminal are ordered separately.

DP	SCANNER
Dimensions:	57x30x30mm/2.28"x1.2"x1.2"
Weight:	28g/1oz
Communication:	Serial RS-232C 9600bps, 8 bit, 1 stop bit
Water protected:	IP67
Buzzer:	YES
Power:	Powered by DP/DPII. Voltage 3.3V, Current consumption: Max. 120mA.
Barcode scanner Optics:	Light source:1 red LED (Peak wavelength 624 nm) Scan method:CCD linear sensor Scan rate: 300 scans/sec Reading pitch angle: -50 to 0°, 0 to +50° Reading skew angle: -65 to 0°, 0 to +65° Reading tilt angle: -25 to 0°, 0 to +25° Curvature: R>15 mm (EAN8) Min. resolution at PCS 0.9: 0.3 mm (EAN-13)
Depth of field:	Code 39: 70 - 180 mm / 2.76 - 7.09 in (0.127 mm / 5 mil) 55 - 300 mm / 2.17 - 11.81 in (0.25 mm / 10 mil) 60 - 460 mm / 2.36 - 18.11 in (0.5 mm / 20 mil) 65 - 800 mm / 2.56 - 31.50 in (1.0 mm / 39 mil) EAN-13 45 - 320 mm / 1.77 - 12.60 in (0.33 mm / 13 mil)
Supported Symbologies:	Barcode (1D): JAN/UPC/EAN incl. add on, Codabar/NW-7, Code 11, Code 39, Code 93, Code 128, GS1-128 (EAN-128), GS1 DataBar (RSS) (exl.stacked), IATA,
Industrial:	2of5, Interleaved 2of5, ISBN-ISSM-ISSN, Matrix 2of5, MSI/Plessey, S-Code,Telepen, Tri-Optic, UK/Plessey Postal code: Chinese Post, Korean Postal Authority Code
Durability:	Temperature in operation: -20 to 60 °C / -4 to 140 °F Temperature in storage: -40 to 70 °C / -40 to 158 °F Humidity in operation: 5 - 90% (noncondensing) Humidity in storage: 5 - 90% (non-condensing Ambient light immunity: Fluorescent 4000 lx max, Sunlight 100,000 lx max, Incandescent 4000 lx Drop test: packed in dummy case 1.8 m / 6 ft drop onto concrete surface
Regulatory & Safety:	RoHS, IEC62471

Digitech®Pro Solutions

Digitech® Tape

Measure log lengths, record automatically

Attach the Digitech Tape to the DP II computer terminal to automatically measure and record log lengths.

The Digitech Tape measuring wire is made from several plaited metal threads, that together form a strong, flexible, yet non-stretch wire that is easy to handle and that extends to approximately 7 meters/yds.

A built-in break prevents the wire from retracting too quickly. The Digitech Tape holder is rugged and made from resistant and shock- and drop-proof plastic. The tape uses the DP II battery for energy supply and its display to feature measuring results.
The Digitech Tape is mainly used for log scaling and harvester calibration applications, and as an electronic diameter tape with the DP II computer terminal.

Art. no 13-600-1019 Digitech Tape.

- Better accuracy
- Minimizes error sources
- Use for flex-scaling with Skalman® v7 harvester calibration system
- Durable, resistant, light weight
- Steel wire 7 meters/yds
- Tested & approved by independent user groups
- Perfect for log optimization

Use the protection cap on the sharp end hook to pull the measuring wire straight out from the Digitech Tape holder.

DIGITECH	TAPE
Size:	150x110x45mm/6x4.3x1.8″″.
Weight:	254g/10.2oz.
Color:	Black.
Temperature:	Min -15° Max 45° C / Min 5° Max 113° F.
Housing:	Poly-carbonate plastic.
Max.Length	7m/22.9ft.
Signal:	Built-in loudspeaker.
Wire:	Reinforced steel wire.
Output:	ASCII format, 19.200BPS.
Accuracy:	+/- 5mm/0.2″ at max.length.
Battery:	External supply, 3-3.5V.

Digitech® Keyboard

Many data variables in the field

- Collection of different species in biodiversity research
- Lumberyards
- Industrial inventories
- Log scaling with different classifications and qualities
- National forest inventories
- Plantations and nurseries

Image shows Digitech Keyboard on DP II terminal

DIGITECH	KEYBOARD
Size:	100x50x37mm/4.3x2.0x1.5″.
Weight:	55g/2oz.
Keyboard:	10-key membrane switch.
Material:	Reinforced polycarbonate glass fiber.
Temperature:	Min -30° Max 70°C / Min -22° Max160°F.
Digits:	0 - 9.
Alpha numeric:	Capital A-Z and Û, Å,Ä,Ö.
Multitap mode:	Automatic multitap.
Power Supply:	Low current 3V/2mW External feed.
Auto detect:	Digitech Pro Bios V1.35 and later.

The Digitech® Keyboard is suitable when you need to collect extensive field data in permanent sample plots and when you work with numerous different variables.

With the Digitech Keyboard, thousands of alpha-numeric combinations and extensive field data can be registered and connected to each individual object.

The Digitech Keyboard is installed on the DP II caliper comport. The keyboard can be used with or without the measuring scale, and uses the computer battery and display for operation.

The keyboard has been developed following operators' specifications and in cooperation with professional user groups. The Digitech Keyboard is built for industrial and field applications.

Art. no 13-600-1044 Digitech Keyboard.

Call 1-800-561-3600 or Email info@bapequipment.com for current pricing or to place an order

Radio Enter Button

Great reach and wireless transfer

- **Log measuring**
- **Cross scaling**
- **Measuring in piles**
- **Standing tree inventory**
- **Large tree diameters**

Order DP II computer caliper with the Radio Enter Button if you wish to work with the SmartScale measuring scale as a stand-alone unit.

The DP II computer terminal can be placed on your wrist or in a pocket. The SmartScale is used as a light-weight, slim diameter caliper. transferring results to the DP II terminal. The lean and light-weight SmartScale is convenient and comfortable to use in timber piles and dense forests.

Execute diameter measurement result with the Radio Enter Button and it is instantly transferred to the DP II terminal for storage and processing. The Radio Enter Button is compatible with all Haglöf Sweden software applications including the Skalman® v7.

Specification in short: 2.45Ghz, GFSK 1Mbps. Radio format: Internal, binary. 1x

CR2032 coin cell battery, approx. 1 year use. The Radio Enter button is factory installed on DP II calipers and replaces the standard right hand button on the DP II handle.

Gator Eyes

Upper stem diameter and diameters at a distance with the DP II computer caliper and Gator Eyes laser pointers

- **Use the Gator Eyes to measure tree diameters from a distance, upper stem diameter and branches**
- **Avoid climbing, carrying long sticks and heavy ladders in the field.**
- **Great when water streams or wind throws prevent you to reach a tree.**
- **Gator Eyes can increase the speed of your measurement work**
- **Combine Gator Eyes laser pointers with software run clinometer function to measure and register heights with your DP II computer caliper**

Aim the two aligned laser pointers as if you were actually at the tree: pull the caliper jaws apart until the laser points are positioned at the stem profile.

Haglöf Sweden caliper models Mantax Black and DP II can be equipped with Gator Eyes laser pointers.

Gator Eyes are used to measure diameters and upper stem diameter from ground level and from a distance. If you are working with DP II Gator Eyes, the built-in clinometer function and corresponding software can be used to measure inclination and tree diameters at specific heights.

The precision of the software run clinometer function is user dependent and around 0.2°. with a height precision of approx. 0.1m and a resolution of 0.1°. The diameter measurement results should be adjusted with one inch/2.54 cm when using Gator Eyes. This adjustment can be automatic (software adjusted) in the DP II computer caliper.
The caliper weight will increase with approx. 190g/7.6oz with Gator Eyes installed. The Gator Eyes are factory aligned and installed. Safety precautions and restrictions apply.

GATOR EYES

Size (laser only):	123x21x23.5mm/4.84"x0.83"x1.04" ea
Operation:	Pressure switch
Weight:	92g/3.25 oz incl battery
Battery:	2 x CR2 3V Lithium battery
Temperature:	Tested down to +5°C/41°F
Wavelength:	532 nm
Housing:	Aluminum Alloy
Output:	<1mW
Dot size at 100m/yds:	60mm/2.25"
Lens:	Multi-coated optical glass lens
Laser:	Class II laser